

# EMC

# TEST REPORT

ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.

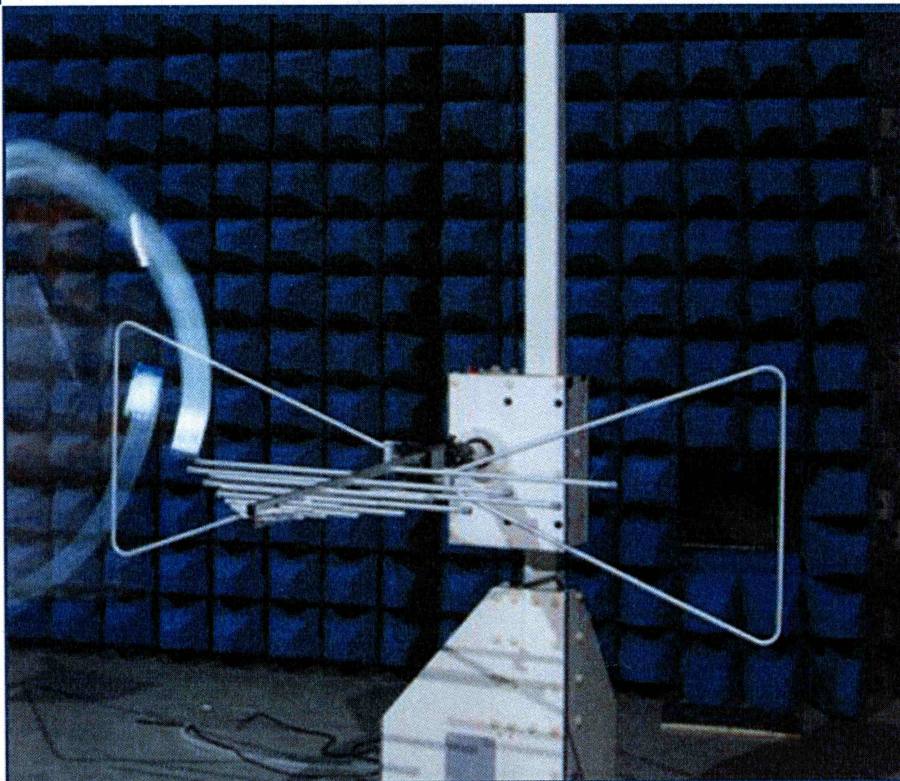


FOR

**OTE960**

ISSUED TO  
GN Audio A/S

Lautrupbjerg 7, 2750 Ballerup, Denmark



Tested by: Hu Qingshan

Hu Qingshan

Date: Jul. 19, 2021

Approved by: Liao Jianming

Liao Jianming  
(Technical Director)

Date: Jul. 19, 2021

Report No.: BL-SZ2120090-401

EUT Name: Bluetooth headset

Model Name: OTE960

Brand Name: BlueParrott

Test Standard: 47 CFR Part 15 Subpart B  
ICES-003 (Issue 7, October 15, 2020)

FCC ID: BCE-OTE960

ISED Number: 2386C-OTE960

Test Conclusion: Pass

Test Date: May 10, 2021 ~ May 26, 2021

Date of Issue: Jul. 19, 2021

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**Revision History**

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Jun. 28, 2021</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jul. 19, 2021</u>	<u>Added the serial number for section 2.4</u>

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# 1 GENERAL INFORMATION

## 1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co.,Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

## 1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

## 1.4 Announce

- (1) The test report refer to the BALUN report mode v3.4.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (7) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

Applicant	GN Audio A/S
Address	Lautrupbjerg 7, 2750 Ballerup, Denmark

### 2.2 Manufacturer Information

Manufacturer	GN Audio A/S
Address	Lautrupbjerg 7, 2750 Ballerup, Denmark

### 2.3 Factory Information

Factory	VTech ( Dongguan ) Telecommunications Limited
Address	Xia Ling Bei Management Zone, Liao Bu District Donguan, Guangdong. P.R China, Postcode: 523411

### 2.4 General Description for Equipment under Test (EUT)

EUT Name	Bluetooth headset: S650-XT (Stereo Headset) B650-XT (Mono Headset)
Model Name Under Test	OTE960
Series Model Name	N/A
Description of Model name differentiation	N/A
Serial Number	204292-01
Hardware Version	V-004
Software Version	V 0.30
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

### 2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	Everpower
	Model No.	PL902232
	Serial No.	N/A
	Capacity	770 mAh
	Rated Voltage	3.8 V
	Limit Charge Voltage	4.35 V
Ancillary Equipment 2	B650-XT	

## 2.6 Technical Information

The Highest Speed of Processor	N/A
Network and Wireless connectivity	Bluetooth, NFC

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15 Subpart B (10-1-19 Edition)	Unintentional Radiators
2	ICES-003 (Issue 7, October 15, 2020)	Information Technology Equipment (Including Digital Apparatus)
3	ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

#### 3.2 Verdict

No.	Description	FCC Rule	ISED Rule	Test Verdict	Result
1	Radiated Emission	15.109	ICES-003, 3.2.2	Pass	Annex A .1
2	Conducted Emission, AC Ports	15.107	ICES-003, 3.2.1	Pass	Annex A .2

#### 3.3 Test Uncertainty

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

Measurement	Value
Conducted emissions (9 kHz-30 MHz)	2.96 dB
Radiated emissions (30 MHz-1 GHz)	3.67 dB
Radiated emissions (1 GHz-18 GHz)	3.57 dB
Radiated emissions (18 GHz-40 GHz)	5.16 dB

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

Environment Parameter	Selected Values During Tests			
	Temperature	Voltage	Relative Humidity	Ambient Pressure
Normal Temperature, Normal Voltage (NTNV)	23°C to 25°C	USB 3.8 Vor DC 3.8 V from Battery	50% to 55%	100 kPa to 102 kPa

### 4.2 Test Equipment List

Radiated Emission Test For Frequency Below 1 GHz (10 m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2020.06.09	2021.06.08	<input checked="" type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-0883	2020.05.11	2022.05.10	<input checked="" type="checkbox"/>
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60 *7.35m	N/A	2018.08.08	2021.08.07	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>

Radiated Emission Test For Frequency Below 1 GHz (3 m)						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2020.09.18	2021.09.17	<input type="checkbox"/>
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2019.07.02	2021.07.01	<input type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.27	<input type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input type="checkbox"/>

Radiated Emission Test For Frequency Above 1 GHz						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2020.09.18	2021.09.17	<input checked="" type="checkbox"/>
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	9120D-1917	2019.07.02	2021.07.01	<input checked="" type="checkbox"/>
Anechoic Chamber	YIHENG	9m*6m*6m	N/A	2018.07.18	2021.07.27	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>



Conducted disturbance Test						
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due	Use
EMI Receiver	KEYSIGHT	N9010B	MY5711030 9	2020.06.08	2021.06.07	<input checked="" type="checkbox"/>
LISN	SCHWARZBECK	NSLK 8127	8127-687	2020.06.09	2021.06.08	<input checked="" type="checkbox"/>
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.4m*3.1m*2 .8m	N/A	2018.08.16	2021.08.15	<input checked="" type="checkbox"/>
Test Software	BALUN	BL410_E	V19.918	--	--	<input checked="" type="checkbox"/>

### 4.3 Test Enclosure list

Description	Manufacturer	Model	Serial No.	Length	Description	Use
Adapter	OPPO	AK903HK	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Laptop	HONOR	KPRS-W10	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB Connector	N/A	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Keyboard	Logitech	Y-BP62a	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Mouse	Logitech	M100	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Printer	Canon	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
Screen	ASUS	N/A	N/A	N/A	N/A	<input checked="" type="checkbox"/>
USB Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input checked="" type="checkbox"/>
AUX Cable	N/A	N/A	N/A	1.5 m	Shielded with core	<input checked="" type="checkbox"/>

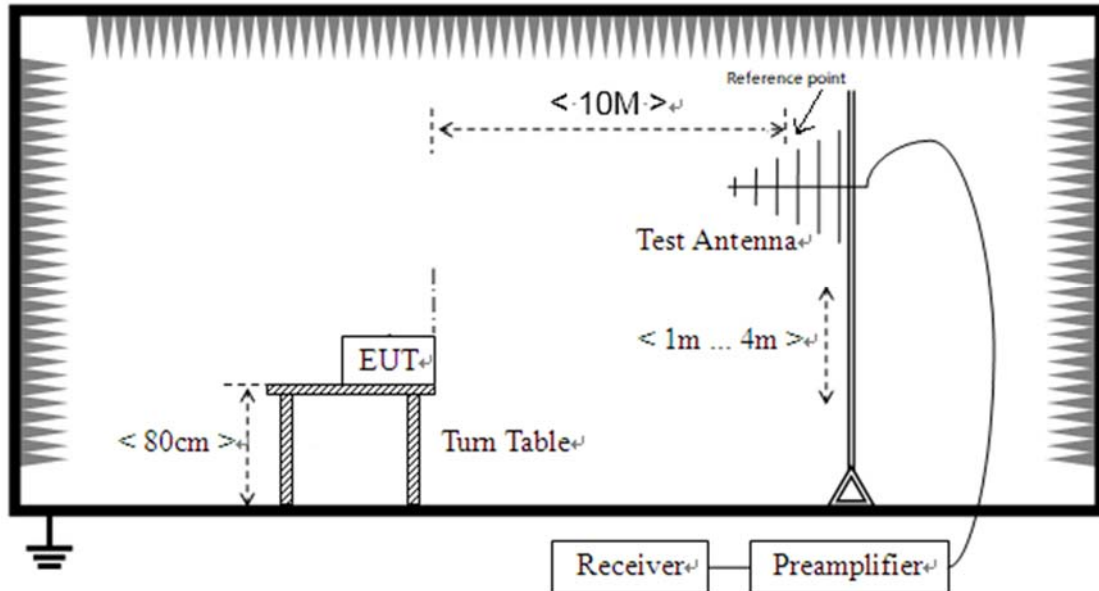
## 4.4 Test Configurations

Test Configurations (TC) No.	Description
TC01	<u>The BT RX Test Mode</u> EUT + Battery + USB Cable + Adapter + BT RX
TC02	<u>The NFC RX Test Mode</u> EUT + Battery + NFC RX
TC03	<u>The AUX RX Test Mode</u> EUT + Battery + AUX RX
TC04	<u>The USB Test Mode</u> EUT +Battery + USB Cable + Laptop +Adapter +USB Connector + Mouse + Keyboard + Printer + Screen

Note: When EUT is charging, it is not NFC and AUX cannot be turn on.

