

# TEST REPORT

**Applicant:** CommuniTake Technologies Ltd.  
**Address:** Yokneam Star Building, High-Tech Park, POB 344,  
Yokneam, Israel 2069205  
**Equipment Type:** 4G Smart phone  
**Model Name:** CTGED01  
**Brand Name:** CommuniTake  
**FCC ID:** 2AUHC-CTGED01  
**Test Standard:** 47 CFR Part 15 Subpart B  
**Test Date:** Jan. 12, 2022 - Mar. 10, 2022  
**Date of Issue:** Mar. 21, 2022

## ISSUED BY:

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### Revision History

| Version        | Issue Date           | Revisions Content    |
|----------------|----------------------|----------------------|
| <u>Rev. 01</u> | <u>Mar. 21, 2022</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 |

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| Applicant | CommuniTake Technologies Ltd.                                              |
| Address   | Yokneam Star Building, High-Tech Park, POB 344, Yokneam, Israel<br>2069205 |

### 2.2 Manufacturer Information

|              |                                                                            |
|--------------|----------------------------------------------------------------------------|
| Manufacturer | CommuniTake Technologies Ltd.                                              |
| Address      | Yokneam Star Building, High-Tech Park, POB 344, Yokneam, Israel<br>2069205 |

### 2.3 Factory Information

|         |                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------|
| Factory | Shenzhen Joyhong Technology Co., Ltd.                                                           |
| Address | 4/F., Building A2, Zhengfeng Industrial Park, Fengtang Road,<br>Fuyong, Bao'an, Shenzhen, China |

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

|                                              |                |
|----------------------------------------------|----------------|
| EUT Name                                     | 4G Smart phone |
| Model Name Under Test                        | CTGED01        |
| Series Model Name                            | N/A            |
| Description of Model<br>name differentiation | N/A            |
| Hardware Version                             | N/A            |
| Software Version                             | N/A            |
| Dimensions (Approx.)                         | N/A            |
| Weight (Approx.)                             | N/A            |

## 2.5 Ancillary Equipment

|                                      |                             |                           |
|--------------------------------------|-----------------------------|---------------------------|
| Ancillary Equipment 1                | Li ion Rechargeable Battery |                           |
|                                      | Brand Name                  | N/A                       |
|                                      | Model No.                   | CTGED01                   |
|                                      | Serial No.                  | N/A                       |
|                                      | Capacity                    | 2500mAh                   |
|                                      | Charging Voltage            | 4.354 V/9.5Wh             |
|                                      | Nominal Voltage             | 3.8 V                     |
| Ancillary Equipment 2                | Adapter                     |                           |
|                                      | Brand Name                  | N/A                       |
|                                      | Model No.                   | SR-C50501000U1 (USA Plug) |
|                                      | Serial No.                  | N/A                       |
|                                      | Rated Input                 | 100-240VAC 50/60Hz 0.2A   |
|                                      | Rated Output                | 5 V=1000Ma                |
| Ancillary Equipment 3                | USB Cable                   |                           |
|                                      | Model No.                   | N/A                       |
|                                      | Length (Approx.)            | 1.0m                      |
| Note: Letter in ( ) means plug type. |                             |                           |

## 2.6 Technical Information

|                                   |                                                                                                                                                                                         |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Network and Wireless connectivity | 2G Network GSM/GPRS/EGPRS 850/1900 MHz<br>3G Network WCDMA/HSDPA/HSUPA Band 2/4/5<br>4G Network FDD LTE Band 2/4/5/7/12<br>Bluetooth 4.2 (BR+EDR+BLE)<br>WIFI 802.11b, 802.11g, 802.11n |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The requirement for the following technical information of the EUT was tested in this report:

|                                |     |
|--------------------------------|-----|
| The Highest Speed of Processor | N/A |
|--------------------------------|-----|

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

| No. | Identity                 | Document Title                                                                                                                                                      |
|-----|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 15 Subpart B | Unintentional Radiators                                                                                                                                             |
| 2   | 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 | Test Verdict | Result     |
|-----|------------------------------|----------|--------------|------------|
| 1   | Radiated Emission            | 15.109   | Pass         | Annex A .1 |
| 2   | Conducted Emission, AC Ports | 15.107   | Pass         | Annex A .2 |

Note: Compared with the EUT of test report BL-SZ2010032-401, the changes of the EUT of this report as below:

1. LCD display change.
2. Disabled LTE Band 17 by software control.
3. Turn off the Voice function.

Therefore, delete all data of GSM and B17, add GPRS related test data, all items were retested in this report, but only the worst data was shown in this report.

#### 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)    | 3.22 dB |
| Radiated emissions (30 MHz-1 GHz)-10m | 4.80 dB |
| Radiated emissions (30 MHz-1 GHz)-3m  | 4.76 dB |
| Radiated emissions (1 GHz-18 GHz)-3m  | 4.88 dB |

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments, Test Date and Test Engineer

| Test items         | Voltage                                          | Temperature | Relative Humidity | Ambient Pressure | Test Date     | Test Engineer |
|--------------------|--------------------------------------------------|-------------|-------------------|------------------|---------------|---------------|
| Radiated Emission  | AC 120V/60Hz<br>DC 3.8V(battery)                 | 21.5℃       | 49%               | 101kPa           | Mar. 10, 2022 | Jiang Pan     |
| Conducted Emission | AC 230V/50Hz<br>AC 120V/60Hz<br>DC 3.8V(battery) | 21℃         | 42%               | 101kPa           | Feb. 23, 2022 | Ye Guangqi    |

### 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      | 2021.10.10 | 2022.10.09 | <input type="checkbox"/> |
| Amplifier (30-1GHz)                                     | COM-MV                  | ZT30-1000M        | B2018054558 | 2021.10.10 | 2022.10.09 | <input type="checkbox"/> |
| Test Antenna-Bi-Log                                     | SCHWARZBECK             | VULB 9163         | 9163-624    | 2019.07.02 | 2022.07.01 | <input type="checkbox"/> |
| Anechoic Chamber                                        | EMC Electronic Co., Ltd | 20.10*11.60*7.35m | N/A         | 2021.08.15 | 2024.08.14 | <input type="checkbox"/> |
| Description                                             | Manufacturer            | Name              |             | Version    |            | Use                      |
| Test Software                                           | BALUN                   | BL410-E           |             | V19.918    |            | <input type="checkbox"/> |

| Radiated Emission Test For Frequency Below 1 GHz (3m) |              |            |             |            |            |                                     |
|-------------------------------------------------------|--------------|------------|-------------|------------|------------|-------------------------------------|
| Description                                           | Manufacturer | Model      | Serial No.  | Cal. Date  | Cal. Due   | Use                                 |
| EMI Receiver                                          | KEYSIGHT     | N9038A     | MY55330120  | 2021.10.20 | 2022.10.19 | <input checked="" type="checkbox"/> |
| Amplifier (30-1GHz)                                   | COM-MV       | ZT30-1000M | B2017119081 | 2021.10.20 | 2022.10.19 | <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         | 2021.09.04 | 2024.09.03 | <input checked="" type="checkbox"/> |
| Description                                           | Manufacturer | Name       |             | Version    |            | Use                                 |
| Test Software                                         | BALUN        | BL410-E    |             | V19.918    |            | <input checked="" type="checkbox"/> |

| Radiated Emission Test For Frequency Above 1 GHz (3m) |                    |                 |            |            |            |                                     |
|-------------------------------------------------------|--------------------|-----------------|------------|------------|------------|-------------------------------------|
| Description                                           | Manufacturer       | Model           | Serial No. | Cal. Date  | Cal. Due   | Use                                 |
| EMI Receiver                                          | Agilent            | N9038A          | MY55330120 | 2021.10.20 | 2022.10.19 | <input checked="" type="checkbox"/> |
| EMI Receiver                                          | ROHDE & SCHWARZ    | FSV40           | 101544     | 2022.01.04 | 2023.01.03 | <input checked="" type="checkbox"/> |
| Amplifier (1-12GHz)                                   | Advanced Microwave | WLA652A         | 1740103    | 2021.10.20 | 2022.10.19 | <input checked="" type="checkbox"/> |
| Amplifier (0.8-21GHz)                                 | Mini-Circuits      | ZVA-213-S+      | 225321316  | 2021.10.20 | 2022.10.19 | <input checked="" type="checkbox"/> |
| Amplifier (18-40GHz)                                  | COM-MV             | KA_LNA18-40G-01 | 18050001   | 2021.10.20 | 2022.10.19 | <input checked="" type="checkbox"/> |
| Test Antenna-Horn                                     | SCHWARZBECK        | BBHA 9120D      | 1917       | 2019.07.02 | 2022.07.01 | <input checked="" type="checkbox"/> |
| Test Antenna-Horn                                     | A-INFOMW           | LB-180400KF     | J211060273 | 2021.07.02 | 2024.07.01 | <input checked="" type="checkbox"/> |
| Anechoic Chamber                                      | YIHENG             | 9m*6m*6m        | N/A        | 2021.09.04 | 2024.09.03 | <input checked="" type="checkbox"/> |
| Description                                           | Manufacturer       | Name            |            | Version    |            | Use                                 |
| 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         | MY57110309 | 2021.10.10 | 2022.10.09 | <input checked="" type="checkbox"/> |
| LISN                       | SCHWARZBECK                | NSLK 8127      | 8127-687   | 2021.06.08 | 2022.06.07 | <input checked="" type="checkbox"/> |
| Shielded Enclosure         | YiHeng Electronic Co., Ltd | 3.5m*3.1m*2.8m | N/A        | 2022.02.19 | 2025.02.18 | <input checked="" type="checkbox"/> |
| Description                | Manufacturer               | Name           |            | Version    |            | Use                                 |
| Test Software              | BALUN                      | BL410-E        |            | V19.918    |            | <input checked="" type="checkbox"/> |

