

|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------------|
| <b>Prüfbericht-Nr.:</b><br><i>Test report No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                         | <b>60360725 001</b>                                                                                                                                                                                                                                                        | <b>Auftrags-Nr.:</b><br><i>Order No.:</i>                                                                                            | 168154778                   | Seite 1 von 24<br><i>Page 1 of 24</i>        |
| <b>Kunden-Referenz-Nr.:</b><br><i>Client reference No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                | N/A                                                                                                                                                                                                                                                                        | <b>Auftragsdatum:</b><br><i>Order date:</i>                                                                                          | 04.03.2020                  |                                              |
| <b>Auftraggeber:</b><br><i>Client:</i>                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>ASAP TECHNOLOGY (jiangxi) CO., LTD</b><br>No.5, Shuguang Rd, West Zone, Ji'an County Industrial Park, Ji'an, Jiangxi 343100 China                                                                                                                                       |                                                                                                                                      |                             |                                              |
| <b>Prüfgegenstand:</b><br><i>Test item:</i>                                                                                                                                                                                                                                                                                                                                                                                                                | Wireless Charging Stand                                                                                                                                                                                                                                                    |                                                                                                                                      |                             |                                              |
| <b>Bezeichnung / Typ-Nr.:</b><br><i>Identification / Type No.:</i>                                                                                                                                                                                                                                                                                                                                                                                         | LACA128, NS-MWPC10KS, NS-MWPC10xxxxx, MD-MWPC10xxxxx, DX-MWPC10xxxxx, PT-MWPC10xxxxx, RF-MWPC10xxxxx ('x' can be A-Z, a-z, 0-9, - or blank only for different models) (Trademark: INSIGNIA)                                                                                |                                                                                                                                      |                             |                                              |
| <b>Auftrags-Inhalt:</b><br><i>Order content:</i>                                                                                                                                                                                                                                                                                                                                                                                                           | FCC and IC approval                                                                                                                                                                                                                                                        |                                                                                                                                      |                             |                                              |
| <b>Prüfgrundlage:</b><br><i>Test specification:</i>                                                                                                                                                                                                                                                                                                                                                                                                        | CFR47 FCC Part 15: Subpart C Section 15.201 RSS-216 issue 2 January 2016<br>CFR47 FCC Part 15: Subpart C Section 15.207 RSS-GEN issue 5 March 2019<br>CFR47 FCC Part 15: Subpart C Section 15.209 RSS-102 issue 5 March 2015<br>CFR47 FCC Part 2: Subpart J Section 2.1091 |                                                                                                                                      |                             |                                              |
| <b>Wareneingangsdatum:</b><br><i>Date of receipt:</i>                                                                                                                                                                                                                                                                                                                                                                                                      | 17.03.2020                                                                                                                                                                                                                                                                 | Refer to photos document                                                                                                             |                             |                                              |
| <b>Prüfmuster-Nr.:</b><br><i>Test sample No.:</i>                                                                                                                                                                                                                                                                                                                                                                                                          | A001069150-025 to 026                                                                                                                                                                                                                                                      |                                                                                                                                      |                             |                                              |
| <b>Prüfzeitraum:</b><br><i>Testing period:</i>                                                                                                                                                                                                                                                                                                                                                                                                             | 18.03.2020 - 07.04.2020                                                                                                                                                                                                                                                    |                                                                                                                                      |                             |                                              |
| <b>Ort der Prüfung:</b><br><i>Place of testing:</i>                                                                                                                                                                                                                                                                                                                                                                                                        | TÜV Rheinland (Shenzhen) Co., Ltd.                                                                                                                                                                                                                                         |                                                                                                                                      |                             |                                              |
| <b>Prüflaboratorium:</b><br><i>Testing laboratory:</i>                                                                                                                                                                                                                                                                                                                                                                                                     | TÜV Rheinland (Shenzhen) Co., Ltd.                                                                                                                                                                                                                                         |                                                                                                                                      |                             |                                              |
| <b>Prüfergebnis*:</b><br><i>Test result*:</i>                                                                                                                                                                                                                                                                                                                                                                                                              | Pass                                                                                                                                                                                                                                                                       |                                                                                                                                      |                             |                                              |
| <b>geprüft von / tested by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                            | <b>kontrolliert von / reviewed by:</b>                                                                                               |                             |                                              |
| <br>06.05.2020 Jonathan Li / Project Manager                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                            | <br>06.05.2020 Winnie Hou / Technical Certifier |                             |                                              |
| <b>Datum</b><br><i>Date</i>                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Name/Stellung</b><br><i>Name/Position</i>                                                                                                                                                                                                                               | <b>Unterschrift</b><br><i>Signature</i>                                                                                              | <b>Datum</b><br><i>Date</i> | <b>Name/Stellung</b><br><i>Name/Position</i> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |
| <b>Sonstiges / Other:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |
| FCC ID: 2APXNLACA128<br>IC: 24654-LACA128, HVIN: NS-MWPC10KS-C                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |
| <b>Zustand des Prüfgegenstandes bei Anlieferung:</b><br><i>Condition of the test item at delivery:</i>                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                            | <b>Prüfmuster vollständig und unbeschädigt</b><br><i>Test item complete and undamaged:</i>                                           |                             |                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |
| * Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft<br>P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet<br>Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor<br>P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested                        |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |
| <b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b><br><i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i> |                                                                                                                                                                                                                                                                            |                                                                                                                                      |                             |                                              |

