



## DFS MEASUREMENT REPORT

### FCC PART 15.407

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**FCC ID:** O9C-BJNGAFB0004

**APPLICANT:** Hewlett Packard Company

**Application Type:** Certification

**Product:** Wireless LAN Access Point

**Model No.:** BJNGA-FB0004, JG993A

**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:** Jun 25 ~ July 13, 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
1406RSU03303	Rev. 01	Initial report	07-14-2014
1406RSU03303	Rev. 02	Added some descriptions for EUT and the antenna	07-30-2014

# CONTENTS

Description	Page
<b>Revision History</b> .....	<b>2</b>
<b>§2.1033 General Information</b> .....	<b>5</b>
<b>1. INTRODUCTION</b> .....	<b>6</b>
1.1. Scope .....	6
1.2. MRT Test Location .....	6
<b>2. PRODUCT INFORMATION</b> .....	<b>7</b>
2.1. Equipment Description.....	7
2.2. Description of Available Antennas .....	8
2.1. Description of Antenna RF Port .....	9
2.2. DFS Band Carrier Frequencies Operation .....	10
2.3. Test Mode .....	11
<b>3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS</b> .....	<b>12</b>
3.1. Applicability .....	12
3.2. DFS Devices Requirements.....	13
3.3. DFS Detection Threshold Values .....	14
3.4. Parameters of DFS Test Signals .....	15
3.5. Conducted Test Setup .....	18
<b>4. TEST EQUIPMENT CALIBRATION DATE</b> .....	<b>19</b>
<b>5. TEST RESULT</b> .....	<b>20</b>
5.1. Summary .....	20
5.2. Radar Waveform Calibration.....	21
5.2.1. Calibration Setup .....	21
5.2.2. Calibration Procedure .....	21
5.2.3. Cablibration Result .....	22
5.2.4. Test Setup Photo .....	26
5.3. Channel Loading Test Result .....	27
5.4. UNII Detection Bandwidth Measurement .....	29
5.4.1. Test Limit .....	29
5.4.2. Test Procedure .....	29
5.4.3. Test Result.....	30
5.5. Initial Channel Availability Check Time Measurement .....	36
5.5.1. Test Limit .....	36
5.5.2. Test Procedure .....	36

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5.5.3. Test Result.....	37
5.6. Radar Burst at the Beginning of the Channel Availability Check Time Measurement ..	38
5.6.1. Test Limit .....	38
5.6.2. Test Procedure .....	38
5.6.3. Test Result.....	39
5.7. Radar Burst at the End of the Channel Availability Check Time Measurement .....	40
5.7.1. Test Limit .....	40
5.7.2. Test Procedure .....	40
5.7.3. Test Result.....	41
5.8. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement.....	42
5.8.1. Test Limit .....	42
5.8.2. Test Procedure Used .....	42
5.8.3. Test Result.....	43
5.9. Statistical Performance Check Measurement.....	45
5.9.1. Test Limit .....	45
5.9.2. Test Procedure .....	45
5.9.3. Test Result.....	46
<b>6. CONCLUSION.....</b>	<b>122</b>

## §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-FB0004, JG993A
<b>FCC ID:</b>	O9C-BJNGAFB0004
<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>	June 25 ~ Jul 13, 2014
<b>Test Report S/N:</b>	1406RSU03303

### 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.

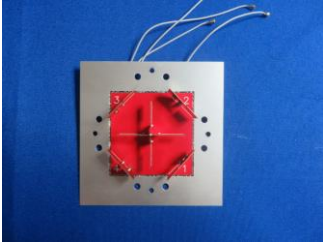



## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

Product Name	Wireless LAN Access Point
Model No.	BJNGA-FB0004, JG993A
Radio Type	Intentional Transceiver
Power Type	48Vdc, 0.63A (or POE input)
Operation Mode	Master Device
Frequency Range	<p>For 802.11a/n-HT20: 5260~5320MHz, 5500~5700MHz</p> <p>For 802.11ac-VHT20: 5260~5320MHz, 5500~5720MHz</p> <p>For 802.11n-HT40: 5270~5310MHz, 5510~5670MHz</p> <p>For 802.11ac-VHT40: 5270~5310MHz, 5510~5710MHz</p> <p>For 802.11ac-VHT80: 5290MHz, 5530MHz, 5610MHz, 5690MHz</p>
Maximum Output Power	<p>802.11a: 20.23dBm</p> <p>802.11n-HT20: 20.37dBm</p> <p>802.11ac-VHT20: 20.02dBm</p> <p>802.11n-HT40: 19.91dBm</p> <p>802.11ac-VHT40: 20.26dBm</p> <p>802.11ac-VHT80: 19.98dBm</p>
Type of Modulation	802.11a/n/ac: OFDM;
Power-on cycle	Requires 134.2 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
<b>Internal Antenna</b>							
	2.4	Airgain, Inc.	N2465D	2	4	4	7.01
	5.2			2	5	5	8.01
	5.5			2	4.6	4.6	7.61
	5.8			2	4.9	4.9	7.91
<b>External Antenna</b>							
	2.4	Laird Technologies (Beijing) Co., Ltd.	JG696A	2	L1: 4.12 L2: 3.78	6.96	6.96
	5.2			2	H1: 5.65 H2: 6.21	8.94	8.94
	5.5			2	H1: 5.47 H2: 5.86	8.68	8.68
	5.8			2	H1: 5.45 H2: 5.36	8.42	8.42

Note:

1. The four antennas of the internal antenna are all the same, and the four antennas of the external antenna are different.
2. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.



## 2.1. Description of Antenna RF Port

External Antenna RF Port (Note 1)				
--	2.4GHz RF Port		5GHz RF Port	
RF Port Location	C1	C2	D1	D2
Software Control Port	Ant 0	Ant 1	Ant 1	Ant 0
Internal Antenna RF Port (Note 2)				
RF Port Location	A1	A3	A2	A4
--	2.4GHz TX			
Software Control Port	Ant 0	Ant 1	Ant 0	Ant 1
--	5GHz TX			
Software Control Port	Ant 1	Ant 0	Ant 1	Ant 0

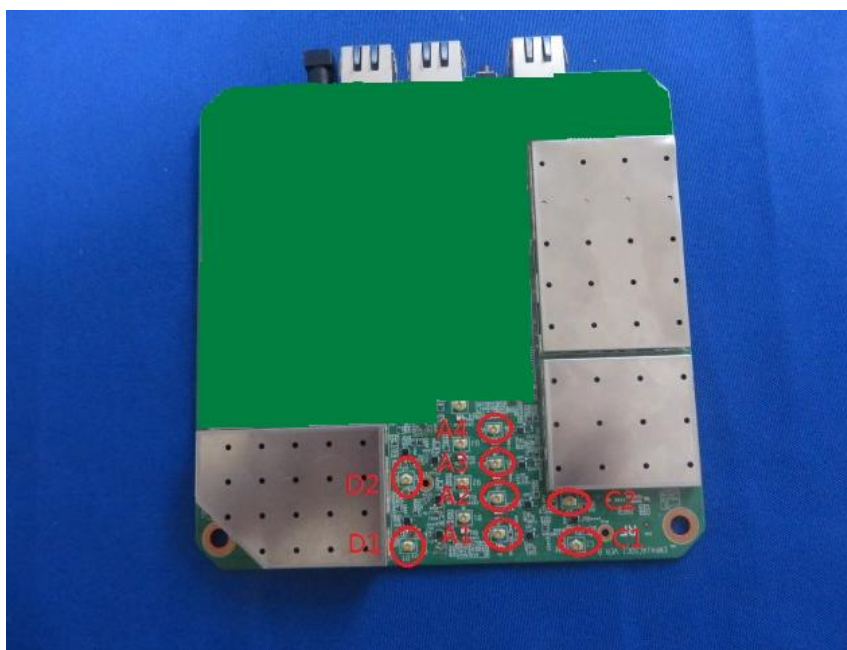
Note 1: The external antenna RF ports are divided into two groups. One group (C1 and C2) just transmit 2.4GHz, and another group (D1 and D2) just transmit 5GHz signal.

Note 2: The internal antenna RF ports are divided into two groups, one group includes A1 and A3, another group includes A2 and A4. Two groups can transmit 2.4GHz or 5GHz signal.

Note 3: When the EUT worked normally, it always used its default antenna (internal or external) and can't switch automatic unless modify the software setting through access controller (AC) or WEB page. When the product used its internal antenna, it can adjust antenna combiner (A1+A3 or A2+A4) automatic according to signal strength.

Note 4: We selected the external antenna RF port for all DFS conducted testing. For the internal antenna RF port, we also evaluated it.

**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-20MHz 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-40MHz 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-40MHz 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-80MHz 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

**Tablet 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
<p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p><b>Note 2:</b> 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.</p> <p><b>Note3:</b> EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>	

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

### 3.4. Parameters of DFS Test Signals

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

#### Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	$\text{Roundup} \left\{ \begin{array}{l} \left( \frac{1}{360} \right) \cdot \\ \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \end{array} \right\}$	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

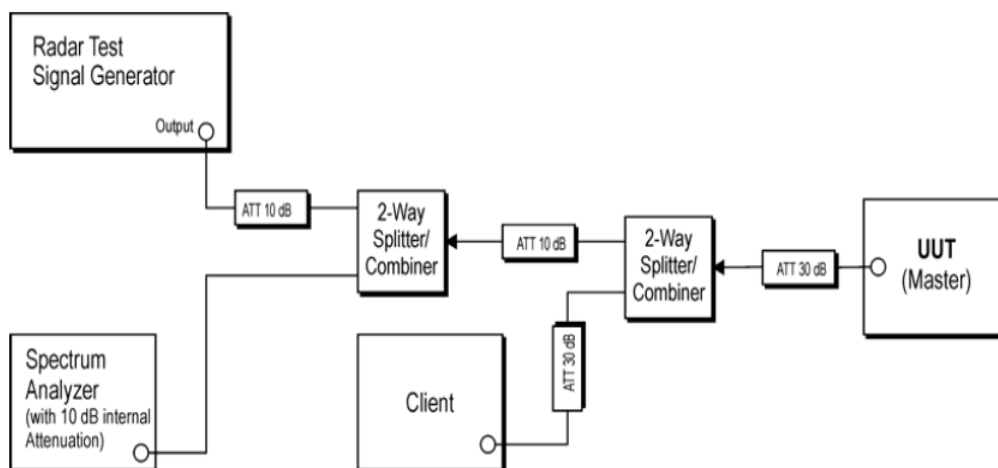
**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

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	MY51440164	2014/08/15
ESG Vector Signal Generator	Agilent	E4438C	MY49872484	2014/12/14

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

## 5. TEST RESULT

### 5.1. Summary

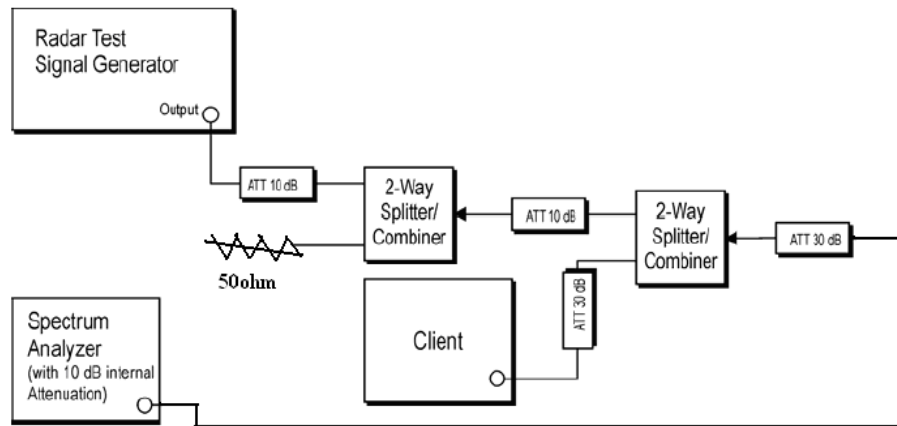
**Company Name:** Hewlett Packard Company  
**FCC ID:** O9C-BJNGAFB0004  
**FCC Classification:** Unlicensed National Information Infrastructure (UNII)

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



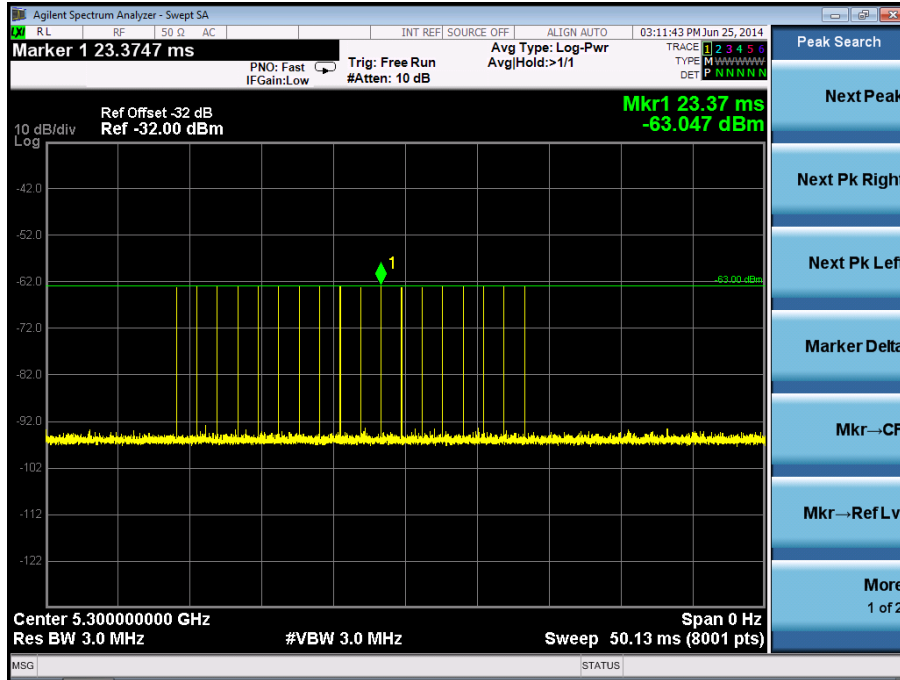
**Figure 3-2: Conducted Test Setup**

### 5.2.2. Calibration Procedure

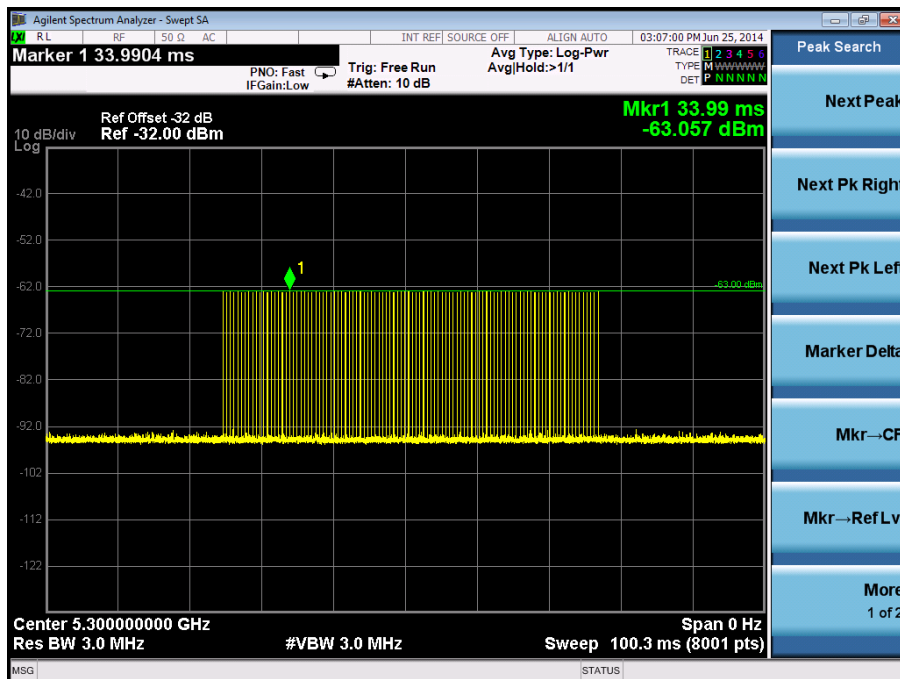
The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator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

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

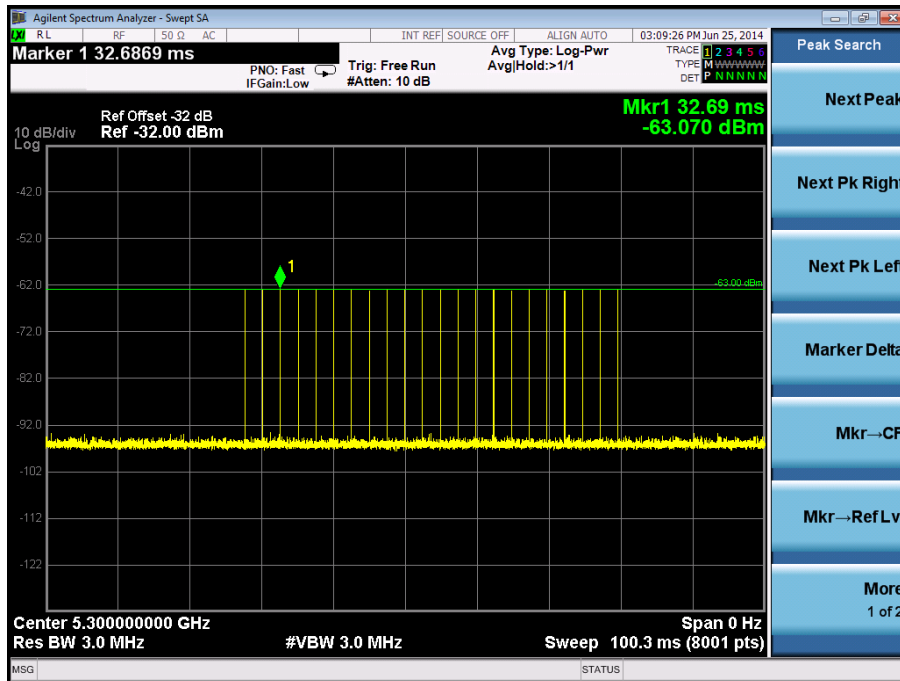


Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



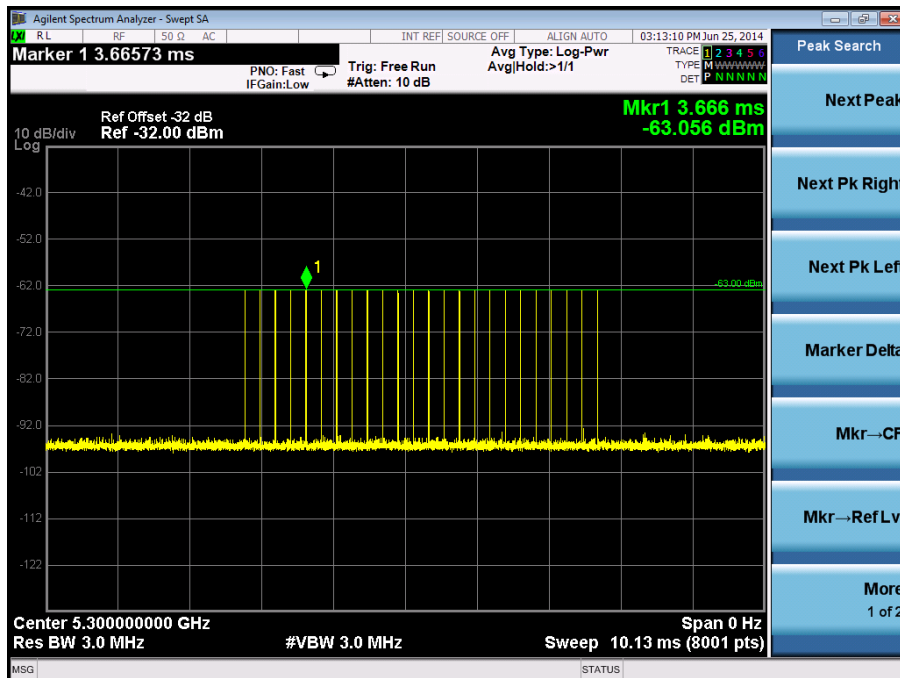
PRI = 518us and the number of pulses = 102

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

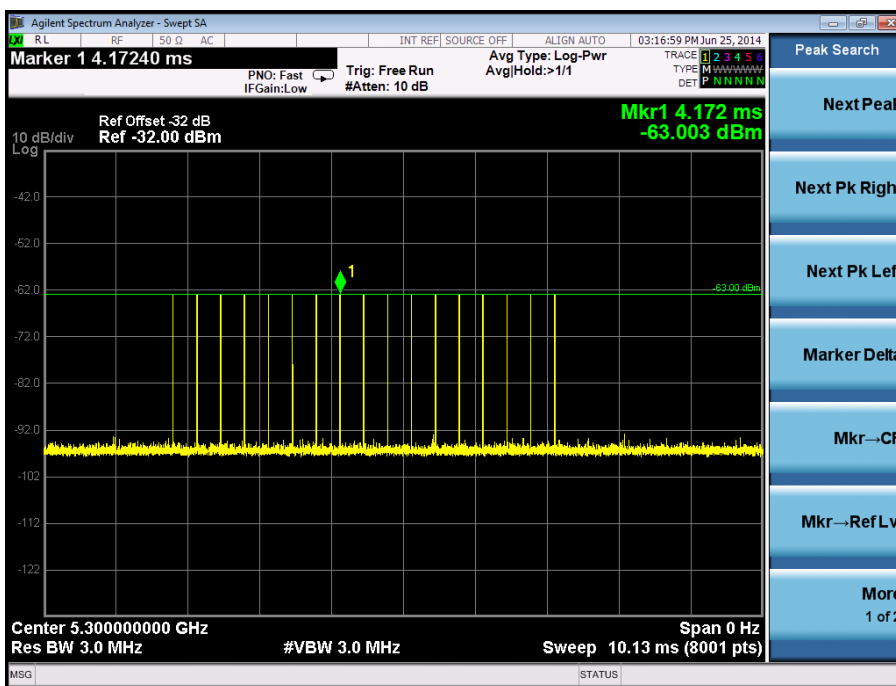


PRI = 2.478ms and the number of pulses = 22

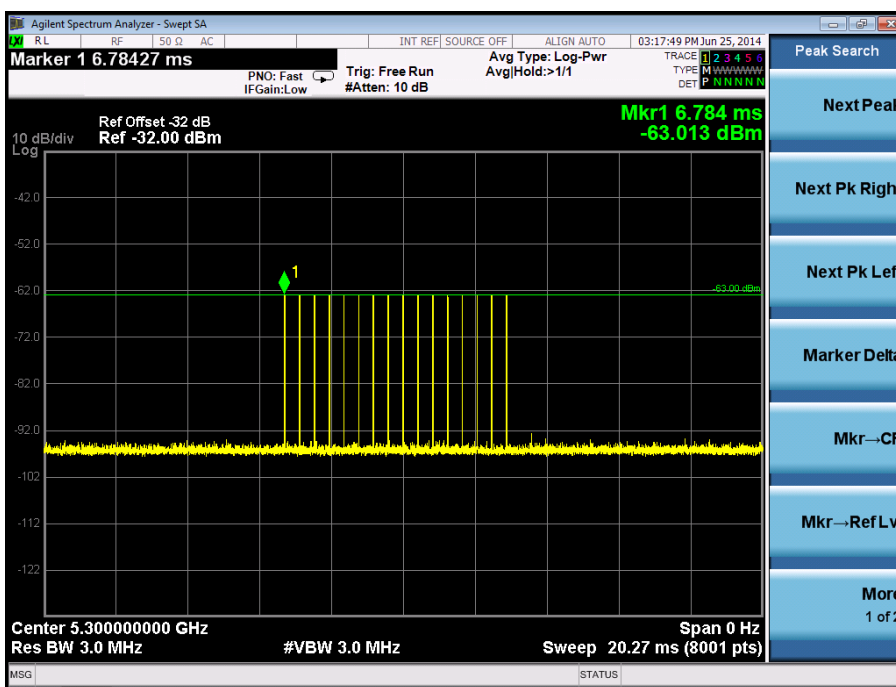
Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