### 4.3 Test Enclosure list

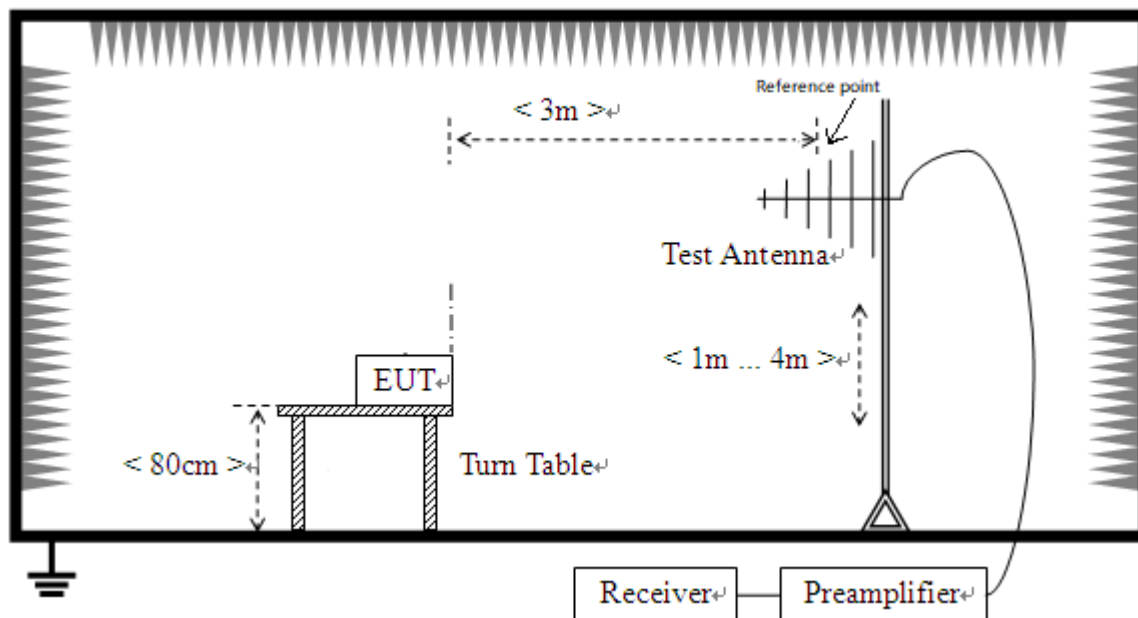
| Description                      | Manufacturer | Model  | Serial No. | Length | Description         | Use                                 |
|----------------------------------|--------------|--------|------------|--------|---------------------|-------------------------------------|
| Wireless Communications Test Set | R&S          | CMW500 | 127801     | N/A    | Cal. Due 2023.01.03 | <input checked="" type="checkbox"/> |
| Laptop                           | HONOR        | 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"/> |
| Headset                          | 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 EGPRS 850 MHz RX Test Mode</u><br>EGPRS 850 MHz RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset |
| TC02                         | <u>The WCDMA Band 5 RX Test Mode</u><br>WCDMA Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset   |
| TC03                         | <u>The FDD LTE Band 5 RX Test Mode</u><br>LTE Band 5 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset   |
| TC04                         | <u>The FDD LTE Band 12 RX Test Mode</u><br>LTE Band 12 RX + EUT +Adapter + USB Cable + Battery + TF Card + Headset |
| TC05                         | <u>The Camera Test Mode</u><br>EUT + Adapter + USB Cable + Battery + TF Card + Headset                             |
| TC06                         | <u>The Video Play Test Mode</u><br>EUT + Adapter + USB Cable + Battery + TF Card + Headset                         |
| TC07                         | <u>The USB Test Mode</u><br>EUT + USB Cable + Battery + Laptop + TF Card + Headset                                 |

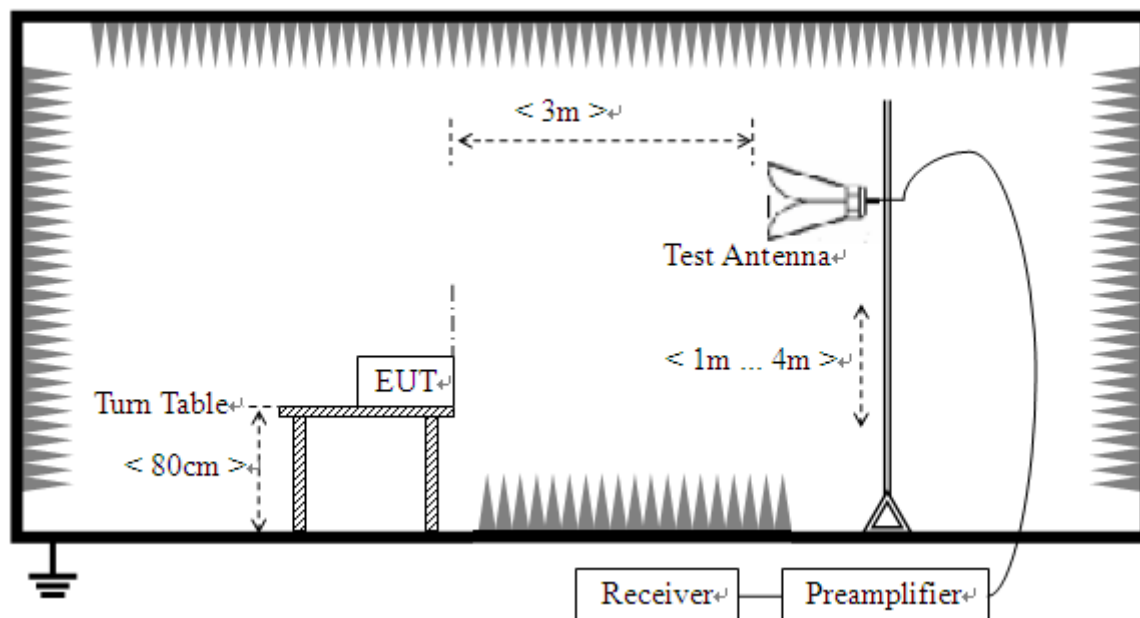
## 4.5 Test Setups

### Test Setup 1

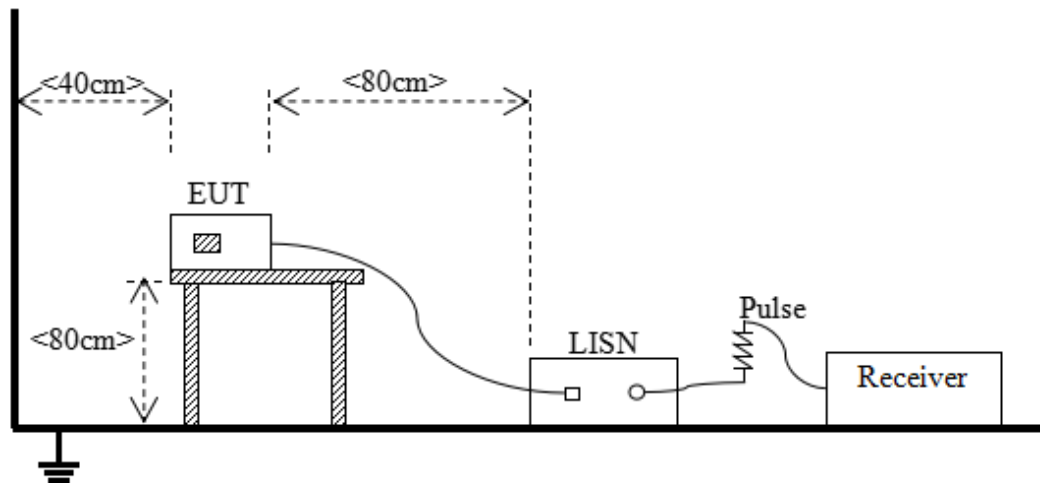


(For Radiated Emission Test (30 MHz-1 GHz))

### 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 Setup         | Test Setup 1&2            |
|                                                                                                                                                                                                                            | Test Configuration | TC01~TC07 <sup>Note</sup> |
| Conducted Emission,<br>AC Ports                                                                                                                                                                                            | Test Setup         | Test Setup 3              |
|                                                                                                                                                                                                                            | Test Configuration | TC01~TC07 <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 $\mu\text{V/m}$ ) =  $20 \cdot \log [\text{Field Strength } (\mu\text{V/m})]$ .
- 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.

