



DFS MEASUREMENT REPORT

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

FCC ID: Q9DAPIN0504505

APPLICANT: Hewlett Packard Enterprise Company

Application Type: Class III Permissive Change

Product: ACCESS POINT

Model No.: APIN0504, APIN0505

Brand Name:  

FCC Classification: Unlicensed National Information Infrastructure (UNII)

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

Type of Device: Master Device

Test Date: August 10 ~ 28, 2019

Reviewed By: 
(Paddy Chen)

Approved By: 
(Chenz Ker)



The test results relate only to the samples tested.

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

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

Revision History

Report No.	Version	Description	Issue Date	Note
1906TW0102-U9	Rev. 01	Initial Report	09-01-2019	Valid

CONTENTS

Description	Page
Revision History	2
§2.1033 General Information	5
1. INTRODUCTION	6
1.1. Scope	6
1.2. MRT Test Location	6
2. PRODUCT INFORMATION	7
2.1. Equipment Description.....	7
2.2. Product Specification Subjective to this Report.....	7
2.3. Description of Available Antennas.....	8
2.4. Description of Antenna RF Port	10
2.5. Operating Frequency and Channel List.....	11
2.6. Test Channel for this Report	11
2.7. Test Mode	11
3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS	12
3.1. Applicability	12
3.2. DFS Devices Requirements.....	13
3.3. DFS Detection Threshold Values	14
3.4. Parameters of DFS Test Signals	15
3.5. Conducted Test Setup	18
4. TEST EQUIPMENT CALIBRATION DATE	19
5. TEST RESULT	20
5.1. Summary	20
5.2. Radar Waveform Calibration.....	21
5.2.1. Calibration Setup	21
5.2.2. Calibration Procedure	21
5.2.3. Cablibration Result	22
5.2.4. Channel Loading Test Result	24
5.3. UNII Detection Bandwidth Measurement	25
5.3.1. Test Limit	25
5.3.2. Test Procedure	25
5.3.3. Test Result.....	26
5.4. Initial Channel Availability Check Time Measurement	29
5.4.1. Test Limit	29

5.4.2. Test Procedure	29
5.4.3. Test Result.....	30
5.5. Radar Burst at the Beginning of the Channel Availability Check Time Measurement ..	31
5.5.1. Test Limit	31
5.5.2. Test Procedure	31
5.5.3. Test Result.....	32
5.6. Radar Burst at the End of the Channel Availability Check Time Measurement	33
5.6.1. Test Limit	33
5.6.2. Test Procedure	33
5.6.3. Test Result.....	34
5.7. In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period Measurement	35
5.7.1. Test Limit	35
5.7.2. Test Procedure Used	35
5.7.3. Test Result.....	36
5.8. Statistical Performance Check Measurement	38
5.8.1. Test Limit	38
5.8.2. Test Procedure	38
5.8.3. Test Result.....	39
6. CONCLUSION.....	119
Appendix A – Test Setup Photograph.....	120
Appendix B – EUT Photograph	121

§2.1033 General Information

Applicant:	Hewlett Packard Enterprise Company
Applicant Address:	3333 Scott Blvd, Santa Clara, CA 94089, USA
Manufacturer:	Hewlett Packard Enterprise Company
Manufacturer Address:	3333 Scott Blvd, Santa Clara, CA 94089, USA
Test Site:	MRT Technology (Taiwan) Co., Ltd
Test Site Address:	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
Test Device Serial No.:	APIN0504 S/N: DB1959003D

Test Facility / Accreditations

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

- MRT facility is a FCC registered (Reg. No. 291082 and 153292) test facility with the site description report on file and is designated by the FCC as an Accredited Test Film.
- MRT facility is an IC registered (MRT Reg. No. 21723-1) test laboratory with the site description on file at Industry Canada.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (TAF) under the American Association for Laboratory Accreditation Program (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, Taiwan, EU and TELEC Rules.

TAF certificate here



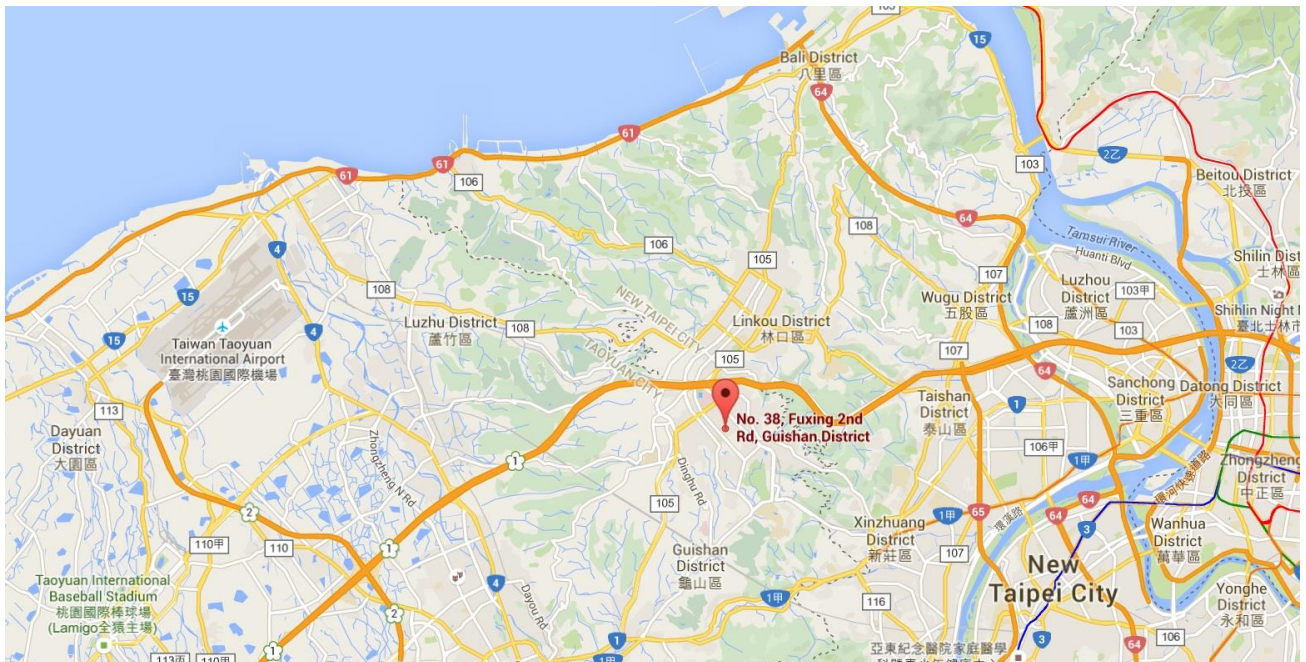
1. INTRODUCTION

1.1. Scope

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



1.2. MRT Test Location

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



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	ACCESS POINT
Model No.	APIN0504, APIN0505
Brand Name:	 
Wi-Fi Specification:	802.11a/b/g/n/ac/ax
Bluetooth Specification:	v4.2 single mode
ZigBee Specification:	802.15.4
Software Version:	ArubaOS_70xx_8.6.0.0_71581
Operating Temperature:	0 ~ 50 °C
Power Type:	AC Adapter or POE input
Operating Environment:	Indoor Use

Note 1: The difference between models is that EUT use different antenna and appearance, APIN0504 use some external antennas, APIN0505 use internal antenna, other hardware and software are the same.

Note 2: We selected the model APIN0504 that has lowest antenna gain to perform the DFS testing.

2.2. Product Specification Subjective to this Report

Frequency Range	For 802.11a/n-HT20/ac-VHT20/ax-HE20: 5260~5320MHz, 5500~5720MHz For 802.11n-HT40/ac-VHT40/ax-HE40: 5270~5310MHz, 5510~5710MHz For 802.11ac-VHT80/ax-HE80: 5290MHz, 5530MHz, 5610MHz, 5690MHz
Type of Modulation	802.11a/n/ac: OFDM 802.11ax: OFDMA
Power-on cycle	Requires 70.8 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band)	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

Note: For other features of this EUT, test report will be issued separately.

2.3. Description of Available Antennas

APIN0504

Antenna No.	Directionality	Frequency Band (GHz)	Model No.	Max Peak Gain (dBi)	BF Dir Gain (dBi)	CDD Dir Gain (dBi)	
						For Power	For PSD
Wi-Fi External Antenna List (2.4GHz 2*2 MIMO, 5GHz 2*2 MIMO)							
1	Omni	2.4	AP-ANT-1W	3.8	6.81	3.8	6.81
		5		5.8		8.81	5.8
2	Omni	2.4	AP-ANT-13B	2.3	5.31	2.3	5.31
		5		4.0		7.01	4.0
3	Omni	2.4	AP-ANT-19	3.0	6.01	3.0	6.01
		5		6.0		9.01	6.0
4	Omni	2.4	AP-ANT-20W	2.0	5.01	2.0	5.01
		5		2.0		5.01	2.0
5	Omni	2.4	AP-ANT-40	4.0	7.01	4.0	7.01
		5		5.0		8.01	5.0
6 (Note 3)	Directional	2.4	AP-ANT-25A	5.0	5.0	5.0	8.01
		5		5.0		5.0	5.0
7 (Note 3)	Directional	2.4	AP-ANT-28	7.5	7.5	7.5	10.51
		5		7.5		7.5	7.5
Bluetooth & ZigBee Internal Antenna							
PCB		2.4		3.3			

APIN0505

Directionality	Frequency Band (GHz)	Max Peak Gain (dBi)	BF Dir Gain (dBi)	CDD Dir Gain (dBi)	
				For Power	For PSD
Wi-Fi Internal Antenna List (2.4GHz 2*2 MIMO, 5GHz 4*4 MIMO)					
Omni	2.4	4.29	7.08	4.29	7.08
Omni	5	5.63	8.64	5.63	8.64
Bluetooth & ZigBee Internal Antenna					
PCB		2.4		3.3	

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.
For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.
If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.
 - For power spectral density (PSD) measurements on all devices,
Array Gain = $10 \log (N_{ANT}/ N_{SS}) \text{ dB} = 3.01$;
 - For power measurements on IEEE 802.11 devices,
Array Gain = 0 dB for $N_{ANT} \leq 4$;
2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11n/ac/ax, not include 802.11a/b/g. Directional gain = $G_{ANT} + \text{BF Gain}$, BF Gain was declared by the applicant.
3. Two antennas have Cross-Polarized design, the detail see the antenna specification.
4. For APIN0505, its directional gain was declared by the applicant, the detail refers to antenna specification.
5. We selected APIN0504 that has lowest antenna gain to perform the DFS testing.

2.4. Description of Antenna RF Port

Antenna RF Port				
--	2.4GHz RF Port		5GHz RF Port	
Software Control Port	Ant 0	Ant 1	Ant 0	Ant 1
APIN0504				
APIN0505				

2.5. Operating Frequency and Channel List

802.11a/n-HT20/ac-VHT20/ax-HE20

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

802.11n-HT40/ac-VHT40/ax-HE40

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	5710 MHz	--	--

802.11ac-VHT80/ax-HE80

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

2.6. Test Channel for this Report

Test Mode	Test Channel	Test Frequency
802.11ax-HE20	100	5500 MHz
802.11ax-HE40	102	5510 MHz
802.11ax-HE80	106	5530 MHz

2.7. Test Mode

Test Mode	Mode 1: Communication with the notebook
-----------	---

3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

3.1. Applicability

The following table from FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02 lists the applicable requirements for the DFS testing.

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

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

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

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

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

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

3.2. DFS Devices Requirements

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

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

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

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

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

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

Table 3-3: DFS Response Requirements

3.3. DFS Detection Threshold Values

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

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

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.
 Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.
 Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

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

3.4. Parameters of DFS Test Signals

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

Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 3-6	$\text{Roundup} \left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\text{usec}}} \right) \right\}$	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 v02 describes a radiated test setup and a conducted test setup. The conducted test setup was used for this testing. Figure 3-1 shows the typical test setup.

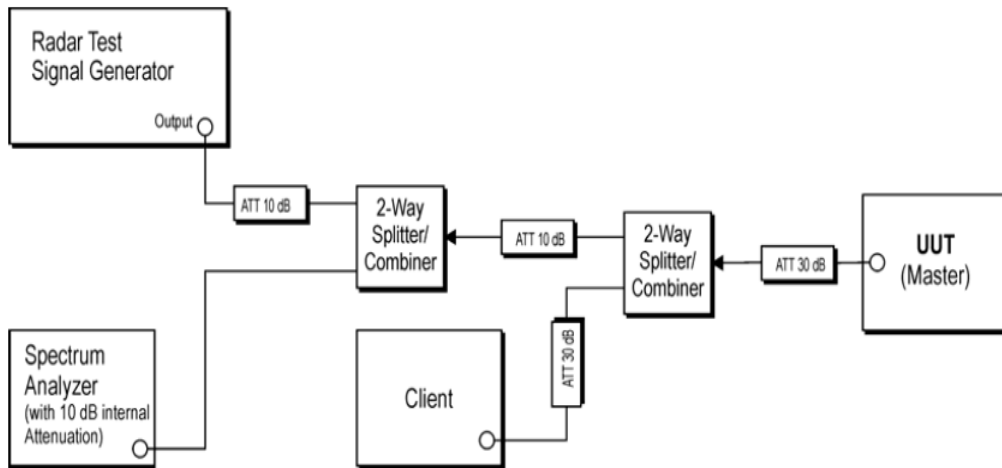


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

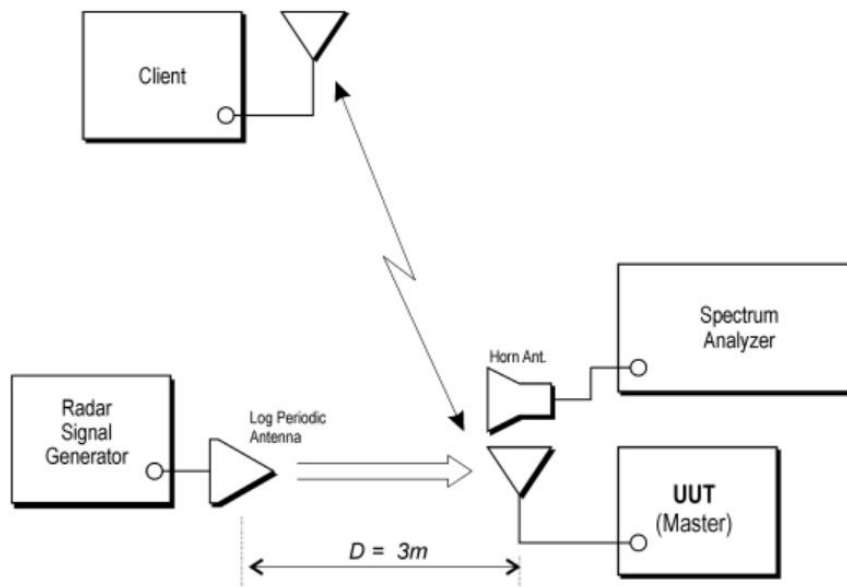


Figure 3-2: Radiated Test Setup where UUT is a Bridge or Mesh mode and Radar Test Waveforms are injected into the UUT

4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS) - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2019/10/30
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2020/07/11
Vector Signal Generator	Keysight	N5182B	MRTTWA00010	1 year	2020/04/22
Combiner	WOKEN	0120A04208001S	MRTTWE00008	1 year	2020/06/17
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2020/05/30
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTTWA00003	1 year	2020/04/22

Client Information

Instrument	Manufacturer	Type No.	FCC ID
Wireless Network Adapter	Intel	AX200NGW	PD9AX200NG

Software	Version	Manufacturer	Function
Pulse Building(N7607B)	V3.0.0	Keysight	Radar Signal Generation Software
DFS Tool	V6.7	Keysight	DFS Test Software

