

TEST REPORT

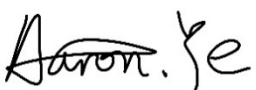
Product Name : MINIPC
Brand Name : N/A
Model : MS-02U-285HX
Series Model : See page 6
FCC ID : 2A49R-MS-02-ULTRA
Applicant : **MICRO COMPUTER (HK) TECH LIMITED**
Address : RM 18, 28/F, Shui On Centre, 6-8 Harbour Road, WaterfRont,
Wan Chai, HK
Manufacturer : **MICRO COMPUTER (HK) TECH LIMITED**
Address : RM 18, 28/F, Shui On Centre, 6-8 Harbour Road, WaterfRont,
Wan Chai, HK
Standard(s) : FCC CFR Title 47 Part 15 Subpart E Section 15.407
Date of Receipt : Oct. 11, 2025
Date of Test : Oct. 12, 2025~ Nov. 03, 2025
Issued Date : Nov. 04, 2025

Issued By: **Guangdong Asia Hongke Test Technology Limited**

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Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Guangdong Asia Hongke Test Technology Limited. If there is a need to alter or revise this document, the right belongs to Guangdong Asia Hongke Test Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

Guangdong Asia Hongke Test Technology Limited

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Report Revise Record

Report Version	Issued Date	Notes
M0	Nov. 04, 2025	Initial Release

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1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

[FCC Rules Part 15 Subpart E](#)—Unlicensed National Information Infrastructure Devices.

[ANSI C63.10: 2020](#): American National Standard for Testing Unlicensed Wireless Devices

[KDB789033 D02](#): General UNII Test Procedures New Rules v02r01.

[KDB 987594 D02](#): U-NII 6GHz EMC Measurement v01r01

[KDB 662911 D01 Multiple Transmitter Output v02r01](#) is required to be used for this kind of FCC 15.407 Ull device.

1.2 Test Summary

Test Item	Rules	Result
Antenna requirement	FCC 47 CFR Part 15.203/ 15.407(a)(1) (2) RSS-Gen 6.8	Pass
On Time and Duty Cycle	/	Pass
AC Power Line Conducted Emission	FCC 15.207 RSS-Gen 8.8	Pass
Conducted Peak Output Power & EIRP	FCC 15.407 (a) RSS-248 4.5	Pass
26dB Bandwidth & 99%Bandwidth	FCC 15.407 (a) (11) RSS-248 4.4 RSS-Gen 6.7	Pass
Power Spectral Density	FCC 15.407 (a) RSS-248 4.5	Pass
In-Band Emissions (Mask)	FCC 15.407 (b) RSS-248 4.6	Pass
Radiated Emissions And Band Edge Measurement	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-248 4.6 RSS-GEN 8.9	Pass
Contention-based Protocol	FCC 15.407 (d) (6) RSS-248 4.7	Pass
Frequency Stability	FCC 15.407 (g)	Pass

1.3 Test Facility

Test Laboratory:

Guangdong Asia Hongke Test Technology Limited

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:

FCC-Registration No.: 251906 Designation Number: CN1376

Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 31737 CAB identifier: CN0165

The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01

Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Guangdong Asia Hongke Test Technology Limited's quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Asia Hongke laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	9KHz~30MHz ± 1.20 dB	(1)
Radiated Emission	9KHz~30MHz ± 3.10 dB	(1)
Radiated Emission	30MHz~1GHz ± 3.75 dB	(1)
Radiated Emission	1GHz~18GHz ± 3.88 dB	(1)
Radiated Emission	18GHz~40GHz ± 3.88 dB	(1)
RF power, conducted	30MHz~7.5GHz ± 0.16 dB	(1)
RF power density, conducted	± 0.24 dB	(1)
Spurious emissions, conducted	± 0.21 dB	(1)
Temperature	$\pm 1^{\circ}\text{C}$	(1)
Humidity	$\pm 3\%$	(1)
DC and low frequency voltages	$\pm 1.5\%$	(1)
Time	$\pm 2\%$	(1)
Duty cycle	$\pm 2\%$	(1)

The report uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%

2 GENERAL INFORMATION

2.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

2.2 General Description of EUT

Product Name:	MINIPC				
Model/Type reference:	MS-02U-285HX				
Serial Model:	MS-02U-275HX, MS-02U-265HX, MS-02U-255HX, MS-02U-245HX, MS-02U-235HX, MS-02***** (where*="0-9", "A-Z""a-z", ".", blank space, no character difference between each model is only due to the different model naming methods for different sales regions, other circuit principles, safety structures and key components are all the same, and the difference not affect the safety and electromagnetic compatibility performance of the product.)				
Power Supply:	AC 100-240V5.0A				
Hardware Version:	V1.0				
Software Version:	Win11 24H2				
Sample(s) Status:	AiTSZ-251011020-1(Normal sample) AiTSZ-251011020-2(Engineer sample)				
6G WIFI:					
Supported type:	20MHz system	40MHz system	80MHz system	160MHz system	320MHz system
	802.11ax 802.11be	802.11ax 802.11be	802.11ax 802.11be	802.11ax 802.11be	802.11be
Operation frequency:	5955-6415MHz 6435-6515MHz 6535-6855MHz 6895-7115MHz	5965-6405MHz 6445-6485MHz 6525-6845MHz 6885-7085MHz	5985-6385MHz 6465MHz 6545-6865MHz 6945-7025MHz	6025-6985MHz	N/A
Modulation:	OFDMA	OFDMA	OFDMA	OFDMA	N/A
Channel number:	59	29	13	7	N/A
Channel separation:	20MHz	40MHz	80MHz	160MHz	N/A
MIMO	Support MIMO 2*2				
Antenna type:	PIFA Antenna MIMO 2*2				
Antenna gain:	Antenna1: 5.07dBi Antenna2: 1.84dBi				
Directional gain:	6.61dBi				

Remark:

- Directional gain = $10 \cdot \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 10 \cdot \log[(10^{5.07/20} + 10^{1.84/20})^2 / 2] = 6.61\text{dBi}$
- The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- WIFI 802.11ax & 802.11be mode only Support Full RU.
- The device not support Channel Puncturing or Bandwidth Reduction mechanisms supported.

2.3 Description of Test Modes and Test Frequency

The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

All test performed at the low, middle and high of operational frequency range of each mode.

Operation Frequency List:

Operating band	20MHz		40MHz		80MHz		160MHz			
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)		
U-NII 5 (5925MHz-6425MHz)	1	5955	3	5965	7	5985	15	6025		
	5	5975								
	9	5995	11	6005						
	13	6015								
	17	6035	19	6045	23	6065				
	21	6055								
	25	6075	27	6085						
	29	6095								
	33	6115	35	6125	39	6145	47	6185		
	37	6135								
	41	6155	43	6165						
	45	6175								
	49	6195	51	6205	55	6225				
	53	6215								
	57	6235	59	6245						
	61	6255								
	65	6275	67	6285	71	6305	79	6345		
	69	6295								
	73	6315	75	6325						
	77	6335								
	81	6355	83	6365	87	6385				
	85	6375								
	89	6395	91	6405						
	93	6415								
U-NII 6 (6425MHz-6525MHz)	97	6435	99	6445	103	6465	111*	6505		
	101	6455								
	105	6475	107	6485						
	109	6495								
U-NII 7 (6525MHz-6875MHz)	113	6515	115*	6525	119*	6545				
	117	6535								
	121	6555	123	6565						
	125	6575								
	129	6595	131	6605	135	6625	143	6665		
	133	6615								
	137	6635	139	6645						
	141	6655								
	145	6675	147	6685	151	6705				
	149	6695								
	153	6715	155	6725			167	6785	175*	6825
	157	6735								
	161	6755	163	6765						
	165	6775								
	169	6795	171	6805						
	173	6815								
	177	6835	179	6845	183*	6865				
	181	6855								
	185	6875*	187*	6885						
U-NII 8 (6875MHz-	189	6895			199	6945	207	6985		
	193	6915	195	6925						

	197	6935						
	201	6955	203	6965				
	205	6975						
	209	6995	211	7005	215	7025		
	213	7015						
	217	7035						
	221	7055	219	7045				
	225	7075						
	229	7095						
	233	7115	--	--	--	--	--	--

Note:

1. "--"Means no channel(s) available any more.
2. The line display in grey is those Channels/Frequencies select to test in this report for each operation mode.
3. *Mean straddle channel

Data Rate Used:

All test items were preliminary test with different data rate to find the worst radiated emission.

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Mode	Preliminary Data Rate	Worst-case Data Rate
802.11ax	MCS0~ MCS11	MCS0
802.11be	MCS0~ MCS13	MCS0

Power setting during the test:

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters:

Test Software Version	DRTU		
Test Frequency	Lowest	Middle	Highest
U-NII 5	Default	Default	Default
U-NII 6	Default	Default	Default
U-NII 7	Default	Default	Default
U-NII 8	Default	Default	Default

2.4 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Serial No.	Provided by	Other
Mouse	Dell	G2	SGG24280003175	Test lab	/
Keyboard	Dell	KK-3	Z2304KK333011	Test lab	/
Display	TITAN	M27T8T	NJVC00504416S30007	Test lab	/
/	/	/	/	/	/

2.5 Equipment List for the Test

Conducted Emission measurement						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
☒ 1	EMI Test Receiver	R&S	ESPI	100771	2025.09.23	2026.09.22
☒ 2	LISN	R&S	NNLK 8129	8130179	2025.09.23	2026.09.22
☒ 3	ISN	TESEQ	T800	29429	2025.09.23	2026.09.22
☒ 4	Pulse Limiter	R&S	ESH3-Z2	102789	2025.09.23	2026.09.22
☒ 5	CE Software	EZ	EZ-EMC_CE	Ver.AIT-03A	N/A	N/A

Radiation Emission measurement						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
☒ 1	EMI Measuring Receiver	R&S	ESR	101160	2025.09.23	2026.09.22
☒ 2	Low Noise Pre Amplifier	SCHWARZBECK	BBV 9745	00282	2025.09.23	2026.09.22
☒ 3	Low Noise Pre Amplifier	CESHENG	CSKJLNA231 016A	CSKJLNA23 1016A	2025.09.23	2026.09.22
☒ 4	Spectrum Analyzer	R&S	FSV40	101470	2025.09.23	2026.09.22
☒ 5	Passive Loop	ETS	6512	00165355	2024.08.29	2026.08.28
☒ 6	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9168	01434	2024.08.29	2027.08.28
☒ 7	Broadband Horn Antenna	Schwarzbeck	BBHA 9120D	452	2024.08.29	2027.08.28
☒ 8	Horn Antenna 15-40GHz	SCHWARZBECK	BBHA9170	BBHA91703 67	2024.08.28	2027.08.27
☒ 9	6dB Attenuator	JFW	50FPE-006	4360846-949-1	2025.09.23	2026.09.22
☒ 10	RE Software	EZ	EZ-EMC_RE	Ver.AIT-03A	N/A	N/A

RF Conducted measurement						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
☒ 1	Spectrum Analyzer	Agilent	N9020A	MY53421570	2025.09.23	2026.09.22
☐ 2	Power Sensor	Agilent	8481A	MY41097697	2025.09.23	2026.09.22
☐ 3	Vector Signal Generator	Agilent	N5182A	MY50143009	2025.09.23	2026.09.22
☐ 4	Analog signal generator	Agilent	E8257	MY51554256	2025.09.23	2026.09.22
☐ 5	Const Temp. & Humidity Chamber	Eastlab	YH-HW-408L	23051109	2025.09.23	2026.09.22
☐ 6	Wideband Radio communication tester	R&S	CMW500	1201.0002K50	2025.09.23	2026.09.22
☐ 7	DC power supply	ZHAOXIN	RXN-305D-2	28070002559	2025.09.23	2026.09.22
☒ 8	RF Test box	TST	TSTPASS	21033016	2025.09.23	2026.09.22
☒ 9	RF Software	TST	TSTPASS	Version 2.0	N/A	N/A
☐ 10	RF Software	Cesheng	WCN Regulary	Ver 25.03.2901	N/A	N/A

Note: ☐ is not applicable in this Test Report. ☒ is applicable in this Test Report.

