DFS MEASUREMENT REPORT

FCC PART 15 Subpart E WLAN 802.11b/g/n

FCC ID:	2AD8UFZCWO2CA1
APPLICANT:	Nokia Solutions and Networks, OY
Application Type:	Certification
Product:	AC220 Wi-Fi AP OD directional antenna US AC220 Wi-Fi AP OD external antenna US AC220 Wi-Fi AP OD small omni antenna US
Model No.:	WO2C-AC220
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:	August 08 ~ October 22, 2017

Reviewed By : Paddy Chen
(Sunny Sun)

Approved By : Marlin Chen
(Marlin Chen)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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.

Revision History

Report No.	Version	Description	Issue Date	Note
1707TW0110-U5	Rev. 01	Initial Report	12-02-2017	Valid

CONTENTS

Description Page

§2.1033 General Information

Applicant:	Nokia Solutions and Networks, OY
Applicant Address:	1455 W Shure Drive, Arlington Heights, IL 60004
Manufacturer:	Nokia Solutions and Networks, OY
Manufacturer Address:	1455 W Shure Drive, Arlington Heights, IL 60004
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
FCC Rule Part(s):	Part 15 Subpart E - 15.407 Section (h)(2)
Test Device Serial No.:	CNCKK2S0PL ☐ 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.**

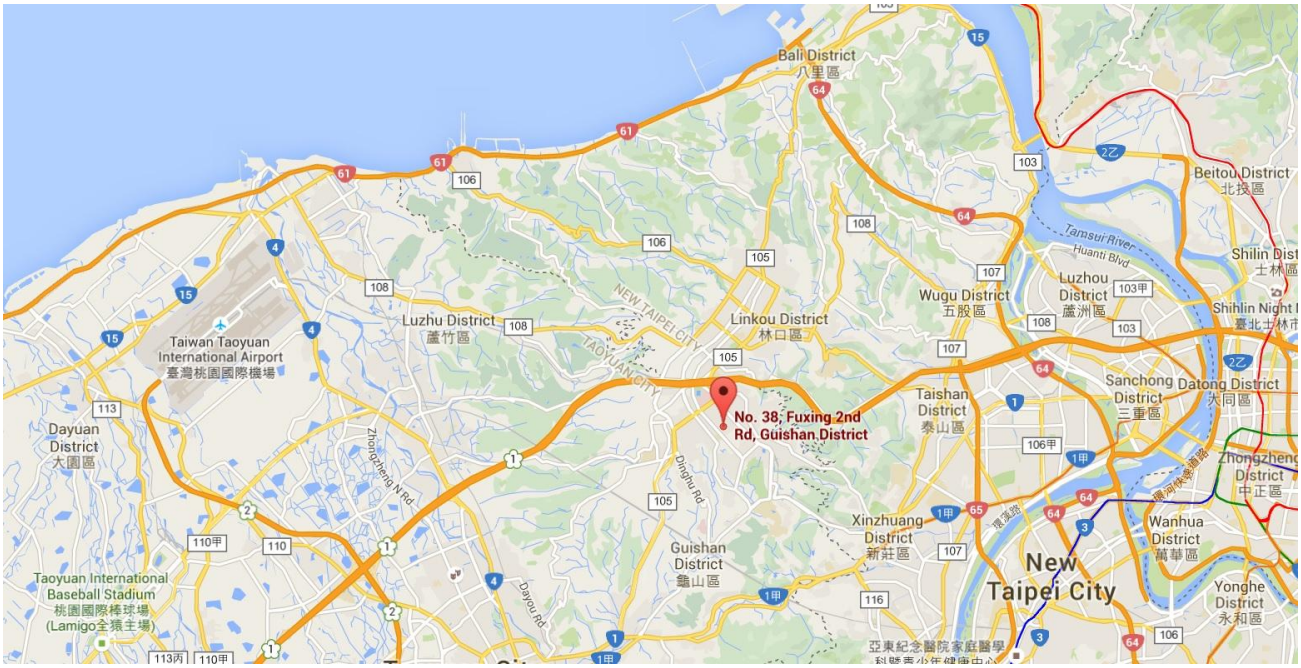
1. INTRODUCTION

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

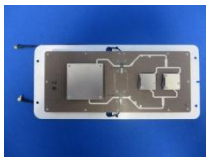
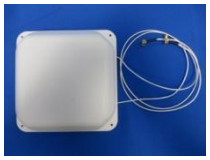
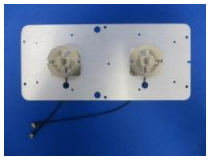
2.1. Equipment Description

Product Name:	AC220 Wi-Fi AP OD directional antenna US AC220 Wi-Fi AP OD external antenna US AC220 Wi-Fi AP OD small omni antenna US
Model No.:	WO2C-AC220
Brand Name:	NOKIA
Wi-Fi Specification:	802.11a/b/g/n/ac
Frequency Range	**2.4GHz:** For 802.11b/g/n-HT20: 2412 ~ 2462 MHz For 802.11n-HT40: 2422 ~ 2452 MHz **5GHz:** For 802.11a/n-HT20/ac-VHT20:5180~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40:5190~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80:5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz
Type of Modulation	802.11b: DSSS, 802.11a/g/n/ac: OFDM
Modulation Type	CCK, DQPSK, DBPSK for DSSS 16QAM, 64QAM, 256QAM, QPSK, BPSK for OFDM
Power-on cycle	Requires 91.9 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: The model difference as below:

- when the device has been connected the Galtronics Directional antenna, the product name is “AC220 Wi-Fi AP OD directional antenna US”;
- when the device has been connected the PCTEL antenna, the product name is “AC220 Wi-Fi AP OD external antenna US”;
- when the device has been connected the Galtronics Small Omni antenna, the product name is “AC220 Wi-Fi AP OD small omni antenna US”;

2.2. Description of Available Antennas

Antenna	Manufacture	Frequency Band (MHz)	Antenna Type	Part Number
	Galtronics	2412 ~ 2472 5150 ~ 5250 5725 ~ 5850	Directional Antenna	02078140-06561U2
	PCTEL, Inc.	2412 ~ 2472 5150 ~ 5850	Panel Antenna	FPMI2458-DP2RPSMA
	Galtronics	2412 ~ 2472	Small Omni Antenna	02078140-06561U1

Antenna Type	Frequency Band (MHz)	TX Paths	Per Chain Max Antenna Gain (dBi)		Beam Forming Directional Gain (dBi)	CDD Directional Gain (dBi)	
			Ant 1	Ant 2		For Power	For PSD
Directional Antenna	2412 ~ 2462	2	9.00	9.00	12.01	9.00	12.01
	5150 ~ 5250	2	11.00	11.00	14.01	11.00	14.01
	5150 ~ 5250 30° elevation angle	2	3.00	3.00	6.01	3.00	N/A
	5250 ~ 5350	2	11.00	11.00	14.01	11.00	14.01
	5470 ~ 5725	2	10.50	10.50	13.51	10.50	13.51
	5725 ~ 5850	2	10.00	10.00	13.01	10.00	13.01
Panel Antenna	2412 ~ 2462	2	6.00	6.00	9.01	6.00	9.01
	5150 ~ 5250	2	5.00	5.00	8.01	5.00	8.01
	5150 ~ 5250 30° elevation angle	2	2.27	2.27	5.28	2.27	N/A
	5250 ~ 5350	2	5.00	5.00	8.01	5.00	8.01
	5470 ~ 5725	2	5.00	5.00	8.01	5.00	8.01
	5725 ~ 5850	2	5.00	5.00	8.01	5.00	8.01
Small Omni Antenna	2412 ~ 2462	2	5.25	5.25	8.26	5.25	8.26
	5150 ~ 5250	2	6.50	6.50	9.51	6.50	9.51
	5150 ~ 5250 30° elevation angle	2	-1.25	-1.25	1.76	-1.25	N/A
	5250 ~ 5350	2	6.50	6.50	9.51	6.50	9.51
	5470 ~ 5725	2	6.50	6.50	9.51	6.50	9.51
	5725 ~ 5850	2	6.50	6.50	9.51	6.50	9.51

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

   For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.

   1) If all antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

   - For power spectral density (PSD) measurements on all devices,
     Array Gain = 10 log (N_{ANT}/ N_{SS}) dB = 3.01;
   - For power measurements on IEEE 802.11 devices,
     Array Gain = 0 dB for $N_{ANT} \leq 4$;

   2) If antenna gains are not equal, the user may use either of the following methods to calculate directional gain, provided that each transmit antenna is driven by only one spatial stream:

   - Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

- $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$

  $g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

  G_k is the gain in dBi of the kth antenna.

2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n, not include 802.11a/ac.

   Correlated signals include, but are not limited to, signals transmitted in any of the following modes:

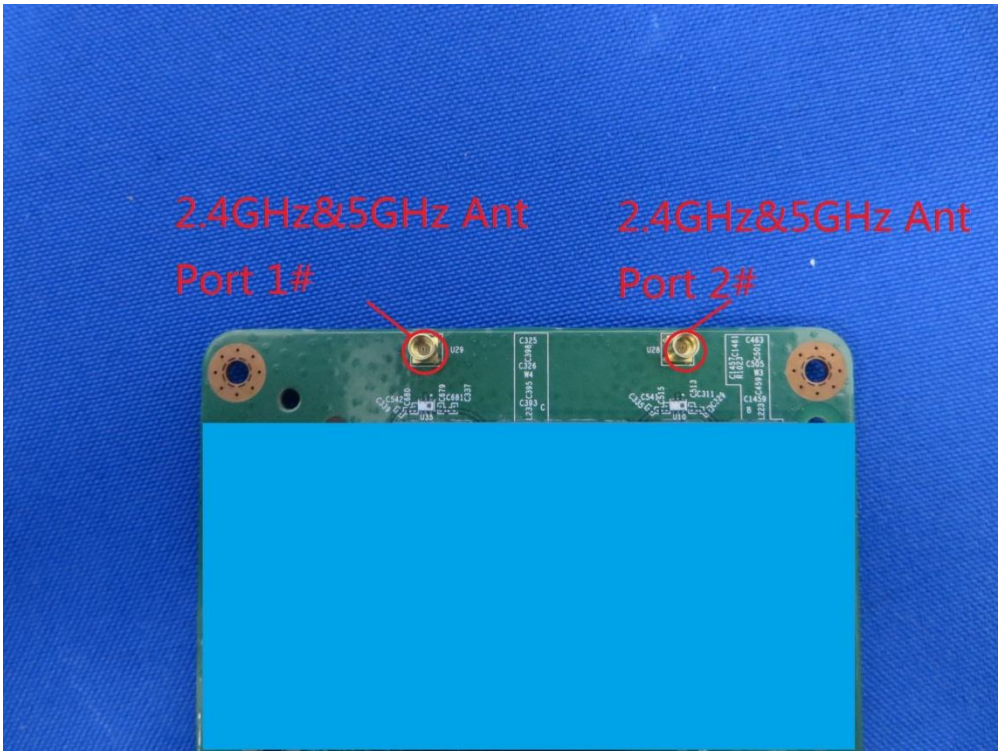
   - Any transmit Beam Forming mode, whether fixed or adaptive (e.g., phased array modes, closed loop MIMO modes, Transmitter Adaptive Antenna modes, Maximum Ratio Transmission (MRT) modes, and Statistical Eigen Beam Forming (EBF) modes).

   Unequal antenna gains, with equal transmit powers. For antenna gains given by G_1, G_2, …, G_N dBi.

   - transmit signals are correlated, then
   - Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N_{ANT}]$ 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.]

2.3. Description of Antenna RF Port

Antenna RF Port				
--	2.4GHz RF Port		5GHz RF Port	
Software Control Port	Ant 1	Ant 2	Ant 1	Ant 2



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

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

Table 3-5: Parameters for Short Pulse Radar Waveforms

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

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

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

Long Pulse Radar Test Waveform

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

Table 3-7: Parameters for Long Pulse Radar Waveforms

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

Frequency Hopping Radar Test Waveform

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

Table 3-8: Parameters for Frequency Hopping Radar Waveforms

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

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

3.5. Conducted Test Setup

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

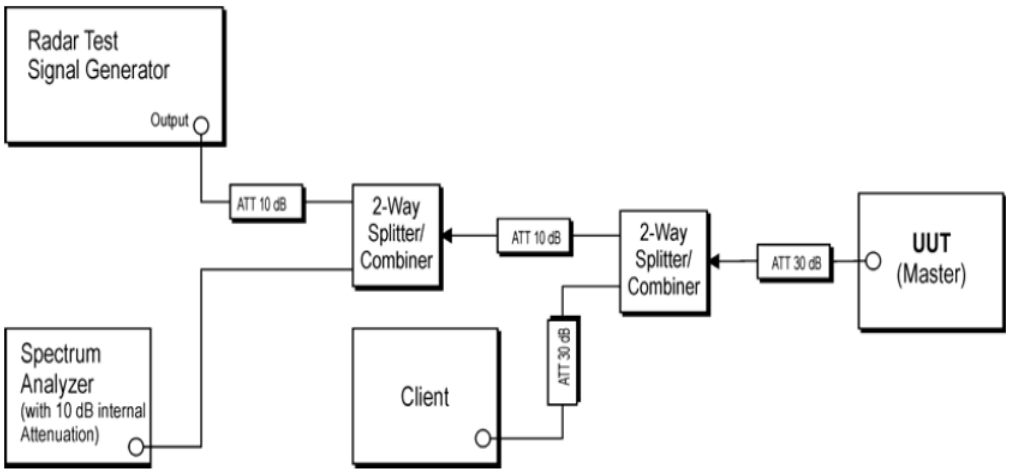


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

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	2018/07/10
MXG X-Series Microwave Analog Signal Generator	KEYSIGHT	N5183B	MRTTWA00013	1 year	2018/04/17
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2018/06/08
Combiner	WOKEN	0120N02208001D	MRTTWA00040	1 year	N/A
Broadband Hornantenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2018/04/05

Client Information

Instrument	Manufacturer	Type No.
Wireless Network Adapter	Intel	7260HMW

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 OY**

FCC ID: **2AD8UFZCWO2CA1**

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

5.2. Radar Waveform Calibration

5.2.1. Calibration Setup

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

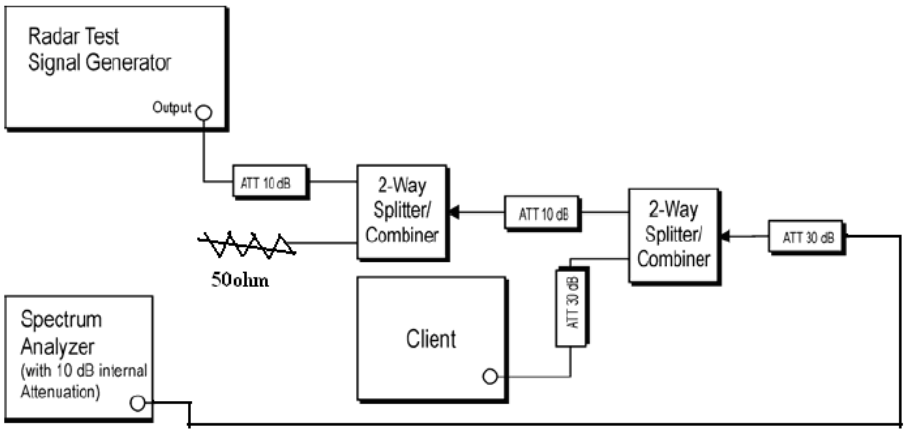


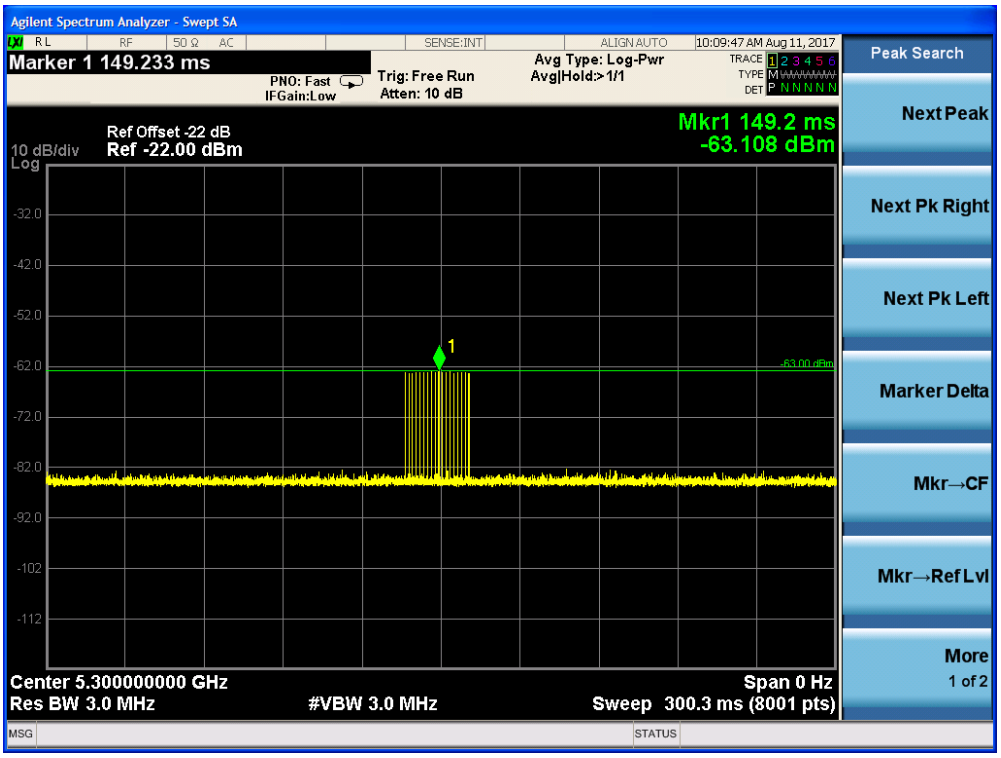
Figure 3-2: Conducted Test Setup

5.2.2. Calibration Procedure

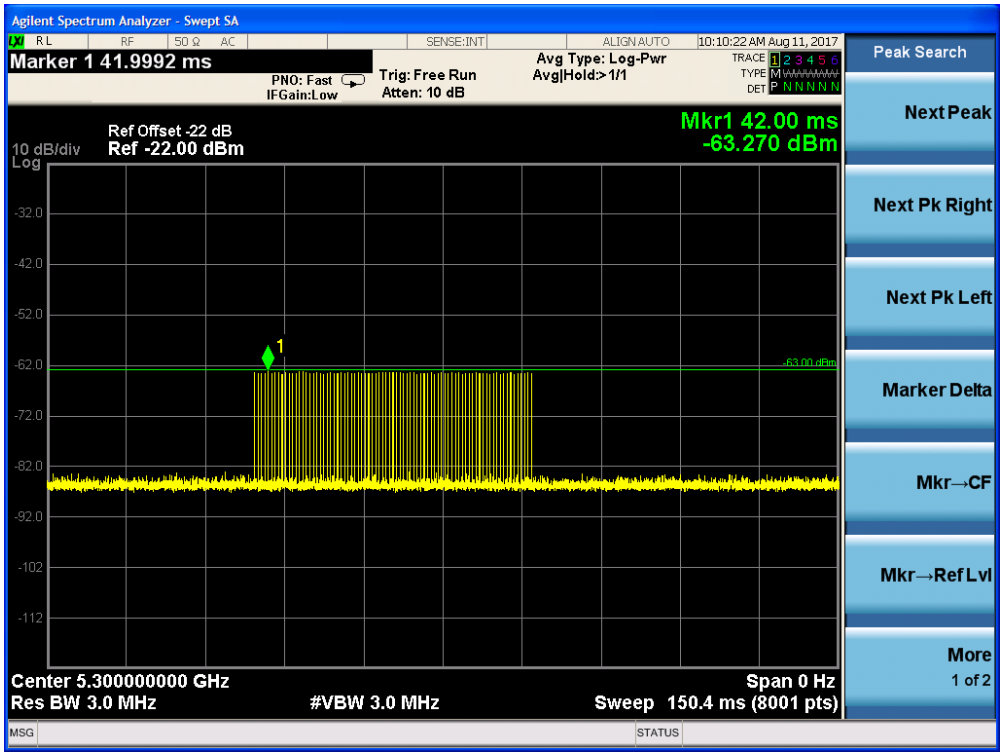
The Interference Radar Detection Threshold Level is (-64dBm) + (0) [dBi] + 1 dB= -63 dBm that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test 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 (-64dBm) + (0) [dBi] + 1 dB= -63dBm. 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

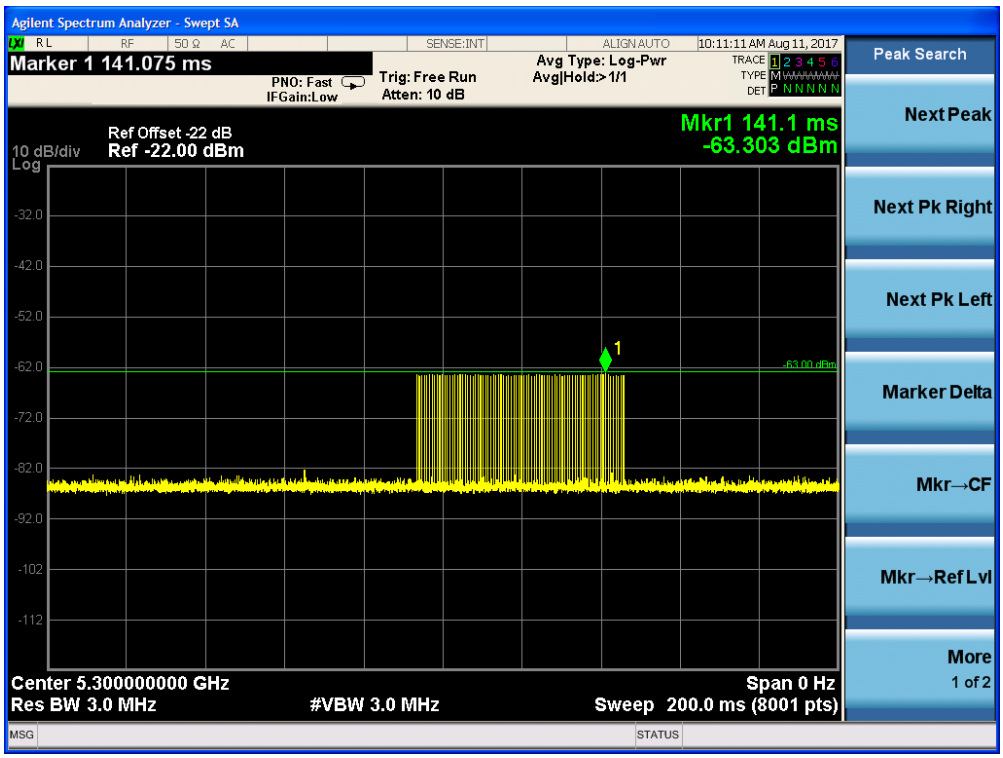


Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



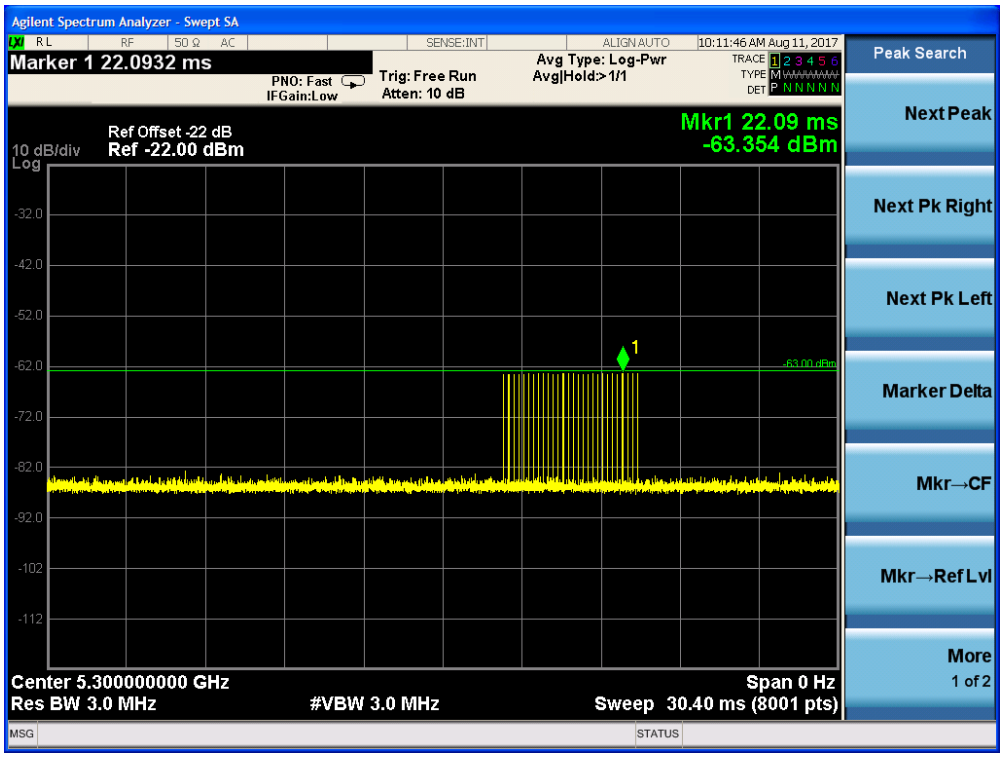
PRI = 658us and the number of pulses = 81