5. TEST RESULT

5.1. Summary

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

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

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

5.2. Radar Waveform Calibration

5.2.1. Calibration Setup

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

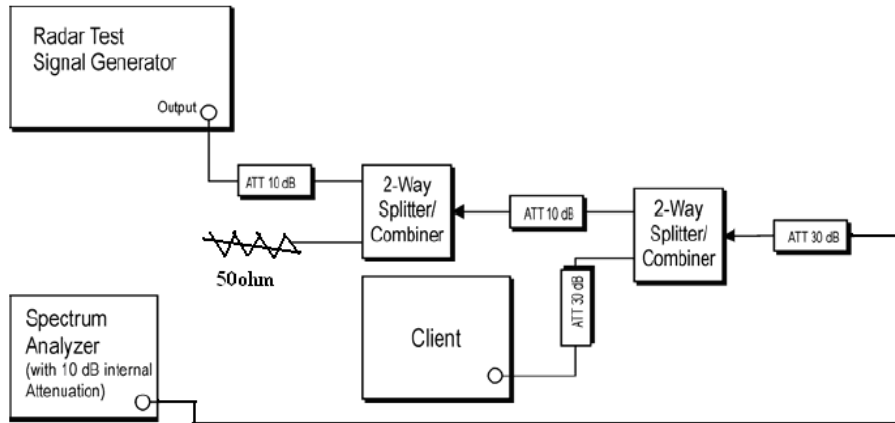


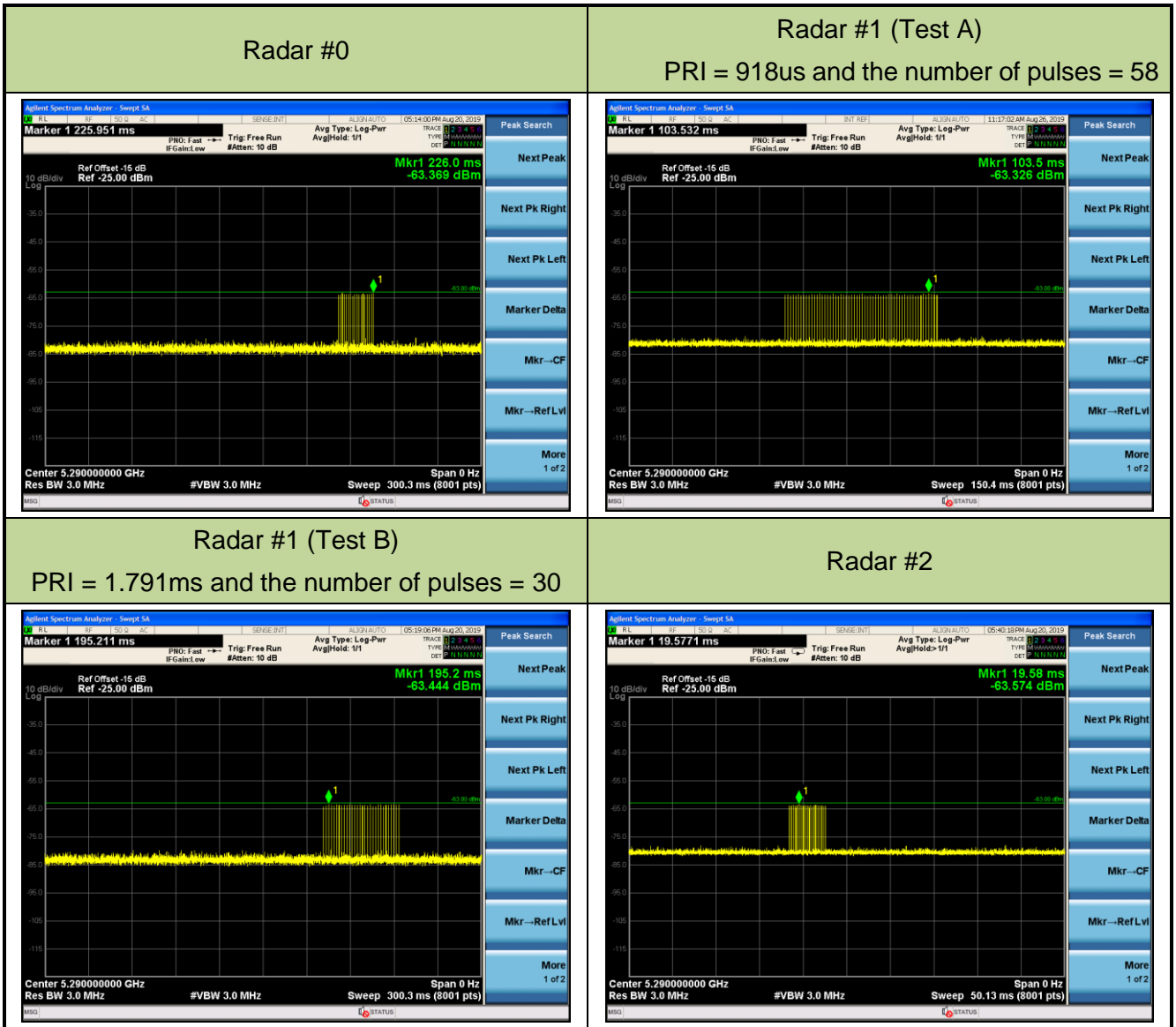
Figure 3-2: Conducted Test Setup

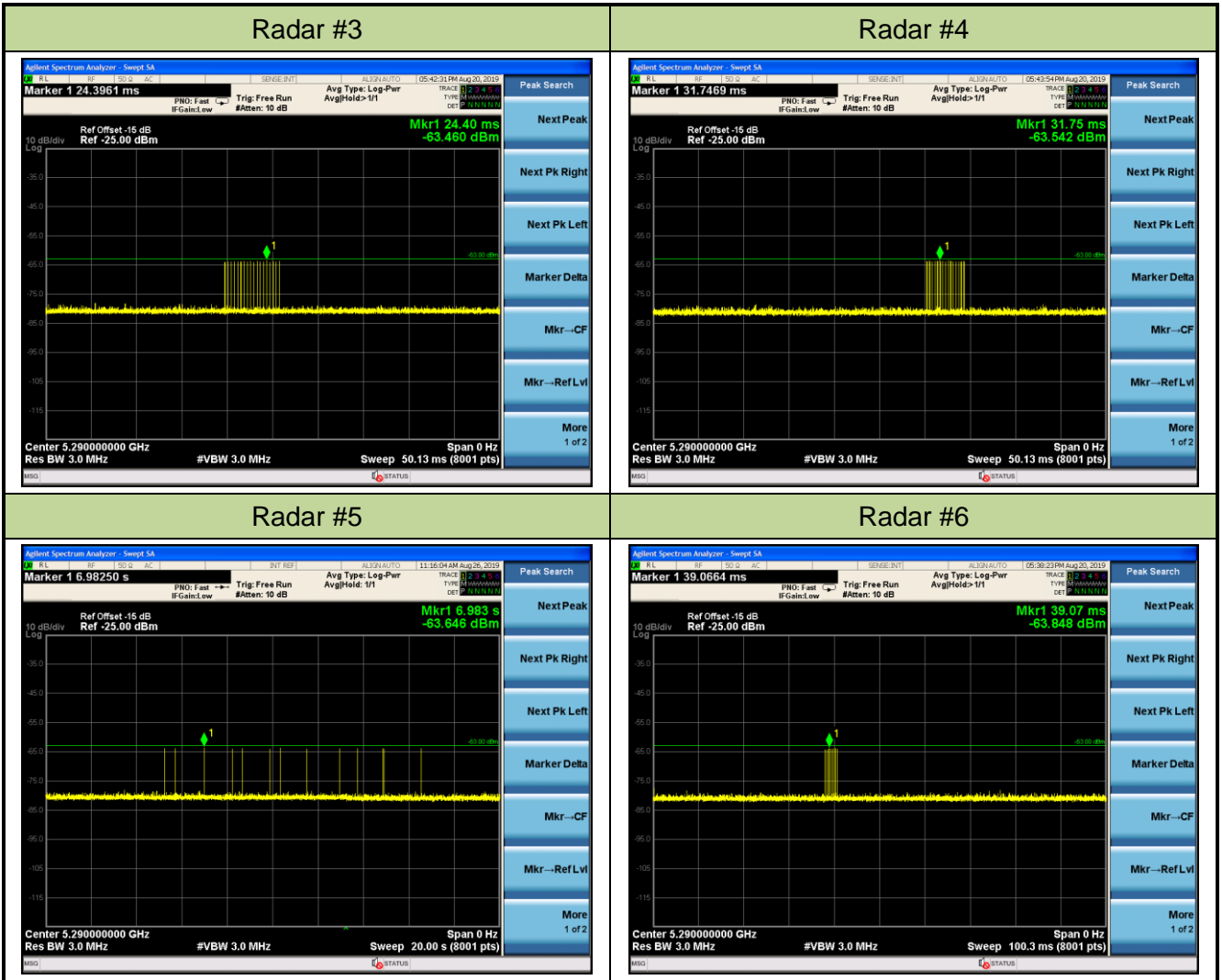
5.2.2. Calibration Procedure

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

5.2.3. Cablibration Result

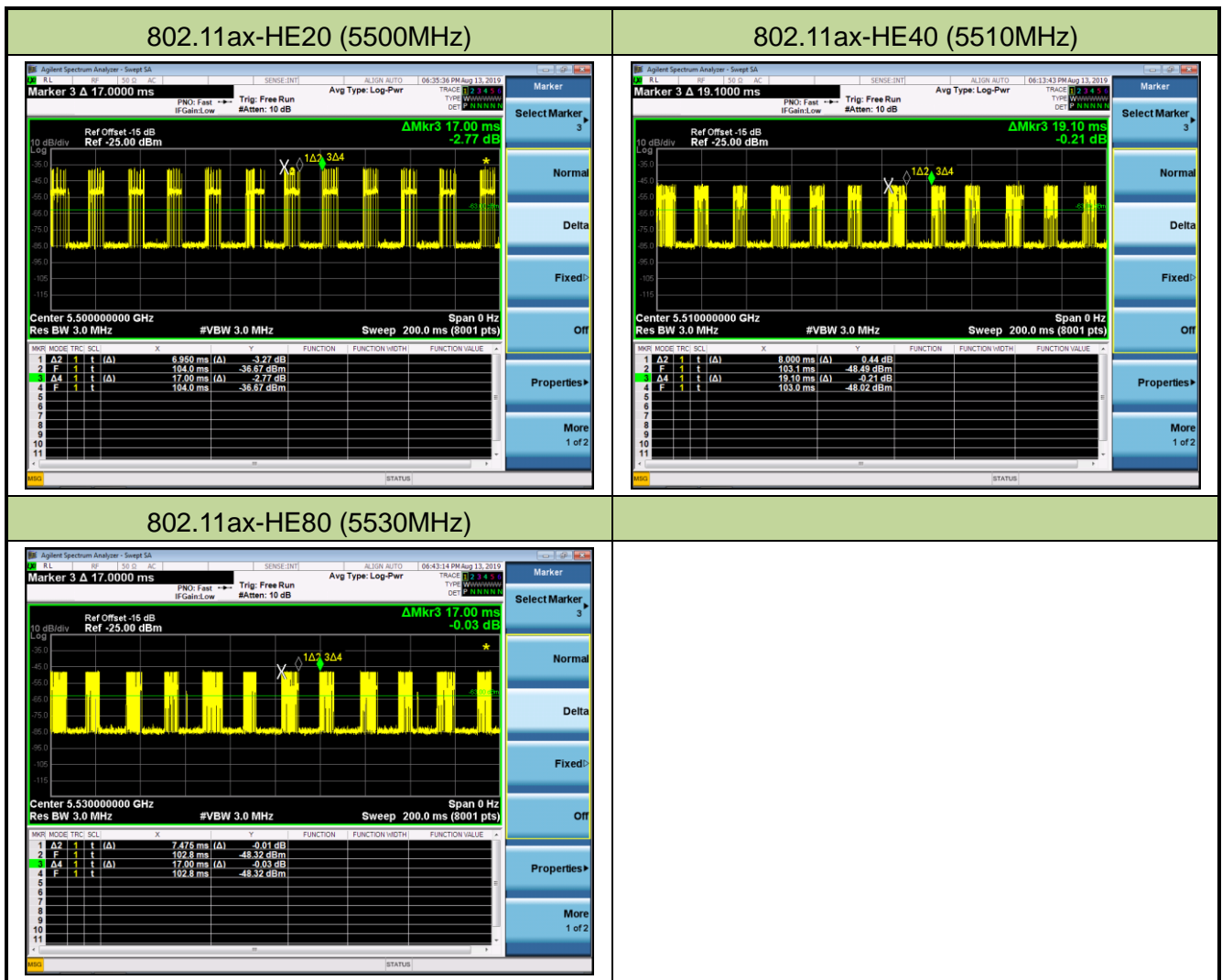
Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/20 ~ 2019/08/26
Test Item	Radar Waveform Calibration		





5.2.4. Channel Loading Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/13
Test Item	Channel Loading		



Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11ax-HE20	5500 MHz	40.88%	≥ 17%	Pass
802.11ax-HE40	5510 MHz	41.88%	≥ 17%	Pass
802.11ax-HE80	5530 MHz	43.97%	≥ 17%	Pass

Note: System testing was performed with the designated "Iperf" test file. 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. Packet ratio = Time On / (Time On + Off Time).

5.3. UNII Detection Bandwidth Measurement

5.3.1. Test Limit

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

5.3.2. Test Procedure

1. Adjust the equipment to produce a single Burst of any one of the Short Pulse Radar Types 0-4 in Table 3-5 at the center frequency of the EUT Operating Channel at the specified DFS Detection Threshold level.
2. The generating equipment is configured as shown in the Conducted Test Setup above section 3.5.
3. The EUT is set up as a stand-alone device (no associated Client or Master, as appropriate) and no traffic. Frame based systems will be set to a talk/listen ratio reflecting the worst case (maximum) that is user configurable during this test.
4. Generate a single radar Burst, and note the response of the EUT. Repeat for a minimum of 10 trials. The EUT must detect the Radar Waveform using the specified U-NII Detection Bandwidth criterion shown in Table 3-5. In cases where the channel bandwidth may exceed past the DFS band edge on specific channels (i.e., 802.11ac or wideband frame based systems) select a channel that has the entire emission bandwidth within the DFS band. If this is not possible, test the detection BW to the DFS band edge.
5. Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified in Table 3-3. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.
6. Starting at the center frequency of the EUT operating Channel, decrease the radar frequency in 1 MHz steps, repeating the above item 4 test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion. Record the lowest frequency (denote as FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.
7. The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL
8. The U-NII Detection Bandwidth must be at least 100% of the EUT transmitter 99% power, otherwise, the EUT does not comply with DFS requirements.

5.3.3. Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/15
Test Item	Detection Bandwidth (802.11ax-HE20 mode - 5500MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5490.4 FL	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5509.6 FH	1	1	1	1	1	1	1	1	1	1	100%
5510	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 19.05MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5509.60MHz – 5490.40MHz = 19.20MHz

Note 3: NII Detection Bandwidth Min. Limit (MHz): 19.05MHz x 100% = 19.05MHz.

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/15
Test Item	Detection Bandwidth (802.11ax-HE40 mode - 5510MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529 FH	1	1	1	1	1	1	1	1	1	1	100%
5530	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 37.63MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5529MHz - 5491MHz = 38MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 37.63MHz x 100% = 37.63MHz.



Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/15
Test Item	Detection Bandwidth (802.11ax-HE80 mode - 5530MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569 FH	1	1	1	1	1	1	1	1	1	1	100%
5570	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 77.08MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5569MHz - 5491MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 77.08MHz x 100% = 77.08MHz.

5.4. Initial Channel Availability Check Time Measurement

5.4.1. Test Limit

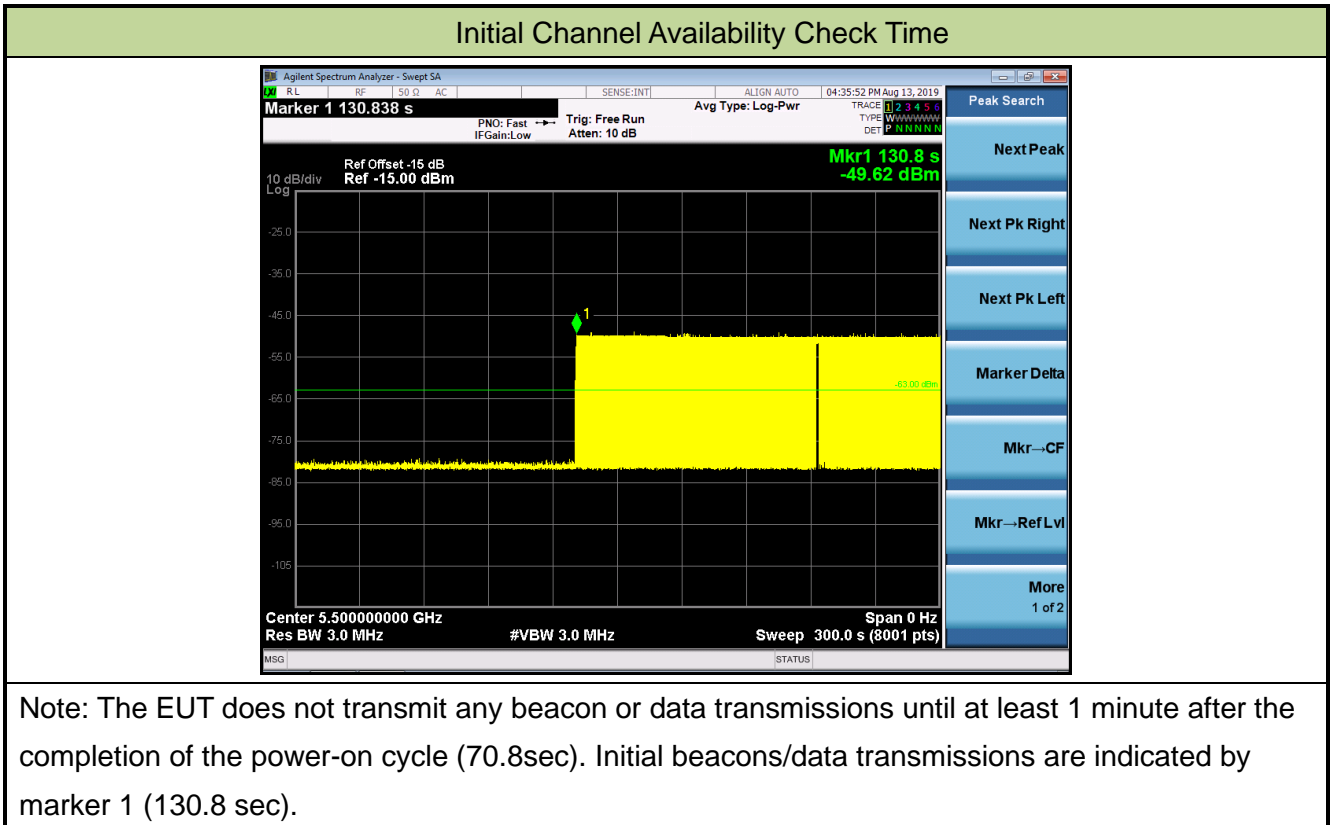
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

5.4.2. Test Procedure

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

5.4.3. Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/13
Test Item	Initial Channel Availability Check Time (802.11ax-HE20 mode - 5500MHz)		



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

5.5.1. Test Limit

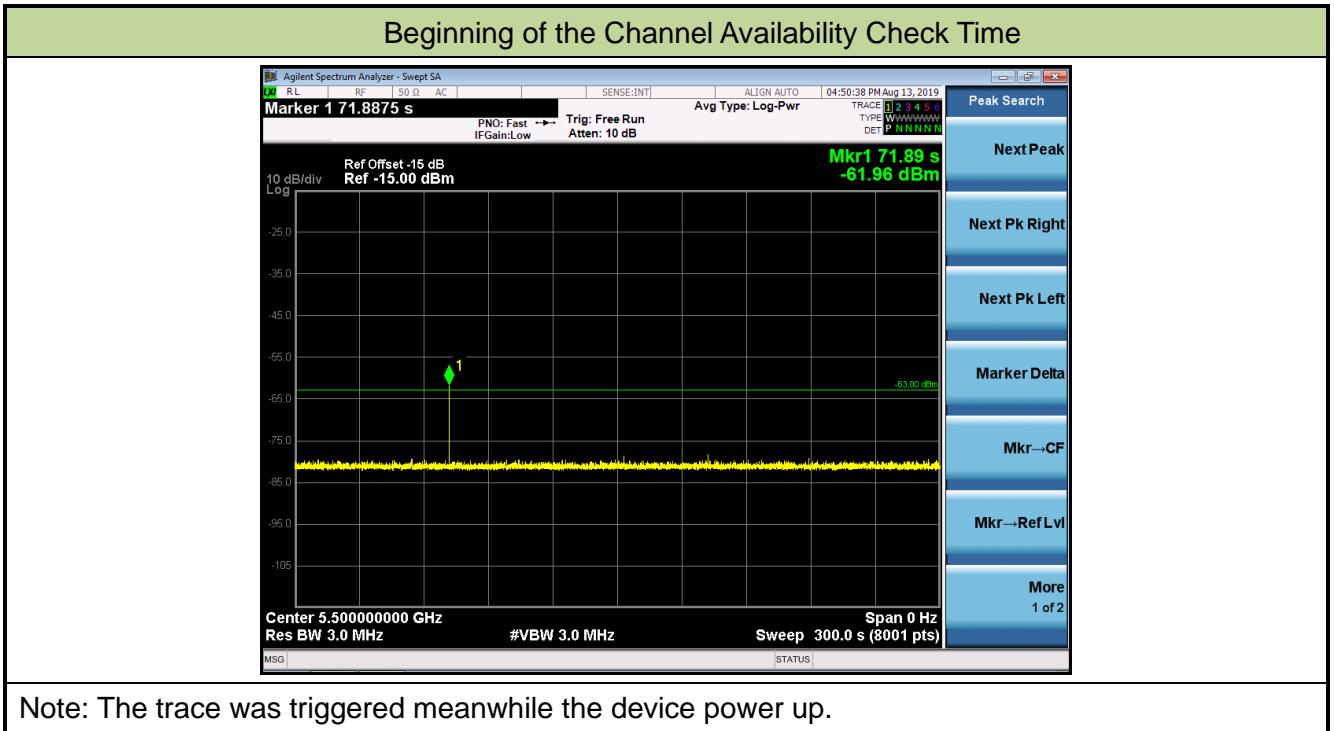
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

5.5.2. Test Procedure

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

5.5.3. Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/13
Test Item	Beginning of the Channel Availability Check Time (802.11ax-HE20 - 5500MHz)		



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

5.6.1. Test Limit

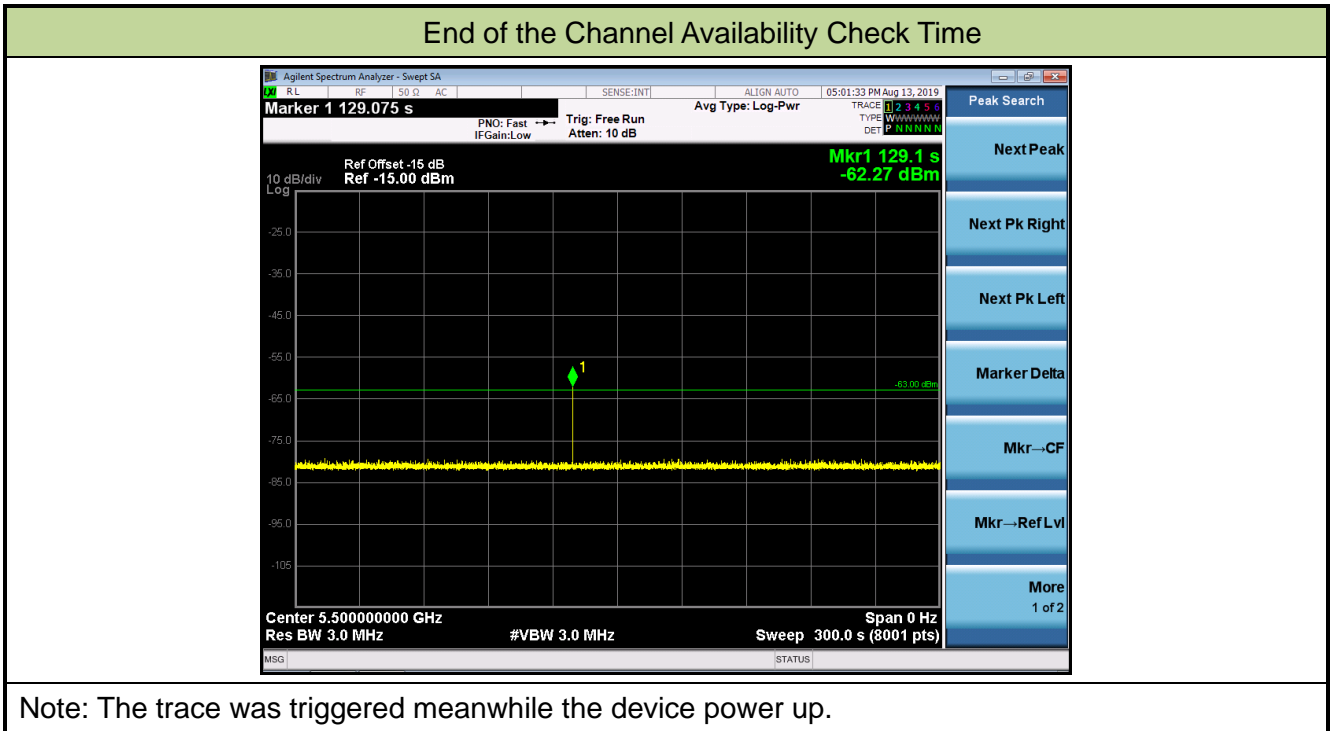
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC on that channel.

5.6.2. Test Procedure

1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning of the Channel Availability Check Time.
2. The EUT is powered on at T0. T1 denotes the instant when the EUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.
3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions will continue for 2.5 minutes after the radar Burst has been generated. Verify that during the 2.5 minutes measurement window no EUT transmissions occurred.

5.6.3. Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/13
Test Item	End of the Channel Availability Check Time (802.11ax-HE20 - 5500MHz)		



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

5.7.1. Test Limit

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

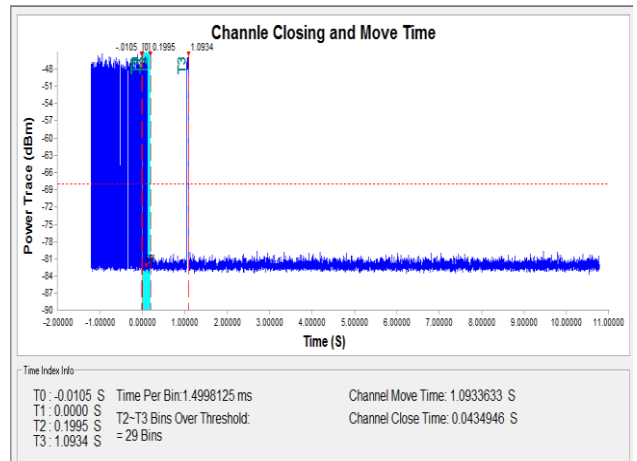
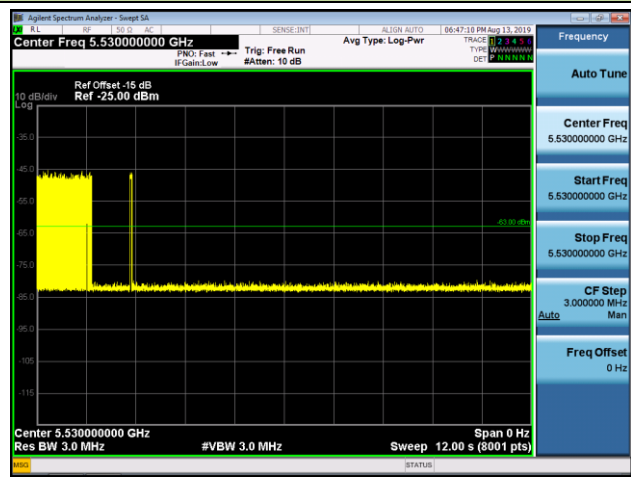
5.7.2. Test Procedure Used

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

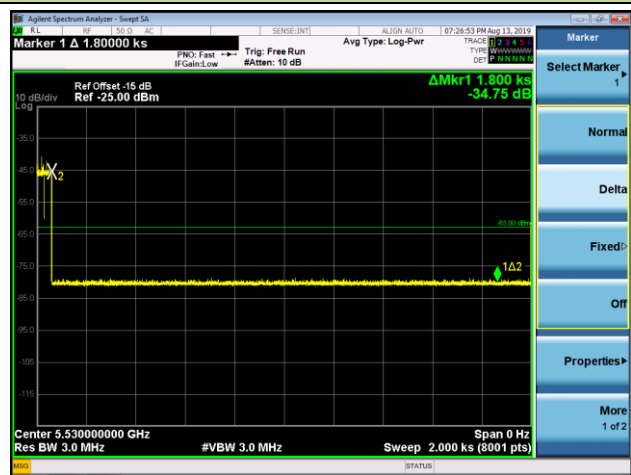
5.7.3. Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/13
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ax-HE80 - 5530MHz)		

Channel Move Time and Channel Closing Transmission Time



Non-Occupancy Period



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	1.093s	<10s
Channel Closing Transmission Time (ms) (Note)	43ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min
<p>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.</p>		

5.8. Statistical Performance Check Measurement

5.8.1. Test Limit

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

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

The percentage of successful detection is calculated by:

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

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

5.8.2. Test Procedure

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

5.8.3. Test Result

Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/15
Test Item	Radar Statistical Performance Check (802.11ax-HE20 – 5500MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.2	1.0	558	95	1
2	5500.4	1.0	838	63	1
3	5494.6	1.0	738	72	1
4	5501.1	1.0	3066	18	0
5	5496.3	1.0	898	59	1
6	5503.5	1.0	718	74	1
7	5498.7	1.0	598	89	1
8	5505.5	1.0	698	76	1
9	5500.8	1.0	538	99	1
10	5507.4	1.0	818	65	1
11	5490.4	1.0	658	81	1
12	5509.6	1.0	858	62	1
13	5491.9	1.0	938	57	1
14	5504.1	1.0	758	70	1
15	5493.3	1.0	798	67	1
16	5506.8	1.0	1049	51	1
17	5495.6	1.0	946	56	1
18	5508.2	1.0	952	56	1
19	5497.1	1.0	1700	32	1
20	5504.9	1.0	712	75	1
21	5492.1	1.0	2849	19	1
22	5502.8	1.0	2655	20	1
23	5499.6	1.0	1996	27	1
24	5500.5	1.0	521	102	1
25	5493.7	1.0	1091	49	1
26	5507.2	1.0	1835	29	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5503.4	1.0	1348	40	1
28	5496.6	1.0	596	89	0
29	5500.8	1.0	1375	39	1
30	5490.9	1.0	1381	39	1
Detection Percentage (%)					93.3%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.2	3.3	164	23	1
2	5500.4	3.8	193	23	1
3	5494.6	4.5	170	26	1
4	5501.1	3.9	154	27	1
5	5496.3	1.2	204	26	1
6	5503.5	2.7	202	25	1
7	5498.7	2.4	223	29	1
8	5505.5	4.7	221	26	1
9	5500.8	3.8	184	23	1
10	5507.4	4.0	224	24	1
11	5490.4	3.4	168	23	1
12	5509.6	3.1	222	26	1
13	5491.9	3.5	167	29	1
14	5504.1	4.3	160	26	1
15	5493.3	4.6	178	25	1
16	5506.8	4.8	179	23	1
17	5495.6	4.3	210	26	1
18	5508.2	2.1	226	29	1
19	5497.1	2.9	201	24	1
20	5504.9	1.2	161	27	1
21	5492.1	5.0	188	23	1
22	5502.8	2.0	219	28	1
23	5499.6	3.0	217	25	1
24	5500.5	3.0	184	27	1
25	5493.7	2.4	156	25	1
26	5507.2	1.4	155	25	1
27	5503.4	1.1	191	23	1
28	5496.6	3.5	218	23	1
29	5500.8	1.5	216	29	1
30	5490.9	3.5	190	27	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	5492.2	8.7	261	16	1
2	5500.4	6.6	477	16	1
3	5494.6	9.1	465	18	1
4	5501.1	8.5	291	16	0
5	5496.3	6.3	450	16	1
6	5503.5	7.3	336	17	1
7	5498.7	8.5	256	16	1
8	5505.5	6.9	341	16	1
9	5500.8	9.4	337	17	1
10	5507.4	7.9	383	18	1
11	5490.4	6.6	454	17	1
12	5509.6	6.1	328	16	1
13	5491.9	7.3	251	16	1
14	5504.1	9.6	293	17	1
15	5493.3	7.0	454	18	1
16	5506.8	8.1	389	18	1
17	5495.6	7.6	477	18	1
18	5508.2	6.7	304	18	1
19	5497.1	7.4	436	16	1
20	5504.9	6.7	284	16	1
21	5492.1	6.3	364	17	1
22	5502.8	9.0	399	16	1
23	5499.6	9.1	362	16	1
24	5500.5	9.7	338	16	1
25	5493.7	8.5	313	16	1
26	5507.2	9.5	498	17	1
27	5503.4	6.5	253	16	0
28	5496.6	6.3	328	17	1
29	5500.8	6.1	408	18	0
30	5490.9	7.7	465	18	1
Detection Percentage (%)					90.0%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5492.2	18.9	400	12	1
2	5500.4	13.8	341	15	1
3	5494.6	20.0	394	14	1
4	5501.1	11.9	380	14	1
5	5496.3	14.5	447	12	1
6	5503.5	11.5	322	12	1
7	5498.7	18.2	488	16	1
8	5505.5	11.6	426	14	1
9	5500.8	11.8	356	16	0
10	5507.4	11.2	462	12	1
11	5490.4	17.9	322	14	1
12	5509.6	14.8	402	13	1
13	5491.9	18.4	328	15	1
14	5504.1	15.3	419	16	1
15	5493.3	19.3	284	14	1
16	5506.8	15.5	468	16	1
17	5495.6	16.9	286	13	1
18	5508.2	12.4	331	12	1
19	5497.1	17.8	415	15	1
20	5504.9	19.1	294	13	1
21	5492.1	17.6	273	14	0
22	5502.8	14.5	351	15	1
23	5499.6	13.8	436	14	0
24	5500.5	13.7	374	14	0
25	5493.7	13.3	336	16	1
26	5507.2	15.3	392	14	1
27	5503.4	12.9	485	15	1
28	5496.6	14.8	304	14	1
29	5500.8	15.6	306	12	1
30	5490.9	13.5	325	15	1
Detection Percentage (%)					86.7%

