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Report No.: 1605RSU01301
Report Version: V02
Issue Date: 07-15-2016

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

FCC ID:	Q9DAPINR15515P
APPLICANT:	Aruba Networks, Inc

Application Type:	Certification
Product:	Wireless Remote Access Point
Model No.:	APINR155, APINR15P
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
1605RSU01301	Rev. 01	Initial report	06-02-2016	Invalid
1605RSU01301	Rev. 02	Revise some error and add some testing	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.:	APINR155, APINR15P
FCC ID:	Q9DAPINR15515P
Test Device Serial No.:	CC0003551 ☒ 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.	APINR155, APINR15P
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 134.0 seconds to complete its power-on cycle
Minimum E.I.R.P Output Power (DFS Band)	23.30dBm
Maximum E.I.R.P Output Power (DFS Band)	26.16dBm
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)	Note
Integral	Omni Directional	3.0	5150 - 5850	3x per unit

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 2	Port 0	Port 1	Port 2

Note: The radar test waveforms shall be injected into the 5GHz RF port 0 & 5GHz RF port 1 & 5GHz RF port 2 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.
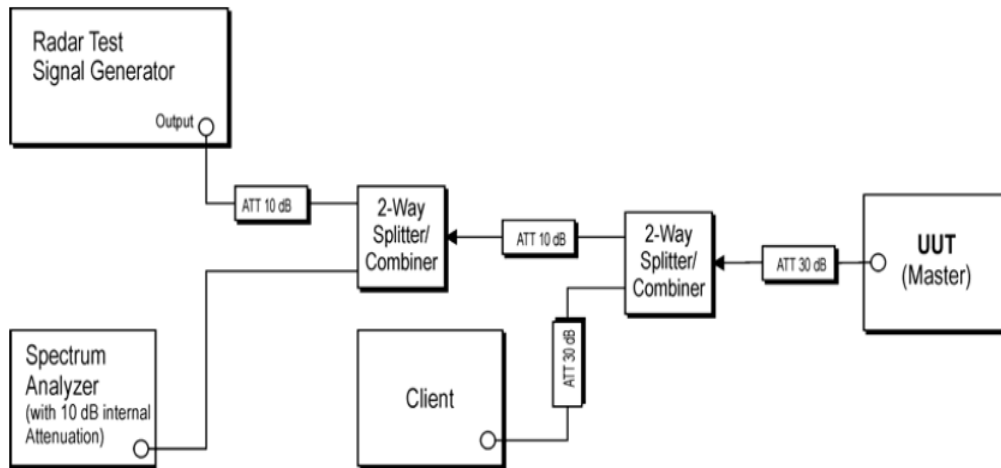
Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters
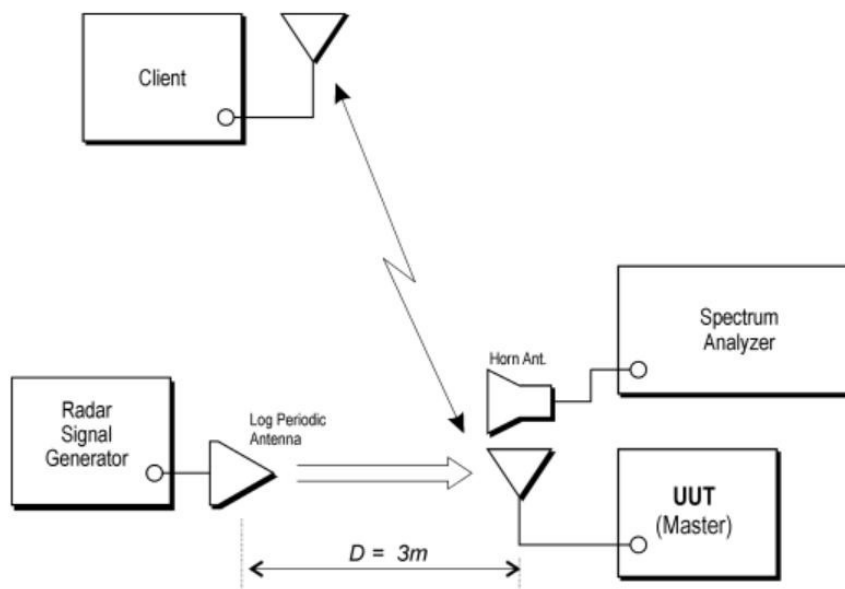
Figure 3-2: Radiated Test Setup where UUT is a Bridge or Mesh mode and Radar Test Waveforms are injected into the UUT

Conducted Test Setup Photo

Radiated Test Setup Photo

Radiated Spurious Emission - Test Setup Photo
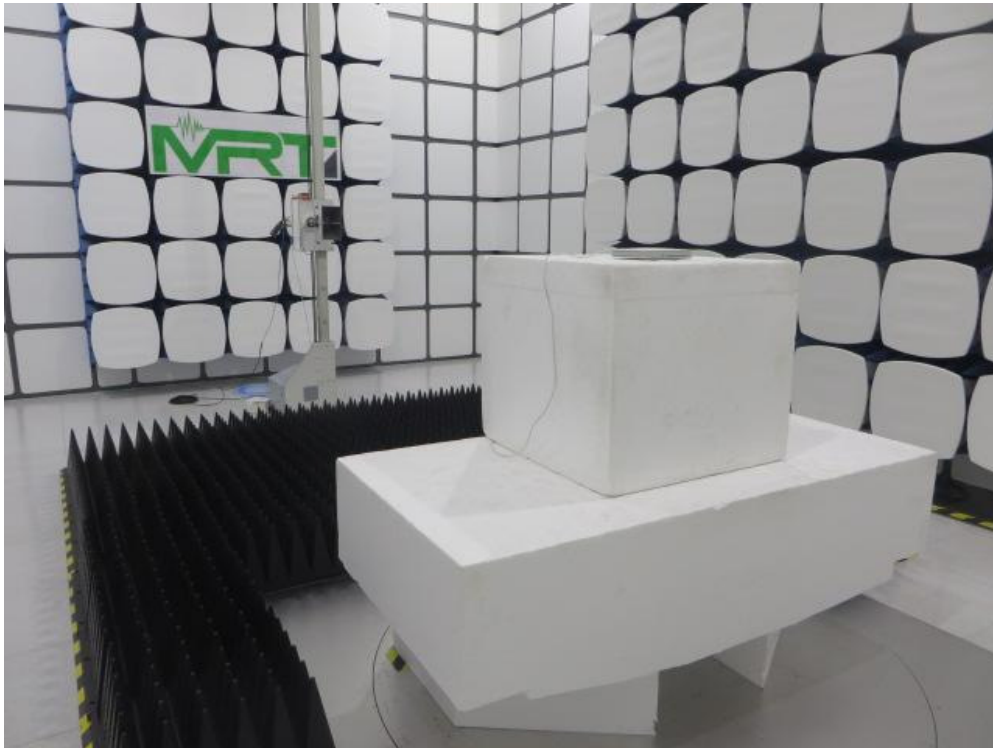
4. TEST EQUIPMENT CALIBRATION DATE

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: **Q9DAPINR15515P**
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.
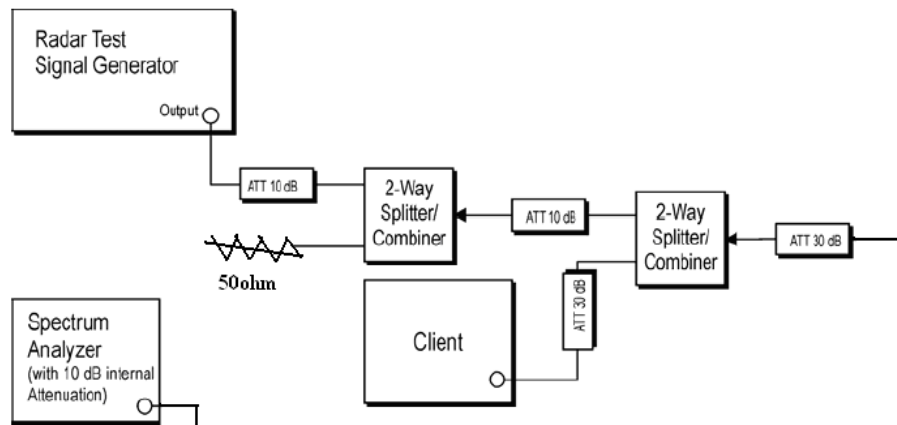
Figure 3-2: Conducted Test Setup

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
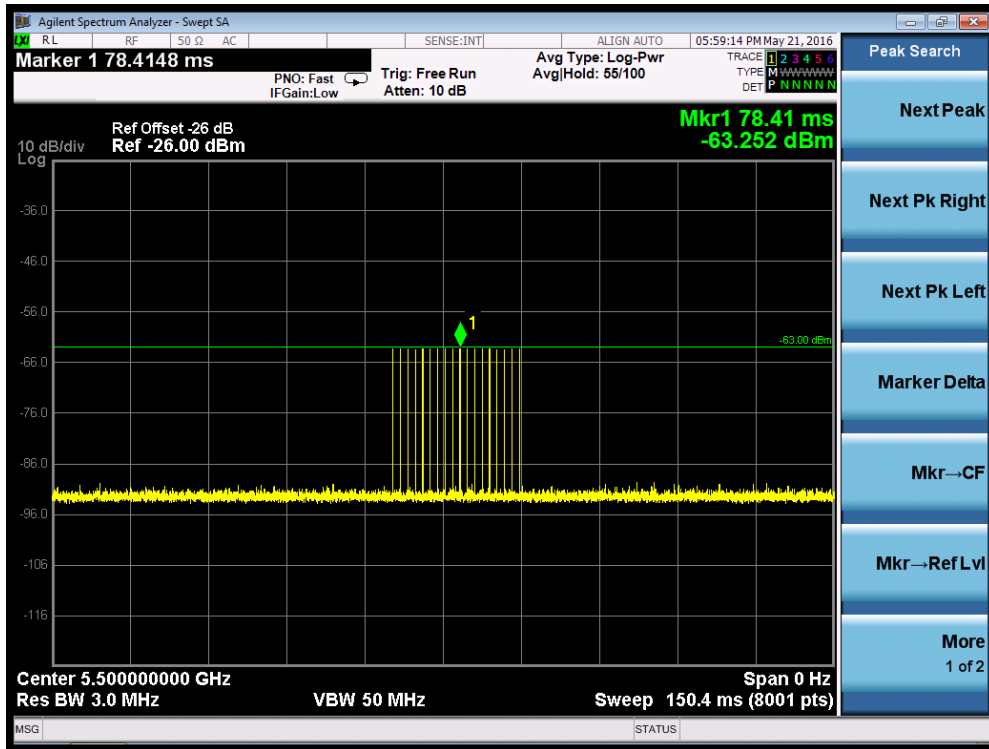
Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency
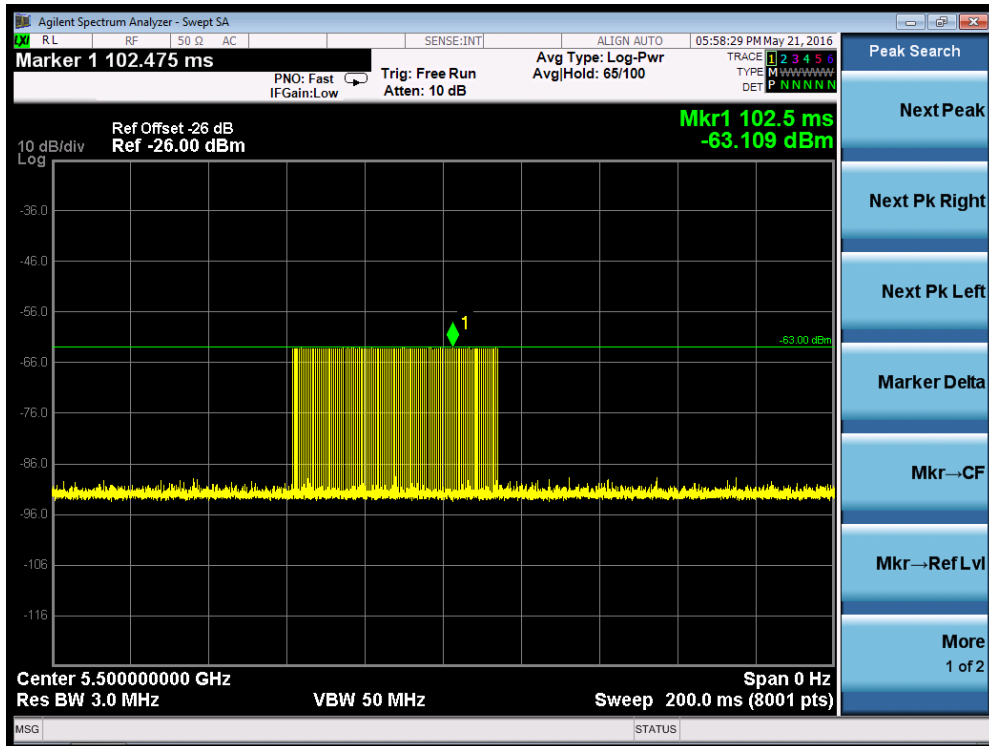
PRI = 538us and the number of pulses = 99

Radar #1(Test B) DFS detection threshold level and the burst of pulses on the Channel frequency
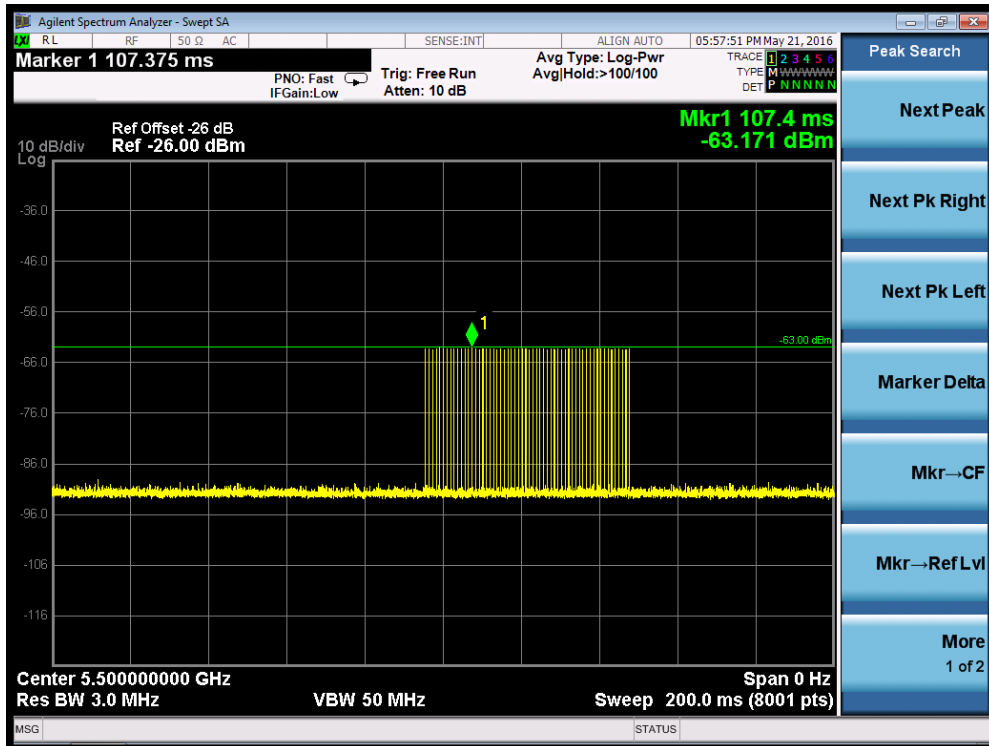
PRI = 939us and the number of pulses = 57

Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency
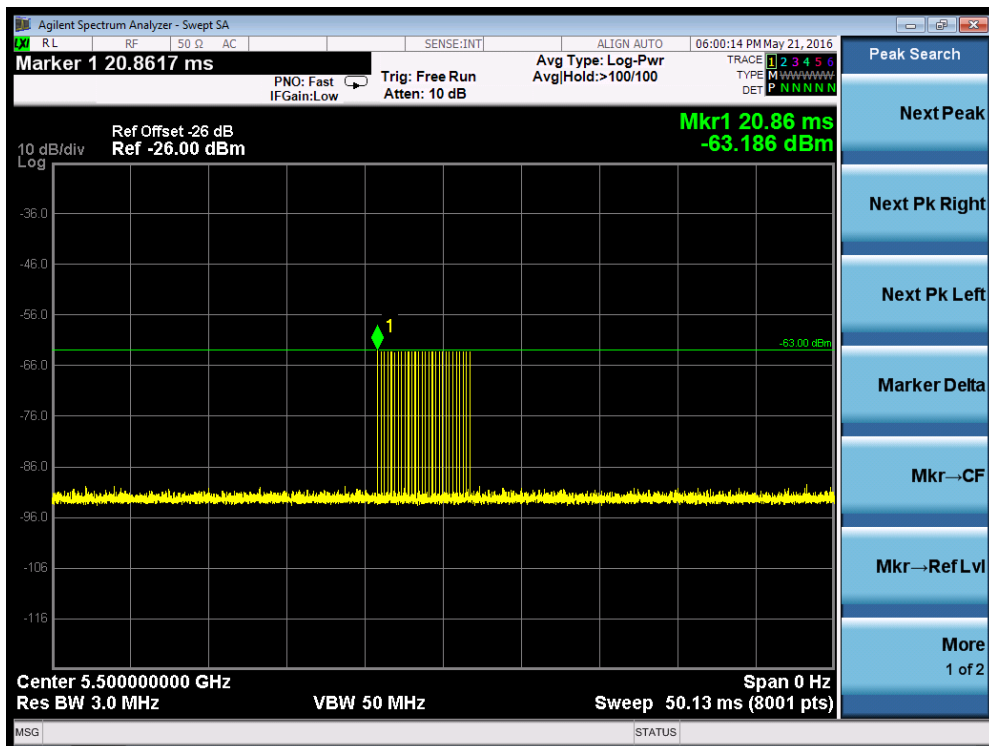
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency
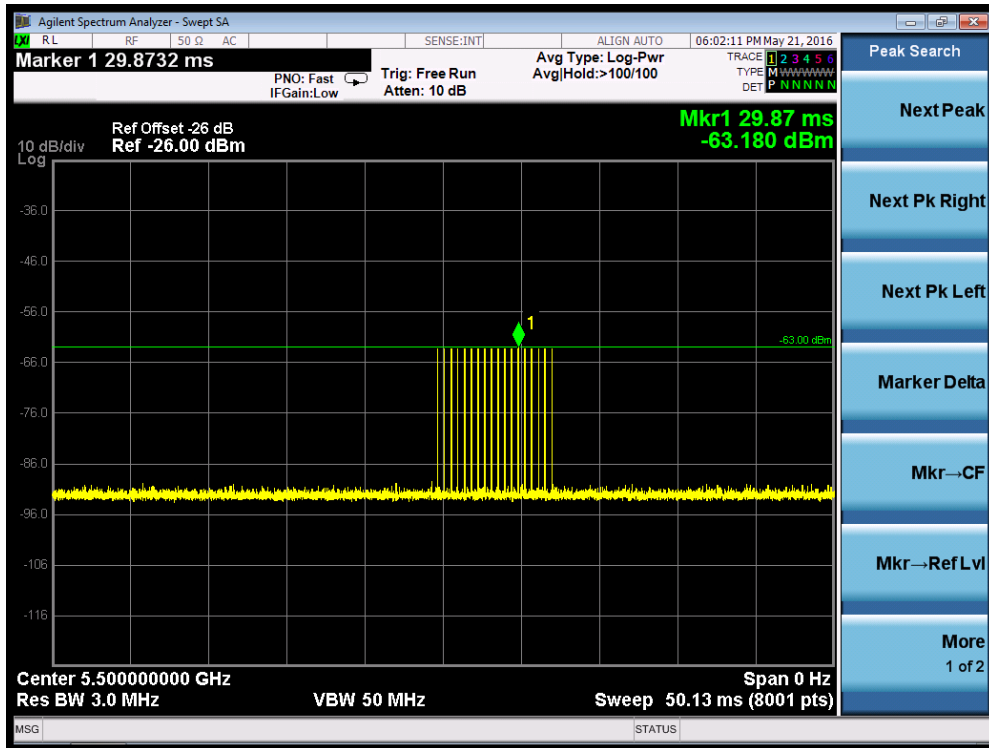
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency
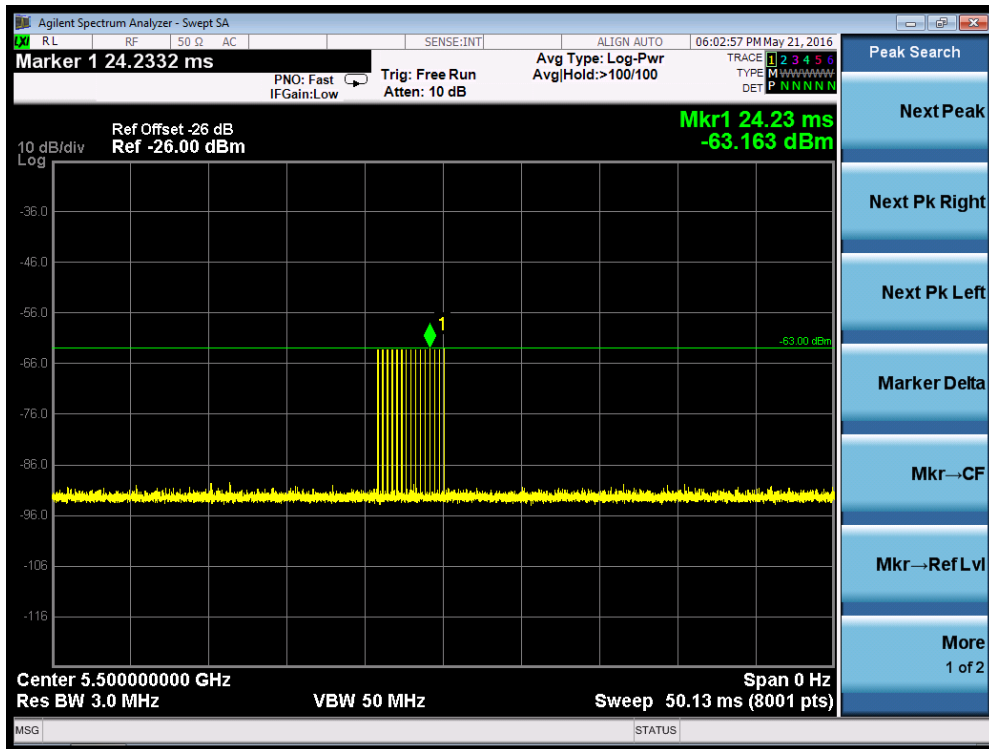
Radar #5 DFS detection threshold level and 12sec long burst on the Channel frequency
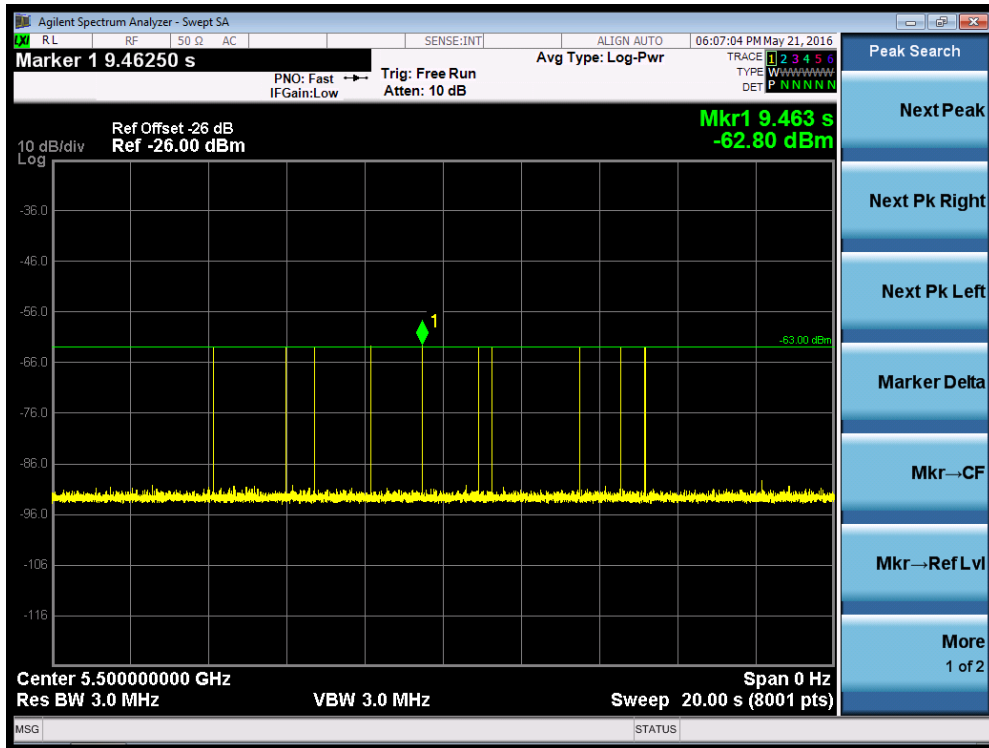
Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth
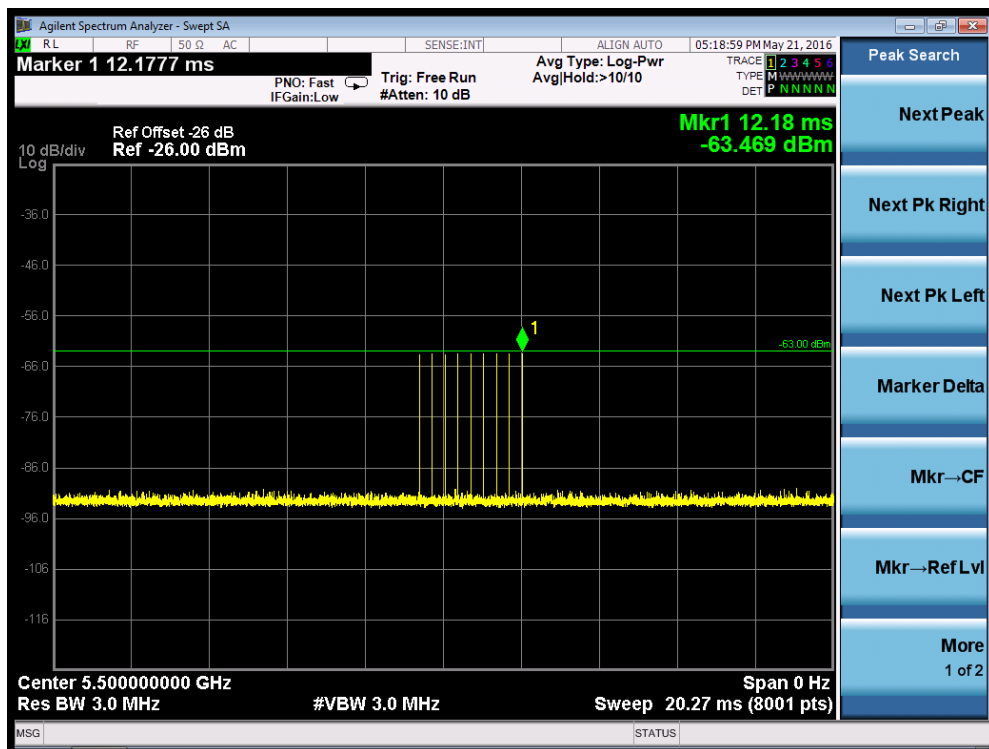
5.3. Channel Loading Test Result

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

Channel Loading Plot - 802.11n-HT20 5500MHz	
Plot 1	Plot 2
Packet Ratio (%)	Requirement Ratio (%)
30.20	> 17
Calculation form Plot 2: Time On = 11067 Points * (400ms / 40001 Points) = 110.67ms Calculation form Plot 1: Packet Radio= 110.67ms / 366.4ms*100% = 30.20%	
Test Result	Pass

Channel Loading Plot - 802.11n-HT40 5510MHz	
Plot 1	Plot 2
Packet Ratio (%)	Requirement Ratio (%)
31.18	> 17
Calculation form Plot 2: Time On = 12084 Points * (552ms / 40001 Points) = 166.76ms Calculation form Plot 1: Packet Radio= 166.76ms / 534.9ms * 100% = 31.18%	
Test Result	Pass
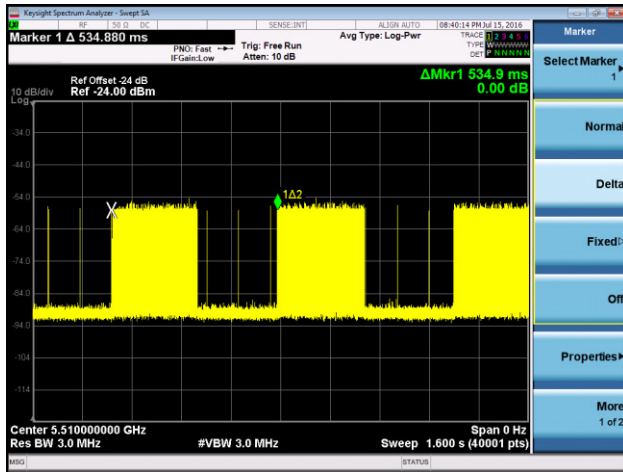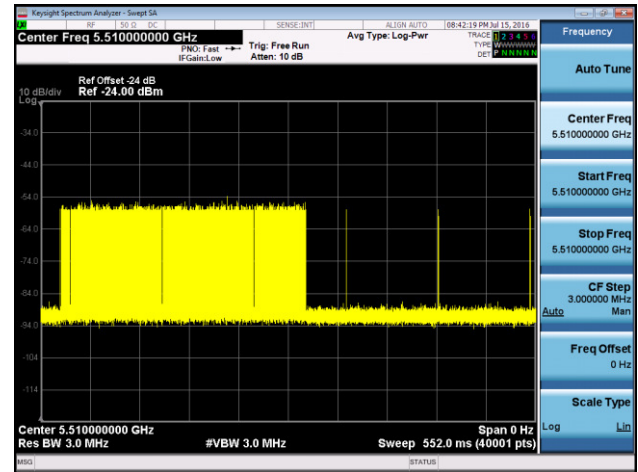
5.4. UNII Detection Bandwidth Measurement

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 stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

5.4.3. 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 = 17.90MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 17.90MHz x 100% = 17.90MHz											
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 17.90MHz.

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 = 36.44MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 36.44MHz x 100% = 36.44MHz											
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 36.44MHz.

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 (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.
2. The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.
3. Confirm that the EUT initiates transmission on the channel. Measurement system showing its nominal noise floor is marker1.

5.5.3. 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 (134.0 sec). Initial beacons/data transmissions are indicated by marker 1 (194.0 sec).

Initial Channel Availability Check Time for 802.11n-HT20
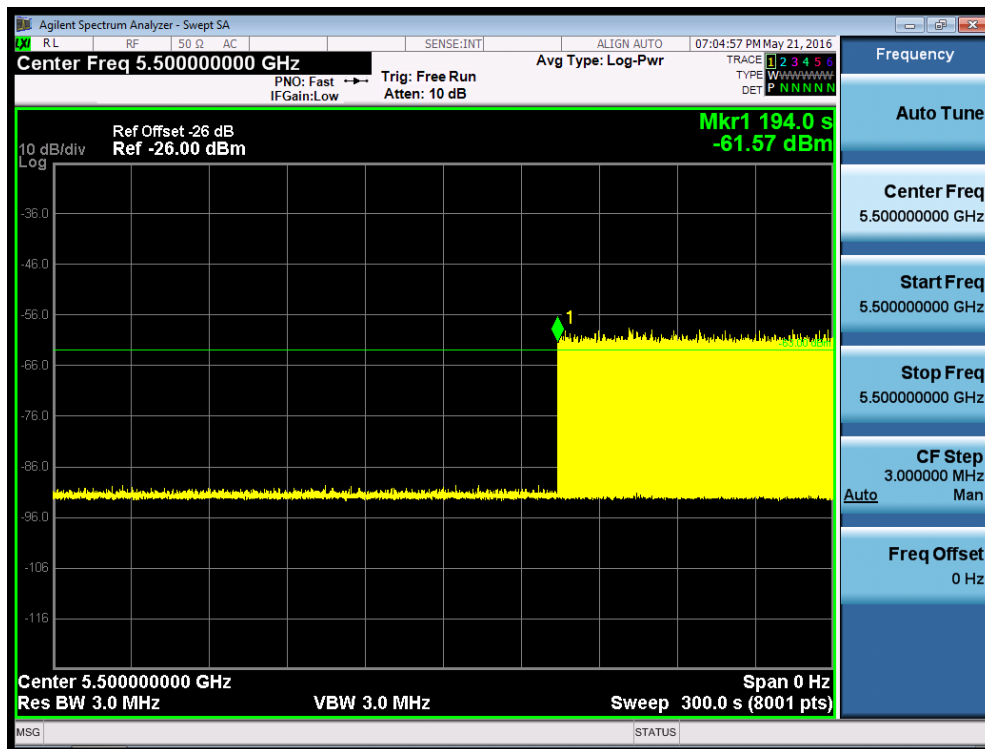
5.6. Radar Burst at the Beginning of the Channel Availability Check Time Measurement

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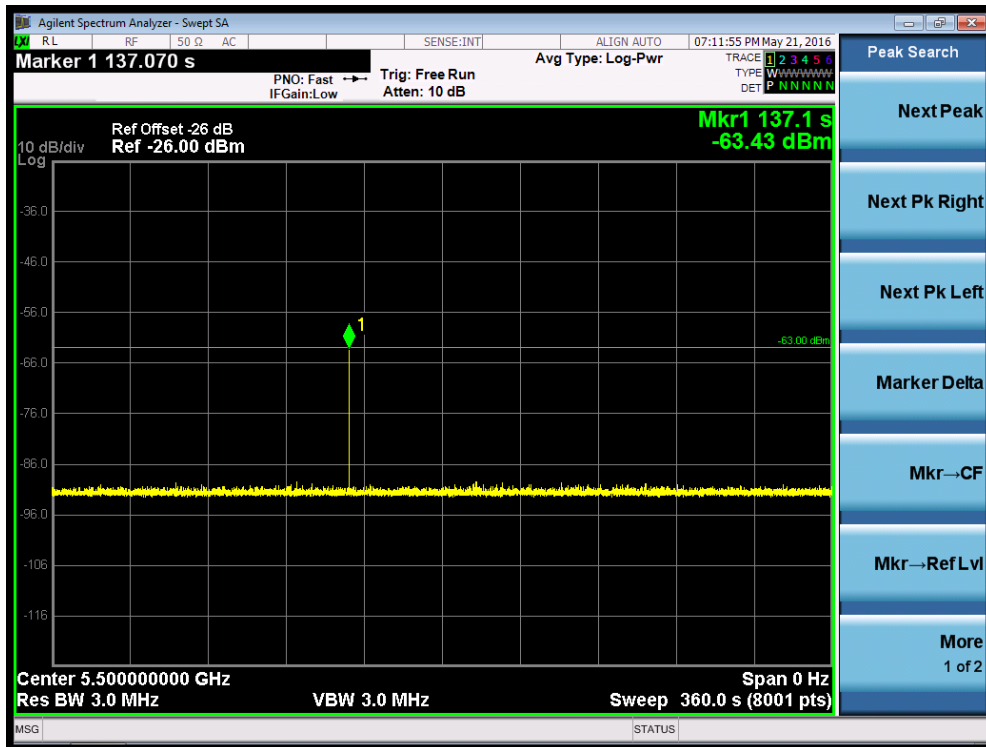
5.7. Radar Burst at the End of the Channel Availability Check Time Measurement

