

DFS MEASUREMENT REPORT

FCC PART 15 Subpart E

FCC ID: TE7AX73

Applicant: TP-Link Technologies Co., Ltd.

Application Type: Certification

Product: AX5400 Wi-Fi 6 Router

Model No.: Archer AX73

Brand Name: tp-link

FCC Classification: Unlicensed National Information Infrastructure (NII)

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

Type of Device: Master Device

Test Date: August 20 ~ October 28, 2020

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
2010TW0003-U3	Rev. 01	Initial Report	11-05-2020	Valid

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General Information

Applicant:	TP-Link Technologies Co., Ltd.
Applicant Address:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Manufacturer:	TP-Link Technologies Co., Ltd.
Manufacturer Address:	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Test Site:	MRT Technology (Taiwan) Co., Ltd
Test Site Address:	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Fuxing Rd., Taoyuan, Taiwan (R.O.C)

- MRT facility is a FCC registered (Reg. No. 154292) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film.
- MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
- 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.

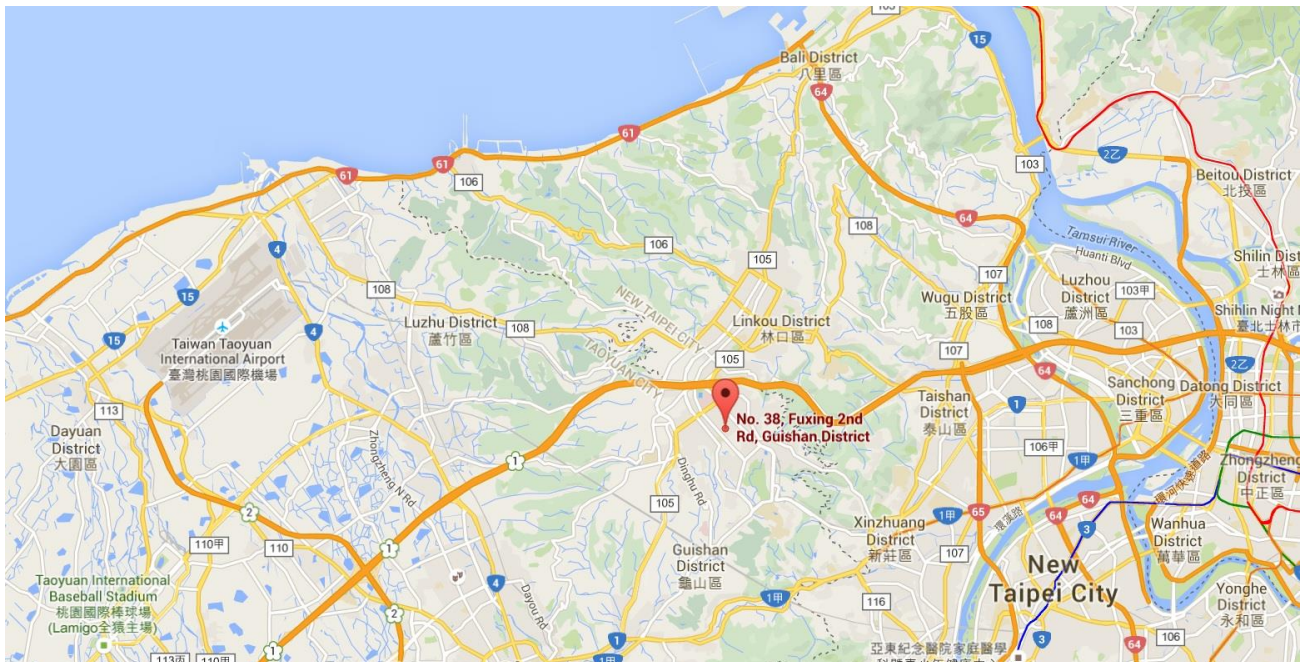
1. INTRODUCTION

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 Innovation, Science and Economic Development Canada and 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:	AX5400 Wi-Fi 6 Router
Model No.:	Archer AX73
Brand Name:	tp-link
Wi-Fi Specification:	802.11a/b/g/n/ac/ax
EUT Identification No.:	20200820Sample#05 (DFS)
Frequency Range:	<u>2.4GHz:</u> For 802.11b/g/n-HT20/ax-HE20: 2412 ~ 2462 MHz For 802.11n-HT40/ax-HE40: 2422 ~ 2452 MHz <u>5GHz:</u> For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5180~5240MHz, 5260~5320 MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5190~5230MHz, 5270~5310 MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80/ax-HE80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz For 802.11ac-VHT160/ax-HE160: 5250MHz, 5570MHz
Type of Modulation:	802.11b: DSSS, 802.11a/g/n/ac: OFDM, 802.11ax: OFDMA
TPC mechanism:	Support (Details refer to operational description)
Power-on cycle:	Requires 46.5 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band):	For the 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.

2.2. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	T _x Paths	Max Antenna Gain (dBi)	Beamforming Directional Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
Dipole Antenna	2412 ~ 2462	2	2.00	5.01	2.00	5.01
	5150 ~ 5350	4	2.50	8.52	2.50	8.52
	5470 ~ 5850	4	2.50	8.52	2.50	8.52

Note:

- The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
If all antennas have the same gain, G_{ANT} , Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.
 - For power spectral density (PSD) measurements on all devices,
Array Gain = $10 \log (N_{ANT} / N_{SS})$ dB;
 - For power measurements on IEEE 802.11 devices,
Array Gain = 0 dB for $N_{ANT} \leq 4$;
- The EUT also supports Beam Forming mode, and the Beam Forming support 802.11ac/ax, not include 802.11a/b/g/n. BF Directional gain = $G_{ANT} + 10 \log (N_{ANT})$.
- All messages of antenna were declared by manufacturer.

2.3. Operating Frequency and Channel List 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
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	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	--	--	--	--

802.11ac-VHT160/ax-HE160

Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250MHz	114	5570 MHz	--	--

2.4. Test Channels 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
802.11ax-HE160	50	5250 MHz
802.11ax-HE160	114	5570 MHz

2.5. Test Mode

Test Mode	Make the EUT communicate with notebook at DFS channel
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3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

3.1. Applicability

The following table from FCC KDB 905462 D02 UNII 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 UNII 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 subsection 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 See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. 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 (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power 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 $\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	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 1: 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 Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (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 UNII 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.

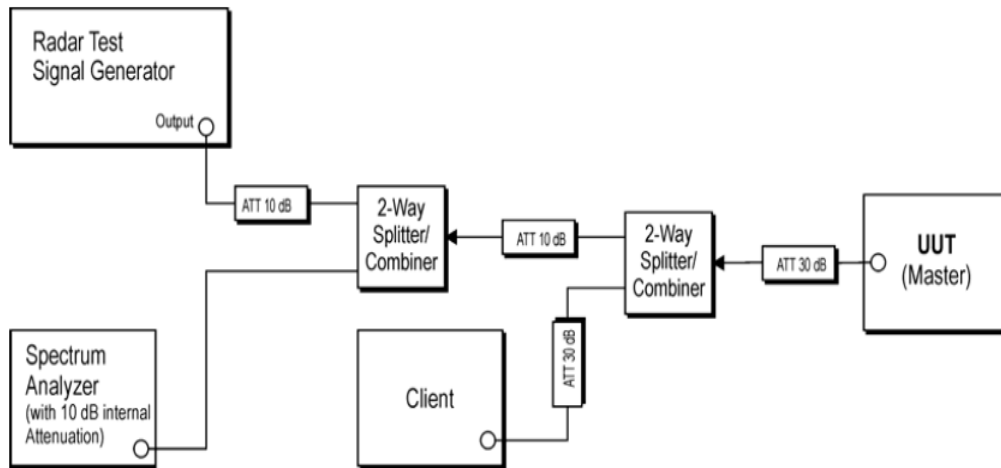


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

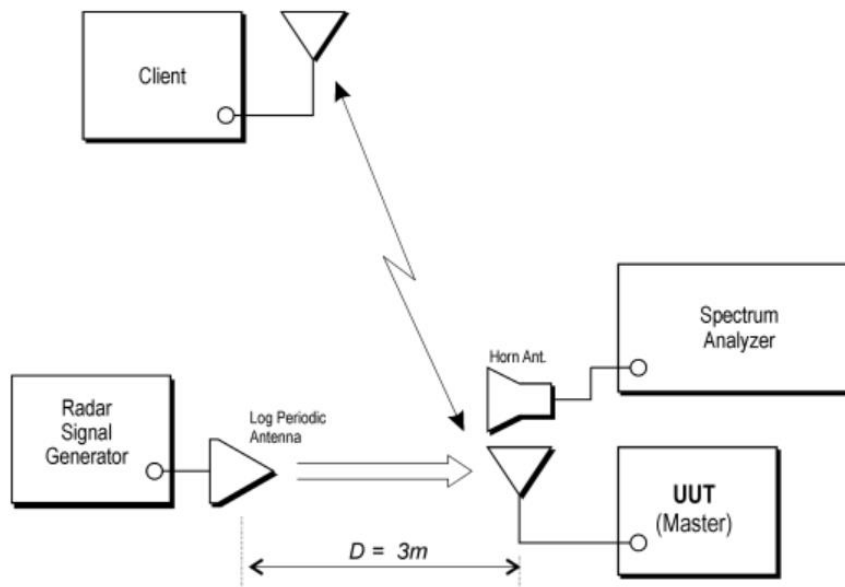


Figure 3-2: Radiated Test Setup where UUT is a Master and Radar Test Waveforms are injected into the UUT

4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/02
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2021/07/14
Vector Signal Generator	Keysight	N5182B	MRTTWA00010	1 year	2021/04/24
Combiner	WOKEN	0120A04208001S	MRTTWE00008	1 year	2021/06/18
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2021/10/02
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2021/07/14

Client Information

Instrument	Manufacturer	Type No.
HP 525 Wireless 802.11ac	HP	JG994A

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

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.

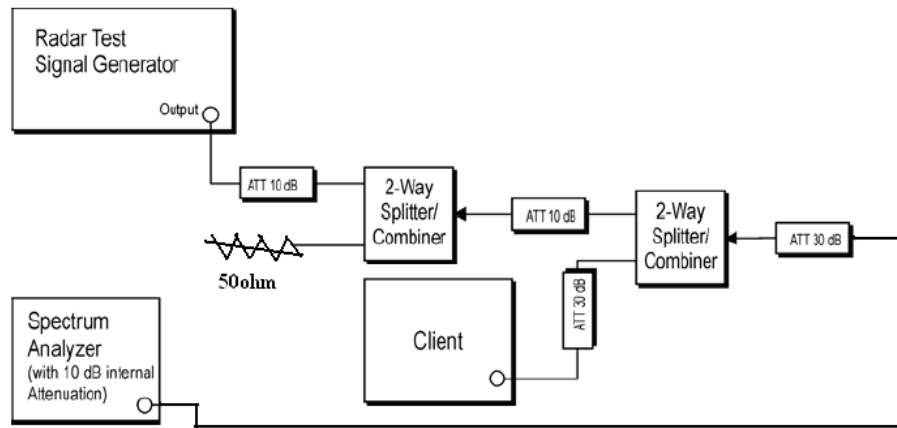


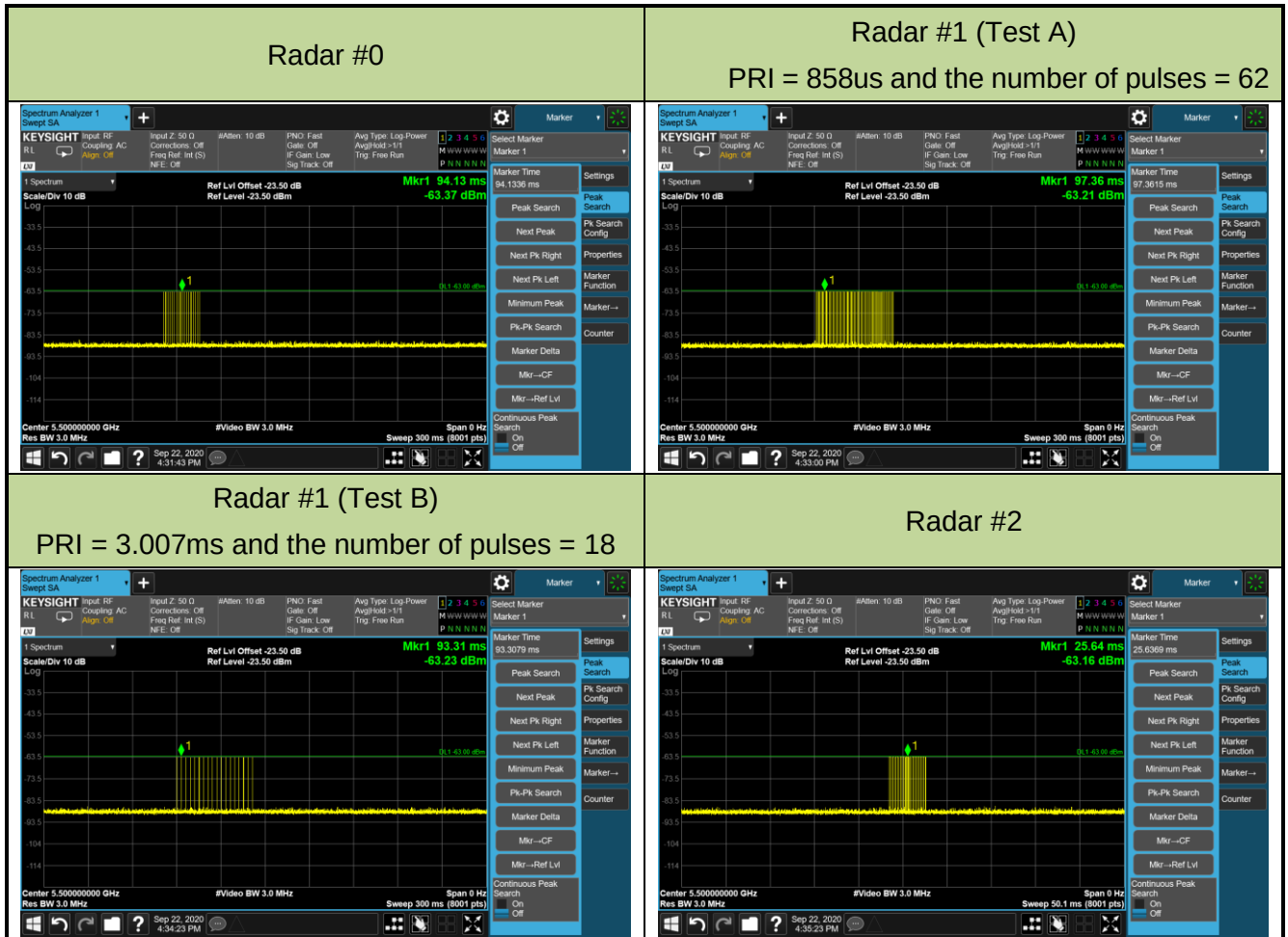
Figure 3-2: Conducted Test Setup

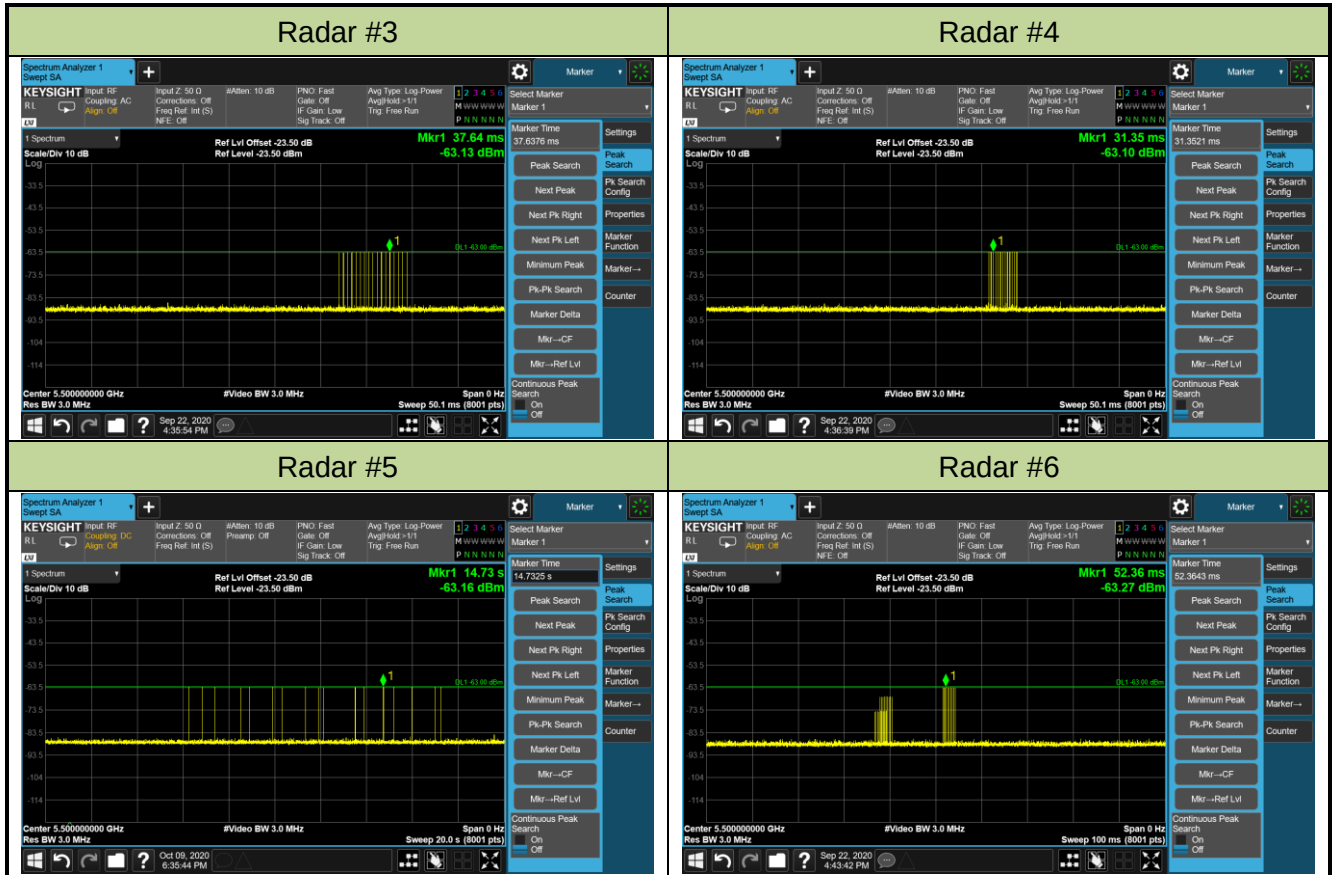
5.2.2. Calibration Procedure

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. Cablibration Result

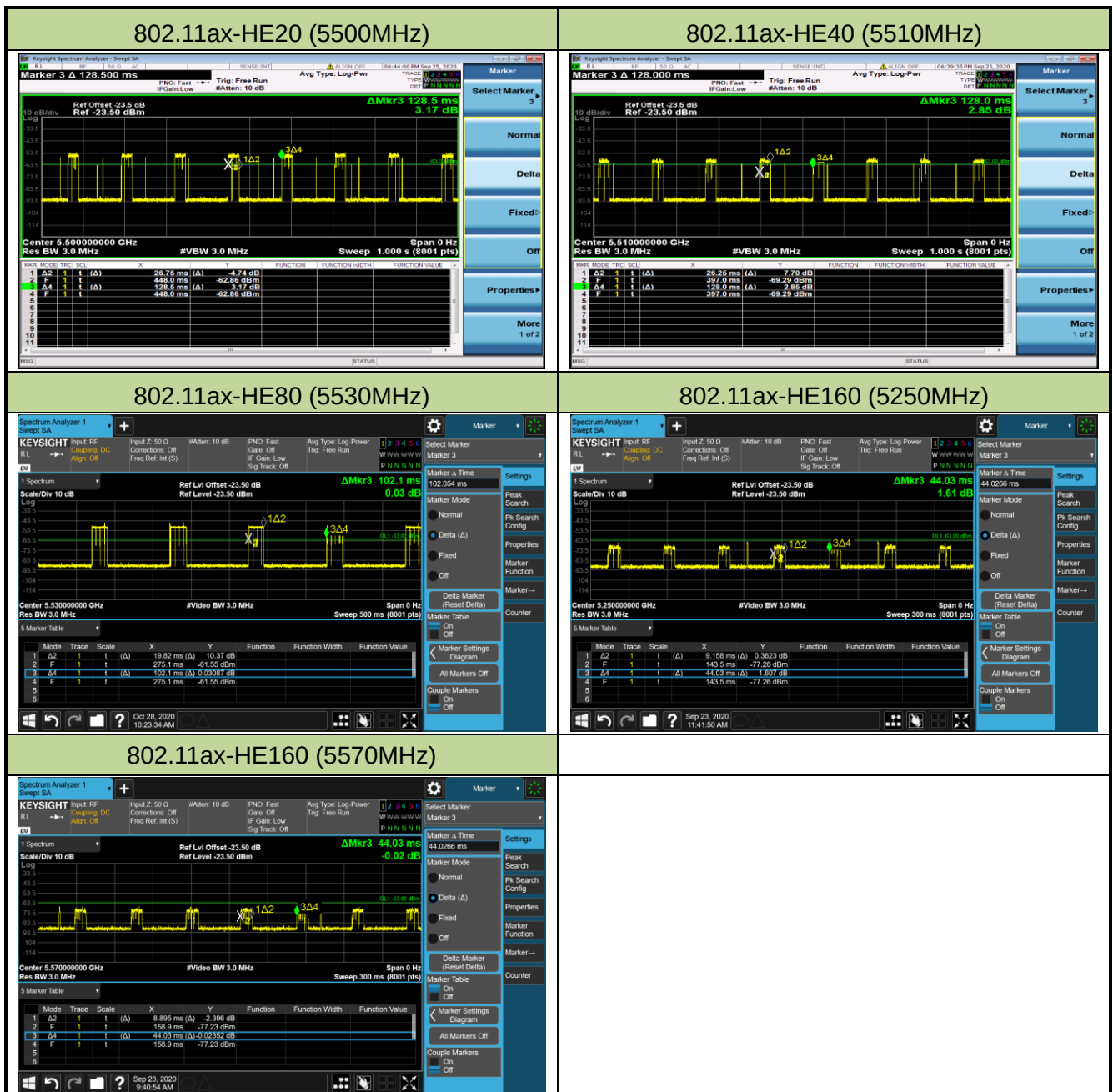
Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/22
Test Item	Radar Waveform Calibration		





5.2.4. Channel Loading Test Result

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23~2020/10/28
Test Item	Channel Loading		



Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11ax-HE20	5500 MHz	20.82%	$\geq 17\%$	Pass
802.11ax-HE40	5510 MHz	20.51%	$\geq 17\%$	Pass
802.11ax-HE80	5530 MHz	19.41%	$\geq 17\%$	Pass
802.11ax-HE160	5250 MHz	20.80%	$\geq 17\%$	Pass
802.11ax-HE160	5570 MHz	20.20%	$\geq 17\%$	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. UNII Detection Bandwidth Measurement

5.3.1. Test Limit

Minimum 100% of the UNII 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: $\text{U-NII Detection Bandwidth} = \text{FH} - \text{FL}$
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	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/24
Test Item	Detection Bandwidth (802.11ax-HE20 mode - 5500MHz)		

Radar Frequency (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 FL	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 FH	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 19.09MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5509.6MHz – 5490.4MHz = 19.2MHz

Note 3: NII Detection Bandwidth Min. Limit (MHz): 19.09MHz x 100% = 19.09MHz.