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

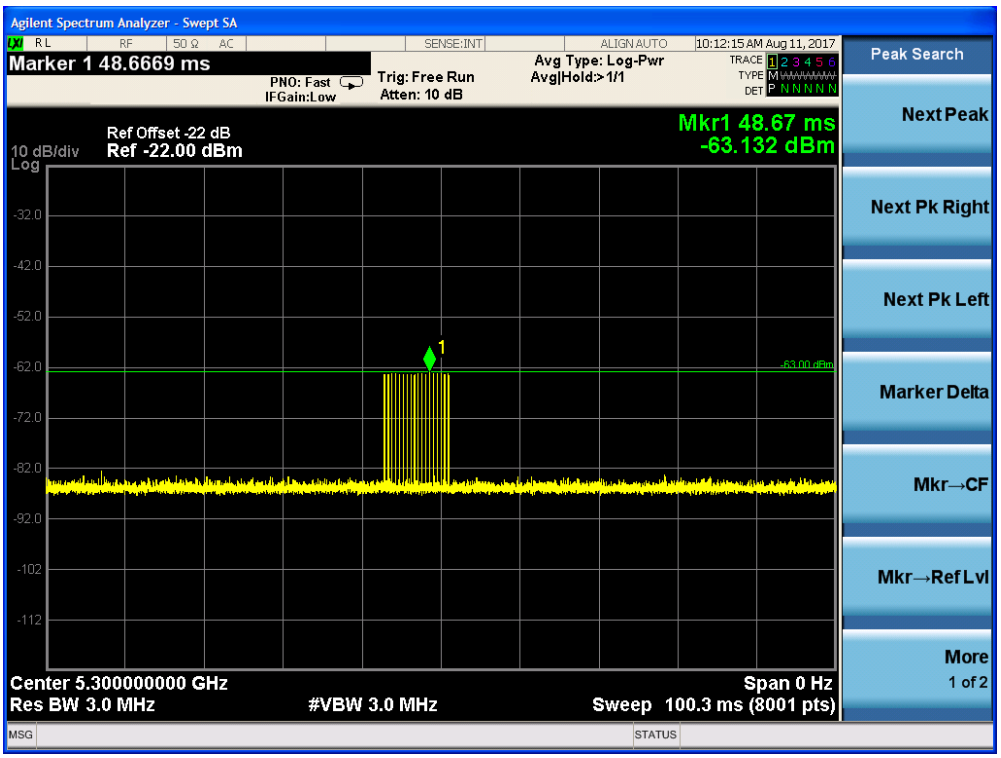


PRI = 1.071ms and the number of pulses = 50

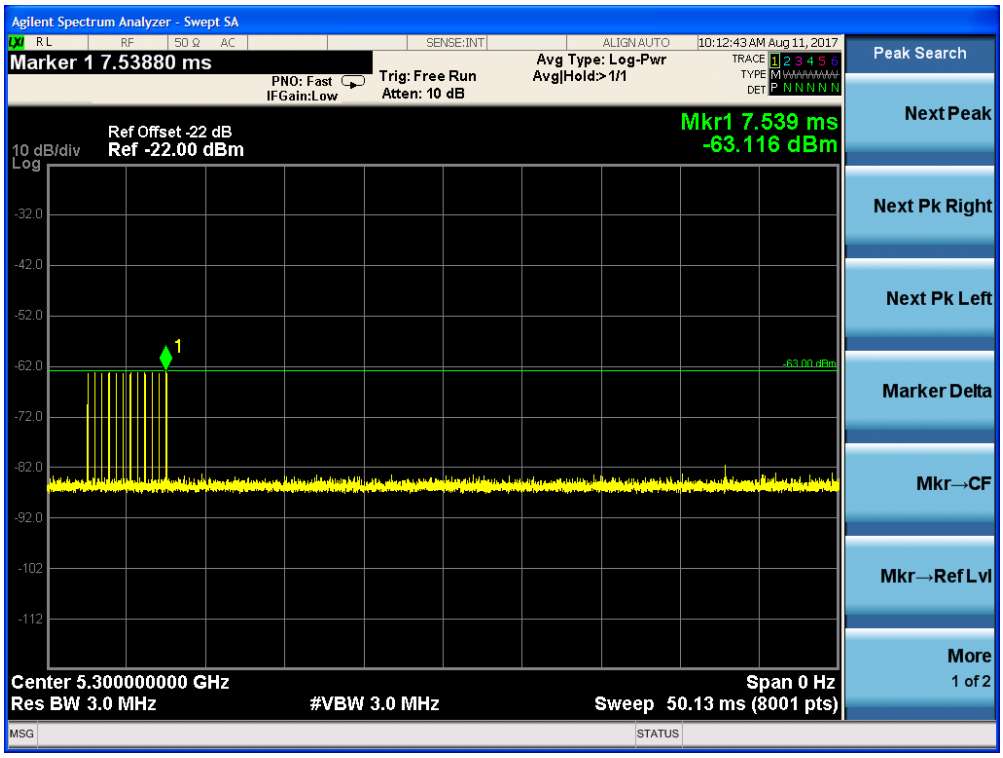
Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



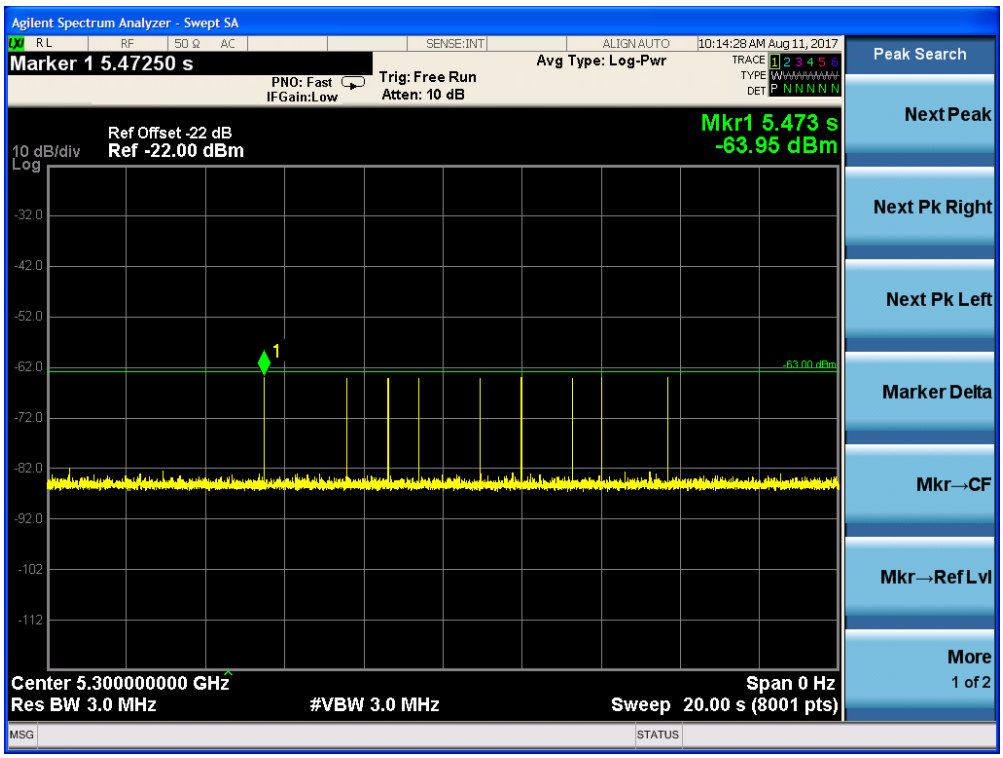
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency



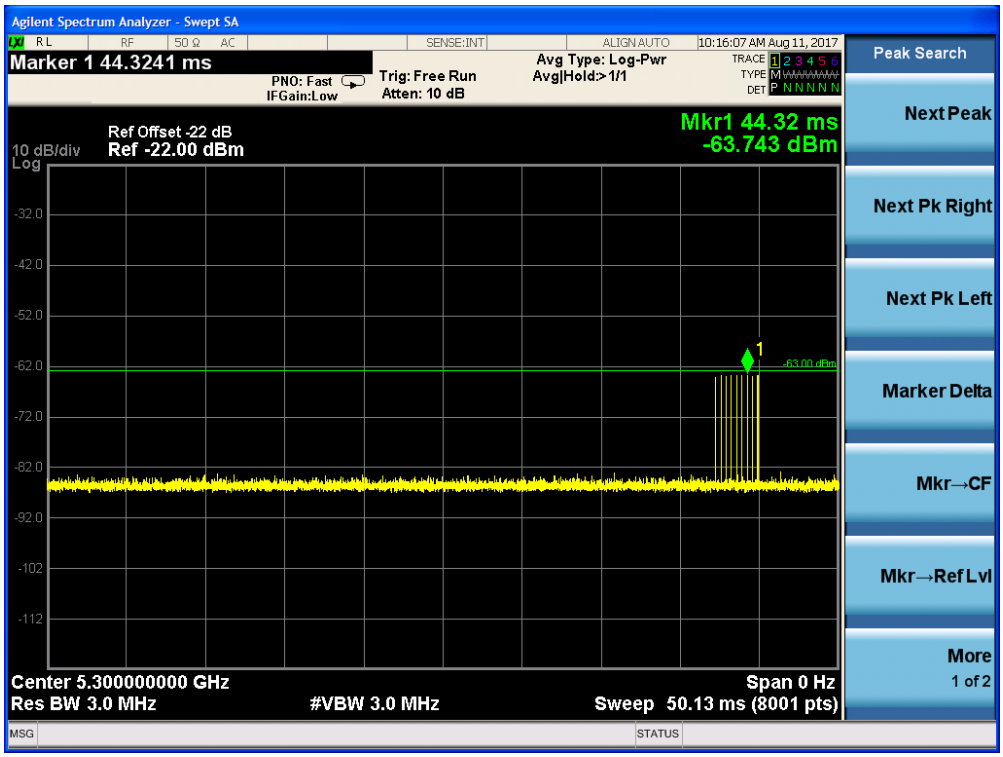
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency



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

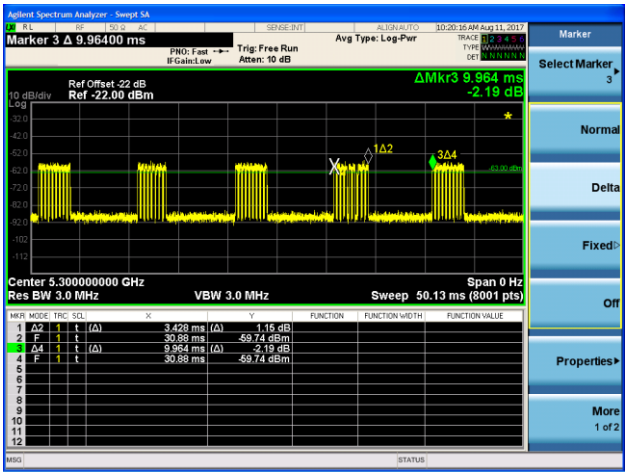
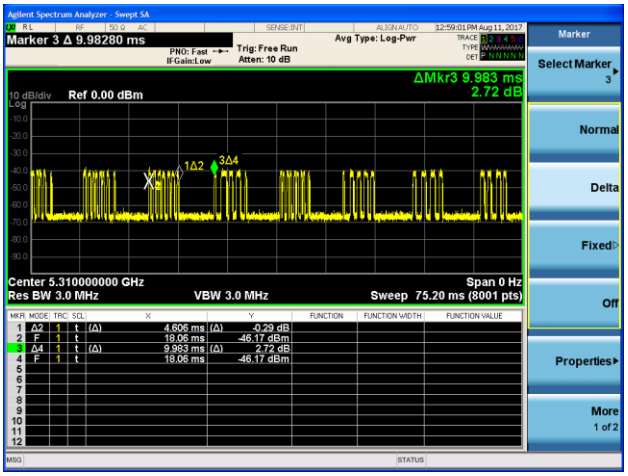
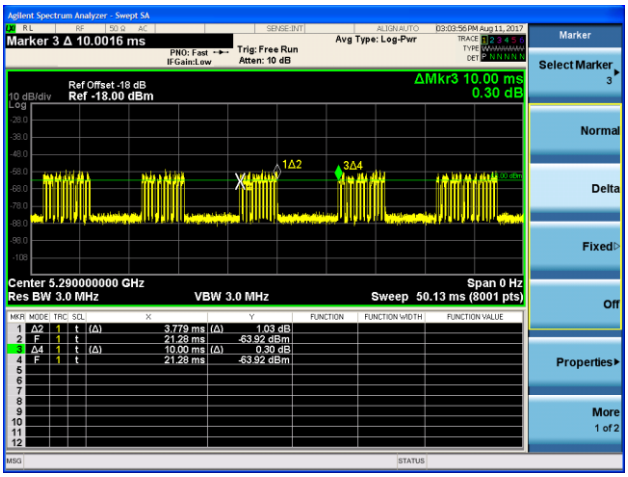


Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth



5.2.4. Channel Loading Test Result

System testing was performed with the designated MPEG test file that streams full motion video from the EUT 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).

<table>
<tr><th colspan="2">Channel Loading Plot</th></tr>
<tr><td>802.11a 5300MHz</td><td>802.11n-HT40 5310MHz</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>802.11ac-VHT80 5290MHz</td><td></td></tr>
<tr><td> 
</td><td></td></tr>
</table>

Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11a	5300 MHz	34.40%	≥ 17%	Pass
802.11n-HT40	5310 MHz	46.14%	≥ 17%	Pass
802.11ac-VHT80	5290 MHz	37.79%	≥ 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: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

5.3.3. Test Result

EUT Frequency = 5300MHz for 802.11a											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5290	0	0	0	0	0	0	0	0	0	0	0%
5291 FL	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309 FH	1	1	1	1	1	1	1	1	1	1	100%
5310	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5309MHz - 5291MHz = 18MHz											
EUT 99% Bandwidth = 16.57MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 16.57MHz x 100% = 16.57MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 16.57MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5310MHz for 802.11n-HT40											
Radar Frequency (MHz)	**DFS Detection Trials (1=Detection, 0= No Detection)**										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5290	0	0	0	0	0	0	0	0	0	0	0%
5291	0	0	0	0	0	0	0	0	0	0	0%
5292 FL	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5292MHz = 37MHz											
EUT 99% Bandwidth = 35.97MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 35.97MHz x 100% = 35.97MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5310MHz. The 99% channel bandwidth is 35.97MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5290MHz for 802.11ac-VHT80											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5250	0	0	0	0	0	0	0	0	0	0	0%
5251 FL	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5251MHz = 78MHz											
EUT 99% Bandwidth = 75.82MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.82MHz x 100% = 75.82MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.82MHz. (See the 99% BW section of the RF report for further measurement details).

5.4. Initial Channel Availability Check Time Measurement

5.4.1. Test Limit

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

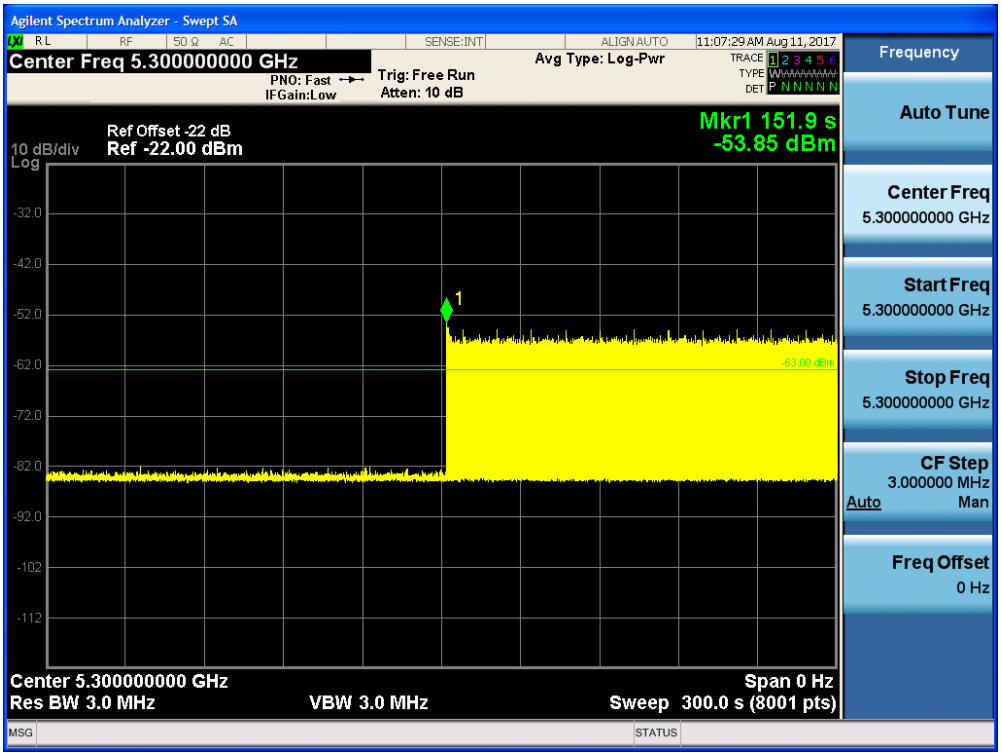
5.4.2. Test Procedure

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

5.4.3. Test Result

The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (91.9 sec). Initial beacons/data transmissions are indicated by marker 1 (151.9 sec).

Initial Channel Availability Check Time for 802.11a



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

5.5.1. Test Limit

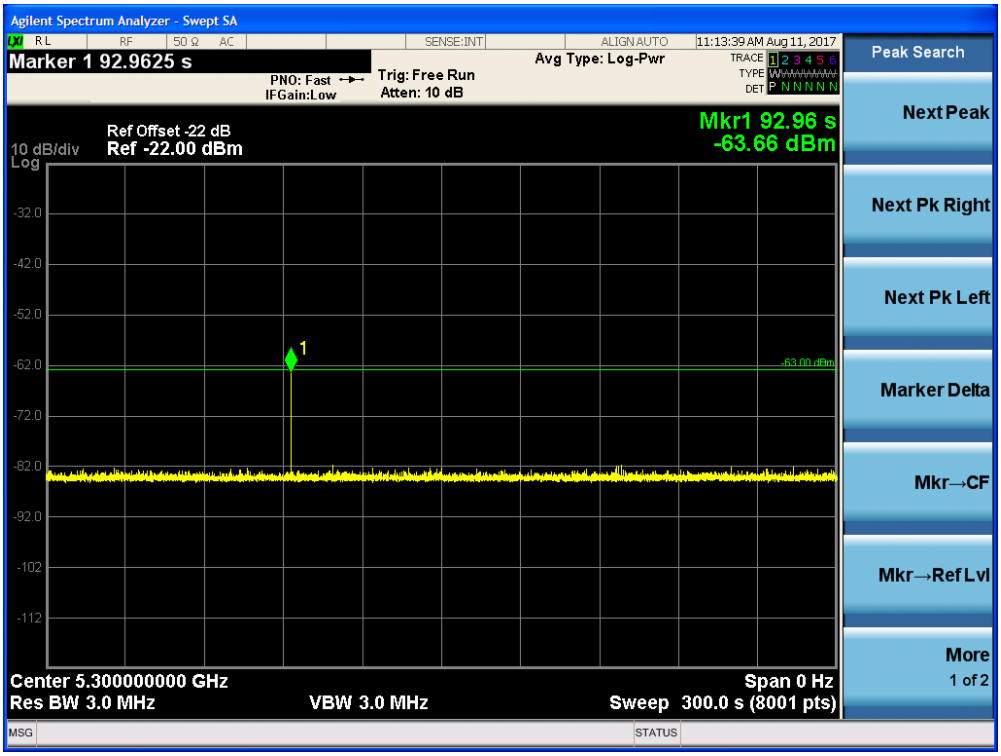
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

5.5.2. Test Procedure

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

5.5.3. Test Result

Radar Burst at the Beginning of the Channel Availability Check Time for 802.11a



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

5.6.1. Test Limit

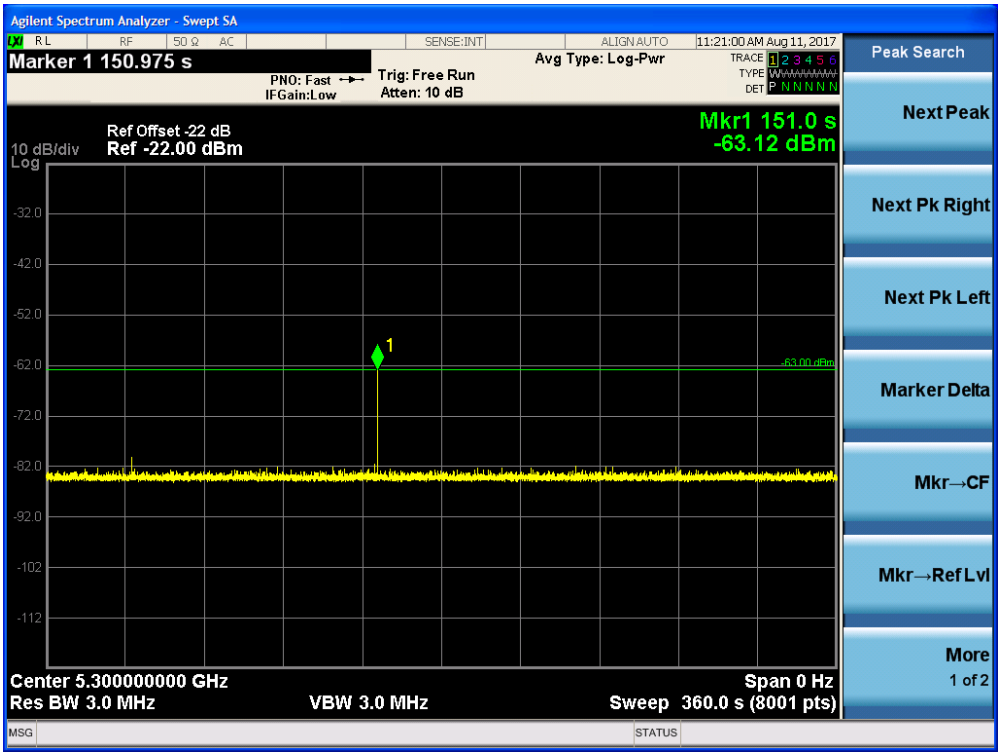
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

5.6.2. Test Procedure

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner thanT1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

