

DFS MEASUREMENT REPORT

FCC PART 15 Subpart E & IC RSS-247

FCC ID: 2AD8UFZCWO4A1
IC: 109D-FZCWO4A1
APPLICANT: Nokia Solutions and Networks, OY

Application Type: Certification
Product: Wi-Fi AP 4x4 OD ext. antenna US
Wi-Fi AP 4x4 OD omni antenna US
Wi-Fi AP 4x4 OD direct antenna US
Wi-Fi AP 4x4 OD small omni antenna US

Model No.: WO4C-AC400
Brand Name: Nokia
FCC Classification: Unlicensed National Information Infrastructure (UNII)
FCC Rule Part(s): Part 15 Subpart E - 15.407 Section (h)(2)
KDB 905462 D02v02, KDB 905462 D04v01

Type of Device: ☒ Master Device
☐ Client Device (No radar detection)
☐ Client Device with radar detection

Test Date: July 03 ~ 11, 2018

Reviewed By:

Paddy Chen

(Paddy Chen)

Approved By:

Chenz Ker

(Chenz Ker)



Testing Laboratory
3261

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
1807TW0112-U1	Rev. 01	Initial Report	10-14-2018	Valid

This report is supplemented to MRT Original “1608TW0110-U15” Report adding “MESH mode” and related data

CONTENTS

Description	Page
Revision History.....	2
§2.1033 General Information.....	5
1. INTRODUCTION	6
1.1. Scope	6
1.2. MRT Test Location	6
2. PRODUCT INFORMATION.....	7
2.1. Equipment Description	7
2.2. Description of Available Antennas	9
2.3. Description of Antenna RF Port.....	13
2.4. DFS Band Carrier Frequencies Operation	14
2.5. Test Mode	14
2.6. Configuration of Mesh Mode	15
3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS.....	16
3.1. Applicability	16
3.2. DFS Devices Requirements	17
3.3. DFS Detection Threshold Values	18
3.4. Parameters of DFS Test Signals	19
3.5. Radiated Test Setup	22
4. TEST EQUIPMENT CALIBRATION DATE	23
5. TEST RESULT	24
5.1. Summary	24
5.2. Radar Waveform Calibration	25
5.2.1. Calibration Setup.....	25
5.2.2. Calibration Procedure.....	25
5.2.3. Cablibration Result	26
5.2.4. Channel Loading Test Result	30
5.3. UNII Detection Bandwidth Measurement	31
5.3.1. Test Limit	31
5.3.2. Test Procedure	31
5.3.3. Test Result.....	32
5.4. Statistical Performance Check Measurement	35
5.4.1. Test Limit	35
5.4.2. Test Procedure	35

5.4.3. Test Result.....	36
6. CONCLUSION.....	114

§2.1033 General Information

Applicant:	Nokia Solutions and Networks, OY
Applicant Address:	2000 W. Lucent Lane, Naperville, Illinois, United States, 60563
Manufacturer:	Nokia Solutions and Networks, OY
Manufacturer Address:	2000 W. Lucent Lane, Naperville, Illinois, United States, 60563
Test Site:	MRT Technology (Taiwan) Co., Ltd
Test Site Address:	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT Registration No.:	153292
MRT IC Registration No.:	21723-1
Test Device Serial No.:	☐ Production ☒ Pre-Production ☐ Engineering

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. 153292) 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. 21723-1) test laboratory with the site description on file at Industry Canada.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (TAF) under the American Association for Laboratory Accreditation Program (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Taiwan, EU and TELEC Rules.

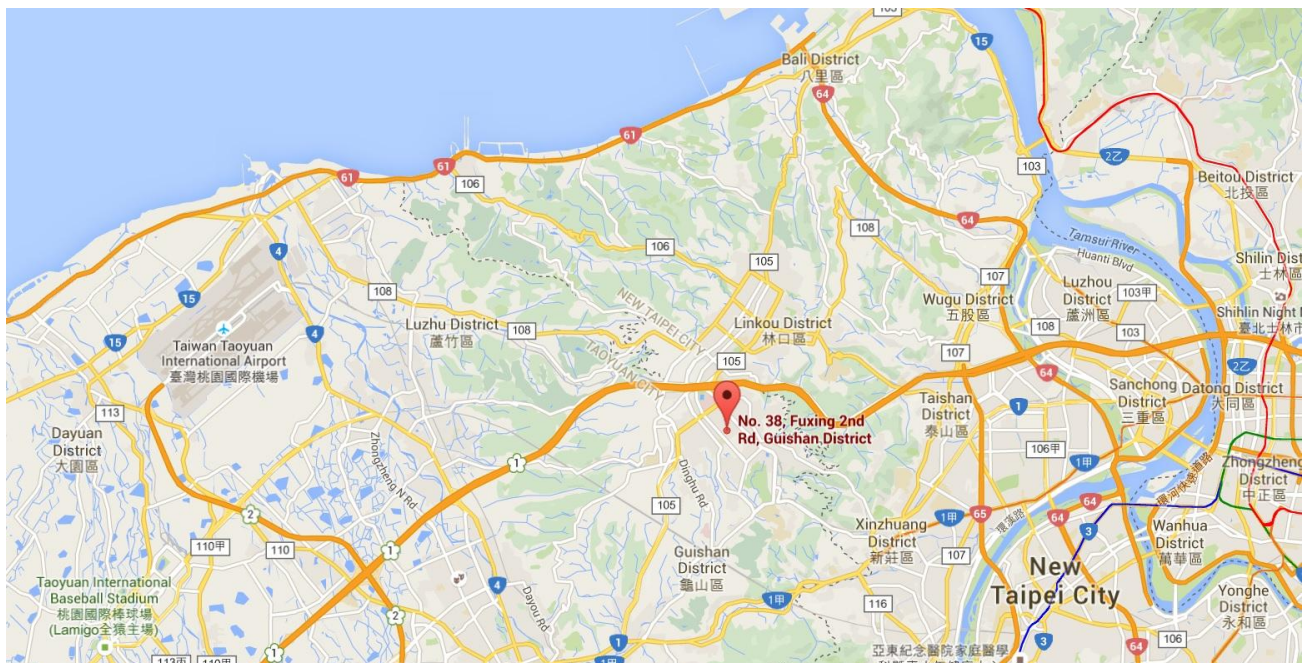
1. INTRODUCTION

1.1. Scope

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

1.2. MRT Test Location

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



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Wi-Fi AP 4X4 OD ext. antenna US; Wi-Fi AP 4x4 OD omni antenna US; Wi-Fi AP 4x4 OD direct. antenna US; Wi-Fi AP 4x4 OD small omni antenna US
Model No.	WO4C-AC400
Radio Type	Intentional Transceiver
Operation Mode	Master Device
Frequency Range	<u>2.4GHz:</u> For 802.11b/g/n-HT20: 2412 ~ 2462 MHz For 802.11n-HT40: 2422 ~ 2452 MHz <u>5GHz:</u> For 802.11a/n-HT20: 5180~5320MHz, 5500~5700MHz, 5745~5825MHz For 802.11ac-VHT20: 5180~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40: 5190~5310MHz, 5510~5670MHz, 5755~5795MHz For 802.11ac-VHT40: 5190~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz For 802.11ac-VHT80+80: 5210 MHz + 5290 MHz, 5210 MHz + 5530 MHz, 5210 MHz + 5610 MHz, 5210 MHz + 5690 MHz, 5210 MHz + 5775 MHz, 5290 MHz + 5530 MHz, 5290 MHz + 5610 MHz, 5290 MHz + 5690 MHz, 5290 MHz + 5775 MHz, 5530 MHz + 5610 MHz, 5530 MHz + 5690 MHz, 5530 MHz + 5775 MHz, 5610 MHz + 5690 MHz, 5610 MHz + 5775 MHz, 5690 MHz + 5775 MHz
Type of Modulation	802.11a/n/ac: OFDM;

Modulation Type	16QAM, 64QAM, QPSK, BPSK for OFDM 802.11a/n/ac: OFDM
Power-on cycle	Requires 45.3 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band)	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

Note 1: We select the POE adapter (M/N: PoE35-54A) to perform all RF testing.

Note 2: The product name difference as below:

- when the device has been connected the Galtronics Omni antenna, the product name is “Wi-Fi AP 4x4 OD omni antenna US”;
- when the device has been connected the Galtronics Directional antenna, the product name is “Wi-Fi AP 4x4 OD direct. antenna US”;
- when the device has been connected the PCTEL antenna & HUBER+SUHNER, the product name is “Wi-Fi AP 4X4 OD ext. antenna US”;
- when the device has been connected the Galtronics Small Omni antenna, the product name is “Wi-Fi AP 4x4 OD small omni antenna US”

Note 3: The device can't support the MESH Mode with 802.11ac-VHT80+80 technology.

2.2. Description of Available Antennas

Antenna	Manufacturer	Frequency Band (GHz)	Product Number	Tx Paths
	PCTEL, Inc.	2.4	FPMI2458-DP4RPSMA	4
		5		4
		2.4	FPMI2458-DP2RPSMA	2
		5		2
	Galtronics	2.4	Galtronics Omni Antenna	2
		5		2
		2.4	Galtronics Directional Antenna	2
		5		2
		2.4	Galtronics Small Omni Antenna	2
		5		2
	HUBER+SUHNER	5	Sector-Antenna 1356.17.0011	1
		5	Directional Antenna 1356.17.0077	1

Note 1: This device make the transmission with two “FPMI2458-DP2RPSMA” directional antenna, there is not any superposition of transmit signal between two antennas.

Note 2: For “FPMI2458-DP2RPSMA” directional antenna, one antenna port be connected with device’s Ant 0 & Ant 1, the other antenna port be connect with device’s Ant 2 & Ant 3, and this installation has been showed in the professional installation manual.

Note 3: For HUBER+SUHNER antenna, this device make the transmission with four antenna, they

were installed by the four sides of the perpendicular. So the antenna was Independent of each other and had no MIMO, CDD or Beamforming mode.

Product Number	Frequency Band (MHz)	Tx Paths	Per Chain Max Antenna Gain (dBi)				Beam Forming Directional Gain (dBi)	CDD Directional Gain (dBi)
			Ant 0	Ant 1	Ant 2	Ant 3		
FPMI2458-DP4RPSMA	2412 ~ 2462	4	6.70	6.40	6.80	6.80	12.70	12.70
	5150 ~ 5250	4	5.79	5.57	5.89	5.05	11.60	11.60
	5150 ~ 5250 30°elevation angle	4	5.10	2.27	4.94	4.06	N/A	N/A
	5250 ~ 5350	4	5.68	5.53	5.65	4.91	11.47	11.47
	5470 ~ 5725	4	5.46	5.21	6.06	5.65	11.62	11.62
	5725 ~ 5850	4	5.24	5.09	6.73	5.62	11.71	11.71
FPMI2458-DP2RPSMA	2412 ~ 2462	2	6.70	6.40	--	--	9.56	9.56
			--	--	6.70	6.40	9.56	9.56
	5150 ~ 5250	2	5.79	5.57	--	--	8.69	8.69
			--	--	5.79	5.57	8.69	8.69
	5150 ~ 5250 30°elevation angle	2	5.10	2.27	--	--	N/A	N/A
			--	--	5.10	2.27	N/A	N/A
	5250 ~ 5350	2	5.68	5.53	--	--	8.62	8.62
			--	--	5.68	5.53	8.62	8.62
	5470 ~ 5725	2	5.46	5.21	--	--	8.35	8.35
			--	--	5.46	5.21	8.35	8.35
	5725 ~ 5850	2	5.24	5.09	--	--	8.18	8.18
			--	--	5.24	5.09	8.18	8.18

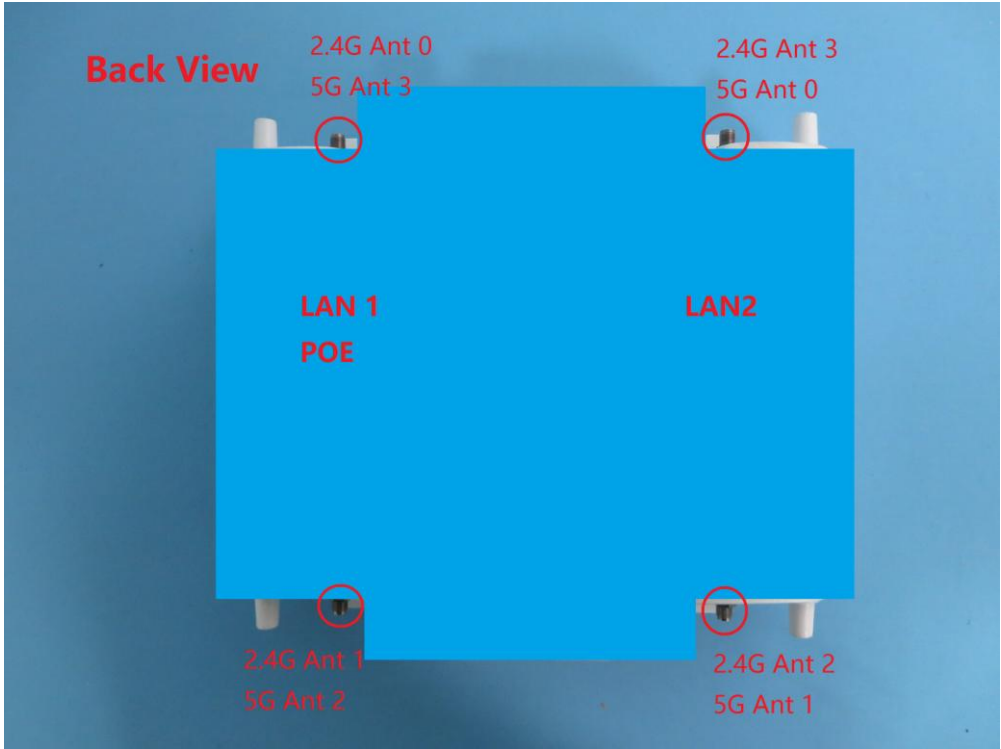
Product Number	Frequency Band (MHz)	Tx Paths	Per Chain Max Antenna Gain (dBi)				Beam Forming Directional Gain (dBi)	CDD Directional Gain (dBi)
			Ant 0	Ant 1	Ant 2	Ant 3		
Galtronics Omni Antenna	2412 ~ 2462	2	2.93	3.02	2.93	3.02	9.00	9.00
	5150 ~ 5250	2	6.68	6.53	6.68	6.53	12.63	12.63
	5150 ~ 5250 30°elevation angle	2	-1.32	-1.53	-1.32	-1.53	N/A	N/A
	5250 ~ 5350	2	6.68	6.53	6.68	6.53	12.63	12.63
	5470 ~ 5725	2	6.60	5.92	6.60	5.92	12.29	12.29
	5725 ~ 5850	2	6.78	6.55	6.78	6.55	12.69	12.69
Galtronics Directional Antenna	2412 ~ 2462	2	6.75	6.75	6.75	6.75	12.77	12.77
	5150 ~ 5250	2	8.39	8.16	8.39	8.16	14.30	14.30
	5150 ~ 5250 30°elevation angle	2	-1.54	-2.86	-1.54	-2.86	N/A	N/A
	5250 ~ 5350	2	8.39	8.16	8.39	8.16	14.30	14.30
	5470 ~ 5725	2	8.49	8.57	8.49	8.57	14.55	14.55
	5725 ~ 5850	2	8.92	8.82	8.92	8.82	14.89	14.89
Galtronics Small Omni Antenna	2412 ~ 2462	2	2.69	2.41	2.69	2.41	8.57	8.57
	5150 ~ 5250	2	3.27	3.85	3.27	3.85	9.59	9.59
	5150 ~ 5250 30°elevation angle	2	3.20	3.81	3.20	3.81	N/A	N/A
	5250 ~ 5350	2	2.77	3.30	2.77	3.30	9.06	9.06
	5470 ~ 5725	2	3.43	3.81	3.43	3.81	9.64	9.64
	5725 ~ 5850	2	4.35	4.30	4.35	4.30	10.35	10.35

Product Number	Frequency Band (MHz)	Tx Paths	Per Chain Max Antenna Gain (dBi)				Beam Forming Directional Gain (dBi)	CDD Directional Gain (dBi)
			Ant 0	Ant 1	Ant 2	Ant 3		
Sector-Antenna 1356.17.0011	5150 ~ 5250	1	16.00	16.00	16.00	16.00	N/A	N/A
	5150 ~ 5250 30°elevation angle	1	-1.22	-1.22	-1.22	-1.22	N/A	N/A
	5250 ~ 5350	1	16.00	16.00	16.00	16.00	N/A	N/A
	5470 ~ 5725	1	16.50	16.50	16.50	16.50	N/A	N/A
	5725 ~ 5850	1	17.00	17.00	17.00	17.00	N/A	N/A
Directional Antenna 1356.17.0077	5150 ~ 5250	1	14.00	14.00	14.00	14.00	N/A	N/A
	5150 ~ 5250 30°elevation angle	1	1.52	1.52	1.52	1.52	N/A	N/A
	5250 ~ 5350	1	14.00	14.00	14.00	14.00	N/A	N/A
	5470 ~ 5725	1	14.00	14.00	14.00	14.00	N/A	N/A
	5725 ~ 5850	1	14.00	14.00	14.00	14.00	N/A	N/A

Note

- The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11a/b/g mode, and CDD signals are correlated.
- The EUT supports Beam Forming technology for 802.11n/ac mode, and exclude 802.11b/g mode.
Correlated signals include, but are not limited to, signals transmitted in any of the following modes:
 - Any transmit Beam Forming mode, whether fixed or adaptive (e.g., phased array modes, closed loop MIMO modes, Transmitter Adaptive Antenna modes, Maximum Ratio Transmission (MRT) modes, and Statistical Eigen Beam Forming (EBF) modes).
 - CDD signals are correlated and create unintended array gain that varies with signal bandwidth, antenna geometry, and cyclic delay values. Consequently, depending on system parameters, it may be appropriate to use different values of array gain for compliance with power limits versus compliance with power spectral density limits.
- Unequal Antenna gains, with equal transmit powers. For Antenna gains given by $G_1, G_2, \dots, G_N$ dBi transmit signals are correlated, then
 - Directional gain = $10 \cdot \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
 - For example (FPMI2458-DP4RPSMA Antenna): 5150 ~ 5250MHz Directional Gain = $10 \cdot \log[(10^{5.79/20} + 10^{5.57/20} + 10^{5.89/20} + 10^{5.05/20})^2 / 4] = 11.60$ dBi

2.3. Description of Antenna RF Port

Antenna RF Port								
---	2.4GHz RF Port				5GHz RF Port			
Software Control Port	Ant 0	Ant 1	Ant 2	Ant 3	Ant 0	Ant 1	Ant 2	Ant 3
 Back View 2.4G Ant 0 5G Ant 3 2.4G Ant 3 5G Ant 0 LAN 1 POE LAN2 2.4G Ant 1 5G Ant 2 2.4G Ant 2 5G Ant 1								

2.4. DFS Band Carrier Frequencies Operation

802.11 a/n-HT20/ac-VHT20 Center Working Frequency of Each Channel

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

802.11n-HT40/ ac-VHT40 Center Working Frequency of Each Channel

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

802.11ac-VHT80 Center Working Frequency of Each Channel

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

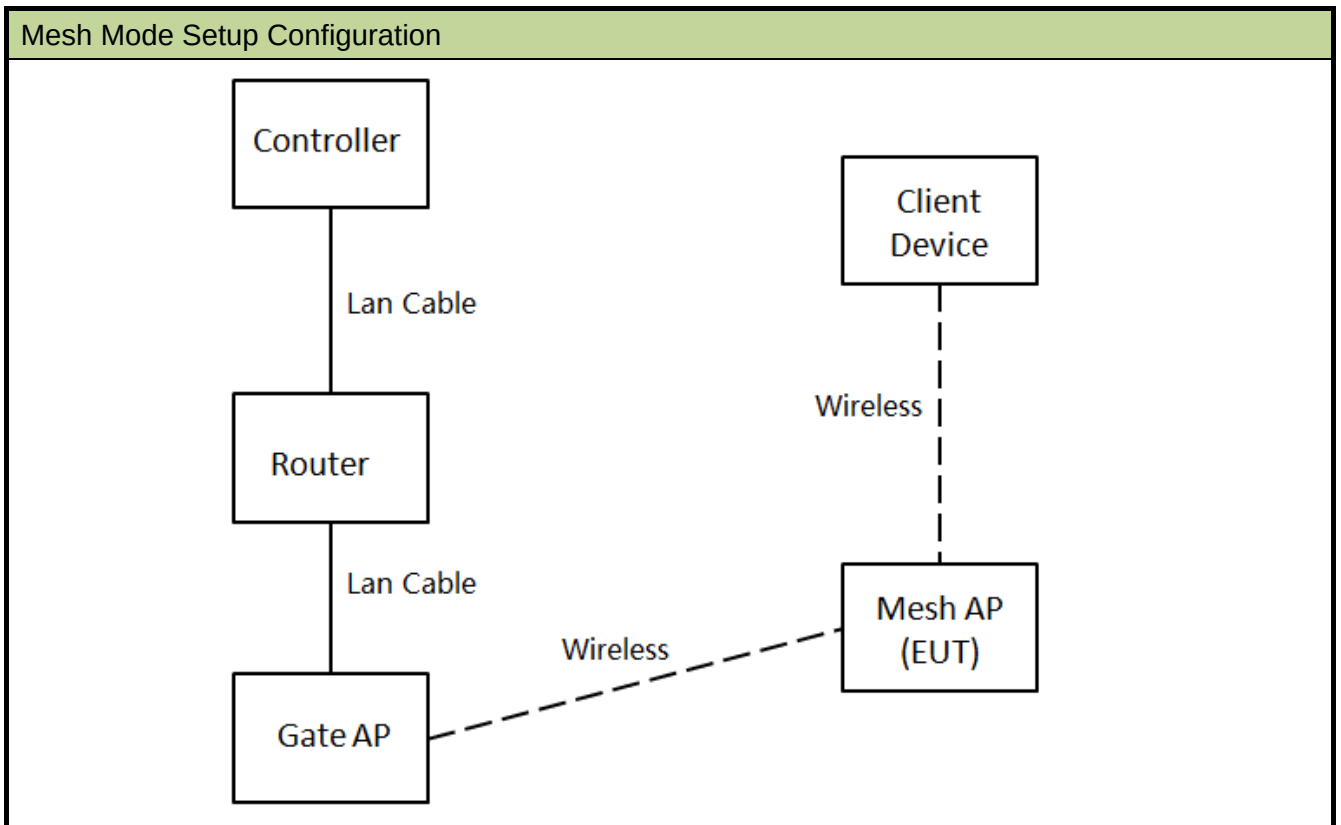
Note: The device can't operate in 5600~5650 MHz band in Canada (The frequency of blue font).

