TEST REPORT

Report No.:	BCTC2503327806-4E
Applicant:	Shenzhen Ouke Lianchuang Network Technology Co., Ltd
Product Name:	Car Multimedia Player
Test Model:	HT-S055
Tested Date:	2025-03-26 to 2025-04-27
Issued Date:	2025-04-29

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2BOF7-HT-S055

Product Name:	Car Multimedia Player
Trademark:	N/A
Model/Type reference:	HT-S055 HT-S056, HT-S057, HT-S058
Prepared For:	Shenzhen Ouke Lianchuang Network Technology Co., Ltd
Address:	Room 605, Building A2, Tianrui Industrial Park, No.35, Fuyuan 1st Road, Zhancheng Community, Fuhai Sub - street, Bao'an District, Shenzhen City
Manufacturer:	Shenzhen Xinshenghua Electronic Technology Co., Ltd
Address:	602, Building A2, Tianrui Industrial Park, No. 35, Fuyuan 1st Road, Zhancheng Community, Fuhai Street, Bao'an District, Shenzhen
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2025-03-26
Sample tested Date:	2025-03-26 to 2025-04-27
Issue Date:	2025-04-29
Report No.:	BCTC2503327806-4E
Test Standards:	FCC Part15 15.407 ANSI C63.10-2013 KDB 789033 D02 v02r01
Test Results:	PASS

Tested by:

Brave Zeng/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2503327806-4E	2025-04-29	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	N/A
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

Note: “N/A” means not applicable in this report.

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission(150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

4. Product Information And Test Setup

4.1 Product Information

Model/Type reference:	HT-S055 HT-S056, HT-S057, HT-S058
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported	802.11a/n/ac(20MHz channel bandwidth) 802.11n/ac(40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20); 5190-5230MHz for 802.11n(HT40); 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n(HT20); 5755-5795 MHz for 802.11n(HT40); 5775MHz for 802.11 ac80;
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac;
Number Of Channel	4 channels for 802.11a/n20 in the 5180-5240MHz band ; 2 channels for 802.11 n40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band
Antenna installation:	Internal antenna
Antenna Gain:	5.1G WIFI:2.51 dBi 5.8G WIFI:2.66 dBi Remark: ☐ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information. ☒ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
Ratings:	DC 12V

4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Car Multimedia Player	N/A	HT-S055	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0M	DC cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

5.1G

802.11a/n/ac (20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	-	-	-	-
40	5200	48	5240	-	-	-	-

802.11n /ac(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	-	-	-	-
46	5230	-	-	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel	
Channel	Frequency (MHz)
42	5210

5.8G

802.11a/n/ac(20 MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11n/ac 40MHz Carrier Frequency Channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-

802.11ac 80MHz Carrier Frequency Channel	
Channel	Frequency (MHz)
155	5775

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	WIFI Link

Note:
1. The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 Table Of Parameters Of Text Software Setting

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	CMD		
Parameters	DEF	DEF	DEF

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.
FCC Test Firm Registration Number: 712850
A2LA certificate registration number is: CN1212
ISED Registered No.: 23583
ISED CAB identifier: CN0017

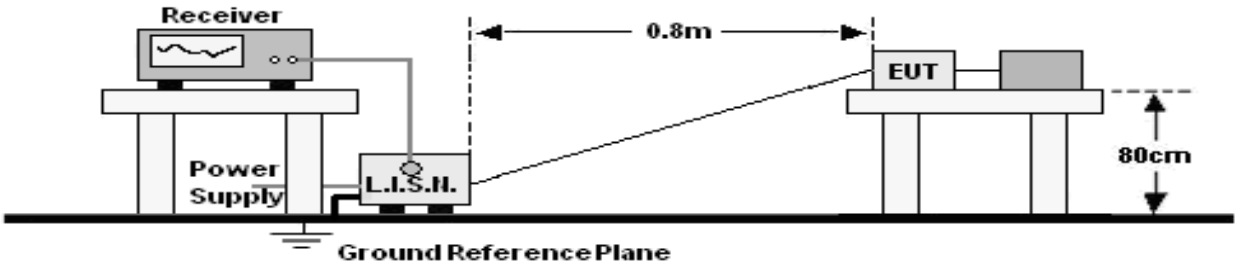
5.2 Test Instrument Used

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power meter	Keysight	E4419	\	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	\	May 16, 2024	May 15, 2025
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Radio frequency control box	MAIWEI	MW100-RFCB	\	\	\
Software	MAIWEI	MTS 8310	\	\	\

Radiated Emissions Test (966 Chamber01)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026
Receiver	R&S	ESR	102075	May 16, 2024	May 15, 2025
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025
Amplifier	SKET	LAPA_01G18G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenna(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00
Notes: 1. *Decreasing linearly with logarithm of frequency. 2. The lower limit shall apply at the transition frequencies.		

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

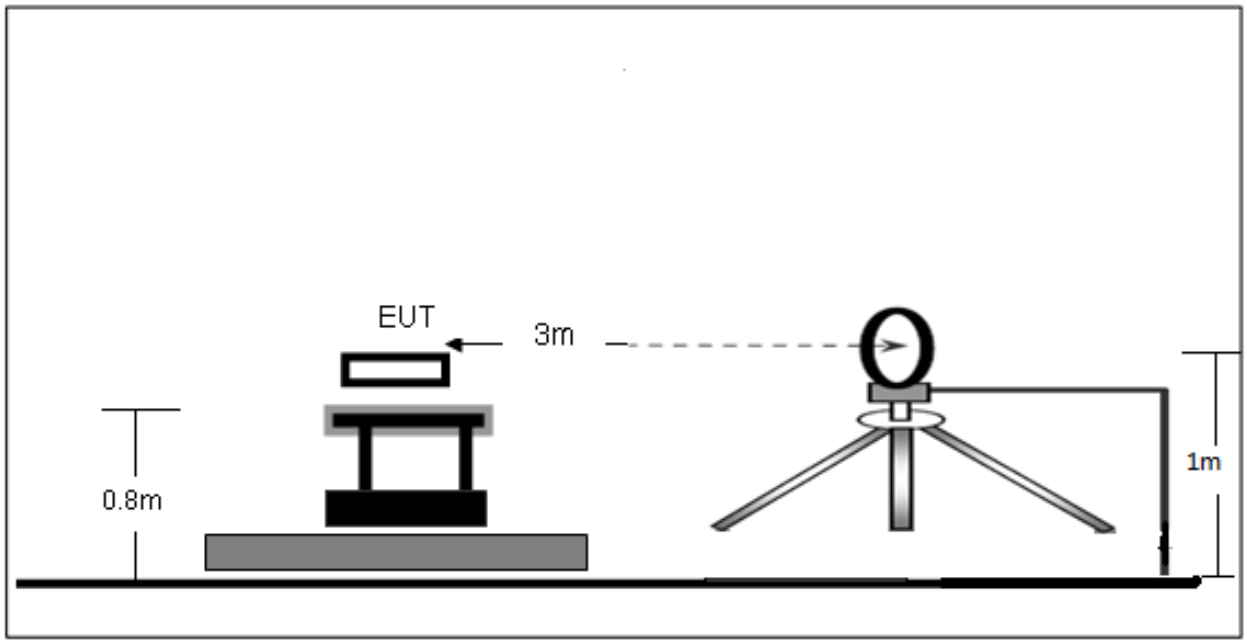
6.5 Test Result

The EUT is powered by the DC only, the test item is not applicable.

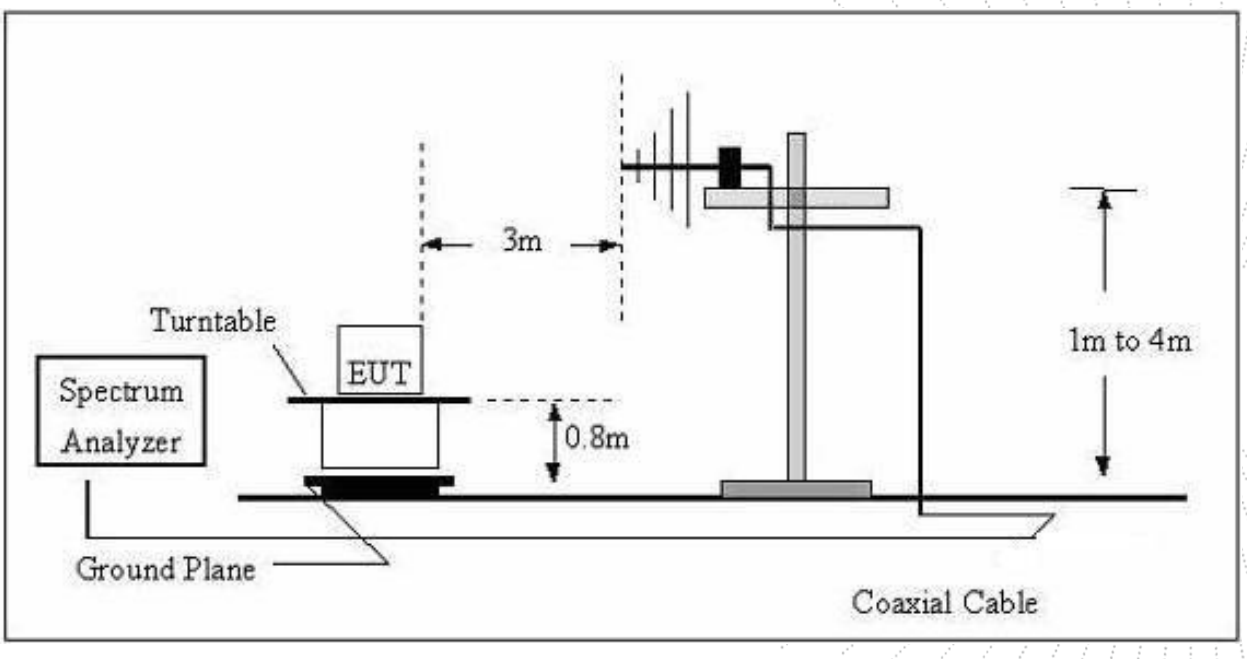
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

