DFS MEASUREMENT REPORT

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

FCC ID:	2AD8UFZCWM2B1
APPLICANT:	Nokia Solutions and Networks, OY
Application Type:	Certification
Product:	AC220m Wi-Fi module ID US
Model No.:	WM2B-AC220m
Brand Name:	NOKIA
FCC Classification:	Unlicensed National Information Infrastructure (NII)
FCC Rule Part(s):	Part 15 Subpart E - 15.407 Section (h)(2) KDB 905462 D02v02, KDB 905462 D04v01
Type of Device:	☒ Master Device ☐ Client Device (No radar detection) ☐ Client Device with radar detection
Test Date:	December 20, 2017 ~ January 17, 2018

Reviewed By : Paddy Chen
(Paddy Chen)

Approved By : Chenz Ker
(Chenz Ker)

Testing Laboratory
3261

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
1712TW0105-U5	Rev. 01	Initial Report	02-22-2018	Valid

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Description Page

§2.1033 General Information

Applicant:	Nokia Solutions and Networks, OY
Applicant Address:	2000 W. Lucent Lane, Naperville, Illinois, United States, 60563
Manufacturer:	Nokia Solutions and Networks, OY
Manufacturer Address:	2000 W. Lucent Lane, Naperville, Illinois, United States, 60563
Test Site:	MRT Technology (Taiwan) Co., Ltd
Test Site Address:	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
FCC Registration No.:	153292
IC Registration No.:	21723-1
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

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

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

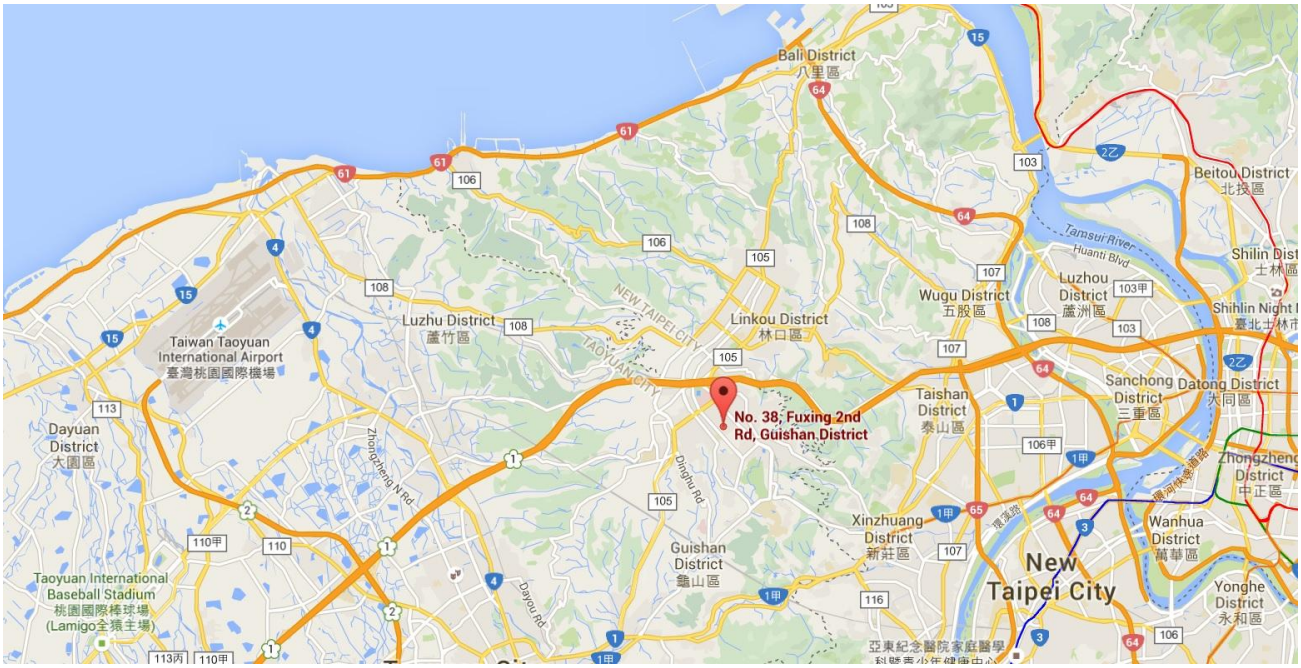
1. INTRODUCTION

1.1. Scope

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

1.2. MRT Test Location

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



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	AC220m Wi-Fi module ID US
Model No.:	WM2B-AC220m
Brand Name:	NOKIA
Wi-Fi Specification:	802.11a/b/g/n/ac
Frequency Range	**2.4GHz:** For 802.11b/g/n-HT20: 2412 ~ 2462 MHz For 802.11n-HT40: 2422 ~ 2452 MHz **5GHz:** For 802.11a/n-HT20/ac-VHT20:5180~5320MHz, 5500~5720MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40:5190~5310MHz, 5510~5710MHz, 5755~5795MHz For 802.11ac-VHT80:5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz
Type of Modulation	802.11b: DSSS, 802.11a/g/n/ac: OFDM
Modulation Type	CCK, DQPSK, DBPSK for DSSS 16QAM, 64QAM, 256QAM, QPSK, BPSK for OFDM
Power-on cycle	Requires 81.3 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band)	For the 5250-5350MHz, 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

2.2. Description of Available Antennas

Antenna Port	Brand	Connector Type	Cable Length	Antenna Type	Frequency (MHz)	Gain (dBi)
Ant 0	Galtronics	MMCX	9.1cm	PIFA	5250 ~ 5350	4.91
					5470 ~ 5725	5.23
Ant 1		MMCX	30.6cm	PIFA	5250 ~ 5350	6.17
					5470 ~ 5725	5.57

Frequency Band (MHz)	Tx Paths	Per Chain Max Antenna Gain (dBi)		Beam Forming Directional Gain (dBi)		CDD Directional Gain (dBi)	
		Ant 0	Ant 1	For Power	For PSD	For Power	For PSD
5250 ~ 5350	2	4.91	6.17	8.57	8.57	6.17	9.18
5470 ~ 5725	2	5.23	5.57	8.41	8.41	5.57	8.58

Note1: The EUT supports Cyclic Delay Diversity (CDD) technology for 802.11a/b/g mode, and CDD signals are correlated.

Note 2: The EUT supports Beam Forming technology for 802.11n/ac mode.

Note 3: For CDD transmissions, directional gain is calculated as follows, N_{ANT} = 2, N_{SS} = 1.

Two antennas have the same gain, G_{ANT}, Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,
  Array Gain = 10 log (N_{ANT}/ N_{SS}) dB = 3.01;
- For power measurements on IEEE 802.11 devices,
  Array Gain = 0 dB for N_{ANT} ≤ 4;

Note 4: For Beam Forming transmissions, directional gain = 10*log[($10^{G1/20}$ + $10^{G2/20}$ + … + $10^{GN/20}$)^2/N_{ANT}]dBi.

2.3. Description of Antenna RF Port

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

2.4. DFS Band Carrier Frequencies Operation

802.11 a/n-HT20/ac-VHT20

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

802.11n-HT40/ac-VHT40

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

802.11ac-VHT80

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

2.5. Test Mode

Test Mode	Mode 1: Communication with Notebook

3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

3.1. Applicability

The following table from FCC KDB 905462 D02 NII 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 NII DFS Compliance Procedures New Rules v02 the following are the requirements for Master Devices:

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

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

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

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

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

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

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

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

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

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

Table 3-3: DFS Response Requirements

3.3. DFS Detection Threshold Values

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

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

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

3.4. Parameters of DFS Test Signals

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

Short Pulse Radar Test Waveforms

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

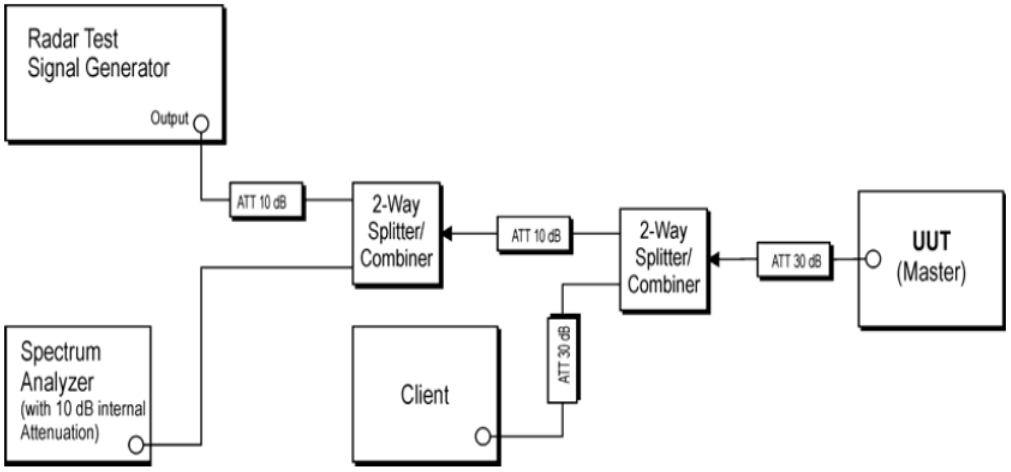


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

4. TEST EQUIPMENT CALIBRATION DATE

Dynamic Frequency Selection (DFS)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2018/07/10
MXG X-Series Microwave Analog Signal Generator	KEYSIGHT	N5183B	MRTTWA00013	1 year	2018/04/17
Temperature/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2018/06/08
Combiner	WOKEN	0120N02208001D	MRTTWA00040	1 year	N/A
Broadband Hornantenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2018/04/05

Client Information

Instrument	Manufacturer	Type No.
Wireless Network Adapter	Intel	7260HMW

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

5. TEST RESULT

5.1. Summary

Product Name: **AC220m Wi-Fi module ID US**

IC: **109D-FZCWM2B01**

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

5.2. Radar Waveform Calibration

5.2.1. Calibration Setup

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

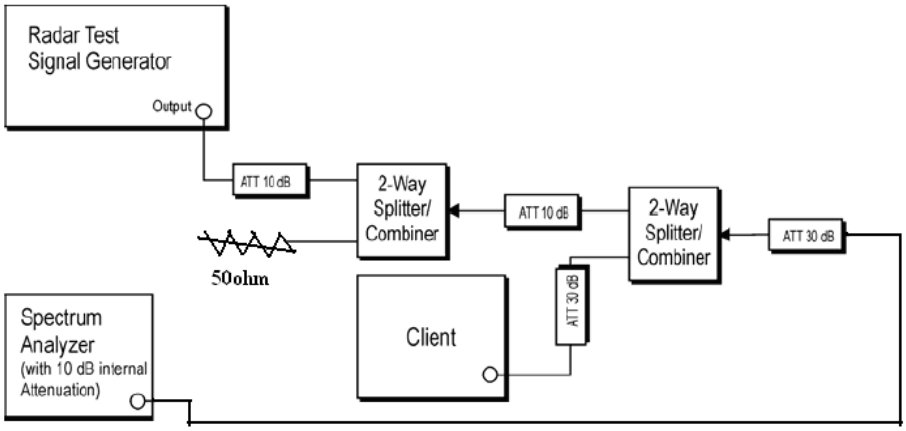


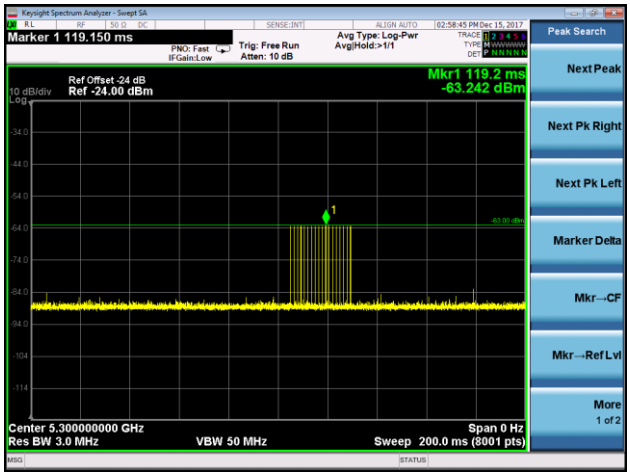
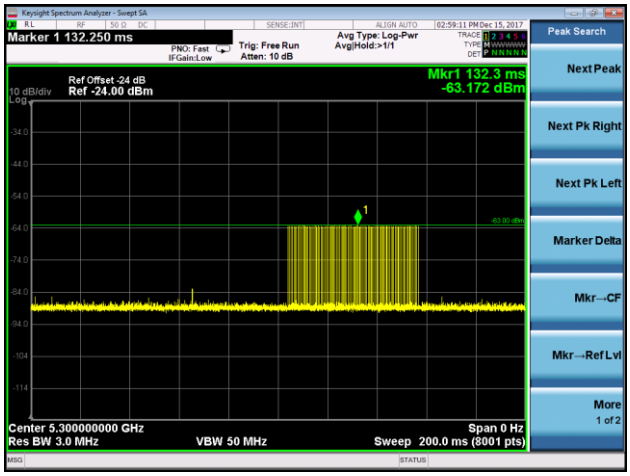
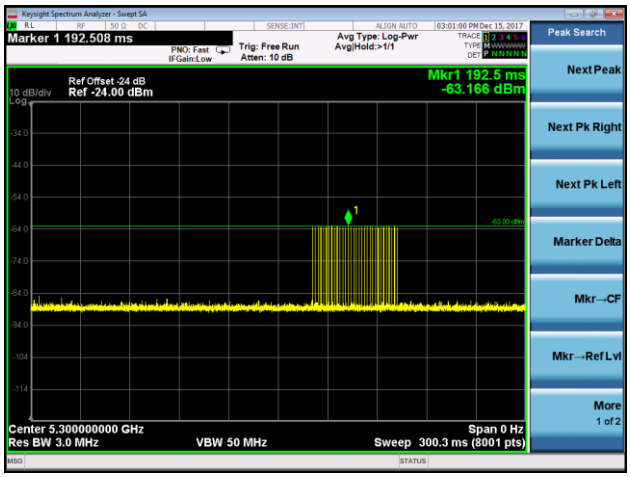
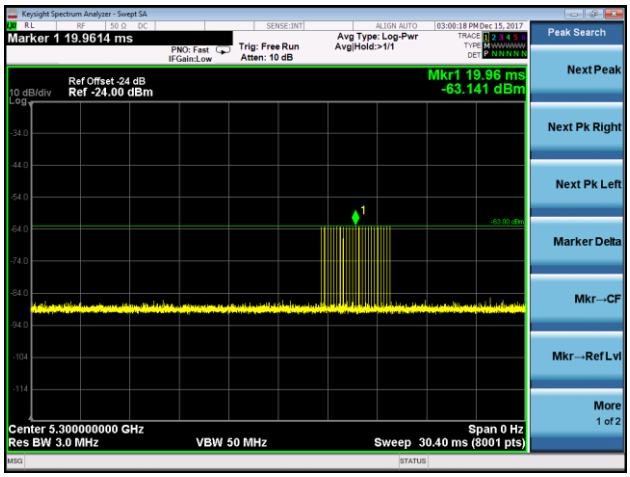
Figure 3-2: Conducted Test Setup

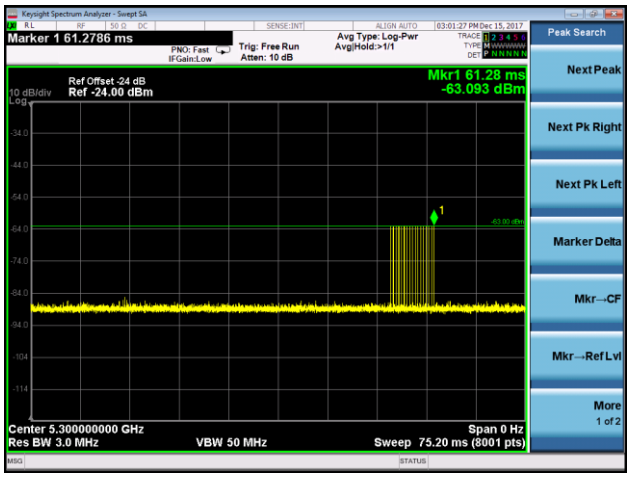
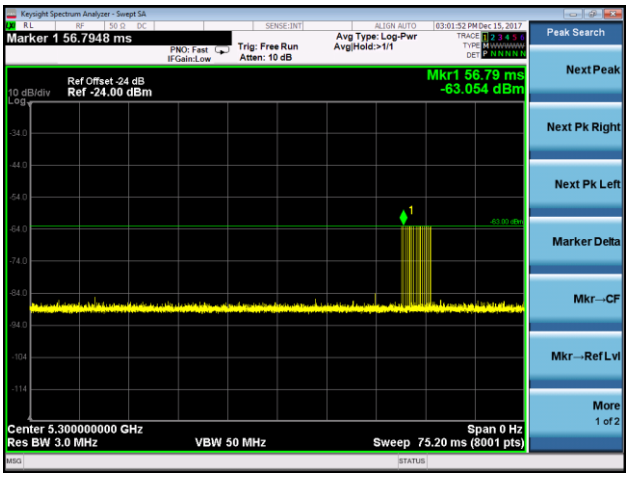
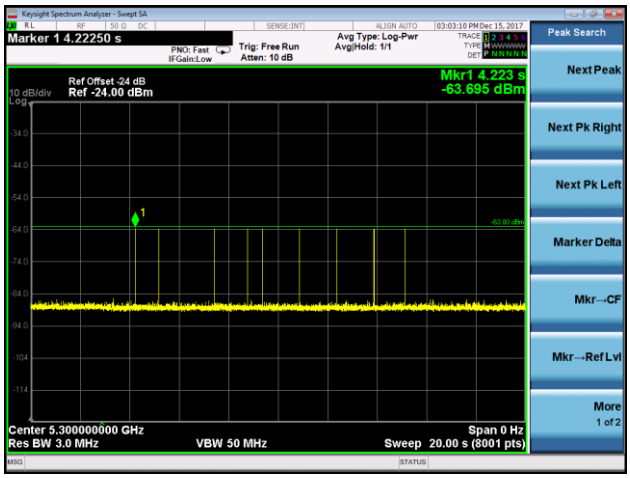
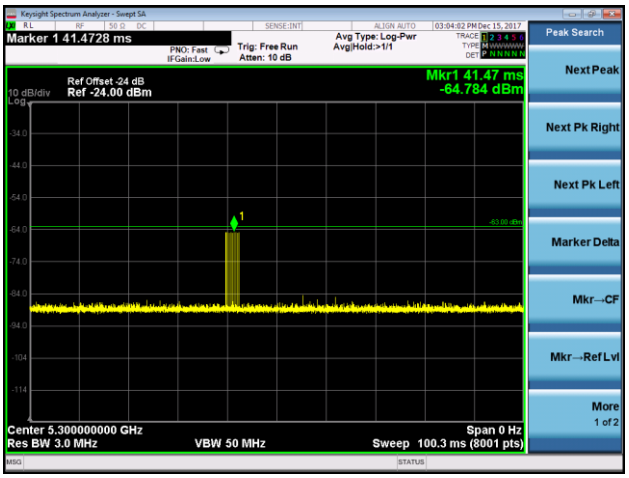
5.2.2. Calibration Procedure

