



# DFS MEASUREMENT REPORT

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

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**FCC ID:** Q9DAPEX037457

**APPLICANT:** Hewlett Packard Enterprise Company

**Application Type:** Class III Permissive Change

**Product:** ACCESS POINT

**Model No.:** APEX0374, APEX0375, APEX0377

**Brand Name:**  

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

**FCC Rule Part(s):** PART15 Subpart E (Section 15.407 (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:** September 25 ~ November 26, 2017

Reviewed By : Paddy Chen  
 ( Paddy Chen )

Approved By : Chenz Ker  
 (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
1710TW0108-U8	Rev. 01	Initial Report	11-26-2017	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>Model No.:</b>	APEX0374, APEX0375, APEX0377
<b>FCC ID:</b>	Q9DAPEX037457
<b>Test Device Serial No.:</b>	CNCKK2S0PL <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 (MRT 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 Canada, Taiwan, EU and TELEC Rules.

TAF certificate here



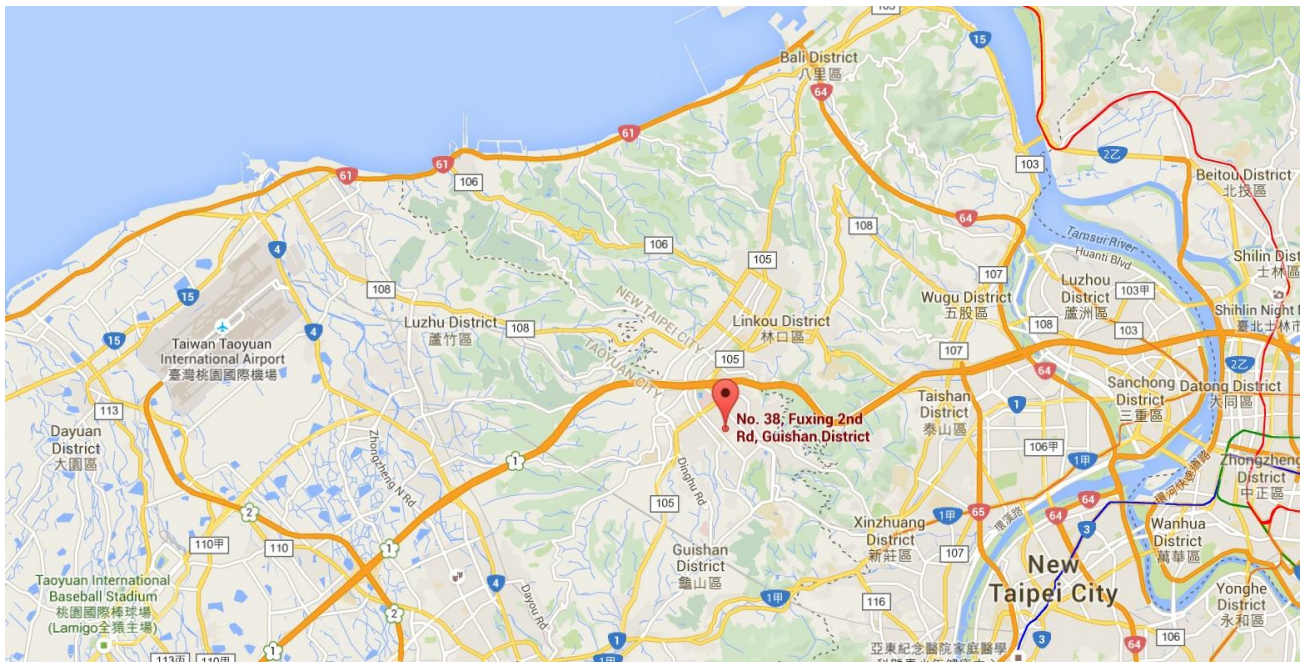
## 1. INTRODUCTION

### 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.:	APEX0374, APEX0375, APEX0377
Brand Name:	 
Software Version:	AoS 8.3.0.0 build 61286 A32x_ipq806x.ari_8.3.0.0-brunello_cshen_61286_1016_csa
Operating Temperature:	-40 ~ 65 °C
Power Type:	POE input or AC adapter input
Frequency Range	<p><b><u>2.4GHz:</u></b></p> <p>For 802.11b/g/n-HT20: 2412~2462 MHz</p> <p>For 802.11n-HT40: 2422~2452 MHz</p> <p><b><u>5GHz:</u></b></p> <p>For 802.11a/n-HT20/ac-VHT20: 5180~5320MHz, 5500~5720MHz</p> <p>For 802.11n-HT40/ac-VHT40: 5190~5310MHz, 5510~5710MHz</p> <p>For 802.11ac-VHT80/ac-VHT80+80 (Non-contiguous): 5290MHz, 5530MHz, 5610MHz, 5690MHz</p> <p>For 802.11ac-VHT80+80 (Contiguous): 5210MHz + 5290MHz, 5530MHz + 5610MHz</p>
Type of Modulation	802.11a/n/ac: OFDM
Power-on cycle	Requires 140.3 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 1: The difference between three models is that the EUT use different antenna and appearance, other hardware and software are the same. Each model has its own power parameter value.

Note 2: 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

Model No.: APEX0374

Antenna No.	Polarization	Frequency Band (GHz)	Model No.	Max Peak Gain (dBi)	30 Degree Antenna 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 (Note 3)	Omni	2.4	ANT-2x2-2005	5.0	N/A	0	5.0	5.00
2 (Note 3)	Omni	5	ANT-2x2-5005	5.0	5.0	3.0	5.0	8.01
3 (Note 3)	Directional	2.4	ANT-2x2-2314	14.0	N/A	0	14.0	14.00
4 (Note 3)	Directional	5	ANT-3x3-5712	11.5	11.5	3.0	11.5	14.51
5 (Note 3)	Directional	5	ANT-4x4-5314	14.0	14.0	3.0	14.0	17.01
6 (Note 3)	Directional	5	MT-484052/NVH	16.0	16.0	3.0	16.0	19.01
7 (Note 3)	Directional	2.4	ANT-3x3-D608	7.5	N/A	3.0	7.5	10.51
		5		7.5	7.5	3.0	7.5	10.51
8 (Note 3)	Directional	2.4	ANT-3x3-D100	5.0	N/A	3.0	5.0	8.01
		5		5.0	5.0	3.0	5.0	8.01
<b>Bluetooth Internal Antenna</b>								
PCB		2.4		3.0				

Model No.: APEX0377

Polarization	Frequency Band (GHz)	Max Peak Gain (dBi)	30 Degree Antenna Gain (dBi)	BF Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
<b>Wi-Fi Internal Antenna List (2.4GHz 2*2 MIMO, 5GHz 4*4 MIMO)</b>						
Directional (Note 3)	2.4	6.4	N/A	0.0	6.4	6.40
Directional (Note 3)	5	6.3	6.3	3.0	6.3	9.31
<b>Bluetooth Internal Antenna</b>						
PCB	2.4	6.7				



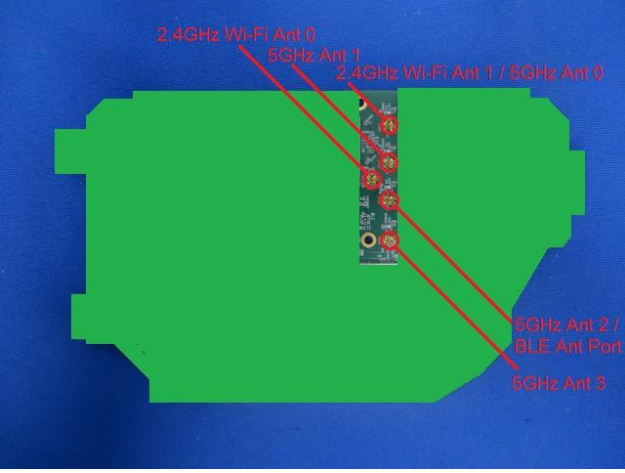
Model No.: APEX0375

Polarization	Frequency Band (GHz)	Max Peak Gain (dBi)	30 Degree Antenna Gain (dBi)	BF Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
<b>Wi-Fi Internal Antenna List (2.4GHz 2*2 MIMO, 5GHz 4*4 MIMO)</b>						
Directional (Note 3)	2.4	4.0	N/A	0.0	4.0	4.00
Directional (Note 3)	5	4.6	-4.0	3.0	4.6	7.61
<b>Bluetooth Internal Antenna</b>						
PCB	2.4			4.5		

Note:

- 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 =  $10 \log (N_{ANT}/ N_{SS})$  dB = 3.01;
  - For power measurements on IEEE 802.11 devices,  
 Array Gain = 0 dB for  $N_{ANT} \leq 4$ ;
- 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.
- These antennas have Cross-Polarized design, the detail see the antenna specification.
- We selected the lowest antenna gain sample (M/N: APEX0375) to perform DFS testing.

### 2.3. Description of Antenna RF Port

Antenna RF Port						
--	2.4GHz RF Port		5GHz RF Port			
Software Control Port	Ant 0	Ant 1	Ant 0	Ant 1	Ant 2	Ant 3
APEX0375						
						

## 2.4. 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 + 155 group, channel 42 will transmit by Ant 0+1 ports and channel 155 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.

## 2.5. 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

## 2.6. 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 $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
<p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p><b>Note 2:</b> Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.</p> <p><b>Note3:</b> EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>	

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

### 3.4. Parameters of DFS Test Signals

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

#### Short Pulse Radar Test Waveforms

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

**Table 3-5: Parameters for Short Pulse Radar Waveforms**



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

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

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

### Long Pulse Radar Test Waveform

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

**Table 3-7: Parameters for Long Pulse Radar Waveforms**

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

### Frequency Hopping Radar Test Waveform

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

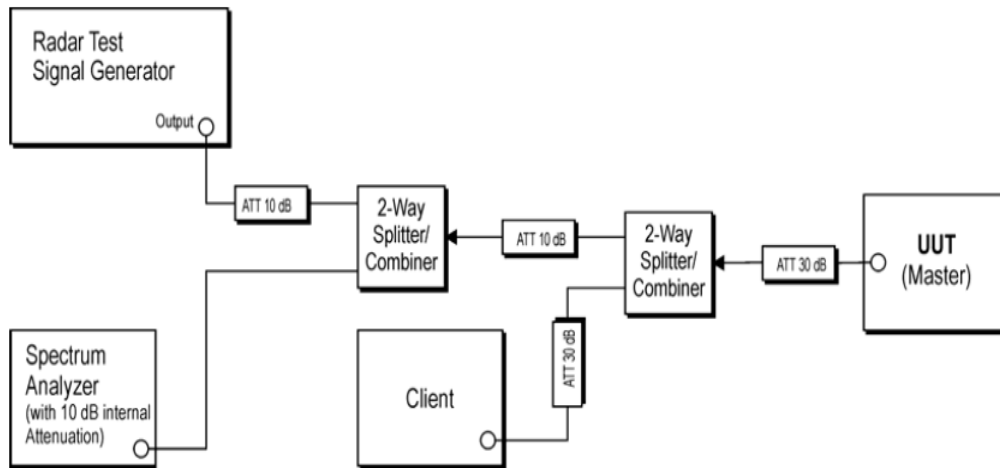
**Table 3-8: Parameters for Frequency Hopping Radar Waveforms**

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

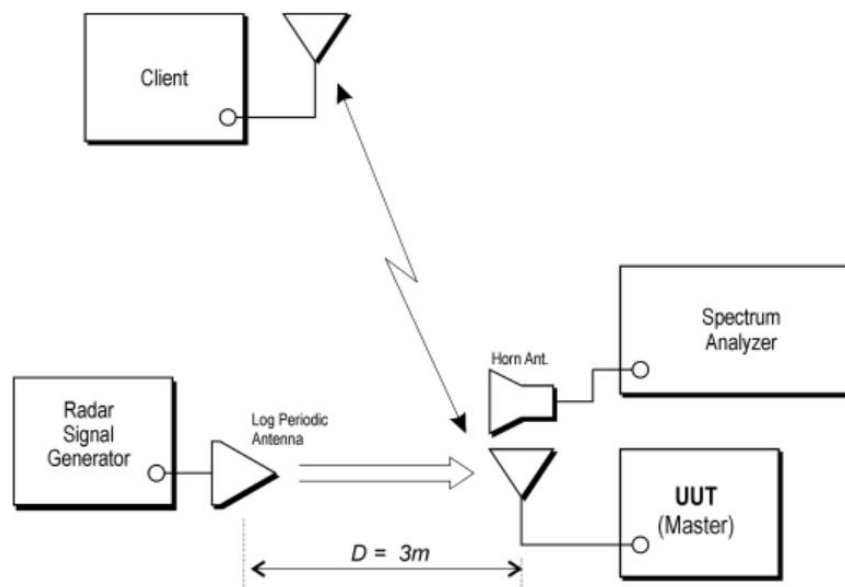
The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues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

### 3.5. Test Setup Diagram

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:** Q9DAPEX037457

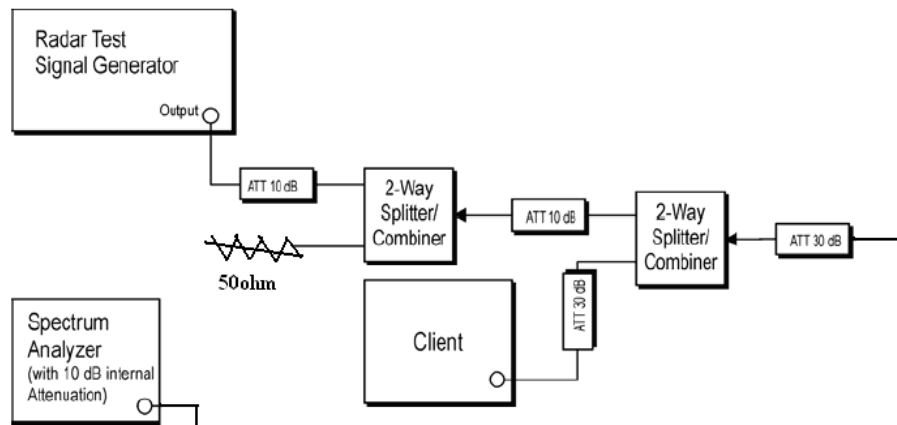
Parameter	Limit	Test Setup Method	Test Result	Reference
UNII Detection Bandwidth Measurement	Refer Table 3-3	Conducted	Pass	Section 5.4
Initial Channel Availability Check Time	Refer Table 3-3	Conducted	Pass	Section 5.5
Radar Burst at the Beginning of the Channel Availability Check Time	Refer Table 3-3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

Note: 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.



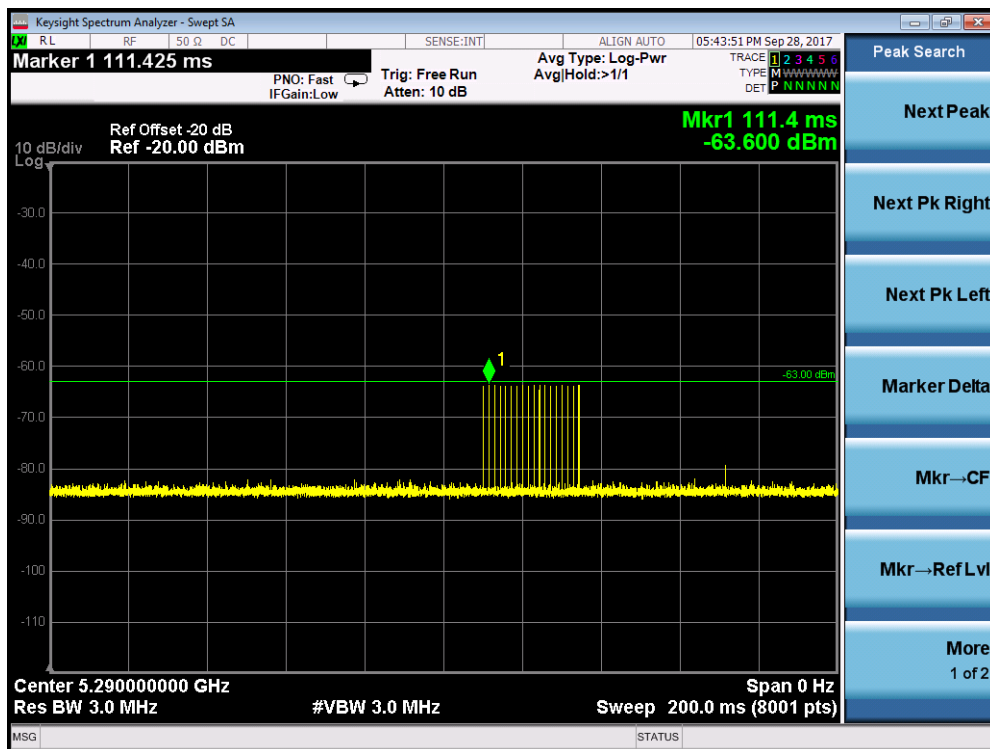
**Figure 3-2: Conducted Test Setup**

### 5.2.2. Calibration Procedure

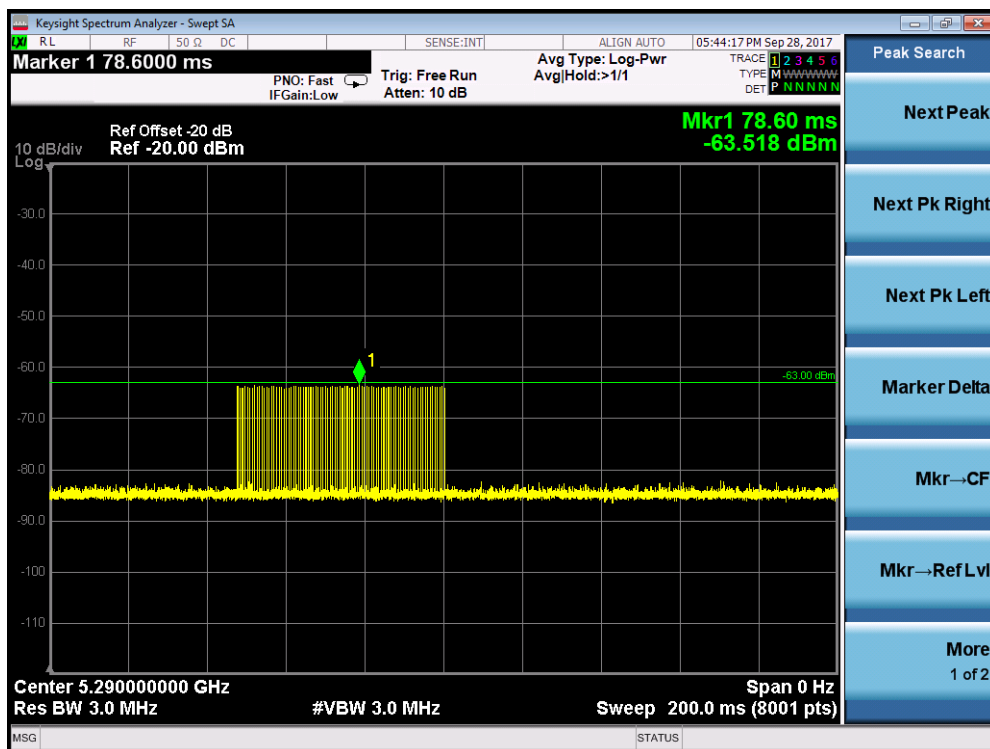
The Interference Radar Detection Threshold Level is  $(-64\text{dBm}) + (0) [\text{dBi}] + 1 \text{ dB} = -63 \text{ dBm}$  that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator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

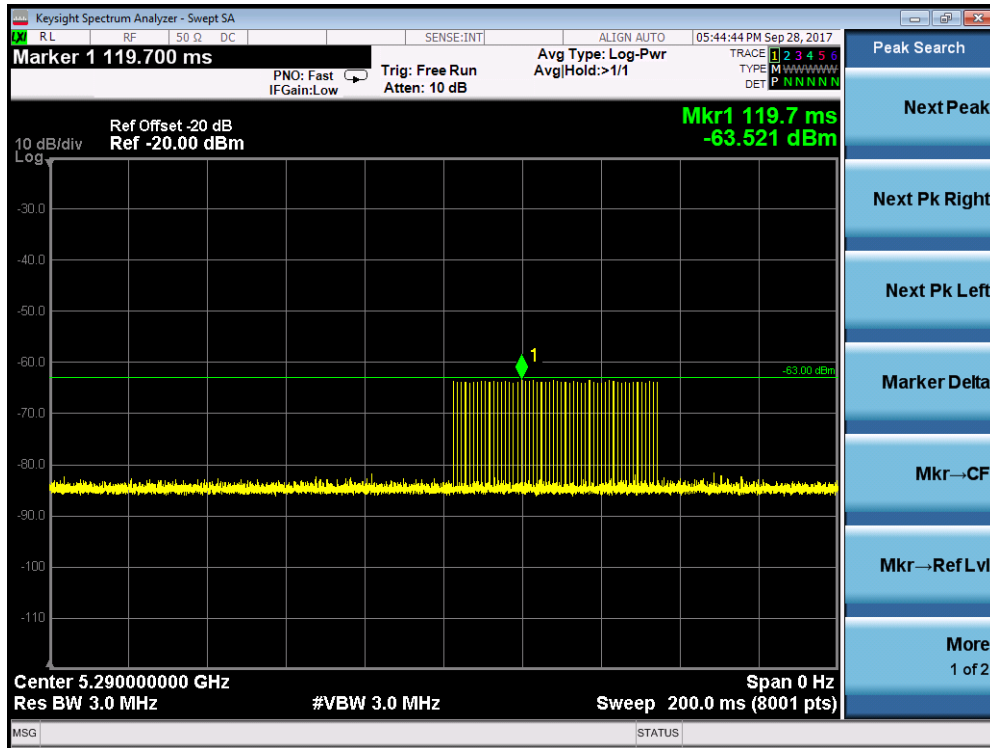


Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency



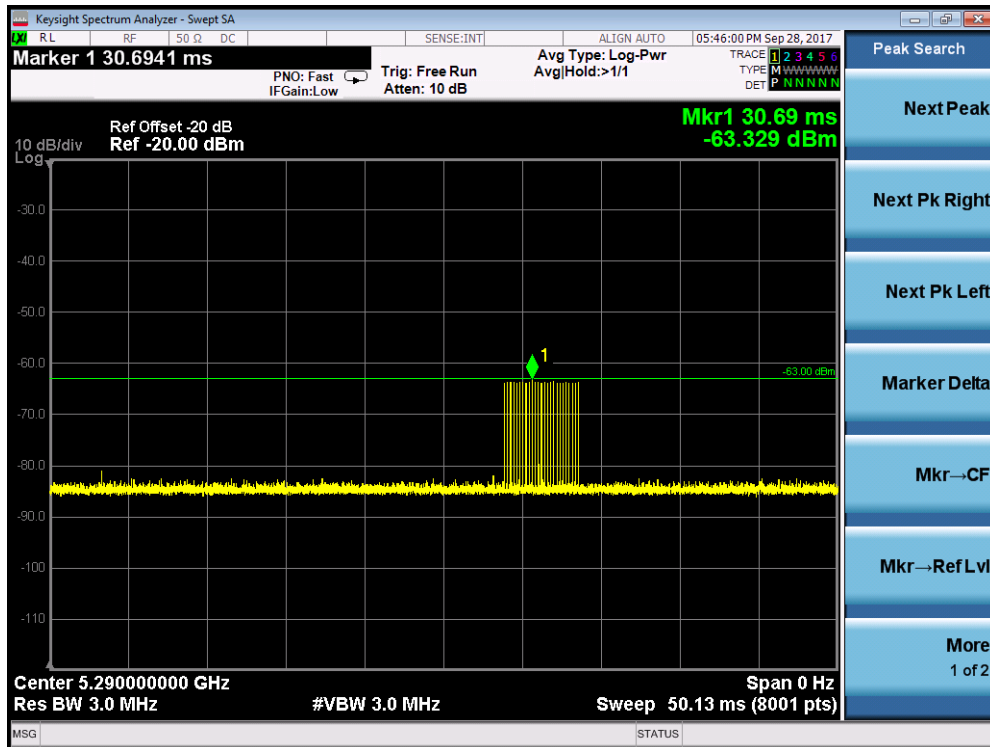
PRI = 618us and the number of pulses = 86

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



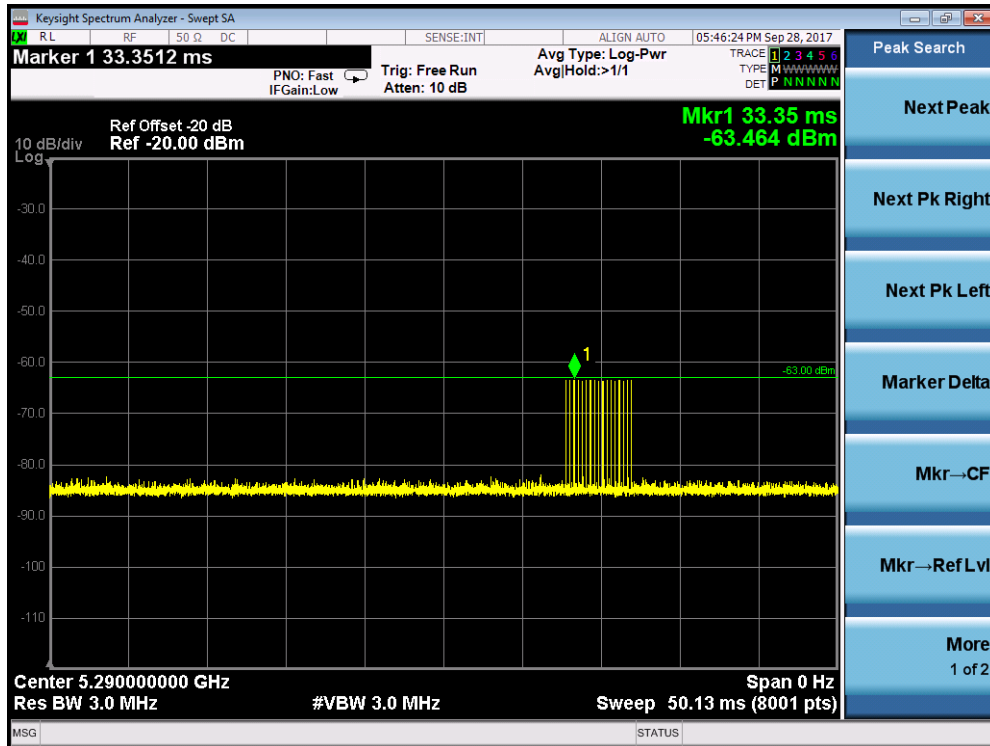
PRI = 1.019ms and the number of pulses = 52

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

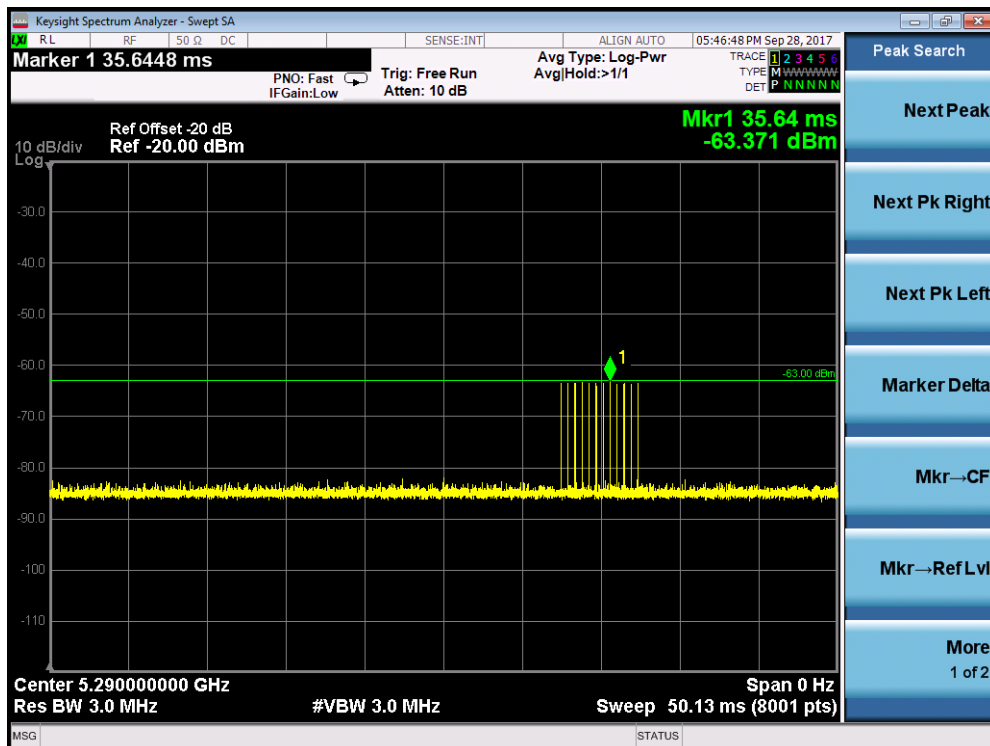




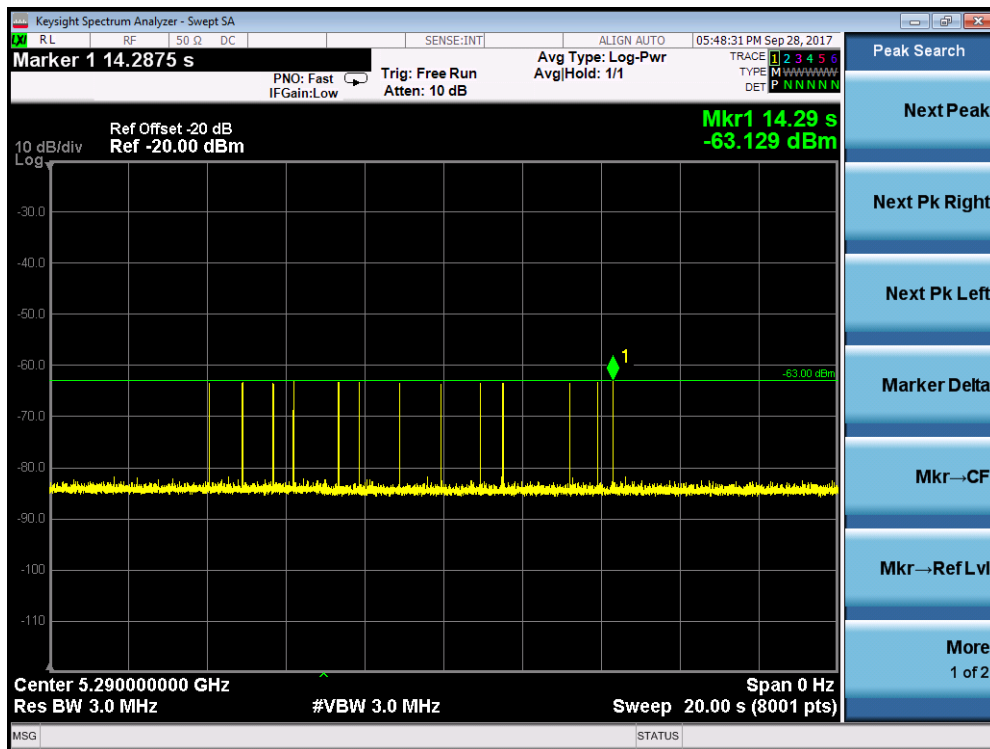
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency



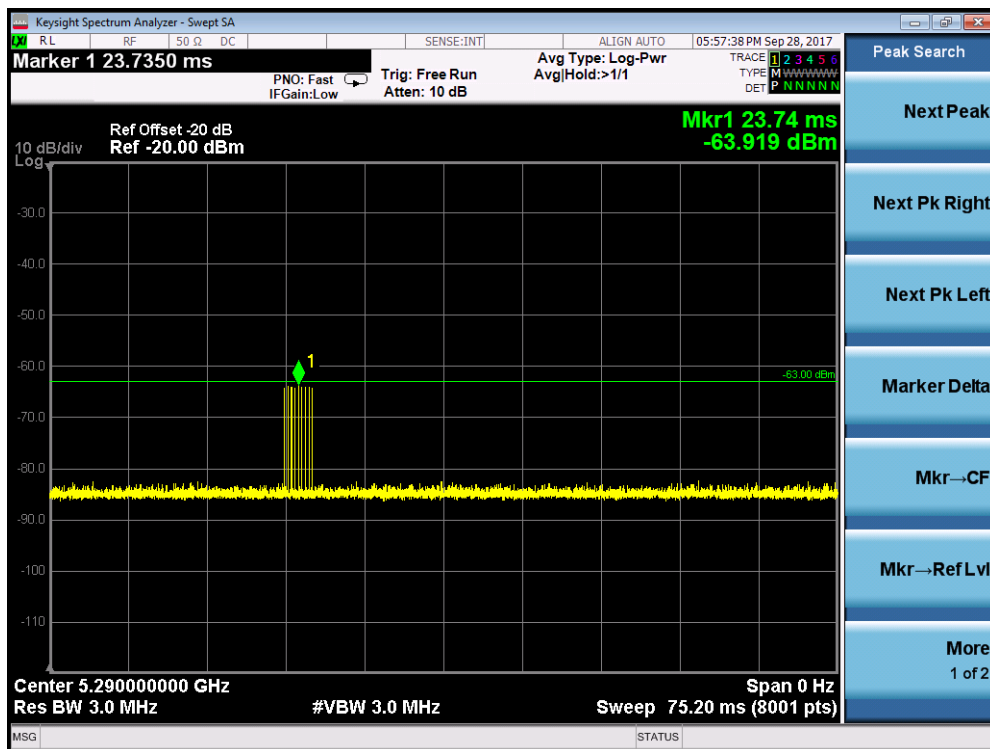
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency



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

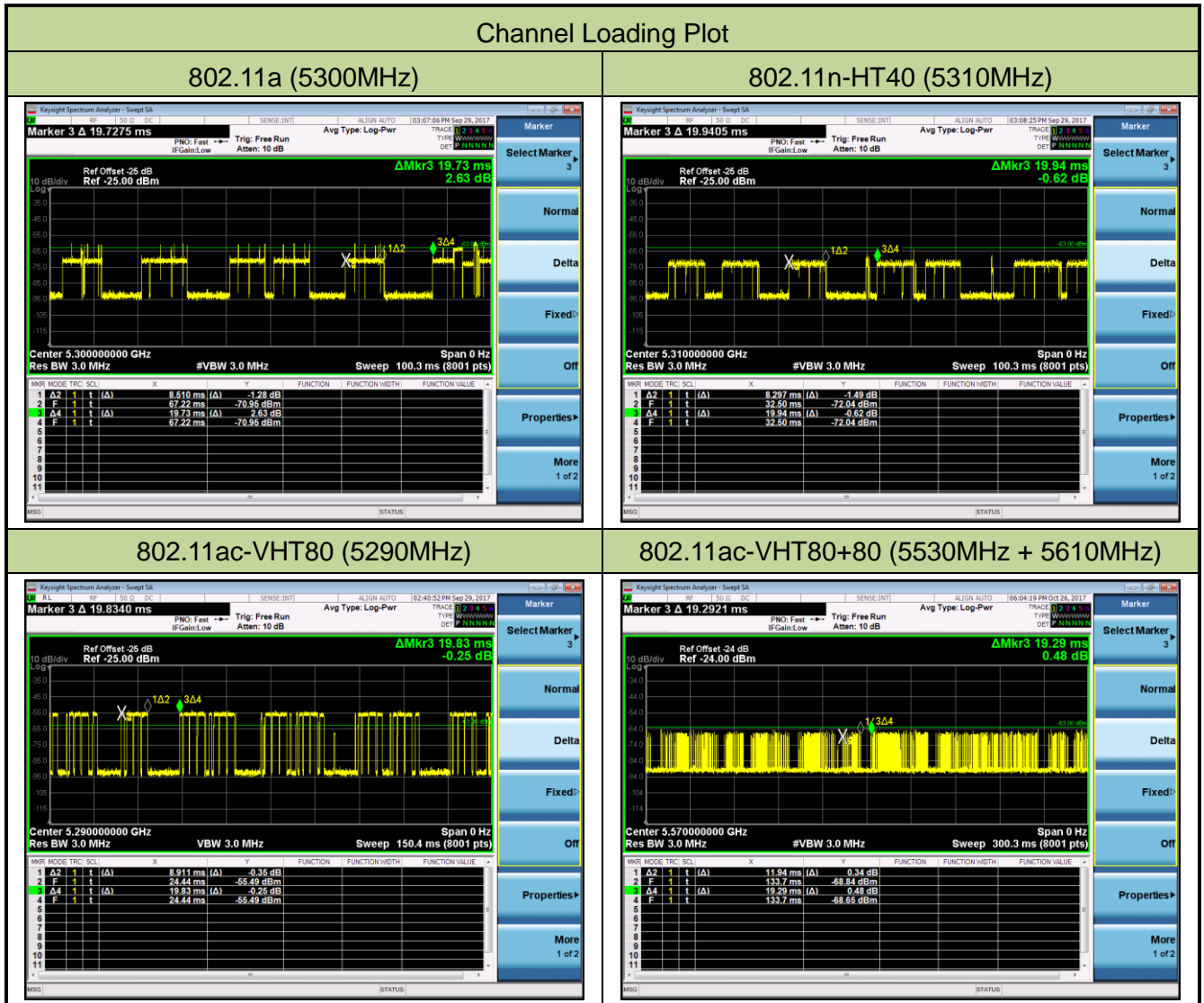


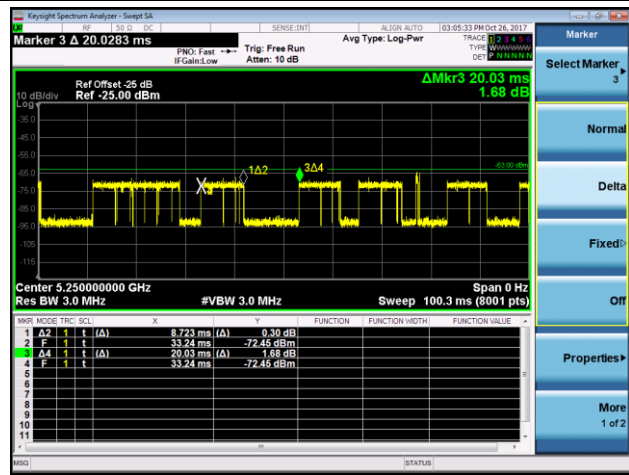
## Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within UNII detection bandwidth



### 5.2.4. Channel Loading Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Andy Zhu	Relative Humidity	65%
Test Site	TR5	Test Date	2017/09/29
Test Item	Channel Loading		



**802.11ac-VHT80+80 (5210MHz + 5290MHz)**


Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11a	5300 MHz	43.13%	$\geq 17\%$	Pass
802.11n-HT40	5310 MHz	41.61%	$\geq 17\%$	Pass
802.11ac-VHT80	5290 MHz	44.94%	$\geq 17\%$	Pass
802.11ac-VHT80+80 (Contiguous)	5530 MHz + 5610 MHz	61.90%	$\geq 17\%$	Pass
802.11ac-VHT80+80 (Contiguous)	5210 MHz + 5290 MHz	43.55%	$\geq 17\%$	Pass

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

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

### 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 = 16.41MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 16.41MHz x 100% = 16.41MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 16.41MHz. (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 = 35.75MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 35.75MHz x 100% = 35.75MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5310MHz. The 99% channel bandwidth is 35.75MHz. (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 = 75.67MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.67MHz x 100% = 75.67MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.67MHz. (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 = 75.75MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.75MHz x 100% = 75.75MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.75MHz. (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 = 75.81MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.81MHz x 100% = 75.81MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 75.81MHz. (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 = 75.82MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.82MHz x 100% = 75.82MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.82MHz. (See the 99% BW section of the RF report for further measurement details).

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 = 154.79MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 154.79MHz x 100% = 154.79MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5570MHz. The 99% channel bandwidth is 154.79MHz. (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.

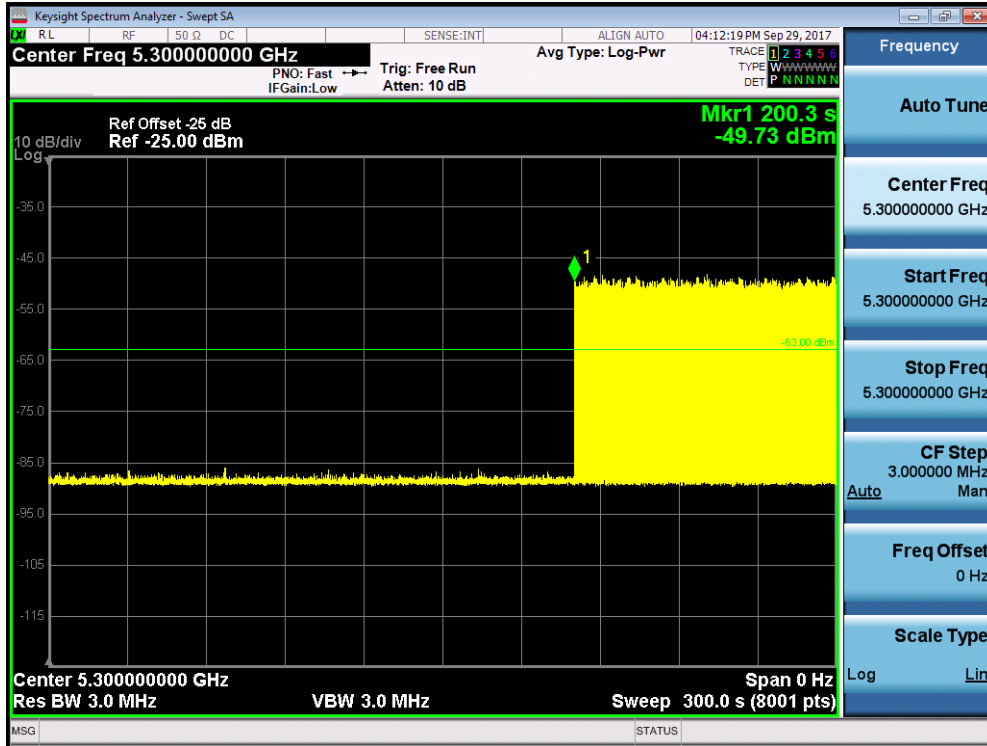
### **5.4.2. Test Procedure**

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 (140.3 sec). Initial beacons/data transmissions are indicated by marker 1 (200.3 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.

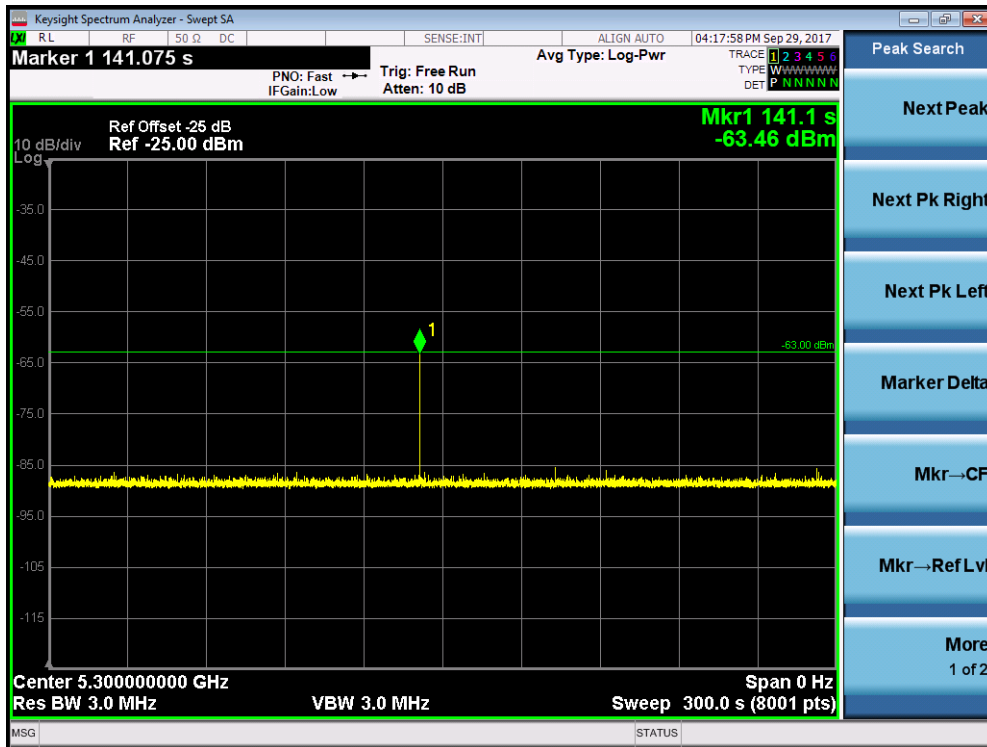
### **5.5.2. Test Procedure**

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



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

### **5.6.1. Test Limit**

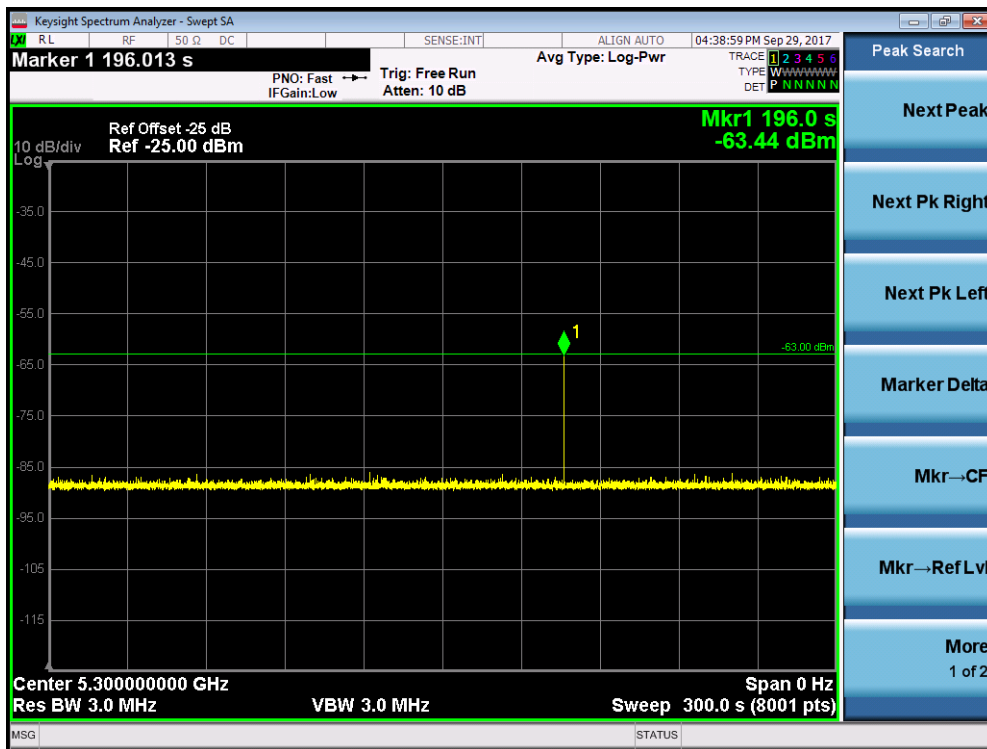
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

### **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



## **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.

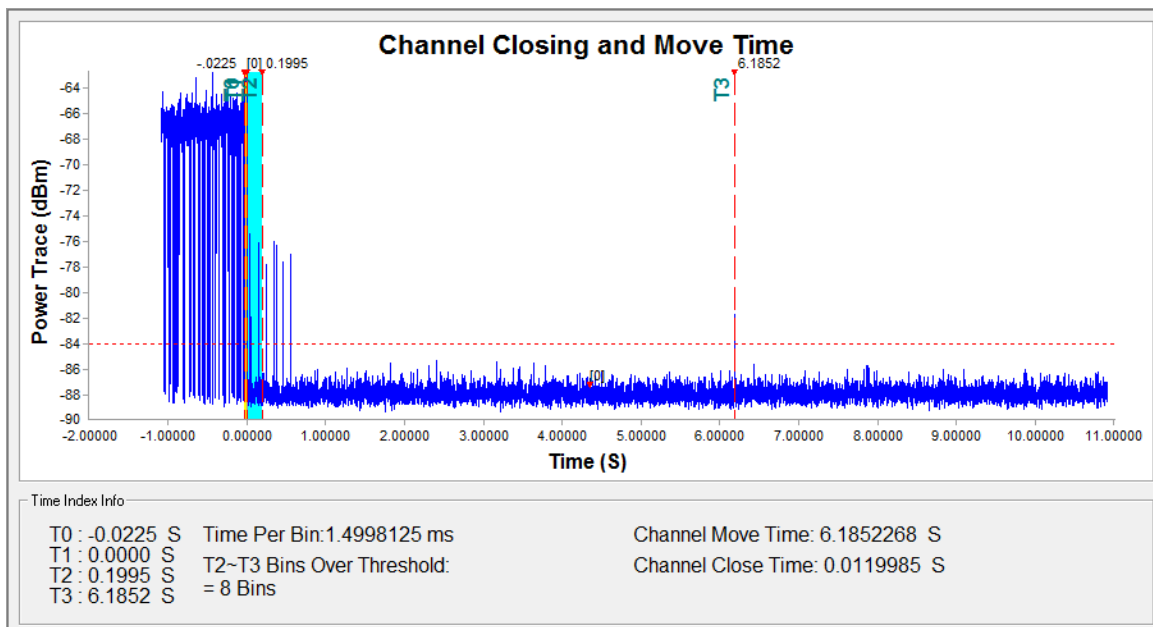
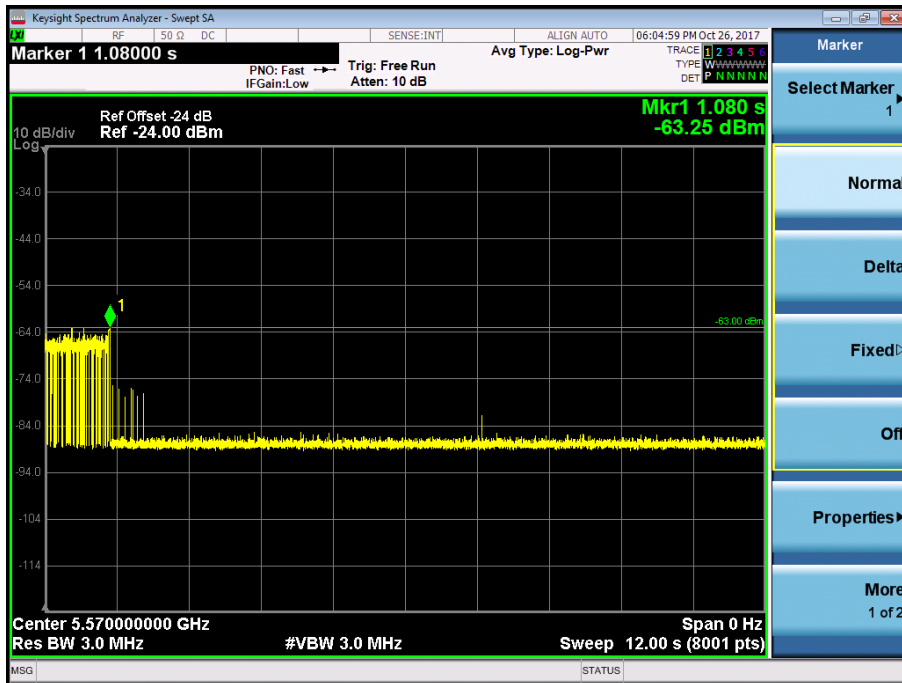
### **5.7.2. Test Procedure Used**

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.

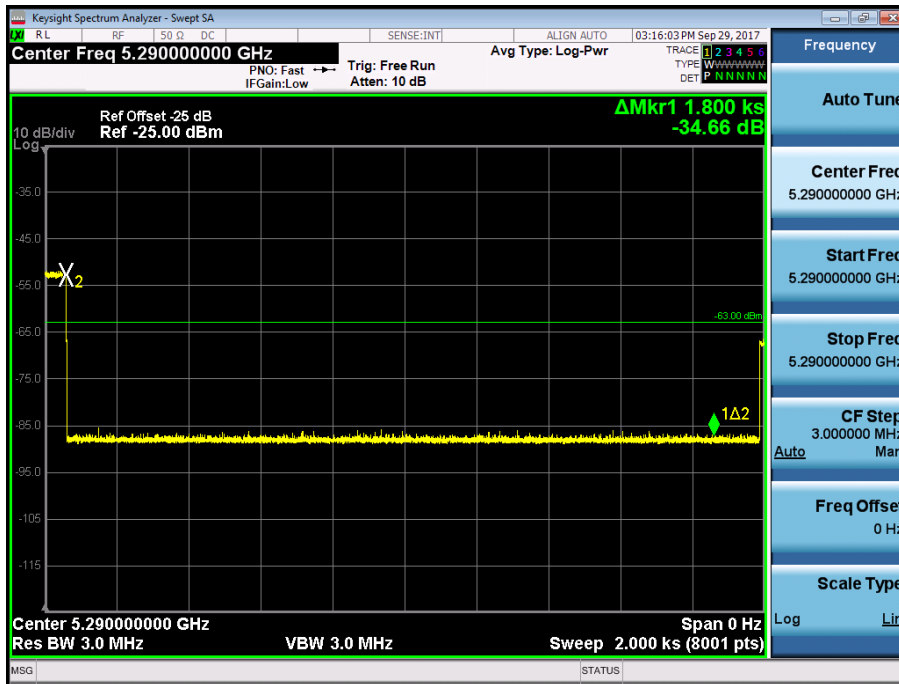
### 5.7.3. Test Result

Channel Move Time and Channel Closing Transmission Time

For 802.11ac-VHT80+80 (Contiguous) - 5530MHz + 5610MHz



## Non-Occupancy Period for 802.11ac-VHT80 – 5290MHz



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	6.185s	<10s
Channel Closing Transmission Time (ms) (Note)	12.0ms	< 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	5298.9	1	3066	18	1
2	5302.7	1	518	102	1
3	5292.3	1	898	59	1
4	5307.3	1	778	68	1
5	5299.3	1	678	78	1
6	5307.8	1	598	89	1
7	5291.0	1	938	57	1
8	5306.1	1	858	62	1
9	5302.2	1	538	99	1
10	5300.0	1	758	70	1
11	5296.4	1	838	63	1
12	5308.0	1	818	65	1
13	5301.8	1	738	72	1
14	5297.6	1	578	92	1
15	5293.2	1	798	67	1
16	5306.8	1	2536	21	1
17	5300.4	1	1049	51	1
18	5295.3	1	1629	33	1
19	5303.5	1	1441	37	1
20	5305.2	1	2800	19	1
21	5293.8	1	787	68	1
22	5301.3	1	1992	27	1
23	5305.6	1	786	68	1
24	5295.8	1	796	67	1
25	5304.2	1	2017	27	1
26	5303.9	1	1948	28	1
27	5309.0	1	2664	20	1
28	5294.0	1	839	63	1
29	5304.8	1	2345	23	1
30	5294.8	1	806	66	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	5295.2	2.4	230	24	1
2	5302.2	2.8	228	29	1
3	5295.7	3.2	214	27	1
4	5306.9	2.0	179	27	1
5	5301.1	2.1	187	29	1
6	5307.7	4.2	230	25	1
7	5291.0	2.8	210	26	1
8	5302.7	1.1	204	27	1
9	5296.3	4.0	183	27	1
10	5307.1	2.9	218	29	1
11	5292.2	3.0	173	27	1
12	5306.2	4.9	218	29	1
13	5301.4	2.2	179	27	1
14	5308.0	2.2	201	25	1
15	5297.8	3.8	185	27	1
16	5309.0	1.4	221	24	1
17	5293.3	4.7	209	28	1
18	5305.3	4.0	213	25	1
19	5303.8	4.9	150	26	1
20	5300.0	2.9	201	23	1
21	5303.5	4.3	168	25	1
22	5293.8	4.4	222	26	1
23	5304.2	3.5	208	24	1
24	5308.6	4.6	193	27	1
25	5305.8	3.2	197	25	1
26	5304.8	3.0	216	29	1
27	5294.0	3.4	226	27	1
28	5399.9	2.8	192	26	1
29	5300.2	2.4	175	27	1
30	5294.4	1.1	188	28	1
Detection Percentage (%)					100%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5297.8	6.0	316	18	1
2	5302.2	8.2	312	18	1
3	5301.5	8.8	487	17	1
4	5292.4	8.6	349	17	1
5	5306.9	7.2	374	17	1
6	5306.3	8.3	452	16	1
7	5297.6	8.1	382	17	1
8	5291.0	6.1	265	18	1
9	5301.1	8.1	431	16	1
10	5308.6	7.3	279	16	1
11	5296.5	6.7	275	18	1
12	5305.8	9.5	343	17	1
13	5293.0	9.4	355	18	1
14	5302.8	7.8	420	17	1
15	5399.2	6.2	402	17	1
16	5295.8	6.8	376	16	1
17	5305.2	6.7	319	17	1
18	5300.0	7.8	466	16	1
19	5303.1	9.7	471	18	1
20	5300.9	9.5	400	17	1
21	5293.6	7.3	344	18	1
22	5307.0	6.7	317	18	1
23	5303.9	9.8	280	18	1
24	5295.2	7.6	395	16	1
25	5307.4	7.0	316	16	1
26	5294.4	7.6	440	18	1
27	5309.0	7.8	400	16	1
28	5304.9	9.1	470	16	1
29	5304.3	8.1	285	16	1
30	5294.8	6.9	379	17	1
Detection Percentage (%)					100%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5294.6	16.6	378	12	1
2	5302.8	16.0	380	16	1
3	5302.3	12.6	486	13	1
4	5291.0	19.8	395	12	1
5	5306.8	14.7	323	16	1
6	5296.6	17.2	297	14	1
7	5294.9	20.0	275	15	1
8	5303.1	18.9	288	13	1
9	5301.6	16.2	382	16	1
10	5295.8	16.2	276	15	1
11	5306.2	17.1	377	16	1
12	5295.2	17.6	500	13	1
13	5307.3	12.8	428	16	1
14	5301.4	13.3	490	13	1
15	5292.2	19.0	321	12	1
16	5305.8	19.6	259	16	1
17	5297.9	16.0	396	13	1
18	5300.0	16.5	272	16	1
19	5293.9	15.3	387	16	1
20	5303.6	12.7	339	14	1
21	5307.6	14.2	339	12	1
22	5308.0	12.0	406	16	1
23	5293.3	11.3	414	12	1
24	5309.0	12.8	471	16	1
25	5304.2	15.6	273	16	1
26	5300.8	16.9	286	15	1
27	5304.7	15.6	422	13	1
28	5399.2	12.7	438	15	1
29	5305.1	13.9	307	15	1
30	5300.3	11.0	262	16	1
Detection Percentage (%)					100%

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

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



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5296.0	1	16	5300.0	1
2	5299.2	1	17	5300.0	1
3	5295.6	1	18	5300.0	1
4	5299.6	1	19	5300.0	1
5	5294.0	1	20	5300.0	1
6	5298.8	1	21	5302.4	1
7	5294.4	1	22	5306.0	1
8	5297.6	1	23	5304.8	1
9	5295.2	1	24	5301.2	1
10	5296.8	1	25	5305.6	1
11	5300.0	1	26	5300.4	1
12	5300.0	1	27	5300.8	1
13	5300.0	1	28	5304.0	1
14	5300.0	1	29	5304.4	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	752260	3	10	60	1978	1285	1999	752260	0	857142
2	788445	2	10	65	1292	1313	0	1545967	857143	1714285
3	799800	2	10	70	1895	1567	0	2348372	1714286	2571428
4	805929	3	10	95	1232	1140	1134	3157763	2571429	3428571
5	910065	2	10	95	1890	1562	0	4071334	3428572	4285714
6	829860	3	10	50	1223	1008	1440	4904646	4285715	5142857
7	1061166	1	10	55	1294	0	0	5969483	5142858	6000000
8	581793	3	10	85	1466	1660	1101	6552570	6000001	6857143
9	864990	2	10	55	1709	1838	0	7421787	6857144	7714286
10	761004	1	10	55	1189	0	0	8186338	7714287	8571429
11	1075380	3	10	85	1996	1316	1527	9262907	8571430	9428572
12	875750	3	10	95	1620	1912	1639	10143496	9428573	10285715
13	313915	2	10	75	1460	1985	0	10462582	10285716	11142858
14	1352873	1	10	60	1658	0	0	11818900	11142859	12000001
Total number of pulses in waveform = 31										
*****										



