

Dynamic Frequency Selection (DFS)

Test Report

Product Name	802.11 ac PCIe Module
Model No	NGP1058
FCC ID	HZB-NGP1058W

Applicant	Proxim Wireless Corporation
Address	47633 Westinghouse Drive, Fremont City, California, United States 94539

Date of Receipt	Aug. 24, 2015
Issued Date	Oct. 08, 2015
Report No.	1580639R-RFUSP07V00
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

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Product Name	802.11 ac PCIe Module
Applicant	Proxim Wireless Corporation
Address	47633 Westinghouse Drive, Fremont City, California, United States 94539
Manufacturer	Compex Systems Pte Ltd
Model No.	NGP1058
FCC ID.	HZB-NGP1058W
EUT Rated Voltage	DC 5V, 1.5A
EUT Test Voltage	AC 120V/60Hz
Trade Name	Proxim
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E 15.407 (h): 2014 KDB 905462 D02, KDB 905462 D04, KDB 905462 D06 FCC 14-30
Test Result	Complied

Documented By : Genie Chang
(Senior Adm. Specialist / Genie Chang)

Tested By : Tom Hsieh
(Vice Supervisor / Tom Hsieh)

Approved By : Vincent Lin
(Director / Vincent Lin)

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. Standard Requirement

FCC Part 15.407:

U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30dBm. A TPC mechanism is not required for systems with an E.I.R.P. of less than 500mW.

U-NII devices operating in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems.

1.2. EUT Description

Product Name	802.11 ac PCIe Module
Trade Name	Proxim
FCC ID.	HZB-NGP1058W
Model No.	NGP1058
DFS Frequency Range	5260-5320MHz, 5500-5700MHz
Number of DFS Channels	802.11a/n-20MHz: 12, 802.11n-40MHz: 5, 802.11ac-80MHz: 2
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 300Mbps 802.11ac-80MHz: up to 866.7MHz
Channel Control	Auto
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Channel Bandwidth	20/40/80MHz
DFS Function	☒ Master ☐ Slave
TPC Function	☐ <500mW not required ☒ $\geq 500\text{mW}$ employ a TPC*
Communication Mode	☒ IP Based Systems ☐ Frame Based System ☐ Other System
Antenna Gain	Refer to the table "Antenna List"

***Note: The TPC test by U-NII report.**

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1.	Mars	MA-WA55-30	External Antenna (Panel)	30dBi
2.	Mars	MA-WB55-20	External Antenna (Sector)	20dBi
3	Andrew	PX3F-52-N7A	External Antenna (Grid DISH)	33.5dBi
4	Smartant	SAA08-220570	External Antenna (Omni)	10dBi
*5	Proxim	N/A	External Antenna (Dipole)	5dBi

Note: *Choose lower Antenna gain for DFS test

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz

802.11n-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 54:	5270 MHz	Channel 62:	5310 MHz	Channel 102:	5510 MHz	Channel 110:	5550 MHz
Channel 134:	5670 MHz						

802.11n-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 58:	5290 MHz	Channel 106:	5530 MHz				

Test Mode	Mode 1: Transmit + Ant 5 (802.11n-20BW) Mode 2: Transmit + Ant 5 (802.11n-40BW) Mode 3: Transmit + Ant 5 (802.11ac-80BW)
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1.3. UNII Device Description

(1) The EUT operates in the following DFS band:

1. 5250-5350 MHz
2. 5470-5725 MHz

(2) The U-NII device maximum power is 29.36dBm(E.I.R.P).

Below are the available 50 ohm antenna assemblies and their corresponding gains. 0dBi gain was used to set the -63 dBm threshold level (-64dBm +1 dB) during calibration of the test setup.

Manufacturer	Part No.	Antenna Type	Peak Gain
Proxim	N/A	External Antenna (Dipole)	5dBi for 5.15~5.25GHz

(3) WLAN traffic is generated by the test software “Iperf.exe” from the Master device to the Slave device in the transfer data rate >17%.

(4) For the 5250-5350 MHz and 5470-5725 MHz bands, the Master device provides, on aggregate, uniform loading of the spectrum across all devices by selecting an operating channel among the available channels using a random algorithm.

(5) The client device is an Dell Latitude E5420 Notebook pc contains Intel WLAN radio Module card (Model :7260HMW). The Intel WLAN Module card FCC ID: PD97260H

1.4. Test Equipment

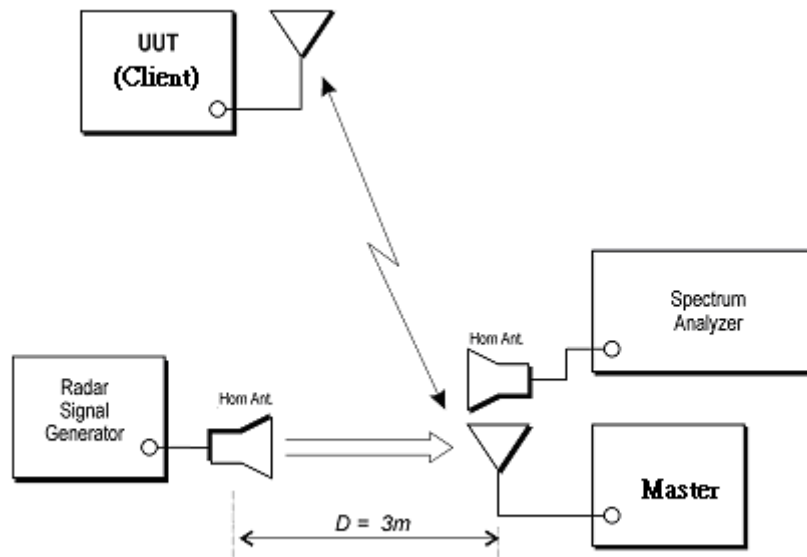
Dynamic Frequency Selection (DFS) / CTR

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4440A	MY46185846	July, 14, 2015
Vector Signal Generator	Agilent	E4438C	MY49070137	July, 02, 2015
Horn Antenna	SCHWARZBECK	BBHA9120D	867	Mar.,06, 2015
Horn Antenna	SCHWARZBECK	BBHA9120D	868	Apr.,22, 2015

Instrument	Manufacturer	Type No.	Serial No
Notebook Pc	Hp	HSTNN-155C	CNU8476RVZ
Notebook Pc	Dell	Latitude E5420	24357736765
RF Cable	WOKEN	L1406-031C	S02-130729-305
RF Cable	SUHNER	SUCOFLEX 106	3474516

Software	Manufacturer	Function
Agilent Signal Studio for Pulse Building V1.3.13.0	Agilent	Radar Signal Generation Software
Agilent DFS_TEST V6.9	Agilent	Radar Signal Generation Software
Media Player Classic v6.4.8.6	Gabest.org	Multimedia Player

1.5. Test Setup



1.6. DFS Detection Thresholds

(1) Interference Threshold value, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64dBm
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.	

(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 + approx. 60 milliseconds over remaining 10 seconds period (See Notes 1 and 2)
U-NII Detection Bandwidth	Minimum 100% 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.

1.7. Radar Test Waveforms

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

(1) Short Pulse Radar Test Waveforms

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

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

(2) Long Pulse Radar Test Signal

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

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the long pulse radar test signal. If more than 30 waveforms are used for the long pulse radar test signal, then each additional waveform must also be unique and not repeated from the previous waveforms.

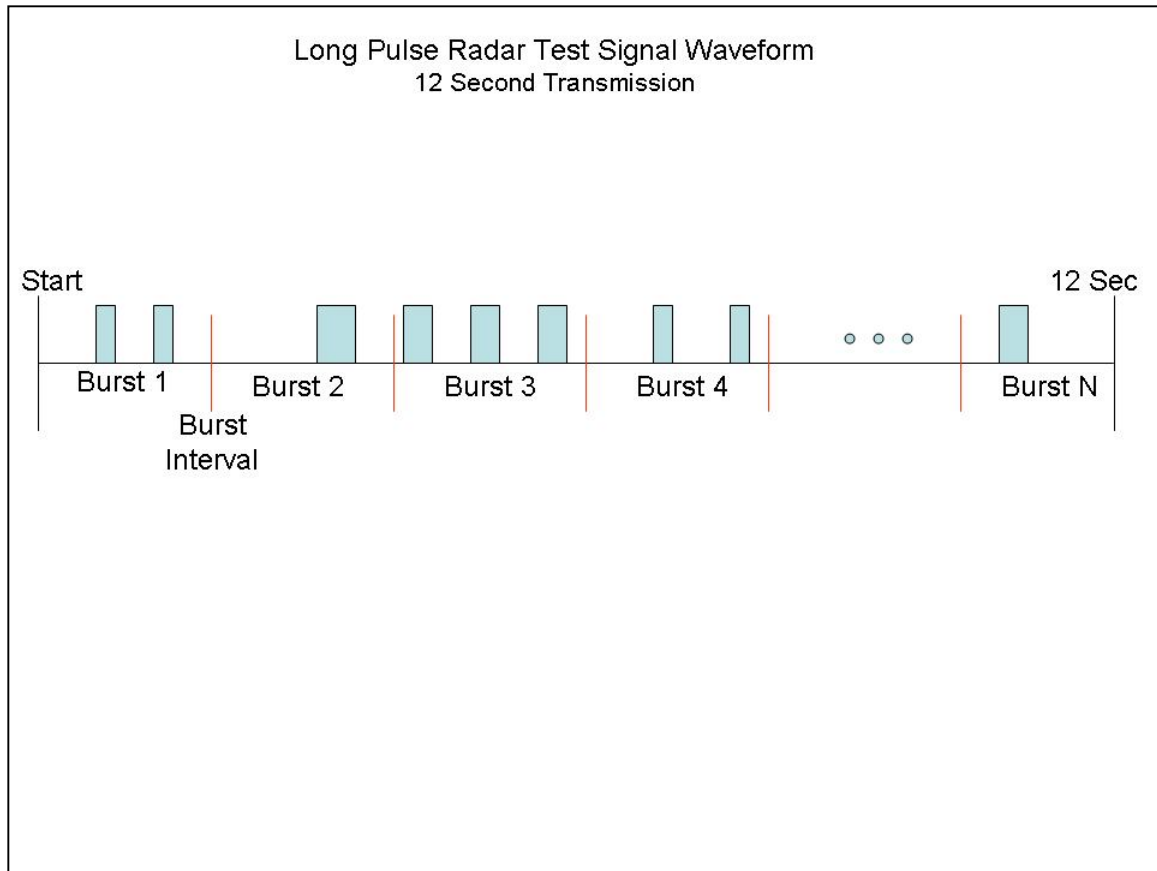
Each waveform is defined as follows:

- 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 FM 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 time between the first and second pulses is chosen independently of the time 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 $(12,000,000 / \text{Burst_Count})$ microseconds. Each interval contains one Burst. The start time for the Burst, relative to the beginning of the interval, is between 1 and $[(12,000,000 / \text{Burst_Count}) - (\text{Total Burst Length}) + (\text{One Random PRI Interval})]$ 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 independently.

A representative example of a Long Pulse radar test waveform:

- 1) The total test signal length is 12 seconds.
- 2) 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).

Graphical Representation of a Long Pulse radar Test Waveform



(3) Frequency Hopping Radar Test Signal

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

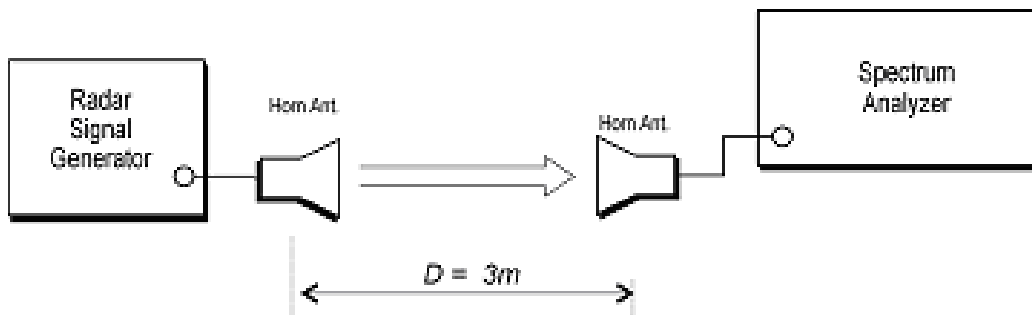
The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 – 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues 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.

1.8. Radar Waveform Calibration

The following equipment setup was used to calibrate the conducted radar waveform. A spectrum analyzer was used to establish the test signal level for each radar type. During this process there were replace 50ohm terminal from 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 utilized. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3MHz and 3 MHz.

The signal generator amplitude was set so that the power level measured at the spectrum analyzer was -63dBm due to the interference threshold level is not required.

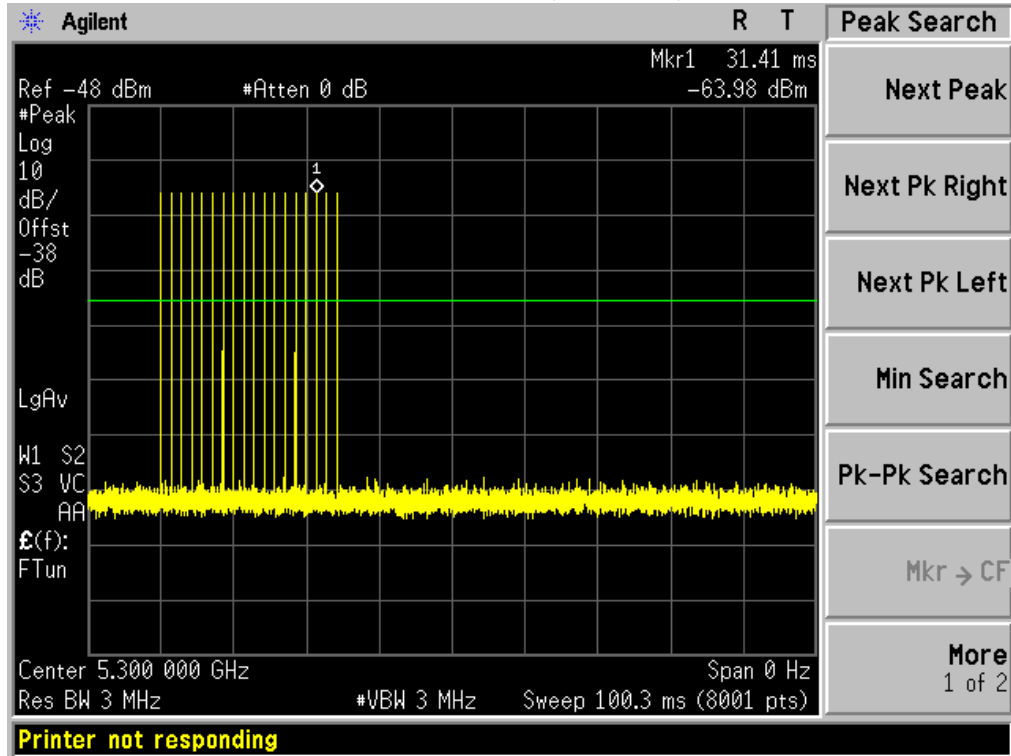
Radiated Calibration Setup



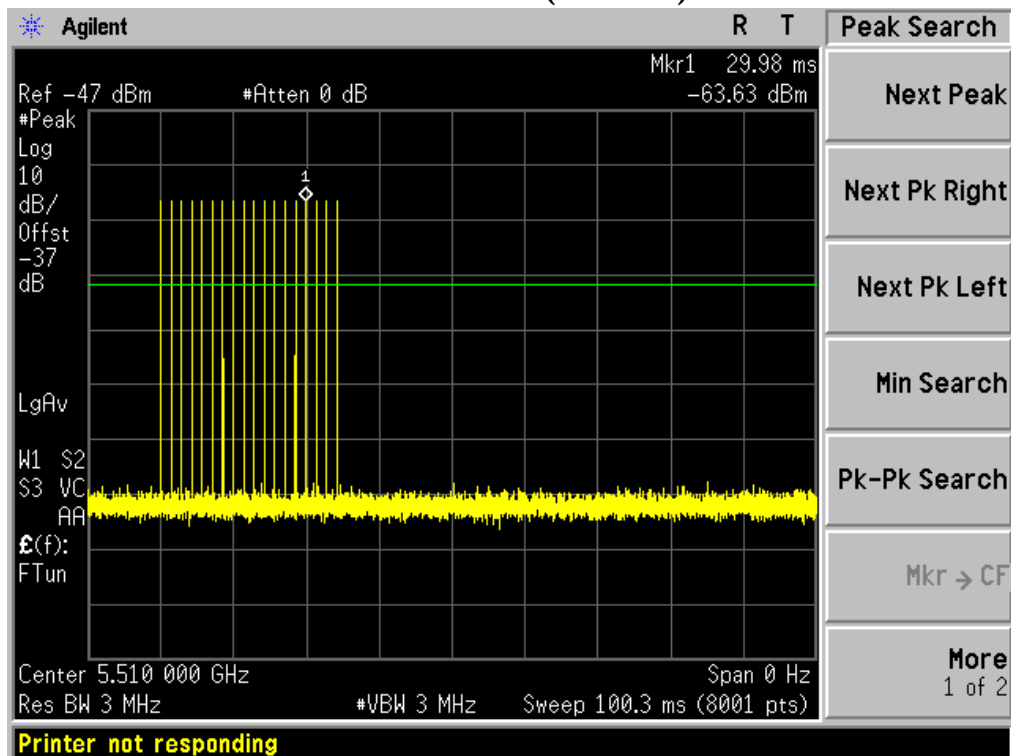
1.9. Radar Waveform Calibration Result

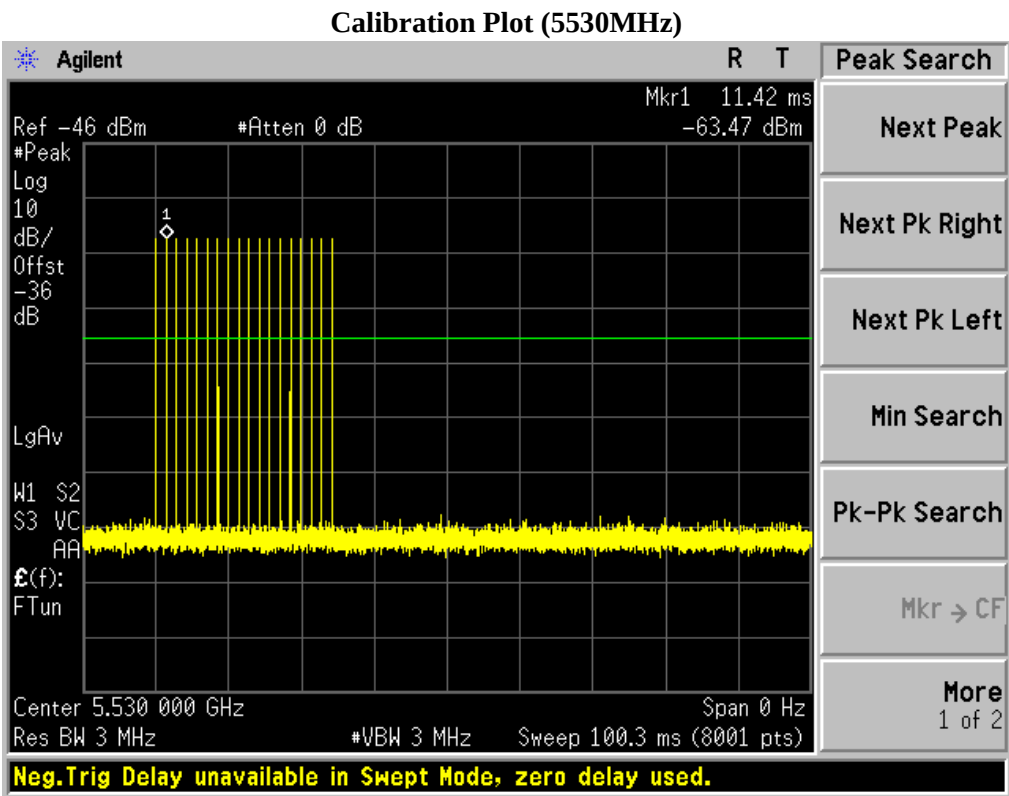
Radar Type 0

Calibration Plot (5300MHz)



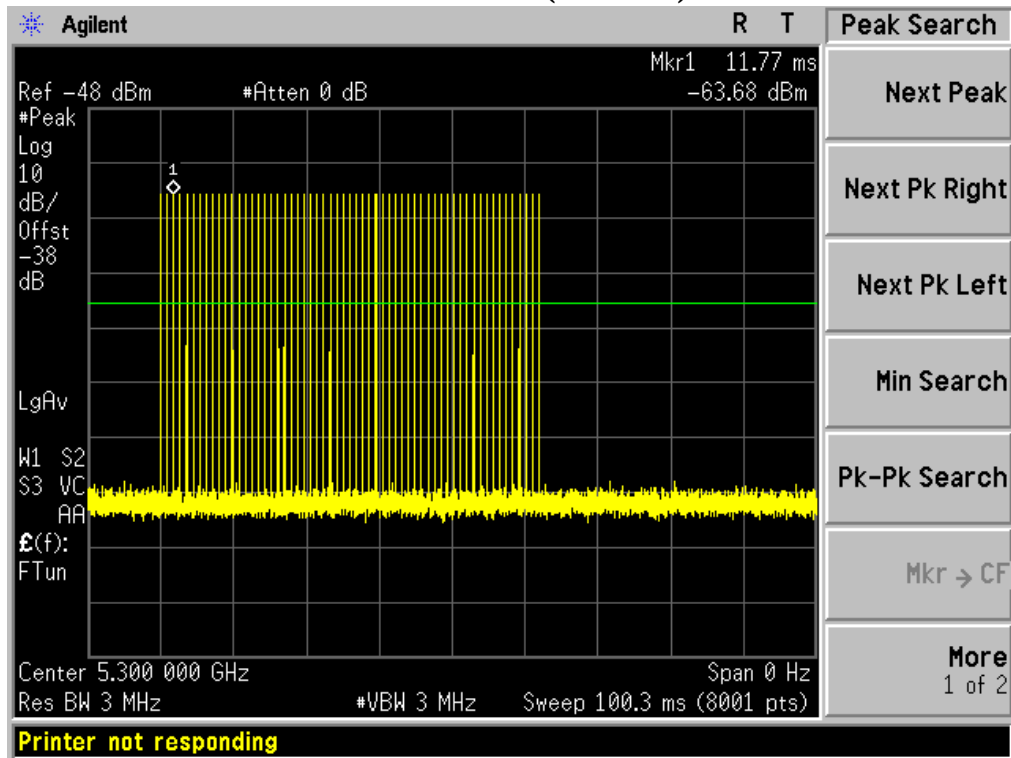
Calibration Plot (5510MHz)



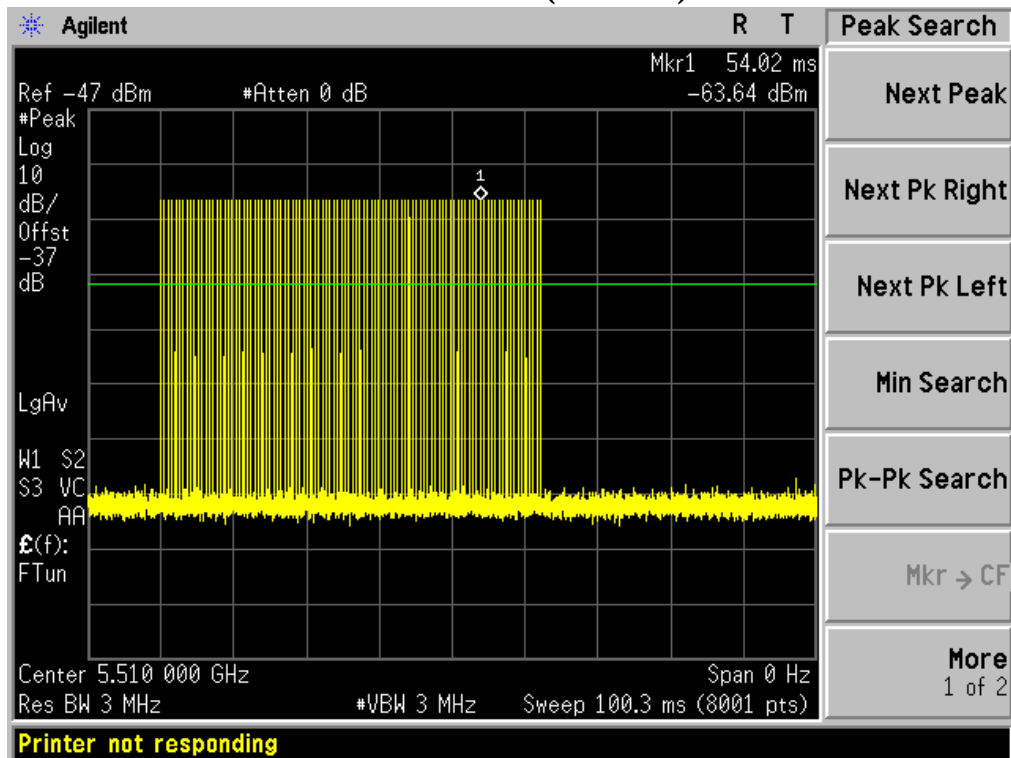


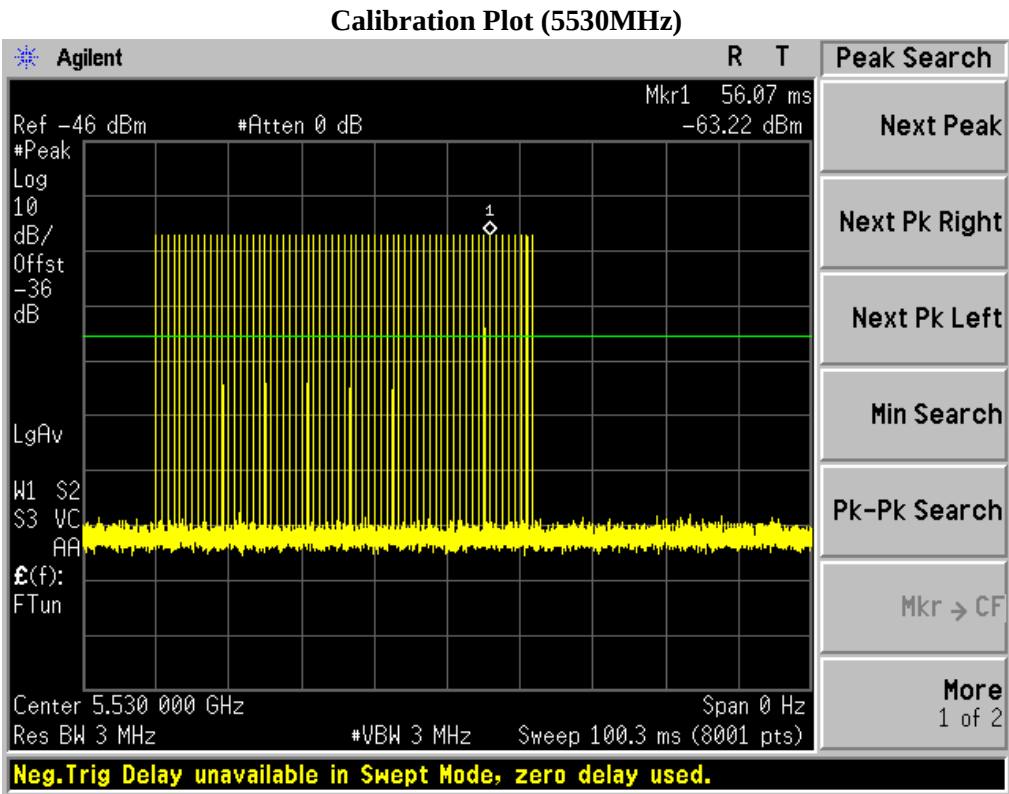
Radar Type 1-A

Calibration Plot (5300MHz)



