



FCC Test Report

Report No: FCS202606348W03

Issued for

Applicant:	Ying Shidai Intelligent Technology (Shenzhen) Co., Ltd.
Address:	Via301 Building 8,Huafeng Science and Technology Park,No. 535,Fengtian Avenue,Tangwei Community,Fuhai Street,Bao'an District,Shenzhen City
Product Name:	Projector
Brand Name:	N/A
Model Name:	Q8
Series Model:	Q7,Q9,Q10,Q11,Q12,Q13
FCC ID:	2BWQ2-Q8
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 http://www.fcs-lab.com	

**TEST RESULT CERTIFICATION**

Applicant's Name: Ying Shidai Intelligent Technology (Shenzhen) Co., Ltd.
Address.....: Via301 Building 8,Huafeng Science and Technology Park,No. 535, Fengtan Avenue,Tangwei Community,Fuhai Street,Bao'an District, Shenzhen City
Manufacture's Name: Ying Shidai Intelligent Technology (Shenzhen) Co., Ltd.
Address.....: Via301 Building 8,Huafeng Science and Technology Park,No. 535, Fengtan Avenue,Tangwei Community,Fuhai Street,Bao'an District, Shenzhen City

Product Description

Product Name: Projector
Brand Name: N/A
Model Name.....: Q8
Series Model: please refer to the first page of the report
Test Standards: CFR 47 FCC Part15E section 15.407
Test Procedure.....: ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
KDB 789033 D02 General UNII Test Procedures New Rules v02r01

This device described above has been tested by Flux Compliance Service Laboratory, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Date (s) of performance of tests : June 25,2026~July 8,2026

Date of Issue.....: July 8,2026

Test Result: Pass

Tested by :

(orange OuYang)

Reviewed by :

(Jayden)

Approved by :

(Jack Wang)



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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	July 8,2026	FCS202606348W01	N/A	N/A

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Standard Section	Test Item	Judgment	Remark
FCC 15.407 (e)	6/26db Bandwidth and 99% Bandwidth	PASS	--
FCC 15.407 (a)	Maximum Conducted Output Power	PASS	--
FCC 15.407 (a)	Power Spectral Density	PASS	--
FCC 15.407 (b) FCC 15.209 FCC 15.205	Emissions in restricted frequency bands	PASS	
FCC 15.407 (b) FCC 15.209 FCC 15.205	Band Edge Compliance	PASS	
FCC 15.207	Power Line Conducted Emission	PASS	
FCC 15.203	Antenna requirement	PASS	--

1.1 TEST FACTORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
FCC Test Firm Registration Number: 514908 Designation number: CN0127 A2LA accreditation number: 5545.01	

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	RF output power, conducted	± 0.71 dB
2	Unwanted Emissions, conducted	± 2.988 dB
3	Conducted Emission (9KHz-150KHz)	± 4.13 dB
4	Conducted Emission (150KHz-30MHz)	± 4.74 dB
5	All emissions,radiated(<1G) 9KHz-30MHz	± 5.2 dB
6	All emissions,radiated(<1G) 30MHz-1000MHz	± 5.2 dB
7	All emissions,radiated 1GHz -18GHz	± 4.66 dB
8	All emissions,radiated 18GHz -40GHz	± 4.31 dB
9	Occupied bandwidth	4(%)
10	PSD	± 1.73 dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Projector
Trade Name	N/A
Model Name	Q8
Series Model	please refer to the first page of the report
Model Difference	The above product with same circuit, PCB layout, electrical parts, materials and wiring structures, Appearance shape, the materials of decorative accessories is same, the only difference is the model name and colour.
Channel List	Please refer to the Note 2.
Operation frequency	IEEE 802.11a/n/ac(HT20)/n(HT40)/ac(HT40)/ac(HT80): U-NII-3 5725MHZ-5850MHz
Antenna Type	Ceramic Antenna
Antenna Gain (dBi)	3.92dBi
Modulation:	802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM
Power supply	Input:100-240V,50Hz
Battery	N/A
Hardware version number	V1.0
Software version number	V1.0
Connecting I/O Port(s)	Please refer to the User's Manual

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

U-NII-3 (5.725-5.85GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	151	5755
153	5765	155	5775
157	5785	159	5795
161	5805	165	5825

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Ceramic Antenna	N/A	3.92 dBi	5G Antenna

2.2 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

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

Block diagram of EUT configuration for test

Mode 1:



Test software: FCC_assist.exe

The test software was used to control EUT work in continuous TX mode, and select test channel, Wireless mode as below table

No.	Test model description
1	Low channel GFSK
2	Middle channel GFSK
3	High channel GFSK

Note:

1. All the test modes can be supply by battery, only the result of the worst case recorded in the report.
Mode 1 is worst mode.
2. For radiated emission, 1 axis were chosen for testing for each applicable mode.

Test software: the QA tool

The test software was used to control EUT work in continuous TX mode, and select test channel, Wireless mode as below table

For 802.11a/n/ac(HT20) U-NII-3

channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	157	5785
165	5825		

For 802.11n/ac(HT40)

U-NII-3

channel	Frequency(MHz)	channel	Frequency(MHz)
151	5755	159	5795

For 802.11ac(HT80)

U-NII-3

channel	Frequency(MHz)	channel	Frequency(MHz)
155	5775		

2.3 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-1	Adapter	Xiaomi	HW-050450C00	N/A	N/A
C-1	USB Cable	Xiaomi	N/A	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.4 EQUIPMENTS LIST Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESRP 3	FCS-E001	2025.08.25	2026.08.24
Signal Analyzer	R&S	FSV40-N	FCS-E012	2025.08.25	2026.08.24
Active loop Antenna	ZHINAN	ZN30900C	FCS-E013	2025.08.25	2026.08.24
Bilog Antenna	SCHWARZBECK	VULB 9168	FCS-E002	2025.08.25	2026.08.24
Horn Antenna	SCHWARZBECK	BBHA 9120D	FCS-E003	2025.08.25	2026.08.24
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	FCS-E018	2025.08.25	2026.08.24
Pre-Amplifier(0.1M-3G Hz)	EMCI	EM330N	FCS-E004	2025.08.25	2026.08.24
Pre-Amplifier (1G-18GHz)	N/A	TSAMP-0518SE	FCS-E014	2025.08.25	2026.08.24
Pre-Amplifier (18G-40GHz)	TERA-MW	TRLA-0400	FCS-E019	2025.08.25	2026.08.24
Temperature & Humidity	HTC-1	victor	FCS-E005	2025.08.25	2026.08.24

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESCI	FCS-E020	2025.08.25	2026.08.24
LISN	R&S	ENV216	FCS-E007	2025.08.25	2026.08.24
LISN	ETS	3810/2NM	FCS-E009	2025.08.25	2026.08.24
Temperature & Humidity	HTC-1	victor	FCS-E008	2025.08.25	2026.08.24
Cable	A-1	N/A	N/A	2025.08.25	2026.08.24

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
MXA SIGNAL Analyzer	Keysight	N9020A	FCS-E015	2025.08.25	2026.08.24
Spectrum Analyzer	Agilent	E4447A	MY50180039	2025.08.25	2026.08.24
Spectrum Analyzer	R&S	FSV-40	101499	2025.08.25	2026.08.24
Power Sensor	Agilent	UX2021XA	FCS-E021	2025.08.25	2026.08.24

3. 26dB Bandwidth, 6dB Bandwidth and 99% Bandwidth

3.1 Limit

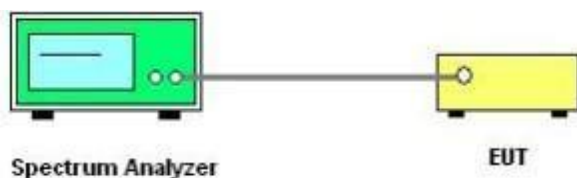
FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150-5250
	26 dB Bandwidth	5250-5350
	26 dB Bandwidth	For FCC:5470-5725 For IC:5470-5600 5650-5725
	Minimum 500kHz 6dB Bandwidth	5725-5850

3.2 Test Procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6dB Bandwidth: RBW=100kHz For 26dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6dB Bandwidth: VBW=300kHz For 26dB Bandwidth: >3RBW
Trace	Max hold
Sweep	Auto couple

(2) Allow the trace to stabilize, 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 26dB and 6dB relative to the maximum level measured in the fundamental emission.



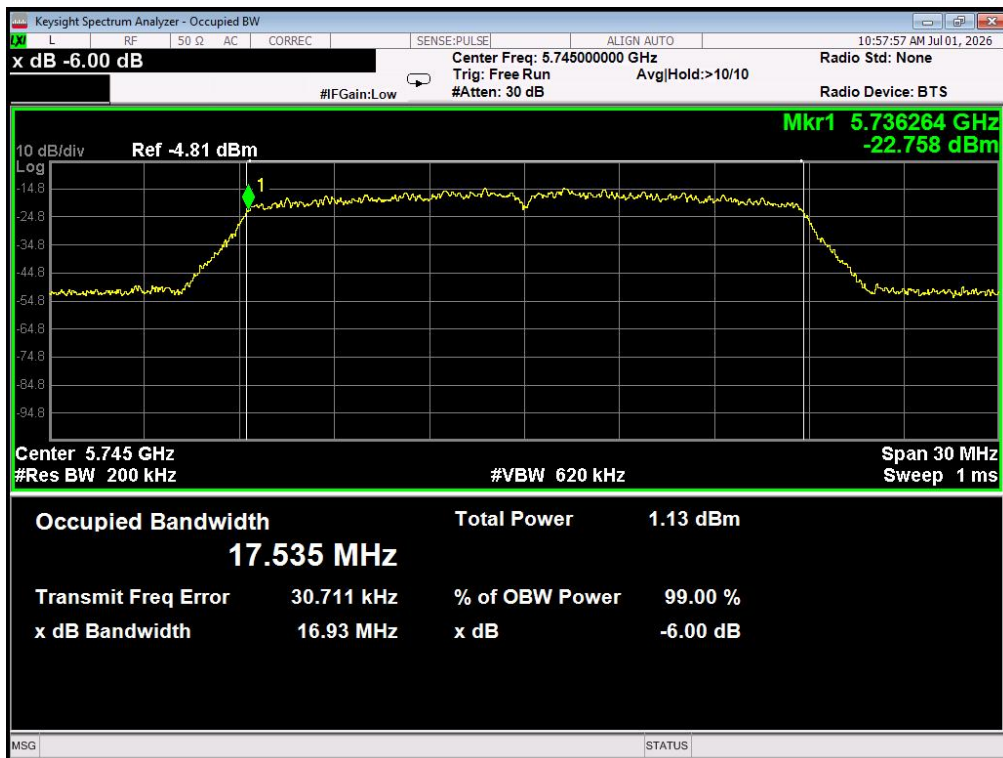
3.3 Test setup

3.4 Test results

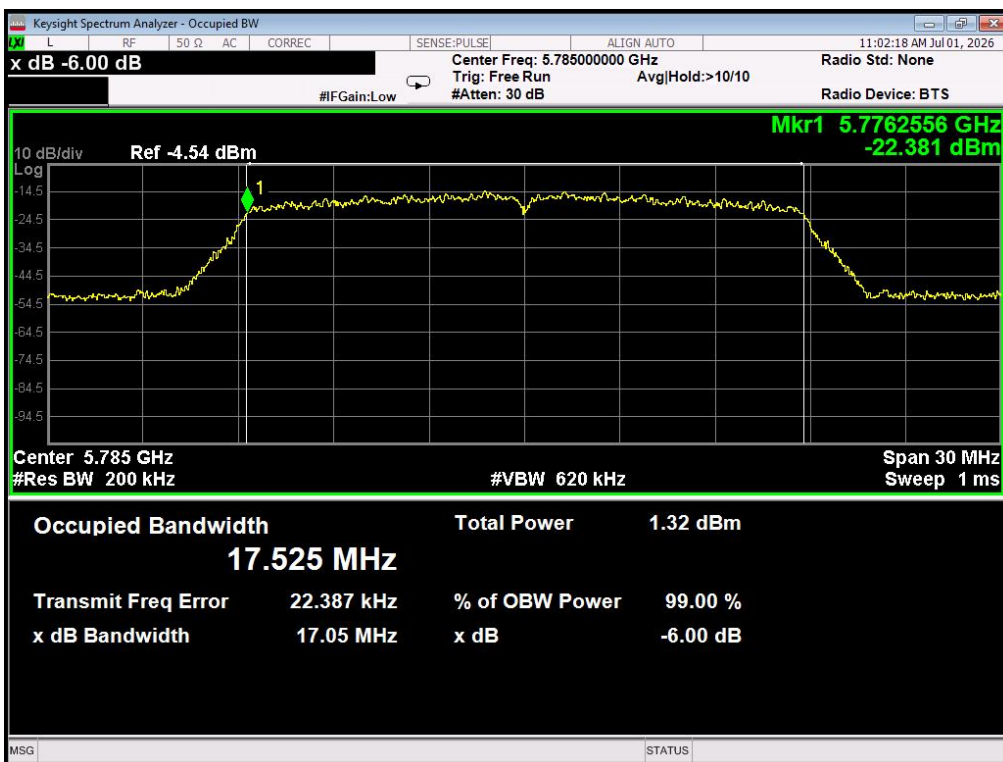
Band	Operation mode	6 dB Bandwidth (MHz)		
		Low	Middle	High
U-NII-3	802.11a	16.93	17.05	17.14
	802.11n(HT20)	16.25	16.91	16.54
	802.11n(HT40)	35.79	/	35.04
	802.11ac(HT20)	17.14	17.13	17.01
	802.11ac(HT40)	34.93	/	33.89
	802.11ac(HT80)	75.14	/	/

