DFS TEST REPORT

Report No.: FCC_IC_DFS_SL18081602-FOR-023
Supersede Report No.: N/A

Applicant	Fortinet Inc.
Product Name	Secured Wireless Access Point
Model No.	FortiAP U422EV
Test Standard	47CFR15.407 (h) RSS 247 Issue 2 2017
Test Method	905462 D02 UNII DFS Compliance Procedures New Rules v02
FCC ID	TVE-291BB033
IC ID	7280B-291BB033
Date of test	08/20/2018-08/31/2018
Issue Date	09/10/2018
Test Result	Pass Fail
Equipment complied with the specification	[x]
Equipment did not comply with the specification	[ ]

Cipher	Chen Ge
Test Engineer	Engineer Reviewer

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Test result presented in this test report is applicable to the tested sample only

Issued By:
SIEMIC Laboratories
775 Montague Expressway, Milpitas, 95035 CA

ACCREDITED
TESTING CERT # 2742-01

Laboratory Introduction

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In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC, RF/Wireless, Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless, Telecom
Taiwan	BSMI, NCC, NIST	EMC, RF, Telecom, Safety
Hong Kong	OFTA, NIST	RF/Wireless, Telecom
Australia	NATA, NIST	EMC, RF, Telecom, Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF, Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	Safety, EMC, RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom, Safety
Israel	MOC, NIST	EMC, RF, Telecom, Safety

Accreditations for Product Certifications

Country	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom
EU	NB	EMC & R&TTE Directive
Japan	MIC (RCB 208)	RF , Telecom
HongKong	OFTA (US002)	RF , Telecom

CONTENTS

1 Report Revision History

Report No.	Report Version	Description	Issue Date
FCC_IC_DFS_SL18081602-FOR-023	None	Original	09/10/2018

2 Executive Summary

The purpose of this test program was to demonstrate compliance of following product

Company: Fortinet Inc.
Product: Secured Wireless Access Point
Model: FortiAP U422EV

against the current Stipulated Standards. The specified model product stated above has demonstrated compliance with the Stipulated Standard listed on 1st page.

3 Customer information

Applicant Name	Fortinet Inc.
Applicant Address	899 Kifer Rd, Sunnyvale, CA 94086
Manufacturer Name	Fortinet Inc.
Manufacturer Address	899 Kifer Rd, Sunnyvale, CA 94086

4 Test site information

Lab performing tests	SIEMIC Laboratories
Lab Address	775 Montague Expressway, Milpitas, CA 95035
FCC Test Site No.	881796
IC Test Site No.	4842D-2
VCCI Test Site No.	A0133

5 Modification

Index	Item	Description	Note
-	-	-	-

6 EUT Information

6.1 EUT Description

Product Name	Secured Wireless Access Point
Model No.	FortiAP U422EV
Trade Name	Fortinet Inc.
Series No.	FortiAP U422EVxxxxxx, FAP-U422EVxxxxxxx, FORTIAP-U422EVxxxxxx (where "x" can be used as "A-Z", or "0-9", or "-", or blank for marketing purposes only)
Input Power	100-240VAC 50/60Hz
Power Adapter Manu/Model	PIN060-54PR
Power Adapter SN	N/A
Date of EUT received	08/20/2018
Equipment Class/ Category	DTS, UNII
Port/Connectors	PoE, Ethernet

6.2 Radio Description

Radio Type	802.11a	802.11n-HT20	802.11n-HT40	802.11ac
Operating Frequency	5260-5320MHz 5500-5720MHz	5260-5320MHz 5500-5720MHz	5260-5320MHz 5500-5720MHz	5210MHz, 5290MHz 5530MHz,5690MHz, 5775MHz
Modulation	OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM)	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Spacing	20MHz	20MHz (5GHz)	40MHz	80MHz
Number of Channels	16	16	8	3
Antenna Type	Dipole			
Antenna Gain (Peak)	5GHz: Highest Gain 7dBi.			
Antenna Connector Type	N-Type plug			
Note	All the EUT radio info please refer FCC RF report, report No.: RF170720C12A			

Note:

1. The EUT operates in master mode.
2. The highest E.I.R.P of the band 5250MHz-5350MHz is 27.41dBm (550.81mW) >200mW.

   The highest E.I.R.P of the band 5470MHz-5725MHz is 28.02dBm (633.87mW) > 200mW.
3. The EUT was set to transmit at 20MHz, 40MHz and 80MHz during test.
4. The EUT will not operate at frequency 5600-5660MHz in Canada.

7 Supporting Equipment/Software and cabling Description

7.1 Supporting Equipment

Item	Supporting Equipment Description	Model	Serial Number	Manufacturer	Note
1	Laptop	Macbook Pro	N/A	Apple	-
2	Controller	FortiWiFi 60D	N/A	Fortinet	-
3	Ethernet Switch	GX-D1051	N/A	ASUS	-
4	Controller	MC1550	N/A	Meru Networks	-

7.2 Cabling Description

Item	Connection Start		Connection Stop		Length / shielding Info		Note
	From	I/O Port	To	I/O Port	Length (m)	Shielding	
1	POE	Controller	Controller	Laptop	>3m	N/A	-
2	EUT	RJ45	Power Over Ethernet Injector	RJ45	>3m	N/A	-

7.3 Test Software Description

Test Item	Software	Description
DFS Testing	FOS v5.4, build0053	Set the EUT to normal modes and testing modes.
DFS Testing	Meru Linux OS 8.4-0dev-20 Build	Set the EUT to normal modes and testing modes.

8 Test Summary

Test Item	Test standard	Test Method/Procedure	Pass / Fail
UNII Detection Bandwidth	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
Initial Channel Availability Check Time	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
Radar Burst at the Beginning of the Channel Availability Check Time	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
Radar Burst at the End of the Channel Availability Check Time	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
In-Service Monitoring - Channel Move Time	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
In-Service Monitoring - Channel Closing Transmission Time	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
In-Service Monitoring - Non-Occupancy Period	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
Statistical Performance Check	47CFR15.407 (h) RSS 247 Issue 2 2017	905462 D02 UNII DFS Compliance Procedures New Rules v02	☒ Pass ☐ N/A
Remark	N/A		

9 Measurement Uncertainty

Test Item	Frequency Range	Description	Uncertainty
Dynamic frequency selection (DFS) Conducted Measurement	5GHz – 6GHz	Confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2	±1.5dB

10 Measurements, examination and derived results

10.1 Dynamic Frequency Selection (DFS)

10.1.1 General introduction

Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see note)
≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectra density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

DFS Response requirement values

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

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 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 { (1/360) * (19*10^6/PRI_{usec}	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.					

2. Long Pulse Radar Test Waveform

Radar Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Number of Pulses per *Burst*	Number of *Bursts*	Minimum Percentage of Successful Detection	Minimum 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 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.

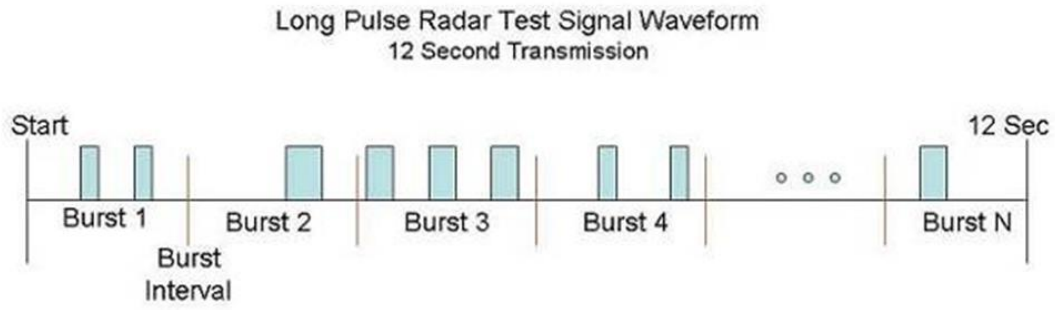
Each waveform is defined as follows:

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 / 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 s9tart 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).



3. Frequency Hopping Radar Type

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

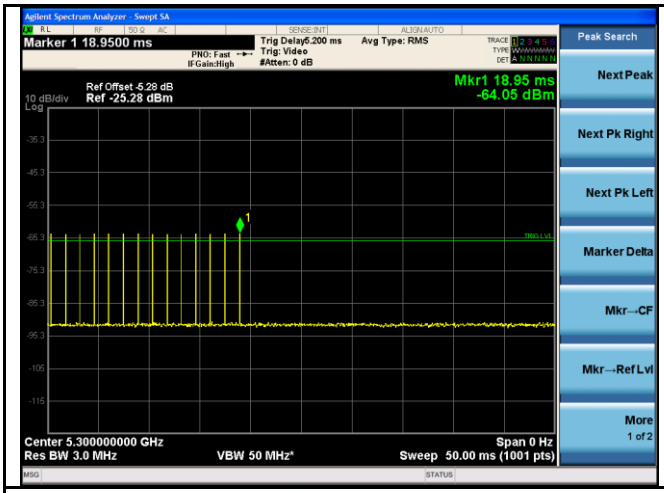
For the Frequency Hopping Radar Type, the same Burst parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected 1 from the hopping sequence defined by the following algorithm:

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.

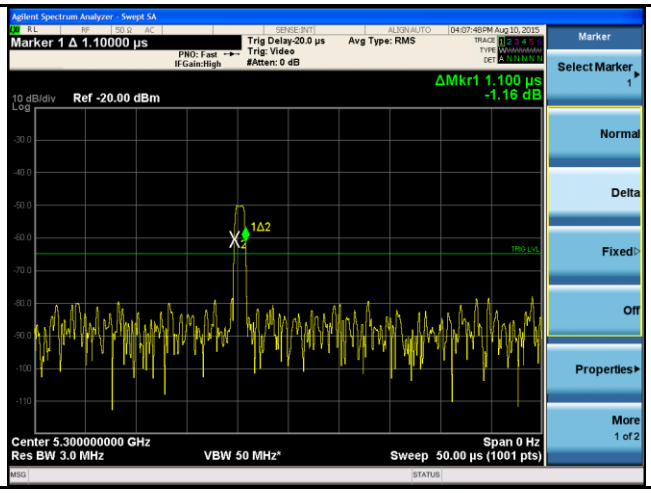
10.1.2 Radar Waveform Calibration

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 no transmissions by either the Master or Client Device. The spectrum analyzer was switched to the zero span (Time Domain) mode 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 3 MHz.

