FCC DFS TEST REPORT

No. 170603051SHA-002

Applicant	:	Alcatel-Lucent Shanghai Bell Co.,Ltd. 388-389#,Ningqiao Road,Pudong Jinqiao, Shanghai, China
Manufacturer	:	Alcatel-Lucent Shanghai Bell Co.,Ltd. 388-389#,Ningqiao Road,Pudong Jinqiao, Shanghai, China
Product Name	:	Digital Home CPE
Type/Model	:	A-240Z-A
EMA Code	:	3FE 46615 AAAA
TEST RESULT	**:**	**PASS**

SUMMARY

The equipment complies with the requirements according to the following standard(s):

47CFR Part 15 (2016): Radio Frequency Devices

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02: Compliance Measurement Procedures for Unlicensed-National Information Infrastructure Devices Operating In The 5250-5350 MHz and 5470-5725 MHz Bands Incorporating Dynamic Frequency Selection

Date of issue: July 5, 2017

Prepared by:

Wade Zhang (*Project Engineer*)

Reviewed by:

Daniel Zhao (*Reviewer*)

Content

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Operation Frequency Band	:	5250 ~ 5350MHz, 5470 ~ 5725MHz
Type of Modulation	:	OFDM(BPSK, QPSK, 16QAM, 64QAM, 256QAM)
EUT Modes of Modulation	:	802.11a, 802.11n/ac(HT20), 802.11n/ac(HT40), 802.11ac(VHT80)
Channel Number	:	For 5250 ~ 5350MHz Band: Channel 52 - 64; For 5470 ~ 5725MHz Band: Channel 100 - 144
Description of EUT	:	The EUT is a digital home CPE, it support WIFI, ZigBee and Z-Wave, and there have only one model, we test it and listed the WIFI 5G band DFS results in this report.
Antenna	:	PCB antenna, 3dBi max Peak gain, FAF connector
Rating	:	100-240V, 50/60Hz
Category of EUT	:	Class B
EUT type	:	☒ Table top ☐ Floor standing
Sample received date	:	March 6, 2017
Date of test	:	March 6, 2017 to April 18, 2017

1.2 RF Technical Information

Specification Items	Description
Protocol	802.11a/n20/ac20/n40/ac40/ac80
Modulation	BPSK, QPSK, 16QAM, 64QAM, 256QAM
Channel Frequency	5250-5350MHz; 5470-5725MHz
Channel Bandwidth	20/40/80MHz
Weather Band (5600~5650MHz)	☒Yes ☐No
Max. EIRP Power	☐ < 200mW ☒ ≥ 200mW
Operating Mode	☒ Master ☐ Salve
Manufacturer Statement	Manufacturer statement confirming that information regarding the parameters of the detected Radar Waveforms are not available to the end user.

1.3 Description of Client

Applicant : Alcatel-Lucent Shanghai Bell Co., Ltd.
388-389#,Ningqiao Road, Pudong Jinqiao, Shanghai, China

Manufacturer : Alcatel-Lucent Shanghai Bell Co.,Ltd.
388-389#,Ningqiao Road, Pudong Jinqiao, Shanghai, China

1.4 Description of Test Facility

Name : Intertek Testing Service Shanghai

Address : Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China

Telephone : 86 21 61278200

Telefax : 86 21 54262353

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2016): Radio Frequency Devices

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02: Compliance Measurement Procedures for Unlicensed-National Information Infrastructure Devices Operating In The 5250-5350 MHz and 5470-5725 MHz Bands Incorporating Dynamic Frequency Selection

2.2 Mode of operation during the test / Test peripherals used

Stream the channel loading test file from the Master Device to the Client Device on the test Channel for the entire period of the test if necessary.

The EUT was operating with the software for DFS test. The software is secured by applicant to prevent the user from disabling the DFS function.

2.3 Instrument list

Selected	Equipment	Type	Manu.	Internal no.	Cal. Date	Due date
☒	PXA Analyzer	N9030A	Agilent	EC5338	2017/3/3	2018/3/2
☒	Vector SG	N5182B	Agilent	EC5175	2017/3/3	2018/3/2
☒	Power sensor	U2021XA	Agilent	EC5338-1	2017/3/3	2018/3/2
☒	MXG Analog SG	N5181A	Agilent	EC5338-2	2017/3/3	2018/3/2
☒	Power meter	N1911A/N1921A	Agilent	EC4318	2016/5/18	2017/5/17
☒	EMI chamber	3m	Albatross	EC 3048	2016/9/10	2017/9/9
☒	Test Receiver	ESIB 26	R&S	EC 3045	2016/10/19	2017/10/18
☒	Test Receiver	ESCI 7	R&S	EC4501	2017/2/23	2018/2/22
☒	Horn antenna	HF 906	R&S	EC 3049	2016/9/24	2017/9/23

Test Software	Manufacturer	Function
Pulse Building	Agilent	Radar Signal Generation Software
DFS Tool	Agilent	DFS Test Software

2.4 Test Summary

This report applies to tested sample only. The test results have been compared directly with the limits, and the measurement uncertainty is recorded. This report shall not be reproduced in part without written approval of Intertek Testing Service Shanghai Limited.

TEST ITEM	FCC CLAUSE	TEST RESULT
Initial Channel Availability Check Time	15.407(h)(2)	Pass
Radar Burst at the Beginning of the Channel Availability Check & End of the Channel Availability Check Time	15.407(h)(2)	Pass
Channel Move Time, Channel Closing Time	15.407(h)(2)	Pass
Non-occupancy period	15.407(h)(2)	Pass
UNII Detection Bandwidth Measurement	15.407(h)(2)	Pass
Statistical Performance Check	15.407(h)(2)	Pass

Notes: 1: NA =Not Applicable

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3 DFS Detection Thresholds and Radar Test Waveforms

3.1 Interference Threshold values

Maximum Transmit Power	Value (see note)
≥ 200 mW	-64 dBm
< 200 mW	-62 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.*	

3.2 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 80% of the 99% 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.*	

3.3 Radar Test Waveforms Minimum Step

Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

3.4 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µs)	PRI (µs)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1a	1	15 unique PRI values randomly selected from the list of 23 PRI values in Note 2	Roundup {(1/360)*(19*10^6/PRI)}	60%	30
1b		15 unique PRI values randomly selected within the range of 518-3066µsec, with a minimum increment of 1 µsec, excluding PRI values selected in radar type 1a			
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.*

Note 2: *Pulse Repetition Intervals Values for Radar Type 1a*

Pulse Repetition Frequency No	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (us)
1	1930.5	518
2	1858.7	538
3	1792.1	558
4	1730.1	578
5	1672.2	598
6	1618.1	618
7	1567.4	638
8	1519.8	658
9	1474.9	678
10	1432.7	698
11	1392.8	718
12	1355	738
13	1319.3	758
14	1285.3	778
15	1253.1	798
16	1222.5	818
17	1193.3	838
18	1165.6	858
19	1139	878
20	1113.6	898
21	1089.3	918
22	1066.1	938
23	326.2	3066

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

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

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

3.5 Long Pulse Radar Test Waveform

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

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

Each waveform is defined as follows:

1) The transmission period for the Long Pulse Radar test signal is 12 seconds.

2) There are a total of 8 to 20 *Bursts* in the 12 second period, with the number of *Bursts* being randomly chosen. This number is *Burst_Count*.

3) Each *Burst* consists of 1 to 3 pulses, with the number of pulses being randomly chosen. Each *Burst* within the 12 second sequence may have a different number of pulses.

4) The pulse width is between 50 and 100 microseconds, with the pulse width being randomly chosen. Each pulse within a *Burst* will have the same pulse width. Pulses in different *Bursts* may have different pulse widths.

5) Each pulse has a linear frequency modulated chirp between 5 and 20 MHz, with the chirp width being randomly chosen. Each pulse within a *Burst* will have the same chirp width. Pulses in different *Bursts* may have different chirp widths. The chirp is centered on the pulse. For example, with a radar frequency of 5300 MHz and a 20 MHz chirped signal, the chirp starts at 5290 MHz and ends at 5310 MHz.

6) If more than one pulse is present in a *Burst*, the time between the pulses will be between 1000 and 2000 microseconds, with the time being randomly chosen. If three pulses are present in a *Burst*, the random time interval between the first and second pulses is chosen independently of the random time interval between the second and third pulses.

7) The 12 second transmission period is divided into even intervals. The number of intervals is equal to *Burst_Count*. Each interval is of length (12,000,000 / *Burst_Count*) microseconds. Each interval contains one *Burst*. The start time for the *Burst*, relative to the beginning of the interval, is between 1 and [(12,000,000 / *Burst_Count*) – (Total *Burst* Length) + (One Random PRI Interval)] microseconds, with the start time being randomly chosen. The step interval for the start time is 1 microsecond. The start time for each *Burst* is chosen

randomly.

A representative example of a Long Pulse Radar Type waveform:

1) The total test waveform length is 12 seconds.
2) Eight (8) *Bursts* are randomly generated for the *Burst_Count*.
3) *Burst* 1 has 2 randomly generated pulses.
4) The pulse width (for both pulses) is randomly selected to be 75 microseconds.
5) The PRI is randomly selected to be at 1213 microseconds.
6) *Bursts* 2 through 8 are generated using steps 3 – 5.
7) Each *Burst* is contained in even intervals of 1,500,000 microseconds. The starting location for Pulse 1, *Burst* 1 is randomly generated (1 to 1,500,000 minus the total *Burst* 1 length + 1 random PRI interval) at the 325,001 microsecond step. *Bursts* 2 through 8 randomly fall in successive 1,500,000 microsecond intervals (i.e. *Burst* 2 falls in the 1,500,001 – 3,000,000 microsecond range).

3.6 Frequency Hopping Radar Test Waveform

Radar Type	Pulse Width (µs)	PRI (µs)	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

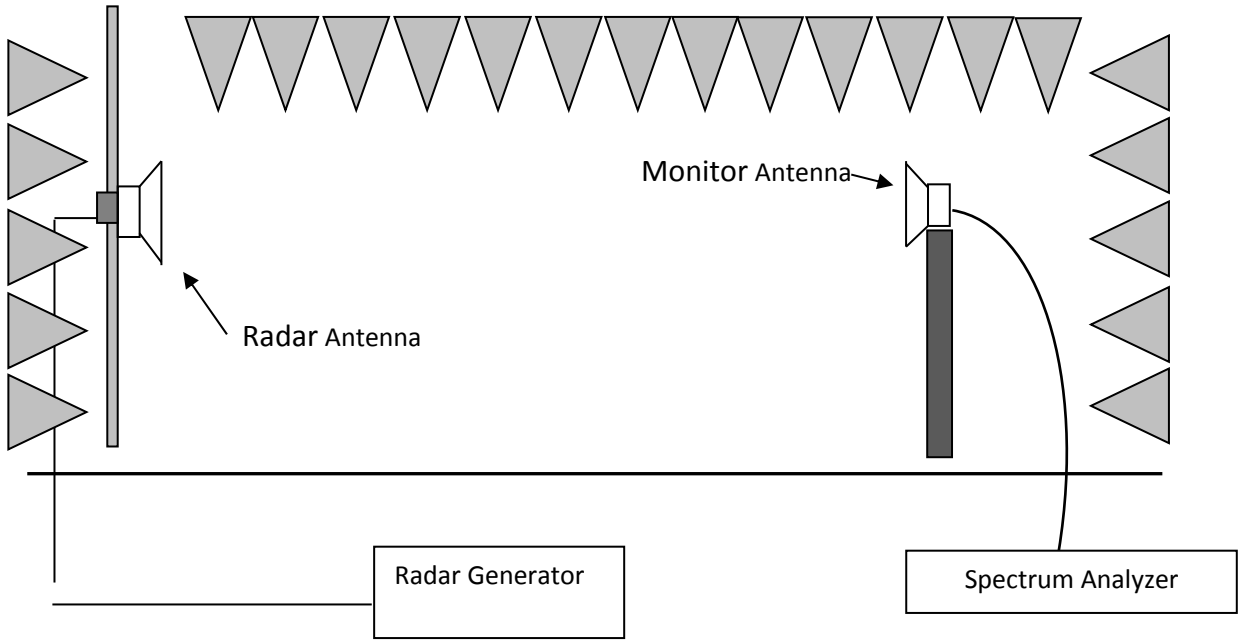
For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

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

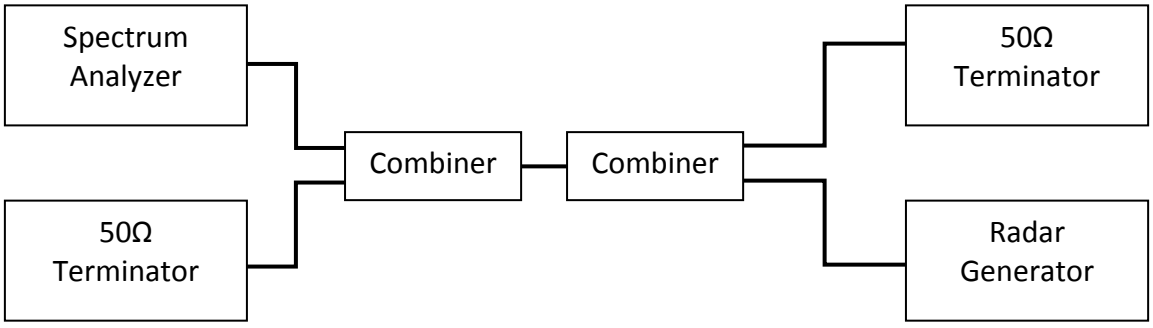
Note: If a segment does not contain at least 1 frequency within the U-NII Detection Bandwidth of the UUT, then that segment is not used.

3.7 Calibration Setup

☒Radiated Method



☐Conducted Method



3.8 Radar Waveform Calibration Procedure

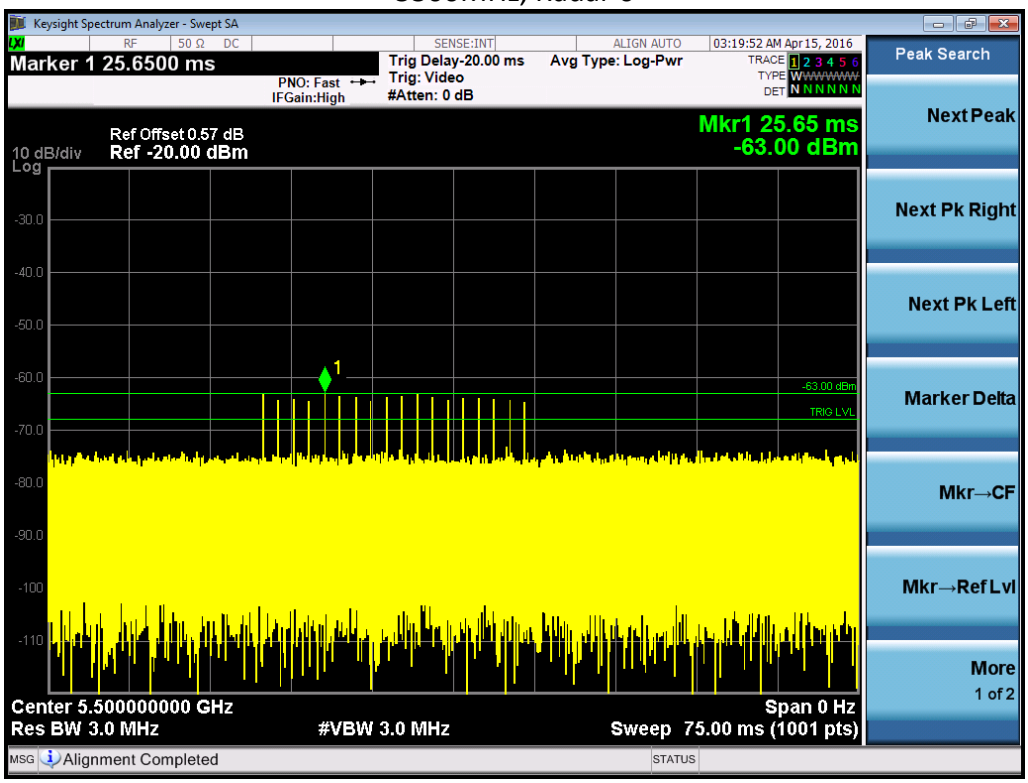
The Interference Radar Detection Threshold Level is -64dBm or -62dBm + 0 [dBi] + 1 dB that had been taken into account the output power range and antenna gain. The above equipment setup was used to calibrate the conducted Radar Waveform. A vector signal generator was utilized to establish the test signal level for each radar type. During this process there were replace 50ohm terminal form Master and Client device and no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) at the frequency of the Radar Waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to at least 3MHz. The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was -64dBm or -62dBm + 0 [dBi] + 1 dB. Capture the spectrum analyzer plots on short pulse radar types, long pulse radar type and hopping radar waveform.

