中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

# TEST REPORT

**Applicant:** **AKUVOX (XIAMEN) NETWORKS CO., LTD.**

Address: 10/F, No.56 Guanri Road, Software Park II, Xiamen 361009, China

**FCC ID:** **2AHCR-R20AV5**

**Product Name:** **Door Phone**

**Model Number:** **R20A**

**Standard(s):** **47 CFR Part 15, Subpart C**
**ANSI C63.10-2013**

The above equipment has been tested and found compliance with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

**Report Number:** **CR22060019-00B**

**Date Of Issue:** **2022-08-25**

**Reviewed By:** **Sun Zhong** Sun Zhong

Title: Manager

**Test Laboratory:** China Certification ICT Co., Ltd (Dongguan)
No. 113, Pingkang Road, Dalang Town, Dongguan,
Guangdong, China
Tel: +86-769-82016888

## Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

## Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

This report cannot be reproduced except in full, without prior written approval of the Company.

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk "★".

# CONTENTS

# 1. GENERAL INFORMATION

## 1.1 Product Description for Equipment under Test (EUT)

| | |
|---|---|
| **EUT Name:** | Door Phone |
| **EUT Model:** | R20A |
| **Rated Input Voltage:** | DC 12V from adapter or POE 48V |
| **Serial Number:** | CR22060019-RF-S1 |
| **EUT Received Date:** | 2022.06.23 |
| **EUT Received Status:** | Good |

**Operation Frequency Detail:**

| Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---|---|---|---|
| 1 | 0.125 | / | / |

**Antenna Information Detail▲:**

| Antenna Manufacturer | Antenna Type | input impedance (Ohm) | Antenna Gain /Frequency Range | §15.203 Requirement |
|---|---|---|---|---|
| AKUVOX (XIAMEN) NETWORKS CO., LTD. | Coil | 50 | Unknown | **Compliance** |

The Method of §15.203 Compliance:

☒Antenna must be permanently attached to the unit.

☐Antenna must use a unique type of connector to attach to the EUT.

☐Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

**Accessory Information:**

No Accessory.

## 1.2 Description of Test Configuration

### 1.2.1 EUT Operation Condition:

| | |
|---|---|
| **EUT Operation Mode:** | The system was configured for testing in Engineering Mode, which was provided by the manufacturer. |
| **Equipment Modifications:** | No |
| **EUT Exercise Software:** | No |
| Engineering Mode was provided by manufacturer▲. The maximum power was configured default setting. | |

### 1.2.2 Support Equipment List and Details

| Manufacturer | Description | Model | Serial Number |
|---|---|---|---|
| Huntkey | Adapter | HKA01105021-XE | 0D1805002143 |
| TP-link | Adapter(POE) | TL-SF1005P | 1167604001685 |
| AKUVOX | Card reader | N5632 | MN52P0024 |
| Unknown | Load | Unknown | Load1 |
| TOTOLINK | Wireless Router | LR1200 | LR1200155P00167 |

### 1.2.3 Support Cable List and Details

| Cable Description | Shielding Type | Ferrite Core | Length (m) | From Port | To |
|---|---|---|---|---|---|
| RJ45 Cable | No | Yes | 3 | EUT | Router |
| RJ45 Cable | No | Yes | 3 | POE | Router |
| Power Cable | No | Yes | 1.5 | EUT | Adapter |
| RJ45 Cable | No | No | 0.5 | EUT | POE |
| Cable | No | No | 3 | EUT | Load |
| Cable | No | No | 3 | EUT | Card Reader |

