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Report No.: 1605RSU01001
Report Version: V03
Issue Date: 07-15-2016

DFS MEASUREMENT REPORT
FCC PART 15.407 Section (h)(2)

FCC ID:	Q9DAPINR108109
APPLICANT:	Aruba Networks, Inc
Application Type:	Certification
Product:	Wireless Remote Access Point
Model No.:	APINR108, APINR109
Brand Name:	ARUBA
FCC Classification:	Unlicensed National Information Infrastructure (UNII)
FCC Rule Part(s):	Part 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:	May 12 ~ July 15, 2016

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlin Chen
(Marlin Chen)

Revision History

Report No.	Version	Description	Issue Date	Note
1605RSU01001	Rev. 01	Initial report	06-02-2016	Invalid
1605RSU01001	Rev. 02	Add some testing	07-11-2016	Invalid
1605RSU01001	Rev. 03	Add the test photo and channel load plots	07-15-2016	Valid

CONTENTS

§2.1033 General Information

Applicant:	Aruba Networks, Inc
Applicant Address:	1344 Crossman Avenue Sunnyvale CA 94089, USA
Manufacturer:	Aruba Networks, Inc
Manufacturer Address:	1344 Crossman Avenue Sunnyvale CA 94089, USA
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT FCC Registration No.:	809388
Model No.:	APINR108, APINR109
FCC ID:	Q9DAPINR108109
Test Device Serial No.:	BV0020552 ☒ Production ☐ Pre-Production ☐ Engineering
Test Device Software Version	6.5.0.0_54661.
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China

- **MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.**
- **MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.**
- **MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.**
- **MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.**

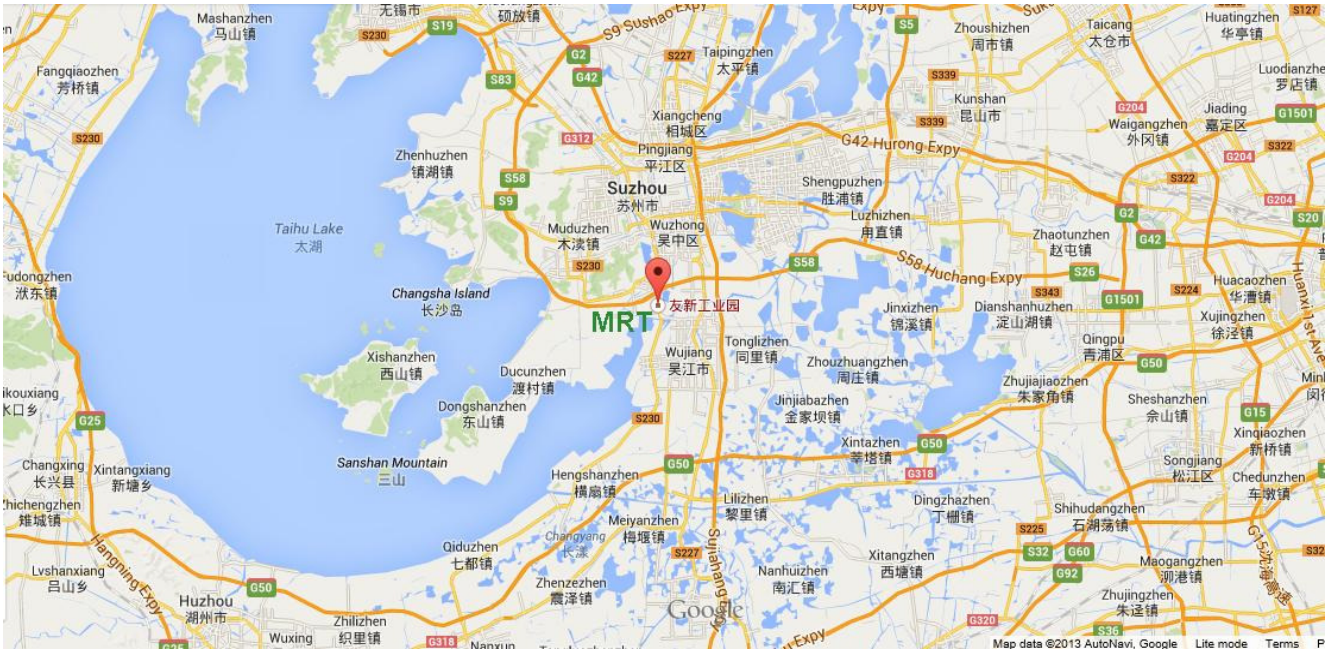
1. INTRODUCTION

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 Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Wireless Remote Access Point
Model No.	APINR108, APINR109
Radio Type	Intentional Transceiver
Operation Mode	Master Device
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: 5180~5320MHz, 5500~5700MHz, 5745~5825MHz For 802.11n-HT40: 5190~5310MHz, 5510~5670MHz, 5755~5795MHz
Type of Modulation	802.11a/n: OFDM
Power-on cycle	Requires 115.5 seconds to complete its power-on cycle
Minimum E.I.R.P Output Power (DFS Band)	29dBm
Maximum E.I.R.P Output Power (DFS Band)	28.03dBm
Uniform Spreading	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

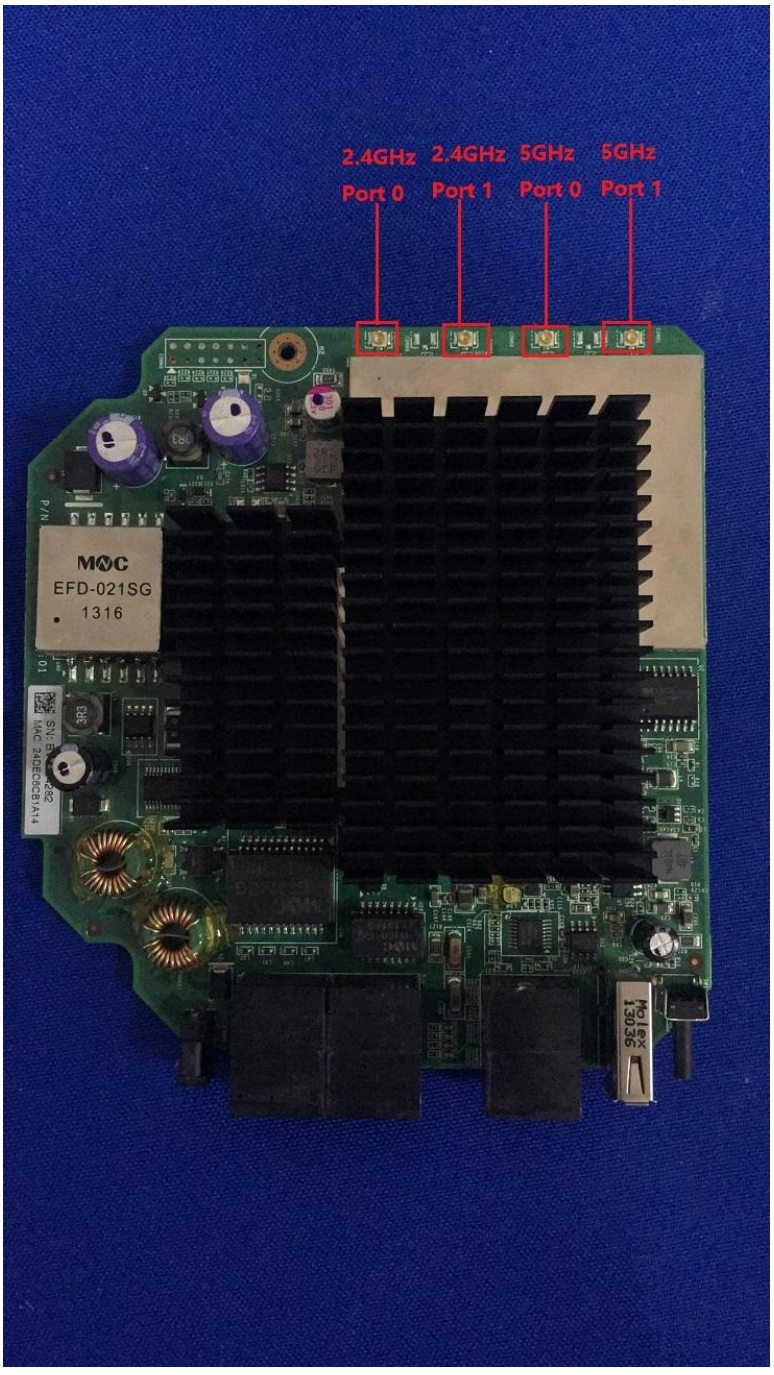
2.2. Description of Available Antennas

Antenna Model	Antenna Type	Antenna Gain (dBi)	Frequency Band (MHz)	Indoor/Outdoor
Internal Antenna (Rap 109)				
Integral	PCB	5.0	2400 - 2500	---
		5.0	4900 - 5875	
External Antenna (Rap 108)				
AP-ANT-1W	Omni Directional	3.8	2400 - 2500	Indoor
		5.8	4900 - 5875	
AP-ANT-13B	Downtilt Omni	4.4	2400 - 2500	Indoor
		3.3	4900 - 5875	
AP-ANT-16	Triple Element Downtilt Omni	3.9	2400 - 2500	Indoor
		4.7	4900 - 5875	
AP-ANT-19	Omni Directional	3.0	2400 - 2500	Indoor/Outdoor
		6.0	4900 - 5875	
AP-ANT-20W	Omni Directional	2.0	2400 - 2500	Indoor
		2.5	4900 - 5875	
AP-ANT-25A	Dual-polarized	5.0	2400 - 2500	Indoor
		5.0	4900 - 5875	
AP-ANT-28	Dual-polarized	7.5	2400 - 2500	Indoor/Outdoor
		7.5	4900 - 5875	

Note: We selected the antenna (Model: AP-ANT-20W) to perform all radiated DFS testing.

2.3. Description of Antenna RF Port

Antenna RF Port				
---	2.4GHz RF Port		5GHz RF Port	
Software Control Port	Port 0	Port 1	Port 0	Port 1



Note: The radar test waveforms shall be injected into the 5GHz RF port 0 and 5GHz RF port 1 during the conducted measurement.

2.4. DFS Band Working Frequencies

802.11a/n-HT20

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

802.11n-HT40

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	--	--	--	--

2.5. Test Mode

Test Mode	Mode 1: Make the EUT communicate with PC at DFS channel

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

Table 3-5: Parameters for Short Pulse Radar Waveforms

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

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

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

Long Pulse Radar Test Waveform

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

Table 3-7: Parameters for Long Pulse Radar Waveforms

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

Frequency Hopping Radar Test Waveform

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

Table 3-8: Parameters for Frequency Hopping Radar Waveforms

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

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

3.5. Conducted Test Setup

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

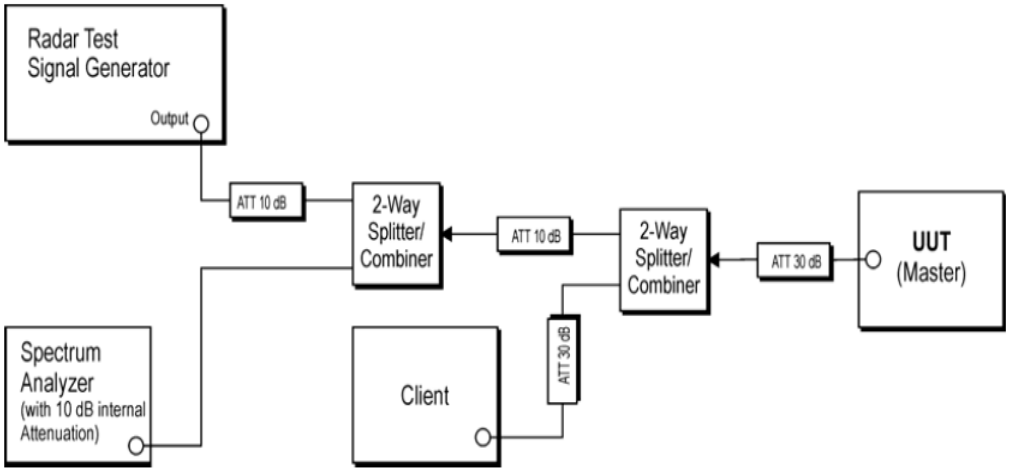


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

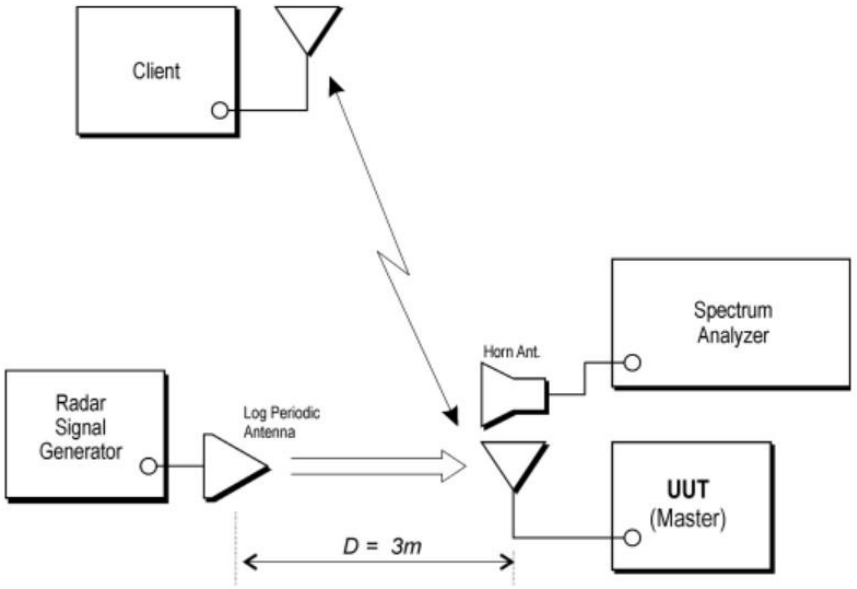
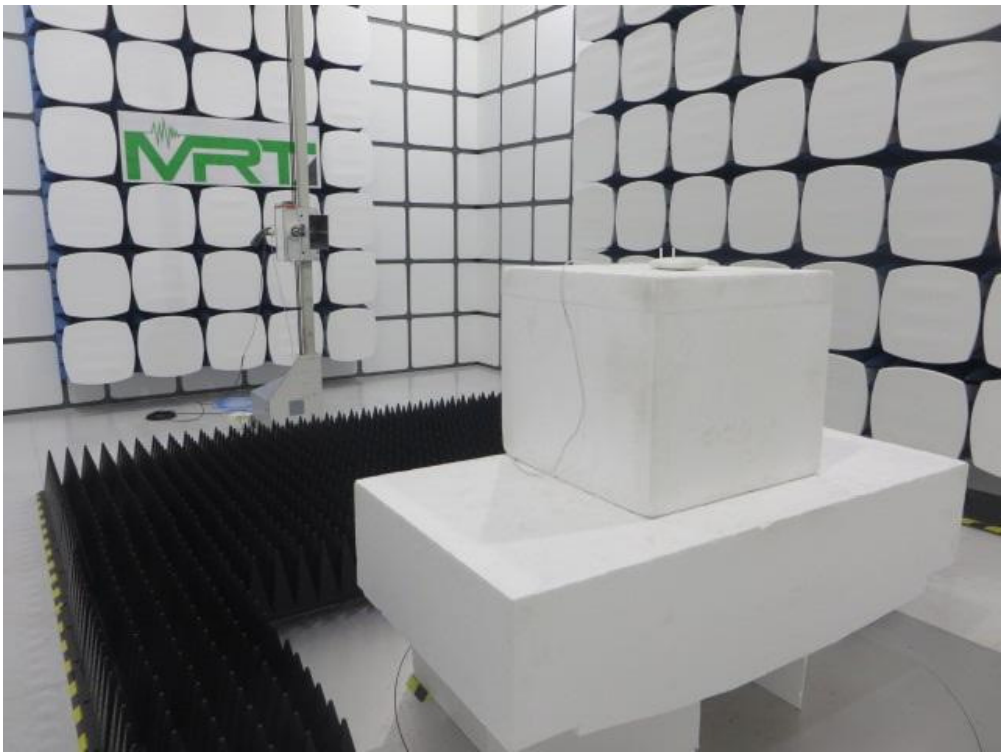


Figure 3-2: Radiated Test Setup where UUT is a Bridge or Mesh mode and Radar Test Waveforms are injected into the UUT

DFS - Conducted Test Setup Photo

DFS - Radiated Test Setup Photo

Radiated Spurious Emission - Test Setup Photo



4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS) - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2017/04/23
ESG Vector Signal Generator	Agilent	E4438C	MRTSUE06026	1 year	2016/12/08
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2016/11/07
Combiner	WOKEN	0120N02208001D	MRTSUE06200	1 year	N/A
Temperature/Humidity Meter	Yuhuaze	HTC-2	MRTSUE06180	1 year	2016/12/20

Radiated Spurious Emission - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2017/04/23
Preamplifier	Agilent	83017A	MRTSUE06076	1 year	2017/03/28
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2016/11/07
Temperature/Humidity Meter	Yuhuaze	HTC-2	MRTSUE06181	1 year	2016/12/20
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2017/05/10

Software	**Version**	**Manufacturer**	**Function**
Pulse Building	N/A	Agilent	Radar Signal Generation Software
DFS Tool	V6.9.2	Agilent	DFS Test Software
e3	V8.3.5	Audix	EMI Test Software

5. TEST RESULT

5.1. Summary

Company Name: **Aruba Networks, Inc**
FCC ID: **Q9DAPINR108109**
FCC Classification: **Unlicensed National Information Infrastructure (UNII)**

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

Note: The test item “Statistical Performance Check” was tested by radiated measurement. Any other test items were tested by conducted measurement.

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.

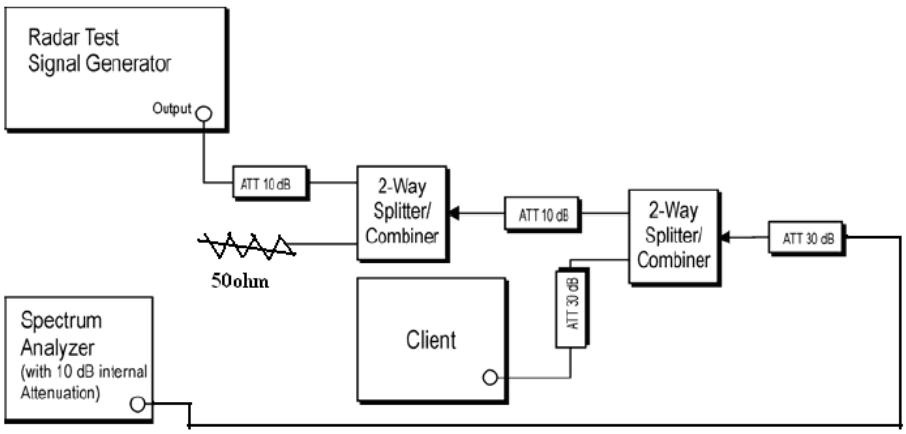


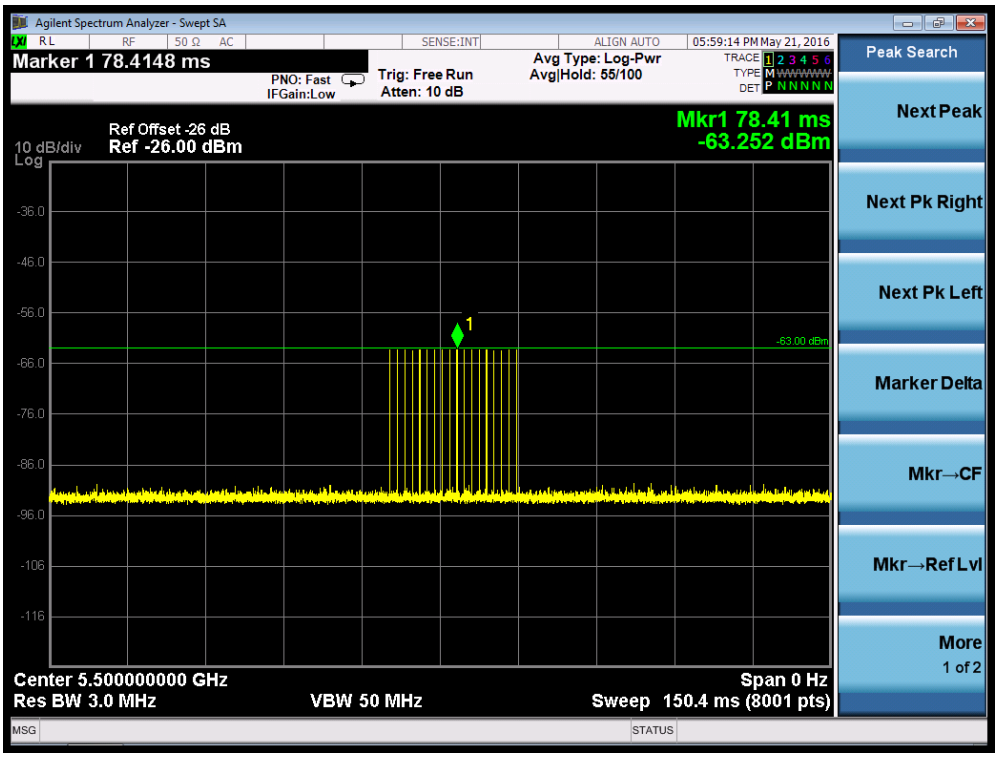
Figure 3-2: Conducted Test Setup

5.2.2. Calibration Procedure

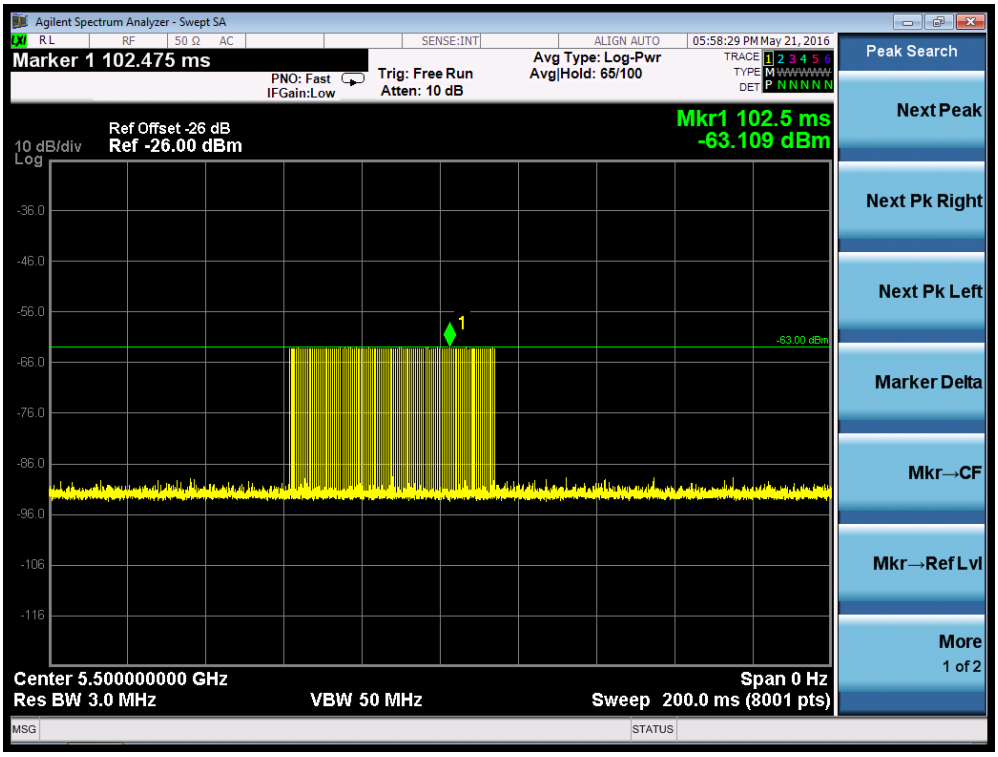
The Interference Radar Detection Threshold Level is (-64dBm) + (0) [dBi] + 1 dB= -63 dBm that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test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

