DFS MEASUREMENT REPORT

FCC PART 15 Subpart E

FCC ID: 2AXJ4RE200V5

Applicant: TP-Link Corporation Limited

Application Type: Certification

Product: AC750 Wi-Fi Range Extender

Model No.: RE200, RE220

Brand Name: tp-link

FCC Classification: Unlicensed National Information Infrastructure (NII)

FCC Rule Part(s): Part 15 Subpart E - 15.407 Section (h)(2)

Type of Device: Master Device
Client with Radar Detection

Receive Date: October 22, 2020

Test Date: November 07, 2020 ~ March 15, 2021

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
2010TW0004-U3	Rev. 01	Initial report	2021-04-11	Valid

CONTENTS

Description Page

General Information

Applicant	TP-Link Corporation Limited
Applicant Address	Room 901, 9/F., New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hongkong
Manufacturer	TP-Link Corporation Limited
Manufacturer Address	Room 901, 9/F., New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hongkong
Test Site	MRT Technology (Taiwan) Co., Ltd
Test Site Address	No. 38, Fuxing Second Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C)
MRT FCC Registration No.	291082
FCC Rule Part(s)	Part 15.407
Test Device Serial No.	N/A ☐ Production ☒ Pre-Production ☐ Engineering

Test Facility / Accreditations

1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm.
2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada.
3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC (Designation Number: TW3261), Industry Taiwan, EU and TELEC Rules.

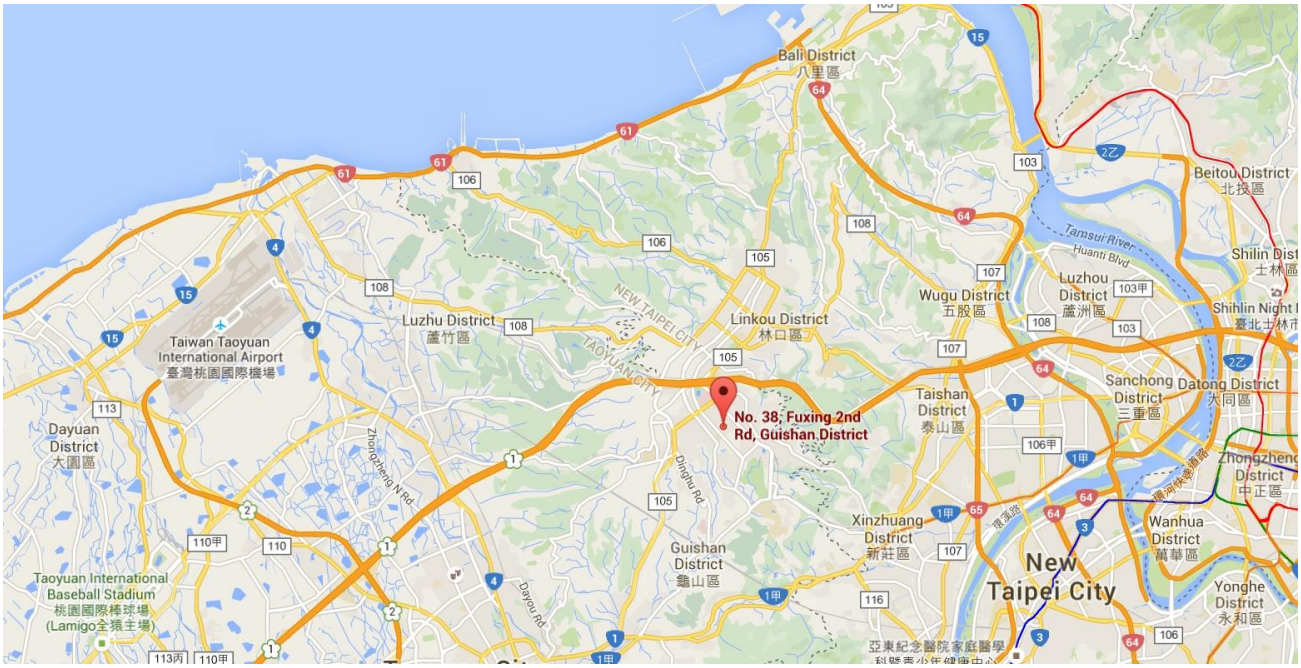
1. INTRODUCTION

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 Innovation, Science and Economic Development Canada and Certification and Engineering Bureau.

1.2. MRT Test Location

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



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	AC750 Wi-Fi Range Extender
Model No.:	RE200, RE220
Brand Name:	tp-link
Wi-Fi Specification:	802.11a/b/g/n/ac
Operating Mode:	Master, Client with Radar Detection
EUT Identification No.:	20201021Sample#04 (Conducted) 20201021Sample#05 (Radiated)
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: 5180~5240MHz, 5260~5320 MHz, 5500~5700MHz, 5745~5825MHz For 802.11n-HT40/ac-VHT40: 5190~5230MHz, 5270~5310 MHz,5510~5670MHz, 5755~5795MHz For 802.11ac-VHT80: 5210MHz, 5290MHz,5530MHz, 5610MHz, 5775MHz
Type of Modulation:	802.11b: DSSS 802.11a/g/n/ac: OFDM
TPC mechanism:	Support (Details refer to operational description)
Power-on cycle:	Requires 21.8 seconds to complete its power-on cycle
Uniform Spreading (For DFS Frequency Band):	For the 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. Operating Frequency and Channel List for this Report

802.11a/n-HT20/ac-VHT20

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

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	126	5630
134	5670 MHz	--	--	--	--

802.11ac-VHT80

Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290 MHz	106	5530 MHz	122	5610 MHz

2.3. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	T_X Paths	Max Antenna Gain (dBi)	CDD Directional Gain (dBi)	
				For Power	For PSD
PCB Antenna	2412 ~ 2462	2	2.0	2.0	5.01
	5150 ~ 5850	1	2.0	--	--

Note 1: The EUT supports Cyclic Delay Diversity (CDD) mode, CDD mode only support 2.4G 802.11b/g/n, and CDD signals are correlated.

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

- For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log (N_{ANT}/ N_{SS}) dB;

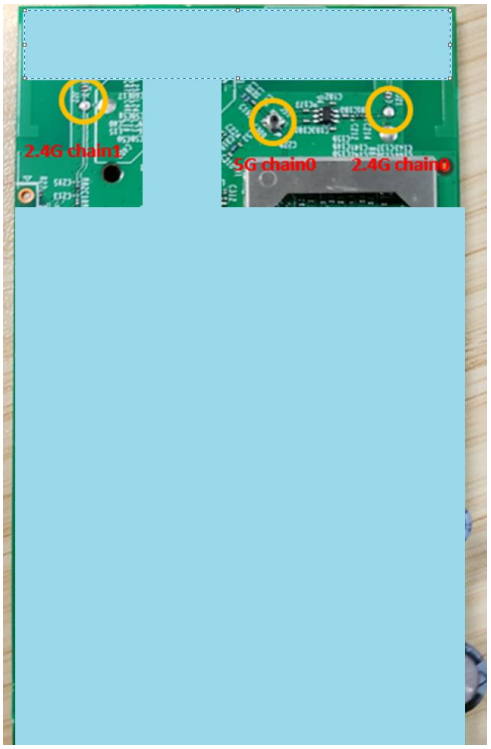
- For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB for $N_{ANT} \leq 4$;

Note 2: All messages as above were declared by manufacturer.

2.4. Description of Antenna RF Port

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



2.5. Test Channels for this Report

Test Mode	Test Channel	Test Frequency
802.11ac-VHT20	100	5500 MHz
802.11ac-VHT40	102	5510 MHz
802.11ac-VHT80	106	5530 MHz

2.6. Test Mode

Test Mode	Mode 1: Operating under AP mode Mode 2: Operating under Client with Radar Detection Mode

2.7. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part15 Subpart E (Section 15.407 Section (h)(2))
- KDB 905462 D02v02
- KDB 905462 D04v01

3. DFS DETECTION THRESHOLDS AND RADAR TEST WAVEFORMS

3.1. Applicability

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

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

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

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

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

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

3.2. DFS Devices Requirements

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

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

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

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

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

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

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

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

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

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

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

Table 3-3: DFS Response Requirements

3.3. DFS Detection Threshold Values

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

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

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

3.4. Parameters of DFS Test Signals

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

Short Pulse Radar Test Waveforms

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

Table 3-5: Parameters for Short Pulse Radar Waveforms

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

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

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

Long Pulse Radar Test Waveform

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

Table 3-7: Parameters for Long Pulse Radar Waveforms

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

Frequency Hopping Radar Test Waveform

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

Table 3-8: Parameters for Frequency Hopping Radar Waveforms

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

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

3.5. Conducted Test Setup

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

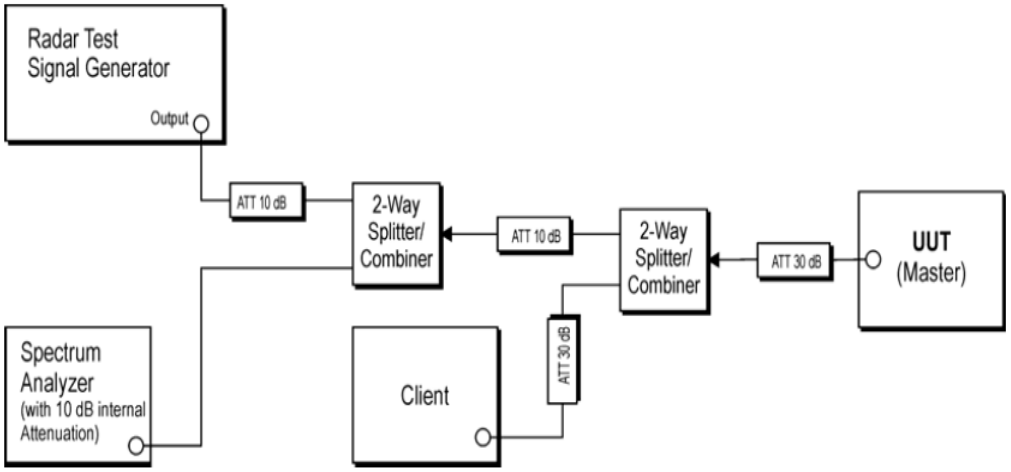


Figure 3-1: Conducted Test Setup where UUT is a Master and Radar Test Waveforms are injected into the Masters

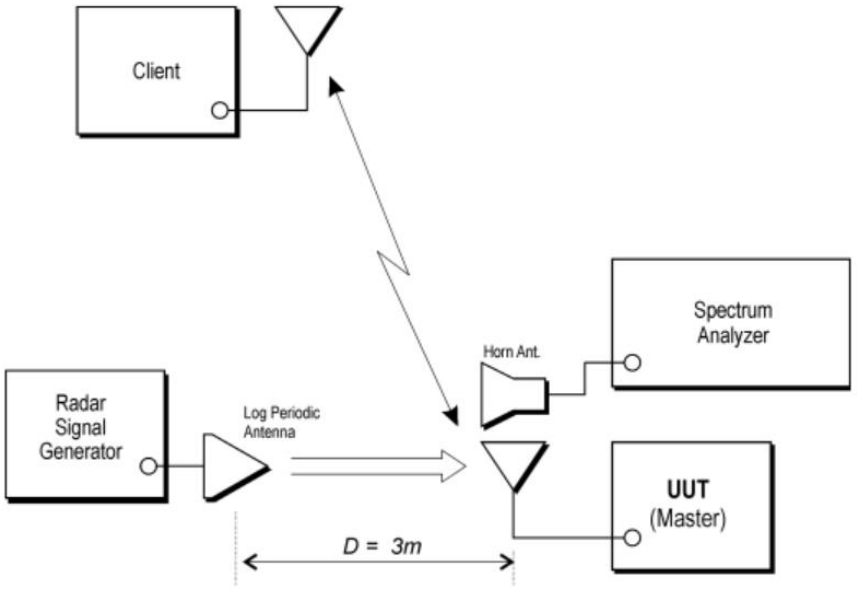


Figure 3-2: Radiated Test Setup where UUT is a Master and Radar Test Waveforms are injected into the UUT

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	2021/10/02
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTTWA00074	1 year	2021/07/14
Vector Signal Generator	Keysight	N5182B	MRTTWA00010	1 year	2021/04/24
Combiner	WOKEN	0120A04208001S	MRTTWE00008	1 year	2021/06/18

Client Information

Instrument	Manufacturer	Type No.	FCC ID
WLAN and BT module	Intel	AX211D2W	PD9AX211D2

Master Information

Instrument	Manufacturer	Type No.	FCC ID
AC750 Wi-Fi Range Extender	tp-link	RE200	2AXJ4RE200V5

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

5. TEST RESULT

5.1. Summary

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

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.

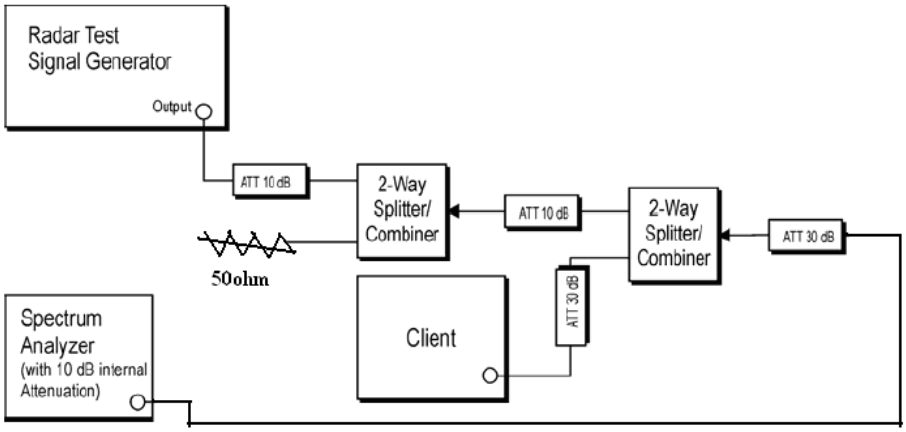


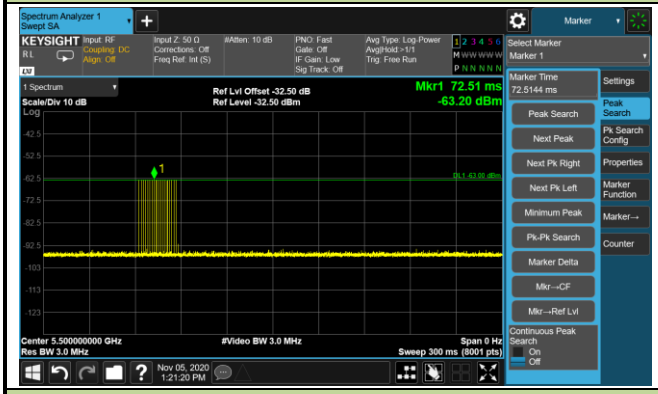
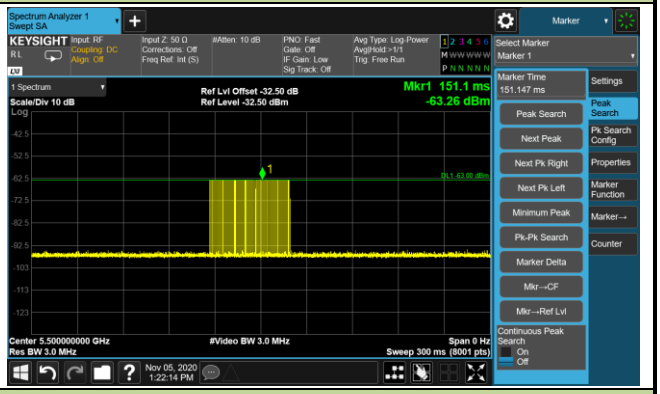
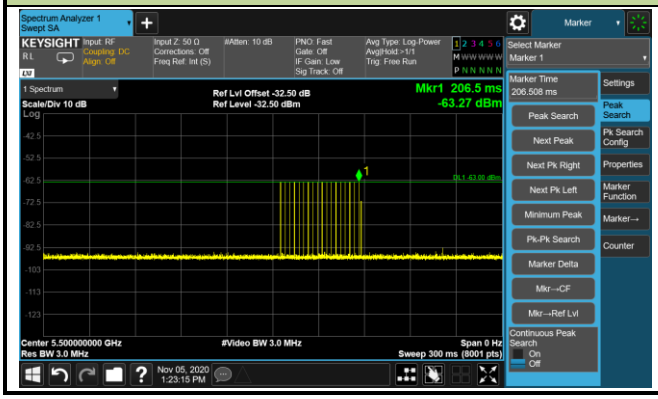
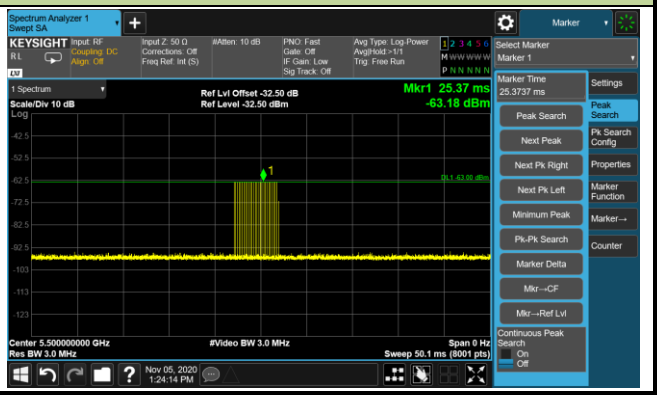
Figure 3-2: Conducted Test Setup

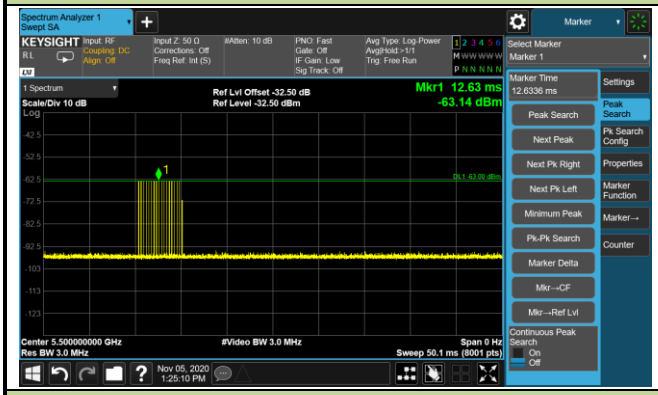
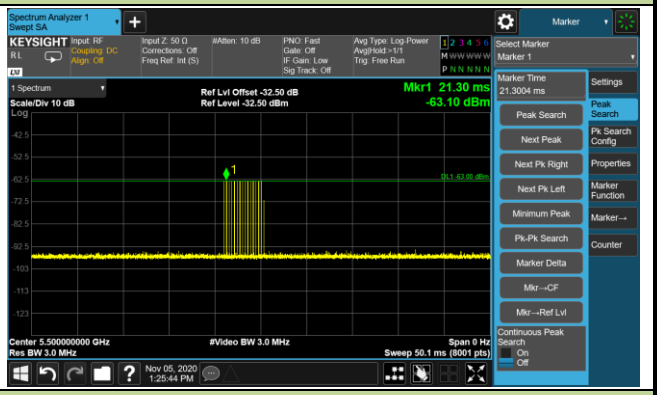
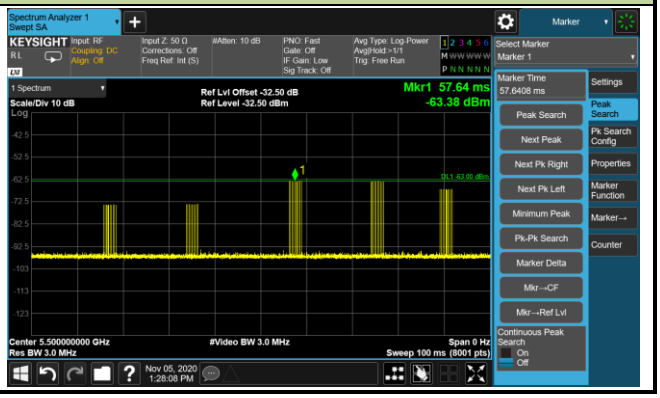
5.2.2. Calibration Procedure

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

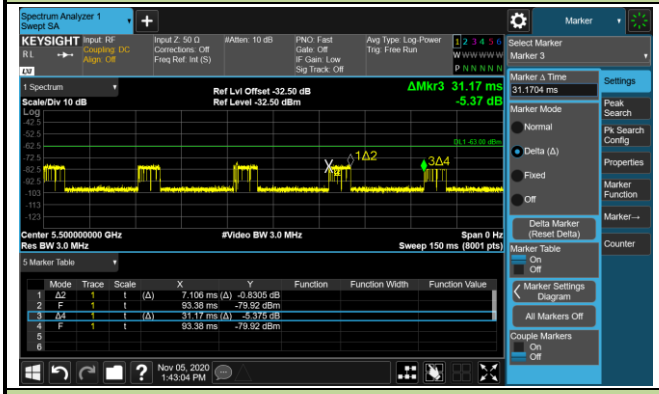
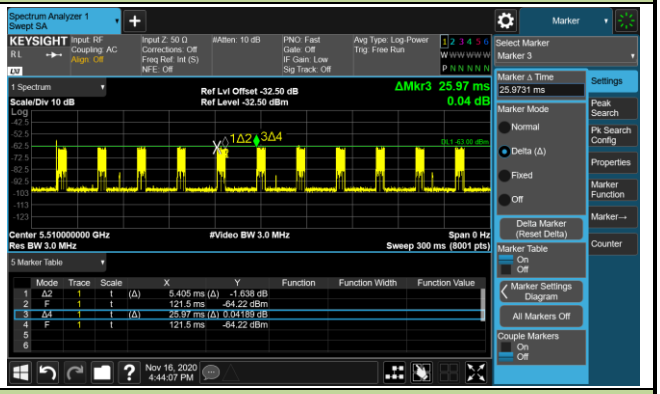
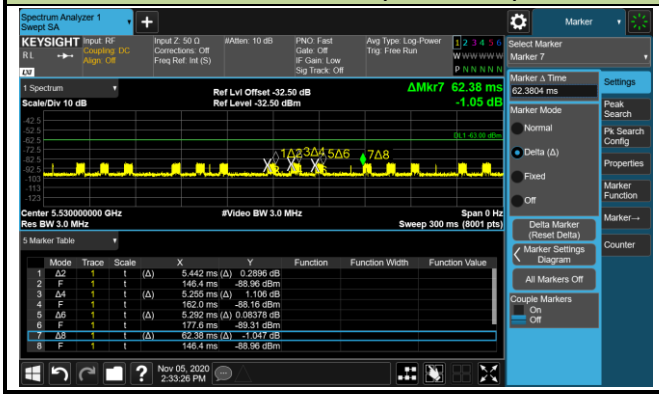
Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2020/11/05
Test Item	Radar Waveform Calibration		

Radar #0	Radar #1 (Test A) PRI = 838us and the number of pulses = 63
	
Radar #1 (Test B) PRI = 1.645ms and the number of pulses = 33	**Radar #2**
	

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

5.2.4. Channel Loading Test Result

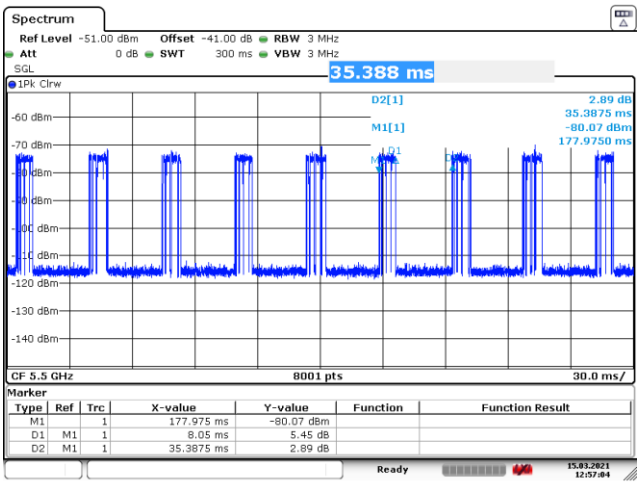
Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2020/11/05 ~2020/11/16
Test Item	Channel Loading – Mode 1		

802.11ac-VHT20 (5500MHz)	802.11ac-VHT40 (5510MHz)
	
802.11ac-VHT80 (5530MHz)	
	

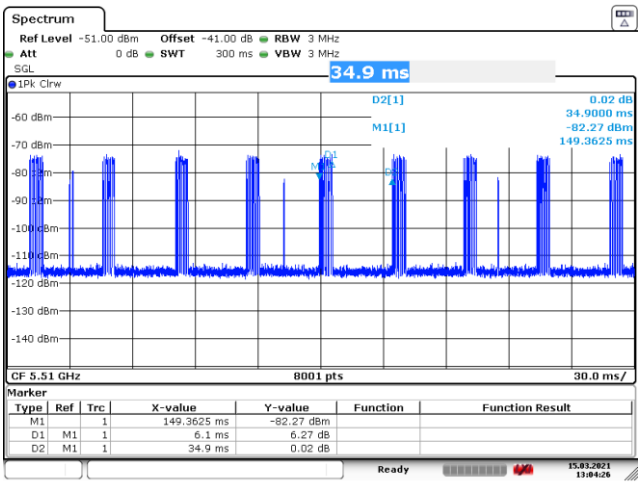
Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11ac-VHT20	5500 MHz	22.80%	≥ 17%	Pass
802.11ac-VHT40	5510 MHz	20.81%	≥ 17%	Pass
802.11ac-VHT80	5530 MHz	25.63%	≥ 17%	Pass
Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based 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).				

