



427 West 12800 South
Draper, UT 84020

Test Report Certification

FCC ID	SWX-U7PROO
ISED ID	6545A-U7PROO
Equipment Under Test	U7-Pro-Outdoor
Test Report Serial Number	TR9565_03
Date of Test(s)	23 September; 1-4 October 2024
Report Issue Date	5 December 2024

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



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 with the specifications provided by the manufacturer.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UBIQUITI
Model Number	U7-Pro-Outdoor
FCC ID	SWX-U7PROO
ISED ID	6545A-U7PROO

On this 5th day of December 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: Clay Allred



Reviewed By: Richard L. Winter

Revision History		
Revision	Description	Date
01	Original Report Release	5 December 2024
02	Amended Section 2.2 Regarding Transmit Power Control	2 January 2025
03	Removed Section 5.5.1 Amended Section 2.2, 3.3.1, 5.1, 5.3, 5.4, 5.6	14 February 2025

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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	U7-Pro-Outdoor
Serial Number	942A6F407A26
Dimensions (cm)	17.0 x 20.8 x 12.18

2.2 Description of EUT

The U7-Pro-Outdoor is a WiFi7 access point with 2.4 GHz, 5GHz and 6GHz 2x2 radios. It has external SMA antenna connectors supporting 2.4/5GHz and internal antennas supporting 2.4/5/6GHz. The U7-Pro-Outdoor has an aggregate throughput rate of 9.3 Gbps and is powered by a 2.5Gbe PoE 802.3at through a single RJ45 port.

The U7-Pro-Outdoor uses Transmit Power (TP) Control protocol and is included in the power tables of Section 5.4.

For CDD transmissions, directional gain is calculated as follows.

Array Gain = $10 \log(\text{NANT}/\text{NSS})$ 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 $\text{NANT} \leq 4$;

For PSD measurements when $\text{Nss}=1$: Array Gain = $10 \log(\text{NANT}/\text{NSS})$ dB + Antenna Gain (dBi). Or 3.01 dB + 11 dBi = 14.01 dBi.

For PSD measurements when $\text{Nss}=1$: Array Gain = $10 \log(\text{NANT}/\text{NSS})$ dB + Antenna Gain (dBi). Or 3.01 dB + 8 dBi = 11.01 dBi.

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: U7-Pro-Outdoor (Note 1) SN: 05BF1C	WiFi Access Point	See Section 2.4
BN: UBIQUITI MN: U-POE-at SN: N/A	PoE Power Adapter	Unshielded Cat 5e cable/1 meters
BN: Dell MN: XPS 13 SN: N/A	Laptop Personal Computer	Unshielded Cat 5e cable/1 meters

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
AC Mains	1	3 conductor power cord/80 cm
POE (POE Injector)	1	Unshielded Cat 5e cable/8 meters
LAN (POE Injector)	1	Unshielded Cat 5e cable/1 meters

2.5 Operating Environment

Power Supply	120 Volts AC Mains to 48 Volts PoE
AC Mains Frequency	60 Hz
Temperature	21 - 26 °C
Humidity	17 - 29 %
Barometric Pressure	1013 mBar

2.6 Operating Modes

The U7-Pro-Outdoor was connected to a personal computer laptop and tested using test software in order to enable to constant duty cycle greater or equal to 98% of the WiFi transceiver. All emission modes of 802.11 b/g/n/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

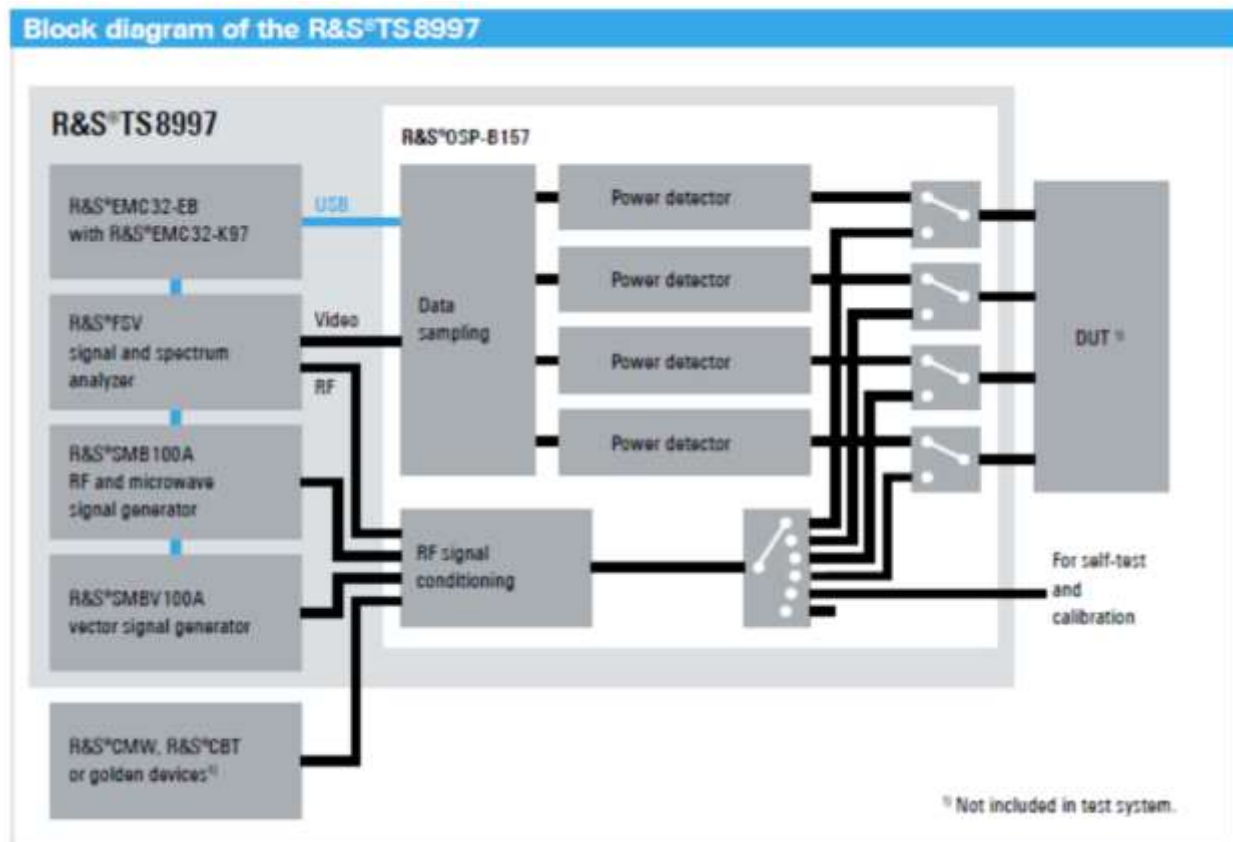


Diagram 1: Test Configuration Block Diagram

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
15.203	N/A	Antenna requirements	Structural Requirement	Compliant
15.207	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.407(a)	RSS-247 §6.2.2	Bandwidth Requirement	5260 to 5720	Compliant
15.407(a)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5260 to 5720	Compliant
15.407(b)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	N/A Note ¹
15.209	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 5720	Compliant
15.407(h)	RSS-247 §6.3	DFS Requirements	5260 to 5720	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. Note ¹ : Radiated Spurious was performed per 15.209 with the antenna unterminated.				

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 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 2025. 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 2025.

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-6754	1/23/2024	2/26/2025
LISN	AFJ	LS16C/10	UCL-2512	7/08/2024	7/08/2025
ISN	Teseq	ISN T800	UCL-2974	7/09/2024	7/09/2025
LISN	AFJ	LS16C\10	UCL-6749	1/29/2024	1/29/2025
AC Power Source	Laplace Instruments	AC1000A	UCL-2857	N/A	N/A
Test Software	AFJ	AFJ FFT3010	UCL-3107	N/A	N/A

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

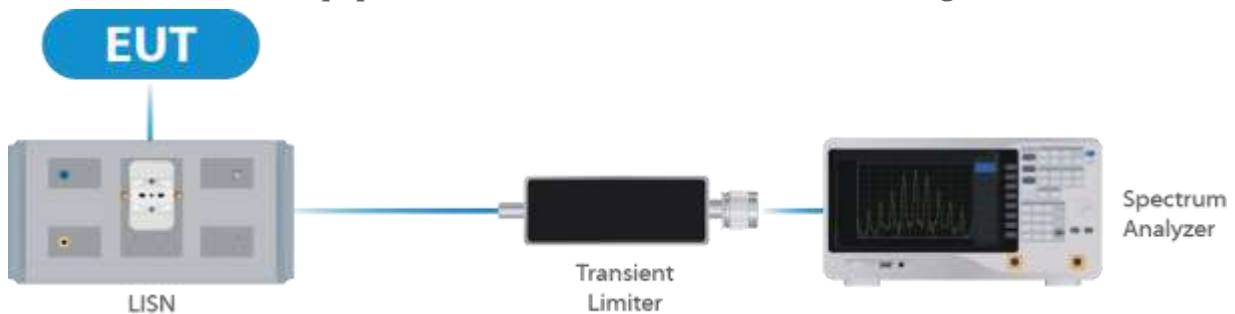


Figure 1: Conducted Emissions Test

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	12/22/2024
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	4/12/2024	4/19/2025
Switch Extension	R&S	OSP-150W	UCL-2870	4/12/2024	4/19/2025
Test Software	R&S	EMC32	UCL-9442	-	-

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

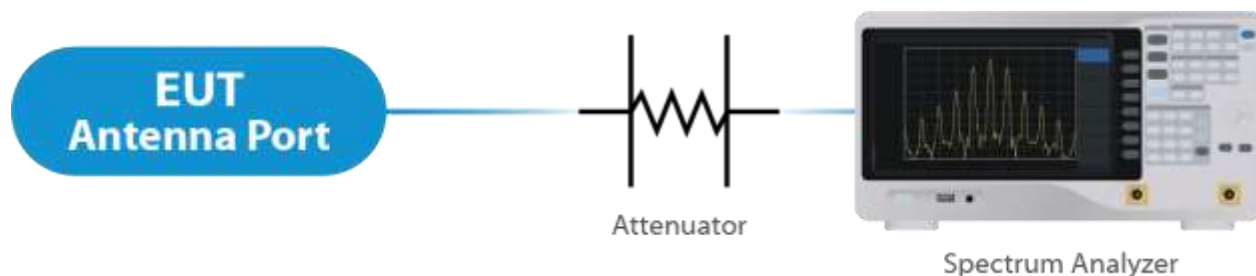


Figure 2: Direct Connect at the Antenna Port Test



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	1/25/2024	1/29/2025
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	1/19/2024	1/19/2026
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	3/10/2023	3/10/2025
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	1/27/2023	1/27/2025
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	3/10/2023	3/10/2025
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	1/19/2024	1/19/2026
Test Software	Nexio	BatEMC	UCL-5253 & UCL-5249	N/A	N/A

