

# DFS MEASUREMENT REPORT

FCC 15.407 WLAN 802.11a/n/ac/ax

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**FCC ID:** Q9DAPIN0635

**Applicant:** Hewlett Packard Enterprise Company

**Application Type:** Certification

**Product:** ACCESS POINT

**Model No.:** APIN0635

**Trade Mark:**  

**FCC Classification:** Unlicensed National Information Infrastructure (NII)

**Type of Device:** Master Device

**FCC Rule Part(s):** Part 15 Subpart E - 15.407 Section (h)(2)

**Test Date:** May 19 ~ 23, 2021

Reviewed By:



( Paddy Chen )

Approved By:



( Chenz Ker )



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 905462 D02v02. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Taiwan) Co., Ltd.

## Revision History

| Report No.    | Version | Description    | Issue Date | Note  |
|---------------|---------|----------------|------------|-------|
| 2101TW0003-U5 | V1.0    | Initial report | 05-25-2021 | Valid |
|               |         |                |            |       |

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## General Information

|                                 |                                                                                                                                        |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicant</b>                | Hewlett Packard Enterprise Company                                                                                                     |
| <b>Applicant Address</b>        | 3333 Scott Blvd, Santa Clara, CA 95054, USA                                                                                            |
| <b>Manufacturer</b>             | Hewlett Packard Enterprise Company                                                                                                     |
| <b>Manufacturer Address</b>     | 3333 Scott Blvd, Santa Clara, CA 95054, USA                                                                                            |
| <b>Test Site</b>                | MRT Technology (Taiwan) Co., Ltd                                                                                                       |
| <b>Test Site Address</b>        | No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)                                                             |
| <b>MRT FCC Registration No.</b> | 291082                                                                                                                                 |
| <b>FCC Rule Part(s)</b>         | Part 15.407                                                                                                                            |
| <b>Test Device Serial No.</b>   | DKS0BS0028 <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering |

## Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.

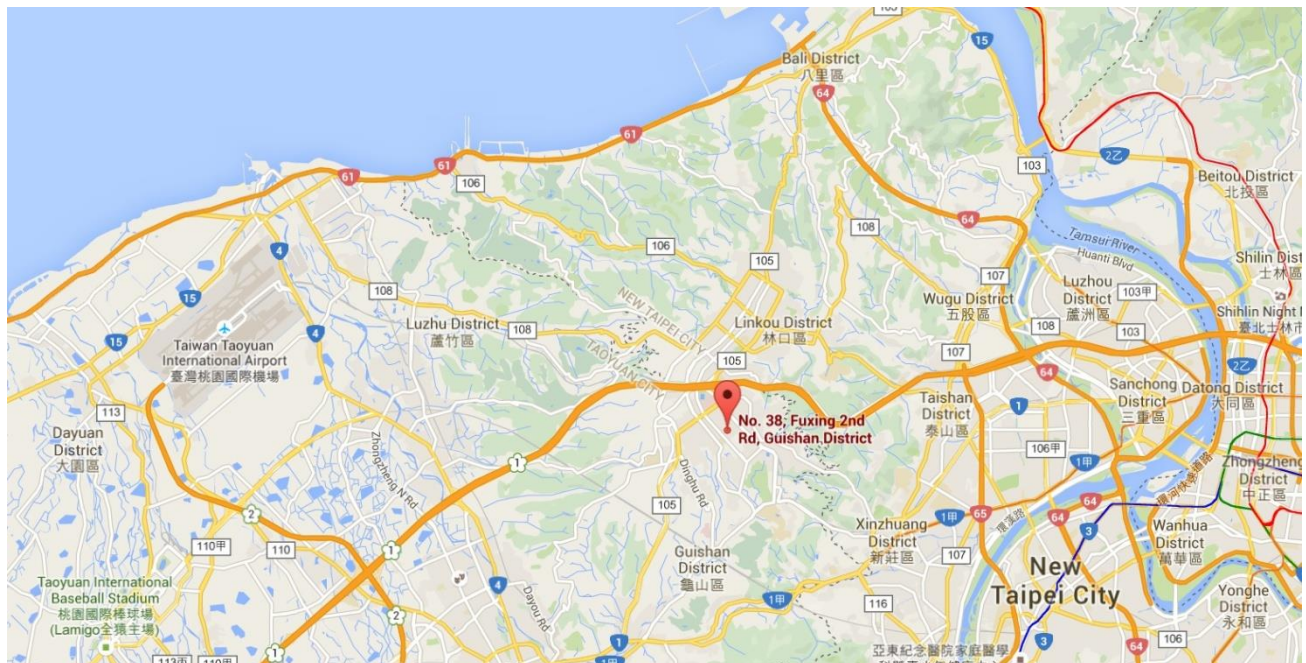
## 1. INTRODUCTION

### 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

### 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

|                         |                            |
|-------------------------|----------------------------|
| Product Name            | ACCESS POINT               |
| Model No.               | APIN0635                   |
| Software Version        | Aruba OS 8.9.0.0_80031     |
| Wi-Fi Specification     | 802.11a/b/g/n/ac/ax        |
| Bluetooth Specification | v5.0 single mode, BLE only |
| Zigbee Specification    | 802.15.4                   |
| GNSS Specification      | GPS, GLONASS, Galileo      |
| Operating Temperature   | 0 ~ 50 °C                  |
| Power Type              | AC Adapter or PoE input    |
| Operating Environment   | Indoor Use                 |

### 2.2. Product Specification Subjective to this Report

|                    |                                                                                                                                                                                                                                  |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency Range    | For 802.11a/n-HT20/ac-VHT20/ax-HE20:<br>5260~5320MHz, 5500~5720MHz<br>For 802.11n-HT40/ac-VHT40/ax-HE40:<br>5270~5310MHz, 5510~5710MHz<br>For 802.11ac-VHT80/ax-HE80:<br>5290MHz, 5530MHz, 5610MHz, 5690MHz                      |
| Type of Modulation | 802.11a/n/ac: OFDM<br>802.11ax: OFDMA                                                                                                                                                                                            |
| Data Rate          | 802.11a: 6/9/12/18/24/36/48/54Mbps<br>802.11n: up to 300Mbps<br>802.11ac: up to 866.6Mbps<br>802.11ax: up to 1201Mbps                                                                                                            |
| Power-on cycle     | Requires 90.9 seconds to complete its power-on cycle                                                                                                                                                                             |
| Uniform Spreading  | For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm. |

Note: For other features of this EUT, test report will be issued separately.

### 2.3. Description of Available Antennas

| Antenna Type                        | Frequency Band (GHz) | Max Peak Gain (dBi) | CDD Directional Gain (dBi) |         | BF Directional Gain (dBi) |
|-------------------------------------|----------------------|---------------------|----------------------------|---------|---------------------------|
|                                     |                      |                     | For Power                  | For PSD |                           |
| Wi-Fi Internal Antenna (2*2 MIMO)   |                      |                     |                            |         |                           |
| PIFA                                | 2.4 ~ 2.5            | 2.90                | 2.90                       | 5.91    | 5.91                      |
|                                     | 5.15 ~ 5.9           | 4.90                | 4.90                       | 7.91    | 7.91                      |
|                                     | 5.9 ~ 7.2            | 4.30                | 4.30                       | 4.30    | 4.30                      |
| Bluetooth / ZigBee Internal Antenna |                      |                     |                            |         |                           |
| PIFA                                | 2.4 ~ 2.5            | 3.0                 |                            |         |                           |

Note:

- The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.  
For CDD transmissions, directional gain is calculated as follows,  $N_{ANT} = 2$ ,  $N_{SS} = 1$ .  
If all antennas have the same gain,  $G_{ANT}$ , Directional gain =  $G_{ANT} + \text{Array Gain}$ , where Array Gain is as follows.
  - For power spectral density (PSD) measurements on all devices,  

$$\text{Array Gain} = 10 \log (N_{ANT} / N_{SS}) \text{ dB} = 3.01;$$
  - For power measurements on IEEE 802.11 devices,  

$$\text{Array Gain} = 0 \text{ dB for } N_{ANT} \leq 4;$$
- The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax, not include 802.11a/b/g. Directional gain =  $G_{ANT} + \text{BF Gain}$ . BF mode power setting will be less than or equal to CDD power setting.
- Wi-Fi 6E band antennas are cross polarized, the detail refer to antenna specification.
- All antenna information is provided by the manufacturer, test laboratory will not be responsible if any error.

### 2.4. Working Frequencies for this report

802.11a/n-HT20/ac-VHT20/ax-HE20

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 52      | 5260 MHz  | 56      | 5280 MHz  | 60      | 5300 MHz  |
| 64      | 5320 MHz  | 100     | 5500 MHz  | 104     | 5520 MHz  |
| 108     | 5540 MHz  | 112     | 5560 MHz  | 116     | 5580 MHz  |
| 120     | 5600 MHz  | 124     | 5620 MHz  | 128     | 5640 MHz  |
| 132     | 5660 MHz  | 136     | 5680 MHz  | 140     | 5700 MHz  |
| 144     | 5720 MHz  | --      | --        | --      | --        |

#### 802.11n-HT40/ac-VHT40/ax-HE40

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 54      | 5270 MHz  | 62      | 5310 MHz  | 102     | 5510 MHz  |
| 110     | 5550 MHz  | 118     | 5590 MHz  | 126     | 5630 MHz  |
| 134     | 5670 MHz  | 142     | 5710 MHz  | --      | --        |

#### 802.11ac-VHT80/ax-HE80

| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 58      | 5290 MHz  | 106     | 5530 MHz  | 122     | 5610 MHz  |
| 138     | 5690 MHz  | --      | --        | --      | --        |

### 2.5. Test Channel for this Report

| Test Mode     | Test Channel | Test Frequency |
|---------------|--------------|----------------|
| 802.11ax-HE20 | 100          | 5500 MHz       |
| 802.11ax-HE40 | 102          | 5510 MHz       |
| 802.11ax-HE80 | 106          | 5530 MHz       |

### 2.6. Test Mode

|                                                                                |
|--------------------------------------------------------------------------------|
| Mode 1: Make the EUT communicate with client device at DFS channel (AP Mode)   |
| Mode 2: Make the EUT communicate with client device at DFS channel (Mesh Mode) |

### 2.7. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- Part 15 Subpart E - 15.407 Section (h)(2)
- KDB 905462 D02v02
- KDB 905462 D04v01

### 3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

#### 3.1. Applicability

The following table from FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 lists the applicable requirements for the DFS testing.

| Requirement                     | Operational Mode |                                |                             |
|---------------------------------|------------------|--------------------------------|-----------------------------|
|                                 | Master           | Client Without Radar Detection | Client With Radar Detection |
| Non-Occupancy Period            | Yes              | Not required                   | Yes                         |
| DFS Detection Threshold         | Yes              | Not required                   | Yes                         |
| Channel Availability Check Time | Yes              | Not required                   | Not required                |
| U-NII Detection Bandwidth       | Yes              | Not required                   | Yes                         |

**Table 3-1: Applicability of DFS Requirements Prior to Use of a Channel**

| Requirement                       | Operational Mode                             |                                |
|-----------------------------------|----------------------------------------------|--------------------------------|
|                                   | Master Device or Client With Radar Detection | Client Without Radar Detection |
| DFS Detection Threshold           | Yes                                          | Not required                   |
| Channel Closing Transmission Time | Yes                                          | Yes                            |
| Channel Move Time                 | Yes                                          | Yes                            |
| U-NII Detection Bandwidth         | Yes                                          | Not required                   |

| Additional requirements for devices with multiple bandwidth modes | Master Device or Client with Radar Detection | Client Without Radar Detection                       |
|-------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------|
| U-NII Detection Bandwidth and Statistical Performance Check       | All BW modes must be tested                  | Not required                                         |
| Channel Move Time and Channel Closing Transmission Time           | Test using widest BW mode available          | Test using the widest BW mode available for the link |
| All other tests                                                   | Any single BW mode                           | Not required                                         |

Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

**Table 3-2: Applicability of DFS Requirements during normal operation**

### 3.2. DFS Devices Requirements

**Per FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 the following are the requirements for Master Devices:**

- (a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5250 ~ 5350 MHz and 5470 ~ 5725 MHz bands. DFS is not required in the 5150 ~ 5250 MHz or 5725 ~ 5825 MHz bands.
- (b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under sub section a) above.
- (c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.
- (d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).
- (e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.
- (f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period.
- (g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

**Channel Move Time and Channel Closing Transmission Time requirements are listed in the following table.**

| Parameter                         | Value                                                                                                     |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Non-occupancy period              | Minimum 30 minutes                                                                                        |
| Channel Availability Check Time   | 60 seconds                                                                                                |
| Channel Move Time                 | 10 seconds<br>See Note 1.                                                                                 |
| Channel Closing Transmission Time | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.<br>See Notes 1 and 2. |
| U-NII Detection Bandwidth         | Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.                                   |

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

**Table 3-3: DFS Response Requirements**

### 3.3. DFS Detection Threshold Values

The DFS detection thresholds are defined for Master devices and Client Devices with In-service monitoring. These detection thresholds are listed in the following table.

| Maximum Transmit Power                                                          | Value<br>(See Notes 1, 2, and 3) |
|---------------------------------------------------------------------------------|----------------------------------|
| EIRP $\geq$ 200 milliwatt                                                       | -64 dBm                          |
| EIRP < 200 milliwatt and<br>power spectral density < 10 dBm/MHz                 | -62 dBm                          |
| EIRP < 200 milliwatt that do not meet the power<br>spectral density requirement | -64 dBm                          |

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

**Table 3-4: Detection Thresholds for Master Devices and Client Devices with Radar Detection**

### 3.4. Parameters of DFS Test Signals

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

#### Short Pulse Radar Test Waveforms

| Radar Type                                                                                                                         | Pulse Width (μsec) | PRI (μsec)                                                                                                                                                    | Number of Pulses                                                                                                 | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------|
| 0                                                                                                                                  | 1                  | 1428                                                                                                                                                          | 18                                                                                                               | See Note 1                                 | See Note 1               |
| 1                                                                                                                                  | 1                  | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6                                                                    | Roundup $\left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{PRI_{\mu sec}} \right) \right\}$ | 60%                                        | 30                       |
|                                                                                                                                    |                    | Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A |                                                                                                                  |                                            |                          |
| 2                                                                                                                                  | 1-5                | 150-230                                                                                                                                                       | 23-29                                                                                                            | 60%                                        | 30                       |
| 3                                                                                                                                  | 6-10               | 200-500                                                                                                                                                       | 16-18                                                                                                            | 60%                                        | 30                       |
| 4                                                                                                                                  | 11-20              | 200-500                                                                                                                                                       | 12-16                                                                                                            | 60%                                        | 30                       |
| Aggregate (Radar Types 1-4)                                                                                                        |                    |                                                                                                                                                               |                                                                                                                  | 80%                                        | 120                      |
| Note: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests. |                    |                                                                                                                                                               |                                                                                                                  |                                            |                          |

**Table 3-5: Parameters for Short Pulse Radar Waveforms**

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

| Pulse Repetition Frequency<br>Number | Pulse Repetition Frequency<br>(Pulses Per Second) | Pulse Repetition Interval<br>(Microseconds) |
|--------------------------------------|---------------------------------------------------|---------------------------------------------|
| 1                                    | 1930.5                                            | 518                                         |
| 2                                    | 1858.7                                            | 538                                         |
| 3                                    | 1792.1                                            | 558                                         |
| 4                                    | 1730.1                                            | 578                                         |
| 5                                    | 1672.2                                            | 598                                         |
| 6                                    | 1618.1                                            | 618                                         |
| 7                                    | 1567.4                                            | 638                                         |
| 8                                    | 1519.8                                            | 658                                         |
| 9                                    | 1474.9                                            | 678                                         |
| 10                                   | 1432.7                                            | 698                                         |
| 11                                   | 1392.8                                            | 718                                         |
| 12                                   | 1355                                              | 738                                         |
| 13                                   | 1319.3                                            | 758                                         |
| 14                                   | 1285.3                                            | 778                                         |
| 15                                   | 1253.1                                            | 798                                         |
| 16                                   | 1222.5                                            | 818                                         |
| 17                                   | 1193.3                                            | 838                                         |
| 18                                   | 1165.6                                            | 858                                         |
| 19                                   | 1139                                              | 878                                         |
| 20                                   | 1113.6                                            | 898                                         |
| 21                                   | 1089.3                                            | 918                                         |
| 22                                   | 1066.1                                            | 938                                         |
| 23                                   | 326.2                                             | 3066                                        |

**Table 3-6: Pulse Repetition Intervals Values for Test A**

### Long Pulse Radar Test Waveform

| Radar Type | Pulse Width (μsec) | Chirp Width (MHz) | PRI (μsec)  | Number of Pulses per Burst | Number of Bursts | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|------------|--------------------|-------------------|-------------|----------------------------|------------------|--------------------------------------------|--------------------------|
| 5          | 50 - 100           | 5 - 20            | 1000 - 2000 | 1 - 3                      | 8 - 20           | 80%                                        | 30                       |

**Table 3-7: Parameters for Long Pulse Radar Waveforms**

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.

### Frequency Hopping Radar Test Waveform

| Radar Type | Pulse Width (μsec) | PRI (μsec) | Pulses Per Hop | Hopping Rate (kHz) | Hopping Sequence Length (msec) | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|------------|--------------------|------------|----------------|--------------------|--------------------------------|--------------------------------------------|--------------------------|
| 6          | 1                  | 333        | 9              | 0.333              | 300                            | 70%                                        | 30                       |

**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

### 3.5. Conducted Test Setup

The FCC KDB 905462 D02 NII DFS Compliance Procedures New Rules v02 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure 3-1 shows the typical test setup.

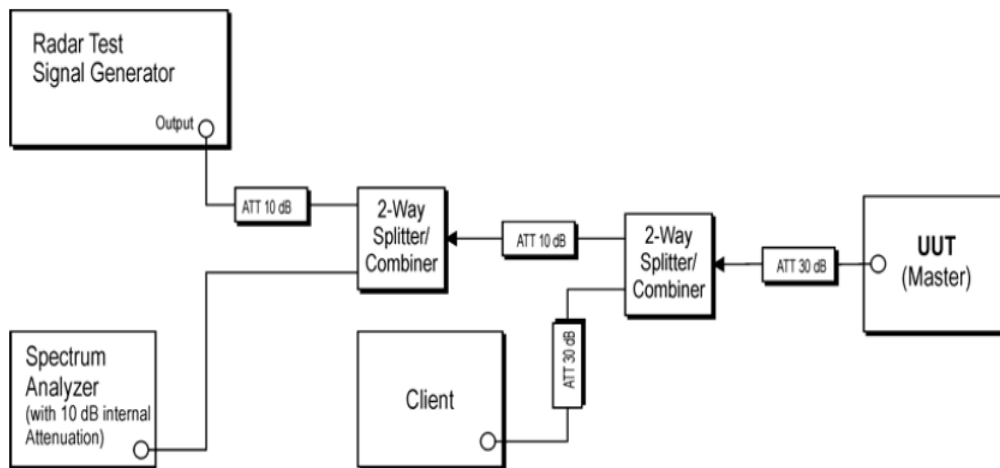


**Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Master**

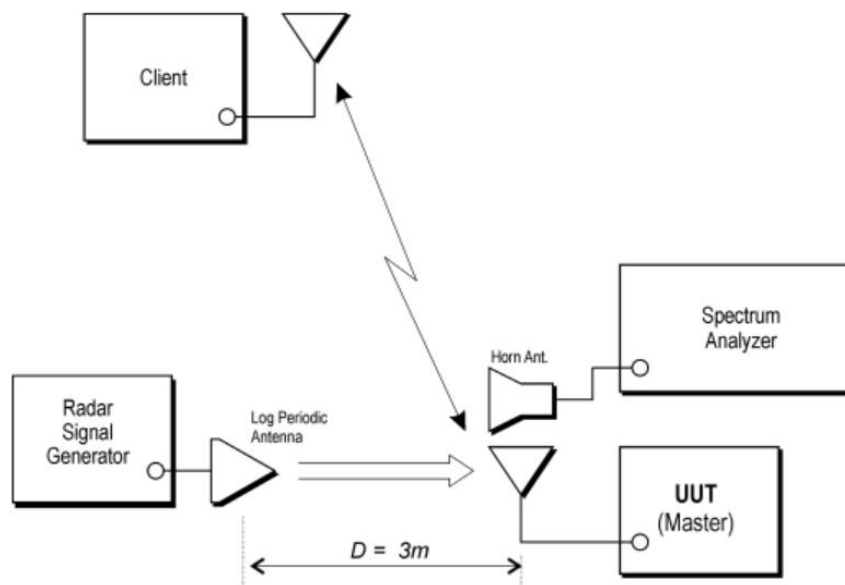


**Figure 3-2: Radiated Test Setup where UUT is a master mode and Radar Test Waveforms are injected into the UUT**

#### 4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS) - SR2

| Instrument              | Manufacturer | Type No.       | Asset No.   | Cali. Interval | Cali. Due Date |
|-------------------------|--------------|----------------|-------------|----------------|----------------|
| EXA Signal Analyzer     | KEYSIGHT     | N9010A         | MRTTWA00012 | 1 year         | 2021/10/14     |
| EXA Signal Analyzer     | KEYSIGHT     | N9010B         | MRTTWA00074 | 1 year         | 2021/7/14      |
| Signal Analyzer         | R&S          | FSV40          | MRTTWA00007 | 1 year         | 2022/3/23      |
| Vector Signal Generator | Keysight     | N5182B         | MRTTWA00010 | 1 year         | 2022/4/19      |
| Combiner                | WOKEN        | 0120A04208001S | MRTTWE00008 | 1 year         | 2021/6/18      |

Client Information

| Instrument               | Manufacturer | Type No. | FCC ID     |
|--------------------------|--------------|----------|------------|
| Wireless Network Adapter | Intel        | AX200NGW | PD9AX200NG |

| Software               | Version | Manufacturer | Function                         |
|------------------------|---------|--------------|----------------------------------|
| Pulse Building(N7607B) | V3.0.0  | Keysight     | Radar Signal Generation Software |
| DFS Tool               | V6.7    | Keysight     | DFS Test Software                |

## 5. TEST RESULT

### 5.1. Summary

| Parameter                                                                      | Limit           | Test Result | Reference   |
|--------------------------------------------------------------------------------|-----------------|-------------|-------------|
| UNII Detection Bandwidth Measurement                                           | Refer Table 3-3 | Pass        | Section 5.4 |
| Initial Channel Availability Check Time                                        | Refer Table 3-3 | Pass        | Section 5.5 |
| Radar Burst at the Beginning of the Channel Availability Check Time            | Refer Table 3-3 | Pass        | Section 5.6 |
| Radar Burst at the End of the Channel Availability Check Time                  | Refer Table 3-3 | Pass        | Section 5.7 |
| In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time | Refer Table 3-3 | Pass        | Section 5.8 |
| Non-Occupancy Period                                                           | Refer Table 3-3 | Pass        | Section 5.8 |
| Statistical Performance Check                                                  | Refer Table 3-3 | Pass        | Section 5.9 |

Note: We used the worst case level -64dBm as DFS detection thresholds for all DFS testing.

## 5.2. Radar Waveform Calibration

### 5.2.1. Calibration Setup

The conducted test setup was used for this calibration testing. Figure 3-2 shows the typical test setup.

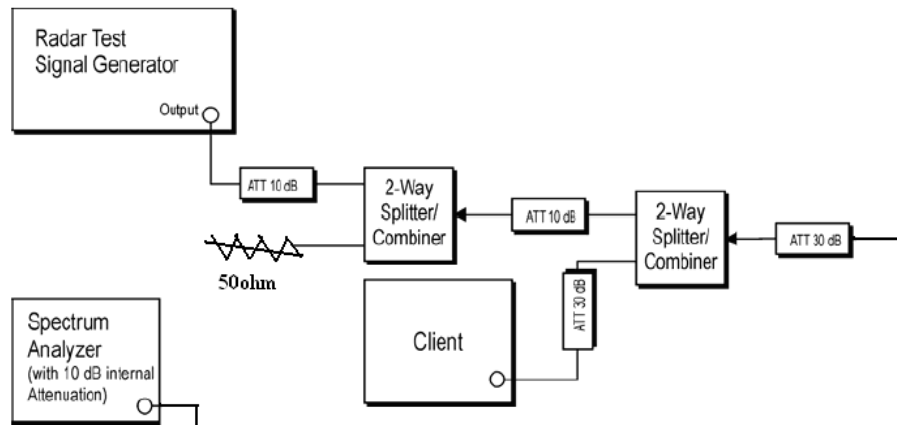


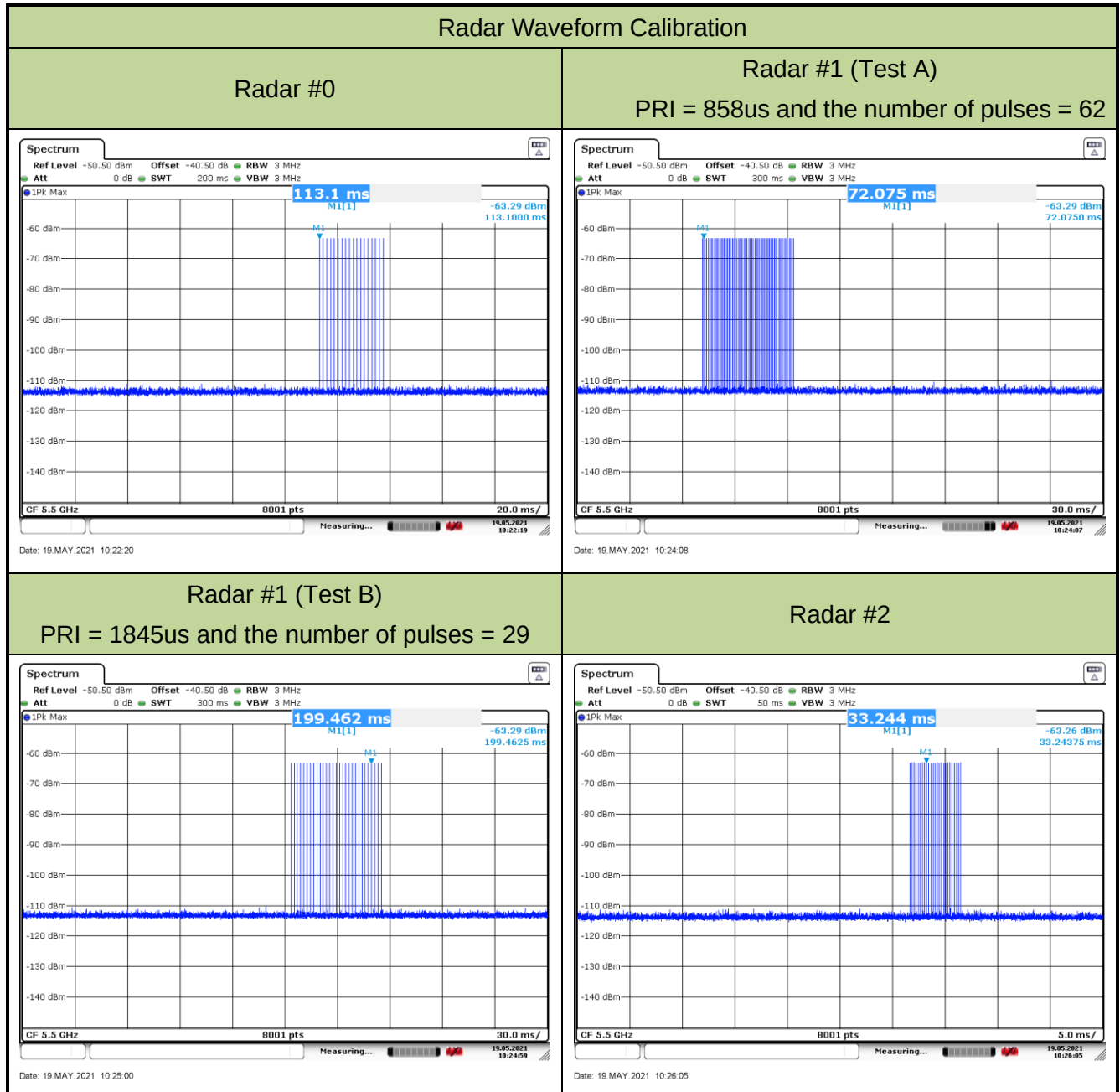
**Figure 3-2: Conducted Test Setup**

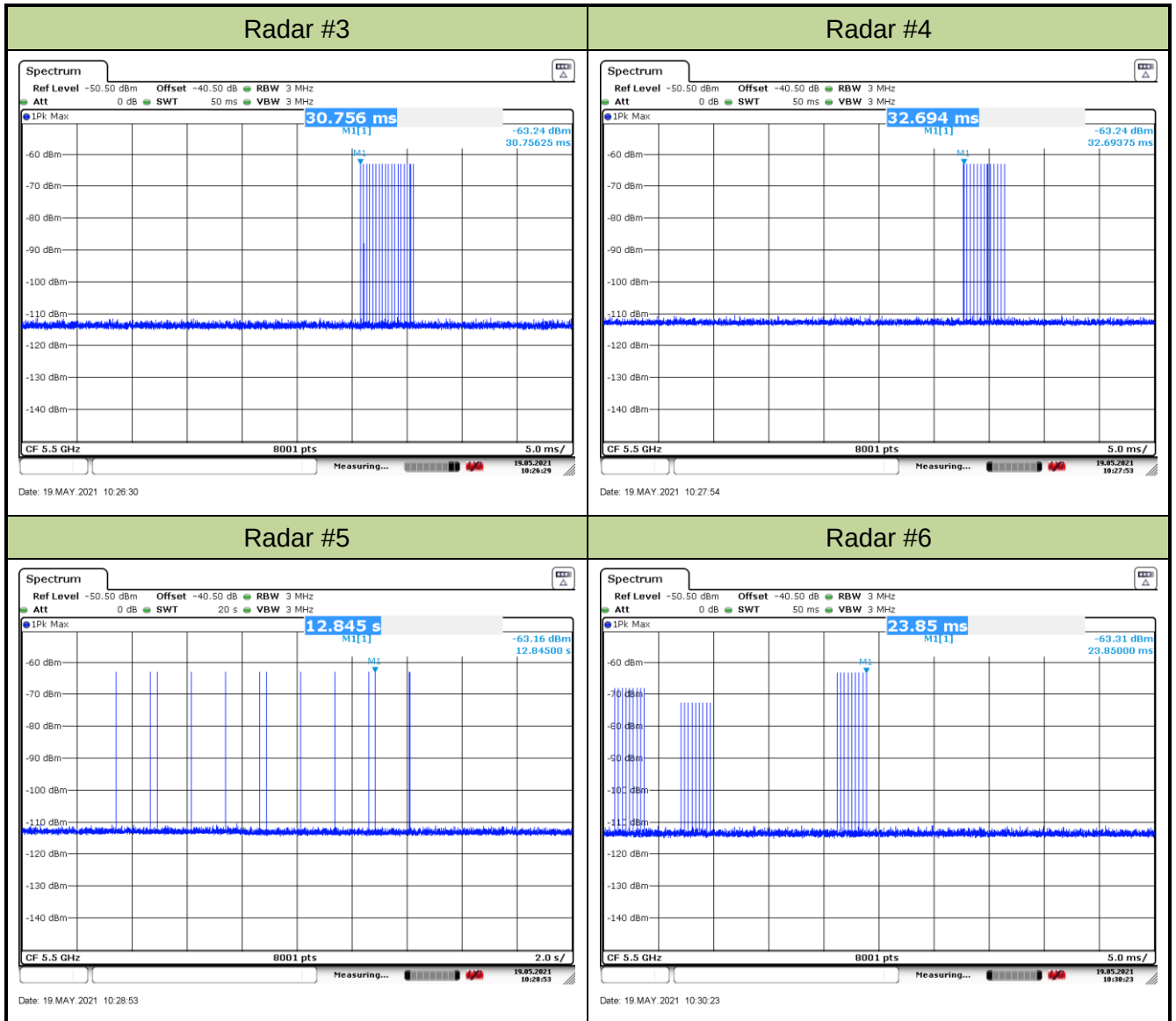
### 5.2.2. Calibration Procedure

The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

### 5.2.3. Test Result of Calibration

|               |                            |           |            |
|---------------|----------------------------|-----------|------------|
| Product       | ACCESS POINT               | Test Site | SR2        |
| Test Engineer | Eric Lin                   | Test Date | 2021/05/19 |
| Test Item     | Radar Waveform Calibration |           |            |





## 5.2.4. Test Result of Channel Loading

|               |                 |           |                  |
|---------------|-----------------|-----------|------------------|
| Test Engineer | Eric Lin        | Test Site | SR2              |
| Test Item     | Channel Loading | Test Date | 2021/05/19~05/22 |



| Test Mode     | Test Frequency | Packet ratio | Requirement ratio | Test Result |
|---------------|----------------|--------------|-------------------|-------------|
| 802.11ax-HE20 | 5500 MHz       | 19.56%       | ≥ 17%             | Pass        |
| 802.11ax-HE40 | 5510 MHz       | 21.15%       | ≥ 17%             | Pass        |
| 802.11ax-HE80 | 5530 MHz       | 23.14%       | ≥ 17%             | Pass        |

Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. Packet ratio = Time On/ (Time On + Off Time).