5.6.3. Test Result

Radar Burst at the End of the Channel Availability Check Time for 802.11a



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

5.7.1. Test Limit

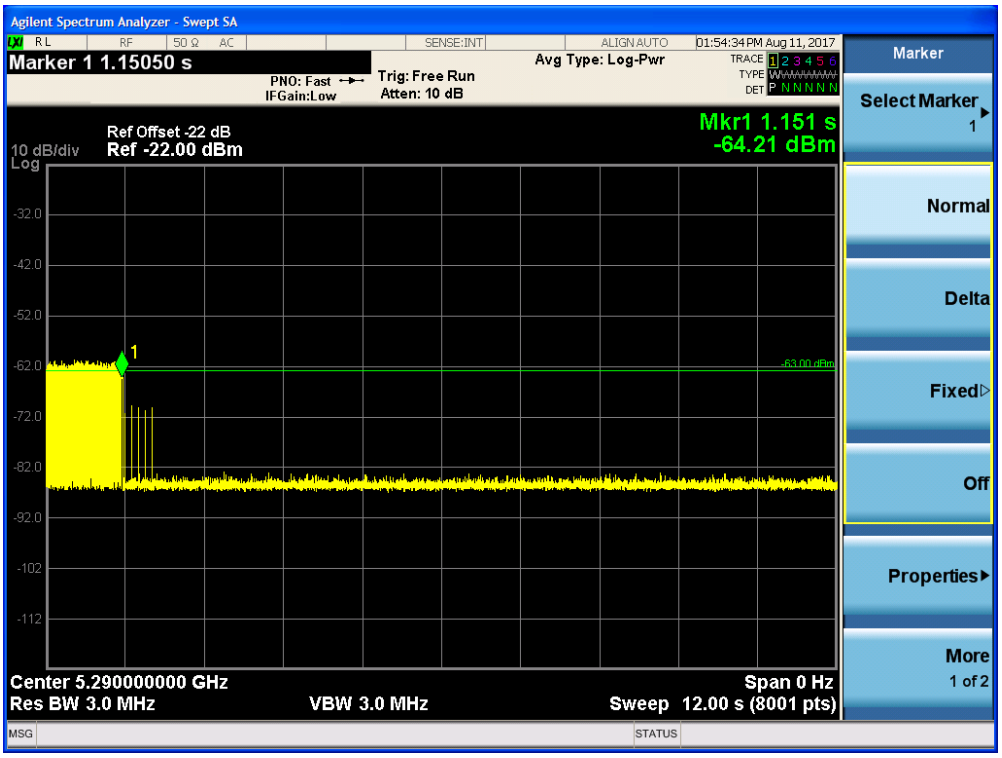
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec.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

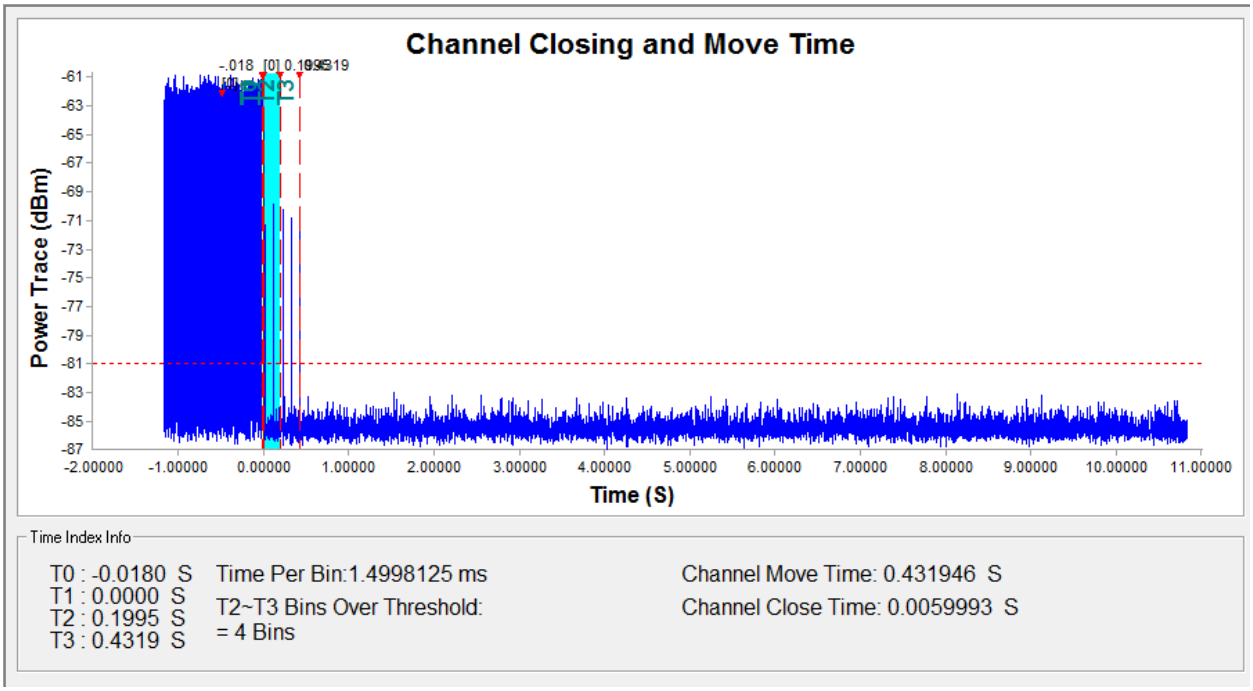
5.7.2. Test Procedure Used

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

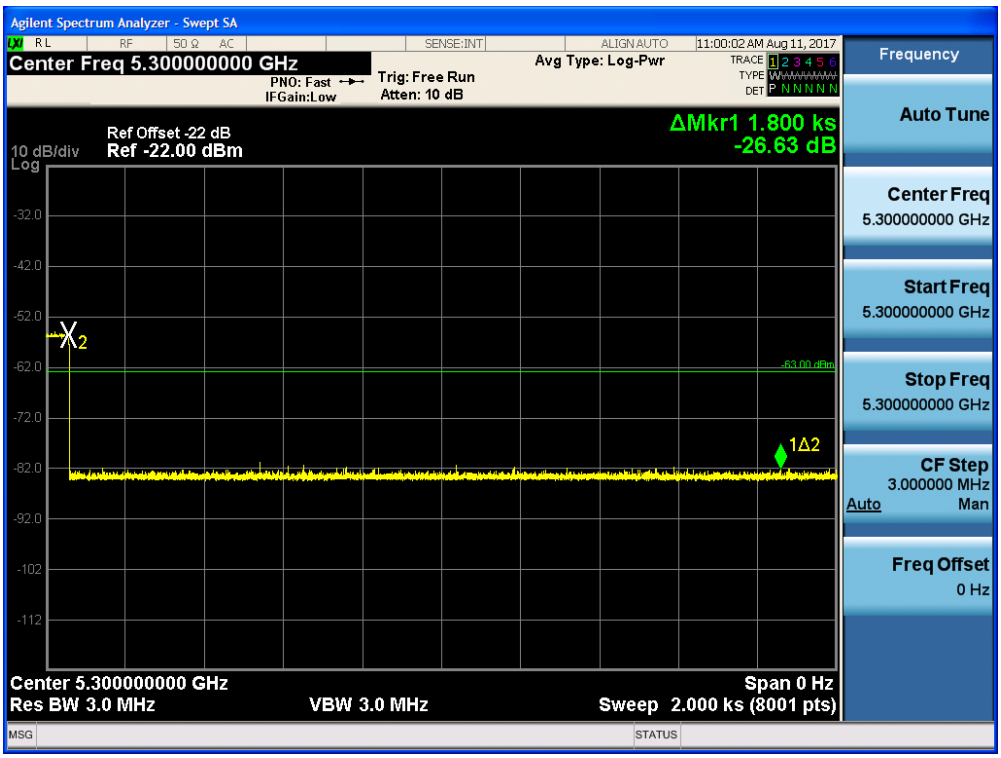
5.7.3. Test Result

Channel Move Time and Channel Closing Transmission Time for 802.11ac-VHT80 – 5290MHz





Non-Occupancy Period for 802.11a – 5300MHz



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.432s	<10s
Channel Closing Transmission Time (ms) (Note)	6.0ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min

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

5.8. Statistical Performance Check Measurement

5.8.1. Test Limit

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

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

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

5.8.2. Test Procedure

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

5.8.3. Test Result

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	5292	1	758	70	1
2	5292	1	698	76	1
3	5292	1	578	92	1
4	5292	1	518	102	1
5	5292	1	718	74	1
6	5292	1	658	81	1
7	5292	1	678	78	1
8	5292	1	858	62	1
9	5292	1	638	83	1
10	5292	1	878	61	1
11	5300	1	738	72	1
12	5300	1	618	86	1
13	5300	1	918	58	1
14	5300	1	818	65	1
15	5300	1	778	68	1
16	5300	1	1287	42	1
17	5300	1	828	64	1
18	5300	1	2234	24	1
19	5300	1	2634	21	1
20	5300	1	1900	28	1
21	5308	1	2447	22	1
22	5308	1	2096	26	1
23	5308	1	848	63	1
24	5308	1	1625	33	1
25	5308	1	857	62	1
26	5308	1	527	101	1
27	5308	1	2043	26	1
28	5308	1	3010	18	1
29	5308	1	2208	24	1
30	5308	1	2160	25	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	5292	4.2	155	26	1
2	5292	1.6	225	26	1
3	5292	3.3	215	25	1
4	5292	4.7	167	29	1
5	5292	4.7	166	24	1
6	5292	3.2	180	24	1
7	5292	2.0	214	29	1
8	5292	4.8	164	28	1
9	5292	4.2	229	26	1
10	5292	2.9	208	25	1
11	5300	5.0	187	24	1
12	5300	4.0	209	29	1
13	5300	1.0	152	23	1
14	5300	4.9	212	26	1
15	5300	1.1	192	24	1
16	5300	3.9	186	27	1
17	5300	2.7	212	26	1
18	5300	1.5	192	24	1
19	5300	4.6	211	28	1
20	5300	4.5	213	23	1
21	5308	4.0	155	27	1
22	5308	1.1	179	28	1
23	5308	3.8	200	23	1
24	5308	4.6	198	27	1
25	5308	3.9	168	26	1
26	5308	1.8	191	23	1
27	5308	2.0	198	29	1
28	5308	2.1	191	25	1
29	5308	2.9	161	23	1
30	5308	3.6	204	29	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	5292	9.1	442	16	1
2	5292	6.3	300	18	1
3	5292	6.3	460	16	1
4	5292	10.0	363	16	1
5	5292	6.3	466	17	1
6	5292	6.3	464	17	1
7	5292	6.3	406	17	1
8	5292	6.7	477	16	1
9	5292	6.3	355	18	1
10	5292	7.8	447	17	1
11	5300	7.7	342	17	1
12	5300	7.9	308	17	1
13	5300	9.9	476	18	1
14	5300	8.6	313	17	1
15	5300	7.9	350	17	1
16	5300	6.1	353	18	1
17	5300	8.1	474	17	1
18	5300	7.1	382	16	1
19	5300	9.2	305	17	1
20	5300	7.6	299	18	1
21	5308	8.3	385	16	1
22	5308	7.0	358	17	1
23	5308	6.9	378	18	1
24	5308	9.4	481	16	1
25	5308	7.7	333	16	1
26	5308	6.8	278	17	1
27	5308	7.4	407	17	1
28	5308	6.7	445	18	1
29	5308	9.3	444	18	1
30	5308	9.0	461	16	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	5292	19.4	470	15	1
2	5292	11.7	268	15	1
3	5292	18.2	255	13	1
4	5292	12.8	460	16	1
5	5292	20.0	347	15	1
6	5292	17.2	326	14	1
7	5292	16.9	252	14	1
8	5292	18.0	444	15	1
9	5292	13.6	261	16	1
10	5292	11.3	384	15	1
11	5300	17.3	490	12	1
12	5300	17.2	267	15	1
13	5300	14.7	327	16	1
14	5300	17.2	316	13	1
15	5300	11.6	289	13	1
16	5300	13.8	313	14	1
17	5300	15.8	468	12	1
18	5300	11.8	435	14	1
19	5300	12.1	295	13	1
20	5300	18.8	356	13	1
21	5308	14.2	279	12	1
22	5308	14.1	455	14	1
23	5308	12.5	300	15	1
24	5308	14.4	458	13	1
25	5308	13.1	431	16	1
26	5308	12.2	269	14	1
27	5308	16.0	266	16	1
28	5308	13.0	476	12	1
29	5308	15.5	271	12	1
30	5308	11.7	345	16	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	5295.6	1	16	5300.0	1
2	5296.8	1	17	5300.0	1
3	5297.6	1	18	5300.0	1
4	5294.0	1	19	5300.0	1
5	5295.2	1	20	5300.0	1
6	5299.2	1	21	5304.0	1
7	5294.4	1	22	5306.0	1
8	5299.6	1	23	5304.4	1
9	5296.0	1	24	5300.8	1
10	5298.8	1	25	5303.2	1
11	5300.0	1	26	5305.6	1
12	5300.0	1	27	5300.4	1
13	5300.0	1	28	5304.8	1
14	5300.0	1	29	5301.2	1
15	5300.0	1	30	5302.4	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)
	290608									
1		3	9	70	1351	1486	1239	290608	0	1499999
	1630765									
2		2	9	55	1666	1851	0	1925449	1500000	2999999
	2008969									
3		2	9	100	1622	1422	0	3937935	3000000	4499999
	1899008									
4		1	9	75	1090	0	0	5839987	4500000	5999999
	1039050									
5		3	9	90	1041	1916	1946	6880127	6000000	7499999
	2071121									
6		2	9	100	1885	1992	0	8956151	7500000	8999999
	352758									
7		2	9	70	1341	1829	0	9312786	9000000	10499999
	1256487									
8		2	9	90	1193	1140	0	10572443	10500000	11999999

Total number of pulses in waveform = 17

Type 5 Radar Waveform_2

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	528340	2	12	75	1370	1256	0	528340	0	599999
2	137906	1	12	100	1142	0	0	668872	600000	1199999
3	653915	1	12	65	1078	0	0	1323929	1200000	1799999
4	588057	3	12	55	1209	1767	1266	1913064	1800000	2399999
5	724064	2	12	80	1470	1155	0	2641370	2400000	2999999
6	632789	2	12	85	1093	1023	0	3276784	3000000	3599999
7	743025	2	12	80	1571	1245	0	4021925	3600000	4199999
8	291054	2	12	90	1796	1140	0	4315795	4200000	4799999
9	888274	3	12	95	1148	1863	1551	5207005	4800000	5399999
10	469124	2	12	55	1037	1553	0	5680691	5400000	5999999
11	329079	3	12	90	1994	1924	1018	6012360	6000000	6599999
12	1042210	2	12	85	1044	1357	0	7059506	6600000	7199999
13	439376	1	12	85	1576	0	0	7501283	7200000	7799999
14	768821	3	12	70	1755	1177	1781	8271680	7800000	8399999
15	324354	3	12	95	1817	1397	1202	8600747	8400000	8999999
16	969361	3	12	70	1121	1631	1634	9574524	9000000	9599999
17	574718	1	12	55	1784	0	0	10153628	9600000	10199999
18	487106	3	12	60	1464	1964	1297	10642518	10200000	10799999
19	522442	1	12	75	1982	0	0	11169685	10800000	11399999
20	263234	2	12	85	1335	1154	0	11434901	11400000	11999999

Total number of pulses in waveform = 42

Type 5 Radar Waveform_3

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	160704	2	14	90	1342	1439	0	160704	0	1499999
2	1424358	3	14	65	1040	1821	1406	1587843	1500000	2999999
3	1717745	1	14	70	1892	0	0	3309855	3000000	4499999
4	1947457	3	14	55	1599	1897	1675	5259204	4500000	5999999
5	2114372	3	14	50	1910	1553	1508	7378747	6000000	7499999
6	895379	1	14	65	1138	0	0	8279097	7500000	8999999
7	1392243	2	14	85	1337	1545	0	9672478	9000000	10499999
8	1481815	1	14	90	1739	0	0	11157175	10500000	11999999

Total number of pulses in waveform = 16

Type 5 Radar Waveform_4

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	685256	3	5	55	1216	1968	1125	685256	0	799999
2	271387	3	5	60	1880	1722	1947	960952	800000	1599999
3	1367668	1	5	75	1766	0	0	2334169	1600000	2399999
4	757203	2	5	90	1714	1776	0	3093138	2400000	3199999
5	170930	3	5	100	1927	1907	1043	3267558	3200000	3999999
6	1479607	2	5	70	1689	1122	0	4752042	4000000	4799999
7	141594	2	5	95	1305	1898	0	4896447	4800000	5599999
8	975714	2	5	70	1990	1563	0	5875364	5600000	6399999
9	627932	3	5	90	1408	1080	1847	6506849	6400000	7199999
10	1458328	3	5	55	1355	1340	1579	7969512	7200000	7999999
11	174277	2	5	55	1709	1886	0	8148063	8000000	8799999
12	741808	1	5	55	1709	0	0	8893466	8800000	9599999
13	959565	1	5	55	1032	0	0	9854740	9600000	10399999
14	885475	1	5	50	1864	0	0	10741247	10400000	11199999
15	730176	2	5	100	1589	1154	0	11473287	11200000	11999999

Total number of pulses in waveform = 31

Type 5 Radar Waveform_5

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	957141	2	8	65	1126	1454	0	957141	0	999999
2	708241	2	8	90	1219	1674	0	1667962	1000000	1999999
3	599902	3	8	85	1172	1190	1879	2270757	2000000	2999999
4	843153	2	8	95	1268	1183	0	3118151	3000000	3999999
5	1339365	3	8	85	1712	1634	1796	4459967	4000000	4999999
6	770018	1	8	50	1564	0	0	5235127	5000000	5999999
7	1697129	1	8	100	1094	0	0	6933820	6000000	6999999
8	796722	1	8	60	1569	0	0	7731636	7000000	7999999
9	275874	2	8	90	1778	1896	0	8009079	8000000	8999999
10	1680309	3	8	100	1136	1525	1379	9693062	9000000	9999999
11	508330	1	8	85	1522	0	0	10205432	10000000	10999999
12	1643542	2	8	100	1481	1555	0	11850496	11000000	11999999

Total number of pulses in waveform = 23

Type 5 Radar Waveform_6

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	558331	2	18	55	1519	1504	0	558331	0	599999
2	556326	3	18	75	1683	1114	1174	1117680	600000	1199999
3	151756	2	18	60	1072	1007	0	1273407	1200000	1799999
4	557686	3	18	75	1799	1415	1014	1833172	1800000	2399999
5	1157701	3	18	100	1058	1896	1356	2995101	2400000	2999999
6	410484	1	18	70	1171	0	0	3409895	3000000	3599999
7	432059	2	18	65	1003	1428	0	3843125	3600000	4199999
8	896650	2	18	65	1377	1345	0	4742206	4200000	4799999
9	291425	1	18	75	1930	0	0	5036353	4800000	5399999
10	598500	1	18	75	1784	0	0	5636783	5400000	5999999
11	559875	2	18	50	1518	1397	0	6198442	6000000	6599999
12	769003	1	18	50	1948	0	0	6970360	6600000	7199999
13	374320	2	18	100	1110	1785	0	7346628	7200000	7799999
14	762762	2	18	60	1689	1850	0	8112285	7800000	8399999
15	725379	3	18	85	1215	1198	1559	8841203	8400000	8999999
16	158095	3	18	90	1023	1113	1360	9003270	9000000	9599999
17	821417	1	18	85	1024	0	0	9828183	9600000	10199999
18	795986	2	18	100	1682	1692	0	10625193	10200000	10799999
19	761235	2	18	55	1789	1383	0	11389802	10800000	11399999
20	523221	2	18	90	1460	1291	0	11916195	11400000	11999999

Total number of pulses in waveform = 40

Type 5 Radar Waveform_7

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	235366	3	6	65	1142	1989	1795	235366	0	857142
2	1339965	1	6	75	1786	0	0	1580257	857143	1714285
3	685260	3	6	60	1406	1316	1199	2267303	1714286	2571428
4	912810	1	6	70	1813	0	0	3184034	2571429	3428571
5	624424	3	6	55	1861	1392	1411	3810271	3428572	4285714
6	1130158	1	6	50	1118	0	0	4945093	4285715	5142857
7	733749	2	6	75	1484	1211	0	5679960	5142858	6000000
8	1139584	2	6	70	1331	1614	0	6822239	6000001	6857143
9	283178	3	6	95	1384	1394	1183	7108362	6857144	7714286
10	955384	3	6	100	1699	1781	1845	8067707	7714287	8571429
11	1188097	2	6	60	1402	1242	0	9261129	8571430	9428572
12	411113	1	6	70	1728	0	0	9674886	9428573	10285715
13	730176	3	6	60	1962	1712	1513	10406790	10285716	11142858
14	1460374	2	6	100	1058	1270	0	11872351	11142859	12000001

Total number of pulses in waveform = 30

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	831476	2	19	55	1412	1493	0	831476	0	923076
2	665205	2	19	90	1037	1079	0	1499586	923077	1846153
3	706799	1	19	65	1039	0	0	2208501	1846154	2769230
4	642638	2	19	65	1220	1030	0	2852178	2769231	3692307
5	1371030	2	19	80	1133	1141	0	4225458	3692308	4615384
6	897083	1	19	50	1861	0	0	5124815	4615385	5538461
7	575783	3	19	85	1641	1642	1570	5702459	5538462	6461538
8	1639620	2	19	85	1830	1220	0	7346932	6461539	7384615
9	713957	3	19	60	1278	1590	1086	8063939	7384616	8307692
10	571054	1	19	65	1364	0	0	8638947	8307693	9230769
11	865774	1	19	95	1488	0	0	9506085	9230770	10153846
12	1136894	3	19	50	1573	1138	1579	10644467	10153847	11076923
13	451957	3	19	70	1883	1298	1893	11100714	11076924	12000000

Total number of pulses in waveform = 26

Type 5 Radar Waveform_9

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	496580	2	10	90	1029	1974	0	496580	0	599999
2	131122	2	10	95	1482	1738	0	630705	600000	1199999
3	813226	2	10	85	1940	1804	0	1447151	1200000	1799999
4	877964	1	10	90	1516	0	0	2328859	1800000	2399999
5	577279	2	10	50	1599	1544	0	2907654	2400000	2999999
6	623039	2	10	60	1764	1352	0	3533836	3000000	3599999
7	187986	3	10	65	1899	1445	1497	3724938	3600000	4199999
8	525878	2	10	75	1287	1565	0	4255657	4200000	4799999
9	733596	1	10	90	1178	0	0	4992105	4800000	5399999
10	875163	2	10	65	1564	1921	0	5868446	5400000	5999999
11	481590	3	10	50	1915	1262	1957	6353521	6000000	6599999
12	259832	3	10	55	1325	1023	1502	6618487	6600000	7199999
13	617937	2	10	75	1204	1787	0	7240274	7200000	7799999
14	626693	2	10	75	1062	1721	0	7869958	7800000	8399999
15	1035628	3	10	75	1387	1460	1138	8908369	8400000	8999999
16	598896	1	10	100	1177	0	0	9511250	9000000	9599999
17	111514	3	10	75	1963	1678	1405	9623941	9600000	10199999
18	1131156	2	10	70	1972	1126	0	10760143	10200000	10799999
19	387741	3	10	70	1526	1299	1788	11150982	10800000	11399999
20	827416	1	10	55	1969	0	0	11983011	11400000	11999999

Total number of pulses in waveform = 42

Type 5 Radar Waveform_10

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	648209	3	17	50	1401	1399	1497	648209	0	749999
2	117230	3	17	90	1847	1897	1318	769736	750000	1499999
3	1363970	3	17	55	1224	1563	1983	2138768	1500000	2249999
4	368188	2	17	65	1540	1246	0	2511726	2250000	2999999
5	755970	2	17	55	1059	1946	0	3270482	3000000	3749999
6	1090371	2	17	65	1691	1735	0	4363858	3750000	4499999
7	218827	1	17	50	1827	0	0	4586111	4500000	5249999
8	1328080	1	17	60	1289	0	0	5916018	5250000	5999999
9	594474	1	17	85	1716	0	0	6511781	6000000	6749999
10	893388	3	17	75	1909	1435	1086	7406885	6750000	7499999
11	779765	3	17	75	1479	1179	1807	8191080	7500000	8249999
12	492254	3	17	70	1525	1077	1569	8687799	8250000	8999999
13	914225	1	17	65	1731	0	0	9606195	9000000	9749999
14	782599	1	17	50	1791	0	0	10390525	9750000	10499999
15	243229	1	17	95	1407	0	0	10635545	10500000	11249999
16	693916	3	17	60	1169	1784	1901	11330868	11250000	11999999