## ***Test Summary***

**5.1.1 ANTENNA REQUIREMENT**

*RESULT: Pass*

**5.1.2 99% BANDWIDTH**

*RESULT: Pass*

**5.1.3 RADIATED SPURIOUS EMISSIONS**

*RESULT: Pass*

**5.1.4 CONDUCTED EMISSIONS**

*RESULT: Pass*

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# 1 General Remarks

## 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up

## 2 Test Sites

### 2.1 Test Facilities

**TÜV Rheinland (Shenzhen) Co., Ltd.**

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Registration No.: 694916

IC Registration No.: 25069

### 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

**TÜV Rheinland (Shenzhen) Co., Ltd.**

| <b>Radio Spectrum Testing</b>             |                     |                   |                   |                   |
|-------------------------------------------|---------------------|-------------------|-------------------|-------------------|
| <b>Description</b>                        | <b>Manufacturer</b> | <b>Model</b>      | <b>Serial No.</b> | <b>Cal. until</b> |
| Wireless Connectivity Tester              | R&S                 | CMW270            | 101375            | 20.08.2020        |
| Signal Analyzer                           | R&S                 | FSV 40            | 101441            | 20.08.2020        |
| Vector Signal Generator                   | R&S                 | SMBV100A          | 263301            | 21.08.2020        |
| Signal Generator                          | R&S                 | SMB100A           | 115186            | 21.08.2020        |
| OSP                                       | R&S                 | OSP 150           | 101017            | 17.12.2020        |
| Control PC                                | DELL                | OptiPlex 7050     | FTJZ9P2           | N/A               |
| Test Software                             | R&S                 | WMS32 (V10.50.10) | N/A               | N/A               |
| Power Meter                               | R&S                 | NRP2              | 107105            | 17.12.2020        |
| Wideband Power Sensor                     | R&S                 | NRP-Z81           | 105350            | 17.12.2020        |
| Humid & Temp Programmable Tester          | BOST                | NTH090-60         | 19040801          | 16.04.2020        |
| Shielding Room 8#                         | Albatross           | SR8               | APC17151-SR8      | 23.07.2020        |
| <b>Unwanted Emission Testing</b>          |                     |                   |                   |                   |
| <b>Description</b>                        | <b>Manufacturer</b> | <b>Model</b>      | <b>Serial No.</b> | <b>Cal. until</b> |
| EMI Test Receiver                         | R&S                 | ESR 7             | 102021            | 19.08.2020        |
| Signal Analyzer                           | R&S                 | FSV 40            | 101439            | 21.08.2020        |
| System Controller Interface               | R&S                 | SCI-100           | S10010038         | N/A               |
| Filterbank                                | R&S                 | Wlan              | 100759            | 21.08.2020        |
| OSP                                       | R&S                 | OSP 120           | 102040            | N/A               |
| Pre-amplifier                             | R&S                 | SCU08F1           | 08320031          | 20.08.2020        |
| Amplifier                                 | R&S                 | SCU-18F           | 180070            | 20.08.2020        |
| Amplifier                                 | R&S                 | SCU40A            | 100475            | 20.08.2020        |
| Trilog Broadband Antenna (30 MHz - 1 GHz) | Schwarzbeck         | VULB9162          | 193               | 02.09.2020        |

|                                          |                     |                     |                   |                   |
|------------------------------------------|---------------------|---------------------|-------------------|-------------------|
| Double-Ridged Antenna (1-18 GHz)         | ETS-LINDGREN        | 3117                | 00218717          | 02.09.2020        |
| Wideband Ridged Horn Antenna (18-40 GHz) | Steatite            | QMS-00880           | 19067             | 02.09.2020        |
| Active Loop Antenna                      | Schwarzbeck         | FMZB 1513           | 302               | 01.09.2020        |
| Wideband Ridged Horn Antenna (12-18 GHz) | Steatite            | QMS-00208           | 18313             | 02.09.2020        |
| Test software                            | R&S                 | V10.40.10-EMC32     | N/A               | N/A               |
| Control PC                               | Dell                | OptiPlex 7050       | 36NV9P2           | N/A               |
| 3m Semi-Anechoic Chamber                 | Albatross           | SAC-3m              | APC17151-SAC      | 07.06.2020        |
| <b>Conducted Emissions</b>               |                     |                     |                   |                   |
| <b>Description</b>                       | <b>Manufacturer</b> | <b>Model</b>        | <b>Serial No.</b> | <b>Cal. until</b> |
| EMI Test Receiver                        | R&S                 | ESR3                | 102428            | 03.09.2020        |
| Artificial Mains Network                 | R&S                 | ENV216              | 102333            | 19.08.2020        |
| Attenuator                               | R&S                 | ESH2Z31             | 100300            | 19.08.2020        |
| EMC32 test software                      | R&S                 | EMC32(Ver.10.50.01) | N/A               | N/A               |

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

| Test                          | Parameters                                              | Expanded uncertainty ( $U_{lab}$ ) | Expanded uncertainty ( $U_{cispr}$ ) |
|-------------------------------|---------------------------------------------------------|------------------------------------|--------------------------------------|
| Conducted Emission            | Level accuracy<br>(9kHz to 150kHz)<br>(150kHz to 30MHz) | $\pm 3.70$ dB<br>$\pm 3.30$ dB     | $\pm 3.8$ dB<br>$\pm 3.4$ dB         |
| Radiated Emission<br>(3m SAC) | Level accuracy<br>(30MHz to 1000MHz)                    | $\pm 4.52$ dB                      | $\pm 6.3$ dB                         |
|                               | Level accuracy<br>(above 1000MHz)                       | $\pm 4.37$ dB                      | N/A                                  |

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

## 3 General Product Information

### 3.1 Product Function and Intended Use

The device is a Wireless Charging Stand.

All the models are identical except the model name is different.

For details, refer to the User Manual, Technical Description and Circuit Diagram.

### 3.2 Ratings and System Details

Table 2: Technical Specification of EUT

| General Information of EUT     | Value                                                                                                                                                                      |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Kind of Equipment              | Wireless Charging Stand                                                                                                                                                    |
| Type Designation               | LACA128, NS-MWPC10KS, NS-MWPC10xxxxxx, MD-MWPC10xxxxxx, DX-MWPC10xxxxxx, PT-MWPC10xxxxxx, RF-MWPC10xxxxxx ('x' can be A-Z, a-z, 0-9, - or blank only for different models) |
| Trademark                      | INSIGNIA                                                                                                                                                                   |
| FCC ID                         | 2APXNLACA128                                                                                                                                                               |
| IC                             | 24654-LACA128                                                                                                                                                              |
| Input Voltage                  | DC 5V@3A/9V@2A/12V@1.5A via AC/DC Adapter                                                                                                                                  |
| Test voltage                   | AC 120V, 60Hz                                                                                                                                                              |
| Technical Specification of WPT |                                                                                                                                                                            |
| Operating Frequency            | 110-205KHz                                                                                                                                                                 |
| Extreme Temperature Range      | 0°C - +40°C                                                                                                                                                                |
| Modulation                     | FSK                                                                                                                                                                        |
| Antenna Type                   | Coil Antenna                                                                                                                                                               |
| Wireless output                | 10W maximum                                                                                                                                                                |

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wireless charging
- B. Off

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

### 3.5 Submitted Documents

- FCC/IC Label and Location Info

- Block Diagram

## 4 Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5&6. All testing were performed according to the procedures in ANSI C63.10: 2013 & ANSI C63.4: 2014

### 4.3 Special Accessories and Auxiliary Equipment

Table 3: List of Accessories and Auxiliary Equipment

| Description     | Manufacturer                             | Model | S/N | Rating |
|-----------------|------------------------------------------|-------|-----|--------|
| Electrical Load | ASAP<br>TECHNOLOGY<br>(jiangxi) CO., LTD | N/A   | N/A | N/A    |
| Mobile Phone    | Apple                                    | N/A   | N/A | N/A    |