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/15
Test Item	Channel Loading – Mode 2		

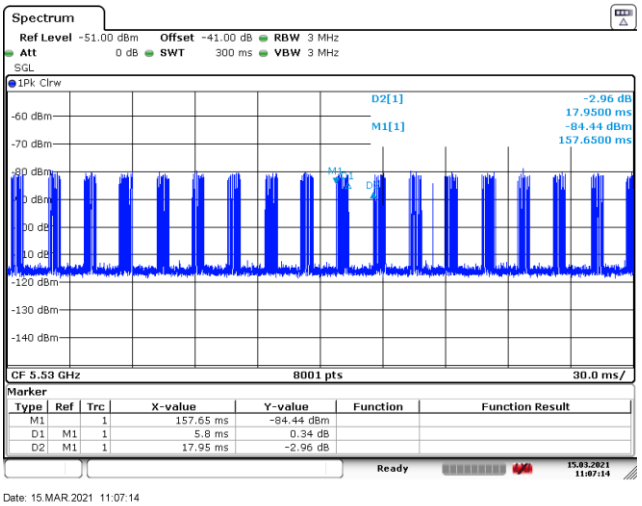
802.11ac-VHT20 (5500MHz)



802.11ac-VHT40 (5510MHz)



802.11ac-VHT80 (5530MHz)



Test Mode	Test Frequency	Packet ratio	Requirement ratio	Test Result
802.11ac-VHT20	5500 MHz	22.75%	≥ 17%	Pass
802.11ac-VHT40	5510 MHz	17.48%	≥ 17%	Pass
802.11ac-VHT80	5530 MHz	32.31%	≥ 17%	Pass
Note: System testing was performed with the designated iperf test file. This file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. Packet ratio = Time On / (Time On + Off Time).				

5.3. UNII Detection Bandwidth Measurement

5.3.1. Test Limit

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

5.3.2. Test Procedure

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

5.3.3. Test Result

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Detection Bandwidth (802.11ac-VHT20 mode - 5500MHz)		

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

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5500MHz. The 99% channel bandwidth is 17.74MHz. (See the 99% BW section of the RF report for further measurement details).

Note 2: Detection Bandwidth = FH - FL = 5509MHz – 5491MHz = 18MHz

Note 3: NII Detection Bandwidth Min. Limit (MHz): 17.74MHz x 100% = 17.74MHz.

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Detection Bandwidth (802.11ac-VHT40 mode - 5510MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529 FH	1	1	1	1	1	1	1	1	1	1	100%
5530	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5510MHz. The 99% channel bandwidth is 35.94MHz. (See the 99% BW section of the RF report for further measurement details).

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

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

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Detection Bandwidth (802.11ac-VHT80 mode - 5530MHz)		

Radar Frequency (MHz)	DFS Detection Trials (1=Detection, 0= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 FL	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569 FH	1	1	1	1	1	1	1	1	1	1	100%
5570	0	0	0	0	0	0	0	0	0	0	0%

Note 1: All NII channels for this device have identical Channel bandwidths. Therefore, all DFS testing was done at 5530MHz. The 99% channel bandwidth is 75.41MHz. (See the 99% BW section of the RF report for further measurement details).

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

Note 3: NII Detection Bandwidth Min. Limit (MHz): 75.41MHz x 100% = 75.41MHz.

5.4. Initial Channel Availability Check Time Measurement

5.4.1. Test Limit

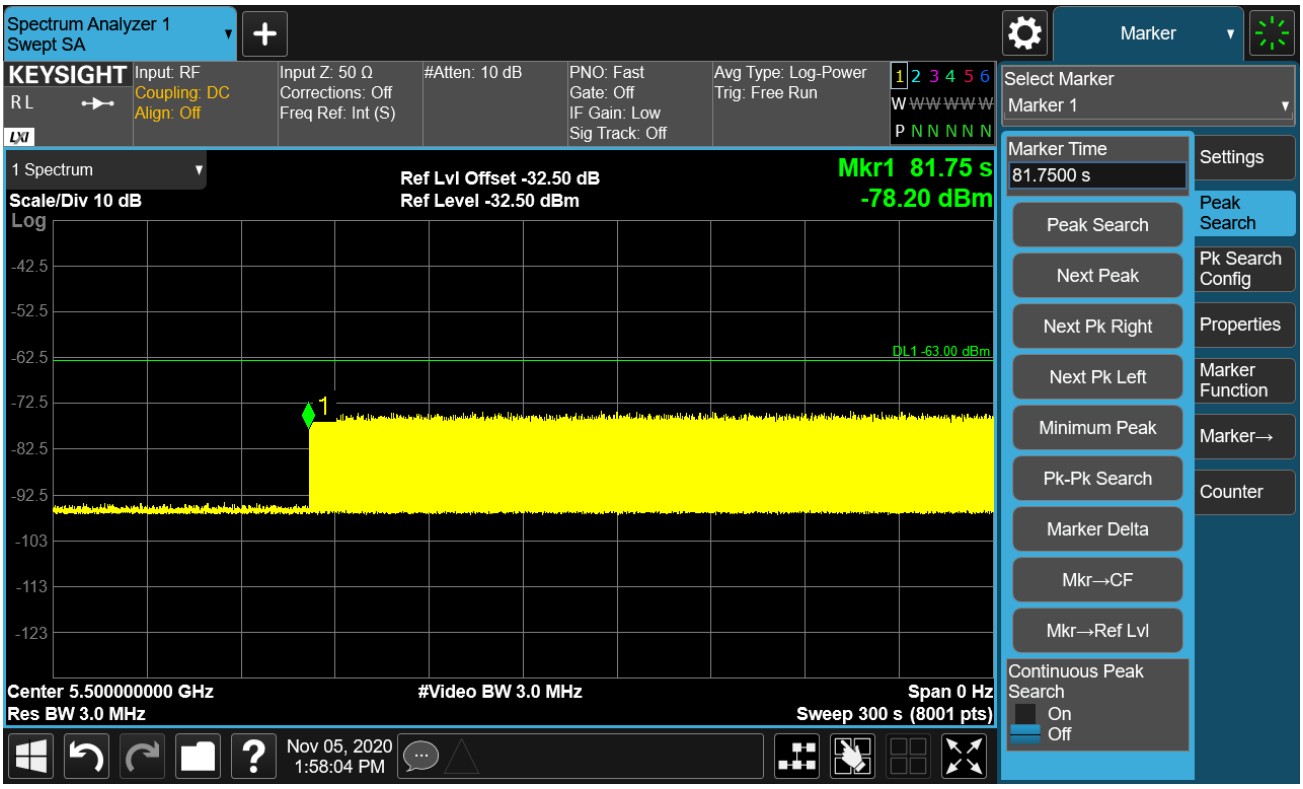
The EUT shall perform a Channel Availability Check to ensure that there is no radar operating on the channel. After power-up sequence, receive at least 1 minute on the intended operating frequency.

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	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2020/11/05
Test Item	Initial Channel Availability Check Time (802.11ac-VHT20 mode - 5500MHz)		

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 (21.8 sec). Initial beacons/data transmissions are indicated by marker 1 (81.8 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.

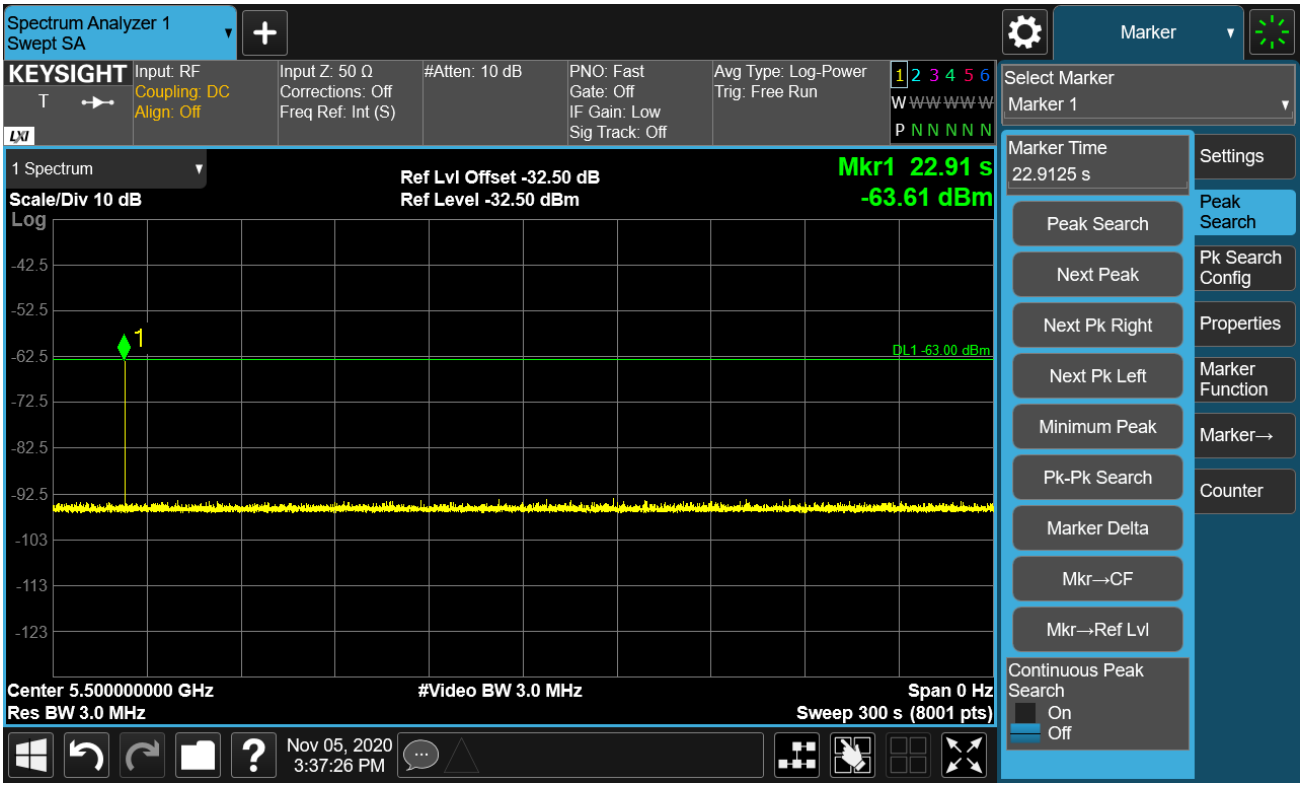
5.5.2. Test Procedure

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	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2020/11/05
Test Item	Beginning of the Channel Availability Check Time (802.11ac-VHT20 mode - 5500MHz)		

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	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2020/11/05
Test Item	End of the Channel Availability Check Time (802.11ac-VHT20 mode - 5500MHz)		

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.

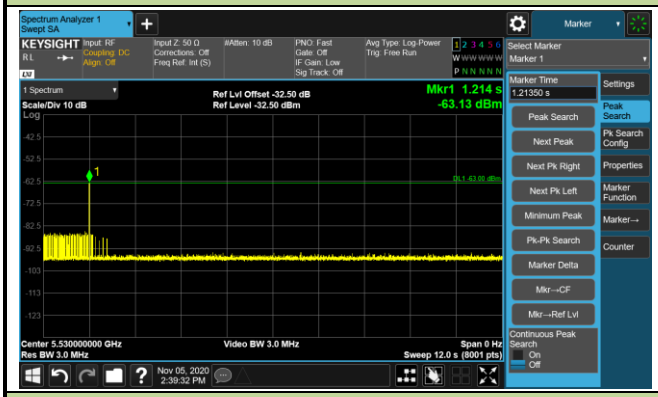
5.7.2. Test Procedure Used

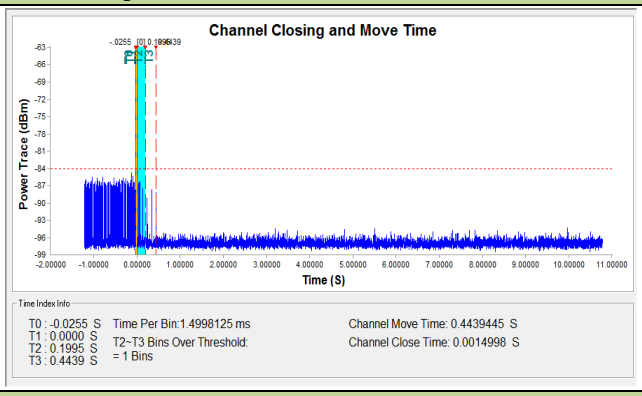
1. The test should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0.
2. When the radar burst with a level equal to the DFS Detection Threshold + 1dB is generated on the Operating Channel of the U-NII device. A U-NII device operating as a Master Device will 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	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2020/11/05
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ac-VHT80 mode - 5530MHz) – Mode 1		

Channel Move Time and Channel Closing Transmission Time



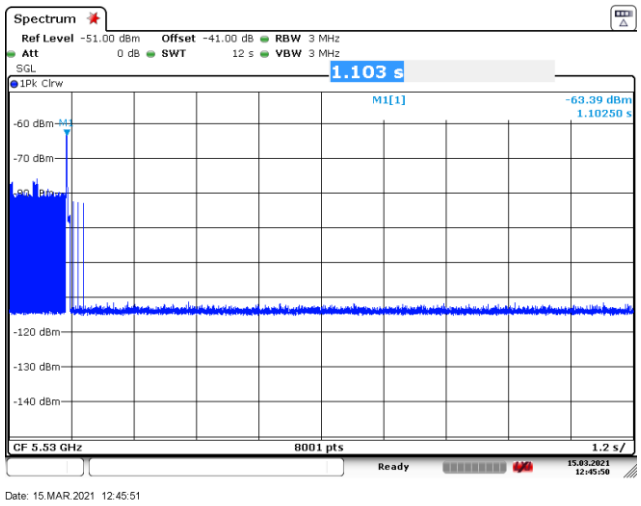


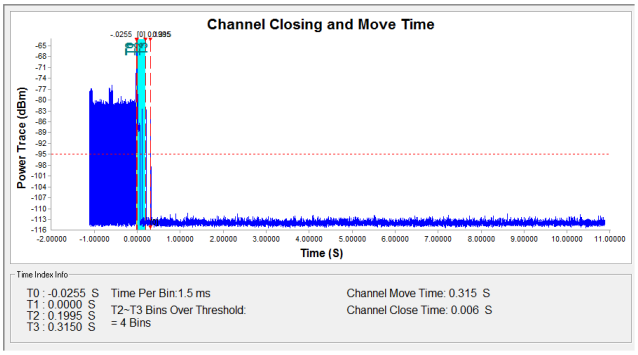
Non-Occupancy Period

Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.444s	<10s
Channel Closing Transmission Time (ms) (Note)	1.5ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30min
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.		

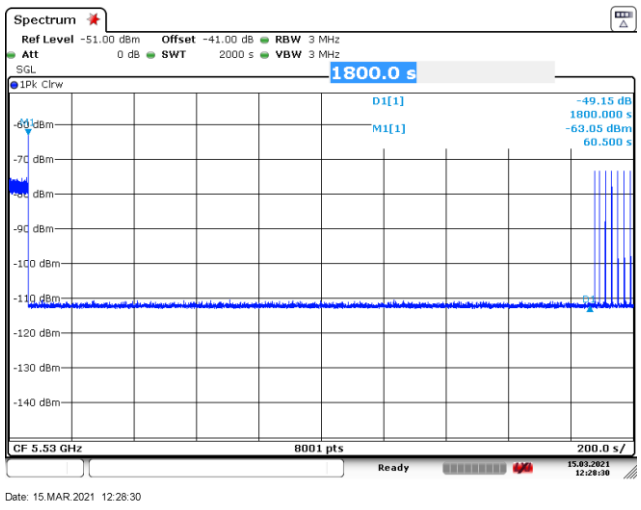
Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/15
Test Item	Channel Move Time and Channel Closing Transmission Time (802.11ac-VHT80 mode - 5530MHz) – Mode 2		

Channel Move Time and Channel Closing Transmission Time





Non-Occupancy Period



Parameter	Test Result	Limit
	Type 0	
Channel Move Time (s)	0.315s	<10s
Channel Closing Transmission Time (ms) (Note)	6ms	< 60ms
Non-Occupancy Period (min)	≥ 30min	≥ 30min
Note: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the		

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

5.8. Statistical Performance Check Measurement

5.8.1. Test Limit

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

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

The percentage of successful detection is calculated by:
(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	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Radar Statistical Performance Check (802.11ac-VHT20 – 5500MHz) – Mode 1		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	638	83	1
2	5491.1	1	878	61	1
3	5491.8	1	778	68	0
4	5492.5	1	538	98	1
5	5493.2	1	918	58	1
6	5494.0	1	618	86	1
7	5494.7	1	758	70	1
8	5495.4	1	938	57	1
9	5496.1	1	658	81	1
10	5496.8	1	858	62	1
11	5497.5	1	898	59	1
12	5498.1	1	838	63	1
13	5498.8	1	818	65	1
14	5499.5	1	738	72	1
15	5500.0	1	798	67	1
16	5500.7	1	2768	20	1
17	5501.4	1	1181	45	1
18	5502.1	1	2250	24	1
19	5502.8	1	2725	20	1
20	5503.2	1	1108	48	1
21	5503.9	1	2380	23	1
22	5504.6	1	642	83	1
23	5505.3	1	2839	19	1
24	5506.0	1	1524	35	1
25	5506.7	1	601	88	1
26	5507.3	1	1142	47	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5508.0	1	2179	25	1
28	5508.7	1	1304	41	1
29	5509.4	1	1957	27	1
30	5509.0	1	2914	19	1
Detection Percentage (%)					96.7%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	2.4	199	27	1
2	5491.1	3.2	213	23	1
3	5491.8	4.6	208	28	1
4	5492.5	1.3	150	23	1
5	5493.2	2.7	176	27	1
6	5494.0	2.4	218	26	0
7	5494.7	4.7	212	25	1
8	5495.4	4.9	176	27	1
9	5496.1	3.7	153	23	1
10	5496.8	4.0	165	24	1
11	5497.5	3.1	177	27	1
12	5498.1	1.4	180	27	0
13	5498.8	1.6	170	24	1
14	5499.5	4.2	154	25	1
15	5500.0	3.1	210	25	1
16	5500.7	4.1	151	27	1
17	5501.4	3.6	182	26	1
18	5502.1	1.0	178	27	1
19	5502.8	1.6	172	26	1
20	5503.2	3.0	152	24	1
21	5503.9	1.8	181	25	1
22	5504.6	4.9	159	25	1
23	5505.3	1.0	220	28	1
24	5506.0	4.3	213	28	1
25	5506.7	4.5	151	25	1
26	5507.3	3.0	211	27	0
27	5508.0	1.0	218	26	1
28	5508.7	3.4	189	24	1
29	5509.4	3.3	224	26	1
30	5509.0	4.5	207	26	1
Detection Percentage (%)					90%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	9.6	320	16	1
2	5491.1	9.8	484	17	1
3	5491.8	6.3	493	17	1
4	5492.5	6.1	203	16	1
5	5493.2	7.2	240	16	1
6	5494.0	9.2	425	17	1
7	5494.7	7.7	276	16	1
8	5495.4	8.8	249	17	1
9	5496.1	8.9	236	16	1
10	5496.8	8.2	322	16	0
11	5497.5	6.7	461	18	1
12	5498.1	7.9	405	17	1
13	5498.8	9.7	397	18	1
14	5499.5	8.9	273	16	1
15	5500.0	6.2	364	17	0
16	5500.7	6.5	289	16	1
17	5501.4	9.4	467	18	0
18	5502.1	9.0	263	17	1
19	5502.8	7.3	274	16	1
20	5503.2	9.9	326	16	1
21	5503.9	9.7	327	18	1
22	5504.6	6.7	455	18	1
23	5505.3	6.3	229	17	1
24	5506.0	8.9	453	17	1
25	5506.7	7.8	423	17	1
26	5507.3	8.6	380	17	0
27	5508.0	7.2	422	18	1
28	5508.7	6.7	439	17	1
29	5509.4	9.6	499	17	0
30	5509.0	8.5	243	17	1
Detection Percentage (%)					83.3%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	15.5	241	15	1
2	5491.1	18.8	235	13	1
3	5491.8	13.1	209	14	1
4	5492.5	12.4	428	16	1
5	5493.2	13.6	337	13	1
6	5494.0	17.3	453	16	1
7	5494.7	18.6	325	13	1
8	5495.4	17.9	394	14	1
9	5496.1	15.5	229	13	0
10	5496.8	16.4	211	14	1
11	5497.5	16.8	432	13	1
12	5498.1	13.5	259	12	0
13	5498.8	17.7	374	14	1
14	5499.5	16.8	379	13	1
15	5500.0	12.5	236	15	1
16	5500.7	13.4	287	13	1
17	5501.4	11.4	371	14	1
18	5502.1	14.0	404	14	1
19	5502.8	12.2	474	13	0
20	5503.2	15.7	385	14	1
21	5503.9	17.6	389	13	1
22	5504.6	17.6	240	13	1
23	5505.3	18.5	478	13	1
24	5506.0	11.4	268	14	1
25	5506.7	13.9	465	14	0
26	5507.3	18.0	375	16	1
27	5508.0	11.4	327	15	1
28	5508.7	15.3	409	13	1
29	5509.4	14.3	417	15	1
30	5509.0	18.4	225	14	1
Detection Percentage (%)					86.7%

Note: In addition, an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (96.7%+90%+83.3%+86.7%)/4 = 89.2% (>80%)

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5500.0	1	16	5496.6	1
2	5500.0	1	17	5498.6	1
3	5500.0	1	18	5494.2	1
4	5500.0	1	19	5497.8	1
5	5500.0	1	20	5495.8	1
6	5500.0	1	21	5505.0	1
7	5500.0	1	22	5501.4	1
8	5500.0	1	23	5505.4	1
9	5500.0	1	24	5502.2	1
10	5500.0	1	25	5502.2	1
11	5494.6	1	26	5505.4	1
12	5496.2	1	27	5506.6	1
13	5495.8	1	28	5503.4	1
14	5494.2	1	29	5501.0	1
15	5495.0	1	30	5504.2	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	64.5	6			231.08
2	2	83.2	6	1367		662.657
3	1	93.5	6			807.724
4	2	55.9	6	1786		321.751
5	3	83.2	6	1068	1958	479.469
6	2	78.7	6	1679		100.876
7	2	79.1	6	1418		584.743
8	3	90.3	6	1243	1615	337.72
9	2	59.8	6	1474		683.367
10	2	73.7	6	1429		55.154
11	3	50.2	6	1704	1634	186.741
12	2	63.2	6	1536		144.369
13	3	68.1	6	1357	1458	183.586
14	3	61.3	6	1296	1778	699.843

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	89.3	17			445.159
2	2	77.3	17	1128		372.753
3	1	97.3	17			378.307
4	3	78.6	17	1264	1796	487.48
5	3	85.2	17	1107	1626	426.183
6	2	57.1	17	1695		251.137
7	1	94.6	17			543.71
8	2	68.2	17	1772		259.653
9	3	85.3	17	1019	1789	287.477
10	2	91.7	17	1196		273.97
11	1	57.9	17			148.683
12	1	94.5	17			39.317
13	1	52.6	17			648.12
14	2	99.7	17	1426		484.153
15	1	83.1	17			168.417
16	2	55.9	17	1941		567.5
17	1	75.4	17			431.933
18	3	54.4	17	1840	1171	417.067

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	94.9	12	1454	1932	121.358
2	3	78.6	12	1761	1243	247.62
3	2	65.7	12	1440		255.11
4	2	83.4	12	1735		417.41
5	1	88.8	12			508.19
6	2	56.4	12	1400		324.45
7	2	80	12	1346		67.79
8	2	99.7	12	1678		293.24
9	2	72.3	12	1748		776.62
10	3	76.4	12	1109	1599	692.16
11	3	73.9	12	1040	1787	551.52
12	2	73.7	12	1914		495.29
13	3	63.3	12	1913	1090	104.94
14	3	63.3	12	1201	1867	244.5
15	1	65.8	12			263.8

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	80.3	10	1956		287.033
2	3	83.6	10	1570	1463	681.688
3	1	65.2	10			159.685
4	2	53.4	10	1835		0.023
5	2	99.6	10	1355		474.361
6	3	70.4	10	1811	1262	18.828
7	1	73.8	10			625.336
8	2	87.7	10	1535		56.244
9	2	99	10	1357		149.511
10	2	59.2	10	1847		336.379
11	1	85.5	10			362.596
12	2	54.3	10	1910		194.254
13	2	65.3	10	1007		202.182
14	2	97.8	10	1722		574.799
15	1	97.4	10			212.547
16	1	65.5	10			172.765
17	2	88.6	10	1175		502.682

