# FCC EMC TEST REPORT

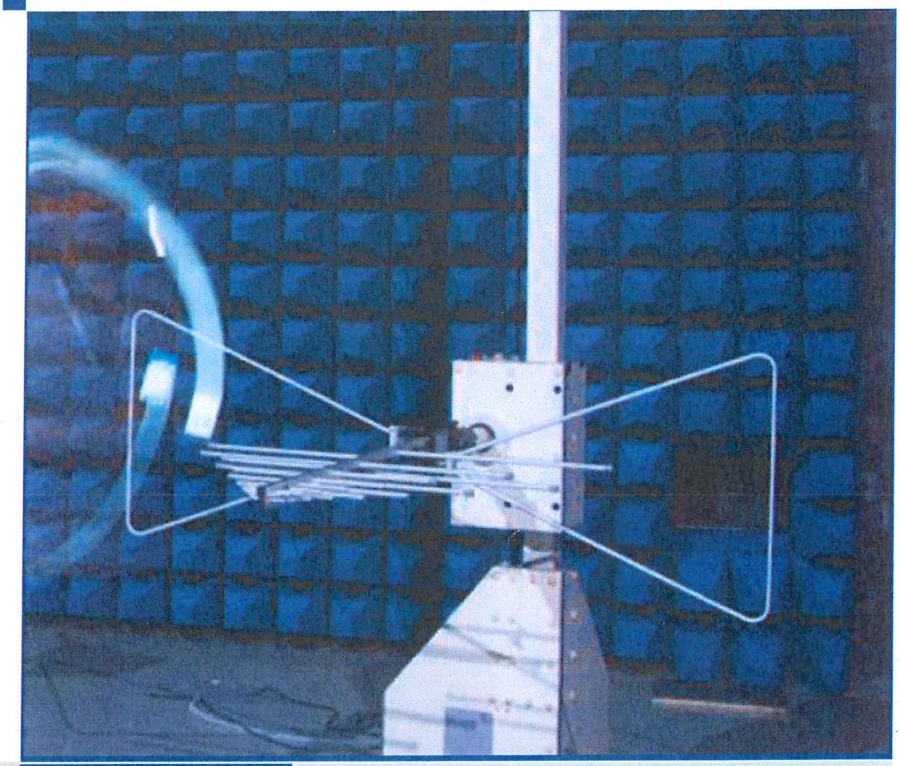
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

**BEDDI**

ISSUED TO
D&S CREATION LTD

10/F., BLK.B-D SUMMIT IND. BLDG., NO 9, SUN YIP ST., CHAI WAN.H.K



Tested by: Zhang Yanqing
Zhang Yanqing
(Engineer)
Date Apr. 18, 2016

Approved by:
Liao Jianming
(Technical Director)
Date Apr. 18. 2016

| | |
|---|---|
| Report No.: | BL-SZ1630198-401 |
| EUT Type: | BEDDI |
| Model Name: | 6901 |
| Brand Name: | WITTI |
| Test Standard: | 47 CFR Part 15 Subpart B |
| FCC ID: | 2ADMUBEDDI6901 |
| Test conclusion: | Pass |
| Test Date: | Mar. 12, 2016 ~ Apr. 18, 2016 |
| Date of Issue: | Apr. 18, 2016 |



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**Revision History**

| Version | Issue Date | Revisions Content |
|---|---|---|
| Rev. 01 | Apr. 15, 2016 | Initial Issue |
| Rev. 02 | Apr. 18, 2016 | Chapter 4.4, 4.5, 5.1, A.1 and A.2 are updated |

# TABLE OF CONTENTS

# 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.<br>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.<br>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791. |
| 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~25°C |
| Ambient Relative Humidity | 45% - 55% |
| Ambient Pressure | 100 kPa - 102 kPa |

## 1.4 Announce

(1) The test report reference to the report template version v1.3.

(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.

# 2 PRODUCT INFORMATION

## 2.1 Applicant Information

| | |
|---|---|
| Applicant | D&S CREATION LTD |
| Address | 10/F., BLK.B-D SUMMIT IND. BLDG., NO 9, SUN YIP ST., CHAI WAN.H.K |

## 2.2 Manufacturer Information

| | |
|---|---|
| Manufacturer | D&S CREATION LTD |
| Address | 10/F., BLK.B-D SUMMIT IND. BLDG., NO 9, SUN YIP ST., CHAI WAN.H.K |

## 2.3 Factory Information

| | |
|---|---|
| Factory | N/A |
| Address | N/A |

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

| | |
|---|---|
| EUT Type | BEDDI |
| Model Name Under Test | 6901 |
| Series Model Name | N/A |
| Description of Model name differentiation | N/A |
| Hardware Version | V00 |
| Software Version | US280B_CGBT475_SDK50_20160121_7IO_KEY_V1.2.6.fw |
| The Highest Speed of Processor | N/A |
| Network and Wireless connectivity | Bluetooth |

## 2.5 Ancillary Equipment

| | | |
|---|---|---|
| Ancillary Equipment 1 | Charger 1 | |
| | Brand Name | KINGS |
| | Model No. | YD18E-055-3000 |
| | Serial No. | N/A |
| | Rated Input | 100-240 V⁓, 0.5 A, 50/60 Hz |
| | Rated Output | 5.5 V⎓, 3 A |
| Ancillary Equipment 2 | Audio Line | |
| | Length(Approx.) | 1.02 m |

## 2.6 Technical Information

N/A

# 3 SUMMARY OF TEST RESULTS

## 3.1 Test Standards

| No. | Identity | Document Title |
|---|---|---|
| 1 | FCC 47 CFR Part 15 Subpart B (10-1-14 Edition) | Unintentional Radiators |
| 2 | ANSI C63.4-2014 | American National Standard for 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 | Test Verdict | Result |
|---|---|---|---|---|
| 1 | Radiated Emission | 15.109 | Pass | Annex A .1 |
| 2 | Conducted Emission, AC Ports | 15.107 | 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) | 2.79 dB |
| Radiated emissions (30 MHz-1 GHz) | 3.45 dB |
| Radiated emissions (1 GHz-18 GHz) | 3.67 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~26°C | AC 120 V/60 Hz<br>AC 240 V/50 Hz | 50%-55% | 100 to 102 kPa |

## 4.2 Test Equipment List

| Radiated Emission Test | | | | | | |
|---|---|---|---|---|---|---|
| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due | Use |
| EMI Receiver | ROHDE&SCHWARZ | ESRP | 101036 | 2015.07.14 | 2016.07.13 | ☒ |
| Test Antenna-Loop(9 kHz-30 MHz) | SCHWARZBECK | FMZB 1519 | 1519-037 | 2015.07.22 | 2017.07.21 | ☒ |
| Test Antenna-Bi-Log(30 MHz-3 GHz) | SCHWARZBECK | VULB 9163 | 9163-624 | 2015.07.22 | 2017.07.21 | ☒ |
| Test Antenna-Horn(1-18 GHz) | SCHWARZBECK | BBHA 9120D | 9120D-1148 | 2015.07.22 | 2017.07.21 | ☒ |
| Test Antenna-Horn(15-26.5 GHz) | SCHWARZBECK | BBHA 9170 | 9170-305 | 2015.07.22 | 2017.07.21 | ☐ |
| Anechoic Chamber | RAINFORD | 9 m*6 m*6 m | N/A | 2015.02.28 | 2017.02.27 | ☒ |

| Conducted disturbance Test | | | | | | |
|---|---|---|---|---|---|---|
| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due | Use |
| EMI Receiver | ROHDE&SCHWARZ | ESRP | 101036 | 2015.07.14 | 2016.07.13 | ☒ |
| LISN | SCHWARZBECK | NSLK 8127 | 8127-687 | 2015.07.14 | 2016.07.13 | ☒ |
| AMN | SCHWARZBECK | NNBM8124 | 8124-509 | 2015.07.14 | 2016.07.13 | ☐ |
| AMN | SCHWARZBECK | NNBM8124 | 8124-510 | 2015.07.14 | 2016.07.13 | ☐ |
| ISN | TESEQ | ISN T800 | 34449 | 2015.07.14 | 2016.07.13 | ☐ |
| Shielded Enclosure | ChangNing | CN-130701 | 130703 | N/A | N/A | ☒ |

