



中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



DFS TEST REPORT

Applicant: Grandstream Networks, Inc.

Address: 126 Brookline Ave., 3rd Floor Boston, MA 02215, USA

FCC ID: YZZGWN7603

Product Name: 802.11ac wave-2 Wi-Fi Access Point

**Standard(s): 47 CFR Part 15, Subpart E(15.407)
FCC KDB 905462 D02 UNII DFS Compliance
Procedures New Rules v02**

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: CR231167508-00D

Date Of Issue: 2024/1/9

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Title: Manager

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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CONTENTS

DOCUMENT REVISION HISTORY	4
1. GENERAL INFORMATION	5
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	5
1.2 DESCRIPTION OF TEST CONFIGURATION.....	6
1.2.1 EUT Operation Condition:.....	6
1.2.2 Support Equipment List and Details	10
1.2.3 Support Cable List and Details	10
1.2.4 Block Diagram of Test Setup.....	10
2. SUMMARY OF TEST RESULTS	11
3. REQUIREMENTS AND TEST PROCEDURES	12
3.1 DFS REQUIREMENT.....	12
3.2 DFS MEASUREMENT SYSTEM.....	16
3.3 SYSTEM BLOCK DIAGRAM	16
3.4 TEST PROCEDURE	16
4. Test DATA AND RESULTS.....	17
4.1 RADAR WAVEFORM CALIBRATION	18
4.2 CHANNEL AVAILABILITY CHECK TIME (CAC).....	30
4.2.1 Test Procedure	30
4.2.2 EUT Initial power-up Cycle Time	30
4.2.3 Results:	30
4.3 CHANNEL MOVE TIME AND CHANNEL CLOSING TRANSMISSION TIME.....	33
4.3.1 Test Procedure	33
4.3.2 Test Results.....	33
4.3.3 Results:	33
4.4 NON-OCCUPANCY PERIOD.....	35
4.4.1 Test Procedure	35
4.4.2 Test Result	35
4.5 DETECTION BANDWIDTH	36
4.5.1 Test Procedure	36
4.5.2 Test Result	36
4.6 STATISTICAL PERFORMANCE CHECK.....	40
4.6.1 Procedure:	40
4.6.2 Result:	41
5. BRIDGE AND/OR MESH MODE.....	134
6. EUT PHOTOGRAPHS	136
7. TEST SETUP PHOTOGRAPHS	137

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR231167508-00D	Original Report	2024/1/9

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	802.11ac wave-2 Wi-Fi Access Point
EUT Model:	GWN7603
Trade Name:	GRANDSTREAM
Operation Frequency:	5260-5320 MHz (802.11a/n ht20/ac vht20) 5270-5310 MHz(802.11n ht40/ac vht40) 5290 MHz(802.11ac vht80) 5500-5700 MHz (802.11a/n ht20/ac vht20) 5510-5670 MHz(802.11n ht40/ac vht40) 5530-5610 MHz(802.11ac vht80)
Device Type:	Master
Maximum Average Conducted Output Power:	20.18 dBm (5250-5350 MHz) 19.87 dBm (5470-5725 MHz)
Modulation Type:	802.11a/n/ac:OFDM-BPSK, QPSK, 16QAM, 64QAM,256QAM
Rated Input Voltage:	DC 44-57V from PoE or DC 12V, 2A from adapter
Serial Number:	2DPM-2
EUT Received Date:	2023/11/15
EUT Received Status:	Good

1.1.1 Antenna Information Detail▲:

Antenna Chain	Antenna Type	input impedance (Ohm)	Frequency Range (MHz)	Antenna Gain (dBi)
Chain 0	Dipole	50	5150-5850	3.54
Chain 1	Dipole	50	5150-5850	4.55

1.1.2 Accessory Information:

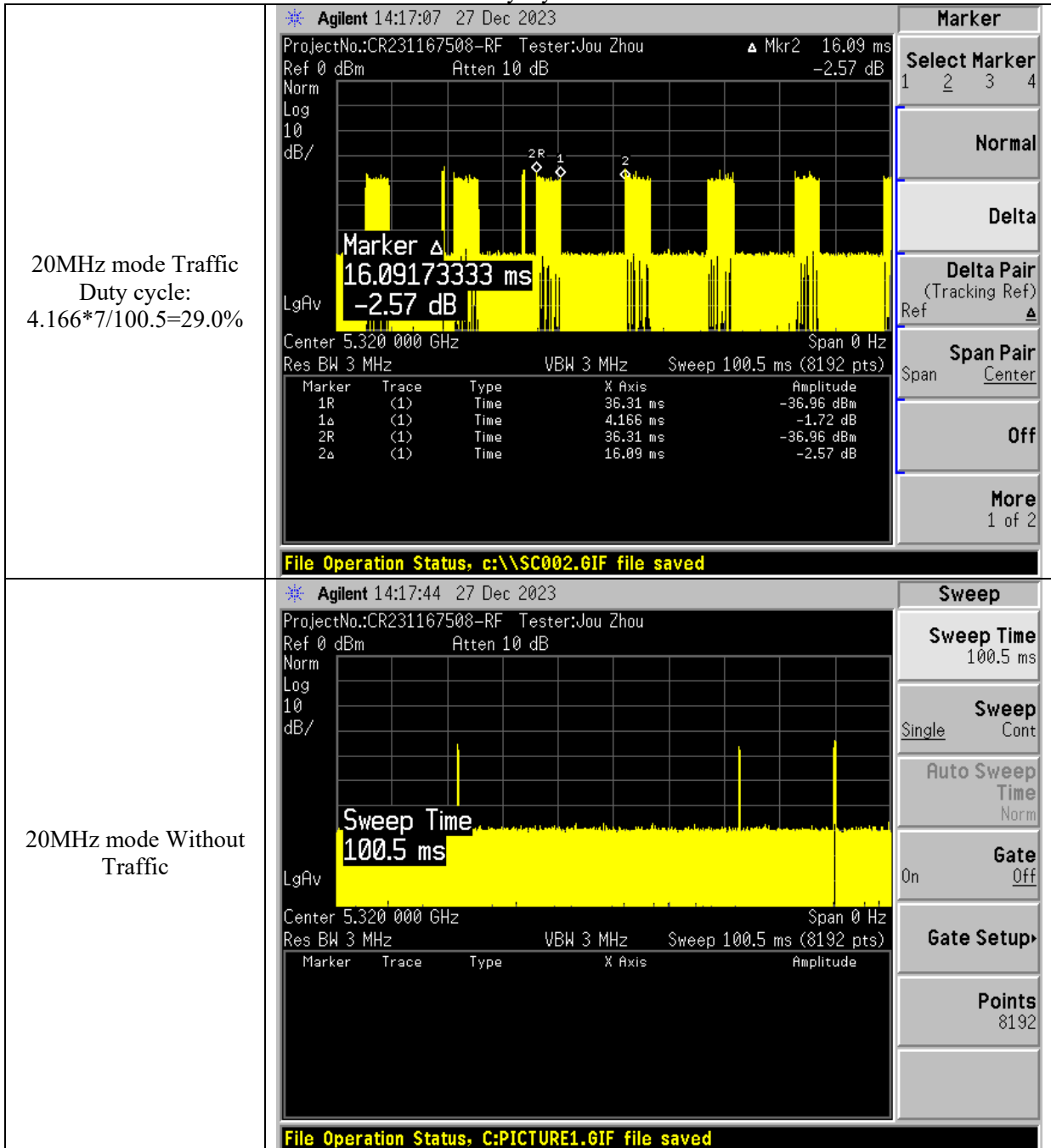
Accessory Description	Manufacturer	Model	Parameters
/	/	/	/

1.2 Description of Test Configuration

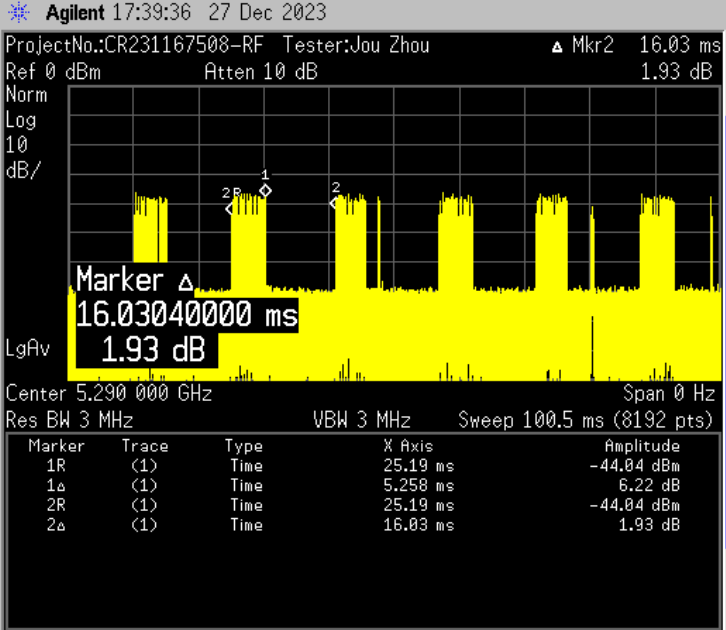
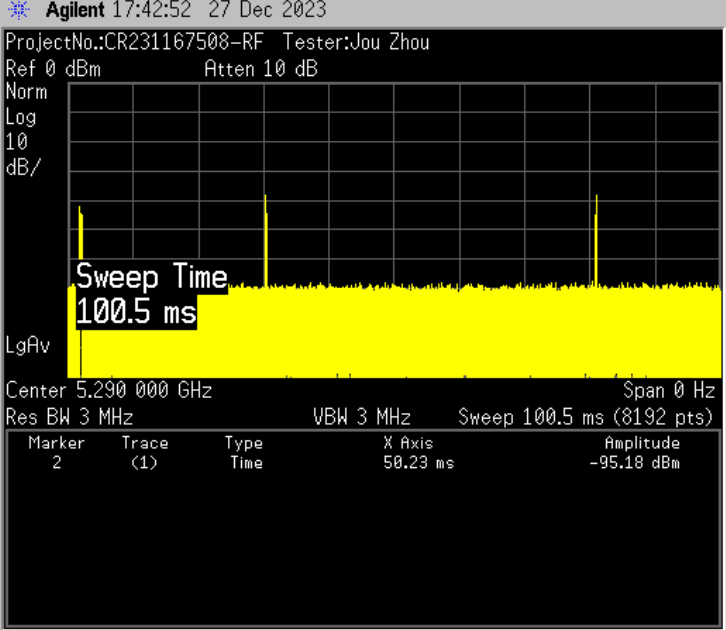
1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.	
Equipment Modifications:	No	
EUT Exercise Software:	Tfgen	
The software was provided by manufacturer▲. The below mode and data rate was used when testing:		
Bandwidth	Modes	Data Rate
20MHz	802.11ac vht20	MCS0
40MHz	802.11ac vht40	MCS0
80MHz	802.11ac vht80	MCS0
WLAN traffic is generated by software “Tfgen”, software is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. Data package streamed from the Access Point to the Client using the software “Tfgen”. The following duty cycle was used when test.		

Duty Cycle:



<p>40MHz mode Traffic Duty cycle: $4.436 \times 7 / 100.5 = 30.9\%$</p>	 <table border="1" data-bbox="518 712 1225 817"> <thead> <tr> <th>Marker</th> <th>Trace</th> <th>Type</th> <th>X Axis</th> <th>Amplitude</th> </tr> </thead> <tbody> <tr> <td>1R</td> <td>(1)</td> <td>Time</td> <td>37 ms</td> <td>-44.78 dBm</td> </tr> <tr> <td>1Δ</td> <td>(1)</td> <td>Time</td> <td>4.436 ms</td> <td>4.07 dB</td> </tr> <tr> <td>2R</td> <td>(1)</td> <td>Time</td> <td>37 ms</td> <td>-44.78 dBm</td> </tr> <tr> <td>2Δ</td> <td>(1)</td> <td>Time</td> <td>16.02 ms</td> <td>1.70 dB</td> </tr> </tbody> </table> <p>File Operation Status, C:PICTURE1.GIF file saved</p>	Marker	Trace	Type	X Axis	Amplitude	1R	(1)	Time	37 ms	-44.78 dBm	1Δ	(1)	Time	4.436 ms	4.07 dB	2R	(1)	Time	37 ms	-44.78 dBm	2Δ	(1)	Time	16.02 ms	1.70 dB
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2Δ	(1)	Time	16.02 ms	1.70 dB																						
<p>40MHz mode Without Traffic</p>	 <table border="1" data-bbox="518 1384 1225 1422"> <thead> <tr> <th>Marker</th> <th>Trace</th> <th>Type</th> <th>X Axis</th> <th>Amplitude</th> </tr> </thead> <tbody> <tr> <td>Sweep Time</td> <td></td> <td></td> <td>100.5 ms</td> <td></td> </tr> </tbody> </table> <p>File Operation Status, C:PICTURE1.GIF file saved</p>	Marker	Trace	Type	X Axis	Amplitude	Sweep Time			100.5 ms																
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Sweep Time			100.5 ms																							

<p>80MHz mode Traffic Duty cycle: $5.258 * 6 / 100.5 = 31.4\%$</p>	 <p>Agilent 17:39:36 27 Dec 2023 ProjectNo.:CR231167508-RF Tester:Jou Zhou Ref 0 dBm Atten 10 dB Mkr2 16.03 ms 1.93 dB</p> <p>Marker Δ 16.03040000 ms 1.93 dB</p> <p>Center 5.290 000 GHz Span 0 Hz Res BW 3 MHz VBW 3 MHz Sweep 100.5 ms (8192 pts)</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Trace</th> <th>Type</th> <th>X Axis</th> <th>Amplitude</th> </tr> </thead> <tbody> <tr> <td>1R</td> <td>(1)</td> <td>Time</td> <td>25.19 ms</td> <td>-44.04 dBm</td> </tr> <tr> <td>1Δ</td> <td>(1)</td> <td>Time</td> <td>5.258 ms</td> <td>6.22 dB</td> </tr> <tr> <td>2R</td> <td>(1)</td> <td>Time</td> <td>25.19 ms</td> <td>-44.04 dBm</td> </tr> <tr> <td>2Δ</td> <td>(1)</td> <td>Time</td> <td>16.03 ms</td> <td>1.93 dB</td> </tr> </tbody> </table> <p>File Operation Status, C:PICTURE1.GIF file saved</p>	Marker	Trace	Type	X Axis	Amplitude	1R	(1)	Time	25.19 ms	-44.04 dBm	1Δ	(1)	Time	5.258 ms	6.22 dB	2R	(1)	Time	25.19 ms	-44.04 dBm	2Δ	(1)	Time	16.03 ms	1.93 dB
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<p>80MHz mode Without Traffic</p>	 <p>Agilent 17:42:52 27 Dec 2023 ProjectNo.:CR231167508-RF Tester:Jou Zhou Ref 0 dBm Atten 10 dB</p> <p>Sweep Time 100.5 ms</p> <p>Center 5.290 000 GHz Span 0 Hz Res BW 3 MHz VBW 3 MHz Sweep 100.5 ms (8192 pts)</p> <table border="1"> <thead> <tr> <th>Marker</th> <th>Trace</th> <th>Type</th> <th>X Axis</th> <th>Amplitude</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>(1)</td> <td>Time</td> <td>50.23 ms</td> <td>-95.18 dBm</td> </tr> </tbody> </table> <p>File Operation Status, C:PICTURE1.GIF file saved</p>	Marker	Trace	Type	X Axis	Amplitude	2	(1)	Time	50.23 ms	-95.18 dBm															
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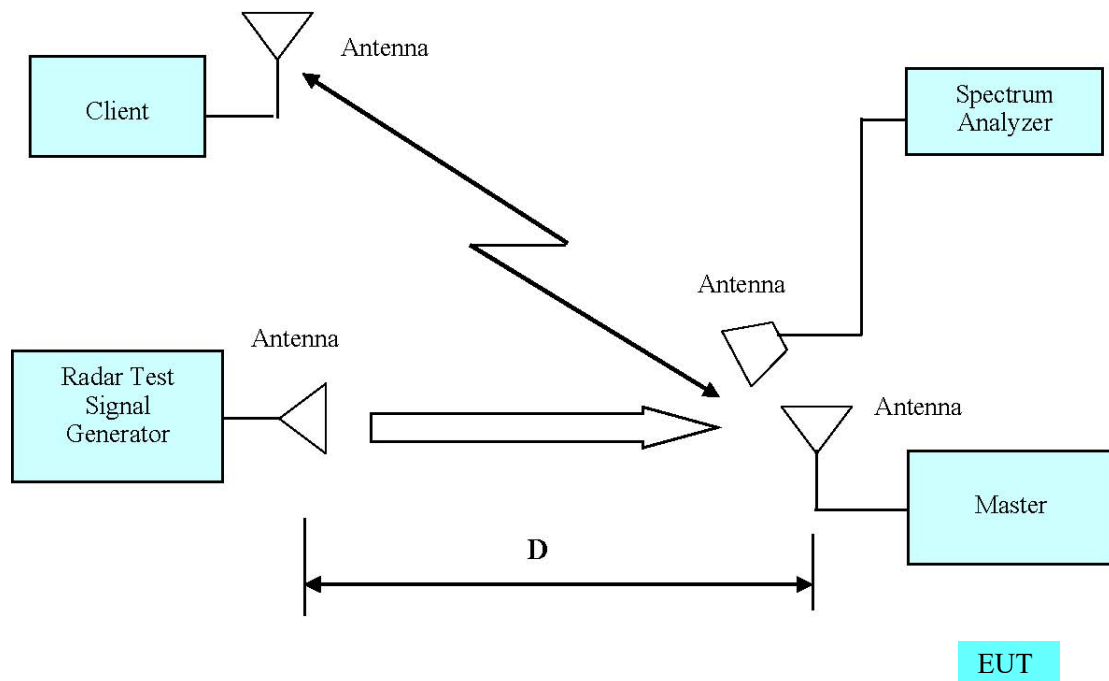
1.2.2 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T430	AA887-03
Asustek	Laptop	FX504G	J6NRCX014047232

1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
/	/	/	/	/	/

1.2.4 Block Diagram of Test Setup



2. SUMMARY OF TEST RESULTS

The following result table represents the list of measurements required under the CFR §47 Part 15.407(h), KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v02

Items	Description of Test	Result
Detection Bandwidth	UNII Detection Bandwidth	Compliant
Performance Requirements Check	Initial Channel Availability Check Time (CAC)	Compliant
	Radar Burst at the Beginning of the CAC	Compliant
	Radar Burst at the End of the CAC	Compliant
In-Service Monitoring	Channel Move Time	Compliant
	Channel Closing Transmission Time	Compliant
	Non-Occupancy Period	Compliant
Radar Detection	Statistical Performance Check	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 DFS Requirement

CFR §47 Part 15.407(h)

FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

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

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

Table 2: Applicability of DFS requirements during normal operation

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

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) 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: DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP \geq 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
<p>Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p>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.</p> <p>Note 3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.</p>	

Table 4: DFS Response Requirement Values

Parameter	Value
<i>Non-occupancy period</i>	Minimum 30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds See Note 1.
<i>Channel Closing Transmission Time</i>	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. See Note 3.
<p>Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.</p> <p>Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> 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.</p> <p>Note 3: During the <i>U-NII Detection Bandwidth</i> 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.</p>	

Table 5 – 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 5a	Roundup $\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$	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.					

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. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

For example if in Short Pulse Radar Type 1 Test B a PRI of 3066 usec is selected, the number of pulses

would be $\text{Roundup} \left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{3066} \right) \right\} = \text{Roundup} \{17.2\} = 18.$

Table 5a - Pulse Repetition Intervals Values for Test A

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

The aggregate is the average of the percentage of successful detections of Short Pulse Radar Types 1-4. For example, the following table indicates how to compute the aggregate of percentage of successful detections.

Radar Type	Number of Trials	Number of Successful Detections	Minimum Percentage of Successful Detection
1	35	29	82.9%
2	30	18	60%
3	30	27	90%
4	50	44	88%
Aggregate $(82.9\% + 60\% + 90\% + 88\%)/4 = 80.2\%$			

Table 6 – Long Pulse Radar Test Waveform

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

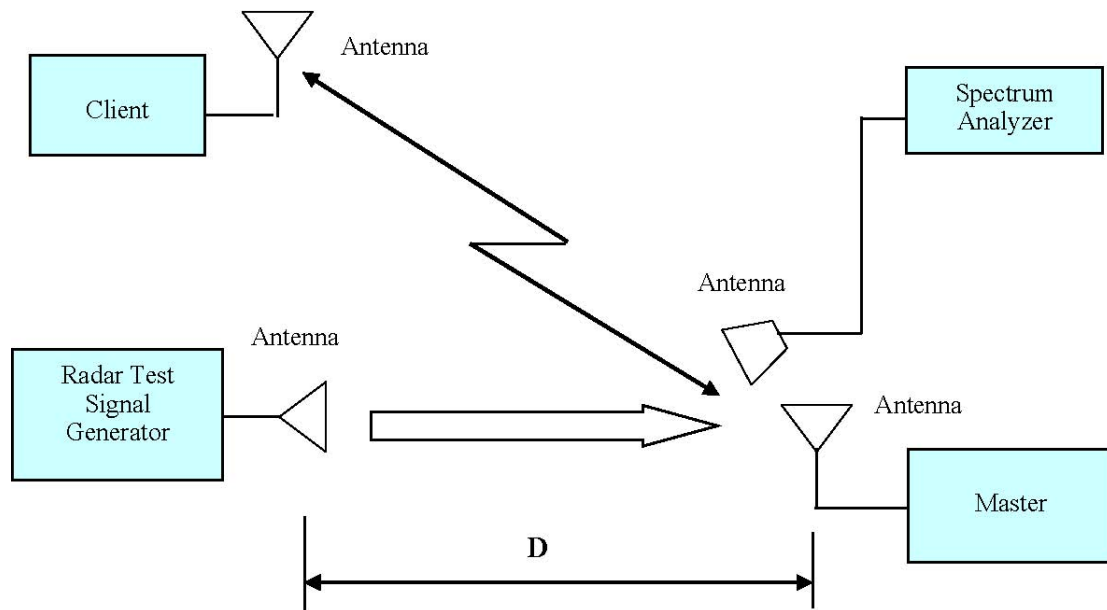
Table 7 – Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (μ sec)	PRI (μ sec)	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

3.2 DFS Measurement System

BACL DFS measurement system consists of two subsystems: (1) The radar signal generating subsystem and (2) the traffic monitoring subsystem.

3.3 System Block Diagram



3.4 Test Procedure

A spectrum analyzer is used as a monitor verifies that the EUT status including Channel Closing Transmission Time and Channel Move Time, and does not transmit on a Channel during the Non-Occupancy Period after the diction and Channel move. It is also used to monitor EUT transmissions during the Channel Availability Check Time.

4. Test DATA AND RESULTS

Serial Number:	2DPM-2	Test Date:	2023/12/22~2024/1/5
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jou Zhou	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	20.3~22.9	Relative Humidity: (%)	35~40	ATM Pressure: (kPa)	102.6~101.4
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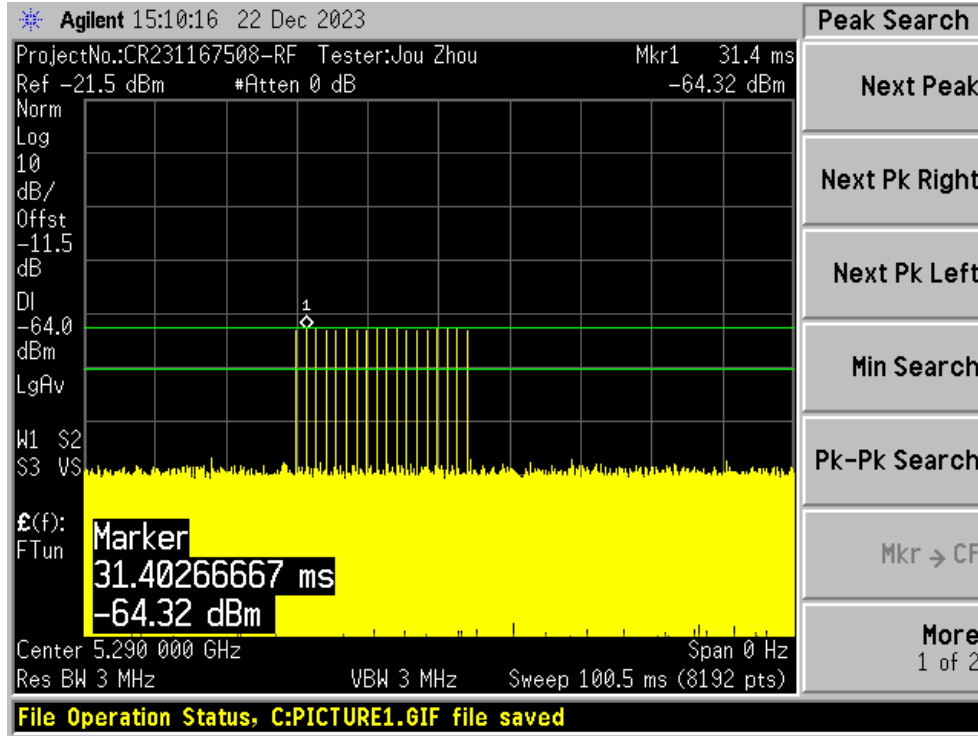
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
National Instruments	NI PXI-1042 8-Slot chassis	PXI-1042	VOBX40FBD	N/A	N/A
National Instruments	Arbitrary Waveform Generator	PXI-5421	N/A	N/A	N/A
National Instruments	RF Upconverter	PXI-5610	N/A	N/A	N/A
ASCOR	Upconverter	AS-7202	N/A	N/A	N/A
Agilent	Spectrum Analyzer	E4440A	SG43360054	2023/3/31	2024/3/30
Ditorn	Splitter/Combiner	D3C4080	SN2244	N/A	N/A
TDK RF	horn antenna	HRN-0118	130 084	2021/10/12	2024/10/11
AH	Double Ridge Guide Horn Antenna	SAS-571	1394	2023/2/22	2026/2/21

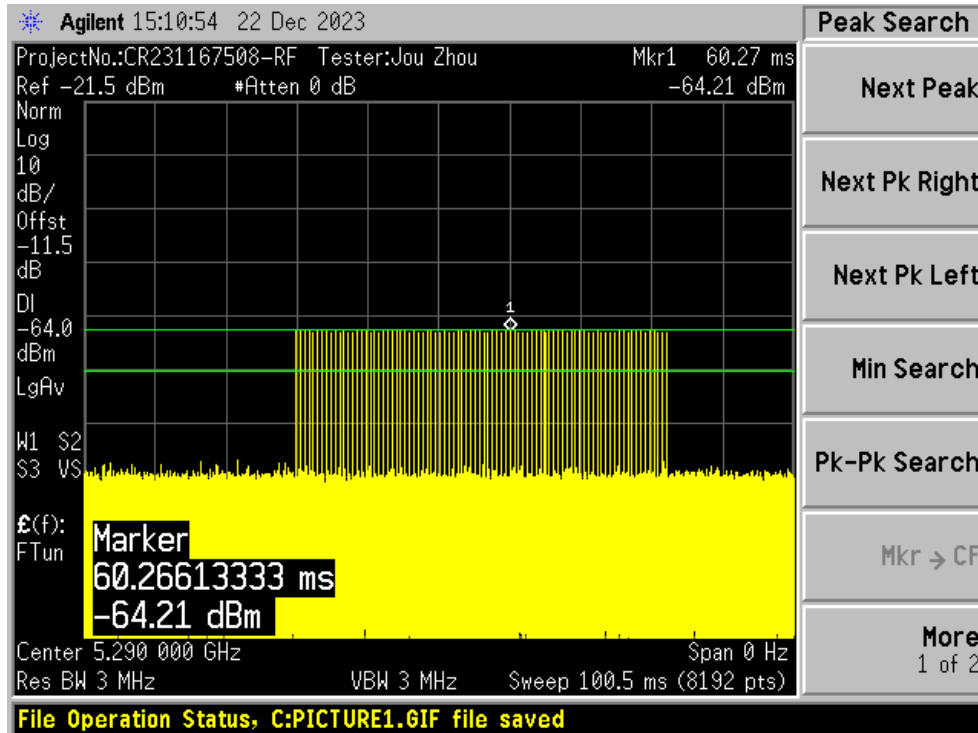
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

4.1 Radar Waveform Calibration 5290MHz:

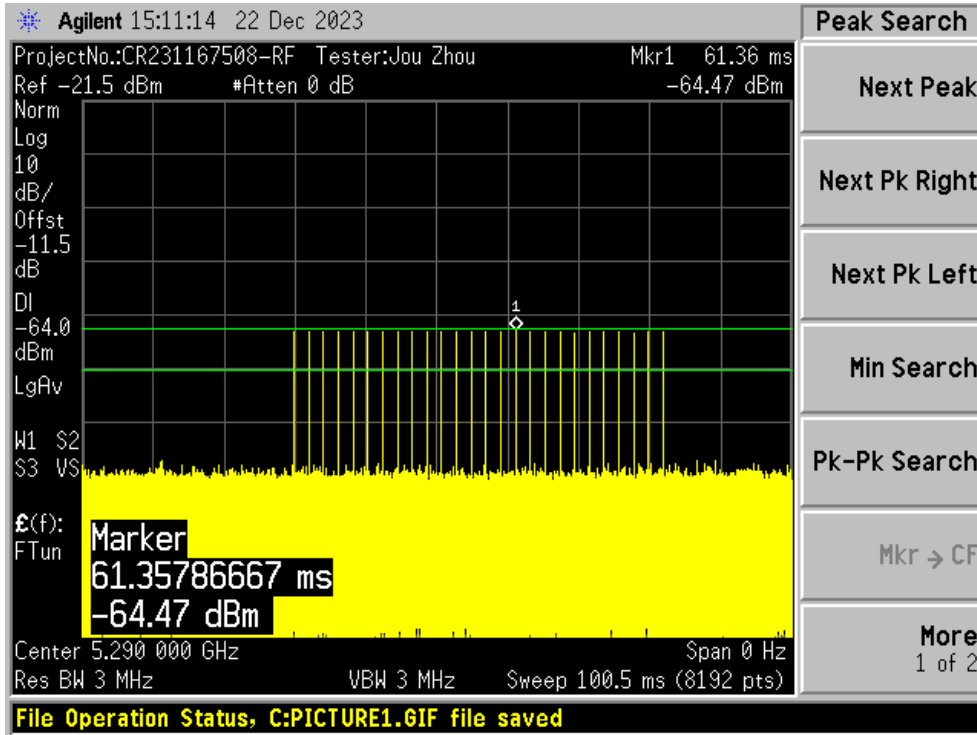
Radar Type 0



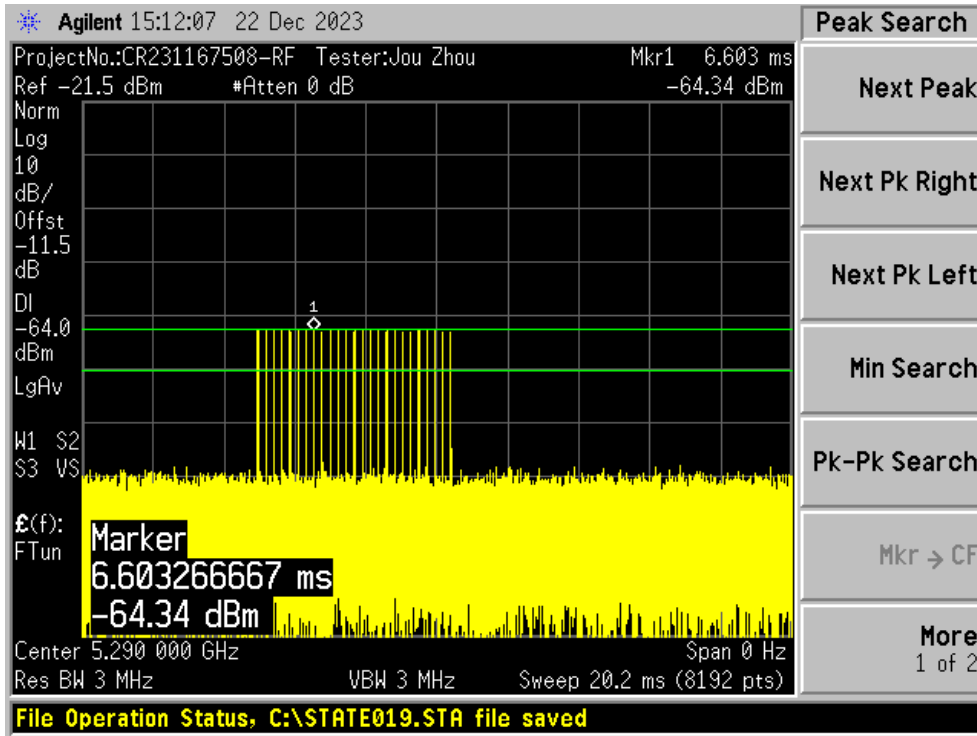
Radar Type 1A



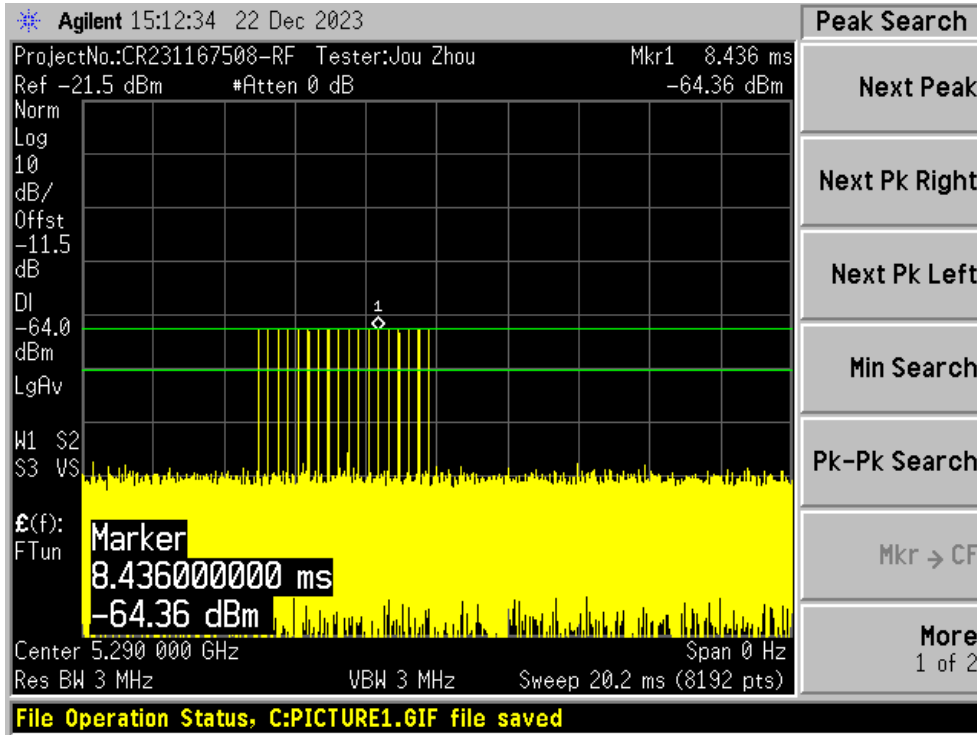
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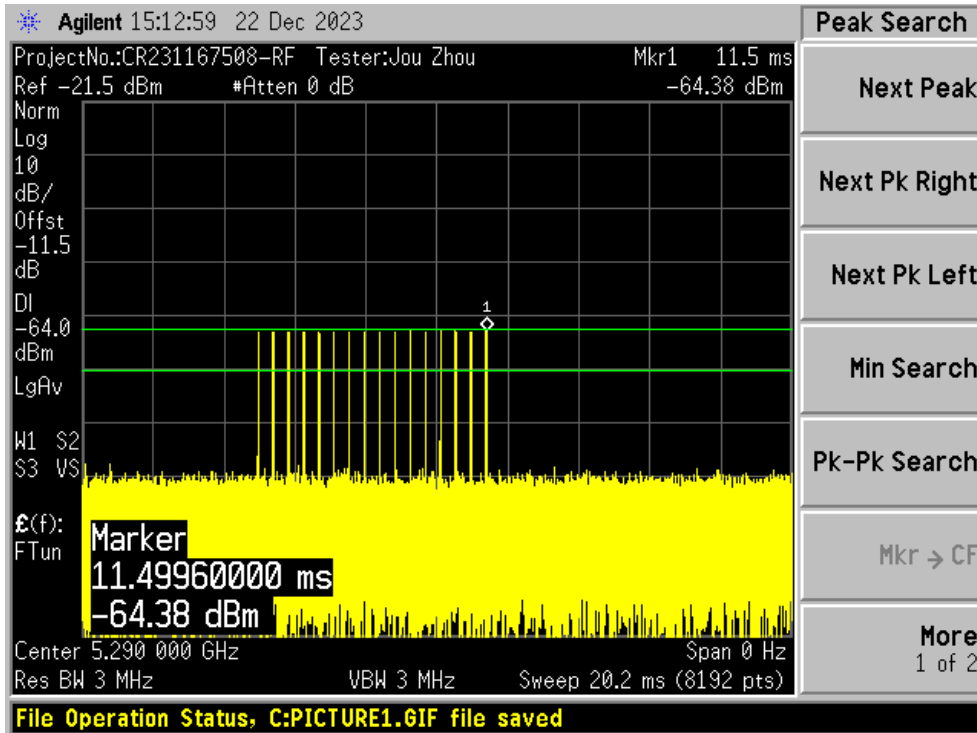
Radar Type 2