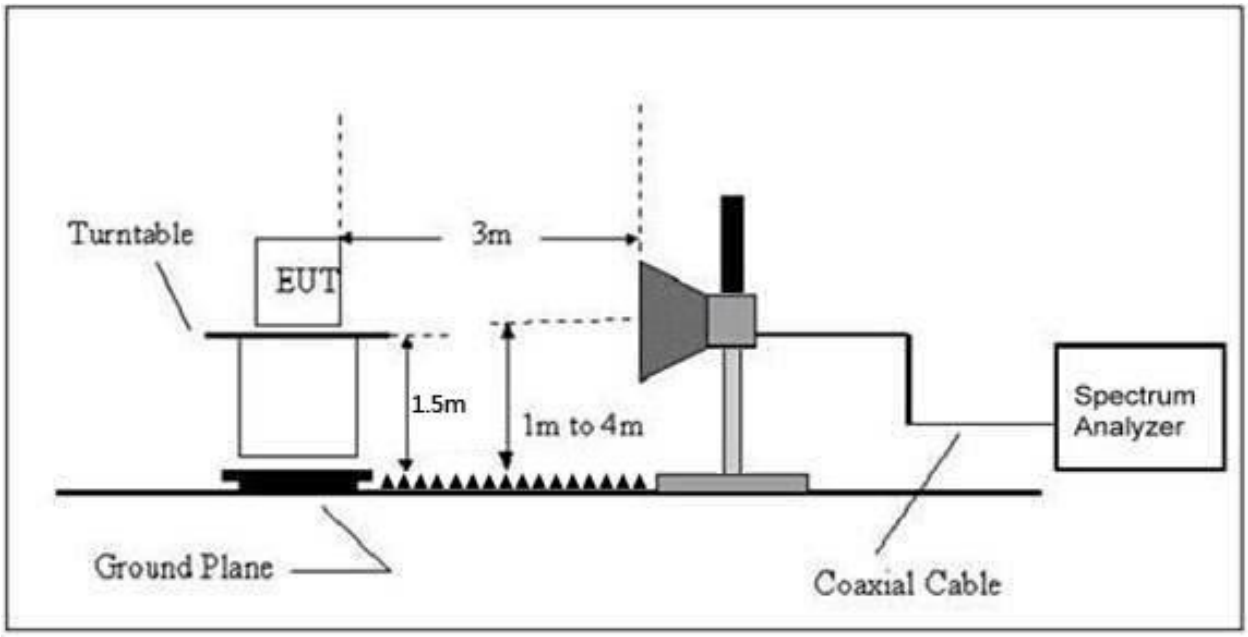
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:
(1) The limit for radiated test was performed according to FCC PART 15C.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.
This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT.
Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

7.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.5 Test Result

Below 30MHz

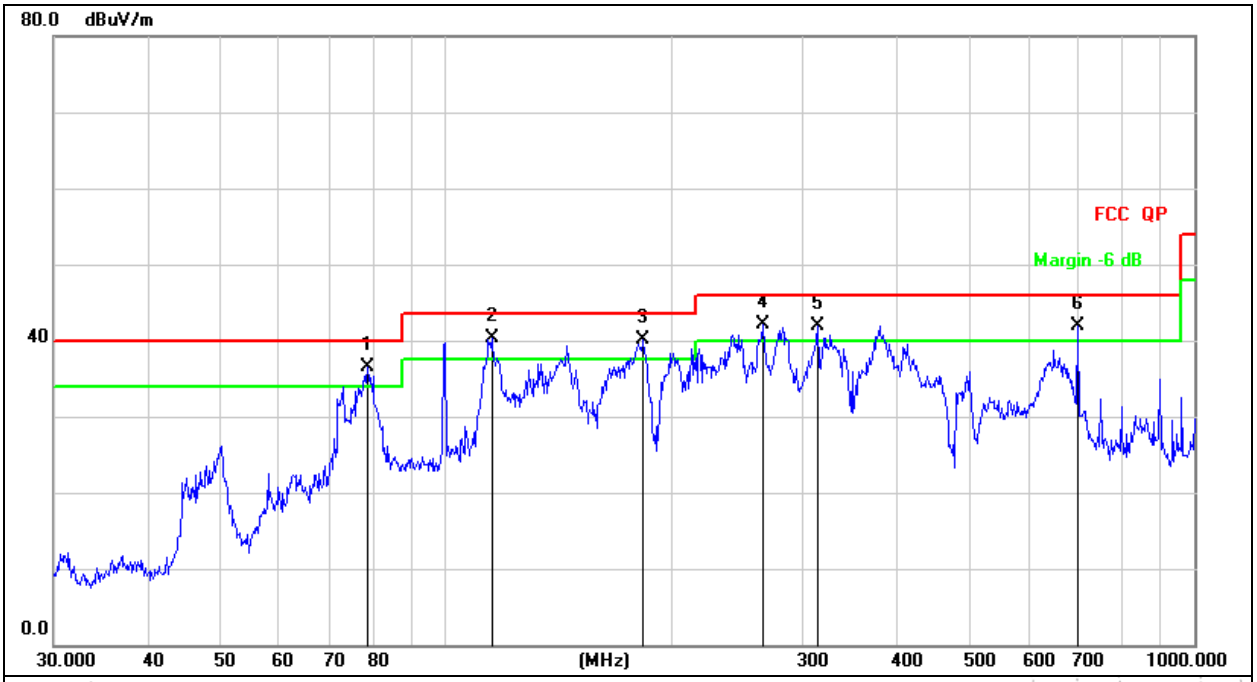
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	DC 12V
Test Mode:	Mode 4	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Between 30MHz – 1GHz

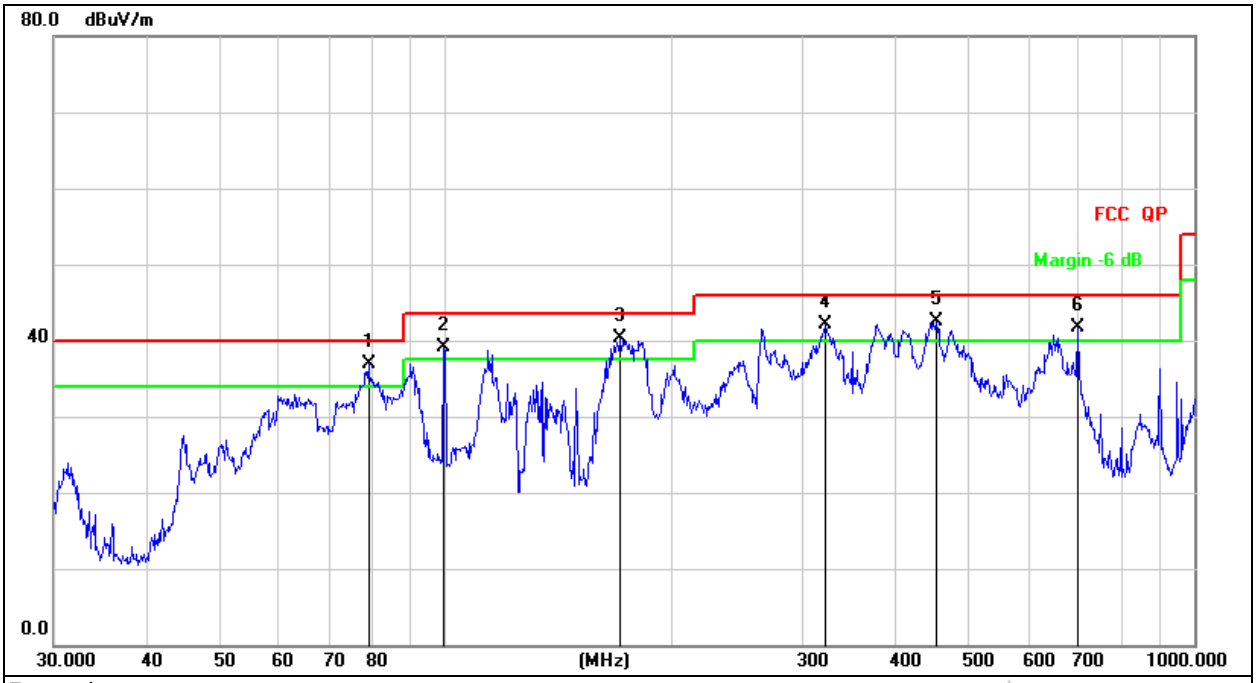
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 4	Test Voltage :	DC 12V



Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over=Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	78.6888	56.05	-19.52	36.53	40.00	-3.47	QP
2	*	115.3204	57.22	-17.00	40.22	43.50	-3.28	QP
3	!	183.8439	57.02	-16.92	40.10	43.50	-3.40	QP
4	!	265.6757	56.14	-13.96	42.18	46.00	-3.82	QP
5	!	314.3765	54.66	-12.73	41.93	46.00	-4.07	QP
6	!	699.3046	47.56	-5.72	41.84	46.00	-4.16	QP

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 4	Test Voltage :	DC 12V



Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	78.9651	56.44	-19.57	36.87	40.00	-3.13	QP
2	!	99.5279	55.10	-16.00	39.10	43.50	-4.40	QP
3	!	171.3925	58.14	-17.84	40.30	43.50	-3.20	QP
4	!	322.1886	54.54	-12.46	42.08	46.00	-3.92	QP
5	!	452.7196	52.32	-9.79	42.53	46.00	-3.47	QP
6	!	699.3046	47.47	-5.72	41.75	46.00	-4.25	QP

Between 1GHz – 40GHz

Test Mode:	TX(5.1G) - 802.11a

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.160	74.87	-20.73	54.14	68.2	-14.06	PK
Vertical	4434.160	59.41	-20.73	38.68	54	-15.32	AV
Vertical	10360.106	64.42	-9.36	55.06	68.2	-13.14	PK
Vertical	10360.106	49.89	-9.36	40.53	54	-13.47	AV
Vertical	15540.135	64.74	-7.84	56.90	74	-17.10	PK
Vertical	15540.135	49.07	-7.84	41.23	54	-12.77	AV
Horizontal	4434.108	72.18	-20.73	51.45	68.2	-16.75	PK
Horizontal	4434.108	59.91	-20.73	39.18	54	-14.82	AV
Horizontal	10360.047	61.11	-9.36	51.75	68.2	-16.45	PK
Horizontal	10360.047	49.09	-9.36	39.73	54	-14.27	AV
Horizontal	15540.116	60.99	-7.84	53.15	74	-20.85	PK
Horizontal	15540.116	49.68	-7.84	41.84	54	-12.16	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.018	73.44	-20.42	53.02	74	-20.98	PK
Vertical	4592.018	59.43	-20.42	39.01	54	-14.99	AV
Vertical	10400.124	64.31	-9.30	55.01	68.2	-13.19	PK
Vertical	10400.124	49.95	-9.30	40.65	54	-13.35	AV
Vertical	15600.071	62.75	-7.82	54.93	74	-19.07	PK
Vertical	15600.071	49.88	-7.82	42.06	54	-11.94	AV
Horizontal	4592.020	70.02	-20.42	49.60	74	-24.40	PK
Horizontal	4592.020	59.10	-20.42	38.68	54	-15.32	AV
Horizontal	10400.012	62.25	-9.30	52.95	68.2	-15.25	PK
Horizontal	10400.012	49.41	-9.30	40.11	54	-13.89	AV
Horizontal	15600.073	63.29	-7.82	55.47	74	-18.53	PK
Horizontal	15600.073	49.71	-7.82	41.89	54	-12.11	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.003	73.74	-20.12	53.62	74	-20.38	PK
Vertical	4739.003	59.47	-20.12	39.35	54	-14.65	AV
Vertical	10480.054	60.97	-9.18	51.79	68.2	-16.41	PK
Vertical	10480.054	49.30	-9.18	40.12	54	-13.88	AV
Vertical	15720.064	63.43	-7.78	55.65	74	-18.35	PK
Vertical	15720.064	49.47	-7.78	41.69	54	-12.31	AV
Horizontal	4739.085	71.64	-20.12	51.52	74	-22.48	PK
Horizontal	4739.085	59.24	-20.12	39.12	54	-14.88	AV
Horizontal	10480.084	61.57	-9.18	52.39	68.2	-15.81	PK
Horizontal	10480.084	49.36	-9.18	40.18	54	-13.82	AV
Horizontal	15720.171	62.33	-7.78	54.55	74	-19.45	PK
Horizontal	15720.171	49.27	-7.78	41.49	54	-12.51	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT20

