FCC PART 15.407
IC RSS-247, ISSUE 1, MAY 2015
DYNAMIC FREQUENCY SELECTION
TEST AND MEASUREMENT REPORT

For

Cisco Systems, Inc.

170 West Tasman Drive,

San Jose, CA 95134, USA

FCC ID: LDKIR829GW-LTE
IC: 2461B-IR829GWLTE

Report Type:	**Product Type:**
Original Report	Smart Grid Router

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Report Number:	R1506011-DFS/Cisco EDCS-1523159
Report Date:	2015-09-29
Reviewed By:	Bo Li RF Lead

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1506011-DFS Cisco EDCS-1523159	Initial	2015-09-29

1 General Description

1.1 Product Description for Equipment under Test (EUT)

This test and measurement report has been compiled on behalf of *Cisco Systems, Inc.* and their product, *FCC ID: LDKIR829GW-LTE; IC: 2461B-IR829GWLTE,* model number: *IR829GW-LTE*, which henceforth is referred to as the EUT (Equipment under Test.) The EUT is a Smart Grid Router.

1.2 Mechanical Description of EUT

The EUT measures approximately 1.73 (H) x 11(W) x 7.7(D) in. (43.9 x 279 x 196 mm) and 1.73 (H) x 11(W) x 10.55(D) in (43.9 x 279 x 268 mm) with IP54 cable guard and weighs approximately 2kg.

The data gathered are from a typical production sample provided by the manufacturer with serial number: R1506011-01, assigned by BACL.

1.3 Objective

This report is prepared on behalf of *Cisco Systems, Inc*. in accordance with FCC CFR47 §15.407 (h) & RSS 247 §6.3 and KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v01r02.

The objective is to determine compliance with FCC rules for DFS Detection Threshold, Channel Availability Check Time, Uniform Spreading U-NII Detection Bandwidth, Channel Closing Transmission Time, and Channel Move time in Master Mode.

1.4 Related Submittal(s)/Grant(s)

N/A

1.5 Test Methodology

FCC CFR 47 Part2, Part15.407 (h)

RSS 247 §6.3

KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v01r02.

COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION

1.6 Test Facility

Bay Area Compliance Laboratories Corp. (BACL) is:

1- An independent Commercial Test Laboratory accredited to **ISO 17025: 2005** by **A2LA**, in the fields of: Electromagnetic Compatibility & Telecommunications covering Emissions, Immunity, Radio, RF Exposure, Safety and Telecom. This includes NEBS (Network Equipment Building System), Wireless RF, Telecommunications Terminal Equipment (TTE); Network Equipment; Information Technology Equipment (ITE); Medical Electrical Equipment; Industrial, Commercial, and Medical Test Equipment; Professional Audio and Video Equipment; Electronic (Digital) Products; Industrial and Scientific Instruments; Cabled Distribution Systems and Energy Efficiency Lighting.

2- An ENERGY STAR Recognized Laboratory, for the LM80 Testing, a wide variety of Luminaires and Computers.

3- A NIST Designated Phase-I and Phase-II CAB including: ACMA (Australian Communication and Media Authority), BSMI (Bureau of Standards, Metrology and Inspection of Taiwan), IDA (Infocomm Development Authority of Singapore), IC (Industry Canada), Korea (Ministry of Communications Radio Research Laboratory), NCC (Formerly DGT; Directorate General of Telecommunication of Chinese Taipei) OFTA (Office of the Telecommunications Authority of Hong Kong), Vietnam, VCCI - Voluntary Control Council for Interference of Japan and a designated EU CAB (Conformity Assessment Body) (Notified Body) for the EMC and R&TTE Directives.

4 - A Product Certification Body accredited to **ISO Guide 65: 1996** by **A2LA** to certify:
1- Unlicensed, Licensed radio frequency devices and Telephone Terminal Equipment for the FCC. Scope A1, A2, A3, A4, B1, B2, B3, B4 & C.
2. Radio Standards Specifications (RSS) in the Category I Equipment Standards List and All Broadcasting Technical Standards (BETS) in Category I Equipment Standards List for Industry Canada.
3. Radio Communication Equipment for Singapore.
4. Radio Equipment Specifications, GMDSS Marine Radio Equipment Specifications, and Fixed Network Equipment Specifications for Hong Kong.
5. Japan MIC Telecommunication Business Law (A1, A2) and Radio Law (B1, B2 and B3).
6. Audio/Video, Battery Charging Systems, Computers, Displays, Enterprise Servers, Imaging Equipment, Set-Top Boxes, Telephony, Televisions, Ceiling Fans, CFLs (including GU24s), Decorative Light Strings, Integral LED Lamps, Luminaires, Residential Ventilating Fans.

The test site used by BACL Corp. to collect radiated and conducted emissions measurement data is located at its facility in Sunnyvale, California, USA.

The test site at BACL Corp. has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997, and Article 8 of the VCCI regulations on December 25, 1997. The test site also complies with the test methods and procedures set forth in CISPR 22:2008 §10.4 for measurements below 1 GHz and §10.6 for measurements above 1 GHz, as well as ANSI C63.4-2009, ANSI C63.4-2009, TIA/EIA-603 & CISPR 24: 2010.

The Federal Communications Commission and Voluntary Control Council for Interference have the reports on file and they are listed under FCC registration number: 90464 and VCCI Registration No.: A-0027. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL Corp. is an American Association for Laboratory Accreditation (A2LA) accredited laboratory (Lab Code 3297-02). The current scope of accreditations can be found at

http://www.a2la.org/scopepdf/3297-02.pdf?CFID=1132286&CFTOKEN=e42a3240dac3f6ba-6DE17DCB-1851-9E57-477422F667031258&jsessionid=8430d44f1f47cf2996124343c704b367816b

2 EUT Test Configuration

2.1 Justification

The EUT was configured for testing according to FCC CFR47 §15.407 (h) & RSS 247 §6.3, and KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v01r02.

2.2 EUT Exercise Software

The test software used was Putty, it was been used to access to IOS and perform commands to control the radio.

2.3 Equipment Modifications

N/A

2.4 Local Support Equipment

Manufacturer	Description	Model	Serial Number
DELL	Laptop	Latitude E6530	-

2.5 EUT Internal Configuration Details

Manufacturer	Description	Model
Cisco Systems	Main board	1298MR
Cisco Systems	PCB board	28-12083-01
Cisco Systems	PCB board	95.0948T00 REV.215
Qualcomm	Sierra Wireless AirPrime 4G chip	MC7350
Qualcomm	5G module	AR9590
Qualcomm	2.4G Module	QCA9550

2.6 Interface Ports and Cables

Cable Description	Length (m)	To	From
USB Cable	<4.0	Laptop	EUT
RJ 45 Cable	<1.0	Laptop	EUT

2.7 Power Supply List and Details

Manufacturer	Description	Model	Serial Number
Power Systems Technologies Limited	Power adapter	FA060LS1-01	PST1903F56A

3 Summary of Test Results

The following result table represents the list of measurements required under the FCC CFR47 §15.407 (h) & RSS 247 §6.3, and KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v01r02. This report is to update from KDB: 905462 D02 UNII DFS Compliance Procedures Old rules v01 to KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v01r02.

Items	Description of Test	Results
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

4 Applicable Standards

4.1 DFS Requirement

FCC CFR47 §15.407 (h) & RSS 247 §6.3, and KDB: 905462 D02 UNII DFS Compliance Procedures New Rules v01r02.

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: Interference Threshold for Master and Client 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 < 10dBm/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 UNII 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 (Microseconds)	PRI (Microseconds)	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 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	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.

Table 6: Long Pulse Radar Test Signal

Radar Type	Bursts	Chirp Width (MHz)	PRI (usec)	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

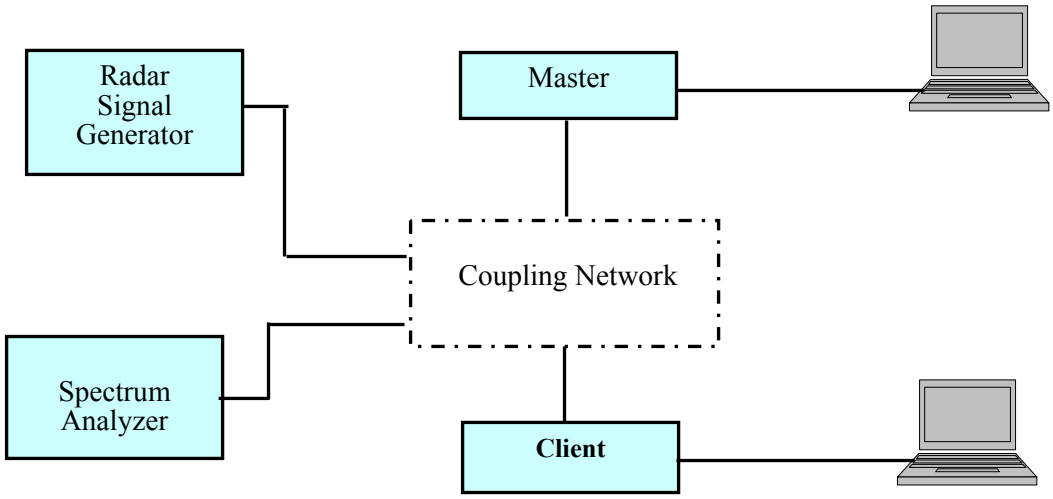
Table 7: Frequency Hopping Radar Test Signal

Radar Type	Pulse Width (usec)	PRI (usec)	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

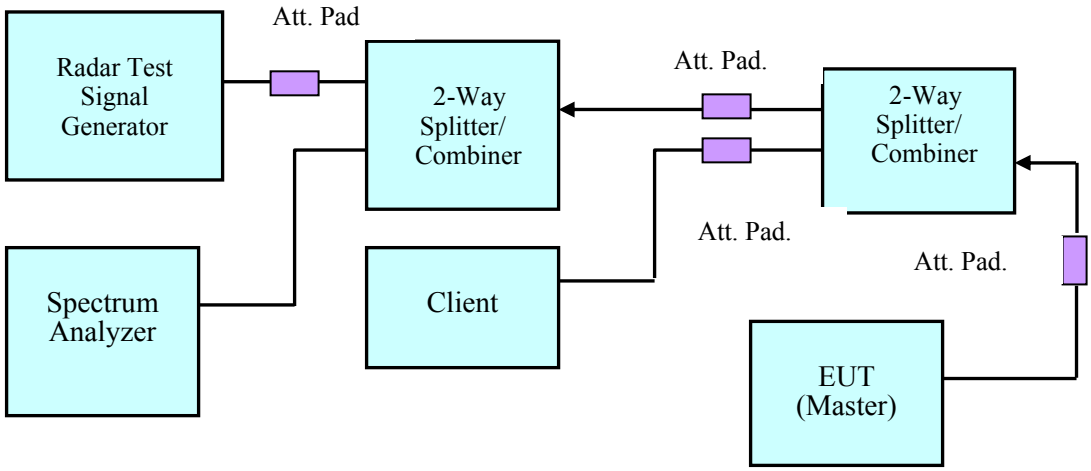
4.2 DFS Measurement System

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

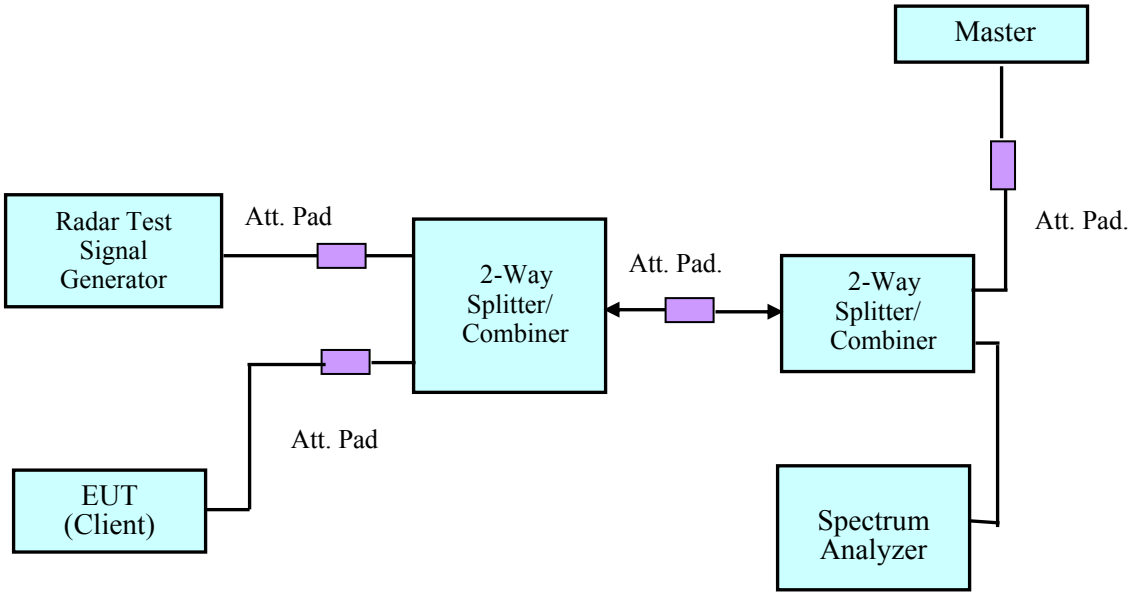
4.3 System Block Diagram



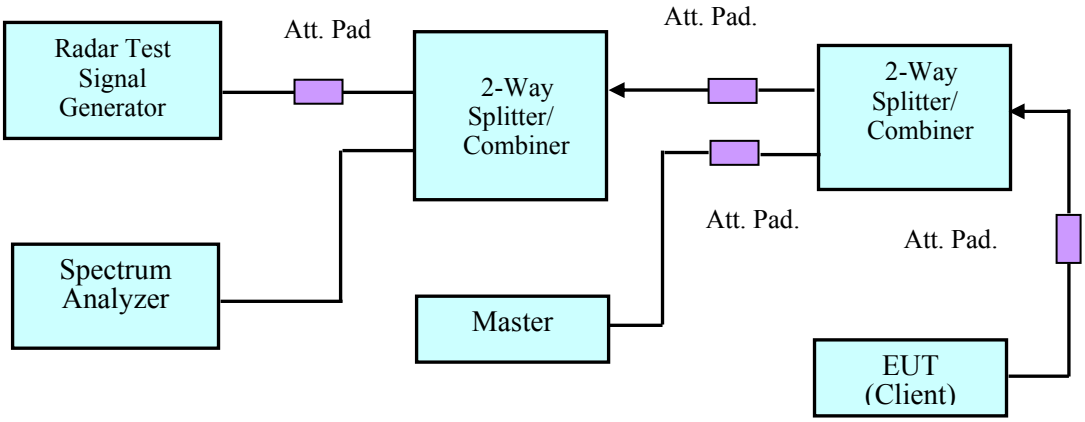
4.4 Conducted Method



Setup for Master with injection at the Master

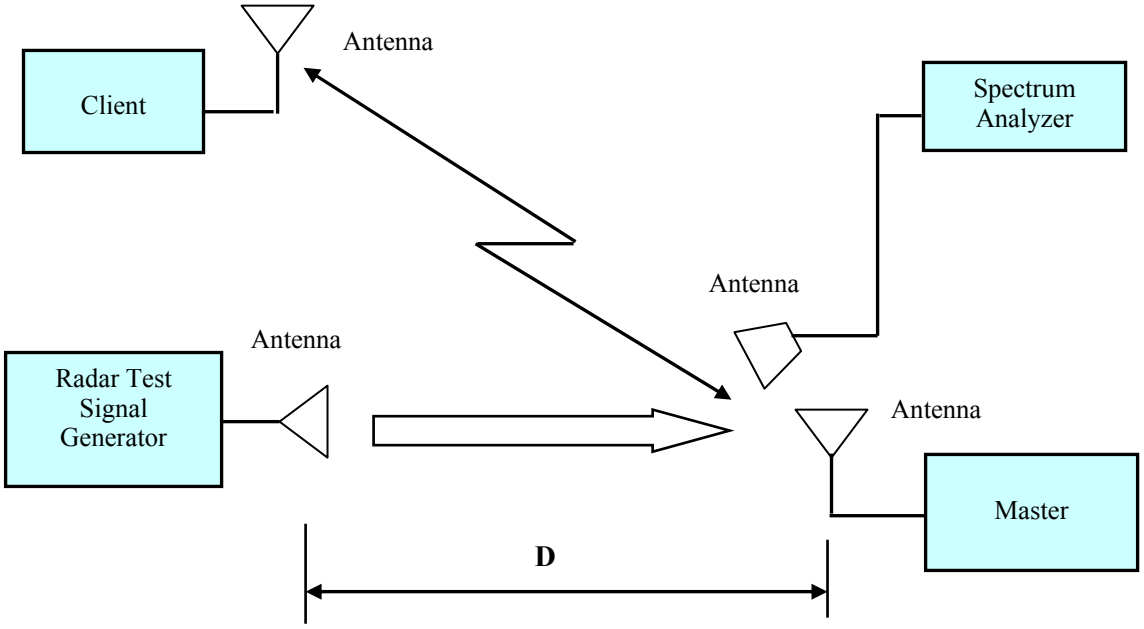


Setup for Client with injection at the Master



Setup for Client with injection at the Client

4.5 Radiated Method



4.6 Test Procedure

A spectrum analyzer is used as a monitor that verifies the EUT's status, which includes the Channel Closing Transmission Time and the Channel Move Time. The Spectrum analyzer is used to monitor the equipment under test (EUT) does not transmit on the same channel during the Non-Occupied Period after the radar detection. It is also used to monitor EUT transmissions during the Channel Availability Check Time.

5 Test Results

5.1 Description of EUT

The EUT operates in 5230-5350 MHz and 5470-5725 MHz range in Master Mode.

The rated output power of EUT is > 23 dBm (EIRP), Therefore the required interference threshold level is -64 dBm, the required radiated threshold at antenna port is -64 dBm.

The calibrated radiated DFS detection threshold level is set to -64 dBm.

WLAN traffic is generated by streaming the video file TestFile.mpg, this file is used by IP and Frame based systems for loading the test channel during the In-service compliance testing of the U-NII device. The file is streamed from the Access Point to the Client in full motion video mode using the media player with the V2.61 Codec package.

The EUT was tested with the 4dBi gain antenna.

5.2 Antenna Description

Antenna Type	Antenna Gain (dBi) @ 5 GHz
Omnidirectional	3
Dipole	3.5
Dual-band dipole	4
Omnidirectional TM02 Mode patch	4.5
Omnidirectional collinear array	6
Omnidirectional collinear array	7
Diversity patch	7
Two element patch array	14

Note: 1) For the Antenna directional gain greater than 6 dBi, the limit for output and power density will be reduced by certain amount.
2) The manufacturer will use three output power settings to control this unit, the table shows below.

Antenna Type	Antenna Gain (dBi)	Software Power Setting
Omnidirectional	3	4
Dipole	3.5	4
Dual-band dipole	4	4
Omnidirectional TM02 Mode patch	4.5	7
Omnidirectional collinear array	6	7
Omnidirectional collinear array	7	7
Diversity patch	7	7
Two element patch array	14	14

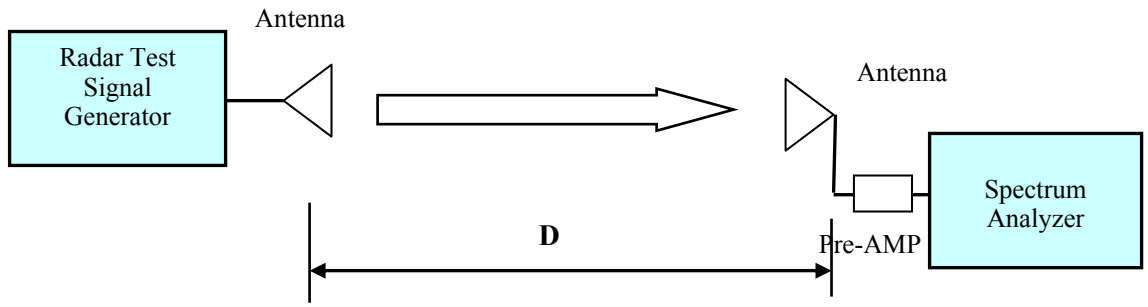
Note: None of the antenna gain is higher than the antenna gain power table, which means the actual conducted output power will be lower than the antenna gain power table which will implement into the unit. So for the testing, we only measured the power table will listed above.

5.3 Test Equipment List and Details

Manufacturer	Equipment Description	Model	S/N	Calibration Date
National Instruments	NI PXI-1042 8-Slot chassis	PXI-1042	V08X01EE1	N/A
National Instruments	Arbitrary Waveform Generator	PXI-5421	N/A	N/A
National Instruments	RF Upconverter	PXI-5610	N/A	N/A
ASCOR	Upconverter	AS-7206	N/A	N/A
Agilent	Spectrum Analyzer	E4440A	MY44303352	2014-10-16
A.R.A.	Antenna Horn	DRG-118/A	1132	2015-01-29
EMCO	Antenna Horn	3115	9511-4627	2014-10-17
Mini-Circuits	Splitter/Combiner	2FSC-2-10G	0349	N/A
Narda	Splitter/Combiner	4326B-2	03514	N/A
Midwest	Attenuator	290-30	N/A	N/A
Mini-Circuits	Attenuator	BW-S30W2	N/A	N/A

Statement of Traceability: BACL Corp. attests that all calibrations have been performed per the A2LA requirements, traceable to the NIST.

5.4 Radar Waveform Calibration



Radiated Calibration Setup Block Diagram

5.5 Test Environmental Conditions

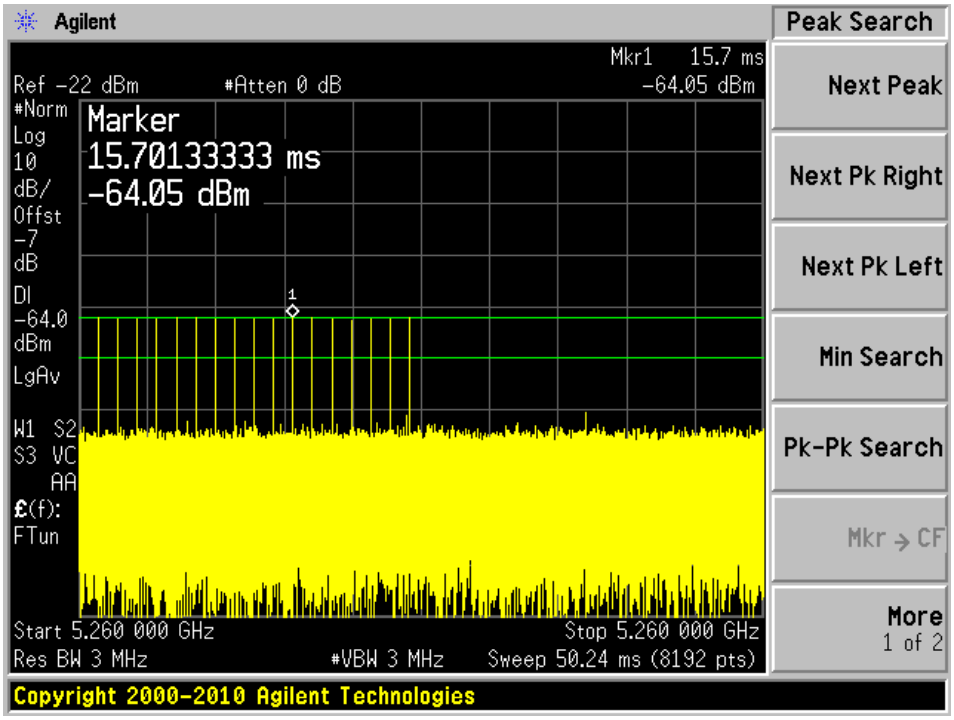
Temperature:	25° C
Relative Humidity:	36 %
ATM Pressure:	101.65 kPa

Testing performed by Jimmy Xiao on 2015-08-11 to 2015-08-13 at DFS testing site.