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	55.1	19	1844		256.514
2	1	53.4	19			320.035
3	2	50.7	19	1747		247.027
4	3	64.4	19	1034	1837	232.54
5	3	50	19	1042	1445	654.823
6	1	82.9	19			295.597
7	2	97.1	19	1825		552.43
8	2	97.8	19	1331		200.753
9	1	51.8	19			2.897
10	2	88.8	19	1483		572.54
11	1	76.6	19			621.003
12	3	97.7	19	1248	1395	469.017
13	3	65.3	19	1230	1493	613.84
14	3	73	19	1413	1843	32.473
15	2	90.3	19	1110		441.927
16	2	85.2	19	1879		106.2
17	2	57.1	19	1456		323.433
18	2	79.3	19	1140		637.167

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	79.4	15			773.722
2	3	71.9	15	1729	1635	163.09
3	3	80.1	15	1578	1169	13.33
4	2	55.1	15	1660		693.06
5	2	56.3	15	1282		704.1
6	2	94	15	1302		262.38
7	2	73.1	15	1495		223.23
8	2	62.1	15	1458		800.91
9	1	82.9	15			312.68
10	1	80.2	15			250.67
11	3	63.1	15	1924	1325	885.9
12	3	52.3	15	1507	1148	798.4

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	68.4	19	1059		209.183
2	1	68.8	19			420.471
3	3	55.1	19	1754	1810	746.662
4	2	67.2	19	1604		1017.693
5	3	74.2	19	1223	1861	677.304
6	2	76.7	19	1736		148.915
7	3	68.1	19	1305	1175	11.815
8	1	98.2	19			179.616
9	1	72.4	19			200.447
10	2	96.6	19	1784		919.418
11	2	93.4	19	1540		809.409

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	66.3	8			401.038
2	2	59.8	8	1438		689.21
3	3	79.4	8	1169	1445	635.19
4	1	63.8	8			545.14
5	1	56.6	8			497.01
6	2	95.7	8	1365		204.44
7	1	90.9	8			557.76
8	3	53	8	1855	1433	109.59
9	2	93.1	8	1674		567.74
10	3	82.8	8	1565	1906	296.91
11	2	82.7	8	1850		468.44
12	1	93.1	8			594.76
13	2	96.4	8	1420		356.33
14	2	72	8	1719		37.7
15	1	57.7	8			322.9

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	74.5	7	1046		346.142
2	3	55.5	7	1250	1619	278.555
3	2	55.8	7	1575		301.005
4	1	87.6	7			26.183
5	2	99.2	7	1300		157.581
6	3	92.3	7	1457	1905	179.138
7	3	93	7	1932	1142	659.896
8	1	85.8	7			446.274
9	2	74.5	7	1447		471.621
10	2	85.3	7	1301		270.989
11	2	84	7	1775		598.586
12	3	80.1	7	1059	1248	378.044
13	2	67.6	7	1100		498.612
14	2	74.3	7	1618		231.679
15	2	67.3	7	1149		25.687
16	1	73.6	7			84.265
17	2	87	7	1990		481.482

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	62.4	17	1710		226.781
2	2	89.5	17	1005		277.937
3	3	82.3	17	1950	1829	87.917
4	2	61.1	17	1263		249.55
5	3	92.7	17	1551	1417	561.793
6	2	64.9	17	1617		521.197
7	2	58.4	17	1011		518.28
8	2	81.9	17	1385		418.103
9	2	75.4	17	1281		414.517
10	1	74.1	17			387.75
11	3	67.1	17	1654	1413	80.073
12	3	50.4	17	1860	1960	375.597
13	2	70.8	17	1302		275.05
14	2	89.3	17	1642		184.883
15	2	68.8	17	1658		293.487
16	3	86.1	17	1778	1041	65.3
17	3	97.6	17	1437	1865	630.633
18	2	91.8	17	1169		224.567

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	54.6	9	1036		1157.52
2	2	83.8	9	1815		386.75
3	3	89.1	9	1299	1439	741.27
4	1	93	9			168.86
5	1	67.1	9			136.83
6	2	89.4	9	1452		271.26
7	3	99.9	9	1398	1647	8.87
8	2	86.9	9	1227		947.59
9	1	74.4	9			371.48
10	3	65.3	9	1270	1073	854.2

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	85.4	13	1715	1123	122.25
2	2	83	13	1772		186.461
3	3	59.9	13	1266	1708	67.827
4	1	88.9	13			481.5
5	2	72.9	13	1243		218.333
6	2	98.7	13	1760		186.237
7	2	75.3	13	1402		270.22
8	2	83.8	13	1842		93.643
9	3	92.1	13	1315	1238	24.077
10	1	83.7	13			494.31
11	2	74.3	13	1730		204.433
12	3	77	13	1869	1634	152.287
13	2	70.5	13	1772		449.49
14	2	88.5	13	1071		607.973
15	1	74.6	13			131.937
16	3	97.8	13	1947	1446	37.4
17	2	87.6	13	1444		282.133
18	1	60.2	13			61.867

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	76.1	12	1399		457.198
2	3	98.3	12	1746	1785	677.567
3	3	51.7	12	1243	1628	1298.823
4	3	96.6	12	1019	1421	1158.22
5	2	59.4	12	1344		680.807
6	3	84	12	1053	1274	898.813
7	3	64.6	12	1362	1892	198.02
8	3	77.6	12	1817	1049	292.547
9	1	60.7	12			383.933

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	77.5	8	1350		28.22
2	2	66.7	8	1415		127.521
3	3	54.3	8	1446	1583	476.632
4	2	79.1	8	1187		600.743
5	3	53.5	8	1215	1627	390.864
6	3	66.6	8	1545	1793	449.605
7	1	77.3	8			154.516
8	1	89.1	8			570.147
9	3	87.2	8	1819	1541	178.288
10	1	83.2	8			290.799
11	2	89.8	8	1594		383.161
12	2	59.5	8	1693		129.012
13	2	65.7	8	1691		360.593
14	2	94.5	8	1175		324.784
15	2	56	8	1966		587.295
16	3	96.8	8	1404	1396	360.846
17	1	60.9	8			468.437
18	3	60.3	8	1205	1180	623.358
19	1	58.1	8			88.879

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	71.8	10	1343	1746	496.57
2	3	67.6	10	1308	1041	383.793
3	2	59.9	10	1111		481.757
4	2	97.5	10	1585		366.67
5	3	66.1	10	1379	1259	434.213
6	1	97.4	10			397.477
7	1	99.2	10			599.3
8	3	88.3	10	1665	1405	576.973
9	1	77.5	10			281.037
10	2	100	10	1274		120.41
11	1	63	10			83.453
12	2	51.5	10	1077		379.047
13	1	84.5	10			109.59
14	3	68	10	1357	1444	90.443
15	2	76.8	10	1506		240.967
16	2	60.8	10	1583		658.7
17	2	87.6	10	1300		326.133
18	2	75.5	10	1779		609.467

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	61.4	14			692.505
2	1	73.6	14			142.768
3	2	51.9	14	1188		471.185
4	2	87.7	14	1780		527.753
5	1	64	14			35.221
6	2	84.5	14	1055		136.408
7	1	72.3	14			116.256
8	3	69.9	14	1344	1064	122.434
9	1	73.9	14			86.301
10	2	93	14	1112		528.429
11	2	90.9	14	1132		284.526
12	2	85.5	14	1622		39.014
13	3	59.6	14	1765	1187	659.692
14	1	65.6	14			254.319
15	2	79.2	14	1981		8.657
16	2	64.1	14	1154		237.265
17	1	69	14			340.982

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	50.7	19	1795	1974	133.917
2	1	66.3	19			455.98
3	2	66	19	1223		17.25
4	2	85	19	1465		501.89
5	3	59.4	19	1668	1762	534.29
6	2	86.7	19	1316		730.08
7	2	97.6	19	1941		563.11
8	3	91.1	19	1594	1362	429.01
9	3	86.2	19	1828	1386	257.51
10	2	87.8	19	1006		733.31
11	2	55	19	1447		654.53
12	1	81.8	19			319.77
13	3	51.5	19	1309	1082	467.88
14	2	86.9	19	1750		535.8
15	2	94.1	19	1806		104.2
16	2	74.7	19	1240		417

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	93.6	8			631.216
2	3	55.9	8	1985	1535	1023.447
3	2	92	8	1675		421.523
4	1	78.2	8			1083.88
5	3	68.5	8	1865	1401	701.517
6	2	87.7	8	1795		626.013
7	2	60.1	8	1396		1066.38
8	3	71.9	8	1627	1193	1094.567
9	2	94.7	8	1636		338.533

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	60.5	17	1413		97.337
2	3	95.1	17	1628	1173	337.028
3	3	77.3	17	1863	1116	222.165
4	2	78.4	17	1188		669.963
5	3	99.6	17	1913	1190	653.211
6	3	61	17	1544	1661	61.398
7	2	91.1	17	1577		404.116
8	2	84.9	17	1954		597.374
9	2	77.2	17	1163		460.831
10	2	50.9	17	1474		620.039
11	2	85.5	17	1817		164.416
12	3	65.2	17	1686	1591	435.734
13	2	53.1	17	1595		699.142
14	3	86.2	17	1737	1689	286.199
15	2	96	17	1891		11.237
16	3	58.6	17	1593	1451	263.765
17	1	62.2	17			523.382

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	65.6	12	1336	1911	221.715
2	1	77.4	12			15.099
3	1	90.5	12			144.6
4	2	75	12	1571		263.5
5	2	55.9	12	1387		407.86
6	3	59.7	12	1761	1343	520.8
7	1	53.4	12			192.88
8	2	95.2	12	1237		307.82
9	1	96.1	12			450.02
10	1	61.6	12			179.9
11	1	92.1	12			124.67
12	1	97.7	12			148.01
13	1	86.5	12			225.37
14	2	59.5	12	1273		320.84
15	1	98.3	12			152.46
16	2	96.9	12	1719		274
17	2	88.5	12	1545		338.17
18	3	95.5	12	1036	1142	12.4
19	2	50.5	12	1287		538.1
20	2	56.1	12	1065		68.2

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	92.4	10	1770		132.184
2	2	92.2	10	1562		199.919
3	3	68.7	10	1021	1076	351.592
4	2	92.1	10	1833		346.673
5	3	65.8	10	1887	1919	292.514
6	3	90.2	10	1111	1600	465.265
7	2	78.6	10	1267		374.266
8	1	77.9	10			471.547
9	2	89.6	10	1067		69.908
10	2	81.5	10	1681		170.149
11	3	82.7	10	1948	1534	480.741
12	1	85.1	10			19.702
13	3	52.5	10	1219	1529	214.743
14	2	56.7	10	1262		548.494
15	2	65.6	10	1763		588.195
16	2	65.6	10	1378		280.436
17	2	97.2	10	1350		441.937
18	2	72.1	10	1169		220.858
19	2	89.1	10	1137		422.379

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	75	19	1550	1640	593.293
2	2	95	19	1135		894.267
3	1	98	19			810.863
4	2	81.1	19	1610		1146.16
5	3	69.3	19	1581	1129	256.697
6	2	60.4	19	1813		567.843
7	1	86.1	19			497.75
8	3	78.5	19	1813	1411	378.397
9	2	83.5	19	1088		825.133

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	86.5	9	1656	1176	1026.28
2	3	67.1	9	1319	1743	899.95
3	2	80.4	9	1104		69.26
4	2	69	9	1620		333.03
5	2	72.7	9	1716		886.48
6	3	75.9	9	1748	1335	450.43
7	1	97.5	9			42.31
8	1	95.8	9			355.69
9	2	70.4	9	1701		214.05
10	1	63	9			763.4

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	65	17	1285		142.224
2	3	96.4	17	1766	1678	591.253
3	2	65.3	17	1930		321.467
4	2	98.2	17	1025		514.12
5	2	94	17	1942		49.103
6	2	80.9	17	1459		119.767
7	2	58.4	17	1036		628.7
8	1	94.3	17			195.483
9	3	57.8	17	1545	1503	8.097
10	1	72.2	17			168.97
11	2	58.6	17	1795		254.763
12	1	53.8	17			103.727
13	2	89.7	17	1415		3.52
14	2	83.9	17	1938		235.723
15	1	90.3	17			534.347
16	2	69.1	17	1925		7.3
17	1	60.2	17			240.833
18	2	54	17	1469		465.267

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	87	17			63.223
2	2	82.4	17	1763		578.68
3	3	73.2	17	1318	1215	168.34
4	3	59.1	17	1447	1449	430.34
5	2	89.4	17	1621		475.07
6	1	57.5	17			243.9
7	3	78.3	17	1172	1338	360.48
8	2	78.3	17	1697		371.36
9	2	60.6	17	1302		273.65
10	2	99.1	17	1683		351.61
11	3	73.3	17	1820	1512	419.62
12	2	54.9	17	1124		97.44
13	3	79	17	1523	1108	276.12
14	2	54.7	17	1175		145.91
15	2	69.1	17	1876		507
16	2	89.4	17	1618		441.72
17	2	74.8	17	1999		345.93
18	3	92.4	17	1878	1883	533.6
19	2	95	17	1905		40.7
20	3	74.7	17	1296	1437	548.5

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	71.7	9	1661	1382	226.38
2	3	96.6	9	1952	1186	392.577
3	1	86.8	9			269.944
4	2	67.9	9	1154		61.891
5	3	57.9	9	1956	1747	547.819
6	2	69.6	9	1542		756.906
7	2	60.7	9	1467		191.623
8	3	68.6	9	1592	1397	578.47
9	2	54.4	9	1029		178.237
10	3	69.4	9	1088	1439	4.094
11	2	83.2	9	1330		779.741
12	2	92.2	9	1786		145.339
13	2	85.5	9	1652		235.086
14	1	97.6	9			470.543

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	81.3	6	1441		866.234
2	3	77.9	6	1173	1149	849.99
3	2	96.6	6	1448		494.54
4	2	52.8	6	1991		222.06
5	1	57.1	6			501.69
6	2	64.7	6	1428		1015.78
7	3	56.7	6	1836	1214	683.77
8	2	71.2	6	1668		106.58
9	1	62.5	6			684.4
10	1	63.2	6			675.4

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	82.2	14	1934		171.7
2	3	88.7	14	1841	1883	700.411
3	3	99.5	14	1895	1197	117.272
4	3	82	14	1610	1446	268.953
5	1	85.2	14			695.814
6	1	99.8	14			245.745
7	1	69.1	14			955.605
8	1	81.8	14			819.426
9	2	96.6	14	1319		617.087
10	2	84.3	14	1482		903.318
11	1	94.3	14			61.609

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	60.8	20	1262	1857	800.722
2	2	61.1	20	1494		523.613
3	2	76.4	20	1746		770.316
4	2	74.4	20	1323		471.849
5	1	50.3	20			5.312
6	2	64.4	20	1638		433.115
7	2	66.6	20	1850		426.068
8	2	58.9	20	1250		844.472
9	2	73.2	20	1214		228.155
10	3	97.1	20	1148	1757	182.548
11	1	64.8	20			847.831
12	2	94.8	20	1577		130.454
13	1	56.5	20			654.177

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	72.6	12	1675		426.367
2	2	99.9	12	1343		730.513
3	2	75.5	12	1056		734.106
4	1	60.3	12			296.629
5	2	97	12	1340		0.812
6	3	72.8	12	1554	1858	725.565
7	1	66.1	12			754.698
8	2	60.7	12	1237		355.302
9	2	74.8	12	1481		8.375
10	2	55.2	12	1108		643.578
11	3	78.5	12	1342	1697	419.221
12	3	55.4	12	1097	1392	529.854
13	2	99.1	12	1439		66.677

Radar Type 6 - Radar Statistical Performance

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

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5497	45	47	5510	141
33	5498	99	69	5490	207
100	5505	300	75	5498	225
--	--	--	84	5501	252
--	--	--	86	5507	258

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
36	5493	108	78	5507	234
44	5498	132	99	5491	297
51	5500	153	--	--	--
80	5504	240	--	--	--
81	5497	243	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5490	60	5	5501	15
36	5493	108	26	5491	78
91	5500	273	35	5493	105
94	5508	282	50	5499	150
--	--	--	52	5494	156
--	--	--	59	5504	177
--	--	--	80	5496	240
--	--	--	84	5503	252

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
34	5504	102	11	5494	33
--	--	--	14	5509	42
--	--	--	27	5504	81
--	--	--	40	5501	120
--	--	--	49	5497	147

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
59	5500	177	4	5499	12
60	5503	180	23	5501	69
92	5502	276	40	5500	120

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
1	5499	3	17	5494	51
16	5495	48	48	5493	144
24	5503	72	--	--	--
91	5501	273	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
37	5510	111	23	5502	69
66	5490	198	40	5497	120
87	5504	261	51	5506	153
--	--	--	67	5493	201
--	--	--	77	5496	231
--	--	--	81	5501	243

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5507	33	47	5498	141
36	5490	108	57	5493	171
44	5506	132	60	5490	180
53	5505	159	--	--	--
77	5508	231	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
52	5501	156	19	5508	57
90	5500	270	22	5493	66
--	--	--	93	5494	279
--	--	--	97	5509	291

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5503	48	19	5497	57
32	5504	96	22	5495	66
77	5499	231	40	5496	120
84	5509	252	62	5499	186
88	5497	264	88	5506	264

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5506	27	39	5492	117

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
78	5500	234	19	5492	57
100	5507	300	39	5507	117
--	--	--	60	5510	180

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
33	5495	99	2	5510	6
49	5491	147	13	5509	39
64	5492	192	30	5506	90
77	5501	231	55	5494	165
78	5497	234	--	--	--
92	5499	276	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
17	5492	51	16	5504	48
85	5510	255	39	5495	117
--	--	--	49	5497	147
--	--	--	51	5506	153
--	--	--	64	5491	192
--	--	--	84	5501	252
--	--	--	89	5503	267

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
36	5508	108	13	5497	39
53	5503	159	18	5510	54
65	5491	195	37	5500	111
72	5493	216	61	5509	183
92	5494	276	77	5501	231
93	5500	279	--	--	--

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Radar Statistical Performance Check (802.11ac-VHT40 mode – 5510MHz) – Mode 1		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	558	95	1
2	5492.3	1	898	59	1
3	5493.5	1	658	81	1
4	5494.8	1	578	92	1
5	5496.1	1	738	72	1
6	5497.4	1	838	63	1
7	5498.8	1	678	78	1
8	5500.1	1	798	67	1
9	5501.3	1	698	76	1
10	5502.6	1	938	57	1
11	5503.9	1	538	98	1
12	5505.2	1	518	102	1
13	5506.4	1	918	58	1
14	5507.7	1	858	62	1
15	5509.0	1	3066	18	1
16	5510.0	1	1999	27	1
17	5511.3	1	990	54	1
18	5512.5	1	1035	51	1
19	5513.8	1	2357	23	1
20	5515.1	1	569	93	1
21	5516.4	1	983	54	1
22	5517.6	1	1210	44	1
23	5518.9	1	588	90	1
24	5520.2	1	1198	44	1
25	5521.4	1	2520	21	1
26	5522.7	1	1953	27	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5524.0	1	1556	34	1
28	5525.2	1	1858	29	1
29	5526.5	1	670	79	1
30	5529.0	1	1360	39	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	5491.0	4.4	230	29	1
2	5492.3	3.0	154	29	0
3	5493.5	3.5	172	26	1
4	5494.8	1.0	213	24	0
5	5496.1	4.7	230	28	1
6	5497.4	2.0	170	23	1
7	5498.8	1.5	191	24	0
8	5500.1	1.9	160	29	1
9	5501.3	4.0	204	26	1
10	5502.6	2.0	203	28	1
11	5503.9	2.9	155	28	1
12	5505.2	2.3	192	25	1
13	5506.4	4.0	219	26	1
14	5507.7	2.8	157	23	1
15	5509.0	2.4	163	24	1
16	5510.0	3.1	171	26	1
17	5511.3	3.8	214	27	1
18	5512.5	1.8	151	26	1
19	5513.8	1.5	219	23	1
20	5515.1	1.1	155	26	1
21	5516.4	2.6	168	24	1
22	5517.6	1.8	176	27	1
23	5518.9	3.3	174	24	1
24	5520.2	2.3	169	25	0
25	5521.4	3.9	176	25	1
26	5522.7	3.6	183	25	0
27	5524.0	4.7	216	23	1
28	5525.2	3.1	151	24	0
29	5526.5	4.8	203	24	1
30	5529.0	4.7	200	28	1
Detection Percentage (%)					80%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	9.4	282	17	0
2	5492.3	8.1	448	17	1
3	5493.5	7.9	283	17	1
4	5494.8	6.9	391	17	1
5	5496.1	7.1	454	18	1
6	5497.4	6.1	343	16	0
7	5498.8	6.0	262	17	1
8	5500.1	8.8	458	17	1
9	5501.3	6.3	334	18	1
10	5502.6	6.8	471	16	1
11	5503.9	9.6	493	18	1
12	5505.2	10.0	308	18	1
13	5506.4	9.4	278	17	1
14	5507.7	8.3	335	16	1
15	5509.0	7.5	280	16	1
16	5510.0	8.8	302	17	1
17	5511.3	8.2	201	18	1
18	5512.5	9.9	380	18	0
19	5513.8	8.5	496	17	1
20	5515.1	6.1	304	16	1
21	5516.4	8.2	303	16	0
22	5517.6	8.3	387	16	1
23	5518.9	8.1	368	17	1
24	5520.2	8.8	460	17	1
25	5521.4	9.1	494	17	1
26	5522.7	6.5	493	16	0
27	5524.0	9.9	367	17	1
28	5525.2	8.7	306	16	1
29	5526.5	9.9	443	17	1
30	5529.0	9.3	436	18	1
Detection Percentage (%)					83.3%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	11.3	382	13	1
2	5492.3	15.3	202	15	1
3	5493.5	11.8	391	15	1
4	5494.8	12.1	218	14	0
5	5496.1	16.6	396	14	1
6	5497.4	18.1	295	12	1
7	5498.8	15.7	261	13	1
8	5500.1	16.6	436	14	1
9	5501.3	18.7	239	14	1
10	5502.6	14.1	351	13	1
11	5503.9	11.7	283	16	1
12	5505.2	14.6	457	16	1
13	5506.4	19.7	224	14	0
14	5507.7	13.2	434	16	1
15	5509.0	11.9	297	14	1
16	5510.0	13.6	259	14	1
17	5511.3	16.6	453	13	0
18	5512.5	19.5	408	15	0
19	5513.8	15.7	397	14	1
20	5515.1	11.1	317	14	1
21	5516.4	15.9	204	14	1
22	5517.6	14.1	386	13	1
23	5518.9	15.1	395	13	1
24	5520.2	19.1	203	16	1
25	5521.4	11.6	203	15	1
26	5522.7	16.8	425	13	1
27	5524.0	17.8	347	15	0
28	5525.2	14.2	344	15	1
29	5526.5	13.1	347	14	1
30	5529.0	15.0	412	14	0
Detection Percentage (%)					80%

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%+80%+83.3%+80%)/4 = 85.8% (>80%)

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5510.0	1	16	5495.8	1
2	5510.0	1	17	5493.8	1
3	5510.0	1	18	5496.2	1
4	5510.0	1	19	5497.8	1
5	5510.0	1	20	5495.0	1
6	5510.0	1	21	5522.2	1
7	5510.0	1	22	5522.6	1
8	5510.0	1	23	5521.4	1
9	5510.0	1	24	5521.0	1
10	5510.0	1	25	5522.6	1
11	5495.8	1	26	5521.0	1
12	5497.0	1	27	5526.6	1
13	5497.0	1	28	5521.8	1
14	5499.0	1	29	5521.0	1
15	5493.8	1	30	5522.6	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	60.5	11	1210	1784	434.3
2	3	79.8	11	1898	1850	368.3
3	2	69.7	11	1671		1.48
4	2	76.9	11	1442		485.28
5	2	65.8	11	1814		1036.46
6	2	54.1	11	1438		984.32
7	3	76.2	11	1803	1756	868.94
8	2	57	11	1466		1150.6

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	55.6	16	1034		102.456
2	1	94.9	16			616.643
3	3	58.9	16	1648	1668	450.937
4	3	75	16	1237	1790	554.12
5	3	90.3	16	1667	1441	144.933
6	1	65.3	16			518.197
7	1	80.5	16			532.39
8	2	96.4	16	1393		337.663
9	2	60.9	16	1773		362.197
10	3	88.2	16	1649	1968	286.72
11	2	78.3	16	1557		465.093
12	2	64.8	16	1610		365.047
13	2	53.3	16	1543		63.46
14	3	77.7	16	1189	1810	142.813
15	2	72.3	16	1645		546.727
16	3	65.3	16	1076	1958	387.1
17	1	68.9	16			465.933
18	2	93.4	16	1958		442.467

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	69.8	15			3.632
2	1	99.4	15			1074.421
3	1	63.4	15			531.062
4	1	78.1	15			604.133
5	1	54.9	15			114.944
6	2	66.9	15	1826		614.545
7	2	54.9	15	1139		209.425
8	2	62.7	15	1907		549.386
9	2	87.3	15	1469		18.347
10	2	61.3	15	1134		1010.418
11	2	79.3	15	1262		121.309

