

# DFS MEASUREMENT REPORT

## FCC PART 15 Subpart E WLAN 802.11a/n/ac

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**FCC ID:** Q9DAPIN0318

**APPLICANT:** Hewlett Packard Enterprise Company

**Application Type:** Class III Permissive Change

**Product:** ACCESS POINT

**Model No.:** APIN0318


**Brand Name:**  

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

**FCC Rule Part(s):** Part 15.407 Section (h)(2)  
KDB 905462 D02v02, KDB 905462 D04v01

**Type of Device:**  Master Device  
 Client Device (No radar detection)  
 Client Device with radar detection

**Test Date:** January 02 ~ March 21, 2018

Reviewed By :   
( Paddy Chen )

Approved By :   
(Chenz Ker)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 905462 D02v02. Test results reported herein relate only to the item(s) tested.

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

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## Revision History

Report No.	Version	Description	Issue Date	Note
1710TW0107-U9	Rev. 01	Initial Report	03-21-2018	Valid

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## §2.1033 General Information

<b>Applicant:</b>	Hewlett Packard Enterprise Company
<b>Applicant Address:</b>	3000 Hanover St. Palo Alto, CA 94304, USA
<b>Manufacturer:</b>	Hewlett Packard Enterprise Company
<b>Manufacturer Address:</b>	3000 Hanover St. Palo Alto, CA 94304, USA
<b>Test Site:</b>	MRT Technology (Taiwan) Co., Ltd
<b>Test Site Address:</b>	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
<b>MRT Registration No.:</b>	153292
<b>FCC Rule Part(s):</b>	Part 15.407
<b>Test Device Serial No.:</b>	CNF5K7Y004 <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering
<b>FCC Classification:</b>	Unlicensed National Information Infrastructure (UNII)

### Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Fuxing Rd., Taoyuan, Taiwan ( R.O.C )

- MRT facility is a FCC registered (Reg. No. 153292) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film.
- MRT facility is an IC registered (MRT Reg. No. 21723-1) test laboratory with the site description on file at Industry Canada.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (TAF) under the American Association for Laboratory Accreditation Program (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Taiwan, EU and TELEC Rules.

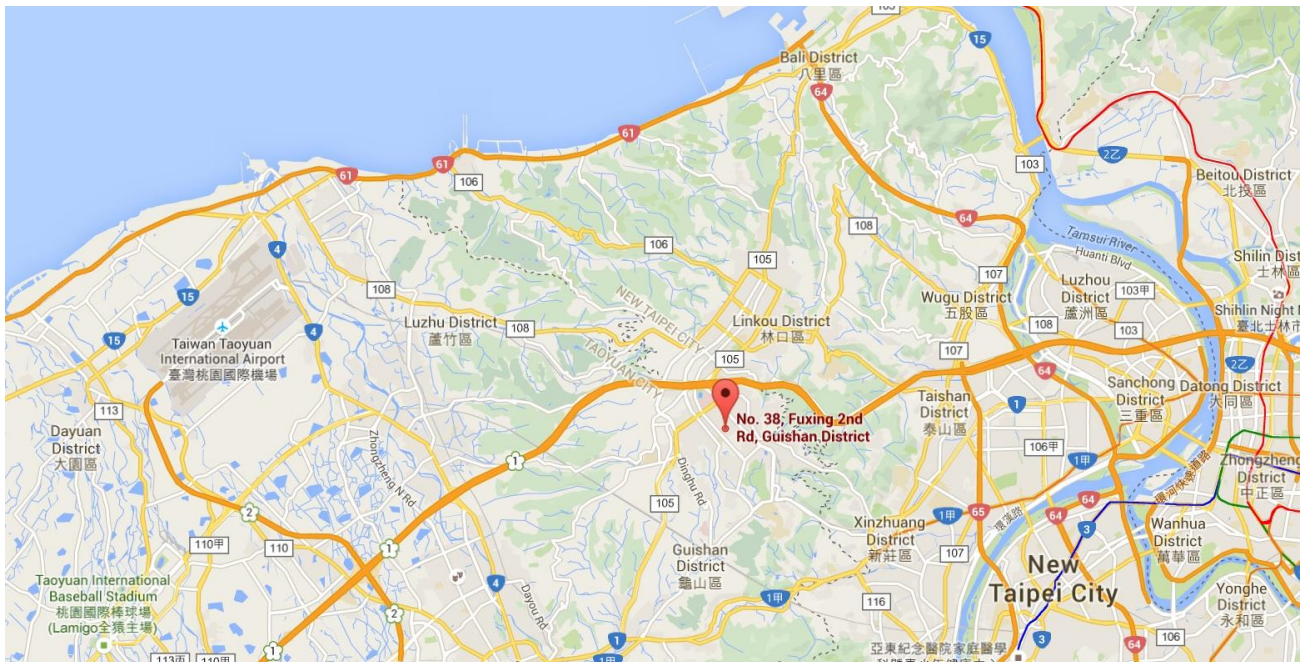
# 1. INTRODUCTION

## 1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.


## 1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taoyuan City. These measurement tests were conducted at the MRT Technology (Taiwan) Co., Ltd. Facility located at No.38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 33377, Taiwan (R.O.C).



## 2. PRODUCT INFORMATION

### 2.1. Equipment Description

Product Name:	ACCESS POINT
Model No.:	APIN0318
Brand Name:	
Software Version:	ArubaOS_70xx_8.3.0.0-brunello_62763 A32x_ipq806x.ari_8.3.0.0-brunello_cshen_62763_1222
Operating Temperature:	-40 ~ 55 °C
Power Type:	POE input
Frequency Range	<p><b><u>2.4GHz:</u></b>            For 802.11b/g/n-HT20:            2412~2462 MHz            For 802.11n-HT40:            2422~2452 MHz</p> <p><b><u>5GHz:</u></b>            For 802.11a/n-HT20/ac-VHT20:            5180~5320MHz, 5500~5720MHz            For 802.11n-HT40/ac-VHT40:            5190~5310MHz, 5510~5710MHz            For 802.11ac-VHT80/ac-VHT80+80(Non-contiguous):            5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz            For 802.11ac-VHT80+80(Contiguous):            5210MHz+5290MHz, 5530MHz+5610MHz</p>
Type of Modulation	802.11a/n/ac: OFDM
Power-on cycle	Requires 137.8 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band)	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

Note: The applicant provide one POE adapter (Manufacturer: MICROSEMI & Model: PD-9001GR/AT/AC) for approval testing, it is not for sale.

## 2.2. Description of Available Antennas

Antenna No.	Polarization	Frequency Band (GHz)	Model No.	Max Peak Gain (dBi)	BF Gain (dBi)	CDD Directional Gain (dBi)	
						For Power	For PSD
<b>Wi-Fi External Antenna List (2.4GHz 2*2 MIMO, 5GHz 4*4 MIMO)</b>							
1	Omni	2.4	AP-ANT-40	4.0	3.01	4.0	7.01
		5		5.0		6.02	5.0
2	Omni	2.4	AP-ANT-19	3.0	3.01	3.0	6.01
		5		6.0		6.02	6.0
3	Omni	2.4	AP-ANT-1W	3.8	3.01	3.8	6.81
		5		5.8		6.02	5.8
4	Omni	2.4	AP-ANT-13B	2.3	3.01	2.3	5.31
		5		4.0		6.02	4.0
5	Omni	2.4	AP-ANT-20W	2.0	3.01	2.0	5.01
		5		2.0		6.02	2.0
6	Omni	2.4	AP-ANT-22 (Note 5)	2.0	3.01	2.0	5.01
		5		4.0		6.02	4.0
7 (Note 3)	Directional	2.4	AP-ANT-45	4.5	0.0	4.5	4.50
		5		5.5		3.01	5.5
8 (Note 3)	Directional	2.4	AP-ANT-48	8.5	0.0	8.5	8.5
		5		8.5		3.01	8.5
9 (Note 3)	Directional	2.4	ANT-2x2-2314	14.0	0.0	14.0	14.0
10 (Note 3)	Directional	5	ANT-4x4-5314	14.0	3.01	14.0	17.01
11 (Note 3)	Directional	5	ANT-3x3-5712	11.5	3.01	11.5	14.51
12 (Note 3)	Directional	2.4	AP-ANT-25A	5.0	0.0	5.0	5.0
		5		5.0		3.01	5.0
13 (Note 3)	Directional	2.4	AP-ANT-28	7.5	0.0	7.5	7.5
		5		7.5		3.01	7.5
14	Omni	2.4	AP-ANT-16	3.9	3.01	3.9	6.91
		5		4.7		6.02	4.7
<b>Bluetooth Internal Antenna</b>							
PCB		2.4		6.8			



## Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.  
 For CDD transmissions, directional gain is calculated as follows,  $N_{ANT} = 2$ ,  $N_{SS} = 1$ .  
 If all antennas have the same gain,  $G_{ANT}$ , Directional gain =  $G_{ANT} + \text{Array Gain}$ , where Array Gain is as follows.
  - For power spectral density (PSD) measurements on all devices,  
 Array Gain =  $10 \log (N_{ANT}/ N_{SS}) \text{ dB} = 3.01$ ;
  - For power measurements on IEEE 802.11 devices,  
 Array Gain = 0 dB for  $N_{ANT} \leq 4$ ;
2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac, not include 802.11a/b/g. Directional gain =  $G_{ANT} + \text{BF Gain}$ , BF Gain was declared by the applicant.
3. These antennas have Cross-Polarized design, the detail see the antenna specification.
4. We selected the minimum peak gain antenna (M/N: AP-ANT-20W) to perform DFS testing.
5. The applicant changed the antenna 6# model from AP-ANT-32 to AP-ANT-22.  
 AP-ANT-22 is identical to AP-ANT-32, the only difference is the number of antennas in the box.
  - AP-ANT-22: Having 2 antennas shipped in the package
  - AP-ANT-32: Having 3 antennas shipped in the package

### 2.3. Operating Frequency and Channel List

#### 802.11a/n-HT20/ac-VHT20

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

#### 802.11n-HT40/ac-VHT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz	102	5510 MHz
118	5590 MHz	126	5630 MHz	134	5670 MHz
142	5710 MHz	--	--	--	--

**802.11ac-VHT80/ac-VHT80+80 (Non-contiguous)**

Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290 MHz	106	5530 MHz	122	5610 MHz
138	5690 MHz	--	--	--	--

Note: For 802.11ac-VHT80+80 mode, Ant 0 & Ant 1 ports work on one frequency of the above table, Ant 2 & Ant 3 ports work on another frequency of the above table. E.g. channel 42 + 138 group, channel 42 will transmit by Ant 0+1 ports and channel 138 will transmit by Ant 2+3 ports.

**802.11 ac-VHT80+80 (Contiguous)**

Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210 MHz	58	5290 MHz	--	--
106	5530 MHz	122	5610 MHz	--	--

Note: For example, Ant 0 & 1 ports operate on one 80MHz channel 42, while Ant 2 & 3 ports operate on the adjacent 80MHz channel 58.

**2.4. Test Channel for this Report**

Test Mode	Test Channel	Test Frequency
802.11a	60	5300 MHz
802.11n-HT40	62	5310 MHz
802.11ac-VHT80	58	5290 MHz
802.11ac-VHT80 + 80 (Non-contiguous)	58	5290 MHz
	106	5530 MHz
802.11ac-VHT80 + 80 (Contiguous)	42 & 58	5210MHz + 5290MHz
	106 & 122	5530MHz + 5610MHz

**2.5. Test Mode**

Test Mode	Mode 1: Communication with Access Point (Client Mode)
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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 v02 lists the applicable requirements for the DFS testing.

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

**Table 3-1: Applicability of DFS Requirements Prior to Use of a Channel**

Requirement	Operational Mode	
	Master Device or Client With Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

**Table 3-2: Applicability of DFS Requirements during normal operation**

### 3.2. DFS Devices Requirements

**Per FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 the following are the requirements for Master Devices:**

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

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

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.	

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

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

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

### 3.3. DFS Detection Threshold Values

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

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

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

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

**Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

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

### 3.4. Parameters of DFS Test Signals

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

#### Short Pulse Radar Test Waveforms

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

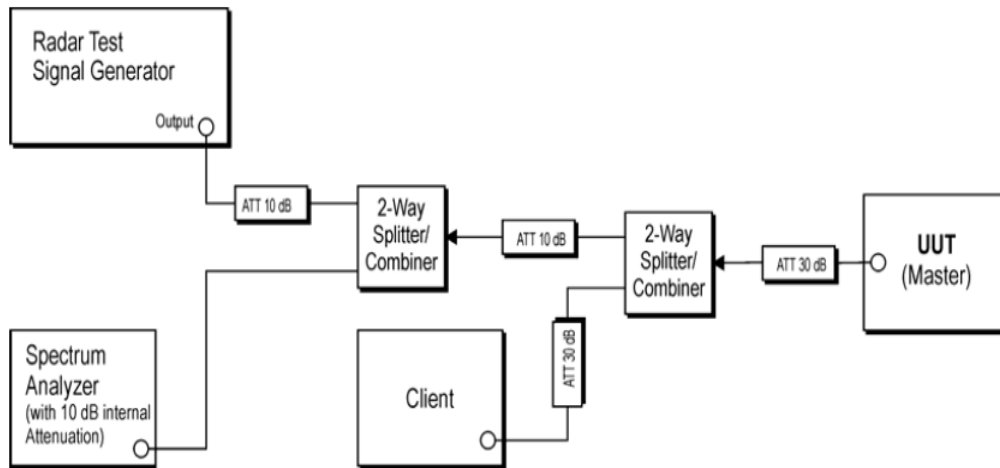
For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

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.

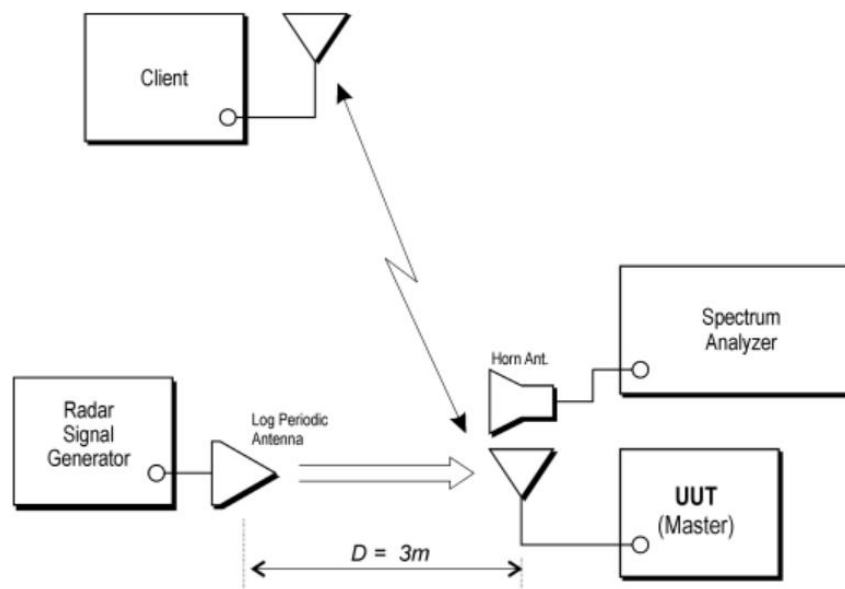


### 3.5. Conducted Test Setup

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



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



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

#### 4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS) – TR4

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MRTTWA00012	1 year	2018/07/10
ESG Vector Signal Generator	Agilent	N5182B	MRTSUE06026	1 year	2018/04/05
Temperature/Humidity Meter	TEN BILLION	TTH-B3UP	MRTTWA00036	1 year	2018/05/10
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTTWA00003	1 year	2018/04/05
Notebook	ASUS	PRO45V	MRTSUE06180	N/A	N/A

Client Information

Instrument	Manufacturer	Type No.
Wireless Network Adapter	Intel	7260HMW
Access Point	Aruba Networks, Inc	APIN0334

Note: The manufacturer configured the Access Point into client mode through software.

Software	Version	Manufacturer	Function
Pulse Building	N/A	Agilent	Radar Signal Generation Software
DFS Tool	V 6.9.2	Agilent	DFS Test Software

## 5. TEST RESULT

### 5.1. Summary

**Company Name:** Hewlett Packard Enterprise Company

**FCC ID:** Q9DAPIN0318

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

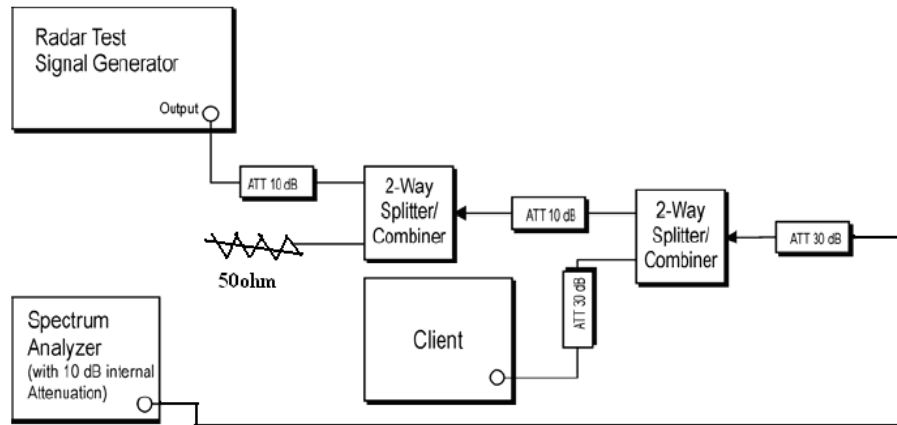
Note 1: Item "Statistical Performance Check" was tested by radiated test method and any other items were tested by conducted test method.

Note 2: We used the worse case level -64dBm as DFS detection thresholds for all DFS testing.

## 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.



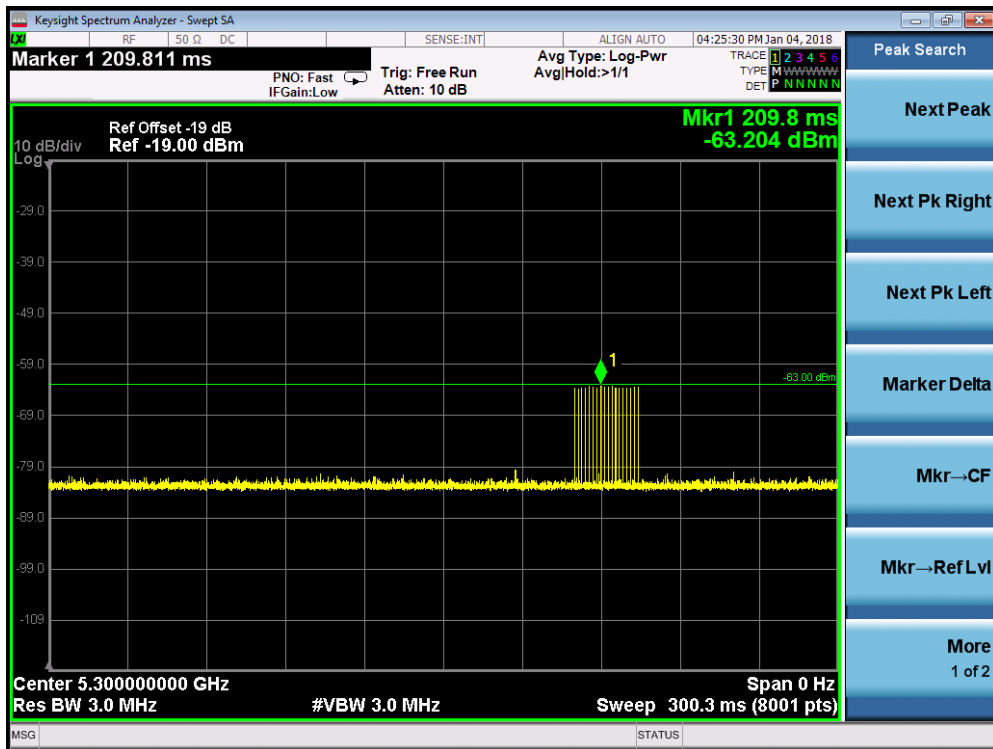
**Figure 3-2: Conducted Test Setup**

### 5.2.2. Calibration Procedure

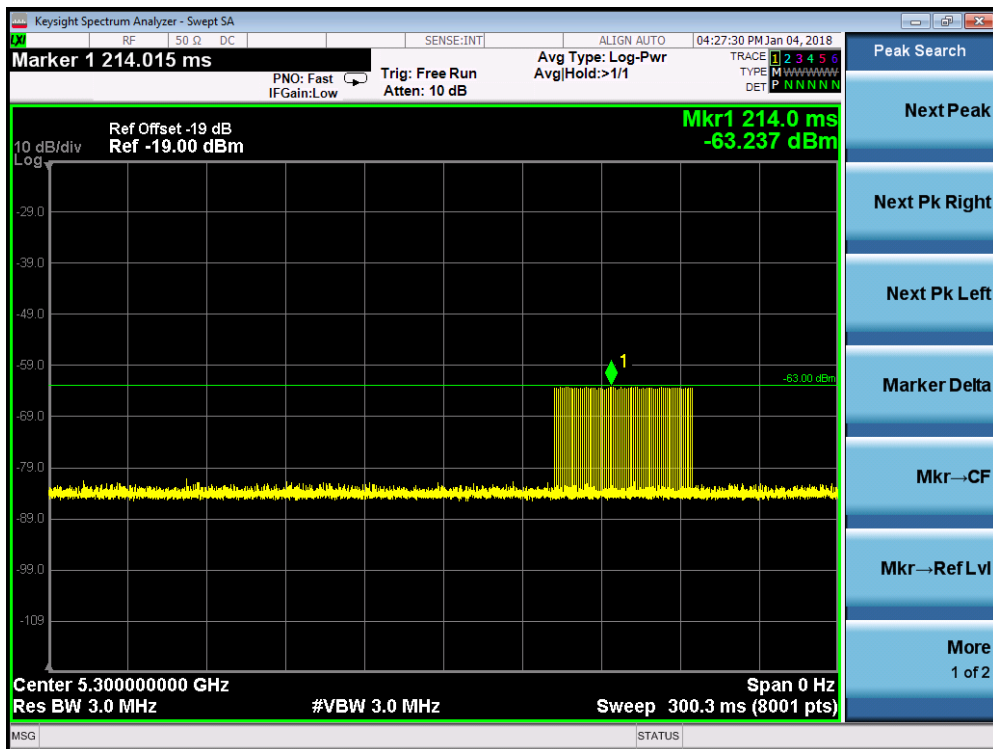
The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator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

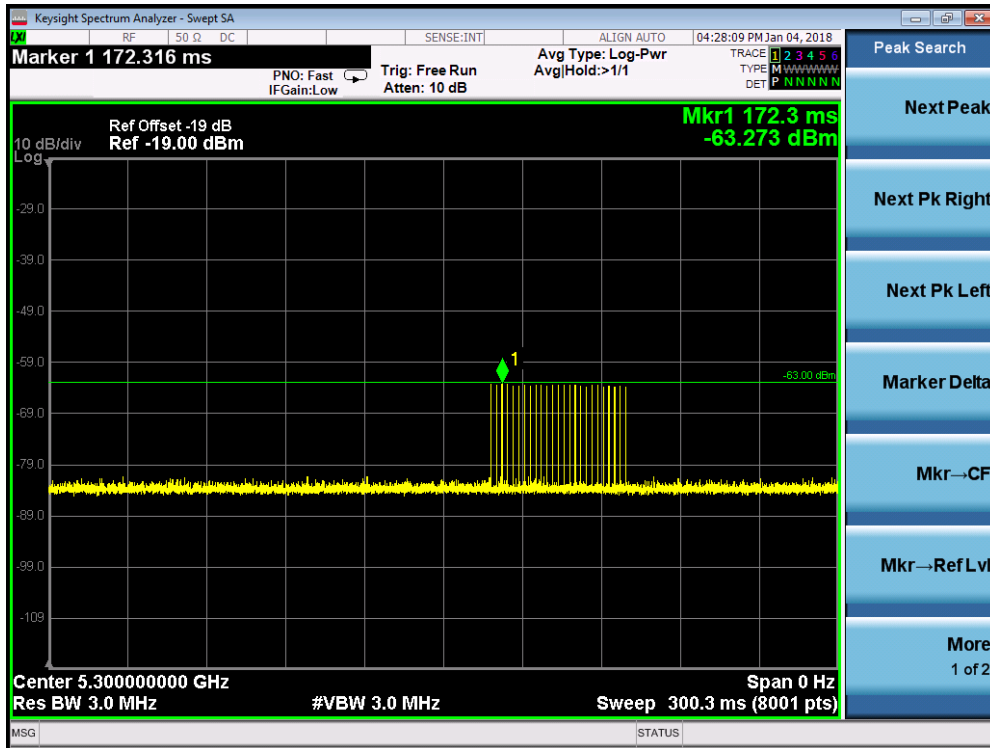


Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



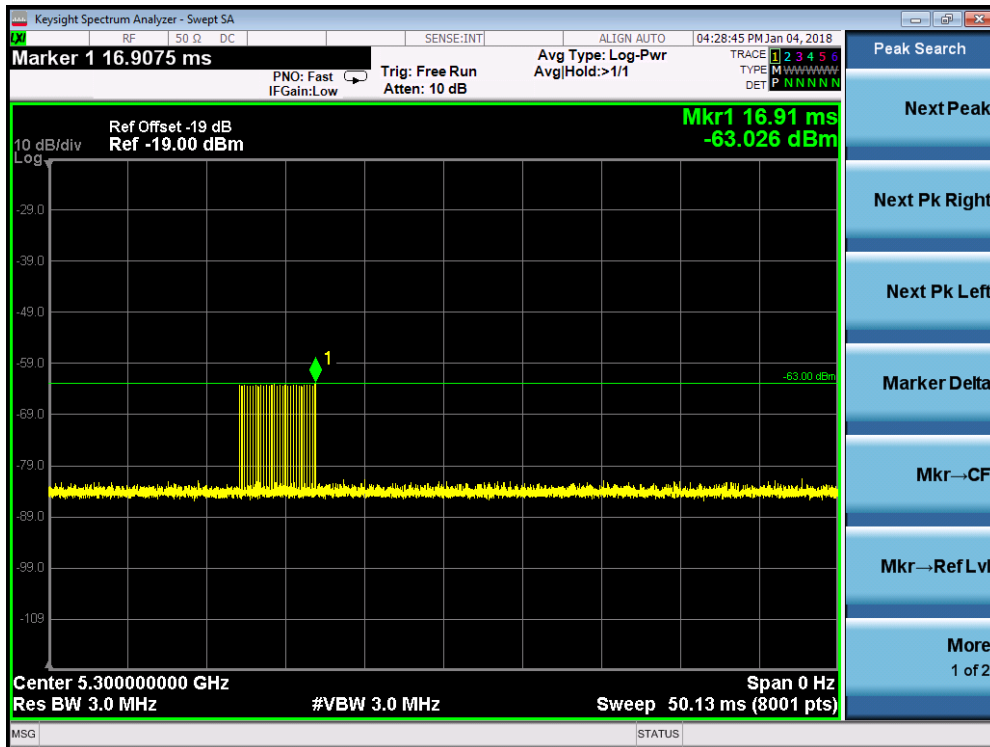
PRI = 758us and the number of pulses = 70

