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

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

DFS TEST REPORT

Applicant: **8devices**

Address: FCC: Antakalnio 17 - 6 Vilnius Lithuania
IC: Antakalnio g. 17-6 Vilnius Vilnius County LT-10312 Lithuania

FCC ID: **Z9W-AP3**
IC: **11468A-AP3**
HVIN: **AP3400**
Product Name: **Wireless Access Point**

Standard(s): **47 CFR Part 15, Subpart E(15.407)**
RSS-247 Issue 2, February 2017
FCC KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

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

Report Number: **CR230314564-00D**

Date Of Issue: **2023/5/24**

Reviewed By: **Julie Tan** Julie Tan

Title: RF Engineer

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Title: Manager

Test Laboratory: **China Certification ICT Co., Ltd (Dongguan)**
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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.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

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

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230314564-00D	Original Report	2023/5/24

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

Trade Name:	HIRSCHMANN
EUT Name:	Wireless Access Point
EUT Model:	AP3400-2Wax
Operation Frequency:	5260-5320 MHz (802.11a/n ht20/ac vht20/ax hew20) 5270-5310 MHz(802.11n ht40/ac vht40/ax hew40) 5290 MHz(802.11ac vht80/ax hew80) 5500-5720 MHz (802.11a/n ht20/ac vht20/ax hew20) 5510-5710 MHz(802.11n ht40/ac vht40/ax hew40) 5530-5690 MHz(802.11ac vht80/ax hew80)
Maximum Average Output Power (Conducted):	16.95dBm (5250-5350 MHz) 14.19dBm (5470-5725 MHz)
Maximum Average Output Power (EIRP):	26.05dBm (5250-5350 MHz) 23.29dBm (5470-5725 MHz)
Modulation Type:	802.11a/n/ac: OFDM-BPSK, QPSK, 16QAM, 64QAM 802.11ax: OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Rated Input Voltage:	DC48V from PoE
Serial Number:	23N0-1
EUT Received Date:	2023/3/27
EUT Received Status:	Good

1.1.1 Antenna Information Detail▲:

Antenna Chain	Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Chain 0 & Chain 1	ANTONICS GmbH	Patch	50	5250-5350MHz	9.1 dBi
				5470-5725MHz	9.1 dBi

1.1.2 Accessory Information:

No.

1.2 Description of Test Configuration

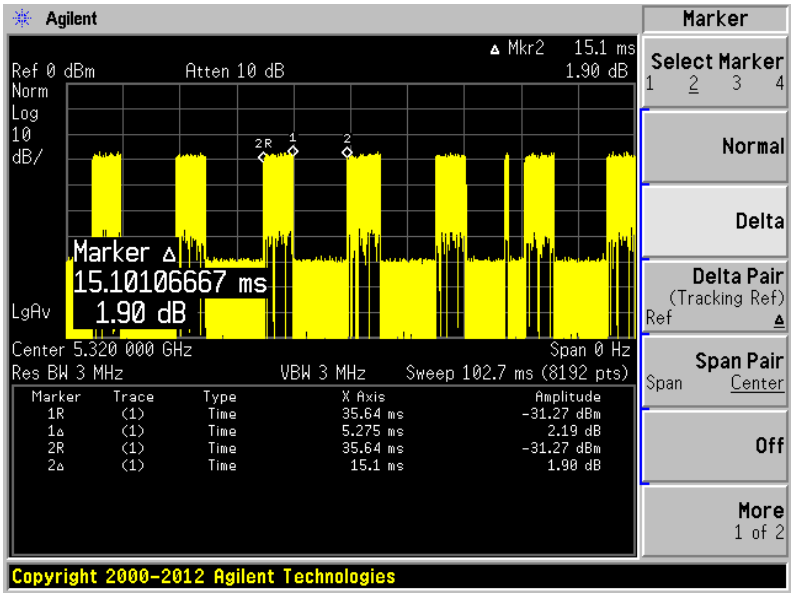
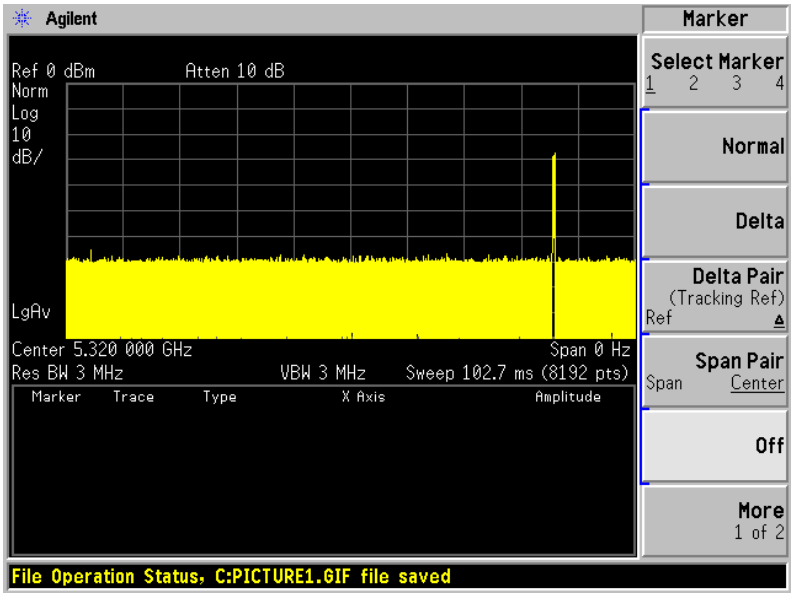
1.2.1 EUT Operation Condition:

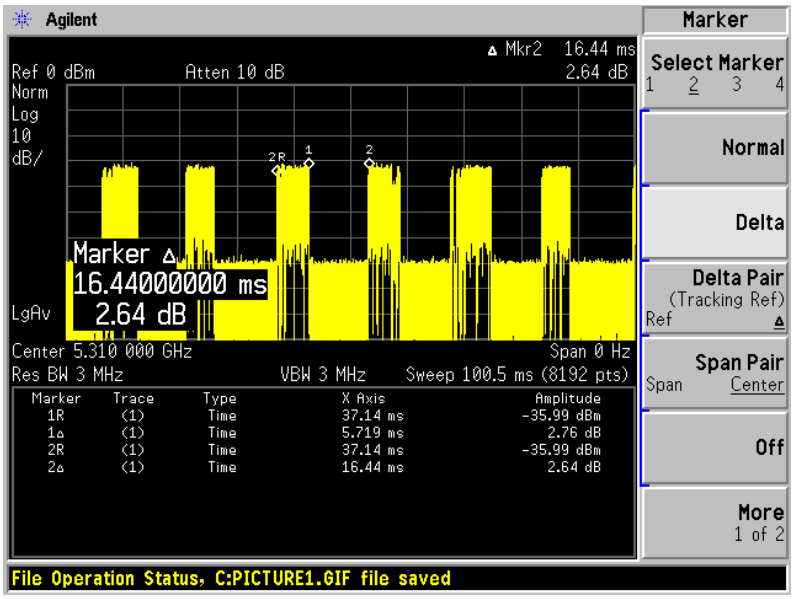
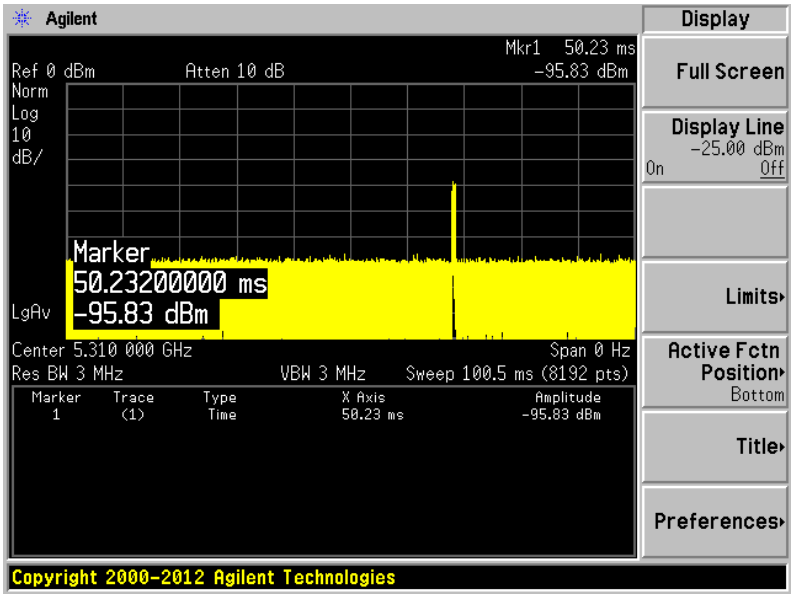
EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer.
Equipment Modifications:	No
EUT Exercise Software:	Tfgen

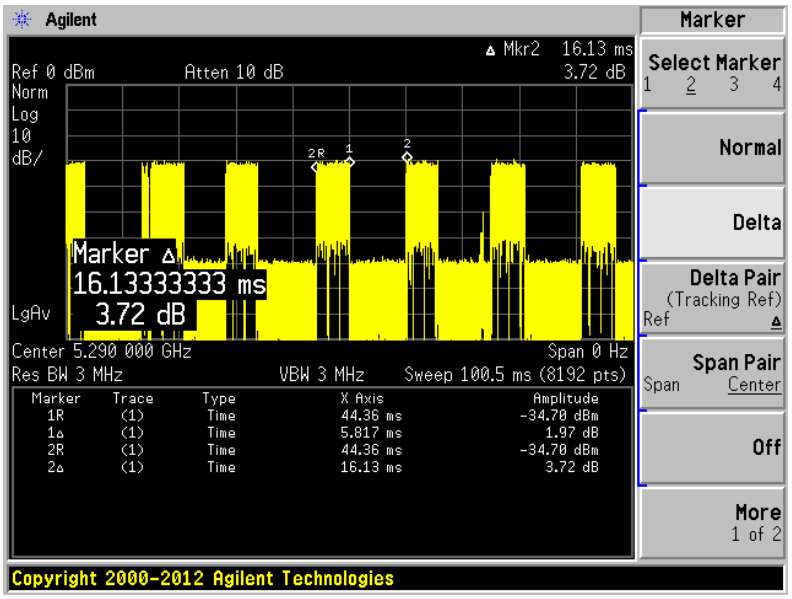
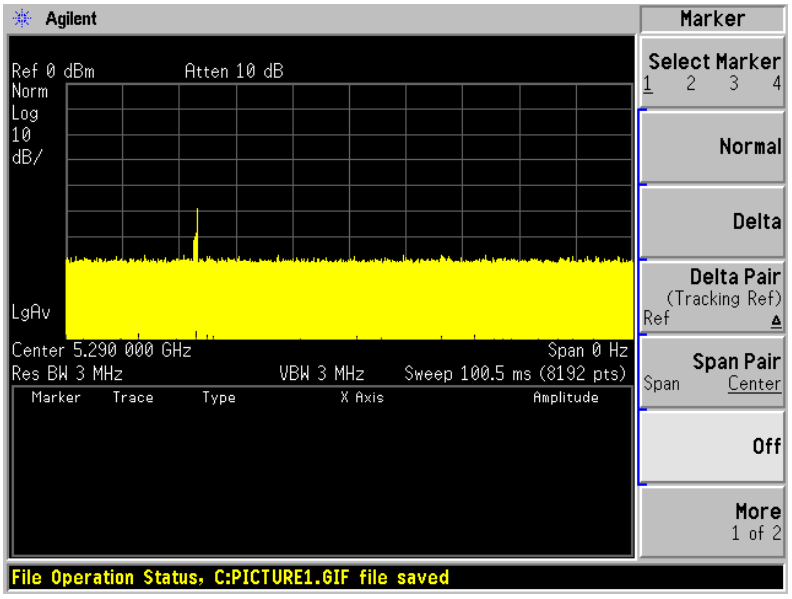
The software was provided by manufacturer▲. The below mode and data rate was used when testing:

Bandwidth	Modes	Data Rate
20MHz	802.11ax hew20	MCS0
40MHz	802.11ax hew40	MCS0
80MHz	802.11ax hew80	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 pakge streamed from the Access Point to the Client using the software “Tfgen”. The following duty cycle was used when test:

20MHz mode Traffic Duty Cycle: 5.275*7/102.7=35.95%	
20MHz mode Without Traffic	

40MHz mode Traffic Duty Cycle: 5.719*6/100.5=34.14%	
40MHz mode Without Traffic	

80MHz mode Traffic Duty Cycle: 5.817*6/100.5=34.73%	
80MHz mode Without Traffic	

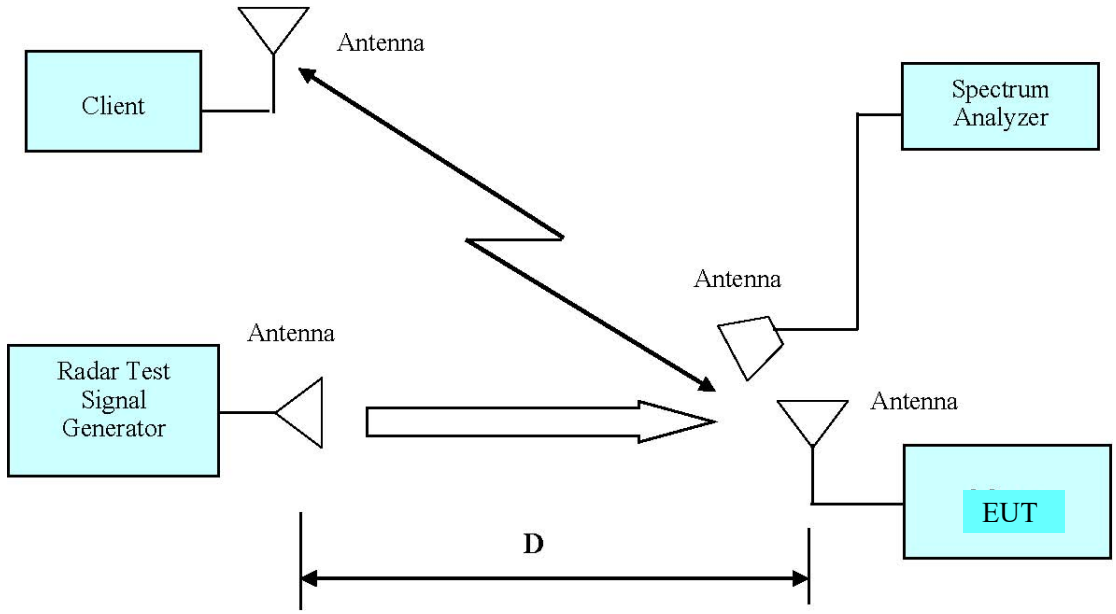
1.2.2 Support Equipment List and Details

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)& RSS-247, Issue 2, February 2017,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)& RSS-247, Issue 2, February 2017

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
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

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

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (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 ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

Table 4: DFS Response Requirement Values

Parameter	**Value**
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: *Channel Move Time* and the *Channel Closing Transmission Time* should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. **Note 2:** The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. **Note 3:** During the *U-NII Detection Bandwidth* detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 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	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	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 $\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{3066}\right)\right\}=\text{Roundup}\{17.2\}=18.$

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

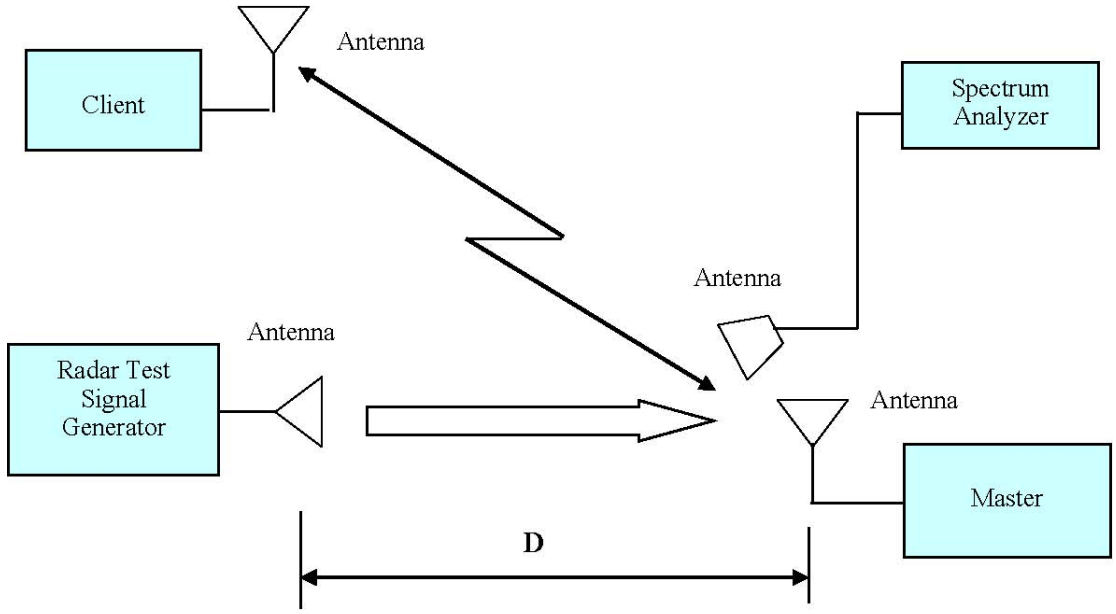
Table 7 – Frequency Hopping Radar Test Waveform

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

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:	23N0-1	Test Date:	2023/4/14~2023/4/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	Ada Yan	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.1~26.1	Relative Humidity: (%)	66~67	ATM Pressure: (kPa)	99.8~100.5

Test Equipment List and Details:

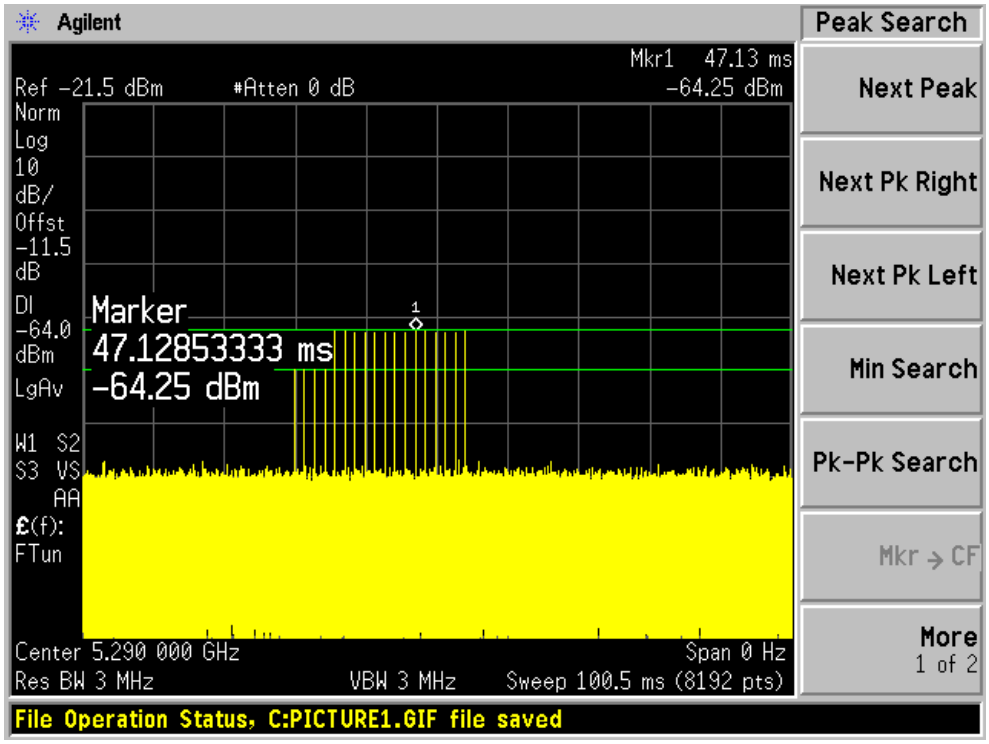
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
National Instruments	NI PXI-1042 8-Slot chassis	PXI-1042	VOBX40FBD	N/A	N/A
National Instruments	Arbitrary Waveform Generator	PXI-5421	N/A	N/A	N/A
National Instruments	RF Upconverter	PXI-5610	N/A	N/A	N/A
ASCOR	Upconverter	AS-7202	N/A	N/A	N/A
Agilent	Spectrum Analyzer	E4440A	SG43360054	2022/07/15	2023/07/14
Ditorn	Splitter/Combiner	D3C4080	SN2244	N/A	N/A
TDK RF	horn antenna	HRN-0118	130 084	2021/10/12	2024/10/12
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12

** 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).*

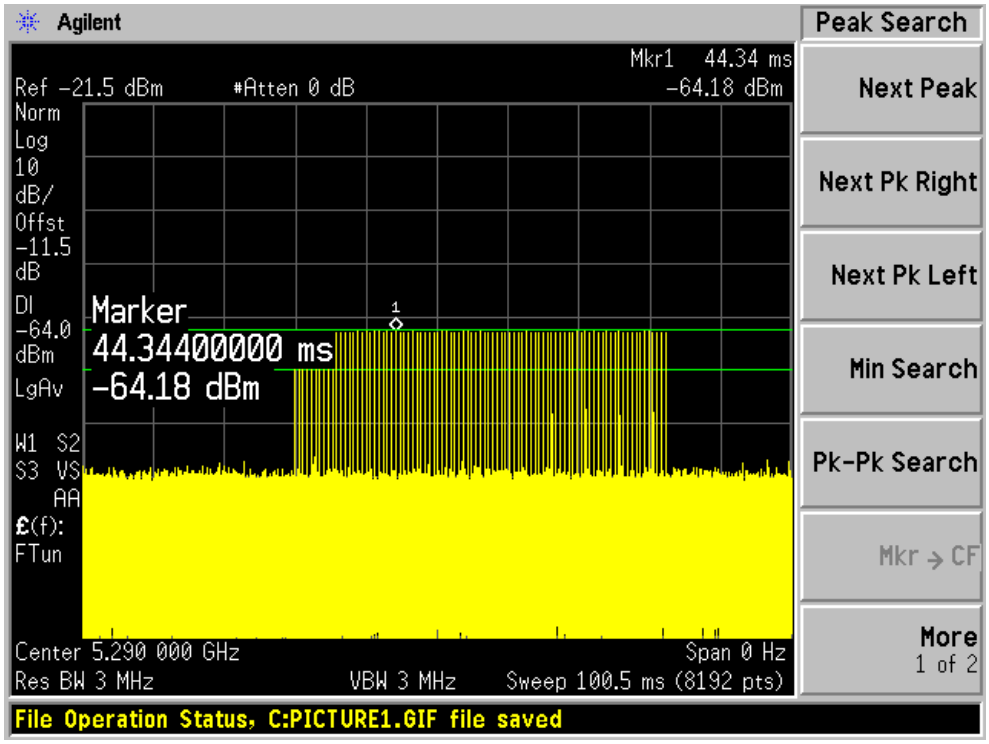
4.1 Radar Waveform Calibration

5290MHz:

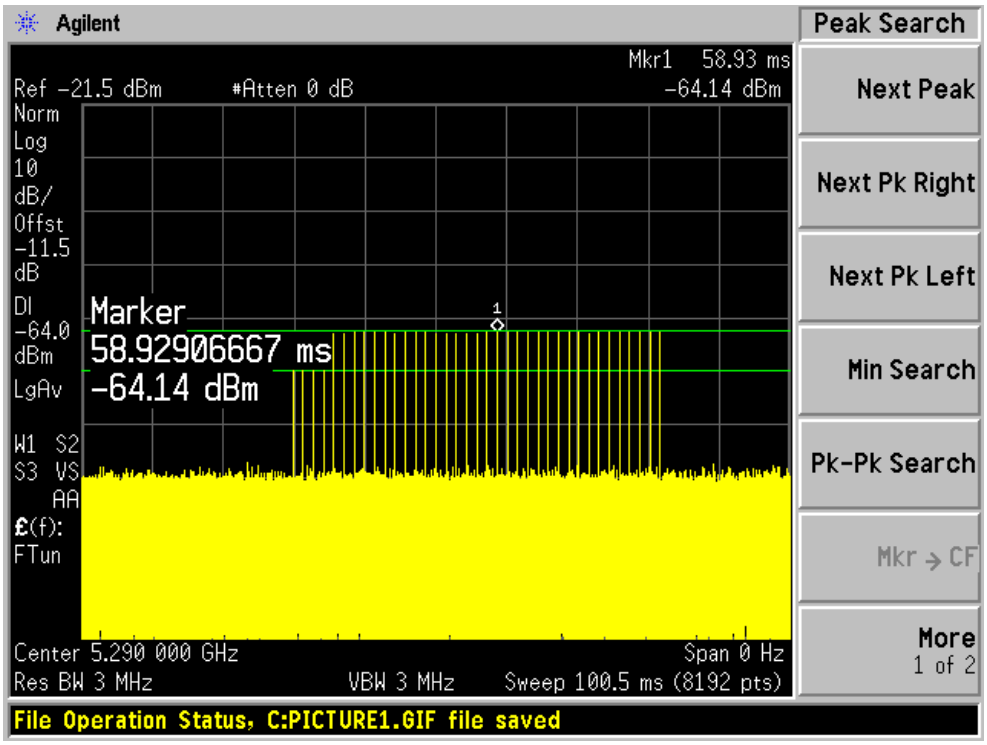
Radar Type 0



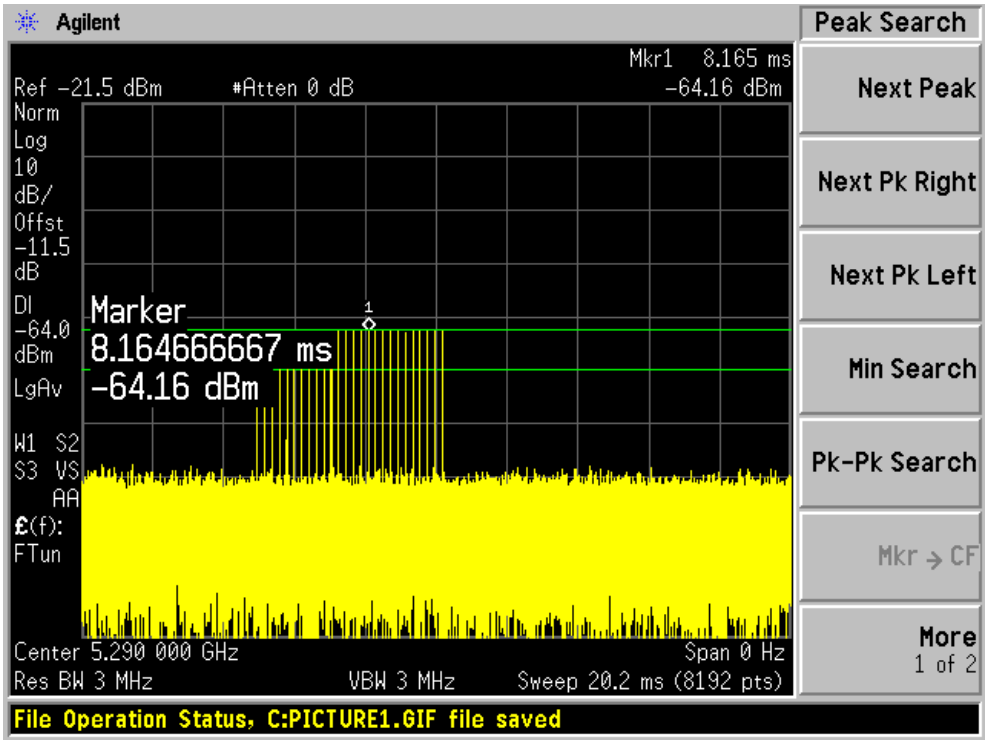
Radar Type 1A



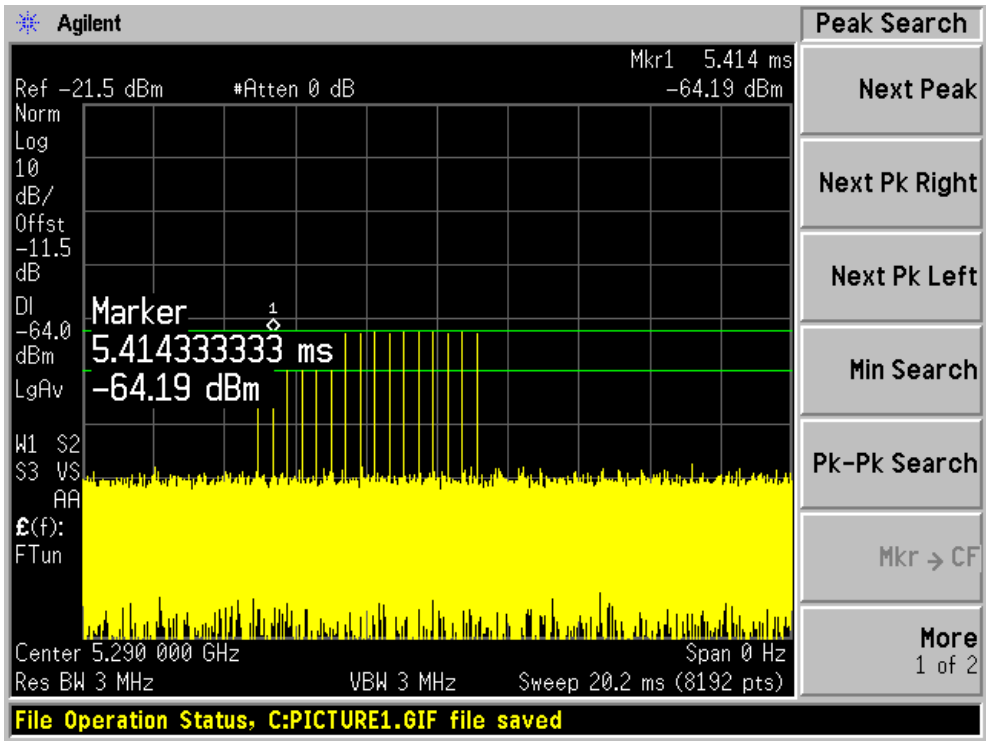
Radar Type 1B



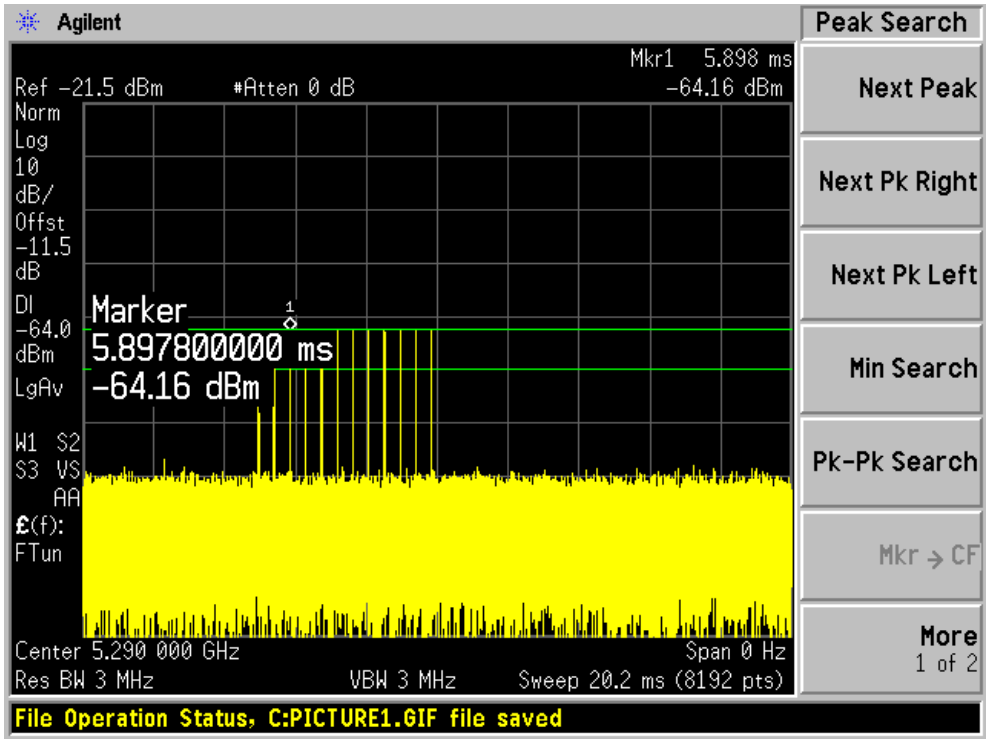
Radar Type 2



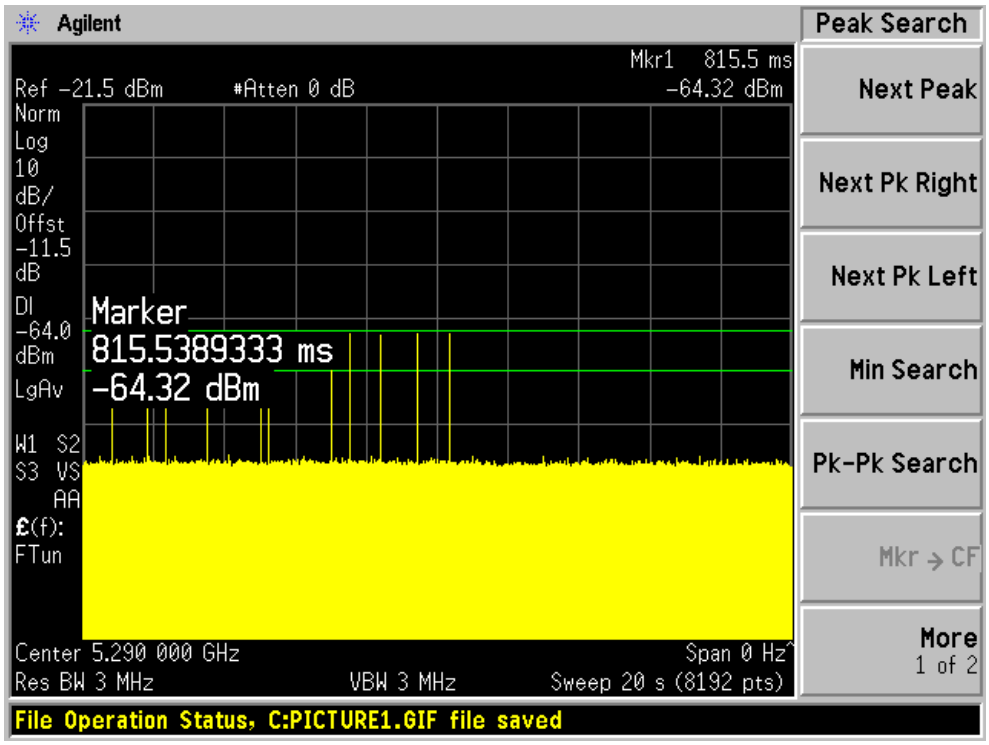
Radar Type 3



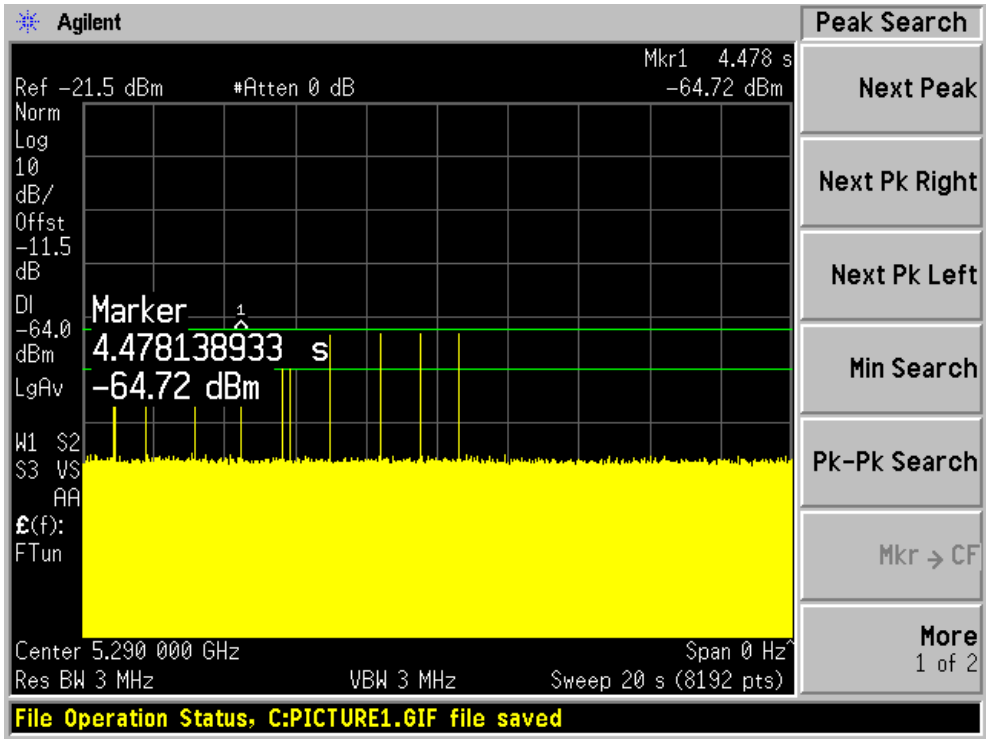
Radar Type 4



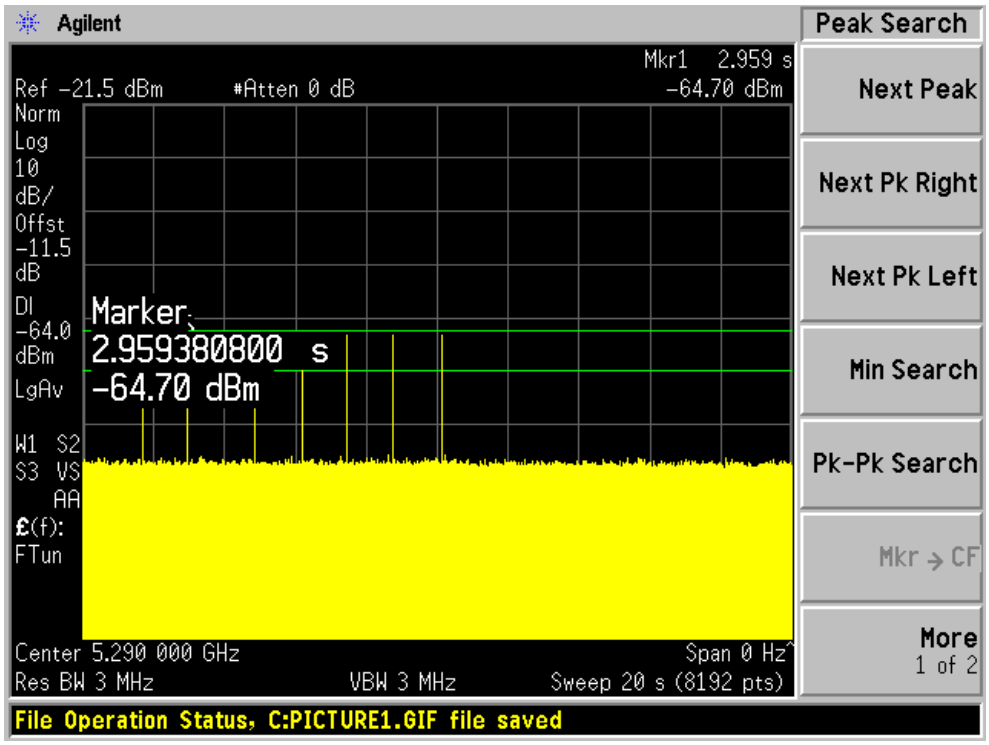
Radar Type 5 Case 1



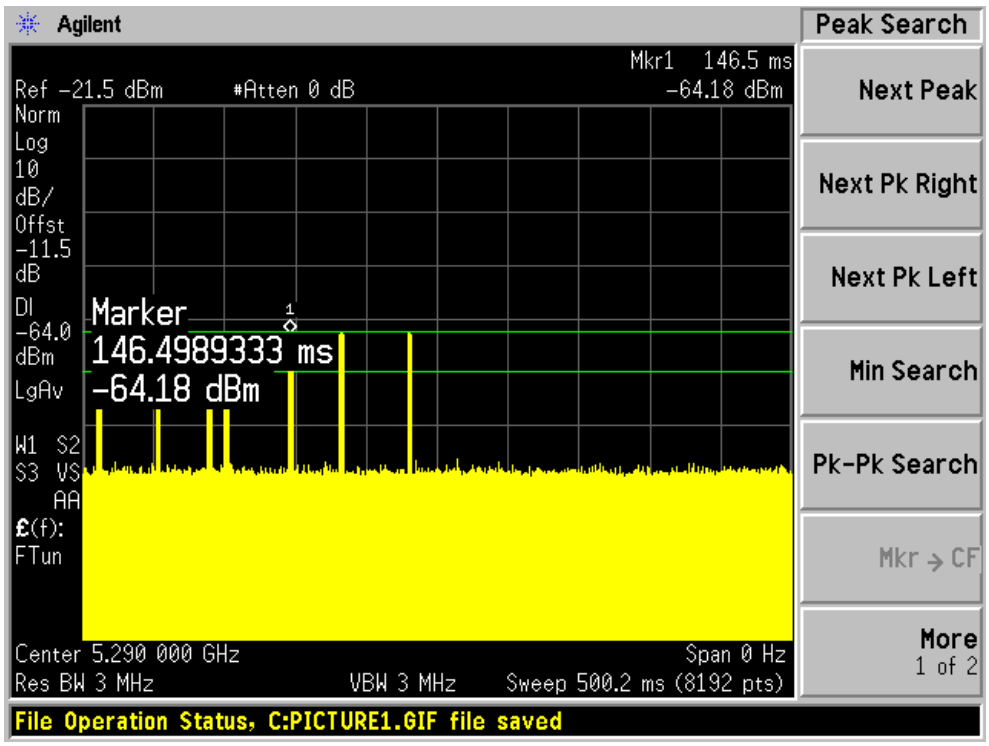
Radar Type 5 Case 2



Radar Type 5 Case 3



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

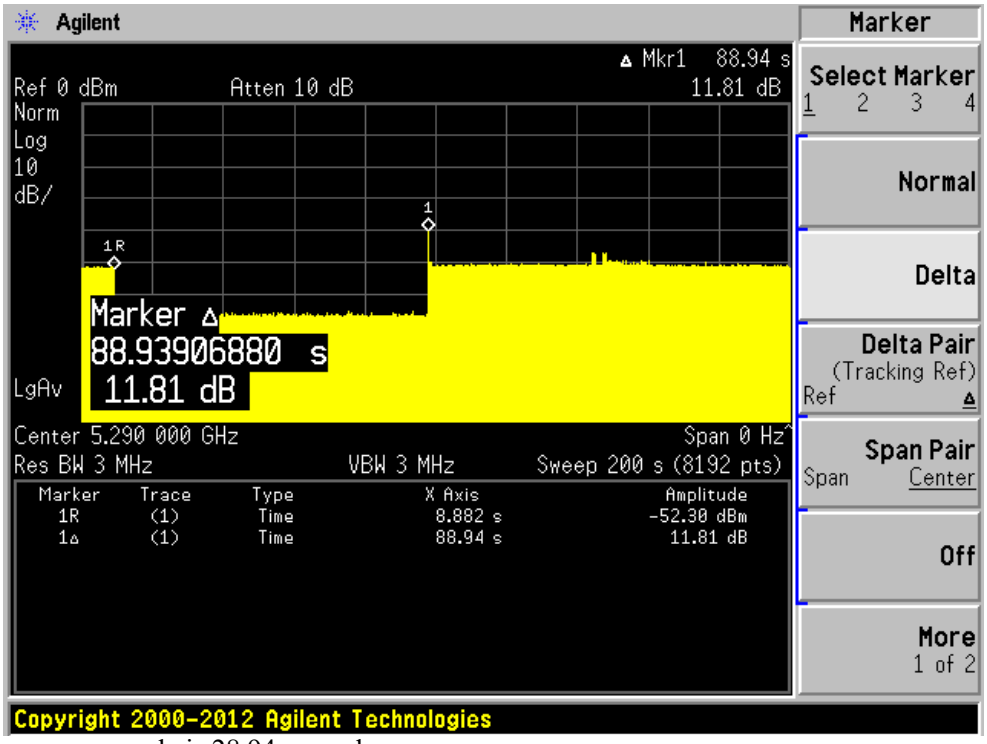
Test Frequency (MHz)	EUT initial Power-up cycle (Second)
5290	28.94

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

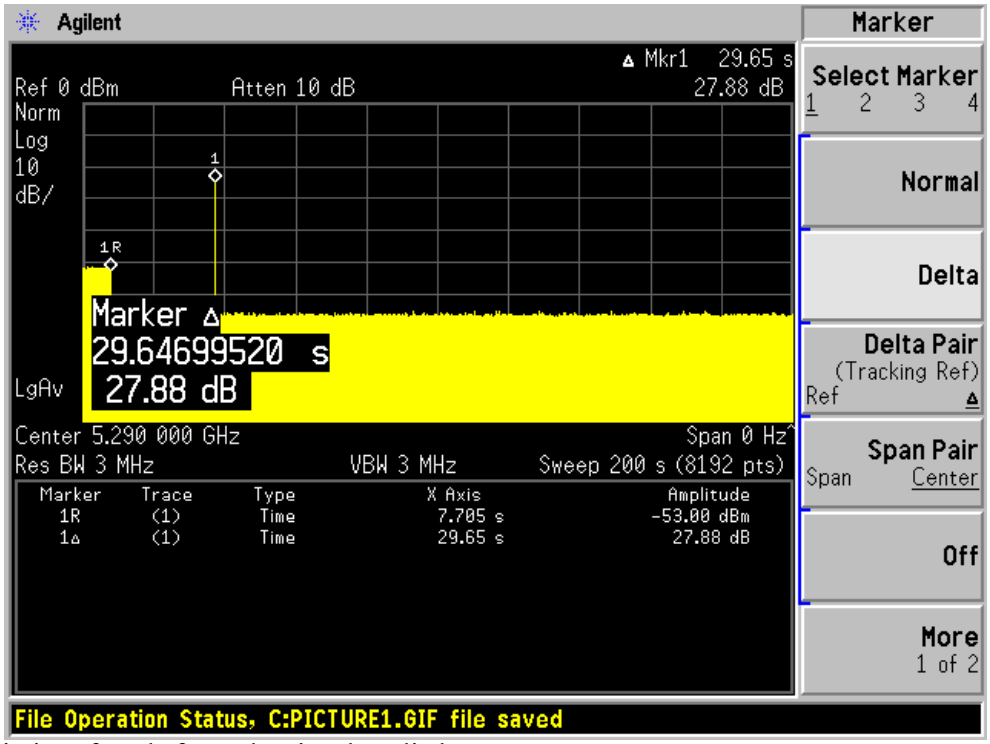
Please refer to the following plots.

Plot of without Radar signal applied



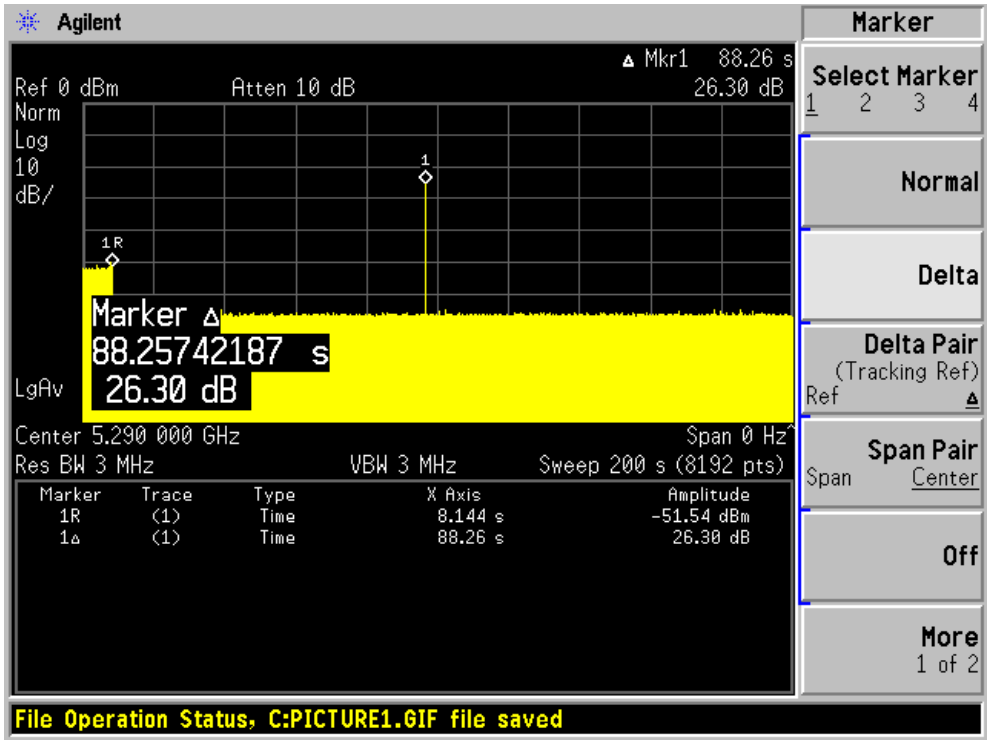
Note: The power-up cycle is 28.94 seconds.

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 MHz	80	Type 0	Compliant

Please refer to the following tables and plots.

4.3.3 Results:

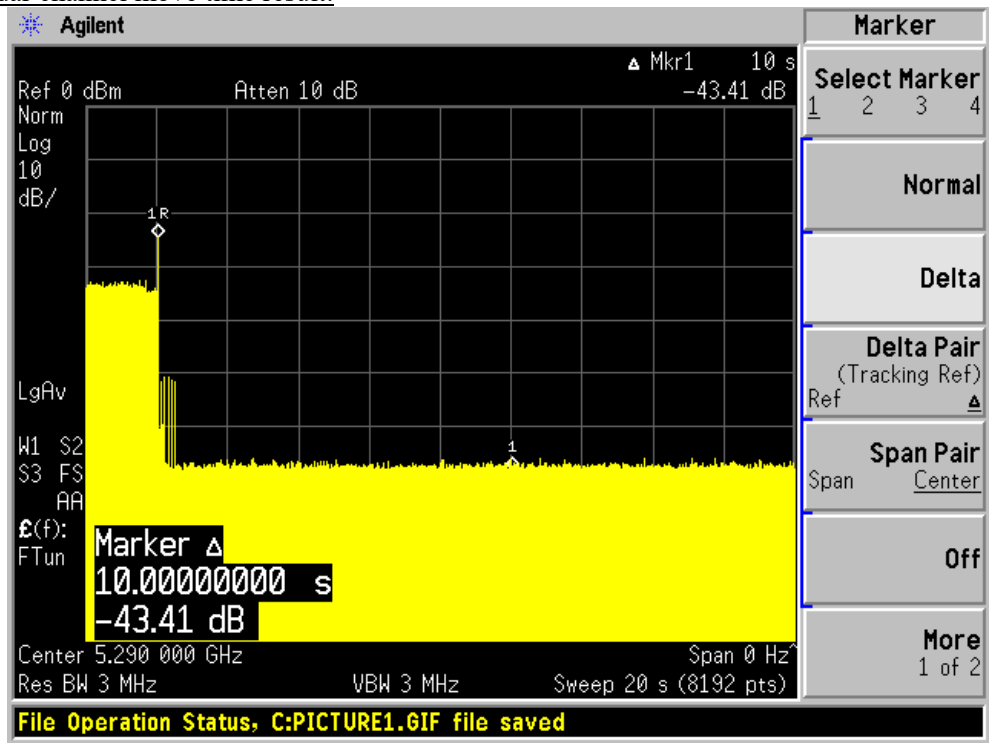
Type 0 radar channel move time result:

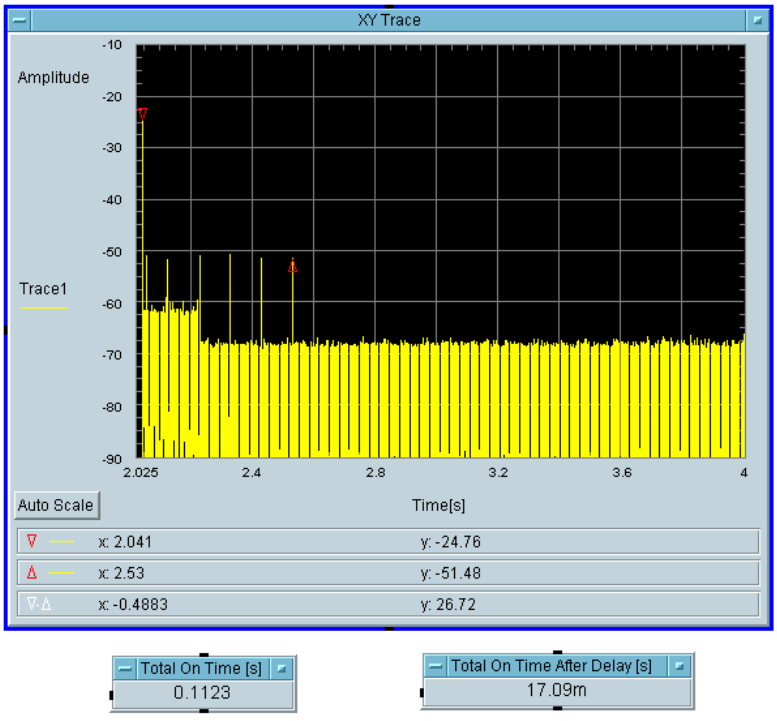
Channel Move Time (s)	Channel Move Time Limit (s)	Result
0.489	10	Pass

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	17.09	60	Pass

Type 0 radar channel move time result:





4.4 Non-occupancy Period

4.4.1 Test Procedure

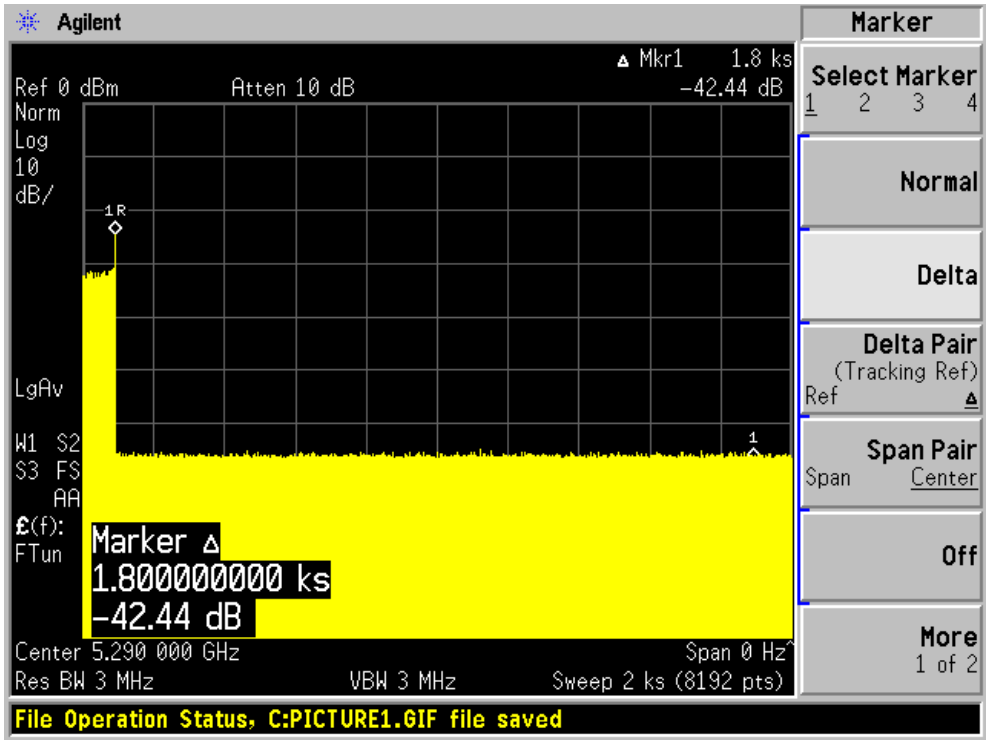
Measure the EUT for more than 30 minutes following the channel close/move time to very that the EUT does not resume any transmissions on this channel. Provide one plot to demonstrate no transmission on the channel for the non-occupancy period (30 minutes observation time)

4.4.2 Test Result

Test Frequency (MHz)	Bandwidth (MHz)	Spectrum Analyzer Display
5290 MHz	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-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	5310	5330	20	19.321	100%	Compliance
5310	40	5290	5330	40	38.802	100%	Compliance
5290	80	5250	5330	80	78.244	100%	Compliance

Please refer to the following tables.

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 (%)**
5309	1	1	1	0	0	1	1	1	1	1	80 %
5310(**F_L**)	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(F_H)	1	1	1	1	1	1	1	1	1	1	100 %
5331	1	1	0	0	0	0	0	0	1	1	40 %
Detection Bandwidth = $F_H - F_L$ = 5330-5310 = 20MHz											
EUT 99% BW = 19.321 MHz											**Result:** Pass

40MHz Bandwidth, EUT Frequency = 5310 MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5289	1	1	1	1	1	0	0	0	1	1	70 %
5290(**F_L**)	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(**F_H**)	1	1	1	1	1	1	1	1	1	1	100 %
5331	1	1	0	0	1	1	1	1	1	1	80%
Detection Bandwidth = $F_H - F_L$ =5330-5290 =40 MHz											
EUT 99% BW = 38.802MHz;											**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 (%)**
5250(F_L)	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(F_H)	1	1	1	1	1	1	1	1	1	1	100 %
5331	1	1	0	0	1	1	1	1	1	1	80 %
Detection Bandwidth = $F_H - F_L$ =5330-5250=80 MHz											
EUT 99% BW = 78.244 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:

80MHz

Radar Signal Type	Waveform/Trial Number	Detection (%)	Limit (%)	Pass/Fail
Type 1A	15	100%	60%	pass
Type 1B	15	93.3%	60%	pass
Type 2	30	96.7%	60%	Pass
Type 3	30	90 %	60%	Pass
Type 4	30	90 %	60%	Pass
Aggregate (Type1 to 4)	120	93.33 %	80%	Pass
Type 5	30	100 %	80%	Pass
Type 6	30	93.3 %	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	92	1	578	1
2	5290	95	1	558	1
3	5290	67	1	798	1
4	5290	76	1	698	1
5	5290	62	1	858	1
6	5290	59	1	898	1
7	5290	81	1	658	1
8	5290	99	1	538	1
9	5290	61	1	878	1
10	5290	86	1	618	1
11	5290	63	1	838	1
12	5290	89	1	598	1
13	5290	57	1	938	1
14	5290	70	1	758	1
15	5290	58	1	918	1
Detection Percentage: 100% (>60%)					

Radar Type 1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μs)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	19	1	2865	1
2	5290	27	1	1993	0
3	5290	19	1	2813	1
4	5290	27	1	1976	1
5	5290	22	1	2442	1
6	5290	21	1	2605	1
7	5290	94	1	566	1
8	5290	41	1	1317	1
9	5290	26	1	2061	1
10	5290	30	1	1764	1
11	5290	27	1	1982	1
12	5290	28	1	1940	1
13	5290	18	1	3019	1
14	5290	20	1	2658	1
15	5290	58	1	915	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	162	1
2	5290	28	3.3	177	1
3	5290	26	4.6	225	1
4	5290	29	4.1	223	1
5	5290	26	1.5	164	1
6	5290	24	4	180	1
7	5290	23	2.2	212	1
8	5290	28	2.6	223	1
9	5290	25	4.8	166	1
10	5290	28	3.9	229	1
11	5290	25	2	204	1
12	5290	25	1.9	154	1
13	5290	29	1.1	170	1
14	5290	28	1.8	177	1
15	5290	28	2	184	1
16	5290	27	4.5	153	1
17	5290	24	4.9	204	1
18	5290	28	1.6	171	1
19	5290	29	3.7	225	1
20	5290	29	2.9	168	1
21	5290	29	1.8	158	1
22	5290	29	2.6	181	1
23	5290	27	4.3	207	1
24	5290	26	2.2	174	1
25	5290	26	3.9	178	1
26	5290	26	3.7	221	1
27	5290	28	4.3	186	1
28	5290	27	2.9	193	1
29	5290	26	4.2	185	1
30	5290	29	4.4	217	0
Detection Percentage: 96.7 % (>60%)					

Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μs)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	16	9.7	314	0
2	5290	18	6.6	497	1
3	5290	18	9.2	461	1
4	5290	18	6.5	240	1
5	5290	16	6.3	216	0
6	5290	16	8.2	379	1
7	5290	16	9	426	1
8	5290	16	6.7	284	1
9	5290	18	6.6	298	1
10	5290	18	7.4	401	1
11	5290	18	6.6	240	1
12	5290	17	8.7	265	0
13	5290	18	9.6	467	1
14	5290	17	6.1	301	1
15	5290	16	6.5	420	1
16	5290	18	10	256	1
17	5290	17	8.5	486	1
18	5290	18	9.3	301	1
19	5290	18	6.3	446	1
20	5290	17	7.2	205	1
21	5290	16	9.8	426	1
22	5290	16	7.2	475	1
23	5290	17	8.9	449	1
24	5290	17	8.7	303	1
25	5290	18	8.6	488	1
26	5290	18	7.3	300	1
27	5290	17	6.4	368	1
28	5290	17	9.5	377	1
29	5290	18	7.6	466	1
30	5290	16	8.3	227	1
Detection Percentage: 90% (>60%)					

Radar Type 4 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5290	15	13.2	466	1
2	5290	15	14.5	204	1
3	5290	13	15.4	320	0
4	5290	13	14.8	470	1
5	5290	14	18.6	456	1
6	5290	15	16.6	498	1
7	5290	16	12.8	279	1
8	5290	12	14	221	1
9	5290	15	14.7	201	1
10	5290	14	16.1	202	1
11	5290	13	15.5	395	1
12	5290	15	19.4	306	0
13	5290	16	12.6	215	1
14	5290	13	17.9	462	1
15	5290	13	17.2	373	0
16	5290	13	14.4	470	1
17	5290	12	17.9	488	1
18	5290	15	12	376	1
19	5290	15	17.1	261	1
20	5290	15	15.1	305	1
21	5290	15	11.2	347	1
22	5290	15	13.4	342	1
23	5290	12	14.1	276	1
24	5290	12	18.6	295	1
25	5290	15	13.9	270	1
26	5290	13	17.2	400	1
27	5290	15	17.8	217	1
28	5290	16	16.1	230	1
29	5290	12	11	382	1
30	5290	15	11.2	360	1
Detection Percentage: 90% (>60%)					