2.5. Test Mode

Test Mode	Mode 1: Communication with Notebook by MESH mode
-----------	--

2.6. Configuration of Mesh Mode

Mesh Mode Setup Configuration



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. Radiated Test Setup

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

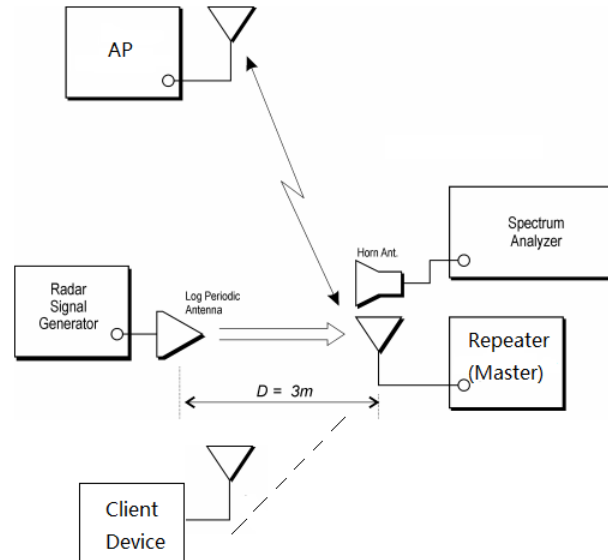


Figure 3-1: Radiated Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS) – TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/07/10
MXG X-Series Microwave Analog Signal Generator	KEYSIGHT	N5183B	MRTTWA00013	1 year	2019/04/17
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2019/06/08
Combiner	WOKEN	0120N02208001D	MRTTWA00040	1 year	N/A
Broadband Hornantenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2019/04/05

Client Information

Instrument	Manufacturer	Type No.
Wireless Network Adapter	Intel	7260HMW
Wi-Fi AP 4x4 OD ext. antenna US	Nokia	WO4A-AC400

Software	Version	Manufacturer	Function
Pulse Building	N/A	Agilent	Radar Signal Generation Software
DFS Tool	V 6.9.2	Agilent	DFS Test Software

5. TEST RESULT

5.1. Summary

Company Name: Nokia Solutions and Networks
FCC ID: 2AD8UFZCWO4A1
IC: 109D-FZCWO4A1

Parameter	Limit	Test Result	Reference
UNII Detection Bandwidth Measurement	Refer Table 3-3	Pass	Section 5.3
Statistical Performance Check	Refer Table 3-3	Pass	Section 5.4

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.

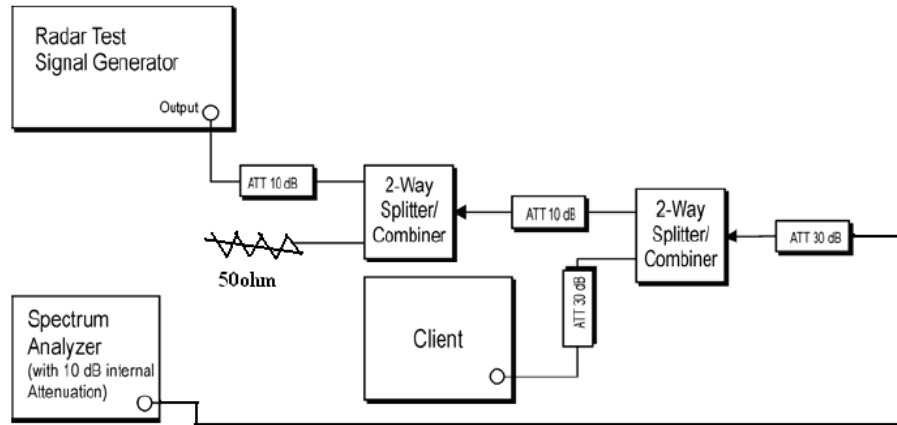


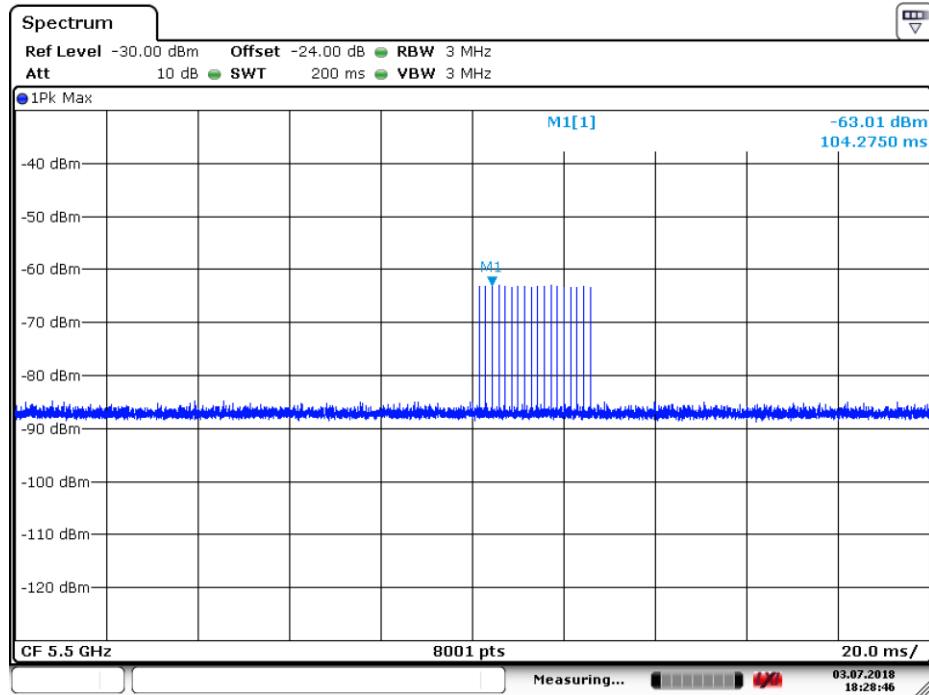
Figure 3-2: Conducted Test Setup

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.

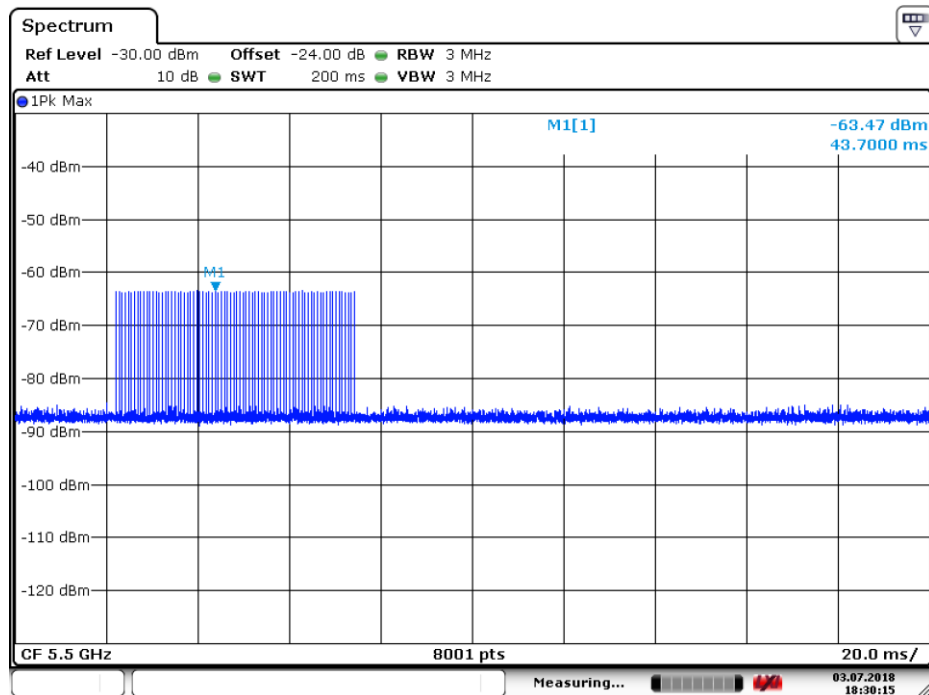
5.2.3. Cablibration Result

Radar #0 DFS detection threshold level and the burst of pulses on the Channel frequency



Date: 3 JUL 2018 18:28:47

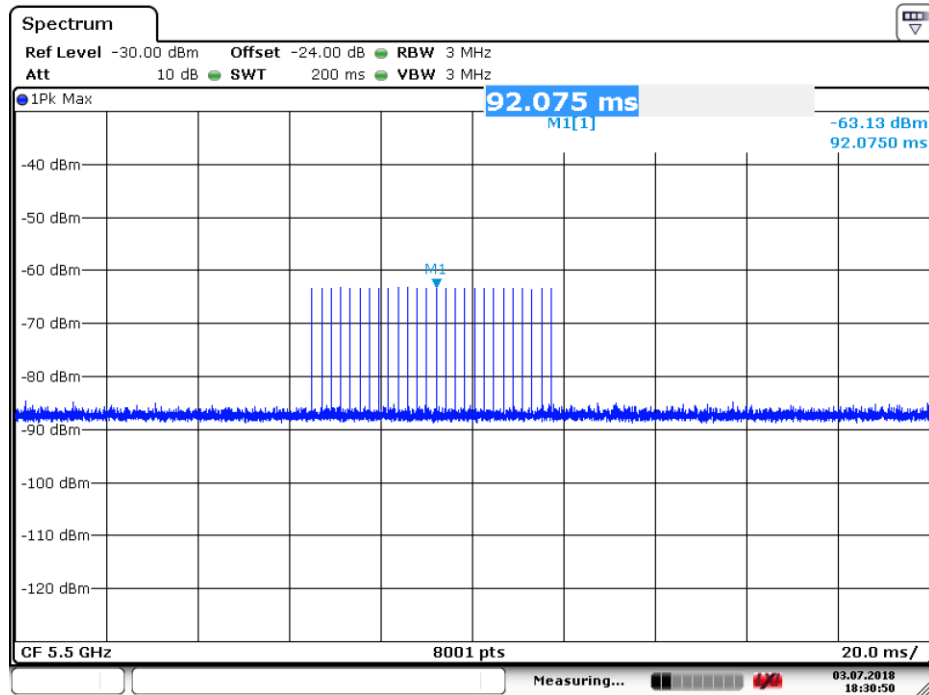
Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



Date: 3 JUL 2018 18:30:15

PRI = 678us and the number of pulses = 78

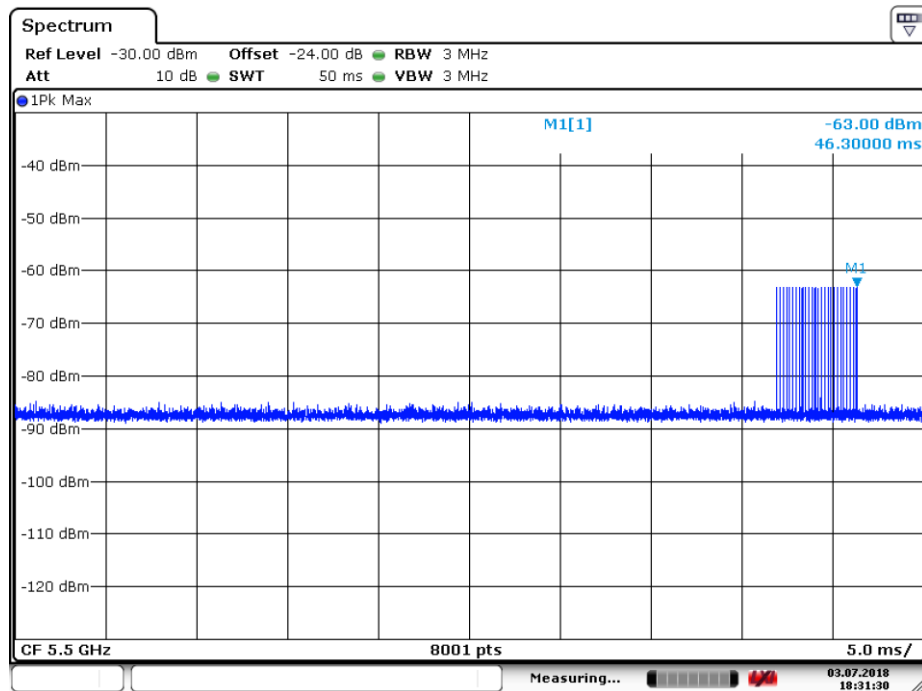
Radar #1(Test B) DFS detection threshold level and the burst of pulses on the Channel frequency



Date: 3.JUL.2018 18:30:51

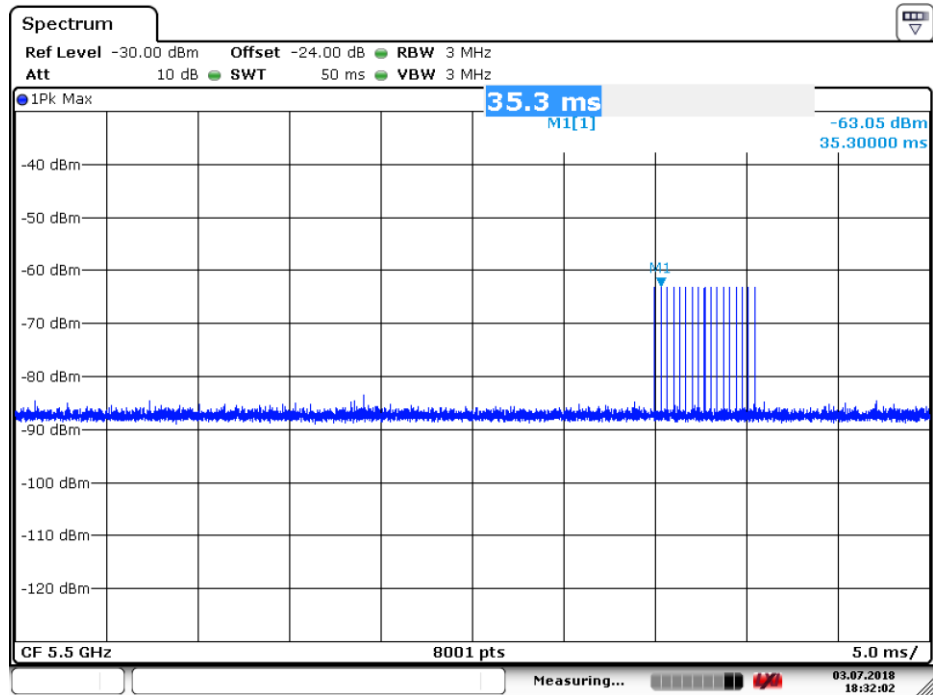
PRI = 2.091ms and the number of pulses = 26

Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



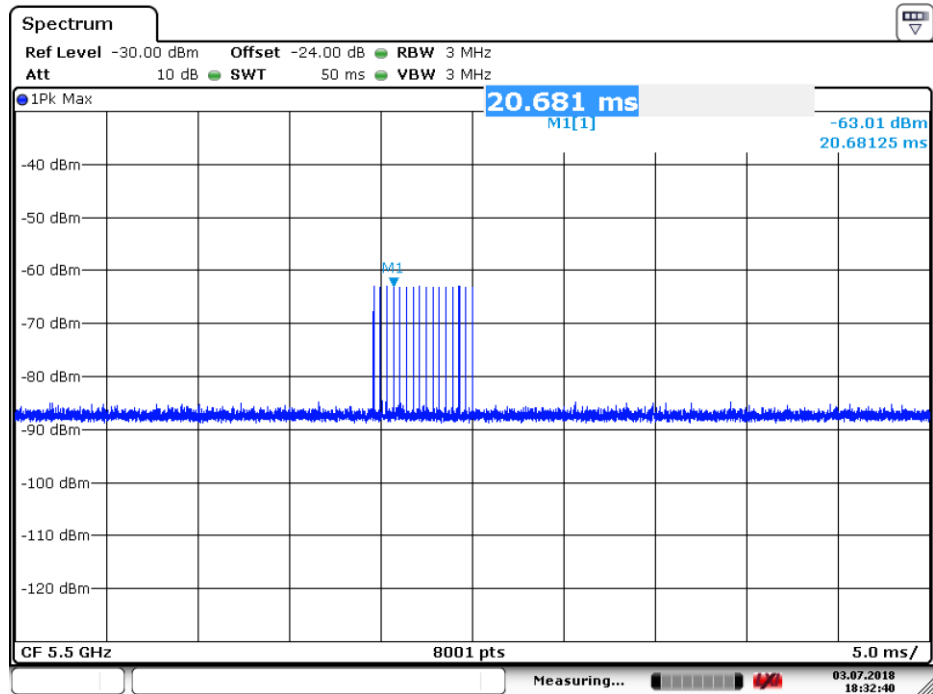
Date: 3.JUL.2018 18:31:30

Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency



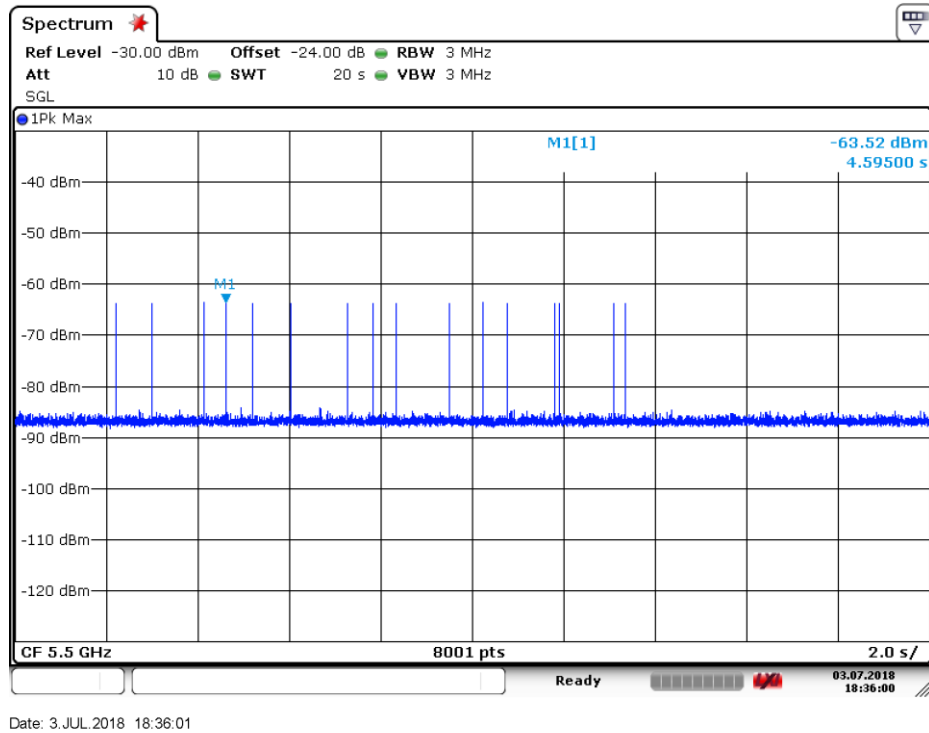
Date: 3 JUL 2018 18:32:03

Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency

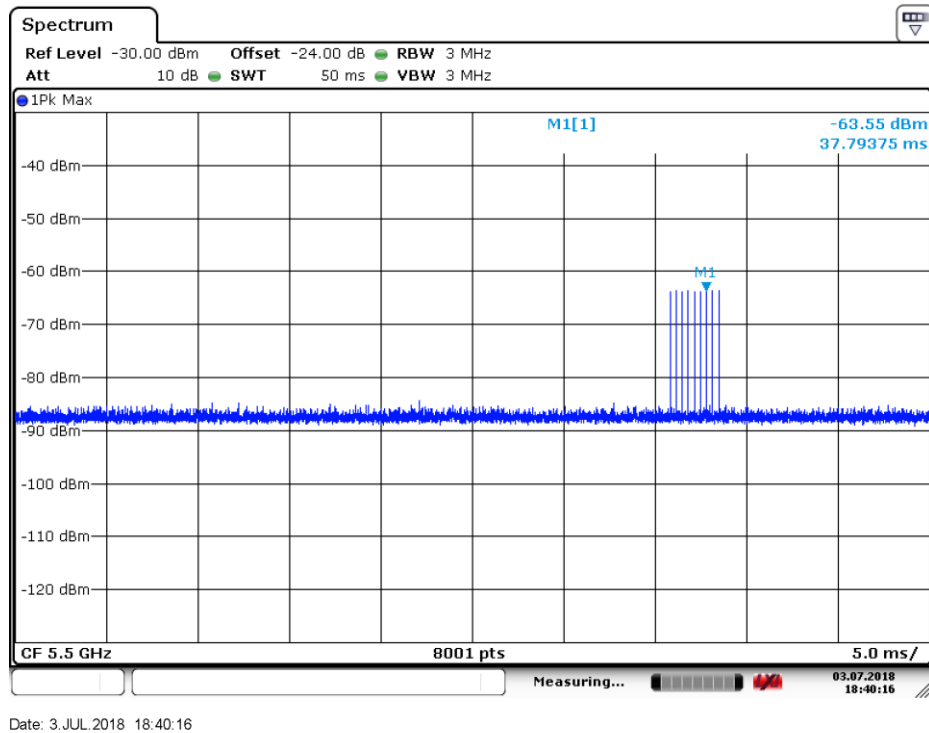


Date: 3 JUL 2018 18:32:40

Radar #5 DFS detection threshold level and 12sec long burst on the Channel frequency

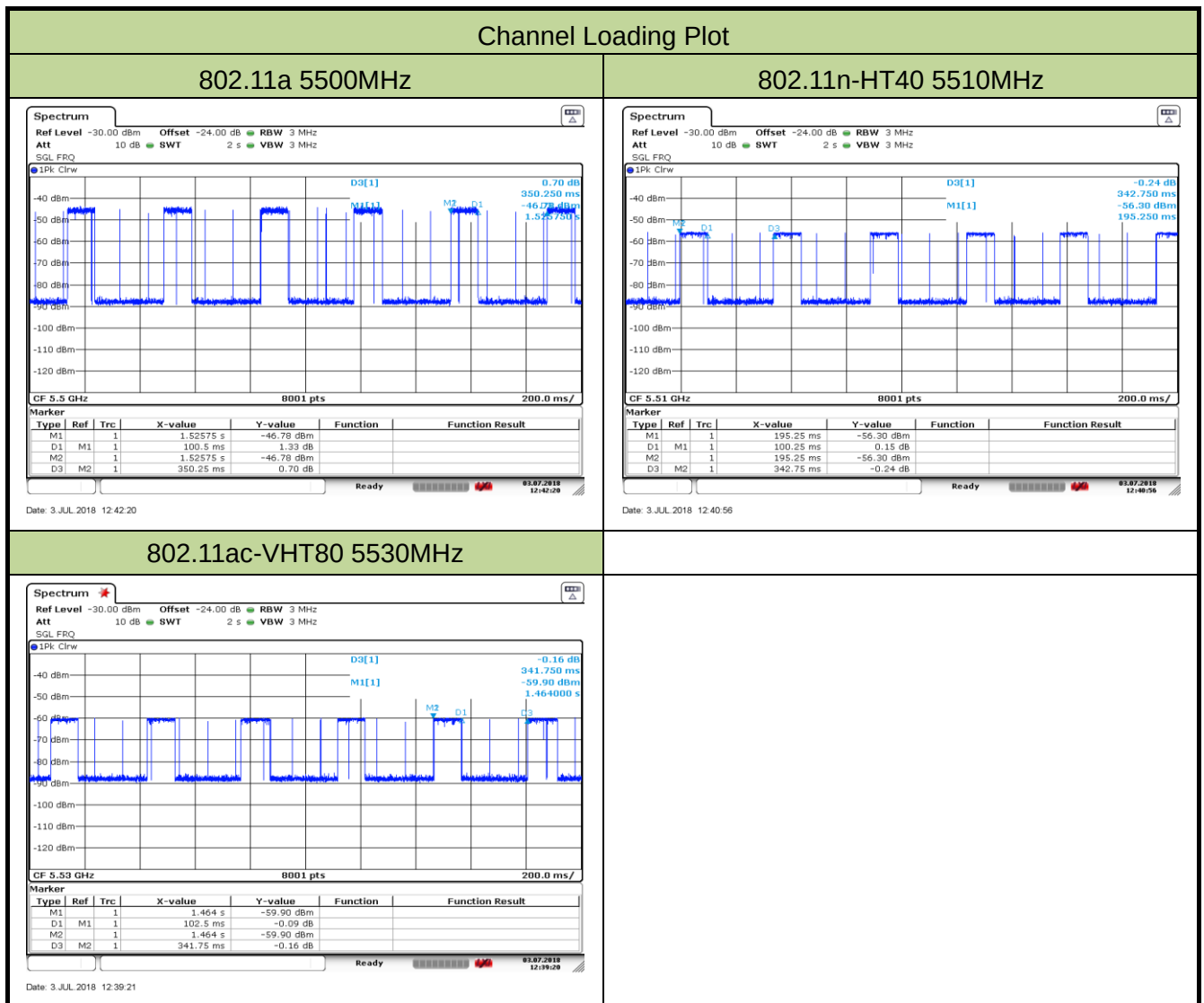


Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth



5.2.4.Channel Loading Test Result

System testing was performed with the designated MPEG test file that streams full motion video from the **Wi-Fi AP 4X4 OD ext. antenna US; Wi-Fi AP 4x4 OD omni antenna US; Wi-Fi AP 4x4 OD direct. antenna US; Wi-Fi AP 4x4 OD small omni antenna US** to the Client in full motion video mode using the media player with the V2.61 Codec package. 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).



Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11a	5500 MHz	28.69%	≥ 17%	Pass
802.11n-HT40	5510 MHz	29.25%	≥ 17%	Pass
802.11ac-VHT80	5530 MHz	29.99%	≥ 17%	Pass

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

EUT Frequency = 5500MHz for 802.11a											
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%
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 FH	1	1	1	1	1	1	1	1	1	1	100%
5510	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5509MHz - 5491MHz = 18MHz											
EUT 99% Bandwidth = 16.48MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 16.48MHz x 100% = 16.48MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 16.48MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5510MHz for 802.11n-HT40											
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	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%
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%
Detection Bandwidth = FH - FL = 5529MHz - 5492MHz = 37MHz											
EUT 99% Bandwidth = 35.91MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 35.91MHz x 100% = 35.91MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 35.91MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5530MHz for 802.11ac-VHT80											
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%
Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz											
EUT 99% Bandwidth = 75.65MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.65MHz x 100% = 75.65MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 75.65MHz. (See the 99% BW section of the RF report for further measurement details).

5.4. Statistical Performance Check Measurement

5.4.1. 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: $(Pd1 + Pd2 + Pd3 + Pd4) / 4$.

5.4.2. 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.

5.4.3. Test Result

Statistical Performance Check for 802.11a

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	758	70	1
2	5491	1	598	89	1
3	5491	1	858	62	1
4	5491	1	578	92	1
5	5491	1	918	58	1
6	5491	1	878	61	1
7	5491	1	718	74	1
8	5491	1	938	57	1
9	5491	1	538	99	1
10	5491	1	618	86	1
11	5500	1	898	59	1
12	5500	1	798	67	1
13	5500	1	738	72	1
14	5500	1	3066	18	1
15	5500	1	778	68	1
16	5500	1	1446	37	1
17	5500	1	2389	23	1
18	5500	1	1333	40	1
19	5500	1	2433	22	1
20	5500	1	903	59	1
21	5509	1	3032	18	1
22	5509	1	1910	28	1
23	5509	1	2263	24	1
24	5509	1	1603	33	1
25	5509	1	928	57	1
26	5509	1	2356	23	1
27	5509	1	1532	35	1
28	5509	1	2897	19	1
29	5509	1	1442	37	1
30	5509	1	2745	20	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	1.7	180	26	1
2	5491	2.3	222	26	1
3	5491	4.5	222	24	1
4	5491	1.9	185	25	1
5	5491	3.7	226	26	1
6	5491	4.9	193	26	1
7	5491	1.0	200	25	1
8	5491	3.4	230	26	1
9	5491	3.7	210	26	1
10	5491	1.2	225	23	1
11	5500	1.0	215	29	1
12	5500	3.1	167	27	1
13	5500	3.8	169	29	1
14	5500	1.3	180	23	1
15	5500	1.3	199	23	1
16	5500	1.1	225	26	1
17	5500	3.4	208	27	1
18	5500	3.2	195	26	1
19	5500	2.9	154	28	1
20	5500	1.4	175	25	1
21	5509	4.9	163	27	1
22	5509	2.8	199	27	1
23	5509	1.6	161	28	1
24	5509	4.6	154	26	1
25	5509	1.8	192	23	1
26	5509	3.9	213	23	1
27	5509	1.7	169	27	1
28	5509	3.6	189	29	1
29	5509	1.9	150	26	1
30	5509	1.5	172	24	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	9.3	485	17	1
2	5491	6.6	376	18	1
3	5491	9.7	290	16	1
4	5491	9.8	348	18	1
5	5491	6.4	400	17	1
6	5491	8.8	481	16	1
7	5491	8.4	465	18	1
8	5491	8.4	260	18	1
9	5491	7.0	331	18	1
10	5491	8.0	415	17	1
11	5500	6.9	368	18	1
12	5500	9.5	355	16	1
13	5500	7.7	375	18	1
14	5500	9.5	317	16	1
15	5500	7.8	489	18	1
16	5500	6.5	317	16	1
17	5500	8.0	461	18	1
18	5500	8.7	351	18	1
19	5500	9.3	387	18	1
20	5500	8.0	437	18	1
21	5509	7.1	404	16	1
22	5509	6.1	468	17	1
23	5509	9.0	314	18	1
24	5509	6.5	369	17	1
25	5509	7.7	334	16	1
26	5509	9.7	347	17	1
27	5509	7.9	297	17	1
28	5509	6.4	306	16	1
29	5509	9.7	255	17	1
30	5509	8.1	297	17	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	5491	12.6	418	12	1
2	5491	11.9	481	14	1
3	5491	12.3	348	16	1
4	5491	14.4	472	15	1
5	5491	11.2	326	13	1
6	5491	11.0	322	12	1
7	5491	15.8	459	14	1
8	5491	19.5	326	16	1
9	5491	12.2	295	16	1
10	5491	12.2	495	13	1
11	5500	17.1	390	15	1
12	5500	13.2	251	15	1
13	5500	14.2	403	12	1
14	5500	13.1	342	16	1
15	5500	17.2	301	13	1
16	5500	12.5	304	15	1
17	5500	14.6	276	14	1
18	5500	13.3	453	16	1
19	5500	17.9	387	14	1
20	5500	17.1	486	15	1
21	5509	13.4	416	12	1
22	5509	19.8	351	14	1
23	5509	18.2	294	16	1
24	5509	12.3	498	12	1
25	5509	17.1	489	13	1
26	5509	16.6	398	14	1
27	5509	18.0	439	14	1
28	5509	15.4	301	12	1
29	5509	15.9	280	13	1
30	5509	11.4	363	12	1
Detection Percentage (%)					100%

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

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



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	5496.0	1	16	5500.0	1
2	5494.0	1	17	5500.0	1
3	5499.2	1	18	5500.0	1
4	5495.6	1	19	5500.0	1
5	5499.6	1	20	5500.0	1
6	5498.8	1	21	5502.4	1
7	5494.4	1	22	5506.0	1
8	5496.8	1	23	5504.8	1
9	5497.6	1	24	5500.8	1
10	5495.2	1	25	5504.0	1
11	5500.0	1	26	5505.6	1
12	5500.0	1	27	5501.2	1
13	5500.0	1	28	5500.4	1
14	5500.0	1	29	5503.2	1
15	5500.0	1	30	5504.4	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	FW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	644388	1	10	55	1918	0	0	644388	0	799999
2	284156	2	10	55	1017	1500	0	930462	800000	1599999
3	685972	2	10	75	1642	1732	0	1618951	1600000	2399999
4	1223038	2	10	75	1222	1752	0	2845363	2400000	3199999
5	470957	2	10	50	1433	1150	0	3319294	3200000	3999999
6	1191986	3	10	90	1232	1983	1837	4513863	4000000	4799999
7	634430	1	10	60	1232	0	0	5153345	4800000	5599999
8	488459	1	10	80	1656	0	0	5643036	5600000	6399999
9	1067574	2	10	95	1866	1888	0	6712266	6400000	7199999
10	830653	1	10	60	1049	0	0	7546673	7200000	7999999
11	1051742	3	10	100	1303	1613	1164	8599464	8000000	8799999
12	606265	1	10	70	1043	0	0	9209809	8800000	9599999
13	702849	1	10	70	1742	0	0	9913701	9600000	10399999
14	1192786	1	10	90	1392	0	0	11108229	10400000	11199999
15	583358	2	10	55	1213	1150	0	11692979	11200000	11999999

Total number of pulses in waveform = 25



Type 5 Radar Waveform_2

Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	298355	1	5	65	1716	0	0	298355	0	666666
2	576250	3	5	50	1785	1547	1408	876321	666667	1333333
3	940391	1	5	70	1839	0	0	1821452	1333334	2000000
4	440000	2	5	95	1641	1557	0	2263291	2000001	2666667
5	441398	1	5	55	1224	0	0	2707887	2666668	3333334
6	857637	2	5	85	1533	1904	0	3566748	3333335	4000001
7	640151	1	5	85	1571	0	0	4210336	4000002	4666668
8	554430	2	5	70	1356	1921	0	4766337	4666669	5333335
9	1172724	1	5	85	1652	0	0	5942338	5333336	6000002
10	393097	3	5	95	1542	1676	1506	6337087	6000003	6666669
11	716442	2	5	50	1804	1030	0	7058253	6666670	7333336
12	637779	1	5	50	1355	0	0	7698866	7333337	8000003
13	480640	3	5	65	1942	1484	1687	8180861	8000004	8666670
14	996994	3	5	60	1815	1221	1466	9182968	8666671	9333337
15	519980	2	5	85	1873	1170	0	9707450	9333338	10000004
16	754366	3	5	50	1025	1416	1593	10464859	10000005	10666671
17	430754	2	5	65	1218	1844	0	10899647	10666672	11333338
18	715865	1	5	75	1902	0	0	11618574	11333339	12000005

Total number of pulses in waveform = 34

Type 5 Radar Waveform_3

Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	409865	3	18	65	1236	1896	1758	409865	0	705881
2	619397	1	18	80	1585	0	0	1034152	705882	1411763
3	785541	1	18	80	1958	0	0	1821278	1411764	2117645
4	655750	3	18	50	1119	1847	1040	2478986	2117646	2823527
5	356152	2	18	100	1431	1643	0	2839144	2823528	3529409
6	1000526	3	18	55	1807	1744	1404	3842744	3529410	4235291
7	1012736	3	18	80	1230	1870	1152	4860435	4235292	4941173
8	733343	2	18	90	1507	1085	0	5598030	4941174	5647055
9	682003	2	18	80	1758	1943	0	6282625	5647056	6352937
10	93634	3	18	85	1054	1517	1166	6379960	6352938	7058819
11	741744	1	18	60	1035	0	0	7125441	7058820	7764701
12	953042	3	18	60	1373	1699	1951	8079518	7764702	8470583
13	432885	2	18	90	1152	1980	0	8517426	8470584	9176465
14	749492	3	18	70	1849	1818	1648	9270050	9176466	9882347
15	1293507	1	18	75	1566	0	0	10568872	9882348	10588229
16	694096	3	18	60	1246	1118	1017	11264534	10588230	11294111
17	222061	2	18	90	1580	1168	0	11489976	11294112	11999969

Total number of pulses in waveform = 38

Type 5 Radar Waveform_4

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	55068	3	9	70	1925	1911	1598	55068	0	1499999
2	2694618	3	9	70	1323	1729	1413	2755120	1500000	2999999
3	458575	2	9	65	1199	1219	0	3218160	3000000	4499999
4	1345727	2	9	85	1187	1816	0	4566305	4500000	5999999
5	1648226	2	9	95	1068	1040	0	6217534	6000000	7499999
6	2375572	3	9	95	1232	1246	1812	8595214	7500000	8999999
7	777886	3	9	65	1126	1211	1287	9377390	9000000	10499999
8	1911189	1	9	75	1407	0	0	11292203	10500000	11999999

Total number of pulses in waveform = 19



Type 5 Radar Waveform_5

Num of Bursts = 14
Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	377489	3	19	50	1341	1479	1375	377489	0	857142
2	1269755	3	19	60	1720	1983	1006	1651439	857143	1714285
3	744223	3	19	70	1365	1941	1769	2400371	1714286	2571428
4	409944	2	19	85	1883	1337	0	2815390	2571429	3428571
5	796233	2	19	100	1314	1597	0	3614843	3428572	4285714
6	1039302	2	19	65	1523	1144	0	4657056	4285715	5142857
7	1207897	1	19	60	1893	0	0	5867620	5142858	6000000
8	860330	1	19	65	1605	0	0	6729843	6000001	6857143
9	189506	2	19	100	1901	1304	0	6920954	6857144	7714286
10	1365218	3	19	70	1029	1724	1772	8289377	7714287	8571429
11	949094	2	19	60	1864	1189	0	9242996	8571430	9428572
12	631190	2	19	100	1807	1630	0	9877239	9428573	10285715
13	620811	2	19	65	1172	1606	0	10501487	10285716	11142858
14	962369	2	19	95	1237	1968	0	11466634	11142859	12000001

Total number of pulses in waveform = 30

Type 5 Radar Waveform_6

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	399385	3	17	80	1935	1575	1954	399385	0	666666
2	545896	1	17	60	1417	0	0	950745	666667	1333333
3	699694	2	17	75	1437	1193	0	1651856	1333334	2000000
4	820645	2	17	70	1969	1835	0	2475131	2000001	2666667
5	495767	3	17	50	1883	1248	1885	2974702	2666668	3333334
6	485920	1	17	100	1034	0	0	3465638	3333335	4000001
7	686429	3	17	50	1289	1379	1190	4133101	4000002	4666668
8	1062726	3	17	85	1687	1293	1187	5199685	4666669	5333335
9	756480	3	17	95	1635	1321	1798	5860332	5333336	6000002
10	389642	1	17	90	1165	0	0	6354728	6000003	6666669
11	320675	1	17	95	1218	0	0	6676568	6666670	7333336
12	882131	1	17	55	1929	0	0	7559917	7333337	8000003
13	897744	1	17	95	1741	0	0	8459590	8000004	8666670
14	423201	2	17	85	1734	1721	0	8884532	8666671	9333337
15	872926	3	17	55	1429	1265	1172	9760913	9333338	10000004
16	748482	1	17	75	1065	0	0	10513261	10000005	10666671
17	632982	3	17	50	1425	1045	1281	11147308	10666672	11333338
18	591166	2	17	100	1586	1301	0	11742225	11333339	12000005

Total number of pulses in waveform = 36

Type 5 Radar Waveform_7

Num of Bursts = 9
Burst Interval (us) = 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1172132	2	6	80	1785	1698	0	1172132	0	1333332
2	267129	3	6	55	1337	1387	1146	1442744	1333333	2666665
3	1789261	3	6	90	1943	1980	1961	3235875	2666666	3999998
4	1955575	3	6	75	1072	1572	1295	5197334	3999999	5333331
5	746150	2	6	75	1687	1842	0	5947423	5333332	6666664
6	922624	2	6	70	1870	1430	0	6873576	6666665	7999997
7	1780484	2	6	85	1646	1356	0	8657360	7999998	9333330
8	1460705	2	6	65	1590	1068	0	10121067	9333331	10666663
9	1456824	3	6	100	1322	1706	1056	11580549	10666664	11999996

Total number of pulses in waveform = 22

**Type 5 Radar Waveform_8**

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	618493	2	12	50	1145	1338	0	618493	0	923076
2	754616	3	12	75	1259	1888	1723	1375592	923077	1846153
3	1222911	1	12	85	1151	0	0	2603373	1846154	2769230
4	755103	2	12	55	1215	1258	0	3359627	2769231	3692307
5	597885	2	12	50	1273	1793	0	3959985	3692308	4615384
6	1141179	2	12	65	1554	1895	0	5104230	4615385	5538461
7	655879	1	12	90	1942	0	0	5763558	5538462	6461538
8	1583440	1	12	100	1389	0	0	7348940	6461539	7384615
9	411548	1	12	85	1634	0	0	7761877	7384616	8307692
10	918751	3	12	85	1042	1603	1570	8682262	8307693	9230769
11	1196775	2	12	55	1606	1911	0	9883252	9230770	10153846
12	944834	2	12	55	1186	1266	0	10831603	10153847	11076923
13	563629	1	12	55	1112	0	0	11397684	11076924	12000000

Total number of pulses in waveform = 23

Type 5 Radar Waveform_9

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	203152	1	14	90	1824	0	0	203152	0	799999
2	1204385	3	14	70	1995	1058	1640	1409361	800000	1599999
3	956769	1	14	95	1717	0	0	2370823	1600000	2399999
4	189946	1	14	55	1576	0	0	2562486	2400000	3199999
5	1120959	1	14	100	1847	0	0	3685021	3200000	3999999
6	964945	3	14	100	1156	1843	1349	4651813	4000000	4799999
7	377616	2	14	90	1206	1288	0	5033777	4800000	5599999
8	1057266	3	14	95	1961	1188	1479	6093537	5600000	6399999
9	338038	2	14	70	1666	1338	0	6436203	6400000	7199999
10	1021799	2	14	100	1585	1892	0	7461006	7200000	7999999
11	1223330	1	14	70	1015	0	0	8687813	8000000	8799999
12	713440	2	14	85	1421	1702	0	9402268	8800000	9599999
13	718920	3	14	75	1749	1275	1739	10124311	9600000	10399999
14	412788	2	14	65	1668	1876	0	10541862	10400000	11199999
15	905118	3	14	65	1462	1603	1544	11450524	11200000	11999999

Total number of pulses in waveform = 30

Type 5 Radar Waveform_10

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	191214	2	8	55	1865	1951	0	191214	0	923076
2	1001555	1	8	70	1728	0	0	1196585	923077	1846153
3	818368	1	8	55	1255	0	0	2016681	1846154	2769230
4	1305106	1	8	85	1557	0	0	3323042	2769231	3692307
5	1049538	1	8	75	1784	0	0	4374137	3692308	4615384
6	351832	2	8	100	1529	1489	0	4727753	4615385	5538461
7	1296259	2	8	85	1078	1075	0	6027030	5538462	6461538
8	1122221	1	8	60	1765	0	0	7151404	6461539	7384615
9	743407	1	8	60	1744	0	0	7896576	7384616	8307692
10	627007	2	8	90	1058	1488	0	8525327	8307693	9230769
11	904980	1	8	90	1275	0	0	9432853	9230770	10153846
12	1450955	3	8	70	1166	1052	1697	10885083	10153847	11076923
13	776521	2	8	60	1102	1460	0	11665519	11076924	12000000

Total number of pulses in waveform = 20



Type 5 Radar Waveform_11

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	188376	3	9	70	1319	1439	1251	188376	0	799999
2	1218637	1	9	65	1267	0	0	1411022	800000	1599999
3	393728	2	9	75	1017	1014	0	1806017	1600000	2399999
4	694121	3	9	90	1563	1618	1104	2502169	2400000	3199999
5	1191880	1	9	70	1968	0	0	3698334	3200000	3999999
6	476630	3	9	60	1109	1446	1973	4176932	4000000	4799999
7	681547	3	9	90	1551	1772	1350	4863007	4800000	5599999
8	985024	3	9	65	1353	1846	1252	5852704	5600000	6399999
9	695040	2	9	85	1091	1217	0	6552195	6400000	7199999
10	865522	3	9	65	1748	1988	1535	7420025	7200000	7999999
11	1339539	2	9	75	1890	1464	0	8764835	8000000	8799999
12	743162	3	9	60	1132	2000	1947	9511351	8800000	9599999
13	291848	2	9	75	1552	1869	0	9808278	9600000	10399999
14	1214737	1	9	55	1830	0	0	11026436	10400000	11199999
15	279618	1	9	100	1073	0	0	11307884	11200000	11999999

Total number of pulses in waveform = 33

Type 5 Radar Waveform_12

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	608466	3	18	95	1758	1708	1745	608466	0	923076
2	585693	3	18	85	1038	1675	1491	1199370	923077	1846153
3	1105973	3	18	90	1817	1154	1915	2309547	1846154	2769230
4	1237247	2	18	85	1997	1156	0	3551680	2769231	3692307
5	842613	1	18	90	1821	0	0	4397446	3692308	4615384
6	762591	1	18	70	1245	0	0	5161858	4615385	5538461
7	957821	1	18	95	1764	0	0	6120924	5538462	6461538
8	894333	1	18	60	1501	0	0	7017021	6461539	7384615
9	417716	3	18	65	1034	1284	1367	7436238	7384616	8307692
10	1197935	3	18	65	1199	1366	1704	8637858	8307693	9230769
11	1339099	3	18	85	1890	1226	1890	9981226	9230770	10153846
12	384171	2	18	75	1886	1978	0	10370403	10153847	11076923
13	1207646	2	18	60	1477	1350	0	11581913	11076924	12000000

Total number of pulses in waveform = 28

Type 5 Radar Waveform_13

Num of Bursts = 14
Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	394068	2	12	50	1198	1668	0	394068	0	857142
2	1246675	2	12	85	1960	1846	0	1643609	857143	1714285
3	253581	3	12	100	1059	1374	1226	1900996	1714286	2571428
4	1202960	3	12	85	1655	1099	1330	3107615	2571429	3428571
5	504777	3	12	60	1762	1372	1792	3616476	3428572	4285714
6	698626	2	12	65	1735	1590	0	4320028	4285715	5142857
7	1545321	3	12	65	1660	1106	1490	5868674	5142858	6000000
8	368807	1	12	80	1490	0	0	6241737	6000001	6857143
9	1115578	1	12	95	1357	0	0	7358805	6857144	7714286
10	520347	1	12	65	1173	0	0	7880509	7714287	8571429
11	1508670	1	12	50	1311	0	0	9390352	8571430	9428572
12	251419	2	12	65	1476	1641	0	9643082	9428573	10285715
13	991353	2	12	75	1415	1935	0	10637552	10285716	11142858
14	766086	3	12	60	1132	1459	1188	11406988	11142859	12000001

Total number of pulses in waveform = 29

**Type 5 Radar Waveform_14**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	288657	3	6	100	1648	1210	1729	288657	0	1199999
2	1390648	2	6	55	1393	1990	0	1683892	1200000	2399999
3	1045367	3	6	70	1581	1120	1306	2732642	2400000	3599999
4	1096641	3	6	75	1229	1424	1458	3833290	3600000	4799999
5	1281283	2	6	70	1093	1671	0	5118684	4800000	5999999
6	2019556	3	6	65	1274	1249	1541	7141004	6000000	7199999
7	662719	1	6	90	1591	0	0	7807787	7200000	8399999
8	1573446	3	6	55	1163	1678	1711	9382824	8400000	9599999
9	349755	1	6	65	1458	0	0	9737131	9600000	10799999
10	1732060	1	6	60	1800	0	0	11470649	10800000	11999999

Total number of pulses in waveform = 22

Type 5 Radar Waveform_15

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	300747	1	17	75	1432	0	0	300747	0	799999
2	970396	2	17	80	1825	1551	0	1272575	800000	1599999
3	347146	2	17	90	1020	1163	0	1623097	1600000	2399999
4	1321154	3	17	50	1093	1048	1939	2946434	2400000	3199999
5	990320	1	17	75	1387	0	0	3940834	3200000	3999999
6	580491	1	17	60	1457	0	0	4522712	4000000	4799999
7	1022726	3	17	85	1681	1444	1959	5546895	4800000	5599999
8	597445	2	17	70	1884	1153	0	6149424	5600000	6399999
9	910152	3	17	65	1698	1339	1124	7062613	6400000	7199999
10	926425	3	17	100	1582	1506	1731	7993199	7200000	7999999
11	383769	2	17	100	1655	1908	0	8381787	8000000	8799999
12	1204647	2	17	60	1351	1758	0	9589997	8800000	9599999
13	125199	1	17	90	1991	0	0	9718305	9600000	10399999
14	1357740	3	17	60	1781	1937	1860	11078036	10400000	11199999
15	304304	3	17	60	1300	1738	1187	11387918	11200000	11999999

Total number of pulses in waveform = 32

Type 5 Radar Waveform_16

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	434384	1	8	70	1549	0	0	434384	0	999999
2	807372	1	8	65	1962	0	0	1243305	1000000	1999999
3	754889	1	8	65	1353	0	0	2000156	2000000	2999999
4	1111836	2	8	85	1430	1128	0	3113345	3000000	3999999
5	1294795	3	8	70	1399	1076	1077	4410698	4000000	4999999
6	911809	1	8	90	1343	0	0	5326059	5000000	5999999
7	785701	2	8	75	1816	1571	0	6113103	6000000	6999999
8	1364886	2	8	75	1147	1074	0	7481376	7000000	7999999
9	918320	2	8	75	1826	1633	0	8401917	8000000	8999999
10	1363907	3	8	85	1134	1356	1660	9769283	9000000	9999999
11	769496	2	8	75	1361	1336	0	10542929	10000000	10999999
12	1446662	1	8	50	1208	0	0	11992288	11000000	11999999

