

Dynascan Technology Corp.

TEST REPORT

Model:
FBP205

REPORT NUMBER
230900286THC-001

ISSUE DATE
Jan. 16, 2024

PAGES
33

DOCUMENT CONTROL NUMBER
GFT-OP-10h (28-Nov-2018)
© 2020 Intertek



Radio Spectrum TEST REPORT

Applicant:	Dynascan Technology Corp. 6F., No. 88, Wenmao Rd., Guishan Dist., Taoyuan City 333001, Taiwan
Product:	Digital Transmission Systems
Model No.:	FBP205
FCC ID:	2AKWYFBP205
Test Method/ Standard:	47 CFR FCC Part 15.247 & ANSI C63.10 2013 KDB 558074 D01 v05r02
Test By:	Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 17, Ln. 246, Niupu S. Rd., Xiangshan Dist, Hsinchu City 300075, Taiwan



Rich Nien

Rich Nien
Engineer

Zero Chen

Zero Chen
Reviewer

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.

Revision History

Report No.	Issue Date	Revision Summary
230900286THC-001	Jan. 16, 2024	<ol style="list-style-type: none">1. This case is to add different Host(Product Name: 55" Display, Model No.: 67801), so the FCC C2PC (Conducted Output Power, Spurious Emission, Band Edge, and AC Conducted Emissions) is exeuted.2. FCC Original Grant Date: 07/01/2022, FCC ID: 2AKWYFBP205

Table of Contents

1. General Information	5
1.1 Identification of the EUT	5
1.2 Description of the EUT	5
1.3 Antenna description	6
1.4 Operation mode	6
2. Maximum Peak Conducted Output Power.....	7
2.1 Instrument Setting.....	7
2.2 Test Procedure.....	7
2.3 Test Diagram	7
2.4 Limit.....	7
2.5 Test Results	8
3. Emissions in Restricted Frequency Bands (Radiated emission measurements)	9
3.1 Instrument Setting.....	9
3.2 Test setup & procedure	9
3.3 Limit.....	11
3.4 Test Result.....	12
3.4.1 Measurement results from 9kHz to 30MHz	12
3.4.2 Measurement results from 30 MHz to 1 GHz	15
3.4.3 Measurement results from 1 GHz to 25 GHz	17
4. Emission on Band Edge.....	18
4.1 Instrument Setting.....	18
4.2 Test Procedure	18
4.3 Test Results	19
5. AC Power Line Conducted Emission	28
5.1 Measuring instrument setting.....	28
5.2 Test Procedure	28
5.3 Test Diagram	29
5.4 Limit.....	29
5.5 Test Results	30
Appendix A: Test equipment list.....	32
Appendix B: Measurement Uncertainty.....	33

TEST REPORT**Summary of Test Data**

Test Requirement	Applicable Rule (Section 15.247)	Result
Maximum Peak Conducted Output Power	15.247(b)(3)	Pass
Emissions In Restricted Frequency Bands (Radiated emission measurements)	15.247(d), 15.205, 15.209	Pass
Emission On The Band Edge	15.247(d), 15.205	Pass
AC Power Line Conducted Emission	15.207	Pass
Antenna Requirement	15.203	Pass

Note: Please note that the test results with statement of conformity, the decision rules which are based on: Safety Testing: the specification, standard or IEC Guide 115.

Other Testing: the specification, standard and not taking into account the measurement uncertainty.

1. General Information

1.1 Identification of the EUT

Product:	Digital Transmission System
Model No.:	FBP205
Operating Frequency:	1. 2412MHz ~ 2462MHz for 802.11b/g/n HT20 2. 2422MHz ~ 2452MHz for 802.11n HT40
Channel Number:	1. 11 channels for 2412MHz ~ 2462MHz 2. 7 channels for 2422MHz ~ 2452MHz
Access scheme:	DSSS, OFDM
Power Cord:	N/A
Sample receiving date:	2023/11/16
Sample condition:	Workable
Test Date(s):	2023/12/20 ~ 2023/12/26

1.2 Description of the EUT

Modulation mode	Transmit path	
	Chain 0	Chain 1
802.11b	V	V
802.11g	V	V
802.11 n (HT20)	V	V
802.11 n (HT40)	V	V

Item	Product name	Model No.	Rated Power
Host	55" Display	67801	100-240V~ 50/60Hz 4A

1.3 Antenna description

For antenna 0 (Chain 0)

Antenna Gain : -3.04 dBi
Antenna Type : PIFA antenna
Connector Type : I-pex

For antenna 1 (Chain 1)

Antenna Gain : -3.04 dBi
Antenna Type : PIFA antenna
Connector Type : I-pex

1.4 Operation mode

Power on, executing "WLAN Test Tool V2.3.0" to select different frequency and modulation.

With individual verifying, the maximum output power were found out 1 Mbps data rate for 802.11b mode, 6 Mbps data rate for 802.11g mode, 6.5 Mbps data rate for 802.11n(HT20) mode, 13.5 Mbps data rate for 802.11n(HT40) mode the final tests were executed under these conditions recorded in this report individually.

2. Maximum Peak Conducted Output Power

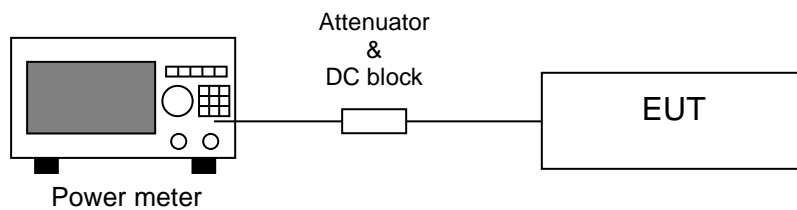
2.1 Instrument Setting

Power Meter Parameter	Setting
Bandwidth	65MHz bandwidth is greater than the EUT emission bandwidth
Detector	Peak & Average

2.2 Test Procedure

The preferred methodology is to use integrated average power measurements, as described in 11.9.2 and 11.13.3 of ANSI C63.10. The peak integrated band power methods of 11.9.1.2 and 11.13.3.2 of ANSI C63.10 are not applicable for FCC compliance testing purposes.

2.3 Test Diagram



2.4 Limit

For systems using digital modulation in the 2400-2483.5 MHz: 1 Watt (30dBm)

TEST REPORT

2.5 Test Results

Temperature (°C) :	20
Relative Humidity (%) :	60
Test date :	2023/12/20
Host :	67801

Mode	Ch	Frequency (MHz)	Output Power (dBm)				Output Power (mW)				Total Power (dBm)				Limit (dBm)	Margin (dB)
			Chain 0		Chain 1		Chain 0		Chain 1		AV		PK			
			AV	PK	AV	PK	AV	PK	AV	PK	0+1 (mW)	0+1 (dBm)	0+1 (mW)	0+1 (dBm)		
802.11b (Chain0+1)	1	2412	21.28	23.23	19.41	21.31	134.28	210.38	87.30	135.21	221.57	23.46	345.59	25.39	30.00	-4.61
	6	2437	21.21	23.08	19.22	21.09	132.13	203.24	83.56	128.53	215.69	23.34	331.76	25.21	30.00	-4.79
	11	2462	22.19	24.09	20.81	22.75	165.58	256.45	120.50	188.36	286.08	24.56	444.81	26.48	30.00	-3.52

Mode	Ch	Frequency (MHz)	Output Power (dBm)				Output Power (mW)				Total Power (dBm)				Limit (dBm)	Margin (dB)
			Chain 0		Chain 1		Chain 0		Chain 1		AV		PK			
			AV	PK	AV	PK	AV	PK	AV	PK	0+1 (mW)	0+1 (dBm)	0+1 (mW)	0+1 (dBm)		
802.11g (Chain0+1)	1	2412	17.52	25.16	16.39	24.52	56.49	328.10	43.55	283.14	100.04	20.00	611.23	27.86	30.00	-2.14
	6	2437	17.54	25.43	15.72	24.26	56.75	349.14	37.33	266.69	94.08	19.73	615.83	27.89	30.00	-2.11
	11	2462	17.92	25.79	16.15	24.54	61.94	379.31	41.21	284.45	103.15	20.13	663.76	28.22	30.00	-1.78

Mode	Ch	Frequency (MHz)	Output Power (dBm)				Output Power (mW)				Total Power (dBm)				Limit (dBm)	Margin (dB)
			Chain 0		Chain 1		Chain 0		Chain 1		AV		PK			
			AV	PK	AV	PK	AV	PK	AV	PK	0+1 (mW)	0+1 (dBm)	0+1 (mW)	0+1 (dBm)		
802.11n (HT20) (Chain0+1)	1	2412	15.77	24.42	15.19	22.87	37.76	276.69	33.04	193.64	70.79	18.50	470.34	26.72	30.00	-3.28
	6	2437	15.25	23.76	14.64	23.07	33.50	237.68	29.11	202.77	62.60	17.97	440.45	26.44	30.00	-3.56
	11	2462	17.42	25.48	15.12	23.57	55.21	353.18	32.51	227.51	87.72	19.43	580.69	27.64	30.00	-2.36

Mode	Ch	Frequency (MHz)	Output Power (dBm)				Output Power (mW)				Total Power (dBm)				Limit (dBm)	Margin (dB)
			Chain 0		Chain 1		Chain 0		Chain 1		AV		PK			
			AV	PK	AV	PK	AV	PK	AV	PK	0+1 (mW)	0+1 (dBm)	0+1 (mW)	0+1 (dBm)		
802.11n (HT40) (Chain0+1)	3	2422	15.69	24.11	14.68	23.09	37.07	257.63	29.38	203.70	66.44	18.22	461.34	26.64	30.00	-3.36
	6	2437	15.00	22.85	14.06	22.32	31.62	192.75	25.47	170.61	57.09	17.57	363.36	25.60	30.00	-4.40
	9	2452	16.44	24.33	14.89	23.20	44.06	271.02	30.83	208.93	74.89	18.74	479.95	26.81	30.00	-3.19