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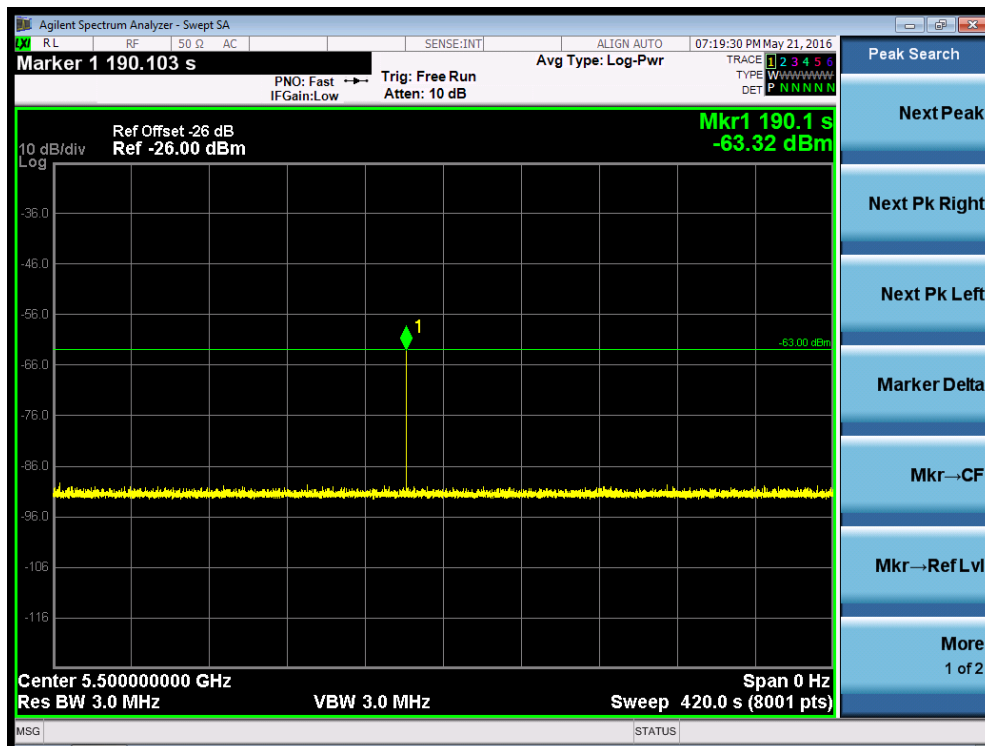
5.8. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement

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

Time Index Info

T0 : -0.0240 S	Time Per Bin:1.4998125 ms	Channel Move Time: 0.4334458 S
T1 : 0.0000 S	T2~T3 Bins Over Threshold:	Channel Close Time: 0.0119985 S
T2 : 0.1995 S	= 8 Bins	
T3 : 0.4334 S		

Plot – 2#

Time Index Info

T0 : -0.0240 S	Time Per Bin:1.4998125 ms	Channel Move Time: 0.4334458 S
T1 : 0.0000 S	T2~T3 Bins Over Threshold:	Channel Close Time: 0.0119985 S
T2 : 0.1995 S	= 8 Bins	
T3 : 0.4334 S		

Non-Occupancy Period for 802.11n-HT20
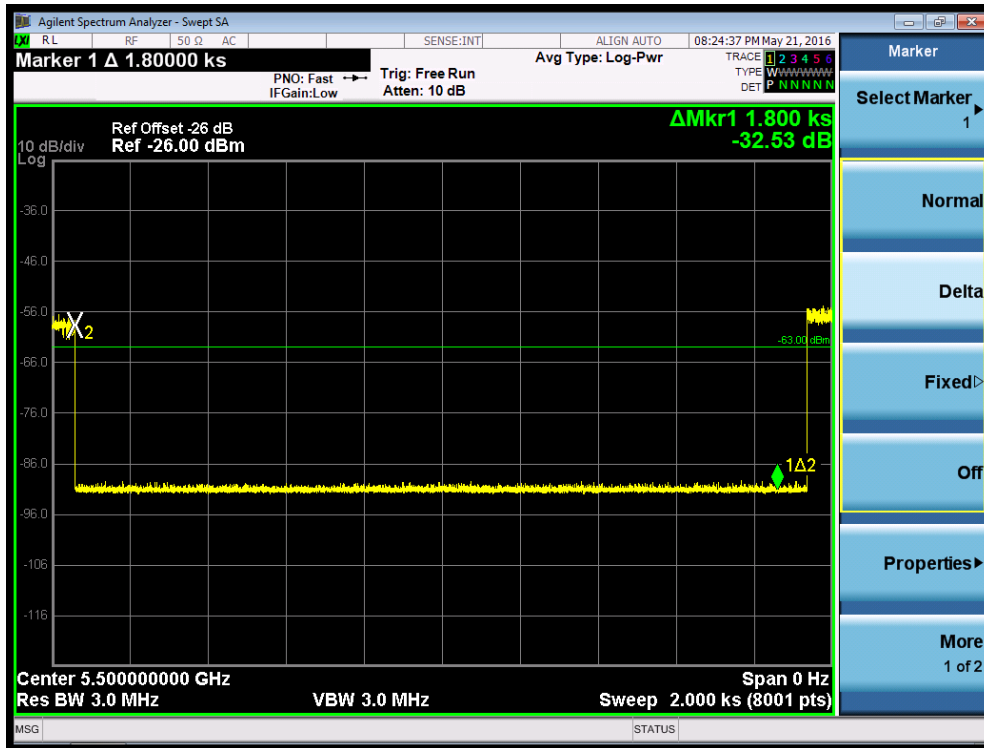
Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.433s	<10s
Channel Closing Transmission Time (ms) (Note)	11.999ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min

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: 2016/07/15 - 10:22
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	
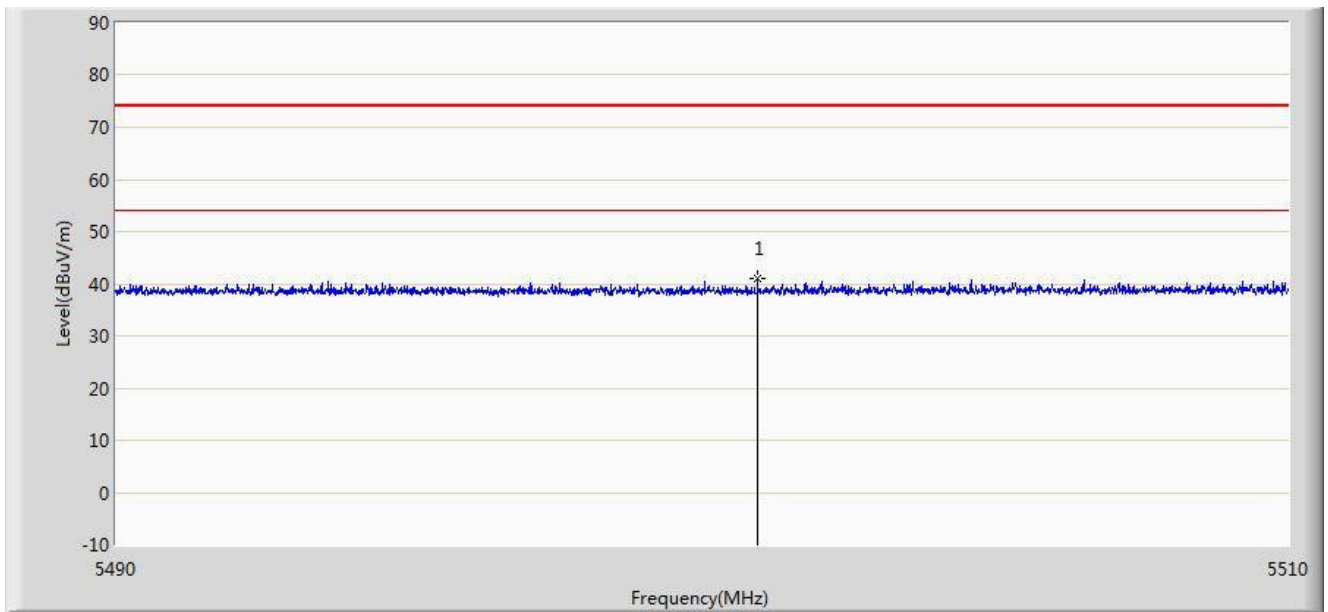
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5500.940	40.938	37.413	-33.062	74.000	3.526	PK

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: 2016/07/15 - 10:27
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	
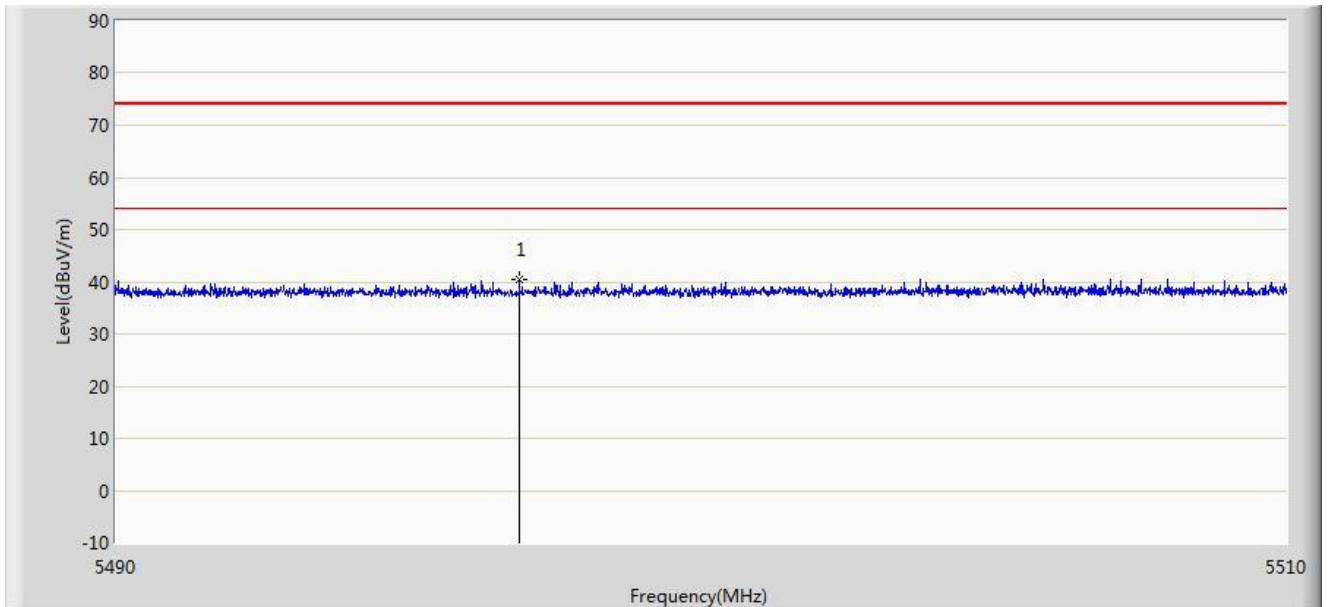
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5496.890	40.471	36.941	-33.529	74.000	3.530	PK

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: 2016/07/15 - 10:35
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	
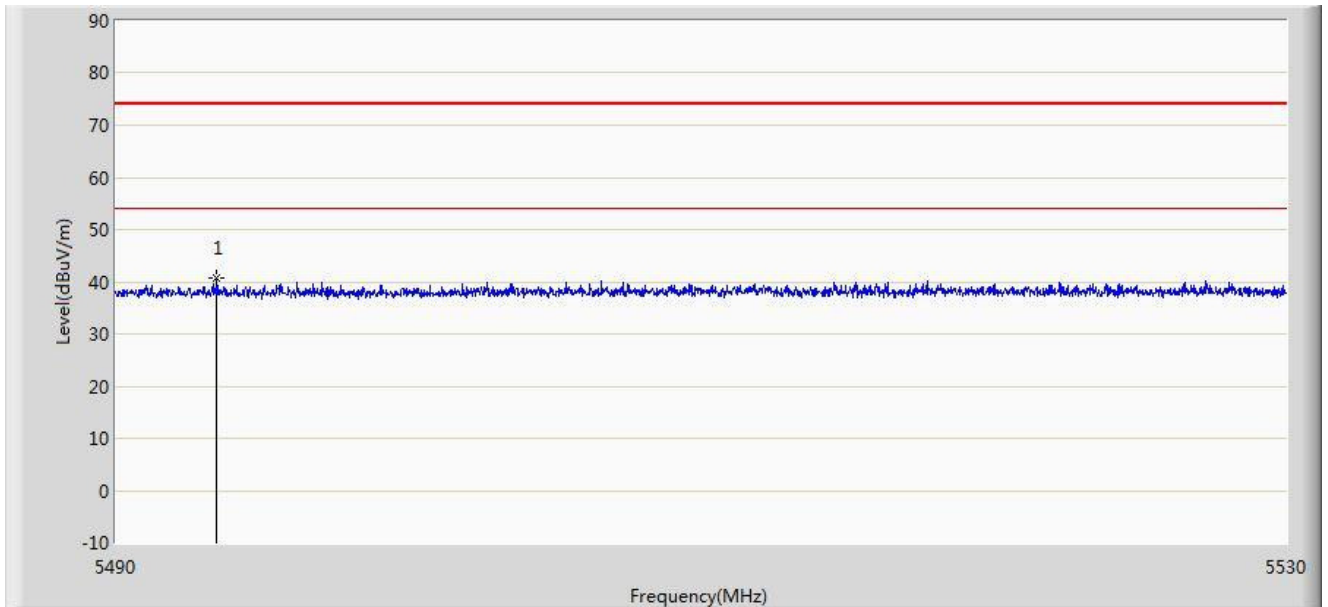
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5493.460	40.703	37.170	-33.297	74.000	3.533	PK

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: 2016/07/15 - 10:43
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	
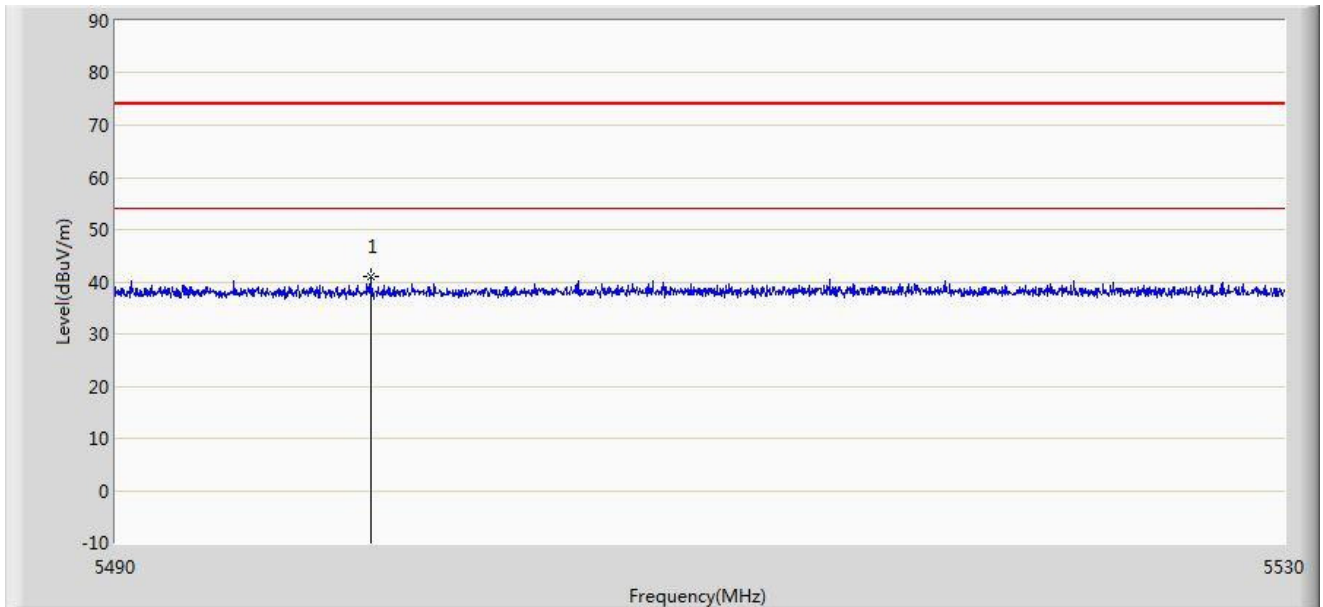
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5498.720	41.092	37.564	-32.908	74.000	3.528	PK

