

# EMC

## TEST REPORT

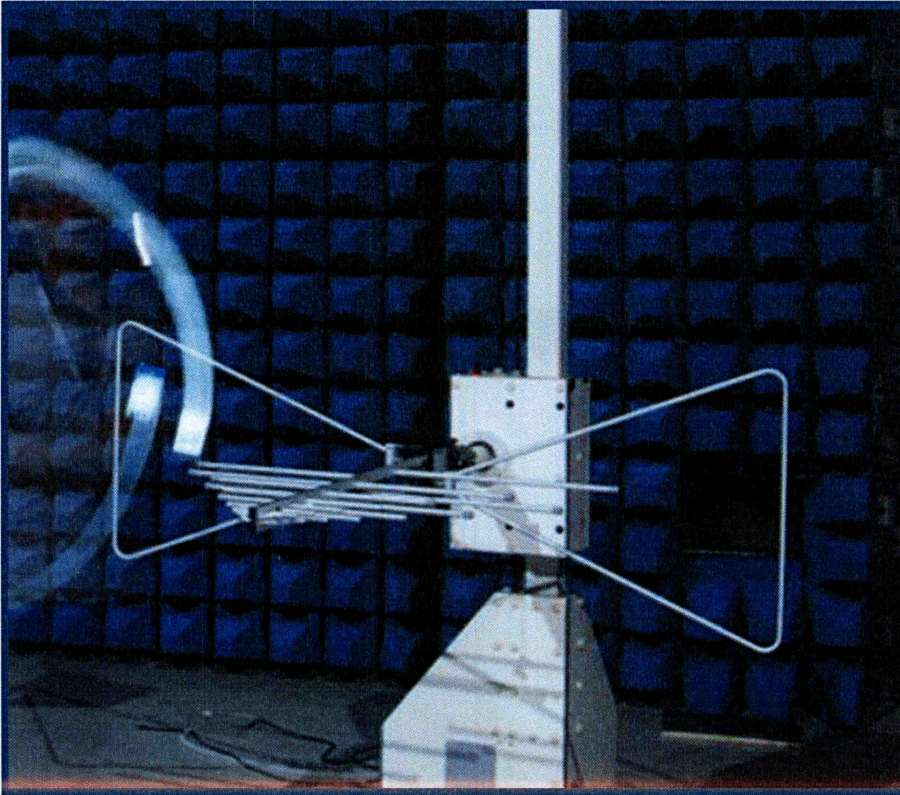
ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**Mobile phone**

ISSUED TO  
Realfit(Shenzhen) Intelligent Technology Co., Ltd

Room 201, building a, No.1 Qianwan 1st Road, Shenzhen Hong Kong  
cooperation zone, Qianhai, Shenzhen



Tested by: Xia Long  
Date: Sep. 07, 2021

Approved by: Wei Yanguan  
(Chief Engineer)

Date: Sep. 07, 2021

Report No.: BL-SZ2150566-401  
EUT Name: Mobile phone  
Model Name: DH2002  
Brand Name: DIZO  
Test Standard: 47 CFR Part 15 Subpart B  
FCC ID: 2AYPPDH2002

Test Conclusion: Pass  
Test Date: May 21, 2021 ~ Jun. 03, 2021  
Date of Issue: Sep. 07, 2021

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**Revision History**

| Version        | Issue Date           | Revisions Content    |
|----------------|----------------------|----------------------|
| <u>Rev. 01</u> | <u>Sep. 07, 2021</u> | <u>Initial Issue</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 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 | 30% to 60%         |
| Ambient Pressure          | 100 kPa to 102 kPa |

### 1.4 Announce

- (1) The test report refer to the BALUN report mode v7.0.
- (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 | Realfit(Shenzhen) Intelligent Technology Co., Ltd                                                   |
| Address   | Room 201, building a, No.1 Qianwan 1st Road, Shenzhen Hong Kong cooperation zone, Qianhai, Shenzhen |

### 2.2 Manufacturer Information

|              |                                                                                                     |
|--------------|-----------------------------------------------------------------------------------------------------|
| Manufacturer | Realfit(Shenzhen) Intelligent Technology Co., Ltd                                                   |
| Address      | Room 201, building a, No.1 Qianwan 1st Road, Shenzhen Hong Kong cooperation zone, Qianhai, Shenzhen |

### 2.3 Factory Information

|         |                                                                                                      |
|---------|------------------------------------------------------------------------------------------------------|
| Factory | Sichuan Suge Communication Technology Co., Ltd.                                                      |
| Address | No.31, West gangyuan Road, Yibin Lingang Economic and Technological Development Zone, Yibin, Sichuan |

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

|                                           |                    |
|-------------------------------------------|--------------------|
| EUT Name                                  | Mobile phone       |
| Model Name Under Test                     | DH2002             |
| Series Model Name                         | N/A                |
| Description of Model name differentiation | N/A                |
| Hardware Version                          | V0.2               |
| Software Version                          | dizo_DH2002_V1.6.0 |
| Dimensions (Approx.)                      | N/A                |
| Weight (Approx.)                          | N/A                |

## 2.5 Ancillary Equipment

|                                 |                      |                                                                      |
|---------------------------------|----------------------|----------------------------------------------------------------------|
| Ancillary Equipment 1           | Battery 1            |                                                                      |
|                                 | Brand Name           | DIZO                                                                 |
|                                 | Model No.            | DH2002                                                               |
|                                 | Serial No.           | N/A                                                                  |
|                                 | Capacity             | 1830 mAh                                                             |
|                                 | Rated Voltage        | 3.7 V                                                                |
|                                 | Limit Charge Voltage | 4.2 V                                                                |
|                                 | Manufacturer         | NINGBO VEKEN BATTERY CO., LTD                                        |
| Ancillary Equipment 2           | Battery 2            |                                                                      |
|                                 | Brand Name           | DIZO                                                                 |
|                                 | Model No.            | DH2002                                                               |
|                                 | Serial No.           | N/A                                                                  |
|                                 | Capacity             | Rated Capacity: 1830mAh/6.771Wh<br>Typical Capacity: 1900 mAh/7.03Wh |
|                                 | Rated Voltage        | 3.7 V                                                                |
|                                 | Limit Charge Voltage | 4.2 V                                                                |
|                                 | Manufacturer         | Zhongshan Tianmao Battery Co., Ltd.                                  |
| Ancillary Equipment 3           | Adapter              |                                                                      |
|                                 | Brand Name           | DIZO                                                                 |
|                                 | Model No.            | PA-5V550mA-005                                                       |
|                                 | Serial No.           | N/A                                                                  |
|                                 | Rated Input          | 100-240 V~, 0.15 A, 50/60 Hz                                         |
|                                 | Rated Output         | 5 V= 0.55 A                                                          |
| Note: All batteries are tested. |                      |                                                                      |

## 2.6 Technical Information

|                                   |                                          |
|-----------------------------------|------------------------------------------|
| Network and Wireless connectivity | 2G Network GSM 850/1900 MHz<br>Bluetooth |
|-----------------------------------|------------------------------------------|

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

| No. | Identity                                      | Document Title                                                                                                                                                                |
|-----|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 15 Subpart B<br>(10-1-19 Edition) | Unintentional Radiators                                                                                                                                                       |
| 2   | ANSI C63.4-2014                               | American National Standard for Methods of<br>Measurement of Radio-Noise Emissions from Low-<br>Voltage Electrical and Electronic Equipment in the<br>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 |
| <p>Note: The only difference between the test sample EUT in this report and the BL-SZ2130939-401, which was issued by Shenzhen BALUN Technology Co., Ltd. on Apr. 23, 2021 show as below:</p> <p>1. Add a battery.</p> <p>All items were retested in this report, but only the worst data was shown in this report.</p> |                              |          |              |            |