### 4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

## 4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

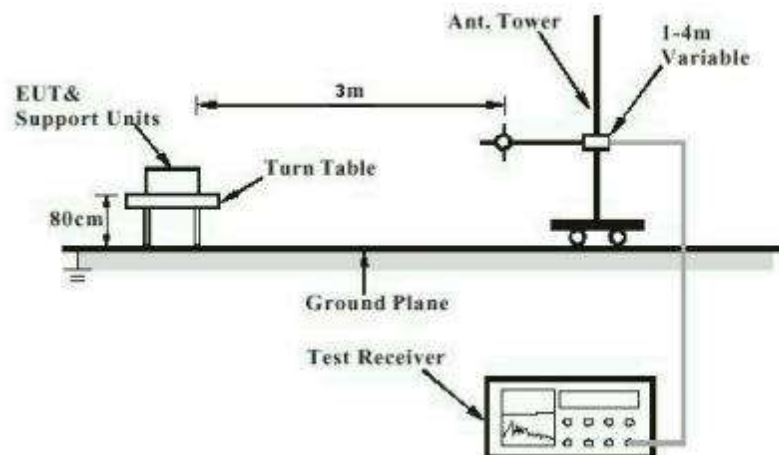


Diagram of Measurement Configuration for Conducted Transmitter Measurement

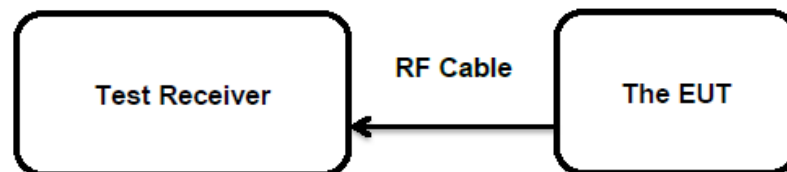
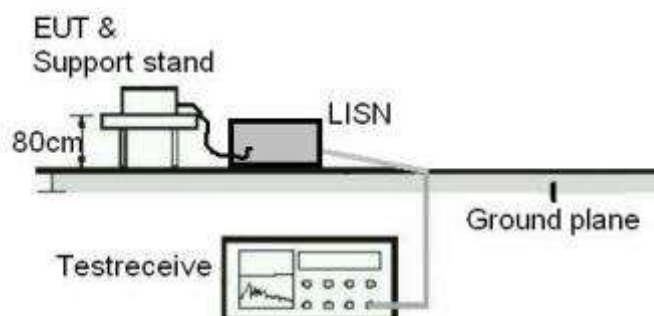


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement



## 5 Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

RESULT:

Pass

##### Test Specification

|               |   |                                                                     |
|---------------|---|---------------------------------------------------------------------|
| Test standard | : | Part 15.203                                                         |
|               | : | RSS-Gen Clause 6.8                                                  |
| Limit         | : | the use of antennas with directional gains that do not exceed 6 dBi |

According to the manufacturer declared, the EUT has an internal antenna, the EUT has an internal antenna, the directional gain of antenna is 0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

## 5.1.2 99% Bandwidth

### RESULT:

**Pass**

#### Test Specification

|                   |                      |
|-------------------|----------------------|
| Test standard     | : RSS-Gen Clause 6.7 |
| Basic standard    | : ANSI C63.10: 2013  |
| Kind of test site | : Shielded Room      |

#### Test Setup

|                      |                 |
|----------------------|-----------------|
| Date of testing      | : 23.03.2020    |
| Input voltage        | : AC 120V, 60Hz |
| Operation mode       | : A             |
| Ambient temperature  | : 25 °C         |
| Relative humidity    | : 56 %          |
| Atmospheric pressure | : 101 kPa       |

For details refer to following test result.



### 5.1.3 Radiated Spurious Emissions

**RESULT:****Pass****Test Specification**

|                   |                                                 |
|-------------------|-------------------------------------------------|
| Test standard     | : FCC Part 15.201<br>RSS-216 Clause 6.2.2.2     |
| Basic standard    | : ANSI C63.10: 2013 & ANSI C63.4:2014           |
| Limits            | : Refer to 15.209(a)<br>RSS-Gen Issue 5 Table 4 |
| Kind of test site | : 3m Semi-anechoic Chamber                      |

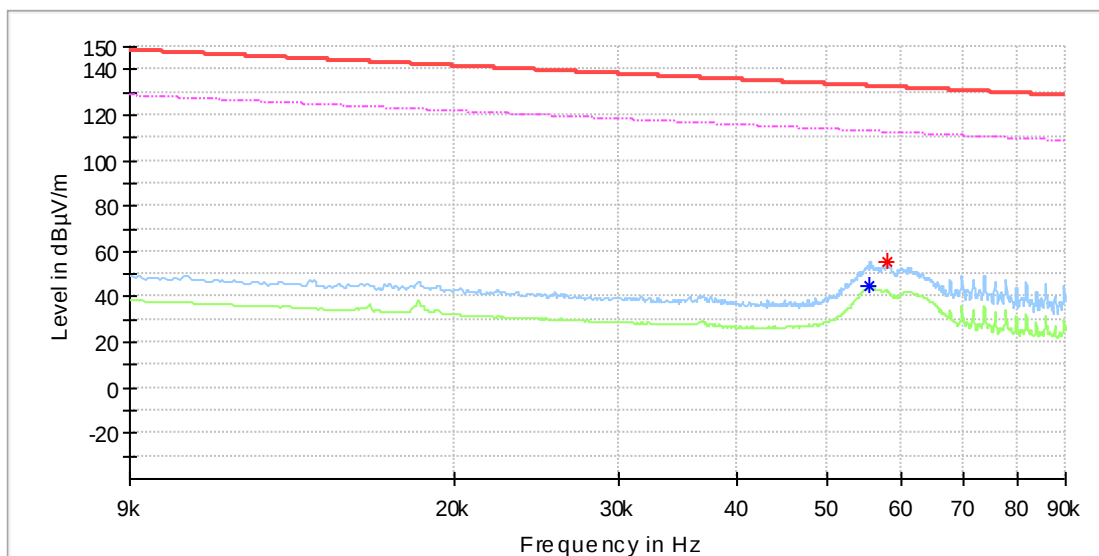
**Test Setup**

|                      |                          |
|----------------------|--------------------------|
| Date of testing      | : 19.03.2020, 27.03.2020 |
| Input voltage        | : AC 120V, 60Hz          |
| Operation mode       | : A                      |
| Ambient temperature  | : 23 °C                  |
| Relative humidity    | : 48 %                   |
| Atmospheric pressure | : 101 kPa                |

Refer to following test plots for details of test result.