### **5.3. NII Detection Bandwidth Measurement**

#### **5.3.1. Test Limit**

Minimum 100% of the NII 99% transmission power bandwidth. During the U-NII Detection Bandwidth detection test, each frequency step the minimum percentage of detection is 90 percent.

Measurements are performed with no data traffic.

#### **5.3.2. Test Procedure**

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.

7. The U-NII Detection Bandwidth is calculated as follows:  $\text{U-NII Detection Bandwidth} = FH - FL$
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

### 5.3.3. Test Result

|               |                                                    |           |            |
|---------------|----------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                       | Test Site | SR2        |
| Test Engineer | Eric Lin                                           | Test Date | 2021/05/22 |
| Test Item     | Detection Bandwidth (802.11ax-HE20 mode - 5500MHz) |           |            |

| Radar Frequency<br>(MHz) | DFS Detection Trials (1=Detection, 0= No Detection) |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|--------------------------|-----------------------------------------------------|---|---|---|---|---|---|---|---|----|--------------------|
|                          | 1                                                   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5490                     | 0                                                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5490.4 F <sub>L</sub>    | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5491                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5492                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5493                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5494                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5495                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5500                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5505                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5506                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5507                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5508                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5509                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5509.6 F <sub>H</sub>    | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5510                     | 0                                                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 18.92MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5509.6\text{MHz} - 5490.4\text{MHz} = 19.2\text{MHz}$ .

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $18.92\text{MHz} \times 100\% = 18.92\text{MHz}$ .

|               |                                                    |           |            |
|---------------|----------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                       | Test Site | SR2        |
| Test Engineer | Eric Lin                                           | Test Date | 2021/05/22 |
| Test Item     | Detection Bandwidth (802.11ax-HE40 mode - 5510MHz) |           |            |

| Radar Frequency<br>(MHz) | DFS Detection Trials (1=Detection, 0= No Detection) |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|--------------------------|-----------------------------------------------------|---|---|---|---|---|---|---|---|----|--------------------|
|                          | 1                                                   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5490                     | 0                                                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5491 F <sub>L</sub>      | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5492                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5493                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5494                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5495                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5500                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5505                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5510                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5515                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5520                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5525                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5526                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5527                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5528                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5529 F <sub>H</sub>      | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5530                     | 0                                                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 37.67MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5529\text{MHz} - 5491\text{MHz} = 38\text{MHz}$ .

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $37.67\text{MHz} \times 100\% = 37.67\text{MHz}$ .

|               |                                                    |           |            |
|---------------|----------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                       | Test Site | SR2        |
| Test Engineer | Eric Lin                                           | Test Date | 2021/05/23 |
| Test Item     | Detection Bandwidth (802.11ax-HE80 mode - 5530MHz) |           |            |

| Radar Frequency<br>(MHz) | DFS Detection Trials (1=Detection, 0= No Detection) |   |   |   |   |   |   |   |   |    | Detection Rate (%) |
|--------------------------|-----------------------------------------------------|---|---|---|---|---|---|---|---|----|--------------------|
|                          | 1                                                   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |                    |
| 5490                     | 0                                                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |
| 5491 F <sub>L</sub>      | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5492                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5493                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5494                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5495                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5500                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5505                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5510                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5515                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5520                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5525                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5530                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5535                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5540                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5545                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5550                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5555                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5560                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5565                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5566                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5567                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5568                     | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5569 F <sub>H</sub>      | 1                                                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 100%               |
| 5570                     | 0                                                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0%                 |

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 77.25MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth =  $F_H - F_L = 5569\text{MHz} - 5491\text{MHz} = 78\text{MHz}$ .

Note 3: NII Detection Bandwidth Min. Limit (MHz):  $77.25\text{MHz} \times 100\% = 77.25\text{MHz}$ .

## **5.4. Initial Channel Availability Check Time Measurement**

### **5.4.1. Test Limit**

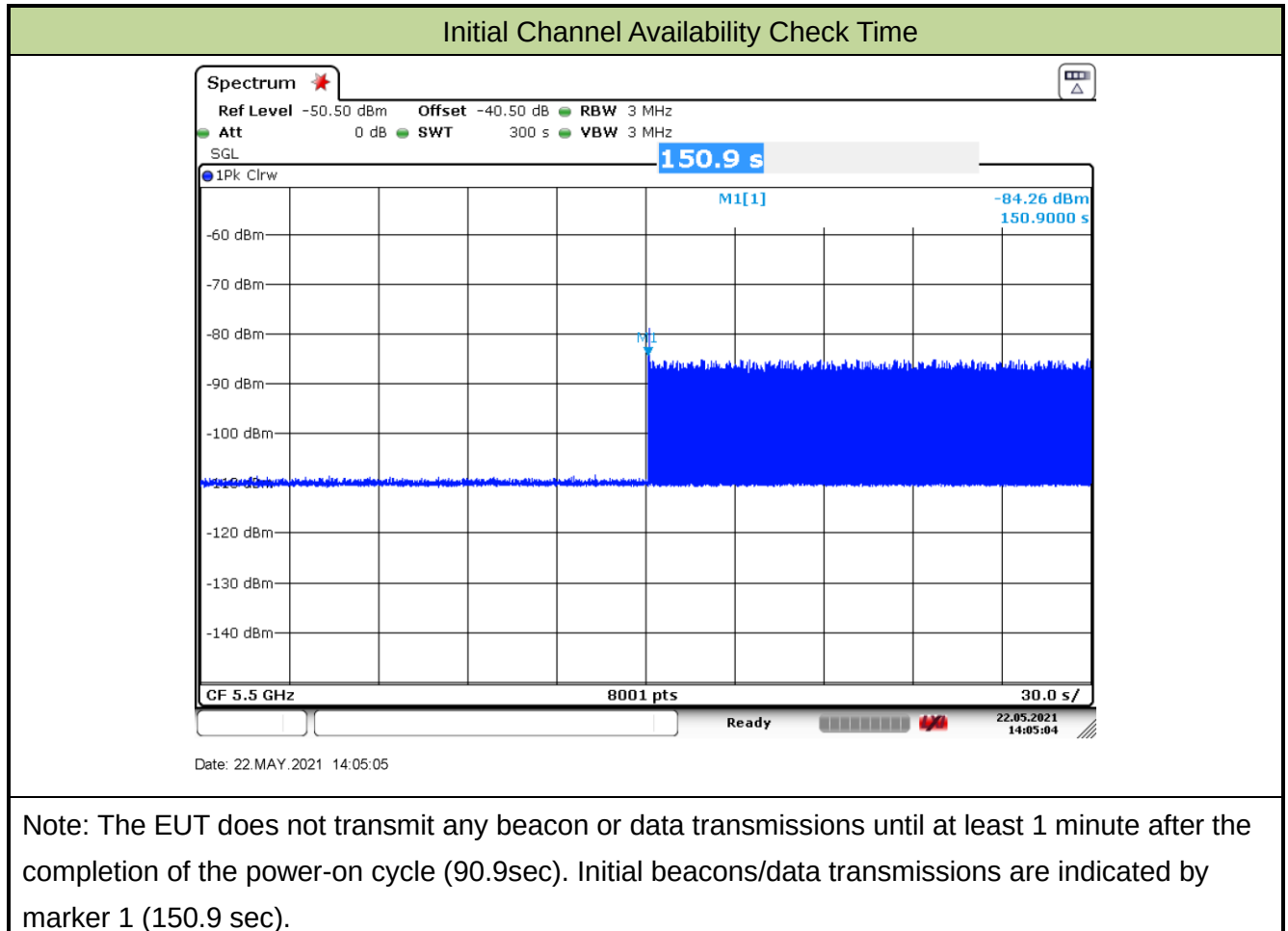
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

### **5.4.2. Test Procedure**

1. The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII Channel that must incorporate DFS functions. At the same time the EUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the Channel occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.
2. The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.
3. Confirm that the EUT initiates transmission on the channel. Measurement system showing its nominal noise floor is marker1.

### 5.4.3. Test Result

|               |                                                                        |           |            |
|---------------|------------------------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                                           | Test Site | SR2        |
| Test Engineer | Eric Lin                                                               | Test Date | 2021/05/22 |
| Test Item     | Initial Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz) |           |            |



## **5.5. Radar Burst at the Beginning of the Channel Availability Check Time Measurement**

### **5.5.1. Test Limit**

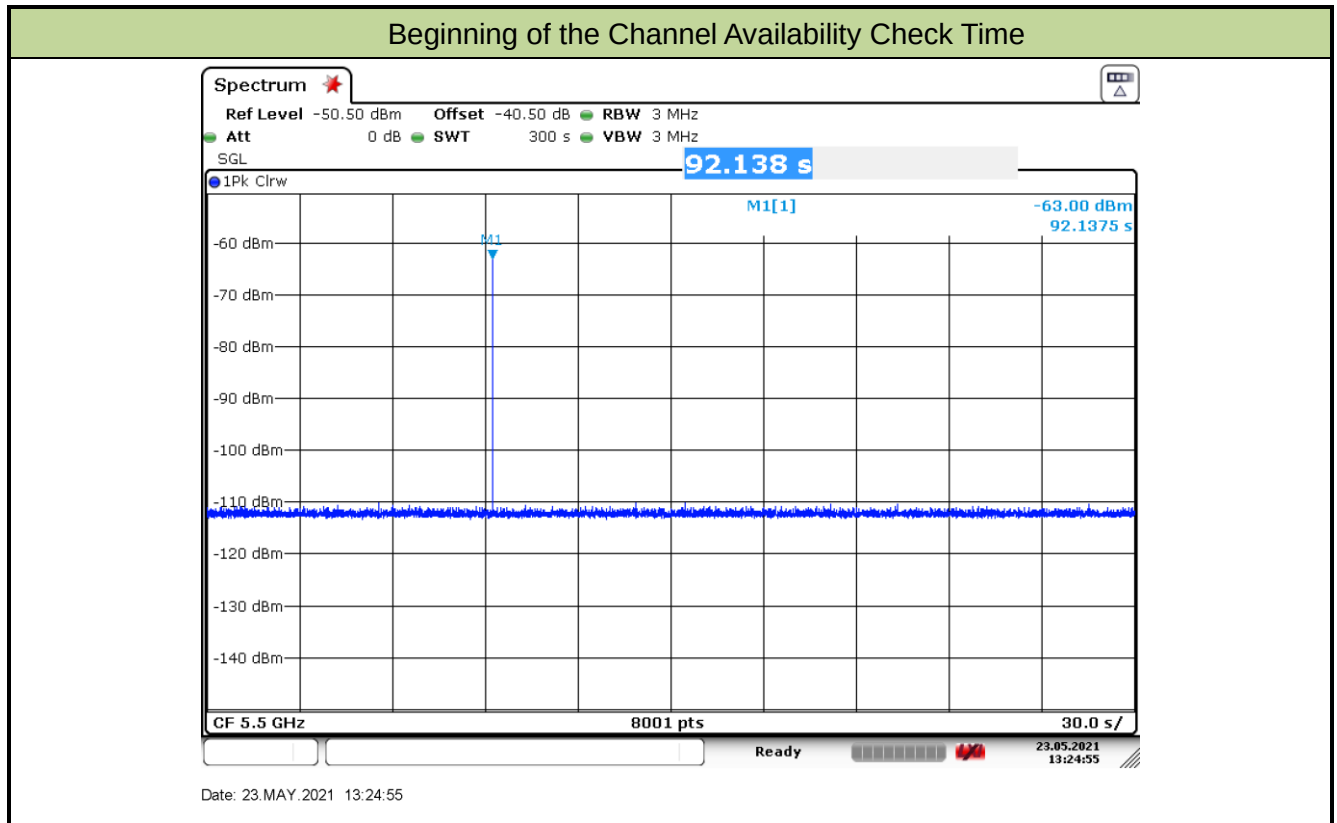
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.5.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is in completion power-up cycle (from T0 to T1). T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

### 5.5.3. Test Result

|               |                                                                                 |           |            |
|---------------|---------------------------------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                                                    | Test Site | SR2        |
| Test Engineer | Eric Lin                                                                        | Test Date | 2021/05/23 |
| Test Item     | Beginning of the Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz) |           |            |



## **5.6. Radar Burst at the End of the Channel Availability Check Time Measurement**

### **5.6.1. Test Limit**

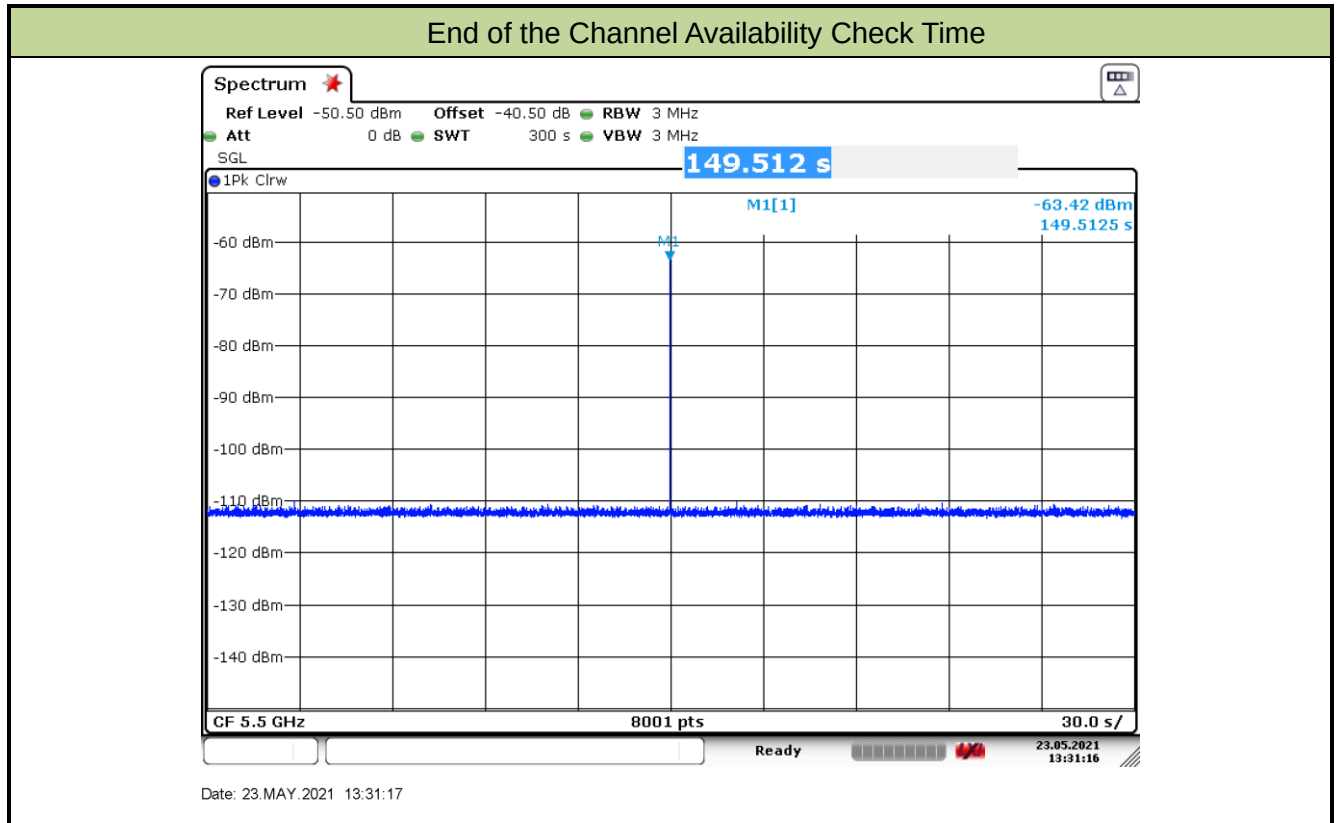
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.6.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

### 5.6.3. Test Result

|               |                                                                           |           |            |
|---------------|---------------------------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                                              | Test Site | SR2        |
| Test Engineer | Eric Lin                                                                  | Test Date | 2021/05/23 |
| Test Item     | End of the Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz) |           |            |



## **5.7. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement**

### **5.7.1. Test Limit**

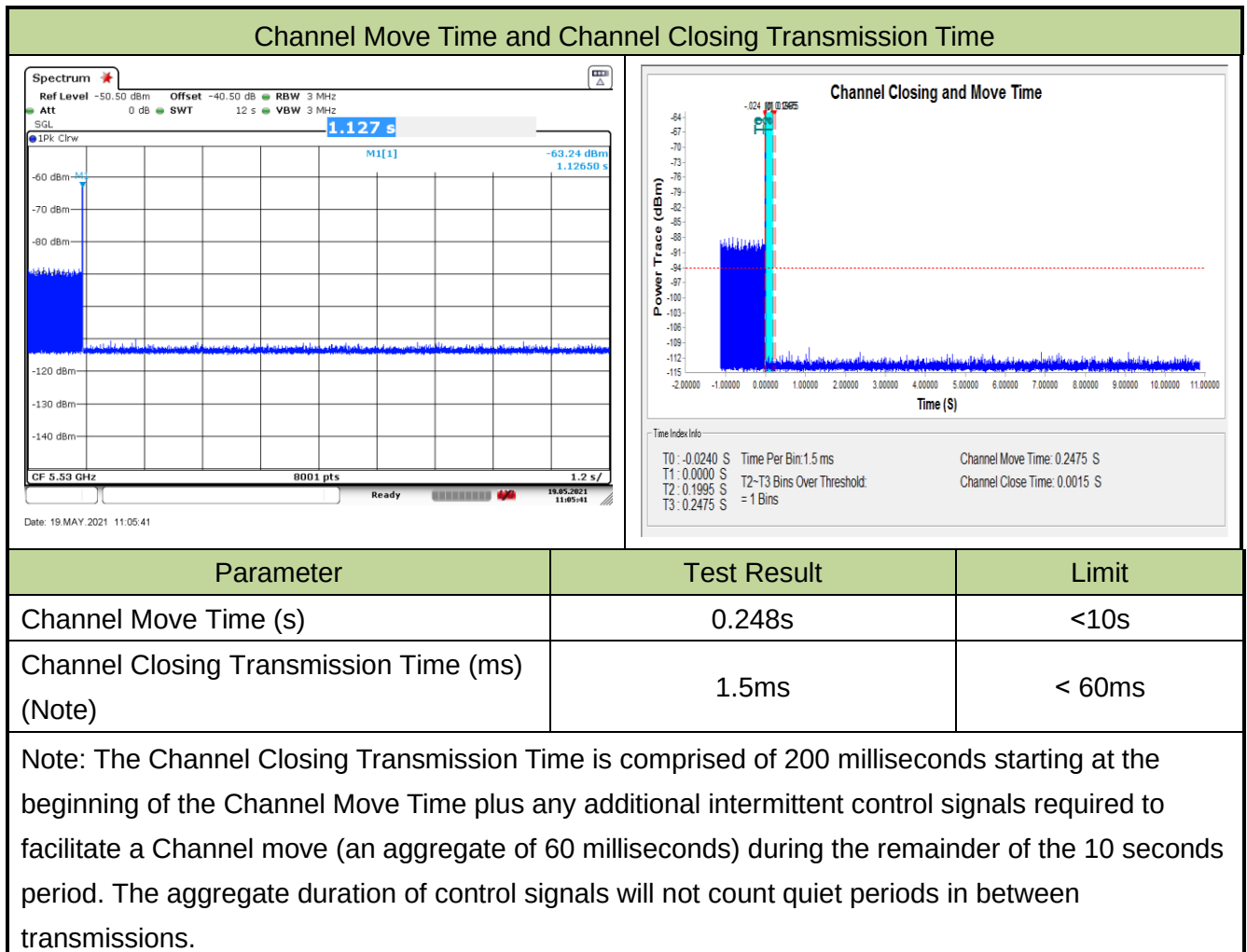
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec. The total duration of Channel Closing Transmission Time is 260ms, consisting of data signals and the aggregate of control signals, by a U-NII device during the Channel Move Time. The Non-Occupancy Period time is 30minute during which a Channel will not be utilized after a Radar Waveform is detected on that Channel.

### **5.7.2. Test Procedure Used**

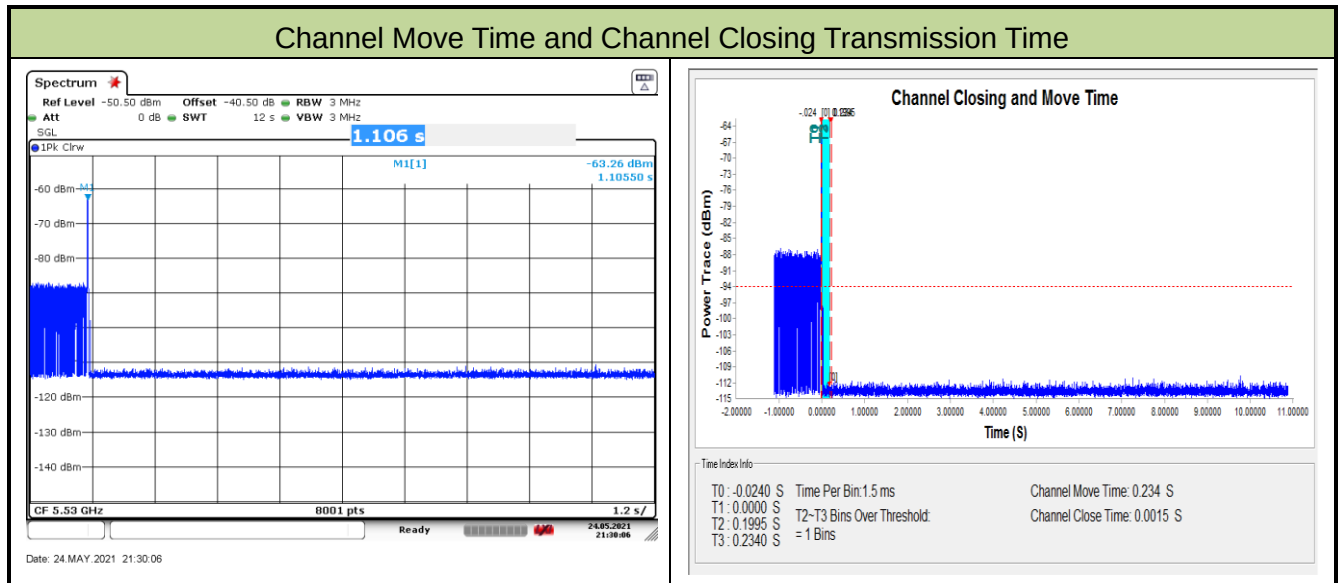
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.
3. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).
4. Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell (1.5ms) = S (12 \text{ sec}) / B (8000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C = N \times Dwell$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and Dwell is the dwell time per bin.
5. Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this Channel.

### 5.7.3. Test Result

|               |                                                         |           |            |
|---------------|---------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                            | Test Site | SR2        |
| Test Engineer | Eric Lin                                                | Test Date | 2021/05/19 |
| Test Item     | Channel Move Time and Channel Closing Transmission Time |           |            |
| Test Mode     | AP Mode, 802.11ax-HE80 mode - 5530MHz                   |           |            |



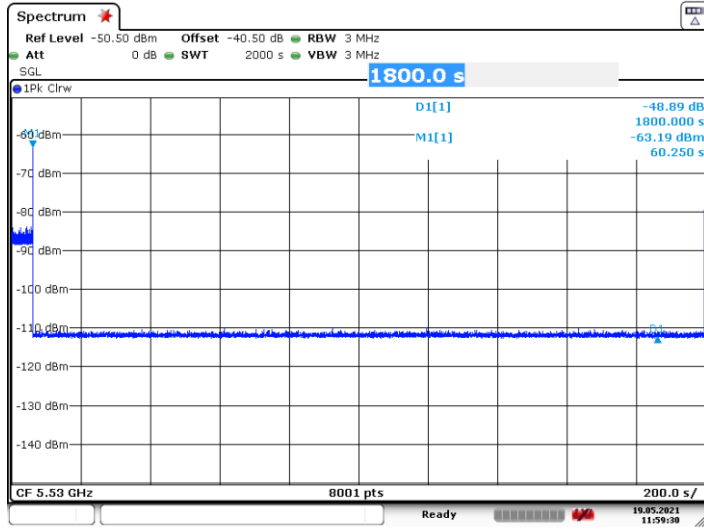
|               |                                                         |           |            |
|---------------|---------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                            | Test Site | SR2        |
| Test Engineer | Eric Lin                                                | Test Date | 2021/05/24 |
| Test Item     | Channel Move Time and Channel Closing Transmission Time |           |            |
| Test Mode     | Mesh Mode, 802.11ax-HE80 mode - 5530MHz                 |           |            |



| Parameter                                        | Test Result | Limit  |
|--------------------------------------------------|-------------|--------|
| Channel Move Time (s)                            | 0.234s      | <10s   |
| Channel Closing Transmission Time (ms)<br>(Note) | 1.5ms       | < 60ms |

Note: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.

|               |                      |           |            |
|---------------|----------------------|-----------|------------|
| Product       | ACCESS POINT         | Test Site | SR2        |
| Test Engineer | Eric Lin             | Test Date | 2021/05/19 |
| Test Item     | Non-Occupancy Period |           |            |

| Non-Occupancy Period                                                                                                                                                                                                                                                                                                                                                                                                          |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|  <p>Spectrum</p> <p>Ref Level -50.50 dBm Offset -40.50 dB RBW 3 MHz</p> <p>Att 0 dB SWT 2000 s VBW 3 MHz</p> <p>SGL</p> <p>1Pk Cnrw</p> <p>1800.0 s</p> <p>D1[1] -48.89 dB 1800.000 s</p> <p>M1[1] -63.19 dBm 60.250 s</p> <p>CF 5.53 GHz 8001 pts 200.0 s/</p> <p>Ready</p> <p>19.MAY.2021 11:59:30</p> <p>Date: 19.MAY.2021 11:59:31</p> |            |
| Test Result                                                                                                                                                                                                                                                                                                                                                                                                                   | Test Limit |
| ≥ 30min                                                                                                                                                                                                                                                                                                                                                                                                                       | ≥ 30 min   |

## 5.8. Statistical Performance Check Measurement

### 5.8.1. Test Limit

The minimum percentage of successful detection requirements found in below table when a radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device (In- Service Monitoring).

| Radar Type                  | Minimum Number of Trails          | Detection Probability |
|-----------------------------|-----------------------------------|-----------------------|
| 0                           | 30                                | Pd > 60%              |
| 1                           | 30(15 of test A and 15 of test B) | Pd > 60%              |
| 2                           | 30                                | Pd > 60%              |
| 3                           | 30                                | Pd > 60%              |
| 4                           | 30                                | Pd > 60%              |
| Aggregate (Radar Types 1-4) | 120                               | Pd > 80%              |
| 5                           | 30                                | Pd > 80%              |
| 6                           | 30                                | Pd > 70%              |

Note: The percentage of successful detection is calculated by:  
 $(\text{Total Waveform Detections} / \text{Total Waveform Trails}) * 100 = \text{Probability of Detection Radar}$   
Waveform In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows:  $(Pd1 + Pd2 + Pd3 + Pd4) / 4$ .

### 5.8.2. Test Procedure

1. Stream the MPEG test file from the Master Device to the Client Device on the test Channel for the entire period of the test.
2. At time T0 the Radar Waveform generator sends the individual waveform for each of the Radar Types 1-6, at levels equal to the DFS Detection Threshold + 1dB, on the Operating Channel.
3. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 10 seconds for Short Pulse Radar Types 0 to ensure detection occurs.
4. Observe the transmissions of the EUT at the end of the Burst on the Operating Channel for duration greater than 22 seconds for Long Pulse Radar Type 5 to ensure detection occurs.
5. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
6. The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in below table.