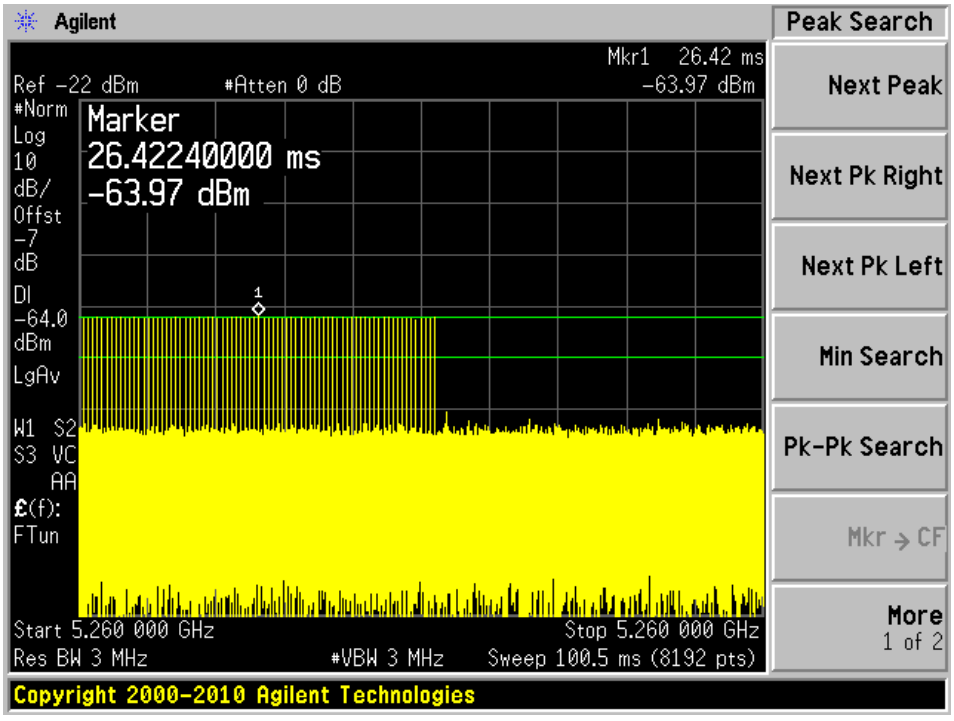
Plots of Radar Waveforms

5260 MHz

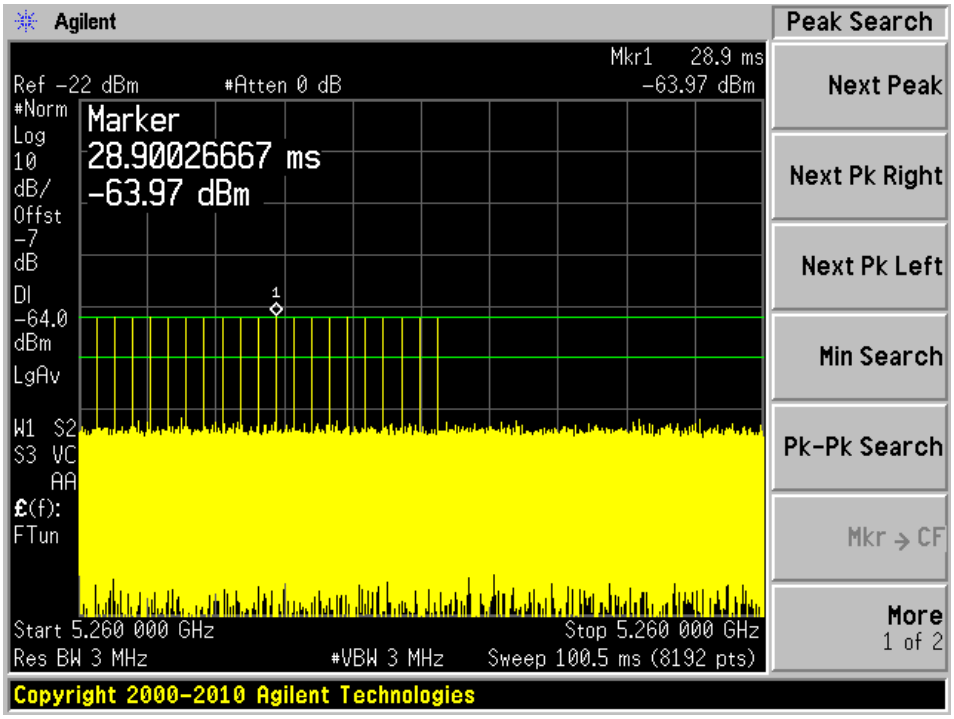
Radar Type 0



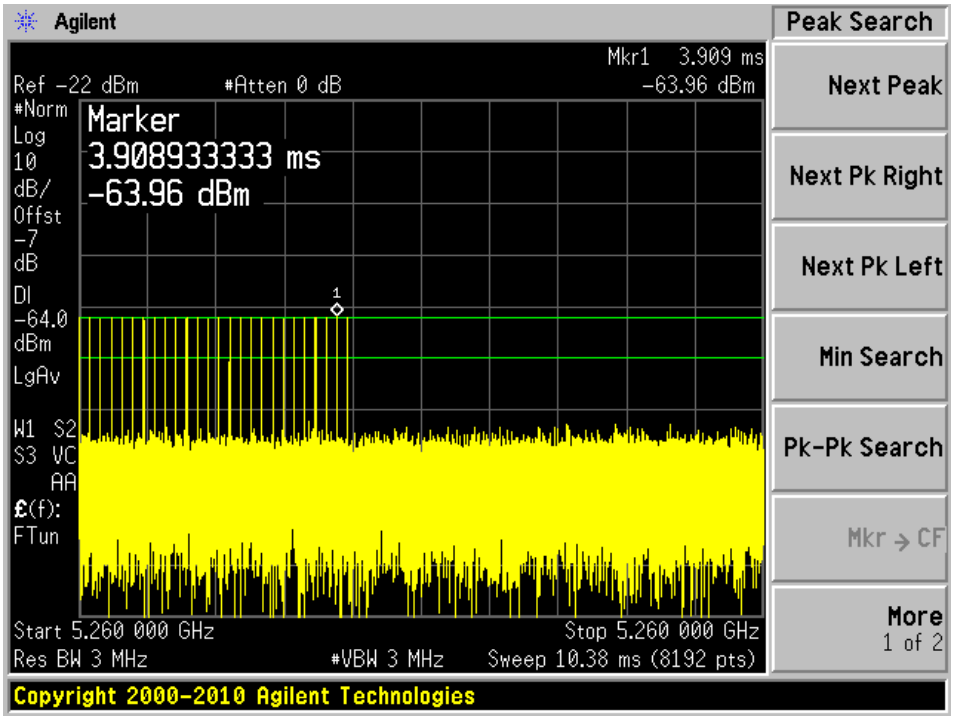
Radar Type 1A



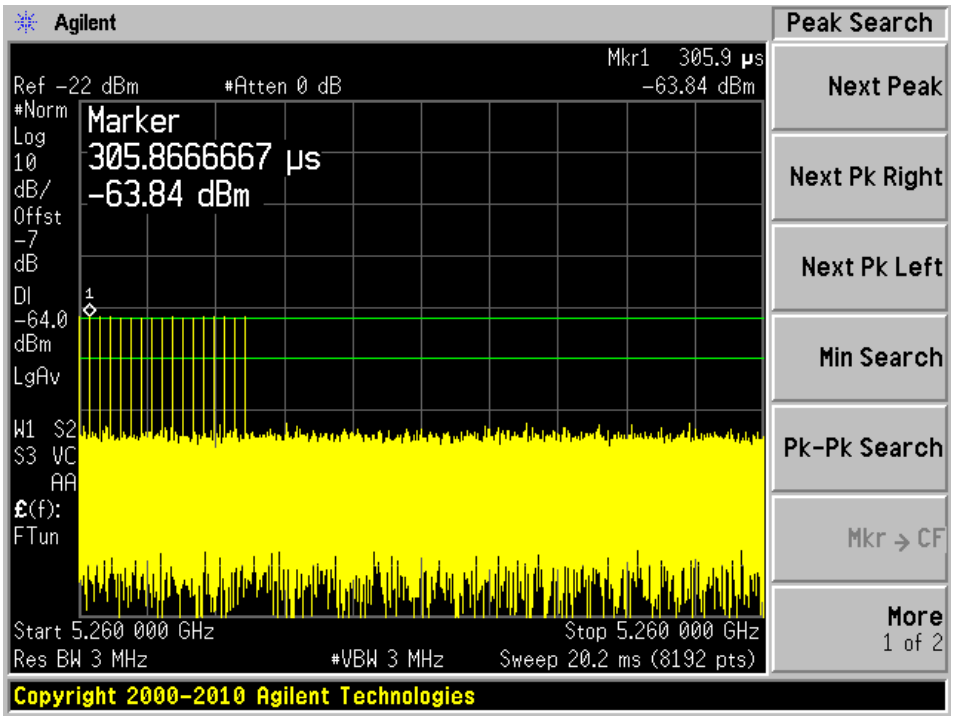
Radar Type 1B



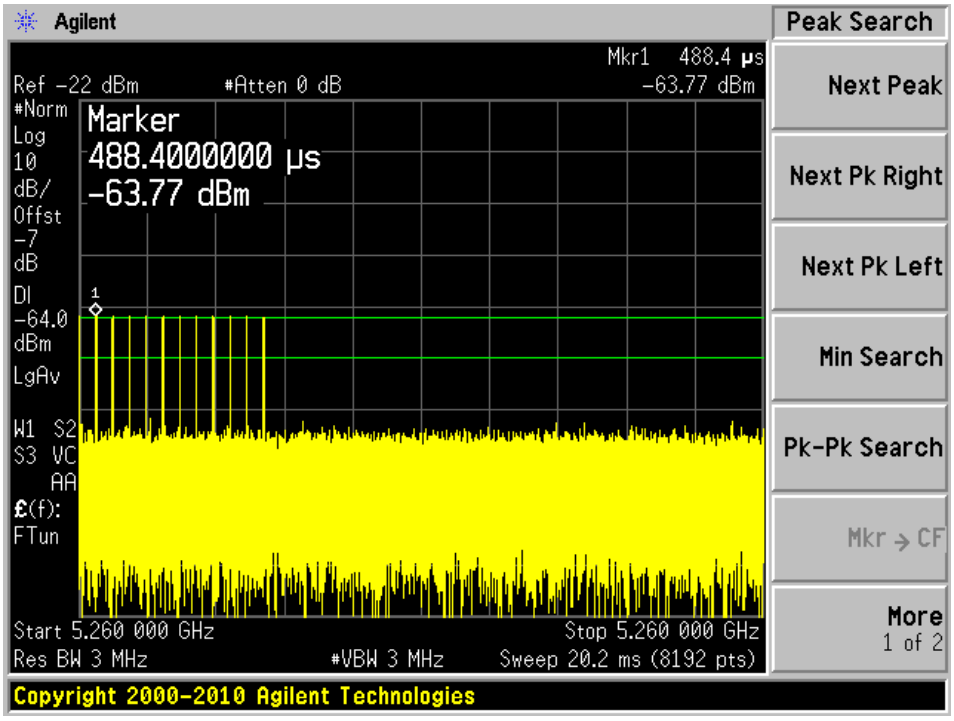
Radar Type 2



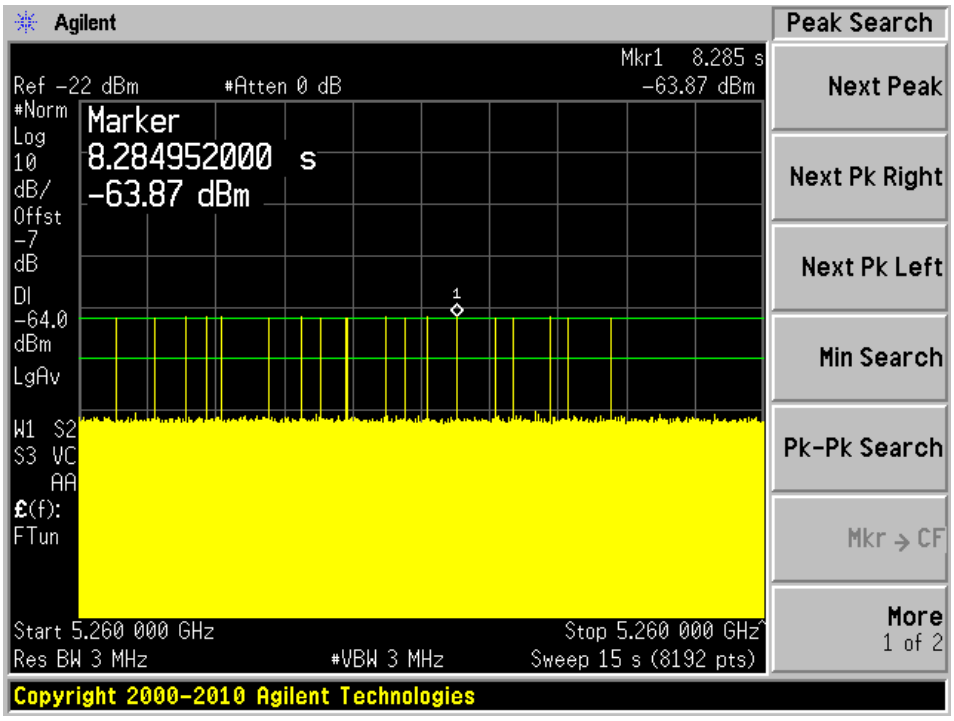
Radar Type 3



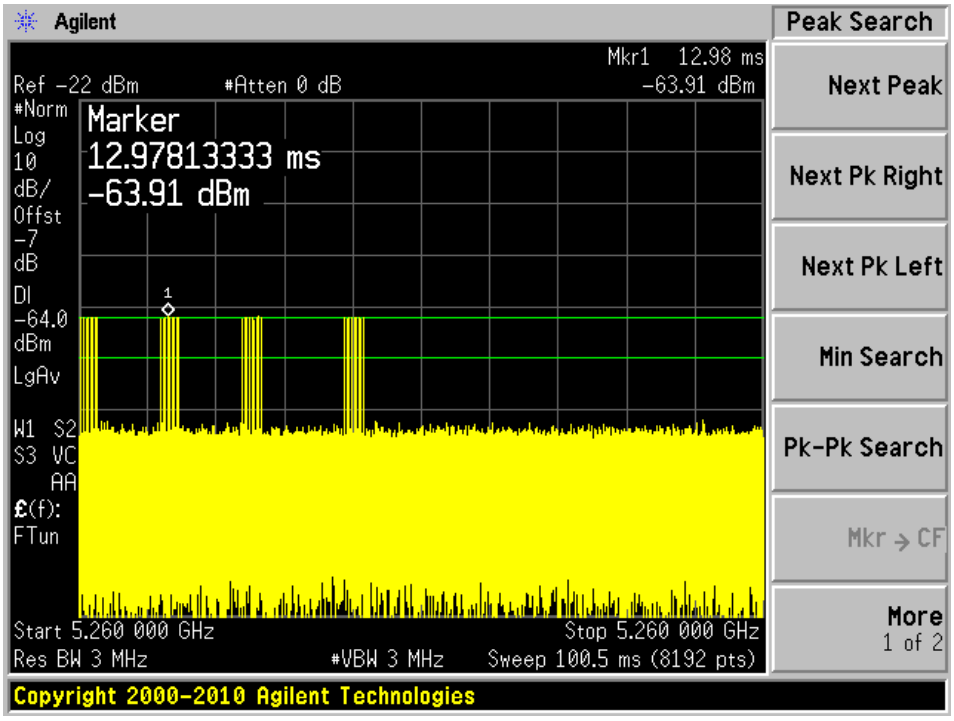
Radar Type 4



Radar Type 5

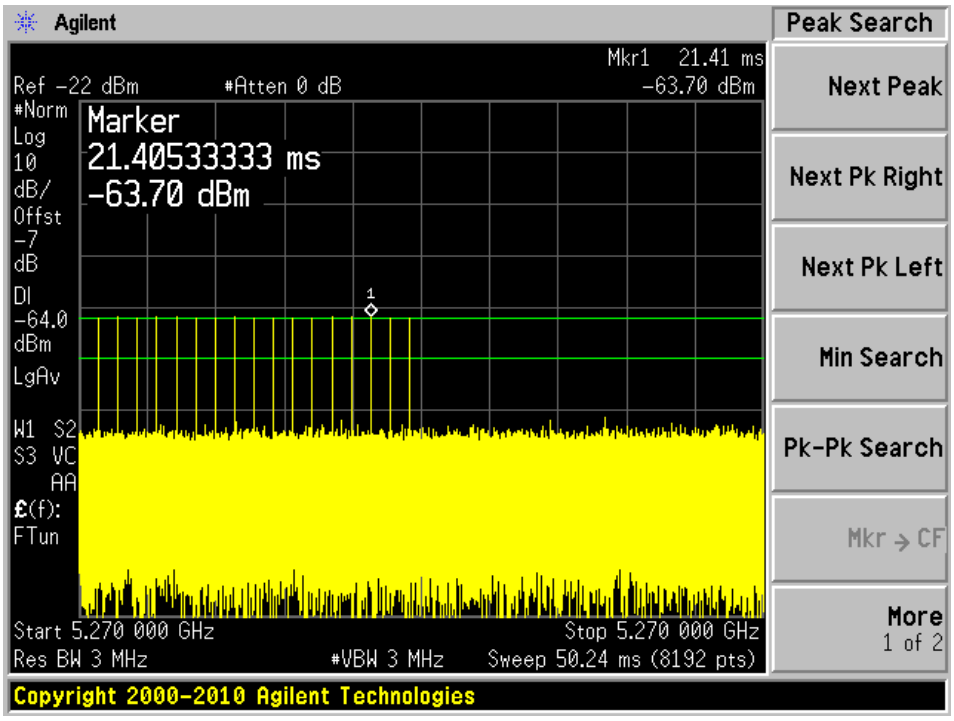


Radar Type 6

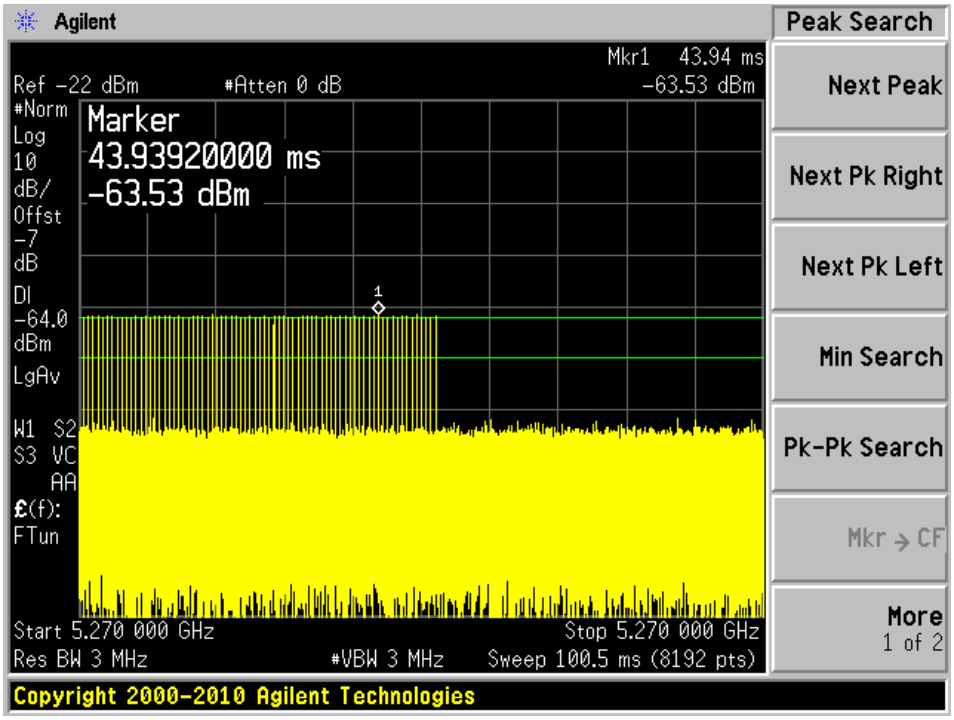


5270 MHz

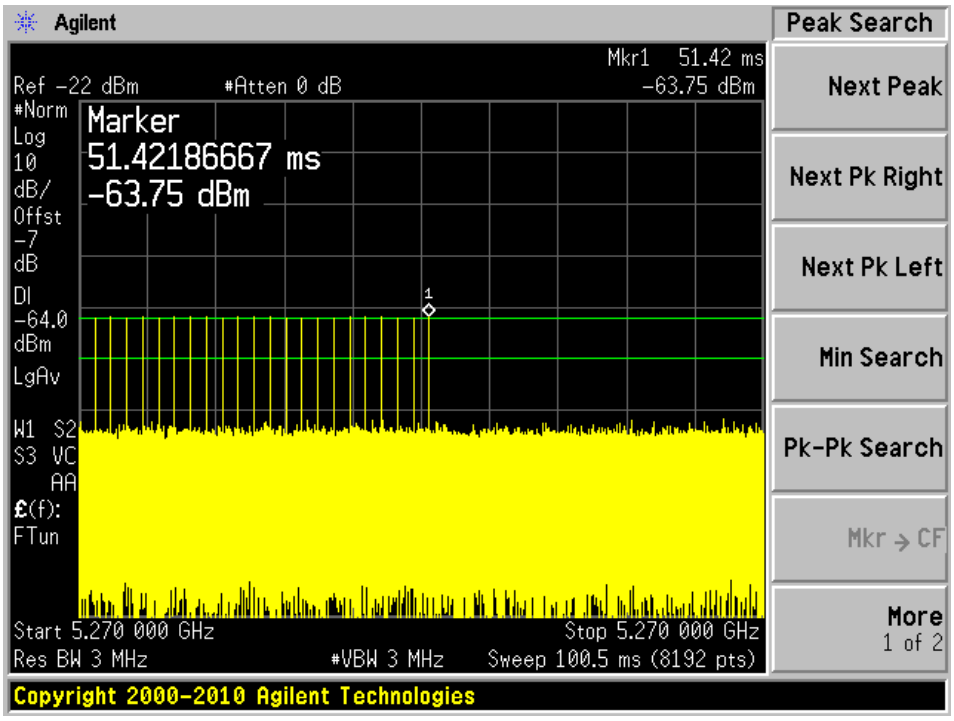
Radar Type 0



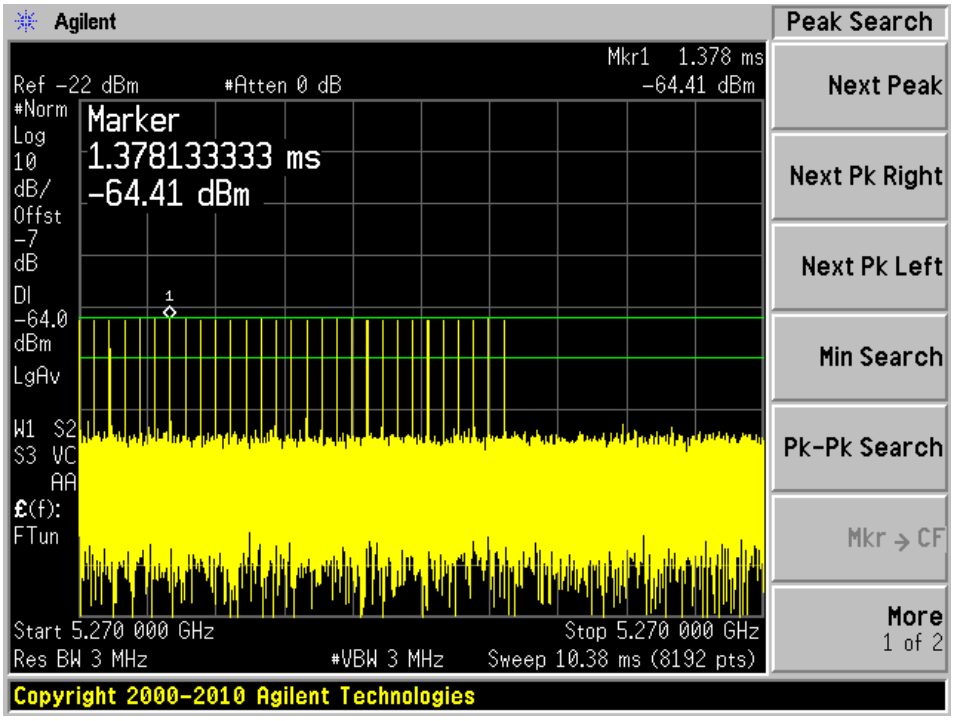
Radar Type 1A



Radar Type 1B



Radar Type 2



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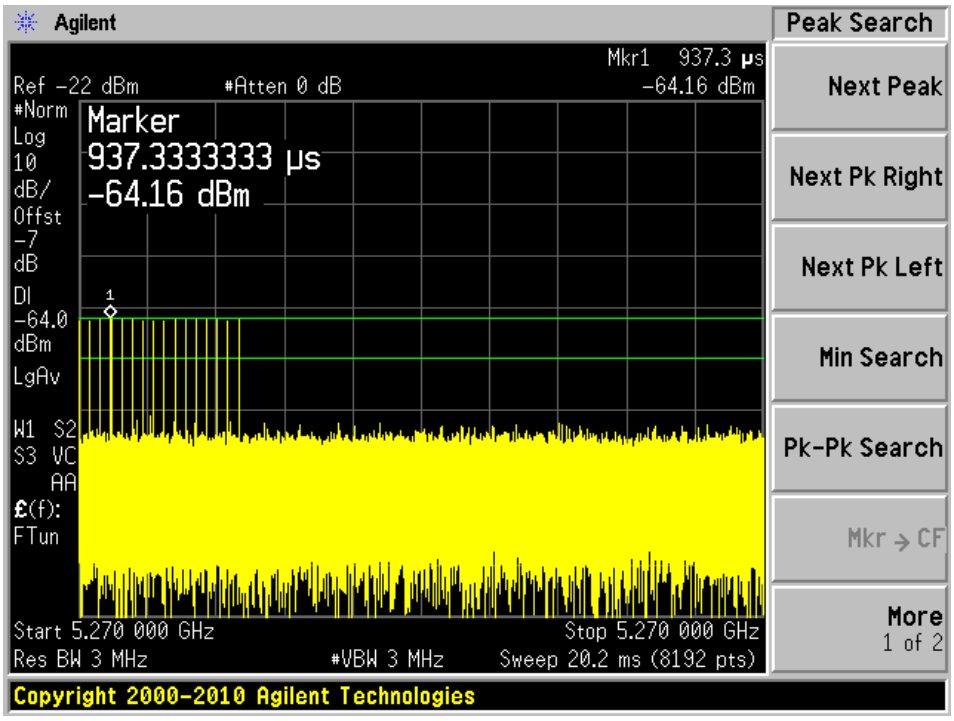
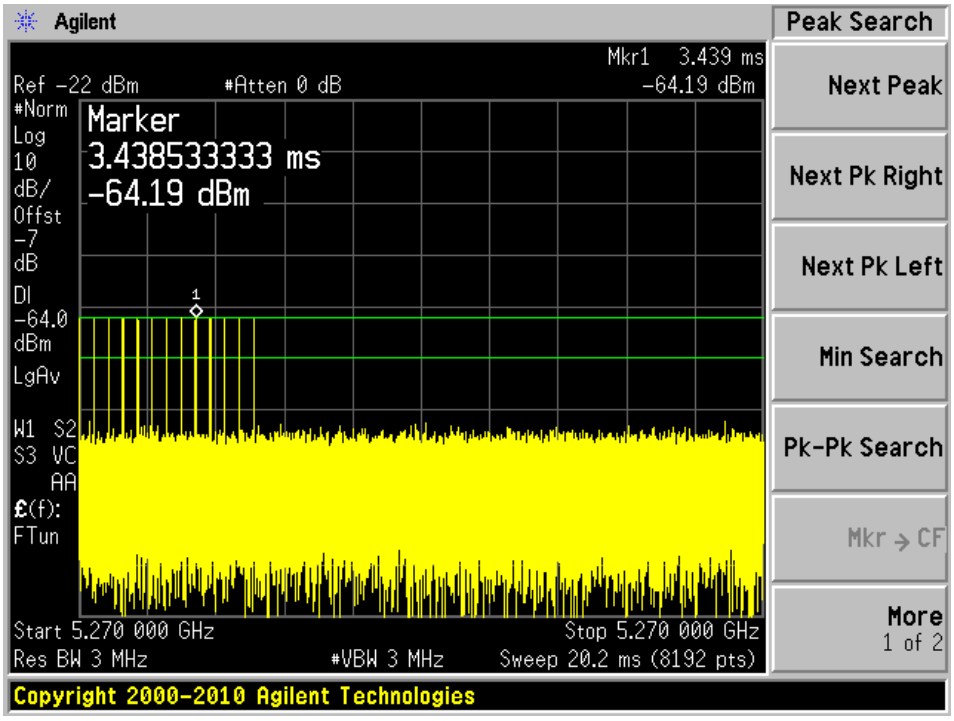


Radar Type 4



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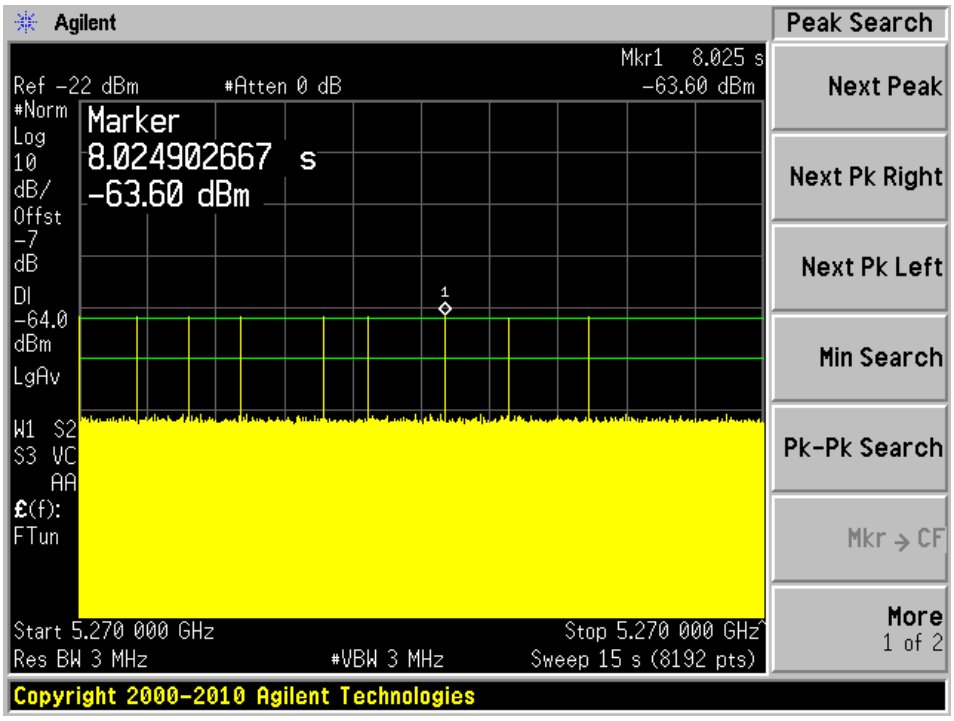
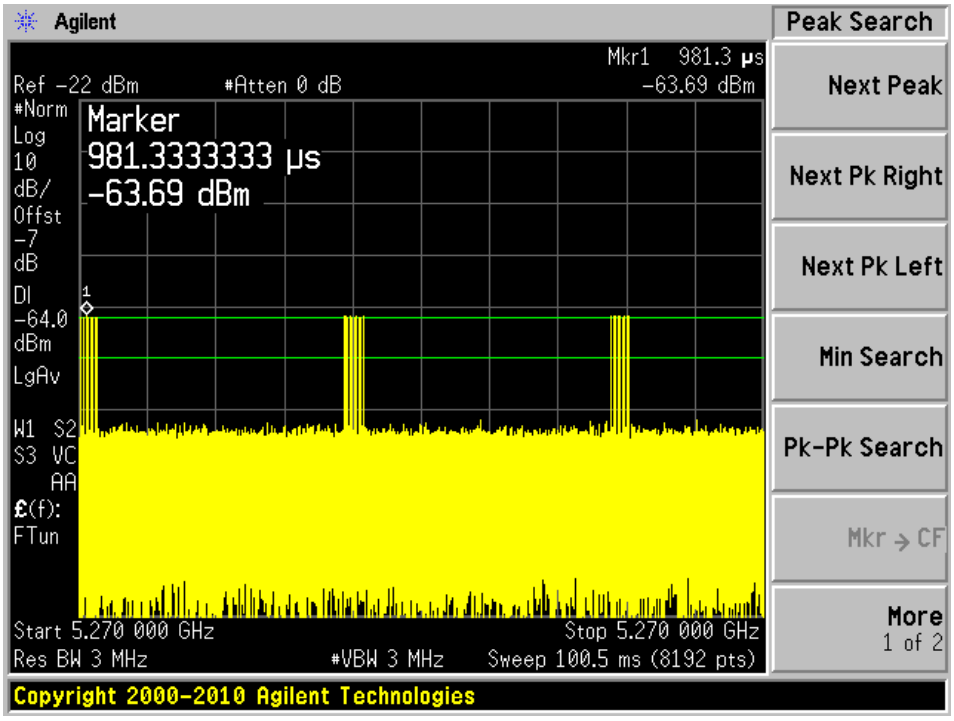
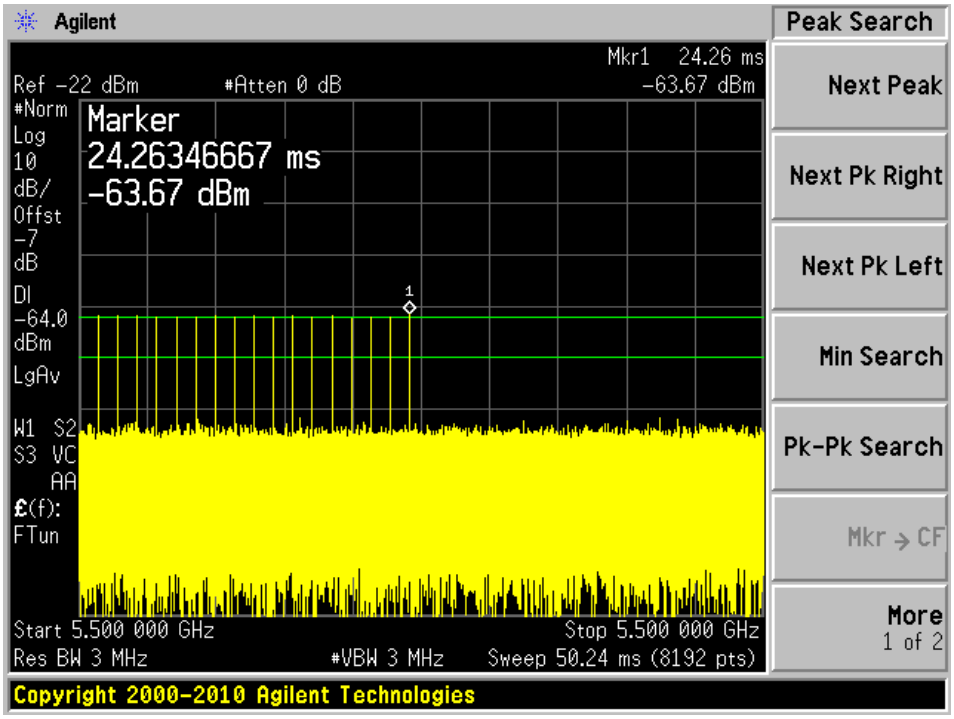