### Type 5 Radar Waveform\_2

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	1120262	1	18	70	1359	0	0	1120262	0	1333332
2	633173	2	18	60	1863	1873	0	1754794	1333333	2666665
3	1464070	1	18	65	1344	0	0	3222600	2666666	3999998
4	1884777	2	18	50	1656	1315	0	5108721	3999999	5333331
5	820154	1	18	65	1009	0	0	5931846	5333332	6666664
6	1252230	1	18	85	1294	0	0	7185085	6666665	7999997
7	1208638	1	18	60	1471	0	0	8395017	7999998	9333330
8	1344694	2	18	95	1050	1093	0	9741182	9333331	10666663
9	1948112	1	18	100	1212	0	0	11691437	10666664	11999996

Total number of pulses in waveform = 12  
\*\*\*\*\*

### 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	910333	2	9	95	1355	1779	0	910333	0	1199999
2	1066910	2	9	75	1261	1333	0	1980377	1200000	2399999
3	781680	1	9	95	1556	0	0	2764651	2400000	3599999
4	920709	2	9	50	1574	1972	0	3686916	3600000	4799999
5	1206602	2	9	50	1376	1079	0	4897064	4800000	5999999
6	1479714	3	9	60	1187	1986	1220	6379233	6000000	7199999
7	1677875	2	9	75	1980	1390	0	8061501	7200000	8399999
8	1263533	2	9	95	1469	1209	0	9328404	8400000	9599999
9	361145	2	9	50	1786	1081	0	9692227	9600000	10799999
10	1434386	3	9	100	1718	1096	1966	11129480	10800000	11999999

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

### Type 5 Radar Waveform\_4

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	46004	3	19	70	1018	1211	1634	46004	0	999999
2	1889090	3	19	85	1115	1294	1329	1938957	1000000	1999999
3	863435	2	19	60	1323	1622	0	2806130	2000000	2999999
4	974360	1	19	50	1492	0	0	3783435	3000000	3999999
5	1017141	1	19	55	1625	0	0	4802068	4000000	4999999
6	704677	3	19	75	1106	1734	1086	5508370	5000000	5999999
7	670033	1	19	100	1048	0	0	6182329	6000000	6999999
8	1247549	2	19	60	1331	1296	0	7430926	7000000	7999999
9	709779	1	19	60	1198	0	0	8143332	8000000	8999999
10	1466982	2	19	65	1523	1114	0	9611512	9000000	9999999
11	1058500	1	19	65	1832	0	0	10672649	10000000	10999999
12	662881	3	19	100	1743	1292	1632	11337162	11000000	11999999

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



Type 5 Radar Waveform\_5

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	777587	1	5	90	1991	0	0	777587	0	999999
2	912616	3	5	65	1308	1223	1768	1692194	1000000	1999999
3	549340	3	5	95	1861	1204	1215	2245833	2000000	2999999
4	1576417	2	5	75	1627	1881	0	3826530	3000000	3999999
5	822456	3	5	55	1152	1987	1840	4652494	4000000	4999999
6	934533	3	5	65	1567	1036	1117	5592006	5000000	5999999
7	683299	2	5	60	1742	1675	0	6279025	6000000	6999999
8	1569828	1	5	100	1120	0	0	7852270	7000000	7999999
9	277952	1	5	75	1824	0	0	8131342	8000000	8999999
10	1351020	3	5	75	1209	1565	1729	9484186	9000000	9999999
11	1216769	2	5	90	1241	1156	0	10705458	10000000	10999999
12	897416	3	5	60	1258	1442	1716	11605271	11000000	11999999

Total number of pulses in waveform = 27

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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	641012	3	17	90	1287	1881	1382	641012	0	1199999
2	1474795	1	17	95	1060	0	0	2120337	1200000	2399999
3	1302475	3	17	90	1565	1026	1568	3423872	2400000	3599999
4	464778	1	17	90	1217	0	0	3892809	3600000	4799999
5	969407	2	17	85	1507	1825	0	4863433	4800000	5999999
6	2317500	2	17	100	1283	1984	0	7184265	6000000	7199999
7	628526	3	17	70	1855	1677	1566	7816058	7200000	8399999
8	755636	3	17	50	1461	1138	1404	8576792	8400000	9599999
9	1356415	3	17	65	1753	1106	1273	9937210	9600000	10799999
10	1718708	1	17	90	1706	0	0	11660050	10800000	11999999

Total number of pulses in waveform = 22

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Type 5 Radar Waveform\_7

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	969601	3	6	65	1237	1954	1331	969601	0	1199999
2	672053	3	6	75	1215	1949	1130	1646176	1200000	2399999
3	1512019	2	6	90	1549	1498	0	3162489	2400000	3599999
4	881628	3	6	65	1127	1796	1515	4047164	3600000	4799999
5	1234318	1	6	70	1046	0	0	5285920	4800000	5999999
6	1394986	1	6	80	1935	0	0	6681952	6000000	7199999
7	1481103	2	6	60	1643	1340	0	8164990	7200000	8399999
8	369410	1	6	60	1992	0	0	8537383	8400000	9599999
9	1936060	2	6	65	1633	1294	0	10475435	9600000	10799999
10	349157	2	6	70	1359	1468	0	10827519	10800000	11999999

Total number of pulses in waveform = 20

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### Type 5 Radar Waveform\_8

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	347285	2	14	80	1166	1341	0	347285	0	749999
2	622904	1	14	60	1926	0	0	972696	750000	1499999
3	983439	1	14	90	1897	0	0	1958061	1500000	2249999
4	719512	1	14	50	1061	0	0	2679470	2250000	2999999
5	962812	1	14	85	1848	0	0	3643343	3000000	3749999
6	210049	2	14	100	1998	1919	0	3855240	3750000	4499999
7	1130153	3	14	80	1583	1492	1810	4989310	4500000	5249999
8	586501	3	14	85	1877	1871	1704	5580696	5250000	5999999
9	1160145	2	14	60	1577	1115	0	6746293	6000000	6749999
10	702876	1	14	80	1857	0	0	7451861	6750000	7499999
11	97224	3	14	85	1651	1628	1819	7550942	7500000	8249999
12	994941	1	14	90	1830	0	0	8550981	8250000	8999999
13	647771	1	14	85	1699	0	0	9200582	9000000	9749999
14	1027917	1	14	95	1350	0	0	10230198	9750000	10499999
15	661574	2	14	50	1970	1844	0	10893122	10500000	11249999
16	902180	1	14	80	1526	0	0	11799116	11250000	11999999

Total number of pulses in waveform = 26  
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### 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	146681	3	8	65	1136	1445	1236	146681	0	999999
2	1075218	1	8	90	1545	0	0	1225716	1000000	1999999
3	1315356	1	8	65	1262	0	0	2542617	2000000	2999999
4	1421058	1	8	65	1848	0	0	3964937	3000000	3999999
5	844111	1	8	85	1006	0	0	4810896	4000000	4999999
6	1019700	2	8	70	1720	1063	0	5831602	5000000	5999999
7	266423	1	8	70	1720	0	0	6100808	6000000	6999999
8	1119837	2	8	60	1198	1750	0	7222365	7000000	7999999
9	1759248	2	8	95	1086	1519	0	8984561	8000000	8999999
10	582907	3	8	90	1471	1684	1911	9570073	9000000	9999999
11	1365818	3	8	85	1550	1886	1807	10940957	10000000	10999999
12	544013	3	8	80	1099	1013	1159	11490213	11000000	11999999

Total number of pulses in waveform = 23  
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### Type 5 Radar Waveform\_10

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	506829	2	12	60	1770	1907	0	506829	0	799999
2	316242	3	12	60	1448	1529	1169	826748	800000	1599999
3	1026366	3	12	85	1354	1166	1510	1857260	1600000	2399999
4	796427	3	12	85	1677	1077	1696	2657717	2400000	3199999
5	741154	1	12	95	1550	0	0	3403321	3200000	3999999
6	858451	2	12	90	1948	1024	0	4263322	4000000	4799999
7	1269133	3	12	75	1476	1581	1611	5535427	4800000	5599999
8	285261	2	12	70	1507	1975	0	5825356	5600000	6399999
9	1031042	2	12	75	1257	1113	0	6859880	6400000	7199999
10	860802	3	12	65	1621	1525	1709	7723052	7200000	7999999
11	865957	3	12	90	1736	1558	1028	8593864	8000000	8799999
12	591202	2	12	95	1875	1577	0	9189388	8800000	9599999
13	600828	2	12	85	1181	1470	0	9793668	9600000	10399999
14	934386	1	12	65	1928	0	0	10730705	10400000	11199999
15	1115438	3	12	90	1650	1345	1586	11848071	11200000	11999999

Total number of pulses in waveform = 35  
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**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	1212223	1	6	50	1675	0	0	1212223	0	1499999
2	1459805	1	6	100	1902	0	0	2673703	1500000	2999999
3	1674203	1	6	95	1781	0	0	4349808	3000000	4499999
4	609072	1	6	55	1734	0	0	4960661	4500000	5999999
5	2057990	2	6	90	1158	1378	0	7020385	6000000	7499999
6	1738485	1	6	100	1143	0	0	8761406	7500000	8999999
7	375841	2	6	70	1101	1323	0	9138390	9000000	10499999
8	1507666	2	6	90	1893	1281	0	10648480	10500000	11999999

Total number of pulses in waveform = 11  
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**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	508909	1	14	95	1804	0	0	508909	0	1333332
2	1312343	2	14	65	1209	1293	0	1823056	1333333	2666665
3	1720710	1	14	65	1264	0	0	3546268	2666666	3999998
4	1110478	1	14	70	1402	0	0	4658010	3999999	5333331
5	807168	2	14	90	1208	1839	0	5466580	5333332	6666664
6	1344500	3	14	90	1856	1421	1153	6814127	6666665	7999997
7	2211669	2	14	65	1796	1960	0	9030226	7999998	9333330
8	1367073	2	14	95	1333	1961	0	10401055	9333331	10666663
9	414863	3	14	50	1957	1760	1279	10819212	10666664	11999996

Total number of pulses in waveform = 17  
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**Type 5 Radar Waveform\_13**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	735876	1	9	90	1913	0	0	735876	0	1499999
2	780067	2	9	60	1682	1894	0	1517856	1500000	2999999
3	1527305	1	9	95	1864	0	0	3048737	3000000	4499999
4	2358603	3	9	80	1764	1500	1691	5409204	4500000	5999999
5	1712070	1	9	55	1097	0	0	7126229	6000000	7499999
6	618904	1	9	85	1465	0	0	7746230	7500000	8999999
7	1938538	1	9	85	1202	0	0	9686233	9000000	10499999
8	1981616	3	9	80	1783	1204	1168	11669051	10500000	11999999

Total number of pulses in waveform = 13  
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### Type 5 Radar Waveform\_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	523859	3	5	75	1030	1109	1639	523859	0	1199999
2	1197915	3	5	55	1630	1413	1485	1725552	1200000	2399999
3	1355504	3	5	90	1726	1812	1543	3085584	2400000	3599999
4	580348	1	5	60	1508	0	0	3671013	3600000	4799999
5	1202214	2	5	95	1087	1474	0	4874735	4800000	5999999
6	1544866	1	5	95	1888	0	0	6422162	6000000	7199999
7	1173801	2	5	65	1141	1484	0	7597851	7200000	8399999
8	1811427	1	5	95	1236	0	0	9411903	8400000	9599999
9	338013	3	5	60	1037	1527	1064	9751152	9600000	10799999
10	1086090	3	5	75	1684	1029	1294	10840870	10800000	11999999

Total number of pulses in waveform = 22

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### Type 5 Radar Waveform\_15

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	39422	1	12	70	1535	0	0	39422	0	999999
2	1894528	1	12	65	1985	0	0	1935485	1000000	1999999
3	483485	3	12	75	1250	1330	1206	2420955	2000000	2999999
4	965488	3	12	65	1212	1483	1201	3390229	3000000	3999999
5	878659	3	12	55	1307	1410	1590	4272784	4000000	4999999
6	1391097	2	12	65	1995	1210	0	5668188	5000000	5999999
7	965131	2	12	100	1342	1924	0	6636524	6000000	6999999
8	934214	1	12	70	1971	0	0	7574004	7000000	7999999
9	889958	2	12	65	1472	1934	0	8465933	8000000	8999999
10	1406702	3	12	60	1749	1044	1183	9876041	9000000	9999999
11	596815	3	12	50	1262	1933	1804	10476832	10000000	10999999
12	848388	3	12	95	1642	1846	1719	11330219	11000000	11999999

Total number of pulses in waveform = 27

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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	164156	1	17	80	1141	0	0	164156	0	923076
2	881803	2	17	90	1736	1104	0	1047100	923077	1846153
3	1711603	1	17	75	1581	0	0	2761543	1846154	2769230
4	654329	2	17	90	1689	1839	0	3417453	2769231	3692307
5	1083492	2	17	65	1081	1034	0	4504473	3692308	4615384
6	752685	3	17	50	1078	1732	1599	5259273	4615385	5538461
7	448036	3	17	65	1098	1193	1210	5711718	5538462	6461538
8	1482804	2	17	65	1462	1851	0	7198023	6461539	7384615
9	547106	1	17	95	1687	0	0	7748442	7384616	8307692
10	1237927	2	17	85	1152	1211	0	8988056	8307693	9230769
11	344049	2	17	65	1155	1540	0	9334468	9230770	10153846
12	976134	1	17	60	1891	0	0	10313297	10153847	11076923
13	838594	1	17	55	1185	0	0	11153782	11076924	12000000

Total number of pulses in waveform = 23

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**Type 5 Radar Waveform\_17**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	324628	2	19	80	1698	1567	0	324628	0	999999
2	1522147	3	19	65	1330	1091	1857	1850040	1000000	1999999
3	871063	3	19	60	1178	1643	1228	2725381	2000000	2999999
4	1166511	3	19	70	1109	1567	1865	3895941	3000000	3999999
5	325770	1	19	75	1424	0	0	4226252	4000000	4999999
6	1079666	3	19	80	1416	1813	1386	5307342	5000000	5999999
7	1559895	3	19	50	1726	1299	1490	6871852	6000000	6999999
8	636972	3	19	85	1196	1514	1029	7513339	7000000	7999999
9	587085	2	19	90	1143	1466	0	8104163	8000000	8999999
10	1514988	2	19	60	1145	1690	0	9621760	9000000	9999999
11	481084	3	19	50	1443	1545	1686	10105679	10000000	10999999
12	1002181	3	19	95	1611	1768	1404	11112534	11000000	11999999

Total number of pulses in waveform = 31  
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**Type 5 Radar Waveform\_18**

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	431225	2	8	100	1491	1474	0	431225	0	705881
2	705558	2	8	100	1991	1287	0	1139748	705882	1411763
3	279676	3	8	60	1369	1085	1880	1422702	1411764	2117645
4	1194757	3	8	80	1860	1548	1913	2621783	2117646	2823527
5	588997	1	8	70	1538	0	0	3216101	2823528	3529409
6	988823	1	8	85	1226	0	0	4206462	3529410	4235291
7	678900	3	8	95	1533	1791	1587	4886588	4235292	4941173
8	65240	2	8	55	1089	1936	0	4956739	4941174	5647055
9	1279420	1	8	75	1738	0	0	6239184	5647056	6352937
10	518826	2	8	65	1425	1476	0	6759748	6352938	7058819
11	935673	2	8	85	1768	1983	0	7698322	7058820	7764701
12	315824	3	8	90	1908	1535	1628	8017887	7764702	8470583
13	757779	1	8	95	1205	0	0	8780737	8470584	9176465
14	807587	1	8	100	1436	0	0	9589529	9176466	9882347
15	529768	1	8	95	1296	0	0	10120733	9882348	10588229
16	1017230	1	8	90	1218	0	0	11139259	10588230	11294111
17	533571	3	8	75	1877	1105	1545	11674048	11294112	11999993

Total number of pulses in waveform = 32  
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**Type 5 Radar Waveform\_19**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1020204	2	10	50	1689	1149	0	1020204	0	1199999
2	1139079	3	10	55	1004	1517	1675	2162121	1200000	2399999
3	821891	2	10	70	1048	1492	0	2988208	2400000	3599999
4	1581652	3	10	90	1939	1054	1481	4572400	3600000	4799999
5	954770	1	10	55	1517	0	0	5531644	4800000	5999999
6	1225972	3	10	65	1985	1502	1131	6759133	6000000	7199999
7	596022	1	10	100	1456	0	0	7359773	7200000	8399999
8	1306719	3	10	65	1548	1277	1161	8667948	8400000	9599999
9	1364741	1	10	65	1436	0	0	10036675	9600000	10799999
10	1685760	2	10	85	1052	1043	0	11723871	10800000	11999999

Total number of pulses in waveform = 21  
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### Type 5 Radar Waveform\_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	274345	3	18	90	1636	1789	1239	274345	0	799999
2	1073775	1	18	55	1465	0	0	1352784	800000	1599999
3	612311	3	18	60	1996	1397	1098	1966560	1600000	2399999
4	485081	2	18	60	1234	1470	0	2456132	2400000	3199999
5	757185	1	18	65	1414	0	0	3216021	3200000	3999999
6	1409685	2	18	55	1842	1451	0	4627120	4000000	4799999
7	961633	3	18	80	1977	1733	1757	5592046	4800000	5599999
8	277144	3	18	75	1663	1931	1954	5874657	5600000	6399999
9	710954	3	18	60	1080	1215	1305	6591159	6400000	7199999
10	1258098	3	18	55	1474	1099	1517	7852857	7200000	7999999
11	218227	3	18	75	1068	1024	1929	8075174	8000000	8799999
12	927057	2	18	90	1691	1630	0	9006252	8800000	9599999
13	977953	3	18	85	1366	1276	1683	9887526	9600000	10399999
14	873185	3	18	75	1446	1742	1478	10865036	10400000	11199999
15	447440	3	18	85	1227	1276	1801	11317142	11200000	11999999

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

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	388802	1	14	55	1824	0	0	388802	0	599999
2	220718	2	14	95	1925	1706	0	609344	600000	1199999
3	783184	3	14	50	1114	1599	1818	1396159	1200000	1799999
4	982399	3	14	80	1453	1170	1906	2383029	1800000	2399999
5	578866	1	14	80	1746	0	0	2966424	2400000	2999999
6	171302	2	14	100	1925	1033	0	3139472	3000000	3599999
7	888073	3	14	65	1277	1073	1197	4030503	3600000	4199999
8	359289	1	14	60	1160	0	0	4393339	4200000	4799999
9	534058	1	14	70	1118	0	0	4928557	4800000	5399999
10	950688	2	14	100	1431	1314	0	5880363	5400000	5999999
11	131977	2	14	95	1645	1289	0	6015085	6000000	6599999
12	894976	1	14	60	1941	0	0	6912975	6600000	7199999
13	717830	3	14	75	1038	1628	1135	7632746	7200000	7799999
14	647788	3	14	80	1928	1754	1192	8284335	7800000	8399999
15	154401	1	14	50	1944	0	0	8443610	8400000	8999999
16	917673	1	14	60	1423	0	0	9363227	9000000	9599999
17	594222	2	14	55	1402	1590	0	9958872	9600000	10199999
18	694709	3	14	80	1436	1053	1887	10656573	10200000	10799999
19	261592	3	14	95	1490	1807	1194	10922541	10800000	11399999
20	530609	1	14	75	1336	0	0	11457641	11400000	11999999

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

### Type 5 Radar Waveform\_22

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	903297	2	5	60	1809	1829	0	903297	0	1199999
2	1348435	3	5	60	1033	1539	1848	2255370	1200000	2399999
3	937156	2	5	65	1847	1400	0	3196946	2400000	3599999
4	1320929	1	5	80	1487	0	0	4521122	3600000	4799999
5	511506	2	5	85	1146	1499	0	5034115	4800000	5999999
6	981670	3	5	95	1735	1419	1755	6018430	6000000	7199999
7	2200374	1	5	75	1609	0	0	8223713	7200000	8399999
8	954846	2	5	75	1030	1951	0	9180168	8400000	9599999
9	1583535	2	5	80	1754	1374	0	10766684	9600000	10799999
10	1091820	3	5	55	1688	1934	1587	11861632	10800000	11999999

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



### Type 5 Radar Waveform\_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	154603	3	8	65	1136	1594	1779	154603	0	666666
2	881442	3	8	55	1996	1872	1443	1040554	666667	1333333
3	592891	2	8	65	1225	1076	0	1638756	1333334	2000000
4	987487	3	8	60	1144	1650	1618	2628544	2000001	2666667
5	183470	1	8	80	1527	0	0	2816426	2666668	3333334
6	1019441	3	8	70	1167	1440	1422	3837394	3333335	4000001
7	679481	3	8	50	1144	1842	1284	4520904	4000002	4666668
8	460730	2	8	50	1232	1228	0	4985904	4666669	5333335
9	460046	1	8	95	1877	0	0	5448410	5333336	6000002
10	970562	3	8	85	1857	1786	1331	6420949	6000003	6666669
11	580840	1	8	85	1874	0	0	7006763	6666670	7333336
12	796228	2	8	80	1691	1597	0	7804665	7333337	8000003
13	428746	3	8	75	1456	1767	1176	8236899	8000004	8666670
14	448880	1	8	60	1506	0	0	8990178	8666671	9333337
15	1198535	2	8	50	1935	1564	0	9890219	9333338	10000004
16	129788	3	8	65	1839	1475	1606	10023506	10000005	10666671
17	806564	2	8	65	1266	1209	0	10834990	10666672	11333338
18	640077	1	8	70	1635	0	0	11477532	11333339	12000005

Total number of pulses in waveform = 39  
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### Type 5 Radar Waveform\_24

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	297358	1	17	80	1263	0	0	297358	0	599999
2	775338	1	17	60	1672	0	0	1073959	600000	1199999
3	387505	1	17	65	1211	0	0	1463136	1200000	1799999
4	857388	2	17	100	1561	1546	0	2321735	1800000	2399999
5	290412	1	17	95	1701	0	0	2615254	2400000	2999999
6	973531	2	17	90	1131	1973	0	3590486	3000000	3599999
7	253740	1	17	50	1795	0	0	3847330	3600000	4199999
8	901885	3	17	55	1097	1642	1342	4750810	4200000	4799999
9	255602	1	17	85	1192	0	0	5010493	4800000	5399999
10	534248	1	17	90	1900	0	0	5545933	5400000	5999999
11	981638	1	17	75	1846	0	0	6529471	6000000	6599999
12	657597	3	17	55	1359	1005	1683	7188914	6600000	7199999
13	499964	2	17	70	1605	1873	0	7692925	7200000	7799999
14	656391	2	17	95	1779	1324	0	8352794	7800000	8399999
15	106369	3	17	85	1384	1804	1976	8462266	8400000	8999999
16	601921	3	17	80	1708	1094	1131	9069351	9000000	9599999
17	573287	3	17	65	1416	1179	1312	9646571	9600000	10199999
18	1029064	3	17	90	1521	1618	1044	10679542	10200000	10799999
19	140292	3	17	65	1639	1357	1114	10824017	10800000	11399999
20	998829	3	17	55	1770	1576	1434	11826956	11400000	11999999

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

### Type 5 Radar Waveform\_25

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	2142	2	6	95	1220	1316	0	2142	0	857142
2	1363940	2	6	65	1975	1982	0	1368618	857143	1714285
3	913418	3	6	80	1466	1341	1387	2285993	1714286	2571428
4	880725	1	6	80	1168	0	0	3170912	2571429	3428571
5	536073	1	6	50	1404	0	0	3708143	3428572	4285714
6	960688	3	6	75	1222	1151	1157	4670235	4285715	5142857
7	1314987	2	6	90	1635	1904	0	5988752	5142858	6000000
8	11612	2	6	65	1619	1989	0	6003903	6000001	6857143
9	1636660	2	6	75	1443	1662	0	7644171	6857144	7714286
10	587552	3	6	50	1177	1050	1354	8234828	7714287	8571429
11	362351	2	6	95	1822	1607	0	8600760	8571430	9428572
12	1626235	1	6	100	1927	0	0	10230424	9428573	10285715
13	838802	3	6	90	1227	1152	1421	11071153	10285716	11142858
14	494083	1	6	100	1432	0	0	11669036	11142859	12000001

Total number of pulses in waveform = 28  
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**Type 5 Radar Waveform\_26**

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	838952	1	19	50	1567	0	0	838952	0	1199999
2	578634	1	19	50	1429	0	0	1419153	1200000	2399999
3	2120011	2	19	75	1277	1301	0	3540593	2400000	3599999
4	752963	3	19	80	1946	1489	1180	4296134	3600000	4799999
5	645228	2	19	70	1326	1481	0	4945977	4800000	5999999
6	1555130	1	19	70	1600	0	0	6503914	6000000	7199999
7	1724909	3	19	60	1000	1024	1602	8230423	7200000	8399999
8	803791	1	19	80	1448	0	0	9037840	8400000	9599999
9	1601600	2	19	85	1777	1274	0	10640888	9600000	10799999
10	1028551	3	19	90	1019	1802	1896	11672490	10800000	11999999

Total number of pulses in waveform = 19  
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**Type 5 Radar Waveform\_27**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	148119	2	18	100	1232	1174	0	148119	0	799999
2	1269875	1	18	65	1989	0	0	1420400	800000	1599999
3	569571	2	18	85	1426	1050	0	1991960	1600000	2399999
4	943742	2	18	85	1701	1838	0	2938178	2400000	3199999
5	327936	2	18	90	1205	1073	0	3269653	3200000	3999999
6	849233	2	18	55	1490	1198	0	4121164	4000000	4799999
7	942224	3	18	55	1504	1012	1520	5066076	4800000	5599999
8	622108	2	18	85	1035	1502	0	5692220	5600000	6399999
9	1037916	2	18	100	1284	1224	0	6732673	6400000	7199999
10	867250	2	18	55	1450	1607	0	7602431	7200000	7999999
11	970131	3	18	95	1686	1494	1931	8575619	8000000	8799999
12	310986	3	18	75	1546	1364	1028	8891716	8800000	9599999
13	837543	1	18	85	1642	0	0	9733197	9600000	10399999
14	1001186	2	18	55	1454	1729	0	10736025	10400000	11199999
15	927498	1	18	90	1871	0	0	11666706	11200000	11999999

Total number of pulses in waveform = 30  
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**Type 5 Radar Waveform\_28**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	124478	2	10	60	1902	1405	0	124478	0	857142
2	1152814	2	10	85	1140	1968	0	1280599	857143	1714285
3	1259167	2	10	75	1386	2000	0	2542874	1714286	2571428
4	536306	3	10	90	1169	1086	1271	3082566	2571429	3428571
5	607509	3	10	85	1749	1866	1453	3693601	3428572	4285714
6	628760	2	10	100	1959	1503	0	4327429	4285715	5142857
7	1532463	1	10	65	1204	0	0	5863354	5142858	6000000
8	289174	3	10	75	1165	1623	1276	6153732	6000001	6857143
9	954603	1	10	90	1443	0	0	7112399	6857144	7714286
10	917272	2	10	75	1203	1843	0	8031114	7714287	8571429
11	1284664	2	10	95	1443	1795	0	9318824	8571430	9428572
12	372300	2	10	60	1073	1506	0	9694362	9428573	10285715
13	1097221	2	10	85	1545	1147	0	10794162	10285716	11142858
14	916842	3	10	75	1340	1858	1551	11713696	11142859	12000001

Total number of pulses in waveform = 30  
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### Type 5 Radar Waveform\_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	471262	3	9	60	1403	1926	1388	471262	0	799999
2	1112047	1	9	70	1515	0	0	1588026	800000	1599999
3	246122	1	9	80	1379	0	0	1839663	1600000	2399999
4	1303761	1	9	70	1662	0	0	3140803	2400000	3199999
5	102322	3	9	55	1132	1701	1044	3244787	3200000	3999999
6	1513298	1	9	50	1953	0	0	4761962	4000000	4799999
7	742914	3	9	55	1823	1120	1067	5506829	4800000	5599999
8	741241	3	9	55	1786	1230	1300	6252080	5600000	6399999
9	481406	1	9	65	1467	0	0	6737802	6400000	7199999
10	1116385	3	9	90	1166	1683	1913	7855654	7200000	7999999
11	250077	2	9	75	1031	1983	0	8110493	8000000	8799999
12	1360245	1	9	95	1942	0	0	9473752	8800000	9599999
13	570833	2	9	95	1791	1992	0	10046527	9600000	10399999
14	609529	3	9	70	1145	1132	1904	10659839	10400000	11199999
15	583015	1	9	70	1944	0	0	11247035	11200000	11999999

Total number of pulses in waveform = 29  
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### Type 5 Radar Waveform\_30

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	110317	2	12	80	1262	1627	0	110317	0	857142
2	897929	3	12	70	1927	1291	1544	1011135	857143	1714285
3	1278774	3	12	75	1856	1593	1686	2294671	1714286	2571428
4	421407	1	12	85	1551	0	0	2721213	2571429	3428571
5	1246103	2	12	95	1886	1514	0	3968867	3428572	4285714
6	533040	2	12	75	1793	1863	0	4505307	4285715	5142857
7	945562	3	12	80	1295	1350	1685	5454525	5142858	6000000
8	1084924	3	12	50	1669	1800	1184	6543779	6000001	6857143
9	800119	2	12	80	1841	1113	0	7348551	6857144	7714286
10	767143	1	12	100	1781	0	0	8118648	7714287	8571429
11	659394	3	12	100	1318	1195	1094	8779823	8571430	9428572
12	1376567	3	12	90	1082	1349	1605	10159997	9428573	10285715
13	829493	2	12	70	1146	1143	0	10993526	10285716	11142858
14	260472	3	12	50	1004	1827	1373	11256287	11142859	12000001