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/24
Test Item	Detection Bandwidth (802.11ax-HE40 mode – 5510MHz)		

Radar Frequency (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 FL	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 FH	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 37.52MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5529MHz - 5491MHz = 38MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 37.52MHz x 100% = 37.52MHz.

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Detection Bandwidth (802.11ax-HE80 mode – 5530MHz)		

Radar Frequency (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 FL	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 FH	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 76.89MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 76.89MHz x 100% = 76.89MHz.

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Detection Bandwidth (802.11ax-HE160 mode – 5250MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5249	0	0	0	0	0	0	0	0	0	0	0%
5250 FL	1	1	1	1	1	1	1	1	1	1	100%
5251	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328FH	1	1	1	1	1	1	1	1	1	1	100%
5329	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 5250MHz. The 99% channel bandwidth is 155.12MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5328MHz - 5250MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): $155.12\text{MHz} \times 100\% / 2 = 77.56\text{MHz}$.

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Detection Bandwidth (802.11ax-HE160 mode – 5570MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5491	0	0	0	0	0	0	0	0	0	0	0%
5492 FL	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%
5570	1	1	1	1	1	1	1	1	1	1	100%
5575	1	1	1	1	1	1	1	1	1	1	100%
5580	1	1	1	1	1	1	1	1	1	1	100%
5585	1	1	1	1	1	1	1	1	1	1	100%
5590	1	1	1	1	1	1	1	1	1	1	100%
5595	1	1	1	1	1	1	1	1	1	1	100%
5600	1	1	1	1	1	1	1	1	1	1	100%
5600	1	1	1	1	1	1	1	1	1	1	100%
5610	1	1	1	1	1	1	1	1	1	1	100%
5615	1	1	1	1	1	1	1	1	1	1	100%
5620	1	1	1	1	1	1	1	1	1	1	100%

5625	1	1	1	1	1	1	1	1	1	1	100%
5630	1	1	1	1	1	1	1	1	1	1	100%
5635	1	1	1	1	1	1	1	1	1	1	100%
5640	1	1	1	1	1	1	1	1	1	1	100%
5645	1	1	1	1	1	1	1	1	1	1	100%
5646	1	1	1	1	1	1	1	1	1	1	100%
5647	1	1	1	1	1	1	1	1	1	1	100%
5648 FH	1	1	1	1	1	1	1	1	1	1	100%
5649	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 5570MHz. The 99% channel bandwidth is 155.14MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5648MHz - 5492MHz = 156MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 155.14MHz x 100% = 155.14MHz.

5.4. Initial Channel Availability Check Time Measurement

5.4.1. Test Limit

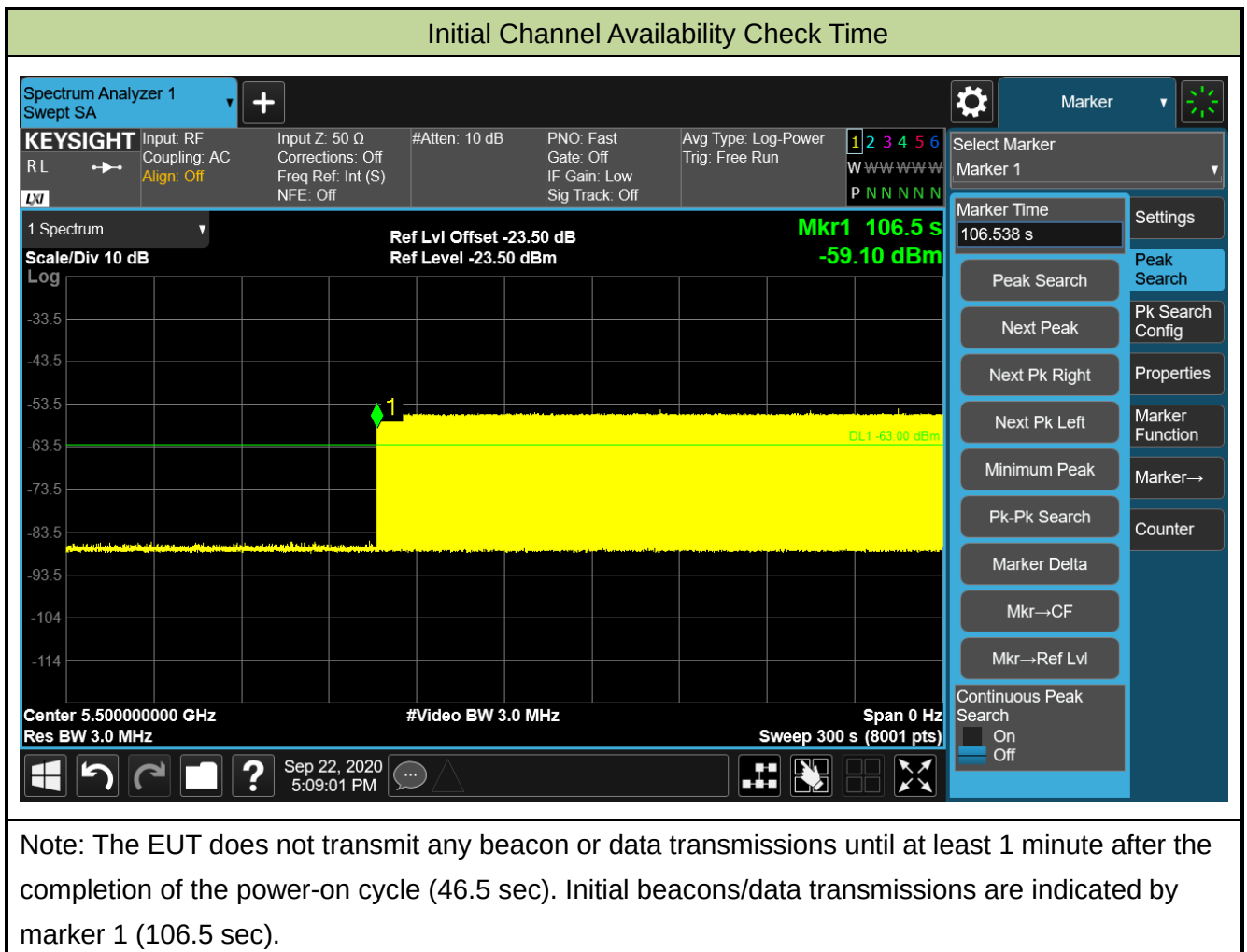
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

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	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/22
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

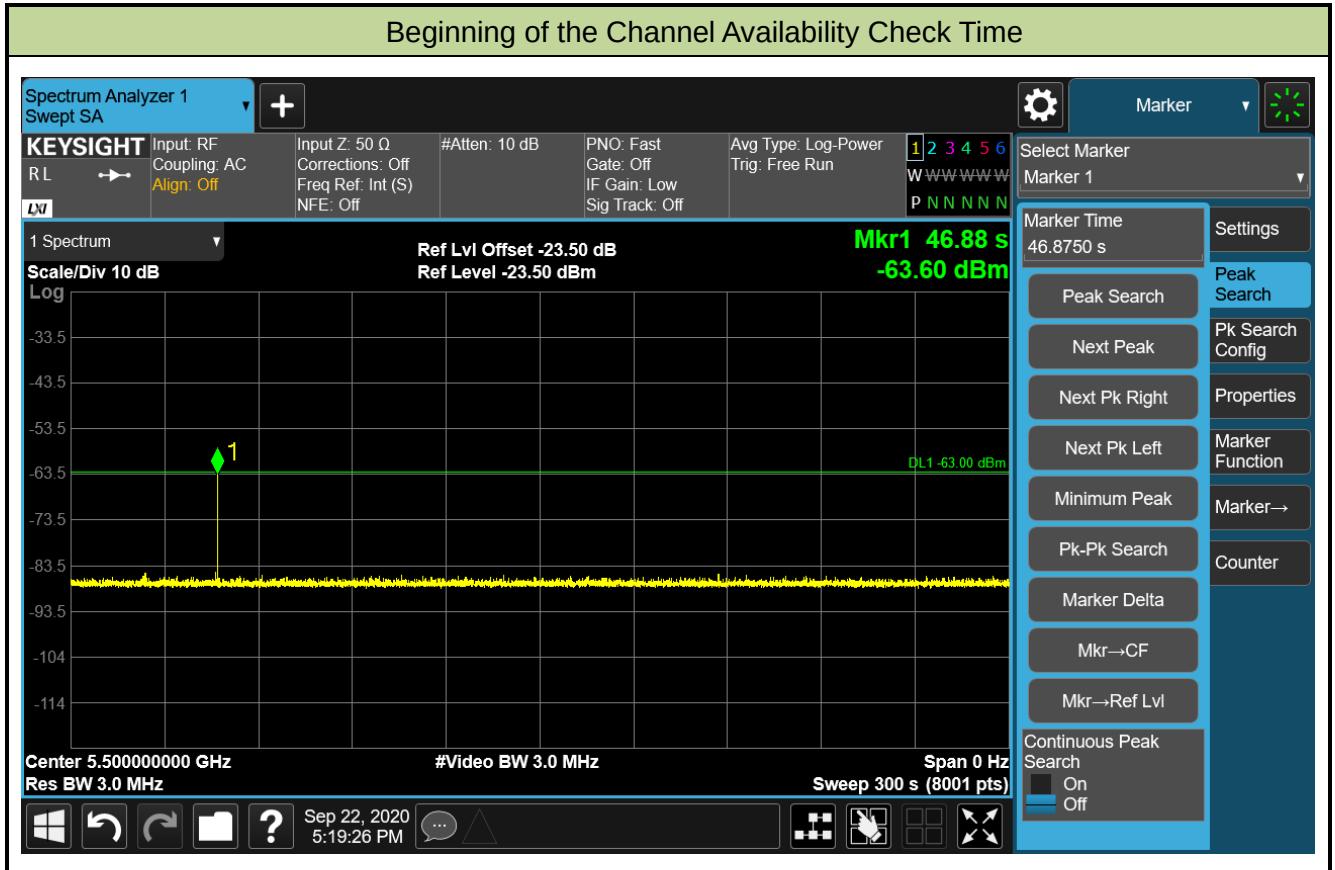
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

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	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/22
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

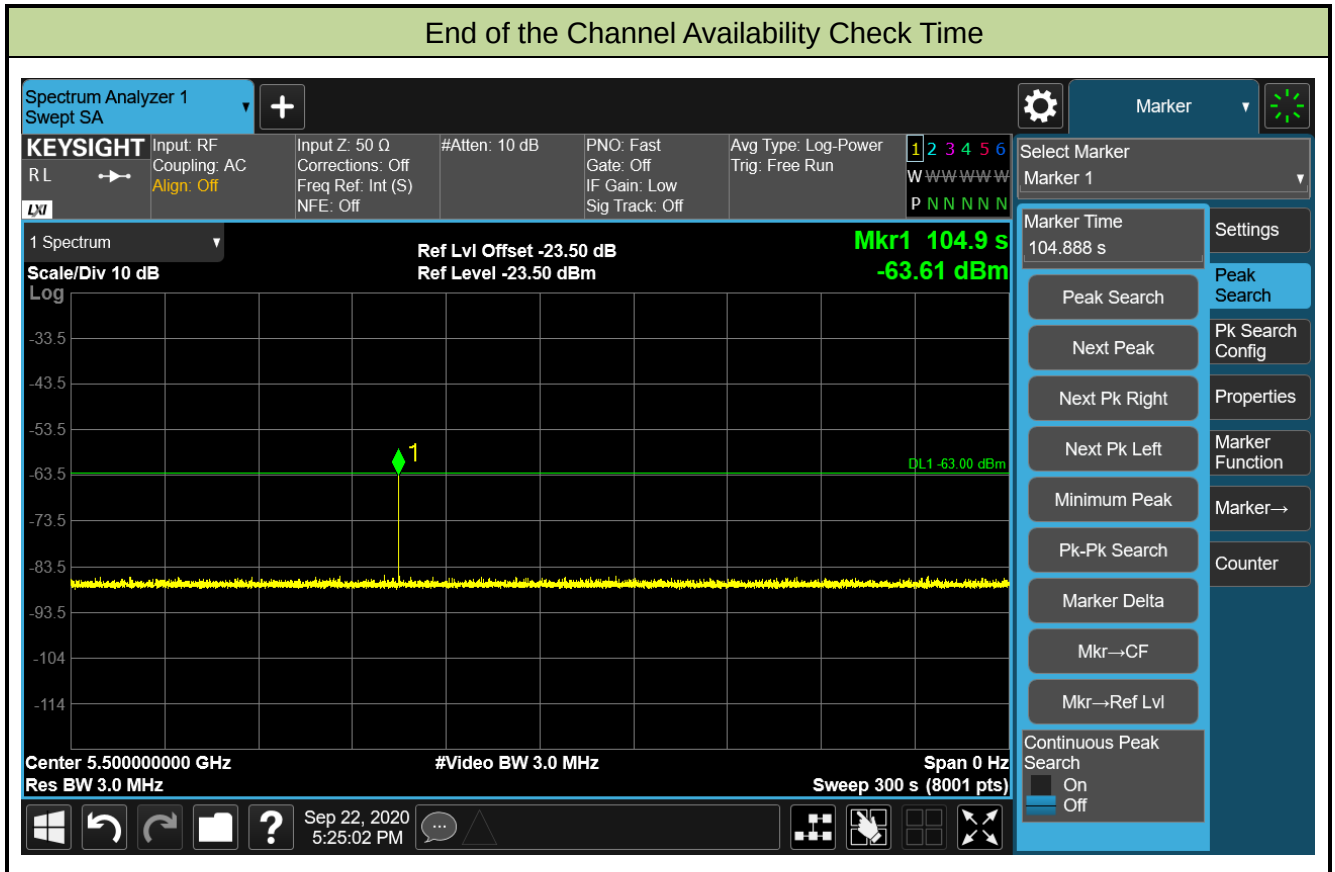
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

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	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/22
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

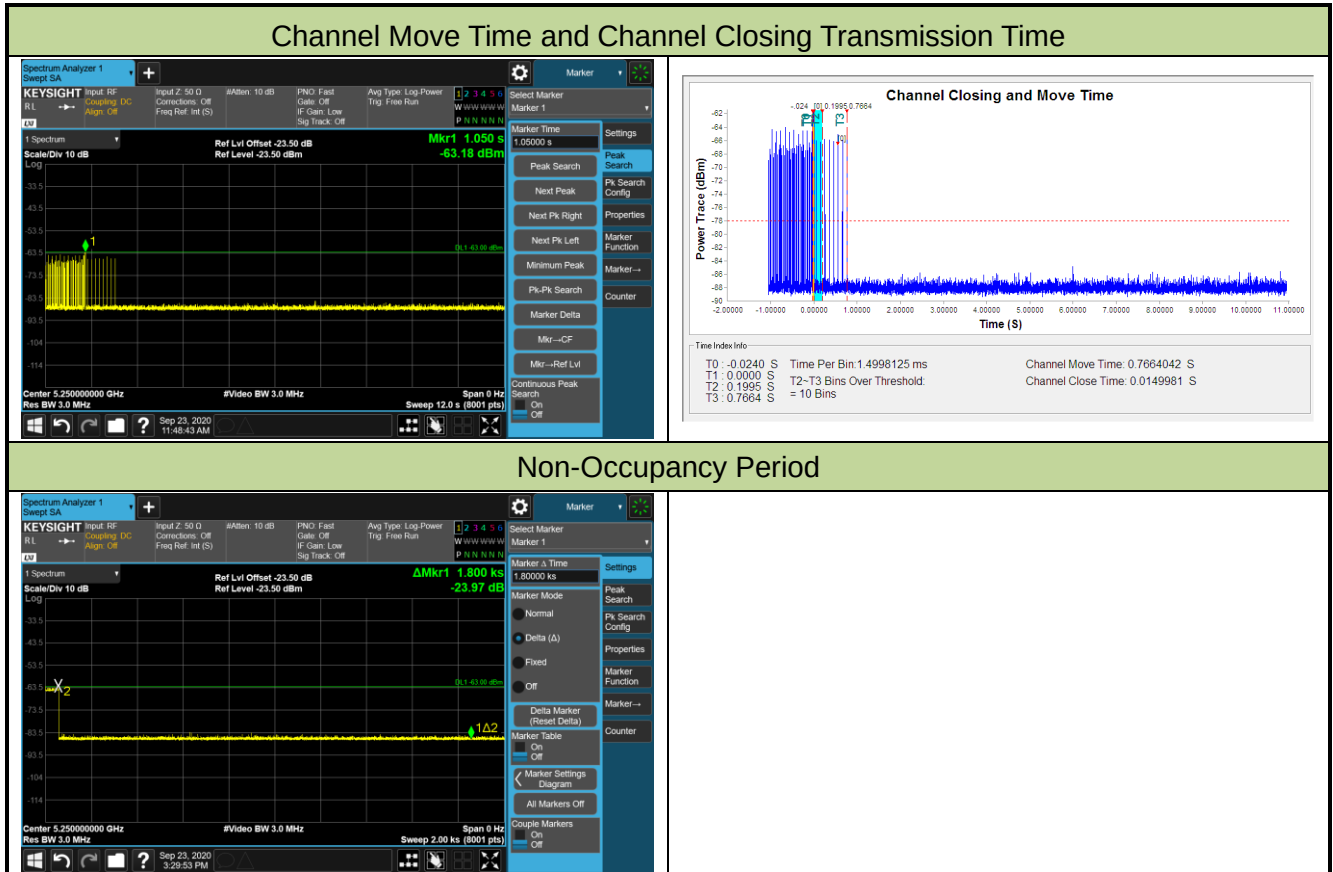
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec. 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 30 minute 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.

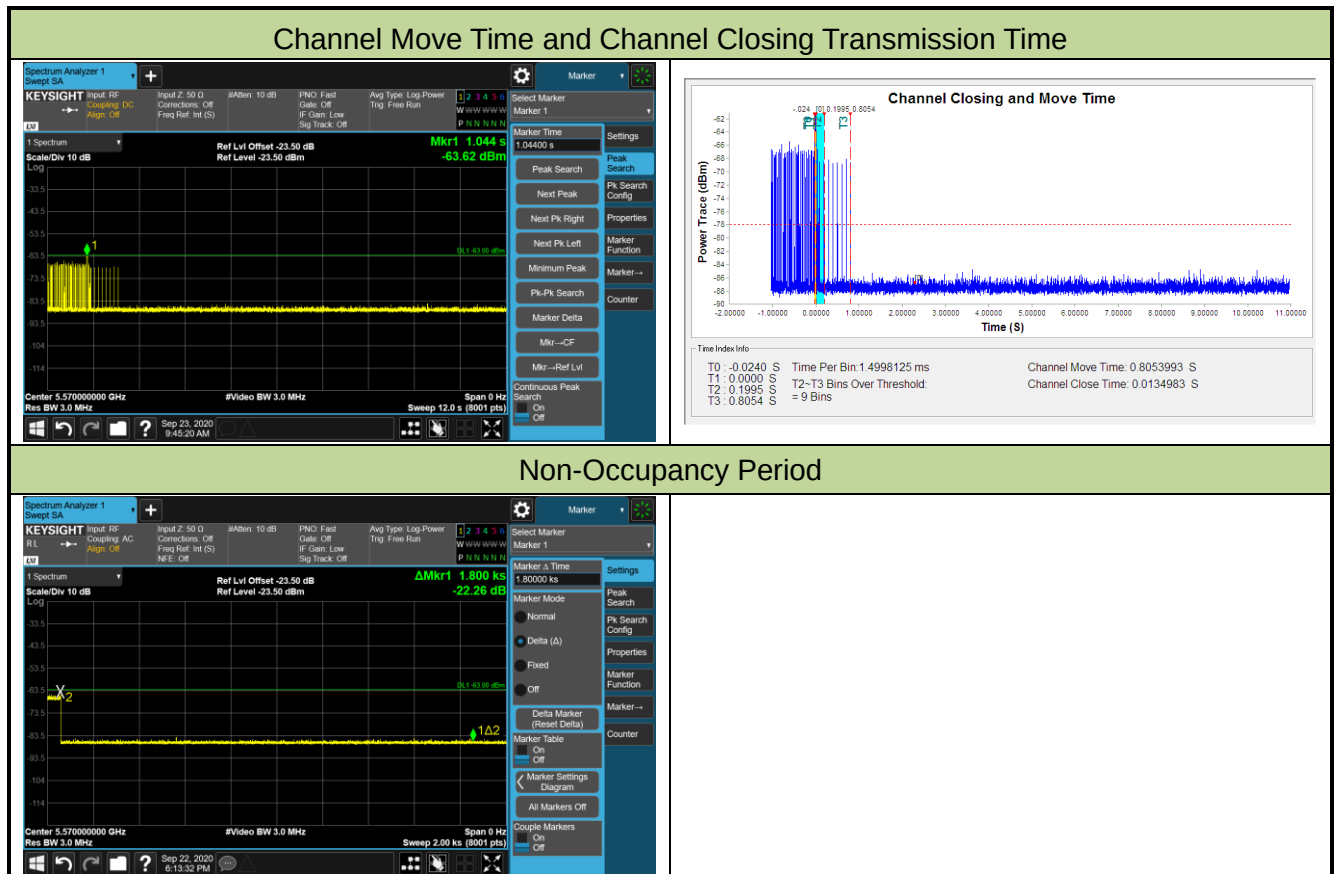
5.7.3. Test Result

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ax-HE160 mode - 5250MHz)		



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.766s	<10s
Channel Closing Transmission Time (ms) (Note)	15ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min
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	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ax-HE160 mode - 5570MHz)		



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.805s	<10s
Channel Closing Transmission Time (ms) (Note)	13ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min
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.		