Total number of pulses in waveform = 21

**Type 5 Radar Waveform_17**

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	772464	2	19	90	1256	1071	0	772464	0	999999
2	494073	1	19	65	1483	0	0	1268864	1000000	1999999
3	1533448	3	19	65	1263	1508	1145	2803795	2000000	2999999
4	381727	1	19	60	1134	0	0	3189438	3000000	3999999
5	1457108	1	19	65	1103	0	0	4647680	4000000	4999999
6	431258	2	19	70	1189	1912	0	5080041	5000000	5999999
7	1280808	2	19	80	1372	1653	0	6363950	6000000	6999999
8	995978	1	19	95	1312	0	0	7362953	7000000	7999999
9	1006464	1	19	75	1442	0	0	8370729	8000000	8999999
10	1337840	3	19	55	1288	1142	1179	9710011	9000000	9999999
11	964905	3	19	85	1692	1773	1081	10678525	10000000	10999999
12	820320	3	19	75	1335	1259	1935	11503391	11000000	11999999

Total number of pulses in waveform = 23

Type 5 Radar Waveform_18

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	744410	2	10	95	1055	1064	0	744410	0	999999
2	725499	1	10	95	1187	0	0	1472028	1000000	1999999
3	1512937	2	10	100	1538	1393	0	2986152	2000000	2999999
4	127742	3	10	70	1588	1520	1660	3116825	3000000	3999999
5	1331702	1	10	85	1292	0	0	4453295	4000000	4999999
6	1080345	3	10	60	1183	1149	1270	5534932	5000000	5999999
7	1433914	3	10	75	1007	1130	1028	6972448	6000000	6999999
8	276705	3	10	65	1503	1328	1696	7252318	7000000	7999999
9	1410923	1	10	50	1390	0	0	8667768	8000000	8999999
10	1292560	1	10	55	1930	0	0	9961718	9000000	9999999
11	884048	3	10	60	1405	1312	1860	10847696	10000000	10999999
12	1015519	2	10	85	1540	1660	0	11867792	11000000	11999999

Total number of pulses in waveform = 25

Type 5 Radar Waveform_19

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	389611	1	5	75	1493	0	0	389611	0	923076
2	1366053	2	5	75	1390	1608	0	1757157	923077	1846153
3	151697	3	5	70	1389	1688	1311	1911852	1846154	2769230
4	995171	2	5	80	1545	1407	0	2911411	2769231	3692307
5	1286995	3	5	80	1898	1817	1902	4201358	3692308	4615384
6	773217	2	5	75	1975	1504	0	4980192	4615385	5538461
7	1128813	2	5	70	1443	1075	0	6112484	5538462	6461538
8	480667	2	5	70	1070	1694	0	6595669	6461539	7384615
9	1521819	1	5	100	1685	0	0	8120252	7384616	8307692
10	785514	3	5	90	1643	1326	1017	8907451	8307693	9230769
11	1145979	3	5	50	1197	1794	1036	10057416	9230770	10153846
12	360235	2	5	95	1373	1664	0	10421678	10153847	11076923
13	1301168	2	5	60	1033	1166	0	11725883	11076924	12000000

Total number of pulses in waveform = 28



Type 5 Radar Waveform_20

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	995835	1	14	85	1215	0	0	995835	0	1090908
2	783880	1	14	60	1640	0	0	1780930	1090909	2181817
3	863584	3	14	85	1356	1131	1264	2646154	2181818	3272726
4	1252667	2	14	80	1891	1745	0	3902572	3272727	4363635
5	566070	2	14	75	1093	1166	0	4472278	4363636	5454544
6	1072481	1	14	55	1197	0	0	5547018	5454545	6545453
7	2067064	2	14	60	1893	1289	0	7615279	6545454	7636362
8	201226	1	14	60	1400	0	0	7819687	7636363	8727271
9	1605251	2	14	95	1388	1280	0	9426338	8727272	9818180
10	1057052	1	14	55	1363	0	0	10486058	9818181	10909089
11	1335775	3	14	60	1608	1378	1387	11823196	10909090	11999998

Total number of pulses in waveform = 19

Type 5 Radar Waveform_21

Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	642365	2	14	50	1009	1876	0	642365	0	705881
2	219638	3	14	65	1973	1535	1671	864888	705882	1411763
3	767899	2	14	80	1189	1654	0	1637966	1411764	2117645
4	1019545	1	14	95	1344	0	0	2660354	2117646	2823527
5	188580	1	14	85	1598	0	0	2850278	2823528	3529409
6	1184381	1	14	95	1310	0	0	4036257	3529410	4235291
7	729207	3	14	55	1719	1053	1597	4766774	4235292	4941173
8	833303	2	14	85	1898	1112	0	5604446	4941174	5647055
9	306093	1	14	85	1823	0	0	5914149	5647056	6352937
10	834263	3	14	100	1540	1630	1868	6750235	6352938	7058819
11	968875	2	14	65	1655	1746	0	7724148	7058820	7764701
12	355680	2	14	50	1384	1547	0	8083229	7764702	8470583
13	555874	3	14	55	1182	1484	1526	8642034	8470584	9176465
14	876813	2	14	80	1032	1390	0	9523039	9176466	9882347
15	734532	1	14	100	1600	0	0	10259993	9882348	10588229
16	763416	3	14	95	1303	1390	1624	11025009	10588230	11294111
17	484490	3	14	85	1806	1784	1304	11513816	11294112	11999999

Total number of pulses in waveform = 35

Type 5 Radar Waveform_22

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	396496	2	5	95	1866	1620	0	396496	0	799999
2	462230	2	5	100	1215	1226	0	8622212	800000	1599999
3	1262819	1	5	100	1283	0	0	2127472	1600000	2399999
4	940576	1	5	50	1629	0	0	3069331	2400000	3199999
5	245852	1	5	100	1088	0	0	3316812	3200000	3999999
6	1201742	3	5	85	1154	1444	1017	4519642	4000000	4799999
7	863618	2	5	100	1442	1403	0	5386875	4800000	5599999
8	917086	2	5	75	1769	1450	0	6306806	5600000	6399999
9	323747	1	5	50	1304	0	0	6633772	6400000	7199999
10	1119544	2	5	60	1047	1740	0	7754620	7200000	7999999
11	690477	2	5	55	1271	1574	0	8447884	8000000	8799999
12	614186	1	5	65	1951	0	0	9064915	8800000	9599999
13	590070	3	5	85	1648	1720	1107	9656936	9600000	10399999
14	778599	3	5	50	1729	1754	1988	10440010	10400000	11199999
15	986622	2	5	65	1336	1969	0	11432103	11200000	11999999

Total number of pulses in waveform = 28

**Type 5 Radar Waveform_23**Num of Bursts = 14
Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	630069	3	8	50	1313	1652	1462	630069	0	857142
2	859507	1	8	65	1100	0	0	1494003	857143	1714285
3	401993	2	8	65	1103	1132	0	1897096	1714286	2571428
4	1460126	2	8	55	1232	1134	0	3359457	2571429	3428571
5	539565	3	8	65	1063	1718	1811	3901388	3428572	4285714
6	512316	3	8	80	1083	1110	1841	4418296	4285715	5142857
7	881641	3	8	90	1594	1102	1107	5303971	5142858	6000000
8	1501708	2	8	55	1234	1013	0	6809482	6000001	6857143
9	418397	3	8	75	1121	1424	1864	7230126	6857144	7714286
10	1236335	1	8	55	1921	0	0	8470870	7714287	8571429
11	828689	3	8	65	1077	1186	1444	9301480	8571430	9428572
12	665503	1	8	80	1459	0	0	9970690	9428573	10285715
13	1003797	1	8	100	1811	0	0	10975946	10285716	11142858
14	945309	3	8	80	1119	1528	1953	11923066	11142859	12000001

Total number of pulses in waveform = 31

Type 5 Radar Waveform_24Num of Bursts = 13
Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	543039	3	18	60	1027	1301	1388	543039	0	923076
2	1213786	1	18	90	1755	0	0	1760541	923077	1846153
3	622238	3	18	100	1816	1864	1670	2384534	1846154	2769230
4	572840	1	18	70	1643	0	0	2962724	2769231	3692307
5	930550	3	18	60	1227	1980	1015	3894917	3692308	4615384
6	1257648	1	18	75	1778	0	0	5156787	4615385	5538461
7	1170535	3	18	60	1364	1537	1198	6329100	5538462	6461538
8	173508	2	18	65	1725	1280	0	6506707	6461539	7384615
9	1608155	2	18	65	1525	1686	0	8117867	7384616	8307692
10	438900	1	18	65	1803	0	0	8559978	8307693	9230769
11	1034439	1	18	50	1584	0	0	9596220	9230770	10153846
12	613995	2	18	100	1519	1816	0	10211799	10153847	11076923
13	1484620	2	18	100	1280	1134	0	11699754	11076924	12000000

Total number of pulses in waveform = 25

Type 5 Radar Waveform_25Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	845418	3	10	55	1449	1301	1095	845418	0	999999
2	423849	2	10	60	1946	1121	0	1273112	1000000	1999999
3	1381041	3	10	60	1051	1994	1452	2657220	2000000	2999999
4	1010659	3	10	70	1722	1351	1591	3672376	3000000	3999999
5	374378	2	10	95	1698	1404	0	4051418	4000000	4999999
6	1123358	3	10	50	1435	1923	1681	5177878	5000000	5999999
7	1432738	1	10	60	1752	0	0	6615655	6000000	6999999
8	428965	3	10	95	1387	1559	1040	7046372	7000000	7999999
9	1012876	2	10	90	1745	1738	0	8063234	8000000	8999999
10	969127	2	10	80	1736	1735	0	9035844	9000000	9999999
11	996016	3	10	80	1354	1682	1659	10035331	10000000	10999999
12	1756624	2	10	100	1843	1854	0	11796650	11000000	11999999

Total number of pulses in waveform = 29



Type 5 Radar Waveform_26

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1006667	2	6	100	1804	1228	0	1006667	0	1199999
2	371047	2	6	50	1664	1865	0	1380746	1200000	2399999
3	2119616	1	6	55	1522	0	0	3503891	2400000	3599999
4	710466	3	6	70	1480	1827	1351	4215879	3600000	4799999
5	891631	2	6	50	1487	1549	0	5112168	4800000	5999999
6	2034965	2	6	85	1540	1833	0	7150169	6000000	7199999
7	792522	1	6	70	1592	0	0	7946064	7200000	8399999
8	1234027	2	6	80	1664	1250	0	9181683	8400000	9599999
9	1391064	2	6	80	1739	1007	0	10575661	9600000	10799999
10	782687	2	6	70	1733	1302	0	11361094	10800000	11999999

Total number of pulses in waveform = 19

Type 5 Radar Waveform_27

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	173214	2	17	95	1348	1066	0	173214	0	799999
2	1335384	3	17	50	1841	1212	1294	1511012	800000	1599999
3	354374	1	17	60	1740	0	0	1869733	1600000	2399999
4	1179181	3	17	95	1920	1376	1353	3050654	2400000	3199999
5	314909	3	17	75	1948	1845	1594	3370212	3200000	3999999
6	665255	1	17	100	1519	0	0	4040854	4000000	4799999
7	1099036	3	17	80	1922	1230	1272	5141409	4800000	5599999
8	752340	2	17	75	1032	1807	0	5898173	5600000	6399999
9	1157444	3	17	90	1417	1455	1400	7058456	6400000	7199999
10	350285	2	17	50	1437	1832	0	7413013	7200000	7999999
11	1119779	1	17	95	1189	0	0	8536061	8000000	8799999
12	647778	2	17	75	1573	1228	0	9185028	8800000	9599999
13	486562	3	17	80	1950	1826	1883	9674391	9600000	10399999
14	1288465	1	17	50	1448	0	0	10968515	10400000	11199999
15	431648	2	17	50	1529	1186	0	11401611	11200000	11999999

Total number of pulses in waveform = 32

Type 5 Radar Waveform_28

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	544354	1	19	50	1901	0	0	544354	0	631578
2	500074	2	19	55	1289	1915	0	1046329	631579	1263157
3	598126	2	19	55	1599	1021	0	1647659	1263158	1894736
4	520167	3	19	90	1325	1277	1919	2170446	1894737	2526315
5	436296	3	19	85	1895	1619	1550	2611263	2526316	3157894
6	767144	1	19	50	1780	0	0	3383471	3157895	3789473
7	467517	1	19	85	1346	0	0	3852768	3789474	4421052
8	894516	2	19	50	1761	1106	0	4748630	4421053	5052631
9	419247	3	19	55	1035	1064	1676	5170744	5052632	5684210
10	691519	1	19	55	1558	0	0	5866038	5684211	6315789
11	738139	3	19	50	1181	1774	1857	6605735	6315790	6947368
12	809153	3	19	55	1727	1206	1671	7419700	6947369	7578947
13	651545	2	19	85	1780	1700	0	8075849	7578948	8210526
14	753342	3	19	95	1733	1106	1145	8832671	8210527	8842105
15	291497	1	19	60	1592	0	0	9128152	8842106	9473684
16	880033	2	19	95	1277	1464	0	10009777	9473685	10105263
17	281467	1	19	60	1693	0	0	10293985	10105264	10736842
18	783467	2	19	95	1427	1050	0	11079145	10736843	11368421
19	410671	1	19	90	1933	0	0	11492293	11368422	12000000

Total number of pulses in waveform = 37

**Type 5 Radar Waveform_29**

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	979640	3	12	95	1253	1412	1566	979640	0	1090908
2	879589	2	12	70	1385	1868	0	1863460	1090909	2181817
3	1129360	3	12	100	1217	1069	1386	2996073	2181818	3272726
4	717409	3	12	55	1182	1953	1212	3717154	3272727	4363635
5	1531753	3	12	50	1671	1752	1080	5253254	4363636	5454544
6	1227625	1	12	50	1233	0	0	6485382	5454545	6545453
7	850435	1	12	65	1810	0	0	7337050	6545454	7636362
8	1313459	3	12	75	1235	1663	1976	8652319	7636363	8727271
9	735554	1	12	80	1304	0	0	9392747	8727272	9818180
10	620269	3	12	80	1589	1659	1566	10014320	9818181	10909089
11	1350145	1	12	55	1959	0	0	11369279	10909090	11999998

Total number of pulses in waveform = 24

Type 5 Radar Waveform_30

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	635187	2	9	50	1172	1584	0	635187	0	999999
2	1267886	3	9	50	1416	1020	1693	1905829	1000000	1999999
3	333860	2	9	55	1865	1934	0	2243818	2000000	2999999
4	1694864	1	9	90	1075	0	0	3942481	3000000	3999999
5	528362	2	9	70	1029	1410	0	4471918	4000000	4999999
6	1229454	3	9	60	1235	1247	1471	5703811	5000000	5999999
7	648292	1	9	50	1664	0	0	6356056	6000000	6999999
8	1247106	1	9	75	1687	0	0	7604826	7000000	7999999
9	507191	1	9	60	1980	0	0	8113704	8000000	8999999
10	1620085	1	9	90	1603	0	0	9735769	9000000	9999999
11	1185966	1	9	55	1971	0	0	10923338	10000000	10999999
12	722971	1	9	55	1518	0	0	11648280	11000000	11999999

Total number of pulses in waveform = 19

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	1	16	5500	1
2	5491	1	17	5500	1
3	5491	1	18	5500	1
4	5491	1	19	5500	1
5	5491	1	20	5500	1
6	5491	1	21	5509	1
7	5491	1	22	5509	1
8	5491	1	23	5509	1
9	5491	1	24	5509	1
10	5491	1	25	5509	1
11	5500	1	26	5509	1
12	5500	1	27	5509	1
13	5500	1	28	5509	1
14	5500	1	29	5509	1
15	5500	1	30	5509	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	5503	9	10	5474	30
7	5483	21	21	5490	63
15	5520	45	53	5482	159
16	5473	48	66	5472	198
34	5509	102	73	5495	219
37	5493	111	84	5468	252
47	5513	141	89	5493	267
49	5478	147	--	--	--
58	5467	174	--	--	--
78	5491	234	--	--	--
96	5502	288	--	--	--
98	5515	294	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5514	6	4	5504	12
14	5519	42	6	5464	18
22	5480	66	26	5462	78
24	5503	72	38	5519	114
31	5481	93	41	5461	123
39	5491	117	42	5471	126
52	5490	156	45	5485	135
53	5495	159	49	5463	147
61	5462	183	53	5489	159
71	5513	213	56	5473	168
72	5474	216	64	5477	192
80	5461	240	67	5510	201
86	5509	258	70	5515	210
89	5464	267	77	5480	231
93	5475	279	99	5466	297

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5520	9	10	5507	30
8	5481	24	15	5479	45
10	5488	30	19	5476	57
12	5466	36	44	5472	132
20	5483	60	53	5469	159
29	5495	87	60	5481	180
43	5502	129	61	5497	183
46	5518	138	78	5462	234
52	5487	156	90	5461	270
55	5491	165	95	5513	285
57	5501	171			
61	5489	183	--	--	--
63	5486	189	--	--	--
64	5521	192	--	--	--
73	5469	219	--	--	--
77	5479	231	--	--	--
83	5477	249	--	--	--
87	5480	261	--	--	--
91	5513	273	--	--	--
96	5484	288	--	--	--
99	5499	297	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5520	9	0	5499	0
5	5499	15	1	5506	3
12	5496	36	19	5480	57
18	5489	54	23	5504	69
21	5491	63	31	5509	93
35	5518	105	32	5464	96
36	5482	108	46	5519	138
45	5501	135	47	5477	141
54	5519	162	66	5462	198
55	5485	165	98	5496	294
69	5462	207	--	--	--
81	5474	243	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5496	12	1	5471	3
9	5481	27	13	5486	39
12	5516	36	17	5497	51
21	5476	63	30	5487	90
62	5461	186	36	5504	108
86	5489	258	37	5468	111
--	--	--	42	5464	126
--	--	--	46	5512	138
--	--	--	50	5462	150
--	--	--	75	5501	225
--	--	--	78	5489	234
--	--	--	86	5493	258
--	--	--	89	5469	267
--	--	--	95	5495	285

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
7	5492	21	0	5490	0
17	5512	51	4	5496	12
20	5480	60	9	5500	27
24	5490	72	20	5472	60
33	5527	99	25	5524	75
34	5471	102	38	5518	114
41	5495	123	39	5486	117
51	5497	153	66	5528	198
52	5528	156	68	5493	204
56	5477	168	69	5470	207
71	5525	213	73	5510	219
72	5489	216	98	5519	294
78	5522	234	--	--	--
85	5511	255	--	--	--
89	5481	267	--	--	--
94	5483	282	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5472	18	1	5486	3
26	5522	78	3	5482	9
37	5524	111	9	5497	27
63	5523	189	15	5505	45
68	5500	204	21	5483	63
89	5481	267	32	5470	96
95	5478	285	45	5495	135
97	5483	291	51	5508	153
--	--	--	67	5477	201
--	--	--	68	5510	204
--	--	--	69	5519	207
--	--	--	74	5494	222
--	--	--	76	5481	228
--	--	--	80	5493	240
--	--	--	82	5504	246
--	--	--	98	5479	294

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5514	15	14	5519	42
11	5509	33	27	5471	81
21	5523	63	34	5489	102
25	5508	75	38	5484	114
31	5527	93	41	5495	123
33	5473	99	50	5518	150
51	5516	153	51	5530	153
57	5479	171	52	5503	156
60	5528	180	60	5504	180
65	5497	195	63	5502	189
80	5500	240	66	5494	198
84	5477	252	67	5479	201
91	5493	273	74	5511	222
92	5484	276	77	5496	231
95	5529	285	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5506	0	7	5507	21
3	5489	9	14	5500	42
11	5520	33	38	5490	114
12	5491	36	62	5521	186
13	5481	39	72	5498	216
18	5475	54	73	5528	219
29	5502	87	91	5512	273
35	5514	105	92	5510	276
36	5507	108	97	5524	291
37	5516	111	99	5471	297
40	5522	120	--	--	--
43	5527	129	--	--	--
44	5493	132	--	--	--
48	5505	144	--	--	--
57	5524	171	--	--	--
60	5511	180	--	--	--
68	5473	204	--	--	--
86	5485	258	--	--	--
88	5510	264	--	--	--
99	5474	297	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5502	9	14	5511	42
17	5518	51	49	5514	147
22	5478	66	62	5488	186
27	5481	81	70	5516	210
37	5475	111	75	5517	225
41	5480	123	99	5471	297
45	5523	135	--	--	--
61	5509	183	--	--	--
65	5496	195	--	--	--
75	5495	225	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5484	15	12	5489	36
36	5491	108	19	5539	57
38	5481	114	28	5492	84
45	5524	135	31	5526	93
54	5512	162	33	5529	99
64	5519	192	38	5530	114
67	5537	201	42	5501	126
70	5485	210	43	5509	129
77	5493	231	50	5504	150
83	5505	249	52	5537	156
99	5530	297	61	5497	183
--	--	--	68	5491	204
--	--	--	79	5488	237
--	--	--	81	5528	243
--	--	--	85	5510	255
--	--	--	86	5490	258

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5501	12	4	5489	12
9	5503	27	19	5523	57
37	5479	111	26	5480	78
41	5519	123	30	5516	90
43	5528	129	31	5533	93
44	5520	132	39	5502	117
54	5514	162	55	5492	165
56	5533	168	57	5520	171
60	5518	180	67	5524	201
62	5492	186	74	5509	222
69	5532	207	95	5521	285
73	5537	219	--	--	--
75	5494	225	--	--	--
89	5495	267	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5511	15	8	5532	24
7	5539	21	29	5520	87
16	5529	48	37	5485	111
17	5479	51	40	5495	120
25	5494	75	45	5507	135
30	5514	90	47	5479	141
39	5507	117	52	5516	156
57	5485	171	54	5489	162
65	5501	195	65	5483	195
66	5498	198	69	5488	207
75	5519	225	74	5482	222
76	5528	228	75	5530	225
83	5518	249	76	5497	228
90	5505	270	85	5539	255
--	--	--	89	5523	267

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5481	6	9	5523	27
13	5535	39	14	5524	42
25	5513	75	20	5482	60
29	5506	87	24	5529	72
39	5527	117	56	5499	168
48	5487	144	70	5505	210
51	5495	153	75	5510	225
59	5497	177	82	5526	246
69	5499	207	97	5503	291
79	5485	237	--	--	--
83	5490	249	--	--	--
87	5517	261	--	--	--
93	5511	279	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5526	0	5	5486	15
4	5514	12	6	5498	18
16	5492	48	12	5534	36
19	5508	57	23	5532	69
28	5523	84	24	5519	72
34	5536	102	25	5482	75
41	5525	123	41	5497	123
67	5524	201	51	5518	153
72	5494	216	53	5524	159
73	5501	219	57	5523	171
87	5484	261	88	5479	264
97	5497	291	--	--	--