## 4.3 Test Enclosure list

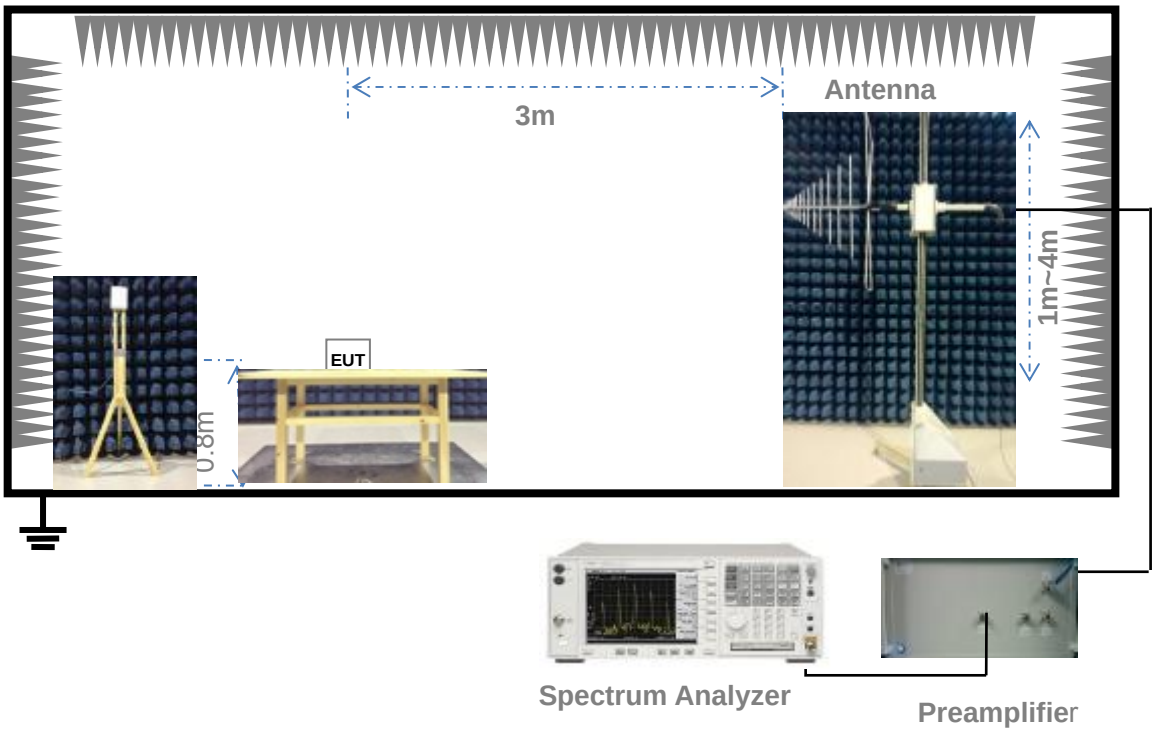
| Description | Manufacturer | Model | Serial No. | Length | Description | Use |
|---|---|---|---|---|---|---|
| PC | N/A | N/A | N/A | N/A | Special Handled | ☐ |
| Printer | HP | DESKJET 1000 | N/A | N/A | N/A | ☐ |
| Keyboard | Logitech | Y-BP62a | N/A | N/A | N/A | ☐ |
| Mouse | Logitech | M100 | N/A | N/A | N/A | ☐ |
| USB disk | Kingston | N/A | N/A | N/A | N/A | ☐ |
| TF Card | Kingston | N/A | N/A | N/A | N/A | ☐ |
| VGA Cable | N/A | N/A | N/A | 1.5 m | Shielded with core | ☐ |
| HDMI Cable | N/A | N/A | N/A | 1.5 m | Shielded with core | ☐ |
| DVI Cable | N/A | N/A | N/A | 1.5 m | Shielded with core | ☐ |
| Coaxial video cable | N/A | N/A | N/A | 2.0 m | Shielded with core | ☐ |
| Audio Line | N/A | N/A | N/A | 0.8 m | Shielded with core | ☐ |
| iPhone | APPLE | A1586 | N/A | N/A | N/A | ☐ |
| iPhone | APPLE | A1528 | N/A | N/A | N/A | ☐ |
| Laptop | LENOVO | K29 | N/A | N/A | N/A | ☒ |
| Phone | MI | M2 | N/A | N/A | N/A | ☐ |
| Earphone | OPPO | N/A | N/A | 1.5 m | N/A | ☐ |
| Loudspeaker | N/A | N/A | N/A | N/A | N/A | ☐ |
| USB Cable | N/A | N/A | N/A | 1.5 m | N/A | ☒ |
| DC Power Supply | ROHDE&SCHWARZ | HMP2020 | 18141664 | N/A | N/A | ☐ |
| Artificial load | N/A | N/A | N/A | N/A | 5 Ω/100 W | ☒ |
| Artificial load | N/A | N/A | N/A | N/A | 2.5 Ω/100 W | ☒ |
| Phone | SANSUNG | S4 | N/A | N/A | N/A | ☒ |
| | | | | | | |

## 4.4 Test Configurations

| Test Configurations (TC) No. | Description |
|---|---|
| TC01 | The Audio Playing Test Mode<br>The EUT configuration of the emission tests is EUT + Audio Line + Phone + Charger + Artificial load.<br>During the measurement, the EUT was powered by charge. The EUT was connected to the Phone and artificial load, the Phone is playing 1 kHz audio signal normally until test end. |
| TC02 | The USB Test Mode<br>The EUT configuration of the emission tests is EUT +USB Cable + Laptop + Charger + Artificial load.<br>During the measurement, the EUT was powered by charge. The EUT connected with a Laptop via a USB cable, the data is transmitting between the Laptop and the EUT. |
| TC03 | The Standby Mode<br>The EUT configuration of the emission tests is EUT + Charger<br>During the measurement, the EUT was powered by charger. |