3.3 Original Test Data

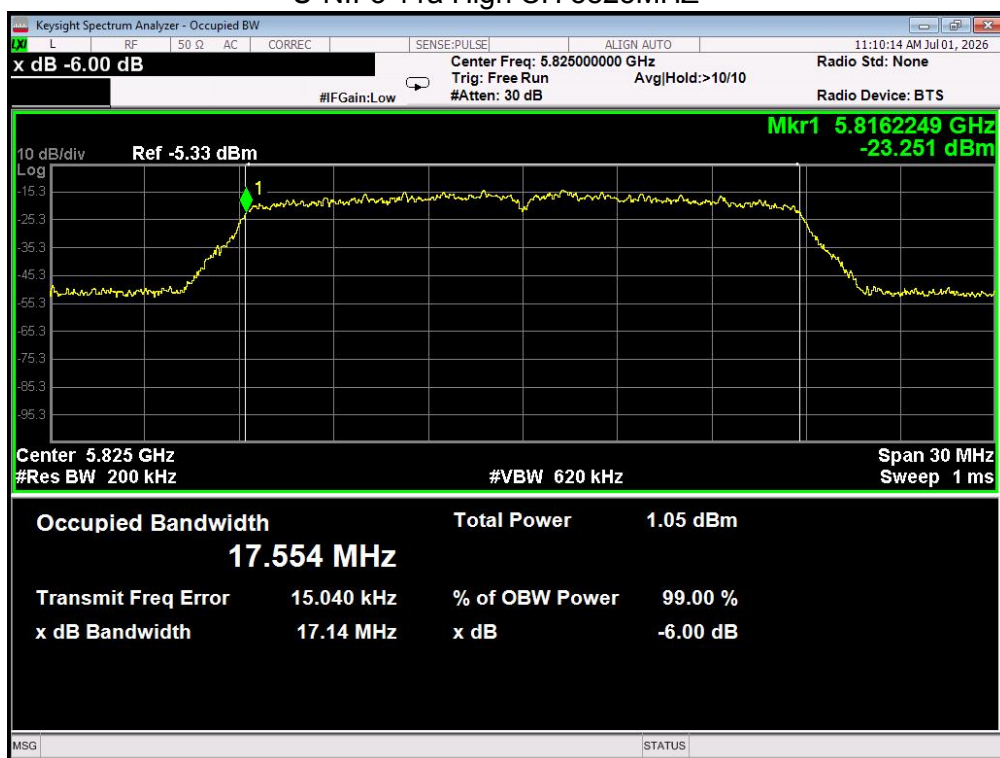
U-NII-3 11a Low CH 5745MHZ



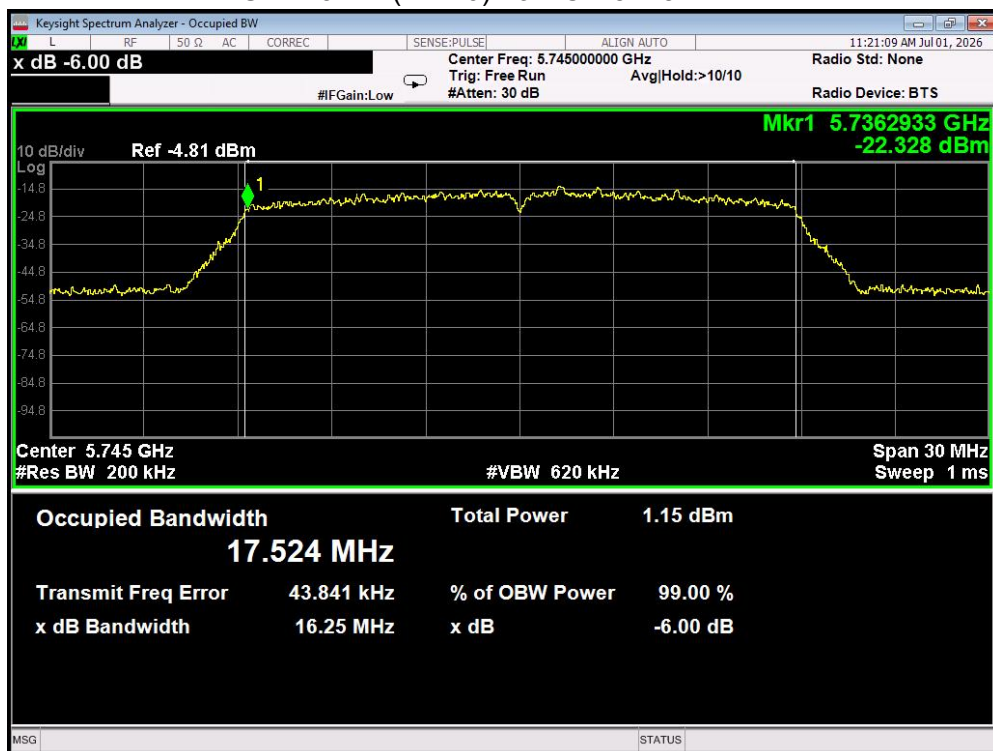
U-NII-3 11a Middle CH 5785MHZ



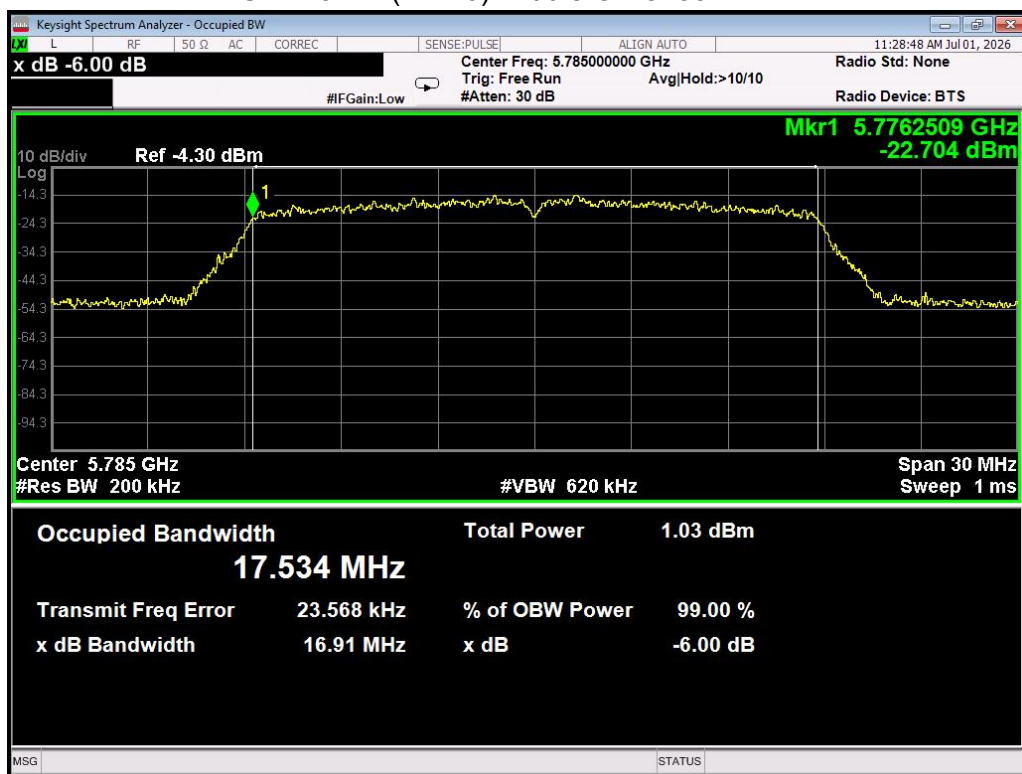
U-NII-3 11a High CH 5825MHZ



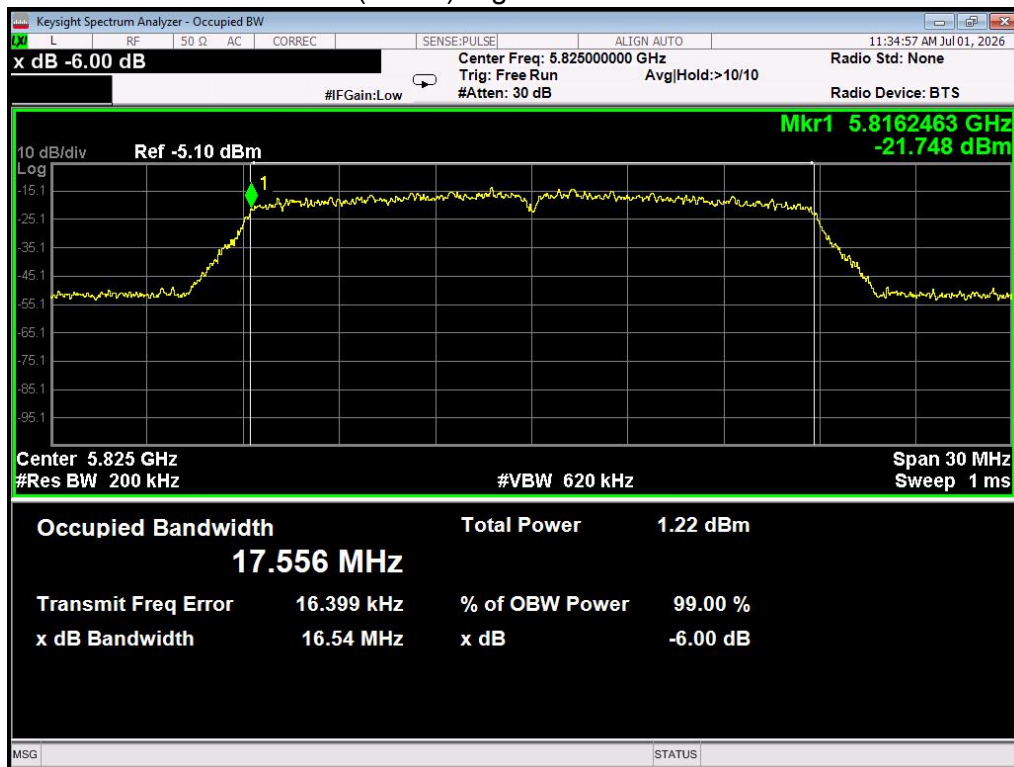
U-NII-3 11n(HT 20) Low CH 5745MHZ



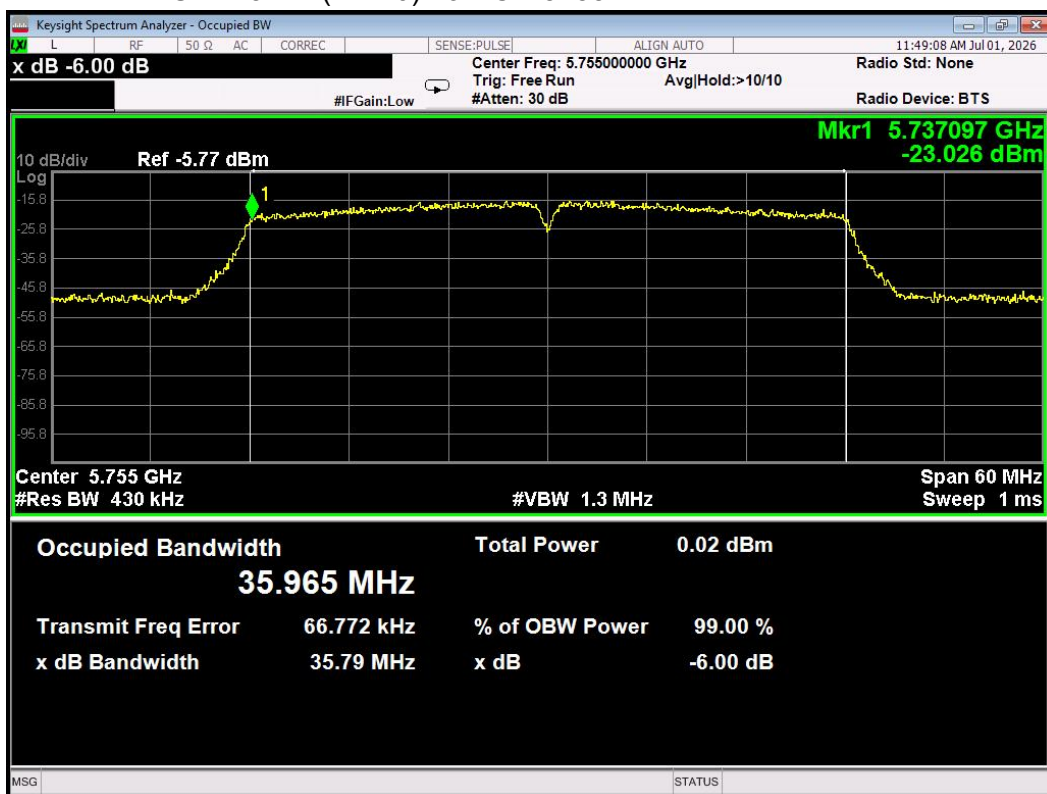
U-NII-3 11n(HT 20) Middle CH 5785MHZ



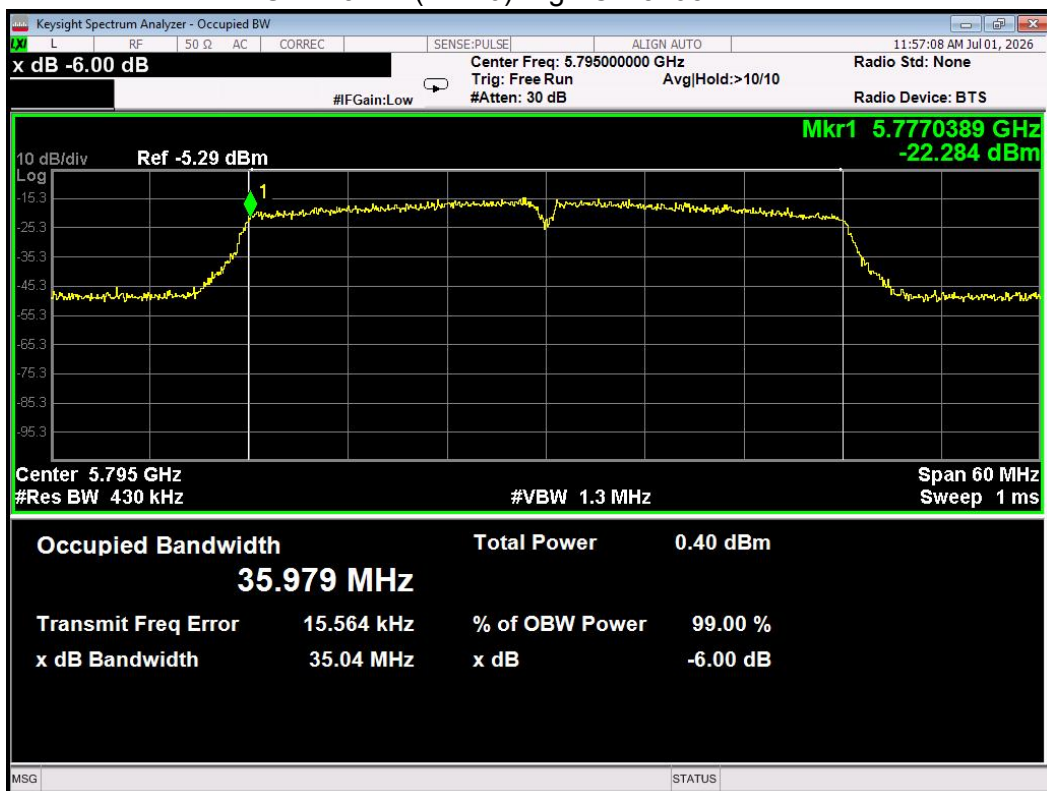
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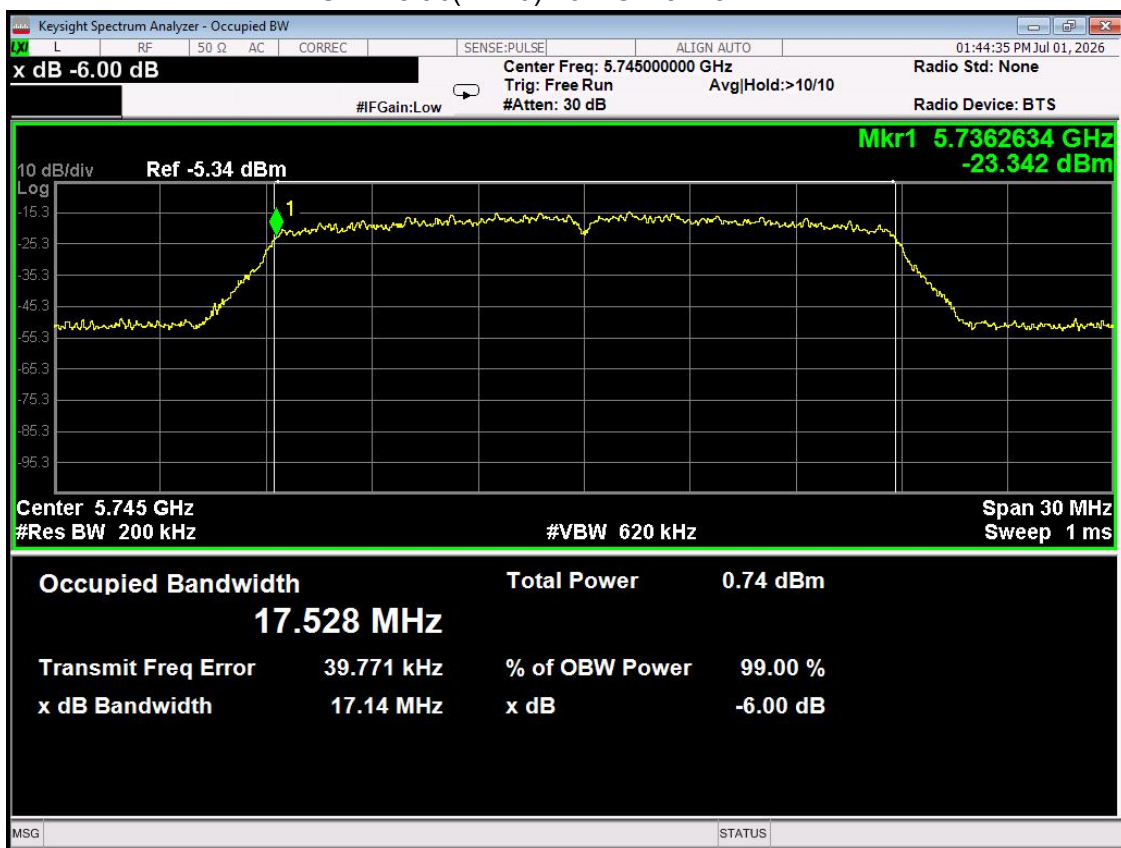
U-NII-3 11n(HT 40) Low CH 5755MHZ



