UNIFIED COMPLIANCE LABORATORY

427 West 12800 South
Draper, UT 84020

Test Report

Certification

FCC ID	SWX-U6MESHP
ISED ID	6545A-U6MESHP
Equipment Under Test	U6-Mesh-Pro
Test Report Serial Number	TR8714_01
Date of Test(s)	6 – 7, 14, 28 – 29 December 2023 and 4 – 9 January 2024
Report Issue Date	9 January 2024

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.

NVLAP TESTING ilac-MRA

NVLAP LAB CODE 600241-0

Certification of Engineering Report

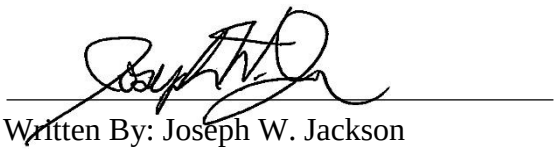
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Model Number	U6-Mesh-Pro
FCC ID	SWX-U6MESHP
ISED ID	6545A-U6MESHP

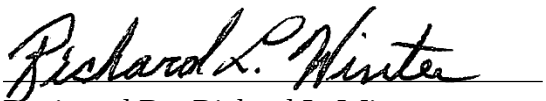
On this 9th day of January 2024, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete and correct to the best of my knowledge and are made in good faith.

Although NVLAP has accredited the Unified Compliance Laboratory testing facilities, this report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. federal government.

Unified Compliance Laboratory



Written By: Joseph W. Jackson



Reviewed By: Richard L. Winter

Revision History		
Revision	**Description**	**Date**
01	Original Report Release	9 January 2024

Table of Contents

1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Alex Macon
Title	Compliance

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Alex Macon
Title	Compliance

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UBIQUITI
Model Number	U6-Mesh-Pro
Serial Number	1FA1CC
Dimensions (cm)	34.3 x 18.1 x 6.0

2.2 Description of EUT

The U6-Mesh-Pro is a four-stream Wi-Fi 6 access point that delivers up to 2.4 Gbps aggregate radio rate with 2X2 5 GHz (DL/UL MU-MIMO) and 2.4 GHz (DL/UL MU-MIMO) radios.

Band	Modulation Bandwidth	Frequency (MHz)
UNII-2A	20 MHz	5260, 5265, 5270, 5275, 5280, 5285, 5290, 5295, 5300, 5305, 5310, 5315, 5320
	40 MHz	5270, 5275, 5280, 5285, 5290, 5295, 5300, 5305, 5310
	80 MHz	5290
	160 MHz	5250
UNII-2C	20 MHz	5500, 5505, 5510, 5515, 5520, 5525, 5530, 5535, 5540, 5545, 5550, 5555, 5560, 5565, 5570, 5575, 5580, 5585, 5590, 5595, 5600*, 5605*, 5610*, 5615*, 5620*, 5625*, 5630*, 5635*, 5640*, 5645*, 5650, 5655, 5660, 5665, 5670, 5675, 5680, 5685, 5690, 5695, 5700, 5705, 5710, 5715, 5720
	40 MHz	5510, 5515, 5520, 5525, 5530, 5535, 5540, 5545, 5550, 5555, 5560, 5565, 5570, 5575, 5580, 5585, 5590, 5595, 5600*, 5605*, 5610*, 5615*, 5620*, 5625*, 5630*, 5635*, 5640*, 5645*, 5650, 5655, 5660, 5665, 5670, 5675, 5680, 5685, 5690, 5695, 5700, 5705, 5710
	80 MHz	5530, 5535, 5540, 5545, 5550, 5555, 5560, 5565, 5570, 5575, 5580, 5585, 5590, 5595, 5600*, 5605*, 5610*, 5615*, 5620*, 5625*, 5630*, 5635*, 5640*, 5645*, 5650, 5655, 5660, 5665, 5670, 5675, 5680, 5685, 5690
	160 MHz	5570
* Frequency not applicable in Canada		

Table 1: UNII-2A and UNII-2C Channel Settings

This report covers the circuitry of the device subject to FCC Part 15, Subpart E. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory test report.

2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name Model Number Serial Number	Description	Name of Interface Ports / Interface Cables
BN: UBIQUITI MN: U6-Mesh-Pro (Note 1) SN: 1FA1CC	WiFi Access Point	See Section 2.4
BN: UBIQUITI MN: UPOE-at (Note 1) SN: N/A	PoE Power Adapter	Shielded or Un-Shielded Cat 5e cable (Note 2)
BN: Dell MN: XPS 13 SN: N/A	Laptop PC	Shielded or Un-Shielded Cat 5e cable (Note 2)

Notes: (1) EUT
(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
Data	1	Shielded Cat 5e cable/8meters
AC (PoE Injector)	1	3 conductor power cord/80cm
LAN (PoE Injector)	1	Un-shielded Cat 5e cable/1 meter

2.5 Operating Environment

Power Supply	120 Volts AC to 48 Volts PoE
AC Mains Frequency	60 Hz
Temperature	21.5 – 23.4 °C
Humidity	17.0 – 24.6 %
Barometric Pressure	1013 mBar

2.6 Operating Modes

The U6-Mesh-Pro was tested using test software in order to enable to constant transmission. The measurements within this report are corrected to reference a 100% duty cycle. All emission modes of 802.11 a/ax were investigated. All measurements are reported with the worst-case mode (802.11ax) unless otherwise stated.

2.7 EUT Exercise Software

EUT firmware version 1.0 was used to operate the transmitter using a constant transmit mode.

2.8 Block Diagram of Test Configuration

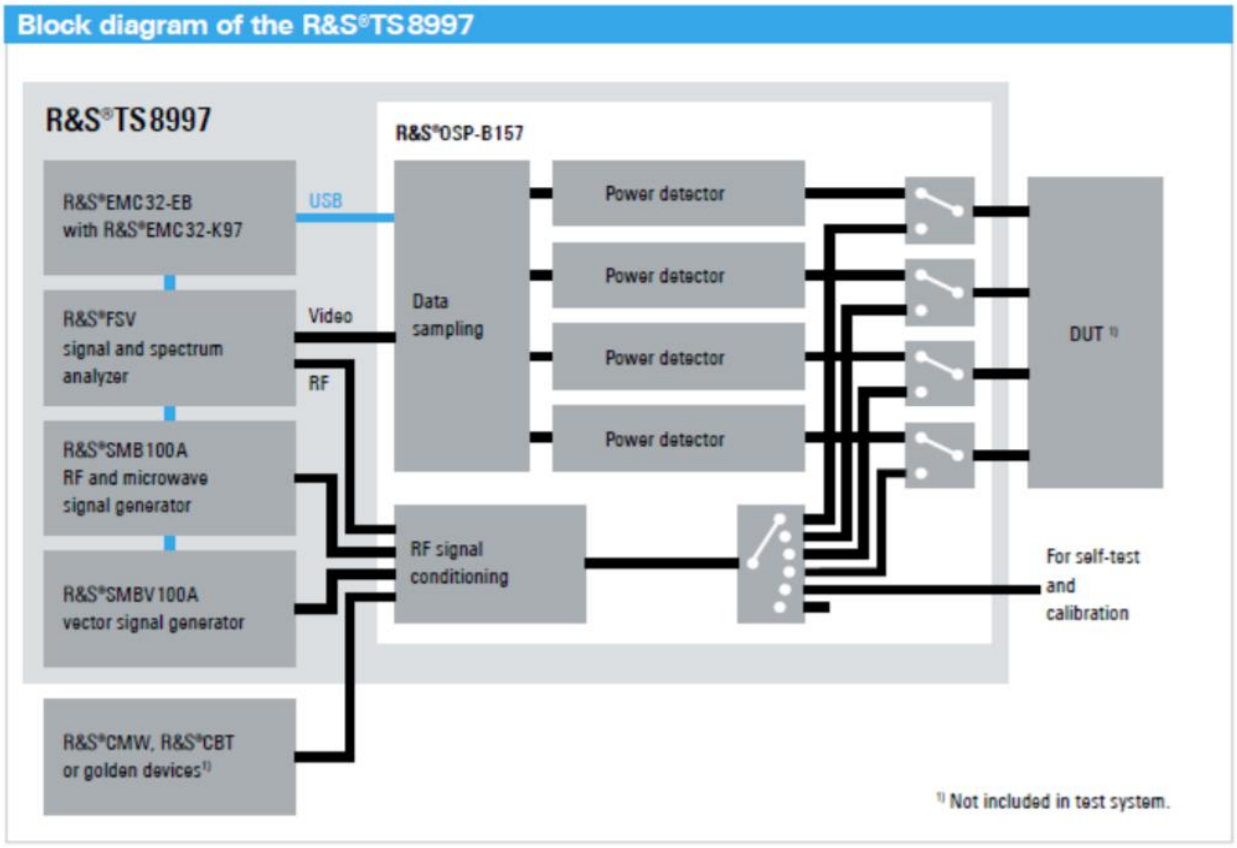


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

There were no modifications made to the EUT during testing to comply with the specification.

2.10 Deviation, Opinions Additional Information or Interpretations from Test Standard

There were no deviations, opinions, additional information or interpretations from the test specification.

3 Test Specification, Method and Procedures

3.1 Test Specification

Title	47 CFR FCC Part 15, Subpart E, Section 15.407 Limits and methods of measurement of radio interference characteristics of Unlicensed National Information Infrastructure Devices
Purpose of Test	The tests were performed to demonstrate initial compliance

3.2 Methods & Procedures

3.2.1 47 CFR FCC Part 15 Section 15.407

See test standard for details.

3.3 FCC Part 15, Subpart E

3.3.1 Summary of Tests

FCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.407(a)	N/A	Antenna requirements	Structural Requirement	Compliant
15.407(b)	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Bandwidth Requirement	5260 to 5570	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5260 to 5570	Compliant
15.407(b)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	Compliant
15.407(b)	RSS-247 §6.2.2, §6.2.3	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Power Spectral Density	5260 to 5570	Compliant
15.407(h)	RSS-247 §6.3	DFS Requirements	5260 to 5570	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 558074 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements.				

3.4 Results

In the configuration tested, the EUT complied with the requirements of the specification.

3.5 Test Location

Testing was performed at the Unified Compliance Laboratory 3-Meter and 10-Meter chambers located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2024. This site has also been registered with Innovations, Science and Economic Development (ISED) department as was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346, effective until 30 June 2024.

Unified Compliance Laboratory has been assigned Designation Number US5037 by the FCC and Conformity Assessment Number US0223 by ISED.

4 Test Equipment

4.1 Conducted Emissions at Mains Ports

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	AFJ	FFT3010	UCL-2500	7/13/2023	7/13/2024
LISN	AFJ	LS16C/10	UCL-2512	5/26/2023	5/26/2024
ISN	Teseq	ISN T800	UCL-2974	6/27/2022	6/272024
LISN	Com-Power	LIN-120C	UCL-2612	1/24/2023	1/24/2024
AC Power Source	Laplace Instruments	AC1000A	UCL-2857	N/A	N/A
Test Software	UCL	Revision 1	UCL-3107	N/A	N/A

Table 2: List of equipment used for Conducted Emissions Testing at Mains Port

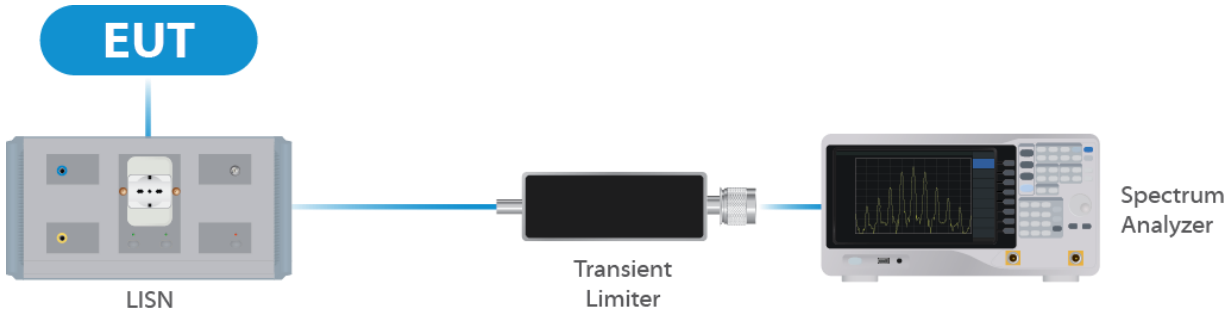


Figure 1: Conducted Emissions Test

4.2 Direct Connect at the Antenna Port Tests

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	R&S	FSV40	UCL-2861	11/27/2023	11/27/2024
Signal Generator	R&S	SMB100A	UCL-2864	N/A	N/A
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Switch Extension	R&S	OSP-B157WX	UCL-2867	2/22/2023	2/22/2024
Switch Extension	R&S	OSP-150W	UCL-2870	2/22/2023	2/22/2024

Table 3: List of equipment used for Direct Connect at the Antenna Port

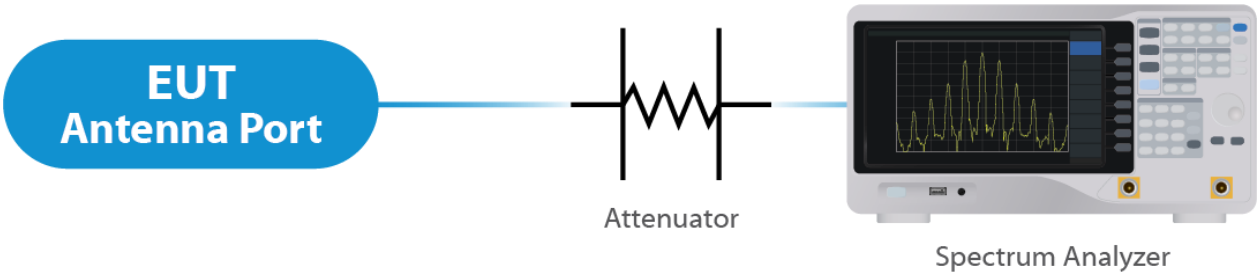


Figure 2: Direct Connect at the Antenna Port Test

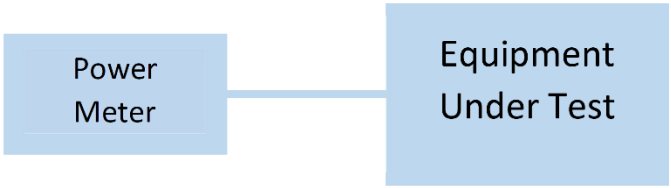


Figure 3: Output Power Measurement

4.3 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	Keysight	N9038A	UCL-2778	1/27/2023	1/27/2024
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	10/7/2021	12/7/2023
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3062	2/22/2023	2/22/2025
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3071	1/11/2023	1/11/2025
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	9/22/2022	9/22/2024
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	1/27/2023	1/27/2025
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	6/09/2022	6/09/2024
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	12/9/2022	12/9/2023
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 4: List of equipment used for Radiated Emissions