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

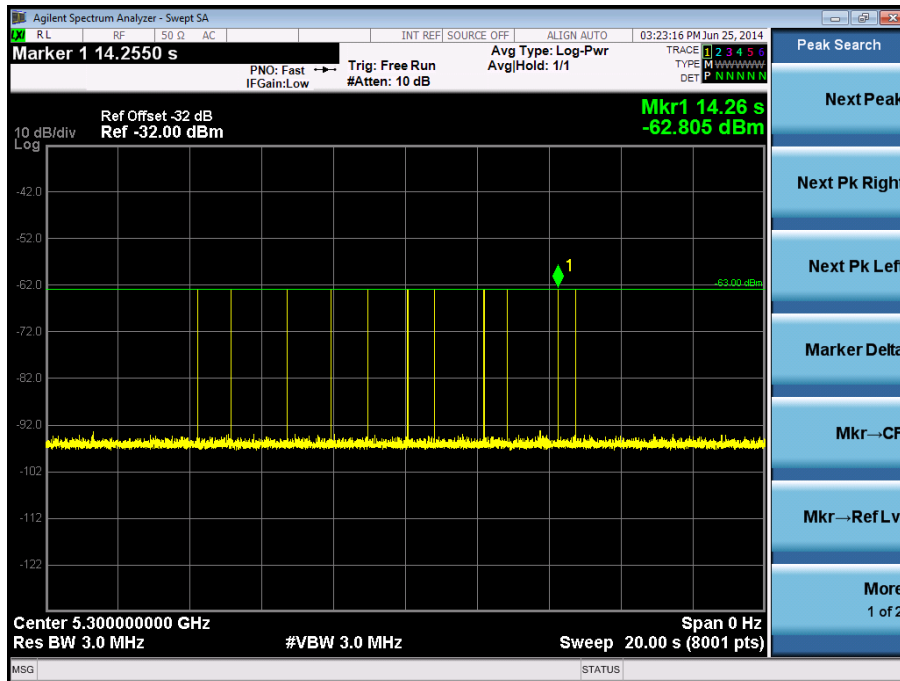


## Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency

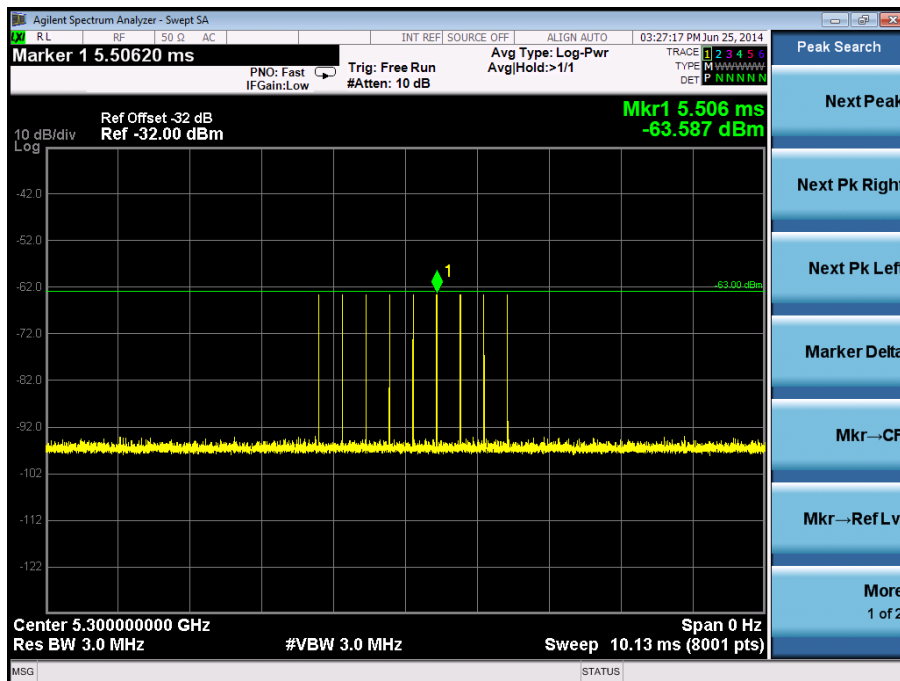




Radar #5 DFS detection threshold level and 12sec long burst on the Channel frequency



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



#### 5.2.4. Test Setup Photo

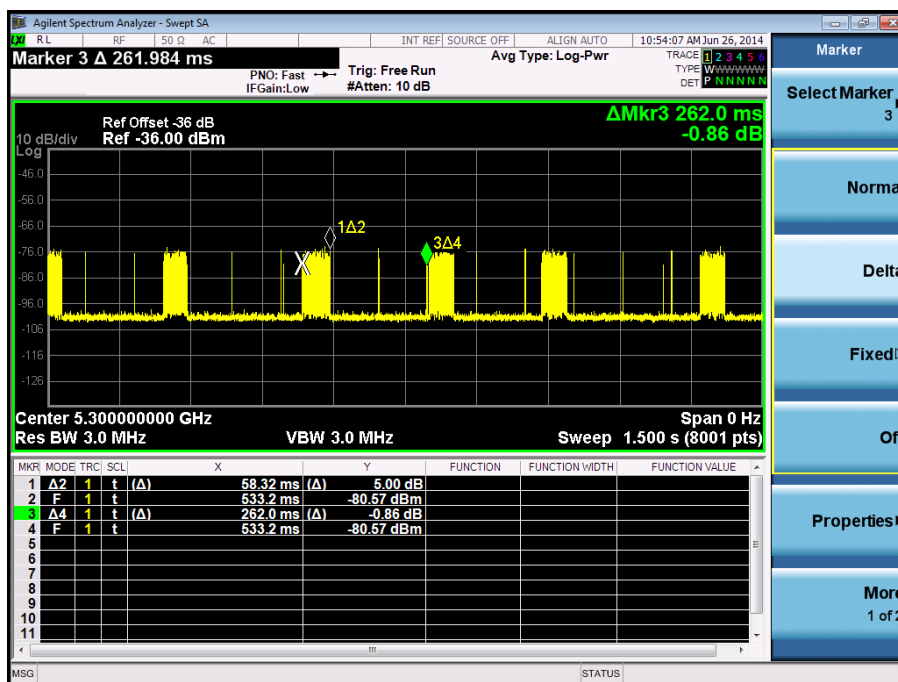
Description: Test Setup Photo



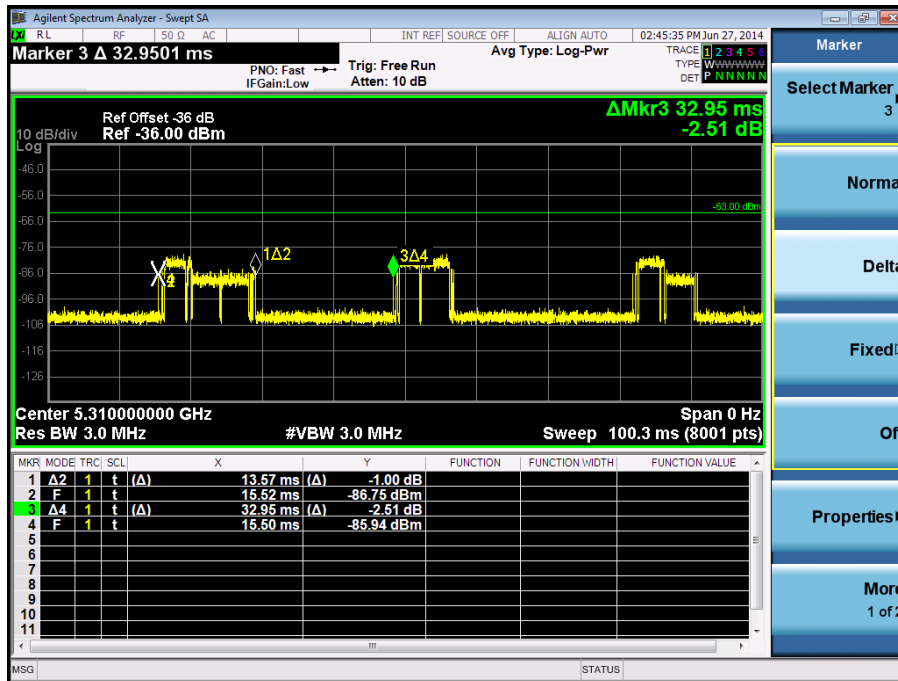
### 5.3. Channel Loading Test Result

System testing was performed with the designated MPEG test file that streams full motion video from the Wireless LAN Access Point to the Client in full motion video mode using the media player with the V2.61 Codec package. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device

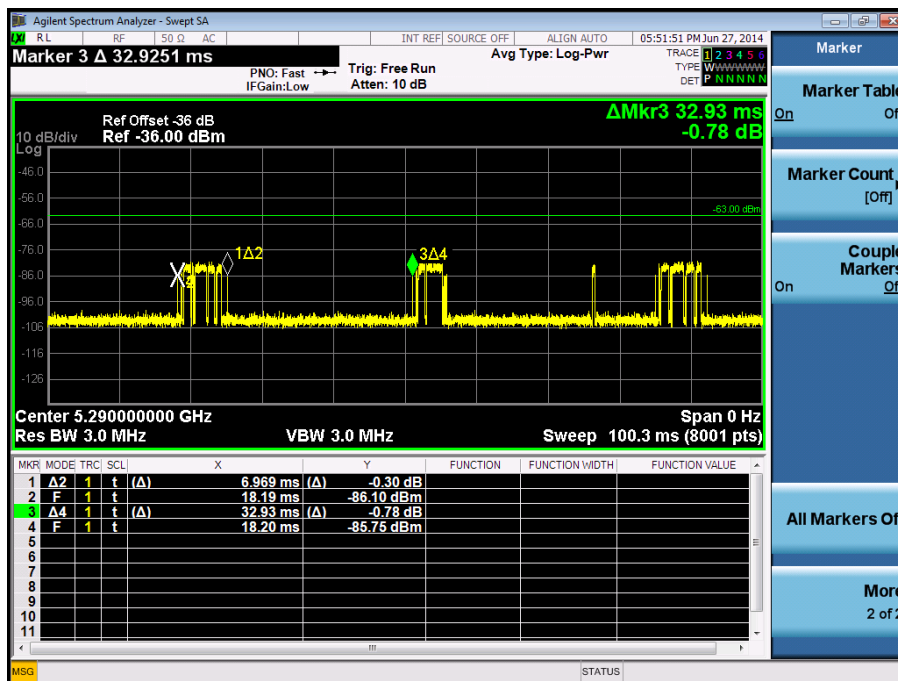
Channel Loading Plot - 802.11a-5300MHz



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



## Channel Loading Plot - 802.11ac80 5290MHz



Test Mode	Packet ratio	Requirement ratio	Test Result
802.11a	22.26%	>17%	Pass
802.11n-40MHz	41.18%	>17%	Pass
802.11ac-80MHz	21.16%	>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:  $U\text{-NII Detection Bandwidth} = FH - FL$
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

### 5.4.3. Test Result

EUT Frequency=5300MHz for 802.11a											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
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 = 17.60MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 17.60MHz x 100% = 17.60MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 17.60MHz. (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)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5290	0	0	0	0	0	0	0	0	0	0	0%
5291 FL	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
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 - 5291MHz = 38MHz											
EUT 99% Bandwidth = 37.86MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 37.86MHz x 100% = 37.86MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 53100MHz. The 99% channel bandwidth is 37.86MHz. (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)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
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 = 77.04MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 77.04MHz x 100% = 77.04MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 77.04MHz. (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.

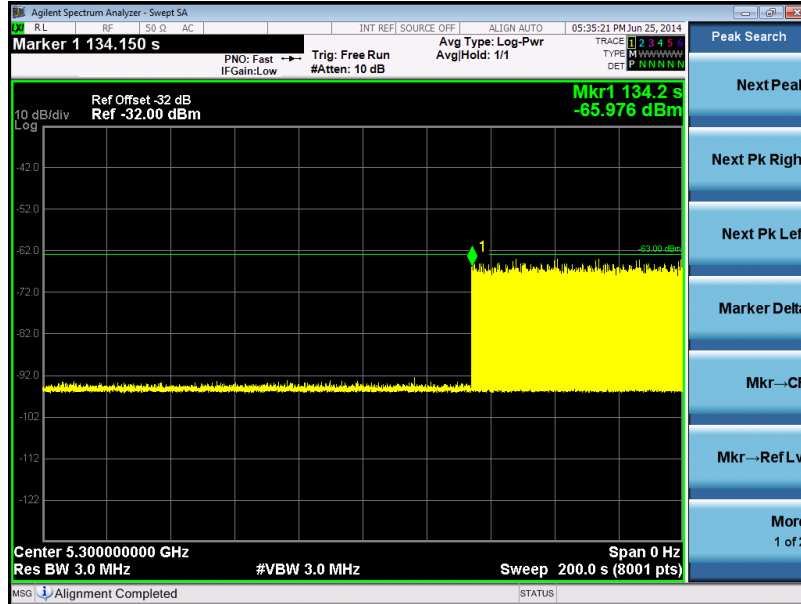
### **5.5.2. Test Procedure**

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 (74.2 sec). Initial beacons/data transmissions are indicated by marker 1 (134.2 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**

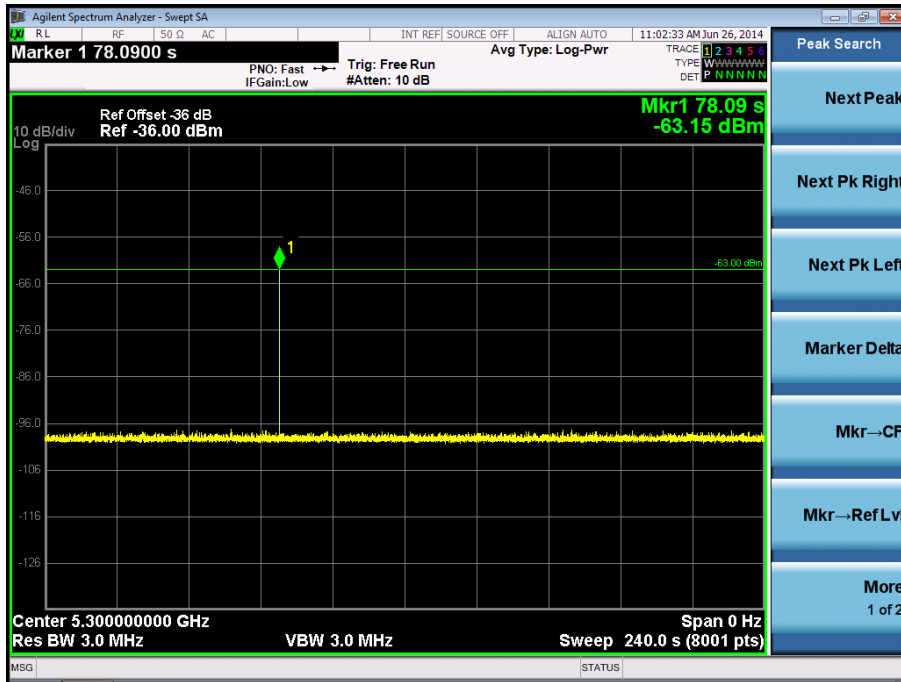
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **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 78.09 seconds after the radar Burst has been generated. Verify that during the 1.5 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.

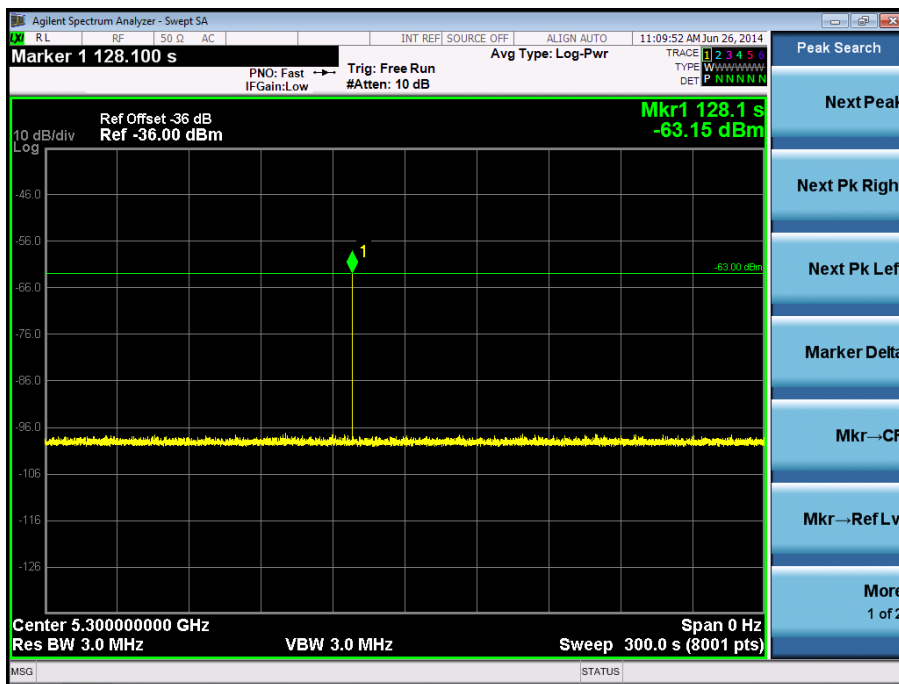
### **5.7.2. Test Procedure**

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 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+ 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 128.1 seconds after the radar Burst has been generated. Verify that during the 1.5 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**

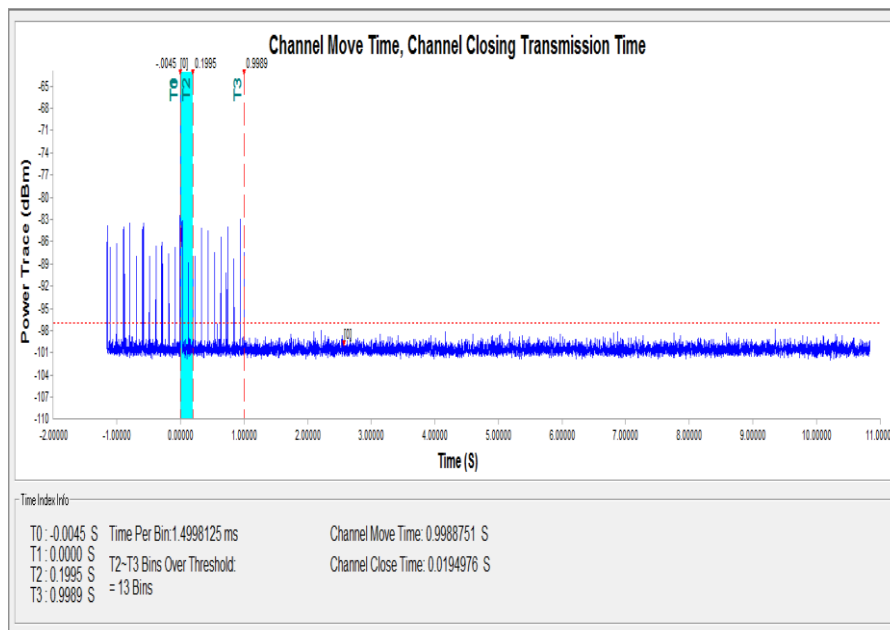
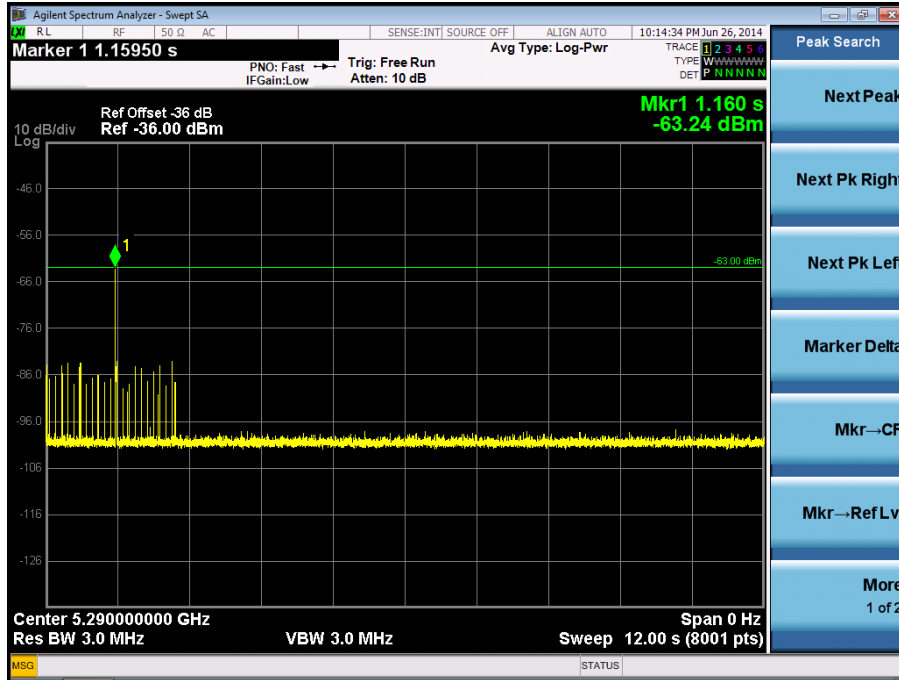
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec.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

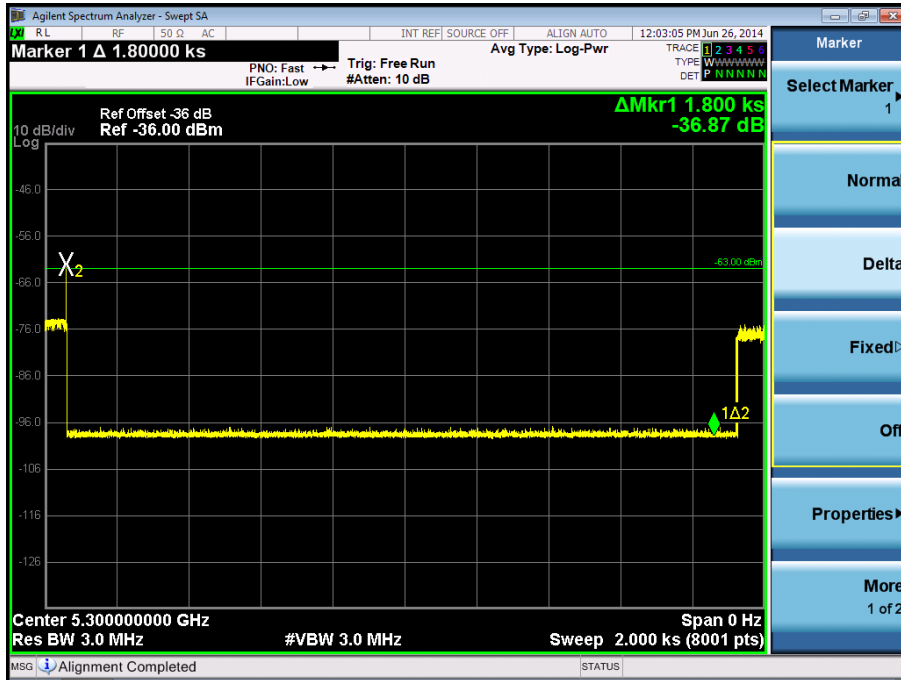
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will 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:  $Dwell (1.5ms) = S (12 \text{ sec}) / B (8000)$ ; 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:  $80MHz: C (19.5 \text{ ms}) = N (13) \times Dwell (1.5 \text{ ms})$ ; 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	
Test Channel (MHz)	5290MHz	N/A
Channel Move Time (s)	0.9989s	<10s
Channel Closing Transmission Time (ms) (Note)	19.50ms	< 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:

$(\text{Total Waveform Detections} / \text{Total Waveform Trails}) * 100 = \text{Probability of Detection Radar}$