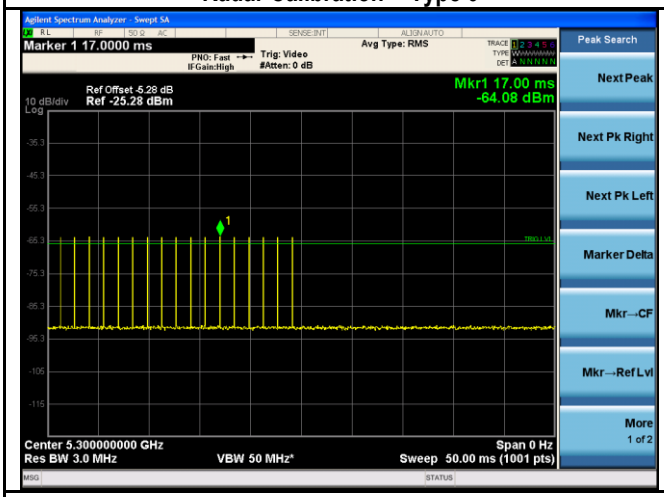
Calibration Test Plots



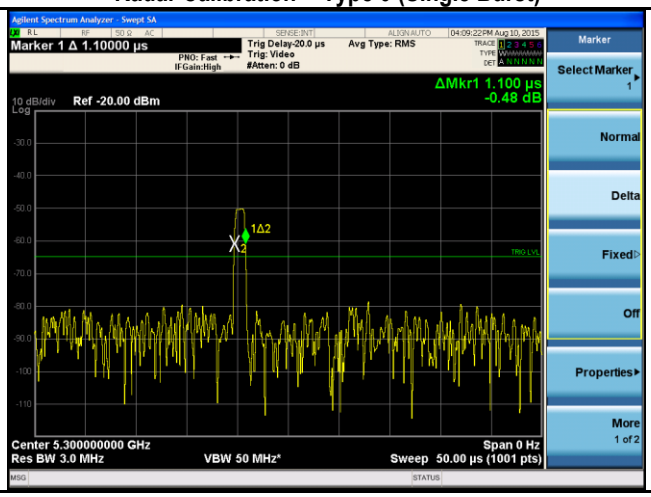
Radar Calibration - Type 0



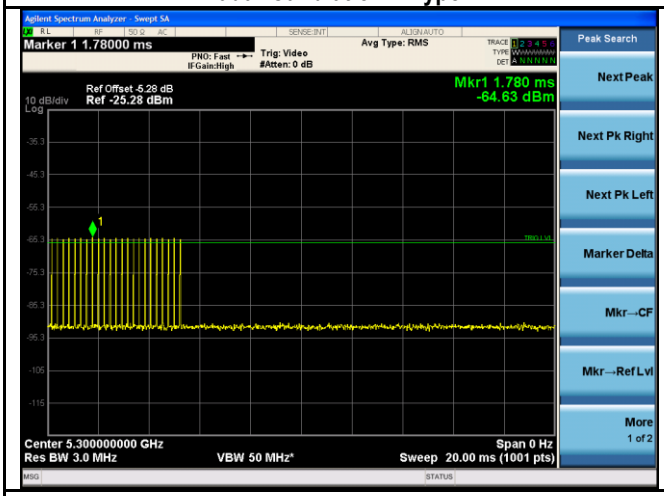
Radar Calibration - Type 0 (Single Burst)



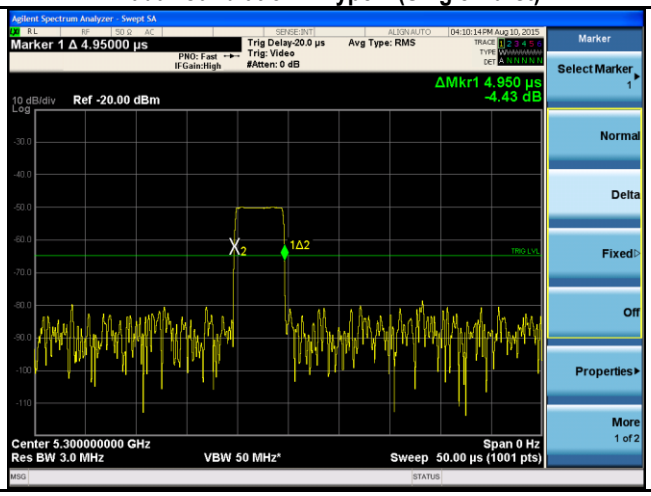
Radar Calibration - Type 1



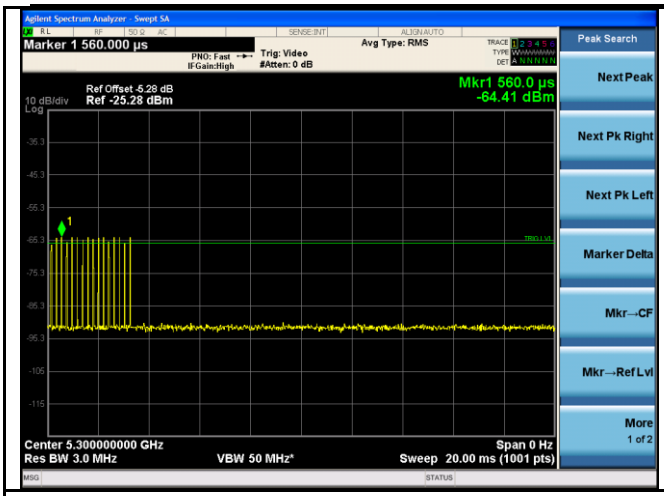
Radar Calibration - Type 1 (Single Burst)



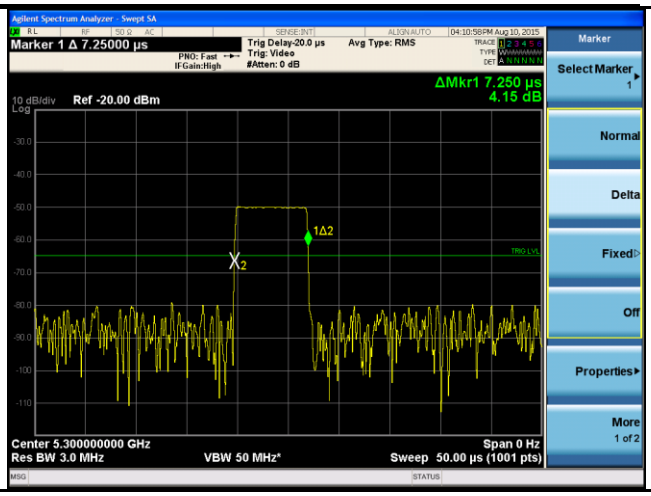
Radar Calibration - Type 2



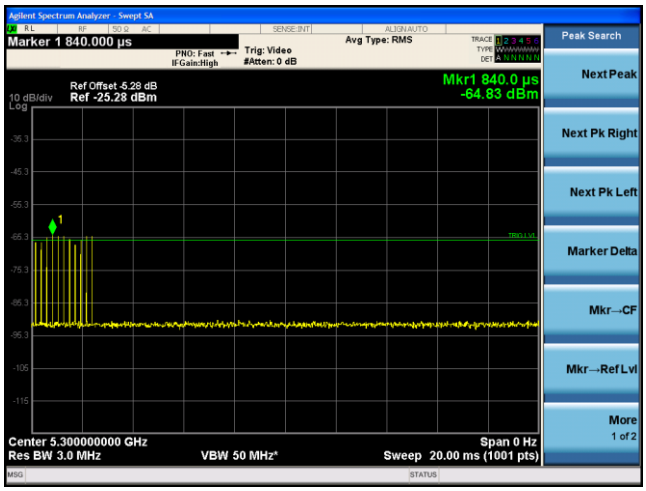
Radar Calibration - Type 2 (Single Burst)



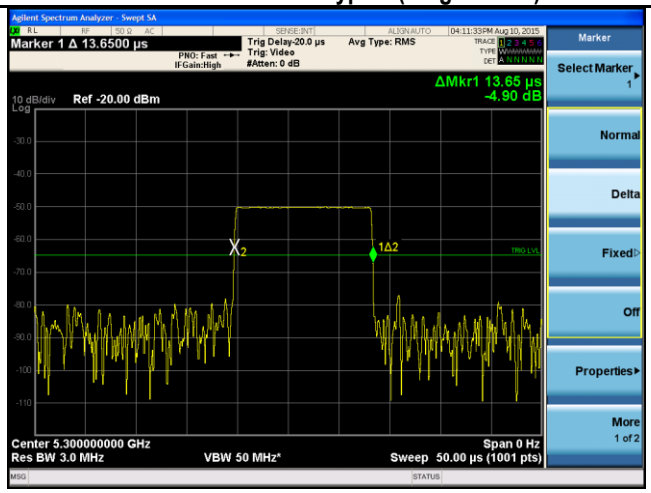
Radar Calibration - Type 3



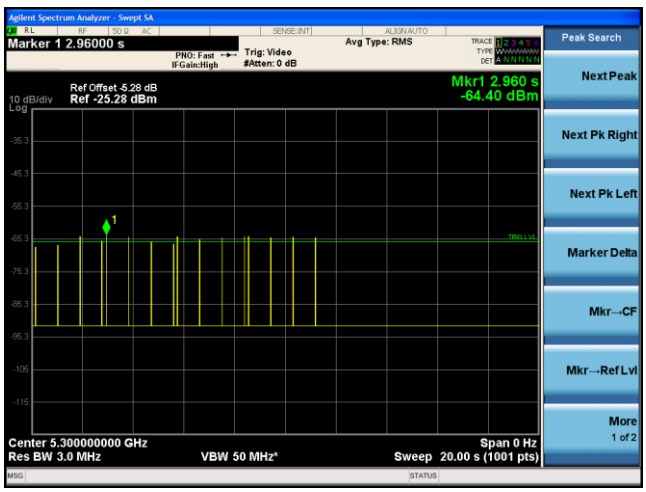
Radar Calibration - Type 3 (Single Burst)



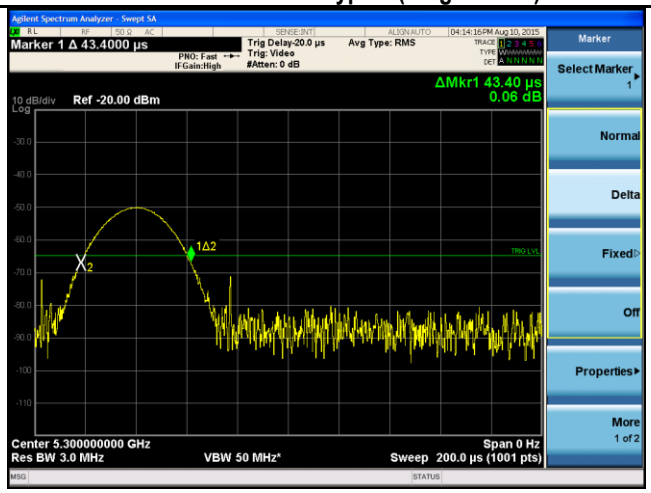
Radar Calibration - Type 4



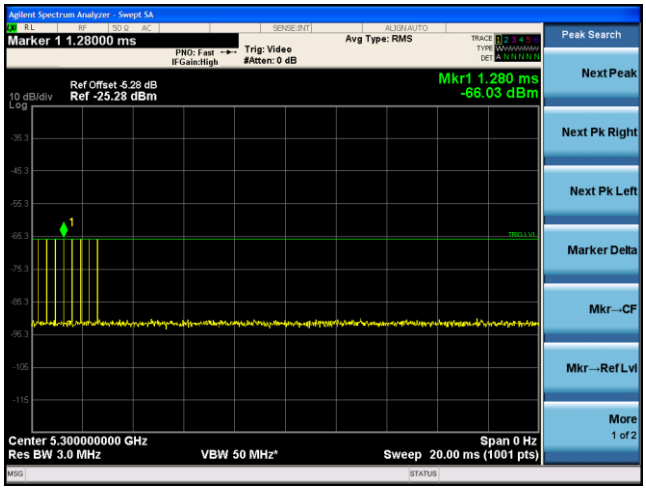
Radar Calibration - Type 4 (Single Burst)