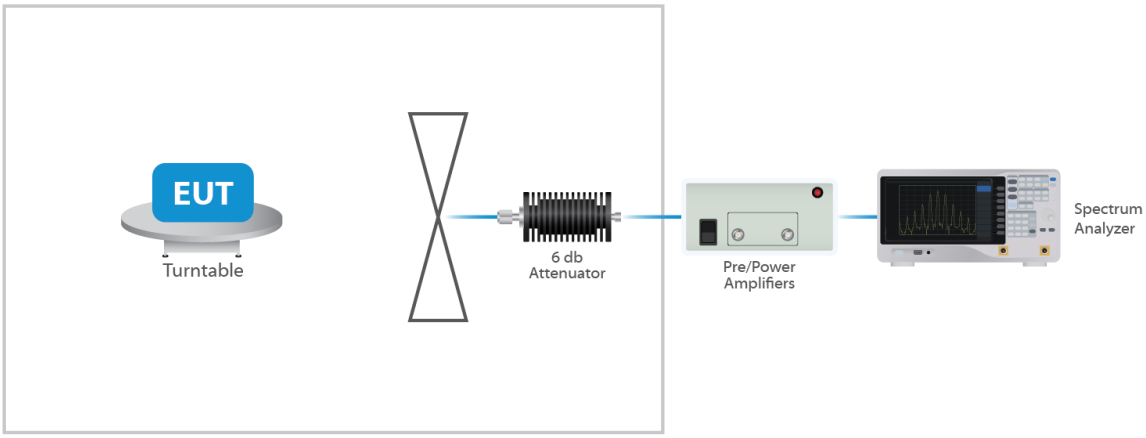


Figure 4: Radiated Emissions Test

4.4 DFS Testing

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Spectrum Analyzer	Keysight	N9010B	UCL-7069	4/26/2023	4/26/2024

4.4.1 Master Test Set Up

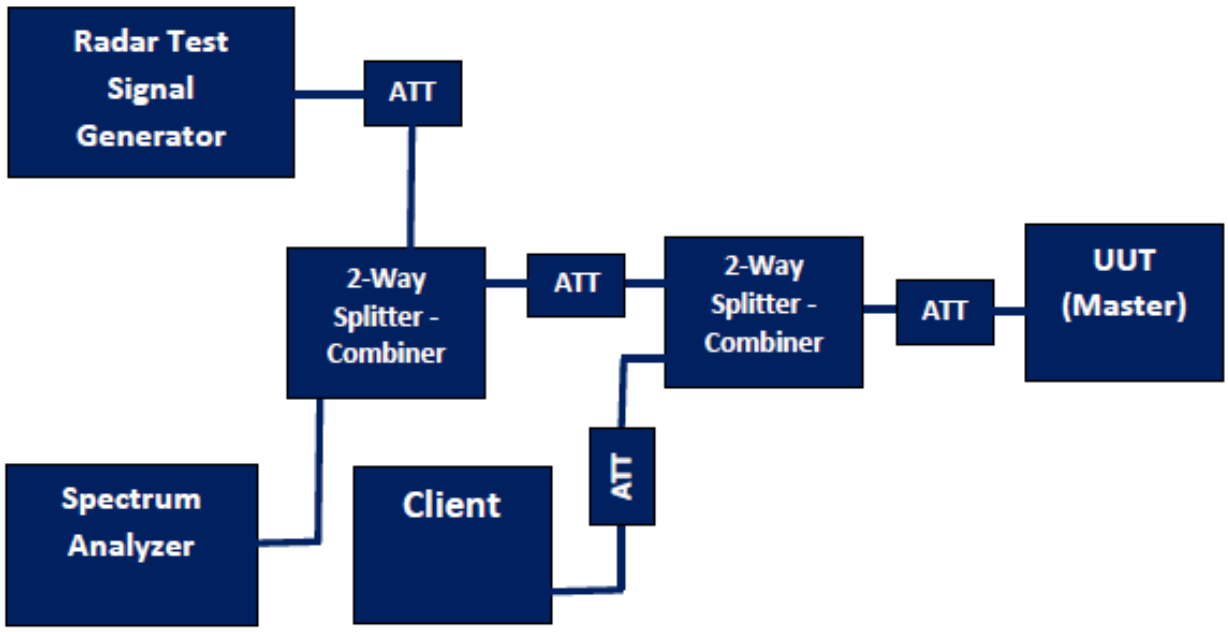


Figure 5: DFS Test Set Up - Master

4.5 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.6 Measurement Uncertainty

Test	Uncertainty (± dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	4.38	95
Radiated Emissions (1 GHz to 18 GHz)	4.37	95
Radiated Emissions (18 GHz to 40 GHz)	3.93	95
Direct Connect Tests	**K Factor**	**Value**
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB

5 Test Results

5.1 §15.203 Antenna Requirements

The EUT uses an internal integral antenna. Per the manufacturer, the Maximum gain of the antenna per chain is 8 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable. For CDD transmissions, directional gain is calculated as follows.

Array Gain = 10 log(NANT/NSS) dB
NANT = number of transmit antennas and
NSS = number of spatial streams. NSS = 1 considered worst case.

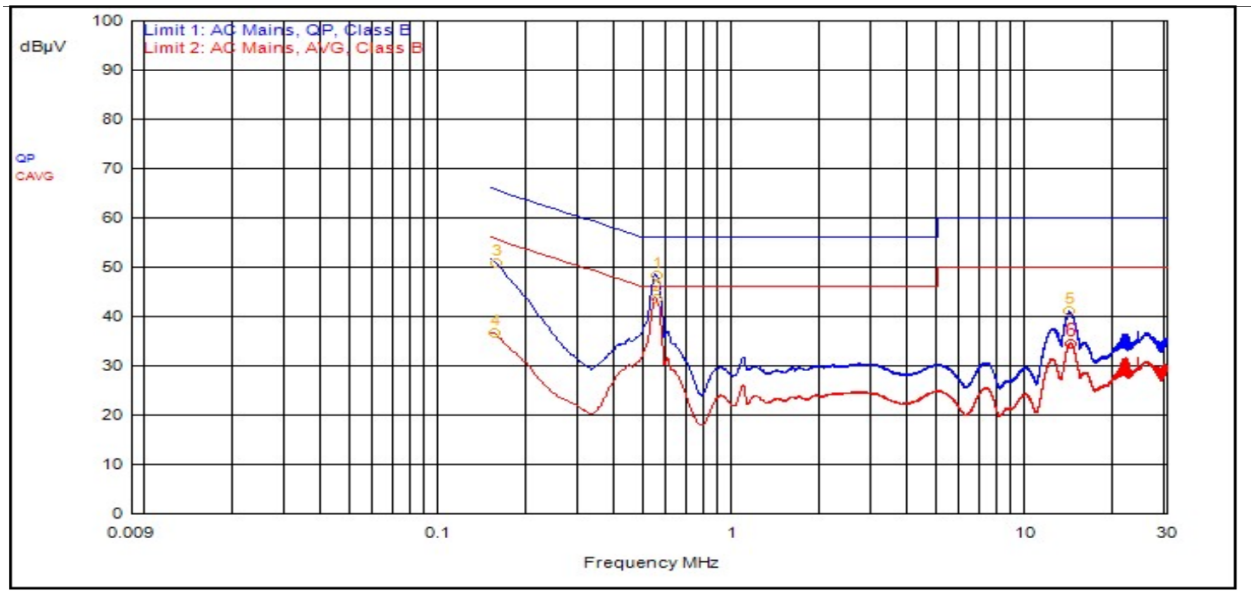
For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT ≤ 4;
For PSD measurements when Nss=1: Array Gain = 10 log(NANT/NSS) dB + Antenna Gain (dBi). Or 3.01 dB + 8 dBi = 11.01 dBi.

Results

The EUT complied with the specification

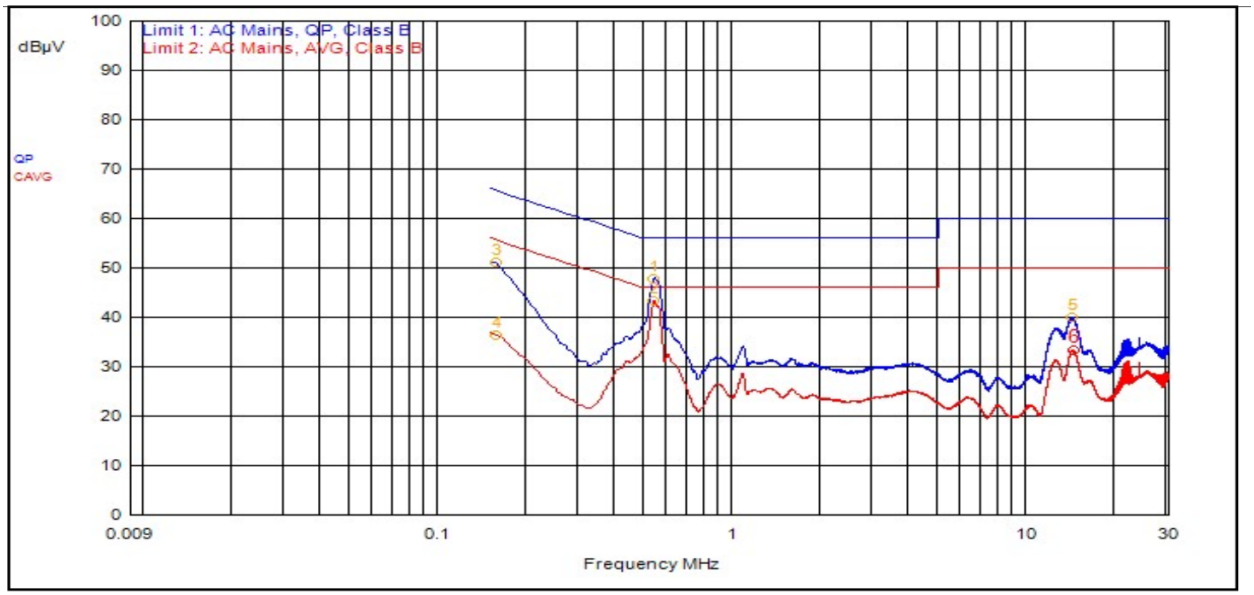
5.2 Conducted Emissions at Mains Ports Data

5.2.1 Line



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.	P/F
MU	MHz	dB	dB	dB	Type	dBµV	dBµV	dBµV	dB	dBµV	dB	P/F
1	546,000kHz	12.42	0.00		QPeak	36.02	48.44	56.00	-7.56			
3	156,000kHz	12.38	0.00		QPeak	38.48	50.86	65.67	-14.81			
5	13.953	12.46	0.20		QPeak	28.35	41.01	60.00	-18.99			
2	546,000kHz	12.42	0.00		C_AVG	31.09	43.51			46.00	-2.49	
4	153,000kHz	12.37	0.00		C_AVG	24.17	36.54			55.84	-19.30	
6	14.064	12.46	0.20		C_AVG	21.88	34.54			50.00	-15.46	

5.2.2 Neutral



ID	Frequency	Probe	Cable	Atten.	Detector	Meter Read	Meas Level	Limit 1	Limit 1 Dist.	Limit 2	Limit 2 Dist.	P/F
MU	MHz	dB	dB	dB	Type	dBµV	dBµV	dBµV	dB	dBµV	dB	P/F
1	537,000kHz	12.42	0.00		QPeak	35.48	47.90	56.00	-8.10			
3	156,000kHz	12.38	0.00		QPeak	38.65	51.03	65.67	-14.64			
5	14.085	12.46	0.20		QPeak	27.26	39.92	60.00	-20.08			
2	537,000kHz	12.42	0.00		C_AVG	30.99	43.41			46.00	-2.59	
4	156,000kHz	12.38	0.00		C_AVG	24.10	36.48			55.67	-19.20	
6	14.190	12.47	0.20		C_AVG	20.75	33.42			50.00	-16.58	

Result

The EUT complied with the specification limit.

5.3 §15.403(i) 26 dB Emissions Bandwidth

All chains were measured under the guidance of KDB 789033 Section II.C. and KDB 66291 D01. Please see associated annex for details on instrument settings.

5.3.1 UNII-2A

Bandwidth	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
a 20	5260	16.3	18.8
a 20	5280	16.3	19.4
a 20	5320	16.3	18.7
ax 20	5260	19.3	20.4
ax 20	5280	19.3	20.5
ax 20	5320	19.3	20.6
ax 40	5270	38.5	39.8
ax 40	5310	38.0	40.1
ax 80	5290	77.0	82.5
ax 160	5250	157.5	165.0

5.3.2 UNII-2C

Bandwidth	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
a 20	5500	16.3	19.4
a 20	5600	16.3	18.4
a 20	5720	16.2	18.6
ax 20	5500	17.8	19.9
ax 20	5600	17.8	20.2
ax 20	5720	17.8	19.8
ax 40	5510	36.5	39.5
ax 40	5590	36.0	38.9

ax 40	5710	36.5	39.5
ax 80	5530	75.0	81.5
ax 80	5610	76.0	81.0
ax 80	5690	76.0	80.5
ax 160	5570	157.5	165.0

Result

The 26 dB bandwidths are reported for information purposes. Please see Annex for all bandwidth measurements.

5.4 §15.407(a)(2) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. and KDB 66291 D01. Please see associated annex for details on instrument settings.

