

**CFR 47 FCC PART 15 SUBPART C**

**TEST REPORT**

*For*

**10000mAh Magnetic Wireless Power Bank**

**MODEL NUMBER: FHN, FHNW0, FHNB0**

**REPORT NUMBER: E04A24050028F00701**

**ISSUE DATE: May 17, 2024**

**FCC ID: 2A7Z4-FHN**

*Prepared for*

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*Prepared by*

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Dongguan city, Guangdong, People's Republic of China, 523808**

**This report is based on a single evaluation of the submitted sample(s) of the above mentioned  
Product, it does not imply an assessment of the production of the products.**

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Global Testing Technology Co., Ltd.**

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
<u>V0</u>	<u>May 17, 2024</u>	<u>Initial Issue</u>	<u></u>

### Summary of Test Results

Test Item	Limit/Requirement	Result
Antenna Requirement	FCC Part 15.203	Pass
AC Power Line Conducted Emission	FCC Part 15.207	Pass
20dB Bandwidth	FCC Part 15.215	Pass
Radiated Emission	FCC Part 15.205/15.209	Pass

Note:

1. N/A: In this whole report not applicable.

\*This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

\*The measurement result for the sample received is <Pass> according to <CFR 47 FCC PART 15 SUBPART C> when <Accuracy Method> decision rule is applied.

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## CONTENTS

<b>1. ATTESTATION OF TEST RESULTS</b> .....	<b>5</b>
<b>2. TEST METHODOLOGY</b> .....	<b>6</b>
<b>3. FACILITIES AND ACCREDITATION</b> .....	<b>6</b>
<b>4. CALIBRATION AND UNCERTAINTY</b> .....	<b>7</b>
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i> .....	7
4.2. <i>MEASUREMENT UNCERTAINTY</i> .....	7
<b>5. EQUIPMENT UNDER TEST</b> .....	<b>8</b>
5.1. <i>DESCRIPTION OF EUT</i> .....	8
5.2. <i>TEST MODE</i> .....	8
5.3. <i>SUPPORT UNITS FOR SYSTEM TEST</i> .....	8
5.4. <i>SETUP DIAGRAM</i> .....	9
<b>6. MEASURING EQUIPMENT AND SOFTWARE USED</b> .....	<b>10</b>
<b>7. RADIATED TEST RESULTS</b> .....	<b>11</b>
7.1. <i>Radiated Spurious Emission</i> .....	15
<b>8. AC POWER LINE CONDUCTED EMISSION</b> .....	<b>21</b>
<b>9. 20DB BANDWIDTH</b> .....	<b>24</b>
<b>10. ANTENNA REQUIREMENT</b> .....	<b>27</b>
<b>APPENDIX: PHOTOGRAPHS OF TEST CONFIGURATION</b> .....	<b>28</b>

# 1. ATTESTATION OF TEST RESULTS

## Applicant Information

Company Name: Ningbo Fulman Communication Technology Co., Ltd  
 Address: No.98 Yuanzhong Road, Xiangshan Economic Development Zone Ningbo, Zhejiang Province, 315700 China

## Manufacturer Information

Company Name: Ningbo Fulman Communication Technology Co., Ltd  
 Address: No.98 Yuanzhong Road, Xiangshan Economic Development Zone Ningbo, Zhejiang Province, 315700 China

## Factory Information

Company Name: Ningbo Fulman Communication Technology Co., Ltd  
 Address: No.98 Yuanzhong Road, Xiangshan Economic Development Zone Ningbo, Zhejiang Province, 315700 China

## EUT Information

Product Description: 10000mAh Magnetic Wireless Power Bank  
 Model: FHN, FHNW0, FHNB0  
 Brand: VENTION  
 Sample Received Date: May 8, 2024  
 Sample Status: Normal  
 Sample ID: A24050028 002  
 Date of Tested: May 8, 2024 to May 16, 2024

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 15 SUBPART C	Pass

Prepared By:

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 Project Engineer

Approved By:

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Shawn Wen  
 Laboratory Manager

Checked By:

*Alan He*

Alan He  
 Laboratory Leader



## 2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 15 SUBPART C

## 3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p><b>A2LA (Certificate No.: 6947.01)</b> Guangdong Global Testing Technology Co., Ltd. has been assessed and proved to be in compliance with A2LA.</p> <p><b>FCC (FCC Designation No.: CN1343)</b> Guangdong Global Testing Technology Co., Ltd. has been recognized to perform compliance testing on equipment subject to Supplier's Declaration of Conformity (SDoC) and Certification rules</p> <p><b>ISED (Company No.: 30714)</b> Guangdong Global Testing Technology Co., Ltd. has been registered and fully described in a report filed with ISED. The Company Number is 30714 and the test lab Conformity Assessment Body Identifier (CABID) is CN0148.</p>
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Note: All tests measurement facilities use to collect the measurement data are located at Room 101-105, 203-210, Building 1, No.2, Keji 8 Road, Songshan Lake Park, Dongguan city, Guangdong, People's Republic of China, 523808

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

### 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Items	k	Uncertainty
20dB Emission Bandwidth	2	±9.2 PPM
Temperature	2	±0.5°C
Humidity	2	±3%

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test Item	Measurement Frequency Range	K	U(dB)
Conducted emissions from the AC mains power ports (AMN)	150 kHz ~ 30 MHz	2	3.37
Radiated emissions	9 kHz ~ 30 MHz	2	4.16
Radiated emissions	30 MHz ~ 1 GHz	2	3.79

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

EUT Name	10000mAh Magnetic Wireless Power Bank
Model	FHN
Series Model	FHNW0, FHNB0
Hardware Version	V1.0
Software Version	V1.0
Ratings	Battery Capacity: 10000mAh/3.85V 38.5Wh Type-C Input: 5V=== 2.4A; 9V=== 2A 18W Max Type-C Output: 5V=== 3A; 9V=== 2.22A; 12V=== 1.67A 20W Max Magnetic Wireless Output: 5W/7.5W/10W/15W Total Output: 5V=== 3A 15W Max
Power Supply	DC 5V / DC 9V / Battery 3.85V
Operation Mode	Wireless Charging
Operating Frequency	110-205kHz
Wireless Charging Power	15W(Max) for phone charging
Modulation Technique	ASK
Antenna Type	Coil Antenna

### 5.2. TEST MODE

Test Mode	Description
M01	The EUT charges four 5W loads
M02	The EUT charges four 7.5W loads
M03	The EUT charges four 15W loads

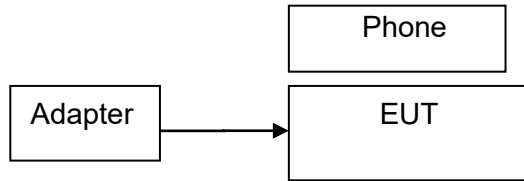
### 5.3. SUPPORT UNITS FOR SYSTEM TEST

No.	Equipment	Manufacturer	Model No.	Serial No.	Remark
1	phone	Apple	A2404	/	/
2	phone	Xiaomi	Xiaomi 9	/	/
3	phone	SAMSUNG	Samsung Galaxy S9	/	/
4	Adapter	Xiaomi	580245A087	/	/

