MRT Technology (Suzhou) Co., Ltd
Phone: +86-512-66308358
Fax: +86-512-66308368
Web: www.mrt-cert.com

Report No.: 1501RSU02805
Report Version: V01
Issue Date: 01-19-2016

DFS MEASUREMENT REPORT
FCC PART 15.407

FCC ID: QISAP4130DN

APPLICANT: HUAWEI TECHNOLOGIES CO., LTD

Application Type: Certification

Product: Wireless LAN Access Point

Model No.: AP4130DN

Brand Name: Huawei

FCC Classification: Unlicensed National Information Infrastructure (UNII)

FCC Rule Part(s): Part 15.407

KDB 905462 D02v01r02, KDB 905462 D04v01

Type of Device: ☒ Master Device

☐ Client Device (No radar detection)

☐ Client Device with radar detection

Test Date: January 08, 2015 ~ January 15, 2016

Reviewed By : _Robin Wu_

(Robin Wu)

Approved By : _Marlinchen_

(Marlin Chen)

Revision History

Report No.	Version	Description	Issue Date
1501RSU02606	Rev. 01	Initial report	01-19-2016

Note: The report was based on the MRT report no. 1501RSU02606. The two models have the same PCB, AP4030DN use the internal antenna and AP4130DN use the external antenna. The DFS testing used the conducted test method, so all test data was referenced to the original report.

CONTENTS

§2.1033 General Information

Applicant:	HUAWEI TECHNOLOGIES CO., LTD.
Applicant Address:	Administration Building, Huawei Base, Bantian, Longgang District, Shenzhen
Manufacturer:	HUAWEI TECHNOLOGIES CO., LTD.
Manufacturer Address:	Administration Building, Huawei Base, Bantian, Longgang District, Shenzhen
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT FCC Registration No.:	809388
Model No.:	AP4130DN
FCC ID:	QISAP4130DN
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

Test Facility / Accreditations

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

- **MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.**
- **MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.**
- **MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.**
- **MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.**

1. INTRODUCTION

1.1. Scope

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

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	Wireless LAN Access Point
Model No.	AP4130DN
Radio Type	Intentional Transceiver
Power Type	12Vdc, 2.0A
Operation Mode	Master Device
Frequency Range	For 802.11a/n-HT20: 5260~5320MHz, 5500~5700MHz For 802.11ac-VHT20: 5260~5320MHz, 5500~5720MHz For 802.11n-HT40: 5270~5310MHz, 5510~5670MHz For 802.11ac-VHT40: 5270~5310MHz, 5510~5710MHz For 802.11ac-VHT80: 5290MHz, 5530MHz, 5610MHz, 5690MHz
Maximum Output Power	802.11a: 20.85dBm 802.11n-HT20: 20.71dBm 802.11n-HT40: 20.69dBm 802.11ac-VHT20: 20.82dBm 802.11ac-VHT40: 20.74dBm 802.11ac-VHT80: 20.24dBm
Type of Modulation	802.11a/n/ac: OFDM;
Power-on cycle	Requires 174.1 seconds to complete its power-on cycle.
Uniform Spreading	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

2.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	Max Peak Gain (dBi)	Beam-forming Gain (dBi)	CDD Directional Gain (dBi)	
				For Power	For PSD
Dipole Antenna	2.4	Ant 1: 3.5, Ant 2: 3.5	6.51	3.50	6.51
	5	Ant 1: 5.5, Ant 2: 5.5	8.51	5.50	8.51

Note:

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

    For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.

    1) If all antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + 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 $N_{ANT} \leq 4$;

    2) If antenna gains are not equal, the user may use either of the following methods to calculate directional gain, provided that each transmit antenna is driven by only one spatial stream:

    ·   Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

    · $$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

        $g_{j,k} = 10^{G_k/20}$ if the kth antenna is being fed by spatial stream j, or zero if it is not;

        G_k is the gain in dBi of the kth antenna.

2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n, not include 802.11a/ac.

    Correlated signals include, but are not limited to, signals transmitted in any of the following modes:

    ·   Any transmit Beam Forming mode, whether fixed or adaptive (e.g., phased array modes, closed loop MIMO modes, Transmitter Adaptive Antenna modes, Maximum Ratio Transmission (MRT) modes, and Statistical Eigen Beam Forming (EBF) modes).

Unequal antenna gains, with equal transmit powers. For antenna gains given by G_1, G_2, …, G_N dBi.

- transmit signals are correlated, then
- Directional gain = $10*\log[(10^{G1/20} + 10^{G2/20} + … + 10^{GN/20})^2/N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

2.1. Description of Antenna RF Port

Antenna RF Port				
--	2.4GHz RF Port		5GHz RF Port	
Software Control Port	Ant 1	Ant 2	Ant 1	Ant 2
Antenna RF Port Plot				
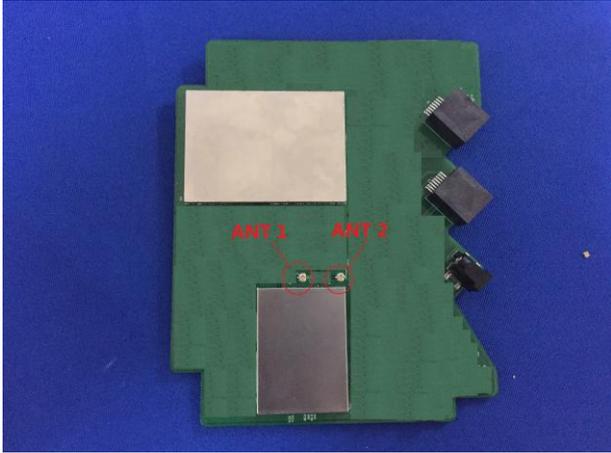
2.2. DFS Band Carrier Frequencies Operation

802.11a/n Center Working Frequency of Each Channel

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

802.11ac-20MHz Center Working Frequency of Each Channel

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

802.11n-40MHz Center Working Frequency of Each Channel

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

802.11ac-40MHz Center Working Frequency of Each Channel

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

802.11ac-80MHz Center Working Frequency of Each Channel

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

2.3. Test Mode

Test Mode	Mode 1: Communication

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 v01r02 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 v01r02 the following

are the requirements for Master Devices:

(a) The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5250 ~ 5350 MHz and 5470 ~ 5725 MHz bands. DFS is not required in the 5150 ~ 5250 MHz or 5725 ~ 5825 MHz bands.

(b) Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.

(c) The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.

(d) During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).

(e) If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.

(f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period.

(g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

Channel Move Time and Channel Closing Transmission Time requirements are listed in the

following table.

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

Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

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

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

Table 3-3: DFS Response Requirements

3.3. DFS Detection Threshold Values

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

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

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

3.4. Parameters of DFS Test Signals

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

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	$\text{Roundup}\left\{ \frac{\left(\frac{1}{360}\right)\cdot}{\left(\frac{19\cdot10^6}{PRI_{usec}}\right)} \right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

Table 3-5: Parameters for Short Pulse Radar Waveforms

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

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

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

Long Pulse Radar Test Waveform

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

Table 3-7: Parameters for Long Pulse Radar Waveforms

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

Frequency Hopping Radar Test Waveform

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

Table 3-8: Parameters for Frequency Hopping Radar Waveforms

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

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

3.5. Conducted Test Setup

The FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v01 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure 3-1 shows the typical test setup.
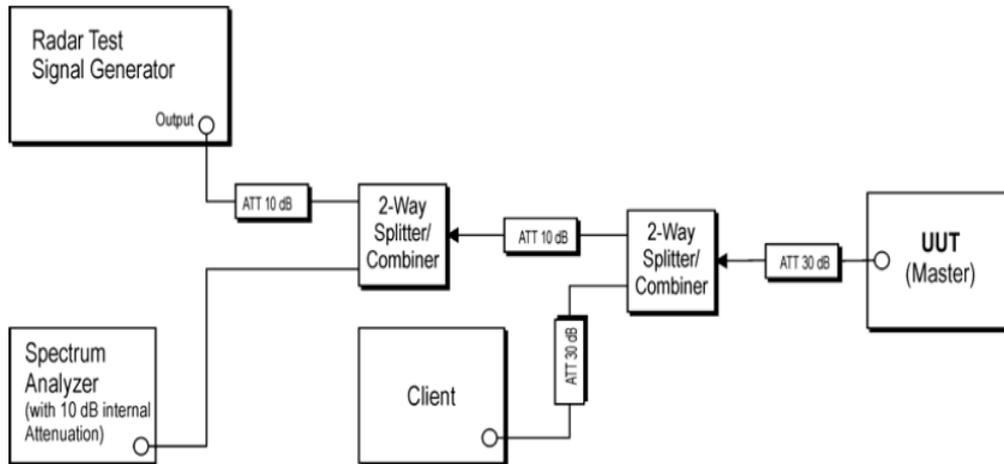
Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS)

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MY52090106	2015/04/23
ESG Vector Signal Generator	Agilent	E4438C	MY49872484	2014/12/09

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

5. TEST RESULT

5.1. Summary

Company Name: **HUAWEI TECHNOLOGIES CO., LTD.**

FCC ID: **QISAP4130DN**

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

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

5.2. Radar Waveform Calibration

5.2.1. Calibration Setup

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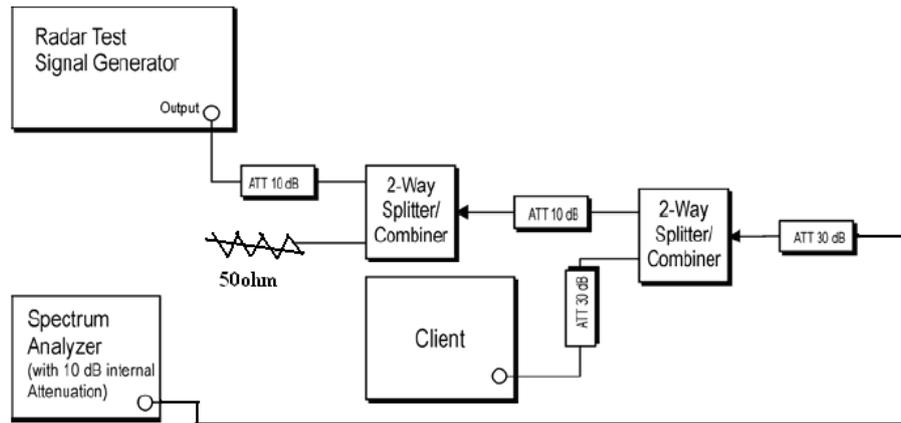
Figure 3-2: Conducted Test Setup

5.2.2. Calibration Procedure

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

5.2.3. Cablibration Result

Radar #0 DFS detection threshold level and the burst of pulses on the Channel frequency
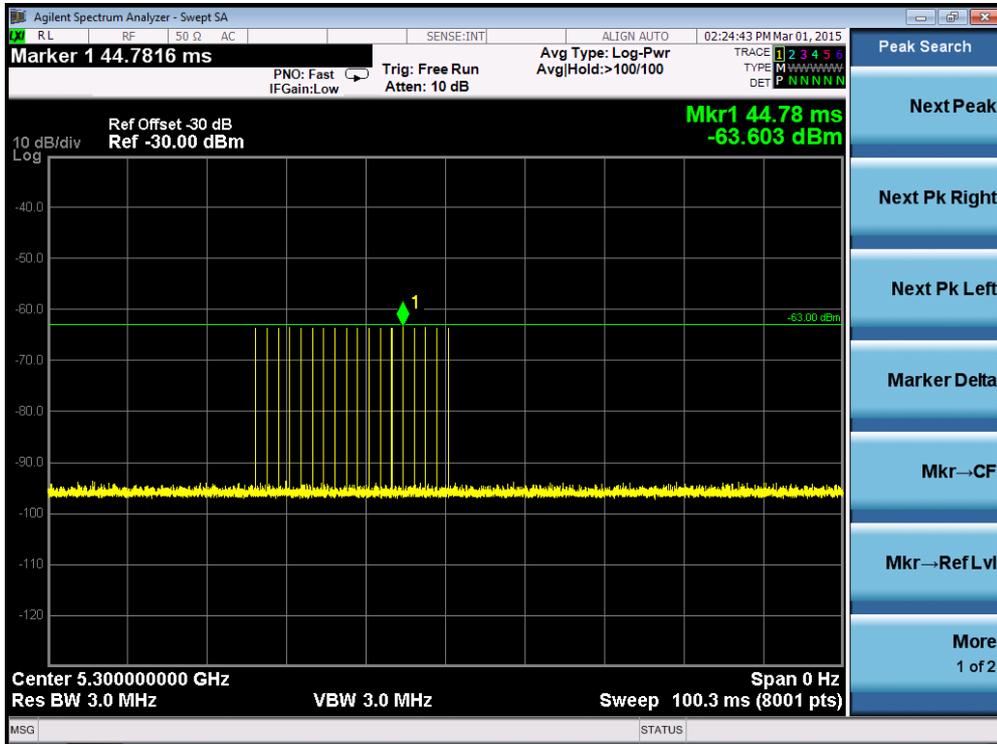
Radar #1(Test A) DFS detection threshold level and the burst of pulses on the Channel frequency
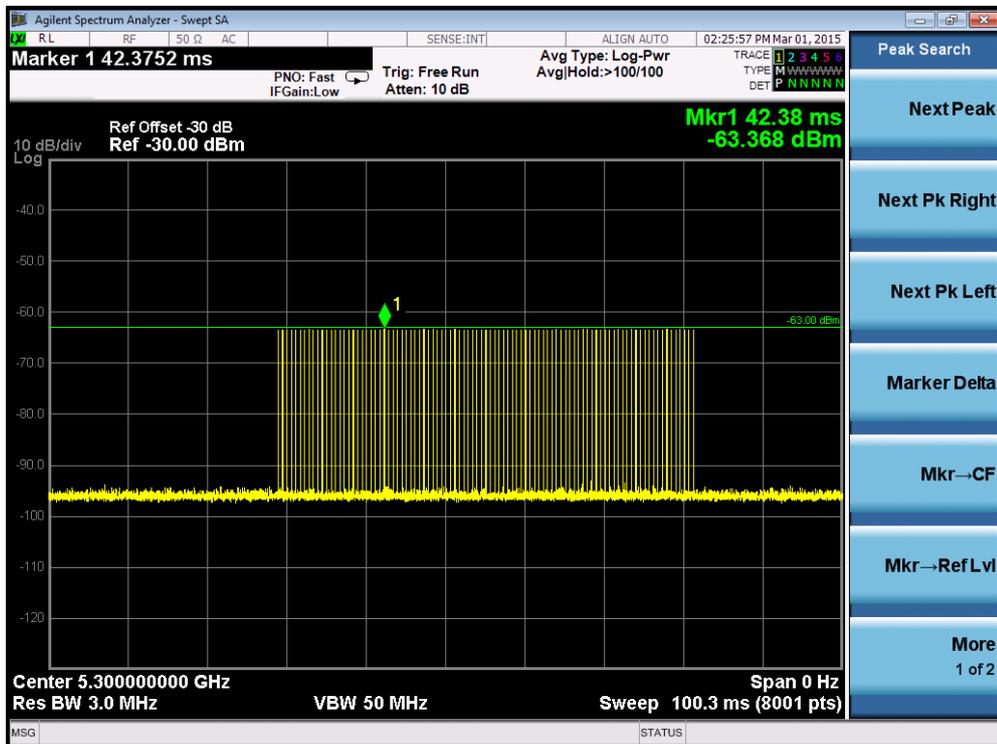
PRI = 558us and the number of pulses = 95

Radar #1(Test B) DFS detection threshold level and the burst of pulses on the Channel frequency
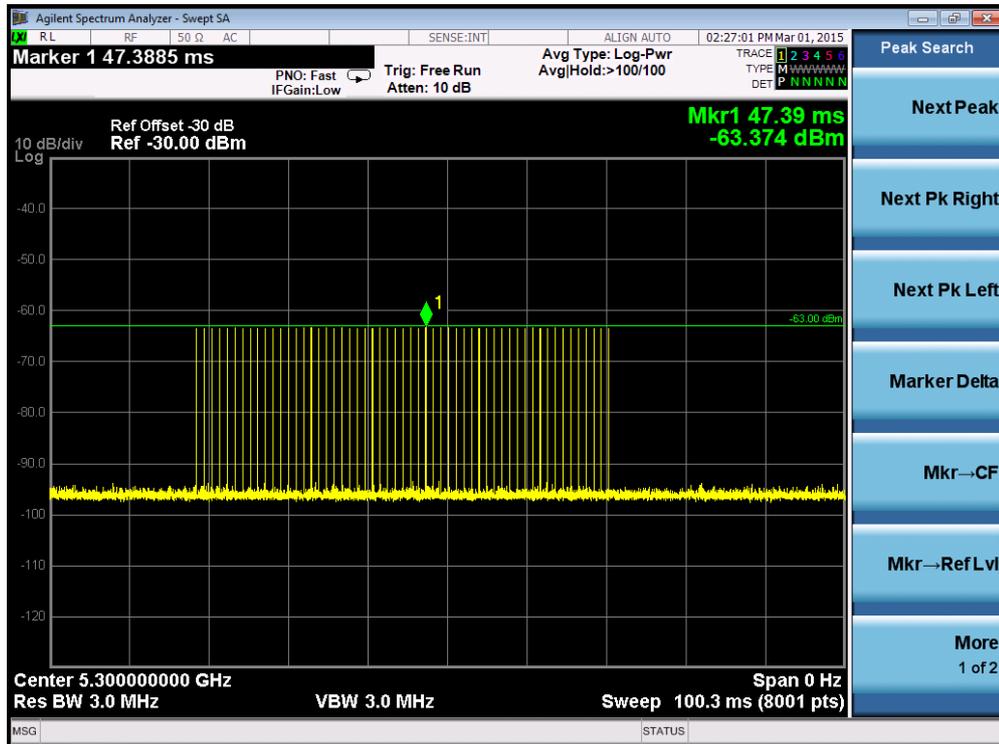
PRI = 0.971ms and the number of pulses = 55

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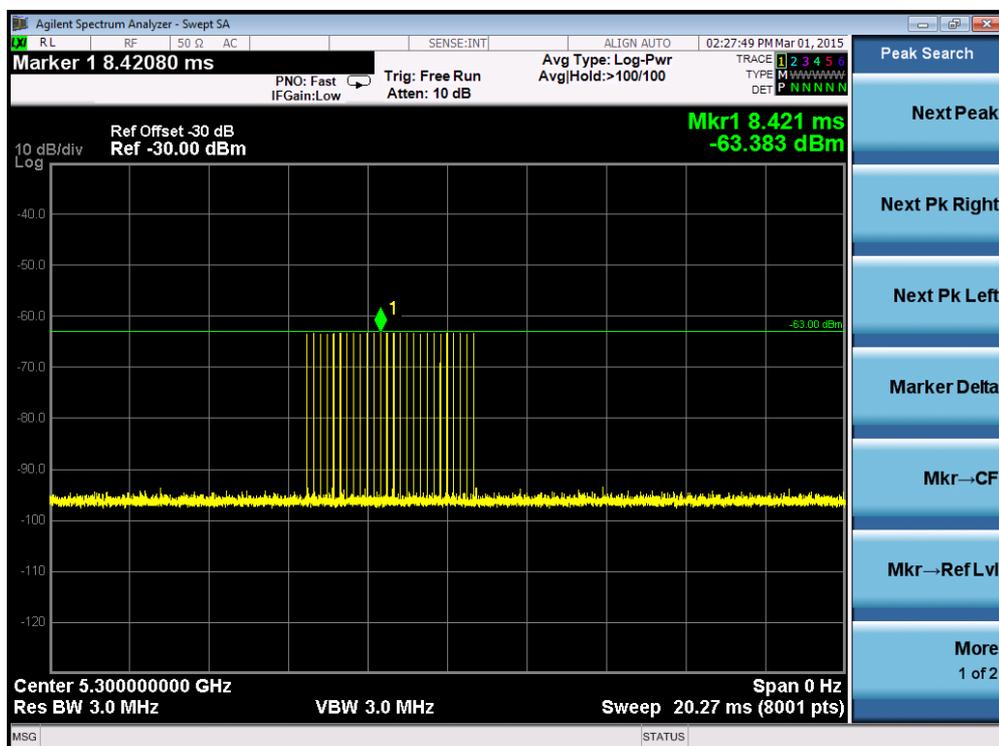
Radar #3 DFS detection threshold level and the burst of pulses on the Channel frequency
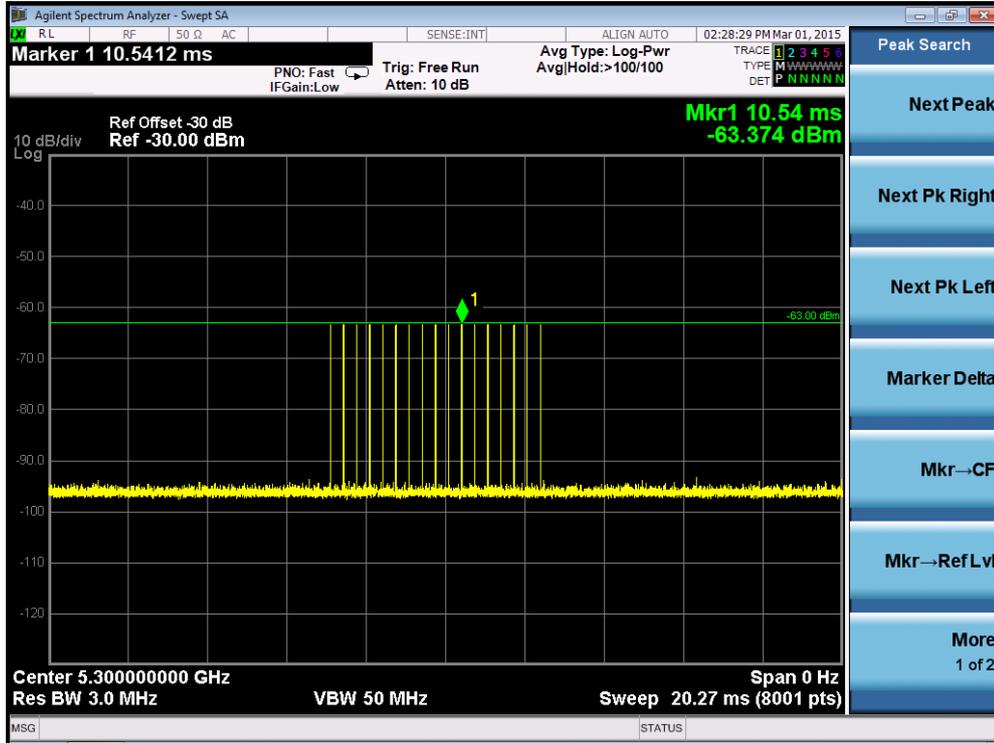
Radar #4 DFS detection threshold level and the burst of pulses on the Channel frequency
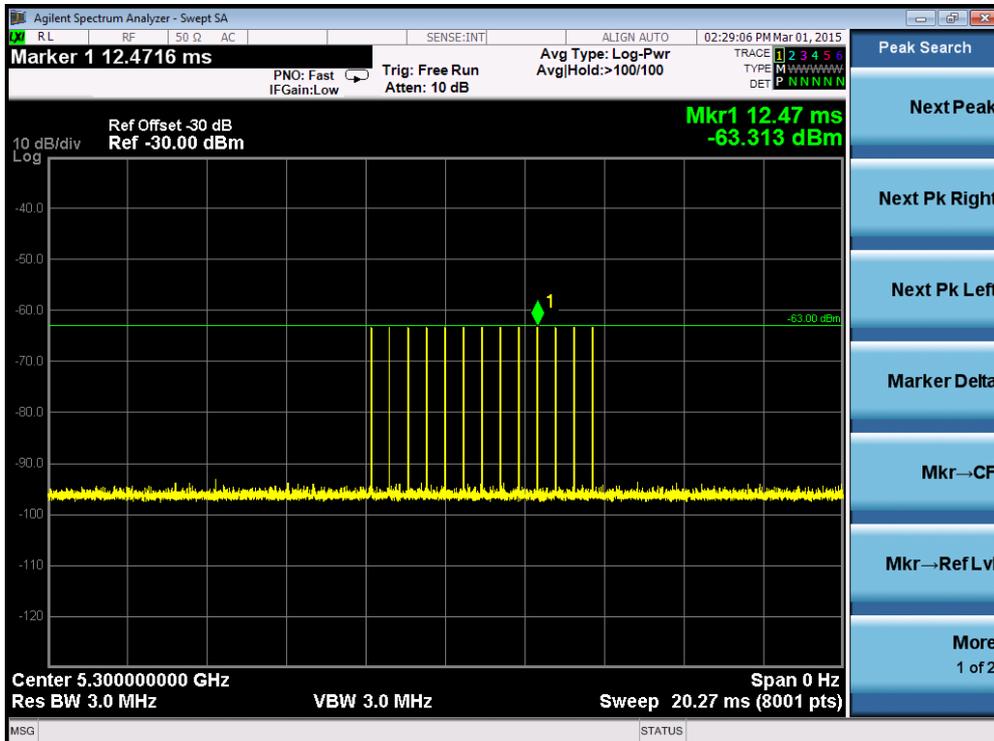
Radar #5 DFS detection threshold level and 12sec long burst on the Channel frequency
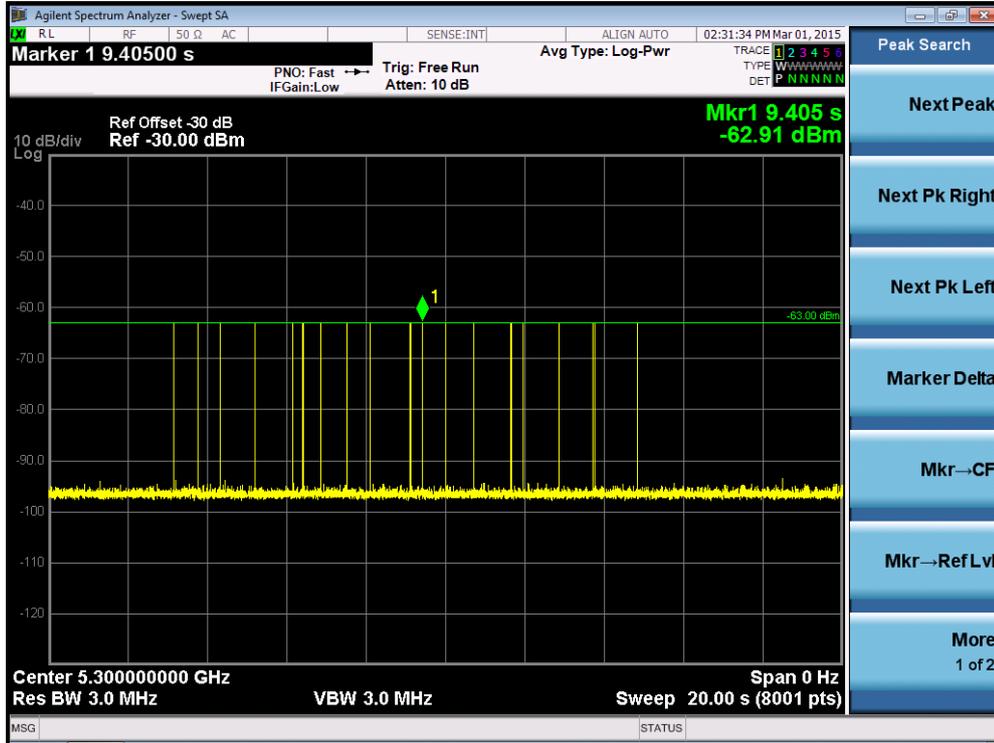
Radar #6 DFS detection threshold level and a single hop (9 pulses) on the Channel frequency within