Total number of pulses in waveform = 33

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	472160	3	10	50	1107	1341	1807	472160	0	799999
2	612278	2	10	50	1372	1194	0	1088693	800000	1599999
3	921487	2	10	60	1564	1110	0	2012746	1600000	2399999
4	408280	1	10	55	1557	0	0	2423700	2400000	3199999
5	786804	2	10	95	1266	1817	0	3212061	3200000	3999999
6	968237	2	10	70	1019	1298	0	4183381	4000000	4799999
7	1222691	1	10	80	1225	0	0	5408389	4800000	5599999
8	472586	2	10	55	1824	1540	0	5882200	5600000	6399999
9	1134402	3	10	90	1874	1040	1280	7019966	6400000	7199999
10	706682	1	10	75	1097	0	0	7730842	7200000	7999999
11	355314	3	10	70	1411	1746	1958	8087253	8000000	8799999
12	1396018	3	10	85	1009	1458	1608	9488386	8800000	9599999
13	630035	2	10	95	1819	1331	0	10122496	9600000	10399999
14	341045	1	10	50	1612	0	0	10466691	10400000	11199999
15	761881	2	10	55	1241	1310	0	11230184	11200000	11999999

Total number of pulses in waveform = 30
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Type 5 Radar Waveform_12

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	642116	1	8	50	1253	0	0	642116	0	1090908
2	721916	2	8	100	1820	1803	0	1365285	1090909	2181817
3	1406834	3	8	50	1330	1356	1208	2775742	2181818	3272726
4	1175689	3	8	80	1351	1672	1190	3955325	3272727	4363635
5	990262	1	8	80	1820	0	0	4949800	4363636	5454544
6	1146437	1	8	75	1474	0	0	6098057	5454545	6545453
7	539658	1	8	75	1483	0	0	6639189	6545454	7636362
8	1360671	3	8	90	1794	1234	1207	8001343	7636363	8727271
9	1094200	3	8	55	1178	1625	1214	9099778	8727272	9818180
10	771997	1	8	80	1317	0	0	9875792	9818181	10909089
11	1121070	2	8	85	1231	1359	0	10998179	10909090	11999998

Total number of pulses in waveform = 21
****

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	626293	1	12	80	1658	0	0	626293	0	705881
2	281108	3	12	70	1580	1865	1405	909059	705882	1411763
3	721117	1	12	75	1623	0	0	1635026	1411764	2117645
4	801194	2	12	65	1057	1933	0	2437843	2117646	2823527
5	660551	1	12	60	1295	0	0	3101384	2823528	3529409
6	1032361	2	12	100	2000	1003	0	4135040	3529410	4235291
7	322495	1	12	75	1936	0	0	4460538	4235292	4941173
8	835712	3	12	65	1865	1772	1029	5298186	4941174	5647055
9	684348	3	12	90	1893	1940	1334	5987200	5647056	6352937
10	943669	1	12	90	1046	0	0	6936036	6352938	7058819
11	712184	2	12	90	1001	1483	0	7649266	7058820	7764701
12	423396	1	12	85	1793	0	0	8075146	7764702	8470583
13	787921	2	12	50	1336	1038	0	8864860	8470584	9176465
14	950302	3	12	90	1058	1779	1493	9817536	9176466	9882347
15	124002	2	12	55	1170	1605	0	9945868	9882348	10588229
16	674957	1	12	50	1295	0	0	10623600	10588230	11294111
17	1189250	3	12	55	1499	1693	1672	11814145	11294112	11999993

Total number of pulses in waveform = 32
****

Type 5 Radar Waveform_14

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	385868	1	18	95	1244	0	0	385868	0	631578
2	718352	1	18	55	1895	0	0	1105464	631579	1263157
3	363132	1	18	80	1708	0	0	1470491	1263158	1894736
4	962116	3	18	100	1434	1102	1735	2434315	1894737	2526315
5	319934	2	18	70	1975	1988	0	2758520	2526316	3157894
6	646299	2	18	60	1835	1171	0	3408782	3157895	3789473
7	556930	1	18	80	1327	0	0	3968718	3789474	4421052
8	774534	1	18	60	1532	0	0	4744579	4421053	5052631
9	314633	3	18	65	1636	1638	1396	5060744	5052632	5684210
10	1223272	3	18	60	1398	1149	1022	6288686	5684211	6315789
11	537489	2	18	95	1772	1092	0	6829744	6315790	6947368
12	482503	1	18	100	1141	0	0	7315111	6947369	7578947
13	608759	2	18	70	1449	1674	0	7925011	7578948	8210526
14	458349	3	18	95	1397	1071	1002	8386483	8210527	8842105
15	699291	2	18	75	1872	1763	0	9089244	8842106	9473684
16	395869	1	18	85	1757	0	0	9488748	9473685	10105263
17	751422	3	18	65	1002	1862	1933	10241927	10105264	10736842
18	972292	2	18	50	1538	1806	0	11219016	10736843	11368421
19	584568	3	18	80	1284	1825	1814	11806928	11368422	12000000

Total number of pulses in waveform = 37
++

Type 5 Radar Waveform_15

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	643936	2	5	65	1835	1775	0	643936	0	666666
2	94282	3	5	90	1389	1395	1629	741828	666667	1333333
3	836306	1	5	65	1876	0	0	1582547	1333334	2000000
4	1069807	1	5	60	1273	0	0	2654230	2000001	2666667
5	317748	3	5	85	1541	1529	1400	2973251	2666668	3333334
6	892796	3	5	85	1670	1471	1148	3870517	3333335	4000001
7	592508	3	5	85	1746	1735	1698	4467314	4000002	4666668
8	289491	3	5	65	1240	1560	1356	4761984	4666669	5333335
9	1114883	3	5	75	1181	1512	1491	5881023	5333336	6000002
10	117923	2	5	90	1851	1015	0	6003130	6000003	6666669
11	1241002	2	5	70	1295	1600	0	7246998	6666670	7333336
12	283285	3	5	85	1308	1565	1343	7533178	7333337	8000003
13	1059110	3	5	70	1696	1230	1672	8596504	8000004	8666670
14	612347	2	5	85	1490	1191	0	9213449	8666671	9333337
15	465654	1	5	55	1596	0	0	9681784	9333338	10000004
16	768762	1	5	85	1660	0	0	10452142	10000005	10666671
17	561209	3	5	70	1369	1966	1267	11015011	10666672	11333338
18	415383	3	5	95	1323	1704	1566	11434996	11333339	12000005

Total number of pulses in waveform = 42
++

Type 5 Radar Waveform_16

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	644439	1	17	100	1552	0	0	644439	0	749999
2	337758	1	17	95	1886	0	0	983749	750000	1499999
3	584794	2	17	60	1064	1034	0	1570429	1500000	2249999
4	895557	2	17	50	1500	1076	0	2468084	2250000	2999999
5	924337	3	17	85	1581	1217	1096	3394997	3000000	3749999
6	584637	3	17	75	1319	1541	1826	3983528	3750000	4499999
7	552307	1	17	80	1891	0	0	4540521	4500000	5249999
8	1065301	1	17	70	1871	0	0	5607713	5250000	5999999
9	700201	3	17	80	1667	1468	1323	6309785	6000000	6749999
10	1003530	3	17	90	1451	1126	1622	7317773	6750000	7499999
11	518067	3	17	85	1494	1255	1031	7840039	7500000	8249999
12	1103028	1	17	75	1204	0	0	8946847	8250000	8999999
13	111226	2	17	65	1736	1509	0	9059277	9000000	9749999
14	1069436	2	17	70	1061	1510	0	10131958	9750000	10499999
15	718724	3	17	90	1853	1704	1606	10853253	10500000	11249999
16	952959	1	17	95	1020	0	0	11811375	11250000	11999999

Total number of pulses in waveform = 32
++

Type 5 Radar Waveform_17

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)
	437396									
1		3	19	80	1588	1257	1983	437396	0	1499999
	2238760									
2		3	19	95	1096	1205	1780	2680984	1500000	2999999
	1321355									
3		1	19	95	1264	0	0	4006420	3000000	4499999
	669931									
4		3	19	50	1671	1948	1903	4677615	4500000	5999999
	2309023									
5		3	19	95	1912	1629	1968	6992160	6000000	7499999
	1980609									
6		3	19	55	1460	1211	1091	8978278	7500000	8999999
	642728									
7		3	19	70	1140	1510	1000	9624768	9000000	10499999
	2281890									
8		2	19	50	1965	1793	0	11910308	10500000	11999999

Total number of pulses in waveform = 21

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Type 5 Radar Waveform_18

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)
	1083642									
1		2	6	85	1226	1723	0	1083642	0	1333332
	611933									
2		3	6	60	1018	1553	1583	1698524	1333333	2666665
	2228453									
3		3	6	65	1309	1203	1130	3931131	2666666	3999998
	792916									
4		2	6	80	1532	1852	0	4727689	3999999	5333331
	956270									
5		3	6	70	1909	1597	1562	5687343	5333332	6666664
	1833996									
6		1	6	100	1491	0	0	7526407	6666665	7999997
	1645316									
7		1	6	95	1993	0	0	9173214	7999998	9333330
	233733									
8		3	6	75	1830	1532	1350	9408940	9333331	10666663
	2193494									
9		2	6	50	1572	1328	0	11607146	10666664	11999996

Total number of pulses in waveform = 20

****

Type 5 Radar Waveform_19

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)
	638258									
1		3	14	65	1542	1925	1397	638258	0	799999
	199432									
2		1	14	100	1001	0	0	842554	800000	1599999
	1460508									
3		2	14	85	1560	1274	0	2304063	1600000	2399999
	583052									
4		2	14	55	1115	1298	0	2889949	2400000	3199999
	560223									
5		1	14	80	1604	0	0	3452585	3200000	3999999
	840661									
6		3	14	75	1667	1953	1541	4294850	4000000	4799999
	583207									
7		1	14	60	1886	0	0	4883218	4800000	5599999
	918033									
8		2	14	80	1622	1358	0	5803137	5600000	6399999
	827028									
9		1	14	85	1997	0	0	6633145	6400000	7199999
	1024569									
10		2	14	60	1210	1600	0	7659711	7200000	7999999
	703654									
11		3	14	100	1131	1367	1562	8366175	8000000	8799999
	577360									
12		3	14	95	1947	1506	1952	8947595	8800000	9599999
	1065678									
13		3	14	55	1701	1169	1993	10018678	9600000	10399999
	1121773									
14		3	14	60	1322	1073	1036	11145314	10400000	11199999
	780392									
15		2	14	80	1369	1910	0	11929137	11200000	11999999

Total number of pulses in waveform = 32

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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	73550	2	9	65	1184	1650	0	73550	0	999999
2	1232205	3	9	55	1264	1597	1043	1308589	1000000	1999999
3	811953	3	9	70	1317	1644	1097	2124446	2000000	2999999
4	1185426	3	9	50	1792	1168	1748	3313930	3000000	3999999
5	1604020	2	9	90	1401	1610	0	4922658	4000000	4999999
6	255731	2	9	85	1279	1061	0	5181400	5000000	5999999
7	993609	1	9	70	1986	0	0	6177349	6000000	6999999
8	1355359	1	9	85	1148	0	0	7534694	7000000	7999999
9	1200316	3	9	50	1135	1151	1943	8736158	8000000	8999999
10	960785	3	9	90	1858	1615	1722	9701172	9000000	9999999
11	1023621	2	9	75	1456	1934	0	10729988	10000000	10999999
12	363892	3	9	65	1403	1749	1194	11097270	11000000	11999999

Total number of pulses in waveform = 28
****

Type 5 Radar Waveform_21

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	13190	2	10	90	1369	1256	0	13190	0	599999
2	1055160	3	10	90	1669	1815	1345	1070975	600000	1199999
3	696270	2	10	80	1197	1222	0	1772074	1200000	1799999
4	319748	1	10	80	1331	0	0	2094241	1800000	2399999
5	385860	1	10	85	1471	0	0	2481432	2400000	2999999
6	660720	1	10	85	1577	0	0	3143623	3000000	3599999
7	959817	2	10	95	1961	1085	0	4105017	3600000	4199999
8	644953	1	10	50	1471	0	0	4753016	4200000	4799999
9	260755	2	10	85	1104	1628	0	5015242	4800000	5399999
10	800694	3	10	80	1581	1291	1968	5818668	5400000	5999999
11	493739	2	10	100	1005	1320	0	6317247	6000000	6599999
12	426654	2	10	55	1712	1371	0	6746226	6600000	7199999
13	625041	2	10	95	1239	1469	0	7374350	7200000	7799999
14	567420	1	10	60	1176	0	0	7944478	7800000	8399999
15	936716	2	10	70	1186	1972	0	8882370	8400000	8999999
16	143295	2	10	55	1789	1340	0	9028823	9000000	9599999
17	769263	1	10	100	1797	0	0	9801215	9600000	10199999
18	872699	3	10	55	1031	1674	1681	10675711	10200000	10799999
19	229009	1	10	85	1961	0	0	10909106	10800000	11399999
20	1027713	1	10	70	1778	0	0	11938780	11400000	11999999

Total number of pulses in waveform = 35
****

Type 5 Radar Waveform_22

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	957583	2	5	55	1361	1300	0	957583	0	1499999
2	1112640	2	5	90	1352	1669	0	2072884	1500000	2999999
3	2187749	3	5	55	1691	1984	1322	4263654	3000000	4499999
4	851195	1	5	70	1411	0	0	5119846	4500000	5999999
5	1020934	3	5	100	1148	1773	1221	6142191	6000000	7499999
6	1568471	1	5	65	1297	0	0	7714804	7500000	8999999
7	1489760	1	5	70	1973	0	0	9205861	9000000	10499999
8	2012708	2	5	55	1256	1432	0	11220542	10500000	11999999

Total number of pulses in waveform = 15
****

Type 5 Radar Waveform_23

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	790214	3	9	100	1853	1774	1249	790214	0	999999
2	445069	1	9	70	1912	0	0	1240159	1000000	1999999
3	1093180	3	9	90	1896	1774	1618	2335251	2000000	2999999
4	665379	2	9	85	1722	1813	0	3005918	3000000	3999999
5	1554028	2	9	65	1880	1046	0	4563481	4000000	4999999
6	924174	3	9	75	1732	1006	1503	5490581	5000000	5999999
7	1056002	3	9	80	1986	1309	1716	6550824	6000000	6999999
8	806392	1	9	60	1033	0	0	7362227	7000000	7999999
9	1353340	2	9	65	1215	1423	0	8716600	8000000	8999999
10	1236986	1	9	70	1821	0	0	9956224	9000000	9999999
11	903349	3	9	100	1979	1633	1397	10861394	10000000	10999999
12	1079994	2	9	70	1316	1670	0	11946397	11000000	11999999

Total number of pulses in waveform = 26
****

Type 5 Radar Waveform_24

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	522327	2	18	60	1053	1918	0	522327	0	631578
2	357073	1	18	90	1542	0	0	882371	631579	1263157
3	851469	2	18	50	1981	1426	0	1735382	1263158	1894736
4	556146	1	18	65	1237	0	0	2294935	1894737	2526315
5	573357	2	18	65	1776	1360	0	2869529	2526316	3157894
6	405161	2	18	70	1631	1950	0	3277826	3157895	3789473
7	1026491	2	18	90	1255	1720	0	4307898	3789474	4421052
8	444785	1	18	70	1422	0	0	4755658	4421053	5052631
9	828123	1	18	70	1105	0	0	5585203	5052632	5684210
10	441249	1	18	60	1760	0	0	6027557	5684211	6315789
11	291927	2	18	95	1452	1467	0	6321244	6315790	6947368
12	742401	1	18	55	1552	0	0	7066564	6947369	7578947
13	564148	1	18	75	1463	0	0	7632264	7578948	8210526
14	812942	3	18	85	1559	1339	1815	8446669	8210527	8842105
15	788983	2	18	95	1478	1542	0	9240365	8842106	9473684
16	297538	3	18	85	1222	1546	1789	9540923	9473685	10105263
17	695260	3	18	75	1287	1108	1896	10240740	10105264	10736842
18	844377	3	18	60	1984	1759	1040	11089408	10736843	11368421
19	744387	1	18	75	1742	0	0	11838578	11368422	12000000

Total number of pulses in waveform = 34
****

Type 5 Radar Waveform_25

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	536606	2	12	75	1840	1513	0	536606	0	1090908
2	1059057	3	12	55	1946	1037	1773	1599016	1090909	2181817
3	1364575	3	12	55	1282	1126	1024	2968347	2181818	3272726
4	1264722	2	12	60	1178	1315	0	4236501	3272727	4363635
5	177333	3	12	60	1419	1454	1260	4416327	4363636	5454544
6	1325127	1	12	70	1818	0	0	5745587	5454545	6545453
7	1409243	2	12	70	1008	1312	0	7156648	6545454	7636362
8	1352819	1	12	90	1093	0	0	8511787	7636363	8727271
9	399704	1	12	70	1538	0	0	8912584	8727272	9818180
10	1899674	3	12	95	1708	1790	1404	10813796	9818181	10909089
11	752590	2	12	60	1707	1559	0	11571288	10909090	11999998

Total number of pulses in waveform = 23
****

Type 5 Radar Waveform_26

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

Total number of pulses in waveform = 21
****

Type 5 Radar Waveform_27

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	624370	2	19	55	1196	1463	0	624370	0	749999
2	271272	2	19	85	1879	1441	0	898301	750000	1499999
3	661881	2	19	50	1509	1578	0	1563502	1500000	2249999
4	1204787	3	19	75	1573	1124	1605	2771376	2250000	2999999
5	829695	3	19	100	1746	1943	1952	3605373	3000000	3749999
6	845554	2	19	55	1020	1875	0	4456568	3750000	4499999
7	499061	1	19	85	1820	0	0	4958524	4500000	5249999
8	830316	3	19	90	1027	1955	1969	5790660	5250000	5999999
9	246379	2	19	60	1348	1886	0	6041990	6000000	6749999
10	967878	1	19	100	1096	0	0	7013102	6750000	7499999
11	690339	3	19	80	1965	1865	1700	7704537	7500000	8249999
12	931681	1	19	50	1423	0	0	8641748	8250000	8999999
13	880001	3	19	100	1310	1142	1670	9523172	9000000	9749999
14	263433	3	19	90	1565	1037	1071	9790727	9750000	10499999
15	1081567	2	19	70	1141	1486	0	10875967	10500000	11249999
16	1047010	2	19	70	1669	1440	0	11925604	11250000	11999999

Total number of pulses in waveform = 35
****

Type 5 Radar Waveform_28

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	172750	1	8	55	1886	0	0	172750	0	749999
2	616928	1	8	90	1488	0	0	791564	750000	1499999
3	848896	3	8	50	1536	1316	1974	1641948	1500000	2249999
4	1066083	2	8	70	1459	1084	0	2712857	2250000	2999999
5	509398	3	8	65	1011	1496	1550	3224798	3000000	3749999
6	1141477	3	8	95	1879	1590	1499	4370332	3750000	4499999
7	801700	1	8	100	1609	0	0	5177000	4500000	5249999
8	171638	2	8	95	1287	1329	0	5350247	5250000	5999999
9	1159652	1	8	75	1361	0	0	6512515	6000000	6749999
10	330769	1	8	70	1686	0	0	6844645	6750000	7499999
11	678081	2	8	70	1122	1427	0	7524412	7500000	8249999
12	1124325	3	8	80	1474	1597	1725	8651286	8250000	8999999
13	1007130	2	8	80	1263	1895	0	9663212	9000000	9749999
14	501133	3	8	80	1356	1719	1485	10167503	9750000	10499999
15	1072458	2	8	100	1586	1591	0	11244521	10500000	11249999
16	468740	1	8	65	1104	0	0	11716438	11250000	11999999

Total number of pulses in waveform = 31
****

Type 5 Radar Waveform_29

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	222811	3	17	70	1003	1851	1740	222811	0	999999
2	1018146	1	17	90	1014	0	0	1245551	1000000	1999999
3	1713601	2	17	85	1552	1784	0	2960166	2000000	2999999
4	870663	1	17	75	1613	0	0	3834165	3000000	3999999
5	1001413	2	17	75	1548	1403	0	4837191	4000000	4999999
6	847745	3	17	55	1570	1762	1368	5687887	5000000	5999999
7	348657	1	17	90	1364	0	0	6041244	6000000	6999999
8	1343687	2	17	70	1534	1271	0	7386295	7000000	7999999
9	752263	3	17	100	1951	1670	1118	8141363	8000000	8999999
10	929733	2	17	65	1147	1809	0	9075835	9000000	9999999
11	1597865	2	17	100	1095	1181	0	10676656	10000000	10999999
12	654184	2	17	80	1087	1481	0	11333116	11000000	11999999

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	957953	1	14	70	1364	0	0	957953	0	999999
2	134082	2	14	90	1890	1328	0	1093399	1000000	1999999
3	1890890	1	14	65	1875	0	0	2987507	2000000	2999999
4	728687	1	14	95	1248	0	0	3718069	3000000	3999999
5	1011053	3	14	100	1633	1193	1214	4730370	4000000	4999999
6	1163700	2	14	75	1043	1806	0	5898110	5000000	5999999
7	507071	3	14	95	1958	1233	1489	6408030	6000000	6999999
8	1518327	3	14	60	1338	1652	1367	7931037	7000000	7999999
9	1014209	1	14	50	1174	0	0	8949603	8000000	8999999
10	61234	1	14	100	1569	0	0	9012011	9000000	9999999
11	1755806	3	14	75	1546	1793	1339	10769386	10000000	10999999
12	731085	2	14	70	1743	1938	0	11505149	11000000	11999999

Total number of pulses in waveform = 23

****

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	5292	1	16	5300	1
2	5292	1	17	5300	1
3	5292	1	18	5300	1
4	5292	1	19	5300	1
5	5292	1	20	5300	1
6	5292	1	21	5308	1
7	5292	1	22	5308	1
8	5292	1	23	5308	1
9	5292	1	24	5308	1
10	5292	1	25	5308	1
11	5300	1	26	5308	1
12	5300	1	27	5308	1
13	5300	1	28	5308	1
14	5300	1	29	5308	1
15	5300	1	30	5308	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5303	18	1	5282	3
11	5316	33	5	5306	15
19	5285	57	6	5318	18
24	5322	72	10	5262	30
35	5270	105	12	5310	36
37	5283	111	13	5292	39
49	5273	147	15	5276	45
55	5320	165	20	5319	60
56	5311	168	29	5264	87
65	5268	195	32	5316	96
66	5271	198	42	5277	126
68	5301	204	45	5293	135
75	5302	225	48	5291	144
76	5307	228	55	5289	165
78	5274	234	75	5300	225
79	5278	237	98	5322	294
81	5267	243	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5267	18	9	5322	27
7	5293	21	31	5309	93
14	5316	42	44	5316	132
16	5302	48	47	5263	141
24	5272	72	53	5291	159
26	5283	78	58	5273	174
34	5278	102	59	5268	177
35	5301	105	66	5265	198
40	5298	120	72	5267	216
47	5287	141	77	5292	231
65	5306	195	99	5278	297
86	5299	258	--	--	--
95	5266	285	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5318	9	7	5318	21
10	5316	30	12	5300	36
17	5284	51	15	5298	45
30	5266	90	29	5265	87
36	5296	108	34	5284	102
38	5285	114	49	5315	147
40	5288	120	58	5309	174
62	5293	186	66	5314	198
64	5274	192	70	5295	210
67	5317	201	78	5299	234
80	5301	240	87	5285	261
91	5276	273	96	5281	288
92	5310	276	--	--	--
93	5290	279	--	--	--
97	5297	291	--	--	--
99	5294	297	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5308	15	14	5280	42
8	5315	24	20	5310	60
16	5298	48	22	5282	66
19	5291	57	26	5271	78
50	5307	150	30	5289	90
51	5292	153	34	5262	102
53	5309	159	36	5314	108
55	5314	165	44	5318	132
59	5269	177	45	5295	135
63	5286	189	64	5267	192
72	5294	216	77	5307	231
83	5279	249	90	5315	270
84	5266	252	--	--	--
85	5295	255	--	--	--
90	5311	270	--	--	--
96	5317	288	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5319	27	4	5281	12
12	5298	36	9	5297	27
13	5265	39	17	5315	51
14	5318	42	19	5312	57
21	5279	63	22	5288	66
30	5268	90	23	5286	69
59	5294	177	26	5311	78
62	5304	186	46	5292	138
69	5299	207	47	5296	141
78	5314	234	64	5318	192
82	5285	246	66	5322	198
92	5305	276	70	5276	210
96	5312	288	71	5277	213
--	--	--	75	5283	225
--	--	--	83	5305	249
--	--	--	99	5284	297