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

5.2.3. Cablibration Result

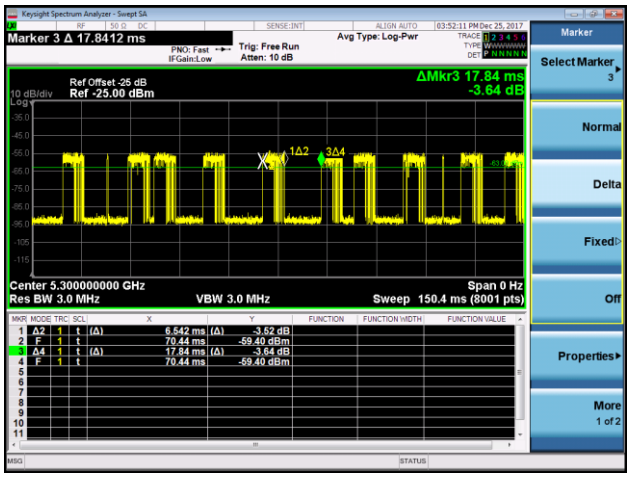
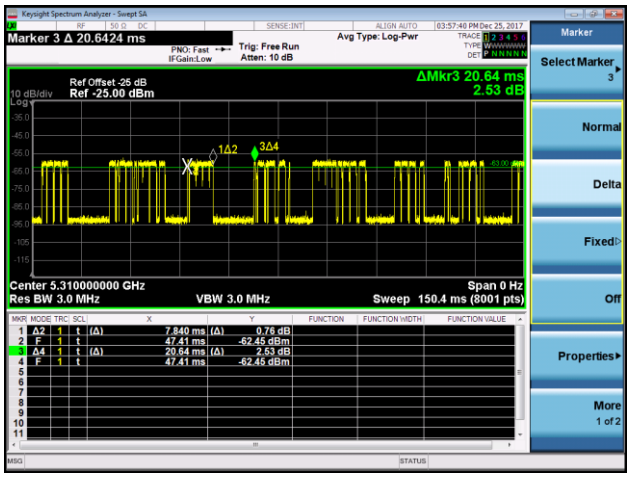
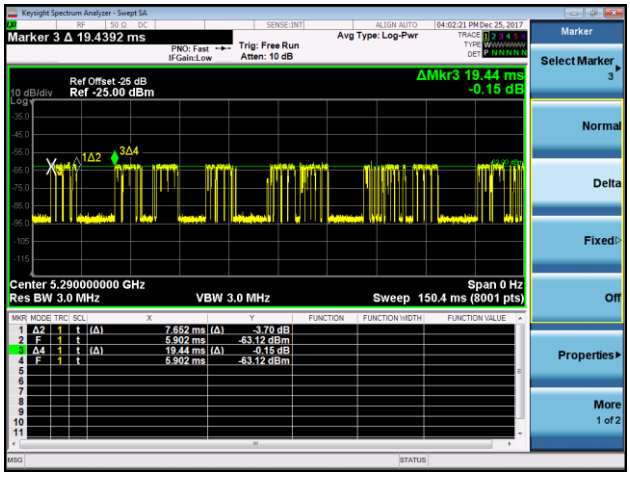
Product	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/15
Test Item	Radar Waveform Calibration		

Radar Waveform Calibration	
Radar #0	Radar #1 (Test A) PRI = 578us and the number of pulses = 92
	
Radar #1 (Test B) PRI = 1.667ms and the number of pulses = 32	Radar #2
	

Radar #3	Radar #4
	
Radar #5	**Radar #6**
	

5.2.4. Channel Loading Test Result

Product	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Channel Loading		

Channel Loading Plot	
802.11a 5300MHz	802.11n-HT40 5310MHz
	
802.11ac-VHT80 5290MHz	
	

Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11a	5300 MHz	36.67%	≥ 17%	Pass
802.11n-HT40	5310 MHz	37.98%	≥ 17%	Pass
802.11ac-VHT80	5290 MHz	39.36%	≥ 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. NII Detection Bandwidth Measurement

5.3.1. Test Limit

Minimum 100% of the NII 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	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Detection Bandwidth (802.11a mode – 5300MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5290	0	0	0	0	0	0	0	0	0	0	0%
5291 FL	1	1	1	1	1	1	1	1	1	1	100%
5292	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5306	1	1	1	1	1	1	1	1	1	1	100%
5307	1	1	1	1	1	1	1	1	1	1	100%
5308	1	1	1	1	1	1	1	1	1	1	100%
5309 FH	1	1	1	1	1	1	1	1	1	1	100%
5310	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz. The 99% channel bandwidth is 16.52MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5309MHz - 5291MHz = 18MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 16.52MHz x 100% = 16.52MHz.

Product	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Detection Bandwidth (802.11n-HT40 mode – 5310MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5290	0	0	0	0	0	0	0	0	0	0	0%
5291	0	0	0	0	0	0	0	0	0	0	0%
5292 FL	1	1	1	1	1	1	1	1	1	1	100%
5293	1	1	1	1	1	1	1	1	1	1	100%
5294	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5310MHz. The 99% channel bandwidth is 35.94MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5329MHz - 5292MHz = 37MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 35.94MHz x 100% = 35.94MHz.

Product	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Detection Bandwidth (802.11ac-VHT80 mode – 5290MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5250	0	0	0	0	0	0	0	0	0	0	0%
5251 FL	1	1	1	1	1	1	1	1	1	1	100%
5252	1	1	1	1	1	1	1	1	1	1	100%
5253	1	1	1	1	1	1	1	1	1	1	100%
5254	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5326	1	1	1	1	1	1	1	1	1	1	100%
5327	1	1	1	1	1	1	1	1	1	1	100%
5328	1	1	1	1	1	1	1	1	1	1	100%
5329 FH	1	1	1	1	1	1	1	1	1	1	100%
5330	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5290MHz. The 99% channel bandwidth is 75.79MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5329MHz - 5251MHz = 78MHz.

Note 3: NII Detection Bandwidth Min. Limit (MHz): 75.79MHz x 100% = 75.79MHz.

5.4. Initial Channel Availability Check Time Measurement

5.4.1. Test Limit

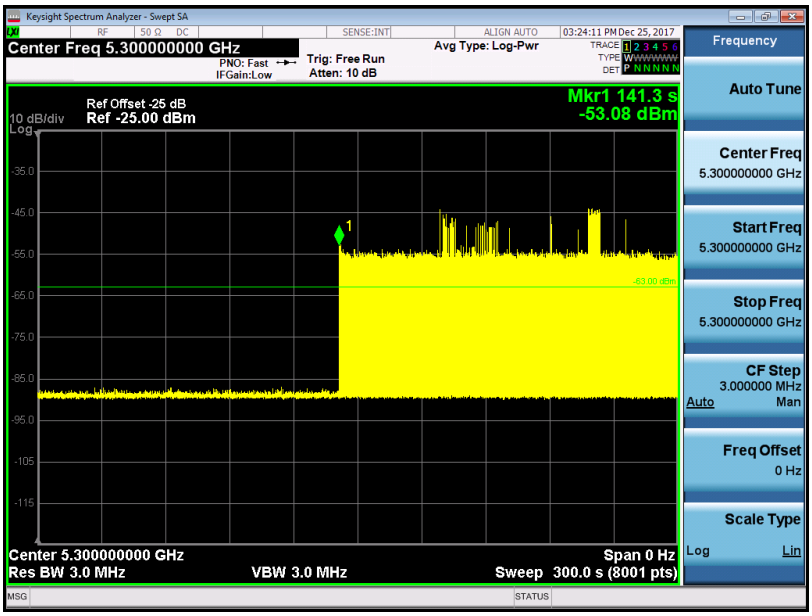
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

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	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Initial Channel Availability Check Time (802.11a mode – 5300MHz)		

Initial Channel Availability Check Time

Note: The EUT does not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle (81.3 sec). Initial beacons/data transmissions are indicated by marker 1 (141.3 sec).

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

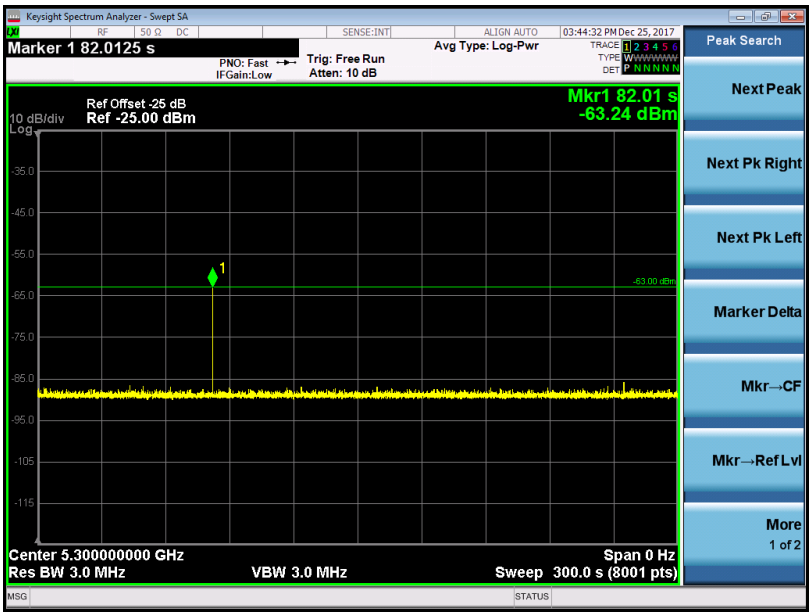
1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning 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	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Beginning of the Channel Availability Check Time (802.11a mode – 5300MHz)		

Beginning of the Channel Availability Check Time


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

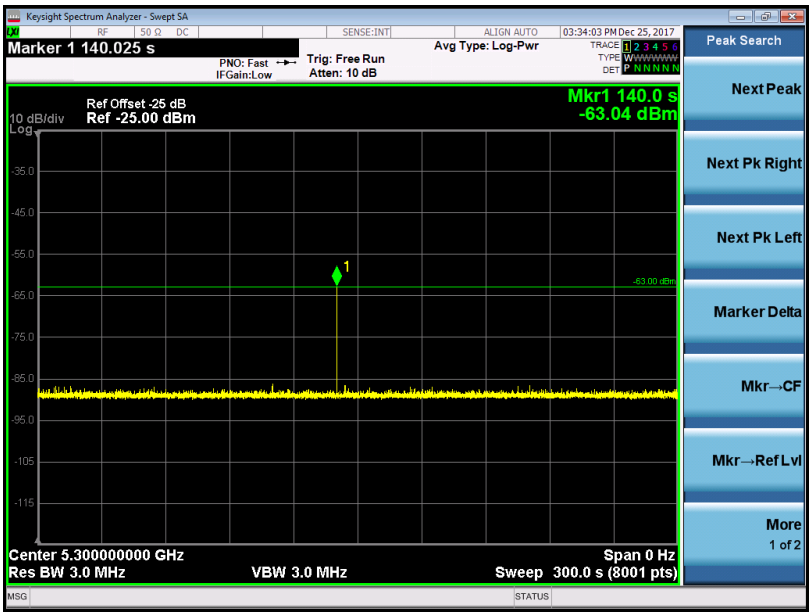
1. The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB occurs at the beginning 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 thanT1 + 60 seconds. A single Burst of one of Short Pulse Radar Types 0-4 at DFS Detection Threshold + 1 dB will commence within a 6 second window starting at T1+ 54 seconds.

3. Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions 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	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	End of the Channel Availability Check Time (802.11a mode – 5300MHz)		

End of the Channel Availability Check Time


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.

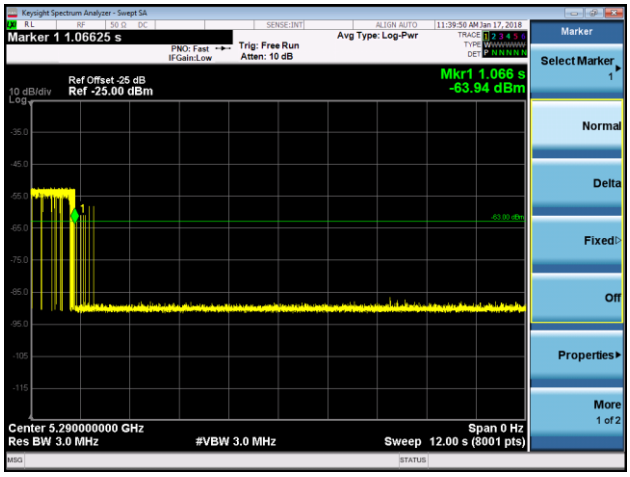
5.7.2. Test Procedure Used

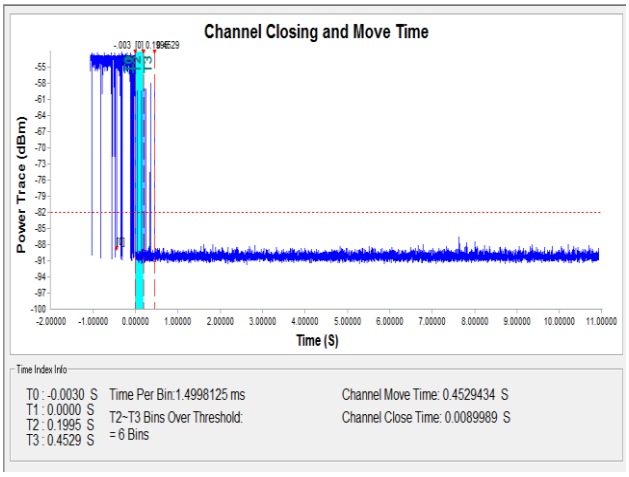
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will 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 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 X 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	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ac-VHT80 mode – 5290MHz)		

Channel Move Time and Channel Closing Transmission Time





Non-Occupancy Period

Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.430s	<10s
Channel Closing Transmission Time (ms) (Note)	6.0ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30 min
Note: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 seconds period. The aggregate duration of control signals will not count quiet periods in between transmissions.		

5.8. Statistical Performance Check Measurement

5.8.1. Test Limit

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

Radar Type	Minimum Number of Trails	Detection Probability
0	30	Pd > 60%
1	30(15 of test A and 15 of test B)	Pd > 60%
2	30	Pd > 60%
3	30	Pd > 60%
4	30	Pd > 60%
Aggregate (Radar Types 1-4)	120	Pd > 80%
5	30	Pd > 80%
6	30	Pd > 70%
Note: The percentage of successful detection is calculated by: (Total Waveform Detections / Total Waveform Trails) * 100 = Probability of Detection Radar Waveform In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows: (Pd1 + Pd2 + Pd3 + Pd4) / 4.		

5.8.2. 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	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/25
Test Item	Radar Statistical Performance Check (802.11a mode – 5300MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	1	838	63	1
2	5291	1	618	86	1
3	5292	1	3066	18	1
4	5292	1	798	67	1
5	5293	1	858	62	1
6	5293	1	778	68	1
7	5294	1	638	83	1
8	5294	1	818	65	1
9	5295	1	578	92	1
10	5296	1	538	99	1
11	5307	1	918	58	1
12	5298	1	558	95	1
13	5299	1	938	57	1
14	5300	1	718	74	1
15	5300	1	898	59	1
16	5300	1	2699	20	1
17	5301	1	1651	32	1
18	5302	1	2491	22	1
19	5303	1	2063	26	1
20	5304	1	2032	26	1
21	5305	1	1853	29	1
22	5305	1	2569	21	1
23	5306	1	1336	40	1
24	5306	1	2513	22	1
25	5307	1	746	71	1
26	5307	1	2832	19	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5308	1	2001	27	1
28	5308	1	597	89	1
29	5309	1	1323	40	1
30	5309	1	977	55	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	3.4	189	24	1
2	5291	3.9	215	29	1
3	5292	4.9	185	23	1
4	5292	1.8	199	24	1
5	5293	1.8	183	27	1
6	5293	3.4	174	24	1
7	5294	3.2	225	28	1
8	5294	3.7	178	25	1
9	5295	4.9	200	27	1
10	5296	5.0	208	27	1
11	5307	1.8	190	23	1
12	5298	1.4	207	23	1
13	5299	1.7	206	23	1
14	5300	4.7	159	27	1
15	5300	2.9	177	26	1
16	5300	1.8	159	26	1
17	5301	1.0	171	29	1
18	5302	3.5	213	24	1
19	5303	3.8	176	24	1
20	5304	1.0	172	23	1
21	5305	1.3	214	27	1
22	5305	4.5	223	29	1
23	5306	4.6	163	24	1
24	5306	1.4	156	23	1
25	5307	2.5	182	25	1
26	5307	1.3	182	28	1
27	5308	4.0	186	26	1
28	5308	1.7	207	25	1
29	5309	4.6	154	26	1
30	5309	4.1	151	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	5291	8.7	263	17	1
2	5291	6.8	478	17	1
3	5292	9.8	358	17	1
4	5292	8.0	334	18	1
5	5293	6.3	439	16	1
6	5293	7.2	270	17	1
7	5294	10.0	403	18	1
8	5294	9.0	355	18	1
9	5295	9.6	344	18	1
10	5296	7.8	443	18	1
11	5307	8.3	254	18	1
12	5298	7.8	353	16	1
13	5299	10.0	417	16	1
14	5300	7.3	328	17	1
15	5300	7.2	495	16	1
16	5300	6.8	409	18	1
17	5301	9.7	373	17	1
18	5302	9.9	421	16	1
19	5303	9.7	479	18	1
20	5304	7.9	398	17	1
21	5305	6.1	330	16	1
22	5305	6.7	500	17	1
23	5306	7.0	377	16	1
24	5306	7.5	376	18	1
25	5307	9.4	491	16	1
26	5307	10.0	476	17	1
27	5308	6.5	253	17	1
28	5308	8.0	297	16	1
29	5309	10.0	497	17	1
30	5309	7.5	266	16	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5291	16.4	404	14	1
2	5291	14.4	290	13	1
3	5292	12.7	392	16	1
4	5292	18.4	425	12	1
5	5293	11.9	280	15	1
6	5293	15.6	361	12	1
7	5294	18.6	291	12	1
8	5294	18.8	416	15	1
9	5295	19.8	452	14	1
10	5296	12.5	251	15	1
11	5307	18.3	466	12	1
12	5298	12.4	300	14	1
13	5299	12.6	325	14	1
14	5300	14.2	422	14	1
15	5300	11.3	336	16	1
16	5300	12.1	446	16	1
17	5301	16.6	297	16	1
18	5302	19.4	330	14	1
19	5303	18.1	452	12	1
20	5304	14.5	313	14	1
21	5305	20.0	348	12	1
22	5305	18.7	380	15	1
23	5306	12.0	268	13	1
24	5306	11.9	301	12	1
25	5307	11.0	407	13	1
26	5307	11.2	375	16	1
27	5308	16.9	398	12	1
28	5308	16.8	360	15	1
29	5309	18.0	369	12	1
30	5309	12.1	449	12	1
Detection Percentage (%)					100%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+100%+100%+100%)/4 = 100% (>80%)

Radar Type 5 - Radar Statistical Performance

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

Type 5 Radar Waveform_1

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	376348	3	9	70	1459	1308	1959	376348	0	631578
2	596856	2	9	55	1891	1989	0	977930	631579	1263157
3	313508	1	9	65	1270	0	0	1295318	1263158	1894736
4	674930	1	9	80	1097	0	0	1971518	1894737	2526315
5	1043780	3	9	50	1191	1038	1553	3016395	2526316	3157894
6	693177	3	9	90	1297	1324	1700	3713354	3157895	3789473
7	628644	1	9	80	1389	0	0	4346319	3789474	4421052
8	327490	2	9	100	1129	1083	0	4675198	4421053	5052631
9	615317	2	9	60	1673	1584	0	5292727	5052632	5684210
10	919967	2	9	60	1140	1452	0	6215951	5684211	6315789
11	101222	2	9	80	1049	1374	0	6319765	6315790	6947368
12	1215581	2	9	70	1222	1437	0	7537769	6947369	7578947
13	429882	3	9	70	1486	1534	1867	7970310	7578948	8210526
14	347609	2	9	50	1737	1533	0	8322806	8210527	8842105
15	751418	1	9	75	1741	0	0	9077494	8842106	9473684
16	681854	2	9	75	1700	1719	0	9761089	9473685	10105263
17	601422	2	9	50	1051	1177	0	10365930	10105264	10736842
18	784220	1	9	80	1671	0	0	11152378	10736843	11368421
19	696184	3	9	60	1555	1728	1395	11850233	11368422	12000000

Total number of pulses in waveform = 38

Type 5 Radar Waveform_2

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	356062	3	14	75	1318	1822	1527	356062	0	799999
2	1139745	2	14	90	1478	1700	0	1500474	800000	1599999
3	769726	1	14	75	1678	0	0	2273378	1600000	2399999
4	404183	2	14	60	1060	1841	0	2679239	2400000	3199999
5	874394	2	14	55	1400	1795	0	3556534	3200000	3999999
6	1187256	3	14	60	1215	1578	1290	4746985	4000000	4799999
7	806763	1	14	85	1279	0	0	5557831	4800000	5599999
8	442861	1	14	85	1323	0	0	6001971	5600000	6399999
9	640899	2	14	65	1789	1412	0	6644193	6400000	7199999
10	700065	3	14	55	1337	1085	1707	7347459	7200000	7999999
11	1314009	3	14	60	1146	1095	1176	8665597	8000000	8799999
12	793059	1	14	80	1160	0	0	9462073	8800000	9599999
13	544314	3	14	95	1590	1149	1608	10007547	9600000	10399999
14	535183	3	14	65	1582	1731	1259	10547077	10400000	11199999
15	1153531	2	14	90	1188	1477	0	11705180	11200000	11999999