Table 4: List of equipment used for Radiated Emissions

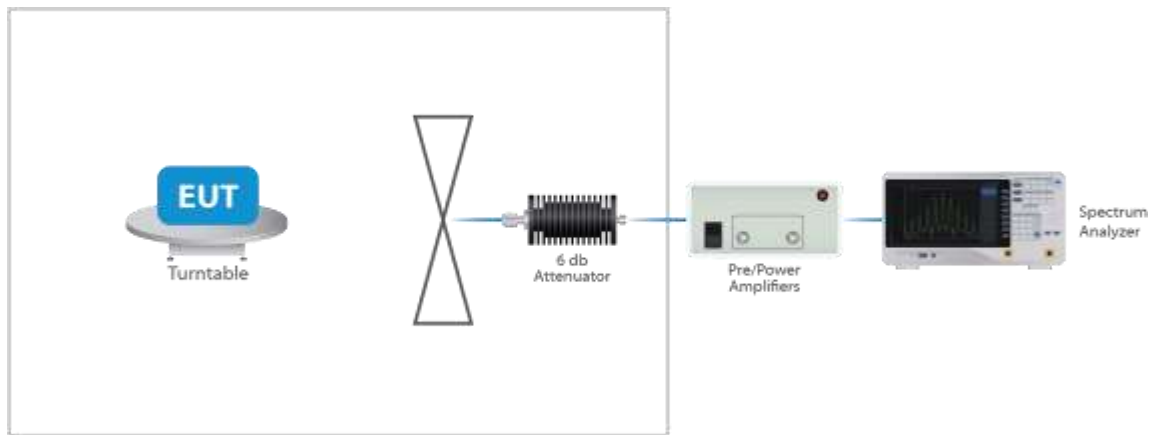


Figure 4: Radiated Emissions Test

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	5/3/2024	5/3/2025

4.4.1 Master Test Set Up

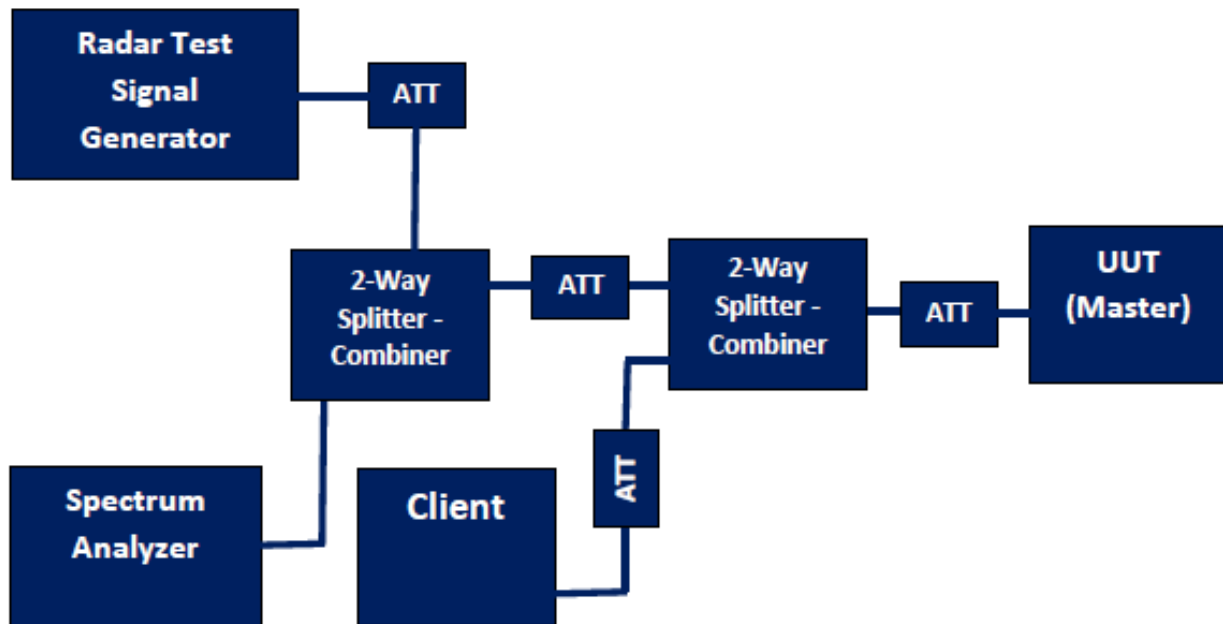


Figure 5: DFS Test Set Up - Master

4.4.2 Client Test Set Up

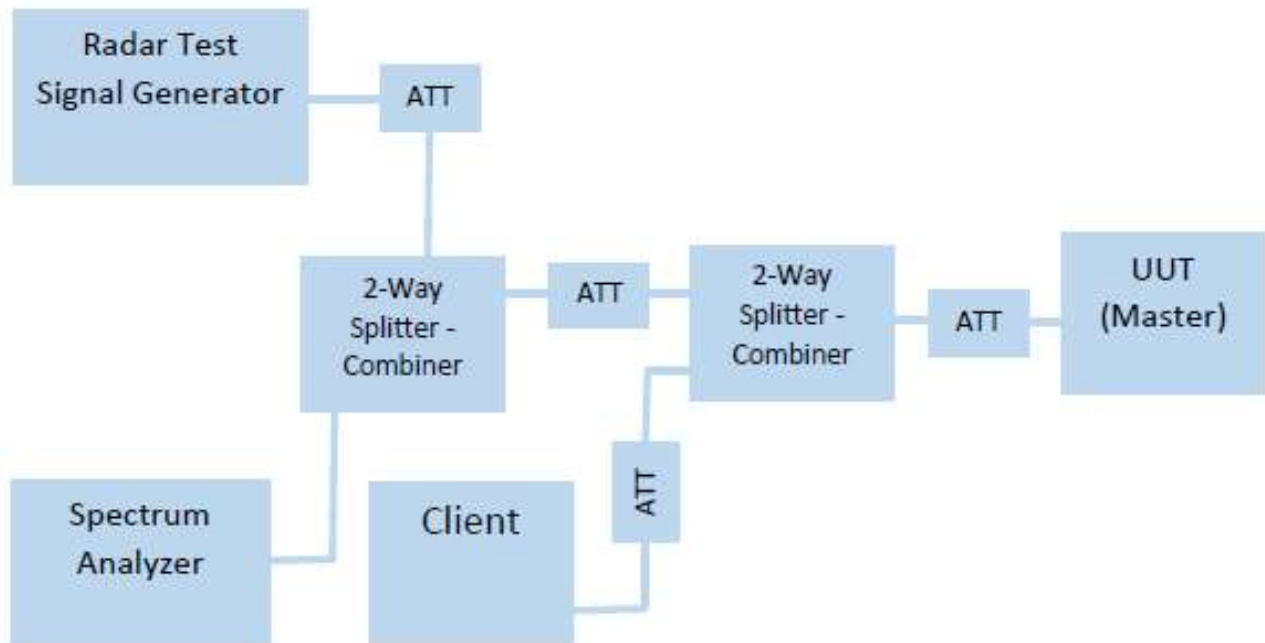


Figure 6: DFS Test Set Up – Client

4.4.3 Master Radiated Test Set Up

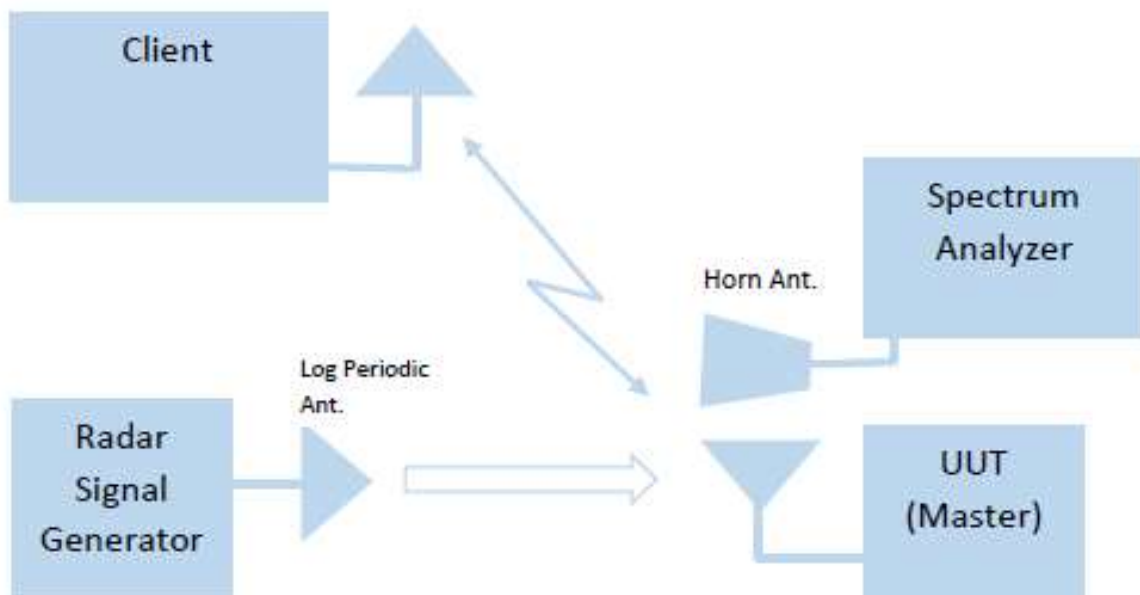


Figure 7: DFS Test Set Up – Master Injection at the Master

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 ($\pm$ 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 and an external antenna. Per the manufacturer, the maximum gain of the internal antenna per chain is 11 dBi and the maximum gain for the external antenna is 7 dBi*. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The internal antenna is not user replaceable; the external antenna is removable.

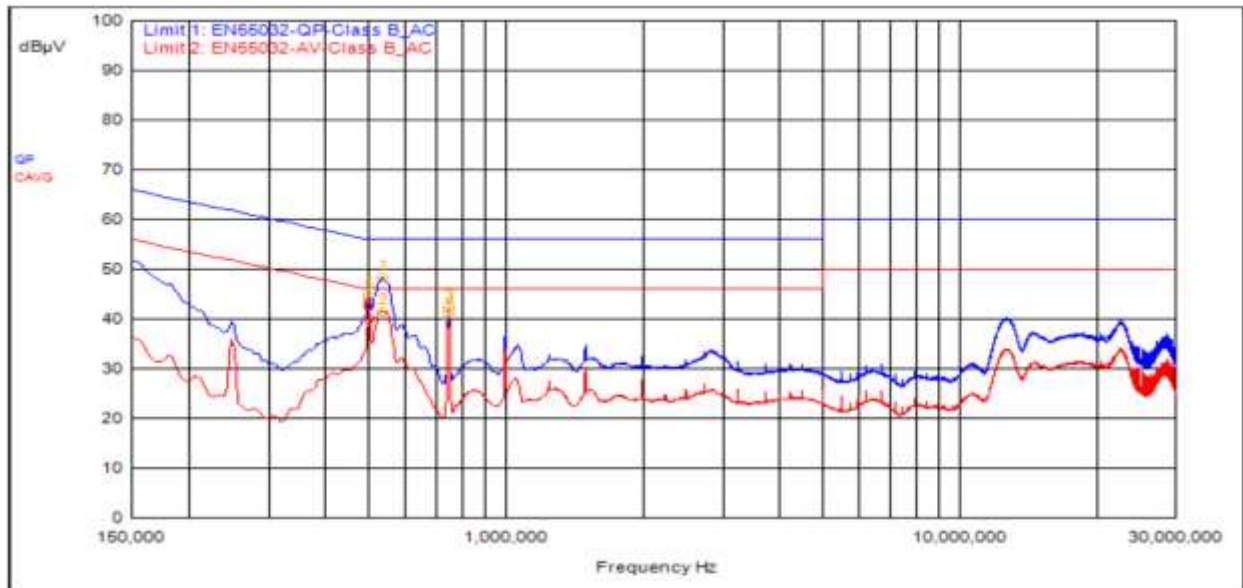
*The actual Antenna Gain is 7dBi, however for worst case considerations 8dBi was used for testing/calculation purposes.

Results

The EUT complied with the specification

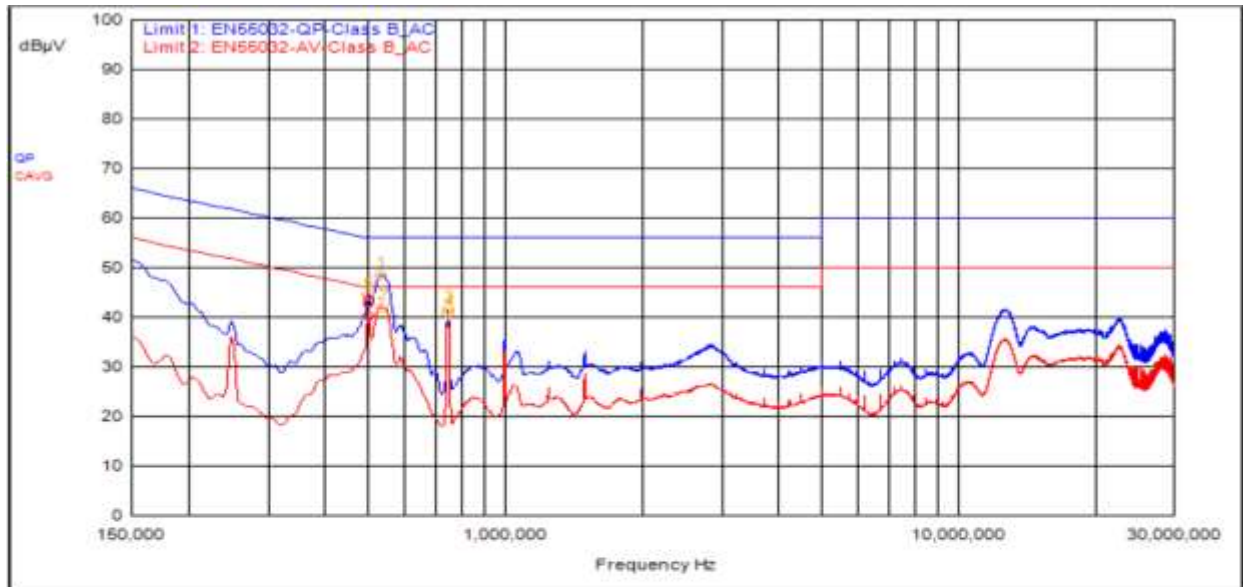
5.2 Conducted Emissions at Mains Ports Data

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	534,000kHz	9.49			QPeak	38.71	48.20	56.00	-7.80			
5	498,000kHz	9.49			QPeak	34.90	44.39	56.03	-11.64			
3	750,000kHz	9.51			QPeak	32.59	42.10	56.00	-13.90			
2	537,000kHz	9.49			C_AVG	31.89	41.38			46.00	-4.62	
4	747,000kHz	9.51			C_AVG	31.66	41.17			46.00	-4.83	
6	498,000kHz	9.49			C_AVG	30.59	40.08			46.03	-5.96	

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	531,000kHz	9.62			QPeak	38.97	48.59	56.00	-7.41			
5	498,000kHz	9.64			QPeak	34.93	44.57	56.03	-11.46			
3	750,000kHz	9.52			QPeak	32.25	41.77	56.00	-14.23			
2	534,000kHz	9.62			C_AVG	32.45	42.07			46.00	-3.93	
4	747,000kHz	9.52			C_AVG	31.36	40.88			46.00	-5.12	
6	498,000kHz	9.64			C_AVG	30.75	40.39			46.03	-5.64	

Result

The EUT complied with the specification limit.

5.3 §15.407(a) 26 dB Emissions Bandwidth

All chains were measured under the guidance of KDB 789033 Section II.C. and KDB 662911 D01.

Please see associated annex for details on instrument settings.

5.3.1 UNII-2A – Internal Antenna

Bandwidth (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM 20	5260	16.5	20.0
OFDM 20	5280	16.6	20.5
OFDM 20	5320	16.5	20.4
HE 20	5260	19.25	21.7
HE 20	5280	19.25	23.1
HE 20	5320	19.5	22.9
HE 40	5270	38.5	43.5
HE 40	5310	38.5	43.2
HE 80	5290	79.0	88.5
HE 160	5250	157.0	172.0

5.3.2 UNII-2A – External Antenna

Bandwidth (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM 20	5260	16.5	19.9
OFDM 20	5280	16.6	20.1
OFDM 20	5320	16.6	19.9
HE 20	5260	19.25	22.0
HE 20	5280	19.25	22.6
HE 20	5320	19.5	22.1
HE 40	5270	39.0	42.15
HE 40	5310	38.5	42.9
HE 80	5290	79.0	89.0
HE 160	5250	158.0	175.0

5.3.3 UNII-2C – Internal Antenna

Bandwidth	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM 20	5500	16.6	20.1
OFDM 20	5600	16.6	20.0
OFDM 20	5720	16.6	20.1
HE 20	5500	19.2	22.8
HE 20	5600	19.2	22.0
HE 20	5720	19.2	22.3
HE 40	5510	38.5	42.6
HE 40	5590	38.5	42.6
HE 40	5710	39.5	44.55
HE 80	5530	78.0	86.5
HE 80	5610	79.0	86.0
HE 80	5690	78.0	88.0
HE 160	5570	159.0	174.0

5.3.4 UNII-2C – External Antenna

Bandwidth	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM 20	5500	16.5	20.5
OFDM 20	5600	16.6	20.3
OFDM 20	5720	16.5	20.3
HE20	5500	19.1	22.9
HE20	5600	19.2	22.6
HE20	5720	19.1	22.3
HE40	5510	38.5	44.25
HE40	5590	38.5	43.05
HE40	5710	38.5	43.35
HE80	5530	79.0	87.0
HE80	5610	78.0	89.0
HE80	5690	78.0	89.5
HE160	5570	157.0	174.0

Result

All chains were tested and the highest bandwidth per chain is reported above. Please see Annex for all bandwidth measurements.