### 5.8.3. Test Result

|               |                                                               |           |            |
|---------------|---------------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                                  | Test Site | SR2        |
| Test Engineer | Eric Lin                                                      | Test Date | 2020/05/22 |
| Test Item     | Radar Statistical Performance Check (802.11ax-HE20 – 5500MHz) |           |            |

#### Radar Type 1 - Radar Statistical Performance

| Trail # | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|---------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1       | 5490.4              | 1                   | 558      | 95             | 1                             |
| 2       | 5491                | 1                   | 3066     | 18             | 1                             |
| 3       | 5492                | 1                   | 618      | 86             | 1                             |
| 4       | 5500                | 1                   | 598      | 89             | 1                             |
| 5       | 5493                | 1                   | 918      | 58             | 1                             |
| 6       | 5494                | 1                   | 698      | 76             | 1                             |
| 7       | 5496                | 1                   | 518      | 102            | 1                             |
| 8       | 5495                | 1                   | 638      | 83             | 1                             |
| 9       | 5496                | 1                   | 718      | 74             | 0                             |
| 10      | 5504                | 1                   | 778      | 68             | 1                             |
| 11      | 5497                | 1                   | 658      | 81             | 1                             |
| 12      | 5498                | 1                   | 758      | 70             | 1                             |
| 13      | 5502                | 1                   | 858      | 62             | 1                             |
| 14      | 5499                | 1                   | 678      | 78             | 1                             |
| 15      | 5500                | 1                   | 818      | 65             | 1                             |
| 16      | 5492                | 1                   | 2214     | 24             | 1                             |
| 17      | 5501                | 1                   | 602      | 88             | 1                             |
| 18      | 5506                | 1                   | 677      | 78             | 1                             |
| 19      | 5502                | 1                   | 2262     | 24             | 1                             |
| 20      | 5503                | 1                   | 2688     | 20             | 1                             |
| 21      | 5504                | 1                   | 1174     | 45             | 1                             |
| 22      | 5494                | 1                   | 1695     | 32             | 1                             |
| 23      | 5505                | 1                   | 1796     | 30             | 1                             |
| 24      | 5506                | 1                   | 1783     | 30             | 1                             |
| 25      | 5508                | 1                   | 2074     | 26             | 1                             |
| 26      | 5507                | 1                   | 761      | 70             | 1                             |

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 27                       | 5498                | 1                   | 1613     | 33             | 1                             |
| 28                       | 5508                | 1                   | 1250     | 43             | 1                             |
| 29                       | 5509                | 1                   | 2964     | 18             | 1                             |
| 30                       | 5509.6              | 1                   | 2242     | 24             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 96.7%                         |

## Radar Type 2 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5490.4              | 4.6                 | 181      | 25             | 1                             |
| 2                        | 5491                | 2.0                 | 196      | 26             | 1                             |
| 3                        | 5492                | 2.1                 | 158      | 27             | 0                             |
| 4                        | 5500                | 2.8                 | 199      | 29             | 1                             |
| 5                        | 5493                | 4.2                 | 226      | 27             | 1                             |
| 6                        | 5494                | 4.2                 | 219      | 26             | 1                             |
| 7                        | 5509                | 3.8                 | 209      | 28             | 1                             |
| 8                        | 5495                | 2.2                 | 169      | 26             | 1                             |
| 9                        | 5496                | 1.6                 | 218      | 25             | 1                             |
| 10                       | 5504                | 3.1                 | 162      | 27             | 1                             |
| 11                       | 5497                | 1.8                 | 150      | 23             | 0                             |
| 12                       | 5506                | 3.2                 | 172      | 29             | 1                             |
| 13                       | 5508                | 1.5                 | 155      | 25             | 0                             |
| 14                       | 5499                | 1.3                 | 159      | 26             | 1                             |
| 15                       | 5500                | 1.9                 | 219      | 26             | 1                             |
| 16                       | 5492                | 3.8                 | 154      | 23             | 1                             |
| 17                       | 5501                | 2.2                 | 226      | 24             | 1                             |
| 18                       | 5506                | 4.6                 | 189      | 27             | 0                             |
| 19                       | 5502                | 2.6                 | 220      | 29             | 1                             |
| 20                       | 5503                | 1.3                 | 191      | 24             | 0                             |
| 21                       | 5504                | 3.4                 | 166      | 28             | 1                             |
| 22                       | 5494                | 3.2                 | 221      | 28             | 1                             |
| 23                       | 5505                | 3.1                 | 174      | 28             | 1                             |
| 24                       | 5498                | 4.1                 | 183      | 23             | 0                             |
| 25                       | 5502                | 2.6                 | 174      | 27             | 1                             |
| 26                       | 5507                | 2.3                 | 181      | 23             | 0                             |
| 27                       | 5498                | 3.8                 | 195      | 24             | 1                             |
| 28                       | 5508                | 4.3                 | 161      | 29             | 0                             |
| 29                       | 5496                | 1.1                 | 205      | 27             | 1                             |
| 30                       | 5509.6              | 1.8                 | 159      | 27             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 73.3%                         |

## Radar Type 3 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5490.4              | 8.7                 | 328      | 16             | 1                             |
| 2                        | 5491                | 6.2                 | 466      | 17             | 1                             |
| 3                        | 5503                | 6.7                 | 440      | 17             | 0                             |
| 4                        | 5500                | 9.3                 | 264      | 18             | 1                             |
| 5                        | 5506                | 9.9                 | 366      | 16             | 1                             |
| 6                        | 5508                | 6.5                 | 374      | 17             | 1                             |
| 7                        | 5493                | 9.2                 | 224      | 18             | 1                             |
| 8                        | 5495                | 9.2                 | 371      | 16             | 1                             |
| 9                        | 5496                | 8.6                 | 418      | 17             | 1                             |
| 10                       | 5504                | 6.2                 | 348      | 17             | 0                             |
| 11                       | 5497                | 6.3                 | 416      | 17             | 1                             |
| 12                       | 5498                | 6.9                 | 452      | 18             | 1                             |
| 13                       | 5502                | 7.5                 | 311      | 17             | 1                             |
| 14                       | 5499                | 8.7                 | 346      | 17             | 1                             |
| 15                       | 5500                | 6.7                 | 262      | 16             | 1                             |
| 16                       | 5492                | 6.7                 | 378      | 18             | 0                             |
| 17                       | 5501                | 9.2                 | 402      | 17             | 1                             |
| 18                       | 5506                | 6.1                 | 363      | 16             | 1                             |
| 19                       | 5502                | 8.7                 | 398      | 16             | 1                             |
| 20                       | 5492                | 6.3                 | 409      | 18             | 0                             |
| 21                       | 5504                | 8.6                 | 326      | 18             | 1                             |
| 22                       | 5494                | 7.3                 | 397      | 18             | 0                             |
| 23                       | 5505                | 8.3                 | 345      | 16             | 0                             |
| 24                       | 5507                | 8.9                 | 305      | 16             | 0                             |
| 25                       | 5494                | 9.2                 | 330      | 16             | 1                             |
| 26                       | 5496                | 6.8                 | 211      | 18             | 1                             |
| 27                       | 5498                | 8.1                 | 426      | 17             | 1                             |
| 28                       | 5508                | 9.0                 | 234      | 17             | 1                             |
| 29                       | 5509                | 9.4                 | 223      | 17             | 1                             |
| 30                       | 5509.6              | 7.4                 | 365      | 17             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 76.7%                         |

## Radar Type 4 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5490.4              | 15.1                | 255      | 13             | 1                             |
| 2                        | 5491                | 16.0                | 372      | 15             | 1                             |
| 3                        | 5503                | 12.2                | 483      | 12             | 1                             |
| 4                        | 5500                | 17.1                | 414      | 14             | 0                             |
| 5                        | 5493                | 16.2                | 353      | 14             | 1                             |
| 6                        | 5507                | 13.7                | 417      | 14             | 0                             |
| 7                        | 5494                | 12.7                | 428      | 14             | 1                             |
| 8                        | 5508                | 11.5                | 396      | 13             | 1                             |
| 9                        | 5496                | 18.7                | 244      | 12             | 1                             |
| 10                       | 5504                | 16.3                | 482      | 16             | 0                             |
| 11                       | 5501                | 14.3                | 201      | 15             | 1                             |
| 12                       | 5498                | 11.6                | 297      | 16             | 0                             |
| 13                       | 5502                | 20.0                | 201      | 16             | 1                             |
| 14                       | 5499                | 15.6                | 236      | 14             | 1                             |
| 15                       | 5500                | 16.3                | 448      | 12             | 1                             |
| 16                       | 5492                | 19.8                | 388      | 12             | 1                             |
| 17                       | 5497                | 11.7                | 377      | 13             | 1                             |
| 18                       | 5506                | 11.0                | 357      | 13             | 1                             |
| 19                       | 5502                | 14.3                | 454      | 13             | 1                             |
| 20                       | 5492                | 13.3                | 249      | 13             | 0                             |
| 21                       | 5504                | 17.7                | 278      | 15             | 1                             |
| 22                       | 5494                | 12.9                | 358      | 15             | 1                             |
| 23                       | 5505                | 15.8                | 240      | 13             | 1                             |
| 24                       | 5495                | 15.9                | 454      | 14             | 1                             |
| 25                       | 5506                | 20.0                | 222      | 13             | 1                             |
| 26                       | 5496                | 13.3                | 437      | 14             | 1                             |
| 27                       | 5509                | 12.8                | 391      | 15             | 0                             |
| 28                       | 5498                | 13.7                | 219      | 14             | 1                             |
| 29                       | 5508                | 14.4                | 293      | 15             | 0                             |
| 30                       | 5509.6              | 15.3                | 254      | 13             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 76.7%                         |

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (96.7\% + 73.3\% + 76.7\% + 76.7\%) / 4 = 80.9\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5500                | 1                             | 16      | 5495.6              | 0                             |
| 2                        | 5500                | 1                             | 17      | 5503.6              | 1                             |
| 3                        | 5500                | 1                             | 18      | 5494.4              | 1                             |
| 4                        | 5500                | 1                             | 19      | 5492.8              | 0                             |
| 5                        | 5500                | 1                             | 20      | 5506.4              | 1                             |
| 6                        | 5500                | 1                             | 21      | 5504.4              | 1                             |
| 7                        | 5500                | 1                             | 22      | 5494.4              | 1                             |
| 8                        | 5500                | 1                             | 23      | 5504.8              | 1                             |
| 9                        | 5500                | 1                             | 24      | 5497.2              | 1                             |
| 10                       | 5500                | 1                             | 25      | 5504.4              | 1                             |
| 11                       | 5492.8              | 1                             | 26      | 5492.8              | 1                             |
| 12                       | 5498                | 1                             | 27      | 5504.8              | 1                             |
| 13                       | 5504.4              | 1                             | 28      | 5497.2              | 1                             |
| 14                       | 5507.2              | 1                             | 29      | 5506.8              | 1                             |
| 15                       | 5493.2              | 1                             | 30      | 5502                | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 93.3%                         |

| Type 5 Radar Waveform_1 |                     |                          |                      |                               |                               |                                             |
|-------------------------|---------------------|--------------------------|----------------------|-------------------------------|-------------------------------|---------------------------------------------|
| Burst                   | Number of<br>Pulses | Pulse<br>Width<br>(µsec) | Chirp Width<br>(MHz) | Pulse 1-to-2<br>PRI<br>(µsec) | Pulse 2-to-3<br>PRI<br>(µsec) | Start Location<br>Within Interval<br>(msec) |
| 1                       | 2                   | 67.8                     | 15                   | 1571                          |                               | 238.43                                      |
| 2                       | 1                   | 70.1                     | 15                   |                               |                               | 372.161                                     |
| 3                       | 2                   | 74.2                     | 15                   | 1966                          |                               | 558.632                                     |
| 4                       | 3                   | 60.5                     | 15                   | 1795                          | 1893                          | 8.273                                       |
| 5                       | 1                   | 77.6                     | 15                   |                               |                               | 414.114                                     |
| 6                       | 1                   | 78.4                     | 15                   |                               |                               | 396.395                                     |
| 7                       | 2                   | 73                       | 15                   | 1998                          |                               | 584.975                                     |
| 8                       | 1                   | 73.2                     | 15                   |                               |                               | 368.906                                     |
| 9                       | 3                   | 60.4                     | 15                   | 1801                          | 1945                          | 904.087                                     |
| 10                      | 2                   | 99.6                     | 15                   | 1983                          |                               | 863.218                                     |
| 11                      | 2                   | 80.1                     | 15                   | 1172                          |                               | 879.609                                     |

Type 5 Radar Waveform\_2

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 63.2               | 18                | 1165                    |                         | 145.295                               |
| 2     | 1                | 82.7               | 18                |                         |                         | 13.87                                 |
| 3     | 3                | 88.3               | 18                | 1172                    | 1261                    | 468.95                                |
| 4     | 1                | 98.9               | 18                |                         |                         | 27.51                                 |
| 5     | 3                | 73.4               | 18                | 1797                    | 1473                    | 269.45                                |
| 6     | 2                | 81                 | 18                | 1393                    |                         | 850.92                                |
| 7     | 2                | 73.8               | 18                | 1027                    |                         | 87.5                                  |
| 8     | 2                | 82.8               | 18                | 1089                    |                         | 202.62                                |
| 9     | 2                | 56.6               | 18                | 1012                    |                         | 183.39                                |
| 10    | 2                | 70.2               | 18                | 1846                    |                         | 216.04                                |
| 11    | 3                | 56.5               | 18                | 1740                    | 1750                    | 840.4                                 |
| 12    | 1                | 92                 | 18                |                         |                         | 763.2                                 |

Type 5 Radar Waveform\_3

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 54                 | 5                 | 1853                    |                         | 588.634                               |
| 2     | 2                | 79.2               | 5                 | 1741                    |                         | 493.02                                |
| 3     | 1                | 94.7               | 5                 |                         |                         | 306.33                                |
| 4     | 2                | 50                 | 5                 | 1398                    |                         | 122.35                                |
| 5     | 3                | 76.7               | 5                 | 1994                    | 1920                    | 520.64                                |
| 6     | 2                | 93.4               | 5                 | 1831                    |                         | 508.54                                |
| 7     | 1                | 55.6               | 5                 |                         |                         | 185.19                                |
| 8     | 2                | 94                 | 5                 | 1107                    |                         | 300.72                                |
| 9     | 2                | 76.3               | 5                 | 1341                    |                         | 500.51                                |
| 10    | 2                | 71.5               | 5                 | 1236                    |                         | 492.68                                |
| 11    | 2                | 71.1               | 5                 | 1185                    |                         | 183.03                                |
| 12    | 3                | 69.8               | 5                 | 1177                    | 1291                    | 152.22                                |
| 13    | 3                | 70                 | 5                 | 1506                    | 1363                    | 9.19                                  |
| 14    | 3                | 52.8               | 5                 | 1254                    | 1976                    | 359.28                                |
| 15    | 2                | 94.4               | 5                 | 1908                    |                         | 386.42                                |
| 16    | 3                | 90.7               | 5                 | 1275                    | 1111                    | 524.57                                |
| 17    | 2                | 92.2               | 5                 | 1328                    |                         | 114.26                                |
| 18    | 1                | 77.2               | 5                 |                         |                         | 395.3                                 |
| 19    | 3                | 66.8               | 5                 | 1214                    | 1008                    | 501.6                                 |
| 20    | 3                | 56.1               | 5                 | 1345                    | 1002                    | 555.2                                 |

Type 5 Radar Waveform\_4

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 81.9               | 16                | 1284                    |                         | 676.237                               |
| 2     | 2                | 86.7               | 16                | 1195                    |                         | 420.41                                |
| 3     | 2                | 96.5               | 16                | 1966                    |                         | 588.45                                |
| 4     | 3                | 54.2               | 16                | 1384                    | 1833                    | 426.83                                |
| 5     | 2                | 80.9               | 16                | 1136                    |                         | 606.13                                |
| 6     | 1                | 57.7               | 16                |                         |                         | 563.31                                |
| 7     | 2                | 50                 | 16                | 1700                    |                         | 12.43                                 |
| 8     | 3                | 50.7               | 16                | 1052                    | 1490                    | 484.25                                |
| 9     | 2                | 87.9               | 16                | 1206                    |                         | 180.25                                |
| 10    | 2                | 83.1               | 16                | 1378                    |                         | 748.85                                |
| 11    | 2                | 54.3               | 16                | 1240                    |                         | 530.76                                |
| 12    | 2                | 79.6               | 16                | 1448                    |                         | 343.87                                |
| 13    | 2                | 70.4               | 16                | 1117                    |                         | 568.1                                 |
| 14    | 2                | 94.3               | 16                | 1743                    |                         | 205                                   |
| 15    | 1                | 99                 | 16                |                         |                         | 167.4                                 |

Type 5 Radar Waveform\_5

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 63.4               | 17                |                         |                         | 394.109                               |
| 2     | 3                | 77.8               | 17                | 1188                    | 1192                    | 792.381                               |
| 3     | 2                | 80.8               | 17                | 1947                    |                         | 849.762                               |
| 4     | 3                | 86.3               | 17                | 1344                    | 1130                    | 180.093                               |
| 5     | 2                | 79.7               | 17                | 1959                    |                         | 746.334                               |
| 6     | 2                | 67.2               | 17                | 1971                    |                         | 689.965                               |
| 7     | 3                | 68.8               | 17                | 1107                    | 1092                    | 187.165                               |
| 8     | 2                | 99.8               | 17                | 1783                    |                         | 200.386                               |
| 9     | 1                | 67.4               | 17                |                         |                         | 107.247                               |
| 10    | 1                | 77.5               | 17                |                         |                         | 239.518                               |
| 11    | 1                | 78.5               | 17                |                         |                         | 543.509                               |

Type 5 Radar Waveform\_6

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 62.8               | 5                 |                         |                         | 947.2                                 |
| 2     | 3                | 74                 | 5                 | 1625                    | 1005                    | 344.77                                |
| 3     | 3                | 91.6               | 5                 | 1756                    | 1830                    | 152.29                                |
| 4     | 2                | 74.3               | 5                 | 1316                    |                         | 992.03                                |
| 5     | 3                | 51.7               | 5                 | 1290                    | 1703                    | 43.8                                  |
| 6     | 1                | 50.7               | 5                 |                         |                         | 541.91                                |
| 7     | 2                | 74.5               | 5                 | 1320                    |                         | 171.01                                |
| 8     | 1                | 93.7               | 5                 |                         |                         | 114.86                                |
| 9     | 2                | 79.2               | 5                 | 1703                    |                         | 957.77                                |
| 10    | 2                | 83.3               | 5                 | 1743                    |                         | 82.4                                  |
| 11    | 3                | 82.9               | 5                 | 1602                    | 1769                    | 158.6                                 |
| 12    | 2                | 62.9               | 5                 | 1763                    |                         | 575.4                                 |

Type 5 Radar Waveform\_7

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 74.8               | 8                 |                         |                         | 555.434                               |
| 2     | 1                | 69.5               | 8                 |                         |                         | 157.852                               |
| 3     | 1                | 65.6               | 8                 |                         |                         | 135.652                               |
| 4     | 1                | 71.5               | 8                 |                         |                         | 1.303                                 |
| 5     | 3                | 60.4               | 8                 | 1785                    | 1162                    | 26.334                                |
| 6     | 2                | 90                 | 8                 | 1297                    |                         | 275.025                               |
| 7     | 3                | 57.1               | 8                 | 1203                    | 1441                    | 585.496                               |
| 8     | 2                | 67.2               | 8                 | 1666                    |                         | 428.007                               |
| 9     | 2                | 54                 | 8                 | 1985                    |                         | 336.948                               |
| 10    | 2                | 81.8               | 8                 | 1794                    |                         | 399.249                               |
| 11    | 2                | 73.8               | 8                 | 1663                    |                         | 390.351                               |
| 12    | 3                | 73.5               | 8                 | 1646                    | 1736                    | 303.252                               |
| 13    | 2                | 71.5               | 8                 | 1947                    |                         | 569.523                               |
| 14    | 2                | 78.2               | 8                 | 1815                    |                         | 259.524                               |
| 15    | 3                | 77.9               | 8                 | 1827                    | 1158                    | 199.305                               |
| 16    | 1                | 95.1               | 8                 |                         |                         | 42.266                                |
| 17    | 1                | 97.8               | 8                 |                         |                         | 442.537                               |
| 18    | 2                | 64.2               | 8                 | 1457                    |                         | 201.158                               |
| 19    | 2                | 65.8               | 8                 | 1433                    |                         | 613.779                               |

Type 5 Radar Waveform\_8

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 Spacing (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-----------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 50.9               | 13                | 1109                        |                         | 1015.16                               |
| 2     | 3                | 53.1               | 13                | 1377                        | 1144                    | 669.79                                |
| 3     | 3                | 60.1               | 13                | 1944                        | 1724                    | 872.19                                |
| 4     | 2                | 93.4               | 13                | 1589                        |                         | 94.25                                 |
| 5     | 2                | 64.9               | 13                | 1760                        |                         | 935.75                                |
| 6     | 3                | 91.3               | 13                | 1819                        | 1207                    | 465.61                                |
| 7     | 2                | 94.5               | 13                | 1158                        |                         | 720.39                                |
| 8     | 1                | 70.1               | 13                |                             |                         | 368.21                                |
| 9     | 3                | 88.3               | 13                | 1147                        | 1653                    | 492.3                                 |
| 10    | 2                | 83.3               | 13                | 1818                        |                         | 753.2                                 |

Type 5 Radar Waveform\_9

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 50.6               | 13                |                         |                         | 158.277                               |
| 2     | 2                | 63.4               | 13                | 1222                    |                         | 456.503                               |
| 3     | 2                | 90.1               | 13                | 1335                    |                         | 843.126                               |
| 4     | 3                | 81.8               | 13                | 1781                    | 1897                    | 759.249                               |
| 5     | 1                | 90.5               | 13                |                         |                         | 691.562                               |
| 6     | 2                | 65.7               | 13                | 1646                    |                         | 775.805                               |
| 7     | 2                | 89                 | 13                | 1837                    |                         | 673.768                               |
| 8     | 3                | 53                 | 13                | 1448                    | 1774                    | 528.982                               |
| 9     | 2                | 90.3               | 13                | 1065                    |                         | 479.825                               |
| 10    | 2                | 82.2               | 13                | 1151                    |                         | 383.738                               |
| 11    | 3                | 60.7               | 13                | 1303                    | 1922                    | 451.201                               |
| 12    | 2                | 66.2               | 13                | 1504                    |                         | 467.354                               |
| 13    | 2                | 70.5               | 13                | 1322                    |                         | 136.777                               |

Type 5 Radar Waveform\_10

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 89.4               | 5                 | 1545                    |                         | 50.665                                |
| 2     | 1                | 85.4               | 5                 |                         |                         | 688.03                                |
| 3     | 2                | 73.9               | 5                 | 1529                    |                         | 744.27                                |
| 4     | 1                | 87.9               | 5                 |                         |                         | 332.99                                |
| 5     | 3                | 87.2               | 5                 | 1680                    | 1656                    | 745.56                                |
| 6     | 3                | 93.8               | 5                 | 1918                    | 1490                    | 790.82                                |
| 7     | 1                | 75.5               | 5                 |                         |                         | 713.23                                |
| 8     | 1                | 74                 | 5                 |                         |                         | 62.67                                 |
| 9     | 2                | 62.7               | 5                 | 1729                    |                         | 91.51                                 |
| 10    | 2                | 50.9               | 5                 | 1607                    |                         | 518                                   |
| 11    | 3                | 82.2               | 5                 | 1774                    | 1288                    | 483.17                                |
| 12    | 2                | 71                 | 5                 | 1704                    |                         | 73.61                                 |
| 13    | 2                | 83.2               | 5                 | 1880                    |                         | 287.96                                |
| 14    | 1                | 59.4               | 5                 |                         |                         | 477.9                                 |
| 15    | 1                | 58.5               | 5                 |                         |                         | 675.6                                 |

Type 5 Radar Waveform\_11

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 61.3               | 6                 | 1785                    | 1148                    | 648.366                               |
| 2     | 1                | 93.8               | 6                 |                         |                         | 120.717                               |
| 3     | 2                | 51.6               | 6                 | 1457                    |                         | 558.985                               |
| 4     | 2                | 82.2               | 6                 | 1739                    |                         | 299.323                               |
| 5     | 2                | 95.4               | 6                 | 1776                    |                         | 459.971                               |
| 6     | 3                | 82.1               | 6                 | 1494                    | 1178                    | 205.928                               |
| 7     | 2                | 77.4               | 6                 | 1616                    |                         | 472.696                               |
| 8     | 2                | 92.7               | 6                 | 1334                    |                         | 113.364                               |
| 9     | 2                | 55.7               | 6                 | 1819                    |                         | 296.141                               |
| 10    | 2                | 55.4               | 6                 | 1581                    |                         | 174.209                               |
| 11    | 2                | 98.8               | 6                 | 1339                    |                         | 466.846                               |
| 12    | 2                | 57.6               | 6                 | 1222                    |                         | 204.904                               |
| 13    | 3                | 79.1               | 6                 | 1803                    | 1122                    | 571.592                               |
| 14    | 2                | 79.7               | 6                 | 1278                    |                         | 11.479                                |
| 15    | 2                | 64.7               | 6                 | 1761                    |                         | 672.147                               |
| 16    | 2                | 72.3               | 6                 | 1342                    |                         | 130.065                               |
| 17    | 2                | 67.9               | 6                 | 1251                    |                         | 242.282                               |

Type 5 Radar Waveform\_12

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 99.3               | 19                |                         |                         | 1113.87                               |
| 2     | 3                | 60.5               | 19                | 1753                    | 1117                    | 913.8                                 |
| 3     | 2                | 86.8               | 19                | 1618                    |                         | 1178.31                               |
| 4     | 2                | 83.5               | 19                | 1031                    |                         | 214.19                                |
| 5     | 2                | 97.7               | 19                | 1617                    |                         | 307.51                                |
| 6     | 2                | 81.7               | 19                | 1329                    |                         | 481.32                                |
| 7     | 2                | 71                 | 19                | 1282                    |                         | 1107.77                               |
| 8     | 2                | 83.2               | 19                | 1387                    |                         | 568.33                                |
| 9     | 1                | 54.5               | 19                |                         |                         | 50.42                                 |
| 10    | 2                | 57                 | 19                | 1250                    |                         | 1171.3                                |

Type 5 Radar Waveform\_13

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 100                | 17                | 1339                    |                         | 468.26                                |
| 2     | 3                | 96.4               | 17                | 1025                    | 1137                    | 2.889                                 |
| 3     | 1                | 90.3               | 17                |                         |                         | 435.247                               |
| 4     | 3                | 99.4               | 17                | 1743                    | 1780                    | 61.56                                 |
| 5     | 2                | 74.3               | 17                | 1163                    |                         | 162.933                               |
| 6     | 2                | 93.4               | 17                | 1654                    |                         | 106.827                               |
| 7     | 3                | 77.6               | 17                | 1185                    | 1310                    | 581.76                                |
| 8     | 2                | 71.2               | 17                | 1867                    |                         | 604.823                               |
| 9     | 2                | 99.2               | 17                | 1752                    |                         | 429.747                               |
| 10    | 1                | 76.7               | 17                |                         |                         | 249.96                                |
| 11    | 2                | 55.4               | 17                | 1273                    |                         | 603.053                               |
| 12    | 3                | 73.8               | 17                | 1617                    | 1357                    | 559.637                               |
| 13    | 3                | 70.1               | 17                | 1728                    | 1415                    | 578.6                                 |
| 14    | 2                | 76                 | 17                | 1930                    |                         | 321.333                               |
| 15    | 1                | 79.1               | 17                |                         |                         | 247.897                               |
| 16    | 2                | 71.2               | 17                | 1713                    |                         | 442.8                                 |
| 17    | 3                | 68.9               | 17                | 1016                    | 1831                    | 55.333                                |
| 18    | 2                | 59.4               | 17                | 1106                    |                         | 127.467                               |

Type 5 Radar Waveform\_14

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 59.7               | 10                | 1003                    |                         | 589.056                               |
| 2     | 3                | 75.3               | 10                | 1588                    | 1575                    | 1249.27                               |
| 3     | 3                | 80.6               | 10                | 1308                    | 1387                    | 898.58                                |
| 4     | 2                | 59.1               | 10                | 1775                    |                         | 235.58                                |
| 5     | 3                | 97.6               | 10                | 1452                    | 1214                    | 1355.22                               |
| 6     | 2                | 87.8               | 10                | 1276                    |                         | 939.08                                |
| 7     | 2                | 78.8               | 10                | 1938                    |                         | 1368.5                                |
| 8     | 3                | 82.6               | 10                | 1135                    | 1691                    | 559.9                                 |

Type 5 Radar Waveform\_15

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 64.9               | 7                 | 1512                    |                         | 621.451                               |
| 2     | 1                | 78.4               | 7                 |                         |                         | 79.087                                |
| 3     | 2                | 62.3               | 7                 | 1714                    |                         | 594.433                               |
| 4     | 1                | 67.8               | 7                 |                         |                         | 1092.77                               |
| 5     | 1                | 98                 | 7                 |                         |                         | 665.447                               |
| 6     | 1                | 92.5               | 7                 |                         |                         | 1295.773                              |
| 7     | 3                | 74.3               | 7                 | 1065                    | 1697                    | 1131.09                               |
| 8     | 2                | 64.6               | 7                 | 1558                    |                         | 565.077                               |
| 9     | 1                | 72.1               | 7                 |                         |                         | 400.333                               |

Type 5 Radar Waveform\_16

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 62.4               | 13                | 1071                    |                         | 1167.13                               |
| 2     | 1                | 81.1               | 13                |                         |                         | 84.4                                  |
| 3     | 2                | 56.1               | 13                | 1437                    |                         | 1029.22                               |
| 4     | 2                | 91.3               | 13                | 1207                    |                         | 1125.82                               |
| 5     | 3                | 65                 | 13                | 1119                    | 1476                    | 1168.31                               |
| 6     | 2                | 65.6               | 13                | 1447                    |                         | 1038.67                               |
| 7     | 3                | 51.9               | 13                | 1535                    | 1460                    | 1193.13                               |
| 8     | 2                | 54.7               | 13                | 1889                    |                         | 645.21                                |
| 9     | 3                | 71.6               | 13                | 1925                    | 1581                    | 299.62                                |
| 10    | 2                | 77.9               | 13                | 1772                    |                         | 530                                   |

Type 5 Radar Waveform\_17

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 75.9               | 6                 | 1541                    |                         | 221.222                               |
| 2     | 1                | 51.7               | 6                 |                         |                         | 269.197                               |
| 3     | 2                | 94.7               | 6                 | 1506                    |                         | 39.724                                |
| 4     | 3                | 84                 | 6                 | 1019                    | 1163                    | 144.931                               |
| 5     | 3                | 71                 | 6                 | 1320                    | 1375                    | 564.379                               |
| 6     | 2                | 54                 | 6                 | 1996                    |                         | 671.786                               |
| 7     | 1                | 95.1               | 6                 |                         |                         | 352.823                               |
| 8     | 3                | 51.8               | 6                 | 1462                    | 1255                    | 344.4                                 |
| 9     | 2                | 70.8               | 6                 | 1768                    |                         | 57.997                                |
| 10    | 2                | 63.9               | 6                 | 1312                    |                         | 668.164                               |
| 11    | 3                | 94.8               | 6                 | 1382                    | 1097                    | 0.341                                 |
| 12    | 1                | 80.6               | 6                 |                         |                         | 90.209                                |
| 13    | 2                | 99.3               | 6                 | 1554                    |                         | 491.686                               |
| 14    | 1                | 85.2               | 6                 |                         |                         | 468.143                               |

Type 5 Radar Waveform\_18

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 50.2               | 10                | 1628                    |                         | 1032.07                               |
| 2     | 2                | 57.7               | 10                | 1820                    |                         | 84.127                                |
| 3     | 1                | 80.9               | 10                |                         |                         | 1262.903                              |
| 4     | 3                | 77.4               | 10                | 1899                    | 1773                    | 1133.38                               |
| 5     | 2                | 95.2               | 10                | 1932                    |                         | 1246.397                              |
| 6     | 1                | 99.7               | 10                |                         |                         | 343.813                               |
| 7     | 2                | 77.5               | 10                | 1445                    |                         | 704.65                                |
| 8     | 2                | 63.1               | 10                | 1971                    |                         | 741.467                               |
| 9     | 3                | 78.1               | 10                | 1881                    | 1515                    | 591.233                               |

Type 5 Radar Waveform\_19

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 87.5               | 6                 |                         |                         | 866.986                               |
| 2     | 2                | 54.5               | 6                 | 1710                    |                         | 442.5                                 |
| 3     | 3                | 80.8               | 6                 | 1616                    | 1679                    | 725.51                                |
| 4     | 1                | 94.7               | 6                 |                         |                         | 23.05                                 |
| 5     | 1                | 78.9               | 6                 |                         |                         | 651.88                                |
| 6     | 3                | 84.7               | 6                 | 1311                    | 1829                    | 421.19                                |
| 7     | 2                | 78.9               | 6                 | 1178                    |                         | 1031.16                               |
| 8     | 2                | 82.5               | 6                 | 1433                    |                         | 653.31                                |
| 9     | 2                | 51                 | 6                 | 1114                    |                         | 162.49                                |
| 10    | 1                | 93.5               | 6                 |                         |                         | 648.3                                 |