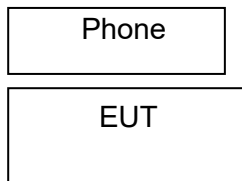


## 5.4. SETUP DIAGRAM

AC conducted emission :



Radiated Emission:



## 6. MEASURING EQUIPMENT AND SOFTWARE USED

Test Equipment of Radiated emissions below 1GHz					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
3m Semi-anechoic Chamber	ETS	9m*6m*6m	Q2146	2022/08/30	2025/08/29
EMI Test Receiver	Rohde & Schwarz	ESCI3	101409	2023/09/18	2024/09/17
Spectrum Analyzer	KEYSIGHT	N9020A	MY51283932	2023/09/18	2024/09/17
Spectrum Analyzer	Rohde & Schwarz	FSV40	101413	2023/09/18	2024/09/17
Pre-Amplifier	HzEMC	HPA-9K0130	HYP A21001	2023/09/18	2024/09/17
Biconilog Antenna	Schwarzbeck	VULB 9168	01315	2022/10/10	2025/10/09
Biconilog Antenna	ETS	3142E	00243646	2022/03/23	2025/03/22
Loop Antenna	ETS	6502	243668	2022/03/30	2025/03/29
Test Software	Farad	EZ-EMC (Ver.FA-03A2 RE)	N/A	N/A	N/A

Test Equipment of Conducted emissions					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Shielded Room	CHENG YU	8m*5m*4m	N/A	2022/10/29	2025/10/28
EMI Test Receiver	Rohde & Schwarz	ESR3	102647	2023/09/18	2024/09/17
LISN/AMN	Rohde & Schwarz	ENV216	102843	2023/09/18	2024/09/17
NNLK 8129 RC	Schwarzbeck	NNLK 8129 RC	5046	2023/09/18	2024/09/17
Test Software	Farad	EZ-EMC (Ver. EMC-con-3A1 1+)	N/A	N/A	N/A

## 7. RADIATED TEST RESULTS

### LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz		
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
		Quasi-Peak
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

FCC Emissions radiated outside of the specified frequency bands below 30 MHz			
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	Field Strength Limit (dBuV/m) at 3 m
			Quasi-Peak
0.009-0.490	2400/F(kHz)	300	128.5-93.8
0.490-1.705	24000/F(kHz)	30	73.8-63.0
1.705-30.0	30	30	69.5

FCC Restricted bands of operation refer to FCC §15.205 (a):

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

Note:<sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

<sup>2</sup>Above 38.6c

## **TEST PROCEDURE**

Below 30 MHz

The setting of the spectrum analyser

RBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto

1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.
2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.
6. For measurement below 1 GHz, 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 and average detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak and average detector and reported.
7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field site. Therefore sufficient tests were made

to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field site based on KDB 414788.

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of  $377\Omega$ . For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to  $Y-51.5 = Z$  dBuA/m, which has the same margin, W dB, to the corresponding 15.209(a) limit.

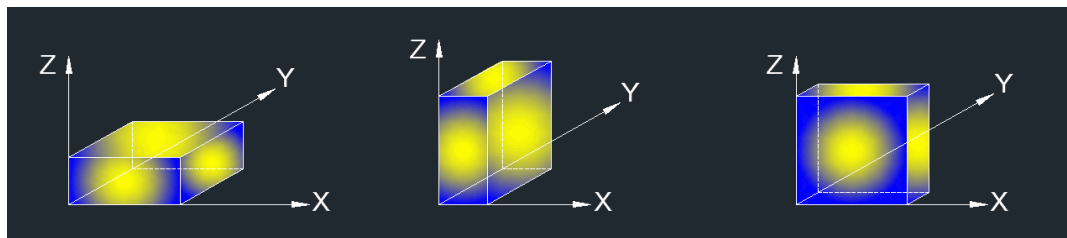
Below 1 GHz and above 30 MHz

The setting of the spectrum analyser

RBW	120 kHz
VBW	300 kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

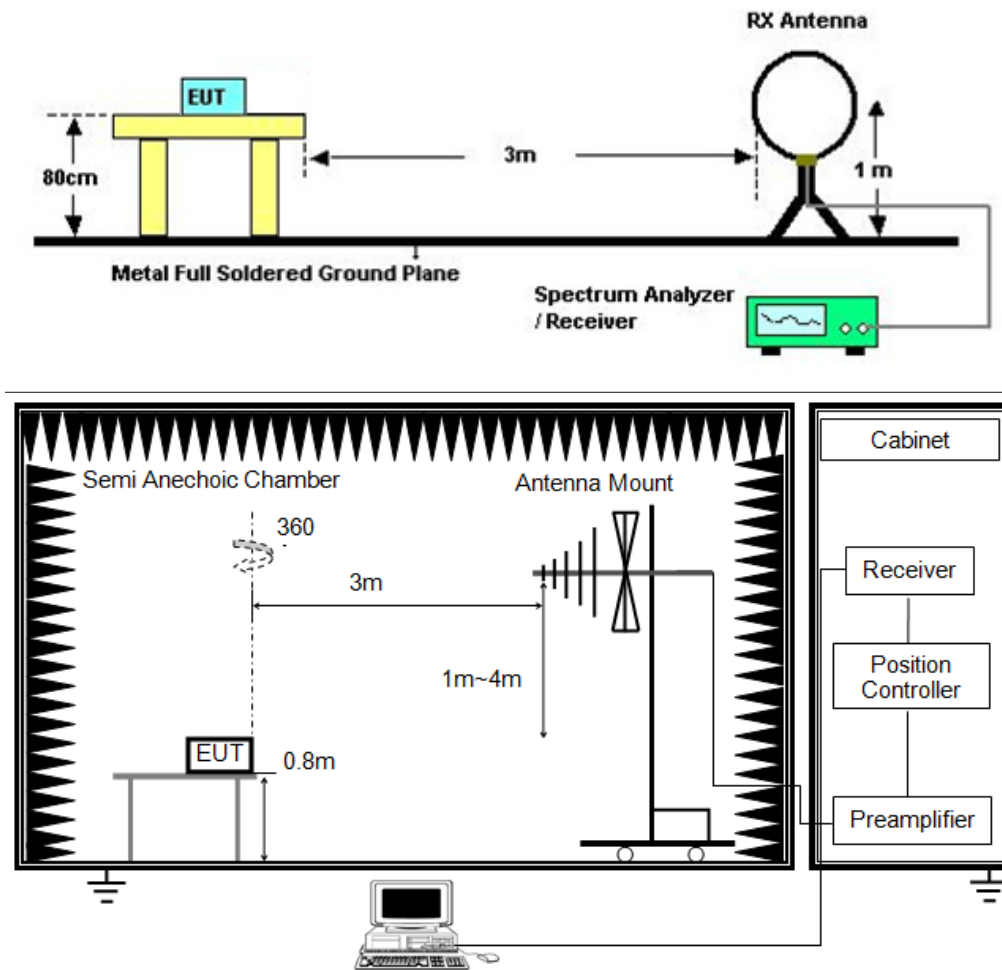
1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
3. The EUT was placed on a turntable with 80 cm above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. For measurement below 1 GHz, 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. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