3 TEST CONDITIONS AND RESULTS

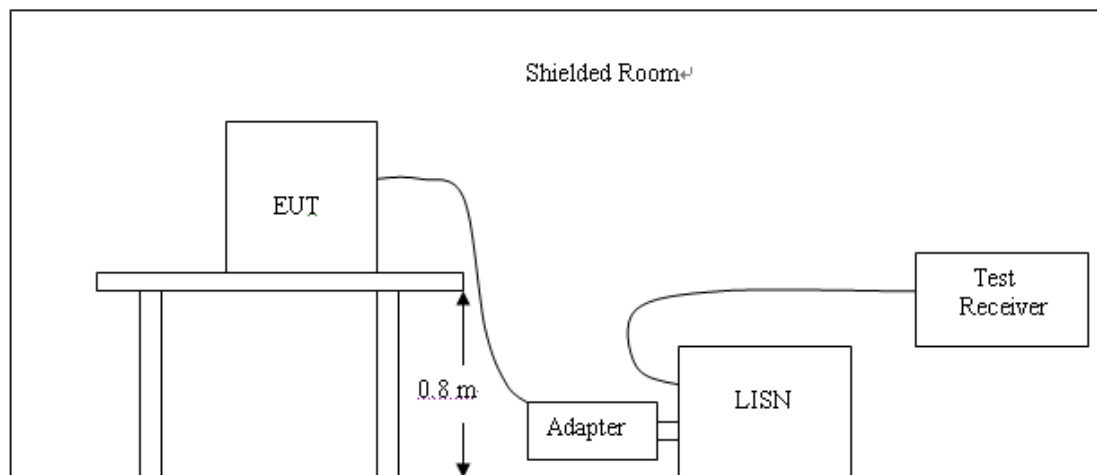
3.1 Conducted Emissions Test

LIMIT

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION

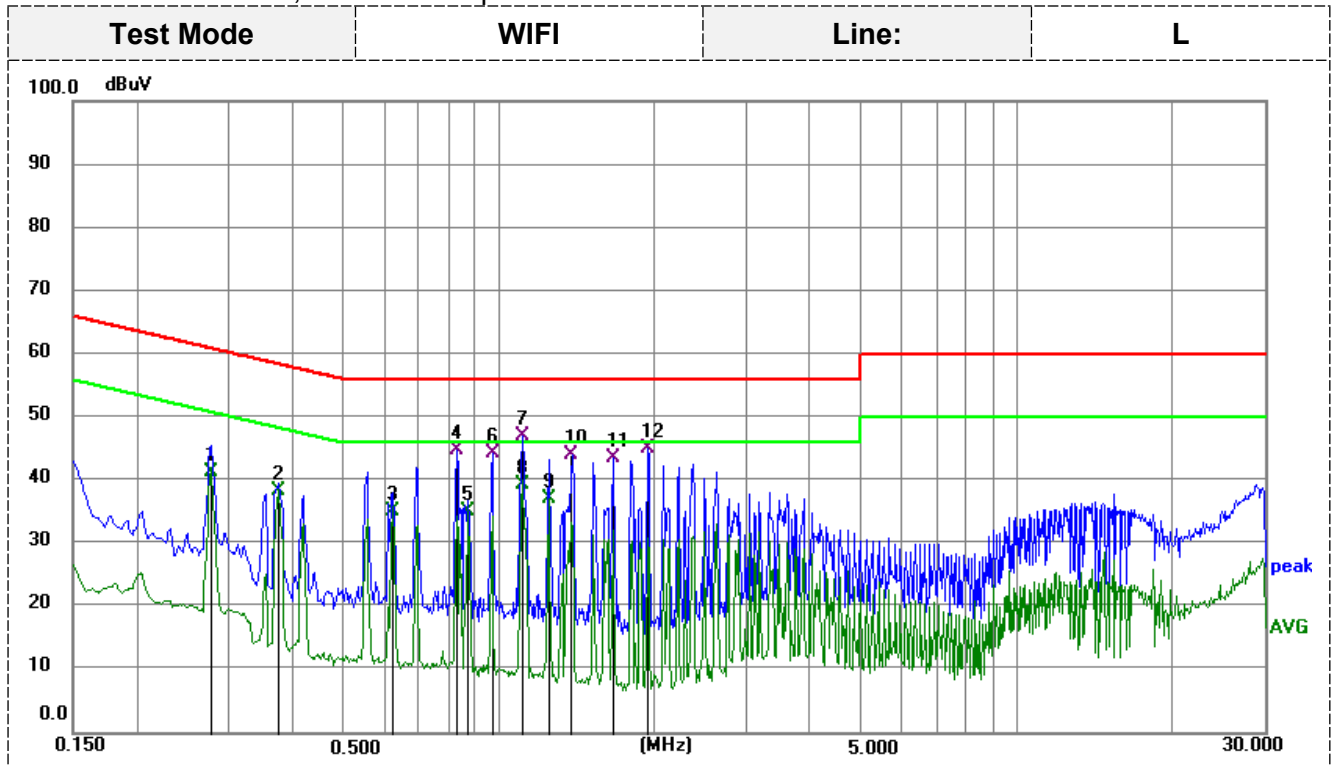


TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10:2020.
2. Support equipment, if needed, was placed as per ANSI C63.10:2020.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10:2020.
4. The adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST RESULTS

1. Pre-scan all WIFI operation modes at Low, Middle, and High channel; only the worst result of UNII band 5 802.11ax mode low channel was reported as below:
2. Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:

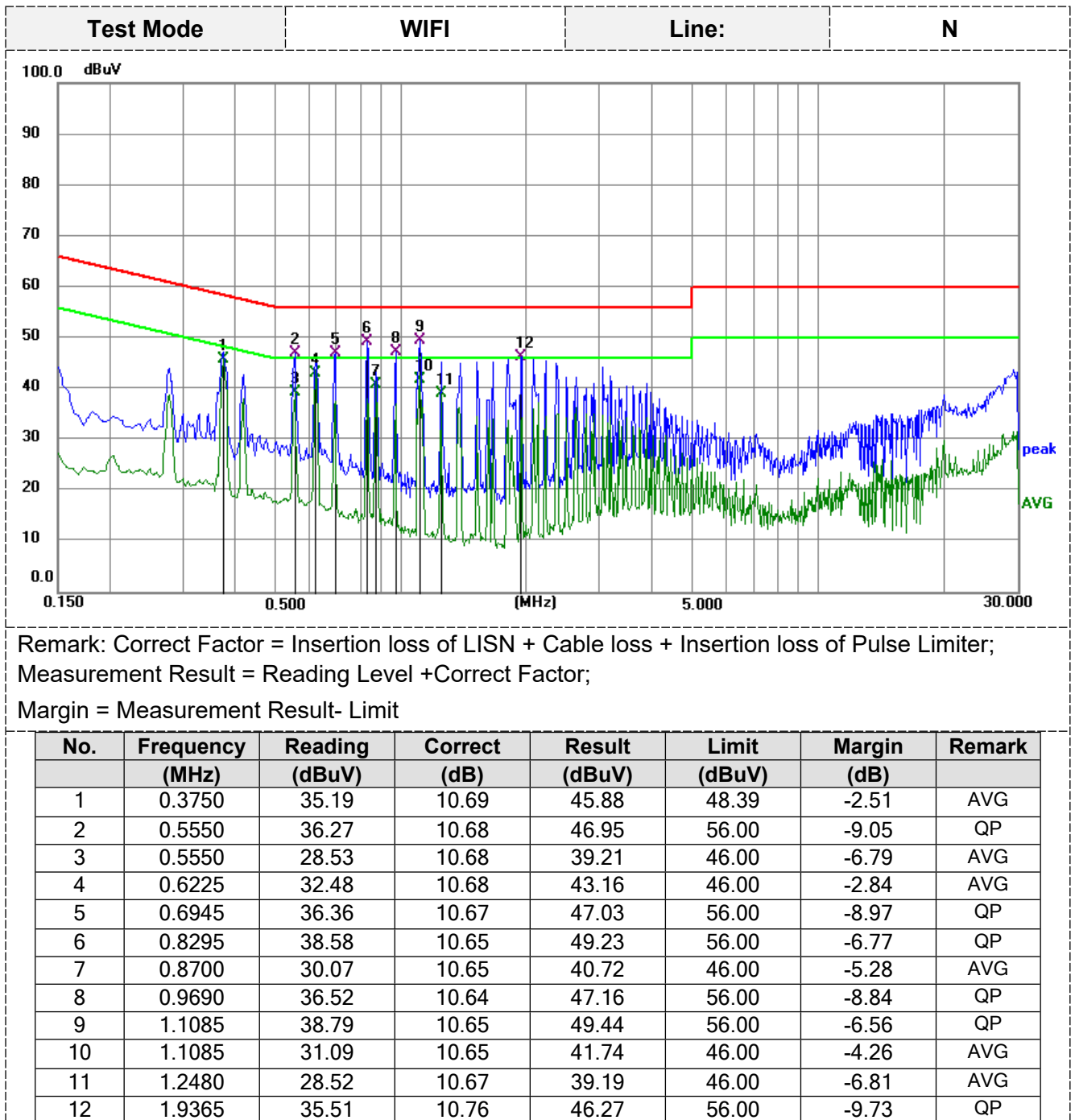


Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;

Measurement Result = Reading Level + Correct Factor;

Margin = Measurement Result - Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2760	30.66	10.69	41.35	50.94	-9.59	AVG
2	0.3750	27.74	10.69	38.43	48.39	-9.96	AVG
3	0.6225	24.45	10.68	35.13	46.00	-10.87	AVG
4	0.8295	34.15	10.65	44.80	56.00	-11.20	QP
5	0.8745	24.46	10.64	35.10	46.00	-10.90	AVG
6	0.9690	33.74	10.64	44.38	56.00	-11.62	QP
7	1.1085	36.48	10.65	47.13	56.00	-8.87	QP
8	1.1085	28.75	10.65	39.40	46.00	-6.60	AVG
9	1.2480	26.44	10.67	37.11	46.00	-8.89	AVG
10	1.3829	33.40	10.69	44.09	56.00	-11.91	QP
11	1.6620	32.84	10.73	43.57	56.00	-12.43	QP
12	1.9365	34.26	10.76	45.02	56.00	-10.98	QP



3.2 Radiated Emissions and Band Edge

Limit

(1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

Undesirable emission limits

Requirement	Limit(EIRP)	Limit (Field strength at 3m) ^{Note1}
outside of the 5.925-7.125 GHz	PK:-27(dBm/MHz)	PK:68.2(dBμV/m)

Note1: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

(2) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209

Radiated emission limits

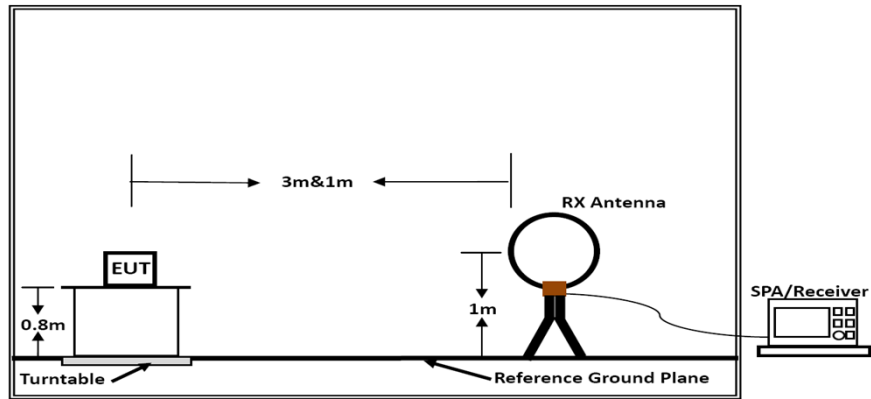
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	$2400/F(\text{KHz})$
0.49-1.705	3	$20\log(24000/F(\text{KHz}))+40\log(30/3)$	$24000/F(\text{KHz})$
1.705-30	3	$20\log(30)+40\log(30/3)$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

(3) In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

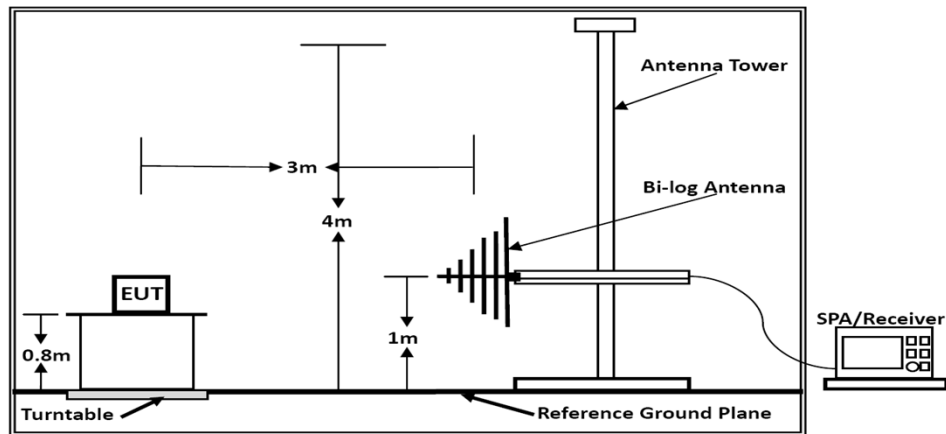
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