Type 5 Radar Waveform\_20

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 93.3               | 17                |                         |                         | 645.792                               |
| 2     | 3                | 69.2               | 17                | 1597                    | 1536                    | 374.77                                |
| 3     | 3                | 81.5               | 17                | 1326                    | 1310                    | 1186.35                               |
| 4     | 2                | 55.2               | 17                | 1883                    |                         | 96.64                                 |
| 5     | 1                | 62                 | 17                |                         |                         | 757.72                                |
| 6     | 3                | 65.7               | 17                | 1626                    | 1050                    | 177.3                                 |
| 7     | 2                | 64.7               | 17                | 1704                    |                         | 182.98                                |
| 8     | 2                | 60                 | 17                | 1945                    |                         | 277.05                                |
| 9     | 3                | 55.6               | 17                | 1293                    | 1865                    | 22.29                                 |
| 10    | 2                | 64.3               | 17                | 1584                    |                         | 865.9                                 |

Type 5 Radar Waveform\_21

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 96.6               | 7                 | 1900                    |                         | 808.009                               |
| 2     | 3                | 74.7               | 7                 | 1916                    | 1443                    | 484.983                               |
| 3     | 2                | 79                 | 7                 | 1236                    |                         | 153.856                               |
| 4     | 2                | 85.1               | 7                 | 1495                    |                         | 169.449                               |
| 5     | 3                | 79                 | 7                 | 1136                    | 1608                    | 753.072                               |
| 6     | 2                | 61.5               | 7                 | 1819                    |                         | 88.015                                |
| 7     | 2                | 87.7               | 7                 | 1287                    |                         | 770.988                               |
| 8     | 1                | 84.8               | 7                 |                         |                         | 306.982                               |
| 9     | 1                | 65.2               | 7                 |                         |                         | 438.465                               |
| 10    | 2                | 76.4               | 7                 | 1818                    |                         | 420.788                               |
| 11    | 1                | 67.6               | 7                 |                         |                         | 754.201                               |
| 12    | 3                | 73.6               | 7                 | 1408                    | 1572                    | 249.054                               |
| 13    | 2                | 90.1               | 7                 | 1648                    |                         | 418.977                               |

Type 5 Radar Waveform\_22

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 53                 | 13                | 1141                    |                         | 730.702                               |
| 2     | 1                | 56.3               | 13                |                         |                         | 839.057                               |
| 3     | 2                | 65.1               | 13                | 1624                    |                         | 1244.813                              |
| 4     | 3                | 53.6               | 13                | 1058                    | 1709                    | 81.38                                 |
| 5     | 1                | 81.9               | 13                |                         |                         | 1097.857                              |
| 6     | 2                | 59.4               | 13                | 1326                    |                         | 224.223                               |
| 7     | 2                | 99.1               | 13                | 1780                    |                         | 395.23                                |
| 8     | 3                | 58.6               | 13                | 1547                    | 1103                    | 58.097                                |
| 9     | 3                | 98.9               | 13                | 1017                    | 1166                    | 1235.933                              |

Type 5 Radar Waveform\_23

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 90.8               | 12                | 1108                    |                         | 393.289                               |
| 2     | 2                | 89.3               | 12                | 1027                    |                         | 422.85                                |
| 3     | 2                | 56.8               | 12                | 1041                    |                         | 213.02                                |
| 4     | 2                | 70.3               | 12                | 1707                    |                         | 59.43                                 |
| 5     | 2                | 98.2               | 12                | 1364                    |                         | 509.73                                |
| 6     | 3                | 69.8               | 12                | 1275                    | 1537                    | 387.5                                 |
| 7     | 1                | 94.5               | 12                |                         |                         | 360.04                                |
| 8     | 2                | 95.6               | 12                | 1237                    |                         | 472.8                                 |
| 9     | 2                | 66.3               | 12                | 1333                    |                         | 733.91                                |
| 10    | 2                | 99.3               | 12                | 1038                    |                         | 284.56                                |
| 11    | 3                | 72.7               | 12                | 1136                    | 1553                    | 264.26                                |
| 12    | 1                | 58.5               | 12                |                         |                         | 578.46                                |
| 13    | 2                | 65.5               | 12                | 1918                    |                         | 530.2                                 |
| 14    | 2                | 73.4               | 12                | 1185                    |                         | 616.9                                 |
| 15    | 2                | 60.7               | 12                | 1386                    |                         | 101.4                                 |
| 16    | 1                | 56                 | 12                |                         |                         | 123.1                                 |

Type 5 Radar Waveform\_24

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 80.8               | 8                 | 1851                    |                         | 620.323                               |
| 2     | 1                | 74.3               | 8                 |                         |                         | 71.461                                |
| 3     | 2                | 97.6               | 8                 | 1561                    |                         | 234.815                               |
| 4     | 3                | 87.1               | 8                 | 1152                    | 1256                    | 559.573                               |
| 5     | 2                | 60.4               | 8                 | 1254                    |                         | 24.391                                |
| 6     | 2                | 60                 | 8                 | 1451                    |                         | 465.268                               |
| 7     | 2                | 59.2               | 8                 | 1171                    |                         | 115.856                               |
| 8     | 3                | 65.6               | 8                 | 1212                    | 1625                    | 650.654                               |
| 9     | 2                | 58.9               | 8                 | 1454                    |                         | 557.901                               |
| 10    | 1                | 60.8               | 8                 |                         |                         | 460.749                               |
| 11    | 3                | 76.9               | 8                 | 1204                    | 1302                    | 631.846                               |
| 12    | 2                | 59                 | 8                 | 1564                    |                         | 40.984                                |
| 13    | 3                | 64.3               | 8                 | 1082                    | 1563                    | 586.372                               |
| 14    | 2                | 58.9               | 8                 | 1257                    |                         | 692.519                               |
| 15    | 2                | 79.4               | 8                 | 1091                    |                         | 251.547                               |
| 16    | 2                | 58.1               | 8                 | 1352                    |                         | 424.065                               |
| 17    | 2                | 54.7               | 8                 | 1964                    |                         | 45.882                                |

Type 5 Radar Waveform\_25

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 78.7               | 13                | 1490                    |                         | 257.456                               |
| 2     | 3                | 85.4               | 13                | 1594                    | 1808                    | 94.105                                |
| 3     | 3                | 53.2               | 13                | 1999                    | 1438                    | 618.817                               |
| 4     | 1                | 91.3               | 13                |                         |                         | 568.79                                |
| 5     | 3                | 99.8               | 13                | 1385                    | 1809                    | 10.933                                |
| 6     | 2                | 55.1               | 13                | 1552                    |                         | 124.887                               |
| 7     | 1                | 92.9               | 13                |                         |                         | 232.3                                 |
| 8     | 3                | 88.7               | 13                | 1158                    | 1453                    | 60.283                                |
| 9     | 1                | 57                 | 13                |                         |                         | 25.797                                |
| 10    | 1                | 72.6               | 13                |                         |                         | 195.11                                |
| 11    | 3                | 60.6               | 13                | 1921                    | 1705                    | 242.603                               |
| 12    | 3                | 84.4               | 13                | 1912                    | 1934                    | 200.317                               |
| 13    | 3                | 83.6               | 13                | 1878                    | 1464                    | 134.97                                |
| 14    | 1                | 85.9               | 13                |                         |                         | 624.283                               |
| 15    | 2                | 73.3               | 13                | 1602                    |                         | 550.307                               |
| 16    | 2                | 73                 | 13                | 1311                    |                         | 92.6                                  |
| 17    | 3                | 97                 | 13                | 1257                    | 1801                    | 531.633                               |
| 18    | 2                | 65.2               | 13                | 1899                    |                         | 449.767                               |

Type 5 Radar Waveform\_26

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 64.1               | 15                | 1842                    |                         | 465.528                               |
| 2     | 3                | 51.9               | 15                | 1610                    | 1447                    | 1420.77                               |
| 3     | 3                | 53                 | 15                | 1162                    | 1890                    | 1007.6                                |
| 4     | 1                | 94                 | 15                |                         |                         | 336.8                                 |
| 5     | 2                | 82.5               | 15                | 1125                    |                         | 1072.71                               |
| 6     | 2                | 91.4               | 15                | 1630                    |                         | 1126.66                               |
| 7     | 1                | 81.7               | 15                |                         |                         | 1293.5                                |
| 8     | 3                | 53.5               | 15                | 1376                    | 1545                    | 289.6                                 |

Type 5 Radar Waveform\_27

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 75.8               | 12                | 1828                    |                         | 1140.17                               |
| 2     | 2                | 70.2               | 12                | 1448                    |                         | 476.28                                |
| 3     | 3                | 96.1               | 12                | 1893                    | 1064                    | 592.39                                |
| 4     | 1                | 89.7               | 12                |                         |                         | 550.35                                |
| 5     | 2                | 93.7               | 12                | 1686                    |                         | 1132.85                               |
| 6     | 2                | 87.2               | 12                | 1201                    |                         | 1022.41                               |
| 7     | 3                | 88                 | 12                | 1830                    | 1016                    | 749.59                                |
| 8     | 2                | 62.9               | 12                | 1917                    |                         | 178.95                                |
| 9     | 2                | 97.6               | 12                | 1569                    |                         | 232.9                                 |
| 10    | 3                | 74.8               | 12                | 1985                    | 1335                    | 346.1                                 |

Type 5 Radar Waveform\_28

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 86.8               | 6                 | 1914                    | 1408                    | 54.266                                |
| 2     | 2                | 61.4               | 6                 | 1755                    |                         | 720.451                               |
| 3     | 2                | 59.7               | 6                 | 1403                    |                         | 637.982                               |
| 4     | 2                | 92.3               | 6                 | 1360                    |                         | 903.063                               |
| 5     | 2                | 77.3               | 6                 | 1651                    |                         | 559.144                               |
| 6     | 2                | 72                 | 6                 | 1585                    |                         | 195.625                               |
| 7     | 1                | 61.6               | 6                 |                         |                         | 657.325                               |
| 8     | 2                | 91.5               | 6                 | 1936                    |                         | 863.966                               |
| 9     | 2                | 79.4               | 6                 | 1384                    |                         | 888.947                               |
| 10    | 1                | 99.7               | 6                 |                         |                         | 252.218                               |
| 11    | 2                | 77.5               | 6                 | 1821                    |                         | 947.009                               |

Type 5 Radar Waveform\_29

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 72.5               | 13                | 1171                    |                         | 6.914                                 |
| 2     | 1                | 88.2               | 13                |                         |                         | 199.911                               |
| 3     | 1                | 90.9               | 13                |                         |                         | 49.46                                 |
| 4     | 3                | 89.6               | 13                | 1300                    | 1784                    | 161.59                                |
| 5     | 2                | 67.7               | 13                | 1496                    |                         | 283.16                                |
| 6     | 2                | 78.3               | 13                | 1426                    |                         | 503.68                                |
| 7     | 3                | 69.3               | 13                | 1628                    | 1653                    | 323.89                                |
| 8     | 1                | 86.6               | 13                |                         |                         | 213.33                                |
| 9     | 2                | 66.1               | 13                | 1772                    |                         | 589.15                                |
| 10    | 3                | 72                 | 13                | 1138                    | 1937                    | 93.72                                 |
| 11    | 2                | 77.4               | 13                | 1411                    |                         | 442.97                                |
| 12    | 3                | 67                 | 13                | 1847                    | 1874                    | 382.23                                |
| 13    | 2                | 80.2               | 13                | 1257                    |                         | 1.71                                  |
| 14    | 1                | 79                 | 13                |                         |                         | 224.78                                |
| 15    | 2                | 80.1               | 13                | 1905                    |                         | 167.2                                 |
| 16    | 1                | 50.3               | 13                |                         |                         | 204.57                                |
| 17    | 2                | 85.7               | 13                | 1826                    |                         | 76.87                                 |
| 18    | 1                | 86                 | 13                |                         |                         | 534.5                                 |
| 19    | 3                | 67.6               | 13                | 1849                    | 1228                    | 173.3                                 |
| 20    | 1                | 86.2               | 13                |                         |                         | 326.8                                 |

Type 5 Radar Waveform\_30

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 83.4               | 19                | 1631                    |                         | 303.98                                |
| 2     | 2                | 62.1               | 19                | 1107                    |                         | 99.826                                |
| 3     | 2                | 75.7               | 19                | 1913                    |                         | 41.48                                 |
| 4     | 2                | 80.9               | 19                | 1079                    |                         | 1.93                                  |
| 5     | 2                | 53.6               | 19                | 1958                    |                         | 491.91                                |
| 6     | 2                | 64.4               | 19                | 1838                    |                         | 500.88                                |
| 7     | 3                | 93.8               | 19                | 1769                    | 1501                    | 561.42                                |
| 8     | 2                | 56.2               | 19                | 1309                    |                         | 430.34                                |
| 9     | 2                | 89.5               | 19                | 1907                    |                         | 286.06                                |
| 10    | 3                | 89                 | 19                | 1391                    | 1449                    | 614.12                                |
| 11    | 1                | 81.1               | 19                |                         |                         | 302.3                                 |
| 12    | 2                | 71.1               | 19                | 1682                    |                         | 364.86                                |
| 13    | 3                | 62.2               | 19                | 1378                    | 1481                    | 406.05                                |
| 14    | 1                | 82.3               | 19                |                         |                         | 597.5                                 |
| 15    | 2                | 71.3               | 19                | 1411                    |                         | 99.4                                  |
| 16    | 2                | 98.6               | 19                | 1481                    |                         | 360.3                                 |

### Radar Type 6 - Radar Statistical Performance

| Trail #                  | 1=Detection<br>0=No Detection | Trail # | 1=Detection<br>0=No Detection |
|--------------------------|-------------------------------|---------|-------------------------------|
| 1                        | 1                             | 16      | 1                             |
| 2                        | 1                             | 17      | 1                             |
| 3                        | 1                             | 18      | 1                             |
| 4                        | 1                             | 19      | 0                             |
| 5                        | 1                             | 20      | 1                             |
| 6                        | 1                             | 21      | 1                             |
| 7                        | 0                             | 22      | 1                             |
| 8                        | 1                             | 23      | 1                             |
| 9                        | 1                             | 24      | 1                             |
| 10                       | 1                             | 25      | 0                             |
| 11                       | 1                             | 26      | 1                             |
| 12                       | 1                             | 27      | 0                             |
| 13                       | 1                             | 28      | 1                             |
| 14                       | 1                             | 29      | 1                             |
| 15                       | 1                             | 30      | 1                             |
| Detection Percentage (%) |                               | 86.7%   |                               |

| Radar waveform #1 |                 |                  | Radar waveform #2 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 5                 | 5504            | 15               | 29                | 5491            | 87               |
| 17                | 5497            | 51               | 36                | 5493            | 108              |
| 32                | 5493            | 96               | 47                | 5506            | 141              |
| 42                | 5509            | 126              | 49                | 5492            | 147              |
| --                | --              | --               | 57                | 5503            | 171              |

| Radar waveform #3 |                 |                  | Radar waveform #4 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 12                | 5490            | 36               | 18                | 5495            | 54               |
| 72                | 5503            | 216              | 68                | 5493            | 204              |
| --                | --              | --               | 74                | 5499            | 222              |
| --                | --              | --               | 99                | 5500            | 297              |

| Radar waveform #5 |                 |                  | Radar waveform #6 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 42                | 5505            | 126              | 5                 | 5495            | 15               |
| 58                | 5498            | 174              | 12                | 5507            | 36               |
| 59                | 5503            | 177              | 26                | 5500            | 78               |
| 64                | 5508            | 192              | 56                | 5501            | 168              |
| 71                | 5504            | 213              | 89                | 5505            | 267              |
| 89                | 5510            | 267              | 90                | 5493            | 270              |
| --                | --              | --               | 93                | 5503            | 279              |

| Radar waveform #7 |                 |                  | Radar waveform #8 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 60                | 5499            | 180              | 23                | 5501            | 69               |
| --                | --              | --               | 59                | 5495            | 177              |
| --                | --              | --               | 76                | 5492            | 228              |
| --                | --              | --               | 90                | 5504            | 270              |

| Radar waveform #9 |                 |                  | Radar waveform #10 |                 |                  |
|-------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 27                | 5509            | 81               | 2                  | 5498            | 6                |
| 46                | 5490            | 138              | 17                 | 5510            | 51               |
| 58                | 5493            | 174              | 38                 | 5509            | 114              |
| 63                | 5504            | 189              | 74                 | 5499            | 222              |
| 80                | 5510            | 240              | 76                 | 5505            | 228              |
| 90                | 5498            | 270              | 95                 | 5504            | 285              |
| 99                | 5491            | 297              | --                 | --              | --               |

| Radar waveform #11 |                 |                  | Radar waveform #12 |                |                  |
|--------------------|-----------------|------------------|--------------------|----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Frequency (MHz)    | Hopping Number | Pulse Start (ms) |
| 49                 | 5509            | 147              | 29                 | 5508           | 87               |
| 73                 | 5490            | 219              | 79                 | 5506           | 237              |
| 81                 | 5507            | 243              | 97                 | 5496           | 291              |
| 91                 | 5502            | 273              | 98                 | 5502           | 294              |

| Radar waveform #13 |                 |                  | Radar waveform #14 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 16                 | 5509            | 48               | 3                  | 5494            | 9                |
| --                 | --              | --               | 32                 | 5490            | 96               |
| --                 | --              | --               | 46                 | 5499            | 138              |
| --                 | --              | --               | 58                 | 5510            | 174              |
| --                 | --              | --               | 79                 | 5507            | 237              |

| Radar waveform #15 |                 |                  | Radar waveform #16 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 5                  | 5504            | 15               | 39                 | 5510            | 117              |
| 38                 | 5507            | 114              | 89                 | 5504            | 267              |
| 64                 | 5501            | 192              | 94                 | 5497            | 282              |
| 99                 | 5494            | 297              | 96                 | 5491            | 288              |

| Radar waveform #17 |                 |                  | Radar waveform #18 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 22                 | 5507            | 66               | 3                  | 5505            | 9                |
| 26                 | 5499            | 78               | 26                 | 5504            | 78               |
| 37                 | 5495            | 111              | 30                 | 5507            | 90               |
| 63                 | 5497            | 189              | 63                 | 5502            | 189              |
| 81                 | 5503            | 243              | 71                 | 5492            | 213              |
| --                 | --              | --               | 77                 | 5497            | 231              |

| Radar waveform #19 |                 |                  | Radar waveform #20 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 39                 | 5503            | 117              | 2                  | 5508            | 6                |
| --                 | --              | --               | 5                  | 5507            | 15               |
| --                 | --              | --               | 58                 | 5501            | 174              |
| --                 | --              | --               | 77                 | 5509            | 231              |

| Radar waveform #21 |                 |                  | Radar waveform #22 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 27                 | 5496            | 81               | 20                 | 5492            | 60               |
| 28                 | 5505            | 84               | 29                 | 5500            | 87               |
| 79                 | 5499            | 237              | 32                 | 5508            | 96               |
| 87                 | 5495            | 261              | 56                 | 5501            | 168              |
| 98                 | 5508            | 294              | --                 | --              | --               |

| Radar waveform #23 |                 |                  | Radar waveform #24 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 34                 | 5500            | 102              | 2                  | 5500            | 6                |
| 38                 | 5509            | 114              | 18                 | 5497            | 54               |
| 66                 | 5491            | 198              | 30                 | 5492            | 90               |
| --                 | --              | --               | 32                 | 5504            | 96               |
| --                 | --              | --               | 69                 | 5498            | 207              |
| --                 | --              | --               | 87                 | 5490            | 261              |

| Radar waveform #25 |                 |                  | Radar waveform #26 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 7                  | 5503            | 21               | 21                 | 5496            | 63               |
| --                 | --              | --               | 23                 | 5507            | 69               |
| --                 | --              | --               | 42                 | 5492            | 126              |
| --                 | --              | --               | 45                 | 5509            | 135              |
| --                 | --              | --               | 46                 | 5490            | 138              |
| --                 | --              | --               | 89                 | 5495            | 267              |
| --                 | --              | --               | 92                 | 5499            | 276              |
| --                 | --              | --               | 99                 | 5505            | 297              |

| Radar waveform #27 |                 |                  | Radar waveform #28 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 3                  | 5506            | 9                | 10                 | 5490            | 30               |
| --                 | --              | --               | 42                 | 5492            | 126              |
| --                 | --              | --               | 93                 | 5510            | 279              |

| Radar waveform #29 |                 |                  | Radar waveform #30 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 21                 | 5495            | 63               | 58                 | 5493            | 174              |
| 37                 | 5490            | 111              | 65                 | 5509            | 195              |
| 47                 | 5492            | 141              | 68                 | 5503            | 204              |
| --                 | --              | --               | 93                 | 5510            | 279              |
| --                 | --              | --               | 100                | 5492            | 300              |

|               |                                                                    |           |            |
|---------------|--------------------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                                       | Test Site | SR2        |
| Test Engineer | Eric Lin                                                           | Test Date | 2020/05/22 |
| Test Item     | Radar Statistical Performance Check (802.11ax-HE40 mode – 5510MHz) |           |            |

## Radar Type 1 - Radar Statistical Performance

| Trail # | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|---------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1       | 5491                | 1                   | 798      | 67             | 1                             |
| 2       | 5511                | 1                   | 1491     | 36             | 1                             |
| 3       | 5494                | 1                   | 558      | 95             | 1                             |
| 4       | 5513                | 1                   | 819      | 65             | 1                             |
| 5       | 5526                | 1                   | 3027     | 18             | 1                             |
| 6       | 5498                | 1                   | 898      | 59             | 1                             |
| 7       | 5516                | 1                   | 1590     | 34             | 1                             |
| 8       | 5500                | 1                   | 538      | 98             | 1                             |
| 9       | 5501                | 1                   | 878      | 61             | 1                             |
| 10      | 5520                | 1                   | 711      | 75             | 1                             |
| 11      | 5504                | 1                   | 678      | 78             | 1                             |
| 12      | 5522                | 1                   | 2834     | 19             | 1                             |
| 13      | 5507                | 1                   | 638      | 83             | 1                             |
| 14      | 5508                | 1                   | 938      | 57             | 1                             |
| 15      | 5528                | 1                   | 990      | 54             | 1                             |
| 16      | 5492                | 1                   | 858      | 62             | 1                             |
| 17      | 5512                | 1                   | 2736     | 20             | 1                             |
| 18      | 5495                | 1                   | 698      | 76             | 1                             |
| 19      | 5521                | 1                   | 1249     | 43             | 1                             |
| 20      | 5499                | 1                   | 658      | 81             | 1                             |
| 21      | 5517                | 1                   | 731      | 73             | 1                             |
| 22      | 5519                | 1                   | 1725     | 31             | 1                             |
| 23      | 5505                | 1                   | 578      | 92             | 1                             |
| 24      | 5496                | 1                   | 618      | 86             | 1                             |
| 25      | 5503                | 1                   | 598      | 89             | 1                             |
| 26      | 5524                | 1                   | 1588     | 34             | 1                             |

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 27                       | 5525                | 1                   | 879      | 60             | 1                             |
| 28                       | 5515                | 1                   | 924      | 58             | 1                             |
| 29                       | 5509                | 1                   | 838      | 63             | 1                             |
| 30                       | 5529                | 1                   | 1145     | 47             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 2 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 4.9                 | 215      | 26             | 1                             |
| 2                        | 5511                | 1.3                 | 210      | 24             | 0                             |
| 3                        | 5494                | 3.8                 | 180      | 25             | 1                             |
| 4                        | 5516                | 1.2                 | 204      | 28             | 0                             |
| 5                        | 5526                | 1.6                 | 222      | 24             | 0                             |
| 6                        | 5498                | 4.8                 | 212      | 26             | 1                             |
| 7                        | 5529                | 1.6                 | 214      | 25             | 1                             |
| 8                        | 5500                | 3.9                 | 213      | 29             | 1                             |
| 9                        | 5513                | 4.5                 | 155      | 27             | 1                             |
| 10                       | 5503                | 4.9                 | 226      | 25             | 1                             |
| 11                       | 5522                | 1.9                 | 193      | 26             | 1                             |
| 12                       | 5525                | 5                   | 154      | 24             | 1                             |
| 13                       | 5507                | 1.1                 | 177      | 29             | 1                             |
| 14                       | 5520                | 1.3                 | 150      | 24             | 1                             |
| 15                       | 5509                | 1                   | 174      | 29             | 1                             |
| 16                       | 5495                | 1.8                 | 163      | 25             | 1                             |
| 17                       | 5512                | 1.2                 | 165      | 24             | 1                             |
| 18                       | 5501                | 4.2                 | 176      | 24             | 0                             |
| 19                       | 5515                | 1.7                 | 180      | 26             | 1                             |
| 20                       | 5492                | 2.9                 | 163      | 26             | 1                             |
| 21                       | 5517                | 4.4                 | 228      | 25             | 0                             |
| 22                       | 5508                | 3.9                 | 192      | 25             | 1                             |
| 23                       | 5521                | 3.6                 | 150      | 26             | 1                             |
| 24                       | 5519                | 2.7                 | 206      | 26             | 1                             |
| 25                       | 5505                | 1.2                 | 213      | 25             | 1                             |
| 26                       | 5524                | 2.4                 | 215      | 26             | 1                             |
| 27                       | 5504                | 4.5                 | 177      | 28             | 1                             |
| 28                       | 5496                | 2.4                 | 156      | 26             | 0                             |
| 29                       | 5528                | 4.4                 | 230      | 24             | 1                             |
| 30                       | 5499                | 2                   | 160      | 26             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 80%                           |

## Radar Type 3 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 8.4                 | 419      | 17             | 1                             |
| 2                        | 5512                | 8.7                 | 441      | 17             | 1                             |
| 3                        | 5520                | 9.7                 | 291      | 18             | 1                             |
| 4                        | 5495                | 6.2                 | 500      | 17             | 1                             |
| 5                        | 5522                | 6.2                 | 306      | 17             | 1                             |
| 6                        | 5498                | 6.3                 | 493      | 17             | 1                             |
| 7                        | 5515                | 9                   | 384      | 16             | 0                             |
| 8                        | 5500                | 6.3                 | 470      | 18             | 1                             |
| 9                        | 5528                | 8.8                 | 279      | 17             | 1                             |
| 10                       | 5516                | 8.6                 | 459      | 18             | 1                             |
| 11                       | 5504                | 7.5                 | 287      | 17             | 1                             |
| 12                       | 5524                | 10                  | 332      | 17             | 1                             |
| 13                       | 5508                | 6.1                 | 216      | 16             | 1                             |
| 14                       | 5526                | 10                  | 224      | 17             | 0                             |
| 15                       | 5509                | 6.9                 | 494      | 17             | 0                             |
| 16                       | 5511                | 6.6                 | 429      | 16             | 0                             |
| 17                       | 5492                | 7.2                 | 455      | 17             | 1                             |
| 18                       | 5513                | 9.9                 | 265      | 18             | 1                             |
| 19                       | 5503                | 7.5                 | 460      | 17             | 1                             |
| 20                       | 5499                | 9.1                 | 251      | 16             | 1                             |
| 21                       | 5517                | 7.8                 | 399      | 17             | 1                             |
| 22                       | 5519                | 8.5                 | 391      | 18             | 1                             |
| 23                       | 5494                | 9                   | 475      | 17             | 1                             |
| 24                       | 5521                | 7                   | 296      | 17             | 1                             |
| 25                       | 5505                | 6.5                 | 361      | 18             | 1                             |
| 26                       | 5496                | 7.2                 | 206      | 18             | 1                             |
| 27                       | 5525                | 6.9                 | 428      | 16             | 1                             |
| 28                       | 5501                | 6.5                 | 402      | 17             | 1                             |
| 29                       | 5507                | 8.9                 | 204      | 16             | 0                             |
| 30                       | 5529                | 7                   | 289      | 17             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 83.3%                         |

## Radar Type 4 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 14.5                | 279      | 14             | 0                             |
| 2                        | 5511                | 18.8                | 326      | 14             | 1                             |
| 3                        | 5517                | 16.4                | 463      | 15             | 0                             |
| 4                        | 5525                | 15.3                | 492      | 15             | 1                             |
| 5                        | 5496                | 19.7                | 429      | 12             | 1                             |
| 6                        | 5520                | 18                  | 290      | 13             | 0                             |
| 7                        | 5499                | 18.7                | 305      | 16             | 0                             |
| 8                        | 5526                | 14.4                | 292      | 12             | 1                             |
| 9                        | 5512                | 11.4                | 254      | 15             | 1                             |
| 10                       | 5528                | 15.6                | 468      | 13             | 1                             |
| 11                       | 5504                | 13.3                | 435      | 13             | 1                             |
| 12                       | 5522                | 19.1                | 311      | 13             | 0                             |
| 13                       | 5515                | 12.9                | 230      | 15             | 1                             |
| 14                       | 5505                | 17.1                | 431      | 14             | 0                             |
| 15                       | 5509                | 12.9                | 378      | 15             | 0                             |
| 16                       | 5501                | 12.3                | 252      | 13             | 1                             |
| 17                       | 5492                | 13                  | 301      | 16             | 1                             |
| 18                       | 5513                | 17.9                | 237      | 14             | 1                             |
| 19                       | 5508                | 16.5                | 340      | 16             | 0                             |
| 20                       | 5516                | 14.5                | 464      | 14             | 1                             |
| 21                       | 5498                | 13.1                | 252      | 12             | 1                             |
| 22                       | 5519                | 14.7                | 342      | 15             | 1                             |
| 23                       | 5494                | 17.9                | 341      | 13             | 1                             |
| 24                       | 5521                | 11                  | 273      | 12             | 1                             |
| 25                       | 5507                | 18                  | 316      | 13             | 1                             |
| 26                       | 5524                | 19.6                | 430      | 15             | 1                             |
| 27                       | 5495                | 16.4                | 419      | 16             | 1                             |
| 28                       | 5500                | 16.5                | 422      | 14             | 1                             |
| 29                       | 5503                | 17.6                | 487      | 12             | 1                             |
| 30                       | 5529                | 17.3                | 270      | 14             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 73.3%                         |