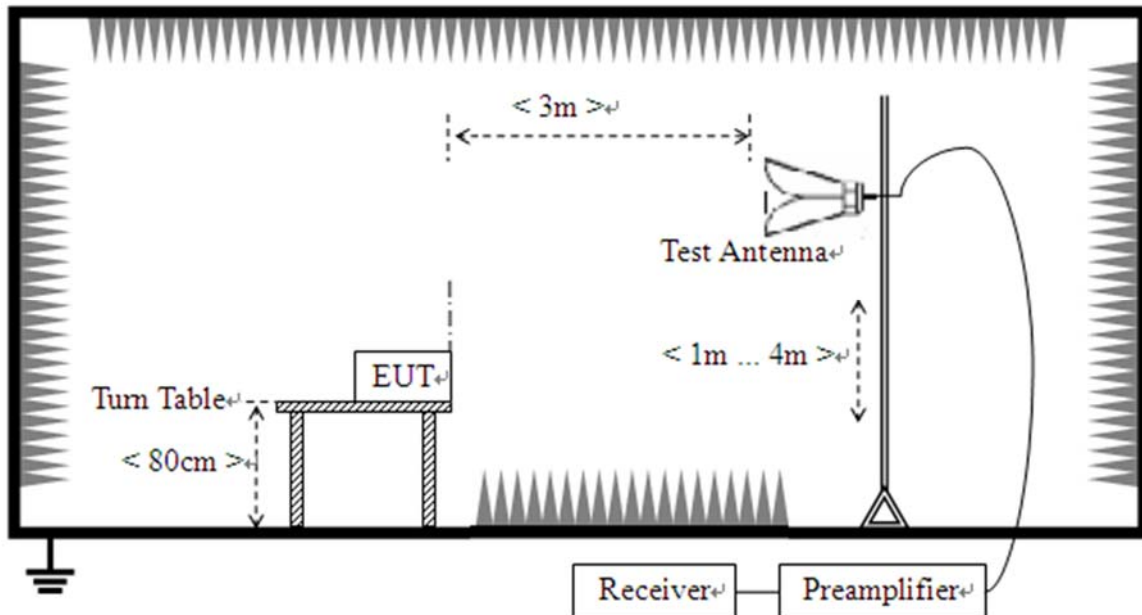
## 4.5 Test Setups

### Test Setup 1



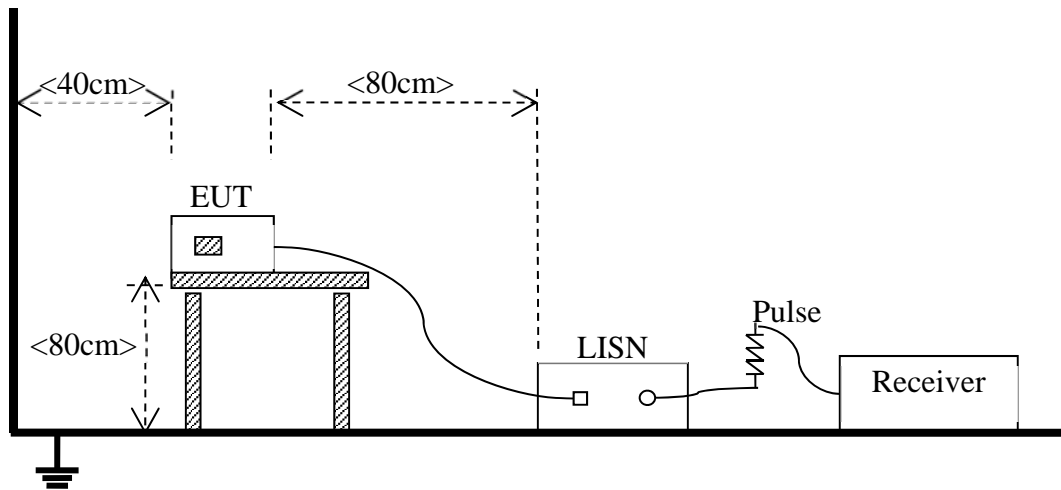
(For Radiated Emission Test (30 MHz-1 GHz))

### Test Setup 2



(For Radiated Emission Test (above 1 GHz))

Test Setup 3



(For Conducted Emission, AC Ports Test)



## 4.6 Test Conditions

Test Case	Test Conditions	
Radiated Emission	Test Env.	NTNV
	Test Setup	Test Setup 1&2
	Test Configuration	TC01~TC04 <sup>Note</sup>
Conducted Emission, AC Ports	Test Env.	NTNV
	Test Setup	Test Setup 3
	Test Configuration	TC01&TC04 <sup>Note</sup>

Note: Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report. The BT RX Test Mode and The USB Test Mode are the worst mode in this report.

## 5 TEST ITEMS

### 5.1 Emission Tests

#### 5.1.1 Radiated Emission

##### 5.1.1.1 Limit

FCC:

Frequency range (MHz)	Class B (at 3 m)		Class B (at 10 m)	Class A (at 10 m)	
	Field Strength ( $\mu\text{V/m}$ )	Field Strength (dB $\mu\text{V/m}$ )	Field Strength (dB $\mu\text{V/m}$ )	Field Strength ( $\mu\text{V/m}$ )	Field Strength (dB $\mu\text{V/m}$ )
30 - 88	100	40	30	90	39
88 - 216	150	43.5	33.5	150	43.5
216 - 960	200	46	36	210	46.4
Above 960	500	54	44	300	49.5

NOTE:

- 1) Field Strength (dB $\mu\text{V/m}$ ) =  $20 \cdot \log$  [Field Strength ( $\mu\text{V/m}$ )].
- 2) In the emission tables above, the tighter limit applies at the band edges.
- 3) The limits using ANSI C63.4.

IC:

Frequency range (MHz)	Class A (3 m) Quasi-peak (dB $\mu\text{V/m}$ )	Class A (10 m) Quasi-peak (dB $\mu\text{V/m}$ )	Class B (3 m) Quasi-peak (dB $\mu\text{V/m}$ )	Class B (10m) Quasi-peak (dB $\mu\text{V/m}$ )
30 - 88	50.0	40.0	40	30.0
88 - 216	54.0	43.5	43.5	33.1
216 - 230	56.9	46.4	46.0	35.6
230 - 960	57.0	47.0	47.0	37.0
960 - 1000	60.0	49.5	54.0	43.5

Note: The more stringent limit applies at transition frequencies.

Frequency range (GHz)	Class A (3 m) Average (dB $\mu\text{V/m}$ )	Class A (3 m) Peak (dB $\mu\text{V/m}$ )	Class B (3 m) Average (dB $\mu\text{V/m}$ )	Class B (3 m) Peak (dB $\mu\text{V/m}$ )
1 - $F_M$	60	80	54	74

Note:

1. The highest measurement frequency,  $F_M$ , in GHz, shall be determined as next Table.
2. The measurement bandwidth shall be 1 MHz or greater.
3. These limit levels apply for a measurement distance of 3 m. If using a different measurement distance, the measured levels shall be extrapolated to the 3 m limit distance using a factor of 20 dB per decade of distance. The measurement distance shall place the measurement antenna in the far field of the ITE or digital apparatus under test.
4. The test site shall have been validated at the distance used for radiated emission measurements on

Frequency range (GHz)	Class A (3 m) Average (dBµV/m)	Class A (3 m) Peak (dBµV/m)	Class B (3 m) Average (dBµV/m)	Class B (3 m) Peak (dBµV/m)
the ITE or digital apparatus under test				

Highest internal frequency (F <sub>x</sub> )	Highest measurement frequency (F <sub>M</sub> )
F <sub>x</sub> ≤ 108 MHz	1GHz
108 MHz ≤ F <sub>x</sub> ≤ 500 MHz	2GHz
500 MHz ≤ F <sub>x</sub> ≤ 1 GHz	5GHz
F <sub>x</sub> ≥ 1 GHz	5 *F <sub>x</sub> up to a maximum of 40 GHz
Note:F <sub>x</sub> is the highest fundamental frequency generated and/or used in the ITE or digital apparatus under test.	

### 5.1.1.2 Test Setup

Refer to 4.5 section (test setup 1 to test setup 2) for radiated emission test, the photo of test setup please refer to ANNEX B.

### 5.1.1.3 Test Procedure

The test employing the methods of measurement described in the publication referenced in Section 3(b) (ANSI C63.4);

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

### 5.1.1.4 Test Result

Please refer to ANNEX A.1.

#### NOTE:

1. Results (dBuV/m) = Reading (dBuV) + Factor (dB/m)

The reading level is calculated by software which is not shown in the sheet

2. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Amplifier Gain (dB)

3. Over limit = Results – Limit.

## 5.1.2 Conducted Emission

### 5.1.2.1 Test Limit

Frequency range (MHz)	Class A	
	Quasi-peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15 - 0.50	79	66
0.50 - 30	73	60

Frequency range (MHz)	Class B	
	Quasi-peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

**NOTE:**

- 1) The lower limit shall apply at the band edges.
- 2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.
- 3) The limit using ANSI C63.4.

### 5.1.2.2 Test Setup

Refer to 4.5 section test (test setup 3) for conducted emission, the photo of test setup please refer to ANNEX B.