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

### 5.9.2. 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 #	Radar signal	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	Test A	5290	1	518	102	1
2	Test A	5292	1	538	99	1
3	Test A	5294	1	558	95	1
4	Test A	5296	1	578	92	1
5	Test A	5298	1	598	89	1
6	Test A	5300	1	618	86	1
7	Test A	5301	1	638	83	1
8	Test A	5302	1	658	81	1
9	Test A	5303	1	678	78	1
10	Test A	5304	1	698	76	1
11	Test A	5305	1	718	74	1
12	Test A	5306	1	738	72	1
13	Test A	5307	1	758	70	1
14	Test A	5308	1	778	68	1
15	Test A	5310	1	798	67	1
16	Test B	5290	1	939	57	1
17	Test B	5292	1	1043	51	1
18	Test B	5294	1	1115	48	1
19	Test B	5296	1	1195	45	1
20	Test B	5298	1	1219	44	1
21	Test B	5300	1	1287	42	1
22	Test B	5301	1	1363	39	1
23	Test B	5302	1	1443	37	1
24	Test B	5303	1	1499	36	1
25	Test B	5304	1	1559	34	1
26	Test B	5305	1	1703	31	1
27	Test B	5306	1	1859	29	1
28	Test B	5307	1	2027	27	1
29	Test B	5308	1	2247	24	1
30	Test B	5310	1	2539	21	1
Detection Percentage (%)						100%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5290	4.4	198	29	1
2	5291	4.1	217	23	1
3	5292	2.2	206	23	1
4	5293	2.6	175	28	1
5	5294	3.7	211	24	1
6	5295	2.3	213	29	1
7	5296	4.0	186	24	1
8	5297	3.8	163	28	1
9	5298	3.7	175	27	1
10	5299	1.8	223	23	1
11	5300	1.1	171	26	1
12	5300	1.0	214	29	1
13	5301	4.9	191	26	1
14	5301	3.5	211	29	1
15	5302	1.1	191	28	1
16	5302	3.1	215	29	1
17	5303	5.0	199	26	1
18	5303	3.6	191	29	1
19	5304	1.5	174	23	1
20	5304	3.0	195	25	1
21	5305	2.8	185	24	1
22	5305	1.2	212	26	1
23	5306	4.9	165	24	1
24	5306	1.4	226	29	1
25	5307	2.6	161	24	1
26	5307	4.0	208	25	1
27	5308	2.1	203	23	1
28	5309	3.0	179	24	1
29	5310	3.6	207	25	1
30	5310	2.4	227	23	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	5290	7.0	310	17	1
2	5291	8.9	494	16	1
3	5292	9.9	354	18	1
4	5293	7.3	421	18	1
5	5294	8.2	397	17	1
6	5295	9.3	341	18	1
7	5296	8.8	288	17	1
8	5297	7.7	391	16	1
9	5298	7.5	371	17	1
10	5299	8.3	405	16	1
11	5300	6.3	261	17	1
12	5300	9.7	412	16	1
13	5301	8.2	471	16	1
14	5301	7.4	409	18	1
15	5302	6.5	307	18	1
16	5302	6.7	352	18	1
17	5303	8.1	382	17	1
18	5303	7.4	403	17	1
19	5304	6.7	302	16	1
20	5304	7.4	387	17	1
21	5305	8.2	385	18	0
22	5305	6.8	255	16	1
23	5306	7.6	330	16	1
24	5306	6.4	475	17	1
25	5307	9.7	306	16	1
26	5307	8.4	459	17	1
27	5308	7.7	261	17	1
28	5309	9.1	362	18	1
29	5310	8.3	297	16	1
30	5310	6.1	316	18	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	5290	13.5	410	15	1
2	5291	11.7	444	16	1
3	5292	12.9	430	13	1
4	5293	15.6	315	16	1
5	5294	12.7	386	16	1
6	5295	19.2	469	14	1
7	5296	17.0	306	16	1
8	5297	12.0	359	12	1
9	5298	11.2	307	12	1
10	5299	13.9	488	12	1
11	5300	17.0	436	14	1
12	5301	13.9	264	13	1
13	5302	19.9	273	16	1
14	5303	18.8	320	16	1
15	5303	14.0	496	16	1
16	5304	19.9	495	14	1
17	5304	16.1	477	14	1
18	5305	18.4	463	15	1
19	5305	16.1	424	13	1
20	5306	11.8	374	13	1
21	5306	14.7	257	12	1
22	5307	17.2	407	12	1
23	5307	12.2	289	12	1
24	5308	11.7	259	16	1
25	5308	16.4	289	13	1
26	5309	15.2	346	12	1
27	5309	11.8	322	14	1
28	5310	11.9	300	13	1
29	5310	15.5	364	12	1
30	5310	11.1	403	14	1
Detection Percentage (%)					100%

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

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 96.7\% + 100\%) / 4 = 99.18\% (>80\%)$



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	0	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 (%)					86.67%

Type 5 Radar Waveform_1										
Waveform Num = 1										
Num of Bursts = 17										
Burst Interval (us) = 705882										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	323364	3	12	90	1207	1694	1351	323364	0	705881
2	648636	2	18	70	1102	1564	0	976252	705882	1411763
3	592497	2	18	65	1084	1431	0	1571415	1411764	2117645
4	684804	1	5	100	1844	0	0	2258734	2117646	2823527
5	870656	2	20	75	1101	1588	0	3131234	2823528	3529409
6	1097022	2	15	70	1900	1694	0	4230945	3529410	4235291
7	378306	3	15	60	1160	1503	1167	4612845	4235292	4941173
8	703516	1	16	75	1189	0	0	5320191	4941174	5647055
9	628253	1	8	60	1144	0	0	5949633	5647056	6352937
10	997735	2	19	75	1267	1469	0	6948512	6352938	7058819
11	416628	2	10	85	1162	1173	0	7367876	7058820	7764701
12	772203	3	5	85	1767	1576	1464	8142414	7764702	8470583
13	676436	1	14	65	1740	0	0	8823657	8470584	9176465
14	990154	1	13	100	1385	0	0	9815551	9176466	9882347
15	633757	2	6	75	1267	1716	0	10450693	9882348	10588229
16	327795	1	12	50	1504	0	0	10781471	10588230	11294111
17	640764	3	15	85	1824	1217	1852	11423739	11294112	11999993
Total number of pulses in waveform = 32										
*****										



### Type 5 Radar Waveform\_2

Waveform Num = 2  
 Num of Bursts = 18  
 Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	638343	1	18	85	1771	0	0	638343	0	666666
2	456013	2	8	50	1489	1065	0	1066127	666667	1333333
3	672161	1	9	80	1438	0	0	1770842	1333334	2000000
4	479540	2	12	55	1055	1230	0	2251820	2000001	2666667
5	850818	3	19	95	1151	1377	1002	3104923	2666668	3333334
6	269361	3	6	60	1926	1504	1887	3377814	3333335	4000001
7	759906	3	11	50	1929	1210	1890	4142737	4000002	4666668
8	878812	1	7	100	1821	0	0	5026578	4666669	5333335
9	950270	3	5	80	1389	1158	1799	5978669	5333336	6000002
10	413470	2	20	80	1260	1855	0	6386485	6000003	6666669
11	773304	2	12	95	1895	1522	0	7172904	6666670	7333336
12	668115	3	14	55	1294	1530	1995	7844436	7333337	8000003
13	152809	3	13	55	1013	1156	1818	8002064	8000004	8666670
14	1157212	3	7	75	1882	1085	0	9163263	8666671	9333337
15	542736	1	10	60	1608	0	0	9708966	9333338	10000004
16	755470	1	11	65	1058	0	0	10466044	10000005	10666671
17	653002	1	20	90	1081	0	0	11120104	10666672	11333338
18	488020	2	5	70	1120	1355	0	11609205	11333339	12000005

Total number of pulses in waveform = 96  
 \*\*\*\*\*

### Type 5 Radar Waveform\_3

Waveform Num = 3  
 Num of Bursts = 13  
 Burst Interval (us) = 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	218367	1	19	50	1233	0	0	218367	0	923076
2	1305141	1	18	90	1158	0	0	1524741	923077	1846153
3	1087854	1	14	75	1337	0	0	2613753	1846154	2769230
4	1051421	2	11	90	1289	1925	0	3666511	2769231	3692307
5	687599	2	6	100	1549	1807	0	4357324	3692308	4615384
6	489404	3	5	55	1328	1241	1482	4850084	4615385	5538461
7	1403578	1	18	90	1049	0	0	6257713	5538462	6461538
8	923880	1	20	75	1074	0	0	7182642	6461539	7384615
9	1094615	1	11	100	1615	0	0	8278331	7384616	8307692
10	149127	3	13	60	1035	1020	1812	8429073	8307693	9230769
11	1415085	1	20	60	1264	0	0	9848025	9230770	10153846
12	853329	3	16	70	1911	1870	1586	10702618	10153847	11076923
13	974837	1	13	70	1449	0	0	11682822	11076924	12000000

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

### Type 5 Radar Waveform\_4

Waveform Num = 4  
 Num of Bursts = 18  
 Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	171523	1	18	50	1115	0	0	171523	0	666666
2	546327	2	6	90	1966	1237	0	718965	666667	1333333
3	944166	3	13	80	1410	1889	1042	1866334	1333334	2000000
4	428524	1	14	55	1951	0	0	2099199	2000001	2666667
5	1174774	3	7	65	1245	1410	1148	3275924	2666668	3333334
6	260536	2	18	95	1350	1070	0	3540263	3333335	4000001
7	1109321	3	9	95	1489	1147	1147	4652004	4000002	4666668
8	543122	1	6	90	1357	0	0	5198889	4666669	5333335
9	161257	1	8	90	1043	0	0	5361503	5333336	6000002
10	856663	2	11	75	1993	1837	0	6218209	6000003	6666669
11	634404	3	14	55	1561	1282	1321	6856433	6666670	7333336
12	657358	1	17	90	1345	0	0	7517955	7333337	8000003
13	645638	2	19	80	1567	1744	0	8164938	8000004	8666670
14	1065434	1	9	100	1521	0	0	9233683	8666671	9333337
15	372472	3	18	50	1666	1210	1878	9607676	9333338	10000004
16	939880	3	8	55	1890	1920	1920	10552310	10000005	10666671
17	218708	3	13	65	1758	1531	2000	10776748	10666672	11333338
18	1022518	1	9	70	1111	0	0	11804555	11333339	12000005

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



### Type 5 Radar Waveform\_5

Waveform Num = 5  
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	492855	3	16	95	1116	1549	1727	492855	0	1090908
2	809153	2	8	50	1550	1163	0	1306400	1090909	2181817
3	1884586	3	5	100	1645	1471	1879	3193699	2181818	3272726
4	238037	1	18	65	1993	0	0	3436731	3272727	4363635
5	1398736	2	17	50	1924	1417	0	4837460	4363636	5454544
6	944005	3	13	65	1025	1543	1146	5784806	5454545	6545453
7	930744	2	9	90	1363	1920	0	6719264	6545454	7636362
8	1523981	3	16	85	1207	1696	1781	8246528	7636363	8727271
9	631576	1	9	95	1741	0	0	8882788	8727272	9818180
10	1361360	2	19	75	1163	1951	0	10245889	9818181	10909089
11	1522883	2	15	80	1713	1038	0	11771886	10909090	11999998

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

### Type 5 Radar Waveform\_6

Waveform Num = 6  
Num of Bursts = 8  
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	951577	1	19	65	1823	0	0	951577	0	1499999
2	1748682	3	12	55	1538	1019	1233	2702082	1500000	2999999
3	1548695	3	19	100	1776	1881	1488	4254567	3000000	4499999
4	1357666	2	5	85	1327	1646	0	5617378	4500000	5999999
5	924742	3	15	80	1073	1646	1909	6545093	6000000	7499999
6	2153480	3	8	95	1331	1259	1468	8703201	7500000	8999999
7	1038059	1	17	90	1701	0	0	9745318	9000000	10499999
8	808872	2	19	75	2000	1954	0	10555891	10500000	11999999

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

### Type 5 Radar Waveform\_7

Waveform Num = 7  
Num of Bursts = 18  
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	648029	2	16	65	1388	1161	0	648029	0	666666
2	425577	1	10	85	1380	0	0	1076155	666667	1333333
3	473967	1	9	80	1346	0	0	1550902	1333334	2000000
4	689438	1	7	85	1955	0	0	2241686	2000001	2666667
5	883790	3	10	50	1422	1551	1778	3127431	2666668	3333334
6	682534	3	16	75	1428	1385	1031	3814716	3333335	4000001
7	312624	1	19	70	1041	0	0	4131184	4000002	4666668
8	692190	1	16	90	1350	0	0	4824424	4666669	5333335
9	1017926	2	17	80	1636	1815	0	5843700	5333336	6000002
10	194209	3	10	75	1425	1887	1609	6041360	6000003	6666669
11	818280	1	14	55	1570	0	0	6864570	6666670	7333336
12	785407	2	15	65	1487	1106	0	7651547	7333337	8000003
13	611081	2	15	75	1515	1975	0	8265221	8000004	8666670
14	751357	1	13	75	1399	0	0	9020068	8666671	9333337
15	659752	2	13	90	1197	1357	0	9881219	9333338	10000004
16	904912	1	16	50	1120	0	0	10588685	10000005	10666671
17	626132	3	12	85	1655	1512	1292	11215937	10666672	11333338
18	456171	3	16	65	1367	1903	1352	11676567	11333339	12000005

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



### Type 5 Radar Waveform\_8

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	398825	3	8	95	1928	1203	1119	398825	0	1199999
2	1431335	1	13	80	1991	0	0	1834410	1200000	2399999
3	602861	1	12	55	1657	0	0	2439262	2400000	3599999
4	1721900	1	10	50	1484	0	0	4162819	3600000	4799999
5	682153	3	18	75	1303	1030	1657	4846456	4800000	5999999
6	1876200	1	16	100	1980	0	0	6726646	6000000	7199999
7	828919	1	13	95	1684	0	0	7557545	7200000	8399999
8	1449530	2	5	60	1400	1357	0	9008759	8400000	9599999
9	1335926	3	8	50	1116	1371	1350	10347442	9600000	10799999
10	666055	3	19	80	1223	1951	1232	11017334	10800000	11999999

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

### Type 5 Radar Waveform\_9

Waveform Num = 9  
Num of Bursts = 17  
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	579125	2	16	50	1400	1210	0	579125	0	705881
2	262909	1	15	90	1725	0	0	844644	705882	1411763
3	1201715	3	9	80	1050	1139	1213	2048084	1411764	2117645
4	207198	1	9	80	1558	0	0	2258684	2117646	2823527
5	1163589	1	15	65	1679	0	0	3423831	2823528	3529409
6	600153	1	10	55	1109	0	0	4025663	3529410	4235291
7	282176	1	18	85	1725	0	0	4308948	4235292	4941173
8	917620	3	20	75	1911	1830	1396	5228293	4941174	5647055
9	991332	1	15	60	1131	0	0	6224762	5647056	6352937
10	470731	2	13	100	1374	1911	0	6696624	6352938	7058819
11	437914	3	9	75	1998	1926	1656	7137823	7058820	7764701
12	1209950	1	5	50	1200	0	0	8353353	7764702	8470583
13	620536	3	13	60	1068	1316	1427	8975089	8470584	9176465
14	372000	2	10	80	1060	1285	0	9350900	9176466	9882347
15	901084	2	6	50	1503	1971	0	10254329	9882348	10588229
16	736273	2	17	75	1871	1641	0	10994076	10588230	11294111
17	897176	3	11	85	1790	1813	1649	11894764	11294112	11999993

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

### 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	81881	2	20	80	1385	1095	0	81881	0	857142
2	1525485	1	14	75	1012	0	0	1609846	857143	1714285
3	159305	1	18	75	1346	0	0	1770163	1714286	2571428
4	953698	1	7	85	1655	0	0	2725207	2571429	3428571
5	1033889	1	5	90	1546	0	0	3760751	3428572	4285714
6	972549	2	13	100	1791	1351	0	4734846	4285715	5142857
7	1006680	2	19	75	1688	1038	0	5744668	5142858	6000000
8	570575	3	20	75	1688	1067	1911	6317969	6000001	6857143
9	1377800	1	13	90	1383	0	0	7700435	6857144	7714286
10	422003	3	11	95	1075	1064	1188	8123821	7714287	8571429
11	1125411	3	15	65	1827	1178	1558	9252559	8571430	9428572
12	586527	3	11	95	1996	1220	1851	9843649	9428573	10285715
13	821926	3	16	95	1929	1940	1454	10670642	10285716	11142858
14	844851	1	6	90	1498	0	0	11520816	11142859	12000001

Total number of pulses in waveform = 27  
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### Type 5 Radar Waveform\_11

Waveform Num = 11  
Num of Bursts = 12  
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	118245	3	15	70	1133	1249	1055	118245	0	999999
2	1851975	3	8	85	1947	1296	1268	1973657	1000000	1999999
3	37049	3	7	95	1283	1275	1430	2015217	2000000	2999999
4	1452151	3	17	50	1929	1773	1951	3471356	3000000	3999999
5	1123134	1	20	95	1615	0	0	4600143	4000000	4999999
6	1196443	2	18	70	1364	1102	0	5798201	5000000	5999999
7	832271	1	7	85	1564	0	0	6632938	6000000	6999999
8	547675	3	11	70	1883	1560	1202	7182177	7000000	7999999
9	1639089	3	7	65	1113	1207	1051	8825911	8000000	8999999
10	505836	2	14	65	1837	1253	0	9335118	9000000	9999999
11	763677	2	10	85	1353	1579	0	10101885	10000000	10999999
12	1727709	3	16	50	1898	1763	1478	11832526	11000000	11999999

Total number of pulses in waveform = 29  
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### Type 5 Radar Waveform\_12

Waveform Num = 12  
Num of Bursts = 17  
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	594473	2	15	90	1582	1757	0	594473	0	705881
2	677301	1	6	80	1521	0	0	1275113	705882	1411763
3	139053	2	19	85	1562	1688	0	1415687	1411764	2117645
4	1333485	1	18	55	1020	0	0	2752422	2117646	2823527
5	740340	2	17	85	1619	1247	0	3493782	2823528	3529409
6	190939	3	14	55	1229	1604	1693	3687587	3529410	4235291
7	851427	3	19	95	1696	1041	1178	4543540	4235292	4941173
8	943700	1	14	90	1301	0	0	5491155	4941174	5647055
9	584617	3	20	85	1842	1340	1826	6077073	5647056	6352937
10	404202	3	12	55	1502	1746	1006	6486283	6352938	7058819
11	749060	3	9	65	1946	1762	1732	7239597	7058820	7764701
12	590916	1	11	85	1967	0	0	7835953	7764702	8470583
13	1025128	2	20	55	1461	1811	0	8863048	8470584	9176465
14	475129	2	13	95	1211	1718	0	9341449	9176466	9882347
15	713675	3	11	80	1623	1686	1598	10058053	9882348	10588229
16	1206070	1	13	100	1949	0	0	11269030	10588230	11294111
17	233646	1	18	50	1692	0	0	11504625	11294112	11999993

Total number of pulses in waveform = 34  
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### Type 5 Radar Waveform\_13

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	22340	2	6	65	1857	1201	0	22340	0	923076
2	1498537	1	10	85	1890	0	0	1523935	923077	1846153
3	409019	3	9	95	1364	1491	1530	1934844	1846154	2769230
4	1749024	2	9	85	1515	1822	0	3688253	2769231	3692307
5	313348	3	5	70	1993	1806	1673	4004938	3692308	4615384
6	1239516	3	19	80	1046	1379	1306	5249926	4615385	5538461
7	1146842	1	20	75	1869	0	0	6400499	5538462	6461538
8	573019	2	17	65	1836	1445	0	6975387	6461539	7384615
9	426605	1	18	55	1223	0	0	7405273	7384616	8307692
10	1356691	3	11	90	1672	1357	1633	8763187	8307693	9230769
11	1228992	3	13	90	1882	1117	1237	9996841	9230770	10153846
12	219802	3	8	100	1955	1269	1980	10220879	10153847	11076923
13	1291148	2	12	75	1462	1186	0	11517231	11076924	12000000

Total number of pulses in waveform = 29  
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### Type 5 Radar Waveform\_14

Waveform Num = 14  
Num of Bursts = 16  
Burst Interval (us) = 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	542787	3	12	85	1684	1553	1091	542787	0	749999
2	412955	1	18	95	1896	0	0	960070	750000	1499999
3	579867	3	9	65	1619	1501	1740	1541833	1500000	2249999
4	821057	3	20	65	1814	1656	1126	2367750	2250000	2999999
5	1231705	2	13	90	1845	1830	0	3604051	3000000	3749999
6	689016	1	11	80	1688	0	0	4296792	3750000	4499999
7	537572	3	16	95	1596	1514	1061	4836052	4500000	5249999
8	900169	2	17	90	1159	1037	0	5740392	5250000	5999999
9	723749	3	15	85	1681	1987	1146	6466337	6000000	6749999
10	897722	3	11	70	1690	1164	1564	7368873	6750000	7499999
11	350734	3	19	55	1774	1915	1120	7724025	7500000	8249999
12	537608	1	18	100	1176	0	0	8266442	8250000	8999999
13	1356196	3	11	55	1230	1232	1846	9623814	9000000	9749999
14	393058	1	16	65	1668	0	0	10021180	9750000	10499999
15	848565	1	10	75	1108	0	0	10871413	10500000	11249999
16	698561	1	14	50	1282	0	0	11571082	11250000	11999999

Total number of pulses in waveform = 34  
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### Type 5 Radar Waveform\_15

Waveform Num = 15  
Num of Bursts = 19  
Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	93706	1	7	50	1782	0	0	93706	0	631578
2	888408	2	17	90	1890	1891	0	963896	631579	1263157
3	319418	2	19	50	1562	1144	0	1276795	1263158	1894736
4	1227337	3	7	50	1726	1858	1134	2508838	1894737	2526315
5	296906	2	14	50	1055	1155	0	2807552	2526316	3157894
6	758844	1	13	80	1994	0	0	3568806	3157895	3789473
7	535162	2	20	55	1318	1012	0	4105782	3789474	4421052
8	318238	2	13	55	1369	1664	0	4426330	4421053	5052631
9	809291	3	20	65	1548	1907	1820	5238654	5052632	5684210
10	839230	2	19	55	1707	1627	0	6083159	5684211	6315789
11	756215	1	16	90	1643	0	0	6842708	6315790	6947368
12	333635	1	6	90	1657	0	0	7177986	6947369	7578947
13	823117	3	20	65	1932	1230	1992	8002760	7578948	8210526
14	529763	3	18	100	1790	1780	1788	8537677	8210527	8842105
15	884642	3	17	65	1700	1532	1136	9127675	8842106	9473684
16	834667	3	18	85	1504	1697	1829	9966710	9473685	10105263
17	736435	2	18	80	1176	1494	0	10708075	10105264	10736842
18	113751	1	13	85	1903	0	0	10824496	10736843	11368421
19	1025263	3	13	75	1178	1678	1897	11851662	11368422	12000000

Total number of pulses in waveform = 40  
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### Type 5 Radar Waveform\_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	928868	3	20	85	1058	1546	1078	928868	0	999999
2	303061	3	10	95	1489	1503	1770	1235611	1000000	1999999
3	1538340	2	13	100	1164	1750	0	2778713	2000000	2999999
4	286570	1	9	55	1212	0	0	3068197	3000000	3999999
5	1850813	3	6	65	1133	1412	1145	4920222	4000000	4999999
6	1038764	2	17	60	1817	1094	0	5962676	5000000	5999999
7	951323	3	9	55	1480	1087	1414	6916910	6000000	6999999
8	543379	1	17	90	1827	0	0	7464270	7000000	7999999
9	902992	3	13	100	1335	1605	1354	8369089	8000000	8999999
10	1351128	3	20	55	1667	1783	1122	9724511	9000000	9999999
11	688671	3	8	95	1527	1033	1933	10417754	10000000	10999999
12	957523	1	14	80	1417	0	0	11379770	11000000	11999999