Total number of pulses in waveform = 33  
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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	5309.0	1	16	5303.1	1
2	5306.2	1	17	5294.8	1
3	5303.7	1	18	5300.6	1
4	5292.3	1	19	5304.2	1
5	5301.3	1	20	5297.4	1
6	5296.0	1	21	5308.0	1
7	5293.2	1	22	5306.9	1
8	5302.7	1	23	5300.0	1
9	5399.4	1	24	5307.6	1
10	5291.0	1	25	5305.6	1
11	5304.8	1	26	5294.1	1
12	5307.1	1	27	5301.5	1
13	5308.3	1	28	5302.2	1
14	5293.5	1	29	5305.1	1
15	5295.7	1	30	5295.2	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5294	0	2	5325	6
20	5328	60	3	5289	9
23	5276	69	7	5324	21
24	5280	72	11	5270	33
25	5293	75	18	5315	54
27	5289	81	21	5284	63
52	5298	156	31	5323	93
74	5283	222	38	5318	114
77	5300	231	39	5285	117
81	5306	243	58	5327	174
96	5278	288	70	5310	210
98	5317	294	79	5314	237
--	--	--	83	5328	249
--	--	--	87	5296	261
--	--	--	96	5305	288

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5323	30	5	5287	15
14	5294	42	41	5305	123
21	5314	63	50	5328	150
23	5299	69	55	5309	165
27	5270	81	64	5280	192
29	5309	87	67	5289	201
34	5327	102	71	5310	213
53	5318	159	83	5327	249
62	5278	186	87	5294	261
66	5287	198	89	5307	267
78	5328	234	92	5298	276
95	5313	285	93	5291	279
96	5289	288	--	--	--
98	5295	294	--	--	--



Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5328	45	41	5308	123
16	5305	48	52	5326	156
27	5283	81	57	5314	171
29	5300	87	74	5286	222
32	5272	96	89	5284	267
34	5330	102	90	5309	270
35	5318	105	96	5278	288
39	5315	117	--	--	--
42	5274	126	--	--	--
52	5288	156	--	--	--
53	5294	159	--	--	--
73	5289	219	--	--	--
75	5313	225	--	--	--
78	5302	234	--	--	--
83	5285	249	--	--	--
84	5279	252	--	--	--
95	5310	285	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5315	36	3	5315	9
15	5271	45	5	5323	15
40	5293	120	12	5325	36
54	5314	162	16	5282	48
73	5278	219	26	5312	78
77	5275	231	44	5290	132
81	5282	243	46	5285	138
--	--	--	50	5306	150
--	--	--	51	5299	153
--	--	--	54	5272	162
--	--	--	66	5319	198
--	--	--	67	5288	201
--	--	--	74	5302	222
--	--	--	88	5274	264
--	--	--	91	5291	273
--	--	--	99	5309	297

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5281	0	3	5319	9
7	5285	21	10	5316	30
9	5287	27	11	5300	33
22	5291	66	21	5288	63
28	5328	84	22	5273	66
29	5330	87	26	5286	78
30	5277	90	31	5325	93
33	5301	99	59	5304	177
41	5317	123	99	5303	297
43	5323	129	--	--	--
50	5329	150	--	--	--
75	5279	225	--	--	--
82	5297	246	--	--	--
85	5309	255	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
7	5328	21	5	5277	15
13	5287	39	10	5328	30
50	5303	150	12	5284	36
51	5278	153	14	5288	42
59	5324	177	19	5306	57
62	5283	186	24	5286	72
66	5271	198	29	5327	87
71	5315	213	35	5317	105
76	5298	228	50	5281	150
80	5323	240	51	5315	153
83	5327	249	61	5322	183
86	5291	258	62	5289	186
90	5279	270	64	5274	192
--	--	--	92	5323	276

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5312	9	36	5323	108
15	5315	45	41	5280	123
28	5318	84	49	5321	147
30	5328	90	51	5311	153
37	5276	111	57	5281	171
42	5278	126	59	5282	177
49	5316	147	65	5329	195
59	5279	177	76	5318	228
62	5271	186	84	5297	252
72	5306	216	89	5284	267
73	5288	219	--	--	--
83	5281	249	--	--	--
94	5274	282	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5281	6	1	5324	3
6	5289	18	6	5308	18
14	5283	42	8	5289	24
39	5291	117	11	5329	33
51	5285	153	16	5282	48
80	5290	240	22	5301	66
90	5312	270	24	5322	72
--	--	--	25	5287	75
--	--	--	26	5272	78
--	--	--	27	5271	81
--	--	--	33	5279	99
--	--	--	40	5290	120
--	--	--	51	5326	153
--	--	--	61	5288	183
--	--	--	62	5330	186
--	--	--	66	5273	198
--	--	--	67	5306	201
--	--	--	71	5283	213

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5274	9	1	5312	3
8	5297	24	9	5271	27
12	5306	36	10	5288	30
26	5310	78	11	5293	33
29	5284	87	16	5285	48
46	5295	138	20	5307	60
57	5281	171	26	5284	78
66	5278	198	28	5279	84
67	5303	201	34	5294	102
71	5308	213	39	5280	117
--	--	--	40	5310	120
--	--	--	62	5301	186
--	--	--	63	5327	189
--	--	--	89	5313	267
--	--	--	99	5281	297

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5292	30	0	5275	0
31	5325	93	8	5280	24
34	5326	102	22	5317	66
40	5308	120	36	5313	108
58	5297	174	38	5303	114
59	5281	177	48	5292	144
97	5329	291	52	5316	156
--	--	--	82	5285	246
--	--	--	84	5330	252
--	--	--	95	5308	285
--	--	--	96	5312	288

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5303	27	20	5285	60
21	5327	63	24	5280	72
23	5328	69	26	5316	78
32	5326	96	28	5325	84
51	5302	153	32	5317	96
56	5310	168	37	5286	111
58	5319	174	42	5272	126
62	5313	186	44	5322	132
76	5300	228	47	5324	141
79	5324	237	50	5326	150
82	5273	246	53	5296	159
86	5274	258	54	5303	162
--	--	--	62	5270	186
--	--	--	74	5274	222
--	--	--	80	5284	240
--	--	--	81	5273	243
--	--	--	85	5278	255
--	--	--	97	5311	291
--	--	--	99	5292	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5325	0	10	5301	30
1	5303	3	23	5324	69
8	5288	24	30	5328	90
15	5284	45	31	5317	93
20	5309	60	33	5287	99
31	5307	93	49	5322	147
66	5273	198	65	5288	195
74	5329	222	74	5290	222
80	5282	240	77	5283	231
81	5278	243	78	5314	234
83	5294	249	80	5315	240
--	--	--	87	5313	261
--	--	--	91	5279	273
--	--	--	93	5282	279
--	--	--	98	5316	294

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5294	0	1	5329	3
3	5313	9	2	5303	6
5	5298	15	7	5298	21
8	5286	24	21	5284	63
13	5271	39	25	5312	75
14	5325	42	28	5327	84
21	5302	63	30	5270	90
29	5304	87	45	5275	135
31	5328	93	48	5319	144
45	5323	135	76	5271	228
55	5279	165	79	5316	237
80	5316	240	83	5314	249
--	--	--	86	5288	258
--	--	--	93	5306	279
--	--	--	98	5273	294

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5273	15	1	5318	3
14	5290	42	12	5314	36
28	5304	84	14	5274	42
30	5325	90	15	5328	45
37	5315	111	16	5291	48
49	5309	147	17	5296	51
54	5286	162	20	5284	60
57	5319	171	25	5325	75
62	5301	186	29	5286	87
81	5312	243	58	5298	174
82	5321	246	59	5300	177
84	5318	252	66	5295	198
98	5308	294	72	5270	216
--	--	--	85	5327	255
--	--	--	88	5289	264
--	--	--	90	5329	270
--	--	--	96	5276	288



Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5277	18	7	5321	21
28	5329	84	29	5288	87
33	5291	99	43	5300	129
45	5303	135	46	5282	138
51	5288	153	47	5318	141
60	5295	180	74	5317	222
61	5300	183	77	5293	231
68	5292	204	81	5310	243
70	5325	210	84	5290	252
75	5283	225	90	5325	270
78	5271	234	99	5323	297
83	5285	249	--	--	--
86	5327	258	--	--	--
88	5294	264	--	--	--

## 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	5306.7	1	518	102	1
2	5295.7	1	798	67	1
3	5293.2	1	598	89	1
4	5320.4	1	618	86	1
5	5305.5	1	758	70	1
6	5318.8	1	838	63	1
7	5294.3	1	898	59	1
8	5324.5	1	678	78	1
9	5296.0	1	878	61	1
10	5307.9	1	3066	18	1
11	5292.0	1	938	57	1
12	5316.6	1	538	99	1
13	5308.3	1	638	83	1
14	5304.4	1	578	92	1
15	5313.5	1	698	76	1
16	5309.2	1	789	67	1
17	5297.4	1	1652	32	1
18	5326.3	1	1267	42	1
19	5310.0	1	606	88	1
20	5299.3	1	2292	24	1
21	5298.5	1	3008	18	1
22	5314.8	1	755	70	1
23	5303.9	1	997	53	1
24	5300.4	1	723	73	1
25	5329.0	1	1368	39	1
26	5311.2	1	1049	51	1
27	5315.3	1	981	54	1
28	5301.6	1	2203	24	1
29	5312.3	1	925	58	1
30	5302.2	1	2888	19	1
Detection Percentage (%)					100%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5303.8	4.9	176	24	1
2	5315.7	2.0	189	28	1
3	5304.5	2.7	214	28	1
4	5292.0	3.3	199	29	1
5	5306.3	4.4	181	28	1
6	5292.5	3.2	170	25	1
7	5312.4	4.6	218	28	1
8	5302.1	1.2	170	27	1
9	5314.3	1.3	184	24	1
10	5305.6	3.2	168	24	1
11	5313.5	2.9	224	23	1
12	5293.7	2.7	165	24	1
13	5316.5	2.1	205	26	1
14	5301.6	1.9	195	27	1
15	5307.9	1.4	155	23	1
16	5300.6	3.4	221	26	1
17	5309.9	3.7	204	29	1
18	5308.5	2.0	176	26	1
19	5318.2	2.4	208	28	1
20	5295.3	5.0	179	27	1
21	5329.0	4.8	152	29	1
22	5320.9	2.6	196	27	1
23	5310.2	1.9	179	27	1
24	5297.2	4.7	178	24	1
25	5299.4	4.5	192	26	1
26	5323.4	2.0	200	24	1
27	5296.9	2.6	163	24	1
28	5311.0	3.1	181	24	1
29	5327.5	2.7	196	28	1
30	5298.8	1.0	158	25	1
Detection Percentage (%)					100%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5306.8	7.2	389	17	1
2	5295.8	8.3	396	16	1
3	5316.9	9.9	360	17	1
4	5303.6	8.6	313	17	1
5	5321.0	9.7	396	17	1
6	5292.0	8.4	307	16	1
7	5315.2	9.9	349	17	1
8	5302.2	9.2	372	18	1
9	5307.2	9.5	250	16	1
10	5304.9	8.0	477	18	1
11	5293.3	8.3	385	16	1
12	5305.3	9.3	313	17	1
13	5296.5	9.2	333	18	1
14	5308.3	7.4	471	18	1
15	5294.6	8.0	278	18	1
16	5317.3	7.3	437	18	1
17	5314.5	9.9	324	16	1
18	5301.6	7.3	334	16	1
19	5309.2	9.9	334	16	1
20	5297.7	9.6	368	16	1
21	5313.0	6.2	449	16	1
22	5310.3	7.7	432	17	1
23	5329.0	7.4	271	18	1
24	5298.5	8.3	382	17	1
25	5312.9	6.1	382	17	1
26	5325.3	7.3	351	16	1
27	5300.4	9.0	366	16	1
28	5327.8	6.4	314	18	1
29	5311.6	6.4	274	16	1
30	5299.3	9.2	397	18	1
Detection Percentage (%)					100%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5301.4	11.4	403	12	1
2	5299.3	11.3	430	14	1
3	5316.7	19.4	264	16	1
4	5292.0	13.1	350	14	1
5	5309.2	17.0	422	15	1
6	5315.5	18.1	384	15	1
7	5298.2	17.0	422	12	1
8	5310.1	19.4	304	12	1
9	5302.5	19.5	262	16	1
10	5300.0	16.9	341	15	1
11	5308.4	14.0	423	16	1
12	5292.3	11.0	380	13	1
13	5314.7	17.7	341	14	1
14	5311.5	19.1	323	14	1
15	5303.3	11.5	267	15	1
16	5312.6	17.7	484	12	1
17	5297.5	17.1	286	12	1
18	5329.0	14.5	385	14	1
19	5307.9	18.2	365	14	1
20	5293.4	13.3	454	16	1
21	5313.4	14.3	500	14	1
22	5306.4	16.1	269	13	1
23	5304.7	19.1	257	16	1
24	5322.5	17.1	439	12	1
25	5318.2	15.2	353	12	1
26	5294.7	14.2	281	15	1
27	5320.3	12.8	462	12	1
28	5305.6	18.8	361	12	1
29	5325.8	11.3	479	14	1
30	5296.0	13.6	304	14	1
Detection Percentage (%)					100%

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

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



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5297.6	1	16	5310.0	1
2	5295.2	1	17	5310.0	1
3	5296.0	1	18	5310.0	1
4	5296.8	1	19	5310.0	1
5	5299.2	1	20	5310.0	1
6	5295.6	1	21	5324.0	1
7	5294.0	1	22	5320.4	1
8	5299.6	1	23	5326.0	1
9	5294.4	1	24	5324.8	1
10	5298.8	1	25	5322.4	1
11	5310.0	1	26	5325.6	1
12	5310.0	1	27	5323.2	1
13	5310.0	1	28	5320.8	1
14	5310.0	1	29	5324.4	1
15	5310.0	1	30	5321.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										
Num of Bursts = 19										
Burst Interval (us) = 631579										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	FW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	49681	2	14	85	1893	1409	0	49681	0	631578
2	1084559	1	14	55	1887	0	0	1137542	631579	1263157
3	575223	2	14	95	1258	1139	0	1714652	1263158	1894736
4	363433	3	14	50	1697	1964	1204	2080482	1894737	2526315
5	875797	3	14	60	1000	1641	1216	2961144	2526316	3157894
6	684961	2	14	70	1679	1206	0	3649962	3157895	3789473
7	169080	1	14	65	1294	0	0	3821927	3789474	4421052
8	855548	2	14	75	1681	1025	0	4678769	4421053	5052631
9	843263	1	14	70	1343	0	0	5524738	5052632	5684210
10	364828	3	14	90	1390	1402	1583	5890909	5684211	6315789
11	852226	2	14	55	1005	1764	0	6747510	6315790	6947368
12	567598	1	14	100	1886	0	0	7317877	6947369	7578947
13	754485	3	14	100	1380	1740	1769	8074248	7578948	8210526
14	627927	1	14	95	1947	0	0	8707064	8210527	8842105
15	271381	3	14	100	1366	1330	1105	8980392	8842106	9473684
16	677284	1	14	65	1943	0	0	9661477	9473685	10105263
17	757306	2	14	75	1119	1093	0	10420726	10105264	10736842
18	654301	3	14	60	1263	1071	1710	11077239	10736843	11368421
19	713843	3	14	65	1307	1815	1666	11795126	11368422	12000000
Total number of pulses in waveform = 39										
*****										



### Type 5 Radar Waveform\_2

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	234876	2	8	50	1449	1604	0	234876	0	705881
2	969622	2	8	65	1253	1899	0	1207561	705882	1411763
3	631465	2	8	55	1516	1917	0	1842168	1411764	2117645
4	304005	3	8	95	1160	1540	1444	2149606	2117646	2823527
5	1014590	3	8	65	1953	1522	1740	3168340	2823528	3529409
6	844748	2	8	100	1534	1250	0	4018303	3529410	4235291
7	263291	2	8	65	1327	1061	0	4284378	4235292	4941173
8	1051138	3	8	50	1351	1906	1162	5337904	4941174	5647055
9	939198	1	8	70	1159	0	0	6281521	5647056	6352937
10	254979	3	8	50	1228	1946	1778	6537659	6352938	7058819
11	1052793	1	8	95	1670	0	0	7595404	7058820	7764701
12	603958	3	8	70	1956	1941	1018	8201032	7764702	8470583
13	491234	2	8	60	1109	1794	0	8697181	8470584	9176465
14	654249	3	8	75	1895	1055	1563	9354333	9176466	9882347
15	798315	3	8	90	1728	1284	1248	10157161	9882348	10588229
16	630204	1	8	80	1338	0	0	10791625	10588230	11294111
17	665051	2	8	50	1378	1103	0	11458014	11294112	11999993

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

### 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	85339	1	10	100	1987	0	0	85339	0	1333332
2	1580425	3	10	90	1627	1808	1330	1667751	1333333	2666665
3	1293000	3	10	90	1739	1567	1832	2965516	2666666	3999998
4	1850901	1	10	55	1601	0	0	4821555	3999999	5333331
5	1323422	1	10	50	1009	0	0	6146578	5333332	6666664
6	1120673	3	10	50	1687	1268	1523	7268260	6666665	7999997
7	1222627	2	10	60	1354	1971	0	8495365	7999998	9333330
8	968273	3	10	75	1360	1760	1960	9466963	9333331	10666663
9	2100953	2	10	90	1082	1690	0	11572996	10666664	11999996

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

### Type 5 Radar Waveform\_4

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	47659	3	12	90	1572	1998	1502	47659	0	599999
2	595267	3	12	75	1621	1113	1672	647998	600000	1199999
3	572572	1	12	50	1390	0	0	1224976	1200000	1799999
4	957706	3	12	70	1433	1613	1120	2184072	1800000	2399999
5	415803	2	12	85	1069	1882	0	2604041	2400000	2999999
6	566756	1	12	80	1237	0	0	3173748	3000000	3599999
7	600727	3	12	65	1453	1694	1077	3775712	3600000	4199999
8	677671	2	12	85	1839	1066	0	4457607	4200000	4799999
9	700146	2	12	85	1778	1025	0	5160658	4800000	5399999
10	491692	3	12	70	1964	1245	1990	5655153	5400000	5999999
11	895766	3	12	70	1338	1619	1688	6556118	6000000	6599999
12	269851	1	12	100	1725	0	0	6830614	6600000	7199999
13	607931	1	12	95	1391	0	0	7440270	7200000	7799999
14	533548	1	12	65	1861	0	0	7995209	7800000	8399999
15	602346	3	12	100	1692	1995	1119	8599416	8400000	8999999
16	643817	3	12	50	1193	1423	1098	9248039	9000000	9599999
17	937390	1	12	85	1063	0	0	10189143	9600000	10199999
18	251304	1	12	50	1139	0	0	10441510	10200000	10799999
19	755838	2	12	95	1921	1811	0	11198487	10800000	11399999
20	567987	1	12	75	1115	0	0	11770206	11400000	11999999

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



### Type 5 Radar Waveform\_5

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	419872	1	18	60	1699	0	0	416872	0	631578
2	543292	1	18	90	1677	0	0	961863	631579	1263157
3	611013	1	18	70	1216	0	0	1574553	1263158	1894736
4	627960	3	18	95	1352	1368	1809	2203729	1894737	2526315
5	524137	1	18	70	1783	0	0	2732385	2526316	3157894
6	962816	2	18	90	1705	1780	0	3696984	3157895	3789473
7	102449	1	18	60	1027	0	0	3802918	3789474	4421052
8	945423	3	18	55	1396	1635	1065	4749368	4421053	5052631
9	640473	2	18	75	1585	1199	0	5393937	5052632	5684210
10	873037	3	18	55	1251	1326	1158	6269758	5684211	6315789
11	600069	2	18	75	1878	1818	0	6873562	6315790	6947368
12	232749	1	18	60	1960	0	0	7110007	6947369	7578947
13	742598	2	18	50	1758	1207	0	7854565	7578948	8210526
14	676528	3	18	75	1697	1069	1196	8534058	8210527	8842105
15	760920	1	18	60	1478	0	0	9298940	8842106	9473684
16	302143	2	18	65	1286	1141	0	9602561	9473685	10105263
17	621775	2	18	75	1370	1914	0	10226763	10105264	10736842
18	890160	2	18	70	1555	1963	0	11120207	10736843	11368421
19	505602	2	18	80	1559	1719	0	11629327	11368422	12000000

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

### Type 5 Radar Waveform\_6

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	95989	3	9	60	1981	1996	1272	95389	0	599999
2	1065929	1	9	60	1858	0	0	1166567	600000	1199999
3	173797	3	9	85	1209	1271	1304	1342222	1200000	1799999
4	745407	1	9	80	1613	0	0	2091413	1800000	2399999
5	746294	2	9	60	1705	1582	0	2839320	2400000	2999999
6	336710	2	9	60	1754	1727	0	3179317	3000000	3599999
7	986616	1	9	65	1020	0	0	4169414	3600000	4199999
8	75200	2	9	100	1758	1394	0	4245634	4200000	4799999
9	1091128	1	9	90	1710	0	0	5339914	4800000	5399999
10	534663	3	9	70	1637	1322	1551	5876287	5400000	5999999
11	246781	1	9	95	1310	0	0	6127478	6000000	6599999
12	563066	1	9	75	1179	0	0	6691874	6600000	7199999
13	830671	2	9	100	1823	1843	0	7523724	7200000	7799999
14	603758	1	9	90	1792	0	0	8131148	7800000	8399999
15	427230	3	9	80	1478	1227	1407	8660170	8400000	8999999
16	606230	2	9	90	1752	1680	0	9170512	9000000	9599999
17	662038	3	9	100	1052	1524	1889	9835982	9600000	10199999
18	683255	1	9	80	1345	0	0	10523702	10200000	10799999
19	620287	3	9	55	1069	1822	1703	11145334	10800000	11399999
20	780762	2	9	65	1783	1689	0	11930690	11400000	11999999

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_7

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	603964	2	5	85	1704	1295	0	603964	0	1499999
2	1203604	2	5	100	1901	1929	0	1810567	1500000	2999999
3	1671689	3	5	75	1558	1502	1224	3486086	3000000	4499999
4	1079619	2	5	55	1427	1529	0	4569989	4500000	5999999
5	2139404	3	5	75	1423	1079	1656	6712349	6000000	7499999
6	965027	3	5	55	1393	1314	1081	7681534	7500000	8999999
7	1821271	1	5	70	1479	0	0	9506593	9000000	10499999
8	2326674	3	5	80	1885	1202	1080	11834746	10500000	11999999

Total number of pulses in waveform = 19  
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### Type 5 Radar Waveform\_8

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1054199	2	19	75	1385	1232	0	1054199	0	1499999
2	1394099	3	19	80	1199	1848	1561	2450915	1500000	2999999
3	1265634	1	19	100	1869	0	0	3721157	3000000	4499999
4	928793	1	19	55	1424	0	0	4651619	4500000	5999999
5	2561932	3	19	90	1048	1887	1880	7214975	6000000	7499999
6	686416	3	19	80	1288	1861	1185	7906206	7500000	8999999
7	2192827	1	19	80	1165	0	0	10103367	9000000	10499999
8	887780	2	19	95	1642	1764	0	10992312	10500000	11999999

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

### Type 5 Radar Waveform\_9

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	464026	2	6	55	1709	1940	0	464026	0	631578
2	714271	3	6	80	1669	1554	1784	1181946	631579	1263157
3	400751	3	6	95	1318	1495	1609	1587704	1263158	1894736
4	371959	2	6	50	1620	1218	0	1964085	1894737	2526315
5	589441	1	6	60	1720	0	0	2556364	2526316	3157894
6	892451	2	6	95	1045	1365	0	3450535	3157895	3789473
7	786860	3	6	60	1264	1592	1014	4239805	3789474	4421052
8	347194	1	6	100	1446	0	0	4590669	4421053	5052631
9	890248	3	6	60	1026	1723	1114	5482563	5052632	5684210
10	463130	1	6	80	1245	0	0	5949556	5684211	6315789
11	574852	2	6	50	1169	1264	0	6525653	6315790	6947368
12	945517	1	6	60	1518	0	0	7473603	6947369	7578947
13	270418	2	6	1173	1071	0	0	7745539	7578948	8210526
14	865138	3	6	85	1099	1630	1960	8612921	8210527	8842105
15	403728	1	6	85	1610	0	0	9021338	8842106	9473684
16	701870	3	6	65	1471	1311	1269	9724818	9473685	10105263
17	671120	3	6	50	1203	1250	1359	10399989	10105264	10736842
18	790906	1	6	70	1807	0	0	11194707	10736843	11368421
19	182079	2	6	75	1113	1567	0	11378593	11368422	12000000

Total number of pulses in waveform = 39  
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### Type 5 Radar Waveform\_10

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	206817	1	17	70	1413	0	0	206817	0	666666
2	1114489	1	17	80	1435	0	0	1322719	666667	1333333
3	322529	3	17	90	1776	1077	1494	1646683	1333334	2000000
4	818234	1	17	100	1305	0	0	2469264	2000001	2666667
5	594467	2	17	65	1755	1216	0	3065036	2666668	3333334
6	675038	1	17	70	1196	0	0	3743045	3333335	4000001
7	340059	1	17	90	1168	0	0	4084300	4000002	4666668
8	842718	1	17	100	1000	0	0	4928186	4666669	5333335
9	818632	1	17	50	1110	0	0	5747818	5333336	6000002
10	462147	2	17	65	1413	1297	0	6211075	6000003	6666669
11	780759	3	17	55	1854	1061	1639	6994544	6666670	7333336
12	756741	2	17	90	1910	1406	0	7756839	7333337	8000003
13	699573	3	17	65	1432	1745	1279	8458728	8000004	8666670
14	790434	1	17	70	1207	0	0	9259618	8666671	9333337
15	426753	3	17	85	1115	1695	1173	9681578	9333338	10000004
16	454380	3	17	85	1146	1578	1912	10139941	10000005	10666671
17	935521	3	17	60	1678	1532	1964	11060098	10666672	11333338
18	846240	3	17	65	1790	1144	1092	11931512	11333339	12000005

Total number of pulses in waveform = 35  
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### Type 5 Radar Waveform\_11

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	732440	2	10	60	1100	1926	0	732440	0	1333332
2	1921915	1	10	100	2000	0	0	2657381	1333333	2666665
3	690965	2	10	80	1762	1950	0	3350346	2666666	3999998
4	1105995	1	10	95	1325	0	0	4460053	3999999	5333331
5	1905415	3	10	50	1164	1162	1930	6366793	5333332	6666664
6	437366	2	10	90	1893	1092	0	6808415	6666665	7999997
7	1371689	2	10	100	1240	1211	0	8183089	7999998	9333330
8	2183686	2	10	95	1551	1618	0	10369226	9333331	10666663
9	1393265	2	10	60	1478	1031	0	11765660	10666664	11999996

Total number of pulses in waveform = 17  
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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	718659	2	6	100	1356	1180	0	718659	0	857142
2	373134	3	6	70	1367	1816	1304	1094329	857143	1714285
3	1458452	1	6	75	1914	0	0	2557268	1714286	2571428
4	842576	1	6	100	1838	0	0	3401758	2571429	3428571
5	402509	3	6	85	1703	1168	1112	3806105	3428572	4285714
6	932510	2	6	90	1665	1248	0	4742598	4285715	5142857
7	1180667	2	6	55	1538	1771	0	5926178	5142858	6000000
8	98251	2	6	55	1783	1780	0	6027738	6000001	6857143
9	1366668	2	6	95	1694	1042	0	7397969	6857144	7714286
10	979653	2	6	70	1974	1160	0	8380358	7714287	8571429
11	757106	1	6	100	1536	0	0	9140598	8571430	9428572
12	582104	1	6	85	1054	0	0	9724238	9428573	10285715
13	1086083	1	6	65	1994	0	0	10811375	10285716	11142858
14	390343	3	6	100	1875	1262	1241	11203712	11142859	12000001

Total number of pulses in waveform = 26  
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### Type 5 Radar Waveform\_13

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	49564	2	5	100	1308	1404	0	49564	0	923076
2	1703504	1	5	90	1410	0	0	1755780	923077	1846153
3	592733	2	5	55	1528	1670	0	2349923	1846154	2769230
4	687407	3	5	90	1262	1738	1408	3040528	2769231	3692307
5	1038131	2	5	70	1682	1365	0	4083067	3692308	4615384
6	765390	3	5	50	1191	1005	1376	4851504	4615385	5538461
7	982279	1	5	95	1227	0	0	5837355	5538462	6461538
8	1292085	2	5	50	1726	1270	0	7130667	6461539	7384615
9	762419	2	5	65	1205	1141	0	7896082	7384616	8307692
10	1028894	2	5	70	1336	1655	0	8927322	8307693	9230769
11	807148	1	5	55	1859	0	0	9737461	9230770	10153846
12	539423	3	5	80	1920	1417	1415	10278743	10153847	11076923
13	1141501	1	5	85	1164	0	0	11424996	11076924	12000000