### 5.1.2.3 Test Procedure

The test employing the methods of measurement described in the publication referenced in Section 3(b) (ANSI C63.4);

The EUT is connected to the power mains through a LISN which provides 50  $\Omega$ /50  $\mu$ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

### 5.1.2.4 Test Result

Please refer to ANNEX A.2.

**NOTE:**

1. Results (dB $\mu$ V/m) = Reading (dB $\mu$ V) + Factor (dB/m)

The reading level is calculated by software which is not shown in the sheet

2. Factor = Insertion loss + Cable loss

3. Over limit = Results – Limit.

## ANNEX A TEST RESULTS

### A.1 Radiated Emission

Note 1: The symbol of "--" in the table which means not application.

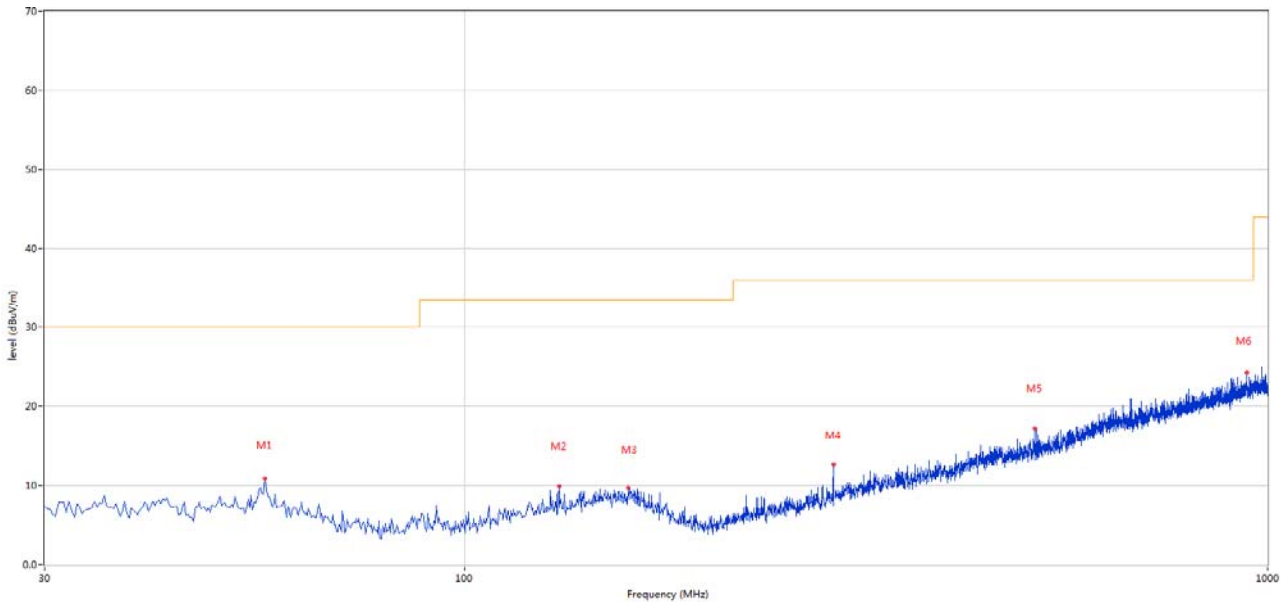
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

#### Test Data and Plots

#### The BT RX Test Mode and The USB Test Mode

##### A.1.1 Test Antenna Vertical, 30 MHz – 1 GHz(FCC)

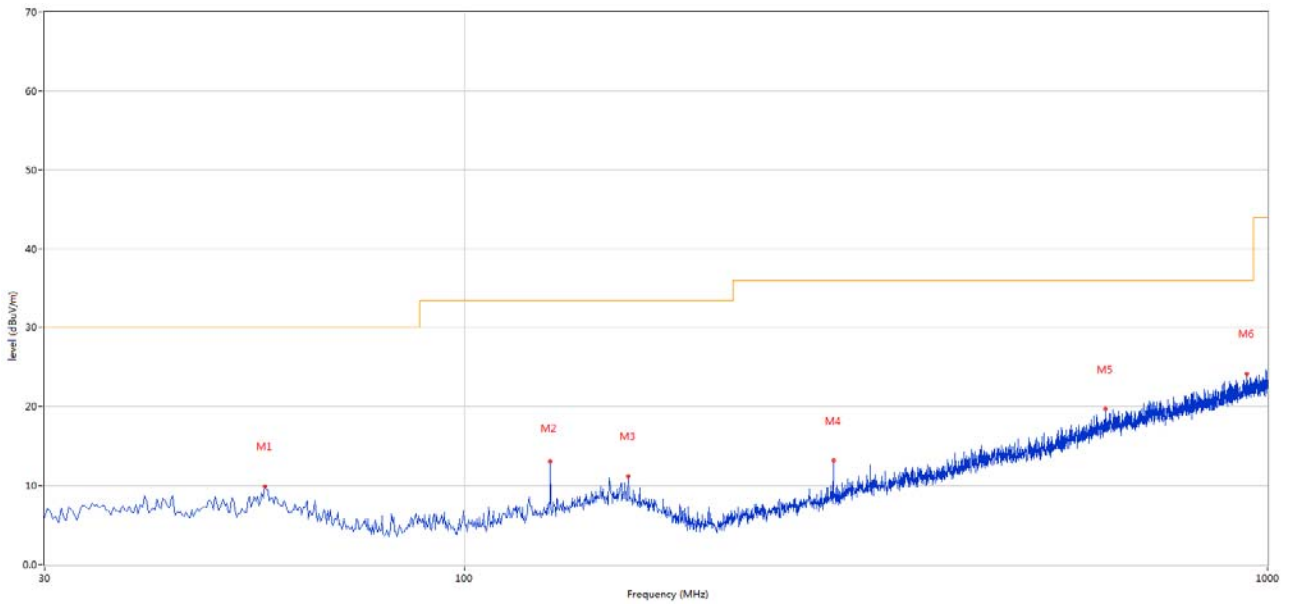
#### The BT RX Test Mode



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	56.426	10.82	-27.59	30.0	-19.18	Peak	65.00	100	Vertical	Pass
2	131.097	9.91	-27.24	33.5	-23.59	Peak	51.00	200	Vertical	Pass
3	159.948	9.71	-25.82	33.5	-23.79	Peak	153.00	200	Vertical	Pass
4	287.956	12.64	-26.09	36.0	-23.36	Peak	332.00	100	Vertical	Pass
5	512.697	17.18	-20.44	36.0	-18.82	Peak	199.00	200	Vertical	Pass
6	942.784	24.17	-11.48	36.0	-11.83	Peak	173.00	200	Vertical	Pass



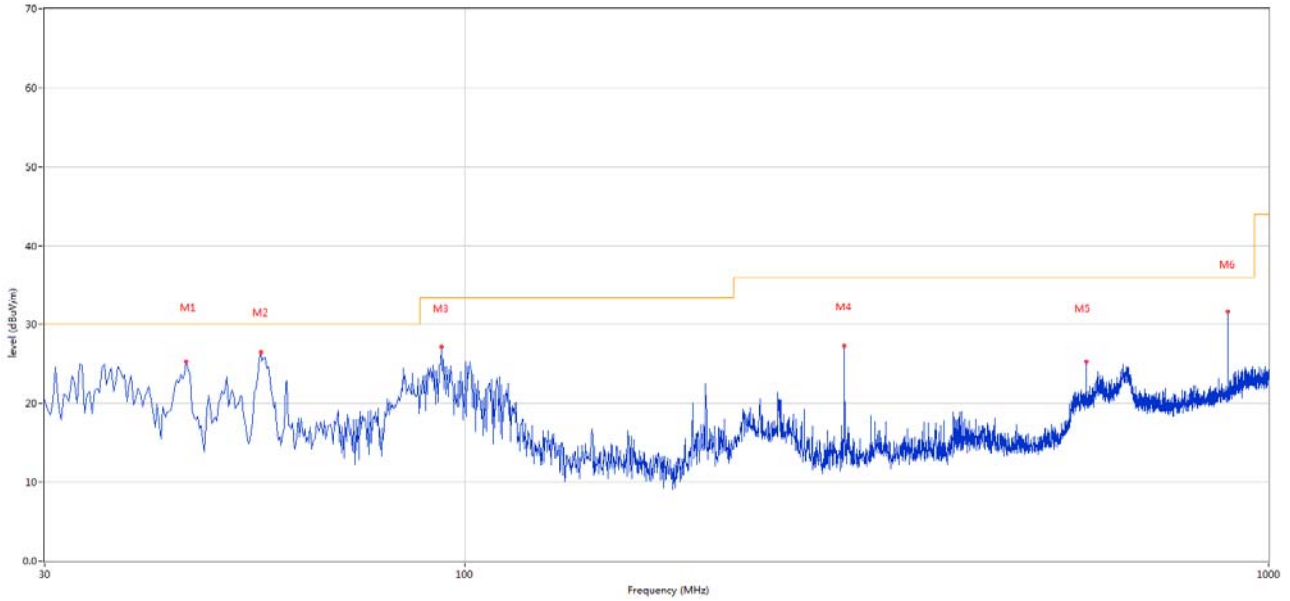
A.1.2 Test Antenna Horizontal, 30 MHz – 1 GHz(FCC)



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	56.426	9.90	-27.59	30.0	-20.10	Peak	149.00	200	Horizontal	Pass
2	127.946	13.03	-27.34	33.5	-20.47	Peak	115.00	100	Horizontal	Pass
3	159.948	11.20	-25.82	33.5	-22.30	Peak	300.00	200	Horizontal	Pass
4	287.956	13.11	-26.09	36.0	-22.89	Peak	73.00	200	Horizontal	Pass
5	628.340	19.64	-17.23	36.0	-16.36	Peak	360.00	200	Horizontal	Pass
6	941.815	24.14	-11.45	36.0	-11.86	Peak	184.00	200	Horizontal	Pass