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
14	5293	42	1	5318	3
24	5280	72	13	5274	39
27	5275	81	19	5284	57
41	5330	123	23	5314	69
66	5319	198	28	5320	84
74	5314	222	33	5272	99
75	5329	225	54	5326	162
78	5305	234	55	5310	165
79	5270	237	61	5285	183
81	5318	243	65	5287	195
87	5316	261	74	5302	222
91	5324	273	80	5319	240
96	5303	288	82	5306	246
--	--	--	93	5325	279
--	--	--	95	5282	285

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5300	3	1	5318	3
12	5307	36	4	5278	12
14	5280	42	8	5320	24
19	5326	57	13	5314	39
32	5273	96	18	5281	54
35	5320	105	34	5330	102
36	5287	108	44	5276	132
54	5285	162	45	5272	135
57	5291	171	46	5283	138
61	5313	183	48	5312	144
74	5322	222	53	5298	159
75	5295	225	57	5287	171
83	5310	249	69	5284	207
89	5294	267	71	5303	213
90	5328	270	86	5311	258

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5303	39	4	5285	12
17	5315	51	7	5325	21
51	5281	153	16	5277	48
65	5309	195	17	5272	51
79	5286	237	34	5321	102
81	5310	243	47	5322	141
--	--	--	58	5288	174
--	--	--	61	5300	183
--	--	--	63	5297	189
--	--	--	68	5294	204
--	--	--	73	5301	219
--	--	--	74	5282	222
--	--	--	88	5274	264

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5283	0	1	5293	3
2	5289	6	11	5302	33
15	5327	45	15	5325	45
34	5295	102	26	5326	78
40	5278	120	29	5289	87
45	5328	135	36	5288	108
48	5326	144	37	5330	111
51	5281	153	40	5304	120
59	5271	177	45	5272	135
62	5292	186	57	5328	171
69	5293	207	65	5327	195
76	5277	228	76	5305	228
82	5286	246	78	5277	234
86	5305	258	92	5310	276
97	5316	291	--	--	--
98	5313	294	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5273	21	0	5279	0
16	5327	48	7	5330	21
30	5324	90	24	5318	72
33	5319	99	29	5320	87
44	5272	132	56	5296	168
60	5311	180	64	5299	192
69	5313	207	70	5311	210
71	5274	213	90	5274	270
74	5321	222	91	5272	273
75	5279	225	94	5329	282
85	5270	255	95	5307	285
92	5286	276	--	--	--
98	5309	294	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
29	5333	87	4	5312	12
30	5281	90	27	5292	81
36	5335	108	33	5336	99
40	5303	120	35	5320	105
43	5326	129	40	5310	120
47	5314	141	59	5280	177
71	5324	213	66	5326	198
81	5329	243	71	5307	213
91	5285	273	76	5282	228
--	--	--	81	5309	243
--	--	--	83	5322	249
--	--	--	86	5330	258
--	--	--	89	5323	267
--	--	--	90	5286	270
--	--	--	97	5334	291
--	--	--	99	5301	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5305	6	12	5296	36
5	5334	15	20	5314	60
6	5317	18	27	5319	81
8	5321	24	28	5304	84
19	5278	57	31	5283	93
21	5283	63	37	5278	111
25	5287	75	43	5332	129
31	5332	93	51	5302	153
35	5295	105	65	5334	195
47	5338	141	84	5338	252
58	5309	174	87	5299	261
69	5293	207	92	5331	276
79	5335	237	96	5290	288

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5331	54	6	5335	18
22	5302	66	9	5308	27
24	5283	72	13	5316	39
46	5286	138	17	5298	51
54	5310	162	22	5325	66
--	--	--	25	5289	75
--	--	--	37	5337	111
--	--	--	53	5286	159
--	--	--	60	5280	180
--	--	--	71	5320	213
--	--	--	78	5314	234
--	--	--	85	5326	255
--	--	--	89	5332	267
--	--	--	92	5333	276
--	--	--	97	5294	291
--	--	--	99	5282	297

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5309	3	0	5290	0
6	5312	18	1	5331	3
12	5299	36	6	5335	18
15	5305	45	11	5309	33
16	5320	48	14	5308	42
67	5295	201	32	5294	96
71	5318	213	52	5314	156
73	5319	219	55	5323	165
75	5326	225	56	5318	168
85	5298	255	61	5326	183
88	5288	264	74	5312	222
96	5317	288	96	5315	288
99	5292	297	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5282	9	2	5279	6
17	5329	51	4	5309	12
23	5302	69	8	5296	24
25	5293	75	15	5311	45
75	5298	225	35	5292	105
78	5328	234	54	5326	162
79	5331	237	57	5337	171
85	5325	255	63	5280	189
91	5314	273	66	5299	198
96	5299	288	67	5322	201
--	--	--	73	5305	219
--	--	--	75	5327	225
--	--	--	77	5302	231
--	--	--	80	5314	240
--	--	--	84	5328	252
--	--	--	87	5334	261
--	--	--	97	5316	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	5292	1	878	61	1
2	5292	1	698	76	1
3	5292	1	598	89	1
4	5292	1	818	65	1
5	5300	1	718	74	1
6	5300	1	678	78	1
7	5300	1	858	62	1
8	5300	1	778	68	1
9	5308	1	3066	18	1
10	5308	1	918	58	1
11	5308	1	558	95	1
12	5308	1	898	59	1
13	5310	1	798	67	1
14	5310	1	538	99	1
15	5310	1	838	63	1
16	5310	1	2398	23	1
17	5310	1	1756	31	1
18	5310	1	2992	18	1
19	5312	1	808	66	1
20	5312	1	553	96	1
21	5312	1	1833	29	1
22	5312	1	1699	32	1
23	5320	1	702	76	1
24	5320	1	567	94	1
25	5320	1	2105	26	1
26	5320	1	2994	18	1
27	5328	1	2923	19	1
28	5328	1	2450	22	1
29	5328	1	1269	42	1
30	5328	1	2232	24	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	5292	4.1	158	28	1
2	5292	2.6	221	23	1
3	5292	1.9	184	27	1
4	5292	2.9	163	24	1
5	5300	1.6	160	29	1
6	5300	3.6	214	24	1
7	5300	4.0	183	27	1
8	5300	4.7	152	29	1
9	5308	4.7	150	26	1
10	5308	4.3	173	26	1
11	5308	3.2	160	29	1
12	5308	1.1	185	29	1
13	5310	4.2	202	26	1
14	5310	1.2	175	23	1
15	5310	3.7	184	28	1
16	5310	2.9	182	23	1
17	5310	2.6	185	23	1
18	5310	4.9	218	25	1
19	5312	4.4	226	29	1
20	5312	2.8	158	29	1
21	5312	2.0	214	29	1
22	5312	1.9	165	27	1
23	5320	2.4	184	24	1
24	5320	4.2	168	28	1
25	5320	4.8	227	27	1
26	5320	1.7	194	28	1
27	5328	3.4	199	27	1
28	5328	3.9	184	29	1
29	5328	4.4	172	25	1
30	5328	4.3	185	25	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	6.8	307	16	1
2	5292	9.5	435	17	1
3	5292	6.6	414	16	1
4	5292	8.9	324	18	1
5	5300	6.8	495	17	1
6	5300	7.7	430	17	1
7	5300	9.0	463	17	1
8	5300	6.1	258	17	1
9	5308	8.5	499	17	1
10	5308	7.6	359	16	1
11	5308	8.5	279	17	1
12	5308	8.2	291	18	1
13	5310	6.8	408	18	1
14	5310	6.3	279	17	1
15	5310	8.1	483	16	1
16	5310	7.5	485	17	1
17	5310	7.6	309	17	1
18	5310	6.1	397	18	1
19	5312	6.9	356	18	1
20	5312	9.5	440	18	1
21	5312	6.5	260	18	1
22	5312	8.3	277	18	1
23	5320	6.8	289	17	1
24	5320	8.0	492	17	1
25	5320	8.0	355	18	1
26	5320	7.7	297	16	1
27	5328	6.5	337	17	1
28	5328	8.3	436	16	1
29	5328	8.9	351	18	1
30	5328	9.5	400	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	5292	16.6	406	13	1
2	5292	13.2	363	14	1
3	5292	19.7	413	16	1
4	5292	15.1	472	13	1
5	5300	16.3	255	16	1
6	5300	12.6	435	12	1
7	5300	14.5	350	13	1
8	5300	11.5	296	16	1
9	5308	18.7	293	13	1
10	5308	19.2	425	14	1
11	5308	18.1	320	13	1
12	5308	17.0	258	12	1
13	5310	15.3	497	14	1
14	5310	16.4	320	14	1
15	5310	20.0	316	12	1
16	5310	12.7	288	13	1
17	5310	18.2	400	16	1
18	5310	11.8	331	14	1
19	5312	13.2	467	16	1
20	5312	19.3	383	13	1
21	5312	19.6	434	13	1
22	5312	19.8	449	15	1
23	5320	17.8	394	16	1
24	5320	19.8	290	15	1
25	5320	11.8	313	15	1
26	5320	11.3	431	12	1
27	5328	17.0	480	14	1
28	5328	17.6	267	13	1
29	5328	18.8	282	13	1
30	5328	12.9	418	15	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	5295.6	1	16	5310.0	1
2	5296.8	1	17	5310.0	1
3	5297.6	1	18	5310.0	1
4	5294.0	1	19	5310.0	1
5	5295.2	1	20	5310.0	1
6	5299.2	1	21	5324.0	1
7	5294.4	1	22	5326.0	1
8	5299.6	1	23	5324.4	1
9	5296.0	1	24	5320.8	1
10	5298.8	1	25	5323.2	1
11	5310.0	1	26	5325.6	1
12	5310.0	1	27	5320.4	1
13	5310.0	1	28	5324.8	1
14	5310.0	1	29	5321.2	1
15	5310.0	1	30	5322.4	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

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	156232	1	9	70	1053	0	0	156232	0	1199999
2	1768117	1	9	70	1870	0	0	1925402	1200000	2399999
3	1038868	1	9	100	1795	0	0	2966140	2400000	3599999
4	1412518	1	9	65	1284	0	0	4380453	3600000	4799999
5	931683	2	9	50	1436	1901	0	5313420	4800000	5999999
6	1361008	1	9	80	1979	0	0	6677765	6000000	7199999
7	1147488	3	9	75	1982	1700	1780	7827232	7200000	8399999
8	953702	1	9	100	1432	0	0	8786396	8400000	9599999
9	1562848	1	9	100	1292	0	0	10350676	9600000	10799999
10	1025930	1	9	60	1845	0	0	11377898	10800000	11999999

Total number of pulses in waveform = 13

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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	498252	2	12	95	1681	1160	0	498252	0	631578
2	660989	1	12	50	1742	0	0	1162082	631579	1263157
3	586587	2	12	95	1504	1855	0	1750411	1263158	1894736
4	265584	1	12	90	1249	0	0	2019354	1894737	2526315
5	834683	3	12	80	1570	1855	1997	2855286	2526316	3157894
6	517051	1	12	100	1722	0	0	3377759	3157895	3789473
7	598654	2	12	95	1717	1876	0	3978135	3789474	4421052
8	483979	1	12	50	1326	0	0	4465707	4421053	5052631
9	836307	1	12	95	1612	0	0	5303340	5052632	5684210
10	709699	1	12	65	1870	0	0	6014651	5684211	6315789
11	458532	1	12	85	1087	0	0	6475053	6315790	6947368
12	1015456	3	12	60	1192	1044	1634	7491596	6947369	7578947
13	369288	3	12	70	1528	1017	1085	7864754	7578948	8210526
14	549555	1	12	50	1381	0	0	8417939	8210527	8842105
15	1036301	1	12	75	1192	0	0	9455621	8842106	9473684
16	606317	1	12	95	1429	0	0	10063130	9473685	10105263
17	602591	2	12	55	1749	1030	0	10667150	10105264	10736842
18	112087	3	12	90	1027	1885	1141	10782016	10736843	11368421
19	1046824	2	12	65	1156	1017	0	11832893	11368422	12000000

Total number of pulses in waveform = 32
****

Type 5 Radar Waveform_3

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	1384907	1	14	80	1787	0	0	1384907	0	1499999
2	1456138	2	14	100	1961	1910	0	2842832	1500000	2999999
3	1600862	2	14	55	1556	1234	0	4447565	3000000	4499999
4	1393281	3	14	50	1802	1460	1776	5843636	4500000	5999999
5	1588003	2	14	65	1469	1732	0	7436677	6000000	7499999
6	941724	3	14	85	1869	1878	1357	8381602	7500000	8999999
7	953701	1	14	75	1989	0	0	9340407	9000000	10499999
8	1904856	3	14	95	1606	1984	1839	11247252	10500000	11999999

Total number of pulses in waveform = 17
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Type 5 Radar Waveform_4

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	5940	1	5	55	1355	0	0	5940	0	799999
2	1001505	3	5	55	1740	1474	1882	1008800	800000	1599999
3	1373568	3	5	100	1244	1745	1031	2387464	1600000	2399999
4	665371	1	5	95	1936	0	0	3056855	2400000	3199999
5	153264	3	5	90	1196	1089	1134	3212055	3200000	3999999
6	1377839	3	5	80	1977	1114	1527	4593313	4000000	4799999
7	673123	3	5	85	1575	1924	1099	5271054	4800000	5599999
8	805814	3	5	50	1413	1972	1328	6081466	5600000	6399999
9	686953	2	5	80	1381	1548	0	6773132	6400000	7199999
10	553176	2	5	50	1041	1922	0	7329237	7200000	7999999
11	1063338	2	5	80	1008	1895	0	8395538	8000000	8799999
12	868529	1	5	65	1887	0	0	9266970	8800000	9599999
13	769245	1	5	95	1928	0	0	10038102	9600000	10399999
14	1053146	1	5	70	1015	0	0	11093176	10400000	11199999
15	635822	2	5	90	1836	1866	0	11730013	11200000	11999999

Total number of pulses in waveform = 31
****

Type 5 Radar Waveform_5

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	503446	3	8	60	1394	1993	1685	503446	0	1499999
2	2202378	2	8	85	1274	1913	0	2710896	1500000	2999999
3	439278	2	8	75	1175	1408	0	3153361	3000000	4499999
4	2140407	1	8	85	1146	0	0	5296351	4500000	5999999
5	1774226	1	8	85	1937	0	0	7071723	6000000	7499999
6	1602956	3	8	95	1318	1438	1641	8676616	7500000	8999999
7	967114	3	8	75	1249	1185	1087	9648127	9000000	10499999
8	1962882	3	8	100	1375	1763	1055	11614530	10500000	11999999

Total number of pulses in waveform = 18

****

Type 5 Radar Waveform_6

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	91651	1	18	95	1002	0	0	91651	0	1499999
2	2092933	3	18	65	1376	1537	1651	2185586	1500000	2999999
3	2063165	3	18	60	1762	1384	1911	4253315	3000000	4499999
4	987064	2	18	100	1517	1164	0	5245436	4500000	5999999
5	2218750	1	18	70	1700	0	0	7466867	6000000	7499999
6	355071	2	18	100	1006	1403	0	7823638	7500000	8999999
7	1355928	3	18	75	1035	1383	1948	9181975	9000000	10499999
8	1643388	3	18	60	1767	1686	1612	10829729	10500000	11999999

Total number of pulses in waveform = 18

****

Type 5 Radar Waveform_7

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	564915	2	6	85	1739	1913	0	564915	0	999999
2	679115	1	6	95	1222	0	0	1247682	1000000	1999999
3	1434587	1	6	50	1730	0	0	2683491	2000000	2999999
4	688866	3	6	60	1668	1540	1441	3374087	3000000	3999999
5	1006251	1	6	80	1581	0	0	4384987	4000000	4999999
6	761594	3	6	65	1129	1266	1681	5148162	5000000	5999999
7	1135298	1	6	75	1762	0	0	6287536	6000000	6999999
8	754507	2	6	65	1930	1463	0	7043805	7000000	7999999
9	1489726	3	6	75	1781	1630	1257	8536924	8000000	8999999
10	503688	1	6	100	1772	0	0	9045280	9000000	9999999
11	1465735	3	6	90	1902	1638	1875	10512787	10000000	10999999
12	1163945	2	6	100	1889	1032	0	11682147	11000000	11999999

Total number of pulses in waveform = 23

****

Type 5 Radar Waveform_8

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	454882	3	19	85	1525	1428	1831	454882	0	631578
2	556438	2	19	90	1790	1455	0	1016104	631579	1263157
3	326361	3	19	90	1659	1721	1065	1345710	1263158	1894736
4	548368	2	19	60	1065	1799	0	1898523	1894737	2526315
5	881879	2	19	95	1648	1419	0	2783266	2526316	3157894
6	690116	2	19	85	1364	1892	0	3476449	3157895	3789473
7	443821	2	19	85	1456	1198	0	3923526	3789474	4421052
8	1063549	2	19	100	1814	1942	0	4989729	4421053	5052631
9	351955	2	19	95	1316	1824	0	5345440	5052632	5684210
10	921588	3	19	55	1793	1254	1974	6270168	5684211	6315789
11	186534	2	19	75	1528	1660	0	6461723	6315790	6947368
12	579983	3	19	100	1312	1953	1296	7044894	6947369	7578947
13	811272	3	19	70	1718	1802	1609	7860727	7578948	8210526
14	368700	3	19	50	1845	1860	1435	8234556	8210527	8842105
15	1075466	3	19	90	1282	1753	1694	9315162	8842106	9473684
16	381839	1	19	95	1232	0	0	9701730	9473685	10105263
17	789450	1	19	70	1459	0	0	10492412	10105264	10736842
18	861422	3	19	90	1629	1419	1520	11355293	10736843	11368421
19	286708	3	19	80	1356	1315	1151	11646569	11368422	12000000

Total number of pulses in waveform = 45

Type 5 Radar Waveform_9

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	167656	2	10	50	1947	1818	0	167656	0	631578
2	899852	3	10	65	1400	1861	1802	1071273	631579	1263157
3	615364	3	10	55	1637	1667	1897	1691700	1263158	1894736
4	724724	2	10	70	1573	1992	0	2421625	1894737	2526315
5	371681	1	10	90	1681	0	0	2796871	2526316	3157894
6	409266	1	10	90	1733	0	0	3207818	3157895	3789473
7	671873	3	10	80	1252	1447	1994	3881424	3789474	4421052
8	907478	3	10	90	1552	1200	1341	4793595	4421053	5052631
9	794934	3	10	60	1374	1428	1382	5592622	5052632	5684210
10	703462	2	10	65	1970	1445	0	6300268	5684211	6315789
11	329391	3	10	65	1388	1608	1620	6633074	6315790	6947368
12	734014	1	10	85	1589	0	0	7371704	6947369	7578947
13	273428	1	10	55	1111	0	0	7646721	7578948	8210526
14	939298	3	10	95	1749	1424	1411	8587130	8210527	8842105
15	378022	1	10	85	1138	0	0	8969736	8842106	9473684
16	910912	3	10	80	1814	1323	1178	9881786	9473685	10105263
17	443914	2	10	75	1195	1648	0	10330015	10105264	10736842
18	629535	3	10	60	1815	1958	1307	10962393	10736843	11368421
19	672279	2	10	60	1680	1024	0	11639752	11368422	12000000

Total number of pulses in waveform = 42

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	733677	3	17	95	1070	1899	1666	733677	0	923076
2	389118	2	17	65	1484	1946	0	1127430	923077	1846153
3	933842	2	17	95	1602	1163	0	2064702	1846154	2769230
4	1179533	1	17	90	1337	0	0	3247000	2769231	3692307
5	545105	3	17	80	1661	1710	1980	3793442	3692308	4615384
6	1388513	2	17	75	1180	1252	0	5187306	4615385	5538461
7	582541	3	17	65	1912	1490	1984	5772279	5538462	6461538
8	785279	3	17	80	1213	1504	1498	6562944	6461539	7384615
9	1597154	3	17	55	1174	1909	1987	8164313	7384616	8307692
10	166455	1	17	100	1622	0	0	8335838	8307693	9230769
11	966620	1	17	55	1736	0	0	9304080	9230770	10153846
12	1705446	2	17	90	1441	1507	0	11011262	10153847	11076923
13	489479	3	17	70	1449	1690	1639	11503689	11076924	12000000

Total number of pulses in waveform = 29

Type 5 Radar Waveform_11

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	577296	1	10	75	1202	0	0	577296	0	1090908
2	526493	1	10	50	1049	0	0	1104991	1090909	2181817
3	1759794	1	10	55	1370	0	0	2865834	2181818	3272726
4	1017216	2	10	60	1660	1740	0	3884420	3272727	4363635
5	1319513	1	10	95	1843	0	0	5207333	4363636	5454544
6	629863	2	10	55	1954	1470	0	5839039	5454545	6545453
7	810604	2	10	65	1212	1854	0	6653067	6545454	7636362
8	1825072	1	10	95	1758	0	0	8481205	7636363	8727271
9	486411	1	10	85	1360	0	0	8969374	8727272	9818180
10	1529767	1	10	55	1545	0	0	10500501	9818181	10909089
11	602279	2	10	65	1055	1857	0	11104325	10909090	11999998

Total number of pulses in waveform = 15
****

Type 5 Radar Waveform_12

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	609104	2	8	50	1428	1349	0	609104	0	705881
2	626583	1	8	55	1353	0	0	1238464	705882	1411763
3	788681	3	8	65	1258	1377	1550	2028498	1411764	2117645
4	156184	1	8	80	1499	0	0	2188867	2117646	2823527
5	858394	2	8	55	1079	1642	0	3048760	2823528	3529409
6	987590	2	8	100	1639	1797	0	4039071	3529410	4235291
7	840390	2	8	85	1724	1032	0	4882897	4235292	4941173
8	638353	1	8	85	1996	0	0	5524006	4941174	5647055
9	377834	1	8	65	1504	0	0	5903836	5647056	6352937
10	934773	2	8	100	1330	1827	0	6840113	6352938	7058819
11	738048	2	8	55	1487	1146	0	7581318	7058820	7764701
12	204716	1	8	75	1439	0	0	7788667	7764702	8470583
13	1313856	1	8	75	1081	0	0	9103962	8470584	9176465
14	370559	3	8	50	1316	1017	1060	9475602	9176466	9882347
15	662792	1	8	85	1137	0	0	10141787	9882348	10588229
16	953671	2	8	70	1744	1055	0	11096595	10588230	11294111
17	645690	3	8	55	1957	1006	1478	11745084	11294112	11999993

Total number of pulses in waveform = 30
****

Type 5 Radar Waveform_13

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	809108	2	12	80	1781	1663	0	809108	0	923076
2	131317	1	12	75	1509	0	0	943869	923077	1846153
3	936275	2	12	100	1094	1092	0	1881653	1846154	2769230
4	1108529	2	12	95	1004	1339	0	2992368	2769231	3692307
5	1235048	2	12	100	1662	1442	0	4229759	3692308	4615384
6	632506	3	12	70	1631	1513	1311	4865369	4615385	5538461
7	975704	1	12	90	1632	0	0	5845528	5538462	6461538
8	1118719	2	12	95	1873	1236	0	6965879	6461539	7384615
9	1296632	1	12	50	1013	0	0	8265620	7384616	8307692
10	705629	3	12	65	1955	1384	1230	8972262	8307693	9230769
11	923085	3	12	95	1525	1310	1852	9899916	9230770	10153846
12	1036104	1	12	70	1471	0	0	10940707	10153847	11076923
13	344817	2	12	100	1404	1555	0	11286995	11076924	12000000