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%

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	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/24
Test Item	Radar Statistical Performance Check (802.11ax-HE20 – 5500MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5490.4	1	838	63	1
2	5491.2	1	758	70	1
3	5492.0	1	538	98	1
4	5492.6	1	778	68	1
5	5493.4	1	938	57	1
6	5494.0	1	638	83	1
7	5494.8	1	658	81	1
8	5495.6	1	698	76	1
9	5496.4	1	3066	18	1
10	5497.2	1	858	62	1
11	5498.0	1	558	95	1
12	5498.8	1	878	61	1
13	5500.0	1	918	58	1
14	5500.6	1	618	86	1
15	5501.1	1	818	65	1
16	5501.7	1	660	80	1
17	5502.2	1	1368	39	1
18	5502.8	1	2487	22	1
19	5503.4	1	2339	23	1
20	5504.0	1	1058	50	1
21	5504.6	1	939	57	1
22	5505.1	1	2186	25	1
23	5505.7	1	1300	41	1
24	5506.2	1	2692	20	1
25	5506.8	1	1167	46	1
26	5507.4	1	1658	32	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5507.9	1	1181	45	1
28	5508.5	1	2068	26	1
29	5509.0	1	1423	38	1
30	5509.6	1	1270	42	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5490.4	4.5	224	26	1
2	5491.2	1.9	158	28	1
3	5492.0	2.6	173	25	1
4	5492.6	2.7	176	29	1
5	5493.4	1.7	182	24	1
6	5494.0	3.1	168	29	1
7	5494.8	4.4	153	27	1
8	5495.6	3.1	168	29	1
9	5496.4	4.3	169	25	0
10	5497.2	4.4	201	24	0
11	5498.0	3.5	204	25	1
12	5498.8	2	179	26	1
13	5500.0	1.4	196	28	1
14	5500.6	3	185	25	1
15	5501.1	1.1	185	28	1
16	5501.7	2.3	223	26	1
17	5502.2	2.3	211	27	1
18	5502.8	3.8	222	25	1
19	5503.4	1.2	192	27	1
20	5504.0	2.9	220	28	0
21	5504.6	3.5	161	26	1
22	5505.1	2.4	188	26	1
23	5505.7	3.3	191	29	0
24	5506.2	3.2	166	25	1
25	5506.8	2.9	160	28	1
26	5507.4	4.6	174	28	1
27	5507.9	2.5	169	24	1
28	5508.5	4.3	210	28	1
29	5509.0	4.8	192	25	1
30	5509.6	1.3	152	26	1
Detection Percentage (%)					86.7%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5490.4	7.2	206	16	1
2	5491.2	6.3	476	16	1
3	5492.0	6.4	227	17	1
4	5492.6	7.1	299	16	1
5	5493.4	10	408	16	1
6	5494.0	8.7	385	17	1
7	5494.8	9.7	438	18	1
8	5495.6	6.7	493	17	0
9	5496.4	7.8	202	17	1
10	5497.2	9.1	232	17	1
11	5498.0	6	433	18	1
12	5498.8	6.8	323	17	1
13	5500.0	7.8	223	17	1
14	5500.6	9.5	257	16	1
15	5501.1	6.1	340	17	1
16	5501.7	6.9	451	16	1
17	5502.2	6.1	492	18	1
18	5502.8	6.9	285	18	1
19	5503.4	7.6	212	17	1
20	5504.0	6	264	17	1
21	5504.6	7.8	201	18	0
22	5505.1	8.1	388	17	1
23	5505.7	8.1	347	16	1
24	5506.2	7.8	411	17	1
25	5506.8	8	256	17	1
26	5507.4	6.1	266	17	1
27	5507.9	6.5	448	18	1
28	5508.5	9.2	374	16	1
29	5509.0	9.8	278	17	1
30	5509.6	8.9	396	16	1
Detection Percentage (%)					93.3%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5490.4	13.5	301	12	1
2	5491.2	18.7	379	16	1
3	5492.0	18.6	202	15	1
4	5492.6	18.2	252	14	1
5	5493.4	18.8	225	14	1
6	5494.0	19.3	299	12	1
7	5494.8	14.9	200	14	1
8	5495.6	14.7	280	12	1
9	5496.4	19.4	406	13	1
10	5497.2	19.1	230	13	1
11	5498.0	14.3	497	13	1
12	5498.8	14.4	429	13	1
13	5500.0	17	351	14	1
14	5500.6	18.6	455	13	1
15	5501.1	15.8	286	15	0
16	5501.7	14.8	416	12	1
17	5502.2	17.5	404	12	1
18	5502.8	14.5	353	15	0
19	5503.4	18.5	404	14	1
20	5504.0	17.3	432	13	0
21	5504.6	14.1	323	12	1
22	5505.1	15.3	220	13	1
23	5505.7	19.8	317	15	1
24	5506.2	18.5	492	13	1
25	5506.8	18.2	353	12	1
26	5507.4	13.4	273	16	1
27	5507.9	13.5	486	14	1
28	5508.5	14.3	256	12	1
29	5509.0	16.6	421	15	1
30	5509.6	19.1	249	14	1
Detection Percentage (%)					90%

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

waveforms is as follows: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 86.7\% + 93.3\% + 90\%) / 4 = 92.5\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5500.0	1	16	5497.6	1
2	5500.0	1	17	5496.4	1
3	5500.0	1	18	5495.6	1
4	5500.0	1	19	5494.4	1
5	5500.0	1	20	5498.0	1
6	5500.0	1	21	5505.2	1
7	5500.0	1	22	5503.6	1
8	5500.0	1	23	5501.6	1
9	5500.0	1	24	5501.6	1
10	5500.0	1	25	5502.0	1
11	5496.8	1	26	5501.6	1
12	5495.2	1	27	5505.6	1
13	5498.4	1	28	5501.6	0
14	5493.6	1	29	5505.6	1
15	5492.4	1	30	5501.6	1
Detection Percentage (%)					96.7%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	58.9	6	1234		583.387
2	2	57.3	6	1431		232.305
3	2	80.7	6	1620		185.5
4	2	78.5	6	1994		261.67
5	1	84.1	6			548.37
6	2	95.2	6	1996		487.88
7	3	83.3	6	1762	1882	189.98
8	2	51.8	6	1020		242.14
9	3	83.2	6	1861	1101	264.65
10	1	90.7	6			96.49
11	1	95.9	6			14.4
12	3	79.9	6	1421	1964	25.34
13	2	66	6	1596		398.51
14	2	91	6	1970		86.02
15	2	98.1	6	1020		73.89
16	2	63.7	6	1048		39.23
17	2	93.8	6	1851		412.9
18	2	83.9	6	1974		259
19	3	63	6	1641	1505	449.8
20	3	82.2	6	1406	1239	49.7

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	91	8	1041	1806	128.232
2	2	74.4	8	1670		20.07
3	2	69.6	8	1706		602.93
4	3	95.2	8	1701	1450	267.06
5	2	94.1	8	1733		145.27
6	1	94.2	8			1138.28
7	3	73.7	8	1887	1775	920.49
8	3	97.8	8	1076	1143	786.7

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	83.7	10			617.311
2	3	66.8	10	1192	1750	131.963
3	3	88.5	10	1539	1855	311.646
4	3	58.7	10	1829	1956	426.169
5	2	77.3	10	1552		750.892
6	1	70.6	10			914.845
7	2	83.2	10	1135		307.158
8	2	88	10	1576		810.682
9	2	53.9	10	1914		642.335
10	1	52.8	10			191.428
11	2	79.3	10	1027		70.491
12	1	74.2	10			20.254
13	3	75.9	10	1382	1631	780.677

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	86.9	5	1592		175.955
2	2	56.5	5	1815		88.36
3	3	99.2	5	1275	1598	126.13
4	2	81.1	5	1812		713.22
5	3	80.7	5	1087	1200	78.16
6	2	87.3	5	1239		282.9
7	3	83.2	5	1911	1809	555.47
8	2	51.6	5	1811		385.56
9	2	89	5	1895		500.7
10	3	56.6	5	1844	1791	27.34
11	2	58.6	5	1471		689.63
12	2	53.4	5	1462		659.69
13	2	56.2	5	1791		377.64
14	2	53	5	1105		724.8
15	1	87.2	5			682.2
16	1	58.1	5			700

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	76.8	5	1975		774.841
2	2	86.6	5	1337		349.1
3	3	65.4	5	1866	1455	20.75
4	2	70.8	5	1595		277.87
5	1	93.8	5			120.34
6	3	70.8	5	1224	1425	790.58
7	2	81.3	5	1804		161.51
8	2	59.5	5	1933		299.79
9	1	60.1	5			411.4
10	2	72.7	5	1240		781.87
11	1	99.7	5			82.8
12	2	70	5	1104		52.53
13	3	92	5	1927	1710	367.66
14	1	66.1	5			462.4
15	1	73	5			285.2

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	69.1	8	1482	1350	598.786
2	3	53	8	1108	1866	650.253
3	2	97.5	8	1497		196.237
4	3	94.5	8	1099	1869	555.33
5	3	69.2	8	1248	1265	46.213
6	2	52.8	8	1619		204.227
7	2	95.9	8	1741		576.27
8	3	72.4	8	1389	1883	350.183
9	1	65.9	8			371.287
10	2	67	8	1367		445.21
11	2	82.9	8	1857		622.823
12	1	78.8	8			192.097
13	2	99.6	8	1278		628
14	3	89.6	8	1066	1133	351.273
15	1	88.7	8			157.587
16	3	92.5	8	1970	1050	455.2
17	2	97	8	1214		412.333
18	2	99.3	8	1022		214.667

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	50.4	15	1106	1661	669.754
2	1	80.7	15			78.555
3	2	56.1	15	1961		658.59
4	3	61.8	15	1646	1132	84.01
5	1	72	15			581.21
6	2	50.3	15	1110		534.92
7	2	72.3	15	1901		723.07
8	2	96.1	15	1192		558.04
9	2	79.1	15	1958		711.36
10	3	66.1	15	1386	1293	630.59
11	2	95.6	15	1706		449.11
12	3	99.4	15	1840	1438	515.86
13	3	63.5	15	1932	1939	340.29
14	3	98.7	15	1394	1785	690.8
15	2	65.9	15	1266		323.5
16	2	50.9	15	1193		506.8

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	64.5	13			1483.01
2	2	65.1	13	1480		87.63
3	3	80.7	13	1792	1685	610.98
4	2	98.5	13	1511		900.35
5	2	86.8	13	1104		1234.32
6	2	80.6	13	1796		1351.21
7	3	65.5	13	1868	1023	278.08
8	2	52.2	13	1219		25.7

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	56.8	8			162.986
2	2	88.6	8	1965		163.834
3	3	51	8	1241	1104	272.28
4	3	82.7	8	1035	1423	101.69
5	2	56.9	8	1672		242.67
6	3	93.8	8	1543	1393	30.57
7	2	81.8	8	1893		435.77
8	2	72.6	8	1726		696.7
9	3	97.4	8	1469	1827	45.31
10	2	62.2	8	1220		198.89
11	3	80.6	8	1733	1522	469.86
12	2	76.4	8	1557		111.84
13	2	54.3	8	1322		529.53
14	1	94.8	8			590.2
15	3	63.6	8	1513	1095	654.3
16	2	68.9	8	1686		220.6

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	66.7	14	1397		559.499
2	1	96.3	14			660.828
3	2	97.6	14	1096		88.055
4	2	78.6	14	1369		218.673
5	3	58	14	1174	1833	159.291
6	3	91.3	14	1732	1626	182.778
7	1	91.8	14			33.596
8	2	73.3	14	1324		299.194
9	2	74.7	14	1213		135.001
10	2	62.7	14	1385		295.699
11	2	86.6	14	1211		385.506
12	1	74.7	14			371.264
13	1	80.7	14			429.032
14	1	93.7	14			154.409
15	2	95.1	14	1121		270.047
16	2	51.2	14	1739		226.565
17	2	50.6	14	1775		517.882

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	83.4	16			628.336
2	1	75.1	16			14.307
3	3	62.2	16	1895	1315	206.427
4	1	63	16			122.65
5	3	68.5	16	1911	1048	462.833
6	2	72.8	16	1095		121.597
7	3	79.9	16	1758	1377	358.19
8	2	70.5	16	1479		203.893
9	1	97.4	16			230.697
10	2	52.1	16	1278		182.35
11	2	95.2	16	1863		378.533
12	1	66.2	16			254.557
13	2	98.1	16	1610		354.82
14	3	77.1	16	1806	1518	585.693
15	1	62.1	16			592.887
16	3	72.6	16	1748	1397	459.2
17	2	98.1	16	1418		427.033
18	3	51.8	16	1846	1278	420.367

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	96.3	12	1662		170.632
2	1	56.8	12			650.89
3	3	74.5	12	1379	1398	541.54
4	1	61.1	12			167.36
5	1	55.9	12			152.65
6	2	91.6	12	1211		591.24
7	3	70.8	12	1266	1130	120.16
8	1	74.2	12			2.17
9	2	85.7	12	1484		150.68
10	3	90.1	12	1653	1693	195.8
11	2	62.8	12	1970		450.95
12	3	86	12	1061	1436	697.17
13	1	94.8	12			50.09
14	2	62.7	12	1802		604.7
15	3	60	12	1060	1750	401.5
16	2	87.9	12	1532		137.5

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	50.2	20	1637	1107	143.48
2	3	86	20	1689	1238	284.88
3	2	88.6	20	1203		894.02
4	3	82.3	20	1298	1863	747.44
5	2	58	20	1720		979.68
6	2	89.3	20	1014		463.4
7	1	52.9	20			323.24
8	3	80.8	20	1087	1634	394.21
9	2	96.3	20	1369		474.43
10	1	77.5	20			0.62
11	2	82.7	20	1198		173.9
12	3	82.6	20	1093	1161	513

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	85.5	8	1128	1842	754.128
2	3	78.1	8	1250	1207	395.973
3	2	56.4	8	1038		22.726
4	2	87.1	8	1606		281.239
5	3	70.5	8	1524	1360	646.712
6	1	98.6	8			502.175
7	3	67.5	8	1897	1848	171.888
8	3	91.6	8	1171	1180	702.452
9	2	79.5	8	1392		795.105
10	2	54.4	8	1582		79.848
11	3	92.8	8	1806	1961	11.771
12	1	95.3	8			40.954
13	3	56.4	8	1737	1890	246.177

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	71.3	5			286.447
2	3	84.9	5	1662	1383	41.821
3	1	51.5	5			126.735
4	2	51.5	5	1739		179.363
5	1	63.6	5			20.521
6	3	97.6	5	1946	1437	590.098
7	2	83.9	5	1471		441.836
8	3	85.4	5	1415	1517	171.234
9	3	61.8	5	1844	1699	238.491
10	2	92.4	5	1735		377.639
11	3	96.8	5	1149	1423	451.856
12	2	95.3	5	1158		189.874
13	2	72.5	5	1798		149.522
14	3	70.7	5	1401	1764	229.049
15	2	93.7	5	1133		17.837
16	3	67.7	5	1136	1938	296.265
17	2	81.2	5	1590		172.782

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	66.8	18	1661	1303	318.334
2	1	54.1	18			484.353
3	3	90.3	18	1794	1550	464.507
4	2	99.8	18	1777		180.09
5	1	71	18			2.113
6	1	60.4	18			527.427
7	2	55.2	18	1186		26.26
8	2	84.3	18	1519		41.683
9	3	93.7	18	1712	1417	93.227
10	2	90.1	18	1254		421.69
11	1	94.8	18			566.583
12	2	57.4	18	1083		128.007
13	3	56	18	1152	1440	562.38
14	1	85.5	18			65.033
15	2	82.4	18	1368		20.567
16	2	81.1	18	1103		520.4
17	2	84.6	18	1503		278.733
18	3	51.8	18	1790	1525	369.367

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	85.1	15	1802	1363	589.655
2	2	79.7	15	1952		1039.971
3	1	68.9	15			539.912
4	2	86.6	15	1047		10.493
5	1	83.2	15			175.594
6	2	71.6	15	1176		514.255
7	2	65.3	15	1776		868.075
8	3	88.4	15	1114	1700	98.006
9	3	91.2	15	1329	1877	687.977
10	1	59.9	15			905.718
11	2	55.4	15	1664		977.709

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	92.4	13			122.304
2	3	92.7	13	1958	1552	17.105
3	2	60.4	13	1247		39.202
4	1	52.3	13			116.213
5	3	62.4	13	1945	1648	381.344
6	2	87.6	13	1967		331.715
7	2	63.7	13	1691		409.356
8	3	68.1	13	1945	1105	10.167
9	1	94.9	13			157.658
10	2	66.9	13	1058		176.499
11	2	94.4	13	1270		417.171
12	2	53.3	13	1376		290.012
13	2	95.8	13	1155		202.973
14	2	59.5	13	1224		336.624
15	3	86	13	1085	1780	156.325
16	1	87.2	13			51.656
17	3	99.6	13	1435	1157	52.437
18	2	73.2	13	1161		288.758
19	2	85.4	13	1546		18.279

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	51.7	10	1293		64.442
2	1	86.5	10			752.837
3	2	62.2	10	1319		501.674
4	3	82.9	10	1440	1452	464.631
5	3	93.1	10	1496	1609	351.329
6	3	93.9	10	1838	1539	440.376
7	1	92.7	10			491.513
8	3	91.1	10	1689	1229	284.03
9	3	96.6	10	1219	1098	80.687
10	3	73.4	10	1230	1153	381.524
11	3	85.5	10	1514	1605	464.031
12	3	57.2	10	1652	1120	416.479
13	2	97.2	10	1769		157.486
14	2	94.4	10	1730		74.543

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	77.3	19	1894		337.612
2	2	55	19	1276		697.86
3	2	80.1	19	1179		343.65
4	2	57.4	19	1332		407.93
5	2	60	19	1595		87.81
6	2	86.7	19	1576		428.96
7	1	93	19			581.31
8	2	82.6	19	1914		575.9
9	2	92.8	19	1662		190.83
10	1	97.9	19			172.96
11	2	61.9	19	1126		220.6
12	2	96.4	19	1666		120.66
13	3	92.1	19	1328	1633	288.53
14	1	82.3	19			227.4
15	3	77.9	19	1921	1912	772.4

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	54.2	11	1303		185.71
2	1	61.1	11			425.308
3	1	73	11			78.595
4	2	65	11	1420		162.763
5	2	80.9	11	1726		175.981
6	2	58.2	11	1638		124.378
7	2	88.1	11	1886		30.236
8	3	77.1	11	1123	1980	0.744
9	2	85.8	11	1653		322.271
10	2	56.9	11	1528		698.899
11	2	82.2	11	2000		276.746
12	1	55.5	11			43.024
13	3	75.4	11	1638	1286	213.972
14	3	54.4	11	1448	1410	423.379
15	2	71.4	11	1248		8.117
16	3	54	11	1713	1594	351.765
17	2	76.9	11	1758		426.682

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	77.3	15			429.46
2	1	70	15			213.861
3	2	74.3	15	1055		510.032
4	1	69.2	15			708.313
5	3	63.2	15	1254	1710	683.524
6	1	74.6	15			231.735
7	2	70.3	15	1505		924.915
8	2	98.6	15	1091		96.396
9	3	68.9	15	1976	1886	227.397
10	3	85.8	15	1677	1240	242.618
11	3	94.3	15	1558	1405	109.809

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	51.2	20	1339		1105.33
2	2	62.9	20	1652		198.83
3	2	56.7	20	1901		225.42
4	2	50.6	20	1451		305.62
5	3	89.6	20	1516	1045	1015.15
6	3	88.3	20	1099	1520	173.29
7	2	96.8	20	1271		501.6
8	2	90.3	20	1338		604.38
9	1	71.9	20			675.3
10	2	66.3	20	1878		1167.5

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	61.8	20	1782	1060	582.221
2	2	51.5	20	1147		27.62
3	1	100	20			609.26
4	2	96.1	20	1505		784.18
5	3	95.4	20	1504	1160	644.44
6	1	90.7	20			252.61
7	3	78.5	20	1749	1407	693.06
8	1	84.9	20			620.52
9	3	86.6	20	1937	1854	756.64
10	1	86.3	20			229.21
11	2	71.9	20	1099		582.18
12	1	98.2	20			292.75
13	1	65.2	20			435.6
14	2	89.1	20	1391		303.6
15	2	81.7	20	1356		567.1

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	53	19	1302		483.205
2	3	61.1	19	1595	1435	491.053
3	2	79.6	19	1004		394.386
4	3	98.8	19	1781	1977	476.359
5	2	67.1	19	1292		190.462
6	1	63.8	19			309.735
7	2	89.9	19	1923		551.398
8	3	69.7	19	1453	1038	360.032
9	1	59.3	19			567.355
10	1	56.7	19			135.318
11	2	68.8	19	1037		276.711
12	3	68.4	19	1085	1090	737.454
13	1	57.5	19			202.477

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	88	20			517.688
2	1	65.6	20			886.23
3	2	51.1	20	1051		72.62
4	1	58.8	20			646.43
5	1	90.3	20			214.1
6	1	86.8	20			435.18
7	2	77.9	20	1315		244.46
8	3	84.5	20	1088	1598	861.32
9	3	84.4	20	1098	1496	256.5
10	2	83.1	20	1941		1032.5

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	74.6	10	1967		566.644
2	3	57.4	10	1186	1755	43.014
3	2	71.3	10	1692		108.63
4	3	87.3	10	1024	1210	51.35
5	1	82	10			434.65
6	1	72.3	10			512.13
7	1	57.6	10			161.7
8	3	54.2	10	1350	1463	126.5
9	1	72.8	10			314.69
10	2	78.6	10	1099		380.31
11	3	68.5	10	1614	1168	453.53
12	2	76.3	10	1024		546.48
13	3	56	10	1673	1640	339.45
14	1	65	10			121.46
15	1	86.5	10			86.27
16	1	60.6	10			370.38
17	3	58.5	10	1513	1950	129.3
18	2	68	10	1204		297.7
19	3	78.8	10	1605	1233	491.7
20	2	69.9	10	1463		159.4

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	80.7	20			418.744
2	1	92.8	20			457.123
3	2	69.8	20	1775		701.116
4	1	62.5	20			17.359
5	1	67.7	20			319.752
6	2	75.8	20	1061		196.135
7	3	73.3	20	1217	1679	916.038
8	1	58.5	20			733.182
9	1	56.5	20			259.905
10	1	70.2	20			722.988
11	1	96	20			280.711
12	1	89.6	20			265.854
13	2	99.2	20	1395		742.577

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	52.7	10	1749	1504	476.31
2	1	88.4	10			624.813
3	1	57.1	10			657.117
4	2	71.6	10	1758		31.55
5	2	86.7	10	1075		536.413
6	1	99.2	10			608.507
7	2	52.4	10	1995		454.97
8	1	92.6	10			444.783
9	3	86.1	10	1886	1952	187.477
10	3	86.9	10	1415	1749	561.42
11	1	79.3	10			216.663
12	3	85.8	10	1119	1783	517.897
13	1	77.1	10			604.22
14	2	66.7	10	1204		15.153
15	2	87.9	10	1988		329.747
16	2	95	10	1138		189.8
17	2	65.9	10	1114		408.133
18	2	59	10	1933		535.667