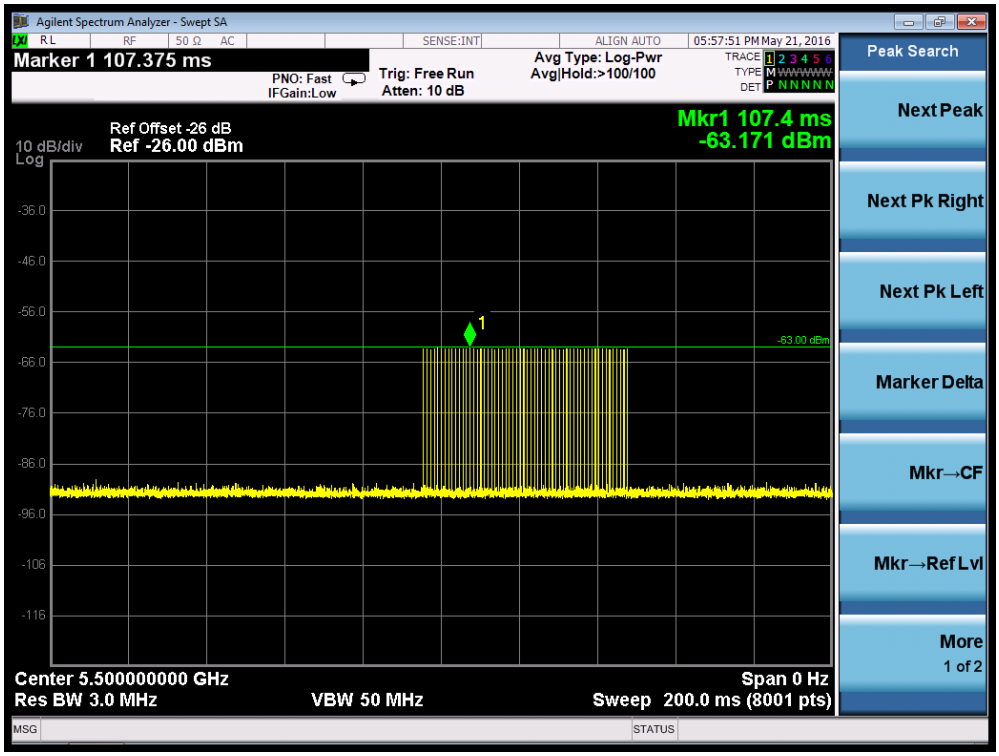


Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



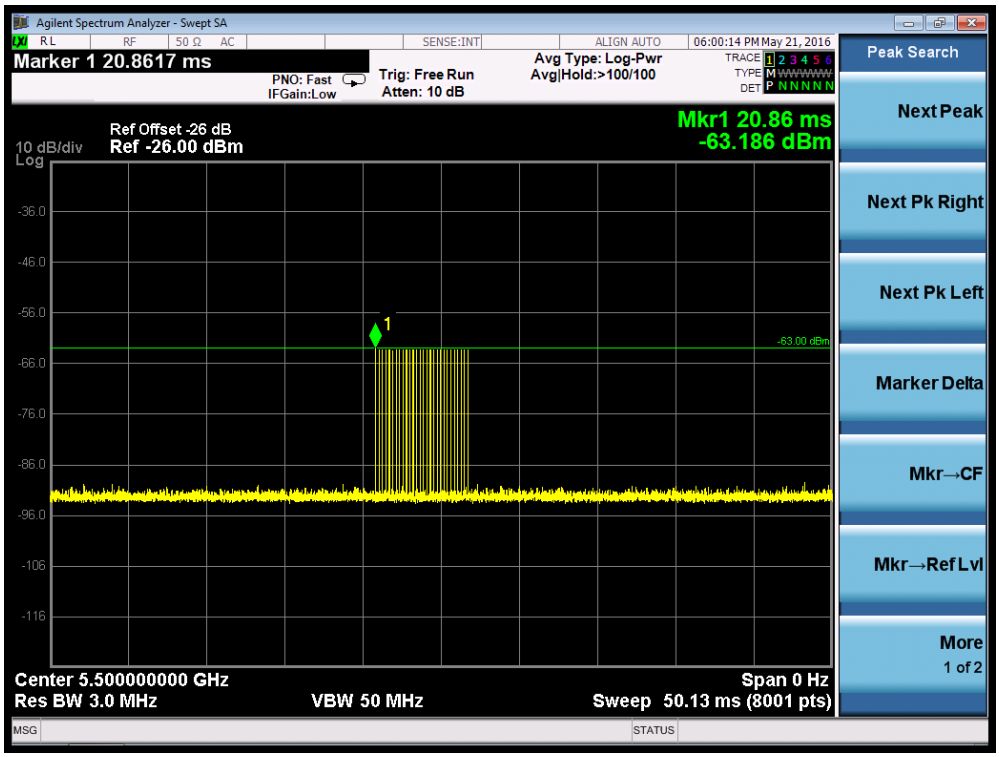
PRI = 538us and the number of pulses = 99

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

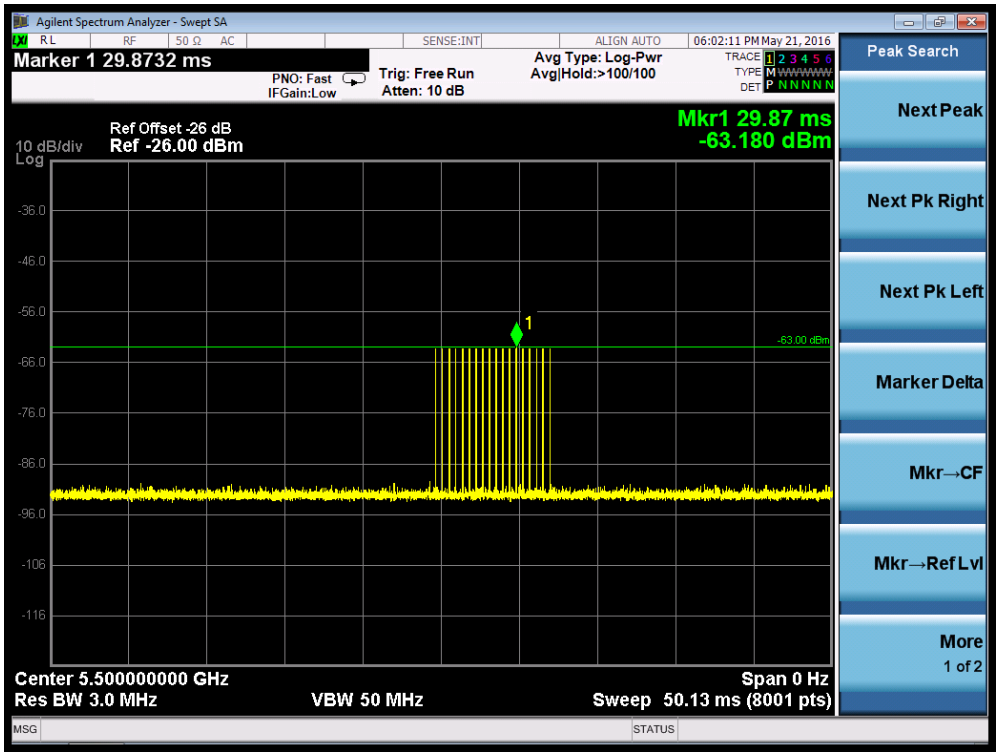


PRI = 939us and the number of pulses = 57

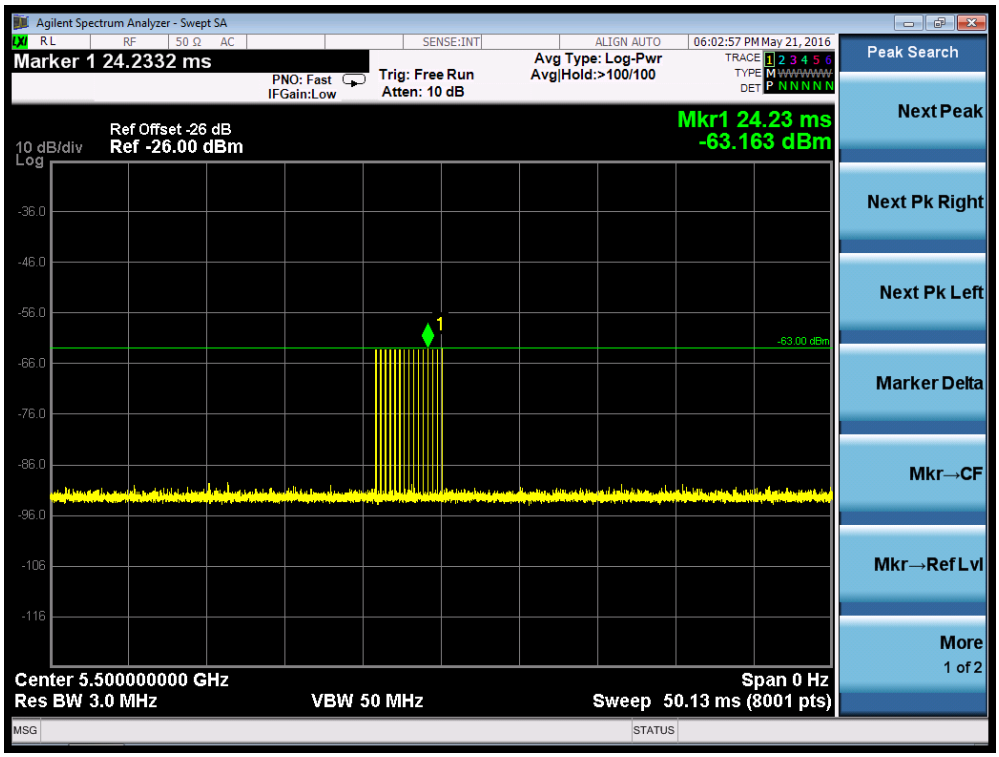
Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



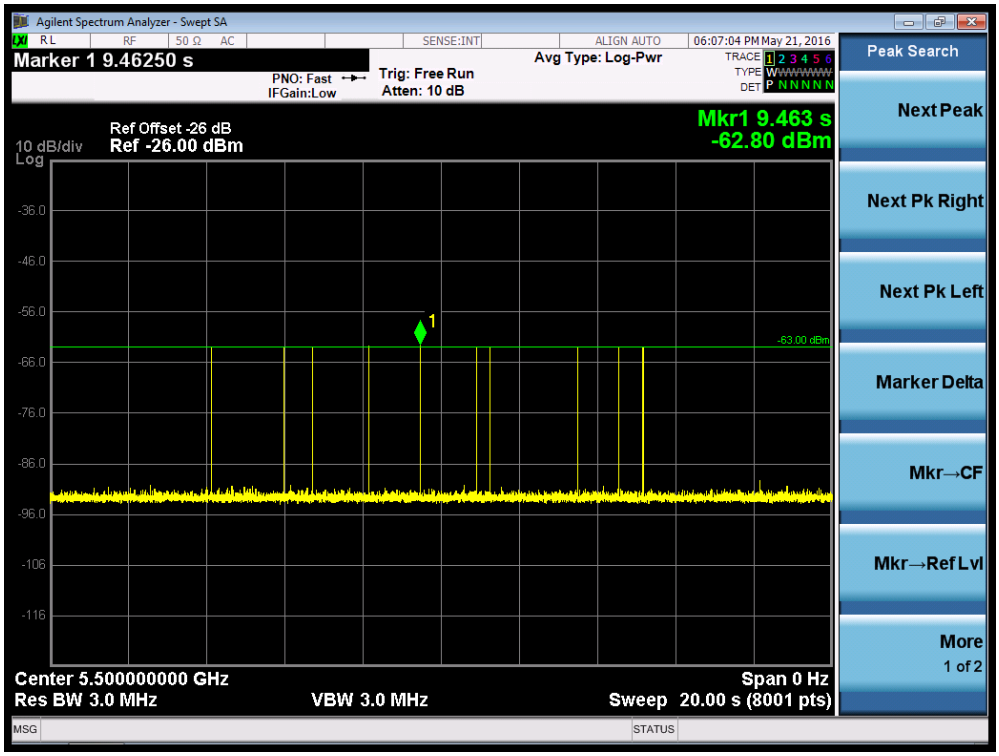
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency



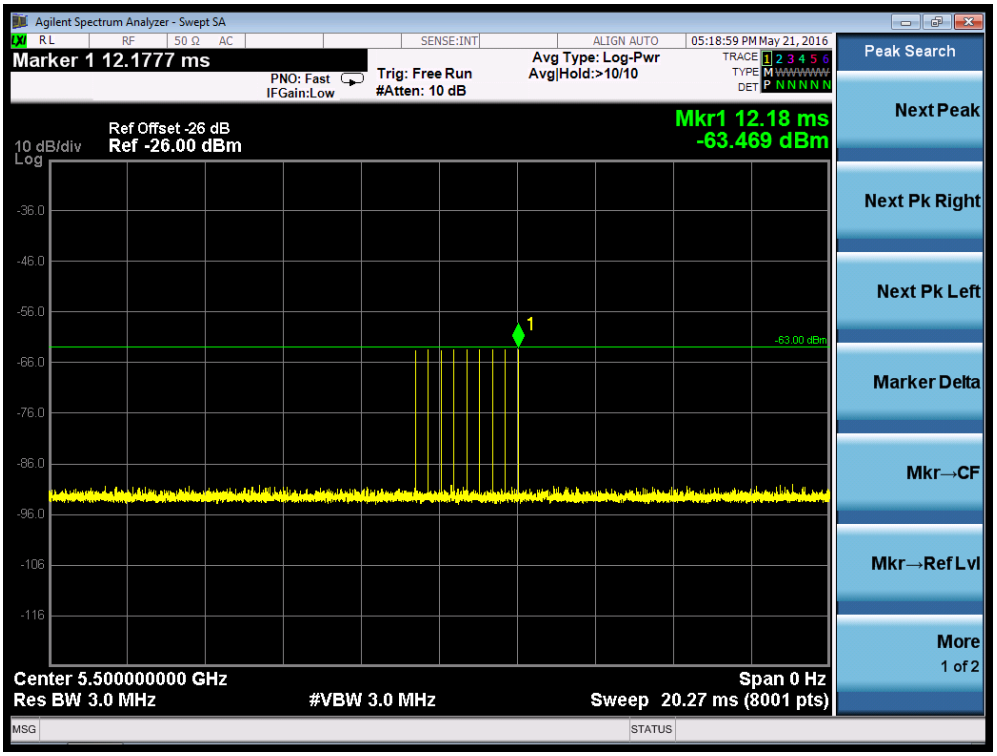
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency



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

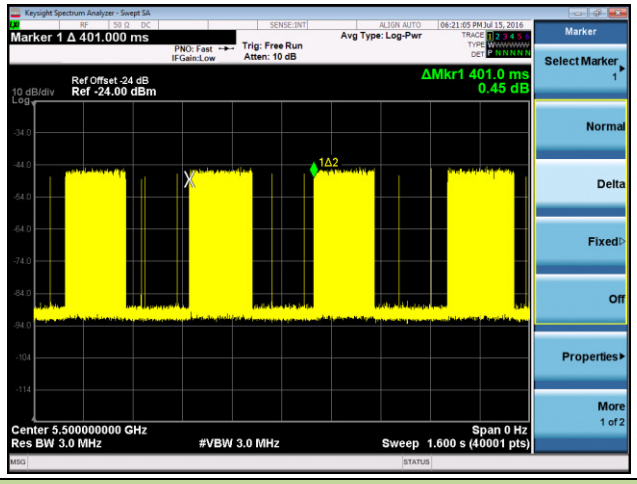
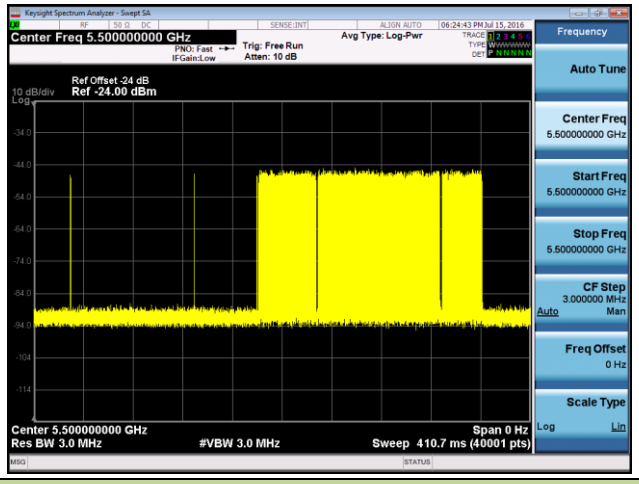


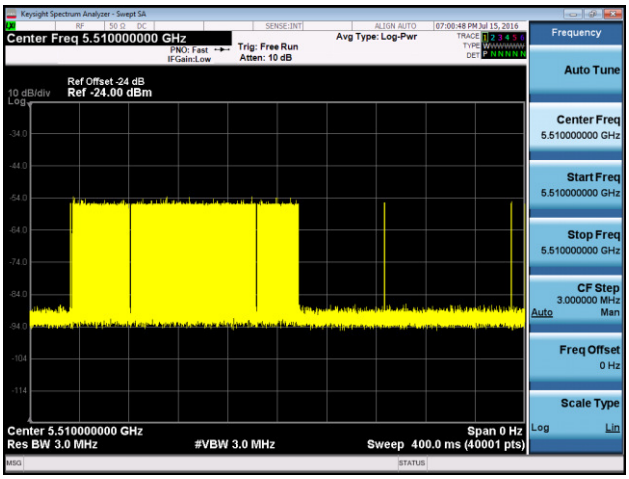
Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth



5.3. Channel Loading Test Result

System testing was performed with the designated MPEG test file that streams full motion video from the Wireless Remote Access Point 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><td colspan="2">Channel Loading Plot - 802.11n-HT20 5500MHz</td></tr>
<tr><td>Plot 1</td><td>Plot 2</td></tr>
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Packet Ratio (%)</td><td>Requirement Ratio (%)</td></tr>
<tr><td>27.65</td><td>> 17</td></tr>
<tr><td colspan="2">Calculation form Plot 2:
Time On = 10799 Points * (410.7ms / 40001 Points) = 110.88ms
Calculation form Plot 1:
Packet Radio= 110.88ms / 401ms*100% = 27.65%</td></tr>
<tr><td>Test Result</td><td>Pass</td></tr>
</table>

Channel Loading Plot - 802.11n-HT40 5510MHz	
Plot 1	Plot 2
	
Packet Ratio (%)	Requirement Ratio (%)
29.53	> 17
Calculation form Plot 2: Time On = 10866 Points * (400ms / 40001 Points) = 108.66ms Calculation form Plot 1: Packet Radio= 108.66ms / 368ms * 100% = 29.53%	
Test Result	Pass

5.4. UNII Detection Bandwidth Measurement

5.4.1. 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.