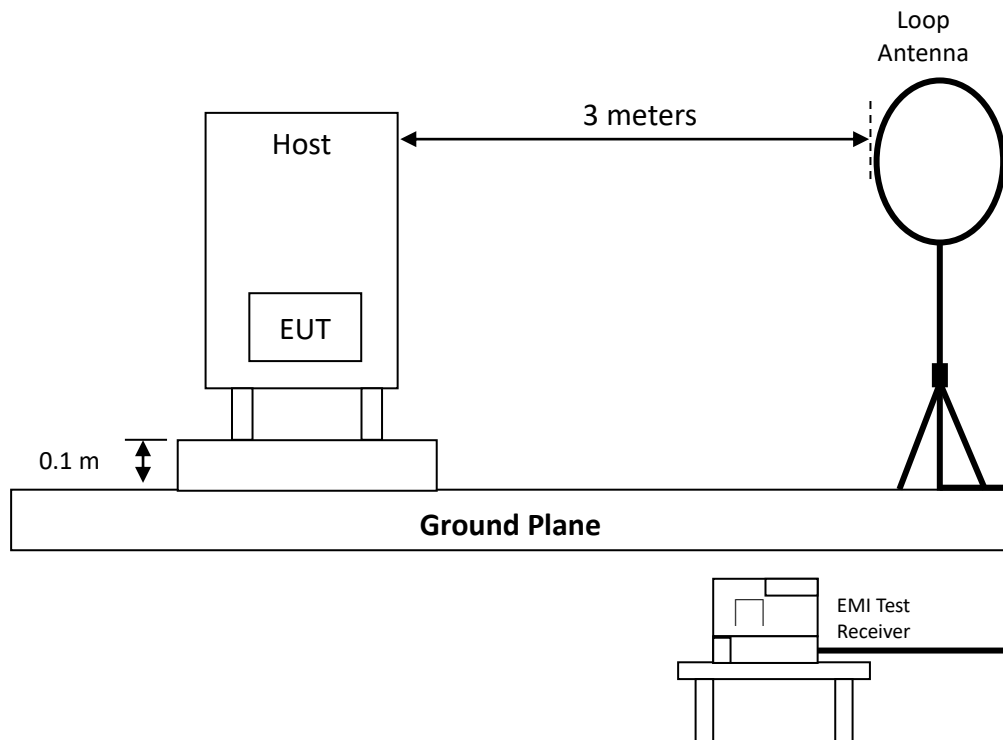
3. Emissions in Restricted Frequency Bands (Radiated emission measurements)

3.1 Instrument Setting

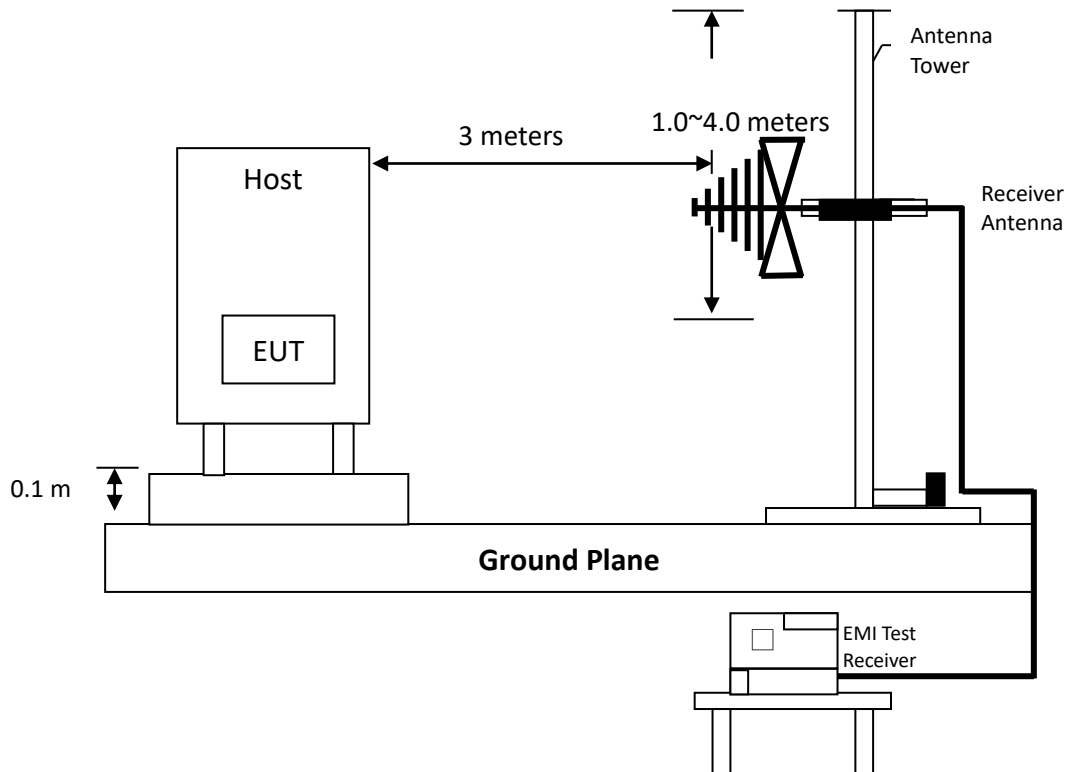
Receiver Function	Setting (Below 1GHz)	Setting (Above 1GHz)
Detector	QP	Peak and Average
RBW	9-150 kHz; 200-300 Hz 0.15-30 MHz; 9-10 kHz 30-1000 MHz; 100-120 kHz	1MHz
VBW	$\geq 3 \times \text{RBW}$	3MHz & 1/T minimum kHz
Sweep	Auto couple	Auto couple
Start Frequency	9 kHz	1GHz
Stop Frequency	1 GHz	Tenth harmonic
Attenuation	Auto	Auto

3.2 Test setup & procedure

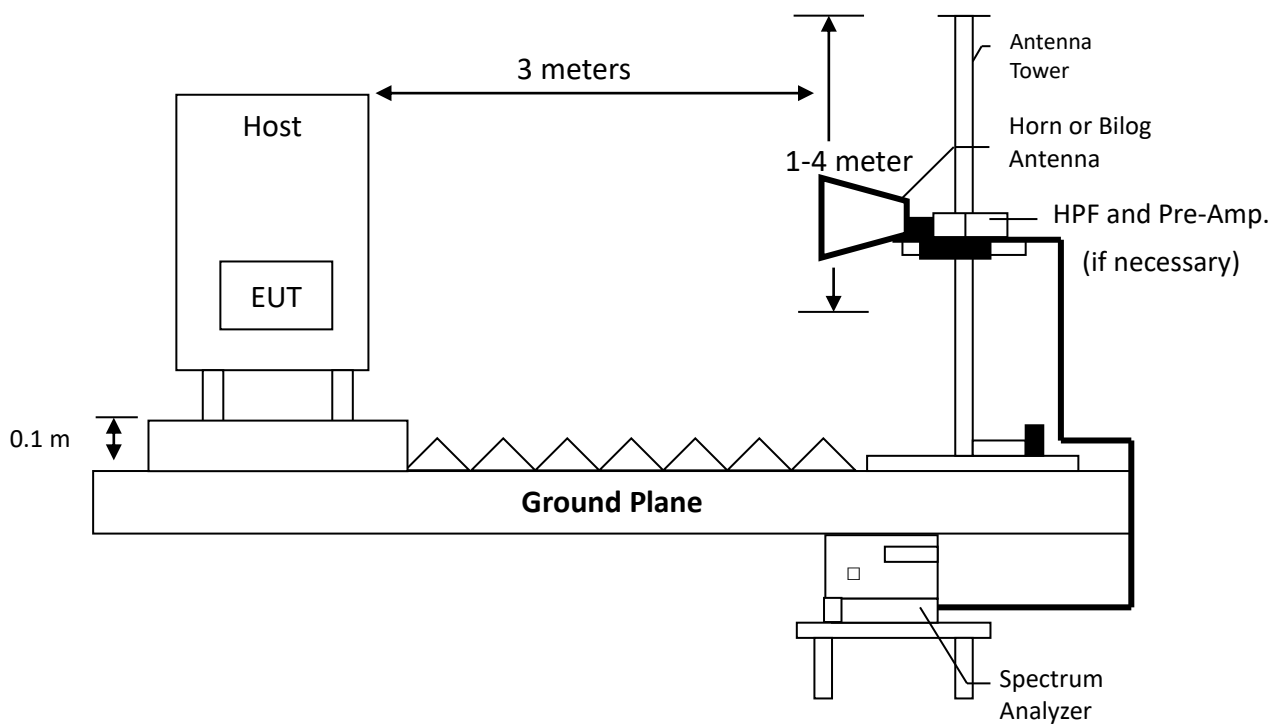
Radiated emission from 9kHz to 30MHz uses Loop Antenna:



Radiated emission below 1GHz using Bilog Antenna



Radiated emission above 1GHz using Horn Antenna



TEST REPORT

Radiated emissions were investigated cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 1/T minimum kHz VBW record Average reading. (15.209 paragraph), the Peak reading (1 MHz RBW/ 3 MHz VBW) recorded also on the report.

The EUT for testing is arranged on a turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meters reading using inverse scaling with distance.

