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Report No.: 1409RSU02703  
Report Version: V01  
Issue Date: 09-25-2014

## DFS MEASUREMENT REPORT

### FCC PART 15.407

**FCC ID:** O9C-BJNGAFB0005

**APPLICANT:** Hewlett Packard Company

**Application Type:** Certification

**Product:** Unified Wired-WLAN Walljack

**Model No.:** BJNGA-FB0005, JH048A

**Brand Name:** HP

**FCC Classification:** Unlicensed National Information Infrastructure (UNII)

**FCC Rule Part(s):** Part 15.407

KDB 905462 D02v01, KDB 905462 D04v01

**Type of Device:**  Master Device

Client Device (No radar detection)

Client Device with radar detection

**Test Date:** Sep. 15 ~ 24, 2014

Reviewed By : Robin Wu  
\_\_\_\_\_  
( Robin Wu )

Approved By : Marlin Chen  
\_\_\_\_\_  
( Marlin Chen )



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 905462 D02v01. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

## Revision History

Report No.	Version	Description	Issue Date
1409RSU02703	Rev. 01	Initial report	09-25-2014

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## §2.1033 General Information

<b>Applicant:</b>	Hewlett Packard Company
<b>Applicant Address:</b>	153 Taylor Street Littleton Massachusetts, United States 01460-1407
<b>Manufacturer:</b>	Hewlett Packard Company
<b>Manufacturer Address:</b>	153 Taylor Street Littleton Massachusetts, United States 01460-1407
<b>Test Site:</b>	MRT Technology (Suzhou) Co., Ltd
<b>Test Site Address:</b>	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
<b>MRT FCC Registration No.:</b>	809388
<b>Model No.:</b>	BJNGA-FB0005, JH048A
<b>FCC ID:</b>	O9C-BJNGAFB0005
<b>Test Device Serial No.:</b>	N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering
<b>FCC Classification:</b>	Unlicensed National Information Infrastructure (UNII)
<b>Date(s) of Test:</b>	Sep. 15 ~ 24, 2014
<b>Test Report S/N:</b>	1409RSU02703

### Test Facility / Accreditations

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

- 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.
- 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 and Industry Canada (11384A-1).
- MRT facility is an IC registered (11384A-1) test laboratory with the site description on file at Industry Canada.



## 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.

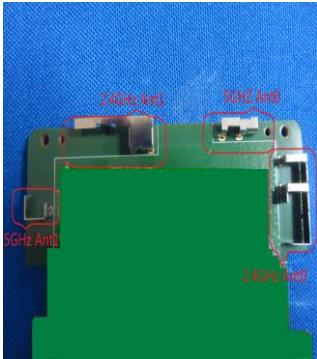


## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

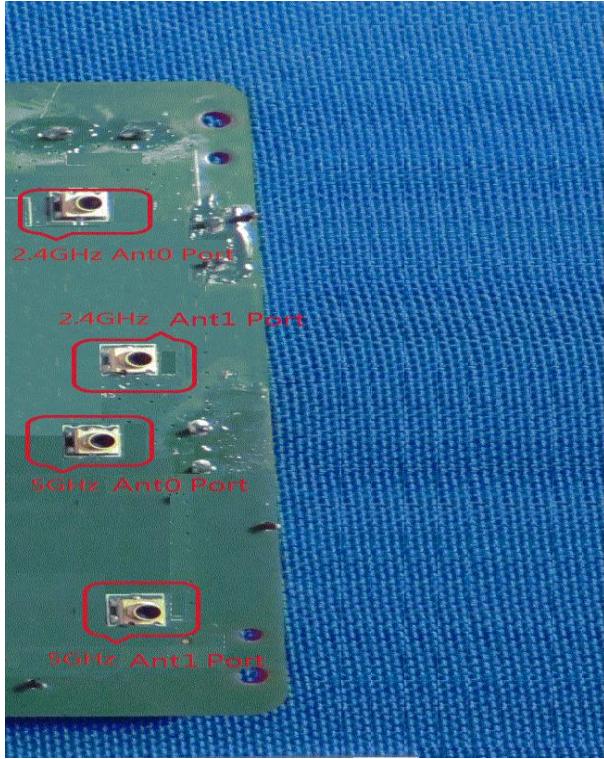
Product Name	Unified Wired-WLAN Walljack
Model No.	BJNGA-FB0005, JH048A
Radio Type	Intentional Transceiver
Power Type	48Vdc, 0.63A (or POE input)
Operation Mode	Master Device
Frequency Range	For 802.11a/n-HT20: 5260~5320MHz, 5500~5700MHz For 802.11ac-VHT20: 5260~5320MHz, 5500~5720MHz For 802.11n-HT40: 5270~5310MHz, 5510~5670MHz For 802.11ac-VHT40: 5270~5310MHz, 5510~5710MHz For 802.11ac-VHT80: 5290MHz, 5530MHz, 5610MHz, 5690MHz
Maximum Output Power	802.11a: 20.86dBm 802.11n-HT20: 20.77dBm 802.11n-HT40: 20.65dBm 802.11ac-VHT20: 20.81dBm 802.11ac-VHT40: 20.58dBm 802.11ac-VHT80: 20.20dBm
Type of Modulation	802.11a/n/ac: OFDM;
Power-on cycle	Requires 127.8 seconds to complete its power-on cycle.
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 Type	Frequency Band (GHz)	Manufacturer	Model	Tx Paths	Max Peak Gain (dBi)	Directional Gain (dBi)	
					For Power	For PSD	
	2.4	Lite-On Technology Corp.	WP388-FN EVT2	2	Ant 0: 2.7 Ant 1: 3.3	6.02	6.02
	5.2				Ant 0: 4.6 Ant 1: 4.2	7.41	7.41
	5.5			2	Ant 0: 4.9 Ant 1: 4.4	7.66	7.66
	5.8				Ant 0: 5.0 Ant 1: 5.4	8.21	8.21

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

## 2.1. Description of Antenna RF Port

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

## 2.2. DFS Band Carrier Frequencies Operation

802.11a/n Center Working Frequency of Each Channel

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

802.11ac-VHT20 Center Working Frequency of Each Channel

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

802.11n-HT40 Center Working Frequency of Each Channel

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

802.11ac-VHT40 Center Working Frequency of Each Channel

Channel	Frequency	Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz	102	5510 MHz
110	5550 MHz	118	5590 MHz	126	5630 MHz
134	5670 MHz	142	5710MHz	N/A	N/A

## 802.11ac-VHT80 Center Working Frequency of Each Channel

Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290 MHz	106	5530 MHz	122	5610 MHz
138	5690 MHz	N/A	N/A	N/A	N/A

**2.3. Test Mode**

Test Mode	Mode 1: Normal Operation
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### 3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

#### 3.1. Applicability

The following table from FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v01 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 all 20 MHz channel blocks and a null frequencies between the bonded 20 MHz channel blocks.		

**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 v01 the following are the requirements for Master Devices:

- (a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5250 ~ 5350 MHz and 5470 ~ 5725 MHz bands. DFS is not required in the 5150 ~ 5250 MHz or 5725 ~ 5825 MHz bands.
- (b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.
- (c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.
- (d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).
- (e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.
- (f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period.
- (g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

Channel Move Time and Channel Closing Transmission Time requirements are listed in the following table.

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

**Table 3-3: DFS Response Requirements**

### 3.3. DFS Detection Threshold Values

The DFS detection thresholds are defined for Master devices and Client Devices with In-service monitoring. These detection thresholds are listed in the following table.

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

**Note 1:** This is the level at the input of the receiver assuming a 0 dBi receive antenna.

**Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

**Note 3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

**Table 3-4: Detection Thresholds for Master Devices and Client Devices with Radar Detection**

### 3.4. Parameters of DFS Test Signals

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

#### Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	Roundup $\left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
<b>Note 1:</b> 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

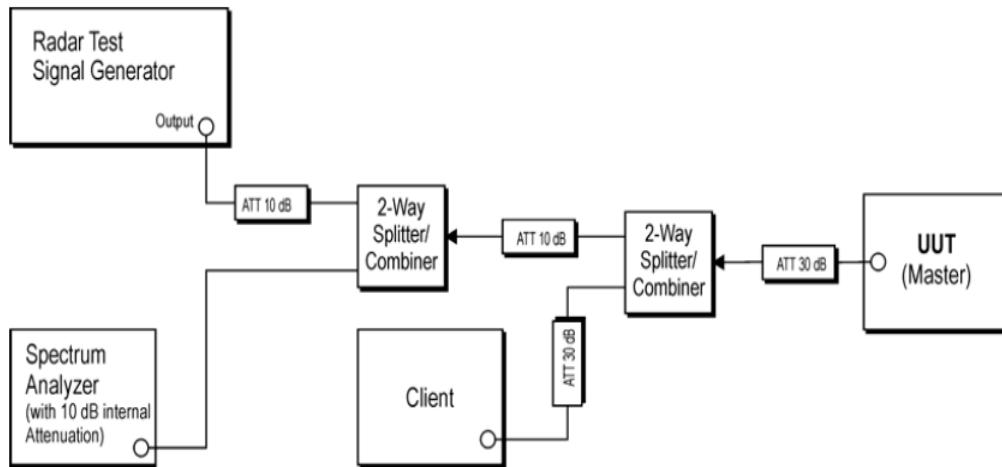
**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

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 v01 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure 3-1 shows the typical test setup.



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

#### 4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS)

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY5144016A	2015/01/04
ESG Vector Signal Generator	Agilent	E4438C	MY49872484	2014/12/14
Wireless Module	Intel	AC 7260	N/A	N/A

Software	Manufacturer	Function
Pulse Building	Agilent	Radar Signal Generation Software
DFS Tool	Agilent	DFS Test Software

## 5. TEST RESULT

### 5.1. Summary

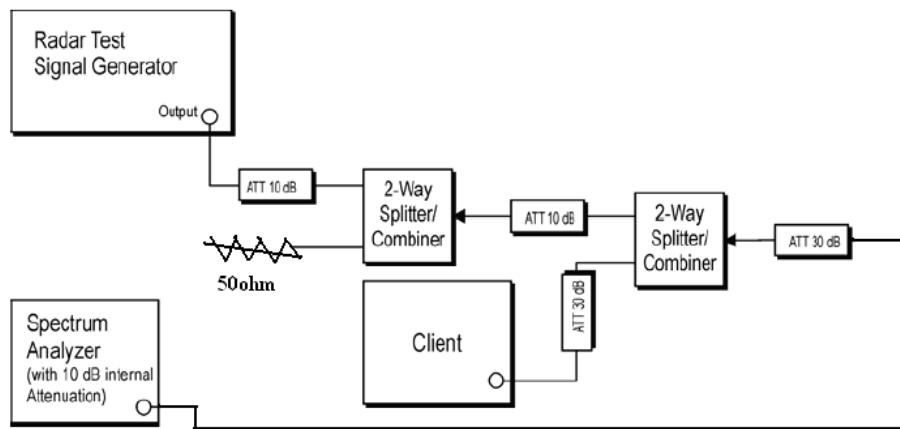
**Company Name:** Hewlett Packard Company  
**FCC ID:** O9C-BJNGAFB0005  
**FCC Classification:** Unlicensed National Information Infrastructure (UNII)

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	
Statistical Performance Check	Refer Table 3-3	Pass	Section 5.9

## 5.2. Radar Waveform Calibration

### 5.2.1. Calibration Setup

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



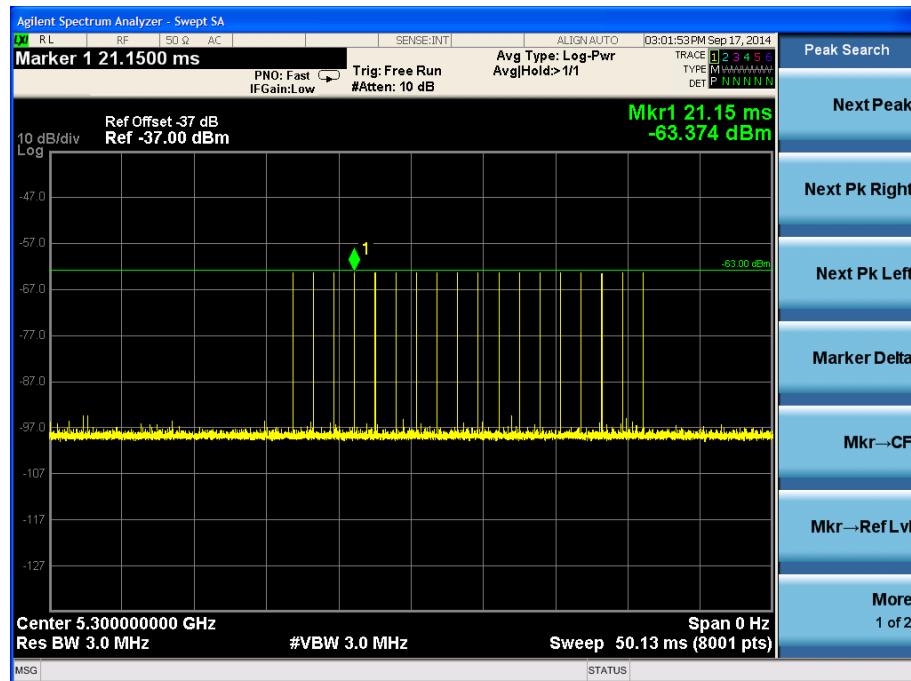
**Figure 3-2: Conducted Test Setup**

### 5.2.2. Calibration Procedure

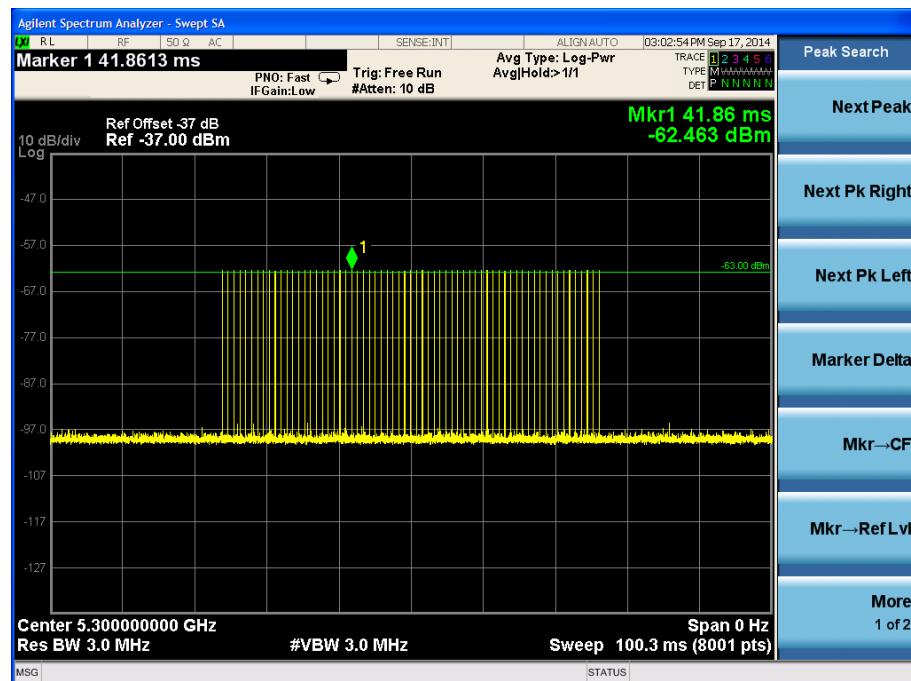
The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

### 5.2.3. Calibration Result

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

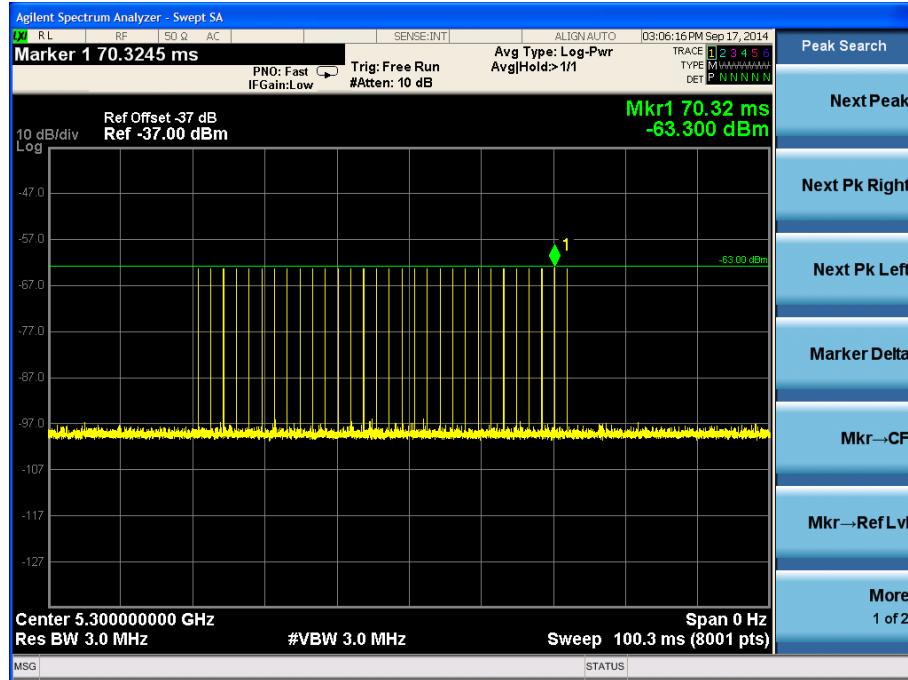


Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



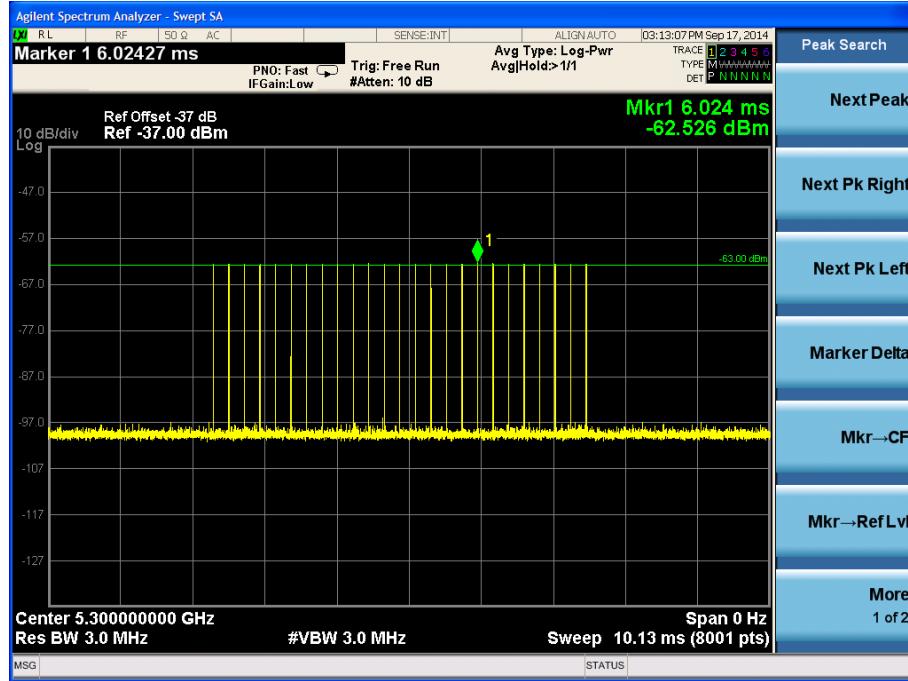
PRI = 738us and the number of pulses = 72

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

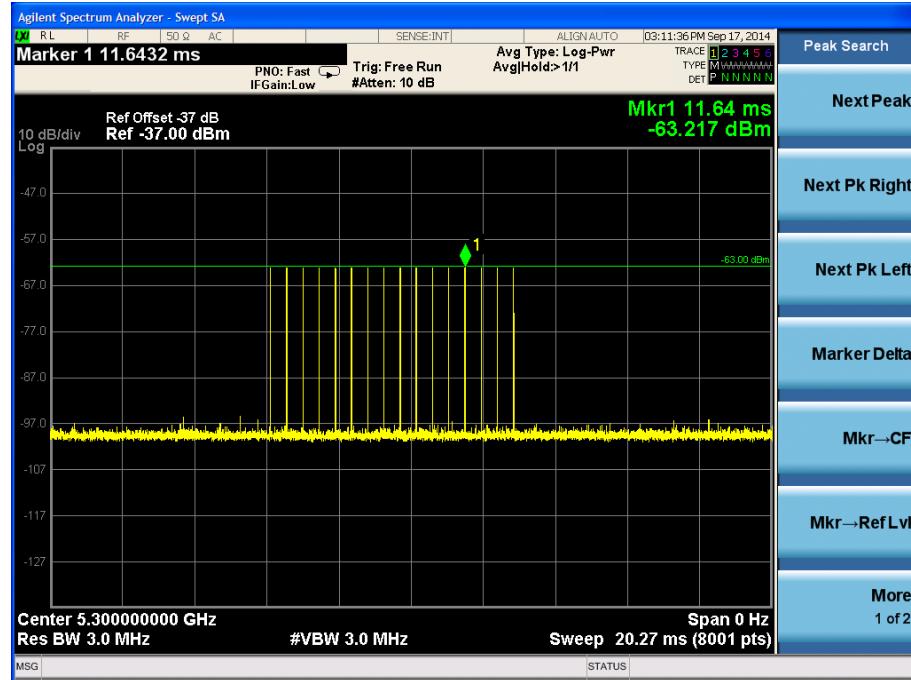


PRI = 1.787ms and the number of pulses = 30

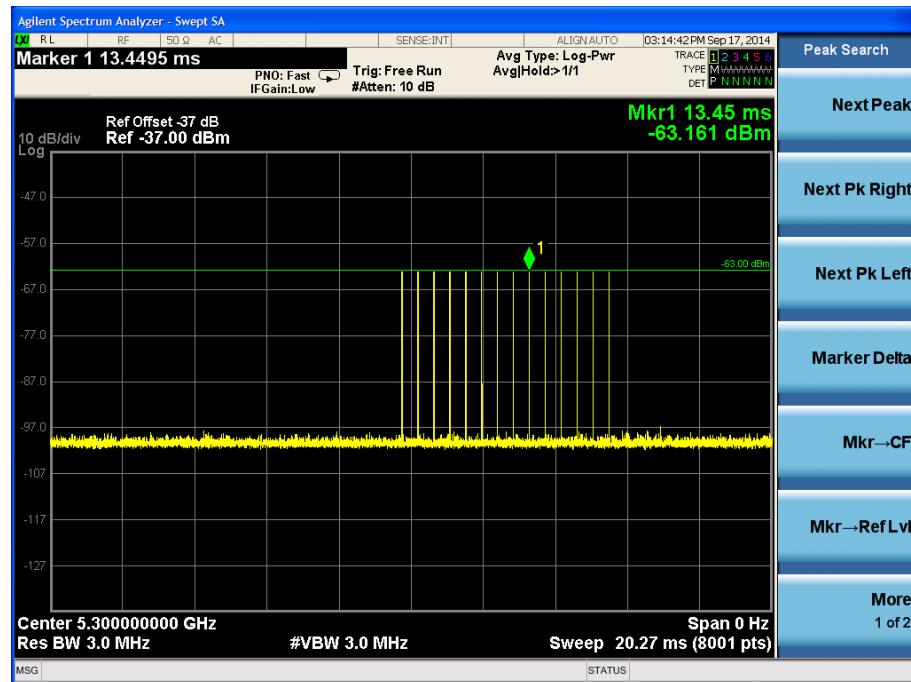
Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



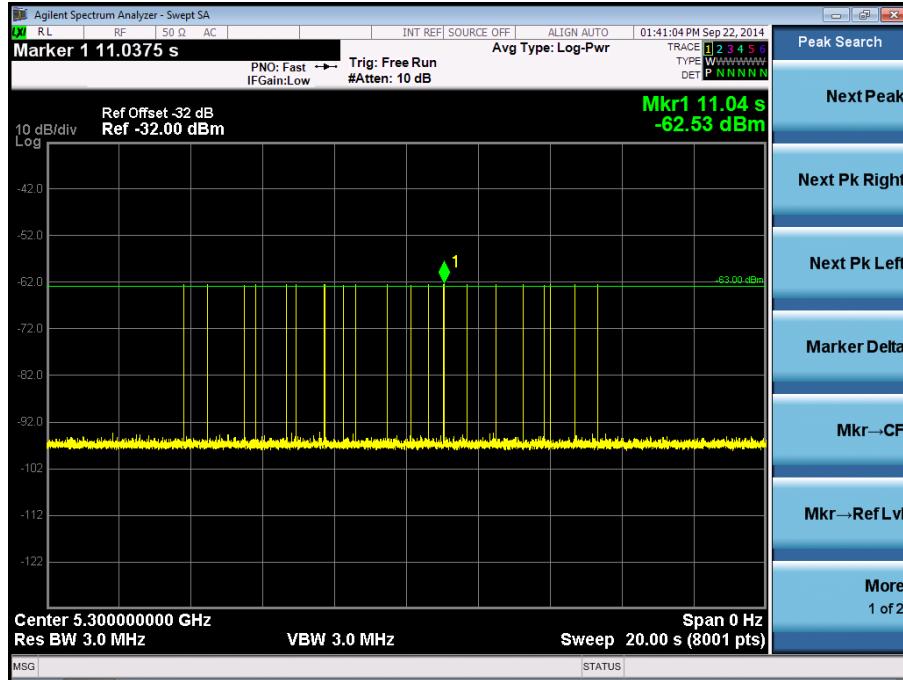
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency