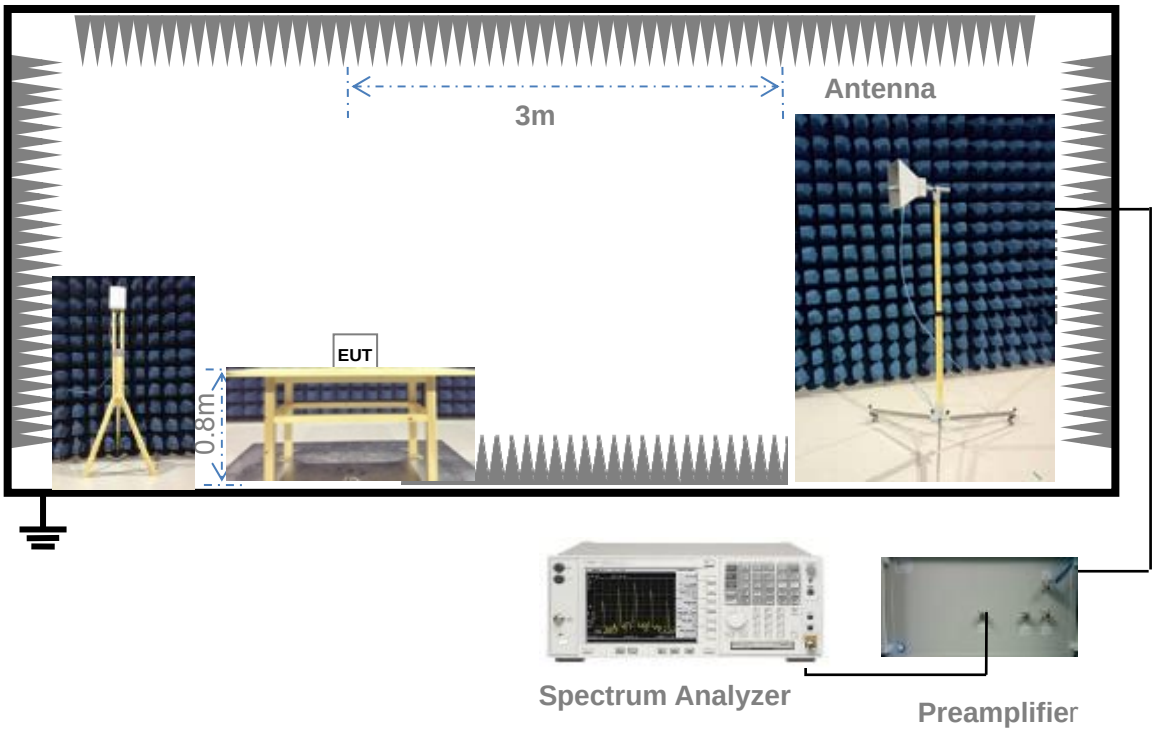
## 4.5 Test Setups

Test Setup 1



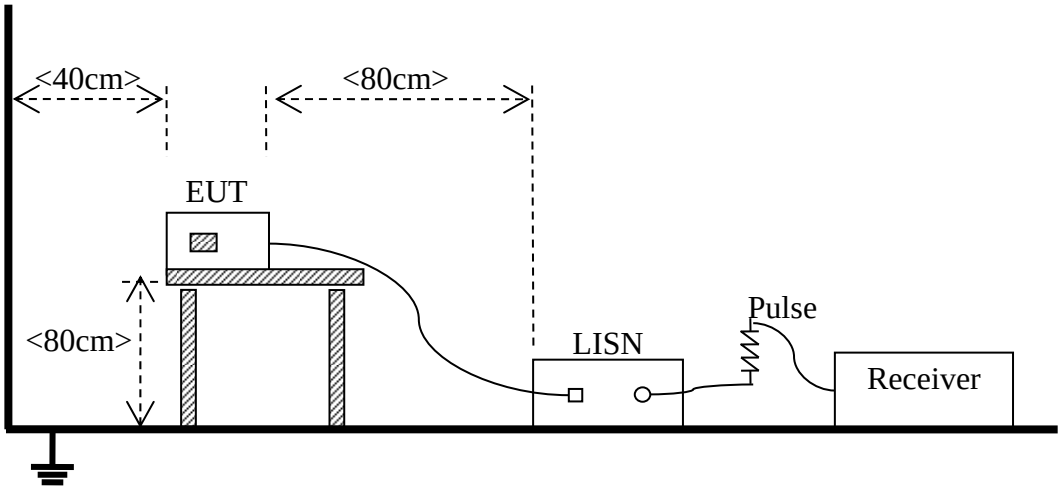

(For Radiated Emission Test (30 MHz-1 GHz))

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~TC03 Note |
| Conducted Emission, AC Ports | Test Env. | NTNV |
| | Test Setup | Test Setup 3 |
| | Test Configuration | TC01~TC03 Note |

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 audio playing test mode and USB test mode is the worst mode in this report.

# 5 TEST ITEMS

## 5.1 Emission Tests

### 5.1.1 Radiated Emission

#### 5.1.1.1 Limit

| Frequency (MHz) | Field Strength (μV/m) | Measurement Distance (m) |
|---|---|---|
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

NOTE:

1) Field Strength (dBμV/m) = 20*log [Field Strength (μV/m)].
2) In the emission tables above, the tighter limit applies at the band edges.
3) For above 1000 MHz, limit field strength of harmonics: 54 dBuV/m@3 m (AV) and 74 dBuV/m@3 m (PK)

#### 5.1.1.2 Test Setup

Refer to 4.5 section (test setups1 to test setups3) for radiated emission test, the photo of test setup please refer to ANNEX B.

#### 5.1.1.3 Test Procedure

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.

### 5.1.2 Conducted Emission

#### 5.1.2.1 Test Limit

| Frequency range (MHz) | Conducted Limit (dBμV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 - 0.50 | 66 to 56 | 56 to 46 |
| 0.50 - 5 | 56 | 46 |
| 5 - 30 | 60 | 50 |

NOTE:

1) The limit is applicable to Class B ITE.
2) The lower limit shall apply at the band edges.
3) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50 MHz.

#### 5.1.2.2 Test Setup

Refer to 4.5 section test (test setup 4) for conducted emission, the photo of test setup please refer to ANNEX B.

#### 5.1.2.3 Test Procedure

The EUT is connected to the power mains through a LISN which provides 50 Ω/50 μH 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.

# ANNEX A TEST RESULTS

## A.1 Radiated Emission

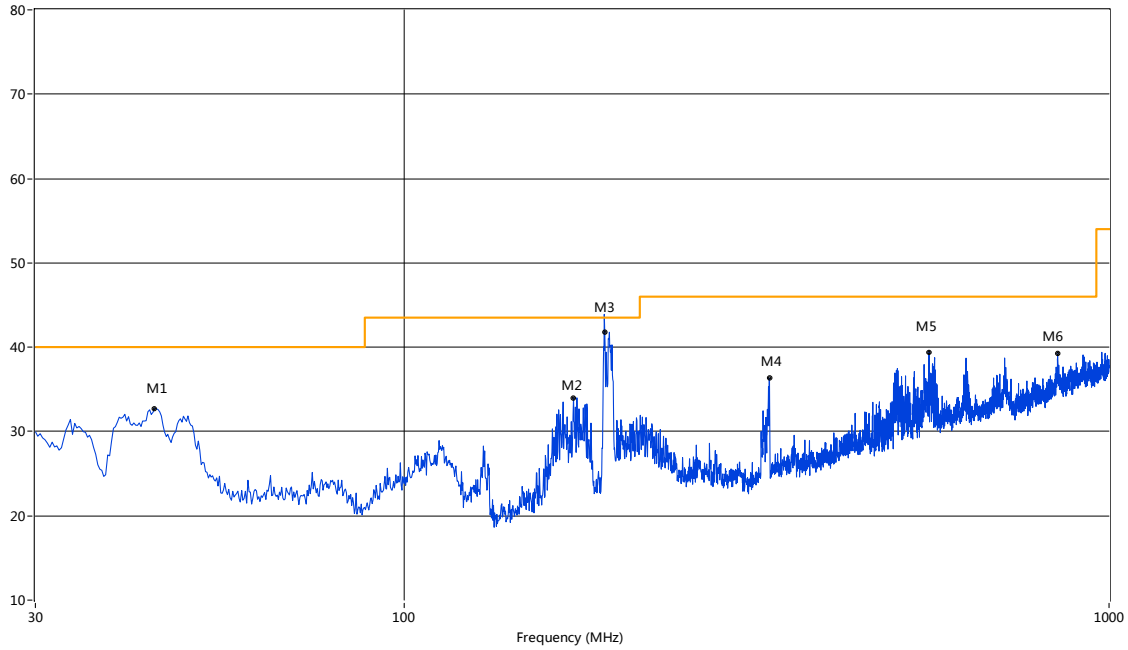
Note 1: The symbol of "--" in the table which means not application.