Central Frequency of Calibration:

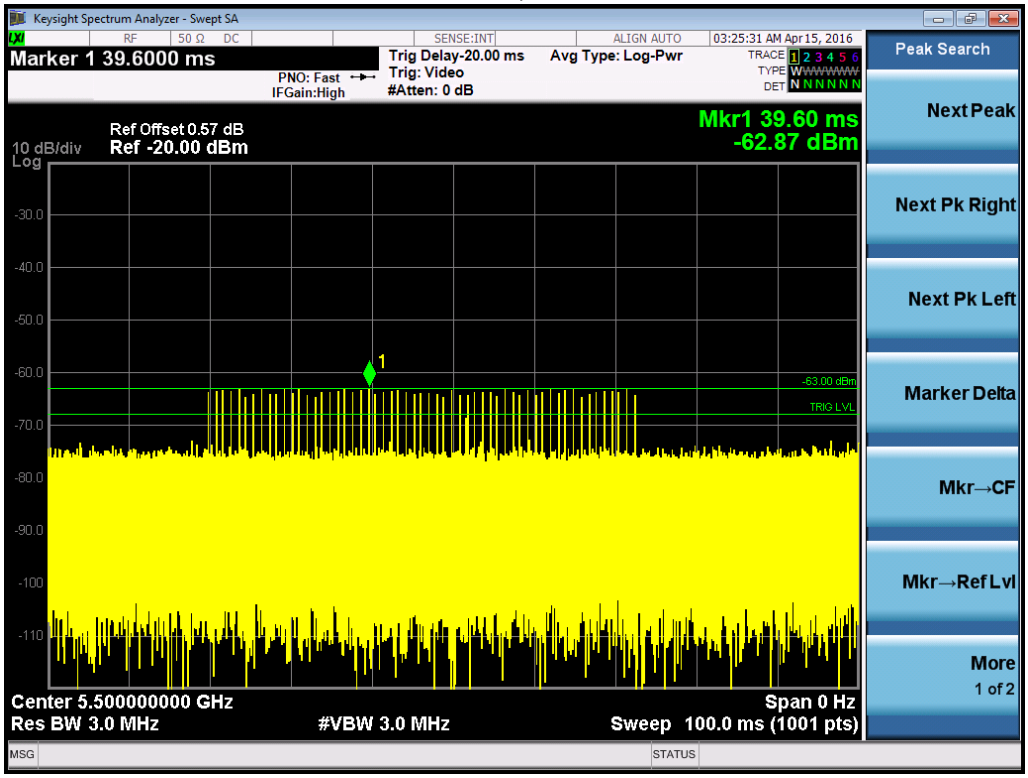
☒Bandwidth 20MHz: 5500MHz
☒Bandwidth 40MHz: 5510MHz
☒Bandwidth 80MHz: 5530MHz