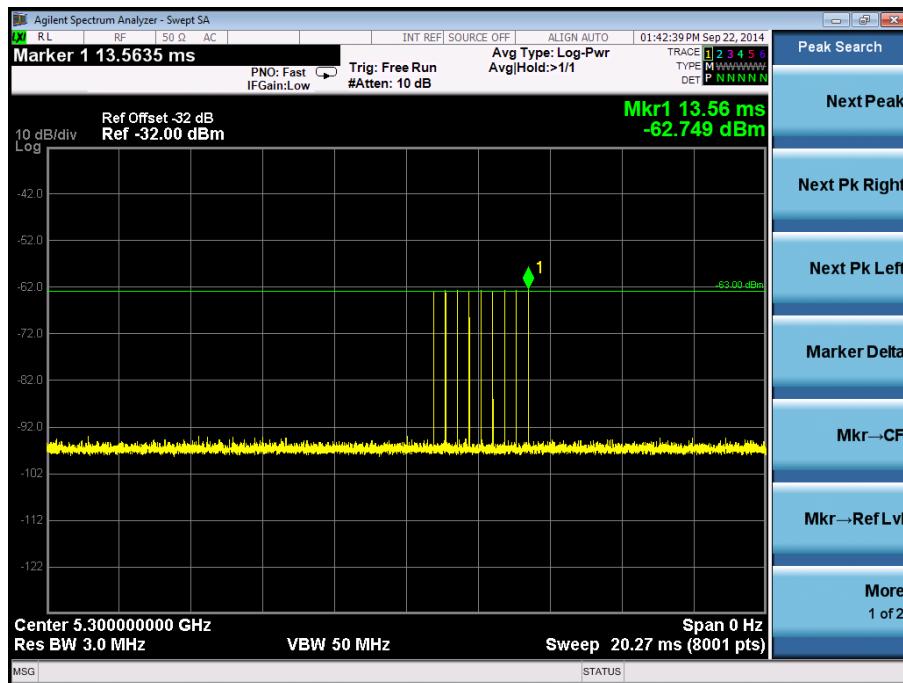
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency



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



Radar #6 DFS detection threshold level and a single hop (13 pulses) on the Channel frequency within UNII detection bandwidth



#### 5.2.4. Test Setup Photo

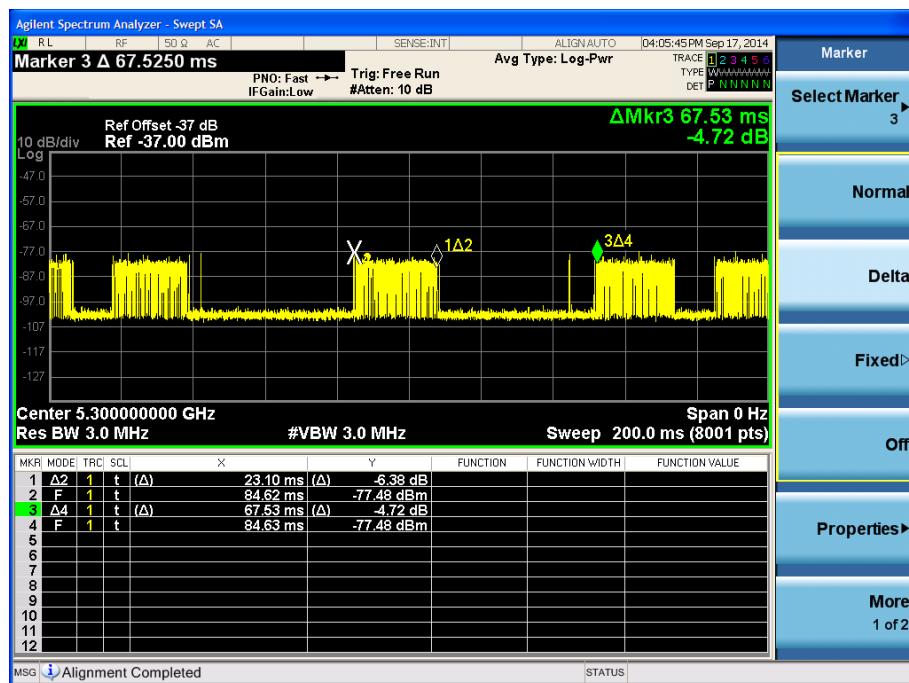
Description: Test Setup Photo



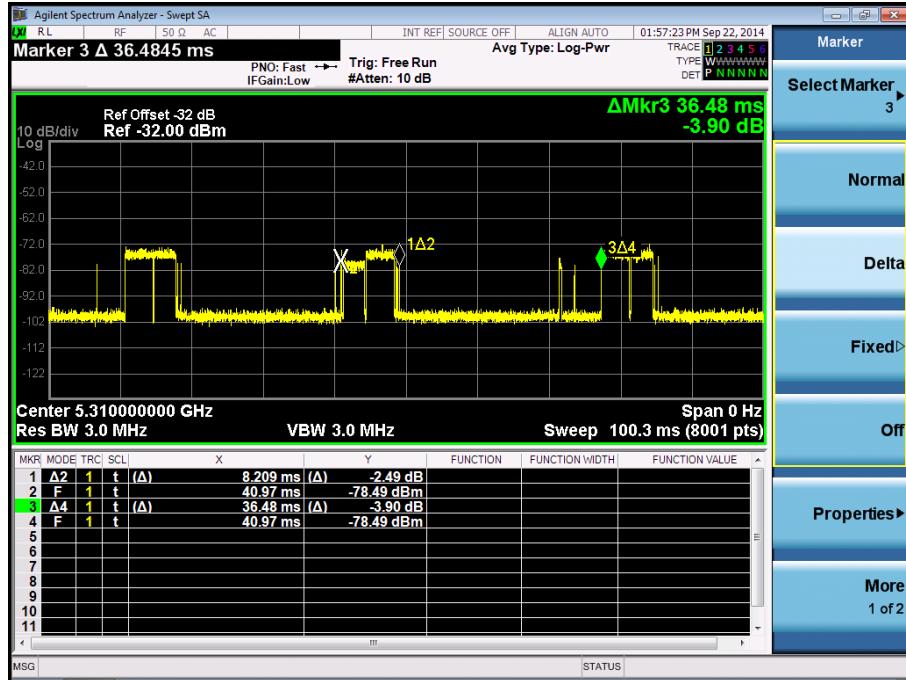
### 5.3. Channel Loading Test Result

System testing was performed with the designated MPEG test file that streams full motion video from the Unified Wired-WLAN Walljack 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

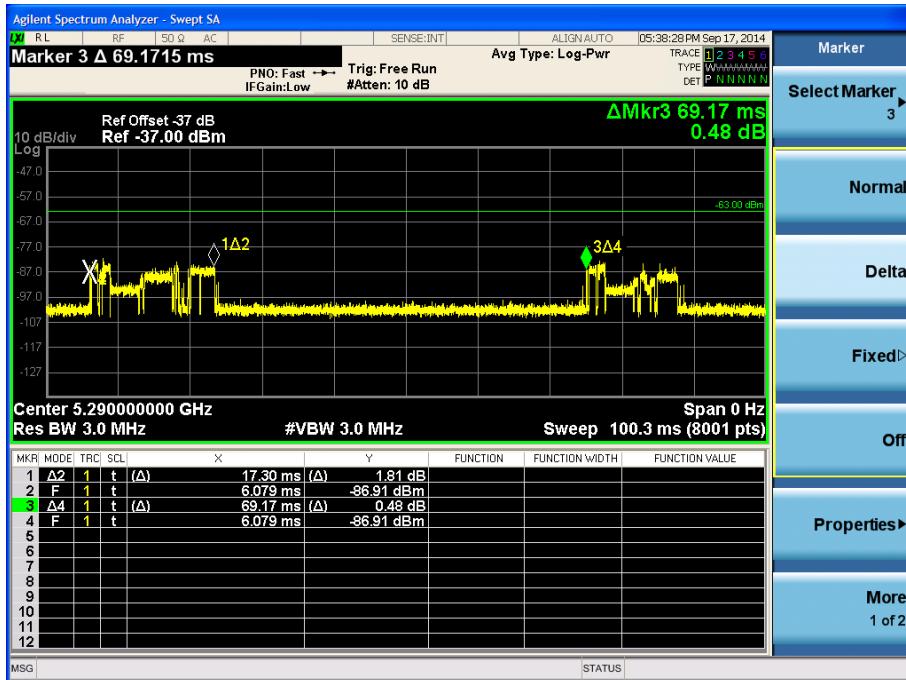
Channel Loading Plot - 802.11a-5300MHz



### Channel Loading Plot - 802.11n-HT40 5310MHz



### Channel Loading Plot - 802.11ac-VHT80 5290MHz



Test Mode	Packet ratio	Requirement ratio	Test Result
802.11a	34.21%	>17%	Pass
802.11n-HT40	22.50%	>17%	Pass
802.11ac-VHT80	25.01%	>17%	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:  $\text{U-NII Detection Bandwidth} = \text{FH} - \text{FL}$
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

### 5.4.3. Test Result

EUT Frequency=5300MHz for 802.11a											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5285	0	0	0	0	0	0	0	0	0	0	0%
5286	0	0	0	0	0	0	0	0	0	0	0%
5287	0	0	0	0	0	0	0	0	0	0	0%
5288	0	0	0	0	0	0	0	0	0	0	0%
5289	0	0	0	0	0	0	0	0	0	0	0%
5290 FL	1	1	1	1	1	1	1	1	1	1	100%
5291	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310 FH	1	1	1	1	1	1	1	1	1	1	100%
5311	0	0	0	0	0	0	0	0	0	0	0%
5312	0	0	0	0	0	0	0	0	0	0	0%
5313	0	0	0	0	0	0	0	0	0	0	0%

5314	0	0	0	0	0	0	0	0	0	0	0%
5315	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5310MHz - 5290MHz = 20MHz											
EUT 99% Bandwidth = 16.92MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 16.92MHz x 100% = 16.92MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 16.92MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency=5310MHz for 802.11n-HT40											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5290	0	0	0	0	0	0	0	0	0	0	0%
5291	0	0	0	0	0	0	0	0	0	0	0%
5292 FL	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%

5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5292MHz = 37MHz											
EUT 99% Bandwidth = 36.38MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): $36.38\text{MHz} \times 100\% = 36.38\text{MHz}$											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5310MHz. The 99% channel bandwidth is 36.38MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency=5290MHz for 802.11ac-VHT80											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5245	0	0	0	0	0	0	0	0	0	0	0%
5246	0	0	0	0	0	0	0	0	0	0	0%
5247	0	0	0	0	0	0	0	0	0	0	0%
5248	0	0	0	0	0	0	0	0	0	0	0%
5249	0	0	0	0	0	0	0	0	0	0	0%
5250 FL	1	1	1	1	1	1	1	1	1	1	100%
5251	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5256	1	1	1	1	1	1	1	1	1	1	100%
5257	1	1	1	1	1	1	1	1	1	1	100%
5258	1	1	1	1	1	1	1	1	1	1	100%
5259	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5261	1	1	1	1	1	1	1	1	1	1	100%
5262	1	1	1	1	1	1	1	1	1	1	100%
5263	1	1	1	1	1	1	1	1	1	1	100%
5264	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5266	1	1	1	1	1	1	1	1	1	1	100%
5267	1	1	1	1	1	1	1	1	1	1	100%
5268	1	1	1	1	1	1	1	1	1	1	100%
5269	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5271	1	1	1	1	1	1	1	1	1	1	100%
5272	1	1	1	1	1	1	1	1	1	1	100%
5273	1	1	1	1	1	1	1	1	1	1	100%
5274	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%

5276	1	1	1	1	1	1	1	1	1	1	100%
5277	1	1	1	1	1	1	1	1	1	1	100%
5278	1	1	1	1	1	1	1	1	1	1	100%
5279	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5281	1	1	1	1	1	1	1	1	1	1	100%
5282	1	1	1	1	1	1	1	1	1	1	100%
5283	1	1	1	1	1	1	1	1	1	1	100%
5284	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5286	1	1	1	1	1	1	1	1	1	1	100%
5287	1	1	1	1	1	1	1	1	1	1	100%
5288	1	1	1	1	1	1	1	1	1	1	100%
5289	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5291	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%

5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329	1	1	1	1	1	1	1	1	1	1	100%
5330 FH	1	1	1	1	1	1	1	1	1	1	100%
5331	0	0	0	0	0	0	0	0	0	0	0%
5332	0	0	0	0	0	0	0	0	0	0	0%
5333	0	0	0	0	0	0	0	0	0	0	0%
5334	0	0	0	0	0	0	0	0	0	0	0%
5335	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5330MHz - 5250MHz = 80MHz											
EUT 99% Bandwidth = 75.90MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.90MHz x 100% = 75.90MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.90MHz. (See the 99% BW section of the RF report for further measurement details).

## 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.

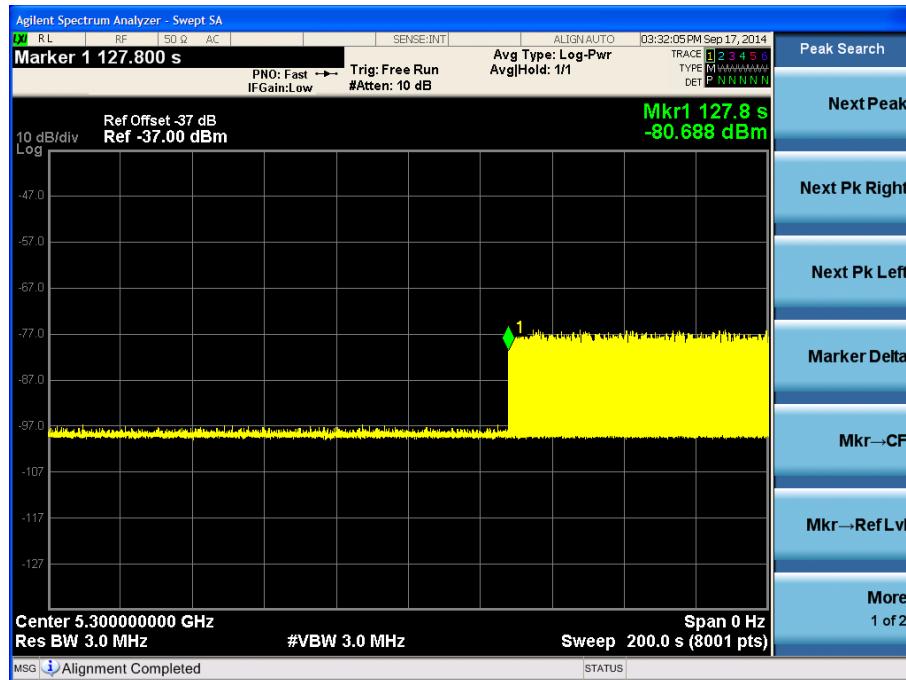
### 5.5.2. Test Procedure

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 (67.8 sec). Initial beacons/data transmissions are indicated by marker 1 (127.8 sec).

#### Initial Channel Availability Check Time for 802.11a



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

### 5.6.1. Test Limit

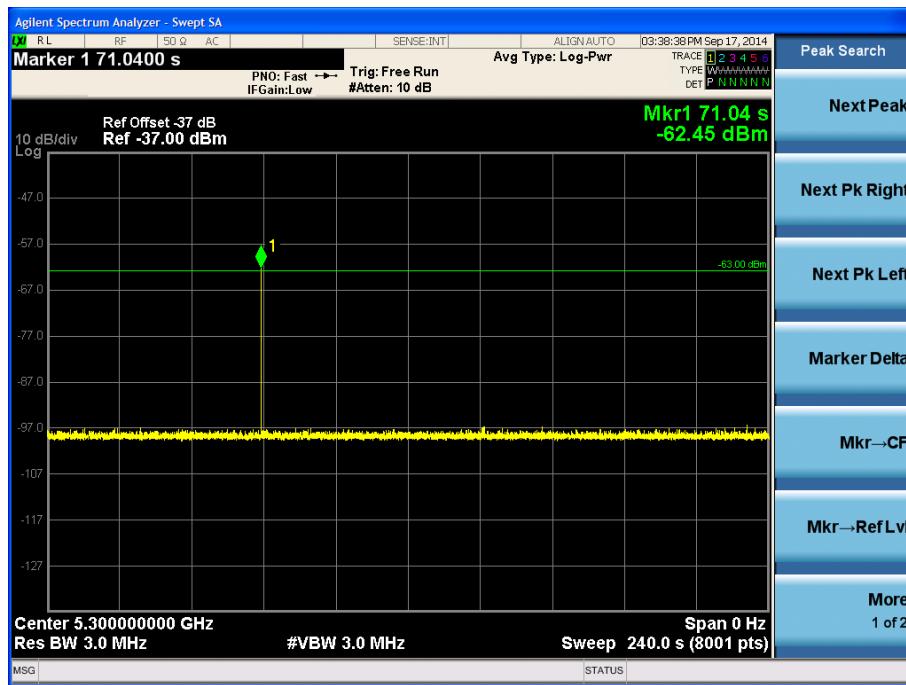
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### 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 5300MHz (for 802.11a) will continue for 71.04 seconds after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred at 5300MHz (for 802.11a).

### 5.6.3. Test Result

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



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

### 5.7.1. Test Limit

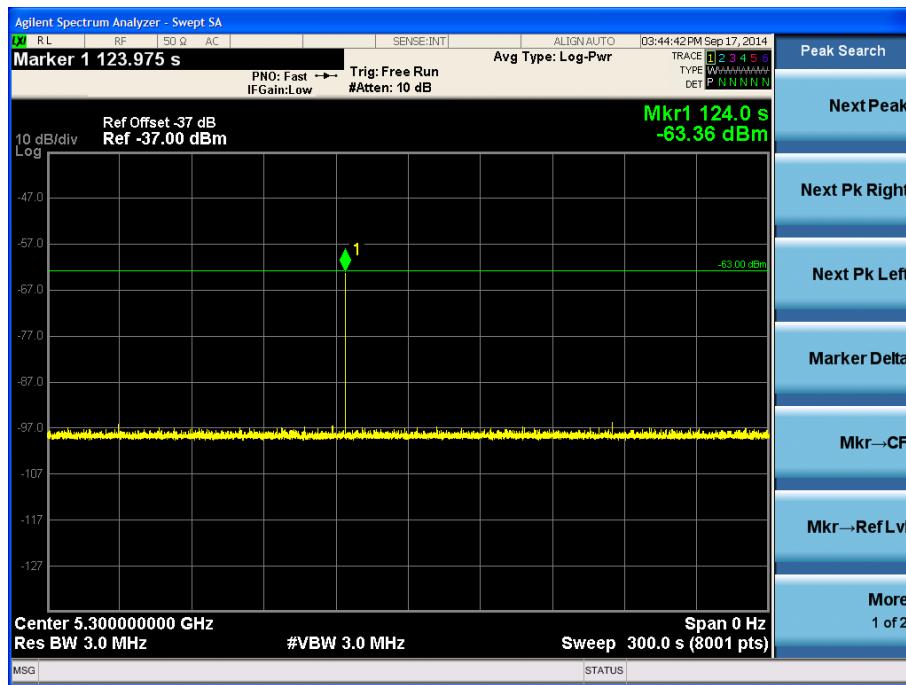
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### 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 than  $T_1 + 60$  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  $T_1 + 54$  seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5300MHz (for 802.11a) will continue for 124.0 seconds after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred at 5300MHz (for 802.11a).

### 5.7.3. Test Result

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



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

### **5.8.1. Test Limit**

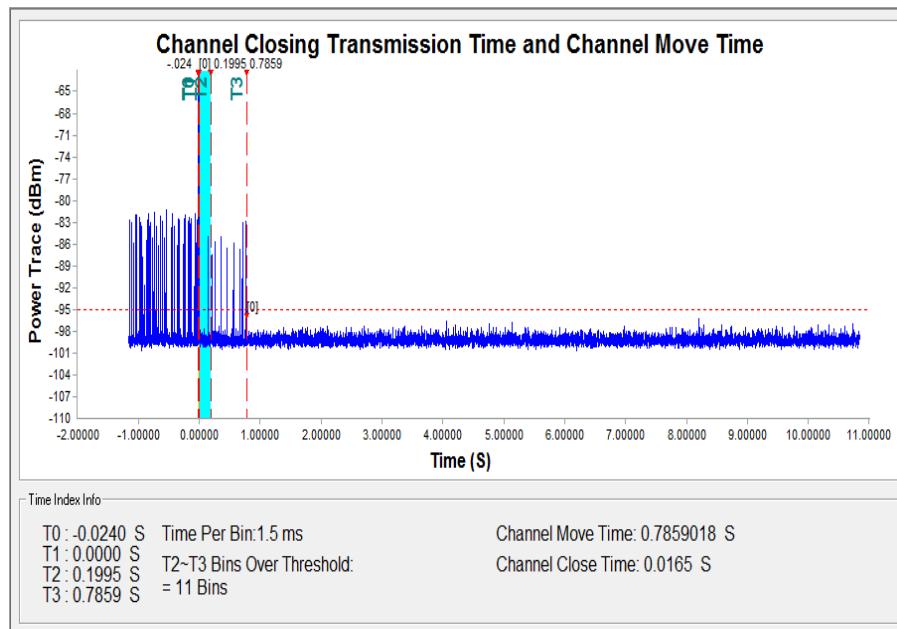
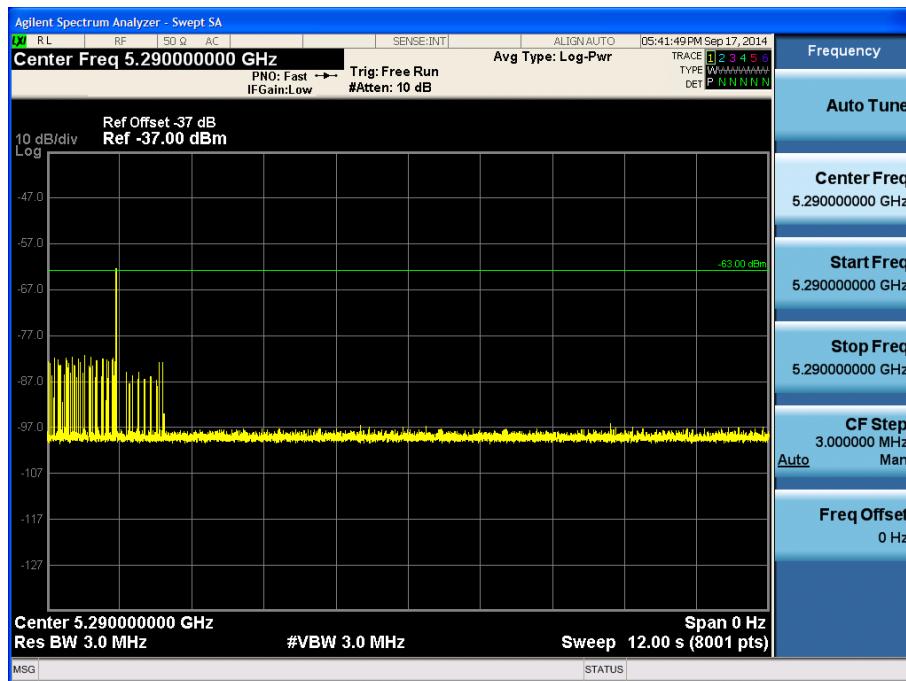
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec.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

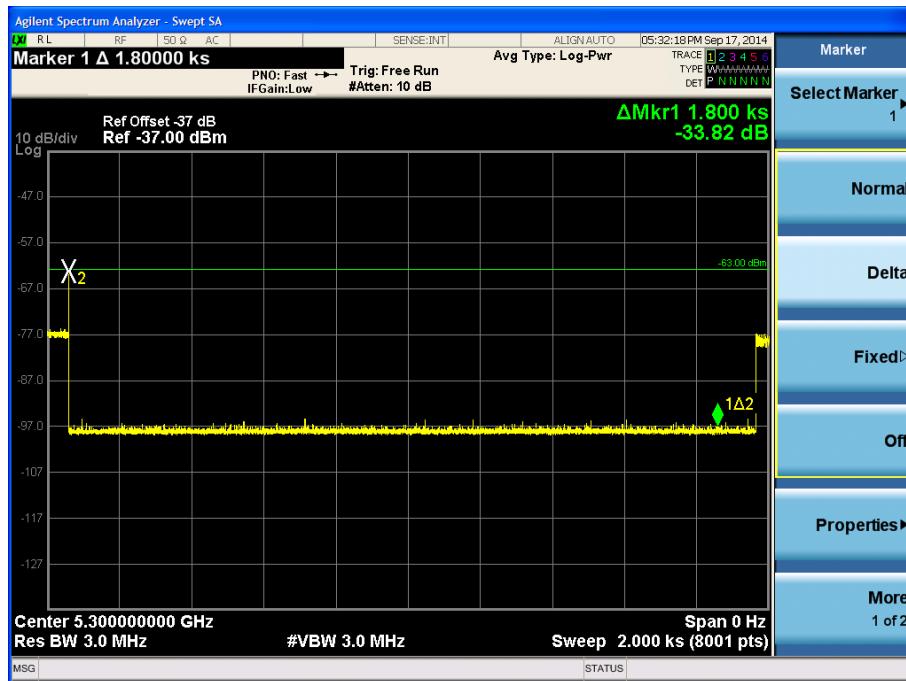
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.
2. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).
3. 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:  
$$\text{Dwell (1.5ms)} = S (12 \text{ sec}) / B (8000)$$
; where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: 80MHz: C (16.5 ms) = N (11) 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.
4. 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 802.11ac-VHT80



## Non-Occupancy Period for 802.11a



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.786s	<10s
Channel Closing Transmission Time (ms) (Note)	16.50ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min

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

## 5.9. 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
0	30	Pd > 60%
1	30(15 of test A and 15 of test B)	Pd > 60%
2	30	Pd > 60%
3	30	Pd > 60%
4	30	Pd > 60%
Aggregate (Radar Types 1-4)	120	Pd > 80%
5	30	Pd > 80%
6	30	Pd > 70%

The percentage of successful detection is calculated by:

(Total Waveform Detections / Total Waveform Trails) \* 100 = Probability of Detection Radar

Waveform In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: (Pd1 + Pd2 + Pd3 + Pd4) / 4.