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	56.7	20	1734	1016	94.478
2	2	59.8	20	1484		100.249
3	1	81.1	20			495.782
4	2	96.1	20	1640		145.223
5	2	81.2	20	1790		18.014
6	2	82.8	20	1400		129.285
7	3	77.3	20	1617	1777	124.136
8	3	97.8	20	1514	1378	504.037
9	2	71.3	20	1722		260.468
10	2	87.7	20	1614		426.189
11	3	63.8	20	1494	1920	261.091
12	3	92.7	20	1323	1064	317.152
13	2	83.9	20	1382		515.633
14	2	56.2	20	1640		463.584
15	3	70.1	20	1073	1383	364.965
16	2	67	20	1053		177.486
17	2	65.4	20	1232		89.437
18	3	66.6	20	1941	1383	8.458
19	2	61.4	20	1240		36.479

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5490.4	1	16	5501.7	1
2	5491.2	1	17	5502.2	1
3	5492.0	1	18	5502.8	1
4	5492.6	1	19	5503.4	1
5	5493.4	1	20	5504.0	1
6	5494.0	1	21	5504.6	1
7	5494.8	1	22	5505.1	1
8	5495.6	1	23	5505.7	1
9	5496.4	1	24	5506.2	1
10	5497.2	1	25	5506.8	1
11	5498.0	1	26	5507.4	1
12	5498.8	1	27	5507.9	1
13	5500.0	1	28	5508.5	1
14	5500.6	1	29	5509.0	1
15	5501.1	1	30	5509.6	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	5504	9	13	5490	39
65	5497	195	42	5492	126
--	--	--	52	5508	156
--	--	--	58	5497	174
--	--	--	89	5507	267
--	--	--	97	5500	291
--	--	--	98	5498	294

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5509	3	12	5498	36
9	5508	27	36	5493	108
36	5497	108	67	5505	201
83	5503	249	--	--	--
84	5494	252	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5503	45	11	5510	33
59	5510	177	40	5501	120
65	5500	195	41	5504	123
98	5508	294	87	5490	261

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
26	5503	78	4	5494	12
63	5497	189	28	5493	84
79	5501	237	30	5505	90
83	5504	249	46	5508	138
84	5493	252	89	5500	267
--	--	--	90	5501	270

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5502	21	23	5503	69
18	5501	54	36	5495	108
34	5506	102	--	--	--
87	5503	261	--	--	--
90	5498	270	--	--	--
95	5491	285	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
26	5504	78	24	5498	72
27	5510	81	47	5490	141
58	5501	174	48	5492	144
66	5496	198	79	5506	237
74	5494	222	--	--	--
79	5499	237	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5496	6	7	5507	21
4	5497	12	97	5502	291
25	5501	75	--	--	--
70	5502	210	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
66	5499	198	22	5506	66
67	5496	201	24	5508	72
68	5509	204	31	5496	93
81	5502	243	49	5510	147
--	--	--	60	5495	180

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
43	5510	129	7	5495	21
48	5500	144	11	5501	33
69	5493	207	26	5502	78
79	5503	237	43	5509	129
92	5504	276	46	5498	138
99	5507	297	66	5493	198

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
28	5491	84	1	5500	3
51	5504	153	14	5493	42
69	5490	207	19	5495	57
78	5502	234	35	5504	105
82	5500	246	46	5497	138
--	--	--	55	5506	165
--	--	--	61	5508	183

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
22	5494	66	54	5501	162
23	5495	69	77	5496	231
51	5502	153	81	5502	243
65	5493	195	--	--	--
72	5491	216	--	--	--
77	5509	231	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5510	6	10	5497	30
16	5504	48	18	5491	54
21	5509	63	50	5494	150
36	5492	108	57	5501	171
95	5499	285	86	5495	258
--	--	--	90	5493	270
--	--	--	95	5500	285

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
33	5495	99	14	5490	42
43	5496	129	22	5495	66
64	5501	192	27	5508	81
75	5507	225	39	5502	117
--	--	--	76	5491	228

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5496	60	40	5505	120
46	5497	138	44	5504	132
52	5509	156	56	5497	168
54	5492	162	92	5496	276
97	5495	291	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
37	5499	111	71	5498	213
52	5509	156	94	5503	282
53	5491	159	--	--	--
80	5496	240	--	--	--
84	5495	252	--	--	--

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/24
Test Item	Radar Statistical Performance Check (802.11ax-HE40 mode – 5510MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	918	58	1
2	5492.5	1	798	67	1
3	5493.9	1	758	70	1
4	5495.4	1	818	65	1
5	5496.8	1	538	98	1
6	5498.3	1	858	62	1
7	5499.8	1	938	57	1
8	5501.2	1	638	83	1
9	5502.7	1	658	81	1
10	5504.1	1	738	72	1
11	5505.6	1	718	74	1
12	5507.1	1	838	63	1
13	5508.5	1	778	68	1
14	5510.0	1	578	92	1
15	5511.3	1	678	78	1
16	5512.6	1	2657	20	1
17	5513.9	1	1348	40	1
18	5515.2	1	2175	25	1
19	5516.6	1	3007	18	1
20	5517.9	1	2686	20	1
21	5519.2	1	2804	19	1
22	5520.5	1	2868	19	1
23	5521.0	1	2989	18	1
24	5522.3	1	1051	51	1
25	5523.6	1	2849	19	1
26	5524.9	1	2915	19	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5526.0	1	2469	22	1
28	5527.3	1	2962	18	1
29	5528.6	1	2672	20	1
30	5529.0	1	2334	23	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	2.3	179	25	1
2	5492.5	1.3	177	25	1
3	5493.9	1.7	159	27	1
4	5495.4	3.4	162	27	1
5	5496.8	2	195	25	1
6	5498.3	4.2	194	25	1
7	5499.8	2.6	202	27	1
8	5501.2	2.9	181	25	1
9	5502.7	3.4	221	26	1
10	5504.1	4.5	226	27	1
11	5505.6	3.2	160	27	1
12	5507.1	2.2	200	24	0
13	5508.5	3.4	153	27	1
14	5510.0	1.7	188	24	1
15	5511.3	2.3	181	28	1
16	5512.6	4.3	192	26	1
17	5513.9	1.8	175	23	1
18	5515.2	1.6	222	23	1
19	5516.6	4.2	196	26	1
20	5517.9	3.8	202	28	1
21	5519.2	3.4	192	28	1
22	5520.5	4.2	175	23	1
23	5521.0	3.2	186	25	1
24	5522.3	1.5	211	24	1
25	5523.6	1.1	195	25	1
26	5524.9	2.7	185	23	1
27	5526.0	3	151	26	1
28	5527.3	2.8	171	26	1
29	5528.6	3	213	26	1
30	5529.0	2.1	190	27	1
Detection Percentage (%)					96.7%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	7.9	323	17	1
2	5492.5	9.5	450	18	1
3	5493.9	6.5	280	18	1
4	5495.4	7.9	486	16	1
5	5496.8	8.6	351	17	1
6	5498.3	9.2	310	16	1
7	5499.8	7.2	406	17	1
8	5501.2	9	315	16	0
9	5502.7	9.2	371	18	1
10	5504.1	8.9	461	18	1
11	5505.6	7.3	482	18	1
12	5507.1	6	267	18	1
13	5508.5	8.5	426	16	1
14	5510.0	6.9	488	17	1
15	5511.3	9.6	367	17	1
16	5512.6	9.1	375	16	1
17	5513.9	7.3	415	17	1
18	5515.2	7	391	16	1
19	5516.6	7.3	236	18	1
20	5517.9	9.8	475	17	1
21	5519.2	6.6	394	18	1
22	5520.5	7.5	373	16	0
23	5521.0	7.7	376	16	1
24	5522.3	6	344	16	1
25	5523.6	7.9	379	17	1
26	5524.9	8.3	462	18	1
27	5526.0	7.5	404	17	1
28	5527.3	8.9	277	17	1
29	5528.6	7.3	384	16	1
30	5529.0	6.4	481	16	1
Detection Percentage (%)					93.3%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	19.8	325	13	1
2	5492.5	18	256	12	0
3	5493.9	11.6	223	12	1
4	5495.4	16.7	261	13	1
5	5496.8	14.4	340	15	1
6	5498.3	14.1	444	14	0
7	5499.8	16.5	490	12	1
8	5501.2	13.1	404	13	1
9	5502.7	12.8	473	12	1
10	5504.1	18.6	341	12	0
11	5505.6	16	235	15	1
12	5507.1	16.3	394	15	1
13	5508.5	12	299	14	1
14	5510.0	15.5	216	16	1
15	5511.3	19.3	401	15	1
16	5512.6	19.1	487	15	1
17	5513.9	18.9	251	16	1
18	5515.2	17.2	253	12	1
19	5516.6	18.5	355	12	1
20	5517.9	19.6	486	14	1
21	5519.2	13.1	316	14	1
22	5520.5	17.7	291	13	1
23	5521.0	11.7	284	13	1
24	5522.3	19.4	291	15	1
25	5523.6	15.6	477	14	1
26	5524.9	12.9	333	16	1
27	5526.0	14.2	409	16	1
28	5527.3	18.8	201	12	1
29	5528.6	14.7	267	16	1
30	5529.0	11.3	324	13	1
Detection Percentage (%)					90%

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

waveforms is as follows: $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\% + 96.7\% + 93.3\% + 90\%) / 4 = 95\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5510.0	1	16	5495.8	1
2	5510.0	1	17	5497.4	1
3	5510.0	1	18	5495.0	1
4	5510.0	1	19	5496.2	1
5	5510.0	1	20	5495.4	1
6	5510.0	1	21	5521.8	1
7	5510.0	1	22	5524.6	1
8	5510.0	1	23	5524.2	1
9	5510.0	1	24	5526.6	1
10	5510.0	1	25	5524.2	1
11	5497.4	1	26	5527.0	1
12	5493.4	1	27	5523.0	1
13	5498.2	1	28	5523.4	1
14	5497.4	1	29	5522.2	1
15	5498.6	1	30	5523.4	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	62.6	13	1376		174.395
2	1	60.2	13			716.44
3	3	56.9	13	1831	1652	1.37
4	3	54.4	13	1952	1724	282.36
5	2	54.6	13	1435		435.71
6	2	55.9	13	1072		448.55
7	1	87.6	13			328.5
8	2	68.6	13	1659		556.54
9	3	74.7	13	1384	1884	343.74
10	3	78.9	13	1927	1542	788.82
11	3	50.8	13	1658	1727	523.72
12	3	68.8	13	1107	1877	52.6
13	3	74.9	13	1419	1186	343.1
14	1	75.4	13			397.9
15	2	97.7	13	1224		557.6

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	88.9	14	1028	1048	187.291
2	3	82.1	14	1675	1004	314.328
3	2	95.2	14	1789		426.855
4	2	88.1	14	1242		326.803
5	3	64.9	14	1696	1874	28.641
6	2	81.9	14	1372		209.428
7	2	83.7	14	1987		580.456
8	3	69.4	14	1180	1195	294.344
9	3	55.6	14	1573	1763	187.211
10	2	69.1	14	1656		106.639
11	2	83.3	14	1141		41.266
12	1	58.7	14			566.404
13	2	85	14	1954		66.232
14	2	59	14	1531		172.279
15	2	79.6	14	1313		212.147
16	1	96.8	14			217.465
17	2	96.6	14	1324		423.982

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	81.1	17	1677	1770	274.156
2	2	66.1	17	1886		499.37
3	2	93.9	17	1116		598.59
4	1	83.1	17			738.73
5	2	62.5	17	1690		364.5
6	3	83.1	17	1108	1429	153.04
7	2	96.2	17	1818		711.37
8	3	54.1	17	1199	1934	96.8
9	2	61	17	1900		611.45
10	3	76.7	17	1825	1526	262.25
11	2	81	17	1408		88.91
12	1	88.3	17			380.8
13	2	57.8	17	1496		267.84
14	2	91.4	17	1289		287.3
15	3	64.6	17	1820	1895	506.6

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	92.1	5	1114	1396	691.423
2	1	97.9	5			703.601
3	3	55.6	5	1691	1136	730.972
4	1	98.5	5			115.293
5	1	74.4	5			336.434
6	2	60.1	5	1784		647.455
7	3	92.7	5	1582	1315	530.165
8	2	55.7	5	1538		888.576
9	1	92.3	5			1011.437
10	2	80.5	5	1932		210.518
11	2	68.1	5	1566		1039.109

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	88.2	7	1194		841.362
2	1	51.3	7			194.82
3	2	62.2	7	1067		751.12
4	2	77.2	7	1875		974.76
5	2	74.7	7	1457		705
6	1	65.1	7			130.11
7	2	59.9	7	1623		461.5
8	2	80.5	7	1110		1022.01
9	2	78.2	7	1822		238.14
10	1	87.3	7			625.9

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	99.8	20			47.135
2	3	67.3	20	1245	1920	230.352
3	2	64.2	20	1684		730.67
4	2	79.2	20	1517		599.96
5	3	54.7	20	1623	1645	418.42
6	3	66	20	1705	1236	465.35
7	2	54.6	20	1257		224.34
8	2	98.9	20	1841		267.61
9	2	91.4	20	1929		22.3
10	3	87.8	20	1228	1304	205.51
11	2	70.1	20	1516		460.32
12	2	77.1	20	1331		621.55
13	2	89.1	20	1094		183.87
14	2	74.2	20	1989		131.15
15	3	95.5	20	1576	1953	133.5
16	3	63.6	20	1001	1344	475.5

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	71	10	1150	1099	709.436
2	1	94.6	10			482.951
3	2	96.7	10	1485		998.652
4	3	71.3	10	1848	1577	161.453
5	2	63.8	10	1329		914.464
6	3	52.2	10	1134	1246	1055.385
7	2	90.7	10	1607		190.405
8	3	83.2	10	1594	1258	597.496
9	2	52.7	10	1857		794.807
10	2	87.1	10	1167		505.418
11	3	88.2	10	1733	1349	1032.009

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	87	8	1115		152.601
2	3	50.7	8	1843	1950	901.11
3	3	54.6	8	1637	1674	1144.73
4	2	93.5	8	1036		466.02
5	2	69.6	8	1609		104.32
6	2	78.1	8	1232		640.93
7	1	84.3	8			653.31
8	2	79.6	8	1965		535.5

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	61.5	6	1730		925.56
2	2	76	6	1616		190.421
3	1	66.5	6			19.092
4	1	95.7	6			199.243
5	2	75.1	6	1439		444.984
6	2	92.5	6	1785		907.905
7	3	84	6	1263	1413	609.055
8	3	91.4	6	1755	1825	525.196
9	2	91.9	6	1435		61.717
10	2	79.2	6	1397		1017.918
11	2	54.8	6	1629		610.609

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	61	20	1797		69.022
2	2	74	20	1342		116.103
3	3	86.8	20	1504	1891	119.866
4	2	85.2	20	1866		241.599
5	3	56.3	20	1033	1140	843.912
6	2	86.9	20	1422		235.235
7	1	76.1	20			717.418
8	3	64.6	20	1121	1904	393.252
9	2	97.7	20	1103		747.935
10	2	53.4	20	1976		297.448
11	3	62.6	20	1470	1710	382.091
12	1	62.1	20			407.954
13	2	83.2	20	1552		462.977

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	71.9	16	1474		751.173
2	1	75.4	16			681.173
3	2	66.5	16	1899		527.066
4	3	55.4	16	1658	1418	654.459
5	1	73.5	16			475.102
6	2	79.2	16	1729		494.515
7	2	63	16	1346		0.708
8	1	63.8	16			194.362
9	3	80.8	16	1350	1088	332.985
10	1	84.9	16			165.728
11	1	96.3	16			311.951
12	2	74.1	16	1673		802.854
13	2	77.2	16	1770		812.977

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	78.9	6	1162		878.161
2	3	57.8	6	1901	1922	955.367
3	3	68.5	6	1134	1581	1262.483
4	1	79.9	6			87.6
5	3	89.7	6	1006	1641	1100.617
6	2	95.9	6	1808		329.553
7	1	78.3	6			760.55
8	3	51.2	6	1231	1011	917.867
9	3	95.4	6	1376	1865	483.033

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	90.1	18			90.944
2	1	57	18			543.777
3	2	75.9	18	1745		8.674
4	1	97.5	18			271.871
5	2	51.8	18	1866		387.229
6	2	78.8	18	1339		644.896
7	2	56.1	18	1244		161.963
8	2	62.2	18	1180		208.7
9	3	69.4	18	1838	1590	774.137
10	2	96.7	18	1803		447.234
11	2	73.1	18	1149		295.551
12	3	60.2	18	1724	1395	606.529
13	1	92.1	18			301.586
14	1	96.8	18			818.743

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	67.8	16	1593		83.901
2	2	86.3	16	1053		503.57
3	3	99	16	1497	1702	717.34
4	3	77.6	16	1027	1968	559.79
5	2	51.3	16	1921		792.31
6	2	67.4	16	1768		325.48
7	2	83.6	16	1232		450.57
8	3	71.9	16	1013	1188	791.24
9	1	69	16			261.62
10	2	71.8	16	1975		532.66
11	2	63.9	16	1442		226.48
12	1	79.1	16			346.08
13	1	74.1	16			219.95
14	2	88.8	16	1153		417.2
15	1	88.2	16			119.8

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	70.4	19			651.529
2	2	71.6	19	1626		547.47
3	2	75.7	19	1622		333.56
4	2	70.5	19	1956		331.34
5	2	64.8	19	1447		343.74
6	2	57.9	19	1477		115.65
7	2	80.8	19	1141		114.68
8	2	83.6	19	1629		294.81
9	1	88.5	19			192.75
10	2	73.9	19	1183		147.08
11	3	87.3	19	1495	1612	259
12	2	99.3	19	1996		154.91
13	1	56.3	19			613.1
14	2	77.2	19	1248		352.5
15	2	80.5	19	1543		75.8

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	70.3	12			159.123
2	2	77.1	12	1991		714.197
3	3	92	12	1017	1295	557.354
4	3	92.6	12	1420	1977	532.411
5	2	89.9	12	1642		274.609
6	1	77	12			32.586
7	1	67.5	12			92.383
8	2	96.6	12	1900		581
9	2	83.8	12	1136		436.817
10	2	60.2	12	1296		696.284
11	1	82.4	12			306.581
12	1	87.7	12			241.729
13	1	86.1	12			679.586
14	3	98.9	12	1818	1496	823.043

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	89.9	16	1464	1224	296.239
2	1	57	16			347.209
3	1	69.9	16			94.75
4	2	76.4	16	1426		300.92
5	2	67.1	16	1829		344.28
6	2	60	16	1752		591.12
7	3	84.4	16	1502	1441	25.6
8	3	61.9	16	1436	1920	577.03
9	1	73.5	16			206.2
10	1	55.6	16			313.36
11	3	54.3	16	1527	1699	231.07
12	3	70.8	16	1554	1306	320.09
13	3	50.3	16	1481	1602	142.18
14	2	74	16	1468		464.65
15	3	60.4	16	1981	1083	4.52
16	2	67.6	16	1746		439.46
17	2	63.8	16	1485		77.9
18	1	53.4	16			172.5
19	2	60.8	16	1978		82.1
20	3	61	16	1817	1078	224.9

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	88	10	1263	1107	1078.57
2	2	79.2	10	1231		1202.587
3	2	61.9	10	1085		381.593
4	2	58.2	10	1159		139.32
5	3	60.5	10	1172	1945	925.117
6	3	100	10	1340	1694	551.423
7	2	64.5	10	1147		29.67
8	1	50.5	10			650.617
9	2	94.4	10	1409		1258.033

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	76.6	13	1534		55.253
2	2	80.5	13	1370		412.87
3	3	81.8	13	1857	1275	254.92
4	2	60.4	13	1704		869.07
5	3	97.6	13	1864	1333	1087.24
6	2	99.4	13	1720		1114.66
7	1	99.8	13			825.03
8	1	70.7	13			177.91
9	2	86.6	13	1273		968.7
10	3	54.1	13	1996	1015	1058.5

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	92.6	11	1183	1238	223.305
2	2	89.5	11	1723		321.408
3	2	57.7	11	1720		255.575
4	3	86.9	11	1372	1925	657.023
5	3	81.8	11	1047	1569	263.781
6	1	55.1	11			363.338
7	1	68.1	11			364.736
8	2	85	11	1146		299.494
9	1	88.3	11			270.431
10	2	80.4	11	1837		666.599
11	1	86.2	11			682.146
12	2	85.4	11	1096		698.844
13	2	73.5	11	1129		229.032
14	3	75.5	11	1417	1850	669.619
15	2	57.2	11	1795		162.647
16	1	70.8	11			602.165
17	1	92.1	11			683.682

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	57	18			591.993
2	2	91.1	18	1512		600.763
3	2	55.7	18	1334		74.327
4	2	80.8	18	1909		599.64
5	3	69.8	18	1128	1808	659.603
6	3	66.6	18	1954	1222	361.057
7	3	97.9	18	1484	1682	437.45
8	3	81.1	18	1394	1269	534.623
9	2	71.2	18	1790		165.137
10	3	80	18	1646	1267	73.21
11	2	78.1	18	1737		113.103
12	1	66.1	18			59.187
13	2	65.6	18	1748		346.19
14	1	70.4	18			659.213
15	2	96.1	18	1335		325.707
16	3	50.9	18	1592	1159	619.2
17	1	87	18			289.733
18	3	88.5	18	1013	1560	626.267

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	62.1	11	1450		477.877
2	2	51.7	11	1957		195.111
3	2	86.4	11	1353		299.34
4	2	98.8	11	1972		511.37
5	1	95.2	11			31.3
6	3	59.4	11	1841	1896	556.09
7	1	87.8	11			241.95
8	2	78	11	1398		416.45
9	2	52.3	11	1718		207.56
10	3	76.5	11	1408	1128	79.41
11	2	81.3	11	1906		372.99
12	2	81.5	11	1693		54.3
13	2	86.2	11	1669		559.33
14	1	54	11			234.26
15	3	67.3	11	1953	1405	533.69
16	2	92.5	11	1746		201.96
17	3	81.4	11	1699	1646	302.41
18	1	64.7	11			4
19	3	94.6	11	1742	1693	65.9
20	2	53.1	11	1253		326.6

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	76.1	12	1223		416.27
2	3	69.1	12	1660	1716	303.14
3	2	86.8	12	1857		234.18
4	1	94.7	12			70.41
5	2	83.6	12	1986		346.93
6	3	93.8	12	1317	1281	250.7
7	1	96.5	12			627.44
8	1	58.4	12			68.57
9	2	90.3	12	1886		286.36
10	3	51.1	12	1961	1047	202.92
11	3	53.2	12	1121	1828	696.89
12	2	67.8	12	1284		330.85
13	2	87.3	12	1849		729.38
14	2	73.3	12	1868		496.3
15	1	85.8	12			728.4
16	3	89.5	12	1250	1372	613.4