Radar Statistical Performance for 802.11n-HT40

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492	1	918	58	1
2	5492	1	698	76	1
3	5492	1	938	57	1
4	5492	1	838	63	1
5	5500	1	898	59	1
6	5500	1	778	68	1
7	5500	1	718	74	1
8	5500	1	658	81	1
9	5508	1	538	99	1
10	5508	1	818	65	1
11	5508	1	578	92	1
12	5508	1	678	78	1
13	5510	1	638	83	1
14	5510	1	3066	18	1
15	5510	1	798	67	1
16	5510	1	1153	46	1
17	5510	1	986	54	1
18	5510	1	2224	24	1
19	5512	1	3041	18	1
20	5512	1	2101	26	1
21	5512	1	1701	32	1
22	5512	1	2300	23	1
23	5520	1	2465	22	1
24	5520	1	629	84	1
25	5520	1	1634	33	1
26	5520	1	1232	43	1
27	5528	1	2860	19	1
28	5528	1	3037	18	1
29	5528	1	2891	19	1
30	5528	1	2512	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	5492	1.3	194	27	1
2	5492	2.2	217	28	1
3	5492	5.0	159	24	1
4	5492	4.2	211	25	1
5	5500	1.9	163	25	1
6	5500	2.8	203	25	1
7	5500	2.3	207	23	1
8	5500	3.5	177	24	1
9	5508	3.2	217	25	1
10	5508	1.0	156	27	1
11	5508	1.5	177	29	1
12	5508	1.3	167	25	1
13	5510	2.3	162	24	1
14	5510	1.2	156	29	1
15	5510	3.5	227	27	1
16	5510	3.8	196	27	1
17	5510	1.0	182	24	1
18	5510	3.4	204	25	1
19	5512	2.9	187	23	1
20	5512	3.0	229	23	1
21	5512	2.1	195	26	1
22	5512	2.7	158	24	1
23	5520	3.2	193	24	1
24	5520	1.4	164	29	1
25	5520	2.8	174	25	1
26	5520	3.6	196	24	1
27	5528	2.4	207	26	1
28	5528	3.3	185	23	1
29	5528	3.7	202	29	1
30	5528	1.6	157	27	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	9.1	419	16	1
2	5492	7.4	314	16	1
3	5492	6.4	438	16	1
4	5492	7.0	447	18	1
5	5500	7.0	362	16	1
6	5500	6.2	299	18	1
7	5500	9.9	435	17	1
8	5500	6.6	300	18	1
9	5508	8.8	426	17	1
10	5508	9.9	383	17	1
11	5508	8.3	484	16	1
12	5508	8.9	263	17	1
13	5510	7.9	479	18	1
14	5510	7.6	344	16	1
15	5510	9.8	455	17	1
16	5510	8.6	464	16	1
17	5510	9.6	257	18	1
18	5510	9.1	490	18	1
19	5512	6.0	350	16	1
20	5512	7.5	459	18	1
21	5512	7.2	479	16	1
22	5512	9.1	439	18	1
23	5520	9.1	380	18	1
24	5520	7.6	424	17	1
25	5520	9.1	330	16	1
26	5520	9.6	283	17	1
27	5528	9.9	427	17	1
28	5528	9.6	296	18	1
29	5528	8.6	450	16	1
30	5528	9.4	421	17	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	19.2	464	16	1
2	5492	13.3	380	14	1
3	5492	15.9	397	12	1
4	5492	13.8	341	15	1
5	5500	19.4	449	16	1
6	5500	19.3	393	16	1
7	5500	17.4	334	16	1
8	5500	18.6	488	12	1
9	5508	11.7	392	14	1
10	5508	12.4	362	13	1
11	5508	12.9	349	15	1
12	5508	14.6	450	16	1
13	5510	15.9	327	15	1
14	5510	18.0	312	15	1
15	5510	14.7	366	14	1
16	5510	11.6	262	12	1
17	5510	11.6	471	13	1
18	5510	17.0	316	13	1
19	5512	19.5	391	16	1
20	5512	18.2	373	14	1
21	5512	16.0	358	13	1
22	5512	14.1	319	16	1
23	5520	18.6	350	14	1
24	5520	16.4	265	15	1
25	5520	17.4	258	12	1
26	5520	19.6	391	13	1
27	5528	17.5	458	15	1
28	5528	11.3	488	12	1
29	5528	17.8	433	13	1
30	5528	18.9	487	14	1
Detection Percentage (%)					100%

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

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



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	5496.8	1	16	5510.0	1
2	5499.6	1	17	5510.0	1
3	5496.0	1	18	5510.0	1
4	5494.0	1	19	5510.0	1
5	5494.4	1	20	5510.0	1
6	5495.6	1	21	5526.0	1
7	5499.2	1	22	5523.2	1
8	5498.8	1	23	5524.8	1
9	5497.6	1	24	5520.8	1
10	5495.2	1	25	5524.4	1
11	5510.0	1	26	5521.2	1
12	5510.0	1	27	5525.6	1
13	5510.0	1	28	5524.0	1
14	5510.0	1	29	5520.4	1
15	5510.0	1	30	5522.4	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	623552	1	12	90	1917	0	0	623552	0	666666
2	503573	1	12	80	1598	0	0	1129042	666667	1333333
3	852807	2	12	70	1502	1522	0	1983447	1333334	2000000
4	266480	2	12	70	1599	1872	0	2252951	2000001	2666667
5	742511	3	12	60	1351	1147	1331	2998933	2666668	3333334
6	601179	2	12	95	1047	1477	0	3603941	3333335	4000001
7	632479	1	12	50	1742	0	0	4238944	4000002	4666668
8	1008943	3	12	95	1489	1854	1980	5249629	4666669	5333335
9	140466	2	12	55	1864	1075	0	5395418	5333336	6000002
10	855510	3	12	55	1909	1225	1662	6253867	6000003	6666669
11	1033982	2	12	60	1102	1648	0	7292645	6666670	7333336
12	255047	1	12	75	1495	0	0	7560442	7333337	8000003
13	1055641	2	12	55	1492	1910	0	8617578	8000004	8666670
14	319229	3	12	50	1704	1878	1095	8940209	8666671	9333337
15	830816	3	12	85	1292	1491	1685	9775702	9333338	10000004
16	315545	1	12	70	1354	0	0	10095715	10000005	10666671
17	1024469	1	12	70	1110	0	0	11121538	10666672	11333338
18	663087	3	12	50	1656	1261	1725	11785735	11333339	12000005

Total number of pulses in waveform = 36



Type 5 Radar Waveform_2

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	158221	1	19	70	1726	0	0	158221	0	749999
2	792690	2	19	65	1332	1833	0	952637	750000	1499999
3	1290349	1	19	55	1975	0	0	2246151	1500000	2249999
4	199089	3	19	90	1484	1298	1176	2447215	2250000	2999999
5	629284	3	19	95	1741	1577	1253	3080457	3000000	3749999
6	1078879	2	19	75	1104	1366	0	4163907	3750000	4499999
7	389202	1	19	50	1787	0	0	4555579	4500000	5249999
8	1189202	1	19	85	1989	0	0	5746568	5250000	5999999
9	883780	2	19	90	1247	1604	0	6632337	6000000	6749999
10	657267	2	19	90	1072	1031	0	7292455	6750000	7499999
11	608985	2	19	55	1662	1658	0	7903543	7500000	8249999
12	927731	2	19	50	1522	1140	0	8834594	8250000	8999999
13	352952	1	19	50	1725	0	0	9190208	9000000	9749999
14	610971	1	19	55	1478	0	0	9802904	9750000	10499999
15	1360767	3	19	80	1990	1346	1332	11165149	10500000	11249999
16	278140	2	19	50	1255	1303	0	11447957	11250000	11999999

Total number of pulses in waveform = 29

Type 5 Radar Waveform_3

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	496384	3	10	100	1621	1857	1841	496384	0	999999
2	955436	2	10	75	1685	1167	0	1457139	1000000	1999999
3	1398717	3	10	85	1490	1870	1376	2858708	2000000	2999999
4	753396	2	10	90	1880	1881	0	3616840	3000000	3999999
5	690176	3	10	90	1342	1781	1924	4310777	4000000	4999999
6	1564056	1	10	70	1154	0	0	5879880	5000000	5999999
7	327469	2	10	80	1542	1059	0	6208503	6000000	6999999
8	1190298	3	10	60	1862	1733	1168	7401402	7000000	7999999
9	1389039	1	10	95	1333	0	0	8795204	8000000	8999999
10	615016	2	10	95	1105	1619	0	9411553	9000000	9999999
11	1103340	3	10	60	1411	1106	1609	10517617	10000000	10999999
12	1438196	3	10	90	1596	1199	1947	11959939	11000000	11999999

Total number of pulses in waveform = 28

Type 5 Radar Waveform_4

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	356789	2	5	50	1049	1534	0	356789	0	749999
2	423005	3	5	80	1466	1610	1652	782377	750000	1499999
3	1346940	2	5	65	1886	1584	0	2134045	1500000	2249999
4	520321	2	5	50	1937	1036	0	2657836	2250000	2999999
5	1079029	3	5	100	1266	1305	1836	3739838	3000000	3749999
6	289862	1	5	80	1886	0	0	4034107	3750000	4499999
7	904807	3	5	55	1625	1490	1250	4940800	4500000	5249999
8	1044872	2	5	75	1508	1052	0	5990037	5250000	5999999
9	658815	3	5	95	1250	1693	1848	6651412	6000000	6749999
10	317451	2	5	80	1013	1441	0	6973654	6750000	7499999
11	1089437	3	5	85	1757	1163	1150	8065545	7500000	8249999
12	328871	2	5	80	1978	1752	0	8398486	8250000	8999999
13	615549	2	5	50	1811	1094	0	9017765	9000000	9749999
14	946720	1	5	55	1236	0	0	9967390	9750000	10499999
15	828089	2	5	65	1647	1036	0	10796715	10500000	11249999
16	666138	3	5	80	1374	1481	1064	11465536	11250000	11999999

Total number of pulses in waveform = 36



Type 5 Radar Waveform_5

Num of Bursts = 20 Burst Interval (us)= 600000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	36927	2	6	90	1562	1815	0	36927	0	599999
2	813892	1	6	80	1635	0	0	854196	600000	1199999
3	478769	1	6	90	1459	0	0	1334600	1200000	1799999
4	583437	2	6	55	1134	1266	0	1919496	1800000	2399999
5	996297	2	6	95	1603	1681	0	2918193	2400000	2999999
6	395750	2	6	70	1348	1681	0	3317227	3000000	3599999
7	321665	2	6	95	1233	1827	0	3641921	3600000	4199999
8	766143	3	6	80	1363	1012	1162	4411124	4200000	4799999
9	967096	1	6	80	1412	0	0	5381757	4800000	5399999
10	490047	3	6	70	1392	1554	1402	5873216	5400000	5999999
11	148565	3	6	70	1771	1263	1558	6026129	6000000	6599999
12	756170	2	6	75	1941	1058	0	6786891	6600000	7199999
13	751934	1	6	100	1414	0	0	7541824	7200000	7799999
14	721061	2	6	60	1848	1714	0	8264209	7800000	8399999
15	442773	3	6	60	1003	1165	1541	8710634	8400000	8999999
16	602740	1	6	100	1010	0	0	9317083	9000000	9599999
17	394123	2	6	90	1178	1254	0	9712216	9600000	10199999
18	932718	2	6	75	1942	1828	0	10647366	10200000	10799999
19	312946	2	6	85	1818	1406	0	10964082	10800000	11399999
20	980069	2	6	85	1344	1488	0	11947375	11400000	11999999
Total number of pulses in waveform = 39 *****										

Type 5 Radar Waveform_6

Num of Bursts = 12 Burst Interval (us)= 1000000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	457572	2	9	75	1930	1301	0	457572	0	999999
2	938499	2	9	60	1583	1060	0	1399302	1000000	1999999
3	1436936	3	9	70	1097	1001	1493	2838881	2000000	2999999
4	1061607	1	9	90	1318	0	0	3904079	3000000	3999999
5	721432	2	9	90	1592	1696	0	4626829	4000000	4999999
6	1223507	2	9	50	1721	1360	0	5853624	5000000	5999999
7	186454	1	9	55	1672	0	0	6043159	6000000	6999999
8	1797347	2	9	100	1064	1524	0	7842178	7000000	7999999
9	363568	2	9	80	1629	1762	0	8208334	8000000	8999999
10	1272657	2	9	85	1033	1589	0	9484382	9000000	9999999
11	892808	3	9	50	1839	1810	1785	10379812	10000000	10999999
12	1146836	2	9	80	1620	1106	0	11532082	11000000	11999999
Total number of pulses in waveform = 24 *****										

Type 5 Radar Waveform_7

Num of Bursts = 15 Burst Interval (us)= 800000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	74933	2	18	65	1802	1709	0	74933	0	799999
2	1028979	1	18	80	1575	0	0	1107423	800000	1599999
3	1185546	3	18	95	1507	1536	1103	2294544	1600000	2399999
4	359669	3	18	65	1408	1187	1395	2658359	2400000	3199999
5	784242	1	18	75	1571	0	0	3446591	3200000	3999999
6	591711	3	18	50	1266	1341	1502	4039873	4000000	4799999
7	1291583	3	18	85	1631	1785	1118	5335565	4800000	5599999
8	369921	2	18	100	1393	1940	0	5710020	5600000	6399999
9	1040007	3	18	65	1132	1596	1429	6753360	6400000	7199999
10	546741	1	18	70	1754	0	0	7304258	7200000	7999999
11	811104	1	18	100	1430	0	0	8117116	8000000	8799999
12	1387211	1	18	90	1352	0	0	9505757	8800000	9599999
13	759154	3	18	95	1698	1956	1053	10266263	9600000	10399999
14	620664	1	18	65	1052	0	0	10891634	10400000	11199999
15	1074258	3	18	50	1595	1417	1965	11966944	11200000	11999999
Total number of pulses in waveform = 31 *****										



Type 5 Radar Waveform_8

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	224209	1	17	60	1564	0	0	224209	0	1199999
2	1490251	2	17	60	1353	1024	0	1716024	1200000	2399999
3	695241	3	17	60	1627	1496	1516	2413642	2400000	3599999
4	1605744	2	17	80	1039	1122	0	4024025	3600000	4799999
5	1262757	2	17	65	1497	1907	0	5288943	4800000	5999999
6	876071	2	17	55	1414	1220	0	6168418	6000000	7199999
7	2024055	2	17	55	1583	1999	0	8195107	7200000	8399999
8	885110	3	17	80	1656	1396	1665	9083799	8400000	9599999
9	1132891	1	17	80	1024	0	0	10221407	9600000	10799999
10	1630348	1	17	80	1749	0	0	11852779	10800000	11999999

Total number of pulses in waveform = 19

Type 5 Radar Waveform_9

Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	426780	2	14	65	1523	1891	0	426780	0	666666
2	767453	1	14	100	1582	0	0	1197647	666667	1333333
3	363162	2	14	70	1444	1194	0	1562391	1333334	2000000
4	689568	2	14	85	1408	1971	0	2254587	2000001	2666667
5	851053	1	14	55	1236	0	0	3109019	2666668	3333334
6	754414	1	14	100	1843	0	0	3864669	3333335	4000001
7	331437	1	14	50	1613	0	0	4197949	4000002	4666668
8	485568	2	14	85	1984	1781	0	4685130	4666669	5333335
9	729309	1	14	70	1304	0	0	5418204	5333336	6000002
10	848517	3	14	80	1870	1535	1850	6268025	6000003	6666669
11	485960	3	14	60	1136	1057	1621	6759240	6666670	7333336
12	1094623	2	14	80	1061	1235	0	7857677	7333337	8000003
13	632887	3	14	70	1172	1468	1769	8492860	8000004	8666670
14	788923	3	14	95	1180	1860	1660	9286192	8666671	9333337
15	302888	2	14	80	1975	1807	0	9593780	9333338	10000004
16	808450	1	14	95	1481	0	0	10406012	10000005	10666671
17	272883	2	14	55	1946	1923	0	10680376	10666672	11333338
18	1153571	1	14	80	1620	0	0	11837816	11333339	12000005

Total number of pulses in waveform = 33

Type 5 Radar Waveform_10

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	949230	1	8	50	1853	0	0	949230	0	999999
2	818618	1	8	85	1588	0	0	1763701	1000000	1999999
3	990461	3	8	85	1346	1454	1285	2761750	2000000	2999999
4	1140280	1	8	50	1636	0	0	3906115	3000000	3999999
5	974830	1	8	85	1279	0	0	4882581	4000000	4999999
6	753000	1	8	75	1983	0	0	5636860	5000000	5999999
7	665516	3	8	60	1703	1739	1748	6304359	6000000	6999999
8	1471976	1	8	85	1284	0	0	7781525	7000000	7999999
9	898501	1	8	90	1957	0	0	8681310	8000000	8999999
10	641060	2	8	95	1827	1946	0	9324327	9000000	9999999
11	1365008	1	8	70	1893	0	0	10693108	10000000	10999999
12	944836	1	8	80	1074	0	0	11639837	11000000	11999999

Total number of pulses in waveform = 17



Type 5 Radar Waveform_11

Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	214866	2	12	85	1582	1856	0	214866	0	666666
2	832493	1	12	50	1064	0	0	1050787	666667	1333333
3	480747	2	12	100	1244	1502	0	1532598	1333334	2000000
4	830365	1	12	100	1594	0	0	2365709	2000001	2666667
5	420919	1	12	50	1696	0	0	2788222	2666668	3333334
6	963166	1	12	50	1622	0	0	3753084	3333335	4000001
7	859929	1	12	70	1568	0	0	4608635	4000002	4666668
8	184234	1	12	100	1552	0	0	4794437	4666669	5333335
9	598347	1	12	75	1358	0	0	5394336	5333336	6000002
10	973468	1	12	80	1333	0	0	6369162	6000003	6666669
11	644688	2	12	65	1317	1093	0	7015183	6666670	7333336
12	514302	1	12	95	1690	0	0	7531895	7333337	8000003
13	476769	3	12	75	1221	1293	1006	8010354	8000004	8666670
14	1074670	3	12	85	1917	1900	1920	9088544	8666671	9333337
15	581468	1	12	60	1782	0	0	9675749	9333338	10000004
16	541078	2	12	90	1467	1297	0	10218609	10000005	10666671
17	989825	2	12	95	1730	1967	0	11211198	10666672	11333338
18	141783	3	12	60	1773	1887	1790	11356678	11333339	12000005

Total number of pulses in waveform = 29

Type 5 Radar Waveform_12

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	522054	3	10	60	1008	1398	1735	522054	0	1333332
2	1706666	3	10	75	1571	1951	1910	2232861	1333333	2666665
3	1501221	2	10	80	1073	1017	0	3739514	2666666	3999998
4	1323589	1	10	95	1529	0	0	5065193	3999999	5333331
5	1465088	3	10	60	1963	1773	1576	6531810	5333332	6666664
6	1415133	2	10	55	1365	1157	0	7952255	6666665	7999997
7	56930	1	10	65	1417	0	0	8011707	7999998	9333330
8	2482684	1	10	80	1205	0	0	10495808	9333331	10666663
9	218137	3	10	75	1439	1820	1328	10715150	10666664	11999996

Total number of pulses in waveform = 19

Type 5 Radar Waveform_13

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	262709	3	14	50	1435	1110	1985	262709	0	749999
2	872181	1	14	70	1883	0	0	1139420	750000	1499999
3	818051	2	14	90	1267	1382	0	1959354	1500000	2249999
4	463290	3	14	65	1134	1287	1259	2425293	2250000	2999999
5	1072972	1	14	50	1888	0	0	3501945	3000000	3749999
6	333517	3	14	95	1162	1476	1622	3837350	3750000	4499999
7	1395689	1	14	65	1330	0	0	5237299	4500000	5249999
8	163138	2	14	100	1569	1395	0	5401767	5250000	5999999
9	1336390	1	14	50	1331	0	0	6741121	6000000	6749999
10	123429	2	14	85	1342	1712	0	6865881	6750000	7499999
11	691541	1	14	80	1103	0	0	7560476	7500000	8249999
12	1266205	2	14	100	1999	1802	0	8827784	8250000	8999999
13	291628	2	14	85	1067	1111	0	9123213	9000000	9749999
14	1045423	2	14	75	1028	1416	0	10170814	9750000	10499999
15	1030732	3	14	80	1398	1157	1671	11203990	10500000	11249999
16	455246	1	14	80	1340	0	0	11663462	11250000	11999999

Total number of pulses in waveform = 30



Type 5 Radar Waveform_14

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	673725	3	19	50	1294	1033	1161	673725	0	999999
2	524942	2	19	60	1177	1169	0	1202155	1000000	1999999
3	986465	3	19	80	1150	1199	1149	2190966	2000000	2999999
4	1055618	3	19	70	1360	1524	1872	3250082	3000000	3999999
5	1551249	1	19	100	1426	0	0	4806087	4000000	4999999
6	1041534	2	19	65	1610	1611	0	5849047	5000000	5999999
7	493273	1	19	90	1519	0	0	6345541	6000000	6999999
8	1188785	2	19	70	1811	1873	0	7535845	7000000	7999999
9	502331	3	19	50	1845	1331	1350	8041860	8000000	8999999
10	1731839	1	19	60	1635	0	0	9778225	9000000	9999999
11	901675	1	19	50	1967	0	0	10681535	10000000	10999999
12	1074883	3	19	60	1719	1710	1403	11758385	11000000	11999999

Total number of pulses in waveform = 25

Type 5 Radar Waveform_15

Num of Bursts = 14
Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	3087	1	5	75	1268	0	0	3087	0	857142
2	1120346	1	5	55	1420	0	0	1124701	857143	1714285
3	1147857	2	5	70	1214	1206	0	2273978	1714286	2571428
4	1136143	3	5	90	1344	1693	1444	3412541	2571429	3428571
5	380202	2	5	55	1009	1122	0	3797224	3428572	4285714
6	1177962	2	5	70	1731	1374	0	4977317	4285715	5142857
7	165727	3	5	75	1775	1899	1641	5146149	5142858	6000000
8	1542561	2	5	55	1740	1725	0	6694025	6000001	6857143
9	243227	1	5	90	1131	0	0	6940717	6857144	7714286
10	870808	3	5	65	1204	1085	1781	7812656	7714287	8571429
11	1100563	2	5	95	1181	1901	0	8917289	8571430	9428572
12	535229	1	5	90	1289	0	0	9455600	9428573	10285715
13	1564917	2	5	95	1927	1175	0	11021806	10285716	11142858
14	556120	2	5	50	1412	1235	0	11581028	11142859	12000001

Total number of pulses in waveform = 27

Type 5 Radar Waveform_16

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	499118	3	17	75	1214	1238	1772	499118	0	631578
2	555078	2	17	80	1644	1996	0	1058420	631579	1263157
3	289139	2	17	55	1531	1566	0	1361199	1263158	1894736
4	575834	1	17	100	1375	0	0	1930130	1894737	2526315
5	960676	2	17	80	1069	1570	0	2692181	2526316	3157894
6	264083	2	17	85	1420	1870	0	3158903	3157895	3789473
7	700923	1	17	85	1607	0	0	3863116	3789474	4421052
8	1088767	1	17	90	1639	0	0	4953490	4421053	5052631
9	173801	1	17	75	1956	0	0	5128930	5052632	5684210
10	1173697	3	17	65	1570	1926	1511	6304583	5684211	6315789
11	106248	1	17	75	1593	0	0	6415838	6315790	6947368
12	848810	2	17	100	1586	1027	0	7266241	6947369	7578947
13	633125	3	17	100	1699	1191	1378	7901979	7578948	8210526
14	432980	3	17	90	1369	1194	1394	8339227	8210527	8842105
15	541693	1	17	80	1090	0	0	8884877	8842106	9473684
16	636838	3	17	65	1907	1142	1618	9522805	9473685	10105263
17	895026	3	17	80	1170	1698	1224	10422498	10105264	10736842
18	705063	2	17	95	1707	1919	0	11131653	10736843	11368421
19	257370	2	17	55	1155	1907	0	11392649	11368422	12000000