3.3 Limit

Frequency(MHz)	Field Strength(uV/m)	Measurement distance(m)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

TEST REPORT

3.4 Test Result

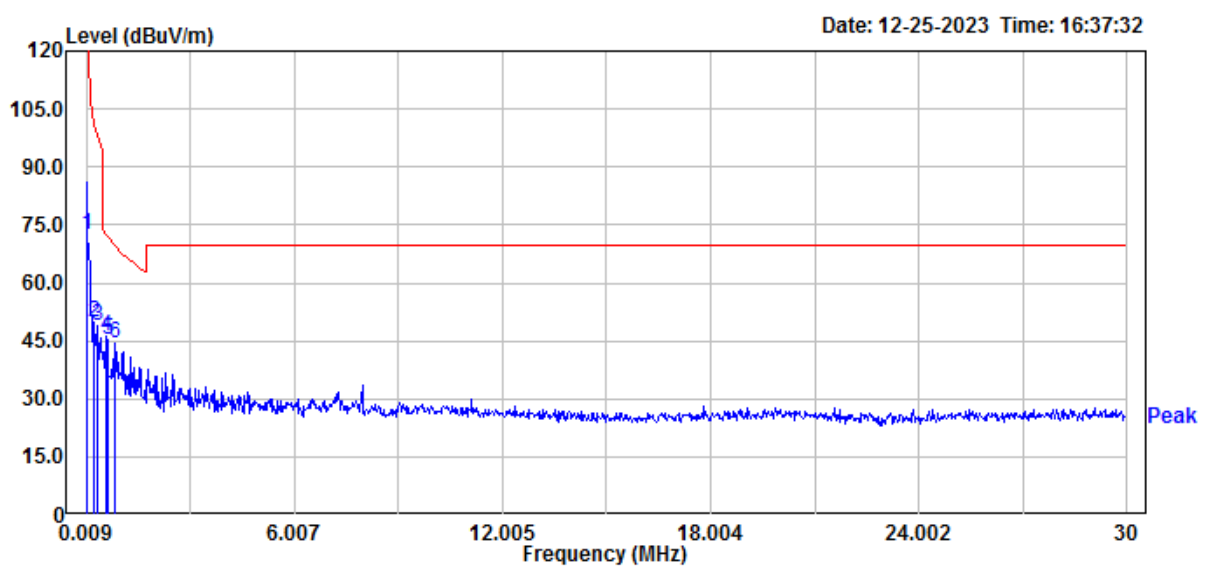
3.4.1 Measurement results from 9kHz to 30MHz

Temperature (°C) :	20
Relative Humidity (%) :	51
Test date :	2023/12/25
Host :	67801

The test was performed on EUT under continuously transmitting mode. The worst case occurred at 802.11g Channel 11.

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Perpendicular	0.039	PK	18.35	54.20	72.55	121.63	-49.08
Perpendicular	0.219	PK	17.86	32.10	49.96	100.85	-50.89
Perpendicular	0.339	PK	18.00	30.71	48.71	97.02	-48.31
Perpendicular	0.549	PK	18.20	28.16	46.36	72.86	-26.50
Perpendicular	0.609	PK	18.22	27.19	45.41	71.93	-26.52
Perpendicular	0.819	PK	18.41	25.93	44.34	69.36	-25.02

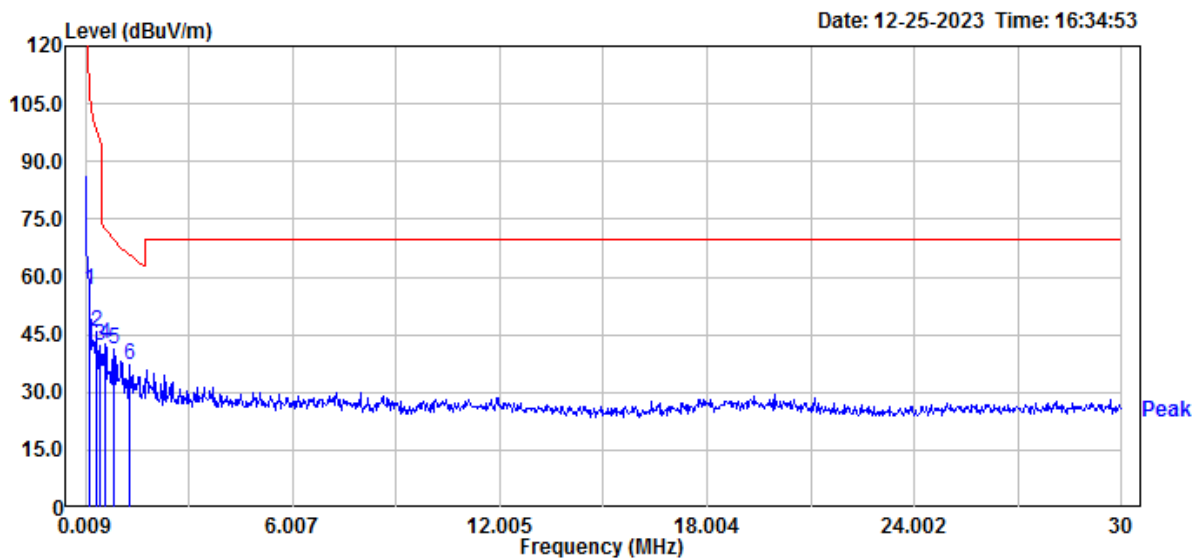
Remark: Corr. Factor = Antenna Factor + Cable Loss



TEST REPORT

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dB μ V)	Corrected Reading (dB μ V/m)	Limit @ 3 m (dB μ V/m)	Margin (dB)
Parallel	0.129	PK	17.49	38.91	56.40	105.56	-49.16
Parallel	0.339	PK	18.00	27.74	45.74	97.02	-51.28
Parallel	0.399	PK	18.19	24.13	42.32	95.59	-53.27
Parallel	0.549	PK	18.20	24.52	42.72	72.86	-30.14
Parallel	0.819	PK	18.41	22.98	41.39	69.36	-27.97
Parallel	1.299	PK	18.29	18.78	37.07	65.36	-28.29

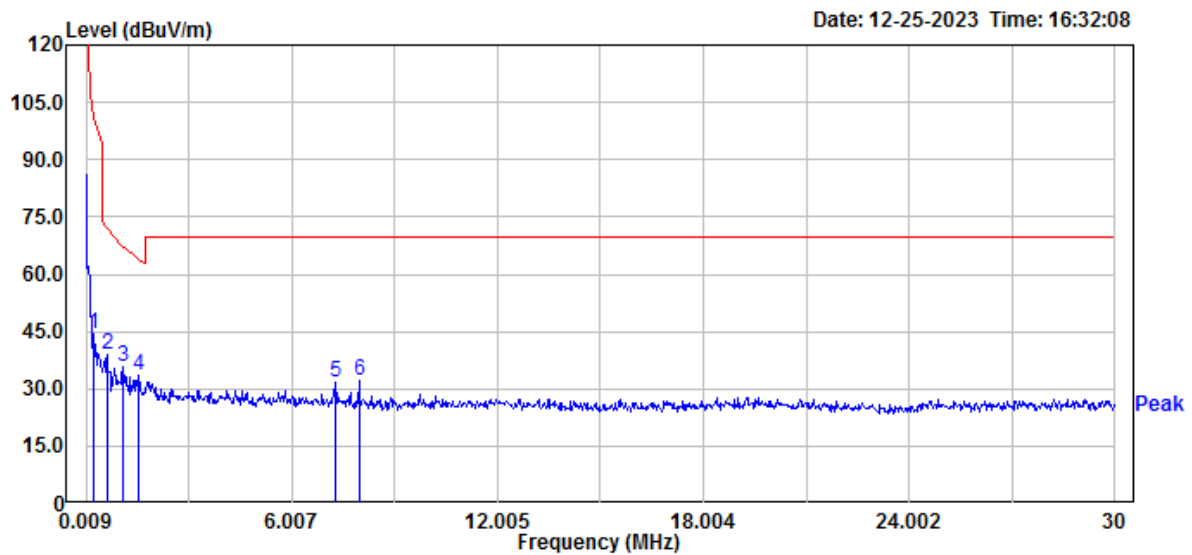
Remark: Corr. Factor = Antenna Factor + Cable Loss



TEST REPORT

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dB μ V)	Corrected Reading (dB μ V/m)	Limit @ 3 m (dB μ V/m)	Margin (dB)
Ground-parallel	0.219	PK	17.86	26.44	44.30	100.85	-56.55
Ground-parallel	0.609	PK	18.22	20.67	38.89	71.93	-33.04
Ground-parallel	1.089	PK	18.33	17.53	35.86	66.90	-31.04
Ground-parallel	1.509	PK	18.26	15.45	33.71	64.05	-30.34
Ground-parallel	7.267	PK	20.20	11.69	31.89	69.54	-37.65
Ground-parallel	7.957	PK	20.14	11.90	32.04	69.54	-37.50

Remark: Corr. Factor = Antenna Factor + Cable Loss



TEST REPORT

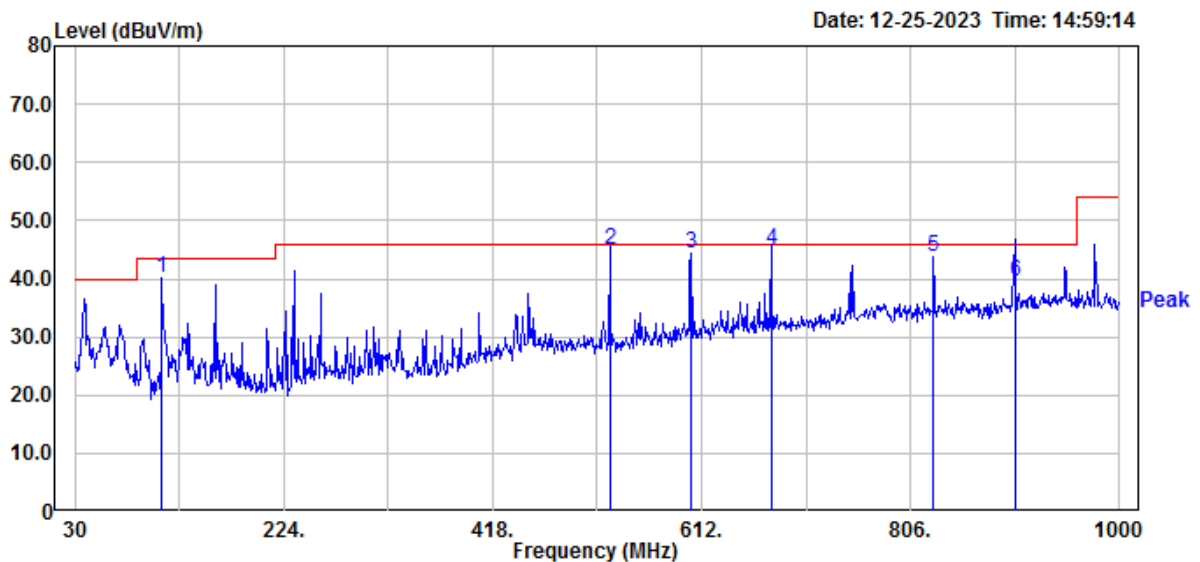
3.4.2 Measurement results from 30 MHz to 1 GHz

Temperature (°C) :	20
Relative Humidity (%) :	51
Test date :	2023/12/25
Host :	67801

The test was performed on EUT under continuously transmitting mode. The worst case occurred at 802.11g Channel 11.