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

Type 5 Radar Waveform_3

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	88823	3	5	65	1101	1158	1646	88823	0	599999
2	637249	3	5	70	1596	1331	1969	729977	600000	1199999
3	737302	3	5	65	1281	1508	1798	1472175	1200000	1799999
4	618500	2	5	70	1009	1685	0	2095262	1800000	2399999
5	890616	3	5	100	1755	1087	1246	2988572	2400000	2999999
6	572220	1	5	60	1394	0	0	3564880	3000000	3599999
7	433906	2	5	85	1251	1397	0	4000180	3600000	4199999
8	346684	2	5	90	1886	1829	0	4349512	4200000	4799999
9	544654	2	5	70	1617	1559	0	4897881	4800000	5399999
10	858440	3	5	80	1999	1044	1688	5759497	5400000	5999999
11	346968	3	5	85	1878	1755	1076	6111196	6000000	6599999
12	791903	3	5	75	1235	1731	1818	6907808	6600000	7199999
13	416886	2	5	80	1118	1015	0	7329478	7200000	7799999
14	998733	2	5	60	1405	1370	0	8330344	7800000	8399999
15	84780	1	5	95	1757	0	0	8417899	8400000	8999999
16	776437	1	5	65	1401	0	0	9196093	9000000	9599999
17	684647	1	5	85	1777	0	0	9882141	9600000	10199999
18	779755	3	5	75	1944	1939	1818	10663673	10200000	10799999
19	591054	2	5	50	1355	1923	0	11260428	10800000	11399999
20	349847	2	5	85	1036	1532	0	11613553	11400000	11999999

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

Type 5 Radar Waveform_4

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	45651	3	8	70	1372	1279	1481	45651	0	999999
2	1502327	1	8	85	1599	0	0	1552110	1000000	1999999
3	843574	2	8	60	1341	1298	0	2397283	2000000	2999999
4	758128	1	8	65	1856	0	0	3158050	3000000	3999999
5	1361373	3	8	60	1231	1516	1139	4521279	4000000	4999999
6	777438	2	8	95	1811	1297	0	5302603	5000000	5999999
7	1170809	1	8	75	1986	0	0	6476520	6000000	6999999
8	1173444	1	8	50	1448	0	0	7651950	7000000	7999999
9	1108674	3	8	95	1342	1176	1243	8762072	8000000	8999999
10	727248	3	8	90	1405	1404	1624	9493081	9000000	9999999
11	797398	3	8	65	1678	1779	1481	10294912	10000000	10999999
12	982608	1	8	50	1630	0	0	11282458	11000000	11999999

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

Type 5 Radar Waveform_5

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	823703	2	12	100	1952	1593	0	823703	0	1090908
2	943148	2	12	75	1658	1785	0	1770396	1090909	2181817
3	646440	2	12	80	1953	1806	0	2420279	2181818	3272726
4	1869490	2	12	70	1076	1897	0	4293528	3272727	4363635
5	225021	1	12	50	1173	0	0	4521522	4363636	5454544
6	1592912	3	12	50	1945	1898	1177	6115607	5454545	6545453
7	1449787	2	12	95	1017	1839	0	7570414	6545454	7636362
8	842758	2	12	70	1869	1329	0	8416028	7636363	8727271
9	866896	1	12	95	1754	0	0	9286122	8727272	9818180
10	1209780	1	12	60	1049	0	0	10497656	9818181	10909089
11	1098283	2	12	80	1631	1866	0	11596988	10909090	11999998

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

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	325559	1	18	50	1879	0	0	325559	0	749999
2	865627	1	18	95	1029	0	0	1193065	750000	1499999
3	311206	2	18	80	1094	1066	0	1505300	1500000	2249999
4	845177	2	18	90	1638	1459	0	2352637	2250000	2999999
5	1013781	1	18	85	1256	0	0	3369515	3000000	3749999
6	934604	3	18	100	1956	1849	1499	4305375	3750000	4499999
7	605677	3	18	85	1310	1877	1708	4916356	4500000	5249999
8	649379	1	18	80	1375	0	0	5570630	5250000	5999999
9	837732	2	18	80	1949	1070	0	6409737	6000000	6749999
10	951788	2	18	95	1159	1771	0	7364544	6750000	7499999
11	295625	2	18	70	1570	1818	0	7663099	7500000	8249999
12	715587	2	18	75	1051	1499	0	8382074	8250000	8999999
13	1081696	2	18	90	1012	1545	0	9466320	9000000	9749999
14	598386	1	18	80	1473	0	0	10067263	9750000	10499999
15	737543	2	18	60	1494	1535	0	10806279	10500000	11249999
16	914774	2	18	90	1563	1873	0	11724082	11250000	11999999

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

Type 5 Radar Waveform_7

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	557402	1	6	95	1527	0	0	557402	0	1090908
2	1555402	2	6	75	1173	1856	0	2114331	1090909	2181817
3	1050515	3	6	75	1428	1403	1735	3167875	2181818	3272726
4	132738	1	6	95	1433	0	0	3305179	3272727	4363635
5	2038611	3	6	100	1792	1074	1187	5345223	4363636	5454544
6	663196	3	6	95	1025	1158	1386	6012472	5454545	6545453
7	806891	2	6	75	1235	1710	0	6822932	6545454	7636362
8	1389701	1	6	100	1018	0	0	8215578	7636363	8727271
9	817924	2	6	85	1074	1707	0	9034520	8727272	9818180
10	822832	1	6	90	1334	0	0	9860133	9818181	10909089
11	1440675	3	6	80	1420	1621	1499	11302142	10909090	11999998

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

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	387617	3	19	95	1402	1387	1562	387617	0	666666
2	739938	1	19	80	1365	0	0	1131906	666667	1333333
3	751547	3	19	65	1156	1880	1574	1884818	1333334	2000000
4	744492	1	19	70	1611	0	0	2633920	2000001	2666667
5	602643	3	19	85	1294	1409	1899	3238174	2666668	3333334
6	738565	3	19	85	1378	1034	1202	3981341	3333335	4000001
7	536212	3	19	75	1254	1965	1808	4521167	4000002	4666668
8	307295	1	19	60	1014	0	0	4833489	4666669	5333335
9	867823	2	19	60	1207	1869	0	5702326	5333336	6000002
10	700762	3	19	95	1259	1915	1183	6406164	6000003	6666669
11	544461	3	19	75	1670	1505	1754	6954982	6666670	7333336
12	582181	1	19	50	1453	0	0	7542092	7333337	8000003
13	475769	3	19	95	1001	1449	1865	8019314	8000004	8666670
14	1067317	1	19	75	1214	0	0	9090946	8666671	9333337
15	698882	3	19	70	1451	1305	1428	9791042	9333338	10000004
16	583124	3	19	80	1459	1047	1971	10378350	10000005	10666671
17	744518	2	19	55	1294	1059	0	11127345	10666672	11333338
18	548335	1	19	80	1666	0	0	11678033	11333339	12000005

Total number of pulses in waveform = 40
++

Type 5 Radar Waveform_9

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	404671	3	17	70	1970	1298	1239	404671	0	705881
2	339252	1	17	75	1234	0	0	748430	705882	1411763
3	922743	1	17	75	1175	0	0	1672407	1411764	2117645
4	1056987	3	17	55	1496	1309	1370	2730569	2117646	2823527
5	549042	3	17	55	1280	1995	1764	3283786	2823528	3529409
6	265631	2	17	60	1161	1430	0	3554456	3529410	4235291
7	780987	3	17	85	1853	1541	1018	4338034	4235292	4941173
8	1045142	2	17	80	1531	1516	0	5387588	4941174	5647055
9	633051	3	17	65	1180	1954	1533	6023686	5647056	6352937
10	1007870	3	17	100	1671	1316	1260	7036223	6352938	7058819
11	691807	2	17	55	1264	1904	0	7732277	7058820	7764701
12	524070	3	17	90	1193	1166	1395	8259515	7764702	8470583
13	782147	2	17	50	1460	1414	0	9045416	8470584	9176465
14	549410	3	17	70	1848	1508	1639	9597700	9176466	9882347
15	359790	2	17	55	1783	1370	0	9962485	9882348	10588229
16	776076	3	17	60	1127	1933	1013	10741714	10588230	11294111
17	1030030	2	17	95	1457	1462	0	11775817	11294112	11999993

Total number of pulses in waveform = 41
++

Type 5 Radar Waveform_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	238960	2	10	65	1400	1572	0	238960	0	1090908
2	1291813	3	10	50	1894	1661	1619	1533745	1090909	2181817
3	1556883	3	10	85	1756	1021	1016	3095802	2181818	3272726
4	1137624	2	10	55	1517	1495	0	4237219	3272727	4363635
5	427098	3	10	65	1294	1049	1932	4667329	4363636	5454544
6	1023944	3	10	50	1553	1858	1073	5695548	5454545	6545453
7	1421632	3	10	90	1101	1330	1865	7121664	6545454	7636362
8	1251607	3	10	70	1030	1488	1364	8377567	7636363	8727271
9	692219	3	10	80	1126	1118	1781	9073668	8727272	9818180
10	858098	3	10	100	1311	1773	1512	9935791	9818181	10909089
11	1706116	1	10	100	1135	0	0	11646503	10909090	11999998

Total number of pulses in waveform = 29
++

Type 5 Radar Waveform_11

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	3016	2	9	70	1686	1982	0	3016	0	705881
2	954484	3	9	55	1867	1336	1123	961168	705882	1411763
3	465687	1	9	80	1583	0	0	1431181	1411764	2117645
4	723634	1	9	100	1486	0	0	2156398	2117646	2823527
5	921181	3	9	90	1397	1524	1415	3079065	2823528	3529409
6	738770	2	9	50	1756	1871	0	3822171	3529410	4235291
7	1021150	1	9	85	1259	0	0	4846948	4235292	4941173
8	207354	3	9	90	1733	1220	1341	5055561	4941174	5647055
9	1208978	1	9	65	1376	0	0	6268833	5647056	6352937
10	369851	2	9	60	1982	1294	0	6640060	6352938	7058819
11	1091603	3	9	80	1113	1197	1179	7734939	7058820	7764701
12	207656	1	9	100	1312	0	0	7946084	7764702	8470583
13	1048236	2	9	50	1961	1956	0	8995632	8470584	9176465
14	475764	2	9	50	1459	1825	0	9475313	9176466	9882347
15	809191	2	9	100	1111	1216	0	10287788	9882348	10588229
16	954916	3	9	80	1359	1143	1161	11245031	10588230	11294111
17	495669	1	9	75	1552	0	0	11744363	11294112	11999993

Total number of pulses in waveform = 33

Type 5 Radar Waveform_12

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	1121006	2	18	50	1811	1024	0	1121006	0	1199999
2	1022816	3	18	75	1128	1137	1778	2146657	1200000	2399999
3	696142	1	18	75	1561	0	0	2846842	2400000	3599999
4	1776474	1	18	75	1774	0	0	4624877	3600000	4799999
5	181914	2	18	55	1577	1248	0	4808565	4800000	5999999
6	1870967	2	18	85	1107	1673	0	6682357	6000000	7199999
7	960581	3	18	55	1773	1802	1673	7645718	7200000	8399999
8	1418839	3	18	55	1109	1360	1856	9069805	8400000	9599999
9	661771	1	18	95	1982	0	0	9735901	9600000	10799999
10	1781804	1	18	85	1606	0	0	11519687	10800000	11999999

Total number of pulses in waveform = 19

Type 5 Radar Waveform_13

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	742620	2	17	100	1342	1821	0	742620	0	999999
2	1178238	3	17	90	1882	1872	1965	1924021	1000000	1999999
3	520201	3	17	60	1453	1333	1363	2449941	2000000	2999999
4	1044445	1	17	95	1215	0	0	3498535	3000000	3999999
5	736900	1	17	75	1810	0	0	4236650	4000000	4999999
6	1429490	2	17	65	1294	1718	0	5667950	5000000	5999999
7	894524	2	17	50	1327	1583	0	6565486	6000000	6999999
8	454558	1	17	65	1861	0	0	7022954	7000000	7999999
9	1918669	2	17	65	1822	1454	0	8943484	8000000	8999999
10	1005820	3	17	75	1947	1533	1230	9952580	9000000	9999999
11	810286	3	17	90	1840	1854	1832	10767576	10000000	10999999
12	1005783	2	17	95	1213	1102	0	11778885	11000000	11999999

Total number of pulses in waveform = 25

Type 5 Radar Waveform_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	297103	2	8	55	1584	1949	0	297103	0	799999
2	1213163	1	8	100	1325	0	0	1513799	800000	1599999
3	720867	3	8	60	1980	1542	1565	2235991	1600000	2399999
4	824094	3	8	75	1196	1695	1006	3065172	2400000	3199999
5	383666	2	8	55	1705	1475	0	3452735	3200000	3999999
6	968534	1	8	80	1408	0	0	4424449	4000000	4799999
7	782384	1	8	55	1845	0	0	5208241	4800000	5599999
8	855655	3	8	80	1522	1220	1478	6065741	5600000	6399999
9	1001035	3	8	95	1049	1632	1080	7070996	6400000	7199999
10	634950	1	8	90	1560	0	0	7709707	7200000	7999999
11	732669	2	8	90	1593	1195	0	8443936	8000000	8799999
12	909497	2	8	80	1273	1131	0	9356221	8800000	9599999
13	817367	3	8	60	1754	1052	1718	10175992	9600000	10399999
14	525478	2	8	85	1348	1727	0	10705994	10400000	11199999
15	1212874	2	8	70	1259	1336	0	11921943	11200000	11999999

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

Type 5 Radar Waveform_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	87618	3	14	85	1575	1673	1799	87618	0	923076
2	1282288	2	14	100	1040	1661	0	1374953	923077	1846153
3	816073	2	14	50	1619	1458	0	2193727	1846154	2769230
4	779142	2	14	90	1496	1980	0	2975946	2769231	3692307
5	1291584	1	14	90	1494	0	0	4271006	3692308	4615384
6	641978	1	14	60	1498	0	0	4914478	4615385	5538461
7	748058	2	14	90	1014	1049	0	5664034	5538462	6461538
8	1060111	3	14	60	1881	1805	1683	6726208	6461539	7384615
9	1173851	1	14	100	1217	0	0	7905428	7384616	8307692
10	658003	2	14	100	1238	1628	0	8564648	8307693	9230769
11	1121336	1	14	60	1561	0	0	9688850	9230770	10153846
12	933397	1	14	95	1813	0	0	10623808	10153847	11076923
13	1048288	2	14	55	1786	1245	0	11673909	11076924	12000000

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

Type 5 Radar Waveform_16

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	66961	1	5	50	1164	0	0	66961	0	749999
2	1223872	2	5	85	1386	1280	0	1291997	750000	1499999
3	381641	2	5	50	1535	1033	0	1676304	1500000	2249999
4	596288	2	5	55	1252	1054	0	2275160	2250000	2999999
5	1020781	2	5	50	1652	1956	0	3298247	3000000	3749999
6	858468	3	5	90	1468	1064	1782	4160323	3750000	4499999
7	548756	1	5	60	1425	0	0	4713393	4500000	5249999
8	756149	1	5	80	1852	0	0	5470967	5250000	5999999
9	1002019	3	5	80	1037	1815	1590	6474838	6000000	6749999
10	275273	1	5	60	1461	0	0	6754553	6750000	7499999
11	1190608	3	5	55	1317	1320	1797	7946622	7500000	8249999
12	938342	2	5	75	1711	1396	0	8889398	8250000	8999999
13	349739	2	5	60	1593	1391	0	9242244	9000000	9749999
14	1016030	2	5	60	1724	1530	0	10261258	9750000	10499999
15	858727	3	5	95	1484	1762	1834	11123239	10500000	11249999
16	585129	2	5	100	1507	1564	0	11713448	11250000	11999999

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

Type 5 Radar Waveform_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	173531	1	19	65	1307	0	0	173531	0	599999
2	603616	2	19	70	1979	1952	0	778454	600000	1199999
3	421253	1	19	55	1636	0	0	1203638	1200000	1799999
4	1071826	3	19	85	1160	1940	1051	2277100	1800000	2399999
5	351578	3	19	60	1116	1783	1699	2632829	2400000	2999999
6	864670	2	19	95	1891	1525	0	3502097	3000000	3599999
7	647791	1	19	85	2000	0	0	4153304	3600000	4199999
8	93705	3	19	50	1686	1025	1741	4249009	4200000	4799999
9	992094	2	19	90	1528	1438	0	5245555	4800000	5399999
10	745709	1	19	100	1921	0	0	5994230	5400000	5999999
11	368227	1	19	85	1454	0	0	6364378	6000000	6599999
12	623962	3	19	90	1646	1481	1430	6989794	6600000	7199999
13	662452	2	19	95	1436	1959	0	7656803	7200000	7799999
14	568242	2	19	95	1264	1537	0	8228440	7800000	8399999
15	382907	3	19	85	1975	1130	1641	8614148	8400000	8999999
16	896036	3	19	90	1331	1845	1705	9514930	9000000	9599999
17	145796	2	19	55	1019	1881	0	9665607	9600000	10199999
18	1082101	3	19	60	1663	1264	1888	10750608	10200000	10799999
19	396940	2	19	70	1106	1911	0	11152363	10800000	11399999
20	529840	1	19	65	1313	0	0	11685220	11400000	11999999

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

Type 5 Radar Waveform_18

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	265414	1	6	100	1410	0	0	265414	0	1333332
2	2164381	3	6	60	1042	1461	1172	2431205	1333333	2666665
3	643439	2	6	60	1345	1160	0	3078319	2666666	3999998
4	1062208	2	6	50	1778	1108	0	4143032	3999999	5333331
5	2355192	1	6	90	1019	0	0	6501110	5333332	6666664
6	287105	3	6	95	1271	1995	1411	6789234	6666665	7999997
7	2318138	1	6	75	1083	0	0	9112049	7999998	9333330
8	1513426	1	6	65	1033	0	0	10626558	9333331	10666663
9	174741	2	6	100	1893	1228	0	10802332	10666664	11999996

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

Type 5 Radar Waveform_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	628532	2	10	55	1271	1005	0	628532	0	1333332
2	1590325	1	10	50	1609	0	0	2221133	1333333	2666665
3	1509568	2	10	75	1217	1166	0	3732310	2666666	3999998
4	1341451	2	10	95	1818	1994	0	5076144	3999999	5333331
5	1564681	3	10	60	1073	1503	1821	6644637	5333332	6666664
6	271482	1	10	65	1471	0	0	6920516	6666665	7999997
7	1981499	3	10	70	1569	1677	1069	8903486	7999998	9333330
8	518258	3	10	75	1415	1382	1040	9426059	9333331	10666663
9	2311686	3	10	65	1809	1123	1107	11741582	10666664	11999996

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

Type 5 Radar Waveform_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	637840	3	12	100	1122	1874	1287	637840	0	1333332
2	1725107	1	12	75	1588	0	0	2367230	1333333	2666665
3	983920	3	12	75	1580	1284	1457	3352738	2666666	3999998
4	706475	1	12	90	1137	0	0	4063534	3999999	5333331
5	1768702	1	12	60	1718	0	0	5833373	5333332	6666664
6	2135990	2	12	70	1750	1515	0	7971081	6666665	7999997
7	173712	3	12	80	1374	1378	1061	8148058	7999998	9333330
8	2344130	1	12	75	1166	0	0	10496001	9333331	10666663
9	1098427	2	12	65	1692	1253	0	11595594	10666664	11999996