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 80\% + 83.3\% + 73.3\%) / 4 = 84.2\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5510                | 1                             | 16      | 5523.8              | 1                             |
| 2                        | 5510                | 1                             | 17      | 5499                | 1                             |
| 3                        | 5510                | 1                             | 18      | 5525.4              | 1                             |
| 4                        | 5510                | 1                             | 19      | 5497.4              | 1                             |
| 5                        | 5510                | 1                             | 20      | 5493                | 1                             |
| 6                        | 5510                | 1                             | 21      | 5495.8              | 1                             |
| 7                        | 5510                | 1                             | 22      | 5523.4              | 1                             |
| 8                        | 5510                | 1                             | 23      | 5494.6              | 1                             |
| 9                        | 5510                | 1                             | 24      | 5526.2              | 1                             |
| 10                       | 5510                | 1                             | 25      | 5522.2              | 1                             |
| 11                       | 5497.8              | 1                             | 26      | 5498.6              | 1                             |
| 12                       | 5524.2              | 1                             | 27      | 5523                | 1                             |
| 13                       | 5526.6              | 1                             | 28      | 5494.6              | 1                             |
| 14                       | 5522.2              | 1                             | 29      | 5524.6              | 1                             |
| 15                       | 5493.8              | 1                             | 30      | 5495.8              | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 100%                          |

| Type 5 Radar Waveform_1 |                     |                          |                      |                               |                               |                                             |
|-------------------------|---------------------|--------------------------|----------------------|-------------------------------|-------------------------------|---------------------------------------------|
| Burst                   | Number of<br>Pulses | Pulse<br>Width<br>(µsec) | Chirp Width<br>(MHz) | Pulse 1-to-2<br>PRI<br>(µsec) | Pulse 2-to-3<br>PRI<br>(µsec) | Start Location<br>Within Interval<br>(msec) |
| 1                       | 1                   | 74                       | 20                   |                               |                               | 1061.1                                      |
| 2                       | 2                   | 62.7                     | 20                   | 1039                          |                               | 747.54                                      |
| 3                       | 2                   | 90.1                     | 20                   | 1502                          |                               | 944.38                                      |
| 4                       | 2                   | 95.1                     | 20                   | 1134                          |                               | 891.98                                      |
| 5                       | 1                   | 75.1                     | 20                   |                               |                               | 462.62                                      |
| 6                       | 3                   | 99                       | 20                   | 1728                          | 1557                          | 762.55                                      |
| 7                       | 3                   | 94.5                     | 20                   | 1917                          | 1495                          | 1247.8                                      |
| 8                       | 3                   | 93                       | 20                   | 1690                          | 1143                          | 454.3                                       |

## Type 5 Radar Waveform\_2

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 68.7               | 9                 | 1844                    |                         | 106.581                               |
| 2     | 2                | 57.4               | 9                 | 1939                    |                         | 1008.237                              |
| 3     | 3                | 52                 | 9                 | 1063                    | 1692                    | 947.693                               |
| 4     | 2                | 93.6               | 9                 | 1827                    |                         | 631.02                                |
| 5     | 1                | 57.6               | 9                 |                         |                         | 344.077                               |
| 6     | 2                | 66.3               | 9                 | 1246                    |                         | 261.213                               |
| 7     | 2                | 79                 | 9                 | 1143                    |                         | 225.6                                 |
| 8     | 2                | 53.5               | 9                 | 1442                    |                         | 429.567                               |
| 9     | 3                | 77.6               | 9                 | 1193                    | 1570                    | 464.933                               |

## Type 5 Radar Waveform\_3

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 85.1               | 11                | 1363                    | 1420                    | 391.458                               |
| 2     | 3                | 76.9               | 11                | 1698                    | 1992                    | 699.973                               |
| 3     | 2                | 70.2               | 11                | 1341                    |                         | 523.646                               |
| 4     | 1                | 75.2               | 11                |                         |                         | 416.409                               |
| 5     | 3                | 70.6               | 11                | 1671                    | 1718                    | 99.112                                |
| 6     | 2                | 86                 | 11                | 1046                    |                         | 750.365                               |
| 7     | 2                | 96.6               | 11                | 1714                    |                         | 738.798                               |
| 8     | 2                | 62.5               | 11                | 1773                    |                         | 744.042                               |
| 9     | 1                | 99.1               | 11                |                         |                         | 383.695                               |
| 10    | 2                | 85.6               | 11                | 1195                    |                         | 625.068                               |
| 11    | 2                | 56.4               | 11                | 1195                    |                         | 869.831                               |
| 12    | 1                | 59.2               | 11                |                         |                         | 405.354                               |
| 13    | 2                | 82.9               | 11                | 1953                    |                         | 90.477                                |

## Type 5 Radar Waveform\_4

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 50.8               | 17                | 1694                    |                         | 156.54                                |
| 2     | 2                | 99.3               | 17                | 1557                    |                         | 241.39                                |
| 3     | 3                | 54                 | 17                | 1772                    | 1573                    | 470.637                               |
| 4     | 1                | 98.9               | 17                |                         |                         | 431.16                                |
| 5     | 2                | 50.2               | 17                | 1355                    |                         | 612.143                               |
| 6     | 2                | 54.1               | 17                | 1634                    |                         | 216.487                               |
| 7     | 3                | 59.7               | 17                | 1309                    | 1569                    | 132.22                                |
| 8     | 2                | 65.5               | 17                | 1770                    |                         | 209.363                               |
| 9     | 3                | 81.7               | 17                | 1731                    | 1545                    | 651.847                               |
| 10    | 2                | 71.7               | 17                | 1149                    |                         | 8.61                                  |
| 11    | 2                | 74.1               | 17                | 1197                    |                         | 73.053                                |
| 12    | 2                | 93.5               | 17                | 1428                    |                         | 143.067                               |
| 13    | 2                | 58.5               | 17                | 1362                    |                         | 138                                   |
| 14    | 2                | 65                 | 17                | 1320                    |                         | 247.343                               |
| 15    | 2                | 64                 | 17                | 1557                    |                         | 660.647                               |
| 16    | 2                | 65.3               | 17                | 1648                    |                         | 604.2                                 |
| 17    | 3                | 79.2               | 17                | 1116                    | 1157                    | 352.533                               |
| 18    | 2                | 73.5               | 17                | 1624                    |                         | 300.667                               |

### Type 5 Radar Waveform\_5

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 85.7               | 6                 | 1409                    |                         | 564.004                               |
| 2     | 1                | 79.8               | 6                 |                         |                         | 731.02                                |
| 3     | 2                | 50.9               | 6                 | 1101                    |                         | 120.61                                |
| 4     | 1                | 83.6               | 6                 |                         |                         | 232.39                                |
| 5     | 2                | 53.1               | 6                 | 1458                    |                         | 376.23                                |
| 6     | 3                | 75.7               | 6                 | 1076                    | 1847                    | 74.59                                 |
| 7     | 2                | 67.4               | 6                 | 1506                    |                         | 694.29                                |
| 8     | 1                | 69.6               | 6                 |                         |                         | 141.92                                |
| 9     | 1                | 50.1               | 6                 |                         |                         | 378.47                                |
| 10    | 3                | 79.3               | 6                 | 1217                    | 1129                    | 428.99                                |
| 11    | 2                | 63.8               | 6                 | 1660                    |                         | 160.72                                |
| 12    | 2                | 91                 | 6                 | 1350                    |                         | 557.65                                |
| 13    | 2                | 88.1               | 6                 | 1513                    |                         | 594.41                                |
| 14    | 2                | 56.7               | 6                 | 1869                    |                         | 364.7                                 |
| 15    | 2                | 98.4               | 6                 | 1745                    |                         | 87.1                                  |
| 16    | 2                | 66.2               | 6                 | 1628                    |                         | 585.5                                 |

### Type 5 Radar Waveform\_6

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 98.3               | 17                | 1919                    | 1101                    | 627.198                               |
| 2     | 2                | 74.5               | 17                | 1779                    |                         | 530.733                               |
| 3     | 3                | 71.4               | 17                | 1624                    | 1465                    | 144.847                               |
| 4     | 2                | 62.1               | 17                | 1109                    |                         | 57.31                                 |
| 5     | 2                | 72.6               | 17                | 1701                    |                         | 627.003                               |
| 6     | 1                | 87.3               | 17                |                         |                         | 93.147                                |
| 7     | 2                | 81.9               | 17                | 1324                    |                         | 482.72                                |
| 8     | 2                | 76.5               | 17                | 1196                    |                         | 203.533                               |
| 9     | 2                | 74                 | 17                | 1879                    |                         | 420.757                               |
| 10    | 2                | 82.5               | 17                | 1594                    |                         | 581.44                                |
| 11    | 1                | 79.5               | 17                |                         |                         | 499.493                               |
| 12    | 1                | 65.3               | 17                |                         |                         | 202.367                               |
| 13    | 2                | 81.8               | 17                | 1886                    |                         | 18.44                                 |
| 14    | 2                | 84.4               | 17                | 1601                    |                         | 384.833                               |
| 15    | 2                | 90.2               | 17                | 1061                    |                         | 621.207                               |
| 16    | 2                | 72.8               | 17                | 1819                    |                         | 366.4                                 |
| 17    | 3                | 88.2               | 17                | 1843                    | 1908                    | 230.633                               |
| 18    | 2                | 87.7               | 17                | 1829                    |                         | 235.067                               |

### Type 5 Radar Waveform\_7

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 61.8               | 20                | 1555                    |                         | 306.357                               |
| 2     | 1                | 53.4               | 20                |                         |                         | 297.53                                |
| 3     | 2                | 94.3               | 20                | 1213                    |                         | 788.32                                |
| 4     | 1                | 54.3               | 20                |                         |                         | 208.19                                |
| 5     | 1                | 54.1               | 20                |                         |                         | 661.91                                |
| 6     | 3                | 98.3               | 20                | 1474                    | 1503                    | 568.85                                |
| 7     | 1                | 94.2               | 20                |                         |                         | 683.76                                |
| 8     | 1                | 57.6               | 20                |                         |                         | 334.46                                |
| 9     | 1                | 75.4               | 20                |                         |                         | 735.36                                |
| 10    | 3                | 53.5               | 20                | 1288                    | 1025                    | 293.6                                 |
| 11    | 1                | 89.7               | 20                |                         |                         | 408.86                                |
| 12    | 3                | 87.9               | 20                | 1473                    | 1956                    | 285.23                                |
| 13    | 2                | 55.1               | 20                | 1409                    |                         | 192.78                                |
| 14    | 3                | 50.6               | 20                | 1822                    | 1291                    | 335                                   |
| 15    | 1                | 86.1               | 20                |                         |                         | 505.2                                 |

Type 5 Radar Waveform\_8

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 Spacing (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-----------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 75.1               | 15                | 1699                        |                         | 797.067                               |
| 2     | 2                | 96                 | 15                | 1206                        |                         | 465.607                               |
| 3     | 2                | 68.5               | 15                | 1706                        |                         | 1040.673                              |
| 4     | 1                | 51.5               | 15                |                             |                         | 961.81                                |
| 5     | 1                | 80.2               | 15                |                             |                         | 898.207                               |
| 6     | 2                | 73.1               | 15                | 1407                        |                         | 363.643                               |
| 7     | 3                | 51.5               | 15                | 1030                        | 1764                    | 439.27                                |
| 8     | 2                | 64.3               | 15                | 1254                        |                         | 805.967                               |
| 9     | 2                | 93.8               | 15                | 1687                        |                         | 852.733                               |

Type 5 Radar Waveform\_9

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 56.3               | 19                | 1438                    |                         | 79.912                                |
| 2     | 2                | 92.5               | 19                | 1681                    |                         | 504.4                                 |
| 3     | 2                | 67.8               | 19                | 1992                    |                         | 297.67                                |
| 4     | 2                | 87.5               | 19                | 1134                    |                         | 766.65                                |
| 5     | 2                | 81.2               | 19                | 1207                    |                         | 739.58                                |
| 6     | 3                | 76.6               | 19                | 1707                    | 1821                    | 329.26                                |
| 7     | 1                | 96.3               | 19                |                         |                         | 749.13                                |
| 8     | 1                | 75.3               | 19                |                         |                         | 613.46                                |
| 9     | 3                | 63                 | 19                | 1714                    | 1521                    | 564.78                                |
| 10    | 2                | 68.6               | 19                | 1082                    |                         | 187.75                                |
| 11    | 3                | 65.3               | 19                | 1661                    | 1043                    | 599.75                                |
| 12    | 2                | 55.7               | 19                | 1856                    |                         | 436.07                                |
| 13    | 2                | 93.5               | 19                | 1952                    |                         | 231.07                                |
| 14    | 2                | 53                 | 19                | 1882                    |                         | 220.3                                 |
| 15    | 1                | 56.7               | 19                |                         |                         | 398.5                                 |

Type 5 Radar Waveform\_10

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 93.4               | 11                | 1945                    |                         | 30.608                                |
| 2     | 1                | 70.4               | 11                |                         |                         | 4.638                                 |
| 3     | 1                | 59.5               | 11                |                         |                         | 162.247                               |
| 4     | 1                | 70.2               | 11                |                         |                         | 171.77                                |
| 5     | 2                | 63.6               | 11                | 1636                    |                         | 332.823                               |
| 6     | 2                | 86.4               | 11                | 1960                    |                         | 508.277                               |
| 7     | 2                | 76.1               | 11                | 1190                    |                         | 43.5                                  |
| 8     | 2                | 53.5               | 11                | 1427                    |                         | 532.363                               |
| 9     | 2                | 72.4               | 11                | 1817                    |                         | 537.627                               |
| 10    | 1                | 88.3               | 11                |                         |                         | 384.71                                |
| 11    | 2                | 87.7               | 11                | 1743                    |                         | 171.023                               |
| 12    | 2                | 59.4               | 11                | 1674                    |                         | 619.897                               |
| 13    | 1                | 87.6               | 11                |                         |                         | 646.12                                |
| 14    | 1                | 66                 | 11                |                         |                         | 599.243                               |
| 15    | 2                | 55.5               | 11                | 1163                    |                         | 194.597                               |
| 16    | 2                | 58                 | 11                | 1973                    |                         | 390.8                                 |
| 17    | 2                | 94.2               | 11                | 1980                    |                         | 222.633                               |
| 18    | 2                | 54.9               | 11                | 1722                    |                         | 656.667                               |

Type 5 Radar Waveform\_11

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 96.8               | 17                | 1838                    |                         | 573.229                               |
| 2     | 3                | 72.1               | 17                | 1668                    | 1813                    | 659.258                               |
| 3     | 3                | 63.5               | 17                | 1459                    | 1961                    | 386.705                               |
| 4     | 2                | 54                 | 17                | 1270                    |                         | 562.653                               |
| 5     | 1                | 57.6               | 17                |                         |                         | 98.131                                |
| 6     | 1                | 81.6               | 17                |                         |                         | 627.288                               |
| 7     | 1                | 93.9               | 17                |                         |                         | 232.746                               |
| 8     | 1                | 84.8               | 17                |                         |                         | 658.194                               |
| 9     | 2                | 91.1               | 17                | 1500                    |                         | 656.801                               |
| 10    | 2                | 75.4               | 17                | 1190                    |                         | 112.759                               |
| 11    | 2                | 79.3               | 17                | 1703                    |                         | 563.196                               |
| 12    | 3                | 50.6               | 17                | 1034                    | 1446                    | 679.114                               |
| 13    | 1                | 67.3               | 17                |                         |                         | 589.022                               |
| 14    | 2                | 84.9               | 17                | 1941                    |                         | 582.279                               |
| 15    | 3                | 60.8               | 17                | 1453                    | 1717                    | 635.747                               |
| 16    | 1                | 91.3               | 17                |                         |                         | 75.665                                |
| 17    | 3                | 60.4               | 17                | 1480                    | 1438                    | 241.882                               |

Type 5 Radar Waveform\_12

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 79.4               | 12                | 1282                    |                         | 108.66                                |
| 2     | 1                | 99.5               | 12                |                         |                         | 451.543                               |
| 3     | 1                | 98.7               | 12                |                         |                         | 497.137                               |
| 4     | 2                | 94.9               | 12                | 1359                    |                         | 300.15                                |
| 5     | 2                | 65.9               | 12                | 1337                    |                         | 553.633                               |
| 6     | 2                | 65.8               | 12                | 1781                    |                         | 114.737                               |
| 7     | 2                | 54.5               | 12                | 1886                    |                         | 364.85                                |
| 8     | 2                | 76.9               | 12                | 1900                    |                         | 292.523                               |
| 9     | 1                | 92.5               | 12                |                         |                         | 25.147                                |
| 10    | 2                | 73.3               | 12                | 1938                    |                         | 96.42                                 |
| 11    | 2                | 84                 | 12                | 1817                    |                         | 231.573                               |
| 12    | 3                | 80.5               | 12                | 1357                    | 1502                    | 326.897                               |
| 13    | 2                | 98.3               | 12                | 1239                    |                         | 543.71                                |
| 14    | 2                | 55                 | 12                | 1378                    |                         | 75.863                                |
| 15    | 2                | 59.1               | 12                | 1314                    |                         | 43.147                                |
| 16    | 2                | 69                 | 12                | 1920                    |                         | 365.5                                 |
| 17    | 2                | 87.1               | 12                | 1930                    |                         | 533.033                               |
| 18    | 2                | 87.4               | 12                | 1453                    |                         | 377.967                               |

Type 5 Radar Waveform\_13

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 52.8               | 19                | 1950                    |                         | 158.703                               |
| 2     | 1                | 56.2               | 19                |                         |                         | 266.327                               |
| 3     | 3                | 98.2               | 19                | 1202                    | 1292                    | 432.954                               |
| 4     | 2                | 59.8               | 19                | 1263                    |                         | 468.771                               |
| 5     | 2                | 81.6               | 19                | 1190                    |                         | 464.699                               |
| 6     | 3                | 50                 | 19                | 1786                    | 1231                    | 126.526                               |
| 7     | 2                | 69.7               | 19                | 1784                    |                         | 159.633                               |
| 8     | 2                | 95.7               | 19                | 1494                    |                         | 159.99                                |
| 9     | 1                | 86.6               | 19                |                         |                         | 230.327                               |
| 10    | 2                | 61.1               | 19                | 1118                    |                         | 222.584                               |
| 11    | 1                | 72.2               | 19                |                         |                         | 758.101                               |
| 12    | 2                | 98.6               | 19                | 1159                    |                         | 236.429                               |
| 13    | 2                | 59.7               | 19                | 1534                    |                         | 511.686                               |
| 14    | 2                | 96.6               | 19                | 1723                    |                         | 379.443                               |

Type 5 Radar Waveform\_14

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 76.8               | 12                | 1391                    | 1668                    | 416.536                               |
| 2     | 3                | 61.7               | 12                | 1549                    | 1741                    | 82.15                                 |
| 3     | 1                | 93.7               | 12                |                         |                         | 245.957                               |
| 4     | 3                | 82.7               | 12                | 1061                    | 1875                    | 212.83                                |
| 5     | 2                | 86.4               | 12                | 1496                    |                         | 643.553                               |
| 6     | 1                | 83                 | 12                |                         |                         | 183.517                               |
| 7     | 3                | 62.1               | 12                | 1392                    | 1851                    | 238.98                                |
| 8     | 1                | 72.7               | 12                |                         |                         | 574.003                               |
| 9     | 1                | 69                 | 12                |                         |                         | 338.917                               |
| 10    | 1                | 68.1               | 12                |                         |                         | 643.08                                |
| 11    | 1                | 78.4               | 12                |                         |                         | 617.343                               |
| 12    | 3                | 59.5               | 12                | 1879                    | 1914                    | 109.317                               |
| 13    | 2                | 72.7               | 12                | 1761                    |                         | 604.42                                |
| 14    | 2                | 80.6               | 12                | 1332                    |                         | 403.523                               |
| 15    | 1                | 88.7               | 12                |                         |                         | 220.697                               |
| 16    | 1                | 89.2               | 12                |                         |                         | 436                                   |
| 17    | 3                | 90.1               | 12                | 1532                    | 1668                    | 389.633                               |
| 18    | 3                | 53.8               | 12                | 1332                    | 1649                    | 606.167                               |

Type 5 Radar Waveform\_15

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 59.8               | 7                 | 1908                    |                         | 568.838                               |
| 2     | 1                | 50.9               | 7                 |                         |                         | 80.371                                |
| 3     | 1                | 54.5               | 7                 |                         |                         | 218.432                               |
| 4     | 2                | 95.7               | 7                 | 1326                    |                         | 94.423                                |
| 5     | 3                | 80.8               | 7                 | 1129                    | 1147                    | 578.284                               |
| 6     | 3                | 97.7               | 7                 | 1490                    | 1599                    | 463.615                               |
| 7     | 1                | 70.9               | 7                 |                         |                         | 119.996                               |
| 8     | 2                | 81.5               | 7                 | 1253                    |                         | 414.977                               |
| 9     | 2                | 52.3               | 7                 | 1766                    |                         | 342.488                               |
| 10    | 2                | 52.9               | 7                 | 1890                    |                         | 371.989                               |
| 11    | 1                | 85.2               | 7                 |                         |                         | 20.411                                |
| 12    | 2                | 53.6               | 7                 | 1822                    |                         | 156.572                               |
| 13    | 3                | 72.6               | 7                 | 1201                    | 1995                    | 110.273                               |
| 14    | 2                | 89.2               | 7                 | 1289                    |                         | 525.954                               |
| 15    | 3                | 52.8               | 7                 | 1683                    | 1619                    | 512.765                               |
| 16    | 2                | 60.4               | 7                 | 1760                    |                         | 410.586                               |
| 17    | 2                | 50.8               | 7                 | 1800                    |                         | 432.837                               |
| 18    | 3                | 67.7               | 7                 | 1063                    | 1748                    | 57.658                                |
| 19    | 1                | 70.6               | 7                 |                         |                         | 90.079                                |

Type 5 Radar Waveform\_16

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 61.4               | 9                 | 1087                    |                         | 587.798                               |
| 2     | 2                | 96.6               | 9                 | 1143                    |                         | 287.547                               |
| 3     | 2                | 87.6               | 9                 | 1304                    |                         | 412.584                               |
| 4     | 2                | 80.6               | 9                 | 1587                    |                         | 104.711                               |
| 5     | 2                | 82.7               | 9                 | 1054                    |                         | 368.819                               |
| 6     | 3                | 92.6               | 9                 | 1234                    | 1276                    | 176.386                               |
| 7     | 2                | 94.9               | 9                 | 1644                    |                         | 273.353                               |
| 8     | 1                | 99.9               | 9                 |                         |                         | 390.45                                |
| 9     | 2                | 59.1               | 9                 | 1911                    |                         | 687.137                               |
| 10    | 1                | 74.9               | 9                 |                         |                         | 116.794                               |
| 11    | 1                | 56.5               | 9                 |                         |                         | 409.581                               |
| 12    | 2                | 67.1               | 9                 | 1411                    |                         | 464.699                               |
| 13    | 2                | 78.9               | 9                 | 1930                    |                         | 240.186                               |
| 14    | 2                | 52.5               | 9                 | 1215                    |                         | 88.943                                |

Type 5 Radar Waveform\_17

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 98.3               | 20                | 1082                    |                         | 317.996                               |
| 2     | 2                | 76.1               | 20                | 1363                    |                         | 378.403                               |
| 3     | 1                | 81.4               | 20                |                         |                         | 333.907                               |
| 4     | 3                | 54.6               | 20                | 1732                    | 1228                    | 539.52                                |
| 5     | 3                | 58.1               | 20                | 1542                    | 1056                    | 331.383                               |
| 6     | 2                | 50.3               | 20                | 1376                    |                         | 87.747                                |
| 7     | 2                | 53                 | 20                | 1256                    |                         | 418.5                                 |
| 8     | 2                | 59                 | 20                | 1727                    |                         | 619.833                               |
| 9     | 2                | 83.9               | 20                | 1594                    |                         | 581.097                               |
| 10    | 2                | 57.5               | 20                | 1154                    |                         | 395.18                                |
| 11    | 2                | 97.7               | 20                | 1717                    |                         | 570.493                               |
| 12    | 3                | 52.9               | 20                | 1269                    | 1946                    | 153.237                               |
| 13    | 2                | 97.3               | 20                | 1480                    |                         | 409.4                                 |
| 14    | 2                | 65.2               | 20                | 1014                    |                         | 326.503                               |
| 15    | 2                | 72.6               | 20                | 1975                    |                         | 364.907                               |
| 16    | 2                | 85.5               | 20                | 1259                    |                         | 573                                   |
| 17    | 2                | 61.9               | 20                | 1101                    |                         | 580.833                               |
| 18    | 2                | 86.2               | 20                | 1396                    |                         | 402.867                               |

Type 5 Radar Waveform\_18

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 68.4               | 9                 | 1761                    |                         | 593.592                               |
| 2     | 2                | 64.4               | 9                 | 1732                    |                         | 636.94                                |
| 3     | 3                | 55.2               | 9                 | 1655                    | 1167                    | 545.42                                |
| 4     | 2                | 75.3               | 9                 | 1046                    |                         | 688.6                                 |
| 5     | 1                | 51.7               | 9                 |                         |                         | 421.57                                |
| 6     | 2                | 82.8               | 9                 | 1871                    |                         | 691.75                                |
| 7     | 1                | 79.1               | 9                 |                         |                         | 657.38                                |
| 8     | 3                | 50.3               | 9                 | 1768                    | 1519                    | 408.38                                |
| 9     | 3                | 52.4               | 9                 | 1098                    | 1526                    | 680.65                                |
| 10    | 2                | 89.4               | 9                 | 1266                    |                         | 429.87                                |
| 11    | 1                | 77.1               | 9                 |                         |                         | 58.15                                 |
| 12    | 3                | 88.5               | 9                 | 1852                    | 1804                    | 742.58                                |
| 13    | 1                | 73.9               | 9                 |                         |                         | 165.05                                |
| 14    | 1                | 55.7               | 9                 |                         |                         | 57.71                                 |
| 15    | 3                | 59.5               | 9                 | 1490                    | 1023                    | 272.5                                 |
| 16    | 2                | 99.4               | 9                 | 1237                    |                         | 540.7                                 |

Type 5 Radar Waveform\_19

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 81.1               | 16                | 1380                    |                         | 1041.02                               |
| 2     | 1                | 81.9               | 16                |                         |                         | 681.48                                |
| 3     | 2                | 57                 | 16                | 1113                    |                         | 690.31                                |
| 4     | 1                | 52.6               | 16                |                         |                         | 212.74                                |
| 5     | 3                | 87                 | 16                | 1594                    | 1849                    | 359.15                                |
| 6     | 2                | 63.7               | 16                | 1902                    |                         | 618.13                                |
| 7     | 2                | 54                 | 16                | 1182                    |                         | 1141.02                               |
| 8     | 2                | 74                 | 16                | 1428                    |                         | 555.26                                |
| 9     | 1                | 70                 | 16                |                         |                         | 389.11                                |
| 10    | 2                | 77.3               | 16                | 1432                    |                         | 631.4                                 |

Type 5 Radar Waveform\_20

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 61.6               | 5                 | 1781                    |                         | 101.626                               |
| 2     | 1                | 54.8               | 5                 |                         |                         | 355.823                               |
| 3     | 3                | 87.2               | 5                 | 1750                    | 1614                    | 607.557                               |
| 4     | 2                | 74.6               | 5                 | 1539                    |                         | 124.21                                |
| 5     | 2                | 63.3               | 5                 | 1671                    |                         | 225.903                               |
| 6     | 2                | 75.1               | 5                 | 1782                    |                         | 329.887                               |
| 7     | 2                | 67.3               | 5                 | 1105                    |                         | 244.52                                |
| 8     | 1                | 54.6               | 5                 |                         |                         | 539.153                               |
| 9     | 3                | 94                 | 5                 | 1452                    | 1219                    | 514.317                               |
| 10    | 3                | 89.6               | 5                 | 1482                    | 1300                    | 92.28                                 |
| 11    | 2                | 95.9               | 5                 | 1969                    |                         | 178.423                               |
| 12    | 2                | 73                 | 5                 | 1029                    |                         | 380.087                               |
| 13    | 2                | 71.6               | 5                 | 1540                    |                         | 165.45                                |
| 14    | 1                | 85.9               | 5                 |                         |                         | 407.623                               |
| 15    | 2                | 51.3               | 5                 | 1473                    |                         | 61.417                                |
| 16    | 2                | 84.7               | 5                 | 1274                    |                         | 469.4                                 |
| 17    | 2                | 73.3               | 5                 | 1339                    |                         | 280.033                               |
| 18    | 1                | 50.1               | 5                 |                         |                         | 540.367                               |

Type 5 Radar Waveform\_21

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 86.9               | 6                 |                         |                         | 119.353                               |
| 2     | 3                | 56.6               | 6                 | 1917                    | 1359                    | 1197.507                              |
| 3     | 2                | 79.7               | 6                 | 1536                    |                         | 85.893                                |
| 4     | 3                | 99.8               | 6                 | 1075                    | 1881                    | 50.97                                 |
| 5     | 2                | 66.4               | 6                 | 1029                    |                         | 1178.687                              |
| 6     | 2                | 62.2               | 6                 | 1736                    |                         | 400.293                               |
| 7     | 2                | 85.9               | 6                 | 1305                    |                         | 592.93                                |
| 8     | 3                | 96.4               | 6                 | 1566                    | 1695                    | 76.697                                |
| 9     | 2                | 86.2               | 6                 | 1901                    |                         | 260.633                               |

Type 5 Radar Waveform\_22

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 99.8               | 14                | 1294                    | 1173                    | 91.416                                |
| 2     | 2                | 95.4               | 14                | 1562                    |                         | 190.279                               |
| 3     | 1                | 100                | 14                |                         |                         | 651.345                               |
| 4     | 2                | 65.5               | 14                | 1581                    |                         | 148.593                               |
| 5     | 2                | 81.4               | 14                | 1719                    |                         | 588.871                               |
| 6     | 1                | 74.4               | 14                |                         |                         | 453.158                               |
| 7     | 2                | 98.6               | 14                | 1367                    |                         | 435.186                               |
| 8     | 3                | 79.6               | 14                | 1683                    | 1894                    | 696.484                               |
| 9     | 3                | 55.8               | 14                | 1421                    | 1087                    | 606.671                               |
| 10    | 1                | 56.4               | 14                |                         |                         | 200.469                               |
| 11    | 1                | 64                 | 14                |                         |                         | 221.126                               |
| 12    | 1                | 67.5               | 14                |                         |                         | 345.194                               |
| 13    | 1                | 86.5               | 14                |                         |                         | 429.322                               |
| 14    | 2                | 94.9               | 14                | 1070                    |                         | 555.709                               |
| 15    | 1                | 76.4               | 14                |                         |                         | 669.047                               |
| 16    | 2                | 58.9               | 14                | 1545                    |                         | 525.165                               |
| 17    | 2                | 73.9               | 14                | 1834                    |                         | 31.582                                |

Type 5 Radar Waveform\_23

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 54.8               | 9                 | 1296                    |                         | 265.3                                 |
| 2     | 2                | 65.9               | 9                 | 1381                    |                         | 101.332                               |
| 3     | 3                | 69.6               | 9                 | 1044                    | 1717                    | 349.31                                |
| 4     | 2                | 78.4               | 9                 | 1502                    |                         | 161.8                                 |
| 5     | 2                | 76.5               | 9                 | 1415                    |                         | 716.79                                |
| 6     | 3                | 99.7               | 9                 | 1159                    | 1340                    | 432.41                                |
| 7     | 2                | 55.7               | 9                 | 1595                    |                         | 547                                   |
| 8     | 2                | 91.8               | 9                 | 1767                    |                         | 612.1                                 |
| 9     | 3                | 71.2               | 9                 | 1068                    | 1156                    | 39.01                                 |
| 10    | 2                | 90.9               | 9                 | 1095                    |                         | 640.08                                |
| 11    | 2                | 77.6               | 9                 | 1636                    |                         | 46.05                                 |
| 12    | 1                | 80                 | 9                 |                         |                         | 48.25                                 |
| 13    | 1                | 85.1               | 9                 |                         |                         | 436.4                                 |
| 14    | 1                | 64.8               | 9                 |                         |                         | 133.9                                 |
| 15    | 2                | 89.9               | 9                 | 1997                    |                         | 55                                    |