The maximum average RF conducted output power measured for this device was 21.96 dBm or 157.04 mW. The limit is 24 dBm or 250 mW when using antennas with 6 dBi or less gain. The antenna has a maximum gain of 8 dBi however, the measured conducted output power is below and adjusted 22.0 dBm or 0.16 watts limit.

5.4.1 UNII-2A

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	Measured EIRP	Measured PSD
a 20	5260	Mcs0_Nss2	39	21.70	29.70	7.92
a 20	5280	Mcs0_Nss2	39	21.60	29.60	7.61
a 20	5320	Mcs0_Nss2	40	21.85	29.85	7.66
ax 20	5260	Mcs0_Nss2	40	21.82	29.82	7.61
ax 20	5280	Mcs0_Nss2	40	21.69	26.69	7.46
ax 20	5320	Mcs0_Nss2	41	21.86	29.86	7.72
ax 40	5270	Mcs0_Nss2	39	21.55	29.55	4.94
ax 40	5310	Mcs0_Nss2	40	21.56	29.56	4.72
ax 80	5290	Mcs0_Nss2	40	21.73	28.73	2.29
ax 160	5250	Mcs0_Nss2	39	21.85	29.85	-0.43

5.4.2 UNII-2C

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	Measured EIRP	Measured PSD
a 20	5500	Mcs0_Nss2	41	21.80	29.80	7.92
a 20	5600	Mcs0_Nss2	41	21.74	29.74	8.02
a 20	5720	Mcs0_Nss2	41	21.75	29.75	7.97
ax 20	5500	Mcs0_Nss2	42	21.92	29.92	7.75
ax 20	5600	Mcs0_Nss2	42	21.57	29.57	7.72
ax 20	5720	Mcs0_Nss2	42	21.96	29.96	8.00
ax 40	5510	Mcs0_Nss2	40	21.68	29.68	4.60

ax 40	5590	Mcs0_Nss2	41	21.73	29.73	5.08
ax 40	5710	Mcs0_Nss2	40	21.89	29.89	4.99
ax 80	5530	Mcs0_Nss2	41	21.53	29.53	2.15
ax 80	5610	Mcs0_Nss2	42	21.88	29.88	2.69
ax 80	5690	Mcs0_Nss2	41	21.77	29.77	2.25
ax 160	5570	Mcs0_Nss2	42	21.79	29.79	-0.43

Result

In the configuration tested, the maximum average RF output power was less than 1 watt; therefore, the EUT complied with the requirements of the specification.

5.5 §15.407(b) Spurious Emissions

5.5.1 Conducted Spurious Emissions

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental frequency was investigated to measure any antenna-conducted emissions. The graphs show the measurement data from spurious emissions noted across the frequency range when transmitting at the lowest frequency, middle frequency and upper frequency. Shown below are plots with the EUT turned to the upper and lower channels with the antenna gain of 8 dBi accounted for. These demonstrate compliance with the provisions of this section at the band edges.

The emissions must be below -27 dBm EIRP.

Result

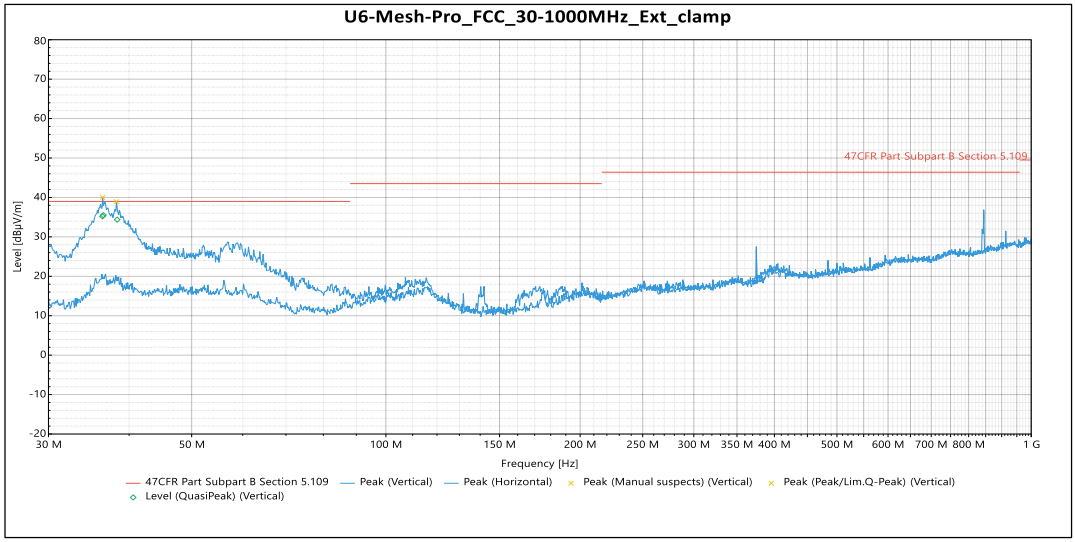
Conducted spurious emissions were below -27 dBm; therefore, the EUT complies with the specification. See Annex for results.

5.5.2 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental emissions was investigated to measure any radiated emissions in the restricted bands. For frequencies above 18.0 GHz. The emissions in the restricted bans must meet the limits specified in § 15.209. Conducted measurement results are included in the Annex. Radiated data with the EUT transmitting into a load is included below. All emissions between the required frequencies were investigated, the following plots represent the worst case. The “fail” is the transmitted signal exceeding the spurious limit.

Correction Factor = Antenna Factor + Cable Loss - Pre-Amplifier Gain, and is added to the Receiver reading.

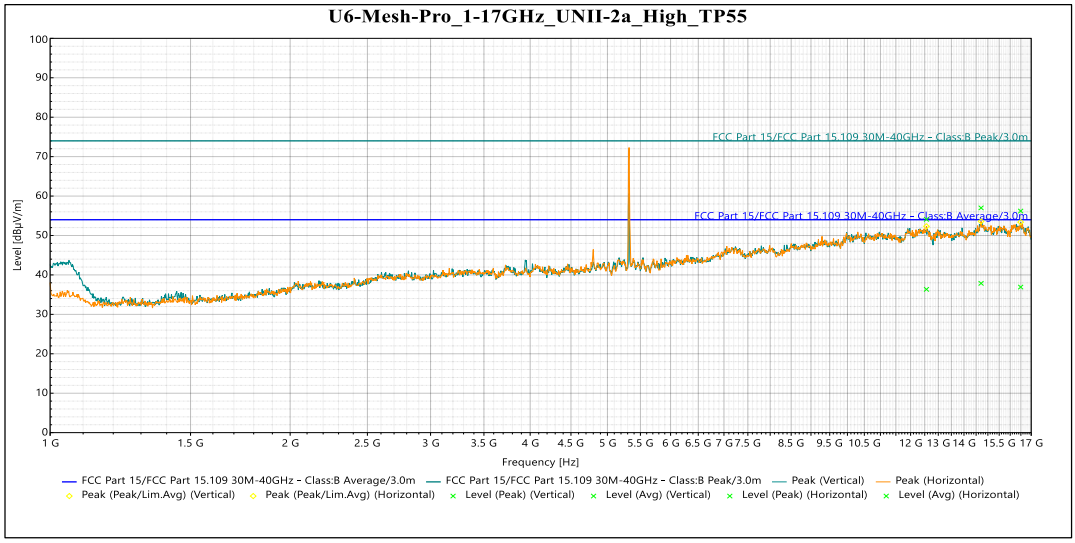
5.5.3 UNII-2A



QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
36.374 MHz	35.221	39	-3.779	71	1.842	Vertical	-14.833
36.48 MHz	35.51	39	-3.49	63	1.156	Vertical	-14.823
38.328 MHz	34.369	39	-4.631	8	0.998	Vertical	-14.439

Graph 1: Radiated Emissions 30 – 1000 MHz



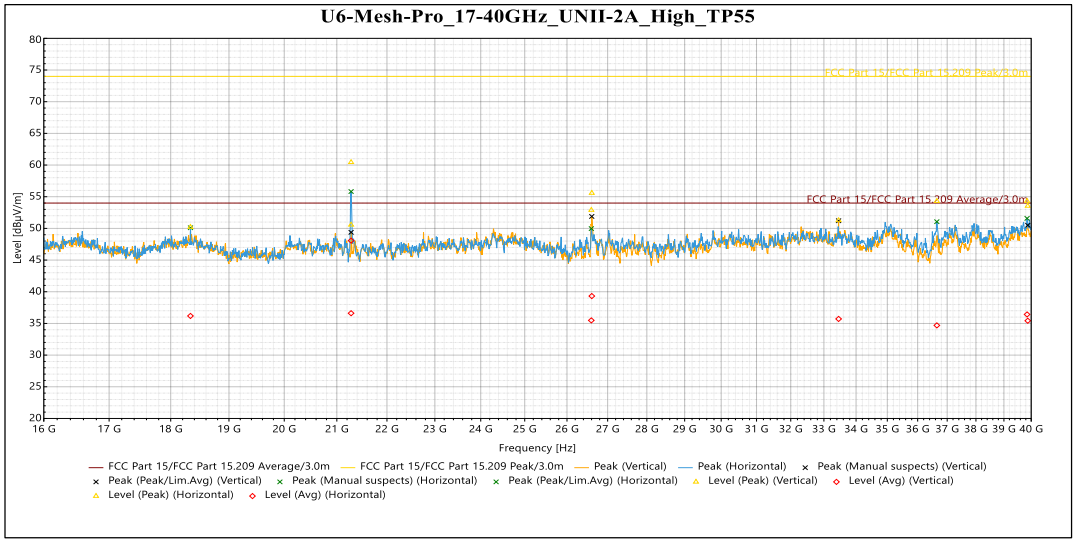
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
16.49 GHz	56.204	74	-17.796	210	2.234	Vertical	18.27
12.563 GHz	54.088	74	-19.912	159	1.63	Horizontal	16.667
14.709 GHz	56.997	74	-17.003	293	2.888	Horizontal	17.359

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
16.49 GHz	36.919	54	-17.081	210	2.234	Vertical	18.27
12.563 GHz	36.342	54	-17.658	159	1.63	Horizontal	16.667
14.709 GHz	37.863	54	-16.137	293	2.888	Horizontal	17.359

Graph 2: 1 GHz – 17 GHz Highest Frequency (worse case)



Peak

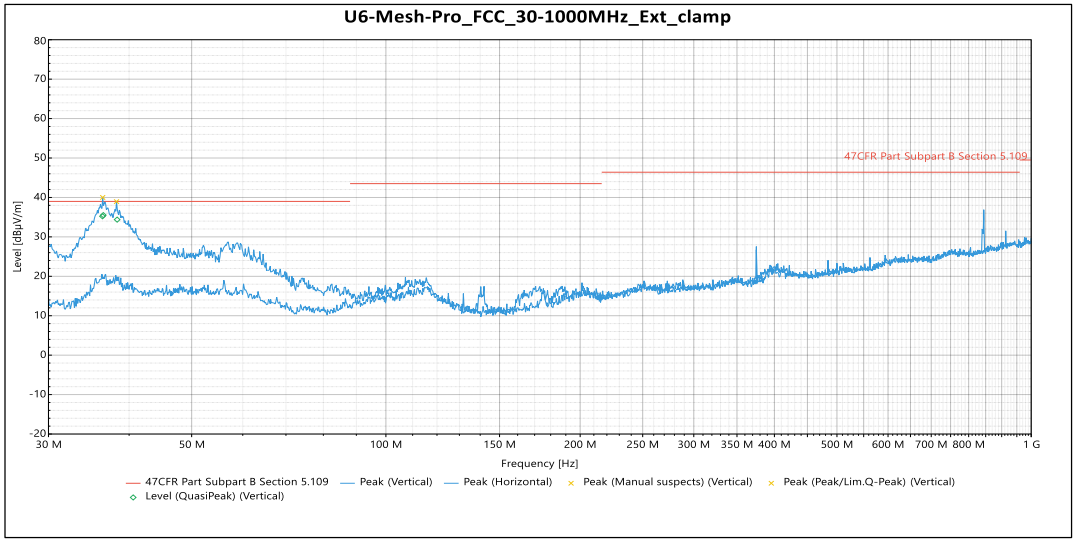
Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
21.28 GHz	50.564	74	-23.436	9	Vertical	-1.372
26.606 GHz	55.584	74	-18.416	15	Vertical	-0.07
33.454 GHz	51.27	74	-22.73	121	Vertical	2.138
39.873 GHz	53.539	74	-20.461	80	Vertical	3.364
18.333 GHz	50.214	74	-23.786	123	Horizontal	-0.405
21.28 GHz	60.439	74	-13.561	316	Horizontal	-1.372
26.594 GHz	52.905	74	-21.095	65	Horizontal	-0.333
36.647 GHz	54.297	74	-19.703	7	Horizontal	4.218
39.847 GHz	54.324	74	-19.676	74	Horizontal	3.141

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
21.28 GHz	36.608	54	-17.392	9	Vertical	-1.372
26.606 GHz	39.324	54	-14.676	15	Vertical	-0.07
33.454 GHz	35.708	54	-18.292	121	Vertical	2.138
39.873 GHz	35.423	54	-18.577	80	Vertical	3.364
18.333 GHz	36.181	54	-17.819	123	Horizontal	-0.405
21.28 GHz	48.073	54	-5.927	316	Horizontal	-1.372
26.594 GHz	35.479	54	-18.521	65	Horizontal	-0.333
36.647 GHz	34.691	54	-19.309	7	Horizontal	4.218
39.847 GHz	36.423	54	-17.577	74	Horizontal	3.141

Graph 3: 17 GHz – 40 GHz Highest Frequency (worse case)