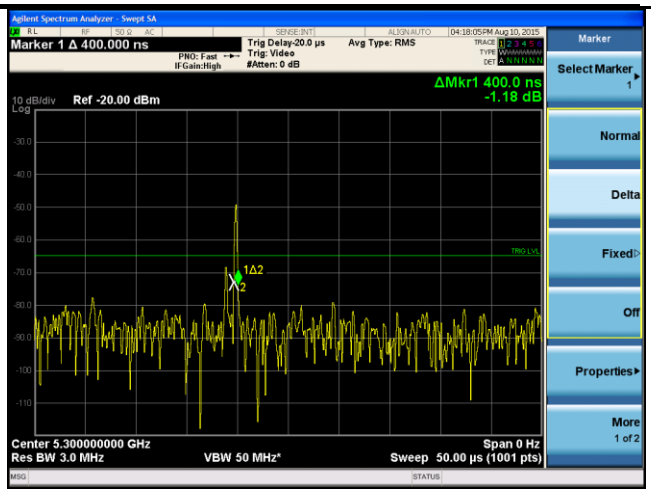
Radar Calibration - Type 5



Radar Calibration - Type 5 (Single Burst)



Radar Calibration - Type 6



Radar Calibration - Type 6 (Single Burst)

10.1.3 Test Procedure

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 is generated on the Operating Channel of the U-NII device.

UUT operating as a Client Device will associate with the (Master) at Mid Channel. DFS testing while the System testing was performed with the designated MPEG test file that streams full motion video at 30 frames per second from the Master to the Client IP based system

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

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.

Channel Closing Transmission Time- Measurement

A type 1 waveform was introduced to the EUT and the Spectrum Analyzer sweep time was set to 1s for monitoring and capturing the plot. A LabView program was created to collect trace data and capturing the plot. The program will calculate the channel closing time base on the spectrum analyzer result. The result will be calculated based on FCC procedure.

C= N*Dwell

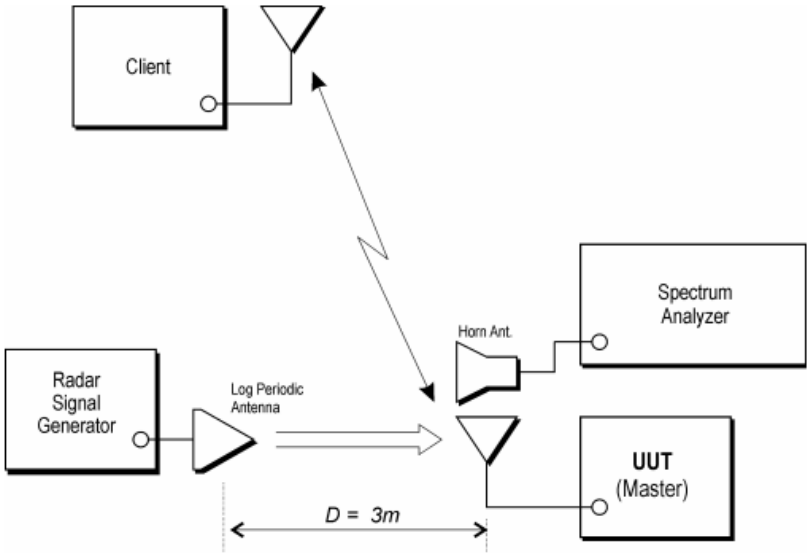
C is the closing time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and dwell is the dwell time per bin.

Dwell= S/B

Where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number 0f spectrum analyzer sampling bins.

10.1.4 DFS Test Setup

Test Setup Block Diagram



The radio was set at the center channel frequency of tested Channel.
A FCC approved Client device – (FCC ID: Q87-WUSB6300) USB wireless adapter was used to link with the UUT (master) device.

For the frequency bands 5470MHz to 5725MHz 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.

The rated output power of the Master unit is > 23 dBm (EIRP). Therefore the required interference threshold is – 64 dBm. After correction for procedural adjustment, the required radiated threshold at the antenna port is -64 + 1 = -63 dBm.

The calibrated radiated DFS detection threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides margining to the limit.

10.1.5 DFS Test Results

10.1.5.1 UNII Detection Bandwidth

UNII Detection Bandwidth: All UNII channels for this device have identical Channel bandwidths and testing was performed on Mid Channel

The generating equipment is configured as shown in the Conducted Test Setup above. A single *Burst* of the short pulse radar type 0 is produced at Mid Channel at a -63 dBm 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.

Starting at the center frequency of the UUT operating Channel, increase the radar frequency in 5 MHz steps, repeating the above test sequence, until the detection rate falls below the U-NII Detection Bandwidth criterion specified. Repeat this measurement in 1MHz steps at frequencies 5 MHz below where the detection rate begins to fall. Record the highest frequency (denote as FH) at which detection is greater than or equal to the U-NII Detection Bandwidth criterion. Recording the detection rate at frequencies above FH is not required to demonstrate compliance.

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

The U-NII Detection Bandwidth is calculated as follows:

U-NII Detection Bandwidth = FH – FL

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

Test Result

FOS:

EUT Frequency = 5300MHz (11a mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5530	No	No	No	No	No	No	No	No	No	No	0.00%
5290	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5295	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5300	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5311	No	No	No	No	No	No	No	No	No	No	0.00%
Detection Bandwidth: 20 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 16.637 MHz											

EUT Frequency = 5500MHz (11a mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5489	No	No	No	No	No	No	No	No	No	No	0.00%
5490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5511	No	No	No	No	No	No	No	No	No	No	0.00%
Detection Bandwidth: 20 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 16.248 MHz											

EUT Frequency = 5310MHz (11n-40MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5289	No	No	No	No	No	No	No	No	No	No	0.00%
5290	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5295	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5300	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5315	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5320	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5325	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5330	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5331	No	No	No	No	No	No	No	No	No	No	0.00%
Detection Bandwidth: 40 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 36.354 MHz											

EUT Frequency = 5510MHz (11n-40MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5489	No	No	No	No	No	No	No	No	No	No	0.00%
5490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5530	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5531	No	No	No	Yes	No	No	No	No	No	No	0.00%
Detection Bandwidth: 40 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 36.547 MHz											

EUT Frequency = 5290MHz (11ac-80MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5249	No	No	No	Yes	No	No	No	No	No	No	0.00%
5250	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5255	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5260	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5265	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5270	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5275	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5280	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5285	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5290	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5295	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5300	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5315	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5320	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5325	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5330	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5331	No	No	No	Yes	No	No	No	No	No	No	0.00%
Detection Bandwidth: 80 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 75.534 MHz											

EUT Frequency = 5530MHz (11ac-80MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5489	No	No	No	Yes	No	No	No	No	No	No	0.00%
5490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5530	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5535	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5540	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5545	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5550	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5555	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5560	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5565	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5570	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5571	No	No	No	Yes	No	No	No	No	No	No	0.00%
Detection Bandwidth: 80 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 75.615 MHz											

MOS:

EUT Frequency = 5300MHz (11a mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5530	No	No	No	No	No	No	No	No	No	No	0.00%
5290	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5295	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5300	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5311	No	No	No	No	No	No	No	No	No	No	0.00%
Detection Bandwidth: 20 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 16.637 MHz											

EUT Frequency = 5500MHz (11a mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5489	No	No	No	No	No	No	No	No	No	No	0.00%
5490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5511	No	No	No	No	No	No	No	No	No	No	0.00%
Detection Bandwidth: 20 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 16.248 MHz											

EUT Frequency = 5310MHz (11n-40MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5289	No	No	No	No	No	No	No	No	No	No	0.00%
5290	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5295	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5300	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5315	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5320	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5325	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5330	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5331	No	No	No	No	No	No	No	No	No	No	0.00%
Detection Bandwidth: 40 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 36.354 MHz											

EUT Frequency = 5510MHz (11n-40MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5489	No	No	No	No	No	No	No	No	No	No	0.00%
5490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5530	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5531	No	No	No	Yes	No	No	No	No	No	No	0.00%
Detection Bandwidth: 40 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 36.547 MHz											

EUT Frequency = 5290MHz (11ac-80MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5249	No	No	No	Yes	No	No	No	No	No	No	0.00%
5250	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5255	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5260	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5265	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5270	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5275	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5280	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5285	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5290	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5295	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5300	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5305	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5315	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5320	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5325	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5330	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5331	No	No	No	Yes	No	No	No	No	No	No	0.00%
Detection Bandwidth: 80 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 75.534 MHz											

EUT Frequency = 5530MHz (11ac-80MHz mode)

Frequency (MHz)	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Trial 6	Trial 7	Trial 8	Trial 9	Trial 10	Detection Rate %
5489	No	No	No	Yes	No	No	No	No	No	No	0.00%
5490	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5495	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5500	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5505	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5510	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5515	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5520	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5525	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5530	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5535	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5540	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5545	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5550	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5555	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5560	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5565	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5570	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100.00%
5571	No	No	No	Yes	No	No	No	No	No	No	0.00%
Detection Bandwidth: 80 MHz											
Specification: at least 100% of 99% of EUT bandwidth= 75.615 MHz											

10.1.5.2 Initial Channel Availability Check Time

The Initial Channel Availability Check Time 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 and only needs to be performed one time.

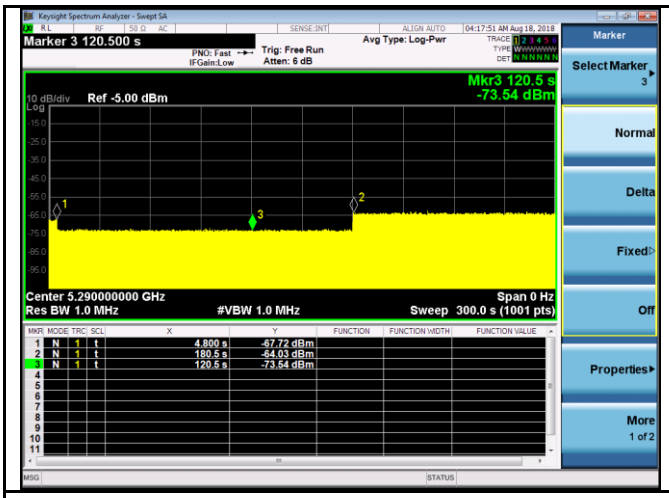
The U-NII device is powered on and be instructed to operate at Low channel, Mid Channel or High channel. At the same time the UUT is powered on, the spectrum analyzer is set to zero span modes with a 3 MHz resolution bandwidth at testing channels with a 3 minute sweep time. The analyzer's sweep will be started the same time power is applied to the UNII device.