Type 5 Radar Waveform\_24

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 55.9               | 7                 | 1847                    |                         | 49.847                                |
| 2     | 3                | 66.7               | 7                 | 1331                    | 1991                    | 243.643                               |
| 3     | 2                | 54.9               | 7                 | 1831                    |                         | 9.86                                  |
| 4     | 2                | 79.3               | 7                 | 1744                    |                         | 594.1                                 |
| 5     | 1                | 64.9               | 7                 |                         |                         | 210.22                                |
| 6     | 3                | 63.6               | 7                 | 1076                    | 1480                    | 682.36                                |
| 7     | 2                | 51.9               | 7                 | 1177                    |                         | 710.25                                |
| 8     | 2                | 50.8               | 7                 | 1528                    |                         | 534.81                                |
| 9     | 2                | 95.5               | 7                 | 1247                    |                         | 10.44                                 |
| 10    | 2                | 71.1               | 7                 | 1711                    |                         | 25.26                                 |
| 11    | 2                | 78.7               | 7                 | 1322                    |                         | 282.05                                |
| 12    | 1                | 78                 | 7                 |                         |                         | 482.65                                |
| 13    | 2                | 88.4               | 7                 | 1172                    |                         | 435.92                                |
| 14    | 3                | 89.3               | 7                 | 1790                    | 1428                    | 262.4                                 |
| 15    | 2                | 80.1               | 7                 | 1804                    |                         | 190.8                                 |
| 16    | 1                | 89.7               | 7                 |                         |                         | 318.8                                 |

Type 5 Radar Waveform\_25

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 99.8               | 17                |                         |                         | 816.603                               |
| 2     | 3                | 67                 | 17                | 1088                    | 1376                    | 536.767                               |
| 3     | 2                | 89.1               | 17                | 1572                    |                         | 499.403                               |
| 4     | 2                | 63.6               | 17                | 1071                    |                         | 952.2                                 |
| 5     | 1                | 75.7               | 17                |                         |                         | 115.627                               |
| 6     | 2                | 51.8               | 17                | 1177                    |                         | 411.893                               |
| 7     | 3                | 81                 | 17                | 1014                    | 1442                    | 1289.95                               |
| 8     | 2                | 99.6               | 17                | 1125                    |                         | 990.167                               |
| 9     | 2                | 86.9               | 17                | 1195                    |                         | 1108.233                              |

Type 5 Radar Waveform\_26

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 76.8               | 12                | 1901                    |                         | 694.43                                |
| 2     | 2                | 70.7               | 12                | 1250                    |                         | 405.45                                |
| 3     | 3                | 64.7               | 12                | 1970                    | 1624                    | 285.24                                |
| 4     | 2                | 79.7               | 12                | 1793                    |                         | 257.15                                |
| 5     | 1                | 90.8               | 12                |                         |                         | 894.65                                |
| 6     | 1                | 51.5               | 12                |                         |                         | 220.07                                |
| 7     | 2                | 62.1               | 12                | 1643                    |                         | 322.62                                |
| 8     | 2                | 84.5               | 12                | 1469                    |                         | 511.07                                |
| 9     | 2                | 94.1               | 12                | 1805                    |                         | 209.08                                |
| 10    | 2                | 97.2               | 12                | 1898                    |                         | 9.12                                  |
| 11    | 2                | 66.2               | 12                | 1280                    |                         | 408.9                                 |
| 12    | 1                | 99.9               | 12                |                         |                         | 145.3                                 |

Type 5 Radar Waveform\_27

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 58.9               | 15                | 1957                    |                         | 126.89                                |
| 2     | 2                | 81.8               | 15                | 1123                    |                         | 822.501                               |
| 3     | 3                | 68.3               | 15                | 1014                    | 1442                    | 167.752                               |
| 4     | 1                | 92.3               | 15                |                         |                         | 301.673                               |
| 5     | 2                | 96.7               | 15                | 1537                    |                         | 607.544                               |
| 6     | 2                | 91.1               | 15                | 1491                    |                         | 344.175                               |
| 7     | 1                | 63.3               | 15                |                         |                         | 555.415                               |
| 8     | 3                | 85.1               | 15                | 1058                    | 1621                    | 357.026                               |
| 9     | 3                | 54.8               | 15                | 1868                    | 1508                    | 974.267                               |
| 10    | 2                | 94.7               | 15                | 1387                    |                         | 175.648                               |
| 11    | 1                | 55.7               | 15                |                         |                         | 1058.909                              |

Type 5 Radar Waveform\_28

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 80.3               | 13                | 1314                    |                         | 1225.45                               |
| 2     | 2                | 85.3               | 13                | 1186                    |                         | 421.597                               |
| 3     | 1                | 65.4               | 13                |                         |                         | 915.403                               |
| 4     | 2                | 90.3               | 13                | 1709                    |                         | 1015.16                               |
| 5     | 3                | 62                 | 13                | 1426                    | 1681                    | 875.827                               |
| 6     | 2                | 78.5               | 13                | 1070                    |                         | 315.513                               |
| 7     | 3                | 61                 | 13                | 1147                    | 1444                    | 190.36                                |
| 8     | 2                | 94                 | 13                | 1781                    |                         | 1002.567                              |
| 9     | 3                | 83.8               | 13                | 1206                    | 1073                    | 105.733                               |

| Type 5 Radar Waveform_29 |                  |                    |                   |                         |                         |                                       |
|--------------------------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| Burst                    | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
| 1                        | 2                | 81.7               | 11                | 1464                    |                         | 429.216                               |
| 2                        | 1                | 56.6               | 11                |                         |                         | 580.251                               |
| 3                        | 3                | 82.3               | 11                | 1217                    | 1106                    | 712.932                               |
| 4                        | 1                | 81.3               | 11                |                         |                         | 168.483                               |
| 5                        | 2                | 61.4               | 11                | 1774                    |                         | 564.594                               |
| 6                        | 2                | 86.9               | 11                | 1766                    |                         | 1064.425                              |
| 7                        | 1                | 89.7               | 11                |                         |                         | 251.155                               |
| 8                        | 1                | 50.4               | 11                |                         |                         | 612.856                               |
| 9                        | 2                | 93.8               | 11                | 1595                    |                         | 1000.147                              |
| 10                       | 2                | 83.1               | 11                | 1579                    |                         | 1074.918                              |
| 11                       | 2                | 86.1               | 11                | 1583                    |                         | 797.809                               |
| Type 5 Radar Waveform_30 |                  |                    |                   |                         |                         |                                       |
| Burst                    | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
| 1                        | 2                | 97                 | 17                | 1139                    |                         | 1170.66                               |
| 2                        | 3                | 57.7               | 17                | 1719                    | 1092                    | 117.24                                |
| 3                        | 2                | 75                 | 17                | 1655                    |                         | 947.41                                |
| 4                        | 1                | 59.6               | 17                |                         |                         | 891.82                                |
| 5                        | 3                | 54.9               | 17                | 1684                    | 1989                    | 788.94                                |
| 6                        | 2                | 90.8               | 17                | 1896                    |                         | 315.65                                |
| 7                        | 3                | 97.1               | 17                | 1018                    | 1874                    | 282.38                                |
| 8                        | 2                | 51.2               | 17                | 1357                    |                         | 912.05                                |
| 9                        | 3                | 97.1               | 17                | 1928                    | 1065                    | 283.54                                |
| 10                       | 2                | 61.2               | 17                | 1643                    |                         | 1102.5                                |

## Radar Type 6 - Radar Statistical Performance

| Trail #                  | 1=Detection<br>0=No Detection | Trail # | 1=Detection<br>0=No Detection |
|--------------------------|-------------------------------|---------|-------------------------------|
| 1                        | 1                             | 15      | 1                             |
| 2                        | 1                             | 16      | 1                             |
| 3                        | 1                             | 17      | 1                             |
| 4                        | 1                             | 18      | 1                             |
| 5                        | 1                             | 19      | 1                             |
| 6                        | 1                             | 20      | 1                             |
| 7                        | 1                             | 21      | 1                             |
| 8                        | 1                             | 22      | 1                             |
| 9                        | 1                             | 23      | 1                             |
| 10                       | 1                             | 24      | 1                             |
| 11                       | 1                             | 25      | 1                             |
| 12                       | 1                             | 26      | 1                             |
| 13                       | 1                             | 27      | 1                             |
| 14                       | 1                             | 28      | 1                             |
| 15                       | 1                             | 29      | 1                             |
| Detection Percentage (%) |                               | 100%    |                               |

| Radar waveform #1 |                 |                  | Radar waveform #2 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 11                | 5529            | 33               | 15                | 5519            | 45               |
| 28                | 5512            | 84               | 21                | 5514            | 63               |
| 29                | 5526            | 87               | 42                | 5526            | 126              |
| 33                | 5528            | 99               | 46                | 5505            | 138              |
| 59                | 5511            | 177              | 52                | 5496            | 156              |
| 61                | 5499            | 183              | 69                | 5529            | 207              |
| 63                | 5521            | 189              | 99                | 5508            | 297              |
| 72                | 5522            | 216              | --                | --              | --               |

| Radar waveform #3 |                 |                  | Radar waveform #4 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 24                | 5529            | 72               | 29                | 5518            | 87               |
| 31                | 5508            | 93               | 31                | 5500            | 93               |
| 36                | 5518            | 108              | 36                | 5503            | 108              |
| 48                | 5506            | 144              | 47                | 5508            | 141              |
| 50                | 5530            | 150              | 56                | 5509            | 168              |
| 52                | 5504            | 156              | 61                | 5496            | 183              |
| 59                | 5525            | 177              | 90                | 5520            | 270              |
| 90                | 5523            | 270              | 94                | 5501            | 282              |

| Radar waveform #5 |                 |                  | Radar waveform #6 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 5                 | 5507            | 15               | 3                 | 5517            | 9                |
| 9                 | 5519            | 27               | 9                 | 5493            | 27               |
| 15                | 5504            | 45               | 45                | 5521            | 135              |
| 51                | 5500            | 153              | 50                | 5497            | 150              |
| 55                | 5517            | 165              | 55                | 5509            | 165              |
| 75                | 5521            | 225              | 56                | 5523            | 168              |
| 82                | 5525            | 246              | 82                | 5505            | 246              |
| 100               | 5509            | 300              | --                | --              | --               |

| Radar waveform #7 |                 |                  | Radar waveform #8 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 10                | 5505            | 30               | 2                 | 5492            | 6                |
| 27                | 5528            | 81               | 20                | 5526            | 60               |
| 66                | 5498            | 198              | 21                | 5517            | 63               |
| 71                | 5521            | 213              | 42                | 5490            | 126              |
| 77                | 5522            | 231              | 69                | 5504            | 207              |
| 85                | 5497            | 255              | 74                | 5506            | 222              |
| 98                | 5524            | 294              | 78                | 5522            | 234              |
| --                | --              | --               | 84                | 5502            | 252              |

| Radar waveform #9 |                 |                  | Radar waveform #10 |                 |                  |
|-------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 11                | 5524            | 33               | 10                 | 5503            | 30               |
| 13                | 5526            | 39               | 17                 | 5509            | 51               |
| 25                | 5513            | 75               | 20                 | 5513            | 60               |
| 36                | 5512            | 108              | 67                 | 5501            | 201              |
| 40                | 5492            | 120              | 77                 | 5494            | 231              |
| 41                | 5498            | 123              | 89                 | 5504            | 267              |
| 49                | 5525            | 147              | 91                 | 5518            | 273              |
| 60                | 5503            | 180              | 95                 | 5524            | 285              |
| 74                | 5523            | 222              | --                 | --              | --               |
| 81                | 5493            | 243              | --                 | --              | --               |
| 89                | 5517            | 267              | --                 | --              | --               |

| Radar waveform #11 |                 |                  | Radar waveform #12 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 3                  | 5522            | 9                | 10                 | 5512            | 30               |
| 16                 | 5500            | 48               | 20                 | 5514            | 60               |
| 17                 | 5526            | 51               | 38                 | 5508            | 114              |
| 67                 | 5494            | 201              | 52                 | 5518            | 156              |
| 72                 | 5492            | 216              | 54                 | 5492            | 162              |
| 79                 | 5490            | 237              | 62                 | 5499            | 186              |
| 95                 | 5524            | 285              | 66                 | 5497            | 198              |
| 99                 | 5528            | 297              | 87                 | 5516            | 261              |
| --                 | --              | --               | 93                 | 5505            | 279              |
| --                 | --              | --               | 97                 | 5522            | 291              |

| Radar waveform #13 |                 |                  | Radar waveform #14 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 26                 | 5505            | 78               | 6                  | 5512            | 18               |
| 33                 | 5530            | 99               | 22                 | 5499            | 66               |
| 35                 | 5503            | 105              | 32                 | 5523            | 96               |
| 49                 | 5529            | 147              | 46                 | 5521            | 138              |
| 50                 | 5495            | 150              | 60                 | 5516            | 180              |
| 60                 | 5523            | 180              | 68                 | 5510            | 204              |
| 75                 | 5506            | 225              | 88                 | 5526            | 264              |
| 77                 | 5517            | 231              | 93                 | 5505            | 279              |
| 96                 | 5524            | 288              | --                 | --              | --               |

| Radar waveform #15 |                 |                  | Radar waveform #16 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 24                 | 5506            | 72               | 17                 | 5501            | 51               |
| 29                 | 5515            | 87               | 33                 | 5509            | 99               |
| 43                 | 5517            | 129              | 38                 | 5527            | 114              |
| 54                 | 5513            | 162              | 54                 | 5502            | 162              |
| 56                 | 5499            | 168              | 56                 | 5493            | 168              |
| 57                 | 5496            | 171              | 58                 | 5511            | 174              |
| 58                 | 5493            | 174              | 62                 | 5494            | 186              |
| 60                 | 5491            | 180              | 63                 | 5528            | 189              |
| 71                 | 5526            | 213              | 74                 | 5513            | 222              |
| 73                 | 5502            | 219              | 84                 | 5529            | 252              |
| 77                 | 5516            | 231              | 96                 | 5505            | 288              |
| 83                 | 5512            | 249              | --                 | --              | --               |
| 86                 | 5492            | 258              | --                 | --              | --               |
| 96                 | 5500            | 288              | --                 | --              | --               |

| Radar waveform #17 |                 |                  | Radar waveform #18 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 16                 | 5497            | 48               | 29                 | 5502            | 87               |
| 19                 | 5517            | 57               | 50                 | 5527            | 150              |
| 21                 | 5495            | 63               | 66                 | 5492            | 198              |
| 31                 | 5505            | 93               | 73                 | 5507            | 219              |
| 35                 | 5518            | 105              | --                 | --              | --               |
| 36                 | 5490            | 108              | --                 | --              | --               |
| 42                 | 5522            | 126              | --                 | --              | --               |
| 47                 | 5502            | 141              | --                 | --              | --               |
| 49                 | 5525            | 147              | --                 | --              | --               |
| 72                 | 5523            | 216              | --                 | --              | --               |
| 76                 | 5516            | 228              | --                 | --              | --               |
| 94                 | 5492            | 282              | --                 | --              | --               |

| Radar waveform #19 |                 |                  | Radar waveform #20 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 3                  | 5501            | 9                | 5                  | 5507            | 15               |
| 21                 | 5498            | 63               | 11                 | 5519            | 33               |
| 53                 | 5507            | 159              | 15                 | 5493            | 45               |
| 56                 | 5492            | 168              | 32                 | 5514            | 96               |
| 76                 | 5497            | 228              | 51                 | 5510            | 153              |
| 78                 | 5513            | 234              | 61                 | 5509            | 183              |
| 86                 | 5494            | 258              | 63                 | 5513            | 189              |
| 98                 | 5504            | 294              | 65                 | 5511            | 195              |
| 99                 | 5525            | 297              | 78                 | 5512            | 234              |
| --                 | --              | --               | 82                 | 5525            | 246              |

| Radar waveform #21 |                 |                  | Radar waveform #22 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 6                  | 5501            | 18               | 1                  | 5520            | 3                |
| 8                  | 5518            | 24               | 3                  | 5490            | 9                |
| 12                 | 5502            | 36               | 15                 | 5494            | 45               |
| 27                 | 5504            | 81               | 21                 | 5508            | 63               |
| 35                 | 5523            | 105              | 69                 | 5530            | 207              |
| 40                 | 5510            | 120              | 72                 | 5500            | 216              |
| 44                 | 5524            | 132              | 97                 | 5505            | 291              |
| 58                 | 5492            | 174              | --                 | --              | --               |
| 64                 | 5503            | 192              | --                 | --              | --               |
| 80                 | 5527            | 240              | --                 | --              | --               |
| 81                 | 5513            | 243              | --                 | --              | --               |
| 95                 | 5515            | 285              | --                 | --              | --               |

| Radar waveform #23 |                 |                  | Radar waveform #24 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 1                  | 5517            | 3                | 17                 | 5504            | 51               |
| 6                  | 5501            | 18               | 32                 | 5515            | 96               |
| 7                  | 5506            | 21               | 33                 | 5516            | 99               |
| 14                 | 5518            | 42               | 55                 | 5517            | 165              |
| 26                 | 5505            | 78               | 60                 | 5511            | 180              |
| 30                 | 5490            | 90               | 75                 | 5498            | 225              |
| 32                 | 5513            | 96               | 83                 | 5518            | 249              |
| 38                 | 5491            | 114              | 95                 | 5508            | 285              |
| 39                 | 5526            | 117              | --                 | --              | --               |
| 41                 | 5512            | 123              | --                 | --              | --               |
| 52                 | 5509            | 156              | --                 | --              | --               |
| 53                 | 5522            | 159              | --                 | --              | --               |
| 64                 | 5502            | 192              | --                 | --              | --               |
| 65                 | 5503            | 195              | --                 | --              | --               |
| 66                 | 5497            | 198              | --                 | --              | --               |
| 67                 | 5504            | 201              | --                 | --              | --               |
| 86                 | 5492            | 258              | --                 | --              | --               |

| Radar waveform #25 |                 |                  | Radar waveform #26 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 25                 | 5503            | 75               | 9                  | 5512            | 27               |
| 29                 | 5498            | 87               | 25                 | 5518            | 75               |
| 38                 | 5519            | 114              | 35                 | 5500            | 105              |
| 52                 | 5491            | 156              | 40                 | 5517            | 120              |
| 72                 | 5529            | 216              | 43                 | 5507            | 129              |
| 89                 | 5504            | 267              | 51                 | 5503            | 153              |
| 93                 | 5526            | 279              | 62                 | 5494            | 186              |
| 96                 | 5494            | 288              | 74                 | 5529            | 222              |
| --                 | --              | --               | 78                 | 5514            | 234              |
| --                 | --              | --               | 80                 | 5493            | 240              |
| --                 | --              | --               | 84                 | 5526            | 252              |
| --                 | --              | --               | 93                 | 5492            | 279              |

| Radar waveform #27 |                 |                  | Radar waveform #28 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 10                 | 5519            | 30               | 16                 | 5497            | 48               |
| 40                 | 5497            | 120              | 25                 | 5517            | 75               |
| 49                 | 5494            | 147              | 42                 | 5512            | 126              |
| 73                 | 5495            | 219              | 57                 | 5492            | 171              |
| 79                 | 5515            | 237              | 60                 | 5514            | 180              |
| 84                 | 5520            | 252              | 69                 | 5525            | 207              |
| --                 | --              | --               | 74                 | 5530            | 222              |
| --                 | --              | --               | 84                 | 5503            | 252              |

| Radar waveform #29 |                 |                  | Radar waveform #30 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5513            | 6                | 19                 | 5492            | 57               |
| 6                  | 5499            | 18               | 21                 | 5516            | 63               |
| 35                 | 5503            | 105              | 46                 | 5518            | 138              |
| 54                 | 5490            | 162              | 50                 | 5499            | 150              |
| 63                 | 5521            | 189              | 56                 | 5519            | 168              |
| 73                 | 5493            | 219              | 63                 | 5523            | 189              |
| 77                 | 5509            | 231              | 67                 | 5511            | 201              |
| 79                 | 5500            | 237              | 72                 | 5512            | 216              |
| --                 | --              | --               | 85                 | 5493            | 255              |

|               |                                                                    |           |            |
|---------------|--------------------------------------------------------------------|-----------|------------|
| Product       | ACCESS POINT                                                       | Test Site | SR2        |
| Test Engineer | Eric Lin                                                           | Test Date | 2020/05/23 |
| Test Item     | Radar Statistical Performance Check (802.11ax-HE80 mode – 5530MHz) |           |            |

#### Radar Type 1 - Radar Statistical Performance

| Trail # | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|---------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1       | 5491                | 1                   | 878      | 61             | 1                             |
| 2       | 5520                | 1                   | 558      | 95             | 1                             |
| 3       | 5499                | 1                   | 618      | 86             | 1                             |
| 4       | 5526                | 1                   | 898      | 59             | 1                             |
| 5       | 5502                | 1                   | 838      | 63             | 1                             |
| 6       | 5538                | 1                   | 2510     | 21             | 1                             |
| 7       | 5565                | 1                   | 1875     | 29             | 1                             |
| 8       | 5494                | 1                   | 918      | 58             | 1                             |
| 9       | 5512                | 1                   | 738      | 72             | 1                             |
| 10      | 5533                | 1                   | 2584     | 21             | 1                             |
| 11      | 5518                | 1                   | 638      | 83             | 1                             |
| 12      | 5543                | 1                   | 2365     | 23             | 1                             |
| 13      | 5551                | 1                   | 1741     | 31             | 1                             |
| 14      | 5549                | 1                   | 2910     | 19             | 1                             |
| 15      | 5528                | 1                   | 778      | 68             | 1                             |
| 16      | 5562                | 1                   | 2798     | 19             | 1                             |
| 17      | 5515                | 1                   | 658      | 81             | 1                             |
| 18      | 5535                | 1                   | 1958     | 27             | 1                             |
| 19      | 5504                | 1                   | 598      | 89             | 1                             |
| 20      | 5541                | 1                   | 2977     | 18             | 1                             |
| 21      | 5523                | 1                   | 3066     | 18             | 1                             |
| 22      | 5496                | 1                   | 818      | 65             | 1                             |
| 23      | 5510                | 1                   | 858      | 62             | 1                             |
| 24      | 5546                | 1                   | 1736     | 31             | 1                             |
| 25      | 5554                | 1                   | 3007     | 18             | 1                             |
| 26      | 5557                | 1                   | 1577     | 34             | 1                             |

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 27                       | 5559                | 1                   | 2037     | 26             | 1                             |
| 28                       | 5530                | 1                   | 2733     | 20             | 1                             |
| 29                       | 5507                | 1                   | 678      | 78             | 1                             |
| 30                       | 5569                | 1                   | 704      | 75             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 100%                          |

## Radar Type 2 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 2                   | 171      | 26             | 1                             |
| 2                        | 5530                | 4                   | 206      | 26             | 1                             |
| 3                        | 5546                | 2.2                 | 182      | 24             | 1                             |
| 4                        | 5535                | 1.5                 | 193      | 29             | 1                             |
| 5                        | 5502                | 4.9                 | 174      | 26             | 0                             |
| 6                        | 5526                | 2.1                 | 209      | 25             | 1                             |
| 7                        | 5559                | 1.7                 | 210      | 28             | 1                             |
| 8                        | 5510                | 1.4                 | 208      | 25             | 1                             |
| 9                        | 5551                | 3.1                 | 214      | 25             | 1                             |
| 10                       | 5515                | 2.6                 | 197      | 24             | 1                             |
| 11                       | 5565                | 1.4                 | 172      | 25             | 1                             |
| 12                       | 5520                | 4.8                 | 192      | 23             | 1                             |
| 13                       | 5523                | 2.9                 | 228      | 26             | 1                             |
| 14                       | 5507                | 1.9                 | 173      | 26             | 1                             |
| 15                       | 5528                | 2.7                 | 168      | 28             | 1                             |
| 16                       | 5533                | 4.4                 | 228      | 26             | 1                             |
| 17                       | 5557                | 1.5                 | 182      | 27             | 1                             |
| 18                       | 5496                | 1.8                 | 178      | 29             | 1                             |
| 19                       | 5538                | 1.8                 | 216      | 25             | 0                             |
| 20                       | 5541                | 2.8                 | 224      | 24             | 0                             |
| 21                       | 5543                | 4.1                 | 198      | 28             | 1                             |
| 22                       | 5499                | 4.5                 | 162      | 29             | 1                             |
| 23                       | 5549                | 4.6                 | 170      | 23             | 1                             |
| 24                       | 5504                | 1.8                 | 203      | 26             | 1                             |
| 25                       | 5554                | 3.9                 | 183      | 26             | 1                             |
| 26                       | 5518                | 3                   | 159      | 27             | 1                             |
| 27                       | 5512                | 1.9                 | 195      | 25             | 1                             |
| 28                       | 5562                | 4.7                 | 155      | 25             | 1                             |
| 29                       | 5494                | 1.1                 | 198      | 26             | 1                             |
| 30                       | 5569                | 2.1                 | 185      | 28             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 90%                           |

## Radar Type 3 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 8.1                 | 246      | 18             | 1                             |
| 2                        | 5518                | 7.9                 | 339      | 17             | 0                             |
| 3                        | 5526                | 8.9                 | 423      | 17             | 1                             |
| 4                        | 5551                | 6.1                 | 392      | 18             | 1                             |
| 5                        | 5543                | 7.8                 | 490      | 17             | 0                             |
| 6                        | 5533                | 7.9                 | 212      | 17             | 1                             |
| 7                        | 5504                | 7.4                 | 245      | 18             | 1                             |
| 8                        | 5510                | 8.7                 | 352      | 17             | 1                             |
| 9                        | 5554                | 9.4                 | 451      | 18             | 1                             |
| 10                       | 5515                | 6.3                 | 306      | 16             | 0                             |
| 11                       | 5559                | 8.8                 | 355      | 17             | 1                             |
| 12                       | 5520                | 8.9                 | 417      | 17             | 1                             |
| 13                       | 5523                | 6.3                 | 236      | 17             | 0                             |
| 14                       | 5565                | 9.1                 | 453      | 17             | 1                             |
| 15                       | 5528                | 6.4                 | 361      | 17             | 1                             |
| 16                       | 5530                | 8.6                 | 289      | 17             | 1                             |
| 17                       | 5507                | 8.2                 | 428      | 17             | 1                             |
| 18                       | 5535                | 7.9                 | 253      | 17             | 1                             |
| 19                       | 5549                | 8.2                 | 283      | 18             | 1                             |
| 20                       | 5541                | 7.8                 | 449      | 16             | 1                             |
| 21                       | 5499                | 8.7                 | 387      | 16             | 0                             |
| 22                       | 5546                | 8.2                 | 263      | 16             | 1                             |
| 23                       | 5502                | 6.8                 | 465      | 17             | 1                             |
| 24                       | 5494                | 8.4                 | 422      | 18             | 1                             |
| 25                       | 5512                | 6.5                 | 466      | 17             | 1                             |
| 26                       | 5557                | 8.8                 | 378      | 18             | 1                             |
| 27                       | 5538                | 7.8                 | 453      | 17             | 1                             |
| 28                       | 5562                | 8.5                 | 483      | 16             | 0                             |
| 29                       | 5496                | 7.3                 | 247      | 17             | 0                             |
| 30                       | 5569                | 8.3                 | 368      | 16             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 76.7%                         |

## Radar Type 4 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | Pulse Width<br>(us) | PRI (us) | Pulses / Burst | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|---------------------|----------|----------------|-------------------------------|
| 1                        | 5491                | 16                  | 355      | 15             | 1                             |
| 2                        | 5533                | 18.4                | 309      | 14             | 1                             |
| 3                        | 5526                | 16.4                | 252      | 12             | 0                             |
| 4                        | 5538                | 13.4                | 336      | 14             | 1                             |
| 5                        | 5502                | 11.4                | 203      | 13             | 1                             |
| 6                        | 5535                | 20                  | 275      | 14             | 1                             |
| 7                        | 5507                | 18.2                | 247      | 15             | 1                             |
| 8                        | 5510                | 18.3                | 259      | 16             | 1                             |
| 9                        | 5557                | 19.5                | 314      | 16             | 1                             |
| 10                       | 5494                | 14.7                | 411      | 12             | 0                             |
| 11                       | 5551                | 18.5                | 407      | 15             | 1                             |
| 12                       | 5499                | 15.6                | 218      | 15             | 0                             |
| 13                       | 5523                | 19                  | 416      | 16             | 1                             |
| 14                       | 5546                | 12                  | 207      | 14             | 0                             |
| 15                       | 5528                | 14.2                | 445      | 13             | 1                             |
| 16                       | 5518                | 13.3                | 389      | 13             | 1                             |
| 17                       | 5559                | 18.8                | 302      | 13             | 1                             |
| 18                       | 5549                | 11.4                | 422      | 15             | 1                             |
| 19                       | 5565                | 11.1                | 354      | 16             | 1                             |
| 20                       | 5541                | 17.3                | 413      | 12             | 1                             |
| 21                       | 5543                | 12.4                | 328      | 13             | 1                             |
| 22                       | 5515                | 11.1                | 476      | 13             | 1                             |
| 23                       | 5562                | 13                  | 337      | 13             | 0                             |
| 24                       | 5496                | 19.3                | 329      | 12             | 0                             |
| 25                       | 5554                | 14.3                | 487      | 14             | 1                             |
| 26                       | 5512                | 18.2                | 264      | 12             | 1                             |
| 27                       | 5530                | 18.1                | 295      | 14             | 1                             |
| 28                       | 5504                | 19.4                | 252      | 14             | 0                             |
| 29                       | 5520                | 15.7                | 200      | 13             | 1                             |
| 30                       | 5569                | 12.2                | 353      | 15             | 1                             |
| Detection Percentage (%) |                     |                     |          |                | 76.7%                         |

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test

waveforms is as follows:  $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\% + 90\% + 76.7\% + 76.7\%) / 4 = 85.9\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

| Trail #                  | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection | Trail # | Test Freq.<br>(MHz) | 1=Detection<br>0=No Detection |
|--------------------------|---------------------|-------------------------------|---------|---------------------|-------------------------------|
| 1                        | 5530                | 1                             | 16      | 5496.6              | 1                             |
| 2                        | 5530                | 1                             | 17      | 5494.2              | 1                             |
| 3                        | 5530                | 1                             | 18      | 5561.8              | 1                             |
| 4                        | 5530                | 1                             | 19      | 5566.2              | 1                             |
| 5                        | 5530                | 1                             | 20      | 5493                | 1                             |
| 6                        | 5530                | 1                             | 21      | 5562.6              | 1                             |
| 7                        | 5530                | 1                             | 22      | 5497.8              | 1                             |
| 8                        | 5530                | 1                             | 23      | 5563.4              | 1                             |
| 9                        | 5530                | 1                             | 24      | 5498.2              | 1                             |
| 10                       | 5530                | 0                             | 25      | 5495.4              | 1                             |
| 11                       | 5495.8              | 1                             | 26      | 5498.2              | 1                             |
| 12                       | 5562.6              | 1                             | 27      | 5564.6              | 1                             |
| 13                       | 5493                | 1                             | 28      | 5562.6              | 1                             |
| 14                       | 5566.2              | 1                             | 29      | 5498.2              | 1                             |
| 15                       | 5565                | 1                             | 30      | 5563.4              | 1                             |
| Detection Percentage (%) |                     |                               |         |                     | 96.7%                         |

| Type 5 Radar Waveform_1 |                  |                    |                   |                         |                         |                                       |
|-------------------------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| Burst                   | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
| 1                       | 2                | 94.9               | 17                | 1035                    |                         | 57.386                                |
| 2                       | 2                | 51.8               | 17                | 1941                    |                         | 11.05                                 |
| 3                       | 1                | 81.7               | 17                |                         |                         | 74.18                                 |
| 4                       | 2                | 72.5               | 17                | 1216                    |                         | 351.93                                |
| 5                       | 2                | 87.6               | 17                | 1046                    |                         | 274.52                                |
| 6                       | 2                | 93.7               | 17                | 1648                    |                         | 729.57                                |
| 7                       | 2                | 88.5               | 17                | 1187                    |                         | 308.51                                |
| 8                       | 2                | 61                 | 17                | 1294                    |                         | 518.03                                |
| 9                       | 1                | 76.3               | 17                |                         |                         | 514.88                                |
| 10                      | 2                | 95.4               | 17                | 1475                    |                         | 739.73                                |
| 11                      | 1                | 72                 | 17                |                         |                         | 365.41                                |
| 12                      | 1                | 76.1               | 17                |                         |                         | 615.57                                |
| 13                      | 2                | 99.6               | 17                | 1356                    |                         | 323.64                                |
| 14                      | 1                | 85.6               | 17                |                         |                         | 523.2                                 |
| 15                      | 3                | 83.1               | 17                | 1115                    | 1965                    | 126.2                                 |
| 16                      | 1                | 66.6               | 17                |                         |                         | 596                                   |