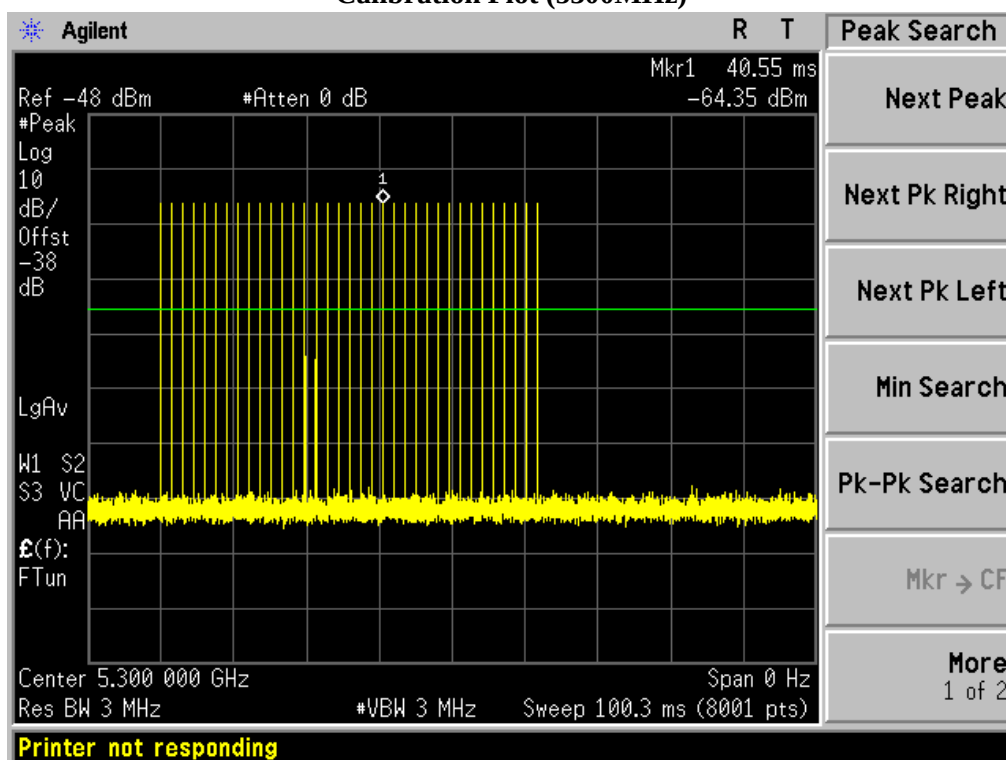
Calibration Plot (5510MHz)



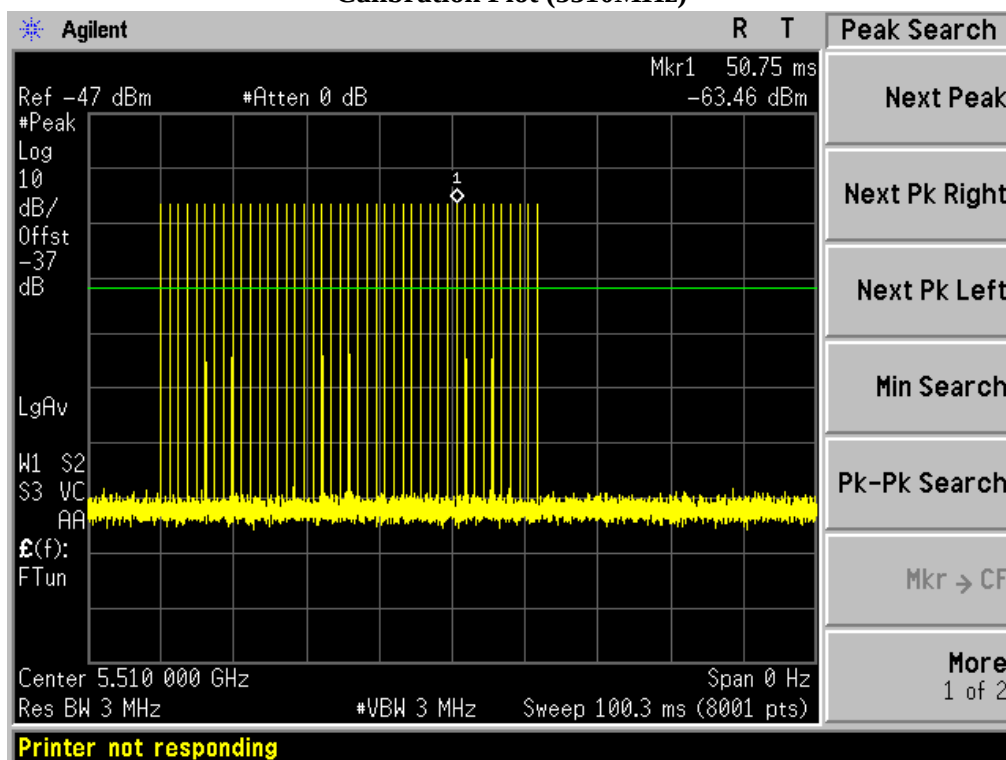


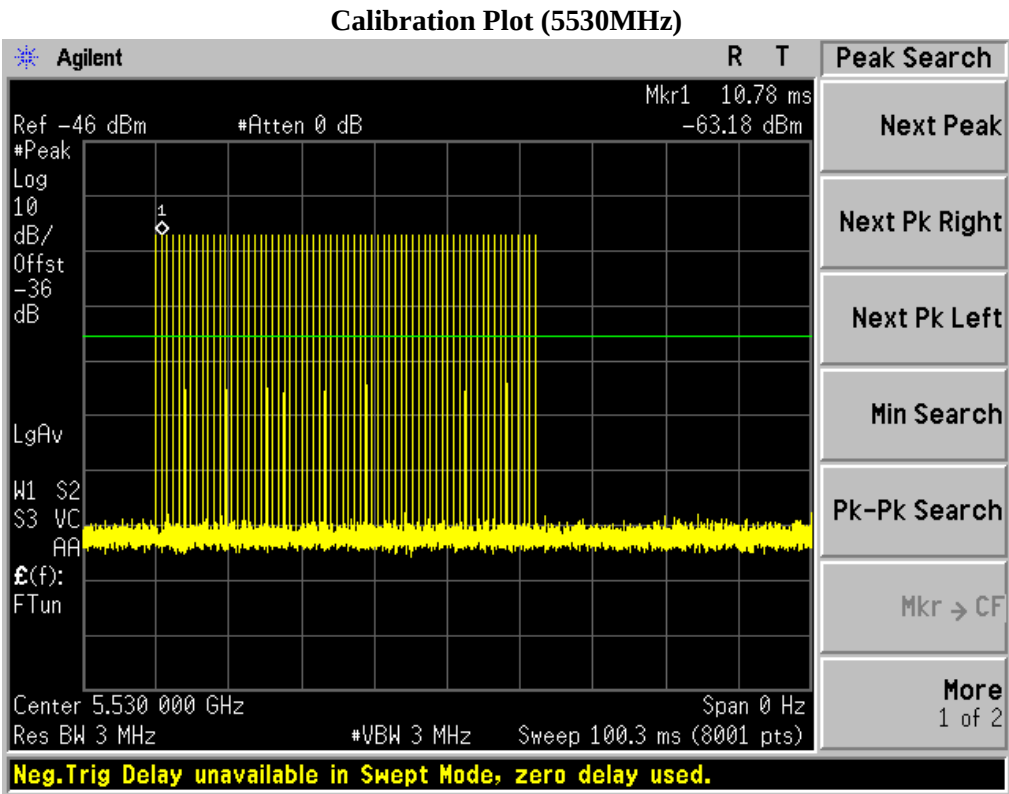
Radar Type 1-B

Calibration Plot (5300MHz)



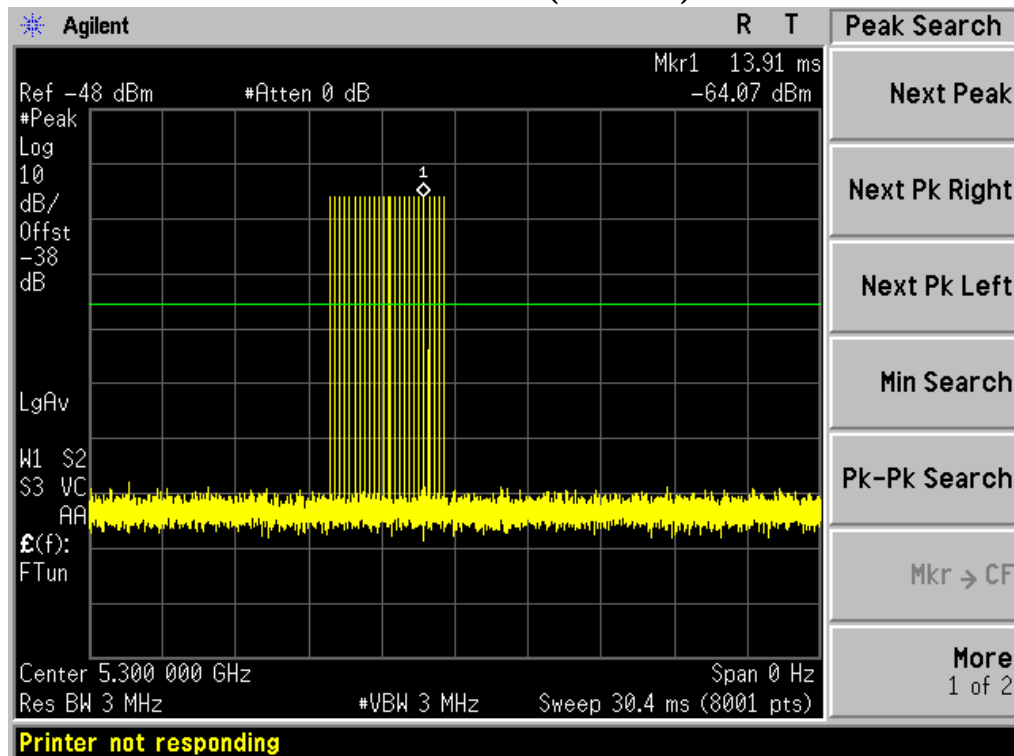
Calibration Plot (5510MHz)



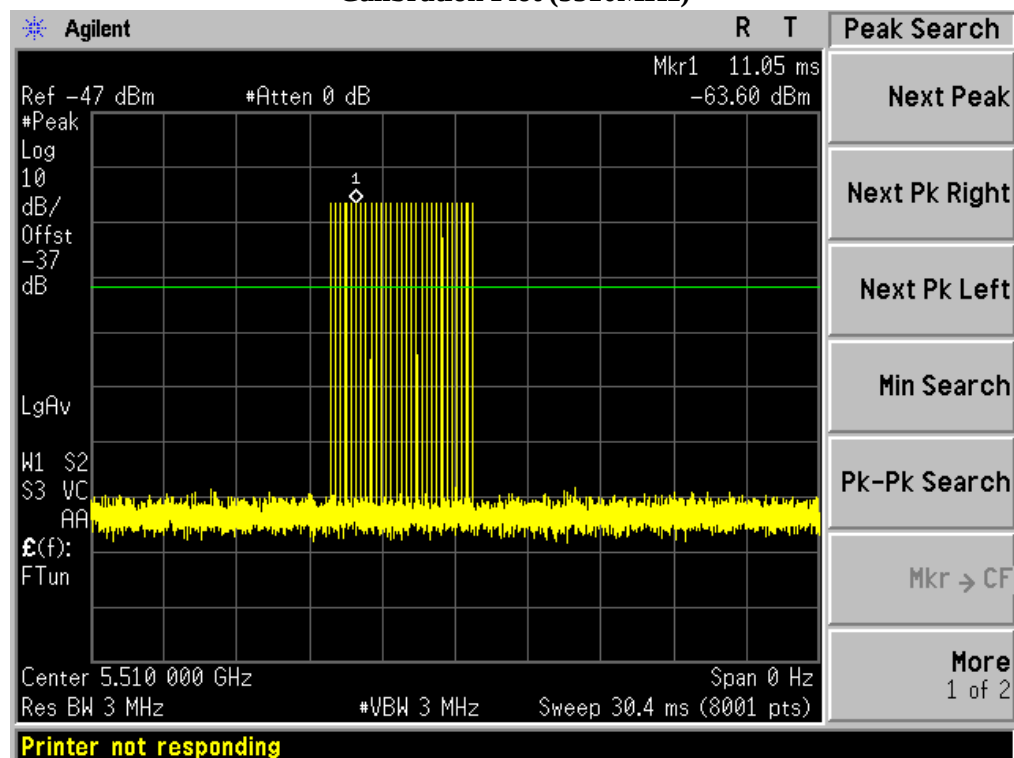


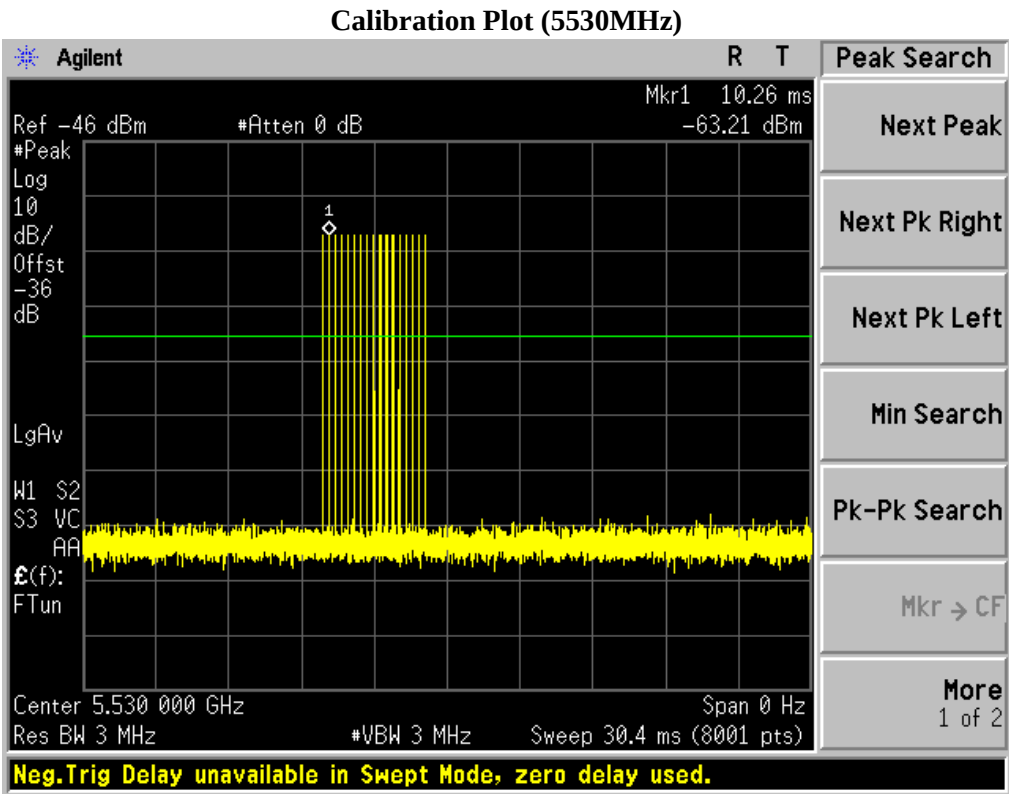
Radar Type 2

Calibration Plot (5300MHz)



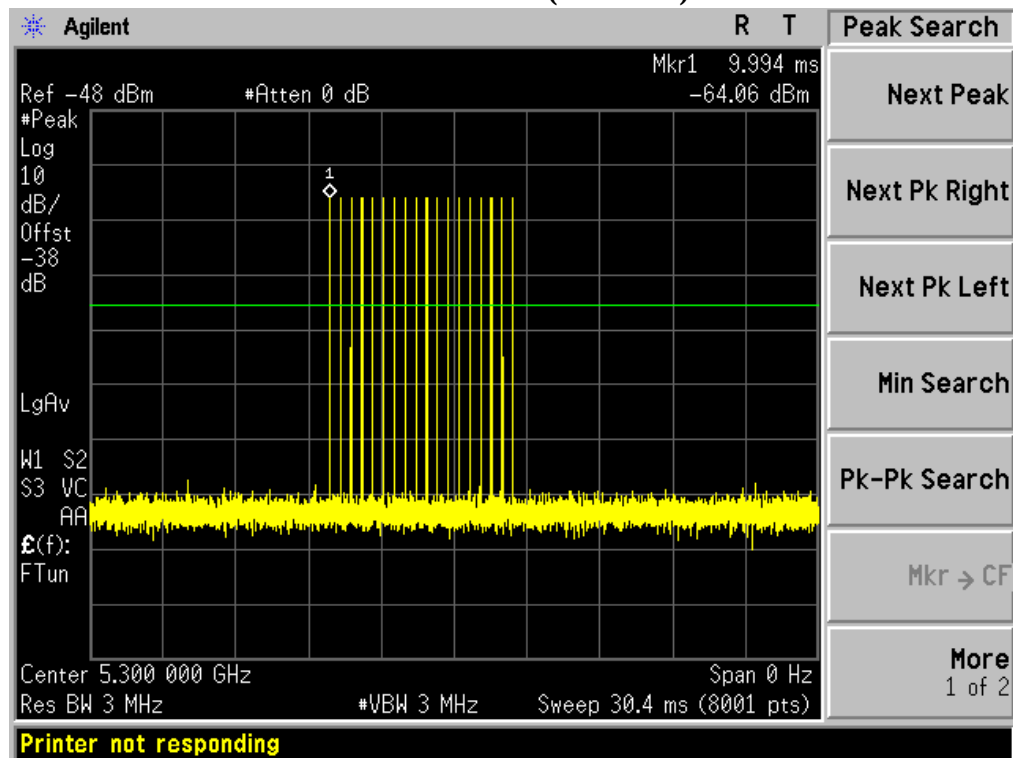
Calibration Plot (5510MHz)



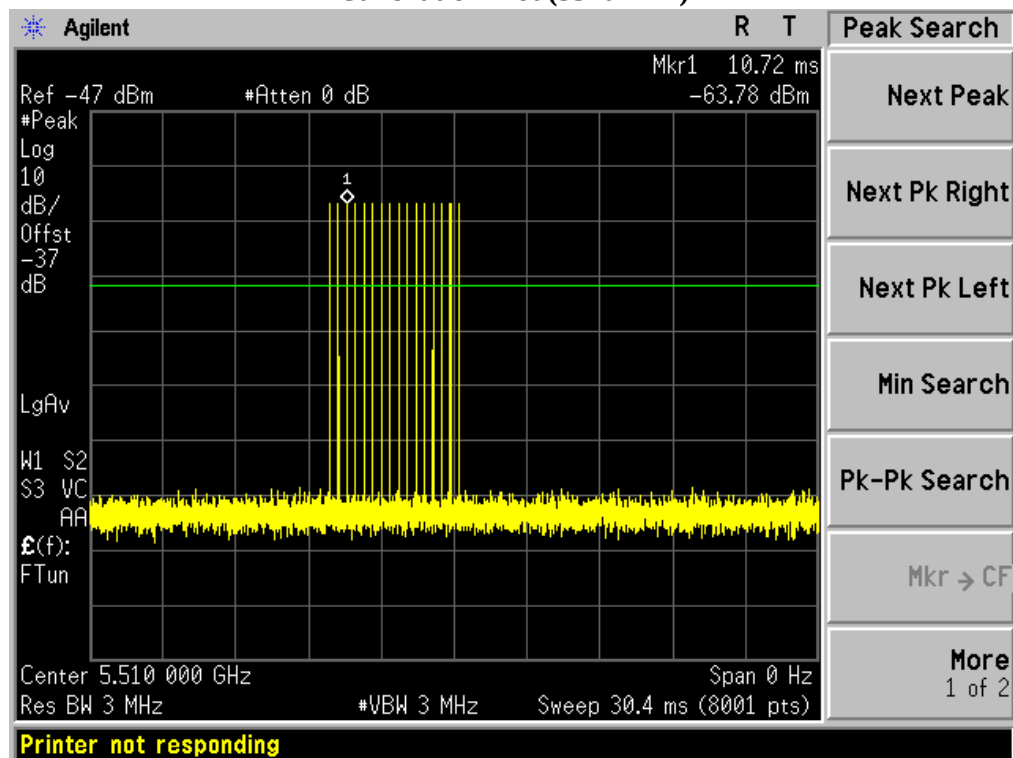


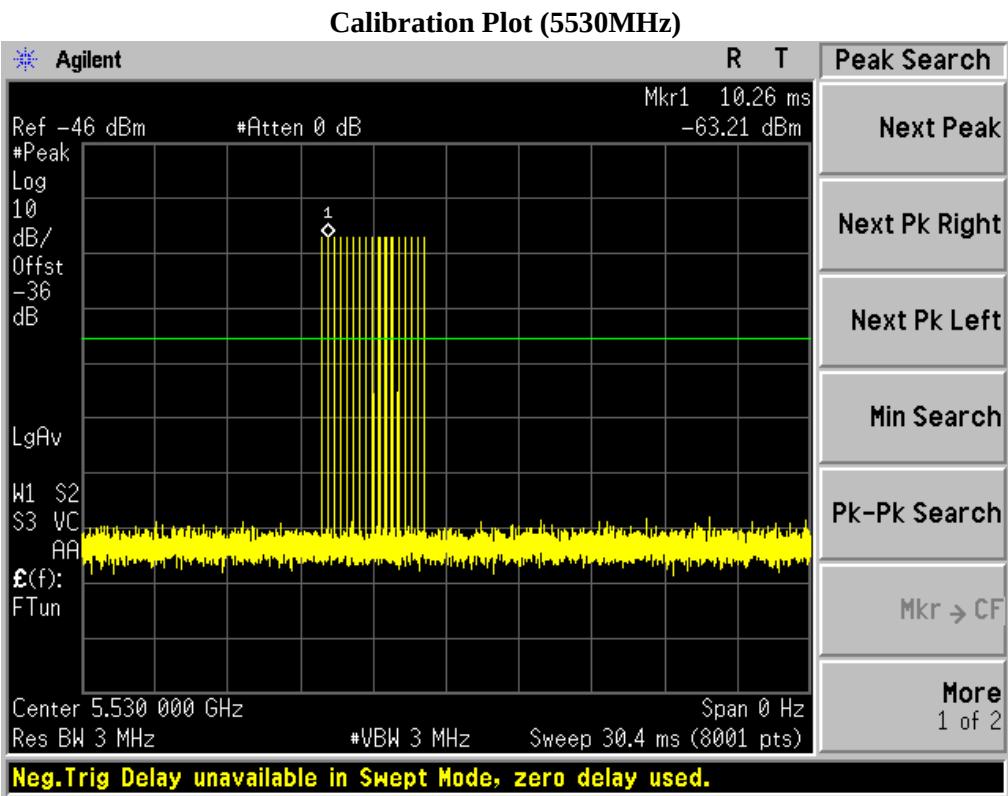
Radar Type 3

Calibration Plot (5300MHz)