### 5.9.2. Test Procedure

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

### 5.9.3. Test Result

Statistical Performance Check for 802.11a

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5290	1	558	95	0
2	5291	1	858	62	1
3	5291	1	698	76	1
4	5292	1	618	86	1
5	5292	1	818	65	1
6	5293	1	658	81	1
7	5293	1	518	102	1
8	5294	1	538	99	1
9	5294	1	718	74	1
10	5295	1	938	57	1
11	5295	1	798	67	1
12	5296	1	898	59	1
13	5297	1	738	72	1
14	5298	1	758	70	1
15	5299	1	638	83	1
16	5300	1	1937	28	1
17	5301	1	2722	20	1
18	5302	1	2170	25	1
19	5303	1	762	70	1
20	5304	1	2402	22	1
21	5305	1	2767	20	1
22	5306	1	592	90	1
23	5307	1	2090	26	1
24	5307	1	1943	28	1
25	5308	1	630	84	1
26	5308	1	2857	19	1
27	5309	1	1948	28	1
28	5309	1	1212	44	1
29	5310	1	1326	40	1
30	5310	1	2531	21	1
Detection Percentage (%)					96.7%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5290	1.1	153	25	0
2	5291	1.3	215	24	1
3	5291	1.1	219	23	1
4	5292	1.7	176	28	1
5	5292	4.9	160	23	1
6	5293	2.2	159	25	1
7	5293	1.6	154	26	1
8	5294	1.9	201	24	1
9	5294	3.7	210	28	1
10	5295	2.7	203	28	1
11	5295	3.5	191	24	1
12	5296	1.0	168	25	1
13	5297	4.4	153	23	1
14	5298	4.3	218	28	1
15	5299	4.2	214	28	1
16	5300	1.5	176	25	1
17	5301	2.5	215	26	1
18	5302	4.6	182	26	1
19	5303	5.0	206	26	1
20	5304	2.8	178	24	1
21	5305	1.0	178	24	1
22	5306	2.9	158	28	1
23	5307	3.1	229	27	1
24	5307	1.5	205	28	1
25	5308	3.9	203	28	1
26	5308	4.4	224	25	1
27	5309	1.5	187	29	1
28	5309	3.0	183	29	1
29	5310	3.2	156	27	1
30	5310	2.4	196	27	1
Detection Percentage (%)					96.7%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5290	9.7	282	18	0
2	5291	6.1	350	18	0
3	5291	7.8	440	16	1
4	5292	8.9	498	16	1
5	5292	9.8	416	16	1
6	5293	7.8	422	16	1
7	5293	9.0	320	18	1
8	5294	7.9	336	16	1
9	5294	8.5	454	17	1
10	5295	8.5	425	16	1
11	5295	7.8	332	18	1
12	5296	9.8	255	16	1
13	5297	8.4	407	17	1
14	5298	9.7	293	16	1
15	5299	9.0	406	18	1
16	5300	7.1	255	18	1
17	5301	8.4	459	17	1
18	5302	6.0	499	16	1
19	5303	7.5	375	16	1
20	5304	8.1	292	18	1
21	5305	9.6	398	16	1
22	5306	6.3	368	17	1
23	5307	8.3	431	16	1
24	5307	7.4	484	17	1
25	5308	7.6	303	17	1
26	5308	6.7	429	18	1
27	5309	9.5	471	16	1
28	5309	9.2	468	17	1
29	5310	7.6	261	16	0
30	5310	9.8	439	17	1
Detection Percentage (%)					90%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5290	13.7	469	13	0
2	5291	15.4	420	13	1
3	5291	13.4	388	16	1
4	5292	18.6	267	12	1
5	5292	18.5	347	15	1
6	5293	19.9	367	15	1
7	5293	12.9	334	13	1
8	5294	14.8	349	16	1
9	5294	16.3	293	16	1
10	5295	13.7	389	14	1
11	5295	15.6	271	16	1
12	5296	14.1	443	12	1
13	5297	16.8	418	13	1
14	5298	12.7	426	15	1
15	5299	16.8	424	12	1
16	5300	13.9	273	12	1
17	5301	13.0	463	13	1
18	5302	15.3	400	14	1
19	5303	14.9	393	13	1
20	5304	12.6	358	12	1
21	5305	15.5	278	16	1
22	5306	15.5	434	13	1
23	5307	18.2	309	14	1
24	5307	15.3	379	14	1
25	5308	15.1	314	13	1
26	5308	17.2	349	15	1
27	5309	17.1	374	15	1
28	5309	13.6	329	12	1
29	5310	12.4	490	14	1
30	5310	12.5	434	15	0
Detection Percentage (%)					93.3%

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

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (96.7\% + 96.7\% + 90\% + 93.3\%) / 4 = 94.18\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5290	0	16	5300	1
2	5291	0	17	5302	1
3	5292	0	18	5303	1
4	5293	1	19	5303	1
5	5294	1	20	5304	1
6	5295	1	21	5304	1
7	5296	1	22	5305	1
8	5297	1	23	5305	1
9	5298	1	24	5306	1
10	5299	1	25	5306	1
11	5300	1	26	5307	1
12	5300	1	27	5307	1
13	5301	1	28	5308	1
14	5301	1	29	5309	1
15	5302	1	30	5310	1
Detection Percentage (%)					90%

## Type 5 Radar Waveform\_1

Waveform Num = 1
Num of Bursts = 10
Burst Interval (us)= 1200000
Burst # Off Time # Pulses Chirp PW Pulse 1 Pulse 2 Pulse 3 Start Loc Start Burst End Burst
1 1038695 2 20 60 1407 1851 0 1038695 0 1199999
2 242598 1 16 85 1737 0 0 1284551 1200000 2399999
3 1935796 3 14 95 1708 1082 1325 3222084 2400000 3599999
4 1125519 3 16 60 1955 1863 1182 4351718 3600000 4799999
5 933693 2 18 80 1476 1813 0 5290211 4800000 5999999
6 1596630 2 14 75 1635 1331 0 6890130 6000000 7199999
7 823225 1 8 80 1802 0 0 7716321 7200000 8399999
8 1727285 2 5 50 1339 1888 0 9445408 8400000 9599999
9 220654 3 16 85 1765 1871 1530 9669289 9600000 10799999
10 1578635 2 10 55 1447 1924 0 11253090 10800000 11999999
Total number of pulses in waveform = 21
*****

### Type 5 Radar Waveform\_2

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
Waveform Num = 2 Num of Bursts = 19 Burst Interval (us)= 631579										
*****										
1 522083 1 9 80 1903 0 0 522083 0 631578										
2 618604 2 13 85 1893 1975 0 1142690 631579 1263157										
3 477684 1 15 55 1406 0 0 1624142 1263158 1894736										
4 657615 2 8 75 1226 1809 0 2283163 1894737 2526315										
5 365581 2 9 50 1543 1802 0 2641779 2526316 3157894										
6 1029393 3 10 90 1271 1129 1034 3674517 3157895 3789473										
7 627711 1 14 90 1676 0 0 4305662 3789474 4421052										
8 208246 1 20 65 1397 0 0 4515583 4421053 5052631										
9 580470 2 11 95 1760 1213 0 5097450 5052632 5684210										
10 709589 1 20 65 1539 0 0 5810012 5684211 6315789										
11 846773 1 18 75 1385 0 0 6558324 6315790 6947368										
12 605203 1 11 65 1124 0 0 7264912 6947369 7578947										
13 720679 1 13 50 1232 0 0 7986715 7578948 8210526										
14 578182 2 9 50 1773 1917 0 8756173 8210527 8842105										
15 470413 2 18 55 1226 1894 0 9338045 8842106 9473684										
16 758274 2 6 70 1848 1650 0 9811578 9473685 10105263										
17 626094 3 17 50 1067 1504 1308 10573350 10105264 10736842										
18 236183 1 14 80 1312 0 0 11203323 10736843 11368421										
19 1 8 95 1613 0 0 11440818 11368422 12000000										
Total number of pulses in waveform = 30										
*****										

### Type 5 Radar Waveform\_3

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
Waveform Num = 3 Num of Bursts = 19 Burst Interval (us)= 631579										
*****										
1 243387 2 10 90 1853 1429 0 243387 0 631578										
2 762671 3 20 100 1394 1164 1478 1009340 631579 1263157										
3 795948 1 18 65 1991 0 0 1809324 1263158 1894736										
4 604281 3 13 50 1810 1145 1592 2415596 1894737 2526315										
5 227175 2 11 65 1351 1536 0 2647318 2526316 3157894										
6 1056442 1 17 50 1173 0 0 3705647 3157895 3789473										
7 639243 3 17 65 1875 1802 1202 4346063 3789474 4421052										
8 433822 3 18 75 1224 1565 1786 4784764 4421053 5052631										
9 710197 1 15 50 1537 0 0 5499536 5052632 5684210										
10 429473 3 9 50 1208 1135 1253 5930546 5684211 6315789										
11 940174 3 7 100 1303 1300 1976 6874316 6315790 6947368										
12 282239 2 5 50 1986 1185 0 7161134 6947369 7578947										
13 568477 1 6 95 1566 0 0 7732782 7578948 8210526										
14 729357 2 11 95 1096 1394 0 8463705 8210527 8842105										
15 674338 1 12 90 1822 0 0 9140533 8842106 9473684										
16 461033 3 6 85 1635 1360 1322 9603388 9473685 10105263										
17 1005087 3 14 95 1186 1096 1503 10612792 10105264 10736842										
18 679395 2 5 60 1209 1966 0 11295972 10736843 11368421										
19 210617 1 18 70 1908 0 0 11509764 11368422 12000000										
Total number of pulses in waveform = 40										
*****										

### Type 5 Radar Waveform\_4

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
Waveform Num = 4 Num of Bursts = 11 Burst Interval (us)= 1090909										
*****										
1 764508 2 6 85 1779 1903 0 764508 0 1090908										
2 1077990 1 14 90 1702 0 0 1846180 1090909 2181817										
3 1385162 1 5 55 1696 0 0 3233044 2181818 3272726										
4 645069 2 11 65 1721 1847 0 3879809 3272727 4363635										
5 1378974 2 15 100 1035 1394 0 5262351 4363636 5454544										
6 189862 3 13 65 1975 1049 1812 5454642 5454545 6545453										
7 1768372 3 16 70 1676 1923 1575 7227850 6545454 7636362										
8 1047480 3 14 50 1249 1481 1629 8280504 7636363 8727271										
9 1379680 3 20 55 1320 1953 1970 9664543 8727272 9818180										
10 785661 1 19 100 1875 0 0 10455447 9818181 10909089										
11 963282 1 10 75 1425 0 0 11420604 10909090 11999998										
Total number of pulses in waveform = 22										
*****										

### Type 5 Radar Waveform\_5

Waveform Num = 5  
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	1112210	3	6	100	1839	1128	1002	1112210	0	1333332
2	320465	3	7	65	1550	1809	1577	1436644	1333333	2666665
3	1541831	3	15	50	1677	1888	1276	2983411	2666666	3999998
4	1473022	2	12	85	1103	1830	0	4461274	3999999	5333331
5	1981272	2	11	80	1230	1621	0	6445479	5333332	6666664
6	533573	2	11	95	1634	1510	0	6981903	6666665	7999997
7	1881041	3	11	85	1298	1075	1248	8866088	7999998	9333330
8	1578689	2	11	100	1612	1224	0	10448398	9333331	10666663
9	403451	3	17	95	1627	1201	1717	10854685	10666664	11999996
Total number of pulses in waveform = 23										
*****										

### Type 5 Radar Waveform\_6

Waveform Num = 6  
Num of Bursts = 18  
Burst Interval (us)= 6666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	161563	3	7	55	1245	1691	1715	161563	0	666666
2	980282	3	20	80	1157	1905	1284	1146496	666667	1333333
3	219767	2	13	95	1492	1493	0	1370609	1333334	2000000
4	810455	3	12	70	1255	1718	1711	2184049	2000001	2666667
5	957805	3	10	75	1133	1184	1072	3146538	2666668	3333334
6	311268	2	18	95	1327	1426	0	3461195	3333335	4000001
7	1067538	3	8	80	1369	1705	1018	4531486	4000002	4666668
8	153806	1	18	85	1765	0	0	4689384	4666669	5333335
9	1022895	2	12	100	1763	1981	0	5714044	5333336	6000002
10	906756	3	10	70	1131	1097	1426	6624544	6000003	6666669
11	240514	1	5	55	1241	0	0	6868712	6666670	7333336
12	933706	3	10	90	1425	1677	1055	7803659	7333337	8000003
13	228252	3	5	95	1173	1084	1438	8036068	8000004	8666670
14	1110110	2	11	50	1691	1229	0	9149873	8666671	9333337
15	701423	2	20	65	1307	1773	0	9854216	9333338	10000004
16	251984	3	12	60	1856	1615	1676	10109280	10000005	10666671
17	1185832	2	15	85	1856	1745	0	11300259	10666672	11333338
18	252669	1	19	90	1953	0	0	11556529	11333339	12000005
Total number of pulses in waveform = 42										
*****										

### 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	183330	1	8	80	1540	0	0	183330	0	923076
2	1259487	1	8	65	1025	0	0	1444357	923077	1846153
3	1023584	3	15	100	1553	1065	1508	2468966	1846154	2769230
4	1188479	2	15	95	1261	1646	0	3661571	2769231	3692307
5	872227	3	14	60	1912	1383	1564	4536705	3692308	4615384
6	273861	1	5	65	1018	0	0	4815425	4615385	5538461
7	1630113	2	15	75	1691	1101	0	6446556	5538462	6461538
8	930402	3	13	65	1242	1489	1580	7379750	6461539	7384615
9	540532	1	11	85	1429	0	0	7924593	7384616	8307692
10	495946	3	15	75	1771	1279	1832	8421968	8307693	9230769
11	1600448	3	15	70	1695	1312	1878	10027298	9230770	10153846
12	465267	1	14	70	1424	0	0	10497450	10153847	11076923
13	1308701	3	14	55	1776	1472	1942	11807575	11076924	12000000
Total number of pulses in waveform = 27										
*****										

### Type 5 Radar Waveform\_8

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	128069	3	15	55	1155	1448	1166	128069	0	799999
2	1030495	3	19	100	1656	1953	1455	1162333	800000	1599999
3	856760	3	14	50	1529	1378	1105	2024157	1600000	2399999
4	1030445	1	16	100	1566	0	0	3058614	2400000	3199999
5	608118	2	18	80	1974	1755	0	3668298	3200000	3999999
6	1054727	3	16	85	1819	1891	1544	4726754	4000000	4799999
7	425051	3	14	100	1361	1837	1796	5157059	4800000	5699999
8	457821	3	18	90	1683	1642	1127	5619874	5600000	6399999
9	1536566	3	8	75	1779	1923	1895	7160892	6400000	7199999
10	742812	1	12	60	1842	0	0	7909301	7200000	7999999
11	169307	1	10	55	1690	0	0	8080450	8000000	8799999
12	1029487	2	8	60	1520	1594	0	9111627	8800000	9599999
13	1193516	2	20	75	1375	1957	0	10308257	9600000	10399999
14	483947	1	6	95	1949	0	0	10795536	10400000	11199999
15	402611	3	7	90	1308	1593	1736	11200096	11200000	11999999
Total number of pulses in waveform = 34										
*****										

### Type 5 Radar Waveform\_9

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	114633	1	18	90	1063	0	0	114633	0	1333332
2	2118265	2	14	65	1050	1396	0	2233961	1333333	2666665
3	998326	3	14	100	1398	1663	1320	3234733	2666666	3999998
4	1245040	2	17	75	1421	1840	0	4484154	3999999	5333331
5	1094361	2	16	75	1936	1243	0	5581776	5333332	6666664
6	1340950	2	10	95	1206	1148	0	6925905	6666665	7999997
7	1906125	2	5	70	1547	1544	0	8834384	7999998	9333330
8	1297372	3	16	80	1680	1005	1538	10134847	9333331	10666663
9	1765588	3	12	80	1681	1315	1237	11904658	10666664	11999996
Total number of pulses in waveform = 20										
*****										

### Type 5 Radar Waveform\_10

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	152012	1	15	85	1806	0	0	192012	0	666666
2	1035644	3	12	50	1760	1272	1471	1229462	666667	1333333
3	105372	1	8	85	1128	0	0	1339337	1333334	2000000
4	987763	1	14	70	1268	0	0	2328248	2000001	2666667
5	913772	1	13	60	1606	0	0	3243288	2666668	3333334
6	388908	2	19	75	1870	1422	0	3633802	3333335	4000001
7	540447	3	12	50	1589	1509	1338	4177541	4000002	4666668
8	647175	2	14	65	1749	1212	0	4829152	4666669	5333335
9	918107	3	9	85	1530	1804	1033	5760220	5333336	6000002
10	907490	3	20	50	1690	1205	1047	6662077	6000003	6666669
11	79869	1	11	75	1646	0	0	6745828	6666670	7333336
12	1085073	3	13	85	1019	1111	1855	7832547	7333337	8000003
13	802454	1	14	75	1810	0	0	8638986	8000004	8666670
14	439691	1	10	80	1224	0	0	9080487	8666671	9333337
15	445843	3	18	85	1174	1921	1790	9527554	9333338	10000004
16	580770	1	12	50	1162	0	0	10113209	10000005	10666671
17	956827	3	14	95	1021	1672	1401	11071198	10666672	11333338
18	842594	2	10	80	1625	1573	0	11917886	11333339	12000005
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_11

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
<small>Waveform Num = 11 Num of Bursts = 19 Burst Interval (us)= 631579</small>										
1	607164	2	13	55	1996	1076	0	329450	0	631578
2	339951	1	6	55	1565	0	0	939886	631579	1263157
3	999457	3	9	70	1531	1452	1266	1281202	1263158	1894736
4	819570	1	7	60	1271	0	0	2284907	1894737	2526315
5	67388	2	8	60	1162	1854	0	3105748	2526316	3157894
6	879850	1	20	60	1538	0	0	3176182	3157895	3789473
7	371186	3	18	100	1120	1447	1801	4057540	3789474	4421052
8	801507	2	5	95	1867	1135	0	4433094	4421053	5052631
9	1055758	3	8	100	1517	1832	1361	5237603	5052632	5684210
10	307774	1	8	90	1191	0	0	6298071	5684211	6315789
11	506964	1	8	100	1180	0	0	6607036	6315790	6947368
12	555264	2	11	65	1977	1481	0	7115180	6947369	7578947
13	773209	1	20	80	1825	0	0	7673902	7578948	8210526
14	869063	2	8	90	1146	1343	0	8448996	8210527	8842105
15	410381	1	12	75	1782	0	0	9320488	8842106	9473684
16	936071	2	13	60	1866	1952	0	9732651	9473685	10105263
17	467460	2	19	95	1502	1879	0	10672530	10105264	10736842
18	245397	2	18	100	1745	1202	0	11143371	10736843	11368421
19		2	6	50	1094	1760	0	11391715	11368422	12000000
Total number of pulses in waveform = 34										

### Type 5 Radar Waveform\_12

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
<small>Waveform Num = 12 Num of Bursts = 20 Burst Interval (us)= 600000</small>										
1	785327	3	9	65	1060	1847	1381	20907	0	699999
2	775584	2	10	100	1586	1198	0	810522	600000	1199999
3	622563	2	15	65	1493	1267	0	1588890	1200000	1799999
4	377708	2	5	75	1133	1446	0	2214213	1800000	2399999
5	655043	1	12	100	1099	0	0	2694500	2400000	2999999
6	473623	2	6	50	1421	1445	0	3250642	3000000	3599999
7	693704	3	12	50	1857	1271	1924	3727131	3600000	4199999
8	845489	3	7	65	1666	1373	1837	4425887	4200000	4799999
9	427389	3	7	75	1818	1661	1804	5276252	4800000	5399999
10	688258	1	15	65	1656	0	0	5708924	5400000	5999999
11	822349	2	10	65	1006	1388	0	6298838	6000000	6599999
12	443113	3	13	65	1620	1287	1955	7123581	6600000	7199999
13	441606	2	18	95	1783	1401	0	7571556	7200000	7799999
14	753320	2	14	75	1763	1786	0	8016346	7800000	8399999
15	509378	3	20	70	1096	1438	1323	8773215	8400000	8999999
16	619290	3	10	55	1967	1454	1458	9286450	9000000	9599999
17	338505	3	14	70	1394	1963	1866	9910619	9600000	10199999
18	815842	3	11	90	1020	1883	1276	10254347	10200000	10799999
19	422549	3	11	95	1021	1350	1273	11074368	10800000	11399999
20		3	11	80	1060	1393	1726	11500561	11400000	11999999
Total number of pulses in waveform = 40										

### Type 5 Radar Waveform\_13

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
<small>Waveform Num = 13 Num of Bursts = 18 Burst Interval (us)= 666667</small>										
1	495699	1	16	50	1303	0	0	496699	0	666666
2	394486	3	9	60	1495	1668	1369	891488	666667	1333333
3	995056	1	13	60	1489	0	0	1891066	1333334	2000000
4	763180	2	6	75	1213	1277	0	2658735	2000001	2666667
5	314546	3	9	55	1566	1183	1253	2972771	2666668	3333334
6	627893	1	12	80	1937	0	0	3604666	3333335	4000001
7	626828	1	12	100	1172	0	0	4233431	4000002	4666668
8	923198	2	5	95	1999	1483	0	5157801	4666669	5333335
9	492171	1	12	75	1698	0	0	5653454	5333336	6000002
10	389710	3	14	55	1592	1477	1002	6044862	6000003	6666669
11	777435	2	14	75	1597	1357	0	6826368	6666670	7333336
12	943377	1	13	100	1567	0	0	7772699	7333337	8000003
13	316004	1	8	60	1736	0	0	8090270	8000004	8666670
14	1214911	2	20	50	1488	1900	0	9306917	8666671	9333337
15	285958	3	10	95	1487	1233	1345	9596263	9333338	10000004
16	479689	3	5	70	1440	1533	1285	10080017	10000005	10666671
17	591528	3	20	90	1570	1308	1025	10675803	10666672	11333338
18	1146458	3	13	85	1382	1166	1378	11826164	11333339	12000005
Total number of pulses in waveform = 36										