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

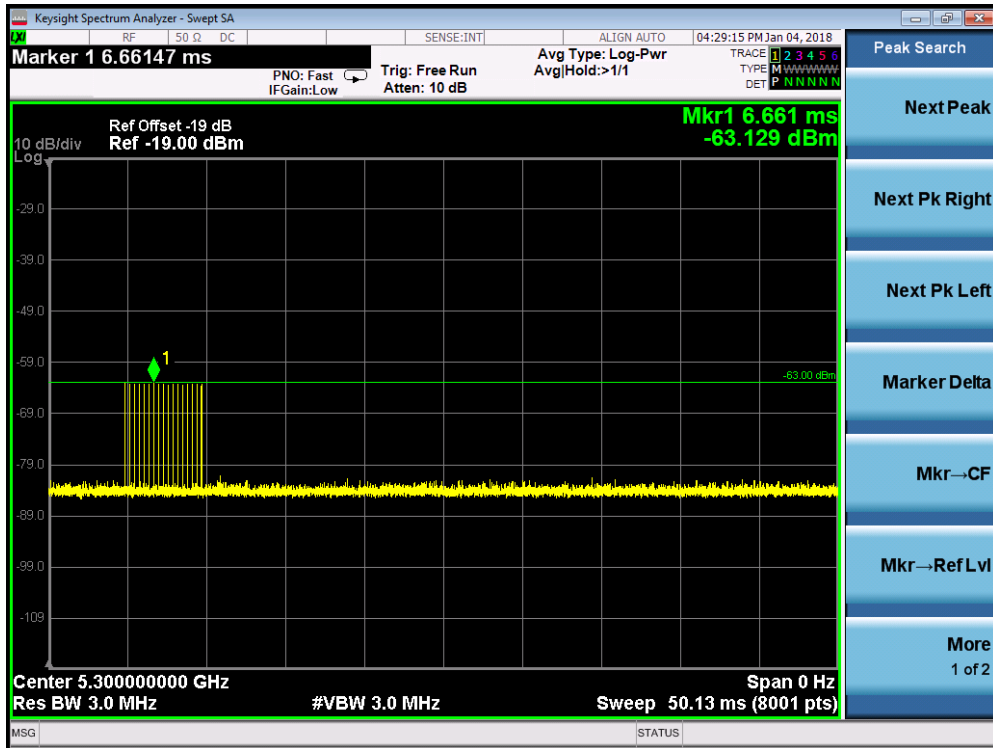


PRI = 2.171ms and the number of pulses = 25

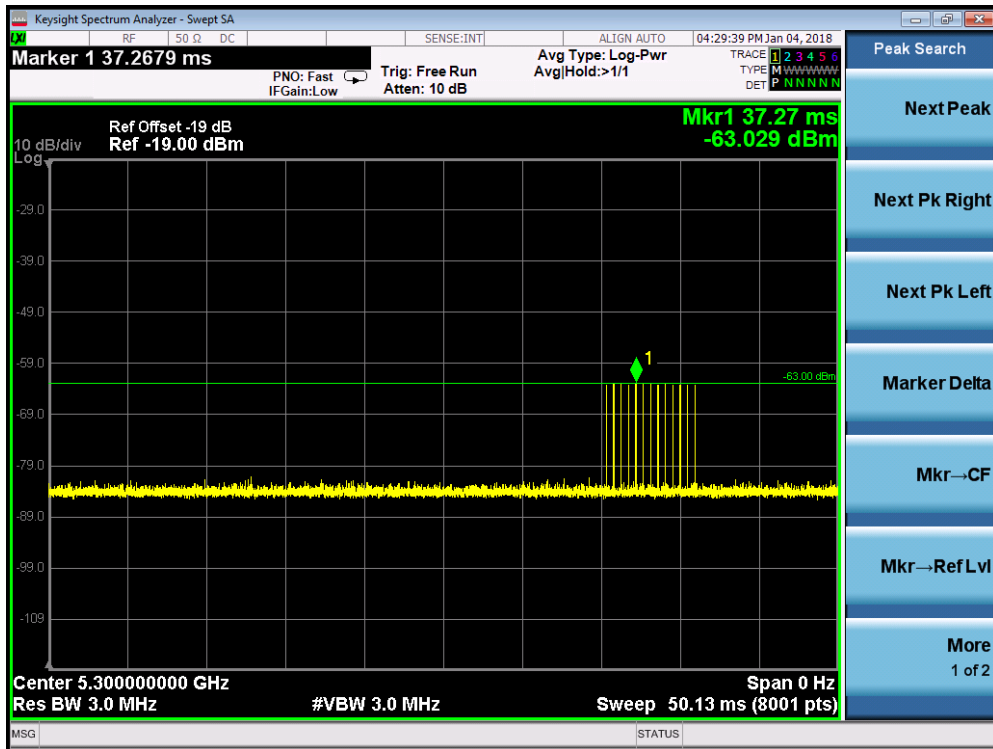
Radar #2 DFS detection threshold level and the burst of pulses on the Channel frequency



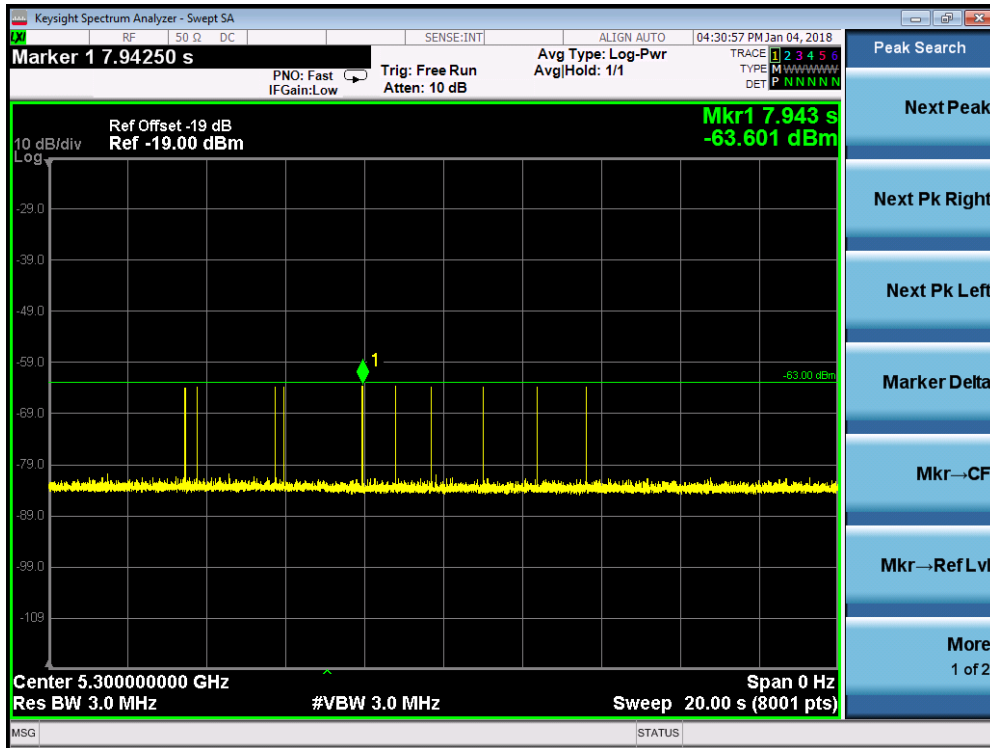
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency



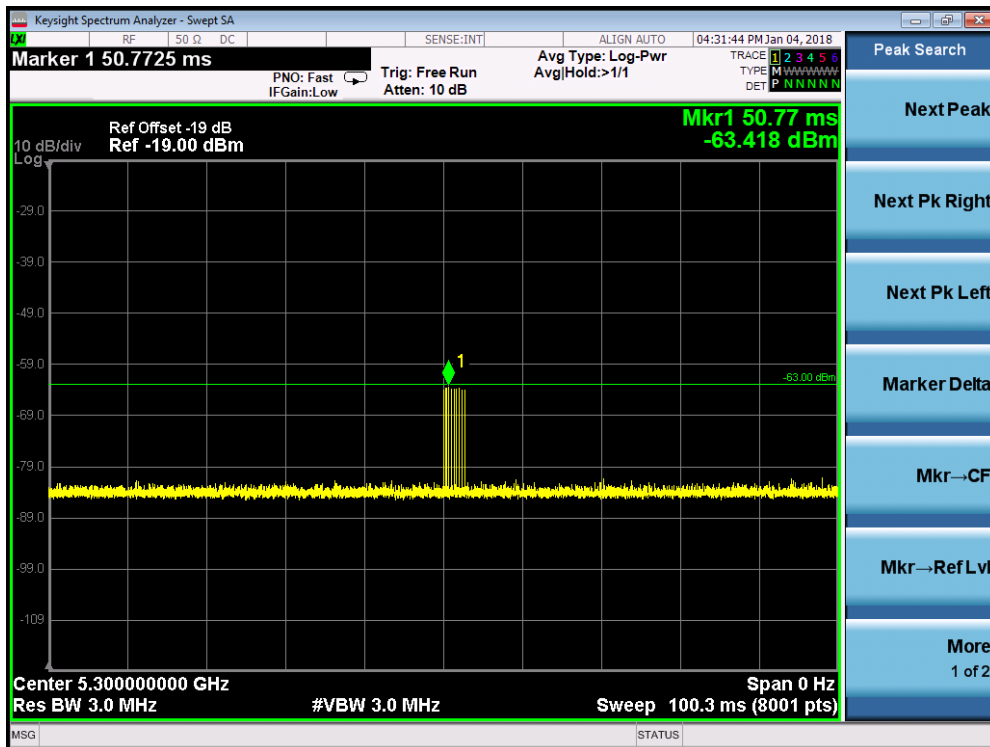
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency



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



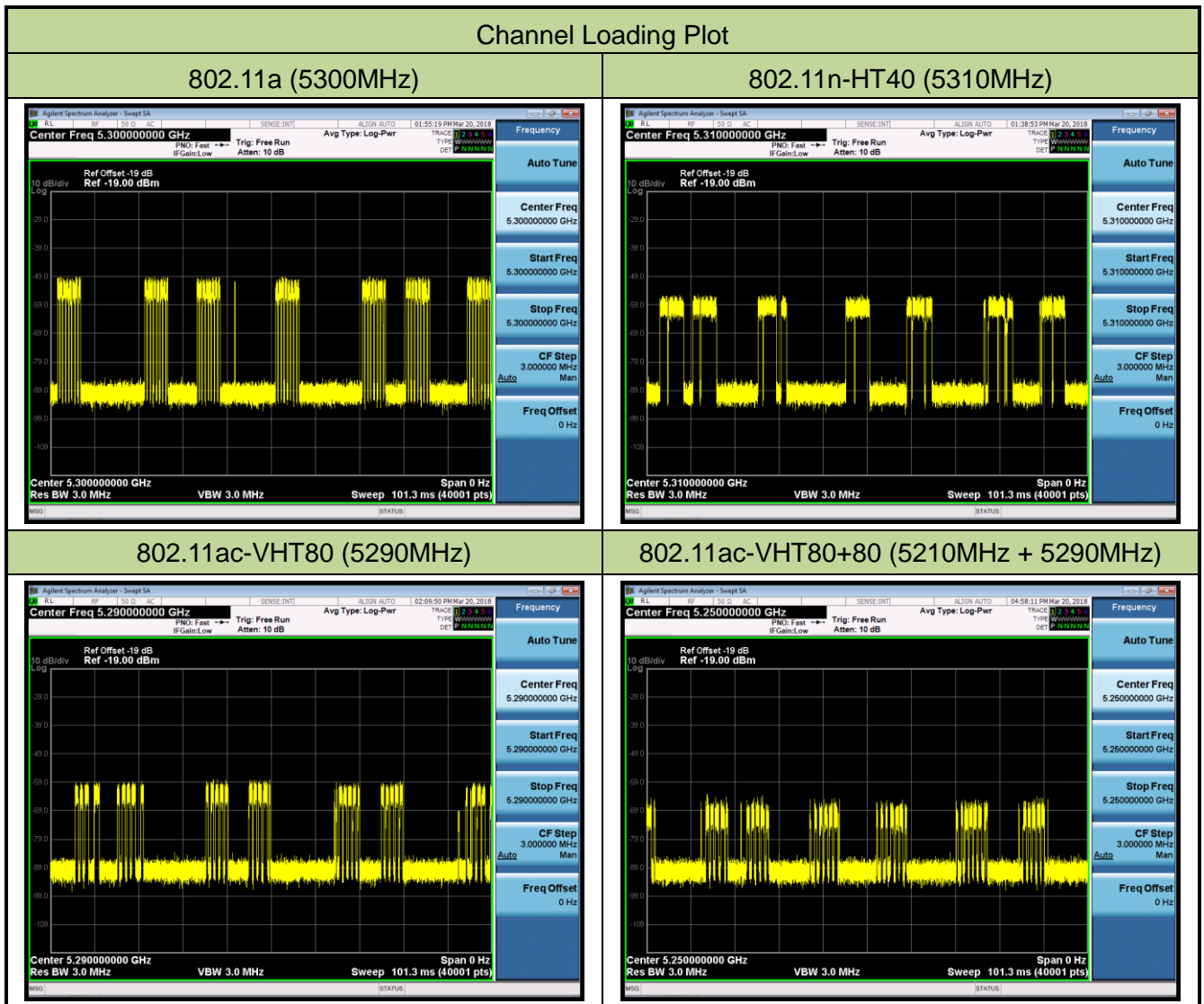
Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth

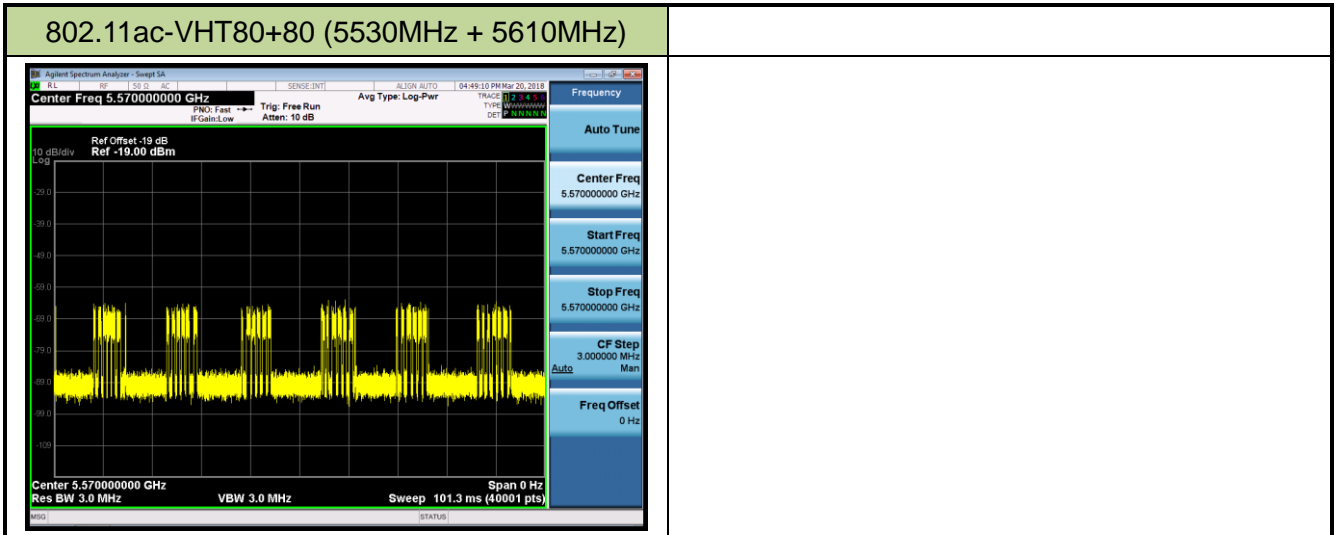




### 5.2.4. Channel Loading Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Amy Zhang	Relative Humidity	65%
Test Site	TR5	Test Date	2018/03/20
Test Item	Channel Loading		





Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11a	5300 MHz	28.54%	≥ 17%	Pass
802.11n-HT40	5310 MHz	36.88%	≥ 17%	Pass
802.11ac-VHT80	5290 MHz	24.57%	≥ 17%	Pass
802.11ac-VHT80+80 (Contiguous)	5210 MHz + 5290 MHz	24.48%	≥ 17%	Pass
802.11ac-VHT80+80 (Contiguous)	5530 MHz + 5610 MHz	22.83%	≥ 17%	Pass

Note 1: High channel loading was realized using the “Iperf” software.

Note 2: Packet ratio = Time On / (Time On + Off Time).

Note 3: We save the trace data to a excel file and calculate packet radio via this file.

### 5.3. UNII Detection Bandwidth Measurement

#### 5.3.1. Test Limit

Minimum 100% of the UNII 99% transmission power bandwidth. During the U-NII Detection Bandwidth detection test, each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

#### 5.3.2. Test Procedure

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows:  $U\text{-NII Detection Bandwidth} = FH - FL$
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.

### 5.3.3. 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	
5290	0	0	0	0	0	0	0	0	0	0	0%
5291 FL	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309 FH	1	1	1	1	1	1	1	1	1	1	100%
5310	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5309MHz - 5291MHz = 18MHz											
EUT 99% Bandwidth = 16.38MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 16.38MHz x 100% = 16.38MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 16.38MHz. (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	0	0	0	0	0	0	0	0	0	0	0%
5292 FL	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5292MHz = 37MHz											
EUT 99% Bandwidth = 35.79MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 35.79MHz x 100% = 35.79MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5310MHz. The 99% channel bandwidth is 35.79MHz. (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	
5250	0	0	0	0	0	0	0	0	0	0	0%
5251 FL	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5251MHz = 78MHz											
EUT 99% Bandwidth = 75.73MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.73MHz x 100% = 75.73MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.73MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5290MHz for 802.11ac-VHT80 + 80 (Non Contiguous)											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5250	0	0	0	0	0	0	0	0	0	0	0%
5251 FL	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5251MHz = 78MHz											
EUT 99% Bandwidth = 76.00MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 76.00MHz x 100% = 76.00MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 76.00MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency = 5530MHz for 802.11ac-VHT80 + 80 (Non Contiguous)											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569 FH	1	1	1	1	1	1	1	1	1	1	100%
5570	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz											
EUT 99% Bandwidth = 75.77MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.77MHz x 100% = 75.77MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 75.77MHz. (See the 99% BW section of the RF report for further measurement details).



EUT Frequency = 5210MHz + 5290MHz for 802.11ac-VHT80+80 (Contiguous)											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5250 FL	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5250MHz = 79MHz											
EUT 99% Bandwidth = 76.02MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 76.02MHz x 100% = 76.02MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 76.02MHz. (See the 99% BW section of the RF report for further measurement details, this value reported is the portion of the 99% BW located within the 5250-5350MHz band).



EUT Frequency = 5530MHz + 5610MHz for 802.11ac-VHT80+80 (Contiguous)											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5570	1	1	1	1	1	1	1	1	1	1	100%
5575	1	1	1	1	1	1	1	1	1	1	100%
5580	1	1	1	1	1	1	1	1	1	1	100%
5585	1	1	1	1	1	1	1	1	1	1	100%
5590	1	1	1	1	1	1	1	1	1	1	100%
5595	1	1	1	1	1	1	1	1	1	1	100%
5600	1	1	1	1	1	1	1	1	1	1	100%
5605	1	1	1	1	1	1	1	1	1	1	100%
5610	1	1	1	1	1	1	1	1	1	1	100%
5615	1	1	1	1	1	1	1	1	1	1	100%
5620	1	1	1	1	1	1	1	1	1	1	100%



5625	1	1	1	1	1	1	1	1	1	1	100%
5630	1	1	1	1	1	1	1	1	1	1	100%
5635	1	1	1	1	1	1	1	1	1	1	100%
5640	1	1	1	1	1	1	1	1	1	1	100%
5645	1	1	1	1	1	1	1	1	1	1	100%
5646	1	1	1	1	1	1	1	1	1	1	100%
5647	1	1	1	1	1	1	1	1	1	1	100%
5648	1	1	1	1	1	1	1	1	1	1	100%
5649 FH	1	1	1	1	1	1	1	1	1	1	100%
5650	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5649MHz - 5491MHz = 158MHz											
EUT 99% Bandwidth = 154.61MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 154.61MHz x 100% = 154.61MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5570MHz. The 99% channel bandwidth is 154.61MHz. (See the 99% BW section of the RF report for further measurement details).

## **5.4. Initial Channel Availability Check Time Measurement**

### **5.4.1. Test Limit**

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

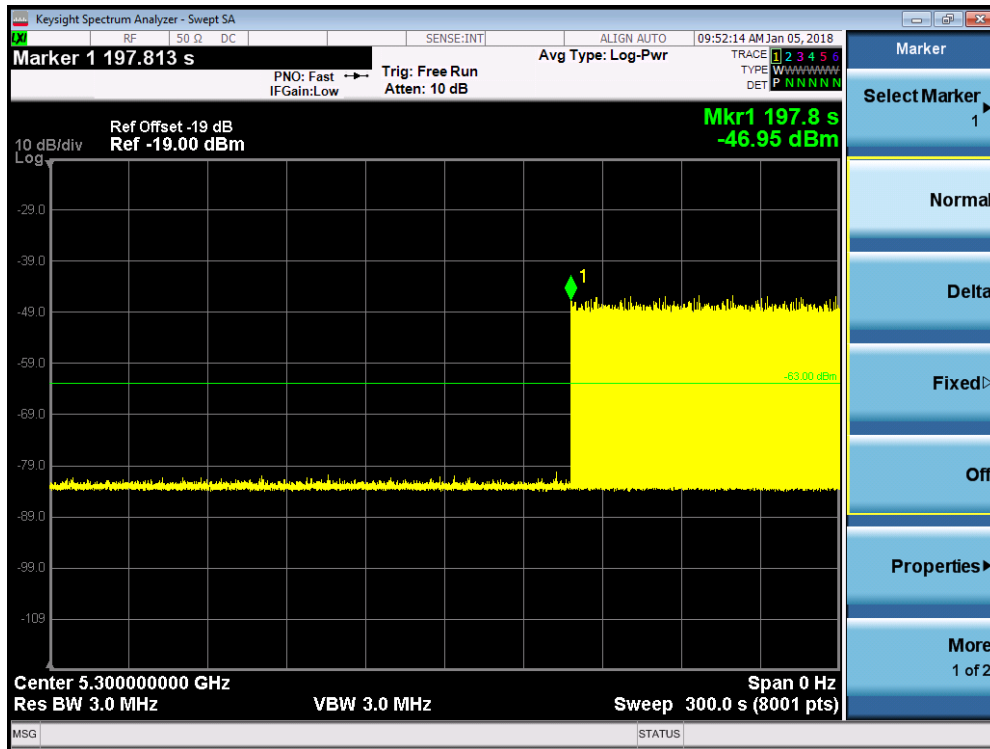
### **5.4.2. Test Procedure**

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

### 5.4.3. Test Result

The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (137.8 sec). Initial beacons/data transmissions are indicated by marker 1 (197.8 sec).