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	99	6	1781	1362	568.747
2	2	56.9	6	1838		93.771
3	3	78.6	6	1884	1605	379.745
4	2	85.9	6	1651		142.893
5	1	85.6	6			179.431
6	2	95.2	6	1745		292.338
7	1	55.6	6			445.956
8	1	79.4	6			28.514
9	3	53.4	6	1260	1838	4.141
10	2	57.9	6	1428		332.329
11	3	90.4	6	1940	1361	99.426
12	3	87.9	6	1556	1005	547.764
13	3	74.4	6	1844	1560	191.932
14	2	69.8	6	1405		427.329
15	2	78.4	6	1382		309.847
16	1	55.1	6			225.265
17	2	98.2	6	1714		533.082

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	57.7	12	1710		499.825
2	1	78.7	12			564.38
3	2	63.7	12	1312		496.2
4	1	72.4	12			169.84
5	2	95	12	1950		762.77
6	2	53.3	12	1133		183.98
7	3	56.4	12	1871	1136	303.25
8	2	51.4	12	1018		826.33
9	3	84.2	12	1614	1451	544.1
10	1	93.5	12			400.6

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	57.7	5	1564		238.262
2	1	61.1	5			404.32
3	2	68.9	5	1848		946.06
4	2	59.2	5	1885		286.77
5	2	51	5	1584		404.77
6	3	92.2	5	1213	1467	274.85
7	3	79.3	5	1279	1120	745.36
8	2	73.7	5	1810		618.06
9	2	59	5	1069		108.49
10	3	83.1	5	1212	1345	574.65
11	2	56.2	5	1098		54.6
12	2	71.2	5	1649		508.4

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	51.3	15	1923	1089	18.249
2	3	80.7	15	1694	1868	382.429
3	1	72.4	15			418.33
4	2	67.5	15	1299		62.73
5	2	60.7	15	1892		489.85
6	3	98.9	15	1698	1892	181.7
7	3	72.2	15	1096	1450	556.14
8	1	95.5	15			177.62
9	2	69.6	15	1575		503.56
10	1	51.3	15			384.74
11	1	71.9	15			479.78
12	2	72.1	15	1049		160.08
13	2	94.7	15	1564		419.62
14	3	90.7	15	1215	1790	380.07
15	2	95.6	15	1274		490.1
16	2	66	15	1453		569.42
17	2	62.9	15	1376		559
18	1	68.5	15			421.9
19	3	89.8	15	1168	1846	204.7
20	2	79	15	1826		172.4

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	69.9	14			196.261
2	3	69.9	14	1512	1919	312.43
3	3	88.4	14	1609	1467	394.93
4	2	87	14	1213		1426.58
5	2	90.6	14	1267		1147.22
6	1	82.8	14			1429.9
7	2	96.9	14	1449		441.68
8	1	51.1	14			1207.8

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	77	17			51.023
2	2	97.5	17	1264		52.476
3	2	79.5	17	1533		440.932
4	1	96.7	17			330.543
5	2	65.9	17	1118		424.794
6	3	67.6	17	1312	1601	296.185
7	3	92	17	1938	1846	472.726
8	1	55.6	17			70.827
9	1	58.3	17			338.548
10	2	59.3	17	1982		165.949
11	1	98.6	17			56.311
12	2	75	17	1456		390.682
13	2	97.7	17	1389		174.223
14	2	57.9	17	1001		305.794
15	3	63.9	17	1591	1781	473.955
16	3	96.4	17	1024	1163	620.116
17	1	58.6	17			143.137
18	1	89.1	17			311.958
19	1	99.1	17			234.779

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	74.7	14			150.945
2	2	74.9	14	1767		15.625
3	2	86.3	14	1765		635.835
4	2	53.3	14	1400		11.123
5	1	84.9	14			315.791
6	3	75.6	14	1247	1203	96.618
7	2	52.5	14	1305		675.636
8	2	72.3	14	1410		663.134
9	1	60.7	14			1.461
10	2	70.5	14	1984		136.839
11	2	93.8	14	1369		633.676
12	2	78.3	14	1177		317.344
13	2	71.4	14	1521		426.522
14	2	61.8	14	1918		663.119
15	2	94.6	14	1776		691.847
16	2	51.5	14	1429		504.365
17	2	97.4	14	1612		3.382

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491.0	1	16	5512.6	1
2	5492.5	1	17	5513.9	1
3	5493.9	1	18	5515.2	1
4	5495.4	1	19	5516.6	1
5	5496.8	1	20	5517.9	1
6	5498.3	1	21	5519.2	1
7	5499.8	1	22	5520.5	1
8	5501.2	1	23	5521.0	1
9	5502.7	1	24	5522.3	1
10	5504.1	1	25	5523.6	1
11	5505.6	1	26	5524.9	1
12	5507.1	1	27	5526.0	1
13	5508.5	1	28	5527.3	1
14	5510.0	1	29	5528.6	1
15	5511.3	1	30	5529.0	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
62	5522	186	2	5509	6
69	5528	207	18	5503	54
76	5523	228	54	5497	162
86	5508	258	58	5506	174
91	5510	273	74	5518	222
94	5502	282	99	5512	297

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5511	9	2	5506	6
4	5495	12	12	5518	36
10	5508	30	40	5515	120
31	5526	93	41	5502	123
33	5516	99	56	5490	168
45	5524	135	93	5523	279
48	5493	144	--	--	--
62	5520	186	--	--	--
79	5518	237	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5527	18	1	5501	3
15	5510	45	37	5492	111
28	5526	84	40	5528	120
33	5521	99	63	5518	189
60	5506	180	74	5500	222
76	5493	228	95	5502	285
90	5504	270	100	5507	300
100	5520	300	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5519	27	5	5491	15
13	5524	39	8	5501	24
38	5497	114	31	5522	93
74	5491	222	35	5503	105
85	5504	255	45	5511	135
92	5511	276	54	5507	162
95	5508	285	55	5512	165
--	--	--	58	5500	174
--	--	--	84	5521	252
--	--	--	94	5518	282
--	--	--	97	5524	291
--	--	--	98	5502	294

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5516	45	14	5521	42
26	5523	78	60	5519	180
34	5495	102	71	5497	213
45	5512	135	99	5495	297
47	5521	141	--	--	--
65	5497	195	--	--	--
87	5510	261	--	--	--
95	5490	285	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5516	27	20	5494	60
28	5506	84	54	5505	162
37	5511	111	66	5504	198
40	5498	120	71	5499	213
47	5496	141	78	5507	234
64	5502	192	83	5519	249
69	5492	207	93	5514	279
84	5529	252	--	--	--
90	5497	270	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5503	39	24	5522	72
19	5514	57	26	5528	78
21	5502	63	42	5525	126
27	5516	81	61	5497	183
29	5512	87	64	5513	192
47	5494	141	72	5492	216
52	5509	156	85	5495	255
53	5497	159	98	5505	294
68	5526	204	--	--	--
72	5527	216	--	--	--
97	5510	291	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5523	12	1	5523	3
8	5506	24	50	5508	150
15	5522	45	96	5530	288
23	5519	69	--	--	--
29	5524	87	--	--	--
32	5528	96	--	--	--
39	5518	117	--	--	--
54	5515	162	--	--	--
69	5520	207	--	--	--
84	5498	252	--	--	--
88	5525	264	--	--	--
94	5501	282	--	--	--
96	5504	288	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5498	21	9	5516	27
10	5522	30	18	5499	54
26	5505	78	43	5502	129
49	5510	147	49	5513	147
93	5513	279	82	5530	246
--	--	--	90	5495	270

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5499	9	8	5515	24
17	5492	51	48	5512	144
19	5490	57	59	5509	177
23	5496	69	62	5499	186
38	5506	114	73	5527	219
55	5516	165	--	--	--
58	5512	174	--	--	--
60	5505	180	--	--	--
66	5519	198	--	--	--
90	5493	270	--	--	--
92	5514	276	--	--	--
95	5502	285	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5507	30	13	5497	39
13	5514	39	57	5509	171
16	5495	48	72	5500	216
41	5519	123	75	5519	225
43	5492	129	91	5517	273
48	5525	144	--	--	--
55	5505	165	--	--	--
76	5510	228	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5502	9	4	5528	12
42	5522	126	17	5496	51
63	5529	189	35	5510	105
66	5523	198	40	5515	120
73	5492	219	45	5524	135
84	5494	252	58	5519	174
86	5515	258	67	5502	201
97	5510	291	89	5492	267
--	--	--	94	5501	282
--	--	--	96	5506	288

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5492	24	44	5496	132
10	5498	30	68	5530	204
33	5490	99	85	5502	255
43	5522	129	87	5516	261
44	5494	132	96	5527	288
57	5510	171	--	--	--
65	5496	195	--	--	--
78	5500	234	--	--	--
82	5521	246	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5503	12	57	5516	171
14	5518	42	58	5524	174
25	5500	75	68	5493	204
26	5506	78	82	5491	246
27	5519	81	83	5528	249
39	5512	117	84	5517	252
40	5517	120	--	--	--
46	5515	138	--	--	--
51	5527	153	--	--	--
80	5526	240	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5517	15	2	5530	6
20	5524	60	10	5514	30
25	5523	75	18	5503	54
35	5490	105	23	5513	69
55	5498	165	30	5525	90
60	5493	180	31	5506	93
62	5526	186	46	5493	138
98	5501	294	51	5527	153
--	--	--	53	5520	159
--	--	--	61	5512	183
--	--	--	77	5500	231
--	--	--	80	5529	240
--	--	--	82	5515	246

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Radar Statistical Performance Check (802.11ax-HE80 mode – 5530MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	518	102	1
2	5493.1	1	618	86	1
3	5495.1	1	778	68	1
4	5497.2	1	818	65	1
5	5499.2	1	918	58	1
6	5501.3	1	538	98	1
7	5503.3	1	758	70	1
8	5505.4	1	598	89	1
9	5507.4	1	798	67	1
10	5509.5	1	898	59	1
11	5511.5	1	658	81	1
12	5513.6	1	878	61	1
13	5515.6	1	838	63	1
14	5517.7	1	638	83	1
15	5519.7	1	578	92	1
16	5521.8	1	842	63	1
17	5523.8	1	2019	27	1
18	5525.9	1	1204	44	1
19	5527.9	1	2699	20	1
20	5530.0	1	1286	41	1
21	5533.9	1	690	77	1
22	5537.8	1	581	91	1
23	5541.7	1	799	66	1
24	5545.6	1	2310	23	1
25	5549.5	1	607	87	1
26	5553.4	1	911	58	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5557.3	1	2848	19	1
28	5561.2	1	972	55	1
29	5565.1	1	1028	52	1
30	5569.0	1	1654	32	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	4.3	211	24	1
2	5493.1	4	159	25	1
3	5495.1	3.8	219	24	1
4	5497.2	4.5	155	25	1
5	5499.2	2.7	169	28	1
6	5501.3	3	195	29	1
7	5503.3	2.6	167	24	1
8	5505.4	1	166	26	1
9	5507.4	1.5	151	28	1
10	5509.5	4.2	151	29	1
11	5511.5	2.4	216	26	1
12	5513.6	3.3	223	24	1
13	5515.6	2.6	187	24	1
14	5517.7	1.5	159	27	1
15	5519.7	4.6	221	28	1
16	5521.8	1.5	189	28	1
17	5523.8	3.4	197	26	1
18	5525.9	3.3	157	27	1
19	5527.9	4.5	179	24	1
20	5530.0	4.8	187	24	1
21	5533.9	2	168	26	1
22	5537.8	1.3	150	27	1
23	5541.7	3.8	208	25	1
24	5545.6	1.2	192	26	1
25	5549.5	3	183	27	1
26	5553.4	1.5	220	29	1
27	5557.3	5	205	28	1
28	5561.2	3.7	156	28	1
29	5565.1	4.4	193	25	1
30	5569.0	2.8	225	26	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	7.6	476	17	1
2	5493.1	6.1	424	18	1
3	5495.1	8.6	242	16	1
4	5497.2	9.8	337	17	1
5	5499.2	6.7	248	17	1
6	5501.3	9.2	270	17	1
7	5503.3	9	348	16	1
8	5505.4	8.2	413	16	1
9	5507.4	6.5	309	16	1
10	5509.5	8.6	273	18	1
11	5511.5	9.6	398	17	1
12	5513.6	9.8	368	17	1
13	5515.6	7.2	214	16	1
14	5517.7	6.9	322	18	1
15	5519.7	6.5	334	18	1
16	5521.8	9.5	375	16	1
17	5523.8	7.6	362	16	1
18	5525.9	6.7	377	17	1
19	5527.9	7.9	387	18	1
20	5530.0	9.7	392	16	1
21	5533.9	8.9	438	18	1
22	5537.8	7.8	391	17	1
23	5541.7	7.8	231	16	1
24	5545.6	9.2	292	17	1
25	5549.5	7.2	323	17	1
26	5553.4	7	454	16	1
27	5557.3	6.3	446	17	0
28	5561.2	7	277	16	1
29	5565.1	7.9	425	17	1
30	5569.0	6.9	220	16	1
Detection Percentage (%)					96.7%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	17.5	234	14	1
2	5493.1	19.4	386	13	1
3	5495.1	16.7	296	15	1
4	5497.2	19.6	385	12	1
5	5499.2	15.7	228	14	1
6	5501.3	13.7	311	13	1
7	5503.3	15.3	247	12	1
8	5505.4	15	422	13	1
9	5507.4	12.9	314	13	1
10	5509.5	12.6	466	16	1
11	5511.5	14.6	372	13	1
12	5513.6	16.9	364	16	1
13	5515.6	18.4	453	12	0
14	5517.7	16.8	418	13	1
15	5519.7	12.1	206	13	1
16	5521.8	15.5	269	12	1
17	5523.8	11.1	202	12	1
18	5525.9	19.8	289	13	1
19	5527.9	17.7	206	15	1
20	5530.0	14.5	441	15	1
21	5533.9	16.8	406	14	1
22	5537.8	18.7	432	15	1
23	5541.7	15.7	310	15	1
24	5545.6	12	220	14	0
25	5549.5	12.8	327	13	1
26	5553.4	16.2	409	14	1
27	5557.3	20	380	15	1
28	5561.2	12.4	471	12	1
29	5565.1	19.4	479	14	1
30	5569.0	14.3	436	13	0
Detection Percentage (%)					90%

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

waveforms is as follows: $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\% + 100\% + 96.7\% + 90\%) / 4 = 96.7\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5530.0	1	16	5493.4	1
2	5530.0	1	17	5497.4	1
3	5530.0	1	18	5494.2	1
4	5530.0	1	19	5495.4	1
5	5530.0	1	20	5493.4	1
6	5530.0	1	21	5563.4	1
7	5530.0	1	22	5566.2	1
8	5530.0	1	23	5563.0	1
9	5530.0	1	24	5565.0	1
10	5530.0	0	25	5564.6	1
11	5496.2	1	26	5562.6	1
12	5494.6	1	27	5563.8	0
13	5498.2	0	28	5563.0	0
14	5497.8	1	29	5562.2	0
15	5498.2	1	30	5561.8	1
Detection Percentage (%)					83.3%

Type 5 Radar Waveform_1						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	97.5	16	1425		759.197
2	3	68	16	1814	1311	694.46
3	3	62.2	16	1458	1550	1183.58
4	1	63.1	16			172.64
5	3	91.4	16	1701	1830	891.47
6	1	68.1	16			495.45
7	3	56.6	16	1432	1727	851.66
8	3	86.3	16	1044	1643	739.87
9	3	91.1	16	1209	1959	549.1
10	3	65.2	16	1358	1192	347.7

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	95.7	12	1078	1250	671.146
2	2	85.2	12	1852		575.877
3	2	62.9	12	1817		54.684
4	2	93	12	1515		831.401
5	2	76.7	12	1652		803.159
6	2	76	12	1236		338.526
7	1	58.3	12			287.343
8	2	80.7	12	1547		318.24
9	2	98.1	12	1239		435.197
10	3	61.1	12	1560	1491	285.044
11	1	85.9	12			707.931
12	3	99.9	12	1698	1882	192.309
13	2	74.1	12	1805		6.186
14	1	69.6	12			74.143

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	98.1	6	1761	1120	255.404
2	1	78	6			430.4
3	2	65.9	6	1394		95.16
4	3	90.9	6	1121	1666	291.77
5	3	97.1	6	1775	1944	548.34
6	3	84.1	6	1889	1821	575.24
7	2	82.2	6	1437		621.29
8	3	78.1	6	1974	1181	50.55
9	1	94	6			571.62
10	2	66.8	6	1641		225.4
11	2	87.1	6	1780		121.25
12	3	82.2	6	1638	1206	695.33
13	3	64.4	6	1253	1887	449.8
14	3	72.2	6	1498	1054	793.7
15	2	74.5	6	1058		786.9

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	72.2	12	1372		491.706
2	2	51.6	12	1986		666.158
3	2	58.1	12	1138		54.885
4	2	91.9	12	1226		524.963
5	1	68.4	12			690.651
6	3	51.9	12	1681	1138	391.338
7	2	83.1	12	1643		280.406
8	1	57.3	12			605.184
9	3	76.7	12	1402	1335	686.041
10	1	58.1	12			143.709
11	2	99.6	12	1473		567.486
12	2	95.7	12	1165		303.174
13	2	84.8	12	1572		126.962
14	2	79.8	12	1983		530.119
15	3	85.8	12	1265	1262	245.047
16	2	84.7	12	1085		654.565
17	3	75.5	12	1515	1688	560.482

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	54.2	8	1723		624.176
2	3	52.1	8	1863	1748	557.831
3	2	98.5	8	1925		380.672
4	1	60.6	8			575.813
5	3	60.4	8	1787	1055	474.204
6	2	92.9	8	1050		356.795
7	3	69.1	8	1093	1510	287.376
8	2	79.9	8	1405		415.947
9	3	86.5	8	1875	1187	11.898
10	1	91	8			506.859
11	2	82.5	8	1102		241.791
12	3	50.2	8	1419	1633	361.372
13	3	51.6	8	1234	1660	289.093
14	2	86.8	8	1752		577.324
15	1	86.1	8			249.235
16	3	67	8	1311	1586	456.636
17	1	53.5	8			305.137
18	3	91.6	8	1928	1310	109.358
19	2	90.5	8	1688		412.479

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	99.6	14			488.093
2	1	89.9	14			601.71
3	1	71.9	14			292.61
4	1	76.2	14			924.24
5	2	70.6	14	1388		1055.9
6	3	99.8	14	1094	1461	879.94
7	2	84	14	1798		864.26
8	3	55.1	14	1935	1637	573.98
9	2	61.4	14	1018		149.84
10	2	54.7	14	1340		82.2

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	84	5	1313		293.536
2	3	81.8	5	1165	1322	39.857
3	2	62.4	5	1661		109.536
4	1	66.3	5			593.789
5	2	80.6	5	1233		756.242
6	3	88	5	1358	1207	32.795
7	3	80.6	5	1025	1714	637.188
8	2	81.9	5	1240		467.812
9	1	70.8	5			182.075
10	3	79.7	5	1236	1133	879.508
11	2	63.5	5	1928		155.681
12	3	72.1	5	1518	1667	863.054
13	3	77.2	5	1914	1500	132.777

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	67.7	20	1212		873.36
2	2	68.4	20	1510		1275.207
3	1	72.4	20			701.783
4	2	63.5	20	1403		592.76
5	2	53.1	20	1947		525.547
6	3	82.9	20	1937	1617	763.003
7	1	98.1	20			140.14
8	1	88.9	20			696.267
9	2	91.4	20	1136		106.533

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	68.4	18	1946		573.621
2	2	60.5	18	1869		589.378
3	1	53.3	18			440.835
4	2	68.3	18	1564		59.983
5	2	73.8	18	1850		182.291
6	3	59.7	18	1627	1084	486.108
7	2	66.9	18	1343		230.626
8	2	71	18	1568		96.034
9	2	73	18	1200		5.821
10	2	63.9	18	1918		667.889
11	2	61.3	18	1828		39.966
12	2	61.1	18	1026		210.384
13	1	54	18			87.692
14	2	65.2	18	1646		50.069
15	1	93	18			33.137
16	3	53.5	18	1708	1302	270.165
17	1	53.8	18			670.982

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	67.1	11	1429	1933	136.408
2	2	73.7	11	1054		656.428
3	2	73.6	11	1652		245.095
4	1	62	11			246.103
5	2	72.4	11	1859		488.461
6	3	78.9	11	1547	1499	74.488
7	3	53.2	11	1787	1581	384.786
8	3	67.8	11	1717	1688	606.224
9	2	89.2	11	1262		499.141
10	2	57.1	11	1523		42.849
11	1	81.1	11			445.246
12	1	80.9	11			562.874
13	1	86.8	11			200.832
14	2	51.6	11	1622		632.069
15	2	98.9	11	1896		651.447
16	1	76	11			473.565
17	2	84.1	11	1440		648.982

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	82.2	13	1685		1010.52
2	2	99.3	13	1520		267.06
3	2	66.5	13	1122		86.99
4	2	50.5	13	1692		115.09
5	2	65.7	13	1714		917.41
6	2	60.6	13	1786		840.3
7	2	60.1	13	1675		346.5
8	1	65.6	13			1102.95
9	2	54.8	13	1986		450.1
10	2	84.7	13	1692		887.7

ype 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	51.3	9			284.98
2	2	92.7	9	1416		451.883
3	1	92.7	9			43.106
4	2	93.9	9	1419		277.449
5	2	94.6	9	1165		281.142
6	2	67.2	9	1836		256.205
7	2	52.1	9	1105		149.258
8	3	92.7	9	1267	1854	89.382
9	3	94.1	9	1587	1403	271.125
10	2	74.9	9	1339		494.748
11	3	72.8	9	1761	1641	532.331
12	2	60	9	1085		572.454
13	2	60	9	1652		374.177

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	91.3	18	1057		624.696
2	3	56.1	18	1467	1952	428.198
3	2	77.4	18	1599		463.695
4	3	77.6	18	1770	1184	26.263
5	1	91.9	18			324.911
6	2	97.4	18	1183		11.968
7	2	78.2	18	1649		184.566
8	2	78.1	18	1790		603.074
9	3	75.6	18	1026	1475	311.991
10	2	53.1	18	1362		634.299
11	1	97.1	18			629.506
12	1	77.7	18			689.004
13	2	68.8	18	1064		174.862
14	2	63	18	1017		678.549
15	2	81.1	18	1454		299.847
16	1	59.2	18			435.765
17	2	53.8	18	1868		77.282

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	54.9	17	1655		211.482
2	1	88.8	17			85.651
3	3	98.8	17	1437	1798	789.662
4	2	63.9	17	1207		354.293
5	2	60.7	17	1069		458.654
6	2	88.5	17	1922		238.295
7	2	98.6	17	1629		769.435
8	2	88	17	1457		393.146
9	1	61.1	17			258.487
10	1	58.2	17			138.488
11	3	52.3	17	1261	1025	716.009