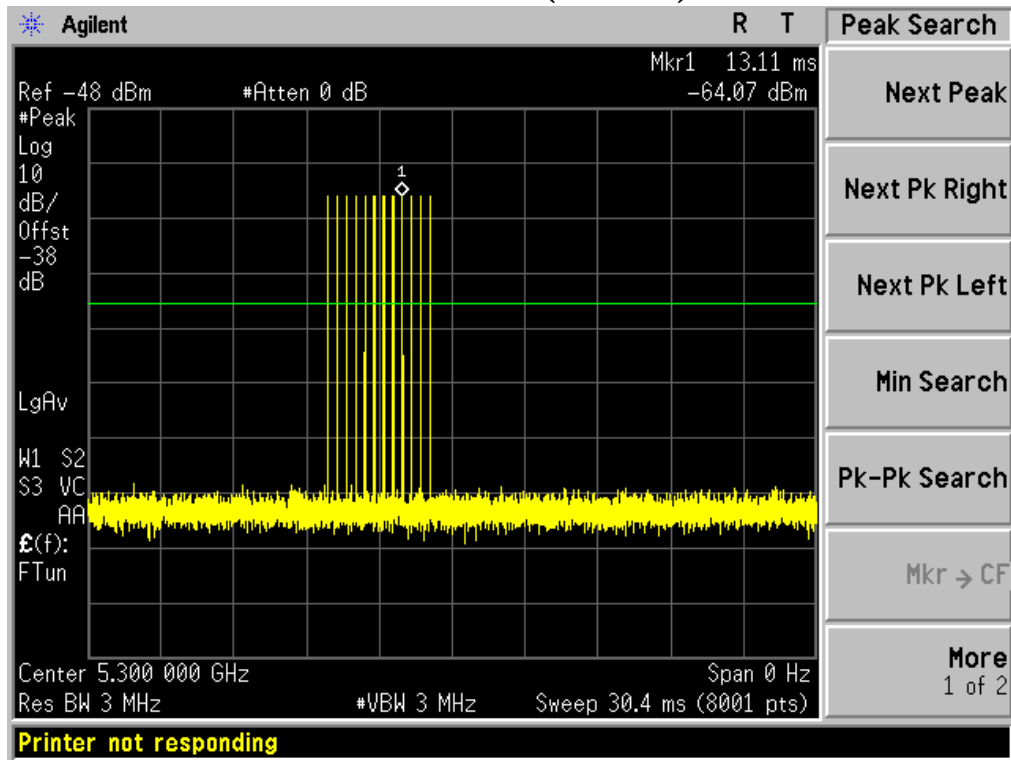
Calibration Plot (5510MHz)



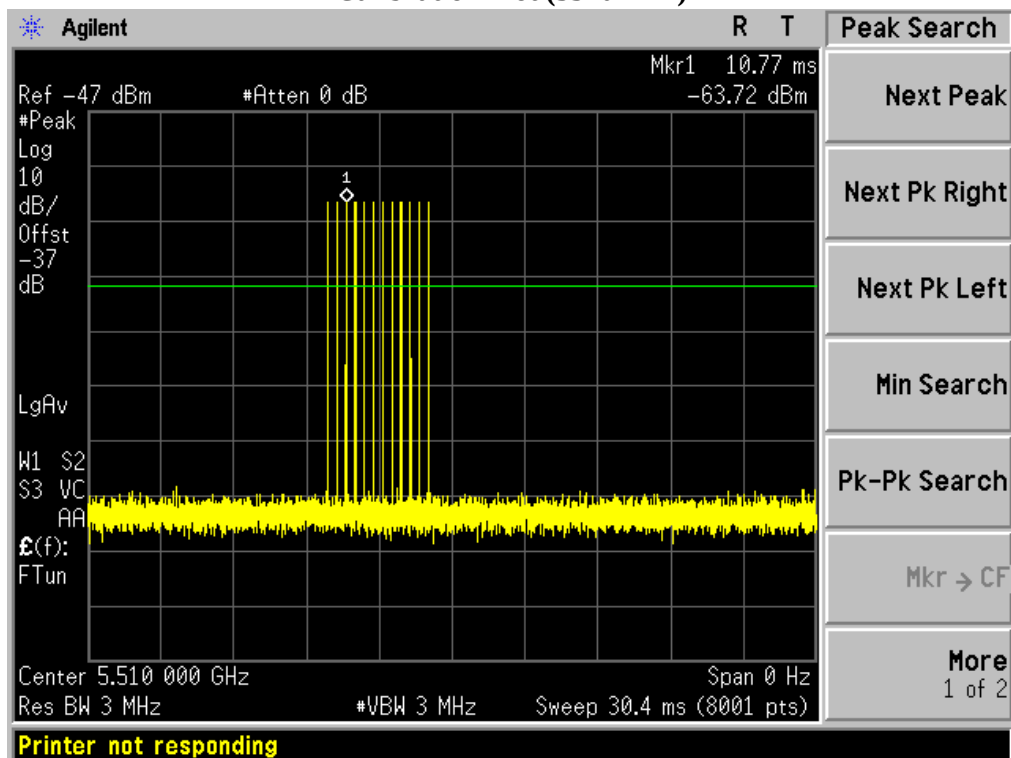


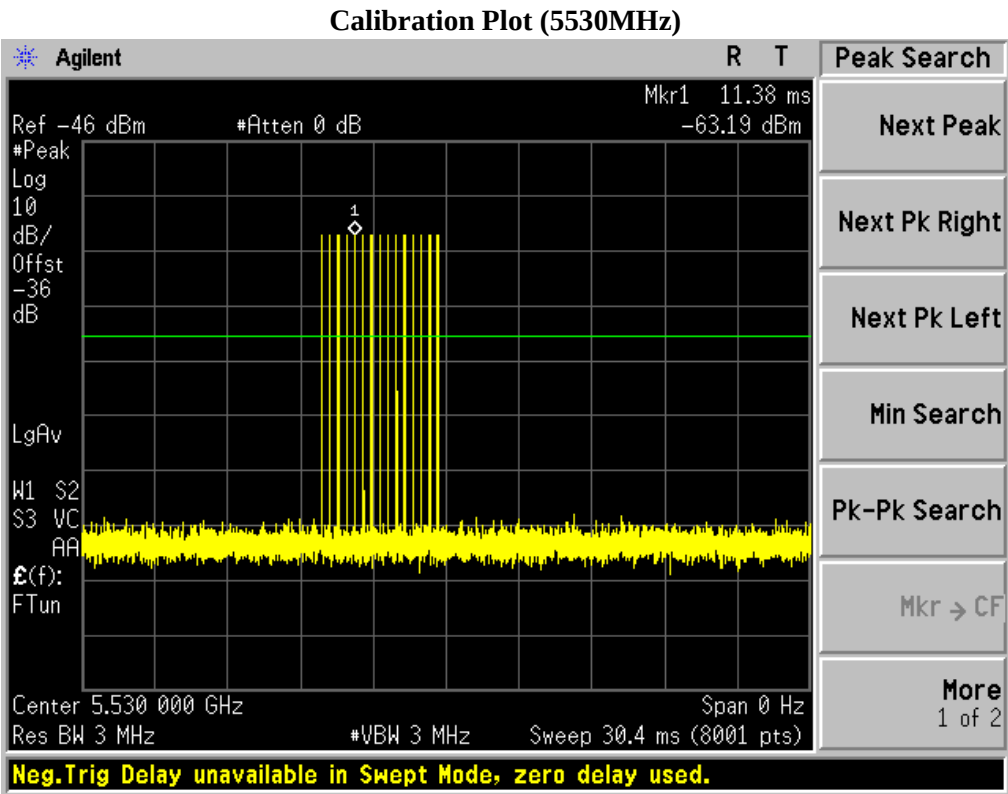
Radar Type 4

Calibration Plot (5300MHz)



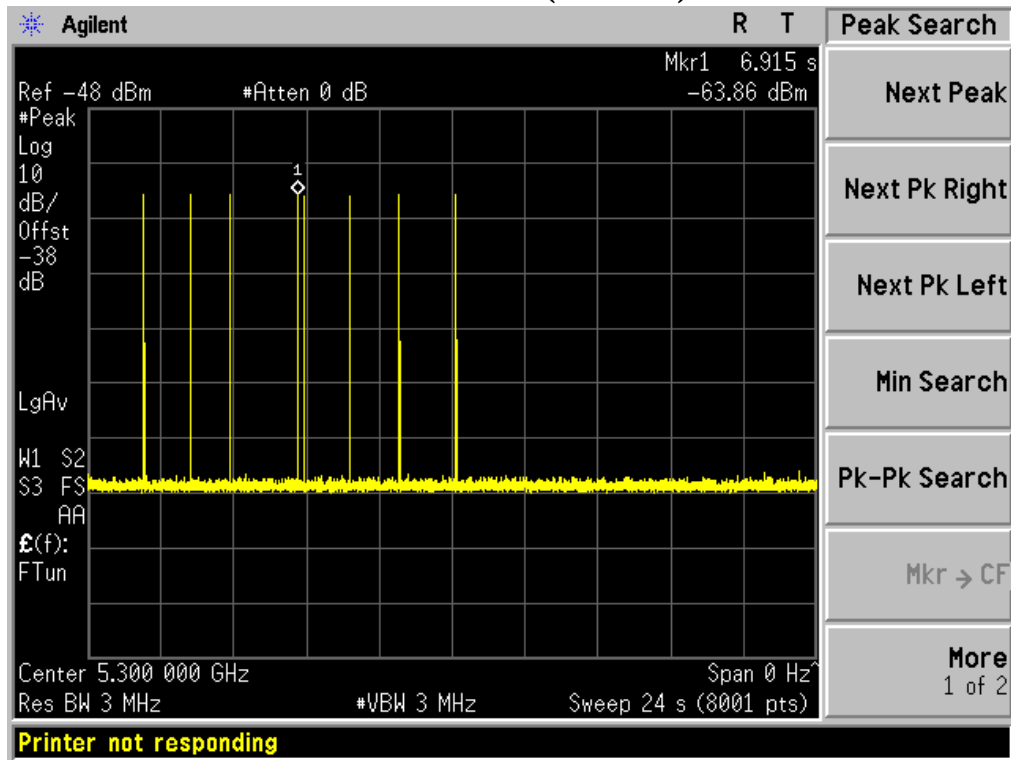
Calibration Plot (5510MHz)



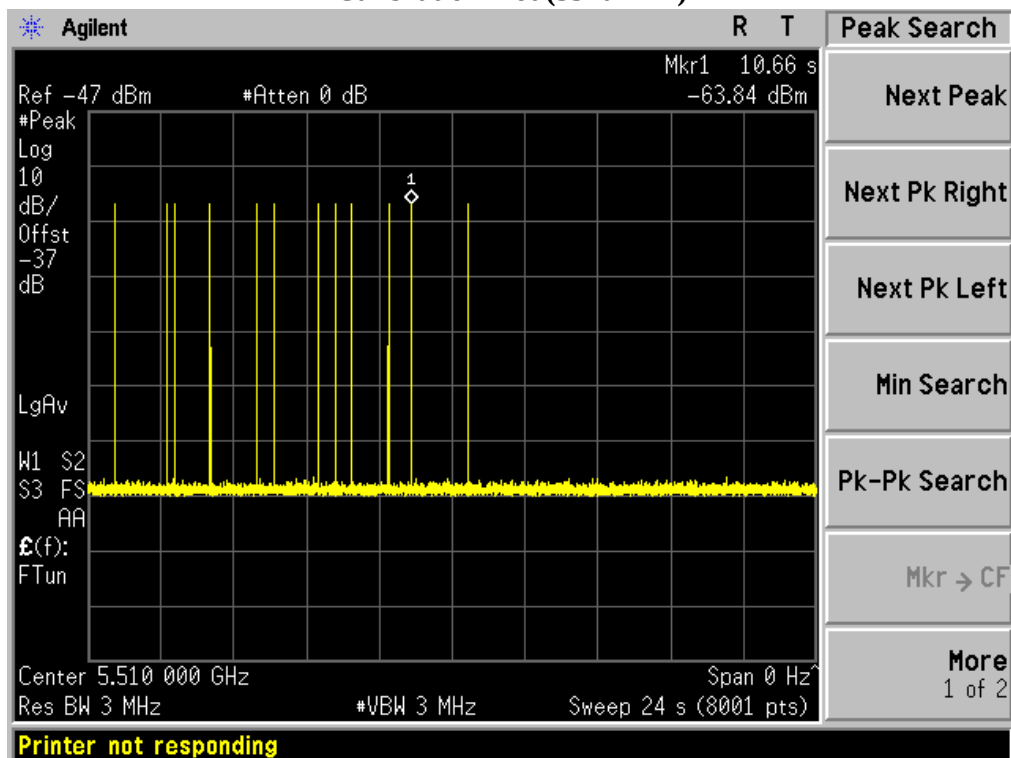


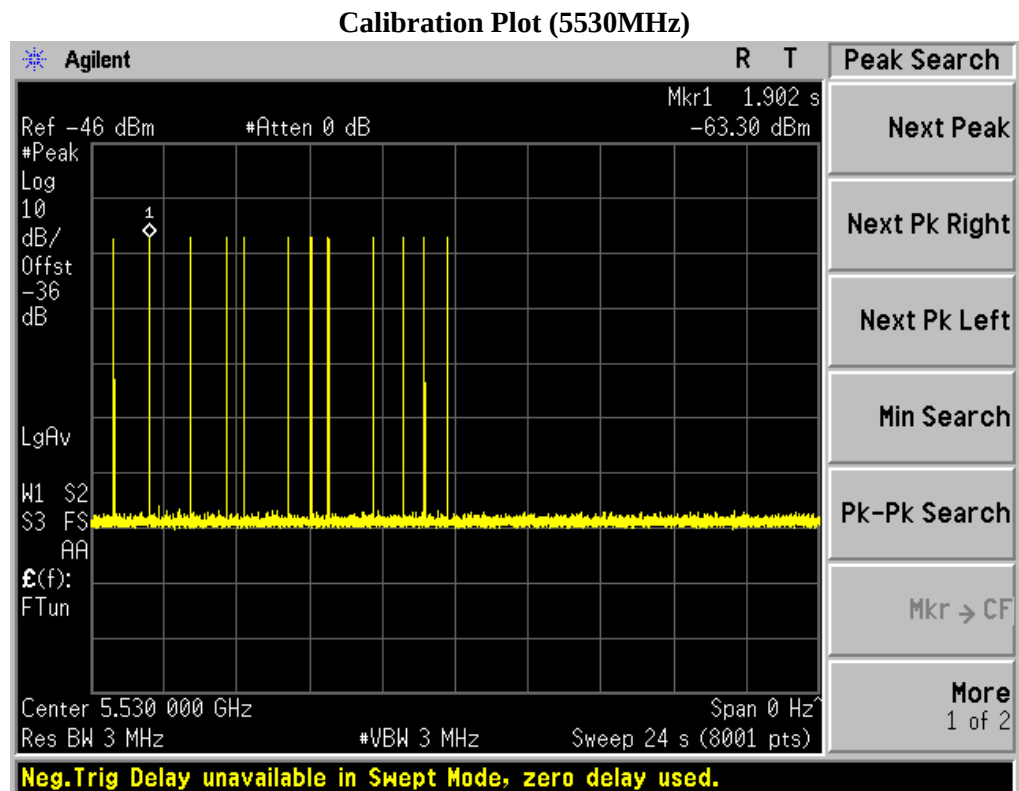
Radar Type 5

Calibration Plot (5300MHz)



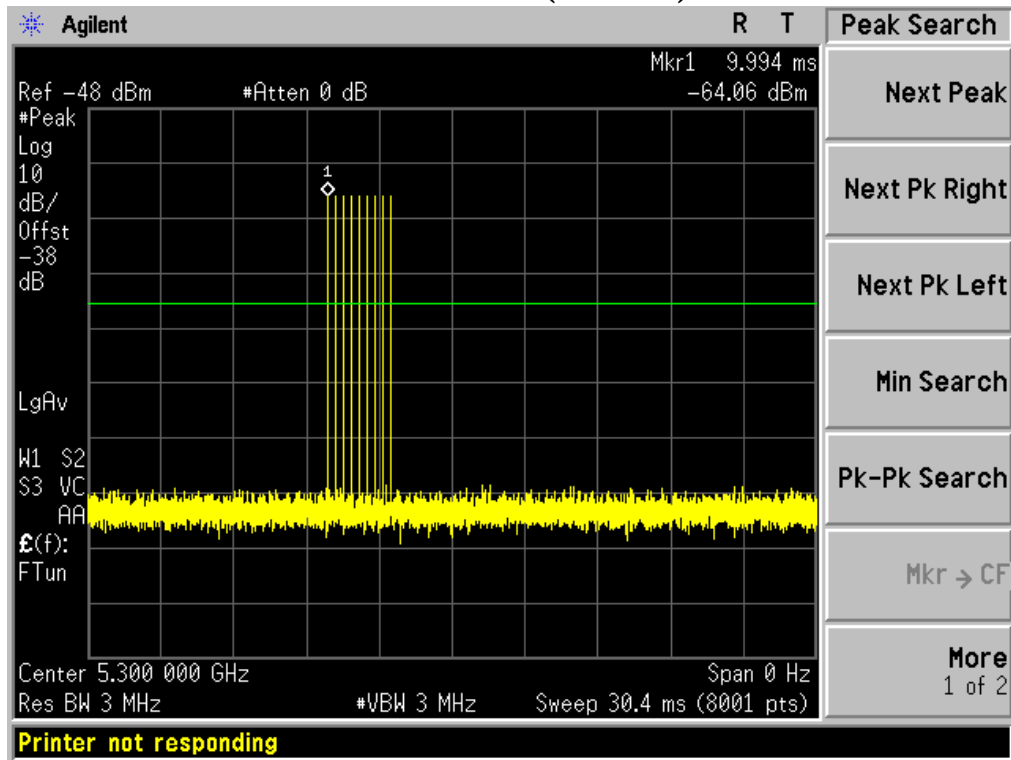
Calibration Plot (5510MHz)



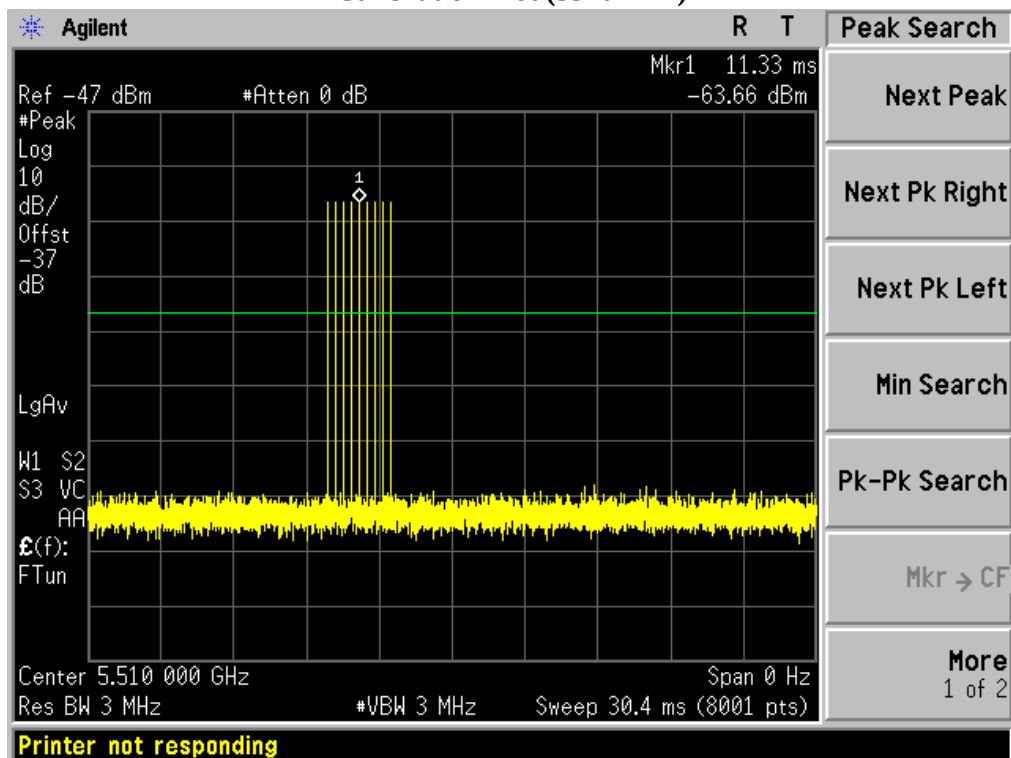


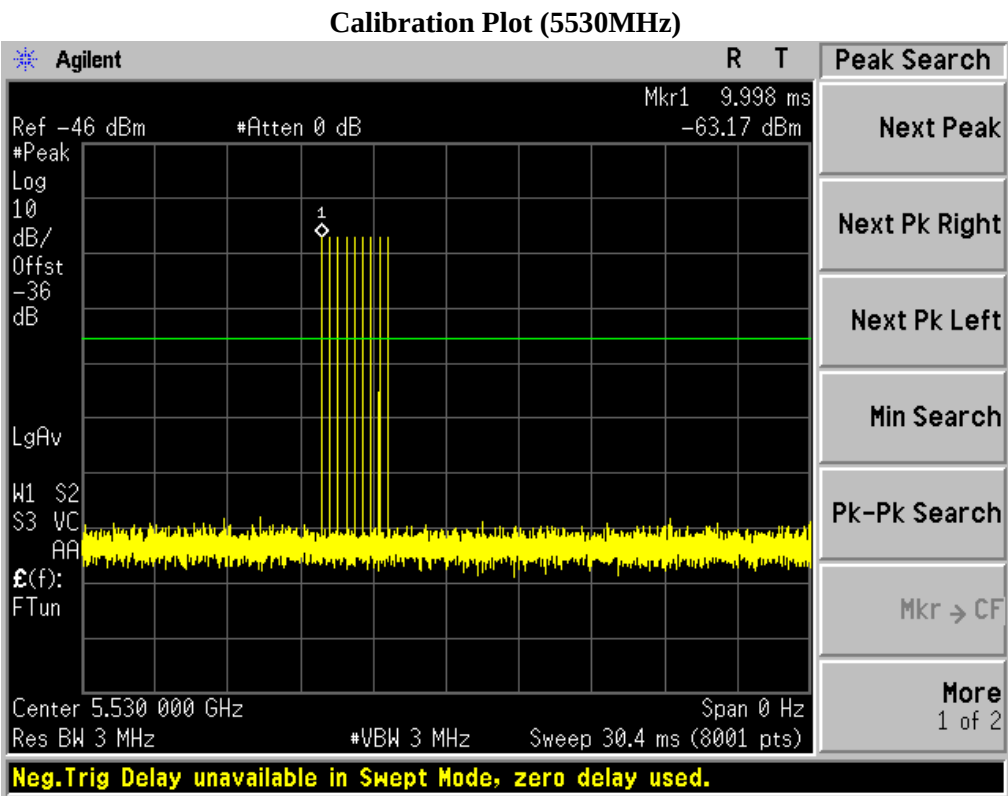
Radar Type 6

Calibration Plot (5300MHz)



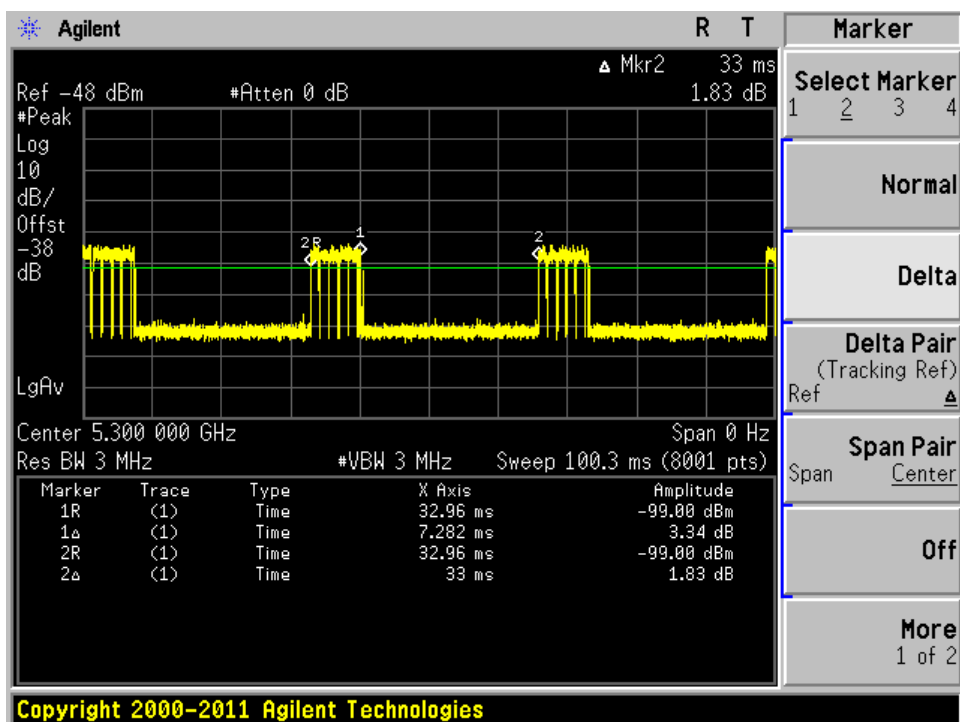
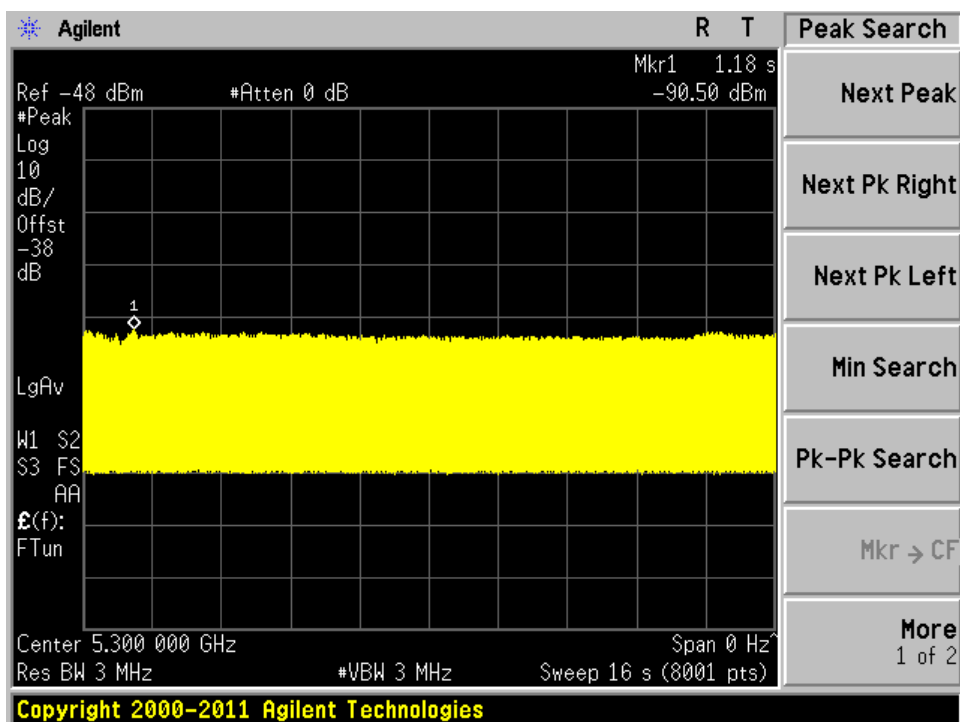
Calibration Plot (5510MHz)