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

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	778	68	1
2	5491	1	3066	18	1
3	5492	1	818	65	1
4	5492	1	578	92	1
5	5493	1	858	62	1
6	5493	1	718	74	1
7	5494	1	678	78	1
8	5494	1	938	57	1
9	5495	1	638	83	1
10	5495	1	618	86	1
11	5496	1	698	76	1
12	5497	1	918	58	1
13	5498	1	598	89	1
14	5499	1	898	59	1
15	5500	1	558	95	1
16	5501	1	966	55	1
17	5502	1	2280	24	1
18	5503	1	2297	23	1
19	5504	1	2585	21	1
20	5504	1	1945	28	1
21	5505	1	2420	22	1
22	5505	1	1130	47	1
23	5506	1	2603	21	1
24	5506	1	902	59	1
25	5507	1	1214	44	1
26	5507	1	1087	49	1
27	5508	1	1006	53	1
28	5508	1	1388	39	1
29	5509	1	901	59	1
30	5509	1	2634	21	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	2.3	191	23	1
2	5491	1.9	210	29	1
3	5492	5.0	171	27	1
4	5492	1.6	216	27	1
5	5493	1.2	183	29	1
6	5493	1.6	158	24	1
7	5494	2.0	200	25	1
8	5494	5.0	184	25	1
9	5495	2.4	160	28	1
10	5495	2.0	204	29	1
11	5496	1.0	201	23	1
12	5497	2.0	176	28	1
13	5498	1.4	200	26	1
14	5499	2.5	154	23	1
15	5500	1.4	188	27	1
16	5501	2.1	153	29	1
17	5502	3.6	169	28	1
18	5503	3.3	169	23	1
19	5504	2.7	155	23	1
20	5504	3.1	217	28	1
21	5505	3.7	167	25	1
22	5505	4.8	164	27	1
23	5506	2.3	201	24	1
24	5506	3.9	186	23	1
25	5507	2.2	185	24	1
26	5507	2.6	186	27	1
27	5508	3.1	207	29	1
28	5508	1.8	155	28	1
29	5509	1.7	185	29	1
30	5509	2.2	208	27	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	9.2	359	17	1
2	5491	6.7	435	16	1
3	5492	6.9	460	16	1
4	5492	7.2	489	16	1
5	5493	8.2	280	17	1
6	5493	9.9	370	16	1
7	5494	9.9	443	18	1
8	5494	7.1	426	17	1
9	5495	7.9	497	17	1
10	5495	9.7	458	17	1
11	5496	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	5503	7.3	255	18	1
19	5504	8.4	260	16	1
20	5504	8.9	392	18	1
21	5505	6.4	429	17	1
22	5505	6.6	327	18	1
23	5506	9.2	280	18	1
24	5506	8.2	487	18	1
25	5507	6.3	357	16	1
26	5507	9.7	312	18	1
27	5508	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	11.2	429	13	1
2	5491	15.8	484	14	1
3	5492	16.9	444	12	1
4	5492	17.4	433	13	1
5	5493	16.9	273	12	1
6	5493	18.9	337	14	1
7	5494	14.0	399	16	1
8	5494	17.0	480	13	1
9	5495	19.4	388	14	1
10	5495	13.6	471	13	1
11	5496	17.8	386	12	1
12	5497	11.1	335	15	1
13	5498	12.6	287	15	1
14	5499	17.3	478	12	1
15	5500	11.4	373	14	1
16	5501	12.5	387	15	1
17	5502	12.5	300	15	1
18	5503	17.6	315	12	1
19	5504	12.3	318	13	1
20	5504	16.8	485	12	1
21	5505	12.3	411	15	1
22	5505	15.2	481	12	1
23	5506	11.3	406	12	1
24	5506	18.8	481	14	1
25	5507	11.3	422	12	1
26	5507	18.5	308	16	1
27	5508	12.4	463	12	1
28	5508	12.2	404	14	1
29	5509	12.8	381	16	1
30	5509	16.4	332	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: $\dfrac{P_d1 + P_d2 + P_d3 + P_d4}{4}$ = (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	5493.1	1	16	5500.0	1
2	5498.7	1	17	5500.0	1
3	5497.9	1	18	5500.0	1
4	5494.3	1	19	5500.0	1
5	5497.1	1	20	5500.0	1
6	5495.1	1	21	5501.8	1
7	5493.5	1	22	5506.6	1
8	5495.9	1	23	5503.0	1
9	5499.1	1	24	5505.8	1
10	5496.7	1	25	5505.4	1
11	5500.0	1	26	5501.0	1
12	5500.0	1	27	5504.6	1
13	5500.0	1	28	5502.2	1
14	5500.0	1	29	5505.0	1
15	5500.0	1	30	5503.4	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

```
Waveform Num = 1
Num of Bursts = 16
Burst Interval (us)= 750000

Burst    Off Time    #         Chirp    PW      Pulse 1     Pulse 2     Pulse 3    Start Loc   Start Burst     End Burst
#        (us)        Pulses    (MHz)    (us)    Pri(us)     Pri(us)     Pri(us)    (us)        Interval(us)    Interval(us)
         351208
1                    2         5        60      1713        1291        0          351208      0               749999
         445075
2                    2         5        75      1154        1092        0          799287      750000          1499999
         789994
3                    3         5        90      1804        1784        1440       1591527     1500000         2249999
         692305
4                    3         5        70      1309        1504        1882       2288860     2250000         2999999
         1017981
5                    1         5        75      1729        0           0          3311536     3000000         3749999
         545271
6                    1         5        50      1393        0           0          3858536     3750000         4499999
         655240
7                    1         5        50      1355        0           0          4515169     4500000         5249999
         1257938
8                    2         5        65      1063        1883        0          5774462     5250000         5999999
         244838
9                    1         5        90      1586        0           0          6022246     6000000         6749999
         1028202
10                   3         5        90      1680        1803        1948       7052034     6750000         7499999
         1189585
11                   1         5        75      1092        0           0          8247050     7500000         8249999
         125455
12                   2         5        75      1011        1728        0          8373597     8250000         8999999
         1356955
13                   2         5        70      1734        1403        0          9733291     9000000         9749999
         602939
14                   2         5        65      1634        1314        0          10339367    9750000         10499999
         723720
15                   1         5        95      1641        0           0          11066035    10500000        11249999
         521833
16                   2         5        85      1457        1063        0          11589509    11250000        11999999
Total number of pulses in waveform = 29
*********************************************************************************
```

Type 5 Radar Waveform_2

```
Waveform Num = 2
Num of Bursts = 19
Burst Interval (us)= 631579
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	596286	2	19	85	1057	1507	0	596286	0	631578
2	215587	1	19	85	1225	0	0	814437	631579	1263157
3	727306	1	19	95	1685	0	0	1542968	1263158	1894736
4	882879	3	19	85	1203	1833	1684	2427532	1894737	2526315
5	495841	2	19	75	1571	1256	0	2928093	2526316	3157894
6	836631	3	19	60	1885	1702	1014	3767551	3157895	3789473
7	321095	3	19	95	1574	1901	1184	4093247	3789474	4421052
8	567307	1	19	90	1850	0	0	4665213	4421053	5052631
9	805425	2	19	80	1009	1625	0	5472488	5052632	5684210
10	220806	3	19	65	1242	1441	1055	5695928	5684211	6315789
11	831377	2	19	60	1864	1346	0	6531043	6315790	6947368
12	619835	1	19	90	1566	0	0	7154088	6947369	7578947
13	684778	1	19	55	1500	0	0	7840432	7578948	8210526
14	575935	1	19	60	1956	0	0	8417867	8210527	8842105
15	453772	2	19	100	1257	1210	0	8873595	8842106	9473684
16	1081724	3	19	70	1919	1454	1013	9957786	9473685	10105263
17	716459	2	19	85	1928	1927	0	10678631	10105264	10736842
18	574641	3	19	95	1027	1838	1418	11257127	10736843	11368421
19	144465	2	19	65	1668	1864	0	11405875	11368422	12000000

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

Type 5 Radar Waveform_3

```
Waveform Num = 3
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	74748	1	17	100	1193	0	0	74748	0	631578
2	1091934	2	17	55	1164	1446	0	1167875	631579	1263157
3	590099	3	17	90	1487	1516	1897	1760584	1263158	1894736
4	669877	3	17	50	1624	1831	1090	2435361	1894737	2526315
5	446259	1	17	75	1144	0	0	2886165	2526316	3157894
6	691461	2	17	75	1314	1324	0	3578770	3157895	3789473
7	234767	3	17	60	1398	1424	1190	3816175	3789474	4421052
8	676050	3	17	65	1189	1422	1150	4496237	4421053	5052631
9	667025	2	17	55	1507	1825	0	5167023	5052632	5684210
10	936050	2	17	100	1319	1004	0	6106405	5684211	6315789
11	708684	1	17	80	1277	0	0	6817412	6315790	6947368
12	666010	1	17	95	1477	0	0	7484699	6947369	7578947
13	537670	2	17	90	1727	1720	0	8023846	7578948	8210526
14	628333	2	17	80	1103	1468	0	8655626	8210527	8842105
15	649632	1	17	65	1070	0	0	9307829	8842106	9473684
16	579924	1	17	85	1652	0	0	9888823	9473685	10105263
17	517263	2	17	70	1163	1748	0	10407738	10105264	10736842
18	610450	1	17	85	1745	0	0	11021099	10736843	11368421
19	701083	3	17	95	1633	1027	1397	11723927	11368422	12000000

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

Type 5 Radar Waveform_4

```
Waveform Num = 4
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	94149	2	8	55	1621	1335	0	94149	0	599999
2	1085161	3	8	65	1440	1348	1075	1182266	600000	1199999
3	117259	3	8	60	1374	1258	1522	1303388	1200000	1799999
4	872592	1	8	70	1270	0	0	2180134	1800000	2399999
5	722316	3	8	65	1576	1612	1337	2903720	2400000	2999999
6	677263	3	8	50	1073	1847	1015	3585508	3000000	3599999
7	106771	3	8	50	1002	1302	1729	3696214	3600000	4199999
8	516162	2	8	55	1019	1905	0	4216409	4200000	4799999
9	654573	3	8	60	1074	1748	1849	4873906	4800000	5399999
10	1030499	3	8	95	1635	1925	1554	5909076	5400000	5999999
11	308460	1	8	60	1576	0	0	6222650	6000000	6599999
12	949886	2	8	85	1989	1785	0	7174112	6600000	7199999
13	581648	2	8	70	1959	1981	0	7759534	7200000	7799999
14	507398	1	8	90	1801	0	0	8270872	7800000	8399999
15	631434	2	8	95	1734	1802	0	8904107	8400000	8999999
16	359257	3	8	85	1443	1601	1035	9266900	9000000	9599999
17	436094	3	8	50	1285	1715	1086	9707073	9600000	10199999
18	730470	3	8	75	1791	1306	1546	10441629	10200000	10799999
19	691614	1	8	90	1428	0	0	11137886	10800000	11399999
20	375264	1	8	75	1956	0	0	11514578	11400000	11999999

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

Type 5 Radar Waveform_5

```
Waveform Num = 5
Num of Bursts = 14
Burst Interval (us)= 857143
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	711742	1	15	65	1312	0	0	711742	0	857142
2	291419	3	15	85	1373	1886	1644	1004473	857143	1714285
3	965177	1	15	55	1265	0	0	1974553	1714286	2571428
4	1092406	1	15	85	1008	0	0	3068224	2571429	3428571
5	675426	2	15	60	1186	1159	0	3744658	3428572	4285714
6	976581	1	15	80	2000	0	0	4723584	4285715	5142857
7	864672	1	15	90	1059	0	0	5590256	5142858	6000000
8	977488	2	15	55	1207	1079	0	6568803	6000001	6857143
9	328714	1	15	55	1978	0	0	6899803	6857144	7714286
10	1123218	1	15	95	1081	0	0	8024999	7714287	8571429
11	1054777	1	15	100	1216	0	0	9080857	8571430	9428572
12	733298	2	15	85	1178	1689	0	9815371	9428573	10285715
13	1244578	2	15	80	1423	1058	0	11062816	10285716	11142858
14	211134	3	15	90	1148	1506	1570	11276431	11142859	12000001

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

Type 5 Radar Waveform_6

```
Waveform Num = 6
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	66966	3	10	70	1195	1353	1561	66966	0	799999
2	896515	2	10	85	1891	1130	0	967590	800000	1599999
3	1130095	2	10	95	1345	1273	0	2100706	1600000	2399999
4	366435	2	10	60	1527	1154	0	2469759	2400000	3199999
5	987050	3	10	90	1684	1170	1951	3459490	3200000	3999999
6	790789	3	10	95	1465	1157	1316	4255084	4000000	4799999
7	1210210	1	10	80	1663	0	0	5469232	4800000	5599999
8	485227	1	10	50	1448	0	0	5956122	5600000	6399999
9	779153	2	10	85	1397	1272	0	6736723	6400000	7199999
10	1150574	1	10	65	1106	0	0	7889966	7200000	7999999
11	243898	3	10	75	1992	1200	1067	8134970	8000000	8799999
12	1371009	1	10	85	1039	0	0	9510238	8800000	9599999
13	227113	1	10	75	1508	0	0	9738390	9600000	10399999
14	1142488	1	10	100	1992	0	0	10882386	10400000	11199999
15	375785	3	10	80	1329	1629	1337	11260163	11200000	11999999

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

Type 5 Radar Waveform_7

```
Waveform Num = 7
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	218367	1	6	50	1233	0	0	218367	0	923076
2	1305141	1	6	90	1158	0	0	1524741	923077	1846153
3	1087854	1	6	75	1337	0	0	2613753	1846154	2769230
4	1051421	2	6	90	1289	1925	0	3666511	2769231	3692307
5	687599	2	6	100	1549	1807	0	4357324	3692308	4615384
6	489404	3	6	55	1328	1241	1482	4850084	4615385	5538461
7	1403578	1	6	90	1049	0	0	6257713	5538462	6461538
8	923880	1	6	75	1074	0	0	7182642	6461539	7384615
9	1094615	1	6	100	1615	0	0	8278331	7384616	8307692
10	149127	3	6	60	1035	1020	1812	8429073	8307693	9230769
11	1415085	1	6	60	1264	0	0	9848025	9230770	10153846
12	853329	3	6	70	1911	1870	1586	10702618	10153847	11076923
13	974837	1	6	70	1449	0	0	11682822	11076924	12000000

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

Type 5 Radar Waveform_8

```
Waveform Num = 8
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	173264	1	12	100	1337	0	0	173264	0	666666
2	945587	1	12	90	1883	0	0	1120188	666667	1333333
3	361401	1	12	65	1729	0	0	1483472	1333334	2000000
4	760886	3	12	50	1930	1964	1609	2246087	2000001	2666667
5	480327	1	12	90	1641	0	0	2731917	2666668	3333334
6	820457	1	12	90	1129	0	0	3554015	3333335	4000000
7	538634	2	12	65	1075	1812	0	4093778	4000002	4666668
8	897770	3	12	60	1017	1656	1477	4994435	4666669	5333335
9	534912	3	12	70	1011	1681	1440	5533497	5333336	6000002
10	694678	3	12	80	1995	1451	1286	6232307	6000003	6666669
11	487736	3	12	80	1992	1708	1331	6724775	6666670	7333336
12	691510	1	12	75	1057	0	0	7421316	7333337	8000003
13	1209675	1	12	55	1016	0	0	8632048	8000004	8666670
14	656910	2	12	75	1040	1856	0	9289974	8666671	9333337
15	557344	1	12	100	1275	0	0	9850214	9333338	10000004
16	425937	1	12	85	1735	0	0	10277426	10000005	10666671
17	645650	1	12	75	1476	0	0	10924811	10666672	11333338
18	541895	3	12	85	1197	1129	1324	11468182	11333339	12000005

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

Type 5 Radar Waveform_9

```
Waveform Num = 9
Num of Bursts = 15
Burst Interval (us)= 800000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	146615	2	20	70	1400	1766	0	146615	0	799999
2	861816	3	20	85	1693	1063	1143	1011597	800000	1599999
3	746456	3	20	65	1388	1829	1099	1761952	1600000	2399999
4	1094828	1	20	85	1789	0	0	2861096	2400000	3199999
5	507995	1	20	65	1438	0	0	3370880	3200000	3999999
6	1061325	1	20	100	1784	0	0	4433643	4000000	4799999
7	661365	3	20	50	1963	1719	1465	5096792	4800000	5599999
8	1207511	2	20	80	1269	1282	0	6309450	5600000	6399999
9	296308	1	20	75	1355	0	0	6608309	6400000	7199999
10	1348165	2	20	75	1911	1821	0	7957829	7200000	7999999
11	59682	2	20	100	1218	1325	0	8021243	8000000	8799999
12	1436927	1	20	70	1948	0	0	9460713	8800000	9599999
13	164787	1	20	90	1865	0	0	9627448	9600000	10399999
14	977426	3	20	60	1840	1015	1288	10606739	10400000	11199999
15	1362781	2	20	100	1763	1278	0	11973663	11200000	11999999

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

Type 5 Radar Waveform_10

```
Waveform Num = 10
Num of Bursts = 16
Burst Interval (us)= 750000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	744708	2	14	55	1204	1247	0	744708	0	749999
2	394997	3	14	50	1130	1232	1627	1142156	750000	1499999
3	981617	1	14	65	1955	0	0	2127762	1500000	2249999
4	602366	1	14	80	1444	0	0	2732083	2250000	2999999
5	594041	1	14	95	1662	0	0	3327568	3000000	3749999
6	989241	3	14	90	1880	1181	1059	4318471	3750000	4499999
7	249428	2	14	100	1577	1807	0	4572019	4500000	5249999
8	927768	3	14	75	1046	1794	1327	5503171	5250000	5999999
9	864252	2	14	55	1592	1916	0	6371590	6000000	6749999
10	683570	3	14	70	1974	1542	1181	7058668	6750000	7499999
11	641968	3	14	90	1057	1926	1681	7705333	7500000	8249999
12	1031279	1	14	85	1725	0	0	8741276	8250000	8999999
13	730491	1	14	100	1296	0	0	9473492	9000000	9749999
14	983823	1	14	70	1580	0	0	10458611	9750000	10499999
15	691726	3	14	80	1953	1617	1857	11151917	10500000	11249999
16	530997	1	14	65	1648	0	0	11688341	11250000	11999999

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

Type 5 Radar Waveform_11

```
Waveform Num = 12
Num of Bursts = 9
Burst Interval (us)= 1333333
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1046677	2	6	85	1840	1235	0	1046677	0	1333332
2	1486003	3	6	80	1345	1425	1473	2535755	1333333	2666665
3	299035	2	6	75	1141	1007	0	2839033	2666666	3999998
4	1498370	3	6	85	1214	1578	1925	4339551	3999999	5333331
5	1750474	1	6	50	1600	0	0	6094742	5333332	6666664
6	1061332	2	6	70	1966	1501	0	7157674	6666665	7999997
7	868806	1	6	70	1062	0	0	8029947	7999998	9333330
8	2241986	1	6	85	1254	0	0	10272995	9333331	10666663
9	1357148	3	6	90	1750	1181	1233	11631397	10666664	11999996

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

Type 5 Radar Waveform_12

```
Waveform Num = 14
Num of Bursts = 8
Burst Interval (us)= 1500000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	687396	1	8	60	1782	0	0	687396	0	1499999
2	1596992	3	8	75	1420	1905	1296	2286170	1500000	2999999
3	794260	3	8	85	1423	1114	1819	3085051	3000000	4499999
4	1641889	1	8	50	1759	0	0	4731296	4500000	5999999
5	2270868	2	8	90	1460	1543	0	7003923	6000000	7499999
6	542865	3	8	85	1746	1269	1612	7549791	7500000	8999999
7	2056013	3	8	90	1837	1994	1015	9610431	9000000	10499999
8	2119284	1	8	75	1198	0	0	11734561	10500000	11999999

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

Type 5 Radar Waveform_13