5.4 §15.407(a) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. and KDB 662911 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.

Internal Antenna Conducted RF power limit = 19dB. (15.407 limit - Antenna gain >6 dBi, or 24dBm – 5dB).

External Antenna Conducted RF Limit = 22dB. (15.407 limit - Antenna gain >6 dBi, or 24dBm – 2dB).

See Section 2.2 of this report for the directional gain calculation.

5.4.1 UNII-2A

Internal Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5260	Mcs0_Nss4	16	17.93	28.93
OFDM 20	5280	Mcs0_Nss4	16	17.63	28.63
OFDM 20	5320	Mcs0_Nss4	16	17.39	28.39
HE20	5260	Mcs0_Nss4	17	18.48	29.48
HE20	5280	Mcs0_Nss4	17	18.38	29.38
HE20	5320	Mcs0_Nss4	17	18.29	29.29
HE40	5270	Mcs0_Nss4	17	18.44	29.44
HE40	5310	Mcs0_Nss4	17	18.52	29.52
HE80	5290	Mcs0_Nss4	17	18.07	29.07
HE160	5250	Mcs0_Nss4	17	18.11	29.11

Internal Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5260	Mcs0_Nss1	13	14.93	25.93
OFDM 20	5280	Mcs0_Nss1	13	14.63	25.63
OFDM 20	5320	Mcs0_Nss1	13	14.39	25.39
HE20	5260	Mcs0_Nss1	14	15.48	26.48
HE20	5280	Mcs0_Nss1	14	15.38	26.38
HE20	5320	Mcs0_Nss1	14	15.29	26.29
HE40	5270	Mcs0_Nss1	17	18.44	29.44
HE40	5310	Mcs0_Nss1	17	18.52	29.52
HE80	5290	Mcs0_Nss1	17	18.07	29.07
HE160	5250	Mcs0_Nss1	17	18.11	29.11

External Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5260	Mcs0_Nss4	20	20.69	28.69
OFDM 20	5280	Mcs0_Nss4	20	20.69	28.69
OFDM 20	5320	Mcs0_Nss4	20	20.61	28.61
HE20	5260	Mcs0_Nss4	21	21.64	29.64
HE20	5280	Mcs0_Nss4	21	21.30	29.30
HE20	5320	Mcs0_Nss4	21	21.13	29.13
HE40	5270	Mcs0_Nss4	21	21.48	29.48
HE40	5310	Mcs0_Nss4	21	21.22	29.22
HE80	5290	Mcs0_Nss4	21	21.02	29.02
HE160	5250	Mcs0_Nss4	21	21.46	29.46

External Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5260	Mcs0_Nss1	17	17.69	25.69
OFDM 20	5280	Mcs0_Nss1	17	17.69	25.69
OFDM 20	5320	Mcs0_Nss1	17	17.61	25.61
HE20	5260	Mcs0_Nss1	18	18.64	26.64
HE20	5280	Mcs0_Nss1	18	18.30	26.30
HE20	5320	Mcs0_Nss1	19	19.13	27.13
HE40	5270	Mcs0_Nss1	21	21.48	29.48
HE40	5310	Mcs0_Nss1	21	21.22	29.22
HE80	5290	Mcs0_Nss1	21	21.02	29.02
HE160	5250	Mcs0_Nss1	21	21.46	29.46

5.4.2 UNII-2C

Internal Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5500	Mcs0_Nss4	16	17.99	28.99
OFDM 20	5600	Mcs0_Nss4	15	16.96	27.96
OFDM 20	5720	Mcs0_Nss4	16	17.54	28.54
HE20	5500	Mcs0_Nss4	16	17.82	28.82
HE20	5600	Mcs0_Nss4	16	17.67	28.67
HE20	5720	Mcs0_Nss4	17	18.12	29.12
HE40	5510	Mcs0_Nss4	16	18.12	29.12
HE40	5590	Mcs0_Nss4	17	18.73	29.73
HE40	5710	Mcs0_Nss4	17	18.32	29.32
HE80	5530	Mcs0_Nss4	17	18.69	29.69
HE80	5610	Mcs0_Nss4	17	18.55	29.55
HE80	5690	Mcs0_Nss4	17	18.31	29.31
HE160	5570	Mcs0_Nss4	17	18.71	29.71

Internal Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5500	Mcs0_Nss1	13	14.99	25.99
OFDM 20	5600	Mcs0_Nss1	12	13.96	24.96
OFDM 20	5720	Mcs0_Nss1	13	14.54	25.54
HE20	5500	Mcs0_Nss1	13	14.82	25.82
HE20	5600	Mcs0_Nss1	13	14.67	25.67
HE20	5720	Mcs0_Nss1	14	15.12	26.12
HE40	5510	Mcs0_Nss1	16	18.12	29.12
HE40	5590	Mcs0_Nss1	17	18.73	29.73
HE40	5710	Mcs0_Nss1	17	18.32	29.32
HE80	5530	Mcs0_Nss1	17	18.69	29.69
HE80	5610	Mcs0_Nss1	17	18.55	29.55
HE80	5690	Mcs0_Nss1	17	18.31	29.31
HE160	5570	Mcs0_Nss1	17	18.71	29.71

External Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5500	Mcs0_Nss4	19	20.53	28.53
OFDM 20	5600	Mcs0_Nss4	20	20.58	28.58
OFDM 20	5720	Mcs0_Nss4	19	20.54	28.54
HE20	5500	Mcs0_Nss4	20	21.29	29.29
HE20	5600	Mcs0_Nss4	20	20.39	28.39
HE20	5720	Mcs0_Nss4	20	21.38	29.38
HE40	5510	Mcs0_Nss4	21	21.64	29.64
HE40	5590	Mcs0_Nss4	21	21.82	29.82
HE40	5710	Mcs0_Nss4	21	21.54	29.54
HE80	5530	Mcs0_Nss4	21	21.59	29.59
HE80	5610	Mcs0_Nss4	20	21.26	29.26
HE80	5690	Mcs0_Nss4	20	21.15	29.15
HE160	5570	Mcs0_Nss4	21	21.55	29.55

External Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power*	EIRP
OFDM 20	5500	Mcs0_Nss1	16	17.53	25.53
OFDM 20	5600	Mcs0_Nss1	17	17.58	25.58
OFDM 20	5720	Mcs0_Nss1	16	17.54	25.54
HE20	5500	Mcs0_Nss1	17	18.29	26.29
HE20	5600	Mcs0_Nss1	17	17.39	25.39
HE20	5720	Mcs0_Nss1	17	18.38	26.38
HE40	5510	Mcs0_Nss1	21	21.64	29.64
HE40	5590	Mcs0_Nss1	20	20.82	28.82
HE40	5710	Mcs0_Nss1	21	21.54	29.54
HE80	5530	Mcs0_Nss1	21	21.59	29.59
HE80	5610	Mcs0_Nss1	20	21.26	29.26
HE80	5690	Mcs0_Nss1	20	21.15	29.15
HE160	5570	Mcs0_Nss1	21	21.55	29.55

Result

In the configuration tested, the maximum average RF output power was less than 0.250 watt; therefore, the EUT complied with the requirements of the specification.

* Gated EIRP shown in the Annex is the conducted measurement.

5.5 §15.209 Spurious Emissions

5.5.1 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 bands 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 (dBi) + Cable Loss (dB) - Pre-Amplifier Gain (dB), and is added to the Receiver reading.

5.5.2 UNII-2A

Internal Antenna

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
10.6403758 GHz	PK	54.153	74	-19.847	284	2.867	Horizontal	1 MHz	10.005
10.6404406 GHz	PK	60.425	74	-13.575	265	1.5	Horizontal	1 MHz	10.005
15.9622163 GHz	PK	63.623	74	-10.377	295	2.041	Horizontal	1 MHz	10.61
15.9624476 GHz	PK	60.454	74	-13.546	324	2.292	Horizontal	1 MHz	10.61
10.6403758 GHz	AV	41.273	54	-12.727	284	2.867	Horizontal	1 MHz	10.005
10.6404406 GHz	AV	47.085	54	-6.915	265	1.5	Horizontal	1 MHz	10.005
15.9622163 GHz	AV	50.21	54	-3.79	295	2.041	Horizontal	1 MHz	10.61
15.9624476 GHz	AV	46.501	54	-7.499	324	2.292	Horizontal	1 MHz	10.61
10.5172109 GHz	PK	60.643	74	-13.357	265	1.714	Vertical	1 MHz	9.765
10.5242323 GHz	PK	64.968	74	-9.032	291	3.444	Vertical	1 MHz	9.787
14.2591624 GHz	PK	58.267	74	-15.733	342	3.728	Vertical	1 MHz	14.069
14.6620675 GHz	PK	58.171	74	-15.829	30	3.728	Vertical	1 MHz	14.775
15.7780608 GHz	PK	55.757	74	-18.243	334	2.036	Vertical	1 MHz	10.957
15.7810123 GHz	PK	55.053	74	-18.947	277	2.292	Vertical	1 MHz	10.972
16.9875074 GHz	PK	57.58	74	-16.42	157	1.714	Vertical	1 MHz	15.137
10.5172109 GHz	AV	46.596	54	-7.404	265	1.714	Vertical	1 MHz	9.765
10.5242323 GHz	AV	51.433	54	-2.567	291	3.444	Vertical	1 MHz	9.787
14.2591624 GHz	AV	44.469	54	-9.531	342	3.728	Vertical	1 MHz	14.069
14.6620675 GHz	AV	45.073	54	-8.927	30	3.728	Vertical	1 MHz	14.775
15.7780608 GHz	AV	42.259	54	-11.741	334	2.036	Vertical	1 MHz	10.957
15.7810123 GHz	AV	41.845	54	-12.155	277	2.292	Vertical	1 MHz	10.972
16.9875074 GHz	AV	44.321	54	-9.679	157	1.714	Vertical	1 MHz	15.137
10.5218731 GHz	PK	60.978	74	-13.022	244	3.732	Horizontal	1 MHz	9.779
10.5232856 GHz	PK	60.744	74	-13.256	244	3.732	Horizontal	1 MHz	9.784
15.7759486 GHz	PK	54.736	74	-19.264	44	2.04	Horizontal	1 MHz	10.946
15.7844498 GHz	PK	55.501	74	-18.499	294	2.871	Horizontal	1 MHz	10.99
10.5218731 GHz	AV	47.111	54	-6.889	244	3.732	Horizontal	1 MHz	9.779
10.5232856 GHz	AV	46.889	54	-7.111	244	3.732	Horizontal	1 MHz	9.784
15.7759486 GHz	AV	41.599	54	-12.401	44	2.04	Horizontal	1 MHz	10.946
15.7844498 GHz	AV	42.689	54	-11.311	294	2.871	Horizontal	1 MHz	10.99
10.5571086 GHz	PK	61.815	74	-12.185	265	1.714	Vertical	1 MHz	9.826
10.5616114 GHz	PK	63.292	74	-10.708	255	2.867	Vertical	1 MHz	9.82
14.7885601 GHz	PK	58.02	74	-15.98	185	1.5	Vertical	1 MHz	14.534
15.0170772 GHz	PK	57.311	74	-16.689	168	2.292	Vertical	1 MHz	14.048
10.5571086 GHz	AV	47.818	54	-6.182	265	1.714	Vertical	1 MHz	9.826
10.5616114 GHz	AV	49.245	54	-4.755	255	2.867	Vertical	1 MHz	9.82
14.7885601 GHz	AV	44.645	54	-9.355	185	1.5	Vertical	1 MHz	14.534
15.0170772 GHz	AV	44.386	54	-9.614	168	2.292	Vertical	1 MHz	14.048
10.5616874 GHz	PK	64.406	74	-9.594	195	2.292	Horizontal	1 MHz	9.82
10.5648866 GHz	PK	53.709	74	-20.291	182	2.292	Horizontal	1 MHz	9.816
15.8389175 GHz	PK	54.541	74	-19.459	95	2.288	Horizontal	1 MHz	11.282
15.8469724 GHz	PK	54.422	74	-19.578	217	2.871	Horizontal	1 MHz	11.325
10.5616874 GHz	AV	49.75	54	-4.25	195	2.292	Horizontal	1 MHz	9.82
10.5648866 GHz	AV	41.039	54	-12.961	182	2.292	Horizontal	1 MHz	9.816
15.8389175 GHz	AV	41.625	54	-12.375	95	2.288	Horizontal	1 MHz	11.282
15.8469724 GHz	AV	41.427	54	-12.573	217	2.871	Horizontal	1 MHz	11.325