Total number of pulses in waveform = 25
****

Type 5 Radar Waveform_14

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	373127	2	18	95	1254	1603	0	373127	0	631578
2	566525	2	18	75	1311	1931	0	942509	631579	1263157
3	352246	3	18	100	1064	1552	1362	1297997	1263158	1894736
4	762958	3	18	100	1479	1966	1967	2064933	1894737	2526315
5	730236	2	18	80	1214	1127	0	2800581	2526316	3157894
6	571147	3	18	50	1675	1054	1101	3374069	3157895	3789473
7	429766	2	18	75	1987	1235	0	3807665	3789474	4421052
8	1111274	3	18	65	1150	1647	1960	4922161	4421053	5052631
9	242041	2	18	95	1090	1459	0	5168959	5052632	5684210
10	664554	2	18	55	1373	1255	0	5836052	5684211	6315789
11	622768	3	18	100	1309	1116	1027	6461458	6315790	6947368
12	871489	3	18	80	1667	1353	1201	7336399	6947369	7578947
13	614367	2	18	65	1409	1684	0	7954987	7578948	8210526
14	836263	1	18	85	1308	0	0	8794343	8210527	8842105
15	574132	2	18	60	1592	1129	0	9369783	8842106	9473684
16	589183	3	18	60	1848	1312	1320	9961687	9473685	10105263
17	153769	3	18	75	1485	1252	1004	10119936	10105264	10736842
18	829430	3	18	50	1151	1554	1509	10953107	10736843	11368421
19	662244	1	18	85	1273	0	0	11619565	11368422	12000000

Total number of pulses in waveform = 45
****

Type 5 Radar Waveform_15

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	282297	3	5	80	1242	1554	1244	282297	0	1199999
2	1686085	1	5	95	1889	0	0	1972422	1200000	2399999
3	1480285	3	5	65	1008	1741	1982	3454596	2400000	3599999
4	1184176	2	5	75	1462	1381	0	4643503	3600000	4799999
5	398161	2	5	95	1217	1338	0	5044507	4800000	5999999
6	1825491	1	5	80	1150	0	0	6872553	6000000	7199999
7	1003397	2	5	90	1185	1629	0	7877100	7200000	8399999
8	1705879	3	5	65	1030	1289	1371	9585793	8400000	9599999
9	272948	1	5	70	1853	0	0	9862431	9600000	10799999
10	1182437	3	5	95	1745	1934	1827	11046721	10800000	11999999

Total number of pulses in waveform = 21
****

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	457000	2	17	75	1216	1058	0	457000	0	999999
2	1423394	2	17	55	1276	1460	0	1882668	1000000	1999999
3	579726	1	17	85	1977	0	0	2465130	2000000	2999999
4	535748	3	17	50	1288	1435	1494	3002855	3000000	3999999
5	1163141	3	17	55	1762	1051	1092	4170213	4000000	4999999
6	1680990	2	17	95	1808	1990	0	5855108	5000000	5999999
7	423515	3	17	100	1496	1112	1807	6282421	6000000	6999999
8	1370064	2	17	70	1644	1675	0	7656900	7000000	7999999
9	1312366	2	17	55	1118	1640	0	8972585	8000000	8999999
10	359435	3	17	90	1784	1790	1457	9334778	9000000	9999999
11	795692	1	17	65	1385	0	0	10135501	10000000	10999999
12	1376560	3	17	90	1976	1441	1577	11513446	11000000	11999999

Total number of pulses in waveform = 27
****

Type 5 Radar Waveform_17

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	548362	2	19	60	1754	1602	0	548362	0	749999
2	447327	3	19	65	1633	1102	1198	999045	750000	1499999
3	525151	3	19	60	1624	1454	1981	1528129	1500000	2249999
4	804231	3	19	100	1504	1198	1653	2337419	2250000	2999999
5	1080889	3	19	65	1569	1189	1435	3422663	3000000	3749999
6	919499	3	19	75	1046	1986	1920	4346355	3750000	4499999
7	846963	1	19	100	1555	0	0	5198270	4500000	5249999
8	277625	2	19	65	1223	1950	0	5477450	5250000	5999999
9	870550	2	19	85	1435	1166	0	6351173	6000000	6749999
10	604714	2	19	70	1050	1337	0	6958488	6750000	7499999
11	860772	3	19	90	1389	1654	1709	7821647	7500000	8249999
12	576538	1	19	65	1758	0	0	8402937	8250000	8999999
13	964152	2	19	50	1844	1299	0	9368847	9000000	9749999
14	1100770	2	19	70	1157	1646	0	10472760	9750000	10499999
15	747377	2	19	70	1329	1951	0	11222940	10500000	11249999
16	702832	3	19	70	1898	1056	1588	11929052	11250000	11999999

Total number of pulses in waveform = 37
****

Type 5 Radar Waveform_18

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	202866	3	6	85	1869	1409	1360	202866	0	923076
2	885251	1	6	85	1950	0	0	1092755	923077	1846153
3	904965	1	6	80	1085	0	0	1999670	1846154	2769230
4	830218	2	6	60	1594	1275	0	2830973	2769231	3692307
5	1024194	3	6	100	1919	1707	1431	3858036	3692308	4615384
6	1116155	2	6	90	1618	1759	0	4979248	4615385	5538461
7	1382141	1	6	60	1983	0	0	6364766	5538462	6461538
8	379040	2	6	65	1301	1258	0	6745789	6461539	7384615
9	1105941	1	6	100	1353	0	0	7854289	7384616	8307692
10	843458	1	6	65	1620	0	0	8699100	8307693	9230769
11	1082581	3	6	60	1375	1537	1971	9783301	9230770	10153846
12	512831	3	6	100	1842	1572	1627	10301015	10153847	11076923
13	1593020	1	6	75	1246	0	0	11899076	11076924	12000000

Total number of pulses in waveform = 24
****

Type 5 Radar Waveform_19

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	268861	2	14	85	1684	1569	0	268861	0	1499999
2	2397183	2	14	100	1307	1431	0	2669297	1500000	2999999
3	541237	1	14	100	1843	0	0	3213272	3000000	4499999
4	2302878	1	14	80	1979	0	0	5517993	4500000	5999999
5	1624457	3	14	75	1524	1989	1485	7144429	6000000	7499999
6	1253231	1	14	85	1327	0	0	8402658	7500000	8999999
7	1961028	3	14	80	1879	1089	1433	10365013	9000000	10499999
8	1159825	2	14	95	1139	1876	0	11529239	10500000	11999999

Total number of pulses in waveform = 15
****

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	895864	3	9	90	1839	1084	1581	895864	0	1090908
2	1261345	2	9	100	1598	1930	0	2161713	1090909	2181817
3	49985	3	9	55	1199	1839	1988	2215226	2181818	3272726
4	1337024	2	9	100	1842	1006	0	3557276	3272727	4363635
5	955706	3	9	80	1900	1997	1181	4515830	4363636	5454544
6	1834653	3	9	85	1257	1688	1623	6355561	5454545	6545453
7	1174618	1	9	95	1239	0	0	7534747	6545454	7636362
8	345381	2	9	50	1512	1497	0	7881367	7636363	8727271
9	1018588	3	9	75	1193	1407	1510	8902964	8727272	9818180
10	1292180	3	9	60	1068	1295	1865	10199254	9818181	10909089
11	1032847	2	9	100	1473	1918	0	11236329	10909090	11999998

Total number of pulses in waveform = 27

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	454309	2	10	95	1198	1043	0	454309	0	705881
2	446364	2	10	80	1102	1227	0	902914	705882	1411763
3	728037	2	10	85	1475	1809	0	1633280	1411764	2117645
4	1107012	2	10	85	1005	1396	0	2743576	2117646	2823527
5	651049	1	10	60	1250	0	0	3397026	2823528	3529409
6	669013	1	10	95	1427	0	0	4067289	3529410	4235291
7	754212	1	10	55	1084	0	0	4822928	4235292	4941173
8	665201	2	10	50	1654	1432	0	5489213	4941174	5647055
9	711491	2	10	80	1513	1871	0	6203790	5647056	6352937
10	257489	2	10	90	1197	1011	0	6464663	6352938	7058819
11	884411	3	10	65	1916	1757	1598	7351282	7058820	7764701
12	610257	2	10	55	1182	1127	0	7966810	7764702	8470583
13	826454	1	10	90	1901	0	0	8795573	8470584	9176465
14	872124	3	10	60	1404	1388	1541	9669598	9176466	9882347
15	407059	2	10	55	1983	1032	0	10080990	9882348	10588229
16	1138516	1	10	60	1525	0	0	11222521	10588230	11294111
17	685208	1	10	95	1334	0	0	11909254	11294112	11999993

Total number of pulses in waveform = 30

Type 5 Radar Waveform_22

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	586560	2	5	60	1843	1690	0	586560	0	749999
2	246851	2	5	90	1068	1024	0	836944	750000	1499999
3	1228664	2	5	100	1391	1830	0	2067700	1500000	2249999
4	363277	1	5	100	1562	0	0	2434198	2250000	2999999
5	718300	1	5	65	1469	0	0	3154060	3000000	3749999
6	1225691	3	5	60	1650	1300	1607	4381220	3750000	4499999
7	587209	3	5	100	1113	1153	1123	4972986	4500000	5249999
8	530916	3	5	60	1040	1755	1238	5507291	5250000	5999999
9	925363	1	5	50	1052	0	0	6436687	6000000	6749999
10	741263	2	5	75	1629	1107	0	7179002	6750000	7499999
11	959811	3	5	70	1238	1717	1814	8141549	7500000	8249999
12	228504	3	5	55	1921	1486	1869	8374822	8250000	8999999
13	932499	3	5	80	1998	1362	1982	9312597	9000000	9749999
14	752339	3	5	60	1469	1820	1304	10070278	9750000	10499999
15	553805	3	5	90	1241	1304	1004	10628676	10500000	11249999
16	736684	1	5	75	1554	0	0	11368909	11250000	11999999

Total number of pulses in waveform = 36

Type 5 Radar Waveform_23

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	896343	2	9	70	1400	1593	0	896343	0	1499999
2	1164200	3	9	100	1092	1949	1609	2063536	1500000	2999999
3	1660654	2	9	65	1101	1841	0	3728840	3000000	4499999
4	1944155	1	9	75	1281	0	0	5675937	4500000	5999999
5	1319220	1	9	70	1596	0	0	6996438	6000000	7499999
6	1369957	3	9	80	1491	1632	1226	8367991	7500000	8999999
7	1096387	2	9	60	1184	1172	0	9468727	9000000	10499999
8	1057179	2	9	80	1703	1673	0	10528262	10500000	11999999

Total number of pulses in waveform = 16
****

Type 5 Radar Waveform_24

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	5933	3	18	100	1498	1088	1679	5933	0	1090908
2	2079229	1	18	95	1639	0	0	2089427	1090909	2181817
3	477642	1	18	90	1910	0	0	2568708	2181818	3272726
4	1783087	1	18	100	1236	0	0	4353705	3272727	4363635
5	217660	3	18	65	1795	1423	1877	4572601	4363636	5454544
6	1863329	1	18	100	1989	0	0	6441025	5454545	6545453
7	576710	1	18	70	1297	0	0	7019724	6545454	7636362
8	1032210	1	18	65	1211	0	0	8053231	7636363	8727271
9	1169590	1	18	70	1496	0	0	9224032	8727272	9818180
10	596994	1	18	70	1465	0	0	9822522	9818181	10909089
11	1721748	3	18	75	1678	1337	1439	11545735	10909090	11999998

Total number of pulses in waveform = 17
****

Type 5 Radar Waveform_25

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	268554	1	12	85	1527	0	0	268554	0	1333332
2	1785040	1	12	90	1643	0	0	2055121	1333333	2666665
3	1007034	1	12	50	1079	0	0	3063798	2666666	3999998
4	1925744	1	12	90	1167	0	0	4990621	3999999	5333331
5	1481335	2	12	70	1559	1561	0	6473123	5333332	6666664
6	1151752	3	12	90	1680	1176	1460	7627995	6666665	7999997
7	1634690	1	12	55	1418	0	0	9267001	7999998	9333330
8	1198360	2	12	95	1220	1757	0	10466779	9333331	10666663
9	451385	3	12	75	1311	1823	1016	10921141	10666664	11999996

Total number of pulses in waveform = 15
****

Type 5 Radar Waveform_26

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	795275	3	6	95	1602	1124	1527	795275	0	1333332
2	905384	3	6	85	1278	1541	1507	1704912	1333333	2666665
3	1522242	1	6	70	1520	0	0	3231480	2666666	3999998
4	948630	3	6	95	1986	1927	1577	4181630	3999999	5333331
5	1966008	1	6	65	1522	0	0	6153128	5333332	6666664
6	1765828	2	6	55	1144	1085	0	7920478	6666665	7999997
7	1244356	1	6	60	1671	0	0	9167063	7999998	9333330
8	1407492	3	6	85	1075	1974	1301	10576226	9333331	10666663
9	762954	1	6	100	1427	0	0	11343530	10666664	11999996

Total number of pulses in waveform = 18
****

Type 5 Radar Waveform_27

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	93032	2	19	70	1308	1191	0	93032	0	631578
2	870313	1	19	80	1408	0	0	965844	631579	1263157
3	416879	1	19	90	1954	0	0	1384131	1263158	1894736
4	761287	2	19	65	1385	1366	0	2147372	1894737	2526315
5	490348	1	19	85	1147	0	0	2640471	2526316	3157894
6	710144	2	19	100	1941	1267	0	3351762	3157895	3789473
7	623856	2	19	60	1177	1309	0	3978826	3789474	4421052
8	970981	1	19	50	1563	0	0	4952293	4421053	5052631
9	172750	1	19	70	1900	0	0	5126606	5052632	5684210
10	712686	1	19	65	1832	0	0	5841192	5684211	6315789
11	619169	3	19	50	1898	1603	1245	6462193	6315790	6947368
12	862962	3	19	55	1965	1931	1242	7329901	6947369	7578947
13	542016	3	19	80	1621	1030	1542	7877055	7578948	8210526
14	469578	1	19	55	1116	0	0	8350826	8210527	8842105
15	526956	3	19	70	1175	1749	1993	8878898	8842106	9473684
16	1153744	2	19	60	1607	1462	0	10037559	9473685	10105263
17	452634	1	19	90	1599	0	0	10493262	10105264	10736842
18	456466	2	19	85	1804	1853	0	10951327	10736843	11368421
19	566411	1	19	85	1973	0	0	11521395	11368422	12000000

Total number of pulses in waveform = 33
****

Type 5 Radar Waveform_28

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	399206	2	8	95	1540	1967	0	399206	0	666666
2	321652	3	8	100	1062	1758	1527	724365	666667	1333333
3	1171944	2	8	80	1083	1557	0	1900656	1333334	2000000
4	422225	3	8	95	1955	1086	1705	2325521	2000001	2666667
5	773631	1	8	90	1203	0	0	3103898	2666668	3333334
6	531007	1	8	70	1493	0	0	3636108	3333335	4000001
7	864340	2	8	50	1208	1980	0	4501941	4000002	4666668
8	642544	1	8	80	1808	0	0	5147673	4666669	5333335
9	352156	1	8	65	1957	0	0	5501637	5333336	6000002
10	1098426	2	8	60	1914	1062	0	6602020	6000003	6666669
11	96548	2	8	55	1413	1853	0	6701544	6666670	7333336
12	818578	1	8	85	1971	0	0	7523388	7333337	8000003
13	921586	3	8	65	1521	1244	1293	8446945	8000004	8666670
14	488223	2	8	100	1734	1331	0	8939226	8666671	9333337
15	993116	2	8	70	1667	1245	0	9935407	9333338	10000004
16	324297	1	8	100	1785	0	0	10262616	10000005	10666671
17	826931	1	8	95	1649	0	0	11091332	10666672	11333338
18	486955	1	8	85	1658	0	0	11579936	11333339	12000005

Total number of pulses in waveform = 31
****

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	318163	2	17	55	1794	1583	0	318163	0	749999
2	656155	3	17	75	1126	1742	1358	977695	750000	1499999
3	744066	2	17	50	1350	1341	0	1725987	1500000	2249999
4	619373	2	17	80	1055	1208	0	2348051	2250000	2999999
5	701648	2	17	85	1111	1030	0	3051962	3000000	3749999
6	1137372	2	17	95	1504	1250	0	4191475	3750000	4499999
7	417499	1	17	70	1293	0	0	4611728	4500000	5249999
8	905808	2	17	60	1131	1275	0	5518829	5250000	5999999
9	918235	3	17	50	1981	1307	1400	6439470	6000000	6749999
10	704216	2	17	90	1878	1449	0	7148374	6750000	7499999
11	965760	1	17	55	1785	0	0	8117461	7500000	8249999
12	795970	2	17	85	1089	2000	0	8915216	8250000	8999999
13	346395	2	17	90	1648	1063	0	9264700	9000000	9749999
14	619889	2	17	75	1060	1620	0	9887300	9750000	10499999
15	726013	3	17	95	1803	1916	1602	10615993	10500000	11249999
16	1218141	2	17	60	1367	1882	0	11839455	11250000	11999999

Total number of pulses in waveform = 33

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	447119	1	14	70	1694	0	0	447119	0	705881
2	530370	1	14	100	1803	0	0	979183	705882	1411763
3	457510	3	14	60	1194	1650	1239	1438496	1411764	2117645
4	903356	2	14	70	1535	1509	0	2345935	2117646	2823527
5	843242	3	14	60	1319	1924	1653	3192221	2823528	3529409
6	617896	2	14	60	1000	1119	0	3815013	3529410	4235291
7	588068	1	14	50	1472	0	0	4405200	4235292	4941173
8	630000	3	14	95	1188	1898	1612	5036672	4941174	5647055
9	840148	3	14	60	1815	1951	1217	5881518	5647056	6352937
10	602740	2	14	50	1770	1825	0	6489241	6352938	7058819
11	1225613	1	14	95	1115	0	0	7718449	7058820	7764701
12	126485	1	14	60	1343	0	0	7846049	7764702	8470583
13	833133	2	14	95	1233	1278	0	8680525	8470584	9176465
14	1121475	2	14	60	1497	1597	0	9804511	9176466	9882347
15	492571	2	14	95	1711	1137	0	10300176	9882348	10588229
16	815462	3	14	100	1381	1128	1495	11118486	10588230	11294111
17	406062	2	14	85	1989	1170	0	11528552	11294112	11999993

Total number of pulses in waveform = 34

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	5292	1	16	5310	1
2	5292	1	17	5310	1
3	5292	1	18	5310	1
4	5292	1	19	5312	1
5	5300	1	20	5312	1
6	5300	1	21	5312	1
7	5300	1	22	5312	1
8	5300	1	23	5320	1
9	5308	1	24	5320	1
10	5308	1	25	5320	1
11	5308	1	26	5320	1
12	5308	1	27	5328	1
13	5310	1	28	5328	1
14	5310	1	29	5328	1
15	5310	1	30	5328	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	5275	9	4	5302	12
6	5286	18	5	5314	15
8	5317	24	16	5277	48
9	5321	27	24	5266	72
11	5296	33	38	5262	114
18	5278	54	43	5321	129
19	5309	57	67	5296	201
47	5266	141	78	5298	234
63	5314	189	80	5319	240
77	5316	231	81	5278	243
79	5295	237	99	5273	297
88	5313	264	--	--	--
94	5290	282	--	--	--
97	5277	291	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5300	36	6	5264	18
14	5291	42	15	5273	45
15	5316	45	25	5299	75
16	5310	48	36	5319	108
23	5271	69	40	5269	120
33	5294	99	44	5283	132
38	5263	114	55	5312	165
42	5299	126	60	5313	180
48	5297	144	61	5290	183
56	5296	168	66	5275	198
64	5306	192	68	5307	204
69	5269	207	71	5286	213
72	5293	216	72	5276	216
73	5268	219	82	5278	246
77	5287	231	84	5294	252
81	5304	243	93	5310	279
95	5321	285	94	5268	282

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5315	33	17	5271	51
17	5296	51	19	5266	57
33	5322	99	22	5281	66
71	5275	213	31	5319	93
72	5276	216	37	5286	111
76	5321	228	42	5283	126
79	5282	237	62	5290	186
83	5288	249	66	5292	198
96	5291	288	80	5279	240
98	5266	294	94	5298	282

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5321	15	2	5324	6
17	5291	51	5	5316	15
22	5272	66	9	5329	27
23	5323	69	10	5300	30
33	5297	99	12	5279	36
55	5286	165	15	5328	45
67	5316	201	17	5277	51
69	5294	207	30	5273	90
77	5330	231	58	5313	174
83	5308	249	62	5312	186
98	5270	294	63	5281	189
--	--	--	76	5322	228
--	--	--	85	5302	255
--	--	--	94	5305	282
--	--	--	98	5285	294

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5304	27	2	5277	6
26	5330	78	32	5276	96
30	5316	90	36	5324	108
38	5278	114	49	5295	147
42	5309	126	52	5273	156
63	5328	189	72	5306	216
71	5317	213	76	5327	228
97	5306	291	81	5286	243
99	5281	297	89	5311	267
--	--	--	93	5282	279
--	--	--	97	5328	291

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5305	0	8	5322	24
6	5307	18	13	5317	39
22	5313	66	15	5271	45
26	5306	78	29	5298	87
31	5294	93	30	5316	90
44	5304	132	53	5327	159
47	5303	141	55	5315	165
60	5280	180	66	5272	198
70	5326	210	76	5302	228
77	5291	231	79	5278	237
79	5296	237	80	5289	240
82	5317	246	93	5307	279
83	5330	249	--	--	--
87	5295	261	--	--	--
92	5309	276	--	--	--
95	5285	285	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5327	3	18	5333	54
3	5320	9	19	5326	57
5	5318	15	32	5285	96
8	5313	24	43	5332	129
9	5319	27	45	5281	135
11	5321	33	50	5320	150
23	5315	69	53	5335	159
31	5307	93	70	5314	210
37	5336	111	72	5302	216
55	5333	165	78	5330	234
57	5306	171	80	5305	240
72	5284	216	86	5315	258
76	5299	228	95	5316	285
86	5287	258	97	5297	291
98	5317	294	--	--	--
99	5282	297	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5298	36	3	5287	9
16	5340	48	7	5303	21
17	5314	51	9	5327	27
19	5316	57	13	5332	39
22	5302	66	30	5339	90
27	5294	81	34	5326	102
28	5285	84	36	5310	108
41	5336	123	41	5294	123
46	5291	138	60	5298	180
68	5324	204	71	5280	213
92	5327	276	90	5309	270
--	--	--	91	5331	273
--	--	--	92	5329	276

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5309	12	2	5300	6
9	5330	27	10	5327	30
18	5315	54	14	5308	42
33	5326	99	20	5326	60
41	5338	123	22	5286	66
55	5334	165	39	5330	117
56	5283	168	45	5309	135
62	5316	186	52	5324	156
73	5312	219	59	5302	177
96	5305	288	65	5303	195
--	--	--	74	5301	222
--	--	--	79	5338	237
--	--	--	86	5322	258

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5317	51	5	5343	15
30	5348	90	11	5300	33
40	5318	120	14	5306	42
42	5304	126	20	5303	60
58	5337	174	26	5318	78
67	5336	201	29	5336	87
81	5300	243	30	5313	90
87	5340	261	55	5327	165
88	5311	264	62	5292	186
95	5349	285	63	5345	189
--	--	--	64	5295	192
--	--	--	77	5297	231
--	--	--	80	5320	240
--	--	--	84	5323	252
--	--	--	87	5342	261
--	--	--	91	5349	273
--	--	--	93	5302	279