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.129	72.37	-20.73	51.64	68.2	-16.56	PK
Vertical	4434.129	59.59	-20.73	38.86	54	-15.14	AV
Vertical	10360.114	64.35	-9.36	54.99	68.2	-13.21	PK
Vertical	10360.114	49.10	-9.36	39.74	54	-14.26	AV
Vertical	15540.068	63.90	-7.84	56.06	74	-17.94	PK
Vertical	15540.068	49.61	-7.84	41.77	54	-12.23	AV
Horizontal	4434.071	72.29	-20.73	51.56	68.2	-16.64	PK
Horizontal	4434.071	59.76	-20.73	39.03	54	-14.97	AV
Horizontal	10360.099	60.05	-9.36	50.69	68.2	-17.51	PK
Horizontal	10360.099	50.00	-9.36	40.64	54	-13.36	AV
Horizontal	15540.080	64.88	-7.84	57.04	74	-16.96	PK
Horizontal	15540.080	49.00	-7.84	41.16	54	-12.84	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.146	71.11	-20.42	50.69	74	-23.31	PK
Vertical	4592.146	59.65	-20.42	39.24	54	-14.76	AV
Vertical	10400.118	61.01	-9.30	51.71	68.2	-16.49	PK
Vertical	10400.118	49.17	-9.30	39.87	54	-14.13	AV
Vertical	15600.189	61.96	-7.82	54.14	74	-19.86	PK
Vertical	15600.189	49.26	-7.82	41.44	54	-12.56	AV
Horizontal	4592.188	71.75	-20.42	51.33	74	-22.67	PK
Horizontal	4592.188	59.53	-20.42	39.12	54	-14.88	AV
Horizontal	10400.184	64.74	-9.30	55.44	68.2	-12.76	PK
Horizontal	10400.184	49.28	-9.30	39.98	54	-14.02	AV
Horizontal	15600.144	61.88	-7.82	54.06	74	-19.94	PK
Horizontal	15600.144	49.21	-7.82	41.39	54	-12.61	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.057	74.25	-20.12	54.13	74	-19.87	PK
Vertical	4739.057	59.73	-20.12	39.61	54	-14.39	AV
Vertical	10480.190	61.41	-9.18	52.23	68.2	-15.97	PK
Vertical	10480.190	49.08	-9.18	39.90	54	-14.10	AV
Vertical	15720.015	61.47	-7.78	53.69	74	-20.31	PK
Vertical	15720.015	49.26	-7.78	41.48	54	-12.52	AV
Horizontal	4739.028	71.69	-20.12	51.57	74	-22.43	PK
Horizontal	4739.028	59.67	-20.12	39.55	54	-14.45	AV
Horizontal	10480.176	60.08	-9.18	50.90	68.2	-17.30	PK
Horizontal	10480.176	49.80	-9.18	40.62	54	-13.38	AV
Horizontal	15720.175	63.60	-7.78	55.82	74	-18.18	PK
Horizontal	15720.175	49.95	-7.78	42.17	54	-11.83	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT40

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.023	73.56	-20.73	52.83	68.2	-15.37	PK
Vertical	4434.023	59.45	-20.73	38.72	54	-15.28	AV
Vertical	10380.131	63.26	-9.33	53.93	68.2	-14.27	PK
Vertical	10380.131	49.44	-9.33	40.11	54	-13.89	AV
Vertical	15570.122	62.41	-7.83	54.58	74	-19.42	PK
Vertical	15570.122	49.98	-7.83	42.15	54	-11.85	AV
Horizontal	4434.104	73.55	-20.73	52.82	74	-21.18	PK
Horizontal	4434.104	59.91	-20.73	39.18	54	-14.82	AV
Horizontal	10380.075	63.92	-9.33	54.59	68.2	-13.61	PK
Horizontal	10380.075	49.25	-9.33	39.92	54	-14.08	AV
Horizontal	15570.131	63.82	-7.83	55.99	74	-18.01	PK
Horizontal	15570.131	49.17	-7.83	41.34	54	-12.66	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.008	73.54	-20.12	53.42	68.2	-14.78	PK
Vertical	4739.008	59.66	-20.12	39.54	54	-14.46	AV
Vertical	10460.080	61.64	-9.21	52.43	68.2	-15.77	PK
Vertical	10460.080	49.43	-9.21	40.22	54	-13.78	AV
Vertical	15690.197	64.87	-7.79	57.08	74	-16.92	PK
Vertical	15690.197	49.01	-7.79	41.22	54	-12.78	AV
Horizontal	4739.196	72.07	-20.12	51.95	68.2	-16.25	PK
Horizontal	4739.196	59.25	-20.12	39.13	54	-14.87	AV
Horizontal	10460.200	62.41	-9.21	53.20	68.2	-15.00	PK
Horizontal	10460.200	49.34	-9.21	40.13	54	-13.87	AV
Horizontal	15690.119	61.27	-7.79	53.48	74	-20.52	PK
Horizontal	15690.119	49.09	-7.79	41.30	54	-12.70	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac-HT20

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.014	73.24	-20.73	52.51	68.2	-15.69	PK
Vertical	4434.014	59.29	-20.73	38.56	54	-15.44	AV
Vertical	10360.135	62.11	-9.36	52.75	68.2	-15.45	PK
Vertical	10360.135	49.06	-9.36	39.70	54	-14.30	AV
Vertical	15540.194	62.66	-7.84	54.82	74	-19.18	PK
Vertical	15540.194	49.91	-7.84	42.07	54	-11.93	AV
Horizontal	4434.154	72.97	-20.73	52.24	68.2	-15.96	PK
Horizontal	4434.154	59.24	-20.73	38.51	54	-15.49	AV
Horizontal	10360.059	64.76	-9.36	55.40	68.2	-12.80	PK
Horizontal	10360.059	49.74	-9.36	40.38	54	-13.62	AV
Horizontal	15540.031	60.10	-7.84	52.26	74	-21.74	PK
Horizontal	15540.031	49.77	-7.84	41.93	54	-12.07	AV
Middle Channel (5200 MHz)-Above 1G							
Vertical	4592.050	74.68	-20.42	54.26	74	-19.74	PK
Vertical	4592.050	59.26	-20.42	38.84	54	-15.16	AV
Vertical	10400.124	60.10	-9.30	50.80	68.2	-17.40	PK
Vertical	10400.124	49.92	-9.30	40.62	54	-13.38	AV
Vertical	15600.100	61.61	-7.82	53.79	74	-20.21	PK
Vertical	15600.100	49.40	-7.82	41.58	54	-12.42	AV
Horizontal	4592.055	74.58	-20.42	54.16	74	-19.84	PK
Horizontal	4592.055	59.29	-20.42	38.87	54	-15.13	AV
Horizontal	10400.141	62.68	-9.30	53.38	68.2	-14.82	PK
Horizontal	10400.141	49.06	-9.30	39.76	54	-14.24	AV
Horizontal	15600.010	63.33	-7.82	55.51	74	-18.49	PK
Horizontal	15600.010	49.28	-7.82	41.46	54	-12.54	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.015	70.19	-20.12	50.07	74	-23.93	PK
Vertical	4739.015	59.72	-20.12	39.60	54	-14.40	AV
Vertical	10480.076	64.39	-9.18	55.21	68.2	-12.99	PK
Vertical	10480.076	49.80	-9.18	40.62	54	-13.38	AV
Vertical	15720.064	61.39	-7.78	53.61	74	-20.39	PK
Vertical	15720.064	49.36	-7.78	41.58	54	-12.42	AV
Horizontal	4739.144	74.84	-20.12	54.71	74	-19.29	PK
Horizontal	4739.144	59.25	-20.12	39.12	54	-14.88	AV
Horizontal	10480.148	62.38	-9.18	53.20	68.2	-15.00	PK
Horizontal	10480.148	49.21	-9.18	40.03	54	-13.97	AV
Horizontal	15720.150	63.70	-7.78	55.92	74	-18.08	PK
Horizontal	15720.150	49.44	-7.78	41.66	54	-12.34	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.025	74.78	-20.73	54.04	68.2	-14.16	PK
Vertical	4434.025	59.94	-20.73	39.21	54	-14.79	AV
Vertical	10380.185	62.28	-9.33	52.95	68.2	-15.25	PK
Vertical	10380.185	49.59	-9.33	40.26	54	-13.74	AV
Vertical	15570.131	63.03	-7.83	55.20	74	-18.80	PK
Vertical	15570.131	49.53	-7.83	41.70	54	-12.30	AV
Horizontal	4434.152	73.04	-20.73	52.31	74	-21.69	PK
Horizontal	4434.152	59.91	-20.73	39.18	54	-14.82	AV
Horizontal	10380.135	64.65	-9.33	55.32	68.2	-12.88	PK
Horizontal	10380.135	49.99	-9.33	40.66	54	-13.34	AV
Horizontal	15570.139	64.51	-7.83	56.68	74	-17.32	PK
Horizontal	15570.139	49.32	-7.83	41.49	54	-12.51	AV
Middle Channel (5230 MHz)-Above 1G							
Vertical	4739.072	70.92	-20.12	50.80	68.2	-17.40	PK
Vertical	4739.072	59.32	-20.12	39.20	54	-14.80	AV
Vertical	10460.083	62.57	-9.21	53.36	68.2	-14.84	PK
Vertical	10460.083	49.62	-9.21	40.41	54	-13.59	AV
Vertical	15690.173	64.22	-7.79	56.43	74	-17.57	PK
Vertical	15690.173	49.26	-7.79	41.47	54	-12.53	AV
Horizontal	4739.098	73.25	-20.12	53.13	68.2	-15.07	PK
Horizontal	4739.098	59.52	-20.12	39.40	54	-14.60	AV
Horizontal	10460.078	64.39	-9.21	55.18	68.2	-13.02	PK
Horizontal	10460.078	49.91	-9.21	40.70	54	-13.30	AV
Horizontal	15690.045	60.19	-7.79	52.40	74	-21.60	PK
Horizontal	15690.045	49.20	-7.79	41.41	54	-12.59	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11ac 80