Type 5 Radar Waveform\_2

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 50.7               | 12                | 1205                    |                         | 781.87                                |
| 2     | 2                | 92.7               | 12                | 1296                    |                         | 254.473                               |
| 3     | 3                | 65.7               | 12                | 1433                    | 1113                    | 847.336                               |
| 4     | 2                | 70.7               | 12                | 1029                    |                         | 831.109                               |
| 5     | 2                | 76.9               | 12                | 1033                    |                         | 906.282                               |
| 6     | 2                | 76                 | 12                | 1801                    |                         | 750.255                               |
| 7     | 2                | 95.8               | 12                | 1259                    |                         | 496.298                               |
| 8     | 2                | 92.1               | 12                | 1963                    |                         | 429.382                               |
| 9     | 3                | 66.9               | 12                | 1946                    | 1964                    | 537.905                               |
| 10    | 2                | 57.1               | 12                | 1532                    |                         | 552.758                               |
| 11    | 3                | 98.2               | 12                | 1398                    | 1108                    | 556.391                               |
| 12    | 3                | 50.4               | 12                | 1077                    | 1537                    | 911.454                               |
| 13    | 3                | 95.9               | 12                | 1819                    | 1545                    | 82.477                                |

Type 5 Radar Waveform\_3

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 70.1               | 17                |                         |                         | 723.955                               |
| 2     | 1                | 86.1               | 17                |                         |                         | 469.801                               |
| 3     | 2                | 71.6               | 17                | 1338                    |                         | 835.182                               |
| 4     | 2                | 89.3               | 17                | 1283                    |                         | 574.993                               |
| 5     | 2                | 89.7               | 17                | 1259                    |                         | 963.224                               |
| 6     | 2                | 88.4               | 17                | 1460                    |                         | 593.555                               |
| 7     | 2                | 65.5               | 17                | 1264                    |                         | 741.005                               |
| 8     | 3                | 65.7               | 17                | 1735                    | 1434                    | 603.636                               |
| 9     | 2                | 82.5               | 17                | 1417                    |                         | 49.827                                |
| 10    | 2                | 57.4               | 17                | 1410                    |                         | 627.718                               |
| 11    | 2                | 58.5               | 17                | 1702                    |                         | 715.509                               |

Type 5 Radar Waveform\_4

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 66.4               | 5                 | 1814                    | 1510                    | 645.729                               |
| 2     | 2                | 87.1               | 5                 | 1710                    |                         | 564.408                               |
| 3     | 2                | 70.6               | 5                 | 1744                    |                         | 680.915                               |
| 4     | 3                | 55.5               | 5                 | 1238                    | 1940                    | 327.823                               |
| 5     | 1                | 99.4               | 5                 |                         |                         | 290.601                               |
| 6     | 3                | 98.2               | 5                 | 1218                    | 1051                    | 64.708                                |
| 7     | 2                | 97.7               | 5                 | 1584                    |                         | 99.316                                |
| 8     | 3                | 78.6               | 5                 | 1930                    | 1217                    | 614.864                               |
| 9     | 3                | 91.7               | 5                 | 1909                    | 1709                    | 203.361                               |
| 10    | 3                | 79.8               | 5                 | 1408                    | 1746                    | 649.249                               |
| 11    | 2                | 72.9               | 5                 | 1049                    |                         | 435.606                               |
| 12    | 2                | 67.2               | 5                 | 1934                    |                         | 343.234                               |
| 13    | 2                | 97.8               | 5                 | 1461                    |                         | 378.582                               |
| 14    | 3                | 56.6               | 5                 | 1730                    | 1349                    | 50.209                                |
| 15    | 1                | 98.5               | 5                 |                         |                         | 346.147                               |
| 16    | 1                | 72.4               | 5                 |                         |                         | 152.465                               |
| 17    | 3                | 70.9               | 5                 | 1568                    | 1649                    | 545.082                               |

Type 5 Radar Waveform\_5

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 99.9               | 18                | 1295                    |                         | 589.484                               |
| 2     | 2                | 79.2               | 18                | 1365                    |                         | 823.217                               |
| 3     | 2                | 63.7               | 18                | 1331                    |                         | 417.913                               |
| 4     | 2                | 93.9               | 18                | 1752                    |                         | 879.79                                |
| 5     | 3                | 54.4               | 18                | 1479                    | 1068                    | 1170.497                              |
| 6     | 3                | 92.9               | 18                | 1209                    | 1277                    | 386.443                               |
| 7     | 2                | 67.8               | 18                | 1282                    |                         | 1168.52                               |
| 8     | 3                | 63.3               | 18                | 1790                    | 1629                    | 1062.567                              |
| 9     | 3                | 91                 | 18                | 1977                    | 1326                    | 937.033                               |

Type 5 Radar Waveform\_6

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 97                 | 7                 | 1698                    |                         | 466.258                               |
| 2     | 2                | 94.5               | 7                 | 1664                    |                         | 109.33                                |
| 3     | 2                | 80.8               | 7                 | 1941                    |                         | 891.78                                |
| 4     | 2                | 94.3               | 7                 | 1869                    |                         | 104.97                                |
| 5     | 3                | 95.2               | 7                 | 1760                    | 1540                    | 299.98                                |
| 6     | 3                | 82.7               | 7                 | 1374                    | 1277                    | 582.11                                |
| 7     | 2                | 73.7               | 7                 | 1297                    |                         | 682.61                                |
| 8     | 2                | 90.9               | 7                 | 1075                    |                         | 1003.45                               |
| 9     | 1                | 72.3               | 7                 |                         |                         | 996.1                                 |
| 10    | 2                | 94.4               | 7                 | 1866                    |                         | 227.1                                 |

Type 5 Radar Waveform\_7

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 88.4               | 17                | 1708                    |                         | 323.294                               |
| 2     | 3                | 93                 | 17                | 1229                    | 1295                    | 106.501                               |
| 3     | 3                | 58.2               | 17                | 1757                    | 1347                    | 274.952                               |
| 4     | 2                | 82.5               | 17                | 1777                    |                         | 701.173                               |
| 5     | 3                | 57.1               | 17                | 1007                    | 1512                    | 170.944                               |
| 6     | 2                | 83.4               | 17                | 1705                    |                         | 477.545                               |
| 7     | 3                | 86                 | 17                | 1062                    | 1614                    | 66.375                                |
| 8     | 2                | 77.5               | 17                | 1521                    |                         | 944.996                               |
| 9     | 2                | 65.9               | 17                | 1230                    |                         | 455.417                               |
| 10    | 2                | 64.8               | 17                | 1257                    |                         | 884.318                               |
| 11    | 1                | 85.5               | 17                |                         |                         | 51.009                                |

Type 5 Radar Waveform\_8

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 Spacing (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-----------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 52.7               | 11                |                             |                         | 439.561                               |
| 2     | 2                | 80.2               | 11                | 1765                        |                         | 562.073                               |
| 3     | 2                | 63.2               | 11                | 1563                        |                         | 9.577                                 |
| 4     | 2                | 76.9               | 11                | 1016                        |                         | 266.1                                 |
| 5     | 3                | 59.6               | 11                | 1099                        | 1607                    | 585.583                               |
| 6     | 2                | 87.2               | 11                | 1086                        |                         | 433.147                               |
| 7     | 2                | 93.3               | 11                | 1841                        |                         | 632.63                                |
| 8     | 2                | 55.1               | 11                | 1963                        |                         | 524.193                               |
| 9     | 2                | 90                 | 11                | 1831                        |                         | 282.067                               |
| 10    | 2                | 61.5               | 11                | 1104                        |                         | 318.33                                |
| 11    | 1                | 99.6               | 11                |                             |                         | 648.193                               |
| 12    | 2                | 79.4               | 11                | 1460                        |                         | 188.377                               |
| 13    | 3                | 75.6               | 11                | 1367                        | 1082                    | 294.38                                |
| 14    | 2                | 67.6               | 11                | 1856                        |                         | 474.563                               |
| 15    | 3                | 81.1               | 11                | 1008                        | 1109                    | 284.247                               |
| 16    | 2                | 88.1               | 11                | 1233                        |                         | 166.2                                 |
| 17    | 3                | 93.4               | 11                | 1021                        | 1836                    | 226.633                               |
| 18    | 3                | 64.2               | 11                | 1618                        | 1898                    | 307.667                               |

Type 5 Radar Waveform\_9

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 54.5               | 9                 | 1381                    |                         | 100.491                               |
| 2     | 1                | 91.7               | 9                 |                         | 1274                    | 212.534                               |
| 3     | 2                | 97                 | 9                 | 1418                    |                         | 239.702                               |
| 4     | 2                | 80.1               | 9                 | 1011                    |                         | 384.113                               |
| 5     | 2                | 72.6               | 9                 | 1332                    |                         | 289.874                               |
| 6     | 3                | 62.2               | 9                 | 1107                    | 1248                    | 563.705                               |
| 7     | 2                | 58.5               | 9                 | 1472                    |                         | 463.146                               |
| 8     | 1                | 57.6               | 9                 |                         |                         | 166.957                               |
| 9     | 2                | 55.7               | 9                 | 1828                    |                         | 136.738                               |
| 10    | 2                | 71.2               | 9                 | 1439                    |                         | 87.719                                |
| 11    | 2                | 68.8               | 9                 | 1767                    |                         | 335.361                               |
| 12    | 2                | 58                 | 9                 | 1292                    |                         | 79.612                                |
| 13    | 3                | 68.4               | 9                 | 1170                    | 1561                    | 399.363                               |
| 14    | 2                | 71.6               | 9                 | 1226                    |                         | 210.654                               |
| 15    | 2                | 74.9               | 9                 | 1165                    |                         | 397.665                               |
| 16    | 2                | 66.5               | 9                 | 1726                    |                         | 182.746                               |
| 17    | 3                | 69.6               | 9                 | 1440                    | 1710                    | 573.837                               |
| 18    | 1                | 87.5               | 9                 |                         |                         | 323.558                               |
| 19    | 3                | 60.8               | 9                 | 1962                    | 1735                    | 443.579                               |

Type 5 Radar Waveform\_10

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 66.3               | 10                |                         |                         | 729.387                               |
| 2     | 2                | 96.8               | 10                | 1652                    |                         | 1046.44                               |
| 3     | 1                | 71.9               | 10                |                         |                         | 1070.05                               |
| 4     | 2                | 57                 | 10                | 1455                    |                         | 1309.96                               |
| 5     | 3                | 81                 | 10                | 1728                    | 1539                    | 25.31                                 |
| 6     | 2                | 82                 | 10                | 1095                    |                         | 844.45                                |
| 7     | 2                | 97.2               | 10                | 1922                    |                         | 33.62                                 |
| 8     | 1                | 71.8               | 10                |                         |                         | 1333.3                                |

Type 5 Radar Waveform\_11

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 99.5               | 12                | 1387                    | 1302                    | 301.159                               |
| 2     | 1                | 57.5               | 12                |                         |                         | 171.321                               |
| 3     | 2                | 57.4               | 12                | 1080                    |                         | 128.96                                |
| 4     | 3                | 87.6               | 12                | 1091                    | 1484                    | 262.3                                 |
| 5     | 2                | 77.5               | 12                | 1682                    |                         | 4.88                                  |
| 6     | 1                | 63                 | 12                |                         |                         | 483.55                                |
| 7     | 1                | 62.5               | 12                |                         |                         | 81.2                                  |
| 8     | 1                | 51.1               | 12                |                         |                         | 534.53                                |
| 9     | 1                | 90.1               | 12                |                         |                         | 390.15                                |
| 10    | 2                | 68.8               | 12                | 1023                    |                         | 588.06                                |
| 11    | 2                | 80.1               | 12                | 1189                    |                         | 481.24                                |
| 12    | 3                | 84.8               | 12                | 1152                    | 1643                    | 426.1                                 |
| 13    | 1                | 92.1               | 12                |                         |                         | 528.82                                |
| 14    | 1                | 52.2               | 12                |                         |                         | 422.82                                |
| 15    | 1                | 94.8               | 12                |                         |                         | 185.85                                |
| 16    | 3                | 73.8               | 12                | 1287                    | 1924                    | 7.41                                  |
| 17    | 3                | 50.2               | 12                | 1440                    | 1164                    | 162.35                                |
| 18    | 1                | 50.3               | 12                |                         |                         | 14.2                                  |
| 19    | 1                | 81.7               | 12                |                         |                         | 451.4                                 |
| 20    | 2                | 86                 | 12                | 1849                    |                         | 173                                   |

ype 5 Radar Waveform\_12

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 56.6               | 8                 | 1879                    | 1483                    | 124.896                               |
| 2     | 2                | 91                 | 8                 | 1495                    |                         | 485.501                               |
| 3     | 3                | 55.4               | 8                 | 1016                    | 1686                    | 150.322                               |
| 4     | 3                | 90.2               | 8                 | 1080                    | 1446                    | 187.573                               |
| 5     | 1                | 81.6               | 8                 |                         |                         | 112.144                               |
| 6     | 1                | 86.5               | 8                 |                         |                         | 6.185                                 |
| 7     | 2                | 79.4               | 8                 | 1357                    |                         | 506.876                               |
| 8     | 3                | 68.8               | 8                 | 1204                    | 1954                    | 235.067                               |
| 9     | 2                | 58.2               | 8                 | 1012                    |                         | 454.088                               |
| 10    | 3                | 71                 | 8                 | 1352                    | 1154                    | 253.779                               |
| 11    | 2                | 57.1               | 8                 | 1863                    |                         | 374.931                               |
| 12    | 1                | 53.6               | 8                 |                         |                         | 87.222                                |
| 13    | 3                | 54.7               | 8                 | 1873                    | 1276                    | 295.623                               |
| 14    | 1                | 82.6               | 8                 |                         |                         | 92.064                                |
| 15    | 1                | 89                 | 8                 |                         |                         | 553.195                               |
| 16    | 2                | 99.1               | 8                 | 1263                    |                         | 599.816                               |
| 17    | 2                | 53.8               | 8                 | 1573                    |                         | 227.437                               |
| 18    | 1                | 56.4               | 8                 |                         |                         | 380.258                               |
| 19    | 2                | 86.4               | 8                 | 1679                    |                         | 619.679                               |

Type 5 Radar Waveform\_13

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 96.9               | 17                |                         |                         | 316.292                               |
| 2     | 3                | 63.2               | 17                | 1714                    | 1611                    | 158.403                               |
| 3     | 1                | 54.7               | 17                |                         |                         | 174.862                               |
| 4     | 2                | 98.9               | 17                | 1038                    |                         | 547.543                               |
| 5     | 2                | 51.1               | 17                | 1216                    |                         | 496.654                               |
| 6     | 2                | 86.7               | 17                | 1155                    |                         | 337.195                               |
| 7     | 3                | 89.4               | 17                | 1034                    | 1656                    | 33.526                                |
| 8     | 2                | 51.1               | 17                | 1878                    |                         | 412.497                               |
| 9     | 2                | 96.1               | 17                | 1510                    |                         | 285.308                               |
| 10    | 1                | 84.2               | 17                |                         |                         | 273.889                               |
| 11    | 2                | 75.1               | 17                | 1138                    |                         | 442.131                               |
| 12    | 2                | 83.7               | 17                | 1677                    |                         | 335.082                               |
| 13    | 2                | 51.1               | 17                | 1080                    |                         | 129.823                               |
| 14    | 1                | 52.1               | 17                |                         |                         | 240.784                               |
| 15    | 2                | 68.2               | 17                | 1377                    |                         | 181.545                               |
| 16    | 2                | 66.5               | 17                | 1066                    |                         | 435.386                               |
| 17    | 2                | 69.8               | 17                | 1121                    |                         | 409.337                               |
| 18    | 1                | 56.9               | 17                |                         |                         | 455.658                               |
| 19    | 2                | 51.9               | 17                | 1934                    |                         | 343.079                               |

Type 5 Radar Waveform\_14

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 99.1               | 18                | 1854                    |                         | 775.171                               |
| 2     | 3                | 77.7               | 18                | 1825                    | 1933                    | 183.664                               |
| 3     | 2                | 59.5               | 18                | 1181                    |                         | 83.69                                 |
| 4     | 1                | 73.1               | 18                |                         |                         | 295.7                                 |
| 5     | 2                | 63                 | 18                | 1753                    |                         | 703.28                                |
| 6     | 3                | 72.6               | 18                | 1520                    | 1131                    | 355.35                                |
| 7     | 2                | 94.7               | 18                | 1261                    |                         | 544.56                                |
| 8     | 3                | 95.3               | 18                | 1175                    | 1462                    | 251.17                                |
| 9     | 2                | 84.5               | 18                | 1002                    |                         | 787.67                                |
| 10    | 2                | 72.6               | 18                | 1730                    |                         | 345.7                                 |
| 11    | 2                | 65.8               | 18                | 1683                    |                         | 781.35                                |
| 12    | 3                | 59.6               | 18                | 1260                    | 1491                    | 350.32                                |
| 13    | 2                | 62.3               | 18                | 1001                    |                         | 354.89                                |
| 14    | 3                | 88                 | 18                | 1029                    | 1151                    | 554.4                                 |
| 15    | 2                | 68.6               | 18                | 1723                    |                         | 752.1                                 |

Type 5 Radar Waveform\_15

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 78.1               | 11                | 1601                    | 1550                    | 98.244                                |
| 2     | 2                | 78.6               | 11                | 1214                    |                         | 599.33                                |
| 3     | 3                | 62                 | 11                | 1228                    | 1526                    | 734.14                                |
| 4     | 3                | 96.8               | 11                | 1823                    | 1019                    | 380.82                                |
| 5     | 1                | 92                 | 11                |                         |                         | 622.98                                |
| 6     | 2                | 62.6               | 11                | 1498                    |                         | 241.28                                |
| 7     | 3                | 89.4               | 11                | 1524                    | 1934                    | 896.25                                |
| 8     | 1                | 65                 | 11                |                         |                         | 651.84                                |
| 9     | 3                | 77.7               | 11                | 1228                    | 1282                    | 265.98                                |
| 10    | 2                | 67                 | 11                | 1548                    |                         | 143.2                                 |
| 11    | 3                | 93.9               | 11                | 1199                    | 1045                    | 329.5                                 |
| 12    | 2                | 97.4               | 11                | 1768                    |                         | 591.5                                 |

Type 5 Radar Waveform\_16

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 83                 | 14                |                         |                         | 946.891                               |
| 2     | 2                | 74.1               | 14                | 1613                    |                         | 746.091                               |
| 3     | 2                | 65.2               | 14                | 1828                    |                         | 403.152                               |
| 4     | 2                | 85.2               | 14                | 1811                    |                         | 1006.983                              |
| 5     | 2                | 75.2               | 14                | 1238                    |                         | 292.474                               |
| 6     | 3                | 57.8               | 14                | 1315                    | 1771                    | 517.335                               |
| 7     | 2                | 75.2               | 14                | 1766                    |                         | 452.515                               |
| 8     | 2                | 76.9               | 14                | 1391                    |                         | 266.906                               |
| 9     | 3                | 97.2               | 14                | 1428                    | 1754                    | 675.147                               |
| 10    | 3                | 91.1               | 14                | 1178                    | 1273                    | 220.818                               |
| 11    | 2                | 53.7               | 14                | 1912                    |                         | 225.809                               |

Type 5 Radar Waveform\_17

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 81.2               | 18                |                         |                         | 133.757                               |
| 2     | 2                | 71.7               | 18                | 1771                    |                         | 759                                   |
| 3     | 2                | 72.5               | 18                | 1546                    |                         | 75.04                                 |
| 4     | 2                | 71.9               | 18                | 1844                    |                         | 41.98                                 |
| 5     | 1                | 95.1               | 18                |                         |                         | 122.41                                |
| 6     | 2                | 87.7               | 18                | 1668                    |                         | 46.57                                 |
| 7     | 2                | 84.5               | 18                | 1543                    |                         | 668.22                                |
| 8     | 1                | 80.7               | 18                |                         |                         | 29.53                                 |
| 9     | 3                | 66.6               | 18                | 1876                    | 1459                    | 15.76                                 |
| 10    | 1                | 65.2               | 18                |                         |                         | 450.6                                 |
| 11    | 2                | 98.5               | 18                | 1251                    |                         | 353.92                                |
| 12    | 3                | 60                 | 18                | 1303                    | 1593                    | 409.49                                |
| 13    | 1                | 62.5               | 18                |                         |                         | 738.4                                 |
| 14    | 1                | 71.7               | 18                |                         |                         | 45.6                                  |
| 15    | 2                | 66.4               | 18                | 1656                    |                         | 139.7                                 |

Type 5 Radar Waveform\_18

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 77.1               | 5                 | 1582                    |                         | 524.703                               |
| 2     | 2                | 69.4               | 5                 | 1461                    |                         | 233.763                               |
| 3     | 3                | 73                 | 5                 | 1008                    | 1698                    | 165.556                               |
| 4     | 3                | 81.3               | 5                 | 1912                    | 1738                    | 250.879                               |
| 5     | 1                | 81.5               | 5                 |                         |                         | 145.032                               |
| 6     | 1                | 55                 | 5                 |                         |                         | 199.425                               |
| 7     | 3                | 70.4               | 5                 | 1204                    | 1311                    | 22.478                                |
| 8     | 3                | 77.4               | 5                 | 1437                    | 1745                    | 204.752                               |
| 9     | 1                | 53.5               | 5                 |                         |                         | 630.485                               |
| 10    | 3                | 96.2               | 5                 | 1616                    | 1552                    | 736.848                               |
| 11    | 2                | 51.1               | 5                 | 1111                    |                         | 224.851                               |
| 12    | 1                | 86.9               | 5                 |                         |                         | 609.654                               |
| 13    | 3                | 62.5               | 5                 | 1699                    | 1840                    | 718.177                               |

Type 5 Radar Waveform\_19

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 57.4               | 18                | 1719                    |                         | 599.516                               |
| 2     | 2                | 93                 | 18                | 1322                    |                         | 651.438                               |
| 3     | 1                | 62.5               | 18                |                         |                         | 515.035                               |
| 4     | 1                | 95.9               | 18                |                         |                         | 214.333                               |
| 5     | 2                | 50.7               | 18                | 1760                    |                         | 386.411                               |
| 6     | 2                | 86.8               | 18                | 1290                    |                         | 493.688                               |
| 7     | 1                | 51.3               | 18                |                         |                         | 23.166                                |
| 8     | 2                | 58.2               | 18                | 1517                    |                         | 506.814                               |
| 9     | 2                | 67.5               | 18                | 1472                    |                         | 174.761                               |
| 10    | 2                | 92.7               | 18                | 1632                    |                         | 561.519                               |
| 11    | 3                | 84.6               | 18                | 1361                    | 1478                    | 686.086                               |
| 12    | 1                | 98.1               | 18                |                         |                         | 158.184                               |
| 13    | 2                | 94.8               | 18                | 1990                    |                         | 349.642                               |
| 14    | 2                | 55                 | 18                | 1428                    |                         | 615.619                               |
| 15    | 2                | 87.7               | 18                | 1203                    |                         | 475.347                               |
| 16    | 2                | 71.7               | 18                | 1766                    |                         | 454.265                               |
| 17    | 2                | 100                | 18                | 1255                    |                         | 424.482                               |

Type 5 Radar Waveform\_20

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 62                 | 5                 | 1782                    |                         | 552.16                                |
| 2     | 2                | 89.2               | 5                 | 1236                    |                         | 732.16                                |
| 3     | 2                | 50                 | 5                 | 1157                    |                         | 317.04                                |
| 4     | 2                | 65.4               | 5                 | 1801                    |                         | 12.63                                 |
| 5     | 2                | 88.9               | 5                 | 1516                    |                         | 264.19                                |
| 6     | 1                | 65.2               | 5                 |                         |                         | 652.26                                |
| 7     | 3                | 61.2               | 5                 | 1535                    | 1671                    | 602.07                                |
| 8     | 3                | 52.4               | 5                 | 1256                    | 1717                    | 14.92                                 |
| 9     | 2                | 63.5               | 5                 | 1803                    |                         | 25.43                                 |
| 10    | 3                | 80.3               | 5                 | 1002                    | 1338                    | 1.82                                  |
| 11    | 3                | 67.4               | 5                 | 1929                    | 1074                    | 546.21                                |
| 12    | 1                | 69.4               | 5                 |                         |                         | 106.74                                |
| 13    | 3                | 93.1               | 5                 | 1532                    | 1334                    | 449.91                                |
| 14    | 2                | 98.9               | 5                 | 1845                    |                         | 273.6                                 |
| 15    | 3                | 75.3               | 5                 | 1309                    | 1222                    | 476.3                                 |
| 16    | 2                | 57.9               | 5                 | 1365                    |                         | 614.7                                 |

Type 5 Radar Waveform\_21

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 65                 | 16                | 1119                    | 1912                    | 242.749                               |
| 2     | 2                | 67.6               | 16                | 1142                    |                         | 553.601                               |
| 3     | 1                | 62.5               | 16                |                         |                         | 592.822                               |
| 4     | 3                | 65.7               | 16                | 1630                    | 1849                    | 183.463                               |
| 5     | 2                | 89.6               | 16                | 1488                    |                         | 599.934                               |
| 6     | 3                | 52.9               | 16                | 1505                    | 1402                    | 545.465                               |
| 7     | 1                | 59.1               | 16                |                         |                         | 212.376                               |
| 8     | 2                | 99.4               | 16                | 1084                    |                         | 128.917                               |
| 9     | 2                | 82.9               | 16                | 1693                    |                         | 499.238                               |
| 10    | 1                | 63.1               | 16                |                         |                         | 251.819                               |
| 11    | 2                | 70.4               | 16                | 1964                    |                         | 578.801                               |
| 12    | 3                | 72                 | 16                | 1541                    | 1174                    | 83.402                                |
| 13    | 1                | 60.3               | 16                |                         |                         | 136.693                               |
| 14    | 2                | 92.2               | 16                | 1821                    |                         | 18.004                                |
| 15    | 2                | 67.2               | 16                | 1870                    |                         | 19.695                                |
| 16    | 3                | 82.4               | 16                | 1844                    | 1836                    | 521.066                               |
| 17    | 2                | 80.3               | 16                | 1435                    |                         | 200.437                               |
| 18    | 2                | 87.2               | 16                | 1558                    |                         | 350.558                               |
| 19    | 1                | 81.1               | 16                |                         |                         | 251.579                               |

Type 5 Radar Waveform\_22

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 80.4               | 11                | 1719                    |                         | 15.439                                |
| 2     | 3                | 97.1               | 11                | 1171                    | 1964                    | 671.943                               |
| 3     | 3                | 85.9               | 11                | 1857                    | 1645                    | 414.676                               |
| 4     | 1                | 89.4               | 11                |                         |                         | 482.669                               |
| 5     | 1                | 76                 | 11                |                         |                         | 372.052                               |
| 6     | 2                | 94.8               | 11                | 1203                    |                         | 359.895                               |
| 7     | 2                | 85.5               | 11                | 1056                    |                         | 844.048                               |
| 8     | 1                | 61.1               | 11                |                         |                         | 273.172                               |
| 9     | 2                | 53.9               | 11                | 1126                    |                         | 499.995                               |
| 10    | 2                | 54.9               | 11                | 1637                    |                         | 170.018                               |
| 11    | 2                | 93                 | 11                | 1872                    |                         | 549.601                               |
| 12    | 3                | 96.7               | 11                | 1051                    | 1940                    | 797.854                               |
| 13    | 1                | 85.1               | 11                |                         |                         | 366.777                               |

Type 5 Radar Waveform\_23

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 79.5               | 14                | 1621                    | 1946                    | 467.808                               |
| 2     | 2                | 85.5               | 14                | 1282                    |                         | 453.367                               |
| 3     | 2                | 71.9               | 14                | 1688                    |                         | 235.844                               |
| 4     | 3                | 94.7               | 14                | 1004                    | 1148                    | 304.301                               |
| 5     | 3                | 50.3               | 14                | 1482                    | 1153                    | 569.609                               |
| 6     | 2                | 91.1               | 14                | 1321                    |                         | 572.596                               |
| 7     | 2                | 96.8               | 14                | 1492                    |                         | 549.823                               |
| 8     | 1                | 85.5               | 14                |                         |                         | 74.59                                 |
| 9     | 3                | 53.1               | 14                | 1240                    | 1221                    | 544.387                               |
| 10    | 2                | 73.2               | 14                | 1187                    |                         | 677.944                               |
| 11    | 3                | 87                 | 14                | 1430                    | 1699                    | 588.141                               |
| 12    | 2                | 52.6               | 14                | 1995                    |                         | 427.759                               |
| 13    | 3                | 99.1               | 14                | 1252                    | 1941                    | 829.186                               |
| 14    | 2                | 53.1               | 14                | 1316                    |                         | 832.143                               |

Type 5 Radar Waveform\_24

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 88.4               | 16                | 1353                    | 1661                    | 435.838                               |
| 2     | 3                | 70.1               | 16                | 1586                    | 1518                    | 576.08                                |
| 3     | 3                | 59.9               | 16                | 1430                    | 1487                    | 182.27                                |
| 4     | 1                | 53.5               | 16                |                         |                         | 491.43                                |
| 5     | 2                | 73.7               | 16                | 1310                    |                         | 431.34                                |
| 6     | 2                | 56.8               | 16                | 1647                    |                         | 394.48                                |
| 7     | 1                | 86.4               | 16                |                         |                         | 95.72                                 |
| 8     | 2                | 70.5               | 16                | 1006                    |                         | 120.66                                |
| 9     | 2                | 82.3               | 16                | 1042                    |                         | 370.16                                |
| 10    | 3                | 86.2               | 16                | 1973                    | 1523                    | 165.11                                |
| 11    | 2                | 63.9               | 16                | 1708                    |                         | 518.35                                |
| 12    | 2                | 61.6               | 16                | 1387                    |                         | 376.95                                |
| 13    | 3                | 69.1               | 16                | 1627                    | 1911                    | 16.13                                 |
| 14    | 2                | 82                 | 16                | 1966                    |                         | 702.2                                 |
| 15    | 2                | 89.3               | 16                | 1279                    |                         | 36.3                                  |
| 16    | 2                | 93.1               | 16                | 1419                    |                         | 167.4                                 |