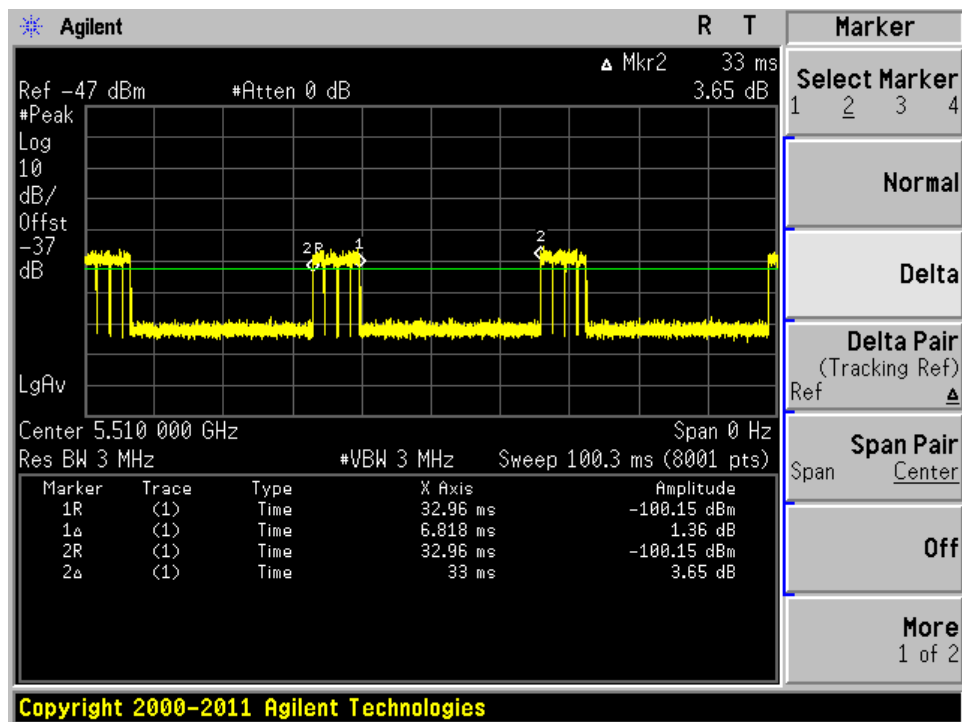
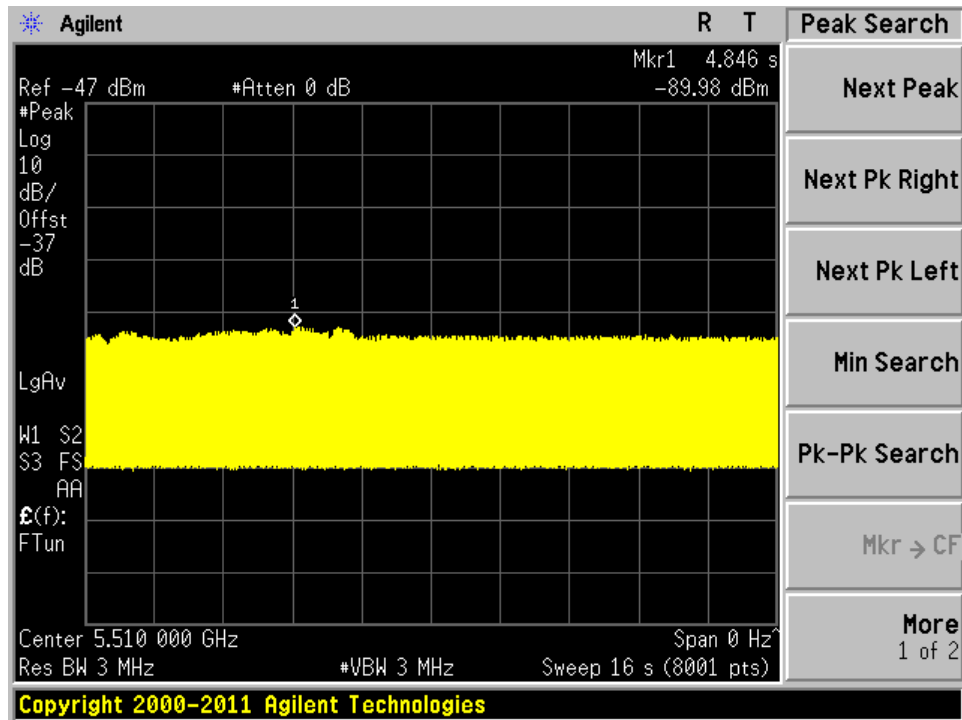
1.10. Master Data Traffic Plot Result

Plot of WLAN Traffic at 5300MHz-20BW



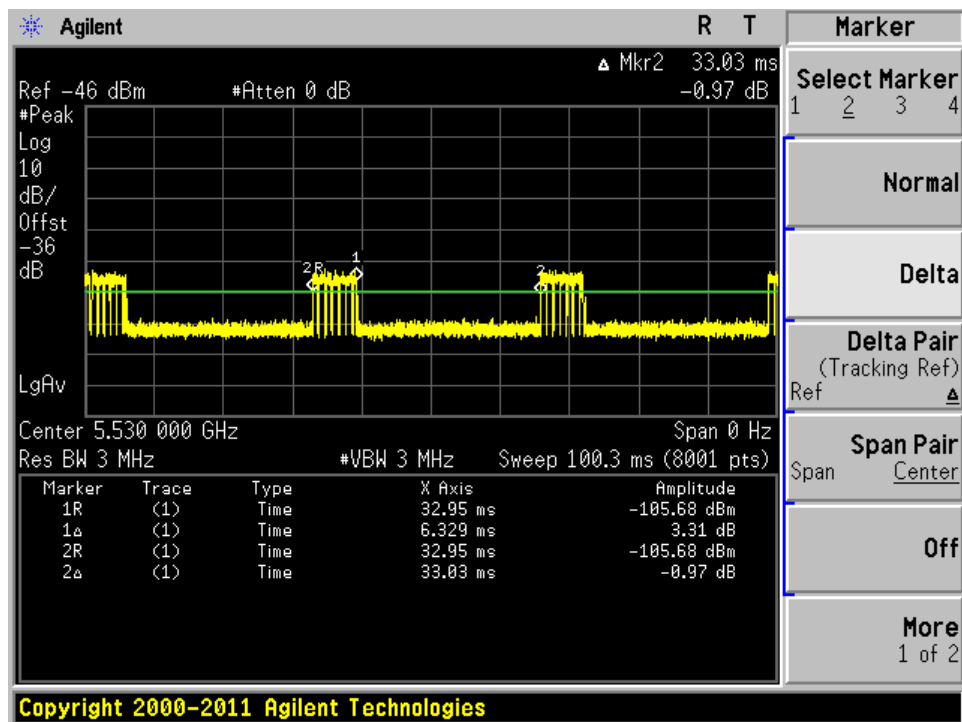
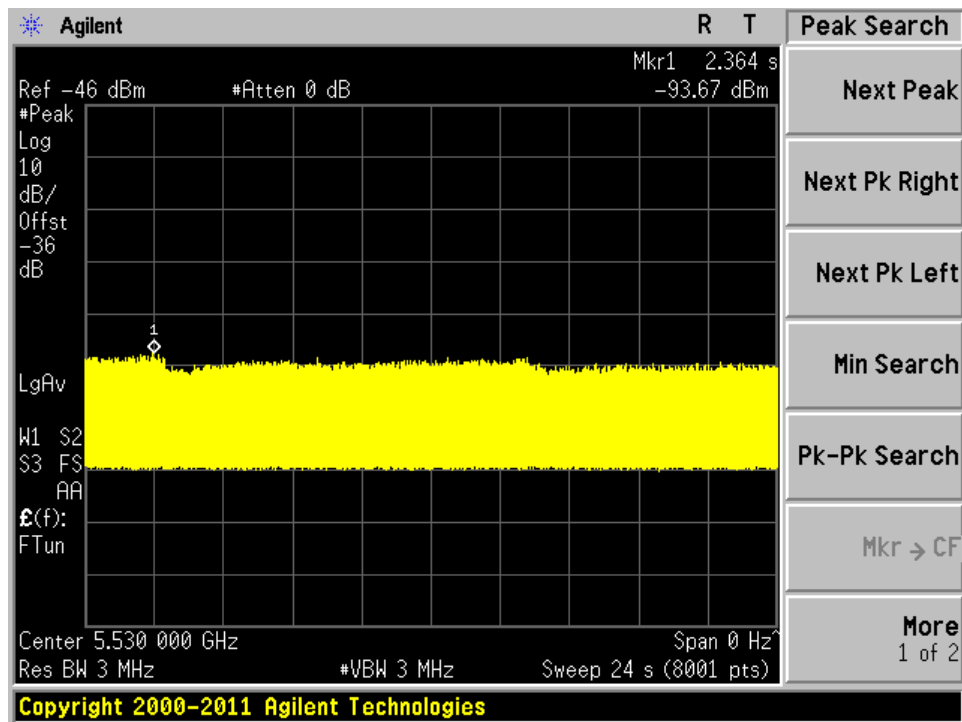
Channel loading	Requirement loading
22.06%	>17%

Plot of WLAN Traffic at 5510MHz-40BW



Channel loading	Requirement loading
20.66%	>17%

Plot of WLAN Traffic at 5530MHz-40BW



Channel loading	Requirement loading
19.16%	>17%

2. UNII Detection Bandwidth

2.1. Test Procedure

The EUT was tested according to U-NII test procedure of KDB905462 D02 for compliance to FCC 47CFR 15.407 requirements.

The generating equipment is configured as shown in the radiated Test Setup above. A single *Burst* of the short pulse radar type 0 is produced at 5300MHz and 5510 at a -63dBm level. The EUT 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 EUT is noted.

The EUT 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 F_H .

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 F_L .

The U-NII Detection Bandwidth is calculated as follows:

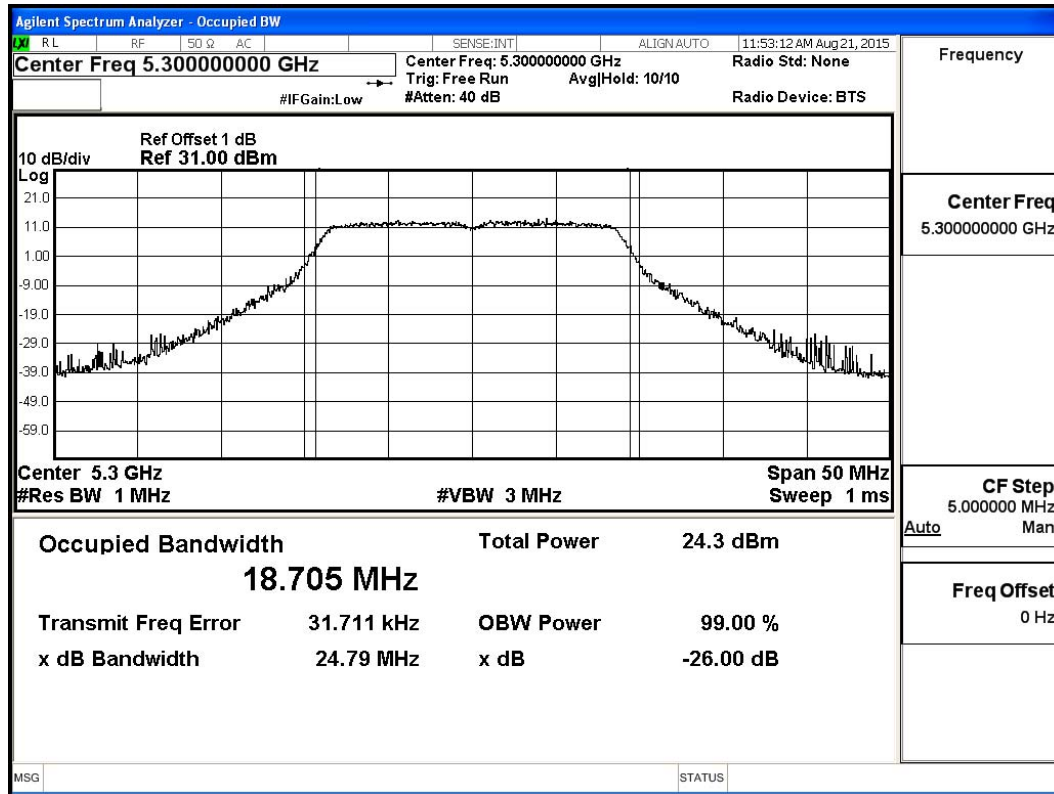
$$\text{U-NII Detection Bandwidth} = F_H - F_L$$

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

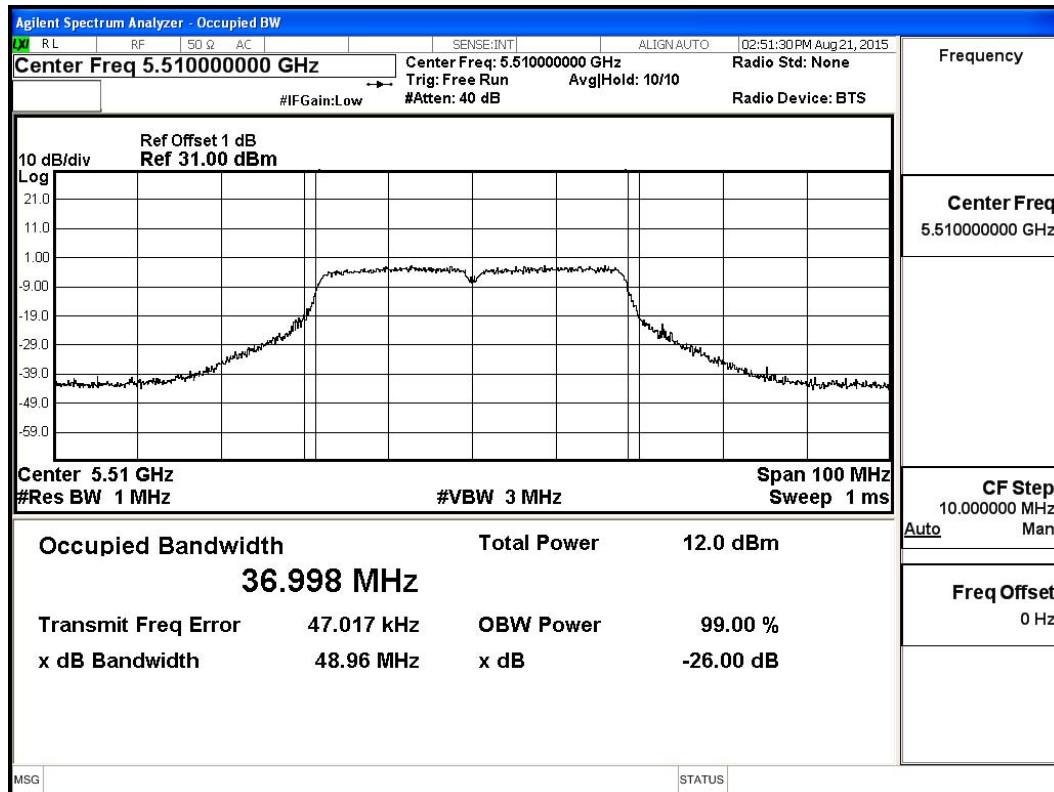
2.2. Test Requirement

All UNII 20/40MHz and 80MHz channels for this device have identical Channel bandwidths. All UNII 20/40/80MHz channels for this device also have identical Channel bandwidths. Therefore, all DFS testing was done at 5300MHz, 5510MHz and 5530MHz. The 99% channel bandwidth for 20MHz signals is 18.705 MHz, and the 99% channel bandwidth for 40MHz signals is 36.998 MHz and 80MHz signals is 75.945MHz.

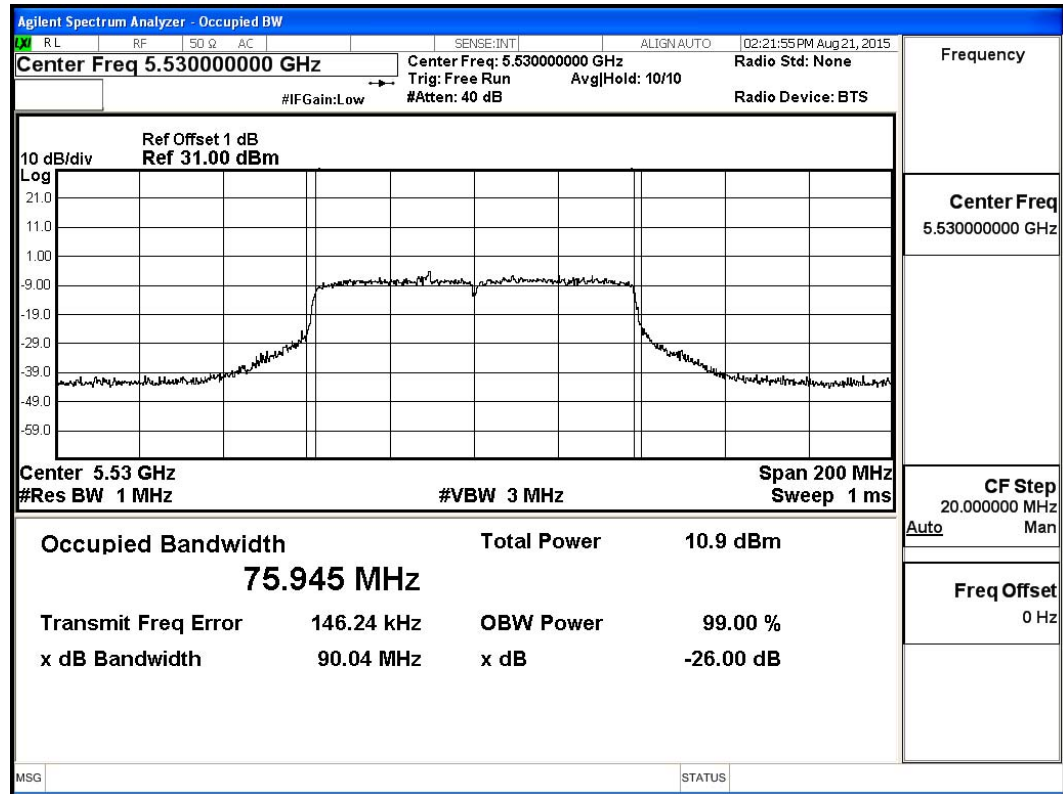
802.11n-20 BW



802.11n-40 BW



802.11ac80 BW



2.3. Uncertainty

 $\pm 1\text{ ms}.$

2.4. Test Result of UNII Detection Bandwidth

Product : 802.11 ac PCIe Module
 Test Item : UNII Detection Bandwidth
 Radar Type : Type 1
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Test Channel: 5300MHz (n-20BW)											
Radar Frequency (MHz)	DFS Detection Trials (1= Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5290 (FL)	1	1	1	1	1	1	1	1	1	1	100
5291	1	1	1	1	1	1	1	1	1	1	100
5292	1	1	1	1	1	1	1	1	1	1	100
5293	1	1	1	1	1	1	1	1	1	1	100
5294	1	1	1	1	1	1	1	1	1	1	100
5295	1	1	1	1	1	1	1	1	1	1	100
5296	1	1	1	1	1	1	1	1	1	1	100
5297	1	1	1	1	1	1	1	1	1	1	100
5298	1	1	1	1	1	1	1	1	1	1	100
5299	1	1	1	1	1	1	1	1	1	1	100
5300	1	1	1	1	1	1	1	1	1	1	100
5301	1	1	1	1	1	1	1	1	1	1	100
5302	1	1	1	1	1	1	1	1	1	1	100
5303	1	1	1	1	1	1	1	1	1	1	100
5304	1	1	1	1	1	1	1	1	1	1	100
5305	1	1	1	1	1	1	1	1	1	1	100
5306	1	1	1	1	1	1	1	1	1	1	100
5307	1	1	1	1	1	1	1	1	1	1	100
5308	1	1	1	1	1	1	1	1	1	1	100
5309	1	1	1	1	1	1	1	1	1	1	100
5310 (FH)	1	1	1	1	1	1	1	1	1	1	100
Detection Bandwidth = FH - FL = 5310MHz - 5290MHz = 20MHz											
EUT 99% Bandwidth = 18.705MHz											
UNII Detection Bandwidth Min. Limit = 18.705MHz * 100% = 18.7051MHz											

Product : 802.11 ac PCIe Module
Test Item : UNII Detection Bandwidth
Radar Type : Type 1
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Test Channel: 5510MHz (n-40BW)											
Radar Frequency (MHz)	DFS Detection Trials (1= Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
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 (FH)	1	1	1	1	1	1	1	1	1	1	100
5530	0	0	0	0	0	0	0	0	0	0	0
Detection Bandwidth = FH - FL = 5529MHz - 5491MHz = 38MHz											
EUT 99% Bandwidth = 36.998MHz											
UNII Detection Bandwidth Min. Limit = 36.998MHz * 100% = 36.998MHz											

Product : 802.11 ac PCIe Module
 Test Item : UNII Detection Bandwidth
 Radar Type : Type 1
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Test Channel: 5530MHz (n-80BW)											
Radar Frequency (MHz)	DFS Detection Trials (1= Detection, 0= No Detection)										Detection Rate (%)
	1	2	3	4	5	6	7	8	9	10	
5490	1	1	1	1	1	1	0	0	0	0	70
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	1	0	1	1	0	1	0	0	1	50
Detection Bandwidth = FH - FL = 5491MHz - 5569MHz = 78MHz											
EUT 99% Bandwidth = 75.945MHz											
UNII Detection Bandwidth Min. Limit = 75.945MHz X 100% =75.945MHz											

3. Initial Channel Availability Check Time

3.1. Test Procedure

The EUT was tested according to U-NII test procedure of KDB905462 D02 for compliance to FCC 47CFR 15.407 requirements.

The U-NII device is powered on and instructed to operate at 5300/5510 MHz and 5530MHz. 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 5300/5510 MHz and 5530MHz with a 2.5minute sweep time. The analyzer's sweep will be started the same time power is applied to the U-NII device.

The EUT 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 EUT is indicated by marker1 in the plot, Initial beacons/data transmissions are indicated by marker 1R.

3.2. Test Requirement

The EUT shall perform a channel availability check to ensure that there is no radar operation on the channel, after power-up sequence, receiver at least 1 minute on the intended operation frequency.

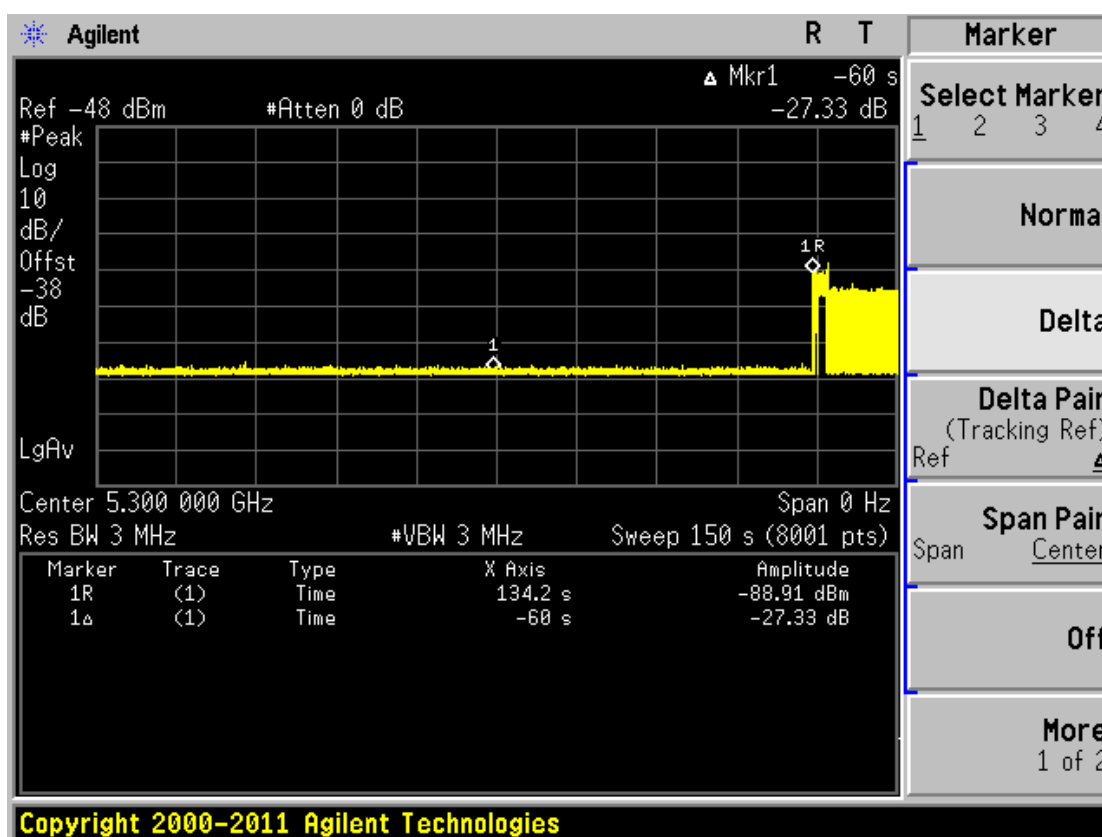
3.3. Uncertainty

$\pm 1\text{ms}$.