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_14

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	786302	3	17	75	1718	1794	1907	786302	0	799999
2	569697	1	17	100	1998	0	0	1361418	800000	1599999
3	567924	1	17	100	1832	0	0	1931340	1600000	2399999
4	918165	3	17	95	1094	1505	1690	2851337	2400000	3199999
5	498036	2	17	90	1543	1091	0	3353662	3200000	3999999
6	1300914	1	17	100	1865	0	0	4657210	4000000	4799999
7	455993	1	17	85	1355	0	0	5115068	4800000	5599999
8	966552	2	17	100	1651	1193	0	6082975	5600000	6399999
9	1067624	3	17	75	1522	1958	1562	7153443	6400000	7199999
10	424182	2	17	70	1275	1311	0	7582667	7200000	7999999
11	927502	3	17	60	1103	1716	1466	8512755	8000000	8799999
12	955825	1	17	85	1076	0	0	9472865	8800000	9599999
13	770690	2	17	75	1764	1126	0	10244631	9600000	10399999
14	684435	2	17	60	1571	1252	0	10931956	10400000	11199999
15	936010	3	17	65	1923	1029	1713	11870789	11200000	11999999

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

### Type 5 Radar Waveform\_15

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	195147	1	9	90	1466	0	0	195147	0	666666
2	1024309	3	9	80	1896	1197	1513	1220922	666667	1333333
3	217241	1	9	95	1889	0	0	1442769	1333334	2000000
4	662349	2	9	65	1133	1357	0	2107007	2000001	2666667
5	1103488	1	9	55	1603	0	0	3212985	2666668	3333334
6	772184	2	9	80	1197	1301	0	3986772	3333335	4000001
7	324522	2	9	90	1118	1151	0	4313792	4000002	4666668
8	429604	2	9	85	1892	1362	0	4745665	4666669	5333335
9	1020647	1	9	85	1274	0	0	5769566	5333336	6000002
10	706710	3	9	60	1444	1831	1645	6477550	6000003	6666669
11	600102	2	9	75	1050	1977	0	7082572	6666670	7333336
12	889837	2	9	65	1271	1068	0	7975436	7333337	8000003
13	374944	1	9	85	1370	0	0	8352719	8000004	8666670
14	606554	1	9	75	1650	0	0	8960643	8666671	9333337
15	992218	2	9	90	1209	1833	0	9954511	9333338	10000004
16	684891	2	9	60	1012	1789	0	10642444	10000005	10666671
17	458962	1	9	75	1872	0	0	11104187	10666672	11333338
18	584658	3	9	55	1439	1941	1906	11690717	11333339	12000005

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

### Type 5 Radar Waveform\_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	701454	2	14	90	1029	1685	0	701454	0	799999
2	609854	3	14	60	1367	1243	1873	1314022	800000	1599999
3	376319	1	14	65	1056	0	0	1694824	1600000	2399999
4	1436238	3	14	90	1360	1405	1708	3132118	2400000	3199999
5	417193	2	14	55	1808	1830	0	3553784	3200000	3999999
6	456876	3	14	65	1731	1138	1165	4014298	4000000	4799999
7	1462674	2	14	75	1503	1875	0	5481006	4800000	5599999
8	808461	1	14	55	1980	0	0	6292845	5600000	6399999
9	891663	3	14	95	1227	1092	1594	7186488	6400000	7199999
10	686791	2	14	70	1785	1307	0	7877192	7200000	7999999
11	457454	3	14	65	1620	1969	1737	8337738	8000000	8799999
12	1014441	1	14	50	1853	0	0	9357505	8800000	9599999
13	295114	2	14	85	1041	1573	0	9654472	9600000	10399999
14	1065023	3	14	95	1832	1513	1692	10742109	10400000	11199999
15	837820	2	14	65	1860	1307	0	11584966	11200000	11999999

Total number of pulses in waveform = 33  
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### Type 5 Radar Waveform\_17

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	448739	3	8	65	1400	1731	1207	448739	0	799999
2	477071	2	8	65	1917	1057	0	930148	800000	1599999
3	794283	1	8	60	1582	0	0	1727405	1600000	2399999
4	971185	3	8	95	1759	1364	1809	2700172	2400000	3199999
5	990541	3	8	100	1548	1926	1394	3695645	3200000	3999999
6	646138	3	8	80	1077	1779	1824	4346651	4000000	4799999
7	568937	3	8	65	1046	1536	1120	4920268	4800000	5599999
8	1324119	3	8	65	1609	1781	1402	6248089	5600000	6399999
9	716667	3	8	50	1645	1764	1246	6969548	6400000	7199999
10	823170	1	8	100	1422	0	0	7797373	7200000	7999999
11	379666	2	8	100	1428	1884	0	8178461	8000000	8799999
12	1041275	2	8	70	1394	1613	0	9223048	8800000	9599999
13	803496	3	8	75	1741	1139	1629	10029551	9600000	10399999
14	390299	2	8	100	1138	1861	0	10424359	10400000	11199999
15	934119	3	8	95	1177	1203	1495	11361477	11200000	11999999

Total number of pulses in waveform = 37  
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### Type 5 Radar Waveform\_18

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	799297	2	12	55	1190	1000	0	799297	0	1199999
2	1532825	3	12	60	1223	1435	1137	2334312	1200000	2399999
3	798109	3	12	100	1457	1781	1770	3136216	2400000	3599999
4	1221090	2	12	60	1525	1378	0	4362314	3600000	4799999
5	477986	3	12	70	1922	1087	1186	4843203	4800000	5999999
6	1290898	1	12	50	1091	0	0	6138296	6000000	7199999
7	2144476	1	12	90	1023	0	0	8283863	7200000	8399999
8	171773	1	12	95	1653	0	0	8456659	8400000	9599999
9	1906786	3	12	80	1819	1849	1924	10365098	9600000	10799999
10	500118	2	12	50	1486	1043	0	10870808	10800000	11999999

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

### Type 5 Radar Waveform\_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	20007	1	19	75	1556	0	0	20007	0	1199999
2	1462983	1	19	80	1678	0	0	1484546	1200000	2399999
3	1124192	1	19	60	1996	0	0	2610416	2400000	3599999
4	1579017	3	19	65	1723	1037	1216	4191429	3600000	4799999
5	1547861	2	19	100	1420	1322	0	5743266	4800000	5999999
6	1248276	3	19	90	1279	1359	1208	6994284	6000000	7199999
7	1221587	1	19	60	1960	0	0	8219717	7200000	8399999
8	1022831	2	19	85	1284	1561	0	9244508	8400000	9599999
9	862707	3	19	80	1449	1528	1794	10110060	9600000	10799999
10	1525637	2	19	70	1075	1907	0	11640468	10800000	11999999

Total number of pulses in waveform = 19  
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### Type 5 Radar Waveform\_20

Num of Bursts = 19

Burst Interval (us)= 631579

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	228300	2	18	80	1072	1779	0	228300	0	631578
2	783206	3	18	65	1854	1247	1404	1014357	631579	1263157
3	249491	3	18	85	1844	1339	1000	1268353	1263158	1894736
4	1115266	3	18	50	1123	1617	1132	2387802	1894737	2526315
5	173215	2	18	95	1965	1961	0	2564889	2526316	3157894
6	627492	2	18	50	1508	1875	0	3196307	3157895	3789473
7	883352	1	18	60	1662	0	0	4083042	3789474	4421052
8	912779	2	18	100	1059	1165	0	4997483	4421053	5052631
9	500555	2	18	65	1394	1676	0	5500262	5052632	5684210
10	440653	2	18	75	1076	1682	0	5943985	5684211	6315789
11	674020	3	18	75	1910	1075	1432	6620763	6315790	6947368
12	946146	3	18	60	1974	1060	1004	7571326	6947369	7578947
13	308064	1	18	85	1199	0	0	7883428	7578948	8210526
14	363542	3	18	85	1634	1511	1110	8248169	8210527	8842105
15	1069601	2	18	70	1975	1944	0	9322025	8842106	9473684
16	727579	1	18	50	1045	0	0	10053523	9473685	10105263
17	620105	1	18	85	1218	0	0	10674673	10105264	10736842
18	373916	2	18	100	1019	1753	0	11049807	10736843	11368421
19	544443	2	18	60	1633	1001	0	11597022	11368422	12000000

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

### 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	395688	3	10	55	1067	1682	1243	395688	0	749999
2	510048	1	10	75	1298	0	0	909728	750000	1499999
3	723139	2	10	60	1478	1868	0	1634165	1500000	2249999
4	1352539	3	10	75	1891	1965	1764	2990050	2250000	2999999
5	135838	2	10	95	1589	1860	0	3131508	3000000	3749999
6	621824	1	10	55	1547	0	0	3756781	3750000	4499999
7	1410734	1	10	90	1696	0	0	5169062	4500000	5249999
8	668398	2	10	60	1080	1187	0	5839156	5250000	5999999
9	415051	2	10	70	1792	1757	0	6256474	6000000	6749999
10	830334	1	10	60	1257	0	0	7090357	6750000	7499999
11	780931	2	10	65	1330	1767	0	7872545	7500000	8249999
12	556951	3	10	100	1194	1900	1799	8432593	8250000	8999999
13	1096191	3	10	80	1950	1182	1861	9473677	9000000	9749999
14	775141	1	10	75	1057	0	0	10253811	9750000	10499999
15	719191	3	10	95	1772	1456	1575	10974059	10500000	11249999
16	522331	2	10	75	1702	1902	0	11501193	11250000	11999999

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

### Type 5 Radar Waveform\_22

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	345001	3	19	50	1714	1715	1229	345001	0	1090908
2	1347023	2	19	100	1479	1806	0	1696682	1090909	2181817
3	711056	2	19	90	1487	1047	0	2410823	2181818	3272726
4	1369680	2	19	60	1541	1987	0	3783037	3272727	4363635
5	1062610	2	19	70	1585	1987	0	4849175	4363636	5454544
6	842676	2	19	50	1491	1895	0	5695423	5454545	6545453
7	1098982	2	19	100	1656	1541	0	6797791	6545454	7636362
8	952587	2	19	50	1764	1963	0	7753575	7636363	8727271
9	1284860	2	19	60	1294	1365	0	9042162	8727272	9818180
10	800747	2	19	50	1640	1287	0	9845568	9818181	10909089
11	1593152	3	19	90	1901	1697	1692	11441647	10909090	11999998

Total number of pulses in waveform = 24  
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### Type 5 Radar Waveform\_23

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	594166	1	5	70	1337	0	0	594166	0	599999
2	396327	3	5	85	1235	1300	1650	991830	600000	1199999
3	457188	2	5	95	1743	1087	0	1453203	1200000	1799999
4	427458	3	5	100	1474	1838	1710	1883491	1800000	2399999
5	598142	3	5	85	1852	1094	1585	2486655	2400000	2999999
6	1012070	1	5	70	1078	0	0	3503256	3000000	3599999
7	387044	1	5	100	1319	0	0	3891378	3600000	4199999
8	456932	3	5	90	1558	1994	0	4349629	4200000	4799999
9	819704	1	5	95	1045	0	0	5174466	4800000	5399999
10	359464	1	5	100	1397	0	0	5534975	5400000	5999999
11	664663	1	5	65	1183	0	0	6201035	6000000	6599999
12	591094	3	5	65	1054	1234	1981	6793312	6600000	7199999
13	506669	1	5	60	1531	0	0	7304250	7200000	7799999
14	804063	2	5	100	1474	1974	0	8109844	7800000	8399999
15	683557	1	5	65	1466	0	0	8796849	8400000	8999999
16	613266	3	5	1190	1190	1265	1884	9411681	9000000	9599999
17	455400	3	5	60	1828	1356	1172	9871320	9600000	10199999
18	897024	2	5	95	1982	1128	0	10772700	10200000	10799999
19	44889	2	5	65	1539	1593	0	10820699	10800000	11399999
20	667673	1	5	80	1058	0	0	11491504	11400000	11999999

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

### Type 5 Radar Waveform\_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	269289	3	8	65	1796	1405	1914	269289	0	857142
2	1096495	2	8	65	1635	1334	0	1370899	857143	1714285
3	914548	2	8	75	1809	1707	0	2288416	1714286	2571428
4	1107376	3	8	80	1504	1607	1887	3399308	2571429	3428571
5	865034	3	8	75	1920	1243	1399	4269340	3428572	4285714
6	471777	3	8	80	1492	1888	1683	4745679	4285715	5142857
7	1192914	3	8	85	1530	1162	1256	5943656	5142858	6000000
8	367286	1	8	80	1577	0	0	6314890	6000001	6857143
9	1145753	2	8	70	1519	1897	0	7462220	6857144	7714286
10	437566	2	8	70	1329	1490	0	7903202	7714287	8571429
11	1224247	3	8	100	1097	1925	1077	9130268	8571430	9428572
12	316235	1	8	90	1676	0	0	9450602	9428573	10285715
13	1473640	1	8	70	1079	0	0	10925918	10285716	11142858
14	460804	1	8	100	1592	0	0	11387801	11142859	12000001

Total number of pulses in waveform = 30  
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### Type 5 Radar Waveform\_25

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	946249	3	14	70	1072	1999	1361	946249	0	1199999
2	740766	1	14	55	1449	0	0	1691447	1200000	2399999
3	1878121	1	14	50	1177	0	0	3571017	2400000	3599999
4	1168592	1	14	75	1257	0	0	4740786	3600000	4799999
5	642426	3	14	95	1263	1619	1293	5384469	4800000	5999999
6	611415	3	14	80	1584	1954	1717	6000059	6000000	7199999
7	1494809	3	14	65	1005	1714	1920	7500123	7200000	8399999
8	1948384	2	14	70	1605	1625	0	9453146	8400000	9599999
9	453920	3	14	65	1517	1847	1208	9910296	9600000	10799999
10	915063	1	14	70	1227	0	0	10829931	10800000	11999999

Total number of pulses in waveform = 21  
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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	1042160	2	6	95	1927	1984	0	1042160	0	1090908
2	84077	3	6	70	1336	1871	1814	1130148	1090909	2181817
3	1946904	1	6	55	1477	0	0	3082073	2181818	3272726
4	360806	3	6	60	1306	1815	1169	3444356	3272727	4363635
5	1789126	3	6	55	1832	1774	1759	5237772	4363636	5454544
6	1286634	2	6	65	1038	1977	0	6529771	5454545	6545453
7	131911	2	6	95	1899	1812	0	6664697	6545454	7636362
8	1315366	3	6	100	1728	1762	1826	7983774	7636363	8727271
9	1757511	1	6	90	1964	0	0	9746601	8727272	9818180
10	916189	1	6	70	1211	0	0	10664754	9818181	10909089
11	998726	1	6	80	1646	0	0	11664691	10909090	11999998

Total number of pulses in waveform = 22  
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**Type 5 Radar Waveform\_27**

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	570950	3	12	80	1378	1201	1523	570950	0	923076
2	1060871	3	12	50	1838	1428	1333	1635923	923077	1846153
3	301172	2	12	60	1788	1301	0	1941694	1846154	2769230
4	1052002	2	12	90	1666	1356	0	2996785	2769231	3692307
5	1451033	1	12	55	1983	0	0	4450840	3692308	4615384
6	781990	3	12	70	1638	1213	1922	5234813	4615385	5538461
7	1101096	1	12	50	1190	0	0	6340682	5538462	6461538
8	502531	2	12	65	1527	1088	0	6844403	6461539	7384615
9	1238656	2	12	70	1121	1952	0	8085674	7384616	8307692
10	539775	1	12	75	1139	0	0	8628522	8307693	9230769
11	1123514	1	12	95	1498	0	0	9753175	9230770	10153846
12	810757	3	12	75	1427	1723	1383	10565430	10153847	11076923
13	1140387	1	12	60	1921	0	0	11710350	11076924	12000000

Total number of pulses in waveform = 25  
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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	302418	1	18	65	1501	0	0	302418	0	923076
2	1113002	3	18	50	1656	1301	1730	1416921	923077	1846153
3	593142	1	18	75	1291	0	0	2014750	1846154	2769230
4	1555311	1	18	55	1718	0	0	3571352	2769231	3692307
5	909005	2	18	65	1413	1509	0	4482075	3692308	4615384
6	766669	2	18	80	1198	1755	0	5251666	4615385	5538461
7	1032146	1	18	60	1865	0	0	6286765	5538462	6461538
8	832866	3	18	50	1842	1331	1510	7121496	6461539	7384615
9	863589	3	18	60	1718	1635	1867	7989768	7384616	8307692
10	611652	2	18	65	1382	1947	0	8606640	8307693	9230769
11	1034444	1	18	65	1483	0	0	9644413	9230770	10153846
12	1400932	1	18	85	1408	0	0	11046828	10153847	11076923
13	772569	3	18	65	1257	1219	1808	11820805	11076924	12000000

Total number of pulses in waveform = 24  
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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	528818	1	9	65	1367	0	0	528818	0	1090908
2	1005143	1	9	95	1750	0	0	1535328	1090909	2181817
3	743056	1	9	100	1807	0	0	2280134	2181818	3272726
4	1270325	2	9	75	1040	1876	0	3552266	3272727	4363635
5	1790794	3	9	95	1751	1026	1342	5345976	4363636	5454544
6	279109	3	9	50	1170	1912	1064	5629204	5454545	6545453
7	1859200	1	9	85	1017	0	0	7492550	6545454	7636362
8	954266	3	9	65	1599	1807	1583	8447833	7636363	8727271
9	658992	3	9	95	1828	1839	1403	9111814	8727272	9818180
10	991888	1	9	65	1119	0	0	10108772	9818181	10909089
11	1695699	2	9	95	1400	1367	0	11805590	10909090	11999998

Total number of pulses in waveform = 21  
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**Type 5 Radar Waveform\_30**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	279889	1	17	55	1891	0	0	279889	0	631578
2	871080	1	17	65	1550	0	0	1152860	631579	1263157
3	478358	2	17	95	1912	1451	0	1632768	1263158	1894736
4	674513	3	17	50	1553	1213	1622	2310644	1894737	2526315
5	376432	2	17	90	1073	1712	0	2691464	2526316	3157894
6	863356	2	17	75	1788	1390	0	3557605	3157895	3789473
7	432728	2	17	80	1162	1860	0	3993511	3789474	4421052
8	501403	2	17	70	1126	1259	0	4497936	4421053	5052631
9	835312	2	17	70	1334	1373	0	5335633	5052632	5684210
10	901119	3	17	80	1494	1124	1375	6239459	5684211	6315789
11	478122	2	17	100	1446	1495	0	6721574	6315790	6947368
12	473080	3	17	100	1380	1147	1703	7197595	6947369	7578947
13	395109	2	17	75	1680	1945	0	7596934	7578948	8210526
14	936733	3	17	95	1733	1193	1936	8537292	8210527	8842105
15	418917	3	17	90	1136	1894	1660	8961071	8842106	9473684
16	582150	1	17	55	1213	0	0	9547911	9473685	10105263
17	725033	2	17	70	1765	1642	0	10274157	10105264	10736842
18	537703	2	17	65	1149	1819	0	10815267	10736843	11368421
19	1147158	3	17	55	1484	1246	1921	11965393	11368422	12000000

Total number of pulses in waveform = 41  
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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	5294.3	1	16	5303.2	1
2	5327.4	1	17	5292.4	1
3	5299.2	1	18	5322.7	1
4	5313.7	1	19	5300.5	1
5	5292.0	1	20	5314.2	1
6	5302.8	1	21	5307.3	1
7	5321.3	1	22	5295.5	1
8	5304.5	1	23	5312.5	1
9	5311.3	1	24	5293.2	1
10	5306.0	1	25	5315.5	1
11	5308.4	1	26	5305.6	1
12	5297.0	1	27	5316.8	1
13	5301.1	1	28	5329.0	1
14	5318.2	1	29	5309.1	1
15	5310.9	1	30	5298.3	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5320	0	5	5319	15
20	5297	60	10	5284	30
37	5299	111	20	5316	60
42	5292	126	29	5311	87
44	5331	132	33	5280	99
50	5339	150	53	5287	159
51	5304	153	61	5303	183
56	5318	168	74	5281	222
58	5337	174	89	5300	267
65	5294	195	95	5331	285
92	5315	276	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5322	0	7	5284	21
1	5336	3	10	5292	30
11	5332	33	19	5298	57
14	5289	42	35	5307	105
18	5325	54	43	5329	129
24	5290	72	45	5337	135
26	5340	78	47	5304	141
28	5333	84	48	5287	144
29	5301	87	58	5314	174
31	5318	93	62	5327	186
32	5298	96	65	5302	195
41	5296	123	80	5286	240
46	5303	138	87	5291	261
47	5306	141	88	5297	264
56	5328	168	93	5340	279
62	5300	186	--	--	--
76	5299	228	--	--	--
81	5304	243	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5295	51	13	5283	39
22	5306	66	21	5298	63
29	5293	87	27	5304	81
30	5308	90	30	5292	90
38	5315	114	33	5309	99
40	5312	120	39	5332	117
42	5290	126	41	5316	123
61	5292	183	47	5314	141
62	5320	186	52	5322	156
66	5297	198	66	5312	198
78	5325	234	73	5338	219
84	5289	252	84	5284	252
91	5327	273	94	5321	282
94	5294	282	--	--	--
96	5287	288	--	--	--
98	5305	294	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5303	54	9	5300	27
29	5297	87	17	5287	51
34	5338	102	25	5306	75
50	5285	150	36	5297	108
52	5288	156	41	5299	123
58	5317	174	51	5296	153
63	5281	189	55	5288	165
68	5327	204	60	5320	180
69	5328	207	65	5304	195
89	5295	267	71	5318	213
90	5306	270	95	5336	285
96	5332	288	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5322	21	0	5313	0
20	5312	60	22	5319	66
30	5320	90	30	5295	90
35	5316	105	34	5311	102
42	5283	126	46	5320	138
49	5329	147	62	5317	186
52	5328	156	66	5339	198
55	5332	165	70	5326	210
67	5313	201	79	5325	237
69	5293	207	84	5289	252
82	5304	246	97	5323	291
97	5296	291	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5317	6	1	5303	3
15	5295	45	6	5338	18
22	5334	66	7	5302	21
23	5312	69	10	5292	30
29	5291	87	18	5281	54
53	5332	159	41	5299	123
64	5318	192	43	5326	129
69	5329	207	44	5312	132
76	5290	228	51	5316	153
77	5289	231	73	5296	219
80	5306	240	95	5301	285
84	5294	252	--	--	--
86	5328	258	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5299	3	8	5326	24
12	5292	36	13	5335	39
16	5332	48	14	5321	42
17	5333	51	20	5318	60
19	5308	57	23	5317	69
28	5314	84	51	5306	153
29	5328	87	57	5292	171
30	5320	90	58	5290	174
46	5280	138	60	5298	180
53	5283	159	72	5308	216
61	5325	183	81	5337	243
63	5312	189	82	5330	246
71	5329	213	96	5302	288
88	5317	264	--	--	--
99	5340	297	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5296	69	9	5326	27
37	5321	111	16	5306	48
46	5339	138	28	5280	84
54	5329	162	35	5286	105
58	5318	174	39	5302	117
76	5325	228	59	5323	177
80	5311	240	71	5310	213
82	5320	246	86	5332	258
96	5333	288	92	5303	276
97	5289	291	94	5295	282
--	--	--	98	5305	294

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5323	0	11	5289	33
23	5288	69	23	5291	69
26	5337	78	37	5281	111
35	5327	105	50	5328	150
36	5302	108	51	5312	153
47	5290	141	69	5340	207
56	5339	168	74	5310	222
58	5307	174	82	5311	246
60	5322	180	83	5313	249
78	5292	234	87	5308	261
--	--	--	90	5317	270

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5296	42	4	5339	12
15	5321	45	5	5294	15
17	5322	51	6	5311	18
20	5295	60	24	5307	72
24	5327	72	25	5332	75
35	5313	105	27	5303	81
48	5299	144	36	5281	108
51	5289	153	50	5336	150
52	5319	156	58	5313	174
57	5286	171	59	5287	177
68	5300	204	66	5334	198
74	5297	222	78	5338	234
--	--	--	80	5298	240
--	--	--	85	5319	255
--	--	--	88	5285	264
--	--	--	92	5305	276
--	--	--	97	5301	291
--	--	--	98	5335	294

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5331	15	1	5299	3
21	5306	63	2	5304	6
25	5333	75	4	5335	12
29	5332	87	23	5298	69
30	5322	90	31	5295	93
33	5307	99	33	5330	99
39	5280	117	34	5320	102
40	5324	120	42	5284	126
47	5336	141	44	5325	132
52	5315	156	45	5281	135
53	5288	159	46	5331	138
65	5317	195	59	5318	177
67	5325	201	65	5286	195
76	5305	228	74	5314	222
87	5292	261	91	5322	273
90	5337	270	92	5288	276
94	5329	282	95	5303	285
--	--	--	99	5296	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5289	33	17	5314	51
16	5333	48	25	5290	75
30	5284	90	27	5291	81
32	5334	96	31	5286	93
44	5318	132	53	5293	159
50	5283	150	54	5307	162
81	5307	243	63	5282	189
95	5336	285	73	5315	219
97	5329	291	79	5318	237
--	--	--	80	5328	240

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5332	0	0	5301	0
25	5318	75	2	5324	6
27	5319	81	9	5334	27
34	5291	102	12	5303	36
40	5331	120	39	5296	117
49	5287	147	40	5281	120
65	5299	195	42	5340	126
74	5304	222	52	5291	156
80	5283	240	57	5292	171
84	5306	252	58	5322	174
88	5317	264	60	5327	180
93	5296	279	63	5286	189
99	5282	297	64	5323	192
--	--	--	70	5285	210
--	--	--	72	5304	216
--	--	--	84	5310	252
--	--	--	89	5326	267
--	--	--	90	5320	270



Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5318	21	12	5301	36
10	5324	30	20	5318	60
31	5308	93	24	5322	72
32	5285	96	26	5327	78
50	5282	150	27	5295	81
62	5286	186	33	5300	99
66	5321	198	54	5280	162
76	5288	228	59	5338	177
81	5332	243	62	5323	186
91	5339	273	68	5293	204
--	--	--	72	5331	216
--	--	--	79	5291	237
--	--	--	89	5319	267

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5312	9	12	5327	36
9	5288	27	19	5309	57
13	5317	39	20	5333	60
14	5305	42	24	5299	72
20	5335	60	26	5315	78
23	5338	69	27	5280	81
46	5303	138	30	5304	90
50	5294	150	49	5287	147
56	5285	168	53	5300	159
63	5330	189	56	5325	168
85	5324	255	67	5336	201
87	5327	261	69	5311	207
92	5301	276	71	5338	213
96	5325	288	77	5307	231
97	5321	291	--	--	--

## 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	5276.3	1	938	57	1
2	5311.2	1	658	81	1
3	5306.4	1	718	74	1
4	5251.0	1	518	102	1
5	5303.3	1	678	78	1
6	5279.2	1	818	65	1
7	5273.6	1	878	61	1
8	5313.5	1	538	99	1
9	5307.9	1	898	59	1
10	5270.4	1	858	62	1
11	5309.4	1	798	67	1
12	5300.0	1	3066	18	1
13	5255.3	1	738	72	1
14	5315.8	1	558	95	1
15	5282.6	1	838	63	1
16	5317.5	1	1267	42	1
17	5285.7	1	2034	26	1
18	5319.8	1	2538	21	1
19	5267.2	1	914	58	1
20	5288.4	1	1396	38	1
21	5258.6	1	1337	40	1
22	5297.6	1	2277	24	1
23	5324.4	1	2983	18	1
24	5321.2	1	1376	39	1
25	5291.3	1	1061	50	1
26	5329.0	1	2170	25	1
27	5264.7	1	1792	30	1
28	5326.9	1	2455	22	1
29	5294.8	1	2599	21	1
30	5261.4	1	974	55	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	5300.2	3.4	227	29	1
2	5257.4	3.7	178	26	1
3	5323.9	1.3	151	27	1
4	5296.7	4.1	211	29	1
5	5251.0	2.7	209	27	1
6	5327.2	3.9	190	29	1
7	5303.0	1.1	209	26	1
8	5260.8	4.6	204	24	1
9	5329.0	4.9	152	28	1
10	5320.2	1.6	198	23	1
11	5254.6	5.0	230	23	1
12	5305.8	5.0	222	27	1
13	5293.7	5.0	172	27	1
14	5279.8	1.0	170	24	1
15	5319.4	4.9	175	29	1
16	5263.6	2.2	159	25	1
17	5281.4	3.7	193	27	1
18	5307.8	2.3	179	26	1
19	5275.4	3.0	207	28	1
20	5317.8	3.8	195	28	1
21	5290.3	4.7	215	28	1
22	5314.5	3.9	186	23	1
23	5309.4	1.7	150	26	1
24	5285.9	2.7	223	29	1
25	5266.9	3.4	177	23	1
26	5314.5	2.7	190	24	1
27	5287.8	1.6	221	23	1
28	5273.5	4.0	230	24	1
29	5311.6	2.9	167	28	1
30	5271.2	1.1	218	25	1
Detection Percentage (%)					100%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5266.4	9.8	444	17	1
2	5301.2	7.6	479	18	1
3	5309.2	6.5	349	17	1
4	5268.4	9.8	426	18	1
5	5303.5	9.7	412	16	1
6	5251.0	6.2	336	18	1
7	5304.8	6.4	377	17	1
8	5296.8	7.6	472	16	1
9	5321.8	8.7	299	18	1
10	5311.0	6.2	354	16	1
11	5271.5	6.4	461	17	1
12	5323.6	8.7	303	17	1
13	5254.6	8.5	500	17	1
14	5313.1	8.0	458	17	1
15	5281.7	9.5	388	16	1
16	5274.3	6.1	288	17	1
17	5326.8	7.6	330	16	1
18	5257.6	6.6	256	16	1
19	5320.4	7.2	482	18	1
20	5306.8	7.1	407	16	1
21	5284.4	9.4	298	17	1
22	5277.9	7.7	461	17	1
23	5293.5	6.5	378	17	1
24	5260.7	6.6	277	16	1
25	5314.6	9.4	323	18	1
26	5287.6	9.7	353	17	1
27	5329.0	7.7	431	16	1
28	5263.8	9.7	251	18	1
29	5317.2	9.2	389	16	1
30	5290.7	7.4	474	17	1
Detection Percentage (%)					100%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5255.8	14.2	405	13	1
2	5252.5	19.4	368	15	1
3	5300.6	11.6	382	16	1
4	5275.3	15.2	417	14	1
5	5316.8	11.1	407	12	1
6	5274.9	14.4	338	12	1
7	5295.9	16.6	330	16	1
8	5303.4	12.7	436	13	1
9	5251.0	18.6	429	16	1
10	5327.2	13.1	468	16	1
11	5305.7	16.7	471	12	1
12	5277.9	15.4	322	12	1
13	5314.4	15.8	314	12	1
14	5321.4	12.7	367	14	1
15	5307.9	18.3	444	16	1
16	5260.3	18.4	346	13	1
17	5309.2	13.9	434	16	1
18	5291.4	15.2	256	14	1
19	5272.4	16.4	275	15	1
20	5311.1	17.1	303	13	1
21	5280.4	19.4	410	16	1
22	5263.1	13.5	284	13	1
23	5312.7	11.0	477	16	1
24	5283.7	11.3	452	13	1
25	5329.0	17.9	500	14	1
26	5317.7	16.2	491	12	1
27	5285.8	13.5	321	16	1
28	5268.5	17.2	456	13	1
29	5320.8	11.1	368	12	1
30	5289.0	15.7	441	14	1
Detection Percentage (%)					100%