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

waveforms is as follows: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (93.3\% + 100\% + 90.0\% + 86.7\%) / 4 = 92.5\%$ (>80%)



Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5495.3	1	16	5500.0	1
2	5493.7	1	17	5500.0	1
3	5497.7	1	18	5500.0	1
4	5498.1	1	19	5500.0	1
5	5492.5	1	20	5500.0	1
6	5494.1	1	21	5507.1	1
7	5496.1	1	22	5503.9	1
8	5494.5	1	23	5507.5	0
9	5492.9	1	24	5504.7	1
10	5497.3	1	25	5502.3	1
11	5500.0	0	26	5505.5	1
12	5500.0	0	27	5502.7	1
13	5500.0	1	28	5506.3	1
14	5500.0	0	29	5501.9	1
15	5500.0	0	30	5505.9	1
Detection Percentage (%)					83.3%

Type 5 Radar Waveform_1										
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	49249	1	12	70	1738	0	0	49249	0	799999
2	826138	1	12	80	1027	0	0	877175	800000	1599999
3	1077620	3	12	80	1871	1024	1149	1955822	1600000	2399999
4	1021713	1	12	70	1802	0	0	2981579	2400000	3199999
5	705007	3	12	90	1614	1757	1816	3688388	3200000	3999999
6	986429	3	12	55	1941	1253	1207	4680004	4000000	4799999
7	335730	3	12	90	1070	1640	1275	5020135	4800000	5599999
8	935622	3	12	50	1201	1435	1148	5959742	5600000	6399999
9	999282	1	12	100	1043	0	0	6962808	6400000	7199999
10	326902	1	12	85	1585	0	0	7290753	7200000	7999999
11	1152809	2	12	50	1083	1824	0	8445147	8000000	8799999
12	1110916	2	12	60	1029	1235	0	9558970	8800000	9599999
13	258921	1	12	55	1701	0	0	9820155	9600000	10399999
14	1026362	1	12	70	1972	0	0	10848218	10400000	11199999
15	523661	1	12	100	1886	0	0	11373851	11200000	11999999
Total number of pulses in waveform = 27										



Type 5 Radar Waveform_2

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	271953	2	8	90	1388	1145	0	271953	0	705881
2	868509	1	8	85	1877	0	0	1142995	705882	1411763
3	801635	2	8	60	1766	1860	0	1946507	1411764	2117645
4	676238	1	8	65	1130	0	0	2626371	2117646	2823527
5	739597	1	8	55	1000	0	0	3367098	2823528	3529409
6	862265	2	8	100	1581	1932	0	4230363	3529410	4235291
7	184808	1	8	75	1151	0	0	4418684	4235292	4941173
8	1164184	3	8	90	1832	1860	1485	5584019	4941174	5647055
9	428070	2	8	50	1626	1214	0	6017266	5647056	6352937
10	922452	2	8	70	1707	1353	0	6942558	6352938	7058819
11	561926	3	8	65	1282	1859	1502	7507544	7058820	7764701
12	709498	2	8	70	1410	1069	0	8221685	7764702	8470583
13	945306	1	8	85	1572	0	0	9169470	8470584	9176465
14	228078	1	8	55	1928	0	0	9399120	9176466	9882347
15	1168424	2	8	95	1326	1473	0	10569472	9882348	10588229
16	717767	2	8	55	1082	1231	0	11290038	10588230	11294111
17	36374	2	8	100	1984	1267	0	11328725	11294112	11999993

Total number of pulses in waveform = 30

Type 5 Radar Waveform_3

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	499211	1	18	60	1265	0	0	499211	0	631578
2	631381	2	18	60	1945	1837	0	1131857	631579	1263157
3	489127	3	18	55	1082	1551	1140	1624766	1263158	1894736
4	748582	1	18	50	1455	0	0	2377121	1894737	2526315
5	329150	1	18	90	1012	0	0	2707726	2526316	3157894
6	723240	1	18	60	1757	0	0	3431978	3157895	3789473
7	816462	3	18	50	1114	1897	1659	4250197	3789474	4421052
8	444717	2	18	65	1015	1258	0	4699584	4421053	5052631
9	549707	2	18	75	1947	1945	0	5251564	5052632	5684210
10	822725	1	18	80	1646	0	0	6078181	5684211	6315789
11	626815	1	18	65	1804	0	0	6706642	6315790	6947368
12	390375	2	18	90	1934	1311	0	7098821	6947369	7578947
13	731594	1	18	85	1409	0	0	7833660	7578948	8210526
14	519231	3	18	90	1717	1507	1076	8354300	8210527	8842105
15	594037	1	18	65	1578	0	0	8952637	8842106	9473684
16	925355	2	18	95	1100	1294	0	9879570	9473685	10105263
17	584905	2	18	70	1980	1466	0	10466869	10105264	10736842
18	387475	3	18	70	1824	1273	1017	10857790	10736843	11368421
19	1124862	2	18	80	1491	1788	0	11986766	11368422	12000000

Total number of pulses in waveform = 34

Type 5 Radar Waveform_4

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	389529	3	19	55	1563	1138	1043	389529	0	631578
2	526671	2	19	70	1426	1703	0	919944	631579	1263157
3	777981	2	19	100	1247	1493	0	1701054	1263158	1894736
4	644845	3	19	75	1633	1662	1585	2348639	1894737	2526315
5	782690	3	19	75	1442	1733	1698	3136209	2526316	3157894
6	158499	2	19	100	1803	1280	0	3299581	3157895	3789473
7	648109	3	19	80	1314	1626	1926	3950773	3789474	4421052
8	863789	3	19	80	1921	1698	1849	4819428	4421053	5052631
9	671053	2	19	65	1112	1778	0	5495949	5052632	5684210
10	234099	2	19	70	1574	1920	0	5732938	5684211	6315789
11	890161	3	19	100	1956	1301	1727	6626593	6315790	6947368
12	720269	3	19	95	1894	1608	1753	7351846	6947369	7578947
13	809504	2	19	65	1998	1348	0	8166605	7578948	8210526
14	361808	1	19	75	1163	0	0	8531759	8210527	8842105
15	345066	3	19	60	1377	1679	1599	8877988	8842106	9473684
16	1148063	3	19	55	1002	1888	1782	10030706	9473685	10105263
17	464135	3	19	55	1038	1911	1634	10499513	10105264	10736842
18	755606	2	19	50	1753	1733	0	11259702	10736843	11368421
19	339893	2	19	65	1644	1202	0	11603081	11368422	12000000

Total number of pulses in waveform = 47



Type 5 Radar Waveform_5

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	389707	1	5	85	1106	0	0	389707	0	857142
2	1136372	1	5	85	1019	0	0	1527185	857143	1714285
3	675022	1	5	65	1438	0	0	2203226	1714286	2571428
4	843100	1	5	55	1578	0	0	3047764	2571429	3428571
5	1208423	3	5	90	1978	1390	1117	4257765	3428572	4285714
6	38294	2	5	60	1871	1703	0	4300544	4285715	5142857
7	1178768	1	5	75	1196	0	0	5482886	5142858	6000000
8	734246	3	5	90	1838	1536	1623	6218328	6000001	6857143
9	1136492	2	5	80	1963	1907	0	7359817	6857144	7714286
10	1153703	1	5	95	1597	0	0	8517390	7714287	8571429
11	483784	2	5	75	1244	1466	0	9002771	8571430	9428572
12	1093668	1	5	65	1448	0	0	10099149	9428573	10285715
13	649740	1	5	70	1187	0	0	10750337	10285716	11142858
14	750519	2	5	90	1994	1857	0	11502043	11142859	12000001

Total number of pulses in waveform = 22

Type 5 Radar Waveform_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	879017	3	9	90	1248	1154	1158	879017	0	1333332
2	805167	2	9	65	1563	1341	0	1687744	1333333	2666665
3	1527450	1	9	95	1667	0	0	3218098	2666666	3999998
4	1575872	1	9	65	1302	0	0	4795637	3999999	5333331
5	758635	2	9	55	1687	1505	0	5555574	5333332	6666664
6	2106518	1	9	90	1502	0	0	7665284	6666665	7999997
7	1151150	3	9	55	1922	1421	1120	8817936	7999998	9333330
8	1344820	3	9	60	1117	1811	1587	10167219	9333331	10666663
9	1435469	2	9	50	1126	1412	0	11607203	10666664	11999996

Total number of pulses in waveform = 18

Type 5 Radar Waveform_7

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	467967	2	14	100	1026	1203	0	467967	0	857142
2	970695	3	14	90	1686	1226	1850	1440891	857143	1714285
3	555888	3	14	55	1119	1858	1470	2001541	1714286	2571428
4	1334309	1	14	95	1613	0	0	3340297	2571429	3428571
5	208237	2	14	50	1128	1190	0	3550147	3428572	4285714
6	1467720	1	14	85	1812	0	0	5020185	4285715	5142857
7	771470	3	14	70	1384	1457	1052	5793467	5142858	6000000
8	832536	2	14	95	1922	1506	0	6629896	6000001	6857143
9	964107	3	14	65	1267	1146	1658	7597431	6857144	7714286
10	760426	2	14	70	1571	1435	0	8361928	7714287	8571429
11	409959	3	14	85	1232	1988	1865	8774893	8571430	9428572
12	1424729	3	14	85	1104	1817	1353	10204707	9428573	10285715
13	239053	1	14	70	1020	0	0	10448034	10285716	11142858
14	1008233	2	14	85	1963	1486	0	11457287	11142859	12000001

Total number of pulses in waveform = 31



Type 5 Radar Waveform_8

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	458113	2	10	100	1377	1383	0	458113	0	666666
2	510444	1	10	95	1118	0	0	971317	666667	1333333
3	859924	3	10	100	1616	1075	1950	1832359	1333334	2000000
4	612911	2	10	90	1450	1463	0	2449911	2000001	2666667
5	610002	1	10	75	1300	0	0	3062826	2666668	3333334
6	448637	2	10	75	1857	1599	0	3512763	3333335	4000001
7	591038	1	10	70	1560	0	0	4107257	4000002	4666668
8	764818	2	10	85	1369	1208	0	4873635	4666669	5333335
9	690610	2	10	65	1636	1029	0	5566822	5333336	6000002
10	759372	3	10	80	1167	1154	1196	6328859	6000003	6666669
11	841360	1	10	90	1984	0	0	7173736	6666670	7333336
12	791279	2	10	90	1809	1358	0	7966999	7333337	8000003
13	104069	3	10	60	1599	1503	1342	8074235	8000004	8666670
14	1165347	1	10	85	1955	0	0	9244026	8666671	9333337
15	565971	3	10	60	1514	1947	1200	9811952	9333338	10000004
16	422332	2	10	85	1975	1532	0	10238945	10000005	10666671
17	1071736	1	10	75	1498	0	0	11314188	10666672	11333338
18	619998	3	10	85	1078	1015	1837	11935684	11333339	12000005

Total number of pulses in waveform = 35

Type 5 Radar Waveform_9

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	27525	2	6	90	1274	1508	0	27525	0	599999
2	666664	2	6	80	1962	1271	0	696971	600000	1199999
3	953249	1	6	95	1567	0	0	1653453	1200000	1799999
4	342666	2	6	90	1679	1469	0	1997686	1800000	2399999
5	603783	3	6	50	1017	1227	1113	2604617	2400000	2999999
6	533575	3	6	75	1552	1592	1428	3141549	3000000	3599999
7	772971	1	6	65	1071	0	0	3919092	3600000	4199999
8	290544	3	6	90	1598	1073	1867	4210707	4200000	4799999
9	604255	2	6	100	1016	1011	0	4819500	4800000	5399999
10	713002	3	6	65	1776	1743	1192	5534529	5400000	5999999
11	519280	3	6	100	1680	1256	1287	6058520	6000000	6599999
12	620643	2	6	75	1154	1496	0	6683386	6600000	7199999
13	706449	1	6	80	1321	0	0	7392485	7200000	7799999
14	893195	1	6	55	1695	0	0	8287001	7800000	8399999
15	596091	2	6	55	1195	1322	0	8884787	8400000	8999999
16	394638	3	6	70	1146	1639	1332	9281942	9000000	9599999
17	477846	1	6	90	1378	0	0	9763805	9600000	10199999
18	704257	1	6	70	1091	0	0	10469440	10200000	10799999
19	356456	1	6	75	1213	0	0	10826987	10800000	11399999
20	1017999	1	6	95	1727	0	0	11846199	11400000	11999999

Total number of pulses in waveform = 38

Type 5 Radar Waveform_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	591461	3	17	75	1764	1444	1968	591461	0	923076
2	1175335	1	17	90	1063	0	0	1771972	923077	1846153
3	494836	1	17	80	1922	0	0	2267871	1846154	2769230
4	1075134	1	17	85	1670	0	0	3344927	2769231	3692307
5	1218943	2	17	95	1154	1925	0	4565540	3692308	4615384
6	933270	1	17	70	1982	0	0	5501889	4615385	5538461
7	815339	2	17	80	1346	1246	0	6319210	5538462	6461538
8	652218	1	17	95	1863	0	0	6974020	6461539	7384615
9	1018780	1	17	90	1164	0	0	7994663	7384616	8307692
10	876941	3	17	85	1038	1132	1304	8872768	8307693	9230769
11	391684	2	17	90	1011	1143	0	9267926	9230770	10153846
12	1220839	2	17	50	1182	1562	0	10490919	10153847	11076923
13	671100	2	17	70	1870	1473	0	11164763	11076924	12000000

Total number of pulses in waveform = 22



Type 5 Radar Waveform_11

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	489483	2	18	85	1057	1656	0	489483	0	999999
2	1246729	1	18	95	1624	0	0	1738925	1000000	1999999
3	1039789	3	18	95	1771	1556	1484	2780338	2000000	2999999
4	348088	3	18	85	1028	1917	1813	3133237	3000000	3999999
5	938184	1	18	95	1928	0	0	4076179	4000000	4999999
6	1489232	3	18	95	1987	1452	1727	5567339	5000000	5999999
7	1355926	3	18	100	1232	1068	1879	6928431	6000000	6999999
8	182457	1	18	75	1060	0	0	7115067	7000000	7999999
9	896494	2	18	85	1028	1309	0	8012621	8000000	8999999
10	1280419	3	18	70	1895	1021	1325	9295377	9000000	9999999
11	1668278	3	18	60	1620	1459	1985	10967896	10000000	10999999
12	77795	1	18	50	1158	0	0	11050755	11000000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_12

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	1026228	3	10	90	1777	1682	1990	1026228	0	1499999
2	852332	3	10	55	1755	1805	1511	1884009	1500000	2999999
3	1514546	1	10	60	1910	0	0	3403626	3000000	4499999
4	2403110	2	10	50	1071	1894	0	5808646	4500000	5999999
5	595260	1	10	50	1484	0	0	6406871	6000000	7499999
6	1404073	1	10	55	1897	0	0	7812428	7500000	8999999
7	2531817	1	10	95	1551	0	0	10346142	9000000	10499999
8	240485	2	10	100	1798	1721	0	10588178	10500000	11999999

Total number of pulses in waveform = 14

Type 5 Radar Waveform_13

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	847883	1	5	90	1520	0	0	847883	0	1333332
2	634690	1	5	100	1771	0	0	1484093	1333333	2666665
3	2007230	1	5	90	1214	0	0	3493094	2666666	3999998
4	663273	3	5	95	1785	1385	1695	4157581	3999999	5333331
5	1797393	3	5	55	1248	1195	1723	5959839	5333332	6666664
6	1497185	3	5	85	1239	1062	1912	7461190	6666665	7999997
7	1793419	1	5	95	1327	0	0	9258822	7999998	9333330
8	452496	2	5	100	1687	1287	0	9712645	9333331	10666663
9	2102457	1	5	60	1292	0	0	11818076	10666664	11999996

Total number of pulses in waveform = 16



Type 5 Radar Waveform_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	277521	3	17	75	1767	1557	1759	277521	0	749999
2	686043	1	17	85	1428	0	0	968647	750000	1499999
3	917980	1	17	100	1456	0	0	1888055	1500000	2249999
4	561185	2	17	70	1945	1529	0	2450696	2250000	2999999
5	558792	3	17	85	1422	1765	1434	3012962	3000000	3749999
6	871303	2	17	95	1438	1959	0	3888886	3750000	4499999
7	1197999	2	17	75	1277	1496	0	5090282	4500000	5249999
8	569332	3	17	100	1832	1791	1400	5662387	5250000	5999999
9	497132	3	17	50	1392	1984	1509	6164542	6000000	6749999
10	829645	2	17	70	1108	1366	0	6999072	6750000	7499999
11	1212961	1	17	65	1088	0	0	8214507	7500000	8249999
12	507840	2	17	60	1048	1416	0	8723435	8250000	8999999
13	879473	3	17	75	1461	1071	1862	9605372	9000000	9749999
14	447301	2	17	95	1555	1600	0	10057067	9750000	10499999
15	632939	1	17	55	1737	0	0	10693161	10500000	11249999
16	1203840	1	17	95	1521	0	0	11898738	11250000	11999999

Total number of pulses in waveform = 32

Type 5 Radar Waveform_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	521562	2	8	55	1361	1132	0	521562	0	799999
2	509508	3	8	55	1688	1789	1644	1033563	800000	1599999
3	1044482	2	8	75	1192	1048	0	2083166	1600000	2399999
4	485430	3	8	90	1387	1200	1320	2570836	2400000	3199999
5	1335306	3	8	65	1176	1140	1392	3910049	3200000	3999999
6	493015	2	8	85	1624	1626	0	4406772	4000000	4799999
7	419270	2	8	65	1242	1340	0	4829292	4800000	5599999
8	1252798	3	8	55	1312	1980	1941	6084672	5600000	6399999
9	1060431	2	8	85	1536	1863	0	7150336	6400000	7199999
10	249749	3	8	50	1629	1879	1891	7403484	7200000	7999999
11	1093382	3	8	55	1210	1565	1600	8502265	8000000	8799999
12	1055845	3	8	85	1220	1475	1357	9562485	8800000	9599999
13	593758	3	8	55	1837	1792	1477	10160295	9600000	10399999
14	948010	2	8	85	1970	1825	0	11113411	10400000	11199999
15	745574	2	8	100	1626	1163	0	11862780	11200000	11999999

Total number of pulses in waveform = 38

Type 5 Radar Waveform_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	872106	2	19	90	1699	1933	0	872106	0	999999
2	731552	1	19	85	1730	0	0	1607290	1000000	1999999
3	827019	3	19	70	1304	1831	1099	2436039	2000000	2999999
4	709782	3	19	95	1288	1317	1385	3150055	3000000	3999999
5	1616883	2	19	85	1422	1770	0	4770928	4000000	4999999
6	495773	3	19	65	1643	1711	1014	5269893	5000000	5999999
7	1496959	3	19	100	1984	1699	1084	6771220	6000000	6999999
8	802895	3	19	100	1074	1874	1530	7578882	7000000	7999999
9	947643	3	19	65	1801	1682	1712	8531003	8000000	8999999
10	1180470	2	19	80	1448	1011	0	9716668	9000000	9999999
11	931155	1	19	60	1852	0	0	10650282	10000000	10999999
12	1122452	1	19	65	1993	0	0	11774586	11000000	11999999

Total number of pulses in waveform = 27



Type 5 Radar Waveform_17

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	1180050	3	9	100	1939	1155	1627	1180050	0	1499999
2	936473	3	9	95	1503	1320	1367	2121244	1500000	2999999
3	1459050	2	9	55	1902	1396	0	3584484	3000000	4499999
4	943886	2	9	100	1852	1761	0	4531668	4500000	5999999
5	2322853	1	9	80	1102	0	0	6858134	6000000	7499999
6	1804490	1	9	85	1138	0	0	8663726	7500000	8999999
7	356244	2	9	55	1864	1412	0	9021108	9000000	10499999
8	1770336	2	9	55	1128	1547	0	10794720	10500000	11999999

Total number of pulses in waveform = 16

Type 5 Radar Waveform_18

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	187066	1	12	60	1448	0	0	187066	0	631578
2	955160	3	12	55	1898	1996	1892	1143674	631579	1263157
3	310799	2	12	95	1239	1673	0	1460259	1263158	1894736
4	976833	2	12	90	1855	1387	0	2440004	1894737	2526315
5	440576	2	12	90	1742	1167	0	2883822	2526316	3157894
6	733855	1	12	80	1462	0	0	3620586	3157895	3789473
7	414183	1	12	90	1395	0	0	4036231	3789474	4421052
8	823471	2	12	60	1672	1252	0	4861097	4421053	5052631
9	481394	3	12	100	1445	1623	1482	5345415	5052632	5684210
10	686839	2	12	75	1945	1647	0	6036704	5684211	6315789
11	473127	3	12	75	1256	1403	1093	6513423	6315790	6947368
12	530432	3	12	85	1438	1277	1276	7047607	6947369	7578947
13	620283	2	12	55	1324	1187	0	7671881	7578948	8210526
14	927445	3	12	70	1413	1813	1469	8601837	8210527	8842105
15	279946	3	12	60	1146	1792	1062	8886478	8842106	9473684
16	686507	1	12	65	1389	0	0	9576985	9473685	10105263
17	942738	3	12	50	1788	1300	1993	10521112	10105264	10736842
18	512730	1	12	95	1879	0	0	11038923	10736843	11368421
19	602989	2	12	70	1495	1956	0	11643791	11368422	12000000

Total number of pulses in waveform = 40

Type 5 Radar Waveform_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	614391	2	14	80	1861	1747	0	614391	0	857142
2	746031	1	14	60	1173	0	0	1364030	857143	1714285
3	1073086	3	14	70	1787	1008	1629	2438289	1714286	2571428
4	672655	1	14	70	1289	0	0	3115368	2571429	3428571
5	818324	1	14	55	1967	0	0	3934981	3428572	4285714
6	464985	1	14	90	1144	0	0	4401933	4285715	5142857
7	1388001	2	14	55	1974	1269	0	5791078	5142858	6000000
8	1048474	2	14	85	1543	1439	0	6842795	6000001	6857143
9	175397	2	14	50	1573	1589	0	7021174	6857144	7714286
10	1136568	3	14	80	1544	1610	1697	8160904	7714287	8571429
11	1089901	3	14	100	1885	1654	1177	9255656	8571430	9428572
12	683363	1	14	100	1688	0	0	9943735	9428573	10285715
13	450355	1	14	55	1725	0	0	10395778	10285716	11142858
14	1547982	2	14	70	1257	1083	0	11945485	11142859	12000001