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

Type 5 Radar Waveform_21

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	243447	1	14	70	1786	0	0	243447	0	599999
2	398910	3	14	90	1102	1289	1034	642143	600000	1199999
3	654540	2	14	70	1634	1897	0	1300108	1200000	1799999
4	975139	1	14	80	1017	0	0	2278778	1800000	2399999
5	203472	3	14	85	1967	1698	1430	2483267	2400000	2999999
6	512706	1	14	80	1279	0	0	3001068	3000000	3599999
7	825825	3	14	95	1357	1657	1911	3828172	3600000	4199999
8	745920	1	14	55	1221	0	0	4579017	4200000	4799999
9	418789	2	14	55	1616	1156	0	4999027	4800000	5399999
10	951760	1	14	85	1472	0	0	5953559	5400000	5999999
11	242467	3	14	50	1800	1605	1298	6197498	6000000	6599999
12	909290	2	14	90	1726	1509	0	7111491	6600000	7199999
13	562495	3	14	60	1456	1373	1974	7677221	7200000	7799999
14	415206	2	14	55	1492	1409	0	8097230	7800000	8399999
15	782779	1	14	60	1845	0	0	8882910	8400000	8999999
16	355767	1	14	90	1792	0	0	9240522	9000000	9599999
17	704241	2	14	70	1150	1909	0	9946555	9600000	10199999
18	303116	1	14	55	1176	0	0	10252730	10200000	10799999
19	799373	2	14	85	1707	1026	0	11053279	10800000	11399999
20	693505	2	14	50	1772	1381	0	11749517	11400000	11999999

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

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	361875	2	5	80	1303	1939	0	361875	0	923076
2	1289722	3	5	60	1405	1302	1676	1654839	923077	1846153
3	686624	2	5	95	1696	1607	0	2345846	1846154	2769230
4	510795	3	5	65	1391	1551	1491	2859944	2769231	3692307
5	892955	3	5	55	1135	1786	1446	3757332	3692308	4615384
6	1659685	1	5	80	1701	0	0	5421384	4615385	5538461
7	782041	1	5	50	1090	0	0	6205126	5538462	6461538
8	837529	3	5	60	1828	1086	1849	7043745	6461539	7384615
9	1070283	1	5	80	1137	0	0	8118791	7384616	8307692
10	188548	3	5	80	1159	1168	1123	8308476	8307693	9230769
11	1334915	1	5	80	1606	0	0	9646841	9230770	10153846
12	756414	2	5	75	1268	1939	0	10404861	10153847	11076923
13	996116	3	5	50	1447	1851	1061	11404184	11076924	12000000

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

Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	166893	3	10	50	1782	1282	1904	166893	0	1499999
2	1545578	3	10	80	1428	1501	1078	1717439	1500000	2999999
3	2101050	3	10	55	1342	1654	1501	3822496	3000000	4499999
4	1722614	3	10	55	1950	1864	1588	5549607	4500000	5999999
5	581478	2	10	70	1849	1275	0	6136487	6000000	7499999
6	2134741	3	10	90	1608	1241	1834	8274352	7500000	8999999
7	1978141	1	10	65	1536	0	0	10257176	9000000	10499999
8	1545519	3	10	55	1409	1792	1074	11804231	10500000	11999999

Total number of pulses in waveform = 21

****

Type 5 Radar Waveform_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	632924	3	8	85	1439	1464	1015	632924	0	1499999
2	1913710	1	8	65	1036	0	0	2550552	1500000	2999999
3	1341650	1	8	65	1557	0	0	3893238	3000000	4499999
4	663371	3	8	100	1373	1265	1743	4558166	4500000	5999999
5	2653914	2	8	90	1120	1893	0	7216461	6000000	7499999
6	938753	1	8	50	1960	0	0	8158227	7500000	8999999
7	2336577	2	8	95	1105	1562	0	10496764	9000000	10499999
8	534473	3	8	60	1321	1473	1460	11033904	10500000	11999999

Total number of pulses in waveform = 16

****

Type 5 Radar Waveform_25

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	408795	1	12	60	1734	0	0	408795	0	705881
2	916710	3	12	75	1334	1468	1381	1327239	705882	1411763
3	755384	1	12	65	1018	0	0	2086806	1411764	2117645
4	435605	3	12	60	1975	1350	1066	2523429	2117646	2823527
5	941349	2	12	75	1252	1052	0	3469169	2823528	3529409
6	675384	2	12	65	1574	1639	0	4146857	3529410	4235291
7	150583	1	12	70	1005	0	0	4300653	4235292	4941173
8	654499	2	12	85	1395	1978	0	4956157	4941174	5647055
9	1201523	3	12	80	1539	1538	1238	6161053	5647056	6352937
10	240526	2	12	55	1297	1438	0	6405894	6352938	7058819
11	1307503	2	12	95	1780	1634	0	7716132	7058820	7764701
12	452564	2	12	90	1781	1587	0	8172110	7764702	8470583
13	351060	3	12	80	1571	1698	1180	8526538	8470584	9176465
14	1346380	2	12	50	1062	1127	0	9877367	9176466	9882347
15	398420	3	12	55	1679	1914	1599	10277976	9882348	10588229
16	534620	1	12	50	1922	0	0	10817788	10588230	11294111
17	912711	2	12	95	1444	1720	0	11732421	11294112	11999993

Total number of pulses in waveform = 35

****

Type 5 Radar Waveform_26

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	2524	2	17	65	1864	1517	0	2524	0	599999
2	1134071	2	17	65	1970	1104	0	1139976	600000	1199999
3	544119	3	17	85	1817	1313	1405	1687169	1200000	1799999
4	203964	1	17	60	1632	0	0	1895668	1800000	2399999
5	1085947	1	17	75	1075	0	0	2983247	2400000	2999999
6	24835	3	17	65	1479	1251	1246	3009157	3000000	3599999
7	1086659	2	17	60	1654	1901	0	4095792	3600000	4199999
8	491245	2	17	75	1017	1948	0	4594592	4200000	4799999
9	582399	3	17	75	1681	1141	1902	5179956	4800000	5399999
10	551091	1	17	85	1311	0	0	5735771	5400000	5999999
11	297818	1	17	80	1515	0	0	6034900	6000000	6599999
12	731910	2	17	90	1578	1139	0	6768325	6600000	7199999
13	489560	1	17	70	1926	0	0	7260602	7200000	7799999
14	786642	1	17	95	1643	0	0	8049170	7800000	8399999
15	860972	2	17	60	1104	1921	0	8911785	8400000	8999999
16	232146	2	17	70	1277	1742	0	9146956	9000000	9599999
17	803882	1	17	55	1867	0	0	9953857	9600000	10199999
18	513884	3	17	70	1264	1306	1789	10469608	10200000	10799999
19	440270	1	17	85	1285	0	0	10914237	10800000	11399999
20	507785	1	17	75	1076	0	0	11423307	11400000	11999999

Total number of pulses in waveform = 35
++

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	108954	3	6	90	1606	1433	1636	108954	0	666666
2	650550	2	6	60	1020	1654	0	764179	666667	1333333
3	971392	2	6	50	1002	1333	0	1738245	1333334	2000000
4	763908	2	6	55	1820	1311	0	2504488	2000001	2666667
5	592955	2	6	70	1272	1713	0	3100574	2666668	3333334
6	557169	2	6	85	1996	1217	0	3660728	3333335	4000001
7	825346	3	6	85	1943	1112	1970	4489287	4000002	4666668
8	321112	1	6	85	1808	0	0	4815424	4666669	5333335
9	1126406	3	6	100	1833	1517	1291	5943638	5333336	6000002
10	99638	3	6	65	1093	1103	1730	6047917	6000003	6666669
11	944062	3	6	60	1403	1614	1444	6995905	6666670	7333336
12	356132	3	6	55	1795	1862	1244	7356498	7333337	8000003
13	1109364	3	6	80	1833	1425	1588	8470763	8000004	8666670
14	728962	1	6	65	1995	0	0	9204571	8666671	9333337
15	233786	1	6	60	1880	0	0	9440352	9333338	10000004
16	1108122	2	6	90	1279	1621	0	10550354	10000005	10666671
17	749964	1	6	85	1464	0	0	11303218	10666672	11333338
18	128694	1	6	60	1874	0	0	11433376	11333339	12000005

Total number of pulses in waveform = 38
++

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	888274	1	19	65	1686	0	0	888274	0	1333332
2	1108729	2	19	55	1632	1324	0	1998689	1333333	2666665
3	813058	2	19	60	1188	1282	0	2814703	2666666	3999998
4	2490110	1	19	80	1285	0	0	5307283	3999999	5333331
5	583406	2	19	75	1549	1702	0	5891974	5333332	6666664
6	1724990	2	19	65	1061	1363	0	7620215	6666665	7999997
7	1670413	1	19	95	1752	0	0	9293052	7999998	9333330
8	666066	3	19	50	1021	1395	1695	9960870	9333331	10666663
9	1065436	1	19	50	1012	0	0	11030417	10666664	11999996

Total number of pulses in waveform = 15
++

Type 5 Radar Waveform_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	587678	3	9	85	1526	1279	1288	587678	0	923076
2	1095805	3	9	70	1339	1810	1346	1687576	923077	1846153
3	967123	1	9	100	1751	0	0	2659194	1846154	2769230
4	690074	1	9	60	1156	0	0	3351019	2769231	3692307
5	902469	3	9	75	1257	1574	1433	4254644	3692308	4615384
6	918128	1	9	55	1214	0	0	5177036	4615385	5538461
7	656765	1	9	60	1271	0	0	5835015	5538462	6461538
8	956345	2	9	80	1445	1168	0	6792631	6461539	7384615
9	1225120	1	9	85	1906	0	0	8020364	7384616	8307692
10	439528	2	9	80	1499	1380	0	8461798	8307693	9230769
11	1386643	3	9	100	1073	1411	1689	9851320	9230770	10153846
12	591232	1	9	95	1734	0	0	10446725	10153847	11076923
13	817234	2	9	55	1655	1745	0	11265693	11076924	12000000

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

Type 5 Radar Waveform_30

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	29784	2	18	95	1396	1090	0	29784	0	1199999
2	2105919	2	18	65	1740	1343	0	2138189	1200000	2399999
3	940025	2	18	55	1939	1144	0	3081297	2400000	3599999
4	1199910	2	18	100	1014	1760	0	4284290	3600000	4799999
5	1026530	3	18	70	1872	1372	1548	5313594	4800000	5999999
6	783495	1	18	80	1826	0	0	6101881	6000000	7199999
7	1300831	1	18	70	1544	0	0	7404538	7200000	8399999
8	2168767	2	18	60	1330	1519	0	9574849	8400000	9599999
9	94302	1	18	100	1436	0	0	9672000	9600000	10799999
10	1413630	2	18	95	1558	1354	0	11087066	10800000	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	5291	1	16	5300	1
2	5291	1	17	5301	1
3	5292	1	18	5302	1
4	5292	1	19	5303	1
5	5293	1	20	5304	1
6	5293	1	21	5305	1
7	5294	1	22	5305	1
8	5294	1	23	5306	1
9	5295	1	24	5306	1
10	5296	1	25	5307	1
11	5307	1	26	5307	1
12	5298	1	27	5308	1
13	5299	1	28	5308	1
14	5300	1	29	5309	1
15	5300	1	30	5309	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5319	27	8	5279	24
10	5277	30	16	5289	48
16	5269	48	22	5291	66
18	5289	54	48	5278	144
21	5282	63	73	5319	219
32	5285	96	77	5304	231
36	5278	108	85	5309	255
53	5294	159	87	5307	261
64	5297	192	90	5302	270
77	5276	231	--	--	--
80	5308	240	--	--	--
87	5291	261	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5263	42	0	5267	0
33	5277	99	10	5290	30
36	5281	108	16	5283	48
44	5318	132	19	5316	57
47	5268	141	21	5304	63
56	5309	168	38	5280	114
58	5275	174	39	5268	117
64	5287	192	41	5302	123
76	5289	228	67	5274	201
82	5272	246	78	5279	234
86	5314	258	84	5270	252
88	5292	264	88	5303	264
89	5265	267	91	5292	273

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5300	0	1	5271	3
12	5269	36	37	5265	111
14	5305	42	53	5293	159
24	5302	72	59	5296	177
31	5292	93	64	5317	192
36	5272	108	65	5278	195
52	5320	156	69	5295	207
61	5287	183	74	5297	222
70	5273	210	78	5312	234
76	5271	228	82	5301	246
95	5290	285	91	5311	273
97	5310	291	93	5279	279

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5313	0	12	5293	36
3	5293	9	25	5282	75
14	5298	42	26	5281	78
40	5290	120	29	5304	87
44	5274	132	31	5294	93
58	5262	174	57	5320	171
60	5265	180	66	5312	198
65	5278	195	74	5318	222
78	5321	234	78	5295	234
79	5264	237	80	5268	240
93	5277	279	81	5263	243
--	--	--	97	5289	291
--	--	--	99	5283	297

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5292	27	2	5266	6
19	5266	57	9	5275	27
22	5315	66	16	5271	48
30	5286	90	31	5311	93
33	5273	99	32	5318	96
37	5280	111	35	5289	105
41	5296	123	41	5300	123
43	5308	129	53	5317	159
53	5291	159	59	5272	177
55	5270	165	67	5273	201
57	5265	171	79	5292	237
60	5269	180	93	5282	279
65	5301	195	95	5288	285
70	5305	210	--	--	--
80	5278	240	--	--	--
92	5314	276	--	--	--
97	5299	291	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
7	5292	21	0	5295	0
17	5294	51	3	5308	9
25	5320	75	12	5296	36
28	5284	84	19	5293	57
33	5272	99	30	5288	90
34	5289	102	37	5272	111
35	5317	105	49	5298	147
38	5313	114	63	5285	189
42	5282	126	65	5330	195
46	5278	138	72	5310	216
48	5328	144	77	5313	231
54	5285	162	92	5291	276
65	5329	195	97	5271	291
89	5307	267	--	--	--
96	5270	288	--	--	--
99	5296	297	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
33	5275	99	8	5307	24
46	5291	138	17	5299	51
56	5318	168	59	5296	177
65	5298	195	82	5326	246
68	5270	204	98	5330	294
71	5289	213	--	--	--
74	5285	222	--	--	--
85	5316	255	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5318	12	8	5270	24
13	5276	39	12	5315	36
26	5296	78	21	5318	63
36	5330	108	43	5311	129
40	5303	120	49	5308	147
44	5321	132	63	5288	189
52	5284	156	68	5316	204
58	5320	174	70	5310	210
60	5287	180	74	5275	222
65	5286	195	96	5299	288
80	5326	240	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5327	9	1	5311	3
11	5326	33	5	5294	15
30	5274	90	40	5316	120
33	5295	99	42	5312	126
43	5310	129	54	5276	162
47	5320	141	60	5324	180
58	5325	174	62	5271	186
65	5305	195	64	5288	192
76	5278	228	70	5299	210
91	5284	273	75	5279	225
--	--	--	81	5274	243

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5330	9	5	5273	15
33	5302	99	13	5317	39
39	5325	117	18	5290	54
42	5299	126	31	5295	93
44	5307	132	35	5289	105
50	5277	150	48	5276	144
75	5282	225	55	5277	165
79	5275	237	59	5324	177
92	5308	276	74	5329	222
--	--	--	75	5327	225
--	--	--	85	5303	255
--	--	--	89	5292	267

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5292	27	13	5325	39
11	5333	33	22	5293	66
14	5286	42	35	5290	105
19	5315	57	37	5299	111
21	5308	63	52	5287	156
28	5328	84	60	5311	180
29	5295	87	63	5336	189
30	5284	90	71	5305	213
39	5336	117	79	5327	237
52	5305	156	86	5332	258
59	5327	177	88	5282	264
63	5332	189	91	5318	273
67	5290	201	96	5308	288
71	5314	213	98	5303	294
72	5298	216	--	--	--
92	5337	276	--	--	--
93	5307	279	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
13	5337	39	9	5337	27
18	5304	54	10	5331	30
30	5324	90	25	5319	75
31	5278	93	40	5307	120
37	5279	111	42	5305	126
51	5321	153	48	5293	144
58	5323	174	52	5291	156
82	5280	246	55	5285	165
87	5282	261	63	5327	189
94	5313	282	71	5301	213
--	--	--	80	5334	240
--	--	--	90	5326	270
--	--	--	91	5314	273
--	--	--	93	5289	279

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5278	6	17	5285	51
8	5306	24	18	5337	54
10	5303	30	21	5310	63
13	5299	39	27	5321	81
14	5296	42	33	5303	99
15	5322	45	41	5329	123
21	5300	63	48	5295	144
23	5314	69	50	5320	150
29	5287	87	52	5294	156
37	5301	111	55	5314	165
40	5317	120	58	5308	174
44	5320	132	67	5282	201
54	5325	162	68	5316	204
66	5312	198	81	5333	243
70	5336	210	87	5312	261
78	5327	234	89	5290	267
80	5321	240	--	--	--
86	5279	258	--	--	--
87	5308	261	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
39	5284	117	4	5329	12
42	5280	126	10	5278	30
43	5318	129	15	5286	45
46	5312	138	21	5332	63
70	5311	210	53	5337	159
72	5293	216	55	5310	165
77	5296	231	67	5336	201
86	5316	258	77	5293	231
87	5290	261	83	5306	249
99	5288	297	87	5323	261
--	--	--	94	5328	282

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5295	12	6	5287	18
10	5320	30	12	5293	36
13	5293	39	27	5335	81
14	5283	42	34	5310	102
15	5323	45	36	5305	108
16	5291	48	46	5280	138
18	5317	54	58	5315	174
29	5300	87	67	5312	201
50	5326	150	72	5309	216
71	5278	213	79	5331	237
75	5322	225	81	5319	243
77	5305	231	87	5328	261
87	5337	261	90	5290	270
88	5297	264	93	5311	279
90	5325	270	--	--	--
94	5315	282	--	--	--

Product	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/26
Test Item	Radar Statistical Performance Check (802.11n-HT40 mode – 5310MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	1	918	58	1
2	5293	1	798	67	1
3	5294	1	738	72	1
4	5295	1	778	68	1
5	5296	1	818	65	1
6	5297	1	678	78	1
7	5298	1	638	83	1
8	5299	1	518	102	1
9	5300	1	938	57	1
10	5301	1	538	99	1
11	5302	1	598	89	1
12	5303	1	558	95	1
13	5305	1	658	81	1
14	5307	1	718	74	1
15	5309	1	698	76	1
16	5310	1	1063	50	1
17	5312	1	2915	19	1
18	5314	1	835	64	1
19	5316	1	1299	41	1
20	5317	1	2829	19	1
21	5318	1	2717	20	1
22	5320	1	1401	38	1
23	5322	1	1126	47	1
24	5323	1	2554	21	1
25	5324	1	2762	20	1
26	5325	1	2980	18	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5326	1	897	59	1
28	5327	1	2664	20	1
29	5328	1	1847	29	1
30	5329	1	1485	36	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	1.8	190	23	1
2	5293	3.4	193	23	1
3	5294	3.5	207	27	1
4	5295	1.0	183	29	1
5	5296	4.7	201	27	1
6	5297	2.3	201	27	1
7	5298	4.4	196	23	1
8	5299	1.2	174	29	1
9	5300	1.7	227	23	1
10	5301	3.5	224	23	1
11	5302	4.2	221	26	1
12	5303	4.2	176	28	1
13	5305	2.1	220	29	1
14	5307	2.8	219	25	1
15	5309	3.0	157	28	1
16	5310	1.8	171	26	1
17	5312	3.7	174	28	1
18	5314	2.2	154	24	1
19	5316	3.9	218	28	1
20	5317	4.5	219	28	1
21	5318	1.7	168	24	1
22	5320	3.5	207	25	1
23	5322	3.3	152	28	1
24	5323	1.6	195	27	1
25	5324	2.0	228	29	1
26	5325	3.6	213	25	1
27	5326	4.0	219	23	1
28	5327	2.8	179	23	1
29	5328	3.2	215	23	1
30	5329	1.3	161	23	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	9.7	308	16	1
2	5293	8.1	462	16	1
3	5294	9.1	374	18	1
4	5295	6.2	305	17	1
5	5296	8.1	264	17	1
6	5297	8.7	496	18	1
7	5298	6.3	323	18	1
8	5299	8.2	384	18	1
9	5300	9.5	437	18	1
10	5301	6.5	430	16	1
11	5302	7.1	416	17	1
12	5303	10.0	299	18	1
13	5305	9.5	332	16	1
14	5307	7.9	325	16	1
15	5309	8.8	339	17	1
16	5310	7.7	252	17	1
17	5312	8.5	301	18	1
18	5314	7.0	379	18	1
19	5316	7.4	342	16	1
20	5317	9.1	259	16	1
21	5318	9.7	438	18	1
22	5320	8.5	481	16	1
23	5322	7.3	471	18	1
24	5323	10.0	316	18	1
25	5324	6.4	404	18	1
26	5325	6.2	425	16	1
27	5326	9.2	267	16	1
28	5327	8.5	442	18	1
29	5328	7.5	449	18	1
30	5329	7.7	380	16	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5292	18.5	281	13	1
2	5293	14.1	350	12	1
3	5294	12.1	318	13	1
4	5295	14.0	341	13	1
5	5296	14.6	310	13	1
6	5297	19.6	316	13	1
7	5298	14.3	457	14	1
8	5299	11.3	465	16	1
9	5300	16.6	294	14	1
10	5301	11.4	367	16	1
11	5302	17.8	447	12	1
12	5303	13.2	341	15	1
13	5305	15.4	425	13	1
14	5307	18.0	465	15	1
15	5309	12.6	412	15	1
16	5310	13.4	252	13	1
17	5312	17.8	274	13	1
18	5314	15.2	407	15	1
19	5316	11.2	329	16	1
20	5317	14.0	338	14	1
21	5318	11.8	281	16	1
22	5320	18.4	387	16	1
23	5322	17.1	479	12	1
24	5323	16.8	433	12	1
25	5324	14.3	345	14	1
26	5325	15.4	257	14	1
27	5326	16.9	404	16	1
28	5327	16.5	367	15	1
29	5328	12.5	325	14	1
30	5329	16.0	484	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: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+100%+100%+100%)/4 = 100% (>80%)