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

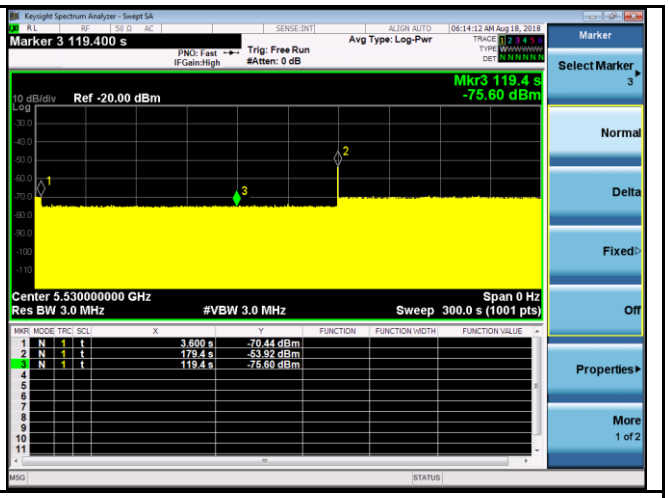
The initial power up time of the UUT is indicated by marker 1 in the plot. Initial beacons/data transmissions are indicated by marker.

Test Plots

FOS:

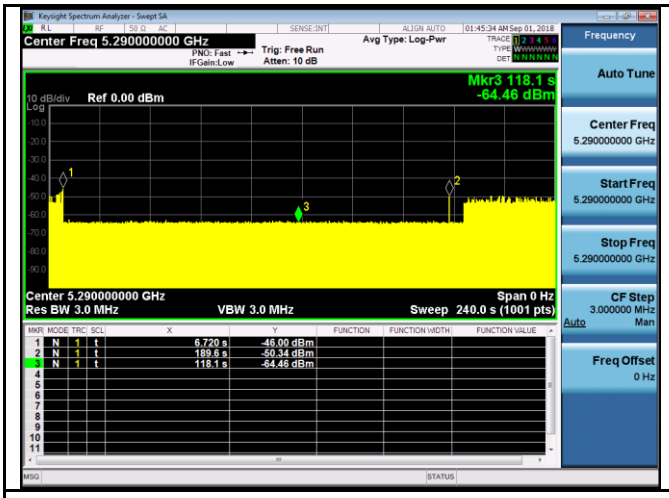


Initial CAC – VHT80 – 5290MHz

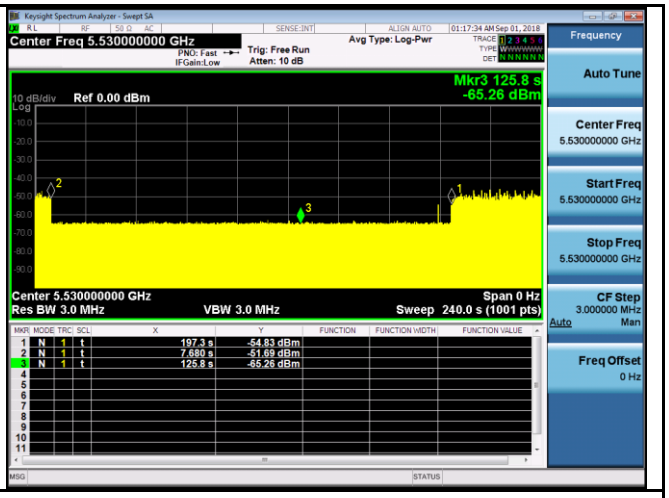


Initial CAC – VHT80 – 5530MHz

MOS:



Initial CAC – VHT80 – 5290MHz



Initial CAC – VHT80 – 5530MHz

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

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 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 0 at -64 dBm will commence within a 6 second window.

Verify that during the 3 minute measurement window no UUT transmissions occurred at mid channel. Visual indication on the UUT of successful detection of the radar Burst will be recorded and reported.
Observation of emissions at center frequency of low channel, mid channel and high channel will continue for 2.5 minutes after the radar Burst has been generated.

Note:

FOS:

For EUT power on cycle time ≈ 115.7 Sec

For CAC at the beginning, the radar signal was injected within 6 sec after 115.7 sec.

For CAC at the end, the radar signal was injected within 6 sec before 175.7 sec.

MOS:

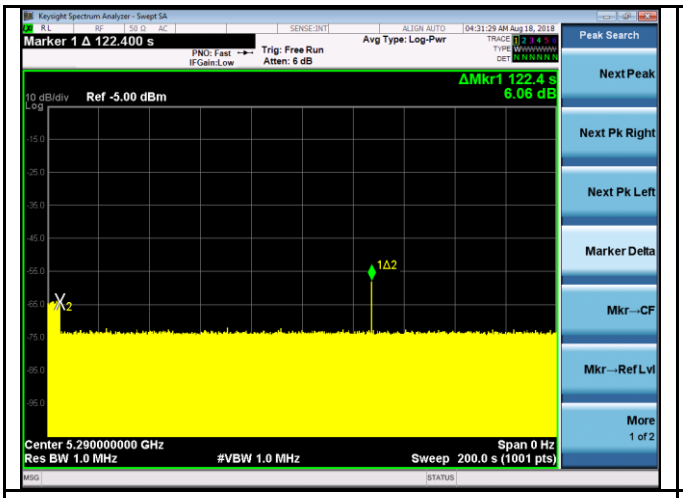
For EUT power on cycle time ≈ 111.38 Sec

For CAC at the beginning, the radar signal was injected within 6 sec after 111.38 sec.

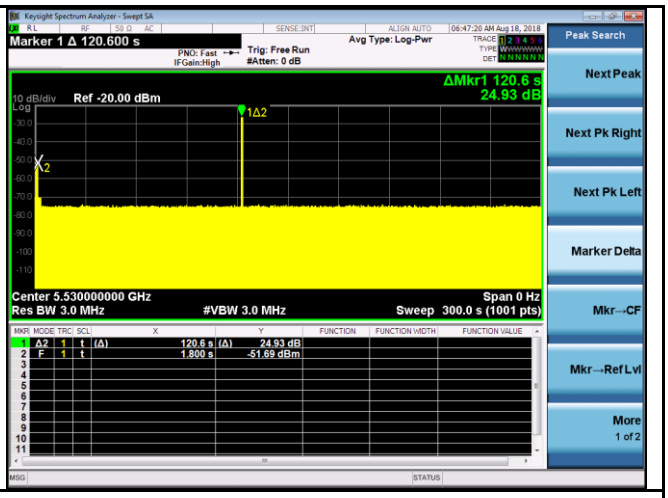
For CAC at the end, the radar signal was injected within 6 sec before 171.38 sec.

Test Plots

FOS:

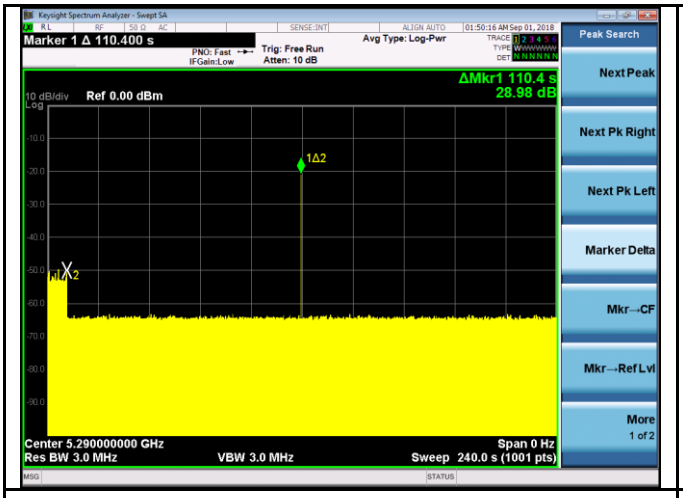


Radar at beginning of CAC – VHT80 – 5290MHz

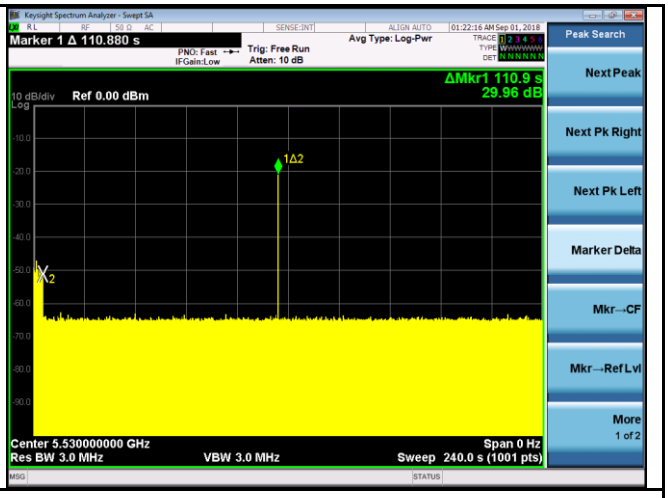


Radar at beginning of CAC – VHT80 – 5530MHz

MOS:



Radar at beginning of CAC – VHT80 – 5290MHz



Radar at beginning of CAC – VHT80 – 5530MHz

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

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 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 0 at -64 dBm will commence within a last 6 second window.

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

Verify that during the 3 minute measurement window no UUT transmissions occurred at mid channel.

Note:

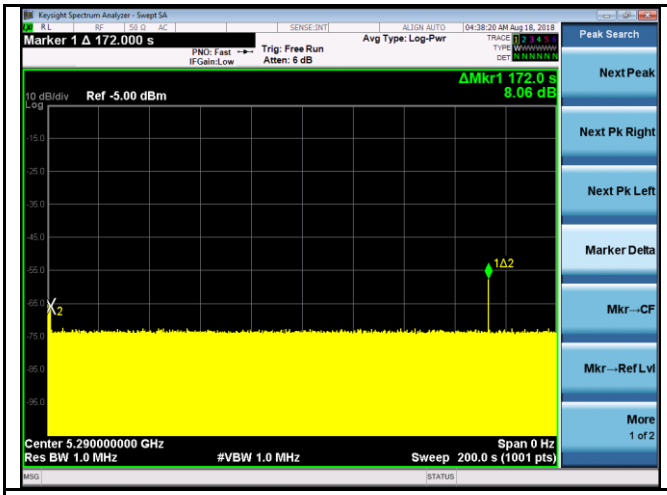
EUT power on cycle time ≈ 51 Sec

For CAC at the beginning, the radar signal was injected within 6 sec after 51 sec.

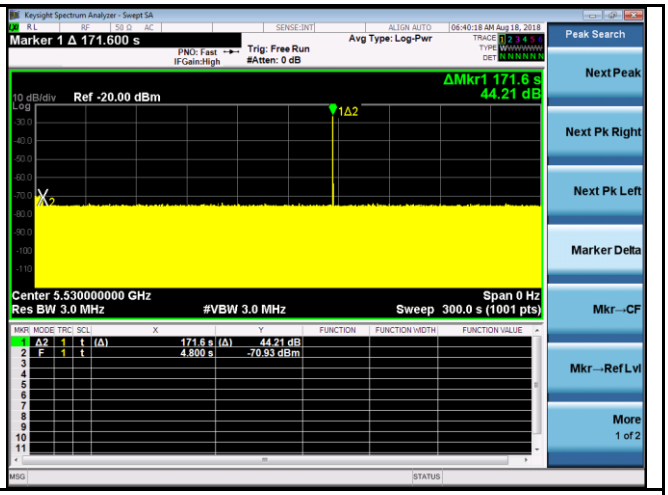
For CAC at the end, the radar signal was injected within 6 sec before 111 sec.