UNII detection bandwidth
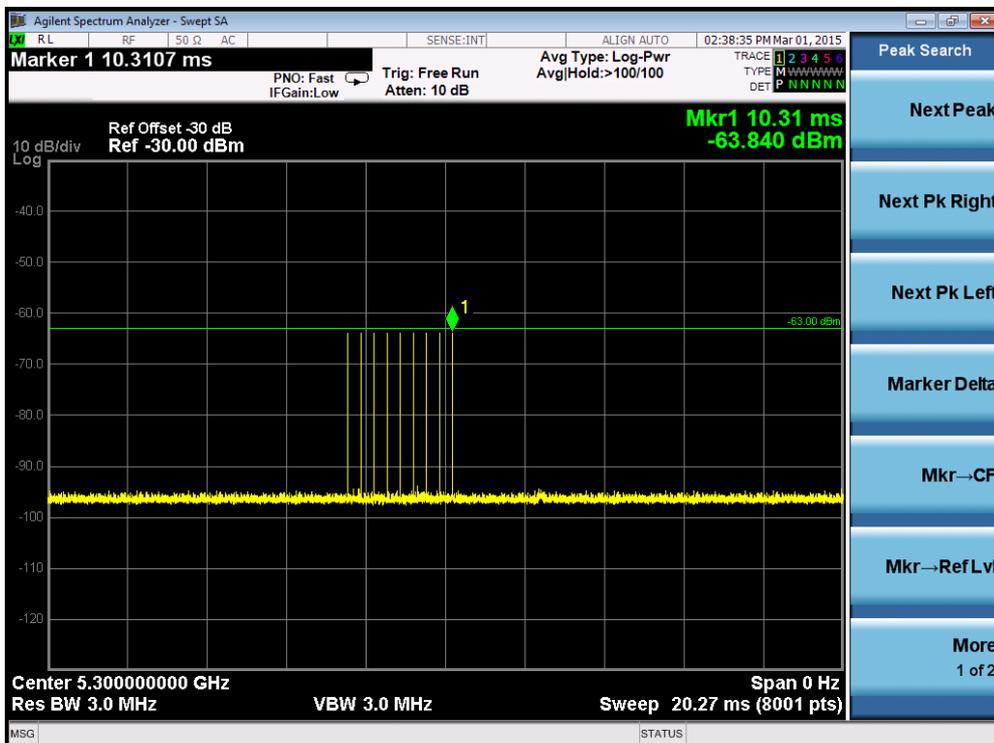
5.2.4. Test Setup Photo

Description: Test Setup Photo

5.3. Channel Loading Test Result

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

Timing plots are required with calculations demonstrating a minimum channel loading of approximately 17% or greater. For example, channel loading can be estimated by setting the spectrum analyzer for zero span and approximate the Time On/ (Time On + Off Time).

Channel Loading Plot - 802.11a-5300MHz
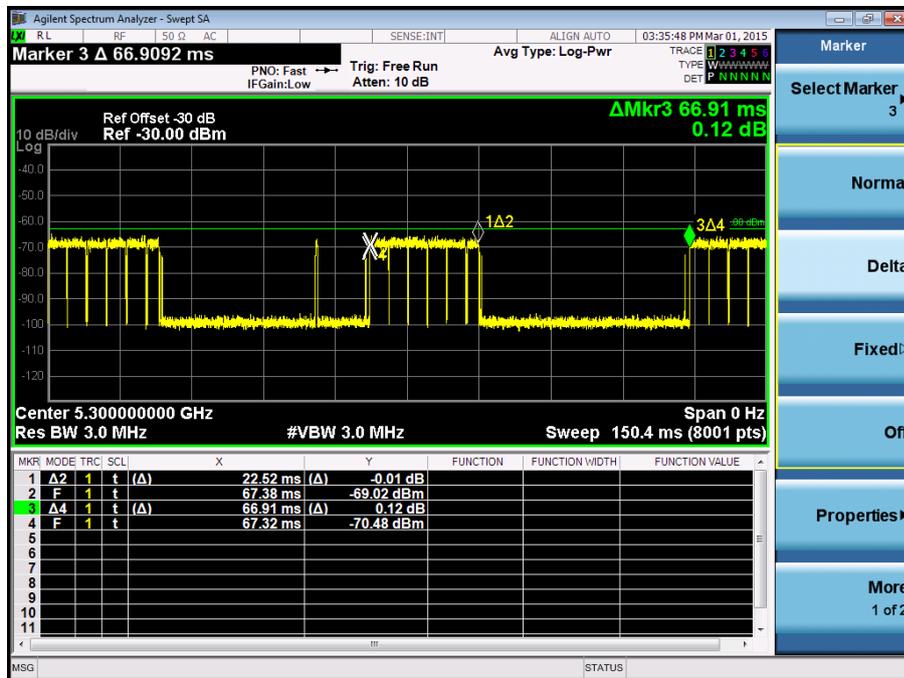
Channel Loading Plot - 802.11n-HT40 5310MHz

Channel Loading Plot - 802.11ac80 5530MHz
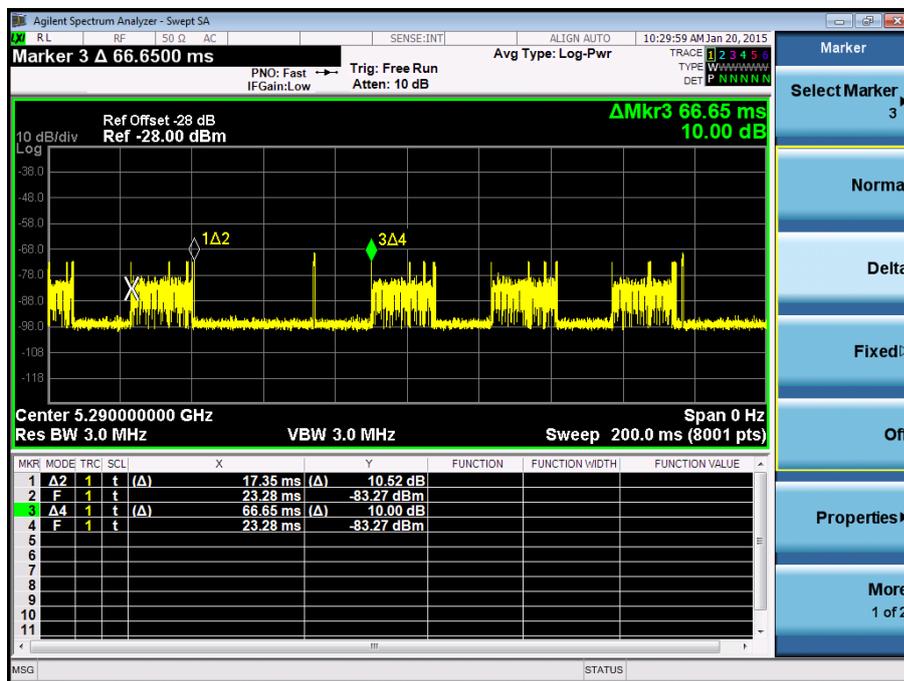
Test Mode	Packet ratio	Requirement ratio	Test Result
802.11a	33.66%	>17%	Pass
802.11n-40MHz	34.24%	>17%	Pass
802.11ac-80MHz	26.03%	>17%	Pass

5.4. UNII Detection Bandwidth Measurement

5.4.1. Test Limit

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

5.4.2. Test Procedure

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.

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

7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

5.4.3. Test Result

EUT Frequency=5300MHz for 802.11a											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5290	0	0	0	0	0	0	0	0	0	0	0%
5291 FL	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309 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 = 16.63MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 16.63MHz x 100% = 16.63MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 16.63MHz. (See the 99% BW section of the RF report for further measurement details).

EUT Frequency=5310MHz for 802.11n-HT40										
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)									
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5290	0	0	0	0	0	0	0	0	0	0	0%
5291	0	0	0	0	0	0	0	0	0	0	0%
5292 FL	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	2	3	4	5	6	7	8	9	10	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%

5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5329MHz - 5292MHz = 37MHz											
EUT 99% Bandwidth = 36.38MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 36.38MHz x 100% = 36.38MHz											

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

EUT Frequency=5290MHz for 802.11ac-VHT80										
Radar Frequency (MHz)	**DFS Detection Trials (1=Detection, 0= No Detection)**									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5285	0	0	0	0	0	0	0	0	0	0	0%
5286	0	0	0	0	0	0	0	0	0	0	0%
5287	0	0	0	0	0	0	0	0	0	0	0%
5288	0	0	0	0	0	0	0	0	0	0	0%
5289	0	0	0	0	0	0	0	0	0	0	0%
5290 FL	1	1	1	1	1	1	1	1	1	1	100%
5291	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5296	1	1	1	1	1	1	1	1	1	1	100%
5297	1	1	1	1	1	1	1	1	1	1	100%
5298	1	1	1	1	1	1	1	1	1	1	100%
5299	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5301	1	1	1	1	1	1	1	1	1	1	100%
5302	1	1	1	1	1	1	1	1	1	1	100%
5303	1	1	1	1	1	1	1	1	1	1	100%
5304	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5311	1	1	1	1	1	1	1	1	1	1	100%
5312	1	1	1	1	1	1	1	1	1	1	100%
5313	1	1	1	1	1	1	1	1	1	1	100%
5314	1	1	1	1	1	1	1	1	1	1	100%

5315	1	1	1	1	1	1	1	1	1	1	100%
5316	1	1	1	1	1	1	1	1	1	1	100%
5317	1	1	1	1	1	1	1	1	1	1	100%
5318	1	1	1	1	1	1	1	1	1	1	100%
5319	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5321	1	1	1	1	1	1	1	1	1	1	100%
5322	1	1	1	1	1	1	1	1	1	1	100%
5323	1	1	1	1	1	1	1	1	1	1	100%
5324	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329	1	1	1	1	1	1	1	1	1	1	100%
5330	1	1	1	1	1	1	1	1	1	1	100%
5331	1	1	1	1	1	1	1	1	1	1	100%
5332	1	1	1	1	1	1	1	1	1	1	100%
5333	1	1	1	1	1	1	1	1	1	1	100%
5334	1	1	1	1	1	1	1	1	1	1	100%
5335	1	1	1	1	1	1	1	1	1	1	100%
5336	1	1	1	1	1	1	1	1	1	1	100%
5337	1	1	1	1	1	1	1	1	1	1	100%
5338	1	1	1	1	1	1	1	1	1	1	100%
5339	1	1	1	1	1	1	1	1	1	1	100%
5340	1	1	1	1	1	1	1	1	1	1	100%
5341	1	1	1	1	1	1	1	1	1	1	100%
5342	1	1	1	1	1	1	1	1	1	1	100%
5343	1	1	1	1	1	1	1	1	1	1	100%
5344	1	1	1	1	1	1	1	1	1	1	100%
5345	1	1	1	1	1	1	1	1	1	1	100%
5346	1	1	1	1	1	1	1	1	1	1	100%
5347	1	1	1	1	1	1	1	1	1	1	100%

5348	1	1	1	1	1	1	1	1	1	1	100%
5349	1	1	1	1	1	1	1	1	1	1	100%
5350	1	1	1	1	1	1	1	1	1	1	100%
5351	1	1	1	1	1	1	1	1	1	1	100%
5352	1	1	1	1	1	1	1	1	1	1	100%
5353	1	1	1	1	1	1	1	1	1	1	100%
5354	1	1	1	1	1	1	1	1	1	1	100%
5355	1	1	1	1	1	1	1	1	1	1	100%
5356	1	1	1	1	1	1	1	1	1	1	100%
5357	1	1	1	1	1	1	1	1	1	1	100%
5358	1	1	1	1	1	1	1	1	1	1	100%
5359	1	1	1	1	1	1	1	1	1	1	100%
5360	1	1	1	1	1	1	1	1	1	1	100%
5361	1	1	1	1	1	1	1	1	1	1	100%
5362	1	1	1	1	1	1	1	1	1	1	100%
5363	1	1	1	1	1	1	1	1	1	1	100%
5364	1	1	1	1	1	1	1	1	1	1	100%
5365	1	1	1	1	1	1	1	1	1	1	100%
5366	1	1	1	1	1	1	1	1	1	1	100%
5367	1	1	1	1	1	1	1	1	1	1	100%
5368	1	1	1	1	1	1	1	1	1	1	100%
5369	1	1	1	1	1	1	1	1	1	1	100%
5370 FH	1	1	1	1	1	1	1	1	1	1	100%
5371	0	0	0	0	0	0	0	0	0	0	0%
5372	0	0	0	0	0	0	0	0	0	0	0%
5373	0	0	0	0	0	0	0	0	0	0	0%
5374	0	0	0	0	0	0	0	0	0	0	0%
5375	0	0	0	0	0	0	0	0	0	0	0%
Detection Bandwidth = FH - FL = 5570MHz - 5490MHz = 80MHz											
EUT 99% Bandwidth = 75.66MHz (see note)											
UNII Detection Bandwidth Min. Limit (MHz): 75.66MHz x 100% = 75.66MHz											

Note: All UNII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.66MHz. (See the 99% BW section of the RF report for further measurement details).

5.5. Initial Channel Availability Check Time Measurement

5.5.1. Test Limit

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

5.5.2. Test Procedure

1. The U-NII devices will be powered on and be instructed to operate on the appropriate U-NII Channel that must incorporate DFS functions. At the same time the EUT is powered on, the spectrum analyzer will be set to zero span mode with a 3 MHz RBW and 3 MHz VBW on the Channel occupied by the radar (Chr) with a 2.5 minute sweep time. The spectrum analyzer's sweep will be started at the same time power is applied to the U-NII device.

2. The EUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.

3. Confirm that the EUT initiates transmission on the channel. Measurement system showing its nominal noise floor is marker1.

5.5.3. Test Result

The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (174.1 sec). Initial beacons/data transmissions are indicated by marker 1 (234.1 sec).

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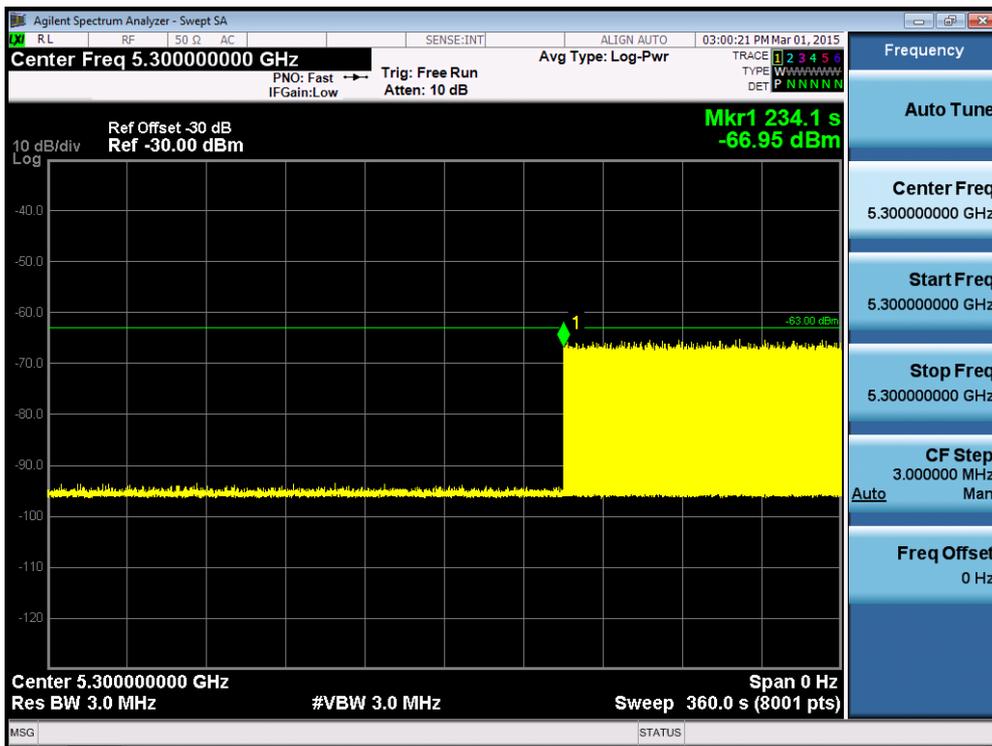
5.6. Radar Burst at the Beginning of the Channel Availability Check Time Measurement

5.6.1. Test Limit

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

5.6.2. Test Procedure

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.

2. The EUT is in completion power-up cycle (from T0 to T1). T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1.

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

5.6.3. Test Result

Radar Burst at the Beginning of the Channel Availability Check Time for 802.11a
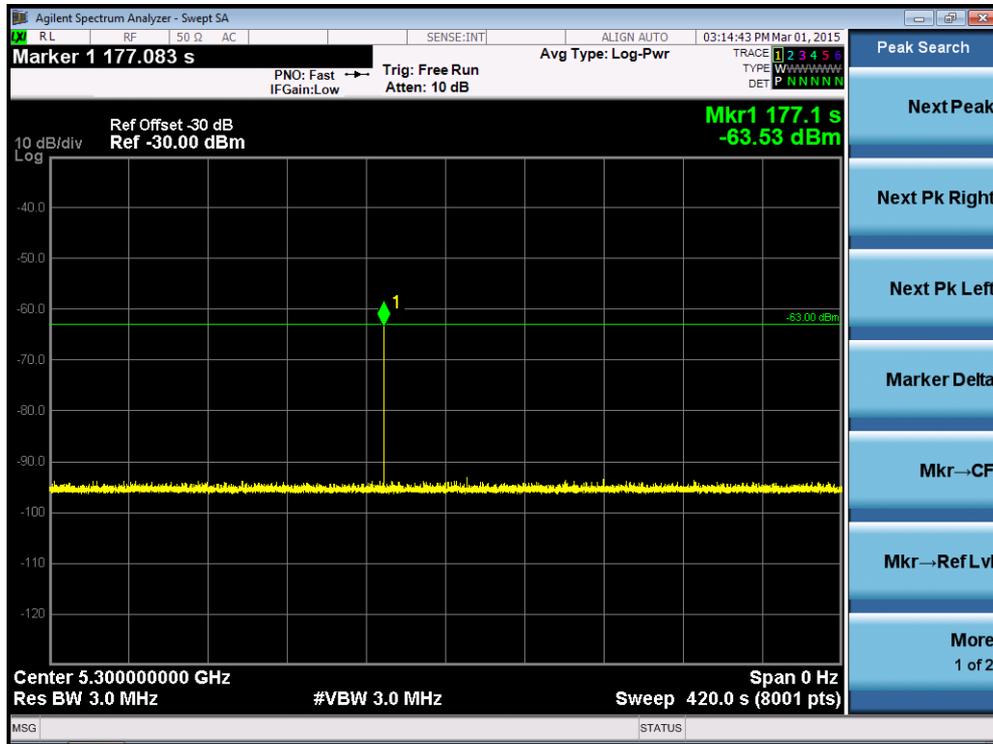
5.7. Radar Burst at the End of the Channel Availability Check Time Measurement

5.7.1. Test Limit

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

5.7.2. Test Procedure

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.

2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner thanT1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.

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

5.7.3. Test Result

Radar Burst at the End of the Channel Availability Check Time for 802.11a
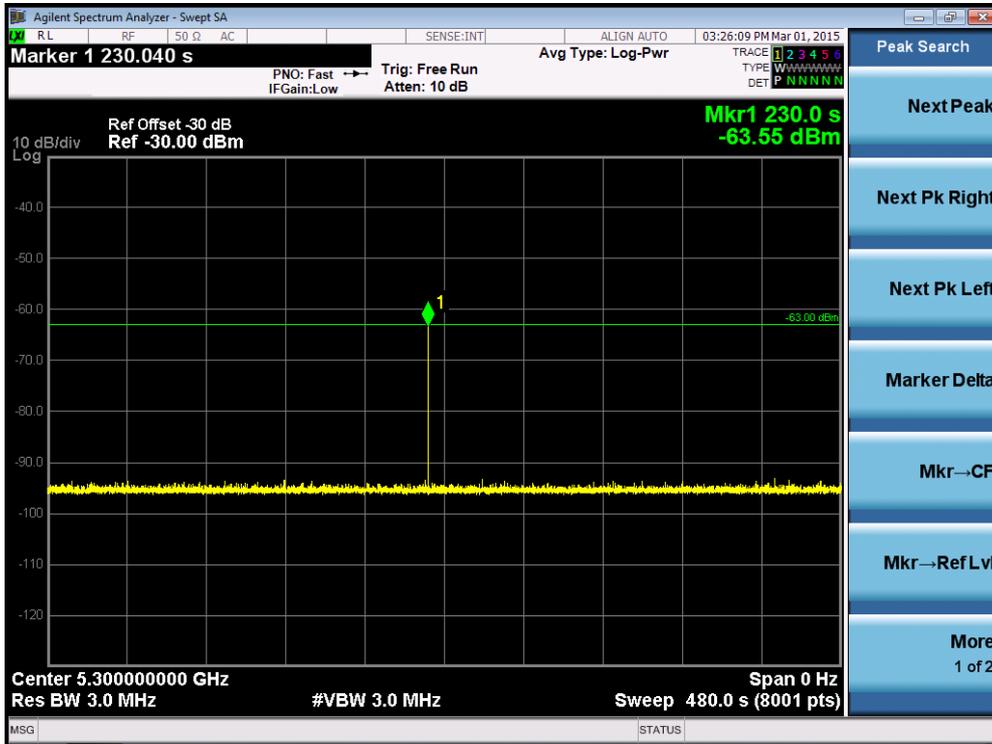
5.8. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement

5.8.1. Test Limit

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

5.8.2. Test Procedure Used

1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.

2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will associate with the Client Device at Channel. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test. At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at Detection Threshold + 1dB.

2. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the EUT during the observation time (Channel Move Time).

3. Measurement of the aggregate duration of the Channel Closing Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (1.5ms) = S (12 sec) / B (8000); where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: 80MHz: C (0 ms) = N (0) X Dwell (1.5 ms); where C is the Closing Time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and Dwell is the dwell time per bin.

4. Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this Channel.