5.4.2. 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 standalone 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 one single radar burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the radar waveform within the DFS band 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 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 F_H 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 F_L) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below F_L is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = $F_H - F_L$
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.

5.4.3. Test Result

EUT Frequency = 5500MHz for 802.11n-HT20 (Using radar type 0)											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate
5485	0	0	0	0	0	0	0	0	0	0	0%
5486	0	0	0	0	0	0	0	0	0	0	0%
5487	0	0	0	0	0	0	0	0	0	0	0%
5488	0	0	0	0	0	0	0	0	0	0	0%
5489	0	0	0	0	0	0	0	0	0	0	0%
5490 F_L	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510 F_H	1	1	1	1	1	1	1	1	1	1	100%
5511	0	0	0	0	0	0	0	0	0	0	0%
5512	0	0	0	0	0	0	0	0	0	0	0%
5513	0	0	0	0	0	0	0	0	0	0	0%
5514	0	0	0	0	0	0	0	0	0	0	0%
5515	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = F_H - F_L = 5510MHz - 5490MHz = 20MHz											
EUT 99% Bandwidth = 18.87MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 18.87MHz x 100% = 18.87MHz											
Test Result: Pass											

Note: All UNII channels for this device have identical channel bandwidth. Therefore, all DFS testing was done at channel 5500MHz. The 99% channel bandwidth is 18.87MHz.

EUT Frequency = 5510MHz for 802.11n-HT40 (Using radar type 0)											
Radar Frequency (MHz)	**DFS Detection Trials (1=Detection, 0= No Detection)**										
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate**
5485	0	0	0	0	0	0	0	0	0	0	0%
5486	0	0	0	0	0	0	0	0	0	0	0%
5487	0	0	0	0	0	0	0	0	0	0	0%
5488	0	0	0	0	0	0	0	0	0	0	0%
5489	0	0	0	0	0	0	0	0	0	0	0%
5490 F_L	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530 F_H	1	1	1	1	1	1	1	1	1	1	100%
5531	0	0	0	0	0	0	0	0	0	0	0%
5532	0	0	0	0	0	0	0	0	0	0	0%
5533	0	0	0	0	0	0	0	0	0	0	0%
5534	0	0	0	0	0	0	0	0	0	0	0%
5535	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = F_H - F_L = 5530MHz - 5490MHz = 40MHz											
EUT 99% Bandwidth = 37.39MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 37.39MHz x 100% = 37.39MHz											
Test Result: Pass											

Note: All UNII channels for this device have identical channel bandwidth. Therefore, all DFS testing was done at channel 5510MHz. The 99% channel bandwidth is 37.39MHz.

5.5. Initial Channel Availability Check Time Measurement

5.5.1. 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.

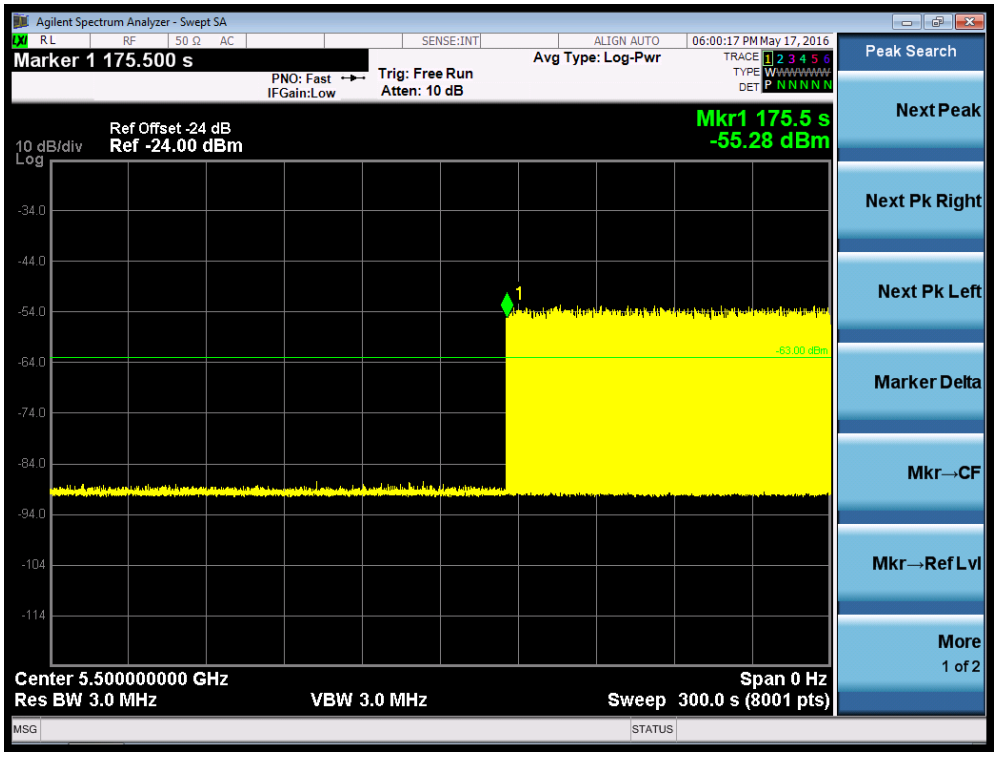
5.5.2. Test Procedure

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 (Ch_r) 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.

5.5.3. 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 (115.5 sec). Initial beacons/data transmissions are indicated by marker 1 (175.5 sec).

Initial Channel Availability Check Time for 802.11n-HT20



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

5.6.1. Test Limit

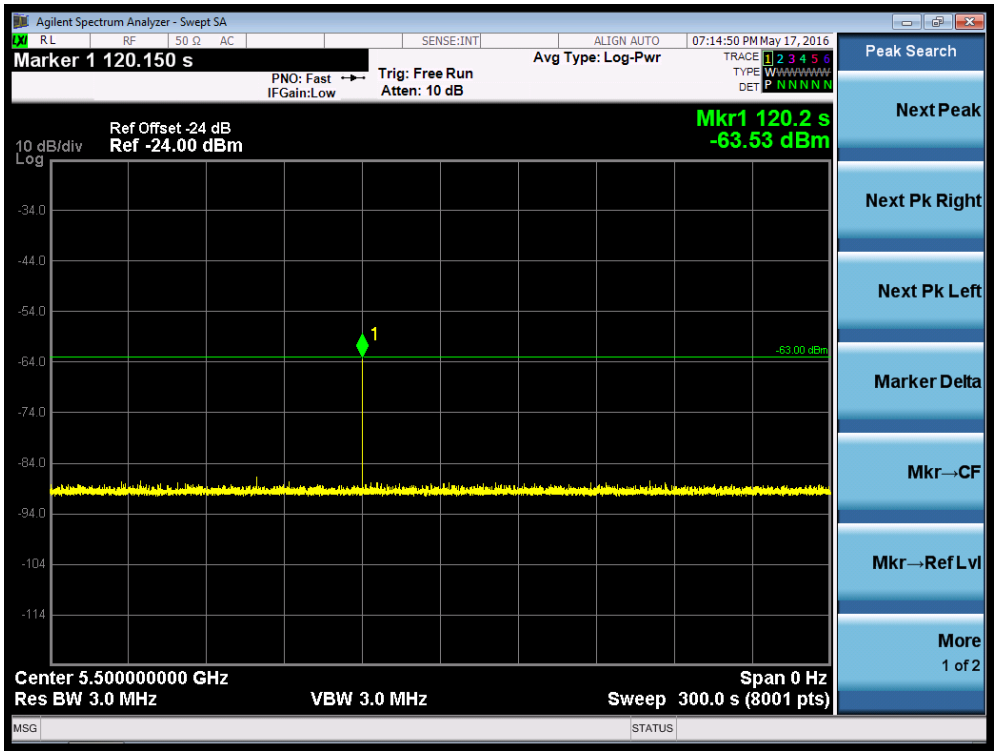
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

5.6.2. 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 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 at 5500MHz (for 802.11n-HT20) 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 at 5500MHz (for 802.11n-HT20).

5.6.3. Test Result

Radar Burst at the Beginning of the Channel Availability Check Time for 802.11n-HT20



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

5.7.1. Test Limit

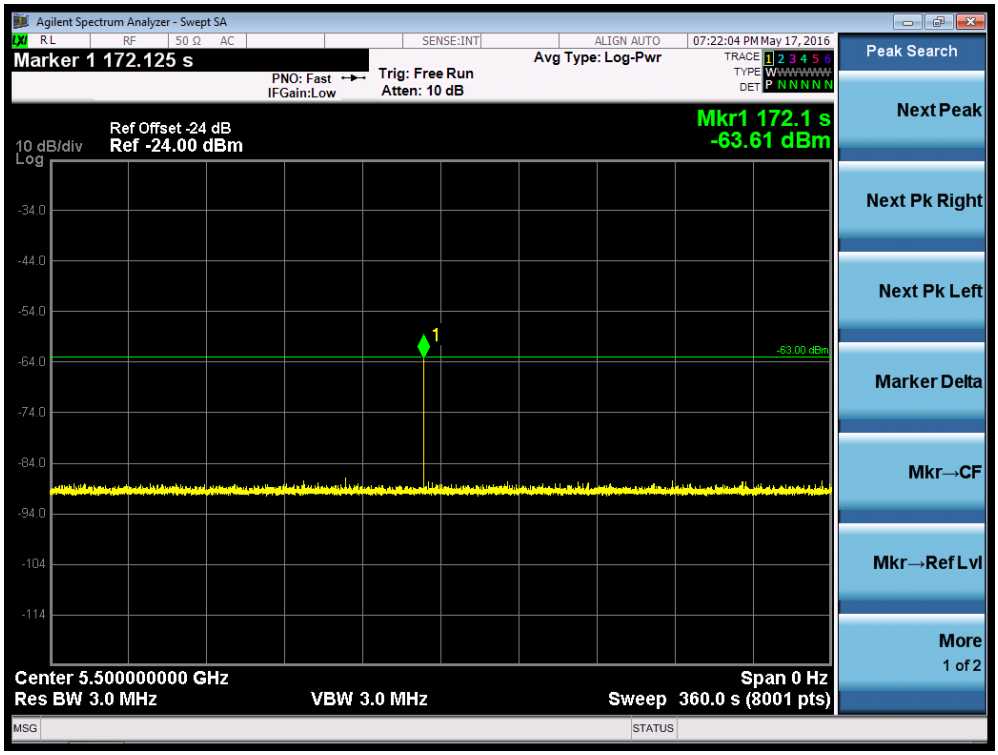
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

5.7.2. 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 at 5500MHz (for 802.11n-HT20) 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 at 5500MHz (for 802.11n-HT20).

5.7.3. Test Result

Radar Burst at the End of the Channel Availability Check Time for 802.11n-HT20



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

5.8.1. Test Limit

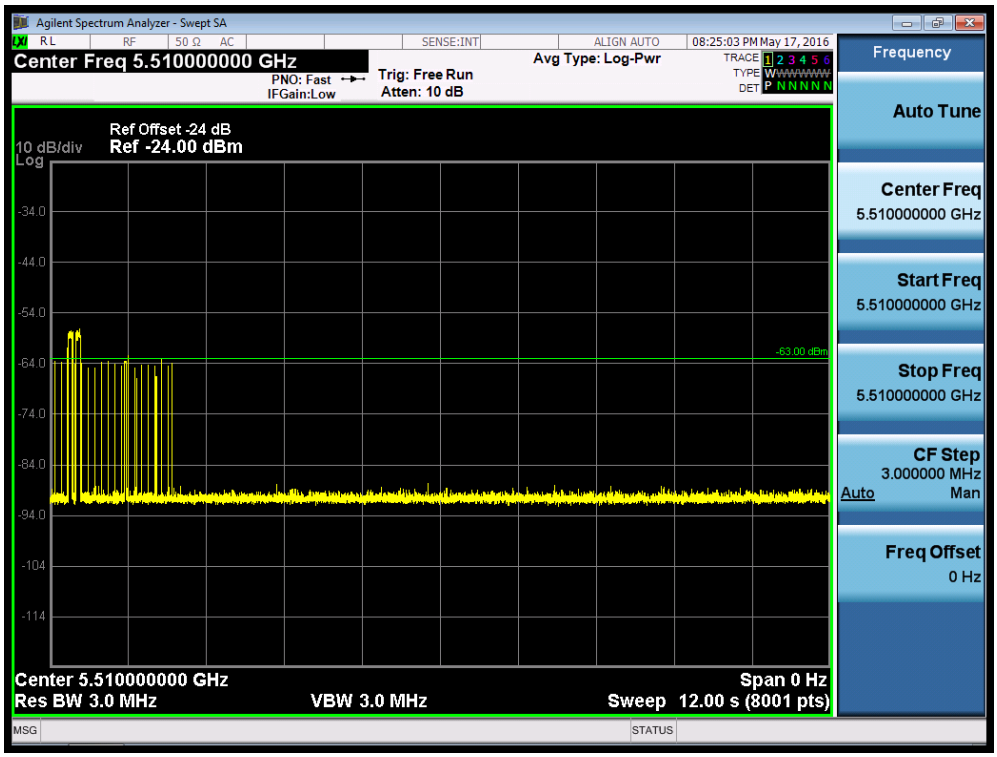
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec.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

5.8.2. Test Procedure Used

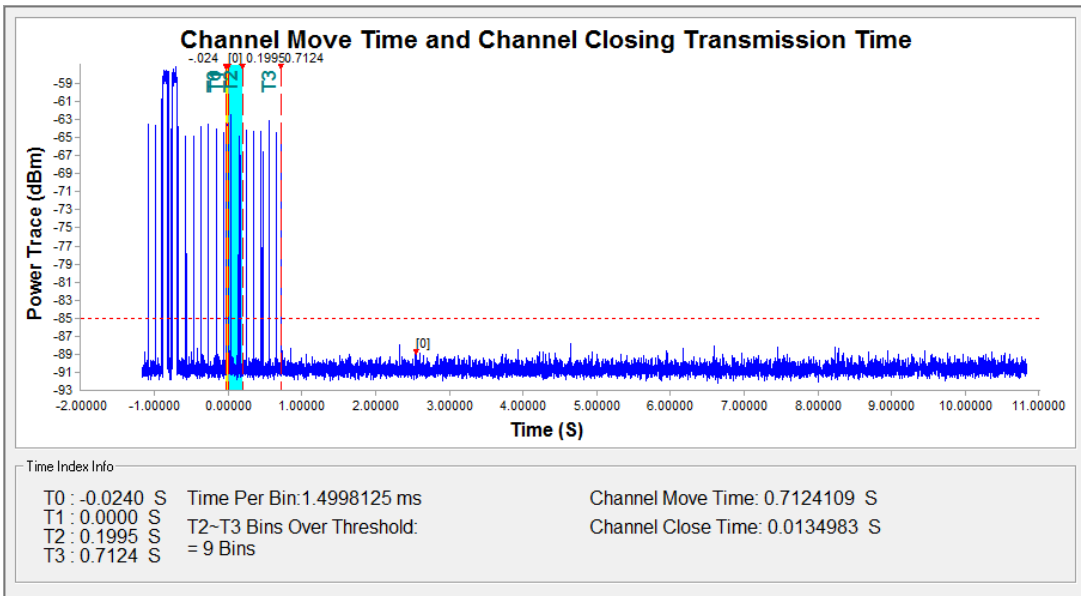
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the channel loading 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 for duration greater than 10s. 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: 40MHz: C (13.5 ms) = N (9) X Dwell (1.5 ms); 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.

5.8.3. Test Result

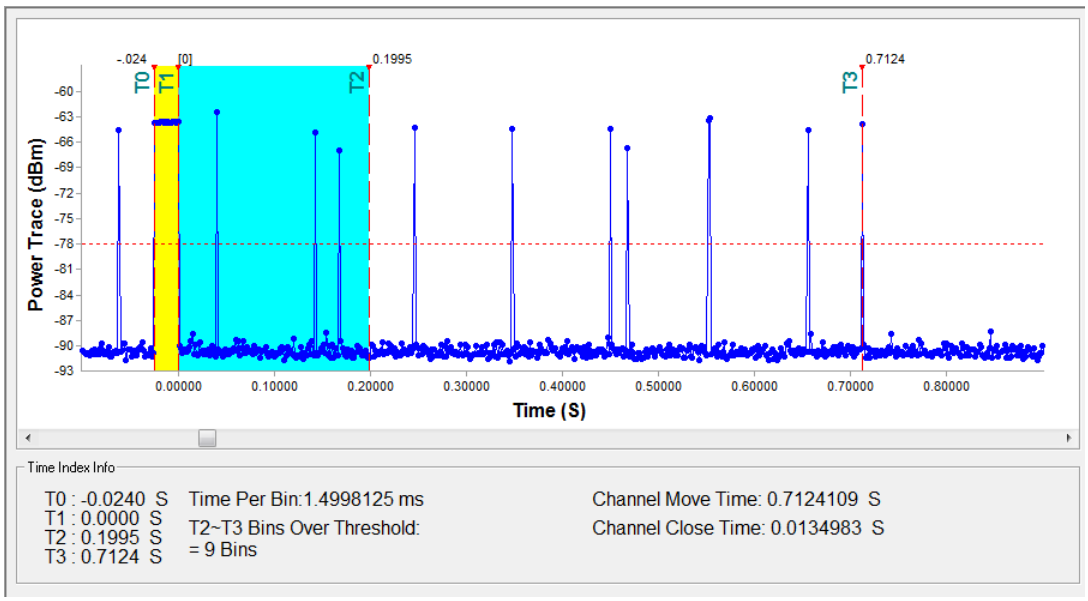
Channel Move Time and Channel Closing Transmission Time for 802.11n-HT40



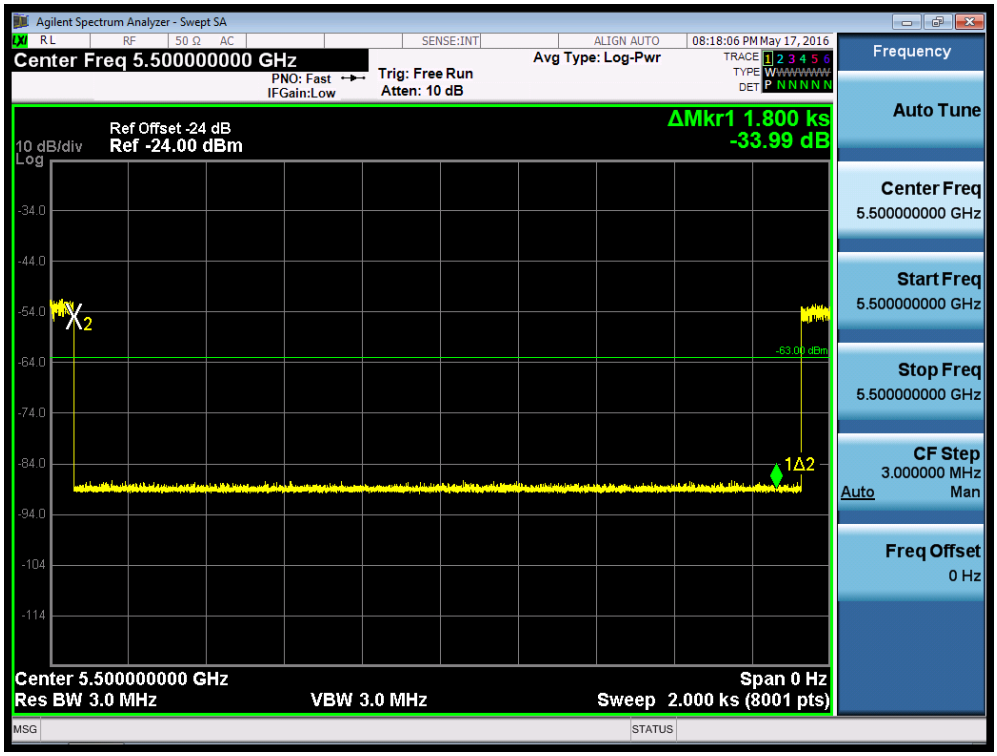
Plot – 1#


Channel Move Time and Channel Closing Transmission Time
-.024
[0] 0.1995 0.7124
T0
T1
T2
T3
Power Trace (dBm)
-59
-61
-63
-65
-67
-69
-71
-73
-75
-77
-79
-81
-83
-85
-87
-89
-91
-93
[0]
-2.00000
-1.00000
0.00000
1.00000
2.00000
3.00000
4.00000
5.00000
6.00000
7.00000
8.00000
9.00000
10.00000
11.00000
Time (S)
Time Index Info
T0 : -0.0240 S
T1 : 0.0000 S
T2 : 0.1995 S
T3 : 0.7124 S
Time Per Bin:1.4998125 ms
T2~T3 Bins Over Threshold:
= 9 Bins
Channel Move Time: 0.7124109 S
Channel Close Time: 0.0134983 S