TEST CONFIGURATION

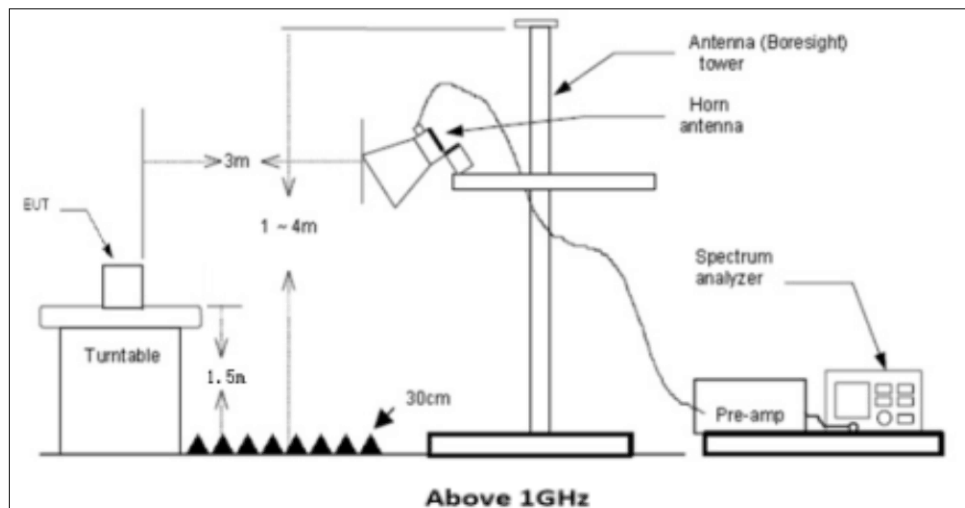
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



Test Procedure

- Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
- Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until all frequency measurements have been completed.
- Radiated emission test frequency band from 9KHz to 40GHz.
- The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3
1GHz-18GHz	Horn Antenna	3
18GHz-40GHz	Horn Antenna	1

- Setting test receiver/spectrum as following table states:

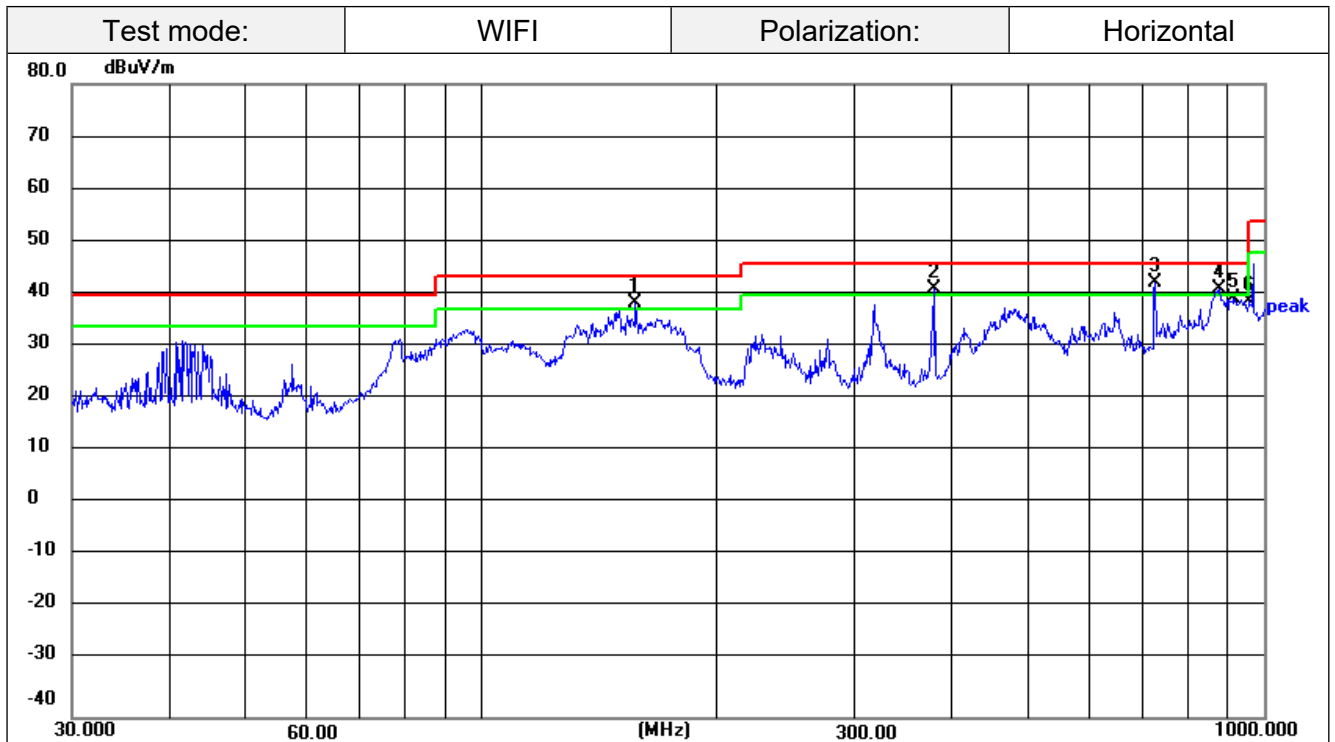
Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz, Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz, Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz, Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

TEST RESULTS

Remark:

- Pre-scan all operation modes for below 1GHz test, only the worst case 802.11a Ant1 low channel of U-NII 1 band was recorded.
- Pre-scan all operation modes for above 1GHz test, only the worst case 802.11a Ant1 was recorded.
- Pre-scan all operation modes for U-NII 3 bandedge test, only the worst case of 802.11ax(40) MIMO mode was recorded.
- Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz



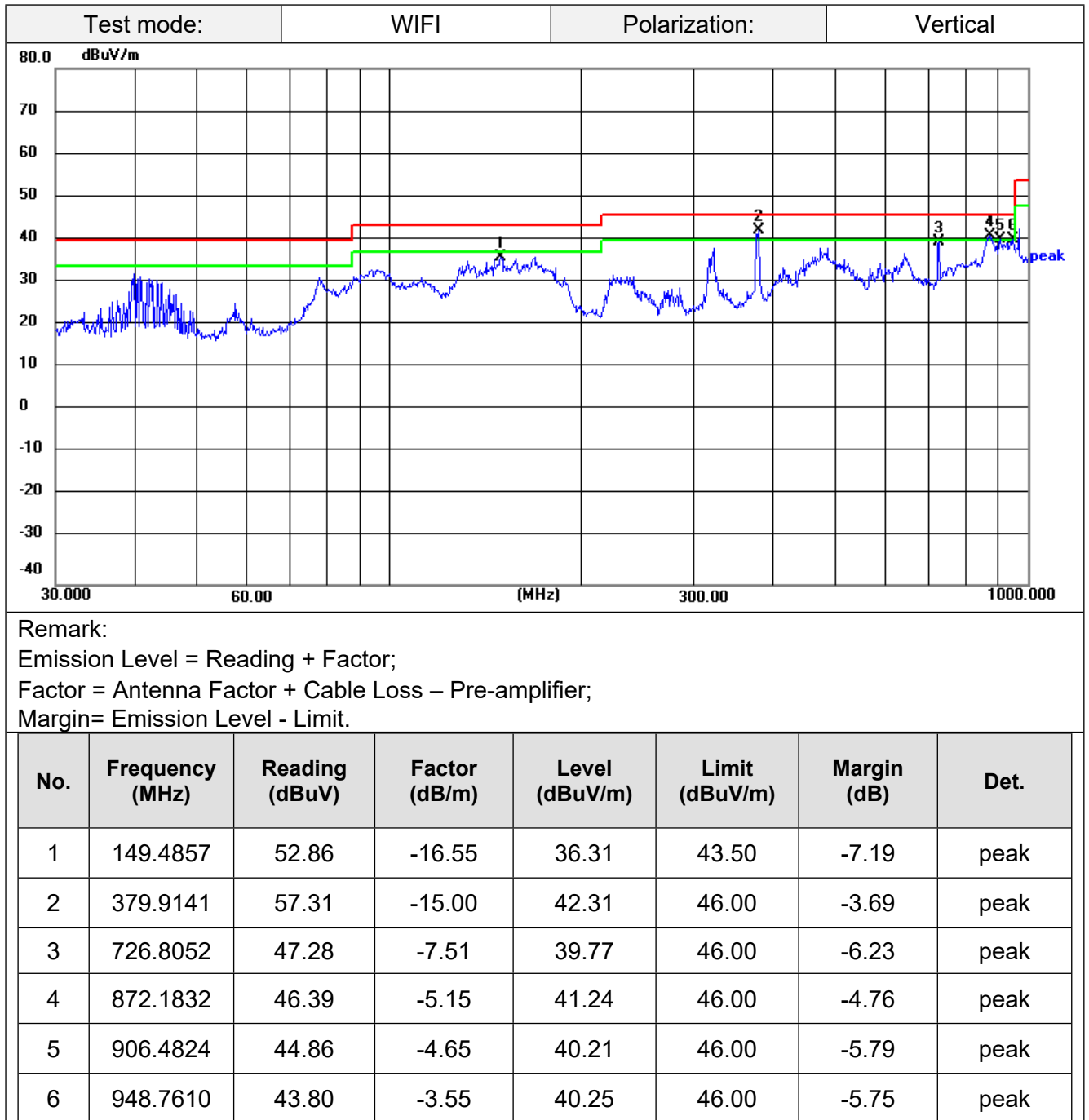
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	157.5586	55.02	-16.54	38.48	43.50	-5.02	peak
2	379.9141	56.31	-15.00	41.31	46.00	-4.69	peak
3	726.8052	49.86	-7.51	42.35	46.00	-3.65	peak
4	878.3214	46.19	-5.08	41.11	46.00	-4.89	peak
5	916.0684	43.72	-4.40	39.32	46.00	-6.68	peak
6	958.7943	42.47	-3.48	38.99	46.00	-7.01	peak



For 1GHz to 40GHz

Remark: All WIFI operation modes have been tested for above 1GHz test, only the worst case 802.11ax20 mode was recorded as below:

U-NII band 5 @ 802.11ax mode (above 1GHz)

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
1 (5955MHz)	5460.00	53.68	-5.91	47.77	68.20	-20.43	V	PK
	5460.00	43.18	-5.91	37.27	54.00	-16.73	V	AV
	11910.00	50.00	5.72	55.72	68.20	-12.48	V	PK
	11910.00	39.45	5.72	45.17	54.00	-8.83	V	AV
	--	--	--	--	--	--	--	--
45 (6175MHz)	12350.00	50.50	5.74	56.24	68.20	-11.96	V	PK
	12350.00	40.41	5.74	46.15	54.00	-7.85	V	AV
	--	--	--	--	--	--	--	--
93 (6415MHz)	5460.00	53.59	-5.91	47.68	68.20	-20.52	V	PK
	5460.00	44.00	-5.91	38.09	54.00	-15.91	V	AV
	12830.00	49.56	6.69	56.25	68.20	-11.95	V	PK
	12830.00	40.94	6.69	47.63	54.00	-6.37	V	AV
	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
1 (5955MHz)	5460.00	54.09	-5.91	48.18	68.20	-20.02	H	PK
	5460.00	45.42	-5.91	39.51	54.00	-14.49	H	AV
	11910.00	50.52	5.72	56.24	68.20	-11.96	H	PK
	11910.00	39.90	5.72	45.62	54.00	-8.38	H	AV
	--	--	--	--	--	--	--	--
45 (6175MHz)	12350.00	50.51	5.74	56.25	68.20	-11.95	H	PK
	12350.00	40.67	5.74	46.41	54.00	-7.59	H	AV
	--	--	--	--	--	--	--	--
93 (6415MHz)	5460.00	53.86	-5.91	47.95	68.20	-20.25	H	PK
	5460.00	44.40	-5.91	38.49	54.00	-15.51	H	AV
	12830.00	49.84	6.69	56.53	68.20	-11.67	H	PK
	12830.00	41.33	6.69	48.02	54.00	-5.98	H	AV
	--	--	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) = Meter Reading (dBuV) + Factor (dB/m)
2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
3. Margin value = Emission level - Limit value.
4. --Other emission levels are attenuated 20dB below the limit and not recorded in report.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

U-NII band 6 @ 802.11ax mode (above 1GHz)

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
97 (6435MHz)	12870.00	50.13	6.09	56.22	68.20	-11.98	V	PK
	12870.00	40.61	6.09	46.70	54.00	-7.30	V	AV
	--	--	--	--	--	--	--	--
105 (6475MHz)	12950.00	50.86	6.21	57.07	68.20	-11.13	V	PK
	12950.00	39.90	6.21	46.11	54.00	-7.89	V	AV
	--	--	--	--	--	--	--	--
113 (6515MHz)	13030.00	49.99	6.83	56.82	68.20	-11.38	V	PK
	13030.00	41.03	6.83	47.86	54.00	-6.14	V	AV
	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
97 (6435MHz)	12870.00	50.48	6.09	56.57	68.20	-11.63	H	PK
	12870.00	39.89	6.09	45.98	54.00	-8.02	H	AV
	--	--	--	--	--	--	--	--
105 (6475MHz)	12950.00	50.27	6.21	56.48	68.20	-11.72	H	PK
	12950.00	40.11	6.21	46.32	54.00	-7.68	H	AV
	--	--	--	--	--	--	--	--
113 (6515MHz)	13030.00	50.20	6.83	57.03	68.20	-11.17	H	PK
	13030.00	40.95	6.83	47.78	54.00	-6.22	H	AV
	--	--	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) =Meter Reading(dBuV)+ Factor (dB/m)
2. Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Emission level- Limit value.
4. --Other emission levels are attenuated 20dB below the limit and not recorded in report.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