3.9 Radar Waveform Calibration Result

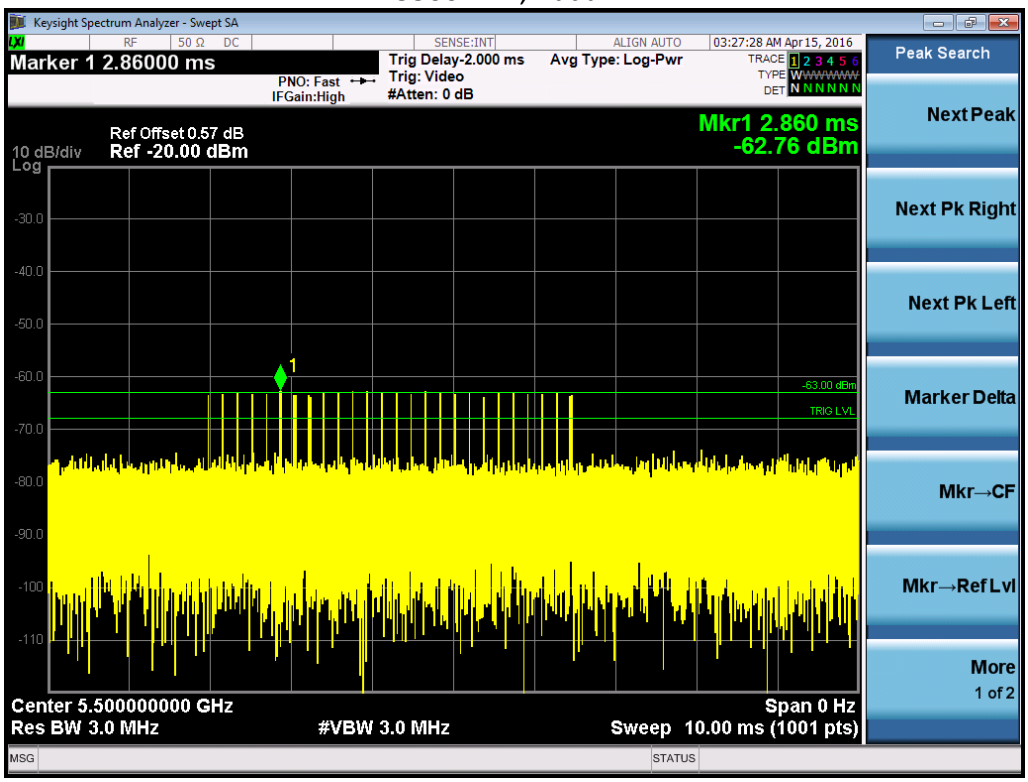
5500MHz, Radar 0



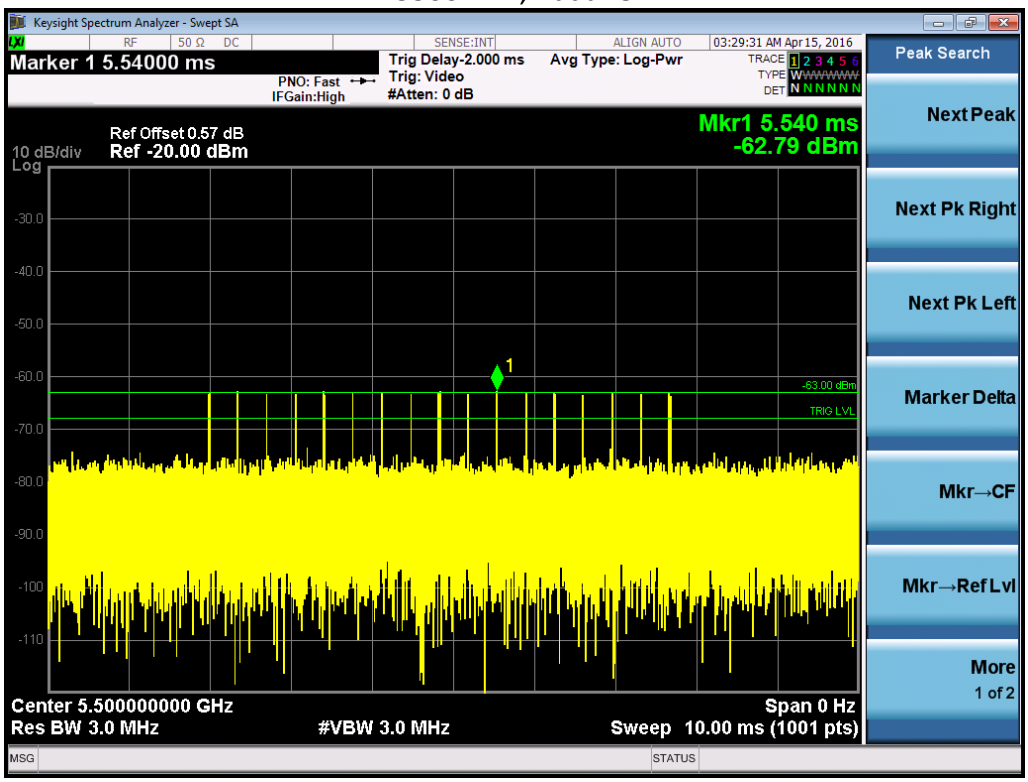
5500MHz, Radar 1



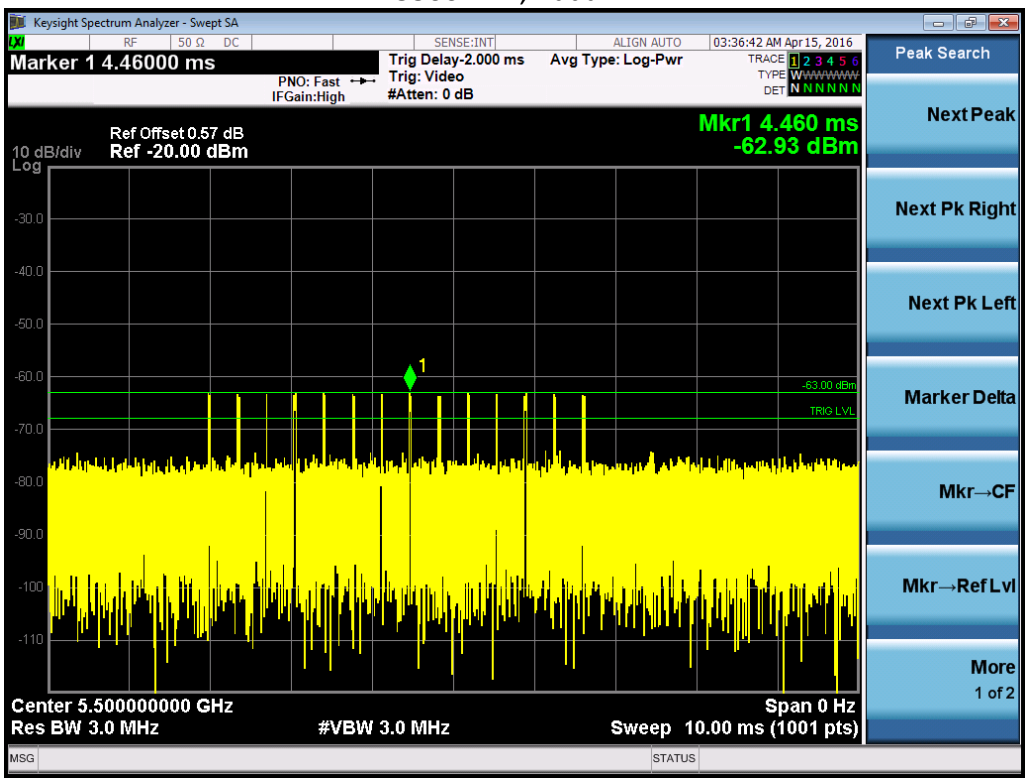
5500MHz, Radar 2



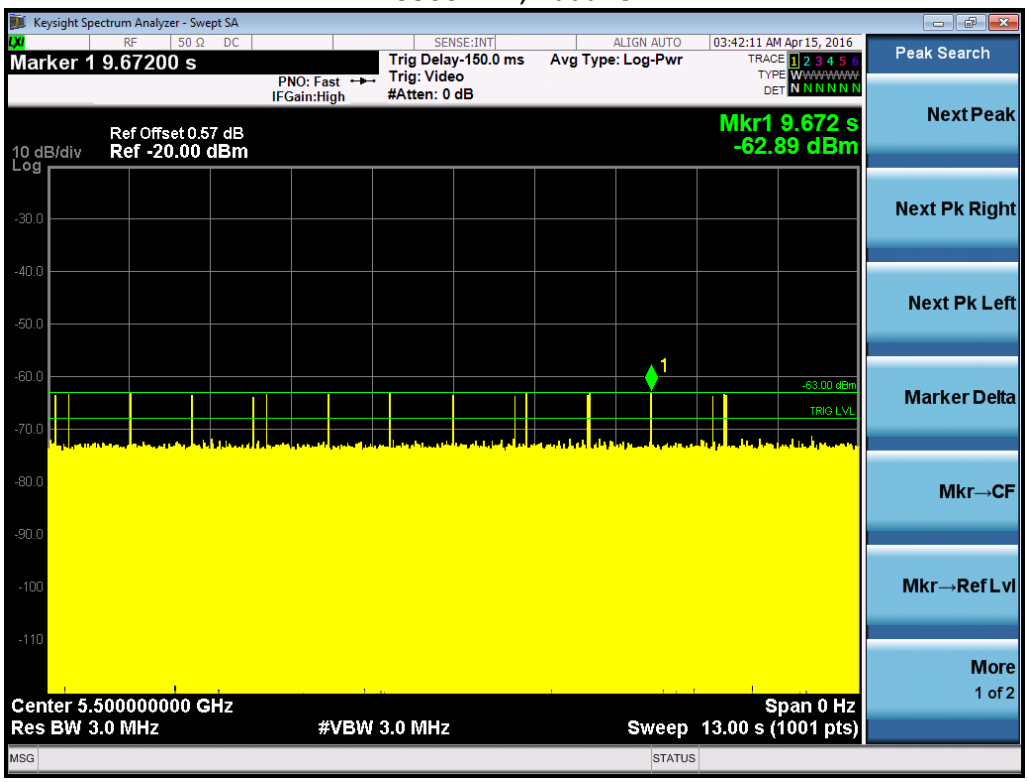
5500MHz, Radar 3



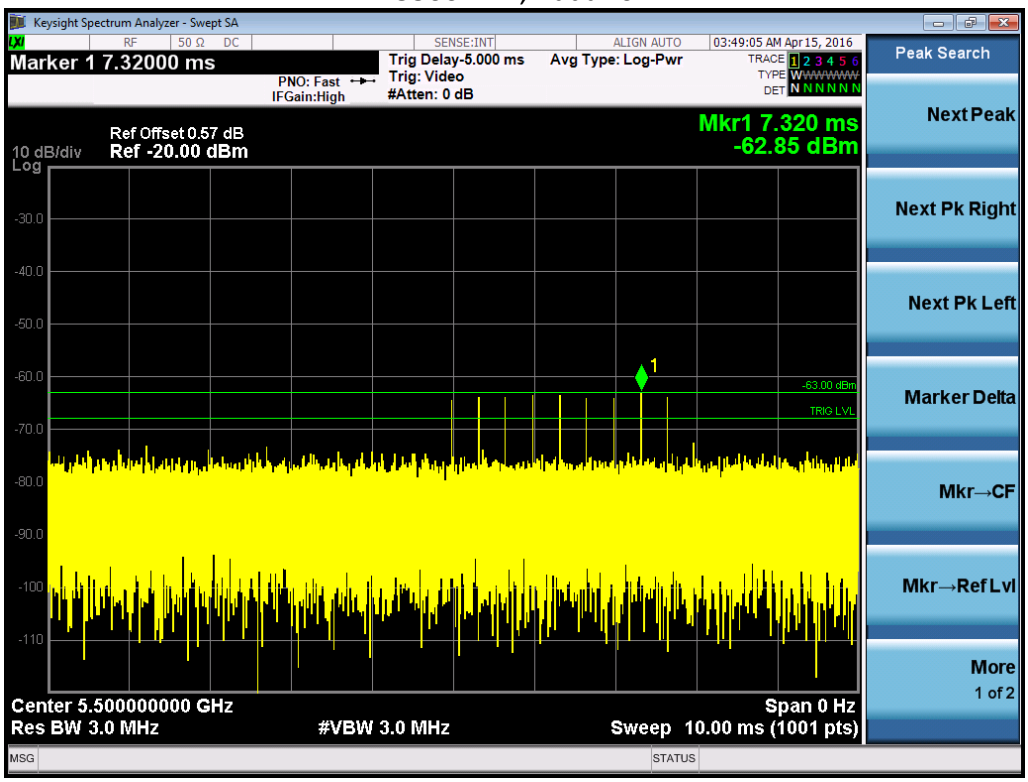
5500MHz, Radar 4



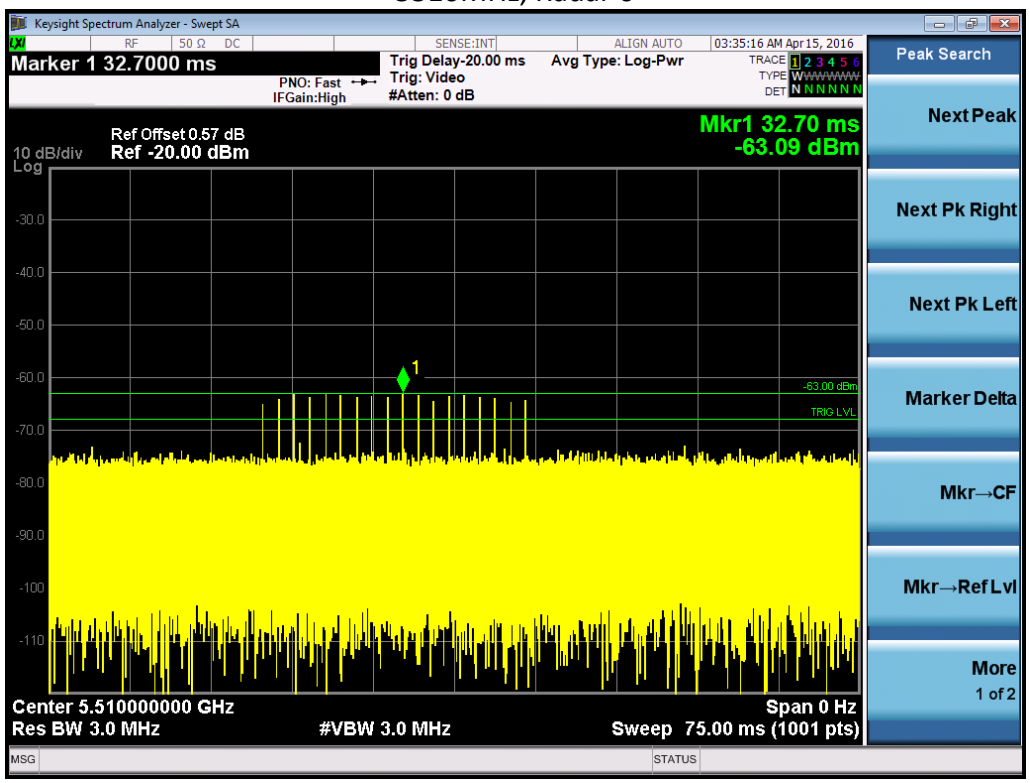
5500MHz, Radar 5



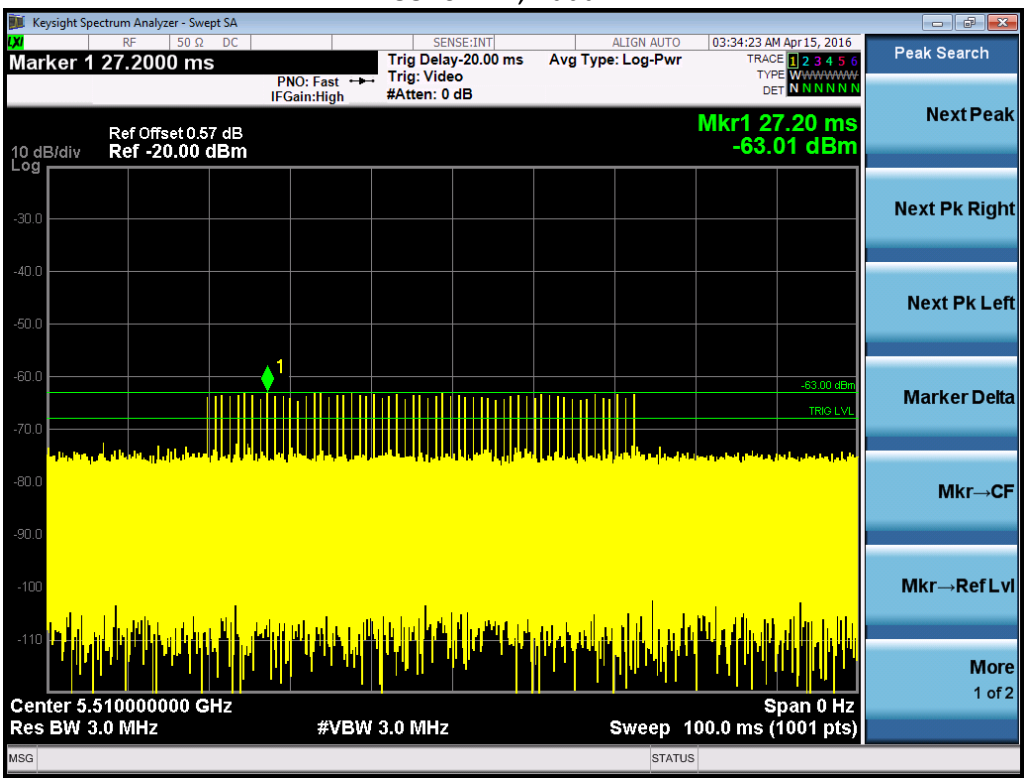
5500MHz, Radar 6



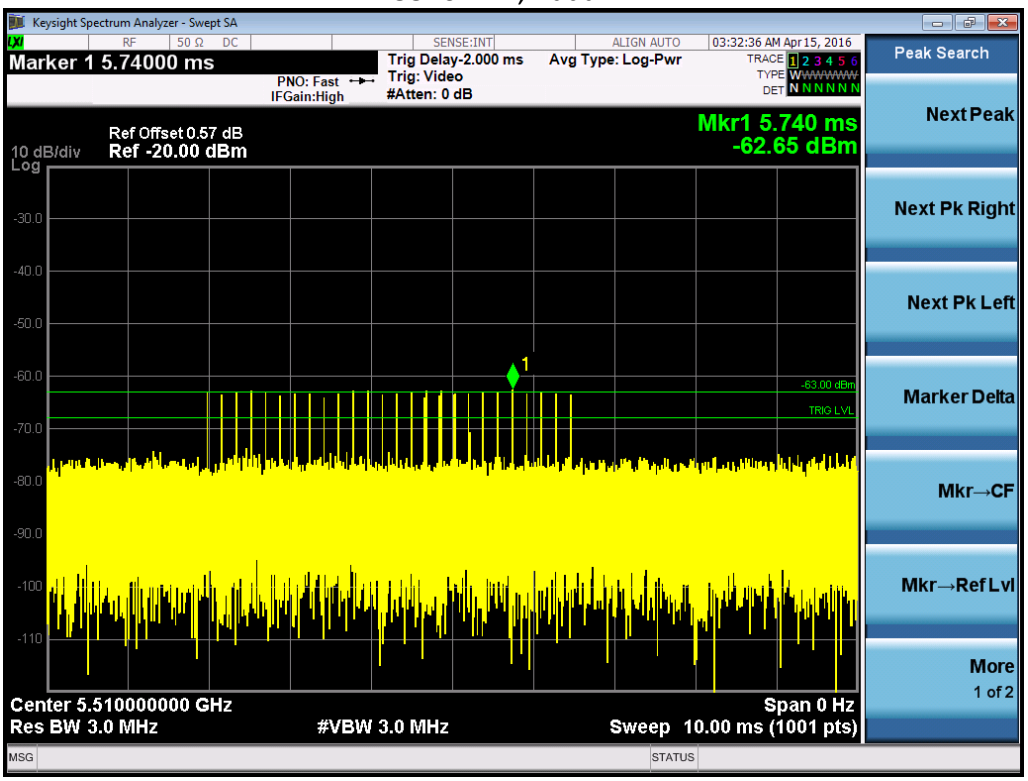
5510MHz, Radar 0



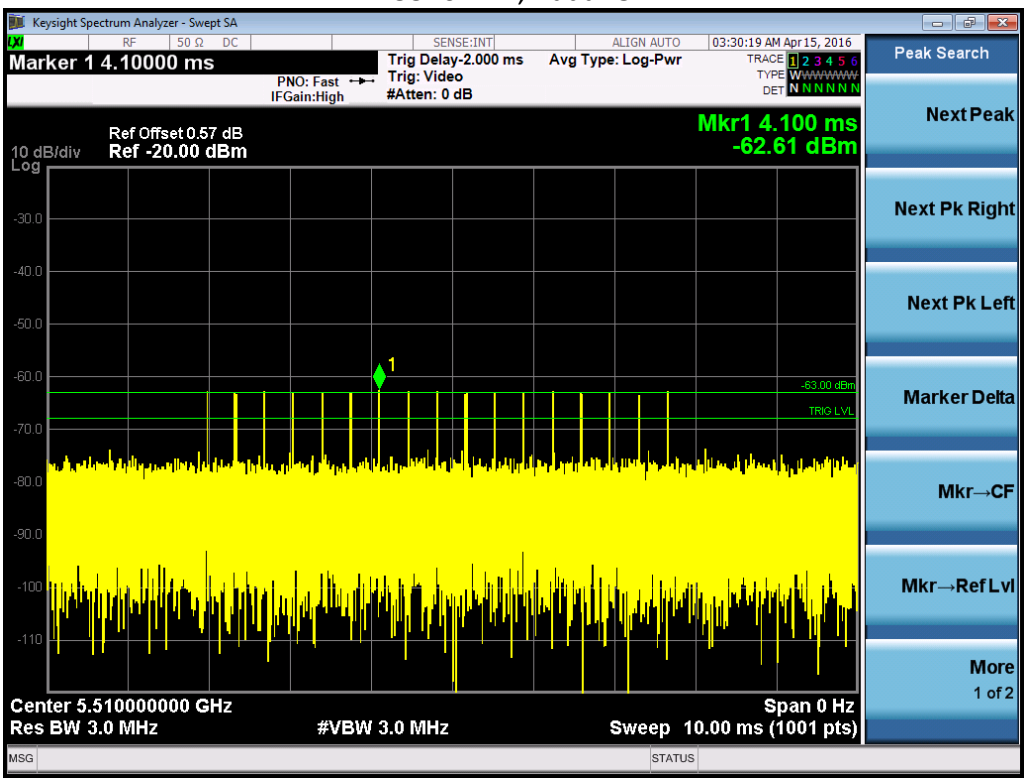
5510MHz, Radar 1



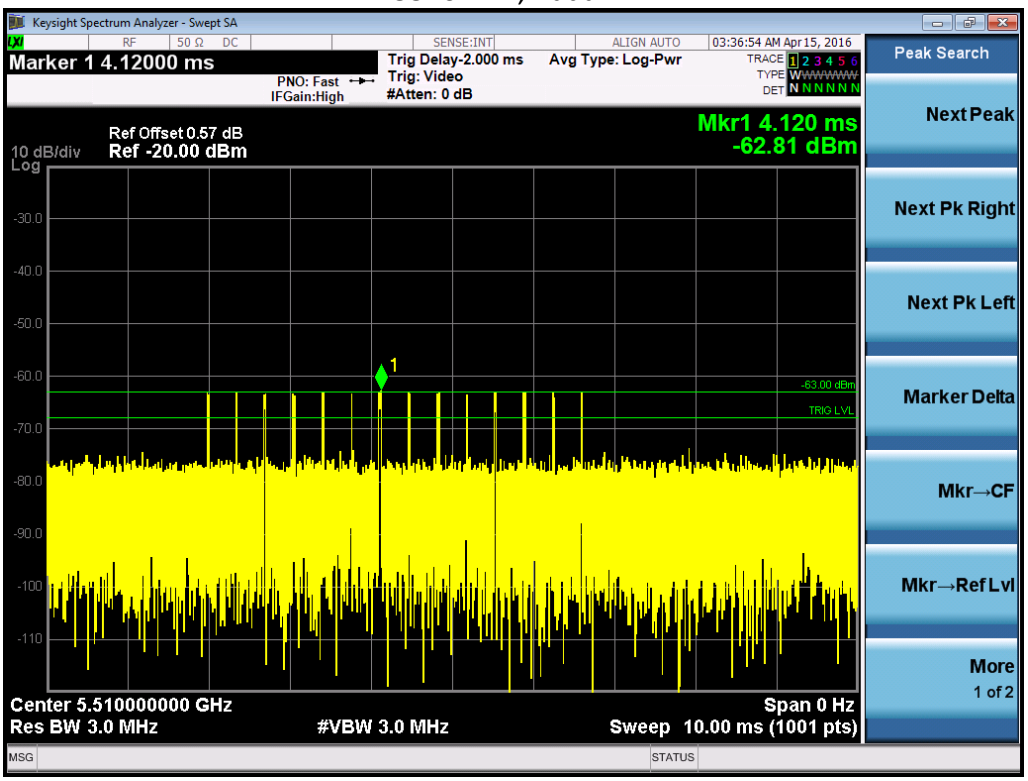
5510MHz, Radar 2



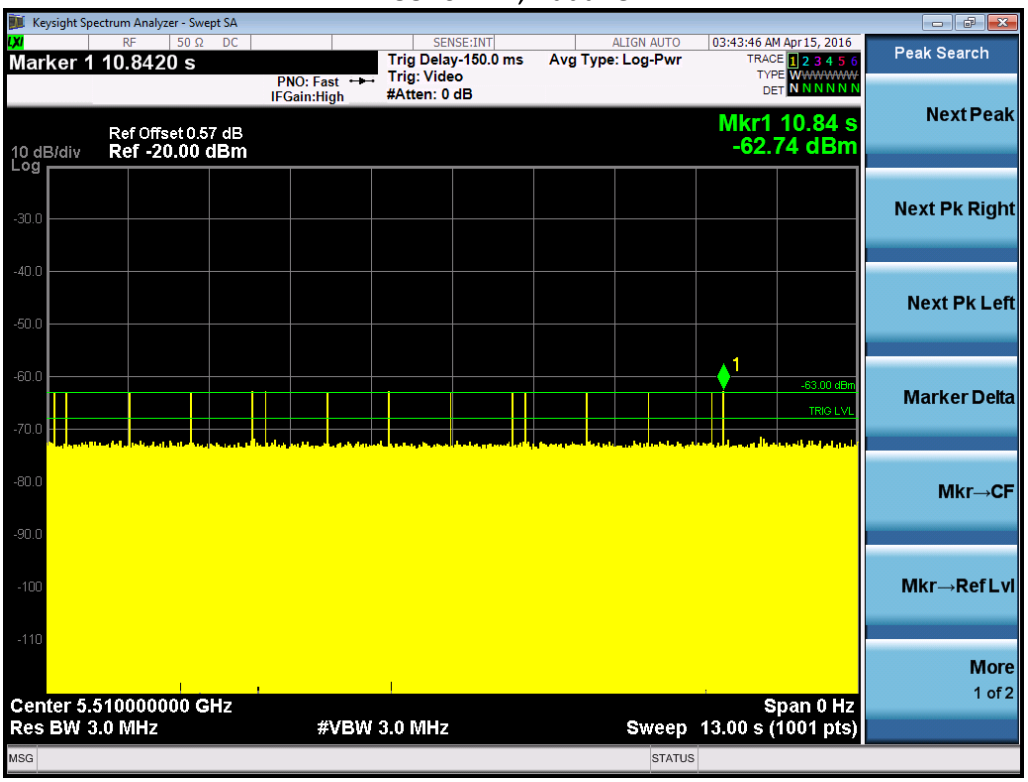
5510MHz, Radar 3



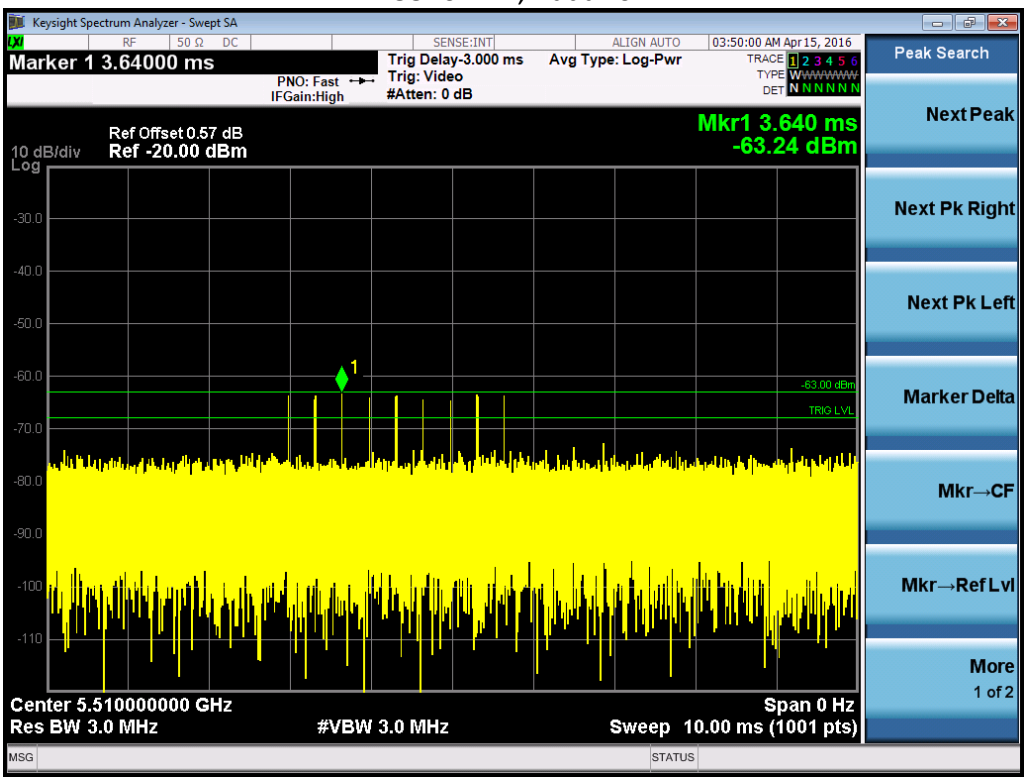