The measurement frequency range is from 30 MHz to the 5th harmonic of the maximum frequency of the EUT internal source. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for  $f \geq 1 \text{ GHz}$ , 100 kHz for  $f < 1 \text{ GHz}$

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak for  $f < 1 \text{ GHz}$ , peak & RMS Average for  $f \geq 1 \text{ GHz}$

Trace = max hold

#### 5.1.1.4 Test Result

Please refer to ANNEX A.1.

#### NOTE:

1. Results (dBuV/m) = Reading (dBuV/m) + 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<br>(dB $\mu$ V) | Average<br>(dB $\mu$ V) |
| 0.15 - 0.50           | 79                         | 66                      |
| 0.50 - 30             | 73                         | 60                      |

| Frequency range (MHz) | Class B                    |                         |
|-----------------------|----------------------------|-------------------------|
|                       | Quasi-peak<br>(dB $\mu$ V) | Average<br>(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.

### 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  $\Omega$ /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.

Use the following spectrum analyzer settings:

RBW = 9 KHz

VBW  $\geq$  RBW

Sweep = 10ms

Detector function = peak & Average

Trace = max hold

#### 5.1.2.4 Test Result

Please refer to ANNEX A.2.

NOTE:

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

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.

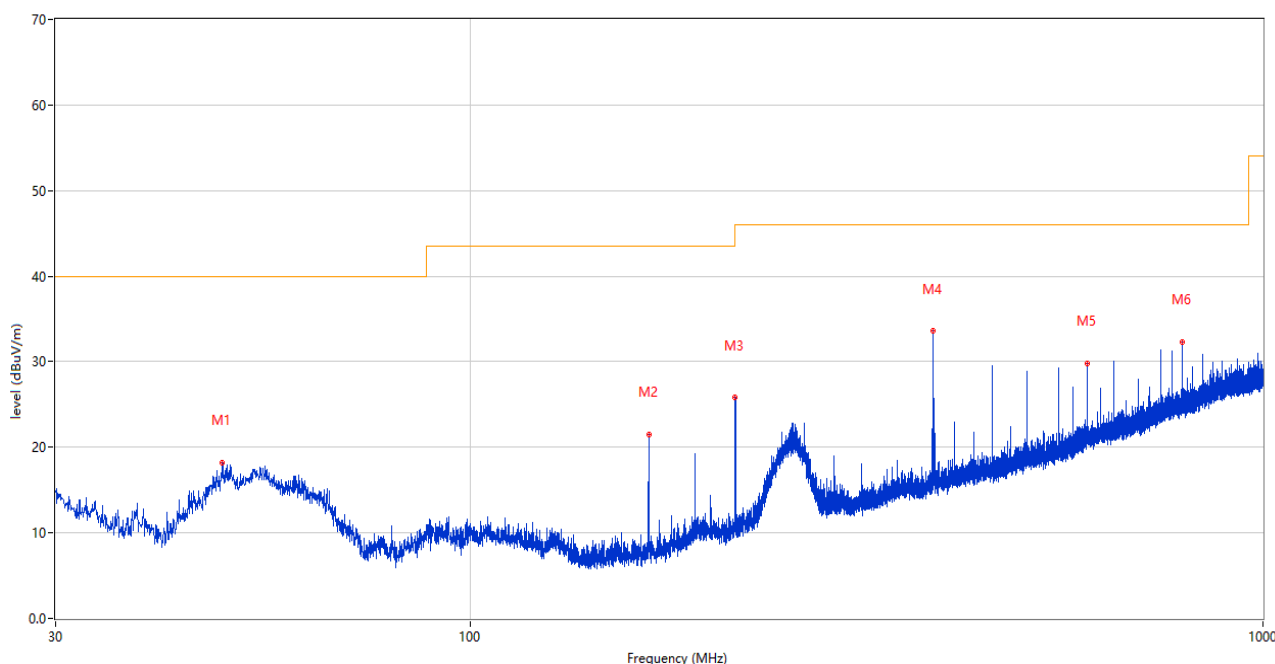
Note 2: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The Radiated Emission from 18G-40G is noise only, do not show on the report.