5.8.3. Test Result

Channel Move Time and Channel Closing Transmission Time for 802.11ac-VHT80
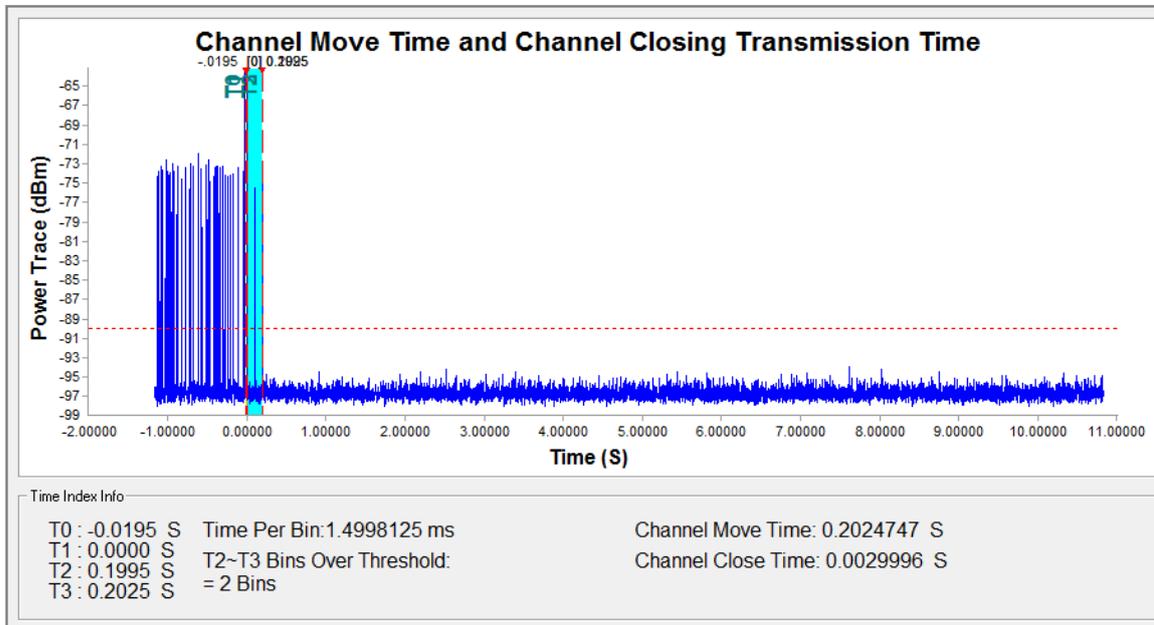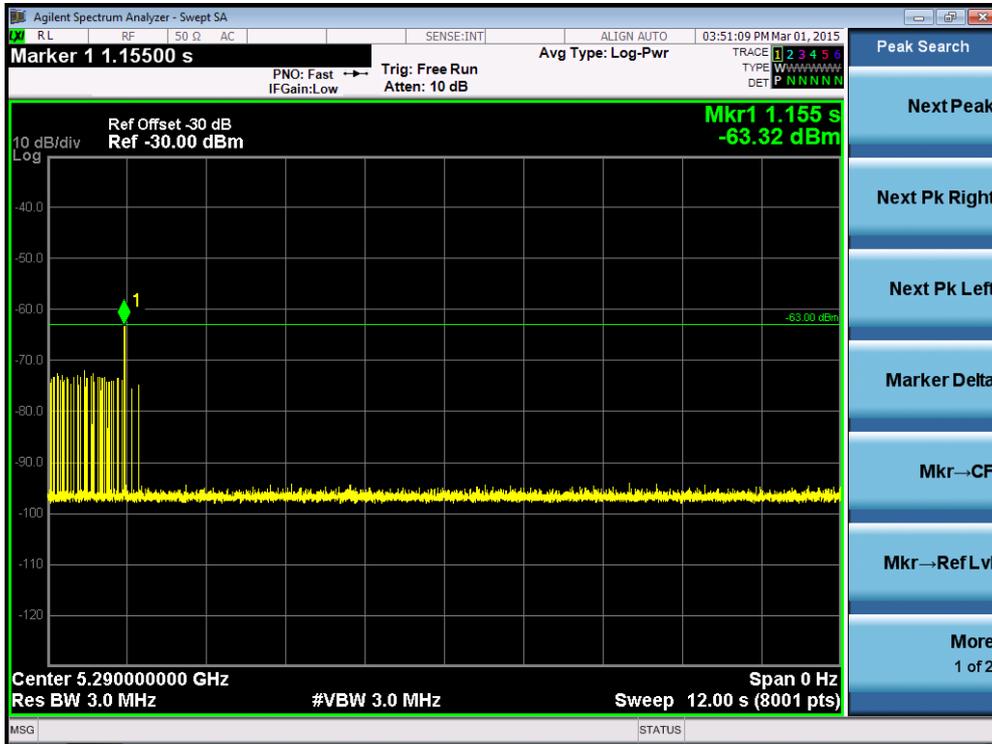
Non-Occupancy Period for 802.11a
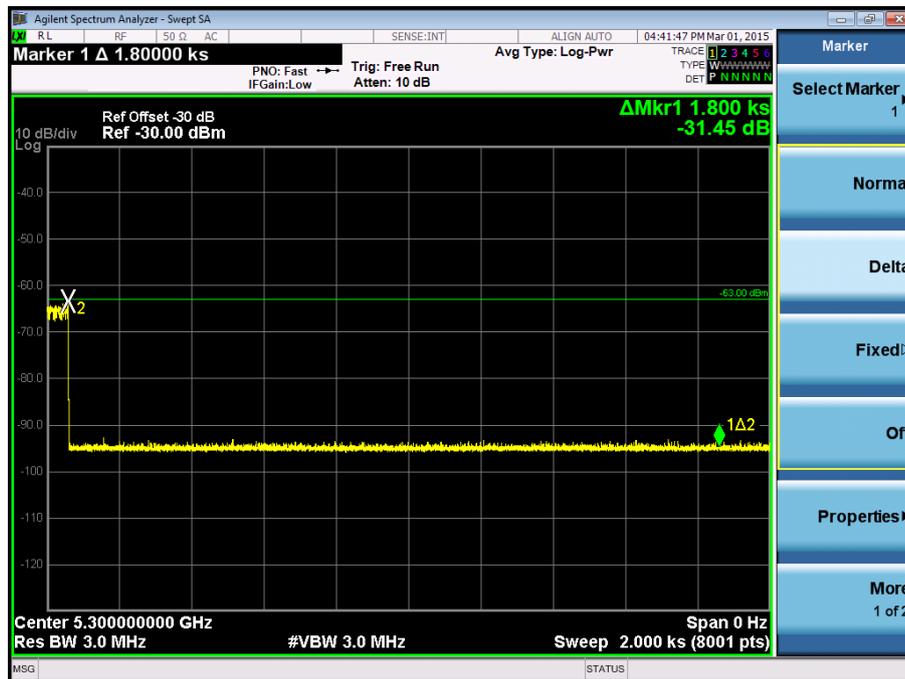
Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.202s	<10s
Channel Closing Transmission Time (ms) (Note)	3ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min

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

5.9. Statistical Performance Check Measurement

5.9.1. Test Limit

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

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

The percentage of successful detection is calculated by:

(Total Waveform Detections / Total Waveform Trails) * 100 = Probability of Detection Radar Waveform In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: (Pd1 + Pd2 + Pd3 + Pd4) / 4.

5.9.2. Test Procedure

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

minimum percentage of successful detection are found in below table.

5.9.3. Test Result

Statistical Performance Check for 802.11a

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5300	1	938	61	1
2	5300	1	678	74	1
3	5300	1	738	65	1
4	5300	1	838	102	1
5	5300	1	638	57	1
6	5300	1	898	72	1
7	5300	1	598	99	1
8	5300	1	758	62	1
9	5300	1	698	76	1
10	5300	1	558	83	1
11	5300	1	818	78	1
12	5300	1	518	18	1
13	5300	1	858	92	1
14	5300	1	778	89	1
15	5300	1	538	81	1
16	5300	1	1930	20	1
17	5300	1	1129	53	1
18	5300	1	2151	24	1
19	5300	1	1690	23	1
20	5300	1	2102	70	1
21	5300	1	2358	48	1
22	5300	1	2810	54	1
23	5300	1	601	102	1
24	5300	1	1459	18	1
25	5300	1	779	65	1
26	5300	1	1643	19	1
27	5300	1	1135	28	1
28	5300	1	2101	22	1
29	5300	1	2723	28	1
30	5300	1	1980	20	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	4.7	181	29	1
2	5291	4.2	230	24	1
3	5291	3.3	184	26	1
4	5291	3.9	230	23	1
5	5291	2.3	209	25	1
6	5291	4.7	200	26	1
7	5291	1.3	222	29	1
8	5291	2.3	206	25	1
9	5291	4.9	163	23	1
10	5291	3.6	216	28	1
11	5291	3.9	209	26	1
12	5291	1.9	230	25	1
13	5291	4.9	225	24	0
14	5291	3.7	194	28	1
15	5291	4.0	219	28	1
16	5291	4.3	165	23	1
17	5291	2.2	150	24	1
18	5291	3.4	216	24	1
19	5291	4.5	159	24	1
20	5291	2.4	202	23	1
21	5291	2.6	227	25	1
22	5291	1.8	152	29	1
23	5291	5.0	197	23	1
24	5291	3.4	160	24	1
25	5291	2.8	159	24	1
26	5291	1.5	199	23	1
27	5291	1.5	201	24	1
28	5291	1.7	151	24	1
29	5291	2.7	228	29	1
30	5291	3.6	155	24	1
Detection Percentage (%)					96.7%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5295	6.9	374	16	1
2	5295	8.0	379	17	1
3	5295	6.3	251	17	0
4	5295	6.9	409	17	1
5	5295	7.1	491	18	1
6	5295	6.6	347	17	1
7	5295	6.8	302	16	1
8	5295	9.9	485	17	1
9	5295	9.0	267	18	1
10	5295	8.6	295	18	1
11	5295	8.3	310	18	1
12	5295	9.3	378	18	1
13	5295	6.0	488	18	1
14	5295	8.2	269	18	1
15	5295	8.6	356	17	1
16	5295	9.5	423	16	1
17	5295	8.0	480	18	1
18	5295	6.6	362	17	1
19	5295	8.5	494	18	1
20	5295	7.0	481	18	1
21	5295	6.2	251	16	1
22	5295	7.5	305	18	1
23	5295	9.6	344	18	1
24	5295	8.8	449	18	1
25	5295	7.3	277	16	1
26	5295	10.0	316	16	1
27	5295	7.8	488	17	1
28	5295	7.5	309	18	1
29	5295	10.0	270	17	1
30	5295	8.4	471	17	1
Detection Percentage (%)					96.7%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5305	14.9	410	16	1
2	5305	18.0	482	13	1
3	5305	20.0	413	14	1
4	5305	14.5	312	13	1
5	5305	15.9	285	13	1
6	5305	16.7	360	13	1
7	5305	18.2	413	16	1
8	5305	19.6	453	16	0
9	5305	18.2	471	15	1
10	5305	18.4	369	15	1
11	5305	18.0	399	14	1
12	5305	12.6	280	13	1
13	5305	17.8	493	12	1
14	5305	16.4	427	12	1
15	5305	18.6	429	12	1
16	5305	12.2	331	12	1
17	5305	12.7	473	13	1
18	5305	13.3	492	16	1
19	5305	15.5	288	14	1
20	5305	17.8	329	12	1
21	5305	16.3	318	14	1
22	5305	18.9	425	14	1
23	5305	13.8	491	16	1
24	5305	17.0	442	12	1
25	5305	16.0	358	12	1
26	5305	16.3	433	16	1
27	5305	15.0	350	13	1
28	5305	15.5	293	15	1
29	5305	19.2	468	14	1
30	5305	19.4	425	13	1
Detection Percentage (%)					96.7%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\dfrac{P_d1 + P_d2 + P_d3 + P_d4}{4}$ = (100%+96.7%+96.7%+96.7%)/4 = 97.53%

(>80%)

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5295	1	16	5295	1
2	5295	1	17	5295	1
3	5295	1	18	5295	1
4	5295	1	19	5295	1
5	5295	1	20	5295	1
6	5295	1	21	5295	1
7	5295	1	22	5295	1
8	5295	1	23	5295	1
9	5295	1	24	5295	1
10	5295	1	25	5295	1
11	5295	1	26	5295	1
12	5295	1	27	5295	1
13	5295	1	28	5295	1
14	5295	1	29	5295	1
15	5295	1	30	5295	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1										

```
Waveform Num = 1
Num of Bursts = 20
Burst Interval (us)= 600000
Burst    Off Time    #       Chirp    PW      Pulse 1    Pulse 2    Pulse 3    Start Loc    Start Burst    End Burst
#        (us)        Pulses  (MHz)    (us)    Pri(us)    Pri(us)    Pri(us)    (us)         Interval(us)   Interval(us)
         1506
1                    2       17       95      1031       1108       0          1506         0              599999
         829616
2                    1       16       85      1674       0          0          833261       600000         1199999
         490611
3                    2       13       80      1218       1096       0          1325546      1200000        1799999
         852544
4                    2       14       85      1525       1461       0          2180404      1800000        2399999
         410336
5                    2       20       60      1794       1339       0          2593726      2400000        2999999
         783283
6                    2       6        85      1914       1837       0          3380142      3000000        3599999
         738046
7                    3       12       65      1695       1360       1847       4121939      3600000        4199999
         332819
8                    2       19       75      1251       1729       0          4459660      4200000        4799999
         400863
9                    2       9        50      1752       1178       0          4863503      4800000        5399999
         716639
10                   3       9        80      1018       1656       1716       5583072      5400000        5999999
         863197
11                   1       19       55      1591       0          0          6450659      6000000        6599999
         181161
12                   1       9        50      1489       0          0          6633411      6600000        7199999
         868397
13                   3       17       55      1654       1549       1332       7503297      7200000        7799999
         850550
14                   2       20       75      1471       1191       0          8358382      7800000        8399999
         120875
15                   3       12       65      1800       1990       1056       8481919      8400000        8999999
         691649
16                   2       10       95      1935       1341       0          9178414      9000000        9599999
         523897
17                   3       8        75      1092       1237       1877       9705587      9600000        10199999
         762005
18                   1       17       50      1837       0          0          10471798     10200000       10799999
         611076
19                   1       11       90      1980       0          0          11084711     10800000       11399999
         579873
20                   1       17       70      1297       0          0          11666564     11400000       11999999
Total number of pulses in waveform = 39
***********************************************************************************************
```

Type 5 Radar Waveform_2

```
Waveform Num = 2
Num of Bursts = 10
Burst Interval (us)= 1200000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	51268									
1		1	9	100	1388	0	0	51268	0	1199999
	1328062									
2		3	13	85	1252	1104	1799	1380718	1200000	2399999
	1121067									
3		1	10	50	1019	0	0	2505940	2400000	3599999
	1600958									
4		2	7	85	1381	1765	0	4107917	3600000	4799999
	1346868									
5		1	5	90	1933	0	0	5457931	4800000	5999999
	1159293									
6		2	9	85	1765	1976	0	6619157	6000000	7199999
	678329									
7		1	19	90	1875	0	0	7301227	7200000	8399999
	1329135									
8		1	17	90	1921	0	0	8632237	8400000	9599999
	1585241									
9		3	5	95	1738	1741	1167	10219399	9600000	10799999
	1004890									
10		3	14	55	1353	1294	1124	11228935	10800000	11999999

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

Type 5 Radar Waveform_3

```
Waveform Num = 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)
	686506									
1		3	9	70	1680	1008	1396	686506	0	857142
	767713									
2		3	10	80	1957	1474	1183	1458303	857143	1714285
	452780									
3		3	6	70	1988	1460	1292	1915697	1714286	2571428
	1391038									
4		2	20	75	1380	1036	0	3311475	2571429	3428571
	508233									
5		3	9	100	1470	1631	1863	3822124	3428572	4285714
	638161									
6		2	20	50	1412	1213	0	4465249	4285715	5142857
	821190									
7		1	16	70	1395	0	0	5289064	5142858	6000000
	1051266									
8		2	9	75	1023	1399	0	6341725	6000001	6857143
	1276592									
9		3	18	50	1432	1965	1706	7620739	6857144	7714286
	859059									
10		3	16	60	1047	1467	1462	8484901	7714287	8571429
	124866									
11		3	11	85	1093	1753	1895	8613743	8571430	9428572
	957575									
12		1	7	55	1061	0	0	9576059	9428573	10285715
	1548825									
13		2	10	65	1772	1679	0	11125945	10285716	11142858
	339415									
14		3	16	100	1090	2000	1573	11468811	11142859	12000001

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

Type 5 Radar Waveform_4

```
Waveform Num = 4
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)
	1078065									
1		1	11	65	1796	0	0	1078065	0	1499999
	1124259									
2		2	12	85	1668	1848	0	2204120	1500000	2999999
	1543310									
3		3	6	70	1355	1827	1281	3750946	3000000	4499999
	1702249									
4		2	6	75	1059	1138	0	5457658	4500000	5999999
	947132									
5		3	8	80	1915	1457	1405	6406987	6000000	7499999
	2321356									
6		1	15	90	1644	0	0	8733120	7500000	8999999
	521734									
7		3	16	70	1071	1650	1591	9256498	9000000	10499999
	2708288									
8		3	8	50	1987	1547	1288	11969098	10500000	11999999

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

Type 5 Radar Waveform_5

```
Waveform Num = 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	116798	2	7	80	1983	1484	0	116798	0	599999
2	693789	2	8	75	1110	1244	0	814054	600000	1199999
3	779318	1	9	80	1146	0	0	1595726	1200000	1799999
4	483701	2	12	90	1943	1029	0	2080573	1800000	2399999
5	480190	2	7	50	1905	1015	0	2563735	2400000	2999999
6	683829	2	8	100	1242	1547	0	3250484	3000000	3599999
7	673423	3	20	60	1182	1780	1938	3926696	3600000	4199999
8	302077	2	20	90	1958	1900	0	4233673	4200000	4799999
9	1024751	1	8	75	1129	0	0	5262282	4800000	5399999
10	685975	1	10	70	1139	0	0	5949386	5400000	5999999
11	226693	2	18	100	1255	1412	0	6177218	6000000	6599999
12	865699	1	11	100	1762	0	0	7045584	6600000	7199999
13	284409	2	16	90	1229	1682	0	7331755	7200000	7799999
14	876007	2	11	95	1686	1816	0	8210673	7800000	8399999
15	539743	1	10	60	1574	0	0	8753918	8400000	8999999
16	630091	2	17	100	1628	1086	0	9385583	9000000	9599999
17	462185	3	13	100	1992	1449	1069	9850482	9600000	10199999
18	525930	1	7	65	1796	0	0	10380922	10200000	10799999
19	661931	1	17	55	1010	0	0	11044649	10800000	11399999
20	702242	3	14	75	1664	1619	1193	11747901	11400000	11999999

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

Type 5 Radar Waveform_6

```
Waveform Num = 6
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	662454	3	19	75	1500	1041	1630	662454	0	999999
2	902306	3	11	85	1312	1445	1217	1568931	1000000	1999999
3	1301852	3	9	100	2000	1936	1650	2874757	2000000	2999999
4	501240	1	10	50	1986	0	0	3381583	3000000	3999999
5	1190610	3	19	55	1775	1178	1961	4574179	4000000	4999999
6	1399752	1	8	80	1290	0	0	5978845	5000000	5999999
7	934463	1	16	55	1095	0	0	6914598	6000000	6999999
8	134892	2	5	100	1949	1393	0	7050585	7000000	7999999
9	1639322	1	10	70	1307	0	0	8693249	8000000	8999999
10	824899	3	20	90	1312	1982	1056	9519455	9000000	9999999
11	858704	1	7	90	1854	0	0	10382509	10000000	10999999
12	629186	2	9	60	1544	1600	0	11013549	11000000	11999999

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

Type 5 Radar Waveform_7

```
Waveform Num = 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	937535	2	13	65	1087	1779	0	937535	0	1090908
2	420485	3	8	65	1577	1884	1696	1360886	1090909	2181817
3	1451528	1	19	70	1735	0	0	2817571	2181818	3272726
4	1232159	2	14	80	1592	1316	0	4051465	3272727	4363635
5	1245468	3	8	55	1606	1724	1021	5299841	4363636	5454544
6	329965	1	11	50	1993	0	0	5634157	5454545	6545453
7	1577234	3	6	90	1450	1720	1193	7213384	6545454	7636362
8	1082254	3	9	65	1059	1040	1849	8300001	7636363	8727271
9	1407919	2	12	100	1368	1288	0	9711868	8727272	9818180
10	132304	1	17	80	1454	0	0	9846828	9818181	10909089
11	1482072	2	17	70	1861	1104	0	11330354	10909090	11999998

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

Type 5 Radar Waveform_8

Waveform Num = 8
Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	6192	1	16	90	1525	0	0	6192	0	705881
2	888271	1	13	50	1791	0	0	895988	705882	1411763
3	1136000	2	8	70	1051	1381	0	2033779	1411764	2117645
4	759553	2	17	100	1178	1906	0	2795764	2117646	2823527
5	323529	1	11	100	1730	0	0	3122377	2823528	3529409
6	1010252	1	11	85	1817	0	0	4134359	3529410	4235291
7	232801	2	15	90	1594	1078	0	4368977	4235292	4941173
8	1097985	1	18	85	1759	0	0	5469634	4941174	5647055
9	237435	1	16	80	1439	0	0	5708828	5647056	6352937
10	696439	2	11	95	1791	1468	0	6406706	6352938	7058819
11	1155259	1	18	60	1593	0	0	7565224	7058820	7764701
12	507123	3	20	50	1345	1276	1304	8073940	7764702	8470583
13	565705	1	5	60	1049	0	0	8643570	8470584	9176465
14	1010228	1	6	85	1865	0	0	9654847	9176466	9882347
15	322930	3	15	95	1383	1826	1354	9979642	9882348	10588229
16	1226169	3	19	90	1995	1085	1099	11210374	10588230	11294111
17	455070	3	13	85	1235	1650	1614	11669623	11294112	11999993

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

Type 5 Radar Waveform_9

Waveform Num = 9
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	111100	1	15	85	1017	0	0	111100	0	1090908
2	1592531	2	12	50	1406	1433	0	1704648	1090909	2181817
3	772253	1	5	75	1785	0	0	2479740	2181818	3272726
4	1246258	3	13	70	1066	1038	1300	3727783	3272727	4363635
5	1627350	1	7	100	1489	0	0	5358537	4363636	5454544
6	194732	2	5	90	1619	1703	0	5554758	5454545	6545453
7	1967255	2	13	90	1602	1823	0	7525335	6545454	7636362
8	1091374	2	20	75	1573	1262	0	8620134	7636363	8727271
9	357887	1	19	80	1947	0	0	8980856	8727272	9818180
10	1239810	1	10	65	1460	0	0	10222613	9818181	10909089
11	1320899	3	6	90	1004	1707	1354	11544972	10909090	11999998

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

Type 5 Radar Waveform_10

Waveform Num = 10
Num of Bursts = 20
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	108140	3	18	50	1791	1396	1637	108140	0	599999
2	916702	2	20	90	1590	1903	0	1029666	600000	1199999
3	300204	1	12	65	1613	0	0	1333363	1200000	1799999
4	1016114	2	8	70	1578	1355	0	2351090	1800000	2399999
5	220278	2	10	85	1267	1488	0	2574301	2400000	2999999
6	880473	3	14	95	1550	1524	1910	3457529	3000000	3599999
7	178845	1	15	65	1175	0	0	3641358	3600000	4199999
8	853180	3	19	70	1719	1982	1394	4495713	4200000	4799999
9	787072	2	16	75	1427	1985	0	5287880	4800000	5399999
10	174628	2	19	80	1015	1699	0	5465920	5400000	5999999
11	1099741	3	5	80	1016	1405	1734	6568375	6000000	6599999
12	580247	2	18	95	1297	1630	0	7152777	6600000	7199999
13	232920	2	14	70	1623	1638	0	7388624	7200000	7799999
14	887430	1	16	75	1419	0	0	8279315	7800000	8399999
15	193021	2	5	50	1686	1086	0	8473755	8400000	8999999
16	865608	3	11	60	1744	1915	1513	9342135	9000000	9599999
17	765867	1	10	85	1885	0	0	10113174	9600000	10199999
18	299550	1	14	75	1424	0	0	10414609	10200000	10799999
19	672666	2	13	75	1004	1560	0	11088699	10800000	11399999
20	557072	2	10	65	1941	1062	0	11648335	11400000	11999999