3.4. Test Result of Initial Channel Availability Check Time

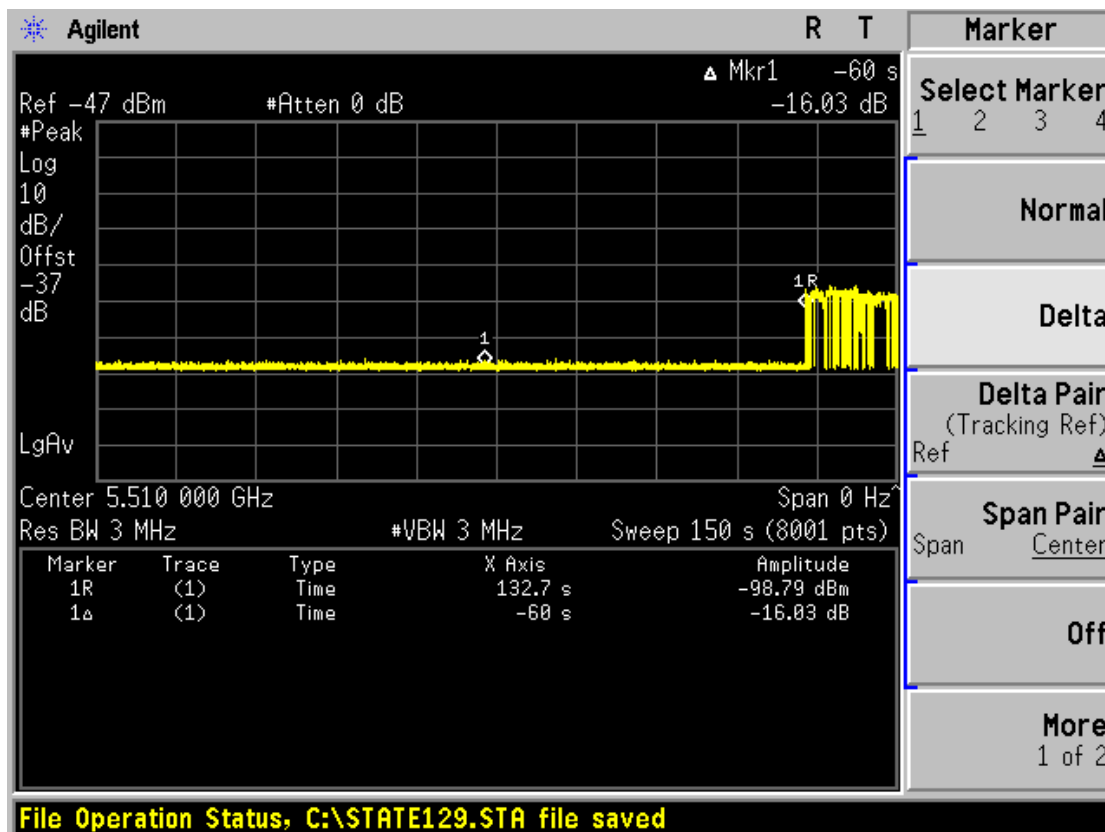
Product : 802.11 ac PCIe Module
 Test Item : Initial Channel Availability Check Time
 Radar Type : Type 1
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

The EUT does not transmit any beacon or data transmission until at least 1 minute after the completion of the power-on cycle (74.2.sec). The initial power up time of the EUT is indicated by Marker 1R (134.2 sec) – CAC (60 sec). Initial beacons/data transmission is indicated by Marker 1R (134.2 sec)



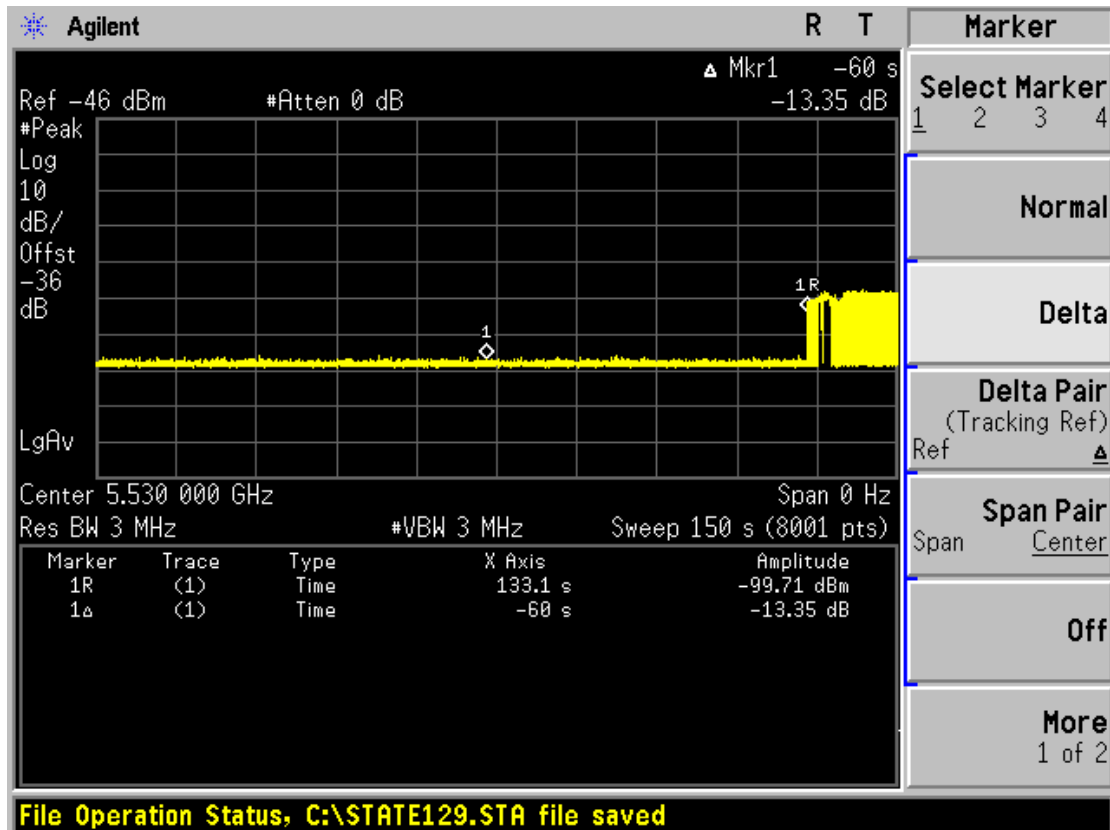
Product : 802.11 ac PCIe Module
 Test Item : Initial Channel Availability Check Time
 Radar Type : Type 1
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

The EUT does not transmit any beacon or data transmission until at least 1 minute after the completion of the power-on cycle (72.7sec). The initial power up time of the EUT is indicated by Marker 1R (132.7sec) – CAC (60 sec). Initial beacons/data transmission is indicated by Marker 1R (132.7sec)



Product : 802.11 ac PCIe Module
Test Item : Initial Channel Availability Check Time
Radar Type : Type 1
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

The EUT does not transmit any beacon or data transmission until at least 1 minute after the completion of the power-on cycle (73.1sec). The initial power up time of the EUT is indicated by Marker 1R (133.1 sec) – CAC (60 sec). Initial beacons/data transmission is indicated by Marker 1R (133.1 sec)



4. Radar Burst at the Beginning of the Channel Availability Check Time

4.1. Test Procedure

The EUT was tested according to U-NII test procedure of KDB905462 D02 for compliance to FCC 47CFR 15.407 requirements.

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

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

Visual indication on the EUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5300MHz and 5510MHz will continue for 2.5 minutes after the radar Burst, Verify that during the 2.5 minute measurement window no EUT transmissions occurred at 5300MHz and 5510MHz.

4.2. Test Requirement

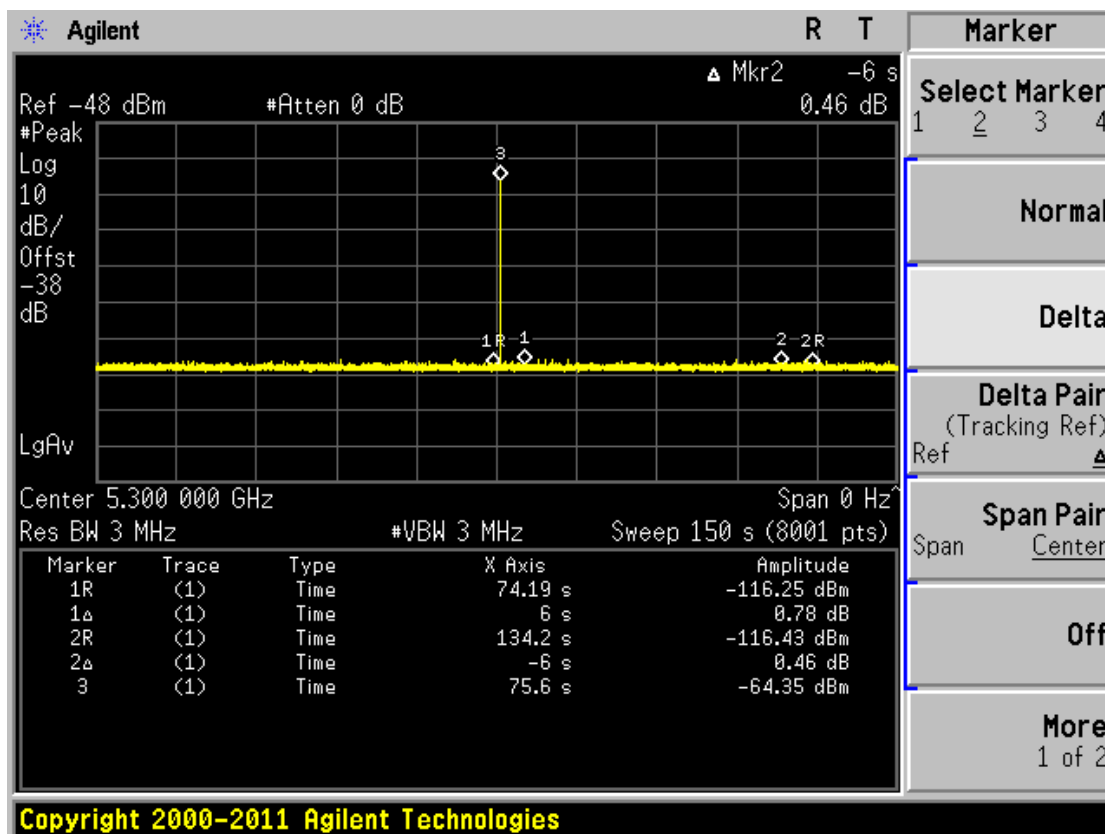
In beginning of the Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC that channel.

4.3. Uncertainty

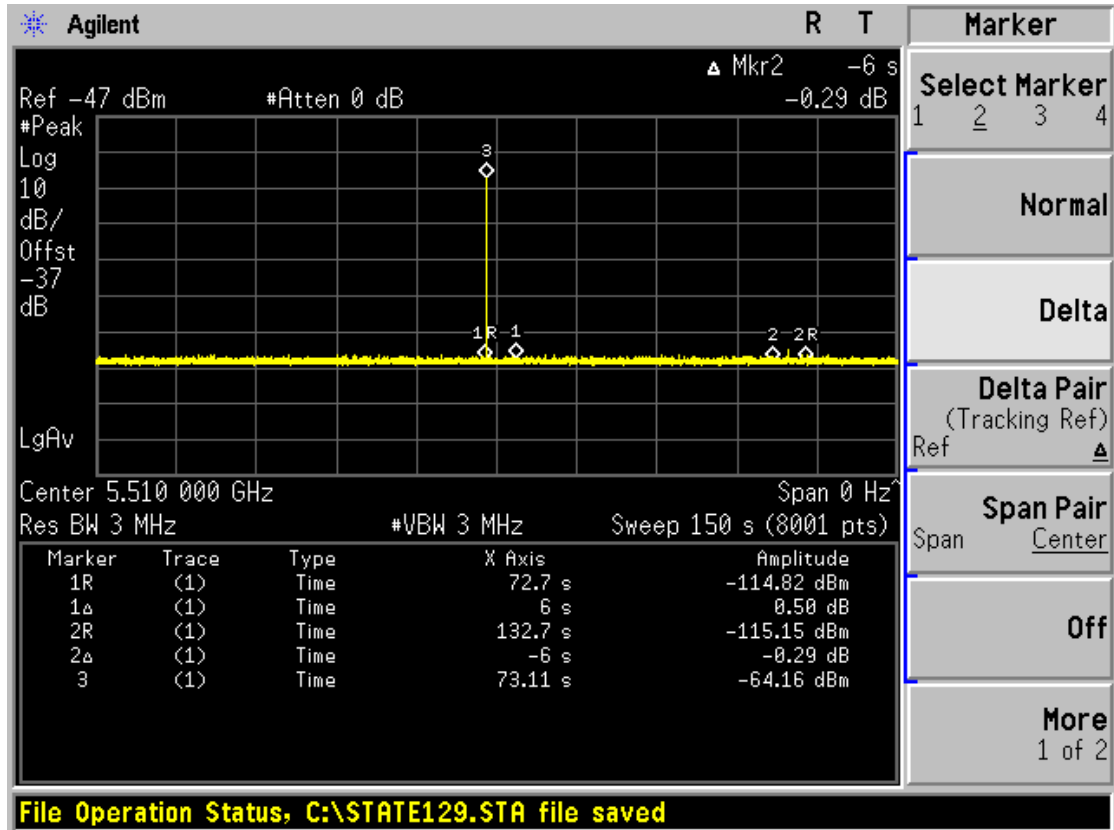
$\pm 1\text{ms}$.

4.4. Test Result of Radar Burst at the Beginning of the Channel Availability Check Time

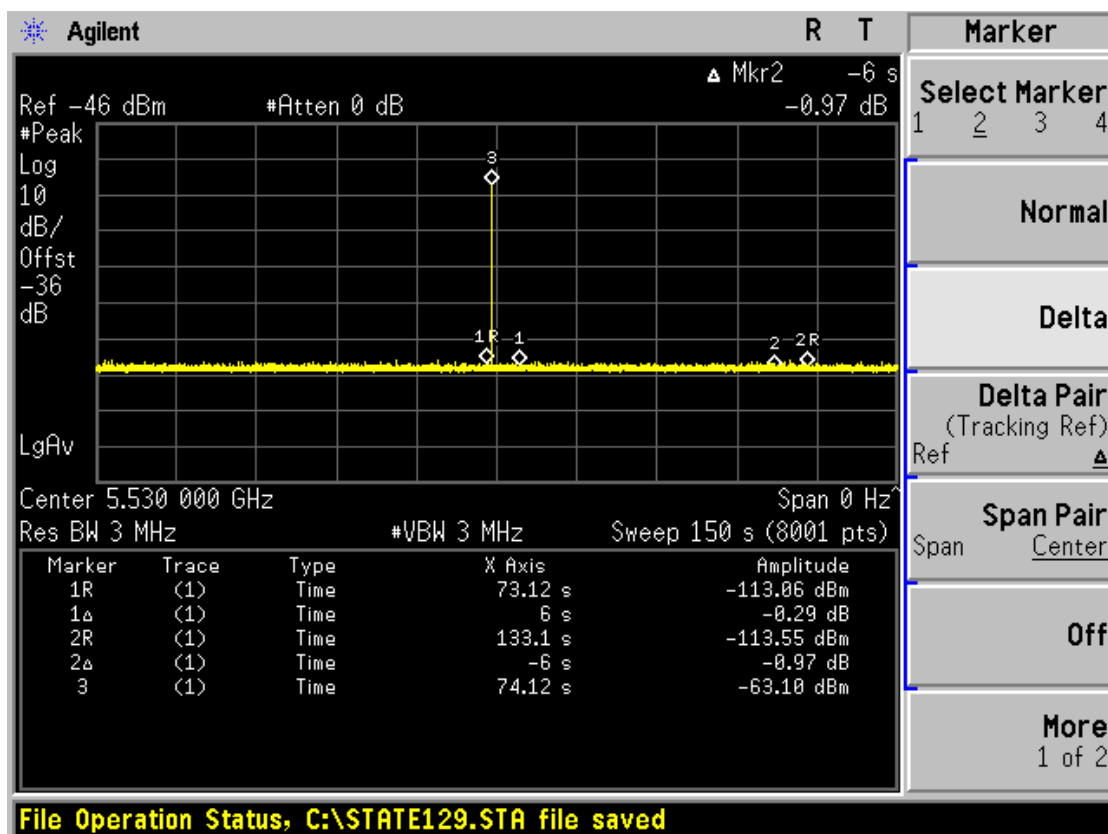
Product : 802.11 ac PCIe Module
 Test Item : Radar Burst at the Beginning of the Channel Availability Check Time
 Radar Type : Type 0
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)



Product : 802.11 ac PCIe Module
 Test Item : Radar Burst at the Beginning of the Channel Availability Check Time
 Radar Type : Type 0
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)



Product : 802.11 ac PCIe Module
 Test Item : Radar Burst at the Beginning of the Channel Availability Check Time
 Radar Type : Type 0
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)



5. Radar Burst at the End of the Channel Availability Check Time

5.1. Test Procedure

The EUT was tested according to U-NII test procedure of KDB905462 D02 for compliance to FCC 47CFR 15.407 requirements.

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 T_0 . T_1 denotes the instant when the UUT has completed its power-up sequence. The Channel Availability Check Time commences at instant T_1 and will end no sooner than $T_1 + 60$ seconds. A single Burst of short pulse of radar type 1 at -63 dBm will commence within a 6 second window starting at $T_1 + 54$ seconds.

Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported. Observation of emissions at 5300MHz and 5510MHz 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 5300MHz and 5510MHz.

5.2. Test Requirement

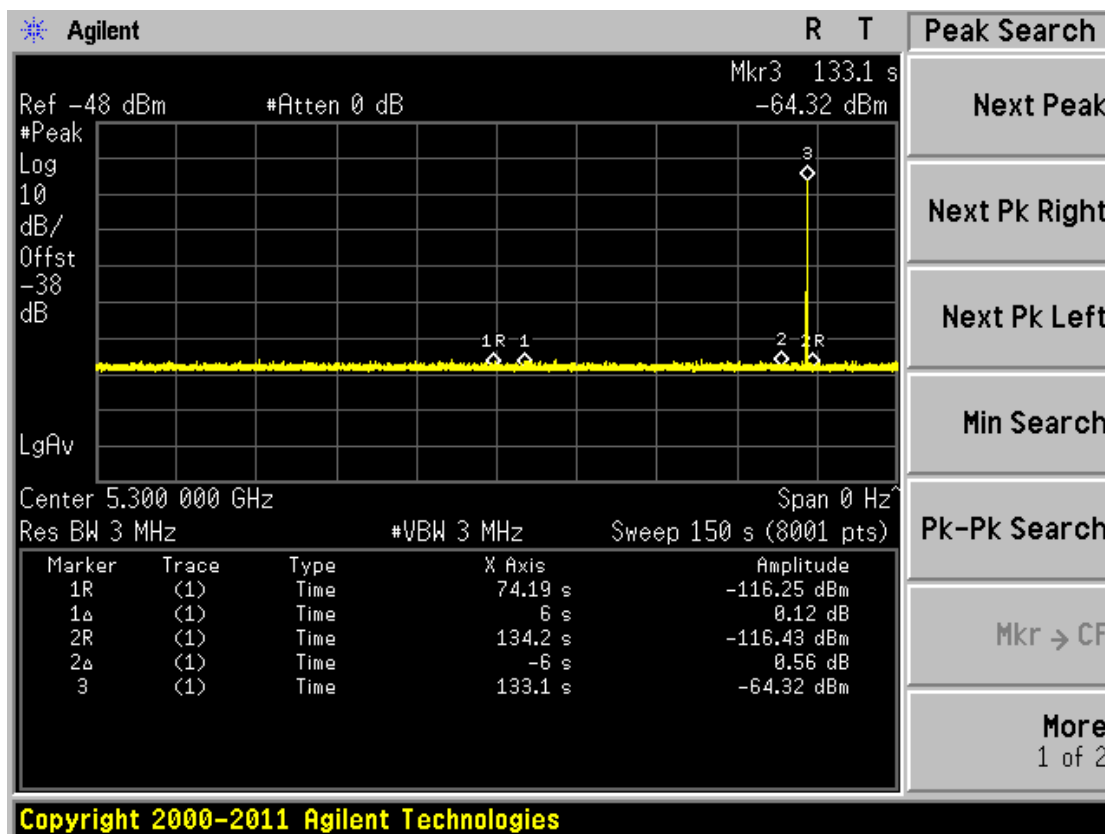
In the end of Channel Availability Check (CAC) Time, radar is detected on this channel, select another intended channel and perform a CAC that channel.

5.3. Uncertainty

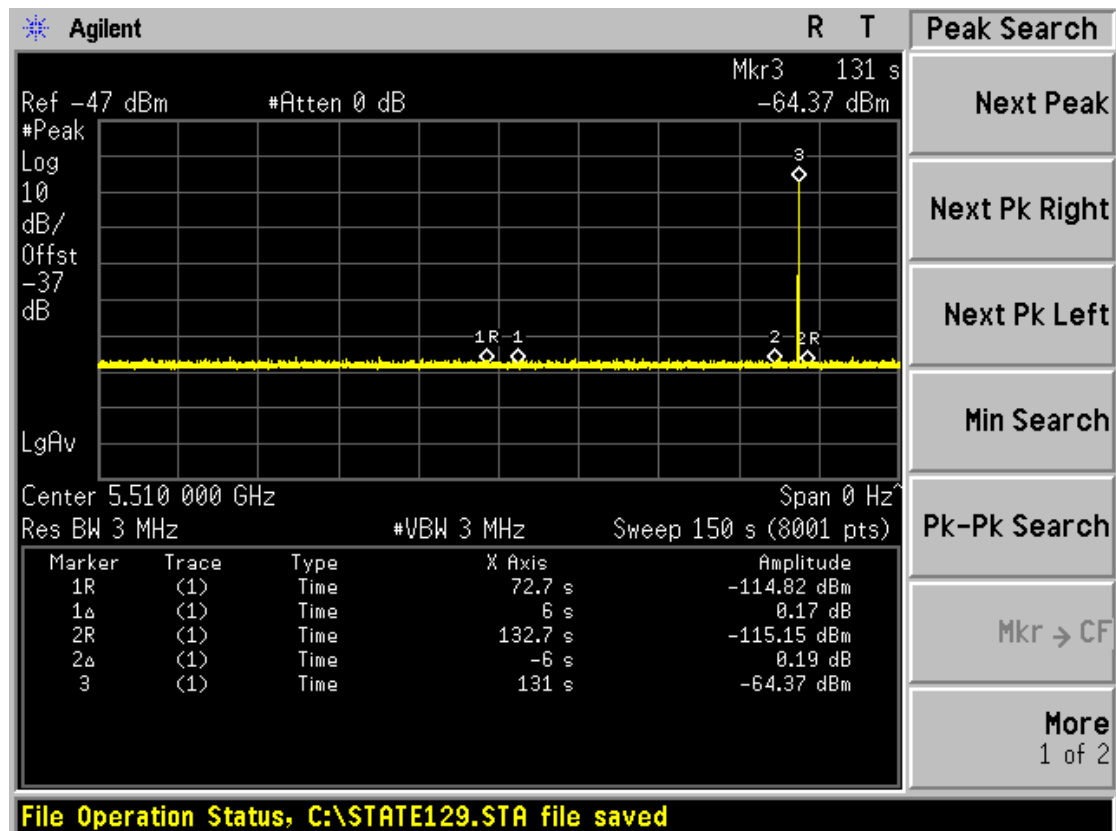
± 1 ms.