Radar Type 6

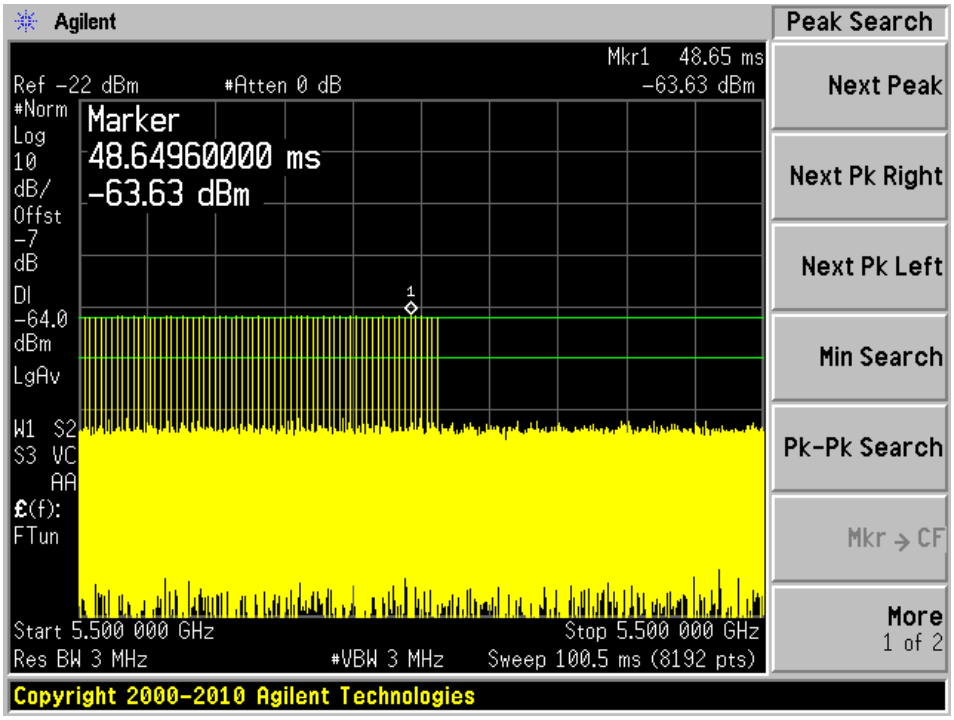


5500 MHz

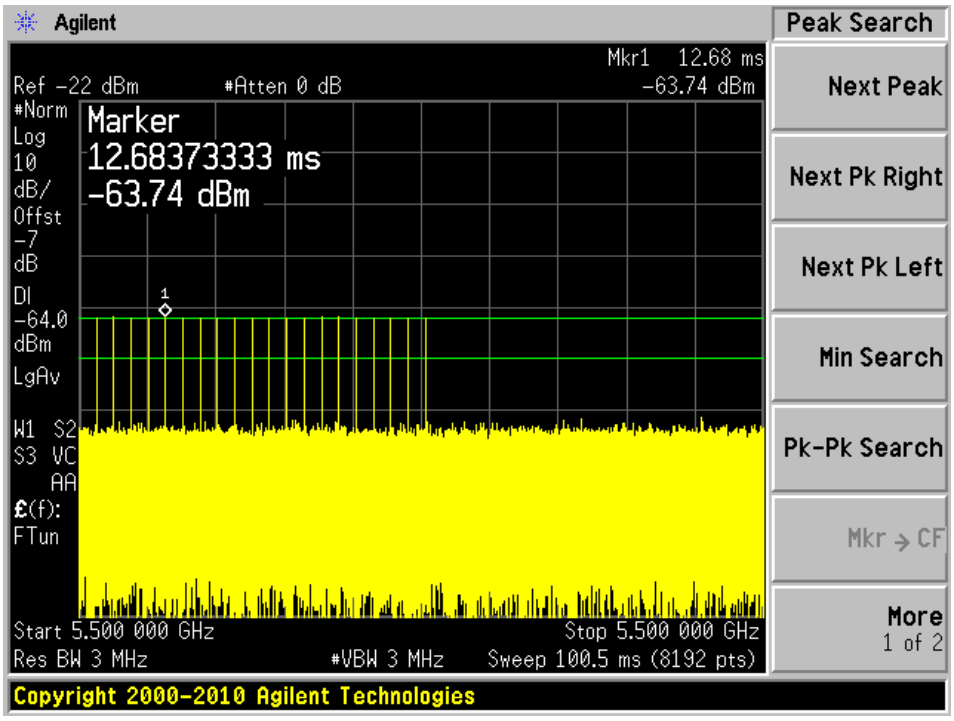
Radar Type 0



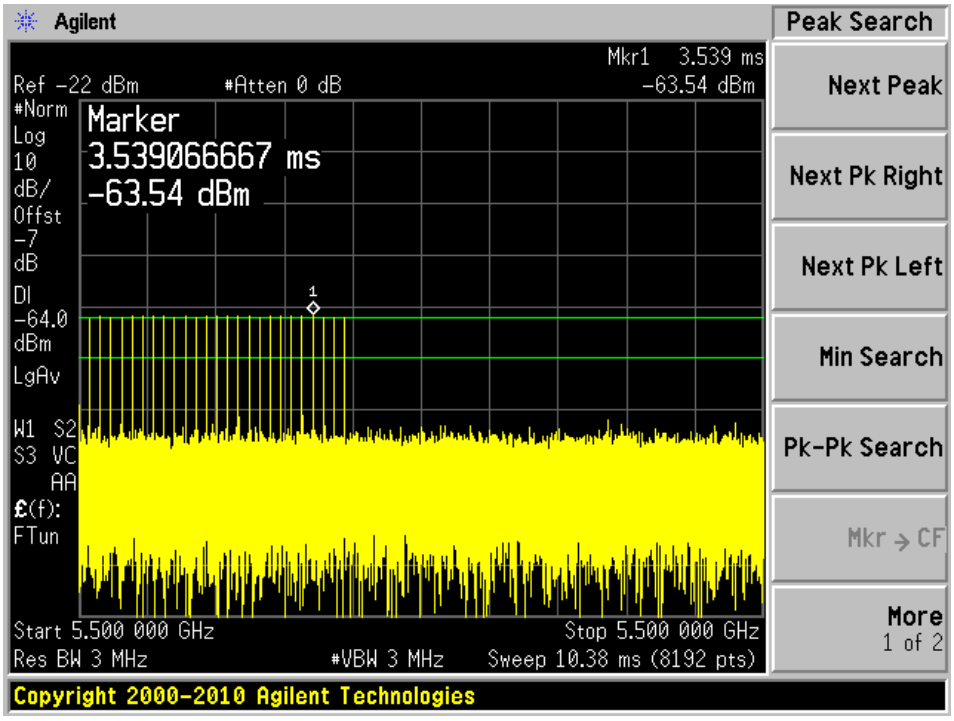
Radar Type 1A



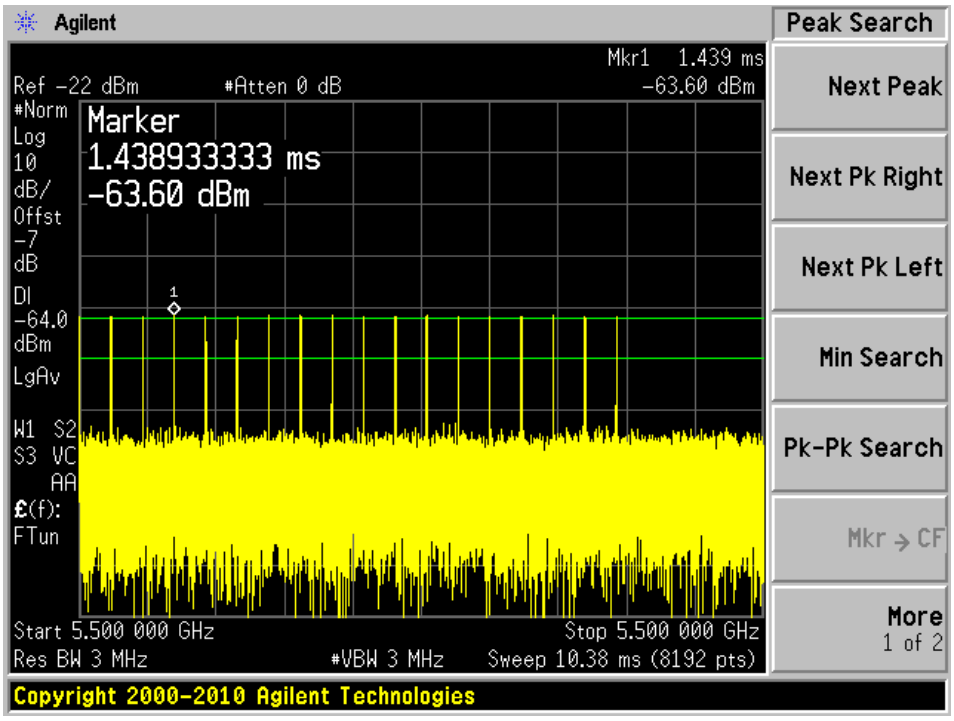
Radar Type 1B



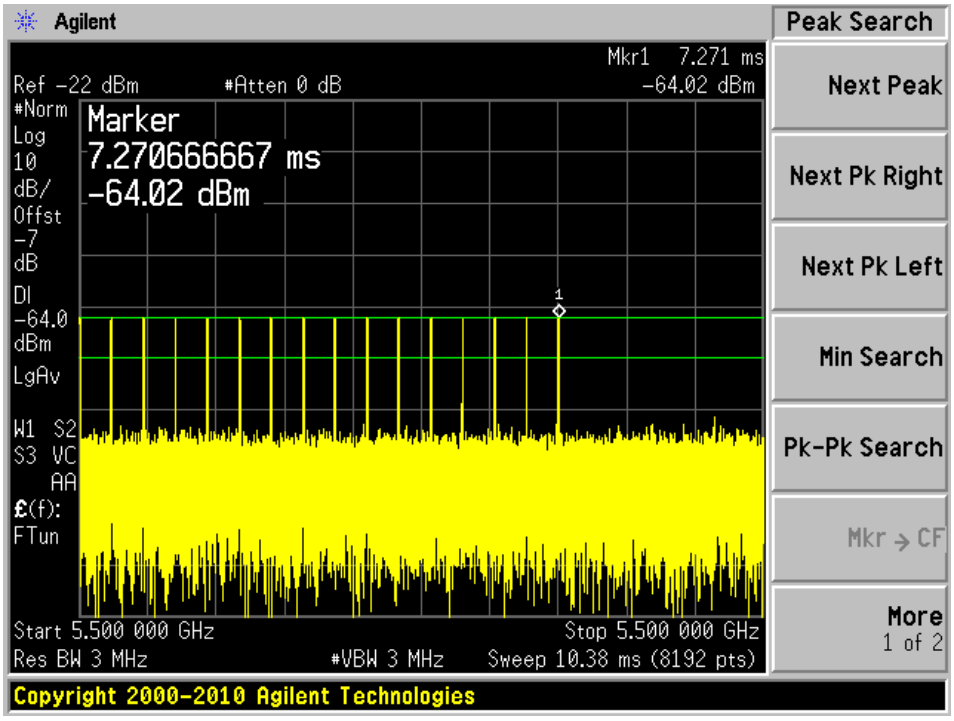
Radar Type 2



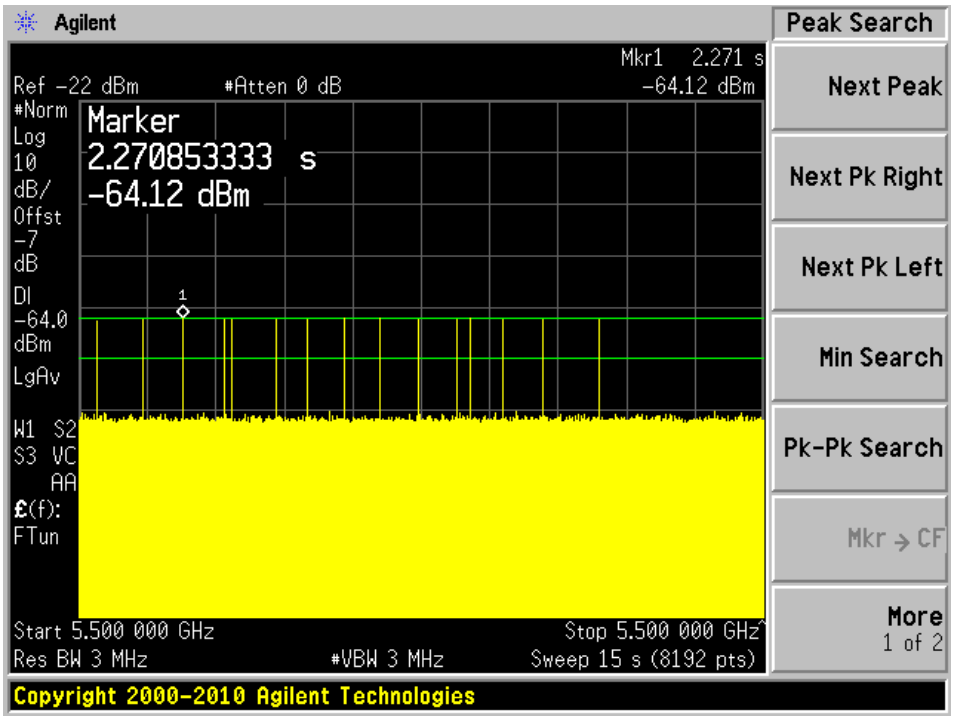
Radar Type 3



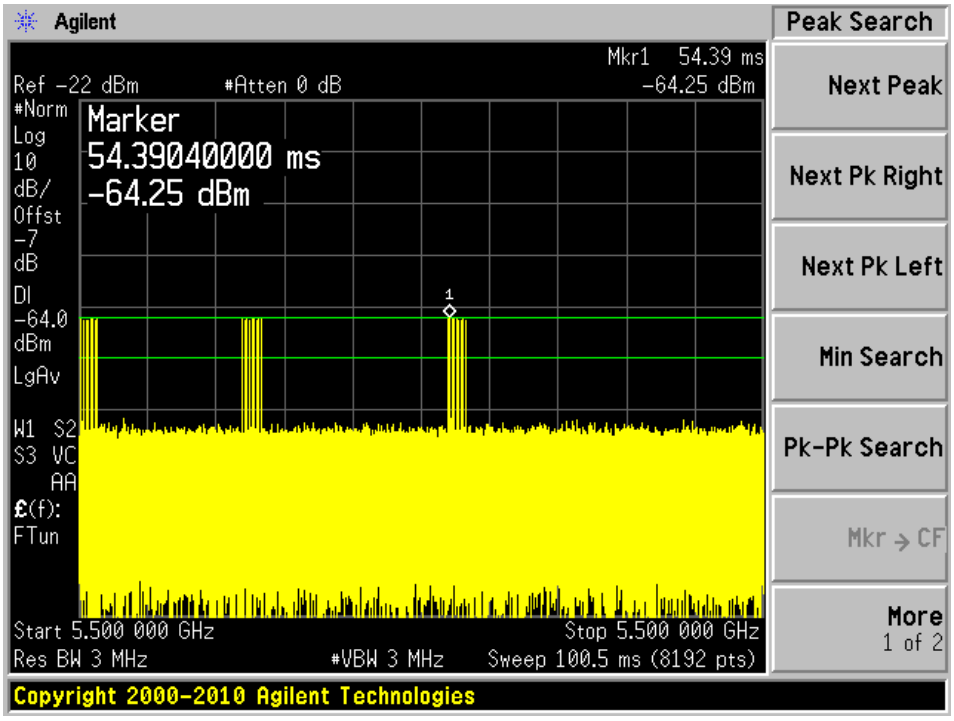
Radar Type 4



Radar Type 5

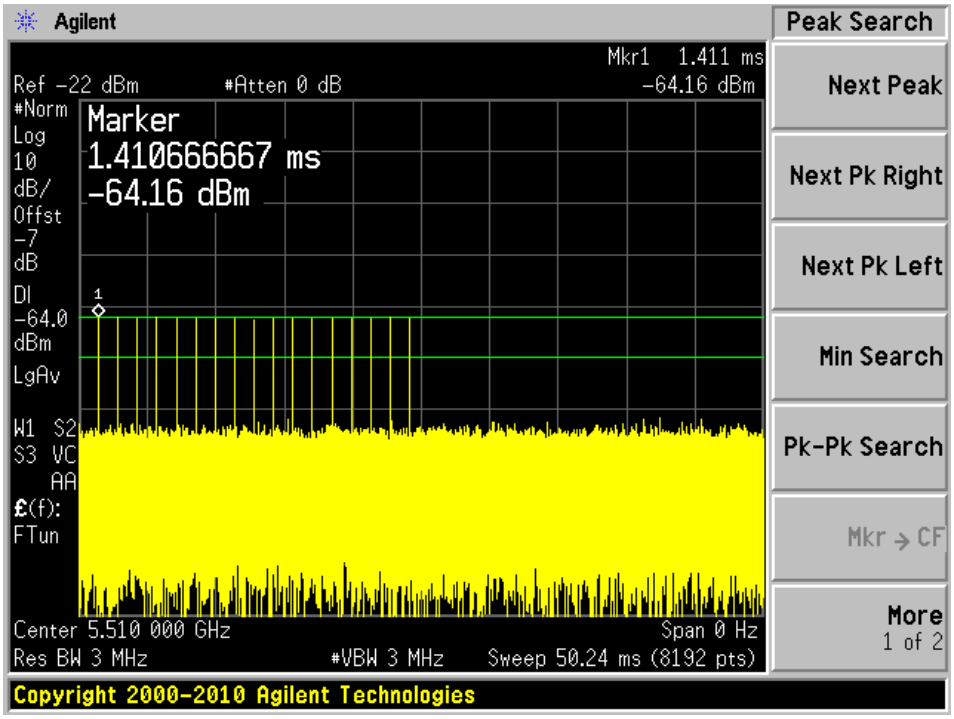


Radar Type 6

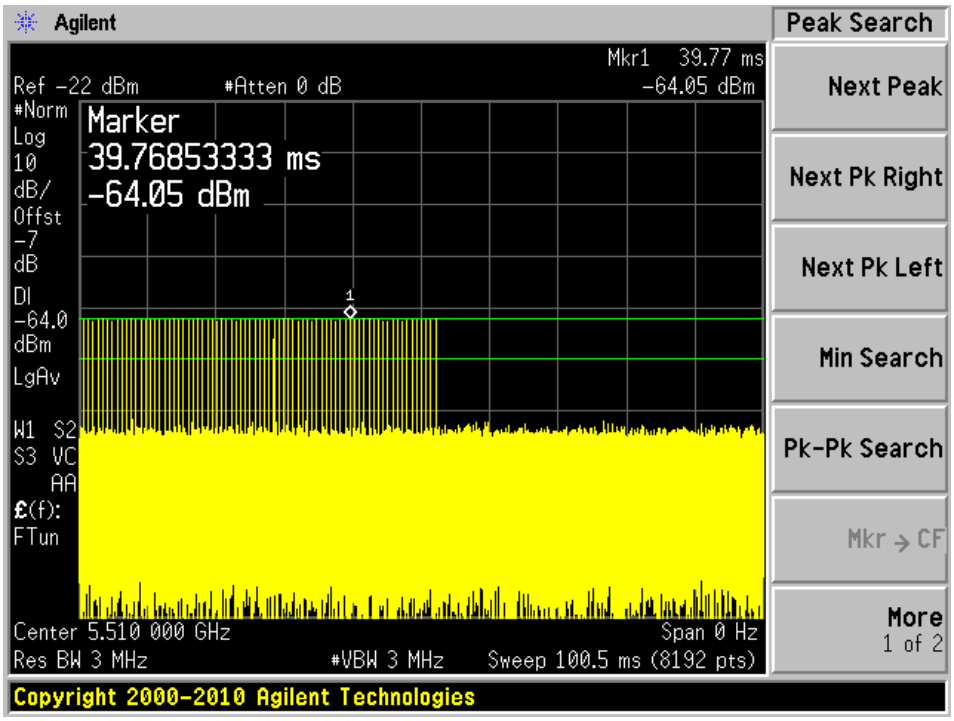


5510 MHz

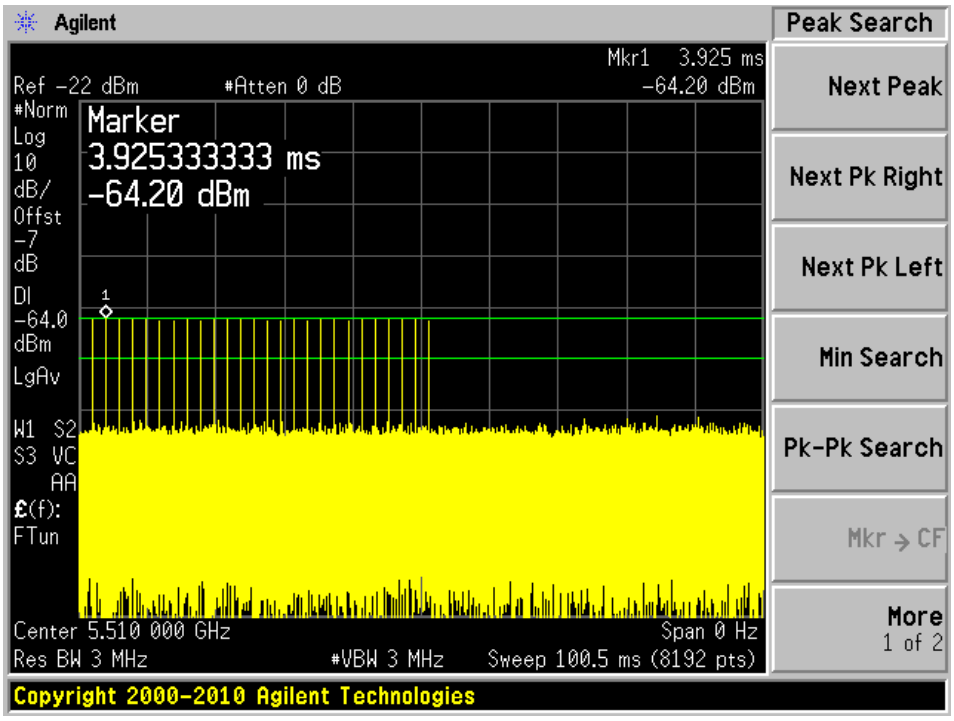
Radar Type 0



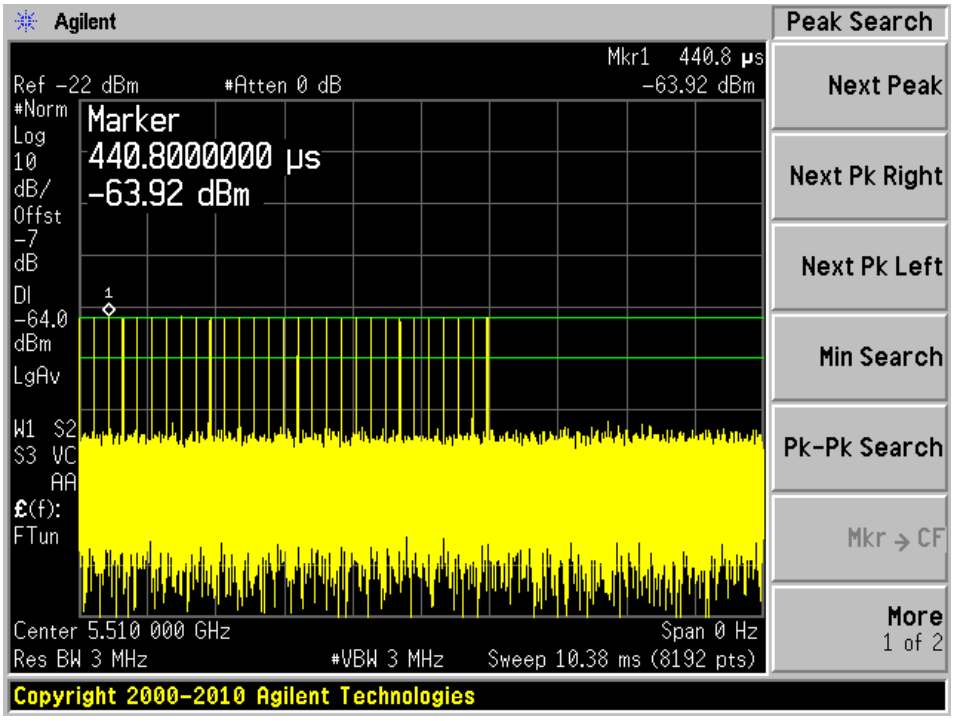
Radar Type 1A



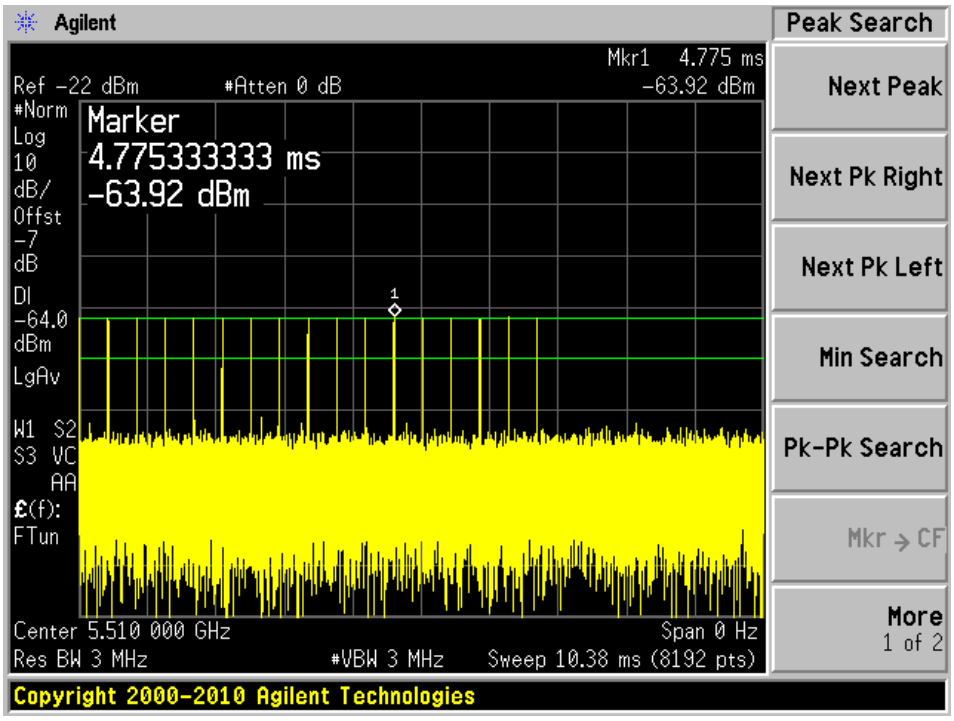
Radar Type 1B



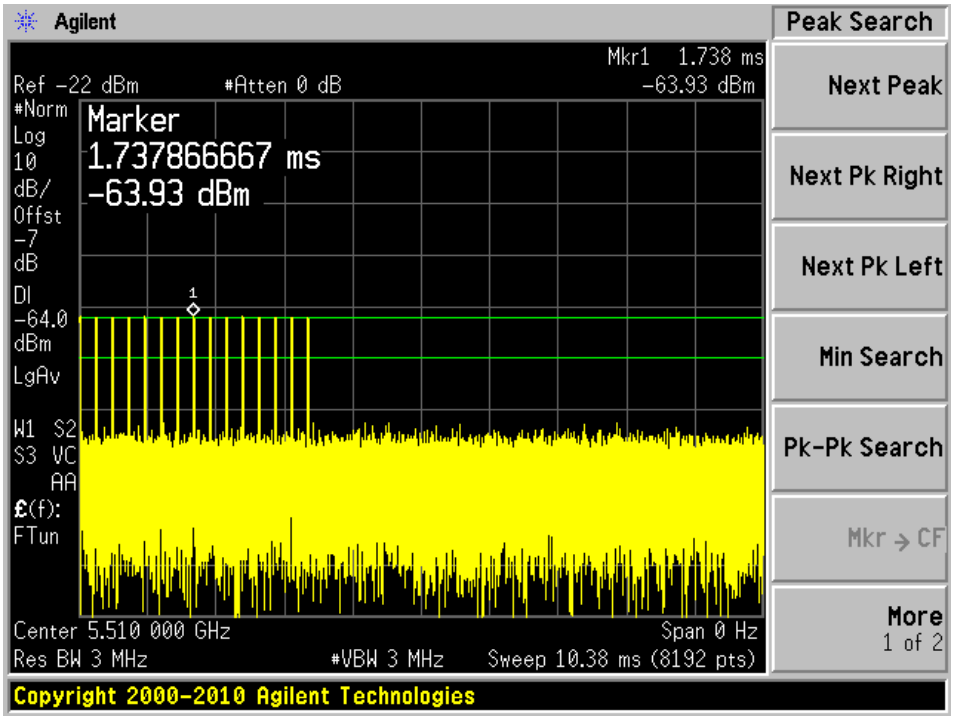
Radar Type 2



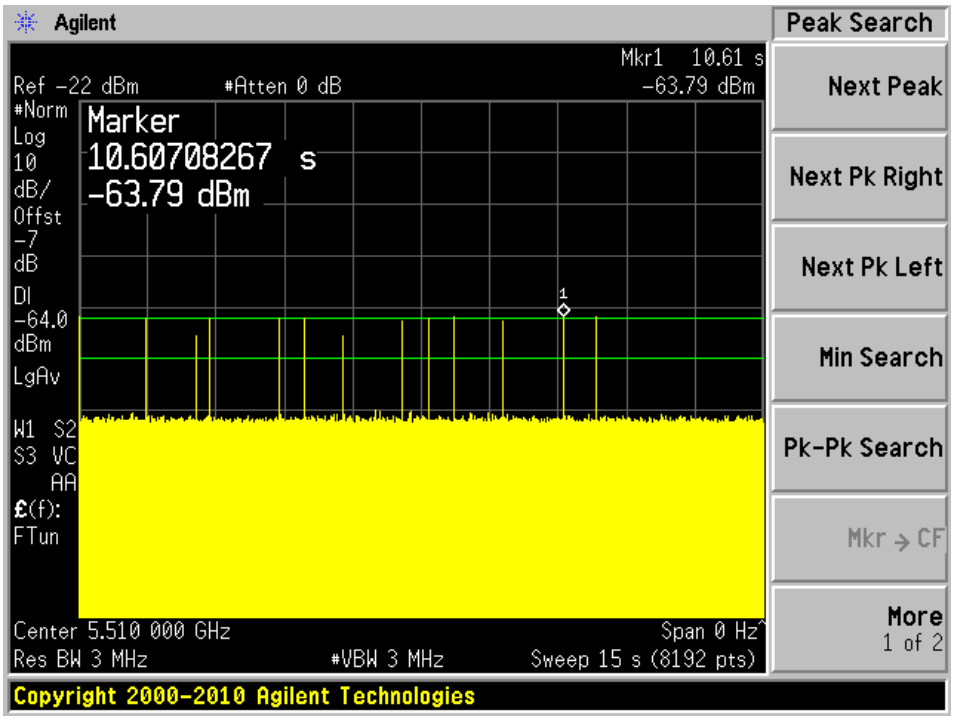
Radar Type 3



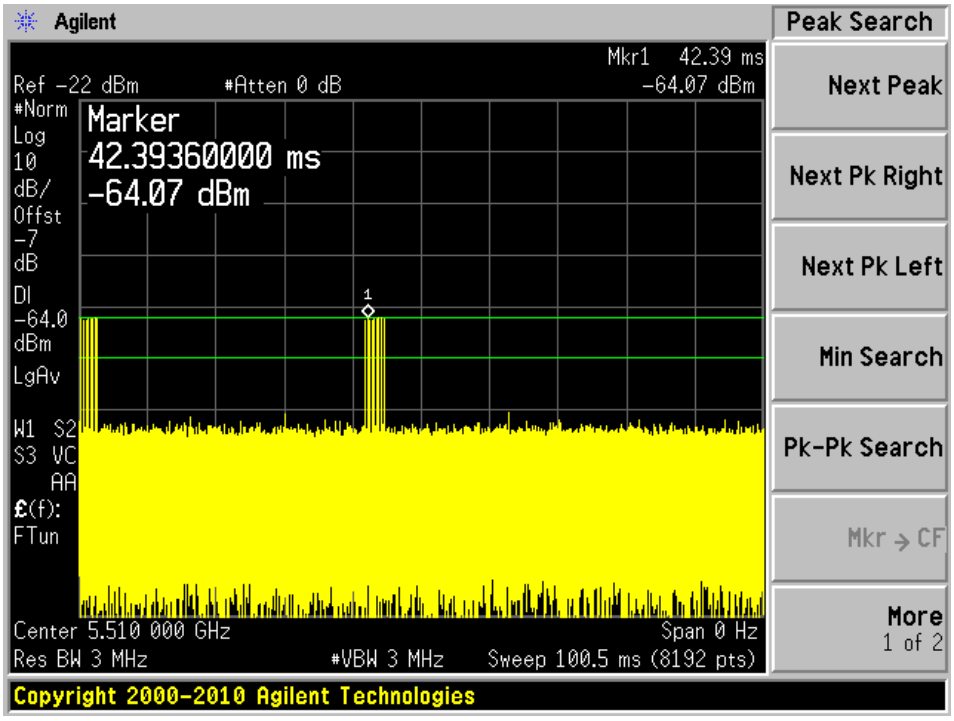
Radar Type 4



Radar Type 5



Radar Type 6



6 Channel Availability Check Time (CAC)

6.1 Test Procedure

1) Measure the initial power-up time of EUT.

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.

EUT Initial power-up Cycle Time

5260 MHz and 5500 MHz

EUT initial Power-up cycle (Second)
256.05

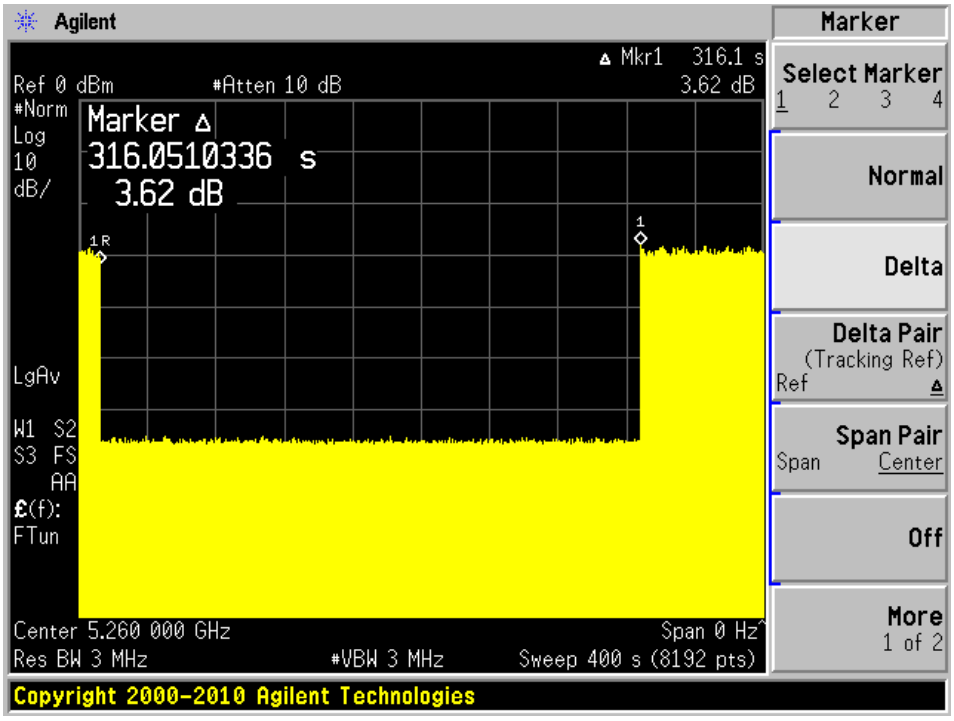
Results:

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

Note: The CAC test is with the Radar type 0.