Total number of pulses in waveform = 25



Type 5 Radar Waveform_20

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	485444	2	6	50	1873	1427	0	485444	0	923076
2	1338008	1	6	80	1893	0	0	1826752	923077	1846153
3	294653	3	6	90	1836	1446	1563	2123298	1846154	2769230
4	1325348	1	6	75	1862	0	0	3453491	2769231	3692307
5	326826	2	6	65	1332	1737	0	3782179	3692308	4615384
6	1461580	1	6	85	1145	0	0	5246828	4615385	5538461
7	964417	2	6	80	1974	1845	0	6212390	5538462	6461538
8	550916	1	6	85	1208	0	0	6767125	6461539	7384615
9	1021837	2	6	90	1493	1834	0	7790170	7384616	8307692
10	969623	1	6	65	1006	0	0	8763120	8307693	9230769
11	713058	1	6	55	1884	0	0	9477184	9230770	10153846
12	836317	3	6	80	1971	1658	1204	10315385	10153847	11076923
13	1550176	1	6	50	1140	0	0	11870394	11076924	12000000

Total number of pulses in waveform = 21

Type 5 Radar Waveform_21

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	496722	2	6	90	1331	1539	0	496722	0	749999
2	400908	2	6	85	1569	1990	0	900500	750000	1499999
3	801226	1	6	80	1372	0	0	1705285	1500000	2249999
4	1250343	2	6	70	1456	1711	0	2957000	2250000	2999999
5	222071	3	6	90	1544	1173	1263	3182238	3000000	3749999
6	1060755	3	6	55	1978	1656	1021	4246973	3750000	4499999
7	255598	3	6	90	1942	1863	1914	4507226	4500000	5249999
8	793176	3	6	90	1772	1114	1994	5306121	5250000	5999999
9	1056155	2	6	80	1108	1746	0	6367156	6000000	6749999
10	674840	2	6	100	1317	1929	0	7044850	6750000	7499999
11	1032446	3	6	70	1911	1774	1857	8080542	7500000	8249999
12	168946	3	6	60	1397	1366	1482	8255030	8250000	8999999
13	836549	1	6	100	1779	0	0	9095824	9000000	9749999
14	720665	1	6	95	1679	0	0	9818268	9750000	10499999
15	1254149	2	6	90	1707	1344	0	11074096	10500000	11249999
16	542083	3	6	55	1445	1412	1593	11619230	11250000	11999999

Total number of pulses in waveform = 36

Type 5 Radar Waveform_22

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	644980	3	14	70	1561	1543	1699	644980	0	749999
2	645870	2	14	50	1925	1628	0	1295653	750000	1499999
3	945098	2	14	50	1256	1898	0	2244304	1500000	2249999
4	515479	3	14	100	1001	1176	1497	2762937	2250000	2999999
5	530516	2	14	85	1875	1394	0	3297127	3000000	3749999
6	832402	1	14	65	1872	0	0	4132798	3750000	4499999
7	776413	1	14	80	1129	0	0	4911083	4500000	5249999
8	634000	3	14	100	1516	1083	1487	5546212	5250000	5999999
9	890895	3	14	100	1943	1415	1968	6441193	6000000	6749999
10	578825	1	14	95	1262	0	0	7025344	6750000	7499999
11	995247	3	14	60	1172	1395	1771	8021853	7500000	8249999
12	804215	1	14	75	1393	0	0	8830406	8250000	8999999
13	881575	1	14	100	1059	0	0	9713374	9000000	9749999
14	437460	1	14	95	1433	0	0	10151893	9750000	10499999
15	682684	3	14	85	1593	1281	1546	10836010	10500000	11249999
16	1104285	2	14	65	1599	1051	0	11944715	11250000	11999999

Total number of pulses in waveform = 32



Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	512828	3	5	90	1656	1580	1126	512828	0	1090908
2	1646151	2	5	90	1503	1801	0	2163341	1090909	2181817
3	1096564	3	5	75	1667	1101	1579	3263209	2181818	3272726
4	638933	2	5	65	1036	1808	0	3906489	3272727	4363635
5	483496	3	5	75	1222	1973	1298	4392829	4363636	5454544
6	2021697	2	5	85	1311	1793	0	6419019	5454545	6545453
7	758798	1	5	95	1878	0	0	7180921	6545454	7636362
8	1155927	3	5	55	1098	1061	1999	8338726	7636363	8727271
9	591726	2	5	70	1966	1532	0	8934610	8727272	9818180
10	1361615	3	5	65	1123	1196	1654	10299723	9818181	10909089
11	635710	1	5	60	1732	0	0	10939406	10909090	11999998

Total number of pulses in waveform = 25

Type 5 Radar Waveform_24

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	863692	1	12	50	1967	0	0	863692	0	1199999
2	1243031	3	12	80	1720	1644	1044	2108690	1200000	2399999
3	602458	2	12	90	1467	1871	0	2715556	2400000	3599999
4	1184455	2	12	100	1121	1204	0	3903349	3600000	4799999
5	982361	3	12	60	1983	1780	1923	4888035	4800000	5999999
6	1468327	1	12	95	1409	0	0	6362048	6000000	7199999
7	1763078	2	12	80	1510	1638	0	8126535	7200000	8399999
8	828842	3	12	65	1559	1071	1608	8958525	8400000	9599999
9	862523	2	12	80	1951	1731	0	9825286	9600000	10799999
10	1661013	3	12	100	1823	1212	1826	11489981	10800000	11999999

Total number of pulses in waveform = 22

Type 5 Radar Waveform_25

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	206640	2	18	65	1173	1328	0	206640	0	923076
2	1187460	2	18	90	1720	1355	0	1396601	923077	1846153
3	1230406	1	18	50	1807	0	0	2630082	1846154	2769230
4	690315	1	18	85	1278	0	0	3322204	2769231	3692307
5	782049	2	18	60	1852	1669	0	4105531	3692308	4615384
6	950287	3	18	95	1331	1413	1039	5059339	4615385	5538461
7	486047	2	18	80	1022	1517	0	5549169	5538462	6461538
8	1539927	1	8	85	1059	0	0	7091635	6461539	7384615
9	841918	2	18	70	1043	1774	0	7934612	7384616	8307692
10	539722	2	18	70	1160	1062	0	8477151	8307693	9230769
11	1200579	1	18	55	1864	0	0	9679952	9230770	10153846
12	529397	3	18	70	1912	1092	1310	10211213	10153847	11076923
13	1476243	2	18	80	1987	1764	0	11691770	11076924	12000000

Total number of pulses in waveform = 24



Type 5 Radar Waveform_26

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	169167	2	10	90	1370	1312	0	169167	0	705881
2	698446	2	10	75	1755	1549	0	870295	705882	1411763
3	1172629	2	10	100	1905	1024	0	2046228	1411764	2117645
4	308583	3	10	75	1618	1653	1589	2357740	2117646	2823527
5	6921103	1	10	75	1640	0	0	3054703	2823528	3529409
6	524945	2	10	75	1481	1903	0	3581288	3529410	4235291
7	1018321	3	10	60	1132	1691	1357	4602993	4235292	4941173
8	371091	3	10	55	1728	1336	1686	4978264	4941174	5647055
9	973044	3	10	75	1459	1382	1646	5956058	5647056	6352937
10	668350	1	10	60	1278	0	0	6628895	6352938	7058819
11	853509	1	10	75	1654	0	0	7483682	7058820	7764701
12	813340	1	10	70	1500	0	0	8298676	7764702	8470583
13	620044	3	10	90	1224	1040	1688	8920220	8470584	9176465
14	519639	2	10	80	1186	1575	0	9443811	9176466	9882347
15	571561	3	10	65	1852	1451	1510	10018133	9882348	10588229
16	905003	1	10	85	1329	0	0	10927949	10588230	11294111
17	911125	2	10	80	1550	1651	0	11840403	11294112	11999993

Total number of pulses in waveform = 35

Type 5 Radar Waveform_27

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	364546	2	17	95	1943	1850	0	364546	0	999999
2	983844	1	17	75	1638	0	0	1352183	1000000	1999999
3	918429	3	17	70	1069	1903	1717	2272250	2000000	2999999
4	1099413	3	17	60	1738	1988	1999	3376352	3000000	3999999
5	878668	3	17	65	1513	1492	1063	4260745	4000000	4999999
6	1398954	2	17	75	1675	1701	0	5663767	5000000	5999999
7	1142869	3	17	60	1483	1411	1998	6810012	6000000	6999999
8	836245	2	17	95	1166	1122	0	7651149	7000000	7999999
9	660865	1	17	70	1151	0	0	8314302	8000000	8999999
10	1200413	1	17	75	1313	0	0	9515866	9000000	9999999
11	830482	2	17	60	1483	1364	0	10347661	10000000	10999999
12	1341561	3	17	65	1532	1419	1954	11692069	11000000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_28

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1117582	1	8	65	1394	0	0	1117582	0	1333332
2	1497173	3	8	85	1463	1094	1771	2616149	1333333	2666665
3	1336170	3	8	90	1360	1053	1759	3956647	2666666	3999998
4	363367	1	8	50	1069	0	0	4324186	3999999	5333331
5	2104245	1	8	85	1626	0	0	6429500	5333332	6666664
6	255755	2	8	100	1866	1867	0	6686881	6666665	7999997
7	1397455	1	8	50	1974	0	0	8088069	7999998	9333330
8	1879008	1	8	50	1982	0	0	9969051	9333331	10666663
9	875491	2	8	100	1061	1387	0	10846524	10666664	11999996

Total number of pulses in waveform = 15



Type 5 Radar Waveform_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	901924	3	19	85	1076	1249	1260	901924	0	1090908
2	632910	3	19	60	1322	1040	1861	1538419	1090909	2181817
3	978435	3	19	90	1299	1910	1668	2521077	2181818	3272726
4	911154	2	19	60	1067	1020	0	3437108	3272727	4363635
5	1922057	1	19	55	1797	0	0	5361252	4363636	5454544
6	904998	2	19	80	1677	1433	0	6268047	5454545	6545453
7	1257498	1	19	65	1078	0	0	7528655	6545454	7636362
8	229522	1	19	50	1647	0	0	7759255	7636363	8727271
9	1912914	3	19	90	1671	1913	1924	9673816	8727272	9818180
10	576727	2	19	65	1846	1165	0	10256051	9818181	10909089
11	1184304	1	19	75	1735	0	0	11443366	10909090	11999998

Total number of pulses in waveform = 22

Type 5 Radar Waveform_30

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	776395	2	9	100	1002	1814	0	776395	0	857142
2	474811	3	9	90	1594	1432	1755	1254022	857143	1714285
3	946891	3	9	95	1346	1972	1312	2205694	1714286	2571428
4	474061	1	9	85	1540	0	0	2684385	2571429	3428571
5	778522	2	9	75	1022	1293	0	3464447	3428572	4285714
6	1509950	1	9	70	1810	0	0	4976712	4285715	5142857
7	743193	1	9	95	1744	0	0	5721715	5142858	6000000
8	1049978	1	9	55	1083	0	0	6773437	6000001	6857143
9	605000	3	9	85	1042	1931	1232	7379520	6857144	7714286
10	677784	1	9	95	1342	0	0	8061509	7714287	8571429
11	901573	1	9	55	1004	0	0	8964424	8571430	9428572
12	1006916	1	9	85	1412	0	0	9972344	9428573	10285715
13	533469	3	9	50	1442	1335	1079	10507225	10285716	11142858
14	653207	2	9	65	1855	1235	0	11164288	11142859	12000001

Total number of pulses in waveform = 25

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	5492.2	1	16	5506.8	1
2	5500.4	1	17	5495.6	1
3	5494.6	1	18	5508.2	1
4	5501.1	1	19	5497.1	1
5	5496.3	1	20	5504.9	1
6	5503.5	1	21	5492.1	1
7	5498.7	1	22	5502.8	1
8	5505.5	1	23	5499.6	1
9	5500.8	1	24	5500.5	1
10	5507.4	1	25	5493.7	1
11	5490.4	1	26	5507.2	1
12	5509.6	1	27	5503.4	1
13	5491.9	1	28	5496.6	1
14	5504.1	1	29	5500.8	1
15	5493.3	1	30	5490.9	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5503	0	0	5470	0
16	5521	48	6	5472	18
37	5469	111	8	5495	24
50	5482	150	9	5507	27
68	5464	204	11	5501	33
71	5474	213	13	5518	39
84	5481	252	19	5528	57
85	5490	255	21	5500	63
87	5476	261	30	5492	90
93	5522	279	34	5506	102
--	--	--	35	5479	105
--	--	--	36	5503	108
--	--	--	45	5521	135
--	--	--	48	5512	144
--	--	--	50	5488	150
--	--	--	52	5473	156
--	--	--	55	5522	165
--	--	--	61	5509	183
--	--	--	70	5523	210
--	--	--	75	5508	225
--	--	--	86	5480	258
--	--	--	88	5517	264



Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5513	15	2	5494	6
7	5506	21	4	5497	12
21	5505	63	15	5522	45
25	5470	75	29	5525	87
30	5499	90	43	5501	129
31	5489	93	60	5510	180
33	5512	99	72	5503	216
42	5507	126	76	5482	228
44	5466	132	77	5505	231
49	5523	147	95	5489	285
54	5497	162	--	--	--
85	5505	255	--	--	--
94	5482	282	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5526	0	2	5493	6
7	5469	21	3	5526	9
11	5493	33	36	5474	108
13	5517	39	40	5496	120
14	5470	42	43	5517	129
18	5501	54	48	5476	144
34	5506	102	57	5491	171
38	5497	114	58	5505	174
43	5521	129	59	5497	177
44	5481	132	68	5473	204
47	5485	141	70	5500	210
49	5520	147	79	5490	237
52	5504	156	87	5501	261
61	5490	183	94	5528	282
81	5492	243	--	--	--
86	5502	258	--	--	--
93	5475	279	--	--	--



Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5475	21	3	5513	9
8	5528	24	25	5489	75
52	5480	156	26	5534	78
68	5500	204	27	5481	81
69	5490	207	30	5531	90
71	5470	213	33	5523	99
85	5477	255	51	5511	153
86	5519	258	85	5506	255
--	--	--	91	5518	273

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5504	21	11	5507	33
10	5523	30	22	5502	66
16	5522	48	30	5534	90
17	5492	51	47	5510	141
19	5508	57	49	5523	147
23	5507	69	50	5478	150
31	5494	93	69	5489	207
33	5480	99	75	5529	225
51	5505	153	76	5526	228
65	5477	195	79	5520	237
82	5513	246	82	5505	246
90	5501	270	92	5490	276
92	5493	276	93	5519	279
93	5483	279	94	5528	282
98	5509	294	97	5504	291

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
8	5498	24	1	5479	3
13	5466	39	2	5508	6
14	5487	42	3	5519	9
27	5509	81	19	5510	57
32	5484	96	34	5520	102
38	5477	114	49	5522	147
39	5500	117	52	5492	156
45	5512	135	60	5503	180
64	5505	192	70	5537	210
92	5470	276	72	5485	216
93	5471	279	77	5487	231
96	5479	288	78	5507	234
99	5463	297	93	5505	279
--	--	--	98	5498	294

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5491	0	12	5497	36
5	5509	15	13	5539	39
13	5476	39	24	5520	72
25	5498	75	41	5518	123
26	5461	78	44	5526	132
31	5502	93	53	5506	159
32	5465	96	55	5491	165
34	5482	102	60	5504	180
48	5518	144	64	5510	192
72	5494	216	65	5538	195
81	5512	243	79	5521	237
87	5487	261	86	5493	258
88	5469	264	93	5499	279
93	5475	279	94	5482	282
98	5468	294	96	5500	288

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5480	6	3	5483	9
7	5470	21	4	5479	12
16	5509	48	17	5505	51
21	5474	63	36	5531	108
26	5518	78	42	5503	126
33	5484	99	56	5517	168
40	5502	120	60	5495	180
42	5466	126	66	5513	198
45	5501	135	69	5519	207
54	5477	162	71	5496	213
60	5497	180	74	5532	222
62	5492	186	82	5477	246
76	5476	228	91	5489	273
--	--	--	93	5484	279

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5522	69	2	5509	6
25	5508	75	7	5538	21
26	5498	78	13	5511	39
46	5486	138	18	5510	54
55	5521	165	20	5492	60
62	5524	186	22	5513	66
63	5499	189	26	5529	78
64	5479	192	41	5478	123
98	5483	294	44	5516	132
--	--	--	46	5522	138
--	--	--	47	5537	141
--	--	--	64	5531	192
--	--	--	92	5481	276
--	--	--	93	5530	279

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
30	5504	90	8	5487	24
35	5495	105	9	5485	27
37	5521	111	14	5491	42
43	5497	129	22	5513	66
53	5523	159	28	5527	84
57	5470	171	32	5482	96
61	5486	183	33	5476	99
66	5522	198	36	5500	108
72	5492	216	43	5498	129
78	5506	234	47	5509	141
83	5512	249	48	5512	144
85	5509	255	51	5483	153
88	5494	264	75	5522	225
91	5511	273	89	5486	267
93	5480	279	95	5530	285

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5477	3	11	5516	33
3	5474	9	13	5500	39
7	5464	21	53	5532	159
8	5484	24	54	5492	162
10	5510	30	56	5512	168
21	5497	63	69	5509	207
36	5482	108	78	5493	234
64	5494	192	80	5524	240
75	5471	225	93	5511	279
79	5520	237	--	--	--
98	5516	294	--	--	--



Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5490	3	21	5507	63
2	5525	6	23	5516	69
4	5506	12	28	5530	84
18	5508	54	35	5519	105
23	5504	69	39	5497	117
25	5469	75	40	5484	120
29	5505	87	51	5488	153
62	5491	186	62	5529	186
68	5520	204	64	5481	192
69	5499	207	70	5511	210
82	5510	246	80	5503	240
83	5473	249	83	5517	249
96	5471	288	85	5473	255
--	--	--	99	5489	297

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5498	24	2	5494	6
14	5503	42	11	5511	33
28	5506	84	14	5478	42
32	5509	96	24	5527	72
55	5504	165	33	5523	99
56	5483	168	35	5501	105
64	5486	192	38	5516	114
76	5476	228	47	5487	141
84	5485	252	53	5479	159
--	--	--	55	5493	165
--	--	--	57	5510	171
--	--	--	65	5483	195
--	--	--	67	5517	201
--	--	--	74	5480	222
--	--	--	84	5537	252
--	--	--	98	5497	294



Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5521	42	10	5480	30
19	5507	57	11	5490	33
36	5517	108	20	5517	60
46	5522	138	25	5516	75
60	5494	180	40	5504	120
61	5510	183	44	5525	132
70	5478	210	56	5466	168
73	5503	219	66	5486	198
74	5484	222	81	5487	243
82	5508	246	91	5500	273
83	5506	249	95	5474	285
96	5502	288	98	5493	294
99	5477	297	99	5483	297

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5501	9	3	5474	9
11	5510	33	11	5501	33
15	5511	45	22	5477	66
19	5500	57	43	5475	129
22	5520	66	44	5513	132
35	5499	105	56	5483	168
36	5471	108	60	5480	180
37	5505	111	70	5512	210
47	5528	141	80	5518	240
59	5516	177	81	5504	243
60	5523	180	83	5482	249
63	5475	189	92	5462	276
70	5517	210	99	5495	297
77	5503	231	--	--	--
83	5483	249	--	--	--
92	5489	276	--	--	--
96	5497	288	--	--	--



Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/15
Test Item	Radar Statistical Performance Check (802.11ax-HE40 mode – 5510MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5510.2	1.0	518	102	1
2	5491.0	1.0	638	83	1
3	5529.0	1.0	618	86	1
4	5525.4	1.0	778	68	1
5	5495.9	1.0	838	63	1
6	5517.6	1.0	558	95	1
7	5520.5	1.0	718	74	1
8	5498.3	1.0	878	61	1
9	5500.7	1.0	678	78	1
10	5522.9	1.0	598	89	1
11	5505.8	1.0	538	99	1
12	5499.3	1.0	738	72	1
13	5510.6	1.0	918	58	1
14	5505.5	1.0	658	81	1
15	5501.8	1.0	758	70	1
16	5493.2	1.0	1396	38	1
17	5496.7	1.0	2786	19	1
18	5527.3	1.0	723	73	1
19	5513.1	1.0	2609	21	1
20	5516.9	1.0	2311	23	1
21	5523.5	1.0	1869	29	1
22	5492.7	1.0	2998	18	1
23	5509.4	1.0	762	70	1
24	5512.2	1.0	527	101	1
25	5494.9	1.0	1759	31	1
26	5528.3	1.0	588	90	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5510.1	1.0	1688	32	1
28	5523.4	1.0	2381	23	1
29	5519.0	1.0	2632	21	1
30	5503.7	1.0	1115	48	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	5510.2	1.7	152	26	1
2	5491.0	1.9	187	29	1
3	5529.0	3.3	163	25	1
4	5525.4	1.2	166	29	1
5	5495.9	1.6	156	23	1
6	5517.6	2.4	220	24	1
7	5520.5	3.3	210	28	1
8	5498.3	1.4	194	24	1
9	5500.7	5.0	218	28	1
10	5522.9	3.2	175	25	1
11	5505.8	1.5	201	24	1
12	5499.3	2.5	186	24	1
13	5510.6	4.3	229	25	1
14	5505.5	4.0	185	28	1
15	5501.8	4.0	186	26	1
16	5493.2	1.7	194	29	1
17	5496.7	5.0	161	27	1
18	5527.3	3.2	187	23	1
19	5513.1	3.4	155	29	1
20	5516.9	4.6	195	24	1
21	5523.5	2.5	184	29	1
22	5492.7	4.1	199	23	1
23	5509.4	1.4	196	23	1
24	5512.2	3.5	155	26	1
25	5494.9	3.6	223	26	1
26	5528.3	4.6	172	26	1
27	5510.1	1.9	186	25	1
28	5523.4	2.2	151	25	1
29	5519.0	3.8	181	29	1
30	5503.7	4.2	170	25	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5510.2	9.2	479	16	1
2	5491.0	7.6	371	16	1
3	5529.0	9.1	375	18	1
4	5525.4	8.8	291	16	1
5	5495.9	6.4	317	17	1
6	5517.6	9.0	408	16	1
7	5520.5	8.2	350	16	1
8	5498.3	6.6	262	18	1
9	5500.7	7.5	303	18	1
10	5522.9	8.3	474	17	1
11	5505.8	6.6	394	17	1
12	5499.3	9.0	319	16	1
13	5510.6	9.8	457	18	1
14	5505.5	6.5	466	17	1
15	5501.8	10.0	421	16	1
16	5493.2	9.1	418	17	1
17	5496.7	9.1	371	18	1
18	5527.3	6.6	490	17	1
19	5513.1	9.4	296	18	1
20	5516.9	8.2	436	18	1
21	5523.5	8.7	344	17	1
22	5492.7	8.6	386	17	1
23	5509.4	9.9	253	18	1
24	5512.2	9.8	349	18	1
25	5494.9	10.0	305	16	1
26	5528.3	8.2	483	18	1
27	5510.1	8.1	260	16	1
28	5523.4	8.2	424	17	1
29	5519.0	9.0	468	16	1
30	5503.7	9.0	491	17	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5510.2	14.7	365	14	1
2	5491.0	12.5	492	16	0
3	5529.0	12.0	362	12	1
4	5525.4	17.1	329	14	1
5	5495.9	18.4	338	12	1
6	5517.6	11.8	355	15	1
7	5520.5	16.2	489	14	1
8	5498.3	19.3	409	13	1
9	5500.7	11.9	364	12	1
10	5522.9	15.0	401	15	1
11	5505.8	18.4	383	15	1
12	5499.3	17.1	424	16	1
13	5510.6	14.5	426	15	1
14	5505.5	11.6	342	12	1
15	5501.8	16.3	335	14	1
16	5493.2	17.5	409	15	1
17	5496.7	14.6	328	15	1
18	5527.3	16.5	494	14	1
19	5513.1	18.9	418	15	1
20	5516.9	11.0	350	13	1
21	5523.5	11.9	356	14	1
22	5492.7	17.1	328	15	1
23	5509.4	13.5	421	15	1
24	5512.2	17.6	349	14	1
25	5494.9	17.5	408	14	1
26	5528.3	18.4	498	12	1
27	5510.1	12.4	287	16	1
28	5523.4	19.6	309	12	1
29	5519.0	13.8	420	15	1
30	5503.7	15.5	393	12	1
Detection Percentage (%)					96.7%

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

waveforms is as follows: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (100\% + 100\% + 100\% + 96.7\%) / 4 = 99.2\% (>80\%)$