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



### Type 5 Radar Waveform\_17

Waveform Num = 17  
Num of Bursts = 14  
Burst Interval (us) = 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	329198	1	18	80	1828	0	0	329198	0	857142
2	1200431	1	20	100	1012	0	0	1531457	857143	1714285
3	804414	2	7	90	1831	1905	0	2336883	1714286	2571428
4	954698	2	19	70	1437	1036	0	3295317	2571429	3428571
5	875453	2	10	90	1406	1475	0	4173243	3428572	4285714
6	818479	1	17	95	1229	0	0	4994603	4285715	5142857
7	506616	3	19	95	1754	1565	1771	5502448	5142858	6000000
8	725310	1	18	55	1660	0	0	6232848	6000001	6857143
9	1197777	3	11	100	1072	1964	1255	7432285	6857144	7714286
10	487898	3	6	85	1282	1642	1861	7924474	7714287	8571429
11	670410	1	15	50	1023	0	0	8599669	8571430	9428572
12	1091684	2	12	95	1591	1397	0	9692376	9428573	10285715
13	801141	2	8	70	1423	1721	0	10496505	10285716	11142858
14	877824	3	8	85	1000	1225	1398	11377473	11142859	12000001

Total number of pulses in waveform = 27  
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### Type 5 Radar Waveform\_18

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	640092	3	5	95	1493	1244	1234	640092	0	666666
2	100325	2	11	90	1422	1921	0	744388	666667	1333333
3	1080674	2	7	100	1572	1237	0	1828405	1333334	2000000
4	617090	2	19	65	1668	1251	0	2448304	2000001	2666667
5	418694	1	10	95	1030	0	0	2869917	2666668	3333334
6	1062907	3	8	80	1206	1884	1848	3933854	3333335	4000001
7	294706	1	5	70	1211	0	0	4233498	4000002	4666668
8	491875	3	13	55	1108	1892	1430	4726584	4666669	5333335
9	1182837	2	16	75	1305	1491	0	5913851	5333336	6000002
10	170410	2	17	65	1917	1510	0	6087057	6000003	6666669
11	1096528	1	10	65	1521	0	0	7187012	6666670	7333336
12	468118	3	11	65	1966	1137	1746	7656651	7333337	8000003
13	376715	3	20	100	1764	1202	1980	8038215	8000004	8666670
14	664686	2	7	75	1566	1344	0	8707847	8666671	9333337
15	988561	1	7	80	1887	0	0	9699308	9333338	10000004
16	948568	1	7	85	1645	0	0	10649763	10000005	10666671
17	136311	1	19	75	1492	0	0	10787719	10666672	11333338
18	847967	2	8	60	1523	1109	0	11637178	11333339	12000005

Total number of pulses in waveform = 35  
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### Type 5 Radar Waveform\_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	547535	3	8	55	1174	1332	1378	547535	0	631578
2	419970	3	17	100	1408	1818	1924	971389	631579	1263157
3	847165	1	18	60	1821	0	0	1823704	1263158	1894736
4	673182	2	12	95	1596	1822	0	2488707	1894737	2526315
5	266714	1	14	55	1452	0	0	2768839	2526316	3157894
6	810163	1	6	100	1326	0	0	3580454	3157895	3789473
7	615400	2	18	85	1309	1304	0	4197180	3789474	4421052
8	264138	2	7	90	1425	1957	0	4463931	4421053	5052631
9	687452	1	18	55	1291	0	0	5154765	5052632	5684210
10	905306	2	5	65	1384	1857	0	6061452	5684211	6315789
11	860696	1	20	95	1105	0	0	6925389	6315790	6947368
12	620104	1	7	100	1772	0	0	7546598	6947369	7578947
13	294344	2	9	65	1314	1825	0	7842714	7578948	8210526
14	857578	2	11	55	1929	1654	0	8703431	8210527	8842105
15	183445	1	15	70	1915	0	0	8890459	8842106	9473684
16	932666	1	20	80	1040	0	0	9825040	9473685	10105263
17	598874	3	17	90	1775	1087	1577	10424954	10105264	10736842
18	590632	2	15	75	1270	1875	0	11020025	10736843	11368421
19	495682	3	8	90	1401	1228	1524	11518852	11368422	12000000

Total number of pulses in waveform = 34  
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### Type 5 Radar Waveform\_20

Waveform Num = 20  
Num of Bursts = 11  
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	249742	1	15	50	1859	0	0	249742	0	1090908
2	1485315	3	14	70	1188	1614	1189	1736916	1090909	2181817
3	971272	3	12	80	1651	1335	1761	2712179	2181818	3272726
4	1486850	3	12	70	1801	1486	1816	4203776	3272727	4363635
5	528452	1	5	55	1028	0	0	4737331	4363636	5454544
6	742737	1	8	85	1068	0	0	5481096	5454545	6545453
7	1070586	3	6	75	1473	1878	1610	6552750	6545454	7636362
8	2069726	3	17	50	1151	1918	1577	8627437	7636363	8727271
9	650573	2	6	65	1794	1559	0	9282656	8727272	9818180
10	1150538	3	12	60	1838	1178	1774	10436347	9818181	10909089
11	1151694	1	14	55	1373	0	0	11592831	10909090	11999998

Total number of pulses in waveform = 24  
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### Type 5 Radar Waveform\_21

Waveform Num = 21  
Num of Bursts = 20  
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	362419	1	6	100	1104	0	0	362419	0	600000
2	600096	1	17	65	1977	0	0	1023619	600000	1199999
3	616849	2	9	95	1701	1108	0	1642445	1200000	1799999
4	188522	2	18	80	1472	1878	0	1833776	1800000	2399999
5	761488	1	13	95	1783	0	0	2598614	2400000	2999999
6	668726	2	7	65	1960	1865	0	3269123	3000000	3599999
7	788658	3	20	80	1674	1100	1686	4061206	3600000	4199999
8	194579	2	6	90	1897	1317	0	4260145	4200000	4799999
9	718943	1	20	60	1905	0	0	4982302	4800000	5399999
10	556176	3	14	70	1740	1286	1000	5540383	5400000	5999999
11	628886	1	18	100	1993	0	0	6173295	6000000	6599999
12	590069	1	7	65	1996	0	0	6774347	6600000	7199999
13	1018874	2	11	100	1632	1856	0	7200000	7200000	7799999
14	371868	3	13	50	1100	1945	1126	8170573	7800000	8399999
15	234161	2	16	80	1285	1946	0	8406905	8400000	8999999
16	1039430	2	15	75	1784	1636	0	9451666	9000000	9599999
17	712801	3	7	85	1479	1042	1435	10167787	9600000	10199999
18	581291	2	20	95	1215	1325	0	10753034	10200000	10799999
19	612000	1	20	80	1730	0	0	11367574	10800000	11399999
20	421568	2	16	50	1284	1986	0	11790862	11400000	11999999

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

### Type 5 Radar Waveform\_22

Waveform Num = 22  
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	251292	2	10	75	1211	1365	0	251292	0	705881
2	994138	1	15	55	1120	0	0	1248006	705882	1411763
3	829856	2	10	60	1665	1721	0	2078982	1411764	2117645
4	502204	1	17	55	1989	0	0	2584572	2117646	2823527
5	271638	3	14	80	1179	1639	1868	2858199	2823528	3529409
6	1281451	3	15	55	1455	1844	1224	4144336	3529410	4235291
7	199949	1	7	75	1548	0	0	4348808	4235292	4941173
8	658111	3	15	60	1601	1958	1976	5008467	4941174	5647055
9	1215123	3	19	90	1875	1135	1764	6229125	5647056	6352937
10	649734	1	5	80	1811	0	0	6883633	6352938	7058819
11	548587	1	5	60	1723	0	0	7434031	7058820	7764701
12	692756	2	14	85	1009	1504	0	8128510	7764702	8470583
13	506863	2	13	80	1401	1527	0	8637886	8470584	9176465
14	556954	3	10	80	1833	1130	1102	9197768	9176466	9882347
15	1279903	2	17	75	1328	1314	0	10481736	9882348	10589229
16	483674	3	5	70	1171	1276	1371	10968052	10589230	11294111
17	1008978	2	19	50	1115	1102	0	11980848	11294112	11999993

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



### Type 5 Radar Waveform\_23

Waveform Num = 23  
Num of Bursts = 12  
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	610479	3	5	75	1421	1386	1841	610479	0	999999
2	695632	1	17	80	1882	0	0	1310759	1000000	1999999
3	1664754	3	11	90	1690	1778	1817	2977395	2000000	2999999
4	881584	1	16	95	1349	0	0	3864264	3000000	3999999
5	874841	3	19	90	1070	1889	1482	4740454	4000000	4999999
6	1145925	1	12	75	1640	0	0	5890820	5000000	5999999
7	680395	3	13	95	1760	1308	1505	6572855	6000000	6999999
8	678531	3	11	80	1474	1167	1488	7255959	7000000	7999999
9	1419248	3	10	75	1905	1110	1763	8679336	8000000	8999999
10	577572	1	18	80	1100	0	0	9261686	9000000	9999999
11	1406340	1	17	85	1469	0	0	10669126	10000000	10999999
12	1206699	1	13	55	1550	0	0	11877294	11000000	11999999

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

### Type 5 Radar Waveform\_24

Waveform Num = 24  
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	889124	1	5	60	1106	0	0	889124	0	1333332
2	1488557	1	5	85	1248	0	0	2378787	1333333	2666665
3	683770	3	18	65	1746	1145	1733	3063805	2666666	3999998
4	1164156	2	6	100	1668	1700	0	4232585	3999999	5333331
5	1382661	2	6	80	1192	1635	0	5618614	5333332	6666664
6	1949866	3	17	65	1797	1959	1210	7571307	6666665	7999997
7	973017	1	11	70	1543	0	0	8549290	7999998	9333330
8	940812	1	11	90	1262	0	0	9491645	9333331	10666663
9	1477362	3	11	70	1197	1620	1074	10970269	10666664	11999996

Total number of pulses in waveform = 17  
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### Type 5 Radar Waveform\_25

Waveform Num = 25  
Num of Bursts = 15  
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	689984	1	19	80	1514	0	0	689984	0	799999
2	825359	3	20	85	1789	1143	1541	1516857	800000	1599999
3	410980	2	18	75	1899	1635	0	1932310	1600000	2399999
4	912934	3	12	65	1761	1194	1178	2848778	2400000	3199999
5	1124262	3	12	65	1749	1681	1931	3977173	3200000	3999999
6	190798	2	16	50	1442	1395	0	4173332	4000000	4799999
7	709995	2	18	85	1102	1903	0	4886164	4800000	5599999
8	1438213	3	20	70	1956	1749	1224	6327382	5600000	6399999
9	656334	2	9	95	1303	1485	0	6988645	6400000	7199999
10	1006418	1	16	95	1891	0	0	7997851	7200000	7999999
11	256669	3	8	90	1634	1431	1655	8256411	8000000	8799999
12	872414	3	19	55	1677	1906	1979	9133545	8800000	9599999
13	990049	1	12	55	1495	0	0	10129156	9600000	10399999
14	1042810	3	16	80	1046	1067	1436	11173461	10400000	11199999
15	243282	2	10	100	1891	1797	0	11420292	11200000	11999999

Total number of pulses in waveform = 34  
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### Type 5 Radar Waveform\_26

Waveform Num = 26  
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	115725	2	13	75	1222	1336	0	115725	0	1090908
2	1334150	3	19	85	1119	1870	1214	1452433	1090909	2181817
3	1761905	3	18	65	1035	1590	1458	3218541	2181818	3272726
4	1125937	1	20	50	1669	0	0	4348561	3272727	4363635
5	590957	2	9	90	1208	1611	0	4941187	4363636	5454544
6	849515	1	12	70	1670	0	0	5793521	5454545	6545453
7	1260531	1	5	100	1395	0	0	7055722	6545454	7636362
8	1162814	1	13	60	1348	0	0	8219931	7636363	8727271
9	1218325	3	14	80	1024	1051	1470	9439604	8727272	9818180
10	1382100	3	18	65	1419	1988	1114	10825249	9818181	10909089
11	943783	3	7	65	1295	1252	1709	11773553	10909090	11999998

Total number of pulses in waveform = 23  
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### Type 5 Radar Waveform\_27

Waveform Num = 27  
Num of Bursts = 12  
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	892926	1	17	50	1104	0	0	892926	0	999999
2	549525	3	11	60	1616	1824	1962	1443555	1000000	1999999
3	589209	3	10	50	1397	1210	1168	2038166	2000000	2999999
4	1459328	2	19	60	1499	1471	0	3501269	3000000	3999999
5	1405139	1	11	95	1222	0	0	4909378	4000000	4999999
6	235452	1	9	70	1890	0	0	5146052	5000000	5999999
7	1406757	1	17	70	1893	0	0	6554699	6000000	6999999
8	1179031	2	17	80	1070	1731	0	7735623	7000000	7999999
9	930482	3	6	75	1115	1802	1279	8668906	8000000	8999999
10	1183615	3	19	80	1020	1807	1418	9856717	9000000	9999999
11	869754	1	7	70	1038	0	0	10730716	10000000	10999999
12	937257	1	16	65	1125	0	0	11669011	11000000	11999999

Total number of pulses in waveform = 22  
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### Type 5 Radar Waveform\_28

Waveform Num = 28  
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	155466	1	6	65	1352	0	0	155466	0	799999
2	856013	3	5	95	1609	1808	1494	1012831	800000	1599999
3	1096045	2	19	55	1563	1694	0	2113787	1600000	2399999
4	914091	1	20	55	1231	0	0	3031135	2400000	3199999
5	493707	2	12	80	1068	1069	0	3526073	3200000	3999999
6	1235035	2	5	70	1755	1761	0	4763245	4000000	4799999
7	297962	2	19	55	1640	1017	0	5064723	4800000	5599999
8	798293	1	11	90	1660	0	0	5865673	5600000	6399999
9	738061	1	20	85	1218	0	0	6605394	6400000	7199999
10	731241	2	14	95	1586	1624	0	7337853	7200000	7999999
11	994515	3	19	80	1989	1693	1016	8335578	8000000	8799999
12	1114112	1	5	50	1462	0	0	9454388	8800000	9599999
13	290680	1	19	75	1297	0	0	9746530	9600000	10399999
14	1131912	1	14	75	1340	0	0	10879739	10400000	11199999
15	888567	1	17	75	1494	0	0	11769646	11200000	11999999

Total number of pulses in waveform = 24  
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### Type 5 Radar Waveform\_29

Waveform Num = 29  
Num of Bursts = 11  
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	17410	3	5	95	1607	1186	1615	17410	0	1090908
2	2103616	1	9	60	1802	0	0	2125434	1090909	2181817
3	145325	3	6	85	1084	1965	1394	2272561	2181818	3272726
4	1424603	2	11	55	1999	1688	0	3701607	3272727	4363635
5	1653432	3	17	80	1595	1027	1359	5358726	4363636	5454544
6	946862	1	5	70	1809	0	0	6309569	5454545	6545453
7	752228	1	6	70	1236	0	0	7063606	6545454	7636362
8	1606601	2	19	75	1633	1779	0	8671443	7636363	8727271
9	947599	1	15	80	1987	0	0	9622454	8727272	9818180
10	675846	2	16	55	1332	1366	0	10300287	9818181	10909089
11	1297751	1	6	50	1503	0	0	11600736	10909090	11999998

Total number of pulses in waveform = 20  
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### Type 5 Radar Waveform\_30

Waveform Num = 30  
Num of Bursts = 19  
Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	576670	1	10	95	1252	0	0	576670	0	631578
2	557105	1	11	60	1003	0	0	1134028	631579	1263157
3	492176	1	7	70	1299	0	0	1627207	1263158	1894736
4	854583	1	10	85	1612	0	0	2483089	1894737	2526315
5	133915	3	14	75	1673	1069	1528	2618616	2526316	3157894
6	1140200	2	9	50	1063	1214	0	3763086	3157895	3789473
7	469184	3	19	90	1145	1079	1909	4234547	3789474	4421052
8	574678	3	10	100	1165	1705	1537	4813358	4421053	5052631
9	585822	3	11	95	1657	1175	1102	5403587	5052632	5684210
10	753396	2	10	70	1405	1121	0	6160917	5684211	6315789
11	708116	3	19	80	1104	1253	1046	6871559	6315790	6947368
12	166906	3	16	70	1889	1928	1751	7041868	6947369	7578947
13	763340	1	6	70	1626	0	0	7810776	7578948	8210526
14	468478	2	9	100	1963	1884	0	8270880	8210527	8842105
15	727309	1	12	95	1443	0	0	9002036	8842106	9473684
16	934747	2	9	50	1492	1869	0	9938226	9473685	10105263
17	717466	2	12	75	1337	1640	0	10659043	10105264	10736842
18	465926	2	5	55	1639	1793	0	11127946	10736843	11368421
19	432263	3	12	50	1604	1418	1561	11563641	11368422	12000000

Total number of pulses in waveform = 39  
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## 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	1	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 (%)					100%



Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5320	45	6	2592	18
17	5313	51	14	5310	42
28	5311	84	29	5278	87
32	5274	96	32	5314	96
34	5284	102	49	5297	147
35	5286	105	50	5271	150
52	5312	156	59	5296	177
53	5272	159	69	5290	207
67	5283	201	77	5302	231
68	5291	204	90	5318	270
73	5282	219	--	--	--
88	5293	264	--	--	--
91	5276	273	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5306	0	8	5275	24
6	5280	18	9	5264	27
9	5298	27	26	5273	78
12	5272	36	29	5271	87
26	5267	78	30	5309	90
32	5264	96	31	5316	93
37	5309	111	35	5285	105
58	5297	174	50	5267	150
59	5316	177	64	5289	192
62	5274	186	88	5278	264
74	5318	222	--	--	--
78	5319	234	--	--	--
81	5269	243	--	--	--
88	5304	264	--	--	--
96	5310	288	--	--	--
98	5300	294	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5285	3	5	5317	15
6	5274	18	9	5271	27
35	5297	105	18	5320	54
36	5287	108	22	5269	66
39	5321	117	37	5303	111
40	5293	120	51	5294	153
42	5290	126	55	5293	165
49	6267	147	66	5276	198
52	5278	156	69	5307	207
55	5320	165	71	5289	213
61	5280	183	77	5272	231
62	5268	186	79	5280	237
80	5281	240	92	5273	276
82	5266	246	93	5292	279
--	--	--	94	5277	282
--	--	--	95	5313	285
--	--	--	99	5285	297

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5299	24	0	5326	0
11	5267	33	2	5315	6
16	5281	48	12	5284	36
38	5287	114	13	5272	39
43	5294	129	16	5269	48
51	5304	153	25	5322	75
54	5296	162	54	5306	162
61	5313	183	62	5308	186
76	5282	228	70	5311	210
78	5288	234	87	5283	261
82	5306	246	92	5302	276
85	5297	255	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5272	3	8	5307	24
3	5289	9	11	5270	33
6	5280	18	13	5315	39
10	5317	30	15	5288	45
15	5286	45	37	5271	111
29	5316	87	38	5309	114
32	5318	96	42	5272	126
36	5290	108	77	5327	231
54	5279	162	94	5292	282
80	5325	240	--	--	--
92	5327	276	--	--	--
94	5298	282	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
22	5309	66	1	5308	3
25	5274	75	14	5273	42
28	5313	84	16	5276	48
32	5277	96	26	5328	78
44	5318	132	35	5279	105
59	5299	177	44	5282	132
65	5295	195	47	5292	141
66	5284	198	54	5283	162
85	5303	255	55	5280	165
87	5328	261	58	5314	174
88	5288	264	65	5306	195
90	5306	270	76	5323	228
98	5292	294	82	5312	246
99	5322	297	87	5317	261
--	--	--	95	5299	285



Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5271	0	0	5329	0
3	5310	9	2	5307	6
35	5274	105	6	5281	18
38	5277	114	8	5328	24
42	5324	126	14	5321	42
46	5326	138	19	5283	57
55	5329	165	22	5301	66
57	5323	171	26	5308	78
59	5316	177	27	5296	81
67	5303	201	34	5310	102
71	5321	213	37	5293	111
81	5281	243	48	5302	144
94	5279	282	73	5282	219
99	5276	297	81	5295	243
--	--	--	82	5309	246
--	--	--	84	5288	252
--	--	--	87	5330	261

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5326	21	3	5512	9
9	5325	27	18	5473	54
10	5322	30	20	5484	60
11	5281	33	39	5477	117
12	5289	36	41	5508	123
21	5300	63	53	5490	159
37	5314	111	61	5498	183
59	5282	177	71	5486	213
76	5285	228	79	5485	237
89	5311	267	81	5515	243
94	5273	282	90	5505	270
98	5309	294	99	5483	297

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5326	21	12	5278	36
9	5325	27	13	5306	39
10	5322	30	16	5282	48
11	5281	33	19	5322	57
12	5289	36	23	5312	69
21	5300	63	29	5281	87
37	5314	111	30	5319	90
59	5282	177	34	5296	102
76	5285	228	38	5286	114
89	5311	267	45	5285	135
94	5273	282	50	5324	150
98	5309	294	53	5291	159
--	--	--	61	5270	183
--	--	--	65	5316	195
--	--	--	74	5321	222
--	--	--	85	5305	255
--	--	--	95	5283	285
--	--	--	96	5274	288

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5288	45	11	5296	33
18	5293	54	14	5312	42
20	5325	60	26	5331	78
35	5330	105	41	5304	123
44	5277	132	48	5313	144
65	5275	195	54	5299	162
67	5318	201	66	5292	198
72	5280	216	70	5276	210
73	5292	219	73	5323	219
97	5304	291	85	5326	255
99	5311	297	97	5301	291

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5332	6	15	5287	45
15	5277	45	35	5303	105
16	5318	48	38	5322	114
21	5304	63	66	5277	198
25	5292	75	67	5320	201
37	5299	111	78	5285	234
42	5280	126	86	5280	258
49	5275	147	95	5301	285
89	5278	267	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5309	24	8	5309	24
17	5329	51	41	5321	123
20	5298	60	46	5278	138
21	5275	63	48	5305	144
22	5302	66	49	5334	147
33	5280	99	57	5308	171
54	5304	162	62	5315	186
58	5314	174	65	5325	195
75	5274	225	67	5303	201
79	5313	237	83	5288	249
84	5293	252	87	5314	261
87	5321	261	96	5307	288
94	5276	282	98	5331	294
--	--	--	99	5281	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5332	12	21	5293	63
7	5287	21	22	5312	66
13	5334	39	28	5321	84
21	5325	63	31	5320	93
26	5331	78	32	5309	96
28	5294	84	40	5278	120
35	5321	105	41	5286	123
38	5299	114	49	5326	147
57	5322	171	60	5301	180
60	5319	180	71	5294	213
67	5276	201	80	5304	240
80	5275	240	--	--	--
91	5312	273	--	--	--
92	5298	276	--	--	--
93	5300	279	--	--	--
98	2331	294	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5307	42	14	5280	42
16	5317	48	25	5294	75
42	5329	126	32	5317	96
45	5323	135	56	5318	168
47	5325	141	57	5283	171
51	5282	153	62	5315	186
72	5331	216	66	5325	198
75	5289	225	84	5337	252
88	5306	264	88	5290	264
92	5308	276	93	5307	279
93	5384	279	96	5334	288

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5282	12	7	5283	21
5	5321	15	14	5290	42
10	5336	30	25	5315	75
13	5312	39	27	5336	81
22	5286	66	41	5338	123
29	5290	87	52	5319	156
38	5289	114	54	5314	162
41	5302	123	61	5308	183
51	5311	153	64	5289	192
52	5281	156	71	5301	213
64	5326	192	83	5293	249
69	5308	207	95	5331	285
88	5294	264	--	--	--
96	5325	288	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5316	15	5	5285	15
12	5281	36	12	5300	36
13	5318	39	17	5329	51
16	5297	48	20	5317	60
39	5288	117	38	5331	114
46	5306	138	39	5334	117
51	5285	153	44	5282	132
53	5319	159	56	5284	168
56	5302	168	58	8306	174
71	5307	213	69	5325	207
89	5299	267	70	5324	210
92	5321	276	80	5326	240
--	--	--	81	5313	243
--	--	--	88	5307	264
--	--	--	95	5319	285