X axis, Y axis, Z axis positions:



Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

**TEST SETUP**



**TEST ENVIRONMENT**

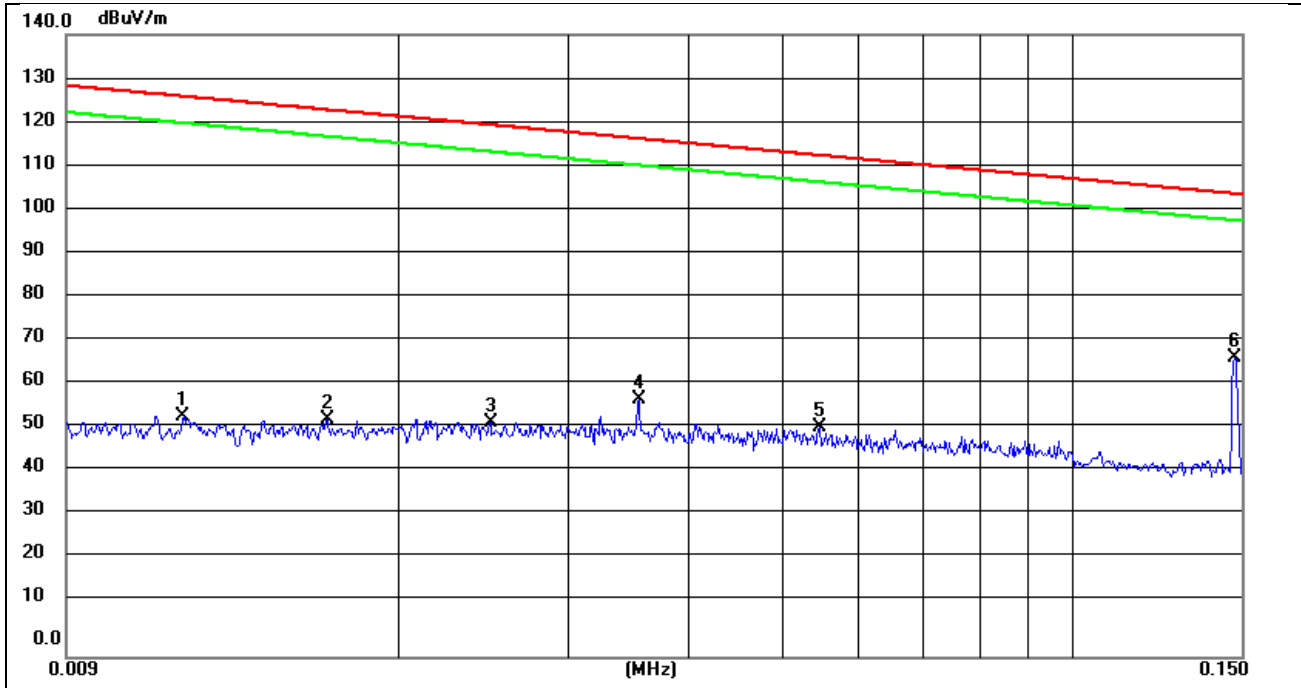
Temperature	24.3°C	Relative Humidity	53.2%
Atmosphere Pressure	101kPa		

**TEST RESULTS**

Please refer to section 7.1.

### 7.1. RADIATED SPURIOUS EMISSION

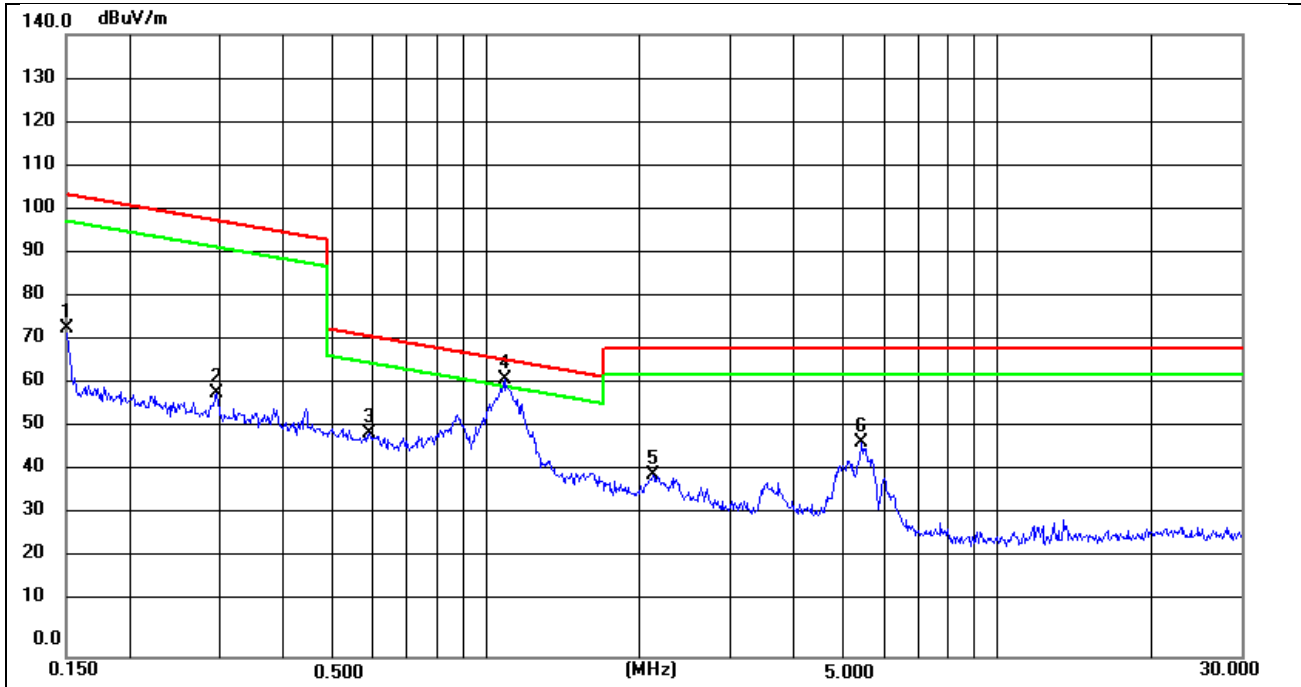
Mode:	M03
Power:	DC 3.85V
TE:	Big
Date	2024/05/10
T/A/P	24.3°C/53.2%/101Kpa