5.4. Test Result of Radar Burst at the End of the Channel Availability Check Time

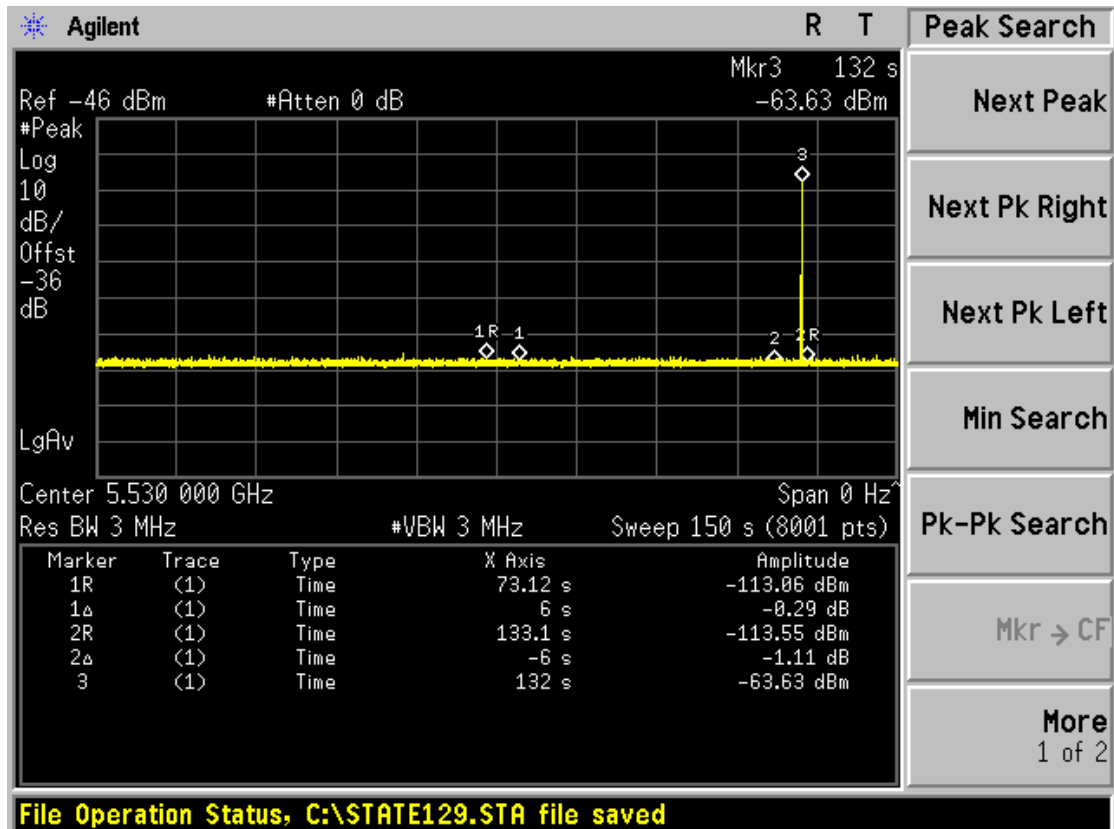
Product : 802.11 ac PCIe Module
 Test Item : Radar Burst at the End of the Channel Availability Check Time
 Radar Type : Type 0
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)



Product : 802.11 ac PCIe Module
 Test Item : Radar Burst at the End of the Channel Availability Check Time
 Radar Type : Type 0
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)



Product : 802.11 ac PCIe Module
 Test Item : Radar Burst at the End of the Channel Availability Check Time
 Radar Type : Type 0
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)



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

6.1. Test Procedure

The EUT was tested according to U-NII test procedure of KDB905462 D02 for compliance to FCC 47CFR 15.407 requirements.

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 5300 MHz and 5510MHz.

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.

Measure the UUT for more than 30 minutes following the channel close/move time to verify that the UUT does not resume any transmissions on this Channel.

6.2. Test Requirement

Parameter	Value
Channel Move Time	10 Seconds
Channel Closing Transmission Time	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period
Non-Occupancy Period	Minimum 30 minutes

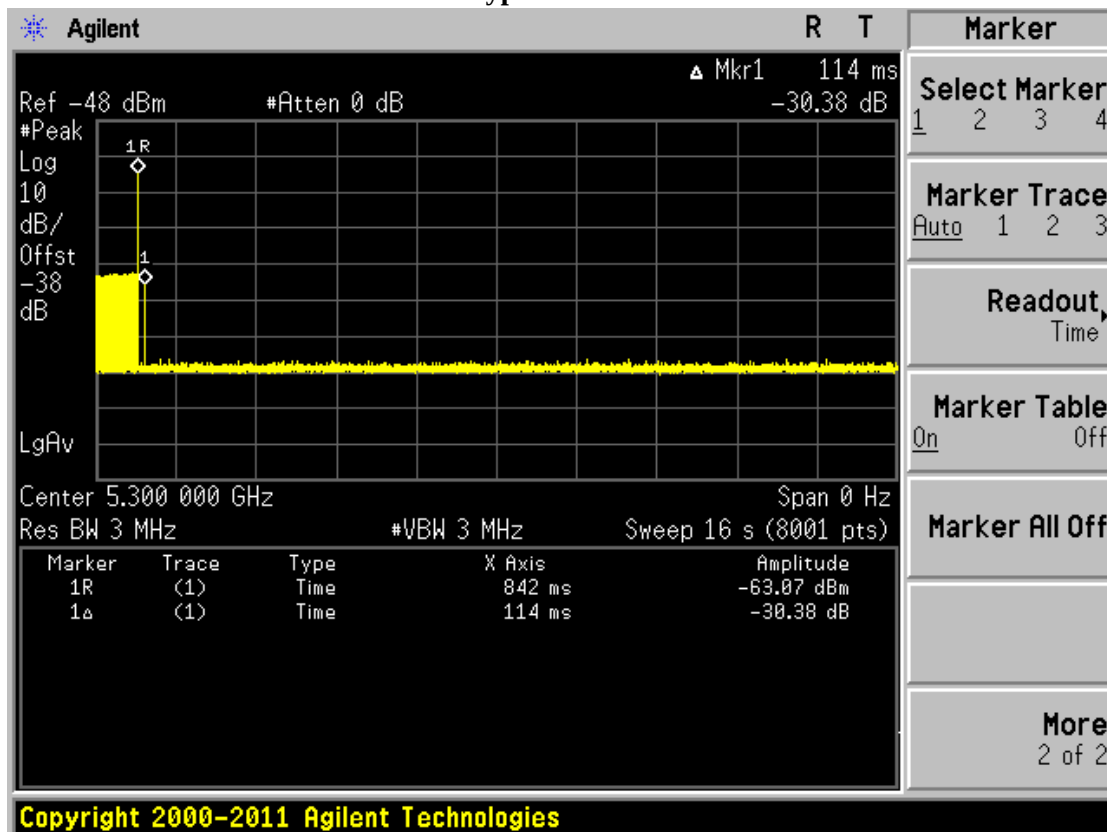
6.3. Uncertainty

$\pm 1\text{ms.}$

6.4. Test Result of Channel Move Time and Channel Closing Transmission Time and Non-Occupancy Period

Product : 802.11 ac PCIe Module
Test Item : Channel Move Time Test
Radar Type : Type 0
Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Channel Move Time for Radar Test Type 0 at 5300MHz

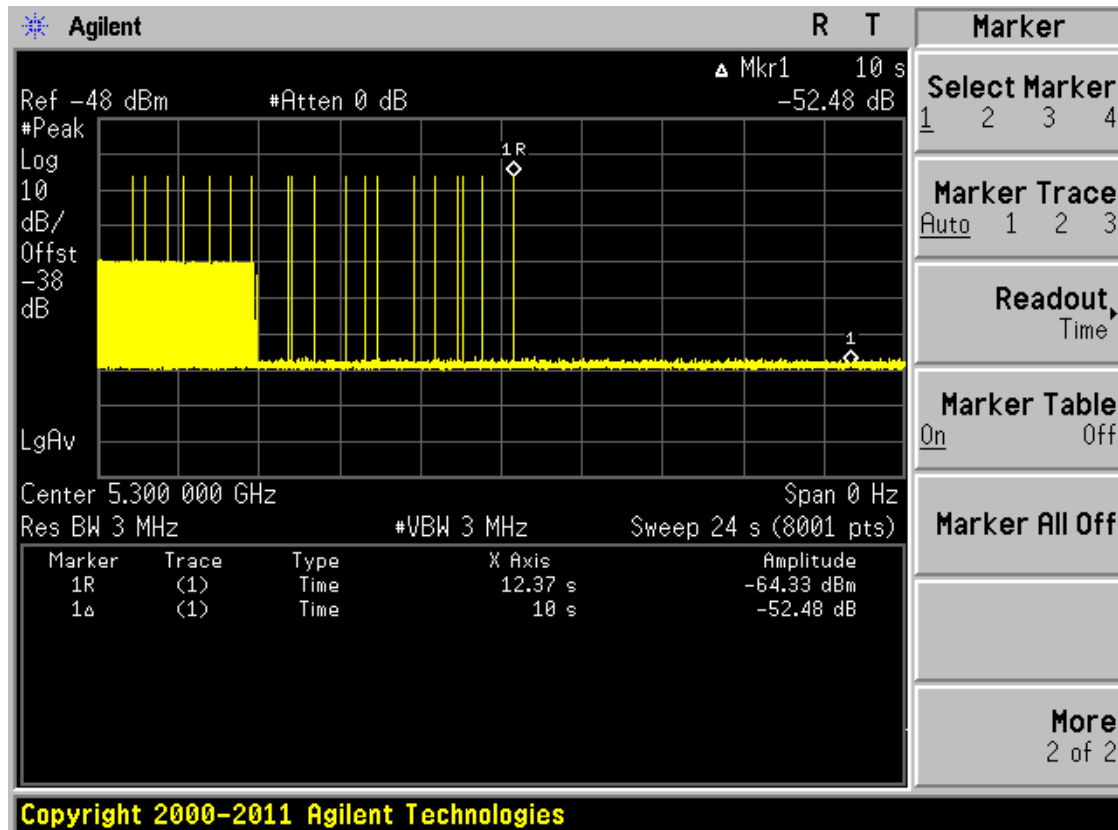


Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.114	10

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Product : 802.11 ac PCIe Module
 Test Item : Channel Move Time Test
 Radar Type : Type 5
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Channel Move Time for Radar Test Type 5 at 5300MHz

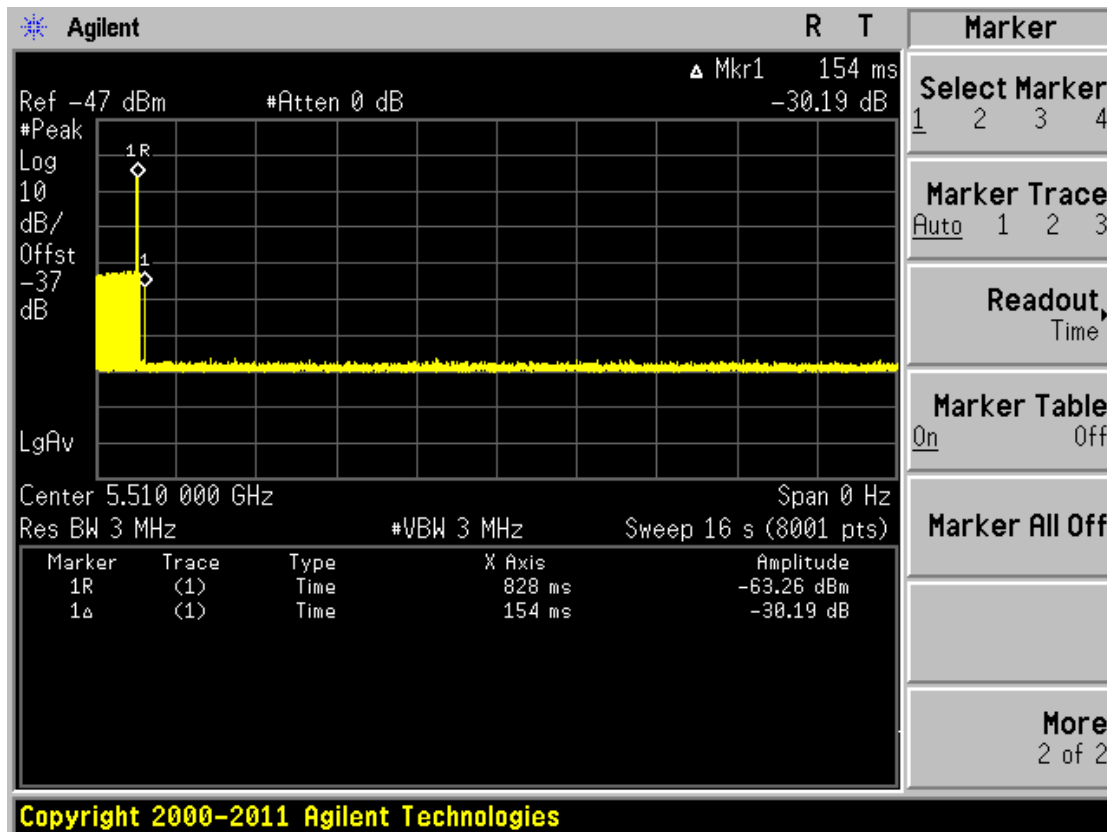


Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0	10

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Move Time
Radar Type : Type 0
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Channel Move Time for Radar Test Type 0 at 5510MHz

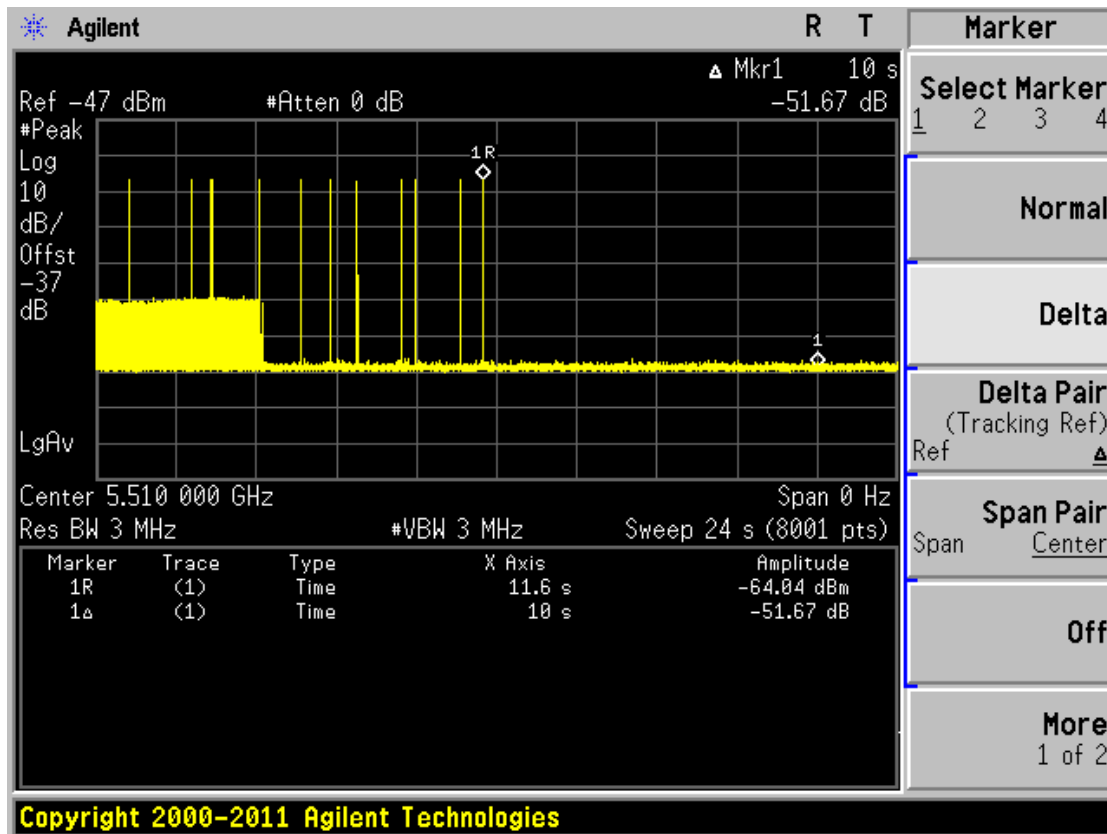


Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.154	10

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Move Time
Radar Type : Type 5
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Channel Move Time for Radar Test Type 5 at 5510MHz

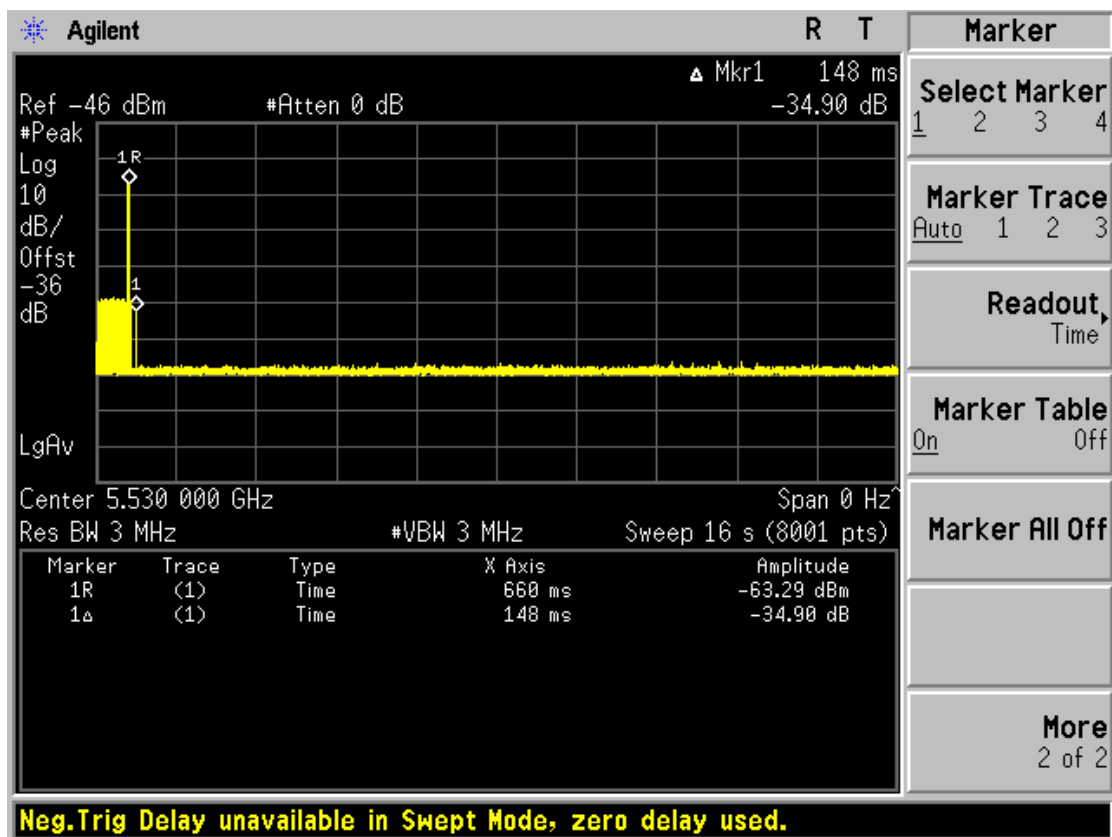


Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0	10

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Move Time
Radar Type : Type 0
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Channel Move Time for Radar Test Type 0 at 5530MHz

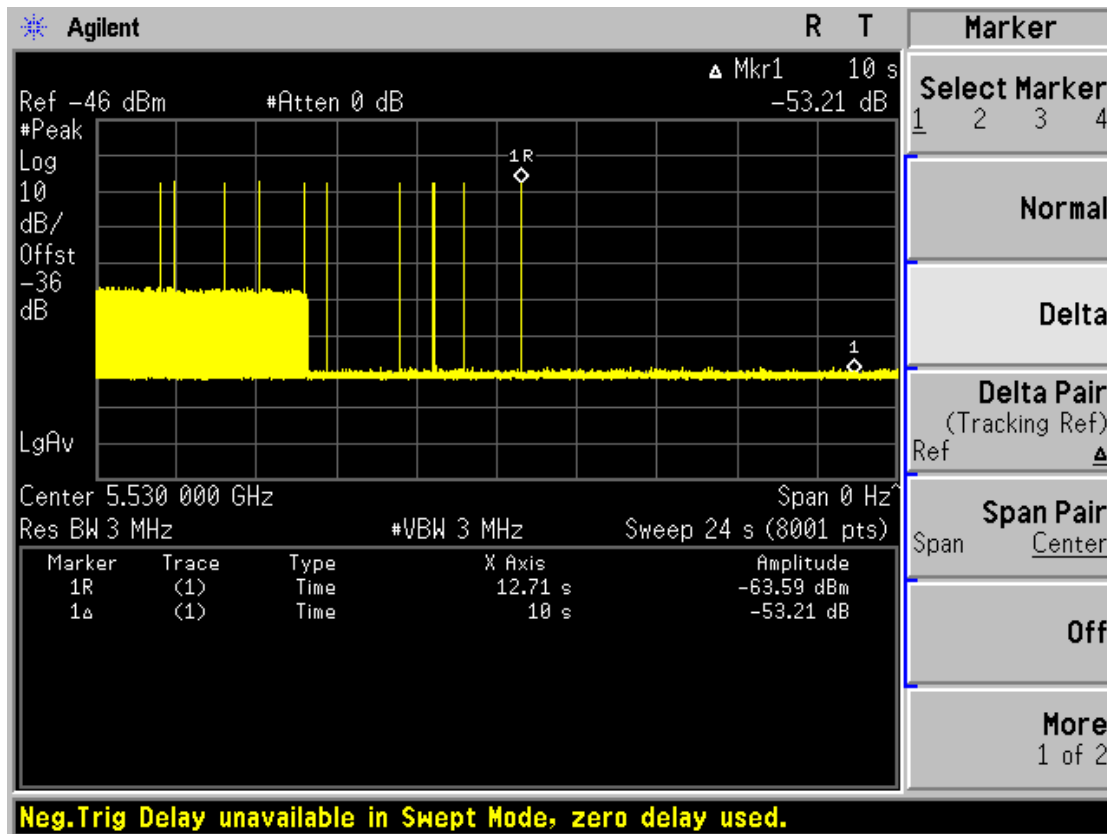


Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0.148	10

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Product : 802.11 ac PCIe Module
 Test Item : Channel Move Time
 Radar Type : Type 5
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Channel Move Time for Radar Test Type 5 at 5530MHz

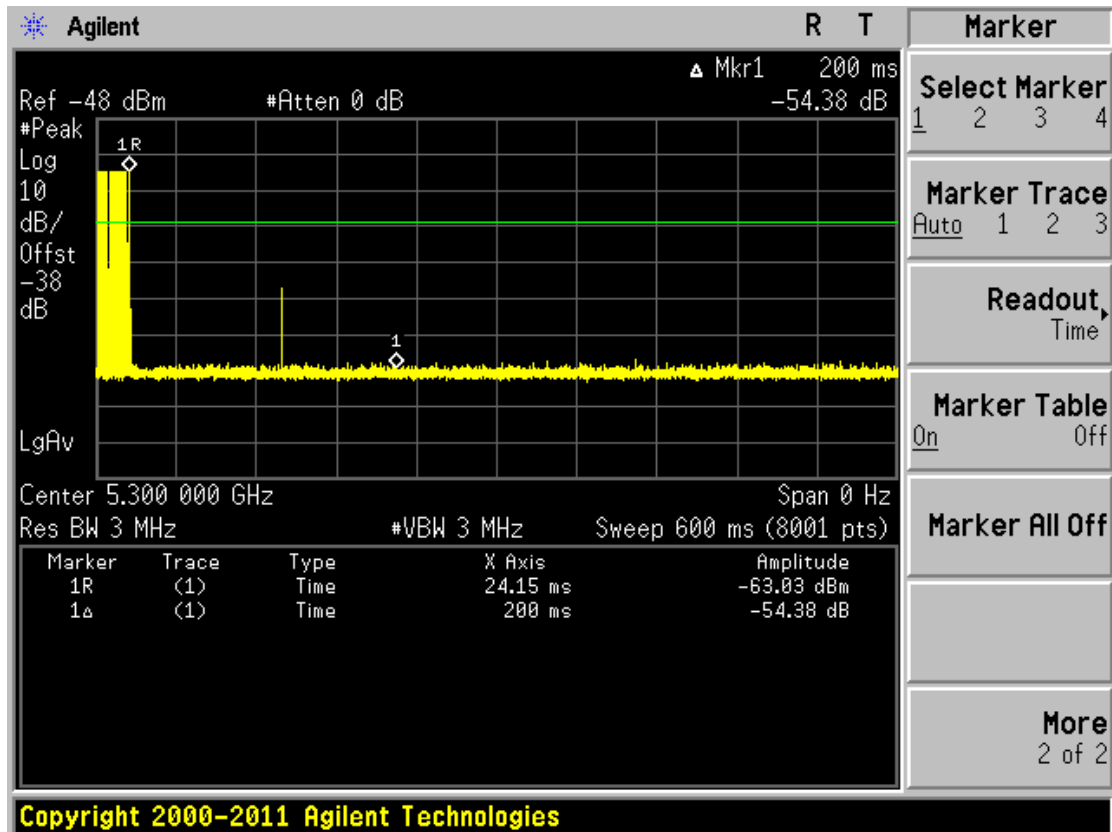


Test Item	Test Result (Sec)	Limit (Sec)
Channel Move Time	0	10

The results showed that after radar signal injected the channel move time was less than 10 seconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Closing Transmission Time Test
Radar Type : Type 0
Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Channel Closing Transmission Time for Radar Test Type 0 at 5300 MHz

