



# FCC TEST REPORT

## FCC ID:2A9Q9-EPB-IM25

Applicant: ShenZhen Zhongyi Technology Co.,Ltd.  
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Manufacturer: ShenZhen Zhongyi Technology Co.,Ltd.  
Address: Room 401, No.4 Road One, Shangxue Science and Technology City, Xinxue Community, Bantian Street, Longgang District, Shenzhen, China  
EUT: Imperial 10000mAh Light-Up Power Bank  
Trade Mark: N/A  
Model Number: EPB-IM25  
M2269Q  
Date of Receipt: Jun. 23, 2025  
Test Date: Jun. 23, 2025 to Jul. 01, 2025  
Date of Report: Jul. 01, 2025  
Prepared By: Shenzhen DL Testing Technology Co., Ltd.  
Address: 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China  
Applicable Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.231  
ANSI C63.10:2013  
Test Result: Pass  
Report Number: DLE-250710005R

Prepared (Test Engineer): Dimon Tan

Reviewer (Supervisor): Jack Bu

Approved (Manager): Jade Yang



*This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.*



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## 1. VERSION

Report No.	Version	Description	Approved
DLE-250710005R	Rev.01	Initial issue of report	Jul. 01, 2025



## 2. TEST SUMMARY

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Spurious Emission	15.209(a)(f)	Pass
20dB Bandwidth	15.215	Pass

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



## 2.1 TEST FACILITY

Shenzhen DL Testing Technology Co., Ltd.

Add. : 101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolon Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China

FCC Test Firm Registration Number: 854456

Designation Number: CN1307

IC Registered No.: 27485

CAB identifier: CN0118

## 2.2 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	3m camber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
2	3m camber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission(6GHz-40GHz)	U=5.0dB
5	Conducted disturbance	U=3.2dB
6	RF Band Edge	U=1.68dB
7	RF power conducted	U=1.86dB
8	RF conducted Spurious Emission	U=2.2dB
9	RF Occupied Bandwidth	U=1.8MHz
10	RF Power Spectral Density	U=1.75dB
11	humidity uncertainty	U=5.3%
12	Temperature uncertainty	U=0.59℃



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Imperial 10000mAh Light-Up Power Bank
Model No.:	EPB-IM25
Serial No.:	N/A
Model Difference:	N/A
Hardware Version:	V 1.0
Software Version:	V 1.1
Operation Frequency:	Phone:115kHz-205kHz Watch:325kHz-325kHz
Modulation Type:	ASK
Antenna Type:	Loop Coil Antenna
Antenna Gain:	0dBi
Ratings:	Wireless Output(Phone): 5W/ 7.5W/10W/15W Wireless Output(Watch): 2W USB-C/Lightning Input: DC 5V/3A, 9V/2A, 12V/1.5A 18W USB-C/Lightning Output: DC 5V/3A, 9V/2.22A, 12V/1.67A 20W USB Output: DC 5V/3A, 9V/2A, 12V/1.5A 18W
Battery Capacity:	10000mAh/3.85V/38.5Wh
Transmitting Mode:	Keep the EUT in continuously wireless charging mode



### 3.2 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.

a. EUT mode of AC/DC Adapter + wireless charge output:

Test Modes:	Test Coil:	Description:
Mode 1a Mode 2a Mode 3a	ANT 1	AC/DC Adapter (12V/1.5A) + EUT + Phone (Battery Status: <1%) AC/DC Adapter (12V/1.5) + EUT + Phone (Battery Status: 50%) AC/DC Adapter (12V/1.5) + EUT + Phone (Battery Status: >98%)
Mode 1b Mode 2b Mode 3b		AC/DC Adapter (9V/2A) + EUT + Phone (Battery Status: <1%) AC/DC Adapter (9V/2A) + EUT + Phone (Battery Status: 50%) AC/DC Adapter (9V/2A) + EUT + Phone (Battery Status: >98%)
Mode 1c Mode 2c Mode 3c		AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: <1%) AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: 50%) AC/DC Adapter (5V/3A) + EUT + Phone (Battery Status: >98%)
Mode 4a Mode 5a Mode 6a		AC/DC Adapter (12V/1.5A) + EUT + Watch (Battery Status: <1%) AC/DC Adapter (12V/1.5A) + EUT + Watch (Battery Status: 50%) AC/DC Adapter (12V/1.5A) + EUT + Watch (Battery Status: >98%)
Mode 4b Mode 5b Mode 6b		AC/DC Adapter (9V/2A) + EUT + Watch (Battery Status: <1%) AC/DC Adapter (9V/2A) + EUT + Watch (Battery Status: 50%) AC/DC Adapter (9V/2A) + EUT + Watch (Battery Status: >98%)
Mode 4c Mode 5c Mode 6c		AC/DC Adapter (5V/3A) + EUT + Watch (Battery Status: <1%) AC/DC Adapter (5V/3A) + EUT + Watch (Battery Status: 50%) AC/DC Adapter (5V/3A) + EUT + Watch (Battery Status: >98%)
Mode 7a Mode 8a Mode 9a		AC/DC Adapter (12V/1.5A) + EUT + Phone Watch (Battery Status: <1%) AC/DC Adapter (12V/1.5) + EUT + Phone Watch (Battery Status: 50%) AC/DC Adapter (12V/1.5) + EUT + Phone Watch (Battery Status: >98%)
Mode 7b Mode 8b Mode 9b		AC/DC Adapter (9V/2A) + EUT + Phone Watch (Battery Status: <1%) AC/DC Adapter (9V/2A) + EUT + Phone Watch (Battery Status: 50%) AC/DC Adapter (9V/2A) + EUT + Phone Watch (Battery Status: >98%)
Mode 7c Mode 8c Mode 9c		AC/DC Adapter (5V/3A) + EUT + Phone Watch (Battery Status: <1%) AC/DC Adapter (5V/3A) + EUT + Phone Watch (Battery Status: 50%) AC/DC Adapter (5V/3A) + EUT + Phone Watch (Battery Status: >98%)



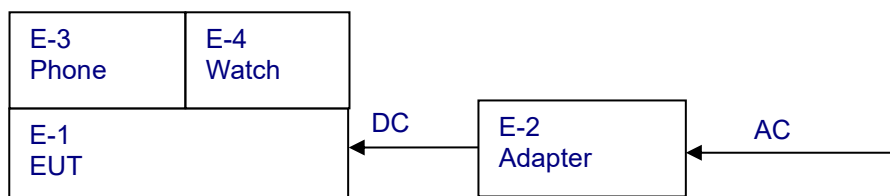
## b. EUT mode of wireless charge output:

Test Modes:	Test Coil:	Description:
Mode 1d Mode 2d Mode 3d	ANT 1	EUT + Phone (Battery Status: <1%) EUT + Phone (Battery Status: 50%) EUT + Phone (Battery Status: >98%)
Mode 4d Mode 5d Mode 6d	ANT 2	EUT + Watch (Battery Status: <1%) EUT + Watch (Battery Status: 50%) EUT + Watch (Battery Status: >98%)
Mode 7d Mode 8d Mode 9d	ANT 1+2	EUT + Phone + Watch (Battery Status: <1%) EUT + Phone + Watch (Battery Status: 50%) EUT + Phone + Watch (Battery Status: >98%)



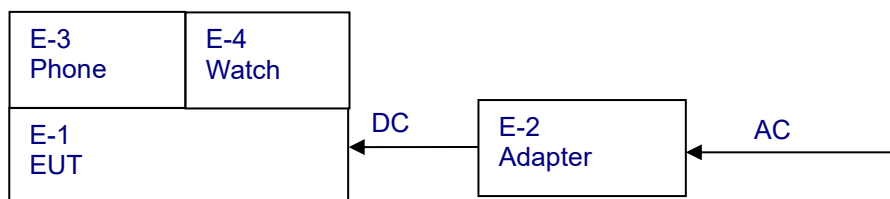
### 3.3 BLOCK DIAGRAM OF EUT CONFIGURATION

#### Conducted Emission

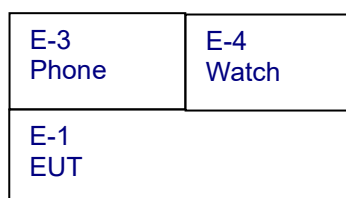


#### Radiated Emission

A:



B:





### 3.4 TEST CONDITIONS

Temperature: 23~26℃

Relative Humidity: 54~63 %

### 3.5 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Imperial 10000mAh Light-Up Power Bank	N/A	EPB-IM25	N/A	EUT
E-2	AC/DC Adapter	Aohai	A895-200150C-CN1	N/A	Auxiliary
E-3	Phone	APPLE	iPhone.13 Pro Max	N/A	Auxiliary
E-4	Watch	BASEUS	E3	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C1	NO	NO	0.8M	DC cable unshielded

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”.



## 3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

## Radiation test, Band-edge test and 6db bandwidth test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	Agilent	E4408B	MY50140780	Nov. 01, 2024	Oct. 31, 2025
2	Test Receiver (9kHz-7GHz)	R&S	ESRP7	101393	Nov. 01, 2024	Oct. 31, 2025
3	Bilog Antenna (30MHz-1GHz)	R&S	VULB9162	00306	Nov. 01, 2024	Oct. 31, 2025
4	Horn Antenna (1GHz-18GHz)	Schwarzbeck	BBHA9120D	02139	Nov. 01, 2024	Oct. 31, 2025
5	Horn Antenna (18GHz-40GHz)	A.H. Systems	SAS-574	588	Nov. 01, 2024	Oct. 31, 2025
6	Amplifier (9kHz-6GHz)	Schwarzbeck	BBV9743B	00153	Nov. 01, 2024	Oct. 31, 2025
7	Amplifier (1GHz-18GHz)	EMEC	EM01G8GA	00270	Nov. 01, 2024	Oct. 31, 2025
8	Amplifier (18GHz-40GHz)	Quanjuda	DLE-161	97	Nov. 01, 2024	Oct. 31, 2025
9	Loop Antenna (9kHz-30MHz)	Schwarzbeck	FMZB1519B	00014	Nov. 01, 2024	Oct. 31, 2025
10	RF cables1 (9kHz-1GHz)	ChengYu	966	004	Nov. 01, 2024	Oct. 31, 2025
11	RF cables2 (1GHz-40GHz)	ChengYu	966	003	Nov. 01, 2024	Oct. 31, 2025
12	Antenna connector	Florida RF Labs	N/A	RF 01#	Nov. 01, 2024	Oct. 31, 2025
13	Power probe	KEYSIGHT	U2021XA	MY55210018	Nov. 01, 2024	Oct. 31, 2025
14	Signal Analyzer 9kHz-26.5GHz	Agilent	N9020A	MY55370280	Nov. 01, 2024	Oct. 31, 2025
15	Test Receiver 20kHz-40GHz	R&S	ESU 40	100376	Nov. 01, 2024	Oct. 31, 2025
16	D.C. Power Supply	LongWei	PS-305D	010964729	Nov. 01, 2024	Oct. 31, 2025