Radar Type 5 - Radar Statistical Performance

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

Type 5 Radar Waveform_1

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	806725	2	9	50	1947	1968	0	806725	0	999999
2	499116	1	9	75	1800	0	0	1309756	1000000	1999999
3	1067256	2	9	90	1556	1218	0	2378812	2000000	2999999
4	1081015	2	9	90	1421	1385	0	3462601	3000000	3999999
5	1136934	1	9	70	1308	0	0	4602341	4000000	4999999
6	1289328	1	9	60	1277	0	0	5892977	5000000	5999999
7	281995	1	9	95	1408	0	0	6176249	6000000	6999999
8	1192080	3	9	90	1878	1541	1368	7369737	7000000	7999999
9	1462682	1	9	95	1866	0	0	8837206	8000000	8999999
10	508980	2	9	85	1016	1627	0	9348052	9000000	9999999
11	993766	2	9	95	1291	1276	0	10344461	10000000	10999999
12	1033645	2	9	70	1622	1504	0	11380673	11000000	11999999

Total number of pulses in waveform = 20

****

Type 5 Radar Waveform_2

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	487378	3	14	65	1346	1501	1696	487378	0	599999
2	109975	1	14	85	1804	0	0	601896	600000	1199999
3	1033498	2	14	55	1307	1178	0	1637198	1200000	1799999
4	191251	1	14	95	1460	0	0	1830934	1800000	2399999
5	748516	3	14	95	1603	1175	1406	2580910	2400000	2999999
6	589414	2	14	50	1740	1374	0	3174508	3000000	3599999
7	1019081	1	14	65	1574	0	0	4196703	3600000	4199999
8	259225	3	14	90	1654	1229	1741	4457502	4200000	4799999
9	800727	3	14	80	1182	1605	1547	5262853	4800000	5399999
10	289341	3	14	70	1927	1526	1387	5556528	5400000	5999999
11	462853	3	14	60	1174	1273	1981	6024221	6000000	6599999
12	735337	3	14	100	1399	1205	1929	6763986	6600000	7199999
13	900915	3	14	80	1185	1923	1360	7669434	7200000	7799999
14	228443	1	14	50	1436	0	0	7902345	7800000	8399999
15	661148	3	14	95	1204	1635	1669	8564929	8400000	8999999
16	843504	1	14	90	1915	0	0	9412941	9000000	9599999
17	505172	1	14	50	1146	0	0	9920028	9600000	10199999
18	281590	2	14	85	1439	1174	0	10202764	10200000	10799999
19	638350	2	14	70	1641	1423	0	10843727	10800000	11399999
20	793861	2	14	85	1425	1087	0	11640652	11400000	11999999

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

Type 5 Radar Waveform_3

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

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

Type 5 Radar Waveform_4

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	296378	1	8	100	1628	0	0	296378	0	923076
2	1164771	2	8	100	1905	1942	0	1462777	923077	1846153
3	515271	3	8	65	1197	1160	1016	1981895	1846154	2769230
4	1066127	3	8	95	1447	1678	1474	3051395	2769231	3692307
5	1317874	1	8	70	1225	0	0	4373868	3692308	4615384
6	260872	1	8	95	1041	0	0	4635965	4615385	5538461
7	1263742	3	8	100	1861	1862	1340	5900748	5538462	6461538
8	1145861	3	8	75	1175	1958	1750	7051672	6461539	7384615
9	643782	1	8	60	1766	0	0	7700337	7384616	8307692
10	816051	1	8	60	1161	0	0	8518154	8307693	9230769
11	902753	3	8	85	1268	1094	1772	9422068	9230770	10153846
12	1189520	3	8	90	1350	1472	1584	10615722	10153847	11076923
13	973222	3	8	75	1608	1683	1059	11593350	11076924	12000000

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

Type 5 Radar Waveform_5

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	255	1	12	90	1167	0	0	255	0	705881
2	1052404	3	12	95	1938	1490	1882	1053826	705882	1411763
3	937031	2	12	100	1528	1581	0	1996167	1411764	2117645
4	788663	2	12	60	1376	1935	0	2787939	2117646	2823527
5	256782	3	12	65	1334	1469	1994	3048032	2823528	3529409
6	1034105	2	12	60	1956	1914	0	4086934	3529410	4235291
7	320539	1	12	85	1995	0	0	4411343	4235292	4941173
8	1075716	3	12	75	1010	1231	1962	5489054	4941174	5647055
9	719111	3	12	95	1047	1865	1393	6212368	5647056	6352937
10	325216	3	12	90	1362	1856	1422	6541889	6352938	7058819
11	591519	1	12	75	1414	0	0	7138048	7058820	7764701
12	839635	2	12	55	1227	1370	0	7979097	7764702	8470583
13	655760	1	12	65	1296	0	0	8637454	8470584	9176465
14	1144272	2	12	90	1932	1939	0	9783022	9176466	9882347
15	571485	3	12	60	1163	1859	1631	10358378	9882348	10588229
16	489615	2	12	60	1821	1050	0	10852646	10588230	11294111
17	702289	1	12	60	1614	0	0	11557806	11294112	11999993

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

Type 5 Radar Waveform_6

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	306813	1	18	65	1254	0	0	306813	0	923076
2	713028	1	18	85	1559	0	0	1021095	923077	1846153
3	838711	2	18	90	1504	1148	0	1861365	1846154	2769230
4	1389623	1	18	75	1998	0	0	3253640	2769231	3692307
5	826464	1	18	60	1202	0	0	4082102	3692308	4615384
6	1171461	3	18	60	1188	1058	1402	5254765	4615385	5538461
7	1065286	1	18	60	1067	0	0	6323699	5538462	6461538
8	986580	1	18	65	1938	0	0	7311346	6461539	7384615
9	903912	1	18	60	1283	0	0	8217196	7384616	8307692
10	531998	2	18	100	1108	1476	0	8750477	8307693	9230769
11	494348	3	18	100	1405	1404	1121	9247409	9230770	10153846
12	1626340	2	18	55	1298	1214	0	10877679	10153847	11076923
13	821612	1	18	90	1736	0	0	11701803	11076924	12000000

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

Type 5 Radar Waveform_7

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	832852	1	6	95	1709	0	0	832852	0	1199999
2	1169607	3	6	100	1209	1014	1471	2004168	1200000	2399999
3	1214107	3	6	95	1989	1236	1688	3221969	2400000	3599999
4	847695	3	6	95	1184	1104	1528	4074577	3600000	4799999
5	1544004	1	6	60	1056	0	0	5622397	4800000	5999999
6	772725	1	6	55	1995	0	0	6396178	6000000	7199999
7	1541465	2	6	85	1207	1671	0	7939638	7200000	8399999
8	652793	3	6	80	1376	1920	1980	8595309	8400000	9599999
9	1763683	1	6	95	1332	0	0	10364268	9600000	10799999
10	933760	2	6	60	1979	1734	0	11299360	10800000	11999999

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

Type 5 Radar Waveform_8

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	214080	1	19	95	1573	0	0	214080	0	923076
2	1277309	3	19	60	1023	1728	1118	1492962	923077	1846153
3	827661	2	19	85	1900	1273	0	2324492	1846154	2769230
4	656674	2	19	55	1530	1270	0	2984339	2769231	3692307
5	1102417	1	19	100	1500	0	0	4089556	3692308	4615384
6	950372	3	19	75	1635	1258	1932	5041428	4615385	5538461
7	1310002	2	19	100	1863	1183	0	6356255	5538462	6461538
8	126134	3	19	55	1526	1699	1209	6485435	6461539	7384615
9	1338833	1	19	75	1914	0	0	7828702	7384616	8307692
10	1111223	1	19	60	1438	0	0	8941839	8307693	9230769
11	642034	3	19	50	1260	1462	1452	9585311	9230770	10153846
12	655463	3	19	60	1707	1209	1013	10244948	10153847	11076923
13	1334461	1	19	50	1880	0	0	11583338	11076924	12000000

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

Type 5 Radar Waveform_9

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	362110	1	17	65	1549	0	0	362110	0	1499999
2	1803503	1	17	75	1358	0	0	2167162	1500000	2999999
3	871833	2	17	75	1097	1632	0	3040353	3000000	4499999
4	2066674	1	17	65	1765	0	0	5109756	4500000	5999999
5	2232660	1	17	55	1316	0	0	7344181	6000000	7499999
6	1277911	1	17	100	1050	0	0	8623408	7500000	8999999
7	1015037	3	17	80	1577	1537	1719	9639495	9000000	10499999
8	1304922	1	17	65	1669	0	0	10949250	10500000	11999999

Total number of pulses in waveform = 11
****

Type 5 Radar Waveform_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	963681	2	10	100	1725	1762	0	963681	0	1333332
2	478253	1	10	60	1571	0	0	1445421	1333333	2666665
3	1435274	1	10	100	1833	0	0	2882266	2666666	3999998
4	2093044	3	10	80	1531	1610	1380	4977143	3999999	5333331
5	424078	2	10	75	1628	1362	0	5405742	5333332	6666664
6	2351670	3	10	80	1246	1365	1848	7760402	6666665	7999997
7	448442	3	10	100	1740	1365	1217	8213303	7999998	9333330
8	1193175	3	10	75	1711	1255	1202	9410800	9333331	10666663
9	2035621	1	10	90	1007	0	0	11450589	10666664	11999996

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

Type 5 Radar Waveform_11

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	803453	2	9	65	1149	1213	0	803453	0	857142
2	763240	3	9	85	1528	1197	1503	1569055	857143	1714285
3	593292	2	9	85	1364	1700	0	2166575	1714286	2571428
4	852924	2	9	95	1700	1092	0	3022563	2571429	3428571
5	806523	3	9	100	1240	1161	1628	3831878	3428572	4285714
6	479059	2	9	55	1675	1076	0	4314966	4285715	5142857
7	1451994	2	9	100	1016	1093	0	5769711	5142858	6000000
8	597753	2	9	80	1179	1378	0	6369573	6000001	6857143
9	1063990	1	9	50	1412	0	0	7436120	6857144	7714286
10	922379	2	9	70	1946	1728	0	8359911	7714287	8571429
11	1007989	3	9	75	1353	1740	1391	9371574	8571430	9428572
12	665434	3	9	95	1555	1190	1679	10041492	9428573	10285715
13	523004	1	9	85	1368	0	0	10568920	10285716	11142858
14	658258	2	9	85	1184	1801	0	11228546	11142859	12000001

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

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	528548	3	18	90	1105	1185	1257	528548	0	666666
2	569734	3	18	85	1433	1842	1431	1101829	666667	1333333
3	855051	3	18	90	1137	1623	1721	1961586	1333334	2000000
4	335372	1	18	90	1511	0	0	2301439	2000001	2666667
5	406629	3	18	100	1408	1075	1315	2709579	2666668	3333334
6	850038	3	18	75	1103	1401	1664	3563415	3333335	4000001
7	804250	1	18	75	1080	0	0	4371833	4000002	4666668
8	481607	3	18	75	1137	1656	1584	4854520	4666669	5333335
9	842556	3	18	60	1260	1395	1857	5701453	5333336	6000002
10	549072	1	18	75	1149	0	0	6255037	6000003	6666669
11	454522	3	18	85	1301	1916	1116	6710708	6666670	7333336
12	945244	2	18	85	1898	1468	0	7660285	7333337	8000003
13	512102	2	18	75	1820	1351	0	8175753	8000004	8666670
14	865627	3	18	85	1064	1271	1927	9044551	8666671	9333337
15	819787	2	18	70	1612	1188	0	9868600	9333338	10000004
16	644564	1	18	70	1859	0	0	10515964	10000005	10666671
17	337000	3	18	50	1045	1710	1587	10854823	10666672	11333338
18	643772	2	18	75	1301	1517	0	11502937	11333339	12000005

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

Type 5 Radar Waveform_13

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	450546	1	17	55	1994	0	0	450546	0	1499999
2	1206740	3	17	95	1314	1012	1224	1659280	1500000	2999999
3	2809240	2	17	55	1244	1877	0	4472070	3000000	4499999
4	535986	3	17	50	1676	1472	1403	5011177	4500000	5999999
5	2216018	1	17	65	1864	0	0	7231746	6000000	7499999
6	943985	3	17	60	1857	1624	1615	8177595	7500000	8999999
7	1248037	2	17	65	1362	1597	0	9430728	9000000	10499999
8	1946085	2	17	100	1155	1252	0	11379772	10500000	11999999

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

Type 5 Radar Waveform_14

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	28840	2	8	75	1255	1832	0	28840	0	857142
2	841488	1	8	100	1462	0	0	873415	857143	1714285
3	999632	3	8	65	1151	1509	1216	1874509	1714286	2571428
4	1004378	3	8	65	1342	1200	1660	2882763	2571429	3428571
5	1047367	2	8	55	1428	1176	0	3934332	3428572	4285714
6	384878	1	8	70	1055	0	0	4321814	4285715	5142857
7	1029178	1	8	95	1388	0	0	5352047	5142858	6000000
8	944154	2	8	60	1229	1349	0	6297589	6000001	6857143
9	1265695	1	8	85	1232	0	0	7565862	6857144	7714286
10	939306	3	8	100	1875	1661	1730	8506400	7714287	8571429
11	769910	1	8	100	1221	0	0	9281576	8571430	9428572
12	479383	2	8	50	1672	1146	0	9762180	9428573	10285715
13	1021100	2	8	100	1810	1886	0	10786098	10285716	11142858
14	954003	3	8	60	1012	1210	1693	11743797	11142859	12000001

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

Type 5 Radar Waveform_15

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	835979	2	14	80	1922	1000	0	835979	0	1090908
2	1325772	1	14	50	1538	0	0	2164673	1090909	2181817
3	945855	1	14	100	1152	0	0	3112066	2181818	3272726
4	655929	3	14	85	1181	1568	1031	3769147	3272727	4363635
5	607854	3	14	90	1584	1470	1054	4380781	4363636	5454544
6	1597963	3	14	60	1310	1620	1928	5982852	5454545	6545453
7	842131	3	14	55	1110	1496	1035	6829841	6545454	7636362
8	1872861	1	14	75	1312	0	0	8706343	7636363	8727271
9	252506	1	14	75	1714	0	0	8960161	8727272	9818180
10	872635	1	14	85	1147	0	0	9834510	9818181	10909089
11	1948603	2	14	100	1382	1523	0	11784260	10909090	11999998

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

Type 5 Radar Waveform_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	808839	2	5	75	1523	1083	0	808839	0	1333332
2	788970	1	5	80	1380	0	0	1600415	1333333	2666665
3	2140508	1	5	85	1812	0	0	3742303	2666666	3999998
4	1491712	3	5	95	1059	1114	1591	5235827	3999999	5333331
5	440675	2	5	65	1033	1386	0	5680266	5333332	6666664
6	2185254	1	5	70	1444	0	0	7867939	6666665	7999997
7	598025	3	5	85	1441	1466	1681	8467408	7999998	9333330
8	1234591	3	5	75	1334	1976	1146	9706587	9333331	10666663
9	1975690	1	5	65	1416	0	0	11686733	10666664	11999996

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

Type 5 Radar Waveform_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	276926	2	19	90	1738	1337	0	276926	0	599999
2	684396	3	19	100	1522	1334	1804	964397	600000	1199999
3	402763	3	19	50	1855	1742	1174	1371820	1200000	1799999
4	504519	2	19	90	1722	1124	0	1881110	1800000	2399999
5	608644	3	19	75	1600	1986	1444	2492600	2400000	2999999
6	801539	3	19	55	1071	1325	1971	3299169	3000000	3599999
7	702030	2	19	85	1826	1587	0	4005566	3600000	4199999
8	247098	3	19	50	1143	1868	1506	4256077	4200000	4799999
9	1042633	1	19	55	1171	0	0	5303227	4800000	5399999
10	249640	1	19	100	1674	0	0	5554038	5400000	5999999
11	908160	1	19	80	1318	0	0	6463872	6000000	6599999
12	415260	2	19	65	1206	1843	0	6880450	6600000	7199999
13	545088	2	19	50	1538	1755	0	7428587	7200000	7799999
14	391721	2	19	50	1634	1063	0	7823601	7800000	8399999
15	746001	3	19	60	1727	1282	1268	8572299	8400000	8999999
16	799587	2	19	100	1802	1579	0	9376163	9000000	9599999
17	582601	1	19	90	1907	0	0	9962145	9600000	10199999
18	807867	2	19	55	1078	1662	0	10771919	10200000	10799999
19	72449	2	19	90	1908	1126	0	10847108	10800000	11399999
20	918308	1	19	50	1193	0	0	11768450	11400000	11999999

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

Type 5 Radar Waveform_18

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1280309	2	6	80	1259	1917	0	1280309	0	1499999
2	1579036	2	6	85	1033	1726	0	2862521	1500000	2999999
3	851832	1	6	65	1635	0	0	3717112	3000000	4499999
4	1086173	3	6	60	1679	1575	1323	4804920	4500000	5999999
5	2076551	3	6	100	1704	1198	1668	6886048	6000000	7499999
6	1787749	1	6	65	1117	0	0	8678367	7500000	8999999
7	518781	3	6	80	1898	1971	1044	9198265	9000000	10499999
8	2658364	2	6	95	1658	1946	0	11861542	10500000	11999999

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

Type 5 Radar Waveform_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	242363	3	10	75	1439	1270	1051	242363	0	749999
2	632490	2	10	80	1635	1176	0	878613	750000	1499999
3	988108	2	10	100	1964	1109	0	1869532	1500000	2249999
4	612977	2	10	85	1197	1767	0	2485582	2250000	2999999
5	1179662	1	10	70	1775	0	0	3668208	3000000	3749999
6	581386	1	10	70	1117	0	0	4251369	3750000	4499999
7	519708	2	10	85	1215	1065	0	4772194	4500000	5249999
8	527617	1	10	90	1049	0	0	5302091	5250000	5999999
9	1365426	3	10	75	1730	1595	1366	6668566	6000000	6749999
10	568793	3	10	80	1760	1908	1029	7242050	6750000	7499999
11	317595	3	10	95	1250	1965	1341	7564342	7500000	8249999
12	1421751	3	10	65	1455	1990	1664	8990649	8250000	8999999
13	95232	2	10	90	1384	1446	0	9090990	9000000	9749999
14	702592	2	10	60	1877	1279	0	9796412	9750000	10499999
15	781299	1	10	75	1140	0	0	10580867	10500000	11249999
16	1404439	1	10	100	1474	0	0	11986446	11250000	11999999