#### Critical\_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	0.0119	33.78	20.41	54.19	126.08	-71.89	QP	coplanar
2	0.0168	33.11	20.34	53.45	123.08	-69.63	QP	coplanar
3	0.0249	32.48	20.22	52.70	119.67	-66.97	QP	coplanar
4	0.0354	38.10	20.09	58.19	116.61	-58.42	QP	coplanar
5	0.0546	31.90	19.87	51.77	112.85	-61.08	QP	coplanar
6	0.1474	47.65	19.64	67.29	104.23	-36.94	QP	coplanar

Mode:	M03
Power:	DC 3.85V
TE:	Big
Date	2024/05/10
T/A/P	24.3°C/53.2%/101Kpa

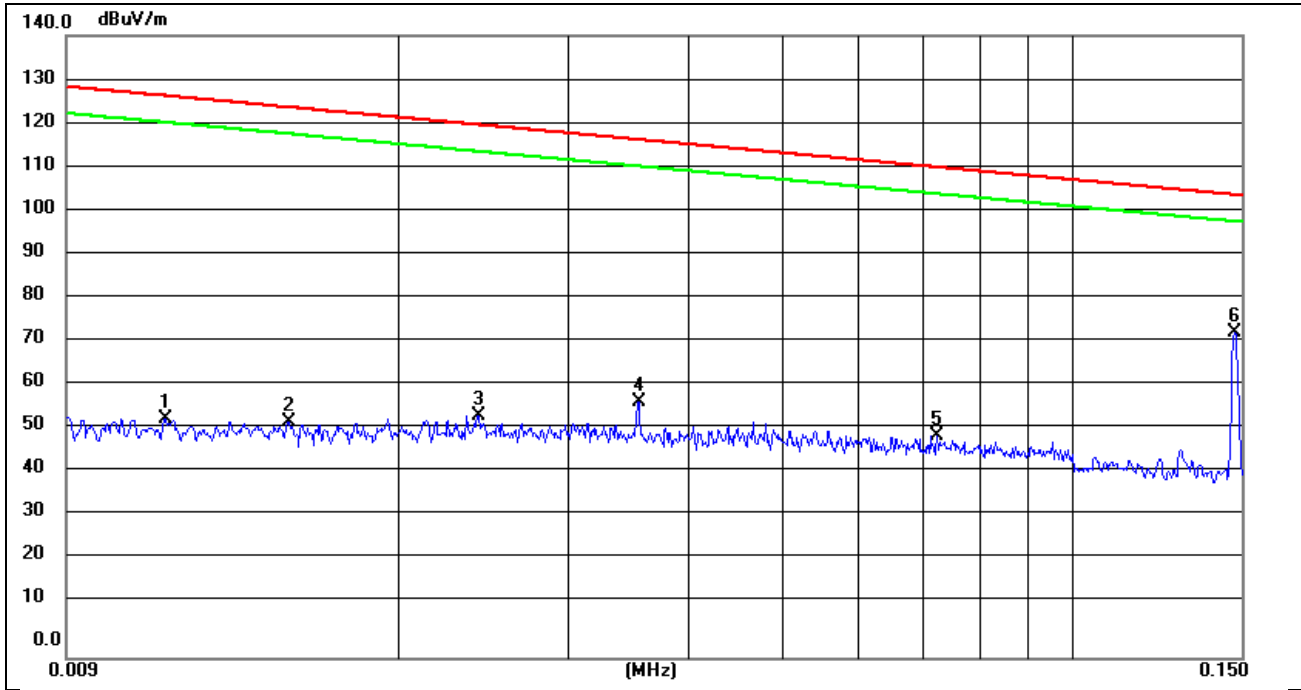


### Critical\_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	0.1500	54.40	19.64	74.04	104.08	-30.04	QP	coplanar
2	0.2955	39.79	19.62	59.41	98.19	-38.78	QP	coplanar
3	0.5885	30.94	19.56	50.50	72.21	-21.71	QP	coplanar
4	1.0824	42.98	19.44	62.42	66.94	-4.52	QP	coplanar
5	2.1101	21.39	19.55	40.94	69.50	-28.56	QP	coplanar
6	5.4186	28.46	19.78	48.24	69.50	-21.26	QP	coplanar



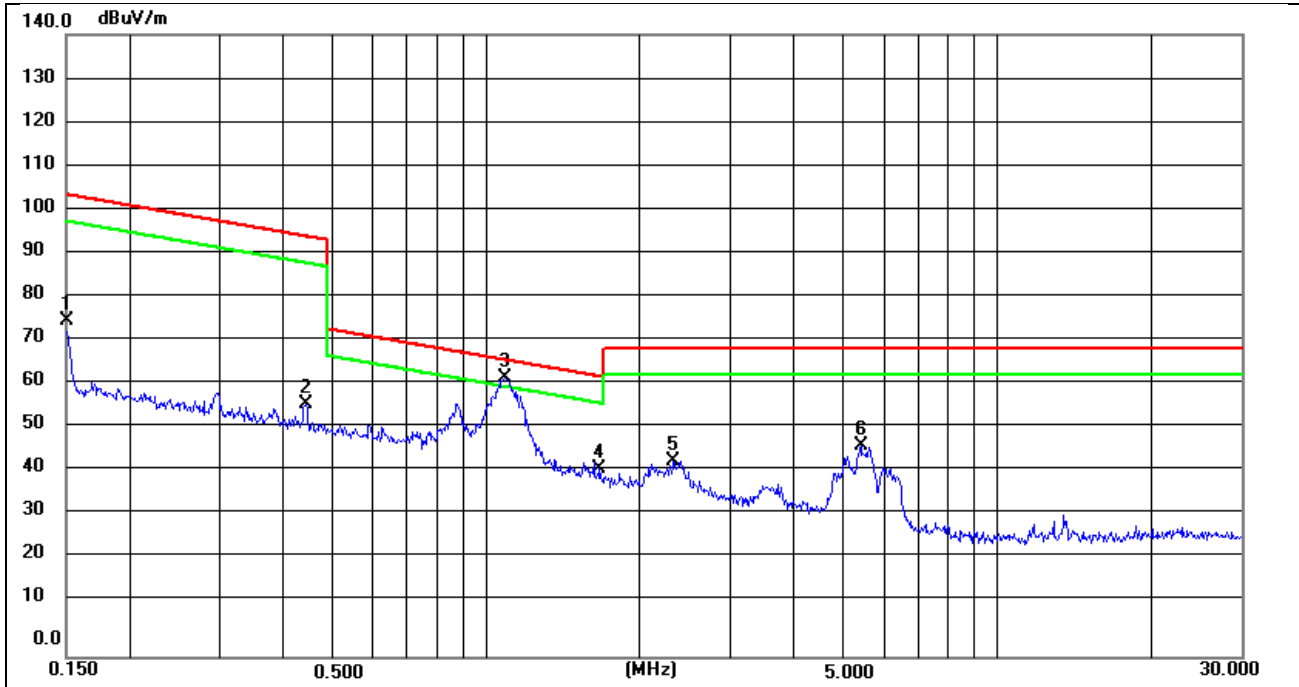
Mode:	M03
Power:	DC 3.85V
TE:	Big
Date	2024/05/10
T/A/P	24.3°C/53.2%/101Kpa