## Conduction Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	843 Shielded Room	ChengYu	843 Room	843	Nov. 01, 2024	Oct. 31, 2025
2	EMI Receiver	R&S	ESR	101421	Nov. 01, 2024	Oct. 31, 2025
3	LISN	R&S	ENV216	102417	Nov. 01, 2024	Oct. 31, 2025
4	843 Cable 1#	ChengYu	CE Cable	001	Nov. 01, 2024	Oct. 31, 2025

## Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ EMC	EMC-CON 3A1.1
2	EMC radiation test system	FALA	EZ EMC	FA-03A2
3	RF test system	MAIWEI	MTS8310	2.0.0.0
4	RF communication test system	MAIWEI	MTS8200	2.0.0.0



#### 4. CONDUCTED EMISSION TEST

##### 4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

##### 4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) \*Decreases with the logarithm of the frequency.

##### 4.1.2 TEST PROCEDURE

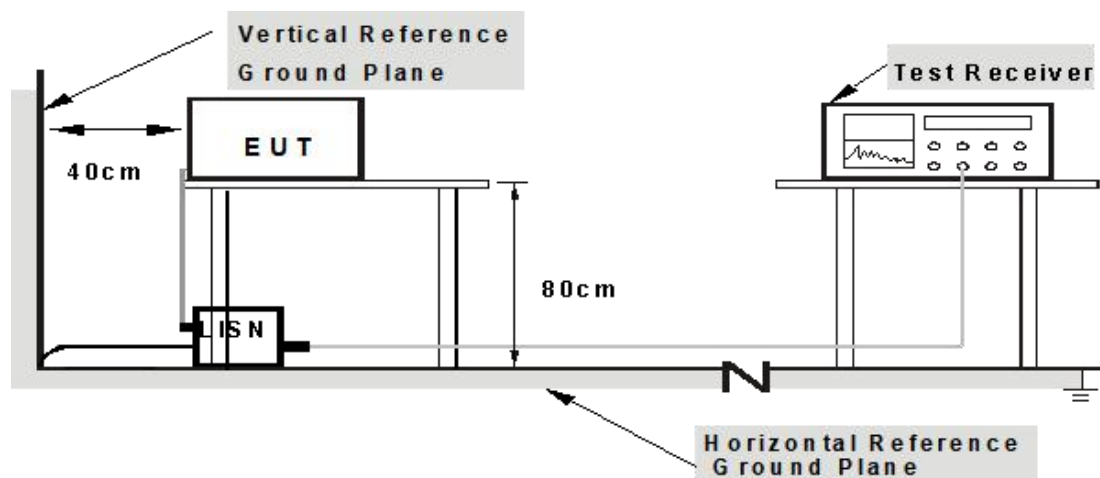
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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.

##### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation



#### 4.1.4 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 cm from other units and other metal planes**

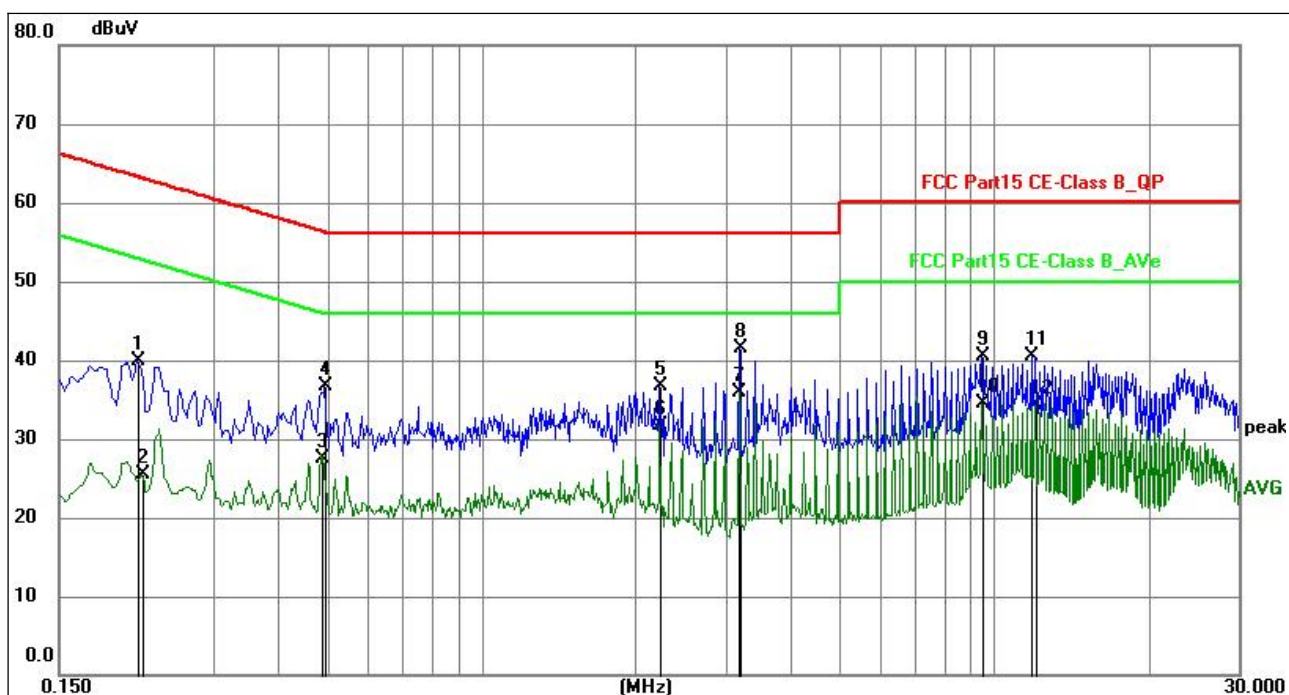
#### 4.1.5 EUT OPERATING CONDITIONS

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.



## 4.1.6 TEST RESULT

Temperature :	26℃	Relative Humidity :	54%
Pressure :	101kPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode :	Mode 1



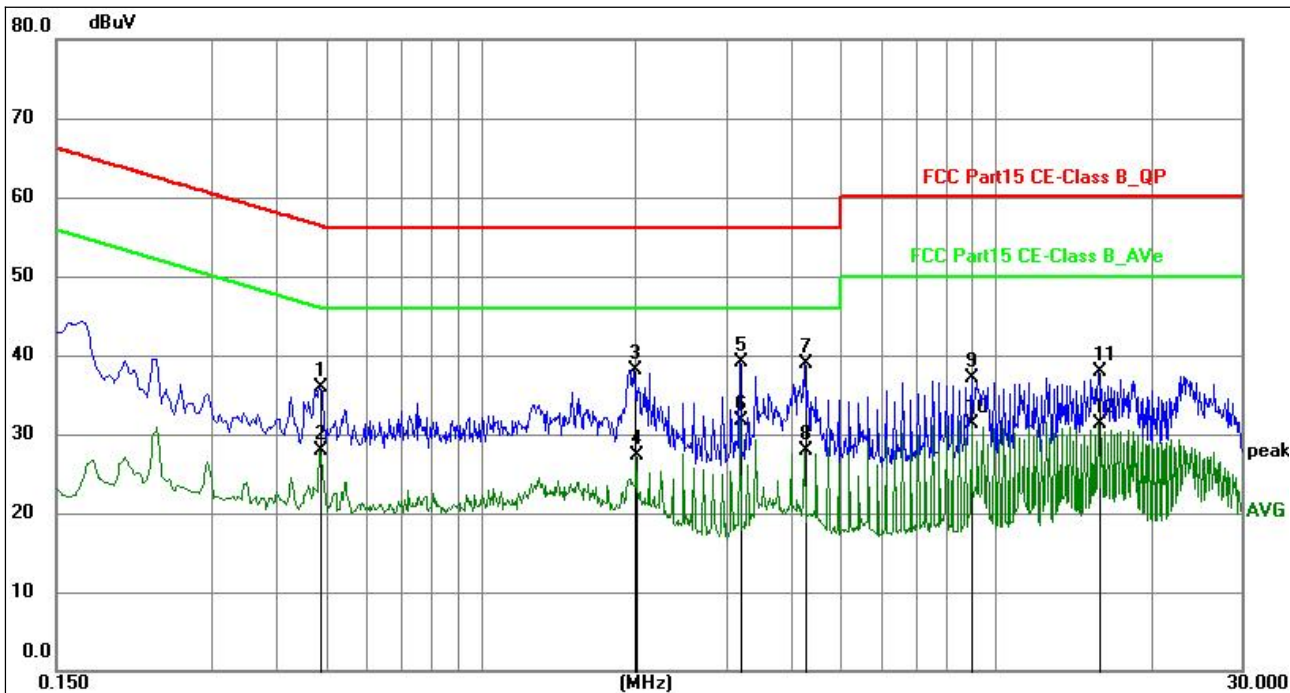
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.2130	19.44	20.38	39.82	63.09	-23.27	QP	P	
2	0.2175	5.12	20.38	25.50	52.91	-27.41	AVG	P	
3	0.4889	7.29	20.30	27.59	46.19	-18.60	AVG	P	
4	0.4965	16.43	20.30	36.73	56.06	-19.33	QP	P	
5	2.2289	16.38	20.31	36.69	56.00	-19.31	QP	P	
6	2.2289	11.38	20.31	31.69	46.00	-14.31	AVG	P	
7	3.1875	15.67	20.33	36.00	46.00	-10.00	AVG	P	
8	3.1920	21.27	20.33	41.60	56.00	-14.40	QP	P	
9	9.4515	19.97	20.44	40.41	60.00	-19.59	QP	P	
10	9.4515	14.08	20.44	34.52	50.00	-15.48	AVG	P	
11	11.8139	20.03	20.47	40.50	60.00	-19.50	QP	P	
12	12.0525	13.75	20.47	34.22	50.00	-15.78	AVG	P	

## Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi - Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor = Lisen factor+ Cable loss factor + limiter factor.
5. Margin = Measurement Level-Limit.
6. All test modes were tested, with only the worst Mode 1 recorded.