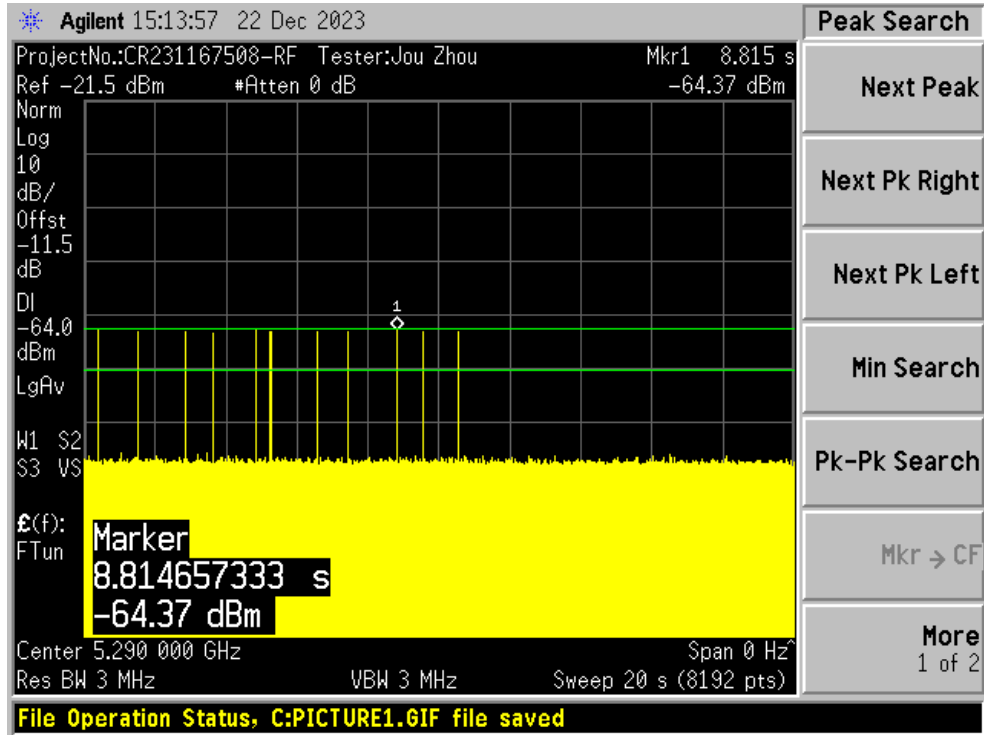
Radar Type 3



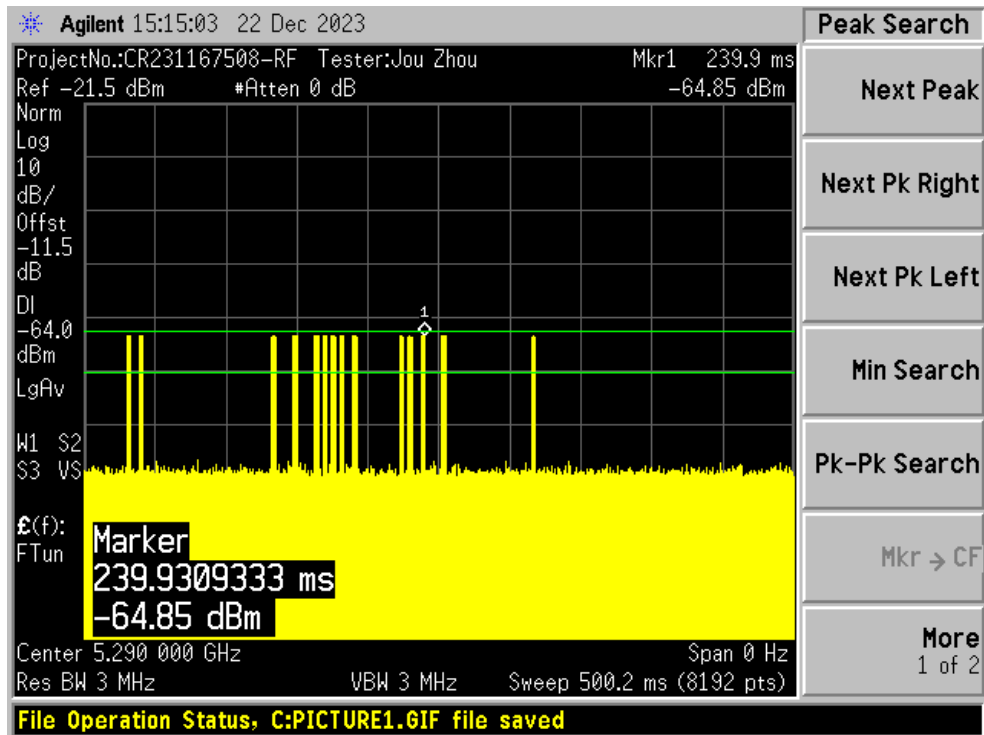
Radar Type 4



Radar Type 5

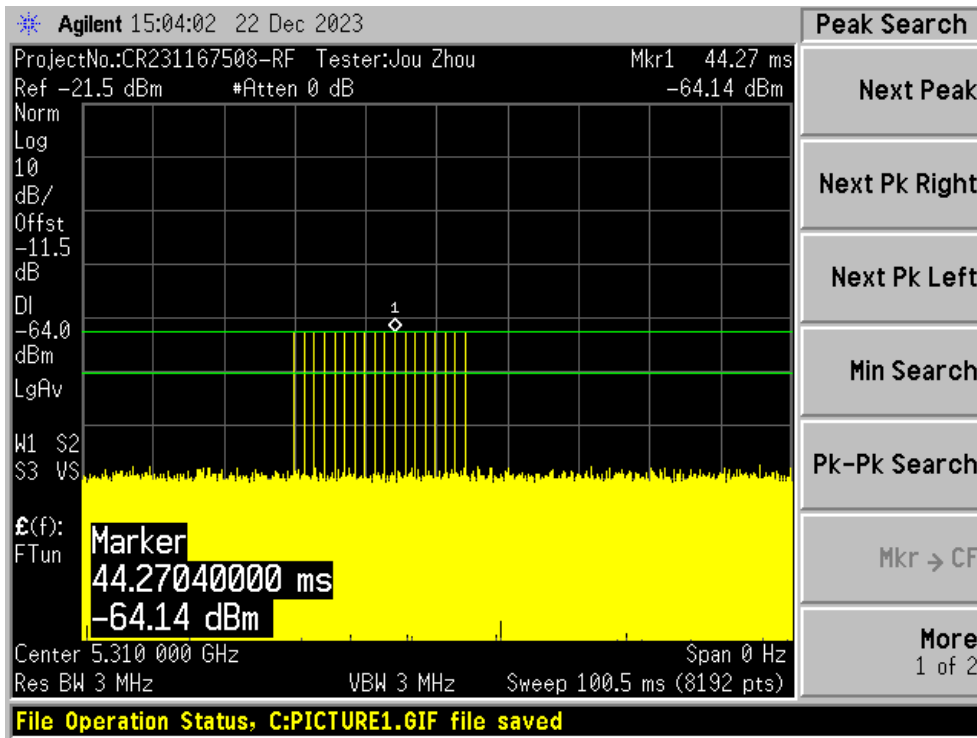


Radar Type 6

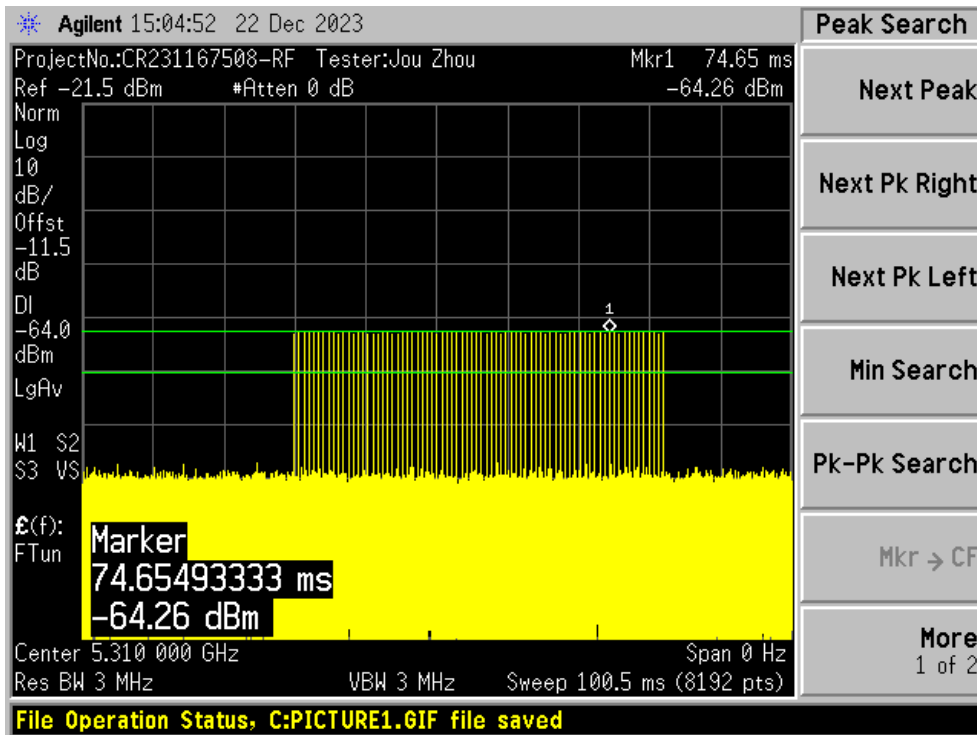


5310 MHz:

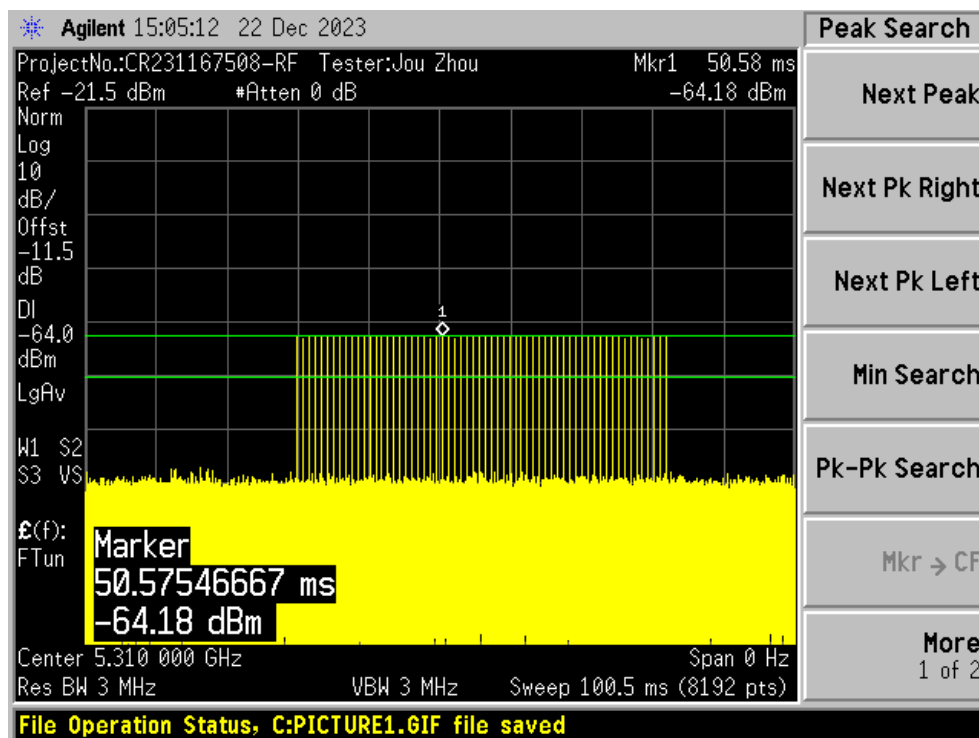
Radar Type 0



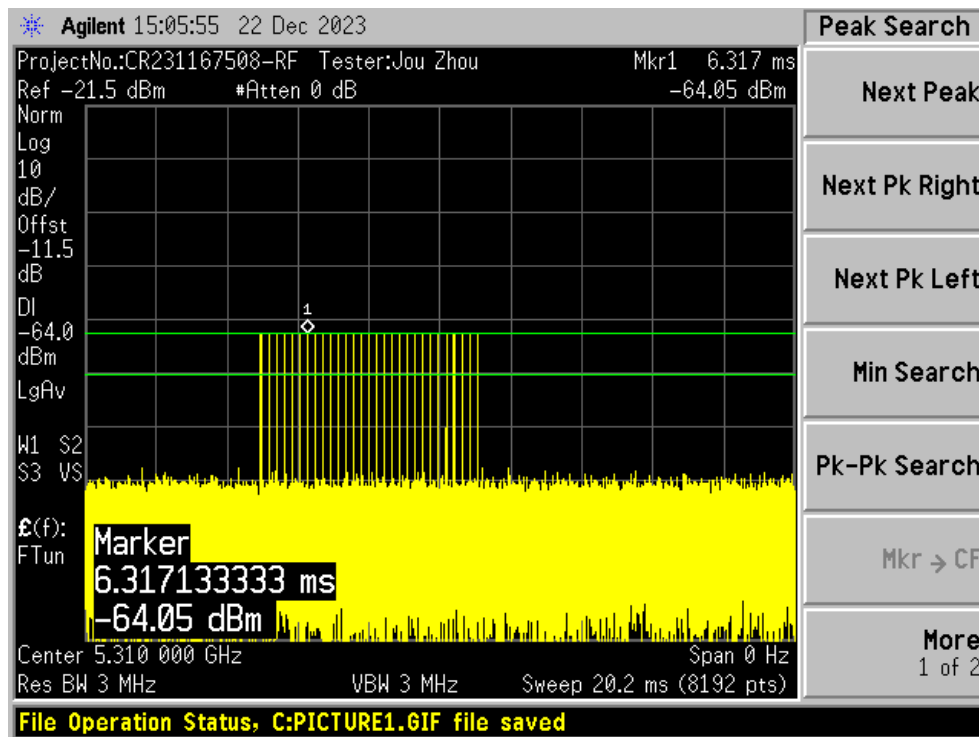
Radar Type 1A



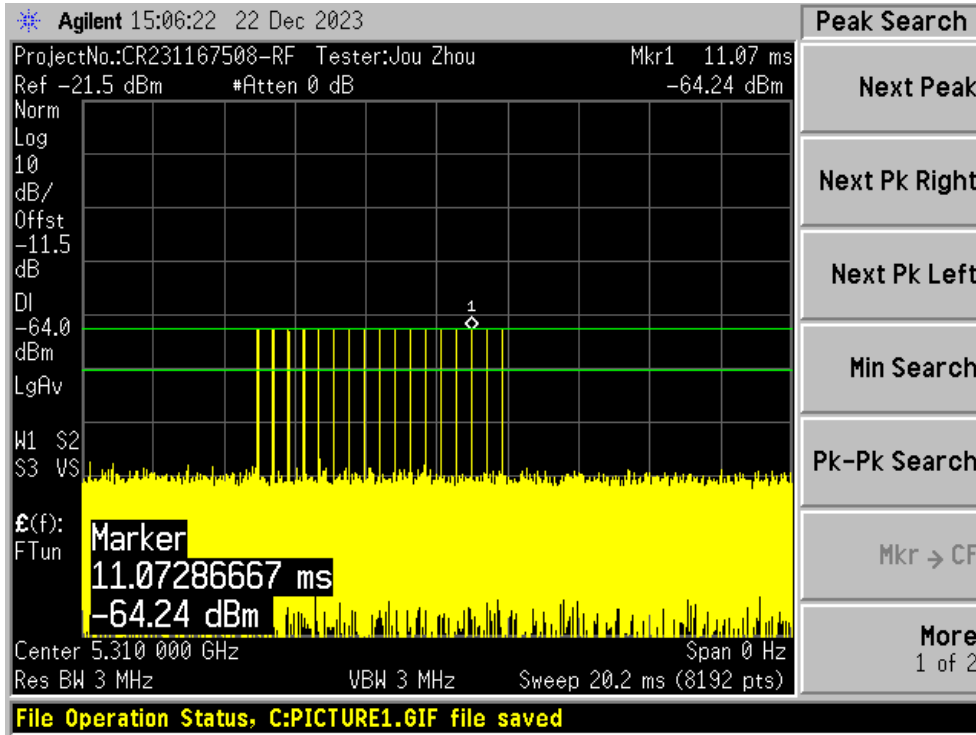
Radar Type 1B



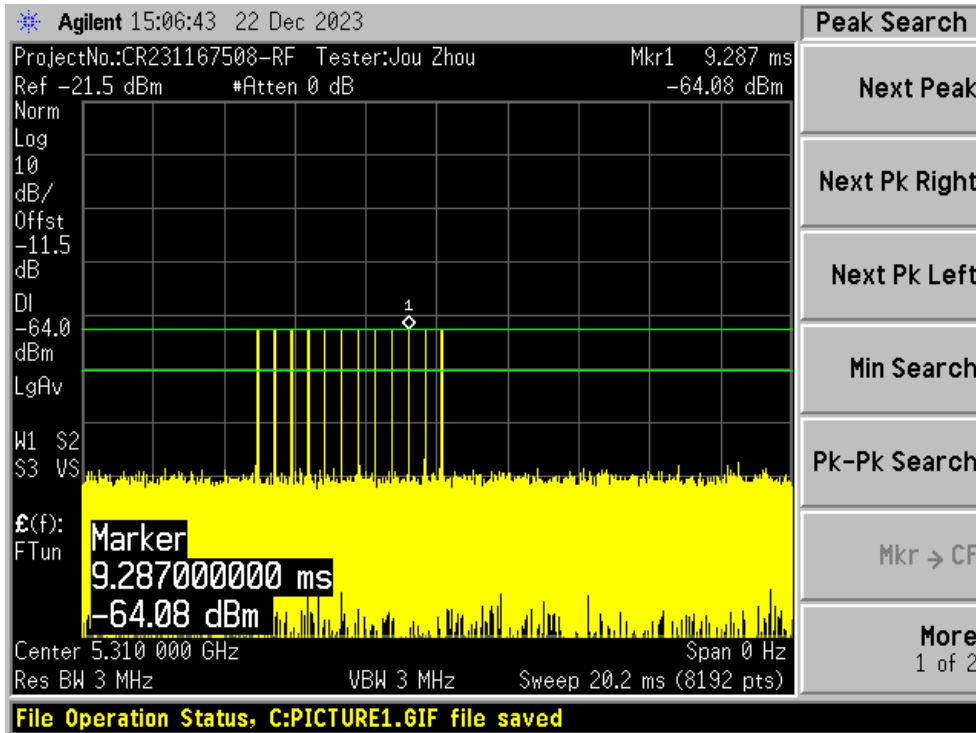
Radar Type 2



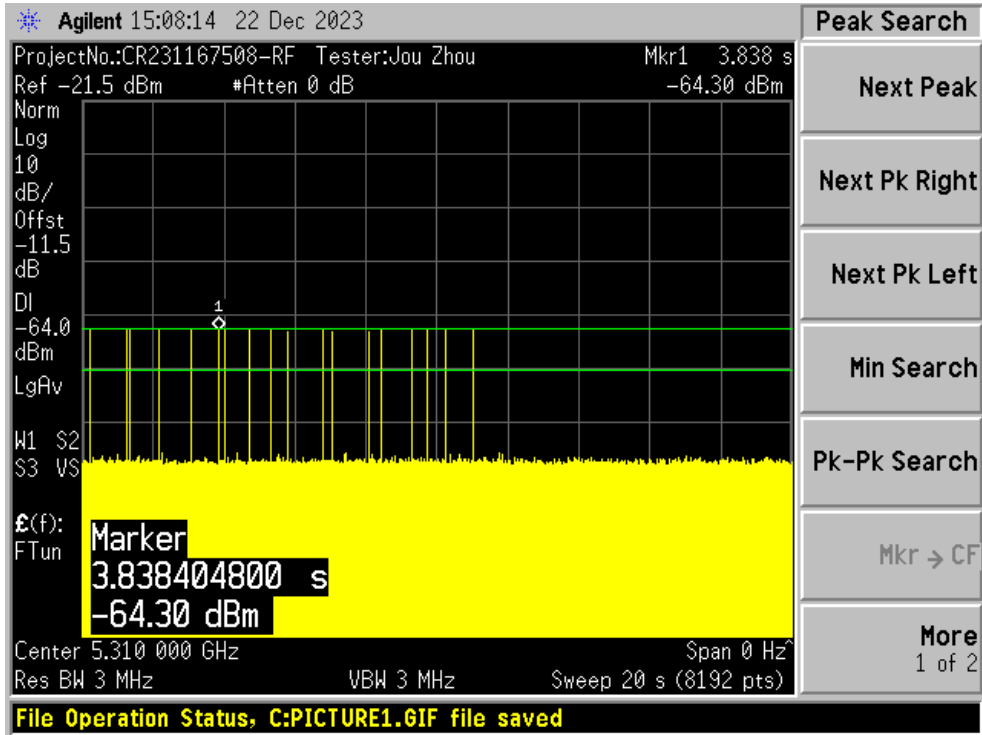
Radar Type 3



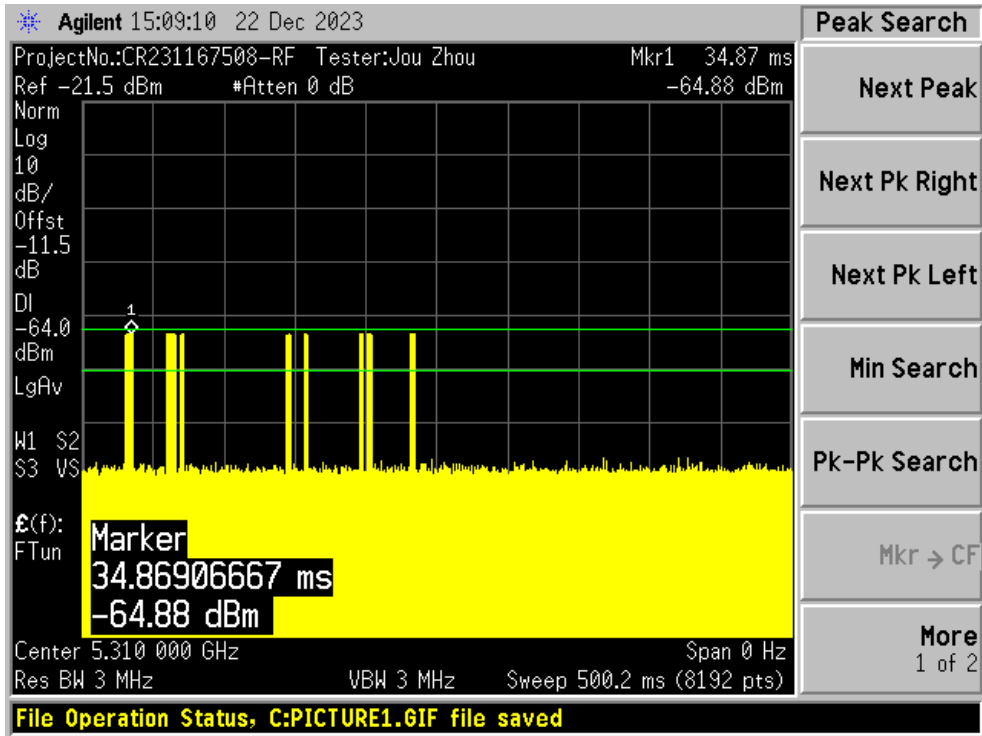
Radar Type 4



Radar Type 5

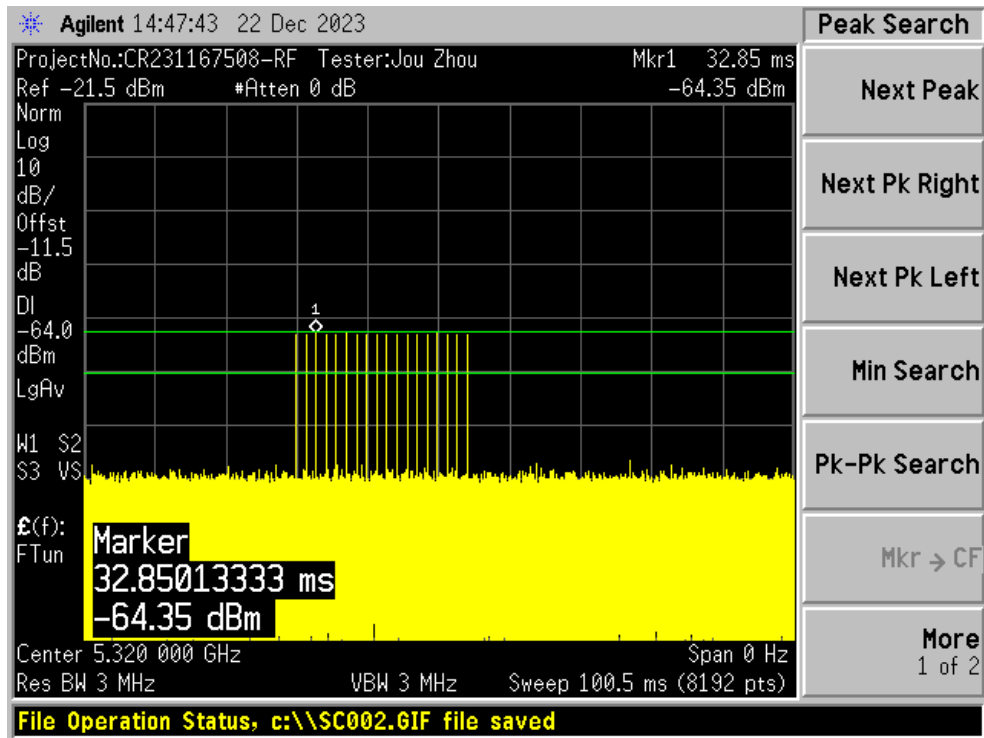


Radar Type 6

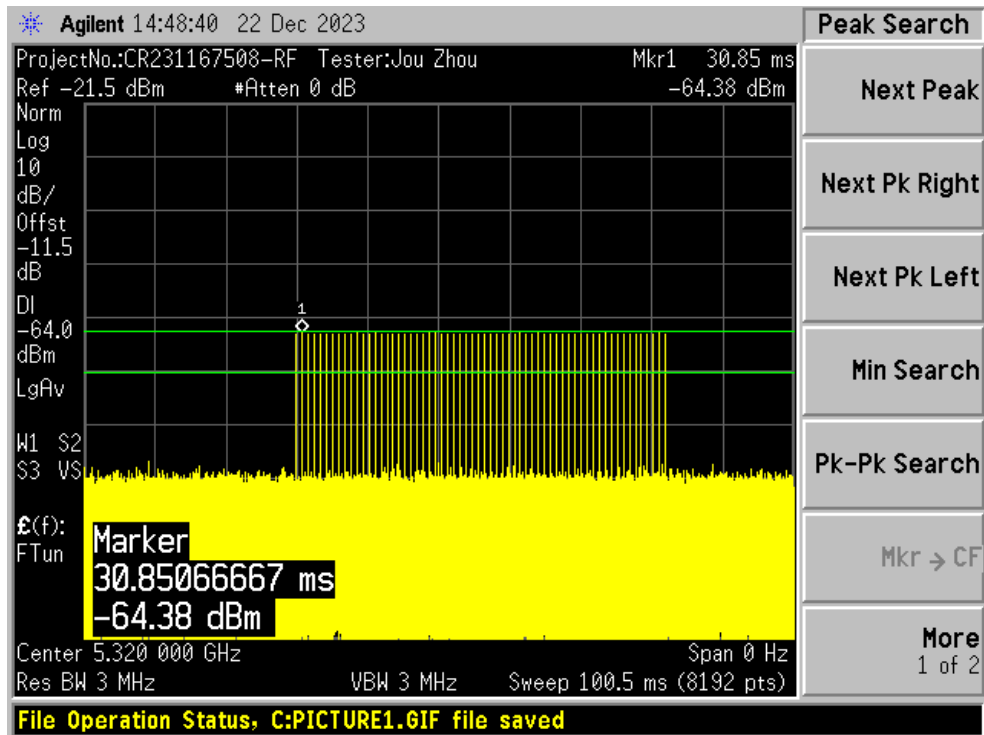


5320MHz:

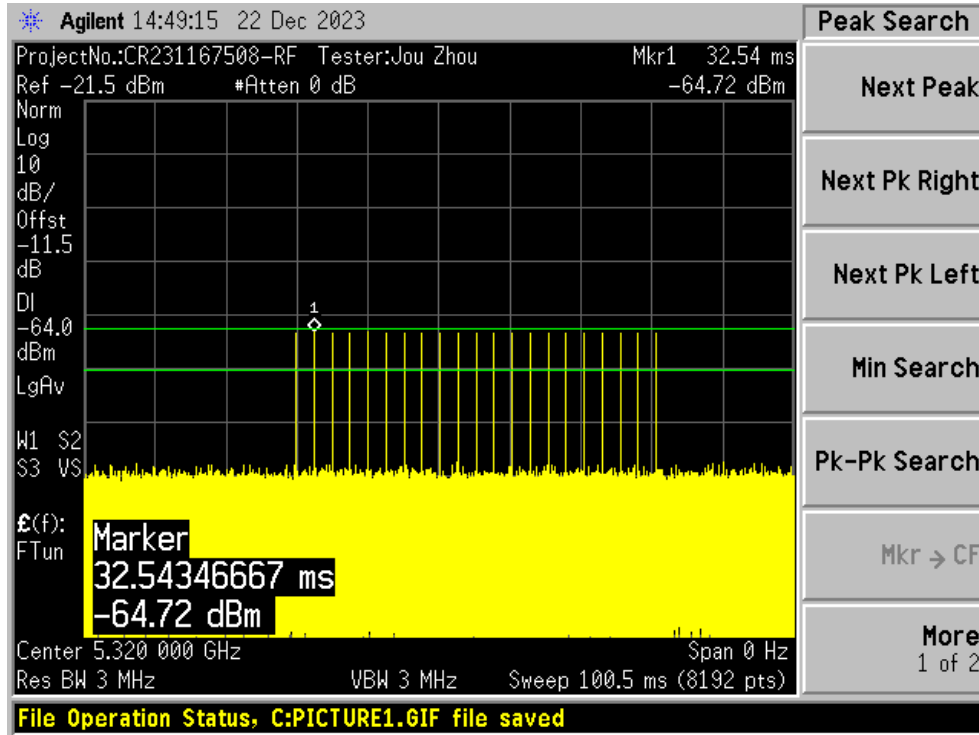
Radar Type 0



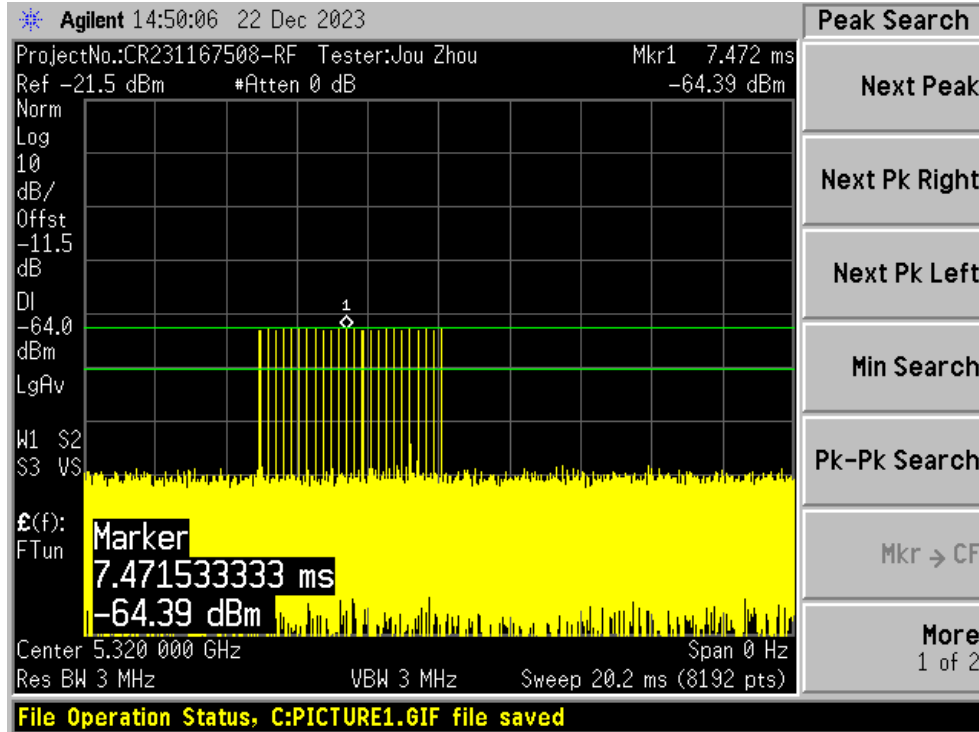
Radar Type 1A



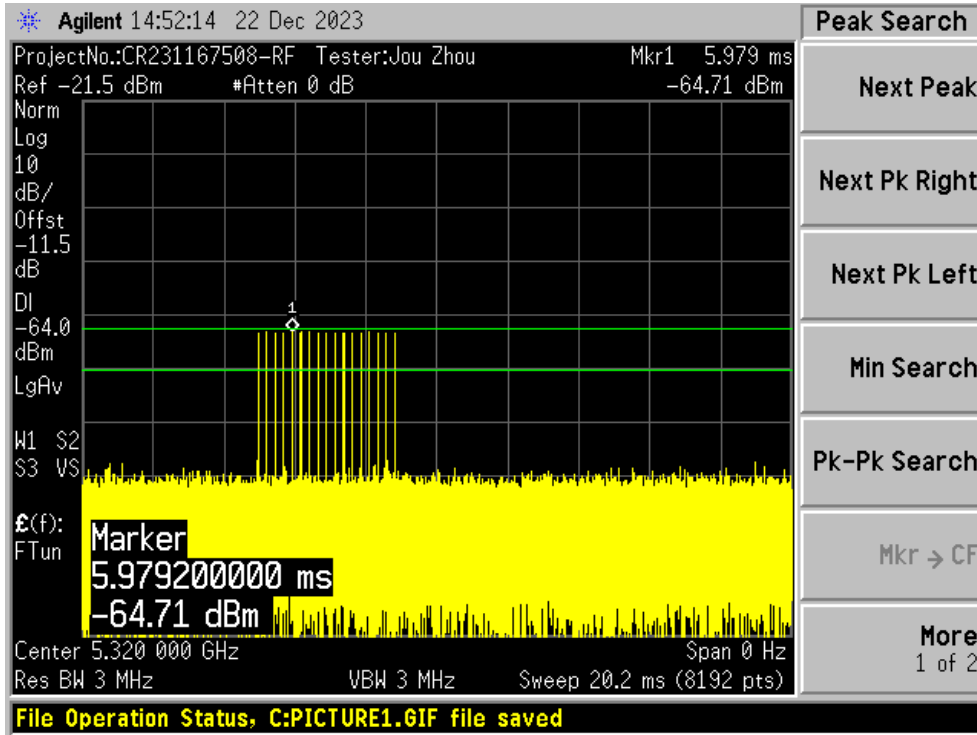
Radar Type 1B



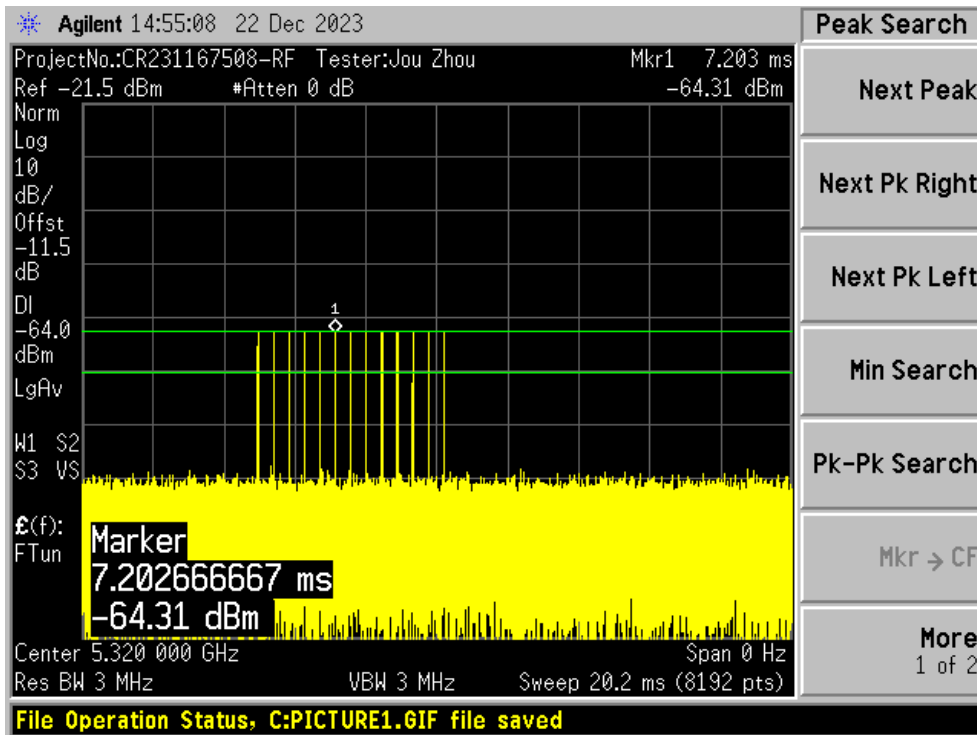
Radar Type 2



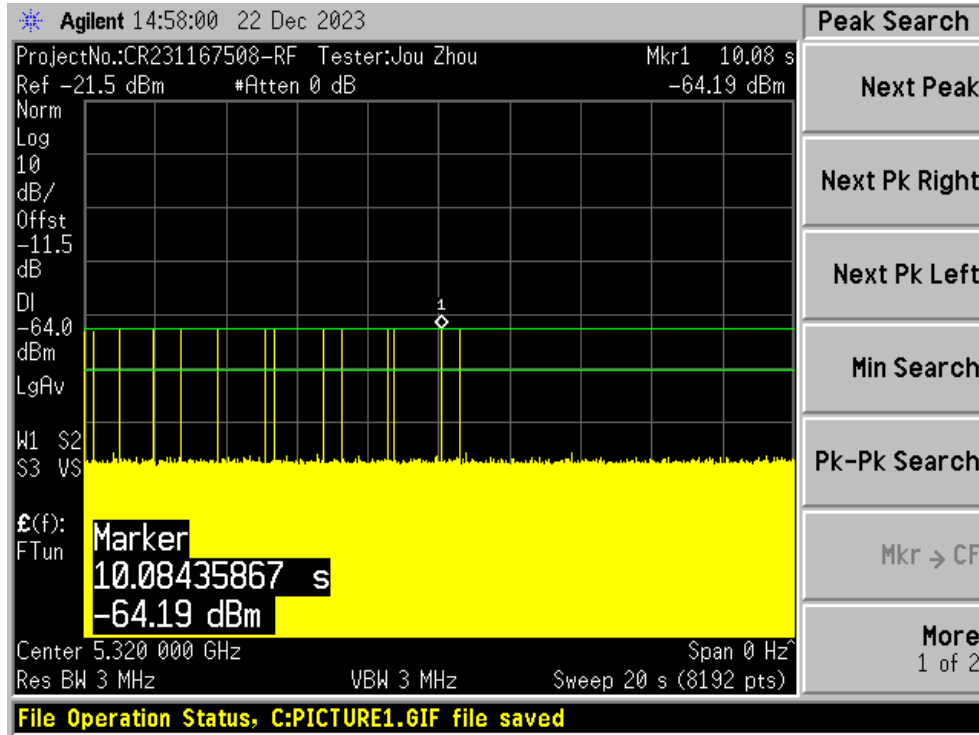
Radar Type 3



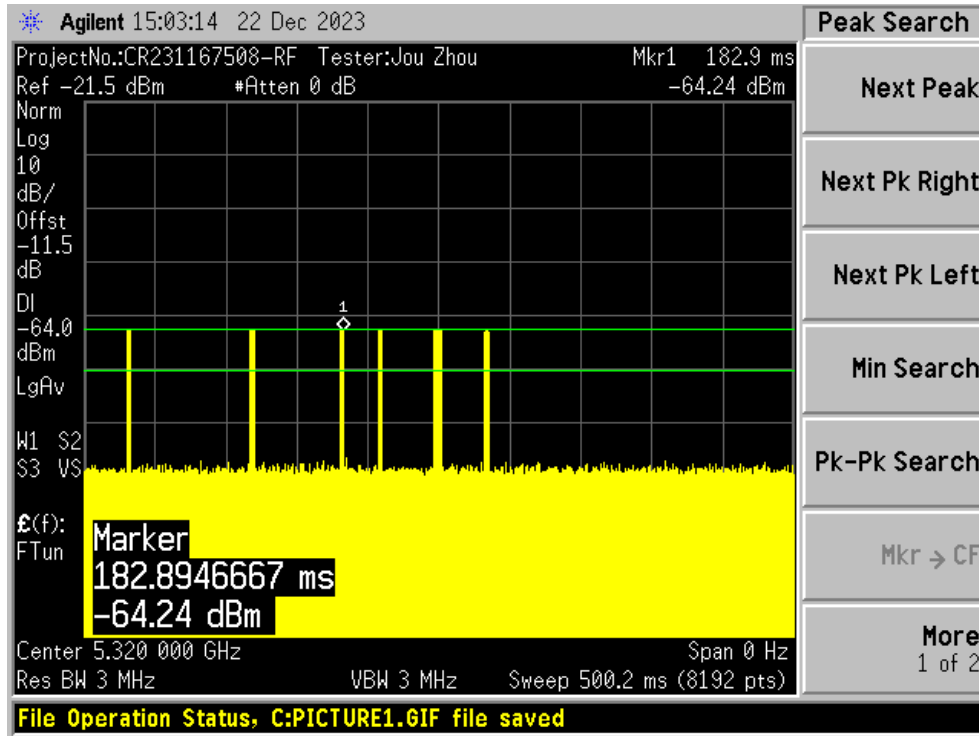
Radar Type 4



Radar Type 5



Radar Type 6



4.2 Channel Availability Check Time (CAC)

4.2.1 Test Procedure

- 1) Channel Availability Check Time (CAC)
- 2) With link established on channel, apply a radar signal within 0~6 seconds after the initial power-up period; monitor the transmissions on channel from the spectrum analyzer.
- 3) Reboot EUT, with a link established on channel, apply a radar signal within 54~60 seconds after the initial power-up period, and monitor the transmission on channel from the spectrum analyzer.