### Type 5 Radar Waveform\_14

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	413884	1	13	80	1154	0	0	413884	0	7999999
2	644871	1	12	85	1927	0	0	1059909	800000	15999999
3	620366	2	10	95	1274	1802	0	1682202	1600000	23999999
4	1132093	3	15	75	1320	1300	1078	2817371	2400000	31999999
5	1118808	1	11	60	1881	0	0	3939877	3200000	39999999
6	772013	1	12	95	1408	0	0	4713771	4000000	47999999
7	470003	2	14	95	1391	1281	0	5185182	4800000	55999999
8	1120414	2	9	65	1388	1531	0	6308268	5600000	63999999
9	653756	1	10	55	1093	0	0	6964943	6400000	71999999
10	801360	2	6	55	1730	1766	0	7767396	7200000	79999999
11	465509	1	16	70	1457	0	0	8236401	8000000	87999999
12	1128586	2	9	60	1899	1440	0	9366444	8800000	95999999
13	243087	2	9	75	1033	1834	0	9612870	9600000	10399999
14	851236	2	10	65	1564	1353	0	10466973	10400000	11199999
15	785503	3	19	100	1738	1478	1564	11255383	11200000	11999999
*****										
Total number of pulses in waveform = 26										

### Type 5 Radar Waveform\_15

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	94641	3	8	65	1986	1262	1123	94641	0	631578
2	700685	1	20	65	1485	0	0	799697	631579	1263157
3	542699	2	16	80	1752	1904	0	1343881	1263158	1894736
4	735078	1	8	50	1390	0	0	2082615	1894737	2526315
5	1040855	3	10	90	1009	1747	1065	3124860	2526316	3157894
6	481987	2	11	65	1613	1451	0	3610668	3157895	3789473
7	519070	3	14	100	1239	1632	1879	4132802	3789474	4421052
8	804936	1	8	75	1731	0	0	4942488	4421053	5052631
9	272406	2	18	90	1280	1130	0	5216625	5052632	5684210
10	534485	2	16	60	1603	1652	0	5753520	5684211	6315789
11	852362	1	12	50	1133	0	0	6609137	6315790	6947368
12	414398	1	18	95	1300	0	0	7024668	6947369	7578947
13	1116578	3	8	95	1975	1122	1939	8142546	7578948	8210526
14	496706	1	10	90	1484	0	0	8644288	8210527	8842105
15	598369	2	15	80	1191	1806	0	9244141	8842106	9473684
16	273966	1	9	50	1678	0	0	9521104	9473685	10105263
17	1185330	2	14	65	1410	1893	0	10708012	10105264	10736842
18	242464	1	14	85	1729	0	0	10953779	10736843	11368421
19	695834	3	7	80	1127	1336	1906	11551342	11368422	12000000
*****										
Total number of pulses in waveform = 35										

### Type 5 Radar Waveform\_16

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1071680	3	6	70	1427	1102	1984	1071680	0	1333332
2	374210	2	8	100	1236	1465	0	1450403	1333333	2666665
3	2210290	1	20	95	1838	0	0	3663394	2666666	3999998
4	1498610	2	20	75	1852	1421	0	5163842	3999999	5333331
5	1202960	3	13	60	1095	1375	1829	6370075	5333332	6666664
6	1501696	2	15	70	1102	1612	0	7876070	6666665	7999997
7	741920	2	14	65	1604	1997	0	8620704	7999998	9333330
8	905436	2	13	100	1847	1915	0	9529741	9333331	10666663
9	2088822	1	14	80	1514	0	0	11622325	10666664	11999996
*****										
Total number of pulses in waveform = 18										

### Type 5 Radar Waveform\_17

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	617253	2	12	55	1857	1743	0	99678	0	666666
2	1071765	2	5	100	1177	1419	0	720531	666667	1333333
3	851904	1	11	55	1099	0	0	1794892	1333334	2000000
4	341203	1	12	100	1337	0	0	2647895	2000001	2666667
5	733154	1	11	80	1366	0	0	2990435	2666668	3333334
6	801641	3	7	60	1932	1741	1801	3724955	3333335	4000001
7	579728	3	11	75	1683	1499	1806	4532070	4000002	4666668
8	361198	2	5	75	1179	1536	0	5116786	4666669	5333335
9	1061165	2	8	95	1869	1974	0	5480699	5333336	6000002
10	578003	1	16	90	1111	0	0	6545707	6000003	6666669
11	738404	1	18	70	1853	0	0	7124821	6666670	7333336
12	535066	2	14	80	1436	1526	0	7866078	7333337	8000003
13	260146	3	7	50	1374	1843	1833	8404106	8000004	8666670
14	1182951	1	5	75	1330	0	0	8669302	8666671	9333337
15	533486	1	9	60	1751	0	0	9853583	9333338	10000004
16	644632	2	14	85	1318	1291	0	10388819	10000005	10666671
17	831728	1	5	100	1241	0	0	11036060	10666672	11333338
18		2	10	75	1836	1946	0	11869029	11333339	12000005
*****										
Total number of pulses in waveform = 31										

### Type 5 Radar Waveform\_18

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	203347	2	11	50	1470	1395	0	203347	0	923076
2	1473099	2	16	90	1918	1936	0	1679311	923077	1846153
3	729154	2	17	85	1982	1186	0	2412319	1846154	2769230
4	1073182	3	10	65	1619	1644	1009	3488669	2769231	3692307
5	866833	1	20	55	1053	0	0	4359774	3692308	4615384
6	297043	1	10	65	1168	0	0	4657870	4615385	5538461
7	1496087	2	14	90	1805	1954	0	6155125	5538462	6461538
8	712009	2	20	95	1154	1528	0	6870893	6461539	7384615
9	1195232	2	5	90	1240	1412	0	8068807	7384616	8307692
10	819067	2	19	55	1683	1829	0	8890526	8307693	9230769
11	791275	2	14	95	1401	1672	0	9685313	9230770	10153846
12	474803	2	12	70	1722	1667	0	10163189	10153847	11076923
13	1275319	2	9	50	1184	1471	0	11441897	11076924	12000000
*****										
Total number of pulses in waveform = 25										

### Type 5 Radar Waveform\_19

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	312432	2	6	90	1043	1932	0	312432	0	1499999
2	1519112	3	12	100	1274	1039	1362	1834519	1500000	2999999
3	1428032	1	10	80	1553	0	0	3266226	3000000	4499999
4	2486109	1	12	90	1392	0	0	5753888	4500000	5999999
5	1164993	1	10	95	1319	0	0	6920273	6000000	7499999
6	2040839	1	20	55	1441	0	0	8962431	7500000	8999999
7	1334286	1	15	85	1591	0	0	10298158	9000000	10499999
8	654233	3	17	95	1208	1990	1258	10953982	10500000	11999999
*****										
Total number of pulses in waveform = 13										

### Type 5 Radar Waveform\_20

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	400137	1	14	55	1733	0	0	400137	0	799999
2	726472	3	20	85	1319	1361	1463	1128342	800000	1599999
3	769315	3	11	60	1186	1378	1370	1901800	1600000	2399999
4	881155	2	15	70	1634	1698	0	2786889	2400000	3199999
5	773512	2	11	75	1082	1927	0	9563733	3200000	3999999
6	578243	2	6	65	1365	1778	0	4144985	4000000	4799999
7	734202	2	17	70	1338	1393	0	4882330	4800000	5599999
8	1506922	1	5	75	1687	0	0	6391983	5600000	6399999
9	55204	3	19	90	1021	1075	1920	6448874	6400000	7199999
10	1506174	2	13	90	1424	1310	0	7959064	7200000	7999999
11	451619	2	18	85	1162	1838	0	8413417	8000000	8799999
12	586302	1	16	90	1548	0	0	9002719	8800000	9599999
13	1366368	3	20	70	1446	1390	1713	10370635	9600000	10399999
14	525810	2	10	50	1789	1067	0	10800994	10400000	11199999
15	804699	1	12	90	1707	0	0	11708549	11200000	11999999
Total number of pulses in waveform = 30										

### Type 5 Radar Waveform\_21

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	294608	2	9	85	1288	1827	0	294608	0	923076
2	824062	3	11	95	1985	1497	1417	1121785	923077	1846153
3	897858	1	19	50	1825	0	0	2024542	1846154	2769230
4	1306798	2	6	85	1803	1361	0	3333165	2769231	3692307
5	1222616	1	13	55	1292	0	0	4558945	3692308	4615384
6	729905	1	16	65	1406	0	0	5290142	4615385	5538461
7	808313	1	5	65	1860	0	0	6099861	5538462	6461538
8	436795	2	17	100	1980	1048	0	6538516	6461539	7384615
9	1693845	2	11	55	1236	1336	0	8235389	7384616	8307692
10	609696	1	9	75	1637	0	0	8847657	8307693	9230769
11	898430	3	15	60	1924	1932	1478	9747724	9230770	10153846
12	424704	3	11	85	1070	1908	1614	10177762	10153847	11076923
13	1268041	2	20	75	1670	1304	0	11450395	11076924	12000000
Total number of pulses in waveform = 24										

### Type 5 Radar Waveform\_22

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	546339	2	16	70	1537	1561	0	546339	0	631578
2	560129	2	20	95	1788	1682	0	1109566	631579	1263157
3	210679	2	7	75	1833	1871	0	1323715	1263158	1894736
4	685802	1	5	80	1232	0	0	2013221	1894737	2526315
5	710250	2	10	95	1349	1778	0	2724703	2526316	3157894
6	862322	3	11	95	1835	1156	1057	3590152	3157895	3789473
7	317277	3	20	50	1547	1056	1050	3911477	3789474	4421052
8	640638	1	11	55	1836	0	0	4555768	4421053	5052631
9	1110263	2	12	80	1572	1491	0	5667867	5052632	5684210
10	95388	2	6	60	1440	1642	0	5766318	5684211	6315789
11	1047820	2	20	65	1458	1483	0	6817220	6315790	6947368
12	272956	2	5	50	1369	1022	0	7093117	6947369	7578947
13	1022364	1	13	70	1161	0	0	8117872	7578948	8210526
14	524517	3	15	70	1208	1261	1067	8643560	8210527	8842105
15	381292	3	13	80	1409	1114	1947	9028378	8842106	9473684
16	844001	2	14	55	1763	1979	0	9876849	9473685	10105263
17	275362	1	17	70	1443	0	0	10155953	10105264	10736842
18	961656	1	9	85	1695	0	0	11119051	10736843	11368421
19	6099864	1	11	90	1889	0	0	11730730	11368422	12000000
Total number of pulses in waveform = 35										

### Type 5 Radar Waveform\_23

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	794909	3	15	85	1362	1650	1600	155664	0	631578
2	458705	3	7	60	1191	1753	1327	955175	631579	1263157
3	798849	1	18	75	1136	0	0	1418151	1263158	1894736
4	823739	3	9	80	1221	1869	1111	2218136	1894737	2526315
5	609517	3	11	75	1750	1548	1343	3046076	2526316	3157894
6	384185	2	9	90	1667	1816	0	3660234	3157895	3789473
7	610100	3	15	70	1779	1056	1222	4047902	3789474	4421052
8	393012	3	10	65	1656	1729	1354	4662059	4421053	5052631
9	1214672	1	15	80	1713	0	0	5059810	5052632	5684210
10	251745	2	9	95	1740	1964	0	6276195	5684211	6315789
11	947699	2	6	80	1381	1330	0	6531644	6315790	6947368
12	272664	2	17	75	1841	1618	0	7482054	6947369	7578947
13	788845	3	8	90	1567	1194	1234	7758177	7578948	8210526
14	303339	3	15	85	1018	1795	1385	8551017	8210527	8842105
15	670081	1	19	50	1597	0	0	8858554	8842106	9473684
16	880827	3	12	100	1367	1850	1670	9530232	9473685	10105263
17	493523	1	10	55	1042	0	0	10415946	10105264	10736842
18	866693	3	11	95	1670	1686	1676	10910511	10736843	11368421
19		3	20	50	1736	1627	1503	11782296	11968422	12000000
Total number of pulses in waveform = 45										

### Type 5 Radar Waveform\_24

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	388105	3	7	55	1182	1106	1094	388105	0	1333332
2	1225426	3	11	60	1394	1453	1432	1616913	1333333	2666665
3	1608848	1	7	75	1406	0	0	3230040	2666666	3999998
4	1360521	1	20	90	1954	0	0	4591967	3999999	5333331
5	1491043	1	12	70	1932	0	0	6084964	5333332	6666664
6	1604841	1	13	80	1110	0	0	7691737	6666665	7999997
7	780571	3	14	100	1085	1531	1552	8473418	7999998	9333330
8	1698288	2	16	90	1647	1978	0	10175874	9333331	10666663
9	587739	2	18	80	1708	1792	0	10767238	10666664	11999996
Total number of pulses in waveform = 17										

### Type 5 Radar Waveform\_25

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	503834	2	10	55	1702	1489	0	503834	0	999999
2	522870	1	17	65	1225	0	0	1029895	1000000	1999999
3	1806167	3	17	65	1343	1544	1461	2837287	2000000	2999999
4	272584	1	14	70	1138	0	0	3114219	3000000	3999999
5	1772987	3	14	100	1016	1525	1273	4888344	4000000	4999999
6	786965	2	6	100	1193	1868	0	5679123	5000000	5999999
7	1315383	1	14	75	1264	0	0	6997567	6000000	6999999
8	19762	2	7	70	1378	1962	0	7018593	7000000	7999999
9	1104616	2	20	60	1607	1246	0	8126549	8000000	8999999
10	890024	3	19	75	1221	1208	1706	9019426	9000000	9999999
11	1839649	1	13	65	1047	0	0	10863210	10000000	10999999
12	799291	3	10	85	1918	1756	1903	11663548	11000000	11999999
Total number of pulses in waveform = 24										

### Type 5 Radar Waveform\_26

```

Waveform Num = 26
Num of Bursts = 15
Burst Interval (us)= 800000
Burst      Off Time     # Pulses   Chirp    PW      Pulse 1    Pulse 2    Pulse 3    Start Loc  Start Burst  End Burst
#        (us)          (us)       (MHz)   (us)    Pri(us)   Pri(us)   Pri(us)   (us)       Interval(us) Interval(us)
1        633475         2          5        95      1963      1789      0        633475      0           799999
2        732462         2          15       55      1701      1840      0        1369689     800000     1599999
3        298536         3          18       85      1480      1730      1245     1671766     1600000    2399999
4        1397712        3          13       75      1157      1998      1102     3073933     2400000    3199999
5        356574          2          16       95      1909      1308      0        3434764     3200000    3999999
6        587396          2          12       100     1292      1756      0        4025377     4000000    4799999
7        1106411         2          7        95      1503      1687      0        5134836     4800000    5599999
8        1098701         1          14       95      1682      0        0        6236727     5600000    6399999
9        402030          1          18       70      1386      0        0        6640439     6400000    7199999
10       947822          1          13       80      1518      0        0        7589647     7200000    7999999
11       1125715          2          12       75      1512      1583      0        8716880     8000000    8799999
12       586611          1          9        70      1683      0        0        9306586     8800000    9599999
13       905593          2          13       70      1988      1735      0        10213862    9600000    10399999
14       220304          2          15       70      1189      1198      0        10437889    10400000   11199999
15       1375722          1          17       55      1568      0        0        11815998    11200000   11999999
Total number of pulses in waveform = 27
*****
```

### Type 5 Radar Waveform\_27

```

Waveform Num = 27
Num of Bursts = 13
Burst Interval (us)= 923077
Burst      Off Time     # Pulses   Chirp    PW      Pulse 1    Pulse 2    Pulse 3    Start Loc  Start Burst  End Burst
#        (us)          (us)       (MHz)   (us)    Pri(us)   Pri(us)   Pri(us)   (us)       Interval(us) Interval(us)
1        524504         1          11       55      1873      0        0        524504      0           923076
2        1042497        2          8        65      1980      1835      0        1568874     923077     1846153
3        374687          3          19       60      1799      1761      1748     1946776     1846154    2769230
4        1717110        1          14       100     1786      0        0        3669194     2769231    3692307
5        312922          2          19       100     1928      1098      0        3983902     3692308    4615384
6        1504344          2          6        75      1360      1573      0        5491272     4615385    5538461
7        716969          1          20       50      1855      0        0        6211174     5538462    6461538
8        820193          3          17       50      1255      1356      1759     7033222     6461539    7384615
9        848540          1          11       95      1931      0        0        7886132     7384616    8307692
10       1196220         1          7        55      1549      0        0        9084283     8307693    9230769
11       852711          3          18       90      1503      1855      1725     9938543     9230770    10153846
12       384691          2          11       55      1758      1947      0        10328317    10153847    11076923
13       1215582          1          9        65      1442      0        0        11547604    11076924   12000000
Total number of pulses in waveform = 23
*****
```

### Type 5 Radar Waveform\_28

```

Waveform Num = 28
Num of Bursts = 16
Burst Interval (us)= 750000
Burst      Off Time     # Pulses   Chirp    PW      Pulse 1    Pulse 2    Pulse 3    Start Loc  Start Burst  End Burst
#        (us)          (us)       (MHz)   (us)    Pri(us)   Pri(us)   Pri(us)   (us)       Interval(us) Interval(us)
1        477079         1          16       80      1752      0        0        477079      0           749999
2        622882         3          17       85      1722      1573      1949     1101713     750000     1499999
3        1088754         2          18       60      1636      1757      0        2195711     1500000    2249999
4        686555          3          13       70      1077      1455      1634     2886659     2250000    2999999
5        184106          3          20       85      1444      1531      1949     3073931     3000000    3749999
6        751430          1          13       100     1132      0        0        3830285     3750000    4499999
7        852271          2          5        70      1831      1693      0        4683688     4500000    5249999
8        1209972          2          7        75      1570      1542      0        5897184     5250000    5999999
9        685168          1          19       65      1274      0        0        6585464     6000000    6749999
10       768851          2          8        60      1192      1296      0        7355589     6750000    7499999
11       441301          2          17       55      1720      1720      0        7799378     7500000    8249999
12       671982          2          8        85      1202      1991      0        8474800     8250000    8999999
13       752021          1          17       95      1949      0        0        9230014     9000000    9749999
14       970345          2          20       80      1672      1454      0        10202308    9750000    10499999
15       557789          1          12       85      1045      0        0        10763223    10500000   11249999
16       1105975          1          6        50      1960      0        0        11870243    11250000   11999999
Total number of pulses in waveform = 29
*****
```

### Type 5 Radar Waveform\_29

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	538939	3	16	95	1369	1158	1544	538939	0	666666
2	622922	2	10	55	1045	1286	0	1165932	666667	1333333
3	333237	1	18	90	1903	0	0	1501500	1333334	2000000
4	696458	2	8	75	1965	1576	0	2199861	2000001	2666667
5	1028504	2	13	90	1220	1747	0	3231906	2666668	3333334
6	283030	1	9	50	1910	0	0	3517903	3333335	4000001
7	958599	2	18	85	1690	1950	0	4478412	4000002	4666668
8	546330	1	6	60	1239	0	0	5028382	4666669	5333335
9	785287	2	13	85	1695	1870	0	5814908	5333336	6000002
10	212433	1	6	60	1456	0	0	6030906	6000003	6666669
11	663784	3	8	50	1248	1249	1275	6696146	6666670	7333336
12	1074886	2	18	80	1677	1677	0	7774804	7333337	8000003
13	583174	2	19	65	1901	1508	0	8361132	8000004	8666670
14	946958	1	7	85	1637	0	0	9311699	8666671	9333337
15	473381	3	5	85	1668	1267	1893	9786617	9333338	10000004
16	685648	2	20	75	1861	1141	0	10477093	10000005	10666671
17	625446	2	20	75	1608	1844	0	11105541	10666672	11333338
18	299866	3	20	70	1352	1769	1287	11408859	11333339	12000005
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_30

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	424108	1	17	55	1850	0	0	424108	0	999999
2	1381673	2	8	85	1728	1691	0	1807631	1000000	1999999
3	1124271	2	7	95	1238	1633	0	2935321	2000000	2999999
4	945879	3	14	75	1098	1850	1276	3884071	3000000	3999999
5	277616	2	12	90	1892	1479	0	4165911	4000000	4999999
6	1074538	2	13	90	1996	1957	0	5243820	5000000	5999999
7	1305275	1	5	75	1688	0	0	6553048	6000000	6999999
8	1114356	1	16	70	1591	0	0	7669092	7000000	7999999
9	508637	2	7	50	1220	1964	0	8179320	8000000	8999999
10	1134447	2	16	85	1827	1344	0	9316951	9000000	9999999
11	726318	2	14	85	1738	1001	0	10046440	10000000	10999999
12	1782029	2	10	75	1437	1392	0	11831208	11000000	11999999
Total number of pulses in waveform = 22										
*****										

## 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	5290	0	16	5300	1
2	5291	1	17	5302	1
3	5292	1	18	5303	1
4	5293	1	19	5303	1
5	5294	1	20	5304	1
6	5295	1	21	5304	1
7	5296	1	22	5305	1
8	5297	1	23	5305	1
9	5298	1	24	5306	1
10	5299	1	25	5306	1
11	5300	1	26	5307	1
12	5300	1	27	5307	1
13	5301	1	28	5308	1
14	5301	1	29	5309	1
15	5302	1	30	5310	1
Detection Percentage (%)					96.7%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5319	9	1	5308	3
4	5299	12	2	5310	6
21	5305	63	22	5293	66
24	5320	72	29	5271	87
29	5296	87	54	5261	162
31	5303	93	56	5265	168
38	5315	114	63	5267	189
48	5309	144	73	5272	219
59	5294	177	76	5280	228
75	5317	225	79	5315	237
85	5316	255	94	5298	282
91	5262	273	96	5263	288
96	5288	288	97	5274	291

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5318	27	6	5305	18
10	5262	30	9	5278	27
11	5295	33	10	5317	30
13	5307	39	16	5306	48
20	5271	60	21	5269	63
28	5302	84	22	5277	66
34	5275	102	24	5298	72
40	5321	120	28	5311	84
53	5267	159	30	5272	90
56	5316	168	38	5293	114
62	5274	186	45	5271	135
80	5313	240	62	5296	186
86	5287	258	72	5275	216
89	5289	267	--	--	--
93	5269	279	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5296	18	9	5290	27
9	5268	27	34	5268	102
28	5275	84	45	5265	135
29	5279	87	53	5305	159
39	5283	117	59	5275	177
45	5304	135	60	5301	180
51	5277	153	64	5318	192
57	5313	171	67	5303	201
58	5312	174	71	5286	213
59	5311	177	73	8595	219
75	5295	225	88	5319	264
76	5319	228	92	5298	276
77	5294	231	94	5278	282
82	5280	246	96	5324	288

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5326	9	5	5284	15
15	5310	45	17	5317	51
31	5318	93	19	5312	57
35	5285	105	22	5266	66
44	5301	132	57	5294	171
48	5288	144	67	5323	201
50	5281	150	68	5269	204
64	5279	192	82	5270	246
71	5269	213	83	5311	249
81	5320	243	84	5288	252
--	--	--	96	5273	288
--	--	--	97	5304	291
--	--	--	99	5281	297

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5288	3	1	5279	3
15	5318	45	26	5312	78
22	5317	66	31	5298	93
41	5284	123	48	5316	144
47	5278	141	60	5286	180
60	5295	180	70	5281	210
75	5325	225	74	5278	222
93	5269	279	86	5313	258
99	5273	297	88	5310	264
--	--	--	91	5303	273
--	--	--	97	5327	291
--	--	--	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
12	5315	36	5	5297	15
16	5273	48	17	5313	51
23	5323	69	23	5306	69
31	5276	93	30	5299	90
51	5296	153	31	45296	93
60	5269	180	33	5294	99
61	5305	183	43	5298	129
67	5286	201	48	5318	144
68	5284	204	53	5324	159
83	5285	249	66	5319	198
88	5321	264	83	5323	249

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5316	6	0	5322	0
12	5309	36	8	5320	24
29	5276	87	16	5273	48
42	5324	126	18	5272	54
51	5287	153	25	5310	75
53	5284	159	38	5296	114
58	5297	174	45	5270	135
60	5307	180	47	5299	141
67	5321	201	56	5326	168
79	5275	237	66	5287	198
83	5300	249	81	5302	243
84	5296	252	89	5329	267
--	--	--	97	5304	291

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5319	9	18	5285	54
5	5300	15	27	5362	81
6	5293	18	37	5273	111
17	5286	51	48	5279	144
58	5325	174	50	5270	150
66	5308	198	53	5308	159
68	5328	204	63	5330	189
70	5271	210	70	5309	210
77	5290	231	75	5302	225
80	5272	240	77	5288	231
91	5310	273	78	5312	234
96	5314	288	99	5296	297

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5273	0	2	5297	6
9	7278	27	5	5330	15
26	5301	78	27	5289	81
35	5290	105	30	5315	90
37	5312	111	32	5324	96
44	5327	132	46	5292	138
48	5325	144	54	5319	162
60	5303	180	55	5286	165
74	5304	222	62	5321	186
77	5282	231	78	5323	234
82	5331	246	81	5274	243
98	8287	294	83	5331	249

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5304	48	2	5272	6
23	5278	69	13	5273	39
27	5310	81	24	5331	72
38	5295	114	32	5319	96
47	5319	141	36	5274	108
48	5307	144	37	5289	111
49	5289	147	49	5324	147
57	5286	171	52	5318	156
69	5325	207	62	5330	186
80	5320	240	76	5313	228
99	5311	297	77	5279	231
--	--	--	78	5314	234
--	--	--	98	5281	294