Temperature :	26℃	Relative Humidity :	54%
Pressure :	101kPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode :	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4875	15.51	20.30	35.81	56.21	-20.40	QP	P	
2	0.4875	7.61	20.30	27.91	46.21	-18.30	AVG	P	
3	1.9904	17.85	20.31	38.16	56.00	-17.84	QP	P	
4	2.0084	6.92	20.31	27.23	46.00	-18.77	AVG	P	
5	3.1920	18.74	20.32	39.06	56.00	-16.94	QP	P	
6	3.1920	11.45	20.32	31.77	46.00	-14.23	AVG	P	
7	4.2540	18.60	20.34	38.94	56.00	-17.06	QP	P	
8	4.2540	7.60	20.34	27.94	46.00	-18.06	AVG	P	
9	8.9790	16.62	20.45	37.07	60.00	-22.93	QP	P	
10	8.9790	10.91	20.45	31.36	50.00	-18.64	AVG	P	
11	15.8280	17.47	20.50	37.97	60.00	-22.03	QP	P	
12	15.8280	10.89	20.50	31.39	50.00	-18.61	AVG	P	

## Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi - Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor = Lism factor+ Cable loss factor + limiter factor.
5. Margin = Measurement Level-Limit.
6. All test modes were tested, with only the worst Mode 1 recorded.



## 5. RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 1GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average

### 5.1 RADIATED EMISSION LIMITS

#### Limits for frequency below 30MHz

Frequency	Limit (uV/m)	Measurement Distance(m)	Remark
0.009-0.490	2400/F(kHz)	300	Quasi-peak Value
0.490-1.705	24000/F(kHz)	30	Quasi-peak Value
1.705-30	30	30	Quasi-peak Value

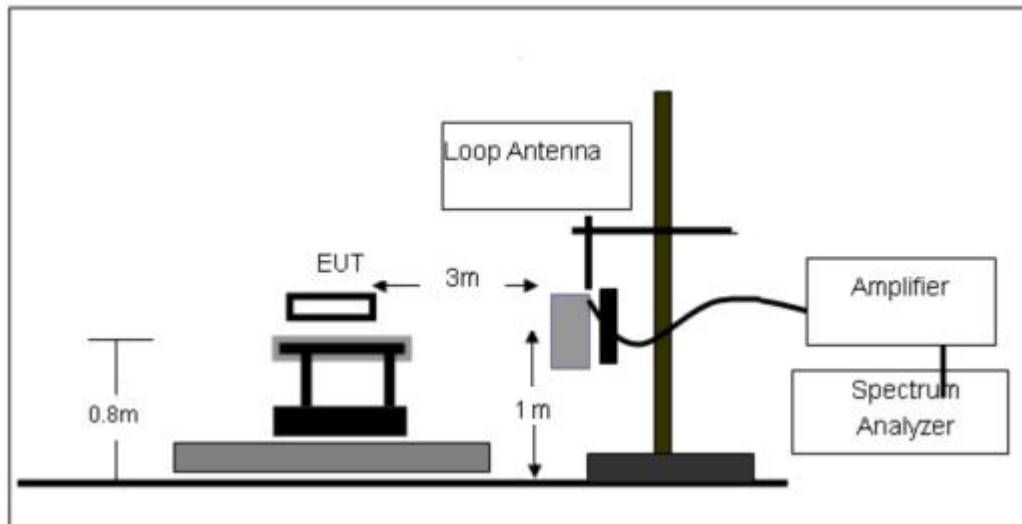
#### Limits for frequency Above 30MHz

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.00	Quasi-peak Value
88MHz-216MHz	43.50	Quasi-peak Value
216MHz-960MHz	46.00	Quasi-peak Value
960MHz-1GHz	54.00	Quasi-peak Value
Above 1GHz	54.00	Average Value
	74.00	Peak Value

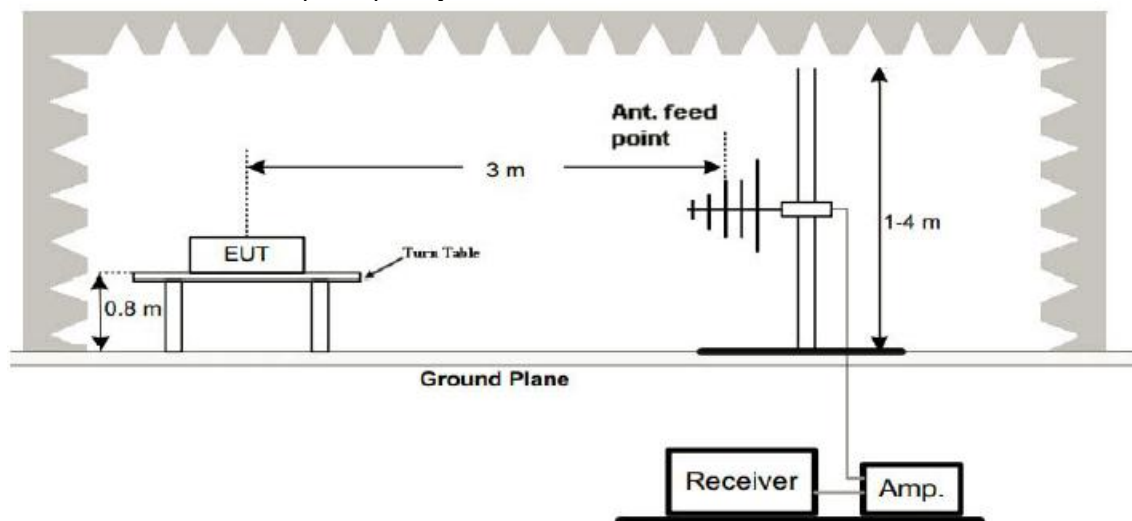


## 5.2 ANECHOIC CHAMBER TEST SETUP DIAGRAM

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



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



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.



### 5.3 TEST PROCEDURE

#### Below 30MHz

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving loop antenna and in the center of a loop antenna, which was mounted on the top of a variable-height antenna tower.
- For each suspected emission, the EUT was arranged to its worst case, the height of interference-receiving loop antenna centre is 1 meter above the ground, and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- Both coaxial (loop plane perpendicular to the ground plane and to the measurement axis) and coplanar (loop plane perpendicular to the ground plane and coplanar with the measurement axis) polarizations of the antenna are set to make the measurement.
- The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

#### 30MHz-1GHz

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

### 5.4 DEVIATION FROM TEST STANDARD

No deviation



## 5.5 TEST RESULT

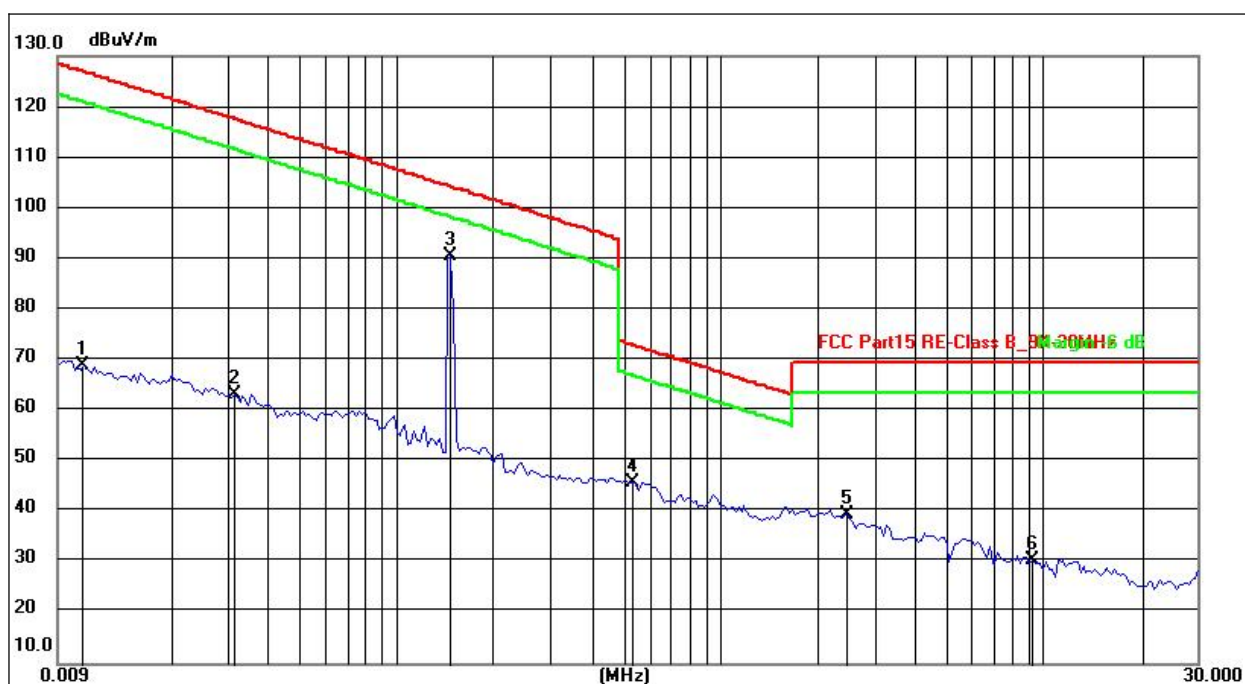
Measurement data:

Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80

Limit dBuV/m @3m = Limit dBuV/m @30m + 40

A: 9 kHz~30 MHz

Temperature :	26℃	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	coaxial
Test Voltage :	DC 12V From Adapter AC 120V/60Hz	Test Mode :	Mode 1a