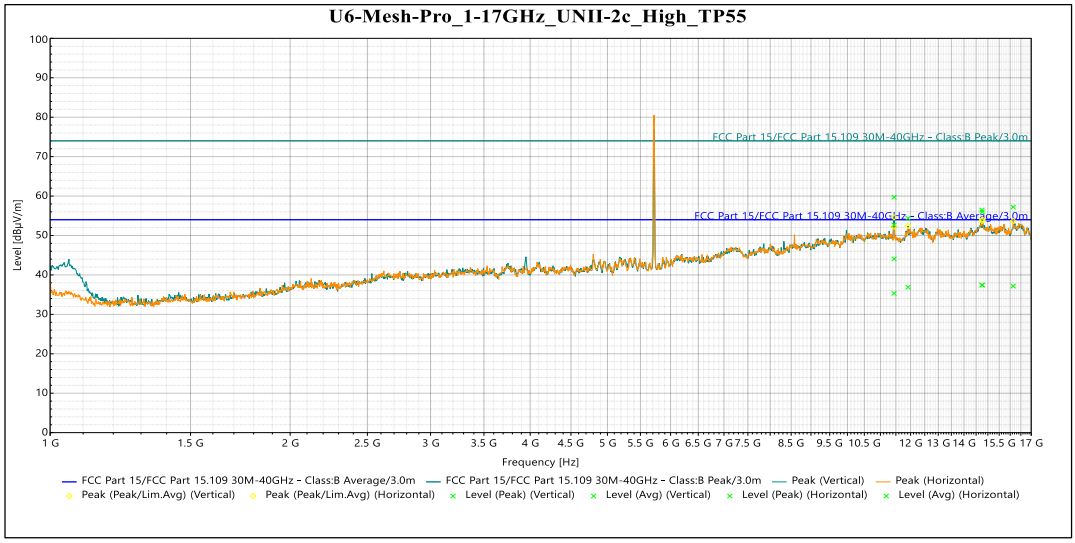
5.5.4 UNII-2C



QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
36.374 MHz	35.221	39	-3.779	71	1.842	Vertical	-14.833
36.48 MHz	35.51	39	-3.49	63	1.156	Vertical	-14.823
38.328 MHz	34.369	39	-4.631	8	0.998	Vertical	-14.439

Graph 4: Radiated Emissions 30 – 1000 MHz



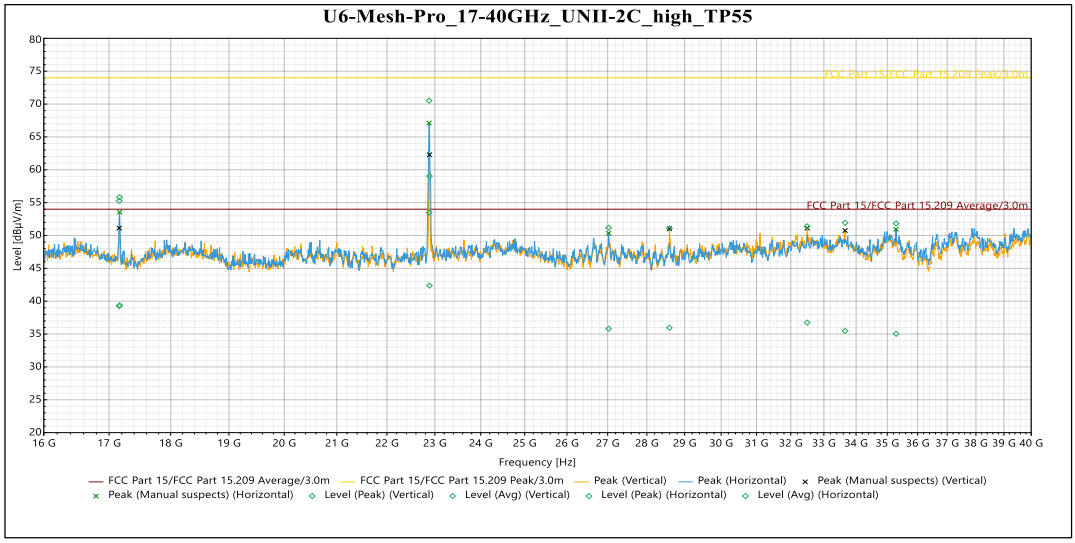
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.441 GHz	59.711	74	-14.289	30	2.757	Vertical	14.611
11.912 GHz	54.369	74	-19.631	344	2.056	Vertical	16.541
14.762 GHz	55.958	74	-18.042	35	3.968	Vertical	16.981
11.441 GHz	52.656	74	-21.344	70	2.052	Horizontal	14.611
14.748 GHz	56.459	74	-17.541	123	1.632	Horizontal	17.075
16.141 GHz	57.203	74	-16.797	13	1.628	Horizontal	17.295

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
11.441 GHz	44.067	54	-9.933	30	2.757	Vertical	14.611
11.912 GHz	36.857	54	-17.143	344	2.056	Vertical	16.541
14.762 GHz	37.431	54	-16.569	35	3.968	Vertical	16.981
11.441 GHz	35.325	54	-18.675	70	2.052	Horizontal	14.611
14.748 GHz	37.42	54	-16.58	123	1.632	Horizontal	17.075
16.141 GHz	37.173	54	-16.827	13	1.628	Horizontal	17.295

Graph 5: 1 GHz – 16 GHz Highest Frequency (worse case)



Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.16 GHz	55.28	74	-18.72	5	Vertical	0.018
22.886 GHz	59.027	74	-14.973	23	Vertical	0.822
28.593 GHz	51.073	74	-22.927	48	Vertical	0.271
32.491 GHz	51.401	74	-22.599	121	Vertical	2.306
33.656 GHz	51.938	74	-22.062	247	Vertical	2.235
17.166 GHz	55.822	74	-18.178	52	Horizontal	0.032
22.879 GHz	70.521	74	-3.479	314	Horizontal	0.792
27.026 GHz	51.167	74	-22.833	118	Horizontal	1.927
35.287 GHz	51.842	74	-22.158	352	Horizontal	2.648

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
17.16 GHz	39.256	54	-14.744	5	Vertical	0.018
22.886 GHz	42.373	54	-11.627	23	Vertical	0.822
28.593 GHz	35.945	54	-18.055	48	Vertical	0.271
32.491 GHz	36.745	54	-17.255	121	Vertical	2.306
33.656 GHz	35.481	54	-18.519	247	Vertical	2.235
17.166 GHz	39.372	54	-14.628	52	Horizontal	0.032
22.879 GHz	53.49	54	-0.51	314	Horizontal	0.792
27.026 GHz	35.815	54	-18.185	118	Horizontal	1.927
35.287 GHz	35.036	54	-18.964	352	Horizontal	2.648

Graph 6: 16 GHz – 40 GHz Highest Frequency (worse case)

5.6 §15.407(a) Maximum Power Spectral Density

All chains were measured and summed under the guidance of KDB 789033 Section II. F. and KDB 66291 D01. Please see associated annex for details on instrument settings.

The maximum average power spectral density conducted from the intentional radiator of the antenna shall not be greater than 11 dBm in any 1 MHz band during any time interval of continuous transmission. Results of this testing are summarized. With a 8 dBi antenna, the conducted limit for power spectral density is 11 dBm. As per KDB 662911, When the EUT is using spatial-multiplexing in HT to HE modes, there is not additional array gain to accommodate. When the EUT uses Nss=1 data rates, the antenna gain is 8 dBi + Array gain of 3.01 dB which is a total of 11.01 dBi
Results of this testing are summarized.

5.6.1 UNII-2A

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	Measured EIRP	Measured PSD
a 20	5260	Mcs0_Nss2	39	21.70	29.70	7.92
a 20	5280	Mcs0_Nss2	39	21.60	29.60	7.61
a 20	5320	Mcs0_Nss2	40	21.85	29.85	7.66
ax 20	5260	Mcs0_Nss2	40	21.82	29.82	7.61
ax 20	5280	Mcs0_Nss2	40	21.69	26.69	7.46
ax 20	5320	Mcs0_Nss2	41	21.86	29.86	7.72
ax 40	5270	Mcs0_Nss2	39	21.55	29.55	4.94
ax 40	5310	Mcs0_Nss2	40	21.56	29.56	4.72
ax 80	5290	Mcs0_Nss2	40	21.73	28.73	2.29
ax 160	5250	Mcs0_Nss2	39	21.85	29.85	-0.43

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	Measured EIRP	Measured PSD
a 20	5260	Mcs0_Nss1	35	19.70	27.70	5.92
a 20	5280	Mcs0_Nss1	35	19.60	27.60	5.61
a 20	5320	Mcs0_Nss1	36	19.85	27.85	5.66
ax 20	5260	Mcs0_Nss1	36	19.82	27.82	5.61
ax 20	5280	Mcs0_Nss1	37	20.19	28.19	5.96

ax 20	5320	Mcs0_Nss1	37	19.86	27.86	5.72
ax 40	5270	Mcs0_Nss1	39	21.55	29.55	4.94
ax 40	5310	Mcs0_Nss1	40	21.56	29.56	4.72
ax 80	5290	Mcs0_Nss1	40	21.73	28.73	2.29
ax 160	5250	Mcs0_Nss1	39	21.85	29.85	-0.43

5.6.2 UNII-2C

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	Measured EIRP	Measured PSD
a 20	5500	Mcs0_Nss2	41	21.80	29.80	7.92
a 20	5600	Mcs0_Nss2	41	21.74	29.74	8.02
a 20	5720	Mcs0_Nss2	41	21.75	29.75	7.97
ax 20	5500	Mcs0_Nss2	42	21.92	29.92	7.75
ax 20	5600	Mcs0_Nss2	42	21.57	29.57	7.72
ax 20	5720	Mcs0_Nss2	42	21.96	29.96	8.00
ax 40	5510	Mcs0_Nss2	40	21.68	29.68	4.60
ax 40	5590	Mcs0_Nss2	41	21.73	29.73	5.08
ax 40	5710	Mcs0_Nss2	40	21.89	29.89	4.99
ax 80	5530	Mcs0_Nss2	41	21.53	29.53	2.15
ax 80	5610	Mcs0_Nss2	42	21.88	29.88	2.69
ax 80	5690	Mcs0_Nss2	41	21.77	29.77	2.25
ax 160	5570	Mcs0_Nss2	42	21.79	29.79	-0.43

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	Measured EIRP	Measured PSD
a 20	5500	Mcs0_Nss1	37	19.80	27.80	5.92
a 20	5600	Mcs0_Nss1	36	19.24	27.24	5.52
a 20	5720	Mcs0_Nss1	37	19.75	27.75	5.97
ax 20	5500	Mcs0_Nss1	38	19.92	27.92	5.75
ax 20	5600	Mcs0_Nss1	38	19.57	27.57	5.72

ax 20	5720	Mcs0_Nss1	37	19.46	27.46	5.50
ax 40	5510	Mcs0_Nss1	40	21.68	29.68	4.60
ax 40	5590	Mcs0_Nss1	41	21.73	29.73	5.08
ax 40	5710	Mcs0_Nss1	40	21.89	29.89	4.99
ax 80	5530	Mcs0_Nss1	41	21.53	29.53	2.15
ax 80	5610	Mcs0_Nss1	42	21.88	29.88	2.69
ax 80	5690	Mcs0_Nss1	41	21.77	29.77	2.25
ax 160	5570	Mcs0_Nss1	42	21.79	29.79	-0.43

Result

The maximum average power spectral density was less than the limit of 11 dBm for Nss2 and 5.99 dBm for Nss1; therefore, the EUT complies with the specification.

5.7 DFS Requirement

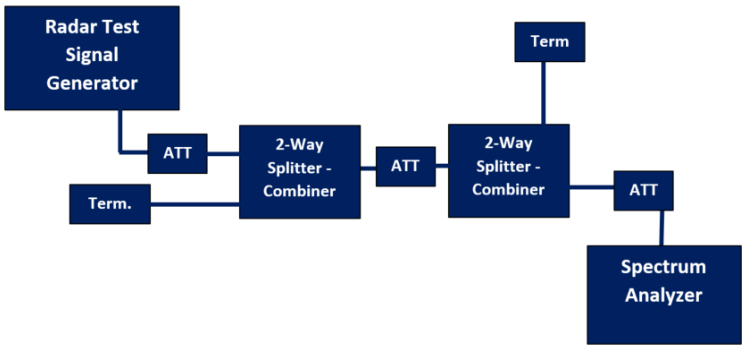
This product is a master with radar detection. The outcome of the required DFS tests is located in this section. DFS testing was performed following the test procedures as outlined in KDB 905462.

The product passes all required DFS tests for a master with radar detection.

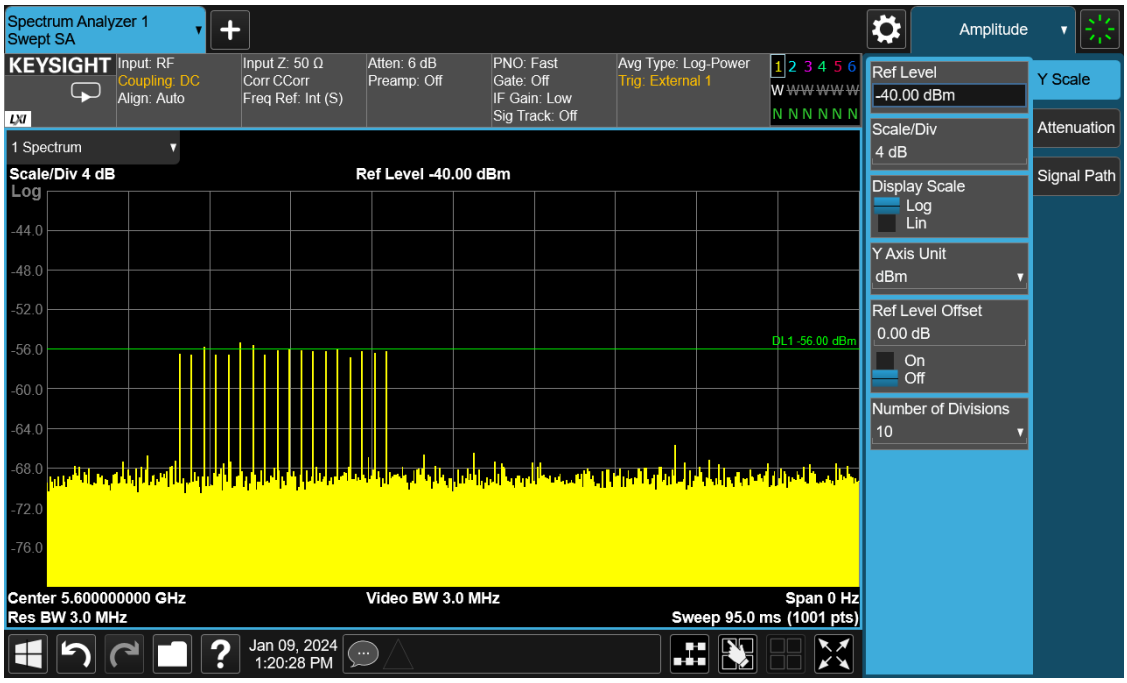
Information	Status	
Possible Antenna/s	Internal Integral 8 dBi	
Antenna used for test	Internal Integral 8 dBi	
Operating mode	Master	
If Client	N/A	
Port used for testing	5G0	
EIRP range	29.86 dBm	
Impedance of port	50 ohms	
Channel loading technique	Data transfer was enacted to achieve a minimum channel loading of approximately 17%	
Antenna measurement technique	See note 1	
Time of power-on cycle	50.50 s	
Detection threshold level	-64 dBm	