#### 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<br>Parameter                        | Selected Values During Tests |                                               |                   |                    |
|-------------------------------------------------|------------------------------|-----------------------------------------------|-------------------|--------------------|
|                                                 | Temperature                  | Voltage                                       | Relative Humidity | Ambient Pressure   |
| Normal Temperature,<br>Normal Voltage<br>(NTNV) | 20°C to 25°C                 | AC 120 V/60 Hz<br>or DC 3.7 V from<br>Battery | 30% to 60%        | 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     | 2021.06.01 | 2022.05.31 | <input type="checkbox"/> |
| Test Antenna-Bi-Log                                     | SCHWARZBECK             | VULB 9168             | 9168-0883  | 2020.05.11 | 2022.05.10 | <input type="checkbox"/> |
| Anechoic Chamber                                        | EMC Electronic Co., Ltd | 20.10*11.60<br>*7.35m | N/A        | 2018.08.08 | 2021.08.07 | <input type="checkbox"/> |
| Test Software                                           | BALUN                   | BL410_E               | V19.918    | --         | --         | <input 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 checked="" type="checkbox"/> |
| Test Antenna-Bi-Log                                    | SCHWARZBECK  | VULB 9163 | 9163-624   | 2019.07.02 | 2022.07.01 | <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"/> |

| 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 | 2022.07.01 | <input checked="" type="checkbox"/> |
| Anechoic Chamber                                 | YIHENG       | 9m*6m*6m   | N/A        | 2018.07.18 | 2022.07.01 | <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<br>9 | 2021.06.01 | 2022.05.31 | <input checked="" type="checkbox"/> |
| LISN                       | SCHWARZBECK                   | NSLK 8127          | 8127-687       | 2021.06.08 | 2022.06.07 | <input checked="" type="checkbox"/> |
| Shielded<br>Enclosure      | YiHeng Electronic<br>Co., Ltd | 3.4m*3.1m*2<br>.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

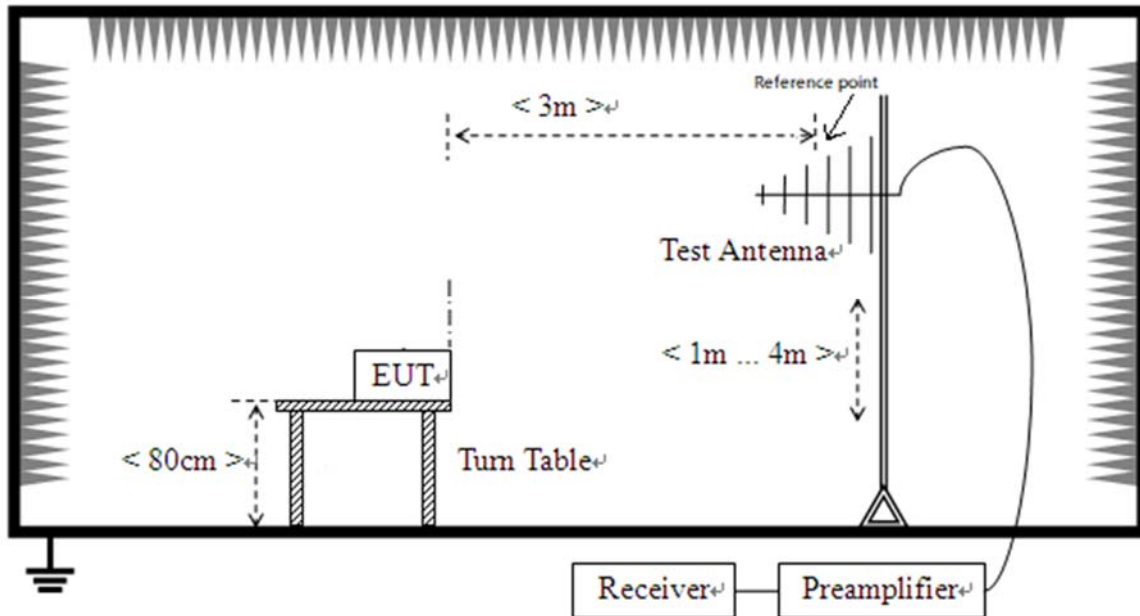
| Description | Manufacturer | Model | Serial No. | Length | Description | Use                                 |
|-------------|--------------|-------|------------|--------|-------------|-------------------------------------|
| Adapter     | N/A          | N/A   | N/A        | N/A    | N/A         | <input checked="" type="checkbox"/> |
| Laptop      | Apple        | A1465 | N/A        | N/A    | N/A         | <input checked="" type="checkbox"/> |
| TF Card     | Kingston     | N/A   | N/A        | N/A    | N/A         | <input checked="" type="checkbox"/> |
| SIM Card    | N/A          | N/A   | N/A        | N/A    | N/A         | <input checked="" type="checkbox"/> |
| Earphone    | N/A          | N/A   | N/A        | N/A    | N/A         | <input checked="" type="checkbox"/> |

## 4.4 Test Configurations

| Test Configurations (TC) No. | Description                                                                             |
|------------------------------|-----------------------------------------------------------------------------------------|
| TC01                         | <u>The Camera Test Mode</u><br>EUT + Battery + Adapter + TF Card + Earphone             |
| TC02                         | <u>The USB (PC to TF Card) Test Mode</u><br>EUT + Battery + TF Card + Earphone + Laptop |

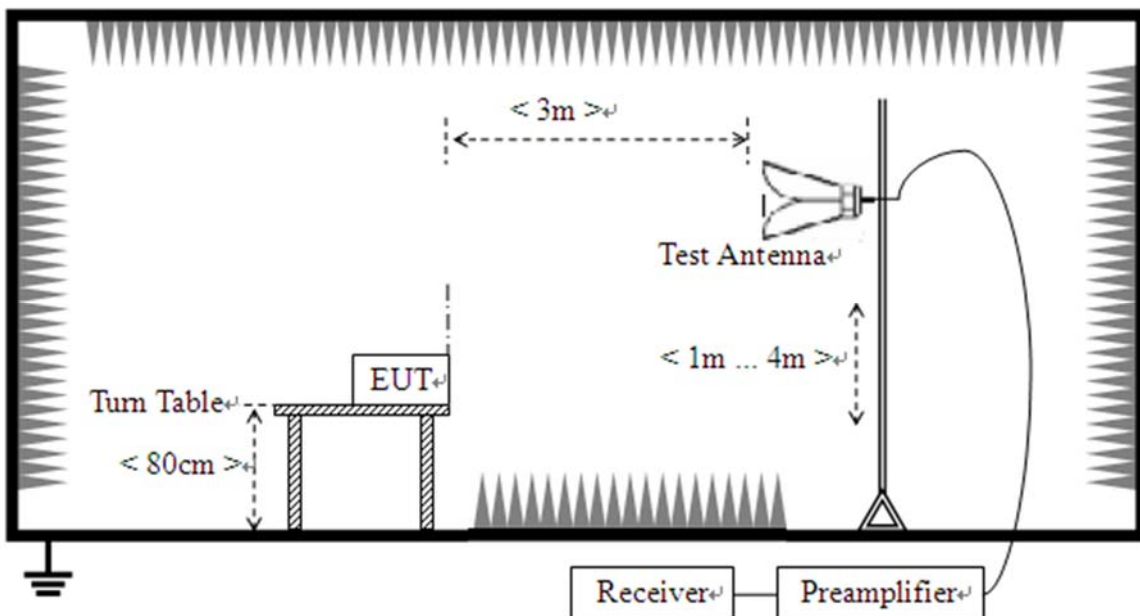
## 4.5 Test Setups

### Test Setup 1



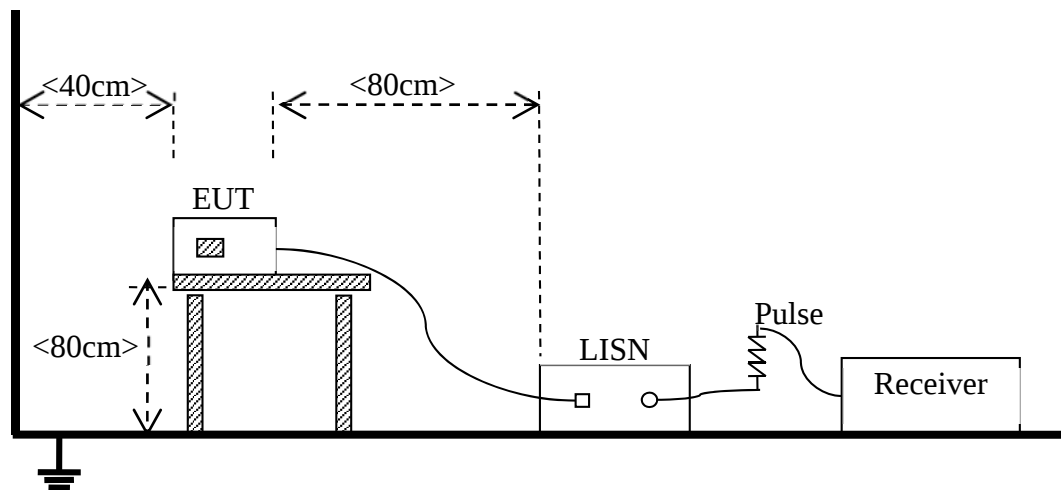
(For Radiated Emission Test (30 MHz-1 GHz))

### 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~TC02 <sup>Note</sup> |
| Conducted Emission, AC Ports                                                                                                                                                                                               | Test Env.          | NTNV                      |
|                                                                                                                                                                                                                            | Test Setup         | Test Setup 3              |
|                                                                                                                                                                                                                            | Test Configuration | TC01~TC02 <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 Camera 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 range<br>(MHz) | Class B (at 3 m)                      |                                         | Class B (at 10 m)                       | Class A (at 10 m)                     |                                         |
|--------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------------|
|                          | Field Strength<br>( $\mu\text{V/m}$ ) | Field Strength<br>(dB $\mu\text{V/m}$ ) | Field Strength<br>(dB $\mu\text{V/m}$ ) | Field Strength<br>( $\mu\text{V/m}$ ) | Field Strength<br>(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.