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

Type 5 Radar Waveform_11

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	464126	2	13	100	1519	1642	0	464126	0	857142
2	948273	3	12	75	1870	1082	1622	1415560	857143	1714285
3	573471	1	6	55	1552	0	0	1993605	1714286	2571428
4	951193	2	5	55	1774	1881	0	2946350	2571429	3428571
5	1169351	1	12	65	1738	0	0	4119356	3428572	4285714
6	648629	1	13	70	1227	0	0	4769723	4285715	5142857
7	905850	1	19	70	1248	0	0	5676800	5142858	6000000
8	339941	3	20	50	1960	1718	1180	6017989	6000001	6857143
9	1267142	2	20	100	1090	1021	0	7289989	6857144	7714286
10	456850	2	6	80	1469	1009	0	7748950	7714287	8571429
11	1243998	3	13	95	1618	1849	1541	8995426	8571430	9428572
12	520332	3	8	70	1338	1693	1559	9520766	9428573	10285715
13	901591	1	7	70	1411	0	0	10426947	10285716	11142858
14	1035846	3	13	55	1633	1511	1745	11464204	11142859	12000001

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

Type 5 Radar Waveform_12

```
Waveform Num = 12
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	462193	1	10	75	1032	0	0	462193	0	631579
2	463800	1	12	80	1870	0	0	927025	631579	1263157
3	608813	2	18	85	1618	1605	0	1537708	1263158	1894736
4	826571	3	18	90	1036	1513	1596	2367502	1894737	2526315
5	542171	1	9	65	1846	0	0	2913818	2526316	3157894
6	818825	2	19	70	1952	1545	0	3734489	3157895	3789473
7	668171	1	20	55	1590	0	0	4406157	3789474	4421052
8	382070	3	5	70	1497	1116	1645	4789817	4421053	5052631
9	600253	1	15	50	1457	0	0	5394328	5052632	5684210
10	409044	2	10	60	1342	1050	0	5804829	5684211	6315789
11	833747	2	13	60	1401	1720	0	6640968	6315790	6947368
12	790529	1	7	80	1179	0	0	7434618	6947369	7578947
13	737959	1	15	65	1131	0	0	8173756	7578948	8210526
14	499853	2	8	60	1344	1601	0	8674740	8210527	8842105
15	399769	3	15	80	1102	1991	1452	9077454	8842106	9473684
16	599386	2	5	90	1113	1171	0	9681385	9473685	10105263
17	932801	1	17	55	1859	0	0	10616470	10105264	10736842
18	742377	1	12	85	1974	0	0	11360706	10736843	11368421
19	60916	1	18	80	1508	0	0	11423596	11368422	12000000

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

Type 5 Radar Waveform_13

```
Waveform Num = 13
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	726278	3	20	90	1411	1607	1417	726278	0	999999
2	805384	3	8	90	1024	1866	1153	1536097	1000000	1999999
3	1273698	2	6	60	1586	1924	0	2813838	2000000	2999999
4	458316	3	9	65	1326	1251	1568	3275664	3000000	3999999
5	1170445	2	19	75	1935	1326	0	4450254	4000000	4999999
6	668763	3	8	80	1518	1200	1826	5122278	5000000	5999999
7	1135501	1	20	85	1182	0	0	6262323	6000000	6999999
8	1062029	1	14	75	1388	0	0	7325534	7000000	7999999
9	1061506	3	16	85	1806	1328	1663	8388428	8000000	8999999
10	953135	3	8	70	1932	1920	1292	9346360	9000000	9999999
11	1503688	1	17	95	1407	0	0	10855192	10000000	10999999
12	536236	3	9	85	1653	1655	1141	11392835	11000000	11999999

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

Type 5 Radar Waveform_14

```
Waveform Num = 14
Num of Bursts = 20
Burst Interval (us)= 600000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	411239	1	7	75	1336	0	0	411239	0	599999
2	456340	1	15	70	1487	0	0	868915	600000	1199999
3	815529	3	12	100	1863	1199	1607	1685931	1200000	1799999
4	390782	3	5	50	1714	1579	1731	2081382	1800000	2399999
5	329914	2	11	70	1068	1550	0	2416320	2400000	2999999
6	1156553	1	8	95	1323	0	0	3575491	3000000	3599999
7	30227	1	5	55	1832	0	0	3607041	3600000	4199999
8	599732	1	11	90	1140	0	0	4208605	4200000	4799999
9	1144204	2	12	75	1004	1403	0	5353949	4800000	5399999
10	601312	2	10	75	1181	1364	0	5957668	5400000	5999999
11	380007	3	14	70	1292	1778	1834	6340220	6000000	6599999
12	769308	1	6	95	1853	0	0	7114432	6600000	7199999
13	620706	2	8	55	1650	1355	0	7736991	7200000	7799999
14	486125	3	13	50	1743	1590	1028	8226121	7800000	8399999
15	594909	3	10	90	1504	1709	1276	8825391	8400000	8999999
16	222467	3	20	70	1242	1155	1013	9052347	9000000	9599999
17	870972	2	17	65	1003	1644	0	9926729	9600000	10199999
18	721899	2	18	90	1659	1272	0	10651275	10200000	10799999
19	621088	1	5	85	1820	0	0	11275294	10800000	11399999
20	323308	1	19	90	1295	0	0	11600422	11400000	11999999

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

Type 5 Radar Waveform_15

```
Waveform Num = 15
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	260507	2	7	90	1525	1841	0	260507	0	1090908
2	1669298	3	10	55	1606	1575	1478	1933171	1090909	2181817
3	991570	2	7	85	1543	1520	0	2929400	2181818	3272726
4	584220	1	15	65	1977	0	0	3516683	3272727	4363635
5	1504371	2	15	70	1994	1994	0	5023031	4363636	5454544
6	949691	3	20	65	1865	1658	1153	5976710	5454545	6545453
7	842900	3	7	75	1188	1699	1305	6824286	6545454	7636362
8	1690074	2	5	75	1220	1994	0	8518552	7636363	8727271
9	347884	3	9	90	1129	1458	1218	8869650	8727272	9818180
10	1779307	2	20	100	1446	1610	0	10652762	9818181	10909089
11	411593	2	20	60	1782	1190	0	11067411	10909090	11999998

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

Type 5 Radar Waveform_16

```
Waveform Num = 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	177957	1	14	95	1860	0	0	177957	0	857142
2	1447770	2	14	75	1297	1416	0	1627587	857143	1714285
3	929228	2	20	85	1420	1028	0	2559528	1714286	2571428
4	195745	3	5	85	1992	1373	1655	2757721	2571429	3428571
5	1350305	1	9	70	1073	0	0	4113046	3428572	4285714
6	697016	2	14	80	1987	1012	0	4811135	4285715	5142857
7	785881	2	19	85	1316	1510	0	5600015	5142858	6000000
8	1089737	3	9	80	1542	1238	1008	6692578	6000001	6857143
9	693741	3	18	70	1939	1830	1954	7390107	6857144	7714286
10	353928	1	17	65	1984	0	0	7749758	7714287	8571429
11	1542474	2	20	65	1656	1230	0	9294216	8571430	9428572
12	338888	2	6	85	1095	1901	0	9635990	9428573	10285715
13	1030526	3	7	55	1516	1614	1558	10669512	10285716	11142858
14	663326	1	7	75	1887	0	0	11337526	11142859	12000001

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

Type 5 Radar Waveform_17

Waveform Num = 17
Num of Bursts = 13
Burst Interval (us)= 923077

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	152380	2	19	80	1778	1651	0	152380	0	923076
2	815594	3	17	50	1995	1661	1021	971403	923077	1846153
3	1718649	1	11	55	1769	0	0	2694729	1846154	2769230
4	777676	1	17	65	1037	0	0	3474174	2769231	3692307
5	442506	3	11	50	1205	1348	1198	3917717	3692308	4615384
6	1176987	3	5	70	1416	1409	1236	5098455	4615385	5538461
7	1225277	3	9	90	1527	1315	1375	6327793	5538462	6461538
8	778943	2	8	75	1043	1287	0	7110953	6461539	7384615
9	690007	3	20	90	1039	1653	1425	7803290	7384616	8307692
10	1012215	3	10	50	1851	1221	1273	8819622	8307693	9230769
11	1029335	2	10	60	1003	1727	0	9853302	9230770	10153846
12	800525	1	15	70	1566	0	0	10656557	10153847	11076923
13	1024691	2	17	90	1696	1076	0	11682814	11076924	12000000

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

Type 5 Radar Waveform_18

Waveform Num = 18
Num of Bursts = 11
Burst Interval (us)= 1090909

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	507381	2	7	100	1170	1449	0	507381	0	1090908
2	983182	1	19	60	1224	0	0	1493182	1090909	2181817
3	1765740	1	20	75	1679	0	0	3260146	2181818	3272726
4	908252	2	17	95	1125	1623	0	4170077	3272727	4363635
5	422976	1	20	65	1339	0	0	4595801	4363636	5454544
6	1859620	1	19	75	1102	0	0	6456760	5454545	6545453
7	615779	1	17	75	1289	0	0	7073641	6545454	7636362
8	1312722	1	11	55	1314	0	0	8387652	7636363	8727271
9	819820	1	11	75	1723	0	0	9208786	8727272	9818180
10	1039446	2	13	55	1680	1540	0	10249955	9818181	10909089
11	714543	2	14	85	1677	1998	0	10967718	10909090	11999998

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

Type 5 Radar Waveform_19

Waveform Num = 19
Num of Bursts = 16
Burst Interval (us)= 750000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	498620	2	14	50	1001	1793	0	498620	0	749999
2	958866	2	6	80	1923	1844	0	1460280	750000	1499999
3	545353	3	8	85	1586	1326	1961	2009400	1500000	2249999
4	551426	1	19	65	1691	0	0	2565691	2250000	2999999
5	738630	1	19	80	1879	0	0	3306020	3000000	3749999
6	686258	2	20	70	1727	1919	0	3994157	3750000	4499999
7	1042698	2	5	50	1193	1383	0	5040501	4500000	5249999
8	562823	3	19	80	1954	1526	1392	5605900	5250000	5999999
9	913112	3	17	55	1127	1364	1108	6523884	6000000	6749999
10	790729	3	7	100	1091	1404	1757	7318212	6750000	7499999
11	575994	3	8	60	1999	1555	1496	7898458	7500000	8249999
12	820167	3	7	50	1851	1098	1633	8723675	8250000	8999999
13	602286	2	9	55	1413	1505	0	9330543	9000000	9749999
14	1030372	1	17	65	1653	0	0	10363833	9750000	10499999
15	147301	1	16	95	1312	0	0	10512787	10500000	11249999
16	1297827	1	8	95	1063	0	0	11811926	11250000	11999999

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

Type 5 Radar Waveform_20

```
Waveform Num = 20
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	270532	3	20	95	1545	1207	1921	270532	0	749999
2	889516	1	8	90	1044	0	0	1164721	750000	1499999
3	992203	2	7	90	1443	1992	0	2157968	1500000	2249999
4	450749	1	16	75	1269	0	0	2612152	2250000	2999999
5	603850	2	9	55	1295	1697	0	3217271	3000000	3749999
6	960711	2	10	60	1128	1295	0	4180974	3750000	4499999
7	823698	1	12	55	1237	0	0	5007095	4500000	5249999
8	778958	3	7	50	1364	1414	1801	5787290	5250000	5999999
9	467464	2	20	60	1553	1885	0	6259333	6000000	6749999
10	786691	1	12	80	1149	0	0	7049462	6750000	7499999
11	1100584	1	17	55	1900	0	0	8151195	7500000	8249999
12	423663	3	10	50	1274	1271	1531	8576758	8250000	8999999
13	727633	2	15	90	1897	1077	0	9308467	9000000	9749999
14	469938	3	6	50	1116	1414	1289	9781379	9750000	10499999
15	1226838	2	17	65	1178	1932	0	11012036	10500000	11249999
16	926868	3	19	100	1794	1905	1688	11942014	11250000	11999999

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

Type 5 Radar Waveform_21

```
Waveform Num = 21
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	940451	3	12	85	1335	1692	1587	940451	0	999999
2	740434	3	8	60	1553	1962	1818	1685499	1000000	1999999
3	464415	3	5	75	1320	1836	1732	2155247	2000000	2999999
4	1460571	1	19	75	1515	0	0	3620706	3000000	3999999
5	1349859	2	6	95	1182	1128	0	4972080	4000000	4999999
6	655115	3	18	55	1475	1141	1632	5629505	5000000	5999999
7	872243	2	8	50	1645	1876	0	6505996	6000000	6999999
8	759196	1	15	70	1241	0	0	7268713	7000000	7999999
9	1696422	2	9	75	1142	1104	0	8966376	8000000	8999999
10	636846	2	19	75	1169	1187	0	9605468	9000000	9999999
11	829489	3	16	80	1199	1793	1082	10437313	10000000	10999999
12	626391	2	12	85	1974	1853	0	11067778	11000000	11999999

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

Type 5 Radar Waveform_22

```
Waveform Num = 22
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	428568	3	10	75	1540	1145	1778	428568	0	923076
2	756471	3	19	95	1241	1449	1445	1189502	923077	1846153
3	1061450	1	10	95	1390	0	0	2255087	1846154	2769230
4	1425232	1	14	50	1694	0	0	3681709	2769231	3692307
5	240021	3	13	70	1327	1543	1800	3923424	3692308	4615384
6	1506492	2	17	90	1584	1112	0	5434586	4615385	5538461
7	544681	1	13	60	1211	0	0	5981963	5538462	6461538
8	722386	3	6	75	1131	1903	1530	6705560	6461539	7384615
9	1117710	3	12	85	1822	1635	1238	7827834	7384616	8307692
10	1095385	1	9	95	1334	0	0	8927914	8307693	9230769
11	753292	3	6	90	1007	1550	1823	9682540	9230770	10153846
12	1197380	2	9	75	1977	1696	0	10884300	10153847	11076923
13	539939	2	17	95	1212	1140	0	11427912	11076924	12000000

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

Type 5 Radar Waveform_23

```
Waveform Num = 23
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	722545	3	16	65	1605	1380	1717	722545	0	799999
2	601398	1	14	80	1904	0	0	1328645	800000	1599999
3	275305	3	14	75	1071	1924	1010	1605854	1600000	2399999
4	886246	3	11	55	1686	1109	1932	2496105	2400000	3199999
5	1022731	3	14	70	1840	1082	1517	3523563	3200000	3999999
6	1052756	1	7	55	1640	0	0	4580758	4000000	4799999
7	232717	2	12	60	1699	1335	0	4815115	4800000	5599999
8	1041875	3	12	60	1682	1048	1770	5860024	5600000	6399999
9	1112904	3	20	60	1574	1688	1462	6977428	6400000	7199999
10	669932	2	14	55	1777	1335	0	7652084	7200000	7999999
11	622784	3	6	75	1497	1428	1405	8277980	8000000	8799999
12	749811	1	15	95	1878	0	0	9032121	8800000	9599999
13	781023	2	7	100	1429	1010	0	9815022	9600000	10399999
14	726286	3	10	65	1394	1539	1288	10543747	10400000	11199999
15	925546	1	7	65	1013	0	0	11473514	11200000	11999999

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

Type 5 Radar Waveform_24

```
Waveform Num = 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	309539	2	18	95	1750	1874	0	309539	0	599999
2	680369	2	7	100	1536	1566	0	993532	600000	1199999
3	786696	1	12	90	1483	0	0	1783330	1200000	1799999
4	607435	1	5	80	1078	0	0	2392248	1800000	2399999
5	124352	3	19	60	1752	1799	1322	2517678	2400000	2999999
6	823393	3	15	100	1040	1562	1457	3345944	3000000	3599999
7	510328	1	20	85	1950	0	0	3860331	3600000	4199999
8	927525	2	8	60	1939	1251	0	4789806	4200000	4799999
9	460080	3	5	80	1359	1955	1859	5253076	4800000	5399999
10	581983	1	19	70	1422	0	0	5840232	5400000	5999999
11	529780	3	15	95	1467	1317	1463	6371434	6000000	6599999
12	589004	1	6	90	1917	0	0	6964685	6600000	7199999
13	537418	3	8	95	1510	1142	1869	7504020	7200000	7799999
14	298180	1	7	50	1413	0	0	7806721	7800000	8399999
15	807222	2	7	60	1646	1649	0	8615356	8400000	8999999
16	846253	3	20	70	1190	1038	1001	9464904	9000000	9599999
17	193008	3	20	80	1397	1194	1766	9661141	9600000	10199999
18	855243	1	11	60	1724	0	0	10520741	10200000	10799999
19	547358	2	15	90	1778	1133	0	11069823	10800000	11399999
20	373818	1	15	75	1812	0	0	11446552	11400000	11999999

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

Type 5 Radar Waveform_25

```
Waveform Num = 25
Num of Bursts = 16
Burst Interval (us)= 750000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	579202	3	15	85	1896	1945	1277	579202	0	749999
2	772502	3	17	100	1578	1333	1616	1356822	750000	1499999
3	820551	1	8	80	1022	0	0	2181900	1500000	2249999
4	132511	1	18	100	1363	0	0	2315433	2250000	2999999
5	1253440	3	17	70	1887	1090	1977	3570236	3000000	3749999
6	907002	1	16	65	1275	0	0	4482192	3750000	4499999
7	741742	3	10	100	1889	1308	1408	5225209	4500000	5249999
8	612157	3	18	80	1140	1217	1501	5841971	5250000	5999999
9	866704	2	8	60	1595	1137	0	6712533	6000000	6749999
10	65764	2	5	85	1425	1440	0	6781029	6750000	7499999
11	909268	1	18	100	1683	0	0	7693162	7500000	8249999
12	640086	1	18	55	1522	0	0	8334931	8250000	8999999
13	1184570	1	6	100	1948	0	0	9521023	9000000	9749999
14	539982	3	11	50	1099	1642	1947	10062953	9750000	10499999
15	1031883	1	13	55	1451	0	0	11099524	10500000	11249999
16	324514	2	15	50	1680	1681	0	11425489	11250000	11999999

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

Type 5 Radar Waveform_26

Waveform Num = 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	551887	1	14	75	1324	0	0	551887	0	666666
2	403121	1	17	65	1508	0	0	956332	666667	1333333
3	616719	1	11	55	1604	0	0	1574559	1333334	2000000
4	832453	1	15	80	1382	0	0	2408616	2000001	2666667
5	730732	1	10	60	1822	0	0	3140730	2666668	3333334
6	346008	2	9	70	1789	1184	0	3488560	3333335	4000001
7	533336	2	14	65	1967	1596	0	4024869	4000002	4666668
8	1111585	2	7	80	1585	1035	0	5140017	4666669	5333335
9	454150	3	16	55	1940	1418	1098	5596787	5333336	6000002
10	948219	2	17	90	1016	1525	0	6549462	6000003	6666669
11	166526	3	13	50	1228	1012	1375	6718529	6666670	7333336
12	661305	3	15	90	1146	1965	1207	7383449	7333337	8000003
13	1034121	2	16	80	1081	1335	0	8421888	8000004	8666670
14	780461	3	18	75	1124	1849	1540	9204765	8666671	9333337
15	744109	1	7	90	1887	0	0	9953387	9333338	10000004
16	238763	3	19	95	1146	1222	1859	10194037	10000005	10666671
17	857900	1	14	50	1326	0	0	11056164	10666672	11333338
18	376308	3	13	50	1259	1574	1479	11433798	11333339	12000005

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

Type 5 Radar Waveform_27

Waveform Num = 27
Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	219278	1	5	75	1222	0	0	219278	0	666666
2	539298	2	19	80	1307	1663	0	759798	666667	1333333
3	887090	2	16	60	1724	1545	0	1649858	1333334	2000000
4	472436	2	13	95	1703	1519	0	2125563	2000001	2666667
5	872900	1	12	75	1761	0	0	3001685	2666668	3333334
6	816583	1	14	70	1755	0	0	3820029	3333335	4000001
7	702582	1	16	70	1693	0	0	4524366	4000002	4666668
8	572499	2	20	90	1840	1518	0	5098558	4666669	5333335
9	780893	2	12	75	1420	1931	0	5882809	5333336	6000002
10	622193	1	7	65	1119	0	0	6508353	6000003	6666669
11	673464	2	11	70	1431	1891	0	7182936	6666670	7333336
12	254942	1	14	90	1310	0	0	7441200	7333337	8000003
13	806662	2	15	100	1610	1201	0	8249172	8000004	8666670
14	677447	3	7	90	1413	1578	1756	8929430	8666671	9333337
15	477336	2	10	80	1849	1792	0	9411513	9333338	10000004
16	623463	2	19	50	1216	1145	0	10038617	10000005	10666671
17	1168782	2	13	95	1084	1946	0	11209760	10666672	11333338
18	612818	3	11	80	1581	1708	1159	11825608	11333339	12000005

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

Type 5 Radar Waveform_28

Waveform Num = 28
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	597818	2	8	55	1844	1678	0	597818	0	705881
2	486831	1	13	85	1856	0	0	1088171	705882	1411763
3	398696	3	19	60	1315	1193	1567	1488723	1411764	2117645
4	1109572	2	17	55	1485	1262	0	2602370	2117646	2823527
5	777456	2	7	90	1942	1456	0	3382573	2823528	3529409
6	663951	1	14	80	1707	0	0	4049922	3529410	4235291
7	495634	2	15	60	1047	1366	0	4547263	4235292	4941173
8	505023	3	19	60	1816	1209	1347	5054699	4941174	5647055
9	662581	2	20	50	1091	1596	0	5721652	5647056	6352937
10	1153449	2	5	100	1986	1544	0	6877788	6352938	7058819
11	685997	3	15	80	1570	1492	1173	7567315	7058820	7764701
12	800841	2	12	70	1540	1391	0	8372391	7764702	8470583
13	464378	1	14	95	1018	0	0	8839700	8470584	9176465
14	416118	2	14	55	1769	1224	0	9256836	9176466	9882347
15	918864	1	17	85	1402	0	0	10178693	9882348	10588229
16	642367	2	8	100	1495	1526	0	10822462	10588230	11294111
17	887265	2	8	75	1358	1667	0	11712748	11294112	11999993

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

Type 5 Radar Waveform_29

```
Waveform Num = 29
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	849771	3	8	80	1473	1830	1642	849771	0	857142
2	483009	1	12	100	1324	0	0	1337725	857143	1714285
3	587342	3	19	60	1862	1053	1557	1926391	1714286	2571428
4	1251896	1	19	50	1860	0	0	3182759	2571429	3428571
5	743632	3	8	55	1541	1438	1882	3928251	3428572	4285714
6	826738	1	18	55	1871	0	0	4759850	4285715	5142857
7	437205	2	16	70	1520	1397	0	5198926	5142858	6000000
8	1345749	2	6	70	1386	1899	0	6547592	6000001	6857143
9	463552	2	18	80	1988	1801	0	7014429	6857144	7714286
10	1016942	1	10	95	1681	0	0	8035160	7714287	8571429
11	1321683	3	14	50	1251	1422	1651	9358524	8571430	9428572
12	621195	3	11	55	1270	1413	1095	9984043	9428573	10285715
13	1115815	2	12	100	1999	1812	0	11103636	10285716	11142858
14	221868	2	6	95	1860	1956	0	11329315	11142859	12000001