## Radar Statistical Performance for 802.11n-HT40

## Radar Type 1 - Radar Statistical Performance

Trail #	Radar signal	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	Test A	5290	1	518	102	1
2	Test A	5293	1	538	99	1
3	Test A	5296	1	558	95	1
4	Test A	5299	1	578	92	1
5	Test A	5302	1	598	89	1
6	Test A	5304	1	618	86	1
7	Test A	5306	1	638	83	1
8	Test A	5309	1	658	81	1
9	Test A	5312	1	678	78	1
10	Test A	5315	1	698	76	1
11	Test A	5318	1	718	74	1
12	Test A	5321	1	738	72	1
13	Test A	5324	1	758	70	1
14	Test A	5327	1	778	68	1
15	Test A	5330	1	798	67	1
16	Test B	5290	1	939	57	1
17	Test B	5293	1	955	56	1
18	Test B	5296	1	983	54	1
19	Test B	5299	1	1055	51	1
20	Test B	5302	1	1159	46	1
21	Test B	5304	1	1283	42	1
22	Test B	5306	1	1335	40	1
23	Test B	5309	1	1439	37	1
24	Test B	5312	1	1531	35	1
25	Test B	5315	1	1663	32	1
26	Test B	5318	1	1771	30	1
27	Test B	5321	1	1875	29	1
28	Test B	5324	1	1967	27	1
29	Test B	5327	1	2016	26	1
30	Test B	5330	1	2871	19	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	5290	3.3	151	25	0
2	5291	3.0	175	28	1
3	5292	3.9	182	27	1
4	5293	4.6	165	24	1
5	5294	2.7	216	26	1
6	5295	4.9	163	23	1
7	5296	2.7	182	23	1
8	5297	2.0	180	27	1
9	5298	4.9	174	23	1
10	5298	2.6	158	28	1
11	5299	4.3	154	24	1
12	5300	3.7	201	26	1
13	5301	1.3	194	27	1
14	5302	4.5	203	28	1
15	5303	1.1	168	29	1
16	5304	3.2	186	25	1
17	5305	3.2	167	24	1
18	5306	4.1	207	24	1
19	5308	2.2	158	23	1
20	5310	4.5	155	26	1
21	5312	2.2	155	24	1
22	5314	2.0	177	28	1
23	5316	3.7	227	27	1
24	5318	3.9	182	25	1
25	5320	4.6	229	24	1
26	5322	3.0	171	29	1
27	5324	2.5	150	27	1
28	5326	3.9	213	23	1
29	5328	1.7	213	26	1
30	5330	4.7	202	25	0
Detection Percentage (%)					93.3%





## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5290	6.1	382	17	0
2	5291	6.2	303	18	1
3	5292	6.3	421	17	1
4	5293	9.4	336	18	1
5	5294	6.7	416	16	1
6	5295	6.2	250	18	1
7	5296	7.9	288	16	1
8	5297	6.8	383	16	1
9	5298	8.6	395	16	1
10	5298	8.7	396	17	1
11	5299	7.5	257	16	1
12	5300	9.8	274	18	1
13	5301	8.0	379	18	1
14	5302	6.2	400	17	1
15	5303	6.0	450	17	1
16	5304	7.3	267	17	1
17	5305	6.0	420	18	1
18	5306	7.3	347	17	1
19	5308	7.4	266	18	1
20	5310	7.2	260	16	1
21	5312	9.5	288	16	1
22	5314	6.8	325	17	1
23	5316	6.8	343	16	1
24	5318	9.0	481	18	1
25	5320	8.2	433	16	1
26	5322	7.4	256	18	1
27	5324	7.8	318	16	1
28	5326	9.5	497	16	1
29	5328	9.5	490	18	1
30	5330	9.5	346	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	5290	19.0	461	14	0
2	5291	15.5	305	16	1
3	5292	19.3	493	16	1
4	5293	19.2	280	15	1
5	5294	16.0	470	12	1
6	5295	12.1	378	13	1
7	5296	16.4	500	13	1
8	5297	13.0	365	14	1
9	5298	14.3	381	15	1
10	5298	19.9	415	14	1
11	5299	15.9	318	16	1
12	5300	18.1	361	13	1
13	5301	12.0	353	13	1
14	5302	12.5	290	14	1
15	5303	11.0	435	15	1
16	5304	14.3	297	14	1
17	5305	16.8	449	12	1
18	5306	18.9	421	15	1
19	5308	14.8	379	12	1
20	5310	13.5	493	12	1
21	5312	15.5	364	12	1
22	5314	15.7	475	13	1
23	5316	19.1	305	16	1
24	5318	15.6	377	12	1
25	5320	16.0	271	14	1
26	5322	13.9	445	13	1
27	5324	18.0	404	16	1
28	5326	15.3	283	16	1
29	5328	18.5	278	12	0
30	5330	12.7	298	16	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:  $\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4} = (100\% + 93.3\% + 93.3\% + 90\%) / 4 = 94.15\% (>80\%)$



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	5304	5510	1
2	5292	0	5305	5510	1
3	5295	1	5306	5510	1
4	5296	1	5308	5510	1
5	5297	1	5310	5510	1
6	5298	1	5312	5510	1
7	5298	1	5314	5510	1
8	5297	1	5316	5510	1
9	5298	1	5318	5510	1
10	5298	1	5320	5510	1
11	5299	1	5322	5510	1
12	5300	1	5324	5510	1
13	5301	1	5326	5510	1
14	5302	1	5328	5510	1
15	5303	1	5330	5510	0
Detection Percentage (%)					90%

Type 5 Radar Waveform_1										
Waveform Num = 1										
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	169241	2	10	75	1712	1197	0	169241	0	599999
2	739822	3	11	90	1367	1075	1498	911972	600000	1199999
3	700046	3	13	70	1193	1960	1570	1615958	1200000	1799999
4	299489	2	11	85	1318	1678	0	1920170	1800000	2399999
5	500089	1	19	75	1412	0	0	2423225	2400000	2999999
6	681903	2	16	55	1395	1826	0	3106600	3000000	3599999
7	905467	2	12	95	1672	1471	0	4015288	3800000	4199999
8	602254	3	18	80	1611	1806	1111	4620585	4200000	4799999
9	481075	3	12	75	1526	1304	1449	5106288	4800000	5399999
10	646113	1	19	90	1240	0	0	5756680	5400000	5999999
11	830356	1	15	85	1517	0	0	6588276	6000000	6599999
12	486983	1	14	65	1665	0	0	7076776	6800000	7199999
13	342223	1	19	80	1556	0	0	7420564	7200000	7799999
14	862865	1	13	100	1995	0	0	8285085	7800000	8399999
15	255886	1	19	90	1639	0	0	8642946	8400000	8999999
16	553049	3	19	75	1844	1051	1291	9097634	9000000	9599999
17	655827	1	17	100	1046	0	0	9757647	9800000	10199999
18	614327	3	17	70	1968	1688	1108	10373020	10200000	10799999
19	792360	3	13	65	1735	1760	1330	11170144	10800000	11399999
20	720640	3	19	50	1444	1880	1042	11895609	11400000	11999999
Total number of pulses in waveform = 40										
*****										



### Type 5 Radar Waveform\_2

```

Waveform Num = 2
Num of Bursts = 18
Burst Interval (us)= 66667
Burst # Off Time (us) # Pulses Chirp (MHz) PW (us) Pulse 1 Pri (us) Pulse 2 Pri (us) Pulse 3 Pri (us) Start Loc (us) Start Burst Interval (us) End Burst Interval (us)
1 154603 3 12 65 1136 1694 1779 154603 0 666667
2 881442 3 14 55 1996 1872 1443 1040554 666667 1333333
3 592891 2 10 65 1225 1076 0 1638756 1333334 2000000
4 987487 3 9 60 1144 1650 1618 2628544 2000001 2666667
5 183470 1 20 80 1527 0 0 2816426 2666668 3333334
6 1019441 3 14 70 1167 1440 1422 3837394 3333335 4000001
7 679481 3 13 50 1144 1842 1284 4520904 4000002 4666668
8 460046 2 17 50 1232 1228 0 4985904 4666669 5333335
9 460046 1 6 95 1877 0 0 5448410 5333336 6000002
10 970662 3 15 85 1857 1786 1331 6420949 6000003 6666669
11 580840 1 6 85 1874 0 0 7006763 6666670 7333336
12 796228 2 17 80 1691 1597 0 7804865 7333337 8000003
13 428746 3 11 75 1456 1767 1176 8238899 8000004 8666670
14 448880 1 6 60 1506 0 0 8690178 8666671 9333337
15 1198535 2 12 50 1935 1564 0 9890219 9333338 10000004
16 129788 3 12 65 1839 1475 1606 10023506 10000005 10666671
17 806564 2 12 65 1256 1209 0 10834990 10666672 11333338
18 640077 1 13 70 1635 0 0 11477532 11333339 12000005
Total number of pulses in waveform = 39
*****

```

### Type 5 Radar Waveform\_3

```

Waveform Num = 3
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 171976 3 20 90 1356 1819 1891 171976 0 749999
2 922192 3 7 95 1533 1040 1779 1099234 750000 1499999
3 845623 2 15 75 1905 1857 0 1949209 1500000 2249999
4 975692 3 14 70 1405 1532 1416 2928663 2250000 2999999
5 760746 1 14 75 1401 0 0 3693762 3000000 3749999
6 282237 3 5 70 1161 1804 1734 3977400 3750000 4499999
7 1159288 3 15 50 1086 1726 1685 5141387 4500000 5249999
8 390105 1 8 95 1725 0 0 5505989 5250000 5999999
9 805134 1 11 90 1868 0 0 6312848 6000000 6749999
10 1127279 1 8 80 1088 0 0 7441795 6750000 7499999
11 487261 1 6 70 1598 0 0 7930144 7500000 8249999
12 640035 3 13 65 1300 1461 1665 8571777 8250000 8999999
13 995077 3 8 95 1358 1201 1008 9571280 9000000 9749999
14 417923 2 12 65 1662 1120 0 9992770 9750000 10499999
15 731888 3 17 90 1473 1007 1073 10727420 10500000 11249999
16 870477 1 15 90 1931 0 0 11601450 11250000 11999999
Total number of pulses in waveform = 34
*****

```

### Type 5 Radar Waveform\_4

```

Waveform Num = 4
Num of Bursts = 18
Burst Interval (us)= 66667
Burst # Off Time (us) # Pulses Chirp (MHz) PW (us) Pulse 1 Pri (us) Pulse 2 Pri (us) Pulse 3 Pri (us) Start Loc (us) Start Burst Interval (us) End Burst Interval (us)
1 142273 3 19 80 1369 1947 1691 142273 0 666667
2 601883 3 8 65 1031 1175 1915 749163 666667 1333333
3 1109017 2 9 55 1107 1051 0 1862301 1333334 2000000
4 511440 2 11 85 1313 1759 0 2375889 2000001 2666667
5 573969 3 6 90 1098 1055 1596 2952940 2666668 3333334
6 791873 2 18 90 1736 1273 0 3748562 3333335 4000001
7 734905 1 17 70 1552 0 0 4115335 4000002 4666668
8 446508 1 7 70 1489 0 0 4851792 4666669 5333335
9 805441 2 18 70 1209 1418 0 5658722 5333336 6000002
10 446508 2 19 100 1067 1247 0 6107857 6000003 6666669
11 674528 3 20 50 1444 1367 1431 6784699 6666670 7333336
12 1061430 3 9 50 1545 1106 1399 7850371 7333337 8000003
13 533484 1 12 90 1781 0 0 8387905 8000004 8666670
14 531453 3 9 100 1602 1635 1464 8921139 8666671 9333337
15 820462 3 13 55 1272 1566 1413 9746302 9333338 10000004
16 290566 3 15 60 1304 1122 1598 10041119 10000005 10666671
17 997050 3 16 85 1658 1973 1374 11042193 10666672 11333338
18 747071 2 8 90 1117 1616 0 11794269 11333339 12000005
Total number of pulses in waveform = 42
*****

```



### Type 5 Radar Waveform\_5

Waveform Num = 5  
 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	738018	2	16	95	1709	1032	0	738018	0	799999
2	339389	2	16	60	1456	1571	0	1080148	800000	1599999
3	1242288	1	11	95	1314	0	0	2325463	1600000	2399999
4	714830	3	7	80	1611	1217	1645	3041607	2400000	3199999
5	182523	2	20	55	1493	1256	0	3228603	3200000	3999999
6	1313871	2	9	60	1715	1043	0	4545223	4000000	4799999
7	741017	1	11	50	1711	0	0	5288998	4800000	5599999
8	896517	3	6	60	1324	1325	1077	6187226	5600000	6399999
9	678965	2	20	75	1781	1482	0	6869917	6400000	7199999
10	703131	2	19	75	1729	1140	0	7576311	7200000	7999999
11	1123039	1	12	65	1342	0	0	8702219	8000000	8799999
12	198243	3	18	50	1658	1022	1383	8901804	8800000	9599999
13	1326037	3	12	55	1599	1130	1829	10231904	9600000	10399999
14	379285	3	5	50	1629	1915	1667	10615747	10400000	11199999
15	978573	3	9	100	1513	1361	1094	11599531	11200000	11999999

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

### Type 5 Radar Waveform\_6

Waveform Num = 6  
 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	621430	2	18	55	1899	1536	0	621430	0	705881
2	183975	1	11	50	1863	0	0	808840	705882	1411763
3	1160780	2	19	75	1796	1007	0	1971463	1411764	2117645
4	246694	1	11	65	1669	0	0	2220880	2117646	2823527
5	703641	2	15	70	1284	1227	0	2926170	2823528	3529409
6	941555	3	11	50	1421	1862	1982	3870236	3529410	4235291
7	407102	3	20	95	1109	1250	1021	4282603	4235292	4941173
8	942446	1	9	100	1853	0	0	5228429	4941174	5647055
9	1002528	1	7	60	1250	0	0	6232810	5647056	6352937
10	411944	1	14	75	1043	0	0	6646004	6352938	7058819
11	646674	2	13	95	1799	1059	0	7293721	7058820	7764701
12	570558	3	10	95	1770	1146	1455	7867137	7764702	8470583
13	867705	2	6	70	1361	1907	0	8739213	8470584	9176465
14	698904	1	11	80	1847	0	0	9441385	9176466	9882347
15	792067	1	11	90	1307	0	0	10235299	9882348	10588229
16	642787	2	15	50	1316	1634	0	10879393	10588230	11294111
17	624722	2	14	65	1355	1407	0	11507065	11294112	11999993

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

### Type 5 Radar Waveform\_7

Waveform Num = 7  
 Num of Bursts = 12  
 Burst Interval (us) = 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	784623	2	9	80	1419	1512	0	784623	0	999999
2	1156629	3	9	75	1484	1848	1561	1944183	1000000	1999999
3	209164	2	15	85	1094	1802	0	2158240	2000000	2999999
4	1509509	2	5	80	1447	1666	0	3670645	3000000	3999999
5	1286431	3	7	65	1441	1604	1977	4960189	4000000	4999999
6	638380	2	5	60	1982	1365	0	5603591	5000000	5999999
7	1299556	1	11	95	1931	0	0	6906494	6000000	6999999
8	597049	1	16	65	1299	0	0	7505474	7000000	7999999
9	999982	2	5	70	1658	1700	0	8506755	8000000	8999999
10	935809	3	18	50	1002	1237	1561	9445922	9000000	9999999
11	1059554	2	7	90	1180	1280	0	10509276	10000000	10999999
12	1068627	3	10	60	1285	1647	1246	11580363	11000000	11999999

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



### Type 5 Radar Waveform\_8

Waveform Num = 8  
 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	419356	1	19	100	1354	0	0	419356	0	857142
2	1165811	1	19	100	1882	0	0	1586521	857143	1714285
3	829982	1	20	90	1825	0	0	2418385	1714286	2571428
4	444619	2	15	65	1735	1206	0	2864829	2571429	3428571
5	973284	2	20	80	1218	1937	0	3841054	3428572	4285714
6	1243378	2	17	65	1334	1166	0	5087587	4285715	5142857
7	311725	1	6	80	1589	0	0	5401812	5142858	6000000
8	1323303	3	14	80	1731	1378	1907	6726704	6000001	6857143
9	600555	2	5	75	1754	1872	0	7332275	6857144	7714286
10	795212	1	17	55	1909	0	0	8131113	7714287	8571429
11	625543	2	8	95	1019	1081	0	8758565	8571430	9428572
12	1399444	1	11	55	1980	0	0	10160109	9428573	10285715
13	186224	1	15	85	1659	0	0	10348313	10285716	11142858
14	1549006	1	13	60	1629	0	0	11898978	11142859	12000001

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

### Type 5 Radar Waveform\_9

Waveform Num = 9  
 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	588970	1	8	90	1472	0	0	588970	0	857142
2	958637	3	16	55	1423	1556	1303	1549079	857143	1714285
3	636995	2	14	90	1920	1194	0	2190356	1714286	2571428
4	1141866	3	5	90	1438	1767	1837	3335336	2571429	3428571
5	555551	2	17	75	1951	1598	0	3895929	3428572	4285714
6	452687	1	6	70	1353	0	0	4352165	4285715	5142857
7	838701	3	20	95	1124	1108	1735	5192219	5142858	6000000
8	1258378	3	13	85	1166	1907	1385	6454564	6000001	6857143
9	1130838	1	16	100	1286	0	0	7589860	6857144	7714286
10	560946	2	7	90	1692	1555	0	8152092	7714287	8571429
11	591019	3	20	90	1721	1771	1832	8746358	8571430	9428572
12	1139476	3	9	85	1351	1264	1753	9891158	9428573	10285715
13	436668	2	14	90	1707	1817	0	10332194	10285716	11142858
14	1049795	1	13	60	1860	0	0	11385513	11142859	12000001

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

### Type 5 Radar Waveform\_10

Waveform Num = 10  
 Num of Bursts = 19  
 Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	590471	3	16	90	1058	1561	1368	590471	0	631578
2	352042	2	17	95	1868	1293	0	946500	631579	1263157
3	809886	1	13	80	1595	0	0	1759547	1263158	1894736
4	673813	3	19	75	1276	1125	1137	2434955	1894737	2526315
5	705931	1	5	65	1660	0	0	3144424	2526316	3157894
6	386437	3	18	70	1969	1648	1523	3532521	3157895	3789473
7	572361	3	5	70	1676	1372	1128	4110022	3789474	4421052
8	829282	3	6	75	1858	1431	1706	4943480	4421053	5062631
9	260467	3	11	95	1239	1768	1058	5208942	5062632	5694210
10	563573	2	18	55	1061	1697	0	5776580	5684211	6315789
11	925133	1	15	70	1744	0	0	6704471	6315790	6947368
12	569502	3	12	85	1073	1540	1542	7275717	6947369	7578947
13	482335	1	16	90	1496	0	0	7762207	7578948	8210526
14	584585	3	13	90	1286	1799	1829	8348288	8210527	8842105
15	540343	1	9	65	1001	0	0	8893545	8842106	9473684
16	741172	1	12	100	1740	0	0	9635718	9473685	10105263
17	793517	3	11	85	1968	1546	1397	10430975	10105264	10736842
18	739011	3	19	100	1153	1953	1602	11174897	10736843	11368421
19	298774	3	12	90	1459	1211	1853	11478379	11368422	12000000

Total number of pulses in waveform = 43  
 \*\*\*\*\*



### Type 5 Radar Waveform\_11

```
Waveform Num = 11
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	595763	3	8	85	1444	1540	1393	595763	0	705881
2	739503	1	9	100	1939	0	0	1339643	705882	1411763
3	616314	1	12	100	1256	0	0	1958396	1411764	2117646
4	653207	2	10	85	1128	1534	0	2612859	2117646	2823527
5	829473	3	5	65	1364	1990	1723	3444994	2823528	3529409
6	280572	3	17	85	1086	1156	1792	3730643	3529410	4235291
7	872668	3	17	95	1063	1445	1078	4607345	4235292	4941173
8	675311	1	20	50	1063	0	0	5286242	4941174	5647055
9	709986	3	8	75	1611	1338	1535	5997291	5647056	6352937
10	954950	3	6	90	1446	1333	1117	6956725	6352938	7058819
11	744512	1	8	85	1776	0	0	7705133	7058820	7764701
12	326721	3	15	75	1651	1119	1310	8033630	7764702	8470583
13	853208	3	5	95	1473	1957	1195	8890918	8470584	9176465
14	781231	2	9	70	1469	1637	0	9676774	9176466	9882347
15	467419	3	10	55	1359	1823	1964	10147299	9882348	10588229
16	596125	1	19	50	1085	0	0	10748570	10588230	11294111
17	1074735	1	16	50	1297	0	0	11824390	11294112	11999993

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

### Type 5 Radar Waveform\_12

```
Waveform Num = 12
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	557737	3	17	55	1886	1787	1181	557737	0	799999
2	355093	1	17	55	1494	0	0	917664	800000	1599999
3	1459812	1	12	50	1556	0	0	2378970	1600000	2399999
4	751548	2	17	60	1930	1235	0	3132074	2400000	3199999
5	689279	1	13	75	1178	0	0	3824518	3200000	3999999
6	419673	1	14	55	1011	0	0	4245369	4000000	4799999
7	736484	2	10	80	1643	1946	0	4982864	4800000	5599999
8	820351	3	9	60	1692	1742	1887	5806804	5600000	6399999
9	1061214	2	6	65	1803	1969	0	6873339	6400000	7199999
10	925257	3	15	75	1532	1226	1859	7802368	7200000	7999999
11	944712	3	14	100	1079	1225	1756	8751697	8000000	8799999
12	637921	3	9	75	1038	1022	1395	9393678	8800000	9599999
13	219288	3	10	60	1140	1452	1215	9616421	9600000	10399999
14	839680	3	17	100	1893	1136	1898	10459608	10400000	11199999
15	1162816	2	13	75	1683	1147	0	11627551	11200000	11999999

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

### Type 5 Radar Waveform\_13

```
Waveform Num = 13
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	768227	1	12	55	1840	0	0	768227	0	1499999
2	2168861	3	12	95	1976	1006	1498	2936928	1500000	2999999
3	1014397	3	9	80	1362	1057	1777	3955805	3000000	4499999
4	644361	3	14	95	1343	1735	1199	4604362	4500000	5999999
5	2480829	1	17	70	1665	0	0	7089468	6000000	7499999
6	1187787	3	8	100	1167	1871	1713	8278920	7500000	8999999
7	773271	2	19	75	1782	1321	0	9056942	9000000	10499999
8	2563416	3	18	50	1437	1467	1644	11623461	10500000	11999999

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



### Type 5 Radar Waveform\_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	47210	2	14	95	1225	1299	0	47210	0	857142
2	950018	1	16	95	1246	0	0	999752	857143	1714285
3	1036759	1	11	70	1619	0	0	2037757	1714286	2571428
4	978514	2	14	50	1128	1534	0	3017890	2571429	3428571
5	1025032	2	5	60	1097	1610	0	4045584	3428572	4285714
6	438137	2	15	80	1247	1862	0	4486428	4285715	5142857
7	849383	3	8	65	1197	1395	1860	5338920	5142858	6000000
8	963643	1	11	80	1766	0	0	6307015	6000001	6857143
9	1204841	3	15	75	1447	1609	1073	7513622	6857144	7714286
10	505202	2	17	95	1752	1073	0	8022953	7714287	8571429
11	725111	2	11	55	1290	1436	0	8750689	8571430	9428572
12	904490	2	13	80	1340	1498	0	9658105	9428573	10285715
13	1402043	3	5	80	1427	1170	1322	11062986	10285716	11142858
14	826679	2	14	90	1672	1305	0	11893584	11142859	12000001

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

### Type 5 Radar Waveform\_15

```
Waveform Num = 15
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	551379	3	20	55	1279	1276	1392	551379	0	1333332
2	898142	1	14	85	1007	0	0	1453468	1333333	2666665
3	2001263	1	6	95	1373	0	0	3455738	2666666	3999998
4	1681690	2	8	95	1921	1519	0	5138901	3999999	5333331
5	499686	2	10	60	1871	1928	0	5641927	5333332	6666664
6	1834277	1	16	75	1559	0	0	7490003	6666665	7999997
7	1209064	1	14	90	1676	0	0	8690626	7999998	9333330
8	1532955	3	16	75	1866	1432	1251	10225257	9333331	10666663
9	1510279	2	18	80	1295	1246	0	11740085	10666664	11999996