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	58.9	19	1573	1785	498.197
2	3	88.5	19	1444	1488	549.308
3	3	74.7	19	1247	1016	525.915
4	2	80.7	19	1237		622.103
5	2	84	19	1649		592.631
6	3	58.6	19	1440	1018	456.528
7	2	63.5	19	1202		333.216
8	2	55.8	19	1368		296.254
9	2	66.7	19	1792		631.771
10	2	90	19	1188		234.409
11	3	62.1	19	1648	1062	159.466
12	1	91.6	19			447.094
13	1	86.9	19			316.452
14	1	77.8	19			498.989
15	2	98	19	1923		157.747
16	2	83.9	19	1561		263.065
17	3	51	19	1912	1438	409.282

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	95.8	9			141.365
2	3	89	9	1293	1338	547.188
3	1	61.5	9			192.745
4	2	94.5	9	1697		61.423
5	3	89.2	9	1183	1913	530.101
6	3	79.2	9	1261	1396	11.298
7	3	87	9	1042	1176	355.276
8	1	99.3	9			16.084
9	1	79.1	9			47.631
10	3	63.3	9	1503	1040	430.969
11	2	65.3	9	1944		480.126
12	2	57.1	9	1831		45.714
13	2	68.2	9	1624		559.952
14	3	68.1	9	1661	1307	331.819
15	3	54	9	1770	1014	68.207
16	2	84.7	9	1663		227.165
17	1	86.3	9			433.482

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	52.7	9	1519		443.313
2	3	78	9	1119	1170	269.42
3	1	54.7	9			477.22
4	2	94.8	9	1662		90.42
5	3	90.6	9	1894	1088	533.17
6	2	53	9	1602		63.48
7	1	87.5	9			177.16
8	3	51.4	9	1548	1855	501.51
9	2	83.2	9	1725		367.04
10	2	73.9	9	1724		706.79
11	3	88.5	9	1943	1458	381.3
12	2	82.2	9	1756		753.46
13	3	73.2	9	1667	1392	138.85
14	2	66.8	9	1940		433.2
15	2	72.2	9	1852		184

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	56.7	17	1295	1216	366.289
2	3	75.6	17	1583	1863	106.994
3	3	100	17	1321	1994	647.92
4	2	80.7	17	1468		473.41
5	2	56.2	17	1673		360.89
6	3	63.2	17	1997	1370	682.95
7	1	79	17			172.39
8	2	68	17	1582		525.94
9	2	65.8	17	1909		579.87
10	2	51.2	17	1419		508.82
11	3	81.9	17	1799	1310	477.85
12	2	64.7	17	1535		220.97
13	2	90.4	17	1680		206.5
14	3	79.5	17	1119	1687	145.5
15	2	78	17	1213		343.9

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	52.5	8	1879		1020.62
2	2	78.5	8	1902		749.601
3	2	82.5	8	1510		713.732
4	2	90.1	8	1018		576.013
5	3	89.9	8	1776	1555	526.944
6	3	84.7	8	1673	1171	35.185
7	1	57.7	8			754.885
8	2	94.6	8	1359		544.556
9	1	58.4	8			62.367
10	1	99.9	8			334.518
11	2	74.5	8	1294		1073.209

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	71.6	8	1767		16.728
2	2	76.3	8	1723		366.63
3	2	95.2	8	1185		644.65
4	1	63.3	8			30.3
5	3	67.8	8	1805	1578	543.62
6	3	69.7	8	1384	1233	3.81
7	3	58.5	8	1849	1821	27.37
8	3	61.5	8	1614	1084	242.72
9	1	57.7	8			298.02
10	1	77.4	8			85.9
11	2	51.4	8	1612		156.39
12	2	88.2	8	1232		586.3
13	1	59.9	8			401.22
14	2	87.6	8	1548		675.3
15	2	70	8	1654		373.8
16	3	54.4	8	1529	1911	86.5

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	95	11			782.443
2	3	81.3	11	1348	1699	90.653
3	2	81.7	11	1848		502.466
4	1	86.4	11			235.209
5	3	98.7	11	1041	1719	847.182
6	1	57.4	11			697.315
7	1	51.7	11			328.308
8	3	51.3	11	1947	1264	282.702
9	3	73.3	11	1387	1038	153.425
10	2	81.6	11	1626		560.188
11	2	86.4	11	1305		713.431
12	2	88.5	11	1009		626.654
13	1	78.7	11			561.677

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	72.6	12			279.728
2	3	79.1	12	1600	1400	345
3	2	60.9	12	1516		360.84
4	1	63.6	12			38.07
5	2	50.5	12	1023		1001.79
6	3	75.3	12	1631	1447	538.11
7	2	69.5	12	1367		52.87
8	2	53.6	12	1142		881.85
9	1	97.6	12			180.25
10	2	93.8	12	1480		475.3

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	75.1	15			736.656
2	2	76.4	15	1809		532.65
3	2	56.1	15	1352		44.6
4	2	52.7	15	1890		455.95
5	2	71.5	15	1549		150.34
6	2	97.7	15	1180		595.69
7	3	56.2	15	1248	1979	565.28
8	3	84.6	15	1423	1335	208.4
9	2	95	15	1199		495.74
10	2	65.3	15	1030		0.25
11	1	64.2	15			377.08
12	3	83.6	15	1013	1682	713.17
13	2	81.3	15	1231		92.35
14	2	97.1	15	1473		265
15	1	92.4	15			476.9
16	3	67.9	15	1853	1438	717

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	80.9	15	1201		289.775
2	3	57.5	15	1945	1986	591.413
3	3	72.1	15	1814	1188	222.907
4	2	81.8	15	1199		656.9
5	3	53.8	15	1960	1266	2.353
6	1	81.6	15			41.847
7	3	99.3	15	1126	1058	194.21
8	1	73.3	15			631.163
9	3	76.2	15	1185	1323	480.647
10	3	57	15	1850	1025	639.78
11	3	62.2	15	1429	1253	100.303
12	1	75.8	15			566.537
13	2	64.1	15	1026		347.05
14	2	56	15	1409		352.443
15	1	64.7	15			589.947
16	3	76.8	15	1582	1964	236.8
17	2	62	15	1261		241.233
18	3	50.9	15	1515	1469	556.067

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	70.4	20	1141	1305	122.736
2	2	78.9	20	1860		727.71
3	2	87.7	20	1924		148.74
4	2	63.2	20	1271		193.31
5	2	65.1	20	1073		177.86
6	1	83.5	20			293.46
7	1	87.2	20			993.94
8	3	73.7	20	1674	1516	76.09
9	1	75.8	20			905.1
10	3	52.1	20	1135	1038	570.7

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	71.8	7	1988		1000.11
2	1	89.2	7			665.461
3	2	75.7	7	1382		763.882
4	1	52	7			297.913
5	1	69.1	7			692.284
6	1	72.7	7			290.525
7	3	98.4	7	1069	1124	215.025
8	2	69.2	7	1588		144.826
9	1	65.8	7			678.257
10	2	51.3	7	1720		590.018
11	3	82.3	7	1701	1610	256.609

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	55.2	12	1356		156.029
2	2	58.7	12	1709		240.939
3	1	94.3	12			15.88
4	2	66.3	12	1378		367.69
5	1	85.1	12			293.31
6	2	72.6	12	1389		161.77
7	2	75.4	12	1764		73.05
8	1	69	12			319.34
9	1	56.3	12			428.41
10	2	54.7	12	1380		338.06
11	2	99.9	12	1552		30.85
12	2	89	12	1257		185.62
13	1	80.4	12			5.61
14	1	66.8	12			470.6
15	3	54.2	12	1293	1044	653.1
16	1	85.8	12			241.7

Type 5 Radar Waveform_17						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	84.2	7	1751	1174	513.692
2	2	52.3	7	1715		167.087
3	2	63.2	7	1206		303.614
4	2	72.8	7	1747		449.661
5	2	79.4	7	1745		111.269
6	3	58.9	7	1029	1590	818.716
7	2	61.2	7	1196		572.323
8	3	89.9	7	1871	1315	730.56
9	3	77	7	1141	1547	550.717
10	2	86.2	7	1868		437.574
11	2	56.1	7	1526		607.371
12	2	88	7	1184		538.839
13	3	69.4	7	1137	1073	118.286
14	3	61	7	1450	1313	1.943

Type 5 Radar Waveform_18						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	58.6	13			610.877
2	3	81.9	13	1746	1103	123.599
3	2	54.6	13	1166		292.205
4	3	88.9	13	1583	1460	593.163
5	2	92.3	13	1829		318.701
6	1	53	13			103.028
7	3	67.9	13	1231	1412	532.966
8	2	78.6	13	1236		677.024
9	2	95.6	13	1978		369.971
10	3	76.3	13	1569	1771	107.559
11	2	59.2	13	1798		315.216
12	2	52	13	1331		622.464
13	2	68.2	13	1843		80.622
14	2	52.3	13	1766		301.059
15	3	70	13	1874	1296	284.847
16	3	95.6	13	1938	1641	655.965
17	2	93.8	13	1203		319.682

Type 5 Radar Waveform_19						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	52.8	17	1055		415.627
2	2	76	17	1623		259.25
3	3	64.2	17	1135	1067	1065.96
4	2	87.2	17	1384		441.87
5	2	89.6	17	1027		848.13
6	1	80.7	17			918.64
7	2	83.2	17	1518		309.34
8	3	68	17	1271	1251	61.67
9	2	53	17	1426		1099.5
10	2	60.2	17	1847		612.9

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	56.6	10	1566		799.894
2	1	64.4	10			488.057
3	2	89.1	10	1194		910.183
4	2	57.2	10	1147		651.79
5	1	50	10			847.107
6	3	98.8	10	1221	1141	331.363
7	1	88.7	10			3.2
8	2	75.2	10	1883		18.717
9	2	68.8	10	1848		389.133

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	60.7	17	1629		547.367
2	3	98.1	17	1802	1612	61.713
3	2	85.7	17	1017		688.785
4	1	96.2	17			620.263
5	1	52.7	17			206.311
6	2	57.1	17	1558		370.718
7	2	91.2	17	1008		333.966
8	2	87.9	17	1346		167.454
9	3	91.1	17	1155	1315	442.981
10	2	67.1	17	1702		548.639
11	2	54.9	17	1803		602.096
12	2	66.2	17	1516		118.984
13	2	94.2	17	1354		519.322
14	3	98	17	1683	1420	478.819
15	3	63.4	17	1380	1620	153.547
16	1	74.8	17			210.465
17	3	74.2	17	1245	1134	541.782

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	53.3	16	1296		483.396
2	3	74.3	16	1459	1011	174.063
3	2	88.1	16	1973		1.416
4	2	74	16	1003		902.389
5	3	58.6	16	1992	1521	816.512
6	2	64.5	16	1868		806.625
7	1	76.6	16			80.498
8	2	78.1	16	1655		864.332
9	2	65.8	16	1275		317.275
10	2	56.3	16	1722		292.528
11	2	81.4	16	1932		211.991
12	2	98.8	16	1204		536.854
13	2	78.1	16	1779		735.277

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	78.1	19	1365		506.462
2	3	90.8	19	1545	1107	202.593
3	2	83.5	19	1157		613.206
4	1	84	19			658.819
5	2	57.4	19	1075		3.542
6	2	78.4	19	1141		171.735
7	2	68	19	1362		601.468
8	2	97.6	19	1551		109.022
9	3	94.4	19	1389	1442	20.485
10	3	81.3	19	1690	1251	641.338
11	2	68.6	19	1728		52.231
12	1	72.8	19			783.354
13	2	95.6	19	1236		645.977

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	55.5	20	1144	1337	645.911
2	2	53.8	20	1188		712.41
3	1	54.9	20			708.37
4	2	88.2	20	1549		295.63
5	3	78.5	20	1179	1884	667.84
6	2	57.4	20	1706		441.17
7	3	52.4	20	1420	1682	656.1
8	2	66.4	20	1926		746.98
9	2	65.5	20	1214		696.18
10	1	83	20			501.17
11	1	68.8	20			780.69
12	3	97.9	20	1346	1223	305.8
13	1	94.3	20			754.9
14	2	94.1	20	1698		218.1
15	2	55.3	20	1256		771.1

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	51.6	16			266.014
2	1	65.2	16			610.771
3	3	54.3	16	1013	1696	700.592
4	1	92.6	16			974.943
5	1	60.6	16			511.234
6	1	92	16			471.425
7	2	57.1	16	1973		135.265
8	1	65.1	16			908.986
9	3	86	16	1145	1396	450.237
10	3	71.2	16	1354	1801	808.718
11	2	58.5	16	1130		923.609

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	80.2	20	1911		82.472
2	2	83.1	20	1011		340.593
3	2	75.6	20	1507		247.337
4	2	50.1	20	1038		6.09
5	2	67.7	20	1534		338.183
6	2	55.9	20	1028		313.247
7	1	60.5	20			432.04
8	2	90.4	20	1233		337.773
9	3	76.4	20	1904	1681	80.197
10	1	93.4	20			202.18
11	2	98.9	20	1818		218.513
12	1	87.3	20			432.217
13	2	73.9	20	1212		333.32
14	1	71.8	20			532.113
15	2	60	20	1637		369.847
16	2	73.6	20	1558		654.4
17	3	78	20	1728	1366	303.833
18	2	83.4	20	1489		612.767

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	89.1	6	1064		426.196
2	3	74.1	6	1813	1322	376.387
3	2	99.7	6	1321		1007.913
4	2	85.4	6	1737		682.35
5	2	71	6	1548		117.807
6	2	61.7	6	1511		615.453
7	3	59	6	1997	1827	1305.4
8	1	74.4	6			1106.067
9	2	75.6	6	1497		1097.133

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	82	18	1011	1879	839.382
2	2	66.5	18	1096		192.283
3	2	86.2	18	1482		844.056
4	1	78	18			463.509
5	3	77.9	18	1692	1473	834.962
6	2	77.2	18	1828		283.025
7	1	69.9	18			623.548
8	2	83	18	1321		26.012
9	2	97.4	18	1290		399.985
10	1	76.2	18			542.598
11	2	52.2	18	1668		740.271
12	1	80.8	18			544.254
13	3	82.3	18	1420	1273	829.877

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	95.7	20			81.365
2	2	84.3	20	1238		679.29
3	2	55.3	20	1514		780.58
4	1	95.5	20			26.6
5	1	99.7	20			387.66
6	2	82.6	20	1466		570.87
7	2	60.5	20	1866		603.23
8	2	100	20	1877		419.07
9	1	59.8	20			236.57
10	3	78.6	20	1656	1113	175.99
11	2	63.1	20	1643		740.5
12	3	61.1	20	1787	1515	714.66
13	1	84.2	20			492
14	2	87.5	20	1173		610.3
15	1	97.7	20			292.8

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	76.5	16			18.645
2	1	62.5	16			133.32
3	2	56.2	16	1463		32.102
4	2	70.5	16	1894		201.323
5	2	86.6	16	1250		380.864
6	2	87.6	16	1608		568.765
7	1	61.9	16			311.486
8	2	50.5	16	1197		211.637
9	2	87.5	16	1629		373.558
10	3	84.9	16	1118	1968	341.859
11	3	91	16	1420	1099	197.721
12	2	70.8	16	1885		240.332
13	3	54.7	16	1234	1311	151.543
14	2	59.6	16	1523		64.214
15	2	64.6	16	1343		354.815
16	3	75.6	16	1523	1160	201.366
17	2	88.7	16	1895		352.437
18	3	87.2	16	1324	1744	523.158
19	1	97.2	16			150.779

Radar Type 6 - Radar Statistical Performance

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

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5503	21	11	5528	33
16	5528	48	21	5529	63
22	5521	66	34	5527	102
38	5495	114	55	5510	165
41	5515	123	58	5491	174
55	5493	165	67	5501	201
66	5516	198	77	5507	231
70	5529	210	89	5494	267
94	5499	282	--	--	--
95	5514	285	--	--	--

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5505	69	10	5523	30
46	5524	138	23	5507	69
68	5516	204	60	5497	180
77	5523	231	73	5493	219
89	5519	267	75	5506	225
97	5498	291	80	5491	240
99	5491	297	81	5509	243
--	--	--	83	5530	249
--	--	--	95	5518	285

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5525	45	27	5521	81
26	5513	78	31	5509	93
56	5519	168	45	5493	135
65	5498	195	52	5522	156
74	5528	222	55	5520	165
--	--	--	58	5523	174
--	--	--	62	5510	186
--	--	--	68	5507	204
--	--	--	86	5511	258
--	--	--	88	5502	264
--	--	--	92	5504	276

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5529	60	3	5521	9
31	5510	93	16	5492	48
36	5494	108	22	5516	66
46	5496	138	23	5512	69
52	5525	156	57	5496	171
57	5507	171	84	5523	252
65	5508	195	--	--	--
84	5517	252	--	--	--
87	5502	261	--	--	--
97	5523	291	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5518	48	1	5512	3
17	5513	51	25	5495	75
38	5508	114	34	5506	102
40	5523	120	35	5527	105
41	5493	123	47	5515	141
61	5516	183	58	5518	174
76	5517	228	67	5501	201
82	5527	246	80	5498	240
86	5511	258	88	5492	264
93	5522	279	96	5519	288
98	5506	294	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5527	18	51	5499	153
12	5505	36	55	5509	165
37	5521	111	63	5505	189
72	5530	216	65	5525	195
77	5519	231	86	5528	258
90	5510	270	87	5498	261
94	5499	282	88	5504	264

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
16	5521	48	3	5497	9
29	5496	87	6	5527	18
30	5524	90	8	5516	24
31	5526	93	22	5521	66
53	5498	159	29	5498	87
90	5513	270	30	5525	90
--	--	--	63	5518	189
--	--	--	75	5494	225
--	--	--	95	5504	285

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5503	60	6	5526	18
21	5522	63	9	5490	27
47	5530	141	21	5524	63
51	5523	153	22	5522	66
69	5521	207	51	5520	153
72	5515	216	60	5523	180
81	5499	243	65	5509	195
--	--	--	68	5512	204
--	--	--	71	5514	213
--	--	--	76	5516	228
--	--	--	87	5507	261
--	--	--	96	5495	288

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5512	42	7	5508	21
23	5507	69	15	5497	45
40	5518	120	25	5499	75
42	5524	126	48	5524	144
47	5513	141	49	5528	147
82	5501	246	69	5498	207
89	5504	267	76	5503	228
--	--	--	95	5526	285
--	--	--	97	5490	291
--	--	--	100	5514	300

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5530	3	32	5505	96
4	5507	12	45	5520	135
35	5500	105	70	5530	210
41	5499	123	78	5519	234
72	5514	216	80	5498	240
96	5504	288	93	5491	279
97	5492	291	--	--	--
100	5491	300	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
48	5497	144	3	5506	9
49	5491	147	19	5490	57
51	5494	153	48	5509	144
52	5523	156	60	5527	180
65	5530	195	66	5493	198
74	5495	222	78	5530	234
76	5496	228	91	5514	273
80	5501	240	94	5522	282
--	--	--	96	5524	288

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5502	60	4	5491	12
21	5527	63	21	5512	63
48	5507	144	24	5526	72
49	5514	147	33	5514	99
56	5497	168	49	5498	147
58	5510	174	71	5494	213
61	5523	183	83	5493	249
73	5526	219	90	5508	270
75	5520	225	100	5523	300

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5514	6	4	5493	12
5	5520	15	17	5516	51
6	5510	18	25	5512	75
9	5502	27	37	5517	111
34	5526	102	42	5495	126
37	5509	111	46	5515	138
39	5490	117	99	5524	297
41	5508	123	--	--	--
43	5517	129	--	--	--
45	5515	135	--	--	--
48	5513	144	--	--	--
56	5492	168	--	--	--
74	5495	222	--	--	--
88	5506	264	--	--	--

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
9	5517	27	3	5529	9
19	5509	57	11	5524	33
20	5495	60	20	5527	60
22	5492	66	24	5498	72
23	5501	69	34	5507	102
36	5527	108	39	5528	117
44	5508	132	41	5496	123
51	5528	153	51	5491	153
65	5530	195	66	5530	198
--	--	--	67	5494	201
--	--	--	76	5506	228

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5501	33	9	5524	27
14	5521	42	40	5494	120
21	5519	63	52	5512	156
33	5528	99	54	5507	162
41	5526	123	55	5522	165
51	5490	153	73	5504	219
69	5522	207	95	5501	285
78	5507	234	--	--	--
85	5495	255	--	--	--
98	5524	294	--	--	--

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Radar Statistical Performance Check (802.11ac-VHT80 mode – 5530MHz) – Mode 1		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	918	58	1
2	5493.8	1	698	76	1
3	5496.6	1	3066	18	1
4	5499.3	1	878	61	1
5	5502.1	1	798	67	1
6	5504.9	1	858	62	1
7	5507.7	1	838	63	1
8	5510.5	1	578	92	1
9	5513.2	1	658	81	1
10	5516.0	1	778	68	1
11	5518.8	1	738	72	1
12	5521.6	1	758	70	1
13	5524.4	1	538	98	1
14	5527.1	1	598	89	1
15	5530.0	1	818	65	1
16	5532.7	1	2865	19	1
17	5535.4	1	1747	31	1
18	5538.0	1	774	69	1
19	5540.7	1	2154	25	1
20	5543.4	1	1069	50	1
21	5546.1	1	2410	22	1
22	5548.8	1	1356	39	1
23	5551.4	1	552	96	1
24	5554.1	1	1983	27	1
25	5556.8	1	1258	42	1
26	5559.5	1	2983	18	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5562.2	1	2272	24	1
28	5564.8	1	1545	35	1
29	5567.5	1	902	59	1
30	5569.0	1	2351	23	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	5491.0	2.7	158	25	1
2	5493.8	3.0	179	28	1
3	5496.6	1.8	162	27	1
4	5499.3	3.1	192	29	1
5	5502.1	1.7	189	25	1
6	5504.9	3.2	182	24	1
7	5507.7	3.5	157	28	1
8	5510.5	4.1	171	25	0
9	5513.2	1.6	168	27	1
10	5516.0	3.6	184	23	0
11	5518.8	2.0	175	28	0
12	5521.6	3.6	168	28	1
13	5524.4	4.2	218	24	1
14	5527.1	4.8	196	24	0
15	5530.0	3.5	193	27	1
16	5532.7	1.2	200	24	1
17	5535.4	1.3	189	29	1
18	5538.0	2.0	156	26	0
19	5540.7	1.2	168	27	1
20	5543.4	4.0	229	28	1
21	5546.1	1.7	153	24	1
22	5548.8	2.7	175	27	1
23	5551.4	4.2	230	28	1
24	5554.1	3.2	156	25	0
25	5556.8	1.0	222	27	1
26	5559.5	3.4	216	27	1
27	5562.2	4.7	227	28	1
28	5564.8	3.8	188	27	1
29	5567.5	3.1	181	24	1
30	5569.0	3.6	203	26	1
Detection Percentage (%)					80%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	9.1	255	18	0
2	5493.8	8.9	314	17	1
3	5496.6	7.0	391	16	1
4	5499.3	9.5	316	17	1
5	5502.1	6.7	453	16	1
6	5504.9	6.7	461	17	1
7	5507.7	9.3	238	17	1
8	5510.5	9.1	208	16	1
9	5513.2	7.2	434	16	1
10	5516.0	9.9	247	17	1
11	5518.8	8.5	311	17	1
12	5521.6	9.7	430	17	1
13	5524.4	7.1	281	17	1
14	5527.1	10.0	335	17	1
15	5530.0	6.3	291	16	1
16	5532.7	8.9	258	16	1
17	5535.4	7.3	358	17	1
18	5538.0	8.5	337	16	1
19	5540.7	7.4	290	18	1
20	5543.4	8.2	383	18	1
21	5546.1	7.3	384	17	1
22	5548.8	8.7	291	17	1
23	5551.4	9.1	461	17	1
24	5554.1	10.0	490	17	1
25	5556.8	9.9	489	17	1
26	5559.5	7.0	465	16	1
27	5562.2	7.4	412	16	1
28	5564.8	6.0	201	18	1
29	5567.5	9.7	358	17	1
30	5569.0	6.3	258	17	1
Detection Percentage (%)					96.7%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	17.2	297	14	1
2	5493.8	15.3	371	14	1
3	5496.6	18.0	301	13	1
4	5499.3	12.3	449	15	1
5	5502.1	14.5	371	16	1
6	5504.9	17.8	313	15	1
7	5507.7	16.5	373	14	0
8	5510.5	14.8	274	16	1
9	5513.2	15.9	474	14	1
10	5516.0	11.4	290	13	1
11	5518.8	14.9	256	14	1
12	5521.6	11.2	204	12	1
13	5524.4	18.1	411	14	0
14	5527.1	17.4	494	16	1
15	5530.0	12.9	324	13	0
16	5532.7	12.1	261	13	0
17	5535.4	18.6	368	13	1
18	5538.0	19.4	232	14	1
19	5540.7	17.6	366	16	1
20	5543.4	19.9	332	15	1
21	5546.1	11.6	395	15	1
22	5548.8	14.4	332	14	1
23	5551.4	11.7	268	16	1
24	5554.1	19.8	224	15	0
25	5556.8	17.1	478	15	1
26	5559.5	16.8	467	13	0
27	5562.2	12.6	287	14	1
28	5564.8	11.1	294	12	1
29	5567.5	15.6	402	12	1
30	5569.0	18.7	433	16	0
Detection Percentage (%)					76.7%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+80%+96.7%+76.7%)/4 = 88.4% (>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	5530.0	1	16	5499.0	1
2	5530.0	1	17	5495.8	1
3	5530.0	1	18	5495.8	1
4	5530.0	1	19	5495.8	1
5	5530.0	1	20	5493.0	1
6	5530.0	1	21	5564.6	1
7	5530.0	1	22	5565.8	1
8	5530.0	1	23	5565.4	1
9	5530.0	1	24	5561.8	1
10	5530.0	1	25	5564.6	1
11	5497.0	1	26	5565.0	1
12	5499.0	1	27	5561.4	1
13	5496.6	1	28	5562.2	1
14	5496.2	1	29	5562.2	1
15	5497.8	1	30	5564.6	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	95.3	12	1728		526.06
2	1	57.5	12			244.22
3	1	85.8	12			112.09
4	1	89.8	12			475.59
5	1	66.8	12			55.4
6	3	90.4	12	1349	1275	589.6
7	2	69.4	12	1149		502.25
8	2	56.3	12	1103		142.2
9	2	86.4	12	1819		556.86
10	2	92.3	12	1161		32.19
11	2	52.6	12	1867		573.89
12	3	73.5	12	1581	1368	686.51
13	1	84.2	12			527.4
14	1	84.1	12			440.8
15	3	83.5	12	1509	1805	367.5