Type 5 Radar Waveform\_25

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 1                | 83.5               | 18                |                         |                         | 88.857                                |
| 2     | 2                | 63.6               | 18                | 1647                    |                         | 621.631                               |
| 3     | 1                | 76.6               | 18                |                         |                         | 179.742                               |
| 4     | 1                | 59                 | 18                |                         |                         | 571.533                               |
| 5     | 2                | 95.1               | 18                | 1999                    |                         | 303.474                               |
| 6     | 1                | 97.3               | 18                |                         |                         | 138.775                               |
| 7     | 3                | 70                 | 18                | 1284                    | 1183                    | 437.526                               |
| 8     | 3                | 79.2               | 18                | 1102                    | 1257                    | 280.867                               |
| 9     | 2                | 93.6               | 18                | 1100                    |                         | 240.508                               |
| 10    | 1                | 84.2               | 18                |                         |                         | 29.399                                |
| 11    | 2                | 51.1               | 18                | 1248                    |                         | 388.061                               |
| 12    | 2                | 76                 | 18                | 1968                    |                         | 49.162                                |
| 13    | 3                | 78                 | 18                | 1693                    | 1241                    | 484.283                               |
| 14    | 3                | 91.9               | 18                | 1658                    | 1742                    | 475.724                               |
| 15    | 1                | 69.3               | 18                |                         |                         | 273.095                               |
| 16    | 2                | 64.9               | 18                | 1039                    |                         | 197.326                               |
| 17    | 2                | 54.4               | 18                | 1859                    |                         | 585.537                               |
| 18    | 1                | 63.1               | 18                |                         |                         | 475.058                               |
| 19    | 3                | 59.1               | 18                | 1772                    | 1799                    | 527.579                               |

Type 5 Radar Waveform\_26

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 59.4               | 7                 | 1989                    |                         | 345.077                               |
| 2     | 2                | 57.8               | 7                 | 1916                    |                         | 681.231                               |
| 3     | 2                | 71.7               | 7                 | 1707                    |                         | 303.812                               |
| 4     | 3                | 86.6               | 7                 | 1117                    | 1257                    | 644.503                               |
| 5     | 2                | 96.3               | 7                 | 1545                    |                         | 991.604                               |
| 6     | 2                | 95.1               | 7                 | 1935                    |                         | 101.285                               |
| 7     | 1                | 56.2               | 7                 |                         |                         | 621.365                               |
| 8     | 2                | 75.6               | 7                 | 1426                    |                         | 763.116                               |
| 9     | 2                | 78.9               | 7                 | 1704                    |                         | 52.167                                |
| 10    | 1                | 56.3               | 7                 |                         |                         | 320.118                               |
| 11    | 1                | 65.1               | 7                 |                         |                         | 545.609                               |

Type 5 Radar Waveform\_27

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 3                | 73.5               | 16                | 1768                    | 1261                    | 193.382                               |
| 2     | 1                | 78.7               | 16                |                         |                         | 30.42                                 |
| 3     | 3                | 58.6               | 16                | 1161                    | 1752                    | 150.67                                |
| 4     | 1                | 68.3               | 16                |                         |                         | 787.12                                |
| 5     | 3                | 90.5               | 16                | 1551                    | 1263                    | 301.25                                |
| 6     | 3                | 87.6               | 16                | 1793                    | 1012                    | 71.61                                 |
| 7     | 1                | 82.6               | 16                |                         |                         | 290.95                                |
| 8     | 1                | 76.3               | 16                |                         |                         | 912.75                                |
| 9     | 2                | 53.3               | 16                | 1345                    |                         | 982.25                                |
| 10    | 2                | 74.3               | 16                | 1838                    |                         | 212.09                                |
| 11    | 2                | 65.3               | 16                | 1658                    |                         | 942                                   |
| 12    | 2                | 62.7               | 16                | 1878                    |                         | 4.9                                   |

Type 5 Radar Waveform\_28

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 59                 | 16                | 1282                    |                         | 13.081                                |
| 2     | 2                | 85.4               | 16                | 1294                    |                         | 379.039                               |
| 3     | 3                | 74.2               | 16                | 1555                    | 1710                    | 407.11                                |
| 4     | 2                | 90.8               | 16                | 1143                    |                         | 25.06                                 |
| 5     | 2                | 91.3               | 16                | 1622                    |                         | 214.93                                |
| 6     | 2                | 79.7               | 16                | 1003                    |                         | 286.13                                |
| 7     | 1                | 89.4               | 16                |                         |                         | 547.21                                |
| 8     | 1                | 73.3               | 16                |                         |                         | 209.93                                |
| 9     | 1                | 80.2               | 16                |                         |                         | 438.48                                |
| 10    | 2                | 54.9               | 16                | 1737                    |                         | 493.72                                |
| 11    | 3                | 62.7               | 16                | 1782                    | 1456                    | 414.96                                |
| 12    | 2                | 62.7               | 16                | 1478                    |                         | 84.43                                 |
| 13    | 3                | 91.2               | 16                | 1239                    | 1546                    | 431.78                                |
| 14    | 2                | 62.5               | 16                | 1553                    |                         | 248.72                                |
| 15    | 1                | 57.4               | 16                |                         |                         | 588.65                                |
| 16    | 3                | 52.8               | 16                | 1189                    | 1235                    | 426.56                                |
| 17    | 1                | 96.4               | 16                |                         |                         | 441.9                                 |
| 18    | 1                | 87.8               | 16                |                         |                         | 89.9                                  |
| 19    | 2                | 92.1               | 16                | 1221                    |                         | 30.1                                  |
| 20    | 1                | 88.6               | 16                |                         |                         | 379.9                                 |

Type 5 Radar Waveform\_29

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 65.5               | 10                | 1564                    |                         | 359.676                               |
| 2     | 3                | 67.7               | 10                | 1768                    | 1365                    | 193.355                               |
| 3     | 1                | 78                 | 10                |                         |                         | 107.862                               |
| 4     | 2                | 69.2               | 10                | 1938                    |                         | 450.443                               |
| 5     | 2                | 83.1               | 10                | 1184                    |                         | 277.504                               |
| 6     | 2                | 60.1               | 10                | 1054                    |                         | 266.705                               |
| 7     | 1                | 57.3               | 10                |                         |                         | 60.276                                |
| 8     | 3                | 60.4               | 10                | 1862                    | 1624                    | 156.897                               |
| 9     | 3                | 79.4               | 10                | 1437                    | 1387                    | 589.618                               |
| 10    | 2                | 85.5               | 10                | 1298                    |                         | 216.319                               |
| 11    | 2                | 89.2               | 10                | 1703                    |                         | 107.261                               |
| 12    | 3                | 67.3               | 10                | 1051                    | 1006                    | 410.972                               |
| 13    | 2                | 86.4               | 10                | 1566                    |                         | 46.053                                |
| 14    | 1                | 65.2               | 10                |                         |                         | 510.784                               |
| 15    | 2                | 60.9               | 10                | 1462                    |                         | 70.595                                |
| 16    | 1                | 54.3               | 10                |                         |                         | 476.226                               |
| 17    | 1                | 65.5               | 10                |                         |                         | 164.037                               |
| 18    | 1                | 59.4               | 10                |                         |                         | 5.258                                 |
| 19    | 1                | 87.7               | 10                |                         |                         | 501.979                               |

Type 5 Radar Waveform\_30

| Burst | Number of Pulses | Pulse Width (μsec) | Chirp Width (MHz) | Pulse 1-to-2 PRI (μsec) | Pulse 2-to-3 PRI (μsec) | Start Location Within Interval (msec) |
|-------|------------------|--------------------|-------------------|-------------------------|-------------------------|---------------------------------------|
| 1     | 2                | 79.3               | 14                | 1507                    |                         | 296.197                               |
| 2     | 2                | 57.7               | 14                | 1091                    |                         | 584.001                               |
| 3     | 1                | 98.2               | 14                |                         |                         | 343.442                               |
| 4     | 2                | 84                 | 14                | 1128                    |                         | 510.533                               |
| 5     | 1                | 52.3               | 14                |                         |                         | 325.904                               |
| 6     | 2                | 52.5               | 14                | 1032                    |                         | 21.465                                |
| 7     | 2                | 88.2               | 14                | 1165                    |                         | 588.716                               |
| 8     | 2                | 66.6               | 14                | 1606                    |                         | 210.617                               |
| 9     | 1                | 97.2               | 14                |                         |                         | 510.848                               |
| 10    | 2                | 80.1               | 14                | 1286                    |                         | 22.379                                |
| 11    | 1                | 86.1               | 14                |                         |                         | 559.591                               |
| 12    | 2                | 92.7               | 14                | 1098                    |                         | 479.052                               |
| 13    | 2                | 53.1               | 14                | 1442                    |                         | 19.523                                |
| 14    | 3                | 73                 | 14                | 1959                    | 1230                    | 52.084                                |
| 15    | 2                | 65.8               | 14                | 1176                    |                         | 117.275                               |
| 16    | 1                | 96.3               | 14                |                         |                         | 575.316                               |
| 17    | 3                | 71.9               | 14                | 1174                    | 1119                    | 429.237                               |
| 18    | 2                | 87.3               | 14                | 1141                    |                         | 622.958                               |
| 19    | 2                | 55.3               | 14                | 1232                    |                         | 423.679                               |

## Radar Type 6 - Radar Statistical Performance

| Trail #                  | 1=Detection<br>0=No Detection | Trail # | 1=Detection<br>0=No Detection |
|--------------------------|-------------------------------|---------|-------------------------------|
| 1                        | 1                             | 16      | 1                             |
| 2                        | 1                             | 17      | 1                             |
| 3                        | 1                             | 18      | 1                             |
| 4                        | 1                             | 19      | 1                             |
| 5                        | 1                             | 20      | 1                             |
| 6                        | 1                             | 21      | 1                             |
| 7                        | 1                             | 22      | 1                             |
| 8                        | 1                             | 23      | 1                             |
| 9                        | 1                             | 24      | 1                             |
| 10                       | 1                             | 25      | 1                             |
| 11                       | 1                             | 26      | 1                             |
| 12                       | 1                             | 27      | 1                             |
| 13                       | 1                             | 28      | 1                             |
| 14                       | 1                             | 29      | 1                             |
| 15                       | 1                             | 30      | 1                             |
| Detection Percentage (%) |                               | 100%    |                               |

| Radar waveform #1 |                 |                  | Radar waveform #2 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 3                 | 5567            | 9                | 2                 | 5523            | 6                |
| 8                 | 5513            | 24               | 6                 | 5498            | 18               |
| 12                | 5544            | 36               | 7                 | 5502            | 21               |
| 17                | 5528            | 51               | 32                | 5543            | 96               |
| 27                | 5550            | 81               | 38                | 5494            | 114              |
| 35                | 5565            | 105              | 41                | 5511            | 123              |
| 36                | 5532            | 108              | 45                | 5545            | 135              |
| 37                | 5527            | 111              | 58                | 5501            | 174              |
| 41                | 5535            | 123              | 61                | 5561            | 183              |
| 45                | 5552            | 135              | 65                | 5538            | 195              |
| 49                | 5553            | 147              | 72                | 5568            | 216              |
| 50                | 5521            | 150              | 82                | 5542            | 246              |
| 51                | 5530            | 153              | 89                | 5534            | 267              |
| 68                | 5510            | 204              | 90                | 5532            | 270              |
| 69                | 5545            | 207              | 92                | 5564            | 276              |
| 76                | 5493            | 228              | 95                | 5539            | 285              |
| 81                | 5512            | 243              | 96                | 5546            | 288              |
| 85                | 5520            | 255              | --                | --              | --               |
| 88                | 5502            | 264              | --                | --              | --               |
| 89                | 5492            | 267              | --                | --              | --               |
| 92                | 5515            | 276              | --                | --              | --               |
| 95                | 5548            | 285              | --                | --              | --               |
| 99                | 5522            | 297              | --                | --              | --               |

| Radar waveform #3 |                 |                  | Radar waveform #4 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 5                 | 5541            | 15               | 2                 | 5556            | 6                |
| 13                | 5526            | 39               | 4                 | 5513            | 12               |
| 18                | 5499            | 54               | 5                 | 5561            | 15               |
| 22                | 5500            | 66               | 9                 | 5570            | 27               |
| 25                | 5511            | 75               | 14                | 5523            | 42               |
| 39                | 5491            | 117              | 26                | 5567            | 78               |
| 44                | 5518            | 132              | 28                | 5569            | 84               |
| 48                | 5496            | 144              | 31                | 5519            | 93               |
| 49                | 5545            | 147              | 35                | 5544            | 105              |
| 69                | 5566            | 207              | 37                | 5534            | 111              |
| 74                | 5508            | 222              | 42                | 5521            | 126              |
| 75                | 5543            | 225              | 48                | 5533            | 144              |
| 76                | 5533            | 228              | 51                | 5565            | 153              |
| 90                | 5554            | 270              | 53                | 5490            | 159              |
| 96                | 5552            | 288              | 55                | 5503            | 165              |
| --                | --              | --               | 62                | 5535            | 186              |
| --                | --              | --               | 64                | 5542            | 192              |
| --                | --              | --               | 68                | 5562            | 204              |
| --                | --              | --               | 71                | 5501            | 213              |
| --                | --              | --               | 74                | 5497            | 222              |
| --                | --              | --               | 76                | 5514            | 228              |
| --                | --              | --               | 83                | 5537            | 249              |
| --                | --              | --               | 90                | 5509            | 270              |

| Radar waveform #5 |                 |                  | Radar waveform #6 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 1                 | 5492            | 3                | 2                 | 5505            | 6                |
| 6                 | 5493            | 18               | 21                | 5543            | 63               |
| 8                 | 5518            | 24               | 35                | 5509            | 105              |
| 10                | 5559            | 30               | 52                | 5499            | 156              |
| 11                | 5525            | 33               | 54                | 5560            | 162              |
| 17                | 5531            | 51               | 62                | 5520            | 186              |
| 20                | 5564            | 60               | 68                | 5545            | 204              |
| 24                | 5513            | 72               | 80                | 5492            | 240              |
| 27                | 5523            | 81               | 87                | 5506            | 261              |
| 49                | 5553            | 147              | 92                | 5556            | 276              |
| 56                | 5504            | 168              | --                | --              | --               |
| 64                | 5521            | 192              | --                | --              | --               |
| 70                | 5499            | 210              | --                | --              | --               |
| 72                | 5545            | 216              | --                | --              | --               |
| 74                | 5535            | 222              | --                | --              | --               |
| 76                | 5495            | 228              | --                | --              | --               |
| 82                | 5543            | 246              | --                | --              | --               |
| 93                | 5528            | 279              | --                | --              | --               |
| 94                | 5500            | 282              | --                | --              | --               |

| Radar waveform #7 |                 |                  | Radar waveform #8 |                 |                  |
|-------------------|-----------------|------------------|-------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number    | Frequency (MHz) | Pulse Start (ms) |
| 2                 | 5514            | 6                | 1                 | 5570            | 3                |
| 3                 | 5518            | 9                | 10                | 5553            | 30               |
| 5                 | 5545            | 15               | 18                | 5491            | 54               |
| 9                 | 5528            | 27               | 24                | 5552            | 72               |
| 17                | 5501            | 51               | 25                | 5521            | 75               |
| 35                | 5566            | 105              | 26                | 5558            | 78               |
| 39                | 5534            | 117              | 37                | 5514            | 111              |
| 43                | 5490            | 129              | 42                | 5545            | 126              |
| 44                | 5529            | 132              | 47                | 5568            | 141              |
| 47                | 5535            | 141              | 51                | 5563            | 153              |
| 61                | 5552            | 183              | 52                | 5533            | 156              |
| 66                | 5556            | 198              | 56                | 5523            | 168              |
| 70                | 5570            | 210              | 61                | 5516            | 183              |
| 85                | 5550            | 255              | 64                | 5536            | 192              |
| 90                | 5548            | 270              | 67                | 5508            | 201              |
| 96                | 5497            | 288              | 70                | 5502            | 210              |
| 99                | 5563            | 297              | 71                | 5547            | 213              |
| --                | --              | --               | 75                | 5527            | 225              |
| --                | --              | --               | 95                | 5499            | 285              |

| Radar waveform #9 |                 |                  | Radar waveform #10 |                 |                  |
|-------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number    | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 11                | 5566            | 33               | 17                 | 5509            | 51               |
| 39                | 5555            | 117              | 22                 | 5508            | 66               |
| 45                | 5527            | 135              | 25                 | 5557            | 75               |
| 46                | 5537            | 138              | 28                 | 5514            | 84               |
| 56                | 5559            | 168              | 40                 | 5533            | 120              |
| 71                | 5535            | 213              | 42                 | 5564            | 126              |
| 85                | 5516            | 255              | 50                 | 5547            | 150              |
| 89                | 5533            | 267              | 65                 | 5531            | 195              |
| 96                | 5522            | 288              | 70                 | 5569            | 210              |
| 98                | 5529            | 294              | 73                 | 5506            | 219              |
| --                | --              | --               | 77                 | 5544            | 231              |
| --                | --              | --               | 82                 | 5522            | 246              |
| --                | --              | --               | 83                 | 5536            | 249              |
| --                | --              | --               | 88                 | 5500            | 264              |
| --                | --              | --               | 89                 | 5521            | 267              |

| Radar waveform #11 |                 |                  | Radar waveform #12 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 1                  | 5517            | 3                | 4                  | 5506            | 12               |
| 5                  | 5544            | 15               | 10                 | 5553            | 30               |
| 6                  | 5527            | 18               | 16                 | 5514            | 48               |
| 56                 | 5491            | 168              | 17                 | 5509            | 51               |
| 68                 | 5495            | 204              | 20                 | 5501            | 60               |
| 70                 | 5543            | 210              | 26                 | 5527            | 78               |
| 73                 | 5570            | 219              | 29                 | 5516            | 87               |
| 78                 | 5552            | 234              | 35                 | 5521            | 105              |
| 80                 | 5514            | 240              | 57                 | 5561            | 171              |
| 82                 | 5541            | 246              | 58                 | 5522            | 174              |
| 84                 | 5490            | 252              | 76                 | 5533            | 228              |
| 85                 | 5522            | 255              | 90                 | 5505            | 270              |
| 90                 | 5545            | 270              | 92                 | 5511            | 276              |
| 91                 | 5503            | 273              | 96                 | 5538            | 288              |
| 94                 | 5494            | 282              | 98                 | 5550            | 294              |
| 95                 | 5551            | 285              | --                 | --              | --               |
| 97                 | 5513            | 291              | --                 | --              | --               |

| Radar waveform #13 |                 |                  | Radar waveform #14 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 6                  | 5509            | 18               | 1                  | 5536            | 3                |
| 14                 | 5504            | 42               | 16                 | 5553            | 48               |
| 45                 | 5535            | 135              | 19                 | 5498            | 57               |
| 51                 | 5490            | 153              | 24                 | 5566            | 72               |
| 55                 | 5517            | 165              | 33                 | 5508            | 99               |
| 70                 | 5523            | 210              | 35                 | 5565            | 105              |
| 78                 | 5512            | 234              | 46                 | 5541            | 138              |
| 79                 | 5491            | 237              | 47                 | 5510            | 141              |
| 83                 | 5570            | 249              | 51                 | 5567            | 153              |
| 99                 | 5563            | 297              | 60                 | 5538            | 180              |
| --                 | --              | --               | 61                 | 5563            | 183              |
| --                 | --              | --               | 62                 | 5560            | 186              |
| --                 | --              | --               | 63                 | 5539            | 189              |
| --                 | --              | --               | 65                 | 5552            | 195              |
| --                 | --              | --               | 69                 | 5493            | 207              |
| --                 | --              | --               | 86                 | 5564            | 258              |
| --                 | --              | --               | 88                 | 5548            | 264              |
| --                 | --              | --               | 92                 | 5495            | 276              |
| --                 | --              | --               | 95                 | 5556            | 285              |

| Radar waveform #15 |                 |                  | Radar waveform #16 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5500            | 6                | 2                  | 5537            | 6                |
| 14                 | 5569            | 42               | 7                  | 5544            | 21               |
| 20                 | 5515            | 60               | 9                  | 5561            | 27               |
| 21                 | 5565            | 63               | 10                 | 5527            | 30               |
| 32                 | 5547            | 96               | 15                 | 5520            | 45               |
| 33                 | 5490            | 99               | 26                 | 5559            | 78               |
| 46                 | 5524            | 138              | 35                 | 5546            | 105              |
| 48                 | 5512            | 144              | 37                 | 5545            | 111              |
| 50                 | 5528            | 150              | 48                 | 5543            | 144              |
| 52                 | 5519            | 156              | 49                 | 5495            | 147              |
| 59                 | 5556            | 177              | 53                 | 5569            | 159              |
| 75                 | 5506            | 225              | 56                 | 5556            | 168              |
| 78                 | 5499            | 234              | 60                 | 5533            | 180              |
| 80                 | 5562            | 240              | 63                 | 5531            | 189              |
| 88                 | 5544            | 264              | 77                 | 5501            | 231              |
| 95                 | 5561            | 285              | 80                 | 5536            | 240              |
| 96                 | 5529            | 288              | 83                 | 5542            | 249              |
| 97                 | 5522            | 291              | 88                 | 5560            | 264              |
| 98                 | 5492            | 294              | 96                 | 5522            | 288              |
| --                 | --              | --               | 98                 | 5519            | 294              |

| Radar waveform #17 |                 |                  | Radar waveform #18 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 4                  | 5568            | 12               | 9                  | 5549            | 27               |
| 9                  | 5560            | 27               | 35                 | 5498            | 105              |
| 15                 | 5525            | 45               | 37                 | 5565            | 111              |
| 31                 | 5510            | 93               | 43                 | 5560            | 129              |
| 42                 | 5493            | 126              | 45                 | 5563            | 135              |
| 52                 | 5535            | 156              | 53                 | 5529            | 159              |
| 82                 | 5515            | 246              | 57                 | 5492            | 171              |
| 89                 | 5531            | 267              | 61                 | 5513            | 183              |
| 90                 | 5495            | 270              | 63                 | 5494            | 189              |
| 91                 | 5553            | 273              | 64                 | 5490            | 192              |
| 99                 | 5501            | 297              | 71                 | 5556            | 213              |
| --                 | --              | --               | 74                 | 5561            | 222              |
| --                 | --              | --               | 77                 | 5555            | 231              |
| --                 | --              | --               | 79                 | 5536            | 237              |
| --                 | --              | --               | 84                 | 5523            | 252              |
| --                 | --              | --               | 87                 | 5544            | 261              |
| --                 | --              | --               | 91                 | 5521            | 273              |
| --                 | --              | --               | 92                 | 5508            | 276              |
| --                 | --              | --               | 96                 | 5505            | 288              |

| Radar waveform #19 |                 |                  | Radar waveform #20 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 1                  | 5554            | 3                | 1                  | 5570            | 3                |
| 5                  | 5508            | 15               | 7                  | 5529            | 21               |
| 16                 | 5569            | 48               | 8                  | 5499            | 24               |
| 17                 | 5561            | 51               | 11                 | 5509            | 33               |
| 23                 | 5558            | 69               | 21                 | 5541            | 63               |
| 24                 | 5552            | 72               | 26                 | 5558            | 78               |
| 28                 | 5523            | 84               | 28                 | 5524            | 84               |
| 29                 | 5541            | 87               | 32                 | 5491            | 96               |
| 37                 | 5557            | 111              | 35                 | 5515            | 105              |
| 38                 | 5511            | 114              | 36                 | 5504            | 108              |
| 39                 | 5560            | 117              | 44                 | 5502            | 132              |
| 42                 | 5516            | 126              | 59                 | 5497            | 177              |
| 57                 | 5559            | 171              | 66                 | 5564            | 198              |
| 63                 | 5500            | 189              | 84                 | 5495            | 252              |
| 78                 | 5493            | 234              | 86                 | 5537            | 258              |
| 83                 | 5506            | 249              | 91                 | 5557            | 273              |
| 85                 | 5491            | 255              | 98                 | 5532            | 294              |
| 91                 | 5536            | 273              | --                 | --              | --               |
| 95                 | 5566            | 285              | --                 | --              | --               |

| Radar waveform #21 |                 |                  | Radar waveform #22 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 5                  | 5548            | 15               | 1                  | 5511            | 3                |
| 8                  | 5560            | 24               | 14                 | 5518            | 42               |
| 11                 | 5492            | 33               | 20                 | 5505            | 60               |
| 17                 | 5552            | 51               | 22                 | 5519            | 66               |
| 24                 | 5544            | 72               | 34                 | 5495            | 102              |
| 25                 | 5561            | 75               | 48                 | 5523            | 144              |
| 26                 | 5513            | 78               | 71                 | 5560            | 213              |
| 28                 | 5522            | 84               | 74                 | 5543            | 222              |
| 33                 | 5566            | 99               | 79                 | 5506            | 237              |
| 36                 | 5563            | 108              | 83                 | 5515            | 249              |
| 61                 | 5504            | 183              | 85                 | 5544            | 255              |
| 68                 | 5568            | 204              | 86                 | 5548            | 258              |
| 82                 | 5520            | 246              | 89                 | 5508            | 267              |
| 91                 | 5517            | 273              | 92                 | 5528            | 276              |
| 92                 | 5537            | 276              | 96                 | 5569            | 288              |

| Radar waveform #23 |                 |                  | Radar waveform #24 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 4                  | 5567            | 12               | 13                 | 5565            | 39               |
| 15                 | 5559            | 45               | 16                 | 5536            | 48               |
| 28                 | 5516            | 84               | 18                 | 5560            | 54               |
| 34                 | 5507            | 102              | 22                 | 5514            | 66               |
| 40                 | 5515            | 120              | 25                 | 5534            | 75               |
| 41                 | 5522            | 123              | 29                 | 5552            | 87               |
| 43                 | 5564            | 129              | 34                 | 5528            | 102              |
| 44                 | 5513            | 132              | 44                 | 5537            | 132              |
| 51                 | 5555            | 153              | 50                 | 5525            | 150              |
| 55                 | 5540            | 165              | 63                 | 5498            | 189              |
| 73                 | 5520            | 219              | 65                 | 5512            | 195              |
| 80                 | 5502            | 240              | 71                 | 5541            | 213              |
| 90                 | 5562            | 270              | 74                 | 5570            | 222              |
| 100                | 5491            | 300              | 84                 | 5510            | 252              |
| --                 | --              | --               | 100                | 5506            | 300              |

| Radar waveform #25 |                 |                  | Radar waveform #26 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 2                  | 5538            | 6                | 7                  | 5499            | 21               |
| 13                 | 5531            | 39               | 14                 | 5508            | 42               |
| 18                 | 5551            | 54               | 18                 | 5495            | 54               |
| 20                 | 5548            | 60               | 25                 | 5558            | 75               |
| 23                 | 5504            | 69               | 28                 | 5539            | 84               |
| 26                 | 5539            | 78               | 29                 | 5554            | 87               |
| 30                 | 5530            | 90               | 34                 | 5518            | 102              |
| 31                 | 5549            | 93               | 49                 | 5553            | 147              |
| 57                 | 5569            | 171              | 54                 | 5561            | 162              |
| 59                 | 5498            | 177              | 55                 | 5522            | 165              |
| 64                 | 5499            | 192              | 61                 | 5538            | 183              |
| 70                 | 5493            | 210              | 68                 | 5555            | 204              |
| 73                 | 5545            | 219              | 71                 | 5519            | 213              |
| 83                 | 5519            | 249              | 72                 | 5547            | 216              |
| 86                 | 5525            | 258              | 81                 | 5491            | 243              |
| 90                 | 5514            | 270              | 92                 | 5548            | 276              |
| 95                 | 5541            | 285              | 95                 | 5510            | 285              |
| 97                 | 5561            | 291              | 98                 | 5551            | 294              |
| 98                 | 5542            | 294              | --                 | --              | --               |
| 99                 | 5524            | 297              | --                 | --              | --               |

| Radar waveform #27 |                 |                  | Radar waveform #28 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 6                  | 5532            | 18               | 2                  | 5498            | 6                |
| 10                 | 5549            | 30               | 6                  | 5526            | 18               |
| 11                 | 5551            | 33               | 13                 | 5523            | 39               |
| 19                 | 5550            | 57               | 17                 | 5536            | 51               |
| 25                 | 5498            | 75               | 24                 | 5491            | 72               |
| 26                 | 5560            | 78               | 27                 | 5553            | 81               |
| 31                 | 5542            | 93               | 29                 | 5547            | 87               |
| 33                 | 5491            | 99               | 59                 | 5549            | 177              |
| 34                 | 5520            | 102              | 70                 | 5495            | 210              |
| 39                 | 5538            | 117              | 73                 | 5538            | 219              |
| 45                 | 5499            | 135              | 74                 | 5565            | 222              |
| 51                 | 5543            | 153              | 80                 | 5499            | 240              |
| 54                 | 5565            | 162              | 81                 | 5556            | 243              |
| 58                 | 5521            | 174              | 96                 | 5528            | 288              |
| 61                 | 5493            | 183              | 97                 | 5524            | 291              |
| 63                 | 5553            | 189              | --                 | --              | --               |
| 68                 | 5513            | 204              | --                 | --              | --               |
| 69                 | 5559            | 207              | --                 | --              | --               |
| 76                 | 5540            | 228              | --                 | --              | --               |
| 86                 | 5531            | 258              | --                 | --              | --               |
| 87                 | 5535            | 261              | --                 | --              | --               |
| 93                 | 5512            | 279              | --                 | --              | --               |

| Radar waveform #29 |                 |                  | Radar waveform #30 |                 |                  |
|--------------------|-----------------|------------------|--------------------|-----------------|------------------|
| Hopping Number     | Frequency (MHz) | Pulse Start (ms) | Hopping Number     | Frequency (MHz) | Pulse Start (ms) |
| 12                 | 5535            | 36               | 6                  | 5546            | 18               |
| 23                 | 5505            | 69               | 10                 | 5508            | 30               |
| 25                 | 5516            | 75               | 12                 | 5538            | 36               |
| 27                 | 5564            | 81               | 24                 | 5558            | 72               |
| 31                 | 5544            | 93               | 40                 | 5506            | 120              |
| 33                 | 5561            | 99               | 46                 | 5557            | 138              |
| 40                 | 5511            | 120              | 65                 | 5511            | 195              |
| 41                 | 5568            | 123              | 69                 | 5555            | 207              |
| 48                 | 5553            | 144              | 70                 | 5494            | 210              |
| 52                 | 5552            | 156              | 71                 | 5516            | 213              |
| 58                 | 5513            | 174              | 81                 | 5528            | 243              |
| 60                 | 5534            | 180              | 83                 | 5531            | 249              |
| 62                 | 5547            | 186              | 87                 | 5533            | 261              |
| 75                 | 5506            | 225              | 93                 | 5570            | 279              |
| 81                 | 5504            | 243              | 96                 | 5515            | 288              |
| 86                 | 5515            | 258              | 98                 | 5541            | 294              |
| 92                 | 5530            | 276              | --                 | --              | --               |

## 6. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with FCC Rules.

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The End

## **Appendix A - Test Setup Photograph**

Refer to “2101TW0003-Test setup photo” file.

## **Appendix B-EUT Photograph**

Refer to “2101TW0003-EUT photo” file.