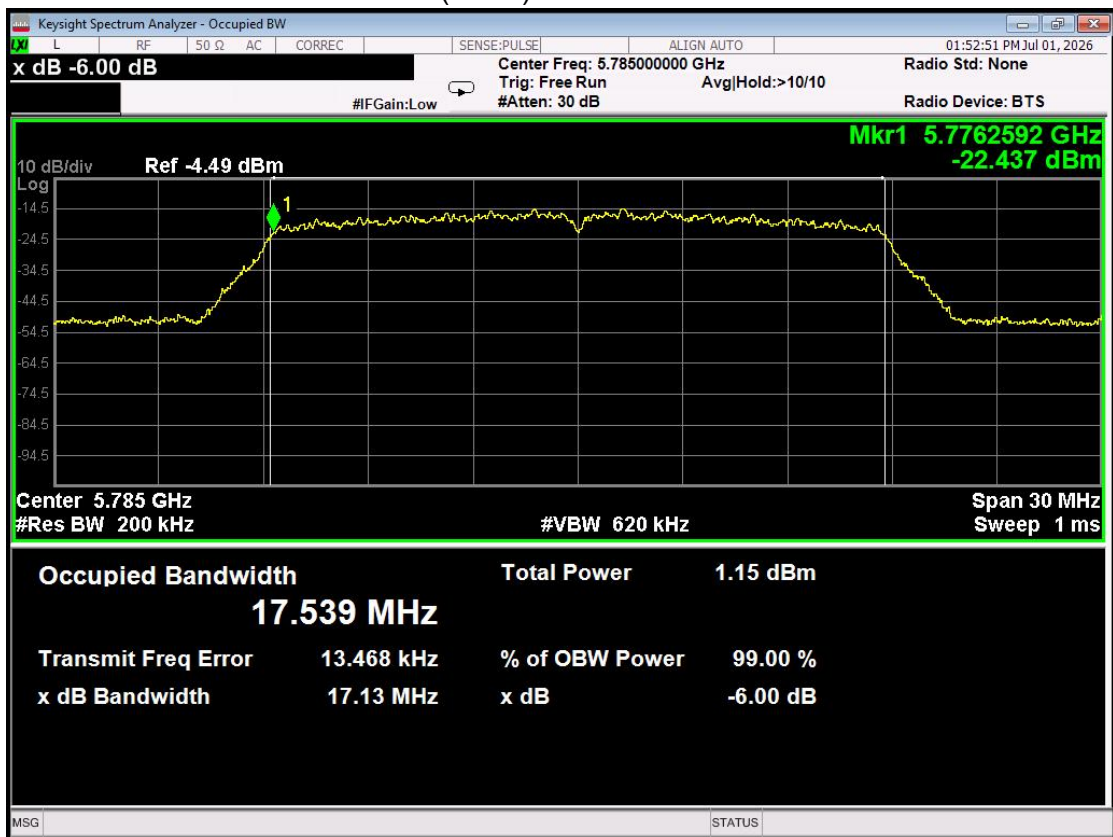
U-NII-3 11n(HT 40) High CH 5795MHZ



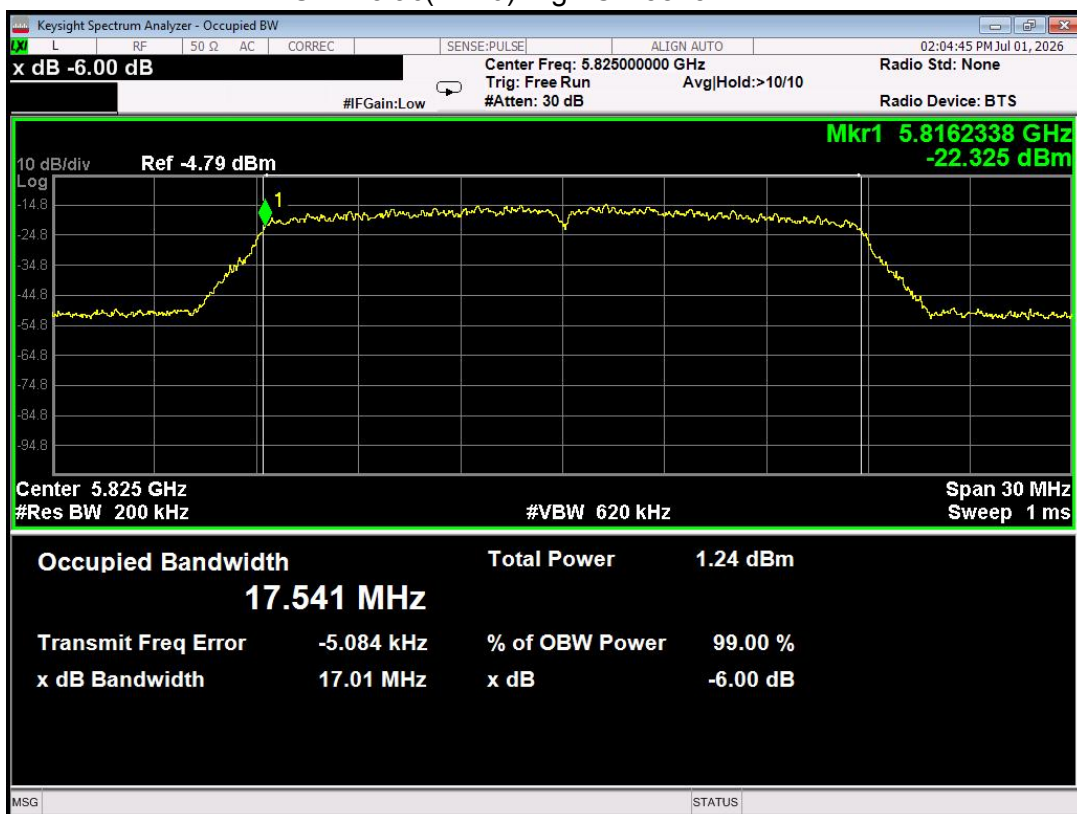
U-NII-3 ac(HT20) Low CH 5745MHZ



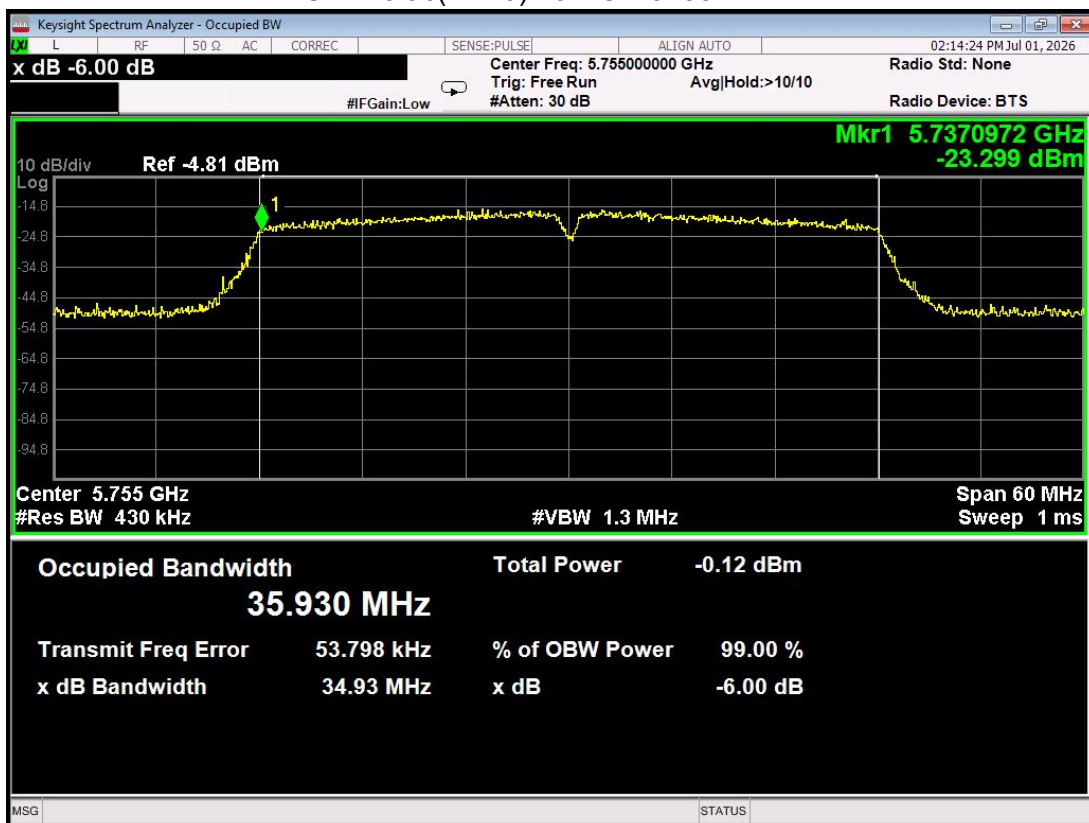
U-NII-3 ac(HT20) Middle CH 5785MHZ



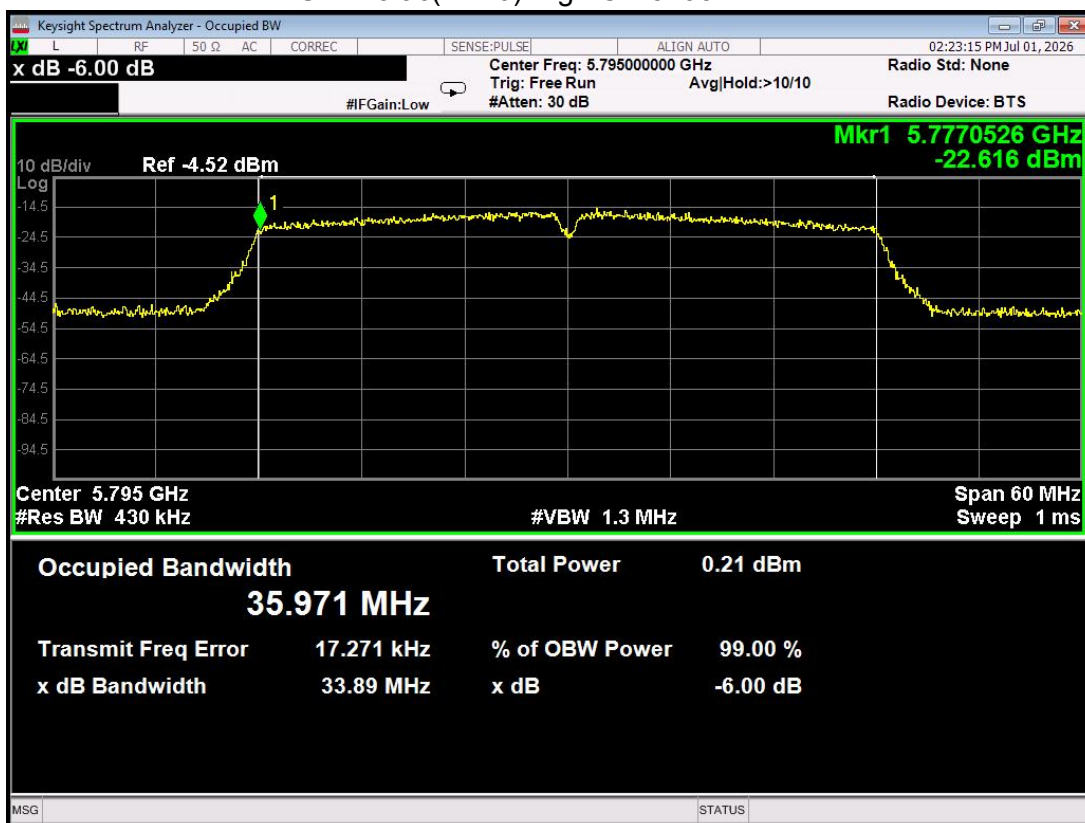
U-NII-3 ac(HT20) High CH 5825MHZ



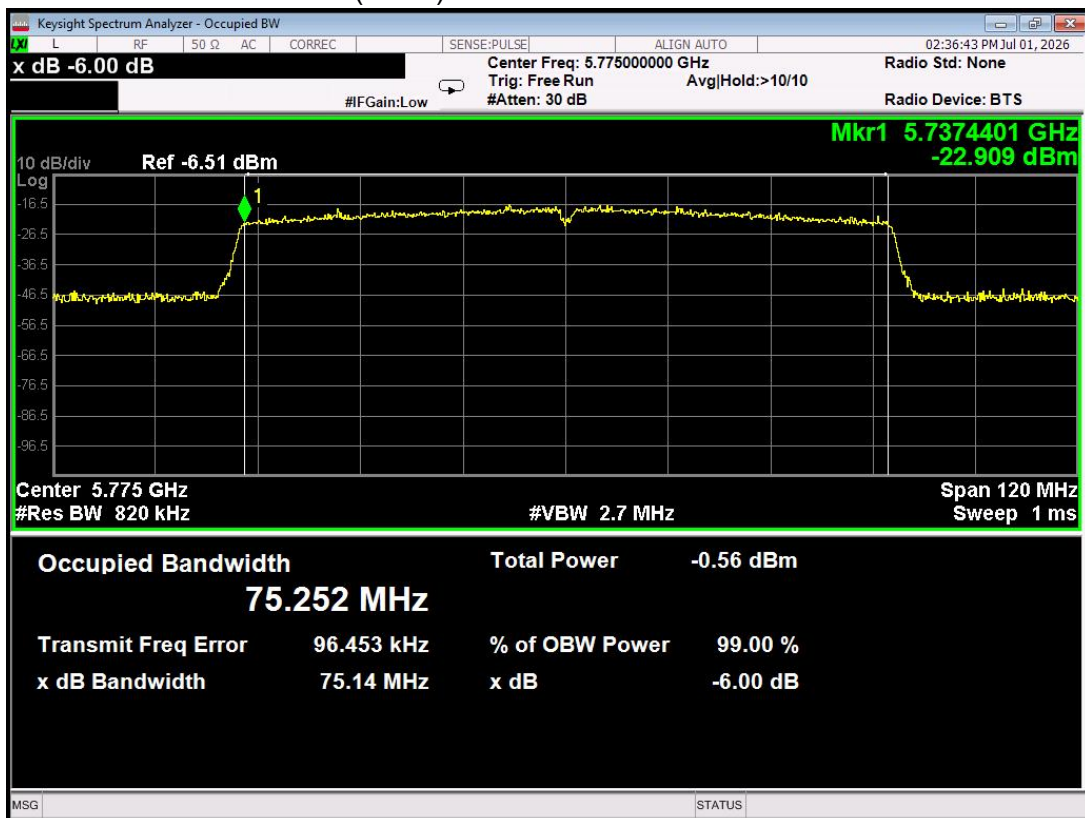
U-NII-3 ac(HT40) Low CH 5755MHZ



U-NII-3 ac(HT40) High CH 5795MHZ



U-NII-3 ac(HT80) Low CH 5775MHZ



4 CONDUCTED OUTPUT POWER

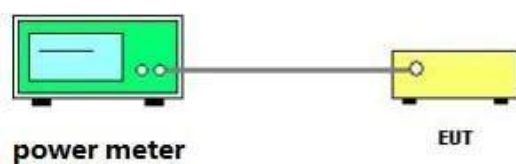
4.1 limit

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	For FCC client devices: 250mW (24dBm)	5150-5250
	For RSS: e.i.r.p. power: not exceed 200 mW(23dBm) or $10 + 10 \log_{10} B$	
	250mW (24dBm) or $11 + 10 \log_{10} B$	5250-5350
	250mW (24dBm) or $11 + 10 \log_{10} B$	For FCC:5470-5725 For IC:5470-5600 5650-5725
	1 Watt (30dBm)	5725-5850
Note: For ISSED: B=99% bandwidth.		

4.2 test procedure

- Connect each EUT's antenna output to power meter by RF cable and attenuator
- Get each antenna port's output power of EUT.

4.3 TEST SETUP



4.4 test results

Band	Operation mode	Conducted Output Power(dBm)		
		Low	Middle	High
U-NII-3	802.11a	2.5	2.67	2.5
	802.11 n(HT20)	2.39	2.66	2.51
	802.11 n(HT40)	1.96	/	2.01
	802.11ac(HT20)	2.17	2.23	2.33
	802.11ac(HT40)	2.05	/	2.34
	802.11ac(HT80)	2.42	/	/

5. POWER SPECTRAL DENSITY

5.1 LIMIT