### Critical\_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	0.0114	33.63	20.41	54.04	126.45	-72.41	QP	coaxial
2	0.0153	32.97	20.36	53.33	123.89	-70.56	QP	coaxial
3	0.0241	34.25	20.23	54.48	119.95	-65.47	QP	coaxial
4	0.0354	37.78	20.09	57.87	116.61	-58.74	QP	coaxial
5	0.0724	30.29	19.65	49.94	110.40	-60.46	QP	coaxial
6	0.1474	53.56	19.64	73.20	104.23	-31.03	QP	coaxial

Mode:	M03
Power:	DC 3.85V
TE:	Big
Date	2024/05/10
T/A/P	24.3°C/53.2%/101Kpa



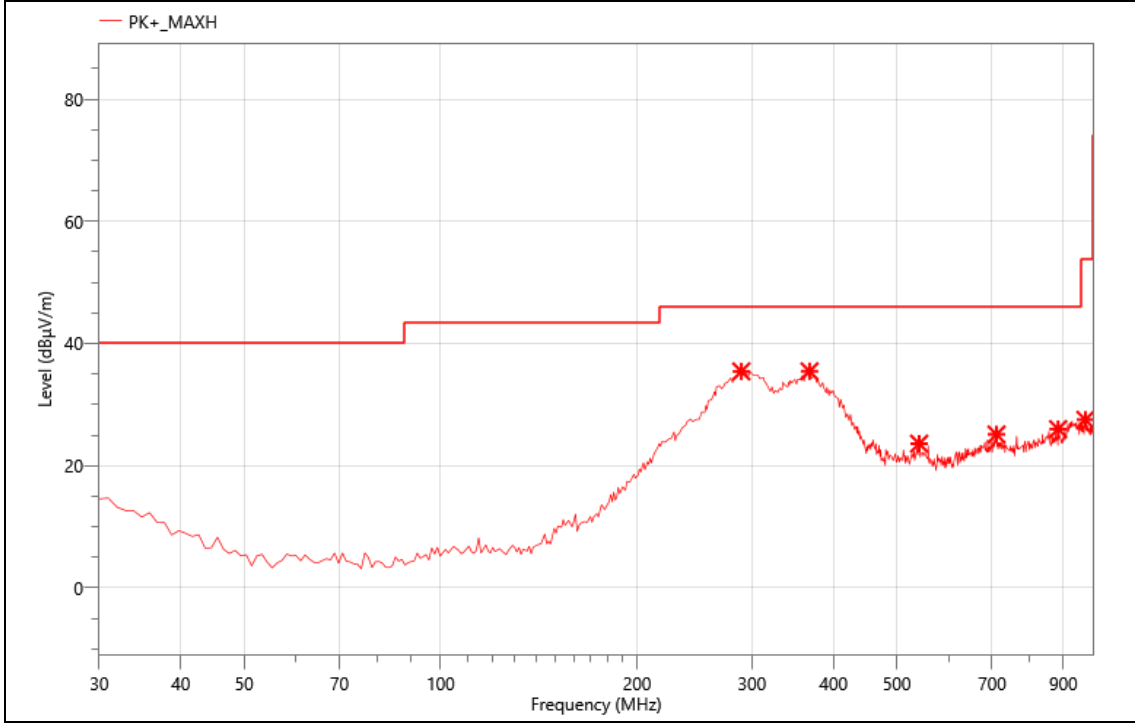
**Critical\_Freqs**

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	0.1500	56.20	19.64	75.84	104.08	-28.24	QP	coaxial
2	0.4421	37.50	19.60	57.10	94.69	-37.59	QP	coaxial
3	1.0881	43.60	19.44	63.04	66.89	-3.85	QP	coaxial
4	1.6625	22.95	19.50	42.45	63.22	-20.77	QP	coaxial
5	2.3213	24.60	19.57	44.17	69.50	-25.33	QP	coaxial
6	5.3900	27.75	19.78	47.53	69.50	-21.97	QP	coaxial

Note:

- 1.Measurement = Reading Level + Correct Factor.
- 2.Margin= Measurement - Limit.
3. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
4. M01, M02 and M03 were all tested, and only M03 was recorded in the report as the worst mode.

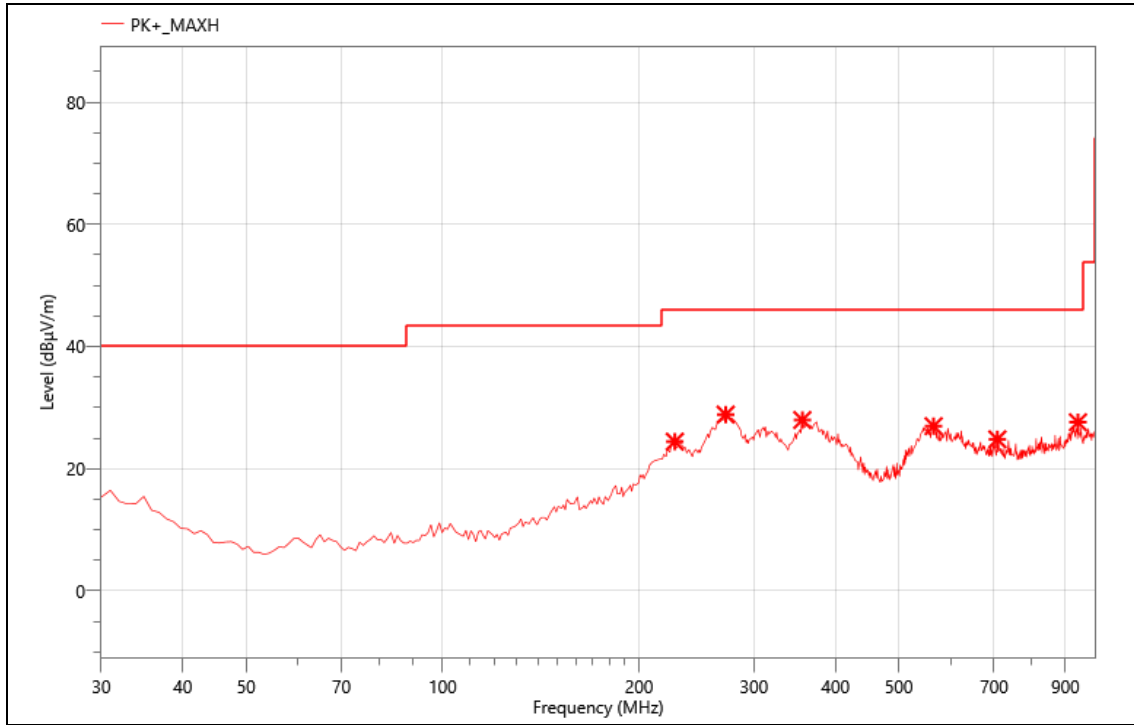
Mode:	M03
Power:	DC 3.85V
TE:	Vier
Date	2024/05/10
T/A/P	24.5°C/54%/101Kpa