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not Required	Yes
DFS Detection Threshold	Yes	Not Required	Yes
Channel Availability Check Time	Yes	Not Required	Not Required
U-NII Detection Bandwidth	Yes	Not Required	Yes

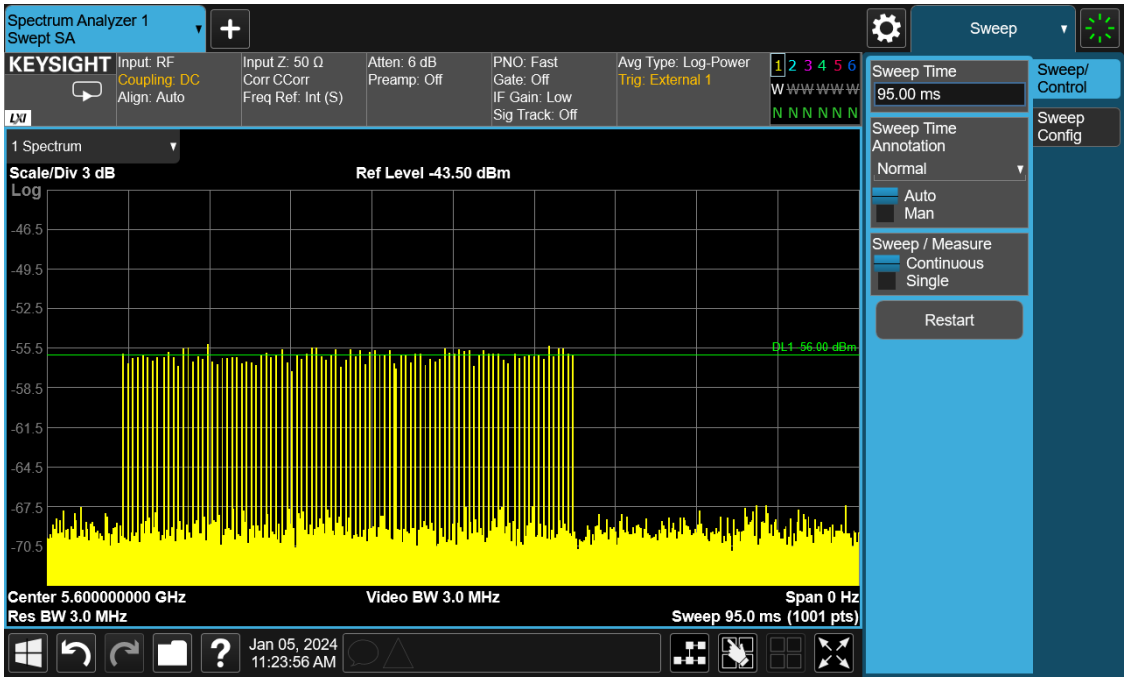
Requirement	Operational Mode	
	Master or Client Client Without Radar Detection	Client Without Radar Detection
DFS Detection Threshold	Yes	Not Required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not Required



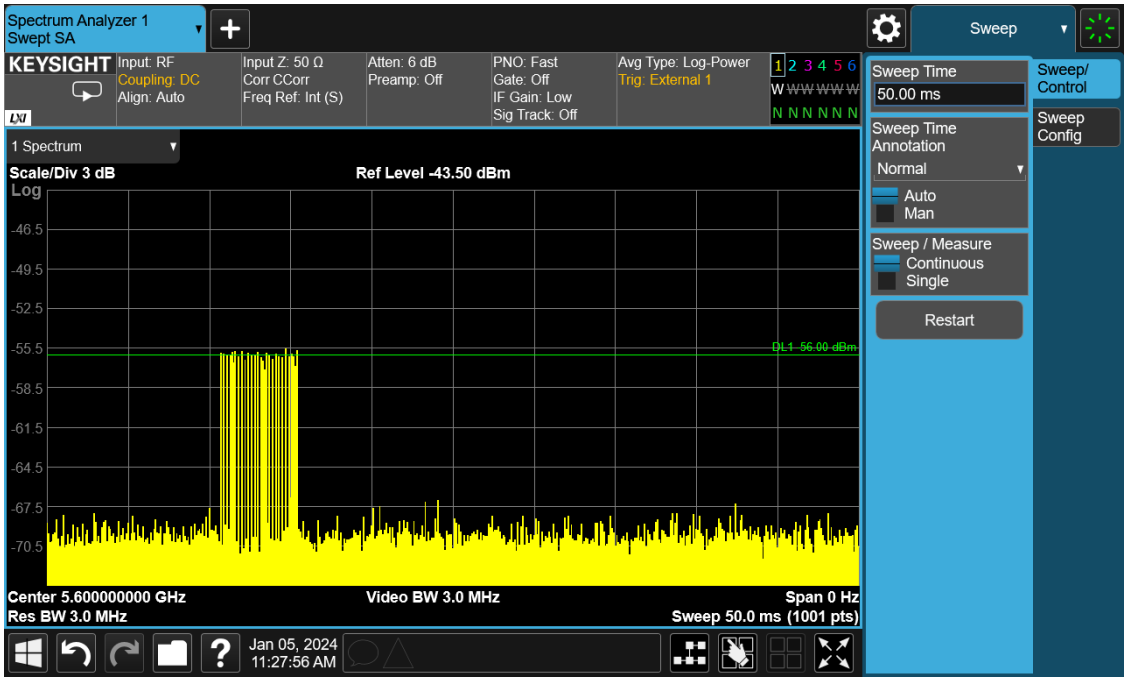
Maximum Transmit Power	**Value (See Notes 1, 2, and 3)**
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2:** Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3:** EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	



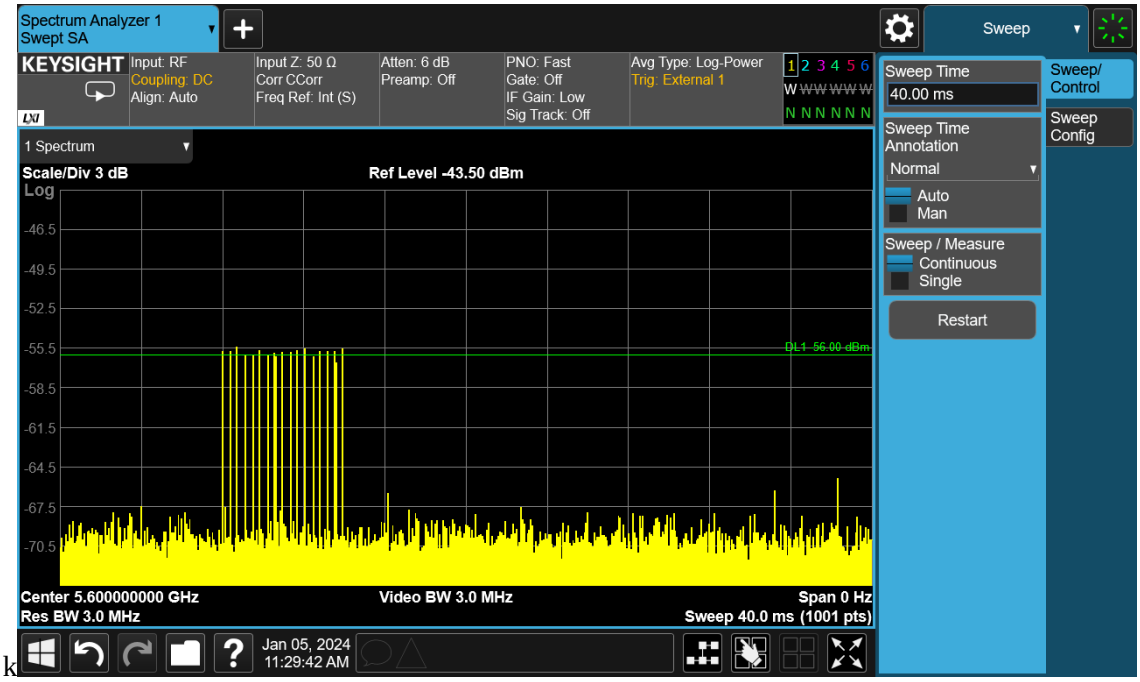
Plot 1: Radar Level 0



Plot 2: Radar Level 1



Plot 3: Radar Level 2



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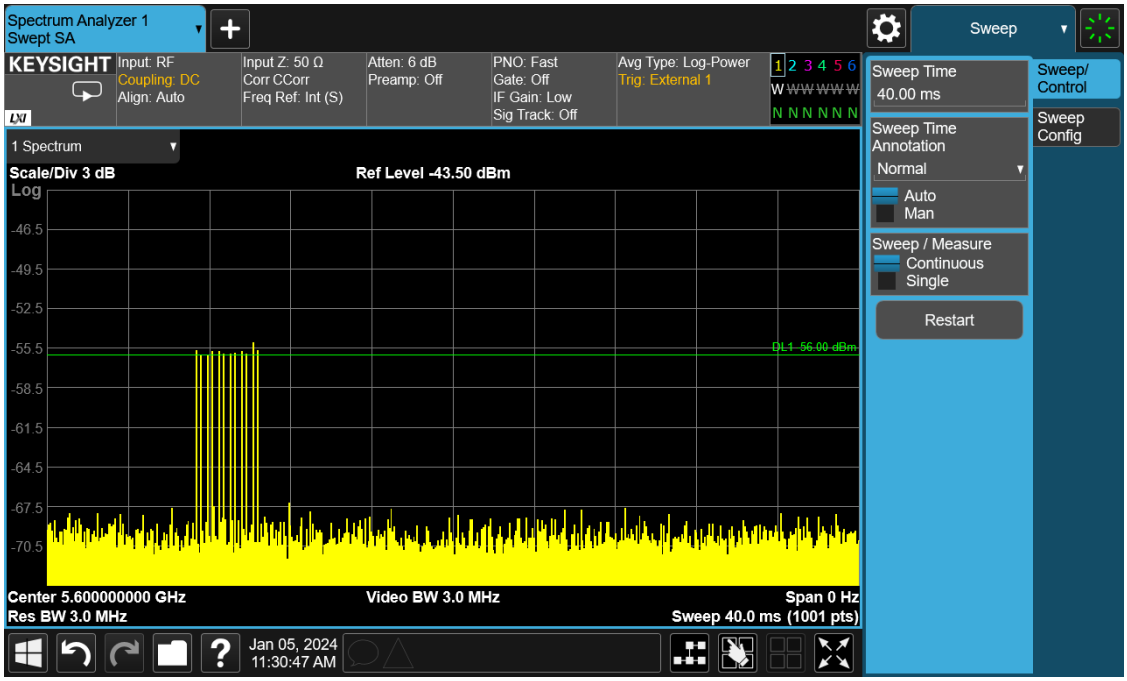
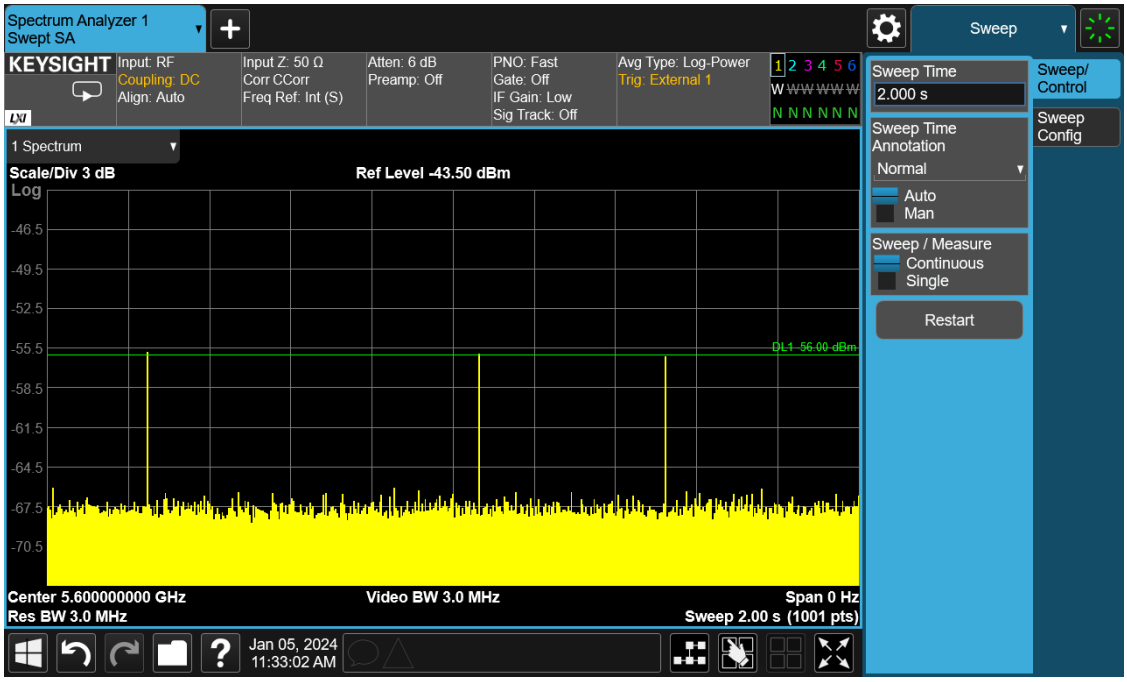
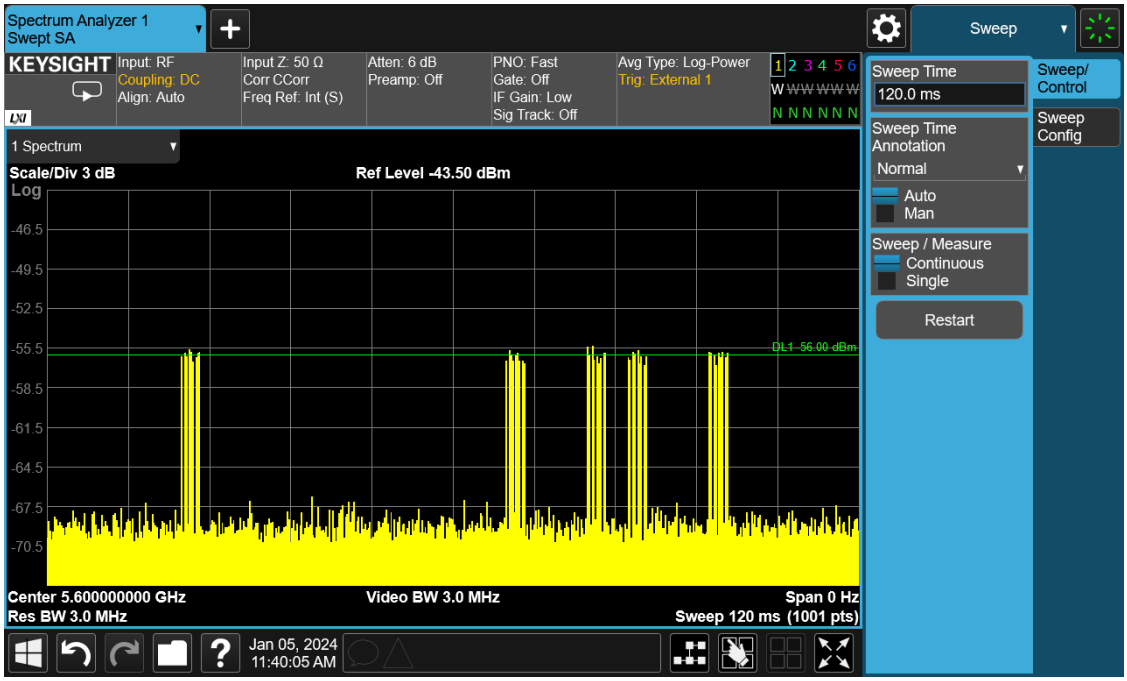
Plot 4: Radar Level 3