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

### Type 5 Radar Waveform\_16

```
Waveform Num = 16
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	391919	3	16	65	1870	1409	1222	391919	0	923076
2	1445093	1	18	55	1250	0	0	1841513	923077	1846153
3	778106	1	12	55	1712	0	0	2620869	1846154	2769230
4	812366	3	17	70	1328	1928	1926	3434947	2769231	3692307
5	517167	2	19	85	1392	1699	0	3957296	3692308	4615384
6	1100927	3	20	65	1401	1788	1040	5061314	4615385	5538461
7	729685	1	16	70	1508	0	0	5795228	5538462	6461538
8	963197	2	15	55	1798	1604	0	6759933	6461539	7384615
9	1494859	1	8	55	1432	0	0	8258194	7384616	8307692
10	643881	3	10	60	1587	1083	1914	8903507	8307693	9230769
11	688743	1	20	70	1064	0	0	9596834	9230770	10153846
12	626506	1	19	75	1031	0	0	10224404	10153847	11076923
13	1523717	3	17	60	1450	1755	1299	11749152	11076924	12000000

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





### Type 5 Radar Waveform\_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	209312	3	17	85	1317	1430	1945	209312	0	749999
2	655647	1	20	95	1160	0	0	869651	750000	1499999
3	821983	1	16	70	1966	0	0	1692794	1500000	2249999
4	850300	3	18	50	1393	1947	1598	2645060	2250000	2999999
5	1111091	3	20	60	1025	1759	1100	3661089	3000000	3749999
6	387542	3	9	75	1070	1013	1475	4052515	3750000	4499999
7	691379	1	8	65	1206	0	0	4747452	4500000	5249999
8	520727	3	8	65	1287	1076	1904	5269385	5250000	5999999
9	827428	1	10	85	1214	0	0	6101080	6000000	6749999
10	1023118	3	14	50	1187	1952	1302	7125412	6750000	7499999
11	498241	2	5	85	1952	1753	0	7628094	7500000	8249999
12	816521	2	13	60	1424	1759	0	8448320	8250000	8999999
13	562994	2	12	100	1812	1948	0	9014497	9000000	9749999
14	758771	1	7	100	1050	0	0	9777028	9750000	10499999
15	829010	3	8	85	1093	1732	1837	10607088	10500000	11249999
16	1196705	1	17	95	1774	0	0	11808465	11250000	11999999

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

### Type 5 Radar Waveform\_18

Waveform Num = 18  
 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	1214850	3	9	90	1070	1418	1551	1214850	0	1499999
2	747877	2	17	100	1664	1328	0	1966766	1500000	2999999
3	1808828	2	11	60	1746	1067	0	3778586	3000000	4499999
4	1447947	2	5	75	1643	1789	0	5229346	4500000	5999999
5	1514671	3	8	100	1421	1824	1650	6747449	6000000	7499999
6	1745976	2	5	85	1067	1570	0	8498320	7500000	8999999
7	709505	3	18	65	1715	1210	1871	9210462	9000000	10499999
8	1797458	2	5	100	1336	1710	0	11012716	10500000	11999999

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

### Type 5 Radar Waveform\_19

Waveform Num = 19  
 Num of Bursts = 15  
 Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	349432	3	20	65	1419	1456	1431	349432	0	799999
2	832451	1	20	95	1414	0	0	1186189	800000	1599999
3	832682	3	18	90	1971	1942	1313	2020285	1600000	2399999
4	708438	1	9	60	1984	0	0	2733949	2400000	3199999
5	898622	3	6	95	1945	1205	1706	3634555	3200000	3999999
6	759400	2	8	80	1804	1546	0	4398811	4000000	4799999
7	506527	1	12	75	1886	0	0	4908688	4800000	5599999
8	789568	2	5	100	1372	1765	0	5700142	5600000	6399999
9	1296313	1	18	85	1523	0	0	6899592	6400000	7199999
10	851911	3	20	55	1696	1804	1293	7853026	7200000	7999999
11	880300	3	11	85	1406	1565	1645	8738119	8000000	8799999
12	157505	3	20	80	1830	1246	1309	8900240	8800000	9599999
13	1214377	3	14	60	1711	1626	1912	10119002	9600000	10399999
14	772663	2	14	90	1337	1079	0	10896914	10400000	11199999
15	1095862	1	20	70	1389	0	0	11995192	11200000	11999999

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



### Type 5 Radar Waveform\_20

Waveform Num = 20  
 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	610218	2	19	85	1221	1029	0	610218	0	857142
2	681218	3	20	65	1862	1863	1319	1293686	857143	1714285
3	581064	2	14	50	1793	1290	0	1879794	1714286	2671428
4	1427744	3	6	80	1869	1092	1572	3310621	2571429	3428571
5	165717	1	7	70	1658	0	0	3480871	3428572	4285714
6	1524699	1	13	60	1419	0	0	5007228	4285715	5142857
7	749268	3	7	90	1029	1531	1678	5757915	5142858	6000000
8	500498	3	17	70	1440	1984	1579	6262651	6000001	6857143
9	1033450	1	19	50	1217	0	0	7301104	6857144	7714286
10	1180914	3	15	95	1620	1637	1791	8483235	7714287	8571429
11	804486	1	15	100	1123	0	0	9292769	8571430	9428572
12	643996	2	14	55	1204	1251	0	9937888	9428573	10285715
13	744476	1	11	50	1066	0	0	10684819	10285716	11142858
14	841833	2	17	50	1668	1048	0	11527718	11142859	12000001

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

### Type 5 Radar Waveform\_21

Waveform Num = 21  
 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	438550	2	10	70	1497	1455	0	438550	0	1199999
2	1892286	3	6	100	1794	1856	1163	2333788	1200000	2399999
3	230798	3	17	95	1601	1732	1202	2569399	2400000	3599999
4	1762386	2	13	95	1002	1364	0	4336320	3600000	4799999
5	1112751	2	15	90	1271	1785	0	5451437	4800000	5999999
6	1219863	2	6	65	1756	1366	0	6674356	6000000	7199999
7	1507563	2	15	60	1608	1024	0	8185041	7200000	8399999
8	1017270	2	18	75	1096	1630	0	9204943	8400000	9599999
9	1004547	1	6	50	1943	0	0	10212216	9600000	10799999
10	1631793	2	19	80	1854	1012	0	11846952	10800000	11999999

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

### Type 5 Radar Waveform\_22

Waveform Num = 22  
 Num of Bursts = 19  
 Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	476949	3	14	90	1974	1878	1912	476949	0	631578
2	453925	3	15	60	1321	1954	1895	936638	631579	1263157
3	650213	2	17	65	1133	1599	0	1592021	1263158	1894736
4	919096	2	11	75	1008	1688	0	2513849	1894737	2526315
5	490580	1	9	65	1982	0	0	3007125	2526316	3157894
6	510231	2	20	100	1265	1007	0	3519338	3157895	3789473
7	405517	2	11	65	1886	1364	0	3927127	3789474	4421052
8	764053	1	8	60	1429	0	0	4694430	4421053	5052631
9	738433	1	5	50	1620	0	0	5434292	5052632	5684210
10	630402	3	10	55	1723	1891	1531	6066314	5684211	6315789
11	771057	1	14	80	1245	0	0	6842516	6315790	6947368
12	301706	2	13	90	1244	1270	0	7145467	6947369	7578947
13	749816	1	19	65	1862	0	0	7897797	7578948	8210526
14	599186	3	14	75	1465	1468	1702	8498845	8210527	8842105
15	781577	1	11	65	1725	0	0	9285057	8842106	9473684
16	321699	2	17	55	1227	1197	0	9608481	9473685	10105263
17	1060103	2	16	65	1388	1823	0	10661008	10105264	10736842
18	511889	1	8	55	1729	0	0	11176108	10736843	11368421
19	518662	2	11	65	1824	1449	0	11696499	11368422	12000000

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



### Type 5 Radar Waveform\_23

```
Waveform Num = 23
Num of Bursts = 12
Burst Interval (us)= 1000000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	293705	1	20	65	1026	0	0	293705	0	999999
2	718371	3	11	90	1944	1712	1806	1013102	1000000	1999999
3	1240007	3	6	70	1905	1079	1015	2258571	2000000	2999999
4	1576771	1	5	60	1669	0	0	3839341	3000000	3999999
5	426954	3	9	100	1831	1254	1377	4267964	4000000	4999999
6	1319233	2	5	95	1238	1159	0	5591659	5000000	5999999
7	902150	3	15	60	1082	1859	1671	6496206	6000000	6999999
8	1347193	1	19	95	1161	0	0	7848011	7000000	7999999
9	1006218	1	19	70	1662	0	0	8855390	8000000	8999999
10	231617	1	20	50	1052	0	0	9088669	9000000	9999999
11	1110603	1	18	95	1738	0	0	10200324	10000000	10999999
12	1201646	2	9	60	1292	1141	0	11403708	11000000	11999999

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

### Type 5 Radar Waveform\_24

```
Waveform Num = 24
Num of Bursts = 20
Burst Interval (us)= 6000000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	303295	2	15	55	1724	1487	0	303295	0	5999999
2	436592	3	17	55	1197	1147	1156	743098	6000000	11999999
3	880459	2	19	65	1707	1466	0	1627057	12000000	17999999
4	567441	3	14	95	1570	1563	1743	2197671	18000000	23999999
5	667892	3	15	65	1690	1896	1484	2870439	24000000	29999999
6	460241	2	8	95	1346	1408	0	3335750	30000000	35999999
7	712099	2	5	55	1096	1147	0	4050603	36000000	41999999
8	485010	2	9	50	1906	1694	0	4537856	42000000	47999999
9	759792	3	18	85	1255	1942	1313	5301248	48000000	53999999
10	660074	2	7	100	1409	1739	0	5965832	54000000	59999999
11	253949	2	15	55	1552	1601	0	6222929	60000000	65999999
12	681036	2	10	100	1365	1337	0	6907118	66000000	71999999
13	699731	2	12	60	1268	1933	0	7609551	72000000	77999999
14	441928	2	19	60	1469	1320	0	8054680	78000000	83999999
15	344014	3	12	60	1286	1911	1406	8401483	84000000	89999999
16	986070	2	10	55	1089	1424	0	9392156	90000000	95999999
17	330388	1	6	60	1789	0	0	9725057	96000000	101999999
18	752020	1	17	80	1032	0	0	10478866	102000000	107999999
19	915258	3	16	85	1290	1051	1060	11395156	108000000	113999999
20	352289	2	5	55	1851	1929	0	11750866	114000000	119999999

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

### Type 5 Radar Waveform\_25

```
Waveform Num = 25
Num of Bursts = 9
Burst Interval (us)= 1333333
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	951883	1	18	95	1443	0	0	951883	0	1333332
2	820488	3	12	95	1430	1475	1910	1773814	1333333	2666665
3	2109839	2	8	60	1762	1361	0	3888468	2666666	3999998
4	397419	2	6	70	1873	1291	0	4289010	3999999	5333331
5	2338788	2	5	65	1050	1710	0	6630962	5333332	6666664
6	85099	2	16	50	1428	1279	0	6718821	6666665	7999997
7	1428381	2	17	50	1438	1564	0	8149909	7999998	9333330
8	1724834	3	17	50	1162	1503	1846	9877745	9333331	10666663
9	850816	3	7	80	1189	1974	1835	10733072	10666664	11999996

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



### Type 5 Radar Waveform\_26

```
Waveform Num = 26
Num of Bursts = 8
Burst Interval (us)= 1500000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	751748	2	18	65	1277	1814	0	751748	0	1499999
2	1402643	3	14	80	1285	1421	1160	2157482	1500000	2999999
3	1510782	1	6	65	1703	0	0	3672130	3000000	4499999
4	1271561	1	11	85	1016	0	0	4945394	4500000	5999999
5	1846279	1	18	75	1259	0	0	6792689	6000000	7499999
6	758693	3	13	80	1495	1446	1504	7552641	7500000	8999999
7	2453452	1	9	100	1010	0	0	10010538	9000000	10499999
8	1233090	3	9	90	1090	1410	1104	11244638	10500000	11999999

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

### Type 5 Radar Waveform\_27

```
Waveform Num = 27
Num of Bursts = 8
Burst Interval (us)= 1500000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1447311	1	13	80	1179	0	0	1447311	0	1499999
2	159156	2	17	100	1060	1326	0	1607646	1500000	2999999
3	1712221	3	8	55	1089	1608	1991	3322253	3000000	4499999
4	2102309	3	15	50	1586	1002	1717	5429250	4500000	5999999
5	1751440	3	8	60	1810	1722	1202	7184995	6000000	7499999
6	1131678	3	10	70	1484	1126	1773	8321407	7500000	8999999
7	1746674	3	12	80	1006	1043	1879	10072464	9000000	10499999
8	1281790	2	11	75	1037	1641	0	11358182	10500000	11999999

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

### Type 5 Radar Waveform\_28

```
Waveform Num = 28
Num of Bursts = 14
Burst Interval (us)= 857143
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	53476	2	18	85	1589	1868	0	53476	0	857142
2	933849	1	8	75	1994	0	0	990782	857143	1714285
3	1291202	2	18	100	1520	1089	0	2283978	1714286	2571428
4	810929	2	19	95	1760	1133	0	3097516	2571429	3428571
5	1100614	1	5	90	1248	0	0	4201023	3428572	4285714
6	899792	3	5	80	1563	1980	1371	5102063	4285715	5142857
7	515142	3	11	80	1410	1699	1494	5622119	5142858	6000000
8	1177453	3	9	95	1482	1043	1091	6804175	6000001	6857143
9	224688	3	12	75	1834	1093	1191	7032479	6857144	7714286
10	1206831	2	11	60	1245	1708	0	8243428	7714287	8571429
11	691492	3	6	65	1618	1393	1027	8937873	8571430	9428572
12	1078139	3	20	95	1761	1601	1056	10020050	9428573	10285715
13	1006324	3	6	80	1202	1141	1643	11030792	10285716	11142858
14	741420	3	17	90	1915	1920	1634	11776198	11142859	12000001

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



### Type 5 Radar Waveform\_29

```

Waveform Num = 29
Num of Bursts = 19
Burst Interval (us) = 631579

```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	907902	1	8	70	1460	0	0	124995	0	631578
2	124995	2	9	80	1275	1409	0	1034357	631579	1263157
3	496042	3	5	80	1976	1324	1713	1533083	1263158	1894736
4	598118	1	12	60	1372	0	0	2136214	1894737	2526316
5	865613	2	10	90	1588	1523	0	3003199	2526316	3157894
6	193995	1	9	85	1512	0	0	3199905	3157895	3789473
7	1035460	1	17	70	1319	0	0	4236877	3789474	4421052
8	334015	3	10	65	1789	1867	1890	4572211	4421053	5052631
9	778401	2	7	65	1565	1030	0	5356158	5052632	5684210
10	623749	2	11	55	1278	1692	0	5982502	5684211	6315789
11	893060	2	5	85	1111	1769	0	6878532	6315790	6947368
12	338897	1	15	95	1931	0	0	7220309	6947369	7578947
13	617658	3	20	50	1147	1171	1216	7839898	7578948	8210526
14	779484	3	6	65	1524	1448	1229	8622916	8210527	8842105
15	507843	3	9	65	1539	1736	1674	9134960	8842106	9473684
16	813670	3	18	90	1913	1076	1831	9953579	9473685	10105263
17	505461	2	18	90	1560	1466	0	10463660	10105264	10736842
18	839144	2	12	85	1964	1284	0	11306020	10736843	11368421
19	673026	2	10	95	1968	1079	0	11982284	11368422	12000000

Total number of pulses in waveform = 39

### Type 5 Radar Waveform\_30