U-NII band 7 @ 802.11ax mode (above 1GHz)

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
117 (6535MHz)	13070.00	50.74	6.89	57.63	68.20	-10.57	V	PK
	13070.00	41.47	6.89	48.36	54.00	-5.64	V	AV
	--	--	--	--	--	--	--	--
153 (6715MHz)	13430.00	50.90	7.11	58.01	68.20	-10.19	V	PK
	13430.00	40.77	7.11	47.88	54.00	-6.12	V	AV
	--	--	--	--	--	--	--	--
181 (6855MHz)	13710.00	51.94	6.41	58.35	68.20	-9.85	V	PK
	13710.00	41.66	6.41	48.07	54.00	-5.93	V	AV
	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
117 (6535MHz)	13070.00	50.44	6.89	57.33	68.20	-10.87	H	PK
	13070.00	41.69	6.89	48.58	54.00	-5.42	H	AV
	--	--	--	--	--	--	--	--
153 (6715MHz)	13430.00	50.56	7.11	57.67	68.20	-10.53	H	PK
	13430.00	40.48	7.11	47.59	54.00	-6.41	H	AV
	--	--	--	--	--	--	--	--
181 (6855MHz)	13710.00	51.38	6.41	57.79	68.20	-10.41	H	PK
	13710.00	42.14	6.41	48.55	54.00	-5.45	H	AV
	--	--	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) =Meter Reading(dBuV)+ Factor (dB/m)
2. Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Emission level- Limit value.
4. --Other emission levels are attenuated 20dB below the limit and not recorded in report.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

U-NII band 8 @ 802.11ax mode (above 1GHz)

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
185 (6875MHz)	7250.00	51.39	-1.20	50.19	68.20	-18.01	V	PK
	7250.00	42.47	-1.20	41.27	54.00	-12.73	V	AV
	13750.00	52.27	5.68	57.95	68.20	-10.25	V	PK
	13750.00	41.93	5.68	47.61	54.00	-6.39	V	AV
	--	--	--	--	--	--	--	--
213 (7015MHz)	14030.00	52.29	6.17	58.46	68.20	-9.74	V	PK
	14030.00	43.74	6.17	49.91	54.00	-4.09	V	AV
	--	--	--	--	--	--	--	--
233 (7115MHz)	7250.00	51.45	-1.20	50.25	68.20	-17.95	V	PK
	7250.00	42.80	-1.20	41.60	54.00	-12.40	V	AV
	14230.00	53.40	6.25	59.65	68.20	-8.55	V	PK
	14230.00	43.20	6.25	49.45	54.00	-4.55	V	AV
	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Meter Reading (dBμV)	Factor (dB/m)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	ANT Pol	Detector Mode
185 (6875MHz)	7250.00	50.97	-1.20	49.77	68.20	-18.43	H	PK
	7250.00	40.15	-1.20	38.95	54.00	-15.05	H	AV
	13750.00	52.78	5.68	58.46	68.20	-9.74	H	PK
	13750.00	44.16	5.68	49.84	54.00	-4.16	H	AV
	--	--	--	--	--	--	--	--
213 (7015MHz)	14030.00	51.42	6.17	57.59	68.20	-10.61	H	PK
	14030.00	41.06	6.17	47.23	54.00	-6.77	H	AV
	--	--	--	--	--	--	--	--
233 (7115MHz)	7250.00	51.93	-1.20	50.73	68.20	-17.47	H	PK
	7250.00	42.62	-1.20	41.42	54.00	-12.58	H	AV
	14230.00	52.23	6.25	58.48	68.20	-9.72	H	PK
	14230.00	42.02	6.25	48.27	54.00	-5.73	H	AV
	--	--	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) =Meter Reading(dBuV)+ Factor (dB/m)
2. Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
3. Margin value = Emission level- Limit value.
4. --Other emission levels are attenuated 20dB below the limit and not recorded in report.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

3.3 Maximum Conducted Average Output Power

Limit

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	☐ Standard Power Access Point The maximum e.i.r.p. over the frequency band of operation must not exceed 36 dBm. For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).	5.925-6.425 GHz 6.525-6.875 GHz
	☐ Indoor Access Point The maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm	5.925-7.125 GHz
	☐ Subordinate Device The maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm.	5.925-7.125 GHz
	☐ Client Devices, Operating Under The Control Of A Standard Power Access Point The maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.	5.925-6.425 GHz 6.525-6.875 GHz
	☒ Client Devices, Operating Under The Control Of An Indoor Access Point The maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.	5.925-7.125 GHz
	☐ For very low power the maximum e.i.r.p must not exceed 14 dBm.	5.925-7.125 GHz

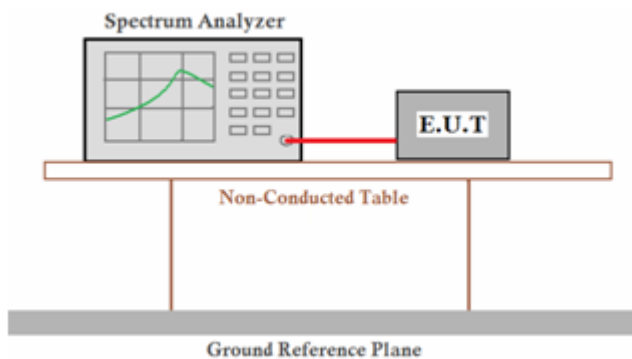
Test Procedure

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer. Place the EUT on the table and set it in transmitting mode.

Method AVGSA-2 description in ANSI C63.10-2020 12.4.2.4 is used for Duty cycle constant (variations are less than $\pm 2\%$) condition.

Method AVGSA-3 description in ANSI C63.10-2020 12.4.2.6 is used for Duty cycle nonconstant (variations are greater than $\pm 2\%$) condition.

Test Configuration



Test Results

☒ **Pass** ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for 6G WIFI_1 & Appendix RF test data for 6G WIFI_2..

3.4 Power Spectral Density

Limit

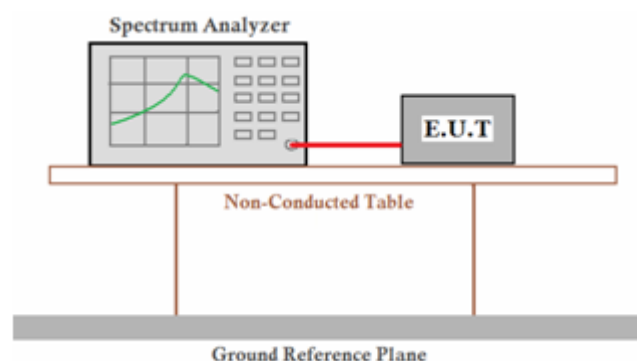
CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	☐ Standard Power Access Point The maximum power spectral density must not exceed 23 dBm e.i.r.p in any 1-megahertz band.	5.925-6.425 GHz 6.525-6.875 GHz
	☐ Indoor Access Point The maximum power spectral density must not exceed 5 dBm e.i.r.p. in any 1-megahertz band.	5.925-7.125 GHz
	☐ Subordinate Device The maximum power spectral density must not exceed 5 dBm e.i.r.p in any 1-megahertz band.	5.925-7.125 GHz
	☐ Client Devices, Operating Under The Control Of A Standard Power Access Point The maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band.	5.925-6.425 GHz 6.525-6.875 GHz
	☒ Client Devices, Operating Under The Control Of An Indoor Access Point The maximum power spectral density must not exceed -1 dBm e.i.r.p. in any 1-megahertz band.	5.925-7.125 GHz
	☐ For very low power devices the maximum power spectral density must not exceed -5 dBm e.i.r.p in any 1-megahertz band	5.925-7.125 GHz

Test Procedure

Use the same procedure used for Maximum Conducted Average Output Power measurement with follow setting change.

1. Set the RBW = 300KHz.
2. Set the VBW $\geq 3 \times$ RBW.
3. Use the peak search function on the instrument to find the peak of the spectrum.

Test Configuration



Test Results

☒ Pass ☐ Not Applicable

Note:

For test data, please refer to Appendix RF test data for 6G WIFI_1 & Appendix RF test data for 6G WIFI_2.

3.5 Emission Bandwidth (26dBm Bandwidth)

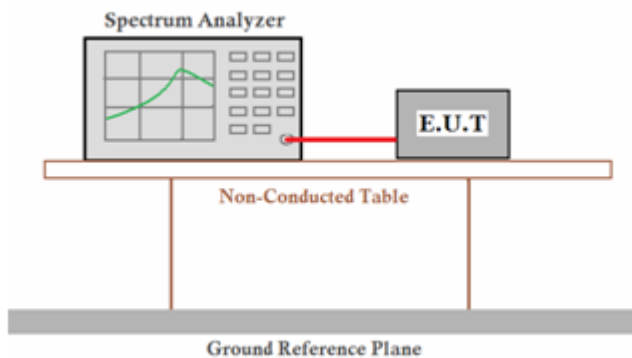
Limit

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz

Test Procedure

1. Set resolution bandwidth (RBW) = approximately 1% to 5%. of the EBW.
2. Set the video bandwidth (VBW) > RBW.
3. Detector = Peak.
4. Trace mode = Max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW / EBW ratio is approximately 1% to 5%.

Test Configuration



Test Results

☒ Pass ☐ Not Applicable

Note:

For test data, please refer to Appendix RF test data for 6G WIFI_1 & Appendix RF test data for 6G WIFI_2..

3.6 Occupied Bandwidth

Limit

N/A

Test Procedure

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

RBW=1% to 5% of the OBW

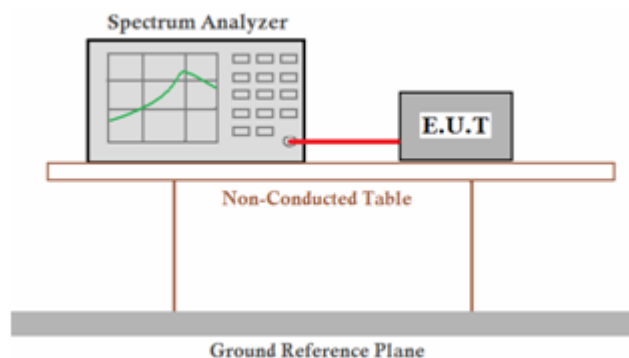
VBW=approximately 3 X RBW

Detector=Peak

Trace Mode: Max Hold

Use the 99% power bandwidth function of the instrument to measure the Occupied Bandwidth and recorded.

Test Configuration



Test Results

Passed

☒ Pass ☐ Not Applicable

Note:

For test data, please refer to Appendix RF test data for 6G WIFI_1 & Appendix RF test data for 6G WIFI_2..

3.7 In-Band Emissions (MASK)

For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

Test Procedure

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer. Place the EUT on the table and set it in transmitting mode.

2. Set the reference level of the measuring equipment in accordance with procedure 4.1.6.2 of ANSI C63.10-2020.

3. Measure the 26 dB EBW using the test procedure 12.5.2 of ANSI C63.10-2020. (This will be used to determine the channel edge.)

4. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:

- a) Set the span to encompass the entire 26 dB EBW of the signal.
- b) Set RBW = same RBW used for 26 dB EBW measurement.
- c) Set VBW $\geq 3 \times$ RBW
- d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
- e) Sweep time = auto.
- f) Detector = RMS (i.e., power averaging)
- g) Trace average at least 100 traces in power averaging (rms) mode.
- h) Use the peak search function on the instrument to find the peak of the spectrum.

5. For the purposes of developing the emission mask, the channel bandwidth is defined as the 26 dB EBW.

6. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:

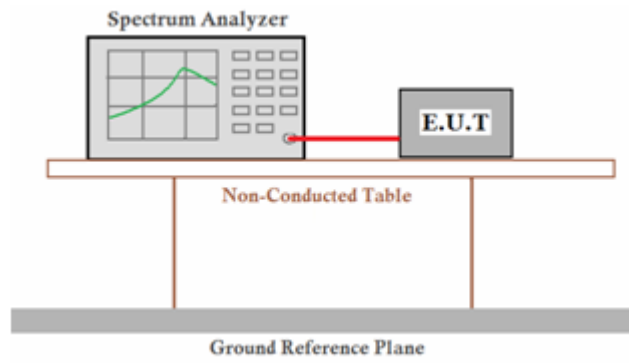
- a. Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
- b. Suppressed by 28 dB at one channel bandwidth from the channel center.
- c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.

7. Adjust the span to encompass the entire mask as necessary.

8. Clear trace.

9. Trace average at least 100 traces in power averaging (rms) mode.

Test Configuration



Test Results

Passed

☒ Pass
 ☐ Not Applicable

Note:

For test data, please refer to Appendix RF test data for 6G WIFI_1 & Appendix RF test data for 6G WIFI_2..