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Vertical	110.51	QP	17.07	22.96	40.03	43.50	-3.47
Vertical	526.64	QP	26.98	18.00	44.98	46.00	-1.02
Vertical	602.30	QP	28.95	15.41	44.36	46.00	-1.64
Vertical	677.10	QP	30.09	14.86	44.95	46.00	-1.05
Vertical	827.34	QP	32.50	11.32	43.82	46.00	-2.18
Vertical	903.00	QP	33.38	6.15	39.53	46.00	-6.47

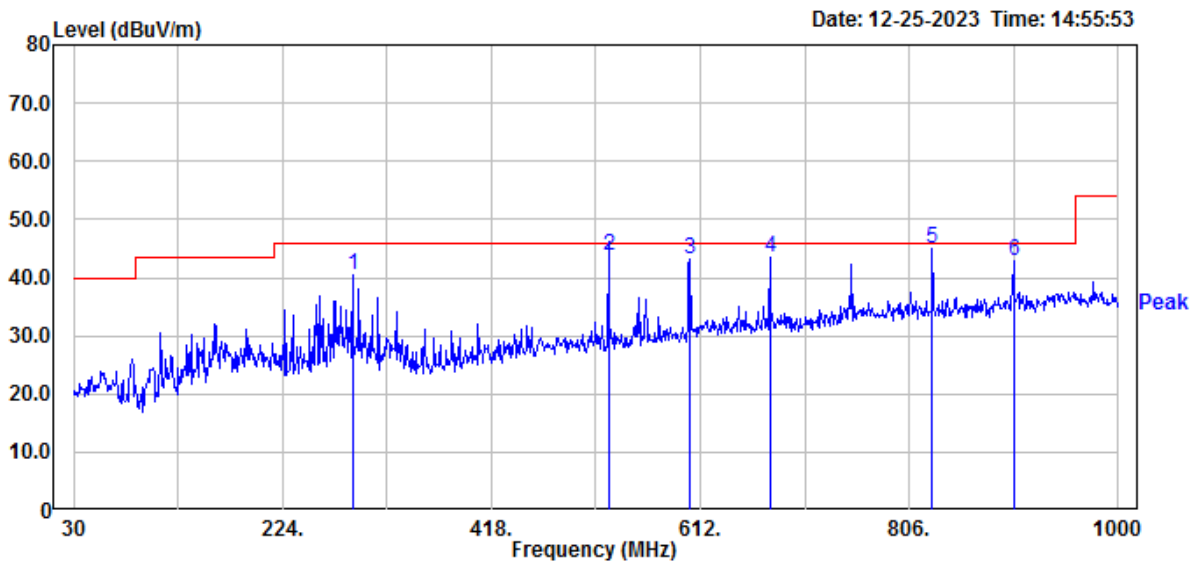
Remark: Corr. Factor = Antenna Factor + Cable Loss



TEST REPORT

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Horizontal	288.99	QP	21.41	18.95	40.36	46.00	-5.64
Horizontal	526.64	QP	26.98	16.67	43.65	46.00	-2.35
Horizontal	602.30	QP	28.95	14.18	43.13	46.00	-2.87
Horizontal	676.99	QP	30.09	13.25	43.34	46.00	-2.66
Horizontal	827.34	QP	32.50	12.36	44.86	46.00	-1.14
Horizontal	903.00	QP	33.38	9.34	42.72	46.00	-3.28

Remark: Corr. Factor = Antenna Factor + Cable Loss



TEST REPORT

3.4.3 Measurement results from 1 GHz to 25 GHz

Temperature (°C) :	21
Relative Humidity (%) :	57
Test date :	2023/12/21
Host :	67801

Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
802.11g_Ch11	4924	PK	H	-5.42	42.64	37.22	74	-36.78
	4924	PK	V	-5.42	43.56	38.14	74	-35.86

Remark: Correction Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Pre_Amplifier Gain

4. Emission on Band Edge**4.1 Instrument Setting**

Spectrum Function	Setting
Detector	Peak and Average
RBW	1MHz
VBW	3MHz & 1/T minimum kHz
Sweep	Auto couple
Restrict bands	2310 MHz ~ 2390 MHz 2483.5 MHz ~ 2500 MHz
Attenuation	Auto

4.2 Test Procedure

The test procedure is the same as Emissions in Restricted Frequency Bands (Radiated emission measurements).

TEST REPORT

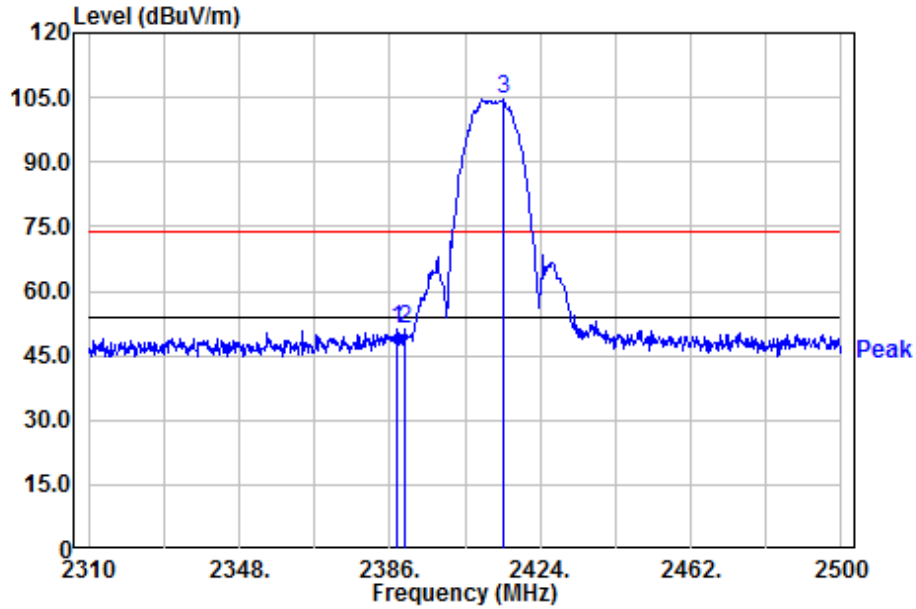
4.3 Test Results

Temperature (°C) :	21
Relative Humidity (%) :	57
Test date :	2023/12/21
Host :	67801

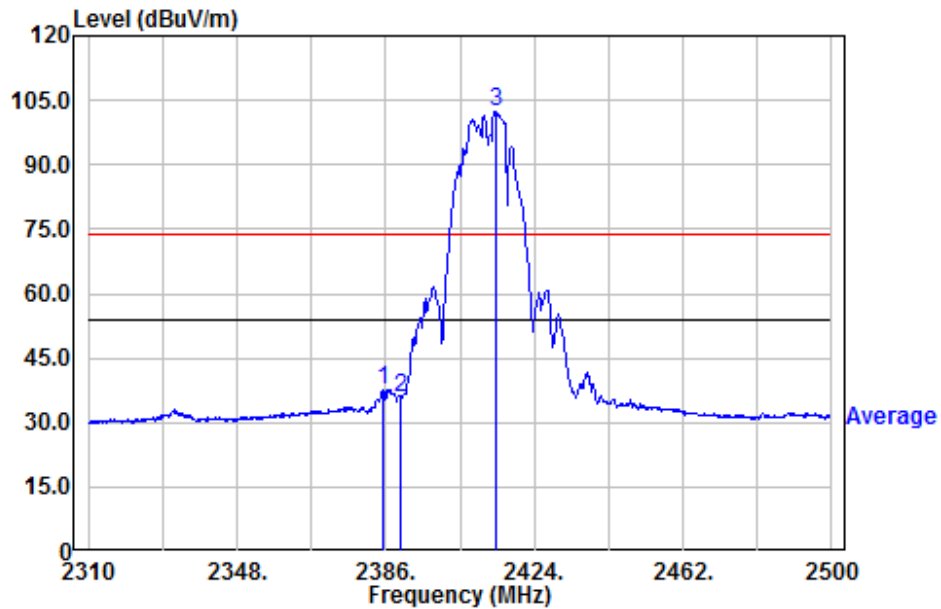
Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)	Restricted band (MHz)
802.11b	2387.71	PK	H	34.83	16.34	51.17	74	-22.83	2310~2390
	2385.43	AV	H	34.83	2.80	37.63	54	-16.37	
	2492.59	PK	H	35.67	15.36	51.03	74	-22.97	2483.5~2500
	2487.08	AV	H	35.64	1.04	36.68	54	-17.32	
802.11g	2388.85	PK	H	34.83	23.35	58.18	74	-15.82	2310~2390
	2390.00	AV	H	34.83	10.11	44.94	54	-9.06	
	2484.23	PK	H	35.64	20.76	56.40	74	-17.60	2483.5~2500
	2483.50	AV	H	35.64	5.09	40.73	54	-13.27	
802.11n (HT20)	2390.00	PK	H	34.83	18.43	53.26	74	-20.74	2310~2390
	2390.00	AV	H	34.83	7.32	42.15	54	-11.85	
	2483.50	PK	H	35.64	16.81	52.45	74	-21.55	2483.5~2500
	2483.50	AV	H	35.64	3.93	39.57	54	-14.43	
802.11n (HT40)	2388.47	PK	H	34.83	22.58	57.41	74	-16.59	2310~2390
	2390.00	AV	H	34.83	8.30	43.13	54	-10.87	
	2490.88	PK	H	35.66	18.04	53.70	74	-20.30	2483.5~2500
	2483.50	AV	H	35.64	6.44	42.08	54	-11.92	