5510MHz, Radar 4



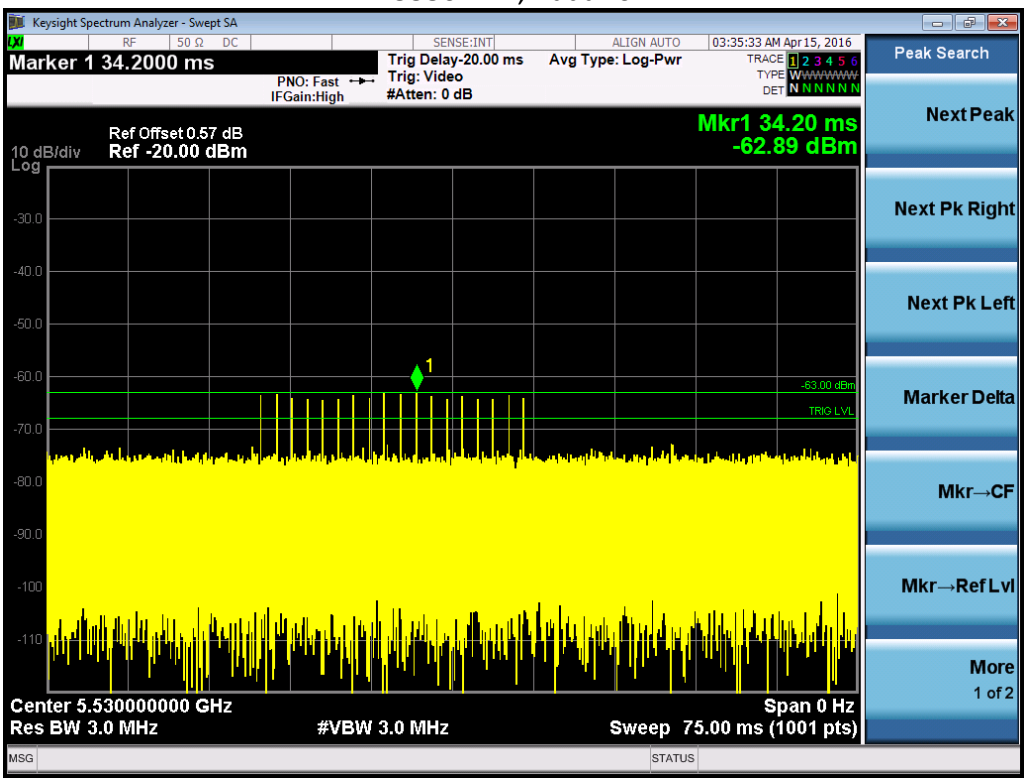
5510MHz, Radar 5



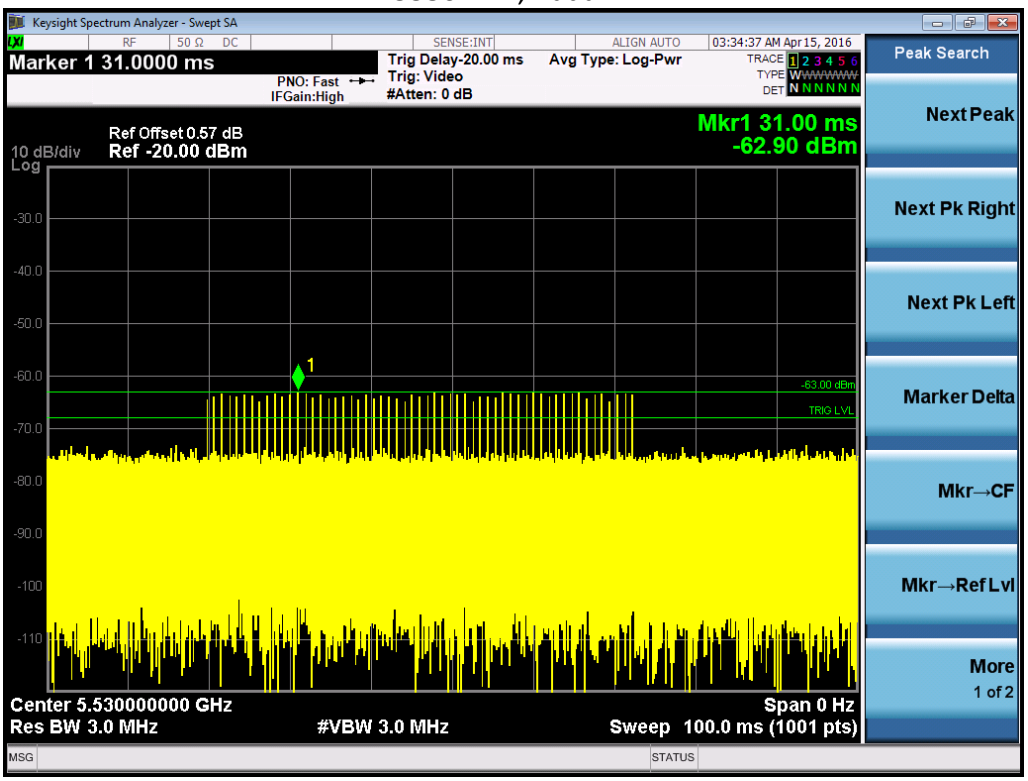
5510MHz, Radar 6



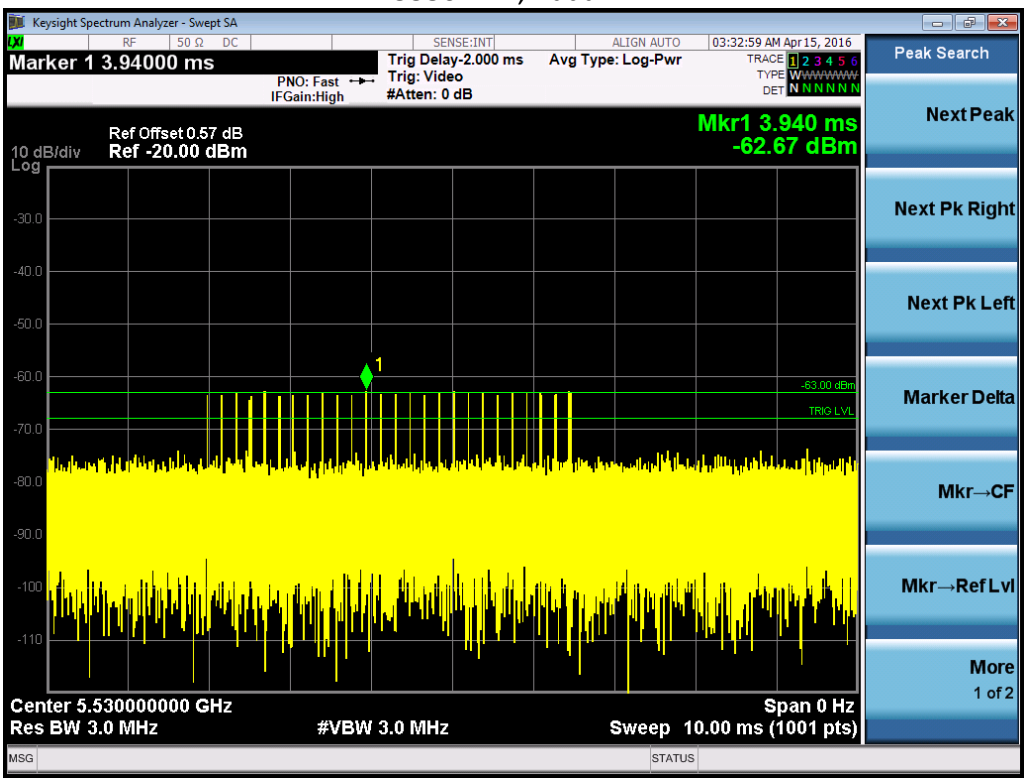
5530MHz, Radar 0



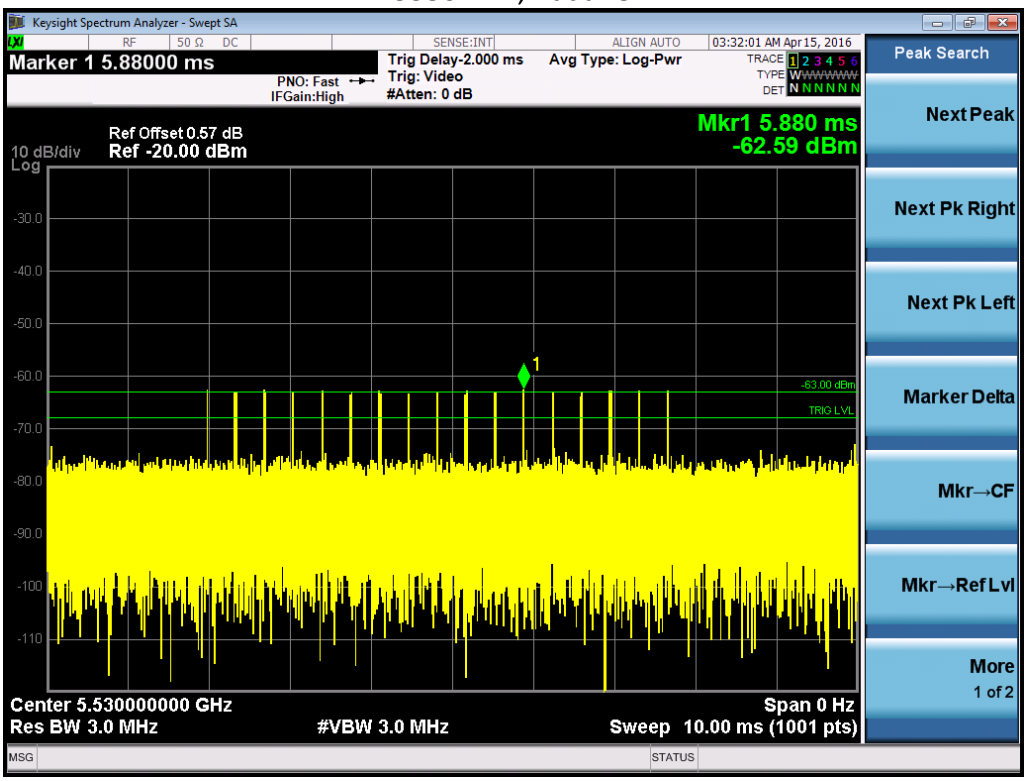
5530MHz, Radar 1



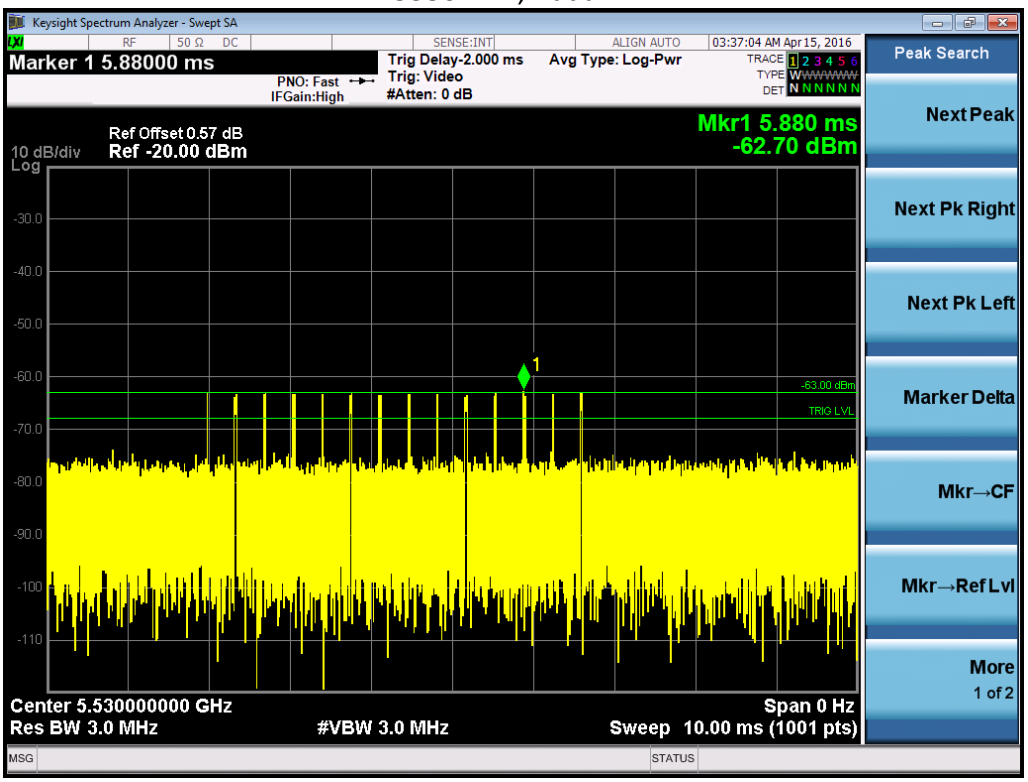
5530MHz, Radar 2



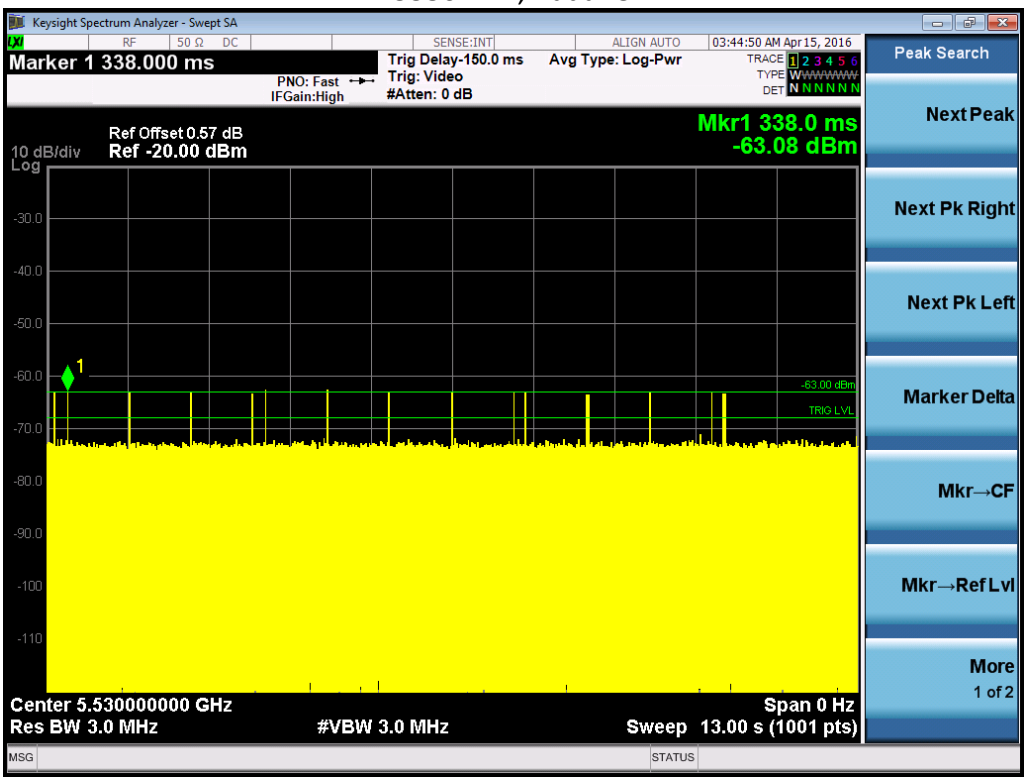
5530MHz, Radar 3



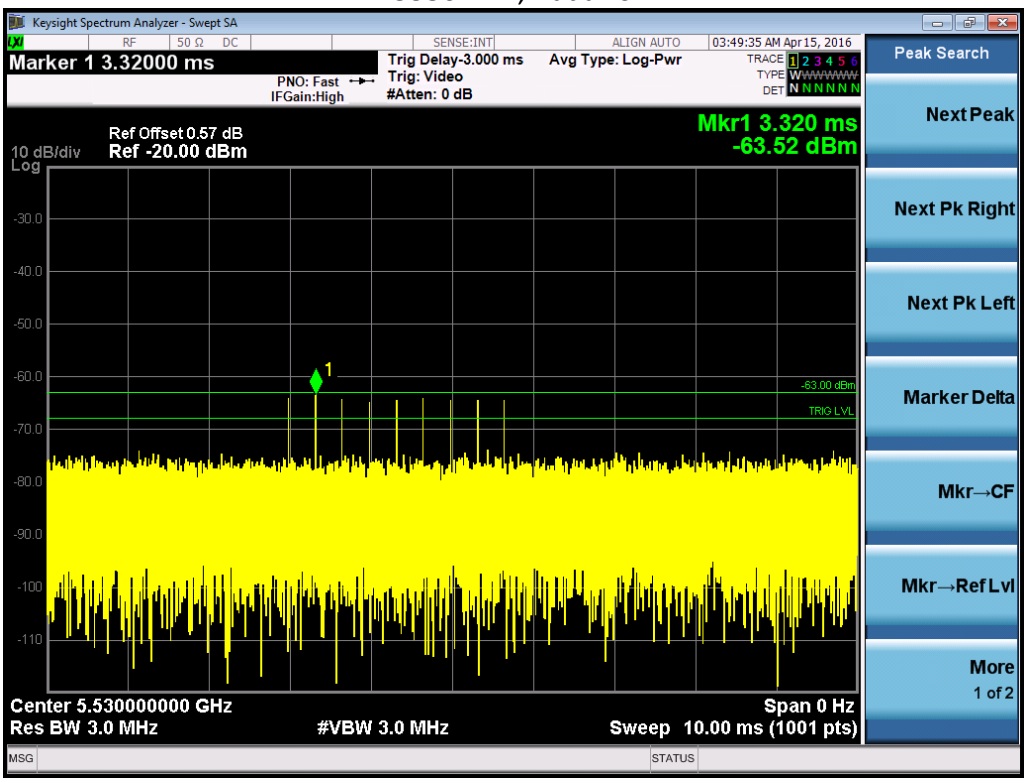
5530MHz, Radar 4



5530MHz, Radar 5



5530MHz, Radar 6



4 UNII Detection Bandwidth

All UNII 20 MHz channels for this device have identical Channel bandwidths, and all 40 MHz, 80MHz channels have identical Channel bandwidths. Therefore, all DFS testing was done at 5500 MHz, 5510 MHz and 5530MHz.