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	For FCC: Other than Mobile and portable:17dBm/MHz Mobile and portable:11dBm/MHz	5150-5250
	For RSS eirp:10dBm/MHz	
	11dBm/MHz	5250-5350
	11dBm/MHz	For FCC:5470-5725 For IC:5470-5600 5650-5725
	30dBm/500kHz	5725-5850

5.2 TEST PROCEDURE

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.

Connect the UUT to the spectrum analyser and use the following settings:

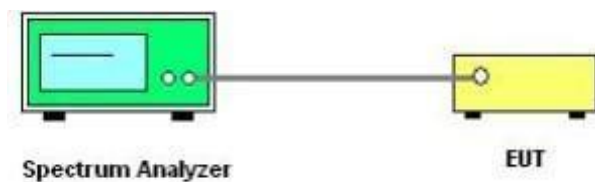
5725MHz-5850MHz

Note:

1. The test method was referred to the subclause F.5 of KDB 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 1MHz and VBW at 3MHz if the spectrum analyzer does not have 500kHz RBW.
2. The value measured with RBW=1MHz is to be added with $10\log(500\text{kHz}/1\text{MHz})$ which is - 3dB. For example, if the measured value is +10dBm using RBW=1MHz (that is +10dBm/MHz), then the converted value will be +7dBm/500kHz.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

5.3 TEST SETUP

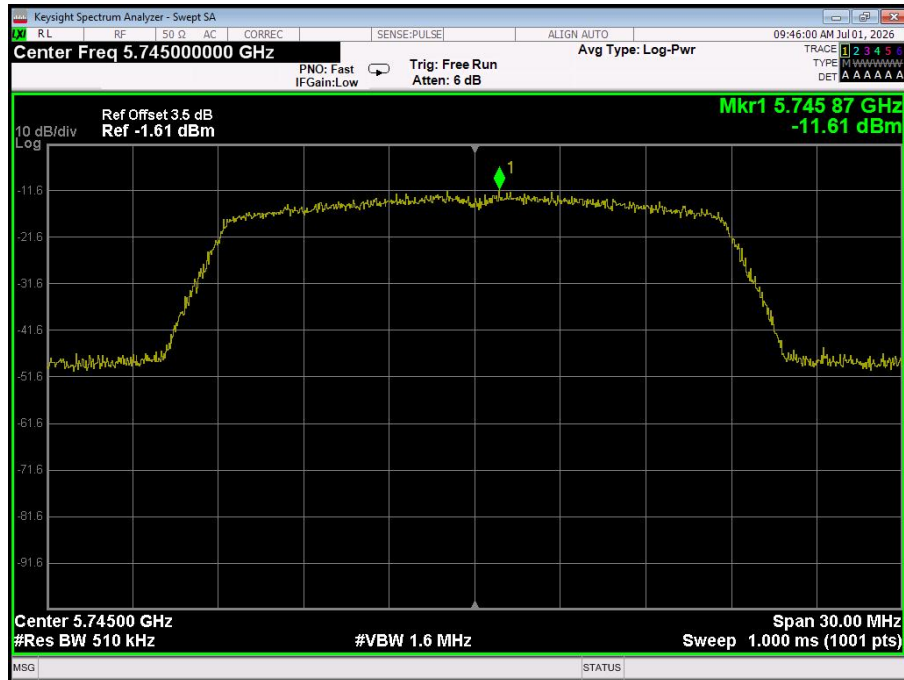


5.4 TEST RESULTS

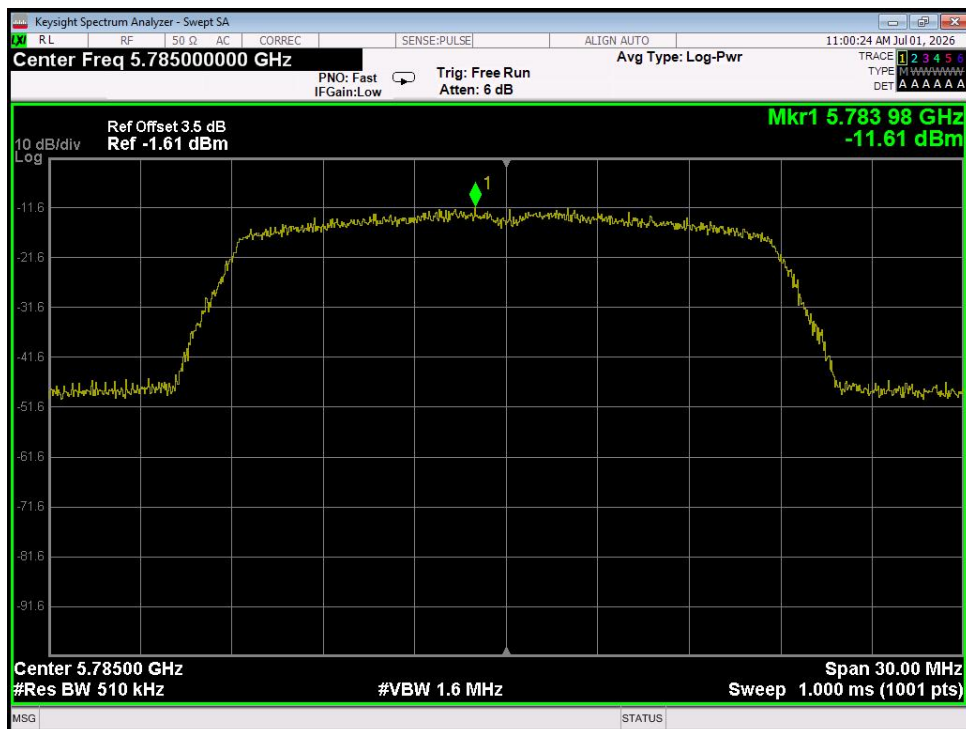
Band	Operation mode	Power Spectral Density(dBm/510KHz)			Limit (dBm/500KHz)
		Low	Middle	High	
U-NII-3	802.11a	-11.38	-11.38	-11.05	30
	802.11 n(HT20)	-10.73	-11.64	-10.84	30
	802.11 n(HT40)	-14.56	/	-14.93	30
	802.11ac(HT20)	-11.61	-12.13	-12.14	30
	802.11ac(HT40)	-14.74	/	-14.20	30
	802.11ac(HT80)	-17.68	/	/	30
RB factor= $10 \cdot \log(510/500\text{kHz})=0.086$ Duty cycle<98%,PSD=Result+Duty Cycle Factor					