Remark: Correction Factor = Antenna Factor + Cable Loss

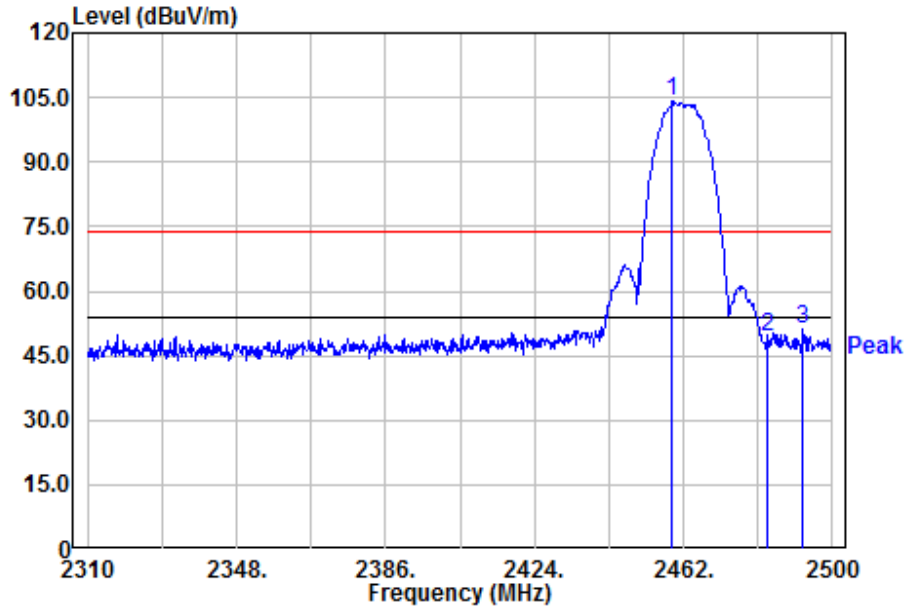
Chain0+1 : Restricted Band Bandedge @ 802.11b Mode Ch1 PK



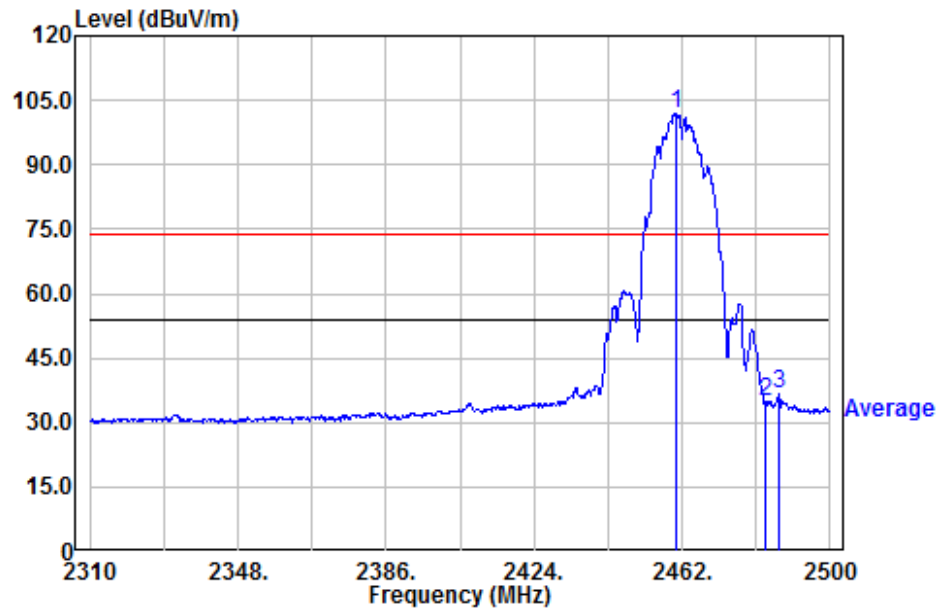
Chain0+1 : Restricted Band Bandedge @ 802.11b Mode Ch1 AV



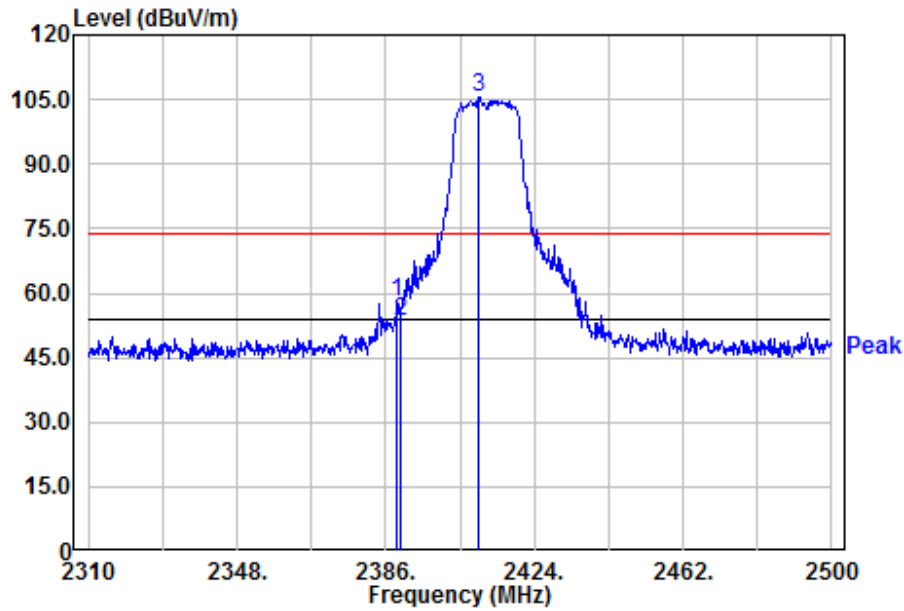
Chain0+1 : Restricted Band Bandedge @ 802.11b Mode Ch11 PK



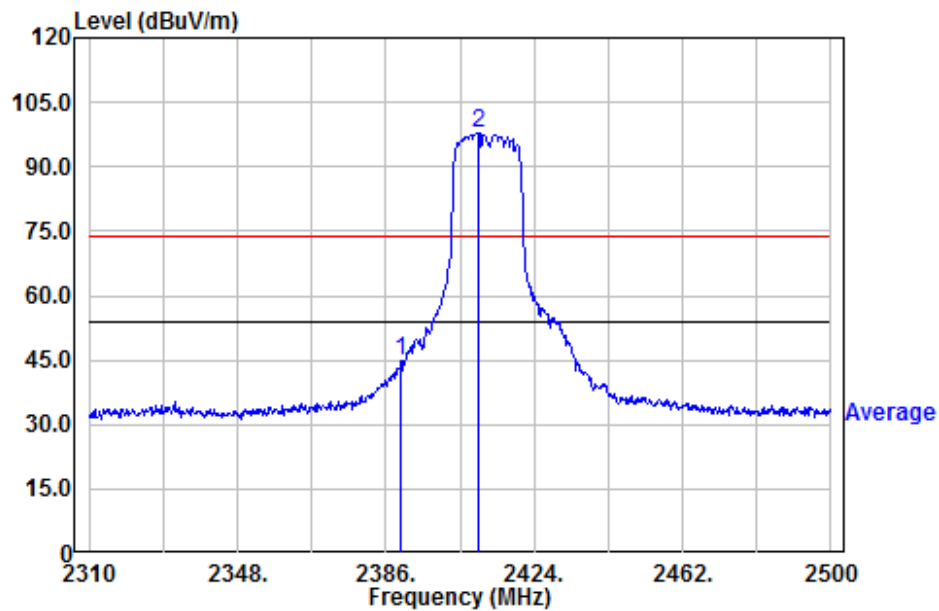
Chain0+1: Restricted Band Bandedge @ 802.11b Mode Ch11 AV