3.8 Contention-Based Protocol

Applicability of Contention-Based Protocol Requirements

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission. Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)¹. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain. To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

a) Simulating Incumbent Signal The incumbent signal is assumed to be noise-like. One example of such transmission could be Digital Video Broadcasting (DVB) systems that use Orthogonal Frequency Division Multiplexing (OFDM). Incumbent systems may also use different bandwidths for their transmissions. A 10 MHz-wide additive white Gaussian noise (AWGN) signal is selected to simulate and represent incumbent transmission.

b) Required number of tests

Incumbent and EUT (access point, subordinate or client) signals may occupy different portions of the channel. Depending on the EUT transmission bandwidth and incumbent signal center frequency (simulated by a 10 MHz-wide AWGN signal), the center frequency of the EUT signal f_{cc1} may fall within the incumbent's occupied bandwidth (Figure 1.a), or outside of it (Figure 1.b).

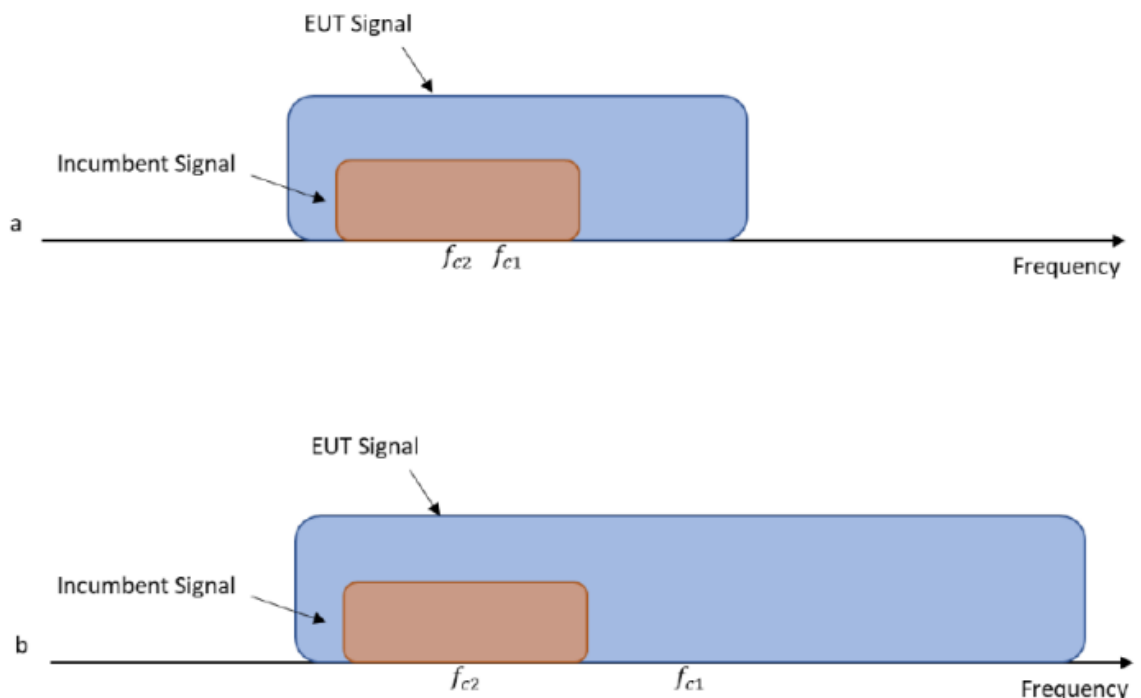


Figure 1. Two possible scenarios where a) center frequency of EUT transmission falls within incumbent's bandwidth, or b) outside of it

To ensure EUT reliably detects an incumbent signal in both scenarios shown in Figure 1, the detection threshold test may be repeated more than once with the incumbent signal (having center frequency f_{cc2}) tuned to different center frequencies within the UT transmission bandwidth. The criteria specified in Table 1 determines how many times the detection threshold test must be performed;

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

where:

BW_{EUT} : Transmission bandwidth of EUT signal

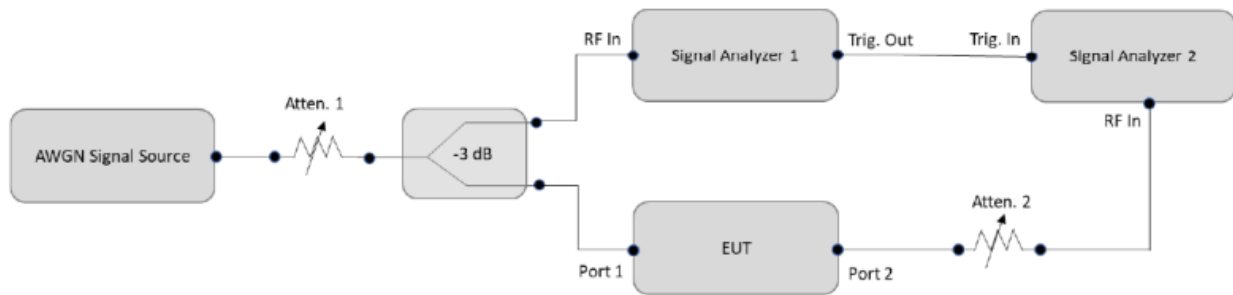
BW_{Inc} : Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)

f_{c1} : Center frequency of EUT transmission

f_{c2} : Center frequency of simulated incumbent signal

Test Setup and procedure

To ensure the EUT is capable of detecting co-channel energy, the first step is to configure the EUT to transmit with a constant duty cycle.² To simulate an incumbent signal, a signal generator (or similar source) that is capable of generating band-limited additive white Gaussian noise (AWGN) is required. Depending on the EUT antenna configuration, the AWGN signal can be provided to the EUT receiver via a conducted method (Figure 2) or a radiated method (Figure 3). Figure 2 shows the conducted test setup where a band-limited AWGN signal is generated at a very low power level and injected into the EUT's antenna port. The AWGN signal power level is then incrementally increased while the EUT transmission is monitored on a signal analyzer 2 to verify if the EUT can sense the AWGN signal and can subsequently cease its transmission. A triggered measurement, as shown in Figure 2, is optional, and assists with determining the time it takes the EUT to cease transmission (or vacate the channel) upon detecting RF energy. If the EUT has only one antenna port, then an AWGN signal source can be connected to the same antenna port.



1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in Figure 2.
7. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

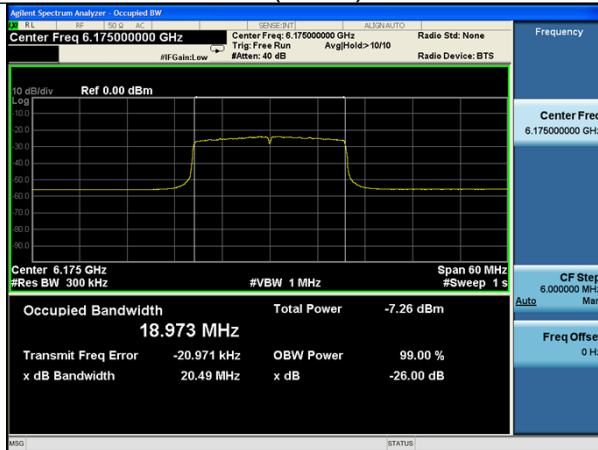
Test Results

Remark: Pre-scan both 802.11ax mode and 802.11be mode, only the worst result of 802.11be mode was reported as below:

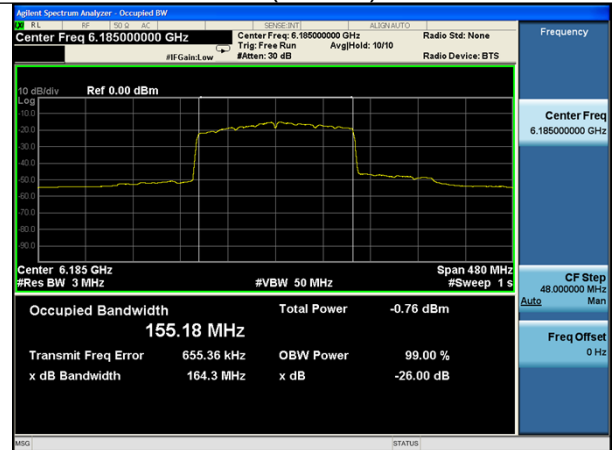
Contention Based Protocol Measurement											
Operation Band	Operation Mode	Channel Bandwidth	Channel number	Channel Frequency (MHz)	AWGN Signal Frequency (MHz)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT TX Status	Test Result
					Freq. (MHz)	Power (dBm)					
U-NII-5	802.11be	20	45	6175	6175	-69.00	3.67	-65.33	-62	OFF	Pass
						-69.09	3.67	-65.42	-62	Minimal	Pass
						-69.21	3.67	-65.54	-62	ON	Pass
		160	47	6185	6110	-68.90	3.67	-65.23	-62	OFF	Pass
						-68.80	3.67	-65.13	-62	Minimal	Pass
						-69.14	3.67	-65.47	-62	ON	Pass
					6185	-69.07	3.67	-65.40	-62	OFF	Pass
						-68.96	3.67	-65.29	-62	Minimal	Pass
						-69.03	3.67	-65.36	-62	ON	Pass
					6260	-69.21	3.67	-65.54	-62	OFF	Pass
						-69.09	3.67	-65.42	-62	Minimal	Pass
						-69.18	3.67	-65.51	-62	ON	Pass

Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHZ)	AWGN Signal Freq. (MHZ)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6175	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6110	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6185	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6260	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

802.11be(HE20) / CH45

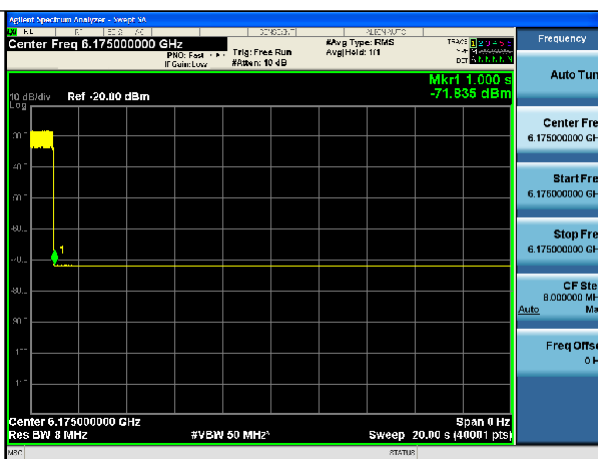


802.11be(HE160) / CH47

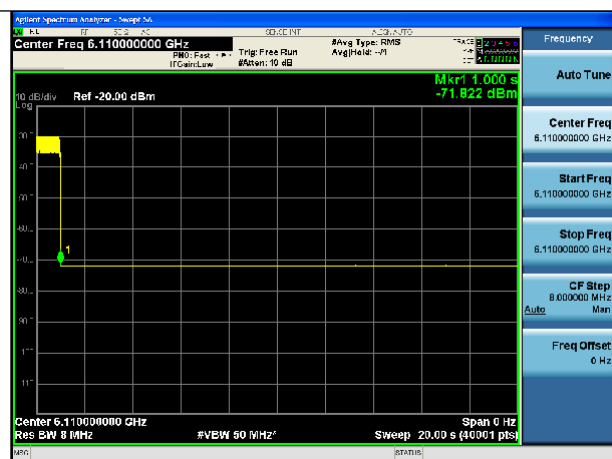


Plots of Incumbent Signal (AWGN) Level

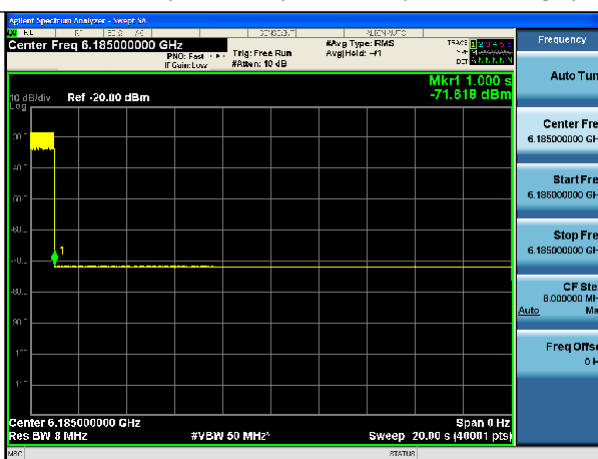
802.11be (EHT20) / CH45



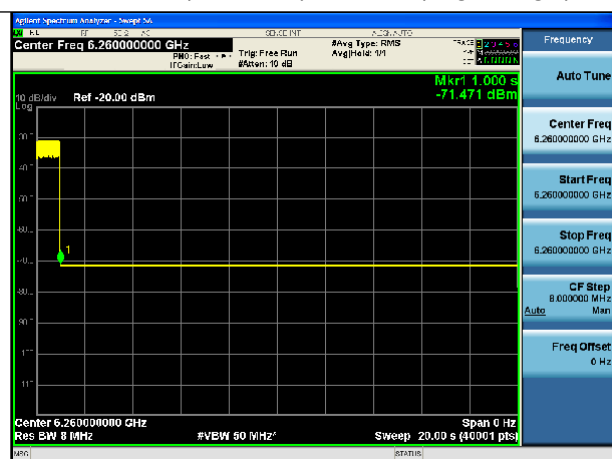
802.11be (EHT160) / CH47 (Low Edge)