5.5 original test data

U-NII-3 802.11a Low CH



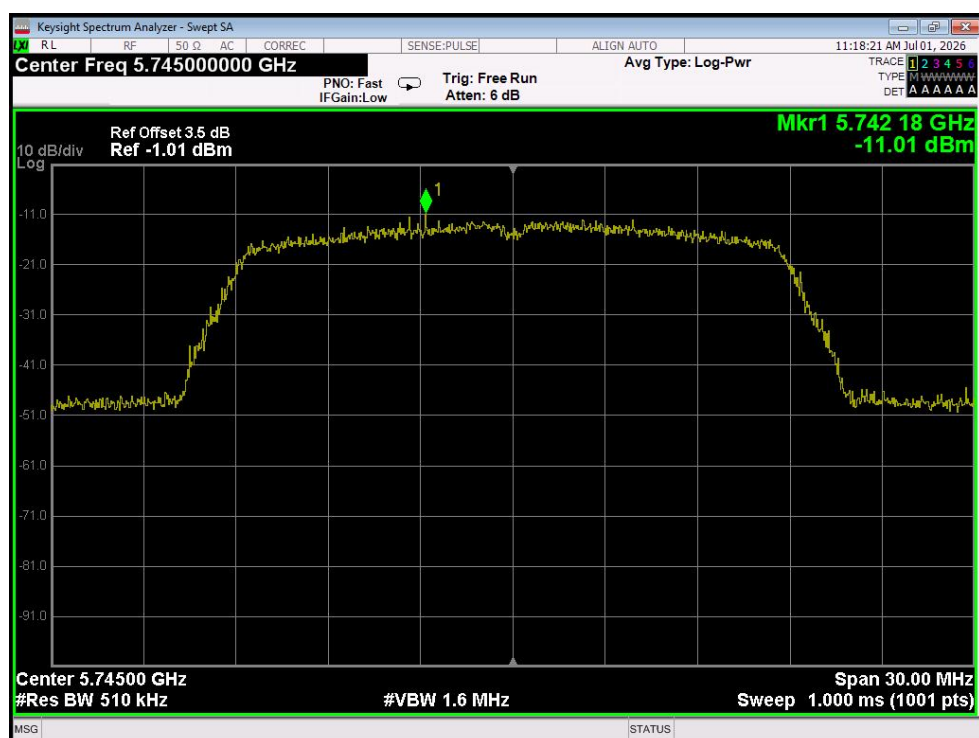
U-NII-3 802.11a Middle CH



U-NII-3 802.11a High CH



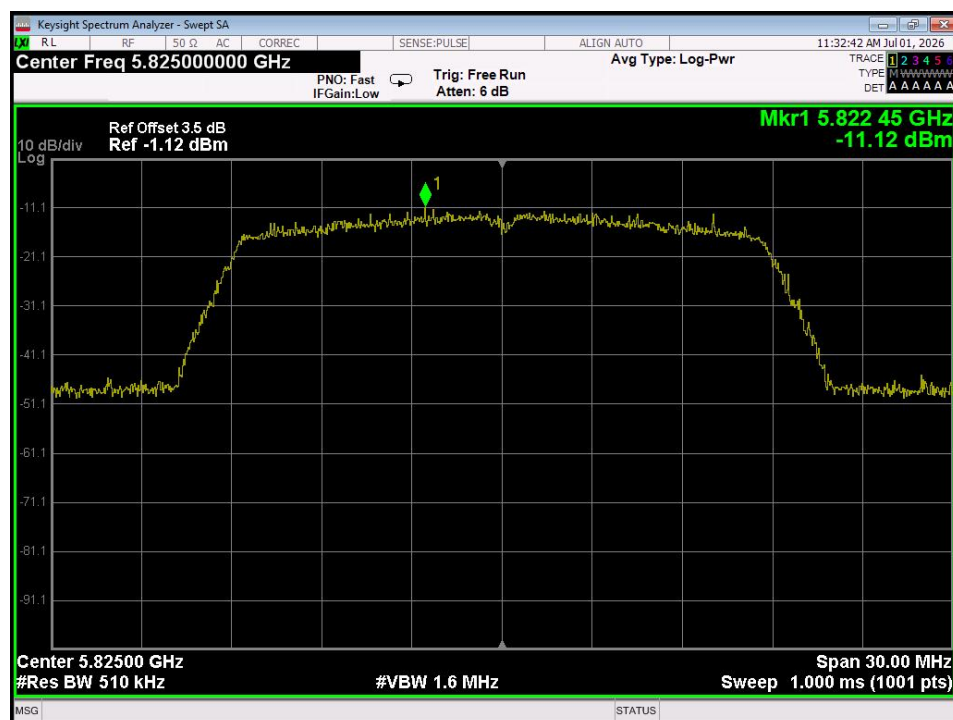
U-NII-3 802.11n(HT20) Low CH



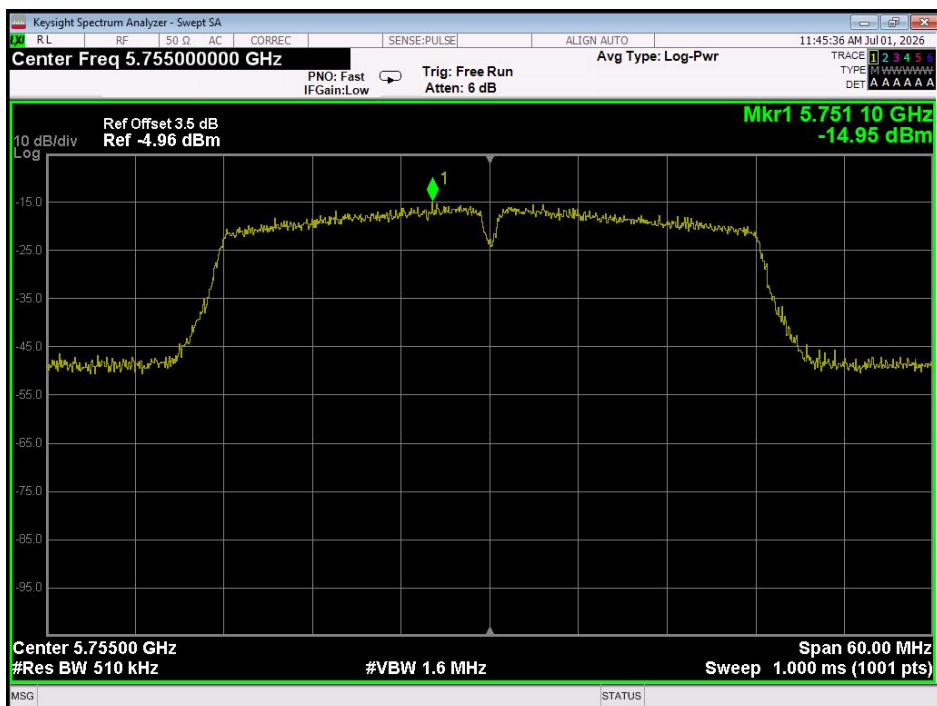
U-NII-3 802.11n(HT20) Middle CH



U-NII-3 802.11n(HT20) High CH



U-NII-3 802.11n(HT40) Low CH



U-NII-3 802.11n(HT40) High CH



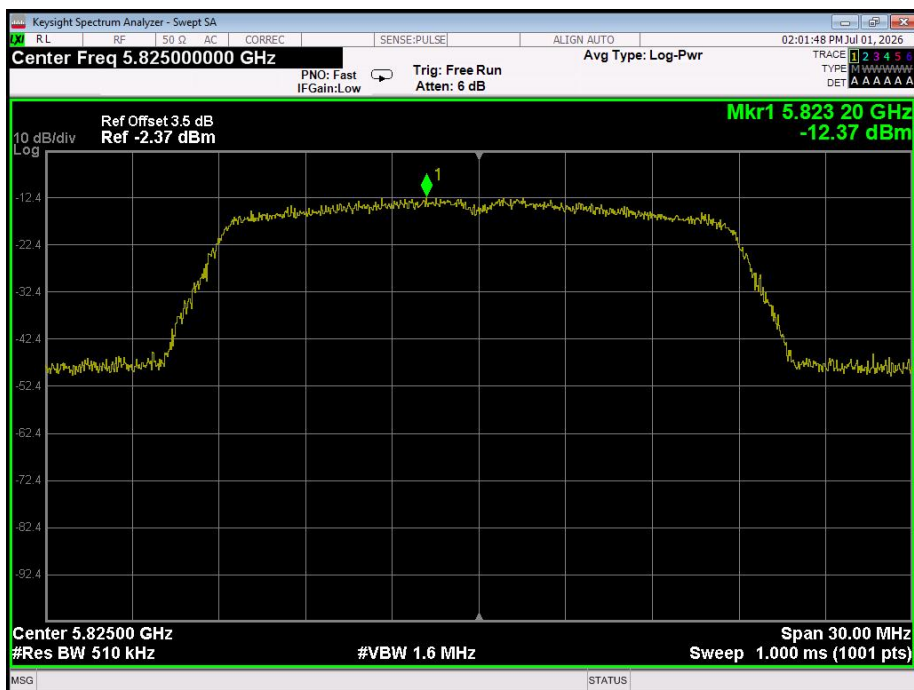
U-NII-3 802.11ac(VHT20) Low CH



U-NII-3 802.11ac(VHT20) Middle CH



U-NII-3 802.11ac(VHT20) High CH



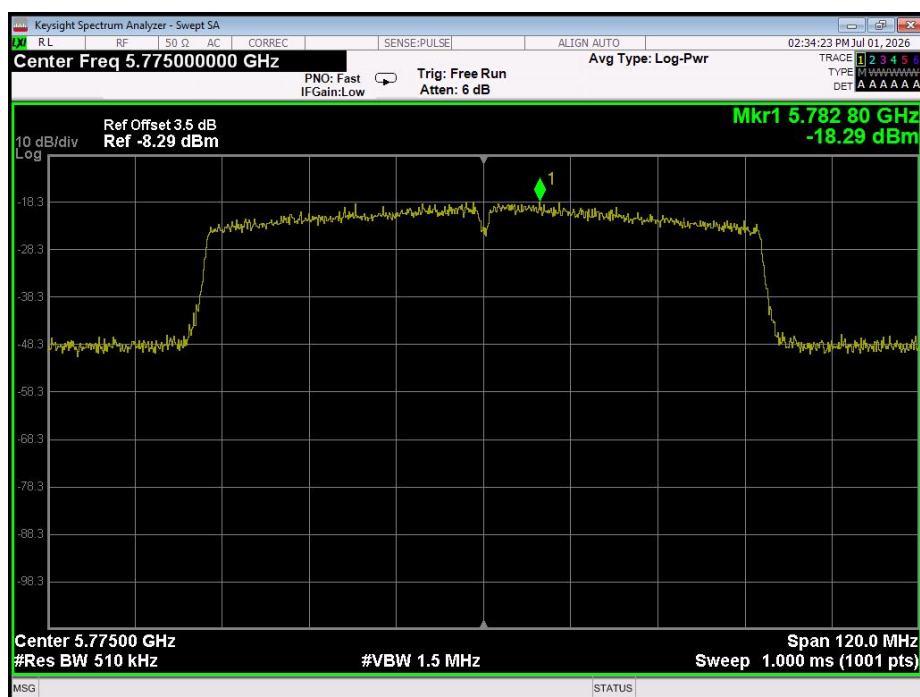
U-NII-3 802.11ac(VHT40) Low CH



U-NII-3 802.11ac(VHT40) High CH



U-NII-3 802.11ac(VHT80) Low CH



6. FREQUENCY STABILITY MEASUREMENT

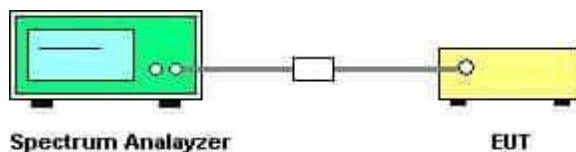
6.1 LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual

6.2 TEST PROCEDURE

- (1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- (2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
- (3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

6.3 TEST SETUP



6.4 TEST RESULTS

U-NII-3 Test Frequency:5745MHz				
Temperature (°C)	Power Supply (AC)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)
50	230V	/		within the band of operation
45		20000.00	3.481562	
30		40000.00	6.962689	
20		40000.00	6.962689	
10		40000.00	6.962689	
0		40000.00	6.962689	
-10		40000.00	6.962689	
-15		40000.00	6.962689	
-30		/		
20	195.5V	40000.00	6.962689	
20	264.5V	40000.00	6.962689	

7. Conducted spurious emission and Band edge

7.1 LIMIT

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

Frequency Band (MHz)	Limit
5150-5250	Outside of the 5.15-5.35 GHz band:EIRP-27 dBm
5250-5350	Outside of the 5.15-5.35 GHz band:EIRP-27 dBm
5470-5725	Outside of the 5.47-5.725 GHz band:EIRP-27 dBm
5725-5850	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

7.2 TEST PROCEDURE

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

RBW = 1 MHz

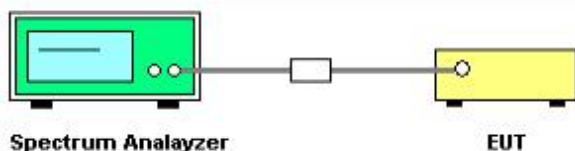
VBW = 3 MHz

Sweep = auto

Detector function = peak Trace = max hold

Allow the trace to stabilize

7.3 TEST SETUP



7.4 TEST RESULTS

For the measurement records, refer to the Annex I.

8. Duty Cycle

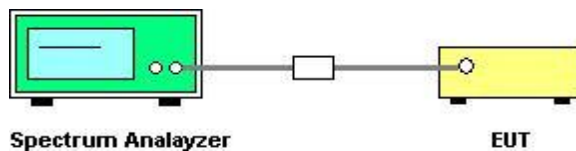
8.1 TEST REQUIREMENT

47 CFR Part 15E §15.407, KDB 789033 D02 General UNII
Test Procedures New Rules v02r01 (December 14, 2017),
Section (B)
ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to
C63.10a-2024

8.2 TEST PROCEDURE

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.