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

Type 5 Radar Waveform_20

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	602005	3	12	100	1661	1700	1925	602005	0	666666
2	580218	3	12	90	1356	1880	1644	1187509	666667	1333333
3	313020	3	12	90	1438	1246	1026	1505409	1333334	2000000
4	624714	1	12	80	1513	0	0	2133833	2000001	2666667
5	977194	1	12	55	1001	0	0	3112540	2666668	3333334
6	391482	1	12	55	1561	0	0	3505023	3333335	4000001
7	771616	1	12	60	1607	0	0	4278200	4000002	4666668
8	919427	2	12	90	1994	1918	0	5199234	4666669	5333335
9	764295	1	12	95	1742	0	0	5967441	5333336	6000002
10	503574	1	12	50	1463	0	0	6472757	6000003	6666669
11	549818	3	12	55	1431	1541	1130	7024038	6666670	7333336
12	580453	3	12	95	1961	1303	1601	7608593	7333337	8000003
13	468831	3	12	90	1708	1781	1068	8082289	8000004	8666670
14	1218209	3	12	100	1459	1156	1376	9305055	8666671	9333337
15	241856	3	12	75	1786	1185	1825	9550902	9333338	10000004
16	604014	3	12	80	1236	1848	1605	10159712	10000005	10666671
17	738979	2	12	55	1458	1733	0	10903380	10666672	11333338
18	1027800	2	12	90	1525	1437	0	11934371	11333339	12000005

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

Type 5 Radar Waveform_21

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	108368	2	14	100	1531	1168	0	108368	0	705881
2	1170367	3	14	95	1898	1508	1685	1281434	705882	1411763
3	619224	2	14	60	1589	1479	0	1905749	1411764	2117645
4	692522	3	14	55	1770	1795	1559	2601339	2117646	2823527
5	666703	1	14	80	1982	0	0	3273166	2823528	3529409
6	287026	2	14	70	1965	1046	0	3562174	3529410	4235291
7	1025063	1	14	100	1299	0	0	4590248	4235292	4941173
8	709653	2	14	85	1586	1047	0	5301200	4941174	5647055
9	427836	1	14	60	1749	0	0	5731669	5647056	6352937
10	975199	2	14	70	1793	1123	0	6708617	6352938	7058819
11	617798	3	14	90	1550	1909	1354	7329331	7058820	7764701
12	1090873	2	14	55	1062	1844	0	8425017	7764702	8470583
13	345414	1	14	85	1723	0	0	8773337	8470584	9176465
14	623403	2	14	60	1031	1547	0	9398463	9176466	9882347
15	647892	2	14	70	1921	1955	0	10048933	9882348	10588229
16	870407	1	14	50	1429	0	0	10923216	10588230	11294111
17	886503	3	14	85	1947	1353	1682	11811148	11294112	11999993

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

Type 5 Radar Waveform_22

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	913651	1	5	55	1991	0	0	913651	0	1199999
2	1147704	1	5	100	1316	0	0	2063346	1200000	2399999
3	1276402	3	5	80	1801	1296	1394	3341064	2400000	3599999
4	903438	1	5	90	1662	0	0	4248993	3600000	4799999
5	1650256	2	5	75	1238	1678	0	5900911	4800000	5999999
6	413426	3	5	100	1159	1380	1793	6317253	6000000	7199999
7	1298039	3	5	100	1319	1185	1331	7619624	7200000	8399999
8	907518	3	5	100	1197	1368	1399	8530977	8400000	9599999
9	1874119	1	5	90	1248	0	0	10409060	9600000	10799999
10	703116	2	5	85	1234	1794	0	11113424	10800000	11999999

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

Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	188593	3	10	95	1865	1447	1913	188593	0	599999
2	657107	2	10	80	1112	1544	0	850925	600000	1199999
3	739062	2	10	65	1373	1258	0	1592643	1200000	1799999
4	503143	3	10	60	1855	1050	1446	2098417	1800000	2399999
5	803361	1	10	75	1386	0	0	2906129	2400000	2999999
6	619556	2	10	75	1302	1932	0	3527071	3000000	3599999
7	330420	3	10	60	1229	1433	1403	3860725	3600000	4199999
8	924437	2	10	75	1359	1652	0	4789227	4200000	4799999
9	275501	3	10	100	1133	1068	1897	5067739	4800000	5399999
10	430293	3	10	50	1005	1288	1541	5502130	5400000	5999999
11	1091404	1	10	65	1521	0	0	6597368	6000000	6599999
12	124046	3	10	70	1203	1515	1153	6722935	6600000	7199999
13	770272	1	10	65	1320	0	0	7497078	7200000	7799999
14	779975	1	10	95	1429	0	0	8278373	7800000	8399999
15	451374	1	10	95	1328	0	0	8731176	8400000	8999999
16	846039	2	10	85	1120	1482	0	9578543	9000000	9599999
17	309964	3	10	75	1073	1071	1729	9891109	9600000	10199999
18	751993	3	10	70	1757	1625	1324	10646975	10200000	10799999
19	724182	2	10	90	1827	1464	0	11375863	10800000	11399999
20	199236	2	10	95	1395	1536	0	11578390	11400000	11999999

Total number of pulses in waveform = 43

Type 5 Radar Waveform_24

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	340971	3	8	50	1952	1644	1823	340971	0	749999
2	561794	1	8	75	1466	0	0	908184	750000	1499999
3	754101	2	8	100	1251	1254	0	1663751	1500000	2249999
4	719760	2	8	85	1772	1208	0	2386016	2250000	2999999
5	722004	3	8	60	1533	1044	1691	3111000	3000000	3749999
6	1235341	3	8	95	1459	1710	1176	4350609	3750000	4499999
7	600973	3	8	90	1073	1829	2000	4955927	4500000	5249999
8	597097	1	8	60	1290	0	0	5557926	5250000	5999999
9	984579	3	8	65	1161	1425	1377	6543795	6000000	6749999
10	826023	3	8	65	1188	1775	1345	7373781	6750000	7499999
11	580460	1	8	60	1584	0	0	7958549	7500000	8249999
12	526565	1	8	55	1462	0	0	8486698	8250000	8999999
13	645326	2	8	95	1358	1414	0	9133486	9000000	9749999
14	645809	2	8	85	1800	1836	0	9782067	9750000	10499999
15	1149302	2	8	50	1603	1271	0	10935005	10500000	11249999
16	1039941	1	8	60	1001	0	0	11977820	11250000	11999999

Total number of pulses in waveform = 33

Type 5 Radar Waveform_25

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1277155	3	12	55	1360	1281	1197	1277155	0	1499999
2	1057420	2	12	50	1238	1289	0	2338413	1500000	2999999
3	1839014	2	12	80	1936	1018	0	4179954	3000000	4499999
4	1268030	1	12	55	1453	0	0	5450938	4500000	5999999
5	1509370	1	12	55	1488	0	0	6961761	6000000	7499999
6	1510056	2	12	80	1841	1850	0	8473305	7500000	8999999
7	527587	2	12	100	1787	1018	0	9004583	9000000	10499999
8	1780590	1	12	100	1969	0	0	10787978	10500000	11999999

Total number of pulses in waveform = 14

Type 5 Radar Waveform_26

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	280530	3	17	50	1300	1167	1111	280530	0	857142
2	906452	2	17	90	1710	1851	0	1190560	857143	1714285
3	820361	1	17	75	1563	0	0	2014482	1714286	2571428
4	1136222	1	17	70	1523	0	0	3152267	2571429	3428571
5	995884	2	17	90	1235	1653	0	4149674	3428572	4285714
6	881379	2	17	80	1051	1819	0	5033941	4285715	5142857
7	297350	2	17	60	1509	1471	0	5334161	5142858	6000000
8	1156485	2	17	60	1767	1587	0	6493626	6000001	6857143
9	943310	1	17	50	1663	0	0	7440290	6857144	7714286
10	725363	1	17	55	1005	0	0	8167316	7714287	8571429
11	410861	3	17	75	1429	1146	1269	8579182	8571430	9428572
12	1649883	2	17	100	1409	1533	0	10232909	9428573	10285715
13	117267	1	17	70	1954	0	0	10353118	10285716	11142858
14	1365493	2	17	75	1911	1042	0	11720565	11142859	12000001

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

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	666826	1	6	80	1610	0	0	666826	0	999999
2	1298870	3	6	100	1716	1938	1819	1967306	1000000	1999999
3	362803	3	6	85	1236	1902	1655	2335582	2000000	2999999
4	811517	3	6	100	1516	1783	1416	3151892	3000000	3999999
5	1503715	1	6	65	1666	0	0	4660322	4000000	4999999
6	431599	2	6	85	1320	1088	0	5093587	5000000	5999999
7	1829385	1	6	85	1284	0	0	6925380	6000000	6999999
8	488757	3	6	80	1439	1032	1425	7415421	7000000	7999999
9	820144	3	6	75	1782	1323	1653	8239461	8000000	8999999
10	920569	2	6	70	1324	1977	0	9164788	9000000	9999999
11	1506874	2	6	65	1608	1778	0	10674963	10000000	10999999
12	361887	2	6	70	1364	1229	0	11040236	11000000	11999999

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

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	632508	2	19	75	1120	1772	0	632508	0	799999
2	569668	3	19	100	1276	1466	1603	1205068	800000	1599999
3	442245	2	19	55	1937	1616	0	1651658	1600000	2399999
4	1163851	2	19	55	1514	1153	0	2819062	2400000	3199999
5	838395	1	19	50	1114	0	0	3660124	3200000	3999999
6	903952	2	19	60	1113	1608	0	4565190	4000000	4799999
7	583448	1	19	60	1295	0	0	5151359	4800000	5599999
8	1046243	2	19	90	1601	1297	0	6198897	5600000	6399999
9	856964	3	19	50	1895	1552	1451	7058759	6400000	7199999
10	528358	2	19	50	1843	1967	0	7592015	7200000	7999999
11	735579	2	19	65	1669	1637	0	8331404	8000000	8799999
12	511012	3	19	100	1992	1971	1880	8845722	8800000	9599999
13	1265212	2	19	60	1233	1699	0	10116777	9600000	10399999
14	565008	3	19	70	1091	1809	1145	10684717	10400000	11199999
15	918270	3	19	60	1777	1612	1217	11607032	11200000	11999999

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

Type 5 Radar Waveform_29

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	714913	1	9	85	1915	0	0	714913	0	857142
2	472029	1	9	65	1075	0	0	1188857	857143	1714285
3	805365	1	9	85	1418	0	0	1995297	1714286	2571428
4	1254345	1	9	75	1362	0	0	3251060	2571429	3428571
5	761916	1	9	50	1395	0	0	4014338	3428572	4285714
6	334915	3	9	75	1045	1426	1349	4350648	4285715	5142857
7	1452932	2	9	60	1437	1277	0	5807400	5142858	6000000
8	510798	2	9	50	1186	1785	0	6320912	6000001	6857143
9	928933	2	9	80	1615	1189	0	7252816	6857144	7714286
10	795951	1	9	100	1493	0	0	8051571	7714287	8571429
11	1013339	3	9	60	1506	1502	1130	9066403	8571430	9428572
12	544341	2	9	55	1101	1855	0	9614882	9428573	10285715
13	1098733	1	9	80	1778	0	0	10716571	10285716	11142858
14	926212	2	9	100	1960	1516	0	11644561	11142859	12000001

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

Type 5 Radar Waveform_30

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	208578	2	18	85	1016	1345	0	208578	0	923076
2	1385117	1	18	50	1145	0	0	1596056	923077	1846153
3	841345	2	18	60	1508	1173	0	2438546	1846154	2769230
4	1074056	3	18	50	1275	1987	1229	3515283	2769231	3692307
5	793124	3	18	85	1074	1636	1455	4312898	3692308	4615384
6	415279	2	18	70	1847	1960	0	4732342	4615385	5538461
7	1104834	1	18	70	1452	0	0	5840983	5538462	6461538
8	679872	3	18	75	1967	1704	1643	6522307	6461539	7384615
9	1551108	1	18	70	1450	0	0	8078729	7384616	8307692
10	961448	1	18	80	1859	0	0	9041627	8307693	9230769
11	493181	3	18	90	1675	1601	1576	9536667	9230770	10153846
12	1518271	1	18	50	1705	0	0	11059790	10153847	11076923
13	91297	3	18	75	1296	1228	1969	11152792	11076924	12000000

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

Radar Type 6 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5292	1	16	5310	1
2	5293	1	17	5312	1
3	5294	1	18	5314	1
4	5295	1	19	5316	1
5	5296	1	20	5317	1
6	5297	1	21	5318	1
7	5298	1	22	5320	1
8	5299	1	23	5322	1
9	5300	1	24	5323	1
10	5301	1	25	5324	1
11	5302	1	26	5325	1
12	5303	1	27	5326	1
13	5305	1	28	5327	1
14	5307	1	29	5328	1
15	5309	1	30	5329	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5290	6	12	5266	36
5	5274	15	14	5277	42
17	5291	51	16	5292	48
23	5309	69	26	5318	78
24	5306	72	30	5305	90
25	5296	75	39	5294	117
34	5285	102	56	5269	168
50	5312	150	58	5263	174
69	5322	207	59	5281	177
73	5279	219	61	5293	183
88	5262	264	81	5321	243
91	5303	273	82	5311	246
95	5311	285	90	5282	270
--	--	--	97	5264	291
--	--	--	98	5289	294

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5268	6	11	5307	33
3	5291	9	12	5264	36
4	5301	12	16	5309	48
13	5304	39	17	5283	51
16	5281	48	18	5266	54
20	5276	60	26	5290	78
22	5303	66	32	5265	96
23	5280	69	44	5296	132
25	5314	75	59	5315	177
28	5284	84	61	5273	183
35	5316	105	63	5305	189
39	5318	117	78	5288	234
46	5321	138	93	5278	279
57	5296	171	99	5320	297
65	5264	195	--	--	--
72	5305	216	--	--	--
86	5293	258	--	--	--
88	5277	264	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5277	0	5	5290	15
4	5326	12	9	5316	27
11	5285	33	11	5272	33
20	5278	60	14	5284	42
23	5272	69	24	5274	72
30	5317	90	26	5302	78
37	5313	111	33	5317	99
38	5323	114	34	5283	102
40	5312	120	54	5299	162
44	5324	132	67	5291	201
63	5319	189	71	5325	213
66	5315	198	87	5327	261
72	5291	216	92	5293	276
83	5281	249	94	5310	282
92	5301	276	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5322	12	12	5288	36
6	5305	18	14	5277	42
10	5326	30	18	5327	54
18	5304	54	32	5316	96
25	5328	75	61	5271	183
37	5287	111	69	5308	207
43	5302	129	73	5294	219
53	5323	159	83	5320	249
70	5301	210	96	5317	288
79	5299	237	--	--	--
92	5318	276	--	--	--
99	5317	297	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5283	24	8	5327	24
19	5304	57	9	5312	27
46	5317	138	18	5325	54
52	5313	156	25	5280	75
54	5302	162	30	5290	90
56	5309	168	33	5295	99
59	5305	177	35	5329	105
65	5290	195	41	5308	123
69	5291	207	79	5303	237
81	5330	243	85	5328	255
90	5278	270	86	5320	258
92	5307	276	90	5298	270

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5338	27	2	5331	6
14	5280	42	4	5305	12
23	5337	69	7	5337	21
43	5295	129	20	5290	60
46	5306	138	21	5320	63
49	5307	147	30	5304	90
52	5313	156	31	5335	93
56	5324	168	56	5315	168
62	5312	186	98	5285	294
74	5296	222	99	5282	297
75	5298	225	--	--	--
80	5315	240	--	--	--
84	5278	252	--	--	--
94	5282	282	--	--	--
96	5304	288	--	--	--
99	5327	297	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5288	42	4	5294	12
15	5314	45	5	5282	15
17	5281	51	7	5306	21
27	5309	81	11	5328	33
48	5311	144	16	5300	48
63	5280	189	22	5339	66
64	5282	192	23	5333	69
72	5323	216	29	5336	87
78	5290	234	34	5325	102
80	5286	240	47	5284	141
83	5283	249	58	5285	174
84	5321	252	62	5322	186
--	--	--	94	5290	282
--	--	--	97	5321	291
--	--	--	98	5311	294
--	--	--	99	5298	297

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5333	9	10	5303	30
5	5286	15	15	5317	45
14	5329	42	17	5318	51
15	5300	45	20	5339	60
20	5293	60	33	5325	99
21	5282	63	61	5296	183
58	5335	174	63	5287	189
70	5285	210	68	5336	204
71	5314	213	73	5321	219
72	5287	216	76	5309	228
86	5340	258	84	5328	252
88	5339	264	91	5338	273

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5293	6	4	5289	12
15	5311	45	10	5285	30
17	5332	51	12	5330	36
19	5330	57	42	5314	126
21	5283	63	47	5324	141
49	5294	147	51	5305	153
53	5334	159	59	5326	177
62	5292	186	74	5340	222
63	5289	189	76	5319	228
66	5298	198	82	5284	246
77	5318	231	83	5336	249
86	5291	258	87	5296	261
--	--	--	89	5335	267
--	--	--	94	5283	282

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5327	21	3	5303	9
8	5305	24	10	5340	30
34	5300	102	23	5302	69
60	5309	180	26	5316	78
62	5330	186	30	5297	90
65	5292	195	58	5293	174
66	5340	198	69	5313	207
71	5325	213	78	5295	234
74	5287	222	86	5326	258
--	--	--	91	5311	273

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5296	0	5	5297	15
8	5326	24	9	5342	27
9	5308	27	13	5340	39
16	5295	48	20	5338	60
23	5289	69	26	5318	78
25	5317	75	41	5305	123
27	5282	81	49	5329	147
31	5337	93	58	5298	174
38	5315	114	77	5311	231
46	5333	138	86	5333	258
94	5310	282	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5296	0	13	5295	39
2	5333	6	18	5314	54
5	5340	15	21	5326	63
28	5303	84	41	5315	123
38	5291	114	57	5320	171
39	5347	117	63	5306	189
49	5311	147	70	5340	210
59	5328	177	74	5347	222
66	5302	198	83	5307	249
75	5319	225	86	5323	258
82	5298	246	87	5293	261
83	5322	249	97	5335	291
86	5345	258	98	5311	294
89	5290	267	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5326	12	14	5299	42
10	5298	30	17	5294	51
35	5338	105	21	5306	63
36	5300	108	30	5343	90
37	5292	111	31	5310	93
39	5302	117	34	5320	102
47	5323	141	36	5304	108
54	5290	162	39	5301	117
56	5335	168	40	5348	120
62	5301	186	41	5322	123
71	5327	213	42	5309	126
76	5331	228	51	5335	153
78	5336	234	60	5300	180
98	5303	294	68	5313	204
--	--	--	74	5350	222
--	--	--	76	5325	228
--	--	--	96	5318	288

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5332	93	22	5337	66
34	5350	102	26	5300	78
36	5347	108	44	5304	132
49	5346	147	45	5315	135
82	5318	246	47	5316	141
98	5315	294	49	5339	147
--	--	--	56	5347	168
--	--	--	64	5321	192
--	--	--	80	5358	240
--	--	--	84	5354	252
--	--	--	94	5323	282

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5301	3	0	5342	0
17	5348	51	14	5310	42
22	5298	66	29	5319	87
24	5327	72	40	5328	120
26	5319	78	44	5309	132
39	5347	117	53	5350	159
42	5304	126	59	5336	177
50	5351	150	60	5305	180
55	5335	165	67	5321	201
62	5329	186	92	5346	276
67	5355	201	--	--	--
77	5320	231	--	--	--
87	5316	261	--	--	--
89	5350	267	--	--	--
93	5328	279	--	--	--
94	5331	282	--	--	--