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

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



Radar Type 5 - Radar Statistical Performance

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

Type 5 Radar Waveform_1										
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	249245	1	17	50	1911	0	0	249245	0	749999
2	839496	2	17	90	1475	1035	0	1090652	750000	1499999
3	1056352	1	17	80	1689	0	0	2149514	1500000	2249999
4	643944	2	17	75	1908	1310	0	2795147	2250000	2999999
5	755530	2	17	75	1164	1152	0	3553895	3000000	3749999
6	830269	3	17	100	1774	1208	1285	4386480	3750000	4499999
7	357368	3	17	95	1843	1953	1017	4748115	4500000	5249999
8	676817	3	17	55	1040	1872	1789	5429745	5250000	5999999
9	1028645	3	17	100	1733	1605	1469	6463091	6000000	6749999
10	466342	2	17	65	1103	1846	0	6934240	6750000	7499999
11	574933	1	17	80	1036	0	0	7512122	7500000	8249999
12	1454531	1	17	90	1810	0	0	8967689	8250000	8999999
13	729965	1	17	50	1219	0	0	9699464	9000000	9749999
14	123105	3	17	100	1538	1559	1250	9823788	9750000	10499999
15	1176907	1	17	75	1986	0	0	11005042	10500000	11249999
16	670975	1	17	65	1639	0	0	11678003	11250000	11999999
Total number of pulses in waveform = 30										
*****										



### Type 5 Radar Waveform\_2

Num of Bursts = 20  
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	125713	1	14	50	1055	0	0	125713	0	599999
2	929570	2	14	95	1399	1180	0	1057338	600000	1199999
3	594203	2	14	100	1041	1364	0	1654120	1200000	1799999
4	414985	1	14	100	1643	0	0	2071510	1800000	2399999
5	481463	3	14	70	1087	1156	1900	2554616	2400000	2999999
6	716163	1	14	75	1702	0	0	3274922	3000000	3599999
7	705813	3	14	55	1509	1800	1996	3982437	3600000	4199999
8	713002	3	14	60	1881	1464	1977	4700744	4200000	4799999
9	329793	2	14	60	1441	1481	0	5035859	4800000	5399999
10	714589	2	14	55	1776	1510	0	5753370	5400000	5999999
11	556546	3	14	55	1214	1779	1401	6313201	6000000	6599999
12	420509	2	14	55	1791	1746	0	6738104	6600000	7199999
13	993318	2	14	75	1022	1432	0	7734959	7200000	7799999
14	597342	2	14	55	1109	1114	0	8334755	7800000	8399999
15	389379	3	14	90	1477	1882	1859	8726357	8400000	8999999
16	851959	1	14	55	1324	0	0	9583534	9000000	9599999
17	114319	1	14	75	1733	0	0	9699177	9600000	10199999
18	976197	2	14	85	1749	1681	0	10677107	10200000	10799999
19	419605	1	14	50	1851	0	0	11100142	10800000	11399999
20	555429	1	14	85	1915	1755	0	11657422	11400000	11999999

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

### Type 5 Radar Waveform\_3

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	714411	1	9	100	1274	0	0	714411	0	857142
2	644421	2	9	70	1276	1717	0	1360106	857143	1714285
3	445902	3	9	85	1650	1069	1492	1809001	1714286	2571428
4	888308	3	9	60	1049	1950	1427	2701520	2571429	3428571
5	1491588	2	9	80	1511	1021	0	4197534	3428572	4285714
6	251524	2	9	75	1504	1879	0	4451590	4285715	5142857
7	963430	3	9	80	1722	1140	1037	5418403	5142858	6000000
8	740907	1	9	75	1301	0	0	6163209	6000001	6857143
9	952541	3	9	100	1966	1384	1133	7117051	6857144	7714286
10	1157253	1	9	85	1583	0	0	8278787	7714287	8571429
11	346803	1	9	70	1951	0	0	8627173	8571430	9428572
12	922187	3	9	100	1330	1609	1939	9551311	9428573	10285715
13	734981	3	9	60	1362	1562	2000	10291170	10285716	11142858
14	1442489	3	9	70	1706	1820	1676	11738583	11142859	12000001

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

### Type 5 Radar Waveform\_4

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	617738	3	8	55	1934	1956	1931	617738	0	1090908
2	1453655	3	8	55	1010	1464	1247	2077214	1090909	2181817
3	497231	2	8	55	1708	1284	0	2578166	2181818	3272726
4	811884	3	8	95	1067	1644	1851	3393042	3272727	4363635
5	1155256	2	8	80	1217	1709	0	4552860	4363636	5454544
6	1523163	2	8	80	1341	1018	0	6078949	5454545	6545453
7	800785	1	8	70	1055	0	0	6882093	6545454	7636362
8	1803886	3	8	75	1951	1965	1476	8687034	7636363	8727271
9	47281	2	8	55	1793	1623	0	8739707	8727272	9818180
10	1886277	2	8	100	1967	1801	0	10629400	9818181	10909089
11	1285118	2	8	75	1838	1861	0	11918286	10909090	11999998

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_5

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	454581	2	19	50	1817	1569	0	454581	0	923076
2	813092	1	19	60	1886	0	0	1271059	923077	1846153
3	880286	2	19	75	1355	1632	0	2153231	1846154	2769230
4	797675	1	19	50	1941	0	0	2953893	2769231	3692307
5	1226318	2	19	80	1184	1906	0	4182152	3692308	4615384
6	1087776	3	19	70	1825	1863	1410	5273018	4615385	5538461
7	1043110	1	19	65	1783	0	0	6321226	5538462	6461538
8	252532	3	19	75	1168	1218	1934	6575541	6461539	7384615
9	1563620	3	19	80	1265	1431	1592	8143481	7384616	8307692
10	534911	3	19	90	1793	1122	1760	8682680	8307693	9230769
11	689967	2	19	70	1111	1964	0	9377322	9230770	10153846
12	1076966	2	19	100	1197	1453	0	10457363	10153847	11076923
13	1150819	2	19	50	1169	1598	0	11610832	11076924	12000000

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

### Type 5 Radar Waveform\_6

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1276839	1	5	90	1151	0	0	1276839	0	1499999
2	273463	2	5	50	1616	1833	0	1551453	1500000	2999999
3	2188178	2	5	55	1040	1764	0	3743080	3000000	4499999
4	1533263	3	5	55	1540	1639	1623	5279147	4500000	5999999
5	1046634	1	5	85	1862	0	0	6330583	6000000	7499999
6	2383127	1	5	85	1329	0	0	8715572	7500000	8999999
7	1047752	1	5	75	1899	0	0	9764653	9000000	10499999
8	2143119	3	5	50	1289	1373	1346	11909671	10500000	11999999

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

### Type 5 Radar Waveform\_7

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	816814	2	12	65	1290	1659	0	816814	0	1090908
2	1357236	2	12	70	1086	1736	0	2176999	1090909	2181817
3	1066293	3	12	65	1717	1590	1077	3246114	2181818	3272726
4	363411	1	12	60	1831	0	0	3613909	3272727	4363635
5	908190	3	12	90	1935	1039	1167	4523930	4363636	5454544
6	1250752	1	12	85	1922	0	0	5778823	5454545	6545453
7	790690	3	12	85	1264	1737	1768	6571435	6545454	7636362
8	1727361	1	12	85	1603	0	0	8303665	7636363	8727271
9	689214	2	12	85	1983	1538	0	8994382	8727272	9818180
10	1056237	3	12	70	1886	1302	1407	10054140	9818181	10909089
11	1486713	3	12	100	1410	1640	1225	11545448	10909090	11999998

Total number of pulses in waveform = 24  
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### Type 5 Radar Waveform\_8

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	225302	1	18	95	1293	0	0	225302	0	599999
2	671128	1	18	50	1392	0	0	897723	600000	1199999
3	657794	2	18	80	1474	1388	0	1556909	1200000	1799999
4	590205	1	18	50	1631	0	0	2149976	1800000	2399999
5	600507	3	18	80	1478	1848	1621	2752114	2400000	2999999
6	437354	3	18	80	1216	1149	1973	3194415	3000000	3599999
7	412919	3	18	80	1420	1048	1810	3611672	3600000	4199999
8	1100898	2	18	85	1001	1385	0	4716848	4200000	4799999
9	182085	3	18	90	1434	1051	1854	4901319	4800000	5399999
10	992561	3	18	100	1594	1778	1121	5898219	5400000	5999999
11	501875	1	18	55	1393	0	0	6404587	6000000	6599999
12	698677	3	18	80	1800	1357	1543	7104657	6600000	7199999
13	268671	1	18	60	1308	0	0	7378028	7200000	7799999
14	747702	2	18	95	1580	1311	0	8127038	7800000	8399999
15	334191	3	18	65	1732	1136	1601	8464120	8400000	8999999
16	821341	1	18	80	1085	0	0	9289930	9000000	9599999
17	511564	1	18	70	1481	0	0	9802579	9600000	10199999
18	419483	2	18	90	1513	1214	0	10223543	10200000	10799999
19	1079450	3	18	50	1201	1903	1589	11305720	10800000	11399999
20	606622	1	18	65	1344	0	0	11917035	11400000	11999999

Total number of pulses in waveform = 40  
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### Type 5 Radar Waveform\_9

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	27540	1	6	70	1700	0	0	27540	0	923076
2	1581598	1	6	75	1330	0	0	1610838	923077	1846153
3	296486	3	6	70	1482	1535	1270	1908654	1846154	2769230
4	1712679	2	6	55	1156	1590	0	3625620	2769231	3692307
5	136873	2	6	85	1511	1597	0	3765239	3692308	4615384
6	1609727	2	6	60	1008	1454	0	5378074	4615385	5538461
7	272145	1	6	55	1817	0	0	5652681	5538462	6461538
8	1495435	3	6	90	1641	1331	1442	7149933	6461539	7384615
9	374297	2	6	50	1810	1719	0	7528644	7384616	8307692
10	838905	1	6	60	1765	0	0	8371078	8307693	9230769
11	1094394	3	6	55	1801	1943	1961	9467237	9230770	10153846
12	1308613	1	6	95	1006	0	0	10781555	10153847	11076923
13	1094552	3	6	90	1266	1245	1696	11877113	11076924	12000000

Total number of pulses in waveform = 25  
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### Type 5 Radar Waveform\_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	60952	1	10	75	1460	0	0	60952	0	999999
2	1221461	3	10	100	1208	1222	1672	1283873	1000000	1999999
3	944542	1	10	75	1409	0	0	2232517	2000000	2999999
4	869383	1	10	55	1190	0	0	3103309	3000000	3999999
5	1013926	1	10	50	1381	0	0	4118425	4000000	4999999
6	1524282	1	10	55	1678	0	0	5644088	5000000	5999999
7	531145	1	10	90	1291	0	0	6176911	6000000	6999999
8	1375040	3	10	60	1683	1246	1257	7553242	7000000	7999999
9	824581	2	10	55	1548	1646	0	8382009	8000000	8999999
10	623524	1	10	80	1243	0	0	9008727	9000000	9999999
11	1954225	3	10	100	1607	1863	1369	10964195	10000000	10999999
12	210365	3	10	50	1000	1874	1578	11179399	11000000	11999999

Total number of pulses in waveform = 21  
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### Type 5 Radar Waveform\_11

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	53276	3	10	90	1847	1017	1284	53276	0	666666
2	611452	1	10	80	1839	0	0	668876	666667	1333333
3	875248	1	10	65	1030	0	0	1545963	1333334	2000000
4	815349	2	10	55	1370	1344	0	2362342	2000001	2666667
5	472793	3	10	90	1674	1639	1916	2837849	2666668	3333334
6	509519	2	10	90	1426	1169	0	3352597	3333335	4000001
7	1000915	2	10	60	1648	1814	0	4356107	4000002	4666668
8	404712	2	10	100	1834	1163	0	4764281	4666669	5333335
9	756489	3	10	70	1222	1457	1256	5523767	5333336	6000002
10	493253	1	10	100	1784	0	0	6020955	6000003	6666669
11	1196629	2	10	85	1701	1769	0	7219368	6666670	7333336
12	205562	3	10	95	1210	1259	1682	7428400	7333337	8000003
13	798717	1	10	95	1452	0	0	8231268	8000004	8666670
14	576404	1	10	90	1854	0	0	8809124	8666671	9333337
15	1121102	3	10	65	1845	1238	1534	9932080	9333338	10000004
16	718298	3	10	65	1138	1341	1334	10654995	10000005	10666671
17	569920	3	10	60	1163	1242	1017	11228728	10666672	11333338
18	351534	1	10	65	1590	0	0	11583684	11333339	12000005

Total number of pulses in waveform = 37  
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### Type 5 Radar Waveform\_12

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	996753	2	17	80	1371	1736	0	996753	0	999999
2	934276	1	17	95	1527	0	0	1934136	1000000	1999999
3	571722	3	17	65	1000	1848	1728	2507385	2000000	2999999
4	1413702	3	17	65	1500	1885	1071	3925663	3000000	3999999
5	565115	3	17	95	1694	1586	1435	4495234	4000000	4999999
6	1442133	3	17	50	1824	1123	1606	5942082	5000000	5999999
7	323365	3	17	65	1982	1200	1531	6270000	6000000	6999999
8	1520616	3	17	75	1662	1917	1170	7795329	7000000	7999999
9	929002	2	17	75	1001	1366	0	8729080	8000000	8999999
10	333512	2	17	80	1349	1102	0	9064959	9000000	9999999
11	1270008	1	17	90	1218	0	0	10337418	10000000	10999999
12	1061130	3	17	55	1293	1844	1428	11399766	11000000	11999999

Total number of pulses in waveform = 29  
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### Type 5 Radar Waveform\_13

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	608600	3	9	80	1424	1735	1216	608600	0	857142
2	410076	3	9	60	1523	1000	1290	1023051	857143	1714285
3	696619	2	9	95	1789	1118	0	1723483	1714286	2571428
4	1458734	2	9	85	1234	1478	0	3185124	2571429	3428571
5	744460	1	9	55	1115	0	0	3932296	3428572	4285714
6	983419	3	9	65	1635	1223	1449	4916830	4285715	5142857
7	354944	1	9	60	1417	0	0	5276081	5142858	6000000
8	1386022	2	9	65	1827	1839	0	6663520	6000001	6857143
9	923645	3	9	95	1512	1478	1150	7590831	6857144	7714286
10	264659	1	9	85	1576	0	0	7859630	7714287	8571429
11	743295	3	9	100	1945	1575	1434	8604501	8571430	9428572
12	1137696	2	9	95	1595	1327	0	9747151	9428573	10285715
13	941384	3	9	50	1642	1887	1466	10691457	10285716	11142858
14	1214416	1	9	50	1052	0	0	11910868	11142859	12000001

Total number of pulses in waveform = 30  
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**Type 5 Radar Waveform\_14**

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	548787	3	12	55	1763	1575	1569	548787	0	749999
2	452885	2	12	100	1543	1661	0	1006579	750000	1499999
3	896873	2	12	55	1929	1527	0	1906656	1500000	2249999
4	695352	3	12	60	1911	1252	1230	2605464	2250000	2999999
5	458683	2	12	85	1259	1346	0	3068540	3000000	3749999
6	965385	3	12	60	1074	1085	1695	4036530	3750000	4499999
7	768782	2	12	70	1215	1474	0	4809166	4500000	5249999
8	725991	2	12	100	1774	1119	0	5537846	5250000	5999999
9	549742	2	12	70	1598	1740	0	6090481	6000000	6749999
10	1142147	3	12	70	1399	1130	1447	7235966	6750000	7499999
11	384318	2	12	65	1481	1564	0	7624260	7500000	8249999
12	676594	1	12	75	1871	0	0	8303899	8250000	8999999
13	896141	3	12	85	1083	1140	1849	9203911	9000000	9749999
14	774983	3	12	65	1988	1263	1544	9982966	9750000	10499999
15	1097110	2	12	70	1444	1339	0	11084871	10500000	11249999
16	267033	3	12	80	1564	1888	1292	11354687	11250000	11999999

Total number of pulses in waveform = 38  
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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	891743	3	5	95	1954	1801	1874	891743	0	1199999
2	1204002	1	5	100	1865	0	0	2101374	1200000	2399999
3	1308040	3	5	75	1274	1783	1843	3411279	2400000	3599999
4	977928	2	5	65	1249	1986	0	4394107	3600000	4799999
5	1489447	2	5	75	1058	1544	0	5886789	4800000	5999999
6	453519	2	5	90	1436	1894	0	6342910	6000000	7199999
7	1347065	2	5	50	1583	1296	0	7693305	7200000	8399999
8	720478	2	5	90	1146	1998	0	8416662	8400000	9599999
9	1734541	3	5	90	1577	1632	1205	10154347	9600000	10799999
10	1559146	1	5	80	1302	0	0	11717907	10800000	11999999

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

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	525356	1	14	55	1566	0	0	525356	0	1333332
2	822388	3	14	85	1681	1332	1511	1349310	1333333	2666665
3	1968274	1	14	80	1818	0	0	3322108	2666666	3999998
4	1308338	2	14	75	1244	1285	0	4632264	3999999	5333331
5	1788626	2	14	95	1862	1864	0	6423419	5333332	6666664
6	575601	1	14	70	1126	0	0	7002746	6666665	7999997
7	1852660	2	14	70	1990	1878	0	8856532	7999998	9333330
8	757231	3	14	95	1438	1697	1565	9617631	9333331	10666663
9	1222338	3	14	100	1498	1614	1089	10844669	10666664	11999996

Total number of pulses in waveform = 18  
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### Type 5 Radar Waveform\_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	377226	3	6	100	1074	1100	1855	377226	0	705881
2	883807	2	6	70	1572	1584	0	1265062	705882	1411763
3	543454	2	6	85	1324	1138	0	1811672	1411764	2117645
4	678662	2	6	80	1539	1969	0	2492796	2117646	2823527
5	798783	2	6	100	1750	1775	0	3295087	2823528	3529409
6	798754	3	6	65	1089	1277	1470	4097366	3529410	4235291
7	301047	2	6	65	1575	1349	0	4402249	4235292	4941173
8	842621	3	6	85	1193	1999	1149	5247794	4941174	5647055
9	1054434	1	6	55	1618	0	0	6306569	5647056	6352937
10	233232	1	6	75	1812	0	0	6541419	6352938	7058819
11	569581	3	6	65	1863	1792	1803	7102812	7058820	7764701
12	1177420	2	6	70	1001	1104	0	8285690	7764702	8470583
13	716179	2	6	65	1165	1585	0	9003974	8470584	9176465
14	689695	3	6	80	1019	1181	1866	9696419	9176466	9882347
15	326918	1	6	95	1301	0	0	10027403	9882348	10588229
16	1227712	2	6	95	1361	1446	0	11256416	10588230	11294111
17	727948	2	6	75	1596	1485	0	11987171	11294112	11999993

Total number of pulses in waveform = 36  
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### Type 5 Radar Waveform\_18

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	351208	2	18	60	1713	1291	0	351208	0	749999
2	445075	2	18	75	1154	1092	0	799287	750000	1499999
3	789994	3	18	90	1804	1784	1440	1591527	1500000	2249999
4	692305	3	18	70	1309	1504	1882	2288860	2250000	2999999
5	1017981	1	18	75	1729	0	0	3311536	3000000	3749999
6	545271	1	18	50	1393	0	0	3858536	3750000	4499999
7	655240	1	18	50	1355	0	0	4515169	4500000	5249999
8	1257938	2	18	65	1063	1883	0	5774462	5250000	5999999
9	244838	1	18	90	1586	0	0	6022246	6000000	6749999
10	1028202	3	18	90	1680	1803	1948	7052034	6750000	7499999
11	1189585	1	18	75	1092	0	0	8247050	7500000	8249999
12	125455	2	18	75	1011	1728	0	8373597	8250000	8999999
13	1356955	2	18	70	1734	1403	0	9733291	9000000	9749999
14	602939	2	18	65	1634	1314	0	10339367	9750000	10499999
15	723720	1	18	95	1641	0	0	11066035	10500000	11249999
16	521833	2	18	85	1457	1063	0	11589509	11250000	11999999

Total number of pulses in waveform = 29  
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### Type 5 Radar Waveform\_19

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	223378	3	19	100	1163	1187	1906	223378	0	705881
2	1082585	2	19	95	1494	1502	0	1310219	705882	1411763
3	411693	1	19	95	1530	0	0	1724908	1411764	2117645
4	807018	3	19	95	1704	1789	1563	2533456	2117646	2823527
5	576178	1	19	60	1789	0	0	3114690	2823528	3529409
6	556122	2	19	100	1394	1938	0	3672601	3529410	4235291
7	1023673	1	19	80	1321	0	0	4699606	4235292	4941173
8	883298	3	19	95	1536	1352	1007	5684225	4941174	5647055
9	230006	1	19	65	1804	0	0	5818126	5647056	6352937
10	624564	3	19	50	1382	1028	1082	6444494	6352938	7058819
11	1235765	3	19	70	1282	1591	1163	7683751	7058820	7764701
12	352325	2	19	100	1942	1200	0	8040112	7764702	8470583
13	1066757	2	19	55	1502	1753	0	9110011	8470584	9176465
14	433216	3	19	60	1977	1636	1208	9546482	9176466	9882347
15	414349	2	19	80	1992	1639	0	9965652	9882348	10588229
16	689177	3	19	70	1591	1724	1597	10658460	10588230	11294111
17	656173	2	19	50	1097	1859	0	11319545	11294112	11999993

Total number of pulses in waveform = 37  
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### Type 5 Radar Waveform\_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	434817	2	8	55	1258	1567	0	214506	0	631578
2	655083	2	8	70	1845	1385	0	652148	631579	1263157
3	1135183	2	8	65	1242	1093	0	1310461	1263158	1894736
4	1651134	1	8	90	1971	0	0	2447979	1894737	2526315
5	634355	3	8	100	1292	1207	1260	2615084	2526316	3157894
6	864660	1	8	85	1270	0	0	3253198	3157895	3789473
7	723997	1	8	55	1789	0	0	4119128	3789474	4421052
8	639353	2	8	85	1906	1290	0	4844914	4421053	5052631
9	694493	2	8	95	1005	1784	0	5487463	5052632	5684210
10	293556	2	8	60	1936	1517	0	6184745	5684211	6315789
11	1081211	2	8	95	1054	1907	0	6481754	6315790	6947368
12	37146	2	8	55	1109	1516	0	7565926	6947369	7578947
13	629211	1	8	75	1074	0	0	7605697	7578948	8210526
14	1011142	1	8	75	1222	0	0	8235982	8210527	8842105
15	712781	1	8	80	1453	0	0	9248346	8842106	9473684
16	382907	1	8	70	1866	0	0	9962580	9473685	10105263
17	870969	2	8	70	1622	1035	0	10347353	10105264	10736842
18	266616	3	8	80	1067	1769	1844	11220979	10736843	11368421
19	266616	2	8	65	1784	1146	0	11492275	11368422	12000000

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

### Type 5 Radar Waveform\_21

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	570742	2	8	75	1971	1765	0	570742	0	923076
2	1058083	2	8	80	1283	1416	0	1632561	923077	1846153
3	1124190	1	8	60	1477	0	0	2759450	1846154	2769230
4	40894	2	8	85	1418	1055	0	2801821	2769231	3692307
5	1660198	3	8	85	1218	1692	1397	4464492	3692308	4615384
6	842115	1	8	60	1885	0	0	5310914	4615385	5538461
7	458835	3	8	50	1691	1011	1973	5771634	5538462	6461538
8	1241904	1	8	50	1989	0	0	7018213	6461539	7384615
9	509652	2	8	70	1748	1020	0	7529854	7384616	8307692
10	1519907	3	8	65	1064	1140	1958	9052529	8307693	9230769
11	814382	1	8	70	1533	0	0	9871073	9230770	10153846
12	1166266	3	8	60	1346	1834	1017	11038872	10153847	11076923
13	717920	1	8	100	1893	0	0	11780989	11076924	12000000

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

### Type 5 Radar Waveform\_22

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	683101	2	10	95	1029	1720	0	683101	0	799999
2	424808	1	10	95	1781	0	0	1110658	800000	1599999
3	1114010	3	10	95	1471	1358	1864	2226449	1600000	2399999
4	264574	3	10	100	1672	1723	1688	2495716	2400000	3199999
5	1222958	3	10	75	1698	1118	1141	3723757	3200000	3999999
6	302147	1	10	85	1002	0	0	4029861	4000000	4799999
7	1180840	1	10	80	1146	0	0	5211703	4800000	5599999
8	589368	2	10	80	1768	1567	0	5802217	5600000	6399999
9	616273	2	10	100	1820	1673	0	6421825	6400000	7199999
10	1355542	2	10	90	1406	1155	0	7780860	7200000	7999999
11	727941	1	10	50	1149	0	0	8511362	8000000	8799999
12	298848	1	10	60	1945	0	0	8811359	8800000	9599999
13	962247	1	10	60	1109	0	0	9775551	9600000	10399999
14	1102443	1	10	60	1262	0	0	10879103	10400000	11199999
15	441839	1	10	85	1697	0	0	11322204	11200000	11999999

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



### Type 5 Radar Waveform\_23

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	115706	3	5	55	1938	1881	1410	115706	0	631578
2	1010085	2	5	75	1566	1425	0	1131020	631579	1263157
3	295230	1	5	60	1138	0	0	1429241	1263158	1894736
4	969468	2	5	70	1516	1801	0	2399837	1894737	2526315
5	638824	1	5	65	1184	0	0	3041978	2526316	3157894
6	699442	1	5	55	1808	0	0	3742604	3157895	3789473
7	450976	2	5	100	1385	1690	0	4195388	3789474	4421052
8	262269	1	5	65	1224	0	0	4460732	4421053	5052631
9	1114940	1	5	50	1668	0	0	5578896	5052632	5684210
10	329545	1	5	60	1851	0	0	5908109	5684211	6315789
11	957434	2	5	55	1555	1095	0	6867394	6315790	6947368
12	347563	2	5	75	1880	1494	0	7217607	6947369	7578947
13	630735	3	5	100	1552	1015	1134	7851716	7578948	8210526
14	890564	3	5	95	1098	1755	1341	8745981	8210527	8842105
15	261174	3	5	85	1158	1143	1282	9011349	8842106	9473684
16	996183	1	5	100	1784	0	0	10011115	9473685	10105263
17	436848	2	5	90	1248	1422	0	10449747	10105264	10736842
18	426690	3	5	95	1802	1471	1152	10879107	10736843	11368421
19	906260	1	5	100	1292	0	0	11789792	11368422	12000000

Total number of pulses in waveform = 35  
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### Type 5 Radar Waveform\_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	141706	2	12	50	1007	1337	0	141706	0	631578
2	846676	2	12	65	1680	1084	0	990726	631579	1263157
3	332089	1	12	85	1730	0	0	1325579	1263158	1894736
4	835520	3	12	100	1380	1704	1363	2162829	1894737	2526315
5	436708	1	12	100	1162	0	0	2603984	2526316	3157894
6	850362	2	12	80	1483	1656	0	3455508	3157895	3789473
7	543963	3	12	60	1202	1430	1726	4002610	3789474	4421052
8	479873	3	12	50	1350	1156	1353	4486841	4421053	5052631
9	1078545	1	12	90	1975	0	0	5669245	5052632	5684210
10	499436	1	12	60	1116	0	0	6070656	5684211	6315789
11	686529	2	12	65	1295	1050	0	6738301	6315790	6947368
12	281134	2	12	60	1816	1691	0	7021780	6947369	7578947
13	711991	3	12	90	1197	1003	1590	7737178	7578948	8210526
14	1072063	3	12	55	1770	1877	1504	8813031	8210527	8842105
15	75001	1	12	50	1955	0	0	8893183	8842106	9473684
16	662440	1	12	65	1299	0	0	9657578	9473685	10105263
17	1026525	3	12	60	1154	1050	1183	10585402	10105264	10736842
18	170998	3	12	80	1027	1531	1761	10759787	10736843	11368421
19	919820	3	12	80	1861	1476	1151	11683926	11368422	12000000

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

### Type 5 Radar Waveform\_25

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	746834	1	6	95	1055	0	0	746834	0	1499999
2	1027361	2	6	50	1671	1766	0	1775250	1500000	2999999
3	2693293	2	6	85	1595	1392	0	4471980	3000000	4499999
4	1267213	2	6	75	1481	1067	0	5742180	4500000	5999999
5	760047	3	6	55	1764	1857	1431	6504775	6000000	7499999
6	1949149	1	6	95	1128	0	0	8458976	7500000	8999999
7	2038521	1	6	70	1285	0	0	10498625	9000000	10499999
8	287025	2	6	75	1152	1344	0	10786935	10500000	11999999