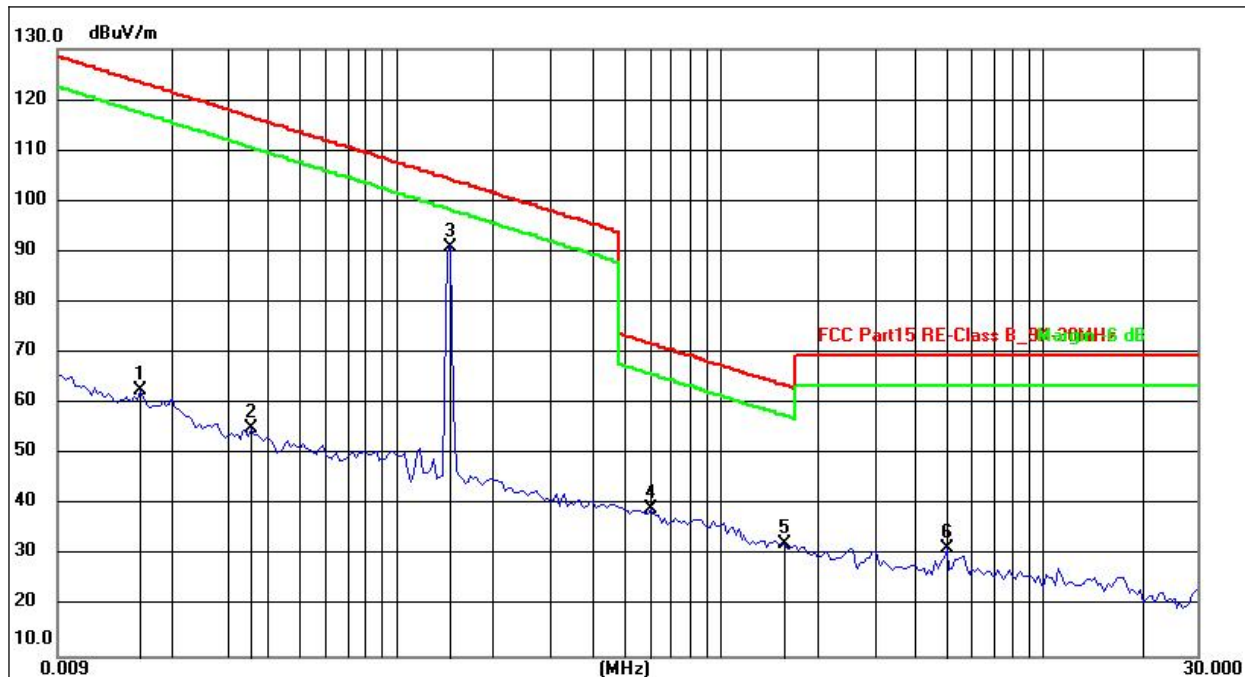
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0108	48.34	20.54	68.88	126.94	-58.06	peak
2	0.0316	43.07	20.18	63.25	117.61	-54.36	peak
3	0.1450	70.43	20.03	90.46	104.38	-13.92	peak
4	0.5410	25.70	20.23	45.93	72.94	-27.01	peak
5	2.4763	19.69	19.73	39.42	69.54	-30.12	peak
6	9.2530	11.57	19.08	30.65	69.54	-38.89	peak

Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature :	26°C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Coplanar
Test Voltage :	DC 12V From Adapter AC 120V/60Hz	Test Mode :	Mode 1a



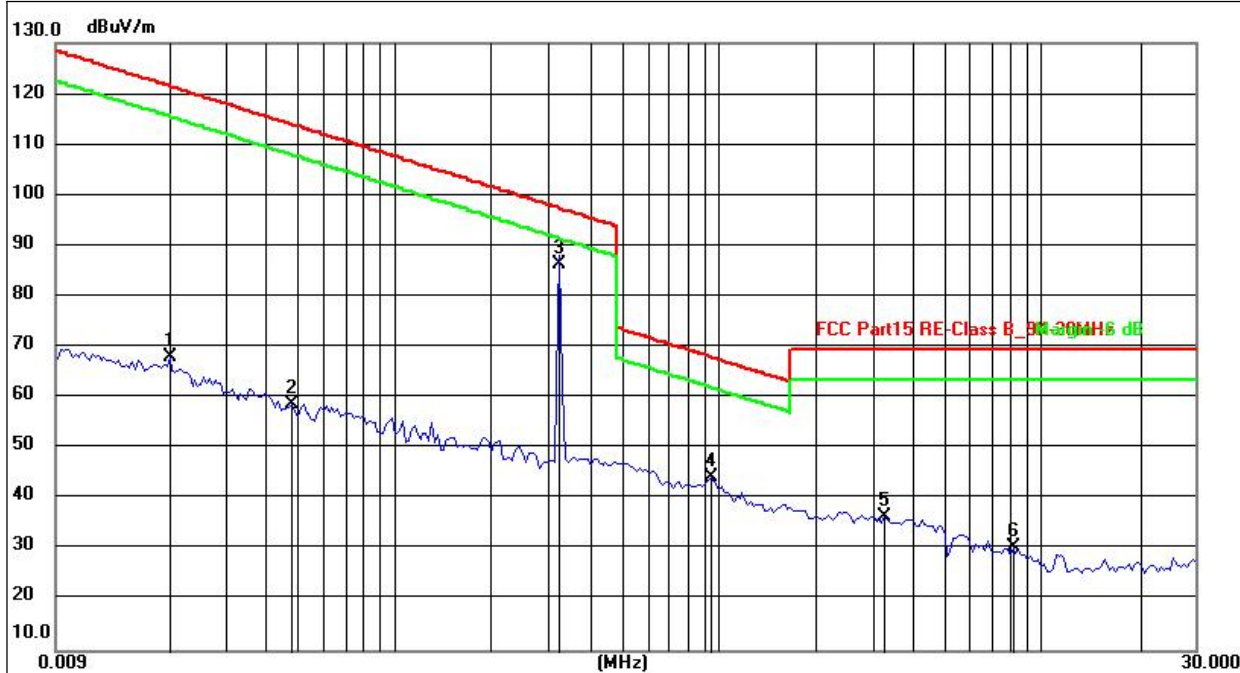
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0160	42.07	20.49	62.56	123.52	-60.96	peak
2	0.0357	35.11	20.08	55.19	116.55	-61.36	peak
3	0.1450	70.75	20.03	90.78	104.38	-13.60	peak
4	0.6108	18.87	20.30	39.17	71.89	-32.72	peak
5	1.5846	12.56	19.86	32.42	63.61	-31.19	peak
6	5.0357	11.86	19.47	31.33	69.54	-38.21	peak

## Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
5. Margin= Measurement Level-Limit.



Temperature :	26°C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	coaxial
Test Voltage :	DC 12V From Adapter AC 120V/60Hz	Test Mode :	Mode 4a



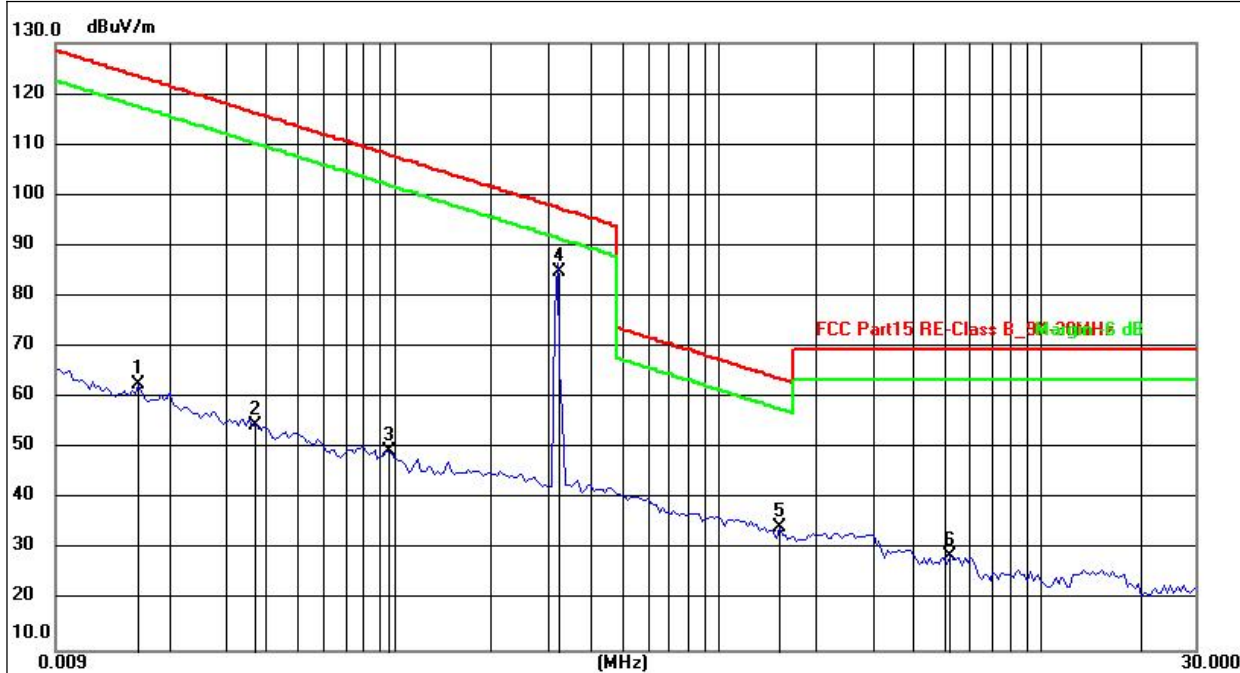
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0200	47.56	20.45	68.01	121.58	-53.57	peak
2	0.0483	38.93	19.79	58.72	113.93	-55.21	peak
3	0.3250	66.08	20.13	86.21	97.37	-11.16	peak
4	0.9546	24.36	20.04	44.40	68.01	-23.61	peak
5	3.2894	16.82	19.63	36.45	69.54	-33.09	peak
6	8.1932	11.35	19.18	30.53	69.54	-39.01	peak

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature :	26°C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Coplanar
Test Voltage :	DC 12V From Adapter AC 120V/60Hz	Test Mode :	Mode 4a