```
Waveform Num = 17
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	99215	1	11	55	1211	0	0	99215	0	705881
2	797911	2	11	95	1907	1137	0	898337	705882	1411763
3	551440	1	11	90	1599	0	0	1452821	1411764	2117645
4	1296654	3	11	75	1893	1207	1040	2751074	2117646	2823527
5	385537	1	11	50	1115	0	0	3140751	2823528	3529409
6	755105	2	11	65	1433	1107	0	3896971	3529410	4235291
7	977192	2	11	80	1994	1348	0	4876703	4235292	4941173
8	559542	2	11	60	1871	1211	0	5439587	4941174	5647055
9	639379	2	11	80	1528	1053	0	6082048	5647056	6352937
10	313792	3	11	50	1853	1266	1299	6398421	6352938	7058819
11	695159	1	11	50	1214	0	0	7097998	7058820	7764701
12	921327	2	11	65	1733	1893	0	8020539	7764702	8470583
13	490405	3	11	65	1983	1400	1953	8514570	8470584	9176465
14	1226408	3	11	60	1574	1395	1221	9746314	9176466	9882347
15	161579	1	11	70	1448	0	0	9912083	9882348	10588229
16	1094829	1	11	70	1887	0	0	11008360	10588230	11294111
17	337636	3	11	85	1263	1968	1516	11347883	11294112	11999993

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

Type 5 Radar Waveform_14

Waveform Num = 14
Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	687396									
1		1	18	60	1239	1155	0	687396	0	1499999
	1596992									
2		3	18	75	1892	0	0	2286170	1500000	2999999
	794260									
3		3	18	85	1949	1499	1100	3085051	3000000	4499999
	1641889									
4		1	18	50	1370	0	0	4731296	4500000	5999999
	2270868									
5		2	18	90	1156	1001	0	7003923	6000000	7499999
	542865									
6		3	18	85	1155	0	0	7549791	7500000	8999999
	2056013									
7		3	18	90	1381	0	0	9610431	9000000	10499999
	2119284									
8		1	18	75	1447	0	0	11734561	10500000	11999999

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

Type 5 Radar Waveform_15

Waveform Num = 15
Num of Bursts = 20
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	444441									
1		2	9	95	1326	1586	0	444441	0	599999
	658239									
2		2	9	50	1661	1378	0	1105592	600000	1199999
	229652									
3		1	9	85	1880	0	0	1338283	1200000	1799999
	615712									
4		2	9	80	1735	1084	0	1955875	1800000	2399999
	752997									
5		2	9	95	1689	1005	0	2711691	2400000	2999999
	751936									
6		2	9	55	1435	1238	0	3466321	3000000	3599999
	671485									
7		3	9	85	1824	1445	1421	4140479	3600000	4199999
	268673									
8		2	9	100	1226	1321	0	4413842	4200000	4799999
	514958									
9		3	9	100	1641	1793	1671	4931347	4800000	5399999
	792558									
10		2	9	80	1939	1126	0	5729010	5400000	5999999
	344123									
11		1	9	75	1006	0	0	6076198	6000000	6599999
	880262									
12		1	9	100	1238	0	0	6957466	6600000	7199999
	598824									
13		1	9	50	1041	0	0	7557528	7200000	7799999
	629074									
14		3	9	85	1830	1976	1616	8187643	7800000	8399999
	304920									
15		1	9	100	1347	0	0	8497985	8400000	8999999
	574416									
16		2	9	85	1096	1284	0	9073748	9000000	9599999
	1086659									
17		2	9	80	1347	1083	0	10162787	9600000	10199999
	621551									
18		3	9	55	1748	1987	1794	10786768	10200000	10799999
	502276									
19		1	9	75	1932	0	0	11294573	10800000	11399999
	228937									
20		2	9	100	1085	1369	0	11525442	11400000	11999999

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

Type 5 Radar Waveform_16

Waveform Num = 18
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)
	366731									
1		1	12	90	1057	0	0	366731	0	666666
	459695									
2		2	12	60	1071	1625	0	827483	666667	1333333
	934757									
3		3	12	50	1967	1946	1630	1764936	1333334	2000000
	373084									
4		2	12	85	1959	1329	0	2143563	2000001	2666667
	832121									
5		1	12	60	1368	0	0	2978972	2666668	3333334
	583432									
6		2	12	85	1581	1259	0	3563772	3333335	4000001
	882584									
7		1	12	75	1472	0	0	4449196	4000002	4666668
	491517									
8		1	12	100	1149	0	0	4942185	4666669	5333335
	502052									
9		3	12	85	1063	1331	1569	5445386	5333336	6000002
	552553									
10		1	12	75	1959	0	0	6001902	6000003	6666669
	1257008									
11		3	12	100	1562	1612	1152	7260869	6666670	7333336
	475367									
12		1	12	90	1757	0	0	7740562	7333337	8000003
	722031									
13		3	12	80	1942	1094	1586	8464350	8000004	8666670
	582924									
14		1	12	50	1495	0	0	9051896	8666671	9333337
	433175									
15		1	12	70	1199	0	0	9486566	9333338	10000000
	638617									
16		1	12	80	1383	0	0	10126382	10000005	10666671
	1012334									
17		2	12	65	1192	1927	0	11140099	10666672	11333338
	408281									
18		1	12	95	1616	0	0	11551499	11333339	12000005

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

Type 5 Radar Waveform_17

Waveform Num = 11
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	1174452	3	5	100	1082	1882	1661	1174452	0	1199999
2	668326	2	5	90	1467	1419	0	1847403	1200000	2399999
3	1651488	1	5	75	1294	0	0	3501777	2400000	3599999
4	1214763	2	5	75	1535	1094	0	4717834	3600000	4799999
5	729696	2	5	90	1730	1681	0	5450159	4800000	5999999
6	661354	3	5	90	1274	1367	1392	6114924	6000000	7199999
7	1770056	2	5	55	1889	1427	0	7889013	7200000	8399999
8	1223938	1	5	55	1664	0	0	9116267	8400000	9599999
9	1570421	3	5	95	1601	1508	1232	10688352	9600000	10799999
10	1298026	3	5	85	1126	1055	1784	11990719	10800000	11999999

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

Type 5 Radar Waveform_18

Waveform Num = 19
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	920591	2	13	55	1334	1496	0	920591	0	1199999
2	315414	2	13	55	1646	1715	0	1238835	1200000	2399999
3	2342006	3	13	90	1753	1257	1190	3584202	2400000	3599999
4	632500	3	13	65	1514	1246	1211	4220902	3600000	4799999
5	890399	3	13	95	1132	1837	1171	5115272	4800000	5999999
6	1305508	2	13	75	1924	1504	0	6424920	6000000	7199999
7	901855	1	13	100	1628	0	0	7330203	7200000	8399999
8	1284679	1	13	90	1808	0	0	8616510	8400000	9599999
9	1037004	1	13	100	1569	0	0	9655322	9600000	10799999
10	2090150	1	13	80	1516	0	0	11747041	10800000	11999999

Total number of pulses in waveform = 19
****

Type 5 Radar Waveform_19

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_20

```
Waveform Num = 20
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	450057	1	14	75	1324	0	0	450057	0	799999
2	765035	1	14	95	1377	0	0	1216416	800000	1599999
3	793590	1	14	95	1422	0	0	2011383	1600000	2399999
4	904876	1	14	65	1376	0	0	2917681	2400000	3199999
5	352337	2	14	50	1482	1555	0	3271394	3200000	3999999
6	1416847	1	14	60	1666	0	0	4691278	4000000	4799999
7	542669	3	14	50	1682	1560	1319	5235613	4800000	5599999
8	893684	1	14	80	1505	0	0	6133858	5600000	6399999
9	666292	1	14	95	1534	0	0	6801655	6400000	7199999
10	514698	3	14	100	1455	1709	1152	7317887	7200000	7999999
11	1297666	2	14	70	1856	1307	0	8619869	8000000	8799999
12	900831	2	14	50	1109	1551	0	9523863	8800000	9599999
13	537442	3	14	50	1256	1830	1785	10063965	9600000	10399999
14	1098982	1	14	55	1842	0	0	11167818	10400000	11199999
15	212957	3	14	100	1649	1022	1846	11382617	11200000	11999999

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

Type 5 Radar Waveform_21

```
Waveform Num = 11
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	704535	2	18	100	1036	1194	0	704535	0	857142
2	233446	1	18	70	1245	0	0	940211	857143	1714285
3	1176580	2	18	90	1425	1222	0	2118036	1714286	2571428
4	1043723	1	18	50	1899	0	0	3164406	2571429	3428571
5	342820	3	18	70	1642	1415	1925	3509125	3428572	4285714
6	1374299	3	18	85	1058	1754	1700	4888406	4285715	5142857
7	518978	2	18	75	1869	1572	0	5411896	5142858	6000000
8	617921	1	18	50	1782	0	0	6033258	6000001	6857143
9	1026680	1	18	50	1378	0	0	7061720	6857144	7714286
10	1402156	1	18	55	1809	0	0	8465254	7714287	8571429
11	411884	1	18	80	1690	0	0	8878947	8571430	9428572
12	1395266	1	18	60	1413	0	0	10275903	9428573	10285715
13	165212	1	18	70	1704	0	0	10442528	10285716	11142858
14	1065113	3	18	75	1560	1800	1981	11509345	11142859	12000001

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

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	290033	1	6	95	1581	0	0	290033	0	923076
2	1347492	1	6	60	1754	0	0	1639106	923077	1846153
3	330603	3	6	50	1421	1460	1893	1971463	1846154	2769230
4	876941	1	6	65	1949	0	0	2853178	2769231	3692307
5	892328	3	6	65	1367	1112	1218	3747455	3692308	4615384
6	1266065	2	6	95	1218	1059	0	5017217	4615385	5538461
7	719632	2	6	55	1828	1077	0	5739126	5538462	6461538
8	949518	2	6	85	1065	1111	0	6691549	6461539	7384615
9	1531944	3	6	55	1323	1757	1432	8225669	7384616	8307692
10	835376	2	6	90	1376	1163	0	9065557	8307693	9230769
11	183209	3	6	55	1989	1195	1996	9251305	9230770	10153846
12	1387136	2	6	75	1487	1702	0	10643621	10153847	11076923
13	925431	1	6	95	1911	0	0	11572241	11076924	12000000

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

Type 5 Radar Waveform_23

```
Waveform Num = 13
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	824861	1	15	75	1759	0	0	824861	0	1090908
2	375467	2	15	90	1364	1031	0	1202087	1090909	2181817
3	1521531	2	15	80	1685	1463	0	2726013	2181818	3272726
4	1364653	2	15	90	1769	1274	0	4093814	3272727	4363635
5	597446	1	15	70	1000	0	0	4694303	4363636	5454544
6	779256	2	15	100	1963	1992	0	5474559	5454545	6545453
7	1969165	1	15	50	1973	0	0	7447679	6545454	7636362
8	305248	1	15	90	1714	0	0	7754900	7636363	8727271
9	1546074	1	15	80	1801	0	0	9302688	8727272	9818180
10	1194420	1	15	85	1329	0	0	10498909	9818181	10909089
11	428265	2	15	100	1584	1497	0	10928503	10909090	11999998

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

Type 5 Radar Waveform_24

```
Waveform Num = 14
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	845697	3	8	90	1235	1665	1963	845697	0	857142
2	391799	1	8	85	1600	0	0	1242359	857143	1714285
3	907700	1	8	95	1628	0	0	2151659	1714286	2571428
4	917737	1	8	80	1989	0	0	3071024	2571429	3428571
5	1080603	2	8	95	1430	1703	0	4153616	3428572	4285714
6	483788	3	8	90	1320	1391	1595	4640537	4285715	5142857
7	694526	2	8	80	1761	1467	0	5339369	5142858	6000000
8	1184475	3	8	55	1631	1849	1490	6527072	6000001	6857143
9	522484	1	8	50	1996	0	0	7054526	6857144	7714286
10	1244337	3	8	60	1635	1501	1291	8300859	7714287	8571429
11	1060872	2	8	60	1810	1266	0	9366158	8571430	9428572
12	472073	2	8	65	1754	1404	0	9841307	9428573	10285715
13	1240789	2	8	70	1323	1787	0	11085254	10285716	11142858
14	703422	2	8	90	1149	1390	0	11791786	11142859	12000001

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

Type 5 Radar Waveform_25

```
Waveform Num = 15
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	347009	1	9	55	1741	0	0	347009	0	631578
2	614603	1	9	55	1772	0	0	963353	631579	1263157
3	767419	1	9	60	1714	0	0	1732544	1263158	1894736
4	287153	3	9	70	1659	1316	1492	2021411	1894737	2526315
5	730275	1	9	90	1987	0	0	2756153	2526316	3157894
6	592604	1	9	80	1669	0	0	3350744	3157895	3789473
7	778358	1	9	65	1377	0	0	4130771	3789474	4421052
8	636530	2	9	70	1739	1832	0	4768678	4421053	5052631
9	768945	2	9	95	1393	1292	0	5541194	5052632	5684210
10	349558	2	9	60	1890	1934	0	5893437	5684211	6315789
11	515979	3	9	80	1185	1317	1249	6413240	6315790	6947368
12	996117	1	9	90	1129	0	0	7413108	6947369	7578947
13	453785	1	9	80	1549	0	0	7868022	7578948	8210526
14	893485	3	9	50	1191	1265	1196	8763056	8210527	8842105
15	389598	2	9	80	1148	1414	0	9156306	8842106	9473684
16	824305	1	9	100	1797	0	0	9983173	9473685	10105263
17	176055	1	9	90	1060	0	0	10161025	10105264	10736842
18	822035	2	9	50	1807	1610	0	10984120	10736843	11368421
19	744080	1	9	95	1210	0	0	11731617	11368422	12000000

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

Type 5 Radar Waveform_26

```
Waveform Num = 20
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	582828	3	20	70	1106	1415	1052	582828	0	1499999
2	2134365	3	20	80	1418	1858	1412	2720766	1500000	2999999
3	545701	2	20	95	1937	1628	0	3271155	3000000	4499999
4	1247967	1	20	65	1994	0	0	4522687	4500000	5999999
5	1516812	3	20	50	1934	1747	1064	6041493	6000000	7499999
6	2154262	3	20	70	1293	1193	1706	8200500	7500000	8999999
7	1215702	2	20	55	1092	1868	0	9420394	9000000	10499999
8	1237545	2	20	70	1962	1906	0	10660899	10500000	11999999

```
Total number of pulses in waveform = 19
**********************************************************************************
```

Type 5 Radar Waveform_27

```
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	734887	1	11	50	1068	0	0	734887	0	1333332
2	1131630	1	11	95	1591	0	0	1867585	1333333	2666665
3	1147037	1	11	85	1683	0	0	3016213	2666666	3999998
4	1120309	2	11	75	1865	1624	0	4138205	3999999	5333331
5	2447787	3	11	55	1520	1219	1003	6589481	5333332	6666664
6	512014	2	11	75	1812	1864	0	7105237	6666665	7999997
7	1816733	3	11	60	1481	1185	1253	8925646	7999998	9333330
8	641467	3	11	90	1436	1147	1447	9571032	9333331	10666663
9	1435207	1	11	90	1865	0	0	11010269	10666664	11999996

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

Type 5 Radar Waveform_28

```
Waveform Num = 17
Num of Bursts = 12
Burst Interval (us)= 1000000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	497005	2	17	100	1334	1739	0	497005	0	999999
2	745022	2	17	50	1832	1181	0	1245100	1000000	1999999
3	1390012	2	17	50	1279	1591	0	2638125	2000000	2999999
4	759133	3	17	60	1622	1183	1867	3400128	3000000	3999999
5	1561212	3	17	90	1181	1664	1021	4966012	4000000	4999999
6	254900	3	17	60	1597	1500	1567	5224778	5000000	5999999
7	973163	1	17	95	1099	0	0	6202605	6000000	6999999
8	1261945	2	17	75	1772	1881	0	7465649	7000000	7999999
9	1478363	1	17	70	1555	0	0	8947665	8000000	8999999
10	556660	3	17	80	1754	1940	1079	9505880	9000000	9999999
11	692269	3	17	55	1222	1559	1963	10202922	10000000	10999999
12	1170505	1	17	70	1347	0	0	11378171	11000000	11999999

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

Type 5 Radar Waveform_29

```
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	403867	2	10	85	1113	1216	0	403867	0	923076
2	925259	1	10	95	1833	0	0	1331455	923077	1846153
3	1276622	3	10	50	1079	1146	1226	2609910	1846154	2769230
4	971819	2	10	75	2000	1999	0	3585180	2769231	3692307
5	773143	1	10	95	1851	0	0	4362322	3692308	4615384
6	889751	1	10	100	1218	0	0	5253924	4615385	5538461
7	876718	1	10	70	1995	0	0	6131860	5538462	6461538
8	1006117	1	10	80	1210	0	0	7139972	6461539	7384615
9	937063	1	10	65	1750	0	0	8078245	7384616	8307692
10	722047	1	10	50	1640	0	0	8802042	8307693	9230769
11	951262	3	10	60	1678	1969	1213	9754944	9230770	10153846
12	496003	3	10	85	1397	1766	1271	10255807	10153847	11076923
13	1603410	3	10	55	1323	1389	1764	11863651	11076924	12000000

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

Type 5 Radar Waveform_30

```
Waveform Num = 19
Num of Bursts = 11
Burst Interval (us)= 1090909
```

Burst #	Off_Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	161352	1	14	90	1491	0	0	161352	0	1090908
2	1183928	1	14	60	1257	0	0	1346771	1090909	2181817
3	1215262	3	14	95	1061	1453	1858	2563290	2181818	3272726
4	968541	2	14	95	1573	1007	0	3536203	3272727	4363635
5	1047722	1	14	65	1671	0	0	4586505	4363636	5454544
6	1014270	1	14	65	1407	0	0	5602446	5454545	6545453
7	1175415	3	14	75	1931	1332	1070	6779268	6545454	7636362
8	864019	1	14	80	1712	0	0	7647620	7636363	8727271
9	1822414	2	14	75	1850	1644	0	9471746	8727272	9818180
10	1217705	2	14	75	1527	1253	0	10692945	9818181	10909089
11	302267	2	14	90	1973	1519	0	10997992	10909090	11999998