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5210 MHz)-Above 1G							
Vertical	4434.118	72.50	-20.73	51.77	68.2	-16.43	PK
Vertical	4434.118	59.61	-20.73	38.88	54	-15.12	AV
Vertical	10420.167	60.66	-9.27	51.39	68.2	-16.81	PK
Vertical	10420.167	49.38	-9.27	40.11	54	-13.89	AV
Vertical	15630.136	61.68	-7.81	53.87	74	-20.13	PK
Vertical	15630.136	49.37	-7.81	41.56	54	-12.44	AV
Horizontal	4434.045	74.01	-20.73	53.28	68.2	-14.92	PK
Horizontal	4434.045	59.16	-20.73	38.42	54	-15.58	AV
Horizontal	10420.190	40.34	9.27	49.61	68.2	-18.59	PK
Horizontal	10420.190	29.63	9.27	38.90	54	-15.10	AV
Horizontal	15630.130	61.25	-7.81	53.44	74	-20.56	PK
Horizontal	15630.130	49.25	-7.81	41.44	54	-12.56	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX (5.8G) -- 802.11a

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.197	75.00	-20.24	54.76	74	-19.24	PK
Vertical	4679.197	59.29	-20.24	39.04	54	-14.96	AV
Vertical	11490.088	62.75	-8.79	53.96	68.2	-14.24	PK
Vertical	11490.088	49.10	-8.79	40.31	54	-13.69	AV
Vertical	17235.171	56.39	-3.18	53.21	68.2	-14.99	PK
Vertical	17235.171	44.85	-3.18	41.67	54	-12.33	AV
Horizontal	4679.159	72.76	-20.73	52.03	74	-21.97	PK
Horizontal	4679.159	59.88	-20.73	39.15	54	-14.85	AV
Horizontal	11490.016	61.12	-8.79	52.33	68.2	-15.87	PK
Horizontal	11490.016	49.40	-8.79	40.61	54	-13.39	AV
Horizontal	17235.138	57.08	-3.18	53.90	68.2	-14.30	PK
Horizontal	17235.138	44.59	-3.18	41.41	54	-12.59	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.113	71.53	-20.42	51.11	74	-22.89	PK
Vertical	4592.113	59.74	-20.42	39.32	54	-14.68	AV
Vertical	11570.136	61.44	-8.86	52.58	68.2	-15.62	PK
Vertical	11570.136	49.17	-8.86	40.31	54	-13.69	AV
Vertical	17355.082	58.76	-2.52	56.24	68.2	-11.96	PK
Vertical	17355.082	44.90	-2.52	42.38	54	-11.62	AV
Horizontal	4592.167	73.10	-20.42	52.68	74	-21.32	PK
Horizontal	4592.167	59.09	-20.42	38.68	54	-15.32	AV
Horizontal	11570.016	63.05	-8.86	54.19	68.2	-14.01	PK
Horizontal	11570.016	49.60	-8.86	40.74	54	-13.26	AV
Horizontal	17355.126	58.56	-2.52	56.04	68.2	-12.16	PK
Horizontal	17355.126	44.37	-2.52	41.85	54	-12.15	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.052	71.49	-18.93	52.56	68.2	-15.64	PK
Vertical	6039.052	59.04	-18.93	40.10	54	-13.90	AV
Vertical	11650.089	64.32	-8.92	55.40	74	-18.60	PK
Vertical	11650.089	49.36	-8.92	40.44	54	-13.56	AV
Vertical	17475.197	55.69	-1.86	53.83	68.2	-14.37	PK
Vertical	17475.197	44.52	-1.86	42.66	54	-11.34	AV
Horizontal	6039.055	73.45	-18.93	54.52	68.2	-13.68	PK
Horizontal	6039.055	59.21	-18.93	40.28	54	-13.72	AV
Horizontal	11650.174	60.13	-8.92	51.21	74	-22.79	PK
Horizontal	11650.174	49.48	-8.92	40.56	54	-13.44	AV
Horizontal	17475.128	55.23	-1.86	53.37	68.2	-14.83	PK
Horizontal	17475.128	44.97	-1.86	43.11	54	-10.89	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX (5.8G) --802.11n-HT20

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.018	74.18	-20.24	53.94	74	-20.06	PK
Vertical	4679.018	59.02	-20.24	38.78	54	-15.22	AV
Vertical	11490.004	62.17	-8.79	53.38	68.2	-14.82	PK
Vertical	11490.004	50.00	-8.79	41.21	54	-12.79	AV
Vertical	17235.116	55.83	-3.18	52.65	68.2	-15.55	PK
Vertical	17235.116	44.87	-3.18	41.69	54	-12.31	AV
Horizontal	4679.170	74.59	-20.24	54.35	74	-19.65	PK
Horizontal	4679.170	59.14	-20.24	38.90	54	-15.10	AV
Horizontal	11490.060	64.50	-8.79	55.71	68.2	-12.49	PK
Horizontal	11490.060	49.10	-8.79	40.31	54	-13.69	AV
Horizontal	17235.004	58.63	-3.18	55.45	68.2	-12.75	PK
Horizontal	17235.004	44.96	-3.18	41.78	54	-12.22	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.143	70.01	-20.42	49.59	74	-24.41	PK
Vertical	4592.143	59.68	-20.42	39.26	54	-14.74	AV
Vertical	11570.006	63.96	-8.86	55.10	68.2	-13.10	PK
Vertical	11570.006	49.39	-8.86	40.53	54	-13.47	AV
Vertical	17355.021	59.41	-2.52	56.89	68.2	-11.31	PK
Vertical	17355.021	44.61	-2.52	42.09	54	-11.91	AV
Horizontal	4592.175	71.75	-20.42	51.34	74	-22.66	PK
Horizontal	4592.175	59.79	-20.42	39.38	54	-14.62	AV
Horizontal	11570.025	61.08	-8.86	52.22	68.2	-15.98	PK
Horizontal	11570.025	49.60	-8.86	40.74	54	-13.26	AV
Horizontal	17355.196	56.35	-2.52	53.83	68.2	-14.37	PK
Horizontal	17355.196	44.49	-2.52	41.97	54	-12.03	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.100	74.67	-18.93	55.74	68.2	-12.46	PK
Vertical	6039.100	59.83	-18.93	40.89	54	-13.11	AV
Vertical	11650.174	62.08	-8.92	53.16	74	-20.84	PK
Vertical	11650.174	49.05	-8.92	40.13	54	-13.87	AV
Vertical	17475.062	55.15	-1.86	53.29	68.2	-14.91	PK
Vertical	17475.062	44.51	-1.86	42.65	54	-11.35	AV
Horizontal	6039.012	71.98	-18.93	53.05	68.2	-15.15	PK
Horizontal	6039.012	59.42	-18.93	40.49	54	-13.51	AV
Horizontal	11650.107	63.74	-8.92	54.82	74	-19.18	PK
Horizontal	11650.107	49.87	-8.92	40.95	54	-13.05	AV
Horizontal	17475.017	56.50	-1.86	54.64	68.2	-13.56	PK
Horizontal	17475.017	44.43	-1.86	42.57	54	-11.43	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX (5.8G) -- 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.026	71.06	-20.24	50.82	74	-23.18	PK
Vertical	4679.026	59.20	-20.24	38.96	54	-15.04	AV
Vertical	11510.191	61.41	-8.81	52.60	74	-21.40	PK
Vertical	11510.191	49.38	-8.81	40.57	54	-13.43	AV
Vertical	17265.043	55.91	-3.01	52.90	68.2	-15.30	PK
Vertical	17265.043	44.57	-3.01	41.56	54	-12.44	AV
Horizontal	4679.092	72.66	-20.24	52.42	74	-21.58	PK
Horizontal	4679.092	59.50	-20.24	39.26	54	-14.74	AV
Horizontal	11510.113	61.00	-8.81	52.19	74	-21.81	PK
Horizontal	11510.113	49.62	-8.81	40.81	54	-13.19	AV
Horizontal	17265.192	57.86	-3.01	54.85	68.2	-13.35	PK
Horizontal	17265.192	44.97	-3.01	41.96	54	-12.04	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.119	71.04	-18.93	52.11	68.2	-16.09	PK
Vertical	6039.119	59.10	-18.93	40.16	54	-13.84	AV
Vertical	11590.090	63.40	-8.87	54.53	74	-19.47	PK
Vertical	11590.090	49.37	-8.87	40.50	54	-13.50	AV
Vertical	17385.071	59.00	-2.35	56.65	68.2	-11.55	PK
Vertical	17385.071	44.86	-2.35	42.51	54	-11.49	AV
Horizontal	6039.095	74.11	-18.93	55.18	68.2	-13.02	PK
Horizontal	6039.095	59.61	-18.93	40.68	54	-13.32	AV
Horizontal	11590.107	63.62	-8.87	54.75	74	-19.25	PK
Horizontal	11590.107	49.89	-8.87	41.02	54	-12.98	AV
Horizontal	17385.093	57.52	-2.35	55.17	68.2	-13.03	PK
Horizontal	17385.093	44.89	-2.35	42.54	54	-11.46	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX (5.8G) --802.11ac-HT20