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	5496.0	1	16	5510.0	1
2	5494.4	0	17	5510.0	1
3	5498.4	0	18	5510.0	0
4	5498.8	1	19	5510.0	1
5	5493.2	1	20	5510.0	1
6	5494.8	1	21	5526.4	1
7	5496.8	1	22	5523.2	0
8	5495.2	1	23	5526.8	1
9	5493.6	1	24	5524.0	1
10	5498.0	1	25	5521.6	0
11	5510.0	1	26	5524.8	1
12	5510.0	1	27	5522.0	1
13	5510.0	1	28	5525.6	1
14	5510.0	1	29	5521.2	1
15	5510.0	1	30	5525.2	1
Detection Percentage (%)					83.3%

Type 5 Radar Waveform_1										
Num of Bursts = 16										
Burst Interval (us)= 750000										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	234449	3	12	65	1204	1723	1959	234449	0	749999
2	807748	3	12	65	2000	1943	1792	1047083	750000	1499999
3	674985	2	12	70	1255	1901	0	1727803	1500000	2249999
4	871899	1	12	65	1961	0	0	2602858	2250000	2999999
5	1105998	3	12	70	1484	1981	1830	3710817	3000000	3749999
6	676384	2	12	55	1790	1193	0	4392496	3750000	4499999
7	725133	2	12	50	1220	1783	0	5120612	4500000	5249999
8	726242	2	12	70	1446	1344	0	5849857	5250000	5999999
9	266920	2	12	60	1513	1080	0	6119567	6000000	6749999
10	1089660	2	12	100	1987	1188	0	7211820	6750000	7499999
11	930582	2	12	70	1586	1479	0	8145577	7500000	8249999
12	691086	2	12	80	1868	1797	0	8839728	8250000	8999999
13	334959	3	12	85	1339	1213	1422	9178352	9000000	9749999
14	872276	2	12	80	1208	1881	0	10054602	9750000	10499999
15	829770	3	12	50	1300	1976	1889	10887461	10500000	11249999
16	558299	3	12	95	1265	1964	1834	11450925	11250000	11999999
Total number of pulses in waveform = 37										



Type 5 Radar Waveform_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	97767	1	8	95	1927	0	0	97767	0	631578
2	1151308	2	8	75	1127	1937	0	1251002	631579	1263157
3	489558	2	8	85	1843	1129	0	1743624	1263158	1894736
4	256628	3	8	100	1441	1887	1215	2003224	1894737	2526315
5	570893	2	8	75	1846	1604	0	2578660	2526316	3157894
6	988509	1	8	90	1763	0	0	3570619	3157895	3789473
7	291449	2	8	90	1398	1489	0	3863831	3789474	4421052
8	929141	3	8	70	1804	1530	1597	4795859	4421053	5052631
9	547458	1	8	95	1902	0	0	5348248	5052632	5684210
10	518511	3	8	90	1465	1261	1008	5868661	5684211	6315789
11	459121	1	8	55	1523	0	0	6331516	6315790	6947368
12	1018360	3	8	60	1251	1432	1651	7351399	6947369	7578947
13	553020	3	8	75	1815	1090	1444	7908753	7578948	8210526
14	720783	3	8	75	1435	1358	1320	8633885	8210527	8842105
15	621039	2	8	95	1341	1659	0	9259037	8842106	9473684
16	264248	3	8	50	1888	1682	1673	9526285	9473685	10105263
17	662669	2	8	60	1010	1733	0	10194177	10105264	10736842
18	563449	2	8	90	1942	1915	0	10760369	10736843	11368421
19	698519	2	8	95	1200	1572	0	11462745	11368422	12000000

Total number of pulses in waveform = 41

Type 5 Radar Waveform_3

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	614799	1	18	55	1767	0	0	614799	0	999999
2	1154102	3	18	50	1847	1098	1298	1770668	1000000	1999999
3	526191	1	18	70	1795	0	0	2301102	2000000	2999999
4	1249934	2	18	95	1826	1212	0	3552831	3000000	3999999
5	489373	3	18	65	1601	1605	1597	4045242	4000000	4999999
6	1918158	1	18	60	1498	0	0	5968203	5000000	5999999
7	232436	2	18	70	1558	1860	0	6202137	6000000	6999999
8	1210206	3	18	90	1671	1037	1490	7415761	7000000	7999999
9	728635	3	18	90	1694	1401	1916	8148594	8000000	8999999
10	1237590	1	18	60	1227	0	0	9391195	9000000	9999999
11	1394065	1	18	100	1138	0	0	10786487	10000000	10999999
12	1027450	2	18	85	1182	1133	0	11815075	11000000	11999999

Total number of pulses in waveform = 23

Type 5 Radar Waveform_4

Num of Bursts = 14

Burst Interval (us)= 857143

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	524482	3	19	70	1796	1011	1840	524482	0	857142
2	344928	2	19	60	1642	1389	0	874057	857143	1714285
3	1011808	3	19	60	1208	1279	1954	1888896	1714286	2571428
4	947567	3	19	70	1101	1324	1462	2840904	2571429	3428571
5	1399679	3	19	90	1801	1229	1799	4244470	3428572	4285714
6	432545	2	19	50	1104	1716	0	4681844	4285715	5142857
7	855993	2	19	100	1573	1157	0	5540657	5142858	6000000
8	948664	1	19	85	1276	0	0	6492051	6000001	6857143
9	1190796	2	19	50	1809	1439	0	7684123	6857144	7714286
10	573638	2	19	55	1429	1459	0	8261009	7714287	8571429
11	1032326	1	19	50	1521	0	0	9296223	8571430	9428572
12	164918	3	19	65	1188	1770	1005	9462662	9428573	10285715
13	1026356	2	19	75	1311	1557	0	10492981	10285716	11142858
14	772841	2	19	50	1609	1187	0	11268690	11142859	12000001

Total number of pulses in waveform = 31



Type 5 Radar Waveform_5

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	529547	3	5	50	1972	1396	1579	529547	0	631578
2	683990	1	5	75	1304	0	0	1218484	631579	1263157
3	259986	3	5	85	1615	1339	1873	1479774	1263158	1894736
4	985416	1	5	80	1984	0	0	2470017	1894737	2526315
5	269744	2	5	90	1215	1652	0	2741745	2526316	3157894
6	871476	2	5	80	1362	1346	0	3616088	3157895	3789473
7	699078	1	5	60	1000	0	0	4317874	3789474	4421052
8	705554	3	5	85	1074	1423	1175	5024428	4421053	5052631
9	431794	1	5	60	1115	0	0	5459894	5052632	5684210
10	471580	3	5	100	1620	1338	1521	5932589	5684211	6315789
11	1141908	1	5	90	1924	0	0	6426264	6315790	6947368
12	353264	1	5	100	1057	0	0	7570096	6947369	7578947
13	853715	2	5	60	1467	1636	0	7924417	7578948	8210526
14	105881	1	5	65	1417	0	0	8781235	8210527	8842105
15	1003319	1	5	50	1864	0	0	8888533	8842106	9473684
16	450182	2	5	100	1022	1282	0	9893716	9473685	10105263
17	785639	3	5	65	1259	1905	1684	10346202	10105264	10736842
18	552318	2	5	60	1585	1016	0	11136843	10736843	11368421
19	552318	3	5	75	1332	1668	1382	11691608	11368422	12000000

Total number of pulses in waveform = 36

Type 5 Radar Waveform_6

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	52582	1	9	80	1356	0	0	52582	0	749999
2	753527	1	9	80	1763	0	0	807465	750000	1499999
3	1366388	3	9	90	1398	1438	1609	2175616	1500000	2249999
4	242943	2	9	70	1587	1894	0	2423004	2250000	2999999
5	889883	3	9	65	1887	1737	1857	3316368	3000000	3749999
6	559289	1	9	95	1941	0	0	3881138	3750000	4499999
7	625185	2	9	70	1263	1771	0	4508264	4500000	5249999
8	874722	3	9	80	1666	1470	1568	5386020	5250000	5999999
9	855205	1	9	95	1790	0	0	6245929	6000000	6749999
10	677231	2	9	70	1365	1768	0	6924950	6750000	7499999
11	727648	1	9	50	1168	0	0	7655731	7500000	8249999
12	1058342	3	9	65	1215	1530	1582	8715241	8250000	8999999
13	679138	2	9	90	1414	1332	0	9398706	9000000	9749999
14	937564	1	9	70	1012	0	0	10339016	9750000	10499999
15	840849	3	9	65	1746	1242	1151	11180877	10500000	11249999
16	296758	1	9	95	1318	0	0	11481774	11250000	11999999

Total number of pulses in waveform = 30

Type 5 Radar Waveform_7

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	584518	2	14	60	1381	1366	0	584518	0	666666
2	597893	3	14	60	1917	1343	1575	1185158	666667	1333333
3	656502	1	14	65	1539	0	0	1846495	1333334	2000000
4	557076	3	14	65	1725	1822	1177	2405110	2000001	2666667
5	547018	2	14	100	1372	1359	0	2956852	2666668	3333334
6	610272	1	14	95	1990	0	0	3569855	3333335	4000001
7	741175	3	14	85	1988	1148	1981	4313020	4000002	4666668
8	453132	1	14	75	1060	0	0	4771269	4666669	5333335
9	680546	1	14	70	1060	0	0	5452875	5333336	6000002
10	1003366	3	14	85	1694	1759	1894	6457301	6000003	6666669
11	438334	1	14	85	1837	0	0	6900982	6666670	7333336
12	872426	2	14	85	1381	1057	0	7775245	7333337	8000003
13	805762	1	14	70	1681	0	0	8583445	8000004	8666670
14	605721	3	14	65	1397	1544	1417	9190847	8666671	9333337
15	716332	3	14	100	1765	1601	1578	9911537	9333338	10000004
16	149255	1	14	95	1040	0	0	10065736	10000005	10666671
17	947818	1	14	90	1664	0	0	11014594	10666672	11333338
18	480653	3	14	85	1558	1925	1187	11496911	11333339	12000005

Total number of pulses in waveform = 35



Type 5 Radar Waveform_8

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	507455	2	10	50	1544	1508	0	507455	0	631578
2	134545	1	10	50	1119	0	0	645052	631579	1263157
3	1136727	3	10	55	1337	1296	1001	1782898	1263158	1894736
4	541959	2	10	70	1502	1946	0	2328491	1894737	2526315
5	418275	2	10	50	1385	1739	0	2750214	2526316	3157894
6	545935	2	10	90	1257	1848	0	3299273	3157895	3789473
7	709412	1	10	80	1245	0	0	4011790	3789474	4421052
8	940645	3	10	95	1229	1269	1519	4953680	4421053	5052631
9	660435	1	10	90	1172	0	0	5618132	5052632	5684210
10	468593	3	10	70	1789	1614	1159	6087897	5684211	6315789
11	311751	1	10	85	1555	0	0	6404210	6315790	6947368
12	662710	3	10	85	1480	1428	1806	7068475	6947369	7578947
13	665021	3	10	100	1361	1114	1319	7738210	7578948	8210526
14	716657	3	10	50	1997	1565	1712	8458661	8210527	8842105
15	545102	3	10	100	1677	1702	1831	9009037	8842106	9473684
16	512593	1	10	80	1248	0	0	9526840	9473685	10105263
17	719379	3	10	85	1341	1140	1972	10247467	10105264	10736842
18	1033150	3	10	55	1481	1173	1824	11285070	10736843	11368421
19	640899	1	10	95	1253	0	0	11930447	11368422	12000000

Total number of pulses in waveform = 41

Type 5 Radar Waveform_9

Num of Bursts = 9

Burst Interval (us)= 1333333

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	443525	3	6	95	1166	1863	1202	443525	0	1333332
2	950847	1	6	65	1914	0	0	1398603	1333333	2666665
3	1382044	3	6	75	1613	1100	1513	2782561	2666666	3999998
4	2141309	2	6	55	1852	1930	0	4928096	3999999	5333331
5	1344059	2	6	100	1586	1973	0	6275937	5333332	6666664
6	1133834	2	6	95	1626	1416	0	7413330	6666665	7999997
7	1646886	3	6	55	1342	1202	1273	9063258	7999998	9333330
8	1084117	3	6	50	1366	1132	1543	10151192	9333331	10666663
9	984120	1	6	85	1226	0	0	11139353	10666664	11999996

Total number of pulses in waveform = 20

Type 5 Radar Waveform_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	139303	3	17	80	1868	1930	1245	139303	0	599999
2	795081	1	17	65	1129	0	0	939427	600000	1199999
3	569580	2	17	85	1444	1310	0	1510136	1200000	1799999
4	566092	3	17	50	1041	1372	1145	2078982	1800000	2399999
5	404004	3	17	50	1141	1025	1147	2486544	2400000	2999999
6	1008662	3	17	60	1210	1192	1584	3498519	3000000	3599999
7	434969	2	17	95	1515	1957	0	3937474	3600000	4199999
8	377891	1	17	95	1782	0	0	4318837	4200000	4799999
9	489151	2	17	100	1079	1004	0	4809770	4800000	5399999
10	814500	2	17	95	1276	1878	0	5626353	5400000	5999999
11	605323	2	17	85	1687	1322	0	6234830	6000000	6599999
12	931130	1	17	75	1864	0	0	7168969	6600000	7199999
13	289546	2	17	55	1550	1363	0	7460379	7200000	7799999
14	921450	2	17	85	1997	1083	0	8384742	7800000	8399999
15	59346	1	17	70	1385	0	0	8447168	8400000	8999999
16	1114810	2	17	65	1912	1351	0	9563363	9000000	9599999
17	93289	2	17	70	1823	1688	0	9659915	9600000	10199999
18	687660	1	17	50	1989	0	0	10351086	10200000	10799999
19	697032	2	17	55	1891	1960	0	11050107	10800000	11399999
20	631068	1	17	70	1907	0	0	11685026	11400000	11999999

Total number of pulses in waveform = 38



Type 5 Radar Waveform_11

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	395647	1	18	90	1655	0	0	395647	0	599999
2	642678	2	18	60	1112	1886	0	1039980	600000	1199999
3	348308	2	18	60	1813	1052	0	1391286	1200000	1799999
4	979140	3	18	55	1194	1995	1098	2373291	1800000	2399999
5	520035	3	18	65	1363	1895	1238	2897613	2400000	2999999
6	192839	3	18	80	1373	1066	1437	3094948	3000000	3599999
7	996856	3	18	55	1526	1936	1407	4095680	3600000	4199999
8	552213	1	18	50	1128	0	0	4652762	4200000	4799999
9	561770	3	18	55	1655	1331	1628	5215660	4800000	5399999
10	554307	3	18	65	1126	1953	1467	5774581	5400000	5999999
11	589594	3	18	90	1486	1438	1375	6368721	6000000	6599999
12	486752	2	18	75	1264	1313	0	6859772	6600000	7199999
13	501461	2	18	85	1298	1935	0	7363810	7200000	7799999
14	522388	1	18	75	1361	0	0	7889431	7800000	8399999
15	909565	1	18	75	1654	0	0	8800357	8400000	8999999
16	685626	3	18	90	1858	1320	1926	9487637	9000000	9599999
17	556112	3	18	70	1389	1758	1583	10048853	9600000	10199999
18	700289	3	18	50	1998	1391	1613	10753872	10200000	10799999
19	597681	2	18	75	1584	1720	0	11356555	10800000	11399999
20	327928	2	18	75	1174	1805	0	11687787	11400000	11999999

Total number of pulses in waveform = 46

Type 5 Radar Waveform_12

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	162324	2	10	90	1331	1390	0	162324	0	1333332
2	1908703	2	10	75	1169	1539	0	2073748	1333333	2666665
3	1373680	3	10	75	1260	1531	1669	3450136	2666666	3999998
4	1208569	1	10	70	1881	0	0	4663165	3999999	5333331
5	902888	3	10	70	1563	1975	1029	5567934	5333332	6666664
6	1448988	1	10	85	1218	0	0	7021489	6666665	7999997
7	1667430	3	10	95	1339	1610	1979	8690137	7999998	9333330
8	1425067	2	10	75	1118	1099	0	10120132	9333331	10666663
9	1579904	3	10	85	1426	1982	1910	11702253	10666664	11999996

Total number of pulses in waveform = 20

Type 5 Radar Waveform_13

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

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

Total number of pulses in waveform = 22



Type 5 Radar Waveform_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	315951	1	17	90	1957	0	0	315951	0	923076
2	747185	3	17	70	1864	1488	1369	1065093	923077	1846153
3	1026403	2	17	70	1150	1251	0	2096217	1846154	2769230
4	844455	3	17	85	1765	1240	1182	2943073	2769231	3692307
5	1221498	3	17	85	1577	1343	1067	4168758	3692308	4615384
6	1210634	1	17	100	1588	0	0	5383379	4615385	5538461
7	914348	1	17	50	1252	0	0	6299315	5538462	6461538
8	1044872	3	17	85	1814	1449	1990	7345439	6461539	7384615
9	830615	2	17	50	1382	1085	0	8181307	7384616	8307692
10	925197	2	17	65	1357	1434	0	9108971	8307693	9230769
11	773057	3	17	60	1424	1444	1091	9884819	9230770	10153846
12	476023	1	17	80	1512	0	0	10364801	10153847	11076923
13	1115149	2	17	55	1603	1909	0	11481462	11076924	12000000

Total number of pulses in waveform = 27

Type 5 Radar Waveform_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	410652	2	8	75	1349	1141	0	410652	0	799999
2	879420	1	8	60	1656	0	0	1292562	800000	1599999
3	907538	1	8	95	1765	0	0	2201756	1600000	2399999
4	806406	1	8	95	1104	0	0	3009927	2400000	3199999
5	450331	3	8	95	1229	1971	1803	3461362	3200000	3999999
6	1121912	1	8	95	1792	0	0	4588277	4000000	4799999
7	797892	3	8	60	1898	1233	1965	5387961	4800000	5599999
8	332333	3	8	80	1273	1019	1436	5725390	5600000	6399999
9	1317707	1	8	75	1205	0	0	7046825	6400000	7199999
10	362589	1	8	55	1977	0	0	7410619	7200000	7999999
11	798739	2	8	70	1999	1615	0	8211335	8000000	8799999
12	823978	1	8	65	1089	0	0	9038927	8800000	9599999
13	810910	1	8	70	1490	0	0	9850926	9600000	10399999
14	702489	2	8	55	1500	1541	0	10554905	10400000	11199999
15	899203	1	8	95	1733	0	0	11457149	11200000	11999999

Total number of pulses in waveform = 24

Type 5 Radar Waveform_16

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	147779	2	19	60	1438	1172	0	147779	0	705881
2	637860	2	19	60	1480	1105	0	788249	705882	1411763
3	774766	1	19	90	1259	0	0	1565600	1411764	2117645
4	1098562	1	19	80	1141	0	0	2665421	2117646	2823527
5	319749	2	19	75	1875	1827	0	2986311	2823528	3529409
6	1033433	3	19	55	1727	1185	1293	4023446	3529410	4235291
7	884806	3	19	80	1412	1085	1285	4912457	4235292	4941173
8	662002	1	19	100	1587	0	0	5578241	4941174	5647055
9	517214	2	19	55	1332	1437	0	6097042	5647056	6352937
10	721718	2	19	65	1321	1346	0	6821529	6352938	7058819
11	247373	3	19	100	1800	1590	1269	7071569	7058820	7764701
12	890660	2	19	95	1309	1457	0	7966888	7764702	8470583
13	1164551	2	19	70	1576	1261	0	9134205	8470584	9176465
14	548230	3	19	75	1442	1074	1144	9685272	9176466	9882347
15	426927	2	19	75	1617	1625	0	10115859	9882348	10588229
16	687987	2	19	65	1377	1884	0	10807088	10588230	11294111
17	953414	1	19	95	1614	0	0	11763763	11294112	11999993

Total number of pulses in waveform = 34



Type 5 Radar Waveform_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	776471	3	9	95	1347	1713	1602	776471	0	857142
2	446492	1	9	85	1177	0	0	1227625	857143	1714285
3	650391	2	9	85	1785	1082	0	1879193	1714286	2571428
4	1474631	3	9	90	1796	1414	1487	3356691	2571429	3428571
5	443263	2	9	65	1461	1809	0	3804651	3428572	4285714
6	1035786	3	9	70	1010	1481	1337	4843707	4285715	5142857
7	858135	3	9	85	1162	1161	1951	5705670	5142858	6000000
8	353123	3	9	60	1275	1759	1662	6063067	6000001	6857143
9	1622448	3	9	80	1885	1909	1840	7690211	6857144	7714286
10	207685	3	9	60	1717	1637	1801	7903530	7714287	8571429
11	1062460	1	9	55	1319	0	0	8971145	8571430	9428572
12	1023054	2	9	70	1309	1229	0	9995518	9428573	10285715
13	411048	2	9	65	1034	1873	0	10409104	10285716	11142858
14	1272621	1	9	60	1074	0	0	11684632	11142859	12000001

Total number of pulses in waveform = 32

Type 5 Radar Waveform_18

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	576010	1	12	80	1297	0	0	576010	0	631578
2	329763	3	12	95	1639	1263	1241	907070	631579	1263157
3	708727	2	12	90	1074	1066	0	1619940	1263158	1894736
4	288112	1	12	85	1672	0	0	1910192	1894737	2526315
5	1206398	3	12	95	1195	1711	1173	3118262	2526316	3157894
6	90720	2	12	75	1821	1714	0	3213061	3157895	3789473
7	687849	3	12	90	1614	1453	1885	3904445	3789474	4421052
8	1119967	1	12	65	1469	0	0	5029364	4421053	5052631
9	446929	2	12	55	1997	1705	0	5477762	5052632	5684210
10	411033	3	12	100	1041	1460	1119	5892497	5684211	6315789
11	949681	1	12	100	1986	0	0	6845798	6315790	6947368
12	522739	1	12	75	1020	0	0	7370523	6947369	7578947
13	439279	3	12	55	1530	1984	1527	7810822	7578948	8210526
14	577534	3	12	75	1274	1939	1659	8393397	8210527	8842105
15	574261	1	12	65	1909	0	0	8972530	8842106	9473684
16	659796	1	12	90	1116	0	0	9634235	9473685	10105263
17	1087904	3	12	95	1876	1889	1483	10723255	10105264	10736842
18	203955	1	12	75	1630	0	0	10932458	10736843	11368421
19	443948	3	12	70	1463	1706	1043	11378036	11368422	12000000

Total number of pulses in waveform = 38

Type 5 Radar Waveform_19

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	435652	2	14	60	1388	1966	0	435652	0	666666
2	282786	2	14	85	1759	1317	0	721792	666667	1333333
3	701253	1	14	75	1829	0	0	1426121	1333334	2000000
4	1113546	2	14	60	1265	1155	0	2541496	2000001	2666667
5	307591	1	14	60	1694	0	0	2851507	2666668	3333334
6	1061666	2	14	100	1979	1668	0	3914867	3333335	4000001
7	294713	2	14	90	1021	1843	0	4213227	4000002	4666668
8	883190	3	14	85	1106	1443	1832	5099281	4666669	5333335
9	550608	2	14	65	1016	1730	0	5654270	5333336	6000002
10	523307	2	14	90	1249	1478	0	6180323	6000003	6666669
11	652040	3	14	100	1194	1504	1984	6835090	6666670	7333336
12	1142209	2	14	75	1999	1601	0	7981981	7333337	8000003
13	174616	2	14	75	1177	1841	1803	8160197	8000004	8666670
14	690182	3	14	85	1344	1771	0	8855200	8666671	9333337
15	774227	1	14	65	1428	0	0	9632542	9333338	10000004
16	573729	3	14	60	1789	1755	1442	10207699	10000005	10666671
17	904047	3	14	75	1499	1369	1427	11116732	10666672	11333338
18	711876	1	14	95	1828	0	0	11832903	11333339	12000005

Total number of pulses in waveform = 37



Type 5 Radar Waveform_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	732086	2	6	75	1915	1204	0	732086	0	1090908
2	1103702	3	6	80	1074	1713	1556	1838907	1090909	2181817
3	1057816	2	6	95	1248	1404	0	2901066	2181818	3272726
4	1394015	2	6	50	1953	1779	0	4297733	3272727	4363635
5	1002233	3	6	85	1597	1678	1631	5303698	4363636	5454544
6	341605	3	6	95	1106	1357	1028	5650209	5454545	6545453
7	1873426	3	6	90	1768	1128	1761	7527126	6545454	7636362
8	697972	3	6	70	1648	1580	1696	8229755	7636363	8727271
9	1452905	2	6	60	1764	1843	0	9687584	8727272	9818180
10	655835	2	6	70	1773	1709	0	10347026	9818181	10909089
11	1421087	2	6	55	1357	1093	0	11771595	10909090	11999998