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	69.6	12	1473	1223	1020.8
2	2	68.5	12	1282		731.787
3	1	76.1	12			1109.953
4	2	70.2	12	1344		1186.24
5	2	93.6	12	1160		869.557
6	2	98.3	12	1711		1231.703
7	2	80.2	12	1273		415.93
8	2	81.4	12	1845		848.967
9	2	65.4	12	1660		8.033

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	63.1	11	1254	1792	203.061
2	2	57.9	11	1458		379.84
3	1	52	11			443.14
4	2	69.7	11	1554		299.75
5	3	61.4	11	1104	1191	14.18
6	2	59.5	11	1664		514.83
7	2	83.6	11	1344		687.14
8	2	80.3	11	1812		222.22
9	2	81.9	11	1554		262.6
10	2	65.8	11	1774		536
11	2	89	11	1116		171.63
12	2	59.8	11	1626		722.6
13	2	61.1	11	1048		618.86
14	2	76.8	11	1822		738
15	3	52.8	11	1116	1490	557.4
16	3	87.2	11	1138	1995	213.5

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	80.9	11	1239		849.727
2	3	50.5	11	1450	1797	1046.947
3	3	67.3	11	1024	1898	282.603
4	3	63.9	11	1527	1666	706.52
5	3	63.6	11	1661	1897	38.577
6	1	98.4	11			531.853
7	1	93.7	11			44.09
8	1	93.3	11			316.957
9	3	95.5	11	1924	1689	601.433

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	71.2	14	1716		692.861
2	3	59.4	14	1239	1469	239.883
3	2	57.2	14	1950		230.67
4	1	89.2	14			389.24
5	2	87.2	14	1020		710.51
6	3	55.6	14	1841	1352	123.8
7	1	84	14			565.11
8	2	90.3	14	1902		685.77
9	2	69.1	14	1498		262.11
10	2	96.2	14	1592		363.15
11	2	50	14	1846		261.01
12	3	52.5	14	1680	1617	399.41
13	1	95.1	14			609.21
14	2	91.3	14	1373		153.44
15	3	83.3	14	1517	1598	241.4
16	2	76.8	14	1655		621.8

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	67	9			302.689
2	2	78.3	9	1856		618.86
3	2	53.9	9	1998		292.21
4	1	99.4	9			128.28
5	2	80.2	9	1813		625.96
6	2	80.7	9	1947		435.2
7	3	64.9	9	1722	1662	411.11
8	3	56.3	9	1962	1179	275.87
9	2	67.9	9	1978		101.3
10	2	82.8	9	1700		602.78
11	2	96.2	9	1970		56.61
12	2	89.8	9	1988		299.98
13	1	71.7	9			262.39
14	3	71.8	9	1142	1554	742.1
15	2	79.9	9	1736		734.1

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	98.6	8	1273	1359	150.33
2	2	73.6	8	1345		229.788
3	1	54.5	8			246.712
4	3	92.6	8	1367	1501	618.073
5	2	95.4	8	1984		338.144
6	1	54.4	8			44.205
7	3	58.1	8	1673	1336	14.206
8	3	83.2	8	1630	1102	387.317
9	2	66.3	8	1040		593.268
10	3	51.1	8	1480	1609	187.899
11	2	71.6	8	1889		284.831
12	3	89.6	8	1813	1910	332.412
13	3	65.8	8	1499	1228	493.413
14	2	87	8	1063		368.444
15	3	88.2	8	1104	1120	329.635
16	1	81.6	8			625.416
17	2	54.8	8	1379		582.137
18	1	84.2	8			119.958
19	1	60.2	8			47.979

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	84.5	20			34.655
2	1	62.2	20			80.728
3	1	74.6	20			133.187
4	1	73.4	20			490.76
5	3	74.1	20	1060	1471	566.173
6	2	84.3	20	1482		441.647
7	2	91.6	20	1540		73.04
8	2	54.3	20	1077		360.573
9	2	76.3	20	1132		180.717
10	2	53.4	20	1749		461.06
11	2	62.6	20	1014		161.443
12	2	91.5	20	1797		136.197
13	2	89.3	20	1712		227.19
14	2	83.6	20	1517		21.743
15	2	92.2	20	1364		595.567
16	2	72.3	20	1961		439.2
17	2	77.8	20	1991		66.733
18	2	59.5	20	1298		313.867

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	68.4	15	1295		505.028
2	2	51.7	15	1598		61.823
3	1	59.5	15			447.467
4	3	97.6	15	1526	1921	253.93
5	1	92.4	15			18.563
6	1	75	15			316.927
7	3	95.2	15	1060	1320	129.42
8	2	97.3	15	1664		453.413
9	2	91.6	15	1364		610.237
10	2	61.1	15	1963		363.27
11	3	77.3	15	1975	1773	453.133
12	3	60.3	15	1244	1231	378.407
13	1	88	15			658.77
14	3	55.3	15	1587	1129	203.853
15	1	50.7	15			103.917
16	1	85.9	15			415.3
17	1	72.7	15			576.433
18	2	97.5	15	1735		482.167

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	74.3	14	1248		1061.51
2	1	82.9	14			707.69
3	2	95.1	14	1212		715.71
4	1	98.8	14			612.81
5	2	53.7	14	1370		223.48
6	1	69.5	14			606.94
7	1	77.2	14			826.89
8	2	62.2	14	1875		658.41
9	2	69.2	14	1810		1031.9
10	2	99.4	14	1744		473

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	51.2	15	1886		1140.11
2	1	76.7	15			421.12
3	3	61.2	15	1604	1696	931.45
4	1	89.7	15			146.43
5	3	50.4	15	1439	1206	27.76
6	2	96.2	15	1279		991.99
7	2	66.6	15	1231		1080.02
8	3	98.2	15	1868	1961	192.97
9	3	76.9	15	1454	1939	62.8
10	1	99.2	15			1178.5

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	72.2	20	1364		1310.65
2	1	56.7	20			986.177
3	1	74.7	20			284.143
4	2	58.7	20	1997		69.11
5	3	61.9	20	1943	1807	393.307
6	3	58.1	20	1732	1156	413.923
7	1	82.3	20			1089.78
8	2	96.1	20	1465		689.267
9	1	70.4	20			283.633

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	60	14			604.825
2	1	65.3	14			308.888
3	1	80.1	14			684.035
4	1	88.6	14			43.033
5	1	86.6	14			599.591
6	3	66.1	14	1825	1792	479.378
7	2	80.5	14	1672		58.426
8	3	80.8	14	1524	1528	207.834
9	1	90.6	14			692.121
10	1	59.5	14			130.099
11	2	50	14	1887		40.196
12	2	75.5	14	1240		532.004
13	3	80.3	14	1521	1699	150.632
14	2	85.4	14	1367		263.539
15	2	89.8	14	1710		592.347
16	2	78.5	14	1073		696.165
17	3	71.3	14	1740	1441	309.482

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	99.8	13	1071		633.58
2	1	74.8	13			489.087
3	1	92.8	13			697.444
4	3	96.1	13	1676	1783	51.851
5	2	64.9	13	1789		834.959
6	3	64.9	13	1498	1528	788.746
7	1	55.4	13			484.363
8	2	76.3	13	1432		71.22
9	3	75.2	13	1942	1693	131.527
10	2	90	13	1785		788.754
11	2	65	13	1923		181.331
12	1	98.3	13			680.529
13	1	85.7	13			9.286
14	1	77.2	13			394.943

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	60.5	17	1694		2.389
2	2	96.8	17	1376		360.027
3	1	72.6	17			287.312
4	1	69.6	17			132.533
5	1	81.9	17			195.874
6	2	92.7	17	1154		147.935
7	2	56.6	17	1847		106.556
8	2	76.6	17	1254		90.087
9	2	76.8	17	1925		579.208
10	2	61.6	17	1858		541.799
11	2	51.1	17	1841		78.301
12	3	59.1	17	1024	1436	506.942
13	1	64.4	17			460.603
14	1	86.4	17			81.084
15	2	80.2	17	1859		339.455
16	2	99.8	17	1495		165.706
17	2	59.7	17	1112		390.837
18	1	74.1	17			331.158
19	3	53.3	17	1710	1452	41.779

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	68.7	20			47.501
2	3	68.4	20	1030	1474	535.811
3	3	56.9	20	1531	1615	623.742
4	1	74.9	20			201.423
5	1	89.4	20			452.404
6	2	93	20	1260		204.625
7	1	70.8	20			430.146
8	3	73.4	20	1197	1757	26.687
9	3	87.7	20	1719	1899	28.688
10	2	53.1	20	1717		94.689
11	2	82.9	20	1920		43.381
12	2	96.8	20	1822		527.942
13	1	96	20			309.303
14	1	91.7	20			387.424
15	1	98.9	20			165.015
16	3	55	20	1042	1427	216.666
17	1	99.3	20			13.237
18	3	67	20	1049	1914	543.558
19	3	65.9	20	1858	1237	373.779

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	65.7	12	1876		286.767
2	2	68.8	12	1344		412.28
3	3	89.2	12	1121	1982	392.64
4	2	51.8	12	1829		427.61
5	2	70.2	12	1209		565.27
6	3	78.6	12	1106	1400	643.78
7	2	84.2	12	1657		128.06
8	2	60.3	12	1384		190.38
9	2	76.5	12	1215		343.19
10	2	84.4	12	1468		529.02
11	2	68.7	12	1937		538.31
12	3	83.8	12	1405	1469	326.13
13	2	93.4	12	1777		273.97
14	3	95.1	12	1720	1717	686.2
15	2	79.9	12	1435		237

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	57.4	12	1632		1232.35
2	2	54.4	12	1581		490.277
3	1	77.9	12			483.013
4	2	50.8	12	1736		367.16
5	1	54.3	12			841.307
6	2	63.6	12	1736		1315.993
7	3	82.7	12	1305	1501	1068.07
8	2	90.2	12	1144		344.967
9	1	62.2	12			1151.033

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	92.6	12	1519		1.214
2	2	84.1	12	1132		615.191
3	2	83.8	12	1130		50.782
4	2	82.7	12	1638		256.653
5	2	59.5	12	1209		560.434
6	3	71.6	12	1720	1857	47.845
7	3	82.8	12	1939	1786	598.336
8	3	93.9	12	1111	1262	185.517
9	2	77.7	12	1104		377.248
10	2	99.8	12	1762		227.669
11	3	71.4	12	1662	1518	602.601
12	2	96.8	12	1301		616.362
13	2	97.6	12	1826		617.763
14	2	62.3	12	1689		380.444
15	2	60.4	12	1493		353.155
16	2	76.7	12	1249		152.666
17	3	78.7	12	1464	1019	454.337
18	3	99.1	12	1680	1801	443.458
19	2	68.9	12	1411		444.979

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	71.4	5	1201		154.474
2	1	53.1	5			255.088
3	1	51.8	5			541.967
4	1	58.6	5			616.93
5	2	65.9	5	1889		155.673
6	1	73.4	5			494.317
7	3	93.7	5	1654	1838	139.66
8	3	74.6	5	1737	1312	300.333
9	2	55.7	5	1995		494.837
10	1	70.6	5			494.35
11	3	67.5	5	1306	1948	270.153
12	3	79.1	5	1432	1018	145.467
13	1	72.6	5			199.67
14	3	93.7	5	1911	1590	598.503
15	2	75.8	5	1385		149.467
16	2	54.3	5	1932		360.8
17	2	75.8	5	1487		617.633
18	2	72.9	5	1330		559.267

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	99.5	11	1926	1105	540.27
2	2	92.7	11	1956		1073.321
3	3	71.7	11	1847	1968	1084.702
4	2	82.9	11	1588		296.913
5	2	76.5	11	1894		138.224
6	3	70.4	11	1284	1266	968.555
7	2	65.8	11	1668		811.625
8	1	61.7	11			1001.276
9	2	97.6	11	1301		278.757
10	1	65.2	11			176.928
11	2	85	11	1487		426.009

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	89.9	8			911.995
2	2	51.7	8	1871		46.88
3	2	79.4	8	1143		608.3
4	1	89.9	8			882.82
5	2	90.3	8	1296		981.87
6	2	92.7	8	1377		261.17
7	3	61.1	8	1069	1712	32.69
8	2	62.8	8	1526		306.17
9	1	56.3	8			883.7
10	2	93.5	8	1993		671

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	90.7	9	1788		250.8
2	2	56.8	9	1077		634.577
3	3	87.1	9	1893	1075	202.134
4	3	88.7	9	1115	1687	184.881
5	3	72.1	9	1668	1697	434.479
6	2	84.4	9	1133		151.206
7	1	69.6	9			519.823
8	3	59.8	9	1041	1935	545.62
9	2	67.7	9	1422		758.927
10	1	84	9			795.344
11	2	77.7	9	1961		697.911
12	1	86	9			345.159
13	2	93.3	9	1882		241.786
14	1	66.1	9			282.643

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	93.5	18	1989		951.887
2	1	61.2	18			770.03
3	2	96.1	18	1902		439.83
4	3	88.2	18	1631	1055	733.94
5	1	58	18			369.56
6	2	76.9	18	1549		958.69
7	1	76.2	18			395.98
8	3	91.7	18	1267	1908	17.42
9	2	69.5	18	1950		830.86
10	3	94.8	18	1332	1090	326.38
11	2	53.7	18	1105		210.6
12	2	64	18	1085		554.8

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	96.5	11	1041	1275	539.758
2	3	94.5	11	1491	1947	610.773
3	2	73.8	11	1747		520.067
4	3	58.7	11	1493	1194	523.36
5	3	63	11	1481	1406	162.443
6	2	71.8	11	1652		308.607
7	2	80.6	11	1941		623.68
8	1	83.9	11			99.373
9	2	88.1	11	1646		281.277
10	2	80.5	11	1405		495.98
11	3	75.3	11	1463	1558	354.963
12	2	75	11	1778		363.647
13	2	66.8	11	1210		390.68
14	2	51.3	11	1870		434.283
15	1	81.5	11			574.337
16	3	68.3	11	1871	1017	221.7
17	2	92.1	11	1799		276.833
18	3	96.3	11	1123	1283	137.567

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	51.4	10			683.075
2	2	54.8	10	1336		173.46
3	1	92.9	10			397.42
4	2	54.2	10	1072		576.98
5	2	52.8	10	1046		342.21
6	3	96.8	10	1597	1674	249.69
7	2	70	10	1922		168.48
8	3	67.3	10	1265	1873	681.71
9	1	71.2	10			741.05
10	2	50.3	10	1914		302.37
11	1	62.5	10			1.15
12	2	74.2	10	1534		58.62
13	2	73.9	10	1276		751
14	2	74.4	10	1683		230.6
15	2	88.8	10	1386		67.9

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	75.8	19	1852		644.116
2	2	96.3	19	1699		552.51
3	3	57.3	19	1000	1139	211.01
4	2	55.4	19	1982		397.18
5	2	83.8	19	1119		942.05
6	1	87.6	19			147.67
7	1	73.1	19			677.47
8	3	72	19	1500	1702	313.94
9	1	69.2	19			154.07
10	2	72.9	19	1710		824.6
11	1	70	19			146.5
12	2	61.1	19	1162		206.7

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	52.4	17	1420	1265	589.071
2	3	96.3	17	1677	1220	60.639
3	3	67.3	17	1550	1432	690.22
4	2	89.6	17	1422		694.01
5	1	60.1	17			17.99
6	2	74.1	17	1334		537.75
7	2	91.7	17	1735		264.15
8	2	70.6	17	1116		643.1
9	2	61.4	17	1438		355.47
10	1	72.4	17			88.8
11	3	57.2	17	1067	1628	628.79
12	3	83.4	17	1134	1803	22.05
13	2	72.6	17	1403		35.91
14	2	55	17	1585		248.8
15	2	98.7	17	1179		143.3

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	72.1	17	1044		32.14
2	3	75.4	17	1973	1048	29.717
3	2	54	17	1253		588.982
4	1	59.1	17			537.403
5	2	79.1	17	1013		562.694
6	1	93.3	17			44.495
7	2	84.7	17	1041		92.896
8	3	94	17	1362	1403	60.387
9	1	78.9	17			624.468
10	1	83.2	17			120.539
11	2	89.6	17	1510		485.661
12	1	93.8	17			418.792
13	2	61.9	17	1955		324.203
14	2	62.6	17	1528		342.584
15	2	58.1	17	1377		477.925
16	2	66.2	17	1805		313.136
17	3	53.7	17	1316	1504	548.537
18	2	91.8	17	1389		379.858
19	2	90.6	17	1177		447.579

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	63.6	11			662.967
2	3	86.2	11	1673	1992	396.153
3	3	90.1	11	1516	1034	745.416
4	2	51.5	11	1293		153.829
5	1	76.6	11			355.852
6	3	69.9	11	1641	1008	115.735
7	2	79.5	11	1072		824.298
8	2	59.2	11	1915		725.332
9	2	90.5	11	1299		839.275
10	2	97.6	11	1815		138.328
11	1	78.3	11			698.761
12	1	88.9	11			59.354
13	1	58.7	11			435.577

Radar Type 6 - Radar Statistical Performance

Trail #	1=Detection 0=No Detection	Trail #	1=Detection 0=No Detection
1	1	16	1
2	1	17	1
3	1	18	1
4	1	19	1
5	1	20	1
6	1	21	1
7	1	22	1
8	1	23	1
9	1	24	1
10	1	25	1
11	1	26	1
12	1	27	1
13	1	28	1
14	1	29	1
15	1	30	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	5545	6	1	5537	3
27	5506	81	7	5515	21
30	5558	90	16	5505	48
36	5493	108	31	5557	93
38	5500	114	33	5508	99
40	5531	120	34	5540	102
57	5509	171	47	5549	141
63	5564	189	50	5498	150
65	5534	195	60	5566	180
66	5491	198	61	5517	183
75	5526	225	63	5547	189
81	5556	243	65	5532	195
83	5492	249	66	5522	198
89	5538	267	69	5530	207
91	5521	273	74	5502	222
--	--	--	81	5569	243
--	--	--	88	5497	264
--	--	--	92	5501	276
--	--	--	97	5554	291

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5490	12	9	5519	27
7	5520	21	15	5562	45
24	5503	72	19	5514	57
25	5562	75	35	5516	105
26	5546	78	40	5507	120
35	5509	105	41	5560	123
36	5548	108	51	5539	153
37	5511	111	61	5564	183
38	5531	114	75	5563	225
41	5568	123	85	5503	255
50	5537	150	89	5565	267
55	5497	165	90	5528	270
63	5559	189	97	5526	291
70	5544	210	--	--	--
84	5556	252	--	--	--
93	5542	279	--	--	--

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5557	9	3	5500	9
9	5570	27	8	5533	24
14	5524	42	19	5570	57
20	5528	60	24	5540	72
23	5522	69	27	5565	81
24	5534	72	28	5513	84
29	5503	87	44	5562	132
34	5509	102	49	5514	147
46	5529	138	54	5528	162
53	5532	159	58	5493	174
63	5536	189	71	5501	213
65	5533	195	77	5496	231
76	5552	228	81	5564	243
--	--	--	95	5523	285
--	--	--	96	5561	288
--	--	--	99	5506	297

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
6	5507	18	5	5566	15
7	5567	21	13	5553	39
12	5554	36	18	5523	54
21	5531	63	19	5533	57
23	5524	69	25	5570	75
27	5528	81	27	5554	81
30	5534	90	28	5519	84
36	5533	108	39	5530	117
42	5541	126	48	5545	144
45	5549	135	50	5492	150
50	5537	150	54	5515	162
56	5558	168	57	5544	171
88	5557	264	69	5543	207
94	5543	282	74	5556	222
--	--	--	79	5499	237
--	--	--	80	5510	240
--	--	--	81	5528	243
--	--	--	90	5518	270

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5500	15	17	5510	51
19	5507	57	21	5540	63
29	5569	87	24	5566	72
32	5498	96	28	5524	84
35	5527	105	32	5517	96
51	5523	153	33	5525	99
54	5497	162	37	5532	111
55	5511	165	47	5522	141
58	5539	174	64	5496	192
61	5490	183	70	5501	210
63	5535	189	74	5494	222
74	5562	222	76	5530	228
75	5501	225	85	5556	255
81	5534	243	88	5555	264
85	5557	255	92	5516	276
87	5545	261	95	5542	285
--	--	--	97	5518	291
--	--	--	100	5511	300

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5556	30	1	5519	3
28	5529	84	2	5490	6
45	5509	135	6	5554	18
46	5513	138	7	5531	21
51	5501	153	12	5550	36
62	5496	186	18	5544	54
65	5559	195	21	5506	63
73	5500	219	39	5504	117
78	5526	234	42	5530	126
86	5512	258	44	5529	132
99	5553	297	51	5548	153
--	--	--	54	5509	162
--	--	--	55	5559	165
--	--	--	62	5516	186
--	--	--	67	5566	201
--	--	--	85	5521	255
--	--	--	98	5525	294
--	--	--	100	5552	300

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5554	3	7	5511	21
18	5556	54	8	5547	24
24	5530	72	9	5498	27
25	5512	75	10	5543	30
31	5543	93	12	5526	36
45	5515	135	18	5502	54
47	5493	141	23	5525	69
49	5539	147	24	5499	72
56	5506	168	34	5520	102
68	5516	204	51	5500	153
79	5500	237	66	5523	198
84	5521	252	67	5537	201
--	--	--	71	5532	213
--	--	--	76	5492	228
--	--	--	77	5552	231
--	--	--	78	5553	234
--	--	--	87	5565	261
--	--	--	100	5490	300

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
7	5553	21	1	5537	3
26	5546	78	2	5552	6
28	5544	84	4	5532	12
34	5541	102	5	5525	15
35	5565	105	7	5546	21
36	5529	108	9	5541	27
37	5492	111	10	5548	30
50	5558	150	11	5506	33
58	5505	174	19	5492	57
64	5539	192	24	5568	72
69	5551	207	43	5526	129
71	5513	213	45	5540	135
73	5510	219	47	5549	141
83	5531	249	48	5504	144
84	5534	252	51	5527	153
85	5508	255	59	5521	177
86	5515	258	62	5554	186
96	5549	288	72	5508	216
99	5495	297	82	5505	246
--	--	--	83	5509	249
--	--	--	100	5522	300

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5532	9	1	5550	3
29	5517	87	2	5543	6
31	5514	93	4	5516	12
34	5535	102	8	5515	24
35	5565	105	9	5525	27
37	5504	111	12	5502	36
38	5493	114	30	5528	90
39	5561	117	35	5561	105
42	5564	126	39	5513	117
51	5492	153	43	5557	129
57	5540	171	44	5521	132
69	5494	207	47	5524	141
77	5558	231	55	5540	165
82	5511	246	56	5493	168
87	5508	261	58	5491	174
88	5501	264	59	5514	177
--	--	--	60	5547	180
--	--	--	65	5490	195
--	--	--	69	5498	207
--	--	--	72	5535	216
--	--	--	73	5495	219
--	--	--	78	5527	234
--	--	--	85	5512	255
--	--	--	99	5562	297

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5515	6	1	5513	3
8	5565	24	2	5538	6
13	5544	39	4	5561	12
14	5533	42	30	5535	90
20	5516	60	43	5490	129
22	5542	66	46	5541	138
39	5535	117	64	5497	192
47	5522	141	65	5537	195
49	5562	147	68	5504	204
52	5540	156	70	5518	210
61	5528	183	71	5505	213
74	5524	222	72	5540	216
79	5553	237	79	5526	237
82	5541	246	87	5524	261
86	5554	258	89	5545	267
95	5520	285	91	5495	273
96	5551	288	92	5567	276
97	5494	291	95	5529	285
--	--	--	98	5539	294