Plot – 2#


-.024
[0]
0.1995
0.7124
T0
T1
T2
T3
Power Trace (dBm)
-60
-63
-66
-69
-72
-75
-78
-81
-84
-87
-90
-93
0.00000
0.10000
0.20000
0.30000
0.40000
0.50000
0.60000
0.70000
0.80000
Time (S)
Time Index Info
T0 : -0.0240 S
T1 : 0.0000 S
T2 : 0.1995 S
T3 : 0.7124 S
Time Per Bin:1.4998125 ms
T2~T3 Bins Over Threshold:
= 9 Bins
Channel Move Time: 0.7124109 S
Channel Close Time: 0.0134983 S

Non-Occupancy Period for 802.11n-HT20



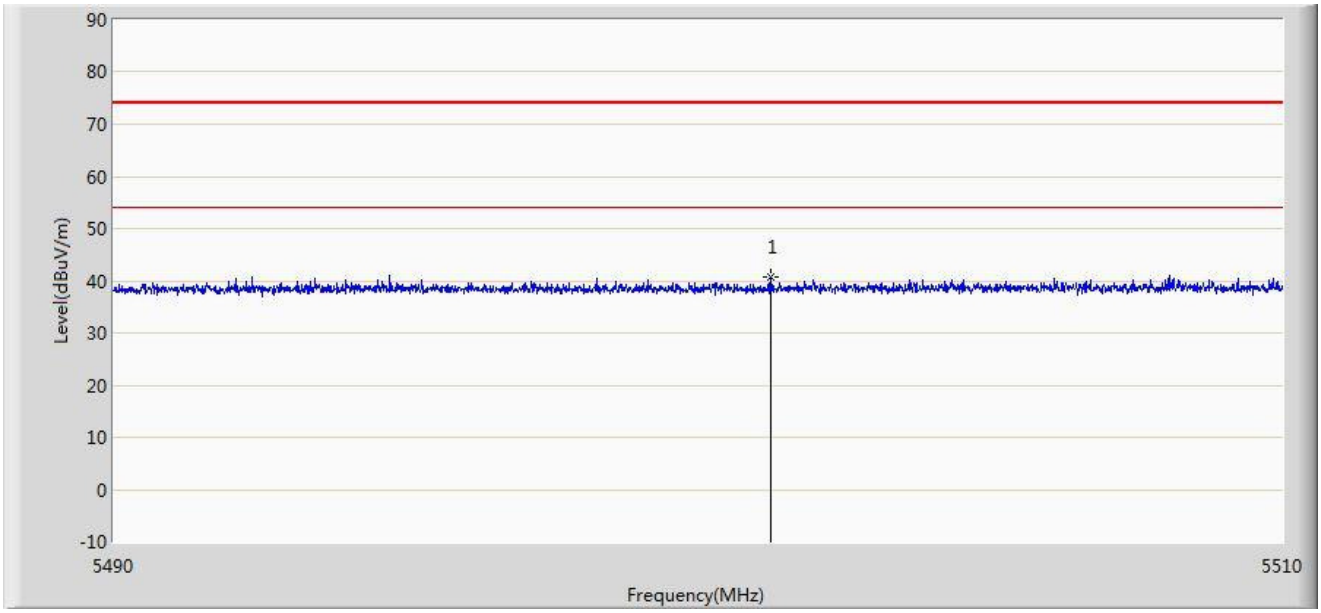
Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.712s	<10s
Channel Closing Transmission Time (ms) (Note)	13.498ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min

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.

Verification Result according to the KDB 905462 D02v02 clause 8.3(g):

The device is “off” when the device shutdown on the DFS channel and the intentional signals can satisfy the FCC rules for unintentional radiation.

Site: AC1	Time: 2016/07/08 - 19:00
Limit: FCC_Part15.109_RE(3m)	Engineer: Vince Yu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Wireless Remote Access Point	Power: POE Input
Note: 802.11n-HT20 Channel 5500MHz shutdown	

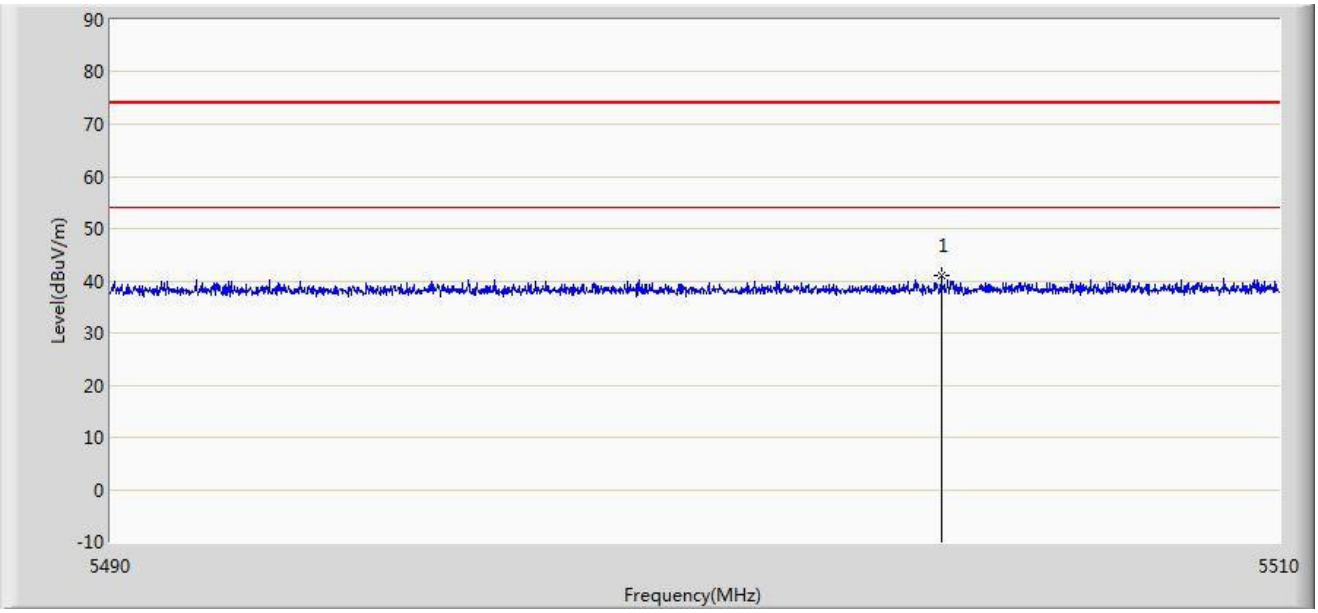


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5501.250	40.663	37.138	-33.337	74.000	3.525	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Site: AC1	Time: 2016/07/08 - 19:10
Limit: FCC_Part15.109_RE(3m)	Engineer: Vince Yu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Wireless Remote Access Point	Power: POE Input
Note: 802.11n-HT20 Channel 5500MHz shutdown	

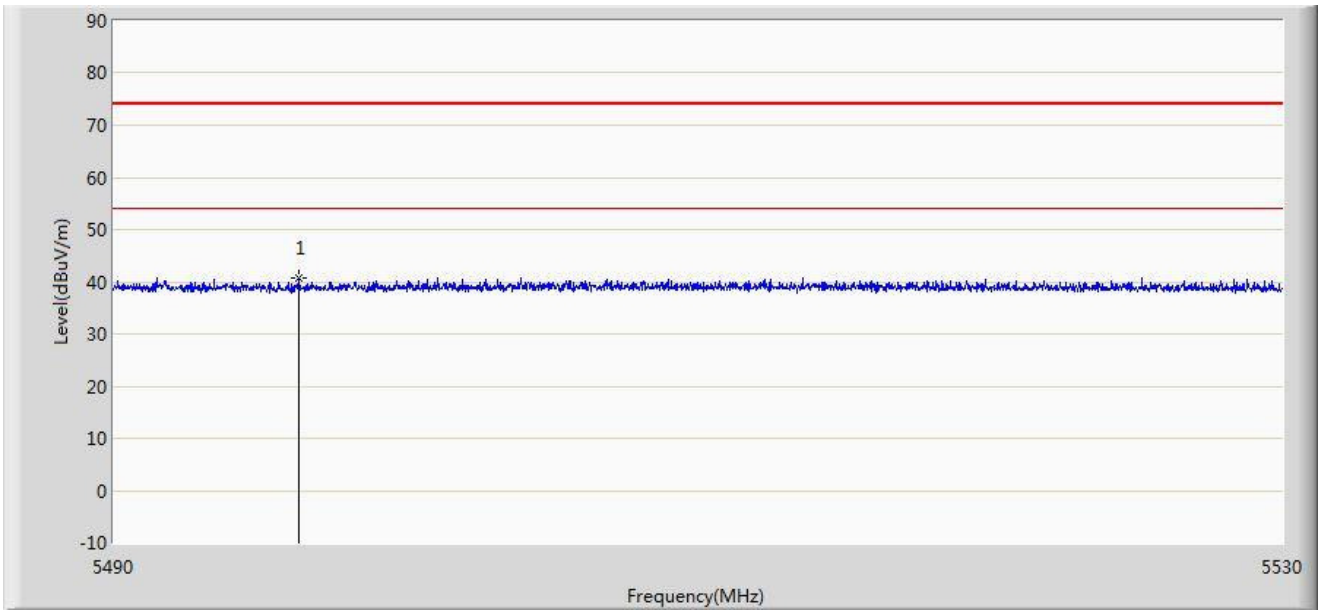


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5504.210	41.120	37.598	-32.880	74.000	3.522	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Site: AC1	Time: 2016/07/08 - 19:15
Limit: FCC_Part15.109_RE(3m)	Engineer: Vince Yu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Wireless Remote Access Point	Power: POE Input
Note: 802.11n-HT40 Channel 5510MHz shutdown	

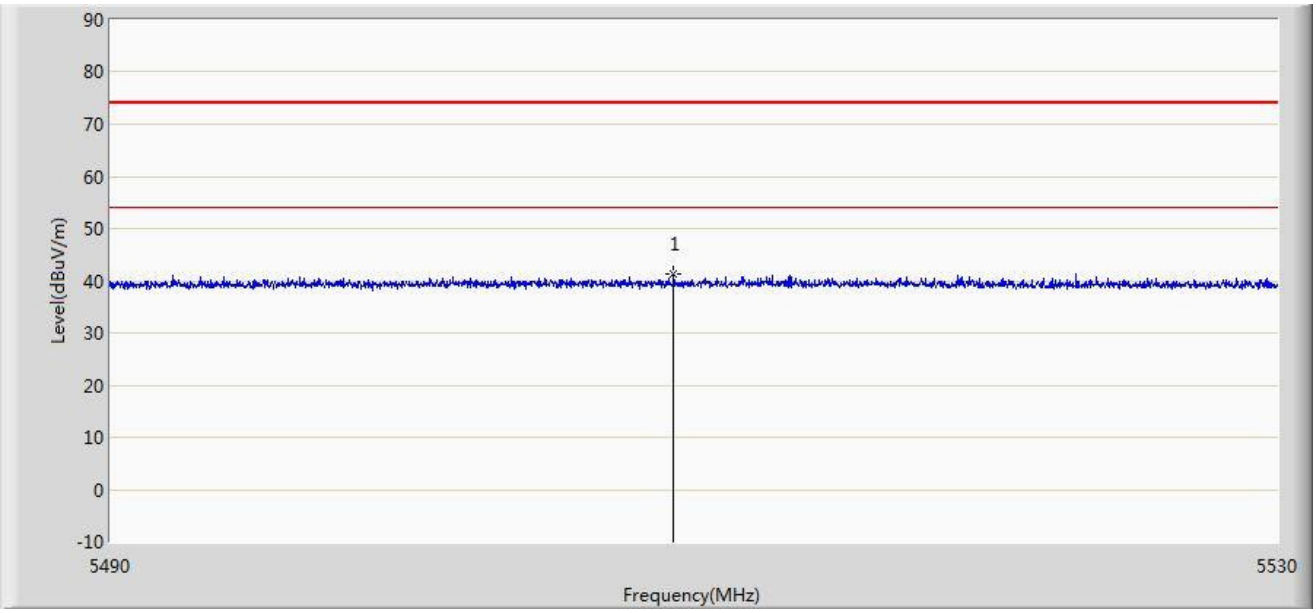


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5496.320	40.845	37.315	-33.155	74.000	3.530	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Site: AC1	Time: 2016/07/08 - 19:21
Limit: FCC_Part15.109_RE(3m)	Engineer: Vince Yu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Wireless Remote Access Point	Power: POE Input
Note: 802.11n-HT40 Channel 5510MHz shutdown	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5509.260	41.319	37.803	-32.681	74.000	3.517	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

5.9. Statistical Performance Check Measurement

5.9.1. 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
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.

5.9.2. Test Procedure

1. Stream the channel loading 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.

5.9.3. Test Result

Statistical Performance Check for 802.11n-HT20 – Channel 5500MHz

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	638	83	1
2	5491	1	918	58	1
3	5492	1	778	68	1
4	5493	1	538	99	1
5	5494	1	518	102	1
6	5494	1	738	72	1
7	5495	1	938	57	1
8	5495	1	758	70	1
9	5496	1	578	92	1
10	5496	1	798	67	1
11	5497	1	558	95	1
12	5497	1	878	61	1
13	5498	1	698	76	1
14	5499	1	618	86	1
15	5500	1	858	62	1
16	5501	1	2847	19	1
17	5502	1	2416	22	1
18	5502	1	2083	26	1
19	5503	1	2699	20	1
20	5503	1	2670	20	1
21	5504	1	1624	33	1
22	5504	1	1235	43	1
23	5505	1	849	63	1
24	5505	1	2203	24	1
25	5506	1	2109	26	1
26	5506	1	1930	28	1
27	5507	1	2600	21	1
28	5508	1	1292	41	1
29	5509	1	3056	18	1
30	5509	1	2941	18	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	4.6	150	23	1
2	5491	1.2	200	29	1
3	5492	1.4	204	26	1
4	5493	3.0	194	24	1
5	5494	2.8	187	29	1
6	5494	3.1	155	28	1
7	5495	1.8	177	25	1
8	5495	3.1	220	28	1
9	5496	4.9	201	24	1
10	5496	5.0	216	29	1
11	5497	4.9	168	29	1
12	5497	1.5	198	28	1
13	5498	3.0	186	24	1
14	5499	2.1	152	29	1
15	5500	1.2	222	25	1
16	5501	1.1	152	27	1
17	5502	4.4	227	29	1
18	5502	5.0	193	25	1
19	5503	1.8	200	26	1
20	5503	1.9	157	25	1
21	5504	4.7	167	26	1
22	5504	4.4	203	28	1
23	5505	3.5	198	27	1
24	5505	1.5	175	26	1
25	5506	2.9	203	26	1
26	5506	3.8	176	28	1
27	5507	1.8	217	27	1
28	5508	3.6	152	25	1
29	5509	3.2	219	24	1
30	5509	1.0	221	24	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	9.2	359	17	1
2	5491	6.7	435	16	1
3	5492	6.9	460	16	1
4	5493	7.2	489	16	1
5	5494	8.2	280	17	1
6	5494	9.9	370	16	1
7	5495	9.9	443	18	1
8	5495	7.1	426	17	1
9	5496	7.9	497	17	1
10	5496	9.7	458	17	1
11	5497	9.0	499	18	1
12	5497	6.8	458	16	1
13	5498	7.7	425	17	1
14	5499	6.6	286	16	1
15	5500	9.9	488	18	1
16	5501	6.8	471	18	1
17	5502	8.3	466	16	1
18	5502	7.3	255	18	1
19	5503	8.4	260	16	1
20	5503	8.9	392	18	1
21	5504	6.4	429	17	1
22	5504	6.6	327	18	1
23	5505	9.2	280	18	1
24	5505	8.2	487	18	1
25	5506	6.3	357	16	1
26	5506	9.7	312	18	1
27	5507	9.8	360	16	1
28	5508	6.2	357	18	1
29	5509	10.0	395	18	1
30	5509	6.7	465	17	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	18.3	320	12	1
2	5491	15.2	469	14	1
3	5492	14.4	365	15	1
4	5493	14.0	400	15	1
5	5494	18.3	323	16	1
6	5494	13.0	400	12	1
7	5495	17.7	376	12	1
8	5495	16.2	338	15	1
9	5496	17.6	437	14	1
10	5496	13.9	257	13	1
11	5497	17.3	452	13	1
12	5497	17.7	405	13	1
13	5498	15.7	497	15	1
14	5499	13.5	310	12	1
15	5500	19.6	323	15	1
16	5501	14.1	354	16	1
17	5502	12.1	330	12	1
18	5502	15.9	398	14	1
19	5503	16.4	352	15	1
20	5503	11.1	470	16	1
21	5504	12.8	269	14	1
22	5504	16.7	383	15	1
23	5505	14.1	473	16	1
24	5505	17.7	439	13	1
25	5506	12.9	310	13	1
26	5506	12.1	411	13	1
27	5507	15.0	291	12	1
28	5508	14.6	372	15	1
29	5509	11.1	309	16	1
30	5509	16.6	328	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	5492.6	1	16	5500.0	1
2	5498.6	1	17	5500.0	1
3	5493.4	1	18	5500.0	1
4	5497.8	1	19	5500.0	1
5	5494.2	1	20	5500.0	1
6	5497.0	1	21	5501.8	1
7	5495.0	1	22	5507.0	1
8	5496.6	1	23	5503.0	1
9	5495.8	1	24	5506.2	1
10	5498.2	1	25	5505.8	1
11	5500.0	1	26	5502.6	1
12	5500.0	1	27	5505.0	1
13	5500.0	1	28	5501.4	1
14	5500.0	1	29	5504.2	1
15	5500.0	1	30	5503.8	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Waveform Num = 1
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	70492	2	5	90	1463	1739	0	70492	0	799999
2	794523	3	5	90	1463	1527	1237	868217	800000	1599999
3	1295008	2	5	90	1433	1503	0	2167452	1600000	2399999
4	755378	1	5	95	1186	0	0	2925766	2400000	3199999
5	897541	2	5	60	1423	1601	0	3824493	3200000	3999999
6	963218	1	5	60	1734	0	0	4790735	4000000	4799999
7	78771	2	5	90	1948	1732	0	4871240	4800000	5599999
8	1230213	3	5	95	1727	1253	1318	6105133	5600000	6399999
9	888913	3	5	95	1607	1491	1285	6998344	6400000	7199999
10	595466	1	5	100	1312	0	0	7598193	7200000	7999999
11	621034	2	5	70	1631	1248	0	8220539	8000000	8799999
12	1163580	3	5	60	1053	1620	1115	9386998	8800000	9599999
13	704093	2	5	85	1017	1267	0	10094879	9600000	10399999
14	1085007	3	5	75	1371	1029	1241	11182170	10400000	11199999
15	736530	3	5	65	1264	1067	1791	11922341	11200000	11999999

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

Type 5 Radar Waveform_2

Waveform Num = 2
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	785559	3	20	70	1262	1112	1036	785559	0	1499999
2	1969844	1	20	55	1325	0	0	2758813	1500000	2999999
3	527850	1	20	90	1760	0	0	3287988	3000000	4499999
4	2467628	3	20	55	1511	1745	1692	5757376	4500000	5999999
5	343190	2	20	95	1807	1706	0	6105514	6000000	7499999
6	2609094	2	20	95	1224	1268	0	8718121	7500000	8999999
7	1122939	2	20	65	1172	1034	0	9843552	9000000	10499999
8	756592	1	20	75	1960	0	0	10602350	10500000	11999999

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

Type 5 Radar Waveform_3

Waveform Num = 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	671564	3	7	85	1955	1959	1723	671564	0	857142
2	456057	2	7	95	1421	1002	0	1133258	857143	1714285
3	1371279	2	7	70	1283	1172	0	2506960	1714286	2571428
4	170930	1	7	65	1336	0	0	2680345	2571429	3428571
5	1221400	1	7	75	1551	0	0	3903081	3428572	4285714
6	889100	1	7	60	1855	0	0	4793732	4285715	5142857
7	765707	1	7	90	1079	0	0	5561294	5142858	6000000
8	666639	1	7	90	1826	0	0	6229012	6000001	6857143
9	1036747	1	7	90	1947	0	0	7267585	6857144	7714286
10	752423	2	7	80	1773	1740	0	8021955	7714287	8571429
11	1247126	3	7	55	1651	1626	1518	9272594	8571430	9428572
12	581831	2	7	65	1212	1505	0	9859220	9428573	10285715
13	1222407	1	7	65	1520	0	0	11084344	10285716	11142858
14	436269	1	7	65	1665	0	0	11522133	11142859	12000001