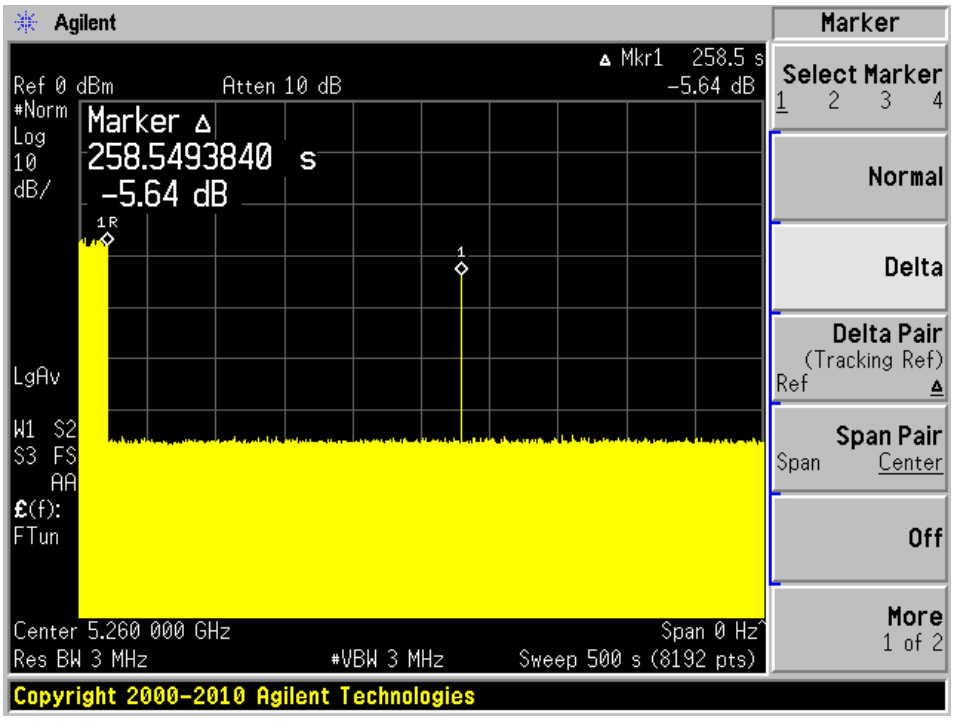
5260 MHz

Plot of without Radar signal applied



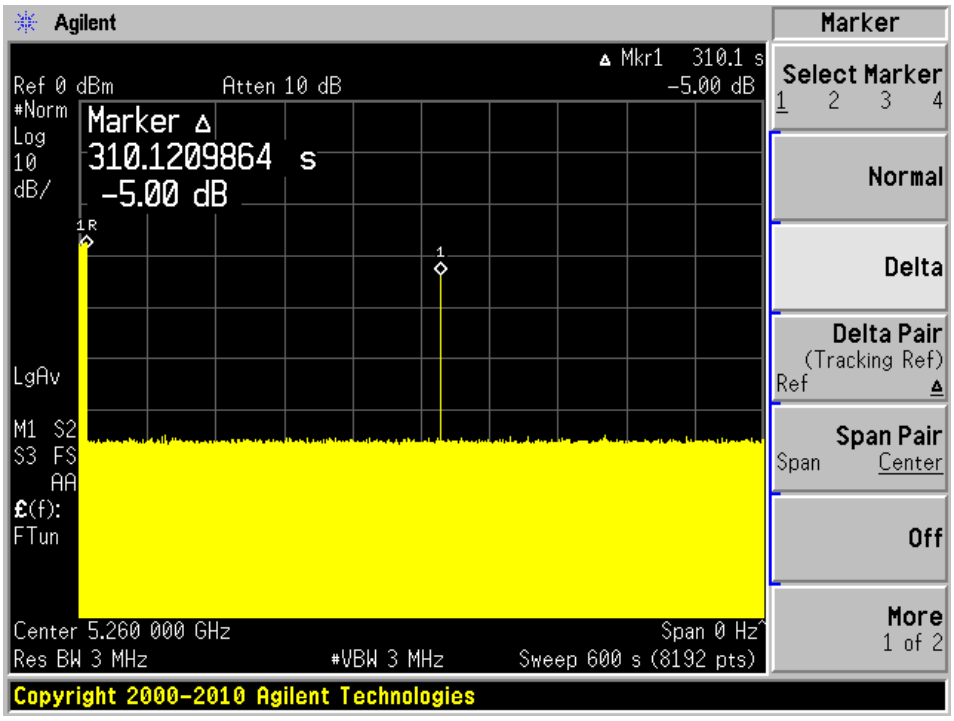
Note: The power-up cycle is 256.05 seconds.

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



No transmissions found after radar signal applied.

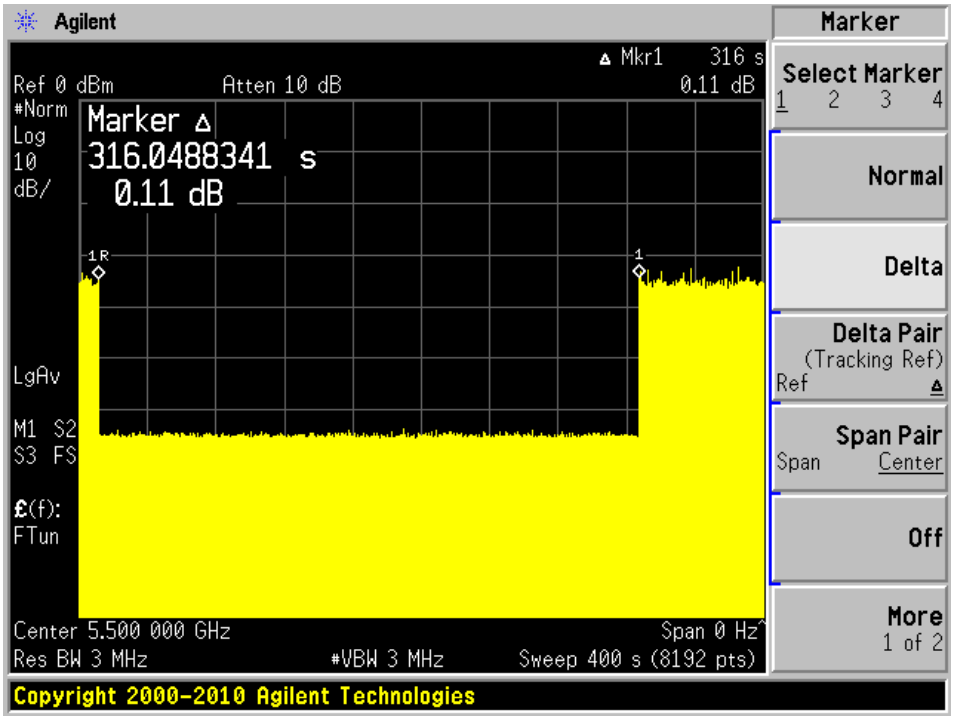
Plot of Radar signal applied at the end of 6 seconds of CAC



No transmissions found after radar signal applied.

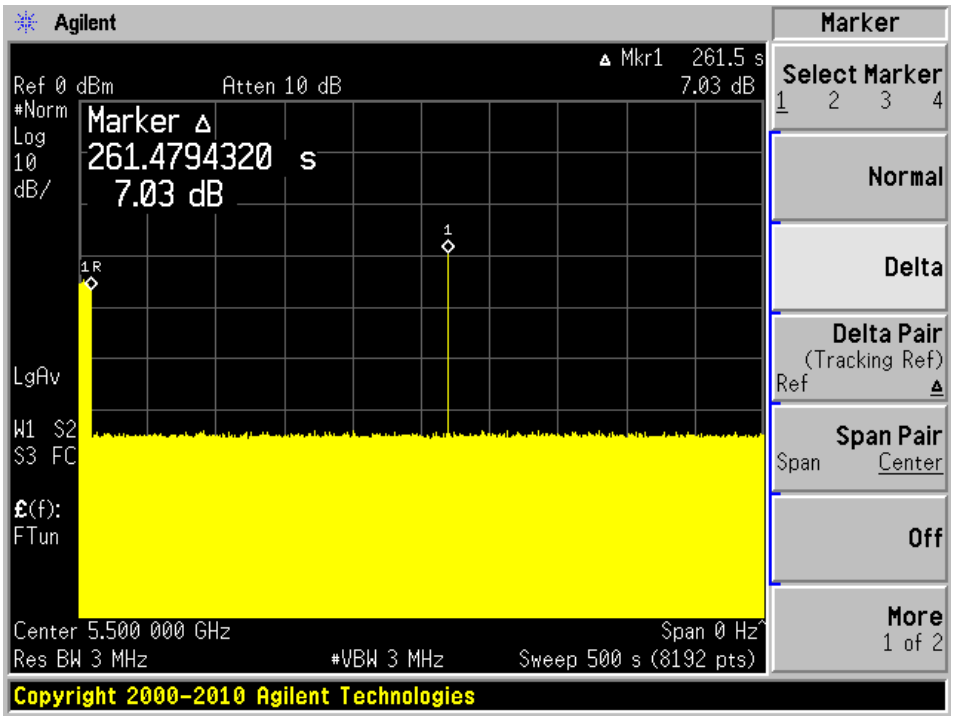
5500 MHz

Plot of without Radar signal applied



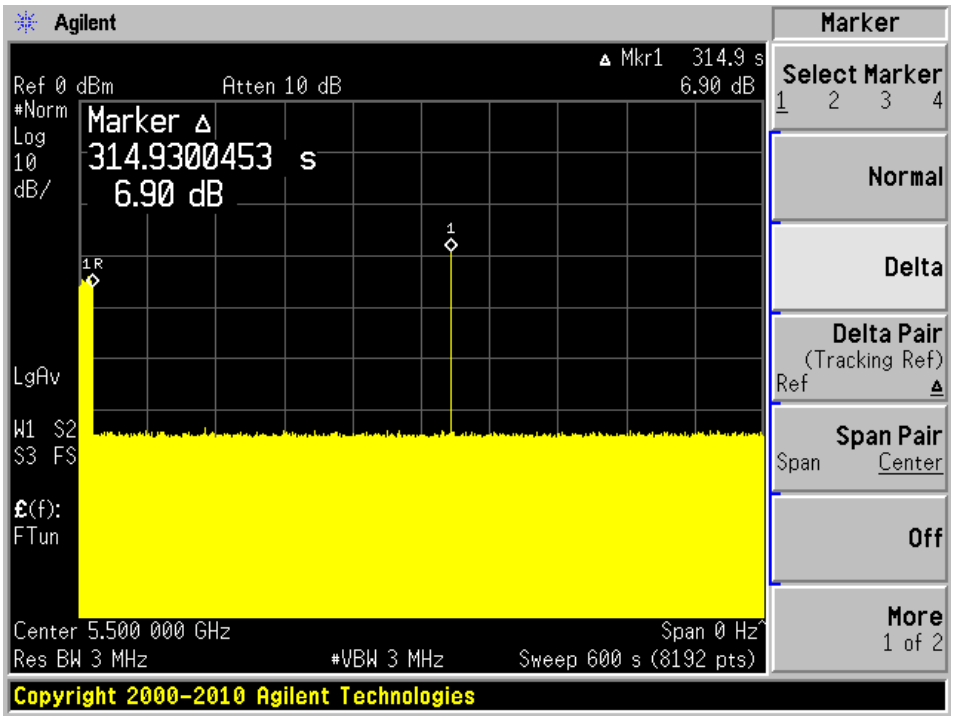
Note: The power-up cycle is 256.05 seconds.

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.

7 Channel Move Time and Channel Closing Transmission Time

7.1 Test Procedure

BACL use type 0 radar signal to test the channel move time and channel closing transmission time.

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)

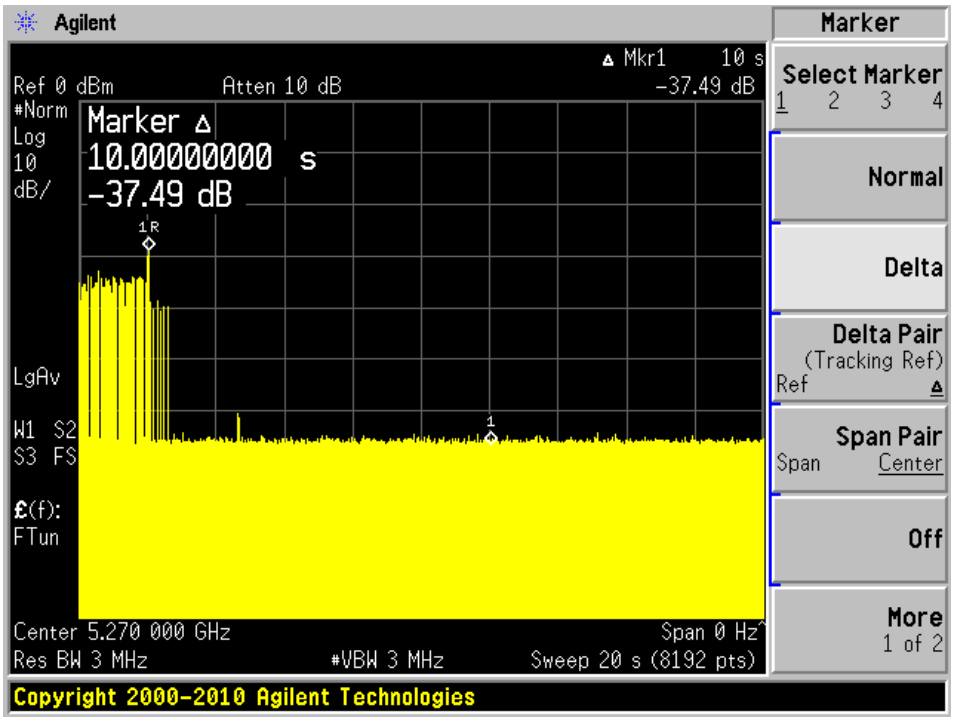
7.2 Test Results

Frequency (MHz)	Bandwidth (MHz)	Radar Type	Results
5270	40	Type 0	Compliant
5510	40	Type 0	Compliant

Please refer to the following tables and plots.

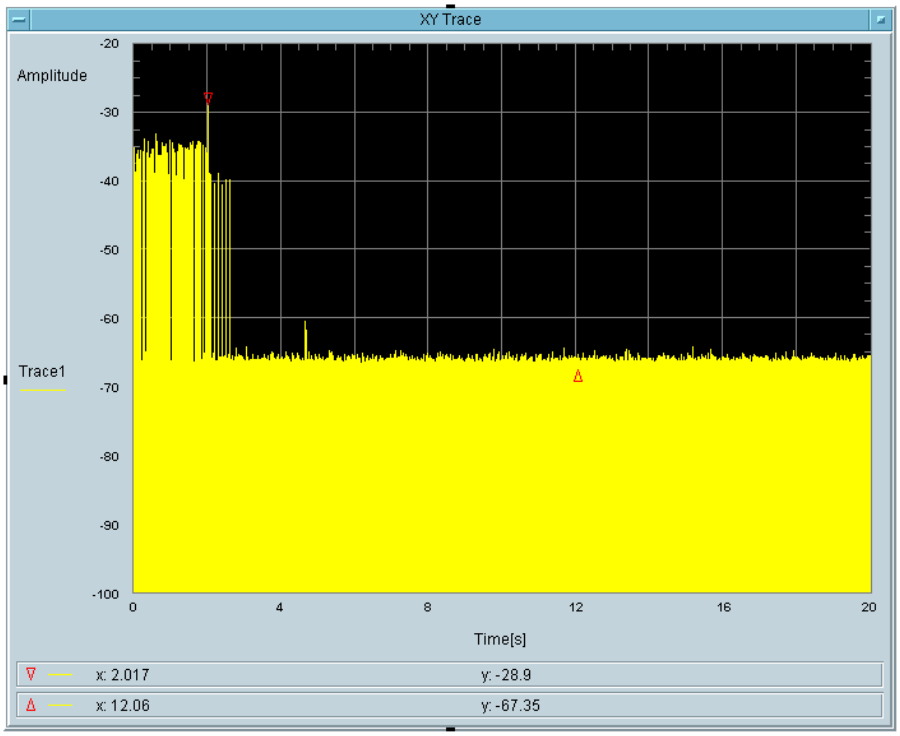
5270 MHz, Bandwidth 40 MHz

Type 0 radar channel move time result:



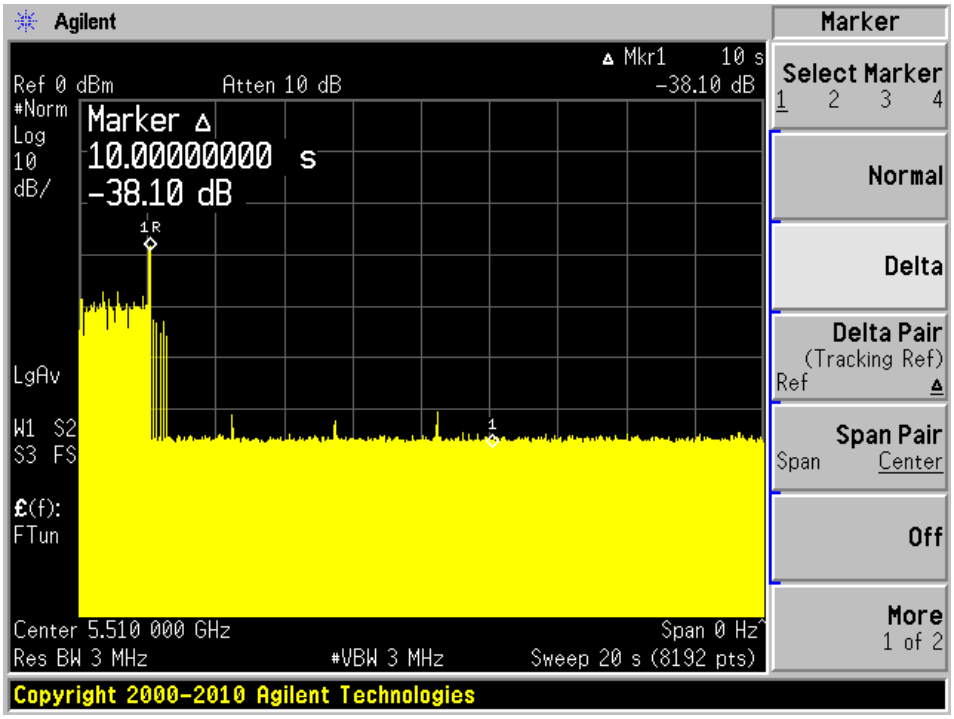
Type 0 radar channel closing transmission time result:

Channel closing transmitting time (ms)	Limit (ms)	Result
147.7	200	Pass



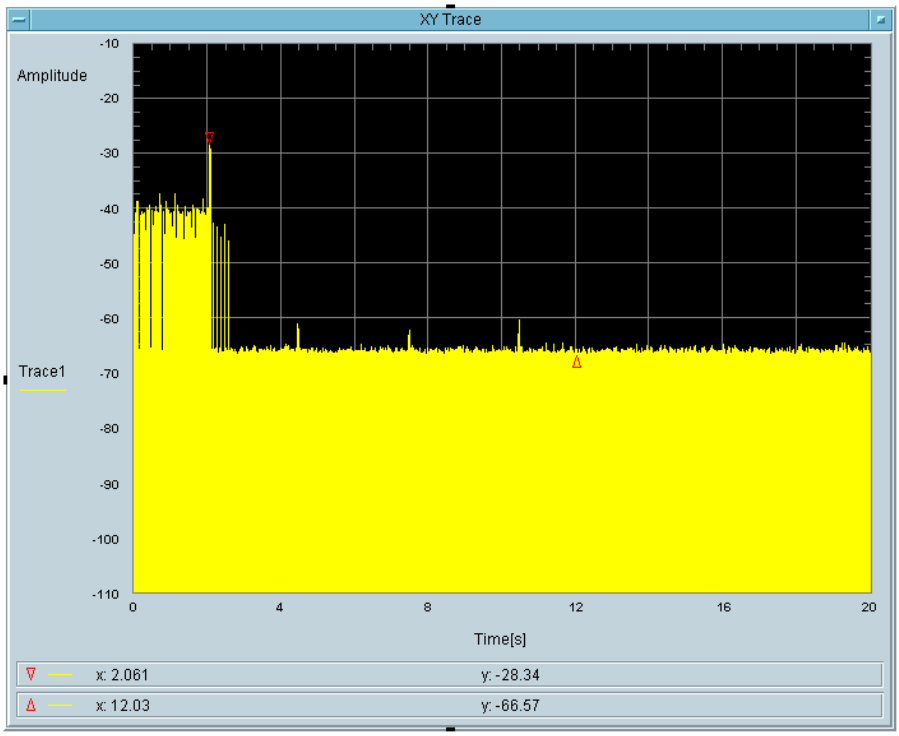
5510 MHz, Bandwidth 40 MHz

Type 0 radar channel move time result:



Type 0 radar channel closing transmission time result:

Channel closing transmitting time (ms)	Limit (ms)	Result
21.97	200	Pass



8 Non-Occupancy Period

8.1 Test Procedure

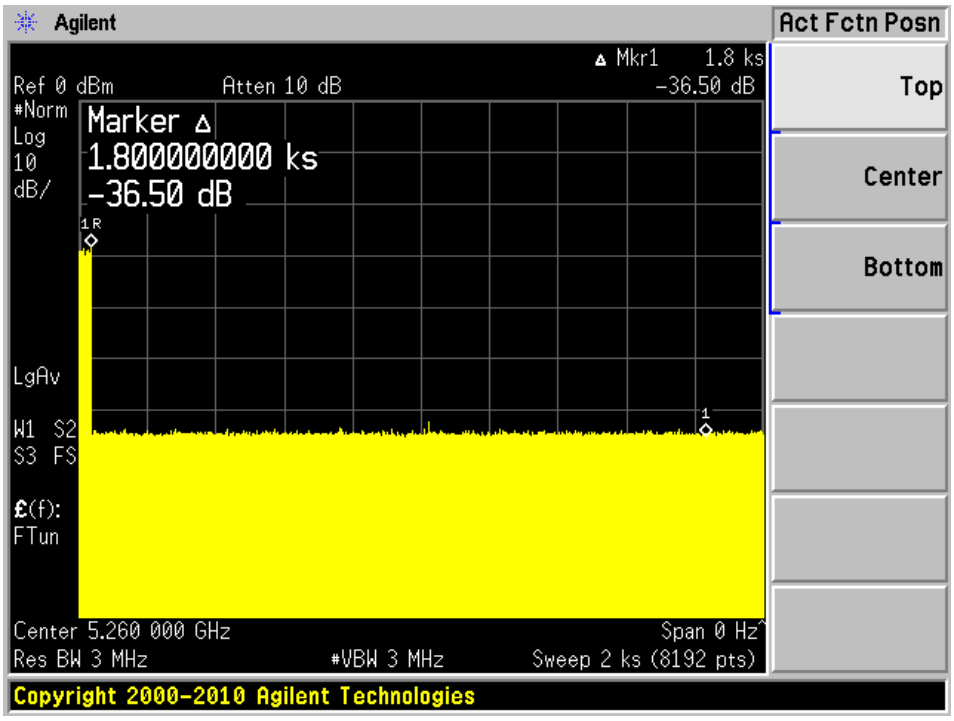
Measure the EUT for more than 30 minutes following the channel close/move time to very that the EUT does not resume any transmissions on this channel. Provide one plot to demonstrate no transmission on the channel for the non-occupancy period (30 minutes observation time)

8.2 Test Results

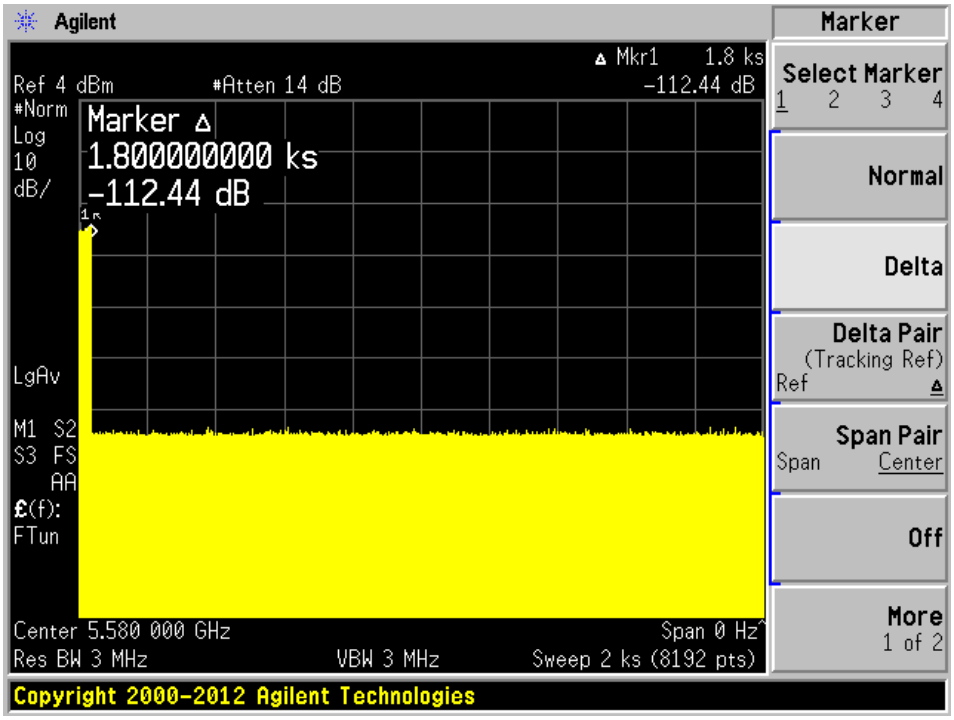
Frequency (MHz)	Bandwidth (MHz)	Spectrum Analyzer Display
5260	20	No transmission within 30 minutes
5580	20	No transmission within 30 minutes

Please refer to the following plots.

5260 MHz, Bandwidth 20 MHz



5580 MHz, Bandwidth 20 MHz



9 Radar Detection Bandwidth & Radar Detection Performance Check

9.1 Detection Bandwidth

Procedure:

Performed with any one of the short pulse radar waveforms type 0

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 FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.

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 FL) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies below FL is not required to demonstrate compliance.

The U-NII Detection Bandwidth is calculated as follows: U-NII Detection Bandwidth = FH – FL

Test Results

Frequency (MHz)	F_L (MHz)	F_H (MHz)	Detection Bandwidth (MHz)	Minimum Limit	Result
5260	5250	5269	19	100%	Compliance
5270	5250	5290	40	100%	Compliance
5500	5490	5509	19	100%	Compliance
5510	5490	5530	40	100%	Compliance

Please refer to the following tables.

Results of Detection Bandwidth:

EUT Frequency = 5260 MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5249	0	0	0	0	0	0	0	0	0	0	0 %
5250(F_L)	1	1	1	1	1	1	1	0	1	1	90 %
5255	1	1	1	1	1	1	1	1	1	1	100 %
5260(Fc)	1	1	1	1	1	1	1	1	1	1	100 %
5265	1	1	1	1	1	1	1	1	1	1	100 %
5269(F_H)	1	1	1	1	1	1	1	1	1	1	100 %
5270	1	0	1	0	1	0	1	1	1	1	70 %
Detection Bandwidth = $F_H - F_L$=5269-5250=19 MHz											
EUT 99% OBW = 18.08 MHz; 18.08 x 100% = 18.08 MHz **Result:** Pass											

EUT Frequency = 5500 MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5489	0	0	0	0	1	0	0	0	0	0	10 %
5490(F_L)	1	1	1	1	0	1	1	1	1	1	90 %
5495	1	1	1	1	1	1	1	1	1	1	100 %
5500(Fc)	1	1	1	1	1	1	1	1	1	1	100 %
5505	1	1	1	1	1	1	1	1	1	1	100 %
5509(F_H)	1	1	1	1	1	1	1	1	1	1	100 %
5510	1	1	0	1	0	0	0	0	0	1	40 %
Detection Bandwidth = $F_H - F_L$=5509-5490=19 MHz											
EUT 99% OBW = 18.08 MHz; 18.08 x 100% = 18.08 MHz **Result:** Pass											

Results of Detection Bandwidth:

EUT Frequency = 5270 MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5249	0	0	0	0	0	0	0	0	0	0	0 %
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(Fc)	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(F_H)	1	1	1	1	1	1	1	1	1	1	100 %
5291	0	0	0	0	0	0	0	0	0	0	0 %
Detection Bandwidth = $F_H - F_L$=5290-5250=40 MHz											
EUT 99% OBW = 36.92 MHz; 36.92 x 100% = 36.92 MHz **Result:** Pass											

EUT Frequency = 5510 MHz											
DFS Detection Trials (1 = Detected, 0 = No Detected)											
Radar Frequency (MHz)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Detection Rate (%)**
5489	0	0	0	0	0	0	0	0	0	0	0 %
5490(F_L)	1	1	1	1	1	1	1	1	1	1	100 %
5495	1	1	1	1	1	1	1	1	1	1	100 %
5500	1	1	1	1	1	1	1	1	1	1	100 %
5505	1	1	1	1	1	1	1	1	1	1	100 %
5510(Fc)	1	1	1	1	1	1	1	1	1	1	100 %
5515	1	1	1	1	1	1	1	1	1	1	100 %
5520	1	1	1	1	1	1	1	1	1	1	100 %
5525	1	1	1	1	1	1	1	1	1	1	100 %
5530(F_H)	1	1	1	1	1	1	1	1	1	1	100 %
5531	0	0	0	0	0	0	0	0	0	0	0 %
Detection Bandwidth = $F_H - F_L$=5530-5490=40 MHz											
EUT 99% OBW = 37.05 MHz; 37.05 x 100% = 37.05 MHz **Result:** Pass											

9.2 Radar Detection Performance Check

Procedure:

Stream MPEG file from master to slave
Generate radar waveform
Record whether or not the waveform was detected
At least 30 trials are applied for each radar type
For radar types with randomized parameters, each trial uses a unique waveform
Perform with each of the radar types 1-6

Confirm that the detection rate for each radar type meets the minimum requirement
Type 1A&1B, 2, 3, 4: 60% each
Type 5: 80%
Type 6: 70%
Confirm that the mean of the rates for radar types 1 through 4 meets the requirement of 80%

$$\text{Detection Ratio} = \frac{\text{Total Waveform Detections}}{\text{Total Waveform Trials}} \times 100$$

Test Results:

5260 MHz, 20 MHz Bandwidth

Radar Signal Type	Waveform/Trial Number	Detection (%)	Limit (%)	Pass/Fail
Type 1A/1B	30	100 %	60%	Pass
Type 2	30	90 %	60%	Pass
Type 3	30	100 %	60%	Pass
Type 4	30	100 %	60%	Pass
Aggregate (Type1 to 4)	120	97.5 %	80%	Pass
Type 5	30	100 %	80%	Pass
Type 6	30	100 %	70%	Pass

Please refer to the following statistical tables:

5260 MHz, 20 MHz Bandwidth

Table-1A/1B Radar Type 1A/1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5260	70	1.0	758	1
2	5260	86	1.0	618	1
3	5260	81	1.0	658	1
4	5260	58	1.0	918	1
5	5260	62	1.0	858	1
6	5260	78	1.0	678	1
7	5260	18	1.0	3066	1
8	5260	76	1.0	698	1
9	5260	92	1.0	578	1
10	5260	89	1.0	598	1
11	5260	67	1.0	798	1
12	5260	102	1.0	518	1
13	5260	68	1.0	778	1
14	5260	61	1.0	878	1
15	5260	83	1.0	638	1
16	5260	19	1.0	2852	1
17	5260	64	1.0	825	1
18	5260	37	1.0	1434	1
19	5260	90	1.0	589	1
20	5260	73	1.0	733	1
21	5260	20	1.0	2669	1
22	5260	44	1.0	1215	1
23	5260	29	1.0	1853	1
24	5260	29	1.0	1854	1
25	5260	19	1.0	2786	1
26	5260	46	1.0	1159	1
27	5260	21	1.0	2516	1
28	5260	60	1.0	894	1
29	5260	35	1.0	1525	1
30	5260	19	1.0	2859	1
Detection Percentage: 100 % (>60%)					

Table-2 Radar Type 2 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5260	23	4.7	220	1
2	5260	28	2.0	180	1
3	5260	26	1.7	182	1
4	5260	25	3.2	171	0
5	5260	24	2.6	176	1
6	5260	26	1.4	186	1
7	5260	26	1.7	217	1
8	5260	25	4.0	150	1
9	5260	24	1.1	171	1
10	5260	28	3.6	160	0
11	5260	23	3.5	159	1
12	5260	23	1.5	227	1
13	5260	23	1.9	159	1
14	5260	28	3.2	152	1
15	5260	26	3.3	199	1
16	5260	26	1.3	155	1
17	5260	24	1.1	190	1
18	5260	24	3.6	192	0
19	5260	26	4.8	151	1
20	5260	25	2.3	150	1
21	5260	27	2.5	179	1
22	5260	26	1.1	161	1
23	5260	27	1.2	178	1
24	5260	23	1.3	197	1
25	5260	23	1.1	184	1
26	5260	26	3.2	177	1
27	5260	28	4.4	172	1
28	5260	29	1.7	156	1
29	5260	28	4.4	167	1
30	5260	29	4.4	198	1
Detection Percentage: 90 % (>60%)					

Table-3 Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5260	16	9.2	499	1
2	5260	18	9.3	271	1
3	5260	16	6.8	412	1
4	5260	18	9.5	496	1
5	5260	17	7.2	221	1
6	5260	18	6.3	483	1
7	5260	17	8.1	449	1
8	5260	16	6.5	292	1
9	5260	18	8.4	288	1
10	5260	18	6.8	488	1
11	5260	16	7.1	218	1
12	5260	16	7.8	226	1
13	5260	16	7.3	420	1
14	5260	18	9.9	458	1
15	5260	17	9.3	470	1
16	5260	17	10.0	474	1
17	5260	17	7.4	281	1
18	5260	16	6.1	248	1
19	5260	16	9.9	200	1
20	5260	17	9.6	339	1
21	5260	16	6.0	339	1
22	5260	17	7.7	448	1
23	5260	17	7.0	479	1
24	5260	16	9.9	494	1
25	5260	17	8.3	490	1
26	5260	17	9.9	441	1
27	5260	17	9.3	331	1
28	5260	18	7.3	288	1
29	5260	17	6.2	343	1
30	5260	18	9.9	281	1
Detection Percentage: 100 % (>60%)					