Total number of pulses in waveform = 14  
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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	246586	1	18	50	1744	0	0	246586	0	1090908
2	849150	1	18	90	1837	0	0	1097480	1090909	2181817
3	1625592	2	18	50	1247	1046	0	2724909	2181818	3272726
4	1203973	2	18	100	1062	1870	0	3931175	3272727	4363635
5	524818	2	18	95	1431	1631	0	4458925	4363636	5454544
6	1217522	2	18	50	1595	1262	0	5679509	5454545	6545453
7	1321594	3	18	100	1387	1968	1219	7003960	6545454	7636362
8	733219	1	18	75	1816	0	0	7741753	7636363	8727271
9	1598377	2	18	95	1035	1228	0	9341946	8727272	9818180
10	505755	3	18	60	1036	1584	1797	9849964	9818181	10909089
11	1243455	2	18	65	1396	1367	0	11097836	10909090	11999998

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

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	608548	2	9	80	1488	1510	0	608548	0	705881
2	680987	1	9	50	1457	0	0	1292533	705882	1411763
3	245725	1	9	85	1889	0	0	1539715	1411764	2117645
4	994135	2	9	95	1045	1887	0	2535739	2117646	2823527
5	706015	2	9	50	1994	1109	0	3244686	2823528	3529409
6	389967	3	9	80	1231	1680	1915	3637756	3529410	4235291
7	740222	2	9	95	1439	1661	0	4382804	4235292	4941173
8	1181824	2	9	85	1188	1153	0	5567728	4941174	5647055
9	477394	3	9	85	1607	1620	1694	6047463	5647056	6352937
10	550730	1	9	60	1813	0	0	6603114	6352938	7058819
11	766447	3	9	95	1005	1736	1167	7371374	7058820	7764701
12	415060	2	9	70	1952	1557	0	7790342	7764702	8470583
13	1037336	3	9	50	1192	1761	1525	8831187	8470584	9176465
14	1013678	2	9	60	1685	1460	0	9849343	9176466	9882347
15	51983	2	9	65	1310	1239	0	9904471	9882348	10588229
16	1008112	3	9	60	1217	1016	1575	10915132	10588230	11294111
17	931448	3	9	50	1703	1976	1759	11850388	11294112	11999993

Total number of pulses in waveform = 37  
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### Type 5 Radar Waveform\_28

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	290247	3	19	80	1030	1531	1045	290247	0	749999
2	578054	3	19	60	1040	1737	1535	871907	750000	1499999
3	1185306	1	19	80	1660	0	0	2061525	1500000	2249999
4	761765	3	19	65	1187	1270	1759	2824950	2250000	2999999
5	568615	1	19	60	1460	0	0	3394781	3000000	3749999
6	490994	3	19	75	1134	1048	1314	3887235	3750000	4499999
7	983195	2	19	55	1956	1630	0	4873926	4500000	5249999
8	1023090	2	19	65	1416	1107	0	5900602	5250000	5999999
9	450323	1	19	85	1820	0	0	6353448	6000000	6749999
10	473241	2	19	55	1115	1028	0	6828509	6750000	7499999
11	857821	1	19	70	1754	0	0	7688473	7500000	8249999
12	842386	3	19	65	1818	1404	1842	8532613	8250000	8999999
13	1071276	3	19	80	1010	1584	1342	9608953	9000000	9749999
14	869117	2	19	80	1343	1406	0	10482006	9750000	10499999
15	53302	3	19	90	1142	1271	1972	10538057	10500000	11249999
16	886987	3	19	50	1612	1259	1134	11429429	11250000	11999999

Total number of pulses in waveform = 36  
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**Type 5 Radar Waveform\_29**

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	644439	1	14	100	1552	0	0	644439	0	749999
2	337758	1	14	95	1886	0	0	983749	750000	1499999
3	584794	2	14	60	1064	1034	0	1570429	1500000	2249999
4	895557	2	14	50	1500	1076	0	2468084	2250000	2999999
5	924337	3	14	85	1581	1217	1096	3394997	3000000	3749999
6	584637	3	14	75	1319	1541	1826	3983528	3750000	4499999
7	552307	1	14	80	1891	0	0	4540521	4500000	5249999
8	1065301	1	14	70	1871	0	0	5607713	5250000	5999999
9	700201	3	14	80	1667	1468	1323	6309785	6000000	6749999
10	1003530	3	14	90	1451	1126	1622	7317773	6750000	7499999
11	518067	3	14	85	1494	1255	1031	7840039	7500000	8249999
12	1103028	1	14	75	1204	0	0	8946847	8250000	8999999
13	111226	2	14	65	1736	1509	0	9059277	9000000	9749999
14	1069436	2	14	70	1061	1510	0	10131958	9750000	10499999
15	718724	3	14	90	1853	1704	1606	10853253	10500000	11249999
16	952959	1	14	95	1020	0	0	11811375	11250000	11999999

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

**Type 5 Radar Waveform\_30**

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	199743	3	17	65	1923	1828	1045	199743	0	705881
2	658006	3	17	70	1171	1460	1075	862545	705882	1411763
3	772466	2	17	65	1012	1210	0	1638717	1411764	2117645
4	1039218	1	17	100	1516	0	0	2680157	2117646	2823527
5	714797	1	17	70	1549	0	0	3396470	2823528	3529409
6	569295	3	17	65	1943	1333	1210	3967314	3529410	4235291
7	457122	3	17	100	1428	1055	1069	4428922	4235292	4941173
8	1074960	1	17	60	1689	0	0	5507434	4941174	5647055
9	290098	1	17	90	1064	0	0	5799221	5647056	6352937
10	786497	1	17	80	1930	0	0	6586782	6352938	7058819
11	954712	3	17	50	1811	1060	1973	7543424	7058820	7764701
12	657813	3	17	55	1402	1312	1448	8206081	7764702	8470583
13	957206	3	17	55	1260	1094	1601	9167449	8470584	9176465
14	622312	1	17	60	1653	0	0	9793716	9176466	9882347
15	650534	1	17	55	1114	0	0	10445903	9882348	10588229
16	551832	2	17	95	1412	1858	0	10998849	10588230	11294111
17	813828	2	17	90	1595	1537	0	11815947	11294112	11999993

Total number of pulses in waveform = 34  
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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	5296.9	1	16	5272.4	1
2	5257.6	1	17	5311.7	1
3	5312.5	1	18	5284.3	1
4	5309.6	1	19	5260.3	1
5	5281.6	1	20	5322.5	1
6	5316.9	1	21	5278.2	1
7	5251.0	1	22	5307.9	1
8	5286.7	1	23	5266.9	1
9	5275.7	1	24	5329.0	1
10	5263.4	1	25	5317.6	1
11	5293.3	1	26	5300.7	1
12	5320.3	1	27	5253.5	1
13	5305.8	1	28	5290.5	1
14	5269.7	1	29	5325.2	1
15	5327.0	1	30	5302.5	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5297	9	4	5271	12
12	5291	36	7	5291	21
18	5310	54	8	5283	24
24	5290	72	11	5275	33
27	5271	81	14	5234	42
32	5307	96	16	5275	48
38	5288	114	23	5245	69
48	5287	144	33	5268	99
52	5298	156	35	5287	105
60	5261	180	50	5263	150
68	5316	204	58	5267	174
89	5270	267	66	5266	198
92	5294	276	67	5260	201
--	--	--	84	5285	252
--	--	--	85	5281	255

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5295	6	16	5297	48
25	5293	75	17	5286	51
74	5317	222	21	5305	63
77	5275	231	23	5275	69
83	5312	249	36	5307	108
96	5306	288	61	5316	183
98	5319	294	64	5287	192
--	--	--	75	5298	225
--	--	--	78	5306	234
--	--	--	80	5281	240
--	--	--	83	5273	249
--	--	--	88	5295	264
--	--	--	89	5312	267
--	--	--	91	5299	273
--	--	--	93	5279	279
--	--	--	95	5301	285

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5295	3	10	5290	30
2	5261	6	12	5289	36
3	5318	9	23	5279	69
10	5262	30	28	5302	84
17	5279	51	36	5316	108
32	5271	96	64	5304	192
36	5311	108	68	5319	204
44	5272	132	97	5293	291
46	5281	138	--	--	--
61	5260	183	--	--	--
62	5276	186	--	--	--
68	5278	204	--	--	--
73	5309	219	--	--	--
83	5310	249	--	--	--
84	5317	252	--	--	--
89	5265	267	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5225	9	4	5305	12
27	5284	81	16	5265	48
30	5232	90	28	5316	84
41	5267	123	29	5314	87
49	5280	147	34	5286	102
60	5287	180	38	5299	114
62	5276	186	39	5284	117
74	5279	222	48	5310	144
76	5274	228	65	5267	195
--	--	--	69	5307	207
--	--	--	70	5270	210
--	--	--	82	5282	246
--	--	--	95	5269	285

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5260	24	8	5292	24
20	5261	60	10	5301	30
37	5281	111	23	5294	69
60	5286	180	24	5264	72
64	5295	192	33	5286	99
70	5279	210	38	5254	114
86	5311	258	59	5296	177
87	5283	261	67	5260	201
91	5305	273	71	5289	213
--	--	--	75	5267	225

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5277	15	0	5316	0
38	5260	114	1	5291	3
42	5306	126	19	5288	57
50	5280	150	22	5314	66
67	5319	201	27	5299	81
72	5266	216	46	5286	138
78	5269	234	76	5305	228
86	5273	258	83	5354	249
--	--	--	91	5327	273

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5272	3	6	5260	18
5	5276	15	9	5302	27
12	5306	36	11	5275	33
17	5284	51	36	5271	108
19	5285	57	43	5287	129
21	5275	63	51	5299	153
23	5314	69	59	5268	177
59	5291	177	63	5288	189
60	5308	180	67	5300	201
71	5300	213	74	5292	222
73	5301	219	75	5265	225
78	5278	234	76	5266	228
92	5292	276	77	5278	231
--	--	--	78	5290	234
--	--	--	79	5295	237
--	--	--	95	5286	285
--	--	--	96	5303	288

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5305	18	21	5289	63
14	5293	42	27	5277	81
19	5301	57	30	5258	90
26	5313	78	34	5267	102
30	5296	90	35	5278	105
48	5299	144	36	5265	108
82	5311	246	43	5311	129
87	5290	261	45	5287	135
89	5355	267	49	5261	147
91	5307	273	54	5308	162
98	5318	294	69	5273	207
--	--	--	72	5286	216
--	--	--	80	5263	240
--	--	--	83	5260	249
--	--	--	92	5276	276
--	--	--	97	5279	291
--	--	--	99	5271	297

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5314	21	4	5276	12
23	5320	69	15	5304	45
37	5273	111	36	5270	108
38	5318	114	39	5315	117
41	5284	123	43	5311	129
42	5275	126	62	5288	186
46	5291	138	76	5273	228
47	5299	141	78	5280	234
49	5288	147	93	5266	279
51	5289	153	99	5272	297
52	5279	156	--	--	--
53	5313	159	--	--	--
59	5290	177	--	--	--
61	5314	183	--	--	--
70	5326	210	--	--	--
98	5318	294	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
28	5244	84	22	5293	66
39	5271	117	30	5303	90
49	5293	147	39	5308	117
54	5289	162	42	5309	126
62	5289	186	47	5305	141
68	5256	204	64	5324	192
84	5262	252	75	5310	225
86	5295	258	79	5318	237
88	5281	264	88	5311	264
89	5279	267	92	5299	276
--	--	--	95	5345	285
--	--	--	99	5311	297



Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5289	0	6	5299	18
13	5290	39	9	5303	27
18	5273	54	15	5291	45
27	5271	81	30	5302	90
45	5292	135	34	5280	102
60	5317	180	44	5278	132
67	5276	201	46	5268	138
68	5278	204	47	5285	141
76	5312	228	50	5288	150
82	5315	246	63	5317	189
86	5294	258	65	5312	195
90	5287	270	68	5305	204
91	5314	273	76	5283	228
95	5266	285	80	5311	240
97	5304	291	89	5280	267
98	5299	294	92	5308	276
--	--	--	96	5290	288

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5301	6	2	5303	6
4	5297	12	12	5317	36
11	5274	33	16	5298	48
15	5278	45	29	5304	87
20	5287	60	42	5305	126
35	5301	105	45	5317	135
43	5285	129	47	5315	141
50	5269	150	49	5299	147
60	5288	180	55	5316	165
75	5286	225	57	5320	171
77	5291	231	65	5329	195
79	5276	237	74	5304	222
80	5294	240	80	5296	240
87	5270	261	91	5313	273
92	5298	276	96	5295	288

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5289	21	1	5307	3
16	5284	48	6	5262	18
45	5319	135	7	5309	21
49	5314	147	14	5293	42
63	5298	189	15	5291	45
65	5299	195	26	5300	78
67	5286	201	29	5295	87
75	5320	225	66	5302	198
90	5313	270	67	5275	201
93	5292	279	70	5273	210
--	--	--	74	5270	222
--	--	--	76	5316	228
--	--	--	77	5282	231
--	--	--	84	5272	252
--	--	--	97	5299	291

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5280	9	3	5295	9
4	5255	12	4	5290	12
7	556	21	45	5293	135
15	5277	45	48	5292	144
24	5249	72	64	5309	192
26	5261	78	73	5261	219
28	5281	84	78	5268	234
30	5288	90	83	5304	249
39	5218	117	96	5297	288
44	5277	132	97	5320	291
47	5287	141	--	--	--
51	5268	153	--	--	--
59	5289	177	--	--	--
60	5267	180	--	--	--
64	5266	192	--	--	--
70	5255	210	--	--	--
77	5235	231	--	--	--
99	5286	297	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5289	3	1	5289	3
15	5304	45	3	5296	9
19	5311	57	5	5314	15
28	5292	84	6	5294	18
35	5326	105	10	5293	30
44	5291	132	25	5299	75
57	5310	171	26	5284	78
67	5320	201	32	5320	96
83	5312	249	36	5308	108
93	5319	279	39	5279	117
94	5324	282	40	5306	120
98	5308	294	41	5274	123
--	--	--	58	5302	174
--	--	--	72	5301	216
--	--	--	79	5270	237
--	--	--	81	5295	243
--	--	--	90	5297	270
--	--	--	92	5265	276

## Statistical Performance Check for 802.11ac-VHT80 + 80 - 5290MHz

## Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5279.1	1	638	83	1
2	5297.6	1	778	68	1
3	5282.7	1	698	76	1
4	5272.8	1	758	70	1
5	5300.2	1	518	102	1
6	5303.3	1	598	89	1
7	5261.1	1	678	78	1
8	5279.2	1	878	61	1
9	5307.4	1	538	99	1
10	5263.9	1	918	58	1
11	5309.8	1	938	57	1
12	5266.4	1	3066	18	1
13	5306.1	1	858	62	1
14	5311.2	1	818	65	1
15	5285.6	1	558	95	1
16	5313.0	1	2870	19	1
17	5276.0	1	2310	23	1
18	5294.5	1	1048	51	1
19	5321.6	1	2691	20	1
20	5291.8	1	2890	19	1
21	5319.4	1	834	64	1
22	5326.5	1	1177	45	1
23	5251.0	1	2671	20	1
24	5288.3	1	1998	27	1
25	5324.9	1	1815	30	1
26	5255.7	1	2162	25	1
27	5329.0	1	2068	26	1
28	5258.3	1	650	82	1
29	5315.8	1	2763	20	1
30	5317.9	1	3054	18	1
Detection Percentage (%)					100%

## Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5251.0	1.3	221	28	1
2	5300.6	3.6	204	24	1
3	5306.8	3.1	184	23	1
4	5326.3	4.1	177	28	1
5	5255.3	4.5	207	26	1
6	5321.2	2.8	213	23	1
7	5294.5	3.9	230	26	1
8	5303.3	3.9	211	26	1
9	5297.8	2.3	179	24	1
10	5309.9	1.1	170	27	1
11	5324.7	3.5	193	28	1
12	5258.2	4.8	167	27	1
13	5329.0	3.0	200	28	1
14	5319.2	1.1	150	29	1
15	5261.7	2.6	161	23	1
16	5307.7	2.1	150	26	1
17	5311.3	4.5	205	29	1
18	5264.4	4.4	161	26	1
19	5285.7	3.1	227	29	1
20	5291.9	4.5	196	27	1
21	5317.8	4.7	169	29	1
22	5288.2	4.2	181	24	1
23	5313.1	1.1	217	28	1
24	5272.9	1.9	207	24	1
25	5315.6	4.3	156	27	1
26	5279.5	1.9	171	28	1
27	5282.4	4.0	193	28	1
28	5267.0	1.5	217	24	1
29	5270.3	3.8	188	29	1
30	5276.1	2.3	187	25	1
Detection Percentage (%)					100%

## Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5288.7	6.8	433	16	1
2	5297.0	7.7	477	18	1
3	5294.5	7.5	405	18	1
4	5306.1	8.9	391	16	1
5	5311.7	7.4	422	18	1
6	5300.2	6.8	259	18	1
7	5319.3	6.3	290	18	1
8	5303.8	7.2	495	16	1
9	5309.5	6.8	350	18	1
10	5317.9	9.0	344	17	1
11	5291.3	7.6	495	16	1
12	5321.5	7.5	435	18	1
13	5254.9	9.4	329	17	1
14	5307.9	9.2	462	16	1
15	5315.4	8.3	336	16	1
16	5329.0	9.1	311	18	1
17	5251.0	7.1	272	17	1
18	5270.8	9.3	340	17	1
19	5276.4	9.8	386	16	1
20	5282.5	6.4	326	16	1
21	5257.2	9.4	442	16	1
22	5285.6	6.3	337	18	1
23	5261.7	6.4	255	17	1
24	5279.7	10.0	319	16	1
25	5267.2	6.0	443	16	1
26	5326.0	9.8	445	17	1
27	5264.3	9.0	292	18	1
28	5313.6	7.1	281	16	1
29	5324.2	9.7	274	18	1
30	5273.6	6.3	427	16	1
Detection Percentage (%)					100%

## Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5278.8	16.9	300	12	1
2	5300.1	17.0	363	14	1
3	5275.7	17.3	390	16	1
4	5321.5	14.0	328	12	1
5	5272.9	18.2	479	13	1
6	5324.8	11.2	288	16	1
7	5319.1	11.4	367	12	1
8	5326.0	14.9	310	14	1
9	5270.1	19.2	314	16	1
10	5329.0	13.5	427	16	1
11	5267.2	14.5	491	15	1
12	5297.2	15.4	477	15	1
13	5282.1	16.7	330	15	1
14	5294.4	19.1	258	12	1
15	5285.5	18.7	278	13	1
16	5317.2	15.1	398	15	1
17	5264.5	16.1	474	15	1
18	5313.7	14.6	382	13	1
19	5288.4	11.3	269	15	1
20	5309.1	19.0	289	12	1
21	5261.7	11.5	261	12	1
22	5315.6	19.6	313	16	1
23	5291.9	17.2	349	15	1
24	5258.2	15.8	359	14	1
25	5303.7	19.9	422	15	1
26	5307.9	13.3	415	14	1
27	5311.4	16.6	453	14	1
28	5255.0	18.3	361	15	1
29	5306.6	16.9	421	13	1
30	5251.0	11.1	386	16	1
Detection Percentage (%)					100%

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

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





Radar Type 5 - Radar Statistical Performance

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

Type 5 Radar Waveform_1										
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	500882	3	9	50	1220	1932	1374	500882	0	999999
2	941767	1	9	95	1794	0	0	1447175	1000000	1999999
3	1239648	3	9	65	1625	1824	1129	2688617	2000000	2999999
4	359004	1	9	65	1255	0	0	3052199	3000000	3999999
5	1025169	2	9	75	1196	1767	0	4078623	4000000	4999999
6	1152070	1	9	75	1152	0	0	5233656	5000000	5999999
7	1309037	2	9	60	1923	1735	0	6543845	6000000	6999999
8	1285987	1	9	60	1198	0	0	7833490	7000000	7999999
9	866293	3	9	100	1127	1730	1789	8700981	8000000	8999999
10	609394	2	9	75	1549	1521	0	9315021	9000000	9999999
11	1381178	1	9	90	1795	0	0	10699269	10000000	10999999
12	438790	2	9	70	1926	1412	0	11139854	11000000	11999999
Total number of pulses in waveform = 22										
*****										



### Type 5 Radar Waveform\_2

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	488022	3	5	90	1501	1753	1041	488022	0	666666
2	258764	3	5	55	1577	1266	1340	751081	666667	1333333
3	1176159	2	5	85	1545	1272	0	1931423	1333334	2000000
4	79286	3	5	95	1534	1745	1047	2013526	2000001	2666667
5	862412	2	5	75	1901	1159	0	2880264	2666668	3333334
6	734499	2	5	50	1325	1567	0	3617823	3333335	4000001
7	411643	1	5	90	1309	0	0	4032358	4000002	4666668
8	1102730	1	5	50	1870	0	0	5136397	4666669	5333335
9	212445	3	5	95	1865	1413	1491	5350712	5333336	6000002
10	871605	1	5	80	1705	0	0	6227086	6000003	6666669
11	1102559	1	5	95	1961	0	0	7331350	6666670	7333336
12	163265	3	5	55	1738	1433	1456	7496576	7333337	8000003
13	1008321	3	5	50	1287	1211	1587	8509524	8000004	8666670
14	596332	2	5	50	1832	1987	0	9109921	8666671	9333337
15	826838	3	5	60	1587	1251	1159	9940578	9333338	10000004
16	117081	2	5	65	1907	1875	0	10061656	10000005	10666671
17	922076	1	5	80	1657	0	0	10987514	10666672	11333338
18	758174	1	5	55	1153	0	0	11747345	11333339	12000005

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

### 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	658191	1	14	95	1010	0	0	658191	0	1199999
2	801291	2	14	55	1673	1216	0	1460492	1200000	2399999
3	1029459	1	14	50	1725	0	0	2492840	2400000	3599999
4	1414182	2	14	90	1473	1227	0	3908747	3600000	4799999
5	1654675	3	14	70	1545	1353	1229	5566122	4800000	5999999
6	1529605	2	14	100	1941	1781	0	7099854	6000000	7199999
7	430952	1	14	55	1240	0	0	7534528	7200000	8399999
8	1414201	1	14	90	1010	0	0	8949969	8400000	9599999
9	740649	2	14	90	1410	1216	0	9691628	9600000	10799999
10	1287004	2	14	55	1894	1125	0	10981258	10800000	11999999

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

### Type 5 Radar Waveform\_4

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	542972	3	8	95	1464	1641	1611	542972	0	857142
2	348682	2	8	100	1759	1178	0	896370	857143	1714285
3	1271603	1	8	50	1138	0	0	2170910	1714286	2571428
4	799368	2	8	55	1188	1432	0	2971416	2571429	3428571
5	1124268	3	8	65	1171	1212	1312	4098304	3428572	4285714
6	619918	3	8	70	1835	1870	1716	4721917	4285715	5142857
7	954624	2	8	85	1070	1457	0	5681962	5142858	6000000
8	677742	1	8	50	1452	0	0	6362231	6000001	6857143
9	835656	3	8	70	1885	1789	1376	7199339	6857144	7714286
10	800708	3	8	100	1482	1761	1229	8005097	7714287	8571429
11	659901	1	8	75	1248	0	0	8669470	8571430	9428572
12	881512	2	8	75	1280	1201	0	9552230	9428573	10285715
13	774030	2	8	95	1995	1042	0	10328741	10285716	11142858
14	1047775	2	8	50	1335	1722	0	11379553	11142859	12000001

Total number of pulses in waveform = 30  
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### 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	592128	1	17	75	1936	0	0	8262	0	599999
2	944287	1	17	90	1610	0	0	602326	600000	1199999
3	547340	1	17	55	1353	0	0	1548223	1200000	1799999
4	386779	2	17	85	1836	1966	0	2096916	1800000	2399999
5	861210	3	17	55	1193	1481	1067	2487497	2400000	2999999
6	550221	3	17	60	1435	1016	1242	3352448	3000000	3599999
7	810504	2	17	60	1127	1068	0	3906362	3600000	4199999
8	614891	1	17	55	1358	0	0	4719061	4200000	4799999
9	578120	2	17	80	1654	1766	0	5335310	4800000	5399999
10	439902	2	17	75	1079	1196	0	5916860	5400000	5999999
11	274792	3	17	85	1997	1963	1383	6359027	6000000	6599999
12	614537	1	17	95	1984	0	0	6639162	6600000	7199999
13	1004966	1	17	55	1248	0	0	7255683	7200000	7799999
14	379619	1	17	75	1271	0	0	8261897	7800000	8399999
15	886560	2	17	90	1870	1712	0	8642787	8400000	8999999
16	546653	2	17	70	1827	1924	0	9532929	9000000	9599999
17	396530	2	17	70	1462	1047	0	10083333	9600000	10199999
18	683968	3	17	90	1005	1292	1828	10482372	10200000	10799999
19	770032	2	17	95	1434	1736	0	11170485	10800000	11399999
20		3	17	80	1115	1040	1539	11943667	11400000	11999999

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_6

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	297065	1	6	70	1792	0	0	297065	0	1090908
2	1736157	3	6	65	1752	1045	1840	2035014	1090909	2181817
3	905196	1	6	85	1880	0	0	2944847	2181818	3272726
4	728359	1	6	60	1164	0	0	3675086	3272727	4363635
5	910420	3	6	80	1977	1533	1334	4586670	4363636	5454544
6	1224317	3	6	90	1752	1452	1903	5815831	5454545	6545453
7	1549661	2	6	70	1634	1538	0	7370599	6545454	7636362
8	1086241	2	6	55	1891	1632	0	8460012	7636363	8727271
9	1071112	1	6	90	1160	0	0	9534647	8727272	9818180
10	785997	2	6	65	1400	1803	0	10321804	9818181	10909089
11	1396610	1	6	75	1697	0	0	11721617	10909090	11999998

Total number of pulses in waveform = 20  
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### Type 5 Radar Waveform\_7

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	640836	2	19	75	1283	1402	0	640836	0	1333332
2	1506712	1	19	90	1442	0	0	2150233	1333333	2666665
3	1002018	2	19	95	1338	1974	0	3153693	2666666	3999998
4	1798741	1	19	75	1987	0	0	4955746	3999999	5333331
5	1605080	2	19	60	1100	1248	0	6562813	5333332	6666664
6	1296781	1	19	75	1112	0	0	7861942	6666665	7999997
7	1229516	3	19	80	1597	1938	1635	9092570	7999998	9333330
8	1333718	1	19	50	1327	0	0	10431458	9333331	10666663
9	308294	1	19	90	1219	0	0	10741079	10666664	11999996

Total number of pulses in waveform = 14  
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### 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	122637	1	10	100	1722	0	0	122637	0	666666
2	914982	3	10	70	1606	1635	1434	1039341	666667	1333333
3	550293	1	10	60	1210	0	0	1594309	1333334	2000000
4	820671	1	10	80	1807	0	0	2416190	2000001	2666667
5	801248	2	10	80	1140	1298	0	3219245	2666668	3333334
6	275505	2	10	60	1750	1711	0	3497188	3333335	4000001
7	709847	1	10	70	1764	0	0	4210496	4000002	4666668
8	678830	3	10	85	1130	1007	1099	4891090	4666669	5333335
9	618764	1	10	75	1420	0	0	5513090	5333336	6000002
10	888251	3	10	80	1115	1372	1801	6402761	6000003	6666669
11	413271	3	10	80	1243	1196	1761	6820320	6666670	7333336
12	1002252	1	10	55	1980	0	0	7826772	7333337	8000003
13	564521	1	10	100	1547	0	0	8393273	8000004	8666670
14	731697	2	10	50	1776	1148	0	9126517	8666671	9333337
15	686216	3	10	60	1861	1936	1080	9815657	9333338	10000004
16	826125	3	10	90	1921	1679	1643	10646659	10000005	10666671
17	328815	2	10	85	1340	1380	0	10980717	10666672	11333338
18	451168	1	10	60	1409	0	0	11434596	11333339	12000005

Total number of pulses in waveform = 34

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### Type 5 Radar Waveform\_9

Num of Bursts = 15

Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	364222	2	18	85	1610	1729	0	364222	0	799999
2	844488	3	18	60	1779	1305	1352	1212049	800000	1599999
3	1113688	2	18	100	1433	1824	0	2330173	1600000	2399999
4	135748	3	18	80	1990	2469178	1921	2469178	2400000	3199999
5	1435856	2	18	55	1827	1519	0	3910830	3200000	3999999
6	720910	2	18	100	1503	1332	0	4635086	4000000	4799999
7	228873	1	18	95	1004	0	0	4866794	4800000	5599999
8	920117	2	18	85	1081	1944	0	5787915	5600000	6399999
9	1272623	1	18	60	1627	0	0	7063563	6400000	7199999
10	328322	2	18	75	1534	1190	0	7393512	7200000	7999999
11	1220914	1	18	65	1963	0	0	8617150	8000000	8799999
12	904771	3	18	75	1860	1614	1584	9523584	8800000	9599999
13	494284	2	18	50	1757	1746	0	10023226	9600000	10399999
14	654899	2	18	100	1077	1940	0	10681628	10400000	11199999
15	785261	1	18	65	1204	0	0	11469906	11200000	11999999

Total number of pulses in waveform = 29

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### Type 5 Radar Waveform\_10

Num of Bursts = 12

Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	746663	2	12	55	1760	1998	0	746663	0	999999
2	810873	3	12	95	1991	1893	1172	1561294	1000000	1999999
3	861373	1	12	60	1654	0	0	2427723	2000000	2999999
4	646308	2	12	75	1500	1602	0	3075685	3000000	3999999
5	1092853	2	12	65	1601	1248	0	4171640	4000000	4999999
6	1340167	2	12	60	1020	1708	0	5514656	5000000	5999999
7	666370	3	12	85	1572	1471	1847	6183754	6000000	6999999
8	1290669	3	12	75	1612	1719	1061	7479313	7000000	7999999
9	784086	2	12	90	1019	1124	0	8267791	8000000	8999999
10	1408146	2	12	80	1353	1368	0	9678080	9000000	9999999
11	640948	2	12	55	1754	1306	0	10321749	10000000	10999999
12	1362347	2	12	50	1451	1178	0	11687156	11000000	11999999