### Critical\_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	288.990	54.89	-19.45	35.44	46.00	10.56	PK+	H
2	367.560	50.95	-15.49	35.46	46.00	10.54	PK+	H
3	541.190	33.80	-10.19	23.61	46.00	22.39	PK+	H
4	710.940	32.21	-7.09	25.12	46.00	20.88	PK+	H
5	883.600	31.30	-5.3	26.00	46.00	20.00	PK+	H
6	972.840	31.23	-3.71	27.52	53.90	26.38	PK+	H

Mode:	M03
Power:	DC 3.85V
TE:	Vier
Date	2024/05/10
T/A/P	24.5°C/54%/101Kpa



### Critical\_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	226.910	44.87	-20.44	24.43	46.00	21.57	PK+	V
2	271.530	47.50	-18.64	28.86	46.00	17.14	PK+	V
3	355.920	44.01	-16.04	27.97	46.00	18.03	PK+	V
4	565.440	37.62	-10.65	26.97	46.00	19.03	PK+	V
5	708.030	31.98	-7.17	24.81	46.00	21.19	PK+	V
6	940.830	30.81	-3.21	27.60	46.00	18.40	PK+	V

Note:

- 1.Measurement = Reading Level + Correct Factor.
- 2.Margin=Limit- Measurement.
3. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
4. Peak: Peak detector.
5. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
6. M01, M02 and M03 were all tested, and only M03 was recorded in the report as the worst mode.

## 8. AC POWER LINE CONDUCTED EMISSION

### LIMITS

Please refer to CFR 47 FCC §15.207 (a)

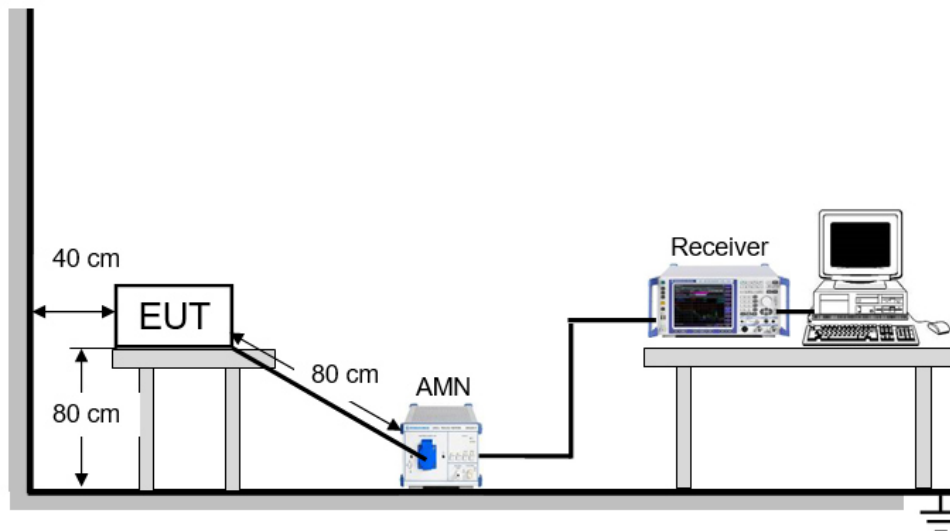
FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