The 99% channel bandwidth for 20MHz signals is 21.709MHz,
The 99% channel bandwidth for 40MHz signals is 36.472MHz,
The 99% channel bandwidth for 80MHz signals is 75.959MHz,
(See the RF report for further measurement details).

The generating equipment is configured as shown in the Conducted Test Setup above. A single Burst of the desired radar profile is produced at 5500MHz, 5510MHz and 5530MHz at a -63dBm level. The UUT is set up as a standalone device (no associated Client and no traffic).

A single radar Burst is generated for a minimum of 10 trials, and the response of the UUT is noted. The UUT must detect the Radar Waveform 90% or more of the time.
The radar frequency is increased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The highest frequency at which detection is greater than or equal to 90% is denoted as Fh.

The radar frequency is decreased in 1 MHz steps, repeating the above test sequence, until the detection rate falls below 90%. The lowest frequency at which detection is greater than or equal to 90% is denoted as Fl.

The U-NII Detection Bandwidth is calculated as follows:

U-NII Detection Bandwidth = FH – FL

The U-NII Detection Bandwidth must be at least 100% of the UUT transmitter 99% power bandwidth, otherwise, the UUT does not comply with DFS requirements.

For the chirped Bin 5 radar, the U-NII Detection Bandwidth must be at least 80% of the UUT transmitter 99% power bandwidth (16 MHz for 20MHz signals, 32 MHz for 40 MHz signals, 64 MHz for 80 MHz signals), otherwise, the UUT does not comply with DFS requirements.

UNII Detection Bandwidth Results:

20 MHz Signal Bandwidth											
EUT Frequency = 5500MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5489 Fl	1	1	1	1	1	1	1	1	1	1	100%
5490	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511 Fh	1	1	1	1	1	1	1	1	1	1	100%
20 MHz Detection Bandwidth = Fh-Fl = 5511MHz - 5489MHz = 22MHz											
EUT 99% Bandwidth = 21.282MHz											
21.282MHz × 80% =17.0256MHz											

40 MHz Signal Bandwidth											
EUT Frequency = 5510MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5489	0	0	0	0	0	0	0	1	0	0	10%
5490 Fl	1	1	1	1	1	1	1	1	1	1	100%
5491	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%
5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%

5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529	1	1	1	1	1	1	1	1	1	1	100%
5530 Fh	1	1	1	1	1	1	1	1	1	1	100%
5531	0	0	0	0	0	0	0	0	0	0	0%
40 MHz Detection Bandwidth = Fh-Fl = 5530MHz - 5490MHz = 40MHz											
EUT 99% Bandwidth = 36.472MHz											
36.472MHz × 80% = 29.1776MHz											

80 MHz Signal Bandwidth											
EUT Frequency = 5530MHz											
Radar Frequency (MHz)	DFS Detection Trials (1=Detection, Blank= No Detection)										
	1	2	3	4	5	6	7	8	9	10	Detection Rate (%)
5490	0	0	0	0	0	0	0	0	0	0	0%
5491 Fl	1	1	1	1	1	1	1	1	1	1	100%
5492	1	1	1	1	1	1	1	1	1	1	100%
5493	1	1	1	1	1	1	1	1	1	1	100%
5494	1	1	1	1	1	1	1	1	1	1	100%
5495	1	1	1	1	1	1	1	1	1	1	100%
5496	1	1	1	1	1	1	1	1	1	1	100%
5497	1	1	1	1	1	1	1	1	1	1	100%
5498	1	1	1	1	1	1	1	1	1	1	100%
5499	1	1	1	1	1	1	1	1	1	1	100%
5500	1	1	1	1	1	1	1	1	1	1	100%
5501	1	1	1	1	1	1	1	1	1	1	100%
5502	1	1	1	1	1	1	1	1	1	1	100%
5503	1	1	1	1	1	1	1	1	1	1	100%
5504	1	1	1	1	1	1	1	1	1	1	100%
5505	1	1	1	1	1	1	1	1	1	1	100%

5506	1	1	1	1	1	1	1	1	1	1	100%
5507	1	1	1	1	1	1	1	1	1	1	100%
5508	1	1	1	1	1	1	1	1	1	1	100%
5509	1	1	1	1	1	1	1	1	1	1	100%
5510	1	1	1	1	1	1	1	1	1	1	100%
5511	1	1	1	1	1	1	1	1	1	1	100%
5512	1	1	1	1	1	1	1	1	1	1	100%
5513	1	1	1	1	1	1	1	1	1	1	100%
5514	1	1	1	1	1	1	1	1	1	1	100%
5515	1	1	1	1	1	1	1	1	1	1	100%
5516	1	1	1	1	1	1	1	1	1	1	100%
5517	1	1	1	1	1	1	1	1	1	1	100%
5518	1	1	1	1	1	1	1	1	1	1	100%
5519	1	1	1	1	1	1	1	1	1	1	100%
5520	1	1	1	1	1	1	1	1	1	1	100%
5521	1	1	1	1	1	1	1	1	1	1	100%
5522	1	1	1	1	1	1	1	1	1	1	100%
5523	1	1	1	1	1	1	1	1	1	1	100%
5524	1	1	1	1	1	1	1	1	1	1	100%
5525	1	1	1	1	1	1	1	1	1	1	100%
5526	1	1	1	1	1	1	1	1	1	1	100%
5527	1	1	1	1	1	1	1	1	1	1	100%
5528	1	1	1	1	1	1	1	1	1	1	100%
5529	1	1	1	1	1	1	1	1	1	1	100%
5530	1	1	1	1	1	1	1	1	1	1	100%
5531	1	1	1	1	1	1	1	1	1	1	100%
5532	1	1	1	1	1	1	1	1	1	1	100%
5533	1	1	1	1	1	1	1	1	1	1	100%
5534	1	1	1	1	1	1	1	1	1	1	100%
5535	1	1	1	1	1	1	1	1	1	1	100%
5536	1	1	1	1	1	1	1	1	1	1	100%
5537	1	1	1	1	1	1	1	1	1	1	100%
5538	1	1	1	1	1	1	1	1	1	1	100%
5539	1	1	1	1	1	1	1	1	1	1	100%
5540	1	1	1	1	1	1	1	1	1	1	100%
5541	1	1	1	1	1	1	1	1	1	1	100%
5542	1	1	1	1	1	1	1	1	1	1	100%

5543	1	1	1	1	1	1	1	1	1	1	100%
5544	1	1	1	1	1	1	1	1	1	1	100%
5545	1	1	1	1	1	1	1	1	1	1	100%
5546	1	1	1	1	1	1	1	1	1	1	100%
5547	1	1	1	1	1	1	1	1	1	1	100%
5548	1	1	1	1	1	1	1	1	1	1	100%
5549	1	1	1	1	1	1	1	1	1	1	100%
5550	1	1	1	1	1	1	1	1	1	1	100%
5551	1	1	1	1	1	1	1	1	1	1	100%
5552	1	1	1	1	1	1	1	1	1	1	100%
5553	1	1	1	1	1	1	1	1	1	1	100%
5554	1	1	1	1	1	1	1	1	1	1	100%
5555	1	1	1	1	1	1	1	1	1	1	100%
5556	1	1	1	1	1	1	1	1	1	1	100%
5557	1	1	1	1	1	1	1	1	1	1	100%
5558	1	1	1	1	1	1	1	1	1	1	100%
5559	1	1	1	1	1	1	1	1	1	1	100%
5560	1	1	1	1	1	1	1	1	1	1	100%
5561	1	1	1	1	1	1	1	1	1	1	100%
5562	1	1	1	1	1	1	1	1	1	1	100%
5563	1	1	1	1	1	1	1	1	1	1	100%
5564	1	1	1	1	1	1	1	1	1	1	100%
5565	1	1	1	1	1	1	1	1	1	1	100%
5566	1	1	1	1	1	1	1	1	1	1	100%
5567	1	1	1	1	1	1	1	1	1	1	100%
5568	1	1	1	1	1	1	1	1	1	1	100%
5569 Fh	1	1	1	1	1	1	1	1	1	1	100%
5570	0	0	0	0	0	0	0	0	0	0	0%
80 MHz Detection Bandwidth = Fh-Fl = 5569MHz - 5491MHz = 78MHz											
EUT 99% Bandwidth = 75.959MHz											
75.959MHz × 80% = 60.7672MHz											

5 Channel Available Check

5.1 Initial Channel Availability Check Time

The tests that the UUT does not emit beacon, control, or data signals on the test Channel until the power-up sequence has been completed and the U-NII device checks for Radar Waveforms for one minute on the test Channel. This test does not use any Radar Waveforms.

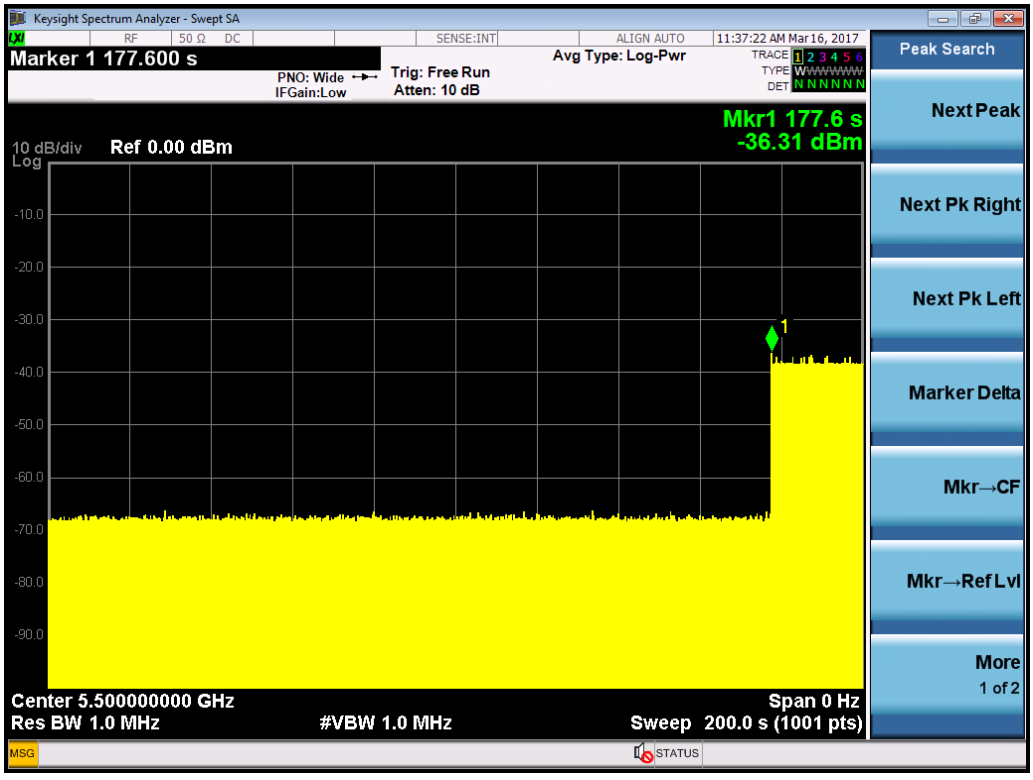
The U-NII device is powered on and instructed to operate at 5500. At the same time the UUT is powered on, the spectrum analyzer is set to zero span mode with a 3 MHz resolution bandwidth at 5500MHz with a 2.5 minute sweep time. The analyzer's sweep will be started the same time power is applied to the U-NII device.

The UUT should not transmit any beacon or data transmissions until at least 1 minute after the completion of the power-on cycle.

The initial power up time of the UUT is indicated by marker 1 in the plot. Initial beacons/data transmissions are indicated by marker 1R.

Initial Channel Availability Check Time

5500MHz



5.2 Radar Burst at the Beginning of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the beginning of the Channel Availability Check Time.

The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds.

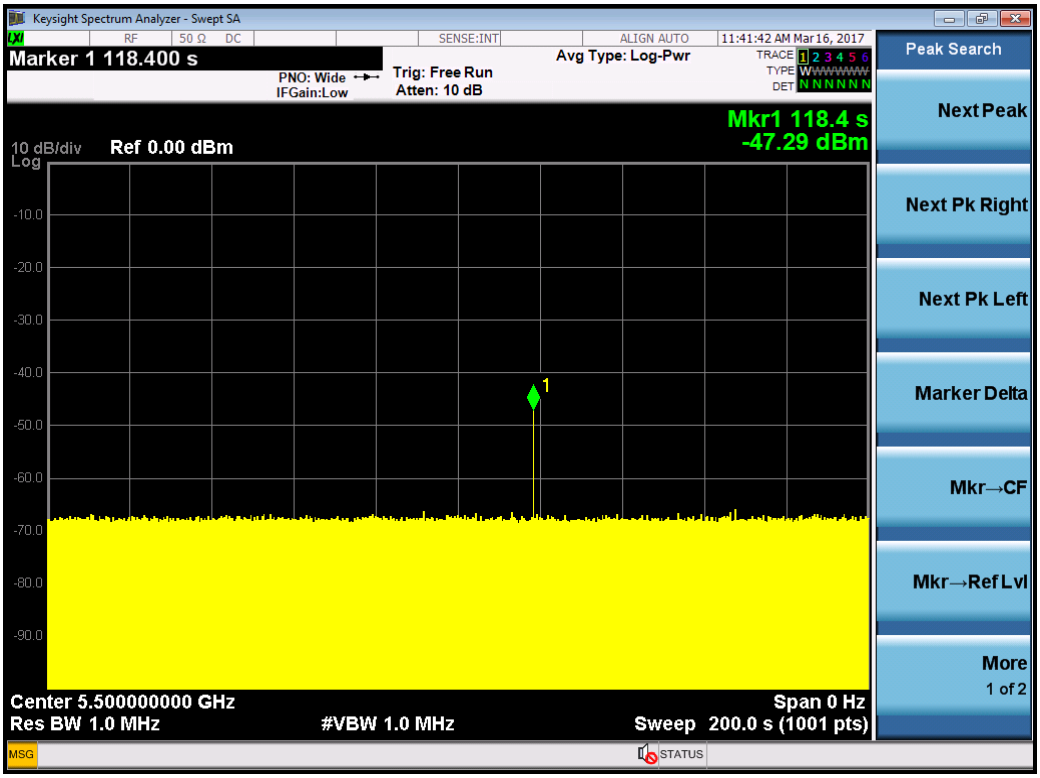
A single Burst of short pulse of radar type 1 at -63 dBm will commence within a 6 second window starting at T1.

Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5500MHz will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window no UUT transmissions occurred at 5500MHz.

Radar Burst at the Beginning of the Channel Availability Check Time

5500MHz



5.3 Radar Burst at the End of the Channel Availability Check Time

The steps below define the procedure to verify successful radar detection on the selected Channel during a period equal to the Channel Availability Check Time and avoidance of operation on that Channel when a radar Burst with a level equal to the DFS Detection Threshold + 1 dB (-63dBm) occurs at the end of the Channel Availability Check Time.

The UUT is powered on at T0. T1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T1 and will end no sooner than T1 + 60 seconds.

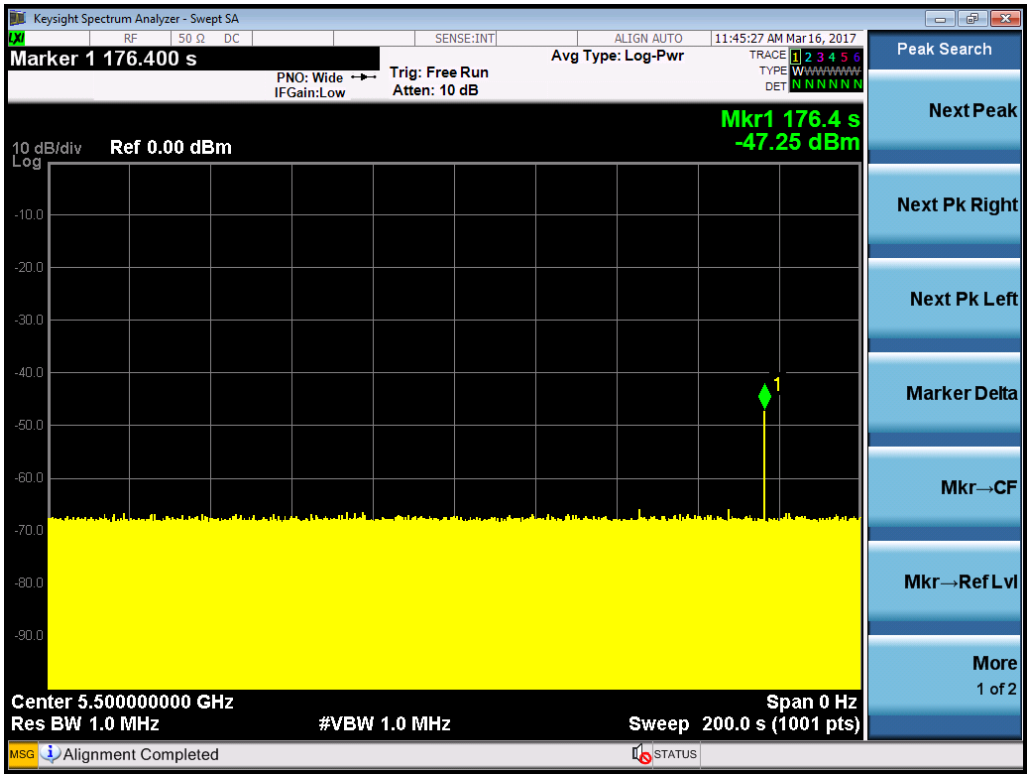
A single Burst of short pulse of radar type 1 at -63 dBm will commence within a 6 second window starting at T1+ 54 seconds.

Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5500MHz will continue for 2.5 minutes after the radar Burst has been generated.

Verify that during the 2.5 minute measurement window no UUT transmissions occurred at 5500MHz.

Radar Burst at the End of the Channel Availability Check Time

5500MHz



6 In-Service Monitoring for Channel Move Time, Channel Closing Transmission Time and Non-Occupancy Period

These tests define how the following DFS parameters are verified during In-Service Monitoring; Channel Closing Transmission Time, Channel Move Time, and Non-Occupancy Period.

The steps below define the procedure to determine the above mentioned parameters when a radar Burst with a level equal to the DFS Detection Threshold + 1dB (-63dBm) is generated on the Operating Channel of the U-NII device.

A U-NII device operating as a Client Device will associate with the UUT (Master) at 5530 MHz. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test.

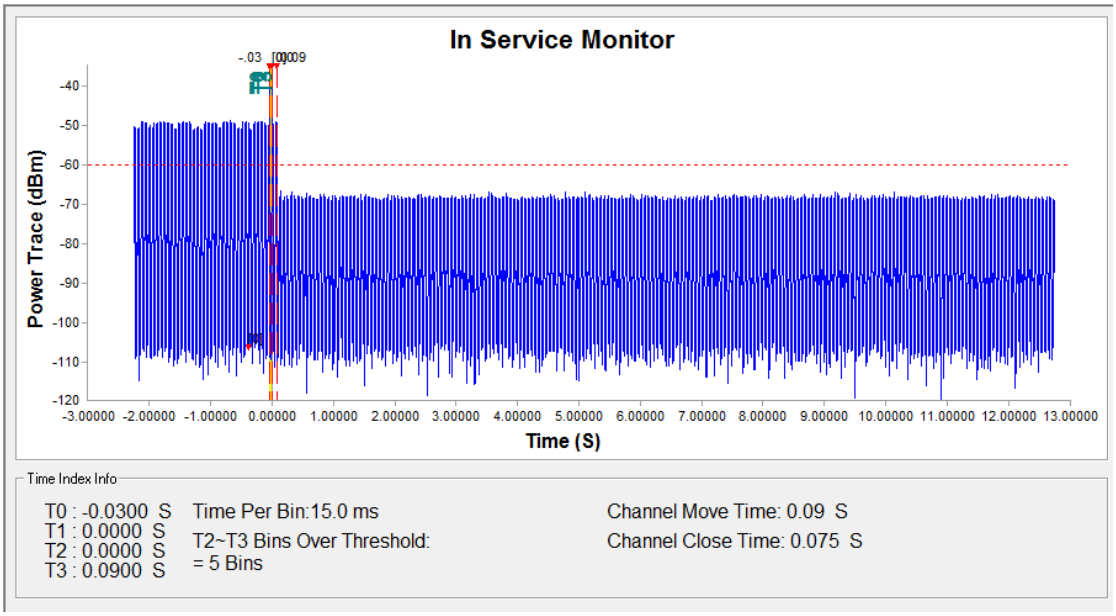
At time T0 the Radar Waveform generator sends a Burst of pulses for each of the radar types at -63dBm.

Observe the transmissions of the UUT at the end of the radar Burst on the Operating Channel for duration greater than 10 seconds. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). Compare the Channel Move Time and Channel Closing Transmission Time results to the limits defined in the DFS Response requirement values table.

Type 0 radar was used for these test.

6.1 Channel Move Time, Channel Closing Transmission Time

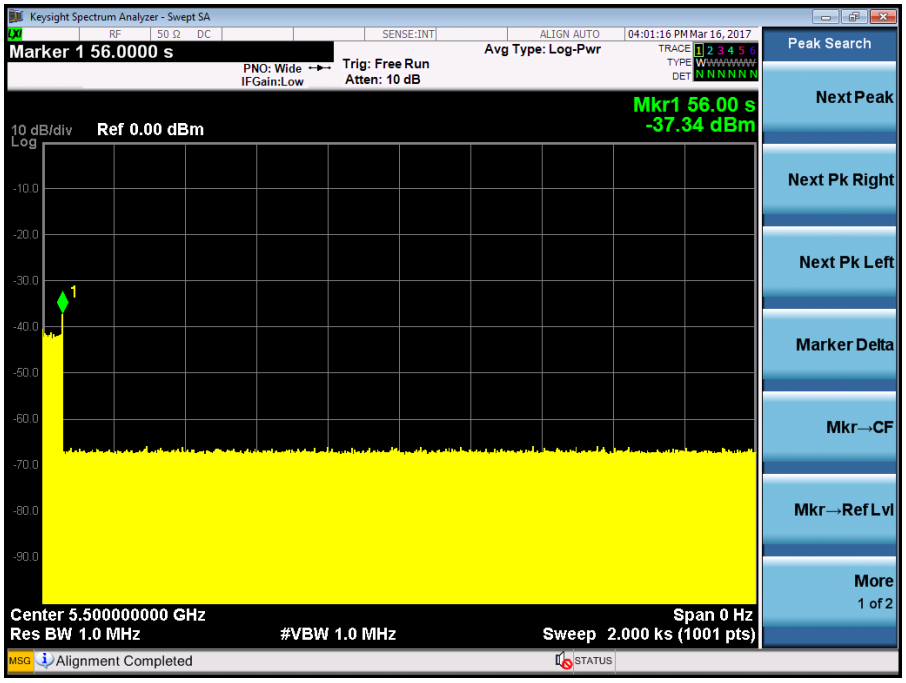
5530MHz



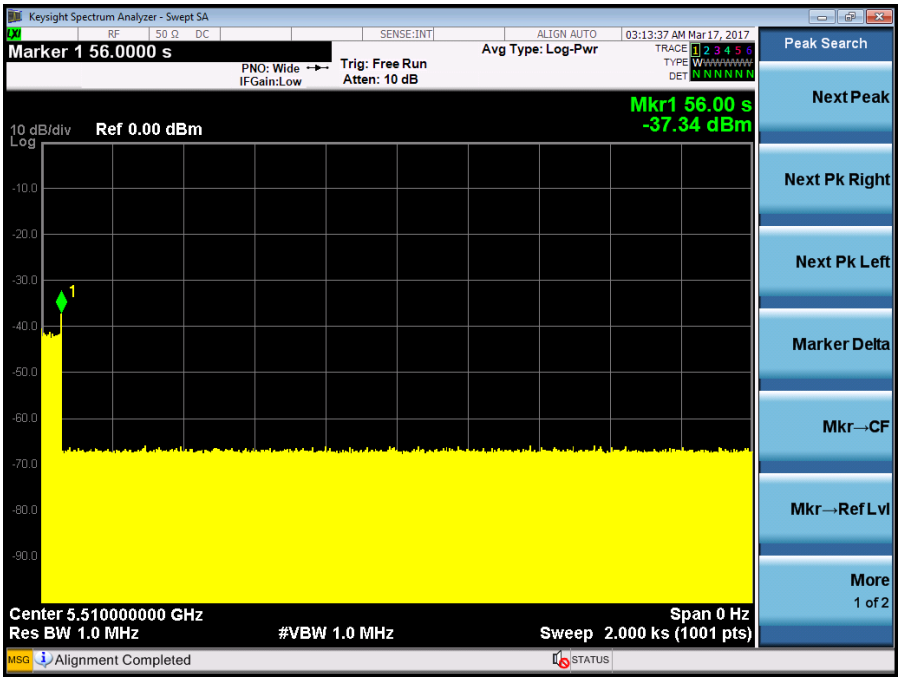
Test Item	Limit	Results
Channel Move Time	10 s	Pass
Channel Closing Transmission Time	200ms + an aggregate of 60ms over remaining 10 second period.	Pass

6.2 Non-Occupancy Period

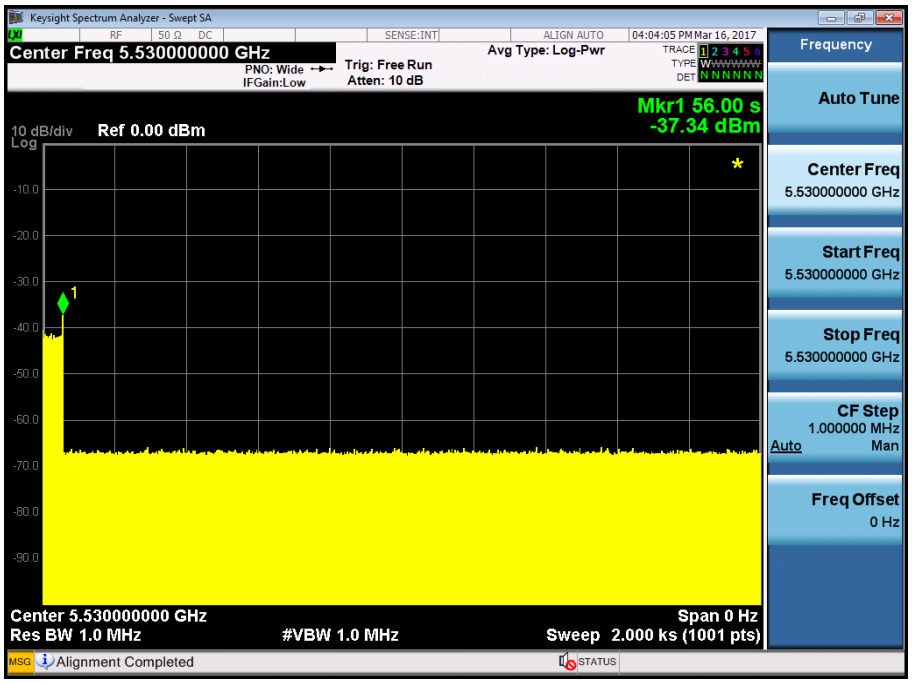
5500MHz



5510MHz



5530MHz



Test Item	Limit	Results
Non-Occupancy Period	30 minutes	Pass

7 Statistical Performance Check

A U-NII device operating as a Client Device associates with the UUT (Master) at 5500MHz, 5510MHz and 5530MHz. Stream the MPEG test file from the Master Device to the Client Device on the selected Channel for the entire period of the test and make sure the channel loading great than 17%. The device can also utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.

The Radar Waveform generator sends the individual waveform for each of radar type 1~6 with a level equal to the DFS detection threshold level + 1dB (-63dBm). Statistical data will be gathered to determine the ability of the device to detect the radar test waveforms. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs. The percentage of successful detection is calculated by:

$$\frac{TotalWaveformDetections}{TotalWaveformTrials} \times 100 \text{ = Probability of Detection Radar Waveform}$$

The Minimum number of trails, minimum percentage of successful detection and the average minimum percentage of successful detection are found in the Radar Test Waveforms section. The following results reflect both 20 MHz, 40 MHz and 80MHz Channel Bandwidth operation.

7.1 Test Result for 20MHz bandwidth

5500MHz

Type 1A/1B Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
1	1	5489	1	938	57	0
1	2	5490	1	938	57	1
1	3	5491	1	698	76	1
1	4	5492	1	618	86	1
1	5	5493	1	538	99	1
1	6	5494	1	878	61	0
1	7	5495	1	3066	18	1
1	8	5496	1	638	83	1
1	9	5497	1	918	58	1
1	10	5498	1	838	63	1
1	11	5499	1	858	62	1
1	12	5500	1	798	67	1
1	13	5501	1	718	74	1
1	14	5502	1	578	92	1
1	15	5503	1	598	89	1
1	16	5504	1	558	95	1
1	17	5505	1	2536	21	1
1	18	5506	1	966	55	1
1	19	5507	1	827	64	0
1	20	5508	1	2501	22	1
1	21	5509	1	2595	21	1
1	22	5510	1	1114	48	1
1	23	5511	1	1114	48	1
1	24	5489	1	1302	41	1
1	25	5490	1	3045	18	1
1	26	5491	1	1624	33	1
1	27	5492	1	2878	19	1
1	28	5493	1	1027	52	1
1	29	5494	1	2485	22	1
1	30	5495	1	1600	33	1
Detection Percentage=90% Limit: >60%						

Type 2 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
2	1	5490	3.2	179	26	1
2	2	5491	1.1	207	23	1
2	3	5492	2.1	230	24	0
2	4	5493	4.8	200	29	1
2	5	5494	3.9	214	28	1
2	6	5495	2.9	222	26	1
2	7	5496	3.2	204	26	1
2	8	5497	2.5	192	25	1
2	9	5498	3.1	164	26	1
2	10	5499	1.2	156	23	1
2	11	5500	3.9	210	27	1
2	12	5501	4.6	201	29	1
2	13	5502	3.2	162	26	0
2	14	5503	2.2	197	25	1
2	15	5504	4.5	163	29	1
2	16	5505	3	203	26	1
2	17	5506	5	168	29	1
2	18	5507	2.4	217	25	1
2	19	5508	2.9	191	26	1
2	20	5509	2.3	166	25	1
2	21	5510	3.7	150	27	1
2	22	5490	2.2	176	25	1
2	23	5491	4.9	195	29	1
2	24	5492	2.9	202	26	1
2	25	5493	2.5	178	25	0
2	26	5500	1.1	206	23	1
2	27	5510	3.8	155	27	1
2	28	5509	4.7	157	29	1
2	29	5508	2.4	224	25	1
2	30	5507	4.2	159	28	1
Detection Percentage=90% Limit: >60%						

Type 3 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
3	1	5490	8.2	355	17	1
3	2	5491	6.1	487	16	0
3	3	5492	7.1	344	16	1
3	4	5493	9.8	288	18	1
3	5	5494	8.9	230	18	1
3	6	5495	7.9	432	17	1
3	7	5496	8.2	207	17	0
3	8	5497	7.5	443	17	1
3	9	5498	8.1	439	17	1
3	10	5499	6.2	223	16	1
3	11	5500	8.9	208	18	1
3	12	5501	9.6	463	18	1
3	13	5502	8.2	441	17	1
3	14	5503	7.2	323	16	1
3	15	5504	9.5	297	18	1
3	16	5505	8	412	17	1
3	17	5506	10	324	18	1
3	18	5507	7.4	271	17	1
3	19	5508	7.9	349	17	1
3	20	5509	7.3	409	16	1
3	21	5510	8.7	373	18	1
3	22	5490	7.2	254	16	1
3	23	5491	9.9	274	18	1
3	24	5492	7.9	278	17	1
3	25	5493	7.5	317	17	1
3	26	5500	6.1	260	16	1
3	27	5510	8.8	211	18	0
3	28	5509	9.7	272	18	1
3	29	5508	7.4	264	17	1
3	30	5507	9.2	284	18	1
Detection Percentage=90% Limit: >60%						

Type 4 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
4	1	5490	16	355	14	0
4	2	5491	11.3	487	12	1
4	3	5492	13.5	344	13	1
4	4	5493	19.4	288	16	1
4	5	5494	17.5	230	15	1
4	6	5495	15.3	432	14	1
4	7	5496	15.9	207	14	1
4	8	5497	14.3	443	13	1
4	9	5498	15.8	439	14	1
4	10	5499	11.5	223	12	1
4	11	5500	17.4	208	15	1
4	12	5501	19	463	16	1
4	13	5502	16	441	14	1
4	14	5503	13.8	323	13	1
4	15	5504	18.9	297	16	1
4	16	5505	15.5	412	14	0
4	17	5506	19.9	324	16	1
4	18	5507	14.1	271	13	1
4	19	5508	15.2	349	14	1
4	20	5509	13.8	409	13	1
4	21	5510	17.1	373	15	1
4	22	5490	13.8	254	13	1
4	23	5491	19.8	274	16	1
4	24	5492	15.3	278	14	1
4	25	5493	14.5	317	13	1
4	26	5500	11.3	260	12	1
4	27	5510	17.3	211	15	1
4	28	5509	19.2	272	16	1
4	29	5508	14.2	264	13	0
4	30	5507	18.2	284	15	1
					Detection Percentage=86.7%	Limit: >60%

In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is required and is calculated as follows:

$\frac{P_d1 + P_d2 + P_d3 + P_d4}{4}$ = (90%+90%+90%+90%)/4= **90%** (>80%)

Type 5 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	File name	1=Detection 0=No Detection
5	1	5492	Radar_Type_5_1_trail	0
5	2	5493	Radar_Type_5_2_trail	1
5	3	5494	Radar_Type_5_3_trail	1
5	4	5495	Radar_Type_5_4_trail	1
5	5	5496	Radar_Type_5_5_trail	1
5	6	5497	Radar_Type_5_6_trail	1
5	7	5498	Radar_Type_5_7_trail	1
5	8	5499	Radar_Type_5_8_trail	1
5	9	5500	Radar_Type_5_9_trail	1
5	10	5501	Radar_Type_5_10_trail	1
5	11	5502	Radar_Type_5_11_trail	1
5	12	5503	Radar_Type_5_12_trail	1
5	13	5504	Radar_Type_5_13_trail	1
5	14	5505	Radar_Type_5_14_trail	1
5	15	5506	Radar_Type_5_15_trail	1
5	16	5507	Radar_Type_5_16_trail	1
5	17	5508	Radar_Type_5_17_trail	1
5	18	5492	Radar_Type_5_18_trail	1
5	19	5493	Radar_Type_5_19_trail	1
5	20	5494	Radar_Type_5_20_trail	1
5	21	5495	Radar_Type_5_21_trail	1
5	22	5496	Radar_Type_5_22_trail	1
5	23	5497	Radar_Type_5_23_trail	1
5	24	5500	Radar_Type_5_24_trail	1
5	25	5503	Radar_Type_5_25_trail	1
5	26	5504	Radar_Type_5_26_trail	1
5	27	5505	Radar_Type_5_27_trail	1
5	28	5506	Radar_Type_5_28_trail	0
5	29	5507	Radar_Type_5_29_trail	1
5	30	5508	Radar_Type_5_30_trail	1
Detection Percentage=93.3% Limit: >80%				

Radar Characteristics For Type 5

Trial List

		Trial Id	Radar Type	Number of Bursts	Burst Period (s)	Waveform Length (s)
⊞	Download	0	Type 5	15	0.8000000	12.0000000
⊞	Download	1	Type 5	8	1.5000000	12.0000000
⊞	Download	2	Type 5	11	1.0909091	12.0000000
⊞	Download	3	Type 5	20	0.6000000	12.0000000
⊞	Download	4	Type 5	17	0.7058824	12.0000000
⊞	Download	5	Type 5	14	0.8571429	12.0000000
⊞	Download	6	Type 5	15	0.8000000	12.0000000
⊞	Download	7	Type 5	12	1.0000000	12.0000000
⊞	Download	8	Type 5	14	0.8571429	12.0000000
⊞	Download	9	Type 5	8	1.5000000	12.0000000
⊞	Download	10	Type 5	17	0.7058824	12.0000000
⊞	Download	11	Type 5	19	0.6315789	12.0000000
⊞	Download	12	Type 5	15	0.8000000	12.0000000
⊞	Download	13	Type 5	12	1.0000000	12.0000000
⊞	Download	14	Type 5	19	0.6315789	12.0000000
⊞	Download	15	Type 5	14	0.8571429	12.0000000
⊞	Download	16	Type 5	20	0.6000000	12.0000000
⊞	Download	17	Type 5	12	1.0000000	12.0000000
⊞	Download	18	Type 5	14	0.8571429	12.0000000
⊞	Download	19	Type 5	12	1.0000000	12.0000000
⊞	Download	20	Type 5	16	0.7500000	12.0000000
⊞	Download	21	Type 5	12	1.0000000	12.0000000
⊞	Download	22	Type 5	20	0.6000000	12.0000000
⊞	Download	23	Type 5	14	0.8571429	12.0000000
⊞	Download	24	Type 5	13	0.9230769	12.0000000
⊞	Download	25	Type 5	8	1.5000000	12.0000000
⊞	Download	26	Type 5	17	0.7058824	12.0000000
⊞	Download	27	Type 5	19	0.6315789	12.0000000
⊞	Download	28	Type 5	12	1.0000000	12.0000000
⊞	Download	29	Type 5	18	0.6666667	12.0000000

Type 6 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	File name	1=Detection 0=No Detection
6	1	5490	Radar_Type_6_1_trail	1
6	2	5491	Radar_Type_6_2_trail	1
6	3	5492	Radar_Type_6_3_trail	1
6	4	5493	Radar_Type_6_4_trail	1
6	5	5494	Radar_Type_6_5_trail	1
6	6	5495	Radar_Type_6_6_trail	1
6	7	5496	Radar_Type_6_7_trail	1
6	8	5497	Radar_Type_6_8_trail	1
6	9	5498	Radar_Type_6_9_trail	1
6	10	5499	Radar_Type_6_10_trail	1
6	11	5500	Radar_Type_6_11_trail	1
6	12	5501	Radar_Type_6_12_trail	1
6	13	5502	Radar_Type_6_13_trail	0
6	14	5503	Radar_Type_6_14_trail	1
6	15	5504	Radar_Type_6_15_trail	1
6	16	5505	Radar_Type_6_16_trail	1
6	17	5506	Radar_Type_6_17_trail	0
6	18	5507	Radar_Type_6_18_trail	1
6	19	5508	Radar_Type_6_19_trail	1
6	20	5509	Radar_Type_6_20_trail	1
6	21	5510	Radar_Type_6_21_trail	1
6	22	5490	Radar_Type_6_22_trail	1
6	23	5491	Radar_Type_6_23_trail	0
6	24	5492	Radar_Type_6_24_trail	1
6	25	5493	Radar_Type_6_25_trail	1
6	26	5500	Radar_Type_6_26_trail	1
6	27	5510	Radar_Type_6_27_trail	1
6	28	5509	Radar_Type_6_28_trail	1
6	29	5508	Radar_Type_6_29_trail	1
6	30	5507	Radar_Type_6_30_trail	1
Detection Percentage=90% Limit: >70%				

Radar Characteristics For Type 6

Trial List

		Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (ms)	Visible Frequency Number
⊞	Download	0	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	1	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	2	Type 6	1.0	333.3	9	0.3333	300.0000000	28
⊞	Download	3	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	4	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	5	Type 6	1.0	333.3	9	0.3333	300.0000000	31
⊞	Download	6	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	7	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	8	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	9	Type 6	1.0	333.3	9	0.3333	300.0000000	32
⊞	Download	10	Type 6	1.0	333.3	9	0.3333	300.0000000	36
⊞	Download	11	Type 6	1.0	333.3	9	0.3333	300.0000000	40
⊞	Download	12	Type 6	1.0	333.3	9	0.3333	300.0000000	37
⊞	Download	13	Type 6	1.0	333.3	9	0.3333	300.0000000	34
⊞	Download	14	Type 6	1.0	333.3	9	0.3333	300.0000000	31
⊞	Download	15	Type 6	1.0	333.3	9	0.3333	300.0000000	39
⊞	Download	16	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	17	Type 6	1.0	333.3	9	0.3333	300.0000000	36
⊞	Download	18	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	19	Type 6	1.0	333.3	9	0.3333	300.0000000	32
⊞	Download	20	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	21	Type 6	1.0	333.3	9	0.3333	300.0000000	38
⊞	Download	22	Type 6	1.0	333.3	9	0.3333	300.0000000	40
⊞	Download	23	Type 6	1.0	333.3	9	0.3333	300.0000000	37
⊞	Download	24	Type 6	1.0	333.3	9	0.3333	300.0000000	31
⊞	Download	25	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	26	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	27	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	28	Type 6	1.0	333.3	9	0.3333	300.0000000	32
⊞	Download	29	Type 6	1.0	333.3	9	0.3333	300.0000000	37

7.2 Test Result for 40MHz bandwidth

5510MHz

Type 1A/1B Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
1	1	5491	1	938	57	1
1	2	5492	1	698	76	1
1	3	5494	1	618	86	1
1	4	5495	1	538	99	1
1	5	5497	1	878	61	1
1	6	5498	1	3066	18	1
1	7	5499	1	638	83	1
1	8	5500	1	918	58	1
1	9	5502	1	838	63	1
1	10	5504	1	858	62	1
1	11	5505	1	798	67	1
1	12	5506	1	718	74	1
1	13	5507	1	578	92	1
1	14	5509	1	598	89	1
1	15	5510	1	558	95	1
1	16	5511	1	2536	21	1
1	17	5512	1	966	55	1
1	18	5513	1	827	64	1
1	19	5515	1	2501	22	1
1	20	5516	1	2595	21	1
1	21	5517	1	1114	48	1
1	22	5519	1	1302	41	1
1	23	5520	1	3045	18	1
1	24	5521	1	1624	33	1
1	25	5523	1	2878	19	1
1	26	5524	1	1027	52	1
1	27	5525	1	2485	22	1
1	28	5527	1	1600	33	1
1	29	5528	1	1172	46	1
1	30	5529	1	1177	45	1
Detection Percentage=100% Limit: >60%						

Type 2 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
2	1	5491	3.2	179	26	1
2	2	5492	1.1	207	23	1
2	3	5494	2.1	230	24	0
2	4	5495	4.8	200	29	1
2	5	5497	3.9	214	28	1
2	6	5498	2.9	222	26	1
2	7	5499	3.2	204	26	1
2	8	5500	2.5	192	25	1
2	9	5502	3.1	164	26	1
2	10	5504	1.2	156	23	1
2	11	5505	3.9	210	27	1
2	12	5506	4.6	201	29	1
2	13	5507	3.2	162	26	0
2	14	5509	2.2	197	25	1
2	15	5510	4.5	163	29	1
2	16	5511	3	203	26	1
2	17	5512	5	168	29	1
2	18	5513	2.4	217	25	1
2	19	5515	2.9	191	26	1
2	20	5516	2.3	166	25	1
2	21	5517	3.7	150	27	1
2	22	5519	2.2	176	25	1
2	23	5520	4.9	195	29	1
2	24	5521	2.9	202	26	1
2	25	5523	2.5	178	25	1
2	26	5524	1.1	206	23	1
2	27	5525	3.8	155	27	1
2	28	5527	4.7	157	29	0
2	29	5528	2.4	224	25	1
2	30	5529	4.2	159	28	1
					Detection Percentage=90%	Limit: >60%

Type 3 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
3	1	5491	8.2	355	17	1
3	2	5492	6.1	487	16	1
3	3	5494	7.1	344	16	1
3	4	5495	9.8	288	18	1
3	5	5497	8.9	230	18	1
3	6	5498	7.9	432	17	1
3	7	5499	8.2	207	17	1
3	8	5500	7.5	443	17	1
3	9	5502	8.1	439	17	1
3	10	5504	6.2	223	16	1
3	11	5505	8.9	208	18	1
3	12	5506	9.6	463	18	1
3	13	5507	8.2	441	17	1
3	14	5509	7.2	323	16	1
3	15	5510	9.5	297	18	1
3	16	5511	8	412	17	1
3	17	5512	10	324	18	0
3	18	5513	7.4	271	17	1
3	19	5515	7.9	349	17	1
3	20	5516	7.3	409	16	1
3	21	5517	8.7	373	18	1
3	22	5519	7.2	254	16	1
3	23	5520	9.9	274	18	1
3	24	5521	7.9	278	17	1
3	25	5523	7.5	317	17	1
3	26	5524	6.1	260	16	1
3	27	5525	8.8	211	18	1
3	28	5527	9.7	272	18	1
3	29	5528	7.4	264	17	1
3	30	5529	9.2	284	18	0
Detection Percentage=93.3% Limit: >60%						

Type 4 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
4	1	5491	16	355	14	1
4	2	5492	11.3	487	12	1
4	3	5494	13.5	344	13	1
4	4	5495	19.4	288	16	1
4	5	5497	17.5	230	15	1
4	6	5498	15.3	432	14	1
4	7	5499	15.9	207	14	0
4	8	5500	14.3	443	13	1
4	9	5502	15.8	439	14	1
4	10	5504	11.5	223	12	1
4	11	5505	17.4	208	15	1
4	12	5506	19	463	16	1
4	13	5507	16	441	14	1
4	14	5509	13.8	323	13	1
4	15	5510	18.9	297	16	1
4	16	5511	15.5	412	14	1
4	17	5512	19.9	324	16	1
4	18	5513	14.1	271	13	1
4	19	5515	15.2	349	14	1
4	20	5516	13.8	409	13	0
4	21	5517	17.1	373	15	0
4	22	5519	13.8	254	13	1
4	23	5520	19.8	274	16	1
4	24	5521	15.3	278	14	1
4	25	5523	14.5	317	13	1
4	26	5524	11.3	260	12	1
4	27	5525	17.3	211	15	1
4	28	5527	19.2	272	16	1
4	29	5528	14.2	264	13	1
4	30	5529	18.2	284	15	0
Detection Percentage=86.7% Limit: >60%						

In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is required and is calculated as follows:

$\frac{P_d1 + P_d2 + P_d3 + P_d4}{4}$ = (100%+90%+93.3%+86.7%)/4= **92.5%** (>80%)

Type 5 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	File name	1=Detection 0=No Detection
5	1	5495	Radar_Type_5_1_trail	1
5	2	5496	Radar_Type_5_2_trail	1
5	3	5497	Radar_Type_5_3_trail	1
5	4	5498	Radar_Type_5_4_trail	1
5	5	5499	Radar_Type_5_5_trail	1
5	6	5500	Radar_Type_5_6_trail	0
5	7	5501	Radar_Type_5_7_trail	1
5	8	5502	Radar_Type_5_8_trail	1
5	9	5503	Radar_Type_5_9_trail	1
5	10	5504	Radar_Type_5_10_trail	1
5	11	5505	Radar_Type_5_11_trail	1
5	12	5506	Radar_Type_5_12_trail	1
5	13	5507	Radar_Type_5_13_trail	1
5	14	5508	Radar_Type_5_14_trail	1
5	15	5510	Radar_Type_5_15_trail	1
5	16	5511	Radar_Type_5_16_trail	1
5	17	5512	Radar_Type_5_17_trail	1
5	18	5513	Radar_Type_5_18_trail	1
5	19	5514	Radar_Type_5_19_trail	1
5	20	5515	Radar_Type_5_20_trail	1
5	21	5516	Radar_Type_5_21_trail	1
5	22	5517	Radar_Type_5_22_trail	0
5	23	5518	Radar_Type_5_23_trail	1
5	24	5519	Radar_Type_5_24_trail	1
5	25	5520	Radar_Type_5_25_trail	1
5	26	5521	Radar_Type_5_26_trail	1
5	27	5522	Radar_Type_5_27_trail	1
5	28	5523	Radar_Type_5_28_trail	1
5	29	5524	Radar_Type_5_29_trail	1
5	30	5525	Radar_Type_5_30_trail	1
Detection Percentage=93.3% Limit: >80%				

Radar Characteristics For Type 5

Trial List

	Trial Id	Radar Type	Number of Bursts	Burst Period (s)	Waveform Length (s)
Download	0	Type 5	15	0.8000000	12.0000000
Download	1	Type 5	8	1.5000000	12.0000000
Download	2	Type 5	11	1.0909091	12.0000000
Download	3	Type 5	20	0.6000000	12.0000000
Download	4	Type 5	17	0.7058824	12.0000000
Download	5	Type 5	14	0.8571429	12.0000000
Download	6	Type 5	15	0.8000000	12.0000000
Download	7	Type 5	12	1.0000000	12.0000000
Download	8	Type 5	14	0.8571429	12.0000000
Download	9	Type 5	8	1.5000000	12.0000000
Download	10	Type 5	17	0.7058824	12.0000000
Download	11	Type 5	19	0.6315789	12.0000000
Download	12	Type 5	15	0.8000000	12.0000000
Download	13	Type 5	12	1.0000000	12.0000000
Download	14	Type 5	19	0.6315789	12.0000000
Download	15	Type 5	14	0.8571429	12.0000000
Download	16	Type 5	20	0.6000000	12.0000000
Download	17	Type 5	12	1.0000000	12.0000000
Download	18	Type 5	14	0.8571429	12.0000000
Download	19	Type 5	12	1.0000000	12.0000000
Download	20	Type 5	16	0.7500000	12.0000000
Download	21	Type 5	12	1.0000000	12.0000000
Download	22	Type 5	20	0.6000000	12.0000000
Download	23	Type 5	14	0.8571429	12.0000000
Download	24	Type 5	13	0.9230769	12.0000000
Download	25	Type 5	8	1.5000000	12.0000000
Download	26	Type 5	17	0.7058824	12.0000000
Download	27	Type 5	19	0.6315789	12.0000000
Download	28	Type 5	12	1.0000000	12.0000000
Download	29	Type 5	18	0.6666667	12.0000000