### 1.2.4 Block Diagram of Test Setup

### 1.2.2 Support Equipment List and Details

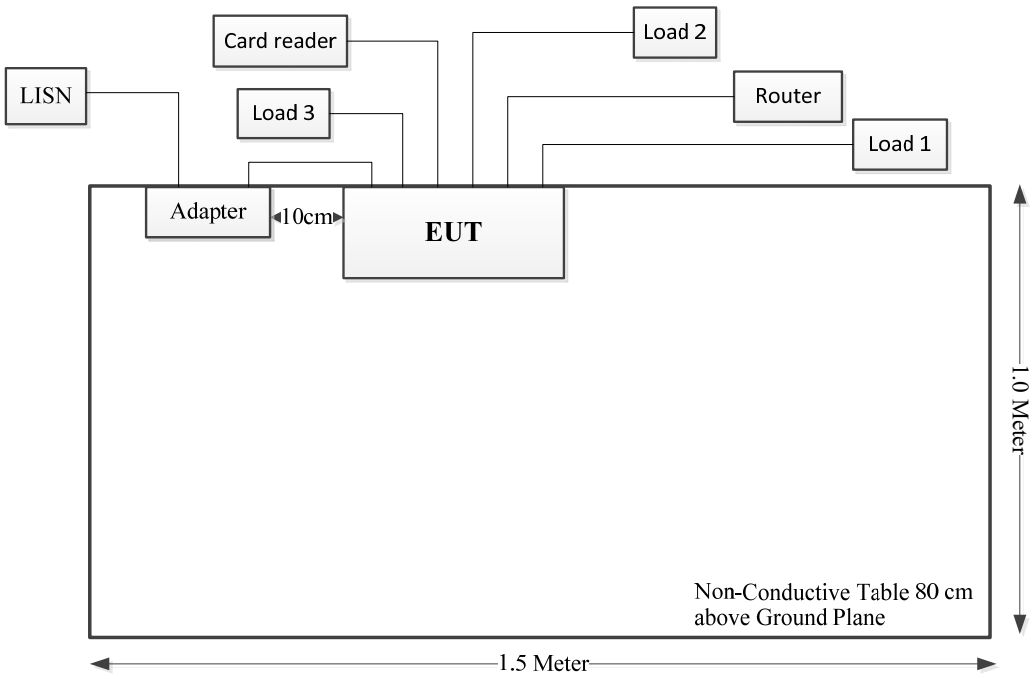
| Manufacturer | Description | Model | Serial Number |
|---|---|---|---|
| Huntkey | Adapter(USB) | HKA01105021-XE | 0D1805002143 |
| TP-link | Adapter(POE) | TL-SF1005P | 1.1676E+12 |
| AKUVOX | Card reader | N5632 | MN52P0024 |
| Unknown | Load 1 | 10W | 1001 |
| Unknown | Load 2 | 10W | 1002 |
| Unknown | Load 3 | 10W | 1003 |
| TOTO LINK | Router | X5000R | X5000RK9T0560 |

### 1.2.3 Support Cable List and Details

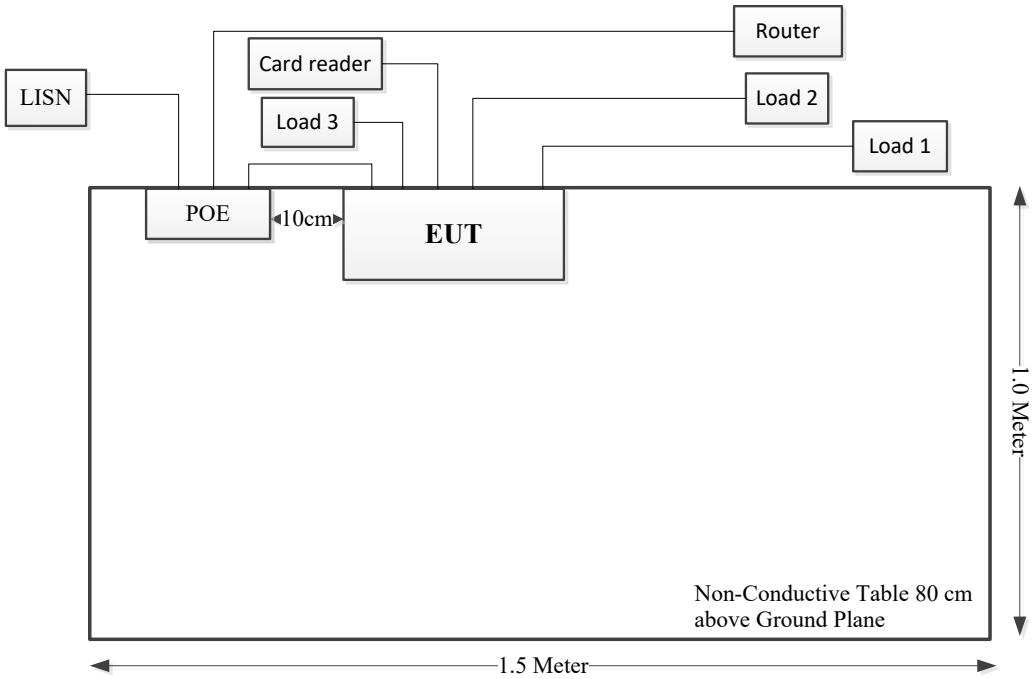
| Cable Description | Shielding Type | Ferrite Core | Length (m) | From Port | To |
|---|---|---|---|---|---|
| RJ45 Cable | No | No | 3 | EUT | Router |
| RJ45 Cable | No | No | 3 | POE | Router |
| RJ45 Cable | No | No | 1.5 | POE | EUT |
| Power Cable | No | No | 1.2 | POE | LISN |
| Power Cable | No | No | 1.5 | Adapter | EUT |
| Cable | No | No | 2 | EUT | Load 1 |
| Cable | No | No | 2 | EUT | Load 2 |
| Cable | No | No | 2 | EUT | Load 3 |
| Cable | No | No | 3 | EUT | Card reader |