4.2.2 EUT Initial power-up Cycle Time

Test Frequency (MHz)	EUT initial Power-up cycle (Second)
5290	75.7

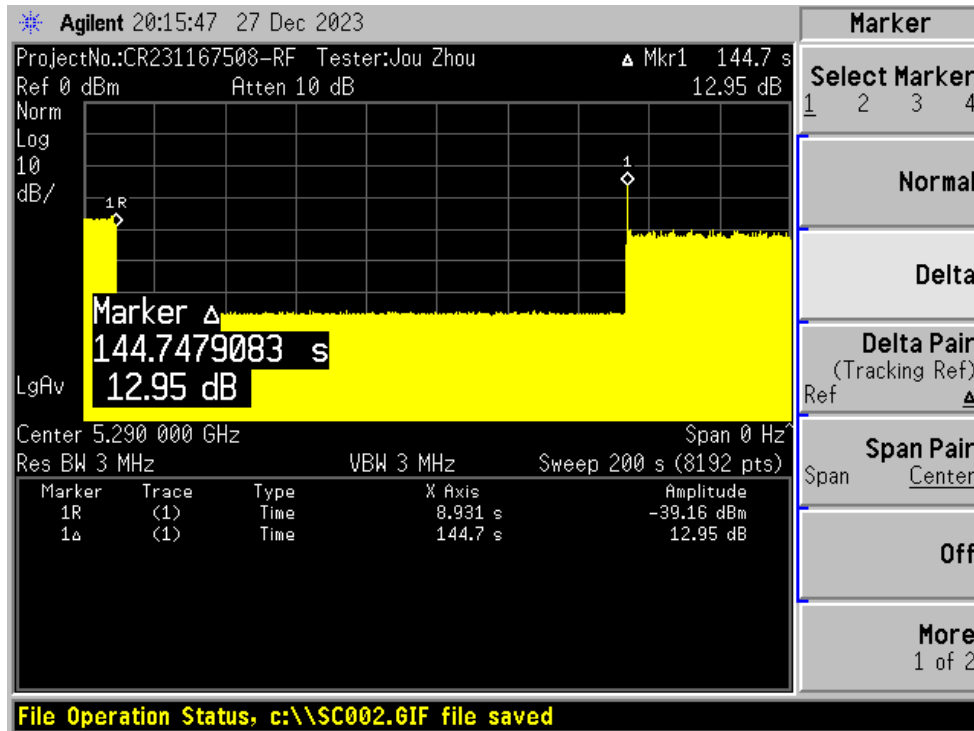
4.2.3 Results:

Timing of Radar Burst	Spectrum Analyzer Display
No Radar Triggered	Transmission begin after power-up cycle +60 seconds CAC
Within 6 seconds of the CAC starting	No transmission
Within the last 6 seconds of the CAC	No transmission

Please refer to the following plots.

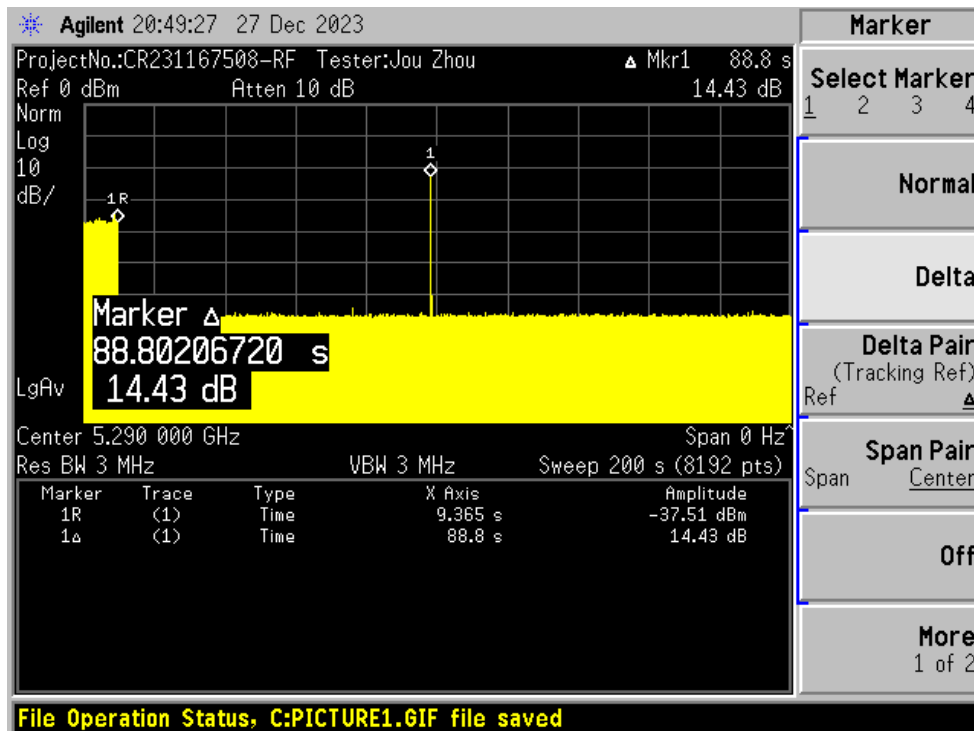
5290MHz

Plot of without Radar signal applied



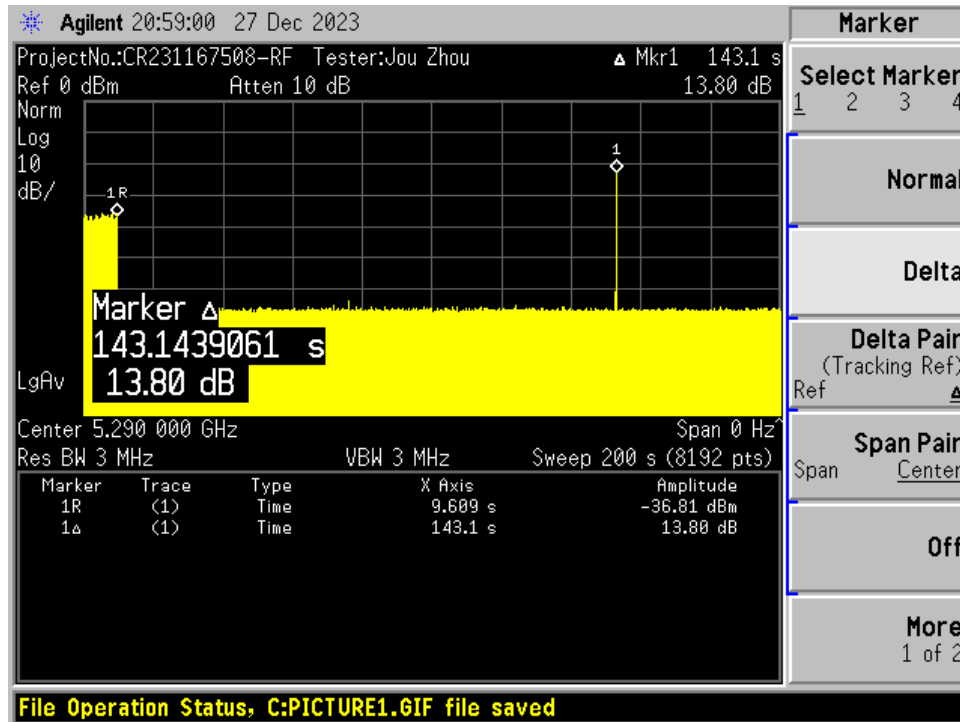
Note: The power-up cycle is 75.7seconds.

Plot of Radar signal applied within 6 seconds of start of CAC



No transmissions found after radar signal applied.

Plot of Radar signal applied at the end of 6 seconds of CAC



No transmissions found after radar signal applied.

4.3 Channel Move Time and Channel Closing Transmission Time

4.3.1 Test Procedure

Perform type 0 short pulse radar waveform.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time = N*Dwell Time

N is the number of spectrum analyzer bins showing a device transmission Dwell Time is the dwell time per bin (i.e. Dwell Time = S/B, S is the sweep time and B is the number of bin, i.e. 8192)

4.3.2 Test Results

Test Frequency (MHz)	Bandwidth (MHz)	Radar Type	Results
5290	80	Type 0	Compliant

Please refer to the following tables and plots.

4.3.3 Results:

5290MHz

Type 0 radar channel move time result:

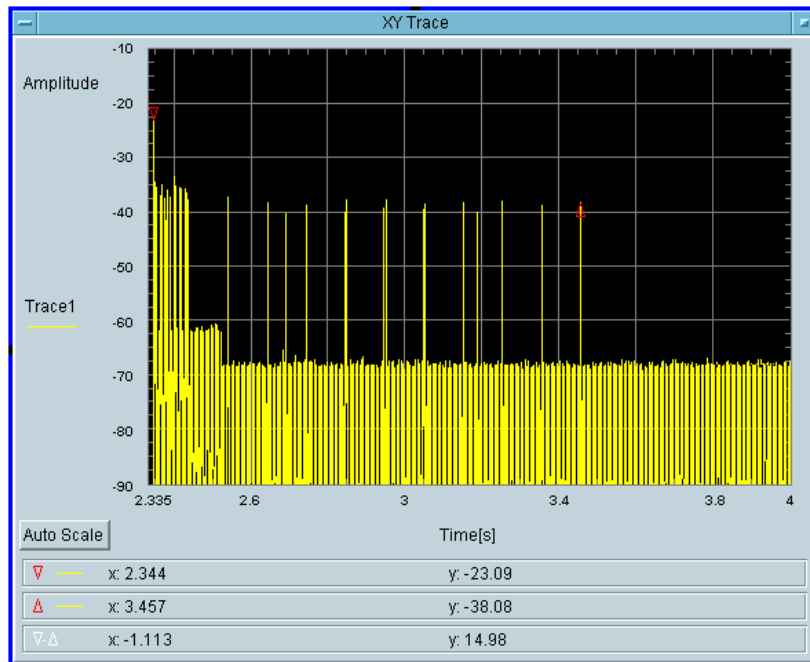
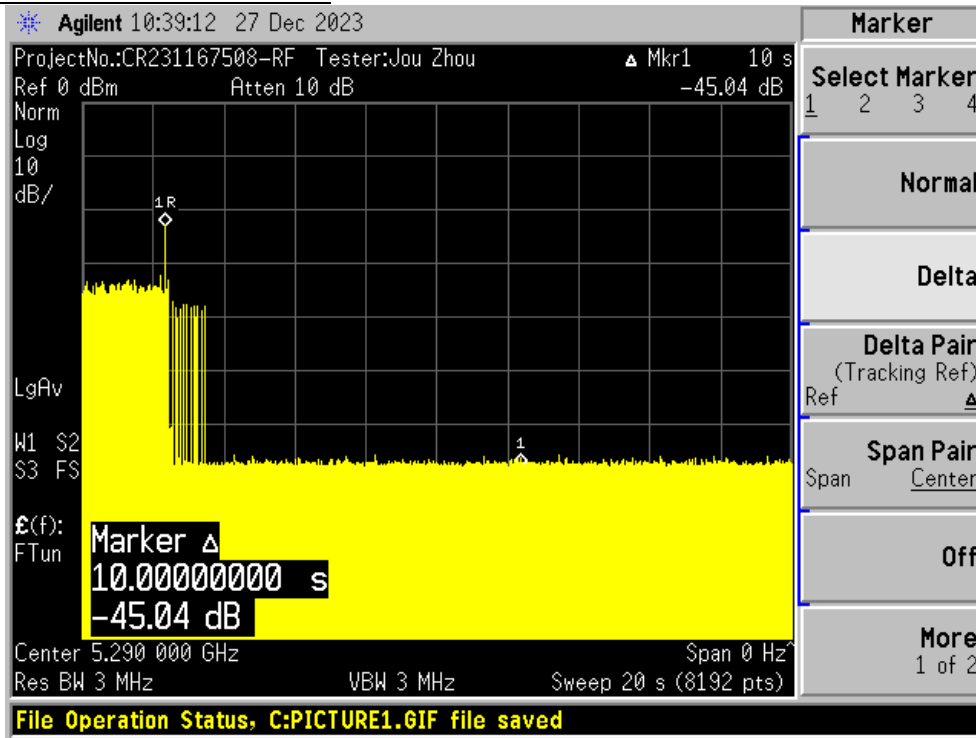
Channel Move Time (s)	Channel Move Time Limit (s)	Result
1.113	10	Pass

Type0 radar channel closing transmission time result:

Transmission After 200ms	Aggregate Transmission Time After 200ms Delay (ms)	Limit for Aggregate Transmission Time After 200ms Delay (ms)	Result
Yes	34.18	60	Pass

5290MHz

Type 0 radar channel move time result:



Total On Time [s]
 75.68m

Total On Time After Delay [s]
 34.18m

4.4 Non-occupancy Period

4.4.1 Test Procedure

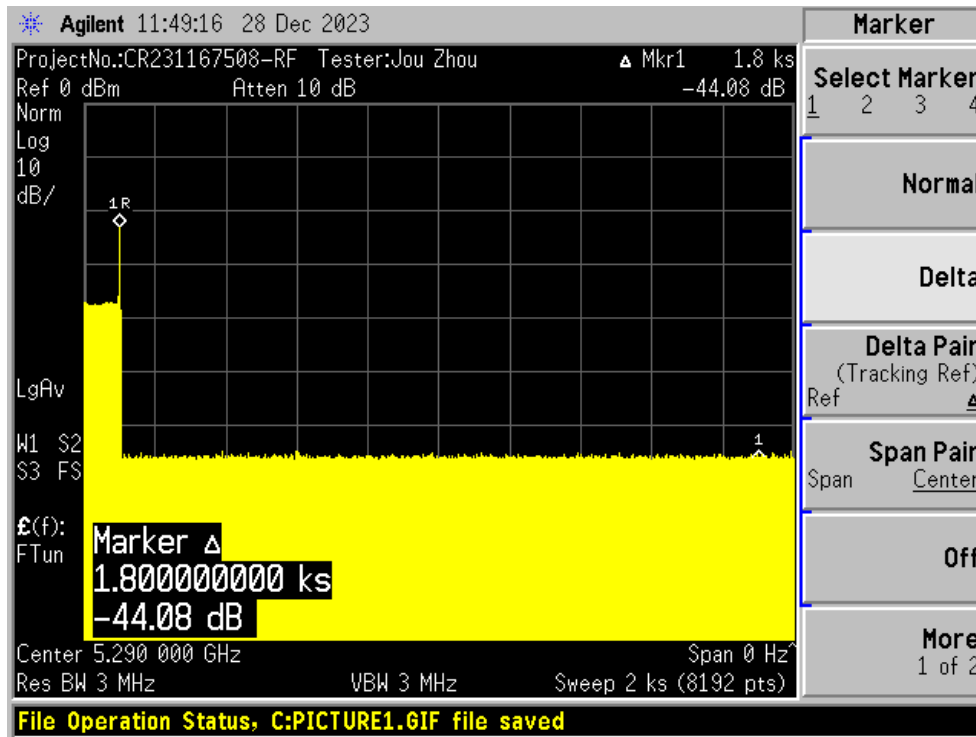
Measure the EUT for more than 30 minutes following the channel close/move time to verify that the EUT does not resume any transmissions on this channel. Provide one plot to demonstrate no transmission on the channel for the non-occupancy period (30 minutes observation time)

4.4.2 Test Result

Test Frequency (MHz)	Bandwidth (MHz)	Spectrum Analyzer Display
5290	80	No transmission within 30 minutes

Please refer to the following plots.

5290 MHz



4.5 DETECTION BANDWIDTH

4.5.1 Test Procedure

Performed with Type 0 radar waveforms

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 4**. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as F_H) at which detection is greater than or equal to the *U-NII Detection Bandwidth* criterion. Recording the detection rate at frequencies above F_H is not required to demonstrate compliance.

Starting at the center frequency of the UUT operating *Channel*, decrease 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 4**. Repeat this measurement in 1MHz steps at frequencies 5 MHz above where the detection rate begins to fall. Record the lowest frequency (denote as F_L) at which detection is greater than or equal to the *U-NII Detection Bandwidth* criterion. Recording the detection rate at frequencies below F_L is not required to demonstrate compliance.

The *U-NII Detection Bandwidth* is calculated as follows:

$$U\text{-NII Detection Bandwidth} = F_H - F_L$$

The *U-NII Detection Bandwidth* must meet the *U-NII Detection Bandwidth* criterion specified in **Table 4**. Otherwise, the UUT does not comply with DFS requirements. This is essential to ensure that the UUT is capable of detecting *Radar Waveforms* across the same frequency spectrum that contains the significant energy from the system. In the case that the *U-NII Detection Bandwidth* is greater than or equal to the 99 percent power bandwidth for the measured F_H and F_L , the test can be truncated and the *U-NII Detection Bandwidth* can be reported as the measured F_H and F_L .

4.5.2 Test Result

Frequency (MHz)	Bandwidth Systems (MHz)	F_L (MHz)	F_H (MHz)	Detection Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Minimum Limit	Result
5320	20	5305	5335	20	17.902	100%	Compliance
5310	40	5285	5335	40	36.204	100%	Compliance
5290	80	5245	5340	81	75.285	100%	Compliance

Results of Detection Bandwidth:

20MHz Bandwidth, EUT Frequency = 5320MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5305	0	0	0	0	0	0	0	0	0	0	0 %
5309	0	0	0	0	0	0	1	0	0	0	10 %
5310	1	1	1	1	1	1	1	1	1	1	100 %
5315	1	1	1	1	1	1	1	1	1	1	100 %
5320	1	1	1	1	1	1	1	1	1	1	100 %
5325	1	1	1	1	1	1	1	1	1	1	100 %
5330	1	1	1	1	1	1	1	1	1	1	100 %
5331	0	0	0	0	0	0	0	0	0	0	0 %
5335	0	0	0	0	0	0	0	0	0	0	0 %
Detection Bandwidth = $F_H - F_L = 5330 - 5310 = 20\text{MHz}$											
EUT 99% BW = 17.902MHz										Result: Pass	

40MHz Bandwidth, EUT Frequency = 5310MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5285	0	0	0	0	0	0	0	0	0	0	0 %
5288	0	0	0	0	0	0	0	0	0	0	0 %
5289	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5330	1	1	1	1	1	1	1	1	1	1	100%
5333	1	1	1	1	1	1	1	1	1	1	100%
5334	0	0	0	0	0	0	0	0	0	0	0 %
5335	0	0	0	0	0	0	0	0	0	0	0 %
Detection Bandwidth = $F_H - F_L = 5333 - 5289 = 44$ MHz											
EUT 99% BW = 36.204MHz;										Result: Pass	

80MHz Bandwidth, EUT Frequency = 5290 MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5245	0	0	0	0	0	0	0	0	0	0	0 %
5246	0	0	0	0	0	0	0	0	0	0	0 %
5247	0	0	0	0	0	0	0	0	0	0	0 %
5248	1	1	1	1	1	1	1	1	1	1	100%
5250	1	1	1	1	1	1	1	1	1	1	100%
5255	1	1	1	1	1	1	1	1	1	1	100%
5260	1	1	1	1	1	1	1	1	1	1	100%
5265	1	1	1	1	1	1	1	1	1	1	100%
5270	1	1	1	1	1	1	1	1	1	1	100%
5275	1	1	1	1	1	1	1	1	1	1	100%
5280	1	1	1	1	1	1	1	1	1	1	100%
5285	1	1	1	1	1	1	1	1	1	1	100%
5290	1	1	1	1	1	1	1	1	1	1	100%
5295	1	1	1	1	1	1	1	1	1	1	100%
5300	1	1	1	1	1	1	1	1	1	1	100%
5305	1	1	1	1	1	1	1	1	1	1	100%
5310	1	1	1	1	1	1	1	1	1	1	100%
5315	1	1	1	1	1	1	1	1	1	1	100%
5320	1	1	1	1	1	1	1	1	1	1	100%
5325	1	1	1	1	1	1	1	1	1	1	100%
5330	1	1	1	1	1	1	1	1	1	1	100%
5335	1	1	1	1	1	1	1	1	1	1	100%
5338	1	1	1	1	1	1	1	1	1	1	100%
5339	0	0	0	0	0	0	0	0	0	0	0 %
5340	0	0	0	0	0	0	0	0	0	0	0 %
Detection Bandwidth = $F_H - F_L = 5338 - 5248 = 90$ MHz											
EUT 99% BW = 75.285 MHz;										Result: Pass	

4.6 STATISTICAL PERFORMANCE CHECK

4.6.1 Procedure:

The steps below define the procedure to determine the minimum percentage of successful detection requirements found in **Tables 5-7** 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*).

- a) One frequency will be chosen from the *Operating Channels* of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands.
- b) In case the UUT is a U-NII device operating as a Client Device (with or without Radar Detection), a U-NII device operating as a Master Device will be used to allow the UUT (Client device) to Associate with the Master Device. In case the UUT is a Master Device, a U-NII device operating as a Client Device will be used and it is assumed that the Client will Associate with the UUT (Master). In both cases for conducted tests, the Radar Waveform generator will be connected to the Master Device. For radiated tests, the emissions of the Radar Waveform generator will be directed towards the Master Device. If the Master Device has antenna gain, the main beam of the antenna will be directed toward the radar emitter. Vertical polarization is used for testing.
- c) Stream the channel loading test file from the *Master Device* to the Client Device on the test *Channel* for the entire period of the test.
- d) At time T_0 the *Radar Waveform* generator sends the individual waveform for each of the Radar Types 1- 6 in **Tables 5-7**, at levels defined in **Table 3**, on the *Operating Channel*. An additional 1 dB is added to the radar test signal to ensure it is at or above the *DFS Detection Threshold*, accounting for equipment variations/errors.
- e) Observe the transmissions of the UUT at the end of the Burst on the *Operating Channel* for duration greater than 10 seconds for Radar Type 0 to ensure detection occurs.
- f) Observe the transmissions of the UUT 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.
- g) In case the UUT is a U-NII device operating as a *Client Device* with *In-Service Monitoring*, perform steps a) to f).

4.6.2 Result:**20MHz(Radar Signal is 5320MHz)**

Radar Signal Type	Waveform/Trial Number	Detection (%)	Limit (%)	Pass/Fail
Type 1A	15	93.3	60	pass
Type 1B	15	100	60	pass
Type 2	30	86.7	60	Pass
Type 3	30	93.3	60	Pass
Type 4	30	93.3	60	Pass
Aggregate (Radar Types 1-4)	120	92.5	80	Pass
Type 5	30	100.0	80	Pass
Type 6	30	93.3	70	Pass

Please refer to the following statistical tables:

5320 MHz**Radar Type 1A Statistical Performance**

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	62	1	858	1
2	5320	99	1	538	1
3	5320	67	1	798	1
4	5320	74	1	718	1
5	5320	78	1	678	1
6	5320	89	1	598	1
7	5320	57	1	938	1
8	5320	83	1	638	1
9	5320	58	1	918	1
10	5320	76	1	698	1
11	5320	61	1	878	1
12	5320	86	1	618	1
13	5320	95	1	558	1
14	5320	81	1	658	0
15	5320	59	1	898	1
Detection Percentage: 93.3 % (>60%)					

Radar Type 1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	61	1	879	1
2	5320	60	1	885	1
3	5320	41	1	1295	1
4	5320	73	1	729	1
5	5320	26	1	2081	1
6	5320	23	1	2306	1
7	5320	19	1	2875	1
8	5320	25	1	2178	1
9	5320	35	1	1528	1
10	5320	47	1	1125	1
11	5320	20	1	2735	1
12	5320	34	1	1595	1
13	5320	26	1	2082	1
14	5320	32	1	1667	1
15	5320	25	1	2147	1
Detection Percentage: 100 % (>60%)					

Radar Type 2 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	27	2.4	202	1
2	5320	26	1.5	186	1
3	5320	28	1	178	0
4	5320	25	1.5	213	1
5	5320	24	2.9	210	1
6	5320	23	1.8	190	1
7	5320	23	2.1	196	1
8	5320	26	3.1	173	1
9	5320	26	1.5	168	1
10	5320	27	4.8	222	1
11	5320	24	3.1	172	1
12	5320	25	1.3	177	1
13	5320	25	2.4	205	1
14	5320	29	4.5	199	1
15	5320	23	5	157	1
16	5320	29	4.2	170	1
17	5320	27	4.3	198	1
18	5320	26	3.7	187	1
19	5320	27	3.7	200	1
20	5320	26	2.4	205	1
21	5320	26	2.4	165	0
22	5320	29	3.9	184	0
23	5320	24	4.9	208	1
24	5320	25	3.6	197	1
25	5320	24	4.8	213	1
26	5320	28	1.8	166	1
27	5320	25	1.7	226	1
28	5320	29	2.8	202	1
29	5320	29	1.6	223	0
30	5320	25	3.8	229	1
Detection Percentage: 86.7 % (>60%)					

Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	17	6.7	408	1
2	5320	17	8.5	461	1
3	5320	16	6.5	335	0
4	5320	17	6	265	1
5	5320	18	9.9	202	1
6	5320	17	6.7	429	1
7	5320	17	8.3	417	1
8	5320	16	9.3	210	1
9	5320	18	8.6	474	1
10	5320	17	9.3	303	1
11	5320	18	8.5	403	1
12	5320	18	6.1	335	0
13	5320	17	8.2	319	1
14	5320	16	9.5	300	1
15	5320	18	7.8	377	1
16	5320	17	6.2	400	1
17	5320	16	8.8	491	1
18	5320	16	6.2	217	1
19	5320	16	8.2	242	1
20	5320	17	7	427	1
21	5320	17	8.8	320	1
22	5320	17	8.8	256	1
23	5320	16	9	267	1
24	5320	17	9.6	452	1
25	5320	18	9.9	288	1
26	5320	18	10	430	1
27	5320	18	9.2	374	1
28	5320	18	9.1	399	1
29	5320	16	7.7	337	1
30	5320	16	8.3	357	1
Detection Percentage: 93.3% (>60%)					

Radar Type 4 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	16	11	303	1
2	5320	12	14.4	226	1
3	5320	13	13.1	384	1
4	5320	14	17.7	235	1
5	5320	14	18.2	386	1
6	5320	16	12.1	225	1
7	5320	15	13.5	473	1
8	5320	15	19.8	326	1
9	5320	14	14.2	320	1
10	5320	12	14.6	349	1
11	5320	15	18.9	354	1
12	5320	12	13.9	315	1
13	5320	13	16.3	298	1
14	5320	15	14.5	286	1
15	5320	16	17.7	207	1
16	5320	13	18.8	229	1
17	5320	12	16.3	417	1
18	5320	12	15.2	262	1
19	5320	13	19.7	300	1
20	5320	14	12.2	236	1
21	5320	15	12.2	399	1
22	5320	13	14.7	499	1
23	5320	15	12.3	447	0
24	5320	16	12.4	251	1
25	5320	14	18.7	292	1
26	5320	13	17.1	270	1
27	5320	14	18	227	1
28	5320	12	16.4	241	1
29	5320	15	15.4	268	1
30	5320	12	12.8	225	0
Detection Percentage: 93.3% (>60%)					

Radar Type 5 Case 1 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	10	53.6	1232		0.000065	1
1	1	10	57			1.077977	
2	2	10	81.8	1470		2.2246	
3	2	10	73.4	1806		2.764725	
4	3	10	93.5	1591	1476	3.215724	
5	2	10	86.2	1556		4.443317	
6	1	10	73.4			5.177811	
7	3	10	98.9	1988	1973	6.165361	
8	3	10	77.5	1324	1667	7.036664	
9	3	10	91.7	1905	1440	7.714905	
10	2	10	81.8	1694		8.644339	
11	1	10	86.9			8.811838	
12	2	10	88.9	1767		10.18526	
13	2	10	57.6	1438		10.82772	
14	2	10	59.8	1998		11.35399	

Statistics 2 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	7	80.5	1718		0.028048	1
1	2	7	62	1575		0.868187	
2	1	7	92			1.953945	
3	3	7	98.1	1264	1826	2.607197	
4	2	7	85.5	1395		3.701237	
5	2	7	66.7	1550		4.795172	
6	3	7	64.1	1649	1304	5.186186	
7	1	7	90.2			6.215647	
8	3	7	69.8	1438	1403	7.180245	
9	3	7	69	1216	1525	7.424826	
10	3	7	56.6	1979	1709	8.062255	
11	2	7	83	1923		8.827283	
12	2	7	82.8	1190		10.32982	
13	3	7	78.3	1385	1968	10.66941	
14	2	7	89.9	1360		11.28575	

Statistics 3 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	9	97.1	1781	1020	0.563109	1
1	2	9	97.6	1051		1.484134	
2	3	9	83.5	1778	1037	1.789068	
3	1	9	97.1			2.971659	
4	1	9	63.3			3.045202	
5	2	9	62.3	1144		4.235181	
6	1	9	70.6			4.584265	
7	1	9	94.5			5.530167	
8	3	9	97.4	1779	1591	6.328588	
9	1	9	88.2			6.996342	
10	2	9	94.6	1953		7.696238	
11	2	9	61.6	1681		8.922733	
12	2	9	81	1790		9.26082	
13	2	9	96.5	1039		10.21212	
14	2	9	89.4	1969		11.23406	
15	2	9	78.3	1338		11.87246	

Statistics 4 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	10	86.6			0.161993	1
1	2	10	69.5	1797		0.747938	
2	1	10	92.4			1.726714	
3	2	10	70.8	1058		2.464287	
4	2	10	61.7	1428		3.120788	
5	1	10	67.4			3.745847	
6	2	10	51.1	1757		4.565223	
7	2	10	76.3	1431		4.707387	
8	3	10	78.5	1931	1084	5.905819	
9	2	10	52.4	1816		6.565557	
10	2	10	82.4	1702		6.789116	
11	1	10	70.3			7.566046	
12	3	10	65.5	1517	1545	8.279673	
13	2	10	51	1748		9.193838	
14	2	10	67	1434		9.97973	
15	1	10	81.3			10.49111	
16	3	10	62.8	1926	1993	11.03243	
17	1	10	54			11.42927	

Statistics 5(ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	13	76.2	1035		0.269141	1
1	3	13	79.5	1722	1315	1.921414	
2	2	13	91	1974		2.695307	
3	3	13	71	1768	1438	3.806148	
4	1	13	62.9			4.884455	
5	2	13	94.3	1926		5.421921	
6	2	13	70.8	1755		6.355951	
7	2	13	59.7	1865		7.009617	
8	3	13	73.3	1235	1323	8.392252	
9	3	13	93.5	1842	1619	9.888584	
10	1	13	50.9			10.71697	
11	1	13	86.7			11.67812	

Statistics 6 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	8	96.9	1967		0.856429	1
1	1	8	58.5			1.861062	
2	3	8	76.6	1550	1320	2.931799	
3	3	8	72.4	1066	1054	3.535084	
4	1	8	74.9			5.146421	
5	2	8	68.1	1124		5.706102	
6	2	8	71.4	1789		7.366908	
7	2	8	59.4	1481		7.836058	
8	1	8	53.1			9.440198	
9	1	8	60.3			10.42225	
10	2	8	72.1	1106		11.15984	

Statistics 7(ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	14	92.3			0.533718	1
1	2	14	50.6	1309		0.685658	
2	2	14	62.4	1045		1.874413	
3	2	14	74.9	1659		2.050339	
4	3	14	65	1653	1670	2.700733	
5	2	14	85.9	1486		3.785043	
6	1	14	96.6			4.348153	
7	2	14	92	1105		4.880088	
8	2	14	56.4	1726		5.836757	
9	2	14	91.6	1734		6.066485	
10	3	14	95.4	1338	1748	6.902898	
11	2	14	72.9	1633		7.927887	
12	3	14	63.8	1380	1209	8.160113	
13	2	14	94.2	1502		9.235502	
14	2	14	66.9	1935		9.381526	
15	2	14	92.5	1420		10.41257	
16	2	14	75.6	1888		11.0643	
17	2	14	72.6	1057		11.68491	

Statistics 8 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	11	90.2	1140		0.528017	1
1	2	11	61.6	1238		1.196964	
2	3	11	97.1	1739	1493	1.954966	
3	3	11	56.9	1375	1682	2.258747	
4	1	11	60.5			3.203439	
5	2	11	53.7	1630		3.91444	
6	2	11	56.8	1542		4.041265	
7	3	11	51	1101	1097	5.047127	
8	2	11	52.3	1678		5.93257	
9	1	11	84.5			6.273711	
10	2	11	90.4	1961		6.906896	
11	2	11	81.5	1789		7.574535	
12	3	11	54.1	1203	1179	8.116761	
13	3	11	99.8	1290	1237	8.84031	
14	2	11	95.5	1372		9.974015	
15	2	11	55.7	1402		10.59849	
16	1	11	82			10.96099	
17	1	11	56.5			11.8433	

Statistics 9 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	9	80	1126		0.340071	1
1	2	9	88.3	1533		1.607511	
2	3	9	83.9	1598	1733	2.577708	
3	2	9	83.7	1776		3.210161	
4	2	9	93	1376		3.962879	
5	1	9	81.8			4.875838	
6	3	9	96.5	1127	1818	6.098787	
7	2	9	58.9	1506		6.656918	
8	1	9	72.3			7.439367	
9	2	9	72.3	1950		8.527356	
10	1	9	52.4			9.507118	
11	3	9	76.7	1925	1682	10.95164	
12	1	9	73			11.79185	

Statistics 10 (ChirpCenter Frequency: 5320MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	6	97	1269	1843	0.689178	1
1	3	6	88.2	1597	1845	1.535661	
2	2	6	88.2	1196		2.802205	
3	1	6	63.9			4.78356	
4	1	6	87.6			6.381069	
5	2	6	98.5	1553		7.08736	
6	3	6	67.9	1908	1716	8.02141	
7	2	6	89.9	1497		10.26457	
8	2	6	89.6	1940		11.70926	

Radar Type 5 Case 2 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5319.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	20	97.1			0.729132	1
1	3	20	70.7	1189	1575	1.736534	
2	2	20	57.8	1954		3.697759	
3	2	20	58.4	1998		4.192653	
4	1	20	89.3			6.465388	
5	2	20	51.6	1202		7.550776	
6	3	20	65.3	1117	1796	8.922324	
7	2	20	88.1	1789		10.07709	
8	3	20	83.9	1446	1091	10.71281	

Statistics 2 (ChirpCenter Frequency: 5314.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	8	71.6	1237		0.695944	1
1	2	8	99.1	1276		0.790842	
2	3	8	93.5	1249	1443	1.737744	
3	3	8	78.7	1930	1215	2.284284	
4	3	8	58.4	1487	1848	3.309976	
5	2	8	93.2	1387		4.028419	
6	1	8	52.4			4.271341	
7	2	8	54.8	1707		5.466194	
8	2	8	62.7	1377		5.913247	
9	3	8	99.7	1537	1532	6.435443	
10	2	8	76.2	1021		7.1874	
11	3	8	92.7	1300	1303	8.149615	
12	2	8	80.9	1408		8.75624	
13	2	8	60	1874		9.754056	
14	2	8	62.4	1125		9.949191	
15	3	8	97.4	1630	1725	11.24426	
16	2	8	85.5	1933		11.68026	

Statistics 3 (ChirpCenter Frequency: 5318.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	18	94.5	1525		0.38481	1
1	3	18	89.5	1994	1129	1.25394	
2	2	18	85.7	1065		2.762415	
3	2	18	67.6	1961		3.562356	
4	2	18	96.2	1173		4.536313	
5	3	18	57.2	1637	1101	5.081599	
6	2	18	59.9	1749		6.282339	
7	2	18	57.1	1590		7.096515	
8	2	18	81.6	1979		8.753815	
9	2	18	57.3	1473		9.78346	
10	3	18	71.2	1467	1474	10.18845	
11	2	18	54.6	1745		11.86132	

Statistics 4 (ChirpCenter Frequency: 5319.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	19	84.5	1720		0.283684	1
1	1	19	63.4			2.643945	
2	2	19	76.8	1339		3.956264	
3	2	19	83.6	1337		4.457547	
4	2	19	56.1	1613		5.63282	
5	3	19	55.4	1186	1134	7.169905	
6	1	19	86.6			9.077425	
7	1	19	75.5			9.467605	
8	3	19	70.3	1569	1666	10.85399	