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_4

Waveform Num = 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	618300	3	18	65	1824	1691	1008	618300	0	631578
2	444769	1	18	55	1968	0	0	1067592	631579	1263157
3	587550	3	18	70	1100	1708	1167	1657110	1263158	1894736
4	655846	3	18	90	1649	1744	1075	2316931	1894737	2526315
5	605019	3	18	80	1652	1656	1890	2926418	2526316	3157894
6	836445	2	18	70	1366	1666	0	3768061	3157895	3789473
7	104865	2	18	55	1175	1986	0	3875958	3789474	4421052
8	804336	2	18	80	1535	1462	0	4683455	4421053	5052631
9	450999	1	18	95	1939	0	0	5137451	5052632	5684210
10	1115283	1	18	60	1511	0	0	6254673	5684211	6315789
11	91415	1	18	100	1416	0	0	6347599	6315790	6947368
12	884631	3	18	50	1460	1792	1300	7233646	6947369	7578947
13	569890	2	18	65	1587	1518	0	7808088	7578948	8210526
14	446645	3	18	70	1414	1515	1309	8257838	8210527	8842105
15	904646	1	18	90	1505	0	0	9166722	8842106	9473684
16	346681	3	18	100	1789	1387	1461	9514908	9473685	10105263
17	739471	2	18	75	1424	1355	0	10259016	10105264	10736842
18	811132	3	18	60	1527	1769	1717	11072927	10736843	11368421
19	392593	1	18	80	1025	0	0	11470533	11368422	12000000

Total number of pulses in waveform = 40
****

Type 5 Radar Waveform_5

Waveform Num = 5
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	353454	1	9	75	1446	0	0	353454	0	1199999
2	1338752	3	9	75	1311	1699	1696	1693652	1200000	2399999
3	879663	2	9	95	1728	1593	0	2578021	2400000	3599999
4	2188243	3	9	85	1305	1564	1502	4769585	3600000	4799999
5	539067	2	9	65	1778	1085	0	5313023	4800000	5999999
6	1801454	3	9	70	1353	1973	1804	7117340	6000000	7199999
7	719772	2	9	100	1317	1916	0	7842242	7200000	8399999
8	1133440	3	9	50	1501	1954	1021	8978915	8400000	9599999
9	622750	1	9	70	1147	0	0	9606141	9600000	10799999
10	2368948	3	9	90	1709	1511	1560	11976236	10800000	11999999

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

Type 5 Radar Waveform_6

Waveform Num = 6
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	271915	2	16	95	1526	1762	0	271915	0	1333332
2	1740641	2	16	55	1327	1236	0	2015844	1333333	2666665
3	1042604	1	16	80	1959	0	0	3061011	2666666	3999998
4	2017225	3	16	65	1493	1971	1180	5080195	3999999	5333331
5	1534464	2	16	65	1403	1736	0	6619303	5333332	6666664
6	291287	2	16	55	1033	1148	0	6913729	6666665	7999997
7	1245367	2	16	70	1549	1949	0	8161277	7999998	9333330
8	1477579	2	16	55	1209	1502	0	9642354	9333331	10666663
9	2268423	2	16	95	1869	1458	0	11913488	10666664	11999996

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

Type 5 Radar Waveform_7

Waveform Num = 7
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	215873	1	11	55	1368	0	0	215873	0	1090908
2	1810897	3	11	80	1726	1295	1945	2028138	1090909	2181817
3	762098	3	11	50	1241	1414	1411	2795202	2181818	3272726
4	483985	2	11	100	1045	1285	0	3283253	3272727	4363635
5	2089591	3	11	80	1974	1294	1977	5375174	4363636	5454544
6	994752	1	11	70	1539	0	0	6375171	5454545	6545453
7	782262	2	11	60	1388	1866	0	7158972	6545454	7636362
8	1227278	1	11	70	1199	0	0	8389504	7636363	8727271
9	1358121	3	11	65	1321	1797	1650	9748824	8727272	9818180
10	138892	2	11	95	1836	1799	0	9892484	9818181	10909089
11	1382085	1	11	55	1946	0	0	11278204	10909090	11999998

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_8

Waveform Num = 8
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	1142720	1	15	75	1933	0	0	1142720	0	1333332
2	1441371	2	15	55	1671	1140	0	2586024	1333333	2666665
3	263163	2	15	95	1358	1055	0	2851998	2666666	3999998
4	1487303	2	15	70	1576	1187	0	4341714	3999999	5333331
5	1904115	1	15	95	1397	0	0	6248592	5333332	6666664
6	902266	3	15	70	1307	1138	1284	7152255	6666665	7999997
7	1898895	1	15	55	1692	0	0	9054879	7999998	9333330
8	572060	1	15	100	1753	0	0	9628631	9333331	10666663
9	1952395	2	15	75	1317	1295	0	11582779	10666664	11999996

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

Type 5 Radar Waveform_9

Waveform Num = 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	614246	1	13	65	1134	0	0	614246	0	666666
2	468744	2	13	80	1541	1928	0	1084124	666667	1333333
3	308811	2	13	80	1114	1636	0	1396404	1333334	2000000
4	1019534	3	13	80	1485	1216	1154	2418688	2000001	2666667
5	758034	1	13	80	1106	0	0	3180577	2666668	3333334
6	437584	1	13	85	1231	0	0	3619267	3333335	4000001
7	706262	3	13	70	1526	1988	1844	4326760	4000002	4666668
8	899806	1	13	100	1248	0	0	5231924	4666669	5333335
9	250642	3	13	70	1774	1436	1673	5483814	5333336	6000002
10	1020359	3	13	90	1572	1055	1581	6509056	6000003	6666669
11	170419	3	13	85	1551	1537	1952	6683683	6666670	7333336
12	710155	2	13	55	1295	1281	0	7398878	7333337	8000003
13	851148	2	13	70	1008	1977	0	8252602	8000004	8666670
14	427971	3	13	65	1681	1520	1946	8683558	8666671	9333337
15	946471	1	13	100	1888	0	0	9635176	9333338	10000004
16	881483	1	13	65	1034	0	0	10518547	10000005	10666671
17	247373	3	13	85	1855	1165	1697	10766954	10666672	11333338
18	1206603	1	13	95	1449	0	0	11978274	11333339	12000005

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

Type 5 Radar Waveform_10

Waveform Num = 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	637952	3	19	80	1031	1596	1709	637952	0	999999
2	1280956	3	19	65	1580	1419	1895	1923244	1000000	1999999
3	350410	1	19	75	1509	0	0	2278548	2000000	2999999
4	1595008	3	19	65	1671	1226	1984	3875065	3000000	3999999
5	992515	2	19	80	1883	1812	0	4872461	4000000	4999999
6	1048044	1	19	100	1443	0	0	5924200	5000000	5999999
7	390229	1	19	65	1405	0	0	6315872	6000000	6999999
8	1078242	3	19	55	1139	1894	1073	7395519	7000000	7999999
9	660693	1	19	90	1413	0	0	8060318	8000000	8999999
10	1583986	1	19	60	1159	0	0	9645717	9000000	9999999
11	377705	1	19	80	1745	0	0	10024581	10000000	10999999
12	1780899	1	19	60	1420	0	0	11807225	11000000	11999999

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

Type 5 Radar Waveform_11

Waveform Num = 1
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	616744	3	8	85	1569	1980	1698	616744	0	705881
2	263942	3	8	90	1350	1396	1729	885933	705882	1411763
3	831771	1	8	55	1545	0	0	1722179	1411764	2117645
4	1058082	2	8	50	1758	1540	0	2781806	2117646	2823527
5	523089	2	8	95	1492	1377	0	3308193	2823528	3529409
6	455963	1	8	75	1741	0	0	3767025	3529410	4235291
7	1030971	1	8	90	1607	0	0	4799737	4235292	4941173
8	658697	3	8	60	1875	1702	1293	5460041	4941174	5647055
9	399498	2	8	65	1898	1551	0	5864409	5647056	6352937
10	699139	1	8	80	1302	0	0	6566997	6352938	7058819
11	1177719	1	8	90	1490	0	0	7746018	7058820	7764701
12	532442	1	8	55	1330	0	0	8279950	7764702	8470583
13	564315	2	8	80	1888	1267	0	8845595	8470584	9176465
14	1022438	3	8	65	1924	1062	1815	9871188	9176466	9882347
15	461816	2	8	75	1749	1155	0	10337805	9882348	10588229
16	590246	3	8	95	1050	1872	1508	10930955	10588230	11294111
17	765455	1	8	70	1490	0	0	11700840	11294112	11999993

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

Type 5 Radar Waveform_12

Waveform Num = 1
Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	540551	1	6	90	1328	0	0	540551	0	666666
2	280070	1	6	95	1837	0	0	821949	666667	1333333
3	678654	3	6	50	1821	1843	1308	1502440	1333334	2000000
4	871868	2	6	65	1814	1612	0	2379280	2000001	2666667
5	305534	1	6	90	1075	0	0	2688240	2666668	3333334
6	1026285	2	6	65	1354	1686	0	3715600	3333335	4000001
7	480160	3	6	75	1597	1237	1460	4198800	4000002	4666668
8	744988	2	6	80	1265	1375	0	4948082	4666669	5333335
9	774750	3	6	55	1753	1498	1175	5725472	5333336	6000002
10	873227	2	6	70	1102	1446	0	6603125	6000003	6666669
11	551378	3	6	90	1860	1492	1191	7157051	6666670	7333336
12	779653	3	6	55	1424	1103	1756	7941247	7333337	8000003
13	583051	2	6	90	1256	1275	0	8528581	8000004	8666670
14	260641	2	6	95	1161	1415	0	8791753	8666671	9333337
15	599959	3	6	95	1278	1505	1968	9394288	9333338	10000004
16	927539	2	6	60	1876	1324	0	10326578	10000005	10666671
17	828745	1	6	85	1030	0	0	11158523	10666672	11333338
18	253311	2	6	75	1099	1435	0	11412864	11333339	12000005

Total number of pulses in waveform = 38
****

Type 5 Radar Waveform_13

Waveform Num = 1
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	252409	2	12	50	1042	1774	0	252409	0	705881
2	920382	3	12	90	1416	1484	1111	1175607	705882	1411763
3	645119	3	12	70	1052	1848	1005	1824737	1411764	2117645
4	906155	2	12	90	1126	1936	0	2734797	2117646	2823527
5	613015	2	12	85	1256	1491	0	3350874	2823528	3529409
6	261874	1	12	95	1930	0	0	3615495	3529410	4235291
7	1152049	1	12	95	1216	0	0	4769474	4235292	4941173
8	396894	2	12	85	1724	1194	0	5167584	4941174	5647055
9	545723	1	12	60	1804	0	0	5716225	5647056	6352937
10	962297	2	12	50	1225	1262	0	6680326	6352938	7058819
11	376420	2	12	50	1939	1082	0	7059233	7058820	7764701
12	1225055	2	12	60	1572	1154	0	8287309	7764702	8470583
13	293717	2	12	95	1673	1079	0	8583752	8470584	9176465
14	596000	1	12	60	1709	0	0	9182504	9176466	9882347
15	754616	1	12	95	1213	0	0	9938829	9882348	10588229
16	847148	1	12	60	1076	0	0	10787190	10588230	11294111
17	582764	1	12	80	1122	0	0	11371030	11294112	11999993

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

Type 5 Radar Waveform_14

Waveform Num = 1
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	601549	3	16	60	1530	1623	1875	601549	0	631578
2	145564	3	16	70	1688	1196	1320	752141	631579	1263157
3	1037142	1	16	50	1884	0	0	1793487	1263158	1894736
4	447340	1	16	65	1450	0	0	2242711	1894737	2526315
5	684441	1	16	60	1655	0	0	2928602	2526316	3157894
6	313580	1	16	95	1213	0	0	3243837	3157895	3789473
7	750797	3	16	75	1124	1675	1340	3995847	3789474	4421052
8	855201	2	16	55	1915	1066	0	4855187	4421053	5052631
9	437558	1	16	100	1739	0	0	5295726	5052632	5684210
10	804781	1	16	70	1788	0	0	6102246	5684211	6315789
11	802022	2	16	65	1307	1436	0	6906056	6315790	6947368
12	118372	2	16	70	1317	1034	0	7027171	6947369	7578947
13	731751	1	16	85	1681	0	0	7761273	7578948	8210526
14	482968	1	16	60	1036	0	0	8245922	8210527	8842105
15	739466	2	16	90	1571	1971	0	8986424	8842106	9473684
16	636289	1	16	55	1228	0	0	9626255	9473685	10105263
17	549028	2	16	65	1888	1985	0	10176511	10105264	10736842 |
18	917674	2	16	90	1432	1819	0	11098058	10736843	11368421
19	605324	3	16	70	1124	1692	1487	11706633	11368422	12000000

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

Type 5 Radar Waveform_15

Waveform Num = 1
Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	652811	2	9	60	1641	1989	0	652811	0	1499999
2	1468931	1	9	90	1919	0	0	2125372	1500000	2999999
3	2282232	3	9	70	1210	1773	1164	4409523	3000000	4499999
4	793862	1	9	95	1401	0	0	5207532	4500000	5999999
5	1976097	3	9	85	1326	1786	1795	7185030	6000000	7499999
6	1535819	1	9	70	1851	0	0	8725756	7500000	8999999
7	338923	2	9	75	1058	1437	0	9066530	9000000	10499999
8	2085868	1	9	90	1507	0	0	11154893	10500000	11999999

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

Type 5 Radar Waveform_16

Waveform Num = 1
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	636745	1	10	50	1857	0	0	636745	0	923076
2	580719	1	10	70	1190	0	0	1219321	923077	1846153
3	850397	3	10	95	1644	1745	1802	2070908	1846154	2769230
4	949504	1	10	80	1071	0	0	3025603	2769231	3692307
5	877035	3	10	50	1833	1284	1619	3903709	3692308	4615384
6	1360390	2	10	100	1371	1639	0	5268835	4615385	5538461
7	548438	1	10	80	1619	0	0	5820283	5538462	6461538
8	973577	3	10	80	1059	1932	1313	6795479	6461539	7384615
9	1027430	1	10	75	1856	0	0	7827213	7384616	8307692
10	1125715	2	10	95	1655	1432	0	8954784	8307693	9230769
11	465742	1	10	90	1709	0	0	9423613	9230770	10153846
12	1647045	2	10	50	1810	1787	0	11072367	10153847	11076923
13	375234	3	10	60	1760	1884	1242	11451198	11076924	12000000

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

Type 5 Radar Waveform_17

Waveform Num = 1
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	533502	2	13	60	1644	1143	0	533502	0	631578
2	509114	1	13	85	1782	0	0	1045403	631579	1263157
3	282608	3	13	100	1434	1178	1591	1329793	1263158	1894736
4	705702	1	13	90	1038	0	0	2039698	1894737	2526315
5	803008	3	13	65	1996	1245	1882	2843744	2526316	3157894
6	562866	3	13	60	1809	1044	1836	3411733	3157895	3789473
7	426320	2	13	85	1347	1246	0	3842742	3789474	4421052
8	711466	1	13	90	1485	0	0	4556801	4421053	5052631
9	1087769	3	13	95	1360	1597	1688	5646055	5052632	5684210
10	138914	3	13	100	1834	1892	1469	5789614	5684211	6315789
11	625900	3	13	50	1717	1331	1945	6420709	6315790	6947368
12	1138251	3	13	50	1589	1165	1402	7563953	6947369	7578947
13	96207	3	13	80	1258	1463	1147	7664316	7578948	8210526
14	957059	1	13	65	1064	0	0	8625243	8210527	8842105
15	376753	2	13	60	1195	1331	0	9003060	8842106	9473684
16	547043	2	13	55	1131	1345	0	9552629	9473685	10105263
17	1109168	3	13	55	1172	1461	1443	10664273	10105264	10736842
18	243466	2	13	50	1612	1964	0	10911815	10736843	11368421
19	613986	3	13	90	1069	1242	1366	11529377	11368422	12000000

Total number of pulses in waveform = 44
****

Type 5 Radar Waveform_18

Waveform Num = 2
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	90387	3	18	60	1545	1184	1242	90387	0	1090908
2	1950697	3	18	55	1140	1666	1815	2045055	1090909	2181817
3	827038	1	18	95	1705	0	0	2876714	2181818	3272726
4	741813	3	18	60	1150	1207	1220	3620232	3272727	4363635
5	757528	2	18	60	1808	1433	0	4381337	4363636	5454544
6	1341063	1	18	75	1793	0	0	5725641	5454545	6545453
7	1357986	2	18	80	1425	1353	0	7085420	6545454	7636362
8	1581938	2	18	100	1229	1051	0	8670136	7636363	8727271
9	157488	3	18	80	1008	1607	1470	8829904	8727272	9818180
10	1162909	1	18	50	1348	0	0	9996898	9818181	10909089
11	1761485	2	18	90	1970	1906	0	11759731	10909090	11999998

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

Type 5 Radar Waveform_19

Waveform Num = 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	258659	2	11	80	1600	1544	0	258659	0	1199999
2	976738	1	11	50	1421	0	0	1238541	1200000	2399999
3	1467765	1	11	65	1606	0	0	2707727	2400000	3599999
4	1887167	2	11	60	1728	1417	0	4596500	3600000	4799999
5	338119	2	11	65	1610	1274	0	4937764	4800000	5999999
6	1447541	1	11	80	1690	0	0	6388189	6000000	7199999
7	1153934	2	11	85	1751	1880	0	7543813	7200000	8399999
8	1204937	2	11	95	1782	1476	0	8752381	8400000	9599999
9	1501805	1	11	65	1728	0	0	10257444	9600000	10799999
10	1699976	1	11	100	1125	0	0	11959148	10800000	11999999

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

Type 5 Radar Waveform_20

Waveform Num = 1
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	820615	2	14	60	1464	1312	0	820615	0	923076
2	487180	3	14	55	1696	1824	1611	1310571	923077	1846153
3	1079171	2	14	55	1656	1730	0	2394873	1846154	2769230
4	491447	1	14	80	1626	0	0	2889706	2769231	3692307
5	1152604	3	14	95	1568	1137	1502	4043936	3692308	4615384
6	988946	1	14	90	1306	0	0	5037089	4615385	5538461
7	924911	2	14	95	1425	1151	0	5963306	5538462	6461538
8	681762	1	14	60	1593	0	0	6647644	6461539	7384615
9	827739	2	14	100	1360	1278	0	7476976	7384616	8307692
10	834582	3	14	95	1335	1384	1058	8314196	8307693	9230769
11	937786	3	14	75	1767	1255	1259	9255759	9230770	10153846
12	1166191	3	14	75	1513	1960	1877	10426231	10153847	11076923
13	1207184	3	14	95	1414	1366	1140	11638765	11076924	12000000

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

Type 5 Radar Waveform_21

Waveform Num = 1
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(u
1	742093	1	19	55	1052	0	0	742093	0	857142
2	831008	3	19	90	1005	1686	1717	1574153	857143	1714285
3	327471	2	19	80	1127	1303	0	1906032	1714286	2571428
4	873025	1	19	100	1940	0	0	2781487	2571429	3428571
5	804852	1	19	60	1158	0	0	3588279	3428572	4285714
6	898805	2	19	50	1871	1519	0	4488242	4285715	5142857
7	1369860	1	19	50	1189	0	0	5861492	5142858	6000000
8	150188	1	19	65	1959	0	0	6012869	6000001	6857143
9	1693319	1	19	100	1966	0	0	7708147	6857144	7714286
10	620934	2	19	85	1469	1614	0	8331047	7714287	8571429
11	680281	1	19	85	1389	0	0	9014411	8571430	9428572
12	965483	2	19	50	1915	1219	0	9981283	9428573	10285715
13	1079887	2	19	85	1562	1851	0	11064304	10285716	11142858
14	844296	2	19	100	1135	1470	0	11912013	11142859	12000001

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_22

Waveform Num = 12
Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us
1	404499	3	6	55	1946	1814	1113	404499	0	923076
2	666496	3	6	55	1807	1499	1057	1075868	923077	1846153
3	1514588	2	6	60	1988	1947	0	2594819	1846154	2769230
4	782374	2	6	70	1719	1270	0	3381128	2769231	3692307
5	310157	1	6	55	1418	0	0	3694274	3692308	4615384
6	1208299	2	6	70	1545	1100	0	4903991	4615385	5538461
7	1245890	3	6	75	1811	1710	1136	6152526	5538462	6461538
8	1106853	1	6	50	1061	0	0	7264036	6461539	7384615
9	532922	2	6	60	1349	1642	0	7798019	7384616	8307692
10	641890	1	6	100	1577	0	0	8442900	8307693	9230769
11	1061471	1	6	75	1292	0	0	9505948	9230770	10153846
12	655995	3	6	90	1581	1284	1510	10163235	10153847	11076923
13	1219748	2	6	100	1496	1366	0	11387358	11076924	12000000