Table-4 Radar Type 4 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5260	13	12.3	402	1
2	5260	13	19.3	479	1
3	5260	15	17.2	257	1
4	5260	12	18.4	297	1
5	5260	16	17.9	488	1
6	5260	14	11.4	440	1
7	5260	14	15.3	397	1
8	5260	14	14.9	245	1
9	5260	15	13.2	493	1
10	5260	12	12.1	392	1
11	5260	12	11.5	348	1
12	5260	15	18.8	250	1
13	5260	16	16.6	242	1
14	5260	13	13.9	228	1
15	5260	16	19.4	341	1
16	5260	16	19.4	300	1
17	5260	12	13.0	393	1
18	5260	13	14.1	265	1
19	5260	12	17.4	318	1
20	5260	14	12.9	313	1
21	5260	14	17.3	322	1
22	5260	12	20.0	252	1
23	5260	12	11.2	388	1
24	5260	12	15.0	493	1
25	5260	12	12.8	242	1
26	5260	15	15.3	489	1
27	5260	16	19.4	222	1
28	5260	14	12.4	416	1
29	5260	14	15.9	229	1
30	5260	15	14.1	252	1
Detection Percentage: 100 % (>60%)					

Table-5 Radar Type 5 Statistical Performance

Bin5 Statistics 1

Trial #	Pulse	Chirp (MHz)	Pulse Width (μS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	8	61.8	1332	1395	0.911693	1
1	2	14	84.0	1984		1.337960	
2	2	13	79.1	1957		2.490364	
3	3	8	95.7	1532	1317	2.923867	
4	3	6	95.6	1895	1364	3.876292	
5	3	19	92.5	1035	1923	4.763119	
6	1	11	74.0			6.170820	
7	1	13	63.8			6.867392	
8	3	19	89.0	1968	1035	7.887750	
9	3	14	62.7	1558	1869	8.876935	
10	1	10	73.8			9.383086	
11	1	17	75.2			10.339131	
12	1	9	64.6			11.449485	

Bin5 Statistics 2

Trial #	Pulse	Chirp (MHz)	Pulse Width (μS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	7	80.1	1065		0.643102	1
1	1	14	78.7			2.274293	
2	2	17	71.8	1010		3.083240	
3	1	8	76.4			4.005590	
4	3	19	68.2	1010	1348	5.734891	
5	2	6	54.5	1314		7.193672	
6	1	5	91.0			7.400425	
7	2	7	67.3	1610		8.483721	
8	2	9	72.0	1543		10.260798	
9	2	8	97.2	1495		11.024393	

Bin5 Statistics 3

Trial #	Pulse	Chirp (MHz)	Pulse Width (μS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	9	71.9			0.429988	1
1	2	9	70.7	1781		2.204828	
2	2	5	73.7	1780		2.870728	
3	2	6	63.8	1742		3.713411	
4	2	17	82.0	1085		5.719816	
5	2	14	84.3	1475		6.760104	
6	2	14	89.1	1545		7.920371	
7	2	5	86.9	1245		8.408499	
8	3	6	52.7	1205	1554	9.880720	
9	2	19	91.2	1169		11.033754	

Bin5 Statistics 4

Trial #	Pulse	Chirp (MHz)	Pulse Width (μS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	17	68.1			0.043611	1
1	2	14	61.1	1274		1.483824	
2	2	16	64.9	1310		1.934480	
3	2	17	62.9	1776		2.374083	
4	1	5	61.8			3.016960	
5	2	15	90.8	1238		4.448525	
6	1	16	93.0			5.074171	
7	2	14	91.8	1434		5.320735	
8	1	14	90.9			6.741547	
9	2	14	99.7	1479		7.225304	
10	3	8	52.4	1400	1114	7.942678	
11	2	10	80.1	1103		8.315846	
12	3	19	90.2	1649	1667	9.605873	
13	3	10	90.6	1992	1240	10.259328	
14	1	8	78.6			10.597178	
15	3	8	64.6	1546	1345	11.536564	

Bin5 Statistics 5

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	14	56.1	1921	1352	0.703669	
1	1	16	63.7			1.549986	
2	2	15	99.8	1987		2.148353	
3	1	19	65.9			3.091588	
4	2	12	50.5	1141		3.811913	
5	1	9	59.9			4.613838	
6	2	11	91.6	1273		4.923487	
7	1	11	96.4			5.924677	1
8	3	12	95.7	1671	1117	7.041956	
9	3	10	76.2	1367	1631	7.405259	
10	1	14	71.8			8.081320	
11	2	16	56.5	1395		9.084580	
12	3	12	82.9	1486	1785	9.682815	
13	3	16	58.7	1833	1981	10.743558	
14	2	17	65.6	1994		11.385232	

Bin5 Statistics 6

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	13	59.2	1932		0.467507	
1	2	11	99.8	1408		0.877825	
2	1	13	65.5			2.230852	
3	3	12	57.6	1145	1717	2.259851	
4	2	16	50.2	1159		3.252684	
5	1	15	60.7			3.785847	
6	3	16	56.4	1470	1103	5.040907	
7	2	6	76.5	1612		5.803744	1
8	2	20	71.0	1687		6.595130	
9	3	8	57.2	1869	1817	6.984745	
10	2	20	93.6	1516		7.500413	
11	2	18	70.3	1126		8.890484	
12	3	7	61.0	1171	1798	9.161287	
13	1	11	88.4			10.157370	
14	3	12	77.0	1935	1504	11.222210	
15	2	13	64.7	1360		11.666728	

Bin5 Statistics 7

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	10	65.7			0.017914	1
1	3	19	73.2	1025	1663	1.261286	
2	1	18	86.9			1.968478	
3	1	5	66.5			2.772495	
4	2	9	71.6	1092		3.083513	
5	2	5	82.8	1975		3.754759	
6	3	5	85.2	1162	1602	4.784340	
7	2	10	78.9	1912		5.369343	
8	3	15	71.8	1071	1732	6.403522	
9	2	10	58.3	1055		7.122616	
10	2	13	95.7	1703		8.094689	
11	3	9	64.6	1002	1110	8.928983	
12	2	14	68.7	1542		9.572961	
13	2	19	71.7	1979		10.083850	
14	1	16	68.9			10.927369	
15	2	9	87.8	1278		11.319857	

Bin5 Statistics 8

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	12	94.8	1178	1348	0.410584	1
1	3	8	99.6	1748	1840	2.576294	
2	2	5	68.2	1988		3.015116	
3	2	14	54.6	1776		4.823589	
4	1	16	88.3			6.239962	
5	3	7	82.8	1065	1624	6.996075	
6	2	11	76.9	1777		8.527091	
7	2	11	99.8	1782		10.214117	
8	1	13	57.8			10.804822	

Bin5 Statistics 9

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	18	73.4			0.002033	
1	2	8	83.2	1129		1.158870	
2	2	19	84.2	1222		1.494729	
3	2	17	96.5	1943		1.988624	
4	1	11	77.4			2.802132	
5	2	11	70.6	1790		3.316432	
6	2	8	74.4	1433		3.946625	
7	2	19	59.5	1628		4.637439	
8	2	14	75.3	1652		5.539654	
9	2	10	54.2	1434		6.132593	1
10	2	17	81.7	1996		6.384687	
11	1	6	58.3			6.995080	
12	2	11	65.4	1315		7.953661	
13	3	18	96.8	1052	1631	8.453264	
14	2	7	62.5	1671		9.247864	
15	2	17	89.9	1589		9.580879	
16	2	16	92.4	1514		10.172986	
17	2	9	89.3	1144		11.025829	
18	3	17	86.7	1879	1609	11.968323	

Bin5 Statistics 10

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	12	72.2	1024	1662	0.853179	
1	3	9	79.7	1683	1515	1.288677	
2	3	7	51.3	1089	1467	2.403198	
3	2	5	66.9	1359		3.647388	
4	2	17	59.7	1832		4.050929	
5	3	18	88.0	1671	1798	5.309500	
6	1	20	75.3			5.866324	1
7	3	15	85.0	1792	1845	7.039982	
8	2	13	64.8	1233		7.707171	
9	3	10	85.9	1255	1519	8.370346	
10	1	15	81.9			9.247876	
11	2	16	76.7	1014		11.016845	
12	2	7	80.6	1148		11.885269	

Bin5 Statistics 11

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	15	71.2	1211	1914	0.129701	1
1	1	14	68.0			1.348309	
2	1	16	82.3			2.667753	
3	1	19	56.7			3.767650	
4	2	14	94.3	1797		4.731092	
5	1	14	62.1			5.060281	
6	3	12	57.3	1410	1537	6.918712	
7	2	20	62.0	1685		7.853327	
8	2	12	79.5	1714		8.639454	
9	3	18	81.8	1407	1975	9.028675	
10	2	19	55.6	1965		10.776095	
11	1	7	91.1			11.101464	

Bin5 Statistics 12

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	14	69.3	1861		0.560932	1
1	1	13	77.4			1.063542	
2	2	17	62.9	1684		1.911900	
3	2	7	68.5	1309		2.124648	
4	2	8	82.4	1074		3.166918	
5	3	19	96.9	1454	1396	3.723105	
6	2	17	79.2	1447		4.483951	
7	3	12	72.8	1649	1724	5.048377	
8	2	15	71.7	1595		5.820336	
9	1	6	73.4			6.514393	
10	1	11	92.3			7.228603	
11	2	18	77.9	1704		7.851640	
12	1	20	65.0			8.942548	
13	2	10	58.5	1680		9.653287	
14	3	20	99.0	1410	1654	10.060405	
15	1	14	62.3			10.768966	
16	3	18	61.9	1670	1874	11.434681	

Bin5 Statistics 13

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	19	85.6			0.123932	
1	3	15	55.0	1183	1286	1.187733	
2	3	10	51.8	1970	1206	2.040886	
3	2	14	88.3	1199		3.208060	
4	2	15	64.4	1722		4.281461	
5	2	14	66.4	1515		5.374344	
6	1	12	66.1			5.898829	1
7	3	16	98.9	1771	1796	7.138583	
8	1	12	74.8			8.295433	
9	3	19	62.3	1942	1842	8.742099	
10	2	5	77.7	1247		9.278267	
11	1	5	72.2			11.022628	
12	2	10	65.9	1769		11.460280	

Bin5 Statistics 14

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	14	53.7	1035		0.338071	
1	3	13	78.7	1365	1089	0.874243	
2	1	19	82.2			2.100351	
3	1	5	67.5			2.326128	
4	1	11	85.2			2.825726	
5	2	7	82.1	1731		3.598453	
6	2	8	56.1	1026		4.320479	
7	2	20	99.5	1091		5.197306	
8	2	10	86.0	1037		6.202552	1
9	2	15	72.0	1445		6.664056	
10	1	10	86.7			7.093799	
11	3	15	96.7	1061	1216	7.866103	
12	3	13	76.6	1234	1841	8.472941	
13	2	10	93.4	1203		9.191394	
14	3	13	81.6	1120	1406	10.469590	
15	2	17	88.2	1340		10.889567	
16	2	12	96.9	1259		11.975921	

Bin5 Statistics 15

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	16	79.8			0.788461	1
1	2	9	81.4	1145		1.165227	
2	3	7	89.1	1438	1100	2.411682	
3	1	7	54.9			3.245131	
4	3	15	99.7	1774	1589	3.569499	
5	2	17	68.3	1777		4.570430	
6	2	12	73.3	1239		5.840705	
7	1	17	55.9			6.279495	
8	2	15	86.7	1691		7.504734	
9	1	9	50.5			8.075668	
10	1	20	66.3			9.325223	
11	2	17	85.1	1914		9.805213	
12	1	17	69.8			10.934667	
13	2	11	50.6	1770		11.589236	

Bin5 Statistics 16

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	11	76.2	1404	1897	0.036663	1
1	1	12	95.9			2.317893	
2	2	12	75.3	1746		3.045482	
3	2	13	85.4	1253		3.844754	
4	2	19	57.2	1078		4.976093	
5	1	15	55.0			6.716680	
6	3	14	76.1	1511	1234	7.910165	
7	1	18	81.4			8.686127	
8	2	9	61.2	1612		9.708313	
9	3	16	80.3	1328	1765	11.311783	

Bin5 Statistics 17

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	17	90.8	1500		0.025102	
1	1	13	59.7			1.196199	
2	1	5	75.7			1.874307	
3	1	6	57.2			3.549672	
4	2	14	72.9	1726		4.229594	
5	1	18	79.5			4.724053	
6	2	18	51.7	1527		6.381466	1
7	1	10	79.5			7.373113	
8	2	17	74.3	1717		8.225111	
9	2	17	96.2	1534		8.332613	
10	2	19	82.5	1054		9.992369	
11	3	9	51.6	1222	1929	10.826141	
12	3	12	66.4	1979	1285	11.933398	

Bin5 Statistics 18

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	13	54.1	1361		0.268641	
1	1	19	82.0			1.547702	
2	1	6	72.6			1.986409	
3	1	14	95.5			2.868925	
4	2	11	82.9	1831		4.154774	
5	1	11	97.1			4.493376	
6	3	6	85.6	1154	1870	5.993007	1
7	1	20	50.9			6.849795	
8	2	6	55.5	1514		7.368478	
9	2	12	88.0	1962		8.172162	
10	3	13	68.8	1710	1529	8.769338	
11	3	9	85.5	1714	1238	10.057297	
12	3	14	59.3	1063	1477	10.722443	
13	1	10	65.7			11.848189	

Bin5 Statistics 19

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	14	84.6	1148		0.542020	
1	2	18	62.2	1429		1.059431	
2	3	8	85.4	1385	1206	2.220585	
3	1	12	86.7			2.757570	
4	1	18	98.4			3.723120	
5	3	14	99.8	1263	1955	4.477143	
6	1	15	68.2			4.917170	
7	2	7	78.0	1475		5.576721	1
8	1	17	94.3			6.619446	
9	2	15	90.6	1748		7.028094	
10	3	16	58.7	1431	1542	8.028921	
11	2	9	83.7	1723		8.314986	
12	1	10	71.9			9.083448	
13	1	15	74.0			9.846991	
14	1	8	65.3			11.146507	
15	2	8	57.5	1917		11.351752	

Bin5 Statistics 20

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	11	64.2			0.407475	
1	3	11	73.2	1370	1515	1.252060	
2	1	10	83.0			3.225599	
3	2	18	91.2	1532		3.407431	
4	1	15	81.5			4.609372	
5	2	15	66.1	1337		6.060029	1
6	2	8	94.2	1530		7.418506	
7	2	16	97.5	1403		8.099724	
8	1	13	69.7			9.531984	
9	1	18	51.1			10.417600	
10	3	16	80.3	1759	1804	11.156814	

Bin5 Statistics 21

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	9	87.9	1355		0.845820	1
1	2	14	94.9	1276		2.410361	
2	2	17	95.4	1936		3.212047	
3	2	7	87.4	1238		4.479336	
4	2	18	95.2	1989		6.629267	
5	1	9	73.2			6.930196	
6	2	15	67.6	1477		8.423105	
7	2	16	87.1	1604		9.931891	
8	3	10	87.2	1171	1083	10.756074	

Bin5 Statistics 22

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	20	89.9	1160		0.008739	1
1	1	7	71.7			1.843358	
2	2	17	55.4	1178		4.292559	
3	3	6	97.6	1929	1304	4.819697	
4	1	19	71.8			6.601673	
5	2	17	56.0	1729		8.174913	
6	1	19	70.1			9.839402	
7	2	18	97.3	1836		10.787607	

Bin5 Statistics 23

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	19	65.0	1224	1777	0.164829	
1	1	20	99.3			1.083037	
2	1	9	79.0			1.944070	
3	2	15	95.1	1694		2.586725	
4	2	6	61.9	1857		3.813849	
5	2	19	56.3	1099		4.545767	
6	1	11	90.0			5.352517	
7	2	7	90.2	1446		6.081588	1
8	3	12	51.5	1879	1405	7.171231	
9	2	8	74.2	1625		7.557826	
10	2	19	67.3	1542		8.532695	
11	2	7	60.4	1310		9.137609	
12	3	12	93.4	1576	1735	10.219451	
13	1	10	50.9			10.614183	
14	2	18	86.1	1599		11.753438	

Bin5 Statistics 24

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	7	95.0	1032		0.685235	
1	3	14	72.6	1821	1798	1.494008	
2	2	6	72.3	1974		3.319799	
3	2	18	67.9	1234		4.113701	
4	3	19	57.6	1970	1798	6.626233	1
5	3	15	50.5	1561	1928	6.974646	
6	2	12	63.4	1055		8.997694	
7	2	10	77.0	1803		10.051100	
8	2	17	88.2	1204		10.683121	

Bin5 Statistics 25

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	19	65.4	1143		0.286288	
1	2	19	72.4	1718		1.244291	
2	2	9	76.8	1775		2.459245	
3	3	11	56.7	1119	1492	3.400717	
4	1	7	54.6			4.529244	
5	2	12	61.1	1515		5.427943	
6	2	11	63.3	1781		5.706001	1
7	2	17	88.6	1069		7.304591	
8	3	7	54.4	1609	1389	7.623780	
9	2	11	56.3	1900		8.480772	
10	2	14	74.2	1982		9.656739	
11	2	16	73.8	1564		10.691830	
12	3	6	58.0	1731	1368	11.611419	

Bin5 Statistics 26

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	8	89.1	1520		0.100016	
1	1	9	98.0			1.181714	
2	3	8	81.3	1593	1773	2.173331	
3	3	14	63.7	1875	1425	2.412784	
4	1	16	77.9			3.796039	
5	2	9	55.7	1720		4.553139	
6	1	18	85.4			5.579838	
7	2	16	94.8	1981		5.752361	1
8	3	13	53.4	1084	1819	7.079694	
9	3	7	95.1	1513	1276	7.774808	
10	2	10	74.6	1173		8.660320	
11	3	5	56.3	1976	1318	9.348975	
12	1	9	56.9			10.374297	
13	2	13	52.0	1448		10.417536	
14	1	18	76.7			11.389618	

Bin5 Statistics 27

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	15	96.3	1887	1218	0.498076	
1	1	14	72.8			0.709329	
2	2	9	91.4	1653		1.471970	
3	1	7	62.2			2.119318	
4	2	9	61.0	1359		2.767680	
5	1	14	72.3			3.357349	
6	1	12	50.4			3.888615	
7	2	13	77.9	1713		4.374028	
8	3	16	77.4	1752	1675	4.862011	
9	2	14	69.4	1392		5.448612	
10	2	17	72.8	1361		6.369630	1
11	3	7	69.3	1437	1003	6.971347	
12	2	17	78.4	1223		7.491388	
13	2	16	90.0	1391		8.357266	
14	1	16	80.2			8.810356	
15	1	7	50.3			9.588889	
16	2	9	58.9	1753		9.810747	
17	3	8	84.8	1013	1001	10.542962	
18	1	13	72.0			10.820371	
19	2	19	76.4	1722		11.441685	

Bin5 Statistics 28

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	14	79.3	1613		0.198361	
1	3	15	74.1	1524	1831	1.473475	
2	2	11	94.3	1131		1.735947	
3	2	14	54.8	1502		3.152401	
4	2	17	90.6	1851		3.869054	
5	1	19	80.5			4.689547	
6	3	14	76.1	1320	1970	5.380623	
7	1	10	94.8			5.892498	1
8	2	9	79.4	1146		7.030551	
9	2	18	82.8	1704		7.916322	
10	3	11	72.7	1443	1595	8.681367	
11	2	10	91.9	1166		9.033695	
12	1	7	71.2			9.768741	
13	2	6	65.6	1300		10.707870	
14	2	7	84.3	1047		11.613914	

Bin5 Statistics 29

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	6	61.5			0.613765	
1	2	12	75.0	1704		1.213466	
2	3	12	95.3	1413	1706	1.875881	
3	2	9	89.0	1815		2.423357	
4	2	9	72.0	1311		2.977578	
5	2	8	53.4	1373		3.593334	
6	2	11	53.8	1082		3.839487	
7	2	5	91.5	1382		4.703057	
8	2	5	81.1	1759		5.114989	
9	1	19	60.4			5.762028	1
10	2	11	60.4	1251		6.593217	
11	1	14	69.5			7.112433	
12	2	11	68.2	1106		8.044546	
13	2	6	95.0	1054		8.407470	
14	2	6	56.8	1507		9.012084	
15	1	19	51.9			9.790919	
16	3	15	98.4	1409	1573	10.341780	
17	3	8	80.5	1953	1435	10.969650	

Bin5 Statistics 30

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	18	97.9	1048		0.523737	
1	1	9	95.1			0.857279	
2	1	12	51.8			1.569492	
3	1	7	60.3			1.963404	
4	2	7	54.9	1464		2.990436	
5	2	17	67.9	1327		3.576701	
6	3	17	70.9	1102	1931	4.322146	
7	3	15	87.4	1661	1675	4.564141	
8	3	17	88.7	1448	1880	5.309191	
9	2	8	93.5	1527		6.068869	1
10	3	12	63.0	1216	1618	6.784505	
11	1	16	50.5			7.024453	
12	3	9	91.3	1441	1071	8.145549	
13	2	11	89.9	1456		8.680560	
14	2	10	70.1	1966		9.343278	
15	2	19	70.9	1166		9.659838	
16	1	6	51.5			10.320401	
17	1	11	53.4			11.325929	
18	1	11	93.7			11.765726	

Table-6 Radar Type 6 Statistical Performance

Trial #	Fc (MHz)	Pulse /Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)	Hopping Sequence
1	5260	9	1	333	1	5403.0, 5538.0, 5685.0, 5709.0, 5347.0, 5701.0, 5341.0, 5420.0, 5700.0, 5481.0, 5314.0, 5450.0, 5655.0, 5718.0, 5405.0, 5395.0, 5345.0, 5604.0, 5542.0, 5290.0, 5688.0, 5669.0, 5635.0, 5567.0, 5262.0, 5298.0, 5308.0, 5699.0, 5720.0, 5264.0, 5305.0, 5438.0, 5585.0, 5335.0, 5621.0, 5406.0, 5385.0, 5355.0, 5539.0, 5388.0, 5285.0, 5543.0, 5381.0, 5475.0, 5706.0, 5544.0, 5534.0, 5656.0, 5498.0, 5570.0, 5432.0, 5670.0, 5460.0, 5440.0, 5558.0, 5493.0, 5708.0, 5333.0, 5295.0, 5362.0, 5433.0, 5311.0, 5686.0, 5448.0, 5410.0, 5352.0, 5640.0, 5716.0, 5714.0, 5251.0, 5703.0, 5629.0, 5495.0, 5528.0, 5694.0, 5445.0, 5572.0, 5671.0, 5274.0, 5529.0, 5474.0, 5394.0, 5489.0, 5601.0, 5472.0, 5672.0, 5280.0, 5584.0, 5269.0, 5439.0, 5343.0, 5591.0, 5253.0, 5390.0, 5553.0, 5315.0, 5470.0, 5710.0, 5649.0, 5276.0 (number of hits: 5)
2	5260	9	1	333	1	5261.0, 5566.0, 5330.0, 5301.0, 5564.0, 5601.0, 5597.0, 5417.0, 5537.0, 5313.0, 5675.0, 5508.0, 5697.0, 5336.0, 5474.0, 5326.0, 5504.0, 5581.0, 5444.0, 5595.0, 5331.0, 5540.0, 5415.0, 5412.0, 5402.0, 5650.0, 5698.0, 5522.0, 5510.0, 5378.0, 5651.0, 5458.0, 5658.0, 5459.0, 5296.0, 5572.0, 5549.0, 5529.0, 5367.0, 5635.0, 5271.0, 5263.0, 5626.0, 5681.0, 5493.0, 5419.0, 5438.0, 5375.0, 5490.0, 5654.0, 5464.0, 5396.0, 5621.0, 5353.0, 5439.0, 5323.0, 5708.0, 5320.0, 5282.0, 5432.0, 5389.0, 5693.0, 5520.0, 5662.0, 5491.0, 5544.0, 5546.0, 5671.0, 5551.0, 5436.0, 5442.0, 5408.0, 5602.0, 5443.0, 5344.0, 5666.0, 5686.0, 5586.0, 5401.0, 5273.0, 5407.0, 5340.0, 5624.0, 5562.0, 5492.0, 5660.0, 5715.0, 5433.0, 5486.0, 5302.0, 5623.0, 5617.0, 5667.0, 5373.0, 5274.0, 5534.0, 5712.0, 5429.0, 5483.0, 5352.0 (number of hits: 2)
3	5260	9	1	333	1	5715.0, 5587.0, 5555.0, 5290.0, 5468.0, 5516.0, 5319.0, 5645.0, 5699.0, 5630.0, 5276.0, 5686.0, 5406.0, 5392.0, 5657.0, 5391.0, 5723.0, 5456.0, 5617.0, 5673.0, 5284.0, 5540.0, 5434.0, 5704.0, 5269.0, 5558.0, 5600.0, 5713.0, 5352.0, 5337.0, 5368.0, 5446.0, 5567.0, 5643.0, 5521.0, 5666.0, 5295.0, 5511.0, 5344.0, 5602.0, 5644.0, 5287.0, 5675.0, 5282.0, 5714.0, 5634.0, 5340.0, 5270.0, 5372.0, 5479.0, 5476.0, 5336.0, 5383.0, 5429.0, 5598.0,

						5289.0, 5542.0, 5518.0, 5423.0, 5326.0, 5618.0, 5381.0, 5432.0, 5268.0, 5638.0, 5301.0, 5472.0, 5452.0, 5601.0, 5651.0, 5676.0, 5709.0, 5720.0, 5543.0, 5565.0, 5437.0, 5654.0, 5251.0, 5359.0, 5512.0, 5419.0, 5320.0, 5622.0, 5482.0, 5296.0, 5611.0, 5509.0, 5442.0, 5281.0, 5541.0, 5718.0, 5703.0, 5411.0, 5346.0, 5637.0, 5294.0, 5457.0, 5266.0, 5316.0, 5677.0 (number of hits: 4)
4	5260	9	1	333	1	5721.0, 5482.0, 5570.0, 5677.0, 5274.0, 5339.0, 5636.0, 5372.0, 5644.0, 5364.0, 5553.0, 5253.0, 5410.0, 5321.0, 5386.0, 5451.0, 5683.0, 5481.0, 5619.0, 5351.0, 5584.0, 5273.0, 5379.0, 5264.0, 5296.0, 5708.0, 5377.0, 5332.0, 5541.0, 5432.0, 5603.0, 5569.0, 5368.0, 5319.0, 5609.0, 5311.0, 5287.0, 5545.0, 5642.0, 5705.0, 5370.0, 5444.0, 5648.0, 5653.0, 5276.0, 5632.0, 5267.0, 5718.0, 5471.0, 5403.0, 5595.0, 5285.0, 5716.0, 5567.0, 5707.0, 5353.0, 5459.0, 5331.0, 5348.0, 5509.0, 5315.0, 5371.0, 5468.0, 5411.0, 5517.0, 5493.0, 5538.0, 5554.0, 5565.0, 5395.0, 5413.0, 5400.0, 5405.0, 5610.0, 5490.0, 5506.0, 5367.0, 5588.0, 5681.0, 5581.0, 5456.0, 5360.0, 5686.0, 5310.0, 5703.0, 5659.0, 5388.0, 5667.0, 5720.0, 5528.0, 5571.0, 5300.0, 5598.0, 5322.0, 5324.0, 5684.0, 5673.0, 5425.0, 5378.0, 5439.0 (number of hits: 3)
5	5260	9	1	333	1	5373.0, 5482.0, 5679.0, 5428.0, 5404.0, 5573.0, 5687.0, 5486.0, 5472.0, 5508.0, 5672.0, 5543.0, 5280.0, 5318.0, 5713.0, 5627.0, 5570.0, 5279.0, 5420.0, 5435.0, 5362.0, 5586.0, 5256.0, 5702.0, 5345.0, 5677.0, 5718.0, 5252.0, 5722.0, 5639.0, 5471.0, 5438.0, 5565.0, 5412.0, 5355.0, 5333.0, 5683.0, 5507.0, 5596.0, 5500.0, 5409.0, 5389.0, 5271.0, 5587.0, 5585.0, 5474.0, 5602.0, 5675.0, 5421.0, 5540.0, 5620.0, 5497.0, 5367.0, 5653.0, 5666.0, 5253.0, 5553.0, 5694.0, 5617.0, 5714.0, 5258.0, 5657.0, 5546.0, 5483.0, 5658.0, 5419.0, 5566.0, 5274.0, 5285.0, 5397.0, 5424.0, 5594.0, 5622.0, 5581.0, 5607.0, 5331.0, 5414.0, 5630.0, 5440.0, 5396.0, 5572.0, 5275.0, 5277.0, 5615.0, 5450.0, 5480.0, 5699.0, 5357.0, 5422.0, 5399.0, 5656.0, 5579.0, 5423.0, 5591.0, 5324.0, 5379.0, 5554.0, 5343.0, 5625.0, 5284.0 (number of hits: 4)
6	5260	9	1	333	1	5697.0, 5284.0, 5424.0, 5257.0, 5613.0, 5315.0, 5278.0, 5573.0, 5359.0, 5358.0, 5509.0, 5464.0, 5472.0, 5320.0, 5505.0, 5523.0, 5286.0, 5687.0, 5668.0, 5671.0, 5583.0, 5348.0, 5294.0, 5386.0, 5487.0, 5296.0, 5390.0, 5482.0, 5326.0, 5367.0, 5256.0, 5442.0, 5444.0, 5465.0, 5601.0,

						5474.0, 5489.0, 5306.0, 5636.0, 5463.0, 5307.0, 5447.0, 5721.0, 5416.0, 5375.0, 5414.0, 5407.0, 5341.0, 5421.0, 5657.0, 5462.0, 5536.0, 5445.0, 5415.0, 5501.0, 5572.0, 5630.0, 5426.0, 5401.0, 5568.0, 5681.0, 5592.0, 5641.0, 5425.0, 5544.0, 5360.0, 5323.0, 5638.0, 5648.0, 5673.0, 5383.0, 5587.0, 5321.0, 5270.0, 5569.0, 5260.0, 5302.0, 5378.0, 5441.0, 5253.0, 5542.0, 5635.0, 5614.0, 5656.0, 5406.0, 5620.0, 5615.0, 5558.0, 5605.0, 5679.0, 5554.0, 5643.0, 5371.0, 5419.0, 5267.0, 5443.0, 5440.0, 5646.0, 5699.0, 5616.0 (number of hits: 5)
7	5260	9	1	333	1	5491.0, 5382.0, 5409.0, 5362.0, 5251.0, 5423.0, 5378.0, 5519.0, 5564.0, 5344.0, 5441.0, 5598.0, 5535.0, 5545.0, 5577.0, 5294.0, 5360.0, 5712.0, 5715.0, 5433.0, 5459.0, 5503.0, 5649.0, 5684.0, 5690.0, 5436.0, 5644.0, 5672.0, 5587.0, 5493.0, 5260.0, 5701.0, 5389.0, 5686.0, 5317.0, 5563.0, 5525.0, 5594.0, 5332.0, 5316.0, 5631.0, 5385.0, 5618.0, 5716.0, 5329.0, 5710.0, 5526.0, 5337.0, 5642.0, 5426.0, 5284.0, 5369.0, 5720.0, 5510.0, 5679.0, 5652.0, 5632.0, 5697.0, 5406.0, 5259.0, 5578.0, 5392.0, 5304.0, 5292.0, 5501.0, 5492.0, 5550.0, 5527.0, 5307.0, 5660.0, 5601.0, 5431.0, 5645.0, 5596.0, 5330.0, 5651.0, 5377.0, 5571.0, 5365.0, 5534.0, 5528.0, 5384.0, 5301.0, 5607.0, 5413.0, 5394.0, 5718.0, 5615.0, 5302.0, 5579.0, 5273.0, 5689.0, 5440.0, 5590.0, 5543.0, 5453.0, 5483.0, 5438.0, 5567.0, 5489.0 (number of hits: 3)
8	5260	9	1	333	1	5691.0, 5410.0, 5570.0, 5350.0, 5366.0, 5341.0, 5392.0, 5330.0, 5628.0, 5591.0, 5347.0, 5289.0, 5323.0, 5540.0, 5395.0, 5661.0, 5285.0, 5714.0, 5658.0, 5542.0, 5592.0, 5508.0, 5556.0, 5695.0, 5547.0, 5327.0, 5484.0, 5715.0, 5633.0, 5423.0, 5326.0, 5577.0, 5428.0, 5559.0, 5624.0, 5282.0, 5678.0, 5312.0, 5442.0, 5620.0, 5533.0, 5267.0, 5348.0, 5634.0, 5339.0, 5564.0, 5275.0, 5626.0, 5397.0, 5699.0, 5589.0, 5587.0, 5314.0, 5266.0, 5596.0, 5478.0, 5437.0, 5521.0, 5683.0, 5379.0, 5510.0, 5692.0, 5706.0, 5393.0, 5615.0, 5660.0, 5284.0, 5469.0, 5552.0, 5597.0, 5663.0, 5257.0, 5704.0, 5700.0, 5427.0, 5349.0, 5270.0, 5474.0, 5558.0, 5671.0, 5648.0, 5625.0, 5652.0, 5473.0, 5450.0, 5585.0, 5530.0, 5316.0, 5541.0, 5494.0, 5415.0, 5513.0, 5372.0, 5402.0, 5377.0, 5486.0, 5572.0, 5546.0, 5376.0, 5408.0 (number of hits: 3)
9	5260	9	1	333	1	5563.0, 5550.0, 5494.0, 5539.0, 5505.0, 5437.0, 5329.0, 5361.0, 5673.0, 5693.0, 5589.0, 5452.0, 5531.0, 5449.0, 5443.0,