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5313	6	39	5291	117
6	5285	18	51	5332	153
8	5322	24	60	5304	180
28	5326	84	75	5278	225
35	5284	105			
40	5309	120			
44	5293	132			
45	5299	135			
52	5307	156	--	--	--
55	5289	165			
60	5280	180			
68	5332	204			
84	5278	252			
89	5298	267			

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5281	12	1	5301	3
7	5322	21	15	5330	45
13	5319	39	19	5293	57
16	5334	48	22	5282	66
34	5286	102	34	5313	102
39	5313	117	37	5295	111
41	5327	123	58	5327	174
54	5316	162	66	5329	198
80	5324	240	74	5293	222
93	5330	279	--	--	--
95	5275	285	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5302	12	15	5303	45
9	5331	27	30	5329	90
10	5316	30	35	5276	105
15	5276	45	41	5284	123
20	5297	60	46	5308	138
41	5330	123	56	5317	168
44	5319	132	59	5304	177
47	5281	141	76	5305	228
61	5300	183	78	5277	234
68	5286	204	79	5306	237
78	5284	234	92	5325	276
82	5332	246	97	5311	291
90	5324	270	--	--	--
94	5290	282	--	--	--
96	5296	288	--	--	--
98	5304	294	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5296	54	0	5325	0
22	5316	66	2	5334	6
38	5299	114	6	5305	18
42	5279	126	7	5319	21
49	5322	147	9	5329	27
68	5314	204	10	5296	30
85	5285	255	18	5281	54
86	5308	258	21	5297	63
87	5286	261	31	5317	93
89	5287	267	34	5304	102
98	5330	294	46	5287	138
--	--	--	52	5302	156
--	--	--	63	5292	189
--	--	--	68	5333	204
--	--	--	72	5320	216
--	--	--	75	5278	225
--	--	--	77	5310	231
--	--	--	83	5301	249

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5286	3	4	5286	12
4	5337	12	7	5327	21
5	5309	15	17	5306	51
12	5321	36	18	5283	54
15	5283	45	21	5280	63
21	5280	63	35	5307	105
31	5317	93	37	5329	111
32	5320	96	43	5339	129
36	5310	108	45	5321	135
37	5339	111	71	5229	213
54	5325	162	74	5300	222
58	5304	174	83	5326	249

94	5330	282	86	5297	258
--	--	--	97	5288	291

## Radar Statistical Performance for 802.11n-HT40

## Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	0	538	99	1
2	5293	1	618	86	1
3	5295	1	798	67	1
4	5297	1	658	81	1
5	5299	1	878	61	1
6	5301	1	758	70	1
7	5291	1	518	102	1
8	5303	1	898	59	1
9	5305	1	738	72	1
10	5306	1	718	74	1
11	5307	1	938	57	1
12	5308	1	678	78	1
13	5309	1	3066	18	1
14	5310	1	638	83	1
15	5311	1	858	62	1
16	5312	1	1909	28	1
17	5313	1	932	57	1
18	5314	1	2777	20	1
19	5315	1	2722	20	1
20	5317	1	2371	23	1
21	5319	1	1074	50	1
22	5320	1	2752	20	1
23	5321	1	2169	25	1
24	5322	1	1394	38	1
25	5323	1	2110	26	1
26	5324	1	2787	19	1
27	5325	1	3055	18	1
28	5327	1	1121	48	1
29	5329	1	2805	19	1
30	5330	1	760	70	1
Detection Percentage (%)					96.7%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	4.5	152	29	0
2	5293	2.1	166	25	1
3	5295	4.7	196	23	1
4	5297	1.1	169	28	1
5	5299	3.8	223	23	1
6	5301	1.6	214	28	1
7	5291	1.3	163	29	1
8	5303	4.5	192	26	1
9	5305	2.8	170	28	1
10	5306	1.5	185	29	1
11	5307	3.9	154	27	1
12	5308	1.4	219	26	1
13	5309	2.6	224	29	1
14	5310	2.2	198	27	1
15	5311	4.0	227	25	1
16	5312	3.6	181	23	1
17	5313	4.9	204	24	1
18	5314	1.1	202	25	1
19	5315	2.5	186	27	1
20	5317	3.3	157	24	1
21	5319	3.9	170	27	1
22	5320	5.0	202	24	1
23	5321	2.4	221	28	1
24	5322	1.7	209	29	1
25	5323	3.5	156	28	1
26	5324	1.8	163	23	1
27	5325	3.1	183	24	1
28	5327	1.1	182	23	1
29	5329	1.6	161	25	0
30	5330	3.2	195	25	0
Detection Percentage (%)					90%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	9.6	282	18	0
2	5293	7.0	445	16	1
3	5295	8.4	257	16	1
4	5297	9.3	395	17	1
5	5299	8.6	359	16	1
6	5301	6.9	482	17	1
7	5301	8.1	390	18	1
8	5303	7.8	362	16	1
9	5305	6.4	470	18	1
10	5306	9.5	475	18	1
11	5307	6.9	270	17	1
12	5308	9.4	339	18	1
13	5309	8.6	432	17	1
14	5310	6.4	386	17	1
15	5311	7.7	399	16	1
16	5312	8.6	473	18	1
17	5313	9.9	253	17	1
18	5314	7.0	464	18	1
19	5315	8.8	375	18	1
20	5317	8.5	263	17	1
21	5319	8.1	374	17	1
22	5320	7.1	350	18	1
23	5321	9.0	352	18	1
24	5322	8.4	325	16	1
25	5323	7.3	442	16	1
26	5324	9.3	371	16	1
27	5325	8.6	474	17	1
28	5327	7.1	451	16	1
29	5329	7.2	368	18	1
30	5330	6.0	264	18	0
Detection Percentage (%)					93.3%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	17.3	392	14	0
2	5293	18.1	470	15	1
3	5295	19.0	373	13	1
4	5297	18.1	479	13	1
5	5299	17.9	413	12	1
6	5301	15.1	403	14	1
7	5301	12.8	408	13	1
8	5303	13.2	379	13	1
9	5305	15.0	311	13	1
10	5306	19.7	328	14	1
11	5307	17.9	378	15	1
12	5308	18.9	263	12	1
13	5309	12.7	436	13	1
14	5310	11.7	371	12	1
15	5311	14.4	359	12	1
16	5312	17.5	272	12	1
17	5313	16.2	276	15	1
18	5314	15.8	487	15	1
19	5315	16.2	295	15	1
20	5317	14.8	461	12	1
21	5319	12.5	374	15	1
22	5320	18.9	455	12	1
23	5321	14.8	458	16	1
24	5322	12.3	321	15	1
25	5323	20.0	436	15	1
26	5324	13.5	284	13	1
27	5325	20.0	486	15	1
28	5327	11.8	323	15	1
29	5329	17.8	393	15	0
30	5330	15.3	461	14	0
Detection Percentage (%)					90%

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

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (96.7\% + 90\% + 93.3\% + 90\%)/4 = 92.5\% (>80\%)$

## Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5291	0	16	5312	1
2	5293	0	17	5313	1
3	5295	1	18	5314	1
4	5297	1	19	5315	1
5	5299	1	20	5317	1
6	5301	1	21	5319	1
7	5301	1	22	5320	1
8	5303	1	23	5321	1
9	5305	1	24	5322	1
10	5306	1	25	5323	1
11	5307	1	26	5324	1
12	5308	1	27	5325	1
13	5309	1	28	5327	1
14	5310	1	29	5329	0
15	5311	1	30	5330	0
Detection Percentage (%)					87.7%

## Type 5 Radar Waveform\_1

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	16078	1	16	95	1974	0	0	16078	0	1499999
2	1835250	2	6	50	1707	1172	0	1853302	1500000	2999999
3	2127517	1	5	80	1076	0	0	3983698	3000000	4499999
4	1046985	2	17	55	1005	1297	0	5031759	4500000	5999999
5	2345442	2	7	60	1230	1847	0	7379503	6000000	7499999
6	216804	2	16	100	1963	1703	0	7599384	7500000	8999999
7	1547612	2	13	70	1858	1333	0	9150662	9000000	10499999
8	1543164	3	7	90	1452	1369	1404	10697017	10500000	11999999
Total number of pulses in waveform = 15										
*****										

### Type 5 Radar Waveform\_2

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	890361	1	18	85	1140	0	0	890361	0	999999
2	822733	2	5	80	1464	1519	0	1714234	1000000	1999999
3	321134	3	18	90	1026	1966	1347	2038351	2000000	2999999
4	1156386	1	8	50	1091	0	0	3199076	3000000	3999999
5	1628435	3	5	50	1427	1925	1735	4828602	4000000	4999999
6	636451	2	18	80	1931	1934	0	5470140	5000000	5999999
7	781551	2	11	80	1189	1226	0	6255556	6000000	6999999
8	1272774	2	6	95	1735	1007	0	7530745	7000000	7999999
9	509484	1	9	80	1247	0	0	8042971	8000000	8999999
10	1349633	2	18	60	1572	1578	0	9393851	9000000	9999999
11	1287522	2	10	60	1859	1828	0	10684523	10000000	10999999
12	1258424	1	18	55	1139	0	0	11946634	11000000	11999999
Total number of pulses in waveform = 22										
*****										

### Type 5 Radar Waveform\_3

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	292381	1	7	60	1545	0	0	292381	0	923076
2	1373941	3	11	100	1905	1082	1055	1667867	923077	1846153
3	303862	3	20	75	1324	2000	1343	1975771	1846154	2769230
4	1524307	2	19	60	1222	1377	0	3504745	2769231	3692307
5	752577	2	6	55	1547	1567	0	4259921	3692308	4615384
6	638592	1	5	50	1650	0	0	4901627	4615385	5538461
7	1041106	1	5	55	1444	0	0	5944383	5538462	6461538
8	621055	1	5	85	1925	0	0	6566882	6461539	7384615
9	871474	3	13	55	1916	1568	1789	7440281	7384616	8307692
10	1420264	1	15	65	1208	0	0	8865808	8307693	9230769
11	991653	1	9	90	1538	0	0	9858669	9230770	10153846
12	1006484	1	8	50	1902	0	0	10866691	10153847	11076923
13	881981	1	8	85	1470	0	0	11750574	11076924	12000000
Total number of pulses in waveform = 21										
*****										

### Type 5 Radar Waveform\_4

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	685737	2	14	70	1230	1218	0	685737	0	923076
2	630224	1	17	70	1915	0	0	1318409	923077	1846153
3	813603	3	10	55	1159	1925	1707	2133927	1846154	2769230
4	903632	1	16	95	1460	0	0	3042350	2769231	3692307
5	1246567	2	12	70	1087	1501	0	4290377	3692308	4615384
6	1217951	1	18	75	1670	0	0	5510916	4615385	5538461
7	683459	2	13	85	1305	1633	0	6196045	5538462	6461538
8	366105	1	15	95	1259	0	0	6565088	6461539	7384615
9	1007047	1	10	55	1661	1361	0	7573394	7384616	8307692
10	1316135	2	20	80	1143	1878	0	8892551	8307693	9230769
11	1187457	3	6	50	1605	1738	1198	10083029	9230770	10153846
12	954185	2	13	60	1893	1188	0	11041755	10153847	11076923
13	293640	1	6	50	1521	0	0	11338476	11076924	12000000
Total number of pulses in waveform = 23										
*****										

### Type 5 Radar Waveform\_5

Type 5 Radar Waveform_5												
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)		
1	257605	3	16	75	1183	1359	1770	257605	0	631578		
2	720373	3	18	70	1125	1648	1613	982290	631579	1263157		
3	779685	3	10	85	1676	1513	1785	1766361	1263158	1894736		
4	577670	3	19	75	1160	1543	1805	2349005	1894737	2526315		
5	327144	1	9	80	1608	0	0	2680657	2526316	3157894		
6	733608	2	13	70	1952	1046	0	3415873	3157895	3789473		
7	476023	1	17	60	1049	0	0	3894894	3789474	4421052		
8	1087117	1	12	65	1741	0	0	4983060	4421053	5052631		
9	452678	1	8	60	1888	0	0	5437479	5052632	5684210		
10	605306	2	6	70	1545	1661	0	6044673	5684211	6315789		
11	537013	1	12	100	1183	0	0	6584892	6315790	6947368		
12	602222	1	12	100	1942	0	0	7188297	6947369	7578947		
13	885772	2	18	95	1836	1689	0	8076011	7578948	8210526		
14	496551	3	18	80	1593	1869	1768	8576087	8210527	8842105		
15	478964	2	16	80	1294	1898	0	9060281	8842106	9473684		
16	896331	2	11	100	1212	1527	0	9899804	9473685	10105263		
17	710114	3	12	75	1880	1539	1986	10612657	10105264	10736842		
18	308313	2	16	60	1828	1449	0	10926375	10736843	11368421		
19	478085	3	15	90	1210	1800	1625	11407737	11368422	12000000		
Total number of pulses in waveform = 39												

### Type 5 Radar Waveform\_6

Type 5 Radar Waveform_6												
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)		
1	465680	3	20	65	1503	1815	1404	465680	0	631578		
2	209274	2	18	90	1500	1051	0	679676	631579	1263157		
3	967364	2	19	95	1824	1037	0	1649591	1263158	1894736		
4	616775	1	18	65	1177	0	0	2269227	1894737	2526315		
5	761493	2	19	55	1934	1352	0	3031897	2526316	3157894		
6	173586	1	15	55	1802	0	0	3208769	3157895	3789473		
7	725234	2	15	60	1783	1392	0	3935800	3789474	4421052		
8	645021	1	17	80	1132	0	0	4584001	4421053	5052631		
9	574584	1	5	80	1796	0	0	5169717	5052632	5684210		
10	577664	1	17	50	1110	0	0	5739177	5684211	6315789		
11	11656574	1	14	60	1166	0	0	6905961	6315790	6947368		
12	527612	1	10	100	1221	0	0	7434739	6947369	7578947		
13	317091	2	13	90	1823	1960	0	7753051	7578948	8210526		
14	790203	1	14	60	1087	0	0	8547037	8210527	8842105		
15	759378	1	8	80	1378	0	0	9307502	8842106	9473684		
16	673829	2	5	75	1815	1383	0	9982709	9473685	10105263		
17	714830	1	18	95	1008	0	0	10700737	10105264	10736842		
18	543303	2	5	75	1642	1946	0	11245048	10736843	11368421		
19	206583	3	6	80	1680	1783	1814	11455219	11368422	12000000		
Total number of pulses in waveform = 30												

### Type 5 Radar Waveform\_7

Type 5 Radar Waveform_7												
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)		
1	565378	1	9	75	1453	0	0	565378	0	631578		
2	387664	3	17	75	1166	1364	1566	954495	631579	1263157		
3	682301	1	20	90	1080	0	0	1640892	1263158	1894736		
4	328638	3	19	85	1966	1632	1522	1970610	1894737	2526315		
5	819347	3	8	70	1401	1117	1503	2795077	2526316	3157894		
6	883653	2	16	85	1320	1860	0	3682751	3157895	3789473		
7	314759	2	6	65	1401	1218	0	4000690	3789474	4421052		
8	1039175	1	6	75	1022	0	0	5042484	4421053	5052631		
9	73320	2	7	70	1229	1025	0	5116826	5052632	5684210		
10	581809	1	5	65	1032	0	0	5700889	5684211	6315789		
11	950389	3	16	100	1312	1608	1176	6652310	6315790	6947368		
12	820202	3	7	65	1929	1676	1534	7476608	6947369	7578947		
13	133264	3	12	50	1884	1368	1346	7615011	7578948	8210526		
14	1030499	1	13	55	1349	0	0	8660108	8210527	8842105		
15	393732	3	17	60	1506	1456	1961	9045189	8842106	9473684		
16	589740	3	7	70	1432	1207	1937	9639852	9473685	10105263		
17	976593	3	12	75	1974	1869	1154	10621021	10105264	10736842		
18	280511	3	8	90	1194	1102	1078	10886529	10736843	11368421		
19	743315	3	20	65	1137	1819	1859	11633218	11368422	12000000		
Total number of pulses in waveform = 44												

### Type 5 Radar Waveform\_8

Waveform Num = 8  
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	128758	3	13	70	1181	1107	1232	128758	0	1499999
2	2328195	1	7	90	1093	0	0	2460473	1500000	2999999
3	859559	2	12	80	1550	1849	0	3321125	3000000	4499999
4	1318366	1	18	60	1162	0	0	4642890	4500000	5999999
5	1799917	2	15	80	1616	1246	0	6443969	6000000	7499999
6	2530067	1	8	80	1595	0	0	8976898	7500000	8999999
7	1136508	3	20	90	1467	1044	1153	10115001	9000000	10499999
8	614771	3	13	70	1775	1438	1338	10733436	10500000	11999999

Total number of pulses in waveform = 16

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### Type 5 Radar Waveform\_9

Waveform Num = 9  
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	718319	1	8	80	1597	0	0	718319	0	749999
2	271290	1	7	70	1942	0	0	991146	750000	1499999
3	1077880	2	14	60	1150	1909	0	2070968	1500000	2249999
4	185172	2	10	95	1567	1388	0	2259199	2250000	2999999
5	888122	1	14	90	1950	0	0	3150276	3000000	3749999
6	873768	2	17	50	1684	1121	0	4025994	3750000	4499999
7	985928	3	17	65	1843	1701	1846	5014727	4500000	5249999
8	410896	1	12	50	1688	0	0	5431013	5250000	5999999
9	648268	1	7	100	1035	0	0	6080969	6000000	6749999
10	1168706	2	10	80	1470	1195	0	7250710	6750000	7499999
11	338410	3	17	65	1140	1003	1663	7591785	7500000	8249999
12	1152203	3	20	80	1204	1564	1284	8747794	8250000	8999999
13	669099	1	15	65	1064	0	0	9420945	9000000	9749999
14	1032436	2	17	55	1700	1502	0	10454445	9750000	10499999
15	709280	1	17	100	1622	0	0	11166927	10500000	11249999
16	411657	3	20	95	1715	1473	1051	11580206	11250000	11999999

Total number of pulses in waveform = 29

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### Type 5 Radar Waveform\_10

Waveform Num = 10  
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	327769	3	7	60	1312	1368	1802	327769	0	857142
2	1263599	3	15	100	1358	1055	1325	1596850	857143	1714285
3	523412	3	18	50	1407	1010	1468	2123000	1714286	2571428
4	1076733	3	17	50	1264	1342	1326	3130591	2571429	3428571
5	705127	1	10	90	1010	0	0	4211256	3428572	4285714
6	620400	3	6	90	1870	1383	1375	4917393	4285715	5142857
7	1157409	3	13	55	1669	1268	1687	5542421	5142858	6000000
8	886608	3	8	85	1178	1097	1185	6704454	6000001	6857143
9	371642	3	16	75	1949	1775	1507	7594522	6857144	7714286
10	1217909	2	18	95	1366	1444	0	7971395	7714287	8571429
11	1023431	2	10	70	1393	1727	0	9192114	8571430	9428572
12	649677	1	8	95	1823	0	0	10218665	9428573	10285715
13	335536	1	9	95	1569	0	0	10870165	10285716	11142858
14	3	11	80	1196	1934	1265	11207270	11142859	12000001	

Total number of pulses in waveform = 34

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### Type 5 Radar Waveform\_11

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	195285	3	12	60	1005	1860	1046	195285	0	1090908
2	1797710	3	19	60	1120	1851	1877	1996906	1090909	2181817
3	1142044	3	14	75	1324	1134	1413	3143798	2181818	3272726
4	1055950	1	18	60	1996	0	0	4203619	3272727	4363635
5	908993	2	17	50	1236	1845	0	5114608	4363636	5454544
6	883727	2	10	90	1650	1984	0	6001416	5454545	6545453
7	1173987	1	20	65	1171	0	0	7179037	6545454	7636362
8	941177	2	9	90	1417	1019	0	8121385	7636363	8727271
9	1264936	1	20	90	1911	0	0	9388757	8727272	9818180
10	898961	2	17	95	1980	1396	0	10289629	9818181	10909089
11	707263	3	12	100	1360	1841	1715	11000268	10909090	11999998
Total number of pulses in waveform = 23										
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### Type 5 Radar Waveform\_12

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	294300	1	16	75	1461	0	0	294300	0	705881
2	552190	2	18	95	1741	1929	0	847951	705882	1411763
3	1153719	1	19	95	1590	0	0	2005340	1411764	2117645
4	614765	3	16	55	1929	1701	1695	2621695	2117646	2823527
5	832204	3	12	70	1785	1154	1077	3459224	2823528	3529409
6	298597	2	10	60	1805	1427	0	3761837	3529410	4235291
7	959989	3	18	75	1719	1759	1485	4725058	4235292	4941173
8	564000	1	10	100	1590	0	0	5294021	4941174	5647055
9	381012	1	12	50	1500	0	0	5676623	5647056	6352937
10	879264	2	17	50	1452	1680	0	6557387	6352938	7058819
11	774337	3	18	85	1826	1841	1841	7334856	7058820	7764701
12	672480	1	13	65	1436	0	0	8012844	7764702	8470583
13	1152373	2	14	90	1159	1441	0	9166653	8470584	9176465
14	511446	3	15	55	1391	1486	1507	9680699	9176466	9882347
15	303438	3	15	60	1596	1539	1907	9988521	9882348	10688229
16	1013839	2	10	80	1821	1389	0	11007402	10588230	11294111
17	932519	3	5	85	1301	1313	1806	11943131	11294112	11999993
Total number of pulses in waveform = 36										
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### Type 5 Radar Waveform\_13

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	9364	1	11	70	1958	0	0	9364	0	799999
2	1567819	1	16	90	1442	0	0	1579141	800000	1599999
3	126202	1	20	80	1641	0	0	1706785	1600000	2399999
4	869549	1	17	65	1303	0	0	2577975	2400000	3199999
5	1209858	3	13	75	1737	1352	1203	3789136	3200000	3999999
6	877404	1	18	75	1732	0	0	4670832	4000000	4799999
7	257540	3	15	100	1802	1746	1001	4930104	4800000	5599999
8	1312115	1	14	80	1629	0	0	6246768	5600000	6399999
9	728805	3	13	90	1663	1553	1154	6977202	6400000	7199999
10	636556	1	9	50	1842	0	0	7618128	7200000	7999999
11	785681	1	12	80	1805	0	0	8405651	8000000	8799999
12	923381	3	11	65	1154	1965	1454	9330837	8800000	9599999
13	522750	3	15	90	1521	1917	1760	9858160	9600000	10399999
14	871943	3	15	60	1019	1517	1228	10735301	10400000	11199999
15	844226	1	20	75	1965	0	0	11583291	11200000	11999999
Total number of pulses in waveform = 27										
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### Type 5 Radar Waveform\_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	222814	3	7	60	1885	1191	1078	222814	0	1199999
2	1141228	3	18	70	1580	1876	1278	1368196	1200000	2399999
3	2028615	2	18	50	1066	1689	0	3401545	2400000	3599999
4	899093	1	12	65	1883	0	0	4303393	3600000	4799999
5	885122	3	12	70	1055	1751	1872	5190398	4800000	5999999
6	1508786	1	18	70	1655	0	0	6703862	6000000	7199999
7	1256945	3	12	60	1331	1609	1991	7962462	7200000	8399999
8	1488597	1	19	70	1721	0	0	9455990	8400000	9599999
9	796173	1	8	95	1343	0	0	10253884	9600000	10799999
10	638666	1	17	80	1654	0	0	10893893	10800000	11999999

Total number of pulses in waveform = 19

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### 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	461513	2	5	80	1786	1054	0	461513	0	857142
2	1178158	2	10	85	1044	1917	0	1642511	857143	1714285
3	488275	3	16	75	1238	1662	1571	2133747	1714286	2571428
4	906697	1	8	75	1884	0	0	3044915	2571429	3428571
5	870465	3	10	80	1419	1889	1343	3917264	3428572	4285714
6	734095	2	10	85	1669	1426	0	4656010	4285715	5142857
7	558211	2	7	95	1186	1936	0	5217316	5142858	6000000
8	918970	3	12	85	1323	1316	1948	6137408	6000001	6857143
9	1476733	2	14	50	1215	1123	0	7618728	6857144	7714286
10	712916	3	11	95	1093	1099	1001	8333982	7714287	8571429
11	761975	3	5	60	1148	1137	1848	9099150	8571430	9428572
12	760501	3	9	80	1475	1564	1152	9863784	9428573	10285715
13	712128	1	20	50	1453	0	0	10580103	10285716	11142858
14	933279	3	17	85	1941	1510	1038	11514835	11142859	12000001

Total number of pulses in waveform = 33

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### Type 5 Radar Waveform\_16