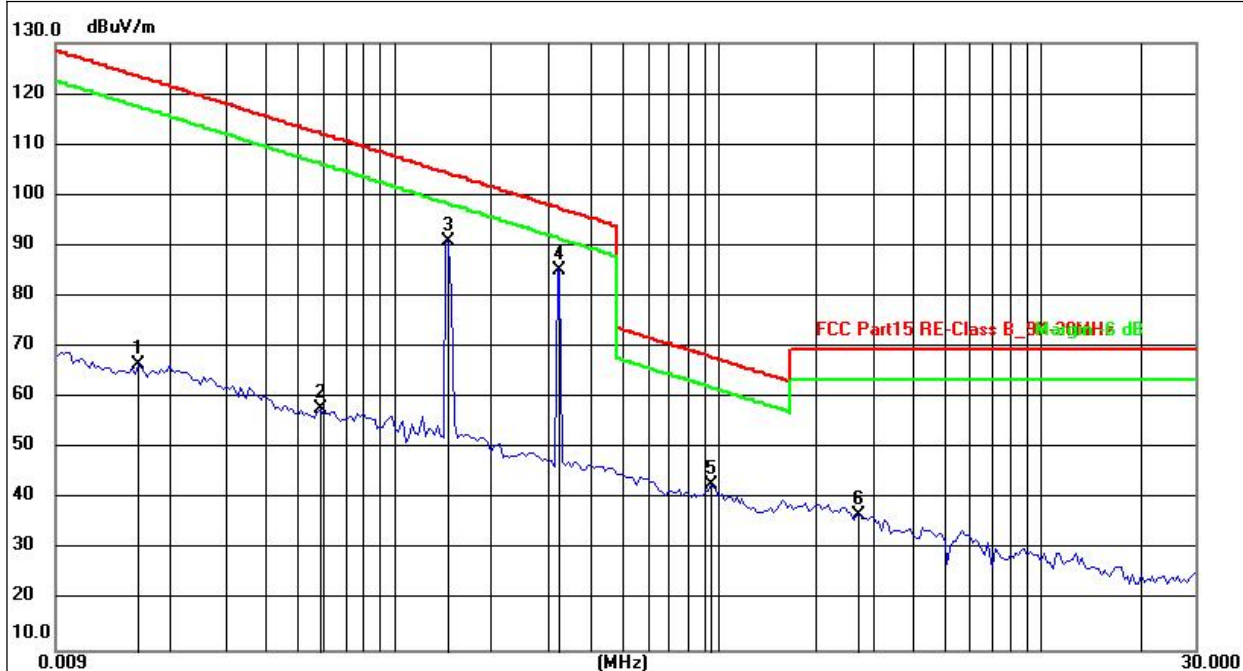
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0160	42.07	20.49	62.56	123.52	-60.96	peak
2	0.0371	34.46	20.05	54.51	116.22	-61.71	peak
3	0.0965	29.77	19.77	49.54	107.91	-58.37	peak
4	0.3250	64.60	20.13	84.73	97.37	-12.64	peak
5	1.5524	14.60	19.87	34.47	63.78	-29.31	peak
6	5.2442	9.17	19.45	28.62	69.54	-40.92	peak

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature :	26°C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	coaxial
Test Voltage :	DC 12V From Adapter AC 120V/60Hz	Test Mode :	Mode 7a



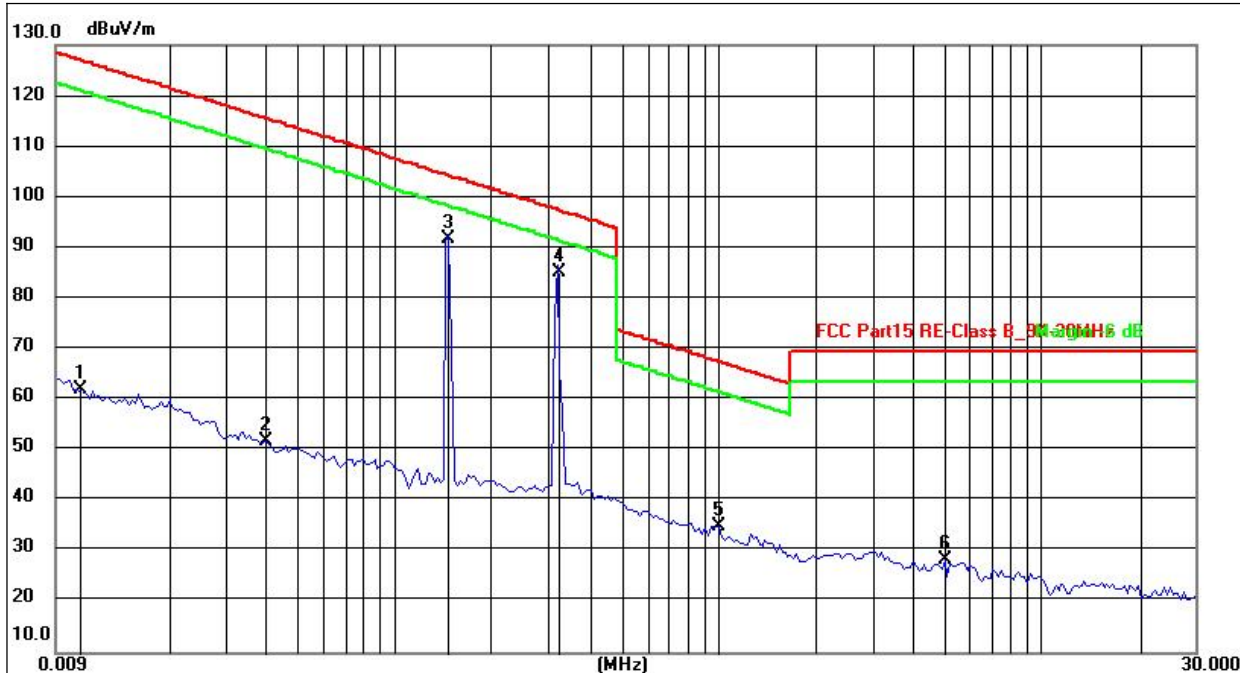
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0160	46.07	20.49	66.56	123.52	-56.96	peak
2	0.0592	37.94	19.80	57.74	112.16	-54.42	peak
3	0.1450	70.76	20.03	90.79	104.38	-13.59	peak
4	0.3250	65.13	20.13	85.26	97.37	-12.11	peak
5	0.9546	22.86	20.04	42.90	68.01	-25.11	peak
6	2.7406	17.01	19.69	36.70	69.54	-32.84	peak

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature :	26°C	Relative Humidity :	54%
Pressure :	101 kPa	Polarization :	Coplanar
Test Voltage :	DC 12V From Adapter AC 120V/60Hz	Test Mode :	Mode 7a



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0108	41.62	20.54	62.16	126.94	-64.78	peak
2	0.0403	31.81	19.98	51.79	115.50	-63.71	peak
3	0.1450	71.70	20.03	91.73	104.38	-12.65	peak
4	0.3250	65.00	20.13	85.13	97.37	-12.24	peak
5	1.0141	15.11	19.95	35.06	67.48	-32.42	peak
6	5.0357	8.86	19.47	28.33	69.54	-41.21	peak

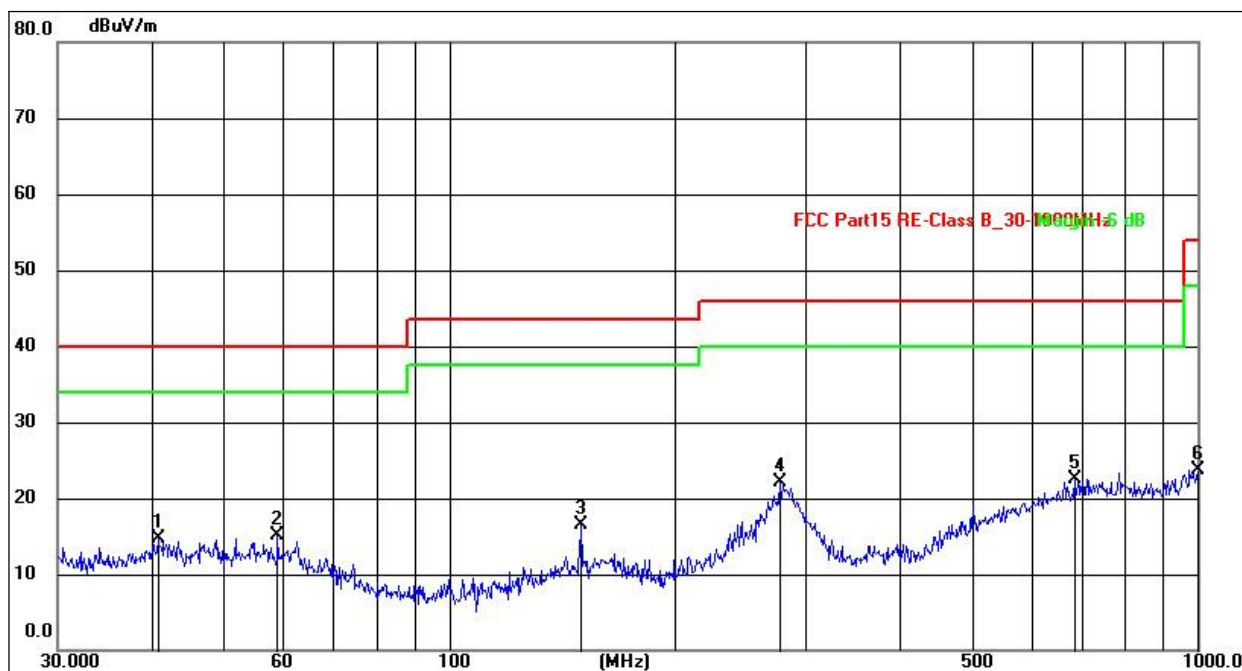
## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



30MHz-1GHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 12V From Adapter AC 120V/60Hz	Test Mode:	Mode 1d