##### 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

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 (dB $\mu\text{V/m}$ ) = Reading (dB $\mu\text{V}$ ) + 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 (dBμV) | Average (dBμV) |
| 0.15 - 0.50           | 79                | 66             |
| 0.50 - 30             | 73                | 60             |

| Frequency range (MHz) | Class B           |                |
|-----------------------|-------------------|----------------|
|                       | Quasi-peak (dBμV) | Average (dBμV) |
| 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.

### 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 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.

**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 = Insertion loss + Cable loss

3. Over limit = Results – Limit.

## ANNEX A TEST RESULTS

### A.1 Radiated Emission

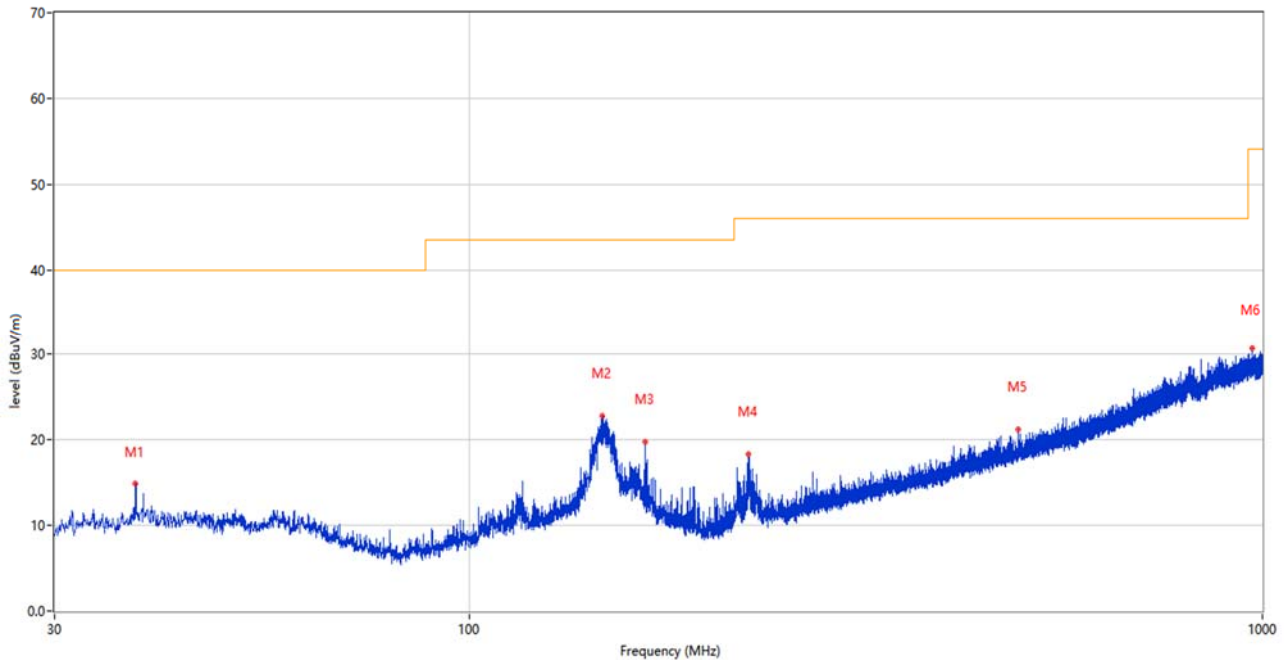
Note 1: The symbol of “--” in the table which means not application.