Statistics 5 (ChirpCenter Frequency: 5318.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	17	85.7	1163		0.731257	1
1	3	17	84.5	1356	1547	2.377155	
2	3	17	64.9	1097	1331	2.914361	
3	2	17	56	1797		4.100556	
4	1	17	89.8			4.808344	
5	2	17	67.5	1847		6.055465	
6	1	17	60.6			7.530307	
7	2	17	66.1	1011		8.957558	
8	2	17	86.8	1201		9.686364	
9	3	17	54.4	1661	1555	11.09351	

Statistics 6 (ChirpCenter Frequency: 5494.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	10	59.3	1275	1457	0.435554	1
1	2	10	59.1	1204		1.046508	
2	2	10	90.6	1082		2.015511	
3	3	10	77.4	1246	1316	3.192887	
4	2	10	77.7	1654		4.358476	
5	1	10	94.4			4.688096	
6	2	10	89.6	1552		5.706296	
7	3	10	67	1450	1847	6.79387	
8	3	10	84	1156	1453	8.058896	
9	1	10	77.2			8.506139	
10	2	10	73	1856		10.01546	
11	3	10	61.1	1307	1077	11.032	
12	2	10	60.8	1233		11.22622	

Statistics 7 (ChirpCenter Frequency: 5317.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	15	83.3	1610		0.413865	1
1	1	15	61.8			1.031286	
2	2	15	69.1	1528		1.333867	
3	2	15	92.7	1089		2.256557	
4	2	15	78.4	1291		2.892149	
5	1	15	96.9			3.391287	
6	3	15	83.1	1155	1540	3.691217	
7	1	15	78.2			4.447061	
8	3	15	82.4	1901	1118	5.349347	
9	2	15	74.2	1325		5.505575	
10	2	15	77.5	1635		6.353312	
11	1	15	85.2			7.049069	
12	2	15	90	1573		7.53764	
13	2	15	80.5	1446		8.089502	
14	3	15	91.7	1318	1454	8.425918	
15	3	15	63.2	1876	1383	9.448454	
16	2	15	69.2	1016		9.720864	
17	2	15	60.4	1638		10.5903	
18	3	15	97.2	1430	1895	11.20358	
19	3	15	53.1	1177	1032	11.50392	

Statistics 8 (ChirpCenter Frequency: 5318.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	18	89	1061		1.002893	1
1	2	18	71.2	1033		1.483422	
2	3	18	84.9	1970	1809	2.359631	
3	3	18	87.2	1587	1662	4.139581	
4	1	18	74			4.841444	
5	1	18	76.7			6.305784	
6	2	18	69.1	1774		6.980444	
7	3	18	79.2	1154	1864	8.41354	
8	2	18	77.4	1284		9.024519	
9	2	18	72.9	1131		10.66765	
10	1	18	57.5			11.93634	

Statistics 9 (ChirpCenter Frequency: 5314.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	7	79.5	1297	1519	0.005157	1
1	2	7	97.3	1402		0.850251	
2	2	7	63.6	1218		1.363361	
3	2	7	96.2	1674		2.371355	
4	3	7	67	1005	1823	2.902893	
5	1	7	67.8			3.65964	
6	1	7	50.6			4.200446	
7	1	7	54.7			4.726941	
8	2	7	61.1	1910		5.460737	
9	2	7	85.7	1182		5.793328	
10	1	7	84.2			6.384081	
11	2	7	60.9	1845		7.306968	
12	2	7	92.8	1127		8.097416	
13	2	7	61.8	1581		8.605361	
14	2	7	56.2	1724		9.426471	
15	2	7	92.7	1843		9.878218	
16	2	7	70.5	1761		10.24251	
17	1	7	63.9			10.7991	
18	2	7	87.1	1224		11.64817	

Statistics 10 (ChirpCenter Frequency: 5318.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	18	86.3	1771		0.493981	1
1	1	18	52			0.979988	
2	2	18	94.7	1609		1.793566	
3	1	18	56.3			2.145835	
4	1	18	80.3			2.955039	
5	1	18	88.1			3.602247	
6	2	18	68.6	1551		4.158944	
7	2	18	59.7	1790		4.487208	
8	1	18	83.1			5.095481	
9	3	18	79.9	1581	1576	5.872834	
10	1	18	51.9			6.381093	
11	2	18	60.8	1946		7.384288	
12	1	18	84.4			7.965704	
13	1	18	65.3			8.835505	
14	2	18	68.4	1500		9.355521	
15	3	18	61.8	1732	1681	9.681252	
16	2	18	71.4	1350		10.454	
17	2	18	68.9	1741		11.05616	
18	1	18	89.1			11.44642	

Radar Type 5 Case 3 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5322.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	18	84.7	1186	1085	0.371949	1
1	2	18	91.2	1594		1.579234	
2	2	18	78.8	1736		2.557405	
3	3	18	82.1	1784	1552	3.393474	
4	2	18	66	1566		3.936564	
5	2	18	64.6	1602		4.737468	
6	2	18	63.4	1605		5.690206	
7	2	18	53.1	1089		6.69143	
8	1	18	56.3			7.032008	
9	1	18	78.1			8.074705	
10	2	18	85	1532		9.002945	
11	1	18	85.4			10.01777	
12	2	18	89.3	1744		11.03757	
13	1	18	53.4			11.57312	

Statistics 2 (ChirpCenter Frequency: 5322.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	18	51.2	1683		0.165283	1
1	3	18	86.6	1493	1858	1.759735	
2	2	18	70.5	1574		3.791882	
3	3	18	74	1255	1780	4.110453	
4	3	18	69	1239	1986	6.522086	
5	1	18	55.1			7.597314	
6	2	18	56.3	1785		8.535338	
7	3	18	86.9	1881	1110	10.16993	
8	1	18	67.3			11.63195	

Statistics 3 (ChirpCenter Frequency: 5324.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	13	84.2	1628		0.283019	1
1	1	13	85.9			1.120514	
2	2	13	60.2	1523		1.663911	
3	2	13	91.3	1579		2.219033	
4	2	13	80.7	1541		3.326515	
5	1	13	72.3			4.069887	
6	2	13	60.5	1451		4.567764	
7	2	13	75.9	1298		5.479936	
8	2	13	98.7	1103		5.660388	
9	2	13	58.1	1788		6.858923	
10	3	13	79.6	1726	1086	7.234268	
11	1	13	95.9			8.222398	
12	2	13	75.6	1222		8.558666	
13	2	13	57.3	1871		9.632207	
14	1	13	68.6			10.55272	
15	1	13	63.8			11.18149	
16	2	13	68	1032		11.76162	

Statistics 4 (ChirpCenter Frequency: 5322.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	16	59	1448		1.341404	1
1	1	16	82.7			2.697862	
2	1	16	75.1			4.210114	
3	3	16	50.9	1169	1828	4.757304	
4	1	16	65.4			6.908681	
5	2	16	70.9	1163		8.293754	
6	1	16	51.2			9.28991	
7	3	16	97.8	1397	1669	11.41398	

Statistics 5 (ChirpCenter Frequency: 5326.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	6	71.4	1487	1402	0.465038	1
1	1	6	66.2			0.782082	
2	2	6	94.4	1285		1.733478	
3	2	6	83.1	1930		1.90609	
4	1	6	60			2.773717	
5	1	6	87.5			3.339206	
6	2	6	85.7	1636		4.206228	
7	3	6	68.9	1952	1192	4.644311	
8	3	6	96.9	1116	1482	5.485581	
9	1	6	65.2			5.754539	
10	2	6	75.4	1692		6.514468	
11	3	6	54.4	1196	1267	7.134569	
12	1	6	83.5			7.776873	
13	3	6	96	1081	1410	8.688978	
14	3	6	58.2	1430	1318	9.35417	
15	2	6	60.1	1617		9.496341	
16	2	6	63.3	1810		10.40018	
17	3	6	67.5	1535	1601	10.84565	
18	1	6	74.2			11.40517	

Statistics 6 (ChirpCenter Frequency: 5321.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	19	83.8	1762	1273	0.09806	1
1	1	19	92.1			1.280513	
2	3	19	57.9	1076	1741	2.16981	
3	2	19	92.4	1154		2.918726	
4	1	19	58.1			3.854126	
5	2	19	72.3	1197		4.510461	
6	2	19	78.2	1216		4.992496	
7	2	19	68.7	1740		6.042135	
8	3	19	93.7	1835	1673	6.717231	
9	1	19	90			7.394004	
10	3	19	90.1	1102	1463	8.283188	
11	3	19	66.5	1265	1566	8.817892	
12	2	19	88.3	1609		9.772916	
13	1	19	90.6			11.08642	
14	1	19	83.6			11.34258	

Statistics 7 (ChirpCenter Frequency: 5326.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	7	93.9	1892	1050	0.084229	1
1	2	7	76.8	1360		1.313572	
2	2	7	89	1135		2.449716	
3	2	7	95.1	1873		3.094575	
4	1	7	81.5			4.097714	
5	2	7	96.5	1422		5.400835	
6	2	7	69.8	1387		6.033936	
7	2	7	96.5	1610		7.197344	
8	2	7	53.1	1051		7.833374	
9	2	7	75.1	1808		8.752258	
10	1	7	61			9.479976	
11	3	7	51.1	1816	1804	10.95297	
12	2	7	91.7	1701		11.58009	

Statistics 8 (ChirpCenter Frequency: 5323.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	15	83.5	1076	1876	0.087103	1
1	3	15	88.5	1738	1506	1.28433	
2	2	15	85.4	1112		2.473575	
3	1	15	79.7			3.239335	
4	2	15	97.8	1933		4.271443	
5	2	15	94.2	1683		4.967839	
6	3	15	57.8	1405	1305	5.805554	
7	3	15	93.6	1404	1695	6.090643	
8	2	15	75.8	1965		7.604468	
9	2	15	95.2	1798		8.411884	
10	2	15	99.9	1518		8.838193	
11	3	15	78.4	1780	1262	10.19819	
12	2	15	96.5	1371		11.01836	
13	2	15	54.3	1067		11.88717	

Statistics 9 (ChirpCenter Frequency: 5323.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	14	90.1			0.696572	1
1	3	14	53.5	1450	1894	1.757628	
2	1	14	70.8			1.856457	
3	2	14	61.5	1829		3.056528	
4	3	14	92.3	1769	1255	3.752261	
5	3	14	69.2	1293	1002	5.406722	
6	2	14	97.7	1405		6.297574	
7	3	14	92.1	1955	1050	6.498076	
8	2	14	89.8	1894		8.009777	
9	2	14	86	1411		8.996878	
10	2	14	96.3	1881		9.480658	
11	2	14	73.1	1410		10.93902	
12	3	14	54.3	1835	1815	11.12966	

Statistics 10 (ChirpCenter Frequency: 5326.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	7	79.2			0.487782	1
1	1	7	66.1			1.265983	
2	2	7	94.9	1018		1.554741	
3	2	7	84.8	1399		2.600525	
4	2	7	67.1	1145		3.176996	
5	2	7	64.1	1269		4.185784	
6	3	7	65.8	1772	1904	4.335173	
7	3	7	62.5	1921	1381	4.95452	
8	1	7	98.9			5.949048	
9	1	7	89.5			6.998348	
10	2	7	66.1	1627		7.554756	
11	2	7	59.8	1497		7.777321	
12	2	7	69.6	1975		8.830477	
13	1	7	51.1			9.494429	
14	2	7	67	1665		10.53992	
15	2	7	74.2	1613		10.91313	
16	2	7	74.5	1068		11.91293	

Radar Type 6 Statistical Performance

Trial #	Fc (MHz)	Pulse /Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)	Hopping Sequence (MHz)
1	5320	9	1	333	1	5314.0, 5332.0, 5376.0, 5556.0, 5550.0, 5598.0, 5432.0, 5528.0, 5721.0, 5436.0, 5661.0, 5568.0, 5329.0, 5697.0, 5427.0, 5355.0, 5517.0, 5409.0, 5525.0, 5294.0, 5448.0, 5604.0, 5676.0, 5493.0, 5544.0, 5607.0, 5358.0, 5640.0, 5631.0, 5435.0, 5509.0, 5561.0, 5264.0, 5641.0, 5670.0, 5473.0, 5630.0, 5396.0, 5420.0, 5519.0, 5273.0, 5313.0, 5459.0, 5643.0, 5664.0, 5579.0, 5527.0, 5503.0, 5690.0, 5694.0, 5566.0, 5256.0, 5523.0, 5535.0, 5696.0, 5251.0, 5565.0, 5672.0, 5645.0, 5424.0, 5540.0, 5364.0, 5467.0, 5628.0, 5583.0, 5311.0, 5393.0, 5346.0, 5276.0, 5385.0, 5695.0, 5341.0, 5398.0, 5453.0, 5506.0, 5633.0, 5723.0, 5389.0, 5712.0, 5464.0, 5291.0, 5487.0, 5434.0, 5456.0, 5421.0, 5682.0, 5259.0, 5708.0, 5626.0, 5371.0, 5617.0, 5462.0, 5495.0, 5534.0, 5488.0, 5512.0, 5588.0, 5412.0, 5280.0, 5581.0 (number of hits: 3)
2	5320	9	1	333	1	5723.0, 5664.0, 5335.0, 5418.0, 5486.0, 5647.0, 5354.0, 5524.0, 5366.0, 5279.0, 5620.0, 5314.0, 5556.0, 5371.0, 5326.0, 5715.0, 5662.0, 5261.0, 5302.0, 5600.0, 5425.0, 5673.0, 5507.0, 5456.0, 5687.0, 5536.0, 5517.0, 5333.0, 5346.0, 5332.0, 5503.0, 5286.0, 5544.0, 5545.0, 5591.0, 5552.0, 5411.0, 5497.0, 5638.0, 5685.0, 5607.0, 5606.0, 5577.0, 5721.0, 5643.0, 5675.0, 5616.0, 5501.0, 5338.0, 5683.0, 5331.0, 5554.0, 5714.0, 5483.0, 5348.0, 5657.0, 5651.0, 5656.0, 5278.0, 5557.0, 5548.0, 5522.0, 5362.0, 5342.0, 5373.0, 5391.0, 5450.0, 5280.0, 5270.0, 5706.0, 5469.0, 5457.0, 5315.0, 5590.0, 5322.0, 5618.0, 5688.0, 5379.0, 5300.0, 5321.0, 5597.0, 5422.0, 5401.0, 5369.0, 5570.0, 5633.0, 5336.0, 5429.0, 5555.0, 5609.0, 5282.0, 5252.0, 5538.0, 5586.0, 5323.0, 5334.0, 5375.0, 5526.0, 5584.0, 5446.0 (number of hits: 6)
3	5320	9	1	333	1	5453.0, 5696.0, 5703.0, 5526.0, 5708.0, 5257.0, 5271.0, 5610.0, 5367.0, 5290.0, 5722.0, 5514.0, 5303.0, 5587.0, 5559.0, 5430.0, 5572.0, 5627.0, 5545.0, 5601.0, 5562.0, 5325.0, 5345.0, 5307.0, 5385.0, 5334.0, 5511.0, 5662.0, 5322.0, 5438.0, 5531.0, 5406.0, 5534.0, 5262.0, 5354.0, 5556.0, 5715.0, 5619.0, 5273.0, 5570.0, 5667.0, 5490.0, 5544.0, 5565.0, 5588.0, 5600.0, 5356.0, 5349.0, 5276.0, 5372.0, 5308.0, 5617.0, 5469.0, 5528.0, 5391.0,

						5332.0, 5546.0, 5491.0, 5466.0, 5410.0, 5634.0, 5463.0, 5493.0, 5681.0, 5302.0, 5278.0, 5369.0, 5306.0, 5285.0, 5292.0, 5510.0, 5520.0, 5691.0, 5713.0, 5704.0, 5388.0, 5558.0, 5329.0, 5592.0, 5709.0, 5671.0, 5553.0, 5636.0, 5423.0, 5284.0, 5643.0, 5437.0, 5481.0, 5622.0, 5582.0, 5615.0, 5578.0, 5368.0, 5480.0, 5508.0, 5266.0, 5431.0, 5320.0, 5286.0, 5489.0 (number of hits: 3)
4	5320	9	1	333	1	5351.0, 5569.0, 5334.0, 5598.0, 5366.0, 5664.0, 5467.0, 5514.0, 5442.0, 5266.0, 5534.0, 5357.0, 5601.0, 5640.0, 5604.0, 5345.0, 5252.0, 5572.0, 5560.0, 5269.0, 5250.0, 5508.0, 5488.0, 5698.0, 5428.0, 5368.0, 5344.0, 5304.0, 5633.0, 5668.0, 5358.0, 5363.0, 5346.0, 5415.0, 5477.0, 5286.0, 5301.0, 5470.0, 5544.0, 5522.0, 5715.0, 5650.0, 5425.0, 5662.0, 5451.0, 5713.0, 5580.0, 5463.0, 5612.0, 5684.0, 5361.0, 5719.0, 5342.0, 5472.0, 5439.0, 5449.0, 5712.0, 5718.0, 5545.0, 5312.0, 5553.0, 5558.0, 5349.0, 5501.0, 5495.0, 5337.0, 5538.0, 5686.0, 5669.0, 5382.0, 5377.0, 5456.0, 5582.0, 5332.0, 5438.0, 5376.0, 5627.0, 5671.0, 5632.0, 5524.0, 5378.0, 5447.0, 5443.0, 5608.0, 5278.0, 5625.0, 5446.0, 5460.0, 5667.0, 5648.0, 5583.0, 5694.0, 5427.0, 5440.0, 5494.0, 5362.0, 5590.0, 5255.0, 5485.0, 5315.0 (number of hits: 2)
5	5320	9	1	333	1	5344.0, 5565.0, 5529.0, 5396.0, 5362.0, 5427.0, 5482.0, 5659.0, 5464.0, 5489.0, 5575.0, 5476.0, 5391.0, 5689.0, 5273.0, 5367.0, 5327.0, 5342.0, 5348.0, 5434.0, 5694.0, 5661.0, 5504.0, 5604.0, 5438.0, 5554.0, 5328.0, 5337.0, 5340.0, 5372.0, 5322.0, 5654.0, 5679.0, 5255.0, 5664.0, 5442.0, 5280.0, 5542.0, 5713.0, 5252.0, 5567.0, 5330.0, 5484.0, 5412.0, 5386.0, 5699.0, 5580.0, 5445.0, 5635.0, 5440.0, 5721.0, 5655.0, 5304.0, 5303.0, 5275.0, 5310.0, 5697.0, 5339.0, 5294.0, 5497.0, 5495.0, 5470.0, 5441.0, 5590.0, 5613.0, 5363.0, 5257.0, 5415.0, 5458.0, 5646.0, 5361.0, 5454.0, 5591.0, 5671.0, 5636.0, 5268.0, 5518.0, 5610.0, 5710.0, 5630.0, 5323.0, 5389.0, 5536.0, 5324.0, 5698.0, 5691.0, 5574.0, 5378.0, 5640.0, 5284.0, 5688.0, 5643.0, 5453.0, 5627.0, 5319.0, 5513.0, 5406.0, 5624.0, 5411.0, 5487.0 (number of hits: 6)
6	5320	9	1	333	1	5414.0, 5604.0, 5576.0, 5328.0, 5407.0, 5633.0, 5379.0, 5543.0, 5705.0, 5353.0, 5315.0, 5393.0, 5559.0, 5343.0, 5618.0, 5581.0, 5359.0, 5292.0, 5251.0, 5463.0, 5302.0, 5518.0, 5474.0, 5440.0, 5673.0, 5713.0, 5549.0, 5550.0, 5320.0, 5548.0, 5631.0, 5696.0, 5614.0, 5698.0, 5334.0,

						5354.0, 5530.0, 5373.0, 5405.0, 5471.0, 5529.0, 5443.0, 5408.0, 5272.0, 5632.0, 5477.0, 5402.0, 5699.0, 5572.0, 5281.0, 5522.0, 5306.0, 5517.0, 5399.0, 5465.0, 5659.0, 5579.0, 5558.0, 5617.0, 5539.0, 5336.0, 5322.0, 5512.0, 5562.0, 5409.0, 5398.0, 5317.0, 5627.0, 5700.0, 5620.0, 5523.0, 5412.0, 5626.0, 5584.0, 5274.0, 5640.0, 5415.0, 5533.0, 5554.0, 5332.0, 5654.0, 5697.0, 5623.0, 5364.0, 5382.0, 5445.0, 5694.0, 5532.0, 5682.0, 5488.0, 5252.0, 5504.0, 5571.0, 5691.0, 5719.0, 5656.0, 5426.0, 5389.0, 5520.0, 5515.0 (number of hits: 5)
7	5320	9	1	333	1	5623.0, 5665.0, 5526.0, 5429.0, 5546.0, 5416.0, 5349.0, 5264.0, 5710.0, 5439.0, 5680.0, 5411.0, 5314.0, 5320.0, 5448.0, 5306.0, 5438.0, 5534.0, 5483.0, 5517.0, 5602.0, 5673.0, 5613.0, 5267.0, 5662.0, 5440.0, 5705.0, 5340.0, 5389.0, 5477.0, 5332.0, 5344.0, 5412.0, 5322.0, 5256.0, 5443.0, 5554.0, 5543.0, 5372.0, 5712.0, 5382.0, 5621.0, 5666.0, 5474.0, 5576.0, 5703.0, 5496.0, 5419.0, 5410.0, 5709.0, 5462.0, 5254.0, 5535.0, 5501.0, 5346.0, 5631.0, 5500.0, 5696.0, 5555.0, 5707.0, 5347.0, 5327.0, 5387.0, 5363.0, 5476.0, 5280.0, 5368.0, 5487.0, 5398.0, 5383.0, 5688.0, 5720.0, 5423.0, 5434.0, 5578.0, 5486.0, 5388.0, 5594.0, 5691.0, 5531.0, 5633.0, 5373.0, 5683.0, 5711.0, 5559.0, 5518.0, 5333.0, 5508.0, 5377.0, 5661.0, 5405.0, 5318.0, 5612.0, 5532.0, 5274.0, 5521.0, 5369.0, 5431.0, 5406.0, 5687.0 (number of hits: 5)
8	5320	9	1	333	1	5354.0, 5487.0, 5360.0, 5556.0, 5582.0, 5435.0, 5724.0, 5258.0, 5488.0, 5675.0, 5704.0, 5312.0, 5479.0, 5289.0, 5650.0, 5524.0, 5634.0, 5330.0, 5440.0, 5422.0, 5612.0, 5624.0, 5576.0, 5507.0, 5429.0, 5294.0, 5279.0, 5497.0, 5544.0, 5532.0, 5673.0, 5271.0, 5671.0, 5322.0, 5525.0, 5563.0, 5505.0, 5670.0, 5434.0, 5606.0, 5301.0, 5566.0, 5454.0, 5251.0, 5614.0, 5461.0, 5618.0, 5499.0, 5253.0, 5707.0, 5639.0, 5685.0, 5400.0, 5349.0, 5665.0, 5384.0, 5567.0, 5520.0, 5334.0, 5444.0, 5282.0, 5453.0, 5470.0, 5424.0, 5255.0, 5698.0, 5553.0, 5678.0, 5519.0, 5640.0, 5708.0, 5570.0, 5492.0, 5530.0, 5465.0, 5373.0, 5417.0, 5455.0, 5632.0, 5307.0, 5464.0, 5667.0, 5337.0, 5319.0, 5647.0, 5651.0, 5323.0, 5555.0, 5445.0, 5302.0, 5720.0, 5283.0, 5343.0, 5551.0, 5594.0, 5480.0, 5358.0, 5543.0, 5385.0, 5292.0 (number of hits: 4)
9	5320	9	1	333	1	5463.0, 5394.0, 5492.0, 5457.0, 5675.0, 5560.0, 5316.0, 5385.0, 5621.0, 5358.0, 5511.0, 5692.0, 5667.0, 5605.0, 5701.0,

						5335.0, 5411.0, 5519.0, 5584.0, 5472.0, 5302.0, 5399.0, 5334.0, 5705.0, 5549.0, 5695.0, 5703.0, 5550.0, 5644.0, 5450.0, 5498.0, 5619.0, 5342.0, 5719.0, 5572.0, 5622.0, 5321.0, 5305.0, 5529.0, 5484.0, 5573.0, 5319.0, 5659.0, 5651.0, 5645.0, 5588.0, 5283.0, 5485.0, 5689.0, 5353.0, 5508.0, 5618.0, 5628.0, 5422.0, 5554.0, 5608.0, 5325.0, 5372.0, 5328.0, 5313.0, 5306.0, 5532.0, 5446.0, 5623.0, 5541.0, 5439.0, 5391.0, 5640.0, 5613.0, 5494.0, 5632.0, 5271.0, 5406.0, 5694.0, 5559.0, 5330.0, 5700.0, 5317.0, 5424.0, 5537.0, 5620.0, 5369.0, 5310.0, 5447.0, 5615.0, 5462.0, 5350.0, 5464.0, 5357.0, 5381.0, 5339.0, 5540.0, 5295.0, 5527.0, 5297.0, 5273.0, 5368.0, 5347.0, 5641.0, 5431.0 (number of hits: 7)
10	5320	9	1	333	1	5284.0, 5663.0, 5531.0, 5486.0, 5314.0, 5681.0, 5586.0, 5706.0, 5436.0, 5599.0, 5264.0, 5430.0, 5500.0, 5251.0, 5641.0, 5715.0, 5587.0, 5423.0, 5664.0, 5395.0, 5502.0, 5666.0, 5277.0, 5294.0, 5321.0, 5352.0, 5378.0, 5589.0, 5394.0, 5476.0, 5575.0, 5518.0, 5533.0, 5677.0, 5388.0, 5448.0, 5270.0, 5253.0, 5416.0, 5496.0, 5301.0, 5687.0, 5647.0, 5674.0, 5618.0, 5474.0, 5670.0, 5472.0, 5398.0, 5425.0, 5583.0, 5338.0, 5313.0, 5462.0, 5263.0, 5585.0, 5320.0, 5545.0, 5554.0, 5509.0, 5668.0, 5307.0, 5701.0, 5596.0, 5544.0, 5400.0, 5306.0, 5567.0, 5302.0, 5535.0, 5547.0, 5598.0, 5409.0, 5329.0, 5390.0, 5429.0, 5723.0, 5560.0, 5688.0, 5308.0, 5626.0, 5420.0, 5282.0, 5549.0, 5299.0, 5548.0, 5358.0, 5592.0, 5468.0, 5525.0, 5431.0, 5396.0, 5446.0, 5685.0, 5498.0, 5717.0, 5380.0, 5454.0, 5370.0, 5517.0 (number of hits: 4)
11	5320	9	1	333	1	5357.0, 5339.0, 5679.0, 5604.0, 5710.0, 5695.0, 5640.0, 5647.0, 5360.0, 5687.0, 5256.0, 5667.0, 5434.0, 5685.0, 5648.0, 5560.0, 5447.0, 5691.0, 5584.0, 5530.0, 5325.0, 5504.0, 5472.0, 5371.0, 5270.0, 5251.0, 5554.0, 5268.0, 5264.0, 5709.0, 5521.0, 5426.0, 5657.0, 5698.0, 5460.0, 5421.0, 5697.0, 5655.0, 5653.0, 5265.0, 5626.0, 5389.0, 5701.0, 5252.0, 5676.0, 5373.0, 5285.0, 5400.0, 5287.0, 5702.0, 5260.0, 5277.0, 5537.0, 5474.0, 5525.0, 5678.0, 5437.0, 5374.0, 5610.0, 5619.0, 5641.0, 5611.0, 5705.0, 5445.0, 5462.0, 5354.0, 5599.0, 5334.0, 5282.0, 5468.0, 5420.0, 5406.0, 5363.0, 5311.0, 5680.0, 5378.0, 5587.0, 5528.0, 5605.0, 5477.0, 5332.0, 5387.0, 5516.0, 5381.0, 5607.0, 5534.0, 5266.0, 5466.0, 5397.0, 5497.0, 5523.0, 5517.0, 5419.0, 5722.0, 5572.0, 5440.0, 5674.0, 5439.0, 5580.0, 5483.0

						(number of hits: 2)
12	5320	9	1	333	1	5281.0, 5614.0, 5468.0, 5435.0, 5458.0, 5290.0, 5681.0, 5380.0, 5353.0, 5539.0, 5264.0, 5596.0, 5304.0, 5371.0, 5270.0, 5251.0, 5714.0, 5474.0, 5449.0, 5313.0, 5507.0, 5652.0, 5605.0, 5641.0, 5500.0, 5610.0, 5283.0, 5513.0, 5603.0, 5455.0, 5532.0, 5332.0, 5706.0, 5446.0, 5646.0, 5351.0, 5394.0, 5698.0, 5254.0, 5522.0, 5350.0, 5536.0, 5418.0, 5591.0, 5434.0, 5272.0, 5475.0, 5443.0, 5369.0, 5412.0, 5495.0, 5307.0, 5337.0, 5260.0, 5358.0, 5607.0, 5523.0, 5381.0, 5550.0, 5509.0, 5566.0, 5707.0, 5639.0, 5521.0, 5327.0, 5694.0, 5360.0, 5279.0, 5319.0, 5611.0, 5419.0, 5324.0, 5659.0, 5409.0, 5533.0, 5463.0, 5368.0, 5427.0, 5577.0, 5504.0, 5406.0, 5655.0, 5708.0, 5302.0, 5339.0, 5465.0, 5320.0, 5393.0, 5442.0, 5367.0, 5308.0, 5372.0, 5269.0, 5530.0, 5315.0, 5526.0, 5519.0, 5638.0, 5437.0, 5716.0
13	5320	9	1	333	1	(number of hits: 6) 5702.0, 5656.0, 5332.0, 5537.0, 5282.0, 5556.0, 5674.0, 5321.0, 5300.0, 5497.0, 5261.0, 5388.0, 5592.0, 5513.0, 5705.0, 5616.0, 5354.0, 5379.0, 5350.0, 5627.0, 5429.0, 5455.0, 5283.0, 5605.0, 5542.0, 5316.0, 5406.0, 5504.0, 5567.0, 5305.0, 5646.0, 5393.0, 5326.0, 5623.0, 5425.0, 5520.0, 5445.0, 5670.0, 5277.0, 5295.0, 5651.0, 5368.0, 5382.0, 5291.0, 5603.0, 5430.0, 5545.0, 5398.0, 5558.0, 5673.0, 5579.0, 5327.0, 5369.0, 5709.0, 5286.0, 5319.0, 5721.0, 5571.0, 5704.0, 5309.0, 5629.0, 5546.0, 5708.0, 5547.0, 5505.0, 5377.0, 5507.0, 5407.0, 5565.0, 5431.0, 5280.0, 5383.0, 5484.0, 5541.0, 5301.0, 5256.0, 5322.0, 5591.0, 5706.0, 5678.0, 5372.0, 5711.0, 5271.0, 5569.0, 5352.0, 5329.0, 5710.0, 5384.0, 5387.0, 5457.0, 5268.0, 5712.0, 5506.0, 5347.0, 5516.0, 5620.0, 5610.0, 5724.0, 5442.0, 5532.0
14	5320	9	1	333	1	(number of hits: 6) 5457.0, 5649.0, 5563.0, 5509.0, 5528.0, 5340.0, 5587.0, 5665.0, 5364.0, 5632.0, 5443.0, 5616.0, 5422.0, 5594.0, 5681.0, 5280.0, 5571.0, 5532.0, 5530.0, 5449.0, 5432.0, 5489.0, 5357.0, 5426.0, 5609.0, 5423.0, 5445.0, 5510.0, 5378.0, 5679.0, 5514.0, 5529.0, 5279.0, 5686.0, 5534.0, 5474.0, 5547.0, 5467.0, 5561.0, 5263.0, 5413.0, 5440.0, 5569.0, 5275.0, 5395.0, 5403.0, 5606.0, 5329.0, 5389.0, 5292.0, 5485.0, 5515.0, 5484.0, 5541.0, 5334.0, 5361.0, 5260.0, 5314.0, 5674.0, 5433.0, 5297.0, 5684.0, 5436.0, 5653.0, 5611.0, 5262.0, 5281.0, 5469.0, 5406.0, 5461.0, 5556.0, 5499.0, 5508.0, 5637.0, 5452.0, 5560.0, 5562.0, 5521.0, 5557.0, 5573.0

						5675.0, 5408.0, 5468.0, 5431.0, 5331.0, 5513.0, 5371.0, 5661.0, 5268.0, 5324.0, 5523.0, 5480.0, 5622.0, 5414.0, 5252.0, 5397.0, 5694.0, 5301.0, 5420.0, 5363.0 (number of hits: 2)
15	5320	9	1	333	1	5455.0, 5598.0, 5410.0, 5680.0, 5664.0, 5674.0, 5289.0, 5613.0, 5640.0, 5694.0, 5312.0, 5429.0, 5565.0, 5626.0, 5619.0, 5437.0, 5580.0, 5492.0, 5597.0, 5327.0, 5713.0, 5483.0, 5535.0, 5620.0, 5572.0, 5390.0, 5556.0, 5627.0, 5709.0, 5532.0, 5352.0, 5338.0, 5634.0, 5270.0, 5578.0, 5319.0, 5391.0, 5399.0, 5647.0, 5256.0, 5412.0, 5553.0, 5294.0, 5409.0, 5650.0, 5403.0, 5360.0, 5712.0, 5479.0, 5592.0, 5272.0, 5608.0, 5370.0, 5274.0, 5622.0, 5337.0, 5710.0, 5452.0, 5690.0, 5586.0, 5267.0, 5340.0, 5516.0, 5637.0, 5629.0, 5316.0, 5639.0, 5682.0, 5285.0, 5568.0, 5518.0, 5373.0, 5507.0, 5388.0, 5496.0, 5299.0, 5321.0, 5549.0, 5667.0, 5414.0, 5392.0, 5387.0, 5313.0, 5389.0, 5502.0, 5499.0, 5433.0, 5295.0, 5438.0, 5451.0, 5525.0, 5552.0, 5347.0, 5500.0, 5718.0, 5278.0, 5550.0, 5673.0, 5606.0, 5393.0 (number of hits: 6)
16	5320	9	1	333	1	5444.0, 5405.0, 5505.0, 5309.0, 5527.0, 5322.0, 5612.0, 5289.0, 5383.0, 5671.0, 5331.0, 5682.0, 5343.0, 5311.0, 5675.0, 5342.0, 5659.0, 5372.0, 5435.0, 5705.0, 5418.0, 5350.0, 5524.0, 5427.0, 5486.0, 5367.0, 5638.0, 5457.0, 5621.0, 5272.0, 5385.0, 5463.0, 5338.0, 5513.0, 5399.0, 5446.0, 5323.0, 5485.0, 5401.0, 5254.0, 5429.0, 5668.0, 5512.0, 5333.0, 5570.0, 5269.0, 5467.0, 5648.0, 5672.0, 5460.0, 5356.0, 5606.0, 5587.0, 5279.0, 5710.0, 5544.0, 5642.0, 5317.0, 5337.0, 5334.0, 5610.0, 5297.0, 5263.0, 5522.0, 5314.0, 5320.0, 5499.0, 5537.0, 5458.0, 5416.0, 5676.0, 5360.0, 5368.0, 5422.0, 5359.0, 5273.0, 5707.0, 5538.0, 5335.0, 5410.0, 5437.0, 5296.0, 5326.0, 5574.0, 5637.0, 5465.0, 5366.0, 5407.0, 5411.0, 5304.0, 5286.0, 5414.0, 5561.0, 5430.0, 5670.0, 5470.0, 5489.0, 5438.0, 5276.0, 5462.0 (number of hits: 7)
17	5320	9	1	333	1	5388.0, 5426.0, 5485.0, 5588.0, 5607.0, 5706.0, 5451.0, 5435.0, 5300.0, 5330.0, 5700.0, 5594.0, 5393.0, 5628.0, 5432.0, 5667.0, 5379.0, 5626.0, 5486.0, 5437.0, 5411.0, 5681.0, 5364.0, 5623.0, 5561.0, 5569.0, 5422.0, 5682.0, 5477.0, 5548.0, 5405.0, 5589.0, 5294.0, 5327.0, 5354.0, 5277.0, 5595.0, 5468.0, 5401.0, 5386.0, 5399.0, 5375.0, 5255.0, 5560.0, 5552.0, 5317.0, 5268.0, 5666.0, 5546.0, 5579.0, 5409.0, 5299.0, 5309.0, 5254.0, 5551.0, 5536.0, 5376.0, 5507.0, 5252.0, 5310.0,

						5368.0, 5521.0, 5553.0, 5720.0, 5307.0, 5599.0, 5514.0, 5296.0, 5557.0, 5549.0, 5662.0, 5322.0, 5303.0, 5661.0, 5402.0, 5264.0, 5619.0, 5480.0, 5571.0, 5460.0, 5459.0, 5378.0, 5519.0, 5471.0, 5580.0, 5337.0, 5318.0, 5582.0, 5370.0, 5335.0, 5602.0, 5488.0, 5627.0, 5697.0, 5431.0, 5481.0, 5527.0, 5717.0, 5312.0, 5395.0 (number of hits: 5)
18	5320	9	1	333	1	5271.0, 5705.0, 5646.0, 5329.0, 5450.0, 5669.0, 5309.0, 5480.0, 5319.0, 5493.0, 5460.0, 5484.0, 5318.0, 5589.0, 5408.0, 5430.0, 5575.0, 5541.0, 5357.0, 5556.0, 5604.0, 5580.0, 5446.0, 5332.0, 5273.0, 5534.0, 5365.0, 5637.0, 5420.0, 5405.0, 5486.0, 5385.0, 5677.0, 5386.0, 5504.0, 5632.0, 5321.0, 5679.0, 5466.0, 5567.0, 5666.0, 5345.0, 5268.0, 5326.0, 5354.0, 5658.0, 5317.0, 5352.0, 5322.0, 5536.0, 5546.0, 5710.0, 5654.0, 5647.0, 5440.0, 5516.0, 5713.0, 5509.0, 5696.0, 5506.0, 5277.0, 5642.0, 5672.0, 5469.0, 5702.0, 5569.0, 5676.0, 5621.0, 5390.0, 5451.0, 5602.0, 5513.0, 5292.0, 5543.0, 5308.0, 5276.0, 5343.0, 5379.0, 5683.0, 5627.0, 5622.0, 5629.0, 5438.0, 5458.0, 5514.0, 5257.0, 5673.0, 5722.0, 5488.0, 5356.0, 5358.0, 5407.0, 5476.0, 5348.0, 5709.0, 5449.0, 5346.0, 5624.0, 5531.0, 5253.0 (number of hits: 6)
19	5320	9	1	333	1	5673.0, 5680.0, 5453.0, 5468.0, 5452.0, 5416.0, 5647.0, 5329.0, 5429.0, 5417.0, 5490.0, 5558.0, 5291.0, 5501.0, 5485.0, 5363.0, 5600.0, 5365.0, 5703.0, 5661.0, 5493.0, 5259.0, 5570.0, 5498.0, 5268.0, 5544.0, 5385.0, 5593.0, 5443.0, 5675.0, 5524.0, 5285.0, 5689.0, 5459.0, 5367.0, 5287.0, 5300.0, 5380.0, 5609.0, 5337.0, 5279.0, 5446.0, 5610.0, 5313.0, 5424.0, 5386.0, 5326.0, 5289.0, 5618.0, 5554.0, 5654.0, 5370.0, 5488.0, 5691.0, 5507.0, 5540.0, 5578.0, 5547.0, 5352.0, 5319.0, 5655.0, 5431.0, 5435.0, 5664.0, 5257.0, 5439.0, 5614.0, 5678.0, 5286.0, 5324.0, 5602.0, 5430.0, 5631.0, 5697.0, 5681.0, 5608.0, 5584.0, 5563.0, 5408.0, 5653.0, 5422.0, 5666.0, 5393.0, 5617.0, 5433.0, 5263.0, 5688.0, 5343.0, 5575.0, 5549.0, 5597.0, 5508.0, 5633.0, 5590.0, 5441.0, 5569.0, 5351.0, 5357.0, 5353.0, 5651.0 (number of hits: 4)
20	5320	9	1	333	1	5583.0, 5719.0, 5406.0, 5403.0, 5565.0, 5424.0, 5423.0, 5386.0, 5541.0, 5308.0, 5432.0, 5490.0, 5389.0, 5358.0, 5364.0, 5487.0, 5602.0, 5262.0, 5596.0, 5346.0, 5288.0, 5302.0, 5717.0, 5421.0, 5368.0, 5488.0, 5317.0, 5325.0, 5617.0, 5357.0, 5497.0, 5577.0, 5374.0, 5498.0, 5566.0, 5686.0, 5585.0, 5344.0, 5442.0, 5606.0,