```

Waveform Num = 30
Num of Bursts = 13
Burst Interval (us) = 923077

```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	308759	2	14	95	1539	1199	0	308759	0	923076
2	1089527	1	11	90	1092	0	0	1401024	923077	1846153
3	602493	3	6	90	1516	1882	1003	2004609	1846154	2769230
4	1587395	2	16	75	1994	1111	0	3596405	2769231	3692307
5	365813	1	9	55	1699	0	0	3965323	3692308	4615384
6	664875	3	17	50	1775	1234	1187	4631897	4615385	5538461
7	947620	2	18	60	1703	1376	0	5583713	5538462	6461538
8	1566655	2	20	70	1950	1284	0	7153447	6461539	7384615
9	786720	3	7	100	1507	1841	1774	7943401	7384616	8307692
10	554651	3	14	100	1919	1736	1007	8503174	8307693	9230769
11	857806	3	8	90	1453	1964	1396	9365642	9230770	10153846
12	1121202	3	19	90	1845	1645	1597	10491657	10153847	11076923
13	745310	1	18	50	1893	0	0	11242054	11076924	12000000

Total number of pulses in waveform = 29

## 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	5304	1
2	5292	1	17	5305	1
3	5293	1	18	5306	1
4	5296	1	19	5308	1
5	5297	1	20	5310	0
6	5298	1	21	5312	1
7	5298	1	22	5314	1
8	5297	1	23	5316	1
9	5298	1	24	5318	1
10	5298	1	25	5320	1
11	5299	1	26	5322	1
12	5300	1	27	5324	1
13	5301	1	28	5326	1
14	5302	1	29	5328	1
15	5303	1	30	5330	0
Detection Percentage (%)					90%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5252	0	20	5263	60
5	5258	15	34	5256	102
28	5251	84	35	5260	105
29	5257	87	58	5282	174
67	5263	201	59	5250	177
71	5255	213	61	5265	183
73	5268	219	96	5280	288
74	5253	222	--	--	--
97	5274	291	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5297	0	3	5277	9
3	5273	9	4	5312	12
8	5269	24	8	5301	24
10	5323	30	12	5309	36
14	5277	42	24	5295	72
19	5264	57	25	5283	75
24	5271	72	39	5276	117
45	5278	135	48	5291	144
54	5303	162	52	5269	156
70	5318	210	58	5275	174
71	5308	213	61	5288	183
78	5295	234	66	5280	198
81	5312	243	91	5306	273
86	5321	258	--	--	--
81	5298	243	--	--	--
82	5284	246	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5316	12	2	5308	6
29	5281	87	4	5320	12
32	5275	96	34	5295	102
41	5290	123	35	5288	105
44	5273	132	40	5311	120
46	5282	138	43	5284	129
68	5300	204	68	5301	204
76	5310	228	70	5270	210
79	5302	237	75	5315	225
86	5288	258	89	5289	267
90	5267	270	90	5296	270
--	--	--	94	5279	282

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5269	0	12	5321	36
1	5275	3	15	5320	45
5	5286	15	22	5324	66
23	5277	69	27	5280	81
24	5318	72	29	5313	87
28	5326	84	31	5315	93
36	5294	108	40	5277	120
51	5295	153	41	5297	123
93	5301	279	44	5310	132
--	--	--	51	5295	153
--	--	--	53	5312	159
--	--	--	62	5316	186
--	--	--	66	5294	198
--	--	--	77	5322	231
--	--	--	80	5300	240
--	--	--	95	5279	285



Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5297	21	8	5284	24
10	5273	30	14	5321	42
17	5291	51	16	5314	48
21	5272	63	17	5326	51
27	5290	81	20	5307	60
39	5280	117	45	5278	135
57	5293	171	57	5316	171
60	5295	180	67	5308	201
71	5306	213	70	5304	210
74	5303	222	73	5320	219
79	5309	237	89	5270	267
87	5319	261	--	--	--
96	5310	288	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5285	9	4	5239	12
6	5298	18	12	5295	36
13	5282	39	19	5328	57
16	5322	48	27	5326	81
36	5278	108	31	5321	93
39	5306	117	41	5329	123
44	5312	132	44	5297	132
46	5319	138	53	5275	159
53	5292	159	55	5281	165
69	5290	207	75	5289	225
71	5327	213	76	5330	228
75	5329	225	80	5322	240
77	5269	231	85	5282	255
96	5289	288	--	--	--
97	5279	291	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5307	12	3	5326	9
31	5294	93	48	5308	144
33	5305	99	58	5277	174
34	5272	102	63	5280	189
41	5325	123	75	5305	225
50	5314	150	79	5330	237
51	5299	153	84	5309	252
59	5282	177	86	5275	258
69	5318	207	90	5281	270
78	5276	234	--	--	--
85	5285	255	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5321	0	0	5312	0
5	5282	15	9	5284	27
12	5288	36	22	5279	66
15	5289	45	28	5275	84
27	5325	81	30	5314	90
31	5305	93	31	5302	93
64	5332	192	47	5326	141
74	5329	222	85	5283	255
92	5285	276	92	5332	276
--	--	--	95	5316	285

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5316	45	8	5307	24
22	5275	66	23	5284	69
25	5323	75	31	5331	93
35	5326	105	37	5306	111
46	5276	138	57	5317	171
54	5291	162	61	5312	183
55	5324	165	69	5310	207
58	5285	174	79	5326	237
66	5321	198	--	--	--
69	5304	207	--	--	--
75	5315	225	--	--	--
93	5310	279	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5321	15	7	5300	21
9	5326	27	24	5313	72
14	5285	42	38	5306	114
15	5316	45	56	5286	168
31	5307	93	72	5318	216
35	5320	105	95	5292	285
37	5312	111	97	5315	291
42	5287	126	--	--	--
58	5286	174	--	--	--
59	5305	177	--	--	--
64	5314	192	--	--	--
65	5289	195	--	--	--
66	5294	198	--	--	--
77	5327	231	--	--	--
93	5311	279	--	--	--
98	5291	294	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5319	6	6	5285	18
6	5303	18	9	5334	27
26	5316	78	12	5343	36
37	5286	111	18	5289	54
44	5308	132	39	5304	117
60	5315	180	42	5314	126
67	5293	201	70	5312	210
75	5307	225	76	5305	228
76	5297	228	88	5344	264
77	5338	231	89	5296	267
82	5284	246	90	5327	270
87	5342	261	98	5300	294
89	5337	267	99	5333	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5323	6	10	5304	30
9	5295	27	15	5307	45
13	5338	39	18	5296	54
14	5324	42	30	5301	90
16	5327	48	31	5334	93
21	5310	63	35	5294	105
22	5315	66	36	5335	108
28	5341	84	37	5298	111
36	5289	108	43	5314	129
37	5314	111	47	5333	141
45	5317	135	51	5308	153
55	5313	165	53	5345	159
71	5311	213	83	5297	249
82	5316	246	85	5293	255
83	5297	249	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5290	21	9	5331	27
8	5348	24	10	5336	30
12	5318	36	14	5326	42
15	5343	45	15	5323	45
21	5313	63	25	5338	75
28	5333	84	31	5296	93
29	5307	87	36	5298	108
33	5295	99	49	5310	147
42	5320	126	56	5319	168
50	5336	150	58	5309	174
54	5350	162	67	5348	201
57	5316	171	83	5341	249
58	5298	174	87	5334	261
61	5304	183	93	5302	279
73	5334	219	99	5304	297
76	5346	228	--	--	--
92	5294	276	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5349	45	9	5309	27
18	5325	54	13	5322	39
21	5326	63	16	5337	48
23	5320	69	18	5341	54
46	5334	138	23	5351	69
47	5321	141	50	5310	150
59	5304	177	69	5299	207
63	5297	189	71	5353	213
73	5336	219	72	5334	216
74	5346	222	73	5296	219
86	5306	258	74	5343	222
96	5331	288	85	5318	255
98	5352	294	88	5338	264
--	--	--	89	5312	267
--	--	--	91	5314	273
--	--	--	94	5348	282
--	--	--	97	5328	291
--	--	--	99	5333	297

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5351	45	7	5345	21
18	5342	54	18	5309	54
22	5331	66	24	5354	72
26	5315	78	42	5337	126
30	5357	90	44	5320	132
41	5318	123	65	5312	195
46	5349	138	66	5300	198
52	5336	156	70	5258	210
56	5307	168	73	5305	219
81	5324	243	74	5315	222
--	--	--	76	5329	228
--	--	--	80	5314	240
--	--	--	81	5324	243
--	--	--	88	5342	264
--	--	--	91	5335	273
--	--	--	98	5338	294
			99	5331	297





## Radar Statistical Performance for 802.11ac-VHT80

## Radar Type 1 - Radar Statistical Performance

Trail #	Radar signal	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	Test A	5250	1	518	102	1
2	Test A	5256	1	538	99	1
3	Test A	5262	1	558	95	1
4	Test A	5268	1	578	92	1
5	Test A	5274	1	598	89	1
6	Test A	5280	1	618	86	1
7	Test A	5286	1	638	83	1
8	Test A	5292	1	658	81	1
9	Test A	5298	1	678	78	1
10	Test A	5304	1	698	76	1
11	Test A	5310	1	718	74	1
12	Test A	5316	1	738	72	1
13	Test A	5322	1	758	70	1
14	Test A	5328	1	778	68	1
15	Test A	5330	1	798	67	1
16	Test B	5250	1	971	55	1
17	Test B	5256	1	991	54	1
18	Test B	5262	1	1015	52	1
19	Test B	5268	1	1123	47	1
20	Test B	5274	1	1159	46	1
21	Test B	5280	1	1279	42	1
22	Test B	5286	1	1339	40	1
23	Test B	5292	1	1415	38	1
24	Test B	5298	1	1463	37	1
25	Test B	5304	1	1591	34	1
26	Test B	5310	1	1723	31	1
27	Test B	5316	1	1891	28	1
28	Test B	5322	1	2007	27	1
29	Test B	5328	1	2191	25	1
30	Test B	5330	1	2053	22	1
Detection Percentage (%)						100%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250	2.6	230	27	1
2	5253	3.2	196	28	1
3	5256	4.0	216	28	1
4	5259	1.7	211	29	1
5	5262	2.8	213	24	1
6	5265	3.0	173	27	1
7	5268	1.2	151	26	1
8	5271	4.1	164	28	1
9	5274	2.6	188	23	1
10	5277	3.2	198	26	1
11	5280	3.0	179	29	1
12	5283	3.6	156	23	1
13	5286	1.8	170	23	1
14	5289	3.6	222	27	1
15	5292	3.1	217	26	1
16	5295	2.3	201	25	1
17	5298	4.8	212	23	1
18	5301	2.5	173	26	1
19	5304	1.6	157	23	1
20	5307	2.9	215	27	1
21	5310	4.3	165	25	1
22	5313	1.5	162	23	1
23	5319	3.0	212	27	1
24	5316	3.8	207	25	1
25	5322	1.3	154	27	1
26	5325	4.7	174	29	1
27	5326	3.4	154	29	1
28	5327	4.7	207	28	1
29	5329	3.1	184	24	1
30	5330	4.2	186	29	1
Detection Percentage (%)					100%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250	9.9	263	16	1
2	5253	8.2	471	18	1
3	5256	8.9	421	18	1
4	5259	7.4	256	18	1
5	5262	7.0	331	17	1
6	5265	8.2	484	17	1
7	5268	6.4	432	18	1
8	5271	7.3	329	18	1
9	5274	7.4	436	16	1
10	5277	7.4	281	18	1
11	5280	9.1	487	17	1
12	5283	8.4	268	18	1
13	5286	6.0	373	16	1
14	5289	8.5	261	17	1
15	5292	8.0	332	17	1
16	5295	9.1	401	18	1
17	5298	10.0	281	17	1
18	5301	10.0	415	17	1
19	5304	6.2	478	17	1
20	5307	9.4	396	16	1
21	5310	9.2	466	17	1
22	5313	6.1	400	16	1
23	5316	8.9	386	18	1
24	5319	6.3	500	18	1
25	5322	6.6	459	16	1
26	5325	7.2	408	17	1
27	5326	6.7	495	16	1
28	5327	8.6	389	16	1
29	5328	6.3	430	17	1
30	5330	7.7	432	17	1
Detection Percentage (%)					100%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5250	11.2	497	12	1
2	5253	17.9	300	12	1
3	5256	18.2	439	16	1
4	5259	13.9	276	14	1
5	5262	18.3	441	12	1
6	5265	19.5	416	14	1
7	5268	18.9	296	13	1
8	5271	17.9	493	12	1
9	5274	15.4	481	15	1
10	5277	11.2	379	13	1
11	5280	19.0	362	13	1
12	5283	16.1	280	15	1
13	5286	17.6	478	13	1
14	5289	16.5	255	16	1
15	5292	17.3	268	12	1
16	5295	11.5	256	14	1
17	5298	15.2	473	15	1
18	5301	18.1	405	15	1
19	5304	13.4	489	16	1
20	5307	12.0	445	12	1
21	5310	17.2	274	12	1
22	5313	19.8	262	15	1
23	5316	17.7	389	15	1
24	5319	15.0	420	14	1
25	5322	17.3	260	14	1
26	5325	13.5	290	12	1
27	5326	12.8	408	15	1
28	5327	16.3	297	12	1
29	5328	12.6	287	12	1
30	5330	14.1	263	16	1
Detection Percentage (%)					100%

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

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



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5250	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 = 18											
Burst Interval (us) = 666667											
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)	
1	659261	3	20	65	1686	1651	1432	659261	0	666666	
2	216628	3	12	95	1966	1151	1720	880658	666667	1333333	
3	1068407	2	5	75	1902	1558	0	1943902	1333334	2000000	
4	87076	1	14	70	1696	0	0	2034438	2000001	2666667	
5	912104	1	7	75	1413	0	0	2948235	2666668	3333334	
6	1019070	3	8	55	1530	1771	1987	3968721	3333335	4000001	
7	30514	3	14	55	1581	1886	1149	4004523	4000002	4666668	
8	665998	3	10	70	1590	1685	1837	4675137	4666669	5333335	
9	722693	3	5	65	1418	1600	1709	5402942	5333336	6000002	
10	833142	3	18	60	1333	1058	1780	6240811	6000003	6666669	
11	521529	1	14	70	1068	0	0	6766511	6666670	7333336	
12	860570	3	16	65	1203	1646	1176	7628149	7333337	8000003	
13	607812	3	12	80	1678	1686	1975	8239986	8000004	8666670	
14	548673	3	5	75	1534	1527	1794	8793998	8666671	9333337	
15	788811	2	6	65	1576	1167	0	9587664	9333338	10000004	
16	868940	2	5	60	1506	1699	0	10459347	10000005	10666671	
17	747775	1	16	90	1735	0	0	11210327	10666672	11333338	
18	600997	3	18	80	1779	1482	1355	11813059	11333339	12000005	
Total number of pulses in waveform = 43											
*****											



### Type 5 Radar Waveform\_2

Waveform Num = 2  
 Num of Bursts = 8  
 Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	378179	2	7	95	1963	1640	0	378179	0	1499999
2	1223170	2	6	100	1302	1390	0	1604952	1500000	2999999
3	1805838	2	17	80	1368	1987	0	3413482	3000000	4499999
4	1256699	3	16	85	1196	1091	1564	4673536	4500000	5999999
5	2362245	1	12	55	1614	0	0	7039632	6000000	7499999
6	1263389	2	7	75	1209	1534	0	8304635	7500000	8999999
7	1514151	1	16	55	1789	0	0	9821529	9000000	10499999
8	1090320	2	9	90	1123	1301	0	10913638	10500000	11999999

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

### Type 5 Radar Waveform\_3

Waveform Num = 3  
 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	333453	2	20	70	1831	1620	0	333453	0	599999
2	491818	3	9	95	1526	1155	1464	828722	600000	1199999
3	920373	3	6	100	1449	1211	1134	1753240	1200000	1799999
4	320861	1	15	60	1804	0	0	2077895	1800000	2399999
5	530284	3	18	50	1313	1749	1882	2609983	2400000	2999999
6	545023	3	16	60	1751	1354	1873	3159950	3000000	3599999
7	903267	2	12	85	1966	1349	0	4068195	3600000	4199999
8	168178	2	16	80	1266	1998	0	4239688	4200000	4799999
9	917000	1	19	95	1054	0	0	5159952	4800000	5399999
10	569678	1	9	70	1384	0	0	5730684	5400000	5999999
11	384447	2	9	55	1004	1868	0	6116515	6000000	6599999
12	778832	2	11	75	1992	1148	0	6898219	6600000	7199999
13	385584	3	11	75	1620	1979	1738	7286943	7200000	7799999
14	732432	1	10	75	1397	0	0	8024712	7800000	8399999
15	551434	3	16	50	1211	1089	1504	8577543	8400000	8999999
16	852942	1	6	65	1593	0	0	9434289	9000000	9599999
17	545547	3	5	60	1760	1440	1214	9981429	9600000	10199999
18	455002	2	20	65	1591	1922	0	10440845	10200000	10799999
19	368101	2	19	50	1746	1152	0	10802459	10800000	11399999
20	1146240	3	15	80	1373	1958	1900	11951597	11400000	11999999

Total number of pulses in waveform = 43  
 \*\*\*\*\*

### Type 5 Radar Waveform\_4

Waveform Num = 4  
 Num of Bursts = 19  
 Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	482369	2	14	85	1983	1815	0	482369	0	631578
2	353195	2	16	55	1095	1615	0	839362	631579	1263157
3	423733	3	8	70	1675	1774	1537	1266805	1263158	1894736
4	950568	2	15	100	1098	1778	0	2221359	1894737	2526315
5	832356	2	7	50	1276	1603	0	3056591	2526316	3157894
6	293332	3	6	90	1519	1305	0	3352802	3157895	3789473
7	902513	2	9	95	1225	1440	1028	4258139	3789474	4421052
8	654488	3	17	95	1630	1967	0	4916320	4421053	5052631
9	391315	3	16	80	1250	1393	1019	5311232	5052632	5684210
10	692778	1	10	95	1155	0	0	6007672	5684211	6315789
11	580538	2	16	50	1322	1508	0	6589365	6315790	6947368
12	671721	2	17	50	1388	1459	0	7263916	6947369	7578947
13	457157	2	7	85	1640	1857	0	7723920	7578948	8210526
14	827166	2	10	90	1320	1680	0	8564583	8210527	8842105
15	445736	1	12	100	1744	0	0	9003319	8842106	9473684
16	706092	2	7	70	1514	1761	0	9711155	9473685	10105263
17	920902	1	19	75	1319	0	0	10635332	10105264	10736842
18	507468	2	19	95	1192	1417	0	11144119	10736843	11368421
19	482032	3	6	55	1195	1313	1160	11628760	11368422	12000000

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



### Type 5 Radar Waveform\_5

```
Waveform Num = 5
Num of Bursts = 18
Burst Interval (us) = 666667
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	154343	2	8	50	1178	1716	0	154343	0	666666
2	1069308	3	17	95	1087	1657	1782	1226545	666667	1333333
3	633430	2	9	55	1872	1111	0	1864501	1333334	2000000
4	616192	2	13	50	1358	0	0	2483676	2000001	2666667
5	548163	1	8	55	1958	1743	0	3033197	2666668	3333334
6	584328	1	11	90	1603	0	0	3621226	3333335	4000001
7	550861	3	7	65	1083	1687	1322	4173690	4000002	4666668
8	713408	2	6	95	1706	1010	0	4891190	4666669	5333335
9	745999	2	11	80	1453	1766	0	5639905	5333336	6000002
10	404903	3	15	50	1130	1689	1195	6048027	6000003	6666669
11	789282	2	17	55	1811	1626	0	6841323	6666670	7333336
12	1126541	3	18	100	1077	1911	1037	7971301	7333337	8000003
13	322148	3	14	70	1464	1231	1193	8297474	8000004	8666670
14	434474	2	14	70	1108	1748	0	8735836	8666671	9333337
15	1079722	3	18	55	1210	1866	1351	9818414	9333338	10000004
16	181430	2	6	85	1417	1040	0	10004271	10000005	10666671
17	889202	2	18	90	1376	1275	0	10895930	10666672	11333338
18	437653	1	17	70	1454	0	0	11336234	11333339	12000005

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

### Type 5 Radar Waveform\_6

```
Waveform Num = 6
Num of Bursts = 16
Burst Interval (us) = 750000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	700882	2	12	75	1571	1009	0	700882	0	749999
2	331797	3	15	70	1737	1563	1499	1035259	750000	1499999
3	810675	3	14	90	1087	1691	1386	1850733	1500000	2249999
4	410776	2	5	80	1579	1691	0	2265673	2250000	2999999
5	786081	2	12	65	1508	1351	0	3055024	3000000	3749999
6	1195664	1	15	75	1926	0	0	4253547	3750000	4499999
7	303187	3	20	90	1227	1304	1949	4558660	4500000	5249999
8	1372648	2	9	65	1258	1606	0	5935788	5250000	5999999
9	744521	2	14	50	1194	1765	0	6683173	6000000	6749999
10	619866	3	8	50	1087	1397	1458	7305998	6750000	7499999
11	531745	1	5	60	1572	0	0	7841685	7500000	8249999
12	784314	1	15	50	1073	0	0	8627571	8250000	8999999
13	1032390	3	6	80	1029	1405	1370	9661034	9000000	9749999
14	167643	1	15	55	1634	0	0	9832481	9750000	10499999
15	1260794	3	20	75	1565	1840	1691	11094909	10500000	11249999
16	430766	2	18	50	1805	1543	0	11530771	11250000	11999999

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

### 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	282709	3	8	75	1591	1933	1279	282709	0	923076
2	1186432	2	20	65	1515	1753	0	1473944	923077	1846153
3	675049	1	13	55	1459	0	0	2152261	1846154	2769230
4	1292221	1	13	100	1455	0	0	3445941	2769231	3692307
5	1081123	1	5	80	1181	0	0	4528519	3692308	4615384
6	754525	3	12	100	1256	1719	1321	5284225	4615385	5538461
7	953851	1	18	60	1151	0	0	6242372	5538462	6461538
8	411636	2	8	65	1113	1911	0	6655159	6461539	7384615
9	878108	2	19	95	1640	1274	0	7536291	7384616	8307692
10	1440781	3	19	85	1369	1958	1380	8979986	8307693	9230769
11	403494	1	15	75	1175	0	0	9388187	9230770	10153846
12	780130	2	5	75	1613	1277	0	10169492	10153847	11076923
13	1410301	3	20	90	1438	1280	1447	11582683	11076924	12000000

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



### Type 5 Radar Waveform\_8

Waveform Num = 8  
 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	529753	1	5	100	1444	0	0	529753	0	705881
2	676150	1	12	100	1413	0	0	1207347	705882	1411763
3	605741	3	5	100	1561	1435	1722	1814501	1411764	2117645
4	701931	2	19	55	1070	1080	0	2521150	2117646	2823527
5	749065	3	19	65	1221	1142	1722	3272365	2823528	3529409
6	529382	3	12	65	1508	1617	1353	3805832	3529410	4235291
7	552834	1	18	90	1023	0	0	4363144	4235292	4941173
8	647550	2	14	50	1415	1257	0	5011717	4941174	5647055
9	808134	3	8	60	1794	1602	1004	5822523	5647056	6352937
10	820645	2	5	90	1953	1262	0	6647568	6352938	7058819
11	1091655	2	7	50	1172	1153	0	7742438	7058820	7764701
12	251445	2	18	50	1872	1024	0	7996208	7764702	8470583
13	1110398	3	6	55	1586	1262	1352	9109502	8470584	9176465
14	369331	1	8	80	1430	0	0	9483033	9176466	9882347
15	508572	1	7	80	1629	0	0	9993035	9882348	10588229
16	1029540	2	15	80	1059	1872	0	11024204	10588230	11294111
17	315334	1	11	90	1291	0	0	11342469	11294112	11999993

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

### Type 5 Radar Waveform\_9

Waveform Num = 9  
 Num of Bursts = 8  
 Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)
1	1453385	1	6	55	1157	0	0	1453385	0
2	870592	3	14	80	1743	1823	1571	2325134	1500000
3	2087741	2	10	50	1206	1492	0	4418012	3000000
4	1574601	2	18	95	1859	1735	0	5995311	4500000
5	1292172	3	12	80	1291	1472	1055	7291077	6000000
6	382180	3	14	80	1704	1297	1202	7677075	7500000
7	1484515	2	14	65	1085	1917	0	9165793	9000000
8	2722047	3	6	85	1474	1932	1897	11890842	10500000

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

### Type 5 Radar Waveform\_10

Waveform Num = 10  
 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	122371	3	18	90	1866	1734	1063	122371	0	599999
2	755000	2	13	60	1530	1637	0	882034	600000	1199999
3	642114	1	9	65	1597	0	0	1527315	1200000	1799999
4	279415	1	12	60	1872	0	0	1802327	1800000	2399999
5	973284	2	16	75	1653	1927	0	2777483	2400000	2999999
6	260819	2	9	85	1762	1169	0	3041882	3000000	3599999
7	678853	1	18	80	1151	0	0	3723666	3600000	4199999
8	1013970	1	10	65	1367	0	0	4738787	4200000	4799999
9	307633	1	9	80	1824	0	0	5047787	4800000	5399999
10	609951	1	7	65	1941	0	0	5659562	5400000	5999999
11	438855	1	5	75	1156	0	0	6100358	6000000	6599999
12	621898	2	10	95	1884	1474	0	6723412	6600000	7199999
13	904807	2	15	90	1927	1886	0	7631577	7200000	7799999
14	510965	2	20	100	1784	1520	0	8146355	7800000	8399999
15	427222	2	12	85	1723	1721	0	8576881	8400000	8999999
16	531875	1	17	90	1582	0	0	9112200	9000000	9599999
17	583844	1	19	100	1381	0	0	9697626	9600000	10199999
18	871657	1	16	80	1389	0	0	10570564	10200000	10799999
19	522573	3	13	100	1690	1282	1912	11094526	10800000	11399999
20	461495	1	13	70	1691	0	0	11660905	11400000	11999999

Total number of pulses in waveform = 31  
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### Type 5 Radar Waveform\_11

Waveform Num = 11  
 Num of Bursts = 14  
 Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	162138	2	13	65	1821	1113	0	162138	0	857142
2	963984	1	12	85	1169	0	0	1129056	857143	1714285
3	711487	1	20	50	1777	0	0	1841712	1714286	2571428
4	1559737	2	6	1698	1668	0	0	3403226	2571429	3428571
5	134566	2	14	65	1306	1457	0	3541158	3428572	4285714
6	829792	1	14	90	1002	0	0	4373713	4285715	5142857
7	1029806	2	18	95	1948	1894	0	5404521	5142858	6000000
8	951570	2	6	80	1145	1223	0	6359933	6000001	6857143
9	1199588	1	14	65	1823	0	0	7561889	6857144	7714286
10	716920	2	6	75	1436	1466	0	8280632	7714287	8571429
11	786176	2	15	90	1436	1876	0	9069710	8571430	9428572
12	1129878	1	16	50	1124	0	0	10202900	9428573	10285715
13	218439	2	20	65	1603	1705	0	10422463	10285716	11142858
14	1164396	1	17	100	1909	0	0	11590167	11142859	12000001

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

### 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	120304	1	11	95	1035	0	0	120304	0	857142
2	1180025	2	14	55	1287	1566	0	1301364	857143	1714285
3	443323	1	14	75	1559	0	0	1747540	1714286	2571428
4	908211	2	9	95	1336	1241	0	2657310	2571429	3428571
5	1510360	2	11	90	1001	1928	0	4170247	3428572	4285714
6	589477	1	17	60	1054	0	0	4762653	4285715	5142857
7	629873	2	6	55	1593	1605	0	5393580	5142858	6000000
8	964973	3	17	55	1572	1861	1316	6361751	6000001	6857143
9	892115	2	16	70	1532	1114	0	7258615	6857144	7714286
10	564816	1	15	90	1780	0	0	7826077	7714287	8571429
11	1337796	1	9	90	1527	0	0	9165653	8571430	9428572
12	797771	3	11	100	1085	1946	1499	9964951	9428573	10285715
13	1147311	1	17	90	1628	0	0	11116792	10285716	11142858
14	687286	1	13	55	1251	0	0	11805706	11142859	12000001

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

### Type 5 Radar Waveform\_13

Waveform Num = 13  
 Num of Bursts = 19  
 Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	313067	2	10	90	1247	1808	0	313067	0	631578
2	627483	3	16	50	1848	1658	1869	943605	631579	1263157
3	916742	1	16	55	1913	0	0	1865722	1263158	1894736
4	641930	1	5	80	1029	0	0	2509565	1894737	2526315
5	313274	1	7	60	1849	0	0	2823868	2526316	3157894
6	587033	1	19	50	1284	0	0	3412750	3157895	3789473
7	984393	2	10	95	1926	1326	0	4398427	3789474	4421052
8	364118	2	5	90	1719	1102	0	4765797	4421053	5052631
9	903272	3	16	95	1596	1181	1555	5671890	5052632	5684210
10	350903	1	11	100	1852	0	0	6027125	5684211	6315789
11	554675	3	10	80	1131	1822	1646	6583652	6315790	6947368
12	660808	2	11	95	1887	1018	0	7249059	6947369	7578947
13	924295	1	14	95	1075	0	0	8176259	7578948	8210526
14	635547	1	14	85	1304	0	0	8812881	8210527	8842105
15	87528	2	9	85	1275	1166	0	8901713	8842106	9473684
16	669186	1	8	75	1179	0	0	9573340	9473685	10105263
17	627740	3	20	75	1283	1586	1816	10202259	10105264	10736842
18	1099827	3	7	90	1991	1638	1455	11306771	10736843	11368421
19	496873	1	17	80	1346	0	0	11808728	11368422	12000000

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



### Type 5 Radar Waveform\_14

Waveform Num = 14  
 Num of Bursts = 16  
 Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	426412	1	9	90	1528	0	0	426412	0	749999
2	475052	3	16	70	1296	1764	1571	902992	750000	1499999
3	1316715	1	10	65	1613	0	0	2224338	1500000	2249999
4	260018	2	8	75	1694	1334	0	2485989	2250000	2999999
5	1117709	2	9	90	1183	1831	0	3606706	3000000	3749999
6	573780	1	5	95	1874	0	0	4183500	3750000	4499999
7	797789	3	19	80	1073	1407	1146	4983163	4500000	5249999
8	708128	1	19	70	1699	0	0	5694917	5250000	5999999
9	646386	1	7	100	1872	0	0	6342982	6000000	6749999
10	608968	2	10	60	1733	1554	0	6953822	6750000	7499999
11	697981	3	18	90	1330	1482	1201	7655090	7500000	8249999
12	750107	2	8	70	1918	1110	0	8409210	8250000	8999999
13	750438	1	13	55	1357	0	0	9162676	9000000	9749999
14	1038166	3	13	70	1650	1214	1558	10202199	9750000	10499999
15	597073	2	14	65	1527	1350	0	10803694	10500000	11249999
16	494647	2	6	85	1305	1469	0	11301218	11250000	11999999

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

### Type 5 Radar Waveform\_15

Waveform Num = 15  
 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)
1	1236505	1	14	65	1121	0	0	1236505	0
2	286876	3	5	95	1496	1728	1865	1524502	1333333
3	1900779	3	15	90	1136	1465	1239	3430370	2666666
4	716722	3	20	85	1554	1957	1339	4150932	3999999
5	2155022	3	6	55	1428	1215	1983	6310804	5333332
6	1491781	3	14	95	1203	1256	1077	7807211	6666665
7	748666	1	15	80	1278	0	0	8559413	7999998
8	905490	3	9	90	1834	1587	1166	9466181	9333331
9	1374506	3	9	60	1806	1536	1288	10845274	10666664

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

### Type 5 Radar Waveform\_16

Waveform Num = 16  
 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	984159	1	18	55	1478	0	0	984159	0	1499999
2	752850	3	5	55	1346	1146	1390	1738487	1500000	2999999
3	1927691	1	17	85	1250	0	0	3670060	3000000	4499999
4	2146137	3	9	85	1271	1312	1812	5817447	4500000	5999999
5	384622	2	9	80	1313	1914	0	6206464	6000000	7499999
6	2211739	2	10	70	1938	1377	0	8421430	7500000	8999999
7	1011099	3	19	75	1469	1842	1920	9435844	9000000	10499999
8	1163166	3	7	80	1188	1991	1117	10604241	10500000	11999999

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



### Type 5 Radar Waveform\_17

Waveform Num = 17  
 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	267249	1	19	95	1561	0	0	267249	0	1199999
2	1345452	3	20	90	1502	1492	1977	1614262	1200000	2399999
3	1948396	1	12	60	1318	0	0	3567629	2400000	3599999
4	85573	1	11	55	1355	0	0	3654520	3600000	4799999
5	1455674	3	15	75	1740	1407	1523	5111549	4800000	5999999
6	1061197	2	12	90	1345	1614	0	6177416	6000000	7199999
7	1742767	3	20	55	1682	1711	1418	7923142	7200000	8399999
8	708790	1	18	70	1695	0	0	8636743	8400000	9599999
9	2135574	2	18	90	1389	1680	0	10774012	9600000	10799999
10	187035	1	18	95	1540	0	0	10964116	10800000	11999999

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

### Type 5 Radar Waveform\_18

Waveform Num = 18  
 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	572213	3	14	60	1033	1846	1947	572213	0	799999
2	644554	1	5	75	1996	0	0	1221593	800000	1599999
3	884887	1	13	100	1959	0	0	2108476	1600000	2399999
4	540700	2	10	55	1051	1871	0	2651135	2400000	3199999
5	954194	1	5	80	1513	0	0	3608251	3200000	3999999
6	1125732	3	5	100	1287	1373	1245	4735496	4000000	4799999
7	561368	3	19	75	1236	1411	1539	5300769	4800000	5599999
8	419748	2	17	55	1150	1488	0	5724703	5600000	6399999
9	779996	1	19	90	1902	0	0	6507337	6400000	7199999
10	948947	2	11	100	1962	1546	0	7458186	7200000	7999999
11	1227399	2	11	55	1586	1415	0	8689093	8000000	8799999
12	613591	1	7	85	1800	0	0	9305635	8800000	9599999
13	966352	1	8	95	1625	0	0	10273837	9600000	10399999
14	749079	2	17	85	1542	1161	0	11024541	10400000	11199999
15	965551	3	8	55	1157	1356	1457	11992795	11200000	11999999

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

### Type 5 Radar Waveform\_19

Waveform Num = 19  
 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	245070	1	12	1036	0	0	0	245070	0	749999
2	655049	1	15	95	1476	0	0	901155	750000	1499999
3	1232478	1	13	60	1832	0	0	2135109	1500000	2249999
4	494021	1	14	95	1595	0	0	2630962	2250000	2999999
5	1099324	3	15	95	1311	1022	1887	3731881	3000000	3749999
6	599150	2	10	85	1250	1974	0	4335251	3750000	4499999
7	676644	3	18	60	1200	1341	1405	5015119	4500000	5249999
8	946170	2	6	90	1288	1252	0	5965235	5250000	5999999
9	102614	3	15	70	1089	1622	1406	6070389	6000000	6749999
10	925753	2	10	50	1064	1098	0	7000259	6750000	7499999
11	889503	2	9	60	1436	1738	0	7891924	7500000	8249999
12	1015680	2	6	75	1986	1916	0	8910778	8250000	8999999
13	267401	2	14	75	1070	1459	0	9182081	9000000	9749999
14	1111838	2	16	60	1345	1361	0	10296448	9750000	10499999
15	215853	1	16	80	1519	0	0	10515007	10500000	11249999
16	1286518	2	6	75	1356	1019	0	11803044	11250000	11999999

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



### Type 5 Radar Waveform\_20

Waveform Num = 20  
 Num of Bursts = 15  
 Burst Interval (us) = 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	601930	3	11	65	1482	1294	1026	601930	0	799999
2	620421	2	13	100	1527	1027	0	1226153	800000	1599999
3	392107	1	8	100	1254	0	0	1620814	1600000	2399999
4	1486445	3	13	100	1726	1594	1159	3108513	2400000	3199999
5	320349	2	8	100	1162	1386	0	3433341	3200000	3999999
6	1022120	2	19	90	1537	1590	0	4458009	4000000	4799999
7	854503	2	7	50	1772	1538	0	5315639	4800000	5599999
8	1075056	3	20	100	1932	1777	1649	6394005	5600000	6399999
9	445075	2	6	95	1808	1905	0	6844438	6400000	7199999
10	555366	3	7	85	1155	1243	1771	7403517	7200000	7999999
11	1227553	1	16	55	1151	0	0	8635239	8000000	8799999
12	489486	3	6	80	1501	1475	1021	9125876	8800000	9599999
13	474725	3	15	55	1644	1909	1449	9604698	9600000	10399999
14	1059579	1	13	80	1599	0	0	10669179	10400000	11199999
15	850875	3	6	55	1103	1921	1991	11521653	11200000	11999999

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

### Type 5 Radar Waveform\_21

Waveform Num = 21  
 Num of Bursts = 19  
 Burst Interval (us) = 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	294820	3	16	100	1934	1763	1967	294820	0	631578
2	923037	1	16	65	1609	0	0	1223521	631579	1263157
3	603644	2	15	60	1883	1475	0	1828774	1263158	1894736
4	266997	1	5	55	1870	0	0	2099129	1894737	2526315
5	836714	3	13	85	1313	1901	1280	2937713	2526316	3157894
6	707484	1	6	75	1557	0	0	3649691	3157895	3789473
7	489286	2	8	95	1684	1591	0	4140534	3789474	4421052
8	762083	2	8	95	1505	1718	0	4905892	4421053	5052631
9	272446	3	20	55	1465	1488	1891	5181561	5052632	5684210
10	571147	3	11	85	1953	1187	1117	5757552	5684211	6315789
11	892320	3	12	55	1910	1236	1275	6654129	6315790	6947368
12	465546	1	10	75	1686	0	0	7124096	6947369	7578947
13	866407	1	11	60	1415	0	0	7992088	7578948	8210526
14	764702	3	11	85	1830	1480	1969	8758205	8210527	8842105
15	131815	3	10	75	1731	1930	1227	8895299	8842106	9473684
16	949391	3	20	60	1964	1994	1055	9849578	9473685	10105263
17	289253	1	10	55	1565	0	0	10143844	10105264	10736842
18	871498	3	17	65	1673	1524	1244	11016907	10736843	11368421
19	960086	1	14	65	1404	0	0	11981434	11368422	12000000

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

### Type 5 Radar Waveform\_22

Waveform Num = 22  
 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	556449	2	19	65	1089	1018	0	556449	0	1199999
2	1537660	3	6	100	1071	1434	1506	2096216	1200000	2399999
3	1192905	3	14	50	1338	1394	1160	3293132	2400000	3599999
4	1281768	1	5	55	1190	0	0	4578792	3600000	4799999
5	374718	1	15	95	1062	0	0	4954700	4800000	5999999
6	1863146	3	20	65	1559	1476	1370	6818908	6000000	7199999
7	601501	3	5	95	1087	1671	1254	7424814	7200000	8399999
8	1305847	1	13	80	1549	0	0	8734673	8400000	9599999
9	1549441	2	20	85	1046	1805	0	10285663	9600000	10799999
10	1517917	3	10	60	1672	1475	1795	11806431	10800000	11999999

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



### 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	144062	1	7	95	1717	0	0	144062	0	1333332
2	1896315	2	19	75	1610	1049	0	2042094	1333333	2666665
3	904608	2	20	50	1546	1511	0	2949361	2666666	3999998
4	1667201	2	18	90	1051	1357	0	4619619	3999999	5333331
5	1469551	3	5	50	1706	1963	1816	6091578	5333332	6666664
6	632865	3	10	50	1119	1599	1834	6729928	6666665	7999997
7	2174328	3	14	75	1993	1185	1275	8908808	7999998	9333330
8	1272706	2	18	70	1282	1533	0	10185967	9333331	10666663
9	1478419	1	16	85	1176	0	0	11667201	10666664	11999996

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

### Type 5 Radar Waveform\_24

Waveform Num = 24  
Num of Bursts = 11  
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	564476	1	14	80	1977	0	0	564476	0	1090908
2	830747	1	13	50	1059	0	0	1397200	1090909	2181817
3	1281318	2	11	80	1225	1212	0	2679577	2181818	3272726
4	1244684	1	13	90	1560	0	0	3926698	3272727	4363635
5	1431467	2	8	70	1593	1261	0	5359725	4363636	5454544
6	993086	2	8	60	1410	1029	0	6355665	5454545	6545453
7	1213960	2	20	65	1108	1274	0	7572064	6545454	7636362
8	252786	1	19	85	1586	0	0	7827232	7636363	8727271
9	1613005	1	10	50	1609	0	0	9441823	8727272	9818180
10	763365	2	15	50	1016	1677	0	10206797	9818181	10909089
11	1526392	1	18	50	1670	0	0	11735882	10909090	11999998

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

### Type 5 Radar Waveform\_25

Waveform Num = 25  
Num of Bursts = 11  
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1069318	1	12	95	1287	0	0	1069318	0	1090908
2	172093	1	9	75	1865	0	0	1242698	1090909	2181817
3	1232873	3	13	65	1186	1503	1566	2477436	2181818	3272726
4	1421014	2	12	95	1964	1803	0	3902705	3272727	4363635
5	1457864	1	7	70	1430	0	0	5364336	4363636	5454544
6	654096	2	12	80	1200	1342	0	6019862	5454545	6545453
7	954429	2	6	55	1694	1686	0	6976833	6545454	7636362
8	1210727	1	12	60	1402	0	0	8190940	7636363	8727271
9	705870	2	8	85	1997	1448	0	8898212	8727272	9818180
10	1925202	2	18	90	1759	1156	0	10826859	9818181	10909089
11	825578	3	13	85	1134	1207	1117	11655352	10909090	11999998

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



### Type 5 Radar Waveform\_26