Waveform Num = 16  
Num of Bursts = 20  
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	426872	3	5	85	1309	1914	1803	426872	0	599999
2	414655	1	11	60	1789	0	0	846553	600000	1199999
3	933032	3	18	80	1974	1400	1654	1781344	1200000	1799999
4	180174	3	16	95	1776	1495	1931	1966546	1800000	2399999
5	1008455	3	16	55	1963	1103	1913	2980203	2400000	2999999
6	604146	3	8	75	1076	1434	1467	3689328	3000000	3599999
7	255927	3	20	85	1598	1714	1902	3849232	3600000	4199999
8	564259	2	8	70	1110	1211	0	4418705	4200000	4799999
9	497829	3	15	50	1653	1891	1787	4918855	4800000	5399999
10	933815	3	16	75	1964	1041	1894	5858001	5400000	5999999
11	181790	3	20	50	1451	1369	1668	6044690	6000000	6699999
12	787376	2	5	55	1575	1603	0	6836544	6600000	7199999
13	729530	2	17	75	1285	1647	0	7569252	7200000	7799999
14	428199	1	17	50	1683	0	0	8000383	7800000	8399999
15	976056	3	11	50	1198	1397	1212	8978122	8400000	8999999
16	230986	3	5	65	1743	1576	1557	9212915	9000000	9599999
17	931424	1	18	75	1747	0	0	10149215	9600000	10199999
18	333824	1	17	80	1432	0	0	10484786	10200000	10799999
19	425465	3	7	95	1380	1023	1320	10911673	10800000	11399999
20	867864	3	9	75	1131	1086	1494	11783260	11400000	11999999

Total number of pulses in waveform = 49

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### Type 5 Radar Waveform\_17

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	564876	1	17	85	1011	0	0	564876	0	799999
2	850874	2	12	75	1879	1074	0	1416761	800000	1599999
3	373456	1	17	60	1900	0	0	1793170	1600000	2399999
4	1251889	3	13	90	1330	1417	1219	3046959	2400000	3199999
5	258415	2	18	75	1297	1240	0	3309340	3200000	3999999
6	1197836	1	19	80	1897	0	0	4509713	4000000	4799999
7	855239	3	19	80	1726	1088	1249	5366849	4800000	5599999
8	344028	2	7	90	1120	1359	0	5714940	5600000	6399999
9	902558	3	19	85	1615	1181	1130	6619977	6400000	7199999
10	1117521	1	13	65	1066	0	0	7741424	7200000	7999999
11	681727	3	16	85	1563	1916	1945	8424217	8000000	8799999
12	1106095	3	16	55	1529	1713	1278	9535736	8800000	9599999
13	656710	3	12	95	1170	1593	1289	10196966	9600000	10399999
14	514039	2	9	70	1429	1907	0	10715057	10400000	11199999
15	562072	2	15	95	1631	1298	0	11280465	11200000	11999999
Total number of pulses in waveform = 32										
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### Type 5 Radar Waveform\_18

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1232314	2	10	75	1120	1954	0	1232314	0	1499999
2	1656592	2	5	70	1862	1386	0	2891980	1500000	2999999
3	728692	3	11	100	1530	1307	1773	3623920	3000000	4499999
4	894487	1	11	85	1075	0	0	4523017	4500000	5999999
5	1926886	3	8	90	1540	1828	1302	6450978	6000000	7499999
6	2468900	3	7	50	1270	1385	1703	8924548	7500000	8999999
7	1545162	1	5	70	1463	0	0	10474068	9000000	10499999
8	545279	3	12	95	1095	1850	1230	11020810	10500000	11999999
Total number of pulses in waveform = 18										
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### Type 5 Radar Waveform\_19

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	152232	3	7	65	1866	1864	1808	152232	0	599999
2	1028218	2	15	70	1553	1216	0	1185978	600000	1199999
3	46061	2	11	55	1858	1809	0	1234808	1200000	1799999
4	1138275	2	14	60	1361	1297	0	2376750	1800000	2399999
5	379363	2	14	85	1736	1694	0	2758771	2400000	2999999
6	678093	3	9	50	1998	1026	1619	3440294	3000000	3599999
7	198793	3	12	75	1806	1545	1045	3643730	3600000	4199999
8	898612	2	15	85	1276	1594	0	4546738	4200000	4799999
9	776729	1	6	50	1801	0	0	5326337	4800000	5399999
10	419658	2	19	100	1579	1234	0	5747796	5400000	5999999
11	435111	3	19	55	1668	1615	1968	6185720	6000000	6599999
12	733055	1	11	90	1369	0	0	6923926	6600000	7199999
13	512829	2	17	85	1956	1303	0	7438114	7200000	7799999
14	365921	2	14	90	1331	1950	0	7807294	7800000	8399999
15	1030276	1	15	90	1639	0	0	8840851	8400000	8999999
16	661834	2	8	60	1892	1272	0	9504324	9000000	9599999
17	171023	3	13	85	1850	1194	1073	9678511	9600000	10199999
18	805993	2	11	75	1446	1782	0	10488621	10200000	10799999
19	748589	2	18	80	1540	1245	0	11240438	10800000	11399999
20	161406	1	10	95	1165	0	0	11404629	11400000	11999999
Total number of pulses in waveform = 41										
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### Type 5 Radar Waveform\_20

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	393990	3	5	70	1353	1707	1399	445723	0	599999
2	537271	2	16	70	1786	1567	0	844172	600000	1199999
3	688317	3	17	75	1177	1929	1088	1384796	1200000	1799999
4	647777	3	15	100	1690	1269	1145	2077307	1800000	2399999
5	763167	2	6	60	1558	1592	0	2729088	2400000	2999999
6	552396	3	16	75	1828	1248	1563	3495405	3000000	3599999
7	737006	2	7	90	1728	1335	0	4052440	3600000	4199999
8	537960	2	12	70	1057	1281	0	4792509	4200000	4799999
9	260439	3	12	80	1933	1118	1966	5332807	4800000	5399999
10	547276	2	5	65	1601	1567	0	5588263	5400000	5999999
11	495637	2	6	50	1100	1896	0	6138707	6000000	6599999
12	665964	3	14	75	1122	1200	1575	6637340	6600000	7199999
13	543911	2	15	55	1965	1388	0	7307201	7200000	7799999
14	1076079	3	10	55	1348	1998	1949	7854465	7800000	8399999
15	582560	2	11	75	1679	1687	0	8935839	8400000	8999999
16	475257	1	7	60	1679	0	0	9521765	9000000	9599999
17	731204	1	14	75	1603	0	0	9998701	9800000	10199999
18	222959	1	9	60	1202	0	0	10731508	10200000	10799999
19	602800	3	15	65	1156	1601	1806	10955689	10800000	11399999
20		2	13	55	1960	1828	0	11563032	11400000	11999999

### Type 5 Radar Waveform\_21

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	320573	2	6	95	1783	1102	0	320573	0	599999
2	805897	1	13	55	1965	0	0	1129355	600000	1199999
3	590878	1	10	100	1202	0	0	1722198	1200000	1799999
4	572766	3	11	60	1545	1636	1470	2296166	1800000	2399999
5	612494	2	12	60	1724	1396	0	2913311	2400000	2999999
6	247560	3	10	75	1623	1327	1558	3163991	3000000	3599999
7	823719	2	8	85	1300	1181	0	3992218	3600000	4199999
8	330288	1	17	75	1715	0	0	4324987	4200000	4799999
9	1021305	2	10	55	1052	1978	0	5348007	4800000	5399999
10	2607110	3	17	100	1248	1006	1358	6915639	5400000	5999999
11	557693	2	18	90	1071	1333	0	6179961	6000000	6599999
12	767574	1	19	95	1687	0	0	6740058	6600000	7199999
13	413826	1	20	70	1316	0	0	7509319	7200000	7799999
14	1035839	3	8	70	1064	1973	1528	7924461	7800000	8399999
15	38060	2	20	55	1391	1840	0	8964865	8400000	8999999
16	1013381	1	19	95	1477	0	0	9006156	9000000	9599999
17	356468	2	5	100	1794	1786	0	10021014	9600000	10199999
18	840530	3	7	100	1875	1929	1995	10380052	10200000	10799999
19	624014	1	8	85	1948	0	0	11226381	10800000	11399999
20		1	10	70	1335	0	0	11852343	11400000	11999999

### Type 5 Radar Waveform\_22

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	555276	3	19	55	1600	1815	1780	555276	0	749999
2	228765	1	20	80	1376	0	0	789236	750000	1499999
3	894061	2	12	70	1305	1805	0	1684673	1500000	2249999
4	603997	3	13	75	1628	1868	1836	2291780	2250000	2999999
5	1167741	2	16	65	1386	1193	0	3464853	3000000	3749999
6	378799	3	12	85	1543	1168	1738	3846231	3750000	4499999
7	1018974	2	12	100	1486	1846	0	4869654	4500000	5249999
8	543827	2	18	65	1700	1216	0	5416813	5250000	5999999
9	602892	1	7	95	1663	0	0	6022621	6000000	6749999
10	909949	2	10	70	1604	1741	0	6934233	6750000	7499999
11	1200235	2	13	60	1031	1227	0	8137813	7500000	8249999
12	624577	1	9	95	1047	0	0	8764648	8250000	8999999
13	286673	1	7	60	1550	0	0	9052368	9000000	9749999
14	881386	1	12	85	1029	0	0	9935304	9750000	10499999
15	696915	3	15	85	1594	1756	1817	10633248	10500000	11249999
16	1033265	3	5	85	1848	1671	1598	11671680	11250000	11999999

### Type 5 Radar Waveform\_23

| Waveform Num = 23  
 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	1070519	1	13	100	1723	0	0	1070519	0	1333333
2	659700	2	19	90	1915	1735	0	1731942	1333333	2666665
3	1500246	3	14	65	1021	1395	1253	3235838	2666666	3999998
4	1612704	2	7	80	1671	1533	0	4852211	3999999	5333331
5	1519804	3	8	85	1324	1690	1200	6375219	5333332	6666664
6	1290946	3	13	75	1579	1338	1827	7670379	6666665	7999997
7	746006	3	16	65	1274	1285	1948	8421129	7999998	9333330
8	2090114	3	11	85	1375	1172	1031	10515750	9333331	10666663
9	637294	2	5	65	1342	1092	0	11156622	10666664	11999996

Total number of pulses in waveform = 22

### Type 5 Radar Waveform\_24

| Waveform Num = 24  
 Num of Bursts = 17  
 Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	74676	1	6	75	1692	0	0	74676	0	705881
2	984262	3	18	100	1568	1081	1242	1060630	705882	1411763
3	378445	2	17	65	1816	1031	0	1442956	1411764	2117645
4	1276417	3	13	90	1337	1506	1369	2722220	2117646	2823527
5	422308	2	13	60	1679	1405	0	3148740	2823528	3529409
6	650364	2	18	85	1107	1004	0	3802188	3529410	4235291
7	1026374	2	10	75	1872	1511	0	4830673	4235292	4941173
8	327430	1	7	55	1568	0	0	5161486	4941174	5647055
9	546546	1	11	95	1381	0	0	5709590	5647056	6352937
10	1231146	3	13	70	1295	1768	1490	6942117	6352938	7058819
11	480360	2	7	50	1926	1952	0	7427030	7058820	7764701
12	650397	2	8	65	1381	1760	0	8081905	7764702	8470583
13	1059541	1	12	55	1847	0	0	9143987	8470584	9176465
14	204019	3	15	65	1118	1897	1813	9349853	9176466	9882347
15	537187	2	6	90	1254	1461	0	9891868	9882348	10588229
16	1217580	2	12	75	1162	1289	0	11112163	10588230	11294111
17	826226	1	13	85	1568	0	0	11940840	11294112	11999993

Total number of pulses in waveform = 33

### Type 5 Radar Waveform\_25

| Waveform Num = 25  
 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	746930	3	12	80	1146	1302	1557	746930	0	923076
2	346330	2	7	65	1041	1449	0	1097265	923077	1846153
3	1063214	1	14	60	1019	0	0	2162969	1846154	2769230
4	1075740	2	14	85	1557	1799	0	3239728	2769231	3692307
5	620870	3	18	60	1562	1170	1110	3863954	3692308	4615384
6	921289	3	14	80	1938	1312	1449	4789085	4615385	5538461
7	1459465	3	11	60	1922	1673	1237	6253249	5538462	6461538
8	613022	2	6	100	1190	1745	0	6871103	6461539	7384615
9	1139999	3	14	95	1285	1829	1466	8014037	7384616	8907692
10	1101558	3	12	50	1876	1111	1269	9120175	8307693	9230769
11	743990	3	11	65	1206	1242	1574	9868421	9230770	10153846
12	706623	3	15	60	1539	1078	1868	10579066	10153847	11076923
13	667102	1	20	80	1444	0	0	11250653	11076924	12000000

Total number of pulses in waveform = 32

### Type 5 Radar Waveform\_26

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	618699	3	7	95	1348	1895	1632	431524	0	599999
2	415022	1	10	60	1097	0	0	1056098	600000	1199999
3	910154	1	17	70	1201	0	0	1471217	1200000	1799999
4	118703	2	7	50	1618	1339	0	2382572	1800000	2399999
5	893693	2	10	65	1953	1783	0	2504232	2400000	2999999
6	224606	2	9	60	1753	1312	0	3401661	3000000	3599999
7	903448	1	20	50	1808	0	0	3629332	3600000	4199999
8	474097	2	7	55	1098	1531	0	4534588	4200000	4799999
9	916772	3	7	70	1056	1422	1965	5011314	4800000	5399999
10	213238	1	12	80	1581	0	0	5932529	5400000	5999999
11	787876	1	5	65	1546	0	0	6147348	6000000	6599999
12	792383	2	9	95	1580	1861	0	6936770	6600000	7199999
13	291260	1	12	65	1712	0	0	7732694	7200000	7799999
14	700354	1	6	70	1449	0	0	8025566	7800000	8399999
15	756981	2	14	60	1587	1518	0	8727369	8400000	8999999
16	549602	1	14	60	1805	0	0	9487465	9000000	9599999
17	186296	3	5	100	1477	1696	1281	10038862	9600000	10199999
18	1062895	3	7	95	1529	1171	1778	10229612	10200000	10799999
19	439522	3	13	70	1044	1524	1086	11296985	10800000	11399999
20		3	10	100	1167	1075	1980	11740161	11400000	11999999
Total number of pulses in waveform = 38										
*****										

### Type 5 Radar Waveform\_27

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1004369	1	15	50	1515	0	0	178075	0	999999
2	1371656	3	14	90	1468	1626	1917	1183959	1000000	1999999
3	1121494	2	11	90	1961	1331	0	2560626	2000000	2999999
4	857770	1	14	90	1700	0	0	3685412	3000000	3999999
5	6570443	2	15	95	1700	1193	0	4544882	4000000	4999999
6	1190944	3	15	55	1119	1045	1033	5204818	5000000	5999999
7	1565590	3	17	60	1705	1542	1100	6398959	6000000	6999999
8	859316	1	10	90	1228	0	0	7968896	7000000	7999999
9	738694	2	7	100	1700	1886	0	8829440	8000000	8999999
10	783307	2	14	60	1945	1039	0	9571720	9000000	9999999
11	1586614	1	13	50	1648	0	0	10358011	10000000	10999999
12		1	19	80	1802	0	0	11946273	11000000	11999999
Total number of pulses in waveform = 22										
*****										

### Type 5 Radar Waveform\_28

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	979066	3	16	90	1361	1890	1423	297056	0	749999
2	319174	3	11	70	1863	1242	1602	1280796	750000	1499999
3	1236387	3	16	50	1949	1256	1813	1604677	1500000	2249999
4	892603	3	14	50	1245	1568	1578	2846082	2250000	2999999
5	28298	3	11	85	1948	1248	1744	3743076	3000000	3749999
6	1211179	1	7	65	1718	0	0	3776314	3750000	4499999
7	984158	3	13	90	1769	1360	1425	4989211	4500000	5249999
8	536651	3	20	60	1692	1538	1865	5977923	5250000	5999999
9	357872	1	13	80	1658	0	0	6519669	6000000	6749999
10	971127	1	17	50	1774	0	0	6879199	6750000	7499999
11	655541	1	17	60	1100	0	0	7852100	7500000	8249999
12	1030067	1	5	70	1912	0	0	8508741	8250000	8999999
13	869917	3	17	100	1947	1383	1816	9540720	9000000	9749999
14	712452	1	18	70	1410	0	0	10415783	9750000	10499999
15	282742	3	15	75	1364	1208	1850	11129645	10500000	11249999
16		6	50	1310	1844	1845	11416809	11250000	11999999	
Total number of pulses in waveform = 36										
*****										

### Type 5 Radar Waveform\_29

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	710808	3	17	85	1825	1560	1407	710808	0	799999
2	293023	3	16	100	1489	1953	1643	1008623	800000	1699999
3	1043552	2	18	60	1852	1888	0	2057260	1600000	2399999
4	396378	3	6	70	1532	1717	1350	2457378	2400000	3199999
5	1393872	2	8	50	1723	1780	0	3855849	3200000	3999999
6	340297	3	17	100	1627	1217	1435	4199649	4000000	4799999
7	1346514	1	15	95	1067	0	0	5550442	4800000	5599999
8	400534	2	16	90	1423	1147	0	5952043	5600000	6399999
9	961679	2	16	80	1645	1009	0	6916292	6400000	7199999
10	572622	2	20	55	1650	1944	0	7491568	7200000	7999999
11	565743	2	20	80	1160	1623	0	8060905	8000000	8799999
12	1219240	1	19	55	1455	0	0	9282928	8800000	9599999
13	803682	3	8	75	1176	1593	1176	10088065	9600000	10399999
14	434612	3	13	60	1947	1240	1416	10526622	10400000	11199999
15	1225234	3	7	70	1229	1763	1052	11756459	11200000	11999999
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_30

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	186715	3	19	50	1383	1830	1770	185715	0	631578
2	758249	1	8	65	1930	0	0	948947	631579	1263157
3	769917	2	20	95	1405	1428	0	1720794	1263158	1894736
4	246765	3	14	80	1227	1380	1493	1970392	1894737	2526315
5	656963	1	18	65	1921	0	0	2631455	2526316	3157894
6	1121804	2	9	55	1005	1261	0	3755180	3157895	3789473
7	71188	1	11	55	1312	0	0	3828634	3789474	4421052
8	640835	1	13	80	1598	0	0	4470781	4421053	5052631
9	996419	1	11	55	1206	0	0	5468798	5052632	5684210
10	440641	3	18	75	1822	1132	1315	5910645	5684211	6315789
11	468620	2	5	90	1588	1486	0	6383534	6315790	6947368
12	1011000	3	5	100	1481	1945	1193	7397608	6947369	7578947
13	713487	3	11	100	1105	1963	1029	8115714	7578948	8210526
14	657112	2	16	65	1516	1170	0	8776923	8210527	8842105
15	194615	1	7	75	1288	0	0	8974124	8842106	9473684
16	994084	2	7	85	1261	1290	0	9969496	9473685	10105263
17	432948	3	5	95	1695	1010	1937	10404995	10105264	10736842
18	516913	1	5	85	1168	0	0	10926550	10736843	11368421
19	715724	3	14	80	1423	1804	1378	11643442	11368422	12000000
Total number of pulses in waveform = 38										
*****										

## Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5292	0	16	5311	1
2	5293	1	17	5312	1
3	5294	1	18	5313	1
4	5296	1	19	5314	1
5	5297	1	20	5315	1
6	5298	1	21	5317	1
7	5299	1	22	5319	1
8	5300	1	23	5321	1
9	5303	1	24	5323	1
10	5305	1	25	5325	1
11	5306	1	26	5327	1
12	5307	1	27	5328	1
13	5308	1	28	5328	1
14	5309	1	29	5329	1
15	5310	1	30	5330	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5305	6	8	5307	24
3	5263	9	11	5279	33
5	5277	15	16	5322	48
9	5290	27	21	5323	63
13	5288	39	23	5298	69
21	5302	63	38	5302	114
33	5278	99	57	5290	171
40	5292	120	65	5314	195
58	5269	174	68	5291	204
81	5276	243	69	5295	207
--	--	--	82	5263	246
--	--	--	93	5280	279

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5267	18	16	5318	48
11	5293	33	22	5313	66
27	5314	81	24	5286	72
37	5301	111	38	5323	114
39	5302	117	47	5316	141
64	5284	192	50	5306	150
67	5268	201	54	5288	162
83	5320	249	56	5326	168
96	5299	288	73	5285	219
--	--	--	74	5310	222
--	--	--	78	5324	234

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5276	0	0	5302	0
12	5322	36	8	5280	24
13	5289	39	12	5291	36
14	5292	42	21	5309	63
17	5290	51	25	5294	75
18	5293	54	39	5274	117
24	5319	72	44	5328	132
27	5277	81	48	5279	144
36	5318	108	49	5318	147
41	5273	123	50	5331	150
75	5325	225	55	5322	165
--	--	--	91	5293	273
--	--	--	93	5320	279
--	--	--	99	5316	297

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5282	33	6	5321	18
23	5294	69	35	5298	105
32	5273	96	40	5290	120
39	5323	117	41	5315	123
47	5298	141	42	5307	126
53	5278	159	51	5303	153
62	5289	186	65	5276	195
68	5281	204	68	5282	204
69	5316	207	70	5295	210
70	5292	210	75	5333	225
76	5321	228	79	5302	237
79	5300	237	83	5323	249
80	5295	240	--	--	--
83	5312	249	--	--	--
87	5331	261	--	--	--
88	5275	264	--	--	--
89	5283	267	--	--	--
93	5318	279	--	--	--
97	5277	291	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5328	36	3	5331	9
15	5309	60	9	5324	27
29	5308	116	18	5302	54
38	5295	152	31	5335	93
41	5323	164	48	5283	144
42	5316	168	49	5312	147
44	5288	176	50	5226	150
72	5310	288	52	5310	156
88	5287	352	72	5278	216
95	5335	380	92	5298	276
96	5314	384	93	5308	279

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5317	9	3	5289	9
13	5290	39	9	5297	27
17	5313	51	16	5300	48
18	5330	54	17	5335	51
43	5311	129	24	5312	72
47	5280	141	37	5320	111
48	5303	144	51	5287	153
52	5298	156	53	5290	159
55	5321	165	55	5319	165
56	5318	168	65	5321	195
60	5289	180	68	5286	204
61	5277	183	70	5332	210
67	5294	201	77	5325	231
68	5281	204	88	5296	264
70	5324	210	--	--	--
80	5312	240	--	--	--
89	5325	267	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5319	0	22	5297	66
6	5297	18	34	5313	102
10	5321	30	50	5332	150
12	5289	36	59	5305	177
17	5315	51	63	5323	189
20	5305	60	69	5285	207
30	5291	90	76	5299	228
37	5318	111	78	5340	234
63	5304	189	83	5321	249
67	5316	201	90	5281	270
73	5299	219	94	5309	282
82	5332	246	96	5334	288
93	5335	279	99	5301	297
95	5289	285	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5287	24	1	5331	3
11	5282	33	7	5319	21
18	5295	54	8	5301	24
19	5338	57	17	5292	51
25	5296	75	18	5311	54
29	5290	87	22	5304	66
30	5332	90	39	5330	117
37	5302	111	64	5320	192
40	5301	120	74	5286	222
49	5316	147	83	5323	249
50	5305	150	87	5299	261
57	5303	171	91	5288	273
77	5341	231	97	5341	291
--	--	--	99	5287	297

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5283	9	11	5310	33
4	5305	12	12	5294	36
11	5334	33	32	5323	96
14	5309	42	37	5327	111
24	5322	72	41	5321	123
25	5323	75	45	5306	135
28	5315	84	72	5319	216
32	5299	96	75	5305	225
35	5335	105	76	5322	228
44	5291	132	80	5339	240
48	5310	144	84	5330	252
64	5316	192	94	5291	282
70	5284	210	98	5344	294
82	5306	246	--	--	--
84	5317	252	--	--	--
88	5303	264	--	--	--
91	5307	273	--	--	--
95	5336	285	--	--	--
99	5287	297	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5312	27	3	5296	9
17	5333	51	56	5324	168
32	5324	96	72	5300	216
39	5310	117	79	5327	237
50	5307	150	84	5343	252
62	5305	186	89	5303	267
73	5328	219	91	5297	273
91	5336	273	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5333	9	14	5329	42
15	5342	45	15	5300	45
22	5337	66	23	5296	69
32	5327	96	28	5333	84
34	5321	102	35	5313	105
42	5325	126	42	5349	126
55	5291	165	49	5343	147
66	5305	198	54	5324	162
71	5343	213	59	5339	177
80	5307	240	88	5293	264
94	5302	282	--	--	--
95	5298	285	--	--	--
97	5309	291	--	--	--
99	5349	297	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5319	15	4	5323	12
9	5309	27	17	5345	51
1	5348	3	23	5326	69
36	5310	108	26	5303	78
43	5350	129	27	5327	81
45	5336	135	53	5346	159
53	5315	159	62	5348	186
61	5313	183	67	5298	201
66	5304	198	82	5307	246
67	5308	201	83	5312	249
71	5329	213	89	5300	267
77	5302	231	92	5343	276
80	5324	240	--	--	--
83	5323	249	--	--	--
86	5341	258	--	--	--
88	5347	264	--	--	--
93	5337	279	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5296	9	4	5338	12
37	5333	111	17	5307	51
39	5325	117	21	5353	63
43	5338	129	30	5301	90
52	5348	156	31	5348	93
53	5317	159	37	5326	111
60	5339	180	47	5294	141
64	5332	192	64	5309	192
83	5342	249	69	5316	207
97	5321	291	74	5349	222
--	--	--	84	5328	252
--	--	--	97	5304	291