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5511	24	7	5527	21
16	5556	48	24	5517	72
19	5506	57	27	5554	81
24	5497	72	46	5500	138
35	5564	105	48	5496	144
36	5492	108	51	5506	153
58	5548	174	66	5493	198
67	5520	201	68	5547	204
69	5528	207	70	5522	210
70	5545	210	78	5499	234
84	5539	252	82	5497	246
90	5493	270	85	5566	255
93	5499	279	89	5521	267
95	5526	285	90	5538	270
98	5509	294	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
4	5544	12	3	5491	9
8	5512	24	6	5543	18
12	5519	36	16	5527	48
18	5567	54	19	5551	57
25	5543	75	34	5521	102
28	5529	84	38	5511	114
31	5496	93	39	5552	117
37	5538	111	42	5565	126
39	5563	117	47	5490	141
42	5499	126	51	5522	153
43	5500	129	64	5550	192
48	5554	144	68	5561	204
49	5534	147	70	5546	210
57	5515	171	77	5526	231
65	5537	195	78	5523	234
69	5514	207	90	5560	270
75	5565	225	95	5497	285
78	5520	234	--	--	--
79	5550	237	--	--	--
85	5547	255	--	--	--
89	5524	267	--	--	--
90	5549	270	--	--	--
92	5568	276	--	--	--
94	5548	282	--	--	--
95	5556	285	--	--	--
99	5536	297	--	--	--

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
14	5552	42	6	5541	18
18	5511	54	11	5531	33
42	5557	126	14	5498	42
49	5555	147	15	5566	45
60	5536	180	16	5506	48
62	5553	186	19	5538	57
71	5532	213	22	5522	66
73	5541	219	23	5544	69
91	5539	273	28	5545	84
97	5567	291	31	5499	93
--	--	--	34	5500	102
--	--	--	36	5505	108
--	--	--	40	5515	120
--	--	--	62	5533	186
--	--	--	87	5523	261
--	--	--	89	5518	267
--	--	--	91	5535	273
--	--	--	98	5539	294
--	--	--	100	5570	300

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5517	3	7	5507	21
2	5552	6	8	5502	24
12	5538	36	10	5564	30
15	5559	45	14	5540	42
20	5536	60	18	5512	54
21	5492	63	22	5492	66
22	5509	66	24	5561	72
25	5567	75	25	5558	75
34	5561	102	28	5550	84
38	5529	114	30	5570	90
54	5506	162	31	5543	93
58	5508	174	37	5494	111
65	5493	195	40	5517	120
66	5565	198	42	5569	126
67	5501	201	62	5536	186
74	5540	222	68	5562	204
75	5553	225	72	5515	216
76	5568	228	84	5505	252
83	5560	249	88	5560	264
84	5547	252	95	5521	285
98	5513	294	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5546	3	3	5547	9
9	5516	27	26	5517	78
15	5560	45	37	5550	111
20	5552	60	47	5567	141
23	5553	69	48	5563	144
30	5562	90	68	5557	204
32	5568	96	70	5498	210
46	5524	138	73	5509	219
51	5513	153	76	5525	228
55	5548	165	81	5552	243
74	5502	222	84	5519	252
77	5567	231	85	5546	255
78	5495	234	97	5506	291
81	5508	243	--	--	--
93	5517	279	--	--	--

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Radar Statistical Performance Check (802.11ac-VHT20 – 5500MHz) - Mode 2		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	838	63	1
2	5491.1	1	3066	18	1
3	5491.7	1	558	95	1
4	5492.4	1	578	92	1
5	5493.0	1	878	61	1
6	5493.7	1	738	72	1
7	5494.4	1	718	74	1
8	5495.0	1	778	68	1
9	5495.7	1	538	98	1
10	5496.4	1	818	65	1
11	5497.0	1	898	59	1
12	5497.7	1	598	89	1
13	5498.3	1	798	67	1
14	5499.0	1	698	76	1
15	5499.7	1	678	78	1
16	5500.0	1	1921	28	1
17	5500.7	1	940	57	1
18	5501.3	1	909	58	1
19	5502.0	1	1255	42	1
20	5502.6	1	2776	19	1
21	5503.3	1	929	57	1
22	5504.0	1	1620	33	1
23	5505.0	1	597	89	1
24	5505.7	1	926	57	1
25	5506.3	1	2523	21	1
26	5507.0	1	1642	33	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5507.6	1	1845	29	1
28	5508.3	1	753	70	0
29	5509.0	1	2090	26	1
30	5509.0	1	1681	32	1
Detection Percentage (%)					96.7%

Radar Type 2 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1.2	211	29	1
2	5491.1	3.3	205	24	1
3	5491.7	5.0	187	25	1
4	5492.4	1.6	213	27	1
5	5493.0	2.3	178	24	1
6	5493.7	3.8	213	27	1
7	5494.4	1.8	198	27	1
8	5495.0	1.7	189	24	1
9	5495.7	2.4	176	25	1
10	5496.4	4.6	190	26	1
11	5497.0	4.6	205	24	1
12	5497.7	2.0	203	28	0
13	5498.3	4.6	199	28	1
14	5499.0	3.8	200	26	1
15	5499.7	2.6	209	24	0
16	5500.0	3.6	200	28	1
17	5500.7	3.5	179	25	1
18	5501.3	4.0	190	26	0
19	5502.0	3.5	213	25	1
20	5502.6	5.0	202	28	1
21	5503.3	1.7	212	26	1
22	5504.0	4.1	219	26	1
23	5505.0	3.5	169	24	1
24	5505.7	4.3	196	27	1
25	5506.3	2.3	206	27	1
26	5507.0	5.0	156	24	1
27	5507.6	4.0	199	27	1
28	5508.3	4.7	175	26	1
29	5509.0	4.0	192	26	1
30	5509.0	1.5	213	24	1
Detection Percentage (%)					90%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	7.9	443	16	1
2	5491.1	6.3	499	18	1
3	5491.7	10.0	441	18	1
4	5492.4	8.9	276	18	1
5	5493.0	7.8	274	18	1
6	5493.7	9.4	464	16	1
7	5494.4	8.7	441	17	1
8	5495.0	6.4	303	17	1
9	5495.7	8.8	238	18	1
10	5496.4	9.7	389	17	1
11	5497.0	8.0	295	17	1
12	5497.7	8.7	260	18	1
13	5498.3	9.5	284	18	1
14	5499.0	7.6	409	17	1
15	5499.7	9.0	282	18	1
16	5500.0	7.3	350	17	1
17	5500.7	7.9	445	17	1
18	5501.3	7.1	495	16	1
19	5502.0	7.4	363	17	1
20	5502.6	7.0	225	16	1
21	5503.3	9.2	275	17	1
22	5504.0	8.6	228	18	1
23	5505.0	9.0	404	18	1
24	5505.7	9.3	382	17	1
25	5506.3	6.3	446	17	1
26	5507.0	6.9	377	17	1
27	5507.6	8.7	486	18	1
28	5508.3	7.3	230	18	1
29	5509.0	8.6	414	17	1
30	5509.0	7.4	228	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	5491.0	19.8	207	15	1
2	5491.1	19.7	495	15	1
3	5491.7	17.8	495	15	1
4	5492.4	15.8	443	14	0
5	5493.0	13.6	216	15	1
6	5493.7	11.0	321	13	1
7	5494.4	17.0	289	14	1
8	5495.0	11.5	344	15	1
9	5495.7	16.6	453	14	1
10	5496.4	12.1	226	13	1
11	5497.0	17.8	486	13	1
12	5497.7	11.1	459	12	1
13	5498.3	19.1	492	12	0
14	5499.0	18.8	347	15	1
15	5499.7	18.2	489	16	1
16	5500.0	13.0	361	14	0
17	5500.7	14.7	442	12	1
18	5501.3	15.4	411	14	1
19	5502.0	13.5	305	12	1
20	5502.6	12.3	386	15	1
21	5503.3	12.3	263	13	0
22	5504.0	16.6	384	15	1
23	5505.0	14.4	329	15	1
24	5505.7	11.3	247	16	1
25	5506.3	11.9	260	14	1
26	5507.0	12.2	410	12	1
27	5507.6	18.8	273	14	0
28	5508.3	14.1	207	14	1
29	5509.0	19.0	479	15	0
30	5509.0	15.4	456	13	1
Detection Percentage (%)					80%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (96.7%+90%+100%+80%)/4 = 91.7% (>80%)

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5500.0	1	16	5499.0	1
2	5500.0	1	17	5493.8	1
3	5500.0	1	18	5495.8	1
4	5500.0	1	19	5495.8	1
5	5500.0	1	20	5496.2	1
6	5500.0	1	21	5503.4	1
7	5500.0	1	22	5505.4	1
8	5500.0	1	23	5507.0	1
9	5500.0	1	24	5504.6	1
10	5500.0	1	25	5501.8	1
11	5495.0	1	26	5501.0	1
12	5495.0	1	27	5501.0	1
13	5494.2	1	28	5505.4	1
14	5497.0	1	29	5503.0	1
15	5494.6	1	30	5505.8	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	53.8	14	1835		473.031
2	2	84.6	14	1642		580.281
3	3	56.2	14	1412	1616	357.432
4	1	96.6	14			316.033
5	1	63.9	14			658.664
6	1	67.3	14			878.535
7	2	65.8	14	1053		912.735
8	1	62.9	14			580.046
9	3	54.2	14	1595	1571	621.387
10	1	95.4	14			824.818
11	2	88.2	14	1450		923.109

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	97	6	1601		167.975
2	2	55.7	6	1008		599.85
3	2	81.3	6	1733		178.63
4	3	78	6	1483	1314	198.75
5	3	88.6	6	1646	1816	529.65
6	2	89.8	6	1478		667.04
7	1	92.8	6			56.54
8	1	86.9	6			85.15
9	3	67.3	6	1385	1712	665.18
10	2	78.6	6	1155		39.73
11	3	86	6	1258	1737	254.1
12	2	68.5	6	1611		859.5

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	76.2	8	1286		551.519
2	2	62.2	8	1351		986.92
3	2	54.2	8	1245		756.66
4	2	87.8	8	1151		288.9
5	1	57.4	8			669.86
6	2	75.9	8	1318		50.79
7	2	76	8	1465		873.26
8	2	74.5	8	1586		866.44
9	1	61.5	8			968.66
10	2	67.6	8	1091		654.02
11	2	66.7	8	1419		116.5
12	1	88	8			220

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	84.1	13	1001		167.854
2	1	81	13			100.174
3	3	66.8	13	1912	1166	476.417
4	3	85.3	13	1702	1938	497.15
5	1	72.9	13			199.753
6	2	96.7	13	1215		70.437
7	3	64.8	13	1432	1675	158.04
8	2	76.6	13	1228		218.893
9	2	99.1	13	1955		494.527
10	2	86.7	13	1998		165
11	2	59.3	13	1862		282.523
12	2	90.2	13	1128		343.317
13	2	81.5	13	1238		12.99
14	2	83.3	13	1894		632.693
15	3	61	13	1852	1953	160.437
16	1	81	13			221
17	2	81.2	13	1462		555.033
18	3	73.1	13	1187	1133	270.867

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	90.8	10	1273		825.965
2	1	87.2	10			1234.717
3	1	65.6	10			1131.253
4	2	88.8	10	1589		734.47
5	3	76.7	10	1626	1495	1314.907
6	1	52.4	10			1211.053
7	3	53.7	10	1009	1005	603.54
8	2	55.3	10	1349		1069.967
9	3	59.5	10	1166	1469	968.133

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	92.9	10	1520		244.477
2	1	92.2	10			498.413
3	1	92.5	10			656.016
4	2	73.4	10	1192		202.479
5	2	63.1	10	1178		881.292
6	2	73.8	10	1884		634.365
7	2	57.4	10	1128		734.318
8	3	69.3	10	1076	1995	457.042
9	2	69.8	10	1965		132.135
10	2	85.7	10	1430		32.578
11	3	50.9	10	1037	1639	626.411
12	3	62	10	1509	1943	43.054
13	3	65.7	10	1535	1289	433.277

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	94.6	12	1174	1349	564.693
2	2	70.8	12	1472		18.255
3	2	56.3	12	1143		477.902
4	3	61.1	12	1909	1620	583.943
5	3	89.9	12	1724	1116	420.454
6	2	91.1	12	1098		180.965
7	2	83.6	12	1595		546.896
8	3	75.4	12	1529	1290	612.167
9	2	69.8	12	1914		58.558
10	2	71.3	12	1326		87.579
11	2	58	12	1208		279.341
12	2	88.7	12	1115		115.822
13	2	75.5	12	1411		316.793
14	3	99.3	12	1162	1829	109.404
15	1	92.7	12			538.125
16	1	55.7	12			254.946
17	3	67.1	12	1943	1253	18.337
18	2	95.9	12	1970		443.358
19	3	56.5	12	1199	1440	66.079

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	60.5	17	1395		599.374
2	1	97.8	17			105.961
3	2	72.9	17	1977		91.182
4	2	63.4	17	1292		754.043
5	2	74.9	17	1826		703.614
6	2	91.8	17	1456		447.665
7	3	85.6	17	1325	1630	659.615
8	1	87.6	17			835.406
9	2	52.2	17	1345		852.697
10	2	99.3	17	1592		737.018
11	2	62.5	17	1595		476.209

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	99.8	20	1471		874.737
2	3	89.9	20	1835	1276	514.443
3	2	91.2	20	1176		870.646
4	2	80.9	20	1066		140.619
5	1	92.6	20			486.282
6	2	60	20	1345		127.425
7	1	94.8	20			873.508
8	3	88.8	20	1367	1988	527.852
9	3	93.9	20	1236	1217	52.655
10	1	94.7	20			6.738
11	2	81.7	20	1093		469.911
12	1	65.6	20			889.354
13	3	75.2	20	1727	1013	152.477

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	61.5	5			963.546
2	2	93.8	5	1628		641.76
3	1	82.2	5			288.9
4	2	65.6	5	1769		342.76
5	3	66.8	5	1948	1709	52.04
6	2	95	5	1259		1018.13
7	3	66.9	5	1725	1818	1162.73
8	1	57.9	5			707.14
9	3	51.3	5	1307	1824	776.1
10	2	61.2	5	1305		894.6

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	68.8	10	1500	1731	906.225
2	1	73	10			560.933
3	2	87.1	10	1832		382.726
4	2	50.6	10	1394		291.659
5	3	76.8	10	1336	1750	52.642
6	2	85.1	10	1058		355.225
7	1	80.4	10			855.528
8	3	60.7	10	1878	1493	537.352
9	3	62.5	10	1738	1930	479.605
10	2	86.4	10	1634		91.838
11	3	54.2	10	1432	1249	856.531
12	1	76.4	10			319.654
13	2	79.5	10	1144		389.377

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	62.9	10	1398	1057	171.007
2	2	73.3	10	1351		253.61
3	3	76.5	10	1095	1400	683.03
4	2	98.2	10	1990		739.35
5	2	55.8	10	1629		68.56
6	2	98.9	10	1139		322.61
7	2	89.1	10	1099		215.3
8	1	63.2	10			409.29
9	1	56.1	10			395.81
10	2	53.4	10	1698		511.01
11	1	91.5	10			565.73
12	2	56.1	10	1182		695.53
13	1	76.3	10			208.47
14	3	76.8	10	1707	1395	503.5
15	3	76.4	10	1048	1290	453.4
16	2	88.8	10	1279		456.1

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	83.8	8			478.741
2	3	65.9	8	1137	1335	146.2
3	2	70.7	8	1348		375.32
4	3	53.6	8	1961	1793	973.93
5	3	80.4	8	1730	1700	403.63
6	2	61.6	8	1154		272.13
7	1	64.1	8			1123.52
8	1	93.2	8			528.13
9	1	75.2	8			482.1
10	2	92.9	8	1998		220.2

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	54.2	15	1457		74.926
2	2	88.5	15	1679		618.068
3	3	88.5	15	1205	1150	499.115
4	1	99.3	15			520.063
5	1	63.4	15			194.881
6	3	55.8	15	1748	1873	56.428
7	3	92.8	15	1139	1812	570.716
8	1	76.1	15			569.544
9	2	66.4	15	1998		29.141
10	2	59.1	15	1628		36.859
11	2	94.3	15	1207		604.646
12	2	83.1	15	1082		449.234
13	2	88.6	15	1118		453.072
14	2	61.9	15	1758		683.699
15	3	53.3	15	1980	1530	253.347
16	3	77.1	15	1162	1804	163.765
17	1	78.3	15			585.282

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	93.9	9	1281		310.436
2	2	70.9	9	1736		238.372
3	3	97.9	9	1653	1445	57.122
4	1	85.9	9			449.493
5	3	58.6	9	1328	1851	21.924
6	2	52.9	9	1879		519.115
7	1	59.8	9			88.076
8	3	57.4	9	1985	1333	222.357
9	2	55.7	9	1788		365.248
10	3	98.2	9	1250	1087	616.589
11	2	99.9	9	1828		599.921
12	2	76.7	9	1640		336.902
13	1	58.9	9			615.553
14	3	58.2	9	1437	1793	223.234
15	2	64.3	9	1846		607.055
16	1	70	9			139.406
17	3	95.8	9	1464	1305	286.537
18	3	54.5	9	1748	1975	34.158
19	2	77.8	9	1064		356.979

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	79.2	20	1031		938.234
2	1	72	20			776.87
3	3	86.9	20	1848	1154	1378.21
4	1	75.4	20			330.86
5	2	71.5	20	1985		1022.01
6	1	77.8	20			817.82
7	3	67.3	20	1169	1425	284.89
8	1	84.6	20			674.1

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	66.9	7	1137		791.955
2	3	92.5	7	1697	1534	935.971
3	1	55.4	7			1050.062
4	2	72.5	7	1211		358.533
5	1	68.9	7			933.384
6	3	55.3	7	1524	1708	317.895
7	2	77.7	7	1351		935.485
8	3	53.2	7	1309	1002	569.206
9	1	94.3	7			424.407
10	3	96.1	7	1723	1078	941.718
11	2	60.2	7	1745		976.709

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	56.5	12	1631	1512	437.961
2	2	99.5	12	1902		395.858
3	2	67.2	12	1843		320.735
4	3	69.4	12	1180	1676	624.483
5	1	60.2	12			104.831
6	2	98.7	12	1693		110.928
7	3	52.2	12	1315	1669	695.686
8	1	82.5	12			29.494
9	3	79.3	12	1849	1360	695.361
10	1	58.8	12			514.969
11	2	53.5	12	1678		97.516
12	3	82.4	12	1919	1886	570.574
13	3	80	12	1075	1311	300.102
14	2	95.6	12	1462		643.639
15	2	53.4	12	1633		207.847
16	2	84.4	12	1204		515.165
17	1	97.6	12			369.682

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	70.3	12	1431	1241	599.062
2	1	63.9	12			199.005
3	3	59.3	12	1139	1827	138.725
4	2	82.3	12	1349		652.363
5	2	99.4	12	1013		518.391
6	2	76.4	12	1400		322.648
7	2	79.8	12	1291		270.386
8	2	95.4	12	1927		506.644
9	1	69.1	12			132.321
10	2	83	12	1433		189.389
11	3	98.6	12	1460	1606	198.096
12	1	86.9	12			369.374
13	2	59.6	12	1182		566.772
14	1	98.7	12			337.439
15	2	79.5	12	1899		364.747
16	2	55.6	12	1789		494.465
17	1	67.6	12			562.482

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	73.9	13	1142		68.344
2	1	82.6	13			600.308
3	1	63.6	13			543.935
4	1	55.7	13			595.933
5	2	93.7	13	1483		161.551
6	1	60.2	13			39.628
7	1	88.8	13			117.496
8	2	64.6	13	1010		7.094
9	2	56	13	1481		84.021
10	2	81.1	13	1552		402.359
11	2	62.1	13	1160		489.606
12	2	54.3	13	1887		544.884
13	2	93.8	13	1551		454.392
14	3	65.6	13	1167	1664	198.819
15	1	75.6	13			169.147
16	2	84.4	13	1862		541.665
17	2	61.9	13	1643		24.682

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	52.2	14	1058		406.136
2	2	84.3	14	1706		606.46
3	3	86.4	14	1502	1634	503.5
4	2	81.1	14	1782		398.72
5	1	57	14			377.11
6	3	59.5	14	1107	1829	904.42
7	1	69	14			145.74
8	3	92.5	14	1453	1310	1116.12
9	1	51.1	14			511.2
10	3	80.1	14	1674	1820	878.6

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	91	9	1710	1459	1117.22
2	3	58.5	9	1453	1315	792.58
3	2	67	9	1255		674.26
4	2	90	9	1642		1179.34
5	2	70.2	9	1976		197.84
6	3	91.1	9	1562	1377	265.7
7	2	74.1	9	1341		116.76
8	2	61.1	9	1215		722.17
9	1	89.9	9			1048.9
10	3	93.5	9	1934	1122	152.6

Type 5 Radar Waveform_23

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	65.6	5	1602	1610	418.598
2	2	83.1	5	1142		645.76
3	1	96	5			280.86
4	2	80.1	5	1032		486.47
5	1	87.3	5			373.68
6	2	54.8	5	1070		579.17
7	2	58.3	5	1108		921.39
8	2	62.4	5	1675		241.15
9	3	95.2	5	1262	1755	162.28
10	2	82.4	5	1586		802.5

Type 5 Radar Waveform_24

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	77.2	11	1046	1318	1237.69
2	3	54.8	11	1875	1360	72.68
3	2	92.3	11	1892		663.62
4	2	67.4	11	1394		785.94
5	2	65.7	11	1098		894.08
6	1	73.8	11			1170.75
7	3	70.1	11	1121	1681	362.33
8	2	91.7	11	1336		979.4

Type 5 Radar Waveform_25

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	51	18			812.025
2	2	96.8	18	1559		632.36
3	3	85.8	18	1585	1237	88.01
4	2	78.8	18	1328		764.62
5	3	99	18	1749	1168	229.55
6	2	58.4	18	1119		280.06
7	2	92.9	18	1740		3.18
8	2	50.4	18	1284		650.53
9	3	90.2	18	1255	1725	714.97
10	1	95.4	18			474.74
11	2	59.1	18	1414		125.5
12	2	76.8	18	1028		913

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	79.1	20	1031		358.459
2	1	53.5	20			111.418
3	1	57.1	20			738.3
4	2	93.2	20	1621		691.66
5	2	84.9	20	1999		653.74
6	3	51	20	1201	1880	476.26
7	2	99.7	20	1023		85.63
8	3	58.2	20	1355	1505	761.45
9	2	54.2	20	1135		284.9
10	1	54.7	20			754.8
11	2	95.6	20	1125		717.6
12	1	94.8	20			671.34
13	3	81.1	20	1178	1126	786.6
14	1	52.4	20			414.4
15	3	76.3	20	1490	1872	232.9

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	52.4	20	1157		848.275
2	3	97.1	20	1298	1461	375.647
3	3	95.5	20	1678	1577	603.463
4	2	71.5	20	1439		922.58
5	1	57.5	20			22.927
6	1	94	20			345.433
7	2	58	20	1188		450.13
8	3	81.6	20	1187	1089	725.767
9	2	83.7	20	1444		676.433

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	73.2	9			275.542
2	2	93.8	9	1954		632.303
3	1	80.9	9			34.806
4	1	98.8	9			852.459
5	1	82	9			234.442
6	2	63.5	9	1188		183.985
7	1	83.8	9			485.008
8	2	66.9	9	1573		708.902
9	3	65.2	9	1319	1656	474.595
10	2	79.8	9	1718		105.418
11	2	99.4	9	1169		732.521
12	2	86.7	9	1161		288.254
13	2	50	9	1409		167.777

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	75.7	15	1407		551.654
2	2	52.4	15	1946		148.934
3	1	99	15			162.997
4	2	98.1	15	1827		459.53
5	1	76.1	15			547.333
6	2	76.4	15	1468		426.097
7	2	53	15	1831		652.6
8	3	90.8	15	1787	1437	234.633
9	2	79.1	15	1775		605.477
10	1	76.5	15			329.09
11	1	97.8	15			104.283
12	2	77.5	15	1652		103.497
13	3	90.7	15	1656	1819	367.86
14	2	96.2	15	1116		273.483
15	2	51.1	15	1995		545.657
16	2	80.2	15	1438		550.1
17	2	59	15	1854		245.133
18	1	53.6	15			12.367

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	53.1	8	1919		27.396
2	2	69.6	8	1048		108.137
3	1	73.5	8			66.965
4	2	56.9	8	1191		446.313
5	2	72.9	8	1489		488.631
6	1	97.3	8			208.378
7	2	74.1	8	1624		154.676
8	1	64	8			569.884
9	2	50.2	8	1328		147.691
10	2	96.7	8	1594		385.159
11	3	52.4	8	1268	1112	634.446
12	3	80.2	8	1812	1371	290.764
13	3	52	8	1754	1031	640.552
14	3	56.6	8	1284	1188	651.629
15	3	65.2	8	1975	1209	420.147
16	2	77.6	8	1176		251.665
17	1	60.9	8			327.182