### 1.2.4 Block Diagram of Test Setup

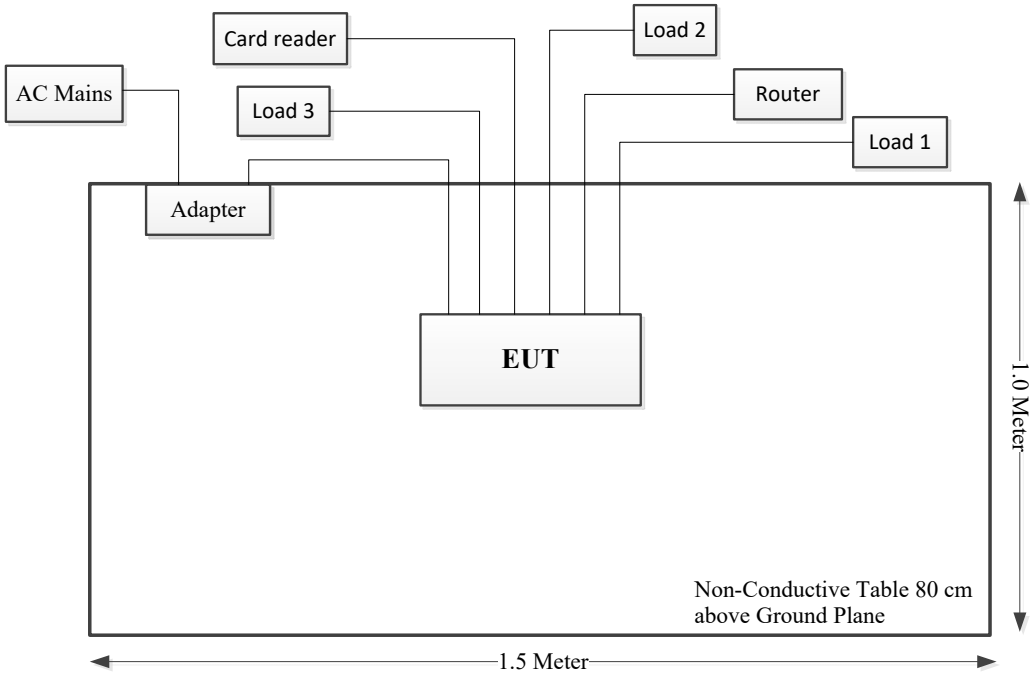
Conducted emissions:
M1：



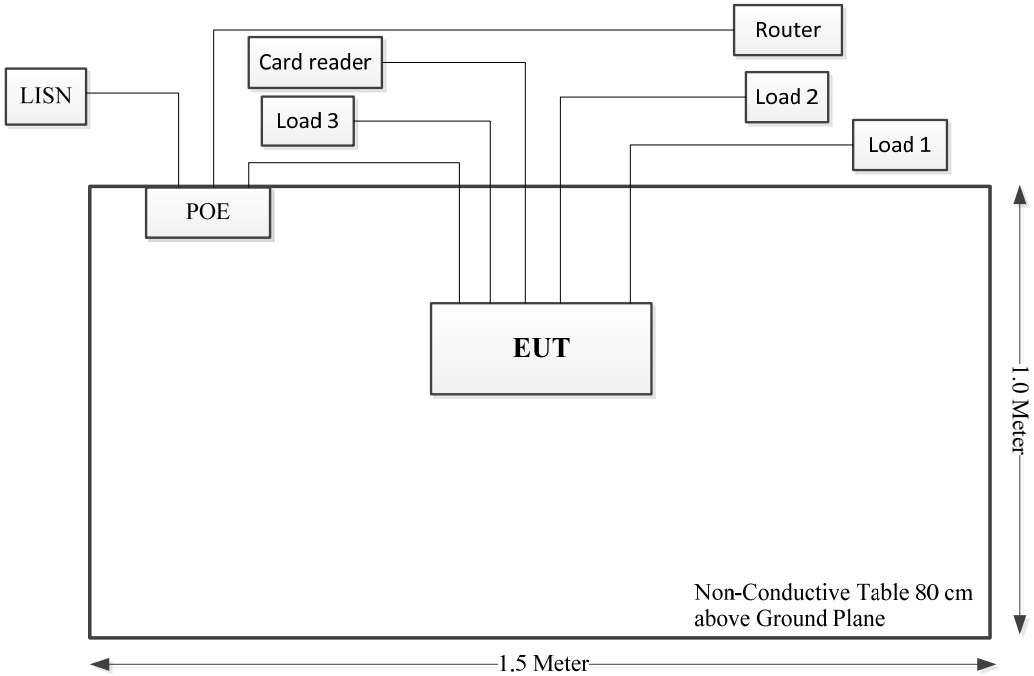

M2：



Radiated emissions:
M1：




M2：



## 1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

| Parameter | Measurement Uncertainty |
|---|---|
| radiated Emissions | 9kHz~30MHz: 4.12dB<br>30M~200MHz: 4.15 dB,200M~1GHz: 5.61 dB,1G~6GHz: 5.14 dB,<br>6G~18GHz: 5.93 dB,18G~26.5G:5.47 dB,26.5G~40G:5.63 dB |
| Temperature | ±1℃ |
| Humidity | ±5% |
| DC and low frequency voltages | ±0.4% |
| Duty Cycle | 1% |
| AC Power Lines Conducted Emission | 2.8 dB (150 kHz to 30 MHz) |