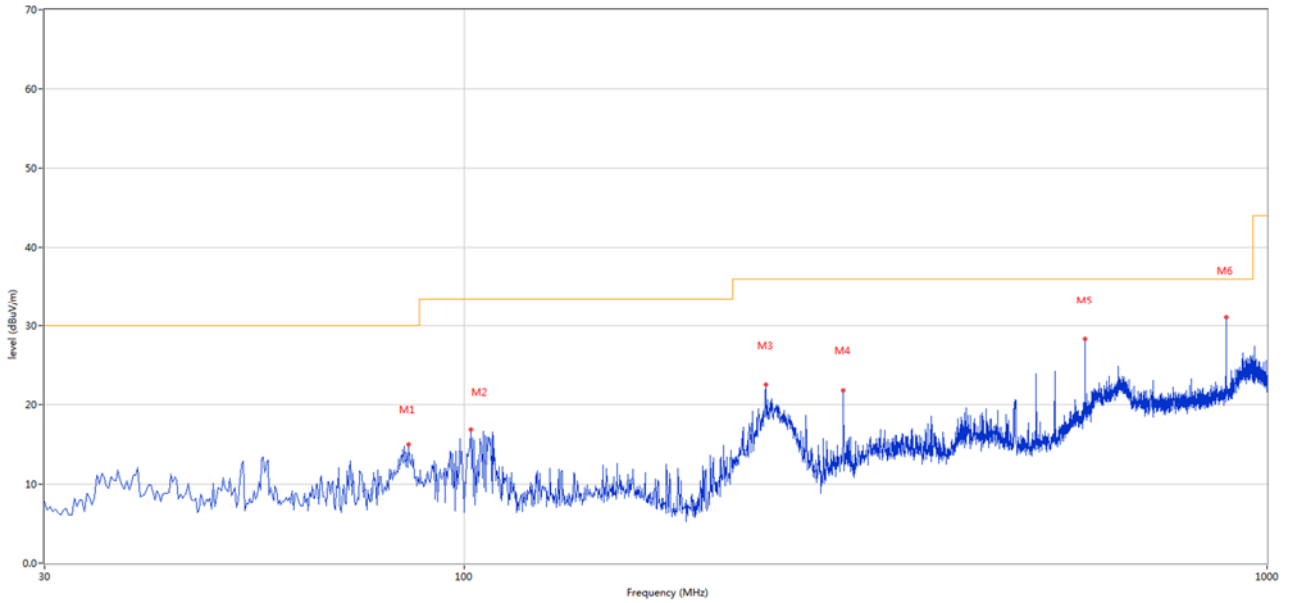
A.1.3 Test Antenna Vertical, 30 MHz – 1 GHz(FCC)

The USB Test Mode



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	45.031	25.24	-27.18	30.0	-4.76	Peak	65.00	200	Vertical	Pass
2	55.699	26.43	-27.47	30.0	-3.57	Peak	359.00	200	Vertical	Pass
3	93.519	27.20	-30.72	33.5	-6.30	Peak	0.00	200	Vertical	Pass
4	296.683	27.23	-26.08	36.0	-8.77	Peak	154.00	100	Vertical	Pass
5	593.187	25.32	-18.31	36.0	-10.68	Peak	0.00	200	Vertical	Pass
6	889.933	31.54	-12.63	36.0	-4.46	Peak	256.00	200	Vertical	Pass

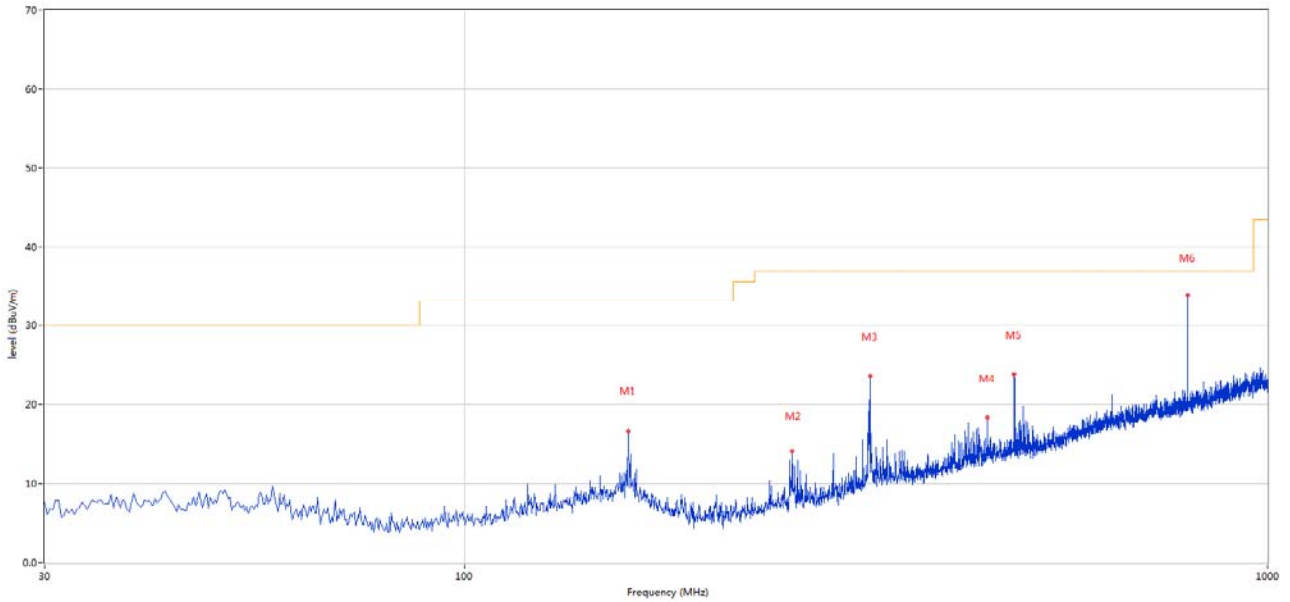
A.1.4 Test Antenna Horizontal, 30 MHz – 1 GHz(FCC)



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	85.276	14.93	-31.15	30.0	-15.07	Peak	251.00	200	Horizontal	Pass
2	102.004	16.87	-29.93	33.5	-16.63	Peak	256.00	200	Horizontal	Pass
3	237.286	22.49	-27.96	36.0	-13.51	Peak	201.00	200	Horizontal	Pass
4	296.683	21.81	-26.08	36.0	-14.19	Peak	125.00	200	Horizontal	Pass
5	593.187	28.30	-18.31	36.0	-7.70	Peak	130.00	200	Horizontal	Pass
6	890.175	31.07	-12.59	36.0	-4.93	Peak	305.00	100	Horizontal	Pass

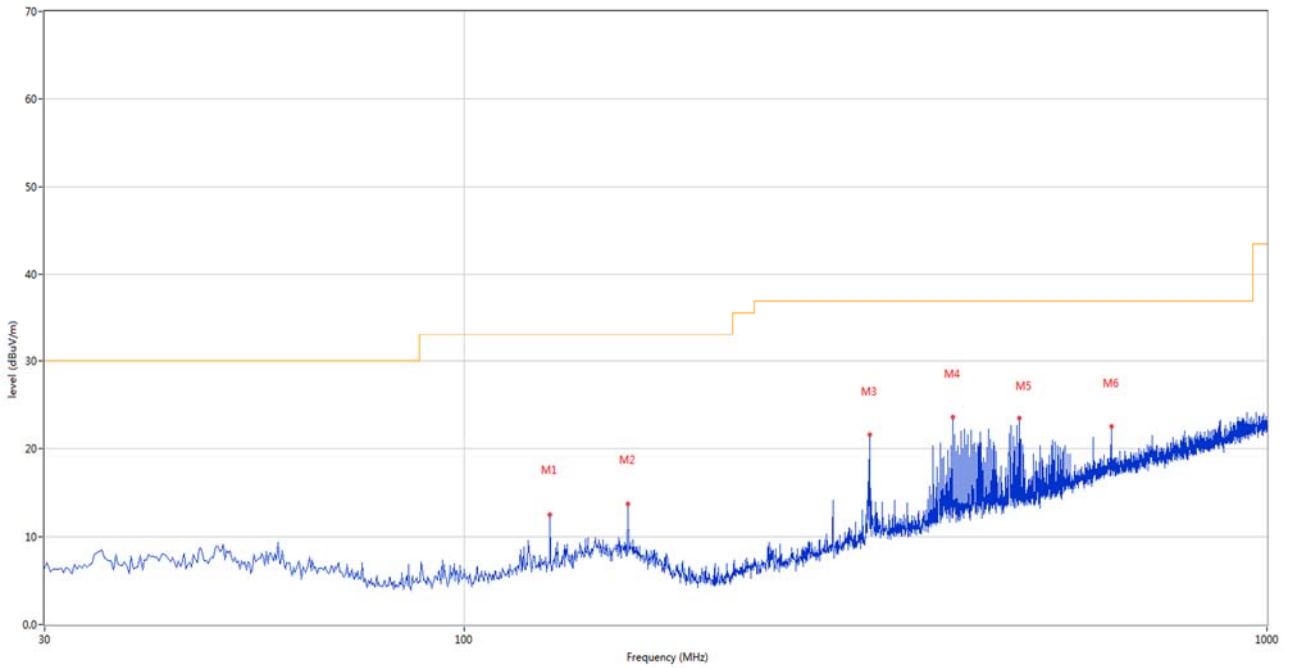
A.1.5 Test Antenna Vertical, 30 MHz – 1 GHz(IC)

The BT RX Test Mode



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	159.948	16.64	-25.82	33.1	-16.46	Peak	245.00	100	Vertical	Pass
2	255.954	14.06	-27.23	37.0	-22.94	Peak	129.00	100	Vertical	Pass
3	319.958	23.53	-25.31	37.0	-13.47	Peak	0.00	200	Vertical	Pass
4	447.966	18.28	-21.59	37.0	-18.72	Peak	1.00	100	Vertical	Pass
5	483.847	23.78	-20.99	37.0	-13.22	Peak	0.00	200	Vertical	Pass
6	795.139	33.94	-14.37	37.0	-3.06	Peak	0.00	200	Vertical	Pass