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

Type 5 Radar Waveform_30

```
Waveform Num = 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	120216	3	12	85	1984	1682	1313	120216	0	705881
2	1044648	2	6	55	1700	1185	0	1169843	705882	1411763
3	871624	1	20	90	1673	0	0	2044352	1411764	2117645
4	498589	2	5	95	1958	1025	0	2544614	2117646	2823527
5	737948	3	11	80	1437	1997	1844	3285545	2823528	3529409
6	793385	1	11	85	1377	0	0	4084208	3529410	4235291
7	624578	2	12	65	1063	1209	0	4710163	4235292	4941173
8	349520	2	13	70	1635	1166	0	5061955	4941174	5647055
9	725712	3	16	75	1561	1565	1818	5790468	5647056	6352937
10	987398	3	8	50	1250	1880	1538	6782810	6352938	7058819
11	545185	1	10	90	1206	0	0	7332663	7058820	7764701
12	959310	3	11	60	1850	1937	1554	8293179	7764702	8470583
13	628921	3	8	60	1142	1590	1060	8927441	8470584	9176465
14	827352	2	16	90	1521	1280	0	9758585	9176466	9882347
15	706782	3	5	70	1907	1539	1678	10468168	9882348	10588229
16	186639	2	19	90	1460	1482	0	10659931	10588230	11294111
17	1181848	2	14	100	1304	1665	0	11844721	11294112	11999993

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

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5309	1	16	5309	1
2	5309	1	17	5309	1
3	5309	1	18	5309	1
4	5309	1	19	5309	1
5	5309	1	20	5309	1
6	5309	1	21	5309	1
7	5309	1	22	5309	1
8	5309	1	23	5309	1
9	5309	1	24	5309	1
10	5309	1	25	5309	1
11	5309	1	26	5309	1
12	5309	1	27	5309	1
13	5309	1	28	5309	1
14	5309	1	29	5309	1
15	5309	1	30	5309	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5305	12	23	5314	69
6	5292	18	32	5300	96
40	5309	120	34	5268	102
48	5304	144	37	5274	111
55	5320	165	42	5289	126
83	5284	249	56	5271	168
91	5270	273	69	5277	207
--	--	--	73	5302	219
--	--	--	76	5295	228
--	--	--	77	5267	231
--	--	--	80	5309	240
--	--	--	94	5282	282
--	--	--	95	5291	285
--	--	--	98	5272	294

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5293	6	2	5299	6
30	5324	90	9	5309	27
45	5272	135	10	5265	30
47	5296	141	25	5292	75
49	5320	147	48	5306	144
51	5323	153	50	5303	150
52	5269	156	60	5279	180
58	5318	174	63	5268	189
65	5281	195	67	5290	201
74	5280	222	--	--	--
93	5307	279	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5297	6	0	5273	0
6	5279	18	16	5267	48
8	5284	24	21	5307	63
13	5301	39	34	5280	102
16	5270	48	38	5297	114
22	5287	66	43	5298	129
32	5291	96	50	5278	150
33	5324	99	64	5288	192
43	5299	129	65	5324	195
44	5274	132	69	5302	207
51	5288	153	71	5294	213
59	5325	177	74	5321	222
79	5319	237	76	5286	228
80	5300	240	83	5274	249
82	5289	246	--	--	--
84	5298	252	--	--	--
90	5281	270	--	--	--
92	5303	276	--	--	--
93	5265	279	--	--	--
98	5276	294	--	--	--
99	5283	297	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5284	21	9	5295	27
10	5267	30	16	5316	48
17	5278	51	20	5268	60
34	5293	102	22	5310	66
37	5271	111	23	5312	69
38	5297	114	25	5278	75
42	5312	126	27	5306	81
47	5291	141	36	5277	108
50	5266	150	64	5273	192
52	5270	156	66	5271	198
53	5294	159	85	5299	255
55	5269	165	89	5291	267
58	5286	174	--	--	--
87	5277	261	--	--	--
92	5319	276	--	--	--
98	5298	294	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5297	0	8	5272	24
25	5304	75	19	5274	57
39	5309	117	27	5304	81
43	5312	129	39	5310	117
44	5298	132	54	5301	162
45	5317	135	63	5306	189
50	5291	150	73	5266	219
57	5267	171	76	5280	228
66	5283	198	83	5322	249
68	5289	204	85	5271	255
78	5318	234	87	5277	261
81	5303	243	96	5275	288
83	5285	249	--	--	--
86	5306	258	--	--	--
91	5274	273	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
1	5288	3	20	5271	60
12	5289	36	32	5265	96
14	5305	42	39	5314	117
21	5306	63	47	5285	141
52	5317	156	49	5304	147
54	5323	162	52	5277	156
70	5269	210	55	5288	165
86	5310	258	60	5317	180
98	5315	294	62	5325	186
--	--	--	69	5276	207
--	--	--	93	5301	279
--	--	--	96	5291	288

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5317	12	9	5295	27
12	5272	36	26	5310	78
20	5288	60	45	5285	135
23	5318	69	67	5274	201
30	5302	90	72	5318	216
40	5283	120	83	5283	249
43	5273	129	87	5302	261
69	5307	207	95	5269	285
72	5322	216	96	5300	288
76	5291	228	98	5303	294
77	5319	231	--	--	--
96	5312	288	--	--	--
99	5323	297	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5308	9	6	5286	18
5	5319	15	9	5284	27
16	5300	48	11	5300	33
18	5265	54	13	5279	39
20	5290	60	15	5283	45
37	5282	111	33	5325	99
42	5268	126	35	5321	105
43	5316	129	38	5313	114
51	5281	153	40	5280	120
57	5271	171	71	5314	213
60	5307	180	77	5299	231
64	5283	192	84	5294	252
93	5297	279	85	5297	255
99	5285	297	86	5304	258

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5303	9	2	5316	6
5	5312	15	25	5310	75
7	5311	21	31	5284	93
10	5305	30	36	5320	108
14	5300	42	49	5319	147
22	5304	66	54	5314	162
28	5296	84	57	5308	171
38	5282	114	68	5290	204
40	5320	120	72	5265	216
57	5323	171	73	5277	219
58	5276	174	83	5286	249
60	5307	180	92	5317	276
67	5295	201	95	5324	285
70	5290	210	98	5274	294
84	5289	252	--	--	--
97	5293	291	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5321	6	2	5310	6
4	5304	12	3	5271	9
16	5319	48	13	5319	39
20	5282	60	14	5280	42
21	5283	63	67	5273	201
32	5314	96	73	5277	219
42	5298	126	80	5269	240
45	5279	135	89	5324	267
51	5324	153	--	--	--
66	5309	198	--	--	--
70	5286	210	--	--	--
84	5272	252	--	--	--
94	5273	282	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5281	0	6	5278	18
10	5315	30	10	5279	30
18	5317	54	23	5277	69
19	5309	57	33	5304	99
22	5318	66	36	5270	108
26	5265	78	51	5274	153
32	5295	96	53	5306	159
55	5286	165	60	5293	180
63	5306	189	73	5313	219
64	5285	192	80	5285	240
72	5314	216	83	5300	249
73	5277	219	87	5289	261
83	5313	249	88	5307	264
86	5319	258	90	5299	270
97	5290	291	95	5266	285
--	--	--	98	5296	294
--	--	--	99	5319	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5312	9	10	5323	30
5	5272	15	14	5296	42
8	5322	24	22	5279	66
11	5270	33	23	5276	69
18	5323	54	31	5293	93
23	5268	69	42	5322	126
30	5305	90	44	5324	132
37	5266	111	45	5283	135
44	5319	132	50	5313	150
58	5283	174	53	5316	159
67	5279	201	54	5300	162
87	5302	261	55	5269	165
89	5318	267	58	5310	174
97	5267	291	60	5281	180
--	--	--	64	5270	192
--	--	--	75	5273	225
--	--	--	89	5317	267
--	--	--	90	5268	270
--	--	--	91	5319	273

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5322	21	8	5325	24
11	5278	33	12	5265	36
18	5271	54	14	5319	42
28	5290	84	49	5286	147
38	5312	114	53	5294	159
42	5315	126	54	5323	162
45	5293	135	58	5317	174
64	5282	192	64	5272	192
66	5301	198	67	5287	201
79	5303	237	79	5292	237
91	5325	273	80	5306	240
95	5267	285	89	5297	267

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5280	12	0	5275	0
5	5284	15	11	5324	33
41	5274	123	27	5316	81
72	5275	216	43	5304	129
86	5300	258	55	5308	165
88	5309	264	59	5276	177
90	5265	270	62	5306	186
--	--	--	63	5285	189
--	--	--	72	5282	216
--	--	--	73	5305	219
--	--	--	85	5265	255
--	--	--	92	5280	276
--	--	--	93	5270	279
--	--	--	95	5325	285
--	--	--	97	5291	291
--	--	--	99	5266	297
Radar waveform #29			Radar waveform #30		

Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5281	27	13	5299	39
17	5307	51	26	5282	78
37	5273	111	29	5280	87
38	5267	114	33	5312	99
42	5283	126	38	5270	114
46	5279	138	47	5273	141
56	5295	168	48	5324	144
59	5289	177	51	5313	153
62	5276	186	67	5279	201
63	5304	189	72	5309	216
68	5325	204	84	5289	252
70	5293	210	89	5284	267
75	5310	225	--	--	--
78	5305	234	--	--	--
98	5303	294	--	--	--

Radar Statistical Performance for 802.11n-HT40

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	0	778	58	1
2	5291	1	758	89	1
3	5291	1	938	65	1
4	5291	1	898	81	1
5	5291	1	718	78	1
6	5291	1	698	18	1
7	5291	1	838	74	1
8	5291	1	558	72	1
9	5291	1	798	59	1
10	5291	1	618	102	1
11	5291	1	578	67	1
12	5291	1	638	92	1
13	5291	1	3066	83	1
14	5291	1	658	63	1
15	5291	1	878	70	1
16	5291	1	1818	18	1
17	5291	1	2333	28	1
18	5291	1	2521	42	1
19	5291	1	1087	19	1
20	5291	1	655	25	1
21	5291	1	2527	43	1
22	5291	1	1138	20	1
23	5291	1	2539	89	1
24	5291	1	583	39	1
25	5291	1	0	29	1
26	5291	1	1175	53	1
27	5291	1	551	43	1
28	5291	1	904	24	1
29	5291	1	2279	82	1
30	5291	1	697	24	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	2.4	199	27	1
2	5300	4.1	210	23	1
3	5300	1.6	166	23	1
4	5300	1.5	191	26	1
5	5300	3.7	225	29	1
6	5300	2.1	218	26	1
7	5300	2.4	225	23	1
8	5300	2.9	182	26	1
9	5300	1.2	164	26	1
10	5300	1.4	183	25	1
11	5300	1.9	205	27	1
12	5300	3.3	200	28	1
13	5300	1.5	196	29	1
14	5300	3.1	225	26	1
15	5300	2.6	201	28	1
16	5300	1.4	185	27	1
17	5300	3.5	229	24	1
18	5300	3.7	191	27	1
19	5300	2.7	220	29	1
20	5300	4.5	184	25	1
21	5300	4.5	190	23	1
22	5300	3.1	193	24	1
23	5300	3.5	180	27	1
24	5300	3.3	200	26	1
25	5300	1.7	176	24	1
26	5300	2.4	210	28	1
27	5300	1.1	230	26	1
28	5300	2.1	221	24	1
29	5300	2.5	176	25	1
30	5300	3.9	165	26	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5310	7.2	412	16	0
2	5310	7.1	465	18	1
3	5310	7.8	459	18	1
4	5310	6.8	366	18	1
5	5310	8.6	270	17	1
6	5310	7.2	393	16	1
7	5310	7.4	363	17	1
8	5310	7.9	336	18	1
9	5310	8.3	321	18	1
10	5310	9.8	265	17	1
11	5310	6.7	308	17	1
12	5310	7.2	395	17	1
13	5310	8.7	293	17	1
14	5310	8.2	479	17	1
15	5310	9.2	355	16	1
16	5310	6.3	472	18	1
17	5310	7.5	397	17	1
18	5310	6.3	370	17	1
19	5310	8.7	408	18	1
20	5310	9.6	358	16	1
21	5310	8.3	390	18	1
22	5310	9.9	472	18	1
23	5310	6.6	492	17	1
24	5310	8.8	469	17	1
25	5310	7.6	252	18	1
26	5310	6.2	276	16	1
27	5310	6.3	364	17	1
28	5310	8.1	265	16	1
29	5310	9.6	398	17	1
30	5310	9.1	434	18	0
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	5315	11.8	325	13	1
2	5315	18.6	410	13	1
3	5315	13.1	393	15	1
4	5315	13.1	448	13	1
5	5315	12.6	469	13	1
6	5315	15.4	314	12	1
7	5315	13.7	455	15	1
8	5315	16.6	334	14	1
9	5315	16.1	351	13	1
10	5315	16.4	265	15	1
11	5315	19.3	459	14	1
12	5315	19.2	485	16	1
13	5315	12.9	334	16	1
14	5315	13.8	395	15	1
15	5315	18.5	379	13	1
16	5315	16.5	267	14	1
17	5315	15.8	487	15	1
18	5315	15.8	464	16	0
19	5315	11.2	291	15	1
20	5315	18.9	259	12	1
21	5315	15.1	393	12	1
22	5315	11.1	414	13	1
23	5315	17.1	376	15	1
24	5315	17.0	328	16	1
25	5315	12.9	329	14	1
26	5315	15.0	410	15	1
27	5315	19.7	367	13	1
28	5315	15.4	462	12	0
29	5315	12.2	446	13	1
30	5315	11.3	455	15	1
Detection Percentage (%)					93.3%

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

radar test waveforms is as follows: $\dfrac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+100%+93.3%+100%)/4 =

98.3% (>80%)

$$\frac{P_d1+P_d2+P_d3+P_d4}{4} = (100\%+100\%+93.3\%+100\%)/4 =$$

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	5325	1	16	5325	1
2	5325	1	17	5325	1
3	5325	1	18	5325	1
4	5325	1	19	5325	1
5	5325	1	20	5325	1
6	5325	1	21	5325	1
7	5325	1	22	5325	1
8	5325	1	23	5325	1
9	5325	1	24	5325	1
10	5325	1	25	5325	1
11	5325	1	26	5325	1
12	5325	1	27	5325	1
13	5325	1	28	5325	1
14	5325	1	29	5325	1
15	5325	1	30	5325	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

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

Burst      Off Time     #         Chirp    PW       Pulse 1    Pulse 2    Pulse 3    Start Loc    Start Burst    End Burst
#          (us)         Pulses    (MHz)    (us)     Pri(us)    Pri(us)    Pri(us)    (us)         Interval(us)   Interval(us)
           227634
1                       2         6        60       1164       1266       0          227634       0              749999
           869000
2                       2         8        95       1637       1593       0          1099064      750000         1499999
           1108965
3                       2         10       60       1424       1227       0          2211259      1500000        2249999
           699604
4                       3         18       100      1290       1585       1381       2913514      2250000        2999999
           503106
5                       3         19       85       1509       1407       1296       3420876      3000000        3749999
           884358
6                       3         16       60       1246       1403       1740       4309446      3750000        4499999
           453486
7                       2         14       95       1360       1682       0          4767321      4500000        5249999
           522393
8                       2         13       75       1242       1221       0          5292756      5250000        5999999
           1181695
9                       3         7        50       1904       1661       1340       6476914      6000000        6749999
           545367
10                      1         20       60       1432       0          0          7027186      6750000        7499999
           1109717
11                      3         9        75       1967       1572       1063       8138335      7500000        8249999
           616152
12                      1         6        85       1354       0          0          8759089      8250000        8999999
           363842
13                      2         15       85       1522       1680       0          9124285      9000000        9749999
           669762
14                      1         20       60       1083       0          0          9797249      9750000        10499999
           793106
15                      3         17       75       1477       1525       1307       10591438     10500000       11249999
           936005
16                      2         19       50       1432       1216       0          11531752     11250000       11999999
Total number of pulses in waveform = 35
*************************************************************************
```

Type 5 Radar Waveform_2

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	43949	2	15	80	1754	1411	0	43949	0	631578
2	646858	3	20	60	1302	1317	1571	693972	631579	1263157
3	567296	1	7	100	1739	0	0	1265458	1263158	1894736
4	1029710	1	7	60	1776	0	0	2296907	1894737	2526315
5	505751	1	14	85	1372	0	0	2804434	2526316	3157894
6	609491	2	14	85	1150	1384	0	3415297	3157895	3789473
7	420608	3	20	80	1050	1996	1516	3838439	3789474	4421052
8	622855	2	17	60	1680	1553	0	4465856	4421053	5052631
9	909647	1	16	60	1696	0	0	5378736	5052632	5684210
10	622592	2	14	95	1369	1957	0	6003024	5684211	6315789
11	608486	2	5	95	1367	1277	0	6614836	6315790	6947368
12	861559	1	6	90	1548	0	0	7479039	6947369	7578947
13	178120	1	12	55	1833	0	0	7658707	7578948	8210526
14	941833	1	5	55	1573	0	0	8602373	8210527	8842105
15	802870	2	16	95	1370	1942	0	9406816	8842106	9473684
16	375548	2	8	80	1538	1820	0	9785676	9473685	10105263
17	720676	3	19	100	1658	1624	1968	10509710	10105264	10736842
18	696416	1	18	60	1414	0	0	11211376	10736843	11368421
19	577190	3	7	65	1820	1217	1699	11789980	11368422	12000000

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

Type 5 Radar Waveform_3

```
Waveform Num = 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	297820	3	10	55	1686	1191	1558	297820	0	1199999
2	1588372	2	17	55	1733	1337	0	1890627	1200000	2399999
3	1213615	3	9	85	1634	1817	1469	3107312	2400000	3599999
4	727752	3	5	90	1083	1811	1512	3839984	3600000	4799999
5	1007514	2	16	100	1276	1987	0	4851904	4800000	5999999
6	2201093	2	16	50	1145	1855	0	7056260	6000000	7199999
7	249905	1	19	75	1258	0	0	7309165	7200000	8399999
8	1491024	1	14	60	1698	0	0	8801447	8400000	9599999
9	950433	2	5	80	1037	1475	0	9753578	9600000	10799999
10	1543584	3	5	60	1658	1023	1124	11299674	10800000	11999999

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

Type 5 Radar Waveform_4

```
Waveform Num = 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	368669	3	5	95	1653	1755	1286	368669	0	999999
2	1524485	2	13	95	1634	1609	0	1897848	1000000	1999999
3	162597	1	11	80	1354	0	0	2063688	2000000	2999999
4	1143054	1	7	70	1982	0	0	3208096	3000000	3999999
5	1474103	1	16	75	1524	0	0	4684181	4000000	4999999
6	986563	2	12	95	1849	1022	0	5672268	5000000	5999999
7	326484	2	15	60	1445	1551	0	6001623	6000000	6999999
8	1575391	1	16	75	1992	0	0	7580010	7000000	7999999
9	849638	3	12	100	1412	1182	1833	8431640	8000000	8999999
10	1004282	2	18	100	1258	1196	0	9440349	9000000	9999999
11	879816	3	9	55	1089	1997	1034	10322619	10000000	10999999
12	1244978	1	14	90	1708	0	0	11571717	11000000	11999999

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

Type 5 Radar Waveform_5

Waveform Num = 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	872541	1	11	65	1463	0	0	872541	0	999999
2	404829	3	9	55	1339	1888	1059	1278833	1000000	1999999
3	1116707	3	7	65	1089	1283	1499	2399826	2000000	2999999
4	1318974	1	14	90	1446	0	0	3722671	3000000	3999999
5	949008	2	8	95	1304	1557	0	4673125	4000000	4999999
6	325337	2	5	80	1515	1750	0	5001323	5000000	5999999
7	1740688	3	10	90	1646	1017	1589	6745276	6000000	6999999
8	387036	3	9	70	1370	1594	1420	7136564	7000000	7999999
9	1442918	2	18	70	1294	1024	0	8583866	8000000	8999999
10	844840	1	16	65	1094	0	0	9431024	9000000	9999999
11	859268	1	19	80	1533	0	0	10291386	10000000	10999999
12	1143530	2	6	60	1608	1246	0	11436449	11000000	11999999

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

Type 5 Radar Waveform_6

Waveform Num = 6
Num of Bursts = 14
Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	582266	2	14	85	1458	1481	0	582266	0	857143
2	879044	2	11	65	1291	1706	0	1464249	857143	1714285
3	970554	2	20	100	1700	1884	0	2437800	1714286	2571428
4	224507	2	19	55	1025	1663	0	2665891	2571429	3428571
5	1600413	2	16	75	1095	1057	0	4268992	3428572	4285714
6	651906	3	8	85	1665	1612	1417	4923050	4285715	5142857
7	681695	2	11	85	1070	1324	0	5609439	5142858	6000000
8	1038273	2	6	55	1398	1027	0	6650106	6000001	6857143
9	638018	2	20	70	1232	1380	0	7290549	6857144	7714286
10	846302	3	10	65	1134	1540	1806	8139463	7714287	8571429
11	585235	1	13	60	1599	0	0	8729178	8571430	9428572
12	941849	2	15	75	1936	1549	0	9672626	9428573	10285715
13	863132	1	18	95	1364	0	0	10539243	10285716	11142858
14	1373623	1	8	65	1663	0	0	11914230	11142859	12000001

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

Type 5 Radar Waveform_7

Waveform Num = 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	370679	2	9	70	1468	1414	0	370679	0	1499999
2	2179207	3	18	50	1416	1246	1597	2552768	1500000	2999999
3	765677	3	8	60	1678	1763	1206	3322704	3000000	4499999
4	1589772	3	19	55	1876	1029	1139	4917123	4500000	5999999
5	2521924	3	15	70	1933	1423	1820	7443091	6000000	7499999
6	625953	3	11	65	1411	1493	1906	8074220	7500000	8999999
7	1416903	3	13	55	2000	1002	1619	9495933	9000000	10499999
8	1137478	1	13	100	1902	0	0	10638032	10500000	11999999

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

Type 5 Radar Waveform_8

Waveform Num = 8
Num of Bursts = 12
Burst Interval (us)= 1000000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	513919	2	13	100	1513	1615	0	513919	0	999999
2	1474331	3	13	80	1905	1125	1792	1991378	1000000	1999999
3	316701	1	17	75	1517	0	0	2312901	2000000	2999999
4	1230122	3	5	90	1217	1550	1188	3544540	3000000	3999999
5	962611	1	9	50	1682	0	0	4511106	4000000	4999999
6	914277	3	14	80	1004	1034	1940	5427065	5000000	5999999
7	712026	3	19	90	1531	1790	1241	6143069	6000000	6999999
8	1728536	3	19	90	1873	1850	1622	7876167	7000000	7999999
9	285771	1	14	75	1070	0	0	8167283	8000000	8999999
10	1728935	3	15	50	1646	1516	1409	9897288	9000000	9999999
11	140017	3	19	70	1503	1421	1331	10041876	10000000	10999999
12	1060070	1	11	80	1507	0	0	11106201	11000000	11999999

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

Type 5 Radar Waveform_9

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	282052	2	16	60	1033	1979	0	282052	0	705881
2	1062319	1	10	50	1478	0	0	1347383	705882	1411763
3	239484	3	11	85	1339	1848	1739	1588345	1411764	2117645
4	931023	3	14	95	1832	1387	1385	2524294	2117646	2823527
5	714063	3	6	55	1973	1811	1132	3242961	2823528	3529409
6	810466	1	10	50	1464	0	0	4058343	3529410	4235291
7	175635	3	7	60	1554	1394	1148	4235442	4235292	4941173
8	1035473	1	10	60	1614	0	0	5275011	4941174	5647055
9	471818	3	5	50	1186	1831	1596	5748443	5647056	6352937
10	636493	1	14	70	1298	0	0	6389549	6352938	7058819
11	848646	1	19	90	1135	0	0	7239493	7058820	7764701
12	656338	1	7	50	1156	0	0	7896966	7764702	8470583
13	724214	2	17	70	1446	1400	0	8622336	8470584	9176465
14	1053356	1	17	65	1602	0	0	9678538	9176466	9882347
15	675481	1	15	65	1623	0	0	10355621	9882348	10588229
16	925992	2	5	85	1024	1904	0	11283236	10588230	11294111
17	13302	1	18	80	1644	0	0	11299466	11294112	11999993

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

Type 5 Radar Waveform_10

Waveform Num = 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	592798	1	6	85	1003	0	0	592798	0	666666
2	697751	1	17	95	1280	0	0	1291552	666667	1333333
3	235843	3	18	75	1258	1944	1026	1528675	1333334	2000000
4	852700	1	7	50	1226	0	0	2385603	2000001	2666667
5	482221	1	12	100	1902	0	0	2869050	2666668	3333334
6	483708	3	6	55	1796	1836	1763	3354660	3333335	4000001
7	1089744	2	19	60	1932	1074	0	4449799	4000002	4666668
8	875993	3	9	50	1189	1509	1122	5328798	4666669	5333335
9	469314	3	13	100	1432	1264	1716	5801932	5333336	6000002
10	456569	1	10	60	1286	0	0	6262913	6000003	6666669
11	505535	3	9	100	1243	1168	1743	6769734	6666670	7333336
12	760270	3	7	85	1803	1798	1493	7534158	7333337	8000003
13	772853	2	6	90	1028	1599	0	8312105	8000004	8666670
14	591163	3	20	65	1317	1816	1446	8905895	8666671	9333337
15	750572	2	12	50	1247	1006	0	9661046	9333338	10000004
16	362790	3	11	95	1208	1852	1144	10026089	10000005	10666671
17	1210243	3	13	90	1460	1742	1848	11240536	10666672	11333338
18	677865	1	13	70	1844	0	0	11923451	11333339	12000005

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

Type 5 Radar Waveform_11

Waveform Num = 11
Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	443947	3	9	80	1121	1007	1243	443947	0	1499999
2	1600054	2	13	75	1964	1109	0	2047372	1500000	2999999
3	2047920	3	18	85	1161	1747	1634	4098365	3000000	4499999
4	1348842	1	9	65	1775	0	0	5451749	4500000	5999999
5	1042865	3	9	80	1849	1422	1146	6496389	6000000	7499999
6	1383133	2	10	95	1936	1451	0	7883939	7500000	8999999
7	2053404	1	19	55	1651	0	0	9940730	9000000	10499999
8	1036238	1	8	60	1773	0	0	10978619	10500000	11999999

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

Type 5 Radar Waveform_12

Waveform Num = 12
Num of Bursts = 15
Burst Interval (us)= 800000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	146519	2	11	95	1471	1535	0	146519	0	799999
2	1288838	1	7	60	1927	0	0	1438363	800000	1599999
3	881938	3	13	100	1603	1782	1072	2322228	1600000	2399999
4	223177	3	5	90	1785	1690	1549	2549862	2400000	3199999
5	873920	3	17	60	1058	1121	1312	3428806	3200000	3999999
6	999548	2	18	90	1343	1833	0	4431845	4000000	4799999
7	887270	1	20	55	1567	0	0	5322291	4800000	5599999
8	415323	3	8	55	1025	1095	1391	5739181	5600000	6399999
9	1199212	1	11	85	1912	0	0	6941904	6400000	7199999
10	641135	2	16	60	1444	1410	0	7584951	7200000	7999999
11	1093337	2	20	70	1566	1978	0	8681142	8000000	8799999
12	812030	2	10	80	1638	1512	0	9496716	8800000	9599999
13	284251	1	10	100	1607	0	0	9784117	9600000	10399999
14	731820	3	18	85	1671	1353	1353	10517544	10400000	11199999
15	1240901	2	10	85	1728	1510	0	11762822	11200000	11999999