```
Total number of pulses in waveform = 19
*********************************************************************************
```

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5491	1	16	5501	1
2	5491	1	17	5502	1
3	5492	1	18	5503	1
4	5492	1	19	5504	1
5	5493	1	20	5504	1
6	5493	1	21	5505	1
7	5494	1	22	5505	1
8	5494	1	23	5506	1
9	5495	1	24	5506	1
10	5495	1	25	5507	1
11	5496	1	26	5507	1
12	5497	1	27	5508	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)
8	5511	24	11	5483	33
9	5494	27	12	5517	36
10	5500	30	13	5494	39
14	5498	42	16	5467	48
30	5502	90	28	5496	84
34	5490	102	29	5487	87
48	5480	144	30	5470	90
50	5481	150	38	5490	114
58	5520	174	39	5486	117
69	5506	207	63	5519	189
79	5487	237	65	5507	195
--	--	--	66	5474	198
--	--	--	70	5493	210
--	--	--	82	5504	246
--	--	--	91	5495	273

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5504	9	12	5472	36
8	5494	24	17	5501	51
10	5472	30	19	5511	57
13	5469	39	23	5516	69
29	5513	87	27	5512	81
34	5511	102	28	5514	84
51	5468	153	33	5518	99
52	5464	156	35	5510	105
57	5508	171	50	5520	150
63	5476	189	53	5489	159
68	5466	204	62	5469	186
77	5479	231	64	5482	192
84	5497	252	68	5477	204
85	5480	255	76	5467	228
87	5481	261	87	5493	261
90	5493	270	89	5464	267
--	--	--	93	5495	279
--	--	--	97	5481	291

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5465	0	6	5482	18
9	5470	27	35	5464	105
10	5482	30	44	5502	132
13	5486	39	46	5497	138
19	5490	57	60	5479	180
22	5479	66	61	5475	183
27	5495	81	62	5523	186
30	5489	90	65	5517	195
39	5494	117	73	5473	219
44	5473	132	82	5463	246
50	5514	150	89	5511	267
57	5504	171	--	--	--
61	5485	183	--	--	--
70	5496	210	--	--	--
94	5520	282	--	--	--
96	5512	288	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5519	15	11	5518	33
10	5482	30	18	5476	54
22	5515	66	23	5500	69
24	5495	72	37	5485	111
26	5477	78	41	5493	123
30	5502	90	42	5495	126
37	5471	111	55	5481	165
60	5468	180	57	5487	171
66	5485	198	58	5477	174
82	5481	246	65	5504	195
90	5518	270	72	5503	216
--	--	--	73	5510	219
--	--	--	76	5484	228
--	--	--	83	5489	249
--	--	--	95	5506	285

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5508	18	2	5525	6
7	5486	21	9	5494	27
11	5505	33	11	5520	33
29	5518	87	17	5497	51
31	5488	93	26	5523	78
51	5500	153	44	5489	132
58	5491	174	48	5474	144
71	5520	213	59	5498	177
81	5502	243	65	5470	195
83	5513	249	67	5472	201
88	5498	264	70	5501	210
--	--	--	78	5480	234
--	--	--	80	5483	240

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
9	5489	27	3	5519	9
26	5518	78	5	5483	15
40	5515	120	17	5517	51
43	5478	129	29	5524	87
48	5479	144	30	5512	90
51	5482	153	36	5500	108
53	5520	159	37	5495	111
60	5504	180	39	5490	117
63	5507	189	70	5482	210
64	5480	192	81	5473	243
74	5526	222	82	5496	246
85	5493	255	88	5498	264
90	5495	270	89	5480	267
97	5484	291	90	5488	270
--	--	--	93	5477	279

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5481	0	9	5493	27
3	5473	9	12	5492	36
5	5470	15	18	5508	54
10	5524	30	43	5498	129
11	5502	33	46	5500	138
14	5494	42	54	5522	162
16	5468	48	59	5521	177
32	5503	96	64	5501	192
34	5490	102	81	5528	243
46	5477	138	84	5470	252
59	5506	177	90	5503	270
66	5486	198	91	5485	273
72	5522	216	98	5481	294
73	5469	219	--	--	--
79	5520	237	--	--	--
83	5485	249	--	--	--
94	5500	282	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5512	15	13	5514	39
7	5530	21	47	5521	141
17	5482	51	49	5531	147
19	5471	57	53	5496	159
39	5497	117	54	5529	162
40	5495	120	71	5474	213
43	5508	129	77	5484	231
65	5505	195	86	5488	258
77	5489	231	90	5519	270
81	5521	243	--	--	--
83	5486	249	--	--	--
89	5477	267	--	--	--
93	5478	279	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5522	6	10	5527	30
6	5509	18	18	5499	54
8	5498	24	28	5497	84
11	5515	33	29	5519	87
12	5517	36	31	5478	93
14	5476	42	32	5496	96
22	5501	66	35	5517	105
32	5519	96	37	5516	111
34	5480	102	45	5488	135
41	5499	123	46	5510	138
47	5488	141	60	5479	180
50	5505	150	82	5474	246
56	5487	168	94	5512	282
65	5530	195	--	--	--
85	5492	255	--	--	--
93	5511	279	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5477	42	0	5528	0
16	5500	48	3	5487	9
17	5517	51	29	5496	87
22	5513	66	34	5493	102
24	5484	72	35	5489	105
29	5526	87	43	5518	129
60	5510	180	46	5524	138
75	5514	225	54	5516	162
87	5487	261	55	5530	165
92	5515	276	69	5502	207
98	5478	294	71	5523	213
99	5532	297	75	5505	225
--	--	--	89	5525	267

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5504	3	4	5529	12
4	5531	12	5	5499	15
5	5498	15	6	5523	18
7	5523	21	11	5486	33
21	5533	63	19	5524	57
26	5529	78	21	5484	63
27	5488	81	26	5531	78
39	5502	117	36	5477	108
58	5507	174	38	5479	114
74	5493	222	50	5485	150
76	5497	228	51	5482	153
82	5515	246	53	5498	159
88	5532	264	56	5509	168
--	--	--	71	5533	213
--	--	--	79	5493	237
--	--	--	87	5527	261
--	--	--	89	5514	267
--	--	--	91	5513	273
--	--	--	96	5481	288
--	--	--	98	5526	294

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5497	42	9	5524	27
22	5518	66	13	5532	39
25	5488	75	16	5515	48
35	5535	105	20	5511	60
48	5491	144	29	5494	87
57	5505	171	34	5530	102
66	5481	198	35	5479	105
69	5506	207	38	5521	114
87	5526	261	45	5516	135
96	5482	288	52	5482	156
97	5520	291	57	5491	171
--	--	--	64	5525	192
--	--	--	87	5498	261
--	--	--	88	5490	264
--	--	--	91	5485	273

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5529	0	27	5483	81
2	5520	6	42	5477	126
7	5499	21	46	5537	138
8	5500	24	56	5522	168
11	5501	33	58	5509	174
16	5527	48	61	5527	183
26	5522	78	63	5503	189
32	5506	96	72	5529	216
61	5495	183	77	5521	231
67	5516	201	78	5525	234
71	5536	213	79	5497	237
79	5496	237	87	5520	261
97	5512	291	90	5510	270

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5516	33	11	5497	33
20	5487	60	14	5493	42
34	5519	102	17	5491	51
47	5479	141	18	5506	54
56	5496	168	19	5495	57
61	5529	183	22	5517	66
62	5494	186	28	5485	84
72	5520	216	29	5503	87
73	5515	219	34	5492	102
79	5527	237	40	5537	120
87	5531	261	51	5525	153
94	5493	282	54	5499	162
--	--	--	58	5534	174
--	--	--	70	5513	210
--	--	--	75	5482	225
--	--	--	88	5514	264
--	--	--	91	5481	273

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
35	5533	105	1	5514	3
40	5494	120	4	5484	12
48	5521	144	7	5520	21
51	5498	153	9	5503	27
79	5505	237	14	5492	42
82	5507	246	23	5479	69
84	5520	252	26	5482	78
96	5503	288	36	5532	108
--	--	--	50	5531	150
--	--	--	61	5496	183

Radar Statistical Performance for 802.11n-HT40

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	1	518	102	1
2	5492	1	3066	18	1
3	5493	1	878	61	1
4	5494	1	558	95	1
5	5495	1	618	86	1
6	5496	1	738	72	1
7	5497	1	858	62	1
8	5498	1	678	78	1
9	5499	1	938	57	1
10	5500	1	638	83	1
11	5502	1	798	67	1
12	5504	1	758	70	1
13	5506	1	818	65	1
14	5508	1	578	92	1
15	5510	1	598	89	1
16	5512	1	2400	22	1
17	5514	1	2155	25	1
18	5516	1	563	94	1
19	5518	1	2859	19	1
20	5519	1	991	54	1
21	5520	1	2026	27	1
22	5521	1	2010	27	1
23	5522	1	2379	23	1
24	5523	1	2994	18	1
25	5524	1	546	97	1
26	5525	1	1468	36	1
27	5526	1	1608	33	1
28	5527	1	2259	24	1
29	5528	1	2098	26	1
30	5529	1	1498	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	2.5	200	27	1
2	5492	3.4	166	27	1
3	5493	2.2	226	24	1
4	5494	4.2	173	24	1
5	5495	4.9	199	27	1
6	5496	3.3	201	28	1
7	5497	1.8	202	29	1
8	5498	1.4	185	23	1
9	5499	1.1	217	28	1
10	5500	3.5	201	29	1
11	5502	1.8	173	29	1
12	5504	1.7	197	24	1
13	5506	5.0	151	28	1
14	5508	3.1	226	29	1
15	5510	1.4	171	26	1
16	5512	2.7	181	29	1
17	5514	2.2	225	23	1
18	5516	3.6	189	23	1
19	5518	2.0	203	27	1
20	5519	3.8	229	24	1
21	5520	2.3	218	27	1
22	5521	4.3	162	25	1
23	5522	2.5	181	24	1
24	5523	1.9	223	23	1
25	5524	2.4	156	27	1
26	5525	4.8	151	28	1
27	5526	3.2	217	27	1
28	5527	1.5	193	24	1
29	5528	4.8	197	23	1
30	5529	2.0	176	26	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	7.7	376	17	1
2	5492	6.6	472	16	1
3	5493	7.7	385	17	1
4	5494	9.8	418	16	1
5	5495	6.6	450	18	1
6	5496	7.4	339	17	1
7	5497	8.7	464	16	1
8	5498	9.1	326	17	1
9	5499	9.0	458	16	1
10	5500	8.7	487	17	1
11	5502	7.6	493	18	1
12	5504	6.3	472	16	1
13	5506	7.9	425	17	1
14	5508	6.5	267	16	1
15	5510	7.3	489	16	1
16	5512	6.9	400	17	1
17	5514	6.7	450	17	1
18	5516	8.1	474	17	1
19	5518	6.4	258	17	1
20	5519	9.8	319	18	1
21	5520	7.2	363	16	1
22	5521	8.5	335	16	1
23	5522	6.1	469	18	1
24	5523	9.8	438	16	1
25	5524	9.6	346	18	1
26	5525	9.9	313	18	1
27	5526	6.5	393	18	1
28	5527	6.1	304	16	1
29	5528	9.8	455	17	1
30	5529	8.0	464	18	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491	15.3	405	12	1
2	5492	18.3	298	15	1
3	5493	13.1	276	15	1
4	5494	14.1	393	14	1
5	5495	17.0	422	15	1
6	5496	11.0	424	15	1
7	5497	12.9	465	13	1
8	5498	14.1	440	12	1
9	5499	13.4	310	15	1
10	5500	18.0	500	15	1
11	5502	18.1	334	16	1
12	5504	11.9	262	13	1
13	5506	15.6	389	14	1
14	5508	12.2	399	15	1
15	5510	17.2	426	13	1
16	5512	14.9	410	14	1
17	5514	15.6	288	15	1
18	5516	19.8	401	16	1
19	5518	18.2	365	14	1
20	5519	12.2	296	15	1
21	5520	18.8	429	15	1
22	5521	12.2	294	15	1
23	5522	19.4	435	14	1
24	5523	11.1	487	16	1
25	5524	11.4	288	13	1
26	5525	18.6	425	16	1
27	5526	18.0	353	14	1
28	5527	11.7	322	12	1
29	5528	11.5	460	15	1
30	5529	12.7	323	16	1
Detection Percentage (%)					100%

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

waveforms is as follows: $\dfrac{P_d1 + P_d2 + P_d3 + P_d4}{4}$ = (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	5493.8	1	16	5510.0	1
2	5494.2	1	17	5510.0	1
3	5495.4	1	18	5510.0	1
4	5495.8	1	19	5510.0	1
5	5496.2	1	20	5510.0	1
6	5496.6	1	21	5526.2	1
7	5497.0	1	22	5525.8	1
8	5498.2	1	23	5524.6	1
9	5499.4	1	24	5524.2	1
10	5499.8	1	25	5523.8	1
11	5510.0	1	26	5523.4	1
12	5510.0	1	27	5523.0	1
13	5510.0	1	28	5521.8	1
14	5510.0	1	29	5520.6	1
15	5510.0	1	30	5520.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

```
Waveform Num = 1
Num of Bursts = 17
Burst Interval (us)= 705882

Burst    Off Time   #        Chirp    PW      Pulse 1    Pulse 2    Pulse 3    Start Loc   Start Burst    End Burst
#        (us)       Pulses   (MHz)    (us)    Pri(us)    Pri(us)    Pri(us)    (us)        Interval(us)   Interval(us)
         275006
1                   1        5        80      1997       0          0          275006      0              705881
         1036935
2                   2        5        60      1846       1046       0          1313938     705882         1411763
         456738
3                   1        5        100     1788       0          0          1773568     1411764        2117645
         420451
4                   3        5        80      1279       1682       1209       2195807     2117646        2823527
         952779
5                   3        5        60      1423       1726       1720       3152756     2823528        3529409
         770723
6                   3        5        50      1358       1889       1635       3928348     3529410        4235291
         864966
7                   3        5        85      1304       1416       1524       4798196     4235292        4941173
         752470
8                   2        5        95      1746       1831       0          5554910     4941174        5647055
         330422
9                   2        5        100     1251       1473       0          5888909     5647056        6352937
         821676
10                  1        5        65      1973       0          0          6713309     6352938        7058819
         866042
11                  2        5        95      1963       1975       0          7581324     7058820        7764701
         350884
12                  3        5        75      1017       1074       1025       7936146     7764702        8470583
         1127873
13                  1        5        75      1146       0          0          9067135     8470584        9176465
         110926
14                  2        5        55      1996       1736       0          9179207     9176466        9882347
         1356815
15                  1        5        60      1410       0          0          10539754    9882348        10588229
         568479
16                  2        5        90      1400       1766       0          11109643    10588230       11294111
         594188
17                  3        5        50      1231       1722       1404       11706997    11294112       11999993
Total number of pulses in waveform = 35
***************************************************************************
```

Type 5 Radar Waveform_2

Waveform Num = 2
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	1195566	3	6	70	1810	1488	1101	1195566	0	1199999
2	98900	1	6	80	1122	0	0	1298865	1200000	2399999
3	1296158	3	6	55	1279	1101	1947	2596145	2400000	3599999
4	1025192	1	6	100	1697	0	0	3625664	3600000	4799999
5	1388843	3	6	80	1279	1019	1191	5016204	4800000	5999999
6	1360524	2	6	60	1783	1085	0	6380217	6000000	7199999
7	1432543	2	6	65	1364	1410	0	7815628	7200000	8399999
8	757718	2	6	80	1739	1640	0	8576120	8400000	9599999
9	1634342	2	6	85	1133	1549	0	10213841	9600000	10799999
10	1399892	3	6	75	1508	1286	1093	11616415	10800000	11999999

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

Type 5 Radar Waveform_3

Waveform Num = 3
Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	216954	3	9	55	1850	1975	1388	216954	0	999999
2	1610681	1	9	85	1564	0	0	1832848	1000000	1999999
3	467420	1	9	75	1411	0	0	2301832	2000000	2999999
4	1612859	1	9	90	1189	0	0	3916102	3000000	3999999
5	139906	1	9	75	1505	0	0	4057197	4000000	4999999
6	1805035	2	9	55	1501	1178	0	5863737	5000000	5999999
7	254985	3	9	75	1877	1841	1385	6121401	6000000	6999999
8	1046903	3	9	65	1783	1273	1698	7173407	7000000	7999999
9	1601417	1	9	65	1201	0	0	8779578	8000000	8999999
10	694180	1	9	75	1029	0	0	9474959	9000000	9999999
11	1039567	1	9	95	1235	0	0	10515555	10000000	10999999
12	851524	2	9	85	1753	1769	0	11368314	11000000	11999999

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

Type 5 Radar Waveform_4

Waveform Num = 4
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	359470	3	10	85	1268	1602	1538	359470	0	599999
2	385116	3	10	90	1748	1280	1216	748994	600000	1199999
3	518488	1	10	80	1640	0	0	1271726	1200000	1799999
4	893847	2	10	90	1088	1494	0	2167213	1800000	2399999
5	777123	3	10	100	1862	1341	1951	2946918	2400000	2999999
6	369786	3	10	80	1696	1633	1503	3321858	3000000	3599999
7	405804	2	10	60	1610	1988	0	3732494	3600000	4199999
8	1021382	3	10	55	1175	1948	1747	4757474	4200000	4799999
9	448455	3	10	85	1301	1289	1369	5210799	4800000	5399999
10	546269	3	10	55	1262	1683	1428	5761027	5400000	5999999
11	330603	2	10	50	1527	1549	0	6096003	6000000	6599999
12	1035467	2	10	60	1799	1164	0	7134546	6600000	7199999
13	83095	3	10	80	1107	1065	1584	7220604	7200000	7799999
14	676693	1	10	65	1677	0	0	7901053	7800000	8399999
15	836803	2	10	100	1937	1949	0	8739533	8400000	8999999
16	574157	3	10	95	1186	1541	1642	9317576	9000000	9599999
17	575009	1	10	60	1884	0	0	9896954	9600000	10199999
18	587748	3	10	100	1992	1958	1651	10486586	10200000	10799999
19	746686	1	10	95	1894	0	0	11238873	10800000	11399999
20	704945	3	10	70	1328	1736	1703	11945712	11400000	11999999

Total number of pulses in waveform = 47
****

Type 5 Radar Waveform_5