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5293	9	5	5349	15
18	5344	54	6	5337	18
20	5337	60	9	5305	27
28	5340	84	14	5302	42
33	5290	99	15	5318	45
34	5341	102	23	5346	69
36	5342	108	32	5340	96
43	5303	129	35	5298	105
55	5326	165	47	5306	141
76	5310	228	48	5333	144
77	5336	231	50	5317	150
89	5302	267	57	5321	171
93	5319	279	69	5311	207
94	5307	282	70	5334	210
--	--	--	75	5342	225
--	--	--	91	5348	273

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5321	15	7	5329	21
18	5316	54	9	5323	27
20	5300	60	11	5290	33
32	5346	96	27	5316	81
49	5340	147	38	5301	114
54	5306	162	40	5326	120
66	5302	198	59	5295	177
72	5334	216	64	5341	192
77	5341	231	66	5342	198
80	5327	240	74	5331	222
88	5342	264	79	5337	237
91	5307	273	82	5327	246
98	5349	294	86	5349	258

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5336	24	5	5354	15
10	5318	30	12	5307	36
15	5310	45	15	5322	45
17	5300	51	19	5334	57
24	5301	72	25	5350	75
29	5322	87	50	5312	150
43	5347	129	54	5313	162
58	5348	174	57	5344	171
73	5355	219	67	5327	201
90	5309	270	71	5319	213
--	--	--	72	5347	216
--	--	--	77	5323	231
--	--	--	97	5314	291

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5308	0	0	5313	0
2	5344	6	3	5345	9
4	5328	12	29	5337	87
6	5357	18	40	5318	120
7	5337	21	48	5355	144
22	5305	66	49	5320	147
29	5300	87	52	5327	156
36	5333	108	59	5338	177
41	5302	123	65	5301	195
56	5304	168	89	5312	267
75	5323	225	--	--	--
82	5307	246	--	--	--
87	5318	261	--	--	--
89	5311	267	--	--	--
92	5350	276	--	--	--
97	5347	291	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5357	6	4	5329	12
9	5345	27	12	5298	36
17	5346	51	16	5350	48
18	5323	54	19	5323	57
36	5324	108	37	5306	111
37	5312	111	39	5305	117
39	5336	117	41	5316	123
46	5343	138	44	5332	132
57	5330	171	46	5347	138
58	5356	174	49	5325	147
74	5332	222	57	5301	171
76	5322	228	59	5342	177
83	5350	249	65	5303	195
85	5301	255	74	5338	222
91	5339	273	82	5353	246
92	5302	276	--	--	--

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	5252	1	798	67	1
2	5252	1	698	76	1
3	5260	1	578	92	1
4	5260	1	758	70	1
5	5268	1	918	58	1
6	5268	1	538	99	1
7	5270	1	898	59	1
8	5270	1	738	72	1
9	5272	1	3066	18	1
10	5272	1	718	74	1
11	5280	1	938	57	1
12	5280	1	678	78	1
13	5288	1	838	63	1
14	5288	1	818	65	1
15	5290	1	518	102	1
16	5290	1	1583	34	1
17	5292	1	2696	20	1
18	5292	1	1050	51	1
19	5300	1	1760	30	1
20	5300	1	2398	23	1
21	5308	1	2089	26	1
22	5308	1	2352	23	1
23	5310	1	2644	20	1
24	5310	1	1169	46	1
25	5312	1	976	55	1
26	5312	1	1678	32	1
27	5320	1	2231	24	1
28	5320	1	1715	31	1
29	5328	1	932	57	1
30	5328	1	2476	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	5252	3.5	211	29	1
2	5252	1.8	208	23	1
3	5260	4.3	165	23	1
4	5260	1.9	180	27	1
5	5268	5.0	230	23	1
6	5268	1.7	218	24	1
7	5270	3.4	226	23	1
8	5270	3.4	230	26	1
9	5272	3.3	208	23	1
10	5272	4.7	213	28	1
11	5280	4.6	197	25	1
12	5280	4.8	204	29	1
13	5288	1.9	171	27	1
14	5288	1.3	181	24	1
15	5290	1.5	161	27	1
16	5290	2.2	173	26	1
17	5292	3.5	154	25	1
18	5292	3.5	165	25	1
19	5300	3.6	155	23	1
20	5300	4.1	159	28	1
21	5308	3.3	220	28	1
22	5308	4.6	150	28	1
23	5310	3.1	208	29	1
24	5310	1.6	162	29	1
25	5312	4.8	184	28	1
26	5312	2.3	222	25	1
27	5320	3.1	176	23	1
28	5320	1.6	158	29	1
29	5328	3.0	217	23	1
30	5328	1.0	222	29	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	5252	6.5	487	17	1
2	5252	6.2	494	16	1
3	5260	9.9	255	17	1
4	5260	9.7	310	17	1
5	5268	7.5	365	16	1
6	5268	7.7	295	17	1
7	5270	7.6	335	17	1
8	5270	7.7	456	16	1
9	5272	9.2	326	16	1
10	5272	8.4	284	16	1
11	5280	9.2	337	17	1
12	5280	6.9	272	16	1
13	5288	7.4	304	16	1
14	5288	9.3	292	17	1
15	5290	8.8	425	16	1
16	5290	9.1	317	18	1
17	5292	9.1	410	18	1
18	5292	8.1	281	16	1
19	5300	9.9	378	17	1
20	5300	8.4	326	18	1
21	5308	8.0	370	18	1
22	5308	8.6	346	17	1
23	5310	6.1	355	16	1
24	5310	9.5	414	16	1
25	5312	9.4	294	16	1
26	5312	9.8	411	18	1
27	5320	7.5	278	18	1
28	5320	8.5	471	18	1
29	5328	6.9	296	17	1
30	5328	8.1	272	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	5252	15.0	491	16	1
2	5252	16.9	382	13	1
3	5260	19.1	288	14	1
4	5260	20.0	399	15	1
5	5268	11.4	355	12	1
6	5268	14.5	350	13	1
7	5270	17.7	407	12	1
8	5270	13.4	303	13	1
9	5272	13.0	382	15	1
10	5272	14.9	327	12	1
11	5280	19.6	413	15	1
12	5280	11.4	272	16	1
13	5288	12.4	480	15	1
14	5288	12.4	313	15	1
15	5290	16.2	370	16	1
16	5290	19.4	496	13	1
17	5292	14.5	309	14	1
18	5292	14.8	284	15	1
19	5300	14.6	267	15	1
20	5300	12.6	385	14	1
21	5308	18.9	469	12	1
22	5308	17.0	414	13	1
23	5310	16.6	384	15	1
24	5310	18.9	352	15	1
25	5312	19.6	451	14	1
26	5312	14.9	475	15	1
27	5320	11.6	331	15	1
28	5320	13.6	461	12	1
29	5328	17.1	320	16	1
30	5328	16.9	345	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: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (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	5255.6	1	16	5290.0	1
2	5256.8	1	17	5290.0	1
3	5257.6	1	18	5290.0	1
4	5254.0	1	19	5290.0	1
5	5255.2	1	20	5290.0	1
6	5259.2	1	21	5324.0	1
7	5254.4	1	22	5326.0	1
8	5259.6	1	23	5324.4	1
9	5256.0	1	24	5320.8	1
10	5258.8	1	25	5323.2	1
11	5290.0	1	26	5325.6	1
12	5290.0	1	27	5320.4	1
13	5290.0	1	28	5324.8	1
14	5290.0	1	29	5321.2	1
15	5290.0	1	30	5322.4	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)
	1113788									
1		1	9	55	1512	0	0	1113788	0	1499999
	1332876									
2		3	9	65	1643	1633	1988	2448176	1500000	2999999
	953664									
3		2	9	55	1324	1239	0	3407104	3000000	4499999
	2007507									
4		1	9	70	1870	0	0	5417174	4500000	5999999
	1114965									
5		2	9	55	1965	1025	0	6534009	6000000	7499999
	2184631									
6		1	9	55	1799	0	0	8721630	7500000	8999999
	1636886									
7		3	9	100	1087	1567	1823	10360315	9000000	10499999
	1381725									
8		1	9	65	1651	0	0	11746517	10500000	11999999

Total number of pulses in waveform = 14
****

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	162903	3	12	70	1413	1740	1287	162903	0	666666
2	719169	1	12	75	1059	0	0	886512	666667	1333333
3	698773	2	12	80	1836	1881	0	1586344	1333334	2000000
4	1016578	1	12	80	1243	0	0	2606639	2000001	2666667
5	535362	2	12	70	1419	1920	0	3143244	2666668	3333334
6	412655	2	12	65	1008	1661	0	3559238	3333335	4000001
7	864727	3	12	50	1722	1946	1590	4426634	4000002	4666668
8	537707	3	12	95	1983	1391	1379	4969599	4666669	5333335
9	970898	1	12	60	1748	0	0	5945250	5333336	6000002
10	500893	2	12	70	1065	1176	0	6447891	6000003	6666669
11	244265	2	12	50	1649	1718	0	6694397	6666670	7333336
12	665180	3	12	100	1087	1852	1174	7362944	7333337	8000003
13	1189544	3	12	75	1912	1215	1632	8556601	8000004	8666670
14	229022	2	12	95	1497	1798	0	8790382	8666671	9333337
15	799475	2	12	75	1417	1028	0	9593152	9333338	10000004
16	626995	2	12	70	1958	1873	0	10222592	10000005	10666671
17	919545	2	12	70	1065	1292	0	11145968	10666672	11333338
18	828683	3	12	60	1370	1018	1499	11977008	11333339	12000005

Total number of pulses in waveform = 39
****

Type 5 Radar Waveform_3

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	667704	2	14	60	1961	1503	0	667704	0	857142
2	878320	2	14	85	1642	1121	0	1549488	857143	1714285
3	873512	1	14	80	1826	0	0	2425763	1714286	2571428
4	731789	3	14	55	1981	1275	1149	3159378	2571429	3428571
5	661402	1	14	60	1066	0	0	3825185	3428572	4285714
6	608885	2	14	50	1773	1041	0	4435136	4285715	5142857
7	948729	2	14	75	1420	1781	0	5386679	5142858	6000000
8	751751	3	14	55	1721	1314	1763	6141631	6000001	6857143
9	1045282	2	14	90	1035	1289	0	7191711	6857144	7714286
10	1371156	3	14	90	1549	1231	1988	8565191	7714287	8571429
11	826295	1	14	70	1927	0	0	9396254	8571430	9428572
12	571163	1	14	75	1960	0	0	9969344	9428573	10285715
13	931314	2	14	80	1396	1786	0	10902618	10285716	11142858
14	1081387	2	14	65	1867	1432	0	11987187	11142859	12000001

Total number of pulses in waveform = 27
****

Type 5 Radar Waveform_4

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	401761	1	5	75	1983	0	0	401761	0	631578
2	419477	3	5	60	1703	1739	1748	823221	631579	1263157
3	927972	1	5	85	1284	0	0	1756383	1263158	1894736
4	566879	1	5	90	1957	0	0	2324546	1894737	2526315
5	404199	2	5	95	1827	1946	0	2730702	2526316	3157894
6	860688	1	5	70	1893	0	0	3595163	3157895	3789473
7	596272	1	5	80	1074	0	0	4193328	3789474	4421052
8	272475	3	5	95	1716	1053	1680	4466877	4421053	5052631
9	905898	2	5	95	1318	1605	0	5377224	5052632	5684210
10	639228	2	5	75	1491	1572	0	6019375	5684211	6315789
11	554532	2	5	100	1995	1398	0	6576970	6315790	6947368
12	544153	2	5	60	1943	1395	0	7124516	6947369	7578947
13	711202	1	5	80	1620	0	0	7839056	7578948	8210526
14	878049	2	5	70	1431	1667	0	8718725	8210527	8842105
15	300986	1	5	75	1060	0	0	9022809	8842106	9473684
16	515098	1	5	70	1310	0	0	9538967	9473685	10105263
17	663385	1	5	100	1490	0	0	10203662	10105264	10736842
18	1108811	2	5	90	1610	1120	0	11313963	10736843	11368421
19	144751	3	5	75	2000	1361	1341	11461444	11368422	12000000

Total number of pulses in waveform = 32
****

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	636198	1	8	90	1002	0	0	636198	0	705881
2	82844	3	8	90	1418	1151	1395	720044	705882	1411763
3	1080852	1	8	80	1223	0	0	1804860	1411764	2117645
4	923553	3	8	90	1066	1656	1288	2729636	2117646	2823527
5	334540	2	8	100	1078	1471	0	3068186	2823528	3529409
6	968668	3	8	75	1932	1620	1147	4039403	3529410	4235291
7	539343	3	8	75	1388	1117	1868	4583445	4235292	4941173
8	476119	3	8	70	1984	1380	1996	5063937	4941174	5647055
9	1179075	1	8	60	1165	0	0	6248372	5647056	6352937
10	801255	3	8	100	1637	1243	1689	7050792	6352938	7058819
11	381183	3	8	90	1085	1582	1935	7436544	7058820	7764701
12	588217	1	8	65	1487	0	0	8029363	7764702	8470583
13	548948	1	8	50	1199	0	0	8579798	8470584	9176465
14	1158666	1	8	55	1910	0	0	9739663	9176466	9882347
15	490016	2	8	75	1398	1999	0	10231589	9882348	10588229
16	480290	3	8	95	1710	1865	1360	10715276	10588230	11294111
17	1056671	1	8	90	1649	0	0	11776882	11294112	11999993

Total number of pulses in waveform = 35

Type 5 Radar Waveform_6

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	251831	2	18	60	1651	1037	0	251831	0	599999
2	695401	2	18	80	1789	1699	0	949920	600000	1199999
3	533288	2	18	70	1959	1525	0	1486696	1200000	1799999
4	900185	2	18	65	1635	1489	0	2390365	1800000	2399999
5	301275	3	18	70	1257	1729	1315	2694764	2400000	2999999
6	486646	1	18	60	1937	0	0	3185711	3000000	3599999
7	855975	2	18	60	1820	1772	0	4043623	3600000	4199999
8	454089	1	18	90	1695	0	0	4501304	4200000	4799999
9	780019	3	18	60	1793	1386	1369	5283018	4800000	5399999
10	325601	1	18	95	1325	0	0	5613167	5400000	5999999
11	474698	3	18	75	1365	1652	1373	6089190	6000000	6599999
12	662490	3	18	100	1126	1041	1238	6756070	6600000	7199999
13	792450	1	18	50	1568	0	0	7551925	7200000	7799999
14	491993	1	18	85	1963	0	0	8045486	7800000	8399999
15	645526	1	18	80	1490	0	0	8692975	8400000	8999999
16	773093	3	18	55	1057	1882	1204	9467558	9000000	9599999
17	656463	2	18	100	1494	1081	0	10128164	9600000	10199999
18	298009	2	18	65	1084	1592	0	10428748	10200000	10799999
19	447977	1	18	90	1539	0	0	10879401	10800000	11399999
20	1109552	3	18	85	1284	1601	1341	11990492	11400000	11999999

Total number of pulses in waveform = 39

Type 5 Radar Waveform_7

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	514313	2	6	80	1281	1610	0	514313	0	631578
2	407989	2	6	90	1448	1814	0	925193	631579	1263157
3	674232	3	6	65	1543	1336	1855	1602687	1263158	1894736
4	774043	3	6	90	1307	1643	1950	2381464	1894737	2526315
5	354329	3	6	55	1396	1617	1363	2740693	2526316	3157894
6	415946	2	6	50	1193	1367	0	3161015	3157895	3789473
7	1110965	3	6	85	1414	1511	1022	4274540	3789474	4421052
8	701397	2	6	60	1591	1778	0	4979884	4421053	5052631
9	462634	3	6	70	1787	1574	1734	5445887	5052632	5684210
10	615609	1	6	95	1578	0	0	6066591	5684211	6315789
11	624092	1	6	55	1969	0	0	6692261	6315790	6947368
12	636417	3	6	85	1250	1588	1413	7330647	6947369	7578947
13	431026	2	6	55	1195	1617	0	7765924	7578948	8210526
14	962485	2	6	90	1008	1205	0	8731221	8210527	8842105
15	198499	3	6	90	1200	1368	1498	8931933	8842106	9473684
16	652876	1	6	95	1207	0	0	9588875	9473685	10105263
17	1137543	2	6	70	1796	1351	0	10727625	10105264	10736842
18	433391	1	6	75	1441	0	0	11164163	10736843	11368421
19	596557	2	6	95	1561	1607	0	11762161	11368422	12000000

Total number of pulses in waveform = 41

Type 5 Radar Waveform_8

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	684592	3	19	100	1584	1200	1547	684592	0	799999
2	838936	1	19	75	1165	0	0	1527859	800000	1599999
3	346737	3	19	90	1494	1982	1419	1875761	1600000	2399999
4	906405	1	19	75	1526	0	0	2787061	2400000	3199999
5	442380	3	19	90	1686	1986	1422	3230967	3200000	3999999
6	840321	2	19	75	1189	1919	0	4076382	4000000	4799999
7	1375745	1	19	100	1855	0	0	5455235	4800000	5599999
8	604164	2	19	75	1830	1931	0	6061254	5600000	6399999
9	764093	1	19	70	1537	0	0	6829108	6400000	7199999
10	1006048	3	19	60	1860	1376	1198	7836693	7200000	7999999
11	432017	1	19	90	1402	0	0	8273144	8000000	8799999
12	968277	1	19	70	1814	0	0	9242823	8800000	9599999
13	666713	1	19	85	1762	0	0	9911350	9600000	10399999
14	704044	1	19	75	1283	0	0	10617156	10400000	11199999
15	620757	3	19	90	1269	1615	1894	11239196	11200000	11999999

Total number of pulses in waveform = 27

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	447884	1	10	70	1923	0	0	447884	0	666666
2	660213	2	10	95	1418	1783	0	1110020	666667	1333333
3	321710	2	10	80	1360	1351	0	1434931	1333334	2000000
4	1119369	2	10	65	1037	1451	0	2557011	2000001	2666667
5	174767	1	10	65	1221	0	0	2734266	2666668	3333334
6	844583	2	10	70	1104	1855	0	3580070	3333335	4000001
7	720962	3	10	75	1228	1742	1811	4303991	4000002	4666668
8	939702	3	10	80	1804	1184	1047	5248474	4666669	5333335
9	710040	3	10	60	1474	1765	1841	5962549	5333336	6000002
10	492608	1	10	70	1084	0	0	6460237	6000003	6666669
11	801288	2	10	90	1738	1818	0	7262609	6666670	7333336
12	225265	3	10	80	1700	1234	1609	7491430	7333337	8000003
13	881115	1	10	70	1262	0	0	8377088	8000004	8666670
14	822443	2	10	100	1862	1084	0	9200793	8666671	9333337
15	629280	1	10	80	1457	0	0	9833019	9333338	10000004
16	446701	1	10	55	1802	0	0	10281177	10000005	10666671
17	812277	2	10	70	1671	1564	0	11095256	10666672	11333338
18	736068	3	10	65	1776	1163	1985	11834559	11333339	12000005

Total number of pulses in waveform = 35

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	801921	3	17	80	1980	1749	1389	801921	0	999999
2	763551	3	17	90	1338	1431	1623	1570590	1000000	1999999
3	605582	2	17	80	1173	1554	0	2180564	2000000	2999999
4	1222299	3	17	100	1012	1527	1663	3405590	3000000	3999999
5	977300	1	17	100	1991	0	0	4387092	4000000	4999999
6	946019	1	17	55	1247	0	0	5335102	5000000	5999999
7	1027185	2	17	65	1634	1177	0	6363534	6000000	6999999
8	1015416	3	17	75	1845	1087	1378	7381761	7000000	7999999
9	1250090	3	17	50	1751	1741	1116	8636161	8000000	8999999
10	1191509	1	17	90	1010	0	0	9832278	9000000	9999999
11	1144470	1	17	70	1606	0	0	10977758	10000000	10999999
12	290853	3	17	50	1209	1817	1220	11270217	11000000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_11

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	435005	1	10	55	1155	0	0	435005	0	749999
2	739624	2	10	55	1950	1929	0	1175784	750000	1499999
3	671041	1	10	80	1290	0	0	1850704	1500000	2249999
4	664893	1	10	95	1589	0	0	2516887	2250000	2999999
5	534138	1	10	50	1145	0	0	3052614	3000000	3749999
6	1234945	3	10	95	1734	1939	1900	4288704	3750000	4499999
7	816682	3	10	65	1750	1977	1838	5110959	4500000	5249999
8	599629	2	10	95	1067	1963	0	5716153	5250000	5999999
9	500522	2	10	100	1752	1886	0	6219705	6000000	6749999
10	1249125	1	10	70	1774	0	0	7472468	6750000	7499999
11	321077	1	10	100	1891	0	0	7795319	7500000	8249999
12	905761	2	10	55	1213	1475	0	8702971	8250000	8999999
13	440123	3	10	80	1655	1098	1268	9145782	9000000	9749999
14	1009011	1	10	75	1724	0	0	10158814	9750000	10499999
15	869426	3	10	50	1667	1048	1216	11029964	10500000	11249999
16	362098	2	10	55	1658	1700	0	11395993	11250000	11999999

Total number of pulses in waveform = 29
****

Type 5 Radar Waveform_12

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	678636	3	8	80	1530	1162	1701	678636	0	705881
2	207025	3	8	60	1839	1484	1554	890054	705882	1411763
3	824064	2	8	75	1442	1567	0	1718995	1411764	2117645
4	574432	3	8	80	1044	1337	1265	2296436	2117646	2823527
5	892682	2	8	80	1034	1069	0	3192764	2823528	3529409
6	362311	2	8	55	1419	1970	0	3557178	3529410	4235291
7	1001499	1	8	60	1812	0	0	4562066	4235292	4941173
8	727556	3	8	60	1872	1378	1079	5291434	4941174	5647055
9	368550	1	8	55	1076	0	0	5664313	5647056	6352937
10	1282478	3	8	90	1854	1862	1088	6947867	6352938	7058819
11	674923	3	8	100	1977	1246	1236	7627594	7058820	7764701
12	143558	2	8	70	1693	1678	0	7775611	7764702	8470583
13	858610	3	8	55	1262	1661	1866	8637592	8470584	9176465
14	684333	2	8	75	1940	1181	0	9326714	9176466	9882347
15	979880	3	8	85	1676	1122	1309	10309715	9882348	10588229
16	575458	3	8	55	1481	1017	1007	10889280	10588230	11294111
17	853566	2	8	95	1594	1670	0	11746351	11294112	11999993

Total number of pulses in waveform = 41
****

Type 5 Radar Waveform_13

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	980896	1	12	70	1986	0	0	980896	0	999999
2	811171	2	12	65	1097	1233	0	1794053	1000000	1999999
3	205481	3	12	75	1175	1521	1239	2001864	2000000	2999999
4	1832063	2	12	80	1197	1982	0	3837862	3000000	3999999
5	912708	2	12	100	1038	1963	0	4753749	4000000	4999999
6	875311	1	12	95	1341	0	0	5632061	5000000	5999999
7	667959	2	12	100	1705	1633	0	6301361	6000000	6999999
8	1561469	1	12	95	1671	0	0	7866168	7000000	7999999
9	693223	1	12	90	1634	0	0	8561062	8000000	8999999
10	677934	1	12	65	1260	0	0	9240630	9000000	9999999
11	1104173	2	12	100	1041	1527	0	10346063	10000000	10999999
12	1562136	2	12	100	1965	1944	0	11910767	11000000	11999999

Total number of pulses in waveform = 20
****

Type 5 Radar Waveform_14

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	7734	1	18	60	1598	0	0	7734	0	1333332
2	1576930	1	18	70	1856	0	0	1586262	1333333	2666665
3	1998481	1	18	75	1864	0	0	3586599	2666666	3999998
4	753536	2	18	75	1944	1293	0	4341999	3999999	5333331
5	2012826	1	18	65	1372	0	0	6358062	5333332	6666664
6	1182917	3	18	65	1875	1094	1124	7542351	6666665	7999997
7	1345859	1	18	70	1472	0	0	8892303	7999998	9333330
8	826838	2	18	60	1427	1364	0	9720613	9333331	10666663
9	1823194	3	18	80	1792	1914	1583	11546598	10666664	11999996