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

Type 5 Radar Waveform_13

Waveform Num = 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	168255	1	20	50	1634	0	0	168255	0	857142
2	856319	2	6	80	1307	1684	0	1026208	857143	1714285
3	1456555	2	11	80	1004	1833	0	2485754	1714286	2571428
4	735260	1	7	75	1029	0	0	3223851	2571429	3428571
5	1005087	3	17	100	1751	1712	1725	4229967	3428572	4285714
6	559996	3	13	60	1474	1005	1268	4795151	4285715	5142857
7	883762	1	18	100	1014	0	0	5682660	5142858	6000000
8	485354	3	6	90	1391	1852	1691	6169028	6000001	6857143
9	820384	2	7	100	1433	1220	0	6994346	6857144	7714286
10	1521486	3	18	80	1537	1474	1081	8518485	7714287	8571429
11	794524	2	18	65	1056	1698	0	9317101	8571430	9428572
12	466343	3	19	65	1749	1036	1480	9786198	9428573	10285715
13	1159803	1	14	50	1414	0	0	10950266	10285716	11142858
14	415002	2	9	50	1099	1506	0	11366682	11142859	12000001

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

Type 5 Radar Waveform_14

```
Waveform Num = 14
Num of Bursts = 20
Burst Interval (us)= 600000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	240579	2	18	85	1499	1643	0	240579	0	599999
2	474382	2	10	100	1371	1265	0	718103	600000	1199999
3	637968	3	13	55	1971	1981	1893	1358707	1200000	1799999
4	851679	3	15	85	1284	1677	1703	2216231	1800000	2399999
5	194836	2	9	50	1389	1308	0	2415731	2400000	2999999
6	625109	3	20	90	1430	1470	1065	3043537	3000000	3599999
7	1104795	3	13	55	1190	1363	1676	4152297	3600000	4199999
8	44779	2	17	65	1837	1850	0	4201305	4200000	4799999
9	1037793	2	9	60	1643	1079	0	5242785	4800000	5399999
10	448791	3	17	95	1126	1856	1103	5694298	5400000	5999999
11	611192	2	10	55	1114	1524	0	6309575	6000000	6599999
12	364918	1	10	80	1665	0	0	6677131	6600000	7199999
13	701671	3	8	75	1163	1077	1574	7380467	7200000	7799999
14	684419	2	12	55	1745	1361	0	8068700	7800000	8399999
15	756923	1	14	60	1088	0	0	8828729	8400000	8999999
16	248595	1	10	95	1274	0	0	9078412	9000000	9599999
17	1054025	2	14	85	1103	1082	0	10133711	9600000	10199999
18	241711	3	12	55	1428	1332	1349	10377607	10200000	10799999
19	421240	3	13	70	1583	1902	1095	10802956	10800000	11399999
20	629965	3	10	50	1586	1243	1833	11437501	11400000	11999999

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

Type 5 Radar Waveform_15

```
Waveform Num = 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	231138	3	5	85	1969	1321	1419	231138	0	666666
2	973608	3	17	60	1599	1137	1919	1209455	666667	1333333
3	195530	1	11	60	1539	0	0	1409640	1333334	2000000
4	1067490	3	7	95	1846	1594	1709	2478669	2000001	2666667
5	741193	1	16	60	1752	0	0	3225011	2666668	3333334
6	224129	2	13	65	1010	1393	0	3450892	3333335	4000001
7	939345	2	10	70	1203	1098	0	4392640	4000002	4666668
8	384598	2	16	80	1257	1482	0	4779539	4666669	5333335
9	1001336	2	8	50	1540	1537	0	5783614	5333336	6000002
10	404989	3	5	50	1446	1719	1801	6191680	6000003	6666669
11	979018	1	16	55	1242	0	0	7175664	6666670	7333336
12	522660	3	16	85	1992	1295	1184	7699566	7333337	8000003
13	445405	1	18	50	1153	0	0	8149442	8000004	8666670
14	794651	2	14	60	1975	1406	0	8945246	8666671	9333337
15	732671	3	15	95	1962	1767	1753	9681298	9333338	10000004
16	863248	1	15	75	1175	0	0	10550028	10000005	10666671
17	238773	1	11	80	1602	0	0	10789976	10666672	11333338
18	745886	1	15	95	1142	0	0	11537464	11333339	12000005

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

Type 5 Radar Waveform_16

```
Waveform Num = 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	789641	2	10	75	1751	1022	0	789641	0	857142
2	348626	3	13	70	1409	1316	1116	1141040	857143	1714285
3	760940	1	11	60	1392	0	0	1905821	1714286	2571428
4	851120	2	19	85	1987	1724	0	2758333	2571429	3428571
5	1331728	3	9	85	1617	1754	1240	4093772	3428572	4285714
6	1025397	1	13	80	1925	0	0	5123780	4285715	5142857
7	340927	1	19	70	1745	0	0	5466632	5142858	6000000
8	591347	1	17	60	1742	0	0	6059724	6000001	6857143
9	801951	3	18	90	1077	1651	1585	6863417	6857144	7714286
10	933804	2	11	75	1142	1895	0	7801534	7714287	8571429
11	1169206	1	18	60	1441	0	0	8973777	8571430	9428572
12	1176391	2	10	65	1481	1773	0	10151609	9428573	10285715
13	558633	2	5	65	1085	1570	0	10713496	10285716	11142858
14	1164771	3	10	65	1156	1466	1366	11880922	11142859	12000001

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

Type 5 Radar Waveform_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	594195	3	8	80	1769	1809	1296	594195	0	857142
2	861307	3	13	70	1460	1299	1195	1460376	857143	1714285
3	256570	1	9	70	1005	0	0	1720900	1714286	2571428
4	979647	2	12	50	1100	1637	0	2701552	2571429	3428571
5	1452090	3	14	60	1177	1318	1746	4156379	3428572	4285714
6	515822	2	18	80	1649	1795	0	4676442	4285715	5142857
7	777820	3	12	75	1103	1493	1054	5457706	5142858	6000000
8	773021	3	16	100	1860	1794	1003	6234377	6000001	6857143
9	645683	3	19	95	1659	1494	1421	6884717	6857144	7714286
10	999382	3	6	65	1213	1709	1206	7888673	7714287	8571429
11	1496077	2	6	70	2000	1123	0	9388878	8571430	9428572
12	853976	1	14	70	1422	0	0	10245977	9428573	10285715
13	577834	1	11	65	1735	0	0	10825233	10285716	11142858
14	412904	1	7	95	1641	0	0	11239872	11142859	12000001

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

Type 5 Radar Waveform_18

```
Waveform Num = 18
Num of Bursts = 8
Burst Interval (us)= 1500000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1333306	1	7	95	1267	0	0	1333306	0	1499999
2	1003513	3	9	50	1613	1854	1867	2338086	1500000	2999999
3	1759674	2	8	65	1992	1109	0	4103094	3000000	4499999
4	546883	2	16	70	1758	1379	0	4653078	4500000	5999999
5	2046807	2	17	85	1223	1765	0	6703022	6000000	7499999
6	1287720	1	7	75	1073	0	0	7993730	7500000	8999999
7	1050061	1	10	90	1540	0	0	9044864	9000000	10499999
8	1512111	2	13	70	1572	1814	0	10558515	10500000	11999999

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

Type 5 Radar Waveform_19

```
Waveform Num = 19
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	112342	1	8	70	1543	0	0	112342	0	923076
2	1229187	2	11	65	1716	1988	0	1343072	923077	1846153
3	840435	3	5	70	1134	1199	1285	2187211	1846154	2769230
4	1259497	2	13	50	1043	1854	0	3450326	2769231	3692307
5	275094	1	10	60	1025	0	0	3728317	3692308	4615384
6	960648	1	16	95	1815	0	0	4689990	4615385	5538461
7	1002320	2	9	90	1061	1422	0	5694125	5538462	6461538
8	797541	2	14	95	1115	1259	0	6494149	6461539	7384615
9	1554566	2	9	55	1131	1016	0	8051089	7384616	8307692
10	886231	2	19	50	1620	1686	0	8939467	8307693	9230769
11	830545	2	8	80	1489	1127	0	9773318	9230770	10153846
12	951177	1	13	50	1028	0	0	10727111	10153847	11076923
13	1028759	1	6	65	1279	0	0	11756898	11076924	12000000

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

Type 5 Radar Waveform_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	361008	1	14	65	1314	0	0	361008	0	599999
2	362252	1	20	70	1225	0	0	724574	600000	1199999
3	661440	3	13	55	1040	1501	1447	1387239	1200000	1799999
4	794339	2	14	90	1003	1868	0	2185866	1800000	2399999
5	656685	2	10	100	1944	1169	0	2845122	2400000	2999999
6	271493	1	12	55	1339	0	0	3119728	3000000	3599999
7	675728	2	5	60	1073	1388	0	3796795	3600000	4199999
8	769514	2	16	90	1013	1910	0	4568770	4200000	4799999
9	681135	2	10	60	1455	1202	0	5252828	4800000	5399999
10	147937	2	13	60	1395	1897	0	5403422	5400000	5999999
11	989652	1	10	100	1587	0	0	6396366	6000000	6599999
12	710826	2	7	70	1772	1826	0	7108779	6600000	7199999
13	370979	1	10	50	1873	0	0	7483356	7200000	7799999
14	726257	2	15	60	1640	1395	0	8211486	7800000	8399999
15	376598	3	11	50	1359	1230	1081	8591119	8400000	8999999
16	781965	2	7	55	1117	1761	0	9376754	9000000	9599999
17	349461	2	10	90	1933	1003	0	9729093	9600000	10199999
18	571310	3	11	90	1932	1998	1632	10303339	10200000	10799999
19	547043	2	14	50	1387	1373	0	10855944	10800000	11399999
20	1021446	2	6	90	1590	1430	0	11880150	11400000	11999999

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

Type 5 Radar Waveform_21

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	532932	3	20	85	1534	1212	1992	532932	0	599999
2	425654	2	12	50	1580	1884	0	963324	600000	1199999
3	318624	3	20	80	1035	1475	1338	1285412	1200000	1799999
4	776712	3	11	90	1546	1922	1877	2065972	1800000	2399999
5	417551	2	19	90	1264	1475	0	2488868	2400000	2999999
6	993667	2	9	100	1532	1525	0	3485274	3000000	3599999
7	134830	1	5	70	1605	0	0	3623161	3600000	4199999
8	759680	2	12	65	1198	1620	0	4384446	4200000	4799999
9	843148	1	8	80	1465	0	0	5230412	4800000	5399999
10	693033	1	9	100	1728	0	0	5924910	5400000	5999999
11	129495	1	17	90	1526	0	0	6056133	6000000	6599999
12	736207	2	13	85	1085	1610	0	6793866	6600000	7199999
13	465393	1	12	70	1743	0	0	7261954	7200000	7799999
14	920322	3	15	90	1491	1465	1613	8184019	7800000	8399999
15	774143	1	12	80	1743	0	0	8962731	8400000	8999999
16	300712	2	13	95	1190	1569	0	9265186	9000000	9599999
17	638895	2	11	95	1138	1780	0	9906840	9600000	10199999
18	667199	2	9	65	1164	1869	0	10576957	10200000	10799999
19	654303	2	18	70	1586	1365	0	11234293	10800000	11399999
20	591303	3	19	75	1386	1130	1811	11828547	11400000	11999999

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

Type 5 Radar Waveform_22

```
Waveform Num = 22
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	751130	1	20	50	1885	0	0	751130	0	1333332
2	627575	1	18	50	1425	0	0	1380590	1333333	2666665
3	1631369	2	10	75	1200	1104	0	3013384	2666666	3999998
4	1379926	2	16	65	1408	1433	0	4395614	3999999	5333331
5	1088184	2	5	95	1223	1553	0	5486639	5333332	6666664
6	1544603	3	9	75	1242	1856	1004	7034018	6666665	7999997
7	1915773	1	7	65	1765	0	0	8953893	7999998	9333330
8	623296	1	7	85	1927	0	0	9578954	9333331	10666663
9	1352762	2	10	100	1933	1069	0	10933643	10666664	11999996

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

Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	513370	3	18	55	1497	1077	1883	513370	0	999999
2	1201607	2	13	60	1858	1907	0	1719434	1000000	1999999
3	1225489	3	14	50	1418	1286	1778	2948688	2000000	2999999
4	701131	2	9	100	1316	1093	0	3654301	3000000	3999999
5	1090222	3	19	75	1849	1239	1872	4746932	4000000	4999999
6	1168332	1	7	60	1677	0	0	5920224	5000000	5999999
7	860325	3	18	80	1869	1190	1730	6782226	6000000	6999999
8	1143458	1	16	55	1346	0	0	7930473	7000000	7999999
9	168546	2	13	60	1424	1587	0	8100365	8000000	8999999
10	1428641	3	16	95	1223	1792	1558	9532017	9000000	9999999
11	1048263	3	5	100	1409	1481	1818	10584853	10000000	10999999
12	976961	2	11	75	1279	1602	0	11566522	11000000	11999999

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

Type 5 Radar Waveform_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	535712	1	15	55	1178	0	0	535712	0	705881
2	596964	2	16	55	1247	1487	0	1133854	705882	1411763
3	810422	2	11	90	1593	1672	0	1947010	1411764	2117645
4	563546	3	16	70	1418	1317	1838	2513821	2117646	2823527
5	515830	3	17	90	1069	1573	1258	3034224	2823528	3529409
6	605887	3	13	55	1765	1159	1536	3644011	3529410	4235291
7	733512	3	17	80	1221	1798	1915	4381983	4235292	4941173
8	983644	3	7	85	1039	1550	1606	5370561	4941174	5647055
9	786321	1	17	80	1889	0	0	6161077	5647056	6352937
10	792655	3	6	55	1616	1656	1530	6955621	6352938	7058819
11	788016	1	14	85	1335	0	0	7748439	7058820	7764701
12	581846	3	7	60	1971	1304	1191	8331620	7764702	8470583
13	185488	1	7	55	1445	0	0	8521574	8470584	9176465
14	1161225	1	18	55	1342	0	0	9684244	9176466	9882347
15	216594	1	10	80	1455	0	0	9902180	9882348	10588229
16	1375633	2	6	50	1936	1620	0	11279268	10588230	11294111
17	340360	1	19	100	1244	0	0	11623184	11294112	11999993

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

Type 5 Radar Waveform_25

Waveform Num = 25
Num of Bursts = 20
Burst Interval (us)= 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	23865	1	11	95	1768	0	0	23865	0	599999
2	761517	3	14	95	1184	1871	1685	787150	600000	1199999
3	411224	1	15	70	1737	0	0	1203114	1200000	1799999
4	857453	3	8	85	1663	1094	1786	2062304	1800000	2399999
5	722375	1	17	85	1908	0	0	2789222	2400000	2999999
6	538697	1	7	100	1633	0	0	3329827	3000000	3599999
7	419397	1	11	90	1891	0	0	3750857	3600000	4199999
8	844613	2	18	95	1935	1019	0	4597361	4200000	4799999
9	422746	1	13	65	1786	0	0	5023061	4800000	5399999
10	520778	3	18	85	1888	1682	1927	5545625	5400000	5999999
11	628971	1	12	85	1225	0	0	6180093	6000000	6599999
12	529869	3	18	65	1886	1934	1184	6711187	6600000	7199999
13	962064	1	5	100	1918	0	0	7678255	7200000	7799999
14	714454	2	20	80	1712	1017	0	8394627	7800000	8399999
15	70718	1	17	75	1710	0	0	8468074	8400000	8999999
16	882782	3	12	50	1580	1127	1586	9352566	9000000	9599999
17	280125	2	18	75	1198	1130	0	9636984	9600000	10199999
18	1060115	2	5	85	1521	1413	0	10699427	10200000	10799999
19	261471	1	11	70	1156	0	0	10963832	10800000	11399999
20	967589	1	11	65	1365	0	0	11932577	11400000	11999999

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

Type 5 Radar Waveform_26

```
Waveform Num = 26
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	353758	3	7	100	1792	1273	1180	353758	0	599999
2	519532	2	14	55	1299	1057	0	877535	600000	1199999
3	750627	1	14	55	1476	0	0	1630518	1200000	1799999
4	215623	1	8	70	1936	0	0	1847617	1800000	2399999
5	1113939	3	12	55	1968	1566	1400	2963492	2400000	2999999
6	487429	2	12	100	1162	1683	0	3455855	3000000	3599999
7	519874	1	11	65	1318	0	0	3978574	3600000	4199999
8	714662	2	12	50	1682	1777	0	4694554	4200000	4799999
9	671431	1	15	85	1739	0	0	5369444	4800000	5399999
10	33469	2	12	65	1071	1757	0	5404652	5400000	5999999
11	865504	2	14	55	1227	1261	0	6272984	6000000	6599999
12	619556	2	14	60	1447	1404	0	6895028	6600000	7199999
13	624058	2	19	95	1622	1948	0	7521937	7200000	7799999
14	349275	3	7	55	1146	1946	1708	7874782	7800000	8399999
15	621860	1	16	95	1452	0	0	8501442	8400000	8999999
16	1016216	1	15	100	1401	0	0	9519110	9000000	9599999
17	524175	2	6	50	1907	1830	0	10044686	9600000	10199999
18	259820	2	5	65	1938	1272	0	10308243	10200000	10799999
19	545688	2	18	50	1044	1022	0	10857141	10800000	11399999
20	803596	1	7	55	1593	0	0	11662803	11400000	11999999

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

Type 5 Radar Waveform_27

```
Waveform Num = 27
Num of Bursts = 15
Burst Interval (us)= 800000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	411509	1	6	75	1990	0	0	411509	0	799999
2	589117	2	19	80	1443	1304	0	1002616	800000	1599999
3	654445	2	12	85	1980	1842	0	1659808	1600000	2399999
4	1450762	1	9	85	1515	0	0	3114392	2400000	3199999
5	87204	3	14	80	1602	1828	1374	3203111	3200000	3999999
6	1304226	2	10	80	1395	1395	0	4512141	4000000	4799999
7	360227	3	10	90	1162	1495	1013	4875158	4800000	5599999
8	957835	2	15	75	1321	1136	0	5836663	5600000	6399999
9	1183599	3	18	55	1888	1493	1433	7022719	6400000	7199999
10	734483	3	20	90	1036	1891	1027	7762016	7200000	7999999
11	862944	3	14	85	1485	1553	1571	8628914	8000000	8799999
12	309504	2	16	80	1048	1742	0	8943027	8800000	9599999
13	1045864	1	6	70	1129	0	0	9991681	9600000	10399999
14	685506	3	16	95	1886	1258	1857	10678316	10400000	11199999
15	890153	3	7	80	1437	1078	1283	11573470	11200000	11999999

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

Type 5 Radar Waveform_28

```
Waveform Num = 28
Num of Bursts = 9
Burst Interval (us)= 1333333
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1267990	1	12	75	1317	0	0	1267990	0	1333332
2	725193	2	5	95	1768	1871	0	1994500	1333333	2666665
3	1289059	1	17	90	1093	0	0	3287198	2666666	3999998
4	876848	2	13	85	1698	1632	0	4165139	3999999	5333331
5	2429424	3	5	100	1806	1411	1350	6597893	5333332	6666664
6	540453	3	10	95	1863	2000	1369	7142913	6666665	7999997
7	1366980	3	9	85	1102	1477	1658	8515125	7999998	9333330
8	1045820	3	10	65	1844	1989	1478	9565182	9333331	10666663
9	1702351	3	9	70	1103	1232	1493	11272844	10666664	11999996

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

Type 5 Radar Waveform_29

```
Waveform Num = 29
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)
	62782									
1		3	17	85	1745	1324	1670	62782	0	923076
	1707559									
2		2	13	50	1573	1550	0	1775080	923077	1846153
	648975									
3		1	9	100	1497	0	0	2427178	1846154	2769230
	1191202									
4		2	5	55	1907	1976	0	3619877	2769231	3692307
	820016									
5		3	12	65	1022	1147	1727	4443776	3692308	4615384
	406222									
6		3	9	65	1152	1888	1177	4853894	4615385	5538461
	1021382									
7		3	13	70	1498	1601	1099	5879493	5538462	6461538
	1222398									
8		3	5	55	1550	1215	1508	7106089	6461539	7384615
	888923									
9		1	11	80	1490	0	0	7999285	7384616	8307692
	796378									
10		1	10	90	1492	0	0	8797153	8307693	9230769
	1309445									
11		3	10	85	1944	1676	1139	10108090	9230770	10153846
	662819									
12		1	12	65	1159	0	0	10775668	10153847	11076923
	751827									
13		3	12	85	1807	1776	1526	11528654	11076924	12000000