Chain0+1 : Restricted Band Bandedge @ 802.11g Mode Ch1 PK

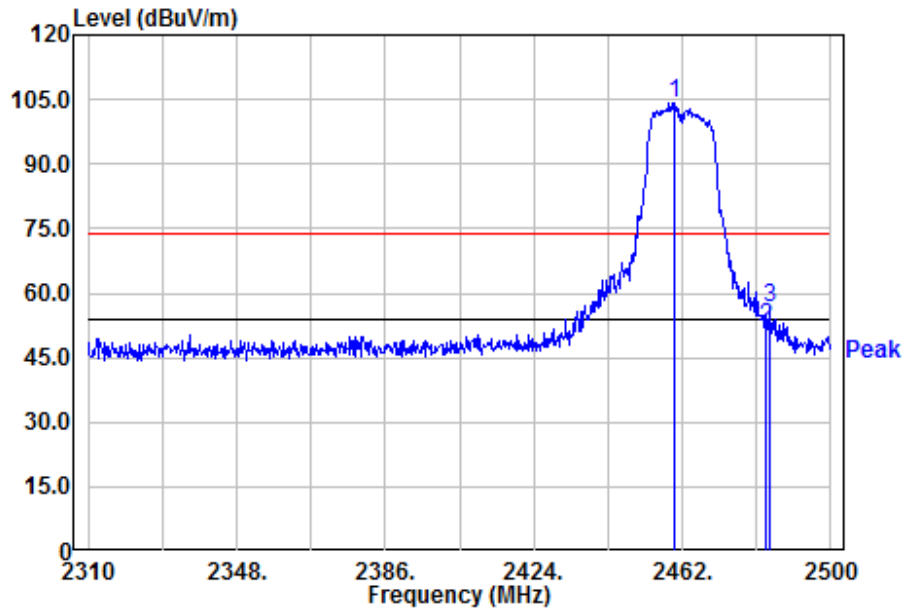


Chain0+1 : Restricted Band Bandedge @ 802.11g Mode Ch1 AV

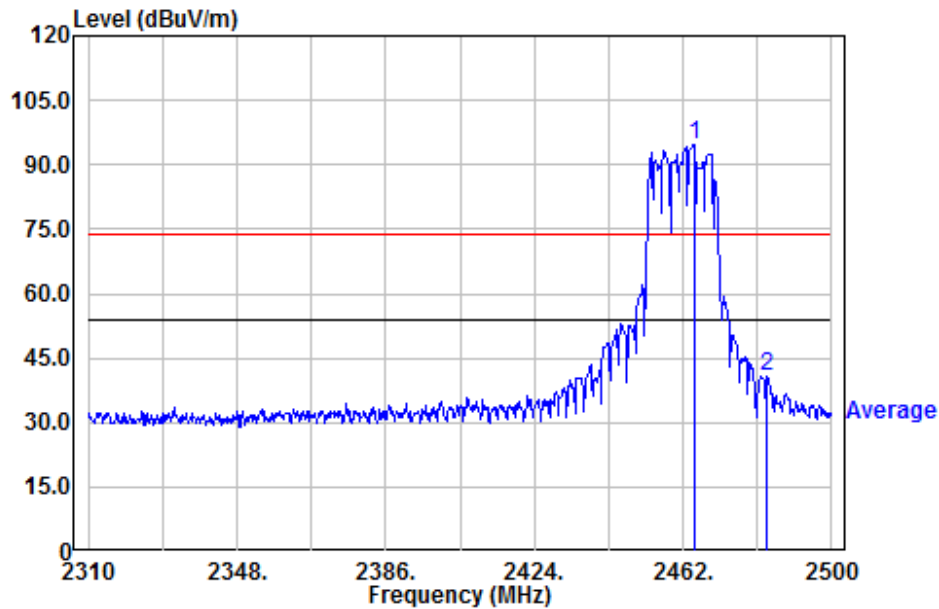


TEST REPORT

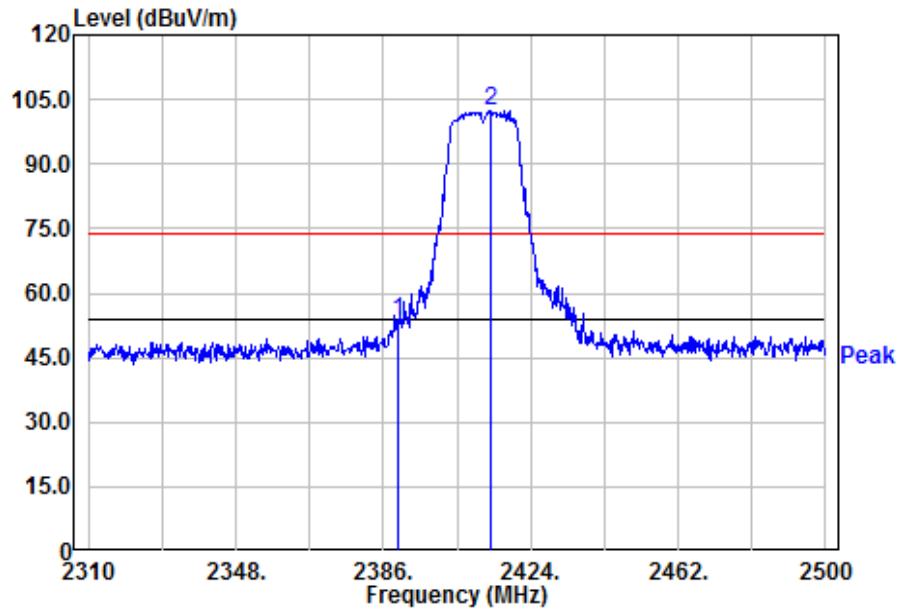
Chain0+1 : Restricted Band Bandedge @ 802.11g Mode Ch11 PK



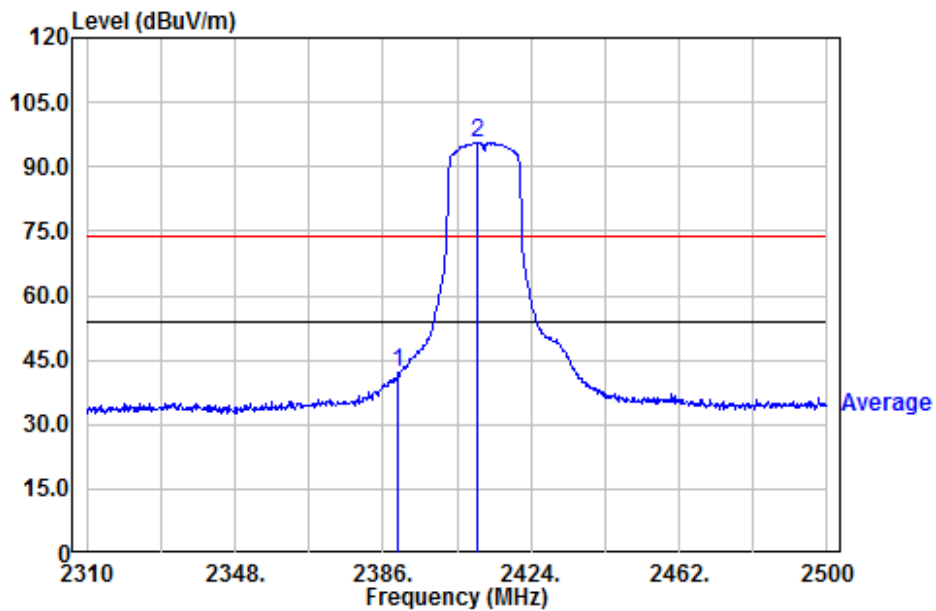
Chain0+1 : Restricted Band Bandedge @ 802.11g Mode Ch11 AV