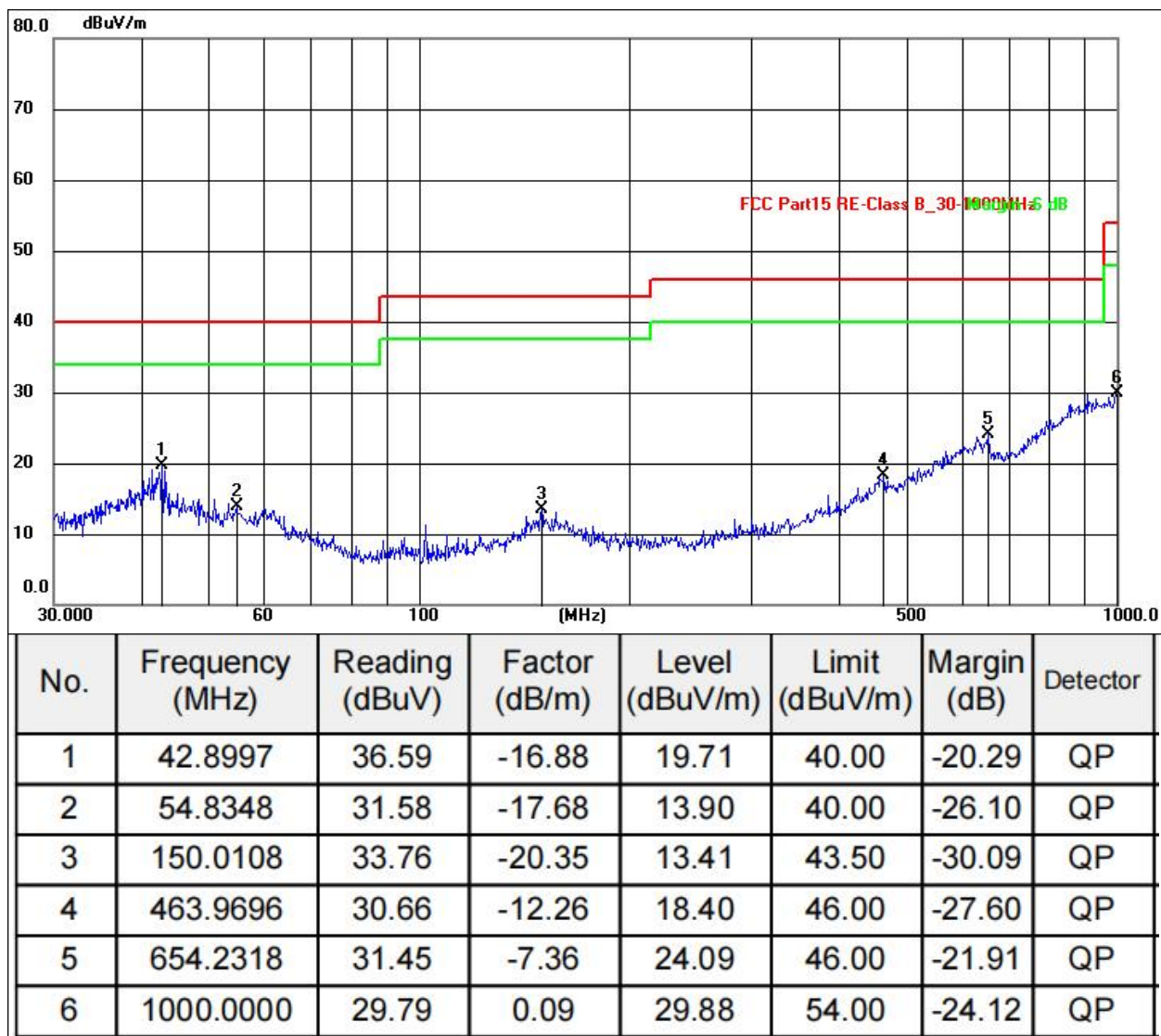
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	40.8445	28.67	-14.03	14.64	40.00	-25.36	QP
2	59.0251	29.13	-14.11	15.02	40.00	-24.98	QP
3	150.0108	32.80	-16.35	16.45	43.50	-27.05	QP
4	277.0935	36.22	-14.12	22.10	46.00	-23.90	QP
5	684.7453	29.18	-6.73	22.45	46.00	-23.55	QP
6	1000.0000	28.31	-4.56	23.75	54.00	-30.25	QP

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.
- 6.All test modes were tested, with only the worst Mode 1 recorded.



Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 12V From Adapter AC 120V/60Hz	Test Mode:	Mode 1a



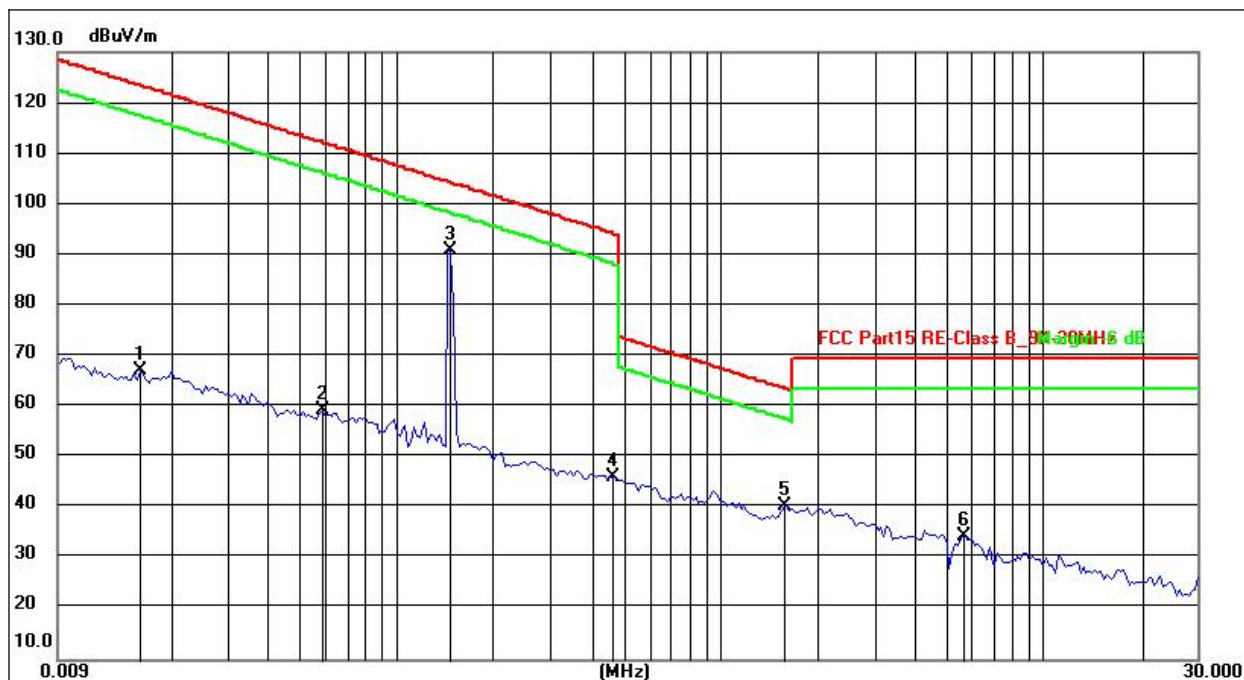
## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.
- 6.All test modes were tested, with only the worst Mode 1 recorded.



B: 9 kHz~30 MHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 3.85V	Test Mode:	Mode 1d



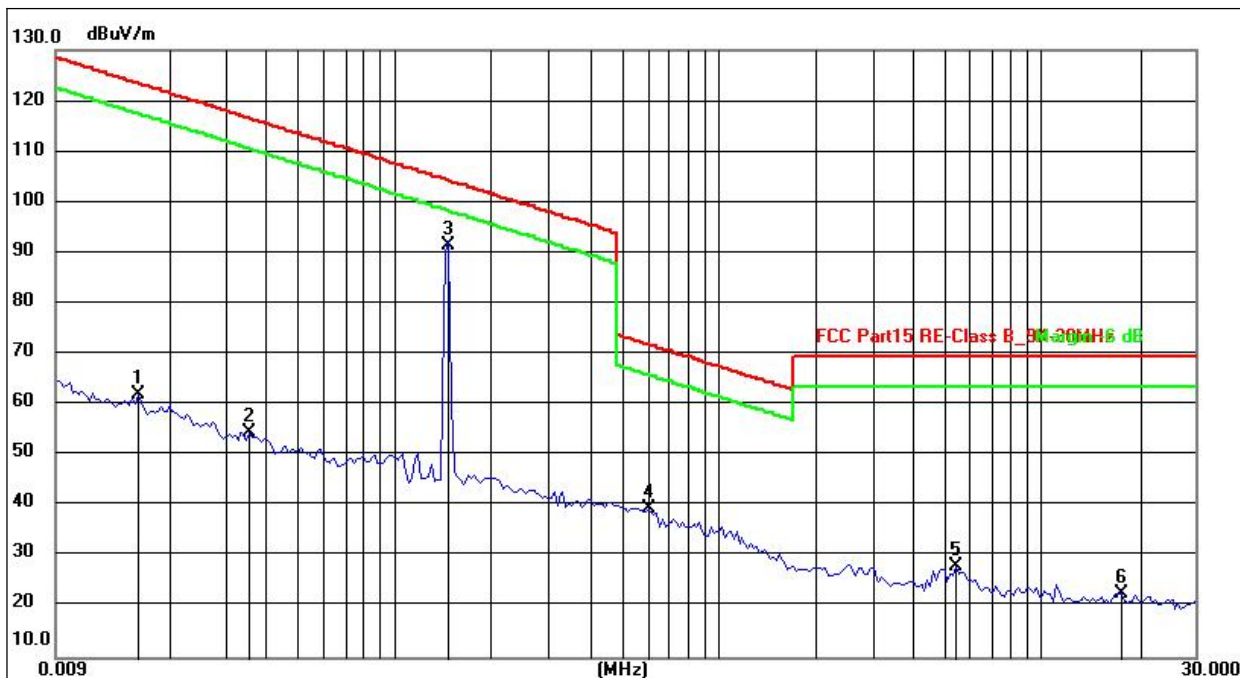
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0160	46.57	20.49	67.06	123.52	-56.46	peak
2	0.0592	39.44	19.80	59.24	112.16	-52.92	peak
3	0.1450	70.76	20.03	90.79	104.38	-13.59	peak
4	0.4692	25.98	20.19	46.17	94.18	-48.01	peak
5	1.5846	20.56	19.86	40.42	63.61	-23.19	peak
6	5.6875	14.92	19.41	34.33	69.54	-35.21	peak