8.3 TEST SETUP



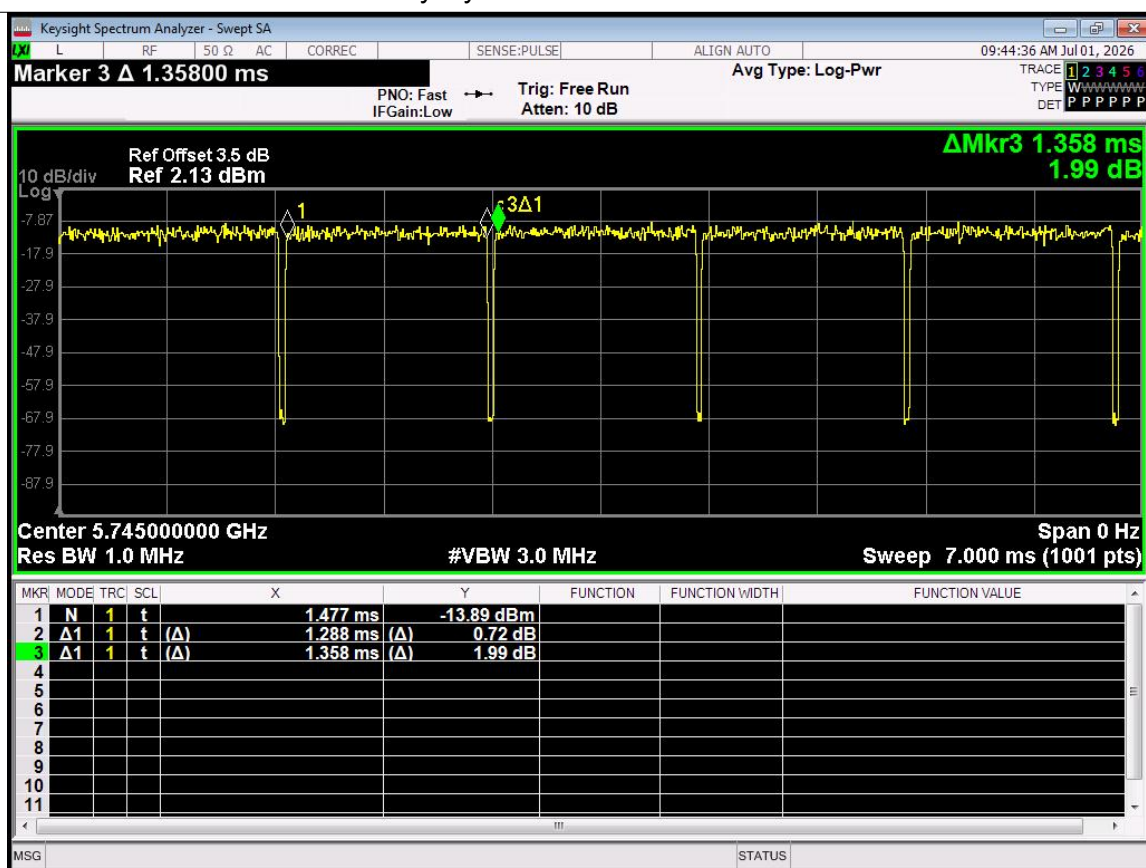


8.4 TEST RESULTS

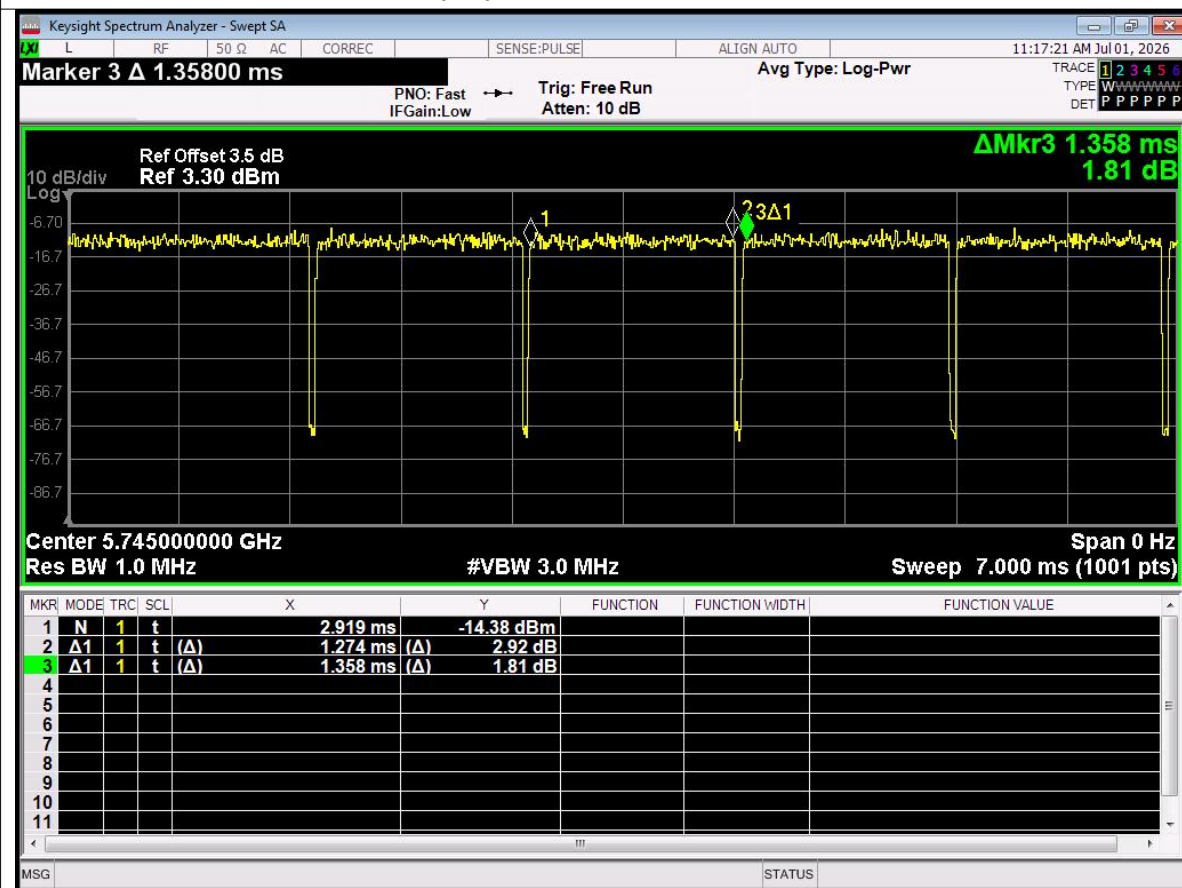
Duty Cycle

mode	On time(ms)	Period(ms)	Duty Cycle(%)	Duty cycle factor(dB)
802.11a 5745	1.288	1.358	94.85	-0.23
802.11n20 5745	1.274	1.358	93.81	-0.28
802.11n40 5755	1.203	1.315	91.48	-0.39
802.11ac20 5745	1.295	1.365	94.87	-0.27
802.11ac40 5755	1.218	1.295	94.05	-0.27
802.11ac80 5775	0.560	0.644	86.96	-0.61

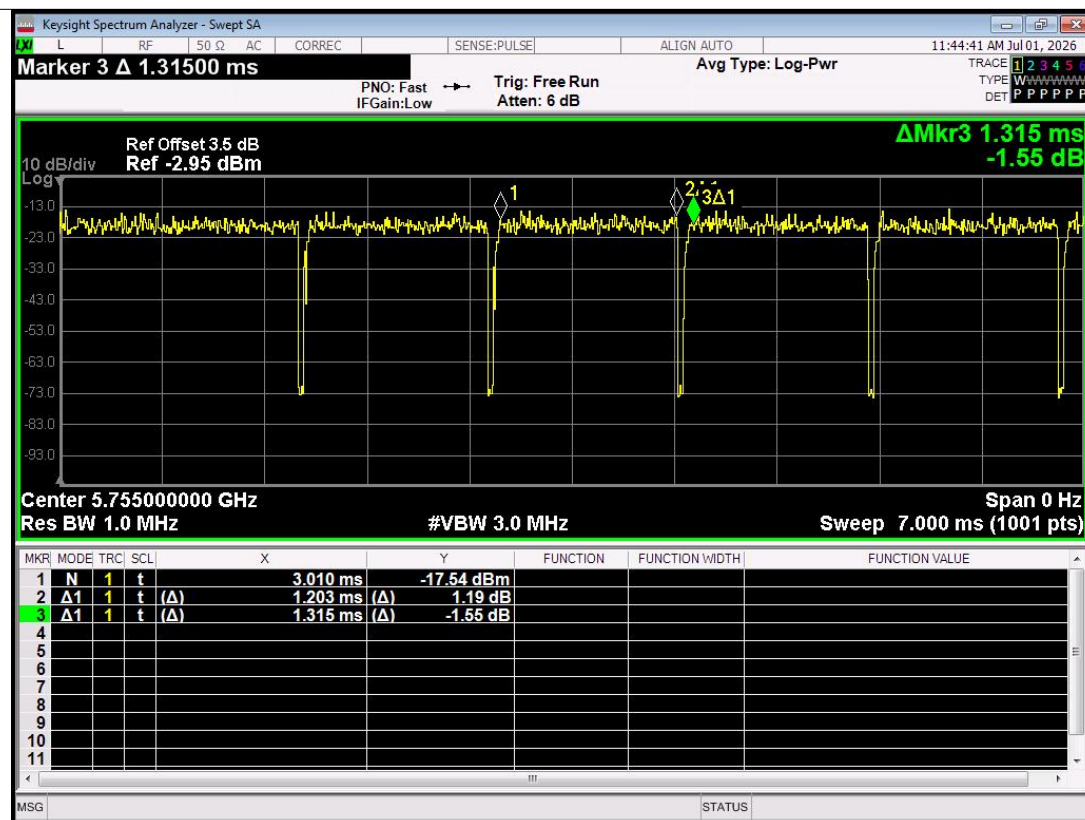
Duty Cycle NVNT a20 5745MHz



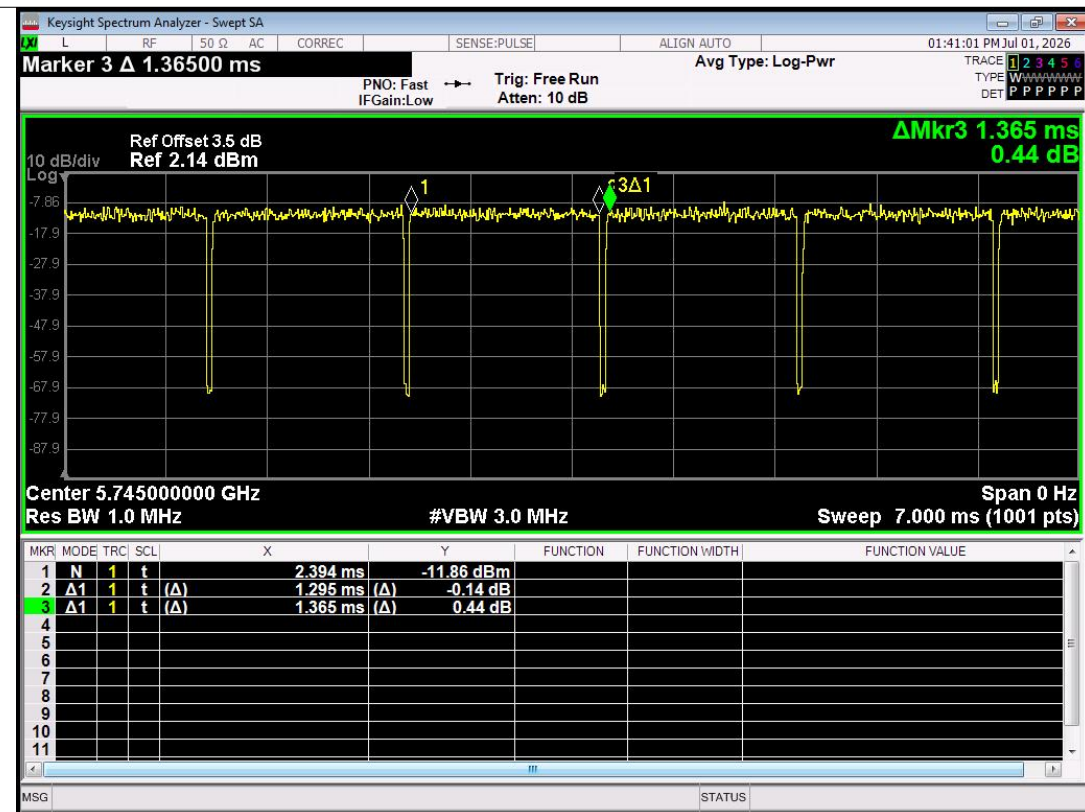
Duty Cycle NVNT n20 5745MHz



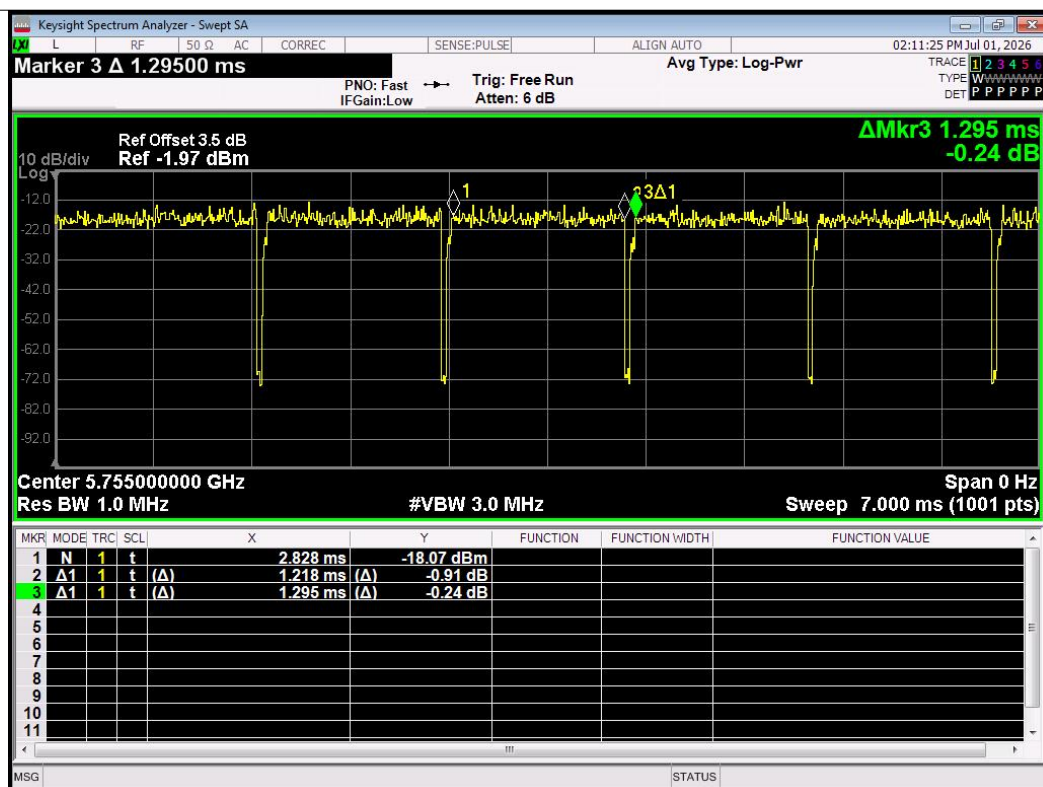
Duty Cycle NVNT n40 5755MHz



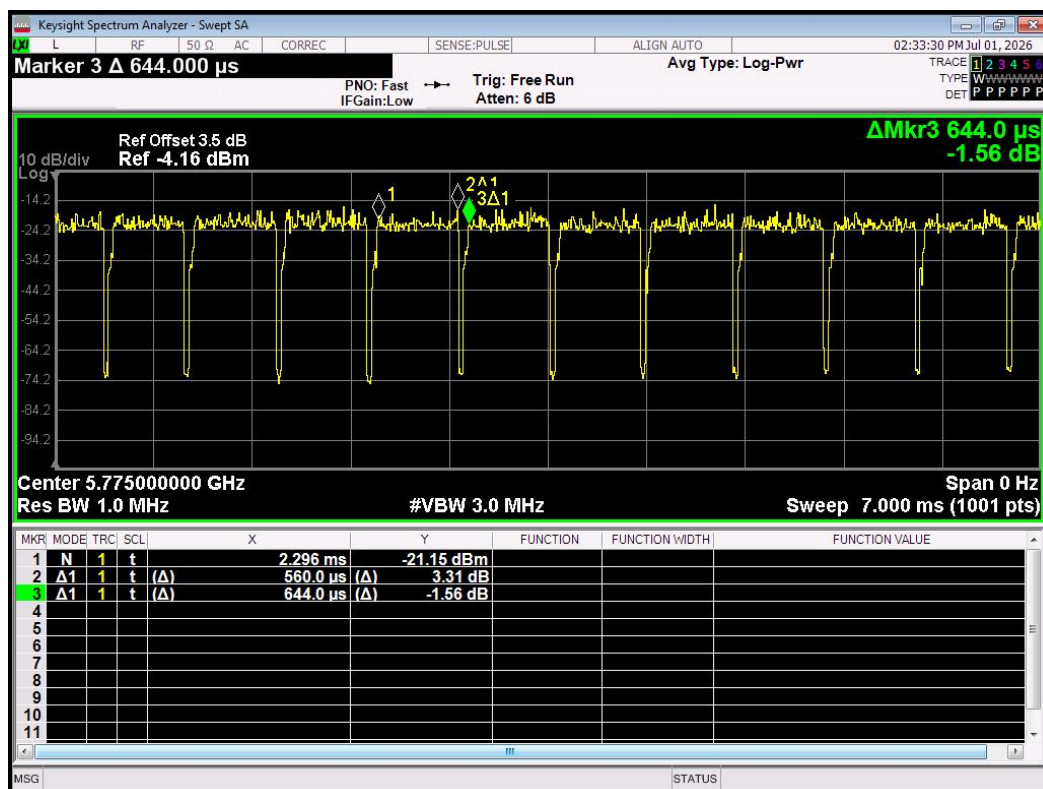
Duty Cycle NVNT ac 20 5745MHz



Duty Cycle NVNT ac 40 5755MHz



Duty Cycle NVNT ac 80 5775MHz



9 RADIATED EMISSION MEASUREMENT

9.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2020 + Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 below has to be followed
LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	PK=1MHz / 1MHz, AV=1 MHz /10 Hz