Plot 5: Radar Level 4



Plot 6: Radar Level 5



Plot 7: Radar Level 6

5.7.1 Channel Availability Check (CAC)

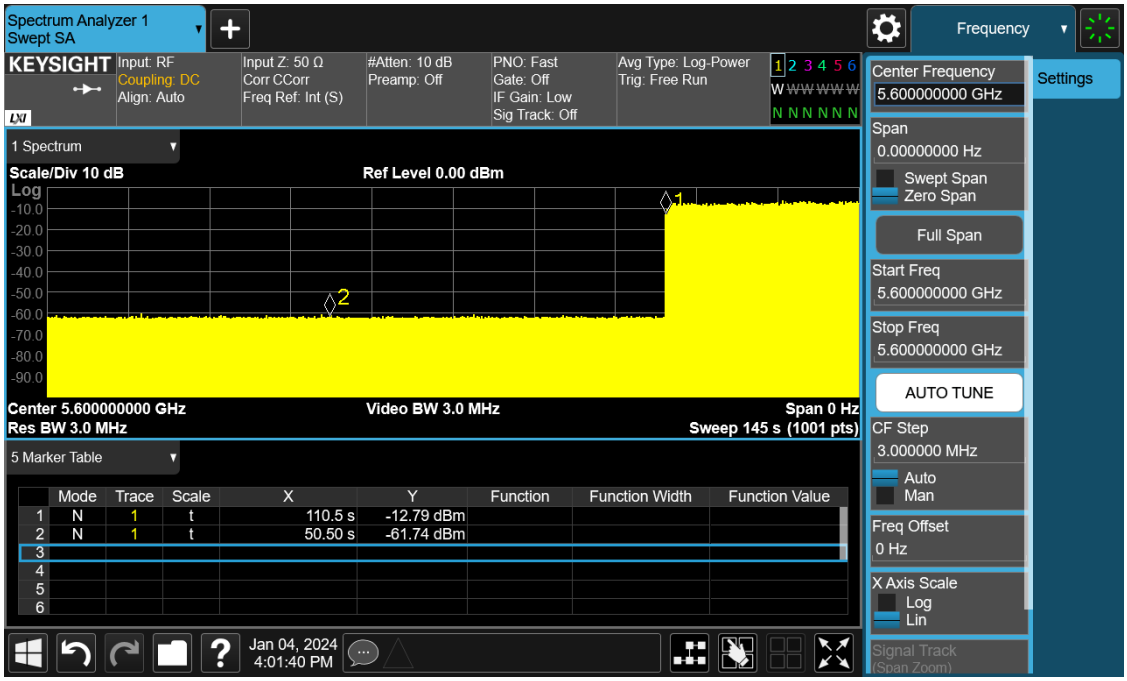
The EUT shall perform a CAC to ensure that there is no radar operating on the channel. After the power-up sequence, at-east 1 minute shall be monitored on the intended operating frequency. For initial CAC, the EUT does not emit beacon, control, or data signals on the test channel until the power-up sequence has been completed and the UNII device checks for radar waveforms for one minute on the test channel. This test does not use any radar waveforms. The markers in the associated plots indicate initial beacons.

For radar burst at the beginning of the CAC. To verify successful radar detection on the selected channel during a period equal to the beginning of the CAC time, visual indication on the EUT of successful detection of the radar burst will be recorded and reported. Observation of the radar burst is show on the associated plot to be within the beginning of the CAC time. Emissions will continue to be monitored for the remaining 300 seconds.

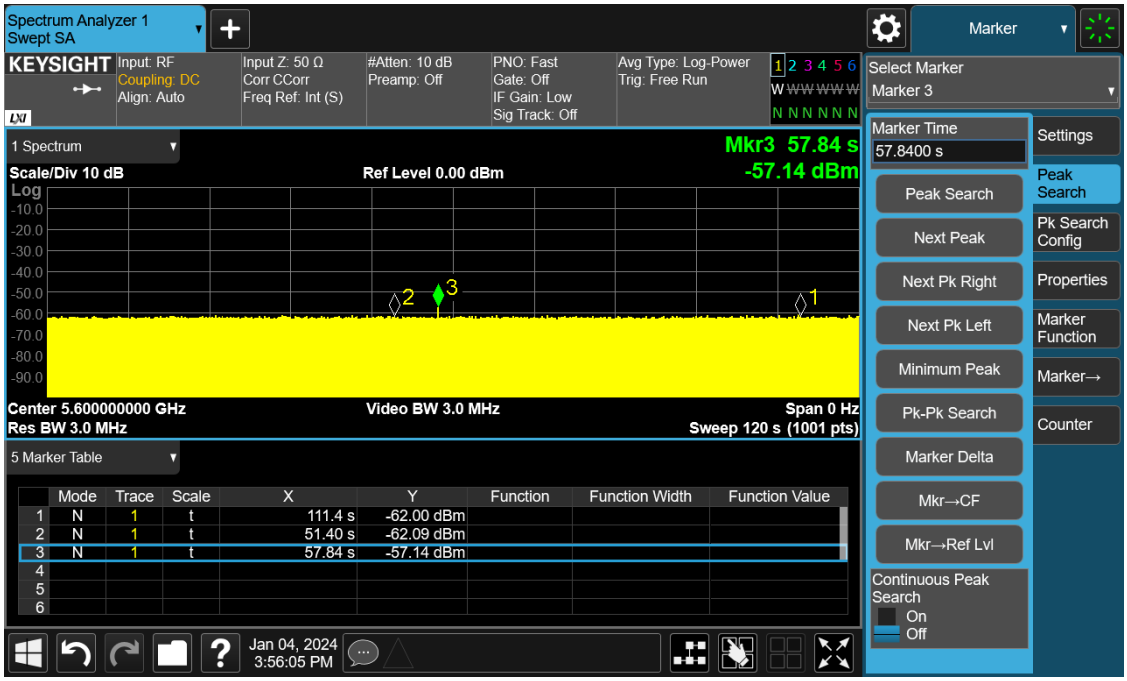
For radar burst at the end of the CAC. To verify successful radar detection on the selected channel during a period equal to the end of the CAC time, visual indication on the EUT of successful detection of the radar burst will be recorded and reported. Observation of the radar

burst is show on the associated plot to be within the end of the CAC time. Emissions will continue to be monitored for the remaining 300 seconds.

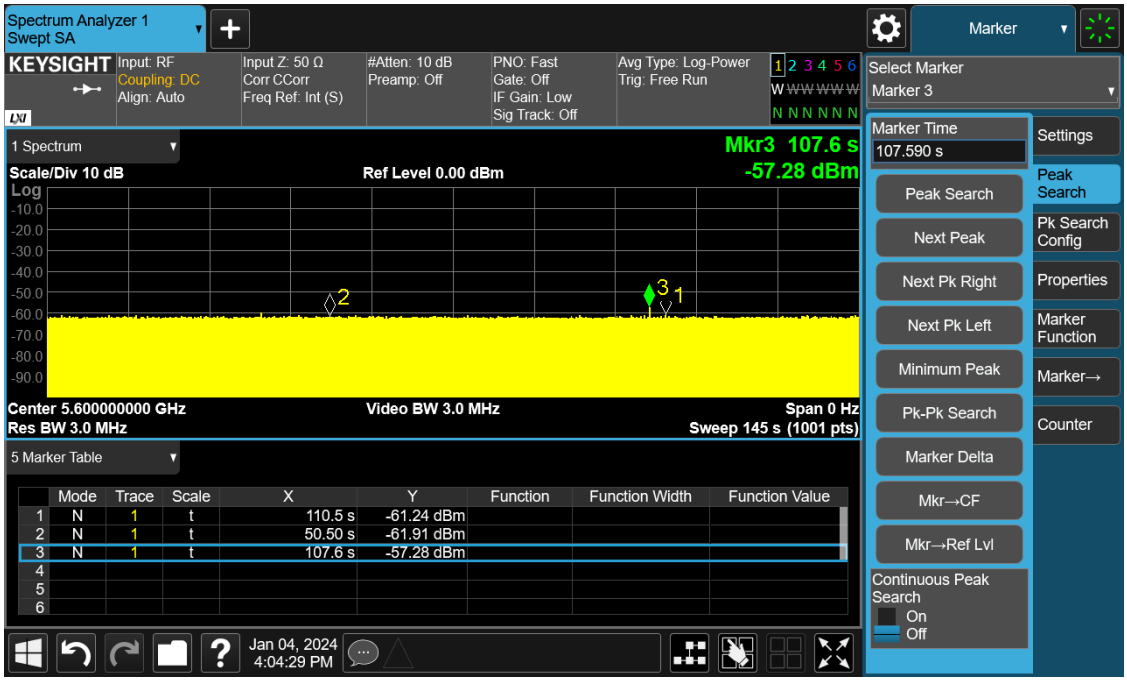
A spectrum analyzer is used as a monitor to verify that the EUT has vacated the channel within the channel closing transmission time and channel move time, and does not transmit on a channel during the non-occupancy period after the detection and channel move.