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 3.85V	Test Mode:	Mode 1d



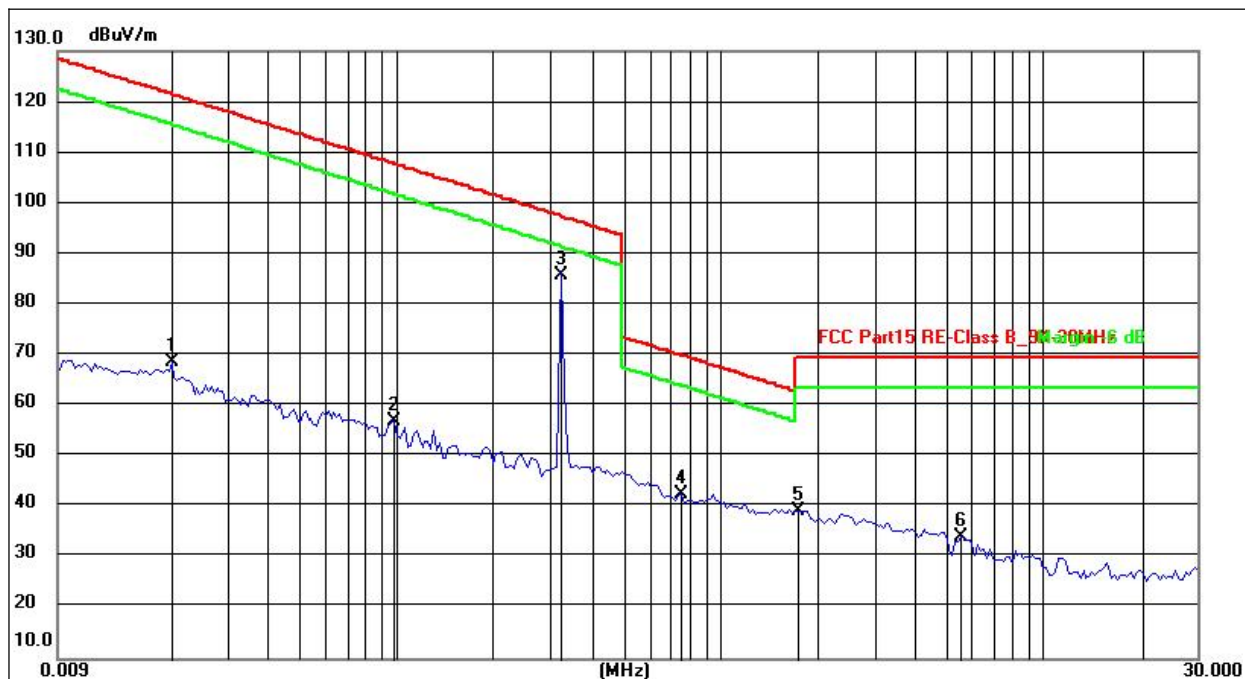
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0160	41.57	20.49	62.06	123.52	-61.46	peak
2	0.0357	34.61	20.08	54.69	116.55	-61.86	peak
3	0.1450	71.53	20.03	91.56	104.38	-12.82	peak
4	0.6108	19.37	20.30	39.67	71.89	-32.22	peak
5	5.4615	8.83	19.43	28.26	69.54	-41.28	peak
6	17.7056	4.12	18.66	22.78	69.54	-46.76	peak

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 3.85V	Test Mode:	Mode 4d



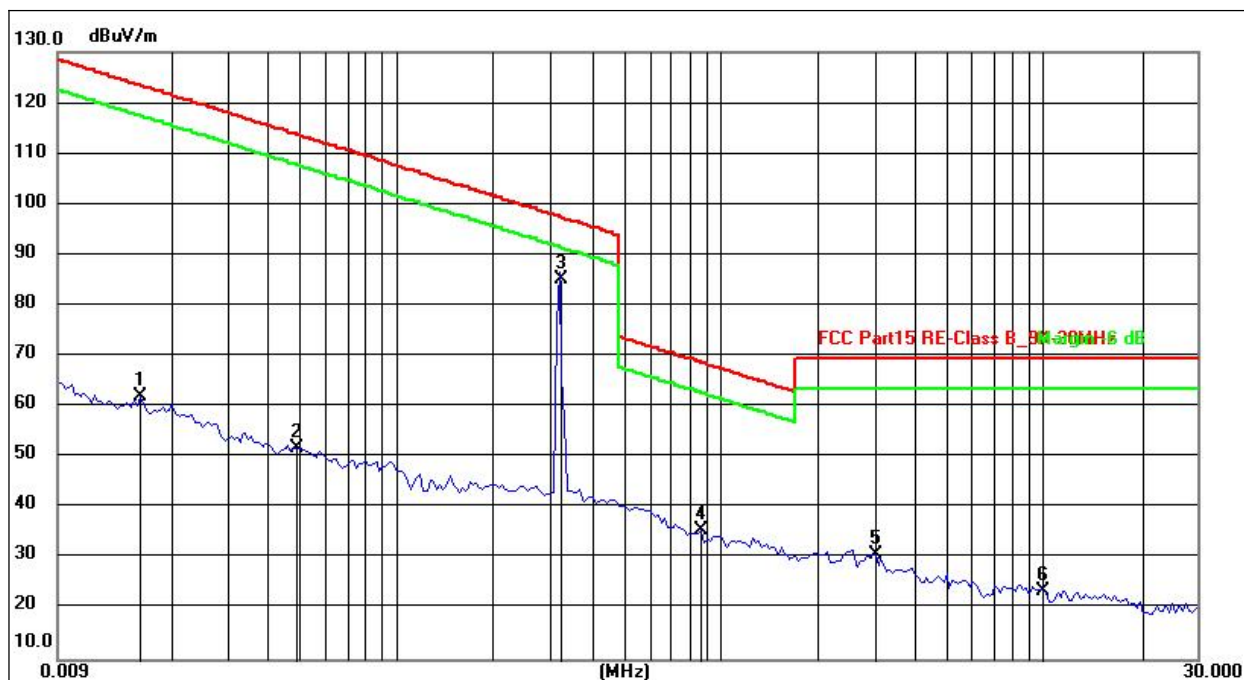
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0200	48.06	20.45	68.51	121.58	-53.07	peak
2	0.0985	37.22	19.77	56.99	107.74	-50.75	peak
3	0.3250	65.50	20.13	85.63	97.37	-11.74	peak
4	0.7638	22.01	20.40	42.41	69.94	-27.53	peak
5	1.7540	19.44	19.84	39.28	69.54	-30.26	peak
6	5.5734	14.61	19.41	34.02	69.54	-35.52	peak

## Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
5. Margin= Measurement Level-Limit.



Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 3.85V	Test Mode:	Mode 4d



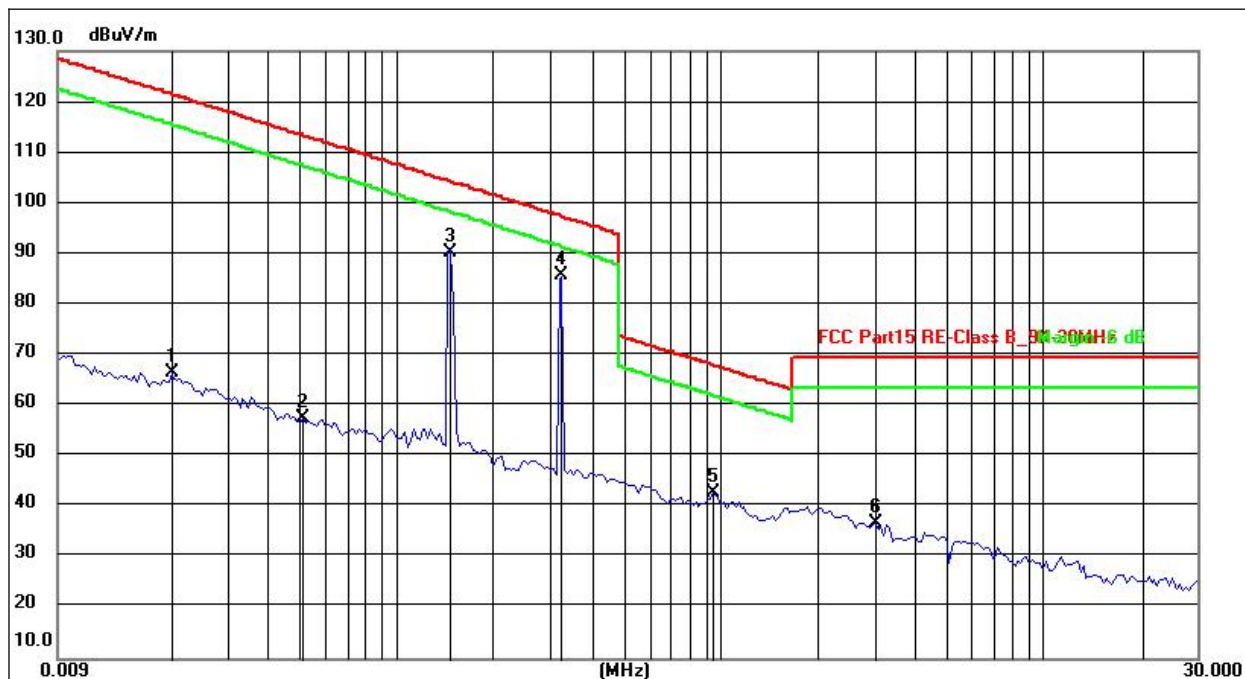
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0160	41.57	20.49	62.06	123.52	-61.46	peak
2	0.0492	32.13	19.77	51.90	113.77	-61.87	peak
3	0.3250	65.00	20.13	85.13	97.37	-12.24	peak
4	0.8800	15.52	20.18	35.70	68.71	-33.01	peak
5	3.0331	11.35	19.64	30.99	69.54	-38.55	peak
6	10.0350	4.77	19.01	23.78	69.54	-45.76	peak

## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 3.85V	Test Mode:	Mode 7d



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0200	46.06	20.45	66.51	121.58	-55.07	peak
2	0.0514	37.82	19.76	57.58	113.39	-55.81	peak
3	0.1450	70.28	20.03	90.31	104.38	-14.07	peak
4	0.3250	65.58	20.13	85.71	97.37	-11.66	peak
5	0.9546	22.86	20.04	42.90	68.01	-25.11	peak
6	3.0331	17.35	19.64	36.99	69.54	-32.55	peak