#### Test Data and Plots

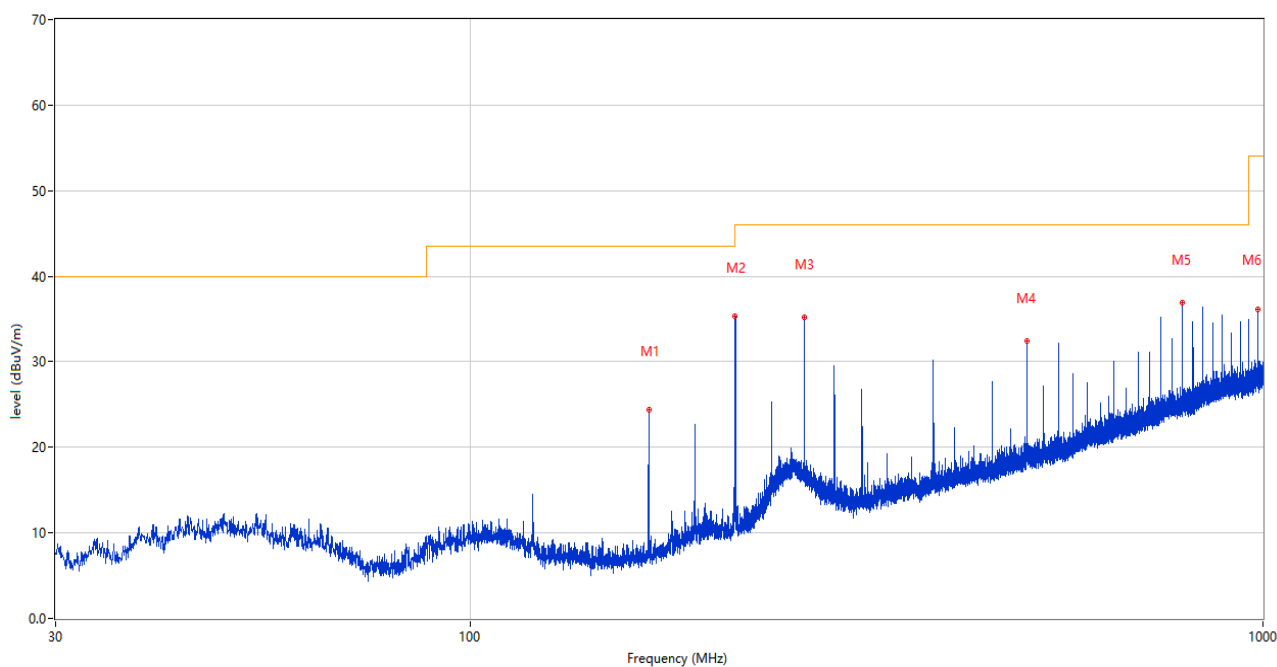
#### The Camera Test Mode

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



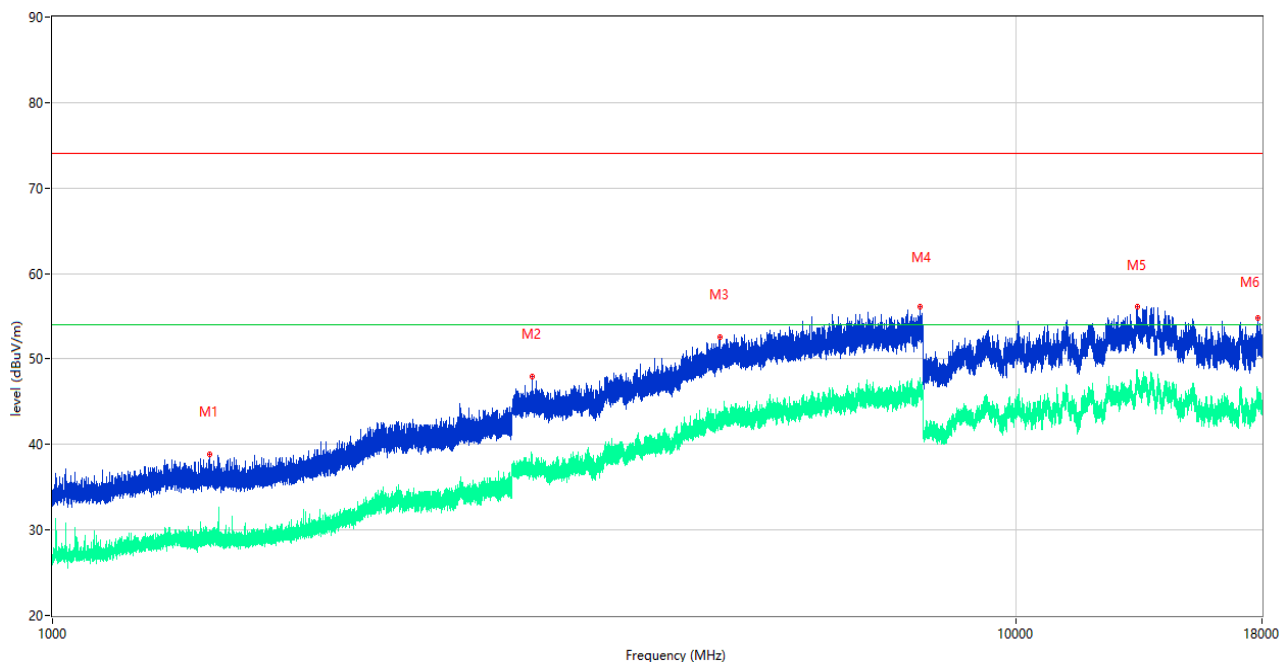
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 48.721          | 18.23            | -25.36      | 40.0           | -21.77          | Peak     | 2.00           | 100         | Vertical | Pass    |
| 2   | 168.031         | 21.43            | -29.22      | 43.5           | -22.07          | Peak     | 312.00         | 100         | Vertical | Pass    |
| 3   | 215.998         | 25.88            | -26.41      | 43.5           | -17.62          | Peak     | 359.00         | 100         | Vertical | Pass    |
| 4   | 384.002         | 33.55            | -21.41      | 46.0           | -12.45          | Peak     | 348.00         | 200         | Vertical | Pass    |
| 5   | 600.020         | 29.84            | -15.80      | 46.0           | -16.16          | Peak     | 273.00         | 100         | Vertical | Pass    |
| 6   | 791.984         | 32.28            | -12.08      | 46.0           | -13.72          | Peak     | 180.00         | 100         | Vertical | Pass    |

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



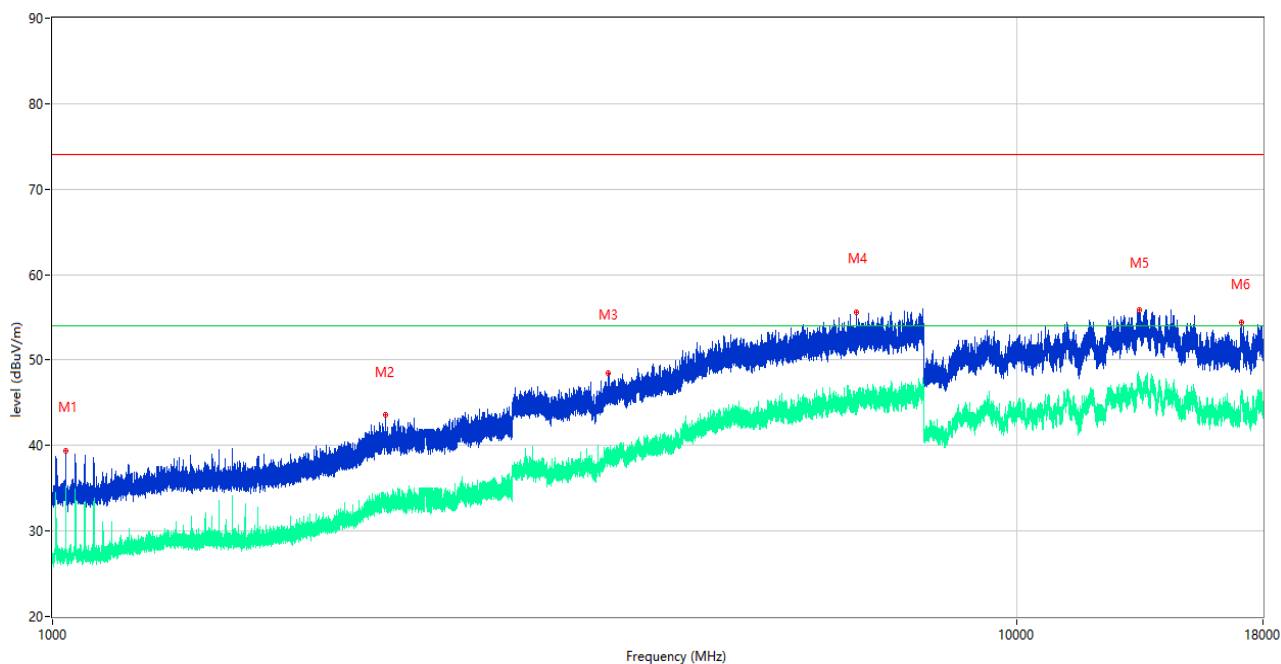
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 168.031         | 24.35            | -29.22      | 43.5           | -19.15          | Peak     | 237.00         | 200         | Horizontal | Pass    |
| 2   | 215.998         | 35.39            | -26.41      | 43.5           | -8.11           | Peak     | 256.00         | 200         | Horizontal | Pass    |
| 3   | 264.013         | 35.21            | -24.51      | 46.0           | -10.79          | Peak     | 80.00          | 100         | Horizontal | Pass    |
| 4   | 503.990         | 32.37            | -18.59      | 46.0           | -13.63          | Peak     | 75.00          | 200         | Horizontal | Pass    |
| 5   | 792.032         | 36.95            | -12.08      | 46.0           | -9.05           | Peak     | 39.00          | 100         | Horizontal | Pass    |
| 6   | 983.995         | 36.11            | -8.67       | 54.0           | -17.89          | Peak     | 28.00          | 100         | Horizontal | Pass    |

## A.1.3 Test Antenna Vertical, 1 GHz – 18 GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 1455.900        | 38.84            | -16.53      | 74.0           | -35.16          | Peak     | 256.00         | 100         | Vertical | Pass    |
| 1** | 1455.900        | 28.74            | -16.53      | 54.0           | -25.26          | AV       | 256.00         | 100         | Vertical | Pass    |
| 2   | 3143.750        | 47.92            | -6.38       | 74.0           | -26.08          | Peak     | 96.00          | 100         | Vertical | Pass    |
| 2** | 3143.750        | 38.33            | -6.38       | 54.0           | -15.67          | AV       | 96.00          | 100         | Vertical | Pass    |
| 3   | 4927.000        | 52.54            | 0.77        | 74.0           | -21.46          | Peak     | 109.00         | 100         | Vertical | Pass    |
| 3** | 4927.000        | 42.94            | 0.77        | 54.0           | -11.06          | AV       | 109.00         | 100         | Vertical | Pass    |
| 4   | 7953.500        | 56.17            | 2.98        | 74.0           | -17.83          | Peak     | 269.00         | 100         | Vertical | Pass    |
| 4** | 7953.500        | 46.52            | 2.98        | 54.0           | -7.48           | AV       | 269.00         | 100         | Vertical | Pass    |
| 5   | 13360.500       | 56.15            | 5.16        | 74.0           | -17.85          | Peak     | 1.00           | 100         | Vertical | Pass    |
| 5** | 13360.500       | 47.79            | 5.16        | 54.0           | -6.21           | AV       | 1.00           | 100         | Vertical | Pass    |
| 6   | 17820.500       | 54.74            | 2.20        | 74.0           | -19.26          | Peak     | 328.00         | 100         | Vertical | Pass    |
| 6** | 17820.500       | 45.79            | 2.20        | 54.0           | -8.21           | AV       | 328.00         | 100         | Vertical | Pass    |