Total number of pulses in waveform = 27

Type 5 Radar Waveform_21

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	190610	3	6	60	1673	1499	1452	190610	0	799999
2	1355865	1	6	85	1102	0	0	1551099	800000	1599999
3	121048	3	6	55	1163	1986	1872	1673249	1600000	2399999
4	724743	3	6	60	1645	1067	1858	2403013	2400000	3199999
5	1296336	3	6	50	1814	1848	1717	3703919	3200000	3999999
6	294192	3	6	70	1889	1521	1322	4003490	4000000	4799999
7	914242	1	6	55	1192	0	0	4922464	4800000	5599999
8	883214	2	6	65	1641	1360	0	5806870	5600000	6399999
9	886776	2	6	60	1871	1144	0	6696647	6400000	7199999
10	929541	1	6	100	1840	0	0	7629203	7200000	7999999
11	694903	1	6	50	1948	0	0	8325946	8000000	8799999
12	623703	2	6	70	1135	1944	0	8951597	8800000	9599999
13	1075115	1	6	70	1025	0	0	10029791	9600000	10399999
14	377676	2	6	100	1999	1231	0	10408492	10400000	11199999
15	1395396	3	6	60	1109	1470	1950	11807118	11200000	11999999

Total number of pulses in waveform = 31

Type 5 Radar Waveform_22

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	522087	3	14	60	1327	1328	1533	522087	0	1090908
2	833419	2	14	80	1556	1960	0	1359694	1090909	2181817
3	1505278	3	14	70	1244	1143	1315	2868488	2181818	3272726
4	762437	3	14	85	1180	1142	1211	3634627	3272727	4363635
5	941298	2	14	65	1159	1103	0	4579458	4363636	5454544
6	1073797	1	14	55	1207	0	0	5655517	5454545	6545453
7	1636563	2	14	100	1606	1697	0	7293287	6545454	7636362
8	1194761	2	14	55	1105	1576	0	8491351	7636363	8727271
9	979833	2	14	55	1172	1472	0	9473865	8727272	9818180
10	849191	2	14	70	1448	1575	0	10325700	9818181	10909089
11	715994	1	14	70	1328	0	0	11044717	10909090	11999998

Total number of pulses in waveform = 23



Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	687205	2	5	70	1359	1454	0	687205	0	749999
2	545300	3	5	90	1214	1052	1011	1235318	750000	1499999
3	441968	2	5	100	1549	1815	0	1680563	1500000	2249999
4	913154	3	5	50	1995	1789	1261	2597081	2250000	2999999
5	801098	2	5	55	1593	1939	0	3403224	3000000	3749999
6	370891	3	5	100	1174	1207	1069	3777647	3750000	4499999
7	1425600	1	5	80	1602	0	0	5206697	4500000	5249999
8	52312	1	5	75	1472	0	0	5260611	5250000	5999999
9	787066	1	5	50	1683	0	0	6049149	6000000	6749999
10	1314702	3	5	80	1298	1854	1447	7365534	6750000	7499999
11	740562	2	5	50	1413	1755	0	8110695	7500000	8249999
12	836222	1	5	65	1418	0	0	8950085	8250000	8999999
13	449252	2	5	85	1542	1828	0	9400755	9000000	9749999
14	353083	1	5	65	1555	0	0	9757208	9750000	10499999
15	1262561	3	5	60	1389	1452	1727	11021324	10500000	11249999
16	434447	3	5	95	1268	1089	1560	11460339	11250000	11999999

Total number of pulses in waveform = 33

Type 5 Radar Waveform_24

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	132731	2	12	95	1322	1401	0	132731	0	666666
2	925087	2	12	55	1433	1564	0	1060541	666667	1333333
3	498815	3	12	65	1053	1584	1265	1562353	1333334	2000000
4	1066680	3	12	55	1973	1486	1404	2632935	2000001	2666667
5	545108	1	12	55	1665	0	0	3182906	2666668	3333334
6	465241	2	12	100	1682	1868	0	3649812	3333335	4000001
7	650620	3	12	60	1312	1773	1245	4303982	4000002	4666668
8	806270	2	12	65	1415	1808	0	5114582	4666669	5333335
9	561902	3	12	80	1312	1014	1736	5679707	5333336	6000002
10	593031	3	12	90	1302	1949	1529	6276800	6000003	6666669
11	494144	1	12	60	1626	0	0	6775724	6666670	7333336
12	1019910	3	12	85	1914	1987	1550	7797260	7333337	8000003
13	610999	1	12	100	1329	0	0	8413710	8000004	8666670
14	545288	2	12	100	1934	1099	0	8960327	8666671	9333337
15	814966	1	12	65	1994	0	0	9778326	9333338	10000004
16	841291	2	12	90	1230	1542	0	10621611	10000005	10666671
17	45268	3	12	100	1760	1952	1082	10669651	10666672	11333338
18	958408	3	12	75	1603	1090	1978	11632853	11333339	12000005

Total number of pulses in waveform = 40

Type 5 Radar Waveform_25

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	242006	2	18	100	1069	1572	0	242006	0	631578
2	933112	1	18	90	1072	0	0	1177759	631579	1263157
3	205298	2	18	60	1970	1724	0	1384129	1263158	1894736
4	1048178	2	18	55	1294	1520	0	2436001	1894737	2526315
5	471169	1	18	90	1479	0	0	2909984	2526316	3157894
6	618968	1	18	80	1427	0	0	3530431	3157895	3789473
7	642814	3	18	55	1422	1501	1825	4174672	3789474	4421052
8	571738	2	18	75	1224	1566	0	4751158	4421053	5052631
9	615594	3	18	55	1822	1576	1970	5369542	5052632	5684210
10	781310	3	18	95	1346	1743	1314	6156220	5684211	6315789
11	384498	2	18	50	1793	1449	0	6545121	6315790	6947368
12	807309	1	18	65	1644	0	0	7355672	6947369	7578947
13	384970	2	18	80	1827	1885	0	7742286	7578948	8210526
14	1001906	2	18	60	1635	1469	0	8747904	8210527	8842105
15	422389	2	18	60	1172	1779	0	9173397	8842106	9473684
16	442835	2	18	80	1535	1681	0	9619183	9473685	10105263
17	506444	1	18	70	1837	0	0	10128843	10105264	10736842
18	692635	3	18	65	1930	1489	1390	10823315	10736843	11368421
19	1008657	3	18	85	1751	1797	1712	11836781	11368422	12000000

Total number of pulses in waveform = 38



Type 5 Radar Waveform_26

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	759362	1	10	100	1757	0	0	759362	0	799999
2	201383	2	10	90	1720	1356	0	962502	800000	1599999
3	993745	1	10	50	1504	0	0	1959323	1600000	2399999
4	631621	2	10	90	1938	1742	0	2592448	2400000	3199999
5	875444	2	10	85	1672	1019	0	3471572	3200000	3999999
6	622170	1	10	85	1564	0	0	4096433	4000000	4799999
7	1099298	1	10	85	1928	0	0	5197295	4800000	5599999
8	721569	1	10	95	1987	0	0	5920792	5600000	6399999
9	900968	1	10	80	1024	0	0	6823747	6400000	7199999
10	759460	1	10	75	1642	0	0	7584231	7200000	7999999
11	746864	2	10	65	1082	1944	0	8332737	8000000	8799999
12	764962	2	10	60	1895	1211	0	9100725	8800000	9599999
13	708886	3	10	90	1626	1468	1129	9812717	9600000	10399999
14	1157365	2	10	70	1262	1424	0	10974305	10400000	11199999
15	886822	3	10	50	1142	1083	1226	11863813	11200000	11999999

Total number of pulses in waveform = 25

Type 5 Radar Waveform_27

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	647296	3	17	85	1371	1081	1862	647296	0	666666
2	78358	3	17	80	1684	1537	1877	729968	666667	1333333
3	763434	3	17	75	1260	1476	1871	1498500	1333334	2000000
4	560065	2	17	65	1105	1682	0	2063172	2000001	2666667
5	1244489	3	17	55	1808	1108	1582	3310448	2666668	3333334
6	29750	2	17	100	1308	1421	0	3344696	3333335	4000001
7	823528	1	17	70	1062	0	0	4170953	4000002	4666668
8	790434	1	17	95	1754	0	0	4962449	4666669	5333335
9	787377	1	17	50	1109	0	0	5751580	5333336	6000002
10	890664	2	17	50	1939	1140	0	6643353	6000003	6666669
11	370116	1	17	100	1077	0	0	7016548	6666670	7333336
12	867857	3	17	85	1426	1101	1876	7885482	7333337	8000003
13	409601	1	17	65	1598	0	0	8299486	8000004	8666670
14	414332	1	17	95	1312	0	0	8715416	8666671	9333337
15	1113382	3	17	55	1110	1142	1151	9830110	9333338	10000004
16	748450	1	17	80	1637	0	0	10581963	10000005	10666671
17	411611	3	17	55	1022	1560	1192	10995211	10666672	11333338
18	989060	1	17	80	1137	0	0	11988045	11333339	12000005

Total number of pulses in waveform = 35

Type 5 Radar Waveform_28

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	137106	2	8	90	1315	1374	0	137106	0	799999
2	676329	3	8	60	1469	1607	1764	816124	800000	1599999
3	1485158	3	8	70	1548	1252	1496	2306122	1600000	2399999
4	323335	3	8	85	1235	1637	1570	2633753	2400000	3199999
5	860683	3	8	55	1064	1622	1004	3498878	3200000	3999999
6	741646	2	8	75	1371	1456	0	4244214	4000000	4799999
7	1063317	3	8	75	1885	1026	1635	5310358	4800000	5599999
8	971976	1	8	60	1735	0	0	6286830	5600000	6399999
9	430834	3	8	75	1435	1500	1590	6719449	6400000	7199999
10	612883	3	8	90	1582	1728	1714	7336857	7200000	7999999
11	670001	2	8	55	1233	1377	0	8011882	8000000	8799999
12	805155	2	8	60	1785	1945	0	8819647	8800000	9599999
13	1468772	1	8	80	1948	0	0	10292149	9600000	10399999
14	459352	2	8	75	1803	1691	0	10753449	10400000	11199999
15	795886	2	8	85	1348	1352	0	11552829	11200000	11999999

Total number of pulses in waveform = 35



Type 5 Radar Waveform_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	54484	1	19	100	1320	0	0	54484	0	749999
2	731814	2	19	60	1915	1381	0	787618	750000	1499999
3	1283772	2	19	100	1492	1040	0	2074686	1500000	2249999
4	569787	2	19	75	1521	1015	0	2647005	2250000	2999999
5	724944	3	19	75	1886	1646	1344	3374485	3000000	3749999
6	566647	3	19	85	1901	1388	1322	3946008	3750000	4499999
7	950579	2	19	55	1233	1488	0	4901198	4500000	5249999
8	847982	2	19	75	1250	1753	0	5751901	5250000	5999999
9	845102	3	19	95	1958	1741	1255	6600006	6000000	6749999
10	653324	3	19	60	1736	1460	2000	7258284	6750000	7499999
11	621372	2	19	55	1206	1387	0	7884852	7500000	8249999
12	987868	1	19	55	1556	0	0	8875313	8250000	8999999
13	328080	2	19	85	1478	1822	0	9204949	9000000	9749999
14	997029	2	19	95	1633	1095	0	10205278	9750000	10499999
15	1019005	3	19	70	1085	1173	1442	11227011	10500000	11249999
16	355706	2	19	55	1095	1959	0	11586417	11250000	11999999

Total number of pulses in waveform = 35

Type 5 Radar Waveform_30

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	279160	3	9	55	1312	1505	1410	279160	0	1499999
2	1383823	2	9	55	1326	1503	0	1667210	1500000	2999999
3	2022643	2	9	90	1569	1726	0	3692682	3000000	4499999
4	1942808	3	9	100	1891	1039	1564	5638785	4500000	5999999
5	569293	3	9	95	1373	1406	1086	6212572	6000000	7499999
6	2158382	2	9	65	1102	1948	0	8374819	7500000	8999999
7	1818304	2	9	80	1710	1981	0	10196173	9000000	10499999
8	1575624	1	9	75	1878	0	0	11775488	10500000	11999999

Total number of pulses in waveform = 18

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	5510.2	1	16	5493.2	1
2	5491.0	1	17	5496.7	1
3	5529.0	1	18	5527.3	1
4	5525.4	1	19	5513.1	1
5	5495.9	1	20	5516.9	1
6	5517.6	1	21	5523.5	1
7	5520.5	1	22	5492.7	1
8	5498.3	1	23	5509.4	1
9	5500.7	1	24	5512.2	1
10	5522.9	1	25	5494.9	1
11	5505.8	1	26	5528.3	1
12	5499.3	1	27	5510.1	1
13	5510.6	1	28	5523.4	1
14	5505.5	1	29	5519.0	1
15	5501.8	1	30	5503.7	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5493	6	9	5512	27
3	5495	9	11	5472	33
4	5502	12	14	5486	42
7	5531	21	15	5511	45
22	5486	66	22	5520	66
23	5483	69	27	5473	81
37	5499	111	50	5479	150
43	5537	129	52	5471	156
46	5496	138	54	5465	162
48	5512	144	58	5483	174
50	5535	150	79	5487	237
81	5517	243	81	5497	243
83	5518	249	93	5490	279
91	5482	273	--	--	--
92	5504	276	--	--	--
98	5525	294	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5519	3	2	5521	6
10	5535	30	5	5542	15
11	5543	33	22	5552	66
12	5552	36	24	5496	72
16	5521	48	30	5529	90
22	5560	66	43	5517	129
50	5546	150	45	5540	135
56	5504	168	57	5544	171
72	5534	216	58	5531	174
85	5531	255	59	5546	177
88	5504	264	78	5519	234
--	--	--	81	5555	243
--	--	--	83	5505	249
--	--	--	84	5516	252
--	--	--	86	5534	258
--	--	--	88	5549	264
--	--	--	95	5548	285



Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5476	3	1	5516	3
5	5501	15	7	5505	21
9	5498	27	15	5501	45
15	5487	45	16	5520	48
20	5471	60	22	5496	66
27	5509	81	29	5495	87
38	5490	114	32	5533	96
53	5525	159	36	5538	108
59	5483	177	71	5506	213
62	5506	186	72	5502	216
68	5469	204	--	--	--
72	5504	216	--	--	--
75	5507	225	--	--	--
96	5521	288	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5495	0	4	5519	12
7	5512	21	7	5482	21
10	5500	30	12	5502	36
21	5550	63	21	5470	63
38	5541	114	49	5508	147
39	5503	117	53	5487	159
55	5540	165	58	5498	174
61	5527	183	69	5507	207
70	5509	210	81	5473	243
79	5510	237	95	5479	285
80	5497	240	96	5517	288

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5499	0	18	5525	54
3	5501	9	23	5550	69
20	5530	60	35	5527	105
26	5473	78	39	5533	117
42	5488	126	52	5536	156
43	5526	129	55	5541	165
44	5479	132	57	5545	171
49	5487	147	59	5529	177
55	5505	165	60	5532	180
68	5524	204	61	5531	183
69	5496	207	79	5508	237
80	5491	240	90	5521	270
85	5504	255	--	--	--
86	5486	258	--	--	--
90	5475	270	--	--	--
92	5477	276	--	--	--
98	5480	294	--	--	--
99	5525	297	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5508	6	0	5477	0
12	5533	36	2	5488	6
17	5504	51	11	5523	33
21	5516	63	23	5482	69
30	5529	90	33	5505	99
39	5524	117	36	5526	108
49	5483	147	38	5519	114
65	5495	195	56	5487	168
71	5500	213	73	5490	219
86	5512	258	76	5506	228
90	5497	270	81	5479	243
92	5504	276	85	5496	255
94	5490	282	87	5497	261
99	5519	297	91	5469	273
--	--	--	93	5481	279
--	--	--	87	5498	261



Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5484	12	3	5500	9
6	5504	18	6	5529	18
21	5486	63	18	5526	54
24	5481	72	21	5508	63
25	5480	75	23	5521	69
30	5491	90	24	5504	72
40	5508	120	30	5535	90
56	5524	168	34	5541	102
84	5528	252	35	5523	105
86	5500	258	38	5505	114
90	5493	270	48	5516	144
--	--	--	52	5495	156
--	--	--	62	5486	186
--	--	--	81	5532	243
--	--	--	87	5498	261

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5508	6	0	5477	0
12	5533	36	2	5488	6
17	5504	51	11	5523	33
21	5516	63	23	5482	69
30	5529	90	33	5505	99
39	5524	117	36	5526	108
49	5483	147	38	5519	114
65	5495	195	56	5487	168
71	5500	213	73	5490	219
86	5512	258	76	5506	228
90	5497	270	81	5479	243
92	5504	276	85	5496	255
94	5490	282	87	5497	261
99	5519	297	91	5469	273
--	--	--	93	5481	279

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5484	12	3	5500	9
6	5504	18	6	5529	18
21	5486	63	18	5526	54
24	5481	72	21	5508	63
25	5480	75	23	5521	69
30	5491	90	24	5504	72
40	5508	120	30	5535	90
56	5524	168	34	5541	102
84	5528	252	35	5523	105
86	5500	258	38	5505	114
90	5493	270	48	5516	144
--	--	--	52	5495	156
--	--	--	62	5486	186
--	--	--	81	5532	243
--	--	--	87	5498	261

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5479	93	2	5505	6
46	5526	138	4	5490	12
57	5485	171	10	5485	30
61	5509	183	17	5473	51
65	5496	195	35	5516	105
67	5505	201	40	5486	120
68	5489	204	48	5523	144
70	5521	210	55	5463	165
72	5519	216	58	5497	174
82	5474	246	64	5493	192
97	5523	291	69	5477	207
--	--	--	86	5522	258



Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5505	0	13	5536	39
1	5476	3	24	5497	72
2	5484	6	27	5553	81
10	5470	30	33	5527	99
25	5503	75	46	5554	138
28	5501	84	55	5543	165
34	5504	102	56	5540	168
37	5524	111	61	5503	183
52	5491	156	66	5532	198
54	5496	162	69	5531	207
56	5466	168	89	5507	267
58	5494	174	91	5544	273
77	5519	231	--	--	--
99	5502	297	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5507	12	5	5493	15
13	5517	39	11	5521	33
14	5518	42	14	5507	42
32	5530	96	16	5503	48
35	5492	105	31	5513	93
41	5500	123	38	5492	114
56	5533	168	60	5520	180
58	5520	174	89	5539	267
61	5534	183	92	5542	276
78	5528	234	99	5523	297
89	5537	267	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5507	9	21	5491	63
15	5541	45	25	5506	75
23	5524	69	34	5462	102
35	5525	105	42	5517	126
36	5539	108	63	5483	189
47	5506	141	77	5522	231
48	5512	144	82	5516	246
55	5494	165	--	--	--
68	5505	204	--	--	--
75	5496	225	--	--	--
79	5510	237	--	--	--
84	5503	252	--	--	--
91	5546	273	--	--	--
92	5527	276	--	--	--
94	5526	282	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5536	30	5	5482	15
14	5526	42	8	5510	24
31	5507	93	9	5520	27
37	5537	111	28	5542	84
54	5494	162	35	5522	105
61	5517	183	37	5526	111
64	5534	192	50	5530	150
66	5506	198	56	5491	168
68	5497	204	61	5535	183
69	5482	207	62	5504	186
72	5499	216	67	5492	201
75	5528	225	76	5519	228
--	--	--	86	5532	258
--	--	--	90	5529	270
--	--	--	91	5525	273



Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5469	36	20	5546	60
29	5519	87	29	5544	87
47	5471	141	35	5506	105
51	5516	153	36	5509	108
53	5490	159	38	5528	114
56	5504	168	49	5522	147
63	5513	189	53	5527	159
66	5479	198	64	5541	192
81	5478	243	66	5552	198
84	5504	252	68	5531	204
90	5495	270	69	5550	207
97	5489	291	84	5504	252
98	5465	294	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5489	9	23	5552	69
4	5533	12	24	5543	72
8	5523	24	29	5531	87
24	5486	72	31	5529	93
26	5491	78	36	5539	108
39	5497	117	38	5521	114
41	5520	123	40	5550	120
43	5527	129	47	5545	141
52	5511	156	49	5507	147
55	5480	165	51	5499	153
63	5540	189	76	5523	228
64	5494	192	97	5503	291
81	5529	243	--	--	--
91	5503	273	--	--	--
98	5490	294	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5534	12	1	5505	3
6	5539	18	9	5482	27
7	5489	21	13	5522	39
14	5516	42	27	5496	81
20	5536	60	31	5526	93
25	5523	75	35	5521	105
33	5510	99	42	5476	126
34	5546	102	43	5492	129
57	5509	171	47	5475	141
65	5492	195	62	5527	186
79	5541	237	78	5501	234
81	5547	243	87	5503	261
97	5522	291	90	5493	270



Product	ACCESS POINT	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	AC1	Test Date	2019/08/16
Test Item	Radar Statistical Performance Check (802.11ax-HE80 mode – 5530MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5530.2	1.0	638	83	1
2	5491.0	1.0	938	57	1
3	5512.3	1.0	778	68	1
4	5493.6	1.0	518	102	1
5	5543.5	1.0	878	61	1
6	5532.1	1.0	558	95	1
7	5568.4	1.0	838	63	1
8	5519.8	1.0	858	62	1
9	5561.3	1.0	598	89	1
10	5537.7	1.0	738	72	1
11	5526.9	1.0	698	76	1
12	5554.5	1.0	718	74	1
13	5569.0	1.0	758	70	1
14	5542.6	1.0	3066	18	1
15	5517.4	1.0	898	59	1
16	5536.3	1.0	1780	30	1
17	5521.1	1.0	1777	30	1
18	5539.8	1.0	1255	43	1
19	5567.1	1.0	2525	21	1
20	5496.7	1.0	1421	38	0
21	5535.2	1.0	2134	25	1
22	5557.4	1.0	1582	34	1
23	5564.8	1.0	2452	22	1
24	5505.3	1.0	1380	39	1
25	5498.1	1.0	1337	40	1
26	5551.5	1.0	2215	24	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5547.7	1.0	1220	44	1
28	5545.6	1.0	2881	19	1
29	5528.2	1.0	643	83	1
30	5523.6	1.0	589	90	1
Detection Percentage (%)					96.7%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5530.2	3.6	186	23	1
2	5491.0	1.8	160	29	0
3	5512.3	2.3	152	28	1
4	5493.6	4.6	208	24	1
5	5543.5	2.7	205	26	1
6	5532.1	1.9	158	23	1
7	5568.4	2.4	183	27	1
8	5519.8	3.6	157	28	1
9	5561.3	2.1	207	25	1
10	5537.7	1.8	172	29	1
11	5526.9	3.3	224	25	1
12	5554.5	2.1	217	25	1
13	5569.0	2.1	217	26	1
14	5542.6	4.0	218	26	1
15	5517.4	1.3	178	28	1
16	5536.3	2.8	228	27	1
17	5521.1	5.0	212	23	1
18	5539.8	3.7	156	26	1
19	5567.1	4.7	201	26	1
20	5496.7	1.4	152	23	1
21	5535.2	1.0	229	28	1
22	5557.4	2.6	163	24	1
23	5564.8	2.8	199	26	1
24	5505.3	3.3	227	24	1
25	5498.1	1.2	169	23	1
26	5551.5	2.1	160	24	1
27	5547.7	4.2	170	25	1
28	5545.6	2.2	224	28	1
29	5528.2	2.7	186	26	1
30	5523.6	2.4	191	29	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	5530.2	6.7	447	16	1
2	5491.0	6.9	494	17	0
3	5512.3	6.7	426	18	1
4	5493.6	8.9	325	16	1
5	5543.5	7.7	310	16	1
6	5532.1	7.2	358	16	1
7	5568.4	8.9	331	18	1
8	5519.8	6.4	446	17	1
9	5561.3	7.3	437	18	1
10	5537.7	9.2	282	17	1
11	5526.9	8.3	357	17	1
12	5554.5	8.7	467	17	1
13	5569.0	7.8	448	16	1
14	5542.6	7.4	345	18	1
15	5517.4	7.3	451	18	1
16	5536.3	9.8	475	16	1
17	5521.1	6.4	408	18	1
18	5539.8	7.5	250	17	1
19	5567.1	8.6	354	16	1
20	5496.7	6.9	438	18	1
21	5535.2	9.5	372	17	1
22	5557.4	7.7	308	18	1
23	5564.8	7.4	352	18	1
24	5505.3	8.2	387	16	1
25	5498.1	8.2	255	18	1
26	5551.5	8.2	347	18	0
27	5547.7	8.0	409	18	1
28	5545.6	7.4	488	16	1
29	5528.2	9.1	462	16	1
30	5523.6	8.0	254	18	1
Detection Percentage (%)					93.3%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5530.2	16.5	337	16	1
2	5491.0	15.9	416	15	1
3	5512.3	13.4	448	15	1
4	5493.6	14.1	267	15	1
5	5543.5	12.8	403	15	1
6	5532.1	16.5	494	14	1
7	5568.4	16.0	378	15	1
8	5519.8	17.1	347	13	1
9	5561.3	18.0	353	14	1
10	5537.7	11.7	322	12	1
11	5526.9	13.2	251	12	1
12	5554.5	16.3	406	14	1
13	5569.0	11.2	491	13	1
14	5542.6	15.0	443	14	1
15	5517.4	13.4	325	12	1
16	5536.3	19.4	448	16	1
17	5521.1	13.5	419	16	1
18	5539.8	16.6	381	13	1
19	5567.1	15.4	289	15	1
20	5496.7	11.1	304	13	1
21	5535.2	13.6	427	16	1
22	5557.4	14.9	391	13	1
23	5564.8	17.3	469	13	1
24	5505.3	17.9	262	14	1
25	5498.1	16.8	356	15	1
26	5551.5	13.8	423	13	1
27	5547.7	12.0	474	13	1
28	5545.6	17.3	494	16	1
29	5528.2	19.3	360	13	1
30	5523.6	13.3	414	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: $\frac{P_d1 + P_d2 + P_d3 + P_d4}{4} = (96.7\% + 96.7\% + 93.3\% + 100\%) / 4 = 96.7\% (>80\%)$