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

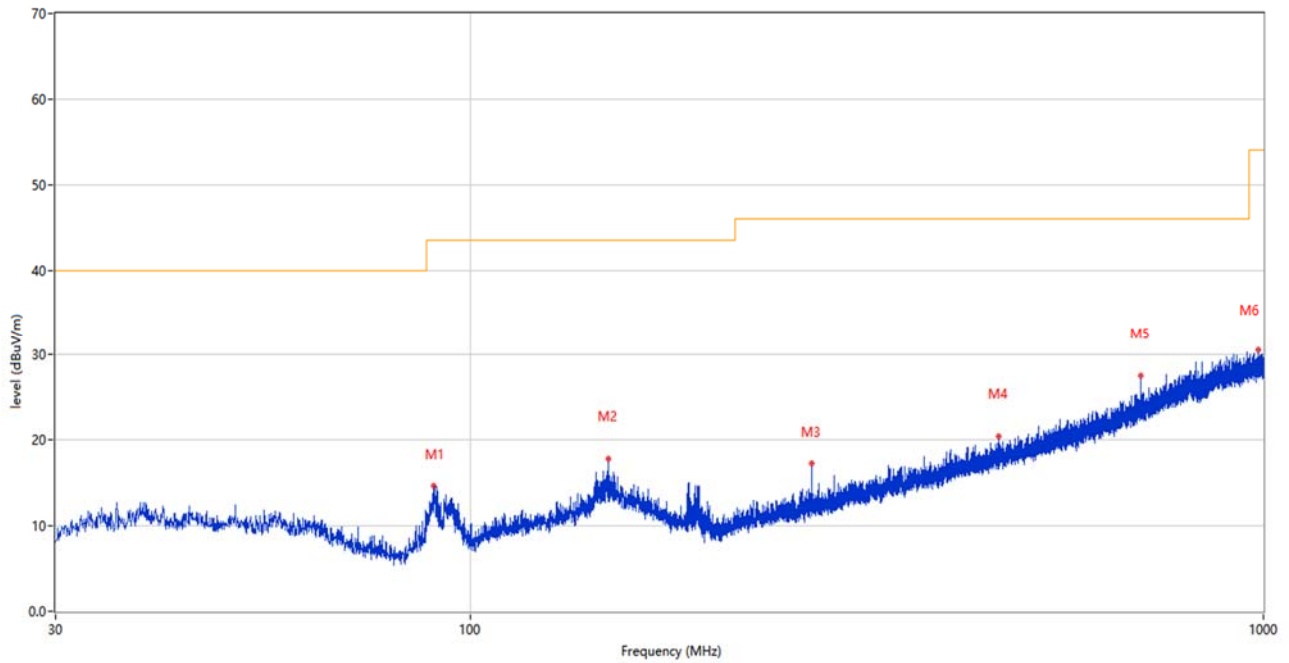
##### The Camera Test Mode

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



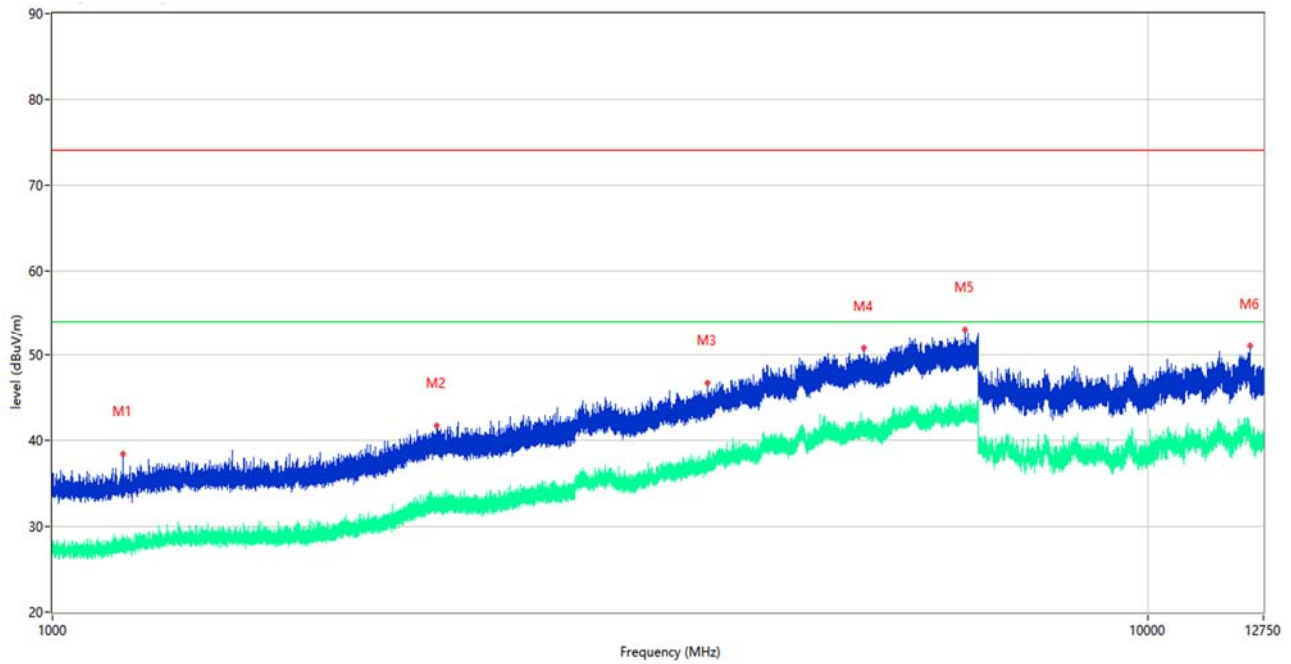
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 37.954          | 14.94            | -26.24      | 40.0           | -25.06          | Peak     | -1.00          | 400         | Vertical | Pass    |
| 2   | 147.273         | 22.81            | -25.07      | 43.5           | -20.69          | Peak     | 282.00         | 100         | Vertical | Pass    |
| 3   | 166.722         | 19.73            | -25.26      | 43.5           | -23.77          | Peak     | 292.00         | 100         | Vertical | Pass    |
| 4   | 224.921         | 18.35            | -27.09      | 46.0           | -27.65          | Peak     | 0.00           | 200         | Vertical | Pass    |
| 5   | 492.254         | 21.17            | -19.55      | 46.0           | -24.83          | Peak     | 295.00         | 400         | Vertical | Pass    |
| 6   | 971.628         | 30.73            | -9.15       | 54.0           | -23.27          | Peak     | 95.00          | 200         | Vertical | Pass    |

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



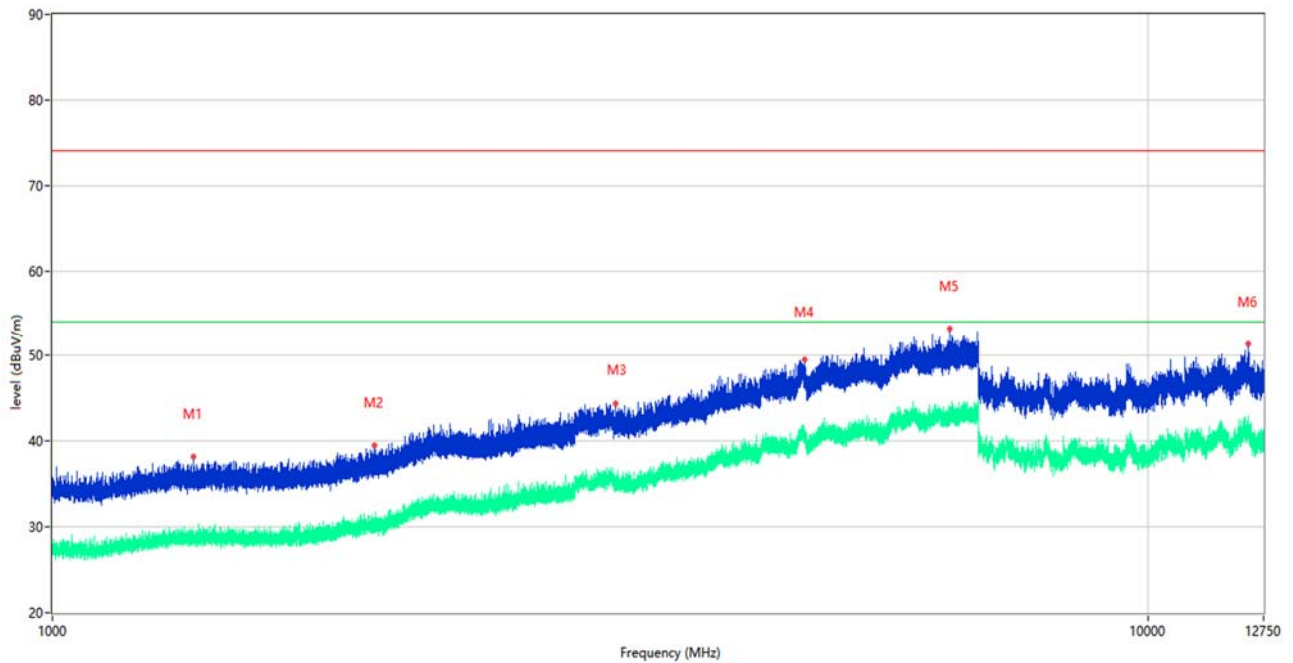
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 89.946          | 14.67            | -30.04      | 43.5           | -28.83          | Peak     | 79.00          | 400         | Horizontal | Pass    |
| 2   | 149.456         | 17.77            | -24.91      | 43.5           | -25.73          | Peak     | 130.00         | 200         | Horizontal | Pass    |
| 3   | 269.444         | 17.30            | -25.72      | 46.0           | -28.70          | Peak     | 0.00           | 200         | Horizontal | Pass    |
| 4   | 463.542         | 20.38            | -20.38      | 46.0           | -25.62          | Peak     | 218.00         | 100         | Horizontal | Pass    |
| 5   | 700.222         | 27.56            | -14.26      | 46.0           | -18.44          | Peak     | 110.00         | 400         | Horizontal | Pass    |
| 6   | 984.577         | 30.58            | -9.22       | 54.0           | -23.42          | Peak     | 57.00          | 200         | Horizontal | Pass    |

### A.1.3 Test Antenna Vertical, 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   | 1159.500        | 38.45            | -18.62      | 74.0           | -35.55          | Peak     | 259.00         | 100         | Vertical | Pass    |
| 1** | 1159.500        | 28.13            | -18.62      | 54.0           | -25.87          | AV       | 259.00         | 100         | Vertical | Pass    |
| 2   | 2243.000        | 41.77            | -13.32      | 74.0           | -32.23          | Peak     | 322.00         | 100         | Vertical | Pass    |
| 2** | 2243.000        | 33.02            | -13.32      | 54.0           | -20.98          | AV       | 322.00         | 100         | Vertical | Pass    |
| 3   | 3965.400        | 46.82            | -6.82       | 74.0           | -27.18          | Peak     | 315.00         | 100         | Vertical | Pass    |
| 3** | 3965.400        | 36.86            | -6.82       | 54.0           | -17.14          | AV       | 315.00         | 100         | Vertical | Pass    |
| 4   | 5501.000        | 50.84            | -3.19       | 74.0           | -23.16          | Peak     | 344.00         | 100         | Vertical | Pass    |
| 4** | 5501.000        | 41.75            | -3.19       | 54.0           | -12.25          | AV       | 344.00         | 100         | Vertical | Pass    |
| 5   | 6806.200        | 53.13            | -1.45       | 74.0           | -20.87          | Peak     | 101.00         | 100         | Vertical | Pass    |
| 5** | 6806.200        | 43.62            | -1.45       | 54.0           | -10.38          | AV       | 101.00         | 100         | Vertical | Pass    |
| 6   | 12392.350       | 51.07            | -1.70       | 74.0           | -22.93          | Peak     | 156.00         | 100         | Vertical | Pass    |
| 6** | 12392.350       | 40.71            | -1.70       | 54.0           | -13.29          | AV       | 156.00         | 100         | Vertical | Pass    |