9.2 TEST PROCEDURE

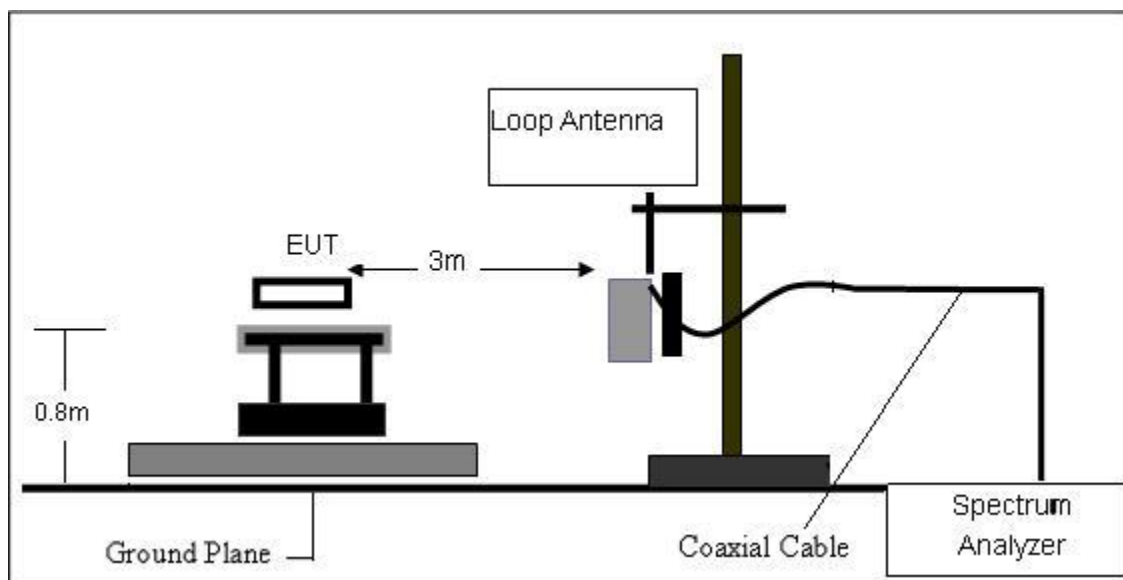
- a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 meters (above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. 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 QuasiPeak 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:

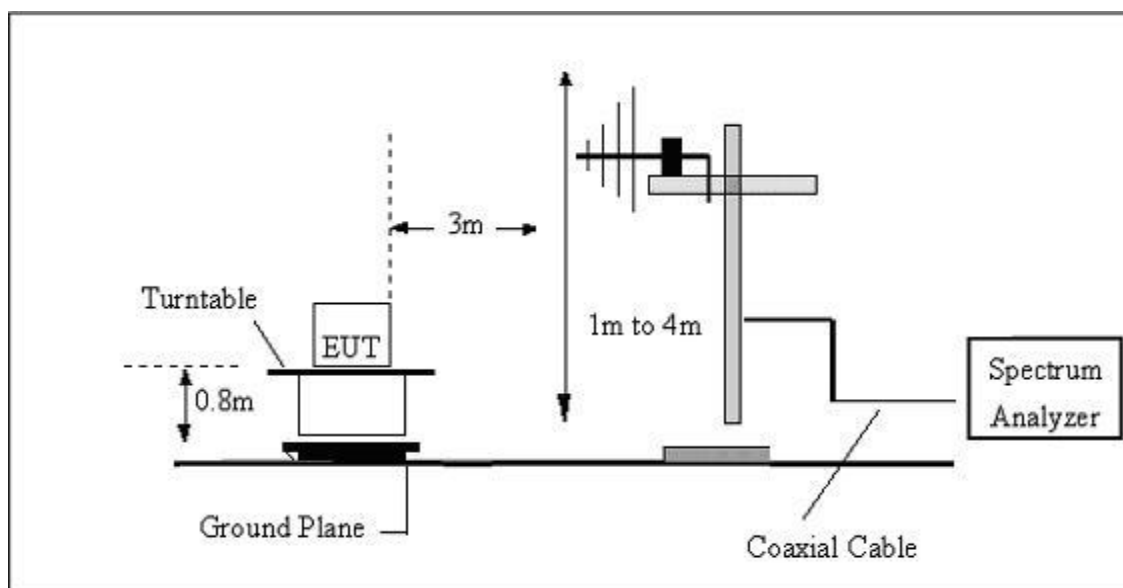
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

9.3 TESTSETUP

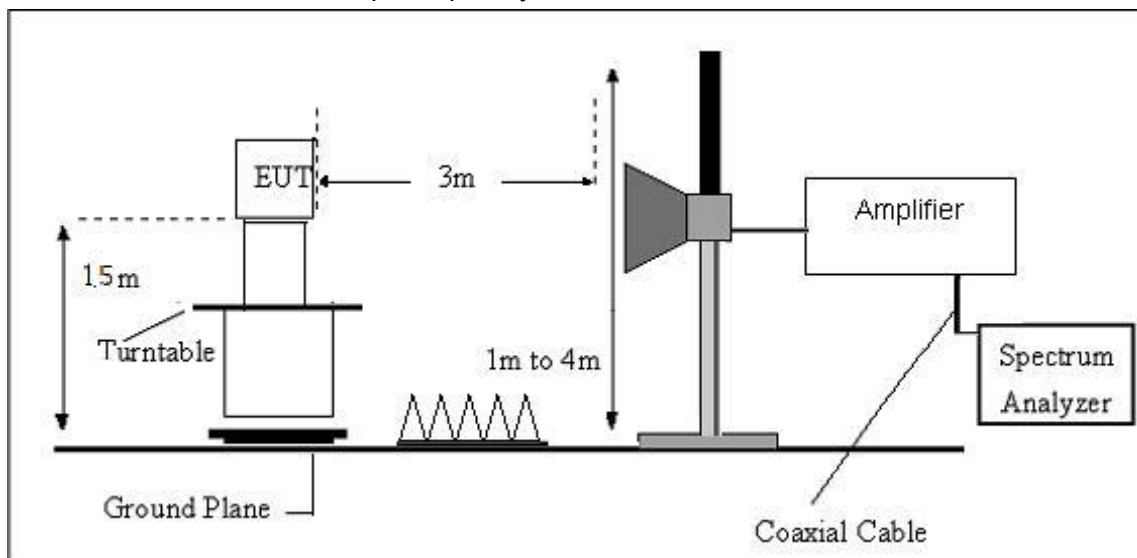
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



9.4. TEST RESULTS

(9KHz-30MHz)

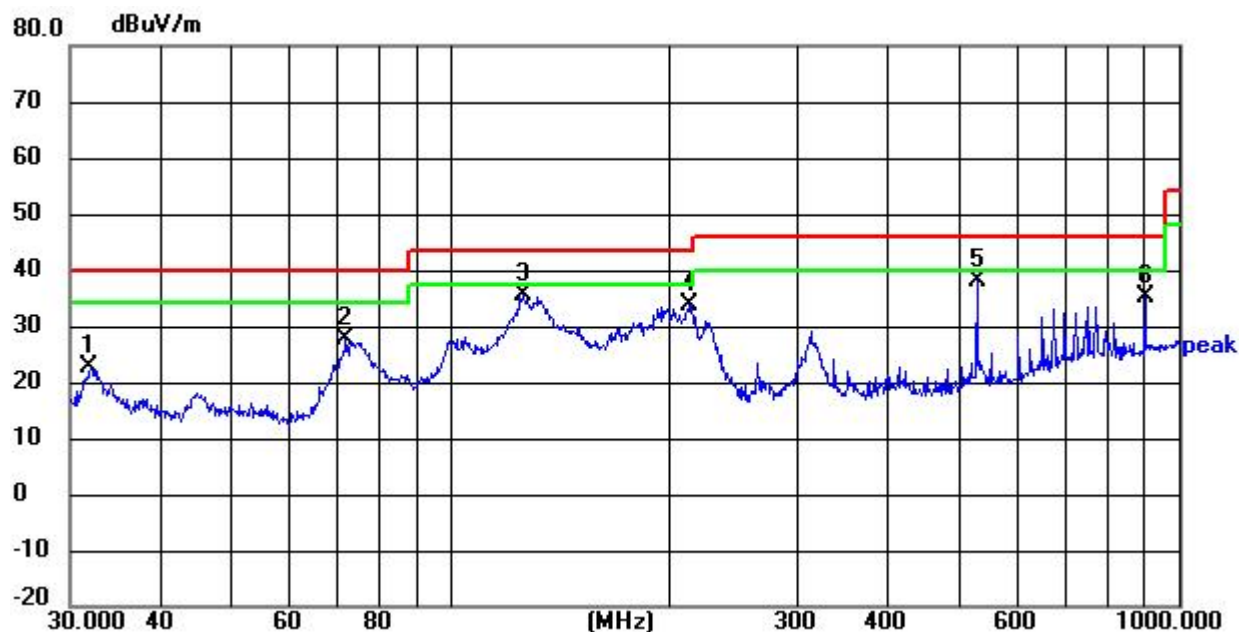
Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported..

(30MHz-1000MHz)

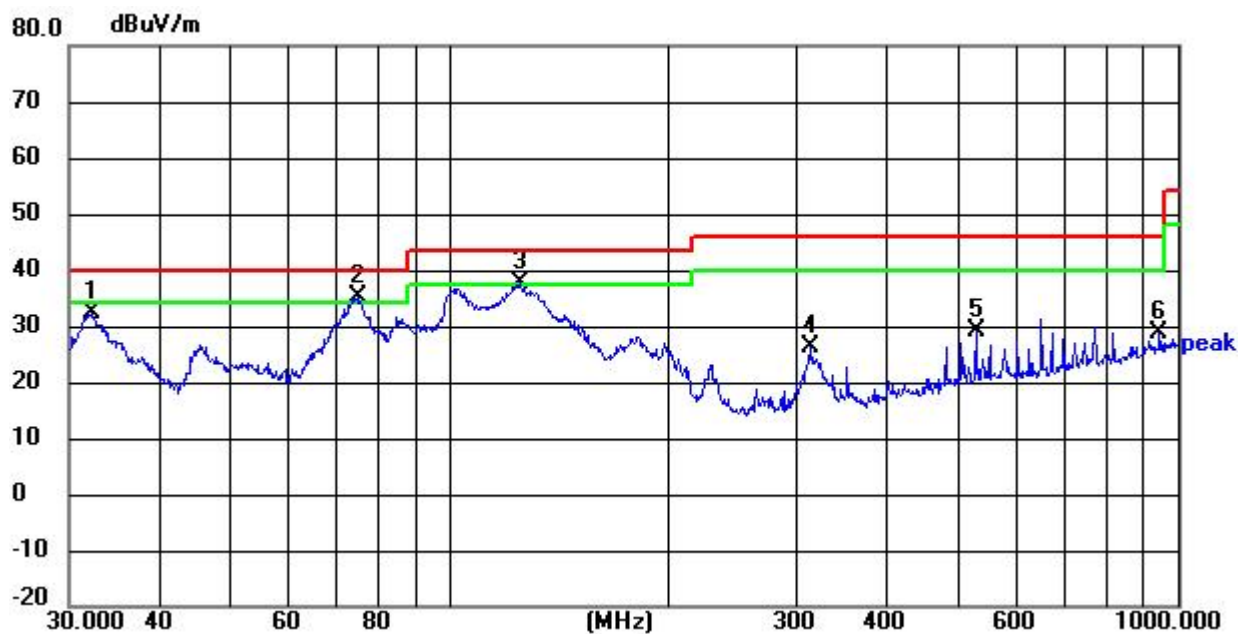
Mode 1:

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.0667	34.85	-12.30	22.55	40.00	-17.45	QP
2	71.8320	42.81	-15.27	27.54	40.00	-12.46	QP
3	125.4457	48.92	-13.37	35.55	43.50	-7.95	QP
4	213.0151	48.25	-14.58	33.67	43.50	-9.83	QP
5	528.2458	44.46	-6.30	38.16	46.00	-7.84	QP
6	900.1474	35.21	-0.17	35.04	46.00	-10.96	QP

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	32.2925	44.79	-12.30	32.49	40.00	-7.51	QP
2	74.6569	50.99	-15.93	35.06	40.00	-4.94	QP
3	125.0066	51.12	-13.41	37.71	43.50	-5.79	QP
4	312.1794	37.60	-11.36	26.24	46.00	-19.76	QP
5	528.2458	35.55	-6.30	29.25	46.00	-16.75	QP
6	942.1305	28.29	0.30	28.59	46.00	-17.41	QP

Remarks:

1. Margin = Result (Result =Reading + Factor) - Limit



(1GHz~40GHz) Restricted band and Spurious emission Requirements

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-3 Low Channel 5745MHz									
4504.10	52.15	PK	114	1.3	H	1.20	53.35	74.00	-20.65
4504.10	40.12	Ave	114	1.3	H	1.20	41.32	54.00	-12.68
11490.00	55.01	PK	327	1.5	H	-0.62	54.39	74.00	-19.61
11490.00	44.45	Ave	327	1.5	H	-0.62	43.83	54.00	-10.17
17239	42.63	PK	114	1.3	H	6.00	48.63	74.00	-25.37
17239	31.41	Ave	114	1.3	H	6.00	37.41	54.00	-16.59
22980	49.86	PK	327	1.5	H	2.10	51.96	74.00	-22.04
22980	38.72	Ave	327	1.5	H	2.10	40.82	54.00	-13.18
28736	47.33	PK	114	1.3	H	3.40	50.73	74.00	-23.27
28736	36.20	Ave	114	1.3	H	3.40	39.60	54.00	-14.4
34478	*	PK	*	*	*	*	*	*	*
34478	*	Ave	*	*	*	*	*	*	*
802.11a U-NII-3 Middle channel 5785MHz									
4540.20	51.61	PK	117	1.3	H	1.21	52.82	74.00	-21.18
4540.20	39.56	Ave	117	1.3	H	1.21	40.77	54.00	-13.23
11570.00	54.50	PK	327	1.5	H	-0.58	53.92	74.00	-20.08
11570.00	43.82	Ave	327	1.5	H	-0.58	43.24	54.00	-10.76
17355	42.05	PK	117	1.3	H	6.03	48.08	74.00	-25.92
17355	30.86	Ave	117	1.3	H	6.03	36.89	54.00	-17.11
23140	49.28	PK	327	1.5	H	2.13	51.41	74.00	-22.59
23140	38.15	Ave	327	1.5	H	2.13	40.28	54.00	-13.72
28925	46.77	PK	117	1.3	H	3.43	50.20	74.00	-23.8
28925	35.64	Ave	117	1.3	H	3.43	39.07	54.00	-14.93
34710	*	PK	*	*	*	*	*	*	*
34710	*	Ave	*	*	*	*	*	*	*



802.11a U-NII-3 High channel 5825MHz									
4506.47	52.43	PK	27	1.2	H	1.32	53.74	74.00	-20.26
4506.47	40.26	Ave	27	1.2	H	1.32	41.58	54.00	-12.42
11650.00	52.78	PK	188	1.5	H	0.36	53.14	74.00	-20.86
11650.00	41.95	Ave	188	1.5	H	0.36	42.31	54.00	-11.69
17470	42.23	PK	27	1.2	H	6.84	49.07	74.00	-24.93
17470	31.12	Ave	27	1.2	H	6.84	37.96	54.00	-16.04
23356	49.54	PK	188	1.5	H	2.25	51.79	74.00	-22.21
23356	38.41	Ave	188	1.5	H	2.25	40.66	54.00	-13.34
29136	47.06	PK	27	1.2	H	3.52	50.58	74.00	-23.42
29136	35.88	Ave	27	1.2	H	3.52	39.40	54.00	-14.6
34946	*	PK	*	*	*	*	*	*	*
34946	*	Ave	*	*	*	*	*	*	*

Note:

All other emissions are attenuated 20dB below the limits, so it does not reported in the report.