Type 6 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	File name	1=Detection 0=No Detection
6	1	5491	Radar_Type_6_1_trail	1
6	2	5492	Radar_Type_6_2_trail	1
6	3	5494	Radar_Type_6_3_trail	1
6	4	5495	Radar_Type_6_4_trail	1
6	5	5497	Radar_Type_6_5_trail	1
6	6	5498	Radar_Type_6_6_trail	1
6	7	5499	Radar_Type_6_7_trail	1
6	8	5500	Radar_Type_6_8_trail	1
6	9	5502	Radar_Type_6_9_trail	1
6	10	5504	Radar_Type_6_10_trail	0
6	11	5505	Radar_Type_6_11_trail	1
6	12	5506	Radar_Type_6_12_trail	1
6	13	5507	Radar_Type_6_13_trail	1
6	14	5509	Radar_Type_6_14_trail	1
6	15	5510	Radar_Type_6_15_trail	1
6	16	5511	Radar_Type_6_16_trail	0
6	17	5512	Radar_Type_6_17_trail	1
6	18	5513	Radar_Type_6_18_trail	1
6	19	5515	Radar_Type_6_19_trail	1
6	20	5516	Radar_Type_6_20_trail	1
6	21	5517	Radar_Type_6_21_trail	1
6	22	5519	Radar_Type_6_22_trail	0
6	23	5520	Radar_Type_6_23_trail	1
6	24	5521	Radar_Type_6_24_trail	1
6	25	5523	Radar_Type_6_25_trail	1
6	26	5524	Radar_Type_6_26_trail	1
6	27	5525	Radar_Type_6_27_trail	1
6	28	5527	Radar_Type_6_28_trail	1
6	29	5528	Radar_Type_6_29_trail	1
6	30	5529	Radar_Type_6_30_trail	1
		Detection Percentage=90% Limit: >70%		

Radar Characteristics For Type 6

Trial List

		Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (ms)	Visible Frequency Number
⊞	Download	0	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	1	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	2	Type 6	1.0	333.3	9	0.3333	300.0000000	28
⊞	Download	3	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	4	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	5	Type 6	1.0	333.3	9	0.3333	300.0000000	31
⊞	Download	6	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	7	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	8	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	9	Type 6	1.0	333.3	9	0.3333	300.0000000	32
⊞	Download	10	Type 6	1.0	333.3	9	0.3333	300.0000000	36
⊞	Download	11	Type 6	1.0	333.3	9	0.3333	300.0000000	40
⊞	Download	12	Type 6	1.0	333.3	9	0.3333	300.0000000	37
⊞	Download	13	Type 6	1.0	333.3	9	0.3333	300.0000000	34
⊞	Download	14	Type 6	1.0	333.3	9	0.3333	300.0000000	31
⊞	Download	15	Type 6	1.0	333.3	9	0.3333	300.0000000	39
⊞	Download	16	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	17	Type 6	1.0	333.3	9	0.3333	300.0000000	36
⊞	Download	18	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	19	Type 6	1.0	333.3	9	0.3333	300.0000000	32
⊞	Download	20	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	21	Type 6	1.0	333.3	9	0.3333	300.0000000	38
⊞	Download	22	Type 6	1.0	333.3	9	0.3333	300.0000000	40
⊞	Download	23	Type 6	1.0	333.3	9	0.3333	300.0000000	37
⊞	Download	24	Type 6	1.0	333.3	9	0.3333	300.0000000	31
⊞	Download	25	Type 6	1.0	333.3	9	0.3333	300.0000000	33
⊞	Download	26	Type 6	1.0	333.3	9	0.3333	300.0000000	29
⊞	Download	27	Type 6	1.0	333.3	9	0.3333	300.0000000	35
⊞	Download	28	Type 6	1.0	333.3	9	0.3333	300.0000000	32
⊞	Download	29	Type 6	1.0	333.3	9	0.3333	300.0000000	37

7.3 Test Result for 80MHz bandwidth

5530MHz

Type 1A/1B Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
1	1	5530	1	938	57	1
1	2	5492	1	698	76	1
1	3	5568	1	618	86	1
1	4	5567	1	538	99	1
1	5	5530	1	878	61	1
1	6	5529	1	3066	18	1
1	7	5531	1	638	83	1
1	8	5492	1	918	58	1
1	9	5493	1	838	63	0
1	10	5568	1	858	62	1
1	11	5567	1	798	67	1
1	12	5506	1	718	74	1
1	13	5496	1	578	92	1
1	14	5509	1	598	89	1
1	15	5520	1	558	95	1
1	16	5531	1	2536	21	1
1	17	5529	1	966	55	1
1	18	5543	1	827	64	1
1	19	5557	1	2501	22	1
1	20	5563	1	2595	21	1
1	21	5530	1	1114	48	1
1	22	5492	1	1302	41	0
1	23	5568	1	3045	18	1
1	24	5567	1	1624	33	1
1	25	5530	1	2878	19	1
1	26	5529	1	1027	52	1
1	27	5531	1	2485	22	1
1	28	5492	1	1600	33	1
1	29	5493	1	1172	46	1
1	30	5568	1	1177	45	1
Detection Percentage=93.3% Limit: >60%						

Type 2 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
2	1	5530	3.2	179	26	1
2	2	5492	1.1	207	23	0
2	3	5568	2.1	230	24	1
2	4	5567	4.8	200	29	1
2	5	5530	3.9	214	28	1
2	6	5529	2.9	222	26	1
2	7	5531	3.2	204	26	1
2	8	5492	2.5	192	25	1
2	9	5493	3.1	164	26	1
2	10	5568	1.2	156	23	1
2	11	5567	3.9	210	27	1
2	12	5506	4.6	201	29	1
2	13	5496	3.2	162	26	1
2	14	5509	2.2	197	25	1
2	15	5520	4.5	163	29	1
2	16	5531	3	203	26	1
2	17	5529	5	168	29	1
2	18	5543	2.4	217	25	1
2	19	5557	2.9	191	26	1
2	20	5563	2.3	166	25	1
2	21	5530	3.7	150	27	1
2	22	5492	2.2	176	25	1
2	23	5568	4.9	195	29	1
2	24	5567	2.9	202	26	1
2	25	5530	2.5	178	25	1
2	26	5529	1.1	206	23	1
2	27	5531	3.8	155	27	1
2	28	5492	4.7	157	29	1
2	29	5493	2.4	224	25	1
2	30	5568	4.2	159	28	1
Detection Percentage=96.7% Limit: >60%						

Type 3 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
3	1	5530	8.2	355	17	1
3	2	5492	6.1	487	16	1
3	3	5568	7.1	344	16	1
3	4	5567	9.8	288	18	0
3	5	5530	8.9	230	18	1
3	6	5529	7.9	432	17	1
3	7	5531	8.2	207	17	1
3	8	5492	7.5	443	17	1
3	9	5493	8.1	439	17	1
3	10	5568	6.2	223	16	1
3	11	5567	8.9	208	18	1
3	12	5506	9.6	463	18	1
3	13	5496	8.2	441	17	1
3	14	5509	7.2	323	16	1
3	15	5520	9.5	297	18	1
3	16	5531	8	412	17	1
3	17	5529	10	324	18	1
3	18	5543	7.4	271	17	1
3	19	5557	7.9	349	17	1
3	20	5563	7.3	409	16	1
3	21	5530	8.7	373	18	1
3	22	5492	7.2	254	16	1
3	23	5568	9.9	274	18	1
3	24	5567	7.9	278	17	1
3	25	5530	7.5	317	17	1
3	26	5529	6.1	260	16	1
3	27	5531	8.8	211	18	1
3	28	5492	9.7	272	18	1
3	29	5493	7.4	264	17	1
3	30	5568	9.2	284	18	0
Detection Percentage=93.3% Limit: >60%						

Type 4 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	Pluse Width (us)	PRI(us)	Number Pluse per Burst	1=Detection 0=No Detection
4	1	5530	16	355	14	1
4	2	5492	11.3	487	12	0
4	3	5568	13.5	344	13	1
4	4	5567	19.4	288	16	1
4	5	5530	17.5	230	15	1
4	6	5529	15.3	432	14	1
4	7	5531	15.9	207	14	1
4	8	5492	14.3	443	13	1
4	9	5493	15.8	439	14	0
4	10	5568	11.5	223	12	1
4	11	5567	17.4	208	15	1
4	12	5506	19	463	16	1
4	13	5496	16	441	14	1
4	14	5509	13.8	323	13	1
4	15	5520	18.9	297	16	1
4	16	5531	15.5	412	14	1
4	17	5529	19.9	324	16	1
4	18	5543	14.1	271	13	1
4	19	5557	15.2	349	14	1
4	20	5563	13.8	409	13	1
4	21	5530	17.1	373	15	1
4	22	5492	13.8	254	13	0
4	23	5568	19.8	274	16	1
4	24	5567	15.3	278	14	1
4	25	5530	14.5	317	13	1
4	26	5529	11.3	260	12	1
4	27	5531	17.3	211	15	1
4	28	5492	19.2	272	16	1
4	29	5493	14.2	264	13	1
4	30	5568	18.2	284	15	1
Detection Percentage=90.0% Limit: >60%						

In addition an average minimum percentage of successful detection across all four Short pulse radar test waveforms is required and is calculated as follows:

$\frac{P_d1 + P_d2 + P_d3 + P_d4}{4}$ = (93.3%+96.7%+93.3%+90.0%)/4= **93.3%** (>80%)

Type 5 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	File name	1=Detection 0=No Detection
5	1	5530	Radar_Type_5_1_trail	0
5	2	5531	Radar_Type_5_2_trail	1
5	3	5529	Radar_Type_5_3_trail	1
5	4	5561	Radar_Type_5_4_trail	1
5	5	5499	Radar_Type_5_5_trail	1
5	6	5530	Radar_Type_5_6_trail	1
5	7	5531	Radar_Type_5_7_trail	1
5	8	5529	Radar_Type_5_8_trail	1
5	9	5561	Radar_Type_5_9_trail	1
5	10	5499	Radar_Type_5_10_trail	1
5	11	5530	Radar_Type_5_11_trail	0
5	12	5499	Radar_Type_5_12_trail	1
5	13	5502	Radar_Type_5_13_trail	1
5	14	5513	Radar_Type_5_14_trail	1
5	15	5525	Radar_Type_5_15_trail	1
5	16	5536	Radar_Type_5_16_trail	1
5	17	5547	Radar_Type_5_17_trail	1
5	18	5554	Radar_Type_5_18_trail	1
5	19	5530	Radar_Type_5_19_trail	1
5	20	5531	Radar_Type_5_20_trail	1
5	21	5529	Radar_Type_5_21_trail	1
5	22	5561	Radar_Type_5_22_trail	1
5	23	5499	Radar_Type_5_23_trail	1
5	24	5530	Radar_Type_5_24_trail	1
5	25	5531	Radar_Type_5_25_trail	1
5	26	5529	Radar_Type_5_26_trail	1
5	27	5561	Radar_Type_5_27_trail	1
5	28	5499	Radar_Type_5_28_trail	1
5	29	5530	Radar_Type_5_29_trail	1
5	30	5526	Radar_Type_5_30_trail	1
Detection Percentage=93.3% Limit: >80%				

Radar Characteristics For Type 5

Trial List

	Trial Id	Radar Type	Number of Bursts	Burst Period (s)	Waveform Length (s)
Download	0	Type 5	15	0.8000000	12.0000000
Download	1	Type 5	8	1.5000000	12.0000000
Download	2	Type 5	11	1.0909091	12.0000000
Download	3	Type 5	20	0.6000000	12.0000000
Download	4	Type 5	17	0.7058824	12.0000000
Download	5	Type 5	14	0.8571429	12.0000000
Download	6	Type 5	15	0.8000000	12.0000000
Download	7	Type 5	12	1.0000000	12.0000000
Download	8	Type 5	14	0.8571429	12.0000000
Download	9	Type 5	8	1.5000000	12.0000000
Download	10	Type 5	17	0.7058824	12.0000000
Download	11	Type 5	19	0.6315789	12.0000000
Download	12	Type 5	15	0.8000000	12.0000000
Download	13	Type 5	12	1.0000000	12.0000000
Download	14	Type 5	19	0.6315789	12.0000000
Download	15	Type 5	14	0.8571429	12.0000000
Download	16	Type 5	20	0.6000000	12.0000000
Download	17	Type 5	12	1.0000000	12.0000000
Download	18	Type 5	14	0.8571429	12.0000000
Download	19	Type 5	12	1.0000000	12.0000000
Download	20	Type 5	16	0.7500000	12.0000000
Download	21	Type 5	12	1.0000000	12.0000000
Download	22	Type 5	20	0.6000000	12.0000000
Download	23	Type 5	14	0.8571429	12.0000000
Download	24	Type 5	13	0.9230769	12.0000000
Download	25	Type 5	8	1.5000000	12.0000000
Download	26	Type 5	17	0.7058824	12.0000000
Download	27	Type 5	19	0.6315789	12.0000000
Download	28	Type 5	12	1.0000000	12.0000000
Download	29	Type 5	18	0.6666667	12.0000000

Type 6 Radar Statistical Performance:

Radar Type	Trial #	Frequency (MHz)	File name	1=Detection 0=No Detection
6	1	5530	Radar_Type_6_1_trail	1
6	2	5492	Radar_Type_6_2_trail	1
6	3	5568	Radar_Type_6_3_trail	1
6	4	5567	Radar_Type_6_4_trail	1
6	5	5530	Radar_Type_6_5_trail	1
6	6	5529	Radar_Type_6_6_trail	0
6	7	5531	Radar_Type_6_7_trail	1
6	8	5492	Radar_Type_6_8_trail	1
6	9	5493	Radar_Type_6_9_trail	1
6	10	5568	Radar_Type_6_10_trail	1
6	11	5567	Radar_Type_6_11_trail	1
6	12	5506	Radar_Type_6_12_trail	1
6	13	5496	Radar_Type_6_13_trail	1
6	14	5509	Radar_Type_6_14_trail	1
6	15	5520	Radar_Type_6_15_trail	1
6	16	5531	Radar_Type_6_16_trail	1
6	17	5529	Radar_Type_6_17_trail	1
6	18	5543	Radar_Type_6_18_trail	1
6	19	5557	Radar_Type_6_19_trail	1
6	20	5563	Radar_Type_6_20_trail	1
6	21	5530	Radar_Type_6_21_trail	1
6	22	5492	Radar_Type_6_22_trail	1
6	23	5568	Radar_Type_6_23_trail	1
6	24	5567	Radar_Type_6_24_trail	1
6	25	5530	Radar_Type_6_25_trail	1
6	26	5529	Radar_Type_6_26_trail	1
6	27	5531	Radar_Type_6_27_trail	1
6	28	5492	Radar_Type_6_28_trail	1
6	29	5493	Radar_Type_6_29_trail	1
6	30	5568	Radar_Type_6_30_trail	1
Detection Percentage=96.7% Limit: >70%				

Radar Characteristics For Type 6

Trial List

	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (ms)	Visible Frequency Number
Download	0	Type 6	1.0	333.3	9	0.3333	300.0000000	33
Download	1	Type 6	1.0	333.3	9	0.3333	300.0000000	29
Download	2	Type 6	1.0	333.3	9	0.3333	300.0000000	28
Download	3	Type 6	1.0	333.3	9	0.3333	300.0000000	35
Download	4	Type 6	1.0	333.3	9	0.3333	300.0000000	35
Download	5	Type 6	1.0	333.3	9	0.3333	300.0000000	31
Download	6	Type 6	1.0	333.3	9	0.3333	300.0000000	33
Download	7	Type 6	1.0	333.3	9	0.3333	300.0000000	29
Download	8	Type 6	1.0	333.3	9	0.3333	300.0000000	33
Download	9	Type 6	1.0	333.3	9	0.3333	300.0000000	32
Download	10	Type 6	1.0	333.3	9	0.3333	300.0000000	36
Download	11	Type 6	1.0	333.3	9	0.3333	300.0000000	40
Download	12	Type 6	1.0	333.3	9	0.3333	300.0000000	37
Download	13	Type 6	1.0	333.3	9	0.3333	300.0000000	34
Download	14	Type 6	1.0	333.3	9	0.3333	300.0000000	31
Download	15	Type 6	1.0	333.3	9	0.3333	300.0000000	39
Download	16	Type 6	1.0	333.3	9	0.3333	300.0000000	35
Download	17	Type 6	1.0	333.3	9	0.3333	300.0000000	36
Download	18	Type 6	1.0	333.3	9	0.3333	300.0000000	29
Download	19	Type 6	1.0	333.3	9	0.3333	300.0000000	32
Download	20	Type 6	1.0	333.3	9	0.3333	300.0000000	35
Download	21	Type 6	1.0	333.3	9	0.3333	300.0000000	38
Download	22	Type 6	1.0	333.3	9	0.3333	300.0000000	40
Download	23	Type 6	1.0	333.3	9	0.3333	300.0000000	37
Download	24	Type 6	1.0	333.3	9	0.3333	300.0000000	31
Download	25	Type 6	1.0	333.3	9	0.3333	300.0000000	33
Download	26	Type 6	1.0	333.3	9	0.3333	300.0000000	29
Download	27	Type 6	1.0	333.3	9	0.3333	300.0000000	35
Download	28	Type 6	1.0	333.3	9	0.3333	300.0000000	32
Download	29	Type 6	1.0	333.3	9	0.3333	300.0000000	37