Plot 8: DUT Turn On



Plot 9: Beginning



Plot 10: End

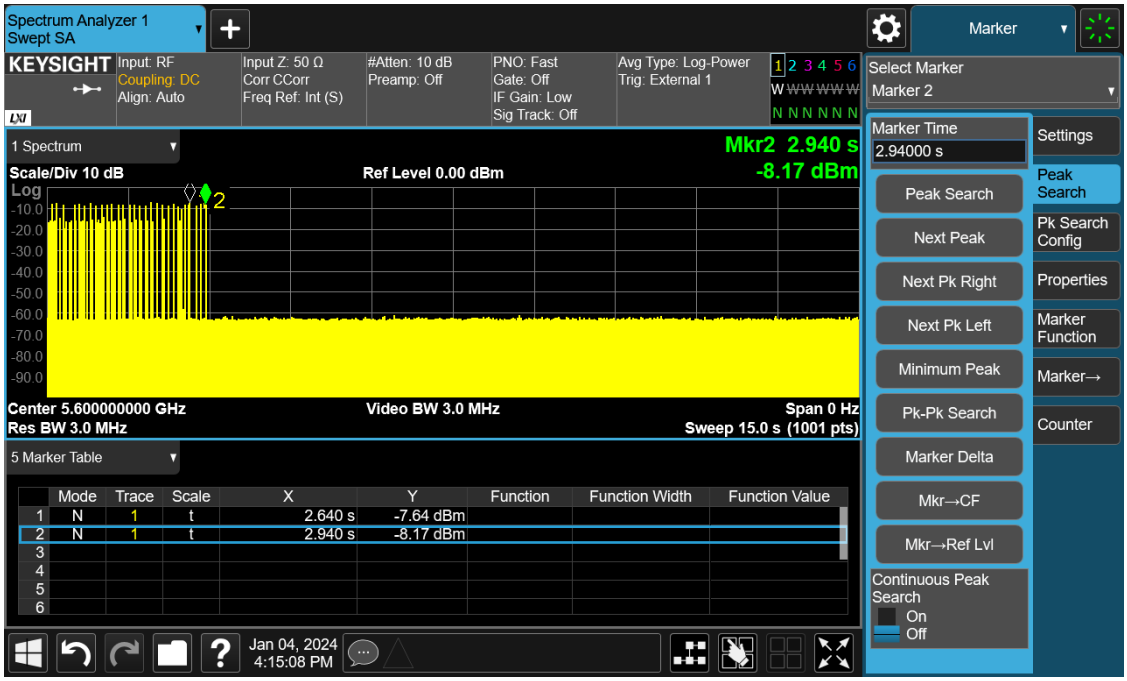
5.7.2 In-service Monitoring

Channel Move Time	10 seconds

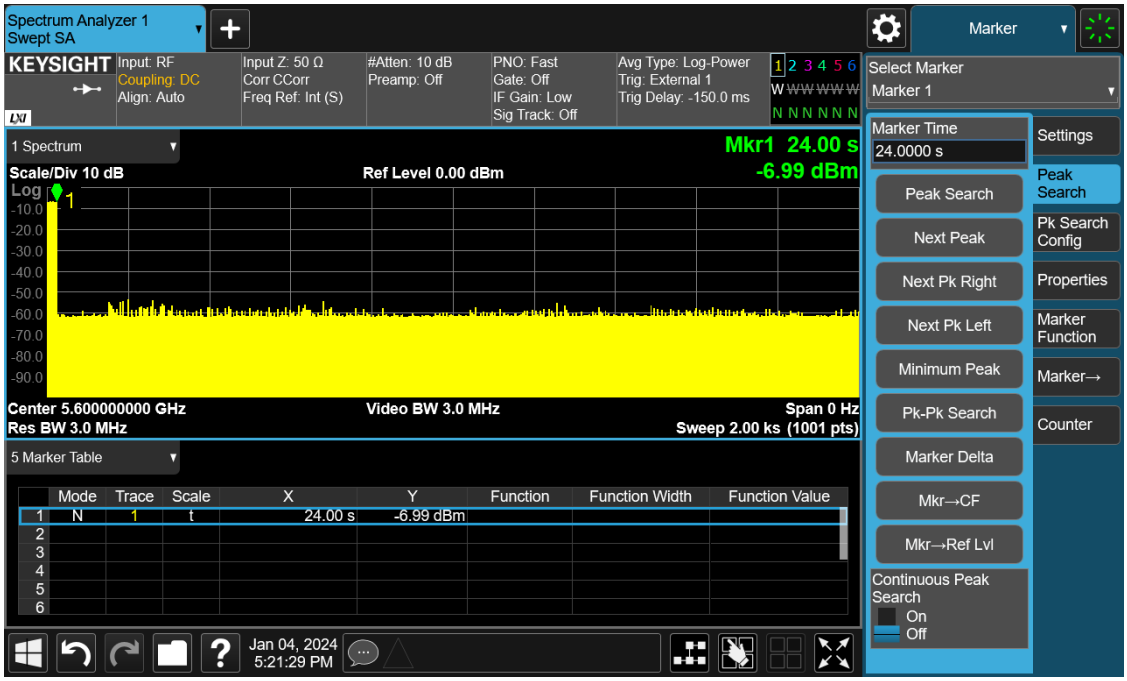
Channel Closing Transmission Time	200 ms + aggregate of 60 ms over remaining 10 second period
Non-occupancy period	Minimum 30 minutes

Verified during in-service monitoring: channel closing transmission time and channel move time. The transmissions were observed at the end of the radar burst on the operating channel for a duration of greater than 10 seconds. The transmissions were measured and recorded during the observation time. This was compared to the channel move time and channel closing time limits.
One 12 second plot is reported for the short pulse radar type 0. A 60 ms plot is also provided to verify closing time for the aggregate transmission time starting from 200 ms after the end of the radar signal to the completion of the channel move.
During the 30 minutes observation time, the EUT did not make any transmissions on a channel after a radar signal was detected.
Please see plots below.
A spectrum analyzer is used as a monitor to verify that the EUT has vacated the channel within the channel closing transmission time and channel move time, and does not transmit on a channel during the non-occupancy period after the detection and channel move.

Plot 11: Channel Close)



Plot 12: Channel Move



Plot 13: Non-Occupancy

5.7.3 DFS Detection Bandwidth

20 MHz

EUT Frequency = 5600 MHz ; Bandwidth = 20 MHz											
Radar Frequency MHz	**DFS Detection Trials (1 = Detection, 0 = No Detection)**										**Detection Rate %**
	Trials										
	1	2	3	4	5	6	7	8	9	10	
F_Low 5590	1	1	1	1	1	1	1	1	1	1	100
5595	1	1	1	1	1	1	1	1	1	1	100
5600	1	1	1	1	1	1	1	1	1	1	100
5605	1	1	1	1	1	1	1	1	1	1	100
F_High 5610	1	1	1	1	1	1	1	1	1	1	100
Total Detection Percentage											100
Detection Bandwidth = FH-FL = 5590 MHz - 5610 MHz = 20 MHz											
99% Bandwidth = 19.8 MHz											

40 MHz

EUT Frequency = 5590 MHz ; Bandwidth = 40 MHz											
Radar Frequency MHz	**DFS Detection Trials (1 = Detection, 0 = No Detection)**										**Detection Rate %**
	Trials										
	1	2	3	4	5	6	7	8	9	10	
F_Low 5570	1	1	1	1	1	1	1	1	1	1	100
5580	1	1	1	1	1	1	1	1	1	1	100
5590	1	1	1	1	1	1	1	1	1	1	100
5600	1	1	1	1	1	1	1	1	1	1	100
F_High 5610	1	1	1	1	1	1	1	1	1	1	100
Total Detection Percentage											100
Detection Bandwidth = FH-FL = 5570 MHz - 5610 MHz = 40 MHz											
99% Bandwidth = 39.6 MHz											

80 MHz

EUT Frequency = 5610 MHz ; Bandwidth = 80 MHz											
Radar Frequency MHz	**DFS Detection Trials (1 = Detection, 0 = No Detection)**										**Detection Rate %**
	Trials										
	1	2	3	4	5	6	7	8	9	10	
F_Low 5570	1	1	1	1	1	1	1	1	1	1	100
5590	1	1	1	1	1	1	1	1	1	1	100
5610	1	1	1	1	1	1	1	1	1	1	100
5630	1	1	1	1	1	1	1	1	1	1	100
F_High 5650	1	1	1	1	1	1	1	1	1	1	100
Total Detection Percentage											100
Detection Bandwidth = FH-FL = 5570 MHz - 5650 MHz = 80 MHz											
99% Bandwidth = 79.2 MHz											

160 MHz

EUT Frequency = 5570 MHz ; Bandwidth = 160 MHz											
Radar Frequency MHz	**DFS Detection Trials (1 = Detection, 0 = No Detection)**										**Detection Rate %**
	Trials										
	1	2	3	4	5	6	7	8	9	10	
F_Low 5490	1	1	1	1	1	1	1	1	1	1	100
5530	1	1	1	1	1	1	1	1	1	1	100
5570	1	1	1	1	1	1	1	1	1	1	100
5610	1	1	1	1	1	1	1	1	1	1	100
F_High 5650	1	1	1	1	1	1	1	1	1	1	100
Total Detection Percentage											100
Detection Bandwidth = FH-FL = 5490 MHz - 5650 MHz = 160 MHz											
99% Bandwidth = 158.4 MHz											

5.7.4 Detection Probability

For statistical performance check. Demonstrating a minimum channel loading of approximately 17% or greater of the test. Observe the transmissions of the EUT at the end of the burst on the operating channel for duration greater than 10 seconds for short pulse radar type 1-4 and 6 to ensure detection occurs. Then observe the transmissions of the EUT at the end of the burst on the operating channel for duration greater than 22 seconds for long pulse radar type 5 to ensure detection occurs. The device can utilize a test mode to demonstrate when detection occurs to prevent the need to reset the device between trial runs.
Please see data below.

Radar Type	Min successful detection (%)	Minimum Trials
1	60	30
2	60	30
3	60	30
4	60	30
Types 1 - 4	80	120
5	80	30
6	70	30

20 MHz

Summary			
Type	**Detections**	**Trials**	**Detection Probability**
Type 1	18	30	60%
Type 2	29	30	97%
Type 3	26	30	87%
Type 4	23	30	77%
Type 5	30	30	100%
Type 6	30	30	100%
Aggregate 1-4	96	120	80%

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	56	1	954	y
2	22	1	2411	y
3	60	1	893	y
4	26	1	2064	y
5	23	1	2297	n
6	22	1	2428	n
7	85	1	622	y
8	51	1	1035	y
9	60	1	888	y
10	27	1	2015	n
11	37	1	1440	y
12	26	1	2065	n
13	20	1	2640	n
14	80	1	663	y
15	21	1	2574	y
16	28	1	1900	n
17	42	1	1280	y
18	22	1	2473	y
19	35	1	1524	y
20	28	1	1896	n
21	18	1	3023	y
22	98	1	540	n
23	30	1	1791	n
24	20	1	2713	n
25	24	1	2255	n
26	24	1	2241	n
27	20	1	2654	y
28	33	1	1602	y
29	18	1	2970	y
30	27	1	1981	y
				18/30: 60%

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	26	1.4	168	y
2	28	3.8	205	y
3	26	2.1	225	y
4	25	2	205	y
5	29	3	180	y
6	26	1.7	181	y
7	26	1.3	201	y
8	26	2.4	187	y
9	27	3.7	200	n
10	25	4.3	211	y
11	25	4.2	163	y
12	26	4.1	214	y
13	27	4	188	y
14	25	4.7	199	y
15	24	2.3	158	y
16	25	3.1	198	y
17	28	3.6	204	y
18	26	4.7	168	y
19	24	3	168	y
20	29	3.7	208	y
21	24	1.6	186	y
22	24	2.9	165	y
23	27	2.7	158	y
24	27	4.9	199	y
25	27	3.4	196	y
26	24	4	188	y
27	26	2.8	153	y
28	28	1.9	222	y
29	26	3.8	227	y
30	27	3.8	185	y
				29/30: 96.7%

RADAR TYPE 3				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	17	8.4	317	y
2	16	6.5	464	y
3	17	9.2	368	y
4	17	6.4	304	y
5	18	9.9	209	y
6	18	6.1	355	y
7	17	9.9	438	n
8	16	9	359	y
9	17	7.8	234	y
10	17	8	442	n
11	18	8.7	356	y
12	18	6	208	y
13	16	9.9	368	y
14	17	8.8	329	y
15	16	7.1	344	y
16	16	8.8	202	y
17	18	7.1	352	y
18	16	9.1	388	y
19	17	7.2	356	y
20	17	9.5	455	y
21	17	6.9	470	n
22	16	7.3	406	y
23	16	9.6	467	y
24	18	9	474	y
25	16	6.1	396	y
26	16	9.8	408	y
27	17	7.3	234	y
28	17	8.3	324	n
29	16	6.7	375	y
30	16	7	230	y
				26/30: 86.7%

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	13	19.8	452	y
2	12	17	330	n
3	13	16.8	449	y
4	16	14.2	391	y
5	13	14.4	319	n
6	13	14.5	219	y
7	15	17.3	372	y
8	15	12.7	363	n
9	13	14	384	y
10	16	13.9	395	n
11	14	15.1	296	y
12	13	13.5	300	y
13	16	18.9	491	y
14	15	16	290	y
15	16	13.7	371	y
16	16	19.5	413	y
17	13	14.2	243	y
18	15	13.5	431	n
19	13	12.5	290	y
20	14	19.2	202	y
21	15	16.3	449	y
22	13	14.4	304	n
23	12	16.9	499	y
24	12	15.6	343	y
25	16	12.9	408	y
26	13	13.7	468	y
27	15	13.2	261	y
28	13	17.3	262	y
29	16	15.1	348	y
30	14	19.9	367	n
				23/30: 76.7%

TYPE 5	Rohde & Schwarz K350 Pulse Sequencer DFS			
Trial #	**Detection (yes/no)**	**Chirp Width (MHz)**	**Subset**	**Fc**
1	y	19	1	5600
2	y	19	1	5600
3	y	9	1	5600
4	y	6	1	5600
5	y	13	1	5600
6	y	17	1	5600
7	y	16	1	5600
8	y	14	1	5600
9	y	9	1	5600
10	y	6	1	5600
11	y	15	2	5596
12	y	13	2	5595.2
13	y	10	2	5594
14	y	15	2	5596
15	y	8	2	5593.2
16	y	17	2	5596.8
17	y	5	2	5592
18	y	8	2	5593.2
19	y	7	2	5592.8
20	y	12	2	5594.8
21	y	12	3	5605.2
22	y	15	3	5604
23	y	14	3	5604.4
24	y	10	3	5606
25	y	14	3	5604.4
26	y	14	3	5604.4
27	y	11	3	5605.6
28	y	19	3	5602.4
29	y	10	3	5606
30	y	8	3	5606.8
	30/30: 100%			

TYPE 6 S	Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Detection (yes/no)**
1	y
2	y
3	y
4	y
5	y
6	y
7	y
8	y
9	y
10	y
11	y
12	y
13	y
14	y
15	y
16	y
17	y
18	y
19	y
20	y
21	y
22	y
23	y
24	y
25	y
26	y
27	y
28	y
29	y
30	y
	30/30: 100%

40 MHz

Summary			
Type	**Detections**	**Trials**	**Detection Probability**
Type 1	23	30	77%
Type 2	24	30	80%
Type 3	25	30	83%
Type 4	26	30	87%
Type 5	30	30	100%
Type 6	29	30	97%
Aggregate 1-4	98	120	82%

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	27	1	1966	y
2	51	1	1034	y
3	62	1	854	y
4	21	1	2580	y
5	30	1	1795	y
6	21	1	2540	y
7	36	1	1468	n
8	54	1	978	y
9	34	1	1590	y
10	47	1	1136	y
11	21	1	2579	n
12	19	1	2905	n
13	26	1	2098	y
14	63	1	837	y
15	31	1	1701	y
16	39	1	1362	n
17	28	1	1898	y
18	43	1	1243	y
19	56	1	955	y
20	49	1	1082	y
21	29	1	1878	y
22	21	1	2522	n
23	25	1	2154	y
24	27	1	1964	y
25	30	1	1768	n
26	18	1	3031	n
27	59	1	907	y
28	21	1	2565	y
29	54	1	983	y
30	49	1	1093	y
				23/30: 76.7%

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	27	2.3	223	y
2	26	3.8	229	y
3	28	4.9	156	y
4	28	4.8	195	y
5	27	1	189	y
6	27	2.1	188	n
7	26	4.3	191	y
8	26	4.9	222	n
9	29	2.5	158	y
10	27	2.7	192	y
11	25	4	156	n
12	28	1.5	214	y
13	28	4.1	225	y
14	26	3.8	151	y
15	24	1.6	181	y
16	26	3.3	182	y
17	27	1.4	192	y
18	27	1.1	182	y
19	25	2.1	226	y
20	23	4.6	157	y
21	25	1.1	207	n
22	25	1.2	156	y
23	23	2.6	221	y
24	27	4.7	222	n
25	27	2.8	197	y
26	26	2.7	162	n
27	27	1.2	167	y
28	24	2.9	208	y
29	29	4.4	214	y
30	26	3.2	228	y
				24/30: 80%