# 2. SUMMARY OF TEST RESULTS

| Standard(s) Section | Description of Test | Result |
|---|---|---|
| FCC§15.207 | AC Line Conducted Emission | Compliance |
| FCC§15.209 §15.205 | Radiated Emission Test | Compliance |
| FCC§15.203 | Antenna Requirement | Compliance |

# 3. REQUIREMENTS AND TEST PROCEDURES

## 3.1 AC Line Conducted Emissions

### 3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

| | Conducted limit (dBμV) | |
|---|---|---|
| Frequency of emission (MHz) | Quasi-peak | Average |
| 0.15-0.5 | 66 to 56* | 56 to 46* |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

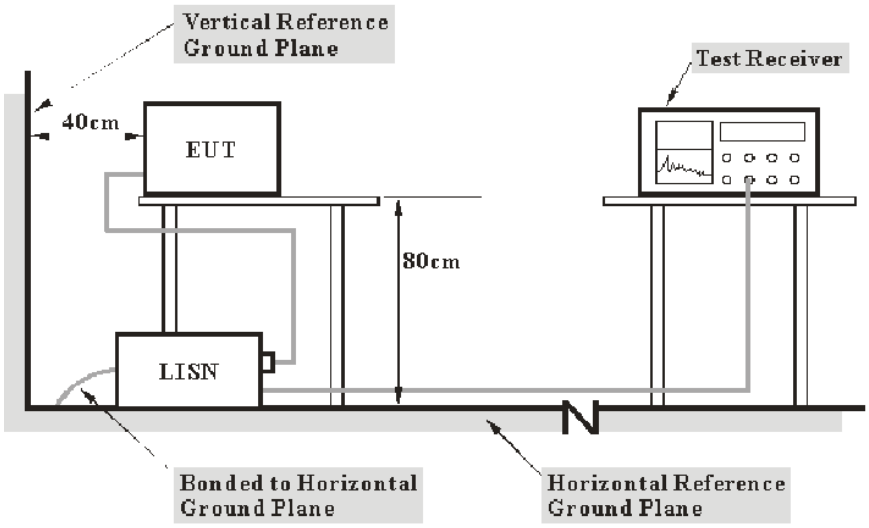
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

### 3.1.2 EUT Setup




Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with 120 V/60 Hz AC power source.

### 3.1.3 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range | IF B/W |
|---|---|
| 150 kHz – 30 MHz | 9 kHz |

### 3.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

### 3.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

## 3.2 Radiation Spurious Emissions

### 3.2.1 Applicable Standard

FCC §15.209

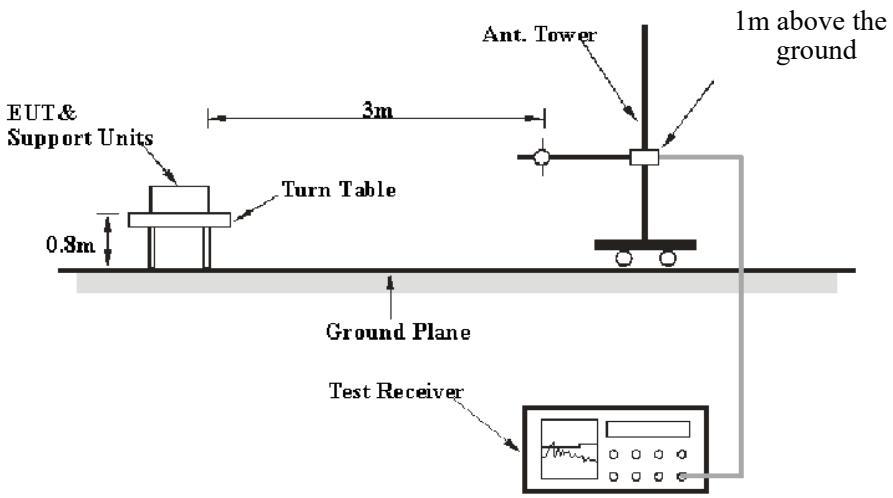
(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field strength (microvolts/meter) | Measurement distance (meters) |
|---|---|---|
| 0.009-0.490 | 2400/F(kHz) | 300 |
| 0.490-1.705 | 24000/F(kHz) | 30 |
| 1.705-30.0 | 30 | 30 |
| 30-88 | 100** | 3 |
| 88-216 | 150** | 3 |
| 216-960 | 200** | 3 |
| Above 960 | 500 | 3 |