All modes are tested, with the worst mode being 80211a(HT20)

*** means this data is the too weak instrument of signal is unable to test.



Radiated Band Edge data

Band 4 (5.745-5.825)GHz							
Frequency (MHz)	Reading (dBμV)	Corrected Factor (dB)	Result (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector	Polarity
802.11a_low_5745							
5641.6	57.15	-2.18	54.97	74	-19.03	Peak	Vertical
5641.6	41.16	-2.18	38.98	54	-15.02	AVG	Vertical
5646	57.27	-2.16	55.11	74	-18.89	Peak	Horizontal
5646	41.26	-2.16	39.10	54	-14.9	AVG	Horizontal
5724.8	57.95	-2.14	55.81	74	-18.19	Peak	Vertical
5724.8	45.15	-2.14	43.01	54	-10.99	AVG	Vertical
5724.2	58.73	-2.14	56.59	74	-17.41	Peak	Horizontal
5724.2	45.85	-2.14	43.71	54	-10.29	AVG	Horizontal
802.11a_middle_5755							
5682	57.25	-2.17	55.08	74	-18.92	Peak	Vertical
5682	41.24	-2.17	39.07	54	-14.93	AVG	Vertical
5677.25	57.19	-2.17	55.02	74	-18.98	Peak	Horizontal
5677.25	41.18	-2.17	39.01	54	-14.99	AVG	Horizontal
5724.5	57.48	-2.14	55.34	74	-18.66	Peak	Vertical
5724.5	41.47	-2.14	39.33	54	-14.67	AVG	Vertical
5724	56.91	-2.14	54.77	74	-19.23	Peak	Horizontal
5724	40.33	-2.14	38.19	54	-15.81	AVG	Horizontal
802.11a_high_5825							
5851.2	66.21	-2.05	64.16	74	-9.84	Peak	Vertical
5851.2	40.2	-2.05	38.15	54	-15.85	AVG	Vertical
5852.2	63.19	-2.05	61.14	74	-12.86	Peak	Horizontal
5852.2	39.16	-2.05	37.11	54	-16.89	AVG	Horizontal
5879.4	56.84	-1.88	54.96	74	-19.04	Peak	Vertical
5879.4	40.83	-1.88	38.95	54	-15.05	AVG	Vertical
5884.8	56.2	-1.85	54.35	74	-19.65	Peak	Horizontal
5884.8	39.19	-1.85	37.34	54	-16.66	AVG	Horizontal

10 CONDUCTED EMISSION TEST

10.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-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

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

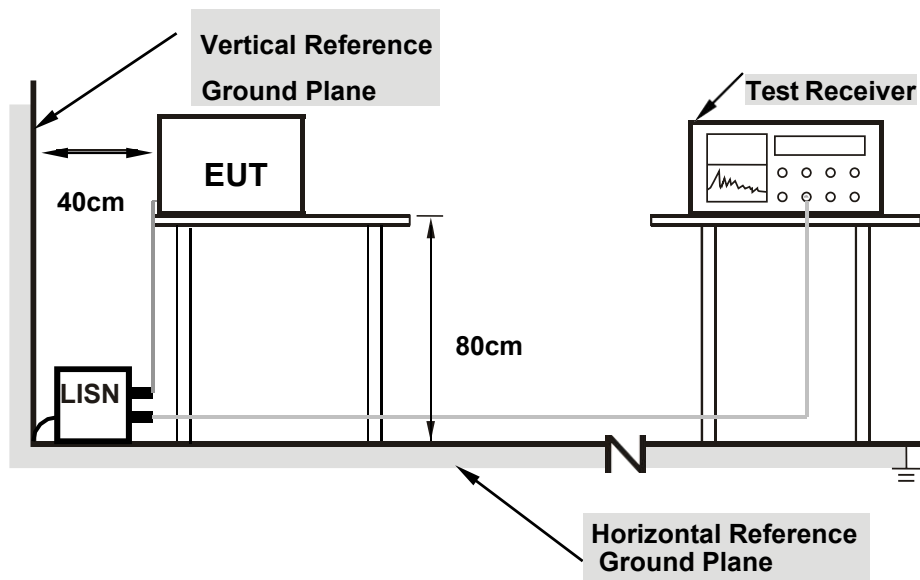
The following table is the setting of the receiver

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

10.2 TEST PROCEDURE

- The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

10.3 TEST SETUP



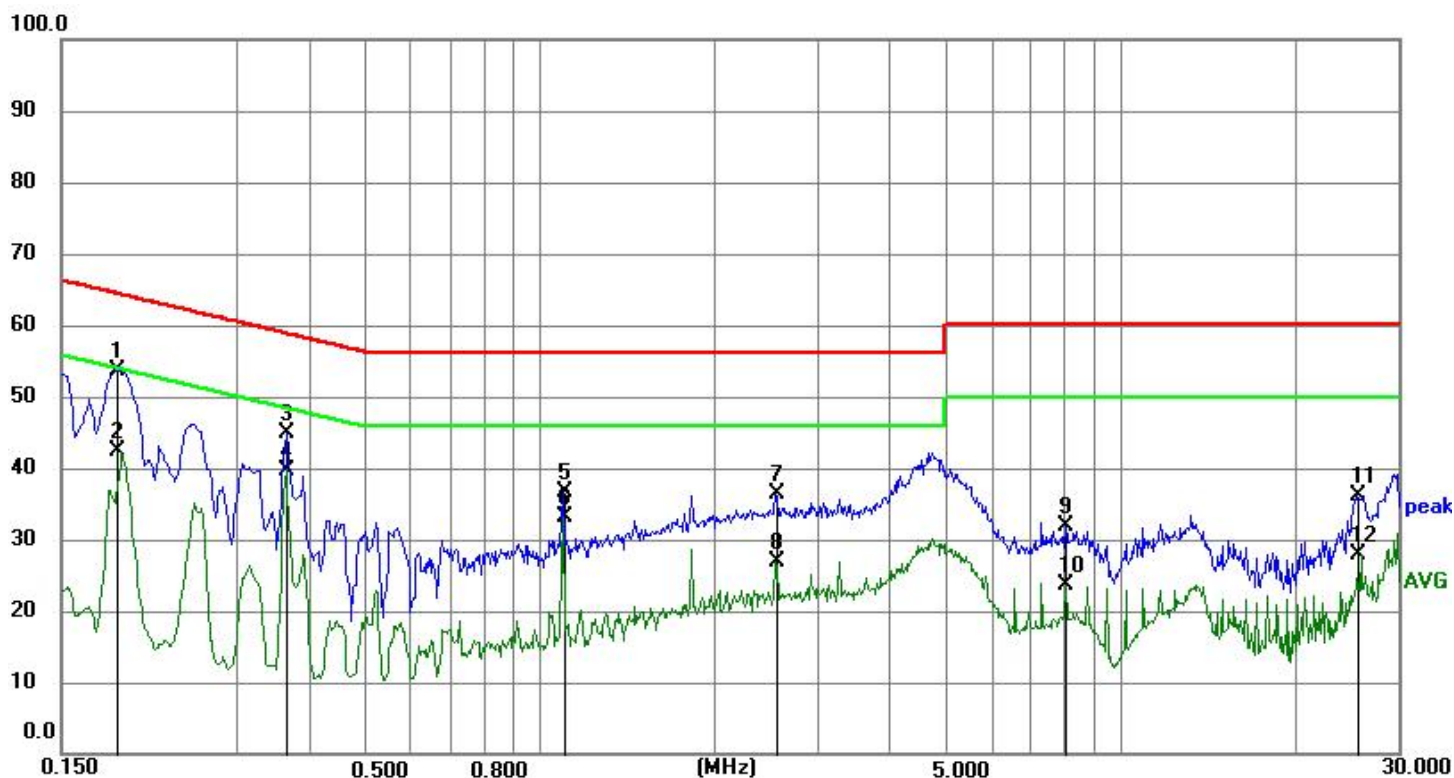
Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

10.4 TEST RESULT

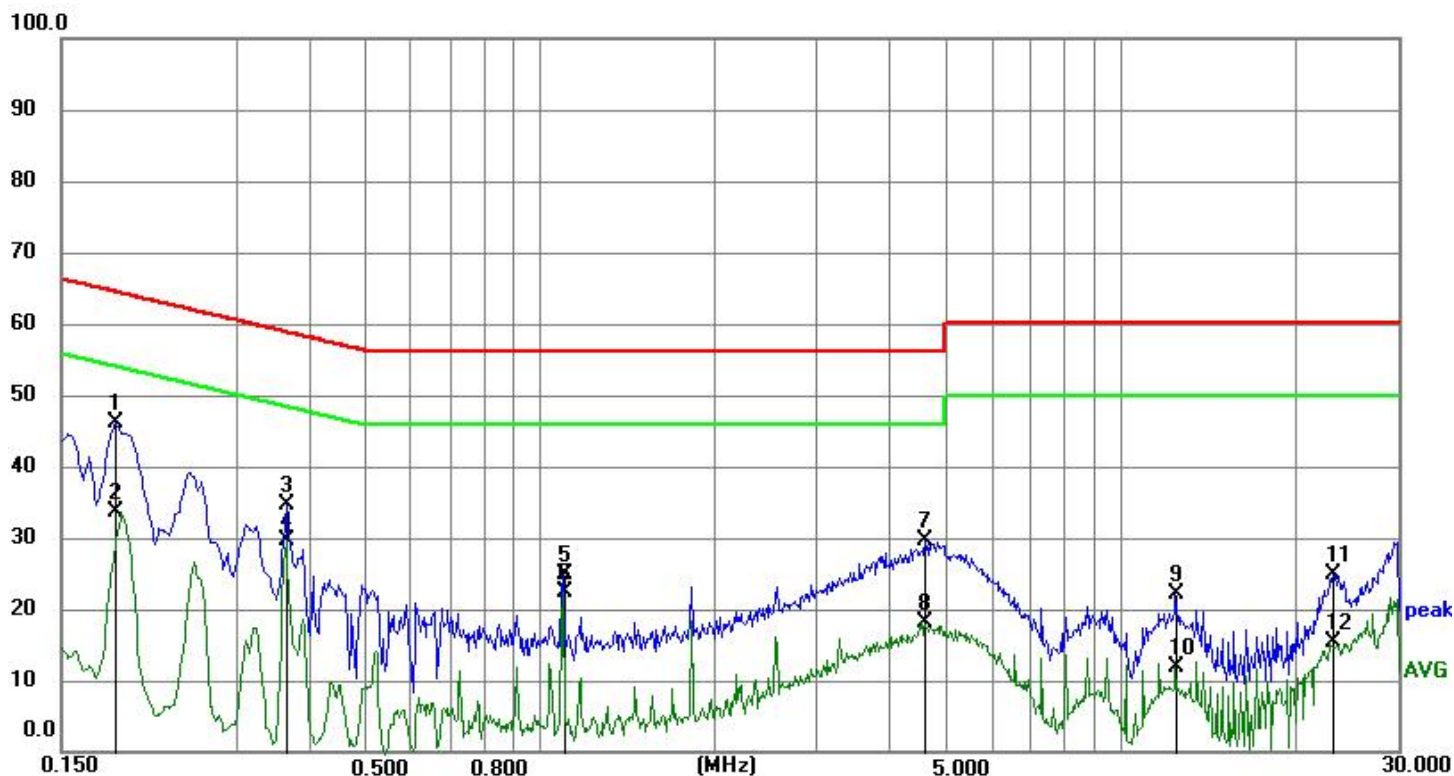
Temperature:	22.1 °C	Relative Humidity:	56%
Test Voltage:	AC 230V	Phase:	L
Test Mode:	Mode 1		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1863	43.79	9.91	53.70	64.20	10.50	peak
2	0.1863	32.47	9.91	42.38	54.20	11.82	AVG
3	0.3660	34.92	9.89	44.81	58.59	13.78	peak
4	0.3660	29.86	9.89	39.75	48.59	8.84	AVG
5	1.0949	26.56	9.99	36.55	56.00	19.45	peak
6	1.0949	23.11	9.99	33.10	46.00	12.90	AVG
7	2.5530	26.30	10.05	36.35	56.00	19.65	peak
8	2.5530	16.94	10.05	26.99	46.00	19.01	AVG
9	8.0295	21.90	10.08	31.98	60.00	28.02	peak
10	8.0295	13.59	10.08	23.67	50.00	26.33	AVG
11	25.5525	25.90	10.30	36.20	60.00	23.80	peak
12	25.5525	17.55	10.30	27.85	50.00	22.15	AVG



Temperature:	22.1 °C	Relative Humidity:	56%
Test Voltage:	AC 230V	Phase:	N
Test Mode:	Mode 1		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1860	36.25	9.85	46.10	64.21	18.11	peak
2	0.1860	23.72	9.85	33.57	54.21	20.64	AVG
3	0.3660	24.81	9.89	34.70	58.59	23.89	peak
4	0.3660	19.81	9.89	29.70	48.59	18.89	AVG
5	1.0949	15.03	9.97	25.00	56.00	31.00	peak
6	1.0949	12.50	9.97	22.47	46.00	23.53	AVG
7	4.6050	19.67	10.03	29.70	56.00	26.30	peak
8	4.6050	8.10	10.03	18.13	46.00	27.87	AVG
9	12.4035	11.97	10.19	22.16	60.00	37.84	peak
10	12.4035	1.71	10.19	11.90	50.00	38.10	AVG
11	23.1765	14.72	10.27	24.99	60.00	35.01	peak
12	23.1765	5.05	10.27	15.32	50.00	34.68	AVG



11. ANTENNA REQUIREMENT

11.1 STANDARD REQUIREMENT

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. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2 RESULT

The antennas used for this product are Ceramic antenna and other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 3.92dBi.

※※※※※END OF THE REPORT※※※※※