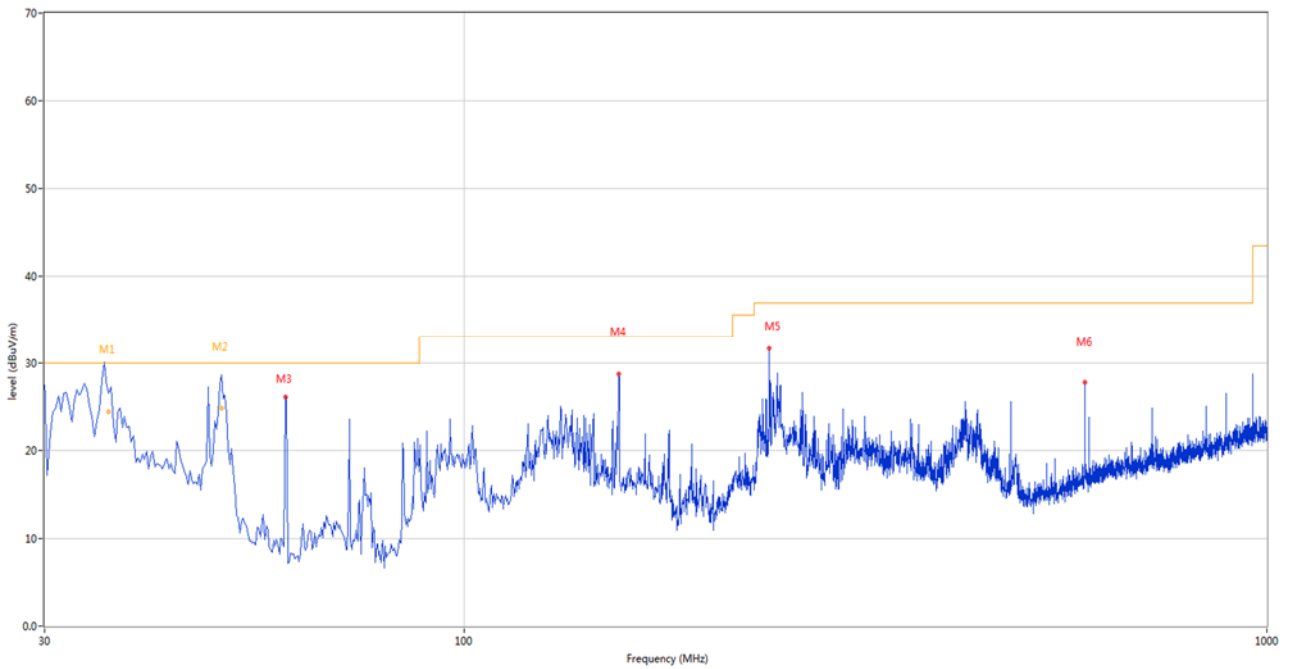
A.1.6 Test Antenna Horizontal, 30 MHz – 1 GHz(IC)



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	127.946	12.56	-27.34	33.1	-20.54	Peak	7.00	100	Horizontal	Pass
2	159.948	13.70	-25.82	33.1	-19.40	Peak	317.00	200	Horizontal	Pass
3	319.958	21.55	-25.31	37.0	-15.45	Peak	130.00	200	Horizontal	Pass
4	406.023	23.58	-23.03	37.0	-13.42	Peak	277.00	200	Horizontal	Pass
5	491.847	23.50	-20.88	37.0	-13.50	Peak	120.00	200	Horizontal	Pass
6	639.978	22.52	-17.06	37.0	-14.48	Peak	330.00	100	Horizontal	Pass

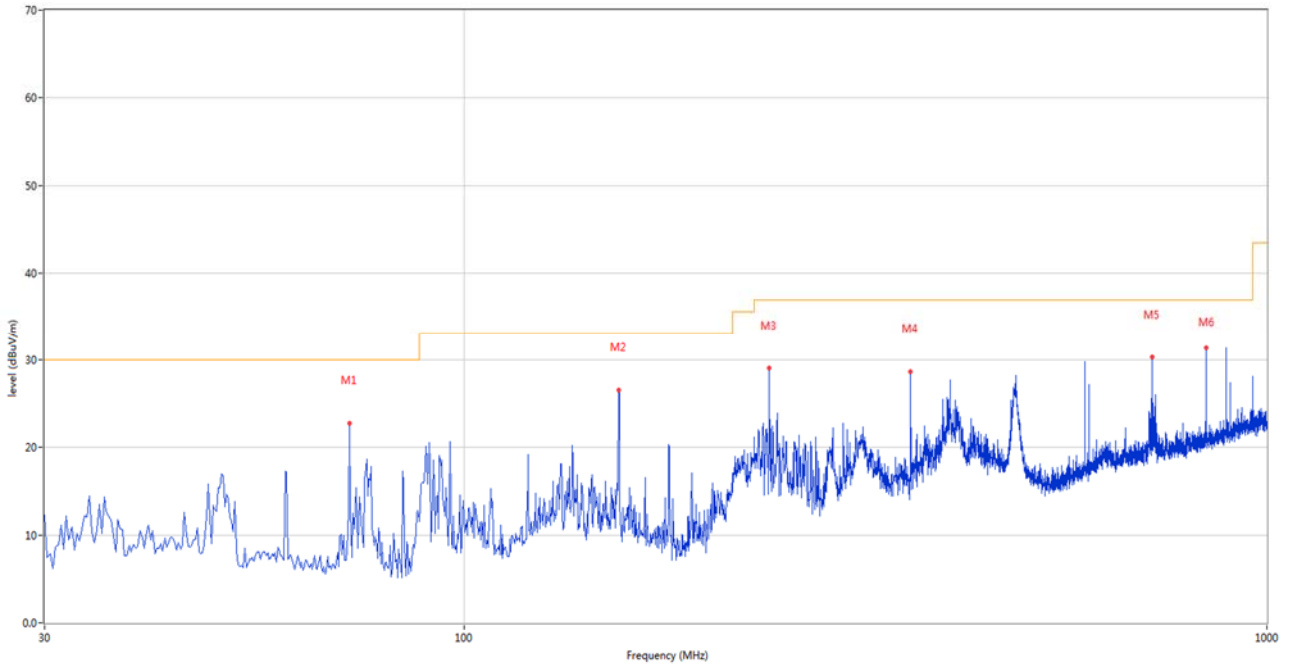


## A.1.7 Test Antenna Vertical, 30 MHz – 1 GHz(IC)

The USB Test Mode


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	36.005	34.85	-27.31	30.0	4.85	Peak	225.00	112	Vertical	N/A
1*	36.005	24.47	-27.31	30.0	-5.53	QP	225.00	112	Vertical	Pass
2	49.872	29.41	-27.28	30.0	-0.59	Peak	184.00	200	Vertical	N/A
2*	49.872	24.87	-27.28	30.0	-5.13	QP	184.00	200	Vertical	Pass
3	59.820	26.09	-27.76	30.0	-3.91	Peak	159.00	100	Vertical	Pass
4	155.826	28.73	-25.67	33.1	-4.37	Peak	351.00	100	Vertical	Pass
5	239.953	31.71	-27.87	37.0	-5.29	Peak	169.00	100	Vertical	Pass
6	593.429	27.80	-18.30	37.0	-9.20	Peak	18.00	100	Vertical	Pass

A.1.8 Test Antenna Horizontal, 30 MHz – 1 GHz(IC)

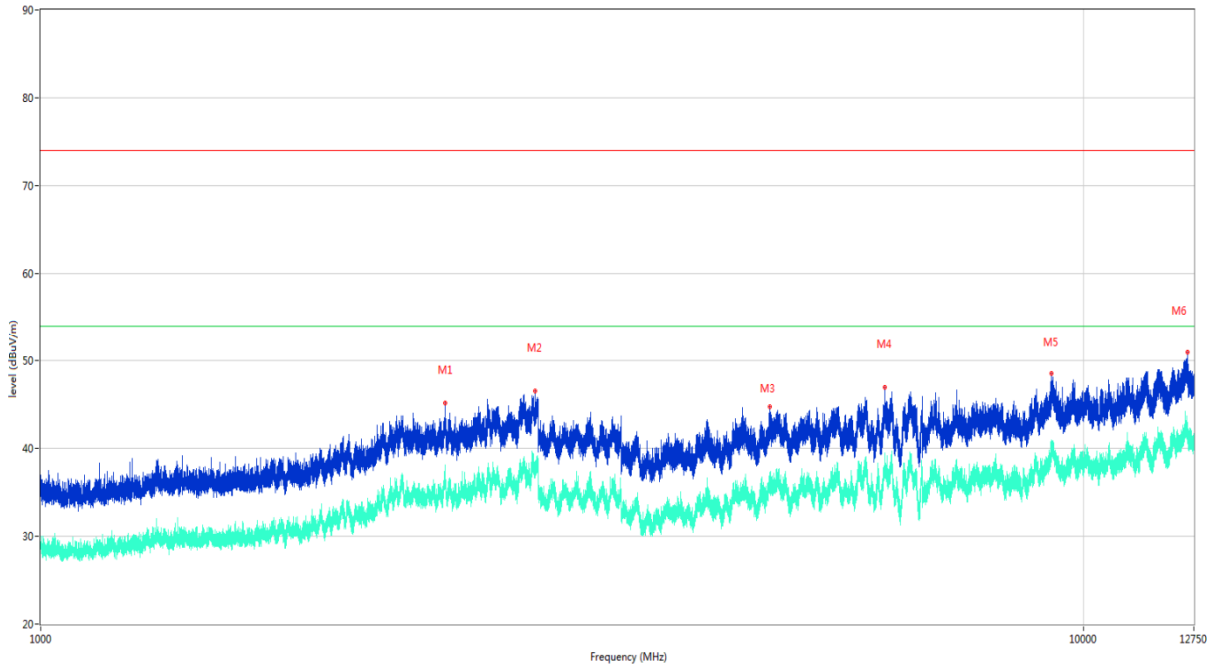


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	71.942	22.70	-30.17	30.0	-7.30	Peak	282.00	200	Horizontal	Pass
2	155.826	26.57	-25.67	33.1	-6.53	Peak	317.00	200	Horizontal	Pass
3	239.953	29.02	-27.87	37.0	-7.98	Peak	322.00	200	Horizontal	Pass
4	359.960	28.59	-24.18	37.0	-8.41	Peak	85.00	200	Horizontal	Pass
5	719.983	30.33	-15.62	37.0	-6.67	Peak	28.00	100	Horizontal	Pass
6	839.990	31.33	-13.52	37.0	-5.67	Peak	240.00	100	Horizontal	Pass