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5300	21	3	5330	9
28	5335	84	29	5321	87
38	5302	114	31	5326	93
52	5298	156	32	5346	96
82	5346	246	37	5333	111
94	5297	282	41	5347	123
--	--	--	48	5320	144
--	--	--	64	5331	192
--	--	--	75	5339	225
--	--	--	76	5324	228
--	--	--	87	5335	261

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5357	21	9	5313	27
18	5302	54	16	5349	48
22	5358	66	19	8323	57
32	5323	96	20	5316	60
42	5309	126	25	5332	75
62	5352	186	34	5338	102
66	5318	198	38	5317	114
74	5299	222	41	5360	123
75	5322	225	57	5351	171
85	5338	255	58	5320	174
89	5310	267	60	5347	180
91	5330	273	81	5337	243
--	--	--	92	5319	276
--	--	--	94	5318	282

## Radar Statistical Performance for 802.11ac-VHT80

## Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5251	1	758	70	1
2	5254	1	638	83	1
3	5257	1	878	61	1
4	5260	1	3066	18	1
5	5263	1	858	62	1
6	5266	1	598	89	1
7	5269	1	918	58	1
8	5272	1	518	102	1
9	5275	1	558	95	1
10	5278	1	618	86	1
11	5281	1	538	99	1
12	5284	1	778	68	1
13	5287	1	658	81	1
14	5290	1	818	65	1
15	5293	1	718	74	1
16	5296	1	2215	24	1
17	5299	1	641	83	1
18	5302	1	1913	28	1
19	5305	1	3006	18	1
20	5308	1	2260	24	1
21	5311	1	2053	26	1
22	5314	1	715	74	1
23	5317	1	2352	23	1
24	5320	1	1030	52	1
25	5323	1	2407	22	1
26	5326	1	2405	22	1
27	5327	1	2801	19	1
28	5328	1	921	58	1
29	5329	1	1366	39	1
30	5330	1	2699	20	1
Detection Percentage (%)					100%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5251	4.9	197	29	1
2	5254	1.2	174	28	1
3	5257	2.5	207	28	1
4	5260	2.7	217	24	1
5	5263	2.5	190	26	1
6	5266	1.9	221	26	1
7	5267	3.0	192	27	1
8	5270	1.3	194	28	1
9	5273	3.8	205	24	1
10	5276	2.2	202	26	1
11	5279	2.0	197	28	1
12	5282	2.9	186	23	1
13	5285	2.9	215	28	1
14	5288	1.8	165	27	1
15	5291	2.9	216	25	1
16	5294	2.9	183	28	1
17	5297	3.8	216	26	1
18	5300	3.6	161	24	1
19	5303	2.4	197	28	1
20	5306	1.5	229	25	1
21	5309	3.8	155	23	1
22	5312	1.6	222	25	1
23	5315	2.9	195	26	1
24	5318	3.5	183	23	1
25	5321	4.5	179	26	1
26	5324	2.4	203	28	1
27	5327	4.0	180	29	1
28	5328	1.9	224	24	1
29	5329	1.5	192	29	1
30	5330	4.6	198	24	1
Detection Percentage (%)					100%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5251	8.0	377	18	0
2	5254	6.6	345	16	1
3	5257	9.7	393	18	1
4	5260	8.1	490	17	1
5	5263	6.9	388	18	1
6	5266	6.3	447	18	1
7	5267	9.0	322	17	1
8	5270	9.3	363	18	1
9	5273	8.1	307	18	1
10	5276	6.4	429	16	1
11	5279	8.0	339	18	1
12	5282	9.0	346	16	1
13	5285	6.3	444	18	1
14	5288	9.6	273	16	1
15	5291	6.5	449	17	1
16	5294	7.9	421	18	1
17	5297	9.0	306	17	1
18	5300	7.4	301	18	1
19	5303	7.2	442	18	1
20	5306	9.1	394	18	1
21	5309	8.2	315	16	1
22	5312	7.0	480	16	1
23	5315	6.5	493	18	1
24	5318	8.1	283	17	1
25	5321	9.7	459	16	1
26	5324	7.8	458	18	1
27	5327	6.2	284	16	1
28	5328	9.0	437	17	1
29	5329	7.8	292	17	1
30	5330	8.9	441	17	1
Detection Percentage (%)					96.7%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5251	17.8	436	12	0
2	5254	18.5	454	13	1
3	5257	11.0	284	12	1
4	5260	12.0	407	14	1
5	5263	19.7	449	14	1
6	5266	15.6	451	13	1
7	5267	11.9	272	13	1
8	5270	18.0	462	16	1
9	5273	18.9	313	12	1
10	5276	19.8	287	15	1
11	5279	17.9	489	13	1
12	5282	18.7	494	16	1
13	5285	13.3	473	14	1
14	5288	12.9	350	15	1
15	5291	14.6	351	14	1
16	5294	18.3	379	16	1
17	5297	19.9	302	15	1
18	5300	15.2	471	12	1
19	5303	15.4	450	14	1
20	5306	14.3	452	16	1
21	5309	18.4	490	14	1
22	5312	16.1	382	12	1
23	5315	11.6	309	13	1
24	5318	12.4	322	14	1
25	5321	15.0	471	12	1
26	5324	18.4	450	12	1
27	5327	11.4	378	13	1
28	5328	16.9	362	12	1
29	5329	13.8	279	12	1
30	5330	15.1	336	14	1
Detection Percentage (%)					96.7%

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

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (96.7\% + 96.7\% + 100\% + 100\%) / 4 = 98.35\% (>80\%)$

## 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	5251	0	16	5295	1
2	5253	0	17	5298	1
3	5256	1	18	5301	1
4	5259	1	19	5304	1
5	5262	1	20	5307	1
6	5265	1	21	5310	1
7	5268	1	22	5313	1
8	5271	1	23	5316	1
9	5274	1	24	5319	1
10	5277	1	25	5322	1
11	5280	1	26	5325	1
12	8283	1	27	5327	1
13	5286	1	28	5328	1
14	5289	1	29	5329	1
15	5292	1	30	5330	1
Detection Percentage (%)					93.3%

## Type 5 Radar Waveform\_1

Waveform Num = 1
Num of Bursts = 9
Burst Interval (us)= 1333333
Burst # Off Time # Pulses Chirp (MHz) PW (us) Pulse 1 Pri(us) Pulse 2 Pri(us) Pulse 3 Pri(us) Start Loc (us) Start Burst Interval(us) End Burst Interval(us)
1 22782 2 15 75 1926 1965 0 22782 0 1333332
2 2491345 3 11 90 1133 1900 1909 2518018 1333333 2666665
3 373556 1 11 65 1205 0 0 2896516 2666666 3999998
4 2360996 2 18 50 1591 1999 0 5258717 3999999 5333331
5 321508 2 15 100 1675 1895 0 5583815 5333332 6666664
6 2400471 3 17 60 1821 1472 1783 7987856 6666665 7999997
7 669062 1 19 85 1785 0 0 8661994 7999998 9333330
8 1134540 3 11 50 1610 1899 1876 9798319 9333331 10666663
9 989562 3 17 60 1664 1423 1058 10793266 10666664 11999996
Total number of pulses in waveform = 20
*****

### Type 5 Radar Waveform\_2

Type 5 Radar Waveform_2											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)	
1	403988	1	20	95	1056	0	0	403988	0	999999	
2	1046499	1	15	80	1251	0	0	1451543	1000000	1999999	
3	1148897	2	17	65	1948	1959	0	2601691	2000000	2999999	
4	477635	1	7	65	1559	0	0	3083233	3000000	3999999	
5	1219592	3	6	65	1046	1214	1732	4304384	4000000	4999999	
6	776066	2	7	55	1082	1863	0	5084442	5000000	5999999	
7	1798448	3	10	75	1270	1175	1891	6885835	6000000	6999999	
8	517282	1	13	50	1024	0	0	7407453	7000000	7999999	
9	1152857	1	6	85	1169	0	0	8561334	8000000	8999999	
10	1117062	1	6	70	1460	0	0	9679565	9000000	9999999	
11	715630	2	17	60	1860	1604	0	10396655	10000000	10999999	
12	1337798	3	6	50	1095	1993	1316	11737917	11000000	11999999	
Total number of pulses in waveform = 21											
*****											

### Type 5 Radar Waveform\_3

Type 5 Radar Waveform_3											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)	
1	536295	2	17	75	1270	1080	0	536295	0	749999	
2	744520	1	5	50	1192	0	0	1283165	750000	1499999	
3	751892	1	13	100	1197	0	0	2036249	1500000	2249999	
4	781273	1	8	70	1978	0	0	2818719	2250000	2999999	
5	755424	1	14	90	1916	0	0	3576121	3000000	3749999	
6	800264	2	9	100	1718	1825	0	4378301	3750000	4499999	
7	434228	3	13	65	1997	1568	1255	4816072	4500000	5249999	
8	715404	3	11	70	1712	1425	1987	5536296	5250000	5999999	
9	1114751	2	12	95	1045	1036	0	66561171	6000000	6749999	
10	767430	3	14	85	1198	1598	1505	7425682	6750000	7499999	
11	348666	1	15	50	1833	0	0	7778639	7500000	8249999	
12	625415	1	12	80	1422	0	0	8405687	8250000	8999999	
13	1141794	2	15	70	1986	1952	0	9548903	9000000	9749999	
14	574323	1	7	100	1572	0	0	10127164	9750000	10499999	
15	734269	1	16	70	1680	0	0	10863005	10500000	11249999	
16	491279	2	6	90	1201	1727	0	11355964	11250000	11999999	
Total number of pulses in waveform = 27											
*****											

### Type 5 Radar Waveform\_4

Type 5 Radar Waveform_4											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)	
1	1105332	1	18	80	1995	0	0	1105332	0	1199999	
2	1141521	1	8	50	1108	0	0	2248848	1200000	2399999	
3	233928	2	15	55	1331	1482	0	2483884	2400000	3599999	
4	1175909	2	16	80	1211	1977	0	3662806	3600000	4799999	
5	1506651	2	14	80	1251	1687	0	5172445	4800000	5999999	
6	1372738	3	13	70	1698	1924	1748	6548121	6000000	7199999	
7	1216262	3	5	70	1963	1934	1364	7769753	7200000	8399999	
8	1314775	2	16	50	1698	1682	0	9089789	8400000	9599999	
9	1680846	2	7	75	1768	1155	0	10774015	9600000	10799999	
10	823208	1	9	50	1430	0	0	11600146	10800000	11999999	
Total number of pulses in waveform = 19											
*****											

### Type 5 Radar Waveform\_5

Waveform Num = 5  
Num of Bursts = 10  
Burst Interval (us)= 1200000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	429287	1	13	50	1762	0	0	429287	0	1199999
2	1338387	2	15	55	1385	1927	0	1769436	1200000	2399999
3	1440594	1	18	85	1006	0	0	3213342	2400000	3599999
4	423120	3	16	50	1439	1203	1399	3637468	3600000	4799999
5	1222610	2	15	65	1879	1278	0	4864119	4800000	5999999
6	1647024	1	17	85	1849	0	0	6514300	6000000	7199999
7	1661519	2	13	80	1130	1033	0	8177468	7200000	8399999
8	292723	1	10	80	1307	0	0	8472354	8400000	9599999
9	1749759	3	14	90	1890	1687	1873	10223420	9600000	10799999
10	790276	1	5	95	1676	0	0	11019146	10800000	11999999

Total number of pulses in waveform = 17

### Type 5 Radar Waveform\_6

Waveform Num = 6  
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	771111	1	20	60	1182	0	0	771111	0	923076
2	217041	1	7	50	1243	0	0	989334	923077	1846153
3	1197705	2	18	75	1432	1259	0	2188282	1846154	2769230
4	1312750	3	12	75	1229	1174	1586	3503723	2769231	3692307
5	1049436	1	9	95	1358	0	0	4557148	3692308	4615384
6	321641	2	10	90	1245	1158	0	4880147	4615385	5538461
7	767917	2	14	95	1089	1398	0	5650467	5538462	6461538
8	1463197	3	16	85	1238	1949	1355	7116151	6461539	7384615
9	333722	2	20	65	1703	1893	0	7454415	7384616	8307692
10	1023080	1	20	80	1558	0	0	8481091	8307693	9230769
11	1439711	3	5	70	1786	1250	1250	9922360	9230770	10153846
12	1033950	3	18	50	1116	1835	1822	10960596	10153847	11076923
13	258027	2	20	55	1770	1184	0	11223396	11076924	12000000

Total number of pulses in waveform = 26

### 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	691372	1	6	60	1149	0	0	691372	0	923076
2	584113	3	12	95	1947	1586	1912	1276634	923077	1846153
3	701310	1	12	90	1297	0	0	1983389	1846154	2769230
4	1360532	3	12	60	1057	1028	2000	3345218	2769231	3692307
5	766779	2	20	50	1226	1960	0	4116082	3692308	4615384
6	1310102	3	12	90	1410	1869	1727	5429370	4615385	5538461
7	781097	3	10	90	1621	1360	1191	6215473	5538462	6461538
8	997789	2	6	100	1149	1557	0	7217434	6461539	7384615
9	675838	2	8	55	1875	1409	0	7895978	7384616	8307692
10	1282604	1	7	55	1749	0	0	9181866	8307693	9230769
11	755403	3	16	85	1266	1720	1730	9939018	9230770	10153846
12	947409	3	14	65	1508	1054	1108	10891143	10153847	11076923
13	1085454	2	9	70	1930	1745	0	11980267	11076924	12000000

Total number of pulses in waveform = 29

### Type 5 Radar Waveform\_8

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
Waveform Num = 8 Num of Bursts = 20 Burst Interval (us)= 600000										
Burst 1 Off Time = 230936										
1 911395 1 11 90 1234 0 0 230936 0 599999										
2 291431 2 6 60 1612 1525 0 0 11435656 600000 1199999										
3 383278 1 14 55 1468 0 0 1438133 1200000 1799999										
4 657015 3 20 80 1244 1548 1391 1822879 1800000 2399999										
5 707178 1 6 70 1638 0 0 2484077 2400000 2999999										
6 917524 2 12 70 1402 1948 0 0 3192893 3000000 3699999										
7 579834 2 9 90 1989 1542 0 0 4113767 3600000 4199999										
8 208697 3 20 80 1746 1074 1218 4697132 4200000 4799999										
9 855240 2 16 70 1797 1890 0 0 4909867 4800000 5399999										
10 587681 3 6 85 1040 1428 1631 5768794 5400000 5999999										
11 681287 3 20 85 1596 1784 1569 6360574 6000000 6599999										
12 327735 1 8 75 1304 0 0 7046810 6600000 7199999										
13 749577 3 6 85 1748 1829 1677 7375849 7200000 7799999										
14 544947 2 20 55 1685 1708 0 0 8130680 7800000 8399999										
15 536418 1 8 55 1425 0 0 8678990 8400000 8999999										
16 542990 3 10 70 1443 1269 1958 9216833 9000000 9699999										
17 689582 3 18 70 1071 1123 1936 9764483 9600000 10199999										
18 728118 3 12 50 1977 1152 1677 10428195 10200000 10799999										
19 608679 1 10 85 1237 0 0 11161119 10800000 11399999										
20 3 18 100 1879 1014 1135 11771035 11400000 11999999										
Total number of pulses in waveform = 43										

### Type 5 Radar Waveform\_9

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
Waveform Num = 9 Num of Bursts = 14 Burst Interval (us)= 857143										
Burst 1 Off Time = 447902										
1 420618 1 19 65 1387 0 0 447902 0 857142										
2 1195869 1 9 95 1879 0 0 869907 857143 1714285										
3 799636 1 20 65 1527 0 0 2067655 1714286 2571428										
4 1289109 1 9 70 1685 0 0 2868818 2571429 3428571										
5 390781 1 10 60 1082 0 0 4159612 3428572 4285714										
6 1100418 1 13 75 1655 0 0 4551475 4285715 5142857										
7 1155800 3 14 65 1243 1816 1417 5653548 5142858 6000000										
8 670407 1 20 65 1786 0 0 6813824 6000001 6857143										
9 716438 2 8 90 1643 1122 0 7486017 6857144 7714286										
10 961519 3 18 75 1145 1090 1781 8205220 7714287 8571429										
11 672857 1 18 65 1689 0 0 9170755 8571430 9428572										
12 788782 2 14 55 1166 1233 0 9845301 9428573 10285715										
13 1255409 3 10 60 1041 1444 1715 10636482 10285716 11142858										
14 3 16 95 1291 1530 1767 11896091 11142859 12000001										
Total number of pulses in waveform = 24										

### Type 5 Radar Waveform\_10

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
Waveform Num = 10 Num of Bursts = 14 Burst Interval (us)= 857143										
Burst 1 Off Time = 423362										
1 807582 1 12 70 1707 0 0 423362 0 857142										
2 986142 3 18 95 1119 1225 1580 1232651 857143 1714285										
3 364316 1 20 100 1708 0 0 2222717 1714286 2571428										
4 1471176 3 19 60 1451 1648 1806 2588741 2571429 3428571										
5 255027 2 6 90 1290 1536 0 4064822 3428572 4285714										
6 995083 3 16 75 1361 1465 1399 4322675 4285715 5142857										
7 1215119 1 6 60 1675 0 0 5321983 5142858 6000000										
8 1042915 3 5 50 1449 1487 1227 6538777 6000001 6857143										
9 204303 3 20 100 1479 1809 1594 7585855 6857144 7714286										
10 1315916 2 7 60 1817 1021 0 7795040 7714287 8571429										
11 925541 2 10 90 1044 1401 0 9113794 8571430 9428572										
12 552501 1 6 70 1559 0 0 10041780 9428573 10285715										
13 1362699 3 15 60 1157 1935 1236 10595840 10285716 11142858										
14 1 7 55 1606 0 0 11962867 11142859 12000001										
Total number of pulses in waveform = 29										

### 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	705048	3	14	55	1699	1783	1832	705048	0	1499999
2	912214	1	14	60	1699	0	0	1622576	1500000	2999999
3	2245039	1	20	65	1474	0	0	3869314	3000000	4499999
4	1220033	3	7	50	1793	1377	1109	5090821	4500000	5999999
5	2312920	1	18	60	1819	0	0	7408020	6000000	7499999
6	608609	1	16	50	1862	0	0	8018448	7500000	8999999
7	2100202	2	13	70	1697	1738	0	10120512	9000000	10499999
8	1395121	2	10	65	1990	1289	0	11519068	10500000	11999999

Total number of pulses in waveform = 14

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### Type 5 Radar Waveform\_12

Waveform Num = 12  
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	574000	2	10	55	1394	1361	0	574000	0	857142
2	329303	2	8	60	1117	1107	0	906058	857143	1714286
3	1121634	2	6	70	1861	1169	0	2029916	1714286	2571428
4	998407	3	20	95	1236	1421	1853	3031353	2571429	3428571
5	1241282	3	19	100	1016	1223	1834	4277145	3428572	4285714
6	770407	2	10	65	1397	1985	0	5051625	4285715	5142857
7	846973	2	20	70	1372	1086	0	5901980	5142858	6000000
8	552550	2	11	90	1865	1636	0	6456988	6000001	6857143
9	939915	2	15	85	1549	1322	0	7400404	6857144	7714286
10	498013	3	13	65	1982	1748	1563	7898288	7714287	8571429
11	912756	2	7	80	1039	1925	0	8816337	8571430	9428572
12	1056272	2	8	55	1578	1891	0	9875573	9428573	10285715
13	976866	2	11	50	1299	1764	0	10855908	10285716	11142858
14	842078	1	5	90	1311	0	0	11701049	11142859	12000001

Total number of pulses in waveform = 30

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### 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	38843	2	5	75	1764	1460	0	38843	0	705881
2	959719	2	11	50	1173	1598	0	1001786	705882	1411763
3	788568	2	10	65	1145	1099	0	1793125	1411764	2117645
4	536866	2	9	85	1009	1655	0	2332235	2117646	2823527
5	710099	1	13	75	1914	0	0	3044998	2823528	3529409
6	1067628	1	5	95	1187	0	0	4114540	3529410	4235291
7	684851	3	17	60	1134	1201	1899	4800578	4235292	4941173
8	706536	1	16	100	1981	0	0	5511348	4941174	5647055
9	407336	3	11	50	1981	1670	1223	5920665	5647056	6352937
10	530478	2	10	65	1059	1408	0	6456017	6352938	7058819
11	1024286	1	18	50	1642	0	0	7482770	7058820	7764701
12	876278	1	10	80	1647	0	0	8360690	7764702	8470583
13	729439	3	13	55	1717	1844	1814	9091776	8470584	9176465
14	437153	2	13	75	1568	1304	0	9534104	9176466	9882347
15	838082	3	12	70	1894	1569	1863	10375058	9882348	10588229
16	623257	3	6	80	1297	1408	1258	11003641	10588230	11294111
17	502503	2	10	100	1299	1282	0	11510107	11294112	11999993

Total number of pulses in waveform = 34

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### 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)
1	1391096	2	6	90	1158	1317	0	1391096	0	1499999
2	649580	3	11	70	1311	1937	1212	2043151	1500000	2999999
3	1568095	2	12	60	1022	1054	0	3615706	3000000	4499999
4	1055522	1	18	85	1498	0	0	4673304	4500000	5999999
5	2369889	2	15	95	1555	1677	0	7044691	6000000	7499999
6	1042816	2	6	95	1718	1879	0	8090739	7500000	8999999
7	913922	1	20	90	1956	0	0	9008258	9000000	10499999
8	2395393	3	7	90	1023	1950	1789	11405607	10500000	11999999

Total number of pulses in waveform = 16

### Type 5 Radar Waveform\_15

Waveform Num = 15  
Num of Bursts = 16  
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	225338	3	11	60	1474	1499	1932	225338	0	749999
2	562878	2	6	75	1254	1401	0	793121	750000	1499999
3	1256157	3	20	100	1615	1621	1873	2051933	1500000	2249999
4	699118	3	17	50	1269	1080	1538	2756160	2250000	2999999
5	521913	1	16	50	1251	0	0	3281960	3000000	3749999
6	915082	2	15	90	1769	1446	0	4198293	3750000	4499999
7	647706	3	18	85	1794	1379	1645	4849214	4500000	5249999
8	795312	1	8	65	1095	0	0	5649344	5250000	5999999
9	1081463	1	9	85	1181	0	0	6731902	6000000	6749999
10	199364	1	17	95	1564	0	0	6932447	6750000	7499999
11	851689	1	8	85	1468	0	0	7785700	7500000	8249999
12	923012	2	5	70	1713	1557	0	8710180	8250000	8999999
13	721923	1	10	75	1690	0	0	9435373	9000000	9749999
14	699861	1	7	75	1775	0	0	10136924	9750000	10499999
15	906296	3	9	60	1719	1013	1828	11044995	10500000	11249999
16	325918	3	18	75	1538	1347	1765	11375473	11250000	11999999

Total number of pulses in waveform = 31

### Type 5 Radar Waveform\_16

Waveform Num = 16  
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	543502	1	12	65	1228	0	0	543502	0	799999
2	751685	1	19	90	1436	0	0	1296415	800000	1599999
3	793640	3	14	65	1254	1326	1075	2091491	1600000	2399999
4	556511	2	8	65	1457	1325	0	2651657	2400000	3199999
5	1094094	3	15	65	1291	1066	1735	3748473	3200000	3999999
6	324583	1	10	95	1909	0	0	4077148	4000000	4799999
7	1061415	3	13	95	1782	1548	1180	5140472	4800000	5599999
8	709571	2	14	60	1859	1545	0	5854553	5600000	6399999
9	592365	1	20	85	1881	0	0	6450322	6400000	7199999
10	808145	3	12	50	1221	1920	1119	7260348	7200000	7999999
11	785177	1	15	95	1232	0	0	8049785	8000000	8799999
12	1346417	2	16	50	1619	1009	0	9397434	8800000	9599999
13	702780	1	10	60	1298	0	0	10102842	9600000	10399999
14	422098	1	9	75	1511	0	0	10526238	10400000	11199999
15	902653	2	10	50	1912	1982	0	11430402	11200000	11999999