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

Type 5 Radar Waveform_23

Waveform Num = 13
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	948803	1	16	60	1326	0	0	948803	0	1333332
2	1612066	2	16	65	1830	1394	0	2562195	1333333	2666665
3	1272407	2	16	60	1150	1984	0	3837826	2666666	3999998
4	1482018	2	16	100	1115	1412	0	5322978	3999999	5333331
5	1320615	3	16	85	1076	1400	1788	6646120	5333332	6666664
6	391333	3	16	80	1149	1148	1960	7041717	6666665	7999997
7	1248839	2	16	90	1498	1008	0	8294813	7999998	9333330
8	1598716	1	16	85	1455	0	0	9896035	9333331	10666663
9	1962224	2	16	60	1085	1858	0	11859714	10666664	11999996

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

Type 5 Radar Waveform_24

Waveform Num = 14
Num of Bursts = 10
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us
1	1111993	2	8	60	1474	1781	0	1111993	0	1199999
2	641858	3	8	65	1816	1620	1191	1757106	1200000	2399999
3	1046692	3	8	100	1459	1229	1558	2808425	2400000	3599999
4	1259372	2	8	60	1873	1647	0	4072043	3600000	4799999
5	1742480	2	8	60	1021	1243	0	5818043	4800000	5999999
6	210478	1	8	70	1041	0	0	6030785	6000000	7199999
7	1521837	2	8	50	1068	1443	0	7553663	7200000	8399999
8	1796161	2	8	75	1553	1445	0	9352335	8400000	9599999
9	859658	3	8	60	1157	1256	1364	10214991	9600000	10799999
10	604124	2	8	55	1170	1137	0	10822892	10800000	11999999

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_25

Waveform Num = 15
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	318076	1	9	95	1254	0	0	318076	0	705881
2	566640	3	9	60	1001	1089	1584	885970	705882	1411763
3	816678	2	9	70	1067	1402	0	1706322	1411764	2117645
4	420179	2	9	65	1735	1448	0	2128970	2117646	2823527
5	1249115	3	9	100	1927	1204	1624	3381268	2823528	3529409
6	367170	2	9	95	1290	1471	0	3753193	3529410	4235291
7	769427	2	9	95	1913	1585	0	4525381	4235292	4941173
8	569576	3	9	65	1413	1648	1898	5098455	4941174	5647055
9	610478	1	9	50	1280	0	0	5713892	5647056	6352937
10	1138991	1	9	55	1075	0	0	6854163	6352938	7058819
11	575720	1	9	95	1800	0	0	7430958	7058820	7764701
12	583743	1	9	90	1279	0	0	8016501	7764702	8470583
13	638322	1	9	70	1489	0	0	8656102	8470584	9176465
14	1034409	2	9	80	1175	1198	0	9692000	9176466	9882347
15	494046	1	9	95	1234	0	0	10188419	9882348	10588229
16	791892	1	9	50	1058	0	0	10981545	10588230	11294111
17	934960	3	9	80	1359	1410	1811	11917563	11294112	11999993

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

Type 5 Radar Waveform_26

Waveform Num = 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	211065	2	17	65	1776	1644	0	211065	0	1333332
2	1347879	1	17	80	1003	0	0	1562364	1333333	2666665
3	1736176	1	17	65	1829	0	0	3299543	2666666	3999998
4	1936476	3	17	65	1540	1958	1398	5237848	3999999	5333331
5	1224471	3	17	100	1450	1183	1667	6467215	5333332	6666664
6	1061698	1	17	100	1526	0	0	7533213	6666665	7999997
7	835910	1	17	85	1637	0	0	8370649	7999998	9333330
8	1321729	1	17	60	1465	0	0	9694015	9333331	10666663
9	2153471	3	17	60	1751	1839	1908	11848951	10666664	11999996

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

Type 5 Radar Waveform_27

Waveform Num = 17
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	699177	2	11	50	1627	1455	0	699177	0	857142
2	980210	2	11	100	1899	1502	0	1682469	857143	1714285
3	700660	2	11	80	1049	1118	0	2386530	1714286	2571428
4	732708	2	11	85	1408	1751	0	3121405	2571429	3428571
5	605404	3	11	85	1019	1504	1499	3729968	3428572	4285714
6	877151	3	11	55	1164	1326	1812	4611141	4285715	5142857
7	1107320	3	11	65	1159	1470	1807	5722763	5142858	6000000
8	946333	2	11	60	1820	1160	0	6673532	6000001	6857143
9	547512	2	11	90	1369	1625	0	7224024	6857144	7714286
10	1006907	1	11	100	1075	0	0	8233925	7714287	8571429
11	1063467	2	11	50	1324	1801	0	9298467	8571430	9428572
12	939307	3	11	85	1035	1409	1667	10240899	9428573	10285715
13	609388	2	11	55	1327	1733	0	10854398	10285716	11142858
14	310751	2	11	60	1676	1212	0	11168209	11142859	12000001

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

Type 5 Radar Waveform_28

Waveform Num = 18
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	470065	1	20	50	1067	0	0	470065	0	857142
2	444274	3	20	100	1253	1578	1382	915406	857143	1714285
3	1256573	2	20	90	1589	1767	0	2176192	1714286	2571428
4	898104	2	20	85	1930	1893	0	3077652	2571429	3428571
5	432605	2	20	85	1248	1310	0	3514080	3428572	4285714
6	915569	3	20	90	1016	1404	1491	4432207	4285715	5142857
7	1394707	1	20	95	1879	0	0	5830825	5142858	6000000
8	336906	2	20	100	1012	1085	0	6169610	6000001	6857143
9	1230523	2	20	80	1589	1291	0	7402230	6857144	7714286
10	930557	2	20	50	1376	1243	0	8335667	7714287	8571429
11	978214	3	20	75	1108	1593	1903	9316500	8571430	9428572
12	789233	3	20	65	1063	1461	1665	10110337	9428573	10285715
13	821918	2	20	70	1138	1802	0	10936444	10285716	11142858
14	678318	3	20	80	1204	1215	1564	11617702	11142859	12000001

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

Type 5 Radar Waveform_29

Waveform Num = 19
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	378138	2	13	90	1696	1222	0	378138	0	631578
2	676428	3	13	100	1837	1042	1281	1057484	631579	1263157
3	642911	1	13	100	1722	0	0	1704555	1263158	1894736
4	212765	2	13	60	1573	1937	0	1919042	1894737	2526315
5	1062971	3	13	95	1485	1735	1923	2985523	2526316	3157894
6	629967	2	13	55	1969	1634	0	3620633	3157895	3789473
7	592204	1	13	55	1602	0	0	4216440	3789474	4421052
8	672622	1	13	95	1518	0	0	4890664	4421053	5052631
9	321970	1	13	55	1468	0	0	5214152	5052632	5684210
10	726133	2	13	85	1100	1021	0	5941753	5684211	6315789
11	411956	3	13	50	1281	1066	1390	6355830	6315790	6947368
12	592608	1	13	80	1510	0	0	6952175	6947369	7578947
13	760014	3	13	55	1061	1873	1281	7713699	7578948	8210526
14	1011317	3	13	55	1526	1245	1922	8729231	8210527	8842105
15	433282	3	13	90	1210	1302	1732	9167206	8842106	9473684
16	928444	2	13	60	1966	1720	0	10099894	9473685	10105263
17	78689	2	13	75	1447	1706	0	10182269	10105264	10736842
18	819425	3	13	90	1879	1883	1554	11004847	10736843	11368421
19	637812	1	13	55	1718	0	0	11647975	11368422	12000000

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

Type 5 Radar Waveform_30

Waveform Num = 20
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	162693	2	14	75	1856	1762	0	162693	0	923076
2	1029562	3	14	60	1675	1731	1856	1195873	923077	1846153
3	1349904	2	14	65	1184	1158	0	2551039	1846154	2769230
4	418419	3	14	60	1597	1253	1866	2971800	2769231	3692307
5	959744	3	14	90	1961	1687	1801	3936260	3692308	4615384
6	846707	2	14	70	1258	1353	0	4788416	4615385	5538461
7	756636	3	14	90	1606	1754	1024	5547663	5538462	6461538
8	1434065	3	14	70	1547	1572	1464	6986112	6461539	7384615
9	745311	3	14	95	1803	1482	1766	7736006	7384616	8307692
10	718121	3	14	60	1774	1301	1417	8459178	8307693	9230769
11	1527221	1	14	65	1580	0	0	9990891	9230770	10153846
12	994130	2	14	50	1303	1052	0	10986601	10153847	11076923
13	388986	1	14	100	1035	0	0	11377942	11076924	12000000

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

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491	1	16	5501	1
2	5491	1	17	5502	1
3	5492	1	18	5502	1
4	5493	1	19	5503	1
5	5494	1	20	5503	1
6	5494	1	21	5504	1
7	5495	1	22	5504	1
8	5495	1	23	5505	1
9	5496	1	24	5505	1
10	5496	1	25	5506	1
11	5497	1	26	5506	1
12	5497	1	27	5507	1
13	5498	1	28	5508	1
14	5499	1	29	5509	1
15	5500	1	30	5509	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5470	9	2	5478	6
8	5484	24	18	5498	54
33	5505	99	34	5475	102
38	5476	114	36	5500	108
43	5500	129	37	5473	111
48	5463	144	38	5463	114
63	5522	189	41	5489	123
72	5513	216	52	5522	156
75	5475	225	57	5494	171
81	5492	243	61	5495	183
85	5497	255	66	5481	198
92	5514	276	67	5506	201
99	5501	297	74	5466	222
--	--	--	75	5503	225
--	--	--	80	5487	240
--	--	--	82	5462	246
--	--	--	92	5504	276
--	--	--	94	5484	282
--	--	--	98	5510	294
--	--	--	99	5516	297

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5522	6	18	5480	54
10	5512	30	20	5472	60
13	5494	39	22	5484	66
14	5497	42	33	5496	99
17	5487	51	37	5516	111
19	5521	57	51	5508	153
29	5511	87	63	5485	189
47	5507	141	64	5507	192
50	5495	150	66	5515	198
53	5518	159	72	5494	216
75	5470	225	76	5489	228
86	5465	258	84	5497	252
88	5474	264	86	5475	258
99	5488	297	90	5510	270
--	--	--	91	5482	273
--	--	--	95	5476	285
--	--	--	97	5519	291
--	--	--	99	5477	297

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5464	12	3	5519	9
10	5499	30	19	5485	57
13	5486	39	21	5489	63
15	5498	45	23	5477	69
21	5466	63	37	5495	111
26	5504	78	46	5511	138
28	5505	84	48	5510	144
33	5478	99	57	5500	171
44	5489	132	64	5505	192
49	5501	147	76	5464	228
75	5467	225	81	5508	243
96	5524	288	82	5486	246
97	5510	291	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5524	9	1	5495	3
7	5511	21	3	5518	9
16	5507	48	16	5480	48
21	5491	63	21	5474	63
40	5478	120	23	5514	69
51	5519	153	41	5503	123
55	5477	165	44	5471	132
67	5525	201	50	5510	150
72	5498	216	52	5491	156
92	5497	276	63	5515	189
94	5467	282	93	5505	279
96	5513	288	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5523	3	0	5478	0
6	5486	18	4	5515	12
27	5526	81	13	5497	39
37	5494	111	18	5524	54
48	5521	144	19	5469	57
50	5501	150	24	5498	72
53	5474	159	28	5507	84
58	5470	174	33	5485	99
59	5509	177	35	5474	105
60	5485	180	38	5510	114
62	5469	186	49	5467	147
74	5471	222	55	5494	165
--	--	--	57	5475	171
--	--	--	76	5476	228
--	--	--	97	5520	291

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
8	5512	24	0	5505	0
18	5514	54	11	5496	33
20	5503	60	19	5486	57
28	5525	84	22	5513	66
30	5522	90	25	5527	75
53	5492	159	32	5469	96
55	5523	165	42	5511	126
84	5526	252	44	5482	132
90	5490	270	50	5468	150
91	5469	273	54	5510	162
--	--	--	65	5517	195
--	--	--	68	5523	204
--	--	--	74	5475	222
--	--	--	86	5484	258
--	--	--	88	5483	264
--	--	--	89	5500	267
--	--	--	97	5512	291

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5488	3	6	5479	18
12	5524	36	19	5519	57
23	5519	69	20	5486	60
29	5503	87	26	5524	78
37	5496	111	27	5497	81
43	5487	129	29	5508	87
44	5527	132	36	5515	108
57	5489	171	41	5471	123
62	5486	186	43	5481	129
63	5476	189	48	5526	144
65	5485	195	51	5529	153
66	5504	198	52	5521	156
73	5477	219	56	5492	168
78	5526	234	69	5511	207
93	5507	279	72	5507	216
96	5502	288	77	5499	231
--	--	--	78	5469	234
--	--	--	80	5501	240
--	--	--	90	5487	270
--	--	--	95	5485	285

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5480	3	2	5528	6
3	5494	9	10	5512	30
15	5490	45	11	5513	33
18	5519	54	12	5473	36
24	5483	72	21	5514	63
29	5498	87	32	5531	96
30	5485	90	47	5487	141
36	5528	108	48	5521	144
42	5474	126	53	5529	159
57	5495	171	60	5490	180
64	5525	192	68	5477	204
65	5529	195	74	5505	222
78	5487	234	94	5472	282
--	--	--	99	5485	297

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5485	6	0	5472	0
6	5531	18	2	5502	6
12	5477	36	5	5507	15
15	5484	45	27	5509	81
19	5472	57	30	5484	90
21	5478	63	31	5521	93
44	5497	132	36	5473	108
50	5504	150	50	5489	150
65	5525	195	51	5512	153
70	5496	210	55	5486	165
72	5481	216	89	5479	267
75	5522	225	--	--	--
83	5530	249	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5510	12	1	5515	3
42	5497	126	14	5475	42
44	5526	132	15	5501	45
46	5493	138	22	5533	66
48	5525	144	28	5491	84
55	5533	165	39	5479	117
68	5485	204	48	5513	144
72	5474	216	49	5503	147
76	5488	228	54	5492	162
77	5508	231	58	5490	174
--	--	--	59	5486	177
--	--	--	66	5498	198
--	--	--	71	5526	213
--	--	--	72	5474	216
--	--	--	75	5519	225
--	--	--	77	5481	231
--	--	--	87	5499	261

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5493	93	17	5526	51
46	5490	138	27	5513	81
50	5527	150	35	5482	105
58	5528	174	41	5501	123
78	5491	234	43	5524	129
93	5518	279	51	5488	153
99	5496	297	67	5502	201
--	--	--	85	5518	255
--	--	--	90	5507	270
--	--	--	93	5522	279
--	--	--	94	5528	282

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5518	3	3	5483	9
17	5478	51	7	5486	21
21	5510	63	10	5526	30
23	5524	69	12	5525	36
24	5509	72	44	5498	132
25	5492	75	56	5528	168
42	5496	126	58	5534	174
52	5527	156	60	5492	180
55	5515	165	70	5489	210
71	5526	213	73	5506	219
91	5530	273	74	5507	222
--	--	--	76	5535	228
--	--	--	87	5481	261
--	--	--	98	5509	294

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5498	9	18	5527	54
8	5509	24	32	5514	96
9	5478	27	36	5511	108
15	5481	45	38	5517	114
20	5477	60	39	5478	117
35	5480	105	43	5505	129
39	5515	117	47	5481	141
41	5488	123	52	5501	156
48	5483	144	64	5532	192
54	5522	162	65	5513	195
56	5476	168	69	5492	207
59	5507	177	70	5491	210
60	5516	180	73	5526	219
68	5500	204	77	5498	231
73	5506	219	79	5496	237
79	5517	237	80	5535	240
--	--	--	86	5534	258
--	--	--	93	5485	279

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5494	30	7	5483	21
18	5516	54	14	5482	42
19	5478	57	20	5532	60
21	5532	63	24	5534	72
30	5497	90	27	5523	81
31	5510	93	29	5510	87
39	5522	117	30	5511	90
40	5503	120	38	5529	114
47	5511	141	60	5503	180
49	5477	147	62	5495	186
55	5519	165	82	5535	246
67	5509	201	84	5498	252
73	5487	219	89	5490	267
84	5504	252	97	5487	291
85	5502	255	98	5516	294
87	5484	261	--	--	--
91	5507	273	--	--	--
99	5531	297	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5529	36	41	5537	123
15	5513	45	44	5484	132
17	5503	51	46	5523	138
18	5538	54	76	5490	228
23	5516	69	92	5510	276
39	5491	117	96	5502	288
42	5530	126	97	5538	291
62	5487	186	98	5532	294
70	5494	210	--	--	--
78	5483	234	--	--	--
81	5532	243	--	--	--
97	5497	291	--	--	--
98	5480	294	--	--	--

Radar Statistical Performance for 802.11n-HT40 - Channel 5510MHz

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	3066	18	1
2	5492	1	598	89	1
3	5493	1	918	58	1
4	5494	1	778	68	1
5	5495	1	538	99	1
6	5496	1	678	78	1
7	5497	1	638	83	1
8	5498	1	898	59	1
9	5499	1	658	81	1
10	5500	1	838	63	1
11	5502	1	738	72	1
12	5504	1	558	95	1
13	5506	1	698	76	1
14	5508	1	518	102	1
15	5510	1	758	70	1
16	5512	1	1166	46	1
17	5514	1	780	68	1
18	5516	1	3012	18	1
19	5517	1	1794	30	1
20	5518	1	1581	34	1
21	5519	1	1341	40	1
22	5520	1	1036	51	1
23	5522	1	2614	21	1
24	5523	1	1332	40	1
25	5524	1	2626	21	1
26	5525	1	1834	29	1
27	5526	1	2842	19	1
28	5527	1	2683	20	1
29	5528	1	2459	22	1
30	5529	1	1471	36	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	5.0	160	24	1
2	5492	2.2	166	23	1
3	5493	2.0	170	25	1
4	5494	4.8	229	26	1
5	5495	2.9	180	23	1
6	5496	1.7	161	24	1
7	5497	1.0	204	28	1
8	5498	4.8	194	29	1
9	5499	4.8	169	26	1
10	5500	4.2	190	25	1
11	5502	4.7	153	24	1
12	5504	1.2	211	24	1
13	5506	3.7	158	26	1
14	5508	2.0	177	28	1
15	5510	3.0	198	24	1
16	5512	3.1	207	28	1
17	5514	1.6	170	27	1
18	5516	1.2	157	26	1
19	5517	5.0	196	26	1
20	5518	1.9	159	28	1
21	5519	2.5	216	29	1
22	5520	1.6	164	29	1
23	5522	1.6	181	23	1
24	5523	1.9	209	28	1
25	5524	1.4	168	28	1
26	5525	3.6	155	23	1
27	5526	3.1	218	27	1
28	5527	2.6	178	25	1
29	5528	3.7	206	28	1
30	5529	3.4	177	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	5491	9.2	350	16	1
2	5492	9.7	284	17	1
3	5493	6.4	386	17	1
4	5494	8.3	341	17	1
5	5495	7.4	319	18	1
6	5496	7.3	360	18	1
7	5497	7.8	375	17	1
8	5498	6.1	307	18	1
9	5499	10.0	488	18	1
10	5500	8.6	397	18	1
11	5502	9.9	427	17	1
12	5504	9.7	358	17	1
13	5506	6.4	438	17	1
14	5508	7.4	271	16	1
15	5510	6.7	354	16	1
16	5512	6.7	419	16	1
17	5514	7.7	251	18	1
18	5516	7.5	373	17	1
19	5517	7.7	387	17	1
20	5518	8.1	411	18	1
21	5519	9.3	373	16	1
22	5520	9.4	428	16	1
23	5522	8.2	430	18	1
24	5523	6.7	387	16	1
25	5524	7.3	372	16	1
26	5525	6.7	319	16	1
27	5526	7.2	342	16	1
28	5527	9.8	359	18	1
29	5528	7.2	322	17	1
30	5529	6.8	323	17	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	16.6	406	13	1
2	5492	15.4	251	16	1
3	5493	20.0	466	13	1
4	5494	11.1	426	14	1
5	5495	16.3	255	16	1
6	5496	14.9	438	15	1
7	5497	12.1	417	12	1
8	5498	12.1	366	14	1
9	5499	18.7	418	13	1
10	5500	16.9	438	14	1
11	5502	12.7	385	16	1
12	5504	17.9	355	16	1
13	5506	16.9	495	12	1
14	5508	16.4	275	15	1
15	5510	13.8	328	12	1
16	5512	11.2	462	15	1
17	5514	16.4	492	13	1
18	5516	13.1	428	16	1
19	5517	15.0	320	15	1
20	5518	15.3	338	13	1
21	5519	11.9	493	14	1
22	5520	18.2	326	12	1
23	5522	19.8	354	16	1
24	5523	16.6	260	15	1
25	5524	15.8	277	14	1
26	5525	17.1	456	16	1
27	5526	12.5	480	16	1
28	5527	16.3	448	13	1
29	5528	11.3	449	15	1
30	5529	16.0	292	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	5493.3	1	16	5510.0	1
2	5493.7	1	17	5510.0	1
3	5494.5	1	18	5510.0	1
4	5494.9	1	19	5510.0	1
5	5495.3	1	20	5510.0	1
6	5496.1	1	21	5526.7	1
7	5496.9	1	22	5526.3	1
8	5498.1	1	23	5525.5	1
9	5498.5	1	24	5525.1	1
10	5499.3	1	25	5524.7	1
11	5510.0	1	26	5523.9	1
12	5510.0	1	27	5523.1	1
13	5510.0	1	28	5521.9	1
14	5510.0	1	29	5521.5	1
15	5510.0	1	30	5520.7	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Waveform Num = 1
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	376345	3	5	95	1709	1712	1798	376345	0	857142
2	623145	1	5	75	1005	0	0	1004709	857143	1714285
3	1021787	3	5	80	1212	1878	1018	2027501	1714286	2571428
4	1339150	2	5	65	1178	1369	0	3370759	2571429	3428571
5	147213	3	5	55	1194	1512	1309	3520519	3428572	4285714
6	768737	3	5	65	1567	1496	1359	4293271	4285715	5142857
7	1254668	3	5	90	1574	1243	1378	5552361	5142858	6000000
8	1026898	3	5	75	1381	1499	1388	6583454	6000001	6857143
9	630381	3	5	55	1618	1038	1091	7218103	6857144	7714286
10	1013981	2	5	90	1726	1175	0	8235831	7714287	8571429
11	356115	1	5	70	1854	0	0	8594847	8571430	9428572
12	1576439	1	5	80	1707	0	0	10173140	9428573	10285715
13	539437	2	5	95	1205	1307	0	10714284	10285716	11142858
14	642537	2	5	55	1726	1880	0	11359333	11142859	12000001