802.11be (EHT160) / CH47 (Middle Edge)

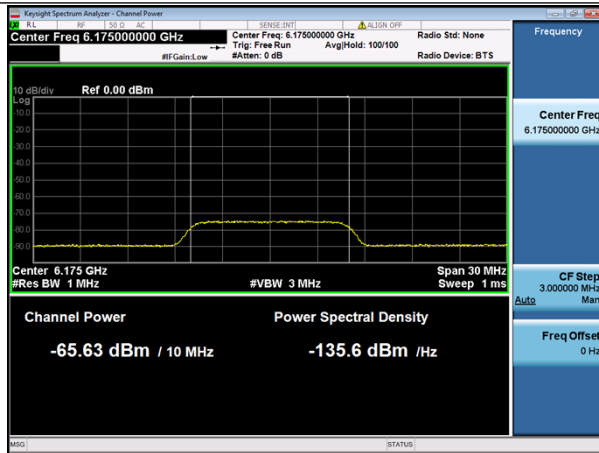


802.11be (EHT160) / CH47 (High Edge)

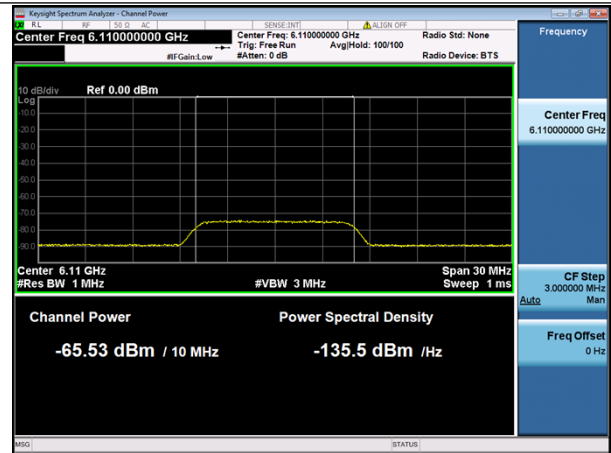


Plots of EUT Ceased Transmission In The Time Domain

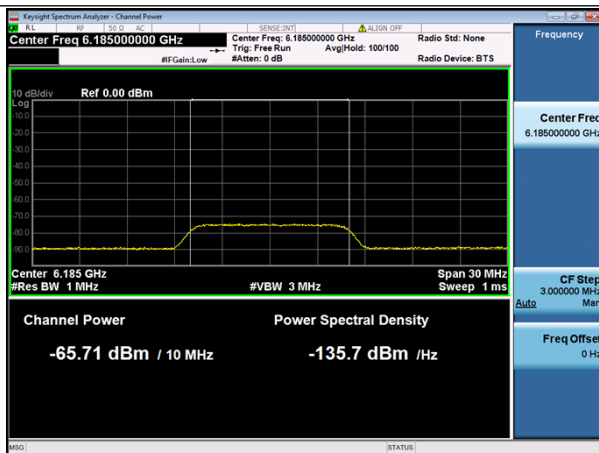
802.11be (EHT20) / CH45



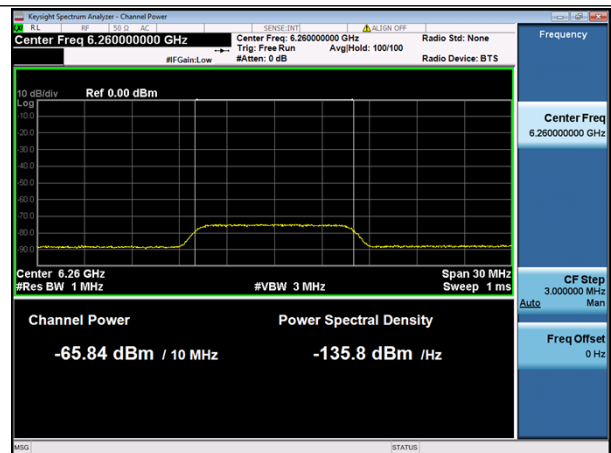
802.11be (EHT160) / CH47 (Low Edge)



802.11be (EHT160) / CH47 (Middle Edge)



802.11be (EHT160) / CH47 (High Edge)



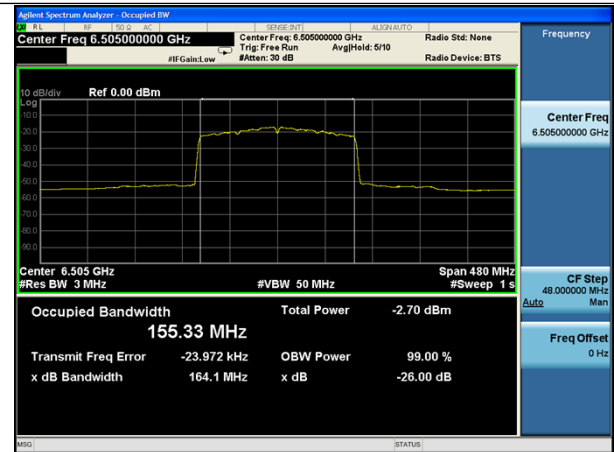
Contention Based Protocol Measurement											
Operation Band	Operation Mode	Channel Bandwidth	Channel number	Channel Frequency (MHz)	AWGN Signal Frequency (MHz)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT TX Status	Test Result
					Freq. (MHz)	Power (dBm)					
U-NII-6	802.11be	20	105	6475	6475	-68.75	3.67	-65.08	-62	OFF	Pass
						-68.62	3.67	-64.95	-62	Minimal	Pass
						-69.11	3.67	-65.44	-62	ON	Pass
		160	111	6505	6430	-69.12	3.67	-65.45	-62	OFF	Pass
						-68.83	3.67	-65.16	-62	Minimal	Pass
						-69.03	3.67	-65.36	-62	ON	Pass
					6505	-68.93	3.67	-65.26	-62	OFF	Pass
						-68.86	3.67	-65.19	-62	Minimal	Pass
						-69.08	3.67	-65.41	-62	ON	Pass
					6580	-69.21	3.67	-65.54	-62	OFF	Pass
						-69.01	3.67	-65.34	-62	Minimal	Pass
						-69.25	3.67	-65.58	-62	ON	Pass

Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHZ)	AWGN Signal Freq. (MHZ)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6475	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6430	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6505	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6580	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

802.11be (EHT20) / CH105

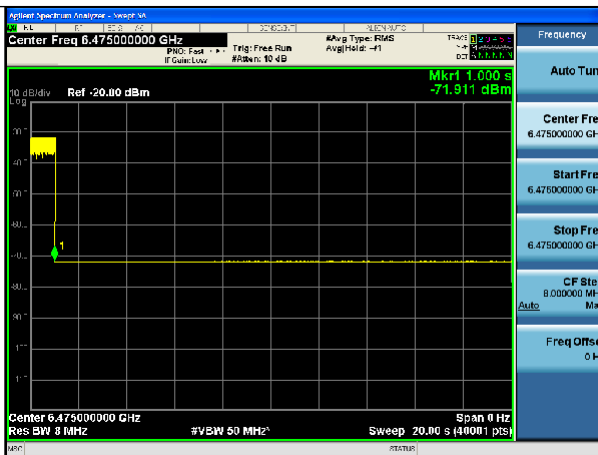


802.11be (EHT160) / CH111

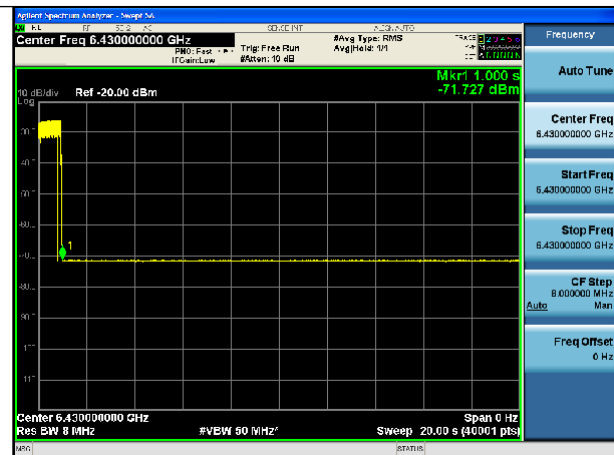


Plots of Incumbent Signal (AWGN) Level

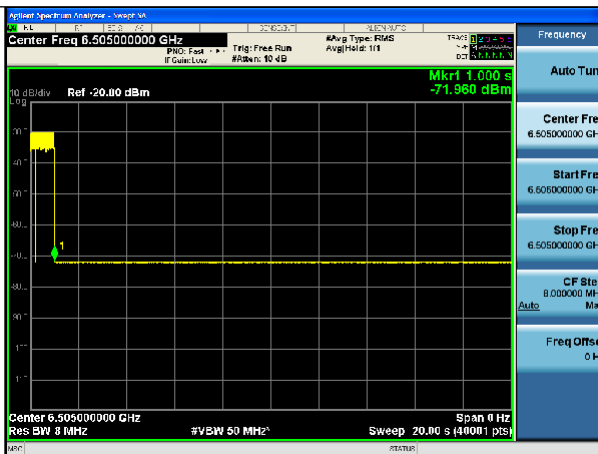
802.11be (EHT20) / CH105



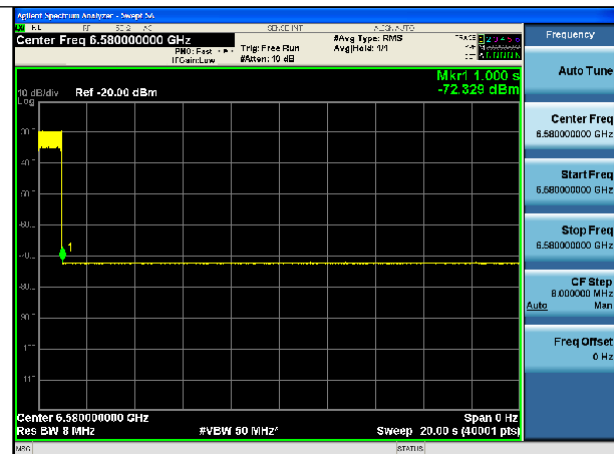
802.11be (EHT160) / CH111 (Low Edge)



802.11be (EHT160) / CH111 (Middle Edge)

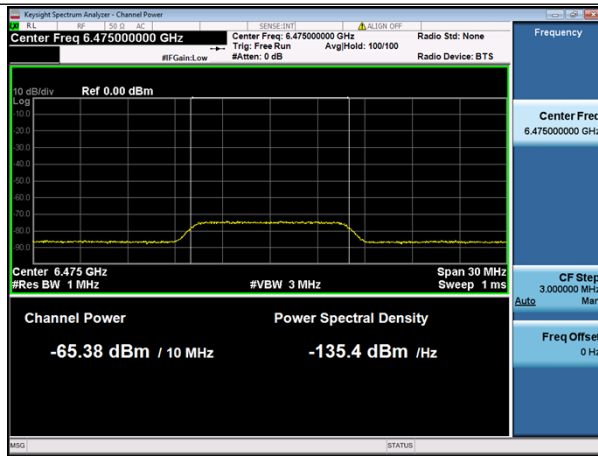


802.11be (EHT160) / CH111 (High Edge)