						5532.0, 5620.0, 5375.0, 5667.0, 5559.0, 5460.0, 5358.0, 5690.0, 5265.0, 5663.0, 5326.0, 5612.0, 5565.0, 5398.0, 5478.0, 5308.0, 5573.0, 5691.0, 5685.0, 5316.0, 5722.0, 5379.0, 5327.0, 5387.0, 5260.0, 5700.0, 5514.0, 5708.0, 5489.0, 5458.0, 5428.0, 5301.0, 5500.0, 5434.0, 5692.0, 5671.0, 5549.0, 5335.0, 5613.0, 5273.0, 5527.0, 5312.0, 5294.0, 5338.0, 5450.0, 5649.0, 5299.0, 5290.0, 5412.0, 5675.0, 5339.0, 5540.0, 5421.0, 5616.0, 5303.0, 5380.0, 5695.0, 5699.0, 5459.0, 5464.0, 5562.0, 5705.0, 5430.0, 5506.0, 5480.0, 5622.0, 5463.0, 5289.0, 5684.0, 5365.0, 5268.0, 5495.0, 5525.0, 5359.0, 5272.0, 5666.0, 5517.0, 5552.0, 5319.0, 5399.0, 5710.0, 5545.0, 5508.0, 5717.0, 5446.0 (number of hits: 3)
10	5260	9	1	333	1	5685.0, 5499.0, 5378.0, 5307.0, 5547.0, 5703.0, 5420.0, 5410.0, 5676.0, 5564.0, 5497.0, 5581.0, 5680.0, 5520.0, 5415.0, 5432.0, 5411.0, 5479.0, 5382.0, 5621.0, 5501.0, 5613.0, 5698.0, 5518.0, 5598.0, 5704.0, 5376.0, 5333.0, 5575.0, 5642.0, 5258.0, 5549.0, 5653.0, 5304.0, 5311.0, 5666.0, 5391.0, 5561.0, 5325.0, 5521.0, 5590.0, 5489.0, 5709.0, 5345.0, 5288.0, 5656.0, 5572.0, 5260.0, 5278.0, 5522.0, 5554.0, 5471.0, 5466.0, 5544.0, 5272.0, 5643.0, 5401.0, 5467.0, 5250.0, 5347.0, 5372.0, 5516.0, 5630.0, 5537.0, 5386.0, 5689.0, 5452.0, 5331.0, 5313.0, 5637.0, 5551.0, 5506.0, 5555.0, 5503.0, 5525.0, 5429.0, 5389.0, 5493.0, 5509.0, 5373.0, 5277.0, 5657.0, 5275.0, 5445.0, 5527.0, 5470.0, 5457.0, 5306.0, 5648.0, 5571.0, 5495.0, 5644.0, 5486.0, 5636.0, 5681.0, 5274.0, 5577.0, 5487.0, 5394.0, 5334.0 (number of hits: 3)
11	5260	9	1	333	1	5643.0, 5295.0, 5436.0, 5513.0, 5597.0, 5684.0, 5452.0, 5686.0, 5474.0, 5406.0, 5485.0, 5290.0, 5705.0, 5480.0, 5466.0, 5692.0, 5504.0, 5363.0, 5584.0, 5274.0, 5402.0, 5341.0, 5302.0, 5583.0, 5508.0, 5289.0, 5592.0, 5582.0, 5464.0, 5345.0, 5265.0, 5413.0, 5404.0, 5465.0, 5631.0, 5602.0, 5273.0, 5450.0, 5671.0, 5432.0, 5538.0, 5635.0, 5430.0, 5378.0, 5581.0, 5596.0, 5533.0, 5260.0, 5715.0, 5309.0, 5462.0, 5392.0, 5563.0, 5366.0, 5469.0, 5622.0, 5624.0, 5379.0, 5259.0, 5528.0, 5486.0, 5348.0, 5719.0, 5599.0, 5421.0, 5297.0, 5707.0, 5271.0, 5625.0, 5580.0, 5593.0, 5334.0, 5595.0, 5524.0, 5520.0, 5556.0, 5473.0, 5458.0, 5336.0, 5447.0, 5484.0, 5515.0, 5687.0, 5544.0, 5303.0, 5412.0, 5320.0, 5494.0, 5483.0, 5275.0, 5699.0, 5516.0, 5359.0, 5257.0, 5357.0, 5502.0, 5284.0, 5496.0, 5586.0, 5489.0

						(number of hits: 4)
12	5260	9	1	333	1	5413.0, 5543.0, 5336.0, 5632.0, 5547.0, 5464.0, 5698.0, 5297.0, 5390.0, 5334.0, 5405.0, 5613.0, 5444.0, 5485.0, 5345.0, 5340.0, 5475.0, 5293.0, 5724.0, 5269.0, 5270.0, 5522.0, 5292.0, 5255.0, 5641.0, 5518.0, 5459.0, 5597.0, 5561.0, 5492.0, 5433.0, 5309.0, 5660.0, 5602.0, 5307.0, 5673.0, 5634.0, 5583.0, 5533.0, 5594.0, 5567.0, 5647.0, 5339.0, 5600.0, 5251.0, 5353.0, 5609.0, 5612.0, 5253.0, 5640.0, 5355.0, 5611.0, 5623.0, 5591.0, 5466.0, 5657.0, 5322.0, 5520.0, 5406.0, 5453.0, 5650.0, 5558.0, 5429.0, 5500.0, 5381.0, 5664.0, 5262.0, 5268.0, 5674.0, 5521.0, 5379.0, 5329.0, 5570.0, 5488.0, 5461.0, 5571.0, 5703.0, 5710.0, 5483.0, 5700.0, 5714.0, 5539.0, 5633.0, 5536.0, 5348.0, 5658.0, 5666.0, 5338.0, 5447.0, 5584.0, 5386.0, 5663.0, 5300.0, 5704.0, 5378.0, 5497.0, 5671.0, 5551.0, 5517.0, 5430.0 (number of hits: 6)
13	5260	9	1	333	1	5693.0, 5386.0, 5349.0, 5307.0, 5259.0, 5437.0, 5382.0, 5471.0, 5624.0, 5288.0, 5432.0, 5573.0, 5711.0, 5568.0, 5581.0, 5577.0, 5483.0, 5411.0, 5558.0, 5544.0, 5395.0, 5628.0, 5385.0, 5475.0, 5291.0, 5664.0, 5446.0, 5299.0, 5441.0, 5425.0, 5251.0, 5632.0, 5674.0, 5320.0, 5315.0, 5586.0, 5572.0, 5477.0, 5256.0, 5708.0, 5542.0, 5704.0, 5659.0, 5455.0, 5312.0, 5418.0, 5560.0, 5254.0, 5703.0, 5629.0, 5637.0, 5282.0, 5653.0, 5651.0, 5556.0, 5431.0, 5306.0, 5370.0, 5336.0, 5538.0, 5551.0, 5362.0, 5608.0, 5654.0, 5430.0, 5474.0, 5710.0, 5484.0, 5570.0, 5402.0, 5277.0, 5374.0, 5283.0, 5338.0, 5527.0, 5351.0, 5503.0, 5528.0, 5512.0, 5331.0, 5687.0, 5636.0, 5321.0, 5491.0, 5633.0, 5365.0, 5359.0, 5281.0, 5314.0, 5616.0, 5267.0, 5439.0, 5486.0, 5516.0, 5375.0, 5468.0, 5342.0, 5505.0, 5409.0, 5671.0 (number of hits: 5)
14	5260	9	1	333	1	5471.0, 5596.0, 5606.0, 5669.0, 5591.0, 5262.0, 5473.0, 5429.0, 5618.0, 5563.0, 5281.0, 5441.0, 5313.0, 5550.0, 5494.0, 5658.0, 5505.0, 5556.0, 5647.0, 5292.0, 5582.0, 5594.0, 5527.0, 5342.0, 5442.0, 5353.0, 5549.0, 5635.0, 5344.0, 5586.0, 5584.0, 5489.0, 5409.0, 5290.0, 5644.0, 5715.0, 5511.0, 5389.0, 5507.0, 5408.0, 5578.0, 5686.0, 5664.0, 5448.0, 5524.0, 5562.0, 5504.0, 5545.0, 5362.0, 5371.0, 5381.0, 5383.0, 5338.0, 5454.0, 5674.0, 5540.0, 5681.0, 5572.0, 5625.0, 5306.0, 5322.0, 5276.0, 5468.0, 5421.0, 5265.0, 5428.0, 5581.0, 5399.0, 5668.0, 5723.0, 5696.0, 5484.0, 5435.0, 5456.0, 5438.0, 5580.0, 5503.0, 5517.0, 5684.0, 5295.0,

						5391.0, 5577.0, 5598.0, 5555.0, 5502.0, 5445.0, 5462.0, 5350.0, 5610.0, 5622.0, 5388.0, 5457.0, 5465.0, 5666.0, 5509.0, 5320.0, 5515.0, 5274.0, 5695.0, 5277.0 (number of hits: 2)
15	5260	9	1	333	1	5717.0, 5321.0, 5316.0, 5560.0, 5303.0, 5485.0, 5578.0, 5289.0, 5663.0, 5304.0, 5492.0, 5520.0, 5471.0, 5640.0, 5626.0, 5697.0, 5367.0, 5283.0, 5551.0, 5401.0, 5380.0, 5680.0, 5438.0, 5287.0, 5413.0, 5545.0, 5673.0, 5494.0, 5505.0, 5416.0, 5254.0, 5368.0, 5390.0, 5271.0, 5503.0, 5415.0, 5267.0, 5338.0, 5698.0, 5337.0, 5312.0, 5631.0, 5469.0, 5511.0, 5373.0, 5493.0, 5366.0, 5318.0, 5573.0, 5704.0, 5296.0, 5652.0, 5414.0, 5581.0, 5524.0, 5425.0, 5592.0, 5313.0, 5568.0, 5613.0, 5418.0, 5527.0, 5658.0, 5516.0, 5476.0, 5372.0, 5608.0, 5291.0, 5409.0, 5614.0, 5355.0, 5639.0, 5620.0, 5261.0, 5538.0, 5635.0, 5453.0, 5295.0, 5300.0, 5459.0, 5489.0, 5406.0, 5617.0, 5444.0, 5565.0, 5474.0, 5509.0, 5627.0, 5472.0, 5445.0, 5715.0, 5455.0, 5684.0, 5596.0, 5714.0, 5537.0, 5420.0, 5363.0, 5674.0, 5536.0 (number of hits: 3)
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17	5260	9	1	333	1	5615.0, 5478.0, 5553.0, 5665.0, 5340.0, 5653.0, 5686.0, 5703.0, 5457.0, 5527.0, 5715.0, 5468.0, 5307.0, 5562.0, 5512.0, 5455.0, 5323.0, 5687.0, 5349.0, 5289.0, 5267.0, 5546.0, 5690.0, 5569.0, 5576.0, 5557.0, 5356.0, 5476.0, 5436.0, 5341.0, 5623.0, 5287.0, 5446.0, 5599.0, 5722.0, 5564.0, 5518.0, 5362.0, 5634.0, 5372.0, 5413.0, 5285.0, 5310.0, 5488.0, 5416.0, 5713.0, 5403.0, 5371.0, 5493.0, 5282.0, 5541.0, 5396.0, 5264.0, 5692.0, 5495.0, 5617.0, 5684.0, 5430.0, 5283.0, 5707.0,

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18	5260	9	1	333	1	5556.0, 5549.0, 5301.0, 5304.0, 5281.0, 5553.0, 5663.0, 5618.0, 5288.0, 5252.0, 5564.0, 5580.0, 5385.0, 5681.0, 5662.0, 5454.0, 5584.0, 5587.0, 5619.0, 5543.0, 5582.0, 5366.0, 5443.0, 5694.0, 5441.0, 5421.0, 5716.0, 5700.0, 5344.0, 5465.0, 5367.0, 5481.0, 5569.0, 5558.0, 5499.0, 5678.0, 5596.0, 5462.0, 5418.0, 5658.0, 5444.0, 5583.0, 5639.0, 5519.0, 5533.0, 5668.0, 5673.0, 5411.0, 5322.0, 5268.0, 5320.0, 5351.0, 5374.0, 5512.0, 5434.0, 5711.0, 5412.0, 5440.0, 5289.0, 5314.0, 5491.0, 5522.0, 5299.0, 5520.0, 5264.0, 5395.0, 5346.0, 5599.0, 5471.0, 5502.0, 5701.0, 5660.0, 5467.0, 5294.0, 5686.0, 5576.0, 5526.0, 5485.0, 5493.0, 5260.0, 5688.0, 5541.0, 5315.0, 5297.0, 5408.0, 5459.0, 5362.0, 5500.0, 5280.0, 5403.0, 5283.0, 5721.0, 5653.0, 5448.0, 5254.0, 5602.0, 5348.0, 5683.0, 5378.0, 5510.0 (number of hits: 5)
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20	5260	9	1	333	1	5343.0, 5427.0, 5453.0, 5341.0, 5536.0, 5620.0, 5289.0, 5719.0, 5637.0, 5655.0, 5266.0, 5717.0, 5660.0, 5498.0, 5441.0, 5658.0, 5687.0, 5317.0, 5312.0, 5346.0, 5705.0, 5251.0, 5585.0, 5439.0, 5477.0, 5662.0, 5586.0, 5580.0, 5587.0, 5287.0, 5302.0, 5495.0, 5480.0, 5465.0, 5559.0, 5436.0, 5621.0, 5263.0, 5644.0, 5291.0,

						5616.0, 5347.0, 5604.0, 5563.0, 5305.0, 5345.0, 5679.0, 5590.0, 5254.0, 5676.0, 5360.0, 5307.0, 5256.0, 5562.0, 5328.0, 5645.0, 5624.0, 5364.0, 5322.0, 5475.0, 5576.0, 5469.0, 5398.0, 5454.0, 5652.0, 5373.0, 5437.0, 5667.0, 5699.0, 5646.0, 5399.0, 5255.0, 5683.0, 5523.0, 5390.0, 5535.0, 5650.0, 5597.0, 5368.0, 5701.0, 5275.0, 5684.0, 5489.0, 5404.0, 5574.0, 5285.0, 5654.0, 5534.0, 5409.0, 5626.0, 5517.0, 5671.0, 5569.0, 5365.0, 5613.0, 5393.0, 5355.0, 5433.0, 5572.0, 5716.0 (number of hits: 6)
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22	5260	9	1	333	1	5607.0, 5550.0, 5641.0, 5315.0, 5368.0, 5468.0, 5369.0, 5631.0, 5514.0, 5510.0, 5439.0, 5422.0, 5554.0, 5316.0, 5333.0, 5291.0, 5443.0, 5386.0, 5507.0, 5292.0, 5497.0, 5634.0, 5660.0, 5455.0, 5559.0, 5270.0, 5669.0, 5488.0, 5490.0, 5640.0, 5340.0, 5318.0, 5372.0, 5633.0, 5477.0, 5351.0, 5432.0, 5376.0, 5473.0, 5683.0, 5682.0, 5395.0, 5708.0, 5712.0, 5486.0, 5572.0, 5401.0, 5404.0, 5417.0, 5635.0, 5565.0, 5599.0, 5389.0, 5686.0, 5717.0, 5441.0, 5506.0, 5557.0, 5590.0, 5403.0, 5458.0, 5681.0, 5512.0, 5538.0, 5352.0, 5326.0, 5415.0, 5329.0, 5310.0, 5665.0, 5645.0, 5359.0, 5613.0, 5426.0, 5405.0, 5287.0, 5530.0, 5643.0, 5465.0, 5533.0, 5703.0, 5684.0, 5501.0, 5654.0, 5281.0, 5653.0, 5519.0, 5570.0, 5594.0, 5690.0, 5336.0, 5448.0, 5589.0, 5713.0, 5251.0, 5615.0, 5475.0, 5440.0, 5600.0, 5696.0 (number of hits: 1)
23	5260	9	1	333	1	5422.0, 5555.0, 5372.0, 5711.0, 5653.0, 5388.0, 5538.0, 5499.0, 5376.0, 5691.0, 5356.0, 5495.0, 5686.0, 5384.0, 5647.0, 5715.0, 5289.0, 5463.0, 5506.0, 5701.0,

						5674.0, 5577.0, 5305.0, 5590.0, 5295.0, 5707.0, 5622.0, 5542.0, 5448.0, 5564.0, 5712.0, 5582.0, 5401.0, 5619.0, 5377.0, 5630.0, 5251.0, 5282.0, 5492.0, 5358.0, 5632.0, 5256.0, 5702.0, 5349.0, 5649.0, 5569.0, 5446.0, 5567.0, 5509.0, 5261.0, 5620.0, 5559.0, 5414.0, 5578.0, 5572.0, 5470.0, 5425.0, 5335.0, 5623.0, 5510.0, 5601.0, 5254.0, 5400.0, 5333.0, 5413.0, 5636.0, 5467.0, 5628.0, 5485.0, 5617.0, 5591.0, 5290.0, 5309.0, 5458.0, 5607.0, 5328.0, 5283.0, 5468.0, 5291.0, 5274.0, 5558.0, 5444.0, 5579.0, 5332.0, 5668.0, 5416.0, 5667.0, 5514.0, 5504.0, 5487.0, 5520.0, 5503.0, 5608.0, 5540.0, 5464.0, 5560.0, 5410.0, 5589.0, 5366.0, 5526.0 (number of hits: 4)
24	5260	9	1	333	1	5656.0, 5542.0, 5330.0, 5263.0, 5708.0, 5250.0, 5403.0, 5518.0, 5499.0, 5701.0, 5377.0, 5586.0, 5594.0, 5547.0, 5363.0, 5684.0, 5453.0, 5346.0, 5505.0, 5543.0, 5714.0, 5599.0, 5521.0, 5680.0, 5613.0, 5381.0, 5349.0, 5617.0, 5421.0, 5375.0, 5280.0, 5529.0, 5651.0, 5402.0, 5538.0, 5419.0, 5308.0, 5319.0, 5430.0, 5501.0, 5709.0, 5693.0, 5471.0, 5478.0, 5460.0, 5509.0, 5634.0, 5387.0, 5261.0, 5289.0, 5597.0, 5659.0, 5464.0, 5588.0, 5404.0, 5593.0, 5324.0, 5697.0, 5611.0, 5469.0, 5342.0, 5323.0, 5486.0, 5437.0, 5717.0, 5523.0, 5405.0, 5630.0, 5629.0, 5700.0, 5553.0, 5401.0, 5568.0, 5492.0, 5495.0, 5691.0, 5678.0, 5618.0, 5320.0, 5689.0, 5474.0, 5269.0, 5293.0, 5484.0, 5472.0, 5519.0, 5276.0, 5497.0, 5667.0, 5274.0, 5291.0, 5596.0, 5503.0, 5407.0, 5394.0, 5516.0, 5322.0, 5422.0, 5277.0, 5303.0 (number of hits: 4)
25	5260	9	1	333	1	5284.0, 5610.0, 5710.0, 5395.0, 5380.0, 5654.0, 5352.0, 5258.0, 5460.0, 5381.0, 5417.0, 5607.0, 5671.0, 5722.0, 5280.0, 5634.0, 5450.0, 5513.0, 5608.0, 5486.0, 5591.0, 5334.0, 5468.0, 5455.0, 5670.0, 5306.0, 5265.0, 5353.0, 5327.0, 5358.0, 5405.0, 5457.0, 5681.0, 5426.0, 5285.0, 5699.0, 5296.0, 5489.0, 5709.0, 5288.0, 5260.0, 5269.0, 5317.0, 5407.0, 5720.0, 5519.0, 5615.0, 5499.0, 5424.0, 5374.0, 5598.0, 5382.0, 5257.0, 5695.0, 5515.0, 5665.0, 5287.0, 5298.0, 5289.0, 5446.0, 5252.0, 5398.0, 5724.0, 5461.0, 5560.0, 5686.0, 5641.0, 5602.0, 5627.0, 5394.0, 5386.0, 5708.0, 5528.0, 5500.0, 5363.0, 5261.0, 5301.0, 5573.0, 5313.0, 5663.0, 5524.0, 5546.0, 5563.0, 5438.0, 5323.0, 5359.0, 5273.0, 5684.0, 5545.0, 5416.0, 5453.0, 5685.0, 5391.0, 5719.0, 5559.0, 5372.0, 5636.0, 5622.0, 5321.0, 5506.0 (number of hits: 7)

26	5260	9	1	333	1	5642.0, 5469.0, 5661.0, 5292.0, 5552.0, 5654.0, 5501.0, 5298.0, 5498.0, 5424.0, 5547.0, 5610.0, 5663.0, 5621.0, 5714.0, 5680.0, 5437.0, 5604.0, 5395.0, 5383.0, 5357.0, 5648.0, 5311.0, 5252.0, 5633.0, 5373.0, 5620.0, 5494.0, 5320.0, 5722.0, 5381.0, 5293.0, 5619.0, 5433.0, 5391.0, 5519.0, 5269.0, 5317.0, 5708.0, 5376.0, 5580.0, 5622.0, 5465.0, 5312.0, 5645.0, 5618.0, 5577.0, 5712.0, 5657.0, 5394.0, 5664.0, 5361.0, 5634.0, 5576.0, 5480.0, 5472.0, 5668.0, 5470.0, 5716.0, 5324.0, 5499.0, 5349.0, 5582.0, 5522.0, 5624.0, 5572.0, 5296.0, 5674.0, 5614.0, 5575.0, 5608.0, 5326.0, 5487.0, 5546.0, 5536.0, 5267.0, 5665.0, 5468.0, 5723.0, 5387.0, 5684.0, 5609.0, 5379.0, 5415.0, 5607.0, 5434.0, 5629.0, 5294.0, 5538.0, 5595.0, 5402.0, 5467.0, 5363.0, 5638.0, 5280.0, 5586.0, 5541.0, 5397.0, 5658.0, 5489.0 (number of hits: 3)
27	5260	9	1	333	1	5635.0, 5361.0, 5298.0, 5429.0, 5710.0, 5614.0, 5567.0, 5701.0, 5633.0, 5378.0, 5436.0, 5389.0, 5372.0, 5639.0, 5643.0, 5664.0, 5551.0, 5479.0, 5321.0, 5559.0, 5363.0, 5356.0, 5660.0, 5495.0, 5406.0, 5475.0, 5425.0, 5716.0, 5377.0, 5519.0, 5333.0, 5486.0, 5555.0, 5254.0, 5661.0, 5271.0, 5272.0, 5546.0, 5434.0, 5594.0, 5718.0, 5597.0, 5264.0, 5571.0, 5588.0, 5627.0, 5485.0, 5477.0, 5311.0, 5403.0, 5252.0, 5552.0, 5412.0, 5433.0, 5447.0, 5263.0, 5442.0, 5413.0, 5693.0, 5324.0, 5265.0, 5484.0, 5521.0, 5598.0, 5427.0, 5575.0, 5482.0, 5601.0, 5587.0, 5257.0, 5340.0, 5474.0, 5514.0, 5469.0, 5676.0, 5504.0, 5464.0, 5256.0, 5476.0, 5646.0, 5380.0, 5525.0, 5258.0, 5445.0, 5276.0, 5539.0, 5365.0, 5593.0, 5262.0, 5438.0, 5496.0, 5531.0, 5284.0, 5279.0, 5303.0, 5287.0, 5473.0, 5353.0, 5490.0, 5370.0 (number of hits: 9)
28	5260	9	1	333	1	5605.0, 5474.0, 5425.0, 5308.0, 5609.0, 5404.0, 5411.0, 5290.0, 5550.0, 5264.0, 5560.0, 5316.0, 5573.0, 5704.0, 5722.0, 5456.0, 5538.0, 5424.0, 5460.0, 5542.0, 5390.0, 5647.0, 5481.0, 5709.0, 5516.0, 5258.0, 5285.0, 5607.0, 5303.0, 5670.0, 5464.0, 5250.0, 5695.0, 5318.0, 5501.0, 5348.0, 5713.0, 5598.0, 5475.0, 5368.0, 5471.0, 5491.0, 5707.0, 5610.0, 5525.0, 5257.0, 5452.0, 5305.0, 5656.0, 5545.0, 5579.0, 5440.0, 5413.0, 5517.0, 5632.0, 5470.0, 5518.0, 5721.0, 5443.0, 5690.0, 5362.0, 5354.0, 5403.0, 5567.0, 5297.0, 5636.0, 5621.0, 5377.0, 5304.0, 5466.0, 5587.0, 5626.0, 5314.0, 5321.0, 5711.0, 5604.0, 5436.0, 5396.0, 5710.0, 5546.0, 5700.0, 5479.0, 5338.0, 5602.0, 5345.0,

						5682.0, 5343.0, 5557.0, 5654.0, 5302.0, 5582.0, 5415.0, 5534.0, 5723.0, 5459.0, 5430.0, 5696.0, 5262.0, 5477.0, 5372.0 (number of hits: 5)
29	5260	9	1	333	1	5598.0, 5477.0, 5340.0, 5469.0, 5366.0, 5414.0, 5471.0, 5490.0, 5470.0, 5504.0, 5634.0, 5358.0, 5362.0, 5283.0, 5543.0, 5632.0, 5306.0, 5560.0, 5547.0, 5702.0, 5427.0, 5318.0, 5493.0, 5676.0, 5672.0, 5696.0, 5505.0, 5421.0, 5337.0, 5585.0, 5682.0, 5544.0, 5274.0, 5624.0, 5370.0, 5488.0, 5390.0, 5466.0, 5314.0, 5586.0, 5253.0, 5315.0, 5647.0, 5454.0, 5319.0, 5322.0, 5724.0, 5483.0, 5438.0, 5379.0, 5465.0, 5436.0, 5345.0, 5369.0, 5355.0, 5437.0, 5562.0, 5524.0, 5589.0, 5323.0, 5300.0, 5336.0, 5312.0, 5533.0, 5494.0, 5441.0, 5565.0, 5324.0, 5293.0, 5594.0, 5373.0, 5394.0, 5692.0, 5502.0, 5403.0, 5708.0, 5607.0, 5609.0, 5610.0, 5464.0, 5531.0, 5652.0, 5678.0, 5542.0, 5718.0, 5535.0, 5705.0, 5467.0, 5689.0, 5294.0, 5256.0, 5360.0, 5405.0, 5693.0, 5548.0, 5683.0, 5633.0, 5353.0, 5608.0, 5320.0 (number of hits: 2)
30	5260	9	1	333	1	5612.0, 5284.0, 5262.0, 5544.0, 5355.0, 5495.0, 5690.0, 5723.0, 5658.0, 5615.0, 5518.0, 5621.0, 5312.0, 5596.0, 5297.0, 5428.0, 5577.0, 5650.0, 5713.0, 5465.0, 5616.0, 5579.0, 5519.0, 5364.0, 5446.0, 5627.0, 5368.0, 5250.0, 5420.0, 5426.0, 5470.0, 5494.0, 5645.0, 5606.0, 5499.0, 5700.0, 5381.0, 5394.0, 5622.0, 5601.0, 5376.0, 5504.0, 5339.0, 5307.0, 5549.0, 5653.0, 5552.0, 5657.0, 5397.0, 5524.0, 5565.0, 5314.0, 5536.0, 5387.0, 5261.0, 5678.0, 5253.0, 5537.0, 5361.0, 5640.0, 5635.0, 5630.0, 5266.0, 5462.0, 5605.0, 5357.0, 5296.0, 5701.0, 5283.0, 5477.0, 5703.0, 5431.0, 5592.0, 5399.0, 5272.0, 5571.0, 5371.0, 5369.0, 5479.0, 5430.0, 5503.0, 5611.0, 5609.0, 5692.0, 5716.0, 5493.0, 5607.0, 5600.0, 5305.0, 5675.0, 5468.0, 5567.0, 5634.0, 5413.0, 5268.0, 5720.0, 5516.0, 5345.0, 5722.0, 5588.0 (number of hits: 6)

5270 MHz, 40 MHz Bandwidth

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

Please refer to the following statistical tables:

5270 MHz, 40 MHz Bandwidth

Table-1A/1B Radar Type 1A/1B Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5270	67	1.0	798	1
2	5270	62	1.0	858	1
3	5270	92	1.0	578	1
4	5270	74	1.0	718	1
5	5270	65	1.0	818	1
6	5270	95	1.0	558	1
7	5270	89	1.0	598	1
8	5270	76	1.0	698	1
9	5270	63	1.0	838	1
10	5270	18	1.0	3066	1
11	5270	58	1.0	918	1
12	5270	83	1.0	638	1
13	5270	78	1.0	678	1
14	5270	0	0.0	0	1
15	5270	0	0.0	0	1
16	5270	44	1.0	1202	1
17	5270	37	1.0	1428	1
18	5270	19	1.0	2930	1
19	5270	52	1.0	1030	1
20	5270	45	1.0	1180	1
21	5270	97	1.0	546	1
22	5270	39	1.0	1361	1
23	5270	37	1.0	1447	1
24	5270	26	1.0	2111	1
25	5270	19	1.0	2782	1
26	5270	69	1.0	775	1
27	5270	83	1.0	643	1
28	5270	25	1.0	2145	1
29	5270	18	1.0	2985	1
30	5270	18	1.0	2951	1
Detection Percentage: 100 % (>60%)					

Table-2 Radar Type 2 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5270	23	1.1	154	1
2	5270	23	2.3	192	1
3	5270	29	1.1	178	1
4	5270	25	1.7	216	1
5	5270	27	3.2	179	1
6	5270	24	3.4	211	1
7	5270	24	3.2	215	1
8	5270	26	2.7	207	1
9	5270	25	1.3	228	1
10	5270	28	1.1	172	1
11	5270	28	4.3	214	1
12	5270	25	1.6	204	1
13	5270	24	4.7	211	1
14	5270	23	4	177	1
15	5270	24	1.6	194	1
16	5270	29	4.1	203	1
17	5270	26	4.2	197	1
18	5270	23	3.4	190	1
19	5270	23	2	166	1
20	5270	26	4	223	1
21	5270	27	1	157	1
22	5270	25	3.4	173	1
23	5270	23	2.9	225	1
24	5270	27	4.2	156	1
25	5270	29	3.8	228	1
26	5270	24	1.9	214	1
27	5270	24	3.2	179	1
28	5270	29	1.3	205	1
29	5270	23	1.6	186	1
30	5270	24	2.2	208	1
Detection Percentage: 100 % (>60%)					

Table-3 Radar Type 3 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5270	17	7.5	262	1
2	5270	18	8.1	394	1
3	5270	18	6.5	311	1
4	5270	18	9.1	301	1
5	5270	18	6.2	283	1
6	5270	17	7.1	433	1
7	5270	17	8.5	328	1
8	5270	18	6.3	428	1
9	5270	17	8.2	434	1
10	5270	17	6.8	228	1
11	5270	18	7.4	455	1
12	5270	18	8.3	405	1
13	5270	18	9.5	373	1
14	5270	16	8.7	298	1
15	5270	18	6.6	233	1
16	5270	16	8.8	433	1
17	5270	18	9.5	252	1
18	5270	16	6.6	390	1
19	5270	18	9.9	387	1
20	5270	18	6.6	400	1
21	5270	16	7.2	422	1
22	5270	16	7.3	431	1
23	5270	17	7.3	429	1
24	5270	17	7.4	223	1
25	5270	16	9.6	492	1
26	5270	18	6.3	349	1
27	5270	16	6.5	473	1
28	5270	17	6.5	403	1
29	5270	18	6.6	277	1
30	5270	18	6.7	461	1
Detection Percentage: 100 % (>60%)					