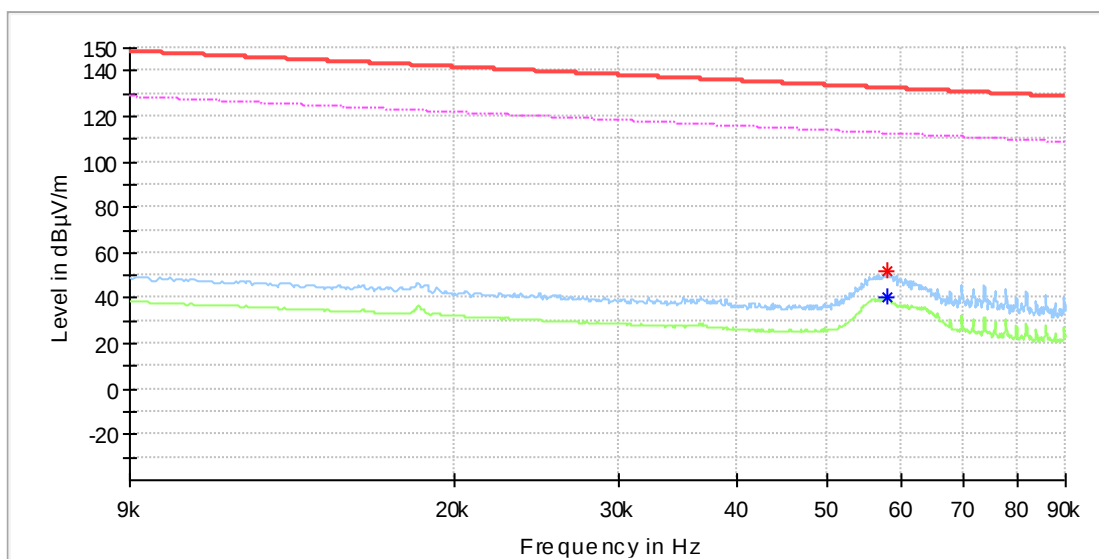
**9KHz – 90KHz**

X axis



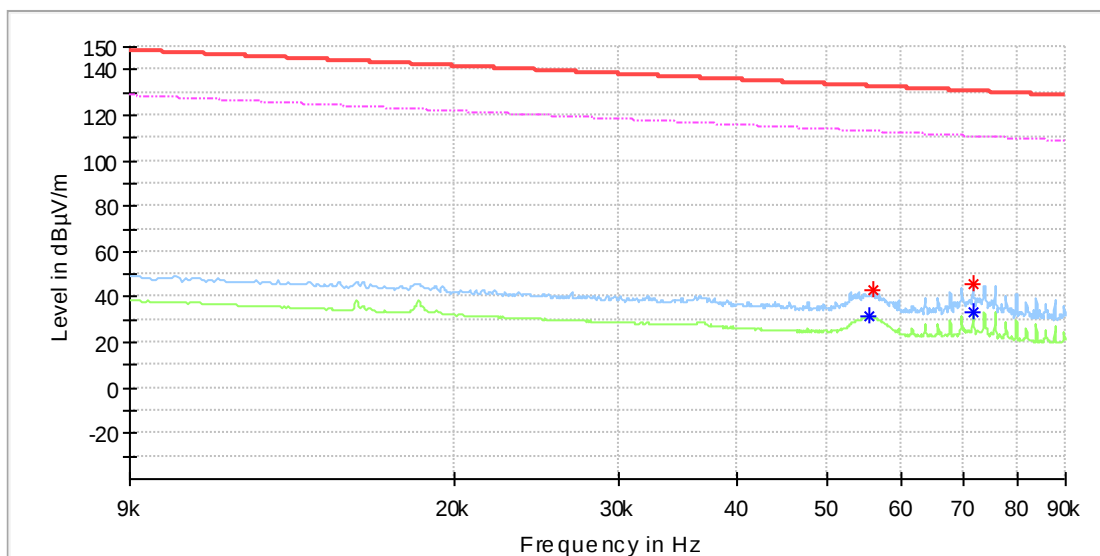
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preamp (dB) |
|-----------------|------------------|------------------|----------------|-------------|-------------|---------------|--------------|-------------|
| 0.055633        | ---              | 44.77            | 112.70         | 67.93       | 100.0       | 287.0         | 20.0         | 0.0         |
| 0.057889        | 55.71            | ---              | 132.34         | 76.64       | 100.0       | 310.0         | 20.0         | 0.0         |

Y axis



| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preamp (dB) |
|-----------------|------------------|------------------|----------------|-------------|-------------|---------------|--------------|-------------|
| 0.057889        | ---              | 40.41            | 112.35         | 71.94       | 100.0       | 239.0         | 20.0         | 0.0         |
| 0.058063        | 52.10            | ---              | 132.32         | 80.22       | 100.0       | 239.0         | 20.0         | 0.0         |

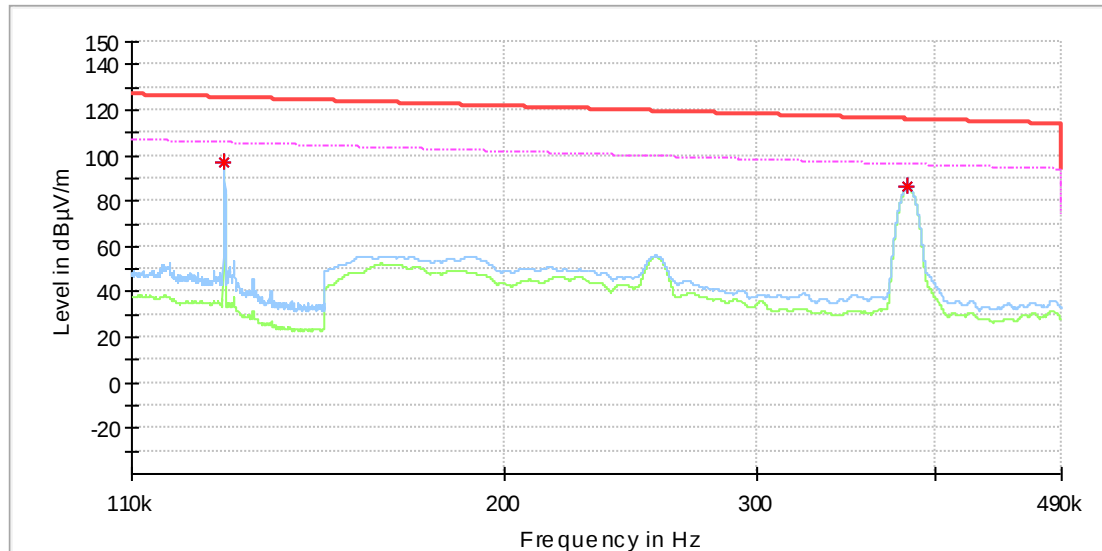
Z axis



| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preamp (dB) |
|-----------------|------------------|------------------|----------------|-------------|-------------|---------------|--------------|-------------|
| 0.055633        | ---              | 31.47            | 112.70         | 81.22       | 100.0       | 190.0         | 20.0         | 0.0         |
| 0.056154        | 43.21            | ---              | 132.61         | 89.39       | 100.0       | 167.0         | 20.0         | 0.0         |
| 0.071717        | ---              | 33.44            | 110.49         | 77.05       | 100.0       | 25.0          | 20.0         | 0.0         |
| 0.071717        | 45.99            | ---              | 130.48         | 84.49       | 100.0       | 25.0          | 20.0         | 0.0         |