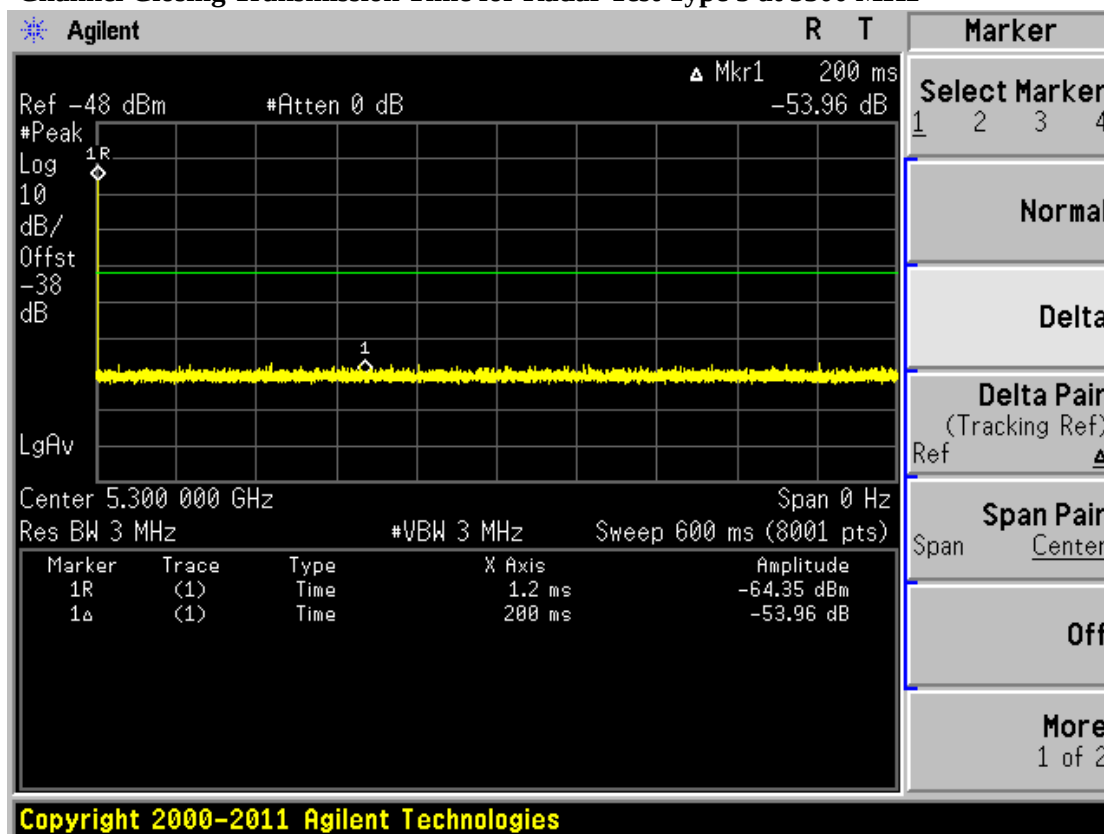


Test Item	Test Result (ms)	Limit (ms)
Channel Closing Transmission	0	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period

The results showed that after radar signal injected the channel transmission closing time less than 200 milliseconds and an aggregate of no more than 60 milliseconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Closing Transmission Time Test
Radar Type : Type 5
Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Channel Closing Transmission Time for Radar Test Type 5 at 5300 MHz

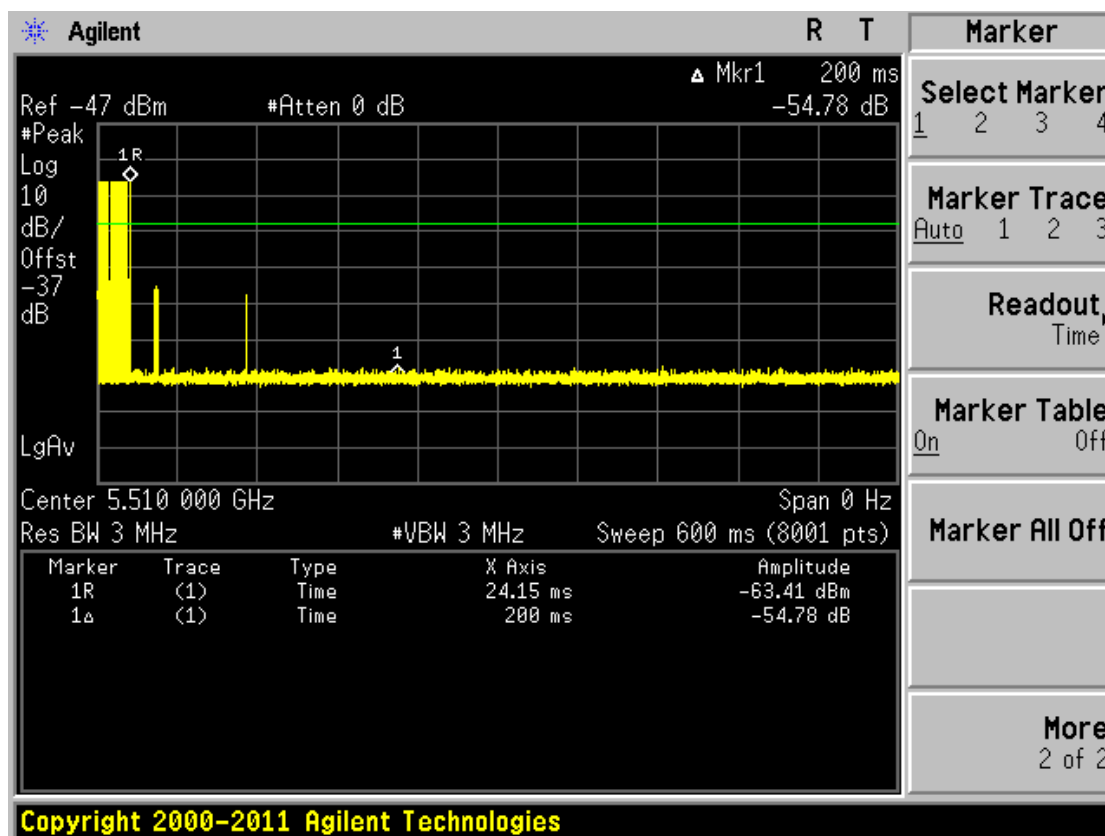


Test Item	Test Result (ms)	Limit (ms)
Channel Closing Transmission	0	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period

The results showed that after radar signal injected the channel transmission closing time less than 200 milliseconds and an aggregate of no more than 60 milliseconds.

Product : 802.11 ac PCIe Module
 Test Item : Channel Closing Transmission Time Test
 Radar Type : Type 0
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Channel Closing Transmission Time for Radar Test Type 0 at 5510 MHz

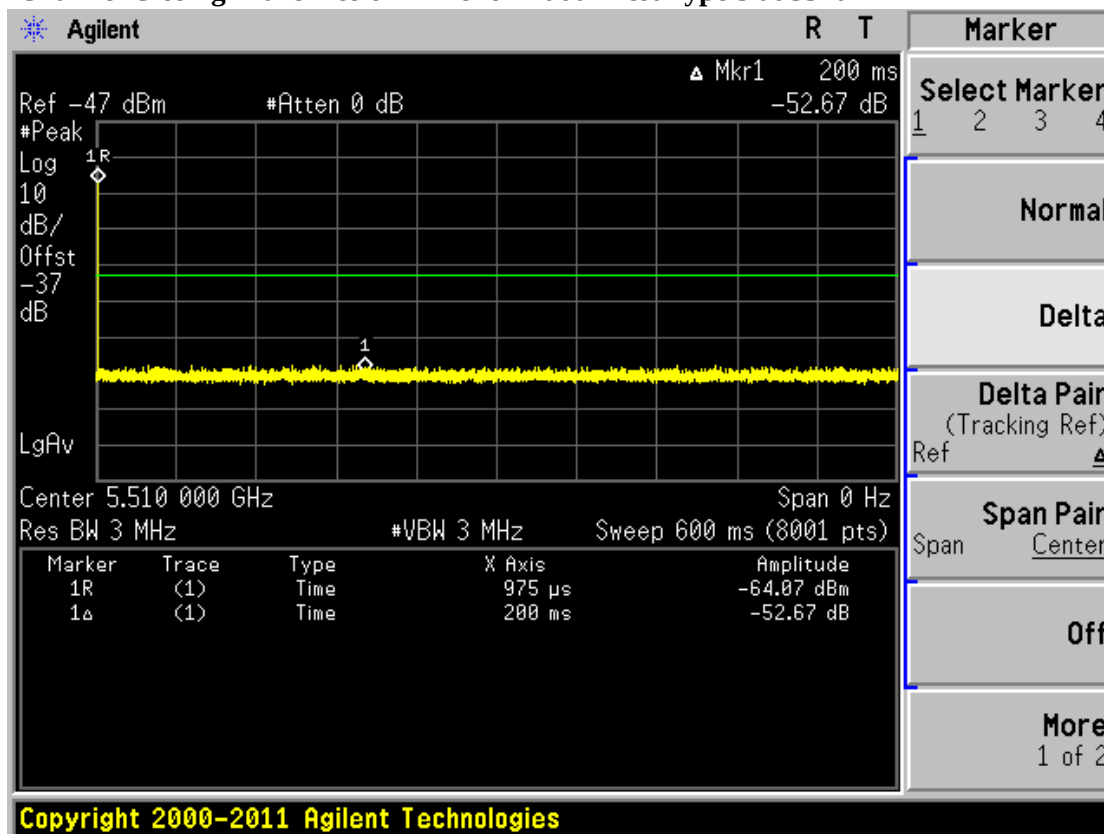


Test Item	Test Result (ms)	Limit (ms)
Channel Closing Transmission	0	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period

The results showed that after radar signal injected the channel transmission closing time less than 200 milliseconds and an aggregate of no more than 60 milliseconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Closing Transmission Time Test
Radar Type : Type 5
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Channel Closing Transmission Time for Radar Test Type 5 at 5510 MHz

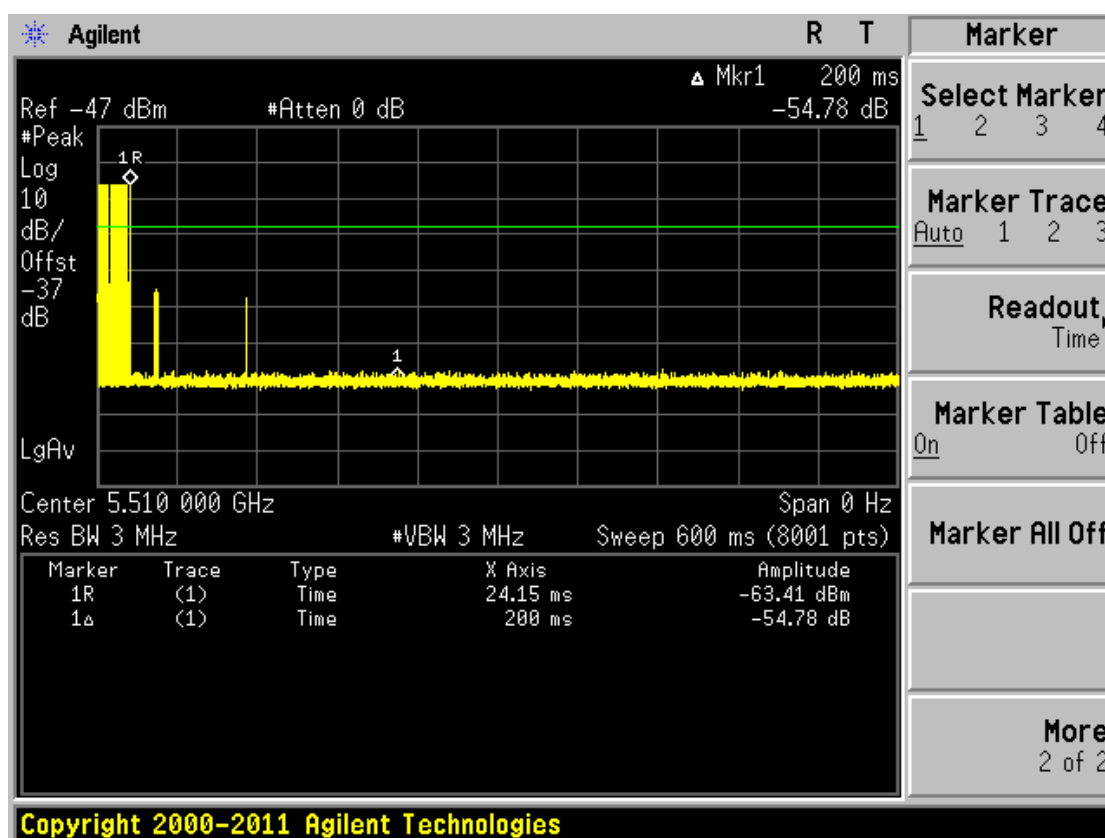


Test Item	Test Result (ms)	Limit (ms)
Channel Closing Transmission	0	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period

The results showed that after radar signal injected the channel transmission closing time less than 200 milliseconds and an aggregate of no more than 60 milliseconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Closing Transmission Time Test
Radar Type : Type 0
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Channel Closing Transmission Time for Radar Test Type 0 at 5530 MHz

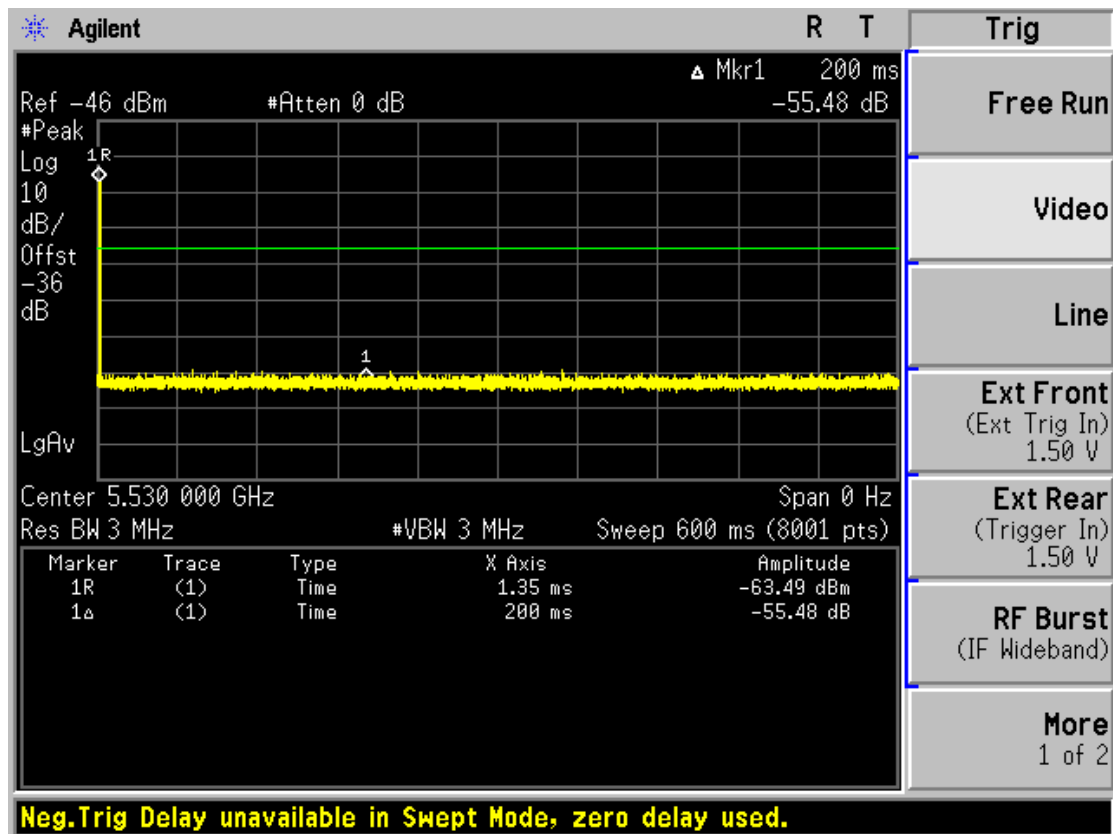


Test Item	Test Result (ms)	Limit (ms)
Channel Closing Transmission	0	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period

The results showed that after radar signal injected the channel transmission closing time less than 200 milliseconds and an aggregate of no more than 60 milliseconds.

Product : 802.11 ac PCIe Module
Test Item : Channel Closing Transmission Time Test
Radar Type : Type 5
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Channel Closing Transmission Time for Radar Test Type 5 at 5530 MHz

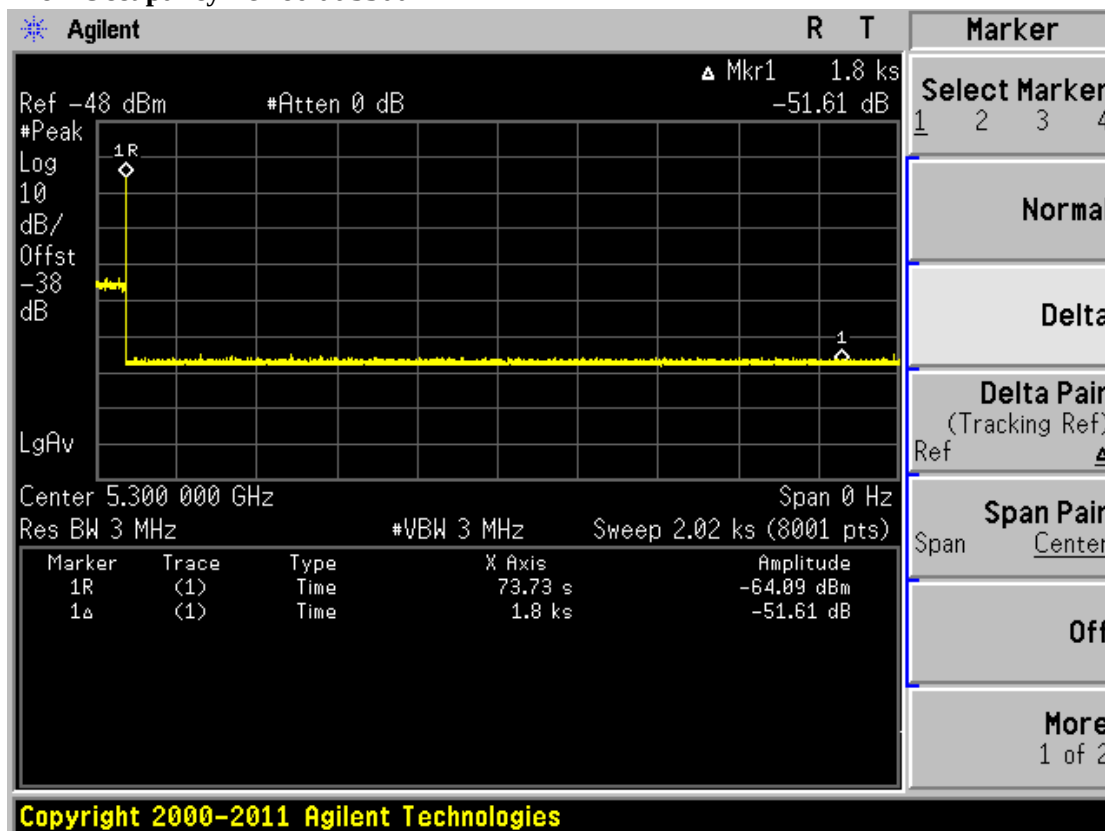


Test Item	Test Result (ms)	Limit (ms)
Channel Closing Transmission	0	200 milliseconds + approx. 60 milliseconds over remaining 10 seconds period

The results showed that after radar signal injected the channel transmission closing time less than 200 milliseconds and an aggregate of no more than 60 milliseconds.

Product : 802.11 ac PCIe Module
Test Item : Non-Occupancy Period
Radar Type : Type 0
Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Non-Occupancy Period at 5300 MHz

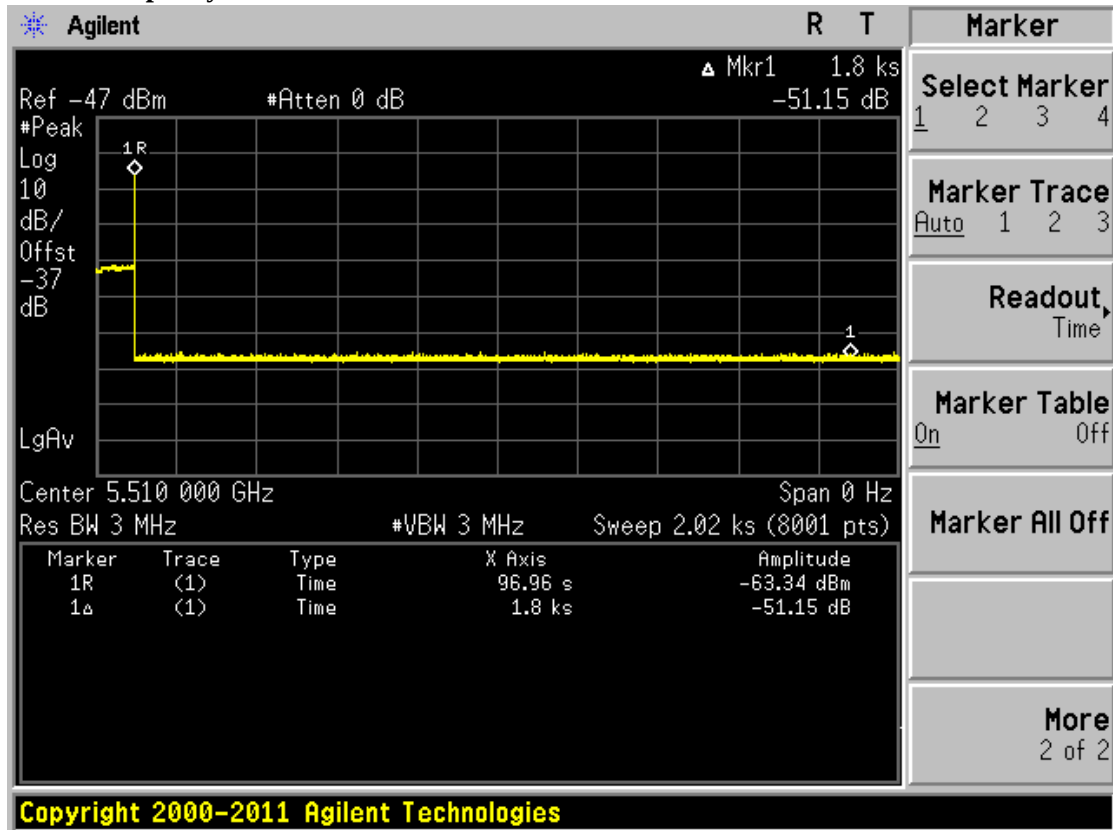


Test Item	Test Result (Minutes)	Limit (Minutes)
Non-Occupancy Period	>30	≥30

*No EUT transmissions were observed on the test channel during 30 minutes observation time.

Product : 802.11 ac PCIe Module
Test Item : Non-Occupancy Period
Radar Type : Type 0
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Non-Occupancy Period at 5510 MHz

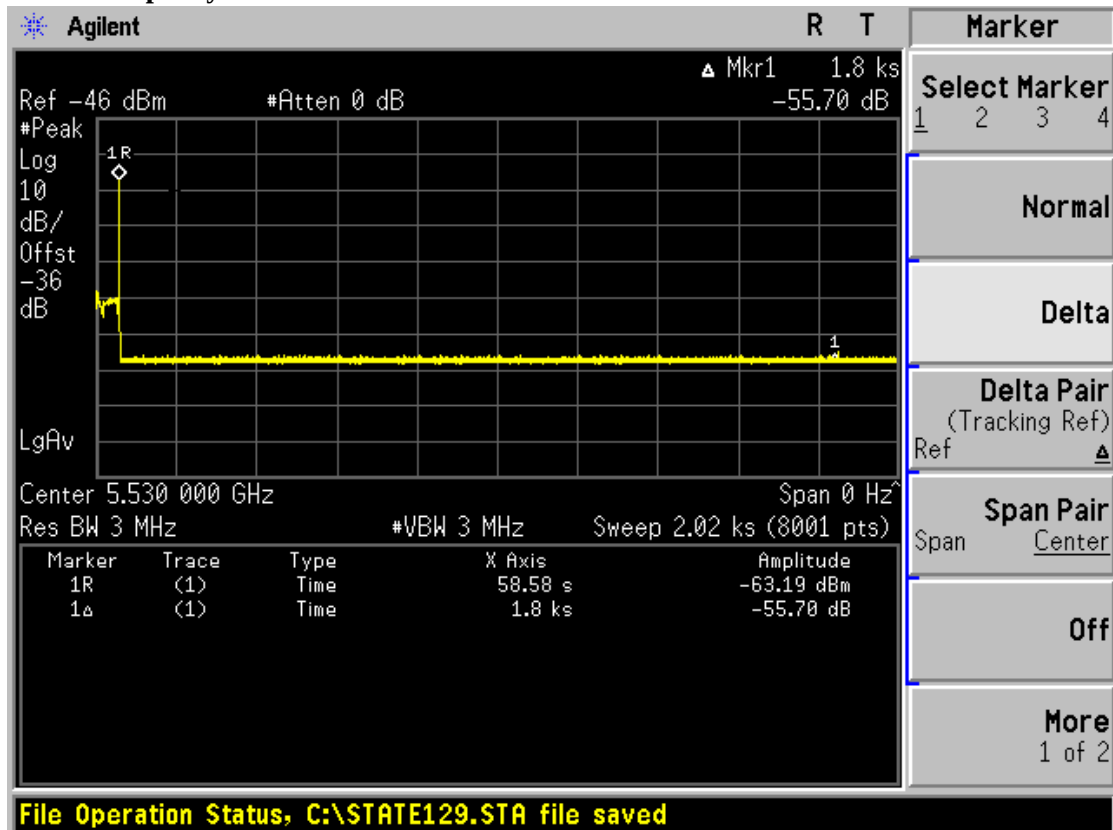


Test Item	Test Result (Minutes)	Limit (Minutes)
Non-Occupancy Period	>30	>30

*No EUT transmissions were observed on the test channel during 30 minutes observation time.

Product : 802.11 ac PCIe Module
 Test Item : Non-Occupancy Period
 Radar Type : Type 0
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Non-Occupancy Period at 5530 MHz



Test Item	Test Result (Minutes)	Limit (Minutes)
Non-Occupancy Period	>30	>30

*No EUT transmissions were observed on the test channel during 30 minutes observation time.

7. Statistical Performance Check

7.1. Test Procedure

The EUT was tested according to U-NII test procedure of KDB905462 D02 for compliance to FCC 47CFR 15.407 requirements.

The steps below define the procedure to determine the minimum percentage of detection 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 5300MHz and 5510 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.

The Radar Waveform generator sends the individual waveform for each of the radar types 1-6 at -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.