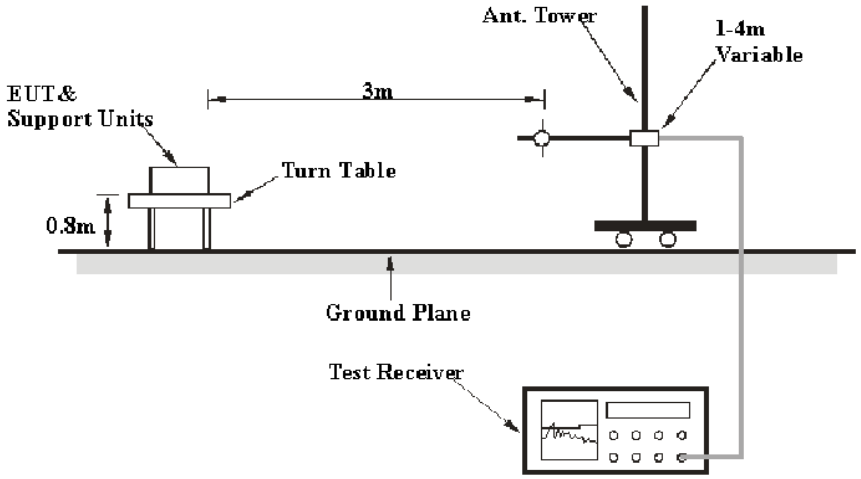
**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permItted under other sections of this part, e.g., §§15.231 and 15.241.

### 3.2.2 EUT Setup

9kHz-30MHz:



30MHz-1GHz:




The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 limits.

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

### 3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 1 GHz.

During the radiated emission test, the EMI test Receiver was set with the following configurations:

| Frequency Range | RBW | Video B/W | Measurement |
|---|---|---|---|
| 9 kHz – 150 kHz | 200 Hz | 1 kHz | QP/Average |
| 150 kHz – 30 MHz | 9 kHz | 30 kHz | QP/Average |
| 30 MHz – 1000 MHz | 120 kHz | 300 kHz | QP |

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP/Average measurement

### 3.2.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

## 3.3 Antenna Requirement

### 3.3.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

### 3.3.2 Judgment

Please refer to the Antenna Information detail in Section 1.

# 4. Test DATA AND RESULTS

## 4.1 AC Line Conducted Emissions

| | | | |
|---|---|---|---|
| Serial Number: | CR22060019-RF-S1 | Test Date: | 2022-08-06 |
| Test Site: | CE | Test Mode: | Transmitting |
| Tester: | Vic Du | Test Result: | Pass |

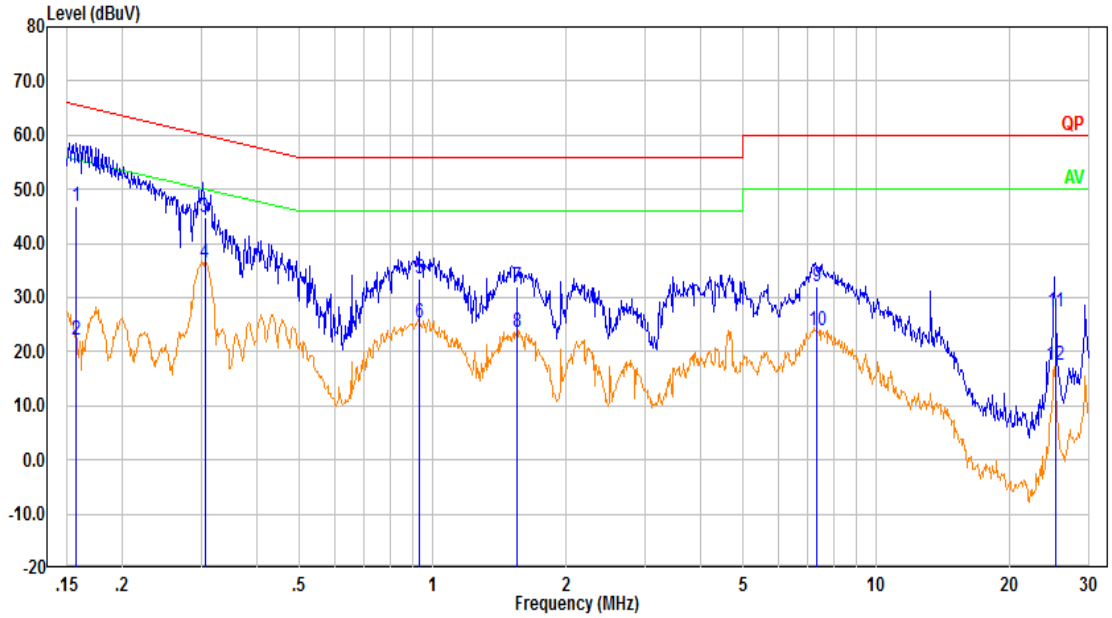
| **Environmental Conditions:** | | | | | |
|---|---|---|---|---|---|
| Temperature: (℃) | 27.1 | Relative Humidity: (%) | 72 | ATM Pressure: (kPa) | 99.9 |