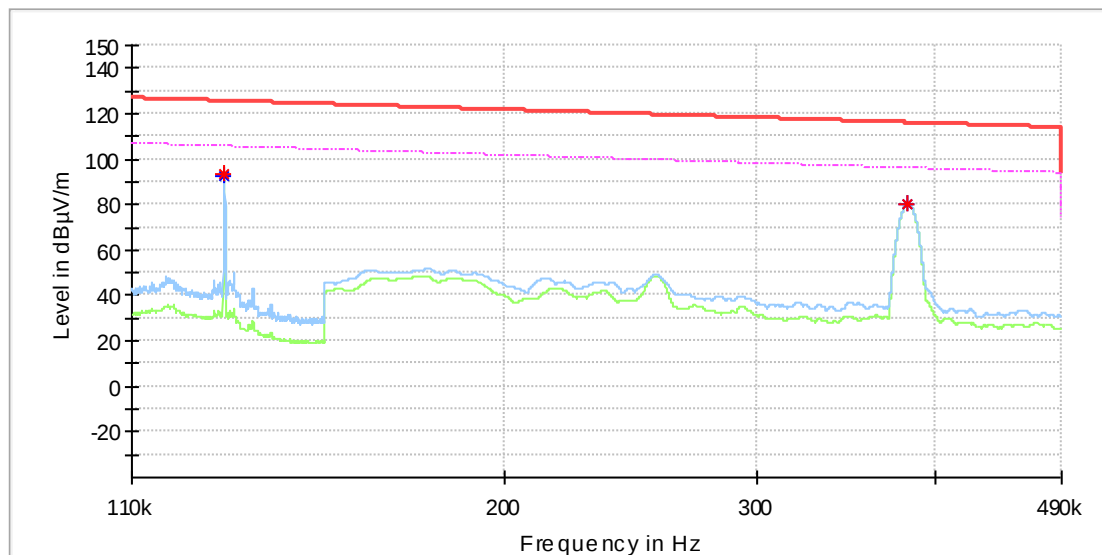
**110KHz – 490KHz**

X axis



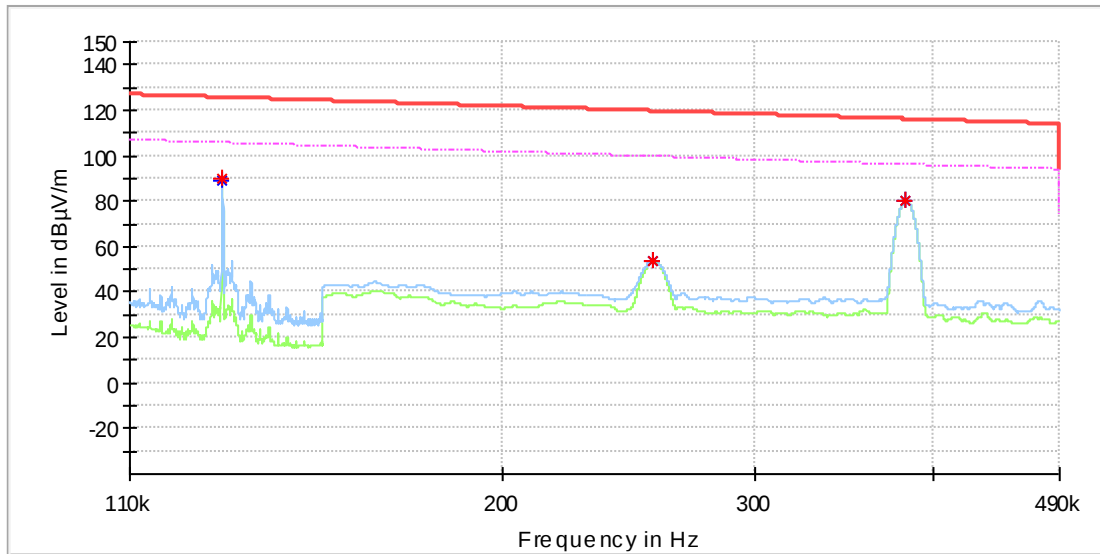
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preamp (dB) |
|-----------------|------------------|------------------|----------------|-------------|-------------|---------------|--------------|-------------|
| 0.127629        | 97.36            | ---              | 125.48         | 28.12       | 100.0       | 31.0          | 20.0         | 0.0         |
| 0.127629        | ---              | 97.23            | 105.49         | 8.25        | 100.0       | 31.0          | 20.0         | 0.0         |
| 0.382900        | 86.16            | ---              | 115.94         | 29.79       | 100.0       | 210.0         | 20.0         | 0.0         |
| 0.382900        | ---              | 86.04            | 95.94          | 9.90        | 100.0       | 210.0         | 20.0         | 0.0         |

Y axis



| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preamp (dB) |
|-----------------|------------------|------------------|----------------|-------------|-------------|---------------|--------------|-------------|
| 0.127629        | 93.07            | ---              | 125.48         | 32.41       | 100.0       | 285.0         | 20.0         | 0.0         |
| 0.127629        | ---              | 92.95            | 105.49         | 12.54       | 100.0       | 285.0         | 20.0         | 0.0         |
| 0.382900        | 80.49            | ---              | 115.94         | 35.45       | 100.0       | 120.0         | 20.0         | 0.0         |
| 0.382900        | ---              | 80.40            | 95.94          | 15.54       | 100.0       | 120.0         | 20.0         | 0.0         |