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

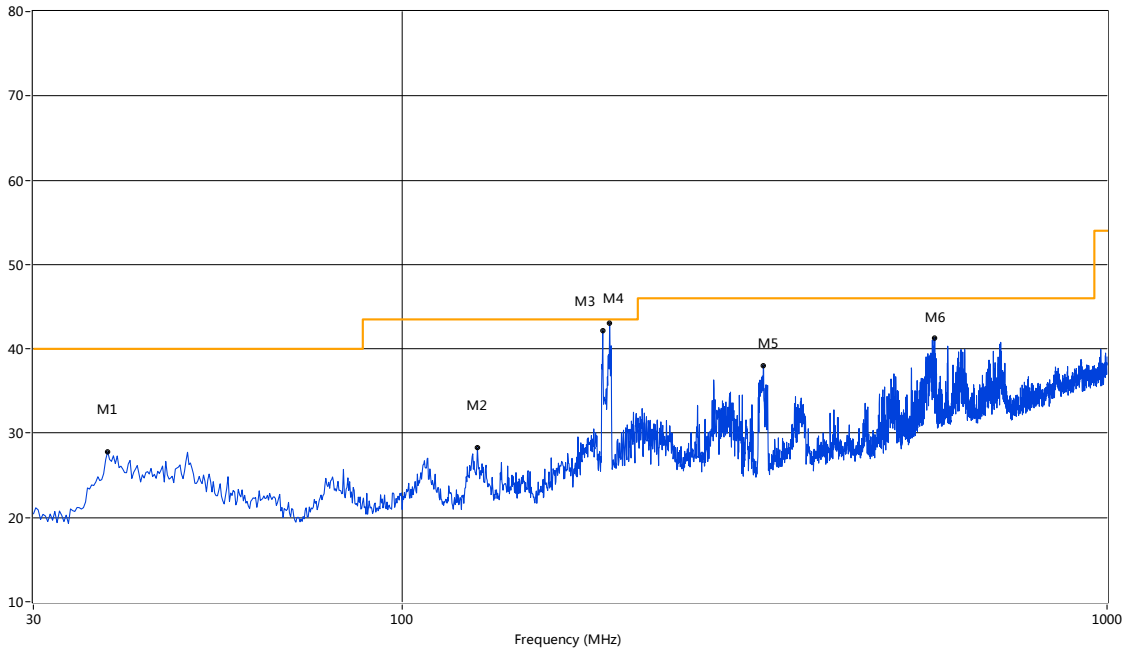
The worst test mode: The Audio Playing Test Mode

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



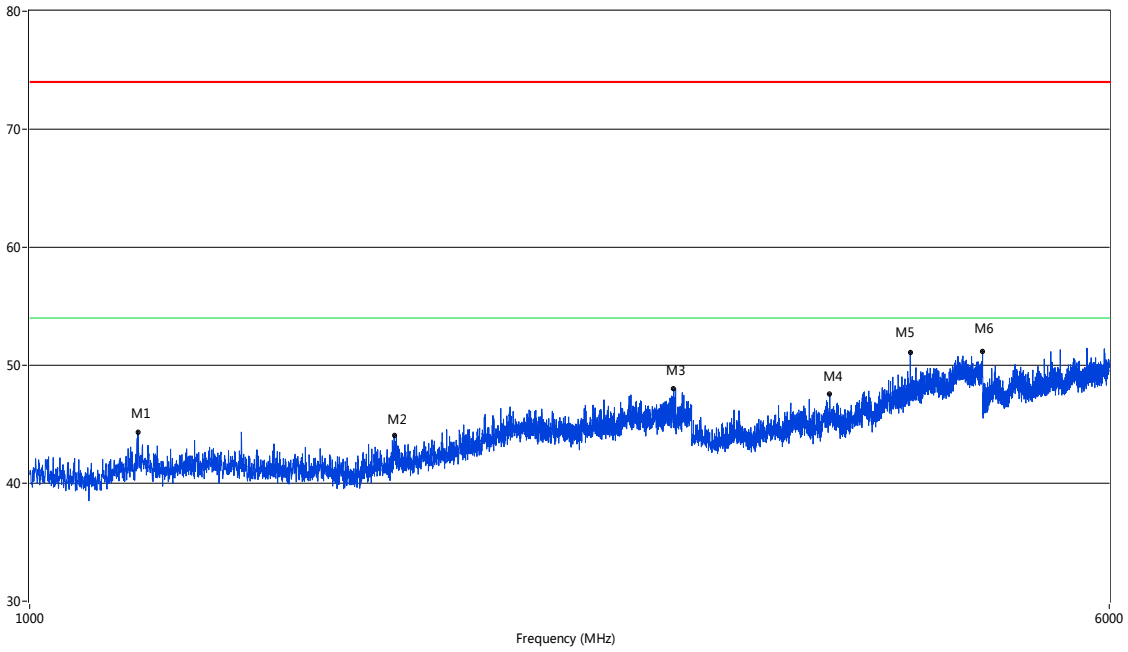

| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 44.30 | 32.74 | -18.82 | 40.0 | 7.26 | Peak | 87.60 | 100 | Vertical | Pass |
| 2 | 174.01 | 34.00 | -22.39 | 43.5 | 9.50 | Peak | 352.10 | 100 | Vertical | Pass |
| 3 | 192.53 | 43.90 | -20.86 | 43.5 | -0.40 | Peak | 13.70 | 100.00 | Vertical | N/A |
| 3* | 192.53 | 38.94 | -20.86 | 43.5 | 4.56 | QP | 13.70 | 100.00 | Vertical | Pass |
| 4 | 329.66 | 36.34 | -16.64 | 46.0 | 9.66 | Peak | 1.80 | 100 | Vertical | Pass |
| 5 | 555.61 | 39.42 | -11.97 | 46.0 | 6.58 | Peak | 352.10 | 100 | Vertical | Pass |
| 6 | 845.81 | 39.22 | -6.49 | 46.0 | 6.78 | Peak | 312.00 | 100 | Vertical | Pass |

### A.1.2 Test Antenna Horizontal, 30 MHz – 1 GHz



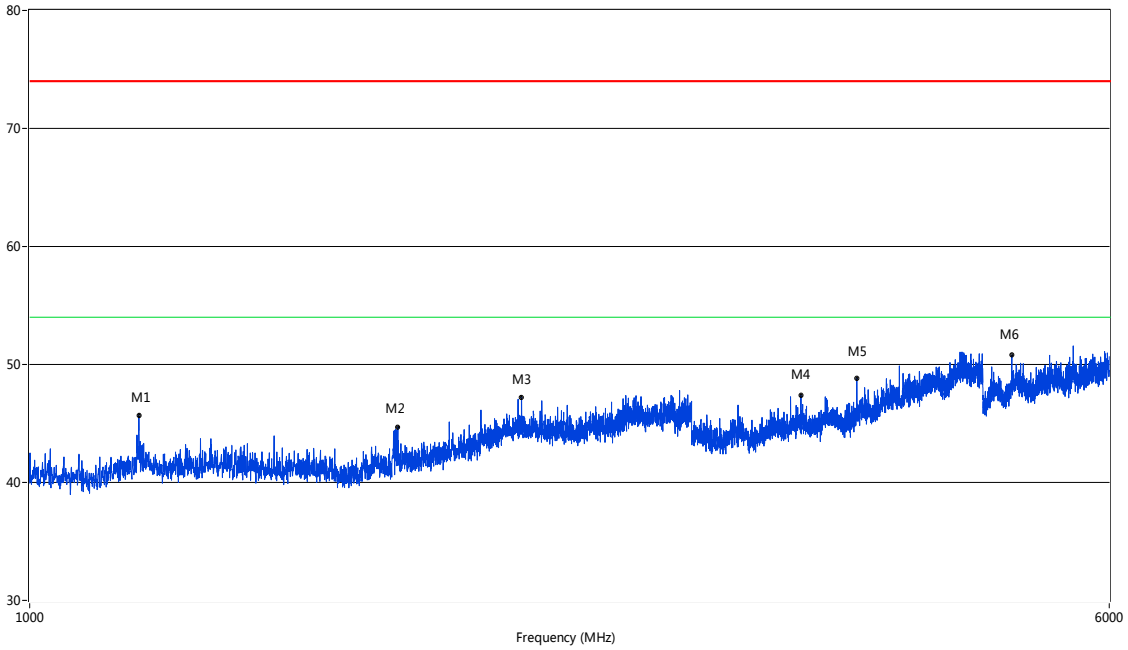

| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 38.24 | 27.80 | -20.23 | 40.0 | 12.20 | Peak | 48.70 | 100 | Horizontal | Pass |
| 2 | 127.95 | 28.27 | -23.08 | 43.5 | 15.23 | Peak | 355.50 | 100 | Horizontal | Pass |
| 3 | 192.68 | 42.19 | -20.94 | 43.5 | 1.31 | Peak | 148.80 | 100.00 | Horizontal | Pass |
| 3* | 192.68 | 39.47 | -20.94 | 43.5 | 4.03 | QP | 148.80 | 100.00 | Horizontal | Pass |
| 4 | 196.54 | 43.07 | -20.49 | 43.5 | 0.43 | Peak | 28.50 | 100.00 | Horizontal | Pass |
| 4* | 196.54 | 38.89 | -20.49 | 43.5 | 4.61 | QP | 28.50 | 100.00 | Horizontal | Pass |
| 5 | 325.53 | 38.04 | -16.88 | 46.0 | 7.96 | Peak | 11.70 | 100 | Horizontal | Pass |
| 6 | 568.70 | 41.30 | -11.72 | 46.0 | 4.70 | Peak | 355.50 | 100 | Horizontal | Pass |