Product	AC220m Wi-Fi module ID US	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	TR5	Test Date	2017/12/27
Test Item	Radar Statistical Performance Check (802.11ac-VHT80 mode – 5290MHz)		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5252	1	898	59	1
2	5253	1	738	72	1
3	5255	1	818	65	1
4	5261	1	698	76	1
5	5264	1	758	70	1
6	5267	1	558	95	1
7	5270	1	918	58	1
8	5273	1	858	62	1
9	5276	1	938	57	1
10	5279	1	598	89	1
11	5282	1	578	92	1
12	5285	1	3066	18	1
13	5288	1	798	67	1
14	5290	1	538	99	1
15	5294	1	838	63	1
16	5297	1	976	55	1
17	5300	1	643	83	1
18	5303	1	2629	21	1
19	5306	1	2334	23	1
20	5309	1	680	78	1
21	5312	1	2291	24	1
22	5315	1	1217	44	1
23	5318	1	547	97	1
24	5321	1	2439	22	1
25	5323	1	1670	32	1
26	5325	1	855	62	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5326	1	1278	42	1
28	5327	1	3045	18	1
29	5328	1	721	74	1
30	5328	1	2470	22	1
Detection Percentage (%)					100%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5252	1.1	229	24	1
2	5253	2.9	156	27	1
3	5255	4.0	212	25	1
4	5261	4.8	185	24	1
5	5264	3.4	193	26	1
6	5267	1.2	153	25	1
7	5270	3.5	211	25	1
8	5273	3.9	211	23	1
9	5276	3.2	217	29	1
10	5279	2.3	160	27	1
11	5282	1.7	200	25	1
12	5285	2.5	198	26	1
13	5288	4.1	202	29	1
14	5290	1.8	227	25	1
15	5294	2.1	199	25	1
16	5297	3.2	217	25	1
17	5300	3.0	222	27	1
18	5303	3.4	157	29	1
19	5306	2.1	167	26	1
20	5309	2.1	224	23	1
21	5312	4.2	211	26	1
22	5315	1.7	222	25	1
23	5318	1.1	196	24	1
24	5321	3.3	151	27	1
25	5323	3.8	198	23	1
26	5325	3.2	171	27	1
27	5326	4.0	161	24	1
28	5327	1.0	157	23	1
29	5328	3.5	225	26	1
30	5328	5.0	164	23	1
Detection Percentage (%)					100%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5252	6.9	363	18	1
2	5253	9.3	258	18	1
3	5255	8.2	304	17	1
4	5261	8.0	252	18	1
5	5264	6.2	468	17	1
6	5267	7.3	428	18	1
7	5270	6.8	288	17	1
8	5273	6.6	470	16	1
9	5276	9.8	464	17	1
10	5279	7.8	439	17	1
11	5282	9.5	268	16	1
12	5285	6.8	381	18	1
13	5288	8.5	297	18	1
14	5290	7.8	312	16	1
15	5294	7.0	472	17	1
16	5297	8.6	298	17	1
17	5300	6.3	283	18	1
18	5303	8.9	427	18	1
19	5306	8.5	384	18	1
20	5309	9.1	298	16	1
21	5312	8.1	317	18	1
22	5315	9.6	404	17	1
23	5318	6.9	289	17	1
24	5321	10.0	480	18	1
25	5323	8.2	463	18	1
26	5325	8.1	281	17	1
27	5326	8.8	280	16	1
28	5327	6.2	498	17	1
29	5328	10.0	256	17	1
30	5328	9.6	327	18	1
Detection Percentage (%)					100%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5252	15.2	253	15	1
2	5253	11.5	485	14	1
3	5255	13.1	325	14	1
4	5261	17.1	281	14	1
5	5264	12.4	251	13	1
6	5267	18.9	347	12	1
7	5270	19.7	427	13	1
8	5273	18.6	412	15	1
9	5276	16.1	472	12	1
10	5279	12.3	483	12	1
11	5282	17.4	327	15	1
12	5285	13.2	426	14	1
13	5288	13.5	352	13	1
14	5290	11.7	350	15	1
15	5294	17.1	397	12	1
16	5297	12.7	372	12	1
17	5300	11.0	309	14	1
18	5303	17.0	399	16	1
19	5306	17.1	284	14	1
20	5309	16.7	288	16	1
21	5312	13.2	439	16	1
22	5315	14.3	272	14	1
23	5318	19.9	321	14	1
24	5321	11.5	270	12	1
25	5323	14.3	325	13	1
26	5325	20.0	338	16	1
27	5326	14.7	406	14	1
28	5327	19.7	366	14	1
29	5328	17.7	263	13	1
30	5328	18.5	334	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: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+100%+100%+100%)/4 = 100% (>80%)

Radar Type 5 - Radar Statistical Performance

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

Type 5 Radar Waveform_1

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	47149	3	9	75	1958	1144	1460	47149	0	705881
2	752500	1	9	100	1214	0	0	804211	705882	1411763
3	1171171	3	9	80	1137	1914	1976	1976596	1411764	2117645
4	450643	3	9	75	1543	1907	1931	2432266	2117646	2823527
5	1031487	1	9	55	1268	0	0	3469134	2823528	3529409
6	284593	1	9	90	1053	0	0	3754995	3529410	4235291
7	703468	2	9	50	1147	1591	0	4459516	4235292	4941173
8	815297	1	9	95	1676	0	0	5277551	4941174	5647055
9	713618	1	9	60	1970	0	0	5992845	5647056	6352937
10	763645	2	9	50	1752	1475	0	6758460	6352938	7058819
11	770106	2	9	55	1800	1699	0	7531793	7058820	7764701
12	374854	2	9	80	1160	1882	0	7910146	7764702	8470583
13	627769	3	9	95	1509	1927	1678	8540957	8470584	9176465
14	995730	3	9	85	1046	1221	1134	9541801	9176466	9882347
15	615038	3	9	85	1313	1120	1650	10160240	9882348	10588229
16	569453	2	9	95	1198	1294	0	10733776	10588230	11294111
17	928628	3	9	50	1381	1562	1330	11664896	11294112	11999993

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

Type 5 Radar Waveform_2

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	358028	2	14	75	1725	1687	0	358028	0	749999
2	678729	2	14	60	1988	1038	0	1040169	750000	1499999
3	837409	3	14	95	1612	1349	1277	1880604	1500000	2249999
4	938087	2	14	55	1949	1648	0	2822929	2250000	2999999
5	211710	3	14	80	1939	1001	1615	3038236	3000000	3749999
6	800765	3	14	85	1760	1938	1667	3843556	3750000	4499999
7	919065	2	14	75	1123	1996	0	4767986	4500000	5249999
8	1116801	2	14	90	1437	1922	0	5887906	5250000	5999999
9	191277	2	14	75	1040	1453	0	6082542	6000000	6749999
10	1230630	2	14	90	1872	1577	0	7315665	6750000	7499999
11	263485	1	14	50	1866	0	0	7582599	7500000	8249999
12	972219	2	14	100	1744	1212	0	8556684	8250000	8999999
13	453977	2	14	80	1874	1646	0	9013617	9000000	9749999
14	991814	3	14	100	1751	1965	1590	10008951	9750000	10499999
15	761114	3	14	60	1265	1707	1817	10775371	10500000	11249999
16	607456	2	14	80	1408	1524	0	11387616	11250000	11999999

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

Type 5 Radar Waveform_3

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	864920	2	5	50	1231	1036	0	864920	0	1499999
2	912320	2	5	60	1802	1809	0	1779507	1500000	2999999
3	2534191	3	5	100	1135	1011	1347	4317309	3000000	4499999
4	1136824	2	5	80	1593	1327	0	5457626	4500000	5999999
5	1041678	2	5	90	1204	1607	0	6502224	6000000	7499999
6	1740049	1	5	90	1822	0	0	8245084	7500000	8999999
7	2054212	1	5	65	1404	0	0	10301118	9000000	10499999
8	1077520	1	5	75	1112	0	0	11380042	10500000	11999999

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

Type 5 Radar Waveform_4

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	60930	1	8	90	1779	0	0	60930	0	705881
2	1005605	1	8	70	1618	0	0	1068314	705882	1411763
3	711328	1	8	70	1009	0	0	1781260	1411764	2117645
4	720697	1	8	50	1650	0	0	2502966	2117646	2823527
5	432593	3	8	100	1066	1099	1814	2937209	2823528	3529409
6	1193793	3	8	50	1815	1046	1204	4134981	3529410	4235291
7	267417	2	8	65	1863	1479	0	4406463	4235292	4941173
8	985640	2	8	95	1229	1424	0	5395445	4941174	5647055
9	812214	2	8	95	1048	1232	0	6210312	5647056	6352937
10	249400	1	8	100	1222	0	0	6461992	6352938	7058819
11	798181	1	8	90	1818	0	0	7261395	7058820	7764701
12	799447	1	8	50	1127	0	0	8062660	7764702	8470583
13	499857	3	8	95	1647	1523	1361	8563644	8470584	9176465
14	1110814	3	8	50	1713	1433	1367	9678989	9176466	9882347
15	838279	3	8	100	1894	1628	1887	10521781	9882348	10588229
16	414632	3	8	70	1948	1137	1910	10941822	10588230	11294111
17	579531	1	8	70	1589	0	0	11526348	11294112	11999993

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

Type 5 Radar Waveform_5

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1000514	3	12	70	1725	1475	1072	1000514	0	1090908
2	993300	3	12	100	1206	1771	1529	1998086	1090909	2181817
3	290455	2	12	85	1165	1371	0	2293047	2181818	3272726
4	1294686	2	12	70	1597	1171	0	3590269	3272727	4363635
5	1588587	2	12	85	1251	1426	0	5181624	4363636	5454544
6	893474	3	12	65	1140	1964	1397	6077775	5454545	6545453
7	859173	1	12	75	1225	0	0	6941449	6545454	7636362
8	1607381	3	12	85	1643	1366	1207	8550055	7636363	8727271
9	1251551	3	12	60	1515	1631	1337	9805822	8727272	9818180
10	45090	3	12	90	1941	1423	1569	9855395	9818181	10909089
11	2098472	3	12	85	1230	1639	1725	11958800	10909090	11999998

Total number of pulses in waveform = 28

****

Type 5 Radar Waveform_6

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	358772	3	18	95	1022	1806	1596	358772	0	1499999
2	1370736	3	18	70	1579	1979	1862	1733932	1500000	2999999
3	1850754	3	18	90	1368	1485	1280	3590106	3000000	4499999
4	1007514	3	18	80	1523	1768	1005	4601753	4500000	5999999
5	1453139	2	18	80	1128	1698	0	6059188	6000000	7499999
6	1733321	1	18	80	1984	0	0	7795335	7500000	8999999
7	2249989	3	18	95	1719	1608	1827	10047308	9000000	10499999
8	1759322	3	18	75	1823	1335	1091	11811784	10500000	11999999

Total number of pulses in waveform = 21

****

Type 5 Radar Waveform_7

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1435032	3	6	85	1636	1033	1770	1435032	0	1499999
2	401641	2	6	95	1008	1992	0	1841112	1500000	2999999
3	1275371	3	6	55	1255	1556	1997	3119483	3000000	4499999
4	2343407	1	6	60	1543	0	0	5467698	4500000	5999999
5	1922933	1	6	80	1626	0	0	7392174	6000000	7499999
6	529282	1	6	65	1347	0	0	7923082	7500000	8999999
7	2060405	1	6	60	1293	0	0	9984834	9000000	10499999
8	599750	2	6	65	1118	1679	0	10585877	10500000	11999999

Total number of pulses in waveform = 14

****

Type 5 Radar Waveform_8

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	553003	1	19	65	1780	0	0	553003	0	1333332
2	836217	2	19	65	1773	1031	0	1391000	1333333	2666665
3	2322101	3	19	75	1861	1296	1551	3715905	2666666	3999998
4	1585723	3	19	85	1126	1421	1466	5306336	3999999	5333331
5	1165909	1	19	85	1445	0	0	6476258	5333332	6666664
6	1398380	1	19	75	1405	0	0	7876083	6666665	7999997
7	674192	3	19	70	1679	1256	1922	8551680	7999998	9333330
8	1636968	2	19	95	1474	1119	0	10193505	9333331	10666663
9	708962	1	19	60	1319	0	0	10905060	10666664	11999996

Total number of pulses in waveform = 17

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Type 5 Radar Waveform_9

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	205508	3	17	100	1711	1417	1918	205508	0	857142
2	1169518	3	17	55	1518	1503	1195	1380072	857143	1714285
3	356155	2	17	95	1075	1914	0	1740443	1714286	2571428
4	1576427	3	17	80	1862	1519	1201	3319859	2571429	3428571
5	600536	2	17	55	1923	1541	0	3924977	3428572	4285714
6	727240	1	17	85	1400	0	0	4655681	4285715	5142857
7	585426	1	17	85	1760	0	0	5242507	5142858	6000000
8	1422948	1	17	75	1725	0	0	6667215	6000001	6857143
9	250167	3	17	50	1148	1090	1937	6919107	6857144	7714286
10	1278126	2	17	100	1848	1280	0	8201408	7714287	8571429
11	755328	2	17	85	1000	1133	0	8959864	8571430	9428572
12	569509	1	17	65	1640	0	0	9531506	9428573	10285715
13	811470	1	17	100	1401	0	0	10344616	10285716	11142858
14	1383264	1	17	80	1127	0	0	11729281	11142859	12000001

Total number of pulses in waveform = 26

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Type 5 Radar Waveform_10

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	759673	2	10	90	1549	1811	0	759673	0	923076
2	340714	3	10	90	1448	1855	1843	1103747	923077	1846153
3	997919	2	10	65	1874	1446	0	2106812	1846154	2769230
4	1549061	3	10	85	1583	1733	1053	3659193	2769231	3692307
5	427847	1	10	95	1506	0	0	4091409	3692308	4615384
6	975825	1	10	65	1705	0	0	5068740	4615385	5538461
7	1186366	1	10	95	1909	0	0	6256811	5538462	6461538
8	471052	1	10	95	1326	0	0	6729772	6461539	7384615
9	857145	3	10	70	1437	1896	1192	7588243	7384616	8307692
10	1335697	2	10	80	1092	1135	0	8928465	8307693	9230769
11	735293	3	10	90	1734	1653	1672	9665985	9230770	10153846
12	850289	3	10	100	1670	1521	1601	10521333	10153847	11076923
13	887182	1	10	85	1489	0	0	11413307	11076924	12000000

Total number of pulses in waveform = 26

****

Type 5 Radar Waveform_11

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	1123750	1	9	55	1676	0	0	1123750	0	1333332
2	470466	1	9	60	1547	0	0	1595892	1333333	2666665
3	1925731	1	9	100	1576	0	0	3523170	2666666	3999998
4	1467019	2	9	90	1894	1015	0	4991765	3999999	5333331
5	1440505	3	9	55	1579	1849	1954	6435179	5333332	6666664
6	342406	3	9	75	1327	1817	1220	6782967	6666665	7999997
7	2111371	1	9	95	1283	0	0	8898702	7999998	9333330
8	1381792	2	9	85	1400	1751	0	10281777	9333331	10666663
9	850576	2	9	55	1390	1305	0	11135504	10666664	11999996

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

Type 5 Radar Waveform_12

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	611750	2	18	50	1762	1930	0	611750	0	1199999
2	798177	3	18	65	1398	1336	1216	1413619	1200000	2399999
3	1167134	2	18	65	1344	1605	0	2584703	2400000	3599999
4	1782144	3	18	95	1649	1925	1871	4369796	3600000	4799999
5	731063	3	18	85	1833	1664	1587	5106304	4800000	5999999
6	1862863	3	18	70	1286	1169	1538	6974251	6000000	7199999
7	259127	2	18	65	1330	1573	0	7237371	7200000	8399999
8	1300936	1	18	95	1211	0	0	8541210	8400000	9599999
9	1564002	3	18	70	1449	1203	1990	10106423	9600000	10799999
10	1808629	3	18	85	1615	1569	1116	11919694	10800000	11999999

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

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	280651	1	17	80	1366	0	0	280651	0	1333332
2	1381699	3	17	80	1616	1034	1126	1663716	1333333	2666665
3	2156993	2	17	55	1812	1002	0	3824485	2666666	3999998
4	399964	1	17	60	1355	0	0	4227263	3999999	5333331
5	1610208	3	17	60	1403	1211	1110	5838826	5333332	6666664
6	944553	3	17	75	1296	1501	1151	6787103	6666665	7999997
7	1563931	2	17	85	1458	1082	0	8354982	7999998	9333330
8	1656651	3	17	85	1311	1520	1333	10014173	9333331	10666663
9	1869953	1	17	75	1024	0	0	11888290	10666664	11999996

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

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	603552	3	8	55	1660	1159	1799	603552	0	923076
2	954976	1	8	75	1589	0	0	1563146	923077	1846153
3	588831	3	8	100	1053	1573	1523	2153566	1846154	2769230
4	1306013	2	8	90	1469	1171	0	3463728	2769231	3692307
5	581334	3	8	50	1852	1440	1079	4047702	3692308	4615384
6	1068707	2	8	80	1227	1850	0	5120780	4615385	5538461
7	964535	3	8	50	1716	1078	1659	6088392	5538462	6461538
8	511447	3	8	50	1840	1391	1733	6604292	6461539	7384615
9	1122076	1	8	65	1105	0	0	7731332	7384616	8307692
10	1231519	3	8	100	1516	1456	2000	8963956	8307693	9230769
11	601448	1	8	85	1268	0	0	9570376	9230770	10153846
12	1416624	1	8	85	1305	0	0	10988268	10153847	11076923
13	481798	3	8	65	1579	1836	1592	11471371	11076924	12000000

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

Type 5 Radar Waveform_15

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	192003	3	14	60	1566	1598	1697	192003	0	749999
2	837867	3	14	70	1538	1837	1828	1034731	750000	1499999
3	685498	2	14	50	1577	1293	0	1725432	1500000	2249999
4	885040	3	14	90	1594	1524	1144	2613342	2250000	2999999
5	814326	2	14	65	1125	1206	0	3431930	3000000	3749999
6	1000272	3	14	90	1866	1615	1342	4434533	3750000	4499999
7	446125	3	14	95	1254	1399	1202	4885481	4500000	5249999
8	428719	1	14	90	1265	0	0	5318055	5250000	5999999
9	745699	1	14	70	1962	0	0	6065019	6000000	6749999
10	1386774	2	14	70	1547	1241	0	7453755	6750000	7499999
11	695244	1	14	60	1946	0	0	8151787	7500000	8249999
12	617711	2	14	90	1272	1580	0	8771444	8250000	8999999
13	345184	2	14	90	1977	1842	0	9119480	9000000	9749999
14	1134735	2	14	65	1810	1235	0	10258034	9750000	10499999
15	610383	2	14	100	1188	1593	0	10871462	10500000	11249999
16	589284	2	14	95	1954	1043	0	11463527	11250000	11999999

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

Type 5 Radar Waveform_16

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	251093	1	5	70	1712	0	0	251093	0	1333332
2	2017407	3	5	70	1056	1381	1270	2270212	1333333	2666665
3	540027	1	5	50	1964	0	0	2813946	2666666	3999998
4	1794998	3	5	55	1751	1420	1545	4610908	3999999	5333331
5	1384679	3	5	60	1184	1538	1996	6000303	5333332	6666664
6	1343894	1	5	70	1049	0	0	7348915	6666665	7999997
7	1760036	3	5	70	1672	1009	1524	9110000	7999998	9333330
8	1252276	1	5	80	1876	0	0	10366481	9333331	10666663
9	515091	2	5	80	1251	1493	0	10883448	10666664	11999996

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

Type 5 Radar Waveform_17

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	155801	3	19	55	1864	1770	1178	155801	0	599999
2	984777	1	19	55	1376	0	0	1145390	600000	1199999
3	227989	3	19	75	1769	1729	1024	1374755	1200000	1799999
4	868733	3	19	75	1463	1638	1387	2248010	1800000	2399999
5	509247	2	19	60	1803	1644	0	2761745	2400000	2999999
6	321102	2	19	50	1403	1466	0	3086294	3000000	3599999
7	967359	1	19	60	1758	0	0	4056522	3600000	4199999
8	533771	1	19	80	1400	0	0	4592051	4200000	4799999
9	668703	2	19	50	1168	1047	0	5262154	4800000	5399999
10	704011	1	19	55	1225	0	0	5968380	5400000	5999999
11	129170	3	19	50	1637	1324	1205	6098775	6000000	6599999
12	763473	1	19	90	1420	0	0	6866414	6600000	7199999
13	770176	3	19	75	1115	1527	1431	7638010	7200000	7799999
14	636254	2	19	50	1684	1665	0	8278337	7800000	8399999
15	152970	2	19	60	1967	1844	0	8434656	8400000	8999999
16	810393	2	19	60	1527	1255	0	9248860	9000000	9599999
17	621181	1	19	100	1866	0	0	9872823	9600000	10199999
18	808675	1	19	65	1202	0	0	10683364	10200000	10799999
19	653902	3	19	60	1567	1613	1910	11338468	10800000	11399999
20	387289	3	19	85	1254	1265	1375	11730847	11400000	11999999