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.047	74.50	-20.24	54.26	74	-19.74	PK
Vertical	4679.047	59.76	-20.24	39.51	54	-14.49	AV
Vertical	11490.050	62.41	-8.79	53.62	68.2	-14.58	PK
Vertical	11490.050	49.97	-8.79	41.18	54	-12.82	AV
Vertical	17235.126	56.06	-3.18	52.88	68.2	-15.32	PK
Vertical	17235.126	44.51	-3.18	41.33	54	-12.67	AV
Horizontal	4679.097	70.04	-20.24	49.80	74	-24.20	PK
Horizontal	4679.097	59.83	-20.24	39.58	54	-14.42	AV
Horizontal	11490.075	60.42	-8.79	51.63	68.2	-16.57	PK
Horizontal	11490.075	49.35	-8.79	40.56	54	-13.44	AV
Horizontal	17235.156	55.96	-3.18	52.78	68.2	-15.42	PK
Horizontal	17235.156	44.27	-3.18	41.09	54	-12.91	AV
Middle Channel (5785 MHz)-Above 1G							
Vertical	4592.122	73.62	-20.42	53.21	74	-20.79	PK
Vertical	4592.122	59.44	-20.42	39.02	54	-14.98	AV
Vertical	11570.134	62.48	-8.86	53.62	68.2	-14.58	PK
Vertical	11570.134	49.29	-8.86	40.43	54	-13.57	AV
Vertical	17355.162	55.50	-2.52	52.98	68.2	-15.22	PK
Vertical	17355.162	44.78	-2.52	42.26	54	-11.74	AV
Horizontal	4592.003	72.22	-20.42	51.81	74	-22.19	PK
Horizontal	4592.003	59.74	-20.42	39.33	54	-14.67	AV
Horizontal	11570.137	62.38	-8.86	53.52	68.2	-14.68	PK
Horizontal	11570.137	49.06	-8.86	40.20	54	-13.80	AV
Horizontal	17355.191	57.62	-2.52	55.10	68.2	-13.10	PK
Horizontal	17355.191	44.02	-2.52	41.50	54	-12.50	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.185	72.41	-18.93	53.48	68.2	-14.72	PK
Vertical	6039.185	59.17	-18.93	40.24	54	-13.76	AV
Vertical	11650.117	60.13	-8.92	51.21	74	-22.79	PK
Vertical	11650.117	49.02	-8.92	40.10	54	-13.90	AV
Vertical	17475.107	55.33	-1.86	53.47	68.2	-14.73	PK
Vertical	17475.107	44.33	-1.86	42.47	54	-11.53	AV
Horizontal	6039.073	72.04	-18.93	53.11	68.2	-15.09	PK
Horizontal	6039.073	59.74	-18.93	40.80	54	-13.20	AV
Horizontal	11650.031	62.85	-8.92	53.93	74	-20.07	PK
Horizontal	11650.031	49.19	-8.92	40.27	54	-13.73	AV
Horizontal	17475.176	59.85	-1.86	57.99	68.2	-10.21	PK
Horizontal	17475.176	44.66	-1.86	42.80	54	-11.20	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode :	TX (5.8G) -- 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure-ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.172	70.62	-20.24	50.38	74	-23.62	PK
Vertical	4679.172	59.20	-20.24	38.95	54	-15.05	AV
Vertical	11510.011	64.73	-8.81	55.92	74	-18.08	PK
Vertical	11510.011	49.55	-8.81	40.74	54	-13.26	AV
Vertical	17265.075	57.67	-3.01	54.66	68.2	-13.54	PK
Vertical	17265.075	44.54	-3.01	41.53	54	-12.47	AV
Horizontal	4679.064	74.77	-20.24	54.53	74	-19.47	PK
Horizontal	4679.064	59.13	-20.24	38.89	54	-15.11	AV
Horizontal	11510.068	62.70	-8.81	53.89	74	-20.11	PK
Horizontal	11510.068	49.34	-8.81	40.53	54	-13.47	AV
Horizontal	17265.161	55.22	-3.01	52.21	68.2	-15.99	PK
Horizontal	17265.161	44.29	-3.01	41.28	54	-12.72	AV
Middle Channel (5795 MHz)-Above 1G							
Vertical	6039.168	73.15	-18.93	54.22	68.2	-13.98	PK
Vertical	6039.168	59.39	-18.93	40.46	54	-13.54	AV
Vertical	11590.183	64.35	-8.87	55.48	74	-18.52	PK
Vertical	11590.183	49.98	-8.87	41.11	54	-12.89	AV
Vertical	17385.019	55.77	-2.35	53.42	68.2	-14.78	PK
Vertical	17385.019	44.55	-2.35	42.20	54	-11.80	AV
Horizontal	6039.104	70.20	-18.93	51.27	68.2	-16.93	PK
Horizontal	6039.104	59.43	-18.93	40.50	54	-13.50	AV
Horizontal	11590.063	61.75	-8.87	52.88	74	-21.12	PK
Horizontal	11590.063	49.10	-8.87	40.23	54	-13.77	AV
Horizontal	17385.089	58.37	-2.35	56.02	68.2	-12.18	PK
Horizontal	17385.089	44.54	-2.35	42.19	54	-11.81	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

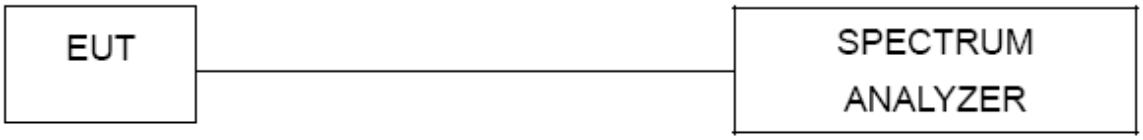
Test Mode :	TX (5.8G) -- 802.11ac 80

Polar	Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5775 MHz)-Above 1G							
Vertical	4679.009	71.28	-20.24	51.04	74	-22.96	PK
Vertical	4679.009	59.31	-20.24	39.06	54	-14.94	AV
Vertical	11550.053	61.53	-8.84	52.69	74	-21.31	PK
Vertical	11550.053	49.11	-8.84	40.27	54	-13.73	AV
Vertical	17325.119	58.19	-2.68	55.51	68.2	-12.69	PK
Vertical	17325.119	44.98	-2.68	42.30	54	-11.70	AV
Horizontal	4679.080	72.79	-20.24	52.54	74	-21.46	PK
Horizontal	4679.080	59.36	-20.24	39.12	54	-14.88	AV
Horizontal	11550.192	63.31	-8.84	54.47	74	-19.53	PK
Horizontal	11550.192	49.00	-8.84	40.16	54	-13.84	AV
Horizontal	17325.114	58.93	-2.68	56.25	68.2	-11.95	PK
Horizontal	17325.114	44.96	-2.68	42.28	54	-11.72	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. 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).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3)For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 Test Procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:
a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

8.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

8.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(U-NII-1) 5180MHz-5240MHz (U-NII-3) 5745MHz-5825MHz		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/1MHz)	Limit (dBm/1MHz)	Verdict
NVNT	a	5180	-1.43	11	Pass
NVNT	a	5200	-2.03	11	Pass
NVNT	a	5240	-1.77	11	Pass
NVNT	n20	5180	-3.86	11	Pass
NVNT	n20	5200	-4.48	11	Pass
NVNT	n20	5240	-5.12	11	Pass
NVNT	n40	5190	-8.83	11	Pass
NVNT	n40	5230	-9.39	11	Pass
NVNT	ac20	5180	-3.85	11	Pass
NVNT	ac20	5200	-4.58	11	Pass
NVNT	ac20	5240	-5.37	11	Pass
NVNT	ac40	5190	-8.51	11	Pass
NVNT	ac40	5230	-9.02	11	Pass
NVNT	ac80	5210	-13.68	11	Pass

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/510KHz)	Conducted PSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
NVNT	a	5745	-4.49	-4.576	30	Pass
NVNT	a	5785	-6.49	-6.576	30	Pass
NVNT	a	5825	-7.55	-7.636	30	Pass
NVNT	n20	5745	-6.29	-6.376	30	Pass
NVNT	n20	5785	-7.52	-7.606	30	Pass
NVNT	n20	5825	-8.88	-8.966	30	Pass
NVNT	n40	5755	-11.07	-11.156	30	Pass
NVNT	n40	5795	-12.51	-12.596	30	Pass
NVNT	ac20	5745	-6.32	-6.406	30	Pass
NVNT	ac20	5785	-7.97	-8.056	30	Pass
NVNT	ac20	5825	-8.75	-8.836	30	Pass
NVNT	ac40	5755	-11.08	-11.166	30	Pass
NVNT	ac40	5795	-12.62	-12.706	30	Pass
NVNT	ac80	5775	-15.45	-15.536	30	Pass
Note: Correction Factor = 10log(500KHz/RBW in measurement) =-0.086						