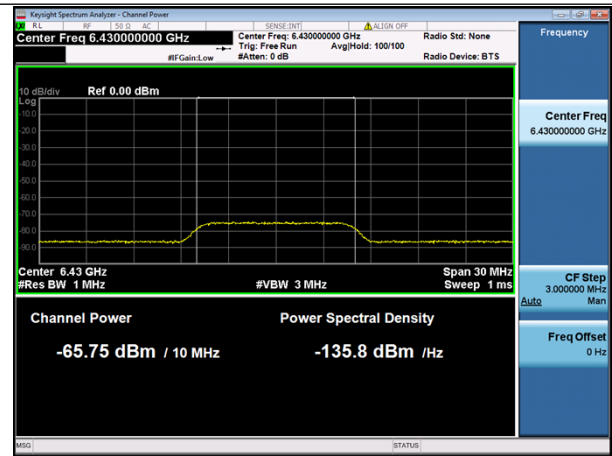


Plots of EUT Ceased Transmission In The Time Domain

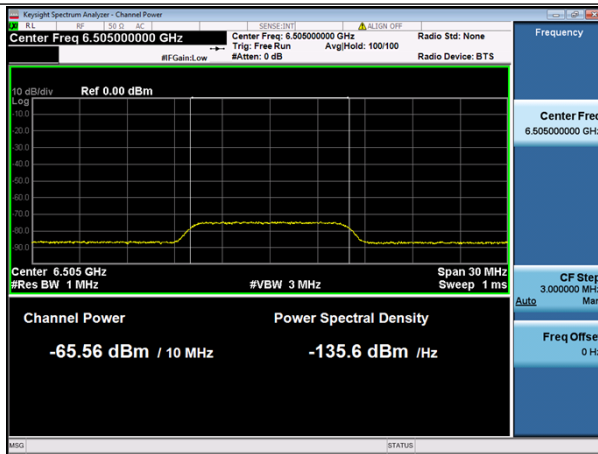
802.11be (EHT20) / CH105



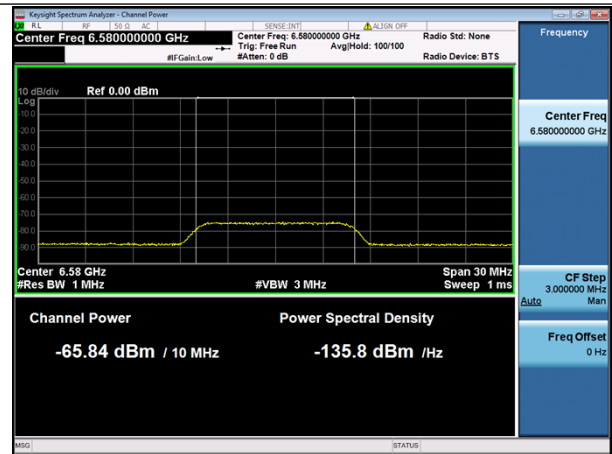
802.11be (EHT160) / CH111 (Low Edge)



802.11be (EHT160) / CH111 (Middle Edge)



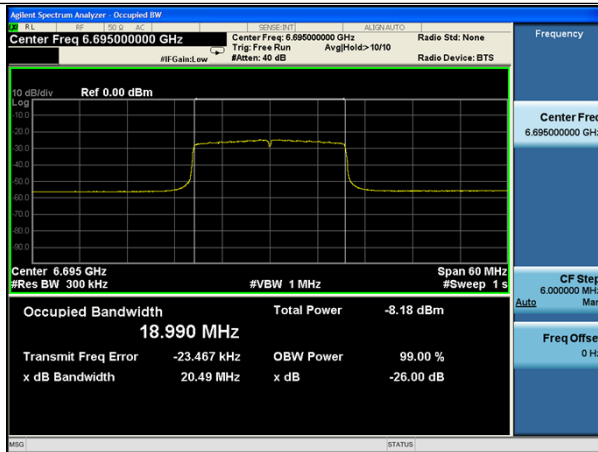
802.11be (EHT160) / CH111 (High Edge)



Contention Based Protocol Measurement											
Operation Band	Operation Mode	Channel Bandwidth	Channel number	Channel Frequency (MHz)	AWGN Signal Frequency (MHz)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT TX Status	Test Result
					Freq. (MHz)	Power (dBm)					
U-NII-7	802.11be	20	149	6695	6695	-69.01	3.67	-65.34	-62	OFF	Pass
						-69.14	3.67	-65.47	-62	Minimal	Pass
						-69.19	3.67	-65.52	-62	ON	Pass
		160	143	6665	6590	-69.16	3.67	-65.49	-62	OFF	Pass
						-69.10	3.67	-65.43	-62	Minimal	Pass
						-69.25	3.67	-65.58	-62	ON	Pass
					6665	-69.05	3.67	-65.38	-62	OFF	Pass
						-69.10	3.67	-65.43	-62	Minimal	Pass
						-69.05	3.67	-65.38	-62	ON	Pass
					6740	-69.17	3.67	-65.50	-62	OFF	Pass
						-69.13	3.67	-65.46	-62	Minimal	Pass
						-68.92	3.67	-65.25	-62	ON	Pass

Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHz)	AWGN Signal Freq. (MHz)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6695	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6590	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6665	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6740	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

802.11be (EHT20) / CH149

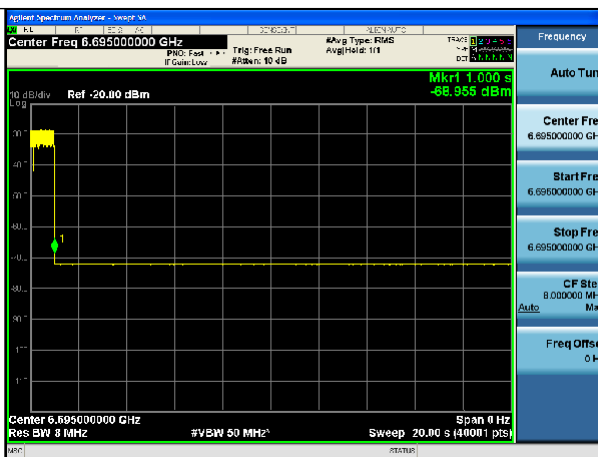


802.11be (EHT160) / CH143

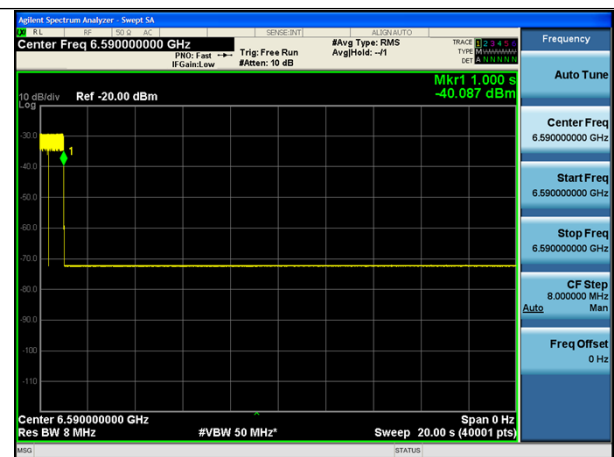


Plots of Incumbent Signal (AWGN) Level

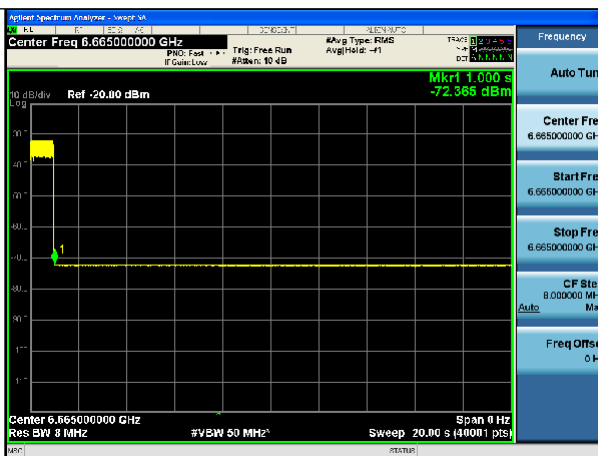
802.11be (EHT20) / CH149



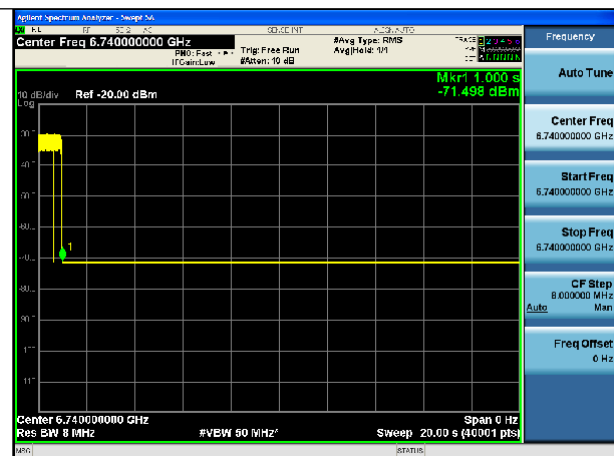
802.11be (EHT160) / CH143 (Low Edge)



802.11be (EHT160) / CH143 (Middle Edge)

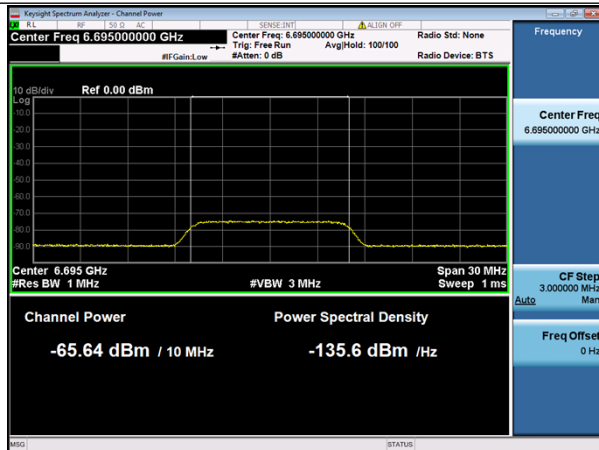


802.11be (EHT160) / CH143 (High Edge)

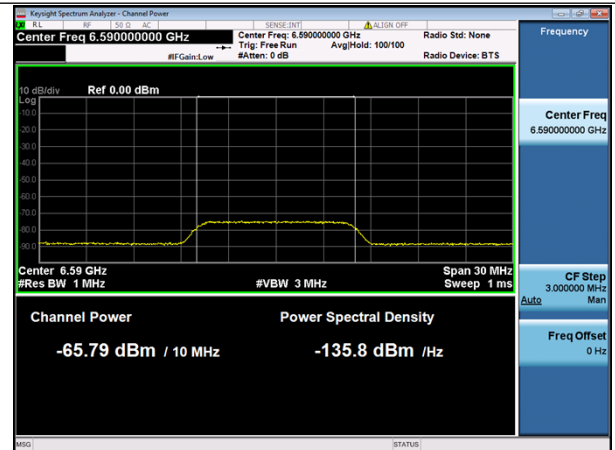


Plots of EUT Ceased Transmission In The Time Domain

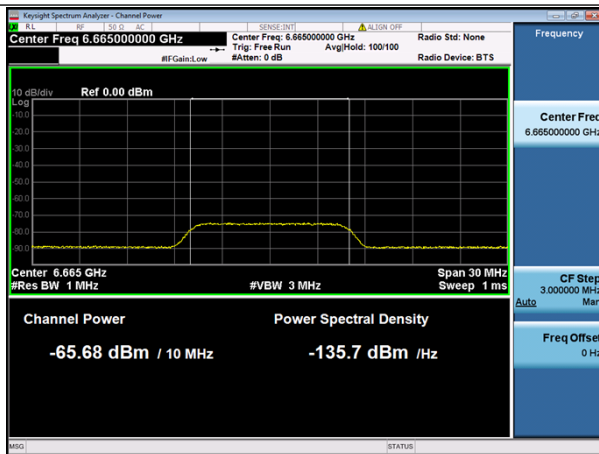
802.11be (EHT20) / CH149



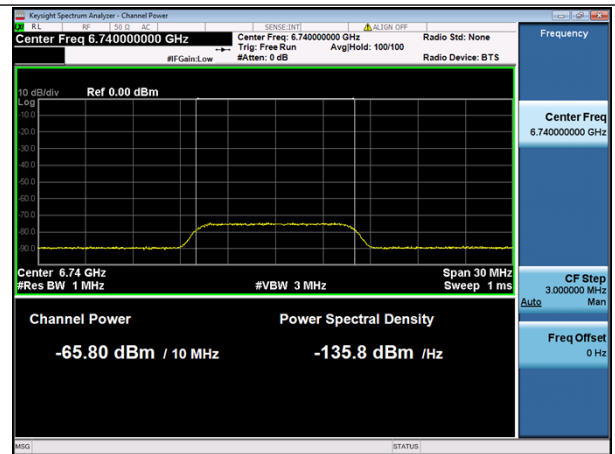
802.11be (EHT160) / CH143 (Low Edge)



802.11be (EHT160) / CH143 (Middle Edge)



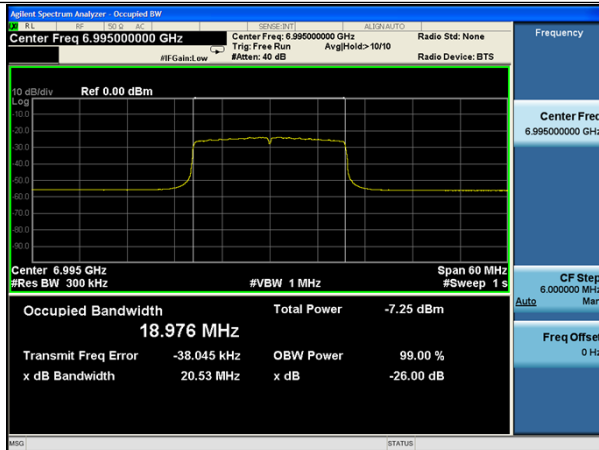
802.11be (EHT160) / CH143 (High Edge)