#### A.1.4 Test Antenna Horizontal, 1 GHz – 12.75 GHz

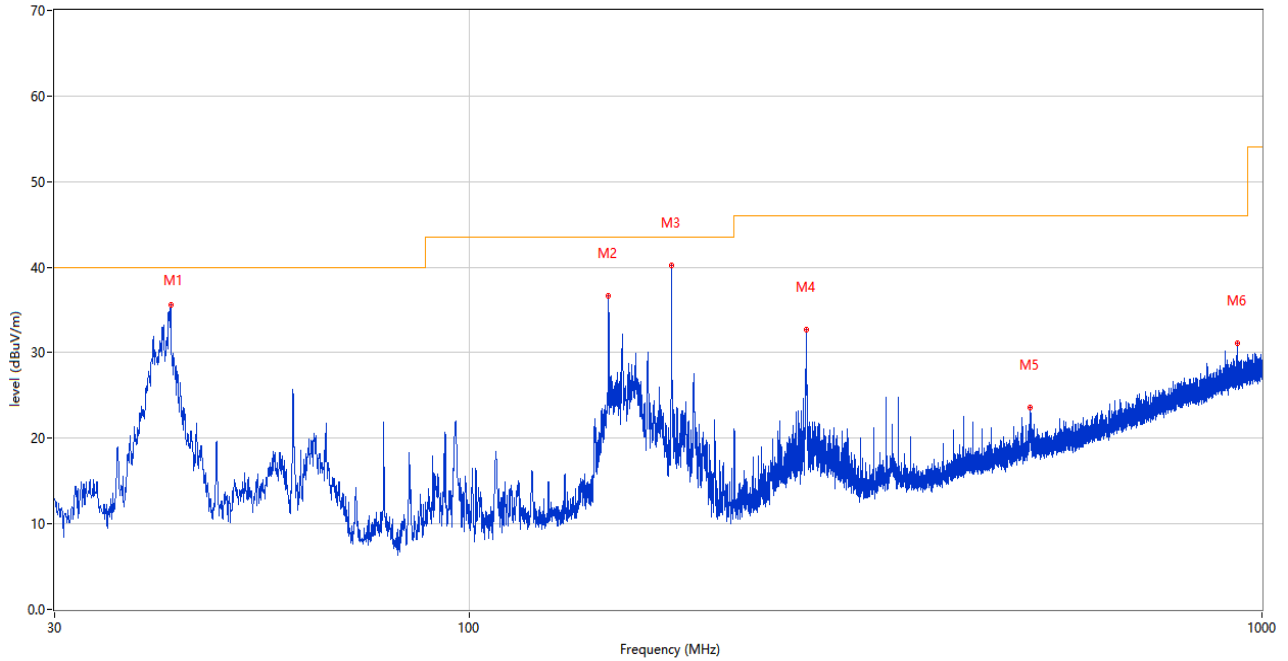


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 1346.500        | 38.22            | -17.95      | 74.0           | -35.78          | Peak     | 325.00         | 100         | Horizontal | Pass    |
| 1** | 1346.500        | 29.22            | -17.95      | 54.0           | -24.78          | AV       | 325.00         | 100         | Horizontal | Pass    |
| 2   | 1968.200        | 39.49            | -16.43      | 74.0           | -34.51          | Peak     | 258.00         | 100         | Horizontal | Pass    |
| 2** | 1968.200        | 29.49            | -16.43      | 54.0           | -24.51          | AV       | 258.00         | 100         | Horizontal | Pass    |
| 3   | 3269.200        | 44.45            | -9.05       | 74.0           | -29.55          | Peak     | 273.00         | 100         | Horizontal | Pass    |
| 3** | 3269.200        | 34.83            | -9.05       | 54.0           | -19.17          | AV       | 273.00         | 100         | Horizontal | Pass    |
| 4   | 4861.600        | 49.54            | -3.62       | 74.0           | -24.46          | Peak     | 117.00         | 100         | Horizontal | Pass    |
| 4** | 4861.600        | 40.21            | -3.62       | 54.0           | -13.79          | AV       | 117.00         | 100         | Horizontal | Pass    |
| 5   | 6590.400        | 53.23            | -2.39       | 74.0           | -20.77          | Peak     | 221.00         | 100         | Horizontal | Pass    |
| 5** | 6590.400        | 42.44            | -2.39       | 54.0           | -11.56          | AV       | 221.00         | 100         | Horizontal | Pass    |
| 6   | 12339.162       | 51.36            | -0.94       | 74.0           | -22.64          | Peak     | 0.00           | 100         | Horizontal | Pass    |
| 6** | 12339.162       | 41.44            | -0.94       | 54.0           | -12.56          | AV       | 0.00           | 100         | Horizontal | Pass    |

## Test Data and Plots

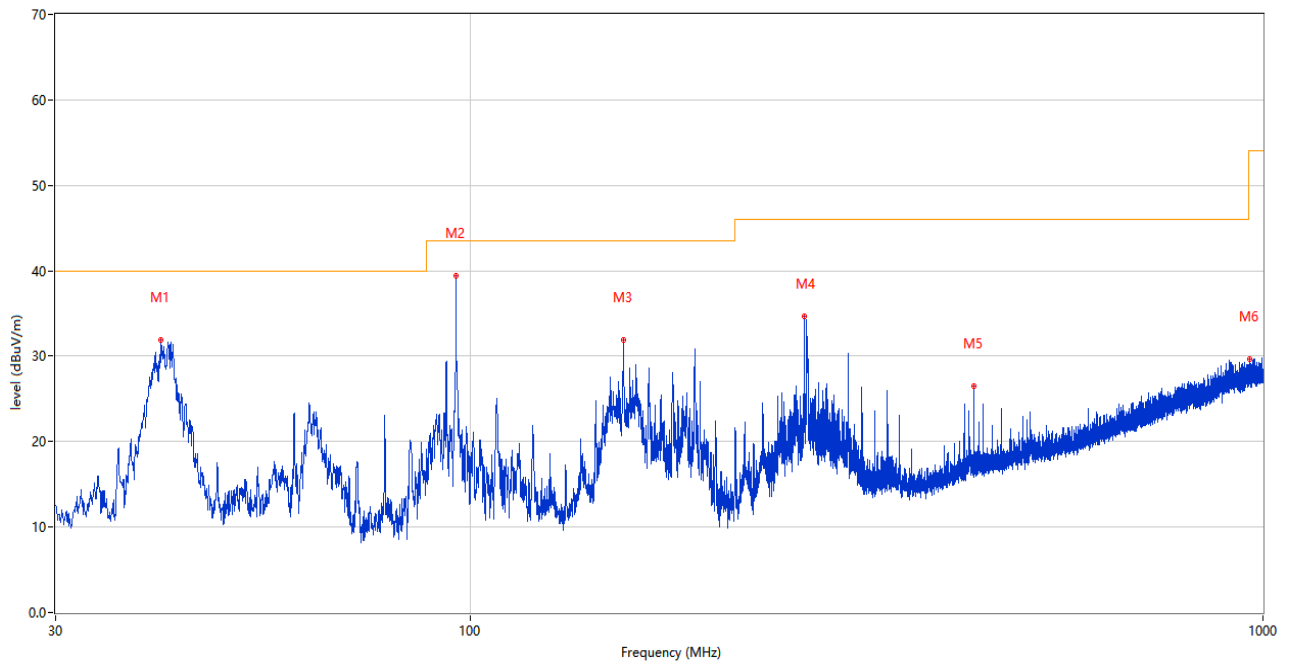
### The USB Test Mode

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



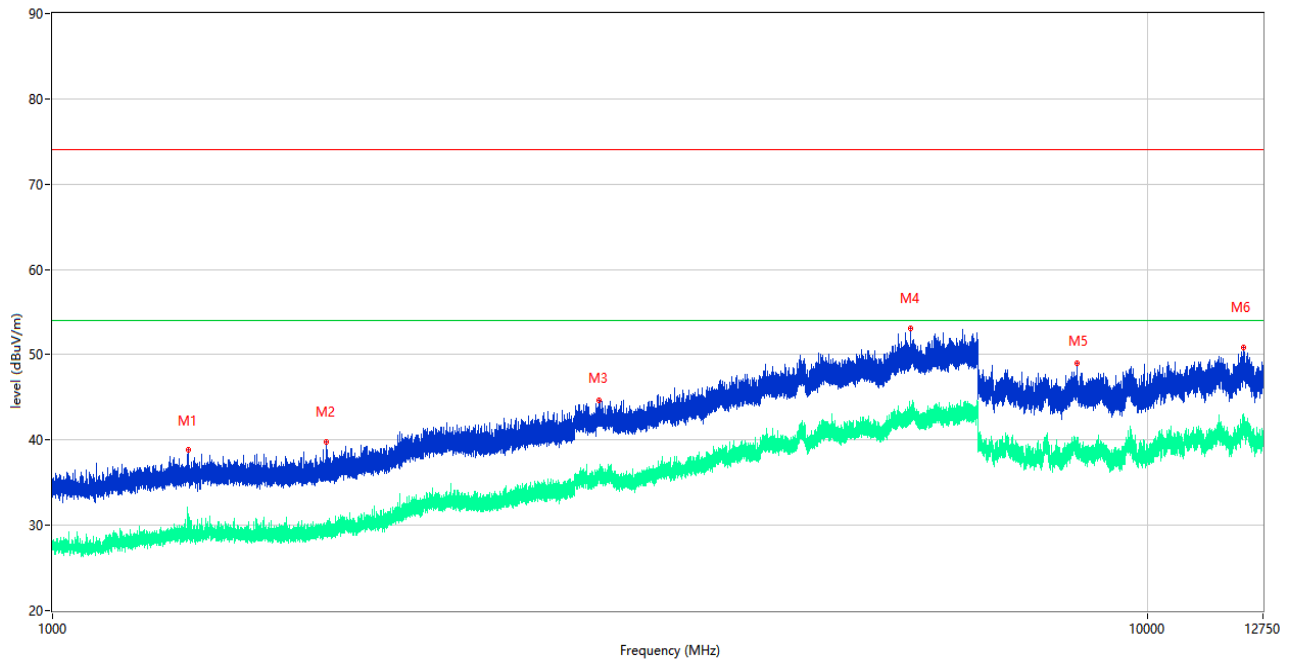
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 42.028          | 35.65            | -26.37      | 40.0           | -4.35           | Peak     | 93.00          | 300         | Vertical | Pass    |
| 2   | 149.989         | 36.70            | -24.96      | 43.5           | -6.80           | Peak     | 117.00         | 100         | Vertical | Pass    |
| 3   | 180.059         | 40.21            | -27.30      | 43.5           | -3.29           | Peak     | 0.00           | 200         | Vertical | Pass    |
| 4   | 266.583         | 32.64            | -25.90      | 46.0           | -13.36          | Peak     | 142.00         | 200         | Vertical | Pass    |
| 5   | 510.053         | 23.53            | -19.47      | 46.0           | -22.47          | Peak     | 0.00           | 200         | Vertical | Pass    |
| 6   | 931.033         | 31.06            | -10.46      | 46.0           | -14.94          | Peak     | 102.00         | 100         | Vertical | Pass    |