Test Graphs

PSD NVNT a 5180MHz

PSD NVNT a 5200MHz

PSD NVNT a 5240MHz

PSD NVNT n20 5180MHz

PSD NVNT n20 5200MHz

PSD NVNT n20 5240MHz

PSD NVNT n40 5190MHz

PSD NVNT n40 5230MHz

PSD NVNT ac20 5180MHz

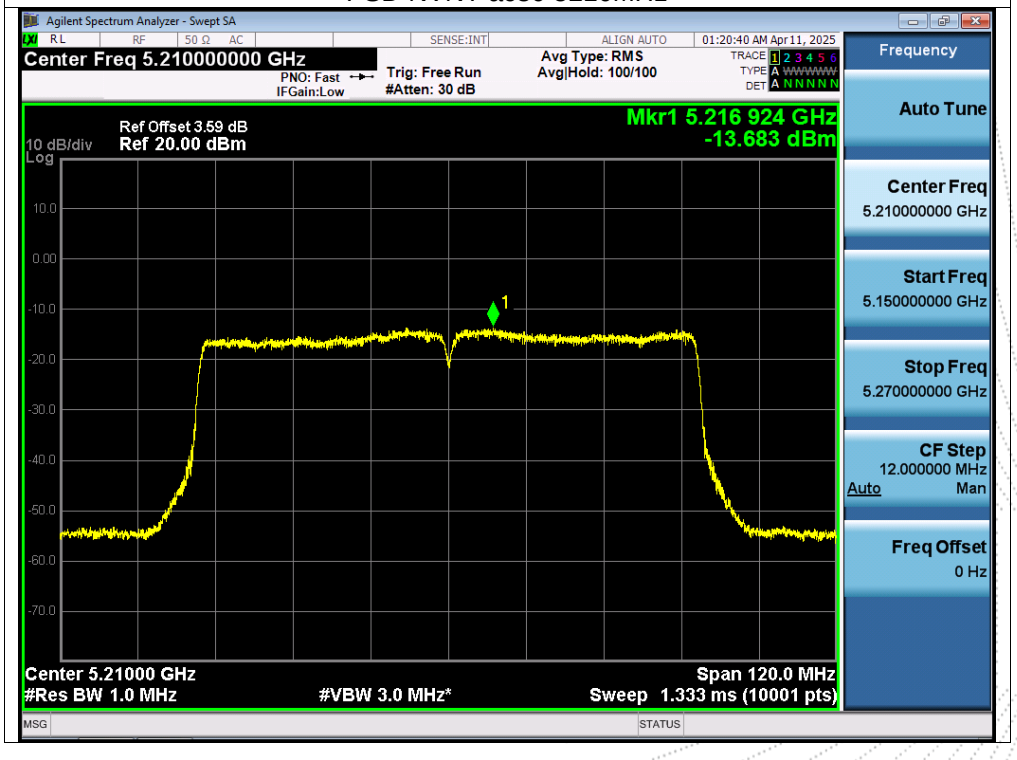
PSD NVNT ac20 5200MHz

PSD NVNT ac20 5240MHz

PSD NVNT ac40 5190MHz

PSD NVNT ac40 5230MHz

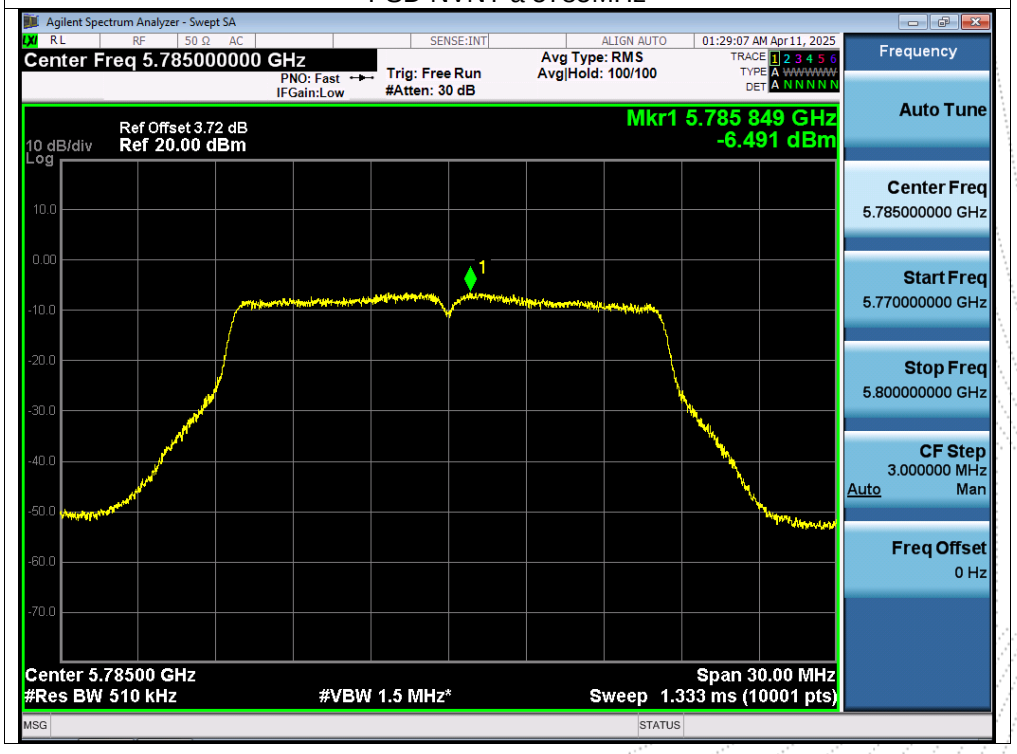
PSD NVNT ac80 5210MHz



Test Graphs

PSD NVNT a 5745MHz

PSD NVNT a 5785MHz



PSD NVNT a 5825MHz

PSD NVNT n20 5745MHz

PSD NVNT n20 5785MHz

PSD NVNT n20 5825MHz

PSD NVNT n40 5755MHz

PSD NVNT n40 5795MHz

PSD NVNT ac20 5745MHz

PSD NVNT ac20 5785MHz

PSD NVNT ac20 5825MHz

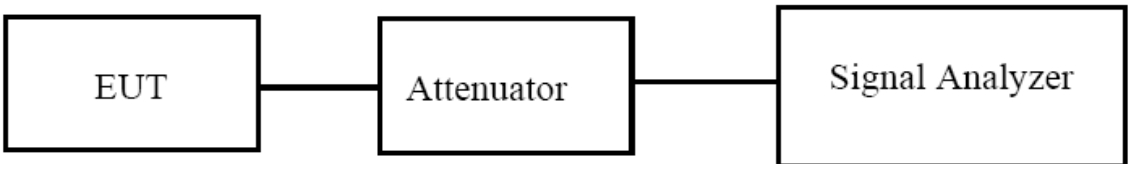
PSD NVNT ac40 5755MHz

PSD NVNT ac40 5795MHz

PSD NVNT ac80 5775MHz

9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power
is integrated over the full reference bandwidth.
(6dB bandwidth)>500kHz

9.3 Test Procedure

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum 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%.

The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

6dB
1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.

6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

9.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

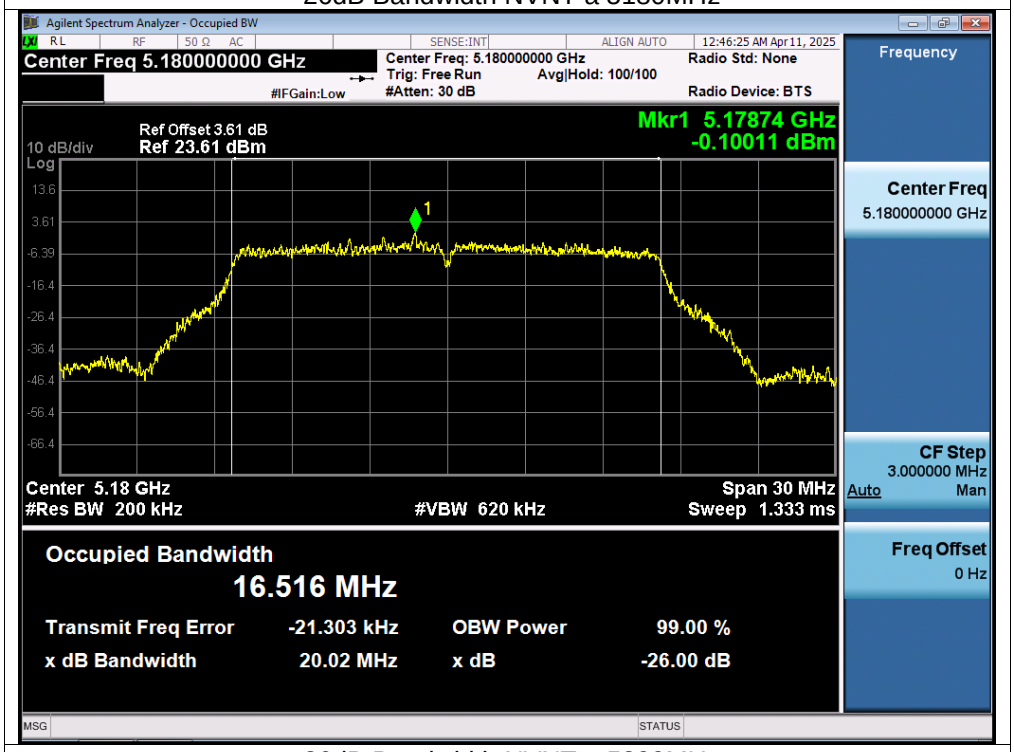
9.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	AC 120V/60Hz
Test Mode:	TX Frequency U-NII-1 (5180-5240MHz)		

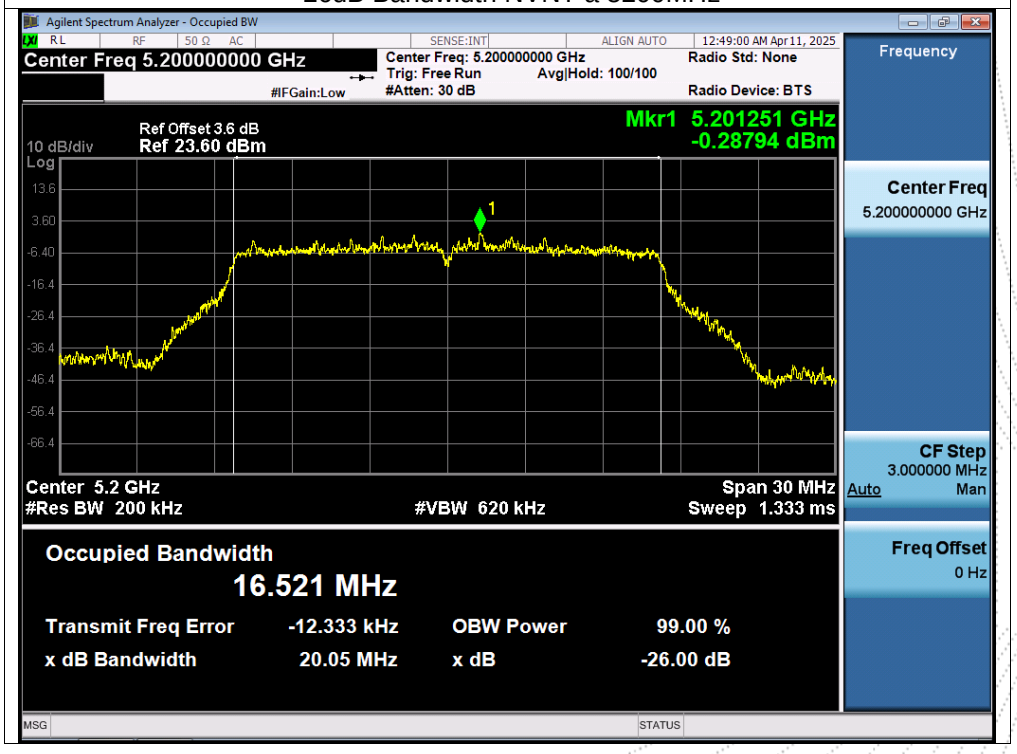
Condition	Mode	Frequency (MHz)	99% bandwidth (MHz)	-26dB bandwidth (MHz)	Result
NVNT	a	5180	16.507	20.022	Pass
NVNT	a	5200	16.494	20.047	Pass
NVNT	a	5240	16.479	19.734	Pass
NVNT	n20	5180	17.639	20.576	Pass
NVNT	n20	5200	17.645	20.405	Pass
NVNT	n20	5240	17.653	20.606	Pass
NVNT	n40	5190	36.183	41.656	Pass
NVNT	n40	5230	36.258	41.096	Pass
NVNT	ac20	5180	17.639	20.691	Pass
NVNT	ac20	5200	17.625	20.34	Pass
NVNT	ac20	5240	17.68	20.629	Pass
NVNT	ac40	5190	36.203	41.397	Pass
NVNT	ac40	5230	36.257	41.483	Pass
NVNT	ac80	5210	75.77	82.634	Pass