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	5496.3	1	16	5530.0	1
2	5494.7	0	17	5530.0	1
3	5498.7	1	18	5530.0	1
4	5499.1	0	19	5530.0	1
5	5493.5	1	20	5530.0	1
6	5495.1	1	21	5566.1	1
7	5497.1	1	22	5562.9	1
8	5495.5	1	23	5566.5	1
9	5493.9	1	24	5563.7	1
10	5498.3	1	25	5561.3	1
11	5530.0	1	26	5564.5	1
12	5530.0	1	27	5561.7	1
13	5530.0	0	28	5565.3	1
14	5530.0	1	29	5560.9	1
15	5530.0	1	30	5564.9	1
Detection Percentage (%)					90%

Type 5 Radar Waveform_1										
Num of Bursts = 14										
Burst Interval (us)= 857143										
Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	247715	2	12	60	1174	1316	0	247715	0	857142
2	1354601	1	12	85	1508	0	0	1604806	857143	1714285
3	629716	1	12	80	1397	0	0	2236030	1714286	2571428
4	780970	2	12	60	1956	1439	0	3018397	2571429	3428571
5	565110	2	12	80	1660	1001	0	3586902	3428572	4285714
6	815669	2	12	80	1246	1692	0	4405232	4285715	5142857
7	1357863	2	12	100	1824	1957	0	5766033	5142858	6000000
8	794234	1	12	65	1383	0	0	6564048	6000001	6857143
9	821603	3	12	95	1503	1981	1031	7387034	6857144	7714286
10	701754	1	12	65	1645	0	0	8093303	7714287	8571429
11	1105324	2	12	100	1202	1105	0	9200272	8571430	9428572
12	799676	1	12	90	1776	0	0	10002255	9428573	10285715
13	778656	1	12	55	1072	0	0	10782687	10285716	11142858
14	950248	3	12	65	1077	1677	1433	11734007	11142859	12000001
Total number of pulses in waveform = 24										



Type 5 Radar Waveform_2

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	1168495	3	8	80	1678	1225	1177	1168495	0	1199999
2	116614	1	8	80	1963	0	0	1289189	1200000	2399999
3	1157257	3	8	65	1096	1455	1781	2448409	2400000	3599999
4	1249175	1	8	75	1020	0	0	3701916	3600000	4799999
5	1316524	1	8	80	1173	0	0	5019460	4800000	5999999
6	1312652	2	8	70	1798	1894	0	6333285	6000000	7199999
7	1710401	3	8	75	1670	1363	1484	8047378	7200000	8399999
8	1275277	3	8	60	1212	1245	1868	9327172	8400000	9599999
9	1459840	3	8	55	1312	1325	1306	10791337	9600000	10799999
10	939493	3	8	95	1664	1190	1012	11734773	10800000	11999999

Total number of pulses in waveform = 23

Type 5 Radar Waveform_3

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	826188	2	18	90	1376	1037	0	826188	0	999999
2	880194	1	18	90	1097	0	0	1708795	1000000	1999999
3	754235	1	18	55	1700	0	0	2464127	2000000	2999999
4	1334701	1	18	95	1672	0	0	3800528	3000000	3999999
5	453350	2	18	75	1031	1390	0	4255550	4000000	4999999
6	1617375	1	18	55	1979	0	0	5875346	5000000	5999999
7	577822	1	18	85	1107	0	0	6455147	6000000	6999999
8	1047950	3	18	95	1648	1795	1276	7504204	7000000	7999999
9	1342959	2	18	95	1112	1053	0	8851882	8000000	8999999
10	339588	3	18	80	1635	1874	1116	9193635	9000000	9999999
11	1156436	2	18	65	1456	1278	0	10354696	10000000	10999999
12	1505007	3	18	95	1679	1918	1886	11862437	11000000	11999999

Total number of pulses in waveform = 22

Type 5 Radar Waveform_4

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	845697	3	19	90	1235	1665	1963	845697	0	857142
2	391799	1	19	85	1600	0	0	1242359	857143	1714285
3	907700	1	19	95	1628	0	0	2151659	1714286	2571428
4	917737	1	19	80	1989	0	0	3071024	2571429	3428571
5	1080603	2	19	95	1430	1703	0	4153616	3428572	4285714
6	483788	3	19	90	1320	1391	1595	4640537	4285715	5142857
7	694526	2	19	80	1761	1467	0	5339369	5142858	6000000
8	1184475	3	19	55	1631	1849	1490	6527072	6000001	6857143
9	522484	1	19	50	1996	0	0	7054526	6857144	7714286
10	1244337	3	19	60	1635	1501	1291	8300859	7714287	8571429
11	1060872	2	19	60	1810	1266	0	9366158	8571430	9428572
12	472073	2	19	65	1754	1404	0	9841307	9428573	10285715
13	1240789	2	19	70	1323	1787	0	11085254	10285716	11142858
14	703422	2	19	90	1149	1390	0	11791786	11142859	12000001

Total number of pulses in waveform = 28



Type 5 Radar Waveform_5

Num of Bursts = 20

Burst Interval (us) = 600000

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	559304	3	5	50	1020	1643	1902	559304	0	599999
2	322592	3	5	75	1451	1731	1064	886461	600000	1199999
3	330888	1	5	85	1584	0	0	1221595	1200000	1799999
4	1119301	3	5	90	1221	1343	1198	2342480	1800000	2399999
5	526941	1	5	70	1699	0	0	2873183	2400000	2999999
6	283237	1	5	90	1370	0	0	3158119	3000000	3599999
7	522945	1	5	50	1763	0	0	3682434	3600000	4199999
8	656193	2	5	80	1100	1916	0	4340390	4200000	4799999
9	639157	2	5	50	1049	1209	0	4982563	4800000	5399999
10	744203	1	5	65	1947	0	0	5729024	5400000	5999999
11	742490	2	5	70	1229	1202	0	6473461	6000000	6599999
12	527437	1	5	65	1876	0	0	7003329	6600000	7199999
13	546833	1	5	80	1112	0	0	7552038	7200000	7799999
14	342112	3	5	50	1987	1650	1291	7895262	7800000	8399999
15	732108	1	5	85	1869	0	0	8632298	8400000	8999999
16	705335	3	5	70	1401	1605	1582	9339502	9000000	9599999
17	486674	3	5	65	1950	1372	1096	9830764	9600000	10199999
18	812952	3	5	70	1205	1721	1023	10648134	10200000	10799999
19	400353	1	5	75	1062	0	0	11052436	10800000	11399999
20	370516	2	5	65	1866	1686	0	11424014	11400000	11999999

Total number of pulses in waveform = 38

Type 5 Radar Waveform_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	180198	3	9	85	1146	1578	1912	180198	0	857142
2	1204780	3	9	60	1678	1532	1964	1389614	857143	1714285
3	1089616	3	9	65	1790	1144	1092	2484404	1714286	2571428
4	382909	2	9	85	1799	1766	0	2871339	2571429	3428571
5	1002584	2	9	50	1091	1860	0	3877488	3428572	4285714
6	945608	2	9	85	1673	1699	0	4826047	4285715	5142857
7	754052	1	9	70	1577	0	0	5583471	5142858	6000000
8	567371	3	9	60	1896	1253	1863	6152419	6000001	6857143
9	795283	1	9	55	1563	0	0	6952714	6857144	7714286
10	1491207	1	9	85	1369	0	0	8445484	7714287	8571429
11	493609	3	9	95	1538	1559	1434	8940462	8571430	9428572
12	528104	1	9	100	1285	0	0	9473097	9428573	10285715
13	1109715	1	9	70	1562	0	0	10584097	10285716	11142858
14	591552	1	9	85	1743	0	0	11177211	11142859	12000001

Total number of pulses in waveform = 27

Type 5 Radar Waveform_7

Num of Bursts = 18

Burst Interval (us) = 666667

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	649118	2	14	80	1915	1769	0	649118	0	666666
2	258688	3	14	55	1089	1845	1818	911490	666667	1333333
3	957993	3	14	90	1281	1146	1844	1874235	1333334	2000000
4	334699	3	14	90	1888	1669	1068	2213205	2000001	2666667
5	758666	1	14	60	1405	0	0	2976496	2666668	3333334
6	632957	3	14	85	1099	1683	1823	3610858	3333335	4000001
7	627485	2	14	100	1448	1580	0	4242948	4000002	4666668
8	783303	3	14	100	1733	1976	1811	5029279	4666669	5333335
9	355239	3	14	80	1833	1583	1070	5390038	5333336	6000002
10	1093434	2	14	70	1951	1306	0	6487958	6000003	6666669
11	317175	2	14	60	1107	1387	0	6808390	6666670	7333336
12	1043476	3	14	55	1348	1702	1536	7854360	7333337	8000003
13	362935	2	14	65	1755	1177	0	8221881	8000004	8666670
14	838690	3	14	85	1149	1636	1905	9063503	8666671	9333337
15	624662	3	14	55	1267	1086	1207	9692855	9333338	10000004
16	638928	1	14	60	1202	0	0	10335343	10000005	10666671
17	354664	2	14	80	1452	1462	0	10691209	10666672	11333338
18	940507	3	14	55	1590	1516	1849	11634630	11333339	12000005

Total number of pulses in waveform = 44



Type 5 Radar Waveform_8

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	188183	1	10	80	1567	0	0	188183	0	631578
2	788402	1	10	80	1746	0	0	978152	631579	1263157
3	589252	1	10	50	1897	0	0	1569150	1263158	1894736
4	854792	2	10	100	1314	1108	0	2425839	1894737	2526315
5	146227	3	10	55	1666	1738	1778	2574488	2526316	3157894
6	908388	2	10	60	1237	1516	0	3488058	3157895	3789473
7	356516	3	10	75	1720	1869	1443	3847327	3789474	4421052
8	818876	3	10	75	1981	1758	1068	4671235	4421053	5052631
9	718756	1	10	65	1884	0	0	5394798	5052632	5684210
10	377041	3	10	60	1530	1974	1579	5773723	5684211	6315789
11	923679	3	10	65	1088	1581	1475	6702485	6315790	6947368
12	396691	3	10	95	1789	1623	1733	7103320	6947369	7578947
13	857926	1	10	85	1381	0	0	7966391	7578948	8210526
14	607215	2	10	70	1329	1630	0	8574987	8210527	8842105
15	636317	3	10	100	1705	1530	1669	9214263	8842106	9473684
16	467286	1	10	90	1126	0	0	9686453	9473685	10105263
17	501377	2	10	50	1234	1951	0	10188956	10105264	10736842
18	652777	3	10	50	1566	1481	1834	10844918	10736843	11368421
19	822349	3	10	50	1537	1757	1503	11672148	11368422	12000000

Total number of pulses in waveform = 41

Type 5 Radar Waveform_9

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	845127	1	6	90	1505	0	0	845127	0	923076
2	282403	3	6	80	1539	1985	1622	1129035	923077	1846153
3	1520573	2	6	60	1309	1171	0	2654754	1846154	2769230
4	849847	1	6	65	1920	0	0	3507081	2769231	3692307
5	747223	2	6	55	1720	1569	0	4256224	3692308	4615384
6	773270	2	6	90	1690	1202	0	5032783	4615385	5538461
7	1235189	3	6	60	1951	1474	1855	6270864	5538462	6461538
8	836665	3	6	50	1128	1386	1595	7112809	6461539	7384615
9	645280	1	6	85	1017	0	0	7762198	7384616	8307692
10	1235322	2	6	100	1354	1313	0	8998537	8307693	9230769
11	773878	1	6	65	1522	0	0	9775082	9230770	10153846
12	690304	2	6	50	1928	1073	0	10466908	10153847	11076923
13	1020152	3	6	65	1348	1971	1543	11490061	11076924	12000000

Total number of pulses in waveform = 26

Type 5 Radar Waveform_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	141445	1	17	55	1349	0	0	141445	0	999999
2	1573626	1	17	80	1090	0	0	1716420	1000000	1999999
3	963902	1	17	65	1282	0	0	2681412	2000000	2999999
4	866653	3	17	55	1440	1062	1982	3549347	3000000	3999999
5	759192	3	17	55	1154	1237	1561	4313023	4000000	4999999
6	758682	2	17	70	1900	1420	0	5075657	5000000	5999999
7	960309	2	17	75	1887	1424	0	6039286	6000000	6999999
8	1278523	1	17	90	1573	0	0	7321120	7000000	7999999
9	1276769	2	17	60	1906	1188	0	8599462	8000000	8999999
10	1016748	1	17	90	1772	0	0	9619304	9000000	9999999
11	1206516	2	17	85	1184	1326	0	10827592	10000000	10999999
12	677030	3	17	70	1187	1715	1343	11507132	11000000	11999999

Total number of pulses in waveform = 22



Type 5 Radar Waveform_11

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	58963	1	18	75	1494	0	0	58963	0	999999
2	1065317	2	18	70	1809	1444	0	1125774	1000000	1999999
3	1221899	1	18	80	1905	0	0	2350926	2000000	2999999
4	789103	3	18	80	1769	1522	1329	3141934	3000000	3999999
5	1759679	3	18	60	1341	1583	1120	4906233	4000000	4999999
6	644295	3	18	100	1939	1489	1873	5554572	5000000	5999999
7	514116	1	18	75	1850	0	0	6073989	6000000	6999999
8	961090	3	18	80	1251	1169	1731	7036929	7000000	7999999
9	975322	1	18	90	1200	0	0	8016402	8000000	8999999
10	1705511	3	18	55	1416	1671	1989	9723113	9000000	9999999
11	360937	2	18	60	1465	1549	0	10089126	10000000	10999999
12	1871944	3	18	100	1258	1039	1886	11964084	11000000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_12

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	392213	1	10	80	1814	0	0	392213	0	666666
2	634682	2	10	55	1868	1317	0	1028709	666667	1333333
3	548923	1	10	95	1920	0	0	1580817	1333334	2000000
4	744487	1	10	90	1237	0	0	2327224	2000001	2666667
5	444103	1	10	90	1920	0	0	2772564	2666668	3333334
6	1045347	1	10	80	1139	0	0	3819831	3333335	4000001
7	352511	3	10	70	1185	1008	1163	4173481	4000002	4666668
8	512809	3	10	80	1685	1772	1400	4689646	4666669	5333335
9	1283082	1	10	75	1500	0	0	5977585	5333336	6000002
10	169494	2	10	55	1984	1978	0	6148579	6000003	6666669
11	1171801	3	10	75	1258	1164	1506	7324342	6666670	7333336
12	64973	3	10	50	1426	1484	1145	7393243	7333337	8000003
13	772668	1	10	70	1050	0	0	8169966	8000004	8666670
14	549861	1	10	100	1293	0	0	8720877	8666671	9333337
15	959096	2	10	60	1258	1245	0	9681266	9333338	10000004
16	671739	2	10	75	1148	1221	0	10355508	10000005	10666671
17	579205	1	10	65	1999	0	0	10937082	10666672	11333338
18	1004425	2	10	75	1693	1475	0	11943506	11333339	12000005

Total number of pulses in waveform = 31

Type 5 Radar Waveform_13

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	187639	3	5	55	1224	1599	1388	187639	0	857142
2	1445863	1	5	65	1324	0	0	1637713	857143	1714285
3	567437	2	5	55	1976	1734	0	2206474	1714286	2571428
4	623453	2	5	60	1401	1202	0	2833637	2571429	3428571
5	1067832	3	5	80	1181	1569	1460	3904072	3428572	4285714
6	419080	1	5	65	1222	0	0	4327362	4285715	5142857
7	892566	1	5	65	1826	0	0	5221150	5142858	6000000
8	1291547	1	5	75	1009	0	0	6514523	6000001	6857143
9	422096	3	5	100	1326	1831	1958	6937628	6857144	7714286
10	1094605	3	5	85	1762	1335	1331	8037348	7714287	8571429
11	816751	2	5	50	1672	1228	0	8858527	8571430	9428572
12	591611	2	5	95	1327	1859	0	9453038	9428573	10285715
13	1340641	2	5	55	1347	1297	0	10796865	10285716	11142858
14	1196818	1	5	65	1170	0	0	11996327	11142859	12000001

Total number of pulses in waveform = 27



Type 5 Radar Waveform_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	179143	3	17	70	1290	1398	1132	179143	0	923076
2	1526495	3	17	100	1658	1198	1331	1709458	923077	1846153
3	257734	3	17	55	1289	1764	1822	1971379	1846154	2769230
4	1396649	3	17	100	1794	1822	1742	3372903	2769231	3692307
5	1044364	3	17	95	1194	1529	1960	4422625	3692308	4615384
6	861388	2	17	75	1600	1010	0	5288696	4615385	5538461
7	788070	3	17	70	1467	1074	1416	6079376	5538462	6461538
8	388355	2	17	100	1290	1585	0	6471688	6461539	7384615
9	1821653	1	17	85	1810	0	0	8296216	7384616	8307692
10	364887	1	17	95	1915	0	0	8662913	8307693	9230769
11	1017387	1	17	100	1829	0	0	9682215	9230770	10153846
12	734069	3	17	55	1624	1445	1536	10418113	10153847	11076923
13	1289402	3	17	50	1699	1405	1163	11712120	11076924	12000000

Total number of pulses in waveform = 31

Type 5 Radar Waveform_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	402446	2	8	50	1232	1370	0	402446	0	799999
2	455280	1	8	60	1610	0	0	860328	800000	1599999
3	1094160	3	8	70	1256	1548	1531	1956098	1600000	2399999
4	541744	3	8	90	1354	1185	1138	2502177	2400000	3199999
5	1432279	1	8	75	1327	0	0	3938133	3200000	3999999
6	361322	2	8	60	1353	1273	0	4300782	4000000	4799999
7	682620	2	8	85	1889	1973	0	4986028	4800000	5599999
8	668133	2	8	70	1575	1616	0	5658023	5600000	6399999
9	808425	1	8	90	1427	0	0	6469639	6400000	7199999
10	1016339	2	8	65	1466	1033	0	7487405	7200000	7999999
11	1174298	1	8	80	1995	0	0	8664202	8000000	8799999
12	521248	1	8	85	1091	0	0	9187445	8800000	9599999
13	875795	1	8	95	1563	0	0	10064331	9600000	10399999
14	592734	1	8	70	1355	0	0	10658628	10400000	11199999
15	893165	3	8	100	1884	1156	1495	11553148	11200000	11999999

Total number of pulses in waveform = 26

Type 5 Radar Waveform_16

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	171919	2	19	55	1693	1238	0	171919	0	631578
2	747449	2	19	95	1512	1458	0	922299	631579	1263157
3	887333	2	19	65	1331	1807	0	1812602	1263158	1894736
4	323615	2	19	65	1951	1437	0	2139355	1894737	2526315
5	988974	3	19	95	1535	1225	1272	3131717	2526316	3157894
6	335935	3	19	80	1279	1167	1489	3471684	3157895	3789473
7	448466	3	19	75	1896	1529	1589	3924085	3789474	4421052
8	786688	3	19	50	1639	1702	1922	4715787	4421053	5052631
9	645007	3	19	90	1239	1644	1181	5366057	5052632	5684210
10	804751	1	19	75	1813	0	0	6174872	5684211	6315789
11	438986	3	19	80	1323	1948	1354	6615671	6315790	6947368
12	803295	2	19	55	1203	1153	0	7423591	6947369	7578947
13	618326	2	19	60	1111	1857	0	8044273	7578948	8210526
14	325388	1	19	65	1852	0	0	8372629	8210527	8842105
15	884223	1	19	65	1548	0	0	9258704	8842106	9473684
16	342283	2	19	90	1527	1489	0	9602535	9473685	10105263
17	869723	3	19	80	1250	1496	1022	10475274	10105264	10736842
18	277957	2	19	85	1416	1381	0	10756999	10736843	11368421
19	690568	1	19	100	1839	0	0	11450364	11368422	12000000

Total number of pulses in waveform = 41



Type 5 Radar Waveform_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	129024	3	9	70	1020	1600	1780	129024	0	749999
2	1177239	1	9	80	1115	0	0	1310663	750000	1499999
3	609529	1	9	70	1649	0	0	1921307	1500000	2249999
4	677161	1	9	50	1724	0	0	2600117	2250000	2999999
5	585695	3	9	80	1593	1529	1937	3187536	3000000	3749999
6	1220379	1	9	55	1337	0	0	4412974	3750000	4499999
7	649256	2	9	100	1374	1345	0	5063567	4500000	5249999
8	525314	3	9	75	1479	1156	1815	5591600	5250000	5999999
9	888579	2	9	65	1300	1130	0	6484629	6000000	6749999
10	347597	2	9	60	1337	1727	0	6834656	6750000	7499999
11	1170524	1	9	70	1667	0	0	8008244	7500000	8249999
12	503828	3	9	70	1810	1362	1106	8513739	8250000	8999999
13	682281	1	9	85	1637	0	0	9200298	9000000	9749999
14	1133183	1	9	85	1264	0	0	10335118	9750000	10499999
15	679902	1	9	90	1938	0	0	11016284	10500000	11249999
16	372733	3	9	85	1299	1632	1959	11390955	11250000	11999999

Total number of pulses in waveform = 29

Type 5 Radar Waveform_18

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	412632	2	12	75	1585	1337	0	412632	0	631578
2	590156	1	12	75	1745	0	0	1005710	631579	1263157
3	404791	2	12	60	1177	1654	0	1412246	1263158	1894736
4	951760	2	12	65	1264	1333	0	2366837	1894737	2526315
5	323046	1	12	100	1651	0	0	2692480	2526316	3157894
6	799851	1	12	100	1318	0	0	3493982	3157895	3789473
7	458639	2	12	95	1224	1976	0	3953939	3789474	4421052
8	656198	1	12	85	1120	0	0	4613337	4421053	5052631
9	956444	2	12	65	1519	1533	0	5570901	5052632	5684210
10	280814	1	12	70	1056	0	0	5854767	5684211	6315789
11	934643	2	12	50	1147	1237	0	6790466	6315790	6947368
12	258251	3	12	55	1598	1882	1202	7051101	6947369	7578947
13	765806	1	12	80	1231	0	0	7821589	7578948	8210526
14	573542	3	12	95	1110	1891	1292	8396362	8210527	8842105
15	864753	2	12	50	1605	1303	0	9265408	8842106	9473684
16	387458	2	12	95	1591	1701	0	9655774	9473685	10105263
17	746072	2	12	100	1380	1633	0	10405138	10105264	10736842
18	866132	1	12	85	1405	0	0	11274283	10736843	11368421
19	231671	3	12	75	1767	1793	1847	11507359	11368422	12000000