Radar Type 5 Case 1 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5290.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	9	53.9	1170		0.123505	1
2	2	9	68.1	1747		1.864209	
3	1	9	57.1			3.050164	
4	1	9	61.3			3.541529	
5	1	9	78.5			4.944163	
6	3	9	57.5	1302	1455	5.841403	
7	2	9	79.7	1497		7.452793	
8	3	9	74.9	1405	1627	7.973315	
9	3	9	67.2	1895	1352	9.608668	
10	3	9	89.2	1427	1385	9.829204	
11	2	9	55.2	1485		11.580408	

Statistics 2 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	14	99			0.31206	1
2	2	14	53.4	1358		1.360301	
3	2	14	54.7	1741		2.863105	
4	3	14	74.5	1405	1512	4.101874	
5	2	14	80.6	1671		5.196483	
6	3	14	97	1850	1881	5.565235	
7	3	14	77.3	1019	1272	6.699421	
8	2	14	94.9	1714		8.354568	
9	2	14	90.9	1504		9.514769	
10	2	14	75.8	1059		10.604902	
11	2	14	92.2	1596		11.341199	

Statistics 3 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	10	92.3	1620		0.379445	
2	2	10	64.5	1681		1.526032	
3	2	10	86	1144		1.890768	
4	1	10	50			2.691328	
5	1	10	64.2			3.665856	
6	3	10	86	1978	1643	4.664425	
7	1	10	67.7			5.174951	
8	3	10	59.6	1583	1485	5.760365	1
9	1	10	85.5			6.616047	
10	1	10	81.9			7.812341	
11	2	10	93.2	1491		8.445922	
12	1	10	65.7			9.159411	
13	2	10	62.1	1368		10.379198	
14	2	10	92.7	1079		11.193487	
15	2	10	70.6	1817		11.541622	

Statistics 4 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	14	96.3	1192		0.165358	
2	2	14	53.6	1773		1.238352	
3	2	14	74.7	1134		1.892324	
4	2	14	50.5	1960		3.089669	
5	2	14	93.9	1208		3.381497	
6	2	14	52.9	1976		4.287978	
7	1	14	65			5.153022	
8	2	14	60.9	1924		6.244499	1
9	1	14	80.4			7.03963	
10	1	14	53.2			7.530748	
11	3	14	98.4	1658	1758	8.471886	
12	1	14	50.5			9.090473	
13	3	14	73.3	1979	1566	10.226731	
14	2	14	87.4	1260		10.561816	
15	1	14	66.4			11.702434	

Statistics 5(ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	13	69.6			0.596463	1
2	2	13	90.3	1948		0.789195	
3	2	13	97.6	1418		1.326343	
4	1	13	87.1			1.890518	
5	2	13	57	1713		2.461437	
6	3	13	95.5	1175	1173	3.073755	
7	2	13	52.4	1966		4.105386	
8	2	13	76.3	1620		4.656672	
9	1	13	93.5			5.318705	
10	3	13	52.8	1555	1112	5.816428	
11	1	13	58.8			6.044579	
12	2	13	57.7	1002		6.672441	
13	2	13	86.7	1082		7.437137	
14	2	13	83.5	1177		8.134365	
15	2	13	61.2	1851		8.822823	
16	2	13	94.6	1134		9.222413	
17	2	13	84.8	1961		9.712966	
18	2	13	83.3	1774		10.221485	
19	1	13	50.3			11.034046	
20	3	13	92.2	1193	1456	11.99275	

Statistics 6 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	6	80.1			0.52059	1
2	2	6	59.6	1995		1.50123	
3	3	6	95.9	1791	1621	2.516256	
4	3	6	90.1	1331	1946	3.123748	
5	1	6	83.3			3.643249	
6	3	6	74.1	1285	1946	4.445714	
7	2	6	85.5	1476		5.954041	
8	2	6	69.8	1603		6.484581	
9	2	6	57.4	1610		7.159817	
10	2	6	68.5	1199		7.764923	
11	1	6	52.3			8.782811	
12	1	6	53.2			9.737916	
13	1	6	72.6			11.026814	
14	2	6	94.5	1145		11.678253	

Statistics 7(ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	14	64.5	1319		0.036121	1
2	2	14	80.9	1112		0.944845	
3	2	14	87.4	1619		2.083561	
4	2	14	52.8	1488		2.296693	
5	2	14	50.9	1316		3.090307	
6	1	14	54.8			4.119623	
7	2	14	66.6	1613		5.018721	
8	1	14	69.4			5.985552	
9	2	14	95.1	1339		6.0107	
10	2	14	56.6	1837		7.464919	
11	3	14	71.3	1302	1678	8.22935	
12	2	14	84	1815		8.427156	
13	2	14	85.8	1708		9.469365	
14	2	14	74.8	1394		9.850046	
15	2	14	93.6	1030		10.84233	
16	2	14	85	1289		11.759665	

Statistics 8 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	6	51.1	1030		0.726542	1
2	3	6	90.2	1698	1470	1.359734	
3	1	6	94.6			1.933165	
4	2	6	67.7	1163		3.177832	
5	3	6	73.6	1706	1292	3.81245	
6	2	6	94.9	1746		4.223491	
7	1	6	76.4			5.537534	
8	1	6	72.3			6.157231	
9	2	6	62.1	1324		7.184631	
10	3	6	69.7	1887	1020	7.84427	
11	1	6	60			8.386501	
12	2	6	91.6	1043		9.201184	
13	2	6	63.3	1623		9.807905	
14	2	6	75.3	1944		10.926943	
15	3	6	81.7	1520	1719	11.265006	

Statistics 9 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	9	98.4	1119		0.675996	1
2	3	9	69.5	1019	1087	1.238898	
3	3	9	62.5	1650	1078	1.488639	
4	1	9	81.2			2.621648	
5	3	9	87.3	1301	1816	2.857715	
6	1	9	93.9			4.09333	
7	2	9	84	1077		4.639697	
8	3	9	77.5	1406	1899	5.311802	
9	1	9	67.6			5.929884	
10	3	9	93.2	1764	1794	6.677996	
11	3	9	85.2	1265	1486	7.545915	
12	2	9	52.5	1317		8.401345	
13	3	9	50.7	1617	1624	8.558694	
14	1	9	95.6			9.525202	
15	3	9	98.1	1865	1617	10.058348	
16	1	9	66.3			10.729734	
17	2	9	70.4	1243		11.671255	

Statistics 10 (ChirpCenter Frequency: 5290.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	15	82.1	1702		0.364919	1
2	2	15	80.9	1371		1.468814	
3	2	15	78.7	1688		3.366644	
4	2	15	51.2	1669		3.853043	
5	3	15	75	1986	1182	5.702623	
6	2	15	60.7	1487		6.00806	
7	3	15	58.3	1322	1088	7.38546	
8	2	15	63.5	1539		8.631248	
9	2	15	68.5	1244		9.659589	
10	2	15	74.8	1723		11.851386	

Radar Type 5 Case 2 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5255.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	13	84.7	1449		0.915466	1
2	2	13	69.9	1082		2.499808	
3	3	13	90.6	1349	1711	3.038305	
4	2	13	98.8	1405		5.130241	
5	3	13	78.3	1077	1754	5.625651	
6	3	13	76.7	1308	1541	6.67697	
7	2	13	50.5	1083		8.320001	
8	2	13	73	1965		10.231501	

Statistics 2 (ChirpCenter Frequency: 5255.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	13	64.3	1914		0.41501	1
2	1	13	66.5			1.252893	
3	2	13	84	1730		2.353431	
4	1	13	54.7			3.439602	
5	3	13	54	1921	1752	4.059036	
6	3	13	92.2	1834	1591	4.943865	
7	2	13	73.5	1749		5.809914	
8	2	13	69.2	1378		6.61382	
9	2	13	54.1	1108		7.80863	
10	2	13	60.4	1991		8.734178	
11	1	13	83.1			10.130574	
12	3	13	93	1449	1297	10.978728	
13	1	13	71.1			11.903365	

Statistics 3 (ChirpCenter Frequency: 5255.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	13	66.9			0.40669	
2	1	13	87.5			1.377723	
3	2	13	52.5	1158		2.32727	
4	3	13	77.4	1926	1803	3.05495	
5	2	13	97.5	1363		3.423707	
6	3	13	79.6	1684	1420	4.721812	
7	2	13	51.6	1267		5.367987	
8	2	13	80	1536		6.268312	1
9	3	13	77.9	1148	1620	6.477608	
10	3	13	58.8	1354	1247	7.685631	
11	2	13	70.9	1940		8.550523	
12	2	13	94	2000		9.43177	
13	2	13	51.3	1018		10.377568	
14	2	13	51.7	1160		10.510932	
15	1	13	81.5			11.704553	

Statistics 4 (ChirpCenter Frequency: 5254.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	9	59.5			0.506182	
2	2	9	53.8	1646		1.145324	
3	1	9	92.1			1.793385	
4	1	9	66.9			2.01045	
5	2	9	63.8	1753		2.912052	
6	2	9	78.8	1799		3.540631	
7	2	9	55	1768		4.176681	
8	2	9	86.8	1439		4.742715	
9	2	9	67.8	1893		5.312256	
10	3	9	88.8	1067	1539	6.14785	1
11	2	9	79.9	1063		6.624424	
12	3	9	93	1907	1825	7.280587	
13	2	9	93.4	1492		7.804673	
14	2	9	64	1305		8.300178	
15	3	9	93.6	1376	1335	8.934031	
16	3	9	93.9	1967	1840	10.010505	
17	2	9	53.2	1538		10.256907	
18	3	9	88	1680	1818	11.025506	
19	3	9	72.4	1779	1658	11.670118	

Statistics 5 (ChirpCenter Frequency: 5258.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	20	73.3			0.653682	1
2	2	20	53.7	1179		1.363918	
3	2	20	86.3	1111		3.568609	
4	2	20	92.1	1807		4.979674	
5	1	20	91.7			5.682678	
6	2	20	83.6	1029		6.94606	
7	2	20	85.3	1516		8.393512	
8	3	20	65.1	1063	1652	9.419741	
9	1	20	95.9			11.643331	

Statistics 6 (ChirpCenter Frequency: 5253.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	8	92.9	1476	1590	0.186631	1
2	2	8	53.2	1112		0.785011	
3	3	8	75.8	1200	1066	1.594618	
4	3	8	96.2	1921	1212	2.214494	
5	2	8	92.8	1583		2.504441	
6	2	8	87.5	1474		3.421601	
7	1	8	63.1			3.947437	
8	3	8	92.4	1149	1880	4.502002	
9	2	8	81.9	1958		4.865162	
10	1	8	67.7			5.954331	
11	2	8	63.9	1778		6.298953	
12	1	8	88.3			6.679213	
13	2	8	90.7	1135		7.23736	
14	3	8	72.3	1199	1805	8.138748	
15	3	8	90.6	1075	1010	8.533034	
16	2	8	72.9	1909		9.547562	
17	2	8	79.3	1723		9.922951	
18	3	8	98.5	1081	1443	10.394019	
19	3	8	70.4	1476	1632	11.103288	
20	1	8	96.4			11.841092	

Statistics 7 (ChirpCenter Frequency: 5254.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(uS)	Pulse 2-3 spacing(uS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	9	69.5	1707	1402	0.236756	1
2	2	9	80.5	1416		0.769322	
3	3	9	52.4	1166	1951	1.725726	
4	3	9	79.3	1154	1060	2.383153	
5	2	9	90.7	1713		3.009952	
6	3	9	91.4	1543	1315	3.619845	
7	2	9	72.5	1232		4.123437	
8	2	9	78.6	1401		5.033276	
9	2	9	64.1	1899		5.335455	
10	1	9	63.1			6.336386	
11	1	9	82.4			7.011421	
12	3	9	81.4	1281	1178	7.405999	
13	1	9	81.4			8.533154	
14	2	9	62.3	1639		8.691476	
15	2	9	87.3	1003		9.667566	
16	1	9	62.9			10.442325	
17	1	9	64.3			10.823095	
18	2	9	89.3	1175		11.555432	

Statistics 8 (ChirpCenter Frequency: 5253.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	8	59.8			0.218132	1
2	3	8	55.2	1107	1937	0.708635	
3	1	8	54.1			1.582458	
4	2	8	61.4	1965		2.027969	
5	2	8	63.2	1821		2.474714	
6	1	8	64.5			3.400799	
7	1	8	69.7			3.98197	
8	2	8	65.6	1308		4.442638	
9	2	8	64.4	1120		5.147835	
10	2	8	67.4	1919		5.678093	
11	1	8	78.3			6.055418	
12	3	8	61.8	1885	1721	6.752638	
13	3	8	88.8	1436	1871	7.708723	
14	1	8	57.1			8.211914	
15	3	8	83.4	1904	1795	8.684965	
16	2	8	97.1	1947		9.549327	
17	1	8	91.7			9.914863	
18	2	8	64.2	1852		10.425802	
19	2	8	91.4	1172		11.297336	
20	3	8	95	1727	1185	11.833681	

Statistics 9 (ChirpCenter Frequency: 5254.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	11	69.7	1613		0.050128	1
2	1	11	71			1.380051	
3	1	11	78.5			2.136364	
4	3	11	92.1	1678	1540	2.69256	
5	3	11	73	1043	1502	3.603856	
6	2	11	52.5	1070		4.369481	
7	2	11	81.2	1808		5.097639	
8	2	11	86.7	1193		5.368795	
9	1	11	89.9			6.042067	
10	3	11	68.4	1050	1786	6.999304	
11	1	11	62.7			8.110368	
12	3	11	66.2	1046	1712	8.65169	
13	2	11	62.3	1367		9.285904	
14	2	11	61.5	1033		10.368766	
15	2	11	50.2	1688		10.699981	
16	1	11	60.6			11.583438	

Statistics 10 (ChirpCenter Frequency: 5254.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	10	61.8	1744		0.018051	1
2	2	10	65.6	1452		0.836859	
3	1	10	73.3			1.281552	
4	2	10	63.5	1175		2.243283	
5	2	10	87	1924		2.721975	
6	3	10	59.8	1106	1705	3.471726	
7	2	10	54.6	1529		4.370892	
8	1	10	75.3			4.643739	
9	2	10	85.3	1775		5.336481	
10	1	10	84.7			5.899394	
11	3	10	98.3	1925	1317	6.790313	
12	1	10	83.6			6.997947	
13	1	10	62.1			8.127927	
14	2	10	90	1727		8.553413	
15	2	10	87.2	1422		9.298297	
16	3	10	59.9	1712	1301	9.864426	
17	2	10	72.2	1665		10.540819	
18	1	10	99.1			11.216511	
19	2	10	89.5	1378		11.727166	

Radar Type 5 Case 3 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5328.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	6	69	1086		0.035528	
2	2	6	77.6	1715		1.370018	
3	2	6	52.4	1658		2.806001	
4	2	6	94.1	1846		4.171667	
5	2	6	63.2	1783		4.853523	
6	1	6	71.9			6.004893	1
7	3	6	60	1360	1594	7.140027	
8	1	6	57			8.369243	
9	3	6	69.6	1480	1924	9.380404	
10	3	6	81.7	1387	1912	9.917407	
11	1	6	61.7			11.170566	

Statistics 2 (ChirpCenter Frequency: 5325.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	12	56.5	1527		0.769178	
2	2	12	58.1	1029		1.58351	
3	2	12	92.1	1413		1.844166	
4	1	12	84.8			2.7025	
5	2	12	53.9	1076		3.333663	
6	3	12	80.7	1009	1144	4.562044	
7	1	12	89.8			5.24447	
8	3	12	62.7	1550	1222	6.064725	1
9	2	12	75.3	1646		7.106229	
10	3	12	61.4	1803	1112	7.844872	
11	2	12	93	1084		8.216503	
12	3	12	85.4	1307	1048	9.325401	
13	2	12	55.7	1829		9.67875	
14	1	12	91.7			10.436014	
15	2	12	63.8	1465		11.636786	

Statistics 3 (ChirpCenter Frequency: 5323.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	17	53.8			0.912045	1
2	3	17	66.1	1853	1104	2.29755	
3	2	17	96.9	1593		2.926025	
4	3	17	95.6	1129	1905	4.582793	
5	1	17	74.8			5.127615	
6	2	17	76.7	1908		6.13485	
7	1	17	58.7			8.273965	
8	2	17	85.4	1231		9.353173	
9	2	17	62.9	1218		9.871795	
10	1	17	51.1			11.116221	

Statistics 4 (ChirpCenter Frequency: 5327.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	7	53.6	1729	1326	0.658962	1
2	1	7	59			1.255722	
3	2	7	60.5	1620		2.02758	
4	2	7	83.8	1935		2.773139	
5	3	7	90.4	1433	1358	2.915027	
6	2	7	60.3	1077		3.662837	
7	3	7	94.5	1776	1053	4.89566	
8	3	7	70.5	1724	1695	5.253276	
9	3	7	98.3	1197	1903	5.973707	
10	2	7	97.1	1924		6.546045	
11	2	7	99.7	1645		7.73404	
12	2	7	86.1	1832		8.096911	
13	2	7	81.3	1695		8.609652	
14	2	7	68.5	1167		9.197145	
15	3	7	53.7	1627	1773	10.448401	
16	1	7	61.6			10.76874	
17	2	7	77.7	1435		11.335217	

Statistics 5 (ChirpCenter Frequency: 5326.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	10	92	1783		0.787663	1
2	2	10	63	1144		1.40759	
3	2	10	54.5	1102		2.94156	
4	3	10	52.9	1028	1547	3.243492	
5	1	10	55.7			4.522398	
6	3	10	79.5	1129	1248	5.943813	
7	2	10	68.3	1533		6.303277	
8	2	10	95.6	1996		7.288241	
9	2	10	54.9	1260		8.044333	
10	3	10	71	1919	1890	9.591548	
11	3	10	57.4	1982	1974	10.601348	
12	3	10	52.8	1067	1772	11.227455	

Statistics 6 (ChirpCenter Frequency: 5323.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	18	53	1789		0.262082	1
2	3	18	55.5	1067	1076	1.39897	
3	2	18	90	1130		2.959387	
4	2	18	87.7	1884		3.468007	
5	3	18	71.3	1959	1389	4.432842	
6	3	18	84.5	1945	1076	5.482768	
7	2	18	84	1993		6.711722	
8	2	18	99.4	1848		7.04448	
9	2	18	50	1501		8.471303	
10	2	18	70.7	1076		9.208993	
11	2	18	59.4	1886		10.688484	
12	2	18	51.2	1592		11.200774	

Statistics 7 (ChirpCenter Frequency: 5325.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	12	62.8	1068	1709	0.516446	1
2	2	12	73.7	1693		1.322395	
3	2	12	73.5	1693		2.632181	
4	2	12	54	1788		3.174304	
5	2	12	58.6	1631		4.22866	
6	1	12	93.7			5.368798	
7	3	12	55.6	1525	1904	6.915139	
8	3	12	97.3	1382	1960	7.753225	
9	3	12	58.7	1073	1111	8.140596	
10	1	12	61.6			9.336228	
11	1	12	71.4			10.571667	
12	2	12	56.4	1054		11.734883	

Statistics 8 (ChirpCenter Frequency: 5324.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	15	62.6	1847		0.587911	1
2	1	15	51			1.031172	
3	1	15	99.9			2.228299	
4	2	15	57.3	1705		2.915991	
5	3	15	97.1	1637	1745	3.282512	
6	1	15	55.1			4.478325	
7	2	15	55.3	1884		4.8622	
8	2	15	75.7	1822		5.495375	
9	2	15	82.4	1767		6.665061	
10	1	15	78.3			7.107233	
11	2	15	85.8	1393		7.716688	
12	1	15	75.9			8.309775	
13	2	15	86.3	1373		9.685755	
14	3	15	70.2	1707	1833	9.889791	
15	2	15	63.1	1482		10.598238	
16	2	15	68.4	1853		11.6779	

Statistics 9 (ChirpCenter Frequency: 5325.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	13	55.4	1952	1269	0.872617	1
2	2	13	83.1	1889		1.43241	
3	1	13	93.4			2.406027	
4	2	13	53	1054		2.94246	
5	3	13	77.4	1339	1762	4.510907	
6	3	13	71.2	1263	1936	5.41878	
7	3	13	78.9	1688	1259	6.050549	
8	1	13	77.8			6.647318	
9	1	13	75.9			8.07315	
10	2	13	60.6	1064		8.99232	
11	2	13	65.5	1465		10.055788	
12	2	13	62.8	1184		10.993024	
13	2	13	59.1	1866		11.625876	

Statistics 10 (ChirpCenter Frequency: 5327.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	8	63.6	1282	1286	0.299454	1
2	1	8	89.4			1.086807	
3	2	8	72.7	1016		2.218973	
4	1	8	90.4			3.727157	
5	1	8	91.5			4.105538	
6	1	8	85.7			5.687572	
7	2	8	88	1639		6.31695	
8	1	8	52.1			7.410746	
9	3	8	96.4	1296	1249	8.436113	
10	2	8	76.3	1103		9.439885	
11	2	8	82.3	1504		10.702721	
12	1	8	67.2			11.858162	

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	5527.0, 5289.0, 5518.0, 5343.0, 5549.0, 5578.0, 5545.0, 5606.0, 5417.0, 5622.0, 5280.0, 5547.0, 5411.0, 5303.0, 5708.0, 5431.0, 5408.0, 5603.0, 5397.0, 5513.0, 5601.0, 5504.0, 5367.0, 5315.0, 5284.0, 5256.0, 5300.0, 5268.0, 5694.0, 5663.0, 5566.0, 5273.0, 5575.0, 5649.0, 5707.0, 5689.0, 5641.0, 5594.0, 5717.0, 5696.0, 5493.0, 5639.0, 5413.0, 5629.0, 5640.0, 5356.0, 5338.0, 5277.0, 5483.0, 5569.0, 5723.0, 5327.0, 5690.0, 5415.0, 5720.0, 5555.0, 5433.0, 5252.0, 5636.0, 5490.0, 5559.0, 5722.0, 5652.0, 5362.0, 5598.0, 5422.0, 5522.0, 5678.0, 5616.0, 5294.0, 5293.0, 5711.0, 5310.0, 5278.0, 5591.0, 5459.0, 5465.0, 5288.0, 5423.0, 5418.0, 5481.0, 5430.0, 5269.0, 5580.0, 5462.0, 5452.0, 5524.0, 5655.0, 5671.0, 5460.0, 5665.0, 5258.0, 5721.0, 5497.0, 5314.0, 5565.0, 5683.0, 5609.0, 5351.0, 5614.0
2	5290	9	1	333	1	5579.0, 5674.0, 5385.0, 5369.0, 5467.0, 5538.0, 5340.0, 5704.0, 5651.0, 5338.0, 5288.0, 5376.0, 5424.0, 5445.0, 5371.0, 5319.0, 5283.0, 5435.0, 5315.0, 5412.0, 5641.0, 5535.0, 5581.0, 5696.0, 5417.0, 5434.0, 5700.0, 5720.0, 5653.0, 5489.0, 5698.0, 5584.0, 5266.0, 5303.0, 5549.0, 5627.0, 5285.0, 5348.0, 5295.0, 5361.0, 5254.0, 5456.0, 5654.0, 5346.0, 5620.0, 5638.0, 5628.0, 5291.0, 5334.0, 5437.0, 5647.0, 5567.0, 5367.0, 5587.0, 5608.0, 5343.0, 5358.0, 5606.0, 5630.0, 5335.0, 5695.0, 5320.0, 5333.0, 5520.0, 5477.0, 5597.0, 5710.0, 5388.0, 5496.0, 5614.0, 5632.0, 5357.0, 5502.0, 5373.0, 5494.0, 5484.0, 5476.0, 5276.0, 5504.0, 5533.0, 5259.0, 5666.0, 5449.0, 5560.0, 5403.0, 5643.0, 5537.0, 5529.0, 5379.0, 5271.0, 5517.0, 5592.0, 5263.0, 5591.0, 5604.0, 5644.0, 5330.0, 5570.0, 5595.0, 5684.0
3	5290	9	1	333	1	5252.0, 5253.0, 5332.0, 5521.0, 5437.0, 5468.0, 5624.0, 5441.0, 5409.0, 5569.0, 5535.0, 5418.0, 5289.0, 5613.0, 5573.0, 5324.0, 5280.0, 5341.0, 5508.0, 5584.0, 5275.0, 5371.0, 5685.0, 5682.0, 5489.0, 5483.0, 5496.0, 5463.0, 5459.0, 5291.0, 5379.0, 5285.0, 5466.0, 5328.0, 5628.0, 5712.0, 5377.0, 5642.0, 5370.0, 5580.0, 5306.0, 5579.0, 5637.0, 5439.0, 5440.0, 5331.0, 5430.0, 5602.0, 5655.0, 5386.0, 5671.0, 5470.0, 5713.0, 5457.0, 5520.0, 5539.0, 5710.0, 5354.0, 5401.0, 5488.0, 5636.0, 5672.0, 5305.0, 5317.0, 5388.0, 5504.0, 5399.0, 5374.0, 5656.0, 5286.0,

						5373.0, 5383.0, 5561.0, 5359.0, 5585.0, 5338.0, 5529.0, 5472.0, 5575.0, 5415.0, 5279.0, 5382.0, 5342.0, 5255.0, 5531.0, 5587.0, 5664.0, 5378.0, 5706.0, 5431.0, 5297.0, 5699.0, 5495.0, 5287.0, 5533.0, 5314.0, 5273.0, 5716.0, 5419.0, 5625.0
4	5290	9	1	333	1	5306.0, 5479.0, 5694.0, 5443.0, 5716.0, 5436.0, 5314.0, 5339.0, 5409.0, 5456.0, 5504.0, 5548.0, 5588.0, 5589.0, 5423.0, 5348.0, 5476.0, 5400.0, 5556.0, 5616.0, 5692.0, 5338.0, 5489.0, 5553.0, 5320.0, 5721.0, 5470.0, 5458.0, 5261.0, 5252.0, 5425.0, 5565.0, 5459.0, 5471.0, 5449.0, 5293.0, 5262.0, 5654.0, 5513.0, 5562.0, 5413.0, 5531.0, 5292.0, 5494.0, 5311.0, 5661.0, 5439.0, 5621.0, 5637.0, 5576.0, 5315.0, 5684.0, 5695.0, 5345.0, 5528.0, 5624.0, 5411.0, 5713.0, 5702.0, 5693.0, 5310.0, 5366.0, 5655.0, 5412.0, 5426.0, 5278.0, 5717.0, 5487.0, 5608.0, 5613.0, 5644.0, 5665.0, 5609.0, 5536.0, 5308.0, 5586.0, 5529.0, 5549.0, 5334.0, 5403.0, 5490.0, 5670.0, 5659.0, 5577.0, 5263.0, 5269.0, 5617.0, 5540.0, 5547.0, 5442.0, 5583.0, 5302.0, 5359.0, 5369.0, 5591.0, 5474.0, 5649.0, 5572.0, 5281.0, 5396.0
5	5290	9	1	333	1	5382.0, 5563.0, 5502.0, 5255.0, 5547.0, 5377.0, 5719.0, 5606.0, 5429.0, 5344.0, 5467.0, 5661.0, 5567.0, 5299.0, 5521.0, 5415.0, 5267.0, 5680.0, 5678.0, 5313.0, 5545.0, 5315.0, 5635.0, 5557.0, 5596.0, 5265.0, 5656.0, 5543.0, 5432.0, 5441.0, 5284.0, 5588.0, 5712.0, 5575.0, 5594.0, 5576.0, 5587.0, 5336.0, 5388.0, 5539.0, 5559.0, 5272.0, 5495.0, 5682.0, 5566.0, 5688.0, 5339.0, 5450.0, 5486.0, 5363.0, 5630.0, 5419.0, 5633.0, 5623.0, 5722.0, 5689.0, 5571.0, 5601.0, 5628.0, 5494.0, 5317.0, 5500.0, 5490.0, 5411.0, 5506.0, 5407.0, 5462.0, 5395.0, 5537.0, 5505.0, 5312.0, 5464.0, 5303.0, 5376.0, 5622.0, 5534.0, 5497.0, 5624.0, 5398.0, 5570.0, 5648.0, 5393.0, 5477.0, 5304.0, 5670.0, 5421.0, 5319.0, 5443.0, 5541.0, 5283.0, 5412.0, 5526.0, 5555.0, 5370.0, 5426.0, 5687.0, 5513.0, 5324.0, 5706.0, 5643.0
6	5290	9	1	333	1	5617.0, 5291.0, 5445.0, 5603.0, 5509.0, 5559.0, 5649.0, 5384.0, 5552.0, 5682.0, 5466.0, 5381.0, 5718.0, 5668.0, 5607.0, 5550.0, 5353.0, 5314.0, 5254.0, 5692.0, 5511.0, 5350.0, 5456.0, 5599.0, 5690.0, 5581.0, 5659.0, 5344.0, 5364.0, 5602.0, 5493.0, 5580.0, 5571.0, 5446.0, 5523.0, 5415.0, 5650.0, 5645.0, 5460.0, 5439.0, 5472.0, 5631.0, 5330.0, 5667.0, 5721.0, 5487.0, 5437.0, 5605.0, 5401.0, 5280.0, 5698.0, 5637.0, 5343.0, 5316.0, 5625.0, 5378.0, 5709.0, 5600.0, 5675.0, 5285.0, 5615.0, 5359.0, 5325.0, 5510.0, 5258.0,