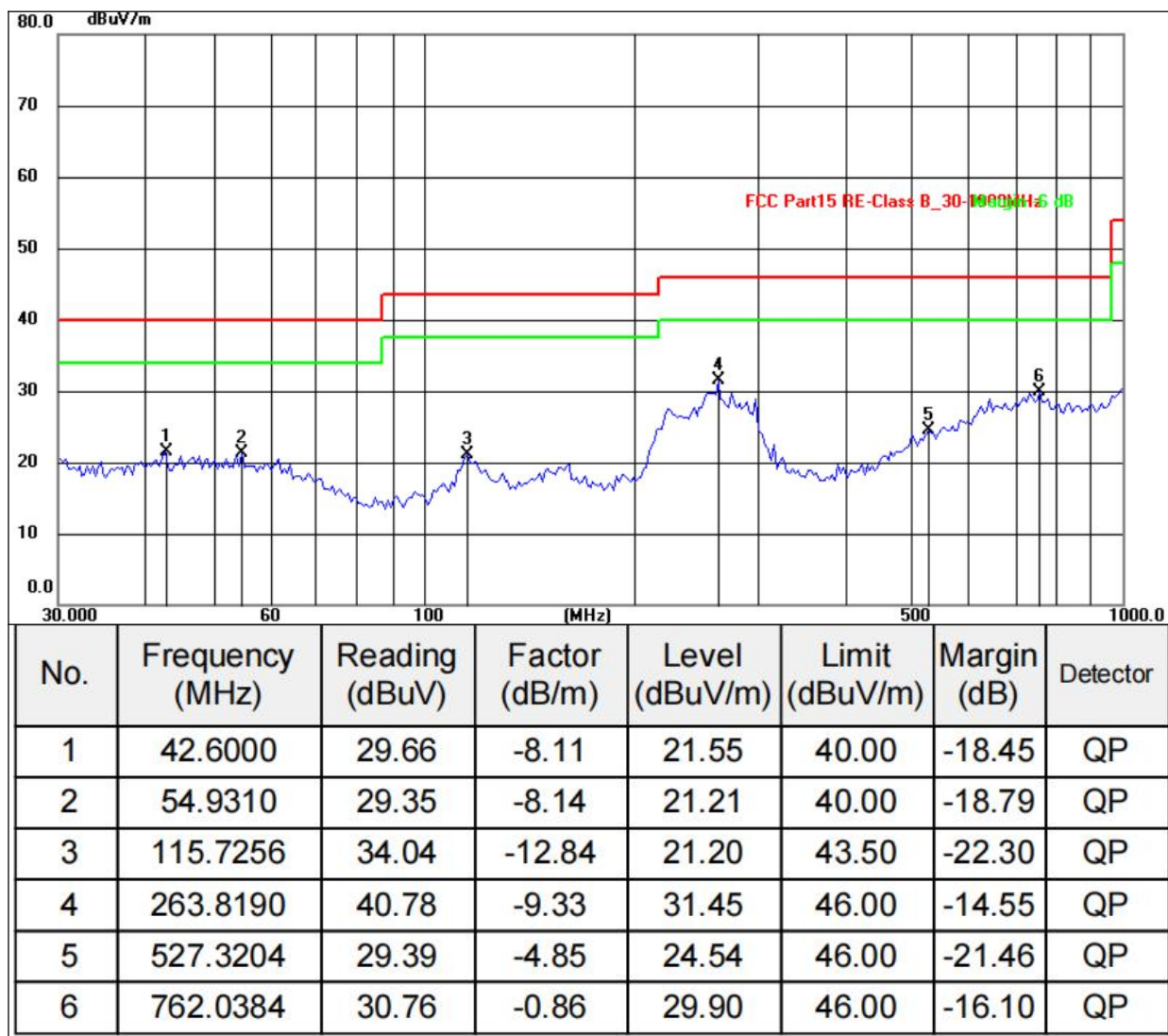
## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.



30MHz-1GHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3.85V	Test Mode:	Mode 7d

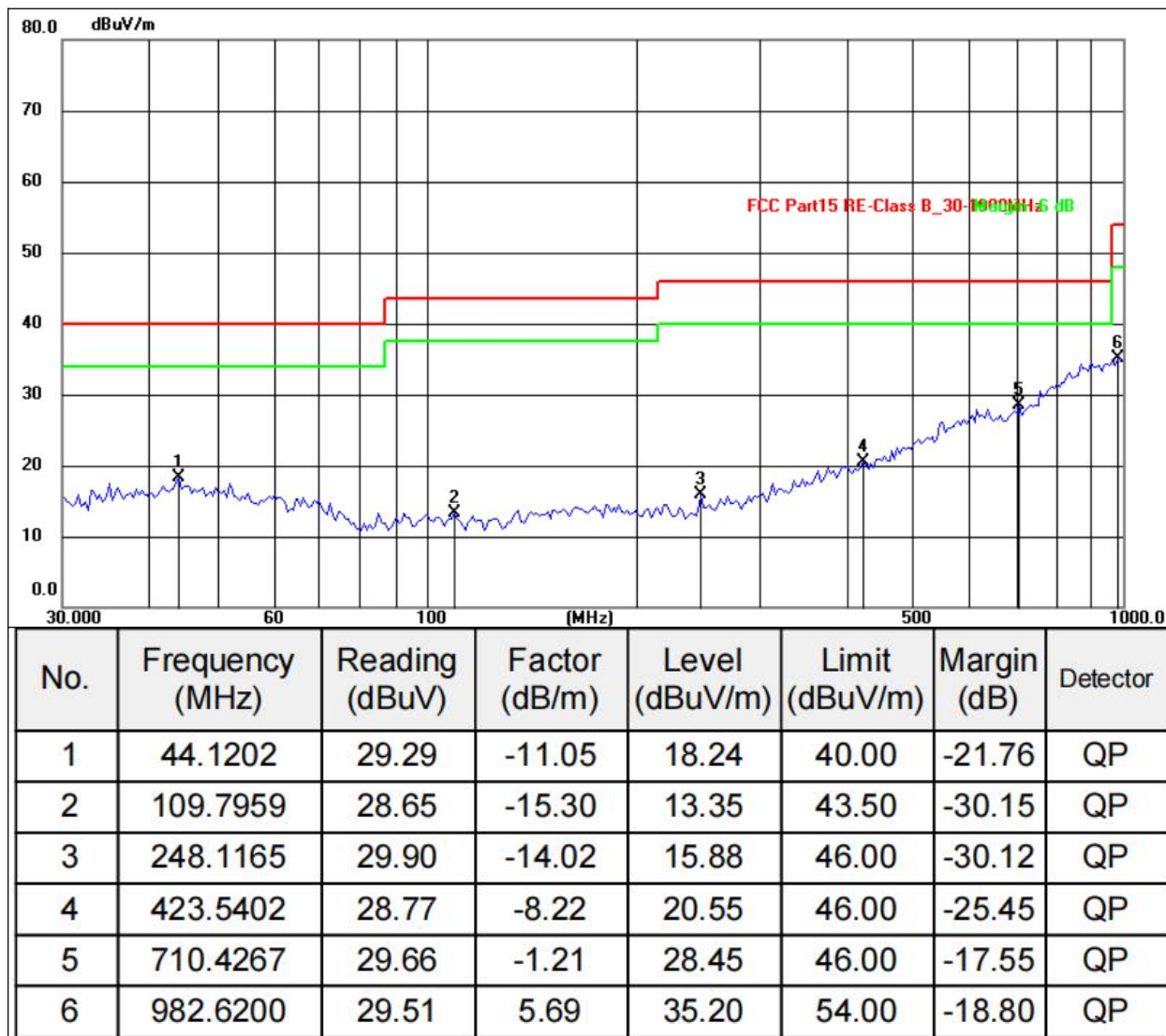


## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.
- 6.All test modes were tested, with only the worst Mode 1a recorded.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.85V	Test Mode:	Mode 7d



## Remarks:

- 1.An initial pre-scan was performed on the peak detector.
- 2.Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
- 3.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Antenna factor+ Cable loss factor - Amplifier factor.
- 5.Margin= Measurement Level-Limit.
- 6.All test modes were tested, with only the worst Mode 1a recorded.



## 6. 20DB BANDWIDTH TEST

### 6.1 TEST PROCEDURE

1. Se span = 1.5 ~ 5 times OBW.
2. Set RBW= 100 Hz.
3. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
4. Detector = peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. 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 20 dB relative to the maximum level measured in the fundamental emission.

### 6.2 LIMIT

N/A

### 6.3 TEST SETUP



### 6.4 DEVIATION FROM STANDARD

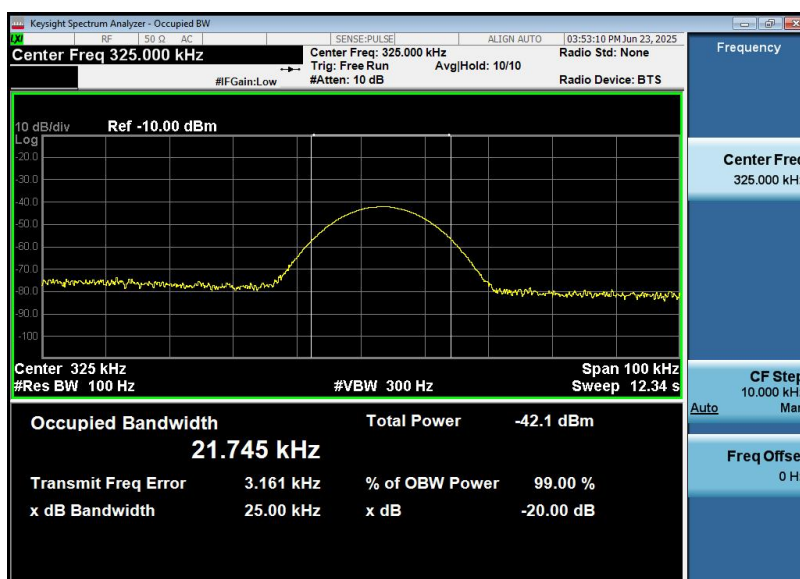
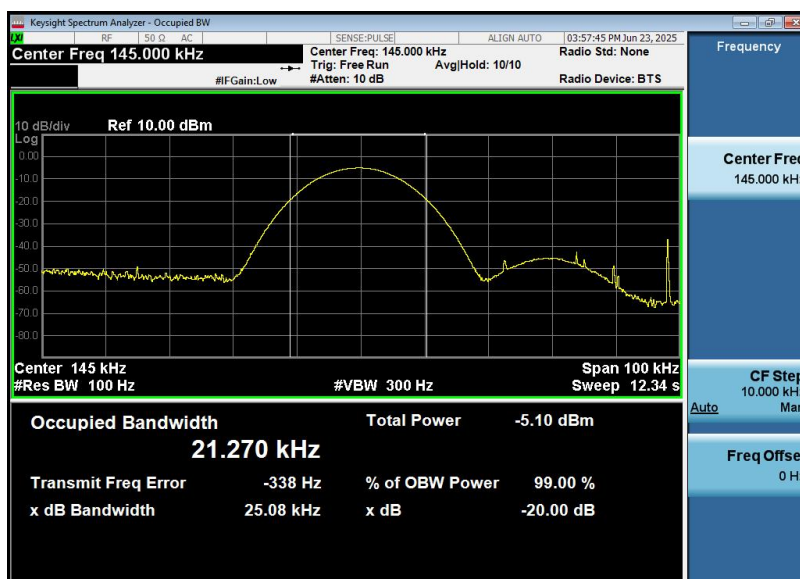
No deviation.



## 6.5 TEST RESULT

Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	DC 3.85V

Mode Configuration	Test Coil	Frequency (kHz)	20dB Bandwidth (kHz)	Result
Phone	ANT 1	145.00	25.08	Pass
Watch	ANT 2	325.00	25.00	Pass





## 7. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antenna is Loop Coil antenna, the best case gain of the antennas is 0dBi, reference to the appendix II for details	



## 8. TEST SETUP PHOTO

Reference to the appendix I for details.

## 9. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

\*\*\*\*\* END OF REPORT \*\*\*\*\*