Initial Channel Availability Check Time for 802.11a



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

### **5.5.1. Test Limit**

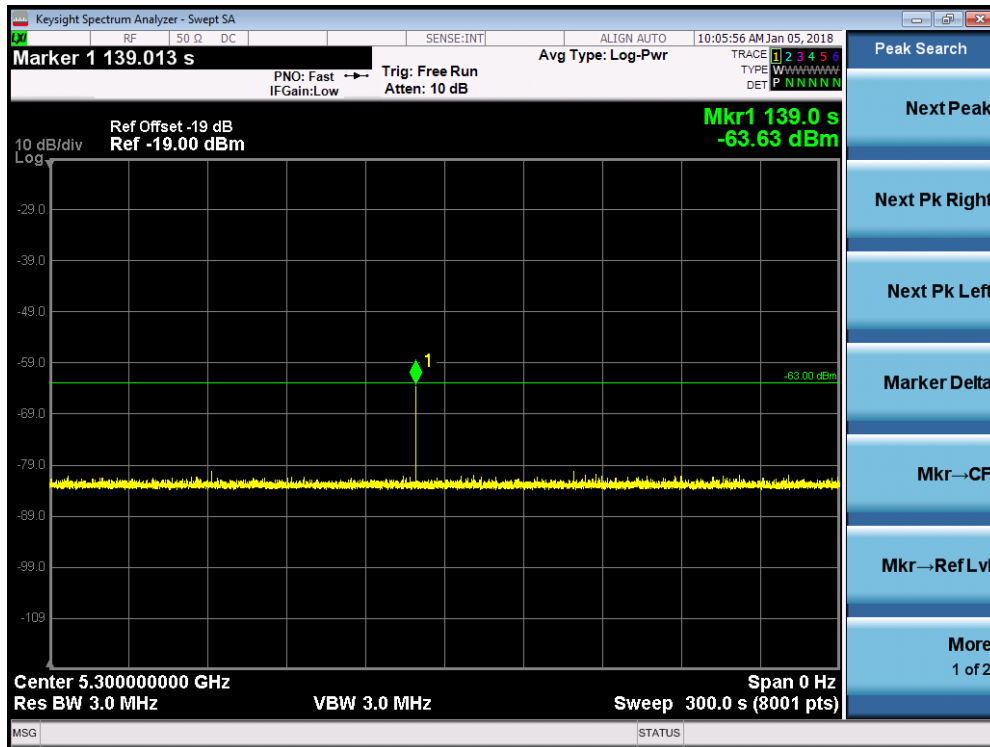
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **5.5.2. Test Procedure**

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

### 5.5.3. Test Result

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



Note: The trace was triggered meanwhile the device power up.

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

### **5.6.1. Test Limit**

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

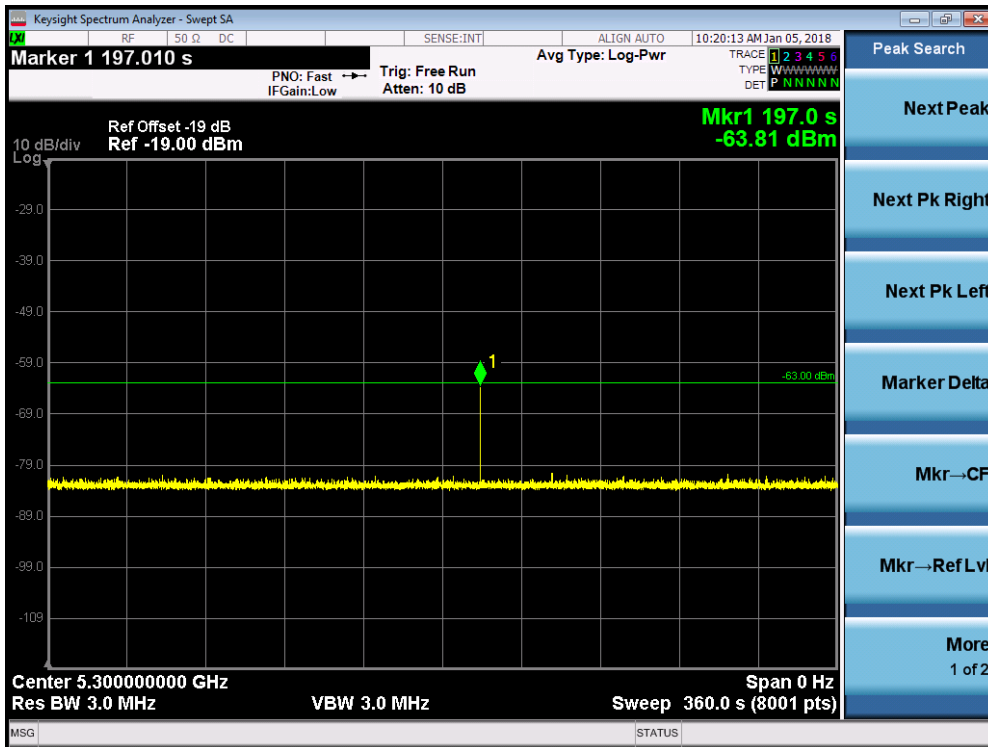
### **5.6.2. Test Procedure**

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner 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 will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.



### 5.6.3. Test Result

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



Note: The trace was triggered meanwhile the device power up.

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

### **5.7.1. Test Limit**

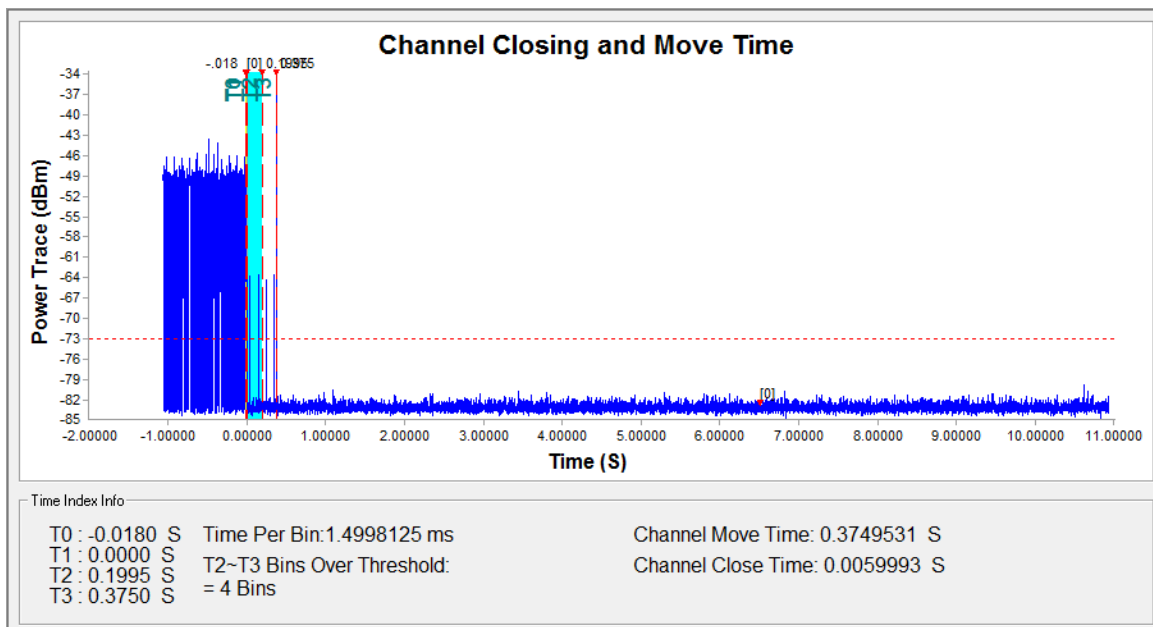
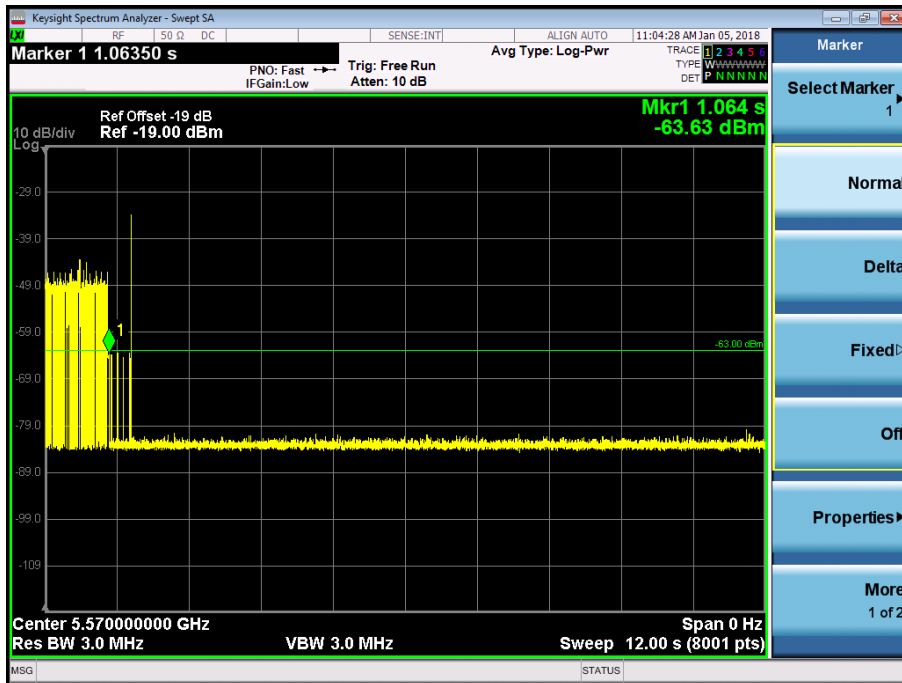
The EUT has In-Service Monitoring function to continuously monitor the radar signals. If the radar is detected, must leave the channel (Shutdown). The Channel Move Time to cease all transmissions on the current channel upon detection of a Radar Waveform above the DFS Detection Threshold within 10 sec.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

### **5.7.2. Test Procedure Used**

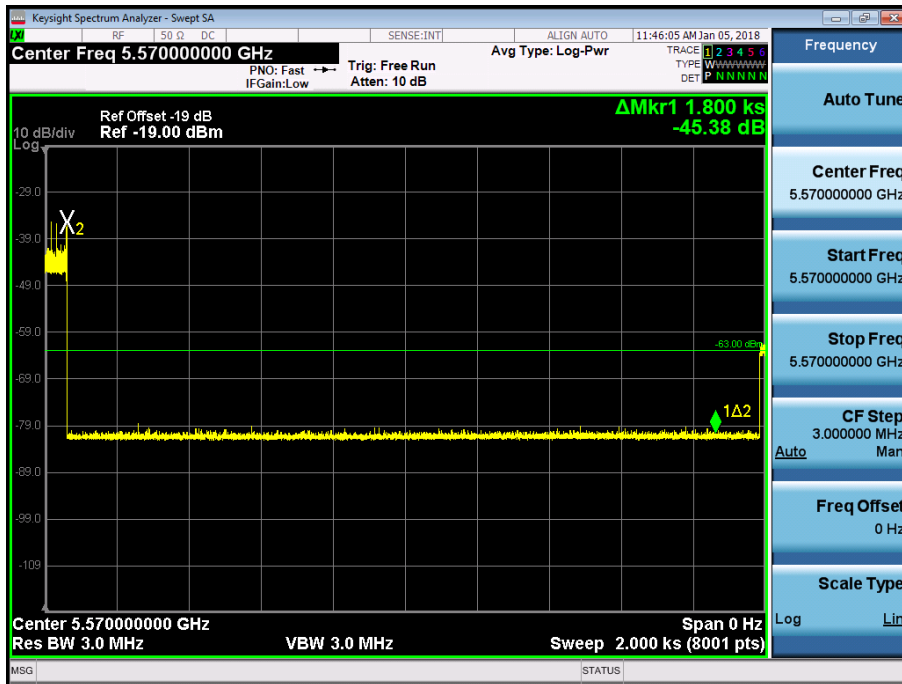
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will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

### 5.7.3. Test Result

Channel Move Time and Channel Closing Transmission Time for 802.11ac-VHT80+80  
(Contiguous Mode) - 5530MHz + 5610MHz



Non-Occupancy Period for 802.11ac-VHT80+80 (Contiguous Mode) - 5530MHz + 5610MHz



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.375s	<10s
Channel Closing Transmission Time (ms) (Note)	6.0ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min

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

## 5.8. Statistical Performance Check Measurement

### 5.8.1. Test Limit

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

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

The percentage of successful detection is calculated by:

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

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:  $(Pd1 + Pd2 + Pd3 + Pd4) / 4$ .

### 5.8.2. Test Procedure

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

### 5.8.3. Test Result

Statistical Performance Check for 802.11a

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5300.0	1	878	61	1
2	5306.1	1	778	68	1
3	5300.0	1	838	63	1
4	5291.0	1	858	62	1
5	5306.7	1	598	89	1
6	5299.3	1	578	92	1
7	5307.0	1	738	72	1
8	5291.7	1	3066	18	1
9	5298.1	1	718	74	1
10	5293.9	1	558	95	1
11	5305.3	1	938	57	1
12	5292.6	1	678	78	1
13	5308.9	1	898	59	1
14	5301.3	1	698	76	1
15	5294.6	1	658	81	1
16	5309.0	1	1441	37	1
17	5302.7	1	1305	41	1
18	5292.9	1	3056	18	1
19	5305.7	1	565	94	1
20	5297.7	1	1760	30	1
21	5304.9	1	923	58	1
22	5303.8	1	681	78	1
23	5293.5	1	1980	27	1
24	5308.6	1	1025	52	1
25	5307.5	1	554	96	1
26	5294.9	1	2783	19	1
27	5304.5	1	1501	36	1
28	5308.4	1	582	91	1
29	5296.4	1	2874	19	1
30	5295.3	1	1491	36	1
Detection Percentage (%)					100%



Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5294.9	4.8	191	25	1
2	5300.0	1.1	214	23	1
3	5293.9	3.8	167	26	1
4	5304.5	2.5	227	23	1
5	5295.3	3.3	206	24	1
6	5294.6	4.0	177	25	1
7	5308.6	3.3	209	25	1
8	5305.7	4.1	223	27	0
9	5291.0	4.0	217	27	1
10	5304.9	3.4	230	26	1
11	5300.0	3.2	154	24	1
12	5296.4	1.7	229	24	0
13	5303.8	1.3	213	26	1
14	5299.3	1.3	195	25	1
15	5293.5	3.0	186	23	1
16	5308.4	1.9	172	27	1
17	5301.3	2.3	192	27	1
18	5305.3	3.2	210	28	1
19	5297.7	1.5	199	23	1
20	5302.7	3.9	175	28	1
21	5298.1	4.5	179	27	1
22	5291.7	3.8	228	29	1
23	5307.5	3.7	180	27	1
24	5307.0	2.2	178	23	0
25	5306.7	2.9	204	29	1
26	5308.9	2.2	219	29	1
27	5292.9	1.9	162	26	1
28	5306.1	3.2	229	23	0
29	5292.6	3.1	150	24	1
30	5309.0	2.3	175	27	1
Detection Percentage (%)					86.7%



Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5296.4	8.7	353	18	1
2	5303.8	8.2	310	16	1
3	5291.0	8.1	271	17	1
4	5307.5	7.2	492	18	1
5	5304.5	7.3	295	16	1
6	5295.3	9.0	466	17	1
7	5308.4	8.3	436	18	0
8	5302.7	6.1	368	18	1
9	5297.7	8.1	268	18	1
10	5304.9	7.6	477	18	1
11	5291.7	6.1	258	18	1
12	5301.3	6.7	294	16	1
13	5298.1	9.2	359	18	1
14	5294.9	7.9	456	17	1
15	5305.7	8.8	260	17	1
16	5299.3	7.8	413	17	1
17	5292.6	6.0	295	16	1
18	5307.0	7.9	496	16	1
19	5300.0	6.8	278	16	1
20	5306.1	6.6	347	17	1
21	5294.6	9.7	474	17	1
22	5305.3	6.3	421	16	1
23	5300.0	8.6	463	17	0
24	5292.9	8.3	328	18	1
25	5309.0	9.9	476	18	1
26	5306.7	9.1	413	16	1
27	5308.6	7.1	461	18	1
28	5293.5	8.4	481	18	1
29	5308.9	9.3	440	17	1
30	5293.9	6.0	453	18	1
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	5304.9	17.2	403	12	1
2	5307.5	18.6	313	14	1
3	5294.6	15.8	350	13	0
4	5308.9	15.4	268	15	1
5	5308.4	11.8	415	16	1
6	5294.9	17.2	378	12	1
7	5304.5	18.6	262	13	1
8	5291.0	17.4	479	13	0
9	5307.0	19.3	450	14	1
10	5293.9	19.7	416	14	1
11	5302.7	16.2	493	16	1
12	5293.5	12.7	385	16	1
13	5308.6	12.3	268	14	1
14	5305.7	11.3	452	14	0
15	5291.7	18.0	443	12	1
16	5306.1	17.4	276	15	1
17	5303.8	19.6	346	12	1
18	5295.3	15.8	342	14	1
19	5301.3	18.5	354	13	1
20	5292.6	19.3	294	12	0
21	5309.0	15.6	489	14	1
22	5296.4	18.3	409	12	1
23	5298.1	16.6	285	15	1
24	5292.9	15.0	328	13	1
25	5306.7	16.0	359	16	1
26	5300.0	18.9	271	15	1
27	5300.0	17.2	448	16	1
28	5297.7	17.8	487	14	1
29	5305.3	15.2	290	12	0
30	5299.3	11.3	449	15	1
Detection Percentage (%)					83.3%

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

waveforms is as follows:  $\frac{P_d1+P_d2+P_d3+P_d4}{4} = (100\%+86.7\%+93.3\%+83.3\%)/4 = 90.8\% (>80\%)$



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5295.2	1	16	5300.0	1
2	5297.6	1	17	5300.0	1
3	5296.0	1	18	5300.0	1
4	5299.2	1	19	5300.0	1
5	5298.8	1	20	5300.0	1
6	5296.8	1	21	5300.8	1
7	5294.0	1	22	5302.4	1
8	5299.6	1	23	5304.0	1
9	5294.4	1	24	5304.8	1
10	5295.6	1	25	5306.0	1
11	5300.0	1	26	5305.6	1
12	5300.0	1	27	5301.2	1
13	5300.0	1	28	5304.4	1
14	5300.0	1	29	5300.4	1
15	5300.0	1	30	5303.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										
Num of Bursts = 14										
Burst Interval (us) = 857143										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	731683	1	8	85	1875	0	0	731683	0	857142
2	482709	2	8	70	1900	1895	0	1216267	857143	1714285
3	996297	3	8	90	1903	1415	1645	2216359	1714286	2571428
4	1192851	1	8	75	1052	0	0	3414173	2571429	3428571
5	649315	3	8	100	1312	1740	1756	4064540	3428572	4285714
6	357017	3	8	50	1024	1749	1100	4426365	4285715	5142857
7	820061	2	8	55	1526	1337	0	5250319	5142858	6000000
8	1416323	2	8	50	1761	1770	0	6669505	6000001	6857143
9	626581	2	8	95	1207	1041	0	7299617	6857144	7714286
10	1248056	2	8	100	1131	1307	0	8549921	7714287	8571429
11	633609	1	8	100	1326	0	0	9185968	8571430	9428572
12	256583	1	8	55	1865	0	0	9443877	9428573	10285715
13	1278274	1	8	95	1849	0	0	10724016	10285716	11142858
14	773141	1	8	50	1044	0	0	11499006	11142859	12000001
Total number of pulses in waveform = 25										
*****										



### Type 5 Radar Waveform\_2

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	786803	1	14	75	1131	0	0	786803	0	923076
2	442945	1	14	100	1031	0	0	1230879	923077	1846153
3	648622	1	14	95	1652	0	0	1880532	1846154	2769230
4	959516	2	14	65	1635	1056	0	2841700	2769231	3692307
5	1537704	2	14	90	1599	1394	0	4382095	3692308	4615384
6	1139959	2	14	80	1826	1243	0	5525047	4615385	5538461
7	670014	1	14	75	1556	0	0	6198130	5538462	6461538
8	1035711	3	14	90	1145	1520	1018	7235397	6461539	7384615
9	550002	3	14	75	1968	1862	1124	7789082	7384616	8307692
10	1116381	2	14	75	1407	1250	0	8910417	8307693	9230769
11	958073	1	14	55	1744	0	0	9871147	9230770	10153846
12	890552	3	14	50	1080	1094	1842	10763443	10153847	11076923
13	1172280	3	14	95	1239	1224	1946	11939739	11076924	12000000

Total number of pulses in waveform = 25

\*\*\*\*\*

### Type 5 Radar Waveform\_3

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	584064	2	10	95	1709	1741	0	584064	0	631578
2	208044	2	10	60	1821	1580	0	795558	631579	1263157
3	564200	3	10	90	1631	1098	1232	1363159	1263158	1894736
4	678320	2	10	80	1710	1281	0	2045440	1894737	2526315
5	885827	1	10	65	1498	0	0	2934258	2526316	3157894
6	454129	3	10	85	1624	1162	1039	3389885	3157895	3789473
7	901647	1	10	85	1793	0	0	4295357	3789474	4421052
8	360878	3	10	90	1639	1198	1442	4658028	4421053	5052631
9	751025	1	10	65	1754	0	0	5413332	5052632	5684210
10	688734	2	10	80	1059	1988	0	6103820	5684211	6315789
11	229634	3	10	100	1011	1369	1180	6336501	6315790	6947368
12	1220127	3	10	95	1033	1892	1668	7560188	6947369	7578947
13	206807	1	10	70	1565	0	0	7771388	7578948	8210526
14	945664	2	10	85	1846	1275	0	8718617	8210527	8842105
15	716817	2	10	100	1122	1983	0	9438555	8842106	9473684
16	590643	2	10	60	1858	1201	0	10032303	9473685	10105263
17	123006	2	10	85	1486	1873	0	10158368	10105264	10736842
18	944917	2	10	90	1605	1756	0	11106644	10736843	11368421
19	368224	3	10	95	1299	1965	1963	11478229	11368422	12000000

Total number of pulses in waveform = 40

\*\*\*\*\*

### Type 5 Radar Waveform\_4

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	17917	1	18	75	1350	0	0	17917	0	1199999
2	1729487	1	18	70	1540	0	0	1748754	1200000	2399999
3	1804378	3	18	75	1282	1804	1520	3554672	2400000	3599999
4	1145241	2	18	100	1335	1876	0	4704519	3600000	4799999
5	341526	3	18	65	1628	1850	1316	5049256	4800000	5999999
6	1020346	2	18	60	1294	1737	0	6074396	6000000	7199999
7	1982300	2	18	55	1482	1574	0	8059727	7200000	8399999
8	1449457	3	18	55	1444	1516	1791	9512240	8400000	9599999
9	531711	1	18	50	1696	0	0	10048702	9600000	10799999
10	1526580	3	18	65	1660	1694	1528	11576958	10800000	11999999

Total number of pulses in waveform = 21

\*\*\*\*\*



### Type 5 Radar Waveform\_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	285080	3	17	75	1575	1064	1382	285080	0	1090908
2	891477	2	17	95	1357	1200	0	1180578	1090909	2181817
3	1438508	1	17	80	1039	0	0	2621643	2181818	3272726
4	1455233	1	17	90	1911	0	0	4077915	3272727	4363635
5	1343370	3	17	90	1569	1143	1530	5423196	4363636	5454544
6	933765	1	17	60	1177	0	0	6361203	5454545	6545453
7	977811	3	17	70	1003	1515	1138	7340191	6545454	7636362
8	639132	3	17	65	1772	1899	1724	7982979	7636363	8727271
9	975223	1	17	65	1160	0	0	8963597	8727272	9818180
10	1168769	2	17	100	1637	1799	0	10133526	9818181	10909089
11	1110841	2	17	55	1632	1450	0	11247803	10909090	11999998

Total number of pulses in waveform = 22

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### Type 5 Radar Waveform\_6

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	913358	3	12	55	1804	1737	1290	913358	0	1199999
2	1112315	2	12	50	1102	1147	0	2030504	1200000	2399999
3	1394674	3	12	70	1025	1571	1219	3427427	2400000	3599999
4	828473	3	12	75	1819	1559	1466	4259715	3600000	4799999
5	1641268	1	12	85	1692	0	0	5905827	4800000	5999999
6	133440	3	12	70	1088	1808	1305	6040959	6000000	7199999
7	324761	2	12	60	1860	1466	0	8365164	7200000	8399999
8	324761	2	12	90	1299	1324	0	8693251	8400000	9599999
9	1054088	3	12	65	1355	1529	1885	9749962	9600000	10799999
10	2005477	3	12	70	1759	1166	1242	11760208	10800000	11999999