### A.1.3 Test Antenna Vertical, 1 GHz – 6 GHz




| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1196.45 | 44.34 | -5.31 | 74.0 | 29.66 | Peak | 6.20 | 100 | Vertical | Pass |
| 2 | 1831.29 | 44.05 | -3.43 | 74.0 | 29.95 | Peak | 360.00 | 100 | Vertical | Pass |
| 3 | 2912.52 | 48.01 | 2.45 | 74.0 | 25.99 | Peak | 359.70 | 100 | Vertical | Pass |
| 4 | 3773.81 | 47.58 | 10.50 | 74.0 | 26.42 | Peak | 143.20 | 100 | Vertical | Pass |
| 5 | 4312.92 | 51.08 | 12.01 | 74.0 | 22.92 | Peak | 82.50 | 100 | Vertical | Pass |
| 6 | 4862.53 | 51.20 | 13.54 | 74.0 | 22.80 | Peak | 339.30 | 100 | Vertical | Pass |

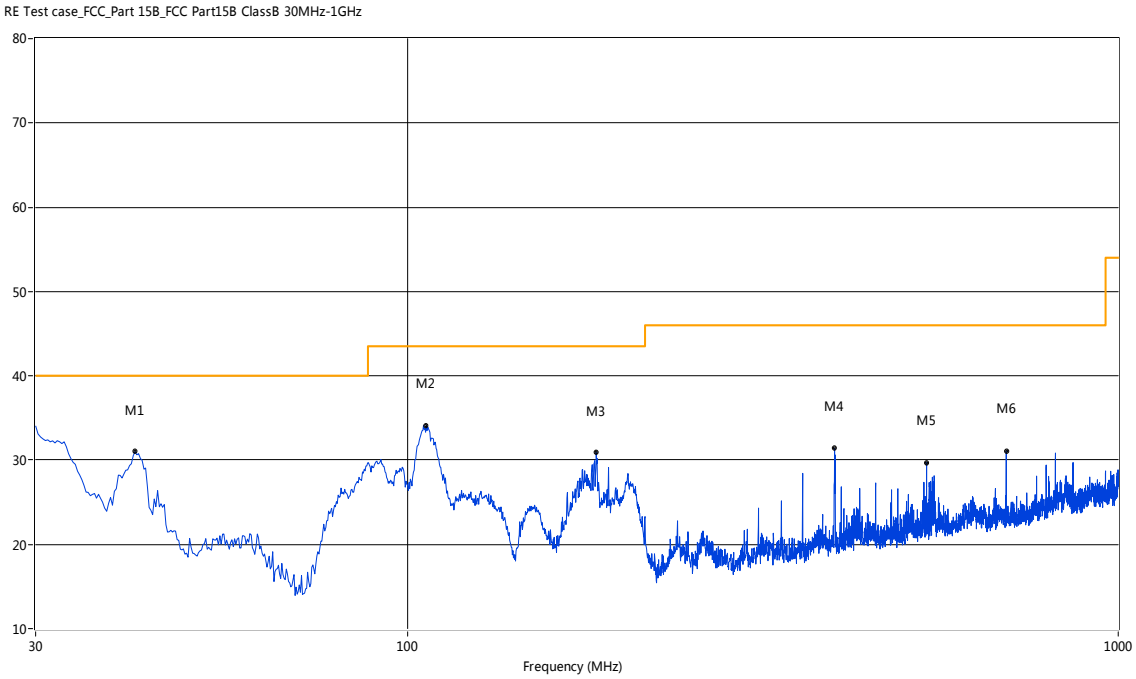
### A.1.4 Test Antenna Horizontal, 30 MHz – 1 GHz




| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1198.95 | 45.68 | -5.34 | 74.0 | 28.32 | Peak | 6.20 | 100 | Horizontal | Pass |
| 2 | 1842.29 | 44.70 | -3.20 | 74.0 | 29.30 | Peak | 99.70 | 100 | Horizontal | Pass |
| 3 | 2262.68 | 47.19 | -0.59 | 74.0 | 26.81 | Peak | 35.90 | 100 | Horizontal | Pass |
| 4 | 3596.85 | 47.38 | 10.04 | 74.0 | 26.62 | Peak | 10.10 | 100 | Horizontal | Pass |
| 5 | 3947.01 | 48.82 | 11.05 | 74.0 | 25.18 | Peak | 241.50 | 100 | Horizontal | Pass |
| 6 | 5104.72 | 50.80 | 15.04 | 74.0 | 23.20 | Peak | 301.50 | 100 | Horizontal | Pass |