## A.1.4 Test Antenna Horizontal, 1 GHz – 18 GHz

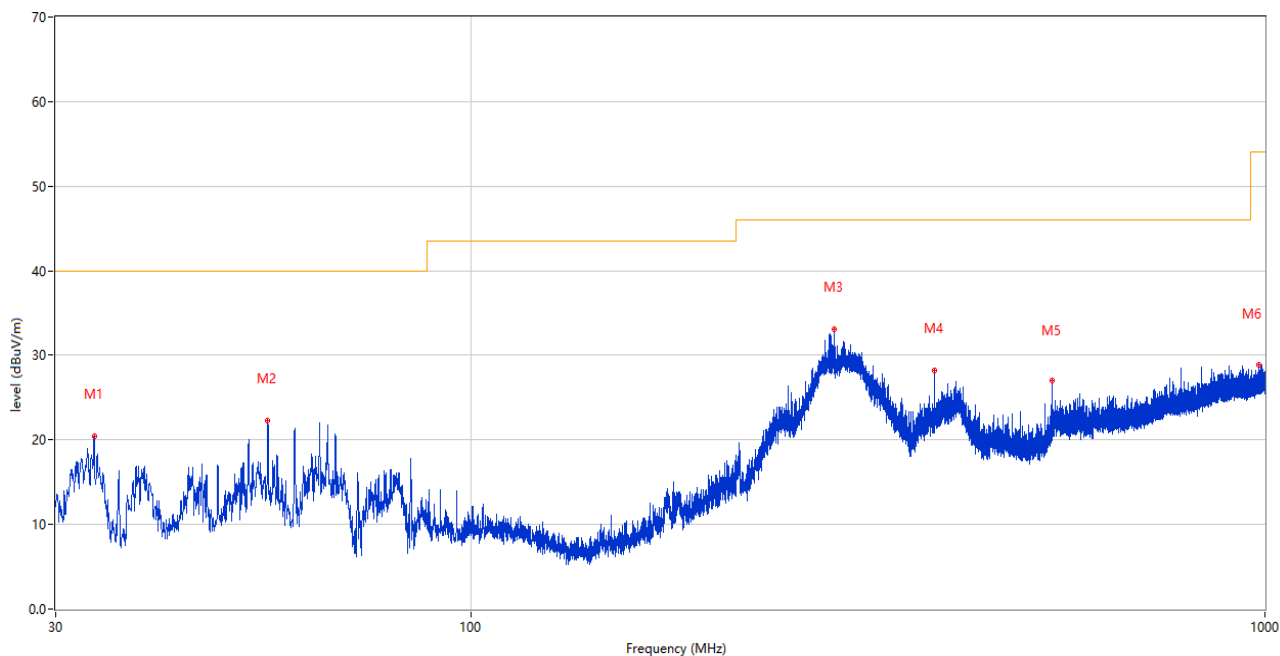


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 1032.000        | 39.34            | -17.76      | 74.0           | -34.66          | Peak     | 139.00         | 100         | Horizontal | Pass    |
| 1** | 1032.000        | 34.89            | -17.76      | 54.0           | -19.11          | AV       | 139.00         | 100         | Horizontal | Pass    |
| 2   | 2215.600        | 43.56            | -11.96      | 74.0           | -30.44          | Peak     | 103.00         | 100         | Horizontal | Pass    |
| 2** | 2215.600        | 33.39            | -11.96      | 54.0           | -20.61          | AV       | 103.00         | 100         | Horizontal | Pass    |
| 3   | 3770.500        | 48.48            | -3.00       | 74.0           | -25.52          | Peak     | 167.00         | 100         | Horizontal | Pass    |
| 3** | 3770.500        | 38.81            | -3.00       | 54.0           | -15.19          | AV       | 167.00         | 100         | Horizontal | Pass    |
| 4   | 6824.750        | 55.62            | 1.33        | 74.0           | -18.38          | Peak     | 217.00         | 100         | Horizontal | Pass    |
| 4** | 6824.750        | 44.50            | 1.33        | 54.0           | -9.50           | AV       | 217.00         | 100         | Horizontal | Pass    |
| 5   | 13385.000       | 55.80            | 5.00        | 74.0           | -18.20          | Peak     | 325.00         | 100         | Horizontal | Pass    |
| 5** | 13385.000       | 47.15            | 5.00        | 54.0           | -6.85           | AV       | 325.00         | 100         | Horizontal | Pass    |
| 6   | 17095.500       | 54.43            | 3.58        | 74.0           | -19.57          | Peak     | 142.00         | 100         | Horizontal | Pass    |
| 6** | 17095.500       | 45.77            | 3.58        | 54.0           | -8.23           | AV       | 142.00         | 100         | Horizontal | Pass    |

## Test Data and Plots

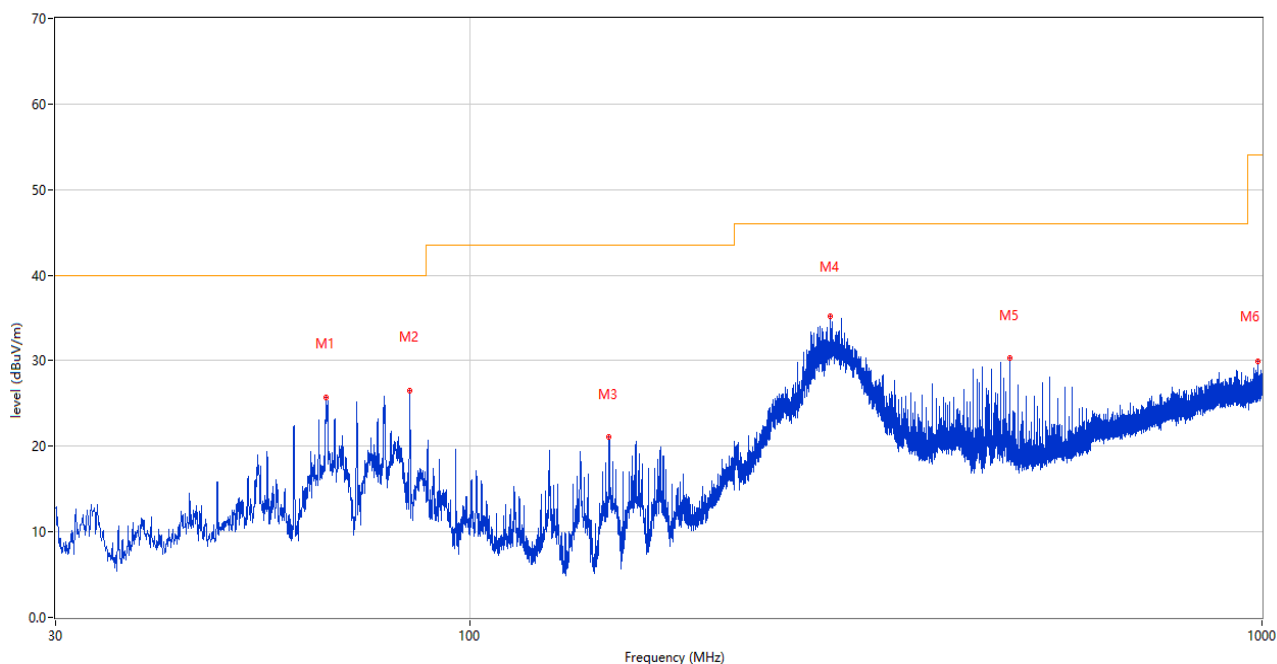
### The USB Test Mode

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



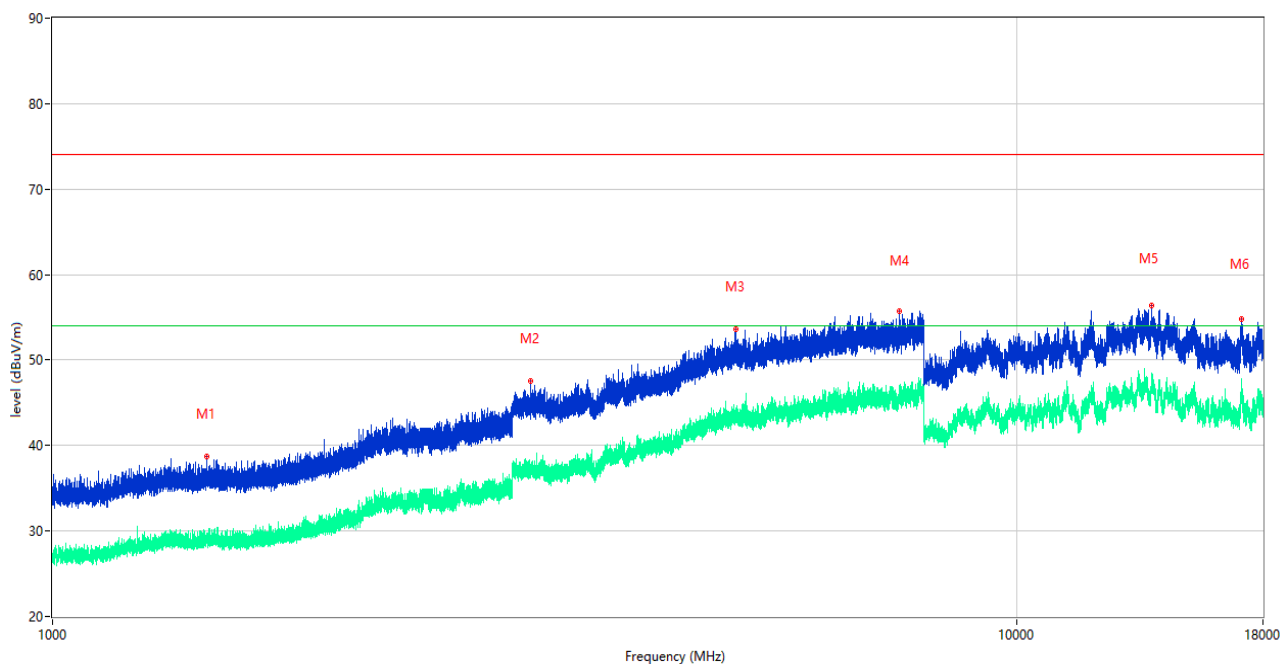
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 33.541          | 20.46            | -28.86      | 40.0           | -19.54          | Peak     | 54.00          | 100         | Vertical | Pass    |
| 2   | 55.511          | 22.28            | -25.95      | 40.0           | -17.72          | Peak     | 73.00          | 100         | Vertical | Pass    |
| 3   | 287.050         | 33.12            | -23.94      | 46.0           | -12.88          | Peak     | 15.00          | 200         | Vertical | Pass    |
| 4   | 384.002         | 28.16            | -21.41      | 46.0           | -17.84          | Peak     | 0.00           | 200         | Vertical | Pass    |
| 5   | 540.026         | 27.07            | -17.69      | 46.0           | -18.93          | Peak     | 354.00         | 100         | Vertical | Pass    |
| 6   | 981.231         | 28.90            | -8.67       | 54.0           | -25.10          | Peak     | 0.00           | 200         | Vertical | Pass    |