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	67.1	18	1178	1618	650.638
2	3	61.6	18	1945	1790	513.09
3	1	62.3	18			1152.87
4	1	91.3	18			795.89
5	2	51.8	18	1258		762.2
6	1	68.5	18			833.96
7	1	96.2	18			2.82
8	1	83.7	18			332.34
9	2	91.1	18	1317		719.1
10	2	80.2	18	1832		307.3

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	53.7	6	1010		110.872
2	2	95.4	6	1244		476.923
3	3	79.4	6	1328	1029	359.827
4	2	96.5	6	1082		234.7
5	3	80.4	6	1053	1865	591.943
6	1	56.7	6			360.997
7	3	61.7	6	1825	1525	459.48
8	1	88.9	6			574.733
9	2	68.6	6	1410		463.147
10	1	80.6	6			458.71
11	2	72.6	6	1063		398.323
12	2	80.3	6	1934		94.037
13	1	82.8	6			103.94
14	3	69.3	6	1803	1008	108.063
15	3	51.1	6	1725	1338	516.807
16	3	70.4	6	1659	1485	202.1
17	2	53.5	6	1433		542.133
18	3	83.7	6	1153	1394	590.867

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	51.9	16	1150		338.487
2	2	77.5	16	1501		617.31
3	2	99.4	16	1419		787.83
4	1	84.4	16			332.53
5	2	52.3	16	1343		680.7
6	3	98.2	16	1234	1672	730.92
7	3	53.1	16	1874	1182	358.07
8	2	53.8	16	1776		746.05
9	2	63	16	1538		240.13
10	2	63	16	1874		689.84
11	1	89.2	16			486.53
12	1	65.6	16			84.9
13	2	52.4	16	1822		61.54
14	2	69.5	16	1953		158.2
15	1	94.3	16			305.8

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	76.8	8	1970	1774	175.776
2	3	82.8	8	1348	1991	393.711
3	2	60.2	8	1375		200.532
4	1	66.9	8			411.683
5	1	73.6	8			125.244
6	2	85.4	8	1275		622.915
7	2	61.2	8	1497		174.616
8	3	64.6	8	1742	1830	616.167
9	2	97.4	8	1006		541.658
10	2	76	8	1567		251.659
11	2	89.7	8	1177		544.951
12	1	76.7	8			252.942
13	2	50.3	8	1797		418.023
14	1	62.1	8			561.544
15	1	59.1	8			592.065
16	1	87.9	8			209.486
17	2	99.3	8	1144		579.837
18	2	65.8	8	1389		74.858
19	1	94.6	8			484.779

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	73.6	11	1601		492.89
2	1	77.6	11			511.92
3	2	75.1	11	1088		441.71
4	3	53.1	11	1744	1333	467.24
5	3	82.8	11	1302	1812	211.93
6	2	67.2	11	1522		1.73
7	1	84.4	11			311.8
8	1	89.2	11			358.71
9	3	77.4	11	1455	1255	299.74
10	2	56.7	11	1062		391.02
11	2	53.6	11	1450		387.01
12	2	96.8	11	1277		450.82
13	2	52.3	11	1284		107.87
14	2	60.7	11	1267		382.97
15	2	59	11	1080		350.39
16	1	81.5	11			373.49
17	3	78.3	11	1130	1715	286.35
18	1	79.1	11			187.4
19	3	80.6	11	1415	1930	446.4
20	3	58.6	11	1364	1818	168.5

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	83.5	6	1311	1851	105.309
2	2	85.5	6	1052		70.067
3	2	55.7	6	1871		631.503
4	2	62	6	1678		1099.07
5	2	62.6	6	1289		447.947
6	1	70.7	6			1071.453
7	3	98.9	6	1014	1406	51.29
8	2	61	6	1960		431.787
9	3	76.9	6	1706	1580	481.233

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	79.9	14	1150	1910	340.078
2	1	97.7	14			557.39
3	1	55.7	14			704.14
4	2	78.2	14	1331		409.96
5	3	58.9	14	1573	1320	171.15
6	3	55.2	14	1631	1864	6.26
7	2	78.5	14	1827		592.58
8	1	56.8	14			217.73
9	2	80.6	14	1765		207.25
10	2	96.6	14	1871		172.96
11	2	83.1	14	1457		746.61
12	3	62.9	14	1420	1957	166.48
13	2	62	14	1009		2.14
14	2	90.7	14	1649		20.3
15	1	64.7	14			496.4

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	61	7	1628	1226	266.544
2	3	62.4	7	1605	1438	492.793
3	1	50.1	7			623.417
4	1	58.5	7			368.77
5	3	67.2	7	1369	1898	605.243
6	2	57.6	7	1517		629.607
7	3	65.7	7	1860	1095	433.45
8	1	57.3	7			195.813
9	2	96.9	7	1904		80.917
10	2	87.1	7	1035		606.21
11	2	67.1	7	1860		442.253
12	3	62.8	7	1448	1777	401.367
13	2	50.1	7	1204		13.98
14	3	72.5	7	1576	1936	115.413
15	3	80.8	7	1960	1456	593.717
16	1	77.3	7			175.8
17	2	70.2	7	1216		240.533
18	3	74.3	7	1723	1087	98.167

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	71.9	15	1666	1056	899.835
2	2	80.5	15	1587		621.271
3	1	65.7	15			720.232
4	2	70.8	15	1082		828.143
5	3	61.9	15	1927	1221	304.144
6	3	76.6	15	1551	1865	545.795
7	2	77.6	15	1494		669.655
8	2	73.2	15	1378		900.056
9	3	62.6	15	1666	1357	852.687
10	2	84.8	15	1043		58.198
11	1	93.3	15			997.609

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	79.3	10	1208	1792	389.74
2	2	81.4	10	1319		550.981
3	2	52.6	10	1320		325.152
4	2	71.4	10	1249		569.503
5	2	68.6	10	1055		447.884
6	1	86.7	10			582.025
7	3	82	10	1845	1124	551.366
8	2	82.7	10	1349		527.687
9	1	74.3	10			259.058
10	3	77.1	10	1479	1901	332.509
11	1	66.8	10			232.521
12	2	80.5	10	1852		350.572
13	1	69.7	10			322.433
14	2	71.1	10	1539		199.494
15	3	96.7	10	1349	1645	514.755
16	2	81.5	10	1926		302.736
17	3	92.5	10	1905	1461	119.837
18	2	65.4	10	1090		357.358
19	2	74.2	10	1902		595.779

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	74.9	11			334.378
2	2	56	11	1568		288.76
3	3	85	11	1855	1758	183.415
4	3	55	11	1566	1444	590.883
5	1	88.4	11			255.021
6	3	93.1	11	1141	1004	461.298
7	3	51.2	11	1100	1884	389.306
8	2	91.5	11	1354		613.424
9	2	80.6	11	1963		163.411
10	2	62.8	11	1688		188.489
11	2	51.7	11	1756		243.326
12	2	72.4	11	1000		388.354
13	1	75.4	11			648.032
14	2	79.3	11	1735		151.129
15	2	71.3	11	1309		512.447
16	1	84.7	11			475.165
17	2	51.2	11	1498		348.182

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	50.2	16	1212	1561	188.666
2	2	66.4	16	1700		523.581
3	3	90.9	16	1223	1668	38.262
4	1	50.3	16			334.563
5	1	63	16			272.964
6	1	69.4	16			467.135
7	3	64.8	16	1445	1885	379.086
8	2	69.7	16	1061		114.237
9	1	65	16			364.448
10	3	65.3	16	1980	1117	582.179
11	2	82.9	16	1434		333.751
12	3	74.1	16	1304	1443	295.902
13	1	54.5	16			147.383
14	2	72.4	16	1219		325.944
15	3	64.6	16	1955	1705	0.775
16	3	92.7	16	1006	1785	21.276
17	3	51.2	16	1055	1974	228.737
18	3	55.1	16	1244	1141	110.758
19	1	99.7	16			570.579

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	57.2	13	1039		440.857
2	1	73.3	13			1225.13
3	2	63.8	13	1293		1368.09
4	1	64.1	13			364.72
5	1	86.1	13			1222.99
6	2	76.3	13	1782		996.55
7	2	55	13	1693		104.15
8	2	80.4	13	1999		962.4

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	94.5	15			275.981
2	1	60.8	15			1305.977
3	2	57.9	15	1010		117.343
4	1	76	15			20.98
5	2	92.8	15	1963		331.497
6	2	81	15	1900		389.173
7	2	92.5	15	1901		1257.69
8	2	65.9	15	1752		1322.867
9	2	60.9	15	1744		842.233

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	59.1	17			246.333
2	1	99	17			804.793
3	2	69.6	17	1384		575.916
4	2	62.6	17	1332		733.879
5	2	73.9	17	1367		849.412
6	1	89.3	17			679.675
7	1	96.9	17			431.898
8	2	73.4	17	1594		614.682
9	2	93.4	17	1032		800.495
10	1	95.6	17			817.748
11	2	54.3	17	1044		78.431
12	3	59.6	17	1498	1187	896.454
13	3	88.1	17	1096	1827	436.777

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	76.5	18			1437.15
2	2	77.2	18	1973		1225.67
3	2	90.6	18	1004		1451.58
4	2	78.7	18	1321		810.28
5	3	71.9	18	1676	1818	1169.21
6	3	78.4	18	1261	1108	942.19
7	1	89.7	18			843.89
8	3	84.5	18	1261	1078	474.4

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491.0	1	16	5521.8	1
2	5493.1	1	17	5523.8	1
3	5495.1	1	18	5525.9	1
4	5497.2	1	19	5527.9	1
5	5499.2	1	20	5530.0	1
6	5501.3	1	21	5533.9	1
7	5503.3	1	22	5537.8	1
8	5505.4	1	23	5541.7	1
9	5507.4	1	24	5545.6	1
10	5509.5	1	25	5549.5	1
11	5511.5	1	26	5553.4	1
12	5513.6	1	27	5557.3	1
13	5515.6	1	28	5561.2	1
14	5517.7	1	29	5565.1	1
15	5519.7	1	30	5569.0	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5525	3	7	5556	21
16	5503	48	15	5544	45
21	5510	63	18	5521	54
27	5524	81	32	5496	96
28	5526	84	53	5495	159
29	5512	87	55	5494	165
30	5539	90	71	5523	213
35	5543	105	72	5545	216
41	5552	123	77	5505	231
50	5490	150	80	5542	240
52	5555	156	85	5548	255
55	5499	165	91	5492	273
56	5553	168	92	5500	276
57	5502	171	--	--	--
58	5566	174	--	--	--
62	5520	186	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5498	12	12	5501	36
5	5526	15	19	5511	57
17	5525	51	20	5542	60
39	5549	117	25	5567	75
41	5497	123	33	5515	99
43	5530	129	36	5553	108
55	5508	165	41	5541	123
61	5564	183	43	5566	129
65	5513	195	46	5534	138
66	5533	198	52	5529	156
70	5537	210	54	5531	162
81	5517	243	58	5513	174
87	5563	261	59	5568	177
--	--	--	64	5569	192
--	--	--	67	5492	201
--	--	--	73	5495	219
--	--	--	76	5517	228
--	--	--	78	5523	234
--	--	--	79	5525	237
--	--	--	87	5549	261

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5529	54	4	5510	12
20	5537	60	8	5567	24
25	5562	75	10	5493	30
38	5503	114	14	5547	42
60	5531	180	21	5554	63
77	5505	231	39	5520	117
82	5549	246	51	5544	153
85	5492	255	58	5538	174
87	5567	261	59	5563	177
89	5557	267	61	5540	183
93	5543	279	63	5513	189
97	5522	291	68	5505	204
--	--	--	70	5522	210
--	--	--	74	5566	222
--	--	--	90	5545	270
--	--	--	91	5564	273
--	--	--	95	5519	285
--	--	--	96	5516	288

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5514	24	1	5504	3
20	5513	60	2	5517	6
21	5546	63	5	5491	15
24	5539	72	6	5547	18
27	5505	81	7	5515	21
34	5565	102	11	5560	33
36	5555	108	16	5499	48
37	5526	111	19	5539	57
42	5536	126	31	5538	93
44	5538	132	39	5535	117
53	5552	159	52	5494	156
57	5502	171	59	5522	177
60	5549	180	83	5520	249
74	5508	222	86	5554	258
81	5529	243	91	5492	273
94	5537	282	95	5553	285
--	--	--	97	5564	291
--	--	--	100	5513	300

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5524	12	5	5497	15
10	5537	30	15	5535	45
12	5500	36	20	5529	60
20	5508	60	24	5513	72
21	5496	63	31	5501	93
23	5533	69	33	5504	99
24	5511	72	35	5498	105
25	5521	75	36	5522	108
27	5567	81	42	5537	126
28	5562	84	45	5541	135
38	5556	114	50	5546	150
39	5529	117	55	5538	165
43	5558	129	56	5509	168
52	5515	156	62	5491	186
53	5498	159	66	5545	198
59	5543	177	67	5512	201
60	5541	180	69	5494	207
65	5565	195	82	5521	246
69	5509	207	84	5495	252
72	5549	216	99	5556	297
73	5550	219	--	--	--
78	5569	234	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5537	27	5	5518	15
12	5567	36	7	5562	21
13	5535	39	14	5509	42
16	5559	48	17	5502	51
22	5505	66	18	5504	54
26	5560	78	28	5544	84
32	5552	96	32	5528	96
42	5551	126	35	5526	105
47	5539	141	42	5545	126
50	5561	150	48	5536	144
52	5520	156	63	5547	189
58	5557	174	64	5508	192
59	5569	177	67	5537	201
72	5562	216	68	5557	204
--	--	--	83	5516	249
--	--	--	94	5496	282

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5501	24	12	5531	36
9	5570	27	13	5544	39
12	5513	36	15	5546	45
13	5540	39	24	5506	72
27	5556	81	30	5501	90
32	5517	96	31	5548	93
35	5500	105	40	5505	120
39	5503	117	42	5559	126
41	5510	123	46	5551	138
52	5527	156	50	5508	150
55	5491	165	58	5538	174
61	5526	183	66	5537	198
64	5534	192	69	5511	207
72	5535	216	70	5552	210
75	5536	225	80	5540	240
77	5564	231	83	5569	249
79	5498	237	85	5524	255
83	5569	249	91	5496	273
85	5539	255	97	5518	291
87	5493	261	100	5532	300
88	5550	264	--	--	--
90	5567	270	--	--	--
96	5502	288	--	--	--
98	5568	294	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5522	9	3	5558	9
5	5529	15	9	5491	27
8	5514	24	17	5506	51
23	5530	69	25	5539	75
30	5541	90	31	5497	93
42	5544	126	33	5562	99
73	5518	219	37	5552	111
74	5528	222	39	5529	117
77	5490	231	42	5496	126
78	5539	234	51	5540	153
79	5512	237	68	5523	204
83	5565	249	88	5492	264
90	5509	270	89	5509	267
92	5542	276	100	5541	300
95	5536	285	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5562	9	11	5503	33
12	5566	36	20	5515	60
27	5564	81	27	5499	81
36	5569	108	30	5559	90
37	5522	111	37	5548	111
44	5520	132	47	5543	141
52	5503	156	55	5522	165
59	5554	177	60	5494	180
71	5539	213	64	5525	192
76	5553	228	67	5513	201
77	5512	231	84	5524	252
85	5494	255	91	5539	273
93	5525	279	96	5544	288
94	5504	282	99	5532	297

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5520	21	7	5493	21
9	5512	27	10	5565	30
22	5562	66	13	5542	39
25	5510	75	18	5568	54
26	5498	78	19	5498	57
27	5550	81	28	5544	84
36	5526	108	30	5534	90
44	5561	132	34	5528	102
46	5563	138	39	5545	117
49	5509	147	64	5566	192
54	5527	162	66	5506	198
55	5569	165	75	5490	225
61	5544	183	77	5501	231
68	5557	204	90	5524	270
80	5515	240	91	5550	273
83	5566	249	--	--	--
89	5553	267	--	--	--
93	5490	279	--	--	--
99	5542	297	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5551	12	3	5551	9
7	5499	21	14	5532	42
8	5550	24	16	5536	48
40	5527	120	20	5508	60
42	5543	126	31	5548	93
46	5524	138	38	5497	114
48	5546	144	44	5514	132
52	5560	156	45	5490	135
72	5569	216	46	5528	138
73	5547	219	63	5560	189
84	5554	252	67	5554	201
89	5540	267	68	5562	204
100	5559	300	71	5547	213
--	--	--	73	5549	219
--	--	--	74	5543	222
--	--	--	85	5570	255

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5501	6	19	5539	57
6	5550	18	27	5519	81
9	5492	27	34	5559	102
13	5565	39	50	5500	150
33	5531	99	58	5518	174
42	5538	126	69	5527	207
44	5506	132	70	5503	210
45	5562	135	75	5497	225
65	5570	195	87	5557	261
77	5546	231	91	5551	273
92	5548	276	--	--	--
93	5512	279	--	--	--
96	5500	288	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5490	60	4	5538	12
21	5535	63	15	5546	45
24	5553	72	16	5526	48
26	5565	78	17	5570	51
28	5556	84	20	5569	60
30	5506	90	26	5545	78
31	5561	93	28	5503	84
46	5530	138	33	5555	99
51	5568	153	44	5551	132
67	5559	201	47	5556	141
72	5507	216	51	5511	153
76	5515	228	52	5522	156
98	5527	294	56	5504	168
--	--	--	61	5505	183
--	--	--	63	5553	189
--	--	--	66	5490	198
--	--	--	69	5521	207
--	--	--	71	5547	213
--	--	--	81	5527	243
--	--	--	87	5567	261
--	--	--	93	5502	279
--	--	--	99	5518	297

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5493	3	5	5511	15
2	5542	6	11	5512	33
8	5516	24	19	5492	57
20	5515	60	22	5506	66
23	5558	69	23	5505	69
25	5510	75	25	5548	75
53	5555	159	27	5521	81
54	5517	162	29	5557	87
63	5500	189	32	5560	96
77	5519	231	34	5533	102
86	5550	258	36	5540	108
89	5539	267	39	5510	117
100	5552	300	45	5516	135
--	--	--	48	5526	144
--	--	--	49	5498	147
--	--	--	51	5520	153
--	--	--	53	5538	159
--	--	--	80	5564	240
--	--	--	92	5531	276
--	--	--	98	5508	294

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5530	15	4	5512	12
6	5532	18	5	5500	15
7	5542	21	13	5569	39
8	5515	24	20	5497	60
12	5521	36	22	5518	66
19	5533	57	26	5542	78
20	5525	60	48	5568	144
25	5563	75	51	5556	153
28	5555	84	56	5517	168
56	5562	168	59	5519	177
57	5559	171	62	5538	186
69	5502	207	71	5503	213
73	5564	219	75	5528	225
78	5506	234	80	5541	240
83	5528	249	83	5526	249
85	5553	255	87	5507	261
87	5522	261	93	5490	279
88	5535	264	--	--	--
90	5541	270	--	--	--
93	5501	279	--	--	--

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Radar Statistical Performance Check (802.11ax-HE160 mode – 5250MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250.0	1	578	92	1
2	5253.3	1	698	76	1
3	5256.7	1	818	65	1
4	5260.0	1	538	98	1
5	5263.3	1	718	74	1
6	5266.7	1	638	83	1
7	5270.0	1	738	72	1
8	5273.3	1	858	62	1
9	5276.6	1	618	86	1
10	5280.0	1	838	63	1
11	5283.3	1	658	81	1
12	5286.6	1	778	68	1
13	5290.0	1	918	58	1
14	5292.2	1	678	78	1
15	5294.5	1	878	61	1
16	5296.7	1	2402	22	1
17	5298.9	1	819	65	1
18	5301.2	1	1488	36	1
19	5303.4	1	2710	20	1
20	5305.6	1	1204	44	1
21	5307.8	1	1662	32	1
22	5310.1	1	1470	36	1
23	5312.3	1	2798	19	1
24	5314.5	1	1999	27	1
25	5316.8	1	575	92	1
26	5319.0	1	2551	21	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5321.2	1	1032	52	1
28	5323.4	1	1240	43	1
29	5325.7	1	1055	50	1
30	5328.0	1	2412	22	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250.0	1	175	28	1
2	5253.3	3	181	25	1
3	5256.7	1.9	186	29	1
4	5260.0	2.3	189	25	1
5	5263.3	3.3	215	28	1
6	5266.7	3.4	156	26	1
7	5270.0	4.4	195	26	1
8	5273.3	1.7	202	29	1
9	5276.6	2.8	169	29	1
10	5280.0	2.1	196	24	1
11	5283.3	3.2	179	24	1
12	5286.6	4.4	208	25	1
13	5290.0	4.6	198	29	1
14	5292.2	4.2	228	23	1
15	5294.5	3.9	175	26	1
16	5296.7	3.8	218	25	1
17	5298.9	3.9	221	25	1
18	5301.2	3.2	205	25	1
19	5303.4	1.3	227	29	1
20	5305.6	2.7	216	26	1
21	5307.8	2.9	180	24	1
22	5310.1	4.1	178	29	1
23	5312.3	2.8	215	24	1
24	5314.5	2.1	187	23	1
25	5316.8	4.8	163	26	1
26	5319.0	2.8	174	28	1
27	5321.2	4.2	160	26	1
28	5323.4	1.5	211	25	1
29	5325.7	2.9	167	24	1
30	5328.0	4.6	166	26	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250.0	9.3	471	17	1
2	5253.3	7.9	397	17	1
3	5256.7	6.1	334	18	1
4	5260.0	7.7	216	17	1
5	5263.3	9.8	348	17	1
6	5266.7	9.2	485	18	1
7	5270.0	8.7	270	17	1
8	5273.3	8	275	17	1
9	5276.6	6.6	336	18	1
10	5280.0	9.3	315	18	1
11	5283.3	8.4	440	17	1
12	5286.6	6.1	242	16	1
13	5290.0	8.3	273	17	1
14	5292.2	7.7	302	17	0
15	5294.5	6.9	481	17	1
16	5296.7	9	402	16	1
17	5298.9	7.9	406	17	1
18	5301.2	8.4	250	17	1
19	5303.4	7.9	461	17	1
20	5305.6	8.8	455	17	1
21	5307.8	7.3	500	18	1
22	5310.1	6.7	493	17	1
23	5312.3	9.5	261	17	1
24	5314.5	7.5	457	18	1
25	5316.8	6.2	442	17	1
26	5319.0	9.3	418	17	1
27	5321.2	6.6	449	18	1
28	5323.4	9.8	375	17	0
29	5325.7	9.1	299	17	1
30	5328.0	9.4	410	18	1
Detection Percentage (%)					93.3%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250.0	17.9	440	15	1
2	5253.3	16.2	313	13	1
3	5256.7	16.4	338	13	1
4	5260.0	13.2	256	16	1
5	5263.3	13.4	416	13	1
6	5266.7	12.3	318	13	1
7	5270.0	13.4	207	15	1
8	5273.3	16.7	332	12	1
9	5276.6	11.4	274	13	1
10	5280.0	17.2	259	13	1
11	5283.3	18.7	487	16	1
12	5286.6	11.1	485	13	1
13	5290.0	11.7	356	12	1
14	5292.2	16.7	439	13	1
15	5294.5	15.7	362	13	1
16	5296.7	11.3	413	12	1
17	5298.9	17.9	303	15	1
18	5301.2	11.2	499	15	1
19	5303.4	16.1	447	16	1
20	5305.6	18.5	241	14	1
21	5307.8	18.2	496	16	1
22	5310.1	14.9	227	12	1
23	5312.3	13.7	437	13	1
24	5314.5	11.1	374	15	1
25	5316.8	18.5	200	16	1
26	5319.0	12.7	377	13	1
27	5321.2	17.1	432	15	1
28	5323.4	19	490	13	1
29	5325.7	11.8	314	13	0
30	5328.0	13.5	387	14	1
Detection Percentage (%)					96.7%