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

Type 5 Radar Waveform_18

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	640978	1	6	100	1330	0	0	640978	0	1199999
2	1678375	2	6	85	1685	1339	0	2320683	1200000	2399999
3	1221011	3	6	75	1504	1345	1896	3544718	2400000	3599999
4	181569	3	6	65	1402	1937	1077	3731032	3600000	4799999
5	1730456	2	6	75	1659	1983	0	5465904	4800000	5999999
6	881417	2	6	85	1468	1041	0	6350963	6000000	7199999
7	1928061	2	6	100	1305	1580	0	8281533	7200000	8399999
8	1167533	3	6	75	1229	1634	1644	9451951	8400000	9599999
9	769816	2	6	100	1891	1129	0	10226274	9600000	10799999
10	1664743	3	6	80	1772	1594	1686	11894037	10800000	11999999

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

Type 5 Radar Waveform_19

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	500008	1	10	70	1604	0	0	500008	0	1333332
2	1962967	2	10	85	1609	1352	0	2464579	1333333	2666665
3	923892	2	10	100	1500	1045	0	3391432	2666666	3999998
4	1653053	1	10	90	1200	0	0	5047030	3999999	5333331
5	1402296	3	10	60	1947	1868	1904	6450526	5333332	6666664
6	1480064	2	10	90	1904	1810	0	7936309	6666665	7999997
7	998499	1	10	80	1218	0	0	8938522	7999998	9333330
8	691310	2	10	65	1939	1514	0	9631050	9333331	10666663
9	1135802	3	10	80	1656	1810	1367	10770305	10666664	11999996

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

Type 5 Radar Waveform_20

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	646022	1	12	60	1038	0	0	646022	0	1199999
2	1364638	1	12	85	1952	0	0	2011698	1200000	2399999
3	569677	3	12	50	1912	1973	1214	2583327	2400000	3599999
4	1075638	2	12	55	1351	1642	0	3664064	3600000	4799999
5	1966116	2	12	65	1980	1405	0	5633173	4800000	5999999
6	683039	1	12	80	1078	0	0	6319597	6000000	7199999
7	1901864	2	12	75	1975	1521	0	8222539	7200000	8399999
8	1223114	3	12	90	1789	1129	1254	9449149	8400000	9599999
9	1046695	3	12	80	1441	1220	1148	10500016	9600000	10799999
10	655109	1	12	85	1871	0	0	11158934	10800000	11999999

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

Type 5 Radar Waveform_21

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	553370	1	14	60	1441	0	0	553370	0	666666
2	769190	2	14	95	1108	1517	0	1324001	666667	1333333
3	539909	1	14	80	1443	0	0	1866535	1333334	2000000
4	466686	1	14	50	1730	0	0	2334664	2000001	2666667
5	362560	3	14	65	1203	1954	1521	2698954	2666668	3333334
6	694157	3	14	95	1164	1015	1555	3397789	3333335	4000001
7	690963	3	14	85	1119	1287	1652	4092486	4000002	4666668
8	1127882	2	14	80	1693	1988	0	5224426	4666669	5333335
9	201363	1	14	70	1269	0	0	5429470	5333336	6000002
10	923471	1	14	100	1302	0	0	6354210	6000003	6666669
11	777564	1	14	50	1199	0	0	7133076	6666670	7333336
12	696034	1	14	75	1142	0	0	7830309	7333337	8000003
13	725439	2	14	80	1475	1252	0	8556890	8000004	8666670
14	433998	3	14	50	1960	1213	1088	8993615	8666671	9333337
15	894098	2	14	80	1668	1995	0	9891974	9333338	10000004
16	575281	2	14	50	1322	1681	0	10470918	10000005	10666671
17	428977	2	14	90	1686	1173	0	10902898	10666672	11333338
18	886806	2	14	80	1772	1801	0	11792563	11333339	12000005

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

Type 5 Radar Waveform_22

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	405020	2	5	100	1691	1494	0	405020	0	705881
2	984829	3	5	75	1499	1566	1249	1393034	705882	1411763
3	320235	1	5	85	1505	0	0	1717583	1411764	2117645
4	661665	1	5	80	1279	0	0	2380753	2117646	2823527
5	577135	1	5	85	1168	0	0	2959167	2823528	3529409
6	970573	3	5	65	1359	1956	1546	3930908	3529410	4235291
7	776841	1	5	100	1101	0	0	4712610	4235292	4941173
8	675007	2	5	85	1121	1421	0	5388718	4941174	5647055
9	675216	2	5	85	1253	1125	0	6066476	5647056	6352937
10	829168	2	5	55	1127	1347	0	6898022	6352938	7058819
11	312291	1	5	65	1374	0	0	7212787	7058820	7764701
12	1201440	3	5	65	1548	1110	1472	8415601	7764702	8470583
13	435080	3	5	95	1332	1771	1515	8854811	8470584	9176465
14	800560	2	5	95	1253	1913	0	9659989	9176466	9882347
15	257204	1	5	60	1002	0	0	9920359	9882348	10588229
16	1325583	3	5	100	1894	1409	1762	11246944	10588230	11294111
17	322787	3	5	60	1644	1826	1320	11574796	11294112	11999993

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

Type 5 Radar Waveform_23

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	150901	2	10	80	1234	1320	0	150901	0	1499999
2	2623096	1	10	65	1634	0	0	2776551	1500000	2999999
3	738801	3	10	75	1984	1017	1729	3516986	3000000	4499999
4	1998757	3	10	50	1722	1779	1083	5520473	4500000	5999999
5	1093440	2	10	95	1178	1174	0	6618497	6000000	7499999
6	2265308	3	10	55	1857	1451	1524	8886157	7500000	8999999
7	290216	1	10	70	1949	0	0	9181205	9000000	10499999
8	2798708	1	10	50	1750	0	0	11981862	10500000	11999999

Total number of pulses in waveform = 16

****

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	208050	3	8	90	1541	1007	1087	208050	0	599999
2	693080	1	8	75	1853	0	0	904765	600000	1199999
3	697395	1	8	60	1536	0	0	1604013	1200000	1799999
4	454184	3	8	100	1728	1357	1246	2059733	1800000	2399999
5	518073	3	8	100	1126	1373	1130	2582137	2400000	2999999
6	809306	2	8	90	1018	1749	0	3395072	3000000	3599999
7	267015	1	8	65	1074	0	0	3664854	3600000	4199999
8	637659	3	8	100	1335	1993	1660	4303587	4200000	4799999
9	745798	3	8	50	1750	1091	1646	5054373	4800000	5399999
10	548615	1	8	95	1790	0	0	5607475	5400000	5999999
11	526371	1	8	65	1412	0	0	6135636	6000000	6599999
12	851091	2	8	60	1158	1343	0	6988139	6600000	7199999
13	589215	2	8	75	1374	1416	0	7579855	7200000	7799999
14	458374	3	8	70	1749	1627	1378	8041019	7800000	8399999
15	821794	1	8	50	1005	0	0	8867567	8400000	8999999
16	563245	2	8	60	1084	1025	0	9431817	9000000	9599999
17	206014	2	8	95	1701	1105	0	9639940	9600000	10199999
18	721403	2	8	75	1855	1902	0	10364149	10200000	10799999
19	656682	1	8	85	1088	0	0	11024588	10800000	11399999
20	945774	3	8	50	1225	1011	1845	11971450	11400000	11999999

Total number of pulses in waveform = 40

****

Type 5 Radar Waveform_25

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	171094	3	12	65	1672	1891	1172	171094	0	857142
2	1152628	2	12	55	1118	1668	0	1328457	857143	1714285
3	670071	3	12	50	1732	1626	1663	2001314	1714286	2571428
4	636078	1	12	50	1171	0	0	2642413	2571429	3428571
5	1067367	3	12	90	1791	1053	1313	3710951	3428572	4285714
6	664142	1	12	100	1037	0	0	4379250	4285715	5142857
7	1333130	2	12	50	1528	1013	0	5713417	5142858	6000000
8	735098	1	12	90	1354	0	0	6451056	6000001	6857143
9	1003908	2	12	100	1747	1858	0	7456318	6857144	7714286
10	759869	1	12	100	1902	0	0	8219792	7714287	8571429
11	987907	3	12	65	1312	1031	1881	9209601	8571430	9428572
12	850839	2	12	85	1036	1521	0	10064664	9428573	10285715
13	967002	1	12	100	1062	0	0	11034223	10285716	11142858
14	936231	1	12	75	1134	0	0	11971516	11142859	12000001

Total number of pulses in waveform = 26

****

Type 5 Radar Waveform_26

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	625897	2	17	85	1439	1597	0	625897	0	1333332
2	933328	3	17	70	1313	1953	1846	1562261	1333333	2666665
3	1630421	3	17	70	1698	1555	1080	3197794	2666666	3999998
4	2100160	1	17	90	1209	0	0	5302287	3999999	5333331
5	649649	2	17	90	1171	1572	0	5953145	5333332	6666664
6	1091084	3	17	50	1582	1881	1800	7046972	6666665	7999997
7	1940455	1	17	50	1719	0	0	8992690	7999998	9333330
8	1284376	2	17	85	1163	1815	0	10278785	9333331	10666663
9	822511	1	17	70	1846	0	0	11104274	10666664	11999996

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

Type 5 Radar Waveform_27

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	606700	3	6	65	1720	1919	1580	606700	0	1199999
2	788768	3	6	100	1484	1954	1553	1400687	1200000	2399999
3	1297150	3	6	80	1571	1887	1483	2702828	2400000	3599999
4	1640378	3	6	55	1192	1030	1590	4348147	3600000	4799999
5	865969	2	6	75	1488	1429	0	5217928	4800000	5999999
6	1375458	1	6	80	1443	0	0	6596303	6000000	7199999
7	1387793	1	6	60	1597	0	0	7985539	7200000	8399999
8	703543	1	6	75	1691	0	0	8690679	8400000	9599999
9	1952266	2	6	65	1439	1071	0	10644636	9600000	10799999
10	322284	1	6	55	1807	0	0	10969430	10800000	11999999

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

Type 5 Radar Waveform_28

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	597635	3	19	85	1779	1705	1585	597635	0	923076
2	505593	1	19	85	1238	0	0	1108297	923077	1846153
3	1559481	2	19	65	1325	1624	0	2669016	1846154	2769230
4	134540	1	19	100	1631	0	0	2806505	2769231	3692307
5	1086053	2	19	85	1693	1404	0	3894189	3692308	4615384
6	757320	2	19	80	1902	1683	0	4654606	4615385	5538461
7	1341959	3	19	50	1499	1639	1302	6000150	5538462	6461538
8	654114	1	19	70	1572	0	0	6658704	6461539	7384615
9	1209320	2	19	60	1956	1708	0	7869596	7384616	8307692
10	1141180	1	19	70	1203	0	0	9014440	8307693	9230769
11	745025	1	19	50	1887	0	0	9760668	9230770	10153846
12	1191281	2	19	85	1254	1537	0	10953836	10153847	11076923
13	669526	3	19	50	1517	1352	1988	11626153	11076924	12000000

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

Type 5 Radar Waveform_29

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	1240924	3	9	65	1762	1437	1961	1240924	0	1333332
2	992020	3	9	90	1574	1213	1557	2238104	1333333	2666665
3	547053	1	9	70	1208	0	0	2789501	2666666	3999998
4	2445860	2	9	100	1829	1228	0	5236569	3999999	5333331
5	410904	1	9	90	1774	0	0	5650530	5333332	6666664
6	2146300	3	9	80	1754	1910	1578	7798604	6666665	7999997
7	648693	1	9	95	1128	0	0	8452539	7999998	9333330
8	1046685	3	9	95	1183	1088	1389	9500352	9333331	10666663
9	1547122	3	9	80	1082	1243	1431	11051134	10666664	11999996

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

Type 5 Radar Waveform_30

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

Burst #	Off Time (us)	# Pulses	Chirp (MHz)	PW (us)	Pulse 1 Pri(us)	Pulse 2 Pri(us)	Pulse 3 Pri(us)	Start Loc (us)	Start Burst Interval(us)	End Burst Interval(us)
1	204515	1	18	50	1941	0	0	204515	0	749999
2	679501	3	18	65	1586	1643	1620	885957	750000	1499999
3	1255196	1	18	75	1963	0	0	2146002	1500000	2249999
4	524734	3	18	95	1122	1614	1726	2672699	2250000	2999999
5	845972	3	18	95	1709	1048	1644	3523133	3000000	3749999
6	713412	3	18	100	1586	1722	1778	4240946	3750000	4499999
7	514297	2	18	70	1562	1380	0	4760329	4500000	5249999
8	554076	2	18	90	1324	1093	0	5317347	5250000	5999999
9	1260731	3	18	80	1662	1818	1583	6580495	6000000	6749999
10	849906	1	18	60	1675	0	0	7435464	6750000	7499999
11	734343	2	18	85	1763	1738	0	8171482	7500000	8249999
12	753446	2	18	65	1299	1911	0	8928429	8250000	8999999
13	491924	1	18	90	1120	0	0	9423563	9000000	9749999
14	911199	2	18	50	1172	1006	0	10335882	9750000	10499999
15	513928	1	18	60	1295	0	0	10851988	10500000	11249999
16	664862	1	18	80	1541	0	0	11518145	11250000	11999999

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

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	5252	1	16	5297	1
2	5253	1	17	5300	1
3	5255	1	18	5303	1
4	5261	1	19	5306	1
5	5264	1	20	5309	1
6	5267	1	21	5312	1
7	5270	1	22	5315	1
8	5273	1	23	5318	1
9	5276	1	24	5321	1
10	5279	1	25	5323	1
11	5282	1	26	5325	1
12	5285	1	27	5326	1
13	5288	1	28	5327	1
14	5290	1	29	5328	1
15	5294	1	30	5328	1
Detection Percentage (%)					100%

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
56	5274	168	1	5278	3
88	5277	264	35	5265	105
97	5266	291	73	5253	219
98	5281	294	77	5255	231
--	--	--	78	5271	234
--	--	--	96	5252	288

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5271	21	0	5274	0
27	5280	81	3	5282	9
56	5267	168	10	5283	30
59	5281	177	23	5276	69
71	5254	213	29	5261	87
73	5251	219	48	5278	144
86	5264	258	61	5255	183
93	5262	279	63	5263	189
95	5265	285	91	5284	273
--	--	--	96	5279	288

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
31	5281	93	0	5274	0
43	5264	129	8	5290	24
57	5284	171	20	5287	60
61	5290	183	33	5269	99
62	5256	186	51	5268	153
--	--	--	53	5254	159
--	--	--	61	5251	183
--	--	--	86	5282	258
--	--	--	94	5257	282
--	--	--	97	5270	291

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5276	9	10	5295	30
19	5278	57	17	5297	51
25	5287	75	30	5250	90
31	5266	93	38	5252	114
45	5288	135	63	5270	189
46	5265	138	68	5262	204
58	5284	174	--	--	--
71	5273	213	--	--	--
88	5261	264	--	--	--
89	5257	267	--	--	--
99	5270	297	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5256	21	3	5261	9
13	5283	39	7	5293	21
20	5296	60	15	5298	45
35	5271	105	22	5302	66
45	5267	135	25	5288	75
68	5250	204	33	5297	99
74	5251	222	36	5292	108
79	5281	237	40	5291	120
85	5255	255	44	5257	132
90	5268	270	46	5255	138
95	5293	285	69	5271	207
99	5279	297	75	5277	225
--	--	--	88	5265	264
--	--	--	96	5285	288

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5258	54	1	5268	3
35	5274	105	5	5261	15
45	5303	135	7	5262	21
46	5251	138	25	5257	75
52	5290	156	26	5265	78
63	5260	189	30	5255	90
70	5304	210	31	5279	93
78	5257	234	48	5276	144
81	5285	243	63	5283	189
86	5292	258	66	5266	198
89	5268	267	74	5252	222
98	5255	294	79	5281	237
--	--	--	88	5275	264
--	--	--	93	5304	279
--	--	--	95	5280	285

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
0	5310	0	0	5281	0
25	5265	75	9	5287	27
28	5264	84	11	5314	33
61	5271	183	21	5288	63
64	5291	192	23	5266	69
65	5266	195	63	5267	189
67	5314	201	65	5272	195
76	5259	228	72	5264	216
85	5296	255	86	5270	258
88	5270	264	94	5283	282
93	5286	279	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5306	24	4	5290	12
14	5286	42	7	5281	21
15	5310	45	18	5292	54
28	5290	84	24	5304	72
42	5262	126	37	5272	111
45	5301	135	39	5320	117
46	5291	138	53	5286	159
51	5283	153	54	5274	162
54	5295	162	62	5260	186
55	5300	165	77	5307	231
67	5313	201	90	5306	270
88	5299	264	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5290	45	5	5317	15
53	5309	159	9	5311	27
63	5286	189	19	5301	57
78	5301	234	24	5280	72
85	5275	255	38	5288	114
87	5277	261	51	5268	153
95	5306	285	55	5318	165
--	--	--	59	5320	177

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5325	33	2	5326	6
13	5316	39	6	5300	18
36	5299	108	14	5322	42
39	5293	117	17	5305	51
48	5303	144	46	5317	138
60	5307	180	47	5281	141
83	5327	249	48	5271	144
85	5287	255	52	5285	156
--	--	--	60	5274	180
--	--	--	70	5318	210
--	--	--	71	5276	213
--	--	--	80	5280	240

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
22	5290	66	2	5321	6
51	5318	153	8	5283	24
64	5278	192	15	5330	45
67	5289	201	16	5313	48
79	5310	237	22	5298	66
81	5285	243	38	5318	114
86	5323	258	43	5279	129
90	5286	270	45	5299	135
91	5334	273	55	5328	165
--	--	--	57	5334	171
--	--	--	60	5310	180
--	--	--	68	5316	204
--	--	--	72	5315	216
--	--	--	73	5324	219
--	--	--	91	5319	273
--	--	--	99	5325	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5291	12	7	5310	21
14	5319	42	11	5326	33
16	5337	48	16	5304	48
36	5302	108	31	5333	93
46	5295	138	50	5280	150
48	5294	144	53	5288	159
49	5324	147	56	5314	168
50	5309	150	69	5318	207
55	5281	165	82	5323	246
59	5321	177	84	5332	252
85	5320	255	94	5286	282
97	5316	291	98	5306	294
--	--	--	99	5302	297

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
12	5287	36	30	5339	90
18	5294	54	32	5300	96
21	5311	63	34	5321	102
40	5337	120	38	5285	114
43	5327	129	40	5294	120
44	5293	132	51	5335	153
47	5282	141	55	5340	165
50	5314	150	58	5302	174
53	5306	159	66	5308	198
60	5339	180	69	5334	207
79	5316	237	70	5298	210
90	5298	270	77	5303	231
94	5324	282	86	5323	258
--	--	--	96	5282	288

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5291	3	0	5319	0
2	5319	6	3	5304	9
3	5328	9	6	5313	18
10	5305	30	19	5310	57
21	5308	63	21	5348	63
29	5294	87	32	5333	96
33	5335	99	47	5330	141
34	5300	102	53	5317	159
44	5329	132	60	5338	180
50	5322	150	69	5314	207
52	5299	156	81	5318	243
53	5295	159	89	5312	267
73	5317	219	--	--	--
79	5337	237	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5346	15	2	5340	6
10	5351	30	22	5344	66
13	5309	39	27	5301	81
17	5345	51	34	5336	102
25	5354	75	47	5308	141
26	5324	78	52	5298	156
27	5350	81	55	5315	165
31	5358	93	61	5348	183
39	5305	117	65	5354	195
48	5340	144	71	5350	213
50	5334	150	--	--	--
58	5318	174	--	--	--
62	5307	186	--	--	--
64	5300	192	--	--	--
65	5326	195	--	--	--
67	5316	201	--	--	--
74	5344	222	--	--	--
83	5303	249	--	--	--
84	5301	252	--	--	--
88	5308	264	--	--	--

6. CONCLUSION

The data collected relate only the item(s) tested and show that the **AC220m Wi-Fi module ID US, FCC ID: 2AD8UFZCWM2B1** is in compliance with FCC Rules.

The End