Test Data and Plots (Above 1 GHz)

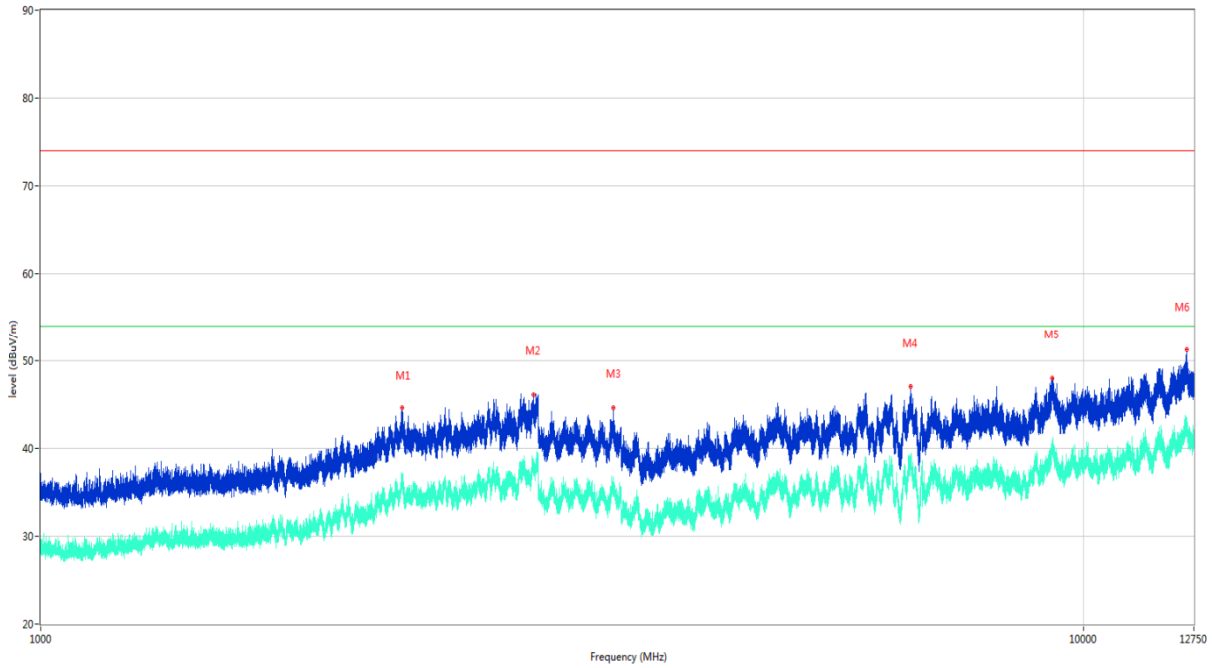
A.1.9 Test Antenna Vertical, 1 GHz – 12.75 GHz

The BT RX Test Mode



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2443.200	45.11	-8.76	74.0	-28.89	Peak	355.70	100	Vertical	Pass
1**	2443.200	36.09	-8.76	54.0	-17.91	AV	355.70	100	Vertical	Pass
2	2978.200	46.48	-5.69	74.0	-27.52	Peak	359.50	100	Vertical	Pass
2**	2978.200	37.45	-5.69	54.0	-16.55	AV	359.50	100	Vertical	Pass
3	5001.000	44.78	-4.19	74.0	-29.22	Peak	65.20	100	Vertical	Pass
3**	5001.000	35.87	-4.19	54.0	-18.13	AV	65.20	100	Vertical	Pass
4	6445.000	46.90	-2.45	74.0	-27.10	Peak	237.50	100	Vertical	Pass
4**	6445.000	37.23	-2.45	54.0	-16.77	AV	237.50	100	Vertical	Pass
5	9315.812	48.53	20.25	74.0	-25.47	Peak	100.80	100	Vertical	Pass
5**	9315.812	39.02	20.25	54.0	-14.98	AV	100.80	100	Vertical	Pass
6	12566.287	50.92	22.02	74.0	-23.08	Peak	117.20	100	Vertical	Pass
6**	12566.287	42.66	22.02	54.0	-11.34	AV	117.20	100	Vertical	Pass

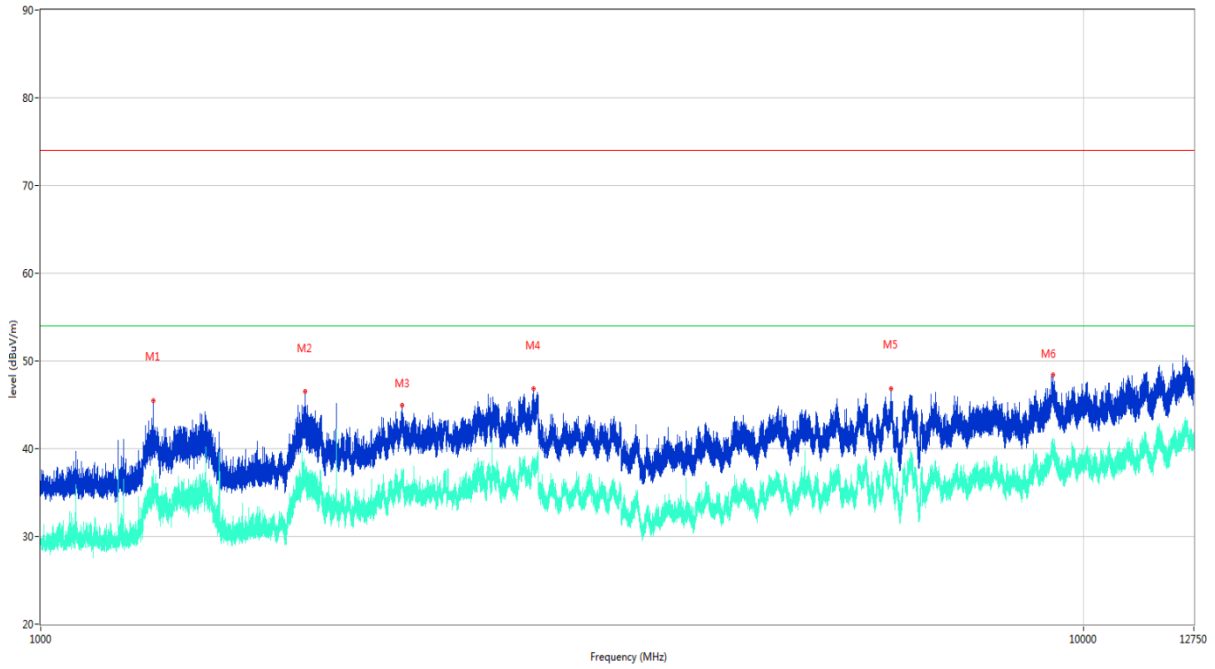
A.1.10 Test Antenna Horizontal, 1 GHz – 12.75 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2222.500	44.61	-8.42	74.0	-29.39	Peak	250.40	100	Horizontal	Pass
1**	2222.500	35.74	-8.42	54.0	-18.26	AV	250.40	100	Horizontal	Pass
2	2966.400	46.11	-5.47	74.0	-27.89	Peak	185.50	100	Horizontal	Pass
2**	2966.400	37.44	-5.47	54.0	-16.56	AV	185.50	100	Horizontal	Pass
3	3537.400	44.67	-6.60	74.0	-29.33	Peak	144.70	100	Horizontal	Pass
3**	3537.400	35.22	-6.60	54.0	-18.78	AV	144.70	100	Horizontal	Pass
4	6819.200	47.01	-2.06	74.0	-26.99	Peak	131.90	100	Horizontal	Pass
4**	6819.200	38.21	-2.06	54.0	-15.79	AV	131.90	100	Horizontal	Pass
5	9331.049	48.03	20.62	74.0	-25.97	Peak	301.30	100	Horizontal	Pass
5**	9331.049	39.88	20.62	54.0	-14.12	AV	301.30	100	Horizontal	Pass
6	12553.638	51.26	21.89	74.0	-22.74	Peak	121.80	100	Horizontal	Pass
6**	12553.638	42.11	21.89	54.0	-11.89	AV	121.80	100	Horizontal	Pass