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

waveforms is as follows: $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\% + 100\% + 93.3\% + 96.7\%) / 4 = 97.5\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5290.0	1	16	5256.0	1
2	5290.0	1	17	5256.0	1
3	5290.0	1	18	5256.8	1
4	5290.0	1	19	5255.2	1
5	5290.0	0	20	5253.6	1
6	5290.0	1	21	5320.0	1
7	5290.0	1	22	5324.4	1
8	5290.0	1	23	5325.2	1
9	5290.0	1	24	5323.2	1
10	5290.0	1	25	5324.4	1
11	5253.6	1	26	5324.8	0
12	5253.2	1	27	5324.8	0
13	5258.0	1	28	5322.8	1
14	5257.2	1	29	5325.2	1
15	5254.4	1	30	5325.6	1
Detection Percentage (%)					90%

Type 5 Radar Waveform_1						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	74.1	15	1010		763.936
2	3	94.9	15	1930	1298	712.941
3	3	50.6	15	1007	1666	285.652
4	2	66.8	15	1055		8.853
5	3	88.4	15	1398	1918	32.524
6	1	58.8	15			999.835
7	1	68.8	15			949.955
8	2	71.6	15	1560		723.416
9	2	52.3	15	1061		334.387
10	2	85.6	15	1779		602.318
11	2	89.2	15	1655		217.109

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	95.1	16	1431		333.42
2	2	80	16	1950		93.404
3	2	91.9	16	1526		178.11
4	3	99.8	16	1225	1061	562.42
5	1	73.4	16			107.85
6	2	96.5	16	1546		408.77
7	2	85.9	16	1648		350.13
8	2	53.7	16	1228		115.83
9	2	52.1	16	1879		430.42
10	1	68.4	16			402.86
11	3	55.7	16	1707	1939	62.24
12	2	67.6	16	1174		107.39
13	3	54.3	16	1525	1279	319.3
14	1	68.5	16			343.4
15	2	76	16	1833		310.09
16	3	66.4	16	1173	1487	502.54
17	2	57.3	16	1225		521.7
18	1	86	16			42.8
19	1	94	16			487.3
20	2	67.1	16	1577		444.2

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	96.6	13			501.789
2	3	53.5	13	1709	1515	505.603
3	1	56.2	13			873.736
4	3	72.6	13	1584	1217	123.599
5	1	84.9	13			61.232
6	1	88.3	13			674.265
7	2	86.6	13	1215		586.598
8	1	93.2	13			251.482
9	2	79.9	13	1564		884.755
10	1	70.1	13			363.278
11	3	83.4	13	1477	1888	870.031
12	3	98.6	13	1814	1904	888.454
13	2	98.4	13	1440		658.477

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	92.6	15	1131		477.601
2	3	99.8	15	1501	1787	167.767
3	2	99.8	15	1533		318.487
4	2	85.1	15	1933		386.68
5	2	67.1	15	1553		399.953
6	3	54.7	15	1065	1351	547.207
7	2	66.7	15	1968		420.58
8	2	55.1	15	1870		112.683
9	3	50.2	15	1522	1009	274.757
10	1	64.9	15			425.67
11	1	90.5	15			637.033
12	2	90.5	15	1542		105.657
13	2	79.8	15	1209		476.25
14	2	78.5	15	1700		224.343
15	2	83.8	15	1965		135.507
16	2	85.5	15	1318		151.7
17	2	67.9	15	1472		376.233
18	2	83.1	15	1638		240.367

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	80	7	1316		1183.33
2	2	68.4	7	1120		1260.097
3	1	50.5	7			1084.813
4	2	50.9	7	1912		868.52
5	2	84.5	7	1778		83.127
6	2	76.5	7	1007		594.533
7	2	50.4	7	1449		948.22
8	1	83.8	7			1242.367
9	2	53.1	7	1920		1182.933

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	94.7	15	1949	1838	389.904
2	2	71.8	15	1451		470.42
3	2	50.8	15	1235		85.25
4	1	88.2	15			258.89
5	1	79.5	15			462.21
6	3	59	15	1492	1118	414.58
7	2	94.8	15	1370		24.46
8	1	98.8	15			485.32
9	3	54.8	15	1155	1918	356.81
10	3	58.2	15	1412	1947	73.07
11	2	62	15	1497		231.09
12	2	56.4	15	1256		245.93
13	1	51.9	15			598.29
14	2	88.1	15	1207		39.91
15	3	76.8	15	1094	1335	312.3
16	2	60.9	15	1845		541

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	55.6	10			777.695
2	1	100	10			973.42
3	3	90.3	10	1632	1185	282.17
4	2	82.6	10	1534		794.43
5	2	78.4	10	1938		869.54
6	2	87.6	10	1580		1100.8
7	2	73.8	10	1367		1075.74
8	2	81.5	10	1646		366.08
9	2	68.9	10	1259		846.3
10	2	65.5	10	1521		958.2

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	54.4	15	1015		342.193
2	1	74.4	15			408.58
3	3	90.5	15	1311	1179	296.39
4	3	83	15	1904	1043	737.37
5	3	100	15	1739	1402	37.29
6	2	51.1	15	1635		329.15
7	3	99.6	15	1476	1922	705.25
8	1	77.2	15			87.49
9	3	59.6	15	1547	1181	465.34
10	1	52.5	15			312.21
11	2	58.2	15	1118		34.58
12	2	71.2	15	1953		696.55
13	2	98.8	15	1678		11.47
14	2	55	15	1454		152.26
15	2	74.7	15	1843		283.4
16	3	63.4	15	1186	1965	528.6

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	50.4	13			281.112
2	3	93.3	13	1973	1221	603.898
3	2	60.6	13	1605		420.315
4	2	94.8	13	1770		329.343
5	1	91.2	13			37.001
6	2	84.8	13	1695		110.058
7	3	50.5	13	1533	1263	166.966
8	3	81.4	13	1904	1139	4.744
9	2	79.3	13	1741		48.571
10	2	98.3	13	1959		545.819
11	2	53	13	1605		169.036
12	3	53.8	13	1298	1301	396.874
13	2	59.5	13	1040		527.142
14	2	64.5	13	1953		195.489
15	2	97.5	13	1168		7.587
16	3	98.3	13	1283	1762	275.665
17	2	78.7	13	1256		314.182

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	98.3	11	1676		409.858
2	2	63.7	11	1414		134.911
3	2	88.7	11	1688		72.692
4	3	98.5	11	1956	1610	744.323
5	3	95.9	11	1891	1734	7.114
6	2	75.8	11	1287		295.955
7	2	83.5	11	1407		588.235
8	1	54.7	11			103.566
9	2	77.4	11	1863		670.437
10	1	70.3	11			824.918
11	2	68.6	11	1675		276.209

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	63.3	9	1062	1010	1017.75
2	3	93.6	9	1826	1684	989.917
3	2	65.8	9	1819		830.613
4	1	89.7	9			228.22
5	1	54.8	9			590.007
6	2	58.3	9	1605		211.753
7	1	84.7	9			1079.2
8	1	58.8	9			241.137
9	2	56.8	9	1057		878.933

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	60.3	8	1569		518.981
2	2	93	8	1642		97.86
3	3	59.9	8	1652	1289	43.46
4	2	55.5	8	1679		352.2
5	3	90.8	8	1346	1663	1091.96
6	3	76.9	8	1380	1204	372.11
7	1	53.2	8			886.45
8	3	54.7	8	1709	1302	1334.6

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	98.6	20	1540		544.736
2	2	75.9	20	1694		370.957
3	1	51.2	20			549.144
4	2	95.3	20	1574		9.091
5	3	72.1	20	1649	1623	393.489
6	2	54.8	20	1309		65.506
7	3	90.7	20	1193	1438	824.833
8	3	98.7	20	1711	1413	229.78
9	2	88.6	20	1065		257.437
10	1	96.2	20			644.914
11	1	99.4	20			632.161
12	2	66.1	20	1634		8.799
13	2	91.5	20	1869		657.686
14	3	66.1	20	1653	1400	127.043

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	55.6	18	1842		192.952
2	3	93.6	18	1153	1320	148.453
3	2	50.5	18	1683		65.436
4	2	79.8	18	1478		329.659
5	2	57.9	18	1475		289.002
6	2	87.9	18	1927		870.915
7	1	91.7	18			193.808
8	1	65.9	18			618.022
9	2	57.1	18	1285		430.345
10	3	93.6	18	1774	1560	508.718
11	1	84.1	18			406.731
12	2	65.6	18	1619		383.154
13	2	85	18	1638		143.677

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	63.3	11			166.242
2	1	90.4	11			221.043
3	2	61.7	11	1116		183.116
4	3	60.4	11	1807	1343	513.819
5	2	52.8	11	1401		195.422
6	1	56.8	11			456.735
7	2	83.5	11	1433		424.628
8	1	86.2	11			148.812
9	1	69.8	11			254.945
10	2	57.6	11	1244		385.678
11	2	87.4	11	1835		687.811
12	2	94	11	1895		265.354
13	3	96.9	11	1844	1048	160.477

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	90.1	15			193.285
2	3	73.6	15	1332	1959	726.691
3	1	78.3	15			604.792
4	2	50.9	15	1141		947.403
5	2	62.2	15	1091		342.684
6	2	78.3	15	1405		498.525
7	2	53.2	15	1716		750.025
8	2	70.6	15	1239		718.806
9	2	77.1	15	1450		190.587
10	3	87.4	15	1677	1554	657.418
11	2	62.9	15	1475		155.209

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	84.6	15			1159.08
2	2	93.1	15	1935		140.89
3	2	57.3	15	1344		573.67
4	1	65.8	15			1015.71
5	2	73.6	15	1872		478
6	2	79	15	1644		984.21
7	3	90	15	1221	1240	692.86
8	1	93.9	15			336.11
9	2	85.2	15	1800		7.86
10	3	87.6	15	1340	1388	733.8

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	73.6	17			100.273
2	2	86.8	17	1790		649.447
3	1	78	17			789.193
4	2	56.7	17	1691		517.3
5	2	67.3	17	1343		210.107
6	2	92.8	17	1664		112.243
7	3	50.4	17	1763	1713	587.45
8	2	54.5	17	1562		1043.167
9	3	83.7	17	1656	1478	587.033

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	93.6	13	1188		712.006
2	2	92.1	13	1572		775.687
3	2	72.4	13	1885		247.993
4	3	61.5	13	1463	1249	583.8
5	2	64.6	13	1172		306.967
6	3	69.7	13	1266	1413	725.813
7	2	92.6	13	1279		294.41
8	1	58.6	13			855.567
9	1	66.9	13			206.333

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	87.8	9			915.271
2	2	95.2	9	1635		676.337
3	2	75.3	9	1648		917.233
4	3	70.4	9	1477	1210	122.01
5	2	83	9	1485		650.077
6	2	65.9	9	1984		412.903
7	1	86.7	9			1296.82
8	3	76.3	9	1566	1375	1078.767
9	2	70.3	9	1483		932.333

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	76.5	20	1684	1976	477.733
2	3	65.9	20	1633	1799	279.162
3	2	93.4	20	1534		555.002
4	3	98.7	20	1213	1537	217.103
5	2	75.4	20	1966		13.224
6	2	66.9	20	1243		140.385
7	3	50.3	20	1611	1842	267.146
8	2	61.8	20	1782		328.667
9	1	75.2	20			475.908
10	2	81.5	20	1809		431.329
11	1	67.3	20			201.451
12	2	52.2	20	1255		312.552
13	2	72.8	20	1709		109.393
14	2	69.6	20	1021		64.964
15	2	85.3	20	1099		210.125
16	2	77.9	20	1313		12.386
17	1	58	20			600.837
18	3	78.2	20	1088	1472	201.758
19	1	84.9	20			215.579

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	90.5	9			174.261
2	1	60.7	9			415.101
3	2	64	9	1276		157.632
4	2	91.8	9	1115		57.763
5	2	70.2	9	1789		476.814
6	3	82.2	9	1813	1183	537.895
7	3	99.8	9	1384	1155	581.746
8	1	77.6	9			245.027
9	2	58.3	9	1988		623.558
10	1	66.3	9			64.729
11	3	85.2	9	1764	1305	118.991
12	1	92.8	9			434.732
13	2	69.7	9	1588		7.303
14	2	73.5	9	1346		167.464
15	2	66.3	9	1706		88.575
16	3	93	9	1501	1741	333.316
17	3	81.1	9	1049	1829	228.337
18	2	61.5	9	1250		245.258
19	1	53.1	9			164.579

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	76.9	7			29.581
2	2	72.5	7	1134		481.341
3	2	67.5	7	1198		602.682
4	2	98.9	7	1624		625.373
5	1	81.5	7			264.044
6	3	56.6	7	1814	1410	279.915
7	3	83.5	7	1034	1022	302.166
8	2	53.9	7	1050		439.887
9	2	72.4	7	1470		581.508
10	3	97.4	7	1417	1938	466.189
11	2	66.4	7	1490		20.381
12	3	69.2	7	1842	1301	478.562
13	3	93.2	7	1393	1562	428.663
14	1	92.2	7			348.024
15	2	64.4	7	1806		396.865
16	2	52.9	7	1300		435.386
17	2	81.6	7	1346		353.037
18	2	99.5	7	1192		225.458
19	2	90.8	7	1551		314.879

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	76.5	12	1937		837.06
2	3	53.9	12	1317	1906	612.767
3	2	62.8	12	1121		674.724
4	2	83.8	12	1908		288.301
5	3	67.2	12	1888	1016	397.529
6	3	56.4	12	1106	1432	593.016
7	1	88.7	12			644.473
8	2	88.5	12	1462		431.59
9	2	62.3	12	1905		604.017
10	2	57.3	12	1078		839.984
11	2	82.3	12	1190		249.821
12	3	66.6	12	1438	1655	126.929
13	2	60	12	1497		262.586
14	2	95.7	12	1872		546.843

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	88.1	9			20.088
2	2	60.9	9	1646		421.99
3	1	77.1	9			848.7
4	3	73.4	9	1834	1152	631.35
5	3	68.6	9	1521	1164	706.05
6	1	72.1	9			344.74
7	2	60.1	9	1275		612.79
8	2	99.7	9	1241		525.56
9	2	84.4	9	1871		605.6
10	2	63.5	9	1408		894.1

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	53.2	8			486.265
2	2	93.9	8	1327		300.82
3	2	85.7	8	1925		506.93
4	2	52.8	8	1334		129.04
5	1	63	8			274.07
6	1	87.6	8			719.61
7	2	52.8	8	1179		465.08
8	1	51.6	8			730.57
9	3	69.4	8	1353	1570	139.68
10	1	90.2	8			404.29
11	2	72.5	8	1240		454.68
12	2	71.6	8	1306		1.43
13	1	73.6	8			641.22
14	2	76.3	8	1652		226.8
15	3	77.8	8	1192	1164	41.1
16	1	77.1	8			400.2

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	80.6	8			323.433
2	2	67.3	8	1672		929.3
3	3	95.2	8	1459	1426	442.19
4	3	66.4	8	1925	1866	1074.67
5	3	63.4	8	1216	1642	1088.95
6	2	83.6	8	1546		662.19
7	2	68.7	8	1727		1379.2
8	2	51.7	8	1686		1465.9

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	62.4	13	1833		325.95
2	3	75.2	13	1232	1618	51.739
3	3	95.4	13	1608	1693	23.032
4	1	58.1	13			613.083
5	2	89	13	1001		548.284
6	2	74.3	13	1953		515.145
7	1	83.5	13			125.326
8	1	94.2	13			445.277
9	2	62.9	13	1263		45.198
10	2	98.3	13	1892		0.119
11	2	61.4	13	1021		208.841
12	1	62.7	13			588.922
13	1	51.6	13			227.643
14	2	65.1	13	1471		173.084
15	2	57.6	13	1203		553.545
16	1	56.3	13			112.986
17	2	65.1	13	1861		342.537
18	2	94.5	13	1121		277.058
19	1	54.2	13			225.279

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	74.3	7	1683		258.492
2	3	97.9	7	1519	1315	885.141
3	3	72	7	1779	1471	748.862
4	2	68	7	1663		190.533
5	1	91.9	7			812.784
6	2	56.3	7	1984		0.125
7	2	82.6	7	1606		499.525
8	2	77.3	7	1714		115.206
9	3	83.9	7	1078	1948	359.977
10	2	71.1	7	1061		1025.618
11	2	56.7	7	1147		1069.009

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	61.8	6	1375	1228	741.213
2	2	65.2	6	1668		423.547
3	2	62.8	6	1696		379.794
4	2	68.4	6	1778		834.651
5	2	89.6	6	1180		105.379
6	1	69.5	6			503.156
7	3	90	6	1679	1858	193.543
8	2	91.9	6	1067		28.65
9	1	99.1	6			28.737
10	3	97.2	6	1457	1999	131.704
11	1	76.3	6			234.911
12	2	67.9	6	1919		613.329
13	3	68.2	6	1146	1334	786.986
14	2	75.7	6	1369		405.943

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5250.0	1	16	5296.7	1
2	5253.3	1	17	5298.9	1
3	5256.7	1	18	5301.2	1
4	5260.0	1	19	5303.4	1
5	5263.3	1	20	5305.6	1
6	5266.7	1	21	5307.8	1
7	5270.0	1	22	5310.1	1
8	5273.3	1	23	5312.3	1
9	5276.6	1	24	5314.5	1
10	5280.0	1	25	5316.8	1
11	5283.3	1	26	5319.0	1
12	5286.6	1	27	5321.2	1
13	5290.0	1	28	5323.4	1
14	5292.2	1	29	5325.7	1
15	5294.5	1	30	5328.0	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5327	12	2	5315	6
8	5273	24	5	5296	15
10	5279	30	8	5276	24
13	5315	39	12	5269	36
21	5259	63	13	5275	39
27	5265	81	16	5323	48
29	5324	87	17	5328	51
47	5274	141	31	5250	93
48	5326	144	45	5288	135
55	5287	165	48	5324	144
59	5269	177	60	5295	180
71	5293	213	63	5300	189
72	5288	216	66	5313	198
76	5262	228	71	5268	213
82	5300	246	74	5289	222
87	5308	261	76	5304	228
94	5292	282	82	5254	246
--	--	--	83	5294	249
--	--	--	87	5265	261
--	--	--	88	5283	264
--	--	--	90	5309	270
--	--	--	95	5281	285
--	--	--	98	5305	294
--	--	--	99	5298	297

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5316	12	1	5283	3
6	5315	18	2	5289	6
14	5252	42	3	5265	9
16	5322	48	10	5294	30
17	5275	51	18	5287	54
22	5299	66	19	5266	57
23	5281	69	25	5321	75
31	5300	93	26	5329	78
34	5305	102	27	5274	81
36	5317	108	42	5252	126
37	5286	111	43	5299	129
41	5267	123	53	5302	159
43	5303	129	77	5258	231
44	5283	132	85	5261	255
46	5263	138	96	5310	288
49	5289	147	99	5262	297
60	5294	180	--	--	--
61	5312	183	--	--	--
63	5274	189	--	--	--
77	5270	231	--	--	--
79	5272	237	--	--	--
86	5279	258	--	--	--
87	5308	261	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5270	12	7	5267	21
15	5317	45	10	5298	30
20	5266	60	11	5296	33
22	5284	66	18	5275	54
25	5313	75	20	5262	60
27	5321	81	21	5291	63
41	5272	123	45	5301	135
50	5316	150	52	5328	156
59	5253	177	53	5292	159
65	5264	195	59	5264	177
68	5312	204	61	5270	183
69	5276	207	62	5309	186
70	5315	210	65	5287	195
79	5257	237	86	5257	258
82	5304	246	91	5271	273
83	5275	249	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5272	33	3	5310	9
14	5290	42	7	5281	21
16	5271	48	8	5330	24
34	5297	102	19	5258	57
44	5263	132	20	5303	60
46	5298	138	52	5291	156
62	5266	186	57	5292	171
67	5261	201	62	5264	186
69	5286	207	64	5274	192
79	5322	237	65	5319	195
89	5304	267	67	5312	201
90	5255	270	70	5271	210
92	5308	276	82	5325	246
97	5252	291	90	5311	270

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5293	27	2	5315	6
20	5282	60	4	5258	12
36	5313	108	9	5270	27
37	5322	111	15	5322	45
44	5308	132	26	5260	78
45	5259	135	27	5294	81
51	5330	153	28	5289	84
52	5315	156	38	5299	114
56	5306	168	44	5323	132
67	5264	201	46	5303	138
71	5254	213	53	5268	159
73	5303	219	65	5328	195
84	5273	252	71	5281	213
91	5326	273	74	5280	222
100	5320	300	77	5286	231
--	--	--	82	5278	246
--	--	--	86	5265	258
--	--	--	91	5309	273
--	--	--	96	5279	288

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5325	6	2	5308	6
4	5295	12	5	5285	15
7	5275	21	8	5328	24
13	5252	39	14	5258	42
15	5308	45	17	5265	51
28	5327	84	29	5293	87
29	5289	87	34	5326	102
36	5266	108	43	5298	129
58	5292	174	47	5300	141
69	5297	207	49	5329	147
81	5324	243	52	5299	156
86	5286	258	57	5272	171
91	5300	273	63	5306	189
94	5268	282	66	5270	198
--	--	--	73	5253	219
--	--	--	74	5330	222
--	--	--	76	5250	228
--	--	--	80	5315	240
--	--	--	84	5301	252
--	--	--	90	5278	270
--	--	--	97	5257	291
--	--	--	99	5311	297
--	--	--	100	5282	300