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



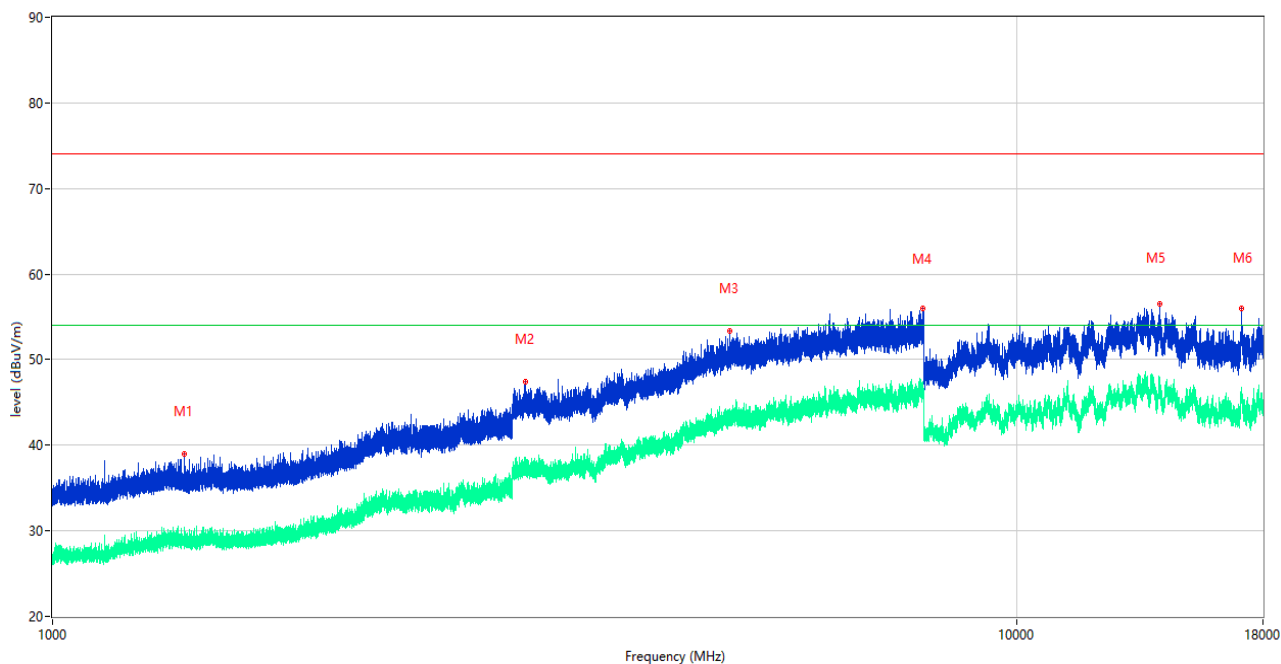
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 65.890          | 25.67            | -27.77      | 40.0           | -14.33          | Peak     | 148.00         | 200         | Horizontal | Pass    |
| 2   | 84.029          | 26.55            | -30.13      | 40.0           | -13.45          | Peak     | 146.00         | 200         | Horizontal | Pass    |
| 3   | 149.844         | 21.12            | -30.05      | 43.5           | -22.38          | Peak     | 0.00           | 200         | Horizontal | Pass    |
| 4   | 285.110         | 35.20            | -24.00      | 46.0           | -10.80          | Peak     | 71.00          | 100         | Horizontal | Pass    |
| 5   | 480.031         | 30.37            | -19.19      | 46.0           | -15.63          | Peak     | 146.00         | 200         | Horizontal | Pass    |
| 6   | 989.039         | 29.97            | -8.55       | 54.0           | -24.03          | Peak     | 0.00           | 200         | Horizontal | Pass    |

## A.1.7 Test Antenna Vertical, 1 GHz – 18 GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna  | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|----------|---------|
| 1   | 1446.400        | 38.68            | -16.59      | 74.0           | -35.32          | Peak     | 44.00          | 100         | Vertical | Pass    |
| 1** | 1446.400        | 29.74            | -16.59      | 54.0           | -24.26          | AV       | 44.00          | 100         | Vertical | Pass    |
| 2   | 3135.000        | 47.61            | -5.50       | 74.0           | -26.39          | Peak     | 277.00         | 100         | Vertical | Pass    |
| 2** | 3135.000        | 37.82            | -5.50       | 54.0           | -16.18          | AV       | 277.00         | 100         | Vertical | Pass    |
| 3   | 5114.500        | 53.65            | 0.15        | 74.0           | -20.35          | Peak     | 216.00         | 100         | Vertical | Pass    |
| 3** | 5114.500        | 43.20            | 0.15        | 54.0           | -10.80          | AV       | 216.00         | 100         | Vertical | Pass    |
| 4   | 7560.500        | 55.71            | 2.74        | 74.0           | -18.29          | Peak     | 253.00         | 100         | Vertical | Pass    |
| 4** | 7560.500        | 45.65            | 2.74        | 54.0           | -8.35           | AV       | 253.00         | 100         | Vertical | Pass    |
| 5   | 13799.999       | 56.41            | 5.81        | 74.0           | -17.59          | Peak     | 0.00           | 100         | Vertical | Pass    |
| 5** | 13799.999       | 47.54            | 5.81        | 54.0           | -6.46           | AV       | 0.00           | 100         | Vertical | Pass    |
| 6   | 17099.000       | 54.82            | 3.71        | 74.0           | -19.18          | Peak     | 310.00         | 100         | Vertical | Pass    |
| 6** | 17099.000       | 47.24            | 3.71        | 54.0           | -6.76           | AV       | 310.00         | 100         | Vertical | Pass    |

## A.1.8 Test Antenna Horizontal, 1 GHz – 18 GHz



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (Degree) | Height (cm) | Antenna    | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|----------------|-------------|------------|---------|
| 1   | 1370.700        | 38.92            | -16.82      | 74.0           | -35.08          | Peak     | 334.00         | 100         | Horizontal | Pass    |
| 1** | 1370.700        | 28.07            | -16.82      | 54.0           | -25.93          | AV       | 334.00         | 100         | Horizontal | Pass    |
| 2   | 3095.250        | 47.40            | -6.00       | 74.0           | -26.60          | Peak     | 60.00          | 100         | Horizontal | Pass    |
| 2** | 3095.250        | 37.29            | -6.00       | 54.0           | -16.71          | AV       | 60.00          | 100         | Horizontal | Pass    |
| 3   | 5042.750        | 53.33            | 0.10        | 74.0           | -20.67          | Peak     | 134.00         | 100         | Horizontal | Pass    |
| 3** | 5042.750        | 43.22            | 0.10        | 54.0           | -10.78          | AV       | 134.00         | 100         | Horizontal | Pass    |
| 4   | 7997.750        | 56.01            | 2.80        | 74.0           | -17.99          | Peak     | 360.00         | 100         | Horizontal | Pass    |
| 4** | 7997.750        | 46.45            | 2.80        | 54.0           | -7.55           | AV       | 360.00         | 100         | Horizontal | Pass    |
| 5   | 14055.500       | 56.51            | 5.29        | 74.0           | -17.49          | Peak     | 237.00         | 100         | Horizontal | Pass    |
| 5** | 14055.500       | 47.72            | 5.29        | 54.0           | -6.28           | AV       | 237.00         | 100         | Horizontal | Pass    |
| 6   | 17118.000       | 55.98            | 3.46        | 74.0           | -18.02          | Peak     | 72.00          | 100         | Horizontal | Pass    |
| 6** | 17118.000       | 44.99            | 3.46        | 54.0           | -9.01           | AV       | 72.00          | 100         | Horizontal | Pass    |