1-17GHz

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
21.2726158 GHz	PK	57.072	74	-16.928	263	1.5	Vertical	1 MHz	-0.009
33.4791127 GHz	PK	55.131	74	-18.869	358	1.5	Vertical	1 MHz	3.431
21.2726158 GHz	AV	43.764	54	-10.236	263	1.5	Vertical	1 MHz	-0.009
33.4791127 GHz	AV	42.231	54	-11.769	358	1.5	Vertical	1 MHz	3.431
21.2769378 GHz	PK	63.296	74	-10.704	337	1.5	Horizontal	1 MHz	-0.005
27.6510036 GHz	PK	53.784	74	-20.216	110	1.5	Horizontal	1 MHz	2.18
21.2769378 GHz	AV	49.547	54	-4.453	337	1.5	Horizontal	1 MHz	-0.005
27.6510036 GHz	AV	40.709	54	-13.291	110	1.5	Horizontal	1 MHz	2.18
21.0308575 GHz	PK	56.795	74	-17.205	309	1.5	Vertical	1 MHz	-1.045
39.8255818 GHz	PK	56.765	74	-17.235	176	1.5	Vertical	1 MHz	2.632
21.0308575 GHz	AV	43.72	54	-10.28	309	1.5	Vertical	1 MHz	-1.045
39.8255818 GHz	AV	42.756	54	-11.244	176	1.5	Vertical	1 MHz	2.632
21.0537493 GHz	PK	64.558	74	-9.442	324	1.5	Horizontal	1 MHz	-0.75
34.9346147 GHz	PK	57.221	74	-16.779	273	1.5	Horizontal	1 MHz	5.022
21.0537493 GHz	AV	50.288	54	-3.712	324	1.5	Horizontal	1 MHz	-0.75
34.9346147 GHz	AV	43.767	54	-10.233	273	1.5	Horizontal	1 MHz	5.022
21.1176388 GHz	PK	56.971	74	-17.029	212	1.5	Vertical	1 MHz	-0.11
34.9121674 GHz	PK	56.93	74	-17.07	330	1.5	Vertical	1 MHz	4.985
21.1176388 GHz	AV	42.615	54	-11.385	212	1.5	Vertical	1 MHz	-0.11
34.9121674 GHz	AV	43.652	54	-10.348	330	1.5	Vertical	1 MHz	4.985
21.1179426 GHz	PK	62.318	74	-11.682	337	1.5	Horizontal	1 MHz	-0.11
34.918458 GHz	PK	56.915	74	-17.085	166	1.5	Horizontal	1 MHz	4.995
21.1179426 GHz	AV	48.667	54	-5.333	337	1.5	Horizontal	1 MHz	-0.11
34.918458 GHz	AV	43.675	54	-10.325	166	1.5	Horizontal	1 MHz	4.995

16-40GHz

External Antenna

Frequency	Det.	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correctio n (dB)
10.5618348 GHz	PK	55.45	74	-18.55	257	1.5	Vertical	1 MHz	10.098
10.5620333 GHz	PK	59.329	74	-14.671	357	1.714	Vertical	1 MHz	10.098
15.8413342 GHz	PK	55.009	74	-18.991	298	3.445	Vertical	1 MHz	11.503
15.8429215 GHz	PK	56.985	74	-17.015	251	2.6	Vertical	1 MHz	11.511
10.5618348 GHz	AV	42.037	54	-11.963	257	1.5	Vertical	1 MHz	10.098
10.5620333 GHz	AV	46.258	54	-7.742	357	1.714	Vertical	1 MHz	10.098
15.8413342 GHz	AV	42.233	54	-11.767	298	3.445	Vertical	1 MHz	11.503
15.8429215 GHz	AV	43.694	54	-10.306	251	2.6	Vertical	1 MHz	11.511
10.5491189 GHz	PK	55.137	74	-18.863	258	2.292	Horizontal	1 MHz	10.114
10.5662694 GHz	PK	56.78	74	-17.22	189	2.871	Horizontal	1 MHz	10.093
15.8407841 GHz	PK	57.602	74	-16.398	204	2.605	Horizontal	1 MHz	11.501
15.8440859 GHz	PK	55.383	74	-18.617	266	2.871	Horizontal	1 MHz	11.517
10.5491189 GHz	AV	41.292	54	-12.708	258	2.292	Horizontal	1 MHz	10.114
10.5662694 GHz	AV	42.415	54	-11.585	189	2.871	Horizontal	1 MHz	10.093
15.8407841 GHz	AV	44.485	54	-9.515	204	2.605	Horizontal	1 MHz	11.501
15.8440859 GHz	AV	42.211	54	-11.789	266	2.871	Horizontal	1 MHz	11.517
10.5152811 GHz	PK	57.819	74	-16.181	277	1.714	Horizontal	1 MHz	10.032
10.5289092 GHz	PK	55.205	74	-18.795	291	2.292	Horizontal	1 MHz	10.075
15.7778754 GHz	PK	56.28	74	-17.72	291	2.292	Horizontal	1 MHz	11.189
15.7799745 GHz	PK	56.655	74	-17.345	291	2.292	Horizontal	1 MHz	11.199
10.5152811 GHz	AV	44.471	54	-9.529	277	1.714	Horizontal	1 MHz	10.032
10.5289092 GHz	AV	41.248	54	-12.752	291	2.292	Horizontal	1 MHz	10.075
15.7778754 GHz	AV	43.15	54	-10.85	291	2.292	Horizontal	1 MHz	11.189
15.7799745 GHz	AV	43.204	54	-10.796	291	2.292	Horizontal	1 MHz	11.199
10.5577885 GHz	PK	59.009	74	-14.991	339	1.714	Vertical	1 MHz	10.103
10.5602754 GHz	PK	54.239	74	-19.761	284	2.292	Vertical	1 MHz	10.1
15.8488866 GHz	PK	55.045	74	-18.955	328	2.867	Vertical	1 MHz	11.541
15.8536749 GHz	PK	60.132	74	-13.868	236	1.5	Vertical	1 MHz	11.522
10.5577885 GHz	AV	46.185	54	-7.815	339	1.714	Vertical	1 MHz	10.103
10.5602754 GHz	AV	41.008	54	-12.992	284	2.292	Vertical	1 MHz	10.1
15.8488866 GHz	AV	42.167	54	-11.833	328	2.867	Vertical	1 MHz	11.541
15.8536749 GHz	AV	45.585	54	-8.415	236	1.5	Vertical	1 MHz	11.522
10.5679667 GHz	PK	58.586	74	-15.414	0	1.714	Horizontal	1 MHz	10.091
10.5713113 GHz	PK	58.262	74	-15.738	11	1.714	Horizontal	1 MHz	10.087
15.8458976 GHz	PK	62.305	74	-11.695	257	2.292	Horizontal	1 MHz	11.526
15.8481634 GHz	PK	63.028	74	-10.972	30	2.292	Horizontal	1 MHz	11.537
10.5679667 GHz	AV	44.747	54	-9.253	0	1.714	Horizontal	1 MHz	10.091
10.5713113 GHz	AV	44.149	54	-9.851	11	1.714	Horizontal	1 MHz	10.087
15.8458976 GHz	AV	48.293	54	-5.707	257	2.292	Horizontal	1 MHz	11.526
15.8481634 GHz	AV	49.096	54	-4.904	30	2.292	Horizontal	1 MHz	11.537

1-17GHz

Frequency	Det	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
16.5097762 GHz	PK	53.085	74	-20.915	319	1.5	Vertical	1 MHz	0.277
21.9964649 GHz	PK	68.512	74	-5.488	299	1.5	Vertical	1 MHz	-0.475
16.5097762 GHz	AV	39.823	54	-14.177	319	1.5	Vertical	1 MHz	0.277
21.9964649 GHz	AV	53.811	54	-0.189	299	1.5	Vertical	1 MHz	-0.475
16.4946422 GHz	PK	60.837	74	-13.163	357	1.5	Horizontal	1 MHz	0.196
22.0019274 GHz	PK	61.395	74	-12.605	314	1.5	Horizontal	1 MHz	-0.47
16.4946422 GHz	AV	47.322	54	-6.678	357	1.5	Horizontal	1 MHz	0.196
22.0019274 GHz	AV	47.082	54	-6.918	314	1.5	Horizontal	1 MHz	-0.47
16.7879433 GHz	PK	56.972	74	-17.028	311	1.5	Vertical	1 MHz	-0.509
22.3997913 GHz	PK	64.614	74	-9.386	304	1.5	Vertical	1 MHz	-0.754
16.7879433 GHz	AV	42.793	54	-11.207	311	1.5	Vertical	1 MHz	-0.509
22.3997913 GHz	AV	51.218	54	-2.782	304	1.5	Vertical	1 MHz	-0.754
16.8091759 GHz	PK	66.795	74	-7.205	343	1.5	Horizontal	1 MHz	-0.575
22.3782165 GHz	PK	61.875	74	-12.125	330	1.5	Horizontal	1 MHz	-0.707
16.8091759 GHz	AV	52.205	54	-1.795	343	1.5	Horizontal	1 MHz	-0.575
22.3782165 GHz	AV	44.945	54	-9.055	330	1.5	Horizontal	1 MHz	-0.707
17.1638265 GHz	PK	59.523	74	-14.477	289	1.5	Vertical	1 MHz	-0.774
22.8958982 GHz	PK	63.859	74	-10.141	268	1.5	Vertical	1 MHz	-0.188
17.1638265 GHz	AV	46.564	54	-7.436	289	1.5	Vertical	1 MHz	-0.774
22.8958982 GHz	AV	48.965	54	-5.035	268	1.5	Vertical	1 MHz	-0.188
17.1661218 GHz	PK	63.313	74	-10.687	329	1.5	Horizontal	1 MHz	-0.79
22.881082 GHz	PK	61.691	74	-12.309	314	1.5	Horizontal	1 MHz	-0.239
17.1661218 GHz	AV	49.291	54	-4.709	329	1.5	Horizontal	1 MHz	-0.79
22.881082 GHz	AV	47.844	54	-6.156	314	1.5	Horizontal	1 MHz	-0.239

16-40GHz

5.5.3 UNII-2C

Internal Antenna

Frequency	Det.	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
11.4382908 GHz	PK	64.221	74	-9.779	290	3.728	Vertical	1 MHz	10.804
11.4392325 GHz	PK	67.619	74	-6.381	284	3.164	Vertical	1 MHz	10.812
14.5195045 GHz	PK	57.416	74	-16.584	215	1.5	Vertical	1 MHz	14.065
14.7589006 GHz	PK	58.334	74	-15.666	154	1.714	Vertical	1 MHz	14.81
11.4382908 GHz	AV	50.875	54	-3.125	290	3.728	Vertical	1 MHz	10.804
11.4392325 GHz	AV	53.744	54	-0.256	284	3.164	Vertical	1 MHz	10.812
14.5195045 GHz	AV	44.435	54	-9.565	215	1.5	Vertical	1 MHz	14.065
14.7589006 GHz	AV	45.345	54	-8.655	154	1.714	Vertical	1 MHz	14.81
11.4443858 GHz	PK	59.768	74	-14.232	290	2.288	Horizontal	1 MHz	10.855
11.4494211 GHz	PK	62.167	74	-11.833	284	2.292	Horizontal	1 MHz	10.898
14.7898349 GHz	PK	58.543	74	-15.457	168	2.292	Horizontal	1 MHz	14.701
14.9121595 GHz	PK	57.81	74	-16.19	203	1.714	Horizontal	1 MHz	14.405
11.4443858 GHz	AV	45.86	54	-8.14	290	2.288	Horizontal	1 MHz	10.855
11.4494211 GHz	AV	48.127	54	-5.873	284	2.292	Horizontal	1 MHz	10.898
14.7898349 GHz	AV	44.997	54	-9.003	168	2.292	Horizontal	1 MHz	14.701
14.9121595 GHz	AV	44.596	54	-9.404	203	1.714	Horizontal	1 MHz	14.405
11.2007918 GHz	PK	57.207	74	-16.793	250	2.292	Vertical	1 MHz	10.556
11.2013448 GHz	PK	65.589	74	-8.411	291	3.445	Vertical	1 MHz	10.554
14.5710922 GHz	PK	57.715	74	-16.285	309	1.5	Vertical	1 MHz	14.51
14.7158761 GHz	PK	58.55	74	-15.45	44	2.871	Vertical	1 MHz	14.965
11.2007918 GHz	AV	44.145	54	-9.855	250	2.292	Vertical	1 MHz	10.556
11.2013448 GHz	AV	53.043	54	-0.957	291	3.445	Vertical	1 MHz	10.554
14.5710922 GHz	AV	45.006	54	-8.994	309	1.5	Vertical	1 MHz	14.51
14.7158761 GHz	AV	45.488	54	-8.512	44	2.871	Vertical	1 MHz	14.965
10.9945424 GHz	PK	60.489	74	-13.511	316	2.04	Vertical	1 MHz	11.423
10.9970892 GHz	PK	58.416	74	-15.584	306	2.292	Vertical	1 MHz	11.394
14.6564112 GHz	PK	58.52	74	-15.48	309	2.292	Vertical	1 MHz	14.913
14.762818 GHz	PK	58.118	74	-15.882	172	2.292	Vertical	1 MHz	14.796
10.9945424 GHz	AV	46.812	54	-7.188	316	2.04	Vertical	1 MHz	11.423
10.9970892 GHz	AV	45.486	54	-8.514	306	2.292	Vertical	1 MHz	11.394
14.6564112 GHz	AV	45.241	54	-8.759	309	2.292	Vertical	1 MHz	14.913
14.762818 GHz	AV	45.128	54	-8.872	172	2.292	Vertical	1 MHz	14.796
10.9931549 GHz	PK	61.343	74	-12.657	330	1.714	Horizontal	1 MHz	11.439
10.9967782 GHz	PK	62.325	74	-11.675	306	1.714	Horizontal	1 MHz	11.397
16.4948006 GHz	PK	57.309	74	-16.691	258	1.714	Horizontal	1 MHz	13.306
16.5138772 GHz	PK	59.265	74	-14.735	353	1.714	Horizontal	1 MHz	13.511
10.9931549 GHz	AV	47.903	54	-6.097	330	1.714	Horizontal	1 MHz	11.439
10.9967782 GHz	AV	47.419	54	-6.581	306	1.714	Horizontal	1 MHz	11.397
16.4948006 GHz	AV	44.063	54	-9.937	258	1.714	Horizontal	1 MHz	13.306
16.5138772 GHz	AV	45.344	54	-8.656	353	1.714	Horizontal	1 MHz	13.511