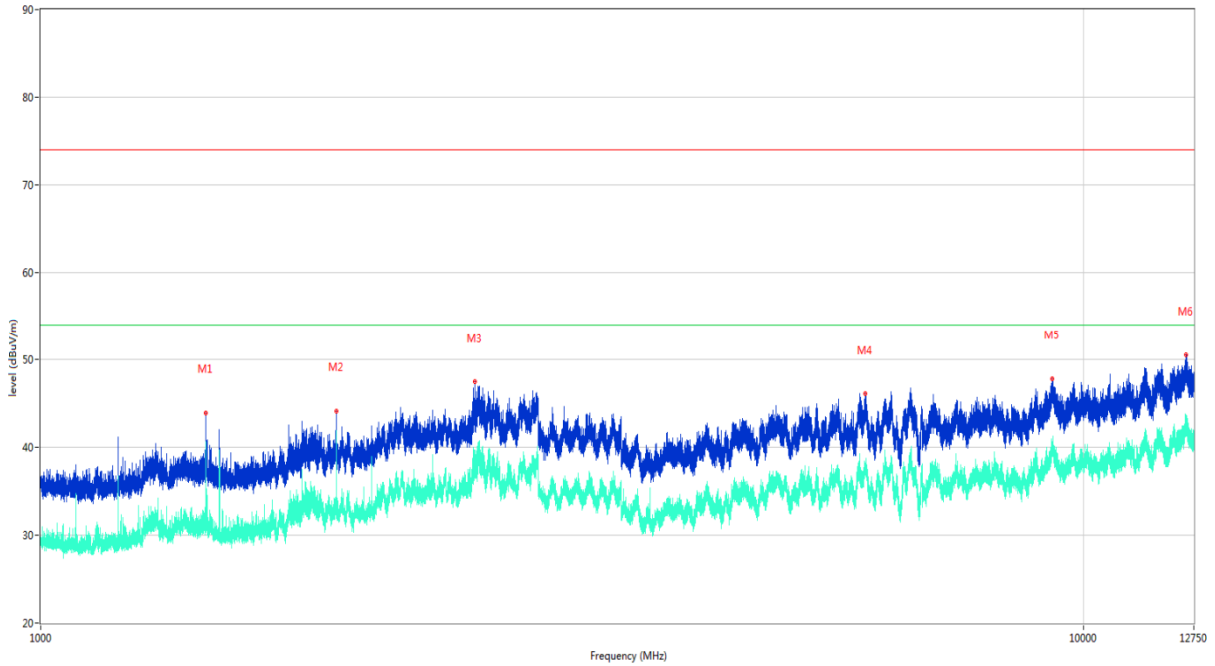
A.1.11 Test Antenna Vertical, 1 GHz – 12.75 GHz

The USB Test Mode



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1282.300	45.51	-15.60	74.0	-28.49	Peak	234.00	100	Vertical	Pass
1**	1282.300	35.06	-15.60	54.0	-18.94	AV	234.00	100	Vertical	Pass
2	1794.000	46.48	-14.61	74.0	-27.52	Peak	266.70	100	Vertical	Pass
2**	1794.000	36.74	-14.61	54.0	-17.26	AV	266.70	100	Vertical	Pass
3	2222.200	44.99	-8.40	74.0	-29.01	Peak	285.40	100	Vertical	Pass
3**	2222.200	36.48	-8.40	54.0	-17.52	AV	285.40	100	Vertical	Pass
4	2970.700	46.81	-5.81	74.0	-27.19	Peak	252.40	100	Vertical	Pass
4**	2970.700	37.52	-5.81	54.0	-16.48	AV	252.40	100	Vertical	Pass
5	6539.600	46.88	-1.49	74.0	-27.12	Peak	122.40	100	Vertical	Pass
5**	6539.600	38.28	-1.49	54.0	-15.72	AV	122.40	100	Vertical	Pass
6	9341.975	48.39	20.40	74.0	-25.61	Peak	290.30	100	Vertical	Pass
6**	9341.975	40.63	20.40	54.0	-13.37	AV	290.30	100	Vertical	Pass

A.1.12 Test Antenna Horizontal, 1 GHz – 12.75 GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1439.900	43.86	-15.21	74.0	-30.14	Peak	259.10	100	Horizontal	Pass
1**	1439.900	37.67	-15.21	54.0	-16.33	AV	259.10	100	Horizontal	Pass
2	1920.200	44.10	-13.27	74.0	-29.90	Peak	316.70	100	Horizontal	Pass
2**	1920.200	40.90	-13.27	54.0	-13.10	AV	316.70	100	Horizontal	Pass
3	2609.200	47.47	-8.95	74.0	-26.53	Peak	231.30	100	Horizontal	Pass
3**	2609.200	38.31	-8.95	54.0	-15.69	AV	231.30	100	Horizontal	Pass
4	6177.000	46.11	-2.61	74.0	-27.89	Peak	288.70	100	Horizontal	Pass
4**	6177.000	37.70	-2.61	54.0	-16.30	AV	288.70	100	Horizontal	Pass
5	9328.463	47.79	20.60	74.0	-26.21	Peak	110.70	100	Horizontal	Pass
5**	9328.463	39.85	20.60	54.0	-14.15	AV	110.70	100	Horizontal	Pass
6	12524.026	50.57	21.50	74.0	-23.43	Peak	288.00	100	Horizontal	Pass
6**	12524.026	42.00	21.50	54.0	-12.00	AV	288.00	100	Horizontal	Pass

## A.2 Conducted Emission

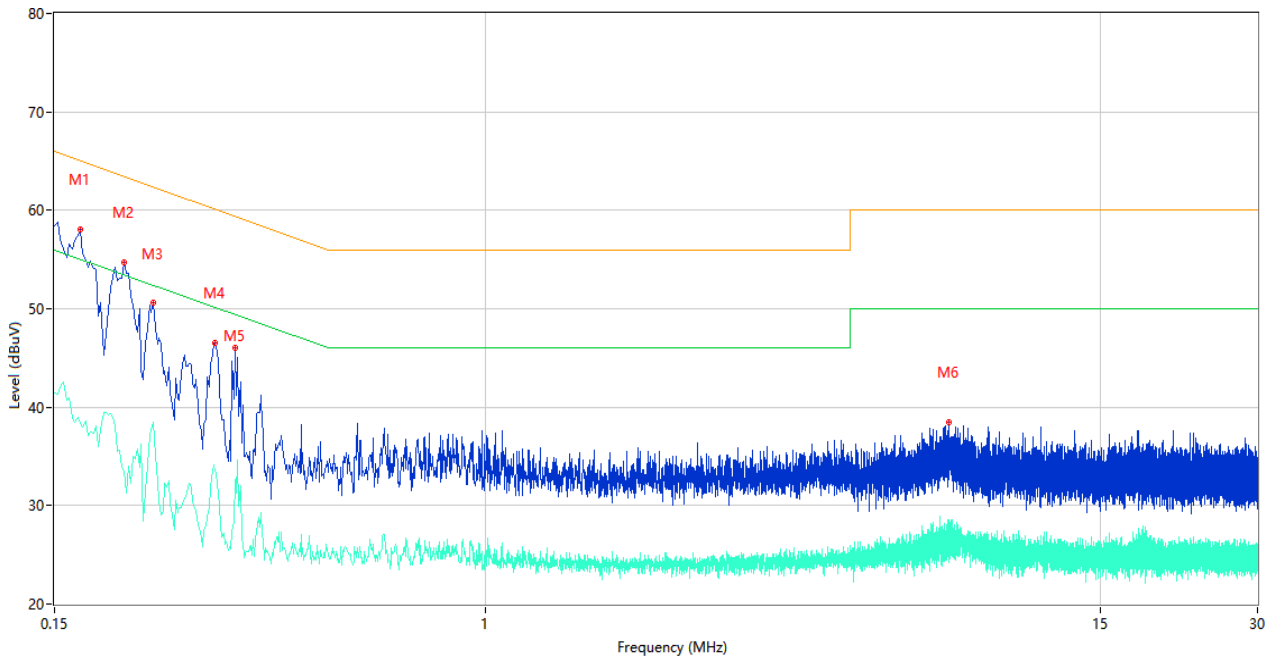
Note: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz ) shown here.

### Test Data and Plots

#### The BT RX Test Mode and The USB Test Mode

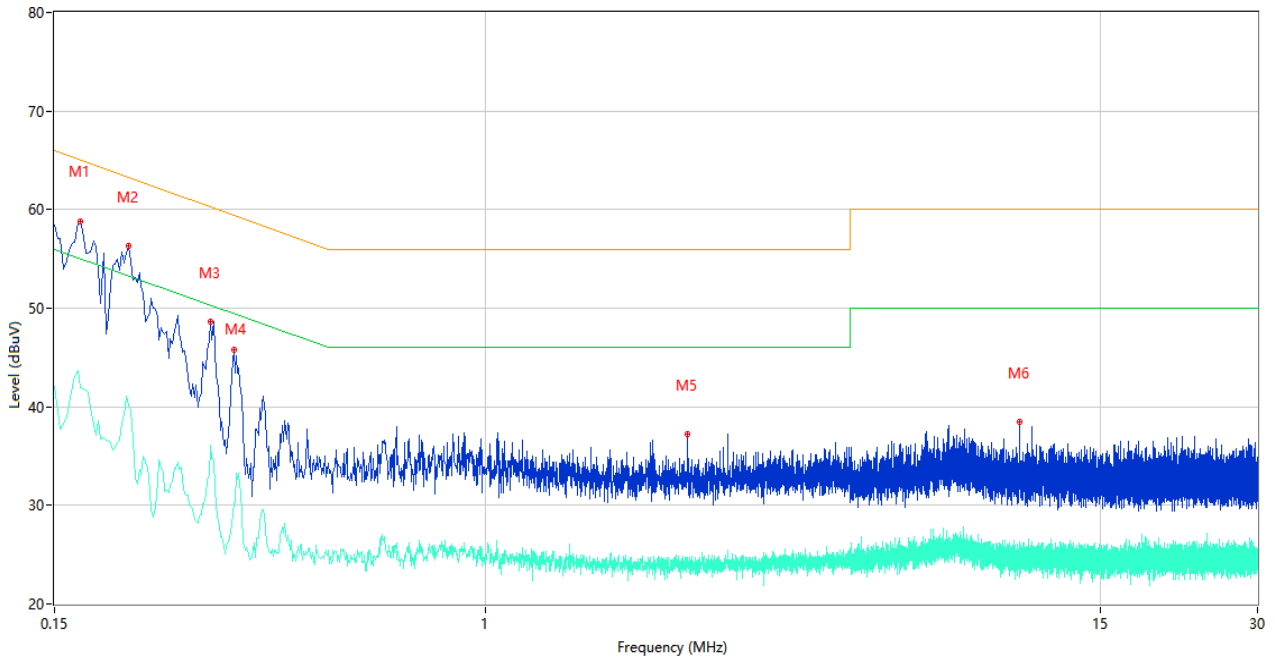
##### A.2.1 L Phase

#### The BT RX Test Mode



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.168	58.05	10.40	65.06	-7.01	Peak	L	Pass
1**	0.168	38.32	10.40	55.06	-16.74	AV	L	Pass
2	0.204	54.73	10.38	63.45	-8.72	Peak	L	Pass
2**	0.204	33.45	10.38	53.45	-20.00	AV	L	Pass
3	0.232	50.58	10.36	62.38	-11.80	Peak	L	Pass
3**	0.232	38.44	10.36	52.38	-13.94	AV	L	Pass
4	0.304	46.55	10.33	60.13	-13.58	Peak	L	Pass
4**	0.304	33.70	10.33	50.13	-16.43	AV	L	Pass
5	0.332	46.02	10.33	59.40	-13.38	Peak	L	Pass
5**	0.332	32.59	10.33	49.40	-16.81	AV	L	Pass
6	7.718	38.51	10.35	60.00	-21.49	Peak	L	Pass
6**	7.718	28.50	10.35	50.00	-21.50	AV	L	Pass