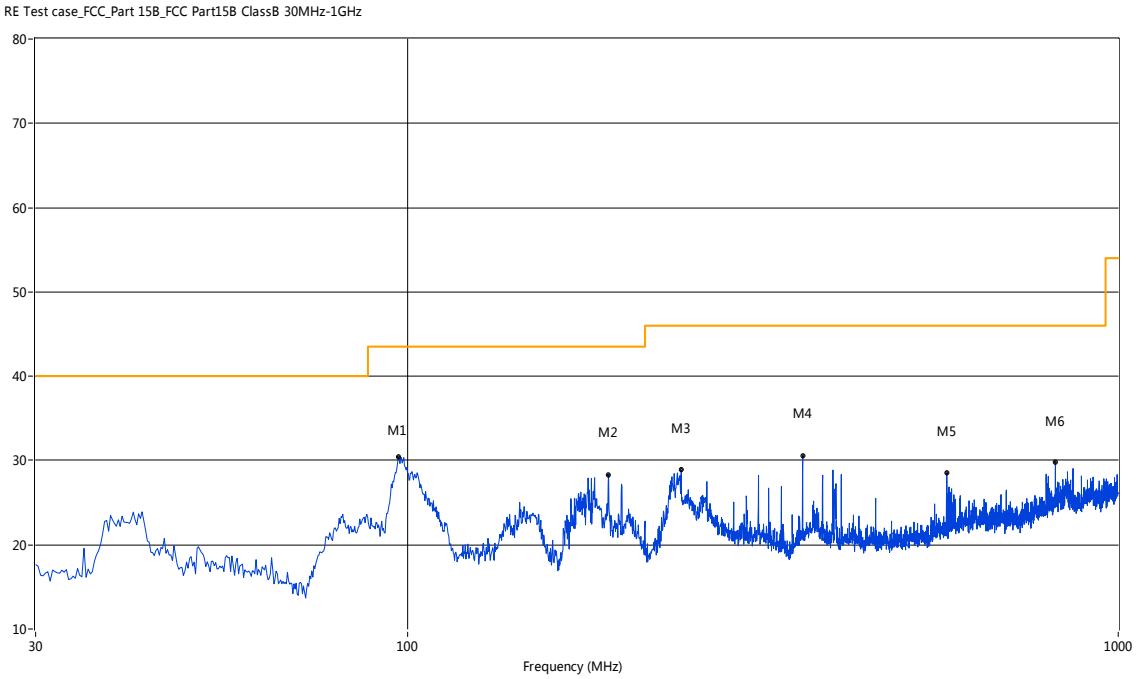
The USB Test Mode

## A.1.5 Test Antenna Vertical, 30 MHz – 1 GHz



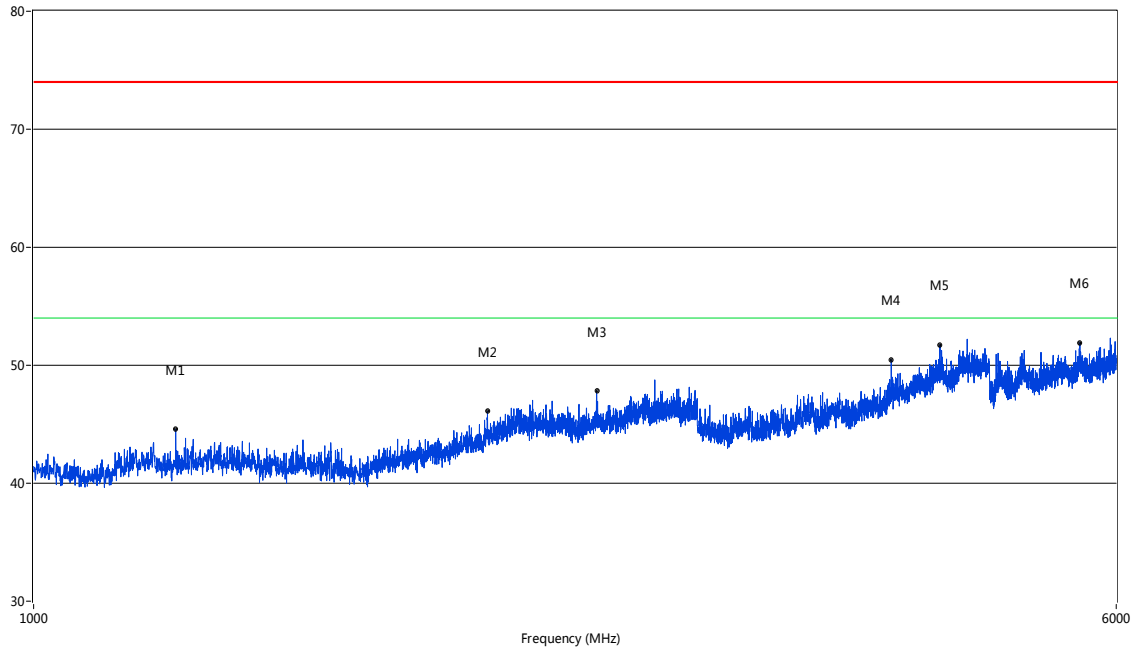

| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 41.40 | 31.00 | -20.51 | 40.0 | 9.00 | Peak | 11.10 | 100 | Vertical | Pass |
| 2 | 106.37 | 34.11 | -22.14 | 43.5 | 9.39 | Peak | 309.80 | 100 | Vertical | Pass |
| 3 | 184.43 | 30.91 | -24.00 | 43.5 | 12.59 | Peak | 329.80 | 100 | Vertical | Pass |
| 4 | 399.24 | 31.40 | -18.62 | 46.0 | 14.60 | Peak | 360.00 | 100 | Vertical | Pass |
| 5 | 537.67 | 29.70 | -16.39 | 46.0 | 16.30 | Peak | 333.00 | 100 | Vertical | Pass |
| 6 | 695.98 | 31.11 | -13.64 | 46.0 | 14.89 | Peak | 171.00 | 100 | Vertical | Pass |

## A.1.6 Test Antenna Horizontal, 30 MHz – 1 GHz



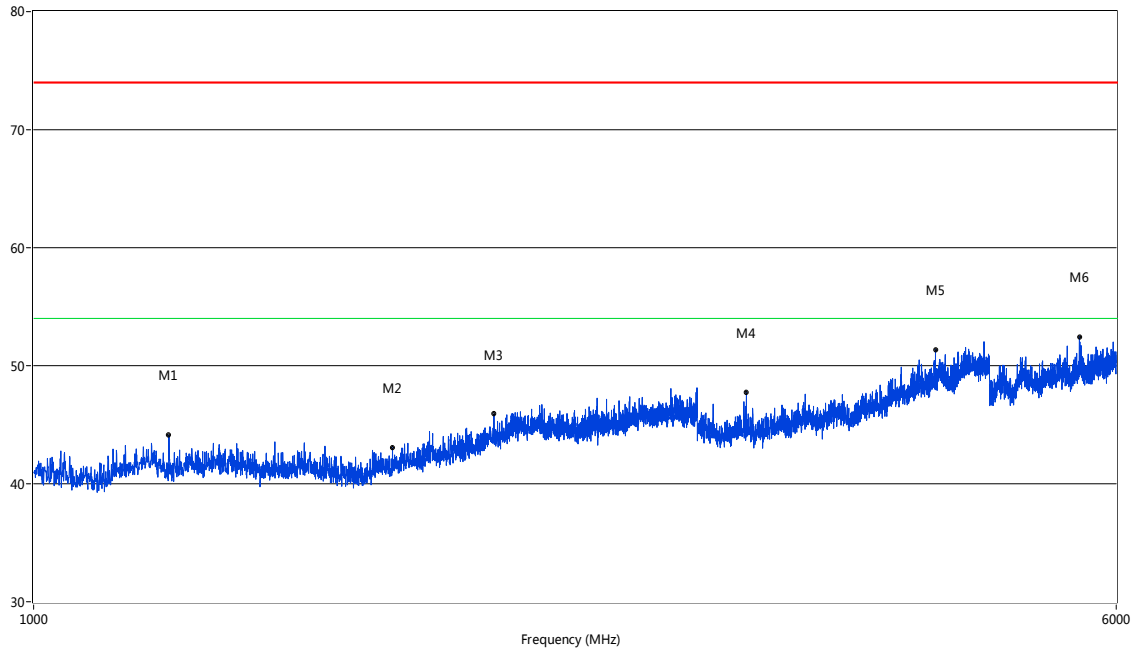

| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 97.16 | 30.44 | -22.39 | 43.5 | 13.06 | Peak | 352.30 | 100 | Horizontal | Pass |
| 2 | 191.95 | 28.34 | -23.29 | 43.5 | 15.16 | Peak | 38.00 | 100 | Horizontal | Pass |
| 3 | 242.86 | 28.87 | -21.71 | 46.0 | 17.13 | Peak | 34.80 | 100 | Horizontal | Pass |
| 4 | 359.96 | 30.57 | -19.39 | 46.0 | 15.43 | Peak | 251.70 | 100 | Horizontal | Pass |
| 5 | 574.03 | 28.54 | -15.65 | 46.0 | 17.46 | Peak | 288.60 | 100 | Horizontal | Pass |
| 6 | 815.99 | 29.74 | -11.38 | 46.0 | 16.26 | Peak | 258.50 | 100 | Horizontal | Pass |

## A.1.7 Test Antenna Vertical, 1 GHz – 6 GHz




| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1264.93 | 44.58 | -5.05 | 74.0 | 29.42 | Peak | 157.80 | 100 | Vertical | Pass |
| 2 | 2119.72 | 46.10 | -1.16 | 74.0 | 27.90 | Peak | 153.40 | 100 | Vertical | Pass |
| 3 | 2539.61 | 47.84 | -0.02 | 74.0 | 26.16 | Peak | 13.20 | 100 | Vertical | Pass |
| 4 | 4135.22 | 50.48 | 11.47 | 74.0 | 23.52 | Peak | 186.00 | 100 | Vertical | Pass |
| 5 | 4482.38 | 51.73 | 12.70 | 74.0 | 22.27 | Peak | 315.80 | 100 | Vertical | Pass |
| 6 | 5649.84 | 51.92 | 15.67 | 74.0 | 22.08 | Peak | 90.30 | 100 | Vertical | Pass |

## A.1.8 Test Antenna Horizontal, 1 GHz – 6 GHz




| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1250.94 | 44.14 | -5.19 | 74.0 | 29.86 | Peak | 313.80 | 100 | Horizontal | Pass |
| 2 | 1811.30 | 43.04 | -3.64 | 74.0 | 30.96 | Peak | 241.90 | 100 | Horizontal | Pass |
| 3 | 2142.71 | 45.92 | -1.18 | 74.0 | 28.08 | Peak | 359.50 | 100 | Horizontal | Pass |
| 4 | 3253.44 | 47.77 | 9.07 | 74.0 | 26.23 | Peak | 73.30 | 100 | Horizontal | Pass |
| 5 | 4448.64 | 51.37 | 12.51 | 74.0 | 22.63 | Peak | 250.10 | 100 | Horizontal | Pass |
| 6 | 5646.09 | 52.45 | 15.60 | 74.0 | 21.55 | Peak | 290.50 | 100 | Horizontal | Pass |