```
Waveform Num = 5
Num of Bursts = 14
Burst Interval (us)= 857143
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	616316	2	11	80	1662	1648	0	616316	0	857142
2	1072404	1	11	85	1387	0	0	1692030	857143	1714285
3	867825	1	11	95	1887	0	0	2561242	1714286	2571428
4	285985	3	11	80	1886	1728	1230	2849114	2571429	3428571
5	901371	1	11	80	1755	0	0	3755329	3428572	4285714
6	1315500	2	11	85	1402	1463	0	5072584	4285715	5142857
7	758788	1	11	75	1093	0	0	5834237	5142858	6000000
8	691851	2	11	95	1881	1681	0	6527181	6000001	6857143
9	1035034	1	11	95	1613	0	0	7565777	6857144	7714286
10	959526	2	11	55	1065	1276	0	8526916	7714287	8571429
11	593030	1	11	55	1599	0	0	9122287	8571430	9428572
12	1031268	3	11	90	1181	1042	1118	10155154	9428573	10285715
13	660895	3	11	85	1533	1713	1745	10819390	10285716	11142858
14	748883	3	11	85	1730	1854	1187	11573264	11142859	12000001

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

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	489388	3	12	80	1891	1258	1821	489388	0	857142
2	1193264	3	12	60	1617	1776	1488	1687622	857143	1714285
3	802846	1	12	85	1271	0	0	2495349	1714286	2571428
4	83115	2	12	80	1457	1053	0	2579735	2571429	3428571
5	1500369	1	12	60	1157	0	0	4082614	3428572	4285714
6	749877	1	12	85	1736	0	0	4833648	4285715	5142857
7	533611	3	12	55	1973	1845	1628	5368995	5142858	6000000
8	938879	3	12	90	1613	1940	1854	6313320	6000001	6857143
9	612872	1	12	60	1540	0	0	6931599	6857144	7714286
10	1149697	2	12	100	1243	1355	0	8082836	7714287	8571429
11	1059633	3	12	95	1812	1075	1369	9145067	8571430	9428572
12	901115	3	12	90	1418	1117	1974	10050438	9428573	10285715
13	715968	3	12	80	1816	1355	1529	10770915	10285716	11142858
14	752345	3	12	65	1887	1518	1732	11527960	11142859	12000001

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

Type 5 Radar Waveform_7

```
Waveform Num = 7
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	293775	1	13	70	1733	0	0	293775	0	705881
2	804810	1	13	70	1405	0	0	1100318	705882	1411763
3	746049	1	13	65	1392	0	0	1847772	1411764	2117645
4	809611	1	13	50	1567	0	0	2658775	2117646	2823527
5	288508	1	13	60	1369	0	0	2948850	2823528	3529409
6	597881	1	13	100	1970	0	0	3548100	3529410	4235291
7	1228227	2	13	50	1294	1713	0	4778297	4235292	4941173
8	781484	3	13	60	1045	1652	1250	5562788	4941174	5647055
9	274789	2	13	60	1330	1730	0	5841524	5647056	6352937
10	611750	3	13	85	1667	1415	1510	6456334	6352938	7058819
11	1094304	2	13	80	1052	1773	0	7555230	7058820	7764701
12	771187	1	13	80	1812	0	0	8329242	7764702	8470583
13	336124	2	13	100	1662	1649	0	8667178	8470584	9176465
14	952414	1	13	50	1926	0	0	9622903	9176466	9882347
15	924189	2	13	55	1602	1221	0	10549018	9882348	10588229
16	633545	1	13	80	1773	0	0	11185386	10588230	11294111
17	486001	2	13	85	1023	1293	0	11673160	11294112	11999993

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

Type 5 Radar Waveform_8

```
Waveform Num = 8
Num of Bursts = 10
Burst Interval (us)= 1200000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	993115									
1		2	16	80	1874	1938	0	993115	0	1199999
	566024									
2		2	16	55	1996	1655	0	1562951	1200000	2399999
	1106618									
3		2	16	100	1005	1298	0	2673220	2400000	3599999
	1788516									
4		3	16	50	1317	1745	1617	4464039	3600000	4799999
	704471									
5		3	16	50	1135	1762	1712	5173189	4800000	5999999
	1923293									
6		2	16	80	1517	1291	0	7101091	6000000	7199999
	824657									
7		3	16	80	1972	1183	1353	7928556	7200000	8399999
	1160894									
8		3	16	90	1851	1313	1215	9093958	8400000	9599999
	1550251									
9		2	16	95	1682	1092	0	10648588	9600000	10799999
	491015									
10		1	16	100	1066	0	0	11142377	10800000	11999999

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

Type 5 Radar Waveform_9

```
Waveform Num = 9
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)
	839342									
1		1	19	80	1704	0	0	839342	0	1499999
	1018055									
2		2	19	100	1339	1995	0	1859101	1500000	2999999
	2224798									
3		3	19	55	1878	1706	1498	4087233	3000000	4499999
	453108									
4		3	19	85	1390	1796	1656	4545423	4500000	5999999
	1851083									
5		2	19	60	1999	1708	0	6401348	6000000	7499999
	1706611									
6		2	19	60	1486	1015	0	8111666	7500000	8999999
	1782267									
7		3	19	80	1806	1275	1352	9896434	9000000	10499999
	705268									
8		2	19	70	1913	1131	0	10606135	10500000	11999999

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

Type 5 Radar Waveform_10

```
Waveform Num = 10
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)
	1011683									
1		1	20	60	1040	0	0	1011683	0	1333332
	1528874									
2		1	20	75	1063	0	0	2541597	1333333	2666665
	1066368									
3		3	20	55	1218	1510	1733	3609028	2666666	3999998
	1458560									
4		1	20	65	1644	0	0	5072049	3999999	5333331
	1460172									
5		3	20	80	1632	1643	1959	6533865	5333332	6666664
	585673									
6		2	20	90	1711	1262	0	7124772	6666665	7999997
	1014835									
7		2	20	85	1158	1277	0	8142580	7999998	9333330
	1478932									
8		1	20	50	1848	0	0	9623947	9333331	10666663
	1668038									
9		1	20	70	1172	0	0	11293833	10666664	11999996

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

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	1096165	3	5	70	1999	1603	1777	1096165	0	1499999
2	1166003	1	5	80	1999	0	0	2267547	1500000	2999999
3	1444489	2	5	95	1862	1316	0	3714035	3000000	4499999
4	1446061	3	5	75	1764	1474	1789	5163274	4500000	5999999
5	1955099	3	5	90	1237	1328	1217	7123400	6000000	7499999
6	1229998	2	5	65	1900	1786	0	8357180	7500000	8999999
7	1511269	1	5	85	1053	0	0	9872135	9000000	10499999
8	1875612	3	5	55	1202	1164	1135	11748800	10500000	11999999

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

Type 5 Radar Waveform_12

Waveform Num = 12
Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1068880	3	6	55	1458	1152	1409	1068880	0	1333332
2	1086244	2	6	90	1952	1636	0	2159143	1333333	2666665
3	828409	2	6	80	1518	1078	0	2991140	2666666	3999998
4	1657855	2	6	55	1222	1710	0	4651591	3999999	5333331
5	1326384	2	6	60	1733	1174	0	5980907	5333332	6666664
6	1944404	1	6	55	1128	0	0	7928218	6666665	7999997
7	79143	3	6	60	1676	1697	1434	8008489	7999998	9333330
8	2015349	2	6	65	1778	1957	0	10028645	9333331	10666663
9	1314979	2	6	100	1223	1851	0	11347359	10666664	11999996

Total number of pulses in waveform = 19
****

Type 5 Radar Waveform_13

Waveform Num = 13
Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	236713	1	9	55	1365	0	0	236713	0	705881
2	491218	2	9	60	1474	1180	0	729296	705882	1411763
3	1192233	3	9	100	1494	1404	1888	1924183	1411764	2117645
4	883482	2	9	65	1975	1634	0	2812451	2117646	2823527
5	609941	2	9	60	1147	1876	0	3426001	2823528	3529409
6	281565	2	9	100	1367	1959	0	3710589	3529410	4235291
7	828489	3	9	95	1788	1914	1619	4542404	4235292	4941173
8	779625	2	9	85	1814	1314	0	5327350	4941174	5647055
9	652696	2	9	50	1123	1090	0	5983174	5647056	6352937
10	683294	3	9	75	1913	1955	1567	6668681	6352938	7058819
11	803366	3	9	100	1238	1505	1144	7477482	7058820	7764701
12	813537	1	9	90	1206	0	0	8294906	7764702	8470583
13	597045	1	9	75	1599	0	0	8893157	8470584	9176465
14	348320	1	9	75	1390	0	0	9243076	9176466	9882347
15	901354	3	9	80	1272	1424	1198	10145820	9882348	10588229
16	1062507	3	9	85	1342	1750	1176	11212221	10588230	11294111
17	257511	3	9	50	1722	1460	1310	11474000	11294112	11999993

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

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	224305	3	10	55	1137	1316	1935	224305	0	749999
2	1028674	2	10	50	1683	1384	0	1257367	750000	1499999
3	461926	1	10	70	1821	0	0	1722360	1500000	2249999
4	820894	2	10	60	1314	1078	0	2545075	2250000	2999999
5	1170630	3	10	55	1630	1003	1878	3718097	3000000	3749999
6	202292	2	10	75	1017	1874	0	3924900	3750000	4499999
7	626519	3	10	70	1831	1716	1238	4554310	4500000	5249999
8	714441	2	10	85	1768	1813	0	5273536	5250000	5999999
9	857164	3	10	80	1772	1474	1906	6134281	6000000	6749999
10	780937	1	10	100	1655	0	0	6920370	6750000	7499999
11	1203070	3	10	65	1219	1334	1465	8125095	7500000	8249999
12	632765	3	10	80	1875	1984	1234	8761878	8250000	8999999
13	475271	3	10	60	1064	1269	1627	9242242	9000000	9749999
14	953186	3	10	100	1995	1291	1182	10199388	9750000	10499999
15	343301	3	10	55	1419	1749	1930	10547157	10500000	11249999
16	801758	1	10	85	1784	0	0	11354013	11250000	11999999

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

Type 5 Radar Waveform_15

```
Waveform Num = 15
Num of Bursts = 14
Burst Interval (us)= 857143
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	654097	1	11	50	1029	0	0	654097	0	857142
2	355959	1	11	80	1266	0	0	1011085	857143	1714285
3	1436162	2	11	65	1041	1754	0	2448513	1714286	2571428
4	292301	3	11	90	1673	1855	1947	2743609	2571429	3428571
5	1130495	2	11	65	1795	1626	0	3879579	3428572	4285714
6	556989	3	11	55	1732	1614	1049	4439989	4285715	5142857
7	1103470	2	11	90	1690	1450	0	5547854	5142858	6000000
8	537488	3	11	95	1893	1693	1558	6088482	6000001	6857143
9	1042253	1	11	100	1166	0	0	7135879	6857144	7714286
10	1035334	1	11	75	1962	0	0	8172379	7714287	8571429
11	423395	2	11	60	1837	1855	0	8597736	8571430	9428572
12	1679186	3	11	90	1082	1952	1115	10280614	9428573	10285715
13	668505	1	11	85	1219	0	0	10953268	10285716	11142858
14	527241	3	11	95	1923	1685	1908	11481728	11142859	12000001

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

Type 5 Radar Waveform_16

```
Waveform Num = 16
Num of Bursts = 12
Burst Interval (us)= 1000000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	702057	2	12	50	1737	1914	0	702057	0	999999
2	1240238	1	12	80	1750	0	0	1945946	1000000	1999999
3	110491	1	12	65	1181	0	0	2058187	2000000	2999999
4	1745520	1	12	50	1466	0	0	3804888	3000000	3999999
5	891328	3	12	60	1537	1686	1803	4697682	4000000	4999999
6	1191662	2	12	100	1129	1751	0	5894370	5000000	5999999
7	378470	1	12	95	1878	0	0	6275720	6000000	6999999
8	1224613	3	12	60	1198	1585	1592	7502211	7000000	7999999
9	827166	2	12	60	1534	1842	0	8333752	8000000	8999999
10	1653272	3	12	55	1299	1611	1711	9990400	9000000	9999999
11	416402	1	12	75	1187	0	0	10411423	10000000	10999999
12	733854	3	12	60	1295	1429	1583	11146464	11000000	11999999

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

Type 5 Radar Waveform_17

```
Waveform Num = 17
Num of Bursts = 16
Burst Interval (us)= 750000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	270776	3	13	70	1711	1699	1726	270776	0	749999
2	1062847	1	13	85	1825	0	0	1338759	750000	1499999
3	375856	1	13	75	1642	0	0	1716440	1500000	2249999
4	571844	2	13	95	1416	1868	0	2289926	2250000	2999999
5	1024241	3	13	75	1996	1561	1057	3317451	3000000	3749999
6	1141767	2	13	80	1163	1211	0	4463832	3750000	4499999
7	720982	1	13	70	1393	0	0	5187188	4500000	5249999
8	606506	2	13	65	1850	1188	0	5795087	5250000	5999999
9	928657	2	13	80	1545	1334	0	6726782	6000000	6749999
10	349566	2	13	60	1159	1730	0	7079227	6750000	7499999
11	712253	3	13	100	1445	1521	1497	7794369	7500000	8249999
12	527530	3	13	80	1568	1184	1728	8326362	8250000	8999999
13	1326008	2	13	100	1174	1176	0	9656850	9000000	9749999
14	394483	2	13	75	1669	1909	0	10053683	9750000	10499999
15	985507	3	13	85	1578	1032	1863	11042768	10500000	11249999
16	927411	1	13	80	1907	0	0	11974652	11250000	11999999

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

Type 5 Radar Waveform_18

```
Waveform Num = 18
Num of Bursts = 20
Burst Interval (us)= 600000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	353336	2	16	75	1672	1217	0	353336	0	599999
2	445361	2	16	80	1874	1436	0	801586	600000	1199999
3	438054	2	16	55	1536	1467	0	1242950	1200000	1799999
4	941838	1	16	85	1230	0	0	2187791	1800000	2399999
5	323590	2	16	60	1474	1175	0	2512611	2400000	2999999
6	775396	3	16	60	1444	1833	1890	3290656	3000000	3599999
7	411384	1	16	85	1388	0	0	3707207	3600000	4199999
8	974649	2	16	100	1183	1361	0	4683244	4200000	4799999
9	158618	3	16	90	1724	1782	1806	4844406	4800000	5399999
10	920939	2	16	70	1675	1521	0	5770657	5400000	5999999
11	745181	1	16	95	1817	0	0	6519034	6000000	6599999
12	663702	1	16	75	1575	0	0	7184553	6600000	7199999
13	355298	1	16	60	1142	0	0	7541426	7200000	7799999
14	370676	1	16	60	1981	0	0	7913244	7800000	8399999
15	1068532	3	16	65	1342	1297	1079	8983757	8400000	8999999
16	547599	3	16	50	1078	1787	1077	9535074	9000000	9599999
17	205943	2	16	80	1794	1822	0	9744959	9600000	10199999
18	842347	1	16	85	1951	0	0	10590922	10200000	10799999
19	356366	3	16	60	1514	1452	1292	10949239	10800000	11399999
20	460805	2	16	55	1396	1559	0	11414302	11400000	11999999