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5256	6	5	5262	15
10	5262	30	27	5252	81
13	5325	39	32	5269	96
14	5304	42	36	5283	108
16	5270	48	46	5258	138
18	5289	54	52	5308	156
20	5319	60	60	5311	180
22	5267	66	63	5314	189
32	5302	96	66	5273	198
33	5320	99	74	5261	222
38	5316	114	77	5270	231
43	5255	129	80	5312	240
44	5257	132	82	5300	246
56	5272	168	83	5277	249
64	5277	192	92	5315	276
68	5274	204	94	5291	282
69	5313	207	--	--	--
77	5292	231	--	--	--
84	5318	252	--	--	--
95	5282	285	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5261	9	6	5268	18
6	5272	18	9	5263	27
9	5310	27	17	5325	51
11	5305	33	19	5252	57
15	5330	45	24	5321	72
18	5300	54	27	5283	81
21	5329	63	32	5280	96
22	5290	66	34	5320	102
25	5316	75	42	5329	126
34	5265	102	44	5258	132
41	5257	123	50	5314	150
43	5282	129	56	5324	168
47	5309	141	67	5261	201
59	5294	177	69	5294	207
63	5325	189	76	5309	228
75	5324	225	78	5315	234
83	5318	249	87	5253	261
84	5295	252	94	5282	282
86	5277	258	--	--	--
88	5256	264	--	--	--
94	5271	282	--	--	--
97	5323	291	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5273	3	2	5325	6
18	5301	54	11	5315	33
19	5274	57	14	5305	42
20	5278	60	19	5280	57
24	5253	72	21	5251	63
29	5291	87	22	5311	66
33	5292	99	24	5279	72
34	5306	102	27	5269	81
48	5256	144	29	5296	87
66	5295	198	35	5277	105
71	5302	213	39	5255	117
73	5308	219	40	5288	120
81	5315	243	43	5273	129
96	5285	288	44	5330	132
98	5276	294	46	5275	138
--	--	--	66	5284	198
--	--	--	87	5314	261
--	--	--	97	5253	291

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5291	15	3	5306	9
6	5305	18	5	5283	15
12	5311	36	8	5317	24
13	5255	39	12	5255	36
14	5300	42	14	5320	42
24	5279	72	18	5273	54
25	5261	75	29	5278	87
27	5323	81	47	5325	141
28	5286	84	48	5265	144
34	5294	102	52	5280	156
36	5252	108	53	5257	159
40	5325	120	56	5274	168
42	5276	126	67	5264	201
49	5312	147	72	5305	216
53	5282	159	76	5281	228
91	5277	273	81	5252	243
92	5296	276	86	5328	258
95	5270	285	94	5294	282
98	5260	294	99	5293	297
--	--	--	100	5299	300

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5275	12	9	5290	27
5	5290	15	10	5303	30
8	5265	24	12	5291	36
11	5328	33	13	5298	39
18	5320	54	25	5326	75
24	5314	72	29	5306	87
28	5251	84	33	5256	99
32	5271	96	34	5276	102
34	5280	102	36	5266	108
37	5327	111	43	5257	129
44	5285	132	49	5259	147
46	5293	138	50	5292	150
50	5317	150	51	5278	153
54	5281	162	70	5318	210
57	5270	171	75	5299	225
62	5274	186	82	5309	246
67	5279	201	86	5289	258
75	5284	225	87	5314	261
87	5315	261	89	5281	267
99	5259	297	91	5316	273
100	5311	300	99	5323	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5254	12	5	5296	15
25	5279	75	9	5254	27
28	5267	84	19	5314	57
31	5269	93	30	5260	90
44	5257	132	41	5328	123
48	5308	144	46	5308	138
53	5286	159	47	5326	141
59	5318	177	61	5311	183
72	5323	216	64	5256	192
73	5295	219	82	5262	246
80	5278	240	84	5269	252
83	5274	249	90	5294	270
93	5324	279	92	5282	276
--	--	--	94	5319	282

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5257	21	6	5296	18
8	5295	24	14	5303	42
19	5252	57	16	5292	48
20	5272	60	40	5289	120
21	5313	63	42	5282	126
22	5288	66	49	5257	147
33	5310	99	62	5281	186
37	5318	111	74	5261	222
38	5315	114	80	5326	240
43	5274	129	89	5317	267
47	5250	141	96	5305	288
63	5258	189	99	5288	297
66	5267	198	--	--	--
79	5301	237	--	--	--
84	5311	252	--	--	--
86	5302	258	--	--	--
88	5294	264	--	--	--
90	5255	270	--	--	--
93	5296	279	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5326	3	5	5263	15
7	5330	21	9	5254	27
15	5281	45	13	5310	39
26	5300	78	24	5287	72
34	5328	102	28	5303	84
39	5308	117	43	5258	129
40	5302	120	52	5295	156
53	5312	159	56	5257	168
64	5284	192	60	5324	180
67	5327	201	66	5289	198
74	5318	222	75	5251	225
91	5306	273	89	5330	267
92	5315	276	92	5259	276
98	5329	294	93	5318	279
--	--	--	96	5329	288

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5322	12	15	5268	45
10	5256	30	25	5322	75
23	5253	69	43	5281	129
24	5266	72	46	5250	138
25	5318	75	47	5253	141
27	5283	81	48	5294	144
30	5265	90	50	5282	150
36	5290	108	54	5270	162
40	5326	120	56	5318	168
45	5295	135	58	5301	174
46	5291	138	72	5313	216
52	5330	156	73	5260	219
55	5321	165	75	5295	225
63	5324	189	76	5267	228
65	5289	195	78	5275	234
67	5305	201	81	5304	243
73	5303	219	95	5252	285
78	5252	234	97	5316	291
83	5255	249	98	5317	294
95	5314	285	99	5259	297

Product	AX5400 Wi-Fi 6 Router	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2020/09/23
Test Item	Radar Statistical Performance Check (802.11ax-HE160 mode – 5570MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.0	1	618	86	1
2	5497.2	1	718	74	1
3	5502.4	1	918	58	1
4	5507.6	1	578	92	1
5	5512.8	1	778	68	1
6	5518.0	1	818	65	1
7	5523.2	1	838	63	1
8	5528.4	1	558	95	1
9	5533.6	1	878	61	1
10	5538.8	1	798	67	1
11	5544.0	1	938	57	1
12	5549.2	1	638	83	1
13	5554.4	1	3066	18	1
14	5559.6	1	518	102	1
15	5564.8	1	698	76	1
16	5570.0	1	1909	28	1
17	5575.6	1	2315	23	1
18	5581.1	1	2253	24	1
19	5586.7	1	2558	21	1
20	5592.3	1	1011	53	1
21	5597.9	1	1150	46	1
22	5603.4	1	1990	27	1
23	5609.0	1	2549	21	1
24	5614.6	1	1383	39	1
25	5620.1	1	1789	30	1
26	5625.7	1	2377	23	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5631.3	1	758	70	1
28	5636.8	1	774	69	1
29	5642.4	1	2719	20	1
30	5648.0	1	890	60	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.0	1	160	23	1
2	5497.2	3.6	152	28	1
3	5502.4	4.2	194	28	1
4	5507.6	3.6	164	28	1
5	5512.8	2.9	170	25	1
6	5518.0	1.8	187	24	1
7	5523.2	2.1	161	27	1
8	5528.4	1.4	174	26	1
9	5533.6	4.9	179	28	1
10	5538.8	3.4	202	27	1
11	5544.0	1.9	154	28	1
12	5549.2	1.8	189	24	1
13	5554.4	3.7	166	23	1
14	5559.6	4.6	202	27	1
15	5564.8	4.9	197	23	1
16	5570.0	2.5	206	25	1
17	5575.6	1.6	210	25	1
18	5581.1	1.7	167	29	1
19	5586.7	1.2	214	26	1
20	5592.3	4.2	201	23	1
21	5597.9	4.2	202	29	1
22	5603.4	4	196	24	1
23	5609.0	1.7	185	27	1
24	5614.6	3.7	209	26	1
25	5620.1	3.4	194	24	1
26	5625.7	4.2	182	24	1
27	5631.3	1.5	207	25	1
28	5636.8	3.2	201	23	1
29	5642.4	3.9	229	29	1
30	5648.0	4.7	166	25	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.0	9.1	386	17	1
2	5497.2	9.6	209	17	1
3	5502.4	6.2	276	16	1
4	5507.6	7.9	358	16	1
5	5512.8	8.4	482	18	1
6	5518.0	6.1	483	18	1
7	5523.2	7.2	236	16	1
8	5528.4	8.5	250	17	1
9	5533.6	8.6	367	17	1
10	5538.8	6.4	500	18	1
11	5544.0	6.9	386	17	1
12	5549.2	9.1	385	18	1
13	5554.4	8.7	354	17	1
14	5559.6	8.5	363	17	1
15	5564.8	8	472	18	1
16	5570.0	7.1	326	18	1
17	5575.6	8.3	278	16	1
18	5581.1	7.5	339	17	1
19	5586.7	9.2	393	17	1
20	5592.3	8.4	314	17	1
21	5597.9	8	284	16	1
22	5603.4	8.4	465	18	1
23	5609.0	7.1	304	18	1
24	5614.6	6.6	466	16	1
25	5620.1	9.3	455	17	1
26	5625.7	9.7	281	16	1
27	5631.3	8.1	297	17	1
28	5636.8	8.8	354	18	1
29	5642.4	8.6	206	16	1
30	5648.0	8	370	18	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.0	17.8	408	15	1
2	5497.2	13.8	313	13	1
3	5502.4	15.4	234	13	0
4	5507.6	14.8	322	13	1
5	5512.8	11.2	269	12	1
6	5518.0	18.8	492	15	1
7	5523.2	19.3	370	15	1
8	5528.4	18.4	347	16	1
9	5533.6	19.3	387	14	0
10	5538.8	11.9	242	15	1
11	5544.0	12.4	251	14	1
12	5549.2	17.5	256	13	1
13	5554.4	19.2	465	14	0
14	5559.6	13.2	364	13	1
15	5564.8	13.7	355	15	1
16	5570.0	11.9	312	16	1
17	5575.6	14.9	339	14	0
18	5581.1	19.9	461	12	1
19	5586.7	15.2	320	14	1
20	5592.3	11.5	271	14	1
21	5597.9	20	304	14	0
22	5603.4	11.8	285	15	1
23	5609.0	19.4	365	13	1
24	5614.6	15.3	267	16	1
25	5620.1	12.2	225	14	1
26	5625.7	19.9	397	13	1
27	5631.3	17.1	220	15	1
28	5636.8	11.4	356	13	1
29	5642.4	17.6	390	14	1
30	5648.0	16.5	251	14	1
Detection Percentage (%)					83.3%

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

waveforms is as follows: $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\% + 100\% + 100\% + 83.3\%) / 4 = 95.8\% (>80\%)$

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5570.0	1	16	5495.6	1
2	5570.0	1	17	5494.4	1
3	5570.0	1	18	5497.6	1
4	5570.0	1	19	5499.6	1
5	5570.0	1	20	5497.2	1
6	5570.0	1	21	5641.2	0
7	5570.0	1	22	5641.6	1
8	5570.0	1	23	5641.6	1
9	5570.0	1	24	5645.2	1
10	5570.0	1	25	5641.6	1
11	5495.2	1	26	5642.8	1
12	5496.4	1	27	5642.0	0
13	5495.6	1	28	5642.0	1
14	5494.8	1	29	5642.8	1
15	5496.4	1	30	5644.8	1
Detection Percentage (%)					93.3%

Type 5 Radar Waveform_1						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	71.5	20	1516		9.096
2	1	74.4	20			385.321
3	1	98.9	20			36.442
4	1	96.2	20			388.063
5	3	75.6	20	1042	1028	1046.634
6	3	94.8	20	1334	1518	623.355
7	3	70	20	1793	1243	155.895
8	2	55	20	1153		513.016
9	1	80.2	20			504.767
10	3	77.9	20	1843	1784	422.818
11	2	61	20	1561		390.209

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	64.6	17			391.557
2	1	92.4	17			47.774
3	1	89.3	17			606.107
4	3	72.1	17	1466	1053	475.67
5	1	81.6	17			437.133
6	2	50.3	17	1534		174.187
7	2	85.7	17	1791		108.17
8	1	69	17			592.853
9	1	52.7	17			79.907
10	2	96.7	17	1080		65.7
11	2	94.1	17	1787		246.063
12	3	69	17	1956	1867	608.047
13	1	89.3	17			79.78
14	2	92.9	17	1123		488.433
15	2	63.2	17	1674		385.727
16	3	61.1	17	1025	1274	570.4
17	2	91.2	17	1813		438.133
18	3	96.9	17	1078	1468	614.967

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	75.4	16			542.91
2	1	59.2	16			309.847
3	2	86.1	16	1828		451.454
4	2	69.3	16	1568		536.591
5	1	63.6	16			829.249
6	1	68.8	16			374.176
7	3	60.4	16	1058	1418	830.063
8	2	92.6	16	1163		808.49
9	3	97.2	16	1654	1736	270.897
10	2	81.5	16	1560		543.714
11	1	79.2	16			563.851
12	1	68.5	16			462.709
13	2	96.6	16	1784		617.286
14	2	87.7	16	1724		700.343

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	70.9	19	1162	1158	830.451
2	3	94.9	19	1768	1571	352.207
3	1	61.3	19			723.424
4	3	94.1	19	1220	1068	420.841
5	3	53.4	19	1001	1252	847.679
6	3	95.9	19	1329	1355	832.586
7	2	84.5	19	1602		438.763
8	1	88.9	19			821.49
9	2	66.3	19	1424		142.537
10	1	59.9	19			26.444
11	2	94.6	19	1177		448.761
12	2	83.5	19	1964		107.149
13	2	90.8	19	1139		626.086
14	2	82.4	19	1603		705.443

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	50	15			67.938
2	3	59.9	15	1372	1728	680.247
3	3	55.8	15	1669	1090	75.973
4	1	85.1	15			390.9
5	2	69.9	15	1888		151.467
6	1	94	15			58.793
7	3	59.4	15	1044	1480	1198.84
8	2	98	15	1608		136.237
9	1	59.6	15			40.033

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	50.6	13			398.119
2	2	78.6	13	1493		330.2
3	1	78.5	13			205.04
4	2	79.1	13	1678		344.33
5	2	82.8	13	1710		607.18
6	1	75.1	13			182.8
7	1	61.1	13			140.2
8	1	80.5	13			479
9	1	78.6	13			240
10	2	64.1	13	1696		277.39
11	3	60.4	13	1073	1924	692.44
12	1	69.1	13			425.98
13	3	71.7	13	1813	1808	164.18
14	3	55.3	13	1130	1706	546.8
15	3	84.4	13	1169	1030	703.6
16	3	78.8	13	1599	1569	38

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	95.9	7	1250		231.018
2	3	94.6	7	1522	1894	672.97
3	2	77.4	7	1082		872.08
4	2	74.4	7	1771		67.66
5	2	87.2	7	1778		496.19
6	1	71.3	7			832.54
7	1	66.5	7			1155.32
8	2	60.2	7	1780		351.04
9	2	97.7	7	1759		87.98
10	2	59.9	7	1249		1119.6

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	80.9	10	1915		190.795
2	1	78.1	10			380.473
3	3	84.1	10	1452	1032	188.127
4	1	69.2	10			397.4
5	3	69.2	10	1800	1066	216.893
6	2	80.6	10	1428		312.127
7	1	56.8	10			360.32
8	3	67.3	10	1732	1447	139.363
9	2	51.8	10	1270		174.667
10	2	95.7	10	1861		44.33
11	1	56.7	10			402.283
12	3	59.1	10	1539	1857	510.727
13	1	98.2	10			142.83
14	3	67.5	10	1321	1260	533.213
15	3	50.9	10	1374	1466	464.327
16	3	81.4	10	1030	1090	240.8
17	3	84.9	10	1630	1139	182.533
18	1	92.7	10			259.967

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	73.5	9	1220		523.408
2	2	73.8	9	1411		206.464
3	3	77.4	9	1813	1806	282.962
4	3	51.3	9	1178	1034	551.183
5	2	83.3	9	1209		394.744
6	2	78.2	9	1068		442.495
7	2	88.9	9	1176		171.356
8	2	62.5	9	1674		93.267
9	1	58.2	9			547.748
10	3	59.3	9	1496	1949	593.329
11	1	87.7	9			161.271
12	3	74.6	9	1979	1642	528.462
13	3	66	9	1646	1668	451.063
14	2	63.8	9	1805		409.814
15	2	90.6	9	1885		241.105
16	3	99.4	9	1759	1802	262.886
17	1	99.5	9			244.537
18	2	64.9	9	1764		220.058
19	2	75.1	9	1650		86.879

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	85.7	15	1977		504.962
2	3	65.8	15	1254	1123	224.6
3	3	71.7	15	1685	1281	446.385
4	1	98.8	15			156.403
5	2	94.2	15	1246		656.651
6	1	91.4	15			470.198
7	1	89.2	15			689.626
8	2	56.7	15	1615		484.674
9	2	90.6	15	1448		208.221
10	2	83.5	15	1067		440.589
11	2	93.6	15	1438		285.406
12	2	83.9	15	1827		176.244
13	2	84.5	15	1434		38.992
14	2	89.7	15	1103		310.329
15	1	52.8	15			459.947
16	2	53.2	15	1888		273.765
17	3	79.4	15	1623	1755	563.782

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	69	8	1196		205.46
2	1	56	8			653.91
3	2	89.9	8	1816		751.62
4	1	86.4	8			652.82
5	2	62	8	1272		353.72
6	1	66.6	8			478.48
7	3	82.8	8	1586	1971	609.75
8	1	95.5	8			163.7
9	2	88.3	8	1221		739.3
10	2	58.8	8	1480		220.62
11	1	97.3	8			701.84
12	2	61.9	8	1622		164.76
13	2	87.1	8	1320		43.12
14	2	83.3	8	1196		404.4
15	1	79.9	8			676.4

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	66.9	11	1924		380.232
2	3	91.2	11	1855	1861	487.113
3	3	79.4	11	1005	1536	510.376
4	3	51.4	11	1785	1879	637.189
5	2	78.5	11	1294		661.892
6	2	81.6	11	1572		373.065
7	3	93	11	1585	1632	379.548
8	1	86.3	11			191.612
9	3	83.4	11	1371	1492	439.915
10	1	83.1	11			303.408
11	2	61.3	11	1804		171.771
12	2	72.8	11	1773		758.754
13	3	74.5	11	1414	1573	563.277

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	85	9	1861		420.077
2	2	57.1	9	1609		586.31
3	3	64	9	1174	1334	23.74
4	1	88	9			285.65
5	3	74.8	9	1530	1402	114
6	2	81.9	9	1078		313.59
7	2	99.8	9	1667		733.02
8	3	89.4	9	1641	1686	569.89
9	2	92.6	9	1859		503.77
10	3	98.8	9	1787	1251	83.55
11	2	55.6	9	1025		272.14
12	1	85	9			37.11
13	1	72.1	9			774
14	3	79.1	9	1707	1060	209.3
15	1	97.3	9			315.7

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	1	97.5	7			199.529
2	2	98.5	7	1025		503.411
3	2	59.8	7	1037		284.082
4	2	72.2	7	1703		370.263
5	1	67	7			142.754
6	3	92.5	7	1449	1122	42.835
7	2	72.5	7	1699		266.396
8	1	52.3	7			432.807
9	1	60.2	7			521.878
10	3	74.7	7	1704	1591	481.899
11	1	80.3	7			610.671
12	2	86.4	7	1425		39.532
13	2	63.3	7	1976		77.563
14	1	54.3	7			318.264
15	2	87.8	7	1683		415.155
16	3	94.9	7	1577	1760	375.356
17	2	80	7	1090		19.037
18	1	76.2	7			296.558
19	3	93.8	7	1614	1315	199.879

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	62.3	11	1262		360.3
2	2	86.1	11	1521		197.223
3	1	72.4	11			387.25
4	1	83	11			542.71
5	3	71.9	11	1913	1256	648.15
6	1	69.6	11			88.94
7	3	97.3	11	1731	1876	160.99
8	2	64.8	11	1826		61.24
9	3	99.2	11	1491	1141	430.76
10	3	58.9	11	1620	1541	200.79
11	2	95.8	11	1449		692.25
12	1	82.5	11			472.62
13	2	57.9	11	1120		404.92
14	2	55.6	11	1172		736.9
15	2	82.3	11	1041		652.6
16	3	96.2	11	1244	1881	629.7

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	81.2	9	1964	1216	640.518
2	2	92.1	9	1507		576.988
3	3	75.5	9	1336	1512	388.845
4	2	92.4	9	1256		168.853
5	2	72.7	9	1640		571.441
6	2	55.3	9	1245		400.838
7	2	52.7	9	1955		654.096
8	2	85.4	9	1053		256.104
9	3	53.2	9	1011	1054	57.681
10	1	63.9	9			102.189
11	1	70.6	9			21.816
12	1	55.7	9			538.384
13	2	84.8	9	1186		538.202
14	2	50.3	9	1535		76.169
15	2	79.2	9	1295		138.947
16	2	88.8	9	1793		522.865
17	2	72.7	9	1902		391.982

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	53.5	6	1877		465.31
2	1	93.7	6			557.691
3	2	72.7	6	1949		311.342
4	2	54.6	6	1101		147.063
5	1	63.3	6			176.054
6	2	73.3	6	1034		321.055
7	2	96.8	6	1884		295.606
8	2	55.2	6	1841		29.927
9	2	54.5	6	1388		207.978
10	2	90.6	6	1383		349.759
11	1	96.5	6			84.551
12	3	95.7	6	1744	1719	376.182
13	1	52.1	6			151.283
14	1	94.4	6			96.574
15	2	91.3	6	1335		430.375
16	3	60.4	6	1237	1132	48.976
17	3	82.8	6	1393	1146	91.737
18	3	71	6	1040	1594	273.658
19	1	53.1	6			558.779

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	2	50	14	1147		65.151
2	2	65.8	14	1780		373.101
3	3	52.8	14	1176	1502	267.122
4	2	76.7	14	1913		120.173
5	3	76.1	14	1789	1786	584.254
6	3	93.9	14	1781	1569	377.915
7	2	51.8	14	1950		70.936
8	3	68.7	14	1630	1627	599.567
9	3	85.5	14	1389	1853	209.578
10	2	60.3	14	1057		208.879
11	1	80.2	14			187.041
12	2	84.2	14	1327		450.832
13	2	58.5	14	1205		383.323
14	2	95.6	14	1627		100.164
15	1	77.7	14			428.315
16	2	92.7	14	1745		418.986
17	1	55	14			50.537
18	3	92.5	14	1914	1768	543.358
19	1	99	14			354.379

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μ sec)	Pulse 2-to-3 PRI (μ sec)	Start Location Within Interval (msec)
1	3	58.7	19	1676	1459	375.316
2	3	57.9	19	1277	1393	295.28
3	3	65.4	19	1206	1716	237.67
4	3	88.7	19	1309	1877	823.12
5	2	81.8	19	1317		298.63
6	1	80.3	19			763.57
7	2	90	19	1353		842.55
8	3	71.7	19	1304	1066	50.71
9	1	83.3	19			572.52
10	2	52.5	19	1421		450.25
11	2	96.3	19	1646		366.1
12	2	55.7	19	1624		612.6