Radar Type 6 - Radar Statistical Performance

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

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
28	5517	84	15	5515	45
77	5504	231	18	5518	54
99	5499	297	31	5503	93
--	--	--	65	5500	195
--	--	--	92	5502	276

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
25	5516	75	2	5501	6
32	5507	96	21	5512	63
85	5509	255	23	5504	69
96	5508	288	27	5519	81
--	--	--	41	5500	123
--	--	--	43	5517	129
--	--	--	59	5505	177
--	--	--	79	5516	237

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
97	5503	291	17	5499	51
--	--	--	36	5510	108
--	--	--	56	5519	168
--	--	--	64	5503	192
--	--	--	67	5504	201

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
11	5512	33	6	5502	18
51	5507	153	32	5509	96
52	5514	156	80	5515	240
61	5508	183	85	5519	255
76	5510	228	97	5507	291
79	5502	237	--	--	--

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5512	3	1	5517	3
23	5502	69	8	5508	24
28	5507	84	--	--	--
46	5503	138	--	--	--
58	5514	174	--	--	--
77	5513	231	--	--	--

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Frequency (MHz)	Hopping Number	Pulse Start (ms)
19	5506	57	3	5504	9
59	5505	177	15	5503	45
68	5509	204	25	5511	75
82	5513	246	33	5501	99
--	--	--	49	5516	147
--	--	--	54	5508	162
--	--	--	83	5506	249

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
18	5513	54	3	5508	9
23	5512	69	6	5516	18
30	5509	90	37	5518	111
72	5511	216	41	5510	123
80	5507	240	100	5500	300
91	5517	273	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5510	6	11	5499	33
5	5503	15	28	5511	84
7	5517	21	33	5518	99
70	5516	210	70	5505	210
80	5507	240	90	5502	270

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
98	5508	294	3	5503	9
100	5507	300	86	5510	258

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
30	5514	90	12	5500	36
52	5508	156	39	5499	117
78	5513	234	67	5510	201
94	5505	282	91	5519	273
97	5501	291	--	--	--

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
8	5519	24	21	5508	63
10	5508	30	29	5507	87
13	5511	39	32	5516	96
54	5501	162	47	5514	141
84	5509	252	71	5504	213
95	5506	285	99	5517	297

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
21	5509	63	7	5510	21
57	5499	171	18	5499	54
--	--	--	74	5519	222
--	--	--	79	5511	237
--	--	--	96	5517	288

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
38	5514	114	34	5506	102
93	5511	279	83	5511	249
--	--	--	85	5517	255
--	--	--	93	5501	279

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5511	9	17	5505	51
30	5505	90	24	5514	72
37	5518	111	72	5508	216
40	5507	120	77	5519	231
63	5504	189	83	5513	249
--	--	--	86	5503	258

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
33	5499	99	20	5512	60
35	5507	105	47	5514	141
91	5518	273	56	5517	168
--	--	--	58	5516	174
--	--	--	80	5502	240
--	--	--	96	5509	288

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Radar Statistical Performance Check (802.11ac-VHT40 mode – 5510MHz) – Mode 2		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	3066	18	1
2	5492.3	1	818	65	1
3	5493.5	1	658	81	1
4	5494.8	1	758	70	1
5	5496.1	1	738	72	1
6	5497.3	1	598	89	1
7	5498.6	1	638	83	1
8	5499.9	1	678	78	1
9	5501.1	1	918	58	1
10	5502.4	1	618	86	1
11	5503.7	1	878	61	1
12	5504.9	1	898	59	1
13	5506.2	1	558	95	1
14	5507.5	1	538	98	1
15	5508.7	1	858	62	1
16	5510.0	1	2098	26	1
17	5511.3	1	2425	22	1
18	5512.5	1	1619	33	1
19	5513.8	1	2480	22	1
20	5515.1	1	760	70	1
21	5516.3	1	2658	20	1
22	5517.6	1	1923	28	1
23	5518.9	1	2833	19	1
24	5520.1	1	1281	42	1
25	5521.4	1	1414	38	1
26	5522.7	1	1526	35	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5523.9	1	1635	33	1
28	5525.2	1	1970	27	1
29	5526.5	1	2147	25	1
30	5529.0	1	1276	42	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	5491.0	3.3	161	28	1
2	5492.3	4.6	194	27	1
3	5493.5	1.8	188	27	0
4	5494.8	2.6	157	28	1
5	5496.1	4.1	221	27	1
6	5497.3	4.6	198	28	1
7	5498.6	4.5	191	24	0
8	5499.9	1.4	224	26	1
9	5501.1	1.8	224	28	1
10	5502.4	2.4	166	26	1
11	5503.7	2.9	209	24	1
12	5504.9	1.7	197	24	1
13	5506.2	1.4	187	28	0
14	5507.5	4.5	220	25	1
15	5508.7	2.9	221	24	1
16	5510.0	3.0	229	24	1
17	5511.3	2.1	189	26	1
18	5512.5	1.6	210	23	1
19	5513.8	3.6	152	23	1
20	5515.1	2.9	207	25	0
21	5516.3	3.1	170	24	1
22	5517.6	3.4	218	25	1
23	5518.9	3.8	217	26	1
24	5520.1	3.5	228	27	1
25	5521.4	3.2	155	24	1
26	5522.7	4.1	169	27	0
27	5523.9	4.2	171	27	1
28	5525.2	4.4	211	27	1
29	5526.5	1.5	204	24	1
30	5529.0	2.2	157	28	1
Detection Percentage (%)					83.3%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	9.0	394	17	0
2	5492.3	7.0	392	17	1
3	5493.5	9.7	399	18	0
4	5494.8	6.4	432	16	1
5	5496.1	8.3	325	18	1
6	5497.3	9.2	398	18	1
7	5498.6	7.6	421	17	1
8	5499.9	6.1	265	17	1
9	5501.1	7.3	380	18	1
10	5502.4	7.0	312	16	1
11	5503.7	8.2	213	16	1
12	5504.9	9.0	269	17	1
13	5506.2	9.4	236	17	1
14	5507.5	7.8	476	17	1
15	5508.7	8.8	258	18	0
16	5510.0	8.8	375	18	0
17	5511.3	6.1	450	18	1
18	5512.5	6.6	431	16	1
19	5513.8	10.0	480	17	1
20	5515.1	9.6	293	16	1
21	5516.3	7.6	364	17	1
22	5517.6	6.2	488	17	1
23	5518.9	9.9	462	17	1
24	5520.1	9.4	315	18	1
25	5521.4	7.7	405	16	1
26	5522.7	9.6	485	18	1
27	5523.9	7.7	367	16	1
28	5525.2	7.2	427	16	1
29	5526.5	6.1	221	17	1
30	5529.0	6.5	286	18	1
Detection Percentage (%)					86.7%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	18.2	232	13	1
2	5492.3	17.1	336	15	1
3	5493.5	11.1	428	13	1
4	5494.8	19.7	369	13	0
5	5496.1	18.9	444	14	1
6	5497.3	15.2	388	15	1
7	5498.6	19.8	299	12	1
8	5499.9	13.9	262	15	1
9	5501.1	18.2	376	13	0
10	5502.4	16.1	260	14	1
11	5503.7	18.8	393	14	1
12	5504.9	14.3	274	13	1
13	5506.2	13.9	225	15	1
14	5507.5	16.9	211	12	1
15	5508.7	17.0	452	14	1
16	5510.0	17.9	277	16	1
17	5511.3	17.3	301	13	1
18	5512.5	17.4	476	16	1
19	5513.8	17.5	449	15	1
20	5515.1	17.6	328	13	1
21	5516.3	17.1	423	12	0
22	5517.6	16.7	480	13	1
23	5518.9	15.2	462	13	0
24	5520.1	18.7	455	16	1
25	5521.4	19.3	261	14	1
26	5522.7	19.0	339	12	1
27	5523.9	12.5	414	16	1
28	5525.2	11.8	203	16	0
29	5526.5	15.9	319	13	1
30	5529.0	17.8	400	14	1
Detection Percentage (%)					83.3%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+83.3%+86.7%+83.3%)/4 = 88.3% (>80%)

Radar Type 5 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	1=Detection 0=No Detection	Trail #	Test Freq. (MHz)	1=Detection 0=No Detection
1	5510.0	1	16	5494.6	1
2	5510.0	1	17	5495.8	1
3	5510.0	1	18	5495.4	1
4	5510.0	1	19	5496.2	1
5	5510.0	1	20	5494.6	1
6	5510.0	1	21	5521.8	1
7	5510.0	1	22	5526.6	1
8	5510.0	1	23	5521.8	1
9	5510.0	1	24	5524.2	1
10	5510.0	1	25	5526.6	1
11	5493.0	1	26	5521.0	1
12	5497.8	1	27	5522.6	1
13	5493.8	1	28	5524.2	1
14	5499.0	1	29	5523.0	1
15	5497.4	1	30	5526.6	1
Detection Percentage (%)					100%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	85.4	18	1019		616.767
2	3	73	18	1773	1659	347.75
3	2	83.4	18	1050		194.01
4	1	72	18			176.41
5	2	74.4	18	1455		283.51
6	2	95.3	18	1626		450.22
7	3	82.6	18	1149	1391	531.87
8	2	86.6	18	1729		492.31
9	1	81.5	18			244.85
10	2	57.3	18	1787		649.2
11	1	62.7	18			426.43
12	3	65.7	18	1800	1627	436.63
13	2	78.9	18	1182		18.91
14	3	74.3	18	1967	1019	557.9
15	2	70.7	18	1283		706.3
16	3	98.3	18	1635	1622	22.3

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	99.7	17	1696	1712	540.792
2	2	72.1	17	1125		549.843
3	3	56.4	17	1489	1619	540.696
4	3	58.5	17	1940	1483	637.919
5	1	63	17			526.412
6	2	86.5	17	1684		876.625
7	2	85.5	17	1126		126.528
8	3	60.4	17	1403	1175	543.072
9	1	76.4	17			483.045
10	1	98	17			911.038
11	3	74.7	17	1641	1909	604.341
12	2	78.4	17	1942		325.754
13	3	70.8	17	1449	1429	856.177

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	90.4	19	1702	1702	635.121
2	2	87.2	19	1186		524.463
3	3	56.7	19	1730	1872	210.267
4	2	70.3	19	1893		158.57
5	2	69.5	19	1425		276.813
6	2	74.7	19	1654		283.357
7	3	81	19	1565	1340	490.72
8	2	91	19	1530		337.683
9	2	75.8	19	1620		437.877
10	1	72.5	19			332.95
11	2	92.6	19	1904		125.943
12	2	73.7	19	1866		434.427
13	2	86.1	19	1641		647.46
14	2	53.1	19	1307		563.133
15	2	81	19	1952		527.727
16	2	54	19	1066		149.6
17	2	81.4	19	1127		149.533
18	2	73.7	19	1606		183.167

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	98.3	17	1587	1006	8.434
2	1	70.9	17			98.87
3	2	86	17	1125		287.7
4	2	90.2	17	1937		589.24
5	2	93.8	17	1147		557.64
6	1	55.3	17			511.52
7	2	53	17	1691		633.59
8	1	93.2	17			463.57
9	2	51.8	17	1550		302.64
10	1	94.3	17			184.42
11	2	72.6	17	1895		281.8
12	3	86.2	17	1289	1313	763.2

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	50.5	12	1046	1540	964.303
2	1	58.3	12			815
3	2	51.3	12	1813		517.93
4	2	98.6	12	1086		624.79
5	1	68.1	12			1193.72
6	3	60.5	12	1474	1212	515.99
7	1	86	12			213.68
8	2	77.4	12	1805		308.94
9	3	79.6	12	1207	1382	406.2
10	2	53.9	12	1522		1134

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	73.5	19	1119		261.003
2	2	97.1	19	1279		462.05
3	3	94.7	19	1045	1590	480.29
4	1	58.1	19			584.95
5	3	63.8	19	1470	1435	24.71
6	1	61.4	19			369.52
7	2	98	19	1990		334.15
8	3	69.3	19	1421	1271	414.47
9	2	74.4	19	1991		110.82
10	3	74.7	19	1969	1527	48.61
11	1	63.8	19			519.63
12	1	87.6	19			443.46
13	1	87.5	19			565.8
14	2	88.5	19	1499		749.9
15	1	93.8	19			140.2

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	69.7	5			735.542
2	3	62.5	5	1910	1665	319.72
3	2	53.5	5	1050		161.15
4	2	55.3	5	1098		89.46
5	3	71.3	5	1270	1408	12.65
6	2	55.6	5	1727		526.47
7	1	58.3	5			73.08
8	3	61.6	5	1034	1679	104.51
9	3	53.4	5	1110	1062	322.89
10	3	58.3	5	1981	1825	429.36
11	2	55.5	5	1205		62.62
12	2	87.9	5	1606		288.63
13	3	65.8	5	1388	1905	595.5
14	3	79.5	5	1415	1616	81.9
15	3	89.9	5	1546	1281	449

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	91.5	14			884.285
2	3	51.5	14	1361	1503	870.79
3	2	59.5	14	1902		685.42
4	2	78.4	14	1044		983.37
5	2	97.2	14	1054		848.58
6	1	92.1	14			738.09
7	2	67.1	14	1308		881.03
8	2	52.1	14	1774		996.92
9	3	78.8	14	1017	1526	876
10	2	79.1	14	1989		331.6

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	70.1	15	1500		585.652
2	2	80.2	15	1919		736.14
3	3	94	15	1781	1595	73.07
4	1	67.2	15			254.56
5	3	65.9	15	1184	1495	320.57
6	2	55.7	15	1702		927.31
7	2	64.5	15	1054		904.5
8	2	87.2	15	1757		549.11
9	2	67.2	15	1787		693.5
10	3	96	15	1561	1881	1174

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	97.1	20	1419		541.419
2	2	82.5	20	1101		934.63
3	2	56.7	20	1965		1363.6
4	3	64.1	20	1774	1065	1356.84
5	1	83.1	20			837.44
6	3	62.4	20	1118	1399	1089.29
7	2	79.9	20	1127		1027.8
8	3	78.3	20	1992	1276	1405.7

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	67.2	5	1644	1860	342.707
2	2	61.5	5	1889		243.148
3	3	94.5	5	1585	1852	128.222
4	1	93.7	5			216.383
5	1	79.8	5			208.674
6	2	71.4	5	1890		489.825
7	1	74.7	5			187.536
8	2	95.3	5	1217		521.607
9	3	92.7	5	1157	1379	509.848
10	1	71.2	5			242.749
11	1	63.2	5			439.301
12	3	60.6	5	1338	1344	296.312
13	3	86.7	5	1766	1499	194.893
14	2	82.9	5	1264		172.434
15	2	90.1	5	1190		44.495
16	2	77.6	5	1290		276.166
17	1	93.8	5			529.137
18	3	89	5	1285	1019	378.358
19	1	77.6	5			250.279

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	67.3	17	1525		590.321
2	3	51.8	17	1367	1684	393.618
3	2	90.1	17	1674		256.375
4	1	80.6	17			572.813
5	2	93.8	17	1606		72.161
6	2	97.3	17	1277		375.348
7	3	73.1	17	1572	1433	425.006
8	2	75.7	17	1905		479.674
9	3	69.4	17	1597	1119	666.461
10	3	98.9	17	1763	1351	348.619
11	2	54	17	1741		687.786
12	2	87.9	17	1520		563.294
13	3	75.8	17	1343	1509	428.242
14	1	70.8	17			694.989
15	2	55.9	17	1152		71.347
16	2	73.9	17	1003		180.165
17	3	53.8	17	1824	1056	541.282

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	67.2	7	1394		256.034
2	3	53.5	7	1364	1509	96.961
3	1	77.5	7			1057.322
4	1	68.7	7			853.053
5	2	63.5	7	1871		469.024
6	2	75.7	7	1325		1082.855
7	1	82.6	7			153.535
8	2	52.5	7	1558		665.686
9	1	88.5	7			187.637
10	1	66.4	7			629.918
11	2	98	7	1279		520.909

Type 5 Radar Waveform_14

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	55.2	20			139.189
2	1	91	20			96.328
3	1	71.6	20			520.384
4	2	78.5	20	1536		36.401
5	2	73	20	1415		80.619
6	1	75.6	20			298.306
7	1	87	20			314.443
8	3	90.1	20	1600	1523	161.74
9	1	66.8	20			20.127
10	1	91.6	20			501.774
11	1	72.5	20			600.671
12	3	91.3	20	1517	1197	489.189
13	3	83.8	20	1320	1880	117.486
14	2	80.4	20	1724		280.043

Type 5 Radar Waveform_15

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	52.9	16			643.897
2	1	69.3	16			351.3
3	3	97.3	16	1487	1499	113.29
4	1	82.7	16			641.53
5	1	77	16			474.98
6	3	93.1	16	1278	1675	312.73
7	1	93.5	16			637.6
8	3	60.3	16	1065	1216	535.67
9	2	85.8	16	1720		658
10	2	56.6	16	1404		278.35
11	3	95.4	16	1274	1361	178.72
12	3	60.6	16	1079	1970	600.41
13	2	82.2	16	1047		281.13
14	2	77.1	16	1006		308.6
15	2	62	16	1179		524.2
16	2	67.1	16	1450		387.3

Type 5 Radar Waveform_16

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	57.2	9			443.334
2	2	77	9	1148		428.64
3	2	83.3	9	1276		184.87
4	2	66.6	9	1192		198.09
5	3	96.8	9	1768	1077	261.25
6	1	82.1	9			98.16
7	2	74.6	9	1978		361.28
8	1	71	9			584.89
9	2	62.5	9	1462		48.27
10	2	66.7	9	1112		187.56
11	2	59.7	9	1650		588.41
12	2	50.8	9	1498		153.68
13	2	59	9	1940		118.48
14	2	74.8	9	1046		92.74
15	1	93.9	9			500.75
16	2	79.1	9	1815		293.42
17	3	87.6	9	1723	1525	224.2
18	2	53.8	9	1919		9.4
19	3	71.5	9	1084	1201	497
20	1	51.1	9			440.7

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	64.1	12			712.766
2	1	71.8	12			668.091
3	1	87.9	12			496.172
4	1	79.8	12			757.943
5	2	51.9	12	1270		402.824
6	2	59.3	12	1023		99.965
7	3	76.9	12	1179	1444	242.115
8	1	96.7	12			926.316
9	1	94	12			905.167
10	1	54.1	12			340.218
11	1	86.9	12			30.609

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	84.7	11	1695		71.087
2	3	76.4	11	1982	1907	356.683
3	3	92.9	11	1798	1875	307.99
4	3	67.3	11	1926	1187	535.83
5	3	94.9	11	1111	1452	125.92
6	3	89.6	11	1276	1942	550.16
7	2	76.4	11	1108		419.19
8	1	62.1	11			472.66
9	2	68.3	11	1581		502.09
10	3	94.3	11	1138	1113	88.98
11	2	86.7	11	1654		335.24
12	1	99.2	11			213.18
13	1	55.8	11			454.92
14	1	90.9	11			579.47
15	1	67	11			380.21
16	2	57.9	11	1735		129.37
17	2	69.8	11	1418		274.44
18	3	50.1	11	1846	1118	155.3
19	3	51.1	11	1393	1303	80.6
20	2	86.9	11	1282		510.4

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	58.2	13	1595		389.773
2	3	89.8	13	1732	1971	967.9
3	1	88.7	13			1102.53
4	1	64.1	13			1069.12
5	2	84.4	13	1199		1172.89
6	2	56.1	13	1955		454.74
7	2	63.7	13	1115		90.81
8	2	56.2	13	1110		334.25
9	2	95.1	13	1963		1141.4
10	3	94.4	13	1979	1797	453.4

Type 5 Radar Waveform_20

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	70.3	9	1339	1751	79.001
2	1	86.5	9			265.979
3	2	53.7	9	1793		419.975
4	3	93.3	9	1118	1936	1.073
5	1	94.9	9			345.101
6	3	68.9	9	1104	1995	121.408
7	2	94.8	9	1853		214.146
8	1	70.7	9			207.384
9	1	77.7	9			67.651
10	2	76.1	9	1887		680.719
11	1	92.6	9			410.856
12	2	52.4	9	1781		171.694
13	2	94.2	9	1848		491.632
14	3	85.7	9	1673	1810	420.749
15	2	91.7	9	1701		533.547
16	3	55.9	9	1857	1706	499.465
17	1	90.1	9			662.582

Type 5 Radar Waveform_21

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	75	18			540.083
2	2	56.1	18	1898		449.68
3	1	92.4	18			543.84
4	3	54.6	18	1627	1308	254.73
5	1	54.7	18			673.29
6	1	73.6	18			614.47
7	2	63	18	1108		330.32
8	3	97.9	18	1958	1321	131.22
9	2	84.8	18	1127		314.8
10	2	67.3	18	1070		677.59
11	2	59.5	18	1113		440.4
12	2	79.1	18	1655		453.3

Type 5 Radar Waveform_22

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	84.1	6	1130		183.339
2	2	65.1	6	1305		421.703
3	3	81.8	6	1628	1303	39.787
4	2	80.7	6	1426		475.12
5	1	84.5	6			497.353
6	1	85.6	6			127.747
7	1	73.3	6			372.19
8	2	82.3	6	1081		576.463
9	2	88.5	6	1886		430.727
10	1	83.6	6			33.21
11	1	86.2	6			183.233
12	2	77.3	6	1907		2.267
13	2	97.4	6	1937		240.53
14	3	98.8	6	1387	1497	575.453
15	1	95.5	6			261.347
16	1	88.3	6			59.2
17	2	54	6	1451		98.933
18	2	80.5	6	1692		425.067

Type 5 Radar Waveform_23						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	72.2	18			162.686
2	1	90.3	18			31.035
3	2	94.3	18	1171		268.78
4	2	92.4	18	1248		370.61
5	3	82.4	18	1163	1386	334.83
6	2	60.8	18	1390		313.12
7	1	60.8	18			606.06
8	2	54.5	18	1630		375.77
9	2	58.2	18	1401		396.71
10	2	92.5	18	1456		220.84
11	2	74.8	18	1279		708.63
12	2	98	18	1121		226.33
13	2	88.1	18	1874		13.35
14	2	91	18	1347		577.7
15	2	58.2	18	1257		152.4
16	2	50.5	18	1626		140.5

Type 5 Radar Waveform_24						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	86.2	12	1137		601.907
2	2	81.3	12	1695		295.498
3	2	55.5	12	1272		225.675
4	2	70.1	12	1497		345.643
5	3	54.8	12	1361	1390	670.611
6	3	77.3	12	1371	1502	567.928
7	1	73.5	12			372.706
8	2	70.3	12	1330		11.814
9	3	76.3	12	1071	1933	321.901
10	2	79.5	12	1265		547.049
11	2	92.8	12	1242		455.836
12	3	68.1	12	1424	1470	169.964
13	1	90.4	12			203.602
14	3	97.3	12	1812	1945	203.159
15	3	91.6	12	1418	1356	307.747
16	2	69.7	12	1185		454.365
17	1	93.7	12			598.382

Type 5 Radar Waveform_25						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	58.3	6	1333	1574	551.37
2	1	65.4	6			506.011
3	2	85.1	6	1437		403.412
4	1	70.1	6			31.453
5	3	51	6	1797	1429	226.394
6	1	77	6			453.675
7	2	55.5	6	1137		15.336
8	3	57.8	6	1073	1997	155.657
9	2	55.4	6	1288		175.208
10	2	70	6	1854		459.219
11	2	82.4	6	1321		462.151
12	2	89.6	6	1394		0.422
13	2	58.4	6	1225		543.773
14	3	94.7	6	1883	1717	93.784
15	3	59.4	6	1586	1493	398.455
16	2	76.1	6	1671		469.156
17	3	59.6	6	1399	1078	506.137
18	2	62.4	6	1669		216.858
19	2	70.8	6	1864		461.579

Type 5 Radar Waveform_26

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	89.5	20	1162		491.09
2	3	80.7	20	1807	1011	653.62
3	2	93.2	20	1388		653.43
4	1	77.8	20			211.78
5	2	87.5	20	1218		321.74
6	1	70.6	20			231.92
7	1	88	20			708.45
8	1	69.9	20			247.31
9	1	60.9	20			445.1
10	2	88.7	20	1624		215.72
11	3	80.5	20	1684	1625	372.48
12	3	94.6	20	1406	1209	257.12
13	2	64.7	20	1744		126.01
14	2	64.4	20	1143		639.6
15	2	65.2	20	1829		117
16	1	99.6	20			209.8

Type 5 Radar Waveform_27

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	95.9	16	1572	1684	354.656
2	1	70.3	16			582.2
3	1	57.8	16			1167.87
4	2	55.5	16	1879		522.89
5	1	96.9	16			1038.98
6	1	56.2	16			613.2
7	2	69.9	16	1506		841.76
8	2	53.7	16	1569		869.87
9	1	89.9	16			254.34
10	2	70.1	16	1892		584.3