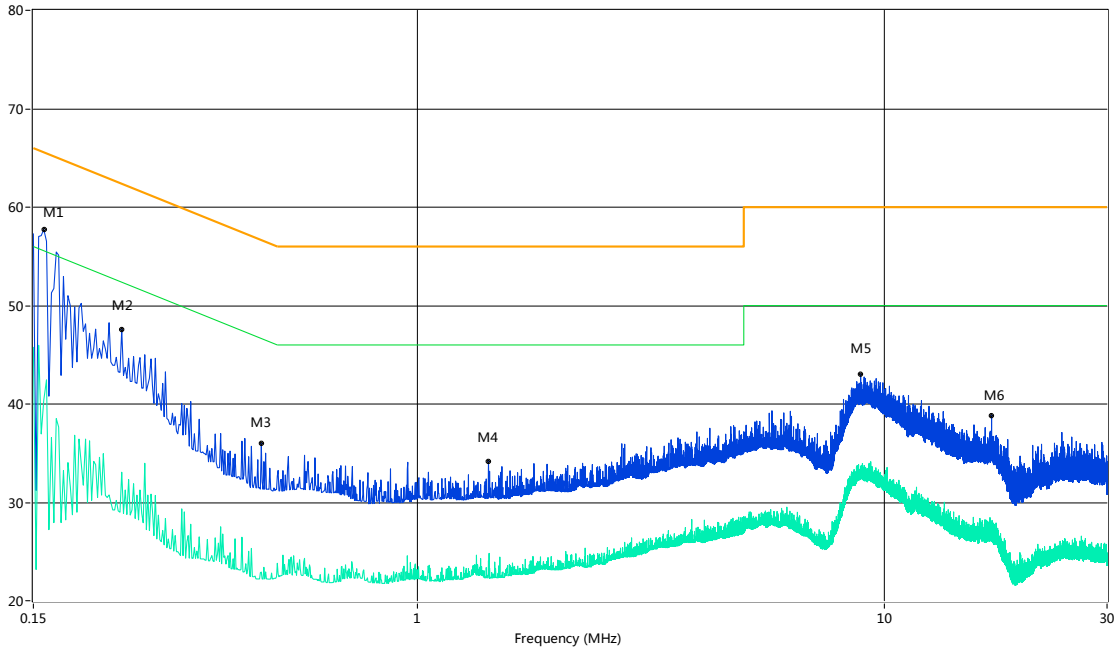
## A.2 Conducted Emission

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, 50/60 Hz and 240 VAC, 50/60 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz ) shown here

Test Data and Plots

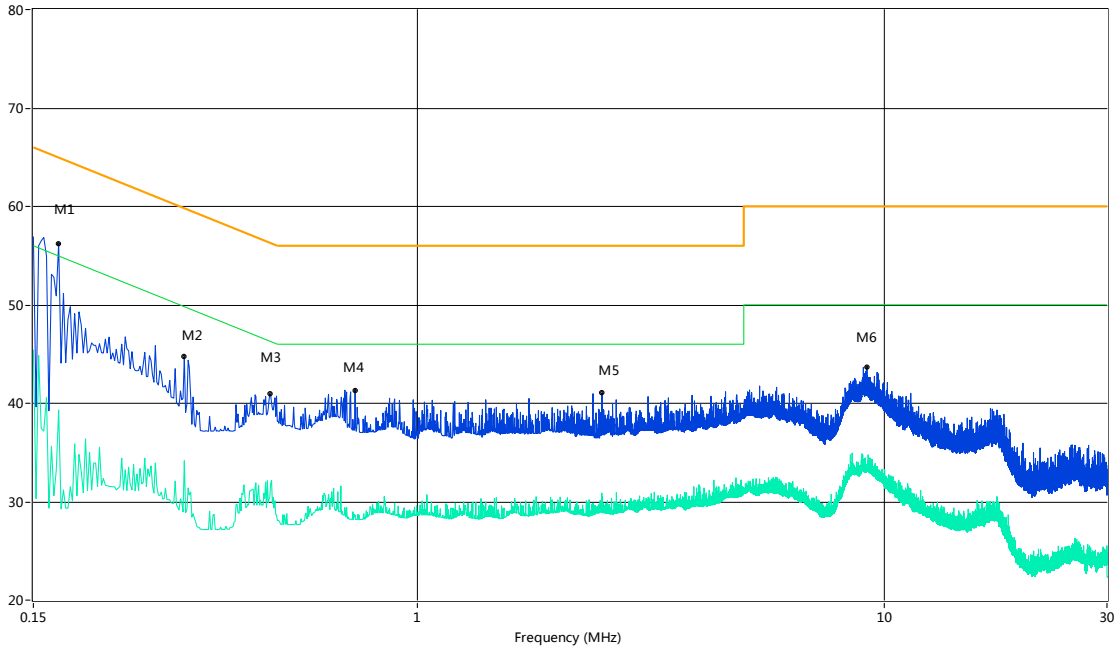
The worst test mode: The Audio Playing Test Mode

### A.2.1 L Phase




| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Margin (dB) | Detector | Line | Verdict |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.16 | 57.7 | 13.00 | 65.8 | 8.10 | Peak | L Line | Pass |
| 1** | 0.16 | 40.4 | 13.00 | 55.8 | 15.40 | AV | L Line | Pass |
| 2 | 0.23 | 47.6 | 13.00 | 63.7 | 16.10 | Peak | L Line | Pass |
| 2** | 0.23 | 33.1 | 13.00 | 53.7 | 20.60 | AV | L Line | Pass |
| 3 | 0.46 | 36.0 | 13.00 | 57.1 | 21.10 | Peak | L Line | Pass |
| 3** | 0.46 | 22.9 | 13.00 | 47.1 | 24.20 | AV | L Line | Pass |
| 4 | 1.42 | 34.2 | 13.00 | 56.0 | 21.80 | Peak | L Line | Pass |
| 4** | 1.42 | 24.1 | 13.00 | 46.0 | 21.90 | AV | L Line | Pass |
| 5 | 8.90 | 43.0 | 13.00 | 60.0 | 17.00 | Peak | L Line | Pass |
| 5** | 8.90 | 32.8 | 13.00 | 50.0 | 17.20 | AV | L Line | Pass |
| 6 | 16.98 | 38.9 | 13.00 | 60.0 | 21.10 | Peak | L Line | Pass |
| 6** | 16.98 | 27.9 | 13.00 | 50.0 | 22.10 | AV | L Line | Pass |