Total number of pulses in waveform = 25

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### Type 5 Radar Waveform\_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	633971	3	5	95	1901	1519	1659	633971	0	923076
2	589609	3	5	95	1912	1736	1571	1228659	923077	1846153
3	967674	3	5	95	1956	1876	1905	2201552	1846154	2769230
4	960921	2	5	60	1549	1865	0	3168210	2769231	3692307
5	1052436	3	5	50	1763	1571	1152	4224060	3692308	4615384
6	610068	1	5	70	1609	0	0	4838614	4615385	5538461
7	891396	1	5	80	1322	0	0	5731619	5538462	6461538
8	766955	1	5	90	1229	0	0	6499896	6461539	7384615
9	1353494	1	5	60	1408	0	0	7854619	7384616	8307692
10	685506	2	5	55	1835	1081	0	8541533	8307693	9230769
11	1307890	3	5	80	1938	1844	1133	9852339	9230770	10153846
12	359584	2	5	85	1803	1441	0	10216838	10153847	11076923
13	1312947	3	5	90	1583	1237	1145	11533029	11076924	12000000

Total number of pulses in waveform = 28

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### Type 5 Radar Waveform\_8

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	956870	1	19	90	1484	0	0	956870	0	999999
2	696708	1	19	65	1353	0	0	1655062	1000000	1999999
3	453941	3	19	95	1174	1427	1624	2110356	2000000	2999999
4	1555959	2	19	65	1543	1835	0	3670540	3000000	3999999
5	722008	3	19	85	1581	1520	1092	4395926	4000000	4999999
6	953775	3	19	75	1855	1308	1469	5353894	5000000	5999999
7	1261110	3	19	100	1069	1603	1576	6619636	6000000	6999999
8	1211517	2	19	50	1559	1001	0	7835401	7000000	7999999
9	1118565	1	19	80	1175	0	0	8956526	8000000	8999999
10	138010	3	19	60	1004	1736	1986	9095711	9000000	9999999
11	1419274	2	19	55	1571	1557	0	10519711	10000000	10999999
12	908517	3	19	80	1968	1840	1638	11431356	11000000	11999999

Total number of pulses in waveform = 27

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### Type 5 Radar Waveform\_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	200335	2	6	65	1203	1534	0	200335	0	705881
2	1141400	2	6	50	1242	1350	0	1344472	705882	1411763
3	491807	3	6	85	1679	1503	1937	1838871	1411764	2117645
4	669450	2	6	70	1935	1693	0	2513440	2117646	2823527
5	389334	3	6	85	1702	1215	1898	2906402	2823528	3529409
6	1022921	3	6	75	1191	1227	1230	3934138	3529410	4235291
7	746156	2	6	50	1786	1112	0	4683942	4235292	4941173
8	330836	3	6	65	1585	1309	1634	5017676	4941174	5647055
9	816549	2	6	50	1578	1850	0	5838753	5647056	6352937
10	1168102	3	6	60	1332	1407	1004	7010283	6352938	7058819
11	328090	2	6	90	1392	1012	0	7342116	7058820	7764701
12	689122	2	6	85	1041	1104	0	8033642	7764702	8470583
13	666692	2	6	95	1353	1875	0	8702479	8470584	9176465
14	767086	3	6	80	1689	1387	1610	9472793	9176466	9882347
15	817401	1	6	60	1310	0	0	10294580	9882348	10588229
16	452847	1	6	80	1370	0	0	10749037	10588230	11294111
17	828923	1	6	70	1226	0	0	11579330	11294112	11999993

Total number of pulses in waveform = 37

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### Type 5 Radar Waveform\_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	253707	3	9	95	1234	1677	1898	253707	0	923076
2	1304054	3	9	95	1081	1648	1507	1562570	923077	1846153
3	630936	2	9	90	1747	1056	0	2197742	1846154	2769230
4	909389	3	9	65	1715	1544	1623	3109934	2769231	3692307
5	950882	1	9	95	1982	0	0	4065698	3692308	4615384
6	1326767	1	9	75	1846	0	0	5394447	4615385	5538461
7	513257	2	9	60	1911	1568	0	5909550	5538462	6461538
8	674085	2	9	85	1898	1695	0	6587114	6461539	7384615
9	1472832	3	9	100	1687	1202	1355	8063539	7384616	8307692
10	559324	1	9	95	1515	0	0	8627107	8307693	9230769
11	930963	3	9	75	1491	1571	1658	9559585	9230770	10153846
12	629249	2	9	90	1579	1344	0	10193554	10153847	11076923
13	1607345	2	9	70	1410	1285	0	11803822	11076924	12000000

Total number of pulses in waveform = 28

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**Type 5 Radar Waveform\_11**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	58119	1	17	50	1958	0	0	58119	0	1199999
2	2167530	1	17	90	1603	0	0	2227607	1200000	2399999
3	621664	1	17	65	1928	0	0	2850874	2400000	3599999
4	1723255	3	17	65	1649	1412	1945	4576057	3600000	4799999
5	709611	3	17	50	1623	1423	1923	5290674	4800000	5999999
6	1454144	3	17	65	1672	1095	1514	6749787	6000000	7199999
7	520098	3	17	80	1344	1130	1567	7274166	7200000	8399999
8	1987092	2	17	85	1516	1439	0	9265299	8400000	9599999
9	1215195	2	17	65	1564	1595	0	10483449	9600000	10799999
10	773042	1	17	65	1184	0	0	11259650	10800000	11999999

Total number of pulses in waveform = 20  
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**Type 5 Radar Waveform\_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	190027	2	5	90	1758	1807	0	190027	0	857142
2	1116096	3	5	75	1186	1807	1733	1309688	857143	1714285
3	824813	2	5	70	1094	1787	0	2139227	1714286	2571428
4	629144	3	5	60	1385	1850	1375	2771252	2571429	3428571
5	1228258	3	5	75	1277	1307	1167	4004120	3428572	4285714
6	541624	1	5	95	1581	0	0	4549495	4285715	5142857
7	607240	1	5	55	1385	0	0	5158316	5142858	6000000
8	1039551	3	5	80	1914	1997	1237	6199252	6000001	6857143
9	1151422	2	5	100	1553	1240	0	7355822	6857144	7714286
10	399698	1	5	90	1721	0	0	7758313	7714287	8571429
11	1134778	2	5	55	1882	1959	0	8894812	8571430	9428572
12	1019315	3	5	60	1568	1720	1513	9917968	9428573	10285715
13	523477	2	5	70	1750	1929	0	10446246	10285716	11142858
14	1261433	3	5	60	1574	1320	1795	11711358	11142859	12000001

Total number of pulses in waveform = 31  
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**Type 5 Radar Waveform\_13**

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	494530	1	14	80	1923	0	0	494530	0	799999
2	813824	1	14	65	1397	0	0	1310277	800000	1599999
3	883623	3	14	85	1515	1962	1038	2195297	1600000	2399999
4	261229	1	14	90	1331	0	0	2461041	2400000	3199999
5	1503392	2	14	90	1840	1946	0	3965764	3200000	3999999
6	55222	1	14	60	1142	0	0	4024772	4000000	4799999
7	1539177	2	14	50	1919	1796	0	5565091	4800000	5599999
8	191962	1	14	55	1190	0	0	5760768	5600000	6399999
9	1327654	2	14	95	2000	1868	0	7089612	6400000	7199999
10	879132	3	14	85	1643	1289	1426	7972612	7200000	7999999
11	784295	3	14	80	1193	1374	1519	8761265	8000000	8799999
12	73271	1	14	95	1219	0	0	8838622	8800000	9599999
13	785220	1	14	50	1637	0	0	9625061	9600000	10399999
14	1260841	2	14	100	1005	1965	0	10887539	10400000	11199999
15	1011542	1	14	50	1812	0	0	11902051	11200000	11999999

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_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	105942	3	10	80	1103	1750	1200	105942	0	857142
2	835208	1	10	55	1805	0	0	945203	857143	1714285
3	1105598	1	10	80	1441	0	0	2052606	1714286	2571428
4	1336878	1	10	100	1320	0	0	3390925	2571429	3428571
5	42988	2	10	90	1680	1980	0	3435233	3428572	4285714
6	1069137	1	10	60	1269	0	0	4508030	4285715	5142857
7	1057091	2	10	70	1292	1324	0	5566390	5142858	6000000
8	691912	3	10	90	1994	1711	1738	6260918	6000001	6857143
9	628642	1	10	75	1313	0	0	6895003	6857144	7714286
10	1412293	2	10	90	1914	1462	0	8308609	7714287	8571429
11	527213	2	10	70	1542	1396	0	8839198	8571430	9428572
12	1407501	3	10	100	1471	1354	1079	10249637	9428573	10285715
13	427752	2	10	85	1137	1551	0	10681293	10285716	11142858
14	1111034	1	10	70	1242	0	0	11795015	11142859	12000001

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_15

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	1142733	1	18	50	1577	0	0	1142733	0	1499999
2	1375258	2	18	85	1031	1976	0	2519568	1500000	2999999
3	1529694	2	18	100	1998	1335	0	4052269	3000000	4499999
4	647787	2	18	80	1605	1330	0	4703389	4500000	5999999
5	1818403	2	18	55	1584	1139	0	6524727	6000000	7499999
6	2470794	1	18	85	1081	0	0	8998244	7500000	8999999
7	517785	2	18	90	1023	1116	0	9517110	9000000	10499999
8	1581439	1	18	60	1598	0	0	11100688	10500000	11999999

Total number of pulses in waveform = 13  
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### Type 5 Radar Waveform\_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	602948	3	9	90	1744	1447	1126	602948	0	923076
2	483272	2	9	85	1864	1394	0	1090537	923077	1846153
3	1380715	2	9	55	1634	1134	0	2474510	1846154	2769230
4	452714	1	9	80	1251	0	0	2929992	2769231	3692307
5	1120347	3	9	50	1725	1235	1071	4051690	3692308	4615384
6	590984	1	9	85	1995	0	0	4646605	4615385	5538461
7	921963	2	9	60	1558	1950	0	5570563	5538462	6461538
8	1218303	3	9	55	1636	1157	1465	6792374	6461539	7384615
9	1423056	3	9	60	1878	1909	1090	8219688	7384616	8307692
10	670335	3	9	95	1898	1490	1982	8894900	8307693	9230769
11	482372	2	9	90	1197	1647	0	9382642	9230770	10153846
12	1255189	3	9	85	1933	1979	1423	10640675	10153847	11076923
13	982938	1	9	65	1696	0	0	11628948	11076924	12000000

Total number of pulses in waveform = 29  
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**Type 5 Radar Waveform\_17**

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	44201	2	6	50	1696	1012	0	44201	0	923076
2	939211	2	6	65	1534	1646	0	986120	923077	1846153
3	1695519	2	6	65	1910	1672	0	2684819	1846154	2769230
4	315810	1	6	65	1003	0	0	3004211	2769231	3692307
5	964559	3	6	65	1097	1567	1412	3969773	3692308	4615384
6	1453386	3	6	85	1387	1123	1033	5427235	4615385	5538461
7	817238	3	6	70	1555	1942	1417	6248016	5538462	6461538
8	372707	1	6	95	1651	0	0	6625637	6461539	7384615
9	1473306	1	6	50	1348	0	0	8100594	7384616	8307692
10	882534	1	6	100	1450	0	0	8984576	8307693	9230769
11	1150466	1	6	70	1990	0	0	10136492	9230770	10153846
12	442850	1	6	80	1551	0	0	10581332	10153847	11076923
13	888031	2	6	90	1280	1019	0	11470914	11076924	12000000

Total number of pulses in waveform = 23  
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**Type 5 Radar Waveform\_18**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	151848	3	19	75	1263	1482	1740	151848	0	923076
2	1280777	2	19	90	1895	1201	0	1437110	923077	1846153
3	822725	2	19	70	1491	1303	0	2262931	1846154	2769230
4	1339618	2	19	60	1648	1971	0	3605343	2769231	3692307
5	601391	1	19	100	1202	0	0	4210353	3692308	4615384
6	903624	1	19	75	1504	0	0	5115179	4615385	5538461
7	1334347	1	19	90	1225	0	0	6451030	5538462	6461538
8	195648	2	19	65	1828	1142	0	6647903	6461539	7384615
9	1172299	3	19	90	1053	1651	1497	7823172	7384616	8307692
10	634574	3	19	70	1769	1311	1401	8461947	8307693	9230769
11	1212513	1	19	90	1586	0	0	9678941	9230770	10153846
12	1212953	2	19	55	1785	1679	0	10893480	10153847	11076923
13	765788	1	19	75	1730	0	0	11662732	11076924	12000000

Total number of pulses in waveform = 24  
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**Type 5 Radar Waveform\_19**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	470085	3	8	95	1928	1873	1546	470085	0	1090908
2	1173701	3	8	80	1620	1557	1517	1649133	1090909	2181817
3	875967	2	8	100	1206	1805	0	2529794	2181818	3272726
4	1569800	3	8	50	1569	1092	1704	4102605	3272727	4363635
5	372533	2	8	55	1075	1318	0	4479503	4363636	5454544
6	1189127	2	8	55	1501	1977	0	5671023	5454545	6545453
7	1515619	1	8	65	1020	0	0	7190120	6545454	7636362
8	538517	3	8	60	1468	1473	1830	7729657	7636363	8727271
9	1630750	1	8	90	1556	0	0	9365178	8727272	9818180
10	766253	3	8	75	1367	1118	1619	10132987	9818181	10909089
11	1357612	2	8	65	1529	1942	0	11494703	10909090	11999998

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	689347	3	12	90	1995	1099	1203	689347	0	1199999
2	1589545	2	12	60	1393	1687	0	2283189	1200000	2399999
3	1279293	2	12	75	1359	1205	0	3565562	2400000	3599999
4	109838	3	12	65	1953	1576	1293	3677964	3600000	4799999
5	1527739	3	12	100	1972	1865	1449	5210525	4800000	5999999
6	1382422	2	12	70	1241	1670	0	6598233	6000000	7199999
7	1790728	3	12	60	1588	1792	1522	8391872	7200000	8399999
8	115835	2	12	60	1333	1756	0	8512609	8400000	9599999
9	1256397	3	12	55	1704	1935	1064	9772095	9600000	10799999
10	1678405	3	12	60	1663	1524	1707	11455203	10800000	11999999

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

### Type 5 Radar Waveform\_21

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	770229	3	18	55	1378	1947	1357	770229	0	799999
2	687266	1	18	80	1430	0	0	1462177	800000	1599999
3	840731	1	18	80	1318	0	0	2304338	1600000	2399999
4	555580	1	18	55	1578	0	0	2861236	2400000	3199999
5	504131	3	18	80	1409	1075	1185	3366945	3200000	3999999
6	1204474	1	18	70	1083	0	0	4575088	4000000	4799999
7	513703	1	18	100	1602	0	0	5089874	4800000	5599999
8	612201	2	18	80	1527	1689	0	5703677	5600000	6399999
9	959805	3	18	85	1176	1788	1066	6666698	6400000	7199999
10	968473	3	18	70	1607	1779	1553	7639201	7200000	7999999
11	445538	1	18	80	1047	0	0	8089678	8000000	8799999
12	1062948	1	18	70	1120	0	0	9153673	8800000	9599999
13	566158	3	18	55	1143	1904	1172	9720951	9600000	10399999
14	1046733	2	18	65	1918	1245	0	10771903	10400000	11199999
15	1096919	2	18	95	1721	1289	0	11871985	11200000	11999999

Total number of pulses in waveform = 28  
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### Type 5 Radar Waveform\_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	282181	2	14	75	1968	1903	0	282181	0	631578
2	910775	2	14	65	1168	1505	0	1196827	631579	1263157
3	191098	3	14	80	1640	1464	1771	1390598	1263158	1894736
4	697481	3	14	55	1624	1569	1412	2092954	1894737	2526315
5	1006024	3	14	65	1403	1646	1191	3103573	2526316	3157894
6	228295	1	14	80	1226	0	0	3336108	3157895	3789473
7	786126	2	14	75	1007	1975	0	4123460	3789474	4421052
8	878353	3	14	60	1165	1924	1294	5004795	4421053	5052631
9	549894	3	14	60	1361	1733	1736	5559072	5052632	5684210
10	562752	1	14	75	1223	0	0	6126554	5684211	6315789
11	292723	2	14	80	1648	1005	0	6420600	6315790	6947368
12	918707	2	14	85	1519	1535	0	7341860	6947369	7578947
13	556434	3	14	75	1709	1267	1900	7901348	7578948	8210526
14	612661	3	14	65	1831	1090	1179	8518885	8210527	8842105
15	536979	1	14	90	1731	0	0	9059964	8842106	9473684
16	832923	1	14	55	1646	0	0	9894618	9473685	10105263
17	365946	1	14	60	1704	0	0	10262210	10105264	10736842
18	786295	2	14	95	1673	1752	0	11050209	10736843	11368421
19	830182	3	14	80	1963	1273	1642	11883816	11368422	12000000

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



**Type 5 Radar Waveform\_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	777801	2	9	60	1680	1091	0	777801	0	1333332
2	1206066	3	9	65	1089	1347	1742	1986638	1333333	2666665
3	1119980	1	9	95	1027	0	0	3110796	2666666	3999998
4	2173266	3	9	80	1197	1807	1765	5285089	3999999	5333331
5	175226	3	9	60	1172	1818	1237	5465084	5333332	6666664
6	2090140	2	9	55	1922	1548	0	7559451	6666665	7999997
7	892734	1	9	50	1563	0	0	8455655	7999998	9333330
8	1982981	2	9	80	1838	1658	0	10440199	9333331	10666663
9	1548752	1	9	100	1005	0	0	11992447	10666664	11999996

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

**Type 5 Radar Waveform\_24**

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	1079020	2	8	100	1858	1292	0	1079020	0	1499999
2	506922	2	8	100	1450	1993	0	1589092	1500000	2999999
3	1550987	2	8	75	1134	1940	0	3143522	3000000	4499999
4	2257461	1	8	80	1396	0	0	5404057	4500000	5999999
5	1183722	2	8	55	1587	1680	0	6589175	6000000	7499999
6	1426489	1	8	50	1196	0	0	8018931	7500000	8999999
7	2254893	1	8	55	1319	0	0	10275020	9000000	10499999
8	1403882	3	8	50	1012	1367	1432	11680221	10500000	11999999

Total number of pulses in waveform = 14  
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**Type 5 Radar Waveform\_25**

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	403779	1	5	50	1763	0	0	403779	0	749999
2	640367	2	5	55	1851	1513	0	1045909	750000	1499999
3	541863	2	5	80	1757	1094	0	1591136	1500000	2249999
4	859369	3	5	50	1070	1943	1593	2453356	2250000	2999999
5	1115982	1	5	50	1736	0	0	3573944	3000000	3749999
6	331267	3	5	60	1572	1371	1253	3906947	3750000	4499999
7	693117	1	5	95	1526	0	0	4604260	4500000	5249999
8	1326901	2	5	70	1932	1513	0	5932687	5250000	5999999
9	416619	3	5	100	1633	1413	1584	6352751	6000000	6749999
10	745569	3	5	95	1686	1319	1485	7102950	6750000	7499999
11	409566	3	5	90	1236	1296	1731	7517006	7500000	8249999
12	806466	1	5	55	1429	0	0	8327735	8250000	8999999
13	965410	2	5	95	1380	1427	0	9294574	9000000	9749999
14	981351	2	5	55	1003	1669	0	10278732	9750000	10499999
15	623964	2	5	85	1060	1174	0	10905368	10500000	11249999
16	829272	3	5	55	1648	1862	1506	11736874	11250000	11999999

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



**Type 5 Radar Waveform\_26**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	364398	1	6	70	1255	0	0	364398	0	999999
2	691496	2	6	55	1820	1293	0	1057149	1000000	1999999
3	1758243	2	6	70	1814	1321	0	2818505	2000000	2999999
4	817976	3	6	75	1554	1380	1678	3639616	3000000	3999999
5	1053142	2	6	95	1857	1683	0	4697370	4000000	4999999
6	350087	1	6	85	1936	0	0	5050997	5000000	5999999
7	1795768	1	6	100	1838	0	0	6848701	6000000	6999999
8	151652	3	6	75	1745	1717	1498	7002191	7000000	7999999
9	1284340	1	6	50	1228	0	0	8291491	8000000	8999999
10	1023405	2	6	75	1321	1007	0	9316124	9000000	9999999
11	1310835	1	6	80	1077	0	0	10629287	10000000	10999999
12	541695	1	6	80	1096	0	0	11172059	11000000	11999999

Total number of pulses in waveform = 20

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**Type 5 Radar Waveform\_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	624257	1	17	80	1489	0	0	624257	0	1499999
2	1049340	2	17	70	1656	1143	0	1675086	1500000	2999999
3	1912657	1	17	100	1251	0	0	3590542	3000000	4499999
4	1287758	2	17	75	1140	1488	0	4879551	4500000	5999999
5	1144000	3	17	65	1089	1077	1048	6026179	6000000	7499999
6	1749143	2	17	80	1663	1871	0	7778536	7500000	8999999
7	2549679	3	17	85	1330	1552	1473	10331749	9000000	10499999
8	305436	1	17	95	1370	0	0	10641540	10500000	11999999

Total number of pulses in waveform = 15

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**Type 5 Radar Waveform\_28**

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	188403	2	10	60	1196	1027	0	188403	0	1333332
2	1755263	2	10	60	1894	1573	0	1945889	1333333	2666665
3	1531080	1	10	70	1369	0	0	3480436	2666666	3999998
4	1464665	3	10	90	1796	1614	1909	4946470	3999999	5333331
5	1035991	2	10	50	1373	1286	0	5987780	5333332	6666664
6	942674	3	10	70	1874	1928	1013	6933113	6666665	7999997
7	1265867	3	10	100	1410	1003	1293	8203795	7999998	9333330
8	1196860	2	10	80	1013	1273	0	9404361	9333331	10666663
9	2527738	3	10	70	1900	1321	1673	11934385	10666664	11999996

Total number of pulses in waveform = 21

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### Type 5 Radar Waveform\_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	464552	1	19	80	1362	0	0	464552	0	999999
2	968307	1	19	55	1290	0	0	1434221	1000000	1999999
3	1203130	2	19	100	1686	1323	0	2638641	2000000	2999999
4	1192222	3	19	95	1100	1209	1975	3833872	3000000	3999999
5	443589	2	19	90	1077	1410	0	4281745	4000000	4999999
6	1109381	1	19	60	1674	0	0	5393613	5000000	5999999
7	1283071	3	19	50	1317	1997	1423	6678358	6000000	6999999
8	1020885	2	19	70	1808	1014	0	7703980	7000000	7999999
9	826107	2	19	65	1472	1693	0	8532909	8000000	8999999
10	810373	3	19	65	1847	1816	1302	9346447	9000000	9999999
11	1058127	2	19	60	1349	1888	0	10409539	10000000	10999999
12	1537610	3	19	65	1919	1247	1502	11950386	11000000	11999999

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_30

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	366431	1	12	70	1311	0	0	366431	0	749999
2	749361	2	12	70	1317	1214	0	1117103	750000	1499999
3	1064100	1	12	95	1141	0	0	2183734	1500000	2249999
4	610804	1	12	80	1984	0	0	2795679	2250000	2999999
5	465707	3	12	100	1610	1448	1446	3263370	3000000	3749999
6	785185	2	12	75	1236	1401	0	4053059	3750000	4499999
7	1002612	1	12	100	1441	0	0	5058308	4500000	5249999
8	311633	2	12	95	1679	1247	0	5371382	5250000	5999999
9	1291601	2	12	50	1296	1428	0	6665909	6000000	6749999
10	739518	2	12	85	1988	1789	0	7408151	6750000	7499999
11	307905	1	12	60	1689	0	0	7719833	7500000	8249999
12	1146314	3	12	95	1495	1380	1835	8867836	8250000	8999999
13	870114	3	12	75	1712	1862	1052	9742660	9000000	9749999
14	213295	1	12	95	1353	0	0	9960581	9750000	10499999
15	1153451	1	12	50	1616	0	0	11115385	10500000	11249999
16	420014	3	12	65	1396	1357	1359	11537015	11250000	11999999

Total number of pulses in waveform = 29  
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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	5291.7	1	16	5291.0	1
2	5307.0	1	17	5305.7	1
3	5294.6	1	18	5292.6	1
4	5309.0	1	19	5308.6	1
5	5299.3	1	20	5308.9	1
6	5293.5	1	21	5296.4	1
7	5298.1	1	22	5293.9	1
8	5308.4	1	23	5292.9	1
9	5304.9	1	24	5301.3	1
10	5305.3	1	25	5304.5	1
11	5294.9	1	26	5306.7	1
12	5300.0	1	27	5302.7	1
13	5307.5	1	28	5297.7	1
14	5303.8	1	29	5295.3	1
15	5300.0	1	30	5306.1	1
Detection Percentage (%)					100%



Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5295	24	14	5320	42
13	5270	39	29	5322	87
18	5328	54	36	5280	108
24	5282	72	40	5329	120
29	5314	87	48	5324	144
39	5305	117	57	5270	171
54	5317	162	60	5299	180
69	5308	207	67	5330	201
74	5294	222	76	5284	228
77	5320	231	77	5321	231
83	5312	249	80	5298	240
90	5313	270	82	5287	246
94	5278	282	83	5307	249
96	5287	288	84	5313	252
98	5275	294	89	5308	267
--	--	--	90	5295	270
--	--	--	91	5291	273
--	--	--	98	5318	294



Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5318	6	5	5283	15
5	5295	15	8	5306	24
43	5321	129	10	5296	30
50	5278	150	12	5290	36
53	5301	159	16	5302	48
59	5275	177	23	5325	69
66	5316	198	32	5295	96
76	5296	228	44	5288	132
82	5302	246	47	5299	141
87	5326	261	61	5324	183
98	5325	294	67	5316	201
99	5311	297	71	5278	213
--	--	--	76	5313	228
--	--	--	77	5292	231
--	--	--	80	5321	240
--	--	--	85	5298	255
--	--	--	91	5326	273
--	--	--	95	5327	285

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5300	9	3	5284	9
21	5312	63	6	5316	18
23	5272	69	11	5288	33
61	5323	183	15	5287	45
63	5296	189	21	5308	63
74	5322	222	22	5276	66
79	5320	237	55	5300	165
85	5304	255	60	5325	180
86	5328	258	74	5275	222
87	5284	261	95	5310	285
92	5303	276	96	5271	288
96	5315	288	--	--	--



Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5317	15	58	5294	174
18	5305	54	59	5290	177
31	5303	93	71	5313	213
51	5309	153	74	5316	222
73	5322	219	80	5271	240
79	5300	237	83	5320	249
--	--	--	85	5275	255
--	--	--	95	5328	285

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5316	6	12	5290	36
3	5319	9	21	5317	63
11	5299	33	31	5293	93
12	5326	36	41	5295	123
18	5290	54	53	5299	159
19	5287	57	54	5309	162
20	5280	60	76	5311	228
26	5311	78	79	5306	237
30	5301	90	90	5286	270
44	5281	132	96	5296	288
47	5298	141	98	5313	294
60	5309	180	99	5274	297
63	5295	189	--	--	--
70	5307	210	--	--	--
72	5297	216	--	--	--
78	5279	234	--	--	--





Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
2	5307	6	17	5296	51
13	5311	39	22	5273	66
16	5303	48	31	5314	93
22	5327	66	36	5330	108
35	5318	105	44	5289	132
42	5276	126	47	5311	141
45	5277	135	59	5328	177
60	5295	180	60	5288	180
63	5316	189	67	5324	201
81	5313	243	69	5280	207
83	5286	249	71	5297	213
87	5302	261	76	5302	228
--	--	--	81	5323	243
--	--	--	86	5308	258
--	--	--	87	5306	261
--	--	--	91	5304	273

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5284	9	9	5284	27
9	5304	27	13	5277	39
23	5322	69	16	5326	48
26	5278	78	20	5306	60
35	5279	105	21	5304	63
56	5303	168	32	5308	96
58	5293	174	37	5274	111
65	5307	195	43	5314	129
--	--	--	47	5291	141
--	--	--	51	5289	153
--	--	--	73	5283	219



Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5320	0	0	5280	0
2	5284	6	19	5298	57
8	5311	24	47	5319	141
10	5272	30	55	5287	165
13	5274	39	62	5326	186
22	5314	66	76	5273	228
23	5299	69	89	5306	267
34	5298	102	98	5278	294
47	5323	141	99	5308	297
48	5309	144	--	--	--
53	5295	159	--	--	--
54	5283	162	--	--	--
60	5290	180	--	--	--
64	5310	192	--	--	--
66	5294	198	--	--	--
68	5307	204	--	--	--
74	5277	222	--	--	--
77	5304	231	--	--	--
89	5282	267	--	--	--
92	5280	276	--	--	--



Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5312	0	10	5272	30
4	5320	12	15	5296	45
9	5284	27	20	5312	60
13	5309	39	35	5280	105
14	5302	42	37	5286	111
24	5315	72	52	5310	156
25	5287	75	59	5277	177
27	5330	81	68	5276	204
39	5293	117	73	5290	219
50	5313	150	99	5307	297
51	5271	153	--	--	--
84	5289	252	--	--	--
94	5324	282	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5284	15	0	5318	0
12	5310	36	10	5298	30
19	5297	57	30	5311	90
26	5294	78	34	5330	102
37	5280	111	48	5279	144
38	5291	114	49	5270	147
43	5311	129	63	5310	189
45	5304	135	83	5283	249
49	5303	147	89	5314	267
55	5298	165	92	5272	276
62	5290	186	93	5290	279
63	5283	189	96	5274	288
65	5321	195	--	--	--
76	5287	228	--	--	--
77	5274	231	--	--	--
87	5299	261	--	--	--
93	5307	279	--	--	--



Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5275	3	12	5305	36
12	5280	36	16	5313	48
13	5319	39	18	5329	54
45	5287	135	39	5282	117
47	5296	141	51	5320	153
51	5278	153	53	5288	159
59	5289	177	56	5308	168
72	5320	216	64	5276	192
83	5330	249	65	5326	195
90	5297	270	67	5292	201
95	5309	285	72	5284	216
--	--	--	73	5300	219
--	--	--	74	5298	222
--	--	--	76	5319	228
--	--	--	81	5304	243

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5310	36	6	5302	18
25	5296	75	12	5329	36
26	5311	78	28	5309	84
30	5273	90	39	5275	117
36	5291	108	47	5304	141
39	5299	117	61	5308	183
41	5272	123	65	5280	195
44	5305	132	68	5278	204
50	5281	150	72	5326	216
73	5277	219	87	5305	261
76	5325	228	91	5287	273
84	5316	252	93	5295	279
92	5317	276	--	--	--
95	5270	285	--	--	--
99	5289	297	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5316	12	9	5276	27
6	5295	18	15	5309	45
9	5281	27	20	5313	60
13	5308	39	26	5329	78
16	5292	48	39	5325	117
20	5286	60	45	5317	135
25	5328	75	49	5323	147
31	5311	93	57	5292	171
52	5298	156	60	5303	180
62	5317	186	80	5298	240
65	5323	195	81	5324	243
67	5324	201	85	5274	255
70	5326	210	87	5295	261
82	5321	246	88	5306	264
91	5327	273	95	5294	285
97	5310	291	--	--	--
98	5319	294	--	--	--



Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5325	21	6	5318	18
8	5283	24	9	5309	27
10	5307	30	33	5315	99
11	5299	33	34	5327	102
16	5323	48	49	5317	147
18	5306	54	62	5277	186
23	5277	69	72	5320	216
26	5326	78	80	5284	240
31	5327	93	85	5281	255
47	5302	141	86	5306	258
55	5296	165	94	5272	282
57	5319	171	95	5288	285
59	5318	177	--	--	--
65	5295	195	--	--	--
82	5280	246	--	--	--



Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5303	12	12	5307	36
12	5296	36	13	5270	39
18	5282	54	18	5288	54
20	5327	60	26	5289	78
31	5290	93	28	5324	84
44	5318	132	38	5295	114
58	5307	174	44	5283	132
62	5306	186	49	5303	147
67	5295	201	52	5314	156
70	5328	210	56	5321	168
74	5276	222	59	5281	177
83	5274	249	62	5304	186
98	5329	294	67	5328	201
--	--	--	72	5282	216
--	--	--	94	5313	282
--	--	--	99	5272	297



Radar Statistical Performance for 802.11n-HT40

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5300.4	1	758	70	1
2	5317.4	1	618	86	1
3	5315.6	1	798	67	1
4	5301.6	1	818	65	1
5	5329.0	1	878	61	1
6	5327.1	1	918	58	1
7	5299.5	1	598	89	1
8	5313.5	1	518	102	1
9	5302.9	1	718	74	1
10	5292.0	1	3066	18	1
11	5325.5	1	858	62	1
12	5318.3	1	558	95	1
13	5308.6	1	678	78	1
14	5323.9	1	538	99	1
15	5298.2	1	698	76	1
16	5311.7	1	2517	21	1
17	5292.3	1	856	62	1
18	5319.6	1	1814	30	1
19	5303.6	1	2530	21	1
20	5310.0	1	890	60	1
21	5295.4	1	1353	40	1
22	5320.2	1	2666	20	1
23	5305.3	1	2466	22	1
24	5296.9	1	1617	33	1
25	5293.5	1	1060	50	1
26	5321.7	1	566	94	1
27	5310.0	1	1416	38	1
28	5322.2	1	892	60	1
29	5294.6	1	2704	20	1
30	5328.5	1	2723	20	1
Detection Percentage (%)					100%





Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5301.5	1.2	222	23	1
2	5320.4	3.7	197	25	1
3	5293.7	1.7	193	23	1
4	5316.7	1.3	211	29	0
5	5296.0	3.1	168	28	1
6	5319.2	4.2	186	29	1
7	5294.6	1.7	204	23	1
8	5321.2	2.1	183	23	1
9	5298.6	4.4	174	24	1
10	5315.3	3.1	186	29	1
11	5292.0	3.9	167	27	1
12	5302.7	2.6	159	26	1
13	5300.5	1.2	211	24	1
14	5317.8	3.5	213	29	1
15	5297.1	5.0	162	25	1
16	5314.2	1.8	173	29	1
17	5303.3	4.4	197	23	1
18	5308.5	2.4	164	27	1
19	5292.8	1.1	154	24	1
20	5324.8	1.2	223	25	1
21	5312.6	3.1	164	29	1
22	5305.9	1.8	158	23	1
23	5328.3	2.5	161	25	1
24	5322.8	3.2	182	27	1
25	5310.0	3.3	201	27	1
26	5326.7	4.6	213	27	1
27	5310.0	1.6	230	23	1
28	5329.0	4.3	183	23	1
29	5323.6	3.3	204	23	1
30	5307.4	2.3	158	27	1
Detection Percentage (%)					96.7%



Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5301.1	7.3	254	16	1
2	5312.4	8.2	327	18	1
3	5294.5	9.4	257	16	1
4	5329.0	8.3	489	18	1
5	5300.4	6.9	267	17	1
6	5292.7	9.7	474	18	1
7	5328.6	9.5	294	18	1
8	5302.5	9.0	402	16	1
9	5295.8	9.2	256	17	1
10	5319.4	8.0	279	18	1
11	5314.3	7.3	338	17	1
12	5292.0	8.3	427	16	1
13	5320.5	9.9	490	16	1
14	5310.0	7.9	307	16	0
15	5303.9	9.2	384	18	1
16	5299.5	6.1	462	17	1
17	5326.3	6.2	354	16	1
18	5315.6	6.1	346	18	1
19	5310.0	6.0	251	18	1
20	5317.1	9.8	447	17	1
21	5296.2	7.3	415	16	1
22	5321.3	8.8	345	18	1
23	5304.6	8.4	358	18	0
24	5322.4	8.8	297	16	1
25	5298.8	7.8	475	16	1
26	5323.3	8.5	449	18	1
27	5316.8	6.4	500	18	1
28	5306.5	8.5	301	17	1
29	5324.6	6.7	348	17	1
30	5297.3	7.4	293	17	1
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	5303.6	11.5	304	14	1
2	5295.4	12.8	378	13	0
3	5313.5	17.0	493	13	1
4	5302.9	13.3	263	16	1
5	5311.7	12.7	495	14	1
6	5296.9	18.9	414	12	1
7	5320.2	13.2	250	15	1
8	5305.3	12.7	345	12	1
9	5292.0	12.0	471	14	1
10	5310.0	14.5	395	15	1
11	5301.6	18.9	312	13	1
12	5294.6	13.8	311	15	1
13	5321.7	17.8	261	14	1
14	5298.2	15.2	396	15	1
15	5308.6	17.5	418	16	1
16	5292.3	16.4	486	15	1
17	5319.6	15.0	436	16	0
18	5299.5	11.8	445	14	1
19	5315.6	14.5	341	14	1
20	5310.0	13.8	407	16	1
21	5322.2	13.6	293	14	1
22	5300.4	18.7	290	13	0
23	5328.5	16.4	458	14	1
24	5293.5	14.7	316	16	1
25	5329.0	11.5	262	16	1
26	5323.9	13.3	280	15	1
27	5317.4	16.3	492	14	1
28	5327.1	16.4	478	12	1
29	5325.5	14.2	299	12	1
30	5318.3	17.8	293	14	1
Detection Percentage (%)					90.0%

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

waveforms is as follows:  $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 96.7\% + 93.3\% + 90.0\%) / 4 = 95.0\% (>80\%)$



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	5299.6	1	16	5310.0	1
2	5297.6	1	17	5310.0	1
3	5296.8	1	18	5310.0	1
4	5294.0	1	19	5310.0	1
5	5295.2	1	20	5310.0	1
6	5295.6	1	21	5320.8	1
7	5298.8	1	22	5324.0	1
8	5294.4	1	23	5326.0	1
9	5296.0	1	24	5320.4	1
10	5299.2	1	25	5322.4	1
11	5310.0	1	26	5325.6	1
12	5310.0	1	27	5321.2	1
13	5310.0	1	28	5324.8	1
14	5310.0	1	29	5324.4	1
15	5310.0	1	30	5323.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	268046	3	19	60	1300	1361	1075	268046	0	631578
2	596526	1	19	75	1111	0	0	868308	631579	1263157
3	517323	1	19	100	1151	0	0	1386742	1263158	1894736
4	597185	1	19	95	1116	0	0	1985078	1894737	2526315
5	560678	1	19	85	1917	0	0	2546872	2526316	3157894
6	1047715	2	19	65	1202	1205	0	3596504	3157895	3789473
7	441323	2	19	75	1177	1356	0	4040234	3789474	4421052
8	1000006	3	19	65	1703	1691	1039	5042773	4421053	5052631
9	109953	1	19	90	1419	0	0	5157159	5052632	5684210
10	1042449	2	19	85	1031	1192	0	6201027	5684211	6315789
11	459202	2	19	70	1278	1262	0	6862452	6315790	6947368
12	388492	2	19	95	1495	1730	0	7053484	6947369	7578947
13	594995	2	19	80	1523	1593	0	7651704	7578948	8210526
14	932822	3	19	100	1322	1557	1513	8587642	8210527	8842105
15	543086	2	19	60	1845	1250	0	9135120	8842106	9473684
16	778831	1	19	95	1453	0	0	9915046	9473685	10105263
17	563194	1	19	75	1601	0	0	10479693	10105264	10736842
18	475670	3	19	90	1866	1251	1274	10956964	10736843	11368421
19	780371	2	19	60	1734	1238	0	11741726	11368422	12000000
Total number of pulses in waveform = 35										
*****										



### Type 5 Radar Waveform\_2

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	863873	3	14	90	1165	1049	1160	863873	0	1199999
2	826884	3	14	55	1827	1867	1873	1694131	1200000	2399999
3	1248316	1	14	85	1317	0	0	2948014	2400000	3599999
4	1433835	3	14	50	1565	1389	1840	4383166	3600000	4799999
5	741708	3	14	55	1500	1072	1138	5129668	4800000	5999999
6	999928	3	14	65	1164	1794	1886	6133306	6000000	7199999
7	1592627	2	14	100	1861	1876	0	7730777	7200000	8399999
8	1064775	1	14	80	1036	0	0	8799289	8400000	9599999
9	1836993	3	14	90	1266	1216	1563	10637318	9600000	10799999
10	208776	1	14	65	1344	0	0	10850139	10800000	11999999

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

### Type 5 Radar Waveform\_3

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	301174	2	12	65	1137	1795	0	301174	0	1199999
2	1245201	2	12	80	1028	1347	0	1549307	1200000	2399999
3	1692163	1	12	60	1900	0	0	3243845	2400000	3599999
4	1293128	3	12	50	1961	1136	1727	4538873	3600000	4799999
5	432027	2	12	100	1305	1810	0	4975724	4800000	5999999
6	1654375	2	12	50	1032	1719	0	6633214	6000000	7199999
7	780272	3	12	60	1495	1631	1264	7416237	7200000	8399999
8	2003987	1	12	80	1105	0	0	9424614	8400000	9599999
9	1309695	1	12	75	1187	0	0	10735414	9600000	10799999
10	758133	3	12	60	1327	1887	1178	11494734	10800000	11999999

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

### Type 5 Radar Waveform\_4

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	790510	2	5	95	1660	1649	0	790510	0	923076
2	512392	3	5	70	1914	1675	1293	1306211	923077	1846153
3	938971	1	5	70	1288	0	0	2250064	1846154	2769230
4	808515	2	5	100	1578	1467	0	3059867	2769231	3692307
5	950368	3	5	100	1698	1276	1257	4013280	3692308	4615384
6	874695	2	5	55	1279	1157	0	4892206	4615385	5538461
7	1308137	2	5	55	1460	1211	0	6202779	5538462	6461538
8	604932	2	5	85	1489	1621	0	6810382	6461539	7384615
9	773740	2	5	75	1431	1963	0	7587232	7384616	8307692
10	911539	1	5	90	1241	0	0	8502165	8307693	9230769
11	923957	3	5	85	1335	1634	1618	9427363	9230770	10153846
12	1578387	1	5	85	1181	0	0	11010337	10153847	11076923
13	964488	3	5	55	1578	1724	1648	11976006	11076924	12000000

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



### Type 5 Radar Waveform\_5

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	433331	1	8	60	1972	0	0	433331	0	599999
2	473830	2	8	100	1187	1113	0	909133	600000	1199999
3	290036	1	8	50	1974	0	0	1201469	1200000	1799999
4	649548	2	8	65	1333	1726	0	1852991	1800000	2399999
5	711343	2	8	70	1252	1461	0	2567393	2400000	2999999
6	435663	1	8	60	1725	0	0	3005669	3000000	3599999
7	809253	2	8	80	1237	1355	0	3816647	3600000	4199999
8	462544	3	8	80	1656	1177	1034	4281783	4200000	4799999
9	848648	3	8	50	1422	1266	1425	5134298	4800000	5399999
10	262532	1	8	65	1166	0	0	5400943	5400000	5999999
11	872829	2	8	60	1022	1151	0	6274938	6000000	6599999
12	470610	1	8	85	1538	0	0	6747721	6600000	7199999
13	859248	1	8	90	1629	0	0	7608507	7200000	7799999
14	650098	1	8	65	1025	0	0	8260234	7800000	8399999
15	472963	3	8	95	1467	1034	1095	8734222	8400000	8999999
16	798373	2	8	80	1031	1689	0	9536191	9000000	9599999
17	278474	2	8	55	1192	1516	0	9817385	9600000	10199999
18	553801	2	8	55	1423	1661	0	10373694	10200000	10799999
19	757055	1	8	50	1452	0	0	1113833	10800000	11399999
20	305986	2	8	55	1055	1968	0	11441271	11400000	11999999

Total number of pulses in waveform = 35  
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### Type 5 Radar Waveform\_6

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	574535	3	9	100	1450	1875	1397	574535	0	923076
2	490829	3	9	70	1782	1306	1379	1070086	923077	1846153
3	1437297	1	9	75	1570	0	0	2511850	1846154	2769230
4	1106458	2	9	70	1695	1638	0	3619878	2769231	3692307
5	562109	2	9	65	1114	1303	0	4185320	3692308	4615384
6	1062858	3	9	50	1457	1550	1342	5250595	4615385	5538461
7	846964	2	9	50	1140	1115	0	6101908	5538462	6461538
8	737550	2	9	100	1405	1731	0	6841713	6461539	7384615
9	1072335	2	9	50	1962	1515	0	7917184	7384616	8307692
10	689408	3	9	50	1328	1904	1820	8610069	8307693	9230769
11	785973	2	9	85	1769	1608	0	9401094	9230770	10153846
12	1623889	1	9	50	1993	0	0	11028360	10153847	11076923
13	843631	2	9	85	1014	1136	0	11873984	11076924	12000000

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

### Type 5 Radar Waveform\_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	83660	3	17	55	1217	1552	1673	83660	0	666666
2	1231322	3	17	100	1699	1787	1396	1319424	666667	1333333
3	495292	1	17	80	1519	0	0	1819498	1333334	2000000
4	179882	1	17	75	1502	0	0	2000899	2000001	2666667
5	1240377	3	17	95	1087	1080	1173	3242778	2666668	3333334
6	684668	1	17	55	1659	0	0	3930786	3333335	4000001
7	372123	3	17	70	1139	1508	1891	4304568	4000002	4666668
8	624814	1	17	65	1406	0	0	4933920	4666669	5333335
9	732713	3	17	100	1062	1246	1902	5668039	5333336	6000002
10	867709	2	17	70	1490	1213	0	6539958	6000003	6666669
11	666384	2	17	75	1565	1830	0	7209045	6666670	7333336
12	726175	3	17	85	1546	1361	1170	7938615	7333337	8000003
13	531919	2	17	85	1367	1008	0	8474611	8000004	8666670
14	191764	2	17	95	1996	1497	0	8668740	8666671	9333337
15	1146731	2	17	65	1195	1722	0	9818964	9333338	10000004
16	610718	2	17	60	1433	1023	0	10432599	10000005	10666671
17	540627	3	17	90	1156	1116	1456	10975682	10666672	11333338
18	880857	1	17	75	1585	0	0	11860267	11333339	12000005

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_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	664115	1	6	60	1515	0	0	664115	0	705881
2	166438	2	6	60	1981	1896	0	832068	705882	1411763
3	767961	3	6	70	1646	1231	1566	1603906	1411764	2117645
4	1107289	1	6	55	1782	0	0	2715628	2117646	2823527
5	299144	2	6	70	1295	1596	0	3016554	2823528	3529409
6	895132	2	6	85	1372	1331	0	3914577	3529410	4235291
7	458596	1	6	100	1616	0	0	4375876	4235292	4941173
8	773360	2	6	100	1487	1127	0	5150852	4941174	5647055
9	726300	3	6	65	1051	1684	1754	5879766	5647056	6352937
10	769894	1	6	65	1339	0	0	6654149	6352938	7058819
11	590009	3	6	55	1647	1184	1139	7245497	7058820	7764701
12	1043215	3	6	60	1854	1624	1700	8292682	7764702	8470583
13	399887	2	6	85	1703	1466	0	8697747	8470584	9176465
14	803576	2	6	65	1375	1746	0	9504492	9176466	9882347
15	875908	2	6	100	1805	1039	0	10383521	9882348	10582229
16	796910	3	6	65	1424	1356	1117	11183275	10582230	11294111
17	563530	2	6	80	1668	1412	0	11750702	11294112	11999993

Total number of pulses in waveform = 35

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### Type 5 Radar Waveform\_9

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	676734	3	10	50	1757	1837	1046	676734	0	1333332
2	1967596	2	10	70	1901	1517	0	2648970	1333333	2666665
3	715971	3	10	70	1523	1776	1708	3368359	2666666	3999998
4	1763628	1	10	85	1976	0	0	5136994	3999999	5333331
5	598460	1	10	55	1825	0	0	5737430	5333332	6666664
6	1970376	2	10	70	1559	1323	0	7709631	6666665	7999997
7	476902	1	10	75	1907	0	0	8189415	7999998	9333330
8	1679040	1	10	80	1067	0	0	9870362	9333331	10666663
9	1490098	3	10	75	1256	1761	1888	11361527	10666664	11999996

Total number of pulses in waveform = 17

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### Type 5 Radar Waveform\_10

Num of Bursts = 9

Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	975018	2	18	80	1745	1594	0	975018	0	1333332
2	963299	1	18	85	1166	0	0	1941656	1333333	2666665
3	1714407	1	18	55	1169	0	0	3657229	2666666	3999998
4	1672098	1	18	70	1875	0	0	5330496	3999999	5333331
5	162001	1	18	55	1677	0	0	5494372	5333332	6666664
6	1680805	2	18	65	1508	1613	0	7176854	6666665	7999997
7	1179194	1	18	80	1904	0	0	8359169	7999998	9333330
8	1387668	1	18	100	1074	0	0	9748741	9333331	10666663
9	1217720	2	18	50	1316	1927	0	10967535	10666664	11999996

Total number of pulses in waveform = 12

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### Type 5 Radar Waveform\_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	505819	3	19	55	1408	1470	1947	505819	0	705881
2	622100	1	19	55	1756	0	0	1132744	705882	1411763
3	330451	2	19	80	1523	1068	0	1464951	1411764	2117645
4	935175	1	19	55	1354	0	0	2402717	2117646	2823527
5	961458	2	19	60	1029	1328	0	3365529	2823528	3529409
6	761337	2	19	60	1708	1693	0	4129223	3529410	4235291
7	729391	2	19	50	1130	1115	0	4862015	4235292	4941173
8	115087	1	19	75	1860	0	0	4979347	4941174	5647055
9	978802	1	19	75	1897	0	0	5960009	5647056	6352937
10	808902	1	19	75	1105	0	0	6770808	6352938	7058819
11	824248	1	19	70	1889	0	0	7596161	7058820	7764701
12	854707	2	19	95	1451	1724	0	8452757	7764702	8470583
13	428796	2	19	90	1788	1513	0	8884728	8470584	9176465
14	713022	2	19	65	1656	1771	0	9601051	9176466	9882347
15	326088	1	19	75	1602	0	0	9930566	9882348	10588229
16	676517	3	19	95	1755	1279	1223	10608685	10588230	11294111
17	1124058	1	19	100	1500	0	0	11737000	11294112	11999993