Test Plots

FOS:

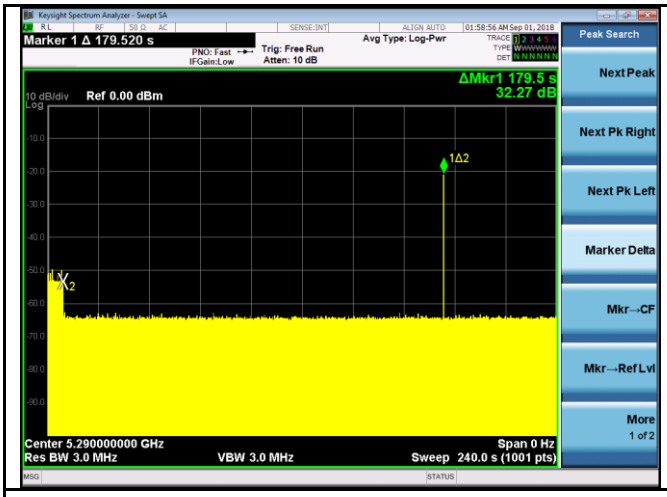


Radar at end of CAC – VHT80 – 5290MHz

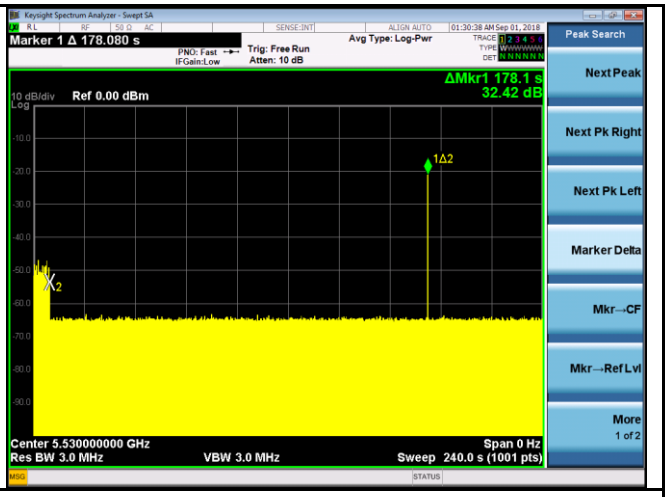


Radar at end of CAC – VHT80 – 5530MHz

MOS:



Radar at end of CAC – VHT80 – 5290MHz



Radar at end of CAC – VHT80 – 5530MHz

10.1.5.5 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 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 Mid Channel. 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 -64dBm.

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.

Channel Closing Transmission Time- Measurement

A type 1 waveform was introduced to the EUT and the Spectrum Analyzer sweep time was set to 1s for monitoring and capturing the plot. A LabView program was created to collect trace data and capturing the plot. The program will calculate the channel closing time base on the spectrum analyzer result. The result will be calculated based on FCC procedure.

C= N*Dwell

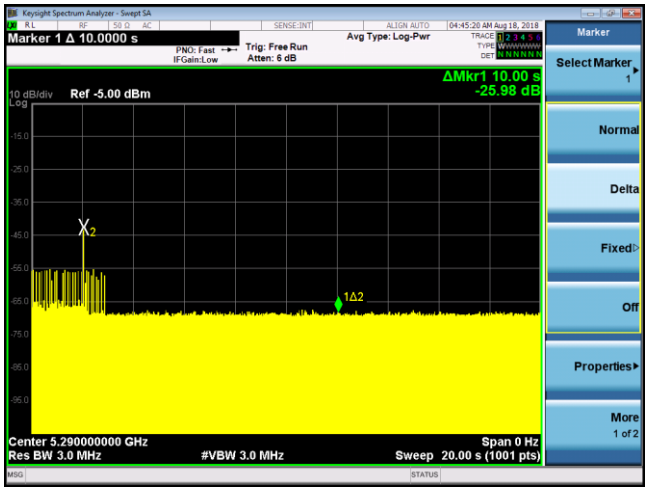
C is the closing time, N is the number of spectrum analyzer sampling bins showing a U-NII transmission and dwell is the dwell time per bin.

Dwell= S/B

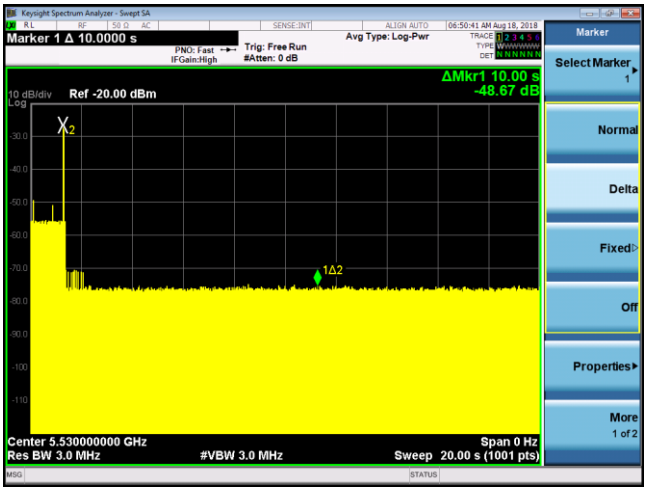
Where Dwell is the dwell time per spectrum analyzer sampling bin, S is the sweep time and B is the number 0f spectrum analyzer sampling bins.

Test Result

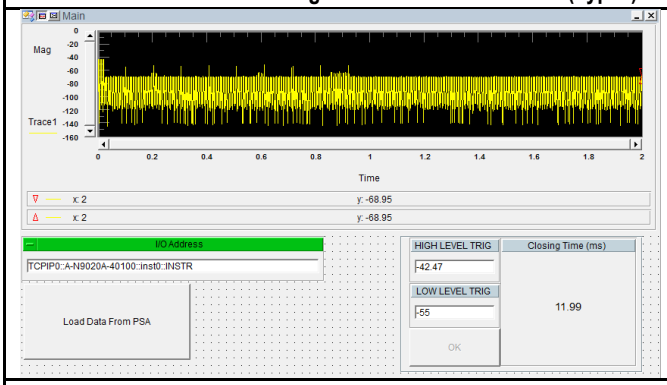
FOS:



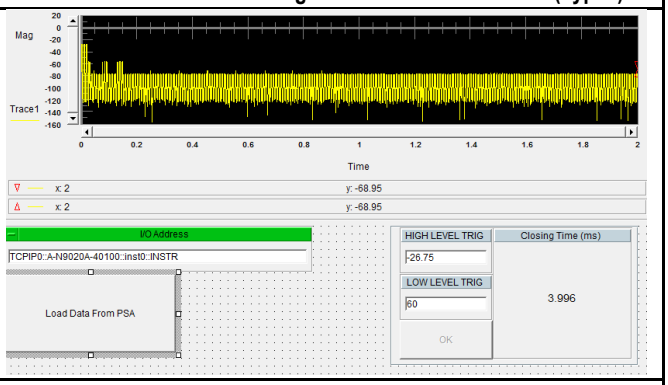
Channel Move Time& Closing Time - 802.11ac-5290MHz (Type0)



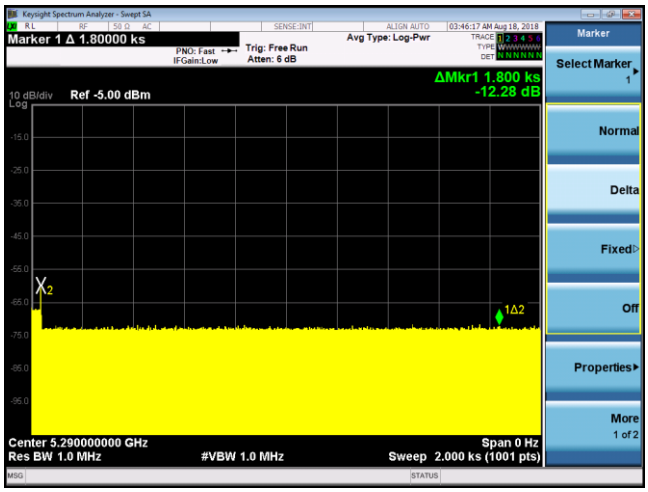
Channel Move Time& Closing Time - 802.11ac-5530MHz (Type0)



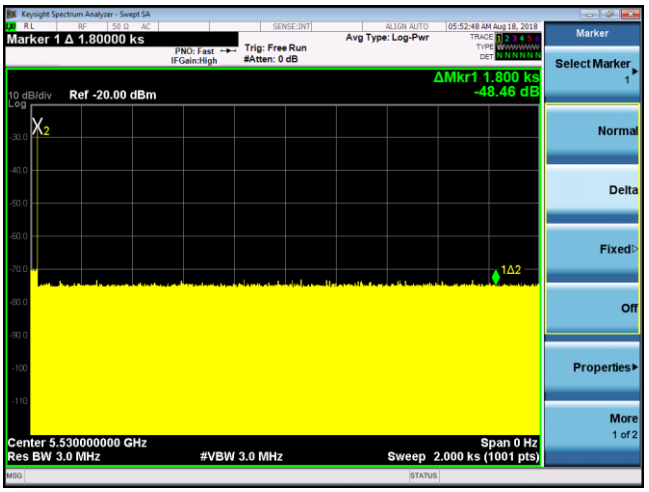
Channel Move Time& Closing Time - 802.11ac-5290MHz (Type0)



Channel Move Time& Closing Time - 802.11ac-5530MHz (Type0)