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



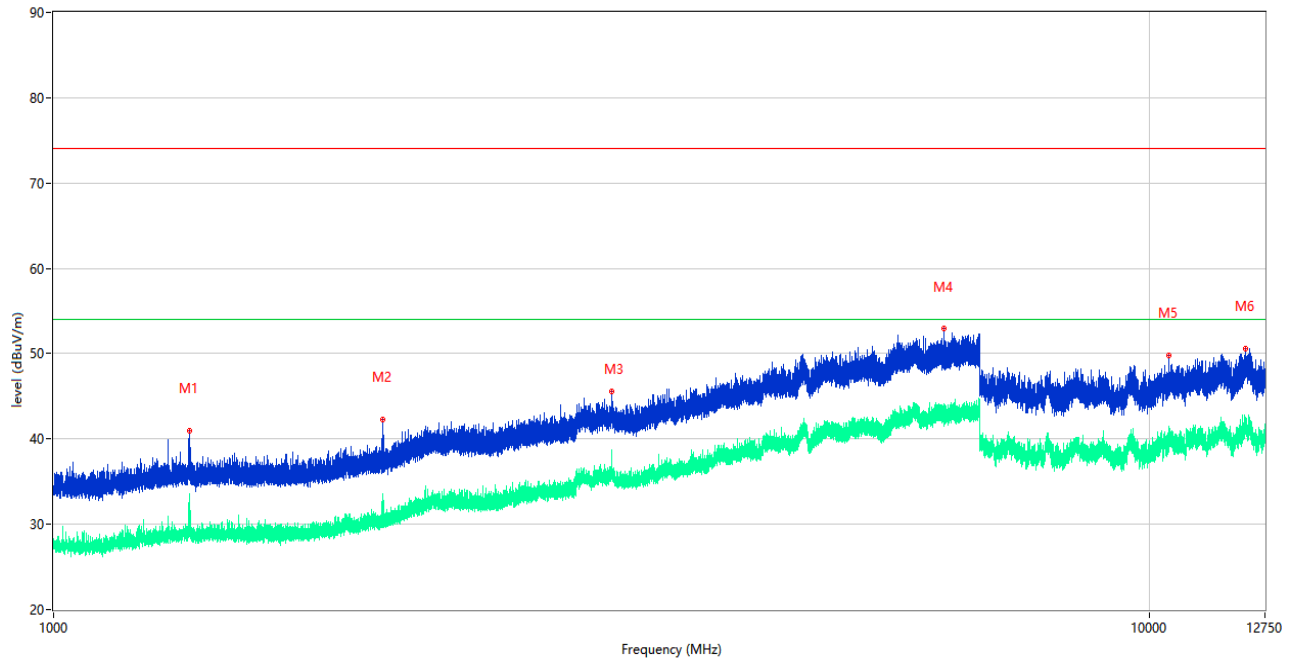
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 40.767          | 31.90            | -26.11      | 40.0           | -8.10           | Peak     | 44.00          | 300         | Horizontal | Pass    |
| 2   | 96.008          | 39.35            | -29.29      | 43.5           | -4.15           | Peak     | 0.00           | 200         | Horizontal | Pass    |
| 3   | 156.003         | 31.93            | -24.92      | 43.5           | -11.57          | Peak     | 63.00          | 100         | Horizontal | Pass    |
| 4   | 264.013         | 34.66            | -26.09      | 46.0           | -11.34          | Peak     | 360.00         | 200         | Horizontal | Pass    |
| 5   | 432.017         | 26.45            | -21.15      | 46.0           | -19.55          | Peak     | 38.00          | 300         | Horizontal | Pass    |
| 6   | 962.898         | 29.65            | -9.77       | 54.0           | -24.35          | Peak     | 8.00           | 300         | Horizontal | Pass    |

### A.1.7 Test Antenna Vertical, 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   | 1330.600        | 38.81            | -17.87      | 74.0           | -35.19          | Peak     | 244.00         | 100         | Vertical | Pass    |
| 1** | 1330.600        | 28.94            | -17.87      | 54.0           | -25.06          | AV       | 244.00         | 100         | Vertical | Pass    |
| 2   | 1780.000        | 39.78            | -17.46      | 74.0           | -34.22          | Peak     | 29.00          | 100         | Vertical | Pass    |
| 2** | 1780.000        | 28.96            | -17.46      | 54.0           | -25.04          | AV       | 29.00          | 100         | Vertical | Pass    |
| 3   | 3154.600        | 44.71            | -8.39       | 74.0           | -29.29          | Peak     | 84.00          | 100         | Vertical | Pass    |
| 3** | 3154.600        | 35.59            | -8.39       | 54.0           | -18.41          | AV       | 84.00          | 100         | Vertical | Pass    |
| 4   | 6079.200        | 53.03            | -2.28       | 74.0           | -20.97          | Peak     | 249.00         | 100         | Vertical | Pass    |
| 4** | 6079.200        | 42.65            | -2.28       | 54.0           | -11.35          | AV       | 249.00         | 100         | Vertical | Pass    |
| 5   | 8629.838        | 48.97            | -3.22       | 74.0           | -25.03          | Peak     | 194.00         | 100         | Vertical | Pass    |
| 5** | 8629.838        | 38.35            | -3.22       | 54.0           | -15.65          | AV       | 194.00         | 100         | Vertical | Pass    |
| 6   | 12249.463       | 50.81            | -0.10       | 74.0           | -23.19          | Peak     | 70.00          | 100         | Vertical | Pass    |
| 6** | 12249.463       | 41.49            | -0.10       | 54.0           | -12.51          | AV       | 70.00          | 100         | Vertical | Pass    |

### A.1.8 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   | 1329.300        | 40.92            | -17.81      | 74.0           | -33.08          | Peak     | 204.00         | 100         | Horizontal | Pass    |
| 1** | 1329.300        | 32.87            | -17.81      | 54.0           | -21.13          | AV       | 204.00         | 100         | Horizontal | Pass    |
| 2   | 1997.000        | 42.33            | -16.54      | 74.0           | -31.67          | Peak     | 0.00           | 100         | Horizontal | Pass    |
| 2** | 1997.000        | 31.14            | -16.54      | 54.0           | -22.86          | AV       | 0.00           | 100         | Horizontal | Pass    |
| 3   | 3231.800        | 45.51            | -7.45       | 74.0           | -28.49          | Peak     | 0.00           | 100         | Horizontal | Pass    |
| 3** | 3231.800        | 36.05            | -7.45       | 54.0           | -17.95          | AV       | 0.00           | 100         | Horizontal | Pass    |
| 4   | 6499.200        | 52.90            | -2.11       | 74.0           | -21.10          | Peak     | 345.00         | 100         | Horizontal | Pass    |
| 4** | 6499.200        | 43.64            | -2.11       | 54.0           | -10.36          | AV       | 345.00         | 100         | Horizontal | Pass    |
| 5   | 10416.650       | 49.75            | -0.67       | 74.0           | -24.25          | Peak     | 117.00         | 100         | Horizontal | Pass    |
| 5** | 10416.650       | 40.33            | -0.67       | 54.0           | -13.67          | AV       | 117.00         | 100         | Horizontal | Pass    |
| 6   | 12250.900       | 50.56            | -0.08       | 74.0           | -23.44          | Peak     | 9.00           | 100         | Horizontal | Pass    |
| 6** | 12250.900       | 41.11            | -0.08       | 54.0           | -12.89          | AV       | 9.00           | 100         | Horizontal | Pass    |