**Test Equipment List and Details:**

| Manufacturer | Description | Model | Serial Number | Calibration Date | Calibration Due Date |
|---|---|---|---|---|---|
| R&S | LISN | ENV216 | 101134 | 2022-04-01 | 2023-03-31 |
| R&S | EMI Test Receiver | ESR3 | 102726 | 2022-07-15 | 2023-07-14 |
| MICRO-COAX | Coaxial Cable | UTIFLEX | C-0200-01 | 2021-08-08 | 2022-08-07 |
| Audix | Test Software | E3 | 190306 (V9) | N/A | N/A |

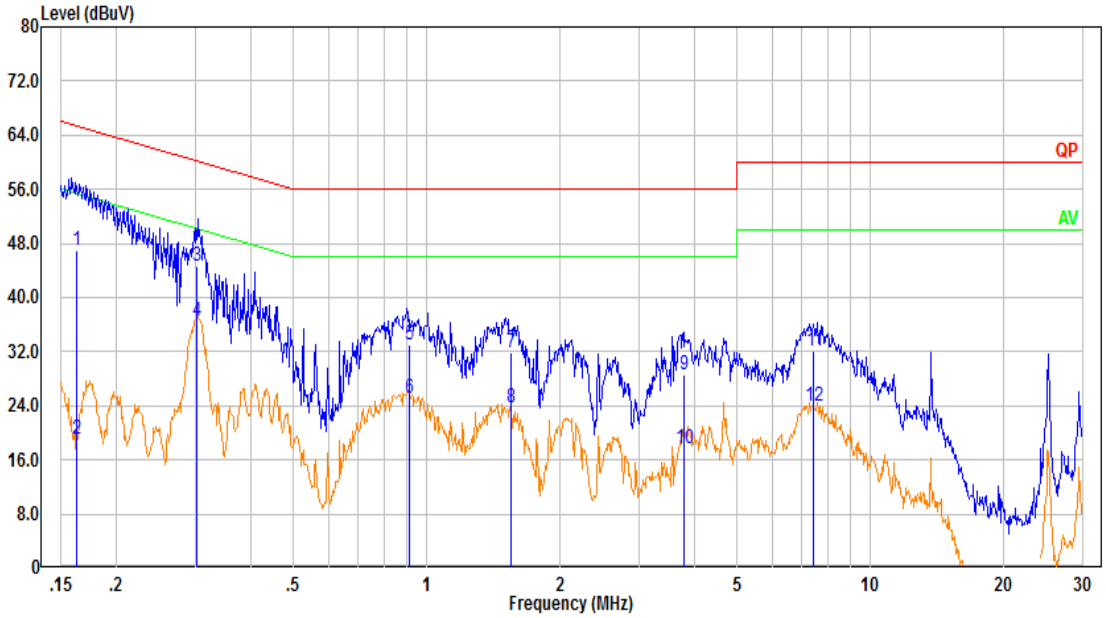
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Adapter mode:
Line:



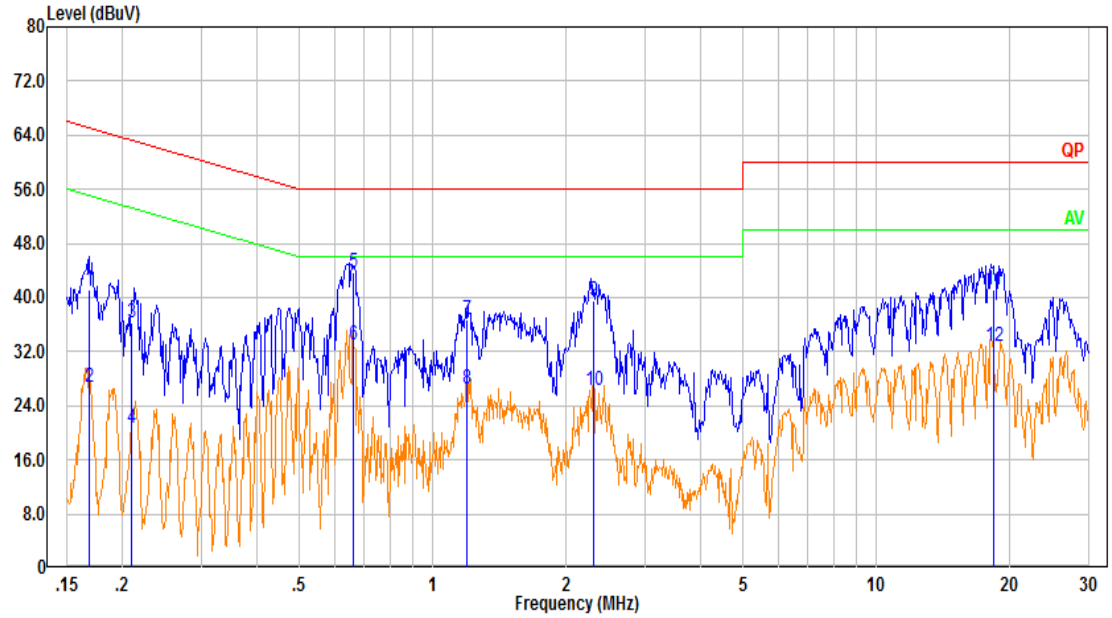

| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB) | Result (dBµV) | Limit (dBµV) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.157 | 37.37 | 9.61 | 46.98 | 65.64 | 18.66 | QP |
| 2 | 0.157 | 12.48 | 9.61 | 22.09 | 55.64 | 33.55 | Average |
| 3 | 0.306 | 35.19 | 9.61 | 44.80 | 60.08 | 15.28 | QP |
| 4 | 0.306 | 26.90 | 9.61 | 36.51 | 50.08 | 13.57 | Average |
| 5 | 0.933 | 23.82 | 9.62 | 33.44 | 56.00 | 22.56 | QP |
| 6 | 0.933 | 15.86 | 9.62 | 25.48 | 46.00 | 20.52 | Average |
| 7 | 1.552 | 22.36 | 9.63 | 31.98 | 56.00 | 24.02 | QP |
| 8 | 1.552 | 13.96 | 9.63 | 23.59 | 46.00 | 22.41 | Average |
| 9 | 7.330 | 22.33 | 9.66 | 32.00 | 60.00 | 28.00 | QP |
| 10 | 7.330 | 14.14 | 9.66 | 23.81 | 50.00 | 26.19 | Average |
| 11 | 25.281 | 17.48 | 9.81 | 27.29 | 60.00 | 32.71 | QP |
| 12 | 25.281 | 7.60 | 9.81 | 17.41 | 50.00 | 32.59 | Average |

Neutral:



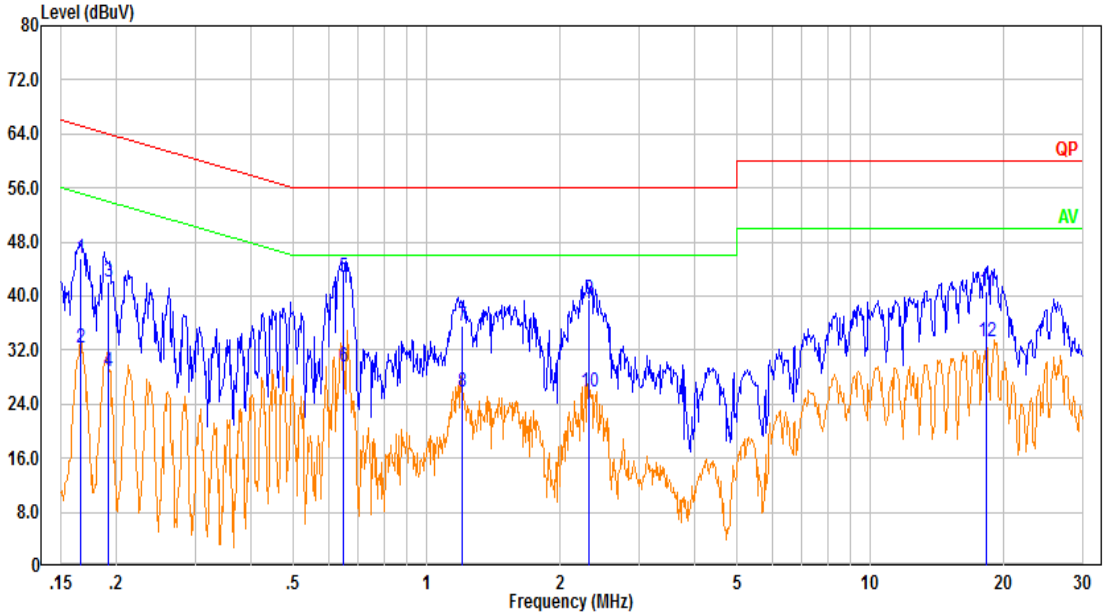

| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB) | Result (dBµV) | Limit (dBµV) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.162 | 37.40 | 9.61 | 47.01 | 65.36 | 18.35 | QP |
| 2 | 0.162 | 9.54 | 9.61 | 19.15 | 55.36 | 36.21 | Average |
| 3 | 0.303 | 35.03 | 9.61 | 44.64 | 60.15 | 15.51 | QP |
| 4 | 0.303 | 26.99 | 9.61 | 36.60 | 50.15 | 13.55 | Average |
| 5 | 0.914 | 23.39 | 9.62 | 33.01 | 56.00 | 22.99 | QP |
| 6 | 0.914 | 15.54 | 9.62 | 25.16 | 46.00 | 20.84 | Average |
| 7 | 1.551 | 22.16 | 9.63 | 31.78 | 56.00 | 24.22 | QP |
| 8 | 1.551 | 14.08 | 9.63 | 23.71 | 46.00 | 22.29 | Average |
| 9 | 3.802 | 19.03 | 9.65 | 28.68 | 56.00 | 27.32 | QP |
| 10 | 3.802 | 8.01 | 9.65 | 17.66 | 46.00 | 28.34 | Average |
| 11 | 7.445 | 22.46 | 9.66 | 32.12 | 60.00 | 27.88 | QP |
| 12 | 7.445 | 14.31 | 9.66 | 23.97 | 50.00 | 26.03 | Average |

POE mode:
Line:




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB) | Result (dBµV) | Limit (dBµV) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.169 | 31.62 | 9.61 | 41.23 | 65.03 | 23.80 | QP |
| 2 | 0.169 | 17.20 | 9.61 | 26.81 | 55.03 | 28.22 | Average |
| 3 | 0.210 | 26.56 | 9.61 | 36.17 | 63.22 | 27.05 | QP |
| 4 | 0.210 | 11.18 | 9.61 | 20.79 | 53.22 | 32.43 | Average |
| 5 | 0.664 | 34.10 | 9.62 | 43.72 | 56.00 | 12.28 | QP |
| 6 | 0.664 | 23.40 | 9.62 | 33.02 | 46.00 | 12.98 | Average |
| 7 | 1.192 | 27.06 | 9.62 | 36.68 | 56.00 | 19.32 | QP |
| 8 | 1.192 | 16.95 | 9.62 | 26.57 | 46.00 | 19.43 | Average |
| 9 | 2.298 | 29.97 | 9.64 | 39.61 | 56.00 | 16.39 | QP |
| 10 | 2.298 | 16.69 | 9.64 | 26.33 | 46.00 | 19.67 | Average |
| 11 | 18.390 | 31.42 | 9.76 | 41.18 | 60.00 | 18.82 | QP |
| 12 | 18.390 | 22.96 | 9.76 | 32.72 | 50.00 | 17.28 | Average |

Neutral:




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB) | Result (dBµV) | Limit (dBµV) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.166 | 36.00 | 9.61 | 45.61 | 65.16 | 19.55 | QP |
| 2 | 0.166 | 22.61 | 9.61 | 32.22 | 55.16 | 22.94 | Average |
| 3 | 0.192 | 32.56 | 9.61 | 42.17 | 63.95 | 21.78 | QP |
| 4 | 0.192 | 19.25 | 9.61 | 28.86 | 53.95 | 25.09 | Average |
| 5 | 0.648 | 33.21 | 9.62 | 42.83 | 56.00 | 13.17 | QP |
| 6 | 0.648 | 19.91 | 9.62 | 29.53 | 46.00 | 16.47 | Average |
| 7 | 1.203 | 25.95 | 9.62 | 35.57 | 56.00 | 20.43 | QP |
| 8 | 1.203 | 16.25 | 9.62 | 25.87 | 46.00 | 20.13 | Average |
| 9 | 2.319 | 29.88 | 9.64 | 39.51 | 56.00 | 16.49 | QP |
| 10 | 2.319 | 16.18 | 9.64 | 25.82 | 46.00 | 20.18 | Average |
| 11 | 18.268 | 31.10 | 9.69 | 40.79 | 60.00 | 19.21 | QP |
| 12 | 18.268 | 23.61 | 9.69 | 33.30 | 50.00 | 16.70 | Average |

## 4.2 Radiation Spurious Emissions

| | | | |
|---|---|---|---|
| Serial Number: | CR22060019-RF-S1 | Test Date: | 2022-08-08~2022-08-19 |
| Test Site: | 966-2 | Test Mode: | Transmitting |
| Tester: | Gary Ling, Carl Xue | Test Result: | Pass |

**Environmental Conditions:**

| | | | | | |
|---|---|---|---|---|---|
| Temperature: (℃) | 27.9~28.1 | Relative Humidity: (%) | 59~61 | ATM Pressure: (kPa) | 99.9~100.2 |