Total number of pulses in waveform = 28  
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### Type 5 Radar Waveform\_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	456444	2	10	70	1310	1874	0	456444	0	857142
2	1133169	1	10	50	1050	0	0	1592797	857143	1714285
3	543112	3	10	60	1333	1498	1890	2136959	1714286	2571428
4	691963	1	10	100	1872	0	0	2833643	2571429	3428571
5	1385244	2	10	95	1190	1332	0	4220759	3428572	4285714
6	106720	2	10	60	1783	1485	0	4330001	4285715	5142857
7	1387452	1	10	90	1139	0	0	5720721	5142858	6000000
8	909920	1	10	60	1843	0	0	6631780	6000001	6857143
9	561327	1	10	70	1223	0	0	7194950	6857144	7714286
10	569204	2	10	90	1402	1919	0	7765377	7714287	8571429
11	997423	3	10	60	1466	1026	1715	8766121	8571430	9428572
12	960558	3	10	70	1183	1098	1889	9730886	9428573	10285715
13	1177353	1	10	100	1166	0	0	10912409	10285716	11142858
14	293162	2	10	85	1172	1876	0	11206737	11142859	12000001

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_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	76004	1	5	80	1984	0	0	76004	0	631578
2	844781	2	5	50	1916	1947	0	922769	631579	1263157
3	364933	2	5	70	1094	1811	0	1291565	1263158	1894736
4	1112456	1	5	100	1894	0	0	2406926	1894737	2526315
5	518417	1	5	65	1144	0	0	2927237	2526316	3157894
6	819745	3	5	85	1410	1580	1589	3748126	3157895	3789473
7	251710	3	5	55	1907	1428	1843	4004415	3789474	4421052
8	1038711	2	5	95	1330	1777	0	5048304	4421053	5052631
9	621377	1	5	80	1535	0	0	5672788	5052632	5684210
10	308835	1	5	70	1073	0	0	5983158	5684211	6315789
11	631922	3	5	90	1039	1076	1817	6616153	6315790	6947368
12	425636	2	5	50	1637	1008	0	7045721	6947369	7578947
13	635907	1	5	70	1359	0	0	7684273	7578948	8210526
14	786027	2	5	55	1072	1115	0	8471659	8210527	8842105
15	689278	1	5	95	1231	0	0	9163124	8842106	9473684
16	797288	3	5	60	1588	1498	1541	9961643	9473685	10105263
17	575209	3	5	80	1967	1202	1967	10541479	10105264	10736842
18	281429	1	5	80	1963	0	0	10828044	10736843	11368421
19	1150072	2	5	60	1160	1369	0	11980079	11368422	12000000

Total number of pulses in waveform = 35  
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### Type 5 Radar Waveform\_14

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	429975	3	12	100	1463	1503	1002	497536	0	599999
2	812215	3	12	90	1790	1731	1259	931479	600000	1199999
3	316109	1	12	85	1214	0	0	1748474	1200000	1799999
4	436097	1	12	100	1349	0	0	2065797	1800000	2399999
5	780707	3	12	95	1826	1329	1291	2503243	2400000	2999999
6	499115	2	12	50	1505	1372	0	3288396	3000000	3599999
7	759331	3	12	60	1063	1021	1926	3790388	3600000	4199999
8	810347	2	12	90	1856	1775	0	4553729	4200000	4799999
9	368368	2	12	100	1623	1209	0	5367707	4800000	5399999
10	713466	3	12	50	1342	1421	1087	5738907	5400000	5999999
11	175749	1	12	100	1268	0	0	6456223	6000000	6599999
12	653800	1	12	80	1683	0	0	6633240	6600000	7199999
13	686952	3	12	60	1921	1719	1282	7288723	7200000	7799999
14	857576	2	12	95	1679	1464	0	7960597	7800000	8399999
15	268428	2	12	75	1577	1355	0	8841316	8400000	8999999
16	894454	1	12	100	1878	0	0	9112676	9000000	9599999
17	635067	3	12	85	1763	1627	1748	10009008	9600000	10199999
18	537729	2	12	90	1621	1391	0	10649213	10200000	10799999
19	555629	3	12	70	1798	1361	1225	11189954	10800000	11399999
20		1	12	65	1963	0	0	11749967	11400000	11999999

Total number of pulses in waveform = 42  
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### Type 5 Radar Waveform\_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	957193	1	8	65	1795	0	0	957193	0	1199999
2	1209276	2	8	70	1612	1125	0	2168264	1200000	2399999
3	429249	3	8	60	1913	1533	1528	2600250	2400000	3599999
4	1864905	3	8	85	1427	1935	1050	4470129	3600000	4799999
5	1437267	3	8	75	1715	1045	1612	5911808	4800000	5999999
6	279119	3	8	55	1791	1071	1835	6195299	6000000	7199999
7	2129115	1	8	55	1049	0	0	8329111	7200000	8399999
8	743052	2	8	50	1535	1626	0	9073212	8400000	9599999
9	1261794	2	8	60	1799	1283	0	10338167	9600000	10799999
10	868734	1	8	95	1445	0	0	11209983	10800000	11999999

Total number of pulses in waveform = 21  
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### Type 5 Radar Waveform\_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	713777	1	6	90	1572	0	0	713777	0	999999
2	540022	2	6	50	1165	1106	0	1255371	1000000	1999999
3	1040588	1	6	100	1529	0	0	2298230	2000000	2999999
4	1622157	1	6	65	1146	0	0	3921916	3000000	3999999
5	863520	1	6	50	1554	0	0	4786582	4000000	4999999
6	1077624	2	6	55	1095	1890	0	5865760	5000000	5999999
7	1124567	2	6	50	1965	1710	0	6993312	6000000	6999999
8	383424	3	6	55	1045	1161	1446	7380411	7000000	7999999
9	733257	1	6	85	1366	0	0	8117320	8000000	8999999
10	938176	3	6	60	1704	1638	1409	9056862	9000000	9999999
11	1127192	1	6	50	1320	0	0	10188805	10000000	10999999
12	1160288	2	6	50	1039	1102	0	11350413	11000000	11999999

Total number of pulses in waveform = 20  
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**Type 5 Radar Waveform\_17**

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	643720	3	18	70	1530	1667	1296	643720	0	666666
2	69038	1	18	90	1640	0	0	717251	666667	1333333
3	1106654	3	18	80	1052	1937	1722	1824545	1333334	2000000
4	286921	2	18	80	1930	1390	0	2116177	2000001	2666667
5	743496	3	18	90	1469	1864	1855	2862993	2666668	3333334
6	656330	3	18	55	1214	1866	1947	3524511	3333335	4000001
7	639185	2	18	80	1998	1984	0	4168723	4000002	4666668
8	528678	1	18	80	1606	0	0	4701383	4666669	5333335
9	866030	3	18	85	1856	1164	1007	5569019	5333336	6000002
10	859808	1	18	60	1851	0	0	6432854	6000003	6666669
11	407164	3	18	55	1364	1764	1582	6841869	6666670	7333336
12	906365	1	18	100	1615	0	0	7752944	7333337	8000003
13	248084	3	18	50	1747	1979	1594	8002643	8000004	8666670
14	788268	2	18	85	1464	1236	0	8776231	8666671	9333337
15	587676	2	18	75	1377	1782	0	9366607	9333338	10000004
16	872387	1	18	85	1744	0	0	10242153	10000005	10666671
17	523262	2	18	75	1215	1767	0	10767159	10666672	11333338
18	608688	1	18	55	1338	0	0	11378829	11333339	12000005

Total number of pulses in waveform = 37

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**Type 5 Radar Waveform\_18**

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	266187	3	9	80	1060	1754	1194	266187	0	1090908
2	1507422	1	9	55	1570	0	0	1777617	1090909	2181817
3	1385633	1	9	75	1867	0	0	3164820	2181818	3272726
4	387728	3	9	75	1930	1549	1530	3554415	3272727	4363635
5	813250	2	9	80	1719	1046	0	4372674	4363636	5454544
6	1566291	1	9	80	1594	0	0	5941730	5454545	6545453
7	981765	1	9	85	1423	0	0	6925089	6545454	7636362
8	1334042	3	9	55	1310	1988	1039	8260554	7636363	8727271
9	1082214	1	9	65	1125	0	0	9347105	8727272	9818180
10	1027761	1	9	60	1573	0	0	10375991	9818181	10909089
11	1173546	1	9	55	1859	0	0	11551110	10909090	11999998

Total number of pulses in waveform = 18

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**Type 5 Radar Waveform\_19**

Num of Bursts = 8

Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	717338	2	17	95	1572	1032	0	717338	0	1499999
2	1078664	2	17	50	1877	1768	0	1798606	1500000	2999999
3	1499025	3	17	90	1375	1856	1058	3301276	3000000	4499999
4	1673615	2	17	85	1751	1593	0	4979180	4500000	5999999
5	1393645	3	17	70	1587	1358	1579	6376169	6000000	7499999
6	2509006	2	17	80	1102	1161	0	8889699	7500000	8999999
7	578980	2	17	55	1707	1670	0	9470942	9000000	10499999
8	1597245	3	17	50	1113	1831	1567	11071564	10500000	11999999

Total number of pulses in waveform = 19

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Type 5 Radar Waveform\_20

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	504180	2	14	95	1947	1774	0	504180	0	599999
2	157527	3	14	100	1000	1909	1923	655428	600000	1199999
3	1124095	2	14	80	1747	1829	0	1794355	1200000	1799999
4	536048	2	14	90	1919	1735	0	2339979	1800000	2399999
5	645792	1	14	95	1933	0	0	2983425	2400000	2999999
6	254284	1	14	60	1175	0	0	3239642	3000000	3599999
7	379598	3	14	50	1947	1151	1143	3620415	3600000	4199999
8	1092684	3	14	55	1687	1425	1896	4717340	4200000	4799999
9	503911	2	14	80	1753	1076	0	5226259	4800000	5399999
10	417785	1	14	90	1991	0	0	5646873	5400000	5999999
11	561519	2	14	60	1219	1738	0	6210383	6000000	6599999
12	817944	3	14	75	1569	1193	1852	7031284	6600000	7199999
13	406047	1	14	50	1981	0	0	7441945	7200000	7799999
14	744470	1	14	60	1660	0	0	8188396	7800000	8399999
15	538708	1	14	70	1606	0	0	8728764	8400000	8999999
16	370075	3	14	65	1642	1078	1262	9100445	9000000	9599999
17	843737	1	14	75	1779	0	0	9948164	9600000	10199999
18	651381	3	14	70	1839	1693	1547	10601324	10200000	10799999
19	710268	2	44	55	1260	1143	0	11316671	10800000	11399999
20	234953	1	14	100	1558	0	0	11554027	11400000	11999999

Total number of pulses in waveform = 38  
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Type 5 Radar Waveform\_21

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	623509	1	18	50	1482	0	0	623509	0	749999
2	287370	2	18	75	1425	1682	0	912361	750000	1499999
3	1262045	1	18	95	1576	0	0	2177513	1500000	2249999
4	498766	3	18	100	1750	1384	1642	2677855	2250000	2999999
5	644568	1	18	75	1780	0	0	3327199	3000000	3749999
6	697351	2	18	70	1095	1036	0	4026330	3750000	4499999
7	909063	1	18	80	1967	0	0	4937524	4500000	5249999
8	772893	1	18	70	1906	0	0	5712384	5250000	5999999
9	822778	2	18	60	1038	1229	0	6537068	6000000	6749999
10	826527	1	18	55	1487	0	0	7365862	6750000	7499999
11	663128	3	18	65	1678	1423	1612	8030477	7500000	8249999
12	656657	2	18	60	1578	1713	0	8690847	8250000	8999999
13	625294	3	18	50	1465	1697	1571	9319432	9000000	9749999
14	1018711	3	18	100	1451	1705	1217	10342876	9750000	10499999
15	574278	3	18	90	1002	1306	1445	10921527	10500000	11249999
16	1012250	2	18	55	1571	1220	0	11937532	11250000	11999999

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

Type 5 Radar Waveform\_22

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	301604	3	10	95	1750	1444	1469	301604	0	599999
2	426599	3	10	50	1426	1628	1584	732666	600000	1199999
3	560284	1	10	80	1968	0	0	1297788	1200000	1799999
4	768988	1	10	70	1416	0	0	2068744	1800000	2399999
5	632019	2	10	80	1003	1808	0	2702179	2400000	2999999
6	591803	2	10	85	1005	1201	0	3296793	3000000	3599999
7	841607	3	10	55	1949	1774	1949	4140606	3600000	4199999
8	163468	1	10	65	1707	0	0	4309746	4200000	4799999
9	900908	3	10	80	1141	1408	1159	5212361	4800000	5399999
10	660876	2	10	60	1621	1634	0	5876945	5400000	5999999
11	339224	3	10	70	1655	1988	1250	6219424	6000000	6599999
12	653625	1	10	60	1295	0	0	6877842	6600000	7199999
13	379247	3	10	80	1388	1502	1314	7258384	7200000	7799999
14	855035	1	10	60	1792	0	0	8117623	7800000	8399999
15	580394	2	10	60	1578	1477	0	8699809	8400000	8999999
16	380230	3	10	95	1613	1040	1688	9083094	9000000	9599999
17	581764	1	10	85	1124	0	0	9669199	9600000	10199999
18	893333	1	10	95	1430	0	0	10563656	10200000	10799999
19	346778	3	10	80	1290	1490	1078	10911864	10800000	11399999
20	801066	3	10	95	1175	1318	1456	11716788	11400000	11999999

Total number of pulses in waveform = 42  
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**Type 5 Radar Waveform\_23**

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	318244	3	5	55	1654	1580	1263	318244	0	1199999
2	1004702	3	5	65	1202	1989	1187	1327443	1200000	2399999
3	1571722	1	5	100	1910	0	0	2903543	2400000	3599999
4	1454545	3	5	50	1479	1186	1262	4359998	3600000	4799999
5	1220312	1	5	60	1114	0	0	5584237	4800000	5999999
6	420519	1	5	80	1483	0	0	6005870	6000000	7199999
7	1720275	1	5	70	1774	0	0	7727628	7200000	8399999
8	1545287	1	5	60	1042	0	0	9274689	8400000	9599999
9	532485	3	5	95	1752	1858	1591	9808216	9600000	10799999
10	1576884	1	5	100	1028	0	0	11390301	10800000	11999999

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

**Type 5 Radar Waveform\_24**

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	1345642	3	19	75	1533	1718	1587	1345642	0	1499999
2	1597294	2	19	85	1382	1475	0	2947774	1500000	2999999
3	1180261	1	19	95	1510	0	0	4130892	3000000	4499999
4	1701822	2	19	100	1203	1100	0	5834224	4500000	5999999
5	289588	3	19	50	1726	1098	1067	6126115	6000000	7499999
6	2121260	3	19	100	1285	1035	1979	8251266	7500000	8999999
7	1927968	1	19	95	1697	0	0	10183533	9000000	10499999
8	1583578	2	19	70	1920	1897	0	11768808	10500000	11999999

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

**Type 5 Radar Waveform\_25**

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	404514	3	14	55	1344	1828	1752	404514	0	749999
2	784287	2	14	95	1361	1673	0	1193725	750000	1499999
3	833279	3	14	100	1462	1336	1076	2030038	1500000	2249999
4	344576	2	14	85	1027	1441	0	2378488	2250000	2999999
5	1171842	3	14	65	1629	1159	1326	3552798	3000000	3749999
6	449134	1	14	85	1077	0	0	4006046	3750000	4499999
7	990395	3	14	100	1132	1473	1659	4997518	4500000	5249999
8	701930	2	14	65	1142	1227	0	5703712	5250000	5999999
9	631485	2	14	95	1114	1858	0	6337566	6000000	6749999
10	787936	2	14	85	1842	1154	0	7128474	6750000	7499999
11	596311	2	14	100	1954	1749	0	7727781	7500000	8249999
12	1120222	1	14	75	1926	0	0	8851706	8250000	8999999
13	151126	2	14	70	1385	1244	0	9004758	9000000	9749999
14	795978	3	14	60	1192	1929	1512	9803365	9750000	10499999
15	738455	2	14	50	1485	1575	0	10546453	10500000	11249999
16	1347300	3	14	100	1653	1814	1500	11896813	11250000	11999999

Total number of pulses in waveform = 36  
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### Type 5 Radar Waveform\_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)
1	62356	1	6	50	1482	0	0	62356	0	631578
2	943153	1	6	100	1556	0	0	1006991	631579	1263157
3	521409	1	6	95	1010	0	0	1529956	1263158	1894736
4	716845	3	6	60	1993	1716	1031	2247811	1894737	2526315
5	381609	3	6	70	1986	1912	1730	2634160	2526316	3157894
6	873708	1	6	85	1486	0	0	3513496	3157895	3789473
7	745843	2	6	65	1832	1431	0	4260825	3789474	4421052
8	614894	1	6	100	1079	0	0	4878982	4421053	5052631
9	641447	2	6	100	1583	1856	0	5521508	5052632	5684210
10	771544	2	6	65	1199	1456	0	6296491	5684211	6315789
11	134686	2	6	65	1847	1512	0	6433832	6315790	6947368
12	650351	2	6	90	1953	1577	0	7087542	6947369	7578947
13	885313	2	6	70	1509	1069	0	7976385	7578948	8210526
14	768715	2	6	100	1986	1046	0	8747678	8210527	8842105
15	555238	2	6	80	1046	1538	0	9305948	8842106	9473684
16	473393	2	6	60	1439	1386	0	9781925	9473685	10105263
17	846018	1	6	50	1631	0	0	10632768	10105264	10736842
18	311520	2	6	85	1023	1045	0	10945919	10736843	11368421
19	1044416	1	6	90	1170	0	0	11992403	11368422	12000000

Total number of pulses in waveform = 33  
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### Type 5 Radar Waveform\_27

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	507898	2	17	55	1130	1136	0	507898	0	666666
2	492713	3	17	55	1752	1042	1113	1002877	666667	1333333
3	725950	1	17	95	1545	0	0	1732734	1333334	2000000
4	298544	3	17	100	1458	1306	1920	2032823	2000001	2666667
5	689078	2	17	95	1235	1831	0	2726585	2666668	3333334
6	624038	2	17	65	1311	1205	0	3353689	3333335	4000001
7	872104	3	17	95	1232	1568	1445	4228309	4000002	4666668
8	831563	2	17	80	1991	1332	0	5064117	4666669	5333335
9	526224	3	17	90	1421	1616	1396	5593664	5333336	6000002
10	571477	1	17	90	1287	0	0	6169574	6000003	6666669
11	770424	1	17	70	1597	0	0	6941285	6666670	7333336
12	482799	3	17	85	1574	1446	1474	7425681	7333337	8000003
13	929521	3	17	95	1269	1759	1407	8359696	8000004	8666670
14	874934	2	17	100	1767	1821	0	9239065	8666671	9333337
15	318154	1	17	55	1864	0	0	9560807	9333338	10000004
16	578177	3	17	60	1737	1630	1094	10140848	10000005	10666671
17	795794	2	17	75	1645	1517	0	10941103	10666672	11333338
18	559203	3	17	65	1663	1342	1174	11503468	11333339	12000005

Total number of pulses in waveform = 40  
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### Type 5 Radar Waveform\_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	74933	2	8	65	1802	1709	0	74933	0	799999
2	1028979	1	8	80	1575	0	0	1107423	800000	1599999
3	1185546	3	8	95	1507	1536	1103	2294544	1600000	2399999
4	359669	3	8	65	1408	1187	1395	2658359	2400000	3199999
5	784242	1	8	75	1571	0	0	3446591	3200000	3999999
6	591711	3	8	50	1266	1341	1502	4039873	4000000	4799999
7	1291583	3	8	85	1631	1785	1118	5335565	4800000	5599999
8	369921	2	8	100	1393	1940	0	5710020	5600000	6399999
9	1040007	3	8	65	1132	1696	1429	6753360	6400000	7199999
10	546741	1	8	70	1754	0	0	7304258	7200000	7999999
11	811104	1	8	100	1430	0	0	8117116	8000000	8799999
12	1387211	1	8	90	1352	0	0	9505757	8800000	9599999
13	759154	3	8	95	1698	1956	1053	10266263	9600000	10399999
14	620664	1	8	65	1052	0	0	10891634	10400000	11199999
15	1074258	3	8	50	1595	1417	1965	11966944	11200000	11999999

Total number of pulses in waveform = 31  
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### Type 5 Radar Waveform\_29

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	193237	1	9	95	1350	0	0	193237	0	666666
2	1020989	2	9	100	1543	1590	0	1215576	666667	1333333
3	307648	3	9	50	1317	1736	1358	1526357	1333334	2000000
4	897339	3	9	80	1549	1723	1664	2428107	2000001	2666667
5	629943	3	9	95	1871	1896	1297	3062986	2666668	3333334
6	548075	2	9	75	1039	1756	0	3616125	3333335	4000001
7	854470	2	9	100	1703	1191	0	4473390	4000002	4666668
8	454007	2	9	65	1527	1988	0	4930291	4666669	5333335
9	636468	2	9	55	1242	1067	0	5570274	5333336	6000002
10	851821	2	9	70	1029	1318	0	6424404	6000003	6666669
11	439656	3	9	60	1147	1207	1119	6866407	6666670	7333336
12	868599	2	9	50	1929	1549	0	7738479	7333337	8000003
13	365727	2	9	75	1684	1219	0	8107684	8000004	8666670
14	1027937	1	9	55	1935	0	0	9138524	8666671	9333337
15	478049	2	9	100	1161	1718	0	9618508	9333338	10000004
16	1000877	2	9	100	1429	1378	0	10622264	10000005	10666671
17	65368	3	9	50	1994	1292	1244	10690439	10666672	11333338
18	1020198	1	9	95	1457	0	0	11715167	11333339	12000005

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_30

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	217948	1	12	80	1329	0	0	217948	0	923076
2	709286	1	12	90	1174	0	0	928563	923077	1846153
3	1714205	1	12	95	1236	0	0	2643942	1846154	2769230
4	230474	1	12	55	1685	0	0	2875652	2769231	3692307
5	1026286	2	12	90	1804	1706	0	3903623	3692308	4615384
6	1031275	1	12	80	1199	0	0	4938408	4615385	5538461
7	640445	3	12	80	1784	1457	1714	5580052	5538462	6461538
8	1115142	3	12	100	1418	1948	1871	6700149	6461539	7384615
9	1395675	2	12	85	1699	1719	0	8101061	7384616	8307692
10	415841	3	12	80	1969	1176	1979	8520320	8307693	9230769
11	722095	3	12	100	1762	1853	1595	9247539	9230770	10153846
12	1812602	3	12	65	1235	1148	1623	11065351	10153847	11076923
13	162074	1	12	80	1375	0	0	11231431	11076924	12000000

Total number of pulses in waveform = 25  
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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	5292.7	1	16	5320.5	1
2	5326.3	1	17	5296.2	1
3	5310.0	1	18	5301.1	1
4	5302.5	1	19	5319.4	1
5	5297.3	1	20	5312.4	1
6	5310.0	1	21	5303.9	1
7	5300.4	1	22	5321.3	1
8	5292.0	1	23	5324.6	1
9	5314.3	1	24	5298.8	1
10	5317.1	1	25	5304.6	1
11	5294.5	1	26	5315.6	1
12	5328.6	1	27	5299.5	1
13	5323.3	1	28	5316.8	1
14	5295.8	1	29	5329.0	1
15	5322.4	1	30	5306.5	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5312	30	15	5313	45
18	5298	54	17	5323	51
30	5319	90	31	5327	93
33	5316	99	38	5285	114
35	5291	105	57	5282	171
43	5282	129	66	5287	198
45	5333	135	68	5337	204
50	5339	150	71	5317	213
63	5303	189	82	5334	246
64	5287	192	84	5284	252
78	5332	234	94	5321	282
85	5288	255	--	--	--
97	5315	291	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5339	0	0	5333	0
2	5292	6	9	5326	27
3	5290	9	22	5332	66
18	5316	54	24	5298	72
25	5332	75	35	5321	105
27	5281	81	40	5286	120
31	5295	93	46	5331	138
37	5317	111	55	5327	165
39	5291	117	64	5288	192
41	5301	123	74	5297	222
42	5320	126	86	5294	258
54	5283	162	91	5330	273
57	5310	171	--	--	--
60	5280	180	--	--	--
69	5335	207	--	--	--
74	5340	222	--	--	--
92	5311	276	--	--	--





Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5302	15	0	5325	0
21	5332	63	4	5340	12
22	5328	66	5	5312	15
26	5330	78	6	5339	18
28	5298	84	13	5326	39
30	5281	90	23	5289	69
39	5287	117	33	5292	99
49	5296	147	52	5328	156
59	5286	177	56	5313	168
61	5285	183	62	5322	186
67	5292	201	70	5323	210
88	5293	264	72	5305	216
97	5307	291	89	5285	267

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5316	42	1	5297	3
24	5308	72	24	5314	72
35	5292	105	31	5292	93
40	5317	120	43	5332	129
41	5322	123	45	5307	135
44	5339	132	65	5325	195
45	5311	135	68	5334	204
69	5289	207	77	5317	231
81	5296	243	79	5310	237
92	5281	276	88	5281	264



Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5318	18	1	5313	3
15	5287	45	28	5305	84
17	5289	51	49	5291	147
23	5323	69	55	5336	165
34	5304	102	60	5316	180
39	5303	117	69	5285	207
43	5281	129	73	5333	219
46	5299	138	74	5283	222
47	5335	141	--	--	--
49	5293	147	--	--	--
61	5325	183	--	--	--
63	5306	189	--	--	--
66	5298	198	--	--	--
67	5286	201	--	--	--
70	5305	210	--	--	--
74	5291	222	--	--	--
82	5308	246	--	--	--
95	5283	285	--	--	--
97	5301	291	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5318	0	8	5334	24
1	5298	3	11	5283	33
12	5296	36	16	5289	48
15	5292	45	36	5316	108
24	5284	72	37	5323	111
37	5287	111	38	5284	114
41	5301	123	42	5281	126
53	5313	159	43	5329	129
61	5324	183	50	5303	150
62	5308	186	58	5314	174
63	5323	189	60	5290	180
71	5315	213	67	5295	201
74	5283	222	69	5322	207
75	5316	225	89	5332	267
82	5294	246	91	5302	273
86	5285	258	--	--	--
99	5297	297	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5299	21	0	5312	0
35	5339	105	9	5290	27
45	5295	135	12	5327	36
48	5302	144	14	5309	42
49	5297	147	26	5329	78
54	5293	162	39	5295	117
55	5291	165	63	5317	189
84	5323	252	64	5306	192
89	5308	267	65	5281	195
--	--	--	73	5300	219
--	--	--	82	5338	246
--	--	--	96	5333	288

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5331	24	11	5284	33
19	5291	57	15	5307	45
23	5303	69	18	5339	54
29	5315	87	20	5313	60
31	5286	93	26	5295	78
36	5310	108	37	5286	111
42	5336	126	41	5314	123
43	5305	129	42	5335	126
44	5289	132	52	5324	156
53	5337	159	58	5319	174
69	5322	207	80	5334	240
78	5306	234	82	5312	246
94	5282	282	88	5301	264
--	--	--	89	5330	267
--	--	--	99	5331	297

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5322	30	0	5323	0
26	5293	78	4	5339	12
29	5327	87	12	5283	36
40	5326	120	18	5322	54
41	5292	123	25	5310	75
49	5331	147	29	5319	87
50	5337	150	32	5292	96
58	5338	174	37	5288	111
59	5318	177	49	5312	147
66	5299	198	54	5298	162
76	5312	228	77	5299	231
93	5303	279	80	5326	240
98	5286	294	85	5293	255
--	--	--	87	5317	261
--	--	--	88	5314	264
--	--	--	95	5291	285

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5320	9	6	5313	18
13	5313	39	24	5303	72
15	5293	45	43	5295	129
22	5322	66	47	5310	141
24	5312	72	54	5297	162
50	5280	150	61	5298	183
54	5295	162	62	5283	186
74	5306	222	67	5302	201
94	5282	282	68	5309	204
95	5335	285	71	5322	213
--	--	--	91	5325	273

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5309	24	17	5280	51
15	5332	45	32	5304	96
28	5335	84	36	5306	108
29	5296	87	41	5339	123
32	5331	96	42	5313	126
36	5290	108	48	5282	144
63	5295	189	52	5329	156
71	5282	213	53	5290	159
74	5328	222	67	5334	201
80	5315	240	80	5318	240
82	5285	246	88	5316	264
83	5306	249	--	--	--
85	5324	255	--	--	--
95	5321	285	--	--	--
96	5334	288	--	--	--



Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5321	15	1	5287	3
21	5331	63	14	5309	42
27	5307	81	23	5322	69
33	5292	99	26	5301	78
35	5336	105	28	5294	84
40	5326	120	59	5283	177
46	5286	138	61	5282	183
50	5285	150	68	5321	204
67	5318	201	79	5304	237
68	5299	204	87	5303	261
73	5290	219	92	5310	276
78	5309	234	96	5288	288
83	5339	249	--	--	--
87	5308	261	--	--	--
92	5282	276	--	--	--
94	5296	282	--	--	--
96	5284	288	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5329	18	5	5302	15
7	5322	21	6	5322	18
10	5312	30	17	5306	51
11	5281	33	21	5320	63
15	5310	45	29	5314	87
19	5309	57	36	5327	108
24	5338	72	40	5280	120
36	5304	108	48	5287	144
37	5298	111	51	5301	153
39	5311	117	63	5323	189
44	5293	132	90	5291	270
45	5286	135	96	5304	288
56	5296	168	--	--	--
65	5284	195	--	--	--
76	5335	228	--	--	--
80	5306	240	--	--	--
87	5305	261	--	--	--
88	5301	264	--	--	--
93	5283	279	--	--	--
96	5292	288	--	--	--



Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5330	9	0	5313	0
5	5310	15	5	5302	15
25	5326	75	16	5316	48
33	5283	99	21	5321	63
34	5285	102	24	5309	72
37	5295	111	25	5335	75
49	5287	147	29	5323	87
80	5318	240	39	5329	117
81	5339	243	44	5308	132
82	5317	246	52	5310	156
88	5337	264	55	5281	165
90	5320	270	66	5317	198
--	--	--	82	5320	246
--	--	--	92	5288	276
--	--	--	93	5318	279

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5327	9	8	5319	24
7	5282	21	10	5311	30
16	5308	48	11	5309	33
18	5331	54	35	5294	105
26	5303	78	73	5284	219
36	5330	108	81	5312	243
54	5286	162	87	5297	261
56	5290	168	92	5288	276
59	5325	177	--	--	--
64	5306	192	--	--	--
65	5319	195	--	--	--
82	5304	246	--	--	--
88	5280	264	--	--	--
93	5297	279	--	--	--
98	5333	294	--	--	--





Radar Statistical Performance for 802.11ac-VHT80

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5269.0	1	798	67	1
2	5295.6	1	698	76	1
3	5288.9	1	518	102	1
4	5271.7	1	878	61	1
5	5325.5	1	638	83	1
6	5251.0	1	738	72	1
7	5322.8	1	718	74	1
8	5290.0	1	938	57	1
9	5266.4	1	918	58	1
10	5292.6	1	658	81	1
11	5274.2	1	3066	18	1
12	5299.2	1	818	65	1
13	5253.7	1	598	89	1
14	5302.5	1	538	99	1
15	5277.3	1	898	59	1
16	5264.1	1	1949	28	1
17	5305.8	1	1616	33	1
18	5261.5	1	2572	21	1
19	5290.0	1	908	59	1
20	5280.4	1	1215	44	1
21	5319.3	1	1377	39	1
22	5309.2	1	699	76	1
23	5256.3	1	2325	23	1
24	5328.3	1	2938	18	1
25	5329.0	1	711	75	1
26	5283.2	1	677	78	1
27	5312.7	1	973	55	1
28	5286.6	1	1275	42	1
29	5315.7	1	2813	19	1
30	5258.9	1	1096	49	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	5268.6	2.9	193	29	1
2	5290.0	4.0	201	25	1
3	5265.7	1.1	213	24	0
4	5290.0	3.5	165	25	1
5	5287.8	2.3	191	24	1
6	5301.9	2.5	173	25	1
7	5263.5	2.9	160	29	1
8	5324.9	4.0	188	25	1
9	5270.3	3.4	228	28	1
10	5291.4	5.0	204	26	0
11	5251.0	4.2	182	25	1
12	5321.5	2.4	172	27	1
13	5298.4	3.0	179	29	1
14	5273.7	4.3	163	27	1
15	5304.2	1.7	214	24	1
16	5285.6	3.4	198	25	1
17	5252.5	4.9	230	29	1
18	5294.8	1.1	156	29	1
19	5327.2	2.3	225	28	1
20	5260.3	1.4	203	24	1
21	5318.6	4.3	161	23	1
22	5308.7	3.4	206	29	1
23	5276.3	1.4	210	27	1
24	5329.0	1.2	225	28	0
25	5282.5	2.2	212	27	1
26	5255.2	3.8	221	28	1
27	5311.4	4.1	224	25	1
28	5279.4	2.5	164	24	1
29	5314.5	1.3	190	29	1
30	5257.5	2.1	213	28	1
Detection Percentage (%)					90.0%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5259.2	6.0	312	18	1
2	5299.5	6.1	357	17	1
3	5284.5	6.3	297	17	1
4	5297.3	9.8	469	16	1
5	5254.5	9.6	424	16	1
6	5320.3	6.4	442	17	1
7	5281.4	6.2	315	16	1
8	5262.6	8.0	332	16	1
9	5329.0	6.0	498	18	1
10	5293.7	9.5	414	16	1
11	5251.0	6.7	306	16	1
12	5319.3	8.7	373	17	1
13	5289.1	6.4	471	17	1
14	5267.7	8.5	337	18	1
15	5303.4	7.3	276	16	0
16	5290.0	6.1	263	16	1
17	5252.4	6.7	306	17	1
18	5306.2	9.2	398	17	1
19	5307.6	6.4	500	17	1
20	5278.3	8.7	431	17	1
21	5316.3	6.6	281	16	1
22	5296.2	9.1	307	18	1
23	5310.4	8.7	390	18	1
24	5266.4	7.5	434	18	1
25	5323.6	7.2	338	16	1
26	5290.0	9.3	318	18	1
27	5275.3	7.9	423	17	1
28	5326.8	7.4	495	16	1
29	5313.5	7.5	276	18	1
30	5272.6	7.0	461	17	1
Detection Percentage (%)					96.7%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5268.6	15.3	451	14	0
2	5311.4	12.7	414	13	1
3	5291.4	19.5	290	12	1
4	5270.3	12.4	484	13	1
5	5329.0	11.1	265	16	1
6	5251.0	16.1	273	12	1
7	5308.7	15.8	494	15	1
8	5265.7	18.0	416	12	1
9	5314.5	19.1	292	12	1
10	5290.0	16.8	492	16	1
11	5273.7	15.0	296	16	1
12	5304.2	17.8	348	15	1
13	5252.5	19.4	484	16	1
14	5290.0	16.7	287	15	1
15	5263.5	17.6	436	16	0
16	5301.9	16.4	258	12	1
17	5255.2	16.8	479	14	1
18	5294.8	14.7	331	13	1
19	5279.4	17.2	300	12	1
20	5318.6	11.9	315	16	1
21	5276.3	13.3	355	14	0
22	5282.5	16.1	283	16	1
23	5327.2	14.1	252	12	1
24	5257.5	16.4	465	15	1
25	5321.5	11.5	385	13	1
26	5285.6	14.4	498	12	1
27	5298.4	15.4	309	13	1
28	5287.8	15.1	353	13	0
29	5260.3	11.4	362	16	1
30	5324.9	17.0	448	14	1
Detection Percentage (%)					86.7%

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

waveforms is as follows: 
$$\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 90.0\% + 96.7\% + 86.7\%) / 4 = 93.3\% (>80\%)$$



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5255.6	1	16	5290.0	1
2	5256.8	1	17	5290.0	1
3	5259.2	1	18	5290.0	1
4	5254.4	1	19	5290.0	1
5	5258.8	1	20	5290.0	1
6	5254.0	1	21	5324.8	1
7	5259.6	1	22	5321.2	1
8	5257.6	1	23	5324.0	1
9	5255.2	1	24	5326.0	1
10	5256.0	1	25	5320.8	1
11	5290.0	1	26	5322.4	1
12	5290.0	1	27	5325.6	1
13	5290.0	1	28	5320.4	1
14	5290.0	1	29	5324.4	1
15	5290.0	1	30	5323.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_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	311260	2	9	55	1530	1455	0	311260	0	705881
2	1070456	2	9	95	1010	1627	0	1384701	705882	1411763
3	121713	1	9	55	1588	0	0	1509051	1411764	2117645
4	649345	2	9	50	1059	1089	0	2159984	2117646	2823527
5	991742	2	9	90	1039	1613	0	3153874	2823528	3529409
6	564412	1	9	80	1283	0	0	3720938	3529410	4235291
7	984824	3	9	90	1514	1224	1594	4707045	4235292	4941173
8	603758	3	9	95	1266	1774	1596	5315135	4941174	5647055
9	839609	1	9	90	1265	0	0	6159380	5647056	6352937
10	490726	1	9	55	1211	0	0	6651371	6352938	7058819
11	569626	3	9	90	1392	1397	1158	7222208	7058820	7764701
12	977505	3	9	50	1393	1839	1566	8203660	7764702	8470583
13	482894	2	9	100	1893	1516	0	8891352	8470584	9176465
14	973736	1	9	50	1842	0	0	9668497	9176466	9882347
15	907833	2	9	70	1657	1726	0	10578172	9882348	10588229
16	257858	3	9	75	1321	1137	1912	10839413	10588230	11294111
17	588910	2	9	95	1350	1766	0	11432693	11294112	11999993
Total number of pulses in waveform = 34										
*****										



### Type 5 Radar Waveform\_2

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	470085	3	12	95	1928	1873	1546	470085	0	1090908
2	1173701	3	12	80	1620	1557	1517	1649133	1090909	2181817
3	875967	2	12	100	1206	1805	0	2529794	2181818	3272726
4	1569800	3	12	50	1569	1092	1704	4102605	3272727	4363635
5	372533	2	12	55	1075	1318	0	4479503	4363636	5454544
6	1189127	2	12	55	1501	1977	0	5671023	5454545	6545453
7	1515619	1	12	65	1020	0	0	7190120	6545454	7636362
8	538517	3	12	60	1468	1473	1830	7729657	7636363	8727271
9	1630750	1	12	90	1556	0	0	9365178	8727272	9818180
10	766253	3	12	75	1367	1118	1619	10132987	9818181	10909089
11	1357612	2	12	65	1529	1942	0	11494703	10909090	11999998

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

### Type 5 Radar Waveform\_3

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	930971	2	18	80	1868	1062	0	930971	0	1333332
2	1346875	2	18	90	1253	1044	0	2280776	1333333	2666665
3	593768	2	18	55	1333	1412	0	2876841	2666666	3999998
4	1540086	2	18	95	1002	1445	0	4419672	3999999	5333331
5	1470477	1	18	50	1675	0	0	5892596	5333332	6666664
6	1740636	3	18	75	1719	1205	1363	7634907	6666665	7999997
7	750737	1	18	90	1303	0	0	8389931	7999998	9333330
8	1495665	2	18	60	1732	1302	0	9886899	9333331	10666663
9	1269540	1	18	60	1830	0	0	11159473	10666664	11999996

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

### Type 5 Radar Waveform\_4

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	532438	3	6	95	1390	1530	1379	532438	0	749999
2	528737	3	6	75	1569	1665	1027	1065474	750000	1499999
3	1003627	2	6	90	1295	1170	0	2073362	1500000	2249999
4	353660	2	6	55	1302	1226	0	2429487	2250000	2999999
5	730248	2	6	85	1056	1078	0	3162263	3000000	3749999
6	788214	2	6	70	1490	1230	0	3952611	3750000	4499999
7	1205508	1	6	95	1911	0	0	5160839	4500000	5249999
8	168390	2	6	80	1295	1102	0	5331140	5250000	5999999
9	1198762	1	6	95	1697	0	0	6532299	6000000	6749999
10	452230	1	6	95	1994	0	0	6986226	6750000	7499999
11	521362	1	6	90	1858	0	0	7509582	7500000	8249999
12	1413230	2	6	100	1618	1101	0	8924670	8250000	8999999
13	691913	2	6	50	1179	1750	0	9619302	9000000	9749999
14	765291	2	6	90	1984	1685	0	10387522	9750000	10499999
15	718836	1	6	95	1474	0	0	11110027	10500000	11249999
16	442913	2	6	70	1359	1081	0	11554414	11250000	11999999

Total number of pulses in waveform = 29  
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### Type 5 Radar Waveform\_5

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-----
Num of Bursts = 16
Burst Interval (us)= 750000

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Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	45408	3	17	85	1636	1777	1304	45408	0	749999
2	1069917	1	17	95	1984	0	0	1120042	750000	1499999
3	712673	2	17	80	1799	1134	0	1834699	1500000	2249999
4	698862	3	17	65	1194	1251	1060	2536494	2250000	2999999
5	1079382	1	17	50	1008	0	0	3619381	3000000	3749999
6	525247	2	17	70	1943	1343	0	4145636	3750000	4499999
7	1039396	2	17	75	1189	1052	0	5188318	4500000	5249999
8	250680	1	17	60	1715	0	0	5441239	5250000	5999999
9	1007063	3	17	65	1228	1152	1787	6450017	6000000	6749999
10	951169	1	17	80	1111	0	0	7405353	6750000	7499999
11	207527	1	17	65	1765	0	0	7613991	7500000	8249999
12	1166624	3	17	65	1647	1779	1192	8782380	8250000	8999999
13	442854	1	17	85	1417	0	0	9229852	9000000	9749999
14	626572	2	17	75	1302	1096	0	9857841	9750000	10499999
15	944186	3	17	65	1167	1899	1418	10804425	10500000	11249999
16	903614	3	17	75	1639	1207	1388	11712523	11250000	11999999

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

### Type 5 Radar Waveform\_6

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-----
Num of Bursts = 16
Burst Interval (us)= 750000

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Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	718603	2	5	85	1350	1659	0	718603	0	749999
2	387657	1	5	55	1277	0	0	1109269	750000	1499999
3	564740	2	5	55	1891	1354	0	1675286	1500000	2249999
4	891698	1	5	100	1951	0	0	2570229	2250000	2999999
5	502007	2	5	95	1456	1123	0	3074187	3000000	3749999
6	897728	2	5	80	1388	1837	0	3974494	3750000	4499999
7	654109	1	5	95	1677	0	0	4631828	4500000	5249999
8	1183294	2	5	60	1175	1466	0	5816799	5250000	5999999
9	437809	3	5	90	1226	1582	1977	6257249	6000000	6749999
10	1090730	3	5	90	1871	1471	1660	7352764	6750000	7499999
11	715763	1	5	70	1915	0	0	8073529	7500000	8249999
12	389223	2	5	90	1000	1463	0	8464667	8250000	8999999
13	1190541	3	5	75	1819	1452	1863	9657671	9000000	9749999
14	222909	2	5	100	1196	1259	0	9885714	9750000	10499999
15	1281661	1	5	85	1981	0	0	11169830	10500000	11249999
16	352108	3	5	90	1588	1584	1772	11523919	11250000	11999999

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

### Type 5 Radar Waveform\_7

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

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Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	625143	3	19	55	1666	1704	1356	625143	0	799999
2	420702	1	19	60	1830	0	0	1050571	800000	1599999
3	824212	1	19	100	1197	0	0	1876613	1600000	2399999
4	634770	2	19	60	1074	1241	0	2512580	2400000	3199999
5	968809	1	19	100	1437	0	0	3483704	3200000	3999999
6	1204374	2	19	90	1565	1228	0	4689515	4000000	4799999
7	176823	3	19	90	1746	1948	1795	4869131	4800000	5599999
8	1121352	1	19	50	1673	0	0	5995972	5600000	6399999
9	1069728	3	19	50	1895	1855	1767	7067373	6400000	7199999
10	806332	2	19	95	1457	1923	0	7879222	7200000	7999999
11	553400	1	19	100	1546	0	0	8436002	8000000	8799999
12	455281	3	19	65	1977	1649	1883	8892829	8800000	9599999
13	1049456	2	19	80	1512	1097	0	9947794	9600000	10399999
14	647781	2	19	60	1064	1863	0	10598184	10400000	11199999
15	1158253	3	19	90	1707	1000	1018	11759364	11200000	11999999

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



### Type 5 Radar Waveform\_8

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	198942	2	14	100	1096	1390	0	198942	0	666666
2	1037376	1	14	55	1702	0	0	1238804	666667	1333333
3	423100	2	14	70	1880	1859	0	1663606	1333334	2000000
4	528681	2	14	90	1215	1535	0	2196026	2000001	2666667
5	498242	1	14	70	1641	0	0	2697018	2666668	3333334
6	729742	1	14	85	1163	0	0	3428401	3333335	4000001
7	1059371	3	14	50	1733	1008	1804	4488935	4000002	4666668
8	398648	2	14	50	1603	1206	0	4892128	4666669	5333335
9	698116	1	14	65	1943	0	0	5593053	5333336	6000002
10	616668	2	14	75	1259	1403	0	6211664	6000003	6666669
11	783650	1	14	95	1652	0	0	6997976	6666670	7333336
12	774581	1	14	55	1573	0	0	7774209	7333337	8000003
13	551599	1	14	55	1511	0	0	8327381	8000004	8666670
14	745618	2	14	85	1790	1548	0	9074510	8666671	9333337
15	546228	1	14	85	1055	0	0	9624076	9333338	10000004
16	849770	1	14	55	1656	0	0	10474901	10000005	10666671
17	499732	3	14	70	1708	1087	1115	10976289	10666672	11333338
18	995538	1	14	95	1247	0	0	11975737	11333339	12000005

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

### Type 5 Radar Waveform\_9

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	347759	1	8	85	1458	0	0	347759	0	999999
2	984936	1	8	60	1231	0	0	1334153	1000000	1999999
3	1442450	3	8	75	1854	1512	1811	2777834	2000000	2999999
4	281537	1	8	70	1294	0	0	3064548	3000000	3999999
5	1382136	2	8	90	1465	1948	0	4447978	4000000	4999999
6	1015359	3	8	90	1884	1946	1567	5466750	5000000	5999999
7	1084799	3	8	50	1500	1867	1055	6556946	6000000	6999999
8	1132056	1	8	100	1981	0	0	7693424	7000000	7999999
9	484638	2	8	80	1747	1268	0	8180043	8000000	8999999
10	1394237	3	8	80	1129	1279	1037	9577295	9000000	9999999
11	1352986	1	8	95	1122	0	0	10933726	10000000	10999999
12	816884	2	8	50	1472	1939	0	11751732	11000000	11999999

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

### Type 5 Radar Waveform\_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	736459	1	10	70	1597	0	0	736459	0	1199999
2	1328568	2	10	60	1796	1302	0	2066624	1200000	2399999
3	1041112	3	10	65	1993	1154	1712	3110834	2400000	3599999
4	1070385	1	10	70	1150	0	0	4186078	3600000	4799999
5	940271	2	10	50	1981	1537	0	5127499	4800000	5999999
6	1113670	2	10	75	1703	1443	0	6244687	6000000	7199999
7	1455359	1	10	100	1370	0	0	7703192	7200000	8399999
8	1313265	1	10	85	1826	0	0	9017827	8400000	9599999
9	768207	2	10	65	1787	1325	0	9787860	9600000	10799999
10	1032095	2	10	90	1481	1620	0	10823067	10800000	11999999

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





**Type 5 Radar Waveform\_11**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1340968	2	17	90	1504	1199	0	1340968	0	1499999
2	1603585	3	17	90	1340	1988	1014	2947256	1500000	2999999
3	777555	1	17	65	1016	0	0	3729153	3000000	4499999
4	1789288	3	17	100	1225	1940	1092	5519457	4500000	5999999
5	910105	3	17	95	1180	1619	1232	6433819	6000000	7499999
6	1090183	2	17	50	1045	1868	0	7528033	7500000	8999999
7	2695152	1	17	60	1447	0	0	10226098	9000000	10499999
8	1357994	1	17	80	1715	0	0	11585539	10500000	11999999

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

**Type 5 Radar Waveform\_12**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	891208	3	8	100	1718	1162	1949	891208	0	1333332
2	856245	3	8	90	1109	1543	1446	1752282	1333333	2666665
3	1528166	2	8	50	1481	1077	0	3284546	2666666	3999998
4	970209	3	8	90	1508	1721	1731	4257313	3999999	5333331
5	2313829	1	8	85	1643	0	0	6576102	5333332	6666664
6	276904	2	8	60	1385	1796	0	6854649	6666665	7999997
7	1314615	3	8	90	1373	1920	1881	8172445	7999998	9333330
8	1328576	1	8	90	1372	0	0	9506195	9333331	10666663
9	2075889	2	8	75	1417	1176	0	11583456	10666664	11999996

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

**Type 5 Radar Waveform\_13**

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	304810	2	10	90	1083	1187	0	304810	0	1199999
2	1617236	2	10	50	1667	1316	0	1924316	1200000	2399999
3	659145	3	10	55	1664	1566	1512	2586444	2400000	3599999
4	1430844	2	10	70	1202	1170	0	4022030	3600000	4799999
5	1862155	3	10	65	1983	1611	1559	5886557	4800000	5999999
6	1219063	1	10	90	1330	0	0	7110773	6000000	7199999
7	749813	2	10	50	1006	1534	0	7861916	7200000	8399999
8	769575	2	10	55	1792	1061	0	8634031	8400000	9599999
9	1377090	1	10	95	1178	0	0	10013974	9600000	10799999
10	1582994	3	10	65	1223	1748	1007	11598146	10800000	11999999