Chain0+1 : Restricted Band Bandedge @ 802.11n(HT20) Mode Ch1 PK

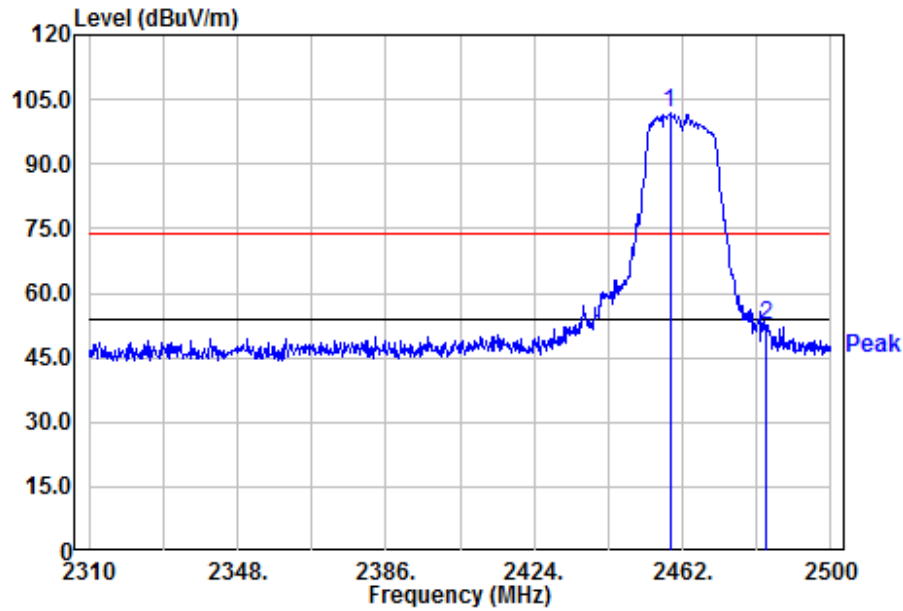


Chain0+1 : Restricted Band Bandedge @ 802.11n(HT20) Mode Ch1 AV

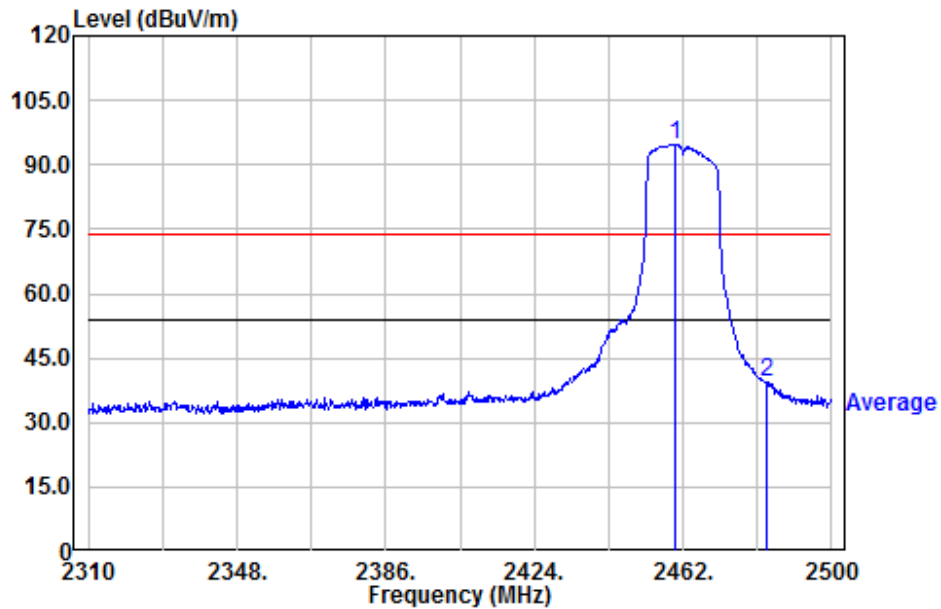


TEST REPORT

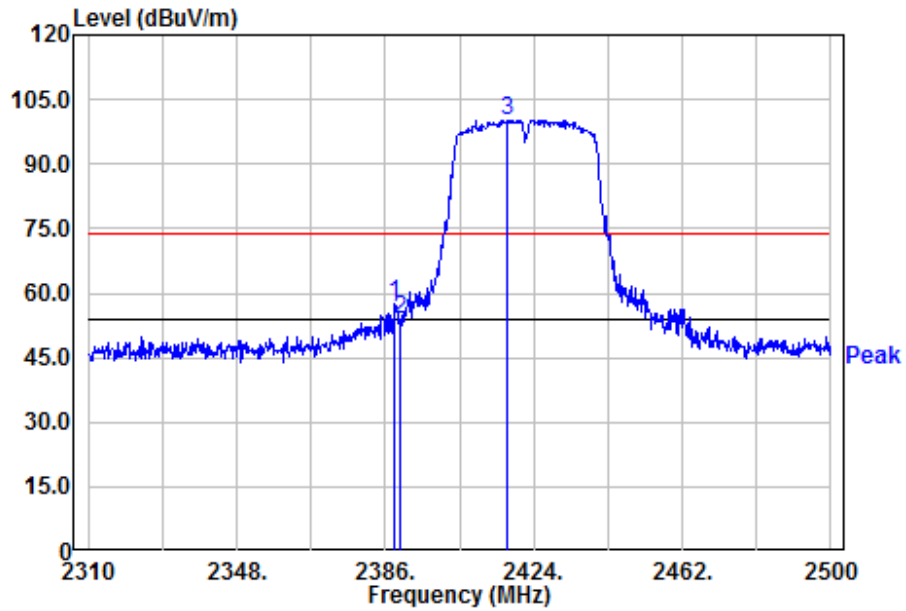
Chain0+1 : Restricted Band Bandedge @ 802.11n(HT20) Mode Ch11 PK



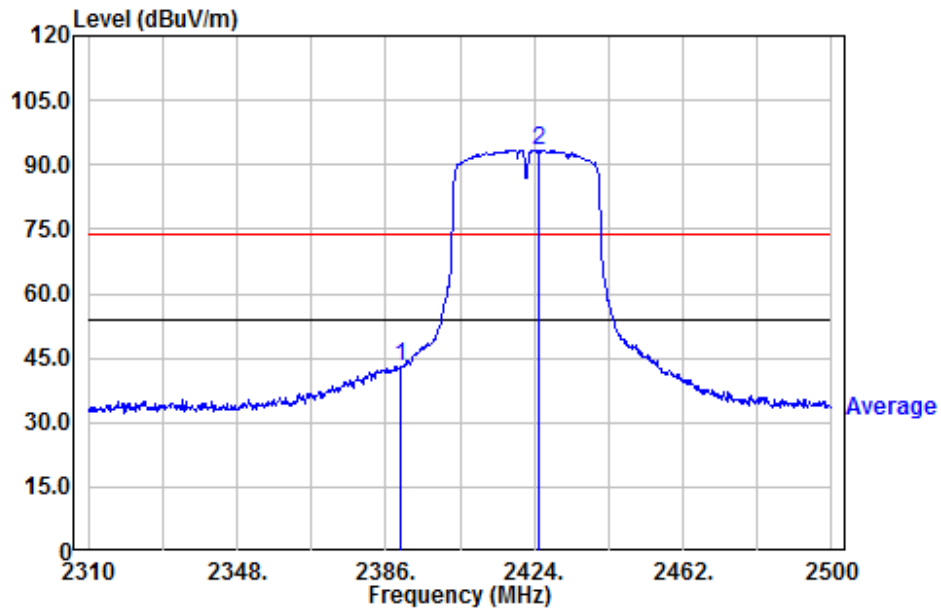
Chain0+1 : Restricted Band Bandedge @ 802.11n(HT20) Mode Ch11 AV



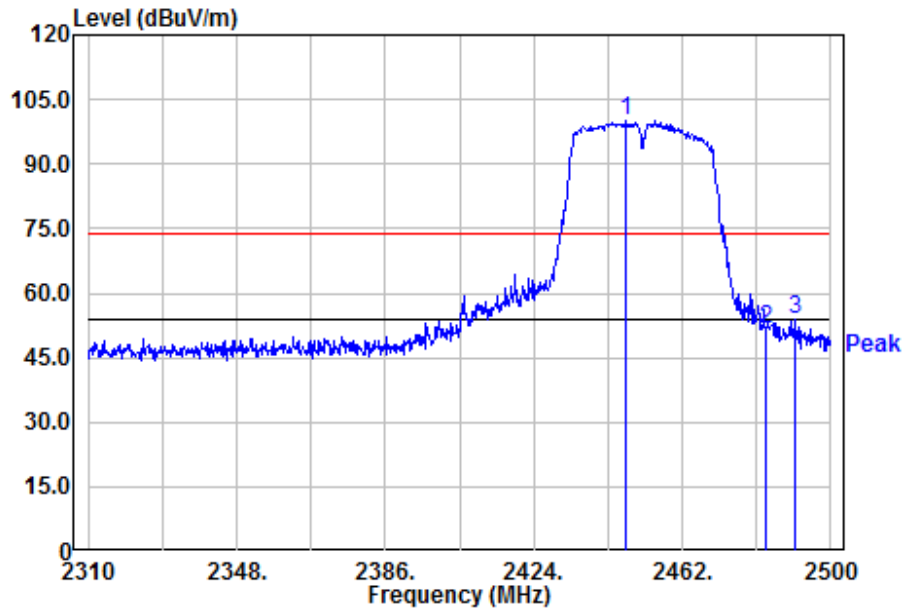
Chain0+1 : Restricted Band Bandedge @ 802.11n(HT40) Mode Ch3 PK



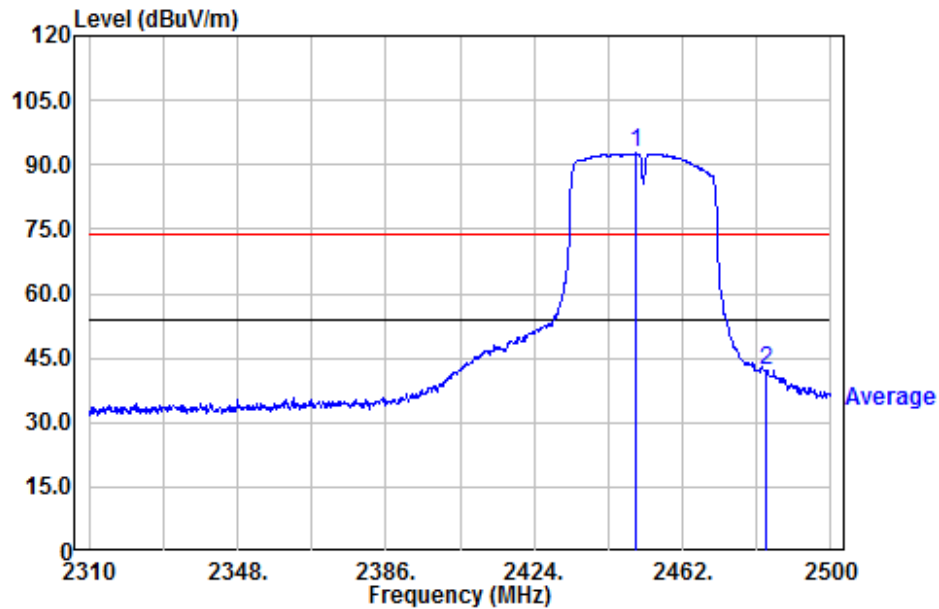
Chain0+1 : Restricted Band Bandedge @ 802.11n(HT40) Mode Ch3 AV



Chain0+1 : Restricted Band Bandedge @ 802.11n(HT40) Mode Ch9 PK



Chain0+1 : Restricted Band Bandedge @ 802.11n(HT40) Mode Ch9 AV



TEST REPORT

5. AC Power Line Conducted Emission

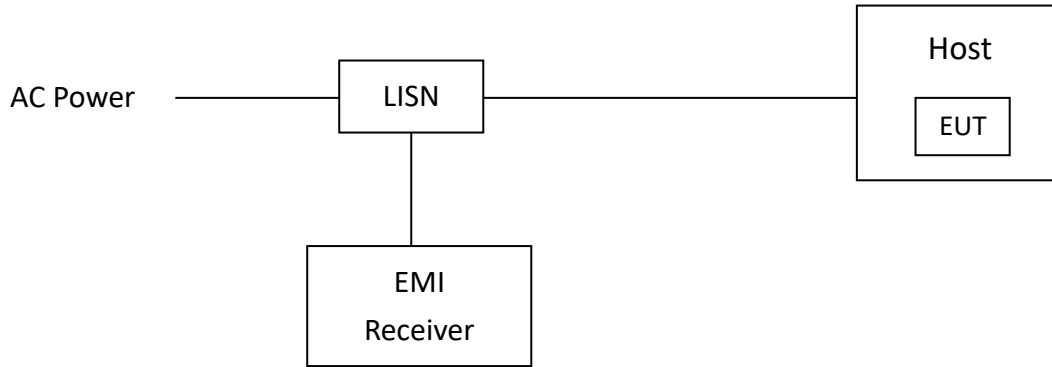
5.1 Measuring instrument setting

Receiver Function	Setting
Detector	QP
Start frequency	0.15MHz
Stop frequency	30MHz
IF bandwidth	9 kHz
Attenuation	10dB

5.2 Test Procedure

Step 1	Configure the EUT according to ANSI C63.10:2013. The EUT or host of EHT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
Step 2	Connect EUT or host of EUT to the power mains through a line impedance stabilization network.
Step 3	All the companion devices are connected to the other LISN. The LISN should provide 50Uh/50ohms coupling impedance.
Step 4	The frequency range from 150 kHz to 30MHz was searched.
Step 5	Set the test-receiver system to peak detector and specified bandwidth with maximum hold mode.
Step 6	The measurement has to be done between each power line and ground at the power terminal.