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

Type 5 Radar Waveform_2

Waveform Num = 2
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	284663	2	6	100	1477	1263	0	284663	0	1090908
2	1036696	2	6	90	1497	1637	0	1324099	1090909	2181817
3	1387904	2	6	70	1112	1396	0	2715137	2181818	3272726
4	1280199	3	6	65	1868	1746	1968	3997844	3272727	4363635
5	952857	2	6	75	1951	1661	0	4956283	4363636	5454544
6	858592	2	6	85	1298	1321	0	5818487	5454545	6545453
7	1698854	1	6	65	1116	0	0	7519960	6545454	7636362
8	1114257	2	6	85	1333	1807	0	8635333	7636363	8727271
9	415804	3	6	80	1692	1117	1201	9054277	8727272	9818180
10	770629	2	6	80	1125	1384	0	9828916	9818181	10909089
11	1318440	1	6	95	1638	0	0	11149865	10909090	11999998

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_3

Waveform Num = 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	544560	1	8	55	1381	0	0	544560	0	857142
2	454007	3	8	70	1338	1060	1226	999948	857143	1714285
3	1278405	3	8	100	1165	1121	1729	2281977	1714286	2571428
4	603023	1	8	100	1977	0	0	2889015	2571429	3428571
5	657029	2	8	65	1928	1534	0	3548021	3428572	4285714
6	1129416	1	8	100	1380	0	0	4680899	4285715	5142857
7	1156975	2	8	80	1799	1417	0	5839254	5142858	6000000
8	337509	3	8	90	1454	1135	1982	6179979	6000001	6857143
9	1400352	3	8	70	1959	1179	1485	7584902	6857144	7714286
10	801676	1	8	65	1881	0	0	8391201	7714287	8571429
11	797741	1	8	90	1249	0	0	9190823	8571430	9428572
12	908054	2	8	75	1849	1326	0	10100126	9428573	10285715
13	527323	1	8	70	1561	0	0	10630624	10285716	11142858
14	773206	1	8	65	1469	0	0	11405391	11142859	12000001

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

Type 5 Radar Waveform_4

Waveform Num = 4
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	500933	3	9	100	1872	1509	1918	500933	0	1199999
2	797006	3	9	100	1215	1460	1181	1303238	1200000	2399999
3	1124889	3	9	60	1941	1667	1726	2431983	2400000	3599999
4	1228531	1	9	65	1414	0	0	3665848	3600000	4799999
5	1658954	3	9	75	1242	1254	1233	5326216	4800000	5999999
6	736064	3	9	90	1731	1340	1888	6066009	6000000	7199999
7	1429172	1	9	85	1031	0	0	7500140	7200000	8399999
8	1702961	2	9	90	1560	1591	0	9204132	8400000	9599999
9	787397	3	9	80	1372	1590	1738	9994680	9600000	10799999
10	1683346	1	9	60	1640	0	0	11682726	10800000	11999999

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

Type 5 Radar Waveform_5

Waveform Num = 5
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	874380	2	10	80	1173	1218	0	874380	0	923076
2	929391	3	10	50	1491	1805	1446	1806162	923077	1846153
3	687349	2	10	55	1619	1329	0	2498253	1846154	2769230
4	850731	3	10	60	1989	1518	1629	3351932	2769231	3692307
5	1093681	1	10	90	1351	0	0	4450749	3692308	4615384
6	1036610	3	10	50	1190	1821	1747	5488710	4615385	5538461
7	230997	1	10	65	1072	0	0	5724465	5538462	6461538
8	1470495	3	10	60	1539	1403	1856	7196032	6461539	7384615
9	514841	3	10	85	1204	1903	1191	7715671	7384616	8307692
10	1450538	1	10	80	1683	0	0	9170507	8307693	9230769
11	410040	1	10	80	1655	0	0	9582230	9230770	10153846
12	1153940	1	10	65	1522	0	0	10737825	10153847	11076923
13	839196	1	10	50	1191	0	0	11578543	11076924	12000000

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

Type 5 Radar Waveform_6

Waveform Num = 6
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	637783	1	12	60	1068	0	0	637783	0	857142
2	389288	1	12	85	1194	0	0	1028139	857143	1714285
3	1371737	3	12	75	1939	1631	1087	2401070	1714286	2571428
4	548110	1	12	100	1811	0	0	2953837	2571429	3428571
5	1041969	2	12	80	1400	1801	0	3997617	3428572	4285714
6	431162	2	12	80	1413	1509	0	4431980	4285715	5142857
7	1348552	2	12	65	1624	1075	0	5783454	5142858	6000000
8	819746	1	12	70	1210	0	0	6605899	6000001	6857143
9	506909	2	12	55	1275	1893	0	7114018	6857144	7714286
10	1415575	3	12	85	1942	1100	1430	8532761	7714287	8571429
11	273838	3	12	55	1066	1577	1255	8811071	8571430	9428572
12	1463911	3	12	90	1660	1883	1146	10278880	9428573	10285715
13	79490	1	12	60	1255	0	0	10363059	10285716	11142858
14	1316855	3	12	95	1952	1090	1020	11681169	11142859	12000001

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

Type 5 Radar Waveform_7

Waveform Num = 7
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	713287	2	14	50	1789	1175	0	713287	0	1499999
2	1062490	2	14	95	1555	1470	0	1778741	1500000	2999999
3	2291210	2	14	100	1813	1057	0	4072976	3000000	4499999
4	1122118	1	14	55	1415	0	0	5197964	4500000	5999999
5	1871853	1	14	50	1041	0	0	7071232	6000000	7499999
6	728120	1	14	100	1402	0	0	7800393	7500000	8999999
7	1216583	2	14	70	1915	1638	0	9018378	9000000	10499999
8	2606977	3	14	90	1236	1686	1701	11628908	10500000	11999999

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

Type 5 Radar Waveform_8

Waveform Num = 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	159124	3	17	50	1551	1685	1378	159124	0	799999
2	1209602	2	17	75	1428	1405	0	1373340	800000	1599999
3	676847	3	17	50	1781	1810	1493	2053020	1600000	2399999
4	995532	2	17	65	1375	1416	0	3053636	2400000	3199999
5	884166	1	17	55	1139	0	0	3940593	3200000	3999999
6	60087	3	17	55	1321	1973	1782	4001819	4000000	4799999
7	824031	2	17	55	1825	1809	0	4830926	4800000	5599999
8	953078	2	17	95	1623	1726	0	5787638	5600000	6399999
9	1146834	2	17	55	1021	1366	0	6937821	6400000	7199999
10	1018102	2	17	60	1500	1916	0	7958310	7200000	7999999
11	825311	1	17	50	1496	0	0	8787037	8000000	8799999
12	520644	2	17	80	1411	1570	0	9309177	8800000	9599999
13	443848	3	17	60	1848	1801	1694	9756006	9600000	10399999
14	1170232	3	17	65	1892	1910	1963	10931581	10400000	11199999
15	1030858	2	17	85	1894	1666	0	11968204	11200000	11999999

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

Type 5 Radar Waveform_9

Waveform Num = 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	314269	1	18	50	1061	0	0	314269	0	599999
2	546046	1	18	95	1646	0	0	861376	600000	1199999
3	879502	1	18	100	1855	0	0	1742524	1200000	1799999
4	216515	3	18	75	1014	1590	1707	1960894	1800000	2399999
5	605297	2	18	90	1834	1985	0	2570502	2400000	2999999
6	553197	1	18	90	1947	0	0	3127518	3000000	3599999
7	664600	3	18	100	1211	1018	1491	3794065	3600000	4199999
8	464681	1	18	95	1181	0	0	4262466	4200000	4799999
9	574597	1	18	50	1135	0	0	4838244	4800000	5399999
10	926290	2	18	70	1178	1538	0	5765669	5400000	5999999
11	776713	1	18	75	1679	0	0	6545098	6000000	6599999
12	377415	3	18	55	1984	1139	1566	6924192	6600000	7199999
13	592972	1	18	75	1316	0	0	7521853	7200000	7799999
14	542426	3	18	60	1496	1658	1596	8065595	7800000	8399999
15	842647	1	18	70	1603	0	0	8912992	8400000	8999999
16	470370	1	18	65	1979	0	0	9384965	9000000	9599999
17	599156	1	18	95	1744	0	0	9986100	9600000	10199999
18	270987	2	18	95	1498	1132	0	10258831	10200000	10799999
19	940832	1	18	80	1145	0	0	11202293	10800000	11399999
20	610453	2	18	65	1190	1923	0	11813891	11400000	11999999

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

Type 5 Radar Waveform_10

Waveform Num = 10
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	94268	3	20	85	1273	1257	1509	94268	0	1199999
2	1379554	2	20	60	1239	1155	0	1477861	1200000	2399999
3	1164001	1	20	90	1892	0	0	2644256	2400000	3599999
4	2116895	3	20	55	1949	1499	1100	4763043	3600000	4799999
5	82583	1	20	90	1370	0	0	4850174	4800000	5999999
6	2304347	2	20	90	1156	1001	0	7155891	6000000	7199999
7	69919	1	20	50	1155	0	0	7227967	7200000	8399999
8	1846338	1	20	95	1381	0	0	9075460	8400000	9599999
9	646436	1	20	85	1447	0	0	9723277	9600000	10799999
10	1339792	3	20	55	1716	1452	1911	11064516	10800000	11999999

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

Type 5 Radar Waveform_11

Waveform Num = 11
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	1102233	2	5	60	1483	1080	0	1102233	0	1499999
2	689881	1	5	55	1159	0	0	1794677	1500000	2999999
3	2272259	3	5	65	1810	1702	1381	4068095	3000000	4499999
4	1019836	1	5	90	1855	0	0	5092824	4500000	5999999
5	1227586	1	5	65	1065	0	0	6322265	6000000	7499999
6	1907511	3	5	65	1304	1183	1478	8230841	7500000	8999999
7	1394533	3	5	70	1664	1482	1509	9629339	9000000	10499999
8	1592398	2	5	70	1030	1656	0	11226392	10500000	11999999

Total number of pulses in waveform = 16

****

Type 5 Radar Waveform_12

Waveform Num = 12
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	159170	3	6	55	1735	1702	1435	159170	0	599999
2	920311	3	6	60	1815	1833	1741	1084353	600000	1199999
3	581942	1	6	90	1831	0	0	1671684	1200000	1799999
4	177693	3	6	60	1154	1339	1395	1851208	1800000	2399999
5	1040826	2	6	100	1484	1449	0	2895922	2400000	2999999
6	501399	1	6	85	1139	0	0	3400254	3000000	3599999
7	560653	3	6	50	1427	1576	1140	3962046	3600000	4199999
8	796895	1	6	65	1087	0	0	4763084	4200000	4799999
9	366835	2	5	90	1835	1688	0	5131006	4800000	5399999
10	527616	3	6	90	1972	1209	1072	5662145	5400000	5999999
11	494398	2	6	85	1411	1360	0	6160796	6000000	6599999
12	1007898	3	6	70	1936	1704	1858	7171465	6600000	7199999
13	227813	1	6	60	1618	0	0	7404776	7200000	7799999
14	557346	3	6	65	1592	1801	1118	7963740	7800000	8399999
15	565428	3	6	75	1458	1376	1692	8533679	8400000	8999999
16	463599	1	6	70	1148	0	0	9001804	9000000	9599999
17	872658	3	6	50	1999	1701	1623	9875610	9600000	10199999
18	513483	1	6	95	1367	0	0	10394416	10200000	10799999
19	935903	2	6	85	1521	1164	0	11331686	10800000	11399999
20	430565	2	6	100	1895	1797	0	11764936	11400000	11999999

Total number of pulses in waveform = 43

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Type 5 Radar Waveform_13

Waveform Num = 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	160302	1	8	95	1385	0	0	160302	0	923076
2	1660492	2	8	60	1584	1826	0	1822179	923077	1846153
3	611862	1	8	75	1370	0	0	2437451	1846154	2769230
4	1079390	3	8	85	1609	1297	1742	3518211	2769231	3692307
5	829208	2	8	55	1869	1046	0	4352067	3692308	4615384
6	932042	3	8	95	1275	1228	1850	5287024	4615385	5538461
7	669235	1	8	55	1983	0	0	5960612	5538462	6461538
8	558111	2	8	90	1195	1437	0	6520706	6461539	7384615
9	1342213	1	8	60	1706	0	0	7865551	7384616	8307692
10	1126542	3	8	80	1802	1437	1418	8993799	8307693	9230769
11	608103	1	8	75	1564	0	0	9606559	9230770	10153846
12	1218429	2	8	100	1000	1878	0	10826552	10153847	11076923
13	515937	2	8	50	1641	1053	0	11345367	11076924	12000000

Total number of pulses in waveform = 24

****

Type 5 Radar Waveform_14

Waveform Num = 14
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	215774	2	9	90	1807	1190	0	215774	0	749999
2	1121944	2	9	65	1729	1703	0	1340715	750000	1499999
3	690768	1	9	100	1314	0	0	2034915	1500000	2249999
4	845340	1	9	80	1695	0	0	2881569	2250000	2999999
5	284897	2	9	95	1528	1932	0	3168161	3000000	3749999
6	1068822	2	9	70	1020	1934	0	4240443	3750000	4499999
7	962387	1	9	80	1254	0	0	5205784	4500000	5249999
8	437306	2	9	95	1389	1538	0	5644344	5250000	5999999
9	799484	1	9	55	1304	0	0	6446755	6000000	6749999
10	742135	1	9	50	1180	0	0	7190194	6750000	7499999
11	1043420	1	9	60	1657	0	0	8234794	7500000	8249999
12	195082	2	9	75	1160	1126	0	8431533	8250000	8999999
13	1141593	1	9	65	1532	0	0	9575412	9000000	9749999
14	867074	3	9	60	1566	1062	1784	10444018	9750000	10499999
15	139455	3	9	100	1943	1403	1168	10587885	10500000	11249999
16	807107	2	9	50	1560	1982	0	11399506	11250000	11999999

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

Type 5 Radar Waveform_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	132261	1	10	80	1721	0	0	132261	0	799999
2	1189145	3	10	60	1982	1431	1463	1323127	800000	1599999
3	419680	3	10	50	1346	1120	1352	1747683	1600000	2399999
4	1436478	2	10	100	1610	1212	0	3187979	2400000	3199999
5	564242	3	10	70	1709	1060	1388	3755043	3200000	3999999
6	951174	2	10	70	1008	1412	0	4710374	4000000	4799999
7	331969	2	10	50	1275	1088	0	5044763	4800000	5599999
8	943809	2	10	100	1137	1077	0	5990935	5600000	6399999
9	944369	3	10	55	1252	1210	1531	6937518	6400000	7199999
10	593018	3	10	90	1536	1433	1708	7534529	7200000	7999999
11	934163	2	10	85	1439	1483	0	8473369	8000000	8799999
12	438385	3	10	95	1025	1247	1606	8914676	8800000	9599999
13	877783	2	10	80	1418	1729	0	9796337	9600000	10399999
14	935416	3	10	90	1559	1855	1597	10734900	10400000	11199999
15	844832	3	10	70	1044	1565	1782	11584743	11200000	11999999

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

Type 5 Radar Waveform_16

Waveform Num = 16
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	474002	3	12	100	1358	1069	1428	474002	0	857142
2	1027666	2	12	80	1565	1047	0	1505523	857143	1714285
3	295683	2	12	75	1356	1365	0	1803818	1714286	2571428
4	806978	2	12	55	1232	1290	0	2613517	2571429	3428571
5	1422621	2	12	85	1319	1779	0	4038660	3428572	4285714
6	510500	3	12	70	1985	1624	1023	4552258	4285715	5142857
7	664033	3	12	85	1328	1588	1458	5220923	5142858	6000000
8	1203920	3	12	90	1195	1687	1626	6429217	6000001	6857143
9	599031	3	12	100	1857	1884	1308	7032756	6857144	7714286
10	1265563	3	12	60	1182	1382	1448	8303368	7714287	8571429
11	722968	1	12	55	1030	0	0	9030348	8571430	9428572
12	1089812	1	12	75	1380	0	0	10121190	9428573	10285715
13	711274	3	12	80	1262	1700	1260	10833844	10285716	11142858
14	358365	1	12	80	1940	0	0	11196431	11142859	12000001

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

Type 5 Radar Waveform_17

Waveform Num = 17
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	171519	2	14	95	1316	1855	0	171519	0	599999
2	979383	3	14	55	1854	1428	1381	1154073	600000	1199999
3	470679	3	14	50	1405	1348	1213	1629415	1200000	1799999
4	170623	1	14	65	1965	0	0	1804004	1800000	2399999
5	869148	3	14	70	1295	1252	1524	2675117	2400000	2999999
6	816267	3	14	60	1060	1552	1398	3495455	3000000	3599999
7	557075	3	14	65	1299	1268	1762	4056540	3600000	4199999
8	439659	1	14	95	1995	0	0	4500528	4200000	4799999
9	320621	1	14	75	1802	0	0	4823144	4800000	5399999
10	1110661	2	14	80	1900	1461	0	5935607	5400000	5999999
11	146333	1	14	95	1350	0	0	6085301	6000000	6599999
12	695403	1	14	95	1030	0	0	6782054	6600000	7199999
13	836698	3	14	55	1514	1770	1510	7619782	7200000	7799999
14	331550	1	14	95	1326	0	0	7956126	7800000	8399999
15	942139	1	14	80	1497	0	0	8899591	8400000	8999999
16	527046	1	14	80	1319	0	0	9428134	9000000	9599999
17	266859	2	14	100	1757	1526	0	9696312	9600000	10199999
18	926364	3	14	85	1764	1298	1841	10625959	10200000	10799999
19	412622	3	14	95	1548	1694	1225	11043484	10800000	11399999
20	648775	2	14	70	1735	1879	0	11696726	11400000	11999999

Total number of pulses in waveform = 40
****

Type 5 Radar Waveform_18

Waveform Num = 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	129097	2	17	70	1106	1432	0	129097	0	923076
2	1669899	1	17	90	1054	0	0	1801534	923077	1846153
3	525821	2	17	90	1996	1003	0	2328409	1846154	2769230
4	1158473	1	17	90	1094	0	0	3489881	2769231	3692307
5	235654	2	17	70	1089	1788	0	3726629	3692308	4615384
6	1551574	3	17	85	1878	1049	1243	5281080	4615385	5538461
7	609069	2	17	80	1822	1037	0	5894319	5538462	6461538
8	1130240	1	17	60	1046	0	0	7027418	6461539	7384615
9	695230	1	17	65	1081	0	0	7723694	7384616	8307692
10	1209495	1	17	75	1872	0	0	8934270	8307693	9230769
11	604108	1	17	65	1516	0	0	9540250	9230770	10153846
12	790814	2	17	50	1852	1129	0	10332580	10153847	11076923
13	994952	3	17	80	1008	1626	1173	11330513	11076924	12000000

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_19

Waveform Num = 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	1182741	2	18	80	1243	1421	0	1182741	0	1499999
2	1145895	3	18	80	1949	1974	1500	2331300	1500000	2999999
3	1177196	1	18	55	1640	0	0	3513919	3000000	4499999
4	1300573	2	18	65	1565	1390	0	4816132	4500000	5999999
5	2587740	1	18	75	1199	0	0	7406827	6000000	7499999
6	104416	2	18	90	1604	1458	0	7512442	7500000	8999999
7	2029129	1	18	85	1808	0	0	9544633	9000000	10499999
8	2234888	2	18	70	1482	1135	0	11781329	10500000	11999999