						5484.0, 5394.0, 5710.0, 5324.0, 5308.0, 5462.0, 5665.0, 5613.0, 5648.0, 5434.0, 5326.0, 5521.0, 5368.0, 5398.0, 5396.0, 5336.0, 5426.0, 5548.0, 5331.0, 5300.0, 5360.0, 5506.0, 5362.0, 5646.0, 5539.0, 5610.0, 5293.0, 5589.0, 5265.0, 5555.0, 5405.0, 5684.0, 5585.0, 5442.0, 5425.0
7	5290	9	1	333	1	5491.0, 5666.0, 5636.0, 5596.0, 5606.0, 5492.0, 5689.0, 5338.0, 5280.0, 5403.0, 5562.0, 5317.0, 5404.0, 5591.0, 5651.0, 5433.0, 5710.0, 5393.0, 5362.0, 5614.0, 5652.0, 5372.0, 5525.0, 5348.0, 5590.0, 5521.0, 5540.0, 5488.0, 5374.0, 5695.0, 5520.0, 5529.0, 5633.0, 5672.0, 5510.0, 5599.0, 5673.0, 5354.0, 5637.0, 5342.0, 5284.0, 5709.0, 5552.0, 5431.0, 5314.0, 5436.0, 5360.0, 5533.0, 5285.0, 5274.0, 5527.0, 5410.0, 5688.0, 5580.0, 5471.0, 5472.0, 5437.0, 5418.0, 5270.0, 5396.0, 5662.0, 5698.0, 5669.0, 5252.0, 5259.0, 5497.0, 5664.0, 5524.0, 5528.0, 5711.0, 5499.0, 5549.0, 5631.0, 5265.0, 5375.0, 5564.0, 5500.0, 5561.0, 5351.0, 5584.0, 5678.0, 5438.0, 5383.0, 5279.0, 5368.0, 5719.0, 5481.0, 5264.0, 5575.0, 5605.0, 5441.0, 5502.0, 5477.0, 5267.0, 5447.0, 5316.0, 5273.0, 5251.0, 5325.0, 5390.0
8	5290	9	1	333	1	5552.0, 5577.0, 5506.0, 5460.0, 5392.0, 5311.0, 5281.0, 5420.0, 5266.0, 5689.0, 5379.0, 5561.0, 5648.0, 5613.0, 5419.0, 5640.0, 5489.0, 5585.0, 5278.0, 5291.0, 5623.0, 5682.0, 5287.0, 5670.0, 5265.0, 5466.0, 5627.0, 5541.0, 5687.0, 5604.0, 5350.0, 5366.0, 5393.0, 5724.0, 5259.0, 5453.0, 5445.0, 5686.0, 5433.0, 5549.0, 5525.0, 5655.0, 5468.0, 5414.0, 5719.0, 5501.0, 5359.0, 5564.0, 5718.0, 5496.0, 5294.0, 5519.0, 5270.0, 5660.0, 5383.0, 5579.0, 5405.0, 5442.0, 5690.0, 5617.0, 5638.0, 5717.0, 5702.0, 5402.0, 5411.0, 5578.0, 5664.0, 5603.0, 5397.0, 5276.0, 5606.0, 5388.0, 5320.0, 5658.0, 5596.0, 5271.0, 5390.0, 5591.0, 5517.0, 5432.0, 5450.0, 5357.0, 5344.0, 5576.0, 5464.0, 5407.0, 5635.0, 5312.0, 5302.0, 5369.0, 5384.0, 5681.0, 5479.0, 5277.0, 5429.0, 5698.0, 5571.0, 5452.0, 5286.0, 5486.0
9	5290	9	1	333	1	5336.0, 5361.0, 5644.0, 5316.0, 5254.0, 5392.0, 5556.0, 5558.0, 5592.0, 5677.0, 5565.0, 5546.0, 5265.0, 5359.0, 5593.0, 5604.0, 5446.0, 5510.0, 5528.0, 5483.0, 5486.0, 5414.0, 5319.0, 5574.0, 5413.0, 5448.0, 5274.0, 5333.0, 5594.0, 5442.0, 5606.0, 5684.0, 5437.0, 5252.0, 5297.0, 5623.0, 5638.0, 5654.0, 5381.0, 5688.0, 5666.0, 5489.0, 5585.0, 5435.0, 5512.0, 5550.0, 5665.0, 5421.0, 5531.0, 5668.0, 5645.0, 5370.0, 5714.0, 5266.0, 5646.0, 5290.0, 5500.0, 5261.0, 5595.0, 5622.0,

						5276.0, 5387.0, 5530.0, 5293.0, 5307.0, 5689.0, 5378.0, 5434.0, 5459.0, 5325.0, 5275.0, 5273.0, 5441.0, 5535.0, 5545.0, 5412.0, 5586.0, 5340.0, 5549.0, 5289.0, 5384.0, 5630.0, 5501.0, 5296.0, 5640.0, 5628.0, 5301.0, 5385.0, 5338.0, 5393.0, 5649.0, 5410.0, 5523.0, 5634.0, 5491.0, 5450.0, 5443.0, 5250.0, 5626.0, 5480.0
10	5290	9	1	333	1	5418.0, 5644.0, 5562.0, 5657.0, 5404.0, 5658.0, 5255.0, 5447.0, 5386.0, 5293.0, 5643.0, 5419.0, 5410.0, 5466.0, 5633.0, 5476.0, 5489.0, 5540.0, 5287.0, 5564.0, 5377.0, 5537.0, 5480.0, 5286.0, 5515.0, 5304.0, 5713.0, 5270.0, 5280.0, 5346.0, 5674.0, 5696.0, 5285.0, 5254.0, 5329.0, 5299.0, 5474.0, 5588.0, 5714.0, 5392.0, 5590.0, 5538.0, 5543.0, 5630.0, 5303.0, 5509.0, 5522.0, 5520.0, 5581.0, 5638.0, 5651.0, 5720.0, 5627.0, 5337.0, 5335.0, 5442.0, 5311.0, 5371.0, 5409.0, 5553.0, 5274.0, 5609.0, 5428.0, 5381.0, 5388.0, 5632.0, 5507.0, 5635.0, 5483.0, 5685.0, 5360.0, 5541.0, 5603.0, 5361.0, 5595.0, 5722.0, 5468.0, 5250.0, 5333.0, 5708.0, 5593.0, 5253.0, 5661.0, 5395.0, 5592.0, 5602.0, 5440.0, 5647.0, 5721.0, 5485.0, 5612.0, 5264.0, 5521.0, 5434.0, 5342.0, 5422.0, 5512.0, 5350.0, 5403.0, 5295.0
11	5290	9	1	333	1	5439.0, 5722.0, 5283.0, 5499.0, 5682.0, 5568.0, 5572.0, 5662.0, 5467.0, 5372.0, 5708.0, 5688.0, 5466.0, 5433.0, 5393.0, 5330.0, 5265.0, 5574.0, 5431.0, 5623.0, 5559.0, 5418.0, 5686.0, 5458.0, 5515.0, 5267.0, 5548.0, 5680.0, 5354.0, 5469.0, 5347.0, 5550.0, 5317.0, 5672.0, 5553.0, 5610.0, 5641.0, 5555.0, 5365.0, 5346.0, 5293.0, 5530.0, 5430.0, 5509.0, 5463.0, 5633.0, 5307.0, 5491.0, 5298.0, 5685.0, 5618.0, 5676.0, 5251.0, 5325.0, 5703.0, 5712.0, 5520.0, 5412.0, 5573.0, 5321.0, 5535.0, 5269.0, 5432.0, 5460.0, 5486.0, 5497.0, 5525.0, 5504.0, 5653.0, 5282.0, 5612.0, 5375.0, 5331.0, 5613.0, 5305.0, 5254.0, 5324.0, 5353.0, 5409.0, 5663.0, 5272.0, 5707.0, 5658.0, 5670.0, 5309.0, 5374.0, 5422.0, 5679.0, 5384.0, 5564.0, 5478.0, 5361.0, 5332.0, 5506.0, 5533.0, 5288.0, 5363.0, 5436.0, 5459.0, 5402.0
12	5290	9	1	333	1	5548.0, 5724.0, 5539.0, 5492.0, 5271.0, 5409.0, 5359.0, 5352.0, 5617.0, 5702.0, 5286.0, 5533.0, 5287.0, 5386.0, 5357.0, 5407.0, 5707.0, 5360.0, 5618.0, 5588.0, 5303.0, 5637.0, 5451.0, 5500.0, 5335.0, 5716.0, 5268.0, 5291.0, 5581.0, 5501.0, 5373.0, 5274.0, 5393.0, 5493.0, 5543.0, 5340.0, 5531.0, 5339.0, 5464.0, 5402.0, 5421.0, 5257.0, 5497.0, 5582.0, 5381.0, 5304.0, 5410.0, 5622.0, 5326.0, 5565.0, 5400.0, 5638.0, 5534.0, 5453.0, 5717.0,

						5642.0, 5586.0, 5633.0, 5591.0, 5535.0, 5383.0, 5459.0, 5649.0, 5503.0, 5653.0, 5499.0, 5621.0, 5530.0, 5650.0, 5458.0, 5570.0, 5346.0, 5427.0, 5567.0, 5538.0, 5295.0, 5601.0, 5440.0, 5344.0, 5665.0, 5657.0, 5600.0, 5708.0, 5671.0, 5353.0, 5306.0, 5417.0, 5519.0, 5684.0, 5666.0, 5522.0, 5465.0, 5681.0, 5506.0, 5328.0, 5668.0, 5631.0, 5258.0, 5721.0, 5454.0
13	5290	9	1	333	1	5365.0, 5355.0, 5474.0, 5289.0, 5536.0, 5268.0, 5639.0, 5402.0, 5480.0, 5479.0, 5659.0, 5491.0, 5521.0, 5684.0, 5362.0, 5484.0, 5568.0, 5695.0, 5439.0, 5574.0, 5405.0, 5298.0, 5522.0, 5262.0, 5335.0, 5361.0, 5665.0, 5396.0, 5313.0, 5489.0, 5692.0, 5400.0, 5265.0, 5707.0, 5416.0, 5587.0, 5292.0, 5610.0, 5395.0, 5444.0, 5388.0, 5434.0, 5425.0, 5637.0, 5501.0, 5440.0, 5415.0, 5644.0, 5632.0, 5669.0, 5401.0, 5283.0, 5623.0, 5658.0, 5488.0, 5581.0, 5609.0, 5286.0, 5493.0, 5370.0, 5301.0, 5595.0, 5551.0, 5462.0, 5270.0, 5483.0, 5585.0, 5563.0, 5351.0, 5570.0, 5683.0, 5455.0, 5558.0, 5454.0, 5257.0, 5531.0, 5337.0, 5629.0, 5670.0, 5643.0, 5322.0, 5348.0, 5709.0, 5393.0, 5420.0, 5443.0, 5656.0, 5703.0, 5708.0, 5432.0, 5297.0, 5615.0, 5540.0, 5621.0, 5715.0, 5494.0, 5422.0, 5471.0, 5680.0, 5284.0
14	5290	9	1	333	1	5261.0, 5343.0, 5262.0, 5567.0, 5401.0, 5396.0, 5636.0, 5556.0, 5531.0, 5433.0, 5478.0, 5364.0, 5446.0, 5483.0, 5470.0, 5360.0, 5520.0, 5278.0, 5489.0, 5557.0, 5307.0, 5415.0, 5356.0, 5696.0, 5706.0, 5715.0, 5588.0, 5279.0, 5485.0, 5499.0, 5402.0, 5277.0, 5406.0, 5694.0, 5411.0, 5305.0, 5313.0, 5693.0, 5583.0, 5723.0, 5635.0, 5514.0, 5521.0, 5549.0, 5607.0, 5288.0, 5380.0, 5412.0, 5560.0, 5545.0, 5466.0, 5573.0, 5535.0, 5332.0, 5284.0, 5350.0, 5638.0, 5365.0, 5593.0, 5481.0, 5667.0, 5627.0, 5677.0, 5377.0, 5528.0, 5624.0, 5473.0, 5689.0, 5451.0, 5430.0, 5264.0, 5479.0, 5564.0, 5323.0, 5428.0, 5621.0, 5626.0, 5330.0, 5681.0, 5594.0, 5280.0, 5309.0, 5632.0, 5345.0, 5459.0, 5257.0, 5414.0, 5426.0, 5429.0, 5476.0, 5418.0, 5615.0, 5334.0, 5268.0, 5634.0, 5381.0, 5581.0, 5271.0, 5642.0, 5359.0
15	5290	9	1	333	1	5459.0, 5361.0, 5621.0, 5722.0, 5276.0, 5556.0, 5297.0, 5613.0, 5507.0, 5687.0, 5273.0, 5400.0, 5641.0, 5709.0, 5497.0, 5664.0, 5424.0, 5540.0, 5530.0, 5684.0, 5534.0, 5337.0, 5447.0, 5720.0, 5295.0, 5644.0, 5253.0, 5551.0, 5629.0, 5579.0, 5503.0, 5364.0, 5385.0, 5351.0, 5593.0, 5268.0, 5293.0, 5558.0, 5258.0, 5658.0, 5707.0, 5533.0, 5537.0, 5562.0, 5376.0, 5697.0, 5714.0, 5418.0, 5348.0, 5347.0,

						5505.0, 5255.0, 5328.0, 5397.0, 5271.0, 5393.0, 5494.0, 5500.0, 5388.0, 5357.0, 5643.0, 5444.0, 5261.0, 5363.0, 5655.0, 5630.0, 5303.0, 5586.0, 5288.0, 5294.0, 5661.0, 5264.0, 5574.0, 5545.0, 5411.0, 5405.0, 5543.0, 5319.0, 5356.0, 5483.0, 5408.0, 5561.0, 5373.0, 5653.0, 5647.0, 5281.0, 5693.0, 5681.0, 5475.0, 5298.0, 5648.0, 5362.0, 5688.0, 5266.0, 5429.0, 5474.0, 5306.0, 5492.0, 5484.0, 5576.0
16	5290	9	1	333	1	5398.0, 5557.0, 5290.0, 5402.0, 5341.0, 5326.0, 5437.0, 5710.0, 5516.0, 5296.0, 5368.0, 5541.0, 5457.0, 5355.0, 5603.0, 5320.0, 5366.0, 5695.0, 5546.0, 5723.0, 5407.0, 5518.0, 5699.0, 5640.0, 5259.0, 5342.0, 5586.0, 5682.0, 5299.0, 5574.0, 5569.0, 5420.0, 5284.0, 5251.0, 5619.0, 5622.0, 5305.0, 5377.0, 5460.0, 5642.0, 5653.0, 5581.0, 5486.0, 5356.0, 5675.0, 5325.0, 5476.0, 5375.0, 5422.0, 5408.0, 5567.0, 5427.0, 5253.0, 5594.0, 5258.0, 5309.0, 5673.0, 5616.0, 5655.0, 5568.0, 5384.0, 5439.0, 5539.0, 5367.0, 5555.0, 5363.0, 5380.0, 5383.0, 5647.0, 5551.0, 5337.0, 5577.0, 5493.0, 5657.0, 5257.0, 5613.0, 5488.0, 5351.0, 5416.0, 5566.0, 5354.0, 5338.0, 5515.0, 5696.0, 5365.0, 5478.0, 5690.0, 5663.0, 5443.0, 5664.0, 5624.0, 5307.0, 5494.0, 5542.0, 5269.0, 5536.0, 5396.0, 5334.0, 5364.0, 5631.0
17	5290	9	1	333	1	5438.0, 5625.0, 5667.0, 5611.0, 5663.0, 5581.0, 5255.0, 5686.0, 5302.0, 5290.0, 5338.0, 5512.0, 5572.0, 5577.0, 5372.0, 5362.0, 5437.0, 5545.0, 5324.0, 5579.0, 5279.0, 5563.0, 5721.0, 5639.0, 5323.0, 5356.0, 5662.0, 5461.0, 5349.0, 5371.0, 5567.0, 5336.0, 5365.0, 5506.0, 5660.0, 5449.0, 5665.0, 5586.0, 5499.0, 5331.0, 5292.0, 5517.0, 5708.0, 5402.0, 5485.0, 5526.0, 5603.0, 5691.0, 5724.0, 5505.0, 5410.0, 5447.0, 5618.0, 5298.0, 5608.0, 5697.0, 5379.0, 5641.0, 5256.0, 5664.0, 5459.0, 5582.0, 5636.0, 5715.0, 5557.0, 5439.0, 5718.0, 5317.0, 5345.0, 5412.0, 5400.0, 5672.0, 5548.0, 5293.0, 5555.0, 5648.0, 5498.0, 5291.0, 5644.0, 5537.0, 5610.0, 5574.0, 5584.0, 5416.0, 5413.0, 5262.0, 5305.0, 5533.0, 5395.0, 5678.0, 5591.0, 5287.0, 5640.0, 5318.0, 5407.0, 5267.0, 5653.0, 5348.0, 5594.0, 5661.0
18	5290	9	1	333	1	5634.0, 5266.0, 5407.0, 5329.0, 5577.0, 5517.0, 5501.0, 5504.0, 5377.0, 5257.0, 5620.0, 5605.0, 5398.0, 5438.0, 5290.0, 5474.0, 5619.0, 5712.0, 5719.0, 5297.0, 5484.0, 5542.0, 5576.0, 5627.0, 5284.0, 5645.0, 5409.0, 5558.0, 5300.0, 5340.0, 5671.0, 5295.0, 5572.0, 5657.0, 5591.0, 5686.0, 5568.0, 5460.0, 5579.0, 5359.0, 5455.0, 5610.0, 5552.0, 5337.0, 5543.0,

						5635.0, 5685.0, 5370.0, 5298.0, 5711.0, 5262.0, 5366.0, 5639.0, 5695.0, 5642.0, 5396.0, 5647.0, 5343.0, 5390.0, 5436.0, 5386.0, 5382.0, 5260.0, 5652.0, 5334.0, 5618.0, 5347.0, 5531.0, 5252.0, 5538.0, 5702.0, 5496.0, 5392.0, 5365.0, 5703.0, 5521.0, 5603.0, 5486.0, 5276.0, 5376.0, 5323.0, 5505.0, 5417.0, 5600.0, 5513.0, 5397.0, 5535.0, 5691.0, 5312.0, 5328.0, 5608.0, 5650.0, 5338.0, 5467.0, 5292.0, 5261.0, 5520.0, 5676.0, 5372.0, 5615.0
19	5290	9	1	333	1	5583.0, 5630.0, 5714.0, 5511.0, 5315.0, 5289.0, 5305.0, 5482.0, 5626.0, 5386.0, 5706.0, 5327.0, 5499.0, 5338.0, 5378.0, 5582.0, 5331.0, 5517.0, 5529.0, 5643.0, 5443.0, 5441.0, 5271.0, 5678.0, 5412.0, 5366.0, 5292.0, 5586.0, 5272.0, 5667.0, 5263.0, 5518.0, 5402.0, 5476.0, 5462.0, 5404.0, 5385.0, 5257.0, 5360.0, 5400.0, 5373.0, 5406.0, 5506.0, 5409.0, 5333.0, 5515.0, 5628.0, 5672.0, 5698.0, 5419.0, 5639.0, 5608.0, 5393.0, 5542.0, 5596.0, 5428.0, 5503.0, 5556.0, 5364.0, 5274.0, 5703.0, 5363.0, 5661.0, 5376.0, 5565.0, 5403.0, 5422.0, 5523.0, 5423.0, 5601.0, 5580.0, 5433.0, 5394.0, 5347.0, 5613.0, 5553.0, 5348.0, 5401.0, 5686.0, 5281.0, 5603.0, 5593.0, 5592.0, 5258.0, 5479.0, 5716.0, 5367.0, 5352.0, 5719.0, 5361.0, 5254.0, 5256.0, 5612.0, 5450.0, 5707.0, 5530.0, 5508.0, 5634.0, 5632.0, 5629.0
20	5290	9	1	333	1	5319.0, 5429.0, 5510.0, 5512.0, 5440.0, 5684.0, 5642.0, 5451.0, 5605.0, 5591.0, 5558.0, 5297.0, 5346.0, 5418.0, 5559.0, 5521.0, 5585.0, 5431.0, 5553.0, 5659.0, 5417.0, 5295.0, 5336.0, 5317.0, 5272.0, 5701.0, 5670.0, 5584.0, 5296.0, 5547.0, 5685.0, 5598.0, 5527.0, 5339.0, 5689.0, 5490.0, 5707.0, 5453.0, 5513.0, 5338.0, 5262.0, 5622.0, 5633.0, 5501.0, 5396.0, 5270.0, 5589.0, 5533.0, 5687.0, 5477.0, 5313.0, 5672.0, 5658.0, 5423.0, 5372.0, 5434.0, 5580.0, 5392.0, 5621.0, 5710.0, 5264.0, 5523.0, 5465.0, 5505.0, 5673.0, 5705.0, 5664.0, 5489.0, 5354.0, 5548.0, 5594.0, 5402.0, 5692.0, 5644.0, 5567.0, 5610.0, 5531.0, 5716.0, 5288.0, 5534.0, 5467.0, 5639.0, 5473.0, 5389.0, 5274.0, 5370.0, 5441.0, 5282.0, 5325.0, 5409.0, 5655.0, 5688.0, 5381.0, 5651.0, 5587.0, 5343.0, 5619.0, 5251.0, 5578.0, 5283.0
21	5290	9	1	333		
22	5290	9	1	333	1	5568.0, 5659.0, 5528.0, 5277.0, 5523.0, 5663.0, 5307.0, 5639.0, 5346.0, 5388.0, 5294.0, 5587.0, 5305.0, 5254.0, 5404.0, 5575.0, 5648.0, 5697.0, 5442.0, 5686.0, 5685.0, 5423.0, 5374.0, 5551.0, 5331.0, 5426.0, 5504.0, 5437.0, 5632.0, 5634.0, 5492.0, 5385.0, 5474.0, 5347.0, 5599.0,

						5526.0, 5662.0, 5267.0, 5664.0, 5608.0, 5381.0, 5409.0, 5647.0, 5637.0, 5501.0, 5281.0, 5611.0, 5545.0, 5471.0, 5605.0, 5621.0, 5661.0, 5718.0, 5681.0, 5707.0, 5684.0, 5256.0, 5620.0, 5714.0, 5411.0, 5653.0, 5524.0, 5297.0, 5469.0, 5667.0, 5287.0, 5406.0, 5490.0, 5580.0, 5290.0, 5380.0, 5625.0, 5402.0, 5719.0, 5271.0, 5465.0, 5348.0, 5476.0, 5571.0, 5416.0, 5656.0, 5300.0, 5494.0, 5301.0, 5554.0, 5536.0, 5687.0, 5563.0, 5457.0, 5391.0, 5511.0, 5282.0, 5495.0, 5705.0, 5278.0, 5419.0, 5268.0, 5515.0, 5497.0, 5550.0
23	5290	9	1	333	1	5507.0, 5646.0, 5348.0, 5345.0, 5278.0, 5265.0, 5633.0, 5400.0, 5547.0, 5715.0, 5711.0, 5546.0, 5677.0, 5669.0, 5519.0, 5472.0, 5655.0, 5384.0, 5721.0, 5713.0, 5318.0, 5642.0, 5330.0, 5555.0, 5475.0, 5422.0, 5615.0, 5528.0, 5267.0, 5550.0, 5503.0, 5367.0, 5474.0, 5288.0, 5612.0, 5594.0, 5582.0, 5437.0, 5608.0, 5513.0, 5407.0, 5508.0, 5660.0, 5258.0, 5709.0, 5292.0, 5517.0, 5718.0, 5496.0, 5523.0, 5644.0, 5565.0, 5391.0, 5490.0, 5313.0, 5425.0, 5463.0, 5526.0, 5497.0, 5591.0, 5629.0, 5681.0, 5287.0, 5284.0, 5686.0, 5351.0, 5355.0, 5469.0, 5350.0, 5607.0, 5339.0, 5635.0, 5379.0, 5704.0, 5423.0, 5559.0, 5643.0, 5525.0, 5638.0, 5652.0, 5560.0, 5338.0, 5299.0, 5453.0, 5576.0, 5714.0, 5388.0, 5477.0, 5331.0, 5260.0, 5369.0, 5722.0, 5535.0, 5416.0, 5459.0, 5613.0, 5335.0, 5449.0, 5333.0, 5473.0
24	5290	9	1	333	1	5518.0, 5507.0, 5347.0, 5434.0, 5310.0, 5379.0, 5278.0, 5487.0, 5383.0, 5338.0, 5435.0, 5399.0, 5700.0, 5649.0, 5664.0, 5636.0, 5712.0, 5440.0, 5590.0, 5694.0, 5618.0, 5591.0, 5669.0, 5684.0, 5538.0, 5566.0, 5443.0, 5445.0, 5388.0, 5677.0, 5612.0, 5510.0, 5716.0, 5332.0, 5628.0, 5415.0, 5660.0, 5385.0, 5378.0, 5568.0, 5403.0, 5429.0, 5426.0, 5603.0, 5461.0, 5421.0, 5323.0, 5263.0, 5556.0, 5570.0, 5476.0, 5351.0, 5545.0, 5402.0, 5659.0, 5536.0, 5492.0, 5390.0, 5312.0, 5453.0, 5541.0, 5406.0, 5309.0, 5477.0, 5644.0, 5691.0, 5408.0, 5567.0, 5500.0, 5713.0, 5400.0, 5580.0, 5262.0, 5670.0, 5298.0, 5340.0, 5522.0, 5369.0, 5695.0, 5667.0, 5633.0, 5393.0, 5589.0, 5658.0, 5311.0, 5614.0, 5305.0, 5723.0, 5258.0, 5526.0, 5496.0, 5356.0, 5313.0, 5711.0, 5382.0, 5401.0, 5602.0, 5524.0, 5444.0, 5698.0
25	5290	9	1	333	1	5358.0, 5678.0, 5476.0, 5505.0, 5438.0, 5451.0, 5342.0, 5660.0, 5487.0, 5504.0, 5529.0, 5608.0, 5674.0, 5313.0, 5607.0, 5335.0, 5644.0, 5553.0, 5655.0, 5656.0, 5353.0, 5326.0, 5479.0, 5283.0, 5703.0, 5426.0, 5373.0, 5687.0, 5370.0, 5658.0,

						5422.0, 5411.0, 5297.0, 5395.0, 5606.0, 5578.0, 5365.0, 5541.0, 5356.0, 5354.0, 5621.0, 5484.0, 5258.0, 5341.0, 5688.0, 5636.0, 5344.0, 5310.0, 5435.0, 5321.0, 5528.0, 5282.0, 5517.0, 5659.0, 5346.0, 5591.0, 5530.0, 5576.0, 5265.0, 5654.0, 5571.0, 5642.0, 5558.0, 5525.0, 5440.0, 5652.0, 5433.0, 5711.0, 5669.0, 5298.0, 5695.0, 5423.0, 5717.0, 5478.0, 5488.0, 5485.0, 5295.0, 5345.0, 5724.0, 5698.0, 5701.0, 5700.0, 5676.0, 5588.0, 5585.0, 5613.0, 5475.0, 5305.0, 5376.0, 5352.0, 5713.0, 5623.0, 5721.0, 5603.0, 5510.0, 5681.0, 5367.0, 5288.0, 5715.0, 5579.0
26	5290	9	1	333	1	5267.0, 5494.0, 5303.0, 5461.0, 5606.0, 5595.0, 5336.0, 5644.0, 5448.0, 5383.0, 5692.0, 5288.0, 5266.0, 5632.0, 5625.0, 5707.0, 5455.0, 5602.0, 5542.0, 5450.0, 5578.0, 5541.0, 5258.0, 5272.0, 5564.0, 5457.0, 5680.0, 5639.0, 5399.0, 5686.0, 5471.0, 5695.0, 5378.0, 5691.0, 5428.0, 5608.0, 5285.0, 5699.0, 5289.0, 5449.0, 5549.0, 5427.0, 5375.0, 5472.0, 5398.0, 5305.0, 5558.0, 5720.0, 5505.0, 5324.0, 5689.0, 5528.0, 5622.0, 5339.0, 5566.0, 5546.0, 5687.0, 5597.0, 5642.0, 5416.0, 5619.0, 5613.0, 5668.0, 5620.0, 5411.0, 5592.0, 5565.0, 5433.0, 5637.0, 5382.0, 5379.0, 5647.0, 5387.0, 5544.0, 5678.0, 5618.0, 5462.0, 5252.0, 5259.0, 5690.0, 5271.0, 5571.0, 5278.0, 5656.0, 5373.0, 5504.0, 5638.0, 5478.0, 5264.0, 5488.0, 5605.0, 5412.0, 5551.0, 5629.0, 5410.0, 5682.0, 5577.0, 5386.0, 5254.0, 5269.0
27	5290	9	1	333	1	5685.0, 5260.0, 5557.0, 5383.0, 5308.0, 5720.0, 5416.0, 5565.0, 5300.0, 5429.0, 5610.0, 5608.0, 5494.0, 5509.0, 5636.0, 5357.0, 5355.0, 5270.0, 5281.0, 5574.0, 5326.0, 5346.0, 5467.0, 5658.0, 5258.0, 5413.0, 5353.0, 5684.0, 5265.0, 5319.0, 5678.0, 5482.0, 5530.0, 5522.0, 5495.0, 5699.0, 5292.0, 5681.0, 5526.0, 5475.0, 5528.0, 5294.0, 5707.0, 5665.0, 5391.0, 5551.0, 5329.0, 5585.0, 5553.0, 5620.0, 5400.0, 5649.0, 5479.0, 5419.0, 5497.0, 5393.0, 5654.0, 5532.0, 5604.0, 5569.0, 5331.0, 5584.0, 5612.0, 5291.0, 5601.0, 5713.0, 5599.0, 5451.0, 5548.0, 5478.0, 5541.0, 5692.0, 5327.0, 5387.0, 5312.0, 5511.0, 5375.0, 5305.0, 5508.0, 5648.0, 5250.0, 5652.0, 5422.0, 5339.0, 5455.0, 5519.0, 5366.0, 5311.0, 5512.0, 5325.0, 5689.0, 5700.0, 5662.0, 5461.0, 5364.0, 5698.0, 5348.0, 5398.0, 5447.0, 5560.0
28	5290	9	1	333	1	5621.0, 5464.0, 5253.0, 5675.0, 5602.0, 5611.0, 5468.0, 5359.0, 5633.0, 5444.0, 5512.0, 5551.0, 5483.0, 5356.0, 5403.0, 5335.0, 5719.0, 5330.0, 5619.0, 5273.0, 5636.0, 5262.0, 5285.0, 5486.0, 5338.0,

						5297.0, 5713.0, 5408.0, 5615.0, 5516.0, 5689.0, 5625.0, 5299.0, 5540.0, 5357.0, 5690.0, 5266.0, 5470.0, 5609.0, 5533.0, 5418.0, 5381.0, 5305.0, 5709.0, 5547.0, 5485.0, 5529.0, 5433.0, 5597.0, 5660.0, 5428.0, 5537.0, 5421.0, 5333.0, 5427.0, 5271.0, 5259.0, 5409.0, 5375.0, 5686.0, 5575.0, 5423.0, 5488.0, 5327.0, 5505.0, 5268.0, 5304.0, 5637.0, 5351.0, 5281.0, 5544.0, 5260.0, 5536.0, 5383.0, 5582.0, 5676.0, 5584.0, 5424.0, 5554.0, 5490.0, 5508.0, 5390.0, 5344.0, 5453.0, 5560.0, 5410.0, 5480.0, 5656.0, 5527.0, 5504.0, 5539.0, 5309.0, 5618.0, 5507.0, 5601.0, 5681.0, 5306.0, 5370.0, 5323.0, 5360.0
29	5290	9	1	333	1	5483.0, 5288.0, 5338.0, 5546.0, 5400.0, 5415.0, 5340.0, 5300.0, 5389.0, 5634.0, 5308.0, 5722.0, 5396.0, 5377.0, 5433.0, 5613.0, 5652.0, 5496.0, 5251.0, 5314.0, 5706.0, 5627.0, 5577.0, 5358.0, 5452.0, 5307.0, 5277.0, 5645.0, 5302.0, 5530.0, 5630.0, 5670.0, 5673.0, 5424.0, 5564.0, 5370.0, 5514.0, 5595.0, 5490.0, 5279.0, 5482.0, 5619.0, 5525.0, 5535.0, 5436.0, 5259.0, 5548.0, 5470.0, 5265.0, 5388.0, 5628.0, 5429.0, 5556.0, 5304.0, 5584.0, 5511.0, 5650.0, 5319.0, 5310.0, 5409.0, 5374.0, 5334.0, 5492.0, 5541.0, 5526.0, 5352.0, 5280.0, 5555.0, 5509.0, 5298.0, 5467.0, 5698.0, 5342.0, 5356.0, 5639.0, 5441.0, 5460.0, 5635.0, 5640.0, 5663.0, 5609.0, 5267.0, 5505.0, 5474.0, 5580.0, 5439.0, 5720.0, 5379.0, 5445.0, 5378.0, 5491.0, 5597.0, 5593.0, 5538.0, 5263.0, 5620.0, 5677.0, 5656.0, 5523.0, 5427.0
30	5290	9	1	333		