5.3 Test Diagram



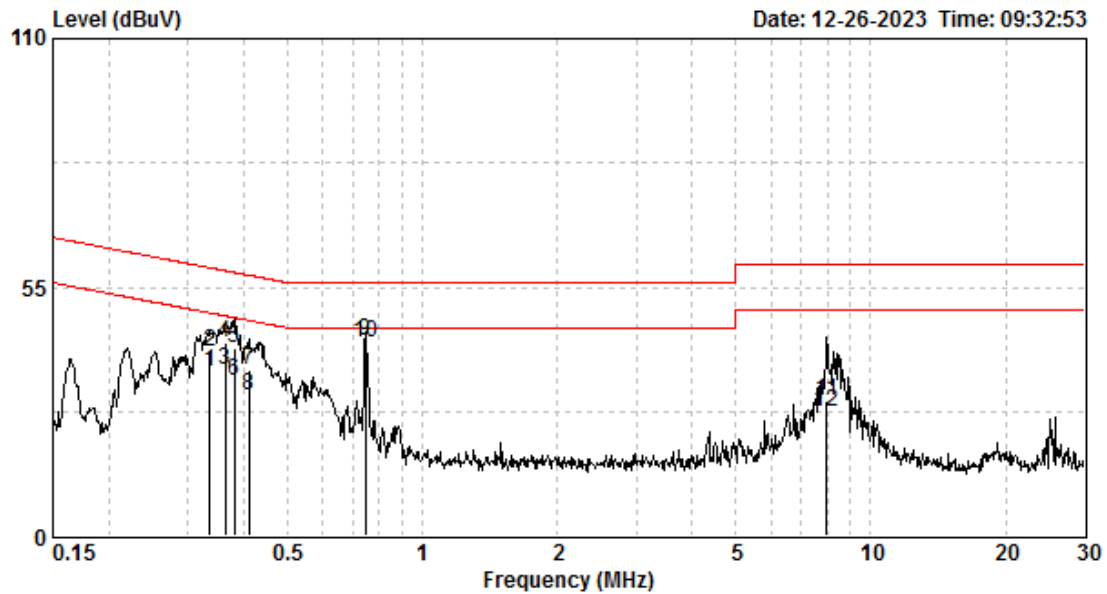
5.4 Limit

Frequency (MHz)	Conducted Limit (dBuV)	
	Q.P.	Ave.
0.15~0.50	66 – 56	56 – 46
0.50~5.00	56	46
5.00~30.0	60	50

TEST REPORT

5.5 Test Results

Model No.:	FBP205
Host:	67801



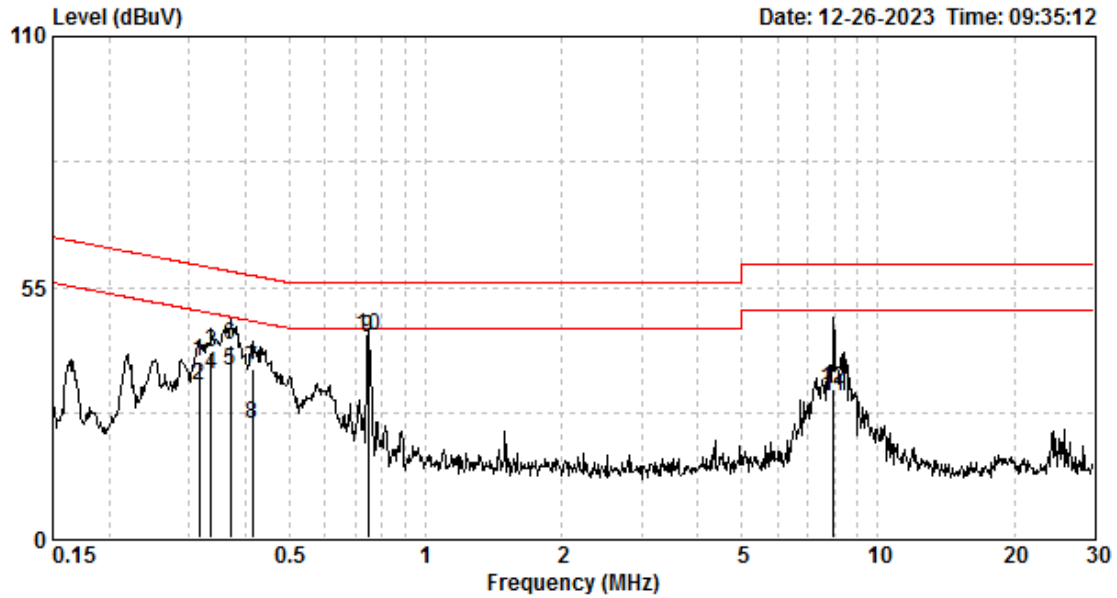
Test voltage :AC 110V
 Temp \ Relative Humidity:19 °C \ 60 %RH
 Atmospheric pressure :1005hPa

Phase	Frequency (MHz)	Corr. Factor (dB)	Reading QP (dBUV)	Level QP (dBUV)	Limit QP (dBUV)	Reading AV (dBUV)	Level AV (dBUV)	Limit AV (dBUV)	Margin (dB)	
									QP	AV
LINE	0.336	9.61	31.24	40.85	59.31	26.65	36.26	49.31	-18.46	-13.05
LINE	0.363	9.61	33.22	42.83	58.65	27.19	36.80	48.65	-15.82	-11.85
LINE	0.381	9.61	31.71	41.32	58.25	24.75	34.36	48.25	-16.94	-13.89
LINE	0.410	9.61	26.89	36.50	57.64	21.37	30.98	47.64	-21.14	-16.66
LINE	0.747	9.61	33.22	42.84	56.00	33.45	43.06	46.00	-13.16	-2.94
LINE	7.977	9.67	20.29	29.96	60.00	17.56	27.24	50.00	-30.04	-22.76

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBUV) = Corr. Factor (dB) + Reading (dBUV)
3. Margin (dB) = Level (dBUV) – Limit (dBUV)

TEST REPORT



Test voltage :AC 110V
 Temp \ Relative Humidity:19 °C \ 60 %RH
 Atmospheric pressure :1005hPa

Phase	Frequency (MHz)	Corr. Factor (dB)	Reading QP (dBuV)	Level QP (dBuV)	Limit QP (dBuV)	Reading AV (dBuV)	Level AV (dBuV)	Limit AV (dBuV)	Margin (dB)	
									QP	AV
NEUTRAL	0.317	9.61	28.91	38.52	59.80	23.64	33.25	49.80	-21.28	-16.54
NEUTRAL	0.336	9.61	31.02	40.63	59.31	26.21	35.82	49.31	-18.68	-13.49
NEUTRAL	0.371	9.61	32.60	42.21	58.47	26.97	36.58	48.47	-16.27	-11.90
NEUTRAL	0.415	9.61	27.41	37.02	57.55	15.39	25.00	47.55	-20.53	-22.55
NEUTRAL	0.747	9.61	34.33	43.94	56.00	34.71	44.32	46.00	-12.06	-1.68
NEUTRAL	7.977	9.68	23.15	32.83	60.00	21.50	31.17	50.00	-27.17	-18.83

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Level (dBuV) = Corr. Factor (dB) + Reading (dBuV)
3. Margin (dB) = Level (dBuV) – Limit (dBuV)

TEST REPORT

Appendix A: Test equipment list

Test Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Test Receiver	KEYSIGHT	N9038B	MY63060107	2023/04/02	2024/04/01
Spectrum analyzer	KEYSIGHT	N9020B	MY63450146	2023/04/01	2024/03/31
Horn Antenna	EMCO	3115	9906-5822	2023/05/12	2024/05/11
Active Loop Antenna	SCHWARZBECK	FMZB1519	1519-067	2023/02/21	2024/02/20
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2023/01/13	2024/01/12
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170159	2021/04/08	2024/04/06
Pre-amplifier	SGH	SGH118(45dB)	20220105-1	2023/02/04	2024/02/03
Pre-amplifier	SGH	SGH184	20201124-1	2023/10/31	2024/10/30
966-2(A) Cable	SUHNER	SUCOFLEX 104	295105/4	2023/03/03	2024/03/01
966-2(B) Cable	SUHNER	SUCOFLEX 104P	CB0005	2023/03/03	2024/03/01
RF Cable	SUHNER	SUCOFLEX 104P	9403 / 4P	2023/11/24	2024/11/23
Hight Pass Filter (3~18G)	Wainwright	WHKX3.0/18G-12SS	N/A	2023/05/24	2024/05/23
Power Meter	Anritsu	ML2495A	0844001	2023/02/04	2024/02/03
Power Sensor	Anritsu	MA2491A	031543	2023/02/04	2024/02/03
20dB Attenuator	PE	PE7001-20	N/A	2023/05/24	2024/05/23
966-2_3m Semi-Anechoic Chamber	966_2	CEM-966_2	N/A	2023/08/01	2024/07/31
Test software	Audix	e3	V9	NCR	NCR
EMI Test Receiver	R&S	ESCI	100059	2023/09/08	2024/09/07
LISN	R&S	ENV216	101159	2023/05/16	2024/05/15
Con Cable	SUHNER	SUCOFLEX 106	27222 /6	2023/01/12	2024/01/12
Test software	Audix	e3	V4.20040112L	NCR	NCR
Test site	Intertek	Con-1	N/A	NCR	NCR

Note: No Calibration Required (NCR).

TEST REPORT

Appendix B: Measurement Uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2.0$.

Item	Uncertainty
Radiated disturbances from 9kHz~30MHz in a semi-anechoic chamber at a distance of 3m	2.73 dB
Vertically polarized radiated disturbances from 30MHz~1GHz in a semi-anechoic chamber at a distance of 3m	3.91 dB
Horizontally polarized radiated disturbances from 30MHz~1GHz in a semi-anechoic chamber at a distance of 3m	3.49 dB
Vertically polarized Radiated disturbances from 1GHz~18GHz in a semi-anechoic chamber at a distance of 3m	3.71 dB
Horizontally polarized Radiated disturbances from 1GHz~18GHz in a semi-anechoic chamber at a distance of 3m	3.71 dB
Conducted Measurement	0.69 dB
AC Conducted Emission	1.31 dB