7.2. Test Requirement

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

Minimum percentage of successful detections

Radar Type	Minimum Percentage of Successful Detection	Minimum Number of Trials
1	60%	30
2	60%	30
3	60%	30
4	60%	30
Aggregate (Radar Types 1-4)	80%	120
5	80%	30
6	70%	30

The percentage of successful detection is calculated by:

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

In addition an aggregate minimum percentage of successful detection across all Short Pulse Radar Types 1-4 is required and is calculated as follows:

$$\frac{P_d 1 + P_d 2 + P_d 3 + P_d 4}{4}$$

7.3. Uncertainty

± 1ms.

7.4. Test Result of Statistical Performance Check

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 1
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5309	1	538	99	1
2	5309	1	918	58	1
3	5309	1	858	62	1
4	5309	1	878	61	1
5	5309	1	778	68	1
6	5309	1	938	57	1
7	5309	1	518	102	1
8	5309	1	698	76	1
9	5309	1	658	81	1
10	5309	1	578	92	1
11	5309	1	838	63	1
12	5309	1	558	95	1
13	5309	1	758	70	1
14	5309	1	598	89	1
15	5309	1	818	65	1
16	5309	1	2353	23	1
17	5309	1	1367	39	1
18	5309	1	2791	19	1
19	5309	1	1595	34	1
20	5309	1	685	78	1
21	5309	1	1375	39	1
22	5309	1	601	88	1
23	5309	1	1573	34	1
24	5309	1	796	67	1
25	5309	1	3043	18	1
26	5309	1	1980	27	1
27	5309	1	2333	23	1
28	5309	1	2178	25	1
29	5309	1	547	97	1
30	5309	1	786	68	1
Detection Percentage(%)					100%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 1
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5528	1	578	92	1
2	5528	1	658	81	1
3	5528	1	738	72	1
4	5528	1	718	74	1
5	5528	1	918	58	1
6	5528	1	898	59	1
7	5528	1	778	68	1
8	5528	1	838	63	1
9	5528	1	698	76	1
10	5528	1	678	78	1
11	5528	1	638	83	1
12	5528	1	3066	18	1
13	5528	1	558	95	1
14	5528	1	938	57	1
15	5528	1	538	99	1
16	5528	1	2964	18	1
17	5528	1	1905	28	1
18	5528	1	2683	20	1
19	5528	1	1467	36	1
20	5528	1	1335	40	1
21	5528	1	1577	34	1
22	5528	1	1809	30	1
23	5528	1	2080	26	1
24	5528	1	779	68	1
25	5528	1	1022	52	1
26	5528	1	1727	31	1
27	5528	1	2319	23	1
28	5528	1	2050	26	1
29	5528	1	954	56	1
30	5528	1	2640	20	1
Detection Percentage(%)					100%

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 1
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5569	1	618	86	1
2	5569	1	798	67	1
3	5569	1	518	102	1
4	5569	1	758	70	1
5	5569	1	818	65	1
6	5569	1	598	89	1
7	5569	1	578	92	1
8	5569	1	778	68	1
9	5569	1	658	81	1
10	5569	1	838	63	1
11	5569	1	698	76	1
12	5569	1	878	61	1
13	5569	1	678	78	1
14	5569	1	918	58	1
15	5569	1	558	95	1
16	5569	1	1744	31	1
17	5569	1	1555	34	1
18	5569	1	916	58	1
19	5569	1	1786	30	1
20	5569	1	2225	24	1
21	5569	1	1852	29	1
22	5569	1	1648	33	1
23	5569	1	2043	26	1
24	5569	1	3010	18	1
25	5569	1	2582	21	1
26	5569	1	1353	40	1
27	5569	1	1842	29	1
28	5569	1	2009	27	1
29	5569	1	2001	27	1
30	5569	1	1957	27	1
Detection Percentage(%)					100%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 2
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5309	3.3	194	24	1
2	5309	2.9	221	23	1
3	5309	3.6	158	26	1
4	5309	2.5	207	29	0
5	5309	4.3	193	28	1
6	5309	3.1	184	24	1
7	5309	2.6	160	25	1
8	5309	1.8	212	28	1
9	5309	1.0	192	29	0
10	5309	2.7	208	23	1
11	5309	2.8	155	29	1
12	5309	1.9	179	28	0
13	5309	3.3	226	29	1
14	5309	1.9	193	26	1
15	5309	2.5	187	23	1
16	5309	3.5	183	28	0
17	5309	3.4	194	29	1
18	5309	1.4	193	25	1
19	5309	4.6	226	25	1
20	5309	1.7	211	25	1
21	5309	2.8	155	29	0
22	5309	3.1	172	23	0
23	5309	2.9	209	23	1
24	5309	4.7	160	24	1
25	5309	3.8	220	26	1
26	5309	3.6	159	27	0
27	5309	3.0	230	23	1
28	5309	4.5	226	26	1
29	5309	4.9	210	28	1
30	5309	4.4	159	27	1
Detection Percentage(%)					76.6%

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 2
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5528	1.2	220	27	1
2	5528	2.2	227	29	1
3	5528	5.0	176	29	1
4	5528	2.9	209	28	1
5	5528	2.4	169	26	1
6	5528	1.2	182	24	1
7	5528	4.4	178	28	1
8	5528	5.0	199	26	0
9	5528	3.3	154	26	1
10	5528	3.5	192	24	0
11	5528	2.9	204	23	1
12	5528	3.4	227	27	1
13	5528	1.5	217	25	1
14	5528	5.0	175	29	1
15	5528	1.1	185	29	1
16	5528	3.0	152	29	0
17	5528	4.3	193	28	1
18	5528	5.0	188	27	1
19	5528	2.6	160	25	1
20	5528	4.1	197	28	1
21	5528	3.5	220	24	0
22	5528	4.0	186	28	1
23	5528	2.1	156	26	0
24	5528	1.7	194	24	1
25	5528	4.8	181	23	1
26	5528	1.6	177	28	0
27	5528	3.8	161	27	1
28	5528	4.9	155	28	1
29	5528	2.1	193	29	1
30	5528	4.6	168	25	1
Detection Percentage(%)					80%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 2
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5569	1.4	207	23	1
2	5569	1.7	206	23	1
3	5569	1.2	204	29	1
4	5569	3.7	210	24	1
5	5569	2.8	181	27	1
6	5569	2.1	186	25	1
7	5569	3.4	159	24	0
8	5569	3.1	151	26	1
9	5569	2.3	176	29	0
10	5569	4.8	171	25	1
11	5569	2.2	197	28	1
12	5569	1.4	217	24	1
13	5569	2.2	203	28	1
14	5569	1.7	161	26	1
15	5569	2.3	201	23	1
16	5569	3.1	201	25	1
17	5569	4.0	178	26	1
18	5569	1.4	222	26	0
19	5569	4.9	185	25	0
20	5569	3.1	172	25	1
21	5569	4.2	203	29	1
22	5569	3.5	184	26	1
23	5569	3.2	185	29	1
24	5569	4.0	187	29	0
25	5569	1.7	214	25	1
26	5569	3.1	190	27	1
27	5569	4.3	166	27	1
28	5569	1.2	220	26	1
29	5569	1.8	150	27	1
30	5569	5.0	224	27	1
Detection Percentage(%)					83.3%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 3
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5309	9.9	343	18	1
2	5309	6.8	414	18	1
3	5309	8.7	372	18	1
4	5309	9.1	329	16	1
5	5309	7.0	380	16	1
6	5309	9.3	280	17	1
7	5309	9.7	300	16	1
8	5309	8.7	297	17	1
9	5309	7.7	459	17	1
10	5309	8.1	265	16	1
11	5309	6.0	476	17	0
12	5309	6.1	295	16	0
13	5309	6.0	374	18	1
14	5309	7.6	270	18	0
15	5309	9.1	413	16	1
16	5309	8.9	335	18	1
17	5309	6.7	416	16	1
18	5309	6.1	410	17	1
19	5309	6.8	305	17	1
20	5309	8.2	380	18	1
21	5309	8.1	479	17	1
22	5309	7.8	405	17	1
23	5309	9.6	333	17	0
24	5309	6.8	413	16	1
25	5309	8.0	275	16	1
26	5309	8.5	427	16	1
27	5309	6.9	388	18	1
28	5309	9.3	352	18	1
29	5309	9.9	416	17	1
30	5309	8.3	493	18	1
Detection Percentage(%)					86.6%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 3
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5528	7.2	492	18	1
2	5528	9.3	305	17	0
3	5528	9.5	295	16	1
4	5528	8.3	436	18	1
5	5528	6.4	312	17	1
6	5528	8.4	464	17	0
7	5528	6.0	395	16	0
8	5528	6.7	399	16	1
9	5528	6.0	352	16	1
10	5528	8.1	435	17	1
11	5528	9.0	389	18	1
12	5528	7.8	318	16	0
13	5528	9.9	484	17	1
14	5528	7.2	343	17	0
15	5528	9.4	275	16	1
16	5528	9.9	335	16	1
17	5528	8.0	476	17	1
18	5528	6.9	487	17	1
19	5528	7.7	343	16	1
20	5528	10.0	385	16	1
21	5528	7.9	339	18	1
22	5528	7.2	460	16	0
23	5528	9.4	294	16	0
24	5528	8.0	251	18	0
25	5528	6.8	451	16	0
26	5528	8.3	436	16	1
27	5528	7.2	421	18	1
28	5528	6.4	468	18	1
29	5528	8.9	288	16	1
30	5528	7.8	405	17	1
Detection Percentage(%)					70%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 3
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5569	9.5	418	16	1
2	5569	7.9	427	17	0
3	5569	6.4	306	18	1
4	5569	9.6	430	17	1
5	5569	9.3	327	17	1
6	5569	8.4	486	18	1
7	5569	8.9	479	18	1
8	5569	8.2	460	18	1
9	5569	8.4	486	17	1
10	5569	8.7	390	18	1
11	5569	6.2	302	16	0
12	5569	8.1	497	18	1
13	5569	6.1	369	18	1
14	5569	9.2	315	17	1
15	5569	6.3	352	16	1
16	5569	8.2	305	18	1
17	5569	8.5	334	16	1
18	5569	6.7	284	17	1
19	5569	8.5	271	16	1
20	5569	6.9	295	17	1
21	5569	9.1	454	18	0
22	5569	8.5	365	17	1
23	5569	6.1	385	17	1
24	5569	7.9	261	16	1
25	5569	7.7	284	18	1
26	5569	6.7	367	16	1
27	5569	8.9	256	16	1
28	5569	9.4	372	18	1
29	5569	7.5	390	16	1
30	5569	6.7	296	17	1
Detection Percentage(%)					90%

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 4
Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5309	16.1	485	15	0
2	5309	16.3	290	13	1
3	5309	19.4	374	14	1
4	5309	11.8	449	15	0
5	5309	19.5	423	14	1
6	5309	19.1	292	12	1
7	5309	12.4	482	14	0
8	5309	15.7	492	15	1
9	5309	14.0	283	12	1
10	5309	11.6	374	13	0
11	5309	13.2	455	12	0
12	5309	14.2	336	14	1
13	5309	12.5	329	13	1
14	5309	17.4	423	12	1
15	5309	19.9	402	14	1
16	5309	18.1	478	12	1
17	5309	16.5	305	14	1
18	5309	14.0	299	13	1
19	5309	18.3	350	12	1
20	5309	11.9	310	16	0
21	5309	14.8	468	12	1
22	5309	12.8	356	16	0
23	5309	16.3	414	13	1
24	5309	16.7	379	13	1
25	5309	15.8	424	16	0
26	5309	12.2	297	14	1
27	5309	13.8	284	14	1
28	5309	19.0	386	14	1
29	5309	13.0	445	16	1
30	5309	11.0	354	12	1
Detection Percentage(%)					73.3%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 4
 Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5528	12.3	275	14	0
2	5528	15.0	355	13	1
3	5528	14.2	250	12	1
4	5528	15.7	500	14	0
5	5528	17.5	398	12	1
6	5528	18.6	254	15	1
7	5528	15.7	290	13	0
8	5528	15.3	315	16	1
9	5528	13.4	330	15	1
10	5528	13.4	426	15	0
11	5528	12.7	342	16	0
12	5528	19.4	448	14	1
13	5528	11.1	476	12	1
14	5528	17.9	485	14	1
15	5528	12.1	474	12	1
16	5528	13.8	498	15	1
17	5528	14.9	400	16	1
18	5528	17.6	271	15	1
19	5528	17.2	276	15	1
20	5528	18.7	381	14	0
21	5528	13.1	327	12	1
22	5528	16.3	342	15	0
23	5528	19.8	494	16	1
24	5528	18.8	361	15	1
25	5528	12.5	277	15	0
26	5528	19.4	484	16	1
27	5528	17.8	444	15	1
28	5528	16.6	338	12	1
29	5528	11.9	499	15	1
30	5528	16.8	479	14	1
Detection Percentage (%)					73.3%

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 4
 Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Trial #	Frequency (MHz)	Pulse Width (us)	PRI (us)	Pulses/Burs	1= Detection 0= No Detection
1	5569	13.9	456	15	1
2	5569	13.1	496	12	1
3	5569	18.4	475	12	1
4	5569	11.5	400	16	1
5	5569	15.5	489	12	0
6	5569	16.7	446	14	1
7	5569	18.9	427	14	1
8	5569	18.2	377	14	1
9	5569	16.5	384	13	1
10	5569	13.0	361	16	1
11	5569	13.4	386	15	1
12	5569	11.3	440	14	1
13	5569	14.6	255	12	0
14	5569	19.7	465	14	1
15	5569	19.2	284	12	1
16	5569	14.2	379	16	1
17	5569	17.7	279	12	1
18	5569	18.5	473	13	1
19	5569	15.9	337	16	1
20	5569	11.1	326	16	1
21	5569	16.4	300	15	0
22	5569	15.3	312	12	1
23	5569	19.2	392	12	1
24	5569	17.6	320	13	1
25	5569	13.4	401	16	1
26	5569	19.1	435	12	1
27	5569	20.0	383	13	0
28	5569	19.3	303	16	1
29	5569	17.8	303	15	1
30	5569	16.5	468	14	1
Detection Percentage (%)					86.6%

Model –802.11n20

Total Type 1~4 Radar Statistical Performance			
Radar Type	Detection Percentage (%)	Limit (%)	Result
1	100	>60%	Pass
2	76.6	>60%	Pass
3	86.6	>60%	Pass
4	73.3	>60%	Pass
Total Type 1~4	84.125	>80%	Pass

Mode2 –802.11n40

Total Type 1~4 Radar Statistical Performance			
Radar Type	Detection Percentage (%)	Limit (%)	Result
1	100	>60%	Pass
2	80	>60%	Pass
3	70	>60%	Pass
4	73.3	>60%	Pass
Total Type 1~4	80.825	>80%	Pass

Mode2 –802.11n40

Total Type 1~4 Radar Statistical Performance			
Radar Type	Detection Percentage (%)	Limit (%)	Result
1	100	>60%	Pass
2	83.3	>60%	Pass
3	90	>60%	Pass
4	86.6	>60%	Pass
Total Type 1~4	89.975	>80%	Pass

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 5
Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Trial #	Frequency (MHz)	*Filename	1= Detection 0= No Detection
1	5299	Statistical Check RandParm For Radar Type 5 1 trail	1
2	5292	Statistical Check RandParm For Radar Type 5 2 trail	0
3	5293	Statistical Check RandParm For Radar Type 5 3 trail	0
4	5294	Statistical Check RandParm For Radar Type 5 4 trail	0
5	5294	Statistical Check RandParm For Radar Type 5 5 trail	0
6	5295	Statistical Check RandParm For Radar Type 5 6 trail	0
7	5295	Statistical Check RandParm For Radar Type 5 7 trail	1
8	5296	Statistical Check RandParm For Radar Type 5 8 trail	1
9	5297	Statistical Check RandParm For Radar Type 5 9 trail	1
10	5298	Statistical Check RandParm For Radar Type 5 10 trail	1
11	5299	Statistical Check RandParm For Radar Type 5 11 trail	1
12	5300	Statistical Check RandParm For Radar Type 5 12 trail	1
13	5301	Statistical Check RandParm For Radar Type 5 13 trail	1
14	5302	Statistical Check RandParm For Radar Type 5 14 trail	1
15	5303	Statistical Check RandParm For Radar Type 5 15 trail	1
16	5304	Statistical Check RandParm For Radar Type 5 16 trail	1
17	5305	Statistical Check RandParm For Radar Type 5 17 trail	1
18	5306	Statistical Check RandParm For Radar Type 5 18 trail	1
19	5304	Statistical Check RandParm For Radar Type 5 19 trail	1
20	5305	Statistical Check RandParm For Radar Type 5 20 trail	1
21	5306	Statistical Check RandParm For Radar Type 5 21 trail	1
22	5306	Statistical Check RandParm For Radar Type 5 22 trail	1
23	5307	Statistical Check RandParm For Radar Type 5 23 trail	1
24	5307	Statistical Check RandParm For Radar Type 5 24 trail	1
25	5308	Statistical Check RandParm For Radar Type 5 25 trail	1
26	5308	Statistical Check RandParm For Radar Type 5 26 trail	1
27	5304	Statistical Check RandParm For Radar Type 5 27 trail	1
28	5305	Statistical Check RandParm For Radar Type 5 28 trail	1
29	5306	Statistical Check RandParm For Radar Type 5 29 trail	1
30	5307	Statistical Check RandParm For Radar Type 5 30 trail	1
Detection Percentage (%)			83.33
Limit			>80
Type5 Detection Bandwidth Min. Limit = 18.705MHz * 80% = 14.964 MHz			

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 5
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Trial #	Frequency (MHz)	*Filename	1= Detection 0= No Detection
1	5495	Statistical Check RandParm For Radar Type 5 1 trail	0
2	5496	Statistical Check RandParm For Radar Type 5 2 trail	0
3	5497	Statistical Check RandParm For Radar Type 5 3 trail	1
4	5498	Statistical Check RandParm For Radar Type 5 4 trail	1
5	5499	Statistical Check RandParm For Radar Type 5 5 trail	1
6	5500	Statistical Check RandParm For Radar Type 5 6 trail	1
7	5501	Statistical Check RandParm For Radar Type 5 7 trail	1
8	5502	Statistical Check RandParm For Radar Type 5 8 trail	1
9	5503	Statistical Check RandParm For Radar Type 5 9 trail	1
10	5504	Statistical Check RandParm For Radar Type 5 10 trail	1
11	5505	Statistical Check RandParm For Radar Type 5 11 trail	1
12	5506	Statistical Check RandParm For Radar Type 5 12 trail	1
13	5507	Statistical Check RandParm For Radar Type 5 13 trail	1
14	5508	Statistical Check RandParm For Radar Type 5 14 trail	1
15	5509	Statistical Check RandParm For Radar Type 5 15 trail	1
16	5510	Statistical Check RandParm For Radar Type 5 16 trail	1
17	5511	Statistical Check RandParm For Radar Type 5 17 trail	1
18	5512	Statistical Check RandParm For Radar Type 5 18 trail	1
19	5513	Statistical Check RandParm For Radar Type 5 19 trail	1
20	5514	Statistical Check RandParm For Radar Type 5 20 trail	1
21	5515	Statistical Check RandParm For Radar Type 5 21 trail	1
22	5516	Statistical Check RandParm For Radar Type 5 22 trail	1
23	5517	Statistical Check RandParm For Radar Type 5 23 trail	1
24	5518	Statistical Check RandParm For Radar Type 5 24 trail	1
25	5519	Statistical Check RandParm For Radar Type 5 25 trail	1
26	5520	Statistical Check RandParm For Radar Type 5 26 trail	1
27	5521	Statistical Check RandParm For Radar Type 5 27 trail	1
28	5522	Statistical Check RandParm For Radar Type 5 28 trail	1
29	5523	Statistical Check RandParm For Radar Type 5 29 trail	1
30	5524	Statistical Check RandParm For Radar Type 5 30 trail	1
Detection Percentage (%)			93.3
Limit			>80
Type5 Detection Bandwidth Min. Limit = 36.998MHz * 80% = 29.598 MHz			

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 5
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Trial #	Frequency (MHz)	*Filename	1= Detection 0= No Detection
1	5500	Statistical Check RandParm For Radar Type 5 1 trail	1
2	5501	Statistical Check RandParm For Radar Type 5 2 trail	1
3	5505	Statistical Check RandParm For Radar Type 5 3 trail	1
4	5506	Statistical Check RandParm For Radar Type 5 4 trail	1
5	5507	Statistical Check RandParm For Radar Type 5 5 trail	1
6	5509	Statistical Check RandParm For Radar Type 5 6 trail	1
7	5510	Statistical Check RandParm For Radar Type 5 7 trail	1
8	5515	Statistical Check RandParm For Radar Type 5 8 trail	1
9	5517	Statistical Check RandParm For Radar Type 5 9 trail	1
10	5519	Statistical Check RandParm For Radar Type 5 10 trail	1
11	5513	Statistical Check RandParm For Radar Type 5 11 trail	1
12	5523	Statistical Check RandParm For Radar Type 5 12 trail	1
13	5526	Statistical Check RandParm For Radar Type 5 13 trail	1
14	5529	Statistical Check RandParm For Radar Type 5 14 trail	1
15	5530	Statistical Check RandParm For Radar Type 5 15 trail	1
16	5533	Statistical Check RandParm For Radar Type 5 16 trail	1
17	5537	Statistical Check RandParm For Radar Type 5 17 trail	1
18	5539	Statistical Check RandParm For Radar Type 5 18 trail	1
19	5540	Statistical Check RandParm For Radar Type 5 19 trail	1
20	5541	Statistical Check RandParm For Radar Type 5 20 trail	1
21	5546	Statistical Check RandParm For Radar Type 5 21 trail	1
22	5549	Statistical Check RandParm For Radar Type 5 22 trail	1
23	5550	Statistical Check RandParm For Radar Type 5 23 trail	1
24	5553	Statistical Check RandParm For Radar Type 5 24 trail	1
25	5557	Statistical Check RandParm For Radar Type 5 25 trail	1
26	5559	Statistical Check RandParm For Radar Type 5 26 trail	1
27	5551	Statistical Check RandParm For Radar Type 5 27 trail	1
28	5554	Statistical Check RandParm For Radar Type 5 28 trail	1
29	5547	Statistical Check RandParm For Radar Type 5 29 trail	1
30	5560	Statistical Check RandParm For Radar Type 5 30 trail	1
Detection Percentage (%)			100
Limit			>80
Type5 Detection Bandwidth Min. Limit = 75.945MHz * 80% = 60.756MHz			

Product : 802.11 ac PCIe Module
 Test Item : Statistical Performance Check
 Radar Type : Type 6
 Test Mode : Mode 1: Transmit + Ant 5 (802.11n-20BW)

Trial #	Frequency (MHz)	*Filename	1= Detection 0= No Detection
1	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_1_trail	1
2	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_2_trail	1
3	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_3_trail	1
4	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_4_trail	1
5	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_5_trail	1
6	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_6_trail	1
7	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_7_trail	1
8	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_8_trail	1
9	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_9_trail	1
10	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_10_trail	1
11	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_11_trail	1
12	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_12_trail	1
13	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_13_trail	1
14	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_14_trail	1
15	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_15_trail	1
16	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_16_trail	1
17	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_17_trail	1
18	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_18_trail	1
19	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_19_trail	1
20	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_20_trail	1
21	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_21_trail	1
22	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_22_trail	1
23	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_23_trail	1
24	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_24_trail	1
25	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_25_trail	1
26	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_26_trail	1
27	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_27_trail	1
28	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_28_trail	1
29	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_29_trail	1
30	5300	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_30_trail	1
Detection Percentage (%)			100
Limit			>70

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 6
Test Mode : Mode 2: Transmit + Ant 5 (802.11n-40BW)

Trial #	Frequency (MHz)	*Filename	1= Detection 0= No Detection
1	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_1_trail	1
2	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_2_trail	1
3	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_3_trail	1
4	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_4_trail	1
5	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_5_trail	0
6	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_6_trail	1
7	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_7_trail	1
8	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_8_trail	0
9	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_9_trail	1
10	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_10_trail	1
11	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_11_trail	1
12	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_12_trail	1
13	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_13_trail	1
14	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_14_trail	1
15	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_15_trail	1
16	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_16_trail	1
17	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_17_trail	1
18	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_18_trail	1
19	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_19_trail	1
20	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_20_trail	1
21	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_21_trail	1
22	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_22_trail	1
23	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_23_trail	1
24	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_24_trail	1
25	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_25_trail	1
26	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_26_trail	1
27	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_27_trail	1
28	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_28_trail	1
29	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_29_trail	1
30	5510	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_30_trail	1
Detection Percentage (%)			93.3
Limit			>70

Product : 802.11 ac PCIe Module
Test Item : Statistical Performance Check
Radar Type : Type 6
Test Mode : Mode 3: Transmit + Ant 5 (802.11ac-80BW)

Trial #	Frequency (MHz)	*Filename	1= Detection 0= No Detection
1	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_1_trail	1
2	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_2_trail	1
3	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_3_trail	1
4	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_4_trail	1
5	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_5_trail	1
6	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_6_trail	0
7	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_7_trail	1
8	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_8_trail	1
9	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_9_trail	1
10	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_10_trail	1
11	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_11_trail	1
12	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_12_trail	1
13	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_13_trail	1
14	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_14_trail	1
15	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_15_trail	1
16	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_16_trail	1
17	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_17_trail	1
18	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_18_trail	1
19	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_19_trail	1
20	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_20_trail	1
21	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_21_trail	1
22	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_22_trail	1
23	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_23_trail	1
24	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_24_trail	0
25	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_25_trail	1
26	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_26_trail	1
27	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_27_trail	1
28	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_28_trail	1
29	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_29_trail	1
30	5530	Statistical_Check_Hopping Frequency List_For_Radar_Type_6_30_trail	1
Detection Percentage (%)			93.3
Limit			>70