Total number of pulses in waveform = 15
****

Type 5 Radar Waveform_15

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	138059	2	5	100	1377	1822	0	138059	0	749999
2	672769	3	5	85	1633	1403	1768	814027	750000	1499999
3	766230	2	5	95	1440	1019	0	1585061	1500000	2249999
4	1309822	2	5	100	1007	1021	0	2897342	2250000	2999999
5	120902	2	5	65	1927	1430	0	3020272	3000000	3749999
6	1207179	1	5	100	1873	0	0	4230808	3750000	4499999
7	833939	1	5	55	1338	0	0	5066620	4500000	5249999
8	352420	1	5	55	1554	0	0	5420378	5250000	5999999
9	855586	2	5	50	1091	1030	0	6277518	6000000	6749999
10	1050105	1	5	100	1467	0	0	7329744	6750000	7499999
11	517914	3	5	50	1660	1902	1592	7849125	7500000	8249999
12	911047	2	5	80	1606	1560	0	8765326	8250000	8999999
13	699327	1	5	80	1690	0	0	9467819	9000000	9749999
14	467279	3	5	80	1498	1500	1083	9936788	9750000	10499999
15	1271031	3	5	70	1586	1187	1238	11211900	10500000	11249999
16	373853	3	5	55	1325	1830	1034	11589764	11250000	11999999

Total number of pulses in waveform = 32
****

Type 5 Radar Waveform_16

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	973299	3	17	95	1594	1452	1889	973299	0	1333332
2	1367071	1	17	100	1295	0	0	2345305	1333333	2666665
3	1586561	1	17	90	1708	0	0	3933161	2666666	3999998
4	1071888	2	17	55	1913	1527	0	5006757	3999999	5333331
5	1118753	1	17	60	1333	0	0	6128950	5333332	6666664
6	867315	3	17	55	1416	1929	1379	6997598	6666665	7999997
7	1215175	2	17	70	1748	1060	0	8217497	7999998	9333330
8	1290225	3	17	70	1918	1158	1418	9510530	9333331	10666663
9	1205479	1	17	50	1703	0	0	10720503	10666664	11999996

Total number of pulses in waveform = 17
****

Type 5 Radar Waveform_17

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	88231	1	19	60	1571	0	0	88231	0	1090908
2	1036036	1	19	100	1232	0	0	1125838	1090909	2181817
3	1354758	2	19	60	1925	1558	0	2481828	2181818	3272726
4	1479207	2	19	95	1367	1145	0	3964518	3272727	4363635
5	950107	2	19	80	1608	1786	0	4917137	4363636	5454544
6	657108	3	19	100	1456	1097	1878	5577639	5454545	6545453
7	1423331	2	19	60	1897	1689	0	7005401	6545454	7636362
8	1249730	1	19	95	1796	0	0	8258717	7636363	8727271
9	1118350	2	19	75	1548	1110	0	9378863	8727272	9818180
10	872686	3	19	75	1821	1434	1075	10254207	9818181	10909089
11	1312174	2	19	55	1464	1557	0	11570711	10909090	11999998

Total number of pulses in waveform = 21
****

Type 5 Radar Waveform_18

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	576132	3	6	95	1517	1539	1549	576132	0	1199999
2	931054	1	6	80	1500	0	0	1511791	1200000	2399999
3	1495473	3	6	100	1420	1429	1835	3008764	2400000	3599999
4	1771448	1	6	80	1115	0	0	4784896	3600000	4799999
5	15090	3	6	60	1871	1352	1994	4801101	4800000	5999999
6	2277915	2	6	70	1918	1224	0	7084233	6000000	7199999
7	835492	3	6	100	1255	1622	1853	7922867	7200000	8399999
8	761498	3	6	60	1061	1211	1373	8689095	8400000	9599999
9	2101910	1	6	95	1444	0	0	10794650	9600000	10799999
10	375105	3	6	75	1654	1428	1495	11171199	10800000	11999999

Total number of pulses in waveform = 23
****

Type 5 Radar Waveform_19

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	172594	2	14	100	1553	1493	0	172594	0	1333332
2	1287547	2	14	65	1919	1763	0	1463187	1333333	2666665
3	1640751	3	14	75	1732	1452	1517	3107620	2666666	3999998
4	1565033	3	14	90	1479	1912	1100	4677354	3999999	5333331
5	1256636	1	14	60	1457	0	0	5938481	5333332	6666664
6	789450	2	14	85	1152	1703	0	6729388	6666665	7999997
7	1653833	2	14	55	1824	1885	0	8386076	7999998	9333330
8	1649342	1	14	50	1575	0	0	10039127	9333331	10666663
9	671935	1	14	100	1613	0	0	10712637	10666664	11999996

Total number of pulses in waveform = 17
****

Type 5 Radar Waveform_20

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	539090	3	9	60	1082	1794	1319	539090	0	1199999
2	837323	3	9	50	1022	1849	1589	1380608	1200000	2399999
3	2199588	3	9	65	1894	1279	1480	3584656	2400000	3599999
4	1105928	2	9	90	1244	1274	0	4695237	3600000	4799999
5	1141628	3	9	70	1798	1740	1506	5839383	4800000	5999999
6	891637	2	9	60	1198	1174	0	6736064	6000000	7199999
7	1388386	2	9	85	1078	1306	0	8126822	7200000	8399999
8	359684	2	9	85	1568	1834	0	8488890	8400000	9599999
9	1987296	2	9	60	1116	1213	0	10479588	9600000	10799999
10	340949	2	9	95	1276	1406	0	10822866	10800000	11999999

Total number of pulses in waveform = 24
****

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	592798	1	10	85	1003	0	0	592798	0	666666
2	697751	1	10	95	1280	0	0	1291552	666667	1333333
3	235843	3	10	75	1258	1944	1026	1528675	1333334	2000000
4	852700	1	10	50	1226	0	0	2385603	2000001	2666667
5	482221	1	10	100	1902	0	0	2869050	2666668	3333334
6	483708	3	10	55	1796	1836	1763	3354660	3333335	4000001
7	1089744	2	10	60	1932	1074	0	4449799	4000002	4666668
8	875993	3	10	50	1189	1509	1122	5328798	4666669	5333335
9	469314	3	10	100	1432	1264	1716	5801932	5333336	6000002
10	456569	1	10	60	1286	0	0	6262913	6000003	6666669
11	505535	3	10	100	1243	1168	1743	6769734	6666670	7333336
12	760270	3	10	85	1803	1798	1493	7534158	7333337	8000003
13	772853	2	10	90	1028	1599	0	8312105	8000004	8666670
14	591163	3	10	65	1317	1816	1446	8905895	8666671	9333337
15	750572	2	10	50	1247	1006	0	9661046	9333338	10000004
16	362790	3	10	95	1208	1852	1144	10026089	10000005	10666671
17	1210243	3	10	90	1460	1742	1848	11240536	10666672	11333338
18	677865	1	10	70	1844	0	0	11923451	11333339	12000005

Total number of pulses in waveform = 39
****

Type 5 Radar Waveform_22

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	129792	1	5	50	1061	0	0	129792	0	1499999
2	1932243	2	5	75	1802	1923	0	2063096	1500000	2999999
3	987905	1	5	60	1849	0	0	3054726	3000000	4499999
4	2593861	2	5	70	1563	1810	0	5650436	4500000	5999999
5	1804315	3	5	55	1756	1753	1251	7458124	6000000	7499999
6	670951	1	5	65	1330	0	0	8133835	7500000	8999999
7	2227110	1	5	70	1413	0	0	10362275	9000000	10499999
8	719215	1	5	50	1685	0	0	11082903	10500000	11999999

Total number of pulses in waveform = 12
****

Type 5 Radar Waveform_23

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	405996	3	9	50	1204	1212	1019	405996	0	749999
2	506385	3	9	85	1086	1541	1423	915816	750000	1499999
3	865562	3	9	55	1170	1974	1633	1785428	1500000	2249999
4	981649	1	9	55	1623	0	0	2771854	2250000	2999999
5	301057	1	9	95	1799	0	0	3074534	3000000	3749999
6	1259165	3	9	65	1776	1720	1645	4335498	3750000	4499999
7	478033	1	9	75	1716	0	0	4818672	4500000	5249999
8	1089727	2	9	85	1936	1065	0	5910115	5250000	5999999
9	374576	3	9	85	1469	1562	1968	6287692	6000000	6749999
10	823374	1	9	95	1237	0	0	7116065	6750000	7499999
11	420776	2	9	95	1779	1542	0	7538078	7500000	8249999
12	1226256	3	9	65	1585	1107	1286	8767655	8250000	8999999
13	495670	1	9	50	1408	0	0	9267303	9000000	9749999
14	526793	3	9	75	1157	1930	1950	9795504	9750000	10499999
15	1405189	2	9	80	1693	1221	0	11205730	10500000	11249999
16	349817	3	9	70	1202	1425	1513	11558461	11250000	11999999

Total number of pulses in waveform = 35
****

Type 5 Radar Waveform_24

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	462964	2	18	60	1101	1106	0	462964	0	799999
2	1065384	1	18	70	1586	0	0	1530555	800000	1599999
3	291831	3	18	75	1513	1366	1885	1823972	1600000	2399999
4	890797	3	18	60	1889	1509	1202	2719533	2400000	3199999
5	637390	1	18	70	1491	0	0	3361523	3200000	3999999
6	705909	2	18	90	1033	1769	0	4068923	4000000	4799999
7	1152743	2	18	50	1922	1092	0	5224468	4800000	5599999
8	989824	3	18	70	1190	1123	1301	6217306	5600000	6399999
9	811971	2	18	100	1266	1229	0	7032891	6400000	7199999
10	470406	2	18	80	1716	1603	0	7505792	7200000	7999999
11	601132	3	18	70	1421	1751	1017	8110243	8000000	8799999
12	1197817	3	18	100	1960	1863	1568	9312249	8800000	9599999
13	812213	2	18	50	1567	1988	0	10129853	9600000	10399999
14	1063813	1	18	55	1281	0	0	11197221	10400000	11199999
15	313075	1	18	90	1761	0	0	11511577	11200000	11999999

Total number of pulses in waveform = 31
****

Type 5 Radar Waveform_25

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	376727	1	12	55	1634	0	0	376727	0	799999
2	816480	3	12	100	1192	1584	1835	1194841	800000	1599999
3	551631	1	12	70	1036	0	0	1751083	1600000	2399999
4	874931	2	12	100	1294	1647	0	2627050	2400000	3199999
5	1088595	3	12	85	1873	1733	1439	3718586	3200000	3999999
6	1030245	2	12	70	1991	1900	0	4753876	4000000	4799999
7	196409	2	12	95	1833	1323	0	4954176	4800000	5599999
8	1117746	3	12	80	1208	1832	1143	6075078	5600000	6399999
9	630758	1	12	100	1371	0	0	6710019	6400000	7199999
10	761006	1	12	70	1193	0	0	7472396	7200000	7999999
11	956251	3	12	70	1965	1926	1711	8429840	8000000	8799999
12	1045375	3	12	100	1370	1091	1628	9480817	8800000	9599999
13	653025	3	12	70	1489	1896	1545	10137931	9600000	10399999
14	293376	3	12	85	1460	1173	1202	10436237	10400000	11199999
15	1017384	2	12	80	1439	1570	0	11457456	11200000	11999999

Total number of pulses in waveform = 33
****

Type 5 Radar Waveform_26

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	894048	2	6	75	1506	1901	0	894048	0	1333332
2	747522	3	6	85	1015	1388	1536	1644977	1333333	2666665
3	1794034	3	6	85	1204	1739	1545	3442950	2666666	3999998
4	890906	1	6	85	1074	0	0	4338344	3999999	5333331
5	2276788	3	6	65	1872	1297	1936	6616206	5333332	6666664
6	156105	3	6	60	1180	1668	1996	6777416	6666665	7999997
7	1456818	1	6	65	1189	0	0	8239078	7999998	9333330
8	1886617	1	6	90	1627	0	0	10126884	9333331	10666663
9	940868	1	6	55	1410	0	0	11069379	10666664	11999996

Total number of pulses in waveform = 18
****

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	486830	2	19	55	1095	1548	0	486830	0	666666
2	517661	3	19	55	1793	1297	1334	1007134	666667	1333333
3	796636	1	19	55	1442	0	0	1808194	1333334	2000000
4	400367	3	19	75	1489	1889	1271	2210003	2000001	2666667
5	595037	3	19	55	1250	1597	1987	2809689	2666668	3333334
6	579535	1	19	55	1021	0	0	3394058	3333335	4000001
7	744303	1	19	85	1592	0	0	4139382	4000002	4666668
8	1136838	3	19	70	1400	1590	1369	5277812	4666669	5333335
9	193310	3	19	50	1233	1945	1549	5475481	5333336	6000002
10	577706	3	19	85	1871	1575	1092	6057914	6000003	6666669
11	746490	1	19	90	1814	0	0	6808942	6666670	7333336
12	961901	1	19	100	1469	0	0	7772657	7333337	8000003
13	463829	3	19	50	1484	1318	1547	8237955	8000004	8666670
14	670309	2	19	80	1349	1061	0	8912613	8666671	9333337
15	1028242	2	19	85	1668	1721	0	9943265	9333338	10000004
16	454091	1	19	65	1048	0	0	10400745	10000005	10666671
17	467707	2	19	80	1817	1778	0	10869500	10666672	11333338
18	1003304	1	19	85	1258	0	0	11876399	11333339	12000005

Total number of pulses in waveform = 36
****

Type 5 Radar Waveform_28

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	326965	3	8	75	1242	1923	1232	326965	0	749999
2	956874	3	8	65	1723	1789	1270	1288236	750000	1499999
3	463438	3	8	90	1943	1605	1203	1756456	1500000	2249999
4	799881	1	8	85	1409	0	0	2561088	2250000	2999999
5	746372	1	8	75	1593	0	0	3308869	3000000	3749999
6	692850	1	8	70	1824	0	0	4003312	3750000	4499999
7	1129125	2	8	90	1910	1860	0	5134261	4500000	5249999
8	465315	2	8	55	1485	1705	0	5603346	5250000	5999999
9	942034	2	8	85	1089	1234	0	6548570	6000000	6749999
10	225217	2	8	65	1388	1382	0	6776110	6750000	7499999
11	1451688	3	8	100	1391	1857	1032	8230568	7500000	8249999
12	503893	1	8	90	1625	0	0	8738741	8250000	8999999
13	709999	3	8	80	1521	1796	1978	9450365	9000000	9749999
14	996528	2	8	55	1705	1454	0	10452188	9750000	10499999
15	167238	1	8	70	1333	0	0	10622585	10500000	11249999
16	705931	2	8	60	1523	1376	0	11329849	11250000	11999999

Total number of pulses in waveform = 32
****

Type 5 Radar Waveform_29

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	634301	2	17	90	1742	1077	0	634301	0	1499999
2	1302662	1	17	75	1072	0	0	1939782	1500000	2999999
3	1833158	1	17	50	1494	0	0	3774012	3000000	4499999
4	787014	2	17	50	1784	1078	0	4562520	4500000	5999999
5	1854976	1	17	75	1689	0	0	6420358	6000000	7499999
6	2027579	2	17	80	1614	1787	0	8449626	7500000	8999999
7	972177	2	17	90	1089	1194	0	9425204	9000000	10499999
8	1659052	3	17	95	1951	1103	1458	11086539	10500000	11999999

Total number of pulses in waveform = 14

****

Type 5 Radar Waveform_30

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	669976	1	14	80	1393	0	0	669976	0	923076
2	550111	2	14	55	1318	1042	0	1221480	923077	1846153
3	1394274	1	14	50	1431	0	0	2618114	1846154	2769230
4	871352	2	14	65	1202	1109	0	3490897	2769231	3692307
5	871339	2	14	80	1541	1005	0	4364547	3692308	4615384
6	745045	2	14	95	1583	1037	0	5112138	4615385	5538461
7	980327	2	14	100	1163	1717	0	6095085	5538462	6461538
8	1150913	3	14	95	1328	1999	1808	7248878	6461539	7384615
9	346569	2	14	100	1863	1262	0	7600582	7384616	8307692
10	1491914	2	14	50	1106	1438	0	9095621	8307693	9230769
11	752724	2	14	80	1069	1504	0	9850889	9230770	10153846
12	408183	2	14	70	1236	1992	0	10261645	10153847	11076923
13	1674993	3	14	60	1971	1116	1627	11939866	11076924	12000000

Total number of pulses in waveform = 26

****

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	5252	1	16	5290	1
2	5252	1	17	5292	1
3	5260	1	18	5292	1
4	5260	1	19	5300	1
5	5268	1	20	5300	1
6	5268	1	21	5308	1
7	5270	1	22	5308	1
8	5270	1	23	5310	1
9	5272	1	24	5310	1
10	5272	1	25	5312	1
11	5280	1	26	5312	1
12	5280	1	27	5320	1
13	5288	1	28	5320	1
14	5288	1	29	5328	1
15	5290	1	30	5328	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5279	21	2	5278	6
18	5264	54	7	5265	21
35	5268	105	9	5262	27
44	5250	132	74	5273	222
61	5266	183	78	5272	234
64	5257	192	--	--	--
68	5262	204	--	--	--
88	5253	264	--	--	--
98	5251	294	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5259	12	5	5271	15
12	5287	36	6	5281	18
17	5257	51	9	5287	27
21	5267	63	42	5289	126
22	5263	66	61	5276	183
26	5252	78	88	5274	264
27	5276	81	98	5290	294
37	5253	111	--	--	--
53	5269	159	--	--	--
60	5251	180	--	--	--
64	5271	192	--	--	--
67	5284	201	--	--	--
68	5264	204	--	--	--
82	5283	246	--	--	--
96	5258	288	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5276	0	16	5295	48
3	5295	9	57	5252	171
6	5282	18	92	5251	276
25	5267	75	93	5253	279
39	5286	117	95	5287	285
48	5271	144	--	--	--
53	5254	159	--	--	--
98	5283	294	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5282	9	16	5270	48
5	5278	15	35	5292	105
6	5277	18	52	5267	156
19	5286	57	56	5289	168
27	5298	81	71	5288	213
52	5287	156	81	5265	243
57	5269	171	85	5291	255
84	5299	252	97	5259	291
92	5276	276	--	--	--
99	5264	297	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5281	21	2	5251	6
12	5272	36	5	5253	15
14	5275	42	15	5281	45
43	5266	129	17	5293	51
48	5264	144	28	5284	84
56	5268	168	32	5286	96
62	5270	186	37	5294	111
78	5277	234	40	5257	120
84	5252	252	51	5264	153
92	5284	276	54	5266	162
96	5276	288	60	5258	180
--	--	--	67	5256	201
--	--	--	69	5276	207
--	--	--	70	5282	210
--	--	--	77	5296	231
--	--	--	81	5289	243
--	--	--	86	5269	258
--	--	--	91	5270	273

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5251	24	16	5281	48
10	5280	30	41	5251	123
12	5309	36	43	5289	129
31	5302	93	51	5256	153
43	5257	129	53	5295	159
45	5282	135	57	5290	171
48	5281	144	66	5298	198
49	5297	147	75	5282	225
68	5293	204	79	5259	237
69	5286	207	81	5305	243
76	5264	228	84	5252	252
88	5287	264	89	5279	267
98	5288	294	90	5266	270
--	--	--	94	5250	282

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5308	3	2	5310	6
3	5306	9	4	5299	12
9	5317	27	12	5264	36
29	5276	87	23	5295	69
34	5280	102	25	5275	75
50	5268	150	41	5274	123
74	5310	222	67	5313	201
81	5273	243	70	5292	210
85	5283	255	74	5290	222
93	5285	279	76	5293	228
94	5298	282	79	5278	237
95	5304	285	99	5317	297
96	5295	288	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5291	12	6	5263	18
8	5296	24	14	5296	42
18	5295	54	28	5298	84
19	5308	57	39	5315	117
21	5307	63	50	5267	150
23	5310	69	53	5274	159
33	5285	99	56	5288	168
34	5261	102	63	5280	189
37	5284	111	64	5268	192
49	5301	147	70	5294	210
65	5289	195	74	5302	222
69	5264	207	--	--	--
71	5313	213	--	--	--
74	5316	222	--	--	--
79	5269	237	--	--	--
82	5273	246	--	--	--
95	5300	285	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5284	48	0	5270	0
20	5319	60	23	5263	69
27	5285	81	28	5313	84
42	5296	126	32	5280	96
47	5302	141	35	5286	105
49	5301	147	39	5269	117
66	5293	198	51	5277	153
67	5295	201	54	5283	162
68	5270	204	58	5322	174
70	5269	210	68	5300	204
90	5310	270	69	5303	207
98	5320	294	74	5308	222
--	--	--	94	5289	282
--	--	--	96	5317	288

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5318	9	0	5303	0
8	5271	24	19	5310	57
9	5306	27	20	5324	60
10	5319	30	35	5319	105
18	5272	54	36	5302	108
48	5327	144	43	5317	129
65	5282	195	47	5327	141
73	5326	219	65	5284	195
94	5301	282	70	5304	210
99	5322	297	75	5278	225
--	--	--	97	5306	291

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5290	36	0	5313	0
18	5280	54	5	5307	15
22	5313	66	8	5332	24
29	5301	87	19	5297	57
39	5284	117	20	5327	60
50	5322	150	21	5287	63
59	5295	177	40	5309	120
63	5323	189	48	5317	144
65	5304	195	66	5336	198
77	5311	231	85	5337	255
78	5329	234	--	--	--
83	5279	249	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5286	63	10	5281	30
30	5319	90	14	5334	42
43	5340	129	17	5320	51
50	5305	150	31	5292	93
51	5292	153	35	5336	105
74	5290	222	43	5290	129
76	5324	228	44	5297	132
86	5334	258	56	5285	168
91	5316	273	63	5305	189
92	5326	276	78	5291	234
93	5315	279	80	5333	240
94	5323	282	86	5321	258
97	5303	291	87	5287	261

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5310	18	11	5302	33
7	5333	21	13	5336	39
17	5283	51	14	5287	42
19	5331	57	16	5311	48
30	5306	90	18	5289	54
43	5292	129	21	5333	63
49	5293	147	26	5284	78
53	5291	159	28	5299	84
59	5328	177	42	5285	126
71	5295	213	43	5296	129
82	5301	246	59	5330	177
86	5297	258	66	5340	198
89	5282	267	80	5321	240
97	5314	291	94	5323	282
99	5296	297	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5293	6	5	5341	15
13	5339	39	27	5344	81
17	5327	51	37	5311	111
19	5318	57	38	5312	114
20	5320	60	47	5338	141
23	5302	69	62	5335	186
37	5298	111	63	5328	189
39	5326	117	69	5291	207
43	5303	129	73	5349	219
45	5294	135	76	5309	228
48	5346	144	77	5331	231
49	5336	147	83	5308	249
62	5313	186	88	5313	264
71	5291	213	--	--	--
79	5345	237	--	--	--
85	5349	255	--	--	--
91	5332	273	--	--	--
93	5306	279	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5326	9	7	5346	21
5	5305	15	9	5322	27
20	5315	60	12	5335	36
27	5330	81	20	5354	60
34	5344	102	25	5331	75
48	5311	144	40	5357	120
49	5321	147	53	5321	159
52	5327	156	56	5320	168
54	5329	162	64	5298	192
69	5333	207	67	5337	201
--	--	--	69	5323	207
--	--	--	75	5348	225
--	--	--	78	5306	234
--	--	--	81	5356	243
--	--	--	86	5350	258
--	--	--	90	5325	270
--	--	--	93	5327	279

6. CONCLUSION

The data collected relate only the item(s) tested and show that the **AC220 Wi-Fi AP OD directional antenna US, AC220 Wi-Fi AP OD external antenna US, AC220 Wi-Fi AP OD small omni antenna US FCC ID: 2AD8UFZCWO2CA1, Model Number: WO2C-AC220** is in compliance with Part 15E of the FCC Rules.

The End