Total number of pulses in waveform = 38



Type 5 Radar Waveform_17

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	598333	3	6	90	1901	1618	1136	598833	0	799999
2	696019	3	6	70	1681	1795	1611	1299507	800000	1599999
3	836618	2	6	55	1926	1218	0	2141212	1600000	2399999
4	549027	3	6	55	1409	1929	1943	2693383	2400000	3199999
5	1278015	1	6	75	1250	0	0	3976679	3200000	3999999
6	529179	3	6	70	1875	1368	1864	4507108	4000000	4799999
7	562193	3	6	65	1251	1420	1719	5074408	4800000	5599999
8	736403	1	6	75	1252	0	0	5815201	5600000	6399999
9	651274	2	6	50	1958	1759	0	6467727	6400000	7199999
10	1065587	3	6	60	1629	1228	1598	7537031	7200000	7999999
11	1165671	3	6	55	1530	1326	1218	8707157	8000000	8799999
12	476352	1	6	50	1426	0	0	9187583	8800000	9599999
13	878682	3	6	85	1135	1427	1908	10067691	9600000	10399999
14	1112554	2	6	75	1512	1277	0	11184715	10400000	11199999
15	749054	3	6	55	1916	1786	1678	11936558	11200000	11999999

Total number of pulses in waveform = 36

Type 5 Radar Waveform_18

Num of Bursts = 20
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	486080	2	8	95	1183	1225	0	486080	0	599999
2	299118	2	8	100	1431	1751	0	787606	600000	1199999
3	910928	1	8	75	1239	0	0	1701716	1200000	1799999
4	522779	2	8	65	1761	1157	0	2225734	1800000	2399999
5	350439	3	8	55	1804	1847	1567	2579091	2400000	2999999
6	770414	1	8	65	1574	0	0	3354723	3000000	3599999
7	651605	2	8	65	1566	1810	0	4007902	3600000	4199999
8	748503	3	8	75	1461	1412	1382	4759781	4200000	4799999
9	592763	1	8	100	1111	0	0	5356799	4800000	5399999
10	198077	1	8	50	1854	0	0	5555987	5400000	5999999
11	491128	2	8	70	1826	1070	0	6048969	6000000	6599999
12	908539	1	8	65	1038	0	0	6960404	6600000	7199999
13	729067	3	8	55	1414	1233	1629	7690509	7200000	7799999
14	426394	1	8	50	1299	0	0	8121179	7800000	8399999
15	445763	2	8	65	1108	1542	0	8568241	8400000	8999999
16	773805	3	8	60	1003	1644	1992	9344696	9000000	9599999
17	343935	2	8	60	1534	1872	0	9693270	9600000	10199999
18	573845	2	8	50	1360	1784	0	10270521	10200000	10799999
19	1093027	3	8	95	1050	1064	1099	11366692	10800000	11399999
20	591147	3	8	55	1453	1595	1858	11961052	11400000	11999999

Total number of pulses in waveform = 40

Type 5 Radar Waveform_19

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	648598	2	9	100	1088	1457	0	648598	0	1090908
2	1409898	3	9	85	1051	1620	1329	2061041	1090909	2181817
3	1007659	1	9	100	1378	0	0	3072700	2181818	3272726
4	971021	1	9	60	1319	0	0	4045099	3272727	4363635
5	1338699	1	9	100	1654	0	0	5385117	4363636	5454544
6	358974	3	9	50	1935	1509	1411	5745745	5454545	6545453
7	1738058	3	9	85	1218	1920	1706	7488658	6545454	7636362
8	273291	1	9	60	1032	0	0	7766793	7636363	8727271
9	1750258	3	9	65	1224	1004	1893	9518083	8727272	9818180
10	829039	1	9	70	1420	0	0	10351243	9818181	10909089
11	814270	3	9	90	1708	1269	1703	11166933	10909090	11999998

Total number of pulses in waveform = 22



Type 5 Radar Waveform_20

Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	898906	2	18	70	1488	1317	0	898906	0	999999
2	528227	1	18	75	1659	0	0	1429938	1000000	1999999
3	1476753	2	18	70	1520	1569	0	2908350	2000000	2999999
4	1000311	2	18	85	1179	1975	0	3911750	3000000	3999999
5	766554	2	18	90	1312	1878	0	4681458	4000000	4999999
6	915953	3	18	80	1034	1073	1385	5600601	5000000	5999999
7	969550	1	18	80	1164	0	0	6573643	6000000	6999999
8	563154	2	18	60	1916	1750	0	7137961	7000000	7999999
9	1486365	3	18	65	1104	1753	1798	8627992	8000000	8999999
10	1231729	2	18	100	1119	1522	0	9864376	9000000	9999999
11	150029	3	18	85	1340	1451	1175	10017046	10000000	10999999
12	1193437	3	18	75	1162	1038	1814	11214449	11000000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_21

Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	375298	2	5	100	1054	1596	0	375298	0	666666
2	377721	1	5	55	1015	0	0	755669	666667	1333333
3	1208685	1	5	65	1233	0	0	1965369	1333334	2000000
4	273785	2	5	75	1330	1883	0	2240387	2000001	2666667
5	799577	3	5	65	1525	1901	1879	3043177	2666668	3333334
6	688150	3	5	75	1082	1539	1841	3736632	3333335	4000001
7	385945	1	5	60	1294	0	0	4127039	4000002	4666668
8	553501	1	5	90	1457	0	0	4681834	4666669	5333335
9	655835	1	5	70	1529	0	0	5339126	5333336	6000002
10	976471	3	5	55	1422	1146	1014	6317126	6000003	6666669
11	642101	1	5	60	1291	0	0	6962809	6666670	7333336
12	861334	3	5	65	1329	1629	1705	7825434	7333337	8000003
13	566965	1	5	75	1712	0	0	8397062	8000004	8666670
14	361839	1	5	60	1222	0	0	8760613	8666671	9333337
15	830351	2	5	70	1722	1792	0	9592186	9333338	10000004
16	988271	2	5	75	1058	1099	0	10583971	10000005	10666671
17	706357	3	5	55	1174	1777	1146	11292485	10666672	11333338
18	244553	2	5	50	1564	1218	0	11541135	11333339	12000005

Total number of pulses in waveform = 33

Type 5 Radar Waveform_22

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	155841	2	12	95	1752	1677	0	155841	0	1333332
2	2302268	1	12	55	1743	0	0	2461538	1333333	2666665
3	350825	1	12	75	1425	0	0	2814106	2666666	3999998
4	1323103	1	12	100	1920	0	0	4138634	3999999	5333331
5	1549497	1	12	80	1227	0	0	5690051	5333332	6666664
6	1397017	3	12	85	1974	1755	1774	7088295	6666665	7999997
7	1916496	3	12	65	1110	1297	1355	9010294	7999998	9333330
8	802433	2	12	85	1359	1141	0	9816489	9333331	10666663
9	1373869	1	12	95	1113	0	0	11192858	10666664	11999996

Total number of pulses in waveform = 15



Type 5 Radar Waveform_23

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	238345	3	8	90	1139	1566	1172	238345	0	631578
2	412010	2	8	65	1098	1493	0	654232	631579	1263157
3	858911	2	8	95	1939	1401	0	1515734	1263158	1894736
4	617528	1	8	95	1723	0	0	2136602	1894737	2526315
5	450482	3	8	65	1873	1069	1046	2588907	2526316	3157894
6	710172	3	8	60	1992	1376	1200	3302967	3157895	3789473
7	1049119	1	8	100	1028	0	0	4356654	3789474	4421052
8	599523	1	8	80	1257	0	0	4957205	4421053	5052631
9	537757	3	8	50	1290	1349	1108	5496219	5052632	5684210
10	276922	1	8	75	1552	0	0	5776888	5684211	6315789
11	633892	1	8	95	1579	0	0	6412332	6315790	6947368
12	972605	2	8	85	1830	1557	0	7386516	6947369	7578947
13	575032	1	8	70	1107	0	0	7964935	7578948	8210526
14	447183	1	8	90	1336	0	0	8413225	8210527	8842105
15	643014	2	8	80	1534	1893	0	9057575	8842106	9473684
16	554431	2	8	70	1678	1092	0	9615433	9473685	10105263
17	755722	1	8	80	1800	0	0	10373925	10105264	10736842
18	788538	2	8	80	1681	1940	0	11164263	10736843	11368421
19	353204	1	8	80	1499	0	0	11521068	11368422	12000000

Total number of pulses in waveform = 33

Type 5 Radar Waveform_24

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	379739	1	18	75	1699	0	0	379739	0	666666
2	381193	2	18	65	1347	1560	0	762631	666667	1333333
3	735910	1	18	60	1770	0	0	1501448	1333334	2000000
4	759757	2	18	55	1598	1069	0	2262975	2000001	2666667
5	996980	2	18	65	1038	1804	0	3262622	2666668	3333334
6	332339	1	18	95	1992	0	0	3597803	3333335	4000001
7	795378	2	18	70	1186	1518	0	4395173	4000002	4666668
8	835761	2	18	70	1736	1380	0	5233628	4666669	5333335
9	302675	1	18	60	1138	0	0	5539419	5333336	6000002
10	726316	1	18	70	1380	0	0	6266873	6000003	6666669
11	710931	3	18	95	1898	1734	1269	6979184	6666670	7333336
12	979208	2	18	70	1322	1120	0	7963293	7333337	8000003
13	162845	2	18	70	1252	1997	0	8128580	8000004	8666670
14	566737	2	18	60	1182	1605	0	8698566	8666671	9333337
15	888905	1	18	65	1462	0	0	9590258	9333338	10000004
16	954307	3	18	85	1864	1144	1991	10546027	10000005	10666671
17	303545	3	18	60	1319	1763	1497	10854571	10666672	11333338
18	1031287	2	18	75	1068	1842	0	11890437	11333339	12000005

Total number of pulses in waveform = 33

Type 5 Radar Waveform_25

Num of Bursts = 10
Burst Interval (us) = 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	620006	2	9	60	1951	1353	0	620006	0	1199999
2	1768284	1	9	50	1699	0	0	2391594	1200000	2399999
3	306372	3	9	95	1352	1197	1653	2699665	2400000	3599999
4	1902606	3	9	85	1851	1049	1870	4606473	3600000	4799999
5	551180	2	9	95	1269	1193	0	5162423	4800000	5999999
6	1778874	3	9	95	1504	1478	1850	6943759	6000000	7199999
7	1187699	3	9	55	1858	1894	1989	8136290	7200000	8399999
8	1301433	1	9	90	1647	0	0	9443464	8400000	9599999
9	252389	1	9	50	1622	0	0	9697500	9600000	10799999
10	1687300	3	9	85	1305	1032	1819	11386422	10800000	11999999

Total number of pulses in waveform = 22

**Type 5 Radar Waveform_26**

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1431301	1	17	55	1279	0	0	1431301	0	1499999
2	1118702	1	17	85	1671	0	0	2551282	1500000	2999999
3	852117	2	17	95	1586	1598	0	3405070	3000000	4499999
4	1979786	2	17	70	1658	1833	0	5388040	4500000	5999999
5	1469948	2	17	95	1056	1633	0	6861479	6000000	7499999
6	900457	1	17	80	1335	0	0	7764625	7500000	8999999
7	2153057	1	17	75	1918	0	0	9919017	9000000	10499999
8	1301281	2	17	50	1591	1346	0	11222216	10500000	11999999

Total number of pulses in waveform = 12

Type 5 Radar Waveform_27

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	789094	1	6	80	1935	0	0	789094	0	1090908
2	1243180	2	6	90	1000	1595	0	2034209	1090909	2181817
3	742878	1	6	55	1565	0	0	2779682	2181818	3272726
4	1471452	3	6	95	1148	1268	1313	4252699	3272727	4363635
5	644777	1	6	65	1174	0	0	4901205	4363636	5454544
6	835590	2	6	65	1349	1768	0	5737969	5454545	6545453
7	1549826	2	6	80	1077	1333	0	7290912	6545454	7636362
8	682723	3	6	80	1390	1373	1004	7976045	7636363	8727271
9	1048678	3	6	50	1250	1182	1223	9028490	8727272	9818180
10	1570473	2	6	80	1340	1474	0	10602618	9818181	10909089
11	838919	2	6	95	1920	1206	0	11444351	10909090	11999998

Total number of pulses in waveform = 22

Type 5 Radar Waveform_28

Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	656183	3	10	70	1664	1555	1952	656183	0	1333332
2	1656013	3	10	70	1078	1857	1217	2317367	1333333	2666665
3	1341474	1	10	100	1306	0	0	3662993	2666666	3999998
4	843443	3	10	60	1216	1893	1514	4507742	3999999	5333331
5	1357767	2	10	50	1154	1682	0	5870132	5333332	6666664
6	1040821	3	10	65	1185	1796	1807	6913789	6666665	7999997
7	1981715	3	10	85	1291	1095	1870	8900292	7999998	9333330
8	1347355	3	10	65	1402	1562	1136	10251903	9333331	10666663
9	1300521	3	10	65	1696	1449	1486	11556524	10666664	11999996

Total number of pulses in waveform = 24

**Type 5 Radar Waveform_29**

Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	897801	3	19	80	1167	1245	1341	897801	0	1199999
2	1233212	2	19	60	1425	1796	0	2134766	1200000	2399999
3	1020754	3	19	85	1438	1289	1075	3158741	2400000	3599999
4	1502083	2	19	100	1026	1574	0	4664626	3600000	4799999
5	740067	3	19	85	1903	1956	1587	5407293	4800000	5999999
6	1048848	3	19	70	1520	1793	1570	6461587	6000000	7199999
7	1324779	3	19	55	1449	1542	1523	7791249	7200000	8399999
8	1667180	3	19	95	1875	1060	1648	9462943	8400000	9599999
9	736798	3	19	50	1786	1772	1488	10204324	9600000	10799999
10	1428723	2	19	65	1272	1434	0	11638093	10800000	11999999

Total number of pulses in waveform = 27

Type 5 Radar Waveform_30

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1383121	2	14	65	1675	1700	0	1383121	0	1499999
2	653300	2	14	55	1554	1453	0	2039796	1500000	2999999
3	1454946	2	14	50	1688	1404	0	3497749	3000000	4499999
4	2060514	2	14	65	1013	1165	0	5561355	4500000	5999999
5	1693588	3	14	100	1235	1868	1371	7257121	6000000	7499999
6	288452	3	14	70	1808	1768	1374	7550047	7500000	8999999
7	1912473	3	14	60	1072	1149	1517	9467470	9000000	10499999
8	1045480	1	14	70	1837	0	0	10516688	10500000	11999999

Total number of pulses in waveform = 18

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	5492	1	16	5510	1
2	5492	1	17	5510	1
3	5492	1	18	5510	1
4	5492	1	19	5512	1
5	5500	1	20	5512	1
6	5500	1	21	5512	1
7	5500	1	22	5512	1
8	5500	1	23	5520	1
9	5508	1	24	5520	1
10	5508	1	25	5520	1
11	5508	1	26	5520	1
12	5508	1	27	5528	1
13	5510	1	28	5528	1
14	5510	1	29	5528	1
15	5510	1	30	5528	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5475	15	7	5507	21
6	5518	18	10	5464	30
20	5473	60	11	5487	33
22	5496	66	21	5477	63
29	5469	87	23	5512	69
34	5462	102	41	5494	123
38	5494	114	42	5506	126
40	5482	120	46	5495	138
42	5519	126	52	5514	156
50	5516	150	58	5500	174
79	5521	237	66	5503	198
80	5479	240	75	5480	225
89	5487	267	77	5513	231
90	5495	270	78	5504	234
92	5513	276	81	5493	243
--	--	--	98	5516	294

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5474	6	10	5472	30
6	5493	18	19	5474	57
24	5514	72	22	5504	66
26	5502	78	30	5513	90
29	5484	87	39	5470	117
35	5469	105	42	5471	126
41	5511	123	46	5491	138
92	5505	276	50	5468	150
98	5483	294	54	5519	162
--	--	--	69	5495	207
--	--	--	71	5505	213
--	--	--	74	5503	222
--	--	--	75	5466	225
--	--	--	76	5506	228
--	--	--	78	5497	234
--	--	--	79	5483	237
--	--	--	85	5484	255
--	--	--	90	5477	270
--	--	--	93	5475	279

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5519	6	7	5474	21
4	5509	12	15	5498	45
6	5501	18	20	5526	60
11	5484	33	24	5522	72
29	5514	87	31	5493	93
47	5492	141	48	5519	144
52	5507	156	78	5524	234
53	5472	159	89	5476	267
56	5522	168	--	--	--
63	5500	189	--	--	--
66	5482	198	--	--	--
82	5470	246	--	--	--
91	5511	273	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5492	6	5	5489	15
5	5487	15	8	5491	24
12	5486	36	11	5509	33
20	5474	60	18	5521	54
29	5493	87	37	5492	111
32	5472	96	40	5477	120
41	5479	123	47	5527	141
51	5499	153	54	5517	162
65	5514	195	57	5520	171
87	5509	261	62	5471	186
93	5491	279	63	5515	189
98	5516	294	64	5505	192
99	5475	297	69	5486	207
--	--	--	75	5526	225
--	--	--	80	5529	240
--	--	--	81	5516	243



Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
22	5511	66	7	5483	21
27	5485	81	10	5502	30
39	5510	117	16	5492	48
43	5528	129	17	5538	51
47	5520	141	21	5513	63
49	5523	147	30	5486	90
63	5497	189	41	5480	123
86	5486	258	52	5501	156
87	5536	261	64	5510	192
91	5501	273	65	5512	195
92	5479	276	69	5517	207
--	--	--	71	5493	213
--	--	--	78	5518	234
--	--	--	80	5509	240
--	--	--	82	5529	246
--	--	--	83	5484	249
--	--	--	89	5534	267
--	--	--	96	5523	288

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5515	48	21	5516	63
50	5480	150	30	5510	90
71	5490	213	41	5501	123
89	5511	267	65	5495	195
97	5522	291	68	5485	204
--	--	--	72	5481	216
--	--	--	81	5538	243
--	--	--	87	5511	261
--	--	--	91	5530	273
--	--	--	93	5521	279

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5482	12	15	5499	45
23	5529	69	16	5496	48
29	5485	87	21	5523	63
32	5531	96	41	5498	123
38	5486	114	54	5490	162
41	5534	123	58	5528	174
42	5501	126	60	5488	180
59	5502	177	65	5517	195
70	5527	210	77	5506	231
74	5518	222	79	5538	237
76	5532	228	--	--	--
99	5514	297	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5531	48	3	5531	9
18	5483	54	7	5490	21
32	5528	96	13	5535	39
45	5490	135	14	5529	42
48	5527	144	32	5532	96
64	5498	192	34	5491	102
70	5510	210	36	5508	108
82	5489	246	38	5501	114
87	5514	261	39	5482	117
92	5523	276	43	5492	129
--	--	--	46	5540	138
--	--	--	52	5512	156
--	--	--	58	5534	174
--	--	--	66	5488	198
--	--	--	80	5496	240
--	--	--	86	5483	258

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5505	3	11	5505	33
4	5497	12	12	5499	36
6	5502	18	20	5508	60
15	5482	45	33	5511	99
25	5537	75	34	5481	102
54	5508	162	39	5534	117
60	5488	180	43	5484	129
65	5535	195	58	5514	174
71	5510	213	75	5488	225
75	5522	225	77	5528	231
86	5512	258	96	5494	288
89	5504	267	--	--	--
94	5499	282	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5541	0	11	5507	33
20	5521	60	21	5520	63
21	5514	63	27	5499	81
40	5490	120	30	5494	90
43	5512	129	55	5503	165
52	5539	156	67	5524	201
68	5523	204	82	5525	246
72	5500	216	86	5489	258
84	5533	252	92	5526	276
91	5510	273	95	5513	285
98	5524	294	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
27	5533	81	7	5512	21
34	5515	102	12	5485	36
48	5482	144	23	5506	69
52	5518	156	26	5498	78
57	5508	171	33	5511	99
59	5502	177	34	5497	102
62	5524	186	44	5532	132
66	5501	198	52	5503	156
80	5509	240	53	5496	159
97	5537	291	56	5509	168
--	--	--	59	5514	177
--	--	--	60	5491	180
--	--	--	71	5489	213

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
25	5534	75	17	5517	51
34	5530	102	21	5496	63
42	5499	126	22	5498	66
52	5520	156	36	5538	108
59	5514	177	37	5508	111
66	5501	198	56	5504	168
84	5532	252	64	5519	192
96	5490	288	69	5545	207
--	--	--	71	5510	213
--	--	--	98	5515	294

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5537	60	2	5508	6
24	5514	72	31	5493	93
29	5519	87	34	5540	102
72	5531	216	63	5511	189
75	5513	225	64	5541	192
87	5535	261	67	5515	201
96	5495	288	81	5533	243
--	--	--	83	5497	249
--	--	--	92	5544	276
--	--	--	93	5525	279

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5498	30	1	5529	3
13	5540	39	5	5508	15
21	5518	63	6	5555	18
31	5546	93	13	5505	39
36	5523	108	17	5539	51
41	5552	123	35	5550	105
51	5513	153	38	5552	114
65	5535	195	39	5532	117
74	5524	222	44	5535	132
78	5557	234	45	5534	135
82	5533	246	47	5538	141
86	5536	258	53	5519	159
93	5514	279	56	5520	168
98	5515	294	60	5499	180
99	5528	297	90	5544	270
--	--	--	96	5510	288

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5513	9	3	5509	9
10	5507	30	6	5503	18
25	5516	75	12	5514	36
41	5530	123	13	5556	39
65	5533	195	14	5517	42
69	5547	207	18	5547	54
75	5526	225	24	5524	72
88	5557	264	34	5538	102
89	5535	267	38	5501	114
--	--	--	42	5529	126
--	--	--	49	5552	147
--	--	--	55	5499	165
--	--	--	61	5511	183
--	--	--	75	5533	225
--	--	--	76	5516	228
--	--	--	80	5528	240
--	--	--	94	5554	282



Radar Statistical Performance for 802.11ac-VHT80

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492	1	918	58	1
2	5492	1	618	86	1
3	5500	1	938	57	1
4	5500	1	698	76	1
5	5508	1	598	89	1
6	5508	1	898	59	1
7	5510	1	858	62	1
8	5510	1	878	61	1
9	5512	1	778	68	1
10	5512	1	838	63	1
11	5520	1	578	92	1
12	5520	1	678	78	1
13	5528	1	658	81	1
14	5528	1	638	83	1
15	5530	1	718	74	1
16	5530	1	1592	34	1
17	5532	1	2861	19	1
18	5532	1	1298	41	1
19	5540	1	1698	32	1
20	5540	1	1528	35	1
21	5548	1	1325	40	1
22	5548	1	2687	20	1
23	5550	1	1686	32	1
24	5550	1	1355	39	1
25	5552	1	781	68	1
26	5552	1	2813	19	1
27	5560	1	2634	21	1
28	5560	1	1616	33	1
29	5568	1	2974	18	1
30	5568	1	1711	31	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	1.5	165	27	1
2	5492	3.4	168	28	1
3	5500	3.6	163	26	1
4	5500	2.2	228	29	1
5	5508	4.2	213	29	1
6	5508	4.0	222	24	1
7	5510	2.8	175	23	1
8	5510	2.1	208	25	1
9	5512	2.7	167	25	1
10	5512	4.5	226	26	1
11	5520	4.4	214	26	1
12	5520	3.5	187	26	1
13	5528	4.1	163	26	1
14	5528	4.9	154	28	1
15	5530	1.1	181	29	1
16	5530	4.6	156	23	1
17	5532	1.0	197	25	1
18	5532	3.8	183	28	1
19	5540	1.5	218	23	1
20	5540	1.0	223	29	1
21	5548	1.4	179	26	1
22	5548	1.9	184	28	1
23	5550	2.3	220	23	1
24	5550	2.7	166	24	1
25	5552	1.5	184	28	1
26	5552	3.5	224	23	1
27	5560	1.4	184	25	1
28	5560	4.6	193	27	1
29	5568	2.8	176	24	1
30	5568	1.9	171	24	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	6.0	311	16	1
2	5492	7.7	355	18	1
3	5500	6.1	289	16	1
4	5500	8.6	382	17	1
5	5508	7.4	316	17	1
6	5508	7.5	410	17	1
7	5510	9.8	445	16	1
8	5510	7.5	484	16	1
9	5512	8.8	362	16	1
10	5512	9.9	358	16	1
11	5520	6.2	341	17	1
12	5520	8.3	376	18	1
13	5528	7.4	265	17	1
14	5528	7.7	305	16	1
15	5530	9.8	345	18	1
16	5530	8.3	408	17	1
17	5532	8.4	492	17	1
18	5532	7.4	420	18	1
19	5540	6.5	338	16	1
20	5540	7.7	405	18	1
21	5548	8.4	290	16	1
22	5548	7.0	261	16	1
23	5550	8.0	396	17	1
24	5550	6.9	327	16	1
25	5552	7.0	465	18	1
26	5552	9.8	388	18	1
27	5560	9.5	486	18	1
28	5560	8.3	485	16	1
29	5568	8.8	290	18	1
30	5568	7.2	283	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	16.0	259	14	1
2	5492	18.3	352	16	1
3	5500	13.6	369	13	1
4	5500	19.0	349	15	1
5	5508	15.7	303	15	1
6	5508	17.2	446	14	1
7	5510	11.1	367	14	1
8	5510	19.8	348	15	1
9	5512	17.4	488	13	1
10	5512	20.0	412	13	1
11	5520	12.6	498	15	1
12	5520	19.6	272	14	1
13	5528	12.1	334	16	1
14	5528	17.3	294	14	1
15	5530	17.6	349	16	1
16	5530	13.9	283	14	1
17	5532	16.7	452	13	1
18	5532	12.1	474	12	1
19	5540	14.8	488	12	1
20	5540	19.8	294	12	1
21	5548	11.4	324	13	1
22	5548	17.4	340	16	1
23	5550	16.4	274	14	1
24	5550	11.5	418	12	1
25	5552	14.3	490	13	1
26	5552	18.3	417	16	1
27	5560	15.8	381	13	1
28	5560	19.7	398	13	1
29	5568	16.2	492	12	1
30	5568	17.4	269	12	1
Detection Percentage (%)					100%