Test Graphs

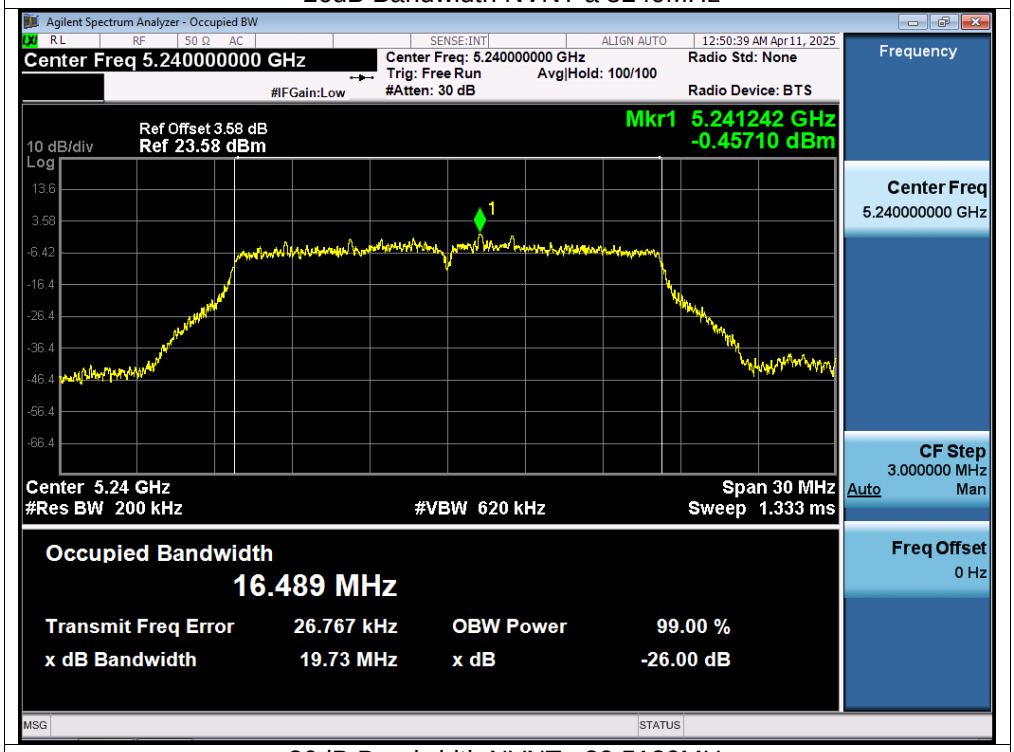
-26dB Bandwidth NVNT a 5180MHz



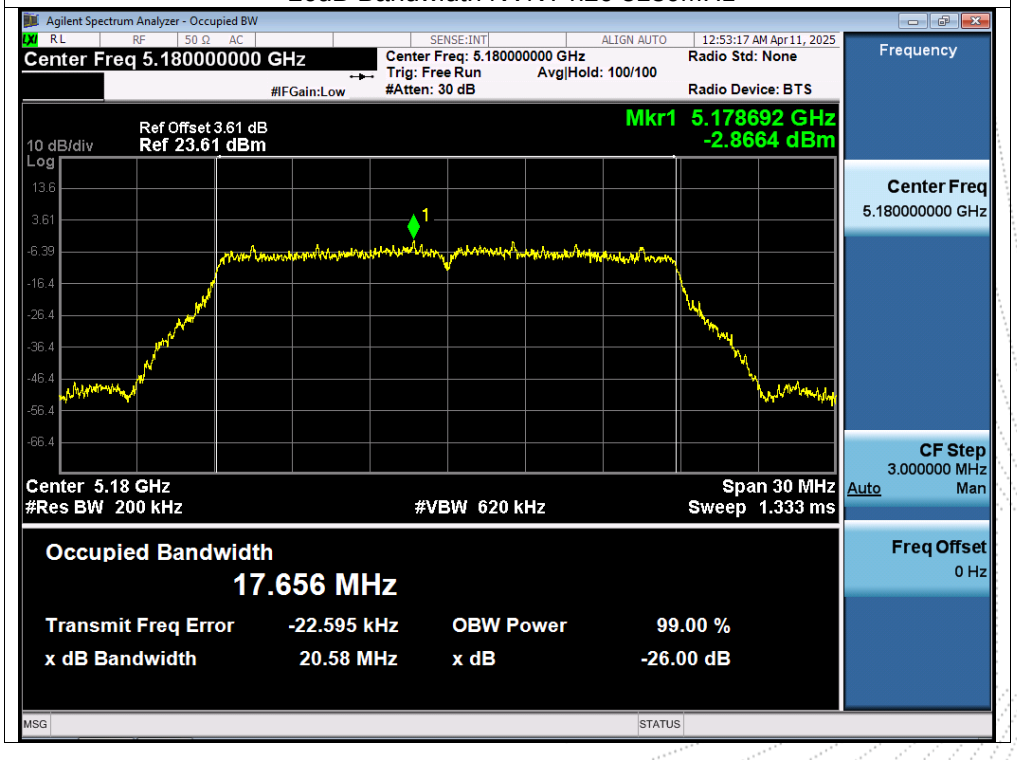
-26dB Bandwidth NVNT a 5200MHz



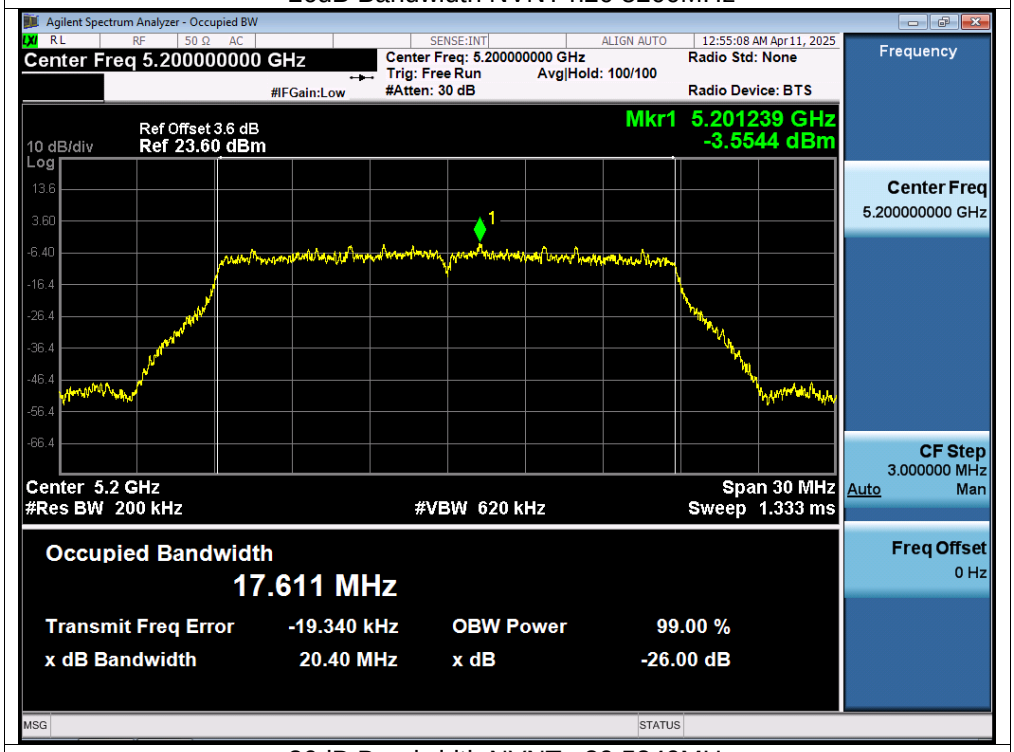
-26dB Bandwidth NVNT a 5240MHz



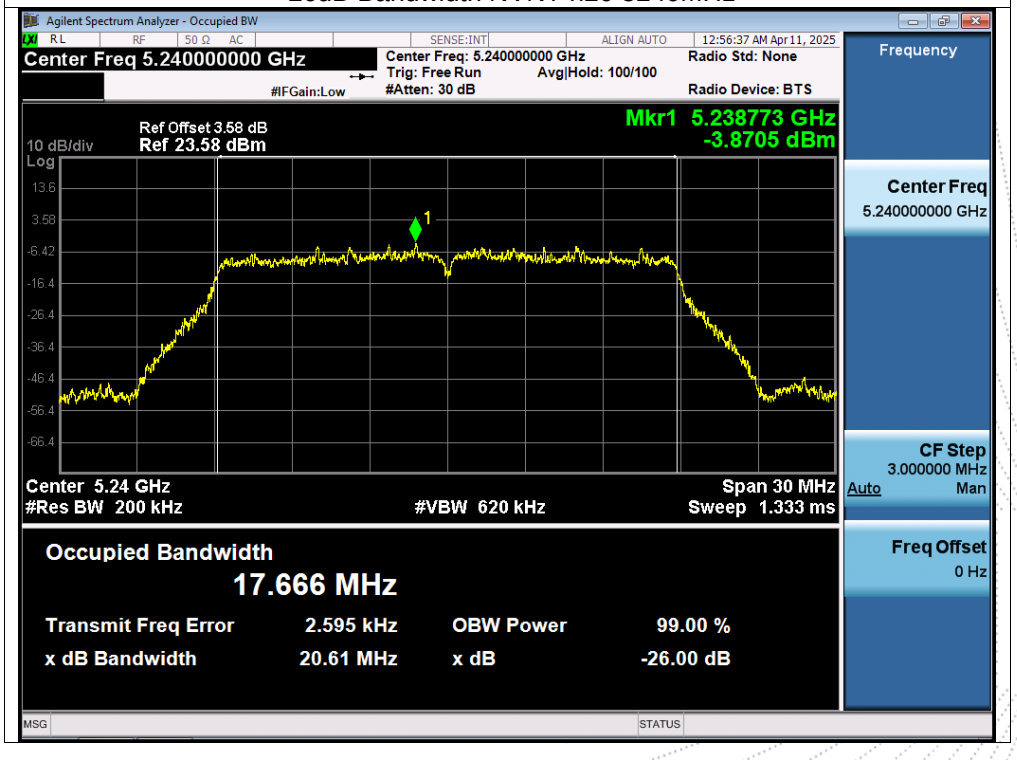
-26dB Bandwidth NVNT n20 5180MHz



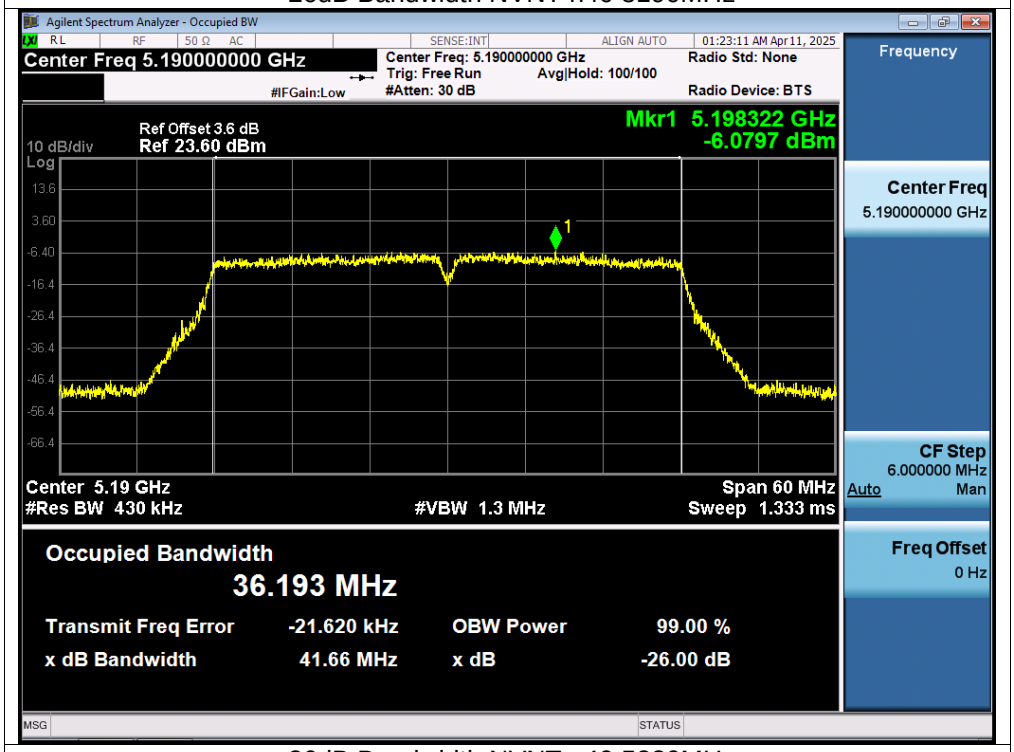