						5316.0, 5633.0, 5258.0, 5349.0, 5334.0, 5474.0, 5555.0, 5723.0, 5621.0, 5414.0, 5328.0, 5264.0, 5569.0, 5592.0, 5375.0, 5615.0, 5407.0, 5659.0, 5416.0, 5290.0, 5689.0, 5524.0, 5430.0, 5706.0, 5267.0, 5669.0, 5559.0, 5679.0, 5578.0, 5475.0, 5362.0, 5486.0, 5533.0, 5463.0, 5637.0, 5696.0, 5438.0, 5589.0, 5481.0, 5630.0, 5314.0, 5710.0, 5570.0, 5534.0, 5644.0, 5510.0, 5548.0, 5483.0, 5417.0, 5330.0, 5326.0, 5528.0, 5323.0, 5372.0, 5480.0, 5648.0, 5437.0, 5564.0, 5281.0, 5552.0 (number of hits: 7)
21	5320	9	1	333	1	5719.0, 5517.0, 5254.0, 5622.0, 5409.0, 5494.0, 5638.0, 5383.0, 5371.0, 5577.0, 5331.0, 5701.0, 5503.0, 5640.0, 5695.0, 5282.0, 5689.0, 5398.0, 5341.0, 5571.0, 5317.0, 5281.0, 5420.0, 5679.0, 5367.0, 5393.0, 5467.0, 5705.0, 5441.0, 5598.0, 5435.0, 5521.0, 5621.0, 5528.0, 5723.0, 5658.0, 5551.0, 5418.0, 5446.0, 5600.0, 5417.0, 5522.0, 5570.0, 5447.0, 5533.0, 5652.0, 5564.0, 5518.0, 5561.0, 5651.0, 5662.0, 5355.0, 5359.0, 5339.0, 5309.0, 5253.0, 5448.0, 5312.0, 5512.0, 5489.0, 5656.0, 5463.0, 5289.0, 5647.0, 5584.0, 5305.0, 5302.0, 5375.0, 5603.0, 5568.0, 5255.0, 5285.0, 5516.0, 5507.0, 5608.0, 5297.0, 5513.0, 5611.0, 5509.0, 5599.0, 5444.0, 5265.0, 5667.0, 5581.0, 5633.0, 5274.0, 5510.0, 5396.0, 5703.0, 5582.0, 5480.0, 5335.0, 5408.0, 5490.0, 5421.0, 5698.0, 5532.0, 5258.0, 5394.0, 5668.0 (number of hits: 2)
22	5320	9	1	333	1	5529.0, 5435.0, 5555.0, 5598.0, 5570.0, 5364.0, 5679.0, 5683.0, 5698.0, 5535.0, 5597.0, 5636.0, 5572.0, 5427.0, 5685.0, 5543.0, 5711.0, 5311.0, 5690.0, 5479.0, 5589.0, 5699.0, 5403.0, 5409.0, 5611.0, 5317.0, 5712.0, 5633.0, 5481.0, 5635.0, 5361.0, 5315.0, 5628.0, 5512.0, 5593.0, 5455.0, 5417.0, 5581.0, 5348.0, 5365.0, 5645.0, 5302.0, 5314.0, 5293.0, 5585.0, 5285.0, 5424.0, 5594.0, 5539.0, 5626.0, 5334.0, 5390.0, 5709.0, 5261.0, 5449.0, 5474.0, 5369.0, 5494.0, 5432.0, 5697.0, 5301.0, 5618.0, 5715.0, 5603.0, 5623.0, 5693.0, 5396.0, 5620.0, 5665.0, 5619.0, 5395.0, 5394.0, 5607.0, 5447.0, 5385.0, 5641.0, 5508.0, 5565.0, 5527.0, 5491.0, 5616.0, 5383.0, 5269.0, 5259.0, 5338.0, 5676.0, 5649.0, 5691.0, 5530.0, 5306.0, 5567.0, 5550.0, 5526.0, 5648.0, 5674.0, 5296.0, 5582.0, 5325.0, 5367.0, 5440.0 (number of hits: 5)
23	5320	9	1	333	1	5428.0, 5506.0, 5261.0, 5473.0, 5523.0, 5339.0, 5452.0, 5364.0, 5350.0, 5385.0, 5540.0, 5375.0, 5518.0, 5381.0, 5356.0, 5619.0, 5477.0, 5693.0, 5285.0, 5681.0,

						5549.0, 5484.0, 5520.0, 5382.0, 5252.0, 5380.0, 5260.0, 5459.0, 5645.0, 5406.0, 5472.0, 5362.0, 5593.0, 5536.0, 5329.0, 5425.0, 5642.0, 5458.0, 5614.0, 5630.0, 5336.0, 5666.0, 5470.0, 5495.0, 5463.0, 5360.0, 5313.0, 5426.0, 5441.0, 5410.0, 5633.0, 5413.0, 5626.0, 5268.0, 5440.0, 5366.0, 5318.0, 5269.0, 5521.0, 5431.0, 5315.0, 5299.0, 5475.0, 5552.0, 5369.0, 5387.0, 5432.0, 5565.0, 5505.0, 5283.0, 5683.0, 5590.0, 5491.0, 5310.0, 5439.0, 5449.0, 5438.0, 5599.0, 5513.0, 5404.0, 5320.0, 5325.0, 5519.0, 5343.0, 5588.0, 5635.0, 5399.0, 5393.0, 5720.0, 5532.0, 5573.0, 5319.0, 5446.0, 5534.0, 5539.0, 5628.0, 5447.0, 5511.0, 5634.0, 5423.0 (number of hits: 6)
24	5320	9	1	333	1	5525.0, 5471.0, 5607.0, 5530.0, 5632.0, 5361.0, 5567.0, 5284.0, 5515.0, 5444.0, 5714.0, 5340.0, 5556.0, 5692.0, 5565.0, 5463.0, 5364.0, 5507.0, 5528.0, 5606.0, 5543.0, 5303.0, 5504.0, 5293.0, 5708.0, 5343.0, 5594.0, 5517.0, 5429.0, 5630.0, 5413.0, 5671.0, 5541.0, 5438.0, 5656.0, 5311.0, 5268.0, 5573.0, 5346.0, 5318.0, 5407.0, 5266.0, 5381.0, 5317.0, 5278.0, 5488.0, 5602.0, 5354.0, 5682.0, 5275.0, 5697.0, 5314.0, 5435.0, 5271.0, 5683.0, 5582.0, 5724.0, 5411.0, 5538.0, 5334.0, 5536.0, 5336.0, 5620.0, 5358.0, 5675.0, 5403.0, 5700.0, 5261.0, 5297.0, 5599.0, 5301.0, 5484.0, 5282.0, 5427.0, 5302.0, 5462.0, 5690.0, 5643.0, 5639.0, 5345.0, 5680.0, 5380.0, 5712.0, 5385.0, 5558.0, 5562.0, 5559.0, 5335.0, 5384.0, 5569.0, 5395.0, 5681.0, 5339.0, 5410.0, 5351.0, 5347.0, 5453.0, 5610.0, 5619.0, 5262.0 (number of hits: 4)
25	5320	9	1	333	1	5698.0, 5700.0, 5584.0, 5299.0, 5396.0, 5404.0, 5285.0, 5258.0, 5667.0, 5670.0, 5524.0, 5465.0, 5613.0, 5386.0, 5551.0, 5661.0, 5432.0, 5475.0, 5261.0, 5495.0, 5545.0, 5397.0, 5383.0, 5699.0, 5677.0, 5494.0, 5459.0, 5414.0, 5370.0, 5280.0, 5413.0, 5335.0, 5560.0, 5274.0, 5640.0, 5265.0, 5402.0, 5499.0, 5540.0, 5508.0, 5431.0, 5310.0, 5564.0, 5379.0, 5275.0, 5643.0, 5526.0, 5463.0, 5403.0, 5598.0, 5713.0, 5272.0, 5256.0, 5284.0, 5504.0, 5651.0, 5472.0, 5461.0, 5703.0, 5537.0, 5721.0, 5398.0, 5638.0, 5293.0, 5702.0, 5509.0, 5364.0, 5618.0, 5623.0, 5597.0, 5320.0, 5271.0, 5594.0, 5704.0, 5473.0, 5722.0, 5620.0, 5380.0, 5653.0, 5554.0, 5446.0, 5587.0, 5289.0, 5366.0, 5351.0, 5569.0, 5339.0, 5270.0, 5343.0, 5300.0, 5521.0, 5559.0, 5394.0, 5711.0, 5487.0, 5442.0, 5719.0, 5349.0, 5684.0, 5345.0 (number of hits: 1)

26	5320	9	1	333		
27	5320	9	1	333	1	5332.0, 5276.0, 5412.0, 5720.0, 5582.0, 5338.0, 5293.0, 5539.0, 5567.0, 5682.0, 5311.0, 5423.0, 5512.0, 5263.0, 5484.0, 5265.0, 5566.0, 5372.0, 5404.0, 5271.0, 5395.0, 5364.0, 5291.0, 5536.0, 5343.0, 5303.0, 5696.0, 5391.0, 5405.0, 5647.0, 5333.0, 5441.0, 5462.0, 5427.0, 5718.0, 5258.0, 5606.0, 5396.0, 5486.0, 5596.0, 5438.0, 5716.0, 5705.0, 5309.0, 5294.0, 5476.0, 5299.0, 5409.0, 5407.0, 5659.0, 5501.0, 5268.0, 5640.0, 5631.0, 5397.0, 5590.0, 5519.0, 5329.0, 5453.0, 5351.0, 5628.0, 5578.0, 5336.0, 5615.0, 5286.0, 5435.0, 5287.0, 5344.0, 5699.0, 5314.0, 5259.0, 5306.0, 5668.0, 5669.0, 5421.0, 5625.0, 5318.0, 5254.0, 5595.0, 5489.0, 5600.0, 5266.0, 5679.0, 5623.0, 5461.0, 5627.0, 5694.0, 5685.0, 5586.0, 5697.0, 5597.0, 5295.0, 5379.0, 5322.0, 5478.0, 5381.0, 5408.0, 5527.0, 5394.0, 5663.0 (number of hits: 4)
28	5320	9	1	333	1	5637.0, 5279.0, 5332.0, 5639.0, 5349.0, 5475.0, 5271.0, 5648.0, 5451.0, 5558.0, 5659.0, 5375.0, 5340.0, 5268.0, 5697.0, 5286.0, 5425.0, 5444.0, 5572.0, 5660.0, 5571.0, 5252.0, 5456.0, 5370.0, 5681.0, 5690.0, 5590.0, 5302.0, 5415.0, 5403.0, 5467.0, 5623.0, 5305.0, 5345.0, 5392.0, 5428.0, 5533.0, 5275.0, 5606.0, 5710.0, 5491.0, 5598.0, 5611.0, 5327.0, 5496.0, 5676.0, 5668.0, 5633.0, 5581.0, 5441.0, 5431.0, 5469.0, 5325.0, 5320.0, 5339.0, 5306.0, 5669.0, 5522.0, 5424.0, 5316.0, 5280.0, 5682.0, 5489.0, 5253.0, 5384.0, 5308.0, 5331.0, 5419.0, 5338.0, 5313.0, 5388.0, 5704.0, 5542.0, 5691.0, 5717.0, 5262.0, 5429.0, 5526.0, 5341.0, 5352.0, 5309.0, 5494.0, 5261.0, 5532.0, 5464.0, 5440.0, 5485.0, 5285.0, 5626.0, 5688.0, 5493.0, 5359.0, 5376.0, 5646.0, 5465.0, 5414.0, 5652.0, 5445.0, 5330.0, 5628.0 (number of hits: 5)
29	5320	9	1	333		
30	5320	9	1	333	1	5653.0, 5599.0, 5299.0, 5423.0, 5389.0, 5264.0, 5357.0, 5290.0, 5694.0, 5589.0, 5668.0, 5268.0, 5565.0, 5659.0, 5504.0, 5646.0, 5302.0, 5680.0, 5610.0, 5413.0, 5630.0, 5262.0, 5287.0, 5318.0, 5712.0, 5720.0, 5362.0, 5688.0, 5252.0, 5392.0, 5667.0, 5416.0, 5376.0, 5576.0, 5489.0, 5346.0, 5605.0, 5570.0, 5558.0, 5640.0, 5393.0, 5626.0, 5397.0, 5455.0, 5263.0, 5514.0, 5315.0, 5447.0, 5541.0, 5660.0, 5293.0, 5552.0, 5678.0, 5573.0, 5410.0, 5431.0, 5557.0, 5543.0, 5345.0, 5369.0, 5542.0, 5722.0, 5387.0, 5429.0, 5547.0, 5448.0, 5510.0, 5355.0, 5443.0, 5428.0,

						5723.0, 5627.0, 5572.0, 5446.0, 5342.0, 5559.0, 5673.0, 5578.0, 5353.0, 5691.0, 5638.0, 5320.0, 5544.0, 5655.0, 5692.0, 5436.0, 5280.0, 5497.0, 5289.0, 5665.0, 5256.0, 5420.0, 5706.0, 5704.0, 5337.0, 5499.0, 5710.0, 5650.0, 5540.0, 5265.0 (number of hits: 3)
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40MHz

Radar SignalType	Waveform/Trial Number	Detection (%)	Limit (%)	Pass/Fail
Type 1A	15	93.3	60	pass
Type 1B	15	100.0	60	pass
Type 2	30	100.0	60	Pass
Type 3	30	96.7	60	Pass
Type 4	30	93.3	60	Pass
Aggregate (Radar Types 1-4)	120	96.7	80	Pass
Type 5	30	96.7	80	Pass
Type 6	30	90.0	70	Pass

Please refer to the following statistical tables:

5310MHz**Radar Type 1A Statistical Performance**

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5310	76	1	698	1
2	5310	89	1	598	0
3	5310	81	1	658	1
4	5310	70	1	758	1
5	5310	86	1	618	1
6	5310	78	1	678	1
7	5310	67	1	798	1
8	5310	63	1	838	1
9	5310	62	1	858	1
10	5310	102	1	518	1
11	5310	18	1	3066	1
12	5310	59	1	898	1
13	5310	72	1	738	1
14	5310	74	1	718	1
15	5310	58	1	918	1
Detection Percentage: 93.3 % (>60%)					

Radar Type 1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5310	20	1	2718	1
2	5310	81	1	657	1
3	5310	34	1	1567	1
4	5310	47	1	1128	1
5	5310	35	1	1512	1
6	5310	19	1	2906	1
7	5310	26	1	2076	1
8	5310	18	1	3037	1
9	5310	25	1	2147	1
10	5310	19	1	2833	1
11	5310	18	1	3062	1
12	5310	18	1	3053	1
13	5310	39	1	1375	1
14	5310	27	1	1996	1
15	5310	88	1	606	1
Detection Percentage: 100.0 % (>60%)					

Radar Type 2 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5310	28	2.4	194	1
2	5310	25	2.6	202	1
3	5310	23	2.1	184	1
4	5310	26	4.7	184	1
5	5310	26	2.1	193	1
6	5310	29	1	192	1
7	5310	27	2	187	1
8	5310	23	3.1	170	1
9	5310	26	5	153	1
10	5310	29	1.7	179	1
11	5310	24	1.7	172	1
12	5310	26	1.2	154	1
13	5310	27	1.1	156	1
14	5310	28	1.3	150	1
15	5310	27	1.4	192	1
16	5310	23	2.5	215	1
17	5310	28	4.4	153	1
18	5310	28	1.3	176	1
19	5310	23	3.1	225	1
20	5310	28	3.1	215	1
21	5310	26	3.9	195	1
22	5310	29	1.8	181	1
23	5310	29	3.2	218	1
24	5310	28	1.4	167	1
25	5310	29	2	188	1
26	5310	24	1	154	1
27	5310	24	1.2	199	1
28	5310	23	4.4	201	1
29	5310	26	2	154	1
30	5310	28	2.8	181	1
Detection Percentage: 100.0 % (>60%)					

Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5310	16	7.2	269	1
2	5310	16	6.9	281	1
3	5310	18	9.1	271	1
4	5310	18	9.2	498	1
5	5310	18	6.6	447	1
6	5310	18	6.9	326	0
7	5310	18	8	242	1
8	5310	16	9.8	210	1
9	5310	16	7.5	399	1
10	5310	16	6.4	296	1
11	5310	18	8.8	205	1
12	5310	16	6.4	242	1
13	5310	18	6.3	259	1
14	5310	17	6.2	470	1
15	5310	18	6.8	354	1
16	5310	16	6.3	407	1
17	5310	18	7.9	413	1
18	5310	18	8.3	211	1
19	5310	16	6.9	419	1
20	5310	18	10	244	1
21	5310	17	8	247	1
22	5310	16	7	475	1
23	5310	16	8.4	272	1
24	5310	18	8.6	341	1
25	5310	16	8.8	262	1
26	5310	16	7.5	274	1
27	5310	16	8.9	218	1
28	5310	18	9.5	385	1
29	5310	16	6.7	397	1
30	5310	16	9.1	297	1
Detection Percentage: 96.7% (>60%)					

Radar Type 4 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5310	14	15.6	416	1
2	5310	16	15.5	319	1
3	5310	14	13.9	202	0
4	5310	15	18.2	489	1
5	5310	15	13.8	324	1
6	5310	16	15.3	316	0
7	5310	13	11.6	425	1
8	5310	13	18.7	307	1
9	5310	14	16.5	283	1
10	5310	14	11.5	344	1
11	5310	13	13.9	484	1
12	5310	14	16.8	371	1
13	5310	13	16.5	485	1
14	5310	14	18.5	359	1
15	5310	13	17.7	294	1
16	5310	16	11.1	302	1
17	5310	14	12.4	470	1
18	5310	13	13.6	323	1
19	5310	15	11.2	305	1
20	5310	16	16.4	444	1
21	5310	12	12.9	294	1
22	5310	12	19	378	1
23	5310	14	15.7	402	1
24	5310	14	18.8	338	1
25	5310	12	11.9	281	1
26	5310	16	17.6	270	1
27	5310	13	19.7	487	1
28	5310	16	19.5	326	1
29	5310	12	19.9	226	1
30	5310	15	11.1	440	1
Detection Percentage: 93.3 % (>60%)					

Radar Type 5 Case 1 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5310MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	14	73	1318		0.196274	1
1	2	14	62.3	1613		0.982736	
2	3	14	75.6	1206	1403	1.795461	
3	1	14	83.1			2.522153	
4	2	14	88.9	1491		3.021896	
5	2	14	75.7	1109		3.161088	
6	2	14	95.3	1453		4.395958	
7	3	14	78.5	1315	1605	4.603672	
8	3	14	78.4	1819	1869	5.424925	
9	2	14	67.1	1759		6.139266	
10	1	14	73.6			6.900869	
11	2	14	84.5	1608		7.465884	
12	3	14	71.8	1849	1248	7.688183	
13	3	14	53.2	1548	1016	8.281201	
14	3	14	84.2	1044	1493	9.015778	
15	2	14	92	1801		9.76109	
16	2	14	97.4	1202		10.334362	
17	2	14	67.5	1453		11.335896	
18	1	14	76.2			11.403421	

Statistics 2 (ChirpCenter Frequency: 5310.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	12	55.7			0.02353	1
1	2	12	52.2	1259		0.712548	
2	2	12	88.4	1899		1.901065	
3	2	12	67.9	1284		2.176138	
4	2	12	84.9	1017		3.515672	
5	3	12	98.4	1960	1695	4.044673	
6	1	12	72.5			4.654462	
7	3	12	76.6	1047	1917	5.288308	
8	3	12	78.4	1586	1682	5.777053	
9	2	12	57.2	1055		6.609854	
10	1	12	55.9			7.498006	
11	3	12	85.9	1528	1471	7.942896	
12	2	12	95.4	1964		9.110635	
13	3	12	93.8	1771	1934	9.725948	
14	3	12	94.5	1933	1873	9.903404	
15	2	12	52.2	1119		10.614747	
16	2	12	91.9	1522		11.915899	

Statistics 3 (ChirpCenter Frequency: 5310.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	8	91.1	1882		0.718412	1
1	2	8	81.4	1822		0.937863	
2	3	8	56.1	1470	1988	2.450922	
3	1	8	57.7			3.128737	
4	2	8	76.5	1814		4.248672	
5	2	8	81.2	1933		5.517728	
6	2	8	56.7	1241		6.101685	
7	2	8	69.9	1861		7.253176	
8	2	8	59.7	1946		8.010789	
9	2	8	90.6	1458		9.07826	
10	1	8	97.3			9.401225	
11	2	8	88.6	1410		10.6615	
12	2	8	70.2	1308		11.867357	

Statistics 4 (ChirpCenter Frequency: 5310.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	6	72.1	1652		0.820144	1
1	1	6	59.8			1.405113	
2	3	6	72.5	1640	1507	2.377567	
3	3	6	74.3	1706	1487	4.112848	
4	1	6	68			5.097344	
5	2	6	71.6	1312		6.103073	
6	2	6	63.5	1836		6.879711	
7	1	6	70.9			8.249157	
8	2	6	53.8	1233		8.914293	
9	2	6	72.6	1980		10.144979	
10	1	6	69.5			10.951972	

Statistics 5(ChirpCenter Frequency: 5310.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	11	56.9			0.390157	1
1	3	11	75.9	1491	1755	1.472061	
2	2	11	52.5	1986		2.076134	
3	2	11	68.4	1763		2.440408	
4	2	11	80.1	1391		3.72295	
5	3	11	98	1970	1459	4.394348	
6	1	11	84.5			4.920579	
7	2	11	58.8	1704		5.985401	
8	2	11	84.8	1943		6.451693	
9	1	11	96.5			7.414079	
10	3	11	93.1	1771	1930	8.749936	
11	3	11	62.4	1378	1563	9.573024	
12	3	11	88	1957	1156	9.732159	
13	1	11	79.8			11.065531	
14	2	11	53.3	1045		11.576074	

Statistics 6 (ChirpCenter Frequency: 5310.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	5	91.7	1823		1.019855	1
1	3	5	67.2	1986	1813	1.638815	
2	3	5	55.3	1150	1812	3.091583	
3	2	5	94.7	1976		3.814292	
4	2	5	71.9	1849		4.428666	
5	1	5	93			5.569755	
6	1	5	79.1			7.243206	
7	2	5	88.3	1162		8.578711	
8	1	5	79.9			9.749374	
9	1	5	94.8			10.116371	
10	2	5	99.2	1364		11.648719	

Statistics 7(ChirpCenter Frequency: 5310.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	11	86.1	1551		0.504276	1
1	2	11	99	1989		0.999381	
2	3	11	85.4	1183	1113	1.695646	
3	3	11	78.4	1425	1949	2.049317	
4	3	11	70.6	1172	1041	2.816044	
5	3	11	93.7	1654	1703	3.938616	
6	1	11	51.8			4.659255	
7	1	11	87.9			4.945608	
8	2	11	78	1084		5.514485	
9	3	11	61.5	1123	1761	6.186087	
10	2	11	66.3	1565		7.040799	
11	1	11	53.5			7.728627	
12	2	11	75.2	1594		8.545274	
13	3	11	77	1087	1333	8.782717	
14	2	11	74.3	1253		9.425531	
15	2	11	82.5	1371		10.534098	
16	3	11	98.1	1379	1080	11.108021	
17	3	11	98.4	1355	1827	11.744395	

Statistics 8 (ChirpCenter Frequency: 5310.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	9	53.6	1217	1822	0.408407	1
1	3	9	50.9	1123	1993	1.049242	
2	2	9	97.7	1006		2.700842	
3	1	9	60.8			2.828198	
4	1	9	78.6			4.451004	
5	2	9	97.2	1942		4.996426	
6	1	9	63.7			5.760414	
7	1	9	97.1			7.175653	
8	2	9	55.7	1818		7.474356	
9	1	9	95.8			8.439312	
10	2	9	55	1830		9.523997	
11	2	9	50.2	1005		10.472291	
12	2	9	60.4	1860		11.523884	

Statistics 9 (ChirpCenter Frequency: 5310.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	10	67.3			0.108414	1
1	3	10	91.3	1543	1853	0.965018	
2	1	10	56.7			2.037955	
3	1	10	52.5			2.768046	
4	3	10	98.6	1232	1909	3.17629	
5	2	10	92.7	1585		3.881216	
6	3	10	53.9	1057	1384	4.933855	
7	1	10	88.2			5.363591	
8	2	10	67.4	1408		5.846039	
9	3	10	87.8	1590	1162	6.453789	
10	2	10	75.4	1510		7.444586	
11	2	10	51.8	1146		8.047835	
12	1	10	62.7			8.82807	
13	2	10	95.9	1818		9.379707	
14	2	10	99.2	1514		10.054781	
15	2	10	98.7	1578		10.764359	
16	3	10	62.3	1194	1324	11.779206	

Statistics 10 (ChirpCenter Frequency: 5310.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	7	75.7			0.13901	1
1	2	7	89.5	1799		1.211807	
2	2	7	86.6	1152		1.634017	
3	2	7	69	1176		2.56695	
4	2	7	78.7	1208		3.615032	
5	3	7	95	1082	1093	4.018699	
6	1	7	83.8			4.644005	
7	3	7	59.2	1877	1446	5.692664	
8	3	7	91.7	1935	1403	6.169811	
9	1	7	91.9			7.305854	
10	3	7	69.1	1686	1972	8.097373	
11	3	7	76.2	1357	1229	8.603527	
12	1	7	55.2			9.159682	
13	2	7	71.3	1844		10.479449	
14	2	7	91.1	1605		10.923749	
15	2	7	79.3	1995		11.554782	

Radar Type 5 Case 2 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5294.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	6	70.6	1968		0.970373	1
1	3	6	73.5	1439	1467	1.674319	
2	2	6	67.4	1707		3.405975	
3	2	6	82.6	1927		4.631791	
4	2	6	52.1	1508		6.151306	
5	3	6	50.5	1969	1428	7.507525	
6	2	6	87.3	1261		9.291126	
7	2	6	80	1004		10.41536	
8	3	6	73.6	1286	1956	11.598773	

Statistics 2 (ChirpCenter Frequency: 5295.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	7	89.3			0.564344	1
1	2	7	64.5	1472		1.227452	
2	3	7	66.4	1629	1863	1.833203	
3	3	7	79.8	1156	1537	2.777567	
4	2	7	75.4	1932		2.971614	
5	3	7	84.6	1753	1728	3.57697	
6	1	7	84.7			4.349137	
7	3	7	58.7	1426	1410	5.479048	
8	2	7	51.7	1350		6.040784	
9	2	7	62.4	1291		6.777553	
10	3	7	71.4	1166	1335	7.210382	
11	1	7	58.5			8.407354	
12	2	7	53.8	1414		8.929226	
13	2	7	52.4	1571		9.506455	
14	1	7	90.7			9.902241	
15	2	7	87	1938		11.114331	
16	3	7	52.8	1672	1443	11.555162	

Statistics 3 (ChirpCenter Frequency: 5299.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	18	79.1			1.320516	1
1	3	18	86.3	1128	1140	1.768677	
2	3	18	80.2	1774	1812	3.931127	
3	3	18	53.8	1476	1297	5.931411	
4	2	18	77.2	1270		6.185836	
5	1	18	98.9			7.825882	
6	2	18	65.3	1093		10.142998	
7	2	18	75.8	1621		11.239617	

Statistics 4 (ChirpCenter Frequency: 5300.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	20	55.1			0.640172	0
1	1	20	65.6			1.017561	
2	3	20	87.2	1830	1762	2.214048	
3	3	20	72.4	1683	1028	2.499387	
4	3	20	73.8	1464	1437	3.230045	
5	3	20	97.6	1434	1031	4.098661	
6	1	20	63			4.916351	
7	1	20	53.2			6.262185	
8	1	20	58.8			6.924974	
9	1	20	78.8			7.675476	
10	2	20	67.5	1358		8.397465	
11	2	20	96	1962		9.380042	
12	3	20	52.1	1543	1227	10.350932	
13	3	20	55.2	1599	1565	10.77281	
14	3	20	57.6	1248	1021	11.365485	

Statistics 5 (ChirpCenter Frequency: 5300.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	19	89.6	1419		0.321929	1
1	3	19	83.2	1131	1946	1.999842	
2	1	19	87.8			2.948882	
3	2	19	52.6	1485		4.06916	
4	2	19	86.2	1254		5.424679	
5	3	19	55.6	1599	1272	6.275387	
6	2	19	93.4	1419		6.551038	
7	2	19	57.8	1135		8.28958	
8	1	19	85.7			9.04377	
9	2	19	99.7	1352		10.895713	
10	1	19	78.2			11.431099	

Statistics 6 (ChirpCenter Frequency: 5297.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	13	74.4	1086		1.265524	1
1	1	13	86.2			2.24693	
2	3	13	68.9	1122	1625	3.83803	
3	2	13	83.2	1764		5.148866	
4	2	13	55	1998		5.543185	
5	1	13	69.2			6.813489	
6	2	13	68.8	1754		8.346686	
7	2	13	90.2	1901		9.656672	
8	1	13	83.2			10.843622	

Statistics 7 (ChirpCenter Frequency: 5294.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	5	79.8	1346		0.412757	1
1	2	5	92.9	1780		0.838755	
2	3	5	68.4	1645	1444	2.068789	
3	1	5	99.7			2.576143	
4	3	5	75.7	1704	1818	3.505529	
5	2	5	98.7	1886		4.316445	
6	3	5	65.5	1454	1099	5.210314	
7	2	5	83.8	1375		5.409678	
8	1	5	78.4			6.376534	
9	1	5	70.3			7.436235	
10	1	5	80.6			7.506014	
11	2	5	50.3	1599		8.838085	
12	1	5	51.2			9.457729	
13	2	5	97.1	1966		10.413856	
14	2	5	90	1788		10.517345	
15	2	5	80	1930		11.774449	

Statistics 8 (ChirpCenter Frequency: 5294.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	6	75.4	1495		0.435771	1
1	3	6	61.8	1985	1349	1.479108	
2	2	6	64.6	1149		1.941036	
3	2	6	52.7	1689		3.662047	
4	1	6	81.3			4.236787	
5	2	6	52	1761		4.968062	
6	1	6	98.8			5.709079	
7	3	6	55.4	1728	1720	7.014767	
8	2	6	76.6	1630		8.049474	
9	2	6	73.5	1211		8.44852	
10	2	6	87.9	1303		9.985468	
11	2	6	86.7	1923		10.16046	
12	1	6	85.9			11.701062	

Statistics 9 (ChirpCenter Frequency: 5298.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	14	94	1418	1398	0.169576	1
1	3	14	60.4	1320	1193	1.053018	
2	2	14	76	1365		2.084131	
3	3	14	67.2	1463	1267	3.058194	
4	2	14	74.3	1543		3.662248	
5	2	14	89	1406		4.124581	
6	2	14	51.3	1771		5.504586	
7	2	14	65	1092		5.995501	
8	1	14	86			6.445521	
9	1	14	85.3			7.890858	
10	3	14	52.1	1668	1625	8.762067	
11	2	14	75.3	1880		9.330565	
12	1	14	93.5			10.15313	
13	3	14	70.4	1085	1309	10.740022	
14	2	14	58.2	1085		11.812052	

Statistics 10 (ChirpCenter Frequency: 5296.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	11	92.2	1049	1904	0.941588	1
1	1	11	75.4			1.837439	
2	2	11	79.2	1241		2.542709	
3	1	11	63.1			3.366779	
4	1	11	61.7			4.833082	
5	3	11	68.4	1260	1475	5.742817	
6	3	11	81.1	1208	1344	6.776316	
7	3	11	92.4	1599	1380	8.005846	
8	3	11	62.2	1927	1679	9.639346	
9	1	11	99.2			10.098584	
10	2	11	71.4	1428		11.474334	
0	3	11	92.2	1049	1904	0.941588	

Radar Type 5 Case 3 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5324.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	11	82.3	1778		0.507015	1
1	2	11	94.1	1499		1.393278	
2	1	11	73.1			1.710005	
3	2	11	97.2	1754		2.514017	
4	2	11	84.2	1875		2.982382	
5	3	11	92.3	1067	1705	3.844073	
6	2	11	74.7	1912		4.339318	
7	1	11	94.1			5.102036	
8	2	11	56.3	1711		5.899434	
9	1	11	69.4			6.383828	
10	3	11	90.3	1017	1991	7.709295	
11	1	11	87.2			8.294434	
12	1	11	72.1			8.987817	
13	1	11	81.8			9.848844	
14	1	11	90.3			10.198218	
15	2	11	51.8	1779		11.127928	
16	2	11	56.4	1629		11.510766	

Statistics 2 (ChirpCenter Frequency: 5324.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	11	90.7	1665		0.58452	1
1	1	11	50.9			1.158452	
2	2	11	57.7	1352		1.74275	
3	2	11	90	1334		2.331497	
4	2	11	78.5	1738		2.736485	
5	2	11	77.2	1141		3.146091	
6	2	11	67.6	1364		3.710598	
7	1	11	98.9			4.637258	
8	2	11	81.1	1770		5.177231	
9	1	11	74.1			5.472995	
10	2	11	53.2	1055		6.28154	
11	2	11	64	1384		6.99829	
12	1	11	52.3			7.716908	
13	2	11	91.5	1244		8.19282	
14	1	11	63.9			8.924516	
15	1	11	93.7			9.005666	
16	2	11	55.6	1475		9.904373	
17	2	11	61.6	1253		10.776081	
18	2	11	53.3	1530		10.934142	
19	2	11	93.5	1258		11.975675	

Statistics 3 (ChirpCenter Frequency: 5323.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	12	77.7	1330	1589	0.435538	1
1	2	12	75.8	1669		0.875319	
2	3	12	51.9	1184	1657	1.722337	
3	3	12	85.9	1515	1913	2.545874	
4	2	12	81.7	1817		2.975827	
5	2	12	51.8	1793		3.824256	
6	2	12	74.2	1411		4.297886	
7	3	12	68.7	1588	1858	5.551869	
8	2	12	84.5	1343		6.10219	
9	3	12	71.2	1534	1439	6.597643	
10	1	12	90.1			7.676238	
11	3	12	83.5	1360	1653	8.426314	
12	1	12	90.7			8.492288	
13	2	12	52.6	1471		9.539666	
14	2	12	61.4	1830		10.020326	
15	1	12	50			10.872379	
16	3	12	92.1	1907	1130	11.80698	

Statistics 4 (ChirpCenter Frequency: 5324.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	11	72.6	1793	1082	0.185628	1
1	3	11	67.3	1562	1393	0.836954	
2	3	11	50.1	1692	1519	1.382419	
3	1	11	81.1			2.410427	
4	2	11	68.1	1036		2.602589	
5	2	11	74.9	1983		3.295679	
6	3	11	90.5	1220	1068	3.815832	
7	2	11	83.1	1326		4.713155	
8	2	11	70	1398		5.265634	
9	2	11	88.9	1082		5.917988	
10	2	11	70.7	1630		6.678008	
11	2	11	79.1	1770		7.364031	
12	1	11	93.8			8.047913	
13	3	11	76.2	1564	1754	8.686786	
14	2	11	61.1	1874		8.927345	
15	1	11	80.2			9.537784	
16	2	11	91.1	1404		10.224009	
17	3	11	62.7	1811	1943	11.022148	
18	3	11	69.7	1625	1194	11.840083	

Statistics 5 (ChirpCenter Frequency: 5322.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	15	63.4	1489		0.397285	1
1	2	15	84.3	1392		1.303539	
2	2	15	72.6	1025		2.510839	
3	3	15	63.5	1859	1514	3.310727	
4	2	15	54.9	1471		4.781711	
5	3	15	83	1651	1283	5.553543	
6	2	15	78.2	1396		6.940547	
7	3	15	94.8	1229	1809	7.719433	
8	3	15	88.8	1152	1109	8.340504	
9	1	15	72			9.551752	
10	3	15	99.6	1990	1608	10.343904	
11	3	15	52	1863	1667	11.524724	

Statistics 6 (ChirpCenter Frequency: 5324.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	11	63.5			0.440813	1
1	3	11	79.9	1588	1748	1.162826	
2	3	11	94.6	1689	1427	2.14177	
3	2	11	65.7	1119		2.880461	
4	2	11	56.4	1101		3.371661	
5	2	11	90.6	1376		4.20284	
6	3	11	55	1507	1621	4.716377	
7	2	11	93.8	1764		5.973249	
8	2	11	80.8	1706		6.608775	
9	2	11	89.5	1870		7.456509	
10	1	11	89.4			7.566896	
11	3	11	98.1	1784	1768	8.97849	
12	3	11	73.5	1865	1208	9.037935	
13	2	11	81.7	1525		9.774612	
14	1	11	64.1			10.866047	
15	2	11	91.6	1796		11.576809	