1-17GHz

Frequency	Det.	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correctio n (dB)
17.1434541 GHz	PK	49.466	74	-24.534	148	1.5	Vertical	1 MHz	-0.636
22.8777483 GHz	PK	51.57	74	-22.43	347	1.5	Vertical	1 MHz	-0.251
17.1434541 GHz	AV	36.123	54	-17.877	148	1.5	Vertical	1 MHz	-0.636
22.8777483 GHz	AV	37.574	54	-16.426	347	1.5	Vertical	1 MHz	-0.251
17.164075 GHz	PK	69.262	74	-4.738	291	1.5	Horizontal	1 MHz	-0.776
22.8795629 GHz	PK	61.698	74	-12.302	319	1.5	Horizontal	1 MHz	-0.245
39.6144027 GHz	PK	56.2	74	-17.8	90	1.5	Horizontal	1 MHz	2.821
17.164075 GHz	AV	48.266	54	-5.734	291	1.5	Horizontal	1 MHz	-0.776
22.8795629 GHz	AV	48.207	54	-5.793	319	1.5	Horizontal	1 MHz	-0.245
39.6144027 GHz	AV	42.705	54	-11.295	90	1.5	Horizontal	1 MHz	2.821
16.5186426 GHz	PK	63.201	74	-10.799	2	1.5	Vertical	1 MHz	0.317
22.0028748 GHz	PK	65.668	74	-8.332	61	1.5	Vertical	1 MHz	-0.469
34.9896842 GHz	PK	56.415	74	-17.585	118	1.5	Vertical	1 MHz	5.106
16.5186426 GHz	AV	45.294	54	-8.706	2	1.5	Vertical	1 MHz	0.317
22.0028748 GHz	AV	52.412	54	-1.588	61	1.5	Vertical	1 MHz	-0.469
34.9896842 GHz	AV	43.743	54	-10.257	118	1.5	Vertical	1 MHz	5.106
16.4909862 GHz	PK	62.039	74	-11.961	358	1.5	Horizontal	1 MHz	0.171
22.0037759 GHz	PK	63.73	74	-10.27	59	1.5	Horizontal	1 MHz	-0.468
16.4909862 GHz	AV	47.365	54	-6.635	358	1.5	Horizontal	1 MHz	0.171
22.0037759 GHz	AV	49.551	54	-4.449	59	1.5	Horizontal	1 MHz	-0.468
16.8036627 GHz	PK	58.228	74	-15.772	56	1.5	Vertical	1 MHz	-0.575
22.3931693 GHz	PK	55.063	74	-18.937	61	1.5	Vertical	1 MHz	-0.74
39.260016 GHz	PK	56.091	74	-17.909	36	1.5	Vertical	1 MHz	3.174
16.8036627 GHz	AV	44.513	54	-9.487	56	1.5	Vertical	1 MHz	-0.575
22.3931693 GHz	AV	41.295	54	-12.705	61	1.5	Vertical	1 MHz	-0.74
39.260016 GHz	AV	42.923	54	-11.077	36	1.5	Vertical	1 MHz	3.174
16.7877243 GHz	PK	65.592	74	-8.408	74	1.5	Horizontal	1 MHz	-0.508
22.4134677 GHz	PK	61.1	74	-12.9	82	1.5	Horizontal	1 MHz	-0.787
16.7877243 GHz	AV	50.867	54	-3.133	74	1.5	Horizontal	1 MHz	-0.508
22.4134677 GHz	AV	46.821	54	-7.179	82	1.5	Horizontal	1 MHz	-0.787

16-40GHz

External Antenna

Frequency	Det	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
11.438858 GHz	PK	61.562	74	-12.438	214	3.728	Vertical	1 MHz	10.808
11.4418215 GHz	PK	57.786	74	-16.214	284	3.728	Vertical	1 MHz	10.834
14.6087076 GHz	PK	58.268	74	-15.732	346	2.04	Vertical	1 MHz	14.762
14.6183667 GHz	PK	58.431	74	-15.569	211	1.714	Vertical	1 MHz	14.792
11.438858 GHz	AV	48.898	54	-5.102	214	3.728	Vertical	1 MHz	10.808
11.4418215 GHz	AV	44.506	54	-9.494	284	3.728	Vertical	1 MHz	10.834
14.6087076 GHz	AV	45.184	54	-8.816	346	2.04	Vertical	1 MHz	14.762
14.6183667 GHz	AV	45.289	54	-8.711	211	1.714	Vertical	1 MHz	14.792
11.4340025 GHz	PK	64.638	74	-9.362	244	1.714	Horizontal	1 MHz	10.767
11.4342306 GHz	PK	64.644	74	-9.356	244	1.714	Horizontal	1 MHz	10.769
14.2923428 GHz	PK	58.624	74	-15.376	193	2.292	Horizontal	1 MHz	14.179
14.7505892 GHz	PK	57.98	74	-16.02	266	2.867	Horizontal	1 MHz	14.84
11.4340025 GHz	AV	51.171	54	-2.829	244	1.714	Horizontal	1 MHz	10.767
11.4342306 GHz	AV	51.116	54	-2.884	244	1.714	Horizontal	1 MHz	10.769
14.2923428 GHz	AV	44.407	54	-9.593	193	2.292	Horizontal	1 MHz	14.179
14.7505892 GHz	AV	44.633	54	-9.367	266	2.867	Horizontal	1 MHz	14.84
11.1918529 GHz	PK	62.664	74	-11.336	316	2.292	Vertical	1 MHz	10.577
11.1926965 GHz	PK	65.227	74	-8.773	306	1.714	Vertical	1 MHz	10.575
13.9806525 GHz	PK	58.715	74	-15.285	320	1.714	Vertical	1 MHz	13.914
14.6028317 GHz	PK	58.242	74	-15.758	0	2.867	Vertical	1 MHz	14.743
11.1918529 GHz	AV	49.234	54	-4.766	316	2.292	Vertical	1 MHz	10.577
11.1926965 GHz	AV	51.729	54	-2.271	306	1.714	Vertical	1 MHz	10.575
13.9806525 GHz	AV	44.72	54	-9.28	320	1.714	Vertical	1 MHz	13.914
14.6028317 GHz	AV	44.825	54	-9.175	0	2.867	Vertical	1 MHz	14.743
11.2044298 GHz	PK	65.356	74	-8.644	312	2.036	Horizontal	1 MHz	10.547
11.2046933 GHz	PK	61.69	74	-12.31	247	2.867	Horizontal	1 MHz	10.547
16.8093494 GHz	PK	56.686	74	-17.314	309	3.169	Horizontal	1 MHz	14.353
16.8100236 GHz	PK	59.298	74	-14.702	48	3.165	Horizontal	1 MHz	14.352
11.2044298 GHz	AV	50.696	54	-3.304	312	2.036	Horizontal	1 MHz	10.547
11.2046933 GHz	AV	48.36	54	-5.64	247	2.867	Horizontal	1 MHz	10.547
16.8093494 GHz	AV	43.929	54	-10.071	309	3.169	Horizontal	1 MHz	14.353
16.8100236 GHz	AV	46.111	54	-7.889	48	3.165	Horizontal	1 MHz	14.352
10.993307 GHz	PK	61.885	74	-12.115	306	1.714	Vertical	1 MHz	11.437
10.9933121 GHz	PK	59.709	74	-14.291	306	1.5	Vertical	1 MHz	11.437
14.2020011 GHz	PK	58.076	74	-15.924	117	1.714	Vertical	1 MHz	14.299
14.6655536 GHz	PK	58.188	74	-15.812	156	3.444	Vertical	1 MHz	14.942
10.993307 GHz	AV	48.14	54	-5.86	306	1.714	Vertical	1 MHz	11.437
10.9933121 GHz	AV	46.433	54	-7.567	306	1.5	Vertical	1 MHz	11.437
14.2020011 GHz	AV	44.909	54	-9.091	117	1.714	Vertical	1 MHz	14.299
14.6655536 GHz	AV	45.001	54	-8.999	156	3.444	Vertical	1 MHz	14.942
10.9894372 GHz	PK	57.612	74	-16.388	250	2.041	Horizontal	1 MHz	11.481
10.9897322 GHz	PK	60.049	74	-13.951	189	2.292	Horizontal	1 MHz	11.478
16.4944515 GHz	PK	56.312	74	-17.688	320	2.866	Horizontal	1 MHz	13.302
16.5034881 GHz	PK	58.997	74	-15.003	218	2.041	Horizontal	1 MHz	13.401
10.9894372 GHz	AV	42.675	54	-11.325	250	2.041	Horizontal	1 MHz	11.481
10.9897322 GHz	AV	45.527	54	-8.473	189	2.292	Horizontal	1 MHz	11.478
16.4944515 GHz	AV	43.021	54	-10.979	320	2.866	Horizontal	1 MHz	13.302
16.5034881 GHz	AV	45.873	54	-8.127	218	2.041	Horizontal	1 MHz	13.401

1-17GHz

Frequency	Det	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. Time (s)	RBW (Hz)	Correction (dB)
17.1596881 GHz	PK	63.311	74	-10.689	283	1.5	Vertical	5	1 MHz	-0.747
22.879989 GHz	PK	62.126	74	-11.874	258	1.5	Vertical	5	1 MHz	-0.243
17.1596881 GHz	AV	49.219	54	-4.781	283	1.5	Vertical	5	1 MHz	-0.747
22.879989 GHz	AV	48.607	54	-5.393	258	1.5	Vertical	5	1 MHz	-0.243
17.1688947 GHz	PK	64.51	74	-9.49	360	1.5	Horizontal	5	1 MHz	-0.809
22.8723646 GHz	PK	64.366	74	-9.634	309	1.5	Horizontal	5	1 MHz	-0.27
33.4522527 GHz	PK	55.521	74	-18.479	110	1.5	Horizontal	5	1 MHz	3.277
39.5028535 GHz	PK	56.389	74	-17.611	5	1.5	Horizontal	5	1 MHz	3.475
17.1688947 GHz	AV	50.022	54	-3.978	360	1.5	Horizontal	5	1 MHz	-0.809
22.8723646 GHz	AV	50.629	54	-3.371	309	1.5	Horizontal	5	1 MHz	-0.27
33.4522527 GHz	AV	42.107	54	-11.893	110	1.5	Horizontal	5	1 MHz	3.277
39.5028535 GHz	AV	43.341	54	-10.659	5	1.5	Horizontal	5	1 MHz	3.475
16.5079142 GHz	PK	59.219	74	-14.781	258	1.5	Vertical	5	1 MHz	0.268
21.9972194 GHz	PK	67.374	74	-6.626	294	1.5	Vertical	5	1 MHz	-0.475
16.5079142 GHz	AV	44.863	54	-9.137	258	1.5	Vertical	5	1 MHz	0.268
21.9972194 GHz	AV	53.34	54	-0.56	294	1.5	Vertical	5	1 MHz	-0.475
16.5134099 GHz	PK	62.164	74	-11.836	340	1.5	Horizontal	5	1 MHz	0.293
22.0006603 GHz	PK	63.036	74	-10.964	304	1.5	Horizontal	5	1 MHz	-0.471
34.9292239 GHz	PK	58.097	74	-15.903	146	1.5	Horizontal	5	1 MHz	5.013
16.5134099 GHz	AV	46.648	54	-7.352	340	1.5	Horizontal	5	1 MHz	0.293
22.0006603 GHz	AV	48.72	54	-5.28	304	1.5	Horizontal	5	1 MHz	-0.471
34.9292239 GHz	AV	43.585	54	-10.415	146	1.5	Horizontal	5	1 MHz	5.013
16.8058841 GHz	PK	61.436	74	-12.564	289	1.5	Vertical	5	1 MHz	-0.575
22.4015546 GHz	PK	64.603	74	-9.397	294	1.5	Vertical	5	1 MHz	-0.758
16.8058841 GHz	AV	46.339	54	-7.661	289	1.5	Vertical	5	1 MHz	-0.575
22.4015546 GHz	AV	51.372	54	-2.628	294	1.5	Vertical	5	1 MHz	-0.758
16.8070476 GHz	PK	67.357	74	-6.643	327	1.5	Horizontal	5	1 MHz	-0.575
22.3946264 GHz	PK	63.089	74	-10.911	327	1.5	Horizontal	5	1 MHz	-0.743
16.8070476 GHz	AV	53.735	54	-0.265	327	1.5	Horizontal	5	1 MHz	-0.575
22.3946264 GHz	AV	49.242	54	-4.758	327	1.5	Horizontal	5	1 MHz	-0.743

16-40GHz

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 662911 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 6 dBi antenna, the conducted limit for power spectral density is 11 dBm.

Internal Antenna PSD limit = 6dB. (15.407 limit - Antenna gain >6 dBi, or 11dBm – 5dB).

External Antenna PSD Limit = 9dB. (15.407 limit - Antenna gain >6 dBi, or 11dBm – 2dB).

See Section 2.2 of this report for the directional gain calculation.

Results of this testing are summarized.

5.6.1 UNII-2A

Internal Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5260	Mcs0_Nss4	16	5.68
OFDM 20	5280	Mcs0_Nss4	16	5.50
OFDM 20	5320	Mcs0_Nss4	16	5.01
HE20	5260	Mcs0_Nss4	17	5.43
HE20	5280	Mcs0_Nss4	17	5.20
HE20	5320	Mcs0_Nss4	17	5.14
HE40	5270	Mcs0_Nss4	17	2.27
HE40	5310	Mcs0_Nss4	17	2.38
HE80	5290	Mcs0_Nss4	17	-1.08
HE160	5250	Mcs0_Nss4	17	-3.53

Internal Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5260	Mcs0_Nss1	13	2.68
OFDM 20	5280	Mcs0_Nss1	13	2.50
OFDM 20	5320	Mcs0_Nss1	13	2.01
HE20	5260	Mcs0_Nss1	14	2.43
HE20	5280	Mcs0_Nss1	14	2.20
HE20	5320	Mcs0_Nss1	14	2.14
HE40	5270	Mcs0_Nss1	17	2.27
HE40	5310	Mcs0_Nss1	17	2.38
HE80	5290	Mcs0_Nss1	17	-1.08
HE160	5250	Mcs0_Nss1	17	-3.53

External Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5260	Mcs0_Nss4	20	8.30
OFDM 20	5280	Mcs0_Nss4	20	8.45
OFDM 20	5320	Mcs0_Nss4	20	8.72
HE20	5260	Mcs0_Nss4	21	8.42
HE20	5280	Mcs0_Nss4	21	8.35
HE20	5320	Mcs0_Nss4	21	7.97
HE40	5270	Mcs0_Nss4	21	5.44
HE40	5310	Mcs0_Nss4	21	5.16
HE80	5290	Mcs0_Nss4	21	2.00
HE160	5250	Mcs0_Nss4	21	-0.33

External Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5260	Mcs0_Nss1	17	5.30
OFDM 20	5280	Mcs0_Nss1	17	5.45
OFDM 20	5320	Mcs0_Nss1	17	5.72
HE20	5260	Mcs0_Nss1	18	5.42
HE20	5280	Mcs0_Nss1	18	5.35
HE20	5320	Mcs0_Nss1	19	5.97
HE40	5270	Mcs0_Nss1	21	5.44
HE40	5310	Mcs0_Nss1	21	5.16
HE80	5290	Mcs0_Nss1	21	2.00
HE160	5250	Mcs0_Nss1	21	-0.33