Table-4 Radar Type 4 Statistical Performance

Trial #	Fc (MHz)	Pulse/Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)
1	5270	13	13.5	286	1
2	5270	15	18.2	328	1
3	5270	14	14.7	465	1
4	5270	13	17.2	255	1
5	5270	16	13.5	365	1
6	5270	12	14.0	338	1
7	5270	12	17.4	470	1
8	5270	16	17.9	474	1
9	5270	14	16.8	225	1
10	5270	13	15.7	390	1
11	5270	12	11.3	274	1
12	5270	13	18.1	388	1
13	5270	16	16.4	405	1
14	5270	13	19.2	205	1
15	5270	15	19.9	298	1
16	5270	12	18.6	329	1
17	5270	14	11.6	412	1
18	5270	14	15.3	481	1
19	5270	13	11.4	401	1
20	5270	12	19.5	401	1
21	5270	15	15.9	497	1
22	5270	16	11.5	361	1
23	5270	12	15.6	452	1
24	5270	15	13.7	209	1
25	5270	16	19.6	386	1
26	5270	14	14.9	262	1
27	5270	16	12.0	441	1
28	5270	13	12.2	485	1
29	5270	14	17.1	496	1
30	5270	13	15.0	393	1
Detection Percentage: 100 % (>60%)					

Table-5 Radar Type 5 Statistical Performance

Bin5 Statistics 1

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	6	82.8	1828		0.329123	1
1	2	10	60.6	1515		0.946804	
2	2	15	88.0	1996		1.821324	
3	2	6	76.6	1028		2.298198	
4	1	13	50.8			3.500042	
5	2	13	71.5	1856		4.429587	
6	2	10	54.1	1836		4.957239	
7	1	10	63.1			5.735203	
8	3	15	70.8	1108	1881	6.062193	
9	3	10	78.4	1990	1403	7.071987	
10	2	15	80.1	1212		8.115846	
11	2	20	51.7	1705		8.574437	
12	2	19	89.6	1543		9.078960	
13	3	14	65.3	1566	1551	10.151599	
14	2	20	59.4	1791		10.558634	
15	1	17	85.3			11.516875	

Bin5 Statistics 2

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	13	94.9	1160	1678	0.673635	1
1	2	18	51.1	1965		1.510116	
2	3	18	74.4	1212	1478	2.382811	
3	2	8	91.0	1447		2.795438	
4	2	6	63.8	1485		3.517497	
5	1	8	78.4			5.127230	
6	2	12	64.4	1066		5.509738	
7	3	19	85.4	1129	1380	6.748669	
8	2	16	58.4	1709		6.909310	
9	3	13	65.2	1259	1748	8.080649	
10	2	15	81.7	1754		8.924921	
11	2	9	66.5	1630		9.429145	
12	1	10	55.7			10.640863	
13	2	11	68.2	1199		11.583067	

Bin5 Statistics 3

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	9	73.3	1544		0.547785	
1	2	18	95.3	1670		1.398529	
2	2	17	73.3	1387		2.202315	
3	2	13	61.3	1727		2.592706	
4	2	9	53.7	1489		3.306687	
5	1	14	72.1			4.646811	
6	2	16	91.7	1645		5.260378	
7	2	6	94.1	1537		6.326182	1
8	1	18	52.1			6.756448	
9	2	13	59.8	1163		7.355251	
10	1	16	92.1			8.110884	
11	1	8	63.5			8.911140	
12	2	6	81.8	1450		10.274412	
13	3	17	66.0	1014	1706	10.411433	
14	3	10	86.9	1193	1081	11.869981	

Bin5 Statistics 4

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	12	75.5	1884		0.736647	
1	3	7	84.5	1067	1729	1.170443	
2	1	5	85.5			2.849818	
3	2	10	66.9	1398		3.722760	
4	2	6	90.6	1402		4.385038	
5	2	17	89.4	1059		5.930639	
6	3	7	87.8	1189	1540	6.240187	1
7	2	7	80.7	1432		7.179279	
8	2	19	53.4	1126		8.245193	
9	2	6	79.8	1347		9.870095	
10	2	9	82.5	1963		10.260243	
11	1	16	87.7			11.665247	

Bin5 Statistics 5

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	17	99.3	1808		0.097609	
1	2	12	69.3	1238		1.396533	
2	2	10	88.7	1121		1.694737	
3	2	13	51.1	1619		2.284685	
4	1	15	91.0			2.978627	
5	2	16	79.2	1973		3.835220	
6	1	16	80.1			4.855477	
7	2	7	86.4	1135		5.192712	
8	1	17	98.3			5.741640	1
9	3	19	87.7	1149	1115	6.879869	
10	2	19	81.7	1013		7.165727	
11	2	16	91.9	1547		8.296512	
12	1	7	100.0			8.956876	
13	1	12	95.7			9.326513	
14	3	11	65.0	1619	1173	10.456475	
15	1	15	66.0			10.946357	
16	2	10	65.5	1117		11.873276	

Bin5 Statistics 6

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	7	97.9			0.302595	
1	3	9	92.9	1446	1240	2.511751	
2	2	16	54.0	1644		3.767400	
3	2	14	77.6	1248		4.400496	
4	2	12	68.2	1583		6.199782	1
5	2	11	99.7	1978		7.327571	
6	2	13	55.9	1948		8.014462	
7	2	16	96.1	1676		10.519250	
8	2	5	74.1	1339		10.839799	

Bin5 Statistics 7

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	12	90.1			0.742865	1
1	3	12	79.7	1147	1042	1.866048	
2	2	5	83.8	1376		3.035102	
3	1	17	90.8			3.616697	
4	3	10	88.3	1883	1426	5.335699	
5	2	16	67.3	1235		5.693224	
6	3	20	59.7	1724	1963	7.605413	
7	2	9	80.2	1034		7.636987	
8	3	9	67.8	1765	1780	8.914499	
9	1	8	90.3			10.797947	
10	3	9	65.1	1020	1609	11.827569	

Bin5 Statistics 8

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	6	51.9			0.116750	1
1	3	10	70.9	1190	1997	1.499932	
2	1	6	83.3			2.453859	
3	3	7	98.2	1324	1587	4.090703	
4	2	6	61.5	1787		4.723442	
5	1	6	99.0			5.593459	
6	1	19	69.3			6.623106	
7	2	12	61.0	1241		8.202217	
8	2	12	56.9	1418		9.564311	
9	2	7	82.2	1519		10.430564	
10	1	13	76.6			10.910519	

Bin5 Statistics 9

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	13	83.0	1412		0.101598	
1	2	6	52.8	1742		1.378456	
2	3	5	82.7	1135	1693	2.023404	
3	1	8	90.1			3.638154	
4	1	14	53.1			4.346418	
5	3	6	85.0	1660	1955	4.630367	
6	1	16	70.0			5.980418	1
7	2	11	88.6	1700		6.738815	
8	3	17	77.7	1047	1785	7.745341	
9	2	20	85.1	1818		8.331097	
10	2	16	55.3	1934		9.409120	
11	2	7	97.3	1540		10.525434	
12	3	14	81.2	1145	1604	11.927803	

Bin5 Statistics 10

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	7	94.1			0.422935	
1	1	6	55.7			1.319466	
2	2	13	58.2	1221		2.335931	
3	1	19	97.7			3.029211	
4	1	17	66.9			4.094950	
5	3	7	66.4	1322	1751	5.044902	
6	2	7	88.2	1431		5.694836	
7	1	15	58.5			6.428163	1
8	2	15	99.6	1808		7.609299	
9	1	18	68.6			8.083865	
10	1	5	74.0			8.915081	
11	2	15	57.9	1181		9.749469	
12	2	7	51.0	1824		10.524151	
13	2	8	80.4	1713		11.621169	

Bin5 Statistics 11

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	16	54.2	1208		0.697832	
1	2	15	99.2	1254		1.121446	
2	2	15	77.5	1604		2.105350	
3	2	16	67.4	1503		2.624366	
4	3	17	54.7	1230	1229	3.215378	
5	2	19	92.7	1013		4.123439	
6	2	11	84.2	1195		5.475753	
7	2	16	87.0	1991		5.855165	1
8	3	11	82.8	1525	1480	6.438458	
9	2	14	90.7	1209		7.484994	
10	1	7	56.6			8.339731	
11	3	11	65.6	1376	1660	9.131937	
12	2	18	95.1	1199		9.731869	
13	2	9	88.6	1493		10.800516	
14	2	10	90.1	1008		11.781254	

Bin5 Statistics 12

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	16	58.6	1305	1870	0.378884	
1	3	11	57.7	1904	1375	2.143445	
2	1	17	70.5			3.921110	
3	1	14	56.6			4.299341	
4	1	10	80.1			5.989506	1
5	1	17	90.5			7.051657	
6	3	13	86.6	1077	1237	9.136678	
7	2	5	82.7	1445		9.680546	
8	3	8	76.3	1330	1291	11.099958	

Bin5 Statistics 13

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	16	97.2	1536	1553	0.363030	1
1	3	15	77.3	1550	1306	1.325842	
2	2	19	92.2	1878		1.886653	
3	2	13	64.6	1590		2.344852	
4	2	16	89.2	1016		2.736729	
5	2	12	99.8	1762		3.490959	
6	3	6	97.9	1138	1625	4.361601	
7	3	11	52.0	1428	1783	5.300355	
8	2	14	74.8	1473		5.940341	
9	1	12	52.4			6.322887	
10	3	9	67.2	1024	1053	6.970758	
11	2	10	84.0	1016		7.990285	
12	2	16	76.2	1768		8.525953	
13	2	6	84.7	1489		8.797252	
14	2	15	53.1	1418		9.371618	
15	3	18	69.2	1381	1443	10.308117	
16	2	20	97.9	1008		11.192161	
17	1	15	54.0			11.674813	

Bin5 Statistics 14

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	15	92.9	1735		0.117053	0
1	3	10	85.4	1566	1563	1.681548	
2	1	7	94.7			3.923544	
3	1	13	53.5			4.812172	
4	3	12	96.0	1996	1356	6.090867	
5	2	12	91.1	1241		6.699786	
6	2	9	89.2	1827		8.772216	
7	2	9	69.7	1166		10.118207	
8	3	8	67.2	1205	1217	10.725452	

Bin5 Statistics 15

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	14	72.9	1998	1190	0.079628	
1	2	11	93.6	1372		1.248205	
2	1	7	93.1			2.131220	
3	2	7	84.8	1541		3.306095	
4	1	12	95.1			4.297847	
5	2	14	63.8	1625		5.494522	
6	2	14	55.8	1113		6.284975	1
7	2	15	77.0	1057		6.705506	
8	2	20	68.2	1679		8.038288	
9	3	6	72.3	1423	1163	8.807911	
10	2	11	57.9	1786		10.131492	
11	2	9	67.3	1462		10.588864	
12	2	18	79.1	1897		11.809422	

Bin5 Statistics 16

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	7	55.8	1574		0.648064	
1	2	16	51.8	1937		1.190125	
2	1	13	58.1			1.582538	
3	1	20	85.1			2.376333	
4	1	6	56.8			3.257912	
5	1	13	93.4			3.733597	
6	2	10	56.4	1229		4.668712	
7	2	8	72.2	1502		5.562455	
8	2	17	69.7	1772		5.798986	1
9	2	11	68.9	1435		6.402110	
10	3	7	73.9	1848	1031	7.441007	
11	2	20	73.8	1823		8.313604	
12	3	7	88.6	1447	1399	8.508478	
13	3	11	55.5	1128	1429	9.717562	
14	2	17	94.7	1626		9.897540	
15	2	17	50.4	1315		11.229834	
16	3	15	53.5	1219	1685	11.473434	

Bin5 Statistics 17

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	14	65.9	1265		0.828248	1
1	3	17	66.0	1799	1283	1.487472	
2	3	12	60.4	1065	1089	2.187028	
3	2	15	78.5	1201		3.659214	
4	1	12	78.7			3.931414	
5	1	14	92.6			5.265866	
6	1	14	89.0			5.823007	
7	3	6	69.1	1877	1696	6.645523	
8	1	11	98.5			7.695560	
9	3	14	62.3	1033	1295	8.961877	
10	2	16	56.0	1589		10.057096	
11	2	12	84.5	1630		10.517437	
12	3	13	53.3	1910	1728	11.575839	

Bin5 Statistics 18

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	7	68.0	1271	1021	0.374779	1
1	2	10	50.1	1640		1.715421	
2	1	20	97.6			3.682655	
3	3	17	86.6	1090	1577	4.703541	
4	2	6	70.2	1541		7.423137	
5	1	17	54.8			8.212764	
6	1	14	68.6			9.830416	
7	3	17	86.2	1624	1517	11.857967	

Bin5 Statistics 19

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	11	84.3	1002		0.634404	
1	2	12	90.8	1446		1.187490	
2	3	18	65.5	1932	1789	1.932235	
3	2	7	72.1	1228		2.159081	
4	1	18	95.8			3.231326	
5	3	16	84.5	1382	1126	3.361854	
6	1	9	58.4			4.138131	
7	1	11	51.7			4.852111	
8	2	6	92.2	1804		5.440737	
9	3	17	69.4	1377	1077	6.536604	1
10	3	11	72.0	1082	1148	6.910613	
11	1	6	68.2			7.812017	
12	3	14	67.7	1317	1821	8.239321	
13	1	14	52.3			8.763067	
14	2	11	57.3	1758		9.495759	
15	3	11	56.6	1143	1411	10.247315	
16	1	18	55.7			11.182063	
17	3	5	98.5	1080	1028	11.926186	

Bin5 Statistics 20

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	8	70.3	1849	1506	0.107100	
1	1	11	69.6			1.615971	
2	1	18	87.1			2.243480	
3	2	14	70.9	1165		4.349430	
4	2	15	85.5	1241		5.159189	
5	2	15	76.3	1038		6.082351	1
6	3	12	88.7	1115	1893	7.020202	
7	1	6	81.7			7.857635	
8	1	20	99.9			9.786054	
9	1	17	56.3			10.639488	
10	2	12	69.6	1353		11.308808	

Bin5 Statistics 21

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	13	77.5	1358		0.499094	
1	2	19	61.8	1162		1.198714	
2	2	15	91.1	1902		1.892092	
3	2	10	70.8	1086		3.603126	
4	3	14	62.0	1962	1974	4.458502	
5	2	8	99.1	1551		4.950565	
6	2	18	88.6	1413		5.839251	1
7	2	8	58.4	1984		6.765359	
8	1	6	98.0			7.550482	
9	2	9	100.0	1986		8.729757	
10	2	10	75.7	1540		9.618978	
11	1	10	91.9			10.282680	
12	2	15	97.2	1458		11.872528	

Bin5 Statistics 22

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	10	66.1	1779	1835	0.925841	
1	2	6	91.5	1229		1.836797	
2	1	16	52.5			3.542836	
3	1	5	70.9			4.088057	
4	2	7	95.9	1195		5.608353	1
5	2	20	61.2	1610		7.026520	
6	1	17	55.8			8.833105	
7	2	8	50.8	1981		10.080897	
8	1	19	82.2			11.397593	

Bin5 Statistics 23

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	15	93.3	1025	1399	0.607770	
1	1	16	96.3			1.195556	
2	2	15	82.3	1176		1.618726	
3	1	16	55.1			2.314172	
4	2	8	94.2	1138		3.314520	
5	2	6	90.5	1138		3.362748	
6	3	19	54.6	1375	1160	4.058004	
7	1	7	59.4			5.103779	
8	2	13	97.1	1764		5.734030	
9	3	20	55.1	1812	1913	6.403574	1
10	2	16	95.7	1156		6.939627	
11	2	18	61.7	1759		7.665371	
12	2	6	53.5	1385		8.004510	
13	3	12	78.5	1341	1169	9.060005	
14	1	10	74.8			9.700644	
15	2	15	90.2	1546		10.255561	
16	3	11	65.6	1016	1674	10.725953	
17	3	8	62.5	1248	1673	11.777148	

Bin5 Statistics 24

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	7	62.1			1.031539	
1	3	13	97.7	1564	1179	1.579694	
2	2	14	71.6	1207		2.697532	
3	1	11	53.9			4.338276	
4	3	11	54.2	1080	1429	5.657003	1
5	2	7	51.7	1119		7.311421	
6	2	8	64.8	1485		8.505575	
7	1	10	61.1			10.578969	
8	2	8	85.7	1285		11.229849	

Bin5 Statistics 25

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	1	17	59.1			0.607154	1
1	2	16	81.5	1289		1.503789	
2	3	6	94.8	1545	1063	2.001632	
3	2	11	79.2	1015		3.170321	
4	1	8	95.1			3.747445	
5	2	13	87.6	1484		4.557910	
6	3	11	87.7	1314	1030	5.850234	
7	2	14	74.9	1252		6.453241	
8	2	15	53.8	1827		7.672475	
9	1	8	57.9			7.821151	
10	2	13	64.6	1309		9.214718	
11	2	17	96.1	1913		9.787369	
12	2	7	88.6	1019		10.654531	
13	2	11	70.3	1646		11.216106	

Bin5 Statistics 26

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	3	18	54.3	1687	1292	0.282031	1
1	1	6	75.0			1.433225	
2	1	17	53.4			3.095414	
3	2	9	60.0	1297		4.114654	
4	1	17	81.4			4.668619	
5	3	9	68.3	1163	1771	5.476246	
6	1	14	80.3			7.472610	
7	2	12	94.5	1730		8.619856	
8	2	9	93.2	1365		9.517952	
9	2	12	52.2	1352		10.507654	
10	3	13	88.1	1752	1541	11.214529	

Bin5 Statistics 27

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	8	82.8	1821		0.412203	
1	2	12	92.5	1619		1.471775	
2	2	18	54.8	1619		1.590734	
3	2	16	98.2	1820		2.804376	
4	2	11	60.0	1114		3.504442	
5	1	19	64.6			4.455511	
6	2	16	59.2	1342		4.775217	
7	2	7	82.4	1721		5.255984	1
8	1	11	74.0			6.091897	
9	2	6	94.9	1171		6.925582	
10	1	19	58.2			7.746343	
11	3	17	86.6	1101	1363	8.934036	
12	3	7	69.4	1457	1392	9.158750	
13	1	11	90.4			10.298669	
14	3	20	78.7	1965	1508	10.627517	
15	3	12	84.9	1487	1011	11.252155	

Bin5 Statistics 28

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	12	86.9	1201		0.545222	
1	2	10	65.4	2000		1.428581	
2	1	15	76.2			1.991293	
3	2	19	51.4	1215		2.996072	
4	2	15	77.5	1396		3.964803	
5	1	13	57.3			4.779730	
6	3	11	92.9	1204	1707	6.194433	1
7	2	16	90.5	1694		7.078935	
8	3	18	72.6	1645	1456	7.532854	
9	3	17	98.0	1983	1426	9.030301	
10	1	20	55.4			9.463375	
11	1	14	64.7			10.670185	
12	1	7	72.2			11.617333	

Bin5 Statistics 29

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	6	54.2	1439		0.842072	
1	3	6	80.2	1912	1139	0.976572	
2	2	14	78.4	1842		2.577978	
3	2	19	56.6	1808		2.815810	
4	1	16	59.2			4.106657	
5	2	6	70.5	1115		5.380878	
6	2	15	98.8	1998		5.791076	1
7	2	10	62.1	1258		7.316688	
8	2	14	66.1	1901		7.494159	
9	2	9	96.2	1766		8.375593	
10	2	13	59.8	1117		9.696149	
11	1	12	88.4			11.019491	
12	3	17	72.0	1834	1304	11.350243	

Bin5 Statistics 30

Trial #	Pulse	Chirp (MHz)	Pulse Width (µS)	Pulse 1-2 spacing (uS)	Pulse 2-3 spacing (uS)	Pulse Start(S)	Detection (1:yes; 0:no)
0	2	13	51.0	1150		0.661927	
1	1	11	58.4			1.239458	
2	3	9	80.9	1661	1625	2.442338	
3	3	8	91.8	1787	2000	2.820234	
4	2	15	61.4	1520		3.590170	
5	2	19	85.2	1948		4.856160	
6	1	14	95.6			5.860360	
7	2	12	58.9	1460		6.073054	1
8	1	10	83.5			7.135220	
9	2	15	64.3	1134		7.831253	
10	2	17	72.1	1816		8.771460	
11	3	17	85.1	1547	1348	9.432663	
12	1	13	53.3			10.396546	
13	2	15	53.1	1351		11.748921	

Table-6 Radar Type 6 Statistical Performance

Trial #	Fc (MHz)	Pulse /Burst	Pulse Width (µS)	PRI (µs)	Detection (1:yes; 0:no)	Hopping Sequence
1	5270	9	1	333	1	5268.0, 5717.0, 5527.0, 5468.0, 5657.0, 5396.0, 5298.0, 5723.0, 5299.0, 5553.0, 5364.0, 5461.0, 5476.0, 5421.0, 5521.0, 5307.0, 5695.0, 5375.0, 5508.0, 5513.0, 5442.0, 5334.0, 5273.0, 5445.0, 5288.0, 5313.0, 5344.0, 5471.0, 5264.0, 5439.0, 5662.0, 5586.0, 5374.0, 5565.0, 5528.0, 5613.0, 5570.0, 5326.0, 5425.0, 5368.0, 5285.0, 5456.0, 5413.0, 5559.0, 5383.0, 5673.0, 5464.0, 5599.0, 5322.0, 5487.0, 5573.0, 5398.0, 5324.0, 5414.0, 5452.0, 5283.0, 5330.0, 5391.0, 5260.0, 5331.0, 5265.0, 5619.0, 5554.0, 5354.0, 5271.0, 5713.0, 5676.0, 5620.0, 5328.0, 5290.0, 5424.0, 5404.0, 5647.0, 5611.0, 5604.0, 5467.0, 5694.0, 5278.0, 5569.0, 5366.0, 5477.0, 5715.0, 5710.0, 5595.0, 5524.0, 5422.0, 5416.0, 5519.0, 5597.0, 5582.0, 5598.0, 5501.0, 5338.0, 5494.0, 5719.0, 5590.0, 5668.0, 5534.0, 5292.0, 5572.0 (number of hits: 8)
2	5270	9	1	333	1	5639.0, 5495.0, 5701.0, 5371.0, 5634.0, 5525.0, 5459.0, 5442.0, 5487.0, 5584.0, 5512.0, 5654.0, 5643.0, 5448.0, 5317.0, 5532.0, 5642.0, 5482.0, 5407.0, 5670.0, 5436.0, 5488.0, 5681.0, 5286.0, 5410.0, 5576.0, 5264.0, 5284.0, 5257.0, 5711.0, 5540.0, 5556.0, 5460.0, 5704.0, 5484.0, 5395.0, 5331.0, 5270.0, 5536.0, 5452.0, 5586.0, 5624.0, 5259.0, 5402.0, 5328.0, 5715.0, 5388.0, 5710.0, 5635.0, 5283.0, 5543.0, 5468.0, 5685.0, 5327.0, 5396.0, 5599.0, 5665.0, 5345.0, 5644.0, 5316.0, 5273.0, 5708.0, 5607.0, 5446.0, 5595.0, 5332.0, 5651.0, 5684.0, 5373.0, 5516.0, 5686.0, 5361.0, 5515.0, 5573.0, 5613.0, 5413.0, 5688.0, 5560.0, 5360.0, 5291.0, 5400.0, 5647.0, 5356.0, 5398.0, 5399.0, 5275.0, 5297.0, 5535.0, 5649.0, 5542.0, 5709.0, 5691.0, 5334.0, 5368.0, 5561.0, 5632.0, 5567.0, 5605.0, 5557.0, 5614.0 (number of hits: 3)
3	5270	9	1	333	1	5412.0, 5389.0, 5467.0, 5558.0, 5426.0, 5639.0, 5689.0, 5275.0, 5324.0, 5331.0, 5313.0, 5373.0, 5328.0, 5551.0, 5598.0, 5503.0, 5391.0, 5330.0, 5306.0, 5398.0, 5712.0, 5532.0, 5544.0, 5530.0, 5570.0, 5344.0, 5457.0, 5550.0, 5706.0, 5352.0, 5631.0, 5261.0, 5510.0, 5345.0, 5506.0, 5338.0, 5710.0, 5334.0, 5283.0, 5463.0, 5272.0, 5526.0, 5715.0, 5273.0, 5514.0, 5564.0, 5327.0, 5676.0, 5428.0, 5673.0, 5587.0, 5623.0, 5257.0, 5600.0, 5589.0,

						5451.0, 5634.0, 5342.0, 5513.0, 5567.0, 5549.0, 5561.0, 5580.0, 5481.0, 5719.0, 5420.0, 5692.0, 5264.0, 5340.0, 5604.0, 5575.0, 5288.0, 5613.0, 5375.0, 5655.0, 5449.0, 5686.0, 5354.0, 5635.0, 5294.0, 5520.0, 5554.0, 5531.0, 5672.0, 5300.0, 5370.0, 5266.0, 5386.0, 5274.0, 5632.0, 5525.0, 5253.0, 5720.0, 5638.0, 5666.0, 5482.0, 5485.0, 5413.0, 5641.0, 5540.0 (number of hits: 5)
4	5270	9	1	333	1	5322.0, 5377.0, 5584.0, 5456.0, 5545.0, 5273.0, 5698.0, 5366.0, 5486.0, 5279.0, 5269.0, 5387.0, 5363.0, 5527.0, 5403.0, 5433.0, 5692.0, 5365.0, 5398.0, 5533.0, 5685.0, 5340.0, 5299.0, 5479.0, 5496.0, 5395.0, 5402.0, 5466.0, 5616.0, 5504.0, 5648.0, 5599.0, 5341.0, 5696.0, 5380.0, 5397.0, 5658.0, 5442.0, 5445.0, 5538.0, 5612.0, 5708.0, 5598.0, 5352.0, 5267.0, 5350.0, 5630.0, 5565.0, 5324.0, 5638.0, 5413.0, 5505.0, 5536.0, 5575.0, 5524.0, 5587.0, 5276.0, 5449.0, 5266.0, 5385.0, 5359.0, 5707.0, 5714.0, 5576.0, 5478.0, 5665.0, 5306.0, 5345.0, 5622.0, 5723.0, 5258.0, 5441.0, 5510.0, 5420.0, 5709.0, 5444.0, 5627.0, 5684.0, 5277.0, 5353.0, 5596.0, 5256.0, 5574.0, 5471.0, 5404.0, 5364.0, 5446.0, 5591.0, 5317.0, 5539.0, 5447.0, 5501.0, 5704.0, 5522.0, 5379.0, 5286.0, 5468.0, 5459.0, 5495.0, 5349.0 (number of hits: 3)
5	5270	9	1	333	1	5610.0, 5678.0, 5317.0, 5523.0, 5277.0, 5406.0, 5594.0, 5509.0, 5486.0, 5647.0, 5312.0, 5531.0, 5258.0, 5469.0, 5259.0, 5696.0, 5495.0, 5529.0, 5403.0, 5512.0, 5260.0, 5702.0, 5655.0, 5603.0, 5304.0, 5264.0, 5356.0, 5620.0, 5444.0, 5609.0, 5508.0, 5588.0, 5578.0, 5263.0, 5432.0, 5292.0, 5301.0, 5482.0, 5425.0, 5527.0, 5568.0, 5561.0, 5458.0, 5295.0, 5721.0, 5664.0, 5586.0, 5410.0, 5497.0, 5535.0, 5695.0, 5390.0, 5336.0, 5276.0, 5498.0, 5656.0, 5545.0, 5481.0, 5352.0, 5673.0, 5373.0, 5638.0, 5480.0, 5331.0, 5326.0, 5374.0, 5639.0, 5517.0, 5477.0, 5562.0, 5379.0, 5627.0, 5596.0, 5657.0, 5635.0, 5532.0, 5524.0, 5575.0, 5487.0, 5714.0, 5526.0, 5302.0, 5671.0, 5650.0, 5674.0, 5637.0, 5419.0, 5408.0, 5606.0, 5707.0, 5530.0, 5298.0, 5293.0, 5560.0, 5522.0, 5687.0, 5355.0, 5328.0, 5549.0, 5590.0 (number of hits: 8)
6	5270	9	1	333	1	5465.0, 5354.0, 5692.0, 5271.0, 5657.0, 5281.0, 5637.0, 5696.0, 5335.0, 5552.0, 5711.0, 5340.0, 5720.0, 5501.0, 5654.0, 5440.0, 5309.0, 5658.0, 5650.0, 5474.0, 5280.0, 5550.0, 5330.0, 5707.0, 5481.0, 5283.0, 5494.0, 5369.0, 5499.0, 5644.0, 5266.0, 5545.0, 5665.0, 5498.0, 5721.0,

						5528.0, 5388.0, 5563.0, 5592.0, 5522.0, 5472.0, 5549.0, 5578.0, 5391.0, 5424.0, 5405.0, 5702.0, 5507.0, 5596.0, 5348.0, 5426.0, 5433.0, 5328.0, 5315.0, 5485.0, 5662.0, 5394.0, 5376.0, 5723.0, 5337.0, 5580.0, 5559.0, 5382.0, 5661.0, 5525.0, 5573.0, 5336.0, 5601.0, 5473.0, 5415.0, 5574.0, 5620.0, 5307.0, 5294.0, 5453.0, 5431.0, 5517.0, 5355.0, 5701.0, 5678.0, 5317.0, 5269.0, 5541.0, 5439.0, 5461.0, 5371.0, 5451.0, 5524.0, 5613.0, 5262.0, 5342.0, 5442.0, 5398.0, 5396.0, 5628.0, 5265.0, 5663.0, 5488.0, 5438.0, 5325.0 (number of hits: 3)
7	5270	9	1	333	1	5377.0, 5397.0, 5262.0, 5724.0, 5286.0, 5380.0, 5334.0, 5613.0, 5711.0, 5707.0, 5654.0, 5499.0, 5444.0, 5429.0, 5322.0, 5303.0, 5350.0, 5320.0, 5696.0, 5494.0, 5408.0, 5464.0, 5379.0, 5608.0, 5595.0, 5331.0, 5291.0, 5669.0, 5679.0, 5712.0, 5345.0, 5528.0, 5705.0, 5659.0, 5333.0, 5485.0, 5677.0, 5497.0, 5624.0, 5326.0, 5259.0, 5295.0, 5260.0, 5297.0, 5399.0, 5605.0, 5556.0, 5271.0, 5592.0, 5626.0, 5425.0, 5342.0, 5250.0, 5683.0, 5277.0, 5637.0, 5419.0, 5369.0, 5300.0, 5427.0, 5482.0, 5675.0, 5469.0, 5293.0, 5568.0, 5704.0, 5665.0, 5514.0, 5496.0, 5393.0, 5274.0, 5441.0, 5493.0, 5569.0, 5662.0, 5283.0, 5674.0, 5706.0, 5359.0, 5589.0, 5660.0, 5462.0, 5435.0, 5601.0, 5647.0, 5698.0, 5622.0, 5540.0, 5396.0, 5447.0, 5341.0, 5460.0, 5615.0, 5614.0, 5576.0, 5708.0, 5550.0, 5385.0, 5649.0, 5454.0 (number of hits: 7)
8	5270	9	1	333	1	5527.0, 5266.0, 5496.0, 5360.0, 5343.0, 5521.0, 5698.0, 5573.0, 5614.0, 5411.0, 5631.0, 5420.0, 5637.0, 5705.0, 5424.0, 5355.0, 5717.0, 5711.0, 5372.0, 5584.0, 5299.0, 5678.0, 5550.0, 5667.0, 5440.0, 5592.0, 5670.0, 5654.0, 5392.0, 5351.0, 5601.0, 5673.0, 5588.0, 5367.0, 5706.0, 5536.0, 5506.0, 5540.0, 5384.0, 5381.0, 5452.0, 5465.0, 5374.0, 5539.0, 5554.0, 5526.0, 5356.0, 5680.0, 5267.0, 5291.0, 5647.0, 5503.0, 5296.0, 5610.0, 5335.0, 5512.0, 5366.0, 5349.0, 5446.0, 5532.0, 5337.0, 5253.0, 5548.0, 5350.0, 5419.0, 5283.0, 5425.0, 5400.0, 5359.0, 5723.0, 5685.0, 5565.0, 5462.0, 5501.0, 5701.0, 5611.0, 5704.0, 5642.0, 5388.0, 5271.0, 5563.0, 5656.0, 5250.0, 5436.0, 5552.0, 5719.0, 5722.0, 5624.0, 5481.0, 5393.0, 5596.0, 5278.0, 5293.0, 5319.0, 5693.0, 5703.0, 5710.0, 5608.0, 5458.0, 5460.0 (number of hits: 4)
9	5270	9	1	333	1	5451.0, 5666.0, 5255.0, 5488.0, 5606.0, 5618.0, 5678.0, 5462.0, 5483.0, 5345.0, 5632.0, 5705.0, 5659.0, 5527.0, 5694.0,