40MHz

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	93.3%	60%	Pass
Type 3	30	93.3%	60%	Pass
Type 4	30	100 %	60%	Pass
Aggregate(Type1 to 4)	120	95.83%	80%	Pass
Type 5	30	100 %	80%	Pass
Type 6	30	96.7 %	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	95	1	558	1
2	5310	67	1	798	1
3	5310	81	1	658	1
4	5310	78	1	678	1
5	5310	65	1	818	1
6	5310	58	1	918	1
7	5310	86	1	618	1
8	5310	99	1	538	1
9	5310	70	1	758	1
10	5310	89	1	598	0
11	5310	92	1	578	1
12	5310	74	1	718	1
13	5310	59	1	898	1
14	5310	83	1	638	1
15	5310	57	1	938	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	47	1	1136	1
2	5310	34	1	1571	1
3	5310	77	1	688	1
4	5310	20	1	2641	1
5	5310	22	1	2451	1
6	5310	26	1	2069	1
7	5310	22	1	2452	1
8	5310	85	1	623	1
9	5310	31	1	1731	1
10	5310	21	1	2514	1
11	5310	43	1	1228	1
12	5310	46	1	1155	1
13	5310	27	1	1961	1
14	5310	23	1	2307	1
15	5310	40	1	1343	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	5310	27	3.9	223	1
2	5310	24	4.1	212	1
3	5310	24	1.7	165	1
4	5310	26	3.4	158	1
5	5310	23	3.5	216	0
6	5310	28	3.1	178	1
7	5310	28	2.2	162	1
8	5310	25	2.1	181	1
9	5310	29	1.4	182	1
10	5310	23	3	180	0
11	5310	26	4.8	198	1
12	5310	25	1.8	180	1
13	5310	24	1	174	1
14	5310	29	1	162	1
15	5310	27	3.1	212	1
16	5310	28	4.3	202	1
17	5310	29	3.1	211	1
18	5310	26	5	169	1
19	5310	27	1.6	189	1
20	5310	25	5	186	1
21	5310	27	4.4	189	1
22	5310	26	1	175	1
23	5310	23	4	169	1
24	5310	26	1.1	211	1
25	5310	25	2.3	195	1
26	5310	25	2.7	177	1
27	5310	25	4.4	222	1
28	5310	26	3	204	1
29	5310	29	3.7	221	1
30	5310	29	3.5	225	1
Detection Percentage: 93.3 % (>60%)					

Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5310	16	6.9	228	1
2	5310	16	6.3	495	1
3	5310	16	6.8	376	1
4	5310	16	6.2	345	1
5	5310	18	9.8	410	1
6	5310	17	9.6	305	1
7	5310	16	8	322	1
8	5310	18	8.8	465	1
9	5310	18	8.8	247	0
10	5310	16	9.8	219	1
11	5310	17	8.1	456	1
12	5310	17	8.4	430	1
13	5310	16	8.1	305	0
14	5310	17	7.8	371	1
15	5310	16	7	269	1
16	5310	18	8.3	367	1
17	5310	18	9.5	497	1
18	5310	17	9.5	398	1
19	5310	17	6.6	323	1
20	5310	17	8.9	459	1
21	5310	18	9.4	254	1
22	5310	16	7.1	328	1
23	5310	16	9.6	338	1
24	5310	18	6.4	253	1
25	5310	18	8.2	253	1
26	5310	18	7.6	436	1
27	5310	16	8.8	279	1
28	5310	17	6.6	364	1
29	5310	16	9.4	202	1
30	5310	18	9.7	445	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	5310	13	20	369	1
2	5310	12	17.2	438	1
3	5310	12	14.1	314	1
4	5310	13	13.9	328	1
5	5310	16	15.7	323	1
6	5310	12	15.9	210	1
7	5310	14	14.7	363	1
8	5310	16	13.9	428	1
9	5310	15	18.2	397	1
10	5310	16	13.4	228	1
11	5310	14	19.4	497	1
12	5310	16	19.7	371	1
13	5310	13	15.5	356	1
14	5310	16	11	479	1
15	5310	13	16.8	282	1
16	5310	15	17.3	298	1
17	5310	15	13.8	342	1
18	5310	12	12.1	339	1
19	5310	13	16.7	224	1
20	5310	14	17.6	481	1
21	5310	12	19.4	410	1
22	5310	12	17.3	353	1
23	5310	14	19.2	350	1
24	5310	12	13	251	1
25	5310	13	13.3	206	1
26	5310	14	19.6	408	1
27	5310	12	11	336	1
28	5310	13	17.8	428	1
29	5310	14	17.9	219	1
30	5310	16	14.6	316	1
Detection Percentage: 100 % (>60%)					

Radar Type 5 Case 1 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5310.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	14	72.7	1191	1391	0.231353	1
2	2	14	54.2	1725		1.221799	
3	2	14	52.6	1503		3.152292	
4	1	14	97.9			3.784486	
5	2	14	56.5	1782		5.214216	
6	2	14	56.1	1125		6.097787	
7	1	14	90.9			8.390691	
8	3	14	88.4	1155	1864	9.243444	
9	2	14	71.7	1594		10.482946	
10	3	14	83.5	1086	1504	10.882297	

Statistics 2 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	12	97.7	1001		0.058737	1
2	3	12	54.7	1996	1288	1.701324	
3	2	12	77.7	1806		2.639033	
4	3	12	82.1	1448	1596	3.383033	
5	1	12	73.1			4.068182	
6	2	12	50.3	1300		4.684701	
7	3	12	95.9	1552	1239	5.615916	
8	3	12	72.5	1478	1483	7.019418	
9	2	12	88.8	1505		7.395781	
10	3	12	56.7	1672	1722	8.756518	
11	2	12	95.6	1477		9.487177	
12	3	12	87.5	1969	1706	10.179864	
13	3	12	53.6	1999	1579	11.538484	

Statistics 3 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	12	65	1620		0.551673	
2	2	12	81.4	1688		0.988541	
3	1	12	83.6			1.754163	
4	1	12	96.3			1.940881	
5	2	12	58.5	1652		3.02839	
6	2	12	88.2	1956		3.325943	
7	1	12	71.1			3.855629	
8	2	12	96.1	1416		4.622021	
9	2	12	96.2	1756		5.227243	
10	2	12	72.8	1171		6.11225	1
11	3	12	83.8	1121	1707	6.712857	
12	3	12	69.8	1509	1630	7.055578	
13	1	12	89.1			7.938681	
14	2	12	76.1	1906		8.476991	
15	2	12	54.2	1317		8.843477	
16	1	12	85.2			9.713247	
17	2	12	82.5	1663		10.564564	
18	1	12	81.3			10.755821	
19	3	12	66.5	1208	1255	11.972899	

Statistics 4 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	16	80			0.364129	
2	3	16	71.5	1860	1692	1.22943	
3	3	16	78.3	1039	1559	2.538926	
4	3	16	61.5	1862	1172	3.052705	
5	3	16	77.8	1409	1417	4.585782	
6	2	16	61.6	1794		5.834796	
7	2	16	67.1	1889		6.750014	1
8	2	16	93.7	1907		7.807873	
9	2	16	95.2	1140		8.243313	
10	3	16	81	1181	1218	9.023537	
11	2	16	62.5	1177		10.660621	
12	3	16	52.8	1250	1390	11.702391	

Statistics 5(ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	11	53.9			0.215983	
2	2	11	63.7	1282		1.327613	
3	2	11	70.3	1122		1.747878	
4	3	11	81.6	1652	1426	3.018161	
5	2	11	56.2	1832		3.774075	
6	2	11	81	1501		4.215469	
7	3	11	69	1179	1053	5.118369	
8	1	11	88.5			6.366986	1
9	1	11	53.3			6.943327	
10	3	11	53.1	1565	1342	7.390032	
11	2	11	79.2	1416		8.770756	
12	2	11	92.8	1270		9.074926	
13	1	11	54.1			9.98451	
14	3	11	86.3	1753	1028	10.647829	
15	1	11	95.5			11.77497	

Statistics 6 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	9	72.3	1983		0.338189	
2	2	9	56.7	1087		1.501988	
3	2	9	84.4	1299		2.261581	
4	3	9	72.8	1722	1765	2.455466	
5	2	9	58.7	1790		3.882803	
6	1	9	92.2			4.690959	
7	2	9	74.7	1072		4.800494	
8	2	9	85.5	1092		6.287668	1
9	1	9	71.3			6.539653	
10	2	9	51.5	1729		7.700449	
11	1	9	56.1			8.030324	
12	1	9	96.6			9.312041	
13	2	9	77.6	1202		10.298811	
14	1	9	92.5			10.59855	
15	2	9	56.2	1099		11.258361	

Statistics 7(ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	13	53			0.141286	1
2	3	13	53.6	1707	1074	1.218535	
3	2	13	64.7	1512		1.935792	
4	2	13	96.2	1950		2.797881	
5	2	13	55.7	1437		3.288507	
6	2	13	92	1884		3.760957	
7	1	13	70.9			4.868068	
8	2	13	65.6	1631		5.987825	
9	2	13	63	1272		6.648805	
10	2	13	52.9	1061		7.273607	
11	3	13	92.6	1128	1836	7.524171	
12	2	13	53.4	1243		8.698086	
13	2	13	50.3	1009		9.210937	
14	2	13	90	1981		10.4213	
15	3	13	55.7	1300	1628	10.699073	
16	3	13	74.7	1673	1197	11.293393	

Statistics 8 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	6	56.4	1525		0.22004	1
2	2	6	57.9	1652		1.483865	
3	2	6	96.7	1237		2.571662	
4	2	6	65.6	1581		4.247141	
5	2	6	56.9	1892		5.605903	
6	3	6	93.2	1569	1283	7.16852	
7	2	6	50.3	1430		8.281176	
8	3	6	77.8	1783	1340	9.518322	
9	2	6	78.1	1375		10.166662	
10	2	6	63.3	1543		11.368292	

Statistics 9 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	7	57.2	1467		0.271659	1
2	3	7	66.7	1878	1053	1.259564	
3	2	7	59.9	1010		3.229286	
4	2	7	50	1103		3.770172	
5	1	7	56.9			5.542255	
6	3	7	55.5	1028	1756	6.210049	
7	2	7	56.6	1037		8.046133	
8	2	7	55.6	1857		8.551038	
9	2	7	87.4	1696		9.699909	
10	2	7	74.9	1238		10.8618	

Statistics 10 (ChirpCenter Frequency: 5310.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	16	70.9			0.09739	1
2	2	16	50.1	1287		1.751398	
3	2	16	58.4	1664		2.033659	
4	2	16	60.7	1777		3.928541	
5	2	16	55.1	1743		4.189737	
6	2	16	83.9	1786		5.958601	
7	2	16	78.3	1190		6.365469	
8	3	16	68	1198	1453	7.968558	
9	2	16	69.7	1199		8.229245	
10	2	16	65.3	1854		9.441813	
11	3	16	78.8	1358	1905	10.54736	
12	1	16	69			11.295752	

Radar Type 5 Case 2 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5295.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	12	53.5	1028		0.287487	
2	2	12	66.9	1835		1.512878	
3	2	12	99.1	1834		3.204774	
4	3	12	81.7	1567	1229	3.389171	
5	2	12	73.5	1891		4.569789	
6	3	12	67.2	1830	1607	5.911756	1
7	1	12	59.4			7.322262	
8	2	12	78.9	1347		7.784461	
9	1	12	73.2			9.656506	
10	3	12	92.8	1022	1956	10.422372	
11	2	12	78.2	1171		11.070578	

Statistics 2 (ChirpCenter Frequency: 5293.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	8	80.5	1031		0.59628	
2	2	8	57.7	1119		1.289862	
3	2	8	66.9	1827		3.006915	
4	2	8	91	1628		3.599432	
5	1	8	71.2			4.718744	
6	2	8	78.8	1713		5.704232	1
7	2	8	77.9	1922		7.566063	
8	3	8	96.1	1835	1719	8.231965	
9	1	8	85.6			8.831454	
10	2	8	75	1079		10.809827	
11	2	8	66.4	1056		11.75155	

Statistics 3 (ChirpCenter Frequency: 5295.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	13	57	1435		0.139388	1
2	1	13	76.9			1.531787	
3	2	13	52	1022		2.219798	
4	3	13	80.5	1630	1358	2.628951	
5	1	13	60			3.423173	
6	2	13	86.4	1748		4.27951	
7	2	13	56	1034		4.872214	
8	3	13	99.7	1199	1870	6.342329	
9	2	13	76.2	1745		7.055087	
10	3	13	53.6	1380	1438	7.45652	
11	3	13	59.9	1013	1900	8.00479	
12	1	13	78.8			9.301292	
13	2	13	75.3	1295		10.320217	
14	1	13	79.3			10.715353	
15	2	13	81.6	1380		11.712673	

Statistics 4 (ChirpCenter Frequency: 5292.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	6	73.3			0.428654	1
2	1	6	53.6			0.872606	
3	1	6	75.8			1.601063	
4	3	6	50.5	1343	1662	2.655669	
5	2	6	55.6	1823		3.499342	
6	3	6	82.1	1992	1098	4.043561	
7	2	6	90.7	1326		5.097044	
8	3	6	63.5	1433	1230	5.498763	
9	1	6	63.8			6.729172	
10	1	6	60.8			7.13565	
11	1	6	55.5			7.736929	
12	2	6	89.2	1202		8.701341	
13	2	6	92.1	1865		9.54671	
14	2	6	63.7	1827		10.208803	
15	1	6	94.7			11.096011	
16	1	6	57.9			11.731133	

Statistics 5 (ChirpCenter Frequency: 5294.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	11	97.4	1042	1805	0.547821	1
2	2	11	89.5	1076		1.095763	
3	2	11	89.8	1720		2.613269	
4	3	11	93.2	1696	1308	3.304797	
5	2	11	73.9	1259		4.532756	
6	2	11	60.1	1005		5.515872	
7	1	11	72.2			6.957699	
8	2	11	54.1	1375		7.96645	
9	2	11	58.3	1151		8.228646	
10	3	11	69.2	1726	1138	9.466919	
11	2	11	69.3	1261		10.967737	
12	1	11	77.5			11.137476	

Statistics 6 (ChirpCenter Frequency: 5296.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	16	64.8	1788	1815	0.154208	1
2	2	16	67.8	1820		1.399435	
3	2	16	63.9	1480		2.177961	
4	2	16	64.6	1830		2.348987	
5	3	16	64.5	1324	1476	3.234085	
6	1	16	96.6			3.924108	
7	1	16	95.5			4.660712	
8	2	16	84.6	1488		5.612303	
9	1	16	60.4			6.125565	
10	2	16	82.4	1028		7.459387	
11	3	16	54.7	1929	1721	8.133633	
12	3	16	75.4	1515	1011	8.646809	
13	2	16	85.2	1671		9.091915	
14	2	16	86.8	1293		10.005899	
15	2	16	68.7	1103		11.239677	
16	2	16	76.2	1873		11.346602	

Statistics 7 (ChirpCenter Frequency: 5297.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(uS)	Pulse 2-3 spacing(uS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	17	54.3	1378		0.526944	1
2	1	17	72.1			0.706165	
3	2	17	56	1935		1.442227	
4	1	17	81.2			1.967643	
5	2	17	72.1	1195		3.128702	
6	2	17	81.8	1173		3.600312	
7	2	17	80	1162		4.1737	
8	2	17	67.9	1571		4.787184	
9	2	17	79.8	1755		5.216917	
10	2	17	63.5	1255		5.805269	
11	1	17	66.2			6.851846	
12	3	17	86	1507	1814	7.481716	
13	2	17	72	1644		8.002668	
14	3	17	93	1095	1092	8.831854	
15	2	17	64.2	1878		8.951147	
16	3	17	54.3	1783	1928	10.089252	
17	2	17	98.4	1633		10.558908	
18	3	17	67.5	1619	1922	10.945241	
19	2	17	69.4	1905		11.815858	

Statistics 8 (ChirpCenter Frequency: 5295.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	13	75.7	1222		0.24975	1
2	1	13	88.7			0.81068	
3	3	13	93	1868	1244	2.055939	
4	3	13	78.2	1679	1700	2.281914	
5	1	13	85.1			3.125146	
6	1	13	88.1			3.986971	
7	1	13	69.8			4.904931	
8	2	13	98.3	1336		5.786118	
9	1	13	85.5			6.32268	
10	1	13	55			7.275874	
11	3	13	77	1751	1467	8.048573	
12	3	13	90.7	1085	1851	8.849224	
13	1	13	85.9			9.432875	
14	2	13	96.4	1208		9.827698	
15	2	13	92.6	1731		10.985859	
16	3	13	88.2	1380	1881	11.8043	

Statistics 9 (ChirpCenter Frequency: 5296.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	14	76.4	1686		0.614121	
2	1	14	66.1			1.109026	
3	2	14	64.9	1414		1.667386	
4	2	14	73.6	1376		2.246905	
5	3	14	98.7	1739	1461	2.607365	
6	3	14	81	1322	1196	3.339198	
7	2	14	68.6	1540		4.376973	
8	2	14	96.4	1597		4.935713	
9	1	14	84.7			5.192928	
10	2	14	97.5	1184		6.136821	1
11	2	14	90.9	1827		6.55591	
12	1	14	86.9			7.084458	
13	2	14	71.3	1514		8.010079	
14	2	14	79.7	1754		8.427172	
15	1	14	52			8.872906	
16	1	14	86.4			9.921875	
17	3	14	96.7	1244	1417	10.589654	
18	2	14	57.9	1700		10.843779	
19	3	14	91.7	1052	1258	11.742302	

Statistics 10 (ChirpCenter Frequency: 5298.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	19	75.9	1993	1713	0.465126	
2	3	19	63.5	1826	1044	1.317971	
3	1	19	92.7			2.165282	
4	3	19	80.7	1639	1512	3.726351	
5	2	19	77	1877		4.605126	
6	1	19	92.8			5.984534	
7	1	19	65.1			6.391708	1
8	2	19	86.3	1525		7.22712	
9	2	19	91.3	1681		8.830356	
10	3	19	53	1633	1502	9.529253	
11	3	19	91.4	1898	1745	10.193409	
12	2	19	82.2	1244		11.993823	

Radar Type 5 Case 3 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5326.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	10	53.5			0.18754	1
2	1	10	59.2			1.19252	
3	2	10	66.7	1630		2.075792	
4	1	10	55.7			2.656049	
5	3	10	92	1837	1179	4.101625	
6	3	10	74.8	1863	1764	4.98114	
7	2	10	96.4	1520		5.503094	
8	1	10	89.8			6.778862	
9	1	10	72.9			7.200142	
10	2	10	72.6	1445		8.452871	
11	3	10	66.3	1250	1908	9.360753	
12	3	10	85.4	1585	1287	10.135158	
13	2	10	78.6	1185		10.299771	
14	1	10	56.5			11.279889	

Statistics 2 (ChirpCenter Frequency: 5327.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	8	92	1257		0.49797	1
2	2	8	59.8	1705		1.322217	
3	3	8	96.3	1436	1091	2.035262	
4	2	8	53.4	1398		2.86019	
5	2	8	91.3	1170		3.203165	
6	1	8	90.3			4.234676	
7	1	8	71.3			5.034463	
8	3	8	85.7	1002	1819	5.56819	
9	2	8	85.1	1345		6.620873	
10	3	8	79	1519	1202	7.026085	
11	2	8	54.8	1357		7.73944	
12	2	8	79.9	1211		8.410848	
13	2	8	89	1676		9.669793	
14	2	8	97.5	1723		9.835371	
15	1	8	91.5			11.019397	
16	1	8	61			11.93104	

Statistics 3 (ChirpCenter Frequency: 5324.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	16	67.1	1868	1659	0.609202	
2	1	16	51.2			1.414797	
3	2	16	52.2	1896		2.228283	
4	2	16	57.3	1617		2.542535	
5	2	16	92.1	1661		3.899012	
6	3	16	50.9	1938	1088	4.619286	
7	1	16	71.2			5.216091	
8	3	16	58.2	1735	1993	6.392271	1
9	2	16	68.6	1304		7.126513	
10	3	16	59.7	1975	1093	7.505178	
11	2	16	69	1536		8.132837	
12	2	16	95.3	1125		9.071461	
13	3	16	89.6	1989	1461	9.932013	
14	3	16	74.9	1093	1087	10.714308	
15	2	16	88.3	1774		11.57106	

Statistics 4 (ChirpCenter Frequency: 5324.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	16	60.4	1875	1350	0.155577	
2	2	16	67.1	1282		1.036732	
3	2	16	70.3	1173		2.37024	
4	2	16	94.8	1511		3.366512	
5	1	16	95.9			4.46782	
6	2	16	72	1018		5.16246	
7	3	16	57.5	1618	1841	5.985188	1
8	2	16	63.2	1462		6.943928	
9	2	16	81.4	1421		7.742409	
10	2	16	54.8	1082		8.408778	
11	1	16	83.8			10.10899	
12	2	16	70	1293		10.493284	
13	1	16	89.9			11.621145	

Statistics 5 (ChirpCenter Frequency: 5326.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	9	63			0.319589	1
2	3	9	83.1	1804	1491	1.260095	
3	1	9	79.4			2.143034	
4	2	9	85.1	1431		2.754115	
5	1	9	63.4			3.561244	
6	2	9	100	1742		4.30372	
7	2	9	58.8	1193		4.816137	
8	2	9	99.9	1027		6.06525	
9	2	9	75.1	1735		7.024378	
10	2	9	69.6	1498		7.717839	
11	1	9	87.9			8.240356	
12	2	9	82.2	1103		9.542464	
13	2	9	52.6	1815		10.308083	
14	2	9	63	1755		10.697035	
15	3	9	84.4	1999	1022	11.510702	

Statistics 6 (ChirpCenter Frequency: 5326.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	9	51.6	1617		0.364314	1
2	3	9	83.2	1886	1022	2.357006	
3	2	9	58.1	1624		2.975287	
4	1	9	50.9			4.377806	
5	2	9	58.4	1592		5.818754	
6	1	9	71.2			6.340534	
7	2	9	80	1948		7.607782	
8	2	9	81.7	1052		8.762902	
9	3	9	51.2	1446	1045	9.788362	
10	1	9	89			11.947466	

Statistics 7 (ChirpCenter Frequency: 5323.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	17	93.2	1148	1557	0.421375	1
2	2	17	58.7	1078		0.984334	
3	3	17	70.7	1880	1601	1.777954	
4	3	17	50.5	1540	1791	2.333562	
5	2	17	66.7	1677		3.290302	
6	2	17	60.8	1528		3.365373	
7	2	17	85.2	1616		4.57925	
8	2	17	71.7	1975		4.846509	
9	1	17	87.6			5.43452	
10	1	17	78.6			6.040027	
11	1	17	60.6			6.882522	
12	2	17	62.3	1592		7.672505	
13	3	17	91.2	1280	1293	8.386674	
14	2	17	53.8	1413		8.738093	
15	2	17	63.8	1651		9.959322	
16	2	17	57.6	1871		10.363252	
17	1	17	79.9			10.746105	
18	2	17	90.9	1044		11.599615	

Statistics 8 (ChirpCenter Frequency: 5323.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	17	60	1823		0.218126	1
2	2	17	80.5	1078		1.264007	
3	2	17	82.4	1463		2.007823	
4	1	17	59.4			2.2547	
5	2	17	79.7	1463		3.230285	
6	2	17	86.9	1091		3.922975	
7	2	17	90.6	1737		4.82389	
8	2	17	60.7	1417		5.198586	
9	1	17	74.8			5.903416	
10	2	17	95.8	1669		7.015792	
11	1	17	95.3			7.591932	
12	2	17	77.4	1848		8.147529	
13	2	17	90.8	1011		8.960244	
14	1	17	57.4			9.200215	
15	1	17	81			10.447015	
16	2	17	56.8	1967		10.805189	
17	1	17	95.8			11.383956	

Statistics 9 (ChirpCenter Frequency: 5328.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	5	64.3	1822		0.494724	1
2	2	5	79.3	1635		1.157716	
3	3	5	74.7	1525	1757	2.953713	
4	2	5	94.1	1611		3.353954	
5	1	5	82.3			4.993668	
6	3	5	68.3	1049	1442	5.111769	
7	1	5	68.8			6.534983	
8	3	5	61.1	1290	1327	7.446738	
9	3	5	89.2	1943	1870	8.325412	
10	2	5	87.1	1892		9.62639	
11	1	5	61.1			10.117055	
12	1	5	57.2			11.295471	

Statistics 10 (ChirpCenter Frequency: 5322.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	19	84.3	1086		0.046035	1
2	2	19	68.8	1044		1.21502	
3	1	19	55.5			2.437703	
4	1	19	54.9			3.797119	
5	3	19	78.4	1324	1046	4.727173	
6	1	19	63.2			5.957161	
7	2	19	84.7	1748		6.795376	
8	2	19	95.2	1437		8.16145	
9	2	19	78.7	1790		8.972088	
10	2	19	65.5	1908		9.934273	
11	3	19	88.5	1455	1184	11.235608	

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	5674.0, 5589.0, 5662.0, 5639.0, 5444.0, 5638.0, 5542.0, 5275.0, 5689.0, 5557.0, 5619.0, 5497.0, 5617.0, 5611.0, 5549.0, 5535.0, 5687.0, 5663.0, 5409.0, 5335.0, 5695.0, 5525.0, 5511.0, 5566.0, 5256.0, 5573.0, 5404.0, 5411.0, 5318.0, 5422.0, 5675.0, 5563.0, 5544.0, 5514.0, 5314.0, 5650.0, 5677.0, 5519.0, 5348.0, 5469.0, 5666.0, 5326.0, 5507.0, 5637.0, 5532.0, 5439.0, 5474.0, 5489.0, 5644.0, 5408.0, 5504.0, 5690.0, 5363.0, 5518.0, 5342.0, 5595.0, 5703.0, 5406.0, 5654.0, 5458.0, 5538.0, 5372.0, 5670.0, 5596.0, 5329.0, 5513.0, 5629.0, 5487.0, 5366.0, 5302.0, 5423.0, 5717.0, 5284.0, 5282.0, 5590.0, 5266.0, 5384.0, 5311.0, 5711.0, 5356.0, 5304.0, 5678.0, 5403.0, 5261.0, 5696.0, 5669.0, 5362.0, 5552.0, 5615.0, 5502.0, 5300.0, 5581.0, 5693.0, 5255.0, 5349.0, 5346.0, 5565.0, 5397.0, 5486.0, 5664.0
2	5310	9	1	333	1	5524.0, 5494.0, 5638.0, 5392.0, 5538.0, 5287.0, 5562.0, 5653.0, 5425.0, 5624.0, 5689.0, 5316.0, 5611.0, 5507.0, 5631.0, 5319.0, 5541.0, 5558.0, 5646.0, 5416.0, 5527.0, 5520.0, 5311.0, 5535.0, 5423.0, 5448.0, 5344.0, 5477.0, 5643.0, 5713.0, 5433.0, 5457.0, 5519.0, 5583.0, 5398.0, 5608.0, 5452.0, 5688.0, 5334.0, 5522.0, 5692.0, 5414.0, 5651.0, 5645.0, 5533.0, 5539.0, 5372.0, 5543.0, 5712.0, 5254.0, 5297.0, 5596.0, 5559.0, 5331.0, 5666.0, 5536.0, 5266.0, 5654.0, 5627.0, 5492.0, 5410.0, 5272.0, 5314.0, 5660.0, 5313.0, 5501.0, 5438.0, 5514.0, 5298.0, 5532.0, 5586.0, 5303.0, 5347.0, 5415.0, 5381.0, 5259.0, 5528.0, 5486.0, 5453.0, 5267.0, 5277.0, 5376.0, 5682.0, 5255.0, 5526.0, 5604.0, 5618.0, 5383.0, 5534.0, 5443.0, 5367.0, 5678.0, 5437.0, 5697.0, 5577.0, 5490.0, 5286.0, 5633.0, 5680.0, 5571.0
3	5310	9	1	333	1	5502.0, 5329.0, 5523.0, 5503.0, 5320.0, 5556.0, 5649.0, 5492.0, 5413.0, 5276.0, 5491.0, 5371.0, 5435.0, 5646.0, 5469.0, 5693.0, 5537.0, 5355.0, 5578.0, 5500.0, 5525.0, 5358.0, 5425.0, 5574.0, 5482.0, 5327.0, 5585.0, 5709.0, 5605.0, 5257.0, 5319.0, 5592.0, 5410.0, 5655.0, 5356.0, 5704.0, 5504.0, 5337.0, 5484.0, 5692.0, 5357.0, 5528.0, 5678.0, 5439.0, 5421.0, 5624.0, 5314.0, 5648.0, 5577.0, 5575.0, 5669.0, 5470.0, 5307.0, 5571.0, 5687.0, 5269.0, 5284.0, 5481.0, 5305.0, 5554.0, 5685.0, 5384.0, 5663.0, 5494.0, 5453.0, 5634.0, 5395.0, 5266.0, 5719.0, 5262.0,

						5670.0, 5312.0, 5363.0, 5553.0, 5443.0, 5375.0, 5479.0, 5458.0, 5657.0, 5420.0, 5373.0, 5716.0, 5287.0, 5378.0, 5316.0, 5522.0, 5444.0, 5583.0, 5328.0, 5324.0, 5677.0, 5686.0, 5275.0, 5449.0, 5714.0, 5271.0, 5348.0, 5717.0, 5638.0, 5258.0
4	5310	9	1	333	1	5618.0, 5443.0, 5275.0, 5450.0, 5544.0, 5384.0, 5560.0, 5447.0, 5640.0, 5558.0, 5330.0, 5494.0, 5709.0, 5255.0, 5492.0, 5256.0, 5554.0, 5435.0, 5648.0, 5636.0, 5311.0, 5531.0, 5471.0, 5334.0, 5289.0, 5385.0, 5653.0, 5474.0, 5294.0, 5346.0, 5572.0, 5425.0, 5366.0, 5679.0, 5375.0, 5509.0, 5465.0, 5662.0, 5713.0, 5603.0, 5373.0, 5365.0, 5307.0, 5714.0, 5590.0, 5386.0, 5293.0, 5419.0, 5455.0, 5724.0, 5521.0, 5297.0, 5395.0, 5586.0, 5627.0, 5404.0, 5433.0, 5561.0, 5476.0, 5338.0, 5502.0, 5284.0, 5697.0, 5258.0, 5696.0, 5357.0, 5647.0, 5412.0, 5410.0, 5634.0, 5624.0, 5654.0, 5617.0, 5345.0, 5439.0, 5302.0, 5278.0, 5406.0, 5597.0, 5594.0, 5282.0, 5720.0, 5301.0, 5569.0, 5614.0, 5616.0, 5318.0, 5331.0, 5491.0, 5606.0, 5568.0, 5645.0, 5621.0, 5556.0, 5351.0, 5631.0, 5678.0, 5584.0, 5583.0, 5401.0
5	5310	9	1	333	1	5586.0, 5310.0, 5386.0, 5282.0, 5337.0, 5599.0, 5561.0, 5722.0, 5450.0, 5698.0, 5478.0, 5483.0, 5563.0, 5343.0, 5590.0, 5283.0, 5499.0, 5602.0, 5307.0, 5495.0, 5265.0, 5639.0, 5399.0, 5333.0, 5504.0, 5658.0, 5436.0, 5293.0, 5456.0, 5323.0, 5269.0, 5567.0, 5435.0, 5645.0, 5557.0, 5413.0, 5405.0, 5502.0, 5515.0, 5691.0, 5375.0, 5297.0, 5528.0, 5308.0, 5487.0, 5353.0, 5303.0, 5640.0, 5678.0, 5551.0, 5633.0, 5372.0, 5592.0, 5600.0, 5572.0, 5376.0, 5451.0, 5543.0, 5671.0, 5370.0, 5432.0, 5410.0, 5562.0, 5721.0, 5697.0, 5444.0, 5653.0, 5677.0, 5571.0, 5348.0, 5383.0, 5258.0, 5363.0, 5665.0, 5662.0, 5578.0, 5485.0, 5545.0, 5503.0, 5644.0, 5651.0, 5429.0, 5607.0, 5682.0, 5418.0, 5345.0, 5601.0, 5666.0, 5621.0, 5280.0, 5681.0, 5715.0, 5296.0, 5352.0, 5673.0, 5275.0, 5566.0, 5328.0, 5391.0, 5309.0
6	5310	9	1	333	1	5508.0, 5462.0, 5639.0, 5394.0, 5392.0, 5307.0, 5283.0, 5632.0, 5718.0, 5305.0, 5402.0, 5665.0, 5270.0, 5312.0, 5268.0, 5493.0, 5550.0, 5476.0, 5393.0, 5623.0, 5356.0, 5661.0, 5300.0, 5292.0, 5527.0, 5714.0, 5477.0, 5717.0, 5370.0, 5578.0, 5535.0, 5719.0, 5410.0, 5653.0, 5273.0, 5509.0, 5581.0, 5333.0, 5679.0, 5374.0, 5422.0, 5617.0, 5295.0, 5278.0, 5301.0, 5667.0, 5309.0, 5641.0, 5627.0, 5358.0, 5662.0, 5579.0, 5343.0, 5409.0, 5694.0, 5670.0, 5267.0, 5554.0, 5557.0, 5275.0, 5414.0, 5291.0, 5544.0, 5595.0, 5424.0,