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

Type 5 Radar Waveform_30

```
Waveform Num = 30
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)
	1156868									
1		3	8	55	1484	1639	1751	1156868	0	1333332
	1115027									
2		2	19	70	1576	1603	0	2276769	1333333	2666665
	1114100									
3		3	15	55	1711	1968	1677	3394048	2666666	3999998
	1194254									
4		2	8	50	1230	1612	0	4593658	3999999	5333331
	2046855									
5		1	15	100	1003	0	0	6643355	5333332	6666664
	517231									
6		1	6	50	1125	0	0	7161589	6666665	7999997
	2089270									
7		2	16	55	1694	1167	0	9251984	7999998	9333330
	1367024									
8		1	20	80	1290	0	0	10621869	9333331	10666663
	1214519									
9		2	7	50	1527	1897	0	11837678	10666664	11999996

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

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5329	1	16	5329	1
2	5329	1	17	5329	1
3	5329	1	18	5329	1
4	5329	1	19	5329	1
5	5329	1	20	5329	1
6	5329	1	21	5329	1
7	5329	1	22	5329	1
8	5329	1	23	5329	1
9	5329	1	24	5329	1
10	5329	1	25	5329	1
11	5329	1	26	5329	1
12	5329	1	27	5329	1
13	5329	1	28	5329	1
14	5329	1	29	5329	1
15	5329	1	30	5329	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5322	33	17	5345	51
14	5357	42	25	5342	75
19	5326	57	45	5302	135
31	5345	93	51	5341	153
47	5307	141	56	5314	168
54	5336	162	61	5300	183
63	5325	189	64	5321	192
72	5319	216	67	5355	201
83	5304	249	70	5311	210
91	5359	273	72	5348	216
--	--	--	76	5339	228
--	--	--	86	5310	258
--	--	--	89	5325	267
--	--	--	98	5349	294

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5322	39	18	5320	54
15	5316	45	23	5303	69
17	5357	51	28	5306	84
19	5320	57	30	5357	90
28	5324	84	32	5334	96
34	5325	102	41	5336	123
48	5331	144	50	5346	150
57	5317	171	53	5356	159
60	5319	180	--	--	--
61	5342	183	--	--	--
72	5343	216	--	--	--
73	5300	219	--	--	--
77	5304	231	--	--	--
85	5302	255	--	--	--
87	5315	261	--	--	--
89	5299	267	--	--	--
92	5313	276	--	--	--
93	5305	279	--	--	--
96	5307	288	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5345	3	2	5340	6
4	5338	12	6	5356	18
18	5307	54	12	5343	36
27	5303	81	19	5334	57
51	5349	153	24	5299	72
54	5314	162	32	5359	96
69	5322	207	34	5348	102
82	5317	246	40	5322	120
83	5306	249	50	5325	150
92	5351	276	57	5300	171
93	5308	279	59	5354	177
95	5348	285	67	5304	201
--	--	--	71	5341	213
--	--	--	72	5301	216
--	--	--	81	5342	243

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5300	21	11	5304	33
8	5342	24	16	5338	48
12	5314	36	31	5305	93
13	5347	39	39	5317	117
15	5307	45	42	5354	126
26	5305	78	44	5340	132
29	5346	87	45	5316	135
32	5355	96	52	5315	156
37	5324	111	53	5307	159
39	5312	117	67	5321	201
51	5352	153	71	5303	213
79	5356	237	73	5308	219
87	5316	261	79	5334	237
93	5339	279	81	5323	243
97	5311	291	82	5301	246
--	--	--	99	5337	297

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5310	3	14	5306	42
11	5327	33	15	5343	45
16	5356	48	16	5307	48
22	5325	66	20	5359	60
23	5348	69	38	5350	114
30	5322	90	51	5327	153
37	5328	111	55	5352	165
45	5355	135	65	5353	195
51	5330	153	67	5310	201
56	5343	168	71	5336	213
61	5349	183	74	5308	222
68	5316	204	78	5318	234
86	5311	258	87	5321	261
94	5337	282	88	5328	264
--	--	--	96	5331	288

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5305	0	3	5330	9
4	5318	12	11	5354	33
5	5332	15	16	5315	48
18	5342	54	17	5307	51
26	5341	78	23	5359	69
29	5350	87	26	5302	78
49	5335	147	27	5351	81
74	5338	222	40	5303	120
76	5337	228	55	5345	165
85	5303	255	59	5324	177
86	5313	258	67	5334	201
96	5312	288	97	5308	291

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5316	24	2	5342	6
16	5328	48	5	5343	15
17	5346	51	9	5320	27
28	5311	84	11	5307	33
31	5307	93	17	5302	51
35	5335	105	34	5351	102
45	5349	135	43	5305	129
51	5355	153	47	5321	141
54	5348	162	51	5304	153
66	5309	198	52	5326	156
70	5314	210	55	5319	165
75	5315	225	65	5303	195
81	5345	243	70	5358	210
94	5305	282	73	5309	219
--	--	--	86	5349	258
--	--	--	87	5325	261
--	--	--	88	5355	264
--	--	--	93	5301	279

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5348	12	0	5320	0
8	5345	24	1	5313	3
18	5304	54	22	5326	66
22	5351	66	24	5307	72
47	5349	141	37	5336	111
49	5353	147	43	5299	129
70	5323	210	45	5348	135
74	5343	222	46	5349	138
86	5328	258	58	5354	174
98	5312	294	60	5356	180
67	5334	201	66	5334	198
97	5308	291	68	5347	204
--	--	--	73	5308	219
--	--	--	87	5304	261
--	--	--	92	5325	276
--	--	--	96	5352	288
--	--	--	97	5324	291

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5344	24	5	5336	15
39	5330	117	42	5316	126
59	5350	177	43	5357	129
61	5326	183	45	5300	135
62	5305	186	47	5348	141
65	5354	195	48	5325	144
68	5325	204	56	5328	168
83	5307	249	58	5330	174
84	5334	252	59	5305	177
91	5320	273	61	5309	183
92	5337	276	77	5322	231
98	5346	294	81	5323	243
--	--	--	83	5355	249
--	--	--	93	5326	279
--	--	--	99	5352	297

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5322	12	7	5299	21
6	5299	18	11	5355	33
8	5303	24	30	5305	90
13	5327	39	54	5348	162
25	5354	75	59	5303	177
32	5332	96	77	5313	231
40	5310	120	81	5310	243
44	5320	132	84	5315	252
47	5337	141	85	5326	255
56	5319	168	86	5347	258
97	5333	291	93	5316	279
--	--	--	97	5320	291

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5330	0	5	5319	15
1	5322	3	24	5334	72
11	5319	33	33	5318	99
21	5338	63	56	5335	168
22	5320	66	65	5345	195
34	5334	102	80	5303	240
39	5355	117	86	5346	258
52	5321	156	89	5326	267
59	5331	177	92	5317	276
66	5317	198	--	--	--
78	5307	234	--	--	--
85	5332	255	--	--	--
86	5324	258	--	--	--
88	5302	264	--	--	--
91	5303	273	--	--	--
92	5339	276	--	--	--
96	5353	288	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5318	36	13	5310	39
13	5339	39	27	5306	81
29	5356	87	39	5356	117
39	5303	117	42	5313	126
41	5353	123	53	5304	159
50	5305	150	66	5301	198
56	5354	168	95	5299	285
57	5308	171	13	5310	39
62	5323	186	--	--	--
73	5325	219	--	--	--
79	5330	237	--	--	--
86	5352	258	--	--	--
89	5322	267	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5339	0	4	5309	12
6	5305	18	8	5359	24
19	5323	57	22	5307	66
43	5335	129	50	5334	150
52	5331	156	59	5325	177
53	5357	159	60	5339	180
64	5348	192	64	5336	192
76	5326	228	72	5304	216
79	5306	237	77	5316	231
95	5343	285	91	5353	273
98	5308	294	92	5324	276

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5309	12	13	5352	39
8	5359	24	24	5339	72
22	5307	66	38	5310	114
50	5334	150	42	5333	126
59	5325	177	50	5358	150
60	5339	180	53	5328	159
64	5336	192	56	5314	168
72	5304	216	67	5337	201
77	5316	231	68	5345	204
91	5353	273	70	5311	210
92	5324	276	84	5308	252
70	5306	210	--	--	--
71	5343	213	--	--	--
75	5300	225	--	--	--
77	5299	231	--	--	--
95	5308	285	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5316	30	2	5301	6
19	5332	57	6	5324	18
29	5354	87	16	5322	48
42	5327	126	18	5359	54
54	5326	162	19	5309	57
57	5343	171	20	5313	60
59	5318	177	26	5334	78
64	5325	192	36	5353	108
87	5357	261	43	5350	129
92	5345	276	57	5337	171
--	--	--	85	5325	255
--	--	--	90	5336	270
--	--	--	97	5323	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	5252	1	558	95	1
2	5252	1	578	92	1
3	5252	1	878	61	1
4	5252	1	718	74	1
5	5252	1	938	57	1
6	5252	1	698	76	1
7	5252	1	638	83	1
8	5252	1	598	89	1
9	5252	1	778	68	1
10	5252	1	818	65	1
11	5252	1	798	67	1
12	5252	1	918	58	1
13	5252	1	538	99	1
14	5252	1	518	102	1
15	5252	1	838	63	1
16	5252	1	589	90	1
17	5252	1	1292	41	1
18	5252	1	2619	21	1
19	5252	1	1239	43	1
20	5252	1	2672	20	1
21	5252	1	2002	27	1
22	5252	1	734	72	1
23	5252	1	898	59	1
24	5252	1	2231	24	1
25	5252	1	1584	34	1
26	5252	1	936	57	1
27	5252	1	2189	25	1
28	5252	1	2701	20	1
29	5252	1	614	86	1
30	5252	1	1185	45	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	5270	4.5	178	26	1
2	5270	2.7	215	27	1
3	5270	1.1	161	27	1
4	5270	3.2	173	27	1
5	5270	4.1	184	27	1
6	5270	2.1	212	29	1
7	5270	3.9	205	29	1
8	5270	3.0	172	28	1
9	5270	3.6	167	27	1
10	5270	3.7	202	29	1
11	5270	1.7	161	28	1
12	5270	3.4	206	24	1
13	5270	1.4	193	25	1
14	5270	4.3	178	24	1
15	5270	4.9	193	24	1
16	5270	3.7	217	26	1
17	5270	1.4	174	27	1
18	5270	3.4	180	27	1
19	5270	1.3	152	29	1
20	5270	2.4	219	29	1
21	5270	2.5	192	26	1
22	5270	1.5	198	25	1
23	5270	2.9	226	26	1
24	5270	4.4	209	29	1
25	5270	1.7	174	26	0
26	5270	4.7	220	26	1
27	5270	1.7	164	26	1
28	5270	3.2	180	27	1
29	5270	3.1	165	27	1
30	5270	4.7	226	28	1
Detection Percentage (%)					96.7%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5289	7.7	329	17	1
2	5289	8.3	497	18	1
3	5289	9.2	473	17	1
4	5289	9.1	493	16	1
5	5289	8.3	281	17	1
6	5289	6.1	439	18	1
7	5289	7.6	273	17	1
8	5289	6.5	299	18	0
9	5289	7.6	302	17	1
10	5289	9.8	465	18	1
11	5289	8.8	490	16	1
12	5289	7.1	372	17	0
13	5289	8.5	444	16	1
14	5289	8.9	331	17	1
15	5289	6.7	487	16	1
16	5289	8.4	427	16	1
17	5289	9.1	456	16	1
18	5289	9.3	254	16	1
19	5289	6.8	354	18	1
20	5289	7.7	461	17	1
21	5289	8.4	397	18	1
22	5289	10.0	289	17	0
23	5289	8.3	400	17	1
24	5289	7.4	274	17	1
25	5289	7.1	299	18	1
26	5289	9.0	326	17	1
27	5289	6.8	454	16	1
28	5289	9.4	358	18	1
29	5289	9.5	387	16	1
30	5289	8.5	347	18	1
Detection Percentage (%)					86.7%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5310	12.0	400	16	1
2	5310	16.6	252	12	1
3	5310	18.0	339	16	1
4	5310	13.3	251	12	1
5	5310	13.5	408	12	1
6	5310	20.0	339	13	1
7	5310	11.1	300	14	1
8	5310	12.6	388	14	1
9	5310	12.2	417	16	1
10	5310	13.8	280	15	1
11	5310	17.5	427	16	1
12	5310	14.3	479	13	1
13	5310	18.3	318	16	1
14	5310	14.8	461	12	1
15	5310	17.6	329	15	1
16	5310	17.9	358	13	1
17	5310	16.4	400	15	1
18	5310	14.9	361	12	1
19	5310	16.4	354	12	1
20	5310	18.8	300	15	1
21	5310	16.3	412	12	1
22	5310	11.3	452	13	1
23	5310	18.6	312	15	1
24	5310	11.9	493	14	1
25	5310	12.8	259	12	1
26	5310	12.8	446	16	1
27	5310	17.3	355	13	1
28	5310	19.4	461	14	1
29	5310	12.4	393	13	1
30	5310	15.9	474	13	1
Detection Percentage (%)					100%

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

radar test waveforms is as follows: $\dfrac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+96.7%+86.7%+100%)/4 = 95.9%

(>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	5320	1	16	5320	1
2	5320	1	17	5320	1
3	5320	1	18	5320	1
4	5320	1	19	5320	1
5	5320	1	20	5320	1
6	5320	1	21	5320	1
7	5320	1	22	5320	1
8	5320	1	23	5320	1
9	5320	1	24	5320	1
10	5320	1	25	5320	1
11	5320	1	26	5320	1
12	5320	1	27	5320	1
13	5320	1	28	5320	1
14	5320	1	29	5320	1
15	5320	1	30	5320	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

```
|
Waveform Num = 1
Num of Bursts = 9
Burst Interval (us)= 1333333

Burst      Off Time     #        Chirp    PW      Pulse 1    Pulse 2    Pulse 3    Start Loc   Start Burst     End Burst
#          (us)         Pulses   (MHz)    (us)    Pri(us)    Pri(us)    Pri(us)    (us)        Interval(us)    Interval(us)
           7519
1                       1        14       80      1751       0          0          7519        0               1333332
           2142865
2                       3        20       60      1304       1967       1782       2152135     1333333         2666665
           1508771
3                       1        10       85      1999       0          0          3665959     2666666         3999998
           1600789
4                       3        16       60      1636       1602       1730       5268747     3999999         5333331
           1103485
5                       2        20       55      1653       1745       0          6377200     5333332         6666664
           1124066
6                       1        8        65      1443       0          0          7504664     6666665         7999997
           1793829
7                       3        10       50      1067       1170       1061       9299936     7999998         9333330
           622714
8                       3        17       100     1966       1987       1645       9925948     9333331         10666663
           1720128
9                       3        11       50      1655       1296       1391       11651674    10666664        11999996
Total number of pulses in waveform = 20
************************************************************************
```

Type 5 Radar Waveform_2

```
Waveform Num = 2
Num of Bursts = 10
Burst Interval (us)= 1200000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	746133	3	10	100	1074	1249	1397	746133	0	1199999
2	1215030	3	13	90	1021	1228	1061	1964883	1200000	2399999
3	988791	2	17	50	1107	1751	0	2956984	2400000	3599999
4	728577	2	19	80	1402	1521	0	3688419	3600000	4799999
5	2205207	2	13	50	1990	1479	0	5896549	4800000	5999999
6	329024	1	15	75	1032	0	0	6229042	6000000	7199999
7	1519598	1	17	75	1668	0	0	7749672	7200000	8399999
8	1272721	3	18	90	1524	1351	1866	9024061	8400000	9599999
9	1548582	2	20	90	1168	1821	0	10577384	9600000	10799999
10	963790	3	14	50	1933	1778	1575	11544163	10800000	11999999

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

Type 5 Radar Waveform_3

```
Waveform Num = 3
Num of Bursts = 20
Burst Interval (us)= 600000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	502714	3	14	70	1134	1252	1410	502714	0	599999
2	403921	2	13	75	1843	1890	0	910431	600000	1199999
3	675800	2	10	50	1236	1257	0	1589964	1200000	1799999
4	731431	3	11	85	1737	1589	1033	2323888	1800000	2399999
5	287626	1	7	65	1348	0	0	2615873	2400000	2999999
6	609590	2	15	85	1173	1835	0	3226811	3000000	3599999
7	813581	2	6	75	1963	1736	0	4043400	3600000	4199999
8	325407	2	8	80	1803	1863	0	4372506	4200000	4799999
9	851499	2	11	100	1142	1428	0	5227671	4800000	5399999
10	438526	1	6	85	1431	0	0	5668767	5400000	5999999
11	405065	3	10	50	1087	1495	1122	6075263	6000000	6599999
12	681838	1	19	65	1560	0	0	6760805	6600000	7199999
13	548908	2	16	80	1298	1127	0	7311273	7200000	7799999
14	592046	3	8	100	1928	1192	1506	7905744	7800000	8399999
15	1003067	2	19	60	1509	1897	0	8913437	8400000	8999999
16	509296	1	6	90	1873	0	0	9426139	9000000	9599999
17	722102	2	6	95	1482	1646	0	10150114	9600000	10199999
18	636854	1	14	80	1630	0	0	10790096	10200000	10799999
19	40974	3	5	50	1406	1089	1503	10832700	10800000	11399999
20	1154617	2	17	65	1602	1307	0	11991315	11400000	11999999

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

Type 5 Radar Waveform_4

```
Waveform Num = 4
Num of Bursts = 16
Burst Interval (us)= 750000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	627209	3	14	85	1725	1865	1356	627209	0	749999
2	488720	2	15	65	1907	1413	0	1120875	750000	1499999
3	506261	3	13	50	1341	1754	1914	1630456	1500000	2249999
4	1181055	2	10	75	1656	1443	0	2816520	2250000	2999999
5	780164	2	10	50	1466	1033	0	3599783	3000000	3749999
6	277783	1	20	60	1456	0	0	3880065	3750000	4499999
7	664382	3	15	70	1376	1254	1099	4545903	4500000	5249999
8	772728	3	18	75	1577	1086	1105	5322360	5250000	5999999
9	875421	3	9	60	1943	1902	1989	6201549	6000000	6749999
10	625781	2	15	50	1693	1809	0	6833164	6750000	7499999
11	1159301	2	8	70	1151	1841	0	7995967	7500000	8249999
12	648748	1	13	50	1501	0	0	8647707	8250000	8999999
13	680319	1	19	50	1836	0	0	9329527	9000000	9749999
14	686409	1	13	60	1010	0	0	10017772	9750000	10499999
15	760133	3	13	95	1584	1886	1432	10778915	10500000	11249999
16	1091921	3	8	95	1850	1569	1757	11875738	11250000	11999999

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

Type 5 Radar Waveform_5

```
Waveform Num = 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	167644	3	19	90	1492	1612	1221	167644	0	999999
2	926606	3	20	55	1255	1065	1689	1098575	1000000	1999999
3	999178	3	9	80	1199	1468	1094	2101762	2000000	2999999
4	1809961	3	20	80	1213	1139	1504	3915484	3000000	3999999
5	813221	1	13	55	1396	0	0	4732561	4000000	4999999
6	736990	1	13	75	1120	0	0	5470947	5000000	5999999
7	988327	1	7	70	1635	0	0	6460394	6000000	6999999
8	791820	3	20	80	1307	1532	1670	7253849	7000000	7999999
9	1535816	1	8	85	1006	0	0	8794174	8000000	8999999
10	921880	1	9	100	1366	0	0	9717060	9000000	9999999
11	1016346	3	15	70	1781	1083	1545	10734772	10000000	10999999
12	766892	2	6	85	1475	1225	0	11506073	11000000	11999999

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

Type 5 Radar Waveform_6

```
Waveform Num = 6
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	880796	3	14	95	1585	1337	1155	880796	0	1333332
2	1570977	3	15	85	1134	1359	1645	2455850	1333333	2666665
3	1271062	1	11	75	1738	0	0	3731050	2666666	3999998
4	563490	2	5	90	1609	1509	0	4296278	3999999	5333331
5	1926386	3	8	50	1869	1444	1650	6225782	5333332	6666664
6	1396500	2	19	75	1416	1329	0	7627245	6666665	7999997
7	1472079	2	13	75	1870	1111	0	9102069	7999998	9333330
8	1385369	1	9	55	1175	0	0	10490419	9333331	10666663
9	923447	2	7	60	1485	1116	0	11415041	10666664	11999996

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

Type 5 Radar Waveform_7

```
Waveform Num = 7
Num of Bursts = 13
Burst Interval (us)= 923077
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	706442	2	5	55	1152	1133	0	706442	0	923076
2	361704	1	16	100	1723	0	0	1070431	923077	1846153
3	1502349	2	20	75	1016	1636	0	2574503	1846154	2769230
4	342133	1	11	95	1154	0	0	2919288	2769231	3692307
5	1001822	3	13	60	1157	1561	1034	3922264	3692308	4615384
6	1270062	2	14	90	1681	1686	0	5196078	4615385	5538461
7	610531	2	8	75	1116	1151	0	5809976	5538462	6461538
8	1406338	1	10	50	1870	0	0	7218581	6461539	7384615
9	594911	3	12	65	1099	1815	1534	7815362	7384616	8307692
10	1143612	1	20	95	1485	0	0	8963422	8307693	9230769
11	1123912	3	20	55	1158	1520	1524	10088819	9230770	10153846
12	200180	2	8	80	1364	1284	0	10293201	10153847	11076923
13	1291728	1	9	85	1067	0	0	11587577	11076924	12000000

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

Type 5 Radar Waveform_8

Waveform Num = 8
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	902707	1	5	100	1823	0	0	902707	0	923076
2	664762	2	19	55	1862	1685	0	1569292	923077	1846153
3	844201	3	15	85	1903	1887	1005	2417040	1846154	2769230
4	464573	1	11	80	1666	0	0	2886408	2769231	3692307
5	960668	1	10	50	1669	0	0	3848742	3692308	4615384
6	1588597	1	19	100	1691	0	0	5439008	4615385	5538461
7	170739	1	16	100	1330	0	0	5611438	5538462	6461538
8	964580	3	6	85	1469	1782	1338	6577348	6461539	7384615
9	934846	2	7	55	1879	1002	0	7516783	7384616	8307692
10	1615920	3	7	55	1333	1054	1624	9135584	8307693	9230769
11	842490	2	18	50	1096	1471	0	9982085	9230770	10153846
12	349497	1	11	85	1716	0	0	10334149	10153847	11076923
13	1095570	1	20	95	1171	0	0	11431435	11076924	12000000

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

Type 5 Radar Waveform_9

Waveform Num = 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	60952	1	7	75	1460	0	0	60952	0	999999
2	1221461	3	12	100	1208	1222	1672	1283873	1000000	1999999
3	944542	1	19	75	1409	0	0	2232517	2000000	2999999
4	869383	1	14	55	1190	0	0	3103309	3000000	3999999
5	1013926	1	10	50	1381	0	0	4118425	4000000	4999999
6	1524282	1	19	55	1678	0	0	5644088	5000000	5999999
7	531145	1	15	90	1291	0	0	6176911	6000000	6999999
8	1375040	3	13	60	1683	1246	1257	7553242	7000000	7999999
9	824581	2	17	55	1548	1646	0	8382009	8000000	8999999
10	623524	1	17	80	1243	0	0	9008727	9000000	9999999
11	1954225	3	16	100	1607	1863	1369	10964195	10000000	10999999
12	210365	3	18	50	1000	1874	1578	11179399	11000000	11999999

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

Type 5 Radar Waveform_10

Waveform Num = 10
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	498944	2	7	60	1004	1970	0	498944	0	1090908
2	705630	2	15	70	1985	1371	0	1207548	1090909	2181817
3	1998153	2	12	55	1615	1098	0	3209057	2181818	3272726
4	708382	1	20	65	1955	0	0	3920152	3272727	4363635
5	1418786	3	5	55	1959	1318	1842	5340893	4363636	5454544
6	718734	2	7	90	1566	1006	0	6064746	5454545	6545453
7	1305574	2	13	90	1622	1369	0	7372892	6545454	7636362
8	563476	2	6	65	1705	1136	0	7939359	7636363	8727271
9	1612218	3	7	60	1989	1973	1581	9554418	8727272	9818180
10	560417	1	12	85	1350	0	0	10120378	9818181	10909089
11	882444	2	20	85	1515	1057	0	11004172	10909090	11999998

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

Type 5 Radar Waveform_11

```
|
Waveform Num = 11
Num of Bursts = 10
Burst Interval (us)= 1200000
```

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	637733	2	14	90	1855	1818	0	637733	0	1199999
2	755822	1	11	90	1287	0	0	1397228	1200000	2399999
3	1775730	3	10	50	1580	1023	1337	3174245	2400000	3599999
4	1021666	2	17	80	1600	1059	0	4199851	3600000	4799999
5	1625134	2	20	55	1100	1978	0	5827644	4800000	5999999
6	281736	1	10	85	1846	0	0	6112458	6000000	7199999
7	1759909	3	6	100	1869	1646	1501	7874213	7200000	8399999
8	1404450	3	19	90	1966	1386	1747	9283679	8400000	9599999
9	977789	3	10	80	1520	1616	1192	10266567	9600000	10799999
10	923351	1	15	85	1122	0	0	11194246	10800000	11999999

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

Type 5 Radar Waveform_12

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	418216	2	18	70	1079	1449	0	418216	0	705881
2	477064	2	17	100	1585	1974	0	897808	705882	1411763
3	1178917	2	14	65	1533	1834	0	2080284	1411764	2117645
4	556567	2	12	65	1036	1843	0	2640218	2117646	2823527
5	716295	2	11	100	1025	1418	0	3359392	2823528	3529409
6	797693	1	7	65	1648	0	0	4159528	3529410	4235291
7	690787	3	7	95	1213	1945	1980	4851963	4235292	4941173
8	486962	1	18	85	1416	0	0	5344063	4941174	5647055
9	594486	2	7	75	1789	1301	0	5939965	5647056	6352937
10	727726	3	11	70	1091	1677	1305	6670781	6352938	7058819
11	727245	2	10	65	1719	1799	0	7402099	7058820	7764701
12	770182	2	6	90	1713	1688	0	8175799	7764702	8470583
13	448394	3	17	80	1666	1661	1546	8627594	8470584	9176465
14	669747	2	17	80	1895	1013	0	9302214	9176466	9882347
15	1037121	3	12	100	1548	1512	1186	10342243	9882348	10588229
16	273648	1	10	65	1135	0	0	10620137	10588230	11294111
17	1028285	1	15	70	1819	0	0	11649557	11294112	11999993

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

Type 5 Radar Waveform_13

```
Waveform Num = 13
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	138886	2	19	65	1200	1145	0	138886	0	999999
2	1311008	2	5	60	1349	1349	0	1452239	1000000	1999999
3	701216	1	7	100	1942	0	0	2156153	2000000	2999999
4	1456585	1	19	65	1199	0	0	3614680	3000000	3999999
5	1214889	1	17	90	1535	0	0	4830768	4000000	4999999
6	331569	3	6	95	1973	1068	1966	5163872	5000000	5999999
7	1470831	2	8	90	1088	1001	0	6639710	6000000	6999999
8	1068591	3	15	90	1068	1701	1498	7710390	7000000	7999999
9	461648	1	15	55	1589	0	0	8176305	8000000	8999999
10	857509	1	6	80	1688	0	0	9035403	9000000	9999999
11	1533660	2	12	100	1158	1168	0	10570751	10000000	10999999
12	962579	3	20	85	1425	1706	1321	11535656	11000000	11999999

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

Type 5 Radar Waveform_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	86434	3	16	65	1184	1783	1529	86434	0	857142
2	1152507	2	8	60	1512	1188	0	1243437	857143	1714285
3	986627	3	19	65	1419	1282	1601	2232764	1714286	2571428
4	1182062	2	14	55	1962	1748	0	3419128	2571429	3428571
5	559759	3	5	55	1564	1585	1922	3982597	3428572	4285714
6	387501	2	14	55	1138	1494	0	4375169	4285715	5142857
7	1318153	3	11	60	1507	1408	1176	5695954	5142858	6000000
8	506118	2	14	85	1905	1228	0	6206163	6000001	6857143
9	1467519	1	14	55	1968	0	0	7676815	6857144	7714286
10	817709	3	19	95	1232	1622	1999	8496492	7714287	8571429
11	649328	3	15	80	1427	1947	1353	9150673	8571430	9428572
12	383552	3	9	75	1797	1997	1047	9538952	9428573	10285715
13	1249215	2	15	100	1885	1033	0	10793008	10285716	11142858
14	532353	3	14	70	1211	1704	1002	11328279	11142859	12000001