RADAR TYPE 3				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	17	8	406	y
2	17	9.7	290	y
3	16	9.8	425	n
4	17	9.8	200	y
5	17	8.4	426	y
6	16	8.9	367	y
7	16	9.6	284	y
8	17	7.7	399	y
9	17	8.4	246	y
10	18	6.3	247	y
11	18	8	299	y
12	16	6.5	496	y
13	17	7.7	390	y
14	16	7	319	y
15	17	8.7	466	y
16	18	7.6	464	n
17	17	6.9	474	n
18	17	7	390	y
19	17	7.2	469	y
20	16	6.2	489	y
21	17	7.6	278	y
22	18	7.7	431	n
23	17	8.2	321	y
24	17	6.6	205	y
25	17	6.7	241	y
26	18	6.6	413	y
27	16	8.2	266	y
28	16	7.6	263	y
29	17	9.5	433	y
30	18	6.5	449	n
				25/30: 83.3%

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	16	16.2	389	y
2	15	11.6	483	y
3	14	18.2	300	y
4	16	17.5	459	y
5	13	12.9	477	y
6	15	12.5	269	y
7	14	17.8	410	y
8	12	12.8	332	y
9	13	17.9	460	n
10	12	17	350	y
11	13	15.5	212	y
12	15	16.4	304	y
13	15	13.6	362	y
14	13	14.9	218	y
15	13	14	431	y
16	16	19.1	352	n
17	13	12.6	209	y
18	16	19.7	290	y
19	13	11.9	396	y
20	15	11.7	476	y
21	15	11.5	458	y
22	15	14.7	400	y
23	15	18.3	405	y
24	12	14.3	378	y
25	14	18.3	471	y
26	16	13.5	274	n
27	15	12.6	411	y
28	12	11.4	436	y
29	15	12.1	326	n
30	13	19.4	297	y
				26/30: 86.7%

TYPE 5	Rohde & Schwarz K350 Pulse Sequencer DFS			
Trial #	**Detection (yes/no)**	**Chirp Width (MHz)**	**Subset**	**Fc**
1	y	10	1	5590
2	y	18	1	5590
3	y	19	1	5590
4	y	10	1	5590
5	y	17	1	5590
6	y	6	1	5590
7	y	12	1	5590
8	y	16	1	5590
9	y	14	1	5590
10	y	11	1	5590
11	y	11	2	5574.4
12	y	16	2	5576.4
13	y	11	2	5574.4
14	y	7	2	5572.8
15	y	13	2	5575.2
16	y	10	2	5574
17	y	8	2	5573.2
18	y	15	2	5576
19	y	15	2	5576
20	y	13	2	5575.2
21	y	5	3	5608
22	y	8	3	5606.8
23	y	9	3	5606.4
24	y	14	3	5604.4
25	y	8	3	5606.8
26	y	5	3	5608
27	y	13	3	5604.8
28	y	16	3	5603.6
29	y	6	3	5607.6
30	y	15	3	5604
	30/30: 100%			

TYPE 6 S	Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Detection (yes/no)**
1	y
2	y
3	y
4	y
5	y
6	y
7	n
8	y
9	y
10	y
11	y
12	y
13	y
14	y
15	y
16	y
17	y
18	y
19	y
20	y
21	y
22	y
23	y
24	y
25	y
26	y
27	y
28	y
29	y
30	y
	29/30: 96.7%

80 MHz

Summary			
Type	**Detections**	**Trials**	**Detection Probability**
Type 1	25	30	83%
Type 2	27	30	90%
Type 3	22	30	73%
Type 4	25	30	83%
Type 5	30	30	100%
Type 6	30	30	100%
Aggregate 1-4	99	120	83%

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	22	1	2438	y
2	31	1	1716	n
3	89	1	595	y
4	39	1	1353	y
5	19	1	2848	y
6	94	1	565	y
7	30	1	1803	y
8	36	1	1492	y
9	85	1	627	y
10	75	1	708	y
11	63	1	840	y
12	27	1	1999	y
13	93	1	571	n
14	19	1	2828	y
15	25	1	2182	y
16	19	1	2859	y
17	35	1	1516	n
18	27	1	2007	n
19	74	1	721	y
20	99	1	534	y
21	64	1	827	y
22	70	1	759	y
23	26	1	2068	y
24	22	1	2435	y
25	30	1	1814	y
26	36	1	1481	n
27	49	1	1084	y
28	18	1	2999	y
29	47	1	1138	y
30	77	1	685	y
				25/30: 83.3%

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	24	3.2	161	y
2	27	1.1	178	y
3	29	3.3	154	y
4	25	1.3	180	y
5	25	1.3	165	y
6	25	2.7	185	y
7	28	2.9	229	y
8	25	2.6	159	y
9	25	2.3	151	n
10	27	2.4	226	y
11	26	1.5	211	y
12	24	2.9	186	y
13	28	4.2	189	y
14	25	1.6	200	y
15	23	3.6	179	y
16	23	3.8	197	n
17	27	3.9	221	n
18	23	1.8	176	y
19	25	2.9	215	y
20	24	2.1	215	y
21	25	4.4	162	y
22	24	2.8	209	y
23	26	4.8	209	y
24	26	4.8	161	y
25	26	1.6	170	y
26	29	3.4	187	y
27	26	4.6	174	y
28	27	1.5	180	y
29	25	2.1	199	y
30	24	2.9	187	y
				27/30: 90%

RADAR TYPE 3				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	17	9	430	y
2	18	9.2	434	y
3	17	8.5	247	y
4	17	7	249	n
5	17	6.8	323	y
6	17	8.7	291	y
7	16	6.4	489	y
8	17	7.5	247	y
9	18	7	426	n
10	17	7.8	229	n
11	17	8.6	316	n
12	17	9.3	366	y
13	17	8.6	364	y
14	17	8.2	420	y
15	18	8.3	328	y
16	18	7.9	482	y
17	16	9.6	341	y
18	17	7.8	212	n
19	16	9.6	404	y
20	17	8.5	455	y
21	18	9.3	442	y
22	16	6.8	391	y
23	17	7.2	440	y
24	16	6.2	454	n
25	17	8.5	495	n
26	17	8.2	247	y
27	16	7.8	478	n
28	16	6.2	399	y
29	17	7.2	383	y
30	18	6.1	327	y
				22/30: 73.3%

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	15	12.8	278	y
2	15	18.8	297	y
3	13	18.8	347	y
4	12	19.7	439	y
5	14	18.1	344	y
6	15	16.4	495	n
7	14	17.1	467	y
8	16	15.9	435	y
9	15	14.7	439	n
10	14	18.9	214	y
11	12	15.3	279	y
12	14	17	389	y
13	15	15.8	211	y
14	15	15.1	302	y
15	14	15	206	y
16	16	12.5	494	y
17	14	17.7	229	y
18	15	19.1	419	n
19	15	15	268	y
20	15	14.9	407	y
21	15	16.3	213	y
22	13	16.9	243	n
23	13	14.6	364	n
24	14	15.2	226	y
25	13	11.1	316	y
26	14	11.2	325	y
27	12	15.2	205	y
28	15	17.8	390	y
29	12	12.2	248	y
30	14	16.8	497	y
				25/30: 83.3%

TYPE 5	Rohde & Schwarz K350 Pulse Sequencer DFS			
Trial #	**Detection (yes/no)**	**Chirp Width (MHz)**	**Subset**	**Fc**
1	y	9	1	5610
2	y	17	1	5610
3	y	18	1	5610
4	y	19	1	5610
5	y	17	1	5610
6	y	6	1	5610
7	y	7	1	5610
8	y	7	1	5610
9	y	5	1	5610
10	y	18	1	5610
11	y	17	2	5576.8
12	y	13	2	5575.2
13	y	5	2	5572
14	y	11	2	5574.4
15	y	5	2	5572
16	y	19	2	5577.6
17	y	17	2	5576.8
18	y	18	2	5577.2
19	y	8	2	5573.2
20	y	17	2	5576.8
21	y	18	3	5642.8
22	y	18	3	5642.8
23	y	11	3	5645.6
24	y	15	3	5644
25	y	12	3	5645.2
26	y	8	3	5646.8
27	y	8	3	5646.8
28	y	9	3	5646.4
29	y	9	3	5646.4
30	y	5	3	5648
	30/30: 100%			

TYPE 6 S	Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Detection (yes/no)**
1	y
2	y
3	y
4	y
5	y
6	y
7	y
8	y
9	y
10	y
11	y
12	y
13	y
14	y
15	y
16	y
17	y
18	y
19	y
20	y
21	y
22	y
23	y
24	y
25	y
26	y
27	y
28	y
29	y
30	y
	30/30: 100%

160 MHz

Summary			
Type	**Detections**	**Trials**	**Detection Probability**
Type 1	28	30	93%
Type 2	30	30	100%
Type 3	26	30	87%
Type 4	24	30	80%
Type 5	30	30	100%
Type 6	30	30	100%
Aggregate 1-4	108	120	90%

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	22	1	2400	y
2	38	1	1415	y
3	40	1	1347	y
4	38	1	1419	y
5	87	1	607	y
6	58	1	912	y
7	53	1	998	y
8	20	1	2721	y
9	43	1	1226	n
10	59	1	904	y
11	56	1	949	y
12	19	1	2918	y
13	39	1	1378	y
14	30	1	1788	y
15	28	1	1924	y
16	38	1	1405	y
17	20	1	2686	y
18	31	1	1749	y
19	22	1	2443	y
20	23	1	2331	y
21	20	1	2653	y
22	76	1	700	y
23	25	1	2185	y
24	31	1	1702	y
25	30	1	1780	y
26	79	1	668	y
27	45	1	1180	y
28	21	1	2551	n
29	23	1	2382	y
30	81	1	653	y
				28/30: 93.3%

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	26	4.2	212	y
2	26	4.9	216	y
3	29	4.3	168	y
4	27	4.8	200	y
5	27	3.6	219	y
6	26	4.6	212	y
7	29	4.5	203	y
8	26	4.5	215	y
9	25	4	165	y
10	24	3.9	220	y
11	23	4.4	217	y
12	27	1.1	192	y
13	28	4.3	213	y
14	25	3.1	150	y
15	24	3.2	200	y
16	28	2.7	191	y
17	28	1.3	187	y
18	26	3.9	173	y
19	26	4.4	199	y
20	27	1.2	222	y
21	25	2.7	173	y
22	23	2.9	178	y
23	24	2.3	173	y
24	28	1.8	196	y
25	27	3.4	205	y
26	29	4.3	164	y
27	28	4.4	213	y
28	25	2.5	188	y
29	29	2.8	202	y
30	25	1.5	199	y
				30/30: 100%

RADAR TYPE 3				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	17	9.6	270	y
2	17	9	336	y
3	18	9.9	228	y
4	17	6.8	495	y
5	18	9.2	373	y
6	16	9.8	483	y
7	18	8.6	480	y
8	17	9.5	433	y
9	16	9.3	363	y
10	17	8.6	296	y
11	17	9	217	y
12	18	8.3	248	y
13	17	9.2	362	y
14	17	6.7	341	y
15	17	8.3	348	n
16	16	7.3	381	y
17	16	6.5	331	y
18	16	9.9	462	y
19	18	6.4	294	y
20	17	6.7	318	y
21	17	7.5	484	y
22	17	9.3	390	y
23	16	9.8	224	y
24	18	6.7	468	y
25	18	6.6	289	n
26	17	6.2	328	n
27	18	7.8	273	n
28	16	7.1	214	y
29	18	6.2	385	y
30	16	7.7	226	y
				26/30: 86.7%

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Number of Pulses per Burst**	**Pulse Width (µsec)**	**PRI (µs)**	**Detection (yes/no)**
1	13	13.3	486	y
2	12	14	266	y
3	14	13.1	441	y
4	15	17.3	206	y
5	12	15.6	216	y
6	13	16.4	372	n
7	14	13.2	390	y
8	14	14.4	317	y
9	14	17.4	259	y
10	15	18	418	n
11	15	15.5	395	y
12	12	11.6	301	n
13	12	19.3	349	y
14	15	18.6	245	y
15	13	18	412	y
16	14	14.3	215	y
17	15	17.8	452	y
18	13	11.1	351	n
19	14	17.6	477	y
20	15	19.8	289	y
21	16	13.6	217	y
22	14	18.9	443	y
23	13	16	303	y
24	12	19.6	397	y
25	12	13.5	484	y
26	12	16.2	296	y
27	13	17	365	n
28	14	18.3	498	n
29	15	16	362	y
30	13	13.4	228	y
				24/30: 80%

TYPE 5	Rohde & Schwarz K350 Pulse Sequencer DFS			
Trial #	**Detection (yes/no)**	**Chirp Width (MHz)**	**Subset**	**Fc**
1	y	18	1	5570
2	y	5	1	5570
3	y	14	1	5570
4	y	15	1	5570
5	y	8	1	5570
6	y	16	1	5570
7	y	9	1	5570
8	y	5	1	5570
9	y	5	1	5570
10	y	6	1	5570
11	y	16	2	5496.4
12	y	9	2	5493.6
13	y	19	2	5497.6
14	y	6	2	5492.4
15	y	17	2	5496.8
16	y	19	2	5497.6
17	y	9	2	5493.6
18	y	5	2	5492
19	y	10	2	5494
20	y	16	2	5496.4
21	y	11	3	5645.6
22	y	14	3	5644.4
23	y	6	3	5647.6
24	y	12	3	5645.2
25	y	17	3	5643.2
26	y	14	3	5644.4
27	y	10	3	5646
28	y	14	3	5644.4
29	y	13	3	5644.8
30	y	12	3	5645.2
	30/30: 100%			

TYPE 6 S	Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	**Detection (yes/no)**
1	y
2	y
3	y
4	y
5	y
6	y
7	y
8	y
9	y
10	y
11	y
12	y
13	y
14	y
15	y
16	y
17	y
18	y
19	y
20	y
21	y
22	y
23	y
24	y
25	y
26	y
27	y
28	y
29	y
30	y
	30/30: 100%

-- End of Test Report --