Statistics 7 (ChirpCenter Frequency: 5324.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	11	93.7	1685		0.521714	1
1	3	11	94.6	1893	1592	0.869201	
2	2	11	65.4	1701		2.096328	
3	3	11	60.3	1058	1940	2.697051	
4	3	11	53.2	1240	1419	3.113005	
5	2	11	94.3	1577		4.222972	
6	2	11	94.4	1821		5.103708	
7	2	11	57.1	1098		5.505986	
8	1	11	71			6.016383	
9	2	11	78.9	1897		7.392627	
10	2	11	95.1	1665		8.181229	
11	2	11	91.8	1908		8.609418	
12	2	11	57.9	1686		9.53839	
13	1	11	78.5			10.329311	
14	3	11	80.4	1418	1525	10.596433	
15	2	11	56.4	1360		11.656786	

Statistics 8 (ChirpCenter Frequency: 5322.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	14	51.2	1849		0.178541	1
1	2	14	91.6	1061		2.034211	
2	2	14	58.3	1603		2.775552	
3	2	14	50.2	1226		4.186212	
4	3	14	64.5	1461	1620	5.792096	
5	2	14	60.8	1978		7.121172	
6	2	14	90.2	1104		7.552574	
7	1	14	74.8			8.91533	
8	2	14	90.5	1648		10.72716	
9	1	14	80.6			10.982396	

Statistics 9 (ChirpCenter Frequency: 5320.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	19	62.7	1031	1443	0.011665	1
1	1	19	62.8			1.460697	
2	2	19	65.2	1934		2.091342	
3	2	19	77.8	1170		3.337974	
4	2	19	98.3	1792		4.205732	
5	2	19	84.4	1873		4.314149	
6	2	19	81.5	1514		5.489308	
7	2	19	70.8	1180		6.657224	
8	2	19	78	1152		7.100647	
9	2	19	77.4	1298		8.138771	
10	2	19	63.2	1925		8.606532	
11	2	19	56.8	1821		9.536474	
12	1	19	87.4			10.48493	
13	1	19	98.7			11.65676	

Statistics 10 (ChirpCenter Frequency: 5320.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	20	60.7	1808		0.786419	1
1	1	20	86.9			1.943928	
2	3	20	96.9	1462	1964	2.220684	
3	2	20	59.3	1911		3.416791	
4	1	20	75.4			4.144731	
5	3	20	57.4	1400	1879	5.259599	
6	2	20	64.2	1605		6.697585	
7	1	20	81.1			7.844407	
8	2	20	50.5	1362		8.796044	
9	3	20	64.7	1893	1723	9.01279	
10	1	20	93.5			10.334451	
11	2	20	93.5	1266		11.369872	

Radar Type 6 Statistical Performance

Trial #	Fc (MHz)	Pulse /Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)	Hopping Sequence (MHz)
1	5310	9	1	333	1	5429.0, 5706.0, 5645.0, 5394.0, 5632.0, 5485.0, 5419.0, 5425.0, 5611.0, 5541.0, 5659.0, 5560.0, 5661.0, 5503.0, 5707.0, 5404.0, 5516.0, 5256.0, 5532.0, 5320.0, 5721.0, 5510.0, 5616.0, 5587.0, 5375.0, 5265.0, 5544.0, 5412.0, 5646.0, 5709.0, 5660.0, 5423.0, 5338.0, 5304.0, 5708.0, 5618.0, 5597.0, 5498.0, 5605.0, 5515.0, 5272.0, 5271.0, 5397.0, 5420.0, 5497.0, 5414.0, 5490.0, 5384.0, 5378.0, 5636.0, 5687.0, 5559.0, 5278.0, 5724.0, 5539.0, 5366.0, 5623.0, 5580.0, 5455.0, 5586.0, 5654.0, 5590.0, 5633.0, 5491.0, 5298.0, 5622.0, 5698.0, 5263.0, 5456.0, 5573.0, 5603.0, 5388.0, 5452.0, 5494.0, 5283.0, 5411.0, 5253.0, 5465.0, 5640.0, 5537.0, 5693.0, 5401.0, 5717.0, 5547.0, 5561.0, 5521.0, 5310.0, 5291.0, 5624.0, 5569.0, 5473.0, 5705.0, 5337.0, 5684.0, 5340.0, 5395.0, 5578.0, 5373.0, 5530.0, 5409.0 (number of hits: 4)
2	5310	9	1	333	1	5429.0, 5505.0, 5437.0, 5637.0, 5695.0, 5484.0, 5722.0, 5656.0, 5644.0, 5387.0, 5486.0, 5705.0, 5327.0, 5477.0, 5464.0, 5542.0, 5368.0, 5425.0, 5537.0, 5519.0, 5554.0, 5418.0, 5402.0, 5277.0, 5688.0, 5536.0, 5626.0, 5591.0, 5465.0, 5335.0, 5646.0, 5685.0, 5354.0, 5662.0, 5523.0, 5410.0, 5515.0, 5305.0, 5428.0, 5560.0, 5442.0, 5370.0, 5548.0, 5480.0, 5555.0, 5292.0, 5266.0, 5414.0, 5594.0, 5356.0, 5430.0, 5363.0, 5660.0, 5436.0, 5576.0, 5452.0, 5549.0, 5301.0, 5544.0, 5320.0, 5255.0, 5551.0, 5483.0, 5578.0, 5714.0, 5500.0, 5697.0, 5346.0, 5426.0, 5341.0, 5723.0, 5264.0, 5321.0, 5719.0, 5564.0, 5492.0, 5635.0, 5659.0, 5580.0, 5676.0, 5482.0, 5630.0, 5709.0, 5585.0, 5596.0, 5460.0, 5608.0, 5474.0, 5315.0, 5405.0, 5278.0, 5388.0, 5399.0, 5493.0, 5352.0, 5275.0, 5666.0, 5433.0, 5326.0, 5350.0 (number of hits: 8)
3	5310	9	1	333		
4	5310	9	1	333	1	5617.0, 5295.0, 5549.0, 5600.0, 5689.0, 5518.0, 5314.0, 5321.0, 5335.0, 5665.0, 5505.0, 5305.0, 5642.0, 5361.0, 5365.0, 5357.0, 5597.0, 5596.0, 5360.0, 5419.0, 5500.0, 5553.0, 5589.0, 5401.0, 5464.0, 5262.0, 5695.0, 5253.0, 5299.0, 5508.0, 5336.0, 5506.0, 5465.0, 5380.0, 5546.0, 5386.0, 5533.0, 5611.0, 5392.0, 5593.0, 5641.0, 5615.0, 5353.0, 5684.0, 5414.0, 5329.0, 5521.0, 5582.0, 5708.0, 5581.0,

						5715.0, 5640.0, 5503.0, 5607.0, 5416.0, 5312.0, 5528.0, 5482.0, 5592.0, 5557.0, 5397.0, 5630.0, 5300.0, 5364.0, 5363.0, 5307.0, 5270.0, 5716.0, 5513.0, 5645.0, 5408.0, 5622.0, 5666.0, 5620.0, 5394.0, 5289.0, 5690.0, 5515.0, 5343.0, 5271.0, 5722.0, 5257.0, 5310.0, 5433.0, 5356.0, 5342.0, 5554.0, 5385.0, 5486.0, 5379.0, 5571.0, 5284.0, 5451.0, 5710.0, 5628.0, 5499.0, 5279.0, 5647.0, 5498.0, 5526.0 (number of hits: 9)
5	5310	9	1	333	1	5546.0, 5284.0, 5345.0, 5515.0, 5589.0, 5570.0, 5568.0, 5580.0, 5414.0, 5429.0, 5316.0, 5360.0, 5539.0, 5425.0, 5498.0, 5610.0, 5653.0, 5460.0, 5500.0, 5620.0, 5597.0, 5626.0, 5593.0, 5283.0, 5724.0, 5397.0, 5286.0, 5382.0, 5466.0, 5551.0, 5497.0, 5538.0, 5706.0, 5616.0, 5505.0, 5633.0, 5386.0, 5690.0, 5393.0, 5435.0, 5424.0, 5296.0, 5347.0, 5481.0, 5517.0, 5294.0, 5583.0, 5401.0, 5689.0, 5502.0, 5561.0, 5374.0, 5263.0, 5361.0, 5713.0, 5671.0, 5668.0, 5677.0, 5440.0, 5417.0, 5254.0, 5372.0, 5457.0, 5298.0, 5278.0, 5267.0, 5285.0, 5395.0, 5663.0, 5682.0, 5450.0, 5408.0, 5380.0, 5669.0, 5371.0, 5472.0, 5656.0, 5291.0, 5657.0, 5646.0, 5462.0, 5448.0, 5622.0, 5694.0, 5501.0, 5717.0, 5410.0, 5523.0, 5591.0, 5486.0, 5356.0, 5433.0, 5621.0, 5358.0, 5615.0, 5642.0, 5714.0, 5307.0, 5441.0, 5341.0 (number of hits: 5)
6	5310	9	1	333	1	5321.0, 5518.0, 5431.0, 5332.0, 5499.0, 5547.0, 5578.0, 5641.0, 5367.0, 5265.0, 5326.0, 5498.0, 5372.0, 5584.0, 5455.0, 5320.0, 5292.0, 5652.0, 5294.0, 5529.0, 5411.0, 5542.0, 5489.0, 5304.0, 5392.0, 5575.0, 5352.0, 5426.0, 5644.0, 5342.0, 5536.0, 5535.0, 5373.0, 5608.0, 5348.0, 5621.0, 5496.0, 5605.0, 5654.0, 5591.0, 5656.0, 5469.0, 5554.0, 5307.0, 5676.0, 5649.0, 5405.0, 5559.0, 5364.0, 5674.0, 5273.0, 5596.0, 5324.0, 5667.0, 5544.0, 5466.0, 5278.0, 5606.0, 5345.0, 5454.0, 5563.0, 5520.0, 5428.0, 5258.0, 5415.0, 5266.0, 5548.0, 5684.0, 5553.0, 5538.0, 5689.0, 5573.0, 5472.0, 5437.0, 5448.0, 5463.0, 5639.0, 5402.0, 5685.0, 5585.0, 5330.0, 5443.0, 5272.0, 5329.0, 5562.0, 5334.0, 5693.0, 5413.0, 5368.0, 5642.0, 5380.0, 5253.0, 5515.0, 5665.0, 5701.0, 5313.0, 5631.0, 5424.0, 5714.0, 5675.0 (number of hits: 9)
7	5310	9	1	333	1	5707.0, 5620.0, 5256.0, 5338.0, 5281.0, 5703.0, 5697.0, 5480.0, 5342.0, 5358.0, 5474.0, 5372.0, 5461.0, 5612.0, 5572.0, 5699.0, 5522.0, 5561.0, 5262.0, 5370.0, 5326.0, 5497.0, 5328.0, 5392.0, 5429.0, 5364.0, 5271.0, 5334.0, 5566.0, 5270.0,

						5515.0, 5309.0, 5476.0, 5257.0, 5323.0, 5665.0, 5347.0, 5569.0, 5452.0, 5424.0, 5632.0, 5285.0, 5411.0, 5339.0, 5385.0, 5514.0, 5614.0, 5502.0, 5594.0, 5420.0, 5451.0, 5254.0, 5490.0, 5481.0, 5409.0, 5677.0, 5673.0, 5668.0, 5299.0, 5264.0, 5621.0, 5453.0, 5578.0, 5353.0, 5371.0, 5625.0, 5416.0, 5544.0, 5446.0, 5550.0, 5253.0, 5295.0, 5459.0, 5575.0, 5259.0, 5647.0, 5376.0, 5523.0, 5322.0, 5629.0, 5325.0, 5284.0, 5713.0, 5289.0, 5557.0, 5495.0, 5539.0, 5288.0, 5320.0, 5280.0, 5440.0, 5419.0, 5272.0, 5556.0, 5638.0, 5581.0, 5406.0, 5351.0, 5579.0, 5675.0 (number of hits: 8)
8	5310	9	1	333	1	5336.0, 5703.0, 5478.0, 5308.0, 5709.0, 5717.0, 5338.0, 5267.0, 5396.0, 5630.0, 5698.0, 5252.0, 5432.0, 5441.0, 5590.0, 5467.0, 5454.0, 5571.0, 5531.0, 5714.0, 5282.0, 5427.0, 5635.0, 5436.0, 5466.0, 5597.0, 5253.0, 5582.0, 5538.0, 5410.0, 5716.0, 5310.0, 5672.0, 5565.0, 5398.0, 5547.0, 5627.0, 5614.0, 5414.0, 5573.0, 5265.0, 5387.0, 5655.0, 5686.0, 5317.0, 5392.0, 5503.0, 5294.0, 5676.0, 5256.0, 5423.0, 5701.0, 5363.0, 5431.0, 5642.0, 5279.0, 5612.0, 5575.0, 5316.0, 5328.0, 5369.0, 5563.0, 5583.0, 5598.0, 5468.0, 5595.0, 5607.0, 5376.0, 5680.0, 5452.0, 5609.0, 5399.0, 5555.0, 5697.0, 5337.0, 5592.0, 5483.0, 5656.0, 5713.0, 5344.0, 5350.0, 5666.0, 5482.0, 5629.0, 5633.0, 5705.0, 5364.0, 5688.0, 5327.0, 5651.0, 5548.0, 5428.0, 5527.0, 5257.0, 5549.0, 5687.0, 5638.0, 5464.0, 5661.0, 5424.0 (number of hits: 6)
9	5310	9	1	333	1	5453.0, 5452.0, 5443.0, 5257.0, 5556.0, 5378.0, 5706.0, 5256.0, 5590.0, 5476.0, 5286.0, 5604.0, 5549.0, 5364.0, 5596.0, 5328.0, 5543.0, 5580.0, 5498.0, 5510.0, 5478.0, 5301.0, 5284.0, 5267.0, 5615.0, 5289.0, 5258.0, 5347.0, 5391.0, 5642.0, 5594.0, 5369.0, 5674.0, 5357.0, 5372.0, 5379.0, 5263.0, 5504.0, 5713.0, 5560.0, 5523.0, 5577.0, 5534.0, 5702.0, 5427.0, 5285.0, 5613.0, 5492.0, 5512.0, 5531.0, 5401.0, 5479.0, 5719.0, 5302.0, 5703.0, 5255.0, 5585.0, 5280.0, 5714.0, 5430.0, 5578.0, 5709.0, 5456.0, 5602.0, 5623.0, 5260.0, 5601.0, 5665.0, 5381.0, 5650.0, 5570.0, 5264.0, 5471.0, 5319.0, 5432.0, 5558.0, 5608.0, 5499.0, 5459.0, 5389.0, 5425.0, 5346.0, 5606.0, 5550.0, 5687.0, 5520.0, 5392.0, 5446.0, 5696.0, 5667.0, 5583.0, 5624.0, 5640.0, 5438.0, 5600.0, 5587.0, 5464.0, 5458.0, 5663.0, 5297.0 (number of hits: 4)
10	5310	9	1	333	1	5346.0, 5495.0, 5620.0, 5581.0, 5265.0, 5273.0, 5617.0, 5540.0, 5575.0, 5414.0,

						5317.0, 5520.0, 5565.0, 5597.0, 5309.0, 5632.0, 5369.0, 5546.0, 5343.0, 5676.0, 5658.0, 5364.0, 5703.0, 5723.0, 5314.0, 5624.0, 5271.0, 5561.0, 5521.0, 5721.0, 5605.0, 5603.0, 5397.0, 5366.0, 5275.0, 5408.0, 5526.0, 5618.0, 5549.0, 5634.0, 5688.0, 5607.0, 5373.0, 5671.0, 5321.0, 5712.0, 5353.0, 5388.0, 5492.0, 5646.0, 5417.0, 5532.0, 5718.0, 5604.0, 5579.0, 5319.0, 5591.0, 5479.0, 5562.0, 5559.0, 5266.0, 5515.0, 5564.0, 5623.0, 5488.0, 5588.0, 5633.0, 5657.0, 5500.0, 5547.0, 5395.0, 5485.0, 5390.0, 5295.0, 5301.0, 5612.0, 5307.0, 5551.0, 5469.0, 5259.0, 5458.0, 5371.0, 5494.0, 5441.0, 5318.0, 5489.0, 5585.0, 5645.0, 5404.0, 5577.0, 5258.0, 5362.0, 5630.0, 5341.0, 5505.0, 5687.0, 5456.0, 5473.0, 5281.0, 5387.0 (number of hits: 9)
11	5310	9	1	333		
12	5310	9	1	333	1	5516.0, 5479.0, 5444.0, 5398.0, 5452.0, 5531.0, 5465.0, 5265.0, 5435.0, 5326.0, 5724.0, 5581.0, 5540.0, 5414.0, 5680.0, 5396.0, 5600.0, 5405.0, 5346.0, 5418.0, 5559.0, 5306.0, 5290.0, 5276.0, 5309.0, 5316.0, 5258.0, 5552.0, 5720.0, 5433.0, 5675.0, 5341.0, 5630.0, 5662.0, 5497.0, 5688.0, 5373.0, 5614.0, 5440.0, 5348.0, 5568.0, 5537.0, 5441.0, 5521.0, 5474.0, 5343.0, 5612.0, 5473.0, 5403.0, 5603.0, 5659.0, 5678.0, 5685.0, 5676.0, 5397.0, 5518.0, 5426.0, 5313.0, 5556.0, 5463.0, 5332.0, 5498.0, 5705.0, 5665.0, 5582.0, 5394.0, 5380.0, 5631.0, 5411.0, 5288.0, 5566.0, 5646.0, 5456.0, 5529.0, 5649.0, 5701.0, 5625.0, 5511.0, 5538.0, 5336.0, 5445.0, 5674.0, 5639.0, 5254.0, 5280.0, 5635.0, 5283.0, 5599.0, 5470.0, 5687.0, 5523.0, 5651.0, 5607.0, 5576.0, 5623.0, 5700.0, 5357.0, 5259.0, 5644.0, 5384.0 (number of hits: 5)
13	5310	9	1	333	1	5417.0, 5392.0, 5540.0, 5391.0, 5379.0, 5665.0, 5611.0, 5300.0, 5442.0, 5632.0, 5390.0, 5604.0, 5490.0, 5682.0, 5643.0, 5280.0, 5489.0, 5380.0, 5523.0, 5441.0, 5498.0, 5719.0, 5500.0, 5364.0, 5408.0, 5276.0, 5398.0, 5278.0, 5281.0, 5672.0, 5410.0, 5347.0, 5606.0, 5711.0, 5495.0, 5522.0, 5318.0, 5541.0, 5421.0, 5274.0, 5484.0, 5701.0, 5260.0, 5673.0, 5656.0, 5387.0, 5306.0, 5661.0, 5521.0, 5290.0, 5595.0, 5710.0, 5607.0, 5695.0, 5483.0, 5470.0, 5433.0, 5597.0, 5332.0, 5471.0, 5662.0, 5466.0, 5335.0, 5326.0, 5447.0, 5514.0, 5702.0, 5669.0, 5314.0, 5397.0, 5358.0, 5599.0, 5480.0, 5413.0, 5479.0, 5436.0, 5516.0, 5324.0, 5272.0, 5344.0, 5463.0, 5310.0, 5407.0, 5338.0, 5348.0, 5393.0, 5375.0, 5580.0, 5553.0, 5666.0,

						5530.0, 5623.0, 5416.0, 5560.0, 5613.0, 5589.0, 5437.0, 5519.0, 5345.0, 5366.0 (number of hits: 7)
14	5310	9	1	333	1	5326.0, 5428.0, 5441.0, 5437.0, 5525.0, 5556.0, 5492.0, 5568.0, 5558.0, 5330.0, 5448.0, 5573.0, 5643.0, 5668.0, 5261.0, 5490.0, 5483.0, 5600.0, 5552.0, 5394.0, 5513.0, 5695.0, 5632.0, 5575.0, 5518.0, 5468.0, 5429.0, 5361.0, 5454.0, 5464.0, 5325.0, 5535.0, 5280.0, 5416.0, 5294.0, 5385.0, 5590.0, 5300.0, 5519.0, 5613.0, 5577.0, 5609.0, 5530.0, 5528.0, 5680.0, 5682.0, 5723.0, 5395.0, 5508.0, 5619.0, 5478.0, 5311.0, 5650.0, 5284.0, 5675.0, 5427.0, 5690.0, 5684.0, 5373.0, 5452.0, 5537.0, 5717.0, 5324.0, 5474.0, 5685.0, 5605.0, 5649.0, 5663.0, 5554.0, 5565.0, 5443.0, 5488.0, 5499.0, 5646.0, 5381.0, 5533.0, 5624.0, 5351.0, 5265.0, 5662.0, 5315.0, 5331.0, 5657.0, 5469.0, 5549.0, 5563.0, 5347.0, 5637.0, 5410.0, 5356.0, 5415.0, 5254.0, 5538.0, 5393.0, 5484.0, 5338.0, 5291.0, 5465.0, 5681.0, 5648.0 (number of hits: 7)
15	5310	9	1	333	1	5352.0, 5636.0, 5394.0, 5561.0, 5353.0, 5552.0, 5678.0, 5359.0, 5259.0, 5269.0, 5319.0, 5314.0, 5419.0, 5488.0, 5704.0, 5298.0, 5323.0, 5535.0, 5628.0, 5515.0, 5329.0, 5467.0, 5451.0, 5556.0, 5472.0, 5594.0, 5660.0, 5406.0, 5331.0, 5468.0, 5702.0, 5601.0, 5590.0, 5550.0, 5584.0, 5362.0, 5390.0, 5554.0, 5424.0, 5289.0, 5449.0, 5642.0, 5667.0, 5712.0, 5473.0, 5481.0, 5483.0, 5418.0, 5286.0, 5408.0, 5370.0, 5287.0, 5577.0, 5717.0, 5635.0, 5393.0, 5684.0, 5503.0, 5343.0, 5530.0, 5413.0, 5404.0, 5371.0, 5675.0, 5698.0, 5490.0, 5542.0, 5291.0, 5517.0, 5522.0, 5706.0, 5268.0, 5422.0, 5285.0, 5527.0, 5326.0, 5478.0, 5302.0, 5516.0, 5409.0, 5715.0, 5622.0, 5661.0, 5645.0, 5442.0, 5574.0, 5631.0, 5544.0, 5279.0, 5450.0, 5308.0, 5423.0, 5559.0, 5272.0, 5586.0, 5548.0, 5641.0, 5568.0, 5403.0, 5355.0 (number of hits: 7)
16	5310	9	1	333	1	5304.0, 5650.0, 5344.0, 5705.0, 5478.0, 5555.0, 5286.0, 5503.0, 5618.0, 5359.0, 5537.0, 5356.0, 5660.0, 5588.0, 5615.0, 5585.0, 5340.0, 5562.0, 5607.0, 5560.0, 5668.0, 5395.0, 5513.0, 5308.0, 5477.0, 5251.0, 5625.0, 5712.0, 5582.0, 5502.0, 5299.0, 5540.0, 5268.0, 5373.0, 5616.0, 5532.0, 5472.0, 5483.0, 5386.0, 5505.0, 5666.0, 5633.0, 5381.0, 5621.0, 5438.0, 5342.0, 5411.0, 5583.0, 5312.0, 5652.0, 5664.0, 5338.0, 5600.0, 5293.0, 5420.0, 5627.0, 5706.0, 5508.0, 5584.0, 5528.0, 5433.0, 5649.0, 5629.0, 5255.0, 5678.0, 5657.0, 5623.0, 5541.0, 5461.0, 5273.0,

						5667.0, 5372.0, 5368.0, 5263.0, 5334.0, 5291.0, 5407.0, 5260.0, 5608.0, 5426.0, 5596.0, 5674.0, 5367.0, 5261.0, 5264.0, 5495.0, 5490.0, 5267.0, 5511.0, 5558.0, 5325.0, 5484.0, 5707.0, 5473.0, 5416.0, 5628.0, 5580.0, 5314.0, 5531.0, 5327.0 (number of hits: 8)
17	5310	9	1	333	1	5434.0, 5357.0, 5668.0, 5554.0, 5585.0, 5688.0, 5413.0, 5260.0, 5543.0, 5382.0, 5717.0, 5329.0, 5593.0, 5385.0, 5666.0, 5693.0, 5458.0, 5502.0, 5558.0, 5536.0, 5670.0, 5605.0, 5431.0, 5449.0, 5343.0, 5448.0, 5611.0, 5396.0, 5489.0, 5267.0, 5390.0, 5483.0, 5447.0, 5455.0, 5662.0, 5375.0, 5684.0, 5481.0, 5581.0, 5506.0, 5505.0, 5528.0, 5624.0, 5716.0, 5315.0, 5265.0, 5397.0, 5383.0, 5389.0, 5645.0, 5429.0, 5335.0, 5595.0, 5627.0, 5706.0, 5472.0, 5623.0, 5687.0, 5657.0, 5283.0, 5527.0, 5570.0, 5365.0, 5718.0, 5514.0, 5531.0, 5430.0, 5279.0, 5259.0, 5652.0, 5269.0, 5596.0, 5496.0, 5276.0, 5445.0, 5296.0, 5264.0, 5451.0, 5538.0, 5632.0, 5640.0, 5658.0, 5268.0, 5479.0, 5302.0, 5653.0, 5462.0, 5319.0, 5352.0, 5686.0, 5441.0, 5711.0, 5622.0, 5318.0, 5484.0, 5255.0, 5708.0, 5298.0, 5607.0, 5273.0 (number of hits: 6)
18	5310	9	1	333	1	5613.0, 5629.0, 5679.0, 5288.0, 5623.0, 5392.0, 5621.0, 5352.0, 5497.0, 5476.0, 5599.0, 5334.0, 5278.0, 5422.0, 5577.0, 5708.0, 5417.0, 5523.0, 5530.0, 5482.0, 5399.0, 5543.0, 5269.0, 5408.0, 5536.0, 5326.0, 5676.0, 5282.0, 5360.0, 5449.0, 5377.0, 5600.0, 5528.0, 5419.0, 5405.0, 5472.0, 5393.0, 5384.0, 5488.0, 5406.0, 5490.0, 5315.0, 5648.0, 5368.0, 5568.0, 5647.0, 5650.0, 5714.0, 5583.0, 5283.0, 5486.0, 5277.0, 5532.0, 5354.0, 5446.0, 5588.0, 5509.0, 5342.0, 5311.0, 5411.0, 5710.0, 5481.0, 5301.0, 5502.0, 5286.0, 5444.0, 5428.0, 5432.0, 5386.0, 5545.0, 5675.0, 5538.0, 5611.0, 5308.0, 5548.0, 5643.0, 5290.0, 5485.0, 5574.0, 5597.0, 5657.0, 5380.0, 5653.0, 5487.0, 5341.0, 5552.0, 5584.0, 5328.0, 5397.0, 5537.0, 5578.0, 5646.0, 5375.0, 5658.0, 5666.0, 5539.0, 5556.0, 5704.0, 5289.0, 5268.0 (number of hits: 5)
19	5310	9	1	333	1	5646.0, 5441.0, 5507.0, 5297.0, 5594.0, 5509.0, 5497.0, 5517.0, 5676.0, 5691.0, 5606.0, 5668.0, 5397.0, 5494.0, 5371.0, 5529.0, 5386.0, 5551.0, 5628.0, 5703.0, 5715.0, 5613.0, 5556.0, 5380.0, 5531.0, 5394.0, 5296.0, 5570.0, 5710.0, 5661.0, 5403.0, 5488.0, 5631.0, 5307.0, 5690.0, 5713.0, 5639.0, 5598.0, 5387.0, 5503.0, 5444.0, 5627.0, 5475.0, 5422.0, 5338.0, 5451.0, 5516.0, 5565.0, 5597.0, 5370.0,

						5454.0, 5576.0, 5395.0, 5545.0, 5333.0, 5602.0, 5351.0, 5534.0, 5256.0, 5722.0, 5361.0, 5704.0, 5635.0, 5365.0, 5512.0, 5320.0, 5363.0, 5608.0, 5388.0, 5372.0, 5453.0, 5519.0, 5697.0, 5547.0, 5539.0, 5706.0, 5579.0, 5588.0, 5436.0, 5341.0, 5615.0, 5626.0, 5329.0, 5637.0, 5644.0, 5452.0, 5326.0, 5310.0, 5345.0, 5327.0, 5625.0, 5633.0, 5587.0, 5466.0, 5374.0, 5526.0, 5490.0, 5377.0, 5648.0, 5467.0 (number of hits: 7)
20	5310	9	1	333	1	5636.0, 5597.0, 5275.0, 5273.0, 5450.0, 5625.0, 5402.0, 5514.0, 5569.0, 5593.0, 5656.0, 5540.0, 5538.0, 5708.0, 5629.0, 5632.0, 5353.0, 5365.0, 5272.0, 5438.0, 5268.0, 5484.0, 5387.0, 5489.0, 5612.0, 5357.0, 5288.0, 5439.0, 5688.0, 5531.0, 5341.0, 5447.0, 5532.0, 5695.0, 5251.0, 5583.0, 5556.0, 5505.0, 5281.0, 5614.0, 5358.0, 5290.0, 5378.0, 5535.0, 5285.0, 5555.0, 5304.0, 5590.0, 5374.0, 5526.0, 5673.0, 5375.0, 5366.0, 5263.0, 5391.0, 5379.0, 5510.0, 5722.0, 5519.0, 5415.0, 5477.0, 5624.0, 5522.0, 5499.0, 5571.0, 5441.0, 5480.0, 5512.0, 5408.0, 5685.0, 5704.0, 5435.0, 5667.0, 5346.0, 5394.0, 5562.0, 5545.0, 5276.0, 5553.0, 5481.0, 5637.0, 5384.0, 5305.0, 5600.0, 5444.0, 5253.0, 5619.0, 5266.0, 5669.0, 5692.0, 5330.0, 5364.0, 5267.0, 5479.0, 5599.0, 5421.0, 5325.0, 5714.0, 5422.0, 5461.0 (number of hits: 3)
21	5310	9	1	333	1	5678.0, 5308.0, 5690.0, 5343.0, 5356.0, 5350.0, 5325.0, 5647.0, 5411.0, 5548.0, 5396.0, 5466.0, 5524.0, 5635.0, 5499.0, 5604.0, 5673.0, 5556.0, 5419.0, 5364.0, 5545.0, 5525.0, 5269.0, 5633.0, 5254.0, 5658.0, 5445.0, 5569.0, 5708.0, 5371.0, 5618.0, 5590.0, 5670.0, 5555.0, 5617.0, 5372.0, 5274.0, 5388.0, 5322.0, 5508.0, 5573.0, 5486.0, 5300.0, 5603.0, 5375.0, 5613.0, 5302.0, 5553.0, 5622.0, 5488.0, 5660.0, 5596.0, 5333.0, 5620.0, 5294.0, 5331.0, 5578.0, 5519.0, 5668.0, 5580.0, 5318.0, 5709.0, 5538.0, 5418.0, 5719.0, 5335.0, 5476.0, 5511.0, 5259.0, 5582.0, 5423.0, 5494.0, 5648.0, 5589.0, 5403.0, 5717.0, 5454.0, 5405.0, 5517.0, 5353.0, 5535.0, 5262.0, 5550.0, 5521.0, 5440.0, 5430.0, 5395.0, 5312.0, 5482.0, 5275.0, 5516.0, 5380.0, 5279.0, 5443.0, 5568.0, 5594.0, 5323.0, 5697.0, 5478.0, 5711.0 (number of hits: 9)
22	5310	9	1	333	1	5270.0, 5631.0, 5612.0, 5528.0, 5399.0, 5267.0, 5520.0, 5397.0, 5463.0, 5687.0, 5711.0, 5603.0, 5658.0, 5340.0, 5319.0, 5461.0, 5311.0, 5380.0, 5545.0, 5466.0, 5578.0, 5344.0, 5505.0, 5426.0, 5669.0, 5525.0, 5452.0, 5310.0, 5541.0, 5514.0,

						5339.0, 5428.0, 5326.0, 5710.0, 5384.0, 5467.0, 5364.0, 5416.0, 5663.0, 5629.0, 5680.0, 5601.0, 5303.0, 5479.0, 5489.0, 5455.0, 5552.0, 5407.0, 5564.0, 5510.0, 5503.0, 5677.0, 5408.0, 5561.0, 5538.0, 5662.0, 5673.0, 5332.0, 5569.0, 5415.0, 5276.0, 5277.0, 5257.0, 5361.0, 5586.0, 5418.0, 5581.0, 5425.0, 5653.0, 5441.0, 5394.0, 5596.0, 5481.0, 5560.0, 5290.0, 5679.0, 5553.0, 5724.0, 5715.0, 5495.0, 5342.0, 5430.0, 5251.0, 5359.0, 5529.0, 5621.0, 5295.0, 5293.0, 5476.0, 5324.0, 5523.0, 5420.0, 5656.0, 5720.0, 5253.0, 5637.0, 5353.0, 5689.0, 5389.0, 5594.0 (number of hits: 8)
23	5310	9	1	333	1	5524.0, 5251.0, 5684.0, 5605.0, 5321.0, 5267.0, 5586.0, 5422.0, 5563.0, 5542.0, 5336.0, 5651.0, 5571.0, 5489.0, 5634.0, 5420.0, 5450.0, 5632.0, 5565.0, 5386.0, 5379.0, 5511.0, 5589.0, 5323.0, 5288.0, 5706.0, 5345.0, 5440.0, 5580.0, 5672.0, 5544.0, 5294.0, 5312.0, 5453.0, 5385.0, 5627.0, 5261.0, 5657.0, 5488.0, 5705.0, 5455.0, 5501.0, 5611.0, 5677.0, 5300.0, 5525.0, 5683.0, 5472.0, 5620.0, 5334.0, 5647.0, 5538.0, 5636.0, 5352.0, 5446.0, 5257.0, 5597.0, 5582.0, 5659.0, 5572.0, 5371.0, 5660.0, 5668.0, 5479.0, 5641.0, 5497.0, 5448.0, 5403.0, 5662.0, 5656.0, 5357.0, 5468.0, 5688.0, 5491.0, 5356.0, 5545.0, 5694.0, 5425.0, 5392.0, 5527.0, 5464.0, 5716.0, 5390.0, 5722.0, 5629.0, 5268.0, 5445.0, 5537.0, 5329.0, 5391.0, 5556.0, 5547.0, 5619.0, 5650.0, 5376.0, 5622.0, 5704.0, 5471.0, 5304.0, 5351.0 (number of hits: 6)
24	5310	9	1	333	1	5273.0, 5558.0, 5337.0, 5576.0, 5269.0, 5423.0, 5458.0, 5520.0, 5479.0, 5678.0, 5432.0, 5467.0, 5600.0, 5703.0, 5302.0, 5513.0, 5656.0, 5515.0, 5677.0, 5583.0, 5616.0, 5598.0, 5324.0, 5565.0, 5655.0, 5344.0, 5634.0, 5402.0, 5582.0, 5519.0, 5522.0, 5388.0, 5567.0, 5449.0, 5259.0, 5452.0, 5332.0, 5684.0, 5675.0, 5670.0, 5709.0, 5528.0, 5586.0, 5640.0, 5562.0, 5710.0, 5603.0, 5721.0, 5595.0, 5447.0, 5379.0, 5370.0, 5654.0, 5264.0, 5336.0, 5476.0, 5360.0, 5628.0, 5260.0, 5446.0, 5330.0, 5413.0, 5289.0, 5610.0, 5496.0, 5533.0, 5301.0, 5521.0, 5701.0, 5607.0, 5696.0, 5715.0, 5683.0, 5333.0, 5638.0, 5426.0, 5575.0, 5411.0, 5518.0, 5460.0, 5571.0, 5389.0, 5609.0, 5543.0, 5682.0, 5427.0, 5620.0, 5468.0, 5399.0, 5539.0, 5588.0, 5372.0, 5300.0, 5584.0, 5653.0, 5319.0, 5303.0, 5430.0, 5404.0, 5473.0 (number of hits: 6)
25	5310	9	1	333	1	5589.0, 5684.0, 5386.0, 5421.0, 5568.0, 5683.0, 5473.0, 5385.0, 5282.0, 5606.0,

						5664.0, 5367.0, 5690.0, 5329.0, 5584.0, 5399.0, 5316.0, 5353.0, 5599.0, 5666.0, 5299.0, 5625.0, 5304.0, 5712.0, 5362.0, 5495.0, 5562.0, 5699.0, 5514.0, 5557.0, 5582.0, 5521.0, 5610.0, 5516.0, 5402.0, 5501.0, 5609.0, 5420.0, 5293.0, 5688.0, 5477.0, 5691.0, 5379.0, 5311.0, 5661.0, 5274.0, 5470.0, 5534.0, 5364.0, 5594.0, 5563.0, 5419.0, 5639.0, 5672.0, 5546.0, 5407.0, 5622.0, 5356.0, 5713.0, 5366.0, 5564.0, 5375.0, 5555.0, 5318.0, 5466.0, 5658.0, 5456.0, 5443.0, 5628.0, 5642.0, 5553.0, 5413.0, 5288.0, 5489.0, 5259.0, 5583.0, 5590.0, 5464.0, 5531.0, 5530.0, 5459.0, 5704.0, 5637.0, 5369.0, 5394.0, 5448.0, 5258.0, 5648.0, 5383.0, 5406.0, 5401.0, 5352.0, 5492.0, 5616.0, 5585.0, 5644.0, 5469.0, 5716.0, 5391.0, 5623.0 (number of hits: 6)
26	5310	9	1	333		
27	5310	9	1	333	1	5286.0, 5585.0, 5708.0, 5709.0, 5721.0, 5354.0, 5640.0, 5510.0, 5401.0, 5612.0, 5355.0, 5551.0, 5613.0, 5504.0, 5515.0, 5314.0, 5329.0, 5629.0, 5632.0, 5374.0, 5700.0, 5696.0, 5574.0, 5483.0, 5586.0, 5394.0, 5316.0, 5522.0, 5519.0, 5527.0, 5418.0, 5638.0, 5643.0, 5397.0, 5514.0, 5553.0, 5251.0, 5554.0, 5662.0, 5433.0, 5430.0, 5716.0, 5582.0, 5274.0, 5462.0, 5579.0, 5668.0, 5364.0, 5491.0, 5283.0, 5566.0, 5436.0, 5705.0, 5371.0, 5512.0, 5639.0, 5610.0, 5333.0, 5636.0, 5688.0, 5560.0, 5724.0, 5470.0, 5641.0, 5267.0, 5327.0, 5567.0, 5389.0, 5453.0, 5484.0, 5699.0, 5343.0, 5591.0, 5594.0, 5679.0, 5392.0, 5459.0, 5651.0, 5621.0, 5568.0, 5278.0, 5507.0, 5608.0, 5559.0, 5476.0, 5719.0, 5375.0, 5678.0, 5543.0, 5611.0, 5706.0, 5477.0, 5661.0, 5417.0, 5379.0, 5331.0, 5606.0, 5265.0, 5466.0, 5349.0 (number of hits: 3)
28	5310	9	1	333	1	5552.0, 5262.0, 5298.0, 5334.0, 5391.0, 5680.0, 5343.0, 5562.0, 5457.0, 5514.0, 5365.0, 5524.0, 5550.0, 5704.0, 5490.0, 5663.0, 5363.0, 5276.0, 5335.0, 5481.0, 5460.0, 5697.0, 5312.0, 5477.0, 5533.0, 5422.0, 5329.0, 5675.0, 5406.0, 5683.0, 5587.0, 5520.0, 5592.0, 5548.0, 5311.0, 5387.0, 5512.0, 5546.0, 5595.0, 5545.0, 5433.0, 5454.0, 5654.0, 5678.0, 5436.0, 5534.0, 5385.0, 5522.0, 5682.0, 5542.0, 5547.0, 5699.0, 5378.0, 5711.0, 5375.0, 5425.0, 5619.0, 5284.0, 5288.0, 5282.0, 5505.0, 5673.0, 5431.0, 5272.0, 5661.0, 5507.0, 5304.0, 5588.0, 5355.0, 5692.0, 5640.0, 5529.0, 5275.0, 5469.0, 5686.0, 5712.0, 5558.0, 5581.0, 5403.0, 5472.0, 5420.0, 5530.0, 5349.0, 5511.0, 5723.0, 5652.0, 5671.0, 5470.0, 5451.0, 5414.0,