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

Type 5 Radar Waveform_15

Waveform Num = 15
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	571334	2	7	100	1056	1250	0	571334	0	923076
2	1238385	1	15	50	1824	0	0	1812025	923077	1846153
3	505201	3	11	65	1828	1466	1946	2319050	1846154	2769230
4	452677	1	14	50	1073	0	0	2776967	2769231	3692307
5	1831120	1	10	70	1691	0	0	4609160	3692308	4615384
6	47012	3	15	95	1156	1410	1514	4657863	4615385	5538461
7	1723546	2	11	95	1614	1708	0	6385489	5538462	6461538
8	306827	3	7	65	1728	1856	1884	6695638	6461539	7384615
9	943066	3	17	75	1959	1823	1063	7644172	7384616	8307692
10	1186887	2	8	60	1009	1715	0	8835904	8307693	9230769
11	671207	1	18	90	1887	0	0	9509835	9230770	10153846
12	1236130	1	15	60	1264	0	0	10747852	10153847	11076923
13	1031548	2	18	60	1234	1345	0	11780664	11076924	12000000

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

Type 5 Radar Waveform_16

Waveform Num = 16
Num of Bursts = 9
Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	804099	3	17	65	1031	1500	1222	804099	0	1333332
2	1794554	1	14	50	1947	0	0	2602406	1333333	2666665
3	302490	1	20	70	1723	0	0	2906843	2666666	3999998
4	1283548	3	13	55	1381	1356	1880	4192114	3999999	5333331
5	2331992	1	17	75	1799	0	0	6528723	5333332	6666664
6	582800	2	9	85	1191	1022	0	7113322	6666665	7999997
7	1871728	1	18	55	1275	0	0	8987263	7999998	9333330
8	1045261	1	8	50	1562	0	0	10033799	9333331	10666663
9	801479	3	12	65	1815	1849	1770	10836840	10666664	11999996

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

Type 5 Radar Waveform_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
	499745									
1		3	17	80	1794	1816	1659	499745	0	857142
	687190									
2		3	13	55	1043	1459	1111	1192204	857143	1714285
	805429									
3		1	7	75	1307	0	0	2001246	1714286	2571428
	966228									
4		1	20	55	1070	0	0	2968781	2571429	3428571
	793981									
5		2	8	70	1785	1456	0	3763832	3428572	4285714
	1108333									
6		3	17	80	1019	1419	1382	4875406	4285715	5142857
	835058									
7		1	5	60	1596	0	0	5714284	5142858	6000000
	913772									
8		3	20	75	1387	1639	1502	6629652	6000001	6857143
	425899									
9		2	5	70	1801	1906	0	7060079	6857144	7714286
	1000276									
10		3	12	80	1297	1062	1204	8064062	7714287	8571429
	1047525									
11		1	14	50	1573	0	0	9115150	8571430	9428572
	352713									
12		1	11	60	1711	0	0	9469436	9428573	10285715
	1527185									
13		1	14	85	1272	0	0	10998332	10285716	11142858
	346464									
14		3	11	85	1838	1359	1933	11346068	11142859	12000001

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

Type 5 Radar Waveform_18

Waveform Num = 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)
	350180									
1		3	8	90	1691	1867	1717	350180	0	749999
	537418									
2		3	6	55	1452	1697	1195	892873	750000	1499999
	1324816									
3		1	5	95	1075	0	0	2222033	1500000	2249999
	371483									
4		2	5	55	1659	1301	0	2594591	2250000	2999999
	606557									
5		3	8	95	1803	1651	1937	3204108	3000000	3749999
	913574									
6		2	16	70	1875	1794	0	4123073	3750000	4499999
	679275									
7		2	8	60	1426	1376	0	4806017	4500000	5249999
	558474									
8		2	10	75	1395	1695	0	5367293	5250000	5999999
	654089									
9		1	18	85	1464	0	0	6024472	6000000	6749999
	751766									
10		3	14	95	1415	1505	1675	6777702	6750000	7499999
	930977									
11		3	17	50	1640	1215	1953	7713274	7500000	8249999
	1087068									
12		3	20	95	1167	1522	1177	8805150	8250000	8999999
	709349									
13		2	15	95	1058	1777	0	9518365	9000000	9749999
	239050									
14		1	17	85	1698	0	0	9760250	9750000	10499999
	993985									
15		3	16	55	1728	1928	1323	10755933	10500000	11249999
	973472									
16		1	6	65	1088	0	0	11734384	11250000	11999999

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

Type 5 Radar Waveform_19

Waveform Num = 19
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)
	763349									
1		1	15	75	1147	0	0	763349	0	1333332
	1799686									
2		2	20	65	1263	1463	0	2564182	1333333	2666665
	132891									
3		1	6	90	1466	0	0	2699799	2666666	3999998
	2344750									
4		2	9	65	1425	1461	0	5046015	3999999	5333331
	725949									
5		3	16	80	1539	1225	1555	5774850	5333332	6666664
	1322535									
6		3	20	55	1538	1052	1410	7101704	6666665	7999997
	1871731									
7		2	7	95	1846	1882	0	8977435	7999998	9333330
	372973									
8		3	17	75	1007	1989	1004	9354136	9333331	10666663
	1982871									
9		3	12	80	1601	1462	1641	11341007	10666664	11999996

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

Type 5 Radar Waveform_20

```
Waveform Num = 20
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	1209911	3	13	60	1352	1474	1304	1209911	0	1333332
2	263392	3	12	100	1184	1654	1805	1477433	1333333	2666665
3	1675772	2	17	65	1772	1897	0	3157848	2666666	3999998
4	1668314	2	11	55	1484	1264	0	4829831	3999999	5333331
5	1023549	1	17	75	1753	0	0	5856128	5333332	6666664
6	1786550	1	8	50	1777	0	0	7644431	6666665	7999997
7	1674417	2	17	95	1623	1661	0	9320625	7999998	9333330
8	95380	2	7	60	1963	1786	0	9419289	9333331	10666663
9	2130145	1	12	75	1607	0	0	11553183	10666664	11999996

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

Type 5 Radar Waveform_21

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	169321	2	7	65	1760	1181	0	169321	0	631578
2	767216	1	14	85	1804	0	0	939478	631579	1263157
3	363798	3	19	100	1708	1406	1204	1305080	1263158	1894736
4	1018557	3	14	80	1156	1987	1490	2327955	1894737	2526315
5	367131	3	6	80	1426	1675	1995	2699719	2526316	3157894
6	717903	2	6	55	1135	1259	0	3422718	3157895	3789473
7	584453	2	19	70	1743	1171	0	4009565	3789474	4421052
8	627992	1	19	80	1666	0	0	4640471	4421053	5052631
9	804219	3	18	95	1629	1597	1136	5446356	5052632	5684210
10	688391	2	16	90	1262	1601	0	6139109	5684211	6315789
11	206694	1	5	90	1411	0	0	6348666	6315790	6947368
12	1036147	2	12	75	1471	1762	0	7386224	6947369	7578947
13	360378	2	20	85	1759	1630	0	7749835	7578948	8210526
14	581983	1	12	100	1149	0	0	8335207	8210527	8842105
15	707141	3	6	70	1611	1050	1642	9043497	8842106	9473684
16	906520	2	16	60	1068	1604	0	9954320	9473685	10105263
17	613151	3	16	50	1673	1699	1131	10570143	10105264	10736842
18	658994	3	13	75	1055	1781	1510	11233640	10736843	11368421
19	677945	3	5	50	1528	1618	1794	11915931	11368422	12000000

```
Total number of pulses in waveform = 42
*******************************************************************************
```

Type 5 Radar Waveform_22

```
Waveform Num = 22
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	141586	2	14	85	1187	1477	0	141586	0	666666
2	577738	1	8	100	1611	0	0	721988	666667	1333333
3	1067612	1	5	100	1368	0	0	1791211	1333334	2000000
4	426705	2	5	90	1469	1034	0	2219284	2000001	2666667
5	450382	2	12	90	1055	1771	0	2672169	2666668	3333334
6	1157577	2	16	90	1623	1524	0	3832572	3333335	4000001
7	441466	1	14	85	1557	0	0	4277185	4000002	4666668
8	878687	2	10	80	1178	1537	0	5157429	4666669	5333335
9	328615	3	14	90	1591	1012	1047	5488759	5333336	6000002
10	1072639	1	9	50	1133	0	0	6565048	6000003	6666669
11	450498	3	5	80	1004	1261	1584	7016679	6666670	7333336
12	339812	2	10	85	1382	1879	0	7360340	7333337	8000003
13	725687	2	9	85	1026	1292	0	8089288	8000004	8666670
14	580566	1	9	70	1537	0	0	8672172	8666671	9333337
15	801021	2	15	60	1981	1775	0	9474730	9333338	10000004
16	598297	2	15	75	1194	1617	0	10076783	10000005	10666671
17	1135599	1	6	85	1741	0	0	11215193	10666672	11333338
18	498751	3	8	55	1572	1765	1142	11715685	11333339	12000005

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

Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	482914	1	19	95	1438	0	0	482914	0	1499999
2	2424733	1	7	55	1240	0	0	2909085	1500000	2999999
3	1298986	1	20	80	1477	0	0	4209311	3000000	4499999
4	586695	2	16	100	1175	1695	0	4797483	4500000	5999999
5	1310596	3	15	55	1377	1671	1399	6110949	6000000	7499999
6	1815232	2	13	60	1535	1296	0	7930628	7500000	8999999
7	2130610	3	19	65	1159	1610	1165	10064069	9000000	10499999
8	1520601	2	15	90	1425	1752	0	11588604	10500000	11999999

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

Type 5 Radar Waveform_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	71387	2	12	85	1662	1511	0	71387	0	631578
2	561588	1	12	80	1200	0	0	636148	631579	1263157
3	929263	2	11	55	1418	1075	0	1566611	1263158	1894736
4	931223	1	6	75	1729	0	0	2500327	1894737	2526315
5	204130	1	7	55	1195	0	0	2706186	2526316	3157894
6	655827	1	15	65	1055	0	0	3363208	3157895	3789473
7	620685	1	13	100	1304	0	0	3984948	3789474	4421052
8	654029	2	14	95	1419	1783	0	4640281	4421053	5052631
9	1015833	2	6	90	1567	1271	0	5659316	5052632	5684210
10	90590	2	17	85	1228	1901	0	5752744	5684211	6315789
11	750883	2	8	80	1264	1460	0	6506756	6315790	6947368
12	750879	3	10	90	1080	1408	1138	7260359	6947369	7578947
13	532979	3	11	90	1936	1566	1562	7796964	7578948	8210526
14	561399	2	7	70	1971	1953	0	8363427	8210527	8842105
15	752887	3	6	50	1216	1626	1863	9120238	8842106	9473684
16	581430	3	17	55	1365	1754	1818	9706373	9473685	10105263
17	803196	1	10	60	1729	0	0	10514506	10105264	10736842
18	657844	2	11	95	1512	1345	0	11174079	10736843	11368421
19	207095	2	5	70	1752	1661	0	11384031	11368422	12000000

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

Type 5 Radar Waveform_25

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	554991	3	15	65	1905	1845	1356	554991	0	1090908
2	1444279	3	9	95	1649	1537	1566	2004376	1090909	2181817
3	241637	2	11	90	1750	1355	0	2250765	2181818	3272726
4	1950360	2	15	65	1424	1024	0	4204230	3272727	4363635
5	917015	1	18	65	1932	0	0	5123693	4363636	5454544
6	350551	1	18	50	1147	0	0	5476176	5454545	6545453
7	1437208	3	9	75	1793	1999	1697	6914531	6545454	7636362
8	1035418	1	17	55	1643	0	0	7955438	7636363	8727271
9	1496666	2	15	55	1497	1071	0	9453747	8727272	9818180
10	1209391	2	13	80	1229	1766	0	10665706	9818181	10909089
11	1031753	1	16	50	1097	0	0	11700454	10909090	11999998

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

Type 5 Radar Waveform_26

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1048794	2	12	95	1585	1204	0	1048794	0	1499999
2	768417	2	12	80	1727	1219	0	1820000	1500000	2999999
3	1326090	2	17	95	1521	1359	0	3149036	3000000	4499999
4	2151840	1	19	60	1807	0	0	5303756	4500000	5999999
5	1577240	2	15	75	1650	1385	0	6882803	6000000	7499999
6	1957428	3	12	65	1646	1823	1377	8843266	7500000	8999999
7	307563	2	9	70	1711	1491	0	9155675	9000000	10499999
8	2416096	2	14	95	1103	1445	0	11574973	10500000	11999999

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

Type 5 Radar Waveform_27

Waveform Num = 27
Num of Bursts = 18
Burst Interval (us)= 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	617380	2	11	60	1735	1139	0	617380	0	666666
2	651133	3	9	55	1727	1760	1657	1271387	666667	1333333
3	327201	2	8	75	1287	1096	0	1603732	1333334	2000000
4	502240	3	18	90	1699	1683	1053	2108355	2000001	2666667
5	845936	2	15	60	1312	1125	0	2958726	2666668	3333334
6	698923	1	6	65	1537	0	0	3660086	3333335	4000001
7	543728	2	18	60	1751	1166	0	4205351	4000002	4666668
8	926743	2	13	60	1332	1874	0	5135011	4666669	5333335
9	629766	1	5	90	1332	0	0	5767983	5333336	6000002
10	609741	3	7	65	1442	1760	1213	6379056	6000003	6666669
11	421670	2	5	60	1600	1660	0	6805141	6666670	7333336
12	560790	1	19	65	1788	0	0	7369191	7333337	8000003
13	1037522	1	20	50	1722	0	0	8408501	8000004	8666670
14	409536	3	14	55	1832	1092	1532	8819759	8666671	9333337
15	883138	1	8	75	1707	0	0	9707353	9333338	10000004
16	639815	3	15	90	1042	1523	1796	10348875	10000005	10666671
17	451223	2	15	50	1229	1685	0	10804459	10666672	11333338
18	876456	2	7	90	1729	1111	0	11683829	11333339	12000005

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

Type 5 Radar Waveform_28

Waveform Num = 28
Num of Bursts = 8
Burst Interval (us)= 1500000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	890687	2	5	100	1822	1262	0	890687	0	1499999
2	708286	1	19	55	1041	0	0	1602057	1500000	2999999
3	2669122	2	5	90	1412	1888	0	4272220	3000000	4499999
4	1681034	1	20	50	1240	0	0	5956554	4500000	5999999
5	599260	1	18	95	1865	0	0	6557054	6000000	7499999
6	1791510	2	16	95	1926	1164	0	8350429	7500000	8999999
7	748323	2	9	60	1911	1833	0	9101842	9000000	10499999
8	1674768	1	5	55	1698	0	0	10780354	10500000	11999999

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

Type 5 Radar Waveform_29

Waveform Num = 29
Num of Bursts = 17
Burst Interval (us)= 705882

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	566053	1	11	100	1688	0	0	566053	0	705881
2	776364	3	17	80	1947	1984	1769	1344105	705882	1411763
3	583435	2	16	60	1825	1266	0	1933240	1411764	2117645
4	395659	3	6	50	1903	1362	1834	2331990	2117646	2823527
5	582468	3	20	70	1573	1007	1238	2919557	2823528	3529409
6	815628	1	19	70	1365	0	0	3739003	3529410	4235291
7	530842	3	15	90	1160	1673	1713	4271210	4235292	4941173
8	1308702	1	12	90	1648	0	0	5584458	4941174	5647055
9	518223	2	18	100	1082	1758	0	6104329	5647056	6352937
10	292841	2	9	100	1846	1357	0	6400010	6352938	7058819
11	1147696	3	13	80	1065	1276	1450	7550909	7058820	7764701
12	648028	1	9	75	1184	0	0	8202728	7764702	8470583
13	508839	3	11	60	1799	1342	1200	8712751	8470584	9176465
14	591611	1	13	100	1571	0	0	9308703	9176466	9882347
15	1213232	3	17	85	1486	1535	1608	10523506	9882348	10588229
16	260405	3	6	100	1695	1170	1479	10788540	10588230	11294111
17	838367	3	15	75	1163	1623	1361	11631251	11294112	11999993

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

Type 5 Radar Waveform_30

Waveform Num = 30
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	509086	2	18	95	1709	1884	0	509086	0	1333332
2	1760893	2	8	50	1057	1120	0	2273572	1333333	2666665
3	1693464	3	10	90	1202	1165	1006	3969213	2666666	3999998
4	607035	2	17	95	1579	1373	0	4579621	3999999	5333331
5	1572159	2	20	95	1968	1822	0	6154732	5333332	6666664
6	1745590	1	9	70	1606	0	0	7904112	6666665	7999997
7	1155014	2	6	90	1315	1280	0	9060732	7999998	9333330
8	1495948	3	14	70	1046	1452	1065	10559275	9333331	10666663
9	1365377	3	5	50	1077	1948	1369	11928215	10666664	11999996

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

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	5329	1	16	5329	1
2	5329	1	17	5329	1
3	5329	1	18	5329	1
4	5329	1	19	5329	1
5	5329	1	20	5329	1
6	5329	1	21	5329	1
7	5329	1	22	5329	1
8	5329	1	23	5329	1
9	5329	1	24	5329	1
10	5329	1	25	5329	1
11	5329	1	26	5329	1
12	5329	1	27	5329	1
13	5329	1	28	5329	1
14	5329	1	29	5329	1
15	5329	1	30	5329	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5331	15	47	5301	141
10	5303	30	48	5346	144
11	5358	33	75	5314	225
12	5356	36	83	5351	249
20	5346	60	87	5355	261
59	5306	177	88	5359	264
69	5327	207	89	5344	267
74	5300	222	92	5337	276
79	5322	237	93	5352	279
83	5309	249	--	--	--
88	5320	264	--	--	--
90	5299	270	--	--	--
97	5304	291	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5316	27	11	5349	33
14	5323	42	20	5346	60
15	5313	45	32	5356	96
26	5353	78	37	5314	111
29	5321	87	60	5332	180
37	5339	111	66	5337	198
49	5357	147	70	5317	210
53	5354	159	71	5352	213
55	5315	165	80	5324	240
56	5332	168	81	5315	243
64	5326	192	--	--	--
81	5336	243	--	--	--
87	5328	261	--	--	--
97	5309	291	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5354	0	5	5324	15
4	5348	12	8	5306	24
5	5345	15	11	5317	33
6	5314	18	25	5300	75
8	5326	24	26	5330	78
11	5357	33	32	5329	96
13	5310	39	57	5338	171
18	5331	54	60	5344	180
20	5328	60	69	5331	207
21	5353	63	89	5342	267
41	5355	123	90	5333	270
46	5335	138	92	5336	276
47	5303	141	94	5353	282
70	5299	210	--	--	--
71	5306	213	--	--	--
72	5359	216	--	--	--
80	5333	240	--	--	--
88	5358	264	--	--	--
93	5341	279	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5315	21	1	5351	3
11	5358	33	10	5333	30
17	5327	51	28	5353	84
18	5339	54	33	5354	99
22	5347	66	42	5309	126
27	5325	81	52	5329	156
39	5338	117	64	5318	192
45	5334	135	79	5313	237
50	5352	150	82	5324	246
55	5309	165	94	5339	282
62	5344	186	--	--	--
66	5335	198	--	--	--
69	5322	207	--	--	--
73	5314	219	--	--	--
96	5310	288	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5302	3	13	5339	39
7	5348	21	20	5340	60
19	5305	57	22	5316	66
26	5314	78	24	5344	72
28	5347	84	37	5322	111
30	5325	90	41	5337	123
32	5321	96	45	5353	135
36	5355	108	53	5314	159
40	5359	120	59	5349	177
43	5342	129	73	5342	219
45	5353	135	83	5307	249
46	5319	138	88	5343	264
48	5351	144	91	5334	273
67	5332	201	95	5326	285
69	5350	207	--	--	--
78	5327	234	--	--	--
79	5315	237	--	--	--
87	5337	261	--	--	--
89	5331	267	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5348	6	4	5344	12
17	5316	51	16	5342	48
23	5334	69	23	5355	69
25	5320	75	25	5305	75
26	5331	78	31	5308	93
30	5337	90	33	5338	99
32	5323	96	36	5314	108
39	5336	117	49	5310	147
55	5340	165	60	5330	180
75	5313	225	80	5328	240
78	5341	234	82	5357	246
85	5342	255	83	5335	249
94	5346	282	90	5336	270
98	5355	294	91	5300	273
--	--	--	92	5346	276
--	--	--	98	5350	294

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5315	18	26	5339	78
10	5303	30	30	5341	90
29	5308	87	56	5300	168
35	5338	105	57	5334	171
36	5311	108	80	5318	240
46	5329	138	--	--	--
48	5359	144	--	--	--
58	5358	174	--	--	--
61	5320	183	--	--	--
70	5324	210	--	--	--
87	5306	261	--	--	--
89	5302	267	--	--	--
91	5305	273	--	--	--
95	5345	285	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5303	3	9	5320	27
2	5315	6	31	5327	93
11	5328	33	57	5318	171
16	5349	48	--	--	--
25	5304	75	--	--	--
31	5353	93	--	--	--
41	5358	123	--	--	--
42	5312	126	--	--	--
43	5307	129	--	--	--
47	5344	141	--	--	--
53	5345	159	--	--	--
58	5311	174	--	--	--
61	5319	183	--	--	--
62	5359	186	--	--	--
77	5335	231	--	--	--
86	5309	258	--	--	--
87	5350	261	--	--	--
92	5336	276	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5347	27	24	5338	72
11	5301	33	34	5310	102
31	5358	93	40	5347	120
41	5331	123	43	5323	129
50	5350	150	57	5332	171
61	5306	183	62	5318	186
65	5329	195	65	5316	195
86	5355	258	66	5358	198
97	5321	291	74	5315	222
--	--	--	76	5330	228
--	--	--	80	5339	240
--	--	--	85	5354	255

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5331	6	1	5342	3
5	5359	15	9	5336	27
12	5358	36	16	5318	48
23	5315	69	17	5312	51
29	5326	87	21	5351	63
30	5329	90	23	5346	69
35	5307	105	27	5319	81
54	5340	162	50	5325	150
67	5325	201	53	5316	159
70	5305	210	76	5352	228
71	5317	213	77	5359	231
73	5353	219	82	5332	246
88	5343	264	85	5330	255
89	5318	267	86	5326	258
99	5302	297	90	5335	270
--	--	--	94	5299	282
--	--	--	96	5324	288
--	--	--	98	5305	294

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5336	6	0	5353	0
5	5306	15	9	5354	27
10	5330	30	10	5299	30
13	5339	39	14	5331	42
14	5352	42	16	5329	48
18	5345	54	17	5320	51
34	5334	102	35	5303	105
35	5312	105	36	5337	108
38	5341	114	41	5330	123
41	5305	123	43	5344	129
50	5303	150	49	5338	147
59	5315	177	58	5319	174
67	5357	201	68	5325	204
79	2358	237	73	5315	219
--	--	--	81	5318	243
--	--	--	88	5340	264
--	--	--	91	5332	273

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5300	30	0	5329	0
19	5335	57	1	5309	3
25	5319	75	4	5326	12
39	5315	117	15	5332	45
44	5359	132	38	5349	114
50	5342	150	58	5346	174
53	5309	159	60	5311	180
71	5336	213	61	5299	183
79	5305	237	62	5307	186
81	5353	243	66	5327	198
94	5312	282	71	5336	213
99	5317	297	84	5324	252

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5311	12	7	5345	21
11	5310	33	11	5348	33
25	5346	75	17	5299	51
30	5312	90	28	5341	84
31	5349	93	35	5304	105
35	5358	105	41	5338	123
43	5317	129	45	5355	135
44	5328	132	51	5327	153
49	5355	147	61	5346	183
65	5313	195	74	5309	222
71	5336	213	80	5305	240
77	5308	231	97	5306	291
88	5321	264	--	--	--
91	5341	273	--	--	--
93	5314	279	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5314	0	11	5327	33
14	5302	42	16	5342	48
20	5317	60	17	5353	51
23	5326	69	24	5325	72
43	5310	129	27	5313	81
49	5328	147	31	5332	93
59	5345	177	34	5335	102
68	5338	204	49	5338	147
70	5321	210	60	5350	180
76	5356	228	90	5331	270
77	5348	231	99	5309	297
84	5299	252	--	--	--
92	5307	276	--	--	--
98	5337	294	--	--	--

+Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5355	18	5	5311	15
11	5324	33	8	5315	24
14	5348	42	10	5317	30
15	5316	45	22	5342	66
40	5322	120	23	5333	69
49	5341	147	31	5336	93
50	5325	150	36	5345	108
54	5347	162	60	5325	180
59	5344	177	63	5338	189
62	5335	186	78	5312	234
65	5309	195	85	5326	255
68	5352	204	87	5313	261
69	5312	207	89	5337	267
98	5303	294	98	5358	294

6. CONCLUSION

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

FCC ID: QISAP4130DN is in compliance with Part 15E of the FCC Rules.

The End