						5531.0, 5379.0, 5708.0, 5282.0, 5478.0, 5666.0, 5260.0, 5573.0, 5251.0, 5724.0, 5596.0, 5458.0, 5688.0, 5406.0, 5351.0, 5404.0, 5431.0, 5484.0, 5547.0, 5480.0, 5551.0, 5269.0, 5536.0, 5575.0, 5485.0, 5398.0, 5395.0, 5616.0, 5353.0, 5534.0, 5407.0, 5421.0, 5549.0, 5702.0, 5435.0
7	5310	9	1	333	1	5484.0, 5269.0, 5319.0, 5601.0, 5688.0, 5321.0, 5549.0, 5393.0, 5361.0, 5252.0, 5561.0, 5414.0, 5649.0, 5486.0, 5516.0, 5360.0, 5612.0, 5657.0, 5394.0, 5715.0, 5262.0, 5583.0, 5673.0, 5477.0, 5512.0, 5465.0, 5438.0, 5474.0, 5506.0, 5698.0, 5568.0, 5596.0, 5297.0, 5452.0, 5699.0, 5354.0, 5283.0, 5719.0, 5659.0, 5295.0, 5505.0, 5493.0, 5669.0, 5328.0, 5721.0, 5448.0, 5701.0, 5722.0, 5511.0, 5288.0, 5347.0, 5384.0, 5653.0, 5633.0, 5469.0, 5639.0, 5309.0, 5366.0, 5535.0, 5255.0, 5691.0, 5562.0, 5470.0, 5637.0, 5459.0, 5604.0, 5300.0, 5367.0, 5289.0, 5346.0, 5401.0, 5534.0, 5348.0, 5574.0, 5387.0, 5660.0, 5405.0, 5681.0, 5265.0, 5514.0, 5273.0, 5641.0, 5373.0, 5424.0, 5383.0, 5513.0, 5623.0, 5402.0, 5567.0, 5718.0, 5449.0, 5432.0, 5258.0, 5439.0, 5661.0, 5427.0, 5315.0, 5686.0, 5695.0, 5270.0
8	5310	9	1	333	1	5623.0, 5677.0, 5356.0, 5448.0, 5469.0, 5460.0, 5310.0, 5482.0, 5421.0, 5251.0, 5368.0, 5553.0, 5584.0, 5286.0, 5512.0, 5361.0, 5532.0, 5314.0, 5295.0, 5624.0, 5621.0, 5519.0, 5581.0, 5606.0, 5268.0, 5516.0, 5703.0, 5585.0, 5402.0, 5364.0, 5260.0, 5658.0, 5663.0, 5367.0, 5409.0, 5709.0, 5566.0, 5291.0, 5374.0, 5464.0, 5571.0, 5479.0, 5633.0, 5642.0, 5509.0, 5634.0, 5255.0, 5612.0, 5705.0, 5686.0, 5430.0, 5366.0, 5265.0, 5281.0, 5307.0, 5417.0, 5576.0, 5688.0, 5338.0, 5285.0, 5453.0, 5284.0, 5504.0, 5419.0, 5618.0, 5505.0, 5298.0, 5458.0, 5313.0, 5282.0, 5440.0, 5347.0, 5592.0, 5617.0, 5376.0, 5390.0, 5292.0, 5388.0, 5627.0, 5439.0, 5414.0, 5557.0, 5451.0, 5380.0, 5444.0, 5326.0, 5638.0, 5391.0, 5400.0, 5560.0, 5693.0, 5655.0, 5287.0, 5398.0, 5549.0, 5721.0, 5696.0, 5462.0, 5473.0, 5477.0
9	5310	9	1	333	1	5689.0, 5470.0, 5320.0, 5502.0, 5526.0, 5285.0, 5666.0, 5401.0, 5511.0, 5469.0, 5531.0, 5566.0, 5686.0, 5485.0, 5656.0, 5468.0, 5369.0, 5311.0, 5484.0, 5568.0, 5595.0, 5431.0, 5683.0, 5486.0, 5295.0, 5402.0, 5537.0, 5377.0, 5581.0, 5404.0, 5370.0, 5704.0, 5255.0, 5408.0, 5327.0, 5302.0, 5419.0, 5541.0, 5691.0, 5366.0, 5342.0, 5665.0, 5640.0, 5621.0, 5525.0, 5399.0, 5355.0, 5363.0, 5587.0, 5335.0, 5571.0, 5647.0, 5471.0, 5549.0, 5458.0, 5428.0, 5341.0, 5397.0, 5552.0, 5444.0,

						5653.0, 5459.0, 5570.0, 5297.0, 5423.0, 5457.0, 5527.0, 5409.0, 5559.0, 5475.0, 5310.0, 5592.0, 5490.0, 5487.0, 5491.0, 5693.0, 5380.0, 5263.0, 5331.0, 5497.0, 5352.0, 5593.0, 5712.0, 5394.0, 5591.0, 5567.0, 5659.0, 5257.0, 5322.0, 5466.0, 5334.0, 5359.0, 5572.0, 5439.0, 5306.0, 5417.0, 5275.0, 5434.0, 5312.0, 5536.0
10	5310	9	1	333	1	5312.0, 5340.0, 5589.0, 5353.0, 5535.0, 5393.0, 5485.0, 5402.0, 5648.0, 5477.0, 5401.0, 5581.0, 5620.0, 5681.0, 5567.0, 5413.0, 5418.0, 5627.0, 5603.0, 5611.0, 5593.0, 5717.0, 5568.0, 5348.0, 5460.0, 5709.0, 5441.0, 5518.0, 5616.0, 5512.0, 5497.0, 5375.0, 5493.0, 5350.0, 5479.0, 5368.0, 5463.0, 5572.0, 5295.0, 5569.0, 5682.0, 5539.0, 5520.0, 5480.0, 5361.0, 5489.0, 5640.0, 5395.0, 5386.0, 5689.0, 5311.0, 5596.0, 5439.0, 5503.0, 5289.0, 5330.0, 5462.0, 5355.0, 5597.0, 5253.0, 5277.0, 5285.0, 5288.0, 5622.0, 5283.0, 5659.0, 5324.0, 5538.0, 5691.0, 5525.0, 5261.0, 5345.0, 5453.0, 5369.0, 5641.0, 5499.0, 5471.0, 5686.0, 5270.0, 5643.0, 5399.0, 5428.0, 5440.0, 5334.0, 5696.0, 5562.0, 5674.0, 5560.0, 5459.0, 5645.0, 5576.0, 5711.0, 5282.0, 5655.0, 5636.0, 5305.0, 5427.0, 5376.0, 5306.0, 5372.0
11	5310	9	1	333	1	5526.0, 5591.0, 5378.0, 5618.0, 5512.0, 5336.0, 5270.0, 5499.0, 5323.0, 5364.0, 5546.0, 5256.0, 5550.0, 5676.0, 5312.0, 5313.0, 5345.0, 5471.0, 5410.0, 5293.0, 5657.0, 5621.0, 5329.0, 5407.0, 5370.0, 5414.0, 5277.0, 5440.0, 5654.0, 5609.0, 5418.0, 5637.0, 5384.0, 5613.0, 5299.0, 5666.0, 5267.0, 5284.0, 5456.0, 5722.0, 5448.0, 5485.0, 5572.0, 5625.0, 5487.0, 5469.0, 5687.0, 5413.0, 5646.0, 5534.0, 5316.0, 5513.0, 5497.0, 5491.0, 5697.0, 5271.0, 5674.0, 5401.0, 5334.0, 5592.0, 5484.0, 5431.0, 5547.0, 5488.0, 5383.0, 5376.0, 5379.0, 5601.0, 5541.0, 5559.0, 5482.0, 5365.0, 5258.0, 5269.0, 5311.0, 5515.0, 5273.0, 5570.0, 5428.0, 5585.0, 5516.0, 5347.0, 5644.0, 5614.0, 5556.0, 5661.0, 5715.0, 5333.0, 5495.0, 5705.0, 5462.0, 5599.0, 5619.0, 5552.0, 5712.0, 5522.0, 5589.0, 5680.0, 5514.0, 5457.0
12	5310	9	1	333	1	5684.0, 5445.0, 5384.0, 5556.0, 5413.0, 5412.0, 5430.0, 5537.0, 5422.0, 5335.0, 5381.0, 5705.0, 5568.0, 5449.0, 5594.0, 5560.0, 5304.0, 5316.0, 5255.0, 5508.0, 5659.0, 5480.0, 5455.0, 5343.0, 5693.0, 5344.0, 5567.0, 5378.0, 5275.0, 5282.0, 5363.0, 5709.0, 5458.0, 5487.0, 5584.0, 5260.0, 5579.0, 5291.0, 5268.0, 5514.0, 5358.0, 5419.0, 5708.0, 5525.0, 5631.0, 5489.0, 5387.0, 5495.0, 5364.0, 5543.0, 5416.0, 5654.0, 5592.0, 5547.0, 5687.0,

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13	5310	9	1	333	1	5623.0, 5442.0, 5670.0, 5551.0, 5251.0, 5682.0, 5718.0, 5282.0, 5569.0, 5673.0, 5455.0, 5690.0, 5632.0, 5650.0, 5440.0, 5458.0, 5529.0, 5494.0, 5585.0, 5619.0, 5420.0, 5376.0, 5605.0, 5611.0, 5616.0, 5635.0, 5441.0, 5621.0, 5350.0, 5401.0, 5312.0, 5636.0, 5349.0, 5545.0, 5622.0, 5527.0, 5473.0, 5463.0, 5628.0, 5678.0, 5558.0, 5309.0, 5383.0, 5435.0, 5528.0, 5693.0, 5304.0, 5277.0, 5502.0, 5617.0, 5600.0, 5353.0, 5596.0, 5474.0, 5542.0, 5603.0, 5493.0, 5523.0, 5511.0, 5337.0, 5292.0, 5254.0, 5590.0, 5424.0, 5625.0, 5513.0, 5375.0, 5620.0, 5272.0, 5500.0, 5467.0, 5561.0, 5397.0, 5548.0, 5485.0, 5444.0, 5384.0, 5659.0, 5374.0, 5363.0, 5553.0, 5413.0, 5598.0, 5563.0, 5422.0, 5677.0, 5294.0, 5698.0, 5293.0, 5541.0, 5559.0, 5614.0, 5712.0, 5264.0, 5393.0, 5504.0, 5260.0, 5412.0, 5719.0, 5607.0
14	5310	9	1	333		
15	5310	9	1	333	1	5331.0, 5256.0, 5465.0, 5584.0, 5420.0, 5671.0, 5675.0, 5375.0, 5598.0, 5591.0, 5384.0, 5677.0, 5372.0, 5483.0, 5489.0, 5255.0, 5716.0, 5665.0, 5538.0, 5646.0, 5504.0, 5596.0, 5359.0, 5481.0, 5534.0, 5261.0, 5383.0, 5395.0, 5551.0, 5295.0, 5268.0, 5480.0, 5405.0, 5417.0, 5491.0, 5441.0, 5454.0, 5488.0, 5328.0, 5499.0, 5494.0, 5330.0, 5346.0, 5582.0, 5308.0, 5448.0, 5434.0, 5449.0, 5496.0, 5444.0, 5642.0, 5428.0, 5414.0, 5623.0, 5550.0, 5365.0, 5640.0, 5575.0, 5722.0, 5557.0, 5590.0, 5503.0, 5524.0, 5667.0, 5280.0, 5509.0, 5659.0, 5544.0, 5278.0, 5632.0, 5660.0, 5450.0, 5643.0, 5348.0, 5710.0, 5404.0, 5397.0, 5292.0, 5379.0, 5657.0, 5644.0, 5694.0, 5717.0, 5676.0, 5363.0, 5695.0, 5369.0, 5612.0, 5568.0, 5407.0, 5478.0, 5277.0, 5421.0, 5281.0, 5674.0, 5353.0, 5702.0, 5689.0, 5381.0, 5668.0
16	5310	9	1	333	1	5355.0, 5703.0, 5261.0, 5274.0, 5547.0, 5598.0, 5250.0, 5397.0, 5556.0, 5692.0, 5613.0, 5294.0, 5536.0, 5492.0, 5321.0, 5346.0, 5623.0, 5627.0, 5445.0, 5405.0, 5293.0, 5393.0, 5582.0, 5466.0, 5684.0, 5478.0, 5309.0, 5328.0, 5454.0, 5564.0, 5322.0, 5422.0, 5366.0, 5662.0, 5717.0, 5624.0, 5304.0, 5256.0, 5351.0, 5341.0, 5381.0, 5451.0, 5586.0, 5428.0, 5612.0,

						5667.0, 5528.0, 5677.0, 5483.0, 5329.0, 5511.0, 5496.0, 5426.0, 5285.0, 5510.0, 5565.0, 5678.0, 5530.0, 5296.0, 5362.0, 5297.0, 5704.0, 5489.0, 5347.0, 5406.0, 5440.0, 5715.0, 5714.0, 5310.0, 5349.0, 5718.0, 5584.0, 5471.0, 5634.0, 5411.0, 5336.0, 5597.0, 5500.0, 5386.0, 5658.0, 5670.0, 5702.0, 5657.0, 5303.0, 5447.0, 5568.0, 5324.0, 5413.0, 5312.0, 5707.0, 5403.0, 5570.0, 5710.0, 5563.0, 5442.0, 5276.0, 5524.0, 5674.0, 5399.0, 5420.0
17	5310	9	1	333	1	5289.0, 5521.0, 5341.0, 5316.0, 5567.0, 5428.0, 5296.0, 5452.0, 5314.0, 5673.0, 5416.0, 5677.0, 5414.0, 5648.0, 5680.0, 5426.0, 5436.0, 5370.0, 5499.0, 5660.0, 5397.0, 5374.0, 5516.0, 5356.0, 5566.0, 5371.0, 5405.0, 5691.0, 5577.0, 5509.0, 5274.0, 5433.0, 5693.0, 5504.0, 5652.0, 5644.0, 5263.0, 5616.0, 5538.0, 5398.0, 5308.0, 5406.0, 5431.0, 5545.0, 5257.0, 5602.0, 5623.0, 5586.0, 5560.0, 5582.0, 5485.0, 5323.0, 5280.0, 5563.0, 5639.0, 5383.0, 5456.0, 5355.0, 5331.0, 5451.0, 5375.0, 5682.0, 5539.0, 5290.0, 5531.0, 5580.0, 5609.0, 5636.0, 5529.0, 5302.0, 5694.0, 5607.0, 5608.0, 5264.0, 5528.0, 5525.0, 5493.0, 5361.0, 5713.0, 5293.0, 5505.0, 5339.0, 5720.0, 5266.0, 5407.0, 5612.0, 5457.0, 5466.0, 5298.0, 5662.0, 5610.0, 5596.0, 5659.0, 5287.0, 5492.0, 5540.0, 5674.0, 5657.0, 5471.0, 5349.0
18	5310	9	1	333	1	5417.0, 5410.0, 5391.0, 5375.0, 5336.0, 5623.0, 5387.0, 5434.0, 5670.0, 5578.0, 5392.0, 5508.0, 5259.0, 5597.0, 5546.0, 5403.0, 5318.0, 5488.0, 5609.0, 5328.0, 5326.0, 5478.0, 5636.0, 5564.0, 5552.0, 5256.0, 5556.0, 5528.0, 5694.0, 5632.0, 5265.0, 5602.0, 5412.0, 5300.0, 5437.0, 5476.0, 5480.0, 5282.0, 5645.0, 5607.0, 5496.0, 5469.0, 5252.0, 5696.0, 5715.0, 5707.0, 5299.0, 5678.0, 5630.0, 5283.0, 5690.0, 5521.0, 5681.0, 5452.0, 5583.0, 5315.0, 5273.0, 5261.0, 5374.0, 5553.0, 5420.0, 5544.0, 5626.0, 5250.0, 5409.0, 5680.0, 5584.0, 5550.0, 5430.0, 5490.0, 5661.0, 5431.0, 5689.0, 5638.0, 5386.0, 5656.0, 5389.0, 5637.0, 5713.0, 5380.0, 5330.0, 5520.0, 5346.0, 5586.0, 5446.0, 5548.0, 5624.0, 5331.0, 5366.0, 5570.0, 5657.0, 5582.0, 5629.0, 5449.0, 5591.0, 5572.0, 5549.0, 5654.0, 5279.0, 5268.0
19	5310	9	1	333	1	5568.0, 5723.0, 5661.0, 5532.0, 5338.0, 5326.0, 5641.0, 5443.0, 5426.0, 5654.0, 5269.0, 5631.0, 5719.0, 5360.0, 5406.0, 5707.0, 5510.0, 5586.0, 5485.0, 5327.0, 5614.0, 5584.0, 5570.0, 5265.0, 5502.0, 5380.0, 5587.0, 5632.0, 5448.0, 5505.0, 5647.0, 5346.0, 5637.0, 5525.0, 5412.0, 5454.0, 5644.0, 5359.0, 5403.0, 5536.0,

						5305.0, 5489.0, 5340.0, 5476.0, 5355.0, 5441.0, 5378.0, 5598.0, 5664.0, 5524.0, 5575.0, 5280.0, 5290.0, 5560.0, 5337.0, 5408.0, 5329.0, 5472.0, 5652.0, 5691.0, 5392.0, 5404.0, 5582.0, 5365.0, 5313.0, 5323.0, 5533.0, 5496.0, 5689.0, 5540.0, 5353.0, 5708.0, 5602.0, 5649.0, 5424.0, 5259.0, 5672.0, 5455.0, 5567.0, 5675.0, 5429.0, 5636.0, 5452.0, 5688.0, 5617.0, 5381.0, 5544.0, 5421.0, 5679.0, 5438.0, 5297.0, 5314.0, 5578.0, 5491.0, 5517.0, 5710.0, 5361.0, 5446.0, 5592.0, 5304.0
20	5310	9	1	333	1	5443.0, 5651.0, 5380.0, 5420.0, 5685.0, 5554.0, 5514.0, 5465.0, 5482.0, 5679.0, 5418.0, 5641.0, 5460.0, 5669.0, 5615.0, 5662.0, 5405.0, 5439.0, 5546.0, 5599.0, 5349.0, 5712.0, 5491.0, 5682.0, 5633.0, 5291.0, 5501.0, 5451.0, 5470.0, 5447.0, 5285.0, 5371.0, 5671.0, 5448.0, 5354.0, 5331.0, 5645.0, 5329.0, 5604.0, 5300.0, 5587.0, 5598.0, 5508.0, 5507.0, 5582.0, 5561.0, 5722.0, 5318.0, 5384.0, 5436.0, 5495.0, 5319.0, 5330.0, 5686.0, 5275.0, 5648.0, 5358.0, 5699.0, 5295.0, 5301.0, 5438.0, 5547.0, 5303.0, 5519.0, 5355.0, 5550.0, 5428.0, 5488.0, 5605.0, 5383.0, 5562.0, 5649.0, 5581.0, 5421.0, 5344.0, 5360.0, 5445.0, 5265.0, 5305.0, 5650.0, 5294.0, 5574.0, 5475.0, 5314.0, 5591.0, 5422.0, 5595.0, 5284.0, 5695.0, 5471.0, 5711.0, 5702.0, 5533.0, 5320.0, 5323.0, 5366.0, 5709.0, 5656.0, 5539.0, 5473.0
21	5310	9	1	333	1	5689.0, 5709.0, 5351.0, 5639.0, 5566.0, 5361.0, 5408.0, 5541.0, 5677.0, 5475.0, 5508.0, 5583.0, 5703.0, 5585.0, 5558.0, 5603.0, 5273.0, 5297.0, 5520.0, 5314.0, 5544.0, 5562.0, 5375.0, 5365.0, 5462.0, 5616.0, 5300.0, 5321.0, 5419.0, 5463.0, 5303.0, 5594.0, 5496.0, 5329.0, 5435.0, 5420.0, 5390.0, 5411.0, 5657.0, 5453.0, 5360.0, 5484.0, 5490.0, 5536.0, 5531.0, 5319.0, 5643.0, 5622.0, 5470.0, 5698.0, 5474.0, 5367.0, 5627.0, 5371.0, 5422.0, 5512.0, 5584.0, 5286.0, 5369.0, 5364.0, 5538.0, 5704.0, 5442.0, 5354.0, 5546.0, 5284.0, 5433.0, 5665.0, 5295.0, 5381.0, 5557.0, 5275.0, 5465.0, 5717.0, 5634.0, 5277.0, 5444.0, 5517.0, 5591.0, 5439.0, 5563.0, 5507.0, 5378.0, 5342.0, 5586.0, 5350.0, 5593.0, 5382.0, 5582.0, 5690.0, 5279.0, 5684.0, 5441.0, 5328.0, 5449.0, 5397.0, 5305.0, 5597.0, 5359.0, 5324.0
22	5310	9	1	333	1	5427.0, 5417.0, 5307.0, 5546.0, 5655.0, 5482.0, 5563.0, 5488.0, 5621.0, 5289.0, 5716.0, 5429.0, 5378.0, 5643.0, 5701.0, 5309.0, 5351.0, 5622.0, 5476.0, 5381.0, 5477.0, 5694.0, 5314.0, 5504.0, 5434.0, 5490.0, 5405.0, 5483.0, 5704.0, 5444.0, 5486.0, 5419.0, 5686.0, 5601.0, 5684.0,

						5604.0, 5260.0, 5440.0, 5420.0, 5256.0, 5677.0, 5723.0, 5678.0, 5627.0, 5508.0, 5685.0, 5518.0, 5470.0, 5292.0, 5475.0, 5253.0, 5443.0, 5308.0, 5639.0, 5370.0, 5575.0, 5422.0, 5436.0, 5509.0, 5676.0, 5702.0, 5300.0, 5391.0, 5520.0, 5423.0, 5623.0, 5412.0, 5319.0, 5651.0, 5606.0, 5284.0, 5288.0, 5261.0, 5334.0, 5624.0, 5700.0, 5317.0, 5468.0, 5714.0, 5372.0, 5516.0, 5579.0, 5598.0, 5404.0, 5507.0, 5347.0, 5311.0, 5448.0, 5432.0, 5354.0, 5493.0, 5681.0, 5473.0, 5660.0, 5278.0, 5535.0, 5526.0, 5637.0, 5282.0, 5570.0
23	5310	9	1	333	1	5700.0, 5403.0, 5648.0, 5645.0, 5360.0, 5587.0, 5547.0, 5517.0, 5284.0, 5669.0, 5684.0, 5435.0, 5310.0, 5603.0, 5555.0, 5686.0, 5560.0, 5537.0, 5388.0, 5336.0, 5694.0, 5708.0, 5316.0, 5275.0, 5473.0, 5709.0, 5348.0, 5358.0, 5542.0, 5531.0, 5253.0, 5624.0, 5363.0, 5568.0, 5266.0, 5315.0, 5634.0, 5505.0, 5446.0, 5591.0, 5638.0, 5367.0, 5487.0, 5630.0, 5563.0, 5261.0, 5471.0, 5389.0, 5685.0, 5297.0, 5452.0, 5626.0, 5366.0, 5636.0, 5424.0, 5306.0, 5398.0, 5559.0, 5379.0, 5674.0, 5352.0, 5485.0, 5500.0, 5492.0, 5699.0, 5311.0, 5619.0, 5340.0, 5304.0, 5453.0, 5497.0, 5387.0, 5401.0, 5282.0, 5586.0, 5326.0, 5494.0, 5428.0, 5296.0, 5723.0, 5649.0, 5290.0, 5584.0, 5518.0, 5322.0, 5650.0, 5267.0, 5581.0, 5307.0, 5476.0, 5255.0, 5283.0, 5281.0, 5599.0, 5447.0, 5621.0, 5493.0, 5529.0, 5716.0, 5579.0
24	5310	9	1	333	1	5515.0, 5375.0, 5629.0, 5537.0, 5681.0, 5567.0, 5683.0, 5514.0, 5316.0, 5546.0, 5384.0, 5348.0, 5288.0, 5409.0, 5342.0, 5516.0, 5675.0, 5355.0, 5616.0, 5540.0, 5666.0, 5687.0, 5462.0, 5690.0, 5420.0, 5453.0, 5491.0, 5706.0, 5669.0, 5312.0, 5373.0, 5428.0, 5597.0, 5468.0, 5317.0, 5562.0, 5328.0, 5518.0, 5628.0, 5604.0, 5680.0, 5612.0, 5609.0, 5363.0, 5489.0, 5530.0, 5324.0, 5554.0, 5579.0, 5260.0, 5294.0, 5525.0, 5458.0, 5264.0, 5498.0, 5281.0, 5671.0, 5696.0, 5511.0, 5564.0, 5438.0, 5635.0, 5709.0, 5622.0, 5490.0, 5563.0, 5437.0, 5399.0, 5476.0, 5467.0, 5419.0, 5565.0, 5534.0, 5596.0, 5254.0, 5301.0, 5505.0, 5433.0, 5560.0, 5566.0, 5398.0, 5600.0, 5723.0, 5447.0, 5261.0, 5556.0, 5320.0, 5386.0, 5721.0, 5573.0, 5382.0, 5605.0, 5368.0, 5595.0, 5495.0, 5444.0, 5426.0, 5545.0, 5383.0, 5698.0
25	5310	9	1	333	1	5331.0, 5343.0, 5441.0, 5408.0, 5347.0, 5669.0, 5538.0, 5619.0, 5706.0, 5420.0, 5582.0, 5383.0, 5589.0, 5708.0, 5622.0, 5531.0, 5313.0, 5686.0, 5516.0, 5528.0, 5592.0, 5646.0, 5498.0, 5330.0, 5641.0, 5672.0, 5564.0, 5515.0, 5477.0, 5278.0,

						5380.0, 5683.0, 5585.0, 5697.0, 5322.0, 5302.0, 5350.0, 5369.0, 5375.0, 5511.0, 5418.0, 5388.0, 5275.0, 5542.0, 5300.0, 5255.0, 5307.0, 5490.0, 5265.0, 5277.0, 5379.0, 5667.0, 5580.0, 5395.0, 5471.0, 5253.0, 5565.0, 5254.0, 5354.0, 5590.0, 5344.0, 5570.0, 5723.0, 5319.0, 5445.0, 5501.0, 5410.0, 5618.0, 5575.0, 5317.0, 5438.0, 5522.0, 5687.0, 5670.0, 5482.0, 5297.0, 5352.0, 5691.0, 5258.0, 5351.0, 5536.0, 5606.0, 5689.0, 5310.0, 5458.0, 5422.0, 5703.0, 5415.0, 5586.0, 5463.0, 5572.0, 5469.0, 5299.0, 5391.0, 5721.0, 5394.0, 5556.0, 5668.0, 5722.0, 5332.0
26	5310	9	1	333	1	5721.0, 5713.0, 5408.0, 5604.0, 5481.0, 5301.0, 5547.0, 5567.0, 5532.0, 5325.0, 5447.0, 5620.0, 5444.0, 5654.0, 5260.0, 5704.0, 5621.0, 5281.0, 5475.0, 5638.0, 5324.0, 5271.0, 5298.0, 5511.0, 5715.0, 5253.0, 5406.0, 5533.0, 5374.0, 5694.0, 5497.0, 5370.0, 5464.0, 5469.0, 5539.0, 5688.0, 5640.0, 5269.0, 5258.0, 5339.0, 5544.0, 5372.0, 5657.0, 5598.0, 5687.0, 5513.0, 5312.0, 5609.0, 5697.0, 5628.0, 5550.0, 5352.0, 5290.0, 5592.0, 5392.0, 5421.0, 5529.0, 5409.0, 5440.0, 5574.0, 5360.0, 5653.0, 5369.0, 5461.0, 5577.0, 5311.0, 5480.0, 5610.0, 5264.0, 5680.0, 5500.0, 5672.0, 5313.0, 5402.0, 5543.0, 5334.0, 5292.0, 5429.0, 5428.0, 5393.0, 5707.0, 5508.0, 5367.0, 5636.0, 5380.0, 5570.0, 5381.0, 5637.0, 5615.0, 5545.0, 5457.0, 5504.0, 5566.0, 5540.0, 5396.0, 5691.0, 5716.0, 5463.0, 5644.0, 5600.0
27	5310	9	1	333	1	5456.0, 5425.0, 5269.0, 5704.0, 5294.0, 5713.0, 5290.0, 5622.0, 5306.0, 5618.0, 5283.0, 5364.0, 5487.0, 5577.0, 5275.0, 5600.0, 5450.0, 5404.0, 5253.0, 5441.0, 5288.0, 5666.0, 5471.0, 5468.0, 5259.0, 5376.0, 5416.0, 5540.0, 5278.0, 5537.0, 5389.0, 5434.0, 5370.0, 5443.0, 5481.0, 5707.0, 5499.0, 5679.0, 5602.0, 5695.0, 5519.0, 5311.0, 5405.0, 5629.0, 5458.0, 5446.0, 5514.0, 5557.0, 5310.0, 5323.0, 5689.0, 5314.0, 5567.0, 5596.0, 5700.0, 5509.0, 5452.0, 5675.0, 5712.0, 5489.0, 5612.0, 5342.0, 5639.0, 5559.0, 5478.0, 5534.0, 5252.0, 5625.0, 5578.0, 5552.0, 5504.0, 5634.0, 5392.0, 5298.0, 5382.0, 5659.0, 5448.0, 5394.0, 5547.0, 5590.0, 5610.0, 5345.0, 5303.0, 5410.0, 5624.0, 5641.0, 5516.0, 5464.0, 5361.0, 5374.0, 5669.0, 5637.0, 5385.0, 5297.0, 5354.0, 5563.0, 5723.0, 5277.0, 5358.0, 5687.0
28	5310	9	1	333	1	5520.0, 5338.0, 5662.0, 5270.0, 5314.0, 5325.0, 5635.0, 5483.0, 5697.0, 5357.0, 5628.0, 5411.0, 5405.0, 5489.0, 5532.0, 5298.0, 5292.0, 5702.0, 5336.0, 5704.0, 5641.0, 5722.0, 5523.0, 5335.0, 5449.0,