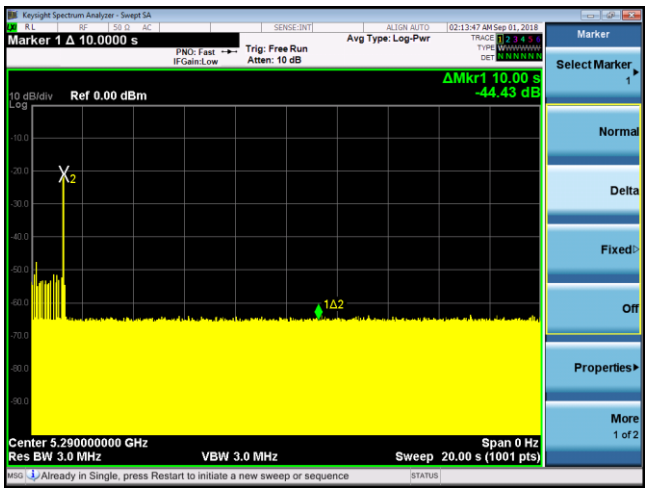


Non-Occupancy Period - 802.11ac-5290MHz

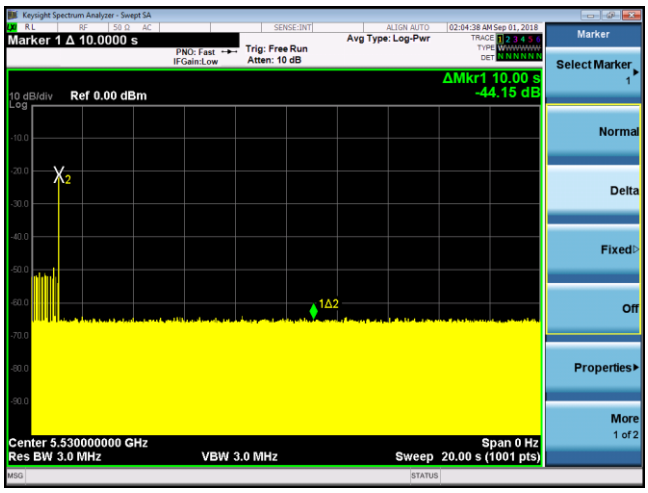


Non-Occupancy Period - 802.11ac-5530MHz

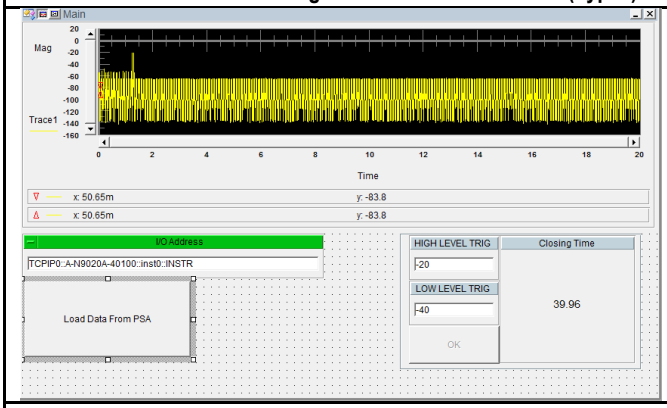
MOS:



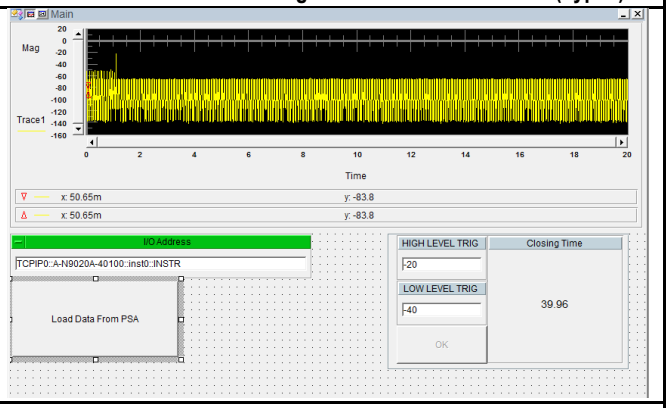
Channel Move Time& Closing Time - 802.11ac-5290MHz (Type0)



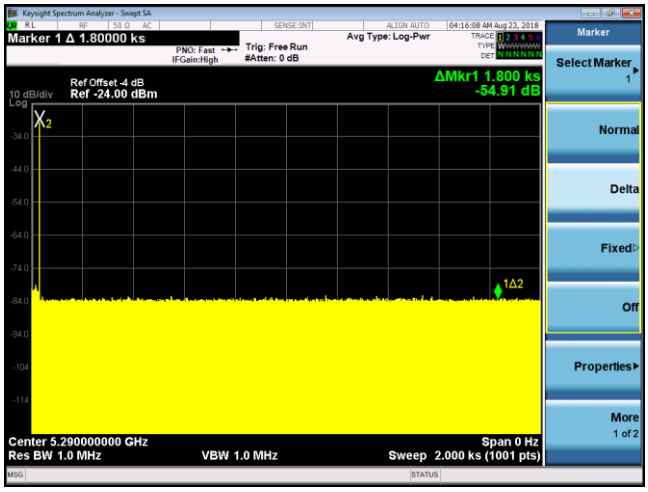
Channel Move Time& Closing Time - 802.11ac-5530MHz (Type0)



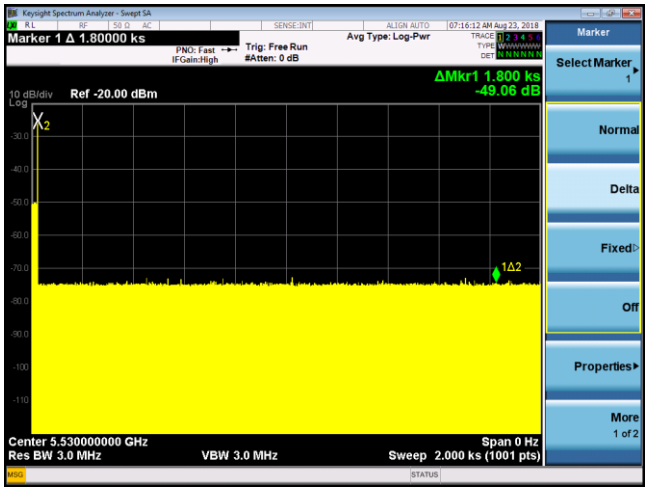
Channel Move Time& Closing Time - 802.11ac-5290MHz (Type0)



Channel Move Time& Closing Time - 802.11ac-5530MHz (Type0)



Non-Occupancy Period - 802.11ac-5290MHz



Non-Occupancy Period - 802.11ac-5530MHz

10.1.5.6 Statistical Performance Check

Statistical Performance Check, 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 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 Low, Mid and High Channel. 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 0-6 at -62dbm. 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

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

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.

FOS:
Test Result-5300MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5300	FCC Radar Type 1	Waveform 1	Completed	Yes
2	5300	FCC Radar Type 1	Waveform 2	Completed	Yes
3	5300	FCC Radar Type 1	Waveform 3	Completed	Yes
4	5300	FCC Radar Type 1	Waveform 4	Completed	Yes
5	5300	FCC Radar Type 1	Waveform 5	Completed	Yes
6	5300	FCC Radar Type 1	Waveform 6	Completed	Yes
7	5300	FCC Radar Type 1	Waveform 7	Completed	Yes
8	5300	FCC Radar Type 1	Waveform 8	Completed	Yes
9	5300	FCC Radar Type 1	Waveform 9	Completed	Yes
10	5300	FCC Radar Type 1	Waveform 10	Completed	Yes
11	5300	FCC Radar Type 1	Waveform 11	Completed	Yes
12	5300	FCC Radar Type 1	Waveform 12	Completed	Yes
13	5300	FCC Radar Type 1	Waveform 13	Completed	Yes
14	5300	FCC Radar Type 1	Waveform 14	Completed	Yes
15	5300	FCC Radar Type 1	Waveform 15	Completed	Yes
16	5300	FCC Radar Type 1	Waveform 16	Completed	Yes
17	5300	FCC Radar Type 1	Waveform 17	Completed	Yes
18	5300	FCC Radar Type 1	Waveform 18	Completed	Yes
19	5300	FCC Radar Type 1	Waveform 19	Completed	Yes
20	5300	FCC Radar Type 1	Waveform 20	Completed	Yes
21	5300	FCC Radar Type 1	Waveform 21	Completed	Yes
22	5300	FCC Radar Type 1	Waveform 22	Completed	Yes
23	5300	FCC Radar Type 1	Waveform 23	Completed	Yes
24	5300	FCC Radar Type 1	Waveform 24	Completed	Yes
25	5300	FCC Radar Type 1	Waveform 25	Completed	Yes
26	5300	FCC Radar Type 1	Waveform 26	Completed	Yes
27	5300	FCC Radar Type 1	Waveform 27	Completed	Yes
28	5300	FCC Radar Type 1	Waveform 28	Completed	Yes
29	5300	FCC Radar Type 1	Waveform 29	Completed	Yes
30	5300	FCC Radar Type 1	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5300MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5300	FCC Radar Type 2	Waveform 1	Completed	Yes
2	5300	FCC Radar Type 2	Waveform 2	Completed	Yes
3	5300	FCC Radar Type 2	Waveform 3	Completed	Yes
4	5300	FCC Radar Type 2	Waveform 4	Completed	Yes
5	5300	FCC Radar Type 2	Waveform 5	Completed	Yes
6	5300	FCC Radar Type 2	Waveform 6	Completed	Yes
7	5300	FCC Radar Type 2	Waveform 7	Completed	Yes
8	5300	FCC Radar Type 2	Waveform 8	Completed	Yes
9	5300	FCC Radar Type 2	Waveform 9	Completed	Yes
10	5300	FCC Radar Type 2	Waveform 10	Completed	Yes
11	5300	FCC Radar Type 2	Waveform 11	Completed	Yes
12	5300	FCC Radar Type 2	Waveform 12	Completed	Yes
13	5300	FCC Radar Type 2	Waveform 13	Completed	Yes
14	5300	FCC Radar Type 2	Waveform 14	Completed	Yes
15	5300	FCC Radar Type 2	Waveform 15	Completed	Yes
16	5300	FCC Radar Type 2	Waveform 16	Completed	Yes
17	5300	FCC Radar Type 2	Waveform 17	Completed	Yes
18	5300	FCC Radar Type 2	Waveform 18	Completed	Yes
19	5300	FCC Radar Type 2	Waveform 19	Completed	Yes
20	5300	FCC Radar Type 2	Waveform 20	Completed	Yes
21	5300	FCC Radar Type 2	Waveform 21	Completed	Yes
22	5300	FCC Radar Type 2	Waveform 22	Completed	Yes
23	5300	FCC Radar Type 2	Waveform 23	Completed	Yes
24	5300	FCC Radar Type 2	Waveform 24	Completed	Yes
25	5300	FCC Radar Type 2	Waveform 25	Completed	Yes
26	5300	FCC Radar Type 2	Waveform 26	Completed	Yes
27	5300	FCC Radar Type 2	Waveform 27	Completed	Yes
28	5300	FCC Radar Type 2	Waveform 28	Completed	Yes
29	5300	FCC Radar Type 2	Waveform 29	Completed	Yes
30	5300	FCC Radar Type 2	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5300MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5300	FCC Radar Type 3	Waveform 1	Completed	Yes
2	5300	FCC Radar Type 3	Waveform 2	Completed	Yes
3	5300	FCC Radar Type 3	Waveform 3	Completed	Yes
4	5300	FCC Radar Type 3	Waveform 4	Completed	Yes
5	5300	FCC Radar Type 3	Waveform 5	Completed	Yes
6	5300	FCC Radar Type 3	Waveform 6	Completed	Yes
7	5300	FCC Radar Type 3	Waveform 7	Completed	Yes
8	5300	FCC Radar Type 3	Waveform 8	Completed	Yes
9	5300	FCC Radar Type 3	Waveform 9	Completed	Yes
10	5300	FCC Radar Type 3	Waveform 10	Completed	Yes
11	5300	FCC Radar Type 3	Waveform 11	Completed	Yes
12	5300	FCC Radar Type 3	Waveform 12	Completed	Yes
13	5300	FCC Radar Type 3	Waveform 13	Completed	Yes
14	5300	FCC Radar Type 3	Waveform 14	Completed	Yes
15	5300	FCC Radar Type 3	Waveform 15	Completed	Yes
16	5300	FCC Radar Type 3	Waveform 16	Completed	Yes
17	5300	FCC Radar Type 3	Waveform 17	Completed	Yes
18	5300	FCC Radar Type 3	Waveform 18	Completed	Yes
19	5300	FCC Radar Type 3	Waveform 19	Completed	Yes
20	5300	FCC Radar Type 3	Waveform 20	Completed	Yes
21	5300	FCC Radar Type 3	Waveform 21	Completed	Yes
22	5300	FCC Radar Type 3	Waveform 22	Completed	Yes
23	5300	FCC Radar Type 3	Waveform 23	Completed	Yes
24	5300	FCC Radar Type 3	Waveform 24	Completed	Yes
25	5300	FCC Radar Type 3	Waveform 25	Completed	Yes
26	5300	FCC Radar Type 3	Waveform 26	Completed	Yes
27	5300	FCC Radar Type 3	Waveform 27	Completed	Yes
28	5300	FCC Radar Type 3	Waveform 28	Completed	Yes
29	5300	FCC Radar Type 3	Waveform 29	Completed	Yes
30	5300	FCC Radar Type 3	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5300MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5300	FCC Radar Type 4	Waveform 1	Completed	Yes
2	5300	FCC Radar Type 4	Waveform 2	Completed	Yes
3	5300	FCC Radar Type 4	Waveform 3	Completed	Yes
4	5300	FCC Radar Type 4	Waveform 4	Completed	Yes
5	5300	FCC Radar Type 4	Waveform 5	Completed	Yes
6	5300	FCC Radar Type 4	Waveform 6	Completed	Yes
7	5300	FCC Radar Type 4	Waveform 7	Completed	Yes
8	5300	FCC Radar Type 4	Waveform 8	Completed	Yes
9	5300	FCC Radar Type 4	Waveform 9	Completed	Yes
10	5300	FCC Radar Type 4	Waveform 10	Completed	Yes
11	5300	FCC Radar Type 4	Waveform 11	Completed	Yes
12	5300	FCC Radar Type 4	Waveform 12	Completed	Yes
13	5300	FCC Radar Type 4	Waveform 13	Completed	Yes
14	5300	FCC Radar Type 4	Waveform 14	Completed	Yes
15	5300	FCC Radar Type 4	Waveform 15	Completed	Yes
16	5300	FCC Radar Type 4	Waveform 16	Completed	Yes
17	5300	FCC Radar Type 4	Waveform 17	Completed	Yes
18	5300	FCC Radar Type 4	Waveform 18	Completed	Yes
19	5300	FCC Radar Type 4	Waveform 19	Completed	Yes
20	5300	FCC Radar Type 4	Waveform 20	Completed	Yes
21	5300	FCC Radar Type 4	Waveform 21	Completed	Yes
22	5300	FCC Radar Type 4	Waveform 22	Completed	Yes
23	5300	FCC Radar Type 4	Waveform 23	Completed	Yes
24	5300	FCC Radar Type 4	Waveform 24	Completed	Yes
25	5300	FCC Radar Type 4	Waveform 25	Completed	Yes
26	5300	FCC Radar Type 4	Waveform 26	Completed	Yes
27	5300	FCC Radar Type 4	Waveform 27	Completed	Yes
28	5300	FCC Radar Type 4	Waveform 28	Completed	Yes
29	5300	FCC Radar Type 4	Waveform 29	Completed	Yes
30	5300	FCC Radar Type 4	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5300MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5307	FCC Radar Type 5	Waveform 1	Completed	No
2	5301	FCC Radar Type 5	Waveform 2	Completed	Yes
3	5306	FCC Radar Type 5	Waveform 3	Completed	Yes
4	5306	FCC Radar Type 5	Waveform 4	Completed	Yes
5	5305	FCC Radar Type 5	Waveform 5	Completed	Yes
6	5306	FCC Radar Type 5	Waveform 6	Completed	Yes
7	5303	FCC Radar Type 5	Waveform 7	Completed	Yes
8	5302	FCC Radar Type 5	Waveform 8	Completed	Yes
9	5301	FCC Radar Type 5	Waveform 9	Completed	Yes
10	5302	FCC Radar Type 5	Waveform 10	Completed	Yes
11	5306	FCC Radar Type 5	Waveform 11	Completed	Yes
12	5305	FCC Radar Type 5	Waveform 12	Completed	Yes
13	5301	FCC Radar Type 5	Waveform 13	Completed	Yes
14	5302	FCC Radar Type 5	Waveform 14	Completed	Yes
15	5307	FCC Radar Type 5	Waveform 15	Completed	Yes
16	5299	FCC Radar Type 5	Waveform 16	Completed	Yes
17	5299	FCC Radar Type 5	Waveform 17	Completed	Yes
18	5299	FCC Radar Type 5	Waveform 18	Completed	Yes
19	5294	FCC Radar Type 5	Waveform 19	Completed	No
20	5294	FCC Radar Type 5	Waveform 20	Completed	Yes
21	5294	FCC Radar Type 5	Waveform 21	Completed	Yes
22	5296	FCC Radar Type 5	Waveform 22	Completed	Yes
23	5294	FCC Radar Type 5	Waveform 23	Completed	Yes
24	5297	FCC Radar Type 5	Waveform 24	Completed	Yes
25	5297	FCC Radar Type 5	Waveform 25	Completed	Yes
26	5295	FCC Radar Type 5	Waveform 26	Completed	Yes
27	5296	FCC Radar Type 5	Waveform 27	Completed	Yes
28	5297	FCC Radar Type 5	Waveform 28	Completed	Yes
29	5296	FCC Radar Type 5	Waveform 29	Completed	Yes
30	5298	FCC Radar Type 5	Waveform 30	Completed	Yes
					Detection Probability Rate %: 93.33