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

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



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	5496.0	1	16	5530.0	1
2	5498.8	1	17	5530.0	1
3	5494.0	1	18	5530.0	1
4	5494.4	1	19	5530.0	1
5	5495.2	1	20	5530.0	1
6	5499.6	1	21	5560.8	1
7	5495.6	1	22	5566.0	1
8	5499.2	1	23	5564.0	1
9	5497.6	1	24	5560.4	1
10	5496.8	1	25	5563.2	1
11	5530.0	1	26	5562.4	1
12	5530.0	1	27	5565.6	1
13	5530.0	1	28	5564.4	1
14	5530.0	1	29	5561.2	1
15	5530.0	1	30	5564.8	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	100946	2	10	80	1357	1788	0	100946	0	1499999
2	1780490	2	10	75	1721	1439	0	1884581	1500000	2999999
3	1204233	1	10	100	1608	0	0	3091974	3000000	4499999
4	1824409	3	10	90	1925	1588	1093	4917991	4500000	5999999
5	1511141	1	10	60	1480	0	0	6433738	6000000	7499999
6	1955901	2	10	90	1193	1559	0	8391119	7500000	8999999
7	1436687	1	10	85	1064	0	0	9830558	9000000	10499999
8	691716	2	10	75	1787	1568	0	10523338	10500000	11999999

Total number of pulses in waveform = 14



Type 5 Radar Waveform_2

Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	50851	1	17	60	1231	0	0	50851	0	631578
2	621015	3	17	100	1615	1201	1761	673097	631579	1263157
3	702146	2	17	60	1636	1902	0	1379820	1263158	1894736
4	973195	3	17	80	1844	1072	1165	2356553	1894737	2526315
5	458416	3	17	95	1034	1312	1569	2819050	2526316	3157894
6	904661	3	17	55	1676	1688	1359	3727626	3157895	3789473
7	341678	2	17	60	1491	1293	0	4074027	3789474	4421052
8	790823	3	17	95	1246	1426	1232	4867634	4421053	5052631
9	241578	3	17	50	1045	1817	1510	5113116	5052632	5684210
10	798838	1	17	50	1876	0	0	5916326	5684211	6315789
11	825081	3	17	60	1170	1395	1670	6743283	6315790	6947368
12	761156	1	17	65	1514	0	0	7508674	6947369	7578947
13	169453	2	17	65	1010	1844	0	7679641	7578948	8210526
14	603355	2	17	70	1223	1344	0	8285850	8210527	8842105
15	586234	2	17	65	1479	1117	0	8874651	8842106	9473684
16	907736	2	17	100	1472	1700	0	9784983	9473685	10105263
17	464829	3	17	90	1975	1705	1821	10252984	10105264	10736942
18	1011623	2	17	65	1907	1478	0	11270108	10736943	11368421
19	514858	3	17	80	1109	1894	1914	11788351	11368422	12000000

Total number of pulses in waveform = 44

Type 5 Radar Waveform_3

Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	555047	3	5	75	1344	1487	1545	555047	0	923076
2	449840	2	5	55	1126	1400	0	1009263	923077	1846153
3	1486280	3	5	80	1835	1917	1998	2498069	1846154	2769230
4	1065216	3	5	60	1217	1872	1632	3569035	2769231	3692307
5	799833	2	5	80	1487	1126	0	4373589	3692308	4615384
6	247475	3	5	100	1512	1025	1493	4623677	4615385	5538461
7	1530758	3	5	50	1354	1860	1724	6158465	5538462	6461538
8	305339	1	5	100	1850	0	0	6468742	6461539	7384615
9	1403924	2	5	50	1826	1642	0	7874516	7384616	8307692
10	446531	2	5	50	1571	1923	0	8324515	8307693	9230769
11	1250243	2	5	90	1134	1998	0	9578252	9230770	10153846
12	844627	1	5	50	1327	0	0	10426011	10153847	11076923
13	1304805	3	5	90	1341	1454	1085	11732143	11076924	12000000

Total number of pulses in waveform = 30

Type 5 Radar Waveform_4

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	550439	2	6	90	1876	1188	0	550439	0	1499999
2	1910561	3	6	95	1703	1688	1310	2464064	1500000	2999999
3	1564058	1	6	95	1164	0	0	4032823	3000000	4499999
4	825245	3	6	80	1838	1577	1502	4859232	4500000	5999999
5	1564098	3	6	75	1880	1063	1025	6428247	6000000	7499999
6	1417289	3	6	60	1980	1510	1498	7849504	7500000	8999999
7	1169568	2	6	65	1685	1085	0	9024060	9000000	10499999
8	1886518	1	6	65	1157	0	0	10913348	10500000	11999999

Total number of pulses in waveform = 18



Type 5 Radar Waveform_5

Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	323616	2	8	75	1659	1779	0	323616	0	705881
2	757523	3	8	50	1109	1154	1033	1084577	705882	1411763
3	854644	1	8	80	1760	0	0	1942517	1411764	2117645
4	678573	1	8	85	1207	0	0	2622850	2117646	2823527
5	640331	2	8	100	1692	1880	0	3264388	2823528	3529409
6	721253	3	8	75	1763	1632	1851	3989213	3529410	4235291
7	770691	1	8	95	1234	0	0	4765150	4235292	4941173
8	484418	3	8	60	1945	1621	1026	5250802	4941174	5647055
9	559604	2	8	85	1143	1423	0	5814968	5647056	6352937
10	976942	2	8	75	1161	1477	0	6794506	6352938	7058819
11	324619	1	8	85	1685	0	0	7121763	7058820	7764701
12	663767	1	8	65	1501	0	0	7787215	7764702	8470583
13	911409	1	8	90	1585	0	0	8700125	8470584	9176465
14	546766	3	8	100	1751	1779	1952	9248476	9176466	9882347
15	683060	1	8	60	1432	0	0	9937018	9882348	10588229
16	884486	2	8	70	1297	1520	0	10822936	10588230	11294111
17	805040	3	8	75	1723	1928	1436	11630793	11294112	11999993

Total number of pulses in waveform = 32

Type 5 Radar Waveform_6

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	152983	1	19	75	1949	0	0	152983	0	749999
2	1213123	1	19	60	1597	0	0	1368055	750000	1499999
3	667464	1	19	95	1082	0	0	2037116	1500000	2249999
4	301232	2	19	50	1411	1479	0	2339430	2250000	2999999
5	1091360	3	19	80	1309	1001	1777	3433680	3000000	3749999
6	339715	3	19	55	1603	1229	1829	3777482	3750000	4499999
7	1414600	1	19	95	1236	0	0	5196743	4500000	5249999
8	786522	1	19	65	1024	0	0	5984501	5250000	5999999
9	297804	1	19	95	1890	0	0	6283329	6000000	6749999
10	906091	3	19	100	1877	1827	1151	7191310	6750000	7499999
11	436956	1	19	85	1684	0	0	7633121	7500000	8249999
12	760096	2	19	50	1198	1296	0	8394901	8250000	8999999
13	1217236	3	19	95	1423	1858	1170	9614631	9000000	9749999
14	871824	3	19	90	1434	1280	1852	10490906	9750000	10499999
15	134180	2	19	85	1341	1461	0	10629652	10500000	11249999
16	1139149	3	19	75	1813	1788	1338	11771603	11250000	11999999

Total number of pulses in waveform = 31

Type 5 Radar Waveform_7

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	766423	2	9	55	1231	1493	0	766423	0	799999
2	780792	3	9	80	1287	1366	1597	1549939	800000	1599999
3	825528	2	9	90	1668	1952	0	2379717	1600000	2399999
4	88861	2	9	100	1461	1387	0	2472198	2400000	3199999
5	939853	1	9	60	1416	0	0	3414899	3200000	3999999
6	675462	1	9	55	1741	0	0	4091777	4000000	4799999
7	1117726	2	9	70	1051	1933	0	5211244	4800000	5599999
8	676493	3	9	95	1174	1517	1769	5890721	5600000	6399999
9	883894	3	9	85	1985	1868	1943	6779075	6400000	7199999
10	432371	3	9	85	1854	1308	1285	7217242	7200000	7999999
11	1330840	3	9	75	1770	1226	1598	8552529	8000000	8799999
12	912476	2	9	60	1337	1886	0	9469599	8800000	9599999
13	526156	2	9	95	1859	1974	0	9998978	9600000	10399999
14	1159283	3	9	70	1567	1143	1981	11162094	10400000	11199999
15	200389	3	9	55	1198	1078	1255	11367174	11200000	11999999

Total number of pulses in waveform = 35



Type 5 Radar Waveform_8

Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	559464	1	18	70	1118	0	0	559464	0	1090908
2	1296643	2	18	100	1841	1112	0	1857225	1090909	2181817
3	1400660	3	18	95	1816	1494	1512	3260838	2181818	3272726
4	546350	3	18	80	1213	1850	1863	3812010	3272727	4363635
5	804186	1	18	65	1302	0	0	4621122	4363636	5454544
6	906125	1	18	95	1322	0	0	5528549	5454545	6545453
7	1815762	1	18	90	1575	0	0	7345633	6545454	7636362
8	962245	3	18	75	1485	1287	1165	8309453	7636363	8727271
9	432331	1	18	95	1598	0	0	8745721	8727272	9818180
10	1249588	2	18	100	1369	1253	0	9996907	9818181	10909089
11	1827675	3	18	95	1662	1539	1186	11827204	10909090	11999998

Total number of pulses in waveform = 21

Type 5 Radar Waveform_9

Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	67673	3	14	80	1452	1459	1807	67673	0	705881
2	1135807	3	14	80	1802	1183	1627	1208198	705882	1411763
3	704518	2	14	60	1515	1692	0	1917328	1411764	2117645
4	476331	3	14	65	1714	1326	1498	2396866	2117646	2823527
5	488653	1	14	85	1678	0	0	2890057	2823528	3529409
6	724784	2	14	90	1404	1145	0	3616519	3529410	4235291
7	1205709	1	14	60	1345	0	0	4824777	4235292	4941173
8	309919	3	14	65	1191	1064	1087	5136041	4941174	5647055
9	1052521	2	14	65	1557	1995	0	6191904	5647056	6352937
10	290850	1	14	65	1829	0	0	6486306	6352938	7058819
11	794460	2	14	70	1454	1569	0	7282595	7058820	7764701
12	1145599	2	14	50	1408	1011	0	8431217	7764702	8470583
13	277340	1	14	85	1629	0	0	8710976	8470584	9176465
14	1155932	3	14	70	1910	1684	1216	9868537	9176466	9882347
15	234948	3	14	55	1256	1274	1369	10108295	9882348	10588229
16	1023080	3	14	90	1697	1986	1194	11135274	10588230	11294111
17	302313	1	14	60	1306	0	0	11442464	11294112	11999993

Total number of pulses in waveform = 36

Type 5 Radar Waveform_10

Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	610182	1	12	100	1136	0	0	610182	0	799999
2	725976	2	12	100	1832	1016	0	1337294	800000	1599999
3	838426	1	12	100	1038	0	0	2178568	1600000	2399999
4	844548	3	12	100	1131	1762	1561	3024154	2400000	3199999
5	542245	1	12	65	1198	0	0	3570853	3200000	3999999
6	551386	3	12	80	1009	1307	1139	4123437	4000000	4799999
7	761445	2	12	55	1110	1672	0	4888337	4800000	5599999
8	1498798	3	12	95	1329	1103	1921	6389917	5600000	6399999
9	51482	2	12	75	1681	1521	0	6445752	6400000	7199999
10	1355914	3	12	85	1753	1365	1221	7804868	7200000	7999999
11	581395	1	12	75	1647	0	0	8390602	8000000	8799999
12	648571	3	12	50	1137	1534	1504	9040820	8800000	9599999
13	1202582	1	12	95	1248	0	0	10247577	9600000	10399999
14	384637	2	12	90	1097	1086	0	10633462	10400000	11199999
15	1164267	2	12	60	1050	1727	0	11799912	11200000	11999999

Total number of pulses in waveform = 30



Type 5 Radar Waveform_11

Num of Bursts = 15
Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	331515	1	9	90	1931	0	0	331515	0	799999
2	565390	2	9	55	1856	1103	0	898836	800000	1599999
3	1204363	3	9	100	1211	1004	1388	2106158	1600000	2399999
4	901455	2	9	65	1023	1067	0	3011216	2400000	3199999
5	910545	2	9	75	1723	1556	0	3923851	3200000	3999999
6	568545	1	9	70	1732	0	0	4495675	4000000	4799999
7	970064	3	9	80	1336	1225	1439	5467471	4800000	5599999
8	495376	2	9	100	1110	1571	0	5966847	5600000	6399999
9	644646	2	9	55	1231	1819	0	6614174	6400000	7199999
10	747003	1	9	95	1211	0	0	7364227	7200000	7999999
11	1060381	2	9	100	1128	1771	0	8425819	8000000	8799999
12	750743	3	9	85	1146	1605	1242	9179461	8800000	9599999
13	471973	3	9	50	1175	1535	1969	9655427	9600000	10399999
14	993440	3	9	50	1997	1135	1787	10653546	10400000	11199999
15	1019900	1	9	55	1718	0	0	11678365	11200000	11999999

Total number of pulses in waveform = 31

Type 5 Radar Waveform_12

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	172003	2	12	85	1608	1752	0	172003	0	631579
2	651362	3	12	70	1972	1910	1428	826725	631579	1263157
3	940797	1	12	65	1853	0	0	1772832	1263158	1894736
4	244176	2	12	85	1934	1464	0	2018861	1894737	2526315
5	793621	2	12	70	1231	1869	0	2815880	2526316	3157894
6	960825	1	12	95	1980	0	0	3779805	3157895	3789473
7	353418	2	12	90	1805	1004	0	4135203	3789474	4421052
8	906761	1	12	60	1497	0	0	5044773	4421053	5052631
9	87286	1	12	100	1314	0	0	5133556	5052632	5684210
10	867852	2	12	55	1339	1043	0	6002722	5684211	6315789
11	455685	1	12	65	1326	0	0	6460789	6315790	6947368
12	1029646	2	12	80	1490	1809	0	7491761	6947369	7578947
13	331062	1	12	95	1961	0	0	7826122	7578948	8210526
14	892540	2	12	85	1735	1044	0	8720623	8210527	8842105
15	712599	2	12	70	1252	1726	0	9436001	8842106	9473684
16	351050	1	12	85	1525	0	0	9790029	9473685	10105263
17	460605	3	12	65	1547	1247	1476	10252159	10105264	10736842
18	964972	1	12	85	1042	0	0	11221401	10736843	11368421
19	738687	1	12	75	1377	0	0	11961130	11368422	12000000

Total number of pulses in waveform = 31

Type 5 Radar Waveform_13

Num of Bursts = 17
Burst Interval (us) = 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	114666	1	19	95	1288	0	0	114666	0	705881
2	1101078	1	19	75	1330	0	0	1217032	705882	1411763
3	884686	2	19	85	1097	1253	0	2103048	1411764	2117645
4	255746	2	19	90	1492	1831	0	2361144	2117646	2823527
5	853060	1	19	80	1377	0	0	3217527	2823528	3529409
6	497568	2	19	60	1473	1717	0	3716472	3529410	4235291
7	873798	2	19	90	1745	1079	0	4593460	4235292	4941173
8	731928	1	19	75	1210	0	0	5328212	4941174	5647055
9	841629	2	19	80	1562	1117	0	6171051	5647056	6352937
10	599663	3	19	65	1246	1639	1828	6773393	6352938	7058819
11	571097	3	19	90	1017	1565	1647	7349203	7058820	7764701
12	1086198	2	19	80	1811	1082	0	8439630	7764702	8470583
13	582624	1	19	50	1989	0	0	9025147	8470584	9176465
14	160091	2	19	50	1923	1417	0	9187227	9176466	9882347
15	743602	2	19	85	1012	1584	0	9934169	9882348	10588229
16	1146357	1	19	100	1910	0	0	11083122	10588230	11294111
17	522548	1	19	100	1966	0	0	11607580	11294112	11999993

Total number of pulses in waveform = 29



Type 5 Radar Waveform_14

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	154768	3	6	100	1805	1426	1959	154768	0	1499999
2	2562708	2	6	85	1320	1979	0	2722666	1500000	2999999
3	742846	2	6	55	1933	1456	0	3468811	3000000	4499999
4	1483787	2	6	90	1908	1641	0	4955987	4500000	5999999
5	1174757	2	6	95	1272	1442	0	6134293	6000000	7499999
6	2286133	3	6	85	1791	1874	1713	8423140	7500000	8999999
7	824790	2	6	95	1755	1361	0	9253308	9000000	10499999
8	1952417	1	6	100	1511	0	0	11208841	10500000	11999999

Total number of pulses in waveform = 17

Type 5 Radar Waveform_15

Num of Bursts = 20
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	424030	3	14	65	1905	1257	1319	424030	0	599999
2	254383	3	14	100	1254	1067	1126	682894	600000	1199999
3	1062140	2	14	80	1515	1554	0	1748481	1200000	1799999
4	514452	3	14	85	1646	1379	1166	2266002	1800000	2399999
5	339648	1	14	95	1214	0	0	2606841	2400000	2999999
6	475640	1	14	55	1868	0	0	3086695	3000000	3599999
7	644405	1	14	60	1342	0	0	3732968	3600000	4199999
8	496278	3	14	75	1977	1000	1835	4230588	4200000	4799999
9	738250	3	14	90	1170	1060	1049	4973650	4800000	5399999
10	843682	2	14	75	1809	1253	0	5820611	5400000	5999999
11	228838	3	14	75	1564	1985	1895	6052511	6000000	6599999
12	874533	2	14	85	1983	1132	0	6932488	6600000	7199999
13	783613	3	14	80	1352	1907	1453	7719216	7200000	7799999
14	377587	2	14	65	1097	1291	0	8101515	7800000	8399999
15	809321	3	14	85	1487	1932	1533	8913224	8400000	8999999
16	451686	2	14	85	1204	1142	0	9369862	9000000	9599999
17	594538	1	14	50	1182	0	0	9966746	9600000	10199999
18	707628	3	14	60	1485	1309	1415	10675566	10200000	10799999
19	315359	1	14	50	1864	0	0	10995124	10800000	11399999
20	690669	1	14	50	1569	0	0	11687657	11400000	11999999

Total number of pulses in waveform = 43

Type 5 Radar Waveform_16

Num of Bursts = 20
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	51132	3	17	75	1670	1546	1448	51132	0	599999
2	599956	1	17	80	1070	0	0	655752	600000	1199999
3	951490	2	17	95	1797	1275	0	1608312	1200000	1799999
4	404175	3	17	75	1134	1595	1100	2015559	1800000	2399999
5	809162	3	17	55	1995	1436	1623	2828550	2400000	2999999
6	682298	3	17	70	1255	1033	1254	3515902	3000000	3599999
7	168712	2	17	80	1087	1105	0	3688156	3600000	4199999
8	1066158	2	17	85	1051	1341	0	4756506	4200000	4799999
9	543770	3	17	100	1557	1247	1823	5302668	4800000	5399999
10	529696	2	17	50	1360	1234	0	5836991	5400000	5999999
11	634295	1	17	80	1167	0	0	6473880	6000000	6599999
12	712354	2	17	100	1625	1055	0	7187401	6600000	7199999
13	118156	3	17	90	1906	1358	1517	7308237	7200000	7799999
14	1070912	3	17	50	1599	1096	1912	8383930	7800000	8399999
15	115482	3	17	60	1601	1277	1118	8504019	8400000	8999999
16	798690	3	17	95	1062	1852	1086	9306705	9000000	9599999
17	667364	1	17	65	1539	0	0	9978069	9600000	10199999
18	785511	3	17	95	1075	1202	1613	10765119	10200000	10799999
19	249816	2	17	50	1495	1249	0	11018825	10800000	11399999
20	710880	2	17	70	1564	1092	0	11732449	11400000	11999999

Total number of pulses in waveform = 47



Type 5 Radar Waveform_17

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	387659	2	10	60	1340	1054	0	387659	0	631578
2	346644	3	10	65	1438	1333	1442	736697	631579	1263157
3	1057750	2	10	100	1700	1758	0	1798660	1263158	1894736
4	649594	3	10	85	1134	1177	1296	2451712	1894737	2526315
5	249976	1	10	50	1738	0	0	2705295	2526316	3157894
6	821417	1	10	65	1384	0	0	3528450	3157895	3789473
7	410772	2	10	90	1423	1368	0	3940606	3789474	4421052
8	942813	2	10	60	1462	1288	0	4886210	4421053	5052631
9	542338	1	10	50	1785	0	0	5431298	5052632	5684210
10	400123	1	10	95	1331	0	0	5833206	5684211	6315789
11	944659	3	10	90	1490	1444	1556	6779196	6315790	6947368
12	488012	1	10	65	1455	0	0	7271698	6947369	7578947
13	905285	3	10	60	1864	1326	1655	8178438	7578948	8210526
14	135806	3	10	60	1559	1713	1382	8319089	8210527	8842105
15	713592	3	10	95	1082	1191	1359	9037335	8842106	9473684
16	648156	1	10	100	1849	0	0	9689123	9473685	10105263
17	714490	2	10	85	1653	1942	0	10405462	10105264	10736842
18	796264	2	10	95	1213	1286	0	11205321	10736843	11368421
19	335552	3	10	75	1977	1309	1104	11543372	11368422	12000000

Total number of pulses in waveform = 39

Type 5 Radar Waveform_18

Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	167001	3	5	65	1086	1461	1333	167001	0	999999
2	1349791	3	5	75	1553	1312	1341	1520672	1000000	1999999
3	845979	2	5	60	1340	1219	0	2370857	2000000	2999999
4	1141226	2	5	60	1068	1499	0	3514642	3000000	3999999
5	662531	3	5	50	1761	1099	1061	4179740	4000000	4999999
6	1518990	3	5	100	1635	1345	1532	5702651	5000000	5999999
7	814165	3	5	90	1349	1116	1540	6521328	6000000	6999999
8	1291130	2	5	90	1935	1243	0	7816463	7000000	7999999
9	851921	3	5	65	1426	1548	1441	8671562	8000000	8999999
10	507494	1	5	85	1991	0	0	9183471	9000000	9999999
11	1717144	2	5	90	1198	1438	0	10902606	10000000	10999999
12	1069789	2	5	75	1731	1440	0	11975031	11000000	11999999