5.6.2 UNII-2C
Internal Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5500	Mcs0_Nss4	16	5.77
OFDM 20	5600	Mcs0_Nss4	15	5.11
OFDM 20	5720	Mcs0_Nss4	16	5.65
HE20	5500	Mcs0_Nss4	16	5.10
HE20	5600	Mcs0_Nss4	16	5.30
HE20	5720	Mcs0_Nss4	17	5.85
HE40	5510	Mcs0_Nss4	16	2.48
HE40	5590	Mcs0_Nss4	17	3.17
HE40	5710	Mcs0_Nss4	17	3.09
HE80	5530	Mcs0_Nss4	17	2.53
HE80	5610	Mcs0_Nss4	17	0.22
HE80	5690	Mcs0_Nss4	17	2.40
HE160	5570	Mcs0_Nss4	17	-2.53

Internal Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5500	Mcs0_Nss1	13	2.77
OFDM 20	5600	Mcs0_Nss1	12	2.11
OFDM 20	5720	Mcs0_Nss1	13	2.65
HE20	5500	Mcs0_Nss1	13	2.10
HE20	5600	Mcs0_Nss1	13	2.30
HE20	5720	Mcs0_Nss1	14	2.85
HE40	5510	Mcs0_Nss1	16	2.48
HE40	5590	Mcs0_Nss1	17	3.17
HE40	5710	Mcs0_Nss1	17	3.09
HE80	5530	Mcs0_Nss1	17	2.53
HE80	5610	Mcs0_Nss1	17	0.22
HE80	5690	Mcs0_Nss1	17	2.40
HE160	5570	Mcs0_Nss1	17	-2.53

External Antenna NSS > 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5500	Mcs0_Nss4	19	8.29
OFDM 20	5600	Mcs0_Nss4	20	8.92
OFDM 20	5720	Mcs0_Nss4	19	8.44
HE20	5500	Mcs0_Nss4	20	8.69
HE20	5600	Mcs0_Nss4	20	8.18
HE20	5720	Mcs0_Nss4	20	8.93
HE40	5510	Mcs0_Nss4	21	5.77
HE40	5590	Mcs0_Nss4	21	6.12
HE40	5710	Mcs0_Nss4	21	5.85
HE80	5530	Mcs0_Nss4	21	3.02
HE80	5610	Mcs0_Nss4	20	2.89
HE80	5690	Mcs0_Nss4	20	2.53
HE160	5570	Mcs0_Nss4	21	0.11

External Antenna NSS = 1

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	PSD
OFDM 20	5500	Mcs0_Nss1	16	5.29
OFDM 20	5600	Mcs0_Nss1	17	5.92
OFDM 20	5720	Mcs0_Nss1	16	5.44
HE20	5500	Mcs0_Nss1	17	5.69
HE20	5600	Mcs0_Nss1	17	5.18
HE20	5720	Mcs0_Nss1	17	5.93
HE40	5510	Mcs0_Nss1	21	5.77
HE40	5590	Mcs0_Nss1	20	5.12
HE40	5710	Mcs0_Nss1	21	5.85
HE80	5530	Mcs0_Nss1	21	3.02
HE80	5610	Mcs0_Nss1	20	2.89
HE80	5690	Mcs0_Nss1	20	2.53
HE160	5570	Mcs0_Nss1	21	0.11

Result

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

5.7 DFS Requirement

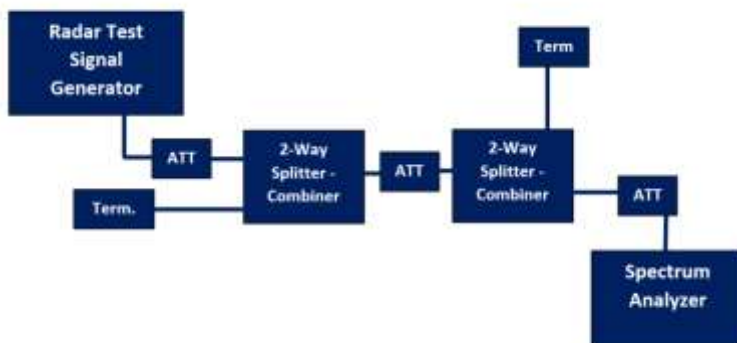
This product is a master with radar detection. The outcome of the required DFS tests is located in this section. DFS testing was performed following the test procedures as outlined in KDB 905462.

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

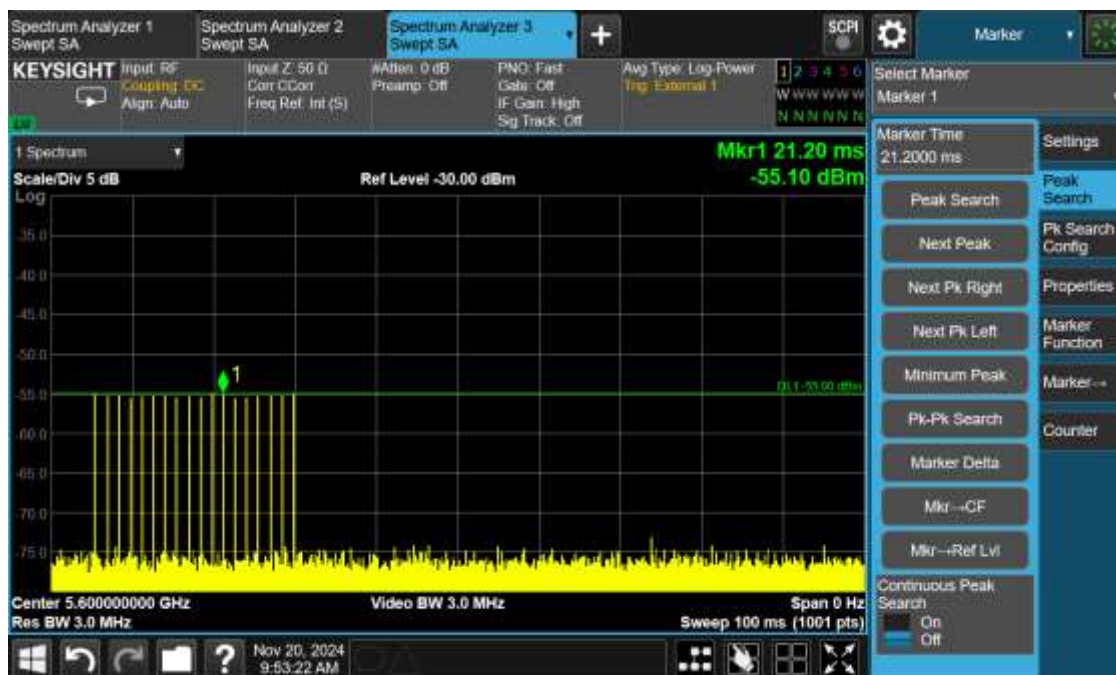
Information	Status	
Possible Antenna/s	Integral/ 11 and 8 dBi External omni	
Antenna used for test	8dBi	
Operating mode	Master	
If Client	N/A	
Port used for testing	Ext0 & EXT1	
EIRP range	> 200 milliwatts	
Impedance of port	50 ohms	
Channel loading technique	Data transfer was enacted to achieve a minimum channel loading of approximately 17%	
Antenna measurement technique	See note 1	
Time of power-on cycle	65s	
Detection threshold level	-55.0 (-64 dBm + Ant Gain + 1)	

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

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



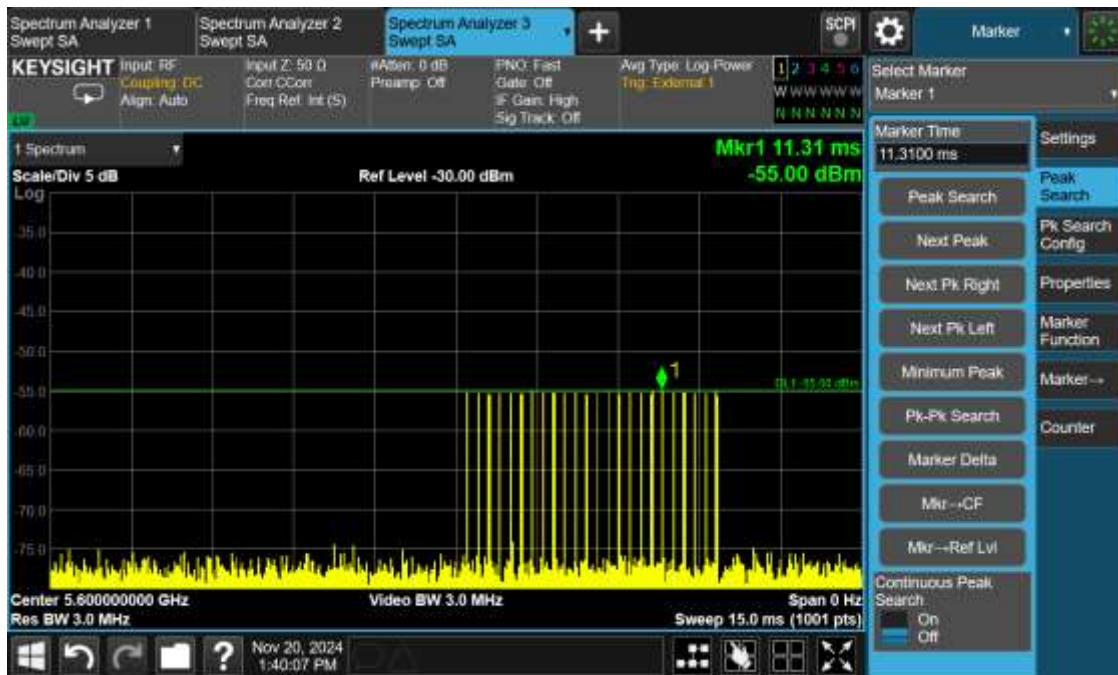
Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming 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



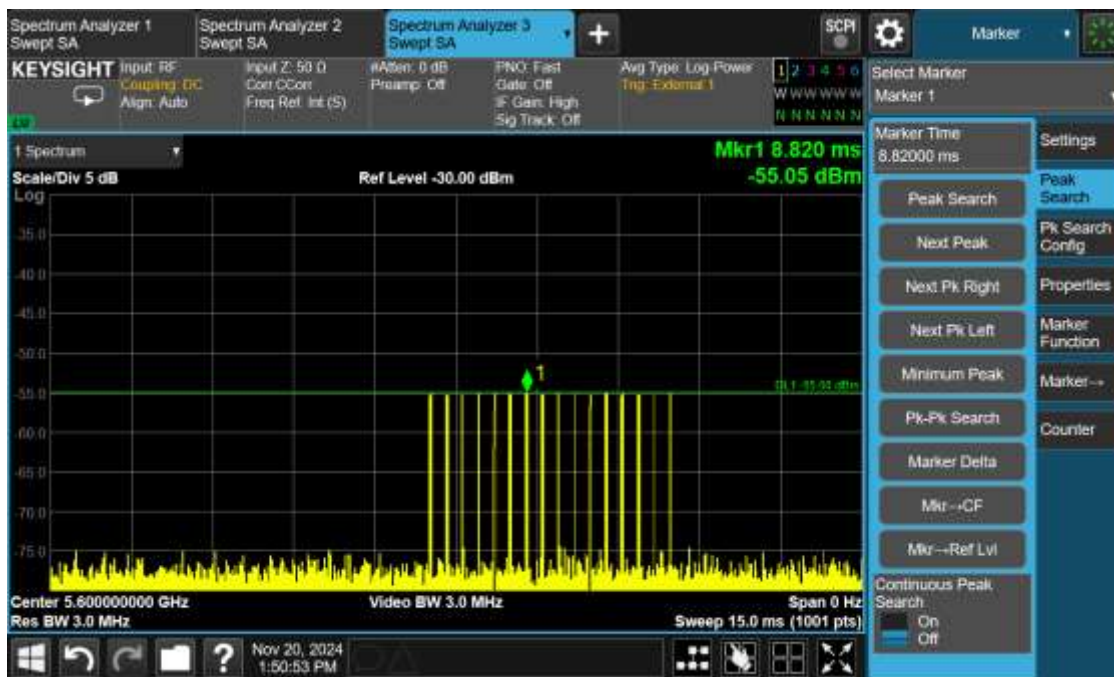
Plot 2: Radar Level 1



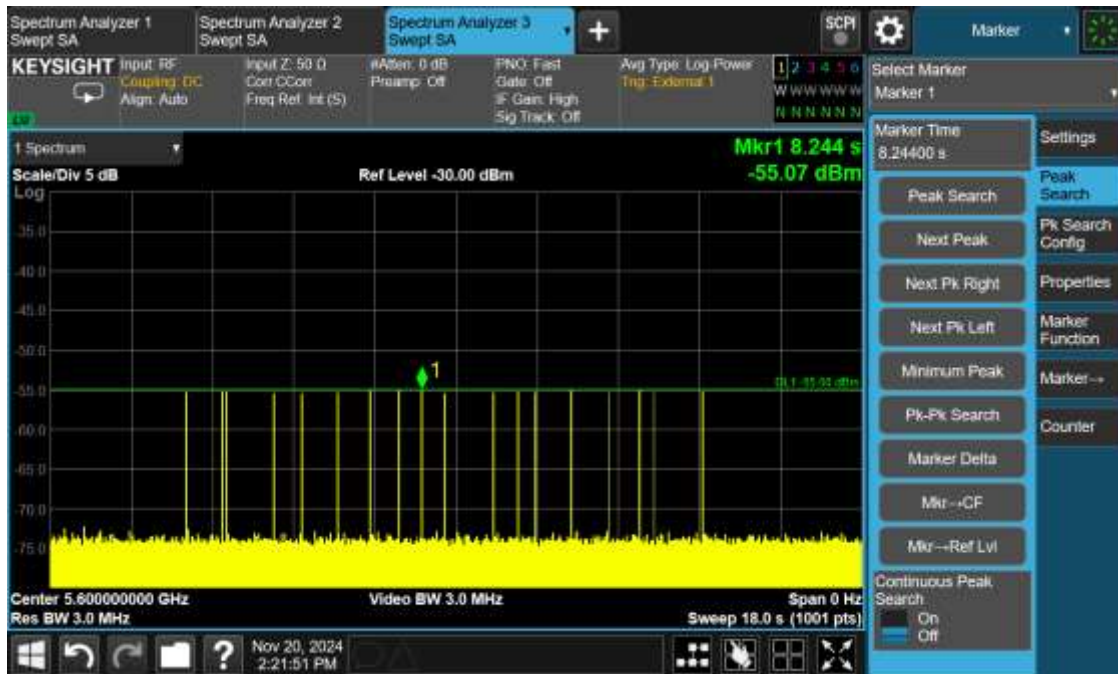
Plot 3: Radar Level 2



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-least 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