-26dB Bandwidth NVNT n20 5200MHz



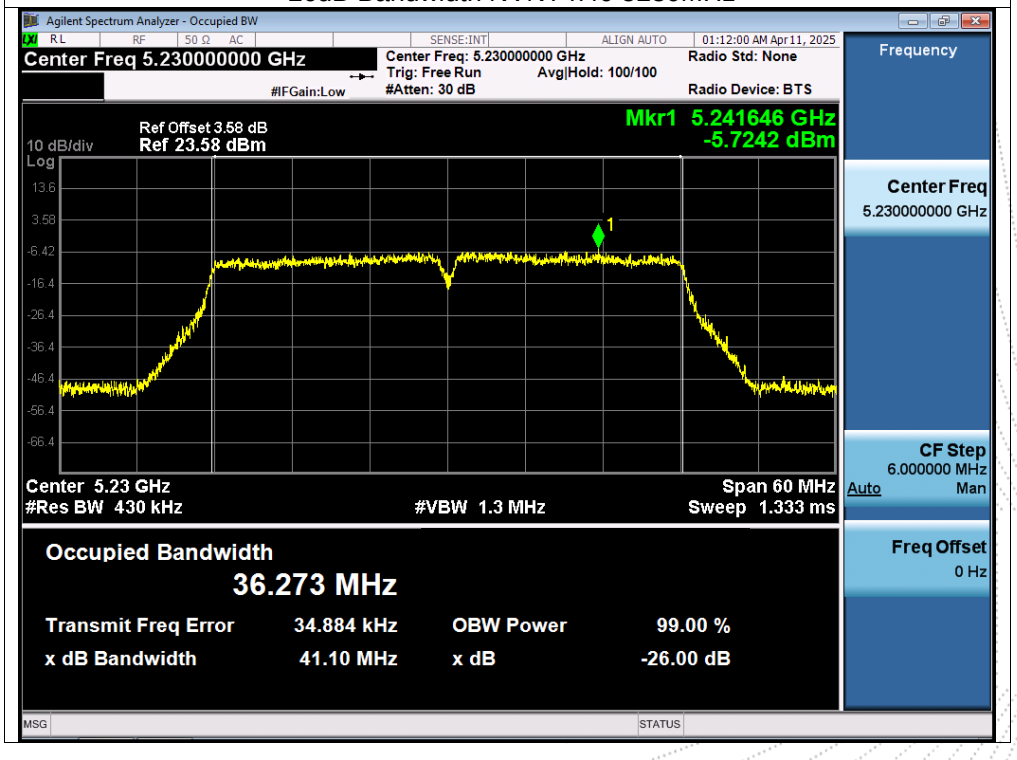
-26dB Bandwidth NVNT n20 5240MHz



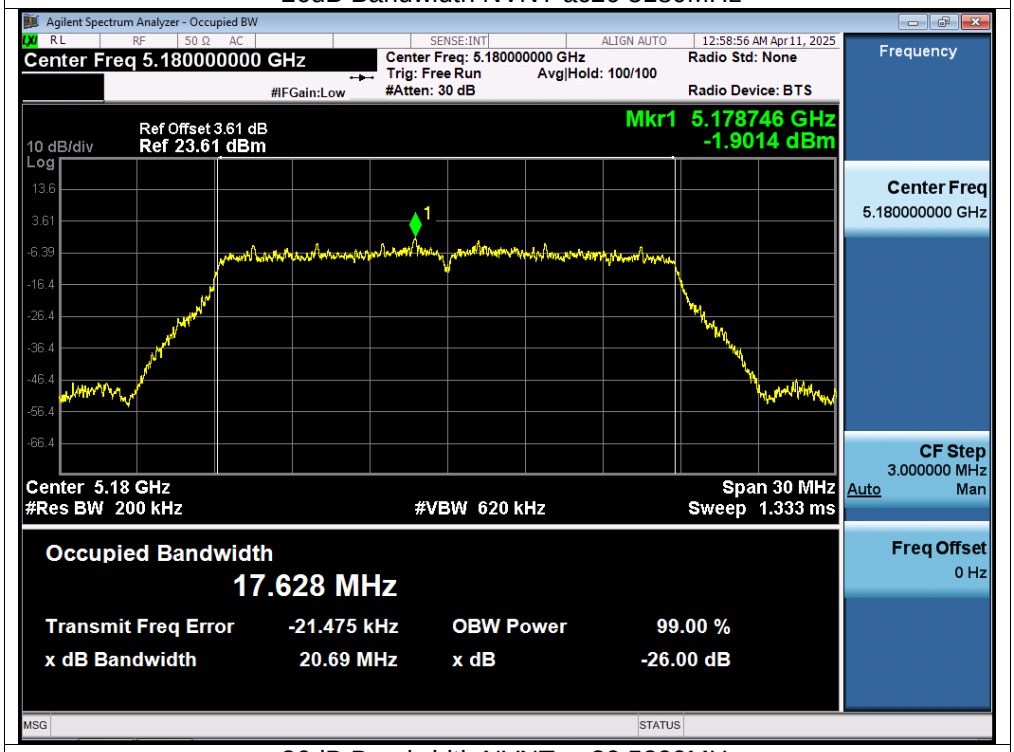
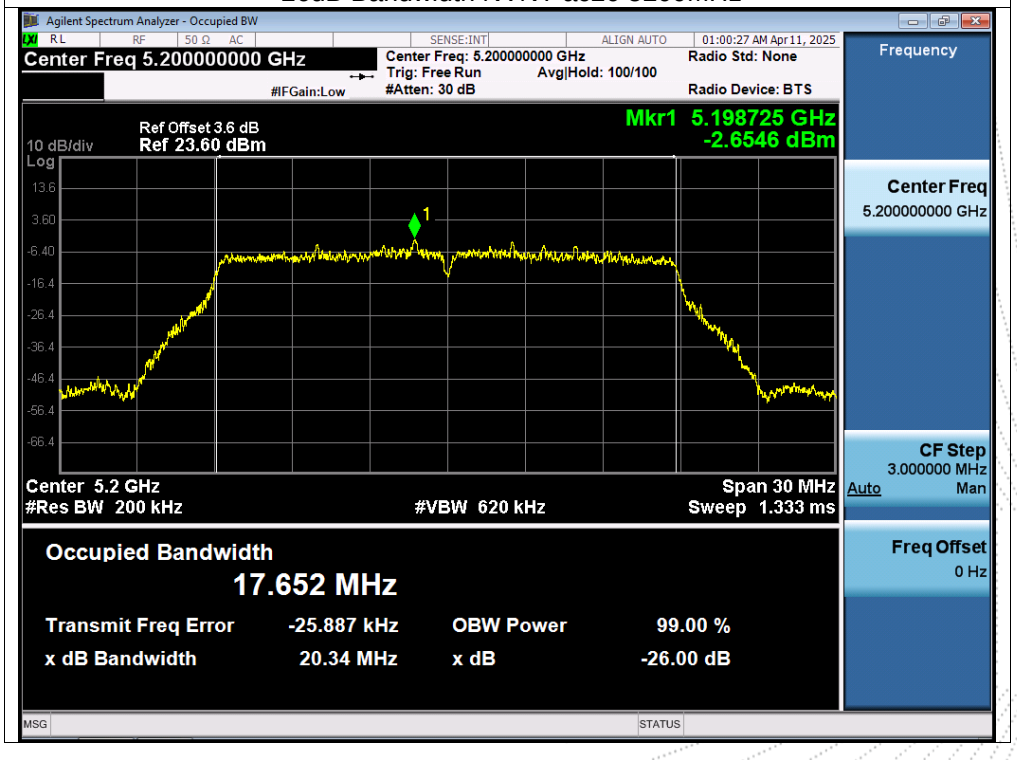
-26dB Bandwidth NVNT n40 5190MHz



-26dB Bandwidth NVNT n40 5230MHz



-26dB Bandwidth NVNT ac20 5180MHz



-26dB Bandwidth NVNT ac20 5200MHz