Total number of pulses in waveform = 27

### Type 5 Radar Waveform\_17

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	751369	2	10	70	1802	1422	0	751369	0	799999
2	732842	2	9	65	1990	1967	0	1487435	800000	1599999
3	574167	2	7	100	1509	1880	0	2065559	1600000	2399999
4	825480	1	14	70	1795	0	0	2430706	2400000	3199999
5	936827	3	5	65	1078	1525	1400	3257981	3200000	3999999
6	1114611	2	6	95	1598	1574	0	4198811	4000000	4799999
7	381192	1	18	90	1690	0	0	5316594	4800000	5599999
8	880411	3	8	90	1064	1115	1109	5699476	5600000	6399999
9	830454	3	16	70	1952	1967	1325	6583175	6400000	7199999
10	974046	1	18	85	1389	0	0	7418273	7200000	7999999
11	478052	1	6	95	1662	0	0	8394308	8000000	8799999
12	1131987	2	5	50	1927	1574	0	8874022	8800000	9599999
13	1091064	2	14	100	1002	1120	0	10009510	9600000	10399999
14	150484	1	14	50	1058	0	0	11102696	10400000	11199999
15		3	8	50	1276	1409	1376	11254238	11200000	11999999
Total number of pulses in waveform = 29										
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### Type 5 Radar Waveform\_18

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	277754	1	11	65	1987	0	0	277754	0	923076
2	648786	1	19	100	1629	0	0	928527	923077	1846153
3	998305	3	15	70	1094	1394	1853	1928461	1846154	2769230
4	1412605	2	8	90	1494	1009	0	3345407	2769231	3692307
5	807049	3	9	50	1543	1843	1559	4154959	3692308	4615384
6	974431	2	6	50	1667	1625	0	5134335	4615385	5538461
7	539114	3	19	90	1952	1910	1174	5676741	5538462	6461538
8	1302791	2	6	95	1638	1241	0	6984568	6461539	7384615
9	1253088	1	6	90	1472	0	0	8240535	7384616	8307692
10	204897	1	10	65	1075	0	0	8446904	8307693	9230769
11	1399366	1	17	95	1797	0	0	9847345	9230770	10153846
12	569647	2	8	65	1166	1860	0	10418789	10153847	11076923
13	1243893	3	20	70	1819	1439	1819	11665708	11076924	12000000
Total number of pulses in waveform = 25										
*****										

### Type 5 Radar Waveform\_19

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	467107	3	15	50	1458	1960	1445	467107	0	666666
2	349773	3	13	100	1550	1111	1763	821743	666667	1333333
3	614584	1	20	95	1271	0	0	1440751	1333334	2000000
4	849502	1	16	75	1677	0	0	2291524	2000001	2666667
5	542331	2	7	75	1542	1615	0	2836532	2666668	3333334
6	503862	2	12	90	1281	1358	0	3342551	3333335	4000001
7	1047587	2	17	65	1179	1061	0	4392777	4000002	4666668
8	288369	1	19	70	1924	0	0	4683386	4666669	5333335
9	1251732	3	13	50	1473	1049	1327	5937042	5333336	6000002
10	243702	2	7	95	1206	1510	0	6184593	6000003	6666669
11	936693	1	13	50	1291	0	0	7124002	6666670	7333336
12	814162	1	14	50	1987	0	0	7939455	7333337	8000003
13	658933	2	18	65	1282	1792	0	8600375	8000004	8666670
14	168748	3	16	90	1511	1933	1867	8772197	8666671	9333337
15	768529	3	18	100	1916	1929	1314	9546037	9333338	10000004
16	1104999	2	10	100	1237	1720	0	10656195	10000005	10666671
17	243973	1	18	85	1859	0	0	10903125	10666672	11333338
18	663730	2	6	70	1937	1079	0	11568714	11333339	12000005
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_20

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	647544	1	17	90	1798	0	0	647544	0	705881
2	310755	2	9	90	1758	1637	0	960097	705882	1411763
3	524070	1	15	65	1312	0	0	1487562	1411764	2117645
4	991108	3	10	65	1689	1592	1319	2479982	2117646	2823527
5	841903	3	19	75	1135	1801	1107	3326485	2823528	3529409
6	586408	3	17	85	1517	1172	1754	3916936	3529410	4235291
7	843892	3	20	50	1646	2000	1198	4765271	4235292	4941173
8	780577	3	19	70	1299	1820	1209	5550692	4941174	5647055
9	480697	2	17	70	1305	1930	0	6035717	5647056	6352937
10	547245	2	8	95	1822	1755	0	6586197	6352938	7058819
11	763100	2	20	75	1212	1049	0	7352874	7058820	7764701
12	461572	1	10	90	1379	0	0	7816707	7764702	8470583
13	1180114	1	11	75	1190	0	0	8978200	8470584	9176465
14	707933	1	20	80	1255	0	0	9687323	9176466	9882347
15	290396	3	14	65	1244	1143	1263	9978974	9882348	10688229
16	699152	3	11	75	1822	1824	1045	10681776	10588230	11294111
17	707354	1	12	55	1844	0	0	11393821	11294112	11999993
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_21

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	28753	2	8	65	1195	1452	0	28753	0	749999
2	1212289	1	11	65	1192	0	0	1243689	750000	1499999
3	768057	1	9	90	1869	0	0	2012938	1500000	2249999
4	865478	2	8	100	1362	1900	0	2880285	2250000	2999999
5	390226	1	10	75	1855	0	0	3273773	3000000	3749999
6	580971	3	6	85	1438	1728	1260	3856599	3750000	4499999
7	983229	3	6	55	1571	1716	1198	4824254	4500000	5249999
8	663545	2	14	50	1695	1395	0	5492284	5250000	5999999
9	507215	2	18	70	1964	1888	0	6002589	6000000	6749999
10	1400416	3	17	100	1354	1335	1497	7406827	6750000	7499999
11	688896	2	16	75	1478	1192	0	8097909	7500000	8249999
12	690327	2	8	75	1239	1125	0	8790906	8250000	8999999
13	654411	2	15	75	1255	1351	0	9447681	9000000	9749999
14	388603	1	14	60	1284	0	0	9838390	9750000	10499999
15	704632	1	6	50	1544	0	0	10544806	10500000	11249999
16	1348936	3	10	60	1193	1018	1152	11895286	11250000	11999999
Total number of pulses in waveform = 31										
*****										

### Type 5 Radar Waveform\_22

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	527691	1	12	95	1000	0	0	527591	0	749999
2	842409	1	12	65	1844	0	0	1371000	750000	1499999
3	204960	1	15	55	1131	0	0	1577804	1500000	2249999
4	1175354	1	15	65	1307	0	0	2754289	2250000	2999999
5	311658	1	10	55	1683	0	0	3067254	3000000	3749999
6	807088	1	12	70	1498	0	0	3876025	3750000	4499999
7	754480	2	19	50	1885	1708	0	4632003	4500000	5249999
8	1144372	2	14	75	1579	1306	0	5779968	5250000	5999999
9	406645	3	11	85	1050	1323	1734	6189498	6000000	6749999
10	1254145	1	7	70	1154	0	0	7447750	6750000	7499999
11	551865	2	12	55	1866	1403	0	8000769	7500000	8249999
12	902563	3	20	60	1360	1620	1288	8906601	8250000	8999999
13	399301	2	18	90	1156	1040	0	9310170	9000000	9749999
14	906901	3	13	75	1592	1302	1797	10219267	9750000	10499999
15	685994	2	18	75	1866	1360	0	10909952	10500000	11249999
16	1017280	3	9	65	1429	1285	1306	11930458	11250000	11999999
Total number of pulses in waveform = 29										
*****										

### Type 5 Radar Waveform\_23

Waveform Num = 23  
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	127203	2	20	75	1085	1186	0	127203	0	1090908
2	1415428	2	16	65	1140	1616	0	1544902	1090909	2181817
3	975972	3	7	85	1290	1240	1703	2523630	2181818	3272726
4	1723154	2	12	50	1060	1020	0	4251017	3272727	4363635
5	1097683	3	5	50	1251	1718	1877	5350780	4363636	5454544
6	222004	3	8	90	1975	1169	1218	5577630	5454545	6545453
7	1022738	2	14	55	1712	1726	0	6604730	6545454	7636362
8	1477505	2	6	65	1429	1402	0	8085673	7636363	8727271
9	1244464	3	19	70	1945	1434	1465	9332968	8727272	9818180
10	1509269	2	11	75	1972	1156	0	10847081	9818181	10909089
11	87024	3	10	90	1100	1692	1949	10937233	10909090	11999998
Total number of pulses in waveform = 27										
*****										

### Type 5 Radar Waveform\_24

Waveform Num = 24  
Num of Bursts = 18  
Burst Interval (us)= 6666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	362663	1	15	65	1441	0	0	362663	0	6666666
2	921557	1	19	85	1838	0	0	1285661	6666667	1333333
3	559004	2	6	90	1892	1889	0	1846503	1333334	2000000
4	389717	3	16	70	1259	1665	1182	2240001	2000001	2666667
5	1042275	3	19	100	1914	1091	1540	3286382	2666668	3333334
6	323561	2	19	95	1887	1329	0	3614488	3333335	4000001
7	826519	1	18	80	1282	0	0	4444223	4000002	4666668
8	864001	1	12	70	1111	0	0	5309506	4666669	5333335
9	100331	1	14	95	1094	0	0	5410948	5333336	6000002
10	1182508	3	17	65	1592	1503	1722	6594560	6000003	6666669
11	177083	3	20	70	1157	1404	1294	6776450	6666670	7333336
12	774500	2	5	80	1683	1827	0	7554805	7333337	8000003
13	478015	1	20	65	1933	0	0	8036330	8000004	8666670
14	1238084	2	19	100	1925	1336	0	9276347	8666671	9333337
15	241746	2	8	90	1011	1207	0	9521354	9333338	10000004
16	1124699	2	8	100	1241	1143	0	10648271	10000005	10666671
17	147816	3	13	55	1762	1723	1185	10798471	10666672	11333338
18	749716	2	17	50	1735	1292	0	11552857	11333339	12000005
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_25

Waveform Num = 25  
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	235912	1	17	95	1194	0	0	235912	0	923076
2	1269235	1	18	90	1230	0	0	1506341	923077	1846153
3	684543	3	9	70	1440	1956	1431	2192114	1846154	2769230
4	1395588	1	7	80	1019	0	0	3592529	2769231	3692307
5	123564	3	6	55	1752	1718	1806	3717112	3692308	4615384
6	1494976	2	7	100	1705	1699	0	5217364	4615385	5538461
7	323827	1	19	70	1439	0	0	5544595	5538462	6461538
8	1334231	1	8	80	1282	0	0	6880265	6461539	7384615
9	968004	3	11	50	1799	1302	1192	7849551	7384616	8307692
10	776610	1	15	100	1633	0	0	8630454	8307693	9230769
11	637214	3	17	75	1345	1813	1962	9269301	9230770	10153846
12	1459833	2	19	90	1524	1694	0	10734254	10153847	11076923
13	665189	2	12	80	1017	1061	0	11402661	11076924	12000000
Total number of pulses in waveform = 24										
*****										

### Type 5 Radar Waveform\_26

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	696764	2	17	60	1957	1079	0	70156	0	666666
2	794948	1	15	60	1041	0	0	769956	666667	1333333
3	781015	3	17	55	1073	1758	1796	1565945	1333334	2000000
4	890875	3	9	50	1820	1283	1738	2351587	2000001	2666667
5	326938	2	7	80	1697	1957	0	3247303	2666668	3333334
6	847803	2	10	80	1312	1512	0	3577895	3333335	4000001
7	245866	2	18	75	1134	1295	0	4428522	4000002	4666668
8	790908	2	16	75	1393	1576	0	4676817	4666669	5333335
9	1188181	3	20	90	1113	1798	1573	5470694	5333336	6000002
10	262376	1	19	55	1148	0	0	6663359	6000003	6666669
11	722588	2	15	50	1896	1112	0	6926883	6666670	7333336
12	942790	1	12	70	1653	0	0	7652479	7333337	8000003
13	327581	3	14	60	1331	1862	1537	8596922	8000004	8666670
14	1029932	1	12	80	1432	0	0	8929233	8666671	9333337
15	94257	3	15	75	1116	1619	1686	9960597	9333338	10000004
16	846668	1	20	55	1683	0	0	10059275	10000005	10666671
17	763336	1	7	55	1067	0	0	10907626	10666672	11333338
18		2	15	60	1508	1759	0	11672029	11333339	12000005
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_27

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	268046	3	17	60	1300	1361	1075	268046	0	631578
2	596526	1	12	75	1111	0	0	868308	631579	1263157
3	517323	1	14	100	1151	0	0	1386742	1263158	1894736
4	597185	1	7	95	1116	0	0	1985078	1894737	2526315
5	560678	1	19	85	1917	0	0	2546872	2526316	3157894
6	1047715	2	20	65	1202	1205	0	3696504	3157895	3789473
7	441323	2	15	75	1177	1356	0	4040234	3789474	4421052
8	1000006	3	18	65	1703	1691	1039	5042773	4421053	5052631
9	109953	1	7	90	1419	0	0	5157159	5052632	5684210
10	1042449	2	8	85	1031	1192	0	6201027	5684211	6315789
11	459202	2	17	70	1278	1262	0	6662452	6315790	6947368
12	388492	2	10	95	1495	1730	0	7053484	6947369	7578947
13	594995	2	12	80	1523	1593	0	7651704	7578948	8210526
14	932822	3	16	100	1322	1557	1613	8587642	8210527	8842105
15	543086	2	20	60	1845	1250	0	9135120	8842106	9473684
16	776831	1	17	95	1453	0	0	9915046	9473685	10105263
17	563194	1	10	75	1601	0	0	10475693	10105264	10736842
18	475670	3	13	90	1866	1251	1274	10956964	10736843	11368421
19	780371	2	13	60	1734	1238	0	11741726	11368422	12000000
Total number of pulses in waveform = 35										
*****										

### Type 5 Radar Waveform\_28

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	521504	1	9	80	1264	0	0	521504	0	631578
2	512803	2	6	85	1341	1778	0	1035571	631579	1263157
3	258152	3	19	55	1276	2000	1273	1296852	1263158	1894736
4	734828	1	9	80	1114	0	0	2036229	1894737	2526315
5	64293	1	6	100	1865	0	0	3155244	2526316	3157894
6	727984	3	6	80	1667	1124	1943	3221402	3157895	3789473
7	478441	1	16	75	1700	0	0	3954120	3789474	4421052
8	1081193	2	13	85	1690	1869	1909	4434261	4421053	5052631
9	542982	3	17	100	1836	1909	1347	5519013	5052632	5684210
10	805496	2	10	70	1730	1034	0	6067087	5684211	6315789
11	198196	3	19	65	1413	1423	1498	6875347	6315790	6947368
12	893673	1	6	60	1767	0	0	7077878	6947369	7578947
13	394699	2	18	60	1170	1558	0	7973318	7578948	8210526
14	639021	2	5	50	1499	1523	0	8370745	8210527	8842105
15	1054886	1	8	100	1653	0	0	9012788	8842106	9473684
16	239778	3	8	65	1118	1098	1798	10069326	9473685	10105263
17	512712	1	6	70	1583	0	0	10313117	10105264	10736842
18	1037620	3	10	60	1220	1667	1206	10827412	10736843	11368421
19		1	14	95	1922	0	0	11869125	11368422	12000000
Total number of pulses in waveform = 36										
*****										

### Type 5 Radar Waveform\_29

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	57369	3	7	75	1724	1038	1378	626775	0	666666
2	1110411	1	15	100	1337	0	0	688284	1333333	
3	665182	1	6	85	1751	0	0	1800002	1333334	2000000
4	327894	3	13	75	1877	1241	1229	2466965	2000001	2666667
5	721697	3	15	95	1606	1229	1801	2799206	2666668	3333334
6	934384	2	17	50	1094	1130	0	3525539	3333335	4000001
7	646358	1	18	85	1972	0	0	4462150	4000002	4666668
8	848303	3	18	70	1872	1201	1703	5110480	4666669	5333335
9	672297	2	6	90	1750	1812	0	5963559	5333336	6000002
10	474150	1	7	60	1094	0	0	6639418	6000003	6666669
11	623505	3	20	80	1166	1283	1682	7114662	6666670	7333336
12	605433	3	20	100	1145	1983	1988	7742298	7333337	8000003
13	945535	1	14	95	1135	0	0	8352847	8000004	8666670
14	271685	2	17	100	1349	1975	0	9299517	8666671	9333337
15	799644	2	7	80	1249	1535	0	9574426	9333338	10000004
16	459194	2	6	75	1367	1137	0	10376854	10000005	10666671
17	727779	1	17	55	1894	0	0	10838652	10666672	1133338
18		3	6	100	1864	1827	1775	11668225	1133339	12000005
Total number of pulses in waveform = 37										
*****										

### Type 5 Radar Waveform\_30

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	730129	3	9	85	1193	1023	1125	730129	0	749999
2	275532	1	20	60	1219	0	0	1009002	750000	1499999
3	1185745	3	17	90	1717	1558	1956	2195966	1500000	2249999
4	2211131	3	19	85	1039	1008	1158	2422328	2250000	2999999
5	1059344	2	20	70	1122	1981	0	3484877	3000000	3749999
6	1002372	2	17	85	1390	1585	0	4490352	3750000	4499999
7	256860	3	17	55	1100	1124	1728	4750187	4500000	5249999
8	586408	3	16	80	1568	1693	1420	5340547	5250000	5999999
9	1004497	3	6	65	1831	1999	1790	6349725	6000000	6749999
10	1019760	2	18	65	1952	1110	0	7375105	6750000	7499999
11	636120	3	16	95	1498	1048	1168	8014287	7500000	8249999
12	746567	3	13	85	1322	1514	1521	8764568	8250000	8999999
13	505911	3	5	65	1530	1951	1848	9274836	9000000	9749999
14	749240	1	8	70	1825	0	0	10029405	9750000	10499999
15	472118	3	7	55	1310	1864	1296	10503348	10500000	11249999
16	785079	1	18	65	1703	0	0	11292697	11250000	11999999
Total number of pulses in waveform = 39										
*****										

## 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	5251	1	16	5289	1
2	5253	1	17	5295	1
3	5256	1	18	5298	1
4	5259	1	19	5301	1
5	5262	1	20	5304	1
6	5265	1	21	5307	1
7	5268	1	22	5310	1
8	5271	1	23	5313	1
9	5274	1	24	5316	1
10	5277	1	25	5319	1
11	5280	1	26	5322	1
12	8283	1	27	5325	1
13	5286	1	28	5326	1
14	5286	1	29	5327	1
15	5292	1	30	5330	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5253	3	20	5257	60
2	5262	6	51	5252	153
13	5255	39	69	5276	207
27	5278	81	90	5281	270
69	5260	207	--	--	--
87	5270	261	--	--	--
95	5263	285	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5275	6	0	5287	0
12	5254	36	3	5281	9
32	5278	96	6	5279	18
44	5261	132	10	5250	30
55	5252	165	30	5275	90
68	5259	204	40	5271	120
99	5266	297	42	5284	126
--	--	--	79	5266	237
--	--	--	88	5256	264
--	--	--	90	5287	270

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5278	15	7	5269	21
18	5276	54	8	5273	24
20	5266	60	17	5290	51
45	5287	135	36	5276	108
49	5256	147	55	5277	165
54	5281	162	59	5284	177
56	5288	168	73	5263	219
73	5251	219	75	5265	225
76	5273	228	83	5256	249
77	5265	231	89	5269	267
78	5263	234	--	--	--
79	5271	237	--	--	--
83	5284	249	--	--	--
85	5293	255	--	--	--
90	5286	270	--	--	--
97	5270	291	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5259	18	25	5250	75
22	5273	66	29	5256	87
25	5265	75	31	5258	93
56	5283	168	42	5277	126
57	5274	171	59	5254	177
64	5294	192	72	5270	216
71	5288	213	87	5276	261
78	5295	234	--	--	--
81	5272	243	--	--	--
89	5269	267	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5277	18	18	5264	54
11	5269	33	22	5251	66
25	5295	75	51	5280	153
41	5283	123	56	5266	168
59	5267	177	72	5298	216
66	5273	198	75	5273	225
69	5250	207	79	5256	237
70	5293	210	84	5255	252
71	5252	213	94	5300	282
93	5291	279	99	5265	297
97	5290	291	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5258	30	13	5290	39
22	5267	66	15	5308	45
42	5282	126	37	5265	111
45	5274	135	54	5272	162
70	5261	210	69	5262	207
71	5263	213	71	5311	213
96	5259	288	82	5304	246

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5280	60	27	5317	81
23	5276	69	36	5296	108
24	5313	72	40	5263	120
26	5298	78	48	5281	144
36	5270	108	56	5305	168
39	5305	117	60	5265	180
46	5255	138	67	5301	201
60	5259	180	74	5318	222
85	5260	255	75	5298	225
92	5286	276	96	5268	288

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5266	21	14	5305	42
17	5270	51	16	5320	48
20	5261	60	25	5319	75
21	5283	63	65	5285	195
38	5267	114	61	5297	183
52	5321	156	67	5271	201
60	5264	180	75	5300	225
64	5280	192	88	5312	264
74	5271	222	--	--	--
95	5321	285	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5311	6	7	5302	21
12	5300	36	11	5287	33
36	5284	108	12	5308	36
37	5281	111	16	5312	48
50	5303	150	17	5272	51
55	5327	165	20	5275	60
59	5307	177	40	5328	120
65	5291	195	68	5318	204
66	5315	198	70	5315	210
80	5278	240	74	5278	222
86	5313	258	67	5306	201
88	5293	264	73	5298	219
94	5321	282	97	5309	291
99	5288	297	98	5299	294

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5293	45	0	5318	0
26	5316	78	11	5320	33
56	5314	168	18	5296	54
78	5315	234	27	5279	81
85	5283	255	43	5334	129
97	5311	291	51	5316	153
98	5323	294	56	5327	168
--	--	--	65	5291	195
--	--	--	73	5331	219
--	--	--	75	5287	225
--	--	--	82	5307	246

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5319	3	1	5320	3
9	5303	27	10	5329	30
11	5308	33	18	5336	54
14	5306	42	28	5317	84
19	5290	57	30	5305	90
21	5339	63	34	5328	102
30	5321	90	36	5341	108
34	5318	102	43	5300	129
41	5299	123	44	5303	132
52	5281	156	53	5294	159
57	5297	171	64	5310	192
64	5285	192	70	5326	210
80	5315	240	75	5304	225
81	5296	243	76	5308	228
--	--	--	86	5335	258

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5316	9	11	5314	33
10	5287	30	16	5313	48
12	5343	36	21	5331	63
27	5337	81	31	5336	93
32	5344	96	40	5297	120
53	5317	159	49	5340	147
68	5319	204	59	5303	177
70	5325	210	63	5319	189
72	5323	216	78	5333	234
83	5318	249	89	5329	267
91	5338	273	97	5299	291
95	5336	285	--	--	--
97	5335	291	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5312	0	13	5347	39
9	5301	27	14	5334	42
15	5342	45	20	5329	60
20	5292	60	33	5295	99
68	5324	204	40	5309	120
72	5297	216	49	5353	147
96	5335	288	55	5318	165
99	5299	297	58	5299	174
--	--	--	68	5336	204
--	--	--	71	5307	213
--	--	--	78	5314	234
--	--	--	79	5333	237
--	--	--	82	5337	246
--	--	--	94	5348	282
--	--	--	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5346	6	5	5340	15
3	5298	9	7	5349	21
7	5326	21	9	5310	27
9	5325	27	27	5318	81
19	5322	57	38	5306	114
24	5309	72	40	5301	120
36	5306	108	52	5319	156
37	5344	111	55	5311	165
41	5308	123	64	5333	192
48	5318	144	74	5353	222
70	5349	210	77	5342	231
80	5323	240	78	5321	234
84	5352	252	84	5341	252

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5329	6	10	5300	30
8	5322	24	13	5310	39
11	5314	33	14	5321	42
15	5335	45	32	5322	96
16	5316	48	35	5346	105
21	5309	63	52	5327	156
31	5321	93	60	5348	180
36	5349	108	64	5349	192
40	5343	120	65	5323	195
47	5324	141	75	5338	225
53	5318	159	97	5303	291
54	5347	162	99	5318	297
60	5338	180	--	--	--
66	5336	198	--	--	--
74	5330	222	--	--	--
84	5345	252	--	--	--
90	5328	270	--	--	--
93	5313	279	--	--	--
98	5342	294	--	--	--
99	5258	297	--	--	--

## 6. CONCLUSION

The data collected relate only the item(s) tested and show that the **Unified Wired-WLAN Walljack** **FCC ID: O9C-BJNGAFB0005** is in compliance with Part 15E of the FCC Rules.

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The End

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