Type 5 Radar Waveform_28

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	80	12			792.472
2	1	83.1	12			510.61
3	2	67.1	12	1986		621.51
4	2	93.4	12	1447		787.81
5	2	69.8	12	1896		1139.04
6	1	96.1	12			393.16
7	1	92.2	12			192.92
8	2	66.5	12	1173		618.61
9	2	65.4	12	1077		83.42
10	3	61.8	12	1880	1329	15.3

Type 5 Radar Waveform_29

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	64.8	15			173.228
2	3	52.9	15	1869	1038	272.821
3	2	94	15	1413		102.812
4	2	82.7	15	1751		101.193
5	2	80.6	15	1631		238.534
6	2	90.2	15	1840		738.655
7	2	99	15	1108		395.495
8	2	75.8	15	1204		95.976
9	3	81.4	15	1252	1827	639.167
10	3	75.3	15	1026	1478	828.818
11	1	91.3	15			490.709

Type 5 Radar Waveform_30

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	62.1	6	1054	1335	199.798
2	3	74.1	6	1681	1800	489.59
3	2	75.2	6	1899		416.91
4	1	78.7	6			72.81
5	3	86.5	6	1614	1078	219.11
6	2	52.4	6	1922		395.17
7	3	73	6	1078	1523	458.45
8	2	85.5	6	1861		353.63
9	2	51.6	6	1397		225.91
10	3	94.3	6	1654	1545	162.09
11	3	99.8	6	1901	1570	138.29
12	2	75.1	6	1003		404.44
13	1	90.7	6			692.1
14	1	97.7	6			539
15	2	84.9	6	1776		584.4

Radar Type 6 - Radar Statistical Performance

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

Radar waveform #1			Radar waveform #2		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
5	5522	15	1	5499	3
7	5493	21	19	5515	57
70	5501	210	20	5506	60
77	5504	231	35	5520	105
--	--	--	39	5495	117
--	--	--	87	5521	261

Radar waveform #3			Radar waveform #4		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
3	5524	9	1	5518	3
13	5503	39	4	5493	12
25	5506	75	8	5494	24
37	5523	111	17	5516	51
43	5499	129	32	5529	96
66	5530	198	34	5500	102
77	5515	231	40	5502	120
99	5490	297	46	5512	138
--	--	--	48	5525	144
--	--	--	61	5515	183
--	--	--	82	5504	246
--	--	--	87	5523	261

Radar waveform #5			Radar waveform #6		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5514	45	13	5502	39
28	5494	84	24	5519	72
36	5513	108	27	5505	81
37	5506	111	35	5501	105
48	5511	144	46	5523	138
66	5512	198	49	5500	147
78	5492	234	--	--	--
90	5524	270	--	--	--
91	5490	273	--	--	--

Radar waveform #7			Radar waveform #8		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
19	5496	57	12	5501	36
59	5509	177	14	5515	42
62	5518	186	18	5524	54
94	5499	282	36	5494	108
--	--	--	58	5496	174
--	--	--	59	5497	177
--	--	--	74	5505	222
--	--	--	76	5526	228
--	--	--	86	5490	258

Radar waveform #9			Radar waveform #10		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5530	3	7	5494	21
5	5516	15	8	5500	24
19	5506	57	12	5513	36
23	5493	69	22	5524	66
24	5501	72	29	5527	87
30	5511	90	34	5496	102
40	5510	120	35	5505	105
57	5495	171	45	5492	135
75	5524	225	54	5499	162
79	5518	237	55	5516	165
87	5529	261	72	5522	216
--	--	--	73	5526	219
--	--	--	76	5502	228
--	--	--	78	5517	234
--	--	--	82	5525	246
--	--	--	93	5507	279
--	--	--	99	5514	297

Radar waveform #11			Radar waveform #12		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5502	45	3	5494	9
33	5491	99	25	5505	75
50	5519	150	71	5521	213
54	5526	162	76	5491	228
55	5499	165	89	5520	267
73	5490	219	--	--	--
81	5507	243	--	--	--
83	5504	249	--	--	--
86	5515	258	--	--	--
93	5518	279	--	--	--
99	5514	297	--	--	--

Radar waveform #13			Radar waveform #14		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
15	5505	45	32	5513	96
23	5493	69	57	5529	171
27	5514	81	59	5507	177
52	5490	156	62	5508	186
72	5520	216	83	5500	249
75	5524	225	84	5510	252
76	5504	228	99	5504	297
81	5517	243	--	--	--
88	5498	264	--	--	--
100	5516	300	--	--	--

Radar waveform #15			Radar waveform #16		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
55	5527	165	50	5511	150
61	5512	183	60	5512	180
65	5524	195	65	5514	195
66	5515	198	67	5499	201
67	5498	201	80	5498	240
70	5530	210	92	5517	276
80	5504	240	--	--	--

Radar waveform #17			Radar waveform #18		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
1	5523	3	22	5499	66
15	5497	45	37	5526	111
31	5500	93	45	5524	135
38	5514	114	49	5525	147
52	5520	156	59	5495	177
53	5491	159	74	5516	222
56	5521	168	78	5497	234
60	5529	180	90	5521	270
68	5502	204	--	--	--
74	5507	222	--	--	--
98	5512	294	--	--	--

Radar waveform #19			Radar waveform #20		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
42	5510	126	6	5522	18
44	5490	132	54	5526	162
47	5526	141	65	5502	195
51	5513	153	69	5513	207
57	5512	171	81	5500	243
84	5504	252	82	5517	246
86	5497	258	87	5514	261
--	--	--	98	5527	294

Radar waveform #21			Radar waveform #22		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
2	5492	6	10	5525	30
12	5523	36	19	5518	57
17	5496	51	43	5516	129
18	5520	54	49	5517	147
21	5498	63	58	5494	174
40	5493	120	72	5521	216
61	5525	183	79	5496	237
73	5500	219	82	5495	246
83	5528	249	84	5529	252
95	5514	285	--	--	--
96	5502	288	--	--	--

Radar waveform #23			Radar waveform #24		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
20	5505	60	2	5521	6
39	5500	117	6	5492	18
41	5506	123	23	5524	69
42	5523	126	30	5504	90
51	5493	153	33	5520	99
64	5508	192	48	5503	144
71	5525	213	49	5494	147
81	5524	243	71	5495	213
82	5530	246	75	5517	225
86	5496	258	85	5515	255
89	5492	267	93	5516	279

Radar waveform #25			Radar waveform #26		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
23	5512	69	6	5521	18
29	5509	87	17	5522	51
32	5493	96	32	5518	96
40	5519	120	45	5529	135
45	5525	135	47	5506	141
57	5518	171	54	5513	162
63	5524	189	59	5514	177
81	5491	243	68	5516	204
--	--	--	84	5530	252
--	--	--	89	5492	267

Radar waveform #27			Radar waveform #28		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
19	5494	57	89	5521	267
64	5505	192	--	--	--
71	5490	213	--	--	--
74	5513	222	--	--	--
81	5512	243	--	--	--
98	5518	294	--	--	--

Radar waveform #29			Radar waveform #30		
Hopping Number	Frequency (MHz)	Pulse Start (ms)	Hopping Number	Frequency (MHz)	Pulse Start (ms)
10	5519	30	9	5503	27
37	5518	111	11	5497	33
41	5520	123	27	5511	81
49	5500	147	34	5526	102
57	5502	171	42	5520	126
91	5507	273	76	5528	228
--	--	--	93	5508	279
--	--	--	100	5505	300

Product	AC750 Wi-Fi Range Extender	Temperature	27°C
Test Engineer	Kevin Ker	Relative Humidity	65%
Test Site	SR2	Test Date	2021/03/12
Test Item	Radar Statistical Performance Check (802.11ac-VHT80 mode – 5530MHz) – Mode 2		

Radar Type 1 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	1	678	78	1
2	5493.7	1	878	61	1
3	5496.3	1	918	58	1
4	5499.0	1	538	98	1
5	5501.6	1	658	81	1
6	5504.3	1	818	65	1
7	5507.0	1	778	68	1
8	5509.6	1	838	63	1
9	5512.3	1	518	102	1
10	5514.9	1	858	62	1
11	5517.6	1	798	67	1
12	5520.3	1	938	57	1
13	5522.9	1	898	59	1
14	5525.6	1	738	72	1
15	5528.2	1	758	70	1
16	5530.0	1	2675	20	1
17	5532.7	1	1107	48	1
18	5535.3	1	1704	31	1
19	5538.0	1	610	87	1
20	5540.6	1	2679	20	1
21	5544.0	1	752	71	1
22	5546.7	1	1802	30	1
23	5549.3	1	1018	52	1
24	5552.0	1	1014	52	1
25	5554.6	1	1779	30	1
26	5557.3	1	1651	32	1

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
27	5560.0	1	1634	33	1
28	5562.6	1	970	55	1
29	5565.3	1	2795	19	1
30	5569.0	1	1606	33	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	5491.0	3.2	150	25	0
2	5493.7	3.3	230	29	1
3	5496.3	3.2	227	24	1
4	5499.0	3.3	185	28	1
5	5501.6	1.7	155	29	1
6	5504.3	1.6	186	25	0
7	5507.0	4.9	167	26	0
8	5509.6	3.7	199	28	1
9	5512.3	4.2	198	25	1
10	5514.9	2.0	162	27	0
11	5517.6	4.4	189	26	1
12	5520.3	1.1	171	27	1
13	5522.9	1.0	196	28	1
14	5525.6	2.6	201	25	1
15	5528.2	2.0	169	24	1
16	5530.0	4.9	157	29	1
17	5532.7	3.9	190	27	1
18	5535.3	4.2	220	28	1
19	5538.0	3.6	158	29	1
20	5540.6	1.6	187	27	1
21	5544.0	1.4	153	27	1
22	5546.7	3.5	227	29	1
23	5549.3	4.1	193	29	1
24	5552.0	2.7	164	25	1
25	5554.6	3.0	227	25	1
26	5557.3	4.0	221	28	0
27	5560.0	1.6	166	23	1
28	5562.6	2.0	196	26	1
29	5565.3	5.0	218	28	0
30	5569.0	3.0	200	26	1
Detection Percentage (%)					80%

Radar Type 3 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	7.7	419	17	1
2	5493.7	9.1	386	17	1
3	5496.3	8.0	287	17	1
4	5499.0	7.9	252	18	1
5	5501.6	9.2	491	16	1
6	5504.3	6.3	236	17	1
7	5507.0	8.1	439	16	1
8	5509.6	9.5	262	16	1
9	5512.3	7.6	253	17	1
10	5514.9	8.3	206	18	1
11	5517.6	8.3	485	17	1
12	5520.3	6.2	414	17	1
13	5522.9	8.1	495	16	0
14	5525.6	7.1	372	16	1
15	5528.2	8.5	260	17	0
16	5530.0	6.1	496	17	1
17	5532.7	8.7	410	17	1
18	5535.3	8.3	283	16	1
19	5538.0	6.5	495	17	1
20	5540.6	6.3	390	18	1
21	5544.0	10.0	307	16	0
22	5546.7	7.5	240	18	0
23	5549.3	9.5	291	17	1
24	5552.0	6.5	431	17	1
25	5554.6	6.0	292	17	1
26	5557.3	8.7	223	17	1
27	5560.0	9.4	259	18	1
28	5562.6	7.7	421	17	1
29	5565.3	6.1	220	17	1
30	5569.0	9.1	352	16	1
Detection Percentage (%)					86.7%

Radar Type 4 - Radar Statistical Performance

Trail #	Test Freq. (MHz)	Pulse Width (us)	PRI (us)	Pulses / Burst	1=Detection 0=No Detection
1	5491.0	16.3	350	14	1
2	5493.7	18.6	305	15	1
3	5496.3	17.8	335	13	1
4	5499.0	17.7	441	15	1
5	5501.6	15.0	214	14	1
6	5504.3	19.6	338	12	1
7	5507.0	19.1	294	13	1
8	5509.6	15.9	404	14	0
9	5512.3	16.4	406	14	0
10	5514.9	11.7	217	15	1
11	5517.6	14.4	225	13	0
12	5520.3	12.0	401	16	0
13	5522.9	16.6	311	13	1
14	5525.6	11.2	241	13	1
15	5528.2	18.8	369	13	1
16	5530.0	17.9	241	13	1
17	5532.7	19.1	366	14	1
18	5535.3	17.2	431	13	0
19	5538.0	17.4	240	14	0
20	5540.6	18.6	409	13	1
21	5544.0	16.8	387	12	1
22	5546.7	12.5	498	13	1
23	5549.3	11.7	211	14	1
24	5552.0	15.3	232	14	1
25	5554.6	14.7	482	16	0
26	5557.3	17.7	431	15	1
27	5560.0	14.5	379	15	1
28	5562.6	17.6	364	14	1
29	5565.3	18.7	393	14	1
30	5569.0	16.8	359	14	1
Detection Percentage (%)					76.7%

Note: In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is as follows: $\frac{P_d1+P_d2+P_d3+P_d4}{4}$ = (100%+80%+86.7%+76.7%)/4 = 85.6% (>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	5530.0	1	16	5494.6	1
2	5530.0	1	17	5493.8	1
3	5530.0	1	18	5494.6	1
4	5530.0	1	19	5496.6	1
5	5530.0	1	20	5494.6	1
6	5530.0	1	21	5563.8	1
7	5530.0	1	22	5566.6	1
8	5530.0	1	23	5561.8	0
9	5530.0	1	24	5562.6	1
10	5530.0	1	25	5564.2	1
11	5495.0	1	26	5564.2	1
12	5493.4	1	27	5564.6	1
13	5494.2	1	28	5566.6	1
14	5497.8	1	29	5562.6	1
15	5496.6	1	30	5563.8	1
Detection Percentage (%)					96.7%

Type 5 Radar Waveform_1

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	91.5	9	1572		558.269
2	1	90.6	9			575.803
3	1	84.7	9			659.517
4	3	69.6	9	1073	1581	575.22
5	2	66.3	9	1930		228.623
6	1	72.8	9			141.387
7	3	91.1	9	1800	1007	110.52
8	2	54.8	9	1554		553.963
9	3	93.7	9	1168	1781	365.527
10	2	77.4	9	1331		221.85
11	2	55.6	9	1255		608.783
12	2	92.6	9	1590		41.837
13	2	67.5	9	1238		470.43
14	2	91.7	9	1923		615.423
15	2	89.3	9	1103		276.287
16	2	54.9	9	1583		563.6
17	2	56.4	9	1858		488.633
18	3	72	9	1855	1913	476.867

Type 5 Radar Waveform_2

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	93.7	16	1510		134.046
2	3	61.3	16	1774	1392	942.95
3	3	58	16	1336	1766	279.89
4	2	59.7	16	1749		16.48
5	2	77.7	16	1077		233.6
6	2	94	16	1645		304.86
7	1	80.8	16			751.47
8	2	69	16	1324		1089.5
9	1	67.5	16			760.9
10	2	76.6	16	1713		972.3

Type 5 Radar Waveform_3

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	72	8	1125	1070	646.669
2	2	76.5	8	1847		1311.24
3	3	86.5	8	1554	1984	321
4	1	99.7	8			458.7
5	2	68.8	8	1837		514.58
6	2	78.2	8	1310		1238.14
7	2	69.6	8	1264		293.45
8	2	80	8	1567		39.1

Type 5 Radar Waveform_4

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	87.2	8			66.527
2	3	76.5	8	1614	1748	790.853
3	2	61.5	8	1391		677.746
4	2	79	8	1341		352.429
5	2	67.1	8	1893		740.502
6	1	51.2	8			705.955
7	3	86.6	8	1815	1486	304.098
8	1	51.8	8			735.452
9	1	58	8			112.655
10	2	54.9	8	1918		488.298
11	1	74	8			77.581
12	2	66.7	8	1712		52.454
13	2	99.2	8	1214		523.677

Type 5 Radar Waveform_5

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	91.4	12	1093		490.44
2	2	68.2	12	1737		163.651
3	2	60.1	12	1935		189.41
4	2	95.9	12	1034		498.45
5	1	73.4	12			394.49
6	2	90.3	12	1620		191.58
7	2	92.4	12	1451		352.81
8	3	58.4	12	1913	1034	466.12
9	1	88.9	12			444.98
10	2	64.3	12	1983		364.46
11	3	73.5	12	1646	1417	359.11
12	2	73.8	12	1573		113.52
13	2	99.9	12	1554		137.51
14	2	86.2	12	1974		163.04
15	3	98.1	12	1830	1122	233.4
16	2	50.4	12	1848		302.62
17	3	52.1	12	1917	1342	401.2
18	1	56	12			154.4
19	1	66.1	12			458.6
20	1	99.8	12			483.8

Type 5 Radar Waveform_6

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	70.2	19	1119		424.146
2	1	78	19			243.937
3	2	78.6	19	1852		279.45
4	3	54.4	19	1990	1168	102.05
5	2	82.5	19	1281		307.26
6	1	55.8	19			269.68
7	2	68.3	19	1697		587.89
8	2	92.4	19	1534		49.91
9	1	88.8	19			52.89
10	2	65.8	19	1353		100.55
11	1	94.6	19			144.52
12	1	81.7	19			468.06
13	3	86.8	19	1437	1572	9.83
14	2	98	19	1432		494.93
15	1	86.5	19			550.67
16	2	57.7	19	1025		50.61
17	1	68.2	19			277.1
18	2	90.4	19	1058		105.6
19	3	86.7	19	1817	1808	192
20	2	94.5	19	1392		340.1

Type 5 Radar Waveform_7

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	76.3	17	1023		616.559
2	2	97.5	17	1773		682.45
3	1	61.6	17			534.01
4	1	92	17			906.63
5	3	91.8	17	1909	1340	154.28
6	2	67.5	17	1053		91.32
7	2	79.7	17	1395		640.34
8	2	52.8	17	1752		772.11
9	2	50.9	17	1947		893.4
10	2	91.8	17	1276		142.4

Type 5 Radar Waveform_8

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 Spacing (μ sec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	62.8	15	1336	1396	341.6
2	1	91.8	15			11.857
3	2	88.1	15	1503		426.884
4	1	76.2	15			104.361
5	3	55.1	15	1290	1851	685.519
6	2	83.1	15	1737		20.726
7	1	98.7	15			376.763
8	2	67.5	15	1910		550.53
9	2	62.9	15	1890		321.987
10	3	65.4	15	1344	1134	316.054
11	2	79.3	15	1655		750.191
12	2	87.1	15	1432		644.429
13	1	52.7	15			466.586
14	2	93.2	15	1776		281.443

Type 5 Radar Waveform_9

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	56.2	16			321.509
2	2	92.6	16	1544		379.247
3	2	51.3	16	1909		219.894
4	3	98.4	16	1864	1970	701.751
5	2	83	16	1185		239.669
6	2	99.9	16	1957		388.476
7	3	94.2	16	1435	1228	848.623
8	2	85	16	1015		96.18
9	2	82.7	16	1554		20.747
10	2	71.2	16	1186		791.534
11	2	99.3	16	1748		798.931
12	1	96.2	16			104.699
13	2	98.8	16	1496		202.686
14	3	67.6	16	1582	1171	368.743

Type 5 Radar Waveform_10

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	76.8	9			58.709
2	1	98	9			495.167
3	1	87.5	9			661.154
4	2	67.2	9	1628		567.301
5	1	72.3	9			470.369
6	2	65.6	9	1391		577.056
7	1	66.6	9			707.943
8	3	75.9	9	1257	1557	360.51
9	1	63.2	9			229.857
10	2	88.4	9	1589		115.934
11	2	79.7	9	1951		610.951
12	2	65.1	9	1356		226.579
13	3	61.3	9	1107	1454	649.686
14	1	88.8	9			240.843

Type 5 Radar Waveform_11

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	70.5	10	1190	1561	525.733
2	3	76.9	10	1316	1400	610.838
3	1	56.6	10			446.685
4	3	83.3	10	1046	1851	676.223
5	2	54.3	10	1729		40.491
6	2	89.8	10	1381		466.798
7	3	76.5	10	1684	1409	557.206
8	2	91.5	10	1392		399.454
9	2	77.6	10	1212		42.011
10	2	95.8	10	1706		440.689
11	2	97.8	10	1209		145.116
12	2	72.7	10	1775		337.734
13	2	53.2	10	1512		295.112
14	1	70	10			305.819
15	3	72.6	10	1738	1347	474.647
16	2	95.2	10	1181		342.465
17	2	55	10	1158		201.082

Type 5 Radar Waveform_12

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	73.6	6			621.851
2	2	91.5	6	1375		348.763
3	1	50.2	6			363.997
4	3	51.4	6	1109	1902	292.84
5	1	68.6	6			384.613
6	2	54.5	6	1776		403.617
7	2	57.9	6	1152		350.63
8	2	89	6	1345		184.093
9	2	76.1	6	1537		479.347
10	2	66.3	6	1301		546.77
11	3	57.5	6	1897	1480	431.753
12	2	80.3	6	1181		360.497
13	2	78	6	1099		618.44
14	1	57.4	6			52.283
15	2	76	6	1931		172.777
16	2	52.5	6	1855		334.2
17	3	52.3	6	1120	1874	49.733
18	1	58.5	6			238.767

Type 5 Radar Waveform_13

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	86.4	8	1708	1717	472.543
2	2	88.2	8	1264		669.86
3	2	55.2	8	1701		578.89
4	3	64	8	1455	1273	440.78
5	3	87.9	8	1233	1994	157.37
6	3	50.8	8	1205	1444	295.44
7	2	62.4	8	1995		780.41
8	2	94.9	8	1320		442.35
9	1	62.4	8			380.03
10	3	93.4	8	1753	1549	192.89
11	2	80.6	8	1889		40.57
12	2	91.6	8	1526		660.86
13	3	75.9	8	1106	1654	115.97
14	2	59.6	8	1847		600.3
15	3	77.3	8	1489	1661	363.4

Type 5 Radar Waveform_14						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	76.7	17	1379	1516	116.642
2	3	63	17	1810	1324	710.11
3	2	81.7	17	1430		770.39
4	3	92	17	1627	1138	794.4
5	2	92.2	17	1796		246.3
6	2	91.5	17	1662		963.62
7	1	70.7	17			381.34
8	2	84.6	17	1188		469.72
9	1	61.3	17			83.07
10	2	69.8	17	1242		175.69
11	3	53.8	17	1531	1730	131.9
12	2	67.1	17	1658		122

Type 5 Radar Waveform_15						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	92.8	14			512.91
2	1	60.1	14			394.711
3	3	69.3	14	1315	1142	664.962
4	1	54.4	14			1069.413
5	2	64.3	14	1034		1073.304
6	2	91.7	14	1725		815.205
7	2	54	14	1250		161.325
8	1	50.2	14			904.976
9	2	80.5	14	1069		673.707
10	2	71.7	14	1718		103.668
11	3	90	14	1919	1347	74.109

Type 5 Radar Waveform_16						
Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	71.9	9			688.082
2	2	55.1	9	1439		692.117
3	1	84.8	9			999.583
4	2	81.5	9	1459		894.15
5	2	65	9	1618		784.477
6	2	91.7	9	1331		1278.063
7	3	76.4	9	1422	1442	621.31
8	2	50	9	1960		1123.867
9	1	91.3	9			1132.433

Type 5 Radar Waveform_17

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	1	88.1	7			726.084
2	2	91.7	7	1326		723.527
3	2	88.8	7	1019		565.594
4	2	79.4	7	1692		70.241
5	2	80.5	7	1262		269.349
6	3	69.7	7	1538	1446	566.216
7	2	88.3	7	1850		550.603
8	2	87.4	7	1130		89.68
9	1	93.2	7			443.477
10	2	53.6	7	1310		736.914
11	1	77.4	7			608.471
12	3	91.5	7	1908	1070	213.319
13	3	97.6	7	1678	1707	61.686
14	2	76.3	7	1603		285.243

Type 5 Radar Waveform_18

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	3	66.2	9	1140	1443	830.375
2	3	68.2	9	1547	1251	62.706
3	2	86.9	9	1530		418.596
4	2	69.8	9	1591		233.459
5	3	88	9	1090	1364	897.932
6	2	62.3	9	1970		684.235
7	2	90.8	9	1094		506.748
8	3	90.3	9	1125	1663	847.852
9	2	52.2	9	1591		773.365
10	1	54	9			140.238
11	2	88.3	9	1673		572.401
12	2	65.7	9	1759		650.454
13	2	58.7	9	1303		908.977

Type 5 Radar Waveform_19

Burst	Number of Pulses	Pulse Width (μ sec)	Chirp Width (MHz)	Pulse 1-to-2 PRI (μsec)	Pulse 2-to-3 PRI (μsec)	Start Location Within Interval (msec)
1	2	95.4	14	1715		22.255
2	2	92	14	1587		281.095
3	2	99.6	14	1458		13.115
4	1	79.3	14			469.773
5	2	93.2	14	1378		287.071
6	2	63.1	14	1191		633.238
7	2	85.8	14	1163		98.726
8	2	61.5	14	1594		264.254
9	2	92.7	14	1034		267.041
10	2	86.4	14	1473		82.149
11	3	92.1	14	1315	1690	301.616
12	2	79	14	1896		60.944
13	2	59.5	14	1998		678.432
14	2	55.3	14	1981		685.849
15	3	65.6	14	1888	1901	445.447
16	1	99	14			576.065
17	2	95.3	14	1576		143.682