### TEST PROCEDURE

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

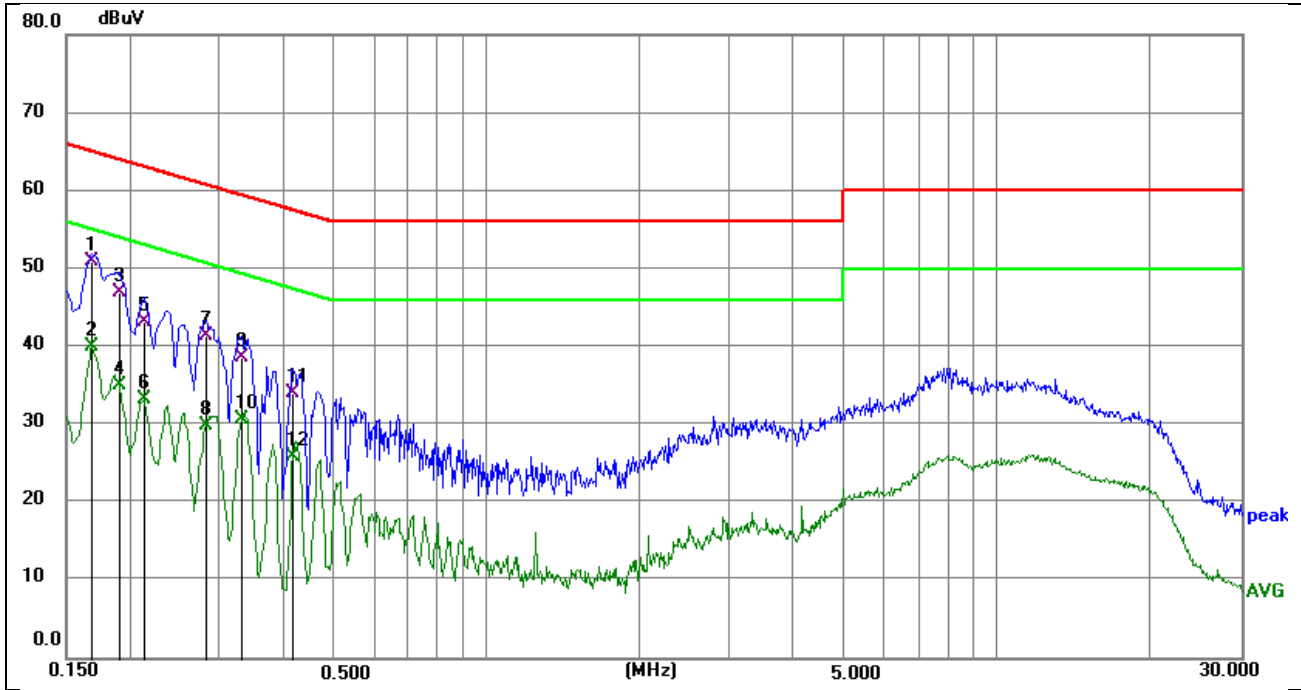
### TEST SETUP



### TEST ENVIRONMENT

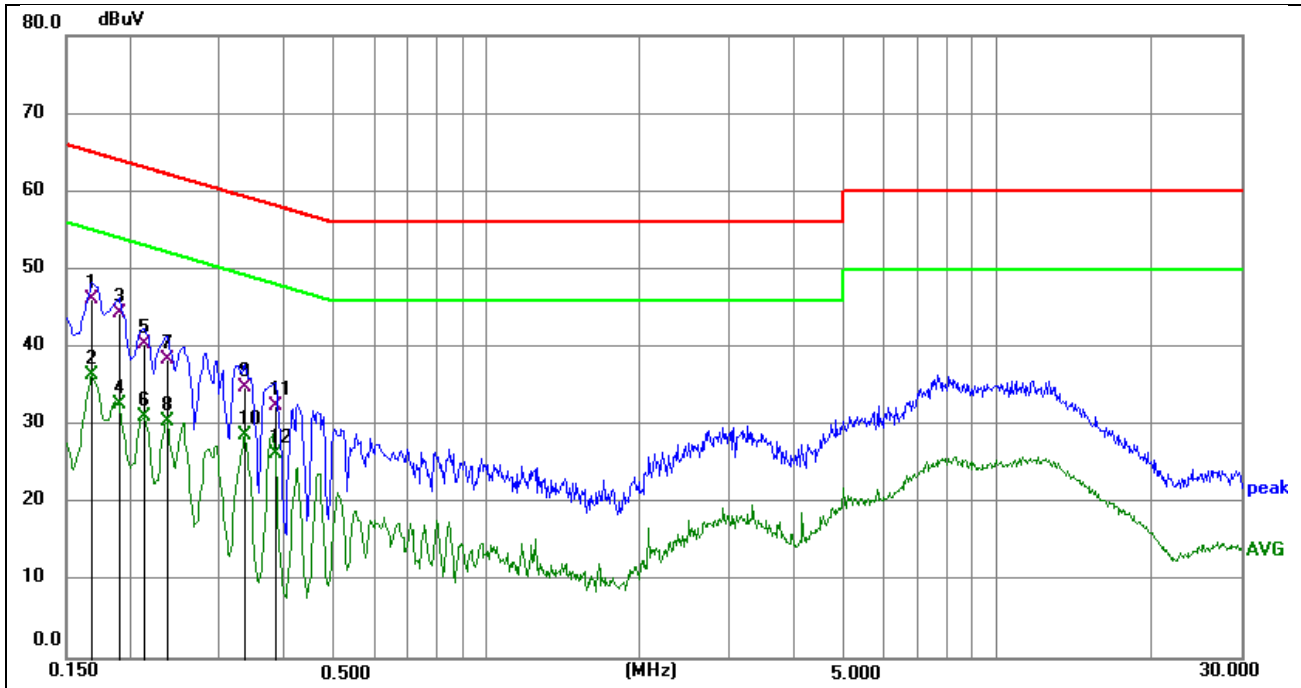
Temperature	24.6°C	Relative Humidity	54%
Atmosphere Pressure	101kPa		

**TEST RESULTS**



Phase: L1	Mode: M03
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1680	41.12	9.81	50.93	65.06	-14.13	QP
2	0.1680	30.28	9.81	40.09	55.06	-14.97	AVG
3	0.1905	37.13	9.80	46.93	64.01	-17.08	QP
4	0.1905	25.29	9.80	35.09	54.01	-18.92	AVG
5	0.2130	33.46	9.81	43.27	63.09	-19.82	QP
6	0.2130	23.48	9.81	33.29	53.09	-19.80	AVG
7	0.2805	31.46	9.98	41.44	60.80	-19.36	QP
8	0.2805	19.88	9.98	29.86	50.80	-20.94	AVG
9	0.3300	28.71	9.89	38.60	59.45	-20.85	QP
10	0.3300	20.69	9.89	30.58	49.45	-18.87	AVG
11	0.4155	24.32	9.80	34.12	57.54	-23.42	QP
12	0.4155	16.01	9.80	25.81	47.54	-21.73	AVG



Phase: N	Mode: M03
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1680	36.36	9.89	46.25	65.06	-18.81	QP
2	0.1680	26.57	9.89	36.46	55.06	-18.60	AVG
3	0.1905	34.42	9.88	44.30	64.01	-19.71	QP
4	0.1905	22.73	9.88	32.61	54.01	-21.40	AVG
5	0.2130	30.55	9.87	40.42	63.09	-22.67	QP
6	0.2130	21.24	9.87	31.11	53.09	-21.98	AVG
7	0.2355	28.54	9.86	38.40	62.25	-23.85	QP
8	0.2355	20.54	9.86	30.40	52.25	-21.85	AVG
9	0.3345	25.00	9.84	34.84	59.34	-24.50	QP
10	0.3345	18.84	9.84	28.68	49.34	-20.66	AVG
11	0.3840	22.59	9.81	32.40	58.19	-25.79	QP
12	0.3840	16.57	9.81	26.38	48.19	-21.81	AVG

Note: 1. Result = Reading + Correct Factor.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).

4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report(M03).

## 9. 20DB BANDWIDTH

### LIMITS

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. In the case of intentional radiators operating under the provisions of subpart E, the emission bandwidth may span across multiple contiguous frequency bands identified in that subpart. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

### TEST PROCEDURE

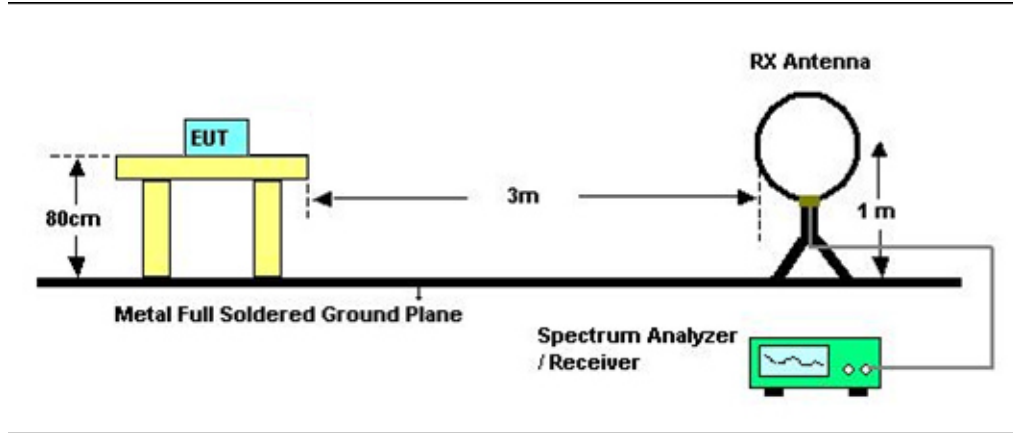
- a.) The EUT operates at maximum output power according to the user manual.
- b.) If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- c.) If the EUT is a floor standing device, it is placed on the ground.
- d.) Auxiliary equipment and cables were positioned to simulate normal operation conditions.
- f.) The EUT is connected to DC Power Source or an adapter.
- e.) The measurement distance is 3 meter.
- f.) The EUT was set into operation.
- g.) Adjust the test instrument for the following setting.