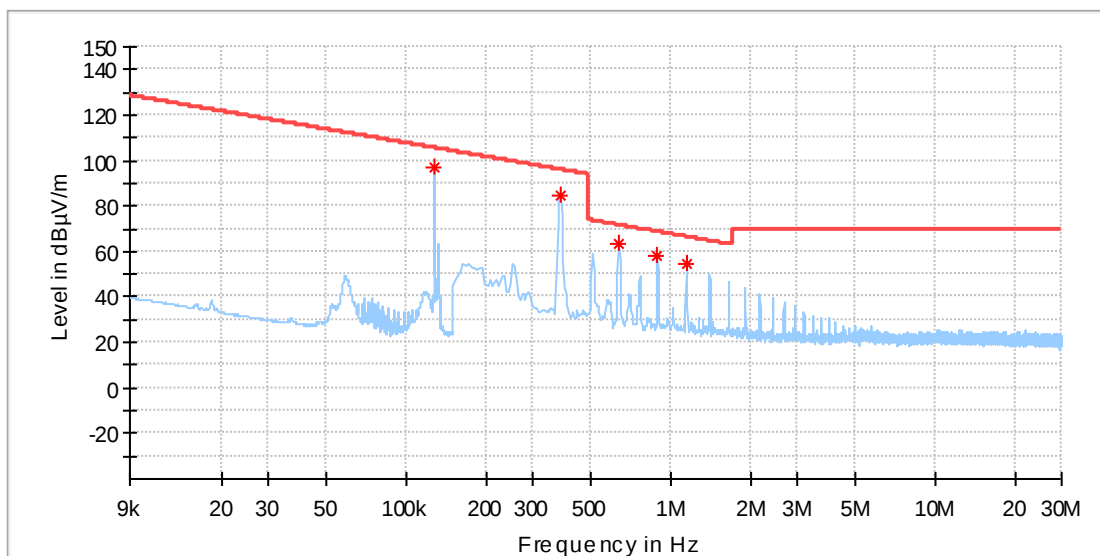
Z axis



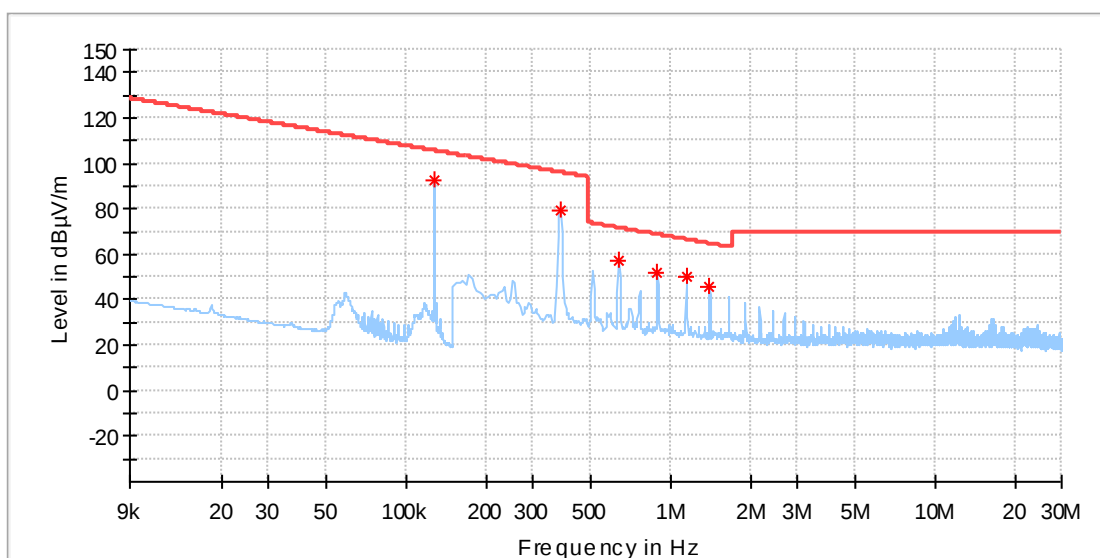
| Frequency (MHz) | MaxPeak (dBµV/m) | Average (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preamp (dB) |
|-----------------|------------------|------------------|----------------|-------------|-------------|---------------|--------------|-------------|
| 0.127629        | 89.64            | ---              | 125.48         | 35.84       | 100.0       | 25.0          | 20.0         | 0.0         |
| 0.127629        | ---              | 89.40            | 105.49         | 16.09       | 100.0       | 25.0          | 20.0         | 0.0         |
| 0.255150        | ---              | 53.45            | 99.47          | 46.02       | 100.0       | 237.0         | 20.0         | 0.0         |
| 0.255150        | 54.03            | ---              | 119.47         | 65.43       | 100.0       | 237.0         | 20.0         | 0.0         |
| 0.382750        | 80.07            | ---              | 115.94         | 35.87       | 100.0       | 209.0         | 20.0         | 0.0         |
| 0.382750        | ---              | 80.03            | 95.95          | 15.91       | 100.0       | 209.0         | 20.0         | 0.0         |