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

Type 5 Radar Waveform_19

```
Waveform Num = 19
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	194697	3	19	95	1668	1731	1106	194697	0	857142
2	668632	1	19	100	1366	0	0	867834	857143	1714286
3	883373	3	19	55	1357	1151	1131	1752573	1714286	2571428
4	1464989	3	19	55	1120	1664	1002	3221201	2571429	3428571
5	895655	1	19	95	1832	0	0	4120642	3428572	4285714
6	278334	3	19	100	1784	1230	1383	4400808	4285715	5142857
7	1520577	1	19	75	1888	0	0	5925782	5142858	6000000
8	162146	2	19	65	1040	1350	0	6089816	6000001	6857143
9	1202781	2	19	85	1951	1396	0	7294987	6857144	7714285
10	1261427	3	19	85	1717	1228	1493	8559761	7714287	8571429
11	665656	2	19	70	1227	1427	0	9229855	8571430	9428572
12	903361	2	19	75	1617	1228	0	10135870	9428573	10285715
13	234982	3	19	90	1636	1333	1411	10373697	10285716	11142858
14	1121552	3	19	50	1648	1166	1620	11499629	11142859	12000001

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

Type 5 Radar Waveform_20

Waveform Num = 20
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	562502	3	20	50	1605	1172	1464	562502	0	705881
2	357543	2	20	90	1123	1347	0	924286	705882	1411763
3	1059279	2	20	70	1621	1579	0	1986035	1411764	2117645
4	771367	1	20	75	1191	0	0	2760602	2117646	2823527
5	625226	1	20	50	1921	0	0	3387019	2823528	3529409
6	782525	2	20	100	1969	1042	0	4171465	3529410	4235291
7	150728	2	20	80	1239	1829	0	4325204	4235292	4941173
8	1067491	3	20	75	1684	1126	1713	5395763	4941174	5647055
9	739921	2	20	95	1813	1655	0	6140207	5647056	6352937
10	241933	1	20	75	1498	0	0	6385608	6352938	7058819
11	1201941	1	20	70	1479	0	0	7589047	7058820	7764701
12	795822	3	20	65	1960	1208	1061	8386348	7764702	8470583
13	756118	3	20	65	1716	1997	1085	9146695	8470584	9176465
14	345857	1	20	75	1305	0	0	9497350	9176466	9882347
15	801807	3	20	55	1399	1903	1245	10300462	9882348	10588229
16	314038	2	20	100	1972	1213	0	10619047	10588230	11294111
17	1137754	2	20	70	1642	1084	0	11759986	11294112	11999993

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

Type 5 Radar Waveform_21

Waveform Num = 21
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	538010	2	5	75	1317	1670	0	538010	0	857142
2	710531	2	5	75	1514	1132	0	1251528	857143	1714285
3	1229333	2	5	80	1465	1529	0	2483507	1714286	2571428
4	778127	1	5	100	1819	0	0	3264628	2571429	3428571
5	490831	2	5	100	1708	1093	0	3757278	3428572	4285714
6	598846	3	5	70	1188	1618	1789	4358925	4285715	5142857
7	890628	1	5	75	1885	0	0	5254148	5142858	6000000
8	1521930	1	5	100	1219	0	0	6777963	6000001	6857143
9	444338	2	5	90	1861	1034	0	7223520	6857144	7714286
10	771646	3	5	95	1298	1669	1056	7998061	7714287	8571429
11	1251170	2	5	60	1838	1705	0	9253254	8571430	9428572
12	943220	1	5	75	1987	0	0	10200017	9428573	10285715
13	469731	1	5	55	1706	0	0	10671735	10285716	11142858
14	576682	3	5	80	1278	1009	1007	11250123	11142859	12000001

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

Type 5 Radar Waveform_22

Waveform Num = 22
Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	256778	1	6	100	1456	0	0	256778	0	1499999
2	1573754	3	6	85	1548	1211	1803	1831988	1500000	2999999
3	2024257	2	6	60	1538	1234	0	3860807	3000000	4499999
4	1910198	3	6	85	1822	1546	1019	5773777	4500000	5999999
5	1201783	1	6	90	1151	0	0	6979947	6000000	7499999
6	1331961	3	6	85	1209	1010	1499	8313059	7500000	8999999
7	2082916	1	6	100	1316	0	0	10399693	9000000	10499999
8	735302	2	6	50	1916	1754	0	11136311	10500000	11999999

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

Type 5 Radar Waveform_23

Waveform Num = 23
Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1103533	1	9	85	1745	0	0	1103533	0	1499999
2	660827	2	9	80	1457	1109	0	1766105	1500000	2999999
3	1319231	1	9	80	1133	0	0	3087902	3000000	4499999
4	2070862	1	9	85	1895	0	0	5159897	4500000	5999999
5	1988002	1	9	55	1151	0	0	7149794	6000000	7499999
6	1044830	3	9	75	1684	1334	1225	8195775	7500000	8999999
7	2207485	3	9	90	1634	1332	1991	10407503	9000000	10499999
8	631574	3	9	50	1689	1093	1498	11044034	10500000	11999999

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

Type 5 Radar Waveform_24

Waveform Num = 24
Num of Bursts = 19
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	258012	2	10	100	1777	1726	0	258012	0	631578
2	434518	3	10	50	1579	1707	1685	696033	631579	1263157
3	668592	2	10	85	1087	1748	0	1369596	1263158	1894736
4	899833	3	10	65	1551	1731	1971	2272264	1894737	2526315
5	616277	2	10	65	1977	1501	0	2893794	2526316	3157894
6	364263	3	10	75	1300	1400	1655	3261535	3157895	3789473
7	638916	3	10	50	1411	1634	1061	3904806	3789474	4421052
8	817702	2	10	50	1843	1927	0	4726614	4421053	5052631
9	721877	3	10	60	1815	1619	1956	5452261	5052632	5684210
10	361030	3	10	65	1800	1534	1414	5818681	5684211	6315789
11	773696	2	10	65	1336	1569	0	6597125	6315790	6947368
12	931424	2	10	100	1199	1423	0	7531454	6947369	7578947
13	137977	3	10	85	1120	1383	1245	7672053	7578948	8210526
14	819534	2	10	70	1965	1468	0	8495335	8210527	8842105
15	919521	1	10	85	1372	0	0	9418289	8842106	9473684
16	173022	3	10	70	1982	1593	1361	9592683	9473685	10105263
17	645676	2	10	80	1237	1035	0	10243295	10105264	10736842
18	691371	2	10	90	1577	1990	0	10936938	10736843	11368421
19	770991	3	10	80	1514	1693	1538	11711496	11368422	12000000

Total number of pulses in waveform = 46
****

Type 5 Radar Waveform_25

Waveform Num = 25
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	350168	2	11	80	1262	1478	0	350168	0	599999
2	791041	3	11	60	1527	1842	1899	1143949	600000	1199999
3	386542	3	11	65	1112	1623	1504	1535759	1200000	1799999
4	790045	2	11	85	1116	1188	0	2330043	1800000	2399999
5	636544	3	11	80	1300	1826	1291	2968891	2400000	2999999
6	399456	1	11	55	1537	0	0	3372764	3000000	3599999
7	688782	3	11	100	1466	1291	1747	4063083	3600000	4199999
8	687735	3	11	100	1276	1940	1134	4755322	4200000	4799999
9	574592	2	11	85	1146	1976	0	5334264	4800000	5399999
10	632056	2	11	75	1573	1306	0	5969442	5400000	5999999
11	300801	2	11	50	1320	1746	0	6273122	6000000	6599999
12	355897	1	11	100	1051	0	0	6632085	6600000	7199999
13	587548	3	11	70	1878	1884	1930	7220684	7200000	7799999
14	1044700	3	11	70	1997	1704	1250	8271076	7800000	8399999
15	672641	1	11	85	1743	0	0	8948668	8400000	8999999
16	205741	3	11	55	1666	1671	1180	9156152	9000000	9599999
17	460183	2	11	65	1760	1313	0	9620852	9600000	10199999
18	1012160	2	11	90	1063	1805	0	10636085	10200000	10799999
19	285325	3	11	75	1153	1649	1231	10924278	10800000	11399999
20	806853	1	11	80	1566	0	0	11735164	11400000	11999999

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

Type 5 Radar Waveform_26

```
Waveform Num = 26
Num of Bursts = 12
Burst Interval (us)= 1000000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	388721	3	12	60	1203	1341	1320	388721	0	999999
2	1525686	2	12	70	1949	1383	0	1918271	1000000	1999999
3	323927	3	12	50	1870	1128	1527	2245530	2000000	2999999
4	1229717	1	12	70	1421	0	0	3479772	3000000	3999999
5	1033190	3	12	100	1583	1296	1857	4514383	4000000	4999999
6	610836	1	12	90	1258	0	0	5129955	5000000	5999999
7	1066338	1	12	100	1834	0	0	6197551	6000000	6999999
8	1387717	3	12	70	1577	1123	1384	7587102	7000000	7999999
9	798251	3	12	60	1626	1262	1178	8389437	8000000	8999999
10	823168	2	12	55	1019	1383	0	9216671	9000000	9999999
11	1090632	1	12	60	1139	0	0	10309705	10000000	10999999
12	1638726	2	12	80	1008	1413	0	11949570	11000000	11999999

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

Type 5 Radar Waveform_27

```
Waveform Num = 27
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	495367	3	13	70	1386	1087	1314	495367	0	1499999
2	1328186	1	13	50	1451	0	0	1827340	1500000	2999999
3	1626489	1	13	90	1895	0	0	3455280	3000000	4499999
4	1622506	1	13	90	1515	0	0	5079681	4500000	5999999
5	2139179	1	13	80	1370	0	0	7220375	6000000	7499999
6	713683	3	13	95	1583	1205	1155	7935428	7500000	8999999
7	2493979	2	13	100	1078	1213	0	10433350	9000000	10499999
8	1017047	2	13	60	1685	1337	0	11452688	10500000	11999999

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

Type 5 Radar Waveform_28

```
Waveform Num = 28
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	897768	1	16	60	1101	0	0	897768	0	923076
2	603635	1	16	50	1310	0	0	1502504	923077	1846153
3	1061666	3	16	80	1388	1088	1477	2565480	1846154	2769230
4	601218	2	16	100	1368	1929	0	3170651	2769231	3692307
5	1200567	1	16	95	1727	0	0	4374515	3692308	4615384
6	323376	1	16	60	1016	0	0	4699618	4615385	5538461
7	929382	3	16	80	1645	1896	1140	5630016	5538462	6461538
8	1062708	1	16	60	1759	0	0	6697405	6461539	7384615
9	1098592	1	16	95	1598	0	0	7797756	7384616	8307692
10	782161	3	16	60	1797	1605	1199	8581515	8307693	9230769
11	1486379	2	16	85	1767	1000	0	10072495	9230770	10153846
12	672853	1	16	80	1899	0	0	10748115	10153847	11076923
13	366407	3	16	90	1508	1957	1819	11116421	11076924	12000000

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

Type 5 Radar Waveform_29

```
Waveform Num = 29
Num of Bursts = 12
Burst Interval (us)= 1000000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	444984	3	19	85	1221	1897	1259	444984	0	999999
2	895204	3	19	95	1948	1173	1370	1344565	1000000	1999999
3	1340446	1	19	85	1652	0	0	2689502	2000000	2999999
4	1297779	2	19	85	1796	1923	0	3988933	3000000	3999999
5	881824	2	19	75	1144	1898	0	4874476	4000000	4999999
6	815700	3	19	55	1276	1325	1001	5693218	5000000	5999999
7	888597	3	19	75	1913	1199	1594	6585417	6000000	6999999
8	648879	1	19	75	1402	0	0	7239002	7000000	7999999
9	1202101	3	19	50	1785	1330	1713	8442505	8000000	8999999
10	811590	3	19	85	1173	1002	1996	9258923	9000000	9999999
11	759896	3	19	85	1097	1352	1647	10022990	10000000	10999999
12	1937430	3	19	80	1819	1158	1622	11964516	11000000	11999999

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

Type 5 Radar Waveform_30

```
Waveform Num = 30
Num of Bursts = 8
Burst Interval (us)= 1500000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	124637	2	20	80	1644	1094	0	124637	0	1499999
2	2261216	1	20	70	1394	0	0	2388591	1500000	2999999
3	1007720	1	20	85	1530	0	0	3397705	3000000	4499999
4	1259310	3	20	80	1116	1512	1319	4658545	4500000	5999999
5	2324780	2	20	50	1847	1121	0	6987272	6000000	7499999
6	1549996	3	20	80	1419	1539	1378	8540236	7500000	8999999
7	1143722	3	20	75	1307	1302	1116	9688294	9000000	10499999
8	1117961	2	20	80	1520	1228	0	10809980	10500000	11999999

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

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	5518	1
5	5495	1	20	5519	1
6	5496	1	21	5520	1
7	5497	1	22	5521	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)
0	5511	0	7	5520	21
2	5467	6	20	5498	60
7	5501	21	32	5513	96
14	5494	42	44	5522	132
24	5498	72	60	5518	180
26	5476	78	67	5470	201
27	5479	81	77	5468	231
35	5463	105	81	5506	243
60	5465	180	98	5521	294
78	5489	234	--	--	--
83	5484	249	--	--	--
84	5475	252	--	--	--
95	5480	285	--	--	--
96	5481	288	--	--	--
97	5509	291	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5508	0	0	5487	0
5	5464	15	17	5500	51
9	5496	27	23	5504	69
10	5498	30	30	5503	90
11	5501	33	35	5515	105
15	5518	45	39	5491	117
35	5463	105	44	5524	132
40	5516	120	64	5467	192
43	5515	129	68	5489	204
44	5504	132	75	5523	225
50	5489	150	76	5495	228
60	5507	180	85	5512	255
75	5486	225	97	5513	291
82	5478	246	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5502	15	12	5486	36
10	5475	30	19	5522	57
35	5492	105	30	5472	90
53	5474	159	43	5506	129
58	5495	174	63	5466	189
77	5523	231	65	5510	195
81	5465	243	71	5503	213
86	5511	258	76	5473	228
--	--	--	79	5491	237
--	--	--	95	5499	285
--	--	--	96	5474	288
--	--	--	99	5489	297

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5513	18	4	5508	12
8	5490	24	13	5511	39
9	5481	27	30	5489	90
15	5506	45	32	5494	96
21	5489	63	39	5521	117
22	5499	66	40	5479	120
56	5527	168	50	5483	150
62	5516	186	52	5503	156
63	5477	189	58	5509	174
65	5510	195	65	5510	195
71	5500	213	81	5473	243
--	--	--	86	5492	258
--	--	--	98	5526	294

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5487	15	3	5513	9
17	5470	51	17	5485	51
20	5482	60	21	5524	63
25	5509	75	29	5478	87
27	5485	81	30	5514	90
32	5513	96	32	5523	96
44	5528	132	38	5495	114
52	5489	156	42	5500	126
55	5524	165	56	5497	168
61	5471	183	59	5519	177
67	5496	201	64	5526	192
80	5514	240	69	5508	207
93	5483	279	83	5496	249
--	--	--	97	5480	291

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5528	54	8	5522	24
24	5476	72	15	5518	45
50	5487	150	17	5480	51
52	5498	156	24	5499	72
58	5497	174	27	5504	81
66	5532	198	42	5534	126
75	5519	225	46	5531	138
78	5526	234	71	5532	213
80	5472	240	84	5477	252
81	5504	243	86	5487	258
89	5516	267	93	5475	279
90	5480	270	94	5507	282
97	5492	291	95	5520	285
98	5494	294	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5518	30	12	5521	36
11	5502	33	19	5505	57
12	5520	36	26	5512	78
21	5485	63	27	5524	81
27	5499	81	30	5497	90
34	5511	102	38	5483	114
60	5527	180	42	5503	126
61	5521	183	47	5531	141
71	5507	213	60	5523	180
73	5487	219	70	5485	210
74	5481	222	85	5516	255
76	5497	228	92	5478	276
84	5516	252	96	5518	288
85	5483	255	12	5521	36
88	5479	264	--	--	--
95	5522	285	--	--	--
97	5531	291	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5504	45	0	5496	0
27	5491	81	7	5506	21
41	5532	123	23	5533	69
43	5535	129	24	5507	72
46	5485	138	27	5534	81
62	5501	186	28	5516	84
64	5487	192	29	5530	87
84	5523	252	52	5483	156
88	5533	264	56	5520	168
96	5486	288	73	5511	219
--	--	--	77	5499	231
--	--	--	83	5505	249
--	--	--	84	5519	252
--	--	--	89	5485	267
--	--	--	91	5497	273
--	--	--	93	5512	279
--	--	--	97	5493	291

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5517	24	7	5542	21
10	5532	30	15	5509	45
20	5500	60	26	5488	78
27	5513	81	28	5486	84
51	5525	153	31	5517	93
52	5501	156	35	5538	105
53	5491	159	44	5500	132
57	5521	171	55	5535	165
58	5510	174	61	5527	183
64	5488	192	70	5493	210
77	5535	231	76	5520	228
82	5512	246	78	5490	234
83	5523	249	81	5533	243
89	5514	267	90	5498	270
97	5522	291	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5532	54	26	5511	78
21	5524	63	28	5524	84
29	5536	87	33	5545	99
39	5541	117	37	5508	111
53	5509	159	55	5544	165
65	5500	195	70	5533	210
80	5504	240	72	5532	216
81	5544	243	74	5514	222
93	5511	279	76	5519	228
94	5531	282	78	5496	234
96	5499	288	87	5534	261
99	5488	297	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5507	33	4	5546	12
45	5537	135	21	5541	63
49	5509	147	24	5523	72
51	5499	153	33	5551	99
52	5502	156	38	5526	114
60	5508	180	41	5505	123
68	5532	204	49	5524	147
88	5527	264	54	5531	162
--	--	--	66	5499	198
--	--	--	74	5536	222
--	--	--	76	5533	228

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5549	12	20	5549	60
7	5509	21	30	5506	90
9	5535	27	36	5545	108
12	5545	36	41	5507	123
20	5495	60	44	5522	132
36	5523	108	45	5539	135
40	5522	120	46	5493	138
58	5497	174	57	5510	171
73	5520	219	69	5537	207
--	--	--	73	5529	219
--	--	--	91	5497	273
--	--	--	98	5551	294

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5526	15	6	5506	18
10	5547	30	7	5526	21
14	5545	42	10	5495	30
19	5498	57	30	5546	90
22	5530	66	48	5523	144
25	5506	75	52	5535	156
33	5502	99	74	5507	222
36	5510	108	82	5542	246
41	5546	123	99	5531	297
45	5497	135	--	--	--
47	5495	141	--	--	--
52	5514	156	--	--	--
60	5537	180	--	--	--
70	5512	210	--	--	--
75	5523	225	--	--	--
82	5529	246	--	--	--
92	5507	276	--	--	--
94	5532	282	--	--	--
95	5518	285	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5516	3	0	5540	0
4	5514	12	9	5527	27
13	5528	39	10	5536	30
15	5523	45	13	5548	39
19	5555	57	18	5553	54
37	5556	111	23	5546	69
39	5509	117	26	5504	78
44	5529	132	28	5498	84
81	5504	243	50	5521	150
91	5534	273	52	5513	156
--	--	--	71	5516	213
--	--	--	83	5506	249
--	--	--	91	5529	273
--	--	--	94	5502	282

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5515	3	1	5525	3
6	5524	18	5	5554	15
13	5499	39	10	5531	30
19	5521	57	11	5543	33
21	5513	63	21	5536	63
23	5554	69	35	5509	105
38	5511	114	42	5511	126
41	5537	123	57	5542	171
42	5506	126	59	5551	177
43	5531	129	74	5552	222
45	5518	135	75	5521	225
75	5523	225	86	5547	258
85	5547	255	90	5519	270
99	5550	297	--	--	--

6. CONCLUSION

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

FCC ID: Q9DAPINR15515P is in compliance with Part 15E of the FCC Rules.

—————————————— The End ——————————————