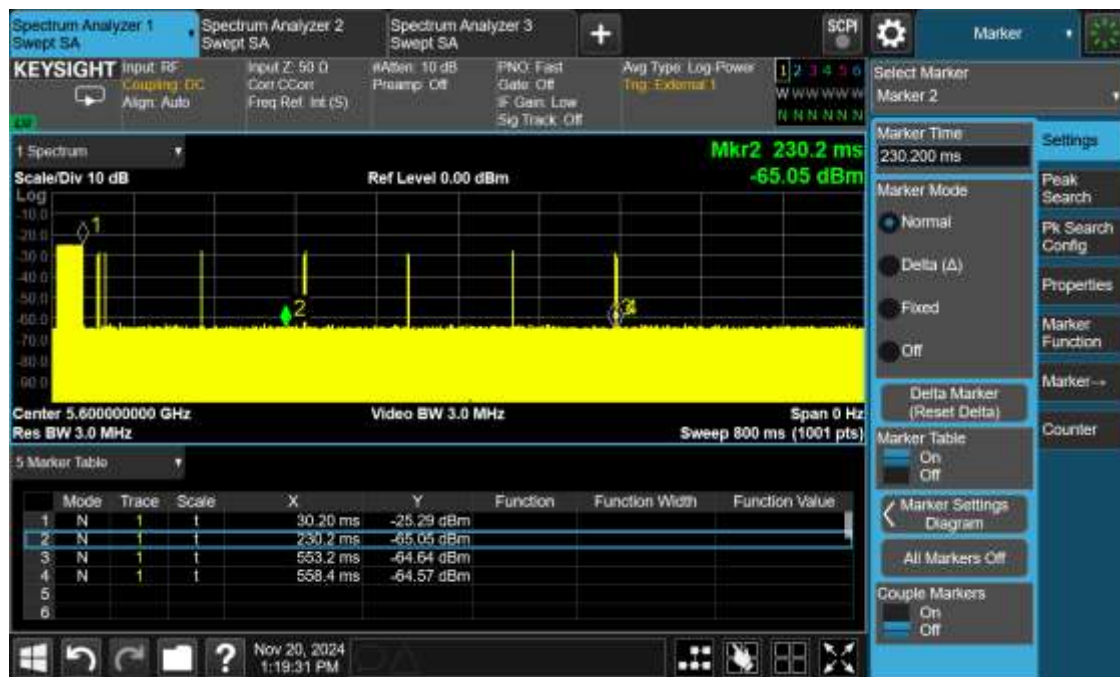
Channel Move Time	10 seconds
Channel Closing Transmission Time	200 ms + aggregate of 60 ms over remaining 10 second period
Non-occupancy period	Minimum 30 minutes

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

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	
5590	1	1	1	1	1	1	1	1	1	1	100
5595	1	1	1	1	1	1	1	0	1	1	90
5600	1	1	1	1	1	1	1	1	1	1	100
5605	1	1	1	1	1	1	1	1	1	1	100
5610	1	1	1	1	1	1	1	1	1	1	100
Parameter											Value
U-NII 99% Transmission Power Bandwidth:											19.25
Lowest frequency with at least 90% detection (F_L):											5590
Highest frequency with at least 90% detection (F_H):											5610
Detection Bandwidth ($F_H - F_L$):											20
Detection Bandwidth percentage of 99% Transmission Power Bandwidth:											104%

20 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	
5570	1	1	1	1	1	1	1	1	1	1	100
5575	1	1	1	1	1	1	1	1	1	1	100
5580	1	1	1	1	1	1	1	1	1	1	100
5585	1	1	1	1	1	1	1	1	1	1	100
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	0	1	1	1	90
5605	0	1	1	1	1	1	1	1	1	1	90
5610	1	1	1	1	1	1	1	1	1	1	100
Parameter											Value
U-NII 99% Transmission Power Bandwidth:											38.5
Lowest frequency with at least 90% detection (F_L):											5570
Highest frequency with at least 90% detection (F_H):											5610
Detection Bandwidth ($F_H - F_L$):											40
Detection Bandwidth percentage of 99% Transmission Power Bandwidth:											104%

40 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	
5570	1	1	1	1	1	1	1	1	1	1	100
5575	1	1	1	1	1	1	1	1	1	1	100
5580	1	1	1	1	1	1	1	1	0	1	90
5585	1	1	1	1	1	1	1	1	1	1	100
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
5610	1	1	1	1	0	1	1	1	1	1	90
5615	1	1	1	1	1	1	1	1	1	1	100
5620	1	1	1	1	1	1	1	1	1	1	100
5625	1	1	1	1	1	1	1	1	1	1	100
5630	1	1	1	1	1	1	1	1	1	1	100
5635	1	1	1	1	1	1	1	1	1	1	100
5640	1	1	1	1	1	1	1	1	1	1	100
5645	1	1	1	1	1	1	1	1	1	1	100
5650	1	1	1	1	1	1	1	1	1	1	100
Parameter											Value
U-NII 99% Transmission Power Bandwidth:											78
Lowest frequency with at least 90% detection (F_L):											5570
Highest frequency with at least 90% detection (F_H):											5650
Detection Bandwidth ($F_H - F_L$):											80
Detection Bandwidth percentage of 99% Transmission Power Bandwidth:											103%

80 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	
5490	1	0	1	1	1	1	1	1	1	1	90
5495	1	1	1	1	1	1	1	1	1	1	100
5500	1	1	1	0	1	1	1	1	1	1	90
5505	1	1	1	1	1	0	1	1	1	1	90
5510	1	1	1	0	1	1	1	1	1	1	90
5515	1	1	1	1	1	1	1	0	1	1	90
5520	1	1	1	1	1	1	1	1	1	1	100
5525	1	1	1	1	1	1	1	1	1	1	100
5530	1	1	1	1	1	1	1	1	1	1	100
5535	0	1	1	1	1	1	1	1	1	1	90
5540	1	1	1	1	1	1	0	1	1	1	90
5545	1	1	1	0	1	1	1	1	1	1	90
5550	1	1	1	1	1	0	1	1	1	1	90
5555	1	1	1	1	1	1	1	1	1	1	100
5560	0	1	1	1	1	1	1	1	1	1	90
5565	1	1	1	1	1	1	1	1	1	1	100
5570	1	1	1	1	1	1	1	1	0	1	90
5575	1	1	1	1	1	1	1	1	1	1	100
5580	1	1	1	1	1	1	1	1	1	1	100
5585	1	1	1	1	1	1	1	1	1	1	100
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	0	1	1	1	1	90
5605	1	1	1	1	1	1	1	1	1	1	100
5610	1	1	1	1	1	1	1	1	1	1	100
5615	1	1	1	1	1	1	1	0	1	1	90
5620	1	1	0	1	1	1	1	1	1	1	90
5625	1	1	1	1	1	1	1	1	1	1	100
5630	1	1	1	1	1	1	1	1	1	1	100
5635	1	1	1	1	1	1	1	1	1	1	100
5640	1	1	1	1	1	1	1	1	1	1	100
5645	1	1	0	1	1	1	1	1	1	1	90
5650	1	1	1	1	1	1	1	1	1	1	100
Parameter											Value
U-NII 99% Transmission Power Bandwidth:											157
Lowest frequency with at least 90% detection (F _L):											5490
Highest frequency with at least 90% detection (F _H):											5650
Detection Bandwidth (F _H - F _L):											160
Detection Bandwidth percentage of 99% Transmission Power Bandwidth:											102%

160 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	24	30	80%
Type 2	26	30	87%
Type 3	23	30	77%
Type 4	24	30	80%
Type 5	30	30	100%
Type 6	30	30	100%
Aggregate 1-4	97	120	81%

Summary

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	20	1	2755	y
2	96	1	551	y
3	27	1	2020	y
4	24	1	2221	y
5	23	1	2350	y
6	65	1	816	y
7	19	1	2793	y
8	48	1	1108	n
9	25	1	2114	n
10	20	1	2733	y
11	20	1	2697	y
12	37	1	1450	y
13	36	1	1484	n
14	71	1	743	y
15	18	1	3029	y
16	52	1	1033	y
17	18	1	2988	n
18	53	1	1010	y
19	93	1	569	y
20	24	1	2225	y
21	39	1	1356	y
22	24	1	2255	y
23	35	1	1521	n
24	79	1	668	y
25	21	1	2619	y
26	27	1	1987	y
27	34	1	1571	y
28	18	1	2965	y
29	18	1	3065	n
30	38	1	1400	y
				24/30: 80%

Radar Type 1;

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	24	2.9	190	y
2	23	1	208	y
3	25	1.5	163	y
4	25	4.8	207	y
5	26	2.1	174	y
6	26	4.4	153	n
7	24	1	160	y
8	25	1.5	193	y
9	29	3.7	168	y
10	25	3.6	168	y
11	25	1.8	168	y
12	28	2.3	185	y
13	29	3	199	y
14	27	1.2	179	y
15	24	1.5	208	n
16	26	3.2	198	y
17	23	1.9	210	y
18	26	2.3	190	y
19	25	1.4	223	y
20	24	3.4	156	y
21	27	4.6	182	y
22	28	2.6	206	y
23	29	3.2	156	y
24	26	1	206	y
25	27	1.1	169	y
26	24	3.4	156	y
27	24	3.1	158	n
28	27	2.1	199	y
29	25	3.2	154	n
30	29	3.9	164	y
				26/30: 86.7%

Radar Type 2;

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	9.3	360	y
2	18	9.3	221	y
3	18	10	464	n
4	17	8	398	y
5	17	7	467	y
6	16	6.6	293	y
7	17	7.1	392	y
8	18	8.7	297	y
9	16	9.1	390	y
10	17	9.5	404	n
11	17	9.6	301	y
12	16	8.8	427	y
13	17	6	410	n
14	17	6.8	238	y
15	17	7.9	276	y
16	16	9.1	424	y
17	18	8.1	412	n
18	17	7.3	251	n
19	18	8.9	322	n
20	17	7.6	303	y
21	17	8.3	239	y
22	17	8.4	363	y
23	16	6.6	419	y
24	18	7.5	343	n
25	18	8.1	221	y
26	17	8	312	y
27	17	7.3	296	y
28	18	6.1	348	y
29	16	8.2	436	y
30	18	6.3	448	y
				23/30: 76.7%

Radar Type 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	13	16.6	235	y
2	12	11.6	324	n
3	14	17.3	431	y
4	14	20	251	y
5	15	13.2	347	y
6	16	11	455	y
7	13	19	347	n
8	16	11.9	482	y
9	13	11	227	y
10	12	15.2	490	y
11	13	15	325	n
12	12	15.2	311	y
13	13	12.4	489	y
14	12	14.2	374	n
15	16	15.4	466	y
16	14	13.5	454	y
17	12	13.2	252	y
18	14	17.7	375	n
19	15	11.3	375	y
20	13	11.7	467	y
21	15	16.5	422	y
22	16	17.5	422	y
23	14	18.5	474	y
24	13	14.7	289	y
25	16	12.6	257	y
26	15	19	202	y
27	15	13.9	367	y
28	16	12.7	366	y
29	15	18.1	425	y
30	16	13.7	282	n
				24/30: 80%

Radar Type 4;

TYPE 5		Rohde & Schwarz K350 Pulse Sequencer DFS		
Trial #	Detection (yes/no)	Chirp Width (MHz)	Subset	Fc
1	y	13	1	5500
2	y	9	1	5500
3	y	18	1	5500
4	y	7	1	5500
5	y	14	1	5500
6	y	20	1	5500
7	y	18	1	5500
8	y	8	1	5500
9	y	20	1	5500
10	y	10	1	5500
11	y	19	2	5498.6
12	y	14	2	5496.6
13	y	16	2	5497.4
14	y	14	2	5496.6
15	y	9	2	5494.6
16	y	14	2	5496.6
17	y	11	2	5495.4
18	y	9	2	5494.6
19	y	11	2	5495.4
20	y	13	2	5496.2
21	y	19	3	5501.4
22	y	12	3	5504.2
23	y	8	3	5505.8
24	y	18	3	5501.8
25	y	19	3	5501.4
26	y	20	3	5501
27	y	7	3	5506.2
28	y	20	3	5501
29	y	17	3	5502.2
30	y	5	3	5507

Radar Type 5;

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%

Radar Type 6]

40 MHz

Summary			
Type	Detections	Trials	Detection Probability
Type 1	27	30	90%
Type 2	23	30	77%
Type 3	25	30	83%
Type 4	23	30	77%
Type 5	30	30	100%
Type 6	30	30	100%
Aggregate 1-4	98	120	82%

Summary

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	39	1	1352	y
2	44	1	1222	y
3	69	1	769	y
4	22	1	2409	y
5	18	1	3048	n
6	102	1	519	y
7	24	1	2203	n
8	19	1	2790	y
9	35	1	1519	y
10	39	1	1360	y
11	19	1	2882	y
12	30	1	1764	y
13	42	1	1268	y
14	42	1	1259	y
15	21	1	2608	y
16	25	1	2163	y
17	28	1	1946	y
18	24	1	2278	n
19	46	1	1151	y
20	26	1	2045	y
21	22	1	2443	y
22	38	1	1411	y
23	29	1	1838	y
24	26	1	2072	y
25	33	1	1625	y
26	18	1	3034	y
27	26	1	2069	y
28	71	1	745	y
29	22	1	2484	y
30	18	1	2949	y
				27/30: 90%

Radar Type 1;