**9KHz – 30MHz**

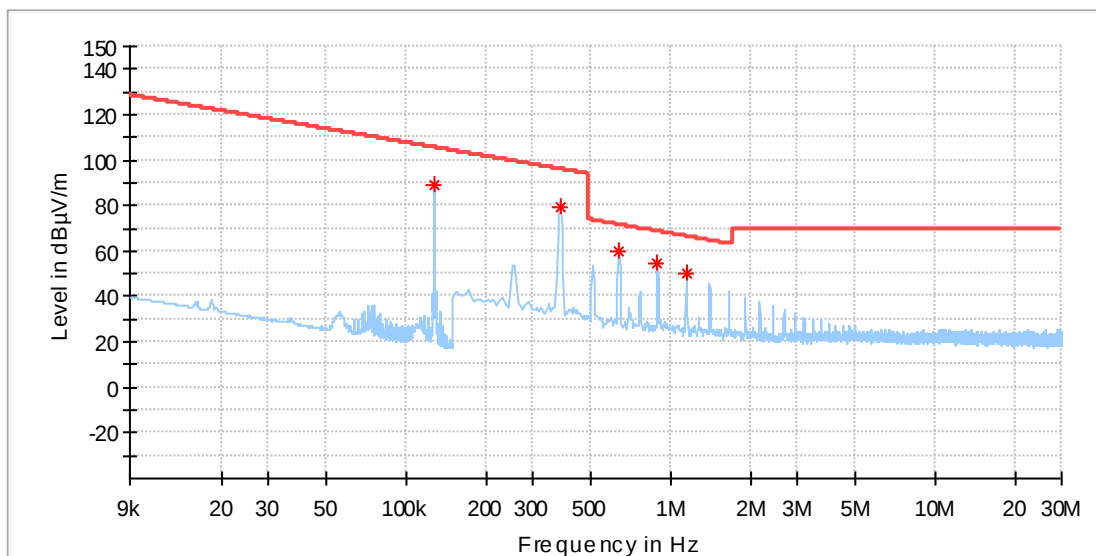
X axis



Y axis



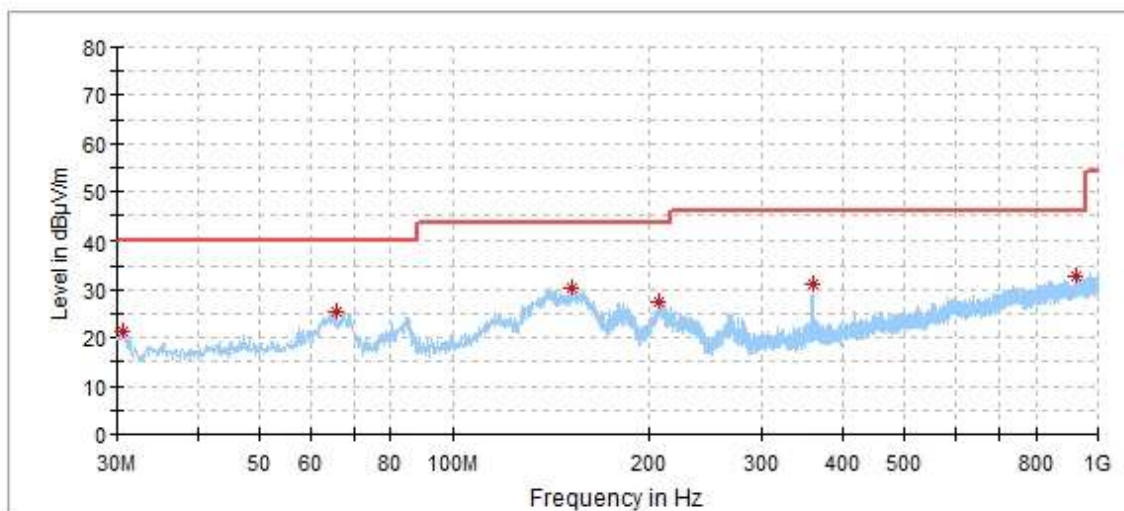
Z axis



| Frequency (MHz) | RMS (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Azimuth (deg) | Corr. (dB/m) | Preampl (dB) | Trd Corr. (dB/m) |
|-----------------|--------------|----------------|-------------|-------------|---------------|--------------|--------------|------------------|
| 0.127641        | 88.81        | 105.48         | 16.67       | 100.0       | 24.0          | 20.0         | 0.0          | 20.0             |
| 0.382655        | 79.69        | 95.95          | 16.26       | 100.0       | 220.0         | 20.0         | 0.0          | 20.0             |
| 0.637258        | 59.61        | 71.52          | 11.90       | 100.0       | 26.0          | 20.0         | 0.0          | 20.0             |
| 0.891860        | 54.20        | 68.60          | 14.40       | 100.0       | 26.0          | 20.0         | 0.0          | 20.0             |
| 1.146463        | 49.84        | 66.42          | 16.58       | 100.0       | 32.0          | 20.0         | 0.0          | 20.0             |

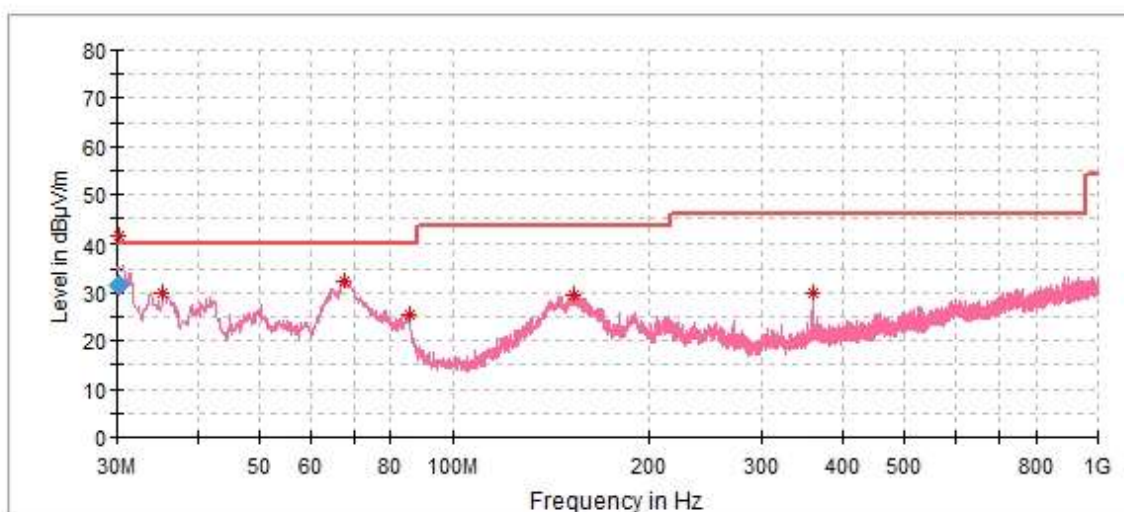
30MHz - 1GHz

Horizontal



| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|
| 152.317000      | 30.38            | 43.50          | 13.12       | 100.0       | H   | 25.0          |
| 208.189000      | 27.47            | 43.50          | 16.03       | 100.0       | H   | 139.0         |
| 359.412000      | 31.15            | 46.00          | 14.85       | 100.0       | H   | 154.0         |
| 30.679000       | 21.52            | 40.00          | 18.48       | 100.0       | H   | 219.0         |
| 65.987000       | 25.52            | 40.00          | 14.48       | 300.0       | H   | 166.0         |
| 927.347000      | 32.75            | 46.00          | 13.25       | 400.0       | H   | 105.0         |

Vertical



| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Height (cm) | Pol | Azimuth (deg) |
|-----------------|------------------|----------------|-------------|-------------|-----|---------------|
| 30.120000       | 41.35            | 40.00          | 4.27        | 125.0       | V   | 20.0          |
| 35.335000       | 29.88            | 40.00          | 10.12       | 100.0       | V   | 260.0         |
| 67.636000       | 32.23            | 40.00          | 7.77        | 100.0       | V   | 53.0          |
| 85.581000       | 25.37            | 40.00          | 14.63       | 100.0       | V   | 133.0         |
| 153.287000      | 29.50            | 43.50          | 14.00       | 100.0       | V   | 244.0         |
| 359.412000      | 29.98            | 46.00          | 16.02       | 200.0       | V   | 72.0          |