RBW	1kHz
VBW	3*RBW
Detector	Peak
Sweep time	Auto
Trace Mode	Max hold

- h.) Allow trace to fully stabilize.



**TEST SETUP**



**TEST ENVIRONMENT**

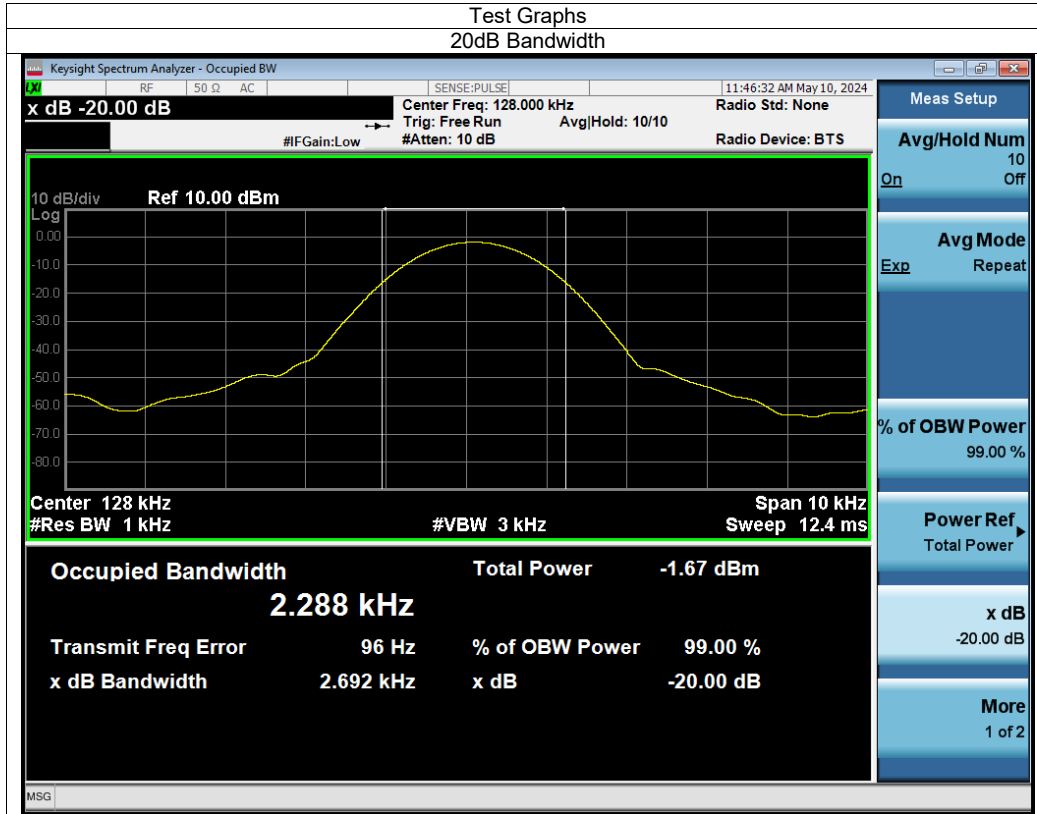
Temperature	23.8°C	Relative Humidity	53%
Atmosphere Pressure	101kPa		

**TEST RESULTS**

For phone

Frequency (kHz)	20dB Bandwidth (kHz)	Result
128	2.692	Pass

For phone



## **10. ANTENNA REQUIREMENT**

### **REQUIREMENT**

Please refer to FCC §15.203

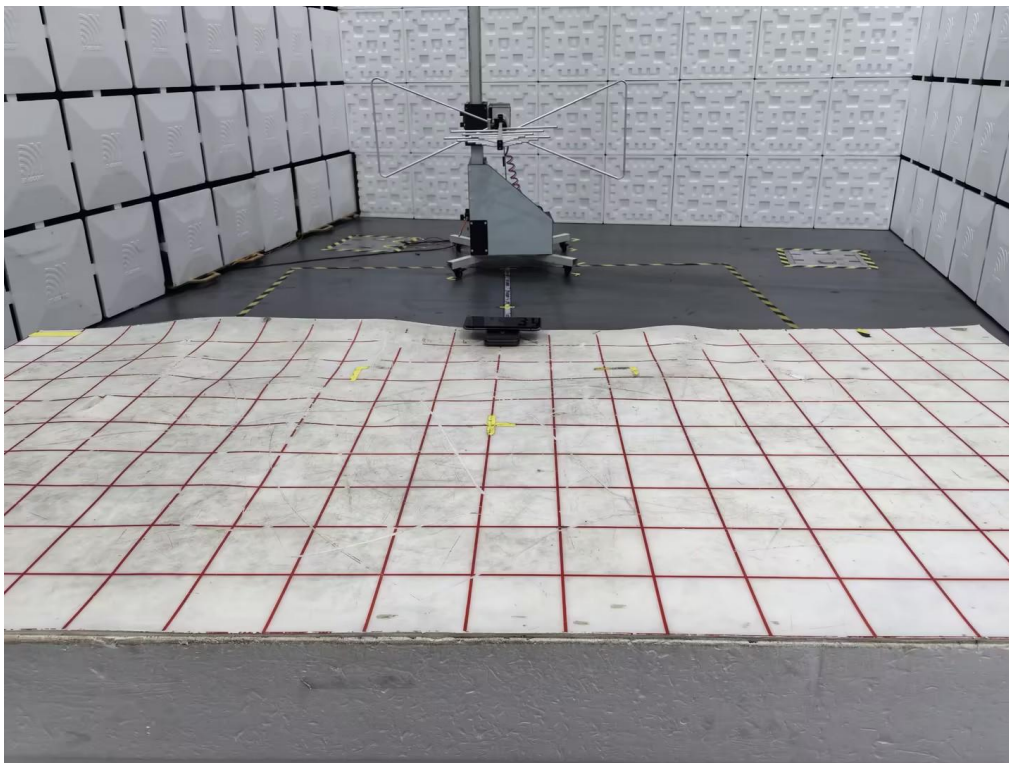
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply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

### **DESCRIPTION**

Pass

## APPENDIX: PHOTOGRAPHS OF TEST CONFIGURATION

### Radiated Spurious Emission



**AC Power Line Conducted Emission**



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**END OF REPORT**