						5491.0, 5286.0, 5430.0, 5386.0, 5352.0, 5564.0, 5672.0, 5340.0, 5544.0, 5592.0, 5275.0, 5675.0, 5410.0, 5560.0, 5585.0, 5649.0, 5395.0, 5328.0, 5307.0, 5642.0, 5398.0, 5699.0, 5613.0, 5426.0, 5671.0, 5266.0, 5415.0, 5295.0, 5418.0, 5600.0, 5272.0, 5404.0, 5486.0, 5580.0, 5463.0, 5647.0, 5349.0, 5459.0, 5702.0, 5603.0, 5455.0, 5366.0, 5429.0, 5644.0, 5269.0, 5351.0, 5500.0, 5635.0, 5432.0, 5406.0, 5662.0, 5490.0, 5336.0, 5710.0, 5665.0, 5614.0, 5327.0, 5401.0, 5416.0, 5408.0, 5651.0, 5612.0, 5598.0, 5261.0, 5567.0, 5501.0, 5601.0, 5557.0, 5685.0, 5629.0, 5292.0, 5344.0, 5511.0, 5636.0, 5641.0, 5290.0, 5475.0, 5683.0, 5274.0, 5571.0, 5314.0, 5302.0, 5297.0, 5623.0, 5556.0 (number of hits: 8)
10	5270	9	1	333	1	5362.0, 5612.0, 5382.0, 5627.0, 5379.0, 5293.0, 5309.0, 5405.0, 5467.0, 5555.0, 5349.0, 5547.0, 5573.0, 5586.0, 5299.0, 5697.0, 5472.0, 5479.0, 5715.0, 5593.0, 5429.0, 5284.0, 5658.0, 5579.0, 5476.0, 5566.0, 5316.0, 5670.0, 5546.0, 5436.0, 5453.0, 5314.0, 5336.0, 5722.0, 5603.0, 5664.0, 5660.0, 5369.0, 5346.0, 5428.0, 5365.0, 5632.0, 5347.0, 5702.0, 5407.0, 5562.0, 5673.0, 5461.0, 5662.0, 5470.0, 5494.0, 5418.0, 5437.0, 5605.0, 5596.0, 5678.0, 5273.0, 5388.0, 5724.0, 5269.0, 5481.0, 5322.0, 5647.0, 5584.0, 5495.0, 5545.0, 5581.0, 5408.0, 5318.0, 5565.0, 5403.0, 5539.0, 5296.0, 5373.0, 5693.0, 5391.0, 5690.0, 5331.0, 5578.0, 5561.0, 5390.0, 5414.0, 5449.0, 5254.0, 5426.0, 5285.0, 5262.0, 5502.0, 5473.0, 5454.0, 5264.0, 5256.0, 5634.0, 5649.0, 5367.0, 5615.0, 5283.0, 5395.0, 5260.0, 5642.0 (number of hits: 6)
11	5270	9	1	333	1	5686.0, 5315.0, 5427.0, 5624.0, 5692.0, 5337.0, 5576.0, 5606.0, 5455.0, 5287.0, 5704.0, 5526.0, 5437.0, 5402.0, 5527.0, 5396.0, 5367.0, 5314.0, 5625.0, 5665.0, 5471.0, 5338.0, 5425.0, 5684.0, 5609.0, 5672.0, 5373.0, 5707.0, 5664.0, 5506.0, 5447.0, 5530.0, 5460.0, 5547.0, 5288.0, 5481.0, 5332.0, 5623.0, 5608.0, 5708.0, 5666.0, 5577.0, 5563.0, 5631.0, 5256.0, 5612.0, 5348.0, 5540.0, 5574.0, 5591.0, 5601.0, 5443.0, 5370.0, 5378.0, 5329.0, 5614.0, 5257.0, 5494.0, 5444.0, 5505.0, 5408.0, 5292.0, 5662.0, 5545.0, 5621.0, 5366.0, 5468.0, 5502.0, 5264.0, 5477.0, 5466.0, 5358.0, 5603.0, 5550.0, 5266.0, 5294.0, 5462.0, 5433.0, 5696.0, 5312.0, 5301.0, 5459.0, 5497.0, 5309.0, 5645.0, 5275.0, 5620.0, 5509.0, 5553.0, 5644.0, 5365.0, 5395.0, 5635.0, 5442.0, 5342.0, 5561.0, 5534.0, 5618.0, 5474.0, 5718.0

						(number of hits: 8)
12	5270	9	1	333	1	5289.0, 5578.0, 5516.0, 5704.0, 5506.0, 5676.0, 5382.0, 5680.0, 5376.0, 5534.0, 5304.0, 5643.0, 5661.0, 5421.0, 5564.0, 5455.0, 5285.0, 5575.0, 5588.0, 5581.0, 5613.0, 5406.0, 5327.0, 5345.0, 5332.0, 5591.0, 5481.0, 5546.0, 5278.0, 5721.0, 5525.0, 5389.0, 5579.0, 5489.0, 5308.0, 5652.0, 5663.0, 5339.0, 5431.0, 5717.0, 5547.0, 5482.0, 5316.0, 5403.0, 5392.0, 5701.0, 5390.0, 5318.0, 5571.0, 5594.0, 5302.0, 5410.0, 5414.0, 5264.0, 5702.0, 5282.0, 5568.0, 5394.0, 5634.0, 5286.0, 5532.0, 5497.0, 5624.0, 5462.0, 5312.0, 5542.0, 5257.0, 5636.0, 5719.0, 5558.0, 5520.0, 5291.0, 5434.0, 5649.0, 5510.0, 5325.0, 5258.0, 5377.0, 5619.0, 5503.0, 5425.0, 5697.0, 5352.0, 5543.0, 5416.0, 5561.0, 5280.0, 5393.0, 5459.0, 5250.0, 5468.0, 5660.0, 5597.0, 5326.0, 5370.0, 5560.0, 5583.0, 5341.0, 5383.0, 5475.0 (number of hits: 8)
13	5270	9	1	333	1	5448.0, 5302.0, 5307.0, 5287.0, 5468.0, 5367.0, 5664.0, 5270.0, 5560.0, 5705.0, 5295.0, 5531.0, 5397.0, 5702.0, 5715.0, 5435.0, 5280.0, 5356.0, 5465.0, 5666.0, 5406.0, 5684.0, 5439.0, 5400.0, 5472.0, 5611.0, 5327.0, 5467.0, 5483.0, 5500.0, 5260.0, 5469.0, 5542.0, 5344.0, 5709.0, 5449.0, 5527.0, 5279.0, 5275.0, 5454.0, 5622.0, 5326.0, 5353.0, 5637.0, 5696.0, 5571.0, 5425.0, 5340.0, 5274.0, 5466.0, 5614.0, 5607.0, 5513.0, 5297.0, 5347.0, 5490.0, 5393.0, 5700.0, 5585.0, 5381.0, 5524.0, 5368.0, 5333.0, 5489.0, 5325.0, 5692.0, 5261.0, 5441.0, 5319.0, 5317.0, 5583.0, 5634.0, 5301.0, 5362.0, 5706.0, 5564.0, 5594.0, 5463.0, 5475.0, 5376.0, 5668.0, 5658.0, 5259.0, 5504.0, 5697.0, 5686.0, 5498.0, 5642.0, 5719.0, 5458.0, 5550.0, 5712.0, 5293.0, 5355.0, 5429.0, 5605.0, 5310.0, 5476.0, 5581.0, 5577.0 (number of hits: 8)
14	5270	9	1	333	1	5400.0, 5638.0, 5449.0, 5527.0, 5423.0, 5593.0, 5428.0, 5537.0, 5505.0, 5615.0, 5257.0, 5546.0, 5320.0, 5416.0, 5687.0, 5501.0, 5447.0, 5429.0, 5499.0, 5392.0, 5469.0, 5281.0, 5279.0, 5291.0, 5259.0, 5330.0, 5636.0, 5549.0, 5351.0, 5642.0, 5548.0, 5722.0, 5295.0, 5461.0, 5331.0, 5625.0, 5631.0, 5591.0, 5352.0, 5489.0, 5307.0, 5556.0, 5681.0, 5388.0, 5596.0, 5488.0, 5490.0, 5691.0, 5260.0, 5434.0, 5310.0, 5576.0, 5627.0, 5406.0, 5643.0, 5394.0, 5263.0, 5268.0, 5414.0, 5524.0, 5497.0, 5647.0, 5403.0, 5705.0, 5592.0, 5341.0, 5634.0, 5443.0, 5274.0, 5440.0, 5382.0, 5479.0, 5465.0, 5706.0, 5533.0, 5301.0, 5663.0, 5609.0, 5659.0, 5666.0,

						5650.0, 5516.0, 5720.0, 5632.0, 5509.0, 5411.0, 5508.0, 5612.0, 5427.0, 5536.0, 5250.0, 5453.0, 5278.0, 5716.0, 5649.0, 5342.0, 5270.0, 5348.0, 5361.0, 5366.0 (number of hits: 5)
15	5270	9	1	333	1	5431.0, 5407.0, 5391.0, 5474.0, 5359.0, 5410.0, 5581.0, 5717.0, 5713.0, 5706.0, 5355.0, 5485.0, 5524.0, 5341.0, 5543.0, 5489.0, 5484.0, 5718.0, 5301.0, 5690.0, 5544.0, 5319.0, 5262.0, 5406.0, 5308.0, 5369.0, 5397.0, 5584.0, 5619.0, 5340.0, 5279.0, 5496.0, 5499.0, 5550.0, 5552.0, 5680.0, 5351.0, 5627.0, 5395.0, 5672.0, 5290.0, 5358.0, 5664.0, 5610.0, 5722.0, 5548.0, 5295.0, 5628.0, 5447.0, 5468.0, 5334.0, 5562.0, 5607.0, 5457.0, 5686.0, 5588.0, 5297.0, 5636.0, 5451.0, 5292.0, 5342.0, 5613.0, 5429.0, 5270.0, 5265.0, 5525.0, 5486.0, 5405.0, 5704.0, 5306.0, 5417.0, 5456.0, 5419.0, 5463.0, 5574.0, 5436.0, 5700.0, 5273.0, 5409.0, 5478.0, 5555.0, 5641.0, 5654.0, 5677.0, 5519.0, 5337.0, 5346.0, 5362.0, 5487.0, 5616.0, 5396.0, 5400.0, 5669.0, 5335.0, 5694.0, 5491.0, 5494.0, 5567.0, 5379.0, 5620.0 (number of hits: 7)
16	5270	9	1	333	1	5280.0, 5652.0, 5722.0, 5584.0, 5395.0, 5723.0, 5569.0, 5526.0, 5426.0, 5425.0, 5645.0, 5324.0, 5597.0, 5568.0, 5659.0, 5296.0, 5440.0, 5374.0, 5448.0, 5382.0, 5441.0, 5435.0, 5312.0, 5484.0, 5696.0, 5625.0, 5600.0, 5620.0, 5438.0, 5682.0, 5710.0, 5252.0, 5432.0, 5356.0, 5412.0, 5264.0, 5607.0, 5265.0, 5439.0, 5379.0, 5263.0, 5483.0, 5697.0, 5498.0, 5631.0, 5572.0, 5623.0, 5563.0, 5373.0, 5493.0, 5291.0, 5551.0, 5272.0, 5282.0, 5520.0, 5285.0, 5283.0, 5718.0, 5258.0, 5506.0, 5494.0, 5401.0, 5605.0, 5421.0, 5369.0, 5647.0, 5611.0, 5319.0, 5389.0, 5407.0, 5712.0, 5300.0, 5260.0, 5376.0, 5361.0, 5415.0, 5706.0, 5431.0, 5420.0, 5306.0, 5347.0, 5511.0, 5488.0, 5398.0, 5562.0, 5523.0, 5719.0, 5340.0, 5453.0, 5515.0, 5388.0, 5418.0, 5455.0, 5533.0, 5716.0, 5368.0, 5606.0, 5614.0, 5326.0, 5619.0 (number of hits: 6)
17	5270	9	1	333	1	5706.0, 5299.0, 5319.0, 5711.0, 5449.0, 5276.0, 5317.0, 5366.0, 5452.0, 5584.0, 5320.0, 5679.0, 5390.0, 5498.0, 5318.0, 5667.0, 5708.0, 5307.0, 5464.0, 5602.0, 5402.0, 5354.0, 5680.0, 5429.0, 5286.0, 5476.0, 5434.0, 5387.0, 5478.0, 5395.0, 5651.0, 5389.0, 5479.0, 5311.0, 5300.0, 5474.0, 5360.0, 5694.0, 5331.0, 5466.0, 5703.0, 5541.0, 5344.0, 5569.0, 5579.0, 5716.0, 5378.0, 5659.0, 5357.0, 5460.0, 5310.0, 5425.0, 5540.0, 5355.0, 5631.0, 5661.0, 5383.0, 5406.0, 5655.0, 5458.0,

						5482.0, 5723.0, 5556.0, 5510.0, 5595.0, 5658.0, 5394.0, 5565.0, 5560.0, 5309.0, 5636.0, 5554.0, 5614.0, 5409.0, 5672.0, 5582.0, 5356.0, 5712.0, 5633.0, 5538.0, 5398.0, 5567.0, 5265.0, 5277.0, 5393.0, 5268.0, 5575.0, 5707.0, 5326.0, 5260.0, 5266.0, 5505.0, 5525.0, 5586.0, 5261.0, 5591.0, 5533.0, 5373.0, 5445.0, 5359.0 (number of hits: 7)
18	5270	9	1	333	1	5501.0, 5516.0, 5296.0, 5529.0, 5678.0, 5361.0, 5365.0, 5688.0, 5308.0, 5698.0, 5426.0, 5468.0, 5676.0, 5511.0, 5422.0, 5714.0, 5450.0, 5399.0, 5354.0, 5706.0, 5425.0, 5680.0, 5431.0, 5420.0, 5436.0, 5473.0, 5309.0, 5313.0, 5443.0, 5396.0, 5465.0, 5392.0, 5709.0, 5405.0, 5366.0, 5360.0, 5645.0, 5455.0, 5716.0, 5648.0, 5672.0, 5462.0, 5259.0, 5362.0, 5626.0, 5372.0, 5635.0, 5603.0, 5585.0, 5490.0, 5724.0, 5482.0, 5513.0, 5301.0, 5256.0, 5371.0, 5619.0, 5274.0, 5539.0, 5690.0, 5623.0, 5391.0, 5464.0, 5702.0, 5427.0, 5550.0, 5376.0, 5555.0, 5639.0, 5611.0, 5693.0, 5297.0, 5721.0, 5342.0, 5528.0, 5469.0, 5306.0, 5576.0, 5411.0, 5356.0, 5506.0, 5649.0, 5681.0, 5557.0, 5457.0, 5641.0, 5604.0, 5358.0, 5288.0, 5668.0, 5283.0, 5504.0, 5284.0, 5609.0, 5477.0, 5410.0, 5438.0, 5258.0, 5269.0, 5646.0 (number of hits: 8)
19	5270	9	1	333	1	5603.0, 5297.0, 5336.0, 5306.0, 5277.0, 5517.0, 5515.0, 5316.0, 5369.0, 5579.0, 5487.0, 5641.0, 5255.0, 5575.0, 5469.0, 5460.0, 5445.0, 5479.0, 5418.0, 5621.0, 5531.0, 5698.0, 5285.0, 5657.0, 5692.0, 5693.0, 5367.0, 5568.0, 5326.0, 5463.0, 5393.0, 5650.0, 5476.0, 5710.0, 5559.0, 5489.0, 5704.0, 5450.0, 5623.0, 5546.0, 5585.0, 5665.0, 5461.0, 5633.0, 5265.0, 5512.0, 5696.0, 5562.0, 5454.0, 5610.0, 5356.0, 5266.0, 5636.0, 5375.0, 5640.0, 5495.0, 5558.0, 5681.0, 5635.0, 5409.0, 5671.0, 5563.0, 5554.0, 5320.0, 5588.0, 5613.0, 5295.0, 5308.0, 5381.0, 5275.0, 5309.0, 5679.0, 5604.0, 5302.0, 5484.0, 5485.0, 5437.0, 5488.0, 5675.0, 5371.0, 5455.0, 5281.0, 5406.0, 5422.0, 5299.0, 5327.0, 5293.0, 5577.0, 5259.0, 5323.0, 5408.0, 5702.0, 5254.0, 5537.0, 5303.0, 5451.0, 5627.0, 5421.0, 5519.0, 5716.0 (number of hits: 10)
20	5270	9	1	333	1	5706.0, 5576.0, 5717.0, 5455.0, 5710.0, 5558.0, 5647.0, 5373.0, 5628.0, 5697.0, 5418.0, 5274.0, 5287.0, 5424.0, 5636.0, 5398.0, 5327.0, 5715.0, 5716.0, 5458.0, 5435.0, 5615.0, 5478.0, 5691.0, 5635.0, 5537.0, 5603.0, 5477.0, 5354.0, 5607.0, 5554.0, 5438.0, 5291.0, 5508.0, 5431.0, 5474.0, 5642.0, 5565.0, 5484.0, 5674.0,

						5472.0, 5454.0, 5374.0, 5494.0, 5349.0, 5457.0, 5502.0, 5432.0, 5310.0, 5476.0, 5286.0, 5653.0, 5621.0, 5573.0, 5686.0, 5582.0, 5487.0, 5429.0, 5446.0, 5428.0, 5699.0, 5545.0, 5692.0, 5323.0, 5532.0, 5568.0, 5587.0, 5272.0, 5506.0, 5483.0, 5678.0, 5333.0, 5278.0, 5443.0, 5504.0, 5517.0, 5465.0, 5630.0, 5279.0, 5586.0, 5616.0, 5488.0, 5386.0, 5411.0, 5579.0, 5471.0, 5336.0, 5713.0, 5307.0, 5359.0, 5571.0, 5596.0, 5301.0, 5496.0, 5253.0, 5666.0, 5430.0, 5416.0, 5709.0, 5651.0 (number of hits: 6)
21	5270	9	1	333	1	5417.0, 5351.0, 5653.0, 5274.0, 5602.0, 5412.0, 5464.0, 5563.0, 5344.0, 5328.0, 5613.0, 5579.0, 5472.0, 5343.0, 5694.0, 5718.0, 5276.0, 5571.0, 5292.0, 5597.0, 5686.0, 5272.0, 5271.0, 5385.0, 5440.0, 5261.0, 5564.0, 5310.0, 5668.0, 5392.0, 5382.0, 5669.0, 5455.0, 5664.0, 5369.0, 5481.0, 5460.0, 5423.0, 5715.0, 5364.0, 5704.0, 5457.0, 5560.0, 5428.0, 5329.0, 5363.0, 5561.0, 5572.0, 5591.0, 5700.0, 5569.0, 5354.0, 5459.0, 5296.0, 5347.0, 5386.0, 5301.0, 5352.0, 5448.0, 5512.0, 5365.0, 5639.0, 5478.0, 5523.0, 5495.0, 5526.0, 5293.0, 5707.0, 5355.0, 5656.0, 5621.0, 5339.0, 5251.0, 5580.0, 5624.0, 5281.0, 5483.0, 5659.0, 5280.0, 5405.0, 5426.0, 5279.0, 5543.0, 5463.0, 5678.0, 5332.0, 5427.0, 5488.0, 5266.0, 5590.0, 5680.0, 5529.0, 5342.0, 5516.0, 5407.0, 5421.0, 5493.0, 5500.0, 5450.0, 5267.0 (number of hits: 5)
22	5270	9	1	333	1	5657.0, 5607.0, 5467.0, 5650.0, 5414.0, 5478.0, 5636.0, 5449.0, 5638.0, 5642.0, 5685.0, 5413.0, 5718.0, 5670.0, 5532.0, 5690.0, 5649.0, 5533.0, 5322.0, 5709.0, 5605.0, 5575.0, 5658.0, 5508.0, 5712.0, 5345.0, 5285.0, 5392.0, 5344.0, 5357.0, 5259.0, 5430.0, 5252.0, 5717.0, 5585.0, 5516.0, 5703.0, 5654.0, 5291.0, 5255.0, 5608.0, 5406.0, 5492.0, 5482.0, 5260.0, 5668.0, 5263.0, 5617.0, 5566.0, 5696.0, 5545.0, 5711.0, 5505.0, 5495.0, 5254.0, 5401.0, 5506.0, 5265.0, 5679.0, 5568.0, 5660.0, 5706.0, 5661.0, 5415.0, 5546.0, 5302.0, 5686.0, 5258.0, 5387.0, 5622.0, 5518.0, 5435.0, 5416.0, 5542.0, 5443.0, 5474.0, 5620.0, 5561.0, 5261.0, 5496.0, 5287.0, 5369.0, 5493.0, 5471.0, 5458.0, 5589.0, 5704.0, 5632.0, 5595.0, 5551.0, 5514.0, 5574.0, 5724.0, 5324.0, 5584.0, 5633.0, 5283.0, 5268.0, 5599.0, 5472.0 (number of hits: 4)
23	5270	9	1	333	1	5677.0, 5616.0, 5486.0, 5594.0, 5573.0, 5578.0, 5314.0, 5601.0, 5585.0, 5302.0, 5638.0, 5452.0, 5417.0, 5620.0, 5443.0, 5659.0, 5514.0, 5500.0, 5484.0, 5392.0,

						5552.0, 5622.0, 5490.0, 5349.0, 5270.0, 5376.0, 5656.0, 5607.0, 5420.0, 5369.0, 5461.0, 5299.0, 5322.0, 5344.0, 5579.0, 5561.0, 5649.0, 5559.0, 5335.0, 5624.0, 5478.0, 5463.0, 5572.0, 5482.0, 5370.0, 5263.0, 5680.0, 5336.0, 5554.0, 5582.0, 5368.0, 5332.0, 5493.0, 5523.0, 5377.0, 5414.0, 5690.0, 5679.0, 5586.0, 5720.0, 5606.0, 5426.0, 5435.0, 5371.0, 5522.0, 5378.0, 5631.0, 5359.0, 5547.0, 5311.0, 5521.0, 5428.0, 5442.0, 5619.0, 5384.0, 5345.0, 5379.0, 5282.0, 5421.0, 5472.0, 5473.0, 5604.0, 5566.0, 5399.0, 5699.0, 5528.0, 5418.0, 5515.0, 5676.0, 5348.0, 5640.0, 5400.0, 5609.0, 5449.0, 5454.0, 5715.0, 5358.0, 5272.0, 5285.0, 5605.0 (number of hits: 5)
24	5270	9	1	333	1	5720.0, 5345.0, 5426.0, 5609.0, 5428.0, 5674.0, 5255.0, 5506.0, 5316.0, 5479.0, 5416.0, 5511.0, 5281.0, 5546.0, 5354.0, 5570.0, 5450.0, 5330.0, 5276.0, 5473.0, 5444.0, 5343.0, 5453.0, 5535.0, 5501.0, 5519.0, 5284.0, 5283.0, 5381.0, 5625.0, 5656.0, 5638.0, 5675.0, 5463.0, 5524.0, 5442.0, 5415.0, 5643.0, 5430.0, 5539.0, 5713.0, 5686.0, 5307.0, 5359.0, 5522.0, 5536.0, 5311.0, 5315.0, 5340.0, 5404.0, 5715.0, 5251.0, 5452.0, 5526.0, 5698.0, 5618.0, 5293.0, 5646.0, 5470.0, 5441.0, 5631.0, 5390.0, 5566.0, 5619.0, 5513.0, 5538.0, 5544.0, 5668.0, 5562.0, 5329.0, 5581.0, 5437.0, 5363.0, 5706.0, 5565.0, 5478.0, 5639.0, 5569.0, 5692.0, 5448.0, 5658.0, 5424.0, 5495.0, 5321.0, 5623.0, 5665.0, 5331.0, 5320.0, 5292.0, 5691.0, 5561.0, 5644.0, 5427.0, 5397.0, 5279.0, 5400.0, 5289.0, 5324.0, 5605.0, 5557.0 (number of hits: 5)
25	5270	9	1	333	1	5552.0, 5342.0, 5319.0, 5450.0, 5351.0, 5394.0, 5326.0, 5528.0, 5710.0, 5719.0, 5317.0, 5628.0, 5412.0, 5378.0, 5662.0, 5709.0, 5683.0, 5497.0, 5474.0, 5321.0, 5313.0, 5312.0, 5280.0, 5300.0, 5592.0, 5532.0, 5463.0, 5704.0, 5634.0, 5640.0, 5708.0, 5698.0, 5567.0, 5629.0, 5615.0, 5318.0, 5271.0, 5320.0, 5540.0, 5399.0, 5714.0, 5563.0, 5335.0, 5575.0, 5611.0, 5508.0, 5671.0, 5455.0, 5278.0, 5448.0, 5373.0, 5397.0, 5672.0, 5346.0, 5590.0, 5574.0, 5283.0, 5443.0, 5402.0, 5632.0, 5268.0, 5288.0, 5549.0, 5613.0, 5344.0, 5352.0, 5484.0, 5454.0, 5348.0, 5472.0, 5639.0, 5617.0, 5594.0, 5330.0, 5418.0, 5420.0, 5353.0, 5435.0, 5660.0, 5371.0, 5444.0, 5695.0, 5490.0, 5274.0, 5341.0, 5584.0, 5260.0, 5369.0, 5307.0, 5272.0, 5495.0, 5676.0, 5277.0, 5543.0, 5465.0, 5297.0, 5294.0, 5715.0, 5400.0, 5393.0 (number of hits: 7)

26	5270	9	1	333	1	5702.0, 5415.0, 5439.0, 5592.0, 5376.0, 5379.0, 5413.0, 5412.0, 5701.0, 5591.0, 5401.0, 5660.0, 5696.0, 5606.0, 5289.0, 5722.0, 5340.0, 5693.0, 5489.0, 5409.0, 5618.0, 5628.0, 5705.0, 5306.0, 5549.0, 5270.0, 5405.0, 5311.0, 5631.0, 5370.0, 5320.0, 5719.0, 5272.0, 5495.0, 5571.0, 5522.0, 5683.0, 5460.0, 5598.0, 5352.0, 5309.0, 5550.0, 5638.0, 5452.0, 5375.0, 5515.0, 5512.0, 5691.0, 5699.0, 5377.0, 5430.0, 5567.0, 5477.0, 5315.0, 5358.0, 5339.0, 5479.0, 5651.0, 5587.0, 5348.0, 5593.0, 5633.0, 5712.0, 5637.0, 5642.0, 5484.0, 5685.0, 5650.0, 5640.0, 5563.0, 5469.0, 5695.0, 5562.0, 5324.0, 5698.0, 5318.0, 5276.0, 5620.0, 5292.0, 5521.0, 5622.0, 5614.0, 5583.0, 5543.0, 5291.0, 5497.0, 5403.0, 5310.0, 5524.0, 5557.0, 5268.0, 5343.0, 5724.0, 5517.0, 5514.0, 5453.0, 5627.0, 5694.0, 5328.0, 5597.0 (number of hits: 7)
27	5270	9	1	333	1	5558.0, 5339.0, 5391.0, 5601.0, 5466.0, 5370.0, 5548.0, 5602.0, 5625.0, 5589.0, 5603.0, 5498.0, 5536.0, 5678.0, 5600.0, 5719.0, 5675.0, 5470.0, 5360.0, 5533.0, 5264.0, 5449.0, 5657.0, 5273.0, 5664.0, 5392.0, 5594.0, 5616.0, 5378.0, 5464.0, 5702.0, 5317.0, 5615.0, 5373.0, 5382.0, 5460.0, 5710.0, 5699.0, 5605.0, 5522.0, 5500.0, 5453.0, 5281.0, 5436.0, 5278.0, 5692.0, 5520.0, 5478.0, 5425.0, 5553.0, 5361.0, 5443.0, 5309.0, 5303.0, 5544.0, 5349.0, 5292.0, 5650.0, 5580.0, 5623.0, 5331.0, 5679.0, 5528.0, 5707.0, 5688.0, 5599.0, 5358.0, 5652.0, 5379.0, 5668.0, 5680.0, 5475.0, 5377.0, 5385.0, 5265.0, 5509.0, 5687.0, 5473.0, 5538.0, 5328.0, 5717.0, 5479.0, 5634.0, 5635.0, 5442.0, 5496.0, 5325.0, 5253.0, 5462.0, 5519.0, 5279.0, 5587.0, 5439.0, 5622.0, 5267.0, 5431.0, 5677.0, 5256.0, 5630.0, 5578.0 (number of hits: 3)
28	5270	9	1	333	1	5347.0, 5267.0, 5585.0, 5647.0, 5701.0, 5323.0, 5288.0, 5282.0, 5284.0, 5336.0, 5473.0, 5590.0, 5416.0, 5356.0, 5577.0, 5713.0, 5350.0, 5699.0, 5563.0, 5461.0, 5623.0, 5470.0, 5319.0, 5395.0, 5556.0, 5615.0, 5604.0, 5540.0, 5605.0, 5516.0, 5251.0, 5335.0, 5256.0, 5314.0, 5360.0, 5391.0, 5706.0, 5308.0, 5404.0, 5529.0, 5642.0, 5411.0, 5342.0, 5489.0, 5471.0, 5606.0, 5508.0, 5302.0, 5385.0, 5709.0, 5667.0, 5333.0, 5279.0, 5413.0, 5654.0, 5290.0, 5697.0, 5367.0, 5588.0, 5592.0, 5428.0, 5444.0, 5361.0, 5414.0, 5303.0, 5506.0, 5532.0, 5346.0, 5622.0, 5421.0, 5343.0, 5600.0, 5596.0, 5252.0, 5399.0, 5534.0, 5656.0, 5696.0, 5627.0, 5690.0, 5262.0, 5382.0, 5674.0, 5363.0, 5579.0,

						5452.0, 5321.0, 5502.0, 5524.0, 5485.0, 5438.0, 5712.0, 5498.0, 5510.0, 5550.0, 5677.0, 5442.0, 5466.0, 5494.0, 5268.0 (number of hits: 6)
29	5270	9	1	333	1	5655.0, 5682.0, 5521.0, 5384.0, 5375.0, 5673.0, 5601.0, 5276.0, 5503.0, 5514.0, 5467.0, 5695.0, 5254.0, 5542.0, 5306.0, 5412.0, 5608.0, 5686.0, 5588.0, 5420.0, 5640.0, 5639.0, 5667.0, 5368.0, 5332.0, 5522.0, 5620.0, 5597.0, 5637.0, 5650.0, 5562.0, 5289.0, 5615.0, 5310.0, 5552.0, 5536.0, 5322.0, 5624.0, 5439.0, 5297.0, 5426.0, 5435.0, 5374.0, 5525.0, 5476.0, 5442.0, 5677.0, 5386.0, 5698.0, 5362.0, 5452.0, 5255.0, 5560.0, 5277.0, 5379.0, 5320.0, 5453.0, 5382.0, 5670.0, 5396.0, 5406.0, 5383.0, 5647.0, 5425.0, 5504.0, 5628.0, 5273.0, 5625.0, 5397.0, 5688.0, 5269.0, 5652.0, 5612.0, 5324.0, 5489.0, 5463.0, 5575.0, 5595.0, 5613.0, 5547.0, 5576.0, 5479.0, 5713.0, 5369.0, 5500.0, 5499.0, 5497.0, 5394.0, 5274.0, 5434.0, 5661.0, 5328.0, 5313.0, 5421.0, 5545.0, 5356.0, 5456.0, 5577.0, 5711.0, 5448.0 (number of hits: 5)
30	5270	9	1	333	1	5484.0, 5423.0, 5438.0, 5496.0, 5470.0, 5643.0, 5529.0, 5487.0, 5479.0, 5561.0, 5460.0, 5485.0, 5435.0, 5272.0, 5261.0, 5619.0, 5720.0, 5660.0, 5712.0, 5688.0, 5593.0, 5372.0, 5448.0, 5659.0, 5426.0, 5502.0, 5488.0, 5278.0, 5363.0, 5353.0, 5558.0, 5490.0, 5396.0, 5464.0, 5285.0, 5425.0, 5405.0, 5565.0, 5315.0, 5620.0, 5566.0, 5634.0, 5628.0, 5623.0, 5689.0, 5594.0, 5567.0, 5663.0, 5572.0, 5523.0, 5681.0, 5588.0, 5600.0, 5291.0, 5534.0, 5553.0, 5445.0, 5447.0, 5366.0, 5400.0, 5264.0, 5302.0, 5465.0, 5635.0, 5411.0, 5275.0, 5700.0, 5251.0, 5325.0, 5472.0, 5476.0, 5297.0, 5418.0, 5647.0, 5545.0, 5597.0, 5550.0, 5546.0, 5440.0, 5512.0, 5424.0, 5658.0, 5610.0, 5552.0, 5265.0, 5562.0, 5612.0, 5557.0, 5497.0, 5255.0, 5598.0, 5723.0, 5719.0, 5577.0, 5377.0, 5527.0, 5380.0, 5335.0, 5346.0, 5436.0 (number of hits: 4)