```
Waveform Num = 26
Num of Bursts = 19
Burst Interval (us) = 631579
Burst # Off Time (us) # Pulses Chirp (MHz) PW (us) Pulse 1 Pri (us) Pulse 2 Pri (us) Pulse 3 Pri (us) Start Loc (us) Start Burst Interval (us) End Burst Interval (us)
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	231930	1	5	70	1557	0	0	231930	0	631578
2	630029	3	11	95	1487	1895	1254	863516	631579	1263157
3	665110	2	12	85	1522	1782	0	1533262	1263158	1894736
4	678027	3	9	55	1075	1285	1300	2214593	1894737	2526315
5	586710	2	6	75	1426	1329	0	2804963	2526316	3157894
6	461816	2	20	95	1414	1788	0	3269534	3157895	3789473
7	841675	3	16	65	1692	1304	1948	4114411	3789474	4421052
8	478322	2	19	60	1597	1027	0	4597677	4421053	5052631
9	634986	2	12	75	1476	1227	0	5081521	5052632	5684210
10	809500	2	14	80	1338	1912	0	5719210	5684211	6315789
11	443329	3	11	80	1615	1154	1983	6531960	6315790	6947368
12	1009209	1	16	95	1869	0	0	6980041	6947369	7578947
13	572102	3	8	50	1696	1996	1960	7991119	7578948	8210526
14	637721	1	8	55	1111	0	0	8568873	8210527	8842105
15	692363	2	13	85	1687	1030	0	9207705	8842106	9473684
16	453546	2	6	60	1619	1261	0	9902785	9473685	10105263
17	875719	1	19	75	1603	0	0	10359211	10105264	10736842
18	277509	3	7	85	1456	1200	1828	11236533	10736843	11368421
19		1	19	95	1799	0	0	11518526	11368422	12000000

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

### Type 5 Radar Waveform\_27

```
Waveform Num = 27
Num of Bursts = 15
Burst Interval (us) = 800000
Burst # Off Time (us) # Pulses Chirp (MHz) PW (us) Pulse 1 Pri (us) Pulse 2 Pri (us) Pulse 3 Pri (us) Start Loc (us) Start Burst Interval (us) End Burst Interval (us)
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	616819	1	17	55	1599	0	0	616819	0	799999
2	309479	1	9	80	1001	0	0	927897	800000	1599999
3	804643	1	6	70	1569	0	0	1733541	1600000	2399999
4	1141030	1	8	100	1296	0	0	2876140	2400000	3199999
5	331058	2	6	80	1487	1029	0	3208494	3200000	3999999
6	1312991	3	13	90	1266	1974	1201	4524001	4000000	4799999
7	736407	1	5	95	1477	0	0	5264849	4800000	5599999
8	384454	1	11	95	1134	0	0	5650780	5600000	6399999
9	949814	2	7	65	1060	1306	0	6601728	6400000	7199999
10	621467	3	16	65	1553	1899	1637	7225561	7200000	7999999
11	810455	1	5	60	1778	0	0	8041105	8000000	8799999
12	1509158	2	20	100	1953	1540	0	9552041	8800000	9599999
13	352850	1	11	75	1505	0	0	9908384	9600000	10399999
14	520200	1	12	50	1851	0	0	10430089	10400000	11199999
15	1362927	3	13	95	1964	1910	1627	11794867	11200000	11999999

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

### Type 5 Radar Waveform\_28

```
Waveform Num = 28
Num of Bursts = 18
Burst Interval (us) = 666667
Burst # Off Time (us) # Pulses Chirp (MHz) PW (us) Pulse 1 Pri (us) Pulse 2 Pri (us) Pulse 3 Pri (us) Start Loc (us) Start Burst Interval (us) End Burst Interval (us)
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	267972	3	7	70	1168	1098	1151	267972	0	666666
2	597034	2	14	75	1951	1967	0	868423	666667	1333333
3	489252	2	8	100	1550	1993	0	1360993	1333334	2000000
4	646079	3	13	85	1545	1995	1924	2010615	2000001	2666667
5	733824	1	9	55	1572	0	0	2749906	2666668	3333334
6	716237	3	9	65	1141	1212	1024	3467715	3333335	4000001
7	544531	3	5	100	1623	1894	1668	4015623	4000002	4666668
8	1080847	2	18	70	1428	1906	0	5101655	4666669	5333335
9	400958	1	11	75	1825	0	0	5505947	5333336	6000002
10	997994	3	7	55	1768	1375	1592	6505766	6000003	6666669
11	453586	3	14	80	1808	1777	1635	6964087	6666670	7333336
12	901123	3	15	95	1579	1565	1028	7870430	7333337	8000003
13	171731	2	14	90	1785	1636	0	8046333	8000004	8666670
14	802404	3	20	70	1906	1363	1493	8852158	8666671	9333337
15	577753	1	7	60	1111	0	0	9434673	9333338	10000004
16	1092846	3	7	70	1164	1520	1963	10528630	10000005	10666671
17	594623	3	16	85	1782	1749	1105	11127900	10666672	11333338
18	244121	2	15	55	1149	1688	0	11376657	11333339	12000005

Total number of pulses in waveform = 43  
\*\*\*\*\*



### Type 5 Radar Waveform\_29

```

Waveform Num = 29
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	568016	1	17	100	1804	0	0	568016	0	705881
2	455478	2	14	60	1298	1592	0	1025298	705882	1411763
3	407157	3	9	100	1738	1977	1072	1435345	1411764	2117645
4	983125	2	5	80	1710	1801	0	2423257	2117646	2823527
5	557242	1	10	70	1417	0	0	2984010	2823528	3529409
6	1105445	3	14	90	1042	1380	1526	4090872	3529410	4235291
7	574107	1	15	55	1990	0	0	4668927	4235292	4941173
8	579404	1	8	60	1083	0	0	5250321	4941174	5647055
9	766924	2	18	80	1318	1998	0	6018328	5647056	6352937
10	357296	3	16	50	1883	1527	1653	6378940	6352938	7058819
11	1086575	3	9	65	1685	1324	1459	7470578	7058820	7764701
12	515933	2	18	95	1829	1975	0	7990979	7764702	8470583
13	753906	2	16	65	1853	1489	0	8748689	8470584	9176465
14	558957	1	14	85	1174	0	0	9310988	9176466	9882347
15	840527	3	6	100	1859	1766	1747	10152689	9882348	10588229
16	526586	2	12	85	1904	1477	0	10684647	10588230	11294111
17	922496	2	10	60	1119	1997	0	11610524	11294112	11999993

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

### Type 5 Radar Waveform\_30

```

Waveform Num = 30
Num of Bursts = 12
Burst Interval (us)= 1000000

```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	981449	2	16	80	1526	1433	0	981449	0	999999
2	857016	1	18	55	1042	0	0	1841424	1000000	1999999
3	556386	3	9	75	1403	1827	1037	2398852	2000000	2999999
4	829386	1	5	90	1848	0	0	3232505	3000000	3999999
5	1671287	3	13	55	1501	1568	1467	4905640	4000000	4999999
6	353476	3	7	100	1702	1840	1343	5263652	5000000	5999999
7	939201	2	17	70	1290	1739	0	6207738	6000000	6999999
8	1740285	1	16	85	1500	0	0	7951052	7000000	7999999
9	96015	2	5	100	1963	1768	0	8048567	8000000	8999999
10	1919353	3	16	90	1723	1953	1971	9971651	9000000	9999999
11	1003507	1	11	50	1830	0	0	10980805	10000000	10999999
12	113728	2	13	60	1020	1444	0	11096363	11000000	11999999

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

## 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	5250	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)
51	5265	153	30	5253	90
65	5264	195	45	5261	135
70	5268	210	47	5272	141
71	5256	213	81	5281	243
89	5277	267	92	5278	276
--	--	--	96	5274	288

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5282	42	17	5267	51
67	5267	201	20	5282	60
90	5285	270	36	5270	108
--	--	--	38	5250	114
--	--	--	44	5285	132
--	--	--	59	5288	177
--	--	--	90	5256	270
--	--	--	96	5274	288

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
33	5282	99	1	5261	3
59	5269	177	14	5282	42
87	5255	261	26	5274	78
--	--	--	31	5285	93
--	--	--	32	5283	96
--	--	--	42	5290	126
--	--	--	45	5273	135
--	--	--	49	5270	147
--	--	--	63	5280	189
--	--	--	72	5291	216
--	--	--	88	5266	264

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5282	18	11	5251	33
61	5255	183	17	5294	51
75	5267	225	20	5297	60
78	5259	234	31	5272	93
80	5297	240	40	5270	120
91	5258	273	53	5257	159
92	5296	276	56	5267	168
96	5272	288	74	5278	222
--	--	--	78	5262	234
--	--	--	82	5277	246
--	--	--	90	5265	270

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5261	21	5	5254	15
18	5278	54	11	5286	33
21	5277	63	13	5282	39
29	5298	87	22	5275	66
31	5287	93	25	5265	75
40	5279	120	31	5285	93
47	5300	141	46	5288	138
53	5288	159	49	5261	147
56	5280	168	52	5269	156
59	5259	177	71	5292	213
67	5286	201	75	5278	225
72	5290	216	84	5251	252
73	5303	219	95	5290	285

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5259	24	8	5266	24
20	5309	60	17	5275	51
26	5295	78	18	5284	54
34	5303	102	24	5255	72
37	5288	111	40	5286	120
40	5307	120	46	5285	138
42	5262	126	49	5264	147
44	5299	132	54	5304	162
45	5268	135	64	5305	192
46	5256	138	71	5261	213
66	5250	198	74	5297	222
71	5300	213	78	5287	234
93	5293	279	91	5291	273
96	5289	288	96	5259	288
99	5271	297	97	5308	291

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5287	33	0	5304	0
15	5318	45	1	5282	3
21	5305	63	21	5307	63
34	5294	102	23	5269	69
38	5322	114	41	5291	123
49	5317	147	44	5315	132
53	5271	159	48	5308	144
59	5325	177	57	5267	171
61	5308	183	60	5261	180
80	5290	240	62	5266	186
86	5304	258	63	5302	189
91	5293	273	72	5257	216
93	5277	279	75	5286	225
98	5279	294	81	5272	243
--	--	--	96	5289	288

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5297	30	5	5309	15
15	5313	45	8	5316	24
18	5269	54	18	5272	54
21	5316	63	20	5262	60
27	5307	81	23	5312	69
28	5285	84	24	5288	72
31	5310	93	32	5263	96
37	5273	111	36	5284	108
41	5283	123	38	5318	114
55	5276	165	41	5290	123
67	5287	201	42	5293	126
80	5267	240	50	5298	150
82	5270	246	57	5265	171
90	5321	270	69	5271	207
--	--	--	78	5273	234
--	--	--	88	5267	264
--	--	--	91	5261	273

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5285	3	0	5275	0
7	5284	21	1	5290	3
8	5300	24	6	5273	18
20	5322	60	13	5303	39
24	5296	72	21	5284	63
34	5290	102	22	5287	66
35	5311	105	29	5313	87
39	5275	117	43	5291	129
47	5273	141	44	5320	132
60	5266	180	52	5318	156
82	5302	246	67	5306	201
95	5320	285	73	5298	219
99	5293	297	97	5309	291
--	--	--	98	5299	294

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5320	24	4	5274	12
18	5291	54	13	5279	39
37	5313	111	17	5317	51
45	5309	135	24	5334	72
52	5316	156	28	5331	84
53	5303	159	39	5286	117
56	5297	168	42	5303	126
64	5275	192	57	5305	171
69	5305	207	58	5324	174
71	5322	213	61	5275	183
74	5299	222	65	5302	195
89	5326	267	74	5313	222
--	--	--	77	5292	231
--	--	--	89	5294	267
--	--	--	94	5312	282
--	--	--	97	5285	291

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5302	21	13	5320	39
11	5317	33	15	5302	45
33	5304	99	22	5303	66
35	5278	105	30	5338	90
41	5331	123	41	5322	123
54	5301	162	51	5335	153
55	5283	165	56	5339	168
80	5296	240	70	5292	210
89	5290	267	89	5294	267
91	5321	273	--	--	--
93	5333	279	--	--	--
94	5291	282	--	--	--
97	5282	291	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5300	51	2	5323	6
19	5307	57	7	5326	21
20	5319	60	15	5293	45
23	5299	69	21	5287	63
24	5328	72	22	5319	66
31	5292	93	27	5286	81
45	5303	135	38	5302	114
56	5315	168	43	5320	129
52	5324	156	57	5333	171
85	5339	255	70	5341	210
--	--	--	76	5336	228
--	--	--	77	5331	231
--	--	--	94	5329	282
--	--	--	96	5334	288
--	--	--	99	5290	297

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5320	10	16	5333	48
11	5323	22	19	5300	57
17	5315	34	21	5296	63
23	5347	46	22	5319	66
33	5301	66	36	5294	108
40	5303	80	40	5292	120
47	5345	94	47	5311	141
50	5330	100	53	5317	159
53	5298	106	65	5340	195
56	5291	112	84	5295	252
59	5310	118	88	8338	264
81	5349	162	91	5303	273
82	5334	164	94	5341	282
89	5319	178	99	5322	297
99	5305	198	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5320	6	2	5298	6
13	5346	39	3	5348	9
17	5308	51	5	5300	15
45	5330	135	13	5312	39
47	5299	141	27	5330	81
74	5323	222	42	5314	126
79	5324	237	44	5311	132
--	--	--	51	5344	153
--	--	--	53	5308	159
--	--	--	64	5345	192
--	--	--	67	5343	201
--	--	--	72	5336	216
--	--	--	79	5355	237
--	--	--	81	5296	243
--	--	--	84	5325	252
--	--	--	85	5326	255
--	--	--	95	5333	285



Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5319	27	3	5355	9
14	5348	42	4	5359	12
15	5336	45	7	5326	21
20	5310	60	13	5309	39
30	5315	90	15	5318	45
37	5309	111	17	5329	51
41	5329	123	21	5343	63
47	5311	141	38	5341	114
52	5353	156	44	5349	132
59	5328	177	66	5342	198
61	5334	183	69	5300	207
62	5303	186	79	5341	237
87	5343	261	91	5360	273
94	5307	282	95	5308	285

## 6. CONCLUSION

The data collected relate only the item(s) tested and show that the **Wireless LAN Access Point FCC ID: O9C-BJNGAFB0004** is in compliance with Part 15E of the FCC Rules.

————— The End —————