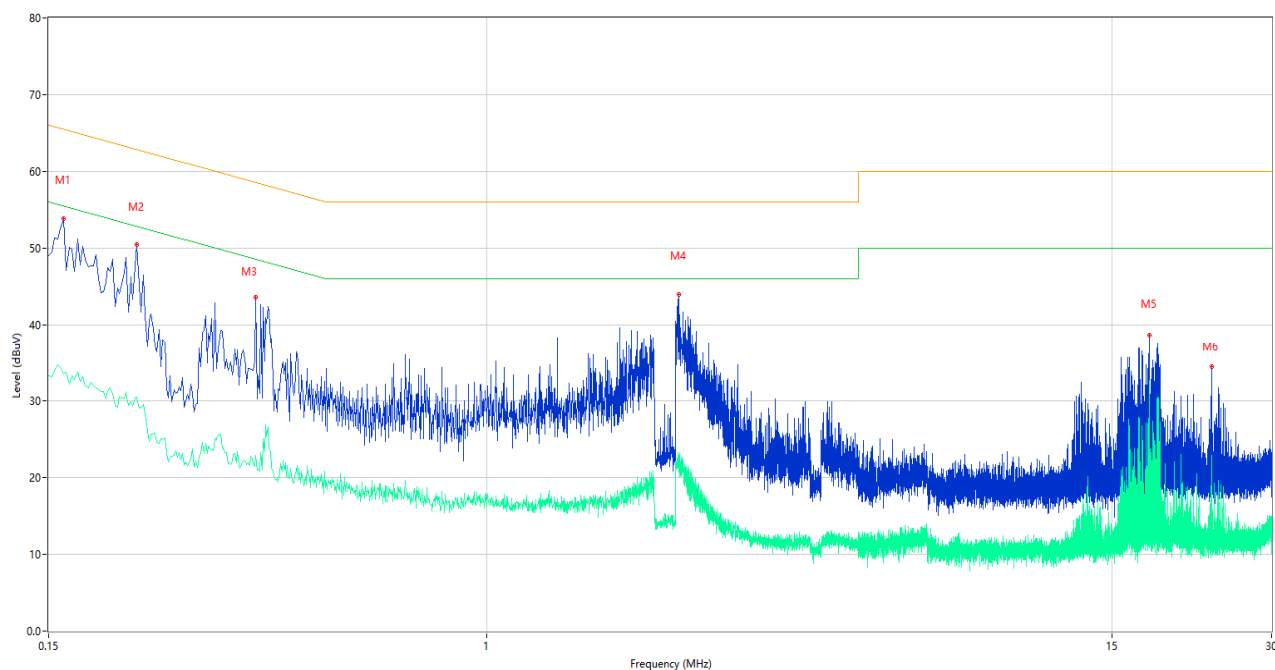
## A.2 Conducted Emission

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

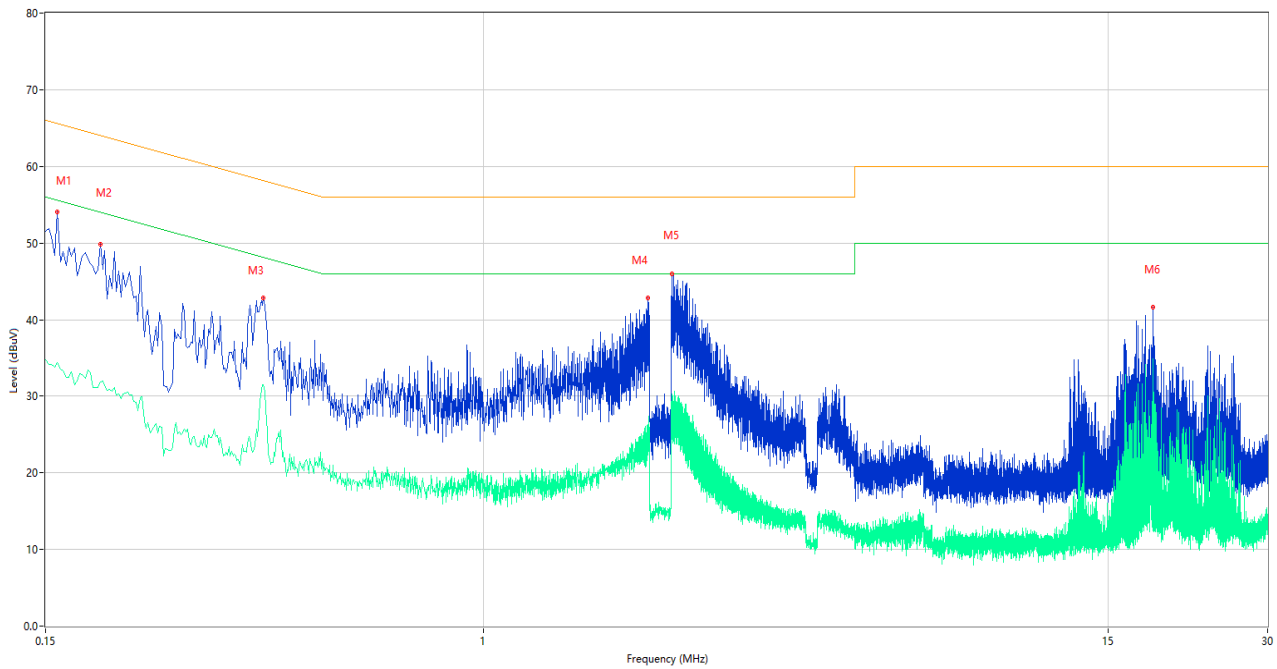
#### The Camera Test Mode

##### A.2.1 L Phase



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.156           | 51.19          | 10.07       | 65.67        | -14.48          | Peak     | L    | Pass    |
| 1** | 0.156           | 34.72          | 10.07       | 55.67        | -20.95          | AV       | L    | Pass    |
| 2   | 0.220           | 50.46          | 9.99        | 62.82        | -12.36          | Peak     | L    | Pass    |
| 2** | 0.220           | 30.49          | 9.99        | 52.82        | -22.33          | AV       | L    | Pass    |
| 3   | 0.368           | 43.61          | 10.08       | 58.55        | -14.94          | Peak     | L    | Pass    |
| 3** | 0.368           | 22.91          | 10.08       | 48.55        | -25.64          | AV       | L    | Pass    |
| 4   | 2.304           | 43.98          | 10.07       | 56.00        | -12.02          | Peak     | L    | Pass    |
| 4** | 2.304           | 22.08          | 10.07       | 46.00        | -23.92          | AV       | L    | Pass    |
| 5   | 17.694          | 38.67          | 10.18       | 60.00        | -21.33          | Peak     | L    | Pass    |
| 5** | 17.694          | 32.68          | 10.18       | 50.00        | -17.32          | AV       | L    | Pass    |
| 6   | 23.130          | 34.50          | 9.89        | 60.00        | -25.50          | Peak     | L    | Pass    |
| 6** | 23.130          | 22.87          | 9.89        | 50.00        | -27.13          | AV       | L    | Pass    |