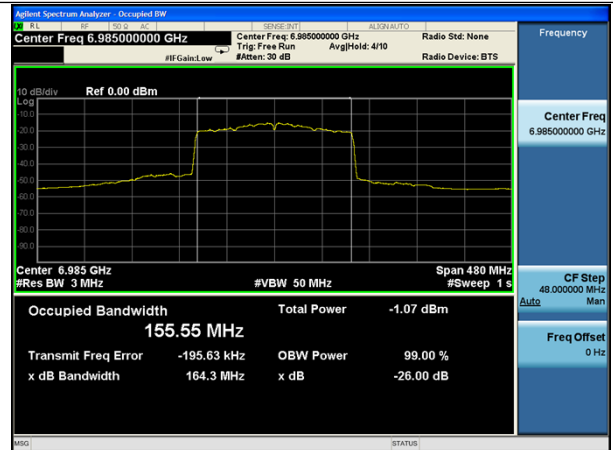
Contention Based Protocol Measurement											
Operation Band	Operation Mode	Channel Bandwidth	Channel number	Channel Frequency (MHz)	AWGN Signal Frequency (MHz)		Antenna Gain (dBi)	Adjusted Power (dBm)	Detection Limit (dBm)	EUT TX Status	Test Result
					Freq. (MHz)	Power (dBm)					
U-NII-8	802.11be	20	209	6995	6995	-68.94	3.67	-65.27	-62	OFF	Pass
						-69.00	3.67	-65.33	-62	Minimal	Pass
						-69.14	3.67	-65.47	-62	ON	Pass
		160	207	6985	6910	-68.93	3.67	-65.26	-62	OFF	Pass
						-69.19	3.67	-65.52	-62	Minimal	Pass
						-68.98	3.67	-65.31	-62	ON	Pass
					6985	-68.93	3.67	-65.26	-62	OFF	Pass
						-68.80	3.67	-65.13	-62	Minimal	Pass
						-68.98	3.67	-65.31	-62	ON	Pass
					7060	-69.01	3.67	-65.34	-62	OFF	Pass
						-68.76	3.67	-65.09	-62	Minimal	Pass
						-69.18	3.67	-65.51	-62	ON	Pass

Contention Based Protocol Detection Probability															
Operation Mode	Channel Bandwidth (MHZ)	AWGN Signal Freq. (MHZ)	#01	#02	#03	#04	#05	#06	#07	#08	#09	#10	Detection Probability	Detection Limit	Test Result
802.11be	20	6995	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
	160	6910	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		6985	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass
		7060	v	v	v	v	v	v	v	v	v	v	100%	90%	Pass

802.11be (EHT20) / CH209

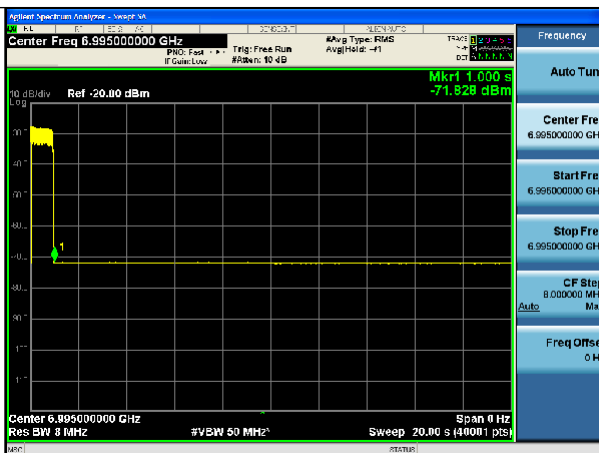


802.11be (EHT160) / CH207

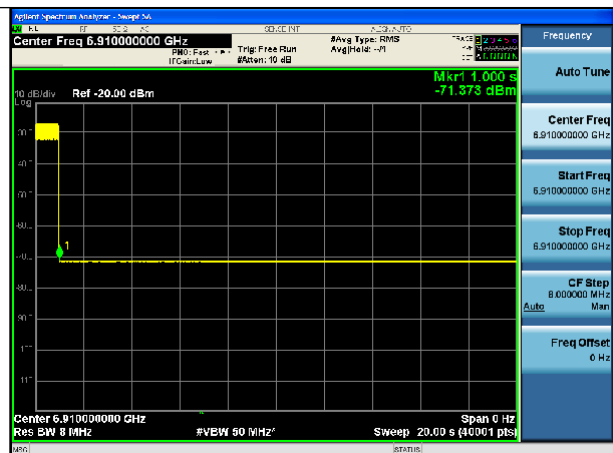


Plots of Incumbent Signal (AWGN) Level

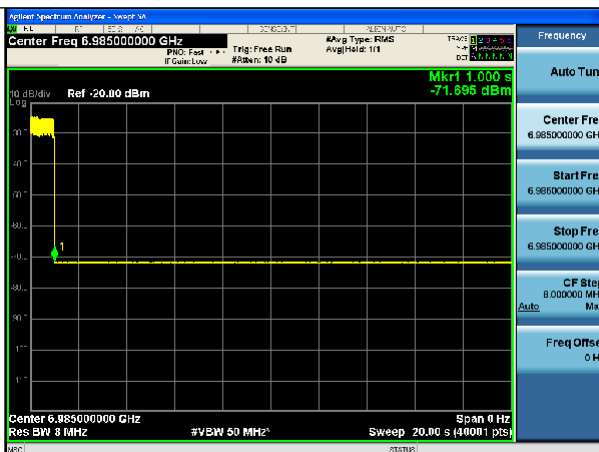
802.11be (EHT20) / CH209



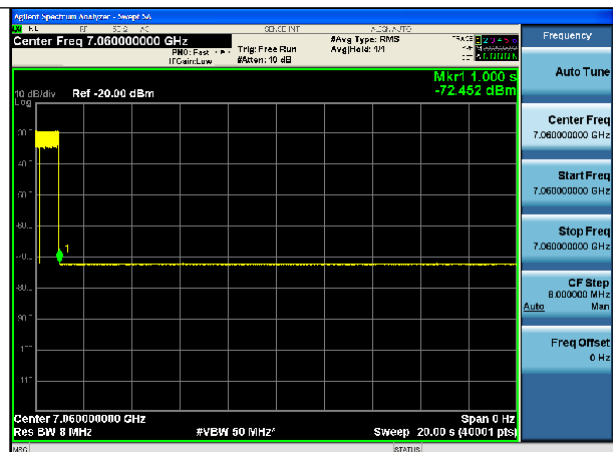
802.11be (EHT160) / CH207 (Low Edge)



802.11be (EHT160) / CH207 (Middle Edge)

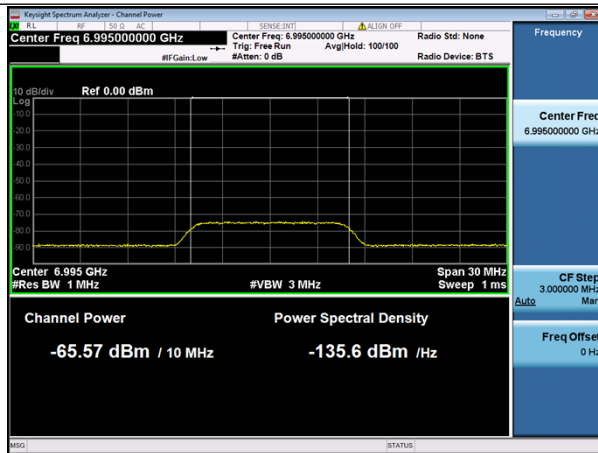


802.11be (EHT160) / CH207 (High Edge)

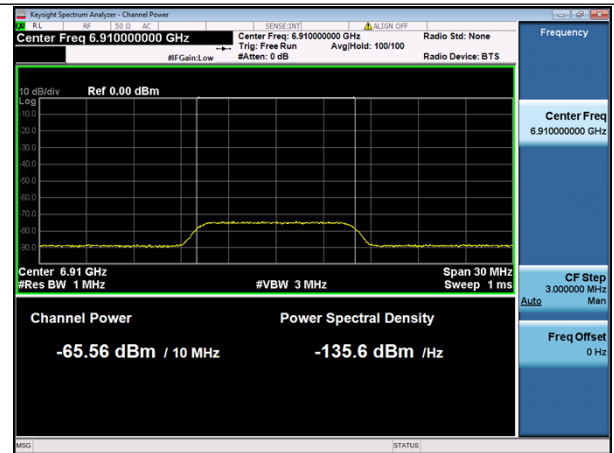


Plots of EUT Ceased Transmission In The Time Domain

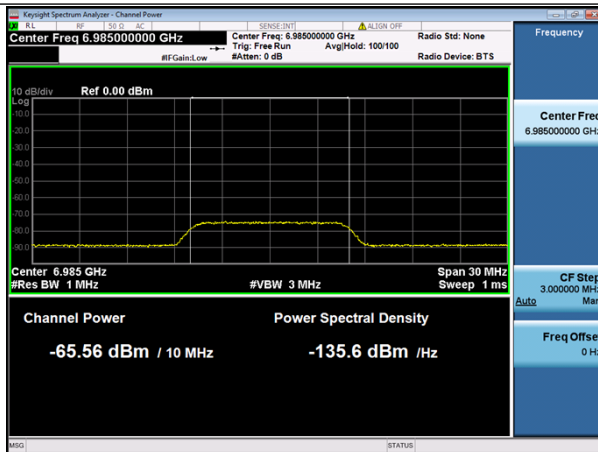
802.11be (EHT20) / CH209



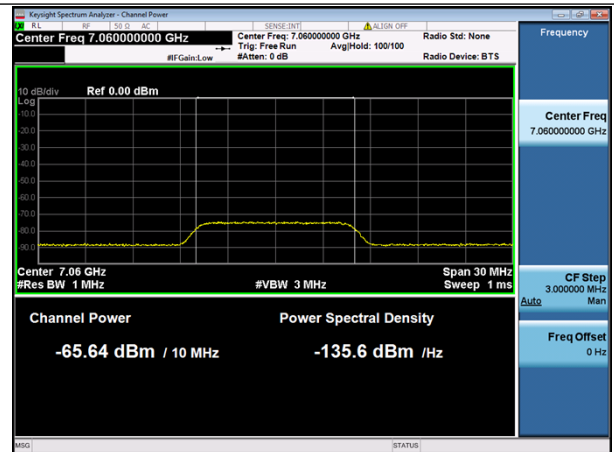
802.11be (EHT160) / CH207 (Low Edge)



802.11be (EHT160) / CH207 (Middle Edge)



802.11be (EHT160) / CH207 (High Edge)

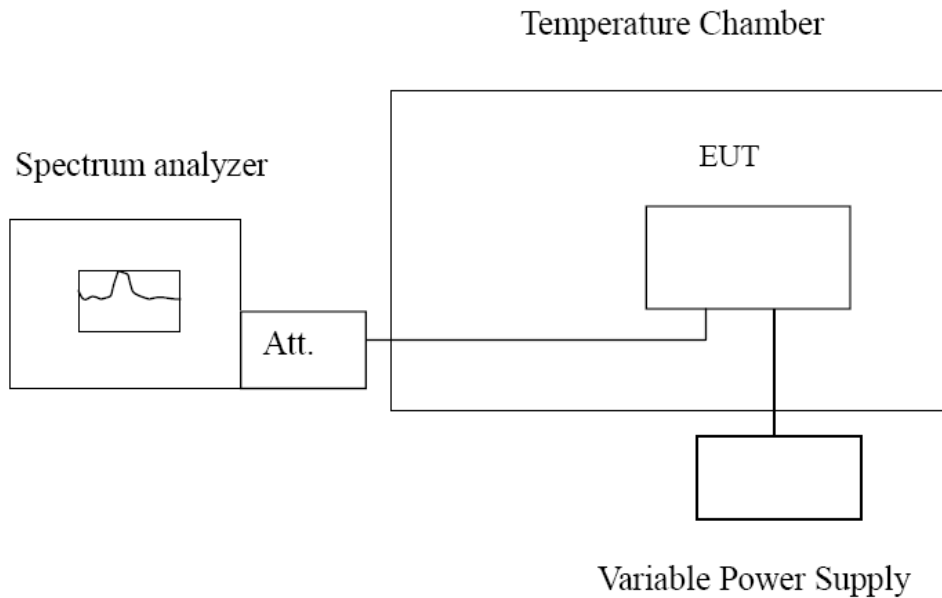


3.9 Frequency Stability

LIMIT

The frequency of the carrier signal shall be maintained within band of operation.

TEST CONFIGURATION



TEST PROCEDURE

Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

TEST RESULTS

☒ **Pass** ☐ **Not Applicable**

Note:

For test data, please refer to Appendix RF test data for 6G WIFI_1 & Appendix RF test data for 6G WIFI_2.

3.10 Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Test Result:

The device used two 50 Ω PIFA Antenna, the maximum gain of antenna 1 is 5.07dBi, antenna 2 is 1.84dBi and Directional gain 6.61dBi. There is no consideration of replacement the antenna.

4 Test Setup Photographs of EUT

Please refer to separated files for Test Setup Photos of the EUT.

5 External Photographs of EUT

Please refer to separated files for External Photos of the EUT.

6 Internal Photographs of EUT

Please refer to separated files for Internal Photos of the EUT.

***** **End of Report** *****