## 5.1.4 Conducted emissions

**RESULT:****Pass****Test Specification**

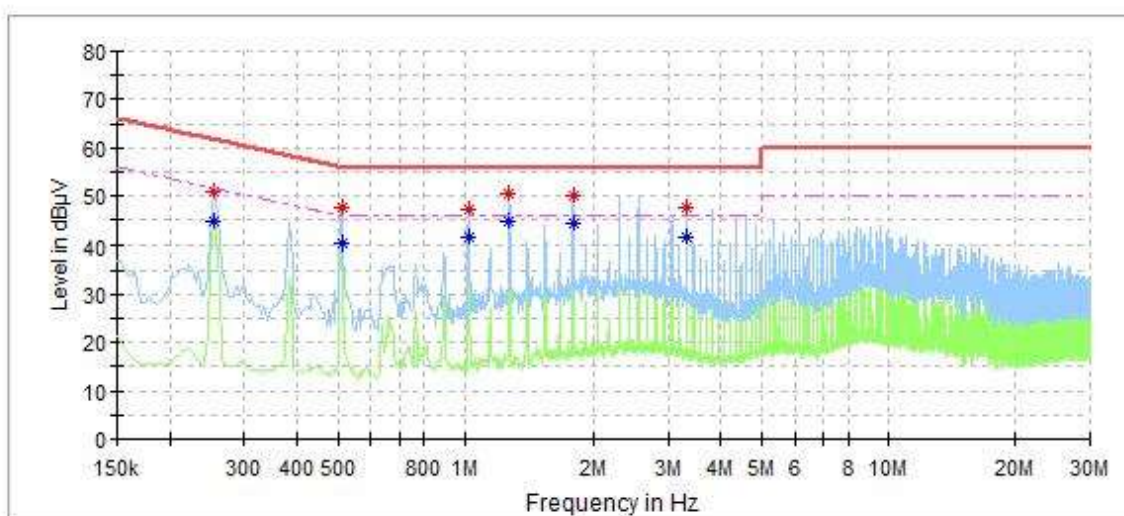
|                   |                                             |
|-------------------|---------------------------------------------|
| Test standard     | : FCC Part 15.201<br>RSS-216 Clause 6.2.2.1 |
| Basic standard    | : ANSI C63.4:2014                           |
| Frequency range   | : 150KHz - 30MHz                            |
| Classification    | : Class B                                   |
| Limit             | : FCC Part 15.207 (a)                       |
| Kind of test site | : 3m Semi-anechoic Chamber                  |

**Test Setup**

|                      |                 |
|----------------------|-----------------|
| Date of testing      | : 03.04.2020    |
| Input voltage        | : AC 120V, 60Hz |
| Operation mode       | : A             |
| Earthing             | : Not connected |
| Ambient temperature  | : 23 °C         |
| Relative humidity    | : 48 %          |
| Atmospheric pressure | : 101 kPa       |

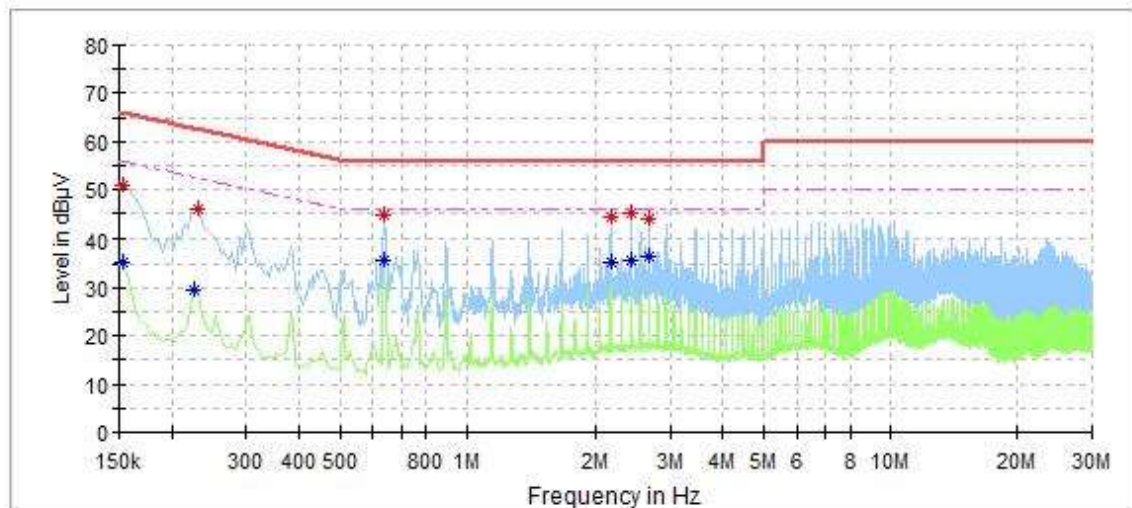
Refer to following test plots for details of test result.

L Line



| Frequency (MHz) | MaxPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.254000        | ---            | 44.71          | 51.63        | 6.91        | L1   | 9.6        |
| 0.254000        | 50.95          | ---            | 61.63        | 10.67       | L1   | 9.6        |
| 0.512000        | ---            | 40.28          | 46.00        | 5.72        | L1   | 9.7        |
| 0.512000        | 47.43          | ---            | 56.00        | 8.57        | L1   | 9.7        |
| 1.020000        | 47.11          | ---            | 56.00        | 8.89        | L1   | 9.7        |
| 1.020000        | ---            | 41.43          | 46.00        | 4.57        | L1   | 9.7        |
| 1.276000        | 50.37          | ---            | 56.00        | 5.63        | L1   | 9.7        |
| 1.276000        | ---            | 44.68          | 46.00        | 1.32        | L1   | 9.7        |
| 1.788000        | ---            | 44.36          | 46.00        | 1.64        | L1   | 9.7        |
| 1.788000        | 50.14          | ---            | 56.00        | 5.86        | L1   | 9.7        |
| 3.320000        | ---            | 41.37          | 46.00        | 4.63        | L1   | 9.8        |
| 3.320000        | 47.65          | ---            | 56.00        | 8.35        | L1   | 9.8        |

N Line



| Frequency (MHz) | MaxPeak (dBµV) | Average (dBµV) | Limit (dBµV) | Margin (dB) | Line | Corr. (dB) |
|-----------------|----------------|----------------|--------------|-------------|------|------------|
| 0.154000        | ---            | 35.48          | 55.78        | 20.30       | N    | 9.6        |
| 0.154000        | 50.69          | ---            | 65.78        | 15.09       | N    | 9.6        |
| 0.226000        | ---            | 29.57          | 52.60        | 23.02       | N    | 9.6        |
| 0.230000        | 46.02          | ---            | 62.45        | 16.43       | N    | 9.6        |
| 0.640000        | ---            | 35.59          | 46.00        | 10.41       | N    | 9.7        |
| 0.640000        | 44.70          | ---            | 56.00        | 11.30       | N    | 9.7        |
| 2.168000        | ---            | 35.33          | 46.00        | 10.67       | N    | 9.7        |
| 2.172000        | 44.26          | ---            | 56.00        | 11.75       | N    | 9.7        |
| 2.424000        | ---            | 35.80          | 46.00        | 10.20       | N    | 9.8        |
| 2.424000        | 45.31          | ---            | 56.00        | 10.69       | N    | 9.8        |
| 2.680000        | ---            | 36.35          | 46.00        | 9.65        | N    | 9.8        |
| 2.680000        | 43.80          | ---            | 56.00        | 12.20       | N    | 9.8        |

## 6 Photographs of the Test Set-Up

Refer to test photo document.

## 7 List of Tables

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## Appendix A: Photographs of the Test Set-Up

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**Photograph 1: Set-up photo for Radiated Emission, 9KHz - 30MHz**



**Photograph 2: Set-up photo for Radiated Emission, 30MHz - 1GHz**



**Photograph 3: Set-up photo for Conducted Emission on AC Mains**