Note: Radar waveform center frequencies are selected based on section 7.8.4.2 Long Pulse Radar Test of 905462 D02 UNII DFS Compliance Procedures New Rules v02.

Test Result-5300MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5300	FCC Radar Type 6	Waveform 1	Completed	Yes
2	5300	FCC Radar Type 6	Waveform 2	Completed	Yes
3	5300	FCC Radar Type 6	Waveform 3	Completed	Yes
4	5300	FCC Radar Type 6	Waveform 4	Completed	Yes
5	5300	FCC Radar Type 6	Waveform 5	Completed	Yes
6	5300	FCC Radar Type 6	Waveform 6	Completed	Yes
7	5300	FCC Radar Type 6	Waveform 7	Completed	Yes
8	5300	FCC Radar Type 6	Waveform 8	Completed	Yes
9	5300	FCC Radar Type 6	Waveform 9	Completed	Yes
10	5300	FCC Radar Type 6	Waveform 10	Completed	Yes
11	5300	FCC Radar Type 6	Waveform 11	Completed	Yes
12	5300	FCC Radar Type 6	Waveform 12	Completed	Yes
13	5300	FCC Radar Type 6	Waveform 13	Completed	Yes
14	5300	FCC Radar Type 6	Waveform 14	Completed	Yes
15	5300	FCC Radar Type 6	Waveform 15	Completed	Yes
16	5300	FCC Radar Type 6	Waveform 16	Completed	Yes
17	5300	FCC Radar Type 6	Waveform 17	Completed	Yes
18	5300	FCC Radar Type 6	Waveform 18	Completed	Yes
19	5300	FCC Radar Type 6	Waveform 19	Completed	Yes
20	5300	FCC Radar Type 6	Waveform 20	Completed	Yes
21	5300	FCC Radar Type 6	Waveform 21	Completed	Yes
22	5300	FCC Radar Type 6	Waveform 22	Completed	Yes
23	5300	FCC Radar Type 6	Waveform 23	Completed	Yes
24	5300	FCC Radar Type 6	Waveform 24	Completed	Yes
25	5300	FCC Radar Type 6	Waveform 25	Completed	Yes
26	5300	FCC Radar Type 6	Waveform 26	Completed	Yes
27	5300	FCC Radar Type 6	Waveform 27	Completed	Yes
28	5300	FCC Radar Type 6	Waveform 28	Completed	Yes
29	5300	FCC Radar Type 6	Waveform 29	Completed	Yes
30	5300	FCC Radar Type 6	Waveform 30	Completed	Yes
Detection Probability Rate %: 100.00					