						5515.0, 5549.0, 5525.0, 5518.0, 5513.0, 5304.0, 5695.0, 5458.0, 5466.0, 5526.0, 5530.0, 5392.0, 5439.0, 5394.0, 5585.0, 5647.0, 5611.0, 5429.0, 5282.0, 5432.0, 5529.0, 5508.0, 5580.0, 5553.0, 5643.0, 5509.0, 5416.0, 5430.0, 5674.0, 5583.0, 5572.0, 5446.0, 5578.0, 5554.0, 5276.0, 5360.0, 5301.0, 5376.0, 5565.0, 5522.0, 5330.0, 5445.0, 5528.0, 5675.0, 5569.0, 5337.0, 5406.0, 5468.0, 5388.0, 5373.0, 5714.0, 5353.0, 5261.0, 5341.0, 5608.0, 5417.0, 5436.0, 5689.0, 5347.0, 5524.0, 5547.0, 5589.0, 5299.0, 5534.0, 5386.0, 5368.0, 5537.0, 5278.0, 5588.0, 5692.0, 5262.0, 5486.0, 5644.0, 5401.0, 5600.0
29	5310	9	1	333	1	5455.0, 5723.0, 5613.0, 5632.0, 5504.0, 5299.0, 5453.0, 5499.0, 5528.0, 5282.0, 5398.0, 5552.0, 5447.0, 5561.0, 5284.0, 5713.0, 5673.0, 5668.0, 5406.0, 5693.0, 5275.0, 5353.0, 5417.0, 5536.0, 5414.0, 5520.0, 5549.0, 5485.0, 5593.0, 5642.0, 5293.0, 5366.0, 5707.0, 5691.0, 5287.0, 5517.0, 5697.0, 5507.0, 5712.0, 5362.0, 5273.0, 5445.0, 5442.0, 5449.0, 5285.0, 5706.0, 5298.0, 5682.0, 5636.0, 5709.0, 5267.0, 5446.0, 5571.0, 5719.0, 5295.0, 5639.0, 5640.0, 5389.0, 5649.0, 5705.0, 5330.0, 5643.0, 5461.0, 5278.0, 5623.0, 5564.0, 5496.0, 5610.0, 5365.0, 5498.0, 5378.0, 5261.0, 5521.0, 5542.0, 5307.0, 5483.0, 5615.0, 5605.0, 5361.0, 5429.0, 5291.0, 5591.0, 5310.0, 5493.0, 5319.0, 5303.0, 5600.0, 5372.0, 5412.0, 5500.0, 5356.0, 5590.0, 5568.0, 5336.0, 5385.0, 5422.0, 5569.0, 5270.0, 5497.0, 5671.0
30	5310	9	1	333	1	5480.0, 5506.0, 5275.0, 5712.0, 5373.0, 5556.0, 5290.0, 5483.0, 5350.0, 5639.0, 5493.0, 5431.0, 5600.0, 5392.0, 5475.0, 5376.0, 5388.0, 5717.0, 5571.0, 5380.0, 5665.0, 5663.0, 5256.0, 5313.0, 5432.0, 5499.0, 5706.0, 5478.0, 5409.0, 5360.0, 5652.0, 5433.0, 5288.0, 5710.0, 5681.0, 5385.0, 5418.0, 5700.0, 5423.0, 5434.0, 5504.0, 5361.0, 5583.0, 5279.0, 5714.0, 5355.0, 5631.0, 5541.0, 5328.0, 5378.0, 5381.0, 5390.0, 5668.0, 5449.0, 5592.0, 5260.0, 5336.0, 5516.0, 5321.0, 5536.0, 5396.0, 5402.0, 5657.0, 5451.0, 5522.0, 5718.0, 5557.0, 5558.0, 5658.0, 5554.0, 5267.0, 5630.0, 5332.0, 5676.0, 5466.0, 5306.0, 5695.0, 5654.0, 5582.0, 5366.0, 5261.0, 5465.0, 5613.0, 5276.0, 5491.0, 5513.0, 5271.0, 5517.0, 5461.0, 5316.0, 5250.0, 5397.0, 5531.0, 5414.0, 5563.0, 5615.0, 5252.0, 5338.0, 5441.0, 5713.0

20MHz

Radar SignalType	Waveform/Trial Number	Detection (%)	Limit (%)	Pass/Fail
Type 1A	15	100%	60%	pass
Type 1B	15	100%	60%	pass
Type 2	30	90%	60%	Pass
Type 3	30	96.7%	60%	Pass
Type 4	30	96.7%	60%	Pass
Aggregate(Type1 to 4)	120	95.83%	80%	Pass
Type 5	30	100 %	80%	Pass
Type 6	30	100 %	70%	Pass

Please refer to the following statistical tables:

5320MHz

Radar Type 1A Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	81	1	658	1
2	5320	61	1	878	1
3	5320	89	1	598	1
4	5320	92	1	578	1
5	5320	72	1	738	1
6	5320	65	1	818	1
7	5320	70	1	758	1
8	5320	76	1	698	1
9	5320	18	1	3066	1
10	5320	86	1	618	1
11	5320	74	1	718	1
12	5320	63	1	838	1
13	5320	58	1	918	1
14	5320	99	1	538	1
15	5320	102	1	518	1
Detection Percentage:100 % (>60%)					

Radar Type 1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	97	1	549	1
2	5320	30	1	1803	1
3	5320	23	1	2366	1
4	5320	22	1	2479	1
5	5320	24	1	2231	1
6	5320	78	1	680	1
7	5320	28	1	1933	1
8	5320	45	1	1173	1
9	5320	58	1	919	1
10	5320	33	1	1607	1
11	5320	47	1	1141	1
12	5320	41	1	1319	1
13	5320	24	1	2261	1
14	5320	23	1	2374	1
15	5320	24	1	2260	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	1.7	163	1
2	5320	29	1.7	188	1
3	5320	23	4.3	219	1
4	5320	23	3.8	161	1
5	5320	23	1.9	157	0
6	5320	23	4	199	0
7	5320	24	1.5	161	1
8	5320	23	3	162	1
9	5320	25	3.9	153	1
10	5320	23	4.1	224	1
11	5320	23	2.6	206	1
12	5320	29	1.8	177	1
13	5320	28	3.3	186	1
14	5320	23	1.4	206	1
15	5320	25	3.1	169	1
16	5320	24	3.4	169	1
17	5320	24	1.9	184	1
18	5320	23	1	210	1
19	5320	27	2.6	162	1
20	5320	27	2.1	205	1
21	5320	24	1.3	171	1
22	5320	28	3.1	209	1
23	5320	24	2.5	213	1
24	5320	28	1.4	158	1
25	5320	24	1.5	183	1
26	5320	29	2.9	185	0
27	5320	28	4.7	202	1
28	5320	26	2.3	215	1
29	5320	29	3.3	192	1
30	5320	24	1.9	207	1
Detection Percentage: 90 % (>60%)					

Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (μS)	PRI (μs)	Detection (1:yes; 0:no)
1	5320	16	9.7	317	1
2	5320	18	6.3	275	1
3	5320	17	7.4	445	1
4	5320	18	8.3	353	1
5	5320	16	8.3	464	1
6	5320	18	7.4	338	1
7	5320	16	6.9	459	1
8	5320	18	10	375	1
9	5320	17	7	451	1
10	5320	18	7.3	243	1
11	5320	18	10	218	1
12	5320	18	8.7	267	1
13	5320	17	7.1	309	1
14	5320	17	7	213	1
15	5320	16	9	491	0
16	5320	18	6.2	235	1
17	5320	16	9	386	1
18	5320	17	9	375	1
19	5320	16	9	300	1
20	5320	17	7.8	420	1
21	5320	16	9.7	435	1
22	5320	16	6.6	447	1
23	5320	16	6.4	442	1
24	5320	17	9	424	1
25	5320	18	8.2	457	1
26	5320	17	9.8	488	1
27	5320	16	6.2	470	1
28	5320	16	6.9	353	1
29	5320	18	7.9	217	1
30	5320	18	7.8	375	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	5320	12	11.9	221	1
2	5320	15	18.7	243	1
3	5320	15	11.4	426	1
4	5320	14	16.1	300	1
5	5320	13	18.6	341	1
6	5320	16	17.5	282	1
7	5320	14	13	202	1
8	5320	13	17.1	497	1
9	5320	14	12.3	462	1
10	5320	14	14	368	1
11	5320	13	18.8	237	1
12	5320	13	18.2	287	1
13	5320	13	11.8	413	1
14	5320	15	16.5	365	1
15	5320	12	13.3	388	1
16	5320	13	17.5	316	1
17	5320	12	20	412	0
18	5320	14	11.9	428	1
19	5320	12	14.2	478	1
20	5320	13	14.6	214	1
21	5320	16	16.7	412	1
22	5320	16	14.7	457	1
23	5320	12	18.7	472	1
24	5320	14	14.5	447	1
25	5320	12	15.5	313	1
26	5320	14	12.8	343	1
27	5320	13	19.4	265	1
28	5320	12	15.4	200	1
29	5320	13	13.8	405	1
30	5320	15	13.1	205	1
Detection Percentage: 96.7 % (>60%)					

Radar Type 5 Case 1 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5320.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	9	55.2	1391	1381	0.051652	
2	2	9	60.6	1291		1.273028	
3	2	9	60.9	1462		1.783552	
4	2	9	81.2	1070		2.703381	
5	3	9	96.4	1461	1114	3.291856	
6	3	9	89.6	1772	1417	4.093735	
7	1	9	67.4			5.586336	
8	1	9	75.1			5.8767	1
9	2	9	74.5	1072		7.04333	
10	1	9	75.6			7.614306	
11	2	9	54.2	1655		8.78701	
12	2	9	65.3	1698		9.372772	
13	3	9	60.1	1852	1804	10.090636	
14	1	9	96.4			11.044187	
15	1	9	53.3			11.321024	

Statistics 2 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	6	73.5			0.471053	
2	2	6	69.1	1483		1.548987	
3	2	6	93.7	1548		3.280745	
4	2	6	92.4	1102		3.941371	
5	2	6	98.4	1415		5.980382	
6	1	6	62.8			6.029858	1
7	3	6	71.8	1650	1381	7.792823	
8	1	6	56.2			9.558493	
9	2	6	95.4	1061		9.731168	
10	3	6	57.4	1540	1116	11.719561	

Statistics 3 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	8	97.8	1405		0.054895	1
2	1	8	63.1			2.025602	
3	3	8	94.4	1598	1548	2.978074	
4	1	8	63.1			4.157185	
5	1	8	76.7			5.775396	
6	3	8	75.2	1892	1040	7.060423	
7	1	8	69.6			7.696109	
8	2	8	75	1110		8.501524	
9	2	8	92.8	1393		10.449199	
10	2	8	52.9	1221		11.707706	

Statistics 4 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	12	98.8	1811	1482	0.824945	1
2	1	12	96.5			1.371825	
3	3	12	84	1265	1973	2.863008	
4	2	12	75.5	1558		3.805265	
5	3	12	54.8	1735	1325	4.123427	
6	2	12	87.9	1889		5.314561	
7	2	12	52.8	1410		6.300494	
8	3	12	98	1334	1790	7.864509	
9	3	12	74.2	1991	1488	8.812042	
10	2	12	94.8	1308		9.875991	
11	3	12	66.3	1710	1440	10.391835	
12	2	12	84.8	1879		11.137768	

Statistics 5(ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	9	85.8	1870	1919	0.760012	1
2	2	9	58.9	1456		2.371537	
3	3	9	89.8	1167	1937	3.298634	
4	2	9	50.9	1214		3.84758	
5	1	9	52.4			5.173862	
6	2	9	77.9	1534		6.756347	
7	3	9	76	1158	1774	7.573564	
8	2	9	86.6	1568		9.20059	
9	2	9	76.1	1600		10.477179	
10	3	9	66.8	1841	1498	11.954568	

Statistics 6 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	7	57.3	1915	1924	0.233858	1
2	2	7	80.8	1655		1.476482	
3	2	7	92.7	1891		2.973225	
4	2	7	95.1	1800		4.181225	
5	2	7	76.6	1180		5.761978	
6	2	7	60.3	1932		7.008205	
7	2	7	79.3	1270		8.32906	
8	2	7	75.6	1400		9.150019	
9	2	7	85.8	1874		9.945286	
10	3	7	96.3	1079	1892	11.912854	

Statistics 7(ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	11	67.8			0.13242	1
2	3	11	83.6	1357	1217	1.078569	
3	2	11	61.9	1626		1.44107	
4	2	11	62	1412		1.934431	
5	3	11	69.7	1417	1628	2.679945	
6	1	11	52.6			3.333401	
7	1	11	94.5			3.70197	
8	2	11	84.1	1091		4.7871	
9	3	11	76.6	1641	1866	5.179944	
10	1	11	73.9			5.583185	
11	2	11	88.5	1629		6.053004	
12	2	11	77	1791		6.973376	
13	2	11	75.3	1769		7.507371	
14	3	11	60.9	1882	1439	8.177297	
15	3	11	83.2	1958	1912	8.812263	
16	2	11	77.8	1856		9.589789	
17	2	11	53.8	1656		10.002312	
18	2	11	85.1	1571		10.781514	
19	2	11	73.4	1480		11.032834	
20	3	11	65.5	1082	1190	11.894339	

Statistics 8 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	14	78.7			0.401208	1
2	3	14	90.4	1393	1100	1.300667	
3	3	14	88.9	1275	1705	1.836968	
4	3	14	94.5	1813	1522	2.370746	
5	2	14	97	1260		3.137717	
6	2	14	98.5	1166		3.838033	
7	3	14	97.7	1738	1538	4.619034	
8	2	14	65.9	1417		5.092211	
9	3	14	54.3	1215	1787	5.832263	
10	1	14	56.2			6.66539	
11	3	14	59	1032	1898	7.501813	
12	2	14	73.5	1570		8.445714	
13	2	14	70.3	1233		8.526449	
14	3	14	92.9	1471	1808	9.40291	
15	3	14	88.5	1157	1979	10.528953	
16	3	14	95	1464	1738	11.201387	
17	3	14	52.4	1721	1911	11.860787	

Statistics 9 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	10	96.7	1376	1192	0.59304	
2	1	10	99.7			0.96017	
3	2	10	76.5	1114		1.644765	
4	2	10	91.4	1791		2.475711	
5	1	10	89			3.43161	
6	2	10	64.7	1771		4.156448	
7	1	10	69.5			4.921587	
8	2	10	93.7	1187		5.193892	
9	2	10	92.8	1816		5.721783	1
10	2	10	92.5	1436		7.011539	
11	3	10	86.3	1824	1207	7.197607	
12	1	10	95.6			8.128742	
13	2	10	50.8	1934		9.149203	
14	1	10	75.2			9.778739	
15	1	10	98.5			9.931057	
16	1	10	79.6			10.998449	
17	1	10	50			11.687275	

Statistics 10 (ChirpCenter Frequency: 5320.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	8	93	1470		0.176234	
2	3	8	55.2	1384	1615	0.66495	
3	2	8	59.4	1137		1.376655	
4	2	8	64	1343		1.955382	
5	1	8	83.9			2.839675	
6	1	8	94.2			3.501696	
7	2	8	88.1	1146		4.371762	
8	2	8	53.4	1353		4.716949	
9	2	8	81.9	1120		5.601273	
10	1	8	76.3			6.246937	1
11	1	8	96.5			6.899545	
12	1	8	65.2			7.344468	
13	2	8	51.4	1318		7.897314	
14	2	8	54.3	1848		8.292619	
15	2	8	94.4	1255		9.238034	
16	1	8	73.7			9.717608	
17	2	8	88.8	1252		10.251928	
18	2	8	71.8	1368		11.048742	
19	3	8	52.8	1968	1285	11.485416	

Radar Type 5 Case 2 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5316.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	13	91.2	1507		0.809244	
2	1	13	72.2			1.375964	
3	3	13	75.3	1297	1761	2.021566	
4	2	13	50.2	1871		3.666742	
5	2	13	96	1480		4.231209	
6	2	13	88.5	1551		5.195134	
7	2	13	78.6	1053		5.944567	1
8	2	13	70.5	1512		7.202266	
9	2	13	80.5	1351		8.078043	
10	3	13	73.2	1179	1138	9.051761	
11	2	13	86.7	1550		9.656825	
12	2	13	77.2	1970		10.637084	
13	1	13	73.5			11.407015	

Statistics 2 (ChirpCenter Frequency: 5318.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	13	81.4	1293		0.747426	
2	2	13	67.4	1970		0.900094	
3	2	13	61.7	1960		2.249862	
4	3	13	62.9	1186	1444	3.047081	
5	2	13	83.7	1878		3.540106	
6	2	13	98.9	1930		4.702903	
7	1	13	54.7			5.584807	
8	2	13	74.8	1354		5.982556	1
9	2	13	70.8	1803		6.554865	
10	2	13	84.7	1975		7.416318	
11	3	13	60.2	1085	1318	8.115698	
12	1	13	94.3			9.325429	
13	2	13	54.3	1463		10.289717	
14	2	13	85.6	1428		10.984802	
15	1	13	88.7			11.292935	

Statistics 3 (ChirpCenter Frequency: 5318.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	12	94.4	1694		0.484654	1
2	1	12	74.1			1.388564	
3	2	12	52.1	1672		1.519582	
4	2	12	53.4	1111		2.811625	
5	1	12	53.4			3.634266	
6	3	12	66.8	1339	1902	4.338945	
7	3	12	72.1	1078	1855	4.939212	
8	1	12	59.6			5.487443	
9	3	12	50.6	1441	1571	6.507059	
10	3	12	76	1112	1476	7.321787	
11	3	12	85.1	1480	1323	7.643155	
12	2	12	89.5	1110		8.79212	
13	2	12	95.9	1111		9.21287	
14	2	12	71	1470		10.16704	
15	2	12	67.5	1352		11.048145	
16	2	12	63.7	1932		11.845508	

Statistics 4 (ChirpCenter Frequency: 5313.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	16	98.7			0.25504	1
2	2	16	87.8	1863		0.979758	
3	3	16	96.6	1844	1696	2.134748	
4	3	16	74.1	1963	1702	2.72486	
5	2	16	64.1	1684		3.782319	
6	1	16	70.3			4.270094	
7	1	16	50			5.581458	
8	1	16	50.5			6.135422	
9	2	16	98.7	1969		6.499552	
10	3	16	92.9	1216	1429	7.510967	
11	2	16	62.4	1386		8.129206	
12	2	16	55.9	1009		9.475625	
13	3	16	62.1	1938	1106	9.987213	
14	2	16	62.4	1478		11.001091	
15	1	16	51.9			11.4783	

Statistics 5 (ChirpCenter Frequency: 5318.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	13	86.8	1458	1355	0.131768	1
2	2	13	56.4	1288		1.167617	
3	3	13	75.7	1917	1911	1.394982	
4	1	13	96.6			1.90005	
5	2	13	77.3	1855		2.530308	
6	3	13	58.3	1400	1200	3.076746	
7	3	13	82	1464	1085	3.889974	
8	2	13	87.1	1148		4.200348	
9	1	13	59.1			5.246385	
10	1	13	64.5			5.94839	
11	1	13	69.3			6.21863	
12	3	13	76.9	1607	1693	6.867299	
13	1	13	64.4			7.309688	
14	3	13	61.2	1096	1429	7.871096	
15	3	13	94.7	1017	1832	8.658412	
16	1	13	98.4			9.207183	
17	2	13	61.3	1130		9.926903	
18	3	13	67.9	1538	1070	10.532002	
19	2	13	75.3	1604		11.032041	
20	2	13	90.2	1602		11.946438	

Statistics 6 (ChirpCenter Frequency: 5316.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	16	69.4	1615	1048	0.34391	1
2	3	16	66.1	1634	1141	1.16317	
3	2	16	91.7	1063		2.395078	
4	2	16	73.8	1719		2.799411	
5	3	16	80.7	1445	1478	4.10481	
6	2	16	56.4	1080		5.499726	
7	1	16	91.5			5.596208	
8	1	16	53.4			6.542838	
9	3	16	62.9	1736	1803	7.913725	
10	3	16	90.6	1551	1285	8.682501	
11	3	16	51	1579	1108	9.415824	
12	2	16	71.6	1257		10.464271	
13	2	16	62.7	1576		11.818812	

Statistics 7 (ChirpCenter Frequency: 5312.0MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(uS)	Pulse 2-3 spacing(uS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	5	65.6	1540		0.072238	
2	3	5	59.1	1307	1001	0.763228	
3	3	5	51.6	1696	1518	1.84159	
4	1	5	85.9			2.200321	
5	1	5	70.6			2.945695	
6	2	5	81.6	1296		4.13385	
7	2	5	83.4	1577		4.267671	
8	1	5	78.6			5.637987	
9	2	5	65.3	1526		5.726552	1
10	3	5	86.9	1664	1913	6.611444	
11	2	5	70.2	1729		7.422148	
12	2	5	85	1809		8.228457	
13	1	5	77.3			8.601829	
14	2	5	97.9	1842		9.849496	
15	2	5	70.7	1492		9.927754	
16	2	5	66	1754		10.767555	
17	2	5	53.7	1692		11.691603	

Statistics 8 (ChirpCenter Frequency: 5317.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	20	54	1628		0.713677	
2	3	20	78.2	1187	1957	0.922276	
3	2	20	85.8	1740		1.861463	
4	2	20	87.4	1164		2.464197	
5	2	20	75.1	1351		3.518965	
6	2	20	98.2	1637		4.673205	
7	3	20	78.4	1847	1958	5.293963	
8	2	20	56.6	1878		5.671562	1
9	2	20	75.4	1357		6.810866	
10	3	20	99.4	1647	1097	7.529869	
11	3	20	80.8	1685	1877	8.396364	
12	2	20	83.3	1541		9.451655	
13	1	20	54			9.913544	
14	1	20	54.2			10.450809	
15	2	20	86.2	1692		11.741185	

Statistics 9 (ChirpCenter Frequency: 5317.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	8	59.8	1378	1379	1.086343	1
2	3	8	61.6	1076	1807	2.113186	
3	2	8	50.7	1490		2.667627	
4	2	8	84.7	1455		4.022791	
5	3	8	55	1789	1382	4.998419	
6	1	8	57.7			6.522772	
7	2	8	77.1	1955		7.748277	
8	2	8	81.6	1694		8.420199	
9	2	8	69.8	1813		10.528176	
10	3	8	99.9	1554	1509	11.871991	

Statistics 10 (ChirpCenter Frequency: 5315.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	5	93	1056		0.280084	1
2	3	5	89.7	1173	1059	1.665581	
3	2	5	64.4	1156		2.139913	
4	2	5	81	1073		3.218894	
5	2	5	52.4	1048		4.272951	
6	1	5	62.6			4.737005	
7	1	5	89.8			5.673987	
8	2	5	65.1	1636		6.031803	
9	3	5	89.5	1579	1921	6.860038	
10	2	5	91.4	1503		8.18308	
11	3	5	78.2	1968	1800	9.023693	
12	2	5	86.3	1476		9.992091	
13	1	5	75.4			11.018956	
14	2	5	86.9	1309		11.70214	

Radar Type 5 Case 3 Statistical Performance

Statistics 1 (ChirpCenter Frequency: 5328.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	19	92			0.232661	
2	3	19	54.3	1296	1383	1.08024	
3	1	19	76.8			1.490641	
4	1	19	81			2.735823	
5	2	19	57.1	1944		2.926578	
6	3	19	51	1400	1356	3.835464	
7	2	19	71.1	1030		4.261884	
8	2	19	80.9	1388		5.37979	
9	2	19	58.2	1557		6.336814	1
10	2	19	54.6	1932		6.703922	
11	2	19	52	1291		7.639152	
12	2	19	52.7	1710		8.048867	
13	2	19	65.8	1351		8.732019	
14	2	19	67.7	1342		9.61189	
15	2	19	93.1	1651		10.459124	
16	2	19	72.6	1982		10.919976	
17	2	19	65.6	1310		11.7888	

Statistics 2 (ChirpCenter Frequency: 5326.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	8	50.4	1886		0.212136	
2	1	8	95.3			0.93065	
3	2	8	99	1513		1.840728	
4	3	8	60.2	1966	1082	2.853955	
5	1	8	71.1			3.493279	
6	2	8	53.2	1587		4.469816	
7	2	8	98.4	1611		5.223424	
8	2	8	68.9	1016		6.355856	1
9	2	8	79.7	1948		6.523981	
10	2	8	83.7	1772		7.526184	
11	2	8	87.9	1455		8.09448	
12	3	8	79.9	1111	1587	9.361321	
13	3	8	68.1	1840	1598	9.85948	
14	1	8	88.8			11.056938	
15	3	8	91.8	1376	1457	11.396885	

Statistics 3 (ChirpCenter Frequency: 5322.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	6	54.3			0.401006	1
2	3	6	63.9	1434	1723	1.168163	
3	2	6	85	1527		1.402403	
4	1	6	79.3			2.338179	
5	3	6	58.8	1614	1866	3.016754	
6	1	6	86.8			3.899682	
7	2	6	69.5	1723		4.567788	
8	2	6	87.3	1000		5.123119	
9	1	6	78.9			5.472043	
10	2	6	64.2	1377		6.167255	
11	2	6	63.3	1511		7.323418	
12	1	6	87.6			7.584225	
13	2	6	76.2	1513		8.173205	
14	3	6	96.2	1023	1333	8.919755	
15	2	6	69.5	1859		9.641675	
16	3	6	73.5	1574	1222	10.547688	
17	2	6	66.9	1907		10.67272	
18	2	6	79.6	1069		11.376741	

Statistics 4 (ChirpCenter Frequency: 5323.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (μS)	Pulse 1-2 spacing(μS)	Pulse 2-3 spacing(μS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	18	96.7	1803		0.385737	1
2	2	18	55.3	1440		1.540293	
3	2	18	68.1	1188		1.777632	
4	2	18	96.2	1579		2.658956	
5	3	18	55.4	1626	1287	3.9237	
6	3	18	70.9	1678	1732	4.591808	
7	2	18	87.9	1902		5.386799	
8	1	18	95.9			6.10611	
9	2	18	52.9	1466		6.928851	
10	2	18	97.2	1260		7.32806	
11	3	18	95	1331	1710	8.332931	
12	2	18	88.2	1804		9.286837	
13	2	18	74.5	1375		10.317835	
14	1	18	94.3			10.569808	
15	2	18	51.3	1991		11.48605	

Statistics 5 (ChirpCenter Frequency: 5325.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	12	50.3	1112		0.362244	1
2	3	12	77.5	1785	1107	1.768953	
3	3	12	58.7	1992	1283	3.874802	
4	2	12	93.7	1085		4.353248	
5	1	12	71.3			6.463799	
6	3	12	91	1220	1454	7.848057	
7	2	12	60.8	1422		8.394038	
8	2	12	68.3	1757		9.518918	
9	2	12	86.7	1394		11.104778	

Statistics 6 (ChirpCenter Frequency: 5325.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	12	60.3			0.648613	1
2	3	12	66.2	1831	1644	0.898392	
3	2	12	69.8	1205		1.550335	
4	2	12	92.1	1395		2.786597	
5	1	12	66.3			3.66278	
6	3	12	88.7	1663	1459	3.969933	
7	2	12	85.1	1536		5.175156	
8	2	12	84.1	1447		5.252535	
9	1	12	97.6			6.122455	
10	1	12	99.5			7.387819	
11	1	12	93.2			8.180224	
12	3	12	86.6	1185	1902	8.921019	
13	2	12	60.6	1947		9.4912	
14	2	12	55	1210		9.919302	
15	1	12	59.8			10.677289	
16	1	12	56.3			11.759534	

Statistics 7 (ChirpCenter Frequency: 5324.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	3	17	91.2	1185	1222	0.61409	1
2	1	17	79			1.39533	
3	1	17	54.3			2.177831	
4	2	17	57.6	1590		2.863703	
5	1	17	79.5			3.609759	
6	2	17	77.5	1858		4.327038	
7	3	17	96.9	1567	1118	5.746056	
8	1	17	84.8			6.809204	
9	3	17	99.7	1293	1641	6.979049	
10	3	17	58.6	1734	1302	7.985999	
11	3	17	51.7	1211	1524	8.780004	
12	2	17	95.2	1521		10.007847	
13	1	17	78			11.038946	
14	2	17	69.8	1431		11.792296	

Statistics 8 (ChirpCenter Frequency: 5322.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	14	56.5	1240		0.117853	1
2	3	14	88	1166	1506	1.569443	
3	1	14	58.6			2.845487	
4	2	14	91.3	1317		4.458388	
5	3	14	56.2	1543	1510	5.945658	
6	1	14	60.9			6.012806	
7	2	14	87.1	1518		7.803879	
8	1	14	90.2			8.877505	
9	1	14	95.2			10.136303	
10	2	14	53.7	1931		11.076326	

Statistics 9 (ChirpCenter Frequency: 5324.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	2	9	56.9	1930		0.352906	1
2	3	9	65.3	1973	1208	0.884105	
3	2	9	59.2	1373		1.749006	
4	2	9	74.4	1435		1.899319	
5	3	9	79.5	1607	1330	2.636441	
6	2	9	59.4	1973		3.544871	
7	2	9	98.5	1106		4.150075	
8	2	9	52.4	1776		4.242166	
9	1	9	91.1			5.078112	
10	1	9	65.3			5.424616	
11	3	9	54.6	1570	1235	6.569352	
12	3	9	80.2	1821	1412	6.907129	
13	1	9	61.1			7.746701	
14	2	9	51.5	1392		8.284433	
15	2	9	53.7	1616		8.814143	
16	3	9	97.8	1071	1715	9.250713	
17	2	9	99.4	1772		9.753262	
18	2	9	88.6	1432		10.418478	
19	2	9	52	1088		11.236989	
20	2	9	60.8	1259		11.496033	

Statistics 10 (ChirpCenter Frequency: 5325.0 MHz)

Burst	Pulse	Chirp(MHz)	Pulse Width (µS)	Pulse 1-2 spacing(µS)	Pulse 2-3 spacing(µS)	Pulse Start(S)	Detection (1:yes;0:no)
1	1	11	86			0.338386	1
2	1	11	52.5			1.098681	
3	2	11	80.3	1154		2.782989	
4	3	11	99.4	1530	1328	3.290791	
5	2	11	80.9	1356		5.436887	
6	2	11	70.8	1017		5.68673	
7	3	11	80.3	1303	1309	7.16088	
8	2	11	65.5	1430		7.862359	
9	3	11	75.4	1968	1359	9.22371	
10	1	11	79.5			9.862683	
11	2	11	66.5	1165		11.108413	