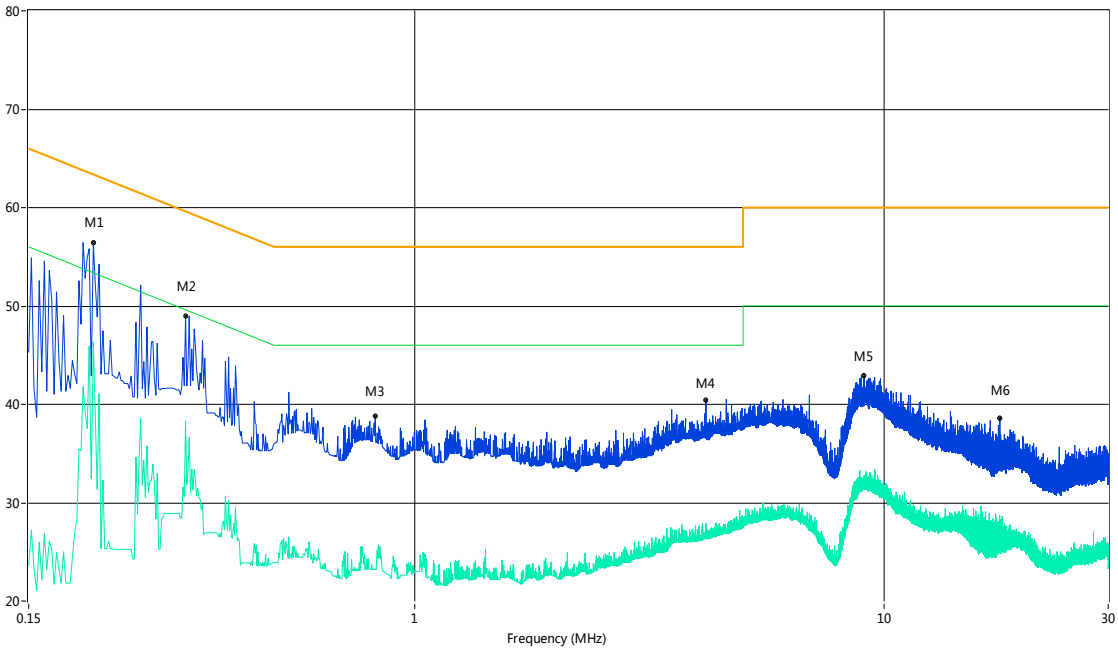
## A.2.2 N Phase




| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Margin (dB) | Detector | Line | Verdict |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.17 | 56.2 | 13.00 | 65.4 | 9.20 | Peak | N Line | Pass |
| 1** | 0.17 | 39.3 | 13.00 | 55.4 | 16.10 | AV | N Line | Pass |
| 2 | 0.32 | 44.7 | 13.00 | 61.3 | 16.60 | Peak | N Line | Pass |
| 2** | 0.32 | 34.2 | 13.00 | 51.3 | 17.10 | AV | N Line | Pass |
| 3 | 0.48 | 40.9 | 13.00 | 56.5 | 15.60 | Peak | N Line | Pass |
| 3** | 0.48 | 30.5 | 13.00 | 46.5 | 16.00 | AV | N Line | Pass |
| 4 | 0.73 | 41.3 | 13.00 | 56.0 | 14.70 | Peak | N Line | Pass |
| 4** | 0.73 | 28.6 | 13.00 | 46.0 | 17.40 | AV | N Line | Pass |
| 5 | 2.48 | 41.0 | 13.00 | 56.0 | 15.00 | Peak | N Line | Pass |
| 5** | 2.48 | 28.9 | 13.00 | 46.0 | 17.10 | AV | N Line | Pass |
| 6 | 9.18 | 43.7 | 13.00 | 60.0 | 16.30 | Peak | N Line | Pass |
| 6** | 9.18 | 33.8 | 13.00 | 50.0 | 16.20 | AV | N Line | Pass |

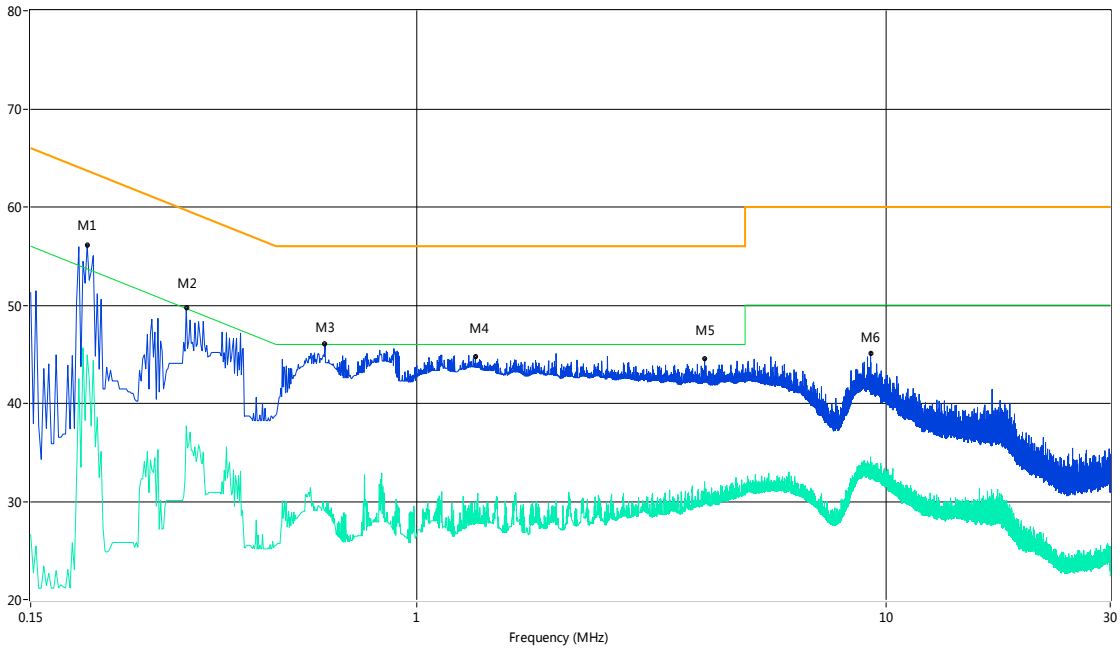
The USB Test Mode

A.2.3 L Phase




| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Margin (dB) | Detector | Line | Verdict |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.21 | 56.4 | 13.00 | 64.4 | 8.00 | Peak | L Line | Pass |
| 1** | 0.21 | 46.3 | 13.00 | 54.4 | 8.10 | AV | L Line | Pass |
| 2 | 0.32 | 49.0 | 13.00 | 61.0 | 12.00 | Peak | L Line | Pass |
| 2** | 0.32 | 38.3 | 13.00 | 51.0 | 12.70 | AV | L Line | Pass |
| 3 | 0.82 | 38.8 | 13.00 | 56.0 | 17.20 | Peak | L Line | Pass |
| 3** | 0.82 | 23.2 | 13.00 | 46.0 | 22.80 | AV | L Line | Pass |
| 4 | 4.17 | 40.4 | 13.00 | 56.0 | 15.60 | Peak | L Line | Pass |
| 4** | 4.17 | 27.9 | 13.00 | 46.0 | 18.10 | AV | L Line | Pass |
| 5 | 9.05 | 42.9 | 13.00 | 60.0 | 17.10 | Peak | L Line | Pass |
| 5** | 9.05 | 32.6 | 13.00 | 50.0 | 17.40 | AV | L Line | Pass |
| 6 | 17.63 | 38.6 | 13.00 | 60.0 | 21.40 | Peak | L Line | Pass |
| 6** | 17.63 | 28.1 | 13.00 | 50.0 | 21.90 | AV | L Line | Pass |

## A.2.4 N Phase




| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Margin (dB) | Detector | Line | Verdict |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.20 | 56.1 | 13.00 | 64.6 | 8.50 | Peak | N Line | Pass |
| 1** | 0.20 | 44.9 | 13.00 | 54.6 | 9.70 | AV | N Line | Pass |
| 2 | 0.32 | 49.7 | 13.00 | 61.1 | 11.40 | Peak | N Line | Pass |
| 2** | 0.32 | 37.7 | 13.00 | 51.1 | 13.40 | AV | N Line | Pass |
| 3 | 0.64 | 46.0 | 13.00 | 56.0 | 10.00 | Peak | N Line | Pass |
| 3** | 0.64 | 28.5 | 13.00 | 46.0 | 17.50 | AV | N Line | Pass |
| 4 | 1.33 | 44.7 | 13.00 | 56.0 | 11.30 | Peak | N Line | Pass |
| 4** | 1.33 | 28.7 | 13.00 | 46.0 | 17.30 | AV | N Line | Pass |
| 5 | 4.10 | 44.5 | 13.00 | 56.0 | 11.50 | Peak | N Line | Pass |
| 5** | 4.10 | 32.0 | 13.00 | 46.0 | 14.00 | AV | N Line | Pass |
| 6 | 9.26 | 45.1 | 13.00 | 60.0 | 14.90 | Peak | N Line | Pass |
| 6** | 9.26 | 34.5 | 13.00 | 50.0 | 15.50 | AV | N Line | Pass |

# ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1630198-AE.PDF”.

# ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1630198-AW.PDF”.

# ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ1630198-AI.PDF”.

--END OF REPORT--