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



**Type 5 Radar Waveform\_14**

```

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

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Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	469878	2	5	90	1412	1957	0	469878	0	1090908
2	1517298	1	5	70	1041	0	0	1990545	1090909	2181817
3	208036	3	5	100	1539	1701	1384	2199622	2181818	3272726
4	1504175	2	5	100	1446	1933	0	3708421	3272727	4363635
5	710622	1	5	70	1087	0	0	4422422	4363636	5454544
6	1669473	1	5	85	1621	0	0	6092982	5454545	6545453
7	1076205	3	5	85	1033	1587	1181	7170808	6545454	7636362
8	607345	1	5	55	1354	0	0	7781954	7636363	8727271
9	1909824	3	5	55	1222	1769	1148	9693132	8727272	9818180
10	1034209	1	5	100	1144	0	0	10731480	9818181	10909089
11	611838	1	5	65	1699	0	0	11344462	10909090	11999998

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

**Type 5 Radar Waveform\_15**

```

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

```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	238948	1	12	85	1488	0	0	238948	0	857142
2	1363366	3	12	90	1589	1957	1148	1603802	857143	1714285
3	232443	1	12	90	1479	0	0	1840939	1714286	2571428
4	1269568	2	12	90	1489	1985	0	3111986	2571429	3428571
5	427903	2	12	85	1608	1702	0	3543363	3428572	4285714
6	1470335	2	12	75	1435	1487	0	5017008	4285715	5142857
7	823909	2	12	55	1120	1944	0	5843839	5142858	6000000
8	217230	3	12	65	1337	1922	1877	6064133	6000001	6857143
9	1441083	3	12	95	1238	1036	1642	7510352	6857144	7714286
10	367162	3	12	85	1868	1768	1400	7881430	7714287	8571429
11	1116522	3	12	95	1598	1971	1680	9002988	8571430	9428572
12	886328	3	12	90	1456	1767	1489	9894665	9428573	10285715
13	466461	1	12	85	1827	0	0	10365728	10285716	11142858
14	1624640	3	12	60	1280	1459	1667	11992195	11142859	12000001

Total number of pulses in waveform = 32  
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**Type 5 Radar Waveform\_16**

```

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

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Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1311833	2	6	100	1994	1825	0	1311833	0	1333332
2	458801	3	6	70	1858	1457	1792	1774453	1333333	2666665
3	1643380	1	6	80	1399	0	0	3422940	2666666	3999998
4	1623924	1	6	85	1751	0	0	5048263	3999999	5333331
5	520297	2	6	60	1974	1376	0	5570311	5333332	6666664
6	1636546	3	6	65	1888	1634	1273	7210207	6666665	7999997
7	1481897	3	6	50	1639	1379	1104	8696899	7999998	9333330
8	826910	1	6	55	1075	0	0	9527931	9333331	10666663
9	2194397	3	6	60	1631	1804	1381	11723403	10666664	11999996

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



### Type 5 Radar Waveform\_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	532932	3	19	85	1534	1212	1992	532932	0	599999
2	425654	2	19	50	1680	1884	0	963324	600000	1199999
3	318624	3	19	80	1035	1475	1338	1285412	1200000	1799999
4	776712	3	19	90	1546	1922	1877	2055972	1800000	2399999
5	417551	2	19	90	1264	1475	0	2488868	2400000	2999999
6	993667	2	19	100	1532	1525	0	3485274	3000000	3599999
7	134830	1	19	70	1605	0	0	3623161	3600000	4199999
8	759680	2	19	65	1198	1620	0	4384446	4200000	4799999
9	843148	1	19	80	1465	0	0	5230412	4800000	5399999
10	693033	1	19	100	1728	0	0	5924910	5400000	5999999
11	129495	1	19	90	1526	0	0	6056133	6000000	6599999
12	736207	2	19	85	1085	1610	0	6793866	6600000	7199999
13	465393	1	19	70	1743	0	0	7261954	7200000	7799999
14	920322	3	19	90	1491	1465	1613	8184019	7800000	8399999
15	774143	1	19	80	1743	0	0	8962731	8400000	8999999
16	300712	2	19	95	1190	1569	0	9265186	9000000	9599999
17	638895	2	19	95	1138	1780	0	9906840	9600000	10199999
18	667199	2	19	65	1164	1869	0	10576957	10200000	10799999
19	654303	2	19	70	1586	1365	0	11234293	10800000	11399999
20	591303	3	19	75	1386	1130	1811	11828547	11400000	11999999

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

### Type 5 Radar Waveform\_18

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	347467	1	9	50	1907	0	0	347467	0	857142
2	955340	3	9	70	1684	1849	1004	1304714	857143	1714285
3	1242225	1	9	55	1280	0	0	2551476	1714286	2571428
4	811438	3	9	60	1394	1806	1626	3364194	2571429	3428571
5	349255	3	9	85	1482	1211	1210	3718275	3428572	4285714
6	655852	2	9	70	1575	1266	0	4378030	4285715	5142857
7	1382962	1	9	50	1286	0	0	5763833	5142858	6000000
8	1023430	1	9	65	1796	0	0	6788549	6000001	6857143
9	752914	3	9	70	1907	1400	1319	7543259	6857144	7714286
10	927794	1	9	55	1855	0	0	8475679	7714287	8571429
11	824560	1	9	50	1906	0	0	9302094	8571430	9428572
12	427575	2	9	50	1298	1046	0	9731575	9428573	10285715
13	729195	2	9	50	1365	1617	0	10463114	10285716	11142858
14	1381221	2	9	80	1911	1841	0	11847317	11142859	12000001

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

### Type 5 Radar Waveform\_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	182012	1	14	95	1614	0	0	182012	0	857142
2	1321790	2	14	55	1199	1220	0	1505416	857143	1714285
3	554168	3	14	100	1081	1754	1000	2061993	1714286	2571428
4	644167	3	14	90	1684	1329	1939	2709995	2571429	3428571
5	1222940	1	14	60	1721	0	0	3937887	3428572	4285714
6	720258	1	14	100	1599	0	0	4659666	4285715	5142857
7	1110307	3	14	85	1794	1322	1677	5771772	5142858	6000000
8	269101	2	14	90	1724	1500	0	6045666	6000001	6857143
9	1605499	2	14	90	1180	1647	0	7654389	6857144	7714286
10	110319	1	14	65	1772	0	0	7767535	7714287	8571429
11	1080550	1	14	65	1450	0	0	8849857	8571430	9428572
12	798525	1	14	75	1756	0	0	9649832	9428573	10285715
13	1306554	1	14	80	1059	0	0	10958142	10285716	11142858
14	696742	2	14	80	1494	1253	0	11655943	11142859	12000001

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



### Type 5 Radar Waveform\_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	312975	3	18	90	1582	1907	1389	312975	0	1199999
2	1051256	2	18	100	1258	1110	0	1369109	1200000	2399999
3	1382292	3	18	90	1749	1127	2000	2753769	2400000	3599999
4	1301575	3	18	75	1214	1694	1230	4060220	3600000	4799999
5	1397629	2	18	90	1943	1391	0	5461987	4800000	5999999
6	1056928	3	18	85	1648	1158	1972	6522249	6000000	7199999
7	1367315	2	18	75	1193	1708	0	7894342	7200000	8399999
8	560706	2	18	75	1925	1345	0	8457949	8400000	9599999
9	2065370	1	18	55	1449	0	0	10526589	9600000	10799999
10	1203490	2	18	100	1497	1834	0	11731528	10800000	11999999

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

### Type 5 Radar Waveform\_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	849522	3	8	60	1367	1858	1241	849522	0	1199999
2	1381617	3	8	50	1950	1591	1168	2235605	1200000	2399999
3	695477	2	8	65	1149	1713	0	2935791	2400000	3599999
4	986140	2	8	80	1068	1009	0	3924793	3600000	4799999
5	975586	2	8	90	1940	1714	0	4902456	4800000	5999999
6	1343233	2	8	50	1737	1143	0	6249343	6000000	7199999
7	2009712	2	8	80	1746	1995	0	8261935	7200000	8399999
8	1116738	3	8	85	1954	1681	1780	9382414	8400000	9599999
9	220895	1	8	80	1149	0	0	9608724	9600000	10799999
10	1807188	2	8	75	1903	1259	0	11417061	10800000	11999999

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

### Type 5 Radar Waveform\_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	576313	3	17	70	1093	1789	1248	576313	0	631578
2	256680	3	17	90	1487	1519	1387	837123	631579	1263157
3	472217	2	17	60	1300	1235	0	1313733	1263158	1894736
4	1056408	3	17	50	1640	1626	1561	2372676	1894737	2526315
5	438233	1	17	55	1877	0	0	2815736	2526316	3157894
6	874516	2	17	90	1863	1200	0	3692129	3157895	3789473
7	348846	2	17	50	1055	1132	0	4044038	3789474	4421052
8	996866	1	17	50	1793	0	0	5043091	4421053	5052631
9	610901	2	17	85	1193	1134	0	5655785	5052632	5684210
10	449933	2	17	55	1959	1429	0	6108045	5684211	6315789
11	414854	2	17	70	1585	1776	0	6526287	6315790	6947368
12	946287	1	17	50	1650	0	0	7475935	6947369	7578947
13	650731	3	17	95	1305	1345	1505	8128316	7578948	8210526
14	127864	1	17	50	1576	0	0	8260395	8210527	8842105
15	1011253	3	17	75	1859	1220	1014	9273164	8842106	9473684
16	601558	2	17	50	1143	1366	0	9878815	9473685	10105263
17	524641	2	17	70	1805	1464	0	10405965	10105264	10736842
18	822834	2	17	90	1565	1502	0	11232068	10736843	11368421
19	149873	1	17	75	1019	0	0	11385008	11368422	12000000

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_23

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	347087	2	10	60	1436	1154	0	347087	0	857142
2	848836	2	10	65	1803	1835	0	1198513	857143	1714285
3	744869	1	10	50	1769	0	0	1947020	1714286	2571428
4	1277819	2	10	70	1219	1409	0	3226608	2571429	3428571
5	300855	1	10	85	1626	0	0	3530091	3428572	4285714
6	1442824	3	10	100	1675	1535	1720	4974541	4285715	5142857
7	968254	3	10	55	1186	1418	1634	5947725	5142858	6000000
8	493877	1	10	65	1694	0	0	6445840	6000001	6857143
9	822065	2	10	100	1016	1490	0	7269599	6857144	7714286
10	458931	3	10	95	1034	1266	1535	7731036	7714287	8571429
11	1565667	1	10	95	1786	0	0	9300538	8571430	9428572
12	268447	3	10	75	1940	1712	1469	9570771	9428573	10285715
13	1108593	2	10	80	1366	1499	0	10684485	10285716	11142858
14	708395	2	10	50	1247	1101	0	11396745	11142859	12000001

Total number of pulses in waveform = 28  
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### Type 5 Radar Waveform\_24

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	764728	1	5	55	1463	0	0	764728	0	923076
2	255661	2	5	95	1941	1489	0	1021852	923077	1846153
3	1182414	2	5	95	1996	1589	0	2207696	1846154	2769230
4	1447542	2	5	100	1699	1500	0	3658823	2769231	3692307
5	921741	3	5	85	1193	1193	1726	4583763	3692308	4615384
6	784354	2	5	95	1958	1417	0	5372229	4615385	5538461
7	742269	2	5	55	1545	1715	0	6117873	5538462	6461538
8	565045	1	5	100	1327	0	0	6686178	6461539	7384615
9	1338149	1	5	50	1341	0	0	8025654	7384616	8307692
10	1164309	3	5	65	1365	1394	1166	9191304	8307693	9230769
11	872361	1	5	55	1143	0	0	10067590	9230770	10153846
12	193764	1	5	100	1577	0	0	10262497	10153847	11076923
13	1109055	3	5	55	1045	1350	1995	11373129	11076924	12000000

Total number of pulses in waveform = 24  
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### Type 5 Radar Waveform\_25

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	57196	2	18	65	1576	1059	0	57196	0	631578
2	720484	3	18	90	1074	1605	1710	780315	631579	1263157
3	1054884	1	18	55	1335	0	0	1839588	1263158	1894736
4	424344	1	18	65	1255	0	0	2265267	1894737	2526315
5	774919	3	18	80	1443	1127	1194	3041441	2526316	3157894
6	130497	3	18	60	1675	1674	1392	3175702	3157895	3789473
7	1235596	3	18	55	1112	1067	1900	4416039	3789474	4421052
8	449906	3	18	85	1833	1082	1394	4870024	4421053	5052631
9	392565	2	18	80	1463	1698	0	5266898	5052632	5684210
10	501594	2	18	75	1681	1551	0	5771653	5684211	6315789
11	772467	2	18	60	1008	1500	0	6547352	6315790	6947368
12	432983	3	18	50	1417	1313	1689	6982843	6947369	7578947
13	930857	2	18	90	1856	1023	0	7918119	7578948	8210526
14	709457	2	18	70	1886	1687	0	8630455	8210527	8842105
15	231543	2	18	85	1345	1998	0	8865571	8842106	9473684
16	798817	2	18	70	1004	1859	0	9667731	9473685	10105263
17	749400	3	18	55	1545	1001	1967	10419994	10105264	10736842
18	398026	1	18	70	1882	0	0	10822533	10736843	11368421
19	1051522	2	18	90	1133	1437	0	11875937	11368422	12000000

Total number of pulses in waveform = 42  
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**Type 5 Radar Waveform\_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	306709	2	14	50	1515	1045	0	306709	0	1090908
2	783583	1	14	70	1669	0	0	1092852	1090909	2181817
3	1165293	1	14	65	1372	0	0	2259814	2181818	3272726
4	2020633	1	14	75	1099	0	0	4281819	3272727	4363635
5	675630	3	14	75	1076	1635	1133	4958548	4363636	5454544
6	1619447	1	14	75	1848	0	0	5884157	5454545	6545453
7	810752	3	14	85	1109	1350	1298	7505452	6545454	7636362
8	983472	2	14	95	1779	1176	0	8319961	7636363	8727271
9	1534007	2	14	60	1098	1692	0	9306388	8727272	9818180
10	157131	3	14	75	1361	1054	1866	10843185	9818181	10909089
11	157131	2	14	85	1708	1257	0	11004597	10909090	11999998

Total number of pulses in waveform = 21  
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**Type 5 Radar Waveform\_27**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	666140	2	6	70	1012	1651	0	666140	0	666666
2	234043	1	6	65	1463	0	0	892846	666667	1333333
3	801191	1	6	85	1000	0	0	1695500	1333334	2000000
4	534845	3	6	60	1320	1710	1868	2231345	2000001	2666667
5	1005271	1	6	90	1970	0	0	3241514	2666668	3333334
6	283571	3	6	75	1077	1479	1181	3527055	3333335	4000001
7	952781	2	6	55	1408	1361	0	4483573	4000002	4666668
8	585292	2	6	85	1379	1403	0	5071634	4666669	5333335
9	379341	2	6	75	1874	1046	0	5453757	5333336	6000002
10	1030696	2	6	90	1028	1868	0	6487373	6000003	6666669
11	537385	1	6	90	1053	0	0	7027654	6666670	7333336
12	788264	1	6	65	1754	0	0	7816971	7333337	8000003
13	686709	3	6	95	1988	1436	1690	8210095	8000004	8666670
14	998115	3	6	85	1137	1510	1457	8901918	8666671	9333337
15	396501	2	6	70	1744	1168	0	9904137	9333338	10000004
16	706366	2	6	60	1439	1673	0	10303550	10000005	10666671
17	1826	3	6	80	1826	1956	1146	11013028	10666672	11333338
18	542078	2	6	55	1779	1171	0	11560034	11333339	12000005

Total number of pulses in waveform = 36  
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**Type 5 Radar Waveform\_28**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	390173	2	19	60	1469	1383	0	390173	0	923076
2	671541	1	19	70	1231	0	0	1064566	923077	1846153
3	1491491	3	19	85	1506	1158	1249	2557288	1846154	2769230
4	713011	3	19	1891	1891	1801	1750	3274212	2769231	3692307
5	802805	1	19	60	1381	0	0	4082459	3692308	4615384
6	986569	2	19	55	1485	1910	0	5070409	4615385	5538461
7	1311656	3	19	60	1768	1379	1007	6385460	5538462	6461538
8	252250	1	19	55	1742	0	0	6641864	6461539	7384615
9	1496546	3	19	85	1513	1542	1071	8140152	7384616	8307692
10	810128	3	19	95	1157	1214	1801	8954406	8307693	9230769
11	655889	1	19	85	1494	0	0	9614467	9230770	10153846
12	865544	2	19	75	1092	1677	0	10481505	10153847	11076923
13	768529	3	19	90	1437	1158	1742	11252803	11076924	12000000

Total number of pulses in waveform = 28  
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### Type 5 Radar Waveform\_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	765680	2	9	60	1980	1373	0	765680	0	1090908
2	863130	1	9	55	1585	0	0	1632163	1090909	2181817
3	1019695	3	9	80	1720	1998	1348	2653443	2181818	3272726
4	1563352	3	9	85	1101	1049	1666	4221861	3272727	4363635
5	824027	3	9	70	1823	1407	1348	5049704	4363636	5454544
6	877929	3	9	90	1225	1004	1703	5932211	5454545	6545453
7	1537833	3	9	85	1361	1983	1426	7473976	6545454	7636362
8	630179	1	9	95	1579	0	0	8108925	7636363	8727271
9	1369422	3	9	95	1192	1897	1207	9479926	8727272	9818180
10	1403425	3	9	55	1395	1894	1465	10887647	9818181	10909089
11	526352	2	9	60	1547	1217	0	11418753	10909090	11999998

Total number of pulses in waveform = 27  
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### Type 5 Radar Waveform\_30

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	219057	1	12	60	1360	0	0	219057	0	799999
2	985384	2	12	50	1954	1631	0	1205801	800000	1599999
3	690761	2	12	55	1907	1786	0	1900147	1600000	2399999
4	677961	3	12	50	1771	1680	1621	2581801	2400000	3199999
5	1298345	3	12	80	1239	1573	1352	3885218	3200000	3999999
6	537339	1	12	70	1701	0	0	4426721	4000000	4799999
7	868995	3	12	75	1620	1348	1020	5297417	4800000	5599999
8	456521	2	12	55	1008	1664	0	5757926	5600000	6399999
9	815762	1	12	100	1729	0	0	6576360	6400000	7199999
10	873485	3	12	75	1519	1488	1716	7451574	7200000	7999999
11	1286527	2	12	50	1639	1616	0	8742824	8000000	8799999
12	68313	3	12	50	1760	1771	1289	8814392	8800000	9599999
13	1147497	1	12	75	1341	0	0	9966709	9600000	10399999
14	736818	3	12	75	1350	1186	1230	10704868	10400000	11199999
15	1228549	1	12	55	1427	0	0	11937183	11200000	11999999

Total number of pulses in waveform = 31  
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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	5253.7	1	16	5323.8	1
2	5258.9	1	17	5313.4	1
3	5264.1	1	18	5318.8	1
4	5269.1	1	19	5303.2	1
5	5274.3	1	20	5308.4	1
6	5279.3	1	21	5292.6	1
7	5284.5	1	22	5297.8	1
8	5290.0	1	23	5261.2	1
9	5329.0	1	24	5256.2	1
10	5321.4	1	25	5266.5	1
11	5316.2	1	26	5271.6	1
12	5310.8	1	27	5276.7	1
13	5305.8	1	28	5282.1	1
14	5300.6	1	29	5287.1	1
15	5295.3	1	30	5251.0	1
Detection Percentage (%)					100%





Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5292	6	7	5258	21
4	5243	12	14	5295	42
6	5270	18	19	5241	57
9	5283	27	30	5243	90
15	5289	45	32	5268	96
16	5240	48	39	5251	117
26	5266	78	41	5273	123
29	5273	87	52	5277	156
39	5282	117	53	5297	159
40	5267	120	57	5275	171
61	5286	183	73	5292	219
69	5251	207	86	5285	258
81	5245	243	90	5252	270
82	5284	246	7	5258	21
95	5255	285	14	5295	42

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5281	21	16	5286	48
8	5275	24	19	5298	57
9	5250	27	42	5292	126
11	5268	33	69	5248	207
22	5299	66	83	5266	249
47	5262	141	91	5274	273
55	5303	165	93	5300	279
63	5295	189	94	5268	282
91	5254	273	98	5242	294

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5262	3	9	5317	27
3	5295	9	23	5267	69
9	5311	27	32	5305	96
10	5297	30	35	5292	105
14	5268	42	47	5276	141
26	5299	78	52	5313	156
28	5274	84	70	5266	210
63	5272	189	74	5312	222
67	5292	201	75	5295	225
71	5306	213	86	5275	258
80	5301	240	--	--	--
83	5261	249	--	--	--
84	5310	252	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5280	33	5	5293	15
13	5275	39	9	5260	27
24	5302	72	17	5288	51
26	5271	78	38	5265	114
44	5293	132	54	5289	162
49	5270	147	79	5320	237
60	5274	180	89	5306	267
65	5288	195	93	5305	279
70	5289	210	--	--	--
75	5311	225	--	--	--
88	5317	264	--	--	--
95	5268	285	--	--	--



Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5326	0	2	5289	6
17	5333	51	14	5283	42
37	5290	111	18	5301	54
57	5316	171	53	5318	159
71	5302	213	58	5286	174
77	5339	231	61	5329	183
97	5331	291	67	5284	201
--	--	--	70	5297	210
--	--	--	77	5314	231
--	--	--	90	5296	270
--	--	--	98	5324	294

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5305	54	13	5288	39
23	5297	69	24	5303	72
39	5294	117	31	5328	93
41	5312	123	32	5306	96
44	5289	132	33	5300	99
46	5321	138	36	5326	108
48	5310	144	39	5315	117
49	5315	147	45	5295	135
57	5331	171	55	5275	165
67	5284	201	57	5309	171
68	5304	204	88	5308	264
70	5280	210	89	5285	267
80	5283	240	--	--	--
85	5317	255	--	--	--
87	5288	261	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5304	18	0	5294	0
9	5297	27	16	5281	48
12	5299	36	26	5298	78
14	5273	42	42	5304	126
15	5309	45	49	5314	147
20	5271	60	53	5288	159
24	5296	72	57	5315	171
44	5290	132	72	5286	216
46	5317	138	90	5268	270
47	5325	141	92	5296	276
55	5330	165	97	5301	291
76	5275	228	--	--	--
82	5320	246	--	--	--
87	5283	261	--	--	--
93	5323	279	--	--	--
96	5321	288	--	--	--



Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5275	63	5	5325	15
37	5308	111	7	5285	21
45	5282	135	9	5294	27
48	5310	144	11	5322	33
50	5293	150	25	5299	75
52	5277	156	27	5308	81
68	5316	204	42	5287	126
70	5265	210	53	5316	159
78	5261	234	55	5331	165
79	5304	237	60	5286	180
--	--	--	76	5323	228
--	--	--	84	5312	252
--	--	--	89	5310	267
--	--	--	90	5304	270
--	--	--	91	5291	273
--	--	--	93	5335	279

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5321	9	7	5312	21
6	5316	18	15	5295	45
30	5309	90	17	5327	51
36	5275	108	22	5280	66
49	5313	147	33	5288	99
60	5299	180	37	5317	111
68	5289	204	40	5306	120
77	5285	231	43	5323	129
84	5280	252	46	5329	138
--	--	--	55	5294	165
--	--	--	57	5305	171
--	--	--	64	5290	192
--	--	--	78	5335	234
--	--	--	85	5291	255



Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5277	6	12	5271	36
4	5267	12	19	5317	57
12	5303	36	28	5281	84
24	5275	72	36	5276	108
26	5278	78	63	5279	189
30	5265	90	67	5298	201
44	5285	132	85	5320	255
46	5299	138	95	5288	285
77	5304	231	96	5274	288
78	5288	234	98	5325	294
95	5306	285	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5292	21	8	5291	24
18	5278	54	14	5301	42
20	5317	60	26	5273	78
33	5299	99	39	5298	117
34	5282	102	54	5266	162
35	5310	105	59	5295	177
38	5261	114	64	5292	192
45	5290	135	67	5312	201
47	5272	141	68	5271	204
54	5307	162	72	5280	216
56	5297	168	74	5300	222
63	5306	189	81	5264	243
--	--	--	91	5289	273



Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5268	0	2	5257	6
18	5275	54	15	5258	45
26	5242	78	16	5284	48
28	5279	84	24	5249	72
33	5278	99	32	5279	96
35	5283	105	35	5242	105
52	5277	156	37	5281	111
55	5296	165	41	5251	123
65	5261	195	45	5288	135
75	5295	225	58	5260	174
93	5247	279	66	5246	198
99	5274	297	77	5282	231
--	--	--	78	5250	234
--	--	--	79	5241	237
--	--	--	85	5243	255
--	--	--	86	5261	258

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5267	33	4	5286	12
20	5300	60	30	5282	90
28	5302	84	56	5296	168
39	5284	117	58	5266	174
44	5287	132	81	5291	243
54	5265	162	92	5310	276
60	5279	180	--	--	--
86	5288	258	--	--	--
88	5254	264	--	--	--
94	5276	282	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5293	9	11	5315	33
18	5257	54	23	5305	69
23	5309	69	35	5316	105
24	5261	72	46	5263	138
27	5301	81	47	5281	141
29	5287	87	50	5309	150
38	5283	114	56	5298	168
42	5269	126	58	5264	174
51	5250	153	61	5289	183
63	5254	189	75	5275	225
69	5284	207	86	5273	258
86	5303	258	88	5270	264
94	5253	282	90	5299	270
95	5296	285	98	5307	294