						5393.0, 5496.0, 5502.0, 5685.0, 5569.0, 5339.0, 5478.0, 5523.0, 5390.0, 5261.0 (number of hits: 4)
29	5310	9	1	333	1	5610.0, 5317.0, 5329.0, 5715.0, 5267.0, 5469.0, 5407.0, 5561.0, 5695.0, 5266.0, 5637.0, 5445.0, 5616.0, 5414.0, 5622.0, 5331.0, 5519.0, 5477.0, 5404.0, 5596.0, 5710.0, 5680.0, 5421.0, 5564.0, 5395.0, 5646.0, 5368.0, 5638.0, 5531.0, 5420.0, 5393.0, 5373.0, 5467.0, 5343.0, 5364.0, 5617.0, 5441.0, 5495.0, 5457.0, 5551.0, 5565.0, 5560.0, 5693.0, 5461.0, 5304.0, 5502.0, 5604.0, 5711.0, 5363.0, 5707.0, 5521.0, 5669.0, 5696.0, 5677.0, 5670.0, 5607.0, 5272.0, 5558.0, 5494.0, 5381.0, 5284.0, 5678.0, 5590.0, 5651.0, 5615.0, 5306.0, 5527.0, 5413.0, 5462.0, 5718.0, 5717.0, 5452.0, 5447.0, 5633.0, 5479.0, 5514.0, 5712.0, 5583.0, 5547.0, 5517.0, 5279.0, 5570.0, 5603.0, 5649.0, 5432.0, 5644.0, 5534.0, 5614.0, 5455.0, 5594.0, 5361.0, 5297.0, 5688.0, 5396.0, 5328.0, 5298.0, 5333.0, 5322.0, 5466.0, 5546.0 (number of hits: 6)
30	5310	9	1	333	1	5710.0, 5267.0, 5391.0, 5580.0, 5609.0, 5340.0, 5315.0, 5313.0, 5719.0, 5689.0, 5398.0, 5528.0, 5614.0, 5425.0, 5350.0, 5588.0, 5650.0, 5383.0, 5598.0, 5668.0, 5593.0, 5281.0, 5682.0, 5687.0, 5513.0, 5659.0, 5648.0, 5506.0, 5278.0, 5541.0, 5716.0, 5607.0, 5323.0, 5341.0, 5618.0, 5400.0, 5529.0, 5432.0, 5583.0, 5253.0, 5679.0, 5309.0, 5582.0, 5459.0, 5626.0, 5569.0, 5523.0, 5306.0, 5560.0, 5570.0, 5343.0, 5649.0, 5390.0, 5396.0, 5499.0, 5575.0, 5472.0, 5577.0, 5273.0, 5262.0, 5345.0, 5458.0, 5501.0, 5597.0, 5441.0, 5688.0, 5359.0, 5277.0, 5563.0, 5708.0, 5296.0, 5602.0, 5450.0, 5591.0, 5420.0, 5557.0, 5490.0, 5619.0, 5600.0, 5568.0, 5465.0, 5358.0, 5554.0, 5512.0, 5533.0, 5657.0, 5539.0, 5605.0, 5713.0, 5712.0, 5693.0, 5633.0, 5507.0, 5585.0, 5265.0, 5387.0, 5413.0, 5282.0, 5293.0, 5624.0 (number of hits: 7)

80MHz(5290MHz)

Radar SignalType	Waveform/Trial Number	Detection (%)	Limit (%)	Pass/Fail
Type 1A	15	100.0	60	pass
Type 1B	15	93.3	60	pass
Type 2	30	86.7	60	Pass
Type 3	30	96.7	60	Pass
Type 4	30	96.7	60	Pass
Aggregate (Radar Types 1-4)	120	94.2	80	Pass
Type 5	30	100.0	80	Pass
Type 6	30	100.0	70	Pass

Please refer to the following statistical tables:

**5290MHz
Radar Type 1A Statistical Performance**

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	57	1	938	1
2	5290	81	1	658	1
3	5290	83	1	638	1
4	5290	18	1	3066	1
5	5290	92	1	578	1
6	5290	78	1	678	1
7	5290	99	1	538	1
8	5290	70	1	758	1
9	5290	89	1	598	1
10	5290	59	1	898	1
11	5290	86	1	618	1
12	5290	74	1	718	1
13	5290	72	1	738	1
14	5290	68	1	778	1
15	5290	63	1	838	1
Detection Percentage: 100.0% (>60%)					

Radar Type 1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	29	1	1865	1
2	5290	53	1	997	1
3	5290	40	1	1322	1
4	5290	66	1	807	1
5	5290	50	1	1065	0
6	5290	67	1	793	1
7	5290	34	1	1595	1
8	5290	35	1	1516	1
9	5290	26	1	2074	1
10	5290	47	1	1130	1
11	5290	40	1	1331	1
12	5290	36	1	1481	1
13	5290	64	1	833	1
14	5290	69	1	766	1
15	5290	56	1	944	1
Detection Percentage: 93.3 % (>60%)					

Radar Type 2 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	28	3.7	173	1
2	5290	28	3.9	224	1
3	5290	29	4.5	229	0
4	5290	25	2.1	225	1
5	5290	23	2.5	220	1
6	5290	25	4.6	179	1
7	5290	24	3.5	196	1
8	5290	28	2.7	229	1
9	5290	26	2.5	179	1
10	5290	26	3.4	158	1
11	5290	26	4.5	175	0
12	5290	29	2.1	218	1
13	5290	24	4.4	158	1
14	5290	26	2.9	161	1
15	5290	26	4.5	188	0
16	5290	29	3.4	179	1
17	5290	28	3.1	150	1
18	5290	27	4.6	170	1
19	5290	23	4.7	173	1
20	5290	25	2.7	159	1
21	5290	27	4.8	189	1
22	5290	23	1.4	160	1
23	5290	28	1.6	193	1
24	5290	23	2.7	166	1
25	5290	24	2.3	226	0
26	5290	23	3.2	229	1
27	5290	27	3	171	1
28	5290	29	2.5	152	1
29	5290	26	4.1	206	1
30	5290	24	1.1	208	1
Detection Percentage: 86.7 % (>60%)					

Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	17	10	466	1
2	5290	18	7.3	240	1
3	5290	16	7.7	447	1
4	5290	18	6.2	241	1
5	5290	16	8.9	214	1
6	5290	17	6.9	218	1
7	5290	18	8.9	217	1
8	5290	16	8.7	239	1
9	5290	18	6.3	310	1
10	5290	16	8.2	448	1
11	5290	16	7.6	356	1
12	5290	17	7.8	389	1
13	5290	18	9.4	366	1
14	5290	16	8.5	257	1
15	5290	18	7.9	384	1
16	5290	16	6	471	0
17	5290	16	7.9	237	1
18	5290	18	7	344	1
19	5290	17	6.1	437	1
20	5290	17	6.7	430	1
21	5290	17	6.1	383	1
22	5290	17	7.7	425	1
23	5290	17	6.9	275	1
24	5290	16	9.3	302	1
25	5290	17	7.8	325	1
26	5290	17	9.4	237	1
27	5290	17	7.4	206	1
28	5290	17	9.5	207	1
29	5290	17	9.1	347	1
30	5290	16	6.9	256	1
Detection Percentage: 96.7 % (>60%)					

Radar Type 4 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	13	17.2	492	1
2	5290	12	12.9	465	1
3	5290	16	18.6	293	1
4	5290	15	13.2	477	1
5	5290	13	15	325	1
6	5290	12	11.5	389	1
7	5290	13	14.6	231	1
8	5290	14	16.5	407	1
9	5290	15	12.3	329	1
10	5290	15	13.4	236	1
11	5290	16	15.4	396	1
12	5290	13	13	446	1
13	5290	14	16.6	491	1
14	5290	16	16.2	381	1
15	5290	12	17.8	341	1
16	5290	13	13.1	335	1
17	5290	12	17.8	499	1
18	5290	12	19.6	204	1
19	5290	16	16.6	243	1
20	5290	16	18.8	337	1
21	5290	16	17.7	453	0
22	5290	16	19.5	473	1
23	5290	14	16.9	464	1
24	5290	13	18.4	326	1
25	5290	12	16.5	432	1
26	5290	14	16.5	328	1
27	5290	16	17.3	248	1
28	5290	15	12.1	280	1
29	5290	13	18.6	448	1
30	5290	13	13.6	233	1
Detection Percentage: 96.7 % (>60%)					

Radar Type 5 Case 1 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5290.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	15	73.1	1568		0.729126	1
1	1	15	61.4			2.138595	
2	3	15	91	1921	1418	2.447628	
3	2	15	79.8	1630		3.974728	
4	1	15	58			5.208628	
5	1	15	69			7.172533	
6	2	15	70.1	1944		8.220844	
7	3	15	57.9	1248	1933	8.63775	
8	1	15	90.9			9.675233	
9	1	15	65.8			11.06705	

Statistics 2 (ChirpCenter Frequency: 5290.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	11	81.5			0.163206	1
1	2	11	88.1	1311		0.962218	
2	2	11	65	1732		1.546368	
3	1	11	67.2			2.054588	
4	3	11	57.4	1187	1530	3.139016	
5	2	11	62.5	1674		3.337797	
6	2	11	76.9	1944		3.860879	
7	2	11	72.2	1244		4.920444	
8	2	11	77.6	1785		5.275914	
9	2	11	52.2	1097		5.893735	
10	1	11	69.4			6.622459	
11	2	11	69.7	1661		7.311536	
12	1	11	75.2			8.053349	
13	3	11	51	1108	1650	8.589655	
14	2	11	61.1	1773		9.288082	
15	2	11	51.8	1639		9.576267	
16	3	11	80	1947	1352	10.11476	
17	2	11	99.6	1111		10.89692	
18	3	11	73.8	1671	1724	11.83999	

Statistics 3 (ChirpCenter Frequency: 5290.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	9	94.4	1164	1028	0.413004	1
1	3	9	76.4	1496	1038	1.315959	
2	2	9	90.4	1188		1.507874	
3	3	9	58.7	1669	1741	2.210073	
4	2	9	71.6	1886		3.173889	
5	1	9	100			3.990933	
6	2	9	77.4	1758		4.660939	
7	3	9	63.7	1177	1642	4.947699	
8	1	9	81.2			5.66952	
9	1	9	72.2			6.000889	
10	2	9	52.8	1650		7.183858	
11	2	9	65.7	1304		7.749904	
12	3	9	70.5	1491	1851	8.524453	
13	3	9	58.6	1897	1942	8.877153	
14	2	9	60.4	1680		9.782556	
15	3	9	72.9	1074	1252	10.63268	
16	2	9	73.5	1105		10.85977	
17	2	9	80.7	1070		11.48057	

Statistics 4 (ChirpCenter Frequency: 5290.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	11	95.9			0.051743	1
1	2	11	80.2	1216		0.910641	
2	1	11	68.5			1.799641	
3	2	11	58.9	1633		2.143404	
4	1	11	68			2.96286	
5	1	11	78.3			3.562839	
6	2	11	88.7	1787		4.151071	
7	1	11	65.8			4.829648	
8	2	11	73.4	1812		5.273369	
9	1	11	65.5			5.759685	
10	2	11	97.6	1158		6.672965	
11	2	11	77.6	1736		7.35783	
12	3	11	61.1	1033	1093	7.861627	
13	1	11	50.4			8.658254	
14	2	11	82.3	1713		9.283906	
15	3	11	58.6	1422	1627	9.989812	
16	2	11	97.8	1378		10.35103	
17	2	11	98	1727		10.98132	
18	3	11	94.9	1100	1440	11.41986	

Statistics 5(ChirpCenter Frequency: 5290.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	12	93.2	1279		0.191856	1
1	1	12	79.7			1.084871	
2	1	12	88			1.581433	
3	2	12	78	1574		1.909731	
4	2	12	59.7	1495		2.485872	
5	1	12	58.5			3.452829	
6	1	12	92.8			3.958204	
7	2	12	57.2	1979		4.568324	
8	2	12	79.4	1543		4.92266	
9	3	12	60	1103	1839	5.719256	
10	1	12	83.6			6.301204	
11	2	12	75.1	1804		6.877079	
12	3	12	63.7	1623	1873	7.777241	
13	2	12	81.6	1613		8.12168	
14	2	12	75.4	1144		8.603935	
15	3	12	88.1	1206	1103	9.300321	
16	2	12	55.8	1165		9.825887	
17	1	12	78			10.49062	
18	2	12	51.7	1859		10.95993	
19	2	12	86	1431		11.45756	

Statistics 6 (ChirpCenter Frequency: 5290.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	15	74.4			0.35469	1
1	3	15	57.4	1395	1120	0.971504	
2	2	15	91.6	1940		1.795553	
3	2	15	53.5	1947		2.746995	
4	3	15	74.1	1919	1844	3.360035	
5	2	15	57.1	1702		3.952176	
6	3	15	85.3	1629	1580	5.015961	
7	1	15	59.3			5.804875	
8	3	15	77.2	1788	1772	6.207926	
9	1	15	64.2			7.374091	
10	3	15	54.6	1928	1671	8.104253	
11	2	15	50.8	1883		8.986266	
12	3	15	57.8	1772	1316	9.305565	
13	1	15	69.6			9.973367	
14	2	15	80.5	1053		10.50758	
15	2	15	62.1	1195		11.4732	

Statistics 7(ChirpCenter Frequency: 5290.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	5	68.9	1382		0.427154	0
1	2	5	62.7	1216		1.367347	
2	2	5	61.9	1520		1.797289	
3	2	5	74.1	1095		2.877959	
4	3	5	65.2	1209	1798	3.83367	
5	2	5	99	1356		4.52554	
6	3	5	94.6	1900	1937	5.88236	
7	1	5	63.9			6.558638	
8	2	5	82.3	1515		7.638634	
9	3	5	67.9	1339	1303	7.744153	
10	1	5	79.8			8.755887	
11	2	5	94.7	1090		10.23805	
12	2	5	79.6	1495		10.39021	
13	2	5	68.4	1698		11.15194	

Statistics 8 (ChirpCenter Frequency: 5290.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	11	93.9	1233	1636	0.062114	1
1	3	11	70.6	1563	1199	2.4346	
2	2	11	77.5	1247		4.421987	
3	2	11	86	1904		4.756471	
4	3	11	88.5	1064	1745	6.545687	
5	1	11	87.9			8.190342	
6	1	11	55.9			10.08928	
7	2	11	90.9	1081		11.07539	

Statistics 9 (ChirpCenter Frequency: 5290.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	9	98.5	1094	1114	0.567985	1
1	3	9	99.6	1097	1250	1.086034	
2	2	9	94.5	1912		1.321065	
3	2	9	82.3	1844		1.983297	
4	1	9	83.5			3.075835	
5	1	9	78.1			3.160592	
6	1	9	60.5			3.804682	
7	2	9	67.4	1276		4.760308	
8	3	9	63.6	1872	1177	5.321536	
9	2	9	71.4	1244		5.745411	
10	2	9	86.5	1891		6.320471	
11	2	9	99.9	1878		7.290892	
12	1	9	52.4			7.680322	
13	3	9	75	1904	1614	8.589112	
14	3	9	99.7	1621	1940	9.232483	
15	1	9	51.2			9.892647	
16	2	9	73	1091		10.17898	
17	3	9	88.9	1371	1429	10.83966	
18	2	9	73	1455		11.46126	

Statistics 10 (ChirpCenter Frequency: 5290.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	8	91.6	1740		1.08322	1
1	2	8	77.4	1040		1.440231	
2	3	8	51.3	1657	1614	3.232348	
3	3	8	88	1032	1188	3.273835	
4	2	8	87.2	1051		5.278642	
5	2	8	50.2	1987		5.690526	
6	3	8	79.3	1872	1856	7.444783	
7	3	8	86.6	1240	1693	8.592809	
8	1	8	60.3			9.757565	
9	2	8	81.7	1905		10.24444	
10	2	8	67.9	1955		11.34262	

Radar Type 5 Case 2 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5259.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	17	95	1627		0.98909	1
1	3	17	68.7	1400	1944	2.336226	
2	2	17	63.5	1766		3.628929	
3	3	17	55.3	1799	1412	4.914007	
4	2	17	90.1	1003		6.265497	
5	3	17	82.8	1457	1718	8.049295	
6	1	17	89			9.585809	
7	3	17	65.5	1695	1119	11.17131	

Statistics 2 (ChirpCenter Frequency: 5258.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	13	51.3	1666		0.258566	1
1	2	13	97.2	1366		1.144156	
2	2	13	63	1196		2.125401	
3	1	13	87.3			3.293964	
4	3	13	88.1	1578	1946	3.799557	
5	3	13	93.8	1840	1787	4.437194	
6	2	13	96.6	1286		5.490133	
7	2	13	80.2	1942		6.351624	
8	1	13	68.5			6.984643	
9	1	13	92.6			7.792862	
10	2	13	75.3	1328		8.941106	
11	1	13	53.2			10.13305	
12	2	13	76.5	1253		10.59911	
13	1	13	68.7			11.32444	

Statistics 3 (ChirpCenter Frequency: 5259.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	16	89.2	1416	1031	0.366603	1
1	1	16	62.5			1.004256	
2	2	16	74.5	1738		2.16086	
3	2	16	59.6	1728		2.292406	
4	3	16	80.2	1384	1965	3.576049	
5	3	16	74.1	1776	1481	4.17065	
6	3	16	70.2	1265	1530	5.051439	
7	3	16	58	1735	1117	5.689094	
8	2	16	57.7	1093		6.583961	
9	1	16	66.5			7.032255	
10	3	16	75.7	1575	1432	8.214716	
11	1	16	60.8			8.276647	
12	1	16	86.7			9.674084	
13	1	16	91.7			10.14321	
14	1	16	69.6			10.62345	
15	2	16	68	1112		11.79806	

Statistics 4 (ChirpCenter Frequency: 5259.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	15	76.9	1546		0.551939	1
1	2	15	70.2	1062		0.805955	
2	2	15	85.8	1996		1.53446	
3	2	15	96.8	1458		2.132403	
4	3	15	68.2	1725	1324	2.834294	
5	1	15	91			3.619164	
6	2	15	99.5	1296		4.41413	
7	1	15	85.5			4.558668	
8	2	15	69.6	1230		5.510385	
9	2	15	63.7	1610		6.053689	
10	2	15	86.9	1969		6.797569	
11	1	15	80.9			7.452503	
12	3	15	67.2	1030	1167	7.647424	
13	2	15	60.8	1533		8.525752	
14	2	15	61.9	1127		9.463897	
15	1	15	76.5			9.984238	
16	2	15	77.6	1026		10.70786	
17	2	15	86.3	1566		11.02302	
18	2	15	53.7	1396		11.76189	

Statistics 5 (ChirpCenter Frequency: 5259.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	16	74.9	1603		0.42654	1
1	2	16	81.2	1839		0.769249	
2	2	16	70.5	1288		1.618313	
3	3	16	57.3	1217	1673	2.423635	
4	2	16	72.3	1773		3.367728	
5	3	16	76.2	1734	1780	4.125619	
6	2	16	94.5	1468		4.917991	
7	3	16	94.1	1595	1488	5.505266	
8	2	16	96.4	1562		6.230273	
9	2	16	57.4	1572		6.448541	
10	2	16	79.7	1935		7.139727	
11	3	16	78.5	1487	1678	8.129223	
12	3	16	74.4	1437	1426	8.505976	
13	3	16	70.4	1286	1130	9.825582	
14	3	16	75.4	1440	1265	9.997762	
15	2	16	66.3	1483		11.00073	
16	1	16	99.3			11.84936	

Statistics 6 (ChirpCenter Frequency: 5258.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	14	71.7	1082		0.03525	1
1	2	14	77.3	1451		2.348901	
2	2	14	76.1	1795		2.901882	
3	2	14	94.7	1552		4.449486	
4	2	14	85.2	1603		5.908555	
5	2	14	76.1	1968		6.067148	
6	2	14	55	1918		8.128969	
7	2	14	70.4	1193		8.731688	
8	3	14	87.9	1254	1334	10.35759	
9	2	14	56.7	1108		11.33868	

Statistics 7 (ChirpCenter Frequency: 5260.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	18	59.5	1766	1857	0.859751	1
1	1	18	78.8			2.279202	
2	1	18	51.5			3.170184	
3	2	18	82.9	1965		4.442486	
4	3	18	65.3	1704	1443	5.436225	
5	3	18	63.6	1120	1033	7.986418	
6	3	18	80.4	1251	1024	8.010893	
7	2	18	95	1464		9.683321	
8	1	18	98.6			11.50395	

Statistics 8 (ChirpCenter Frequency: 5261.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	20	88.4	1336		0.193592	1
1	3	20	57.2	1103	1874	0.790714	
2	2	20	58.8	1993		1.462873	
3	2	20	54.3	1158		2.645925	
4	3	20	58.3	1856	1165	3.168663	
5	3	20	93.2	1416	1249	3.985491	
6	1	20	65.7			4.552936	
7	2	20	80.9	1077		5.417295	
8	2	20	64.3	1179		6.341752	
9	2	20	66.5	1665		6.457398	
10	1	20	76.1			7.270821	
11	1	20	83.4			8.221897	
12	2	20	77	1102		9.07311	
13	2	20	81.7	1239		9.716583	
14	1	20	60.7			9.942919	
15	3	20	89.7	1764	1128	11.08753	
16	1	20	53			11.55233	

Statistics 9 (ChirpCenter Frequency: 5255.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	7	52.1	1572	1111	0.219231	1
1	3	7	67.4	1783	1218	1.013856	
2	2	7	59.7	1217		1.903075	
3	3	7	95.3	1385	1840	3.302929	
4	3	7	83.5	1117	1301	3.846974	
5	3	7	57.2	1622	1012	4.39362	
6	3	7	75.2	1544	1798	5.841042	
7	2	7	93.5	1764		6.761386	
8	3	7	69.4	1516	1470	7.361795	
9	2	7	79.9	1383		8.235248	
10	2	7	91.3	1972		9.419803	
11	2	7	69.6	1558		9.931475	
12	2	7	71.2	1692		11.11983	
13	2	7	90.8	1637		11.4062	

Statistics 10 (ChirpCenter Frequency: 5260.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	19	64.2	1943		0.398386	1
1	1	19	95.8			2.127755	
2	2	19	97	1476		2.368351	
3	1	19	50.4			3.783819	
4	1	19	55.2			5.438063	
5	2	19	98.1	1463		6.54054	
6	3	19	94.1	1980	1125	7.043539	
7	1	19	95.9			7.705306	
8	2	19	58.2	1089		9.390841	
9	2	19	76.7	1357		10.4382	
10	2	19	82.1	1111		11.17503	

Radar Type 5 Case 3 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5321.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	15	96.6	1430		0.346634	1
1	3	15	53.2	1540	1779	2.171152	
2	2	15	55.9	1508		2.539003	
3	3	15	91.4	1519	1829	4.041528	
4	3	15	54.2	1402	1298	4.991442	
5	1	15	70.6			6.338169	
6	3	15	80.8	1215	1760	8.073391	
7	3	15	54.4	1553	1902	8.591276	
8	2	15	51.5	1739		9.610006	
9	1	15	85.5			11.31968	

Statistics 2 (ChirpCenter Frequency: 5321.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	16	83.3	1573	1718	0.689568	1
1	2	16	63.5	1719		0.853643	
2	2	16	92.1	1805		2.218181	
3	3	16	98.5	1575	1649	2.522823	
4	2	16	71.3	1685		3.30646	
5	1	16	65.9			4.195119	
6	2	16	96.2	1491		4.775099	
7	3	16	50.5	1559	1815	5.917717	
8	2	16	84.4	1281		6.53094	
9	3	16	64	1397	1832	7.192049	
10	2	16	63.1	1658		8.228605	
11	3	16	77.4	1953	1256	8.82645	
12	1	16	95.9			9.647463	
13	2	16	65.9	1451		10.10734	
14	1	16	82.7			10.60676	
15	1	16	77.9			11.25875	

Statistics 3 (ChirpCenter Frequency: 5324.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	9	76			0.122241	1
1	2	9	54.8	1714		1.251912	
2	2	9	96.9	1452		1.801425	
3	2	9	67.6	1857		3.123966	
4	3	9	91.1	1338	1904	3.896592	
5	2	9	51.6	1118		4.037154	
6	3	9	83.3	1702	1607	5.4659	
7	2	9	52.2	1853		6.08469	
8	2	9	70	1175		6.816968	
9	3	9	81.3	1760	1692	7.775203	
10	2	9	79.8	1874		8.599901	
11	2	9	72.5	1338		9.351719	
12	3	9	55.1	1898	1896	10.152	
13	3	9	91.2	1972	1675	10.57011	
14	2	9	78.8	1970		11.55546	

Statistics 4 (ChirpCenter Frequency: 5322.0 MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	14	51.9	1193	1266	0.49789	1
1	2	14	55.6	1349		1.184226	
2	1	14	94.2			2.707233	
3	2	14	67.7	1069		3.5289	
4	1	14	69.7			5.326048	
5	2	14	51.9	1164		6.427564	
6	3	14	75.1	1477	1707	7.105885	
7	2	14	55.7	1371		8.087491	
8	3	14	52	1498	1105	9.786303	
9	2	14	81.7	1528		9.874738	
10	1	14	71.8			11.13912	

Statistics 5 (ChirpCenter Frequency: 5322.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	14	54.1	1906	1324	0.22417	1
1	3	14	89.4	1831	1204	2.085034	
2	3	14	80.8	1252	1497	3.719797	
3	2	14	85	1971		4.572199	
4	3	14	93	1409	1897	5.370426	
5	2	14	79.3	1605		7.920162	
6	3	14	99.8	1220	1951	8.401979	
7	3	14	92.1	1836	1700	10.0771	
8	3	14	96.7	1714	1097	11.9723	

Statistics 6 (ChirpCenter Frequency: 5325.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	6	69.2	1770		0.181481	1
1	1	6	55			1.009565	
2	2	6	57.5	1626		2.325464	
3	2	6	93.4	1208		2.904383	
4	2	6	64.6	1301		4.395861	
5	1	6	78.6			4.761417	
6	2	6	69.7	1385		5.943651	
7	1	6	70.4			7.207121	
8	3	6	79.4	1486	1158	7.573998	
9	2	6	63	1732		9.033327	
10	2	6	58.9	1820		9.992068	
11	2	6	56.4	1572		10.37138	
12	3	6	97.9	1539	1267	11.72932	

Statistics 7 (ChirpCenter Frequency: 5323.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	2	11	50.2	1355		0.256582	1
1	1	11	85.3			1.492325	
2	2	11	75.8	1186		3.051719	
3	3	11	70.1	1830	1920	3.654219	
4	2	11	73.6	1603		5.166017	
5	3	11	60.2	1598	1768	5.90053	
6	1	11	62.5			7.269015	
7	2	11	83.7	1885		8.120264	
8	3	11	66.1	1677	1110	9.142091	
9	2	11	66.1	1645		10.87074	
10	2	11	76.1	1374		11.33081	

Statistics 8 (ChirpCenter Frequency: 5322.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	1	14	67.4			0.930298	1
1	1	14	72.7			1.906038	
2	2	14	50.3	1337		2.919522	
3	3	14	81.2	1898	1975	4.827205	
4	2	14	89.4	1848		6.16316	
5	2	14	91.6	1326		7.737617	
6	1	14	60.3			8.41164	
7	1	14	98.1			9.801546	
8	2	14	70.1	1332		11.65962	

Statistics 9 (ChirpCenter Frequency: 5322.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	13	67.4	1904	1267	0.440105	1
1	3	13	55.1	1028	1355	1.295137	
2	1	13	81.9			1.627452	
3	1	13	79			3.000941	
4	3	13	74.2	1478	1208	3.749614	
5	1	13	91.3			4.239445	
6	1	13	96.4			5.317619	
7	3	13	50.9	1601	1832	6.278415	
8	3	13	52	1444	1570	6.891568	
9	2	13	62.6	1930		7.221529	
10	2	13	70	1888		8.592503	
11	2	13	82.3	1189		9.330893	
12	3	13	97.9	1316	1049	9.820674	
13	1	13	89.2			10.7858	
14	2	13	98.4	1631		11.55038	

Statistics 10 (ChirpCenter Frequency: 5324.0MHz)

Trial #	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
0	3	8	69.5	1259	1461	0.051132	1
1	2	8	51.5	1461		1.221213	
2	1	8	68.2			1.728823	
3	2	8	96.4	1129		2.174604	
4	3	8	54.9	1303	1686	2.646144	
5	2	8	58.2	1653		3.661941	
6	1	8	97.2			3.900221	
7	2	8	99.6	1277		4.853735	
8	3	8	73.4	1316	1715	5.588977	
9	2	8	89.9	1267		5.79035	
10	3	8	99	1739	1957	6.736168	
11	3	8	58.1	1728	1692	7.20383	
12	1	8	55.4			7.916902	
13	1	8	76			8.528412	
14	1	8	82.3			9.050721	
15	1	8	52.4			10.07405	
16	2	8	59.4	1422		10.34176	
17	3	8	60.5	1216	1385	10.94683	
18	3	8	65.7	1552	1011	11.84514	

Radar Type 6 Statistical Performance

Trial #	Fc (MHz)	Pulse /Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)	Hopping Sequence (MHz)
1	5290	9	1	333	1	5577.0, 5652.0, 5423.0, 5502.0, 5711.0, 5603.0, 5271.0, 5359.0, 5640.0, 5648.0, 5375.0, 5594.0, 5504.0, 5606.0, 5567.0, 5414.0, 5529.0, 5349.0, 5473.0, 5589.0, 5469.0, 5673.0, 5525.0, 5440.0, 5382.0, 5560.0, 5272.0, 5707.0, 5384.0, 5671.0, 5654.0, 5489.0, 5315.0, 5575.0, 5426.0, 5379.0, 5688.0, 5344.0, 5454.0, 5493.0, 5712.0, 5534.0, 5706.0, 5402.0, 5682.0, 5374.0, 5694.0, 5376.0, 5286.0, 5383.0, 5621.0, 5324.0, 5624.0, 5561.0, 5456.0, 5649.0, 5653.0, 5674.0, 5446.0, 5381.0, 5623.0, 5555.0, 5347.0, 5528.0, 5348.0, 5403.0, 5721.0, 5366.0, 5509.0, 5584.0, 5631.0, 5387.0, 5547.0, 5681.0, 5494.0, 5520.0, 5406.0, 5365.0, 5448.0, 5342.0, 5340.0, 5350.0, 5265.0, 5687.0, 5646.0, 5684.0, 5557.0, 5713.0, 5412.0, 5288.0, 5371.0, 5663.0, 5352.0, 5398.0, 5323.0, 5314.0, 5322.0, 5612.0, 5573.0, 5329.0 (number of hits: 10)
2	5290	9	1	333	1	5507.0, 5578.0, 5370.0, 5564.0, 5496.0, 5541.0, 5663.0, 5714.0, 5519.0, 5660.0, 5679.0, 5356.0, 5479.0, 5411.0, 5308.0, 5668.0, 5449.0, 5288.0, 5692.0, 5697.0, 5262.0, 5538.0, 5610.0, 5598.0, 5407.0, 5263.0, 5693.0, 5458.0, 5368.0, 5571.0, 5326.0, 5707.0, 5627.0, 5515.0, 5520.0, 5478.0, 5341.0, 5358.0, 5275.0, 5474.0, 5687.0, 5270.0, 5593.0, 5375.0, 5310.0, 5574.0, 5543.0, 5391.0, 5529.0, 5617.0, 5549.0, 5554.0, 5477.0, 5715.0, 5255.0, 5329.0, 5287.0, 5331.0, 5404.0, 5333.0, 5633.0, 5594.0, 5625.0, 5562.0, 5585.0, 5614.0, 5683.0, 5503.0, 5548.0, 5523.0, 5457.0, 5472.0, 5428.0, 5294.0, 5616.0, 5595.0, 5722.0, 5380.0, 5641.0, 5563.0, 5539.0, 5573.0, 5318.0, 5513.0, 5629.0, 5419.0, 5307.0, 5643.0, 5716.0, 5338.0, 5250.0, 5481.0, 5703.0, 5258.0, 5403.0, 5296.0, 5455.0, 5551.0, 5590.0, 5344.0 (number of hits: 15)
3	5290	9	1	333	1	5274.0, 5303.0, 5251.0, 5512.0, 5301.0, 5253.0, 5298.0, 5500.0, 5342.0, 5606.0, 5266.0, 5318.0, 5710.0, 5264.0, 5560.0, 5400.0, 5362.0, 5461.0, 5534.0, 5519.0, 5276.0, 5635.0, 5689.0, 5544.0, 5259.0, 5514.0, 5433.0, 5488.0, 5448.0, 5374.0, 5454.0, 5489.0, 5538.0, 5701.0, 5584.0, 5686.0, 5354.0, 5339.0, 5695.0, 5693.0, 5343.0, 5414.0, 5432.0, 5334.0, 5393.0, 5657.0, 5607.0, 5438.0, 5371.0, 5513.0, 5516.0, 5624.0, 5495.0, 5622.0, 5598.0, 5582.0, 5650.0, 5370.0, 5329.0, 5589.0,

						5719.0, 5467.0, 5380.0, 5632.0, 5372.0, 5330.0, 5311.0, 5712.0, 5286.0, 5451.0, 5320.0, 5558.0, 5692.0, 5655.0, 5565.0, 5526.0, 5643.0, 5358.0, 5575.0, 5666.0, 5681.0, 5698.0, 5462.0, 5574.0, 5365.0, 5292.0, 5569.0, 5723.0, 5403.0, 5295.0, 5524.0, 5571.0, 5714.0, 5554.0, 5280.0, 5537.0, 5278.0, 5496.0, 5546.0, 5484.0 (number of hits: 17)
4	5290	9	1	333	1	5406.0, 5431.0, 5715.0, 5721.0, 5618.0, 5519.0, 5557.0, 5388.0, 5412.0, 5302.0, 5316.0, 5385.0, 5697.0, 5677.0, 5389.0, 5438.0, 5554.0, 5461.0, 5611.0, 5360.0, 5363.0, 5633.0, 5543.0, 5351.0, 5604.0, 5528.0, 5609.0, 5450.0, 5452.0, 5290.0, 5673.0, 5422.0, 5529.0, 5597.0, 5538.0, 5419.0, 5253.0, 5598.0, 5599.0, 5505.0, 5497.0, 5430.0, 5664.0, 5427.0, 5321.0, 5524.0, 5394.0, 5719.0, 5480.0, 5260.0, 5410.0, 5687.0, 5256.0, 5616.0, 5335.0, 5472.0, 5377.0, 5393.0, 5288.0, 5475.0, 5376.0, 5277.0, 5550.0, 5473.0, 5331.0, 5501.0, 5354.0, 5251.0, 5441.0, 5534.0, 5665.0, 5333.0, 5328.0, 5320.0, 5437.0, 5310.0, 5434.0, 5337.0, 5326.0, 5444.0, 5468.0, 5620.0, 5307.0, 5315.0, 5417.0, 5716.0, 5371.0, 5498.0, 5474.0, 5563.0, 5471.0, 5294.0, 5465.0, 5698.0, 5397.0, 5704.0, 5574.0, 5622.0, 5502.0, 5392.0 (number of hits: 15)
5	5290	9	1	333	1	5486.0, 5479.0, 5705.0, 5665.0, 5639.0, 5701.0, 5408.0, 5699.0, 5618.0, 5279.0, 5682.0, 5566.0, 5594.0, 5551.0, 5445.0, 5696.0, 5622.0, 5268.0, 5563.0, 5515.0, 5275.0, 5688.0, 5568.0, 5262.0, 5466.0, 5638.0, 5677.0, 5478.0, 5428.0, 5545.0, 5470.0, 5697.0, 5326.0, 5322.0, 5597.0, 5643.0, 5634.0, 5451.0, 5265.0, 5670.0, 5550.0, 5367.0, 5689.0, 5516.0, 5571.0, 5668.0, 5450.0, 5487.0, 5645.0, 5447.0, 5584.0, 5611.0, 5537.0, 5657.0, 5250.0, 5362.0, 5334.0, 5387.0, 5483.0, 5523.0, 5471.0, 5426.0, 5264.0, 5472.0, 5312.0, 5282.0, 5295.0, 5370.0, 5598.0, 5692.0, 5411.0, 5624.0, 5573.0, 5660.0, 5609.0, 5529.0, 5667.0, 5413.0, 5561.0, 5298.0, 5560.0, 5672.0, 5511.0, 5283.0, 5564.0, 5659.0, 5482.0, 5458.0, 5441.0, 5481.0, 5418.0, 5680.0, 5271.0, 5462.0, 5338.0, 5595.0, 5342.0, 5630.0, 5576.0, 5254.0 (number of hits: 15)
6	5290	9	1	333	1	5632.0, 5280.0, 5622.0, 5362.0, 5368.0, 5457.0, 5459.0, 5668.0, 5712.0, 5465.0, 5522.0, 5378.0, 5456.0, 5689.0, 5441.0, 5267.0, 5370.0, 5297.0, 5265.0, 5258.0, 5446.0, 5616.0, 5551.0, 5290.0, 5694.0, 5675.0, 5576.0, 5469.0, 5404.0, 5430.0, 5631.0, 5721.0, 5400.0, 5432.0, 5709.0, 5475.0, 5449.0, 5261.0, 5442.0, 5347.0,