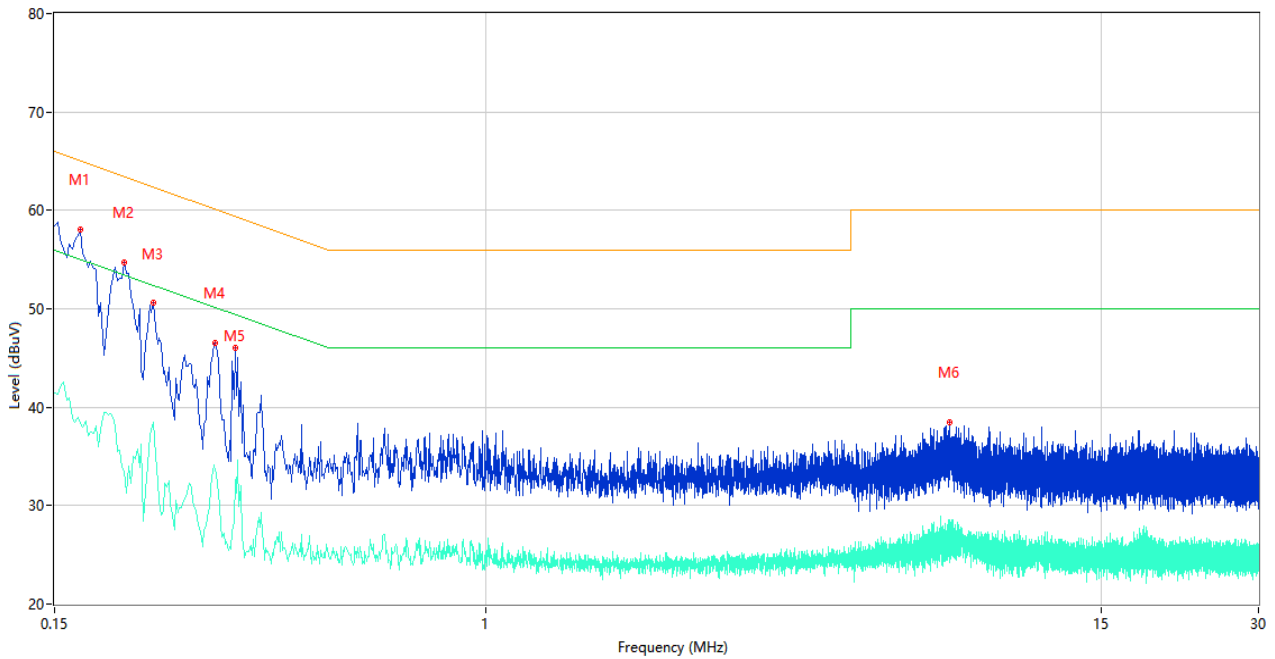
## A.2.2 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.168	58.82	10.40	65.06	-6.24	Peak	N	Pass
1**	0.168	41.99	10.40	55.06	-13.07	AV	N	Pass
2	0.208	56.31	10.38	63.28	-6.97	Peak	N	Pass
2**	0.208	40.27	10.38	53.28	-13.01	AV	N	Pass
3	0.298	48.62	10.33	60.30	-11.68	Peak	N	Pass
3**	0.298	36.10	10.33	50.30	-14.20	AV	N	Pass
4	0.330	45.81	10.33	59.45	-13.64	Peak	N	Pass
4**	0.330	30.34	10.33	49.45	-19.11	AV	N	Pass
5	2.434	37.25	10.25	56.00	-18.75	Peak	N	Pass
5**	2.434	23.87	10.25	46.00	-22.13	AV	N	Pass
6	10.502	38.47	10.37	60.00	-21.53	Peak	N	Pass
6**	10.502	25.48	10.37	50.00	-24.52	AV	N	Pass

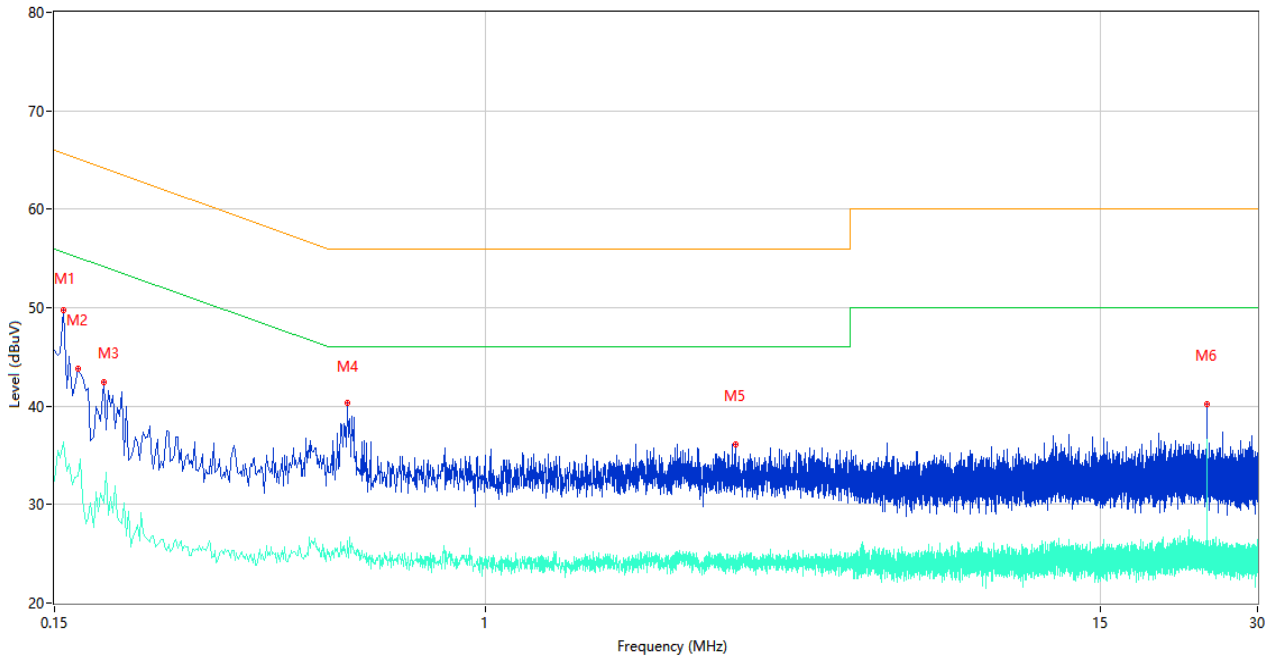


## A.2.3 L Phase

The USB Test Mode


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.168	58.05	10.40	65.06	-7.01	Peak	L	Pass
1**	0.168	38.32	10.40	55.06	-16.74	AV	L	Pass
2	0.204	54.73	10.38	63.45	-8.72	Peak	L	Pass
2**	0.204	33.45	10.38	53.45	-20.00	AV	L	Pass
3	0.232	50.58	10.36	62.38	-11.80	Peak	L	Pass
3**	0.232	38.44	10.36	52.38	-13.94	AV	L	Pass
4	0.304	46.55	10.33	60.13	-13.58	Peak	L	Pass
4**	0.304	33.70	10.33	50.13	-16.43	AV	L	Pass
5	0.332	46.02	10.33	59.40	-13.38	Peak	L	Pass
5**	0.332	32.59	10.33	49.40	-16.81	AV	L	Pass
6	7.718	38.51	10.35	60.00	-21.49	Peak	L	Pass
6**	7.718	28.50	10.35	50.00	-21.50	AV	L	Pass

A.2.4 N Phase



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.156	49.75	10.41	65.67	-15.92	Peak	N	Pass
1**	0.156	36.41	10.41	55.67	-19.26	AV	N	Pass
2	0.166	43.84	10.40	65.16	-21.32	Peak	N	Pass
2**	0.166	32.87	10.40	55.16	-22.29	AV	N	Pass
3	0.186	42.41	10.39	64.21	-21.80	Peak	N	Pass
3**	0.186	30.17	10.39	54.21	-24.04	AV	N	Pass
4	0.546	40.37	10.29	56.00	-15.63	Peak	N	Pass
4**	0.546	26.37	10.29	46.00	-19.63	AV	N	Pass
5	3.012	36.07	10.28	56.00	-19.93	Peak	N	Pass
5**	3.012	24.78	10.28	46.00	-21.22	AV	N	Pass
6	24.002	40.17	10.64	60.00	-19.83	Peak	N	Pass
6**	24.002	34.90	10.64	50.00	-15.10	AV	N	Pass

## **ANNEX B TEST SETUP PHOTOS**

Please refer the document "BL-SZ2120090-AE-1.PDF".

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document "BL-SZ2120090-AW.PDF".

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document "BL-SZ2120090-AI.PDF".

--END OF REPORT--