Total number of pulses in waveform = 34

Type 5 Radar Waveform_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	99245	2	14	65	1495	1733	0	99245	0	631578
2	737572	2	14	55	1689	1809	0	840045	631579	1263157
3	635707	2	14	55	1850	1962	0	1479250	1263158	1894736
4	645121	3	14	100	1749	1525	1245	2128183	1894737	2526315
5	556970	3	14	60	1723	1231	1549	2689672	2526316	3157894
6	842025	2	14	80	1422	1601	0	3536200	3157895	3789473
7	368343	3	14	60	1466	1611	1523	3907566	3789474	4421052
8	985779	3	14	65	1865	1903	1500	4897945	4421053	5052631
9	541044	1	14	90	1431	0	0	5444257	5052632	5684210
10	525457	2	14	55	1259	1609	0	5971145	5684211	6315789
11	897464	2	14	55	1407	1961	0	6871477	6315790	6947368
12	437713	1	14	80	1896	0	0	7312558	6947369	7578947
13	465372	2	14	75	1341	1874	0	7779826	7578948	8210526
14	863548	1	14	60	1290	0	0	8646589	8210527	8842105
15	676165	1	14	75	1524	0	0	9324044	8842106	9473684
16	413954	3	14	90	1420	1313	1972	9739522	9473685	10105263
17	650184	2	14	60	1114	1909	0	10394411	10105264	10736842
18	740876	1	14	100	1219	0	0	11138310	10736843	11368421
19	395365	1	14	70	1576	0	0	11534894	11368422	12000000

Total number of pulses in waveform = 37



Type 5 Radar Waveform_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	280124	1	6	1465	80	0	0	280124	0	599999
2	589891	3	6	65	1875	1793	1944	871480	600000	1199999
3	867326	3	6	50	1638	1526	1737	1744418	1200000	1799999
4	77668	2	6	60	1891	1314	0	1826987	1800000	2399999
5	1041400	1	6	55	1707	0	0	2465961	2400000	2999999
6	380676	3	6	90	1035	1547	1152	3509068	3000000	3599999
7	450265	2	6	85	1033	1629	0	3893478	3600000	4199999
8	555256	2	6	55	1692	1828	0	4346405	4200000	4799999
9	948804	3	6	80	1236	1791	1452	4905181	4800000	5399999
10	277381	3	6	60	1787	1323	1356	5858464	5400000	5999999
11	588720	3	6	100	1543	1934	1207	6140311	6000000	6599999
12	581201	1	6	80	1487	0	0	6733715	6600000	7199999
13	926208	2	6	80	1344	1358	0	7316403	7200000	7799999
14	298621	1	6	55	1429	0	0	8245313	7800000	8399999
15	875719	3	6	95	1661	1700	1108	8545363	8400000	8999999
16	272168	3	6	55	1656	1257	1622	9425551	9000000	9599999
17	874027	3	6	75	1660	1362	1023	9702254	9600000	10199999
18	524887	1	6	95	1497	0	0	10580326	10200000	10799999
19	685717	1	6	90	1170	0	0	11106710	10800000	11399999
20	685717	1	6	60	1025	0	0	11793597	11400000	11999999

Total number of pulses in waveform = 42

Type 5 Radar Waveform_21

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	1248263	3	6	55	1000	1602	1640	1248263	0	1333332
2	394830	3	6	50	1298	1324	1433	1647335	1333333	2666665
3	1054218	2	6	100	1668	1014	0	2705608	2666666	3999998
4	2609767	1	6	65	1639	0	0	5318057	3999999	5333331
5	1010780	3	6	75	1505	1435	1535	6330476	5333332	6666664
6	1388021	3	6	70	1544	1028	1191	7722972	6666665	7999997
7	1230530	3	6	85	1741	1124	1653	8957265	7999998	9333330
8	1205604	2	6	70	1081	1128	0	10167387	9333331	10666663
9	1065623	2	6	55	1404	1407	0	11235219	10666664	11999996

Total number of pulses in waveform = 22

Type 5 Radar Waveform_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	314222	1	14	70	1741	0	0	314222	0	923076
2	1240386	2	14	95	1177	1224	0	1556349	923077	1846153
3	849714	3	14	55	1798	1654	1908	2408464	1846154	2769230
4	924366	1	14	80	1632	0	0	3338190	2769231	3692307
5	693357	2	14	60	1561	1389	0	4033179	3692308	4615384
6	1293578	3	14	60	1174	1020	1434	5329707	4615385	5538461
7	962753	3	14	90	1688	1692	1096	6296088	5538462	6461538
8	858903	1	14	75	1521	0	0	7159467	6461539	7384615
9	867932	3	14	55	1994	1735	1844	8028920	7384616	8307692
10	397589	1	14	80	1936	0	0	8432082	8307693	9230769
11	1288414	2	14	60	1242	1872	0	9722432	9230770	10153846
12	1019166	1	14	100	1224	0	0	10744712	10153847	11076923
13	685792	3	14	95	1601	1919	1841	11431728	11076924	12000000

Total number of pulses in waveform = 26



Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	807854	3	5	100	1566	1068	1315	287	0	749999
2	1168657	2	5	80	1193	1342	0	812090	750000	1499999
3	634041	3	5	65	1758	1188	1309	1983282	1500000	2249999
4	939076	3	5	95	1960	1161	1467	2621578	2250000	2999999
5	492169	2	5	65	1248	1524	0	3565242	3000000	3749999
6	779472	1	5	100	1439	0	0	4060183	3750000	4499999
7	830104	1	5	55	1578	0	0	4841094	4500000	5249999
8	517029	3	5	100	1759	1511	1233	5672776	5250000	5999999
9	954365	3	5	55	1762	1673	1552	6194308	6000000	6749999
10	575227	2	5	90	1611	1661	0	7153660	6750000	7499999
11	1071854	3	5	60	1103	1749	1962	7732159	7500000	8249999
12	268649	3	5	70	1226	1030	1476	8808827	8250000	8999999
13	828726	2	5	100	1199	1725	0	9081208	9000000	9749999
14	636436	1	5	95	1548	0	0	9912858	9750000	10499999
15	1285895	2	5	80	1010	1192	0	10550842	10500000	11249999
16		3	5	80	1887	1507	1171	11838939	11250000	11999999

Total number of pulses in waveform = 37

Type 5 Radar Waveform_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	128809	1	12	60	1035	0	0	128809	0	599999
2	807966	2	12	70	1331	1149	0	937810	600000	1199999
3	312555	3	12	95	1539	1589	1936	1252845	1200000	1799999
4	724116	3	12	60	1379	1271	1345	1982025	1800000	2399999
5	847289	2	12	85	1189	1543	0	2833309	2400000	2999999
6	443135	2	12	75	1198	1220	0	3279176	3000000	3599999
7	682043	2	12	60	1104	1816	0	3963637	3600000	4199999
8	338413	2	12	70	1365	1142	0	4304970	4200000	4799999
9	593962	3	12	50	1321	1171	1278	4901429	4800000	5399999
10	658146	1	12	80	1478	0	0	5563345	5400000	5999999
11	819123	3	12	70	1789	1947	1161	6383946	6000000	6599999
12	625075	1	12	60	1563	0	0	7013918	6600000	7199999
13	428855	1	12	55	1817	0	0	7444336	7200000	7799999
14	355298	3	12	60	1034	1607	1184	7801451	7800000	8399999
15	1187894	2	12	50	1363	1864	0	8993170	8400000	8999999
16	514424	3	12	50	1354	1321	1210	9510821	9000000	9599999
17	456917	3	12	80	1019	1779	1531	9971623	9600000	10199999
18	720438	3	12	55	1802	1845	1407	10696390	10200000	10799999
19	406094	2	12	75	1576	1259	0	11107538	10800000	11399999
20	736757	3	12	50	1939	1436	1565	11847130	11400000	11999999

Total number of pulses in waveform = 45

Type 5 Radar Waveform_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	447540	3	18	90	1153	1523	1550	447540	0	599999
2	629184	1	18	50	1400	0	0	1080950	600000	1199999
3	313969	3	18	65	1503	1688	1164	1396319	1200000	1799999
4	661434	3	18	90	1676	1033	1595	2062108	1800000	2399999
5	896056	1	18	70	1598	0	0	2962468	2400000	2999999
6	177971	1	18	100	1743	0	0	3142037	3000000	3599999
7	472309	2	18	65	1840	1289	0	3616089	3600000	4199999
8	904829	1	18	70	1880	0	0	4524047	4200000	4799999
9	724652	1	18	80	1088	0	0	5250579	4800000	5399999
10	615780	1	18	85	1316	0	0	5867447	5400000	5999999
11	342951	3	18	60	1191	1199	1341	6211714	6000000	6599999
12	892479	1	18	85	1629	0	0	7107924	6600000	7199999
13	631008	1	18	70	1339	0	0	7740561	7200000	7799999
14	468265	2	18	85	1061	1826	0	8210165	7800000	8399999
15	540346	3	18	50	1216	1058	1773	8753398	8400000	8999999
16	433967	1	18	95	1700	0	0	9191412	9000000	9599999
17	989540	3	18	90	1810	1914	1051	10182652	9600000	10199999
18	90163	1	18	55	1569	0	0	10277590	10200000	10799999
19	553688	3	18	85	1608	1237	1678	10832847	10800000	11399999
20	564755	3	18	100	1563	1159	1604	11402125	11400000	11999999

Total number of pulses in waveform = 38



Type 5 Radar Waveform_26

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	444729	3	10	100	1266	1753	1219	444729	0	923076
2	1102857	2	10	85	1898	1113	0	1551824	923077	1846153
3	423660	2	10	50	1630	1418	0	1978495	1846154	2769230
4	838718	2	10	75	1296	1078	0	2820261	2769231	3692307
5	1274322	2	10	95	1882	1448	0	4096957	3692308	4615384
6	1257600	1	10	85	2000	0	0	5357887	4615385	5538461
7	812163	1	10	65	1421	0	0	6172050	5538462	6461538
8	1187528	2	10	60	1282	1591	0	7360999	6461539	7384615
9	431669	2	10	100	1463	1722	0	7795541	7384616	8307692
10	1028146	3	10	85	1728	1173	1230	8826872	8307693	9230769
11	1065643	3	10	65	1910	1206	1456	9896646	9230770	10153846
12	906827	2	10	80	1331	1250	0	10808045	10153847	11076923
13	916868	3	10	65	1330	1575	1646	11727494	11076924	12000000

Total number of pulses in waveform = 28

Type 5 Radar Waveform_27

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	273082	2	17	65	1876	1820	0	273082	0	857142
2	1067006	1	17	75	1954	0	0	1348784	857143	1714285
3	800774	2	17	85	1710	1967	0	2151512	1714286	2571428
4	752704	1	17	90	1965	0	0	2907893	2571429	3428571
5	543429	2	17	55	1747	1459	0	3453287	3428572	4285714
6	1140557	1	17	75	1851	0	0	4597050	4285715	5142857
7	1394284	1	17	95	1536	0	0	5993185	5142858	6000000
8	73393	3	17	75	1945	1692	1856	6068114	6000001	6857143
9	800572	2	17	90	1254	1668	0	6874179	6857144	7714286
10	1000042	3	17	60	1761	1812	1481	7877143	7714287	8571429
11	1121437	2	17	95	1579	1674	0	9003634	8571430	9428572
12	738696	2	17	70	1686	1098	0	9745583	9428573	10285715
13	1193882	2	17	50	1382	1717	0	10942249	10285716	11142858
14	484332	2	17	55	1254	1043	0	11429680	11142859	12000001

Total number of pulses in waveform = 26

Type 5 Radar Waveform_28

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	412153	1	8	50	1567	0	0	412153	0	749999
2	748319	3	8	75	1224	1784	1911	1162039	750000	1499999
3	348174	1	8	60	1841	0	0	1515132	1500000	2249999
4	1358111	1	8	95	1650	0	0	2875084	2250000	2999999
5	773355	2	8	85	1785	1189	0	3650089	3000000	3749999
6	436550	3	8	60	1211	1651	1136	4089613	3750000	4499999
7	801655	2	8	85	1749	1206	0	4895266	4500000	5249999
8	887650	2	8	100	1516	1253	0	5785871	5250000	5999999
9	662153	3	8	75	1770	1161	1355	6450793	6000000	6749999
10	744803	2	8	60	1757	1276	0	7199882	6750000	7499999
11	421238	2	8	100	1608	1884	0	7624153	7500000	8249999
12	867054	1	8	85	1144	0	0	8494699	8250000	8999999
13	1150471	2	8	55	1749	1024	0	9646314	9000000	9749999
14	110305	1	8	60	1588	0	0	9759392	9750000	10499999
15	993189	3	8	60	1084	1712	1794	10754169	10500000	11249999
16	849701	1	8	80	1008	0	0	11608460	11250000	11999999

Total number of pulses in waveform = 30



Type 5 Radar Waveform_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	531193	1	19	95	1408	0	0	531193	0	666666
2	592267	2	19	100	1111	1355	0	1124888	666667	1333333
3	478926	1	19	100	1853	0	0	1606260	1333334	2000000
4	996671	2	19	50	1588	1654	0	2604784	2000001	2666667
5	354668	1	19	80	1878	0	0	2962694	2666668	3333334
6	577299	3	19	55	1407	1726	1672	3541871	3333335	4000001
7	801976	2	19	60	1742	1843	0	4348652	4000002	4666668
8	749913	2	19	60	1978	1696	0	5102150	4666669	5333335
9	768762	3	19	50	1686	1441	1193	5874586	5333336	6000002
10	318108	2	19	55	1809	1373	0	6197014	6000003	6666669
11	765929	2	19	90	1867	1240	0	6966125	6666670	7333336
12	849587	1	19	85	1820	0	0	7818819	7333337	8000003
13	597608	3	19	100	1384	1276	1388	8418247	8000004	8666670
14	810100	2	19	100	1681	1556	0	9232395	8666671	9333337
15	327894	3	19	65	1900	1131	1308	9563526	9333338	10000004
16	1050883	3	19	55	1229	1237	1270	10618748	10000005	10666671
17	547668	3	19	65	1280	1287	1318	11170152	10666672	11333338
18	237426	3	19	70	1810	1781	1653	11411463	11333339	12000005

Total number of pulses in waveform = 39

Type 5 Radar Waveform_30

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri (us)	Pulse 2 Pri (us)	Pulse 3 Pri (us)	Start Loc (us)	Start Burst Interval (us)	End Burst Interval (us)
1	316402	3	9	60	1674	1083	2000	316402	0	631578
2	313521	1	9	70	1822	0	0	634680	631579	1263157
3	651492	1	9	60	1273	0	0	1287994	1263158	1894736
4	878046	2	9	95	1588	1922	0	2167313	1894737	2526315
5	489935	1	9	95	1686	0	0	2660758	2526316	3157894
6	643525	1	9	85	1932	0	0	3305969	3157895	3789473
7	608062	2	9	80	1449	1335	0	3915963	3789474	4421052
8	957470	3	9	75	1674	1112	1889	4876217	4421053	5052631
9	508830	2	9	90	1978	1268	0	5389722	5052632	5684210
10	875568	2	9	65	1722	1399	0	6268536	5684211	6315789
11	603745	2	9	65	1838	1043	0	6875402	6315790	6947368
12	585766	1	9	50	1638	0	0	7464049	6947369	7578947
13	503016	3	9	65	1228	1329	1477	7968703	7578948	8210526
14	618298	2	9	75	1760	1146	0	8591035	8210527	8842105
15	665822	1	9	90	1816	0	0	9259763	8842106	9473684
16	353186	3	9	100	1142	1677	1292	9614765	9473685	10105263
17	1021881	3	9	90	1407	1460	1523	10640757	10105264	10736842
18	287877	3	9	80	1332	1480	1635	10933024	10736843	11368421
19	647255	1	9	65	1580	0	0	11584726	11368422	12000000

Total number of pulses in waveform = 37

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	5530.2	1	16	5536.3	1
2	5491.0	1	17	5521.1	1
3	5512.3	1	18	5539.8	1
4	5493.6	1	19	5567.1	1
5	5543.5	1	20	5496.7	1
6	5532.1	1	21	5535.2	1
7	5568.4	1	22	5557.4	1
8	5519.8	1	23	5564.8	1
9	5561.3	1	24	5505.3	1
10	5537.7	1	25	5498.1	1
11	5526.9	1	26	5551.5	1
12	5554.5	1	27	5547.7	1
13	5569.0	1	28	5545.6	1
14	5542.6	1	29	5528.2	1
15	5517.4	1	30	5523.6	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5554	3	1	5477	3
3	5560	9	22	5491	66
10	5556	30	24	5504	72
24	5510	72	39	5466	117
44	5502	132	44	5473	132
48	5543	144	54	5476	162
51	5541	153	74	5493	222
52	5500	156	76	5490	228
56	5530	168	92	5501	276
65	5507	195	--	--	--
66	5521	198	--	--	--
70	5503	210	--	--	--
72	5548	216	--	--	--
75	5518	225	--	--	--
79	5505	237	--	--	--
89	5526	267	--	--	--
96	5538	288	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5485	0	0	5511	0
16	5502	48	2	5501	6
25	5483	75	3	5520	9
26	5498	78	7	5478	21
36	5518	108	8	5470	24
42	5505	126	28	5522	84
43	5536	129	29	5495	87
59	5491	177	43	5510	129
60	5533	180	53	5491	159
64	5510	192	55	5489	165
87	5505	261	67	5487	201
96	5517	288	70	5502	210
--	--	--	82	5497	246
--	--	--	91	5473	273
--	--	--	95	5517	285
--	--	--	97	5488	291
--	--	--	99	5480	297

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5569	18	2	5539	6
19	5552	57	5	5530	15
24	5536	72	8	5560	24
29	5563	87	21	5519	63
47	5529	141	24	5543	72
49	5562	147	28	5548	84
51	5551	153	62	5503	186
64	5565	192	63	5558	189
72	5518	216	67	5505	201
--	--	--	68	5520	204
--	--	--	74	5507	222
--	--	--	81	5513	243
--	--	--	82	5504	246



Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5554	3	11	5519	33
3	5587	9	26	5543	78
4	5550	12	30	5547	90
6	5564	18	40	5495	120
13	5589	39	42	5509	126
23	5573	69	49	5513	147
29	5591	87	52	5511	156
32	5578	96	62	5532	186
39	5547	117	75	5520	225
46	5594	138	77	5521	231
48	5540	144	80	5517	240
49	5599	147	82	5528	246
50	5558	150	87	5504	261
66	5545	198	95	5522	285
71	5592	213	--	--	--
81	5575	243	--	--	--
83	5577	249	--	--	--
85	5551	255	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5590	0	1	5512	3
3	5550	9	6	5513	18
13	5560	39	41	5507	123
14	5540	42	48	5509	144
16	5539	48	55	5560	165
24	5576	72	56	5549	168
33	5573	99	66	5556	198
34	5591	102	72	5540	216
63	5564	189	85	5523	255
91	5565	273	87	5526	261
95	5571	285	92	5564	276
97	5542	291	97	5563	291

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5508	51	2	5552	6
31	5503	93	9	5562	27
35	5529	105	11	5554	33
42	5537	126	24	5544	72
50	5533	150	29	5556	87
53	5541	159	45	5566	135
56	5511	168	55	5548	165
64	5553	192	65	5561	195
71	5505	213	80	5569	240
73	5497	219	86	5529	258
83	5546	249	89	5550	267
90	5523	270	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
22	5570	66	11	5551	33
36	5577	108	16	5532	48
38	5592	114	18	5524	54
40	5597	120	22	5534	66
41	5600	123	33	5566	99
50	5556	150	38	5560	114
59	5561	177	39	5518	117
64	5586	192	48	5533	144
65	5553	195	68	5542	204
66	5554	198	78	5516	234
69	5562	207	84	5550	252
80	5579	240	88	5564	264
87	5569	261	91	5538	273
94	5580	282	97	5517	291

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5501	12	3	5531	9
12	5505	36	18	5545	54
14	5487	42	39	5560	117
17	5525	51	42	5539	126
26	5523	78	44	5528	132
33	5533	99	46	5527	138
34	5504	102	53	5542	159
36	5502	108	54	5508	162
37	5489	111	67	5543	201
39	5506	117	68	5520	204
59	5543	177	79	5510	237
70	5503	210	93	5533	279
73	5528	219	98	5547	294
78	5547	234	--	--	--
80	5526	240	--	--	--
81	5527	243	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5509	15	0	5564	0
27	5492	81	3	5533	9
34	5497	102	4	5544	12
38	5543	114	5	5513	15
39	5511	117	9	5552	27
62	5499	186	10	5542	30
65	5496	195	13	5517	39
68	5539	204	23	5530	69
69	5525	207	24	5561	72
81	5521	243	29	5524	87
--	--	--	59	5543	177
--	--	--	65	5563	195
--	--	--	66	5562	198
--	--	--	68	5538	204
--	--	--	80	5512	240
--	--	--	90	5569	270

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5559	36	1	5524	3
18	5542	54	14	5510	42
25	5587	75	15	5479	45
35	5548	105	16	5468	48
55	5566	165	54	5478	162
62	5593	186	70	5507	210
72	5562	216	76	5480	228
73	5537	219	80	5526	240
79	5543	237	83	5490	249
84	5544	252	94	5470	282
86	5586	258	95	5495	285
99	5585	297	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5549	3	2	5531	6
4	5511	12	6	5534	18
5	5541	15	17	5530	51
18	5523	54	19	5539	57
23	5522	69	24	5545	72
24	5518	72	25	5547	75
48	5510	144	28	5571	84
56	5507	168	30	5568	90
66	5558	198	47	5565	141
67	5506	201	50	5556	150
68	5546	204	64	5579	192
88	5551	264	68	5564	204
--	--	--	69	5543	207
--	--	--	78	5559	234
--	--	--	84	5532	252
--	--	--	87	5563	261
--	--	--	90	5576	270

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5585	12	7	5504	21
7	5590	21	26	5505	78
14	5540	42	36	5526	108
19	5548	57	40	5501	120
26	5562	78	49	5509	147
33	5583	99	61	5491	183
49	5589	147	62	5485	186
60	5592	180	74	5522	222
65	5552	195	76	5498	228
70	5565	210	85	5517	255
85	5551	255	92	5486	276
88	5547	264	98	5505	294



Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5490	24	1	5573	3
10	5528	30	3	5562	9
22	5489	66	7	5568	21
35	5525	105	8	5559	24
38	5502	114	10	5550	30
47	5505	141	17	5546	51
56	5493	168	18	5578	54
73	5497	219	21	5530	63
79	5523	237	23	5535	69
8	5490	24	38	5538	114
10	5528	30	39	5554	117
22	5489	66	41	5524	123
35	5525	105	43	5543	129
--	--	--	51	5574	153
--	--	--	54	5523	162
--	--	--	56	5572	168
--	--	--	58	5564	174
--	--	--	70	5525	210
--	--	--	76	5521	228
--	--	--	84	5552	252
--	--	--	88	5548	264

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5554	0	11	5565	33
4	5569	12	19	5568	57
17	5558	51	25	5540	75
22	5571	66	32	5543	96
45	5543	135	37	5535	111
47	5553	141	42	5542	126
50	5567	150	49	5533	147
52	5518	156	60	5521	180
80	5523	240	62	5528	186
88	5565	264	63	5529	189
97	5533	291	68	5522	204
--	--	--	78	5548	234
--	--	--	80	5555	240
--	--	--	82	5556	246
--	--	--	93	5524	279
--	--	--	97	5569	291
--	--	--	98	5517	294

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5545	0	13	5519	39
5	5547	15	17	5541	51
25	5550	75	30	5527	90
33	5504	99	35	5543	105
34	5504	102	44	5521	132
50	5548	150	48	5495	144
64	5513	192	61	5528	183
67	5540	201	66	5504	198
75	5531	225	70	5544	210
87	5511	261	80	5493	240
92	5555	276	82	5505	246
--	--	--	86	5542	258
--	--	--	89	5531	267
--	--	--	91	5520	273
--	--	--	98	5548	294

6. CONCLUSION

The data collected relate only the item(s) tested and show that the unit is in compliance with Part 15E of the FCC Rules.

————— The End —————

Appendix A – Test Setup Photograph

Refer to 1906TW0102-UT file.

Appendix B – EUT Photograph

Refer to 1906TW0102-UE file.