Test Result-5500MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5500	FCC Radar Type 1	Waveform 1	Completed	Yes
2	5500	FCC Radar Type 1	Waveform 2	Completed	Yes
3	5500	FCC Radar Type 1	Waveform 3	Completed	Yes
4	5500	FCC Radar Type 1	Waveform 4	Completed	Yes
5	5500	FCC Radar Type 1	Waveform 5	Completed	Yes
6	5500	FCC Radar Type 1	Waveform 6	Completed	Yes
7	5500	FCC Radar Type 1	Waveform 7	Completed	Yes
8	5500	FCC Radar Type 1	Waveform 8	Completed	Yes
9	5500	FCC Radar Type 1	Waveform 9	Completed	Yes
10	5500	FCC Radar Type 1	Waveform 10	Completed	Yes
11	5500	FCC Radar Type 1	Waveform 11	Completed	Yes
12	5500	FCC Radar Type 1	Waveform 12	Completed	Yes
13	5500	FCC Radar Type 1	Waveform 13	Completed	Yes
14	5500	FCC Radar Type 1	Waveform 14	Completed	Yes
15	5500	FCC Radar Type 1	Waveform 15	Completed	Yes
16	5500	FCC Radar Type 1	Waveform 16	Completed	Yes
17	5500	FCC Radar Type 1	Waveform 17	Completed	Yes
18	5500	FCC Radar Type 1	Waveform 18	Completed	Yes
19	5500	FCC Radar Type 1	Waveform 19	Completed	Yes
20	5500	FCC Radar Type 1	Waveform 20	Completed	Yes
21	5500	FCC Radar Type 1	Waveform 21	Completed	Yes
22	5500	FCC Radar Type 1	Waveform 22	Completed	Yes
23	5500	FCC Radar Type 1	Waveform 23	Completed	Yes
24	5500	FCC Radar Type 1	Waveform 24	Completed	Yes
25	5500	FCC Radar Type 1	Waveform 25	Completed	Yes
26	5500	FCC Radar Type 1	Waveform 26	Completed	Yes
27	5500	FCC Radar Type 1	Waveform 27	Completed	Yes
28	5500	FCC Radar Type 1	Waveform 28	Completed	Yes
29	5500	FCC Radar Type 1	Waveform 29	Completed	Yes
30	5500	FCC Radar Type 1	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5500MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5500	FCC Radar Type 2	Waveform 1	Completed	Yes
2	5500	FCC Radar Type 2	Waveform 2	Completed	Yes
3	5500	FCC Radar Type 2	Waveform 3	Completed	Yes
4	5500	FCC Radar Type 2	Waveform 4	Completed	Yes
5	5500	FCC Radar Type 2	Waveform 5	Completed	Yes
6	5500	FCC Radar Type 2	Waveform 6	Completed	Yes
7	5500	FCC Radar Type 2	Waveform 7	Completed	Yes
8	5500	FCC Radar Type 2	Waveform 8	Completed	Yes
9	5500	FCC Radar Type 2	Waveform 9	Completed	Yes
10	5500	FCC Radar Type 2	Waveform 10	Completed	Yes
11	5500	FCC Radar Type 2	Waveform 11	Completed	Yes
12	5500	FCC Radar Type 2	Waveform 12	Completed	Yes
13	5500	FCC Radar Type 2	Waveform 13	Completed	Yes
14	5500	FCC Radar Type 2	Waveform 14	Completed	Yes
15	5500	FCC Radar Type 2	Waveform 15	Completed	Yes
16	5500	FCC Radar Type 2	Waveform 16	Completed	Yes
17	5500	FCC Radar Type 2	Waveform 17	Completed	Yes
18	5500	FCC Radar Type 2	Waveform 18	Completed	Yes
19	5500	FCC Radar Type 2	Waveform 19	Completed	Yes
20	5500	FCC Radar Type 2	Waveform 20	Completed	Yes
21	5500	FCC Radar Type 2	Waveform 21	Completed	Yes
22	5500	FCC Radar Type 2	Waveform 22	Completed	Yes
23	5500	FCC Radar Type 2	Waveform 23	Completed	Yes
24	5500	FCC Radar Type 2	Waveform 24	Completed	Yes
25	5500	FCC Radar Type 2	Waveform 25	Completed	Yes
26	5500	FCC Radar Type 2	Waveform 26	Completed	Yes
27	5500	FCC Radar Type 2	Waveform 27	Completed	Yes
28	5500	FCC Radar Type 2	Waveform 28	Completed	Yes
29	5500	FCC Radar Type 2	Waveform 29	Completed	Yes
30	5500	FCC Radar Type 2	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5500MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5500	FCC Radar Type 3	Waveform 1	Completed	Yes
2	5500	FCC Radar Type 3	Waveform 2	Completed	Yes
3	5500	FCC Radar Type 3	Waveform 3	Completed	Yes
4	5500	FCC Radar Type 3	Waveform 4	Completed	Yes
5	5500	FCC Radar Type 3	Waveform 5	Completed	Yes
6	5500	FCC Radar Type 3	Waveform 6	Completed	Yes
7	5500	FCC Radar Type 3	Waveform 7	Completed	Yes
8	5500	FCC Radar Type 3	Waveform 8	Completed	Yes
9	5500	FCC Radar Type 3	Waveform 9	Completed	Yes
10	5500	FCC Radar Type 3	Waveform 10	Completed	Yes
11	5500	FCC Radar Type 3	Waveform 11	Completed	Yes
12	5500	FCC Radar Type 3	Waveform 12	Completed	Yes
13	5500	FCC Radar Type 3	Waveform 13	Completed	Yes
14	5500	FCC Radar Type 3	Waveform 14	Completed	Yes
15	5500	FCC Radar Type 3	Waveform 15	Completed	Yes
16	5500	FCC Radar Type 3	Waveform 16	Completed	Yes
17	5500	FCC Radar Type 3	Waveform 17	Completed	Yes
18	5500	FCC Radar Type 3	Waveform 18	Completed	Yes
19	5500	FCC Radar Type 3	Waveform 19	Completed	Yes
20	5500	FCC Radar Type 3	Waveform 20	Completed	Yes
21	5500	FCC Radar Type 3	Waveform 21	Completed	Yes
22	5500	FCC Radar Type 3	Waveform 22	Completed	Yes
23	5500	FCC Radar Type 3	Waveform 23	Completed	Yes
24	5500	FCC Radar Type 3	Waveform 24	Completed	Yes
25	5500	FCC Radar Type 3	Waveform 25	Completed	Yes
26	5500	FCC Radar Type 3	Waveform 26	Completed	Yes
27	5500	FCC Radar Type 3	Waveform 27	Completed	Yes
28	5500	FCC Radar Type 3	Waveform 28	Completed	Yes
29	5500	FCC Radar Type 3	Waveform 29	Completed	Yes
30	5500	FCC Radar Type 3	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5500MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5500	FCC Radar Type 4	Waveform 1	Completed	Yes
2	5500	FCC Radar Type 4	Waveform 2	Completed	Yes
3	5500	FCC Radar Type 4	Waveform 3	Completed	Yes
4	5500	FCC Radar Type 4	Waveform 4	Completed	Yes
5	5500	FCC Radar Type 4	Waveform 5	Completed	Yes
6	5500	FCC Radar Type 4	Waveform 6	Completed	Yes
7	5500	FCC Radar Type 4	Waveform 7	Completed	Yes
8	5500	FCC Radar Type 4	Waveform 8	Completed	Yes
9	5500	FCC Radar Type 4	Waveform 9	Completed	Yes
10	5500	FCC Radar Type 4	Waveform 10	Completed	Yes
11	5500	FCC Radar Type 4	Waveform 11	Completed	Yes
12	5500	FCC Radar Type 4	Waveform 12	Completed	Yes
13	5500	FCC Radar Type 4	Waveform 13	Completed	Yes
14	5500	FCC Radar Type 4	Waveform 14	Completed	Yes
15	5500	FCC Radar Type 4	Waveform 15	Completed	Yes
16	5500	FCC Radar Type 4	Waveform 16	Completed	Yes
17	5500	FCC Radar Type 4	Waveform 17	Completed	Yes
18	5500	FCC Radar Type 4	Waveform 18	Completed	Yes
19	5500	FCC Radar Type 4	Waveform 19	Completed	Yes
20	5500	FCC Radar Type 4	Waveform 20	Completed	Yes
21	5500	FCC Radar Type 4	Waveform 21	Completed	Yes
22	5500	FCC Radar Type 4	Waveform 22	Completed	Yes
23	5500	FCC Radar Type 4	Waveform 23	Completed	Yes
24	5500	FCC Radar Type 4	Waveform 24	Completed	Yes
25	5500	FCC Radar Type 4	Waveform 25	Completed	Yes
26	5500	FCC Radar Type 4	Waveform 26	Completed	Yes
27	5500	FCC Radar Type 4	Waveform 27	Completed	Yes
28	5500	FCC Radar Type 4	Waveform 28	Completed	Yes
29	5500	FCC Radar Type 4	Waveform 29	Completed	Yes
30	5500	FCC Radar Type 4	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00

Test Result-5500MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5500	FCC Radar Type 5	Waveform 1	Completed	Yes
2	5500	FCC Radar Type 5	Waveform 2	Completed	Yes
3	5501	FCC Radar Type 5	Waveform 3	Completed	Yes
4	5506	FCC Radar Type 5	Waveform 4	Completed	Yes
5	5504	FCC Radar Type 5	Waveform 5	Completed	Yes
6	5501	FCC Radar Type 5	Waveform 6	Completed	Yes
7	5502	FCC Radar Type 5	Waveform 7	Completed	Yes
8	5505	FCC Radar Type 5	Waveform 8	Completed	Yes
9	5506	FCC Radar Type 5	Waveform 9	Completed	Yes
10	5501	FCC Radar Type 5	Waveform 10	Completed	Yes
11	5507	FCC Radar Type 5	Waveform 11	Completed	No
12	5503	FCC Radar Type 5	Waveform 12	Completed	Yes
13	5503	FCC Radar Type 5	Waveform 13	Completed	Yes
14	5506	FCC Radar Type 5	Waveform 14	Completed	Yes
15	5505	FCC Radar Type 5	Waveform 15	Completed	Yes
16	5494	FCC Radar Type 5	Waveform 16	Completed	Yes
17	5495	FCC Radar Type 5	Waveform 17	Completed	Yes
18	5500	FCC Radar Type 5	Waveform 18	Completed	Yes
19	5496	FCC Radar Type 5	Waveform 19	Completed	Yes
20	5495	FCC Radar Type 5	Waveform 20	Completed	Yes
21	5493	FCC Radar Type 5	Waveform 21	Completed	No
22	5493	FCC Radar Type 5	Waveform 22	Completed	No
23	5494	FCC Radar Type 5	Waveform 23	Completed	Yes
24	5496	FCC Radar Type 5	Waveform 24	Completed	Yes
25	5495	FCC Radar Type 5	Waveform 25	Completed	Yes
26	5498	FCC Radar Type 5	Waveform 26	Completed	Yes
27	5498	FCC Radar Type 5	Waveform 27	Completed	Yes
28	5499	FCC Radar Type 5	Waveform 28	Completed	Yes
29	5499	FCC Radar Type 5	Waveform 29	Completed	Yes
30	5496	FCC Radar Type 5	Waveform 30	Completed	Yes
					Detection Probability Rate %: 90.00

Note: Radar waveform center frequencies are selected based on section 7.8.4.2 Long Pulse Radar Test of 905462 D02 UNII DFS Compliance Procedures New Rules v02.

Test Result-5500MHz – 20MHz

Trials	Frequency (MHz)	Radar Type	Waveform Type	Status	Result
1	5500	FCC Radar Type 6	Waveform 1	Completed	Yes
2	5500	FCC Radar Type 6	Waveform 2	Completed	Yes
3	5500	FCC Radar Type 6	Waveform 3	Completed	Yes
4	5500	FCC Radar Type 6	Waveform 4	Completed	Yes
5	5500	FCC Radar Type 6	Waveform 5	Completed	Yes
6	5500	FCC Radar Type 6	Waveform 6	Completed	Yes
7	5500	FCC Radar Type 6	Waveform 7	Completed	Yes
8	5500	FCC Radar Type 6	Waveform 8	Completed	Yes
9	5500	FCC Radar Type 6	Waveform 9	Completed	Yes
10	5500	FCC Radar Type 6	Waveform 10	Completed	Yes
11	5500	FCC Radar Type 6	Waveform 11	Completed	Yes
12	5500	FCC Radar Type 6	Waveform 12	Completed	Yes
13	5500	FCC Radar Type 6	Waveform 13	Completed	Yes
14	5500	FCC Radar Type 6	Waveform 14	Completed	Yes
15	5500	FCC Radar Type 6	Waveform 15	Completed	Yes
16	5500	FCC Radar Type 6	Waveform 16	Completed	Yes
17	5500	FCC Radar Type 6	Waveform 17	Completed	Yes
18	5500	FCC Radar Type 6	Waveform 18	Completed	Yes
19	5500	FCC Radar Type 6	Waveform 19	Completed	Yes
20	5500	FCC Radar Type 6	Waveform 20	Completed	Yes
21	5500	FCC Radar Type 6	Waveform 21	Completed	Yes
22	5500	FCC Radar Type 6	Waveform 22	Completed	Yes
23	5500	FCC Radar Type 6	Waveform 23	Completed	Yes
24	5500	FCC Radar Type 6	Waveform 24	Completed	Yes
25	5500	FCC Radar Type 6	Waveform 25	Completed	Yes
26	5500	FCC Radar Type 6	Waveform 26	Completed	Yes
27	5500	FCC Radar Type 6	Waveform 27	Completed	Yes
28	5500	FCC Radar Type 6	Waveform 28	Completed	Yes
29	5500	FCC Radar Type 6	Waveform 29	Completed	Yes
30	5500	FCC Radar Type 6	Waveform 30	Completed	Yes
					Detection Probability Rate %: 100.00