Total number of pulses in waveform = 29

Type 5 Radar Waveform_19

Num of Bursts = 18
Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	2637	2	18	95	1772	1468	0	2637	0	666666
2	765525	2	18	80	1407	1885	0	771402	666667	1333333
3	620024	2	18	100	1576	1538	0	1394718	1333334	2000000
4	620796	1	18	80	1503	0	0	2018628	2000001	2666667
5	1196766	1	18	80	1870	0	0	3216897	2666668	3333334
6	221911	3	18	60	1645	1219	1385	3440678	3333335	4000001
7	1190862	1	18	65	1641	0	0	4635789	4000002	4666668
8	440538	3	18	80	1163	1450	1086	5077968	4666669	5333335
9	672213	3	18	90	1070	1315	1548	5753880	5333336	6000002
10	869987	3	18	55	1402	1460	1746	6627800	6000003	6666669
11	410293	3	18	70	1372	1537	1872	7042701	6666670	7333336
12	458397	3	18	95	1882	1064	1684	7505879	7333337	8000003
13	639706	2	18	100	1518	1655	0	8150215	8000004	8666670
14	700771	1	18	100	1379	0	0	8854159	8666671	9333337
15	632433	2	18	55	1025	1945	0	9487971	9333338	10000004
16	1035319	3	18	65	1242	1605	1701	10526260	10000005	10666671
17	733158	2	18	55	1472	1028	0	11263966	10666672	11333338
18	699487	2	18	80	1650	1399	0	11965953	11333339	12000005

Total number of pulses in waveform = 39



Type 5 Radar Waveform_20

Num of Bursts = 20
Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	331142	2	8	90	1373	1327	0	331142	0	599999
2	352488	1	8	50	1205	0	0	686330	600000	1199999
3	984090	2	8	90	1656	1625	0	1671625	1200000	1799999
4	647950	1	8	60	1174	0	0	2322866	1800000	2399999
5	132995	2	8	85	1778	1360	0	2457035	2400000	2999999
6	1103348	2	8	100	1679	1929	0	3563521	3000000	3599999
7	331125	1	8	55	1536	0	0	3898254	3600000	4199999
8	607490	1	8	75	1724	0	0	4507280	4200000	4799999
9	378554	2	8	70	1389	1164	0	4887558	4800000	5399999
10	827965	3	8	60	1813	1211	1417	5718076	5400000	5999999
11	832636	1	8	65	1809	0	0	6555153	6000000	6599999
12	366547	3	8	95	1829	1506	1266	6923509	6600000	7199999
13	813131	1	8	75	1331	0	0	7741241	7200000	7799999
14	424353	1	8	90	1178	0	0	8166925	7800000	8399999
15	330866	1	8	60	1803	0	0	8498969	8400000	8999999
16	512451	2	8	90	1275	1939	0	9013223	9000000	9599999
17	687940	3	8	80	1810	1669	1207	9704377	9600000	10199999
18	494945	3	8	100	1705	1772	1342	10204008	10200000	10799999
19	1013804	3	8	75	1393	1479	1967	11222631	10800000	11399999
20	256617	2	8	50	1666	1092	0	11484087	11400000	11999999

Total number of pulses in waveform = 37

Type 5 Radar Waveform_21

Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	688104	1	18	80	1314	0	0	688104	0	999999
2	787301	1	18	65	1655	0	0	1476719	1000000	1999999
3	1088617	3	18	75	1575	1648	1820	2566991	2000000	2999999
4	1301141	1	18	90	1519	0	0	3873175	3000000	3999999
5	900523	1	18	55	1672	0	0	4775217	4000000	4999999
6	1139070	3	18	60	1502	1804	1976	5915959	5000000	5999999
7	830455	2	18	95	1317	1795	0	6751696	6000000	6999999
8	883116	1	18	95	1440	0	0	7637924	7000000	7999999
9	564283	3	18	50	1062	1903	1968	8203647	8000000	8999999
10	969716	2	18	95	1920	1842	0	9178296	9000000	9999999
11	1586991	3	18	70	1874	1391	1671	10769049	10000000	10999999
12	1215136	1	18	50	1176	0	0	11989121	11000000	11999999

Total number of pulses in waveform = 22

Type 5 Radar Waveform_22

Num of Bursts = 12
Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	164567	1	5	55	1018	0	0	164567	0	999999
2	844608	3	5	75	1429	1035	1487	1010193	1000000	1999999
3	1714855	3	5	65	1639	1146	1003	2728999	2000000	2999999
4	1162554	2	5	65	1715	1102	0	3895341	3000000	3999999
5	211977	3	5	70	1330	1322	1917	4110135	4000000	4999999
6	1181400	2	5	85	1965	1151	0	5296104	5000000	5999999
7	723258	1	5	85	1334	0	0	6022478	6000000	6999999
8	1057628	1	5	70	1497	0	0	7081440	7000000	7999999
9	927959	2	5	90	1269	1241	0	8010896	8000000	8999999
10	1330021	1	5	85	1414	0	0	9343427	9000000	9999999
11	1002525	2	5	70	1831	1102	0	10347366	10000000	10999999
12	1509211	2	5	95	1527	1952	0	11859510	11000000	11999999

Total number of pulses in waveform = 23



Type 5 Radar Waveform_23

Num of Bursts = 20
Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	265722	2	10	70	1576	1334	0	265722	0	599999
2	804848	2	10	85	1974	1241	0	1073480	600000	1199999
3	495031	1	10	100	1366	0	0	1571726	1200000	1799999
4	761002	2	10	95	1593	1140	0	2334094	1800000	2399999
5	144396	1	10	75	1604	0	0	2481223	2400000	2999999
6	698539	3	10	90	1632	1173	1660	3181366	3000000	3599999
7	738123	3	10	70	1135	1945	1805	3923954	3600000	4199999
8	357114	3	10	50	1395	1820	1778	4285953	4200000	4799999
9	951388	2	10	60	1160	1815	0	5242334	4800000	5399999
10	406372	3	10	60	1786	1390	1533	5651681	5400000	5999999
11	381662	1	10	95	1060	0	0	6038052	6000000	6599999
12	1033547	2	10	100	1590	1599	0	7072659	6600000	7199999
13	669600	3	10	95	1889	1671	1550	7745448	7200000	7799999
14	532576	3	10	100	1402	1364	1831	8283134	7800000	8399999
15	160112	2	10	85	1101	1492	0	8447843	8400000	8999999
16	598358	1	10	55	1679	0	0	9048794	9000000	9599999
17	1018749	1	10	80	1641	0	0	10069222	9600000	10199999
18	178090	1	10	85	1569	0	0	10248953	10200000	10799999
19	957196	1	10	55	1689	0	0	11207718	10800000	11399999
20	695926	1	10	95	1985	0	0	11905333	11400000	11999999

Total number of pulses in waveform = 38

Type 5 Radar Waveform_24

Num of Bursts = 17
Burst Interval (us) = 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	205157	2	19	60	1529	1168	0	205157	0	705881
2	1111578	2	19	80	1425	1208	0	1319432	705882	1411763
3	733992	1	19	80	1560	0	0	2056057	1411764	2117645
4	395177	1	19	80	1221	0	0	2452794	2117646	2823527
5	578865	3	19	50	1743	1433	1656	3032880	2823528	3529409
6	773163	3	19	70	1105	1603	1936	3810875	3529410	4235291
7	772042	3	19	90	1589	1689	1885	4587561	4235292	4941173
8	562944	3	19	50	1752	1265	1021	5155668	4941174	5647055
9	1014489	2	19	70	1382	1083	0	6174195	5647056	6352937
10	422367	2	19	80	1279	1117	0	6599027	6352938	7058819
11	789836	1	19	90	1962	0	0	7391259	7058820	7764701
12	827855	3	19	80	1306	1335	1108	8221076	7764702	8470583
13	845763	1	19	50	1289	0	0	9070588	8470584	9176465
14	497670	2	19	70	1470	1140	0	9569547	9176466	9882347
15	863898	2	19	75	1642	1908	0	10436055	9882348	10588229
16	248365	1	19	80	1746	0	0	10687970	10588230	11294111
17	669429	3	19	60	1976	1336	1273	11359145	11294112	11999993

Total number of pulses in waveform = 35

Type 5 Radar Waveform_25

Num of Bursts = 19
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	139024	1	12	80	1114	0	0	139024	0	631578
2	803502	2	12	85	1835	1062	0	943640	631579	1263157
3	425338	1	12	85	1124	0	0	1371875	1263158	1894736
4	715191	2	12	70	1495	1697	0	2088190	1894737	2526315
5	916252	1	12	85	1187	0	0	3007634	2526316	3157894
6	602094	2	12	75	1642	1710	0	3610915	3157895	3789473
7	707567	3	12	70	1827	1126	1931	4321834	3789474	4421052
8	595698	3	12	60	1817	1620	1375	4922416	4421053	5052631
9	294101	3	12	65	1759	1606	1536	5221329	5052632	5684210
10	642209	3	12	50	1094	1763	1392	5868439	5684211	6315789
11	622266	1	12	65	1227	0	0	6494954	6315790	6947368
12	998377	1	12	50	1210	0	0	7494558	6947369	7578947
13	494177	2	12	60	1533	1842	0	7989945	7578948	8210526
14	663101	3	12	100	1093	1690	1900	8656421	8210527	8842105
15	618891	2	12	65	1739	1141	0	9279995	8842106	9473684
16	464249	3	12	60	1070	1936	1817	9747124	9473685	10105263
17	711150	3	12	60	1146	1625	1061	10463097	10105264	10736842
18	829246	1	12	80	1885	0	0	11296175	10736843	11368421
19	581047	1	12	65	1119	0	0	11879107	11368422	12000000

Total number of pulses in waveform = 38



Type 5 Radar Waveform_26

Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1043002	2	14	95	1078	1643	0	1043002	0	1499999
2	567499	1	14	65	1910	0	0	1613222	1500000	2999999
3	2234180	3	14	50	1156	1520	1793	3849312	3000000	4499999
4	893286	2	14	65	1004	1530	0	4747067	4500000	5999999
5	1653258	1	14	100	1063	0	0	6402859	6000000	7499999
6	2047048	2	14	90	1453	1705	0	8450970	7500000	8999999
7	700671	3	14	70	1618	1042	1003	9154799	9000000	10499999
8	2759556	3	14	55	1280	1028	1185	11918018	10500000	11999999

Total number of pulses in waveform = 17

Type 5 Radar Waveform_27

Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	416259	3	6	60	1890	1818	1472	416259	0	666666
2	440317	2	6	100	1235	1546	0	861756	666667	1333333
3	923038	1	6	65	1549	0	0	1787575	1333334	2000000
4	709522	2	6	95	1802	1089	0	2498646	2000001	2666667
5	763179	1	6	70	1742	0	0	3264716	2666668	3333334
6	312495	3	6	70	1932	1787	1468	3578953	3333335	4000001
7	736612	3	6	50	1973	1581	1392	4320752	4000002	4666668
8	627234	1	6	70	1758	0	0	4952932	4666669	5333335
9	1018761	2	6	75	1725	1982	0	5973451	5333336	6000002
10	491515	1	6	80	1849	0	0	6468673	6000003	6666669
11	529044	3	6	85	1023	1065	1339	6999566	6666670	7333336
12	810759	2	6	65	1839	1706	0	7813752	7333337	8000003
13	763817	3	6	70	1306	1160	1166	8581114	8000004	8666670
14	313290	1	6	75	1359	0	0	8898036	8666671	9333337
15	587157	3	6	95	1107	1896	1296	9486552	9333338	10000004
16	967829	3	6	50	1259	1156	1672	10458680	10000005	10666671
17	299999	2	6	95	1638	1270	0	10762766	10666672	11333338
18	1076130	1	6	50	1420	0	0	11841804	11333339	12000005

Total number of pulses in waveform = 37

Type 5 Radar Waveform_28

Num of Bursts = 14
Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	131922	2	9	90	1934	1846	0	131922	0	857142
2	898559	2	9	85	1867	2000	0	1034261	857143	1714285
3	1049753	3	9	95	1615	1100	1246	2087881	1714286	2571428
4	605558	2	9	75	1131	1060	0	2697400	2571429	3428571
5	1534673	2	9	60	1141	1558	0	4234264	3428572	4285714
6	670896	2	9	85	1477	1569	0	4907859	4285715	5142857
7	561040	1	9	65	1435	0	0	5471945	5142858	6000000
8	793916	1	9	60	1809	0	0	6267296	6000001	6857143
9	973401	1	9	90	1963	0	0	7242506	6857144	7714286
10	1284704	1	9	80	1858	0	0	8529173	7714287	8571429
11	839787	2	9	75	1295	1162	0	9370818	8571430	9428572
12	361935	1	9	75	1210	0	0	9735210	9428573	10285715
13	1095285	2	9	75	1786	1361	0	10831705	10285716	11142858
14	363846	1	9	85	1202	0	0	11198698	11142859	12000001

Total number of pulses in waveform = 23



Type 5 Radar Waveform_29

Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	278450	1	17	60	1409	0	0	278450	0	749999
2	1206970	2	17	65	1506	1588	0	1486829	750000	1499999
3	587531	2	17	90	1880	1709	0	2077454	1500000	2249999
4	696573	1	17	75	1549	0	0	2777616	2250000	2999999
5	278692	2	17	50	1123	1094	0	3057857	3000000	3749999
6	960346	2	17	75	1849	1188	0	4020420	3750000	4499999
7	861663	3	17	50	1765	1735	1219	4885120	4500000	5249999
8	922440	2	17	65	1175	1998	0	5812279	5250000	5999999
9	503092	2	17	100	1954	1865	0	6318544	6000000	6749999
10	1061700	1	17	90	1327	0	0	7384063	6750000	7499999
11	133383	1	17	50	1609	0	0	7518773	7500000	8249999
12	1064890	2	17	100	1489	1390	0	8585272	8250000	8999999
13	560233	1	17	85	1054	0	0	9148384	9000000	9749999
14	874513	2	17	75	1498	1026	0	10023951	9750000	10499999
15	529166	2	17	65	1374	1156	0	10555641	10500000	11249999
16	734226	3	17	75	1068	1748	1651	11292397	11250000	11999999

Total number of pulses in waveform = 29

Type 5 Radar Waveform_30

Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	201469	2	8	95	1034	1943	0	201469	0	705881
2	564640	3	8	85	1538	1064	1399	769086	705882	1411763
3	1231022	2	8	70	1606	1774	0	2004109	1411764	2117645
4	290266	1	8	55	1929	0	0	2297755	2117646	2823527
5	1052267	3	8	60	1447	1351	1630	3351951	2823528	3529409
6	404867	3	8	65	1109	1244	1121	3761246	3529410	4235291
7	974469	1	8	75	1001	0	0	4739189	4235292	4941173
8	614536	1	8	90	1094	0	0	5354726	4941174	5647055
9	879569	3	8	55	1038	1485	1998	6235389	5647056	6352937
10	783575	2	8	95	1628	1744	0	7023485	6352938	7058819
11	399312	2	8	70	1404	1297	0	7426169	7058820	7764701
12	788360	1	8	85	1629	0	0	8217230	7764702	8470583
13	466591	1	8	65	1657	0	0	8685450	8470584	9176465
14	1019666	1	8	75	1229	0	0	9706773	9176466	9882347
15	291907	2	8	65	1064	1272	0	9999909	9882348	10588229
16	1034548	2	8	70	1273	1110	0	11036793	10588230	11294111
17	585258	3	8	55	1349	1845	1915	11624434	11294112	11999993

Total number of pulses in waveform = 33

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	5492	1	16	5530	1
2	5492	1	17	5532	1
3	5500	1	18	5532	1
4	5500	1	19	5540	1
5	5508	1	20	5540	1
6	5508	1	21	5548	1
7	5510	1	22	5548	1
8	5510	1	23	5550	1
9	5512	1	24	5550	1
10	5512	1	25	5552	1
11	5520	1	26	5552	1
12	5520	1	27	5560	1
13	5528	1	28	5560	1
14	5528	1	29	5568	1
15	5530	1	30	5568	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5499	6	4	5501	12
29	5503	87	12	5520	36
34	5495	102	19	5478	57
35	5476	105	22	5513	66
41	5468	123	26	5502	78
42	5507	126	39	5522	117
56	5506	168	57	5473	171
58	5511	174	60	5488	180
61	5486	183	65	5512	195
78	5508	234	69	5489	207
84	5519	252	71	5515	213
92	5480	276	72	5506	216
98	5479	294	74	5480	222

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
27	5528	81	7	5505	21
29	5470	87	11	5474	33
31	5515	93	25	5525	75
44	5492	132	43	5530	129
49	5529	147	55	5523	165
56	5507	168	59	5509	177
89	5504	267	61	5470	183
--	--	--	63	5489	189
--	--	--	74	5500	222
--	--	--	81	5527	243
--	--	--	83	5522	249
--	--	--	90	5513	270
--	--	--	97	5497	291

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5486	3	2	5538	6
7	5510	21	22	5526	66
9	5500	27	27	5525	81
11	5504	33	29	5511	87
14	5520	42	30	5508	90
22	5507	66	41	5483	123
30	5532	90	43	5487	129
35	5531	105	45	5536	135
51	5495	153	46	5504	138
73	5525	219	55	5531	165
94	5496	282	58	5505	174
95	5535	285	59	5500	177
--	--	--	77	5502	231
--	--	--	82	5509	246
--	--	--	92	5492	276
--	--	--	96	5514	288

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5540	12	14	5532	42
19	5484	57	17	5496	51
22	5526	66	24	5517	72
26	5539	78	30	5513	90
37	5524	111	34	5521	102
49	5494	147	37	5506	111
57	5511	171	55	5490	165
63	5530	189	73	5485	219
70	5492	210	82	5514	246
76	5495	228	97	5524	291
80	5485	240	99	5534	297
82	5505	246	--	--	--
84	5537	252	--	--	--
87	5501	261	--	--	--
88	5513	264	--	--	--
90	5497	270	--	--	--
94	5481	282	--	--	--
97	5531	291	--	--	--
99	5535	297	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
37	5508	111	7	5491	21
48	5517	144	22	5493	66
60	5516	180	26	5489	78
68	5497	204	35	5507	105
79	5509	237	45	5515	135
86	5511	258	59	5513	177
98	5505	294	60	5499	180
--	--	--	61	5484	183
--	--	--	70	5503	210
--	--	--	77	5500	231
--	--	--	79	5525	237
--	--	--	86	5519	258
--	--	--	91	5488	273

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5498	6	0	5506	0
4	5518	12	37	5501	111
8	5546	24	45	5540	135
24	5497	72	46	5542	138
30	5510	90	54	5512	162
43	5529	129	60	5536	180
59	5520	177	63	5547	189
76	5543	228	69	5525	207
78	5503	234	81	5550	243
79	5532	237	83	5517	249
80	5490	240	92	5530	276
86	5496	258	--	--	--
99	5516	297	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5501	39	6	5527	18
17	5537	51	19	5501	57
34	5522	102	23	5553	69
36	5517	108	33	5558	99
38	5535	114	34	5552	102
44	5507	132	41	5505	123
49	5541	147	45	5525	135
63	5548	189	46	5556	138
68	5556	204	49	5546	147
69	5508	207	52	5532	156
72	5504	216	58	5539	174
77	5552	231	68	5511	204
81	5531	243	70	5500	210
85	5534	255	71	5513	213
88	5524	264	77	5529	231
94	5550	282	86	5545	258
--	--	--	92	5554	276

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5522	0	1	5531	3
1	5548	3	3	5510	9
3	5539	9	4	5533	12
4	5555	12	12	5541	36
19	5541	57	34	5515	102
20	5536	60	38	5539	114
23	5504	69	88	5516	264
24	5512	72	93	5545	279
26	5559	78	97	5544	291
34	5517	102	--	--	--
47	5534	141	--	--	--
65	5529	195	--	--	--
71	5533	213	--	--	--
72	5557	216	--	--	--
75	5520	225	--	--	--
81	5545	243	--	--	--
91	5558	273	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5505	9	7	5523	21
10	5545	30	15	5514	45
23	5518	69	23	5561	69
31	5557	93	24	5532	72
46	5562	138	26	5542	78
51	5529	153	36	5549	108
52	5507	156	38	5510	114
53	5512	159	40	5551	120
54	5561	162	50	5522	150
72	5547	216	56	5512	168
84	5511	252	65	5508	195
93	5534	279	72	5504	216
95	5519	285	75	5547	225
99	5552	297	78	5531	234
--	--	--	86	5539	258
--	--	--	87	5548	261
--	--	--	93	5526	279
--	--	--	96	5533	288
--	--	--	99	5521	297

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5550	51	2	5544	6
24	5520	72	10	5551	30
25	5569	75	16	5555	48
60	5543	180	41	5566	123
66	5544	198	50	5531	150
78	5552	234	54	5550	162
84	5518	252	73	5543	219
91	5510	273	79	5521	237
99	5555	297	89	5532	267
--	--	--	94	5570	282
--	--	--	97	5530	291

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5518	33	10	5566	30
13	5557	39	19	5519	57
16	5564	48	27	5555	81
24	5569	72	35	5546	105
26	5549	78	42	5547	126
32	5541	96	44	5573	132
42	5525	126	50	5520	150
55	5544	165	52	5526	156
63	5573	189	61	5532	183
67	5520	201	75	5528	225
68	5529	204	77	5562	231
69	5522	207	93	5572	279
93	5563	279	--	--	--
95	5524	285	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5574	3	2	5522	6
9	5543	27	4	5537	12
17	5548	51	33	5580	99
23	5541	69	42	5527	126
28	5522	84	43	5536	129
41	5579	123	59	5577	177
43	5572	129	62	5535	186
45	5561	135	72	5545	216
54	5573	162	74	5565	222
64	5580	192	76	5550	228
66	5570	198	78	5546	234
73	5530	219	83	5541	249
97	5560	291	84	5521	252
98	5571	294	85	5563	255
--	--	--	88	5567	264
--	--	--	91	5576	273

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5555	24	8	5522	24
10	5544	30	15	5547	45
12	5533	36	38	5578	114
23	5567	69	42	5527	126
33	5553	99	49	5533	147
48	5525	144	50	5537	150
61	5536	183	51	5538	153
66	5556	198	56	5526	168
77	5534	231	61	5563	183
82	5559	246	74	5574	222
96	5557	288	78	5552	234
--	--	--	80	5540	240
--	--	--	83	5553	249
--	--	--	84	5582	252
--	--	--	94	5580	282
--	--	--	95	5548	285

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5532	33	2	5568	6
17	5539	51	18	5586	54
31	5570	93	23	5551	69
39	5544	117	38	5571	114
46	5575	138	40	5581	120
49	5583	147	42	5579	126
50	5585	150	44	5548	132
59	5587	177	51	5566	153
62	5589	186	60	5543	180
69	5578	207	62	5555	186
70	5540	210	75	5535	225
90	5586	270	83	5580	249
--	--	--	96	5574	288

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5569	3	10	5541	30
11	5538	33	11	5590	33
13	5588	39	24	5554	72
16	5560	48	29	5550	87
19	5547	57	34	5596	102
28	5563	84	52	5585	156
44	5596	132	63	5538	189
48	5548	144	84	5548	252
63	5562	189	85	5559	255
68	5594	204	--	--	--
78	5585	234	--	--	--
82	5568	246	--	--	--
88	5556	264	--	--	--
95	5566	285	--	--	--

6. CONCLUSION

The data collected relate only the item(s) tested and show that the **Wi-Fi AP 4X4 OD ext. antenna US; Wi-Fi AP 4x4 OD omni antenna US; Wi-Fi AP 4x4 OD direct. antenna US; Wi-Fi AP 4x4 OD small omni antenna US FCC ID: 2AD8UFZCWO4A1, Model Number: WO4C-AC400** is in compliance with Part 15E of the FCC Rules and IC Rules.

The End