## A.2.2 N Phase

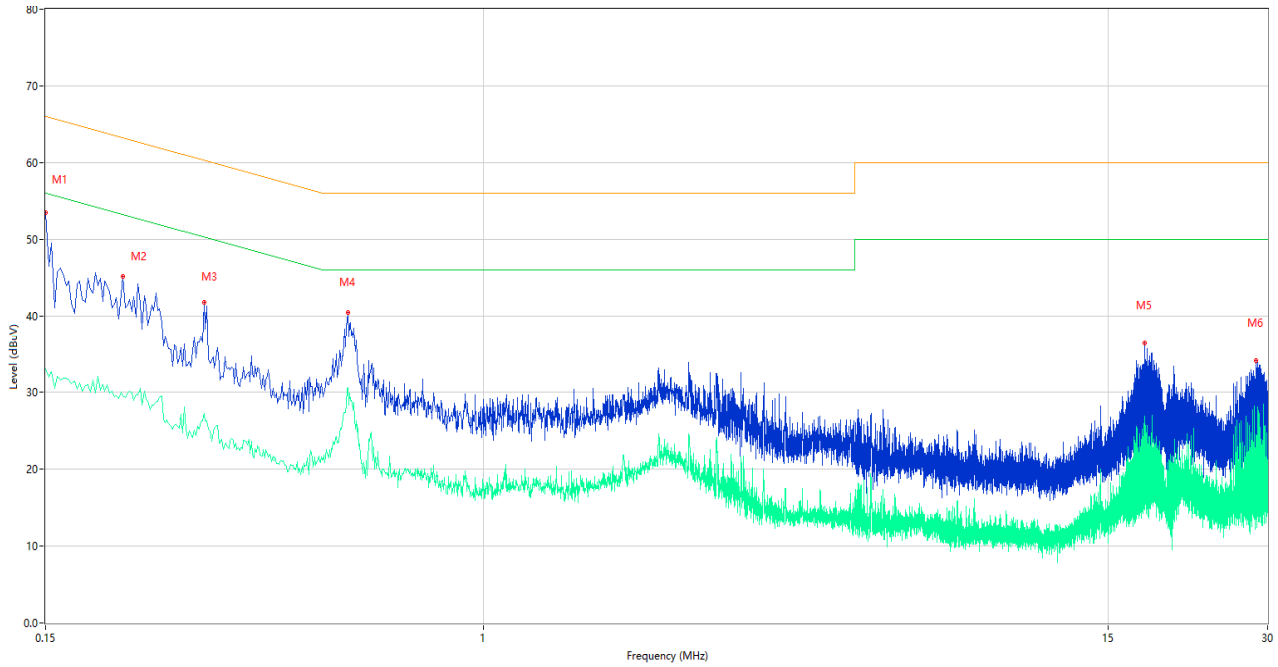


| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.150           | 51.57          | 9.96        | 66.00        | -14.43          | Peak     | N    | Pass    |
| 1** | 0.150           | 34.65          | 9.96        | 56.00        | -21.35          | AV       | N    | Pass    |
| 2   | 0.190           | 49.84          | 10.00       | 64.04        | -14.20          | Peak     | N    | Pass    |
| 2** | 0.190           | 31.86          | 10.00       | 54.04        | -22.18          | AV       | N    | Pass    |
| 3   | 0.386           | 42.91          | 10.04       | 58.15        | -15.24          | Peak     | N    | Pass    |
| 3** | 0.386           | 31.46          | 10.04       | 48.15        | -16.69          | AV       | N    | Pass    |
| 4   | 2.044           | 42.92          | 10.04       | 56.00        | -13.08          | Peak     | N    | Pass    |
| 4** | 2.044           | 26.23          | 10.04       | 46.00        | -19.77          | AV       | N    | Pass    |
| 5   | 2.268           | 46.07          | 10.07       | 56.00        | -9.93           | Peak     | N    | Pass    |
| 5** | 2.268           | 30.27          | 10.07       | 46.00        | -15.73          | AV       | N    | Pass    |
| 6   | 18.244          | 41.65          | 10.16       | 60.00        | -18.35          | Peak     | N    | Pass    |
| 6** | 18.244          | 34.80          | 10.16       | 50.00        | -15.20          | AV       | N    | Pass    |

## Test Data and Plots

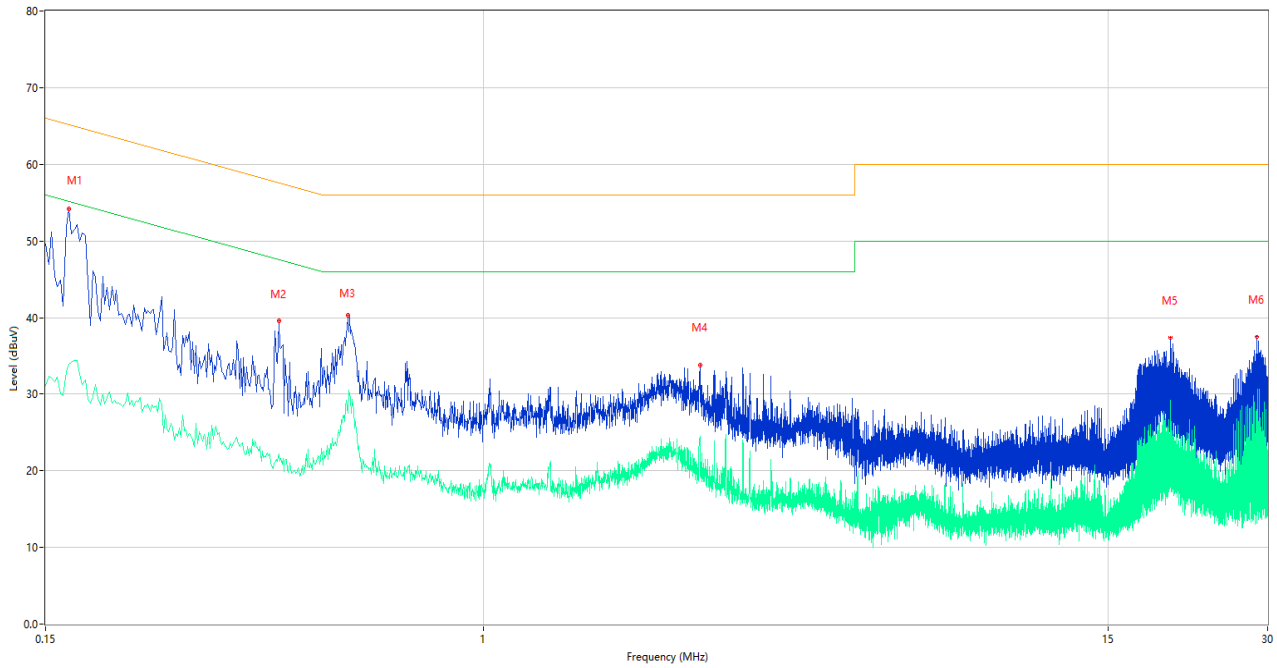
### The USB Test Mode

#### A.2.3 L Phase



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.150           | 53.50          | 9.96        | 66.00        | -12.50          | Peak     | L    | Pass    |
| 1** | 0.150           | 33.05          | 9.96        | 56.00        | -22.95          | AV       | L    | Pass    |
| 2   | 0.210           | 45.13          | 9.90        | 63.21        | -18.08          | Peak     | L    | Pass    |
| 2** | 0.210           | 29.51          | 9.90        | 53.21        | -23.70          | AV       | L    | Pass    |
| 3   | 0.298           | 41.84          | 10.01       | 60.30        | -18.46          | Peak     | L    | Pass    |
| 3** | 0.298           | 27.28          | 10.01       | 50.30        | -23.02          | AV       | L    | Pass    |
| 4   | 0.556           | 40.51          | 9.98        | 56.00        | -15.49          | Peak     | L    | Pass    |
| 4** | 0.556           | 30.62          | 9.98        | 46.00        | -15.38          | AV       | L    | Pass    |
| 5   | 17.616          | 36.43          | 10.18       | 60.00        | -23.57          | Peak     | L    | Pass    |
| 5** | 17.616          | 26.90          | 10.18       | 50.00        | -23.10          | AV       | L    | Pass    |
| 6   | 28.520          | 34.09          | 10.06       | 60.00        | -25.91          | Peak     | L    | Pass    |
| 6** | 28.520          | 24.40          | 10.06       | 50.00        | -25.60          | AV       | L    | Pass    |

## A.2.4 N Phase



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.160           | 44.91          | 9.98        | 65.46        | -20.55          | Peak     | N    | Pass    |
| 1** | 0.160           | 29.96          | 9.98        | 55.46        | -25.50          | AV       | N    | Pass    |
| 2   | 0.412           | 39.66          | 9.97        | 57.61        | -17.95          | Peak     | N    | Pass    |
| 2** | 0.412           | 22.22          | 9.97        | 47.61        | -25.39          | AV       | N    | Pass    |
| 3   | 0.556           | 40.41          | 9.98        | 56.00        | -15.59          | Peak     | N    | Pass    |
| 3** | 0.556           | 27.50          | 9.98        | 46.00        | -18.50          | AV       | N    | Pass    |
| 4   | 2.560           | 33.79          | 10.04       | 56.00        | -22.21          | Peak     | N    | Pass    |
| 4** | 2.560           | 23.76          | 10.04       | 46.00        | -22.24          | AV       | N    | Pass    |
| 5   | 19.688          | 37.29          | 10.08       | 60.00        | -22.71          | Peak     | N    | Pass    |
| 5** | 19.688          | 25.71          | 10.08       | 50.00        | -24.29          | AV       | N    | Pass    |
| 6   | 28.612          | 37.46          | 10.07       | 60.00        | -22.54          | Peak     | N    | Pass    |
| 6** | 28.612          | 25.48          | 10.07       | 50.00        | -24.52          | AV       | N    | Pass    |

## **ANNEX B TEST SETUP PHOTOS**

Please refer the document “BL-SZ2150566-AE.PDF”.

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document “BL-SZ2150566-AW.PDF”.

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document “BL-SZ2150566-AI.PDF”.

--END OF REPORT--