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	5260.0, 5288.0, 5345.0, 5348.0, 5524.0, 5583.0, 5542.0, 5687.0, 5283.0, 5491.0, 5420.0, 5628.0, 5677.0, 5561.0, 5435.0, 5610.0, 5371.0, 5310.0, 5286.0, 5705.0, 5270.0, 5346.0, 5347.0, 5605.0, 5493.0, 5565.0, 5534.0, 5545.0, 5263.0, 5407.0, 5470.0, 5401.0, 5454.0, 5606.0, 5344.0, 5710.0, 5349.0, 5723.0, 5317.0, 5488.0, 5409.0, 5593.0, 5464.0, 5532.0, 5285.0, 5636.0, 5546.0, 5584.0, 5555.0, 5269.0, 5324.0, 5531.0, 5265.0, 5275.0, 5427.0, 5360.0, 5536.0, 5551.0, 5328.0, 5633.0, 5377.0, 5366.0, 5394.0, 5667.0, 5353.0, 5370.0, 5594.0, 5513.0, 5511.0, 5507.0, 5686.0, 5437.0, 5693.0, 5433.0, 5274.0, 5486.0, 5577.0, 5369.0, 5411.0, 5681.0, 5522.0, 5386.0, 5506.0, 5553.0, 5376.0, 5259.0, 5632.0, 5308.0, 5300.0, 5692.0, 5550.0, 5278.0, 5495.0, 5655.0, 5641.0, 5650.0, 5299.0, 5666.0, 5668.0, 5707.0
2	5320	9	1	333	1	5299.0, 5263.0, 5448.0, 5463.0, 5686.0, 5268.0, 5362.0, 5300.0, 5445.0, 5411.0, 5443.0, 5468.0, 5265.0, 5329.0, 5640.0, 5430.0, 5391.0, 5482.0, 5511.0, 5254.0, 5413.0, 5502.0, 5680.0, 5601.0, 5258.0, 5569.0, 5653.0, 5527.0, 5645.0, 5564.0, 5317.0, 5692.0, 5678.0, 5565.0, 5366.0, 5474.0, 5610.0, 5408.0, 5483.0, 5422.0, 5674.0, 5302.0, 5310.0, 5586.0, 5314.0, 5498.0, 5607.0, 5353.0, 5431.0, 5367.0, 5622.0, 5297.0, 5373.0, 5524.0, 5348.0, 5262.0, 5655.0, 5350.0, 5487.0, 5572.0, 5679.0, 5624.0, 5282.0, 5290.0, 5575.0, 5440.0, 5395.0, 5668.0, 5304.0, 5313.0, 5275.0, 5663.0, 5493.0, 5512.0, 5521.0, 5417.0, 5709.0, 5618.0, 5620.0, 5406.0, 5394.0, 5723.0, 5307.0, 5306.0, 5480.0, 5354.0, 5513.0, 5273.0, 5585.0, 5598.0, 5475.0, 5526.0, 5319.0, 5647.0, 5510.0, 5473.0, 5426.0, 5436.0, 5716.0, 5330.0
3	5320	9	1	333	1	5254.0, 5624.0, 5382.0, 5690.0, 5447.0, 5574.0, 5605.0, 5384.0, 5492.0, 5471.0, 5446.0, 5348.0, 5331.0, 5392.0, 5301.0, 5305.0, 5509.0, 5255.0, 5701.0, 5591.0, 5473.0, 5527.0, 5629.0, 5432.0, 5614.0, 5720.0, 5416.0, 5656.0, 5506.0, 5312.0, 5342.0, 5552.0, 5633.0, 5323.0, 5259.0, 5456.0, 5685.0, 5723.0, 5524.0, 5400.0, 5402.0, 5291.0, 5281.0, 5411.0, 5510.0, 5433.0, 5368.0, 5702.0, 5319.0, 5491.0, 5286.0, 5445.0, 5603.0, 5705.0, 5399.0, 5475.0, 5311.0, 5429.0, 5487.0, 5289.0, 5714.0, 5522.0, 5455.0, 5589.0, 5698.0, 5376.0, 5586.0, 5406.0, 5409.0, 5463.0,

						5357.0, 5528.0, 5462.0, 5493.0, 5644.0, 5531.0, 5391.0, 5425.0, 5569.0, 5503.0, 5700.0, 5518.0, 5464.0, 5285.0, 5430.0, 5273.0, 5365.0, 5451.0, 5695.0, 5266.0, 5405.0, 5609.0, 5706.0, 5567.0, 5448.0, 5398.0, 5564.0, 5458.0, 5438.0, 5282.0
4	5320	9	1	333	1	5489.0, 5307.0, 5330.0, 5713.0, 5583.0, 5693.0, 5389.0, 5253.0, 5661.0, 5660.0, 5298.0, 5439.0, 5699.0, 5372.0, 5644.0, 5499.0, 5332.0, 5408.0, 5295.0, 5575.0, 5267.0, 5701.0, 5493.0, 5482.0, 5560.0, 5288.0, 5692.0, 5349.0, 5678.0, 5423.0, 5475.0, 5338.0, 5535.0, 5561.0, 5695.0, 5356.0, 5437.0, 5512.0, 5454.0, 5428.0, 5646.0, 5544.0, 5665.0, 5656.0, 5350.0, 5403.0, 5416.0, 5568.0, 5488.0, 5596.0, 5507.0, 5632.0, 5505.0, 5540.0, 5361.0, 5556.0, 5538.0, 5370.0, 5358.0, 5369.0, 5551.0, 5320.0, 5406.0, 5641.0, 5339.0, 5311.0, 5463.0, 5400.0, 5714.0, 5289.0, 5421.0, 5433.0, 5555.0, 5343.0, 5614.0, 5516.0, 5410.0, 5326.0, 5645.0, 5305.0, 5497.0, 5616.0, 5386.0, 5715.0, 5407.0, 5309.0, 5565.0, 5452.0, 5310.0, 5390.0, 5500.0, 5284.0, 5368.0, 5344.0, 5362.0, 5586.0, 5634.0, 5643.0, 5624.0, 5430.0
5	5320	9	1	333	1	5476.0, 5534.0, 5425.0, 5268.0, 5444.0, 5407.0, 5710.0, 5678.0, 5719.0, 5364.0, 5668.0, 5306.0, 5283.0, 5252.0, 5466.0, 5440.0, 5626.0, 5522.0, 5504.0, 5692.0, 5616.0, 5296.0, 5400.0, 5612.0, 5394.0, 5529.0, 5558.0, 5455.0, 5465.0, 5601.0, 5634.0, 5585.0, 5620.0, 5501.0, 5581.0, 5272.0, 5653.0, 5602.0, 5370.0, 5350.0, 5587.0, 5491.0, 5662.0, 5483.0, 5474.0, 5255.0, 5645.0, 5644.0, 5285.0, 5390.0, 5590.0, 5512.0, 5701.0, 5334.0, 5447.0, 5640.0, 5369.0, 5263.0, 5319.0, 5325.0, 5586.0, 5594.0, 5565.0, 5457.0, 5258.0, 5509.0, 5550.0, 5323.0, 5708.0, 5423.0, 5699.0, 5284.0, 5547.0, 5525.0, 5624.0, 5696.0, 5431.0, 5441.0, 5712.0, 5381.0, 5266.0, 5411.0, 5343.0, 5317.0, 5420.0, 5382.0, 5346.0, 5482.0, 5314.0, 5396.0, 5449.0, 5410.0, 5617.0, 5574.0, 5291.0, 5543.0, 5304.0, 5322.0, 5355.0, 5580.0
6	5320	9	1	333	1	5394.0, 5714.0, 5610.0, 5715.0, 5634.0, 5683.0, 5594.0, 5314.0, 5512.0, 5626.0, 5483.0, 5535.0, 5353.0, 5657.0, 5705.0, 5523.0, 5479.0, 5690.0, 5371.0, 5370.0, 5284.0, 5405.0, 5597.0, 5557.0, 5658.0, 5637.0, 5277.0, 5432.0, 5687.0, 5428.0, 5696.0, 5355.0, 5357.0, 5552.0, 5439.0, 5455.0, 5340.0, 5513.0, 5332.0, 5422.0, 5697.0, 5311.0, 5436.0, 5489.0, 5524.0, 5441.0, 5400.0, 5623.0, 5586.0, 5501.0, 5250.0, 5676.0, 5542.0, 5308.0, 5653.0, 5694.0, 5418.0, 5423.0, 5317.0, 5625.0, 5580.0, 5295.0, 5328.0, 5701.0, 5341.0,

						5566.0, 5713.0, 5290.0, 5633.0, 5274.0, 5561.0, 5415.0, 5399.0, 5384.0, 5337.0, 5601.0, 5312.0, 5536.0, 5485.0, 5433.0, 5251.0, 5292.0, 5280.0, 5324.0, 5661.0, 5466.0, 5306.0, 5298.0, 5302.0, 5397.0, 5368.0, 5412.0, 5291.0, 5482.0, 5703.0, 5438.0, 5595.0, 5255.0, 5606.0, 5440.0
7	5320	9	1	333	1	5546.0, 5706.0, 5543.0, 5701.0, 5369.0, 5600.0, 5417.0, 5553.0, 5638.0, 5396.0, 5634.0, 5576.0, 5264.0, 5482.0, 5320.0, 5537.0, 5698.0, 5375.0, 5582.0, 5475.0, 5671.0, 5472.0, 5356.0, 5621.0, 5349.0, 5506.0, 5552.0, 5718.0, 5256.0, 5535.0, 5504.0, 5368.0, 5277.0, 5262.0, 5382.0, 5431.0, 5386.0, 5561.0, 5279.0, 5539.0, 5524.0, 5668.0, 5512.0, 5372.0, 5376.0, 5714.0, 5665.0, 5305.0, 5327.0, 5484.0, 5336.0, 5686.0, 5615.0, 5408.0, 5457.0, 5635.0, 5695.0, 5433.0, 5260.0, 5255.0, 5307.0, 5490.0, 5474.0, 5527.0, 5652.0, 5589.0, 5434.0, 5353.0, 5373.0, 5468.0, 5554.0, 5438.0, 5388.0, 5606.0, 5529.0, 5485.0, 5491.0, 5522.0, 5630.0, 5548.0, 5663.0, 5271.0, 5420.0, 5325.0, 5559.0, 5261.0, 5304.0, 5608.0, 5378.0, 5421.0, 5592.0, 5540.0, 5495.0, 5333.0, 5400.0, 5601.0, 5275.0, 5478.0, 5258.0, 5294.0
8	5320	9	1	333	1	5271.0, 5500.0, 5666.0, 5439.0, 5507.0, 5705.0, 5642.0, 5476.0, 5347.0, 5628.0, 5410.0, 5635.0, 5664.0, 5402.0, 5512.0, 5541.0, 5422.0, 5280.0, 5311.0, 5330.0, 5580.0, 5359.0, 5425.0, 5508.0, 5466.0, 5623.0, 5473.0, 5468.0, 5584.0, 5453.0, 5564.0, 5301.0, 5470.0, 5493.0, 5549.0, 5262.0, 5561.0, 5371.0, 5318.0, 5313.0, 5396.0, 5414.0, 5294.0, 5376.0, 5321.0, 5514.0, 5254.0, 5372.0, 5596.0, 5349.0, 5503.0, 5583.0, 5265.0, 5640.0, 5292.0, 5426.0, 5700.0, 5442.0, 5462.0, 5276.0, 5719.0, 5255.0, 5716.0, 5394.0, 5332.0, 5688.0, 5558.0, 5386.0, 5362.0, 5299.0, 5511.0, 5532.0, 5389.0, 5354.0, 5523.0, 5581.0, 5636.0, 5291.0, 5272.0, 5336.0, 5648.0, 5646.0, 5322.0, 5540.0, 5681.0, 5472.0, 5315.0, 5621.0, 5259.0, 5698.0, 5633.0, 5559.0, 5355.0, 5685.0, 5348.0, 5616.0, 5364.0, 5407.0, 5682.0, 5397.0
9	5320	9	1	333	1	5278.0, 5381.0, 5436.0, 5683.0, 5347.0, 5413.0, 5699.0, 5573.0, 5630.0, 5393.0, 5505.0, 5295.0, 5538.0, 5635.0, 5566.0, 5268.0, 5611.0, 5446.0, 5634.0, 5639.0, 5539.0, 5305.0, 5606.0, 5355.0, 5281.0, 5638.0, 5271.0, 5554.0, 5253.0, 5532.0, 5481.0, 5400.0, 5383.0, 5329.0, 5343.0, 5407.0, 5473.0, 5297.0, 5363.0, 5552.0, 5667.0, 5519.0, 5529.0, 5492.0, 5313.0, 5379.0, 5364.0, 5648.0, 5685.0, 5541.0, 5646.0, 5689.0, 5459.0, 5675.0, 5330.0, 5375.0, 5437.0, 5356.0, 5272.0, 5269.0,

						5674.0, 5475.0, 5322.0, 5299.0, 5286.0, 5672.0, 5671.0, 5650.0, 5498.0, 5495.0, 5605.0, 5603.0, 5433.0, 5534.0, 5645.0, 5348.0, 5344.0, 5358.0, 5504.0, 5637.0, 5439.0, 5390.0, 5484.0, 5546.0, 5434.0, 5259.0, 5406.0, 5325.0, 5419.0, 5417.0, 5665.0, 5719.0, 5382.0, 5396.0, 5285.0, 5677.0, 5584.0, 5430.0, 5303.0, 5590.0
10	5320	9	1	333	1	5484.0, 5276.0, 5323.0, 5635.0, 5253.0, 5396.0, 5332.0, 5363.0, 5552.0, 5422.0, 5250.0, 5534.0, 5459.0, 5510.0, 5562.0, 5650.0, 5262.0, 5602.0, 5524.0, 5689.0, 5712.0, 5502.0, 5683.0, 5555.0, 5287.0, 5610.0, 5406.0, 5535.0, 5437.0, 5613.0, 5481.0, 5319.0, 5556.0, 5369.0, 5303.0, 5612.0, 5347.0, 5329.0, 5537.0, 5511.0, 5440.0, 5456.0, 5460.0, 5489.0, 5465.0, 5304.0, 5564.0, 5595.0, 5423.0, 5345.0, 5720.0, 5289.0, 5545.0, 5386.0, 5451.0, 5496.0, 5560.0, 5716.0, 5321.0, 5326.0, 5282.0, 5632.0, 5659.0, 5352.0, 5641.0, 5640.0, 5697.0, 5702.0, 5603.0, 5711.0, 5281.0, 5570.0, 5705.0, 5429.0, 5436.0, 5676.0, 5538.0, 5483.0, 5661.0, 5431.0, 5291.0, 5679.0, 5334.0, 5625.0, 5454.0, 5445.0, 5591.0, 5601.0, 5349.0, 5507.0, 5263.0, 5390.0, 5298.0, 5333.0, 5671.0, 5310.0, 5410.0, 5286.0, 5494.0, 5338.0
11	5320	9	1	333	1	5261.0, 5393.0, 5457.0, 5281.0, 5447.0, 5662.0, 5392.0, 5486.0, 5408.0, 5364.0, 5477.0, 5357.0, 5545.0, 5617.0, 5680.0, 5704.0, 5478.0, 5257.0, 5450.0, 5375.0, 5546.0, 5553.0, 5556.0, 5551.0, 5510.0, 5635.0, 5526.0, 5265.0, 5511.0, 5300.0, 5484.0, 5409.0, 5500.0, 5496.0, 5633.0, 5360.0, 5286.0, 5423.0, 5698.0, 5581.0, 5530.0, 5264.0, 5720.0, 5336.0, 5618.0, 5658.0, 5435.0, 5591.0, 5723.0, 5505.0, 5305.0, 5513.0, 5516.0, 5344.0, 5490.0, 5354.0, 5575.0, 5416.0, 5395.0, 5485.0, 5346.0, 5331.0, 5538.0, 5693.0, 5539.0, 5343.0, 5452.0, 5721.0, 5627.0, 5437.0, 5266.0, 5271.0, 5499.0, 5502.0, 5629.0, 5569.0, 5328.0, 5604.0, 5380.0, 5497.0, 5402.0, 5296.0, 5383.0, 5540.0, 5355.0, 5644.0, 5631.0, 5259.0, 5426.0, 5306.0, 5567.0, 5471.0, 5675.0, 5607.0, 5399.0, 5310.0, 5590.0, 5436.0, 5283.0, 5464.0
12	5320	9	1	333	1	5268.0, 5396.0, 5507.0, 5282.0, 5364.0, 5498.0, 5509.0, 5570.0, 5649.0, 5428.0, 5539.0, 5522.0, 5468.0, 5659.0, 5520.0, 5305.0, 5478.0, 5413.0, 5658.0, 5393.0, 5652.0, 5630.0, 5266.0, 5495.0, 5257.0, 5253.0, 5397.0, 5415.0, 5535.0, 5707.0, 5538.0, 5576.0, 5691.0, 5334.0, 5703.0, 5328.0, 5294.0, 5626.0, 5712.0, 5710.0, 5482.0, 5692.0, 5373.0, 5622.0, 5475.0, 5684.0, 5461.0, 5514.0, 5542.0, 5648.0, 5476.0, 5634.0, 5259.0, 5297.0, 5548.0,

						5295.0, 5654.0, 5312.0, 5333.0, 5424.0, 5272.0, 5387.0, 5581.0, 5673.0, 5290.0, 5532.0, 5717.0, 5698.0, 5256.0, 5316.0, 5577.0, 5676.0, 5383.0, 5588.0, 5517.0, 5685.0, 5573.0, 5421.0, 5368.0, 5481.0, 5252.0, 5623.0, 5391.0, 5583.0, 5433.0, 5653.0, 5528.0, 5715.0, 5438.0, 5607.0, 5270.0, 5637.0, 5628.0, 5525.0, 5412.0, 5285.0, 5619.0, 5578.0, 5431.0, 5695.0
13	5320	9	1	333	1	5558.0, 5425.0, 5501.0, 5460.0, 5465.0, 5592.0, 5391.0, 5424.0, 5459.0, 5325.0, 5628.0, 5467.0, 5511.0, 5613.0, 5480.0, 5351.0, 5723.0, 5590.0, 5327.0, 5390.0, 5705.0, 5472.0, 5545.0, 5317.0, 5462.0, 5694.0, 5429.0, 5679.0, 5598.0, 5296.0, 5433.0, 5492.0, 5422.0, 5559.0, 5560.0, 5683.0, 5582.0, 5396.0, 5394.0, 5328.0, 5602.0, 5709.0, 5673.0, 5281.0, 5412.0, 5544.0, 5395.0, 5516.0, 5375.0, 5368.0, 5570.0, 5410.0, 5568.0, 5452.0, 5529.0, 5557.0, 5512.0, 5450.0, 5520.0, 5440.0, 5280.0, 5563.0, 5594.0, 5699.0, 5696.0, 5401.0, 5665.0, 5283.0, 5650.0, 5381.0, 5312.0, 5329.0, 5599.0, 5506.0, 5722.0, 5342.0, 5300.0, 5668.0, 5343.0, 5710.0, 5630.0, 5454.0, 5292.0, 5524.0, 5589.0, 5531.0, 5314.0, 5553.0, 5253.0, 5349.0, 5302.0, 5260.0, 5326.0, 5285.0, 5629.0, 5649.0, 5392.0, 5398.0, 5293.0, 5635.0
14	5320	9	1	333	1	5314.0, 5620.0, 5254.0, 5637.0, 5413.0, 5524.0, 5549.0, 5488.0, 5611.0, 5547.0, 5621.0, 5298.0, 5471.0, 5572.0, 5712.0, 5682.0, 5565.0, 5651.0, 5493.0, 5329.0, 5628.0, 5545.0, 5523.0, 5263.0, 5510.0, 5414.0, 5602.0, 5401.0, 5697.0, 5670.0, 5706.0, 5552.0, 5505.0, 5416.0, 5632.0, 5364.0, 5636.0, 5507.0, 5281.0, 5317.0, 5691.0, 5341.0, 5566.0, 5679.0, 5509.0, 5485.0, 5357.0, 5415.0, 5320.0, 5666.0, 5484.0, 5464.0, 5327.0, 5386.0, 5655.0, 5647.0, 5482.0, 5445.0, 5383.0, 5690.0, 5406.0, 5250.0, 5397.0, 5370.0, 5396.0, 5261.0, 5665.0, 5291.0, 5352.0, 5629.0, 5711.0, 5469.0, 5512.0, 5604.0, 5586.0, 5600.0, 5400.0, 5306.0, 5332.0, 5470.0, 5315.0, 5519.0, 5569.0, 5295.0, 5606.0, 5382.0, 5598.0, 5450.0, 5302.0, 5425.0, 5685.0, 5544.0, 5506.0, 5437.0, 5423.0, 5428.0, 5454.0, 5596.0, 5379.0, 5686.0
15	5320	9	1	333	1	5291.0, 5564.0, 5552.0, 5554.0, 5489.0, 5509.0, 5682.0, 5464.0, 5598.0, 5385.0, 5674.0, 5379.0, 5671.0, 5717.0, 5678.0, 5595.0, 5707.0, 5646.0, 5322.0, 5541.0, 5453.0, 5549.0, 5272.0, 5716.0, 5403.0, 5294.0, 5350.0, 5495.0, 5551.0, 5658.0, 5375.0, 5523.0, 5283.0, 5721.0, 5423.0, 5643.0, 5684.0, 5478.0, 5631.0, 5641.0, 5279.0, 5284.0, 5259.0, 5397.0, 5507.0, 5365.0, 5362.0, 5378.0, 5677.0, 5405.0,

						5382.0, 5316.0, 5413.0, 5515.0, 5591.0, 5539.0, 5331.0, 5468.0, 5621.0, 5533.0, 5606.0, 5398.0, 5525.0, 5376.0, 5577.0, 5306.0, 5588.0, 5524.0, 5636.0, 5715.0, 5655.0, 5415.0, 5537.0, 5669.0, 5708.0, 5576.0, 5400.0, 5394.0, 5377.0, 5704.0, 5418.0, 5637.0, 5325.0, 5381.0, 5288.0, 5460.0, 5480.0, 5610.0, 5339.0, 5718.0, 5281.0, 5451.0, 5317.0, 5662.0, 5527.0, 5257.0, 5555.0, 5692.0, 5619.0, 5670.0
16	5320	9	1	333	1	5415.0, 5604.0, 5430.0, 5281.0, 5268.0, 5477.0, 5517.0, 5391.0, 5357.0, 5276.0, 5464.0, 5381.0, 5526.0, 5330.0, 5363.0, 5694.0, 5360.0, 5393.0, 5340.0, 5405.0, 5572.0, 5629.0, 5342.0, 5372.0, 5329.0, 5307.0, 5605.0, 5615.0, 5608.0, 5616.0, 5566.0, 5284.0, 5366.0, 5312.0, 5282.0, 5495.0, 5334.0, 5666.0, 5536.0, 5702.0, 5320.0, 5369.0, 5723.0, 5667.0, 5692.0, 5443.0, 5290.0, 5339.0, 5613.0, 5609.0, 5294.0, 5662.0, 5450.0, 5436.0, 5440.0, 5565.0, 5521.0, 5306.0, 5704.0, 5701.0, 5400.0, 5429.0, 5504.0, 5309.0, 5648.0, 5295.0, 5625.0, 5346.0, 5688.0, 5679.0, 5473.0, 5260.0, 5587.0, 5525.0, 5563.0, 5382.0, 5326.0, 5428.0, 5715.0, 5718.0, 5424.0, 5263.0, 5252.0, 5279.0, 5472.0, 5547.0, 5682.0, 5585.0, 5522.0, 5578.0, 5316.0, 5448.0, 5717.0, 5441.0, 5594.0, 5352.0, 5658.0, 5580.0, 5386.0, 5483.0
17	5320	9	1	333	1	5538.0, 5426.0, 5368.0, 5406.0, 5679.0, 5483.0, 5539.0, 5417.0, 5253.0, 5475.0, 5452.0, 5353.0, 5290.0, 5307.0, 5682.0, 5410.0, 5276.0, 5293.0, 5559.0, 5479.0, 5502.0, 5655.0, 5458.0, 5675.0, 5484.0, 5512.0, 5681.0, 5536.0, 5713.0, 5599.0, 5334.0, 5488.0, 5459.0, 5464.0, 5405.0, 5505.0, 5326.0, 5345.0, 5347.0, 5577.0, 5633.0, 5438.0, 5324.0, 5648.0, 5322.0, 5551.0, 5342.0, 5430.0, 5697.0, 5341.0, 5435.0, 5283.0, 5514.0, 5352.0, 5277.0, 5455.0, 5328.0, 5457.0, 5364.0, 5281.0, 5658.0, 5562.0, 5616.0, 5472.0, 5706.0, 5518.0, 5252.0, 5425.0, 5600.0, 5596.0, 5558.0, 5331.0, 5319.0, 5588.0, 5623.0, 5602.0, 5631.0, 5391.0, 5294.0, 5542.0, 5556.0, 5621.0, 5723.0, 5447.0, 5302.0, 5680.0, 5544.0, 5357.0, 5465.0, 5699.0, 5647.0, 5433.0, 5395.0, 5273.0, 5338.0, 5365.0, 5366.0, 5416.0, 5566.0, 5565.0
18	5320	9	1	333	1	5448.0, 5680.0, 5688.0, 5677.0, 5486.0, 5516.0, 5262.0, 5701.0, 5398.0, 5628.0, 5703.0, 5380.0, 5342.0, 5538.0, 5490.0, 5707.0, 5702.0, 5624.0, 5635.0, 5465.0, 5563.0, 5437.0, 5383.0, 5472.0, 5334.0, 5662.0, 5480.0, 5359.0, 5613.0, 5664.0, 5446.0, 5392.0, 5539.0, 5304.0, 5659.0, 5374.0, 5484.0, 5679.0, 5709.0, 5488.0, 5438.0, 5657.0, 5263.0, 5650.0, 5623.0,

						5685.0, 5464.0, 5452.0, 5405.0, 5410.0, 5520.0, 5521.0, 5348.0, 5408.0, 5292.0, 5547.0, 5611.0, 5250.0, 5365.0, 5356.0, 5331.0, 5421.0, 5296.0, 5366.0, 5427.0, 5561.0, 5647.0, 5601.0, 5497.0, 5625.0, 5639.0, 5713.0, 5655.0, 5268.0, 5602.0, 5633.0, 5358.0, 5474.0, 5581.0, 5694.0, 5463.0, 5322.0, 5290.0, 5388.0, 5678.0, 5324.0, 5590.0, 5475.0, 5372.0, 5340.0, 5653.0, 5699.0, 5267.0, 5441.0, 5415.0, 5589.0, 5432.0, 5303.0, 5272.0, 5478.0
19	5320	9	1	333	1	5417.0, 5471.0, 5349.0, 5526.0, 5562.0, 5626.0, 5278.0, 5710.0, 5344.0, 5617.0, 5621.0, 5362.0, 5662.0, 5570.0, 5370.0, 5499.0, 5654.0, 5566.0, 5663.0, 5476.0, 5274.0, 5454.0, 5650.0, 5449.0, 5623.0, 5341.0, 5427.0, 5482.0, 5674.0, 5346.0, 5503.0, 5524.0, 5631.0, 5268.0, 5461.0, 5695.0, 5392.0, 5459.0, 5629.0, 5512.0, 5487.0, 5649.0, 5381.0, 5451.0, 5669.0, 5656.0, 5398.0, 5324.0, 5389.0, 5477.0, 5541.0, 5546.0, 5578.0, 5672.0, 5574.0, 5661.0, 5700.0, 5614.0, 5715.0, 5711.0, 5681.0, 5505.0, 5684.0, 5393.0, 5378.0, 5531.0, 5321.0, 5554.0, 5364.0, 5489.0, 5374.0, 5285.0, 5294.0, 5357.0, 5290.0, 5421.0, 5320.0, 5657.0, 5640.0, 5648.0, 5465.0, 5673.0, 5551.0, 5436.0, 5422.0, 5689.0, 5457.0, 5340.0, 5360.0, 5450.0, 5376.0, 5379.0, 5412.0, 5535.0, 5479.0, 5707.0, 5407.0, 5447.0, 5326.0, 5445.0
20	5320	9	1	333	1	5478.0, 5451.0, 5274.0, 5559.0, 5350.0, 5591.0, 5336.0, 5491.0, 5366.0, 5627.0, 5524.0, 5606.0, 5556.0, 5679.0, 5713.0, 5469.0, 5440.0, 5358.0, 5458.0, 5375.0, 5289.0, 5255.0, 5513.0, 5601.0, 5382.0, 5590.0, 5272.0, 5360.0, 5597.0, 5721.0, 5266.0, 5332.0, 5613.0, 5609.0, 5407.0, 5321.0, 5633.0, 5371.0, 5498.0, 5585.0, 5493.0, 5386.0, 5511.0, 5487.0, 5454.0, 5310.0, 5425.0, 5282.0, 5632.0, 5333.0, 5367.0, 5503.0, 5698.0, 5290.0, 5251.0, 5532.0, 5479.0, 5538.0, 5654.0, 5447.0, 5665.0, 5411.0, 5655.0, 5343.0, 5291.0, 5385.0, 5614.0, 5399.0, 5647.0, 5712.0, 5461.0, 5497.0, 5361.0, 5391.0, 5686.0, 5353.0, 5338.0, 5492.0, 5415.0, 5637.0, 5442.0, 5405.0, 5619.0, 5316.0, 5397.0, 5570.0, 5663.0, 5623.0, 5486.0, 5717.0, 5337.0, 5468.0, 5428.0, 5535.0, 5565.0, 5703.0, 5307.0, 5312.0, 5443.0, 5421.0
21	5320	9	1	333	1	5627.0, 5313.0, 5723.0, 5648.0, 5469.0, 5540.0, 5553.0, 5268.0, 5251.0, 5386.0, 5329.0, 5688.0, 5459.0, 5383.0, 5584.0, 5332.0, 5566.0, 5616.0, 5617.0, 5263.0, 5489.0, 5398.0, 5679.0, 5707.0, 5296.0, 5289.0, 5290.0, 5425.0, 5337.0, 5265.0, 5569.0, 5371.0, 5309.0, 5505.0, 5285.0, 5721.0, 5426.0, 5256.0, 5433.0, 5496.0,

						5411.0, 5580.0, 5611.0, 5671.0, 5659.0, 5574.0, 5552.0, 5546.0, 5597.0, 5670.0, 5687.0, 5307.0, 5465.0, 5568.0, 5330.0, 5415.0, 5588.0, 5701.0, 5305.0, 5662.0, 5372.0, 5695.0, 5271.0, 5618.0, 5361.0, 5428.0, 5508.0, 5453.0, 5468.0, 5498.0, 5706.0, 5456.0, 5458.0, 5683.0, 5603.0, 5434.0, 5400.0, 5577.0, 5338.0, 5653.0, 5494.0, 5710.0, 5365.0, 5291.0, 5530.0, 5694.0, 5680.0, 5711.0, 5715.0, 5521.0, 5393.0, 5266.0, 5578.0, 5480.0, 5615.0, 5609.0, 5570.0, 5644.0, 5310.0, 5638.0
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