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (µsec)	PRI (µs)	Detection (yes/no)
1	28	3.8	166	y
2	29	2.2	208	y
3	25	3	176	y
4	29	3.9	229	y
5	25	1.2	180	n
6	28	2.7	173	y
7	25	4.3	210	y
8	28	2.5	215	y
9	28	3.4	155	y
10	23	1	161	y
11	29	1.8	204	y
12	27	3.3	167	n
13	26	4.8	165	n
14	25	4	167	y
15	28	2.9	222	n
16	25	5	201	y
17	26	5	157	y
18	25	1.7	227	y
19	25	2.9	207	n
20	25	2.5	190	y
21	24	1.8	219	y
22	27	4.6	210	n
23	25	2.3	217	y
24	25	4.5	199	y
25	24	2.6	169	n
26	27	3.4	177	y
27	28	4.1	167	y
28	29	4.9	191	y
29	26	2.9	183	y
30	25	2.5	164	y
				23/30: 76.7%

Radar Type 2;

RADAR TYPE 3				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	18	6.4	262	y
2	18	7.3	268	y
3	17	6.3	326	n
4	17	7.3	291	n
5	18	7.7	418	y
6	18	8.8	493	y
7	17	7.2	322	y
8	17	7.1	332	y
9	17	7	342	y
10	18	8.1	376	y
11	17	6.6	476	n
12	17	8.2	232	y
13	17	8.9	232	y
14	16	7.1	406	y
15	17	9.7	217	y
16	16	7.4	344	y
17	16	6.9	398	y
18	17	8	418	n
19	17	9.9	376	y
20	18	9.8	486	y
21	17	7.3	275	y
22	17	6	239	y
23	17	8.6	264	n
24	17	9.4	495	y
25	16	9.8	353	y
26	17	7.1	477	y
27	17	6.9	358	y
28	18	6.9	294	y
29	17	9.3	252	y
30	18	8.5	484	y
				25/30: 83.3%

Radar Type 3;

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	15	11.3	397	n
2	15	19.5	463	y
3	14	12.8	437	y
4	14	17.5	472	y
5	13	17	399	n
6	15	11.5	388	n
7	15	13.9	381	y
8	14	18.6	278	y
9	15	15.7	333	y
10	13	11.7	449	y
11	14	11.8	406	y
12	16	18.5	289	n
13	12	16.3	277	y
14	13	13.7	327	n
15	16	18.9	200	y
16	12	18.5	418	y
17	16	14.2	234	y
18	13	12.4	321	n
19	16	14.9	496	y
20	13	12	432	y
21	15	20	308	y
22	13	16	444	y
23	14	16.3	499	y
24	15	17.2	228	y
25	15	12.5	267	y
26	13	16	279	y
27	15	16.8	273	y
28	16	16.1	371	y
29	16	16.7	395	n
30	14	13.3	274	y
				23/30: 76.7%

Radar Type 4;

TYPE 5		Rohde & Schwarz K350 Pulse Sequencer DFS		
Trial #	Detection (yes/no)	Chirp Width (MHz)	Subset	Fc
1	y	12	1	5500
2	y	17	1	5500
3	y	6	1	5500
4	y	20	1	5500
5	y	12	1	5500
6	y	6	1	5500
7	y	17	1	5500
8	y	20	1	5500
9	y	9	1	5500
10	y	5	1	5500
11	y	12	2	5495.8
12	y	12	2	5495.8
13	y	19	2	5498.6
14	y	20	2	5499
15	y	13	2	5496.2
16	y	14	2	5496.6
17	y	20	2	5499
18	y	7	2	5493.8
19	y	15	2	5497
20	y	13	2	5496.2
21	y	7	3	5506.2
22	y	12	3	5504.2
23	y	9	3	5505.4
24	y	7	3	5506.2
25	y	18	3	5501.8
26	y	19	3	5501.4
27	y	11	3	5504.6
28	y	18	3	5501.8
29	y	5	3	5507
30	y	5	3	5507

30/30: 100%

Radar Type 5;

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%

Radar Type 6]

80 MHz

Summary			
Type	Detections	Trials	Detection Probability
Type 1	28	30	93%
Type 2	24	30	80%
Type 3	27	30	90%
Type 4	26	30	87%
Type 5	30	30	100%
Type 6	30	30	100%
Aggregate 1-4	105	120	88%

Summary

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	42	1	1280	y
2	37	1	1437	y
3	21	1	2547	y
4	38	1	1399	y
5	76	1	702	y
6	30	1	1768	y
7	23	1	2373	n
8	54	1	985	y
9	72	1	734	y
10	67	1	793	y
11	28	1	1940	y
12	27	1	1996	y
13	29	1	1822	y
14	34	1	1595	y
15	21	1	2596	y
16	84	1	632	y
17	30	1	1769	y
18	33	1	1622	y
19	80	1	663	y
20	61	1	867	y
21	20	1	2691	y
22	20	1	2756	y
23	18	1	2981	y
24	48	1	1121	n
25	84	1	630	y
26	41	1	1299	y
27	76	1	694	y
28	35	1	1543	y
29	23	1	2301	y
30	24	1	2284	y
				28/30: 93.3%

Radar Type 1;

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	26	3.1	151	y
2	25	1.9	225	y
3	26	5	229	y
4	23	1.6	210	y
5	28	1.3	165	y
6	24	3.9	227	y
7	24	4.9	226	y
8	24	2.3	178	y
9	27	2.9	162	n
10	27	1.7	158	y
11	28	4.3	176	n
12	29	4.4	170	n
13	25	3.2	189	y
14	29	4.3	170	n
15	25	4.6	166	y
16	26	1.4	203	y
17	26	2.5	200	n
18	24	1.5	152	y
19	26	4.4	172	n
20	26	4.8	212	y
21	25	4.6	177	y
22	29	4.3	216	y
23	28	3.4	219	y
24	23	2.3	160	y
25	25	3.1	181	y
26	25	4.4	192	y
27	26	4.3	202	y
28	24	2.7	165	y
29	28	1.4	222	y
30	23	2.7	211	y
				24/30: 80%

Radar Type 2;

RADAR TYPE 3				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	17	9.4	321	y
2	17	9.6	239	y
3	17	7.3	468	n
4	17	9	482	y
5	17	6.4	202	y
6	17	7.5	466	y
7	17	7.5	458	y
8	17	7.8	251	y
9	17	7.2	303	y
10	17	9.8	292	y
11	18	7.8	415	y
12	18	9.3	275	y
13	18	8.3	336	y
14	18	8.5	277	y
15	17	7.9	242	y
16	17	8.3	325	y
17	17	6.4	486	y
18	17	9.6	279	y
19	18	7.2	387	y
20	17	6	267	y
21	18	9.1	324	n
22	17	9.8	289	y
23	16	6.4	379	y
24	17	9.8	231	y
25	17	9.6	218	y
26	17	7.4	214	y
27	16	9.2	393	y
28	17	9.5	470	n
29	17	9.6	288	y
30	17	9.9	315	y
				27/30: 90%

Radar Type 3;

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	12	20	481	n
2	14	11.1	291	y
3	13	11.5	212	n
4	14	13	331	y
5	13	13.1	202	y
6	16	20	289	y
7	14	18.9	476	y
8	14	12.9	365	y
9	13	14.4	293	y
10	13	15.3	346	y
11	15	15	494	y
12	15	14.7	338	y
13	13	17.7	421	y
14	15	15.8	301	y
15	13	19	450	y
16	15	13.2	386	n
17	15	16.8	315	y
18	13	19.5	315	y
19	12	14.2	315	y
20	14	15.8	310	y
21	12	17.9	227	y
22	14	14.2	495	y
23	13	18.5	458	y
24	14	16.2	240	y
25	15	15.4	394	y
26	12	19.5	447	y
27	15	19.7	236	y
28	14	17	369	n
29	13	18.8	443	y
30	14	11.4	235	y
				26/30: 86.7%

Radar Type 4;

TYPE 5		Rohde & Schwarz K350 Pulse Sequencer DFS		
Trial #	Detection (yes/no)	Chirp Width (MHz)	Subset	Fc
1	y	17	1	5500
2	y	15	1	5500
3	y	17	1	5500
4	y	11	1	5500
5	y	9	1	5500
6	y	16	1	5500
7	y	17	1	5500
8	y	13	1	5500
9	y	8	1	5500
10	y	12	1	5500
11	y	9	2	5494.6
12	y	8	2	5494.2
13	y	8	2	5494.2
14	y	12	2	5495.8
15	y	19	2	5498.6
16	y	17	2	5497.8
17	y	6	2	5493.4
18	y	11	2	5495.4
19	y	10	2	5495
20	y	12	2	5495.8
21	y	6	3	5506.6
22	y	14	3	5503.4
23	y	7	3	5506.2
24	y	7	3	5506.2
25	y	12	3	5504.2
26	y	13	3	5503.8
27	y	13	3	5503.8
28	y	13	3	5503.8
29	y	8	3	5505.8
30	y	19	3	5501.4
30/30: 100%				

Radar Type 5;

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%

Radar Type 6]

160 MHz

Summary			
Type	Detections	Trials	Detection Probability
Type 1	21	30	70%
Type 2	26	30	87%
Type 3	25	30	83%
Type 4	24	30	80%
Type 5	29	30	97%
Type 6	30	30	100%
Aggregate 1-4	96	120	80%

Summary

RADAR TYPE 1				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	46	1	1153	y
2	20	1	2678	y
3	24	1	2260	y
4	96	1	549	y
5	55	1	964	n
6	26	1	2106	y
7	33	1	1646	y
8	19	1	2784	y
9	29	1	1844	y
10	31	1	1744	n
11	25	1	2151	y
12	41	1	1317	n
13	25	1	2168	y
14	25	1	2128	y
15	51	1	1043	y
16	63	1	839	n
17	22	1	2475	y
18	19	1	2791	y
19	19	1	2861	y
20	35	1	1516	n
21	84	1	634	y
22	20	1	2635	y
23	28	1	1924	n
24	39	1	1358	y
25	20	1	2729	y
26	62	1	861	n
27	18	1	2958	n
28	66	1	806	y
29	71	1	751	y
30	32	1	1664	n
				21/30: 70%

Radar Type 1;

RADAR TYPE 2				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	25	4.3	180	y
2	24	2	223	y
3	24	2.2	176	y
4	23	3.5	167	y
5	26	2.3	211	y
6	23	2.3	190	y
7	29	3.7	180	y
8	29	3.4	229	y
9	26	4.7	226	n
10	24	3.9	178	y
11	23	3.5	211	y
12	26	1.6	180	n
13	28	2.2	208	n
14	28	4.5	151	y
15	23	1.6	230	y
16	23	3.4	219	y
17	24	4.5	156	y
18	25	4.2	163	n
19	26	2.7	190	y
20	26	4	229	y
21	29	4.3	152	y
22	24	4.1	194	y
23	25	4.2	204	y
24	27	2.4	215	y
25	24	5	162	y
26	25	1.2	174	y
27	27	2.3	203	y
28	24	4.6	189	y
29	28	4.7	165	y
30	25	2.1	226	y
				26/30: 86.7%

Radar Type 2;

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	7.5	367	y
2	16	7	353	y
3	16	9.5	259	n
4	17	9	476	y
5	17	7.9	265	y
6	16	6.1	248	y
7	16	8.4	378	y
8	17	7.7	425	y
9	17	9	288	y
10	18	6.1	402	y
11	17	9.5	331	y
12	17	8.4	228	y
13	16	8.5	321	n
14	18	10	488	y
15	17	9.1	473	y
16	17	7.9	485	y
17	18	7.3	299	y
18	16	8	452	n
19	16	9.1	307	y
20	17	7.3	225	y
21	16	6.7	383	y
22	18	6.5	318	y
23	18	6.7	441	y
24	17	7.1	426	n
25	17	10	400	y
26	16	8.9	231	y
27	18	8.7	325	y
28	18	8.2	369	y
29	17	9.5	262	y
30	16	6.3	412	n
				25/30: 83.3%

Radar Type 3;

RADAR TYPE 4				Rohde & Schwarz K350 Pulse Sequencer DFS
Trial #	Number of Pulses per Burst	Pulse Width (μ sec)	PRI (μ s)	Detection (yes/no)
1	14	15	328	y
2	15	18.6	492	y
3	15	18.4	267	y
4	16	13.7	408	y
5	15	12.4	356	y
6	14	12.7	396	n
7	16	14.3	415	y
8	14	16.1	220	y
9	12	11.4	377	y
10	13	15.7	211	y
11	14	16.1	248	y
12	14	14.7	251	y
13	16	11.6	295	n
14	16	13.2	304	y
15	13	16.8	255	y
16	14	16.4	481	y
17	13	16.5	379	y
18	14	16.2	212	y
19	14	12	465	y
20	16	14	226	y
21	13	18	389	n
22	13	17.9	489	y
23	13	14.6	494	n
24	12	11.9	348	n
25	13	19.4	443	y
26	13	13.6	400	y
27	14	18.9	449	y
28	13	18.1	430	y
29	15	19	234	y
30	14	14	234	n
				24/30: 80%

Radar Type 4;

TYPE 5		Rohde & Schwarz K350 Pulse Sequencer DFS		
Trial #	Detection (yes/no)	Chirp Width (MHz)	Subset	Fc
1	y	8	1	5500
2	y	20	1	5500
3	y	20	1	5500
4	y	6	1	5500
5	y	19	1	5500
6	y	20	1	5500
7	y	8	1	5500
8	y	20	1	5500
9	y	5	1	5500
10	y	7	1	5500
11	y	20	2	5499
12	y	10	2	5495
13	y	17	2	5497.8
14	y	16	2	5497.4
15	y	14	2	5496.6
16	y	15	2	5497
17	y	19	2	5498.6
18	y	5	2	5493
19	y	19	2	5498.6
20	y	9	2	5494.6
21	n	16	3	5502.6
22	y	20	3	5501
23	y	18	3	5501.8
24	y	6	3	5506.6
25	y	17	3	5502.2
26	y	18	3	5501.8
27	y	15	3	5503
28	y	11	3	5504.6
29	y	10	3	5505
30	y	10	3	5505

29/30: 96.7%

Radar Type 5;

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%

Radar Type 6]

-- End of Test Report --