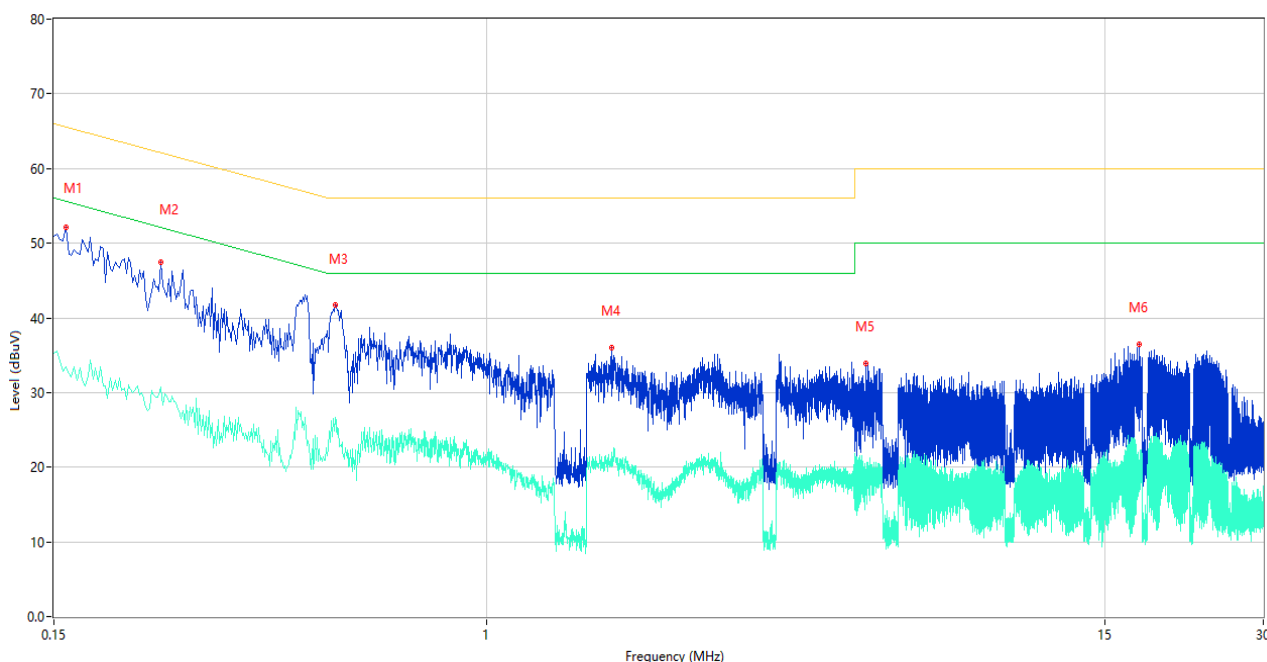
## A.2 Conducted Emission

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

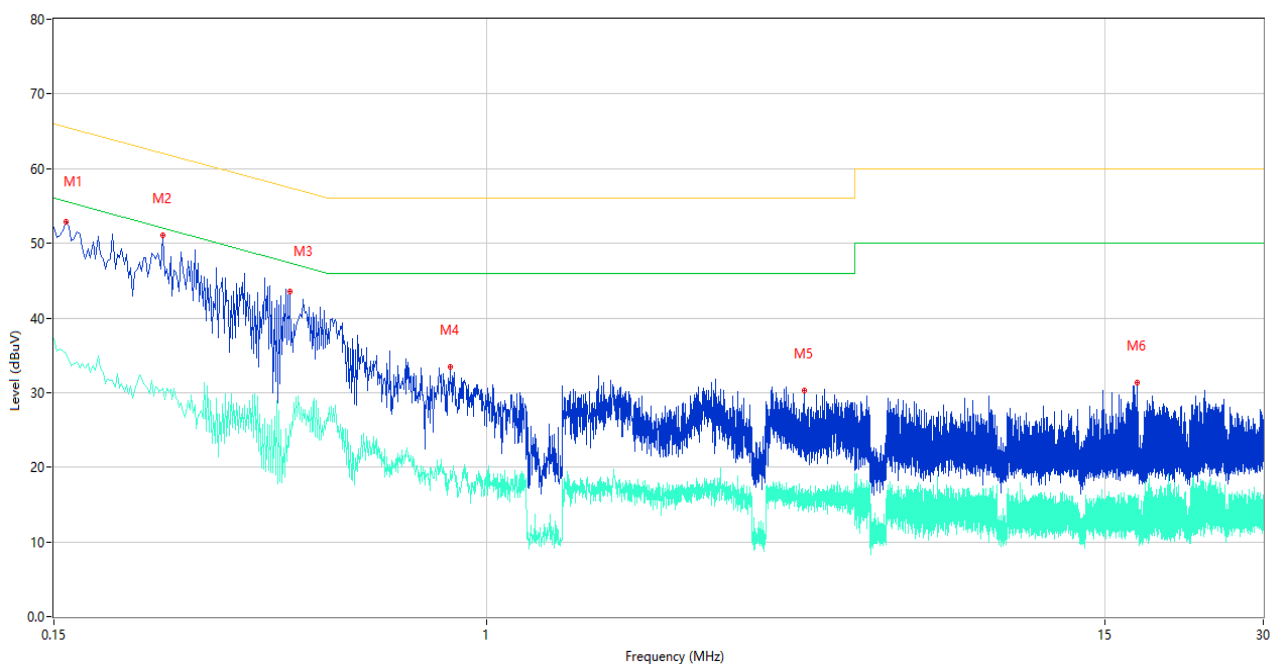
#### The Camera Test Mode

##### A.2.1 L Phase



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.158           | 52.17          | 10.18       | 65.57        | -13.40          | Peak     | L    | Pass    |
| 1** | 0.158           | 33.39          | 10.18       | 55.57        | -22.18          | AV       | L    | Pass    |
| 2   | 0.240           | 47.53          | 10.08       | 62.10        | -14.57          | Peak     | L    | Pass    |
| 2** | 0.240           | 30.75          | 10.08       | 52.10        | -21.35          | AV       | L    | Pass    |
| 3   | 0.514           | 41.73          | 10.11       | 56.00        | -14.27          | Peak     | L    | Pass    |
| 3** | 0.514           | 26.60          | 10.11       | 46.00        | -19.40          | AV       | L    | Pass    |
| 4   | 1.728           | 35.98          | 9.91        | 56.00        | -20.02          | Peak     | L    | Pass    |
| 4** | 1.728           | 22.02          | 9.91        | 46.00        | -23.98          | AV       | L    | Pass    |
| 5   | 5.264           | 33.96          | 9.97        | 60.00        | -26.04          | Peak     | L    | Pass    |
| 5** | 5.264           | 19.62          | 9.97        | 50.00        | -30.38          | AV       | L    | Pass    |
| 6   | 17.432          | 36.42          | 10.18       | 60.00        | -23.58          | Peak     | L    | Pass    |
| 6** | 17.432          | 19.89          | 10.18       | 50.00        | -30.11          | AV       | L    | Pass    |