						5713.0, 5263.0, 5624.0, 5598.0, 5662.0, 5687.0, 5468.0, 5366.0, 5605.0, 5643.0, 5294.0, 5660.0, 5434.0, 5259.0, 5472.0, 5509.0, 5664.0, 5411.0, 5407.0, 5443.0, 5655.0, 5414.0, 5363.0, 5351.0, 5669.0, 5440.0, 5697.0, 5571.0, 5435.0, 5373.0, 5627.0, 5308.0, 5696.0, 5324.0, 5474.0, 5553.0, 5408.0, 5667.0, 5608.0, 5652.0, 5567.0, 5584.0, 5506.0, 5580.0, 5471.0, 5541.0, 5330.0, 5617.0, 5534.0, 5325.0, 5550.0, 5381.0, 5323.0, 5636.0, 5327.0, 5481.0, 5322.0, 5269.0, 5511.0, 5491.0 (number of hits: 16)
7	5290	9	1	333	1	5361.0, 5443.0, 5582.0, 5427.0, 5547.0, 5671.0, 5280.0, 5550.0, 5318.0, 5291.0, 5628.0, 5383.0, 5345.0, 5281.0, 5558.0, 5691.0, 5720.0, 5591.0, 5576.0, 5521.0, 5397.0, 5623.0, 5439.0, 5375.0, 5276.0, 5519.0, 5540.0, 5593.0, 5629.0, 5271.0, 5510.0, 5387.0, 5698.0, 5381.0, 5616.0, 5660.0, 5679.0, 5535.0, 5604.0, 5349.0, 5680.0, 5689.0, 5423.0, 5363.0, 5322.0, 5583.0, 5471.0, 5672.0, 5504.0, 5580.0, 5603.0, 5406.0, 5693.0, 5696.0, 5373.0, 5313.0, 5682.0, 5594.0, 5283.0, 5688.0, 5331.0, 5527.0, 5314.0, 5597.0, 5577.0, 5358.0, 5269.0, 5662.0, 5635.0, 5712.0, 5432.0, 5350.0, 5282.0, 5676.0, 5622.0, 5537.0, 5498.0, 5254.0, 5715.0, 5520.0, 5328.0, 5705.0, 5260.0, 5416.0, 5655.0, 5572.0, 5433.0, 5388.0, 5284.0, 5419.0, 5686.0, 5366.0, 5403.0, 5653.0, 5605.0, 5702.0, 5394.0, 5532.0, 5718.0, 5395.0 (number of hits: 15)
8	5290	9	1	333	1	5315.0, 5644.0, 5652.0, 5402.0, 5357.0, 5583.0, 5371.0, 5353.0, 5377.0, 5264.0, 5472.0, 5610.0, 5563.0, 5339.0, 5669.0, 5250.0, 5614.0, 5344.0, 5383.0, 5647.0, 5382.0, 5333.0, 5260.0, 5553.0, 5529.0, 5554.0, 5281.0, 5603.0, 5514.0, 5498.0, 5475.0, 5278.0, 5268.0, 5366.0, 5536.0, 5442.0, 5512.0, 5695.0, 5580.0, 5448.0, 5485.0, 5274.0, 5709.0, 5286.0, 5438.0, 5586.0, 5710.0, 5254.0, 5423.0, 5722.0, 5511.0, 5541.0, 5524.0, 5579.0, 5574.0, 5424.0, 5551.0, 5517.0, 5410.0, 5487.0, 5450.0, 5540.0, 5355.0, 5668.0, 5492.0, 5427.0, 5642.0, 5418.0, 5376.0, 5428.0, 5370.0, 5416.0, 5369.0, 5632.0, 5314.0, 5613.0, 5544.0, 5605.0, 5469.0, 5659.0, 5525.0, 5653.0, 5507.0, 5348.0, 5456.0, 5310.0, 5687.0, 5547.0, 5292.0, 5271.0, 5301.0, 5691.0, 5560.0, 5322.0, 5552.0, 5702.0, 5335.0, 5643.0, 5534.0, 5707.0 (number of hits: 15)
9	5290	9	1	333	1	5613.0, 5690.0, 5673.0, 5717.0, 5648.0, 5268.0, 5645.0, 5342.0, 5436.0, 5688.0, 5278.0, 5678.0, 5303.0, 5696.0, 5533.0, 5534.0, 5324.0, 5680.0, 5264.0, 5409.0,

						5389.0, 5518.0, 5700.0, 5319.0, 5428.0, 5421.0, 5583.0, 5485.0, 5340.0, 5289.0, 5600.0, 5305.0, 5537.0, 5266.0, 5699.0, 5523.0, 5661.0, 5328.0, 5315.0, 5559.0, 5662.0, 5494.0, 5385.0, 5455.0, 5644.0, 5682.0, 5398.0, 5677.0, 5400.0, 5366.0, 5568.0, 5651.0, 5475.0, 5338.0, 5351.0, 5547.0, 5257.0, 5655.0, 5297.0, 5424.0, 5709.0, 5404.0, 5625.0, 5422.0, 5669.0, 5362.0, 5708.0, 5288.0, 5386.0, 5652.0, 5500.0, 5720.0, 5367.0, 5594.0, 5423.0, 5373.0, 5330.0, 5636.0, 5397.0, 5571.0, 5294.0, 5375.0, 5461.0, 5271.0, 5505.0, 5556.0, 5326.0, 5331.0, 5378.0, 5672.0, 5452.0, 5549.0, 5260.0, 5438.0, 5365.0, 5598.0, 5380.0, 5520.0, 5581.0, 5488.0 (number of hits: 17)
10	5290	9	1	333	1	5367.0, 5334.0, 5527.0, 5271.0, 5656.0, 5282.0, 5349.0, 5407.0, 5712.0, 5511.0, 5364.0, 5335.0, 5614.0, 5321.0, 5576.0, 5608.0, 5564.0, 5343.0, 5617.0, 5542.0, 5516.0, 5260.0, 5514.0, 5602.0, 5622.0, 5432.0, 5416.0, 5251.0, 5650.0, 5541.0, 5381.0, 5710.0, 5297.0, 5479.0, 5621.0, 5302.0, 5619.0, 5658.0, 5298.0, 5487.0, 5412.0, 5363.0, 5713.0, 5446.0, 5534.0, 5306.0, 5544.0, 5256.0, 5345.0, 5328.0, 5596.0, 5292.0, 5520.0, 5537.0, 5369.0, 5483.0, 5550.0, 5379.0, 5408.0, 5603.0, 5370.0, 5382.0, 5346.0, 5575.0, 5536.0, 5452.0, 5375.0, 5471.0, 5361.0, 5612.0, 5304.0, 5342.0, 5554.0, 5482.0, 5425.0, 5436.0, 5543.0, 5329.0, 5697.0, 5455.0, 5326.0, 5319.0, 5318.0, 5666.0, 5429.0, 5502.0, 5525.0, 5443.0, 5273.0, 5595.0, 5449.0, 5462.0, 5528.0, 5320.0, 5484.0, 5592.0, 5444.0, 5493.0, 5398.0, 5435.0 (number of hits: 16)
11	5290	9	1	333	1	5552.0, 5337.0, 5479.0, 5421.0, 5391.0, 5643.0, 5669.0, 5308.0, 5380.0, 5372.0, 5715.0, 5666.0, 5619.0, 5494.0, 5251.0, 5492.0, 5487.0, 5576.0, 5259.0, 5343.0, 5306.0, 5458.0, 5349.0, 5252.0, 5588.0, 5542.0, 5416.0, 5452.0, 5428.0, 5407.0, 5325.0, 5544.0, 5650.0, 5272.0, 5481.0, 5553.0, 5611.0, 5530.0, 5604.0, 5441.0, 5660.0, 5489.0, 5606.0, 5351.0, 5707.0, 5275.0, 5478.0, 5696.0, 5260.0, 5427.0, 5268.0, 5493.0, 5280.0, 5413.0, 5352.0, 5550.0, 5608.0, 5626.0, 5398.0, 5622.0, 5561.0, 5332.0, 5556.0, 5273.0, 5638.0, 5700.0, 5603.0, 5691.0, 5266.0, 5274.0, 5291.0, 5721.0, 5578.0, 5453.0, 5504.0, 5379.0, 5388.0, 5363.0, 5433.0, 5555.0, 5440.0, 5640.0, 5506.0, 5657.0, 5648.0, 5370.0, 5395.0, 5345.0, 5476.0, 5350.0, 5644.0, 5435.0, 5447.0, 5389.0, 5296.0, 5490.0, 5615.0, 5595.0, 5591.0, 5315.0 (number of hits: 15)

12	5290	9	1	333	1	5516.0, 5522.0, 5421.0, 5576.0, 5412.0, 5723.0, 5334.0, 5438.0, 5663.0, 5309.0, 5306.0, 5501.0, 5268.0, 5687.0, 5290.0, 5678.0, 5269.0, 5409.0, 5264.0, 5284.0, 5638.0, 5600.0, 5353.0, 5620.0, 5469.0, 5381.0, 5511.0, 5634.0, 5588.0, 5532.0, 5525.0, 5548.0, 5340.0, 5643.0, 5479.0, 5491.0, 5570.0, 5407.0, 5460.0, 5683.0, 5257.0, 5644.0, 5465.0, 5487.0, 5590.0, 5662.0, 5697.0, 5589.0, 5494.0, 5691.0, 5367.0, 5715.0, 5385.0, 5276.0, 5356.0, 5478.0, 5549.0, 5252.0, 5467.0, 5486.0, 5282.0, 5622.0, 5722.0, 5476.0, 5653.0, 5267.0, 5594.0, 5648.0, 5333.0, 5265.0, 5305.0, 5466.0, 5422.0, 5495.0, 5684.0, 5327.0, 5668.0, 5349.0, 5611.0, 5565.0, 5607.0, 5502.0, 5430.0, 5505.0, 5330.0, 5597.0, 5537.0, 5436.0, 5360.0, 5271.0, 5475.0, 5635.0, 5273.0, 5470.0, 5289.0, 5394.0, 5444.0, 5582.0, 5642.0, 5614.0 (number of hits: 16)
13	5290	9	1	333	1	5477.0, 5568.0, 5282.0, 5362.0, 5365.0, 5353.0, 5293.0, 5309.0, 5277.0, 5708.0, 5488.0, 5506.0, 5581.0, 5476.0, 5378.0, 5579.0, 5666.0, 5661.0, 5635.0, 5415.0, 5527.0, 5638.0, 5711.0, 5630.0, 5650.0, 5337.0, 5640.0, 5511.0, 5264.0, 5372.0, 5366.0, 5428.0, 5399.0, 5518.0, 5496.0, 5288.0, 5615.0, 5519.0, 5539.0, 5695.0, 5651.0, 5379.0, 5438.0, 5636.0, 5463.0, 5395.0, 5436.0, 5389.0, 5500.0, 5270.0, 5628.0, 5689.0, 5550.0, 5391.0, 5253.0, 5341.0, 5644.0, 5331.0, 5692.0, 5285.0, 5596.0, 5321.0, 5408.0, 5512.0, 5473.0, 5381.0, 5537.0, 5492.0, 5681.0, 5710.0, 5624.0, 5699.0, 5685.0, 5274.0, 5563.0, 5657.0, 5586.0, 5607.0, 5647.0, 5343.0, 5605.0, 5452.0, 5412.0, 5322.0, 5346.0, 5627.0, 5345.0, 5403.0, 5548.0, 5698.0, 5431.0, 5262.0, 5481.0, 5342.0, 5457.0, 5348.0, 5618.0, 5643.0, 5447.0, 5266.0 (number of hits: 14)
14	5290	9	1	333	1	5470.0, 5424.0, 5288.0, 5600.0, 5691.0, 5496.0, 5588.0, 5388.0, 5407.0, 5466.0, 5370.0, 5409.0, 5254.0, 5320.0, 5275.0, 5477.0, 5287.0, 5311.0, 5563.0, 5660.0, 5325.0, 5400.0, 5506.0, 5467.0, 5309.0, 5433.0, 5442.0, 5554.0, 5484.0, 5357.0, 5520.0, 5474.0, 5365.0, 5487.0, 5523.0, 5666.0, 5702.0, 5537.0, 5348.0, 5489.0, 5542.0, 5314.0, 5618.0, 5587.0, 5440.0, 5595.0, 5596.0, 5335.0, 5392.0, 5473.0, 5571.0, 5609.0, 5536.0, 5717.0, 5598.0, 5285.0, 5458.0, 5603.0, 5590.0, 5356.0, 5611.0, 5714.0, 5658.0, 5586.0, 5538.0, 5449.0, 5306.0, 5428.0, 5555.0, 5464.0, 5380.0, 5251.0, 5367.0, 5333.0, 5253.0, 5642.0, 5342.0, 5665.0, 5724.0, 5427.0, 5597.0, 5535.0, 5678.0, 5345.0, 5577.0,

						5328.0, 5647.0, 5557.0, 5546.0, 5539.0, 5679.0, 5347.0, 5689.0, 5323.0, 5635.0, 5485.0, 5434.0, 5558.0, 5492.0, 5397.0 (number of hits: 13)
15	5290	9	1	333	1	5497.0, 5313.0, 5654.0, 5390.0, 5613.0, 5456.0, 5398.0, 5606.0, 5263.0, 5545.0, 5412.0, 5416.0, 5642.0, 5614.0, 5473.0, 5381.0, 5282.0, 5472.0, 5435.0, 5379.0, 5476.0, 5631.0, 5345.0, 5393.0, 5347.0, 5586.0, 5486.0, 5666.0, 5575.0, 5717.0, 5574.0, 5489.0, 5499.0, 5616.0, 5257.0, 5530.0, 5612.0, 5292.0, 5610.0, 5551.0, 5664.0, 5442.0, 5370.0, 5645.0, 5406.0, 5634.0, 5564.0, 5287.0, 5466.0, 5446.0, 5629.0, 5441.0, 5425.0, 5531.0, 5448.0, 5538.0, 5672.0, 5322.0, 5394.0, 5330.0, 5542.0, 5254.0, 5597.0, 5267.0, 5505.0, 5462.0, 5584.0, 5615.0, 5340.0, 5623.0, 5328.0, 5548.0, 5324.0, 5716.0, 5533.0, 5681.0, 5561.0, 5633.0, 5429.0, 5364.0, 5360.0, 5344.0, 5297.0, 5577.0, 5250.0, 5543.0, 5581.0, 5536.0, 5648.0, 5674.0, 5635.0, 5302.0, 5719.0, 5723.0, 5578.0, 5677.0, 5573.0, 5524.0, 5482.0, 5700.0 (number of hits: 12)
16	5290	9	1	333	1	5394.0, 5610.0, 5440.0, 5385.0, 5696.0, 5321.0, 5564.0, 5343.0, 5667.0, 5425.0, 5702.0, 5523.0, 5644.0, 5544.0, 5647.0, 5296.0, 5697.0, 5410.0, 5520.0, 5285.0, 5612.0, 5692.0, 5511.0, 5370.0, 5443.0, 5414.0, 5524.0, 5617.0, 5583.0, 5317.0, 5652.0, 5682.0, 5634.0, 5284.0, 5512.0, 5718.0, 5368.0, 5450.0, 5429.0, 5404.0, 5448.0, 5502.0, 5587.0, 5311.0, 5665.0, 5341.0, 5390.0, 5643.0, 5540.0, 5551.0, 5621.0, 5535.0, 5275.0, 5722.0, 5435.0, 5593.0, 5600.0, 5558.0, 5365.0, 5566.0, 5561.0, 5632.0, 5645.0, 5266.0, 5679.0, 5526.0, 5611.0, 5322.0, 5283.0, 5303.0, 5637.0, 5301.0, 5565.0, 5402.0, 5403.0, 5488.0, 5415.0, 5707.0, 5676.0, 5640.0, 5357.0, 5406.0, 5306.0, 5623.0, 5297.0, 5472.0, 5641.0, 5589.0, 5378.0, 5505.0, 5350.0, 5327.0, 5405.0, 5588.0, 5595.0, 5431.0, 5258.0, 5271.0, 5516.0, 5562.0 (number of hits: 16)
17	5290	9	1	333	1	5294.0, 5270.0, 5611.0, 5606.0, 5608.0, 5340.0, 5466.0, 5315.0, 5301.0, 5290.0, 5546.0, 5445.0, 5407.0, 5419.0, 5279.0, 5498.0, 5655.0, 5585.0, 5644.0, 5253.0, 5478.0, 5716.0, 5523.0, 5338.0, 5699.0, 5563.0, 5643.0, 5348.0, 5686.0, 5534.0, 5676.0, 5439.0, 5612.0, 5467.0, 5615.0, 5555.0, 5265.0, 5712.0, 5454.0, 5646.0, 5354.0, 5368.0, 5392.0, 5665.0, 5629.0, 5552.0, 5541.0, 5350.0, 5672.0, 5335.0, 5480.0, 5550.0, 5307.0, 5434.0, 5427.0, 5280.0, 5562.0, 5295.0, 5255.0, 5715.0, 5311.0, 5274.0, 5278.0, 5700.0, 5300.0,

						5364.0, 5344.0, 5455.0, 5420.0, 5408.0, 5298.0, 5543.0, 5722.0, 5437.0, 5436.0, 5651.0, 5673.0, 5501.0, 5258.0, 5584.0, 5355.0, 5459.0, 5370.0, 5566.0, 5511.0, 5441.0, 5706.0, 5675.0, 5458.0, 5263.0, 5421.0, 5415.0, 5583.0, 5316.0, 5388.0, 5252.0, 5375.0, 5495.0, 5581.0, 5630.0 (number of hits: 20)
18	5290	9	1	333	1	5646.0, 5627.0, 5562.0, 5384.0, 5343.0, 5620.0, 5259.0, 5568.0, 5699.0, 5448.0, 5612.0, 5323.0, 5549.0, 5334.0, 5404.0, 5468.0, 5332.0, 5567.0, 5357.0, 5294.0, 5311.0, 5339.0, 5496.0, 5673.0, 5301.0, 5285.0, 5664.0, 5598.0, 5548.0, 5552.0, 5715.0, 5582.0, 5341.0, 5269.0, 5369.0, 5550.0, 5644.0, 5447.0, 5522.0, 5659.0, 5461.0, 5638.0, 5542.0, 5543.0, 5399.0, 5608.0, 5517.0, 5324.0, 5709.0, 5261.0, 5707.0, 5309.0, 5462.0, 5533.0, 5377.0, 5362.0, 5474.0, 5406.0, 5440.0, 5394.0, 5476.0, 5281.0, 5393.0, 5454.0, 5689.0, 5305.0, 5527.0, 5295.0, 5397.0, 5704.0, 5529.0, 5274.0, 5691.0, 5352.0, 5488.0, 5637.0, 5606.0, 5491.0, 5540.0, 5597.0, 5270.0, 5518.0, 5485.0, 5283.0, 5256.0, 5724.0, 5298.0, 5321.0, 5366.0, 5475.0, 5481.0, 5504.0, 5416.0, 5472.0, 5346.0, 5665.0, 5477.0, 5654.0, 5615.0, 5363.0 (number of hits: 19)
19	5290	9	1	333	1	5382.0, 5515.0, 5374.0, 5716.0, 5556.0, 5691.0, 5478.0, 5348.0, 5308.0, 5534.0, 5429.0, 5585.0, 5420.0, 5449.0, 5423.0, 5616.0, 5294.0, 5451.0, 5644.0, 5330.0, 5456.0, 5418.0, 5406.0, 5546.0, 5699.0, 5487.0, 5342.0, 5602.0, 5695.0, 5681.0, 5507.0, 5575.0, 5475.0, 5558.0, 5590.0, 5650.0, 5545.0, 5607.0, 5323.0, 5630.0, 5311.0, 5512.0, 5580.0, 5448.0, 5415.0, 5587.0, 5269.0, 5525.0, 5518.0, 5669.0, 5685.0, 5723.0, 5502.0, 5632.0, 5540.0, 5579.0, 5327.0, 5702.0, 5408.0, 5645.0, 5270.0, 5592.0, 5493.0, 5276.0, 5565.0, 5252.0, 5338.0, 5614.0, 5653.0, 5447.0, 5659.0, 5470.0, 5346.0, 5710.0, 5445.0, 5598.0, 5288.0, 5372.0, 5333.0, 5577.0, 5416.0, 5438.0, 5262.0, 5526.0, 5392.0, 5640.0, 5300.0, 5570.0, 5460.0, 5597.0, 5362.0, 5582.0, 5272.0, 5253.0, 5307.0, 5631.0, 5279.0, 5335.0, 5529.0, 5313.0 (number of hits: 15)
20	5290	9	1	333	1	5430.0, 5338.0, 5499.0, 5669.0, 5510.0, 5316.0, 5343.0, 5594.0, 5634.0, 5484.0, 5519.0, 5664.0, 5617.0, 5700.0, 5453.0, 5676.0, 5570.0, 5380.0, 5372.0, 5627.0, 5564.0, 5451.0, 5386.0, 5427.0, 5432.0, 5406.0, 5531.0, 5541.0, 5353.0, 5640.0, 5320.0, 5356.0, 5508.0, 5309.0, 5600.0, 5657.0, 5598.0, 5490.0, 5648.0, 5493.0, 5485.0, 5620.0, 5565.0, 5537.0, 5385.0,

						5602.0, 5279.0, 5521.0, 5310.0, 5428.0, 5542.0, 5579.0, 5667.0, 5692.0, 5650.0, 5352.0, 5556.0, 5438.0, 5463.0, 5524.0, 5342.0, 5468.0, 5275.0, 5614.0, 5435.0, 5291.0, 5389.0, 5473.0, 5661.0, 5628.0, 5534.0, 5460.0, 5323.0, 5584.0, 5300.0, 5663.0, 5257.0, 5362.0, 5506.0, 5413.0, 5701.0, 5303.0, 5290.0, 5711.0, 5399.0, 5327.0, 5479.0, 5659.0, 5683.0, 5268.0, 5705.0, 5528.0, 5674.0, 5476.0, 5668.0, 5459.0, 5449.0, 5424.0, 5666.0, 5593.0 (number of hits: 13)
21	5290	9	1	333	1	5701.0, 5559.0, 5278.0, 5511.0, 5465.0, 5340.0, 5486.0, 5674.0, 5251.0, 5551.0, 5474.0, 5633.0, 5640.0, 5620.0, 5530.0, 5581.0, 5558.0, 5326.0, 5526.0, 5291.0, 5262.0, 5627.0, 5341.0, 5524.0, 5679.0, 5440.0, 5525.0, 5365.0, 5336.0, 5435.0, 5267.0, 5379.0, 5506.0, 5338.0, 5704.0, 5575.0, 5407.0, 5618.0, 5390.0, 5663.0, 5443.0, 5300.0, 5264.0, 5362.0, 5277.0, 5374.0, 5380.0, 5469.0, 5529.0, 5354.0, 5416.0, 5650.0, 5421.0, 5689.0, 5578.0, 5400.0, 5574.0, 5413.0, 5616.0, 5476.0, 5548.0, 5535.0, 5447.0, 5591.0, 5439.0, 5502.0, 5686.0, 5275.0, 5513.0, 5699.0, 5583.0, 5257.0, 5683.0, 5698.0, 5646.0, 5606.0, 5666.0, 5667.0, 5396.0, 5613.0, 5363.0, 5454.0, 5693.0, 5410.0, 5361.0, 5384.0, 5561.0, 5717.0, 5312.0, 5318.0, 5261.0, 5359.0, 5555.0, 5621.0, 5653.0, 5611.0, 5370.0, 5500.0, 5711.0, 5418.0 (number of hits: 13)
22	5290	9	1	333	1	5560.0, 5260.0, 5630.0, 5647.0, 5596.0, 5287.0, 5699.0, 5444.0, 5633.0, 5365.0, 5668.0, 5626.0, 5320.0, 5313.0, 5304.0, 5360.0, 5436.0, 5515.0, 5298.0, 5374.0, 5587.0, 5353.0, 5669.0, 5420.0, 5624.0, 5473.0, 5690.0, 5618.0, 5415.0, 5302.0, 5332.0, 5469.0, 5518.0, 5609.0, 5348.0, 5706.0, 5443.0, 5378.0, 5297.0, 5488.0, 5333.0, 5266.0, 5561.0, 5316.0, 5557.0, 5591.0, 5719.0, 5490.0, 5340.0, 5612.0, 5402.0, 5459.0, 5311.0, 5676.0, 5620.0, 5604.0, 5317.0, 5438.0, 5480.0, 5602.0, 5416.0, 5427.0, 5364.0, 5679.0, 5307.0, 5435.0, 5703.0, 5276.0, 5510.0, 5419.0, 5566.0, 5489.0, 5470.0, 5495.0, 5565.0, 5471.0, 5537.0, 5528.0, 5664.0, 5314.0, 5281.0, 5529.0, 5634.0, 5293.0, 5683.0, 5418.0, 5410.0, 5603.0, 5582.0, 5514.0, 5572.0, 5496.0, 5641.0, 5511.0, 5408.0, 5455.0, 5635.0, 5454.0, 5714.0, 5330.0 (number of hits: 17)
23	5290	9	1	333	1	5586.0, 5494.0, 5532.0, 5372.0, 5259.0, 5662.0, 5299.0, 5560.0, 5414.0, 5384.0, 5690.0, 5610.0, 5497.0, 5395.0, 5438.0, 5386.0, 5331.0, 5618.0, 5354.0, 5431.0, 5258.0, 5656.0, 5465.0, 5654.0, 5493.0,

						5585.0, 5385.0, 5491.0, 5328.0, 5642.0, 5553.0, 5500.0, 5534.0, 5646.0, 5470.0, 5569.0, 5479.0, 5466.0, 5273.0, 5503.0, 5575.0, 5680.0, 5632.0, 5316.0, 5427.0, 5641.0, 5577.0, 5278.0, 5333.0, 5277.0, 5442.0, 5475.0, 5284.0, 5657.0, 5684.0, 5675.0, 5423.0, 5270.0, 5526.0, 5444.0, 5332.0, 5487.0, 5390.0, 5446.0, 5715.0, 5355.0, 5628.0, 5685.0, 5371.0, 5455.0, 5504.0, 5697.0, 5486.0, 5623.0, 5535.0, 5510.0, 5521.0, 5468.0, 5300.0, 5634.0, 5467.0, 5410.0, 5538.0, 5359.0, 5658.0, 5648.0, 5441.0, 5304.0, 5282.0, 5406.0, 5346.0, 5370.0, 5323.0, 5280.0, 5671.0, 5533.0, 5464.0, 5625.0, 5402.0, 5677.0 (number of hits: 14)
24	5290	9	1	333	1	5387.0, 5449.0, 5447.0, 5670.0, 5285.0, 5461.0, 5411.0, 5385.0, 5494.0, 5682.0, 5621.0, 5343.0, 5508.0, 5570.0, 5402.0, 5496.0, 5307.0, 5659.0, 5337.0, 5362.0, 5646.0, 5464.0, 5309.0, 5435.0, 5576.0, 5386.0, 5617.0, 5398.0, 5567.0, 5685.0, 5280.0, 5553.0, 5320.0, 5324.0, 5500.0, 5393.0, 5276.0, 5495.0, 5415.0, 5491.0, 5392.0, 5463.0, 5563.0, 5357.0, 5616.0, 5379.0, 5365.0, 5723.0, 5689.0, 5471.0, 5443.0, 5441.0, 5350.0, 5299.0, 5669.0, 5345.0, 5388.0, 5691.0, 5705.0, 5375.0, 5721.0, 5688.0, 5686.0, 5434.0, 5684.0, 5416.0, 5540.0, 5358.0, 5509.0, 5288.0, 5640.0, 5648.0, 5549.0, 5662.0, 5586.0, 5356.0, 5711.0, 5390.0, 5584.0, 5293.0, 5360.0, 5511.0, 5718.0, 5554.0, 5425.0, 5470.0, 5574.0, 5529.0, 5583.0, 5506.0, 5650.0, 5628.0, 5714.0, 5442.0, 5292.0, 5602.0, 5319.0, 5460.0, 5642.0, 5335.0 (number of hits: 12)
25	5290	9	1	333	1	5441.0, 5654.0, 5395.0, 5320.0, 5429.0, 5582.0, 5394.0, 5677.0, 5621.0, 5360.0, 5293.0, 5484.0, 5266.0, 5612.0, 5627.0, 5664.0, 5393.0, 5402.0, 5336.0, 5289.0, 5364.0, 5252.0, 5525.0, 5321.0, 5569.0, 5541.0, 5614.0, 5707.0, 5591.0, 5718.0, 5708.0, 5715.0, 5602.0, 5464.0, 5564.0, 5498.0, 5593.0, 5465.0, 5534.0, 5305.0, 5711.0, 5613.0, 5678.0, 5533.0, 5701.0, 5414.0, 5714.0, 5592.0, 5481.0, 5358.0, 5363.0, 5575.0, 5437.0, 5571.0, 5400.0, 5691.0, 5328.0, 5647.0, 5552.0, 5603.0, 5407.0, 5359.0, 5291.0, 5290.0, 5405.0, 5699.0, 5527.0, 5315.0, 5334.0, 5559.0, 5458.0, 5304.0, 5332.0, 5343.0, 5339.0, 5422.0, 5554.0, 5259.0, 5657.0, 5416.0, 5560.0, 5287.0, 5362.0, 5636.0, 5313.0, 5696.0, 5385.0, 5413.0, 5555.0, 5377.0, 5588.0, 5561.0, 5420.0, 5652.0, 5608.0, 5372.0, 5279.0, 5577.0, 5526.0, 5344.0 (number of hits: 14)
26	5290	9	1	333	1	5411.0, 5334.0, 5420.0, 5379.0, 5653.0,

						5354.0, 5577.0, 5539.0, 5579.0, 5564.0, 5442.0, 5638.0, 5519.0, 5648.0, 5266.0, 5546.0, 5720.0, 5718.0, 5464.0, 5567.0, 5544.0, 5654.0, 5270.0, 5259.0, 5337.0, 5455.0, 5430.0, 5707.0, 5325.0, 5632.0, 5717.0, 5400.0, 5335.0, 5530.0, 5620.0, 5344.0, 5360.0, 5601.0, 5592.0, 5452.0, 5506.0, 5357.0, 5650.0, 5521.0, 5606.0, 5641.0, 5373.0, 5493.0, 5301.0, 5265.0, 5436.0, 5636.0, 5596.0, 5586.0, 5426.0, 5572.0, 5261.0, 5283.0, 5294.0, 5350.0, 5708.0, 5686.0, 5287.0, 5332.0, 5467.0, 5701.0, 5505.0, 5432.0, 5634.0, 5529.0, 5486.0, 5589.0, 5457.0, 5396.0, 5479.0, 5537.0, 5483.0, 5339.0, 5318.0, 5296.0, 5692.0, 5681.0, 5446.0, 5253.0, 5258.0, 5410.0, 5535.0, 5721.0, 5611.0, 5418.0, 5690.0, 5672.0, 5329.0, 5509.0, 5668.0, 5381.0, 5408.0, 5340.0, 5401.0, 5321.0 (number of hits: 15)
27	5290	9	1	333	1	5329.0, 5613.0, 5554.0, 5338.0, 5326.0, 5708.0, 5344.0, 5493.0, 5414.0, 5595.0, 5603.0, 5325.0, 5463.0, 5472.0, 5360.0, 5570.0, 5317.0, 5321.0, 5447.0, 5343.0, 5381.0, 5526.0, 5462.0, 5531.0, 5627.0, 5634.0, 5548.0, 5422.0, 5517.0, 5401.0, 5296.0, 5513.0, 5346.0, 5714.0, 5511.0, 5366.0, 5640.0, 5580.0, 5479.0, 5356.0, 5633.0, 5626.0, 5452.0, 5309.0, 5277.0, 5480.0, 5660.0, 5683.0, 5604.0, 5334.0, 5713.0, 5611.0, 5701.0, 5711.0, 5275.0, 5473.0, 5694.0, 5482.0, 5659.0, 5351.0, 5674.0, 5288.0, 5516.0, 5269.0, 5529.0, 5676.0, 5629.0, 5636.0, 5261.0, 5530.0, 5409.0, 5597.0, 5293.0, 5536.0, 5336.0, 5444.0, 5286.0, 5668.0, 5273.0, 5298.0, 5341.0, 5278.0, 5259.0, 5589.0, 5710.0, 5560.0, 5512.0, 5576.0, 5476.0, 5564.0, 5551.0, 5499.0, 5280.0, 5387.0, 5430.0, 5359.0, 5310.0, 5367.0, 5664.0, 5592.0 (number of hits: 19)
28	5290	9	1	333	1	5665.0, 5276.0, 5353.0, 5425.0, 5408.0, 5711.0, 5405.0, 5635.0, 5587.0, 5607.0, 5572.0, 5403.0, 5343.0, 5560.0, 5536.0, 5291.0, 5446.0, 5677.0, 5667.0, 5554.0, 5255.0, 5503.0, 5519.0, 5497.0, 5294.0, 5348.0, 5551.0, 5358.0, 5713.0, 5347.0, 5522.0, 5538.0, 5302.0, 5504.0, 5511.0, 5362.0, 5387.0, 5547.0, 5277.0, 5430.0, 5336.0, 5710.0, 5458.0, 5591.0, 5492.0, 5694.0, 5505.0, 5252.0, 5690.0, 5595.0, 5281.0, 5339.0, 5258.0, 5462.0, 5372.0, 5712.0, 5561.0, 5383.0, 5480.0, 5608.0, 5641.0, 5715.0, 5467.0, 5652.0, 5707.0, 5683.0, 5722.0, 5416.0, 5254.0, 5640.0, 5414.0, 5404.0, 5720.0, 5389.0, 5323.0, 5479.0, 5567.0, 5382.0, 5622.0, 5593.0, 5360.0, 5642.0, 5317.0, 5375.0, 5583.0, 5371.0, 5647.0, 5428.0, 5612.0, 5617.0,

						5310.0, 5574.0, 5275.0, 5384.0, 5589.0, 5328.0, 5379.0, 5412.0, 5297.0, 5400.0 (number of hits: 14)
29	5290	9	1	333	1	5593.0, 5329.0, 5697.0, 5318.0, 5667.0, 5382.0, 5654.0, 5327.0, 5567.0, 5573.0, 5256.0, 5715.0, 5315.0, 5463.0, 5695.0, 5522.0, 5357.0, 5521.0, 5539.0, 5624.0, 5418.0, 5655.0, 5372.0, 5347.0, 5553.0, 5261.0, 5370.0, 5386.0, 5387.0, 5690.0, 5708.0, 5533.0, 5543.0, 5504.0, 5281.0, 5405.0, 5491.0, 5403.0, 5312.0, 5632.0, 5392.0, 5453.0, 5424.0, 5293.0, 5691.0, 5557.0, 5630.0, 5380.0, 5284.0, 5364.0, 5367.0, 5505.0, 5423.0, 5287.0, 5595.0, 5642.0, 5338.0, 5266.0, 5564.0, 5722.0, 5566.0, 5283.0, 5542.0, 5400.0, 5628.0, 5404.0, 5653.0, 5707.0, 5353.0, 5295.0, 5368.0, 5459.0, 5328.0, 5254.0, 5589.0, 5389.0, 5314.0, 5544.0, 5551.0, 5508.0, 5662.0, 5336.0, 5700.0, 5588.0, 5421.0, 5644.0, 5675.0, 5259.0, 5280.0, 5518.0, 5260.0, 5676.0, 5354.0, 5362.0, 5436.0, 5448.0, 5606.0, 5472.0, 5438.0, 5631.0 (number of hits: 17)
30	5290	9	1	333	1	5412.0, 5518.0, 5445.0, 5525.0, 5460.0, 5278.0, 5721.0, 5600.0, 5458.0, 5530.0, 5506.0, 5662.0, 5273.0, 5645.0, 5499.0, 5687.0, 5712.0, 5362.0, 5678.0, 5336.0, 5281.0, 5450.0, 5268.0, 5587.0, 5562.0, 5527.0, 5653.0, 5312.0, 5516.0, 5283.0, 5415.0, 5399.0, 5656.0, 5532.0, 5356.0, 5297.0, 5410.0, 5327.0, 5323.0, 5267.0, 5667.0, 5375.0, 5695.0, 5388.0, 5650.0, 5699.0, 5289.0, 5639.0, 5688.0, 5494.0, 5586.0, 5485.0, 5489.0, 5467.0, 5703.0, 5549.0, 5293.0, 5380.0, 5344.0, 5261.0, 5333.0, 5346.0, 5384.0, 5301.0, 5490.0, 5436.0, 5649.0, 5466.0, 5498.0, 5573.0, 5349.0, 5628.0, 5483.0, 5427.0, 5379.0, 5279.0, 5559.0, 5428.0, 5367.0, 5714.0, 5497.0, 5270.0, 5396.0, 5290.0, 5544.0, 5383.0, 5464.0, 5689.0, 5719.0, 5272.0, 5510.0, 5492.0, 5675.0, 5330.0, 5264.0, 5629.0, 5475.0, 5535.0, 5468.0, 5495.0 (number of hits: 18)

5. BRIDGE AND/OR MESH MODE

Test Standard:

Networks Access Points with Bridge and/or MESH modes of operation are permitted to operate in the DFS bands but must employ a DFS function. The functionality of the Bridge mode as specified in §15.403(a) must be validated in the DFS test report. Devices operating as relays where they act as master and client must also employ DFS function for the master. The method used to validate the functionality must be documented and validation data must be documented. Bridge mode can be validated by performing a test statistical performance check (Section 7.8.4) on any one of the radar types. This is an abbreviated test to verify DFS functionality. MESH mode operational methodology must be submitted in the application for certification for evaluation by the FCC.

Test Result:

Test Mode: Bridge

Compliance, please refer the below data.

5290 MHz**Radar Type 2 Statistical Performance**

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	28	1.5	228	1
2	5290	28	2.6	157	0
3	5290	25	2.5	171	1
4	5290	27	1	219	1
5	5290	28	2.6	175	1
6	5290	24	4.1	228	1
7	5290	25	3.2	160	1
8	5290	28	5	180	1
9	5290	23	2.5	165	1
10	5290	23	1.7	152	0
11	5290	24	1.4	217	1
12	5290	25	3.7	173	1
13	5290	23	3	215	1
14	5290	27	1.6	175	1
15	5290	27	4	178	1
16	5290	24	2	177	1
17	5290	24	2.9	162	1
18	5290	27	2.6	159	1
19	5290	24	2.5	154	1
20	5290	23	4.6	224	1
21	5290	27	4.4	156	1
22	5290	28	4.6	228	1
23	5290	29	4.1	205	1
24	5290	26	1.6	162	1
25	5290	26	2.3	213	1
26	5290	26	3.1	210	1
27	5290	29	3.7	167	1
28	5290	27	2.6	152	1
29	5290	29	3.6	174	1
30	5290	27	4.1	192	1
Detection Percentage: 93.3% (>60%)					

6. EUT PHOTOGRAPHS

Please refer to the attachment CR231167508-EXP EUT EXTERNAL PHOTOGRAPHS and CR231167508-INP EUT INTERNAL PHOTOGRAPHS.

7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR231167508-00D-TSP TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******