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

Type 5 Radar Waveform_20

Waveform Num = 20
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	225613	2	20	75	1332	1912	0	225613	0	631578
2	840650	1	20	60	1485	0	0	1069507	631579	1263157
3	202477	1	20	90	1167	0	0	1273469	1263158	1894736
4	1184060	2	20	50	1861	1028	0	2458696	1894737	2526315
5	326987	3	20	90	1674	1418	1116	2788572	2526316	3157894
6	785394	3	20	100	1146	1077	1471	3578174	3157895	3789473
7	597695	1	20	100	1849	0	0	4179563	3789474	4421052
8	332222	3	20	95	1661	1761	1491	4513634	4421053	5052631
9	1047304	3	20	50	1041	1331	1450	5565851	5052632	5684210
10	548104	2	20	75	1524	1245	0	6117777	5684211	6315789
11	517683	3	20	65	1394	1391	1360	6638229	6315790	6947368
12	323708	1	20	95	1421	0	0	6966082	6947369	7578947
13	1131082	1	20	75	1023	0	0	8098585	7578948	8210526
14	701869	3	20	100	1131	1023	1871	8801477	8210527	8842105
15	640498	1	20	60	1795	0	0	9446000	8842106	9473684
16	521040	3	20	70	1017	1014	1703	9968835	9473685	10105263
17	301452	2	20	55	1880	1220	0	10274021	10105264	10736842
18	766834	3	20	85	1533	1357	1935	11043955	10736843	11368421
19	714044	2	20	75	1797	1733	0	11762824	11368422	12000000

Total number of pulses in waveform = 40
****

Type 5 Radar Waveform_21

Waveform Num = 21
Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	766136	2	5	50	1007	1487	0	766136	0	999999
2	689786	3	5	80	1078	1534	1216	1458416	1000000	1999999
3	1156168	2	5	95	1843	1874	0	2618412	2000000	2999999
4	1238017	1	5	50	1430	0	0	3860146	3000000	3999999
5	548976	1	5	50	1774	0	0	4410552	4000000	4999999
6	1288438	3	5	90	1432	1940	1912	5700764	5000000	5999999
7	517123	2	5	75	1826	1058	0	6223171	6000000	6999999
8	1554203	1	5	100	1630	0	0	7780258	7000000	7999999
9	664187	1	5	75	1779	0	0	8446075	8000000	8999999
10	806272	2	5	75	1650	1817	0	9254126	9000000	9999999
11	1561049	1	5	65	1191	0	0	10818642	10000000	10999999
12	251677	3	5	95	1321	1978	1314	11071510	11000000	11999999

Total number of pulses in waveform = 22
****

Type 5 Radar Waveform_22

Waveform Num = 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	167270	2	6	55	1716	1817	0	167270	0	749999
2	1303043	2	6	65	1234	1061	0	1473846	750000	1499999
3	480911	1	6	100	1457	0	0	1957052	1500000	2249999
4	520573	2	6	70	1037	1435	0	2479082	2250000	2999999
5	548757	2	6	95	1195	1305	0	3030311	3000000	3749999
6	840088	1	6	65	1375	0	0	3872899	3750000	4499999
7	1174495	2	6	85	1822	1844	0	5048769	4500000	5249999
8	805337	2	6	65	1674	1532	0	5857772	5250000	5999999
9	431820	1	6	95	1100	0	0	6292798	6000000	6749999
10	497354	3	6	85	1407	1019	1598	6791252	6750000	7499999
11	1021858	3	6	70	1830	1701	1025	7817134	7500000	8249999
12	790088	2	6	70	1051	1385	0	8611778	8250000	8999999
13	571269	3	6	100	1114	1139	1761	9185483	9000000	9749999
14	1146228	2	6	75	1921	1979	0	10335725	9750000	10499999
15	714570	2	6	90	1938	1439	0	11054195	10500000	11249999
16	271115	1	6	85	1450	0	0	11328687	11250000	11999999

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

Type 5 Radar Waveform_23

Waveform Num = 23
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	104201	1	8	75	1250	0	0	104201	0	666666
2	1065178	2	8	80	1480	1571	0	1170629	666667	1333333
3	543051	3	8	70	1218	1361	1748	1716731	1333334	2000000
4	674823	3	8	70	1853	1420	2000	2395881	2000001	2666667
5	768768	1	8	95	1557	0	0	3169922	2666668	3333334
6	240253	1	8	50	1847	0	0	3411732	3333335	4000001
7	615568	2	8	90	1216	1899	0	4029147	4000002	4666668
8	796588	2	8	70	1511	1486	0	4828850	4666669	5333335
9	1101672	3	8	65	1117	1325	1123	5933519	5333336	6000002
10	318608	3	8	75	1355	1231	1860	6255692	6000003	6666669
11	872765	1	8	65	1897	0	0	7132903	6666670	7333336
12	690330	3	8	100	1239	1912	1573	7825130	7333337	8000003
13	813303	1	8	55	1640	0	0	8643157	8000004	8666670
14	104086	1	8	55	1922	0	0	8748883	8666671	9333337
15	975141	3	8	50	1037	1668	1035	9725946	9333338	10000004
16	392684	2	8	100	1227	1577	0	10122370	10000005	10666671
17	1066452	2	8	90	1981	1658	0	11191626	10666672	11333338
18	652390	2	8	90	1325	1958	0	11847655	11333339	12000005

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

Type 5 Radar Waveform_24

Waveform Num = 24
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	69013	2	9	80	1826	1749	0	69013	0	857142
2	1343344	3	9	80	1952	1138	1987	1415932	857143	1714285
3	523618	3	9	50	1165	1170	1179	1944627	1714286	2571428
4	1158143	1	9	90	1800	0	0	3106284	2571429	3428571
5	994580	1	9	60	1007	0	0	4102664	3428572	4285714
6	618870	2	9	75	1325	1406	0	4722541	4285715	5142857
7	1145823	2	9	75	1359	1695	0	5871095	5142858	6000000
8	280468	3	9	85	1116	1281	1892	6154617	6000001	6857143
9	1240054	2	9	95	1462	1859	0	7398960	6857144	7714286
10	828753	2	9	50	1902	1182	0	8231034	7714287	8571429
11	961765	1	9	95	1394	0	0	9195883	8571430	9428572
12	415259	3	9	55	1774	1097	1579	9612536	9428573	10285715
13	1265805	3	9	50	1735	1929	1263	10882791	10285716	11142858
14	697771	2	9	75	1966	1299	0	11585489	11142859	12000001

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

Type 5 Radar Waveform_25

Waveform Num = 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	38092	3	10	100	1524	1004	1071	38092	0	1090908
2	1889990	2	10	50	1402	1915	0	1931681	1090909	2181817
3	1310133	2	10	95	1956	1113	0	3245131	2181818	3272726
4	659239	1	10	85	1992	0	0	3907439	3272727	4363635
5	1334660	1	10	75	1564	0	0	5244091	4363636	5454544
6	812190	2	10	55	1059	1361	0	6057845	5454545	6545453
7	504911	2	10	50	1810	1053	0	6565176	6545454	7636362
8	2073605	2	10	100	1383	1272	0	8641644	7636363	8727271
9	456623	3	10	65	1383	1226	1572	9100922	8727272	9818180
10	1721551	1	10	70	1177	0	0	10826654	9818181	10909089
11	597193	2	10	90	1866	1644	0	11425024	10909090	11999998

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

Type 5 Radar Waveform_26

Waveform Num = 26
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	66961	1	12	50	1164	0	0	66961	0	749999
2	1223872	2	12	85	1386	1280	0	1291997	750000	1499999
3	381641	2	12	50	1535	1033	0	1676304	1500000	2249999
4	596288	2	12	55	1252	1054	0	2275160	2250000	2999999
5	1020781	2	12	50	1652	1956	0	3298247	3000000	3749999
6	858468	3	12	90	1468	1064	1782	4160323	3750000	4499999
7	548756	1	12	60	1425	0	0	4713393	4500000	5249999
8	756149	1	12	80	1852	0	0	5470967	5250000	5999999
9	1002019	3	12	80	1037	1815	1590	6474838	6000000	6749999
10	275273	1	12	60	1461	0	0	6754553	6750000	7499999
11	1190608	3	12	55	1317	1320	1797	7946622	7500000	8249999
12	938342	2	12	75	1711	1396	0	8889398	8250000	8999999
13	349739	2	12	60	1593	1391	0	9242244	9000000	9749999
14	1016030	2	12	60	1724	1530	0	10261258	9750000	10499999
15	858727	3	12	95	1484	1762	1834	11123239	10500000	11249999
16	585129	2	12	100	1507	1564	0	11713448	11250000	11999999

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

Type 5 Radar Waveform_27

Waveform Num = 27
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	205955	2	14	65	1910	1200	0	205955	0	857142
2	690303	3	14	55	1605	1240	1122	899368	857143	1714285
3	999935	3	14	65	1639	1375	1818	1903270	1714286	2571428
4	1352625	3	14	80	1161	1409	1972	3260727	2571429	3428571
5	990150	2	14	60	1494	1463	0	4255419	3428572	4285714
6	398282	2	14	90	1632	1824	0	4656658	4285715	5142857
7	760571	3	14	100	1109	1813	1082	5420685	5142858	6000000
8	1372829	3	14	95	1646	1468	1883	6797518	6000001	6857143
9	743448	1	14	90	1017	0	0	7545963	6857144	7714286
10	766803	2	14	70	1935	1358	0	8313783	7714287	8571429
11	332414	3	14	100	1083	1011	1812	8649490	8571430	9428572
12	869314	3	14	50	1926	1913	1133	9522710	9428573	10285715
13	1148692	3	14	75	1599	1322	1180	10676374	10285716	11142858
14	876306	1	14	100	1093	0	0	11556781	11142859	12000001

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

Type 5 Radar Waveform_28

Waveform Num = 28
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	219947	3	17	100	1190	1691	1336	219947	0	1499999
2	2093450	3	17	100	1653	1969	1071	2317614	1500000	2999999
3	760625	3	17	70	1665	1864	1405	3082932	3000000	4499999
4	2277869	1	17	65	1123	0	0	5365735	4500000	5999999
5	1360572	1	17	50	1698	0	0	6727430	6000000	7499999
6	2067310	1	17	75	1230	0	0	8796438	7500000	8999999
7	809465	3	17	95	1915	1447	1534	9607133	9000000	10499999
8	1974202	3	17	70	1119	1828	1962	11586231	10500000	11999999

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

Type 5 Radar Waveform_29

Waveform Num = 29
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	707165	2	18	100	1218	1109	0	707165	0	799999
2	809715	1	18	100	1667	0	0	1519207	800000	1599999
3	370020	2	18	75	1593	1144	0	1890894	1600000	2399999
4	1026060	3	18	80	1505	1349	1806	2919691	2400000	3199999
5	341511	3	18	75	1037	1413	1189	3265862	3200000	3999999
6	1238138	3	18	65	1900	1166	1729	4507639	4000000	4799999
7	638805	1	18	55	1637	0	0	5151239	4800000	5599999
8	991278	2	18	85	1171	1724	0	6144154	5600000	6399999
9	433132	2	18	70	1598	1306	0	6580181	6400000	7199999
10	949957	2	18	80	1821	1419	0	7533042	7200000	7999999
11	1196534	3	18	80	1362	1487	1012	8732816	8000000	8799999
12	477720	1	18	100	1702	0	0	9214397	8800000	9599999
13	514924	1	18	75	1519	0	0	9731023	9600000	10399999
14	962252	1	18	65	1839	0	0	10694794	10400000	11199999
15	996859	2	18	60	1000	1574	0	11693492	11200000	11999999

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

Type 5 Radar Waveform_30

Waveform Num = 30
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	92765	3	20	85	1063	1105	1926	92765	0	1333332
2	2563486	2	20	85	1107	1913	0	2660345	1333333	2666665
3	817513	2	20	90	1368	1732	0	3480878	2666666	3999998
4	749653	3	20	85	1798	1143	1152	4233631	3999999	5333331
5	1142499	2	20	70	1017	1593	0	5380223	5333332	6666664
6	1959604	1	20	90	1881	0	0	7342437	6666665	7999997
7	1724455	1	20	75	1679	0	0	9068773	7999998	9333330
8	1164409	3	20	100	1920	1290	1733	10234861	9333331	10666663
9	1253542	1	20	70	2000	0	0	11493346	10666664	11999996

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

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491	1	16	5512	1
2	5492	1	17	5514	1
3	5493	1	18	5516	1
4	5494	1	19	5517	1
5	5495	1	20	5518	1
6	5496	1	21	5519	1
7	5497	1	22	5520	1
8	5498	1	23	5522	1
9	5499	1	24	5523	1
10	5500	1	25	5524	1
11	5502	1	26	5525	1
12	5504	1	27	5526	1
13	5506	1	28	5527	1
14	5508	1	29	5528	1
15	5510	1	30	5529	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5523	3	6	5536	18
18	5538	54	14	5531	42
26	5531	78	17	5485	51
34	5494	102	23	5517	69
43	5528	129	34	5539	102
45	5495	135	44	5529	132
46	5489	138	51	5519	153
59	5537	177	55	5508	165
75	5493	225	62	5515	186
82	5503	246	67	5533	201
83	5510	249	70	5513	210
84	5506	252	75	5489	225
93	5535	279	79	5526	237
94	5522	282	81	5516	243
--	--	--	83	5509	249
--	--	--	97	5497	291

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5513	54	17	5481	51
19	5535	57	31	5480	93
38	5496	114	45	5494	135
40	5538	120	46	5486	138
44	5524	132	53	5495	159
48	5519	144	61	5516	183
50	5490	150	67	5500	201
63	5485	189	69	5518	207
88	5518	264	82	5502	246
89	5525	267	90	5540	270
98	5529	294	91	5508	273
99	5526	297	98	5503	294

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5486	9	13	5507	39
16	5538	48	15	5477	45
22	5521	66	32	5474	96
32	5480	96	40	5514	120
35	5483	105	46	5485	138
39	5530	117	54	5500	162
55	5520	165	58	5523	174
65	5502	195	59	5518	177
69	5508	207	62	5471	186
74	5527	222	79	5527	237
75	5519	225	93	5517	279
76	5507	228	--	--	--
82	5484	246	--	--	--
83	5535	249	--	--	--
89	5516	267	--	--	--
97	5499	291	--	--	--
99	5487	297	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5527	15	4	5479	12
14	5507	42	7	5525	21
23	5492	69	24	5523	72
35	5489	105	26	5515	78
52	5506	156	27	5493	81
53	5470	159	32	5526	96
59	5468	177	37	5505	111
68	5498	204	44	5518	132
69	5515	207	45	5498	135
73	5481	219	53	5519	159
77	5523	231	54	5520	162
81	5472	243	55	5485	165
83	5491	249	58	5486	174
--	--	--	63	5508	189
--	--	--	68	5482	204
--	--	--	69	5521	207
--	--	--	72	5489	216
--	--	--	80	5513	240
--	--	--	84	5478	252
--	--	--	93	5487	279
--	--	--	96	5483	288
--	--	--	99	5477	297

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5502	18	0	5480	0
8	5495	24	1	5477	3
11	5499	33	13	5485	39
16	5522	48	16	5521	48
27	5486	81	24	5471	72
29	5501	87	26	5511	78
36	5489	108	33	5486	99
41	5475	123	35	5499	105
43	5516	129	44	5481	132
62	5471	186	63	5475	189
64	5492	192	74	5495	222
69	5473	207	80	5497	240
77	5487	231	88	5520	264
85	5512	255	91	5526	273
90	5491	270	97	5473	291
91	5511	273	99	5503	297

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5497	6	19	5503	57
10	5482	30	24	5507	72
14	5531	42	28	5484	84
26	5494	78	29	5487	87
48	5516	144	41	5534	123
50	5479	150	53	5519	159
54	5505	162	57	5511	171
56	5473	168	59	5493	177
71	5530	213	71	5490	213
73	5475	219	73	5517	219
90	5524	270	78	5513	234
96	5504	288	80	5520	240
--	--	--	85	5508	255
--	--	--	93	5496	279

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5478	0	5	5484	15
2	5494	6	15	5529	45
5	5481	15	19	5490	57
7	5491	21	25	5480	75
13	5508	39	27	5518	81
17	5480	51	29	5535	87
34	5535	102	48	5501	144
37	5526	111	51	5511	153
39	5485	117	58	5500	174
46	5511	138	60	5530	180
50	5496	150	63	5513	189
63	5492	189	69	5503	207
86	5495	258	72	5514	216
89	5507	267	86	5481	258
90	5527	270	90	5525	270
--	--	--	97	5528	291

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5484	24	1	5532	3
10	5510	30	5	5515	15
15	5520	45	9	5511	27
17	5532	51	13	5506	39
20	5519	60	32	5491	96
23	5480	69	36	5519	108
75	5539	225	38	5524	114
89	5524	267	41	5527	123
91	5515	273	42	5497	126
97	5493	291	43	5494	129
--	--	--	44	5520	132
--	--	--	51	5513	153
--	--	--	61	5535	183
--	--	--	62	5492	186
--	--	--	66	5539	198
--	--	--	70	5482	210
--	--	--	74	5488	222
--	--	--	81	5500	243
--	--	--	97	5512	291
--	--	--	98	5525	294
--	--	--			

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5517	3	2	5528	6
4	5524	12	9	5491	27
8	5527	24	25	5493	75
9	5493	27	32	5512	96
33	5535	99	46	5517	138
37	5497	111	54	5541	162
48	5508	144	63	5538	189
54	5532	162	66	5529	198
62	5492	186	72	5544	216
66	5504	198	87	5535	261
88	5537	264	88	5509	264
91	5539	273	95	5546	285
97	5544	291	--	--	--
98	5500	294	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5516	12	19	5529	57
6	5508	18	24	5502	72
13	5541	39	28	5519	84
15	5527	45	42	5506	126
24	5493	72	45	5499	135
37	5519	111	49	5523	147
39	5524	117	59	5511	177
42	5521	126	63	5497	189
46	5545	138	67	5528	201
59	5536	177	70	5526	210
63	5495	189	71	5517	213
66	5518	198	77	5491	231
81	5522	243	80	5547	240
86	5544	258	83	5538	249
87	5512	261	89	5543	267
93	5496	279	90	5507	270
99	5539	297	92	5535	276

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5500	12	1	5491	3
5	5542	15	5	5531	15
7	5501	21	10	5533	30
38	5535	114	13	5528	39
42	5512	126	34	5539	102
48	5534	144	42	5526	126
53	5491	159	55	5520	165
54	5509	162	57	5503	171
64	5522	192	62	5519	186
66	5490	198	65	5514	195
81	5526	243	74	5535	222
85	5544	255	75	5497	225
91	5537	273	78	5495	234
--	--	--	83	5524	249
--	--	--	91	5545	273
--	--	--	95	5490	285

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5521	36	3	5550	9
19	5527	57	5	5494	15
32	5550	96	6	5504	18
42	5538	126	12	5541	36
47	5539	141	37	5497	111
53	5522	159	48	5500	144
57	5498	171	77	5543	231
59	5544	177	90	5503	270
60	5532	180	95	5510	285
69	5510	207	99	5498	297
80	5502	240	--	--	--
81	5519	243	--	--	--
82	5535	246	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5528	3	3	5520	9
14	5527	42	12	5494	36
19	5511	57	15	5530	45
21	5537	63	27	5552	81
28	5512	84	30	5507	90
31	5507	93	36	5498	108
35	5541	105	44	5528	132
37	5502	111	61	5503	183
39	5539	117	77	5542	231
53	5551	159	78	5501	234
64	5509	192	81	5505	243
67	5547	201	84	5504	252
98	5535	294	88	5506	264

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5503	3	20	5517	60
8	5523	24	29	5500	87
15	5542	45	49	5523	147
20	5515	60	50	5534	150
21	5548	63	68	5515	204
23	5502	69	70	5502	210
31	5504	93	93	5509	279
32	5521	96	95	5546	285
36	5517	108	--	--	--
39	5526	117	--	--	--
59	5497	177	--	--	--
72	5532	216	--	--	--
81	5528	243	--	--	--
90	5539	270	--	--	--
94	5530	282	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5499	54	5	5551	15
23	5500	69	12	5525	36
36	5526	108	20	5499	60
37	5498	111	28	5532	84
40	5531	120	30	5522	90
55	5512	165	41	5557	123
75	5525	225	44	5537	132
78	5514	234	45	5520	135
85	5549	255	52	5527	156
87	5528	261	62	5524	186
94	5552	282	77	5541	231
95	5501	285	79	5534	237
98	5504	294	--	--	--

6. CONCLUSION

The data collected relate only the item(s) tested and show that the **Wireless LAN Access Point**

FCC ID: Q9DAPINR108109 is in compliance with Part 15E of the FCC Rules.

The End