## A.2.2 N Phase

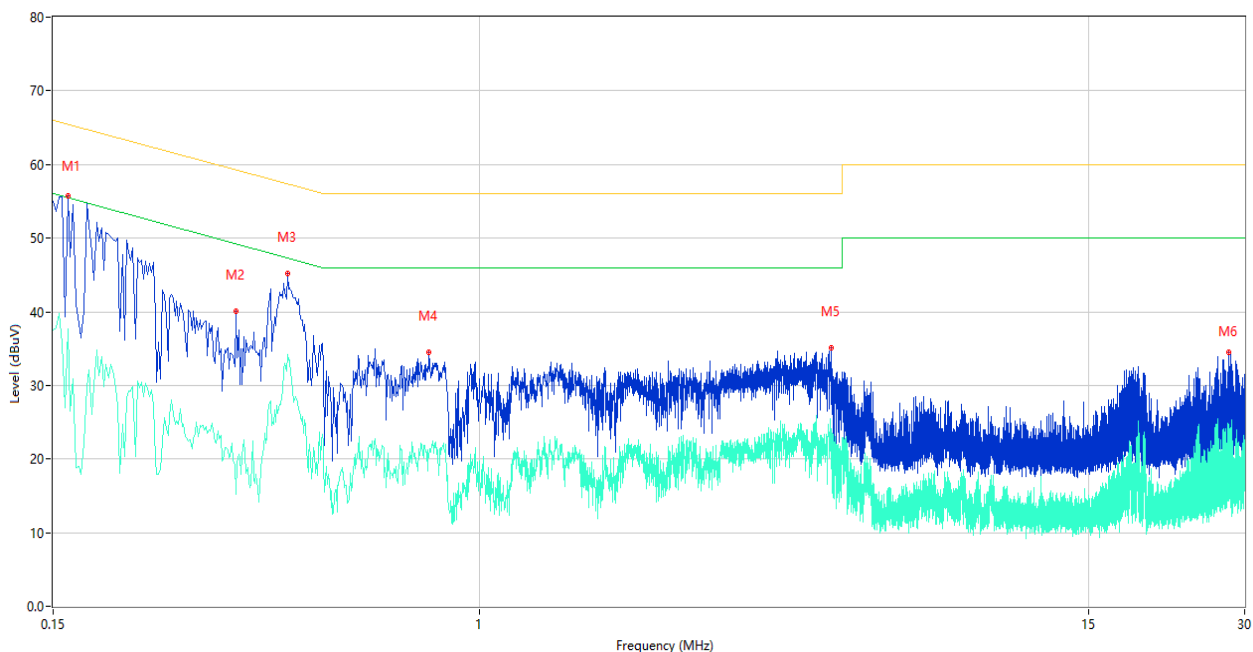


| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.158           | 52.90          | 10.18       | 65.57        | -12.67          | Peak     | N    | Pass    |
| 1** | 0.158           | 35.30          | 10.18       | 55.57        | -20.27          | AV       | N    | Pass    |
| 2   | 0.242           | 51.10          | 10.08       | 62.03        | -10.93          | Peak     | N    | Pass    |
| 2** | 0.242           | 30.57          | 10.08       | 52.03        | -21.46          | AV       | N    | Pass    |
| 3   | 0.422           | 43.59          | 10.09       | 57.41        | -13.82          | Peak     | N    | Pass    |
| 3** | 0.422           | 25.78          | 10.09       | 47.41        | -21.63          | AV       | N    | Pass    |
| 4   | 0.850           | 33.41          | 10.05       | 56.00        | -22.59          | Peak     | N    | Pass    |
| 4** | 0.850           | 18.73          | 10.05       | 46.00        | -27.27          | AV       | N    | Pass    |
| 5   | 4.022           | 30.24          | 10.09       | 56.00        | -25.76          | Peak     | N    | Pass    |
| 5** | 4.022           | 16.57          | 10.09       | 46.00        | -29.43          | AV       | N    | Pass    |
| 6   | 17.292          | 31.31          | 10.18       | 60.00        | -28.69          | Peak     | N    | Pass    |
| 6** | 17.292          | 15.66          | 10.18       | 50.00        | -34.34          | AV       | N    | Pass    |

## Test Data and Plots

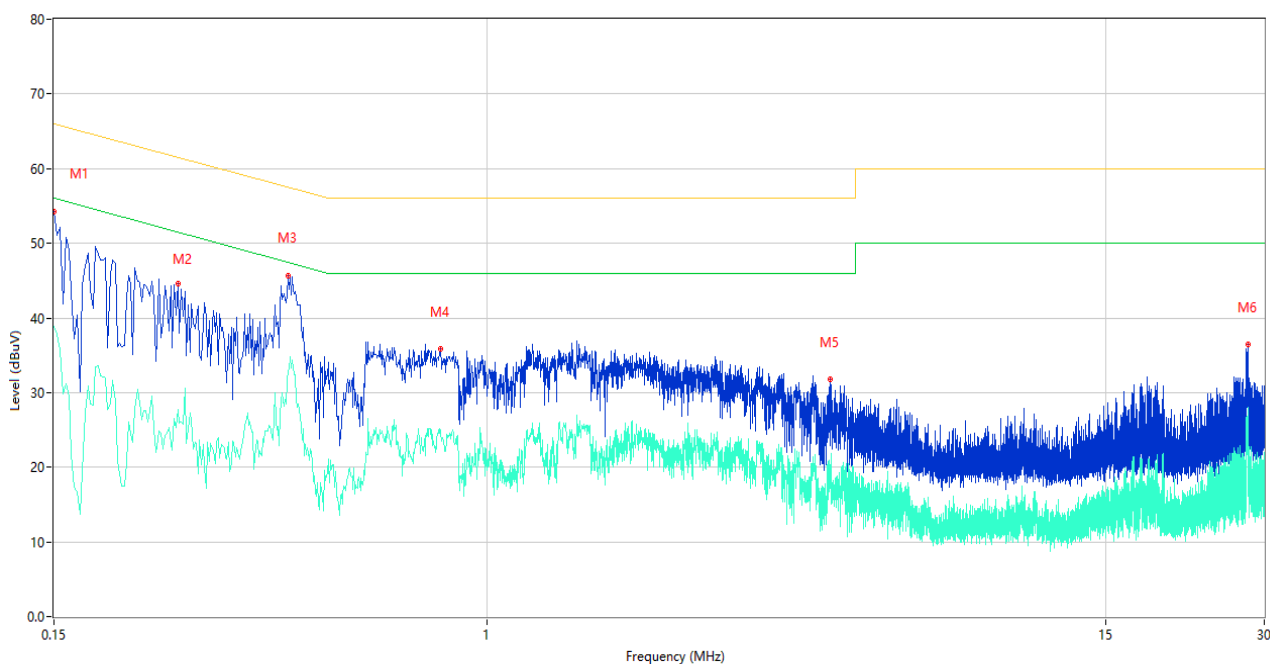
### The USB Test Mode

#### A.2.3 L Phase



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.160           | 55.68          | 10.17       | 65.46        | -9.78           | Peak     | L    | Pass    |
| 1** | 0.160           | 37.60          | 10.17       | 55.46        | -17.86          | AV       | L    | Pass    |
| 2   | 0.338           | 40.01          | 10.08       | 59.25        | -19.24          | Peak     | L    | Pass    |
| 2** | 0.338           | 15.17          | 10.08       | 49.25        | -34.08          | AV       | L    | Pass    |
| 3   | 0.426           | 45.19          | 10.09       | 57.33        | -12.14          | Peak     | L    | Pass    |
| 3** | 0.426           | 34.26          | 10.09       | 47.33        | -13.07          | AV       | L    | Pass    |
| 4   | 0.798           | 34.53          | 10.06       | 56.00        | -21.47          | Peak     | L    | Pass    |
| 4** | 0.798           | 20.36          | 10.06       | 46.00        | -25.64          | AV       | L    | Pass    |
| 5   | 4.772           | 35.05          | 9.97        | 56.00        | -20.95          | Peak     | L    | Pass    |
| 5** | 4.772           | 22.72          | 9.97        | 46.00        | -23.28          | AV       | L    | Pass    |
| 6   | 27.984          | 34.54          | 10.24       | 60.00        | -25.46          | Peak     | L    | Pass    |
| 6** | 27.984          | 24.76          | 10.24       | 50.00        | -25.24          | AV       | L    | Pass    |

## A.2.4 N Phase



| No. | Frequency (MHz) | Results (dBuV) | Factor (dB) | Limit (dBuV) | Over Limit (dB) | Detector | Line | Verdict |
|-----|-----------------|----------------|-------------|--------------|-----------------|----------|------|---------|
| 1   | 0.150           | 54.21          | 10.19       | 66.00        | -11.79          | Peak     | N    | Pass    |
| 1** | 0.150           | 38.87          | 10.19       | 56.00        | -17.13          | AV       | N    | Pass    |
| 2   | 0.258           | 44.64          | 10.08       | 61.50        | -16.86          | Peak     | N    | Pass    |
| 2** | 0.258           | 27.75          | 10.08       | 51.50        | -23.75          | AV       | N    | Pass    |
| 3   | 0.418           | 45.70          | 10.09       | 57.49        | -11.79          | Peak     | N    | Pass    |
| 3** | 0.418           | 32.77          | 10.09       | 47.49        | -14.72          | AV       | N    | Pass    |
| 4   | 0.814           | 35.87          | 10.06       | 56.00        | -20.13          | Peak     | N    | Pass    |
| 4** | 0.814           | 25.02          | 10.06       | 46.00        | -20.98          | AV       | N    | Pass    |
| 5   | 4.486           | 31.85          | 10.01       | 56.00        | -24.15          | Peak     | N    | Pass    |
| 5** | 4.486           | 19.12          | 10.01       | 46.00        | -26.88          | AV       | N    | Pass    |
| 6   | 27.902          | 36.42          | 10.24       | 60.00        | -23.58          | Peak     | N    | Pass    |
| 6** | 27.902          | 28.05          | 10.24       | 50.00        | -21.95          | AV       | N    | Pass    |

## **ANNEX B TEST SETUP PHOTOS**

Please refer the document “BL-SZ2210355-AE.PDF”.

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document “BL-SZ2210355-AW.PDF”.

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document “BL-SZ2210355-AI.PDF”.

## Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
3. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
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--END OF REPORT--