Total number of pulses in waveform = 26

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### Type 5 Radar Waveform\_11

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	425380	1	9	95	1620	0	0	425380	0	631578
2	731055	3	9	85	1651	1877	1765	1158055	631579	1263157
3	176628	1	9	50	1306	0	0	1338976	1263158	1894736
4	565393	3	9	60	1702	1845	1240	1905675	1894737	2526315
5	1003620	2	9	90	1221	1055	0	2914082	2526316	3157894
6	582833	3	9	70	1193	1723	1743	3499191	3157895	3789473
7	332284	2	9	50	1622	1534	0	3836134	3789474	4421052
8	1186806	1	9	80	1876	0	0	5026096	4421053	5052631
9	250240	2	9	85	1118	1002	0	5278212	5052632	5684210
10	437144	2	9	100	1996	1550	0	5717476	5684211	6315789
11	1020344	3	9	60	1971	1780	1781	6741366	6315790	6947368
12	623879	3	9	65	1773	1881	1516	7370777	6947369	7578947
13	481873	1	9	75	1469	0	0	7857820	7578948	8210526
14	581463	3	9	60	1977	1082	1222	8440752	8210527	8842105
15	713192	2	9	90	1485	1242	0	9158225	8842106	9473684
16	894627	3	9	75	1625	1146	1689	10055579	9473685	10105263
17	163152	1	9	100	1377	0	0	10223191	10105264	10736842
18	648255	1	9	60	1594	0	0	10872823	10736843	11368421
19	497969	1	9	75	1574	0	0	11372386	11368422	12000000

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_12

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	279648	3	12	65	1809	1155	1174	279648	0	749999
2	1158174	3	12	90	1857	1517	1883	1441960	750000	1499999
3	185512	3	12	80	1847	1251	1125	1632729	1500000	2249999
4	843233	1	12	60	1238	0	0	2480185	2250000	2999999
5	521635	1	12	95	1875	0	0	3003058	3000000	3749999
6	899238	1	12	85	1331	0	0	3904171	3750000	4499999
7	1306569	3	12	95	1846	1260	1462	5212071	4500000	5249999
8	561526	3	12	80	1406	1086	1775	5778165	5250000	5999999
9	511516	2	12	65	1347	1831	0	6293948	6000000	6749999
10	1127994	2	12	95	1427	1356	0	7425120	6750000	7499999
11	269313	3	12	70	1284	1306	1862	7697216	7500000	8249999
12	1116729	1	12	95	1120	0	0	8818397	8250000	8999999
13	319022	2	12	95	1777	1806	0	9138539	9000000	9749999
14	1288165	2	12	75	1663	1083	0	10430287	9750000	10499999
15	741094	2	12	95	1064	1545	0	11174127	10500000	11249999
16	547599	2	12	100	1911	1049	0	11724335	11250000	11999999

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

### 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	720803	2	5	70	1438	1035	0	720803	0	1199999
2	854110	3	5	55	1293	1137	1670	1577386	1200000	2399999
3	1925795	2	5	65	1738	1979	0	3507281	2400000	3599999
4	264163	1	5	75	1359	0	0	3775161	3600000	4799999
5	1071241	1	5	65	1886	0	0	4847761	4800000	5999999
6	2239648	1	5	85	1957	0	0	7089295	6000000	7199999
7	679616	2	5	75	1020	1202	0	7770868	7200000	8399999
8	793264	2	5	90	1407	1408	0	8566354	8400000	9599999
9	1857845	3	5	80	1944	1571	1706	10427014	9600000	10799999
10	1387258	1	5	95	1340	0	0	11819493	10800000	11999999

Total number of pulses in waveform = 18  
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### Type 5 Radar Waveform\_14

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	225406	3	14	75	1337	1856	1281	225406	0	923076
2	886693	1	14	55	1681	0	0	1116573	923077	1846153
3	824586	2	14	70	1827	1607	0	1942840	1846154	2769230
4	1519453	1	14	100	1205	0	0	3465727	2769231	3692307
5	292387	3	14	75	1444	1340	1969	3759319	3692308	4615384
6	1409693	3	14	50	1107	1045	1581	5173765	4615385	5538461
7	580956	2	14	65	1668	1438	0	5758454	5538462	6461538
8	701187	3	14	55	1363	1397	1603	6462747	6461539	7384615
9	931326	3	14	55	1460	1994	1967	7398436	7384616	8307692
10	1191724	3	14	60	1837	1198	1411	8595581	8307693	9230769
11	984192	3	14	70	1703	1981	1236	9584219	9230770	10153846
12	980133	2	14	50	1252	1547	0	10569272	10153847	11076923
13	1295696	1	14	80	1029	0	0	11867767	11076924	12000000

Total number of pulses in waveform = 30  
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### Type 5 Radar Waveform\_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	152645	3	8	95	1199	1241	1764	152645	0	799999
2	728784	1	8	55	1683	0	0	885633	800000	1599999
3	1368268	1	8	50	1114	0	0	2255584	1600000	2399999
4	155733	3	8	85	1599	1934	1953	2412431	2400000	3199999
5	948643	3	8	100	1673	1537	1234	3366560	3200000	3999999
6	1320629	1	8	95	1164	0	0	4691633	4000000	4799999
7	226348	2	8	50	1843	1420	0	4919145	4800000	5599999
8	1256119	2	8	70	1305	1859	0	6178527	5600000	6399999
9	288720	3	8	90	1907	1563	1464	6470411	6400000	7199999
10	1114343	2	8	100	1002	1384	0	7589688	7200000	7999999
11	1025483	1	8	70	1162	0	0	8617557	8000000	8799999
12	845041	2	8	90	1927	1160	0	9463760	8800000	9599999
13	786693	1	8	55	1570	0	0	10253540	9600000	10399999
14	876022	2	8	80	1503	1041	0	11131132	10400000	11199999
15	394107	1	8	85	1447	0	0	11527783	11200000	11999999

Total number of pulses in waveform = 28  
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### Type 5 Radar Waveform\_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	501701	1	19	55	1551	0	0	501701	0	857142
2	649104	3	19	80	1753	1940	1659	1152356	857143	1714285
3	683797	3	19	55	1263	1486	1841	1841505	1714286	2571428
4	1358658	3	19	90	1589	1185	1037	3204753	2571429	3428571
5	596513	1	19	90	1668	0	0	3805077	3428572	4285714
6	1157746	2	19	90	1165	1318	0	4964491	4285715	5142857
7	881552	3	19	85	1751	1072	1880	5848526	5142858	6000000
8	953919	3	19	80	1439	1312	1302	6807148	6000001	6857143
9	161740	3	19	75	1991	1840	1490	6972941	6857144	7714286
10	782449	3	19	60	1195	1132	1449	7760711	7714287	8571429
11	1433963	3	19	70	1290	1980	1325	9198450	8571430	9428572
12	798947	1	19	90	1481	0	0	10001992	9428573	10285715
13	340736	2	19	80	1563	1739	0	10344209	10285716	11142858
14	1361576	1	19	60	1754	0	0	11709087	11142859	12000001

Total number of pulses in waveform = 32  
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### Type 5 Radar Waveform\_17

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	296980	2	6	85	1644	1109	0	296980	0	799999
2	1275357	1	6	100	1429	0	0	1575090	800000	1599999
3	300637	1	6	80	1610	0	0	1877156	1600000	2399999
4	754363	2	6	85	1229	1744	0	2633129	2400000	3199999
5	1203135	1	6	60	1312	0	0	3839237	3200000	3999999
6	562596	1	6	75	1543	0	0	4403145	4000000	4799999
7	737456	1	6	95	1402	0	0	5142144	4800000	5599999
8	856067	2	6	75	1801	1008	0	5999613	5600000	6399999
9	1044673	2	6	80	1290	1284	0	7047095	6400000	7199999
10	703193	1	6	60	1056	0	0	7752862	7200000	7999999
11	826736	3	6	50	1147	1186	1245	8580654	8000000	8799999
12	932971	3	6	55	1940	1499	1799	9517203	8800000	9599999
13	252215	3	6	60	1652	1765	1608	9774656	9600000	10399999
14	891729	3	6	60	1177	1850	1429	10671410	10400000	11199999
15	754170	2	6	100	1530	1564	0	11430036	11200000	11999999

Total number of pulses in waveform = 28  
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### Type 5 Radar Waveform\_18

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	248183	3	18	85	1240	1359	1063	248183	0	1199999
2	1795448	3	18	90	1290	1715	1790	2047293	1200000	2399999
3	692206	3	18	50	1009	1263	1589	2744294	2400000	3599999
4	1054664	2	18	90	1137	1110	0	3802819	3600000	4799999
5	1732915	3	18	100	1321	1660	1096	5537981	4800000	5999999
6	513273	1	18	100	1146	0	0	6055331	6000000	7199999
7	2281320	3	18	50	1702	1123	1637	8337797	7200000	8399999
8	350430	3	18	50	1433	1674	1314	8692689	8400000	9599999
9	1893223	1	18	100	1316	0	0	10590333	9600000	10799999
10	593939	1	18	100	1527	0	0	11185588	10800000	11999999

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

### Type 5 Radar Waveform\_19

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	525097	2	10	75	1494	1630	0	525097	0	999999
2	1330055	3	10	85	1916	1987	1971	1858276	1000000	1999999
3	817535	2	10	50	1288	1695	0	2681685	2000000	2999999
4	516422	1	10	90	1760	0	0	3201090	3000000	3999999
5	1526328	1	10	55	1264	0	0	4729178	4000000	4999999
6	501506	2	10	55	1546	1383	0	5231948	5000000	5999999
7	1193485	3	10	60	1240	1494	1188	6428362	6000000	6999999
8	1542421	3	10	55	1342	1888	1975	7974705	7000000	7999999
9	391798	3	10	100	1750	1414	1463	8371708	8000000	8999999
10	1551020	3	10	80	1954	1845	1610	9927355	9000000	9999999
11	133747	1	10	100	1057	0	0	10066511	10000000	10999999
12	1052002	1	10	95	1609	0	0	11119570	11000000	11999999

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



### Type 5 Radar Waveform\_20

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	525097	2	17	75	1494	1630	0	525097	0	999999
2	1330055	3	17	85	1916	1987	1971	1858276	1000000	1999999
3	817535	2	17	50	1288	1695	0	2681685	2000000	2999999
4	516422	1	17	90	1760	0	0	3201090	3000000	3999999
5	1526328	1	17	55	1264	0	0	4729178	4000000	4999999
6	501506	2	17	55	1546	1383	0	5231948	5000000	5999999
7	1199485	3	17	60	1240	1494	1188	6428362	6000000	6999999
8	1542421	3	17	55	1342	1888	1975	7974705	7000000	7999999
9	391798	3	17	100	1750	1414	1463	8371708	8000000	8999999
10	1551020	3	17	80	1954	1845	1610	9927355	9000000	9999999
11	133747	1	17	100	1057	0	0	10066511	10000000	10999999
12	1052002	1	17	95	1609	0	0	11119570	11000000	11999999

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

### 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	625262	2	10	85	1021	1890	0	625262	0	799999
2	946189	1	10	90	1903	0	0	1574362	800000	1599999
3	276879	1	10	80	1479	0	0	1853144	1600000	2399999
4	874169	2	10	85	1943	1736	0	2728792	2400000	3199999
5	745858	3	10	55	1546	1987	1358	3478329	3200000	3999999
6	1308924	2	10	80	1424	1157	0	4792144	4000000	4799999
7	367286	1	10	60	1217	0	0	5162011	4800000	5599999
8	1067117	2	10	80	1722	1588	0	6230345	5600000	6399999
9	209638	2	10	65	1516	1833	0	6443293	6400000	7199999
10	1255702	1	10	85	1750	0	0	7702344	7200000	7999999
11	533818	1	10	95	1277	0	0	8237912	8000000	8799999
12	1240440	1	10	50	1919	0	0	9479629	8800000	9599999
13	660786	1	10	75	1927	0	0	10142334	9600000	10399999
14	627847	3	10	95	1596	1063	1078	10772108	10400000	11199999
15	508064	3	10	90	1914	1509	1806	11283909	11200000	11999999

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

### Type 5 Radar Waveform\_22

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	841188	1	12	95	1431	0	0	841188	0	1499999
2	1990947	1	12	80	1426	0	0	2833566	1500000	2999999
3	1517937	3	12	60	1832	1299	1725	4352929	3000000	4499999
4	220806	1	12	80	1449	0	0	4578591	4500000	5999999
5	2479919	2	12	90	1775	1512	0	7059959	6000000	7499999
6	693077	3	12	95	1292	1096	1922	7756323	7500000	8999999
7	2570659	3	12	80	1762	1881	1302	10331292	9000000	10499999
8	780641	1	12	70	1011	0	0	11116878	10500000	11999999

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





### Type 5 Radar Waveform\_23

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	7090	1	8	95	1051	0	0	7090	0	749999
2	812293	1	8	50	1724	0	0	820434	750000	1499999
3	705695	3	8	55	1659	1073	1573	1527853	1500000	2249999
4	1200596	1	8	95	1462	0	0	2732754	2250000	2999999
5	737984	2	8	90	1758	1541	0	3472200	3000000	3749999
6	316540	1	8	60	1066	0	0	3792039	3750000	4499999
7	1037112	2	8	90	1299	1395	0	4830217	4500000	5249999
8	596774	1	8	80	1173	0	0	5429685	5250000	5999999
9	1271822	3	8	95	1863	1983	1912	6702680	6000000	6749999
10	675953	1	8	70	1048	0	0	7384391	6750000	7499999
11	575488	1	8	60	1782	0	0	7960927	7500000	8249999
12	571615	3	8	100	1899	1784	1459	8534304	8250000	8999999
13	795957	3	8	55	1184	1635	1599	9335403	9000000	9749999
14	512640	2	8	85	2000	1499	0	9852461	9750000	10499999
15	1016420	1	8	100	1319	0	0	10872380	10500000	11249999
16	702504	2	8	60	1759	1070	0	11576203	11250000	11999999

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

### Type 5 Radar Waveform\_24

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	2951	2	17	65	1426	1350	0	2951	0	749999
2	1037874	3	17	95	1880	1456	1168	1043601	750000	1499999
3	1105265	2	17	90	1876	1688	0	2153370	1500000	2249999
4	263350	3	17	95	1242	1499	1078	2420284	2250000	2999999
5	631630	1	17	50	1514	0	0	3055733	3000000	3749999
6	734498	3	17	50	1696	1020	1617	3791745	3750000	4499999
7	1294924	1	17	65	1633	0	0	5091002	4500000	5249999
8	220659	2	17	65	1784	1770	0	5313294	5250000	5999999
9	1324319	1	17	80	1524	0	0	6641167	6000000	6749999
10	718405	1	17	75	1130	0	0	7361096	6750000	7499999
11	196003	3	17	90	1293	1707	1876	7568229	7500000	8249999
12	1043467	2	17	90	1721	1935	0	8606572	8250000	8999999
13	620487	3	17	75	1638	1960	1947	9230715	9000000	9749999
14	789588	3	17	70	1842	1778	1762	10025848	9750000	10499999
15	700515	1	17	55	1789	0	0	10731745	10500000	11249999
16	773668	3	17	65	1791	1832	1644	11507202	11250000	11999999

Total number of pulses in waveform = 34  
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### Type 5 Radar Waveform\_25

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	491511	1	5	75	1963	0	0	491511	0	705881
2	394981	2	5	55	1994	1676	0	888455	705882	1411763
3	1060739	2	5	75	1068	1707	0	1952864	1411764	2117645
4	781182	1	5	55	1595	0	0	2736821	2117646	2823527
5	743231	2	5	55	1919	1665	0	3481647	2823528	3529409
6	426511	3	5	55	1860	1844	1270	3911742	3529410	4235291
7	807425	3	5	65	1183	1371	1255	4724141	4235292	4941173
8	694659	3	5	95	1507	1976	1026	5422609	4941174	5647055
9	485466	3	5	65	1992	1591	1542	5912584	5647056	6352937
10	964321	3	5	95	1799	1038	1401	6882030	6352938	7058819
11	847593	1	5	65	1039	0	0	7733861	7058820	7764701
12	265286	3	5	95	1517	1133	1120	8000186	7764702	8470583
13	498662	1	5	60	1066	0	0	8502618	8470584	9176465
14	1280319	3	5	60	1098	1906	1999	9784003	9176466	9882347
15	117919	3	5	50	1005	1933	1731	9906925	9882348	10588229
16	772506	3	5	55	1588	1877	1141	10684100	10588230	11294111
17	1295627	1	5	65	1282	0	0	11984333	11294112	11999993

Total number of pulses in waveform = 38  
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### Type 5 Radar Waveform\_26

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	478449	1	6	100	1293	0	0	478449	0	666666
2	648660	3	6	70	1200	1695	1342	1128402	666667	1333333
3	395467	3	6	95	1323	1678	1403	1528106	1333334	2000000
4	685737	1	6	95	1798	0	0	2218247	2000001	2666667
5	733750	2	6	80	1924	1397	0	2953795	2666668	3333334
6	652332	2	6	90	1098	1534	0	3609448	3333335	4000001
7	904961	1	6	80	1941	0	0	4517041	4000002	4666668
8	487521	3	6	60	1856	1685	1763	5006503	4666669	5333335
9	556037	1	6	90	1008	0	0	5567844	5333336	6000002
10	1015620	2	6	55	1300	1789	0	6584472	6000003	6666669
11	214449	2	6	95	1946	1913	0	6802010	6666670	7333336
12	559697	3	6	100	1608	1514	1514	7365566	7333337	8000003
13	760758	3	6	80	1196	1140	1517	8130960	8000004	8666670
14	536454	2	6	55	1818	1513	0	8671267	8666671	9333337
15	926685	3	6	50	1115	1003	1261	9601283	9333338	10000004
16	1008475	1	6	50	1510	0	0	10613137	10000005	10666671
17	566276	1	6	65	1897	0	0	11180923	10666672	11333338
18	761653	2	6	75	1966	1233	0	11944473	11333339	12000005

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

### Type 5 Radar Waveform\_27

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	120827	1	9	55	1994	0	0	120827	0	799999
2	1294415	2	9	65	1109	1614	0	1417236	800000	1599999
3	286814	2	9	80	1043	1132	0	1706773	1600000	2399999
4	955491	1	9	50	1200	0	0	2664439	2400000	3199999
5	1127179	2	9	65	1652	1336	0	3792818	3200000	3999999
6	660924	2	9	95	1209	1258	0	4456730	4000000	4799999
7	1055095	1	9	90	1117	0	0	5514292	4800000	5599999
8	624659	3	9	85	1894	1854	1899	6140068	5600000	6399999
9	784123	2	9	50	1398	1981	0	6929838	6400000	7199999
10	500513	3	9	95	1216	1452	1847	7433730	7200000	7999999
11	772930	1	9	100	1693	0	0	8211175	8000000	8799999
12	968356	2	9	75	1077	1514	0	9181224	8800000	9599999
13	851380	3	9	60	1354	1634	1636	10035195	9600000	10399999
14	1097769	3	9	75	1737	1802	1498	11137588	10400000	11199999
15	685365	2	9	95	1379	1050	0	11827990	11200000	11999999

Total number of pulses in waveform = 30  
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### Type 5 Radar Waveform\_28

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	520966	2	18	80	1874	1340	0	520966	0	1499999
2	1656252	1	18	70	1096	0	0	2180432	1500000	2999999
3	1866156	1	18	100	1238	0	0	4047684	3000000	4499999
4	1904724	3	18	55	1737	1686	1507	5953646	4500000	5999999
5	493374	3	18	80	1277	1666	1576	6451950	6000000	7499999
6	1405944	3	18	50	1748	1225	1050	7862413	7500000	8999999
7	2270626	2	18	85	1265	1550	0	10137062	9000000	10499999
8	735124	1	18	90	1774	0	0	10875001	10500000	11999999

Total number of pulses in waveform = 16  
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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	570921	3	19	90	1446	1526	1020	570921	0	1090908
2	1377112	2	19	90	1140	1617	0	1952025	1090909	2181817
3	865064	2	19	65	1439	1599	0	2819846	2181818	3272726
4	848960	2	19	55	1391	1269	0	3671844	3272727	4363635
5	852792	3	19	55	1909	1669	1691	4527296	4363636	5454544
6	1276526	3	19	75	1219	1788	1494	5809091	5454545	6545453
7	878312	2	19	60	1535	1801	0	6691904	6545454	7636362
8	1353475	3	19	90	1442	1694	1991	8048715	7636363	8727271
9	1044131	1	19	75	1482	0	0	9097973	8727272	9818180
10	1089008	1	19	70	1834	0	0	10188463	9818181	10909089
11	1421081	2	19	75	1544	1004	0	11611378	10909090	11999998

Total number of pulses in waveform = 24  
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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	91680	1	14	90	1045	0	0	91680	0	749999
2	761586	1	14	80	1183	0	0	854311	750000	1499999
3	1170277	2	14	75	1045	1648	0	2025771	1500000	2249999
4	367068	3	14	90	1488	1456	1253	2395532	2250000	2999999
5	612665	1	14	95	1277	0	0	3012394	3000000	3749999
6	1264729	1	14	80	1125	0	0	4278400	3750000	4499999
7	443594	3	14	85	1572	1734	1266	4723119	4500000	5249999
8	974588	1	14	55	1767	0	0	5702279	5250000	5999999
9	905116	2	14	65	1215	1803	0	6609162	6000000	6749999
10	807194	1	14	50	1326	0	0	7419374	6750000	7499999
11	202180	1	14	70	1853	0	0	7622880	7500000	8249999
12	1115213	1	14	50	1390	0	0	8739946	8250000	8999999
13	588714	1	14	75	1914	0	0	9330050	9000000	9749999
14	559096	2	14	100	1297	1137	0	9891050	9750000	10499999
15	1024257	2	14	50	1452	1657	0	10917751	10500000	11249999
16	802876	3	14	55	1928	1577	1634	11723736	11250000	11999999

Total number of pulses in waveform = 26  
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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	5266.9	1	16	5291.0	1
2	5300.8	1	17	5297.7	1
3	5329.0	1	18	5324.7	1
4	5279.5	1	19	5321.5	1
5	5326.2	1	20	5279.3	1
6	5313.4	1	21	5251.0	1
7	5276.0	1	22	5282.5	1
8	5288.6	1	23	5294.3	1
9	5317.6	1	24	5272.8	1
10	5255.2	1	25	5285.8	1
11	5307.2	1	26	5305.8	1
12	5311.1	1	27	5258.1	1
13	5264.4	1	28	5309.7	1
14	5315.8	1	29	5261.0	1
15	5319.3	1	30	5303.3	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5299	0	0	5318	0
3	5297	9	4	5298	12
5	5306	15	9	5291	27
13	5290	39	12	5294	36
18	5286	54	18	5319	54
23	5293	69	25	5288	75
25	5270	75	26	5305	78
32	5264	96	36	5269	108
33	5271	99	38	5268	114
34	5304	102	45	5299	135
40	5287	120	57	5264	171
42	5268	126	61	5267	183
45	5292	135	80	5307	240
67	5295	201	82	5277	246
70	5296	210	84	5270	252
73	5282	219	95	5275	285
78	5265	234	--	--	--
81	5274	243	--	--	--
83	5280	249	--	--	--
88	5281	264	--	--	--
92	5299	276	--	--	--
99	5273	297	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5311	3	1	5318	3
3	5326	9	4	5275	12
5	5313	15	5	5301	15
26	5329	78	9	5262	27
28	5344	84	11	5287	33
29	5305	87	14	5299	42
30	5351	90	16	5306	48
45	5340	135	31	5294	93
47	5316	141	34	5289	102
59	5318	177	35	5272	105
66	5315	198	54	5307	162
72	5322	216	68	5288	204
79	5295	237	80	5269	240
81	5319	243	87	5312	261
91	5308	273	89	5281	267
94	5312	282	91	5261	273
--	--	--	94	5314	282

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5313	18	11	5281	33
16	5345	48	14	5297	42
26	5357	78	21	5305	63
33	5312	99	27	5294	81
40	5300	120	36	5318	108
41	5324	123	55	5277	165
44	5295	132	57	5292	171
47	5318	141	65	5287	195
65	5299	195	67	5308	201
73	5328	219	75	5289	225
74	5310	222	91	5295	273
84	5333	252	92	5311	276
97	5308	291	99	5322	297
98	5348	294	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5298	3	13	5289	39
6	5300	18	19	5276	57
22	5289	66	23	5316	69
24	5308	72	25	5281	75
34	5304	102	40	5305	120
54	5245	162	41	5290	123
61	5309	183	43	5309	129
62	5306	186	48	5288	144
63	5288	189	63	5288	189
71	5295	213	71	5311	213
95	5313	285	76	5302	228
96	5304	288	77	5279	231
--	--	--	83	5299	249
--	--	--	96	5312	288

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5307	3	1	5280	3
27	5290	81	7	5274	21
31	5301	93	8	5296	24
53	5297	159	15	5270	45
68	5283	204	19	5236	57
82	5291	246	27	5268	81
84	5310	252	33	5265	99
86	5304	258	42	5256	126
92	5292	276	48	5290	144
95	5309	285	52	5278	156
--	--	--	65	5267	195
--	--	--	67	5261	201
--	--	--	72	5233	216
--	--	--	83	5226	249
--	--	--	92	5288	276

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
4	5299	12	6	5289	18
6	5303	18	10	5290	30
7	5293	21	11	5344	33
26	5301	78	22	5286	66
32	5298	96	25	5279	75
33	5325	99	33	5327	99
37	5302	111	57	5279	171
55	5311	165	59	5293	177
59	5318	177	67	5294	201
73	5312	219	74	5278	222
78	5286	234	84	5288	252
85	5289	255	89	5291	267



Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5295	6	12	5294	36
3	5271	9	22	5280	66
9	5285	27	30	5269	90
11	5301	33	39	5281	117
14	5267	42	42	5288	126
20	5302	60	47	5308	141
24	5288	72	49	5301	147
26	5276	78	52	5279	156
27	5245	81	75	5285	225
39	5267	117	76	5299	228
45	5238	135	78	5282	234
64	5272	192	81	5273	243
82	5298	246	94	5275	282
--	--	--	99	5311	297

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5293	6	1	5281	3
4	5287	12	2	5318	6
6	5311	18	5	5296	15
12	5286	36	6	5298	18
14	5327	42	12	5305	36
24	5290	72	38	5289	114
26	5328	78	66	5299	198
36	5291	108	69	5309	207
37	5292	111	70	5284	210
52	5351	156	71	5295	213
55	5299	165	80	5319	240
60	5295	180	--	--	--
67	5302	201	--	--	--
78	5283	234	--	--	--
81	5318	243	--	--	--
90	5326	270	--	--	--
91	5311	273	--	--	--
93	5319	279	--	--	--
95	5336	285	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5327	9	2	5305	6
4	5282	12	11	5314	33
9	5327	27	15	5310	45
22	5289	66	21	5319	63
25	5303	75	33	5291	99
31	5313	93	37	5299	111
49	5309	147	42	5307	126
63	5326	189	49	5318	147
65	5325	195	51	5326	153
73	5289	219	77	5320	231
81	5317	243	91	5294	273
82	5336	246	94	5306	282
--	--	--	96	5289	288

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5307	21	4	5295	12
13	5293	39	8	5299	24
16	5290	48	11	5290	33
28	5284	84	18	5311	54
40	5299	120	21	5267	63
41	5292	123	25	5310	75
45	5294	135	35	5278	105
48	5311	144	53	5291	159
49	5315	147	56	5308	168
51	5322	153	62	5244	186
58	5328	174	63	5253	189
61	5291	183	75	5311	225
63	5305	189	81	5296	243
89	5309	267	87	5289	261
93	5245	279	90	5317	270
94	5318	282	93	5309	279

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5267	3	1	5296	3
2	5278	6	6	5287	18
3	5256	9	19	5285	57
7	5289	21	28	5295	84
23	5280	69	51	5272	153
37	5226	111	58	5298	174
46	5267	138	61	5318	183
48	5278	144	74	5273	222
50	5258	150	76	5315	228
62	5237	186	77	5282	231
79	5282	237	82	5262	246
85	5277	255	92	5297	276
86	5244	258	98	5299	294
98	5238	294	99	5263	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5270	0	3	5309	9
10	5285	30	13	5279	39
15	5282	45	22	5264	66
16	5290	48	29	5277	87
19	5267	57	37	5276	111
24	5277	72	43	5267	129
25	5289	75	51	5303	153
26	5267	78	52	5294	156
29	5280	87	59	5306	177
48	5287	144	73	5283	219
57	5268	171	79	5299	237
95	5266	285	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5313	39	5	5269	15
14	5290	42	15	5309	45
20	5275	60	38	5281	114
25	5302	75	48	5308	144
26	5316	78	53	5278	159
28	5284	84	54	5300	162
37	5308	111	61	5292	183
42	5261	126	67	5267	201
45	5281	135	--	--	--
60	5314	180	--	--	--
64	5298	192	--	--	--
78	5291	234	--	--	--
89	5299	267	--	--	--
91	5310	273	--	--	--
93	5312	279	--	--	--
97	5276	291	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5263	0	1	5319	3
3	5234	9	37	5290	111
10	5281	30	38	5272	114
14	5267	42	40	5300	120
24	5292	72	45	5269	135
52	5233	156	52	5289	156
55	5284	165	63	5316	189
87	5267	261	68	5284	204
89	5295	267	71	5320	213
98	5277	294	76	5292	228
99	5290	297	82	5311	246
--	--	--	83	5283	249
--	--	--	89	5282	267
--	--	--	96	5294	288

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5262	18	9	5274	27
15	5296	45	10	5291	30
16	5276	48	11	5305	33
22	5281	66	35	5315	105
23	5275	69	38	5319	114
25	5288	75	44	5295	132
35	5263	105	63	5281	189
47	5280	141	66	5266	198
68	5291	204	80	5264	240
94	5264	282	81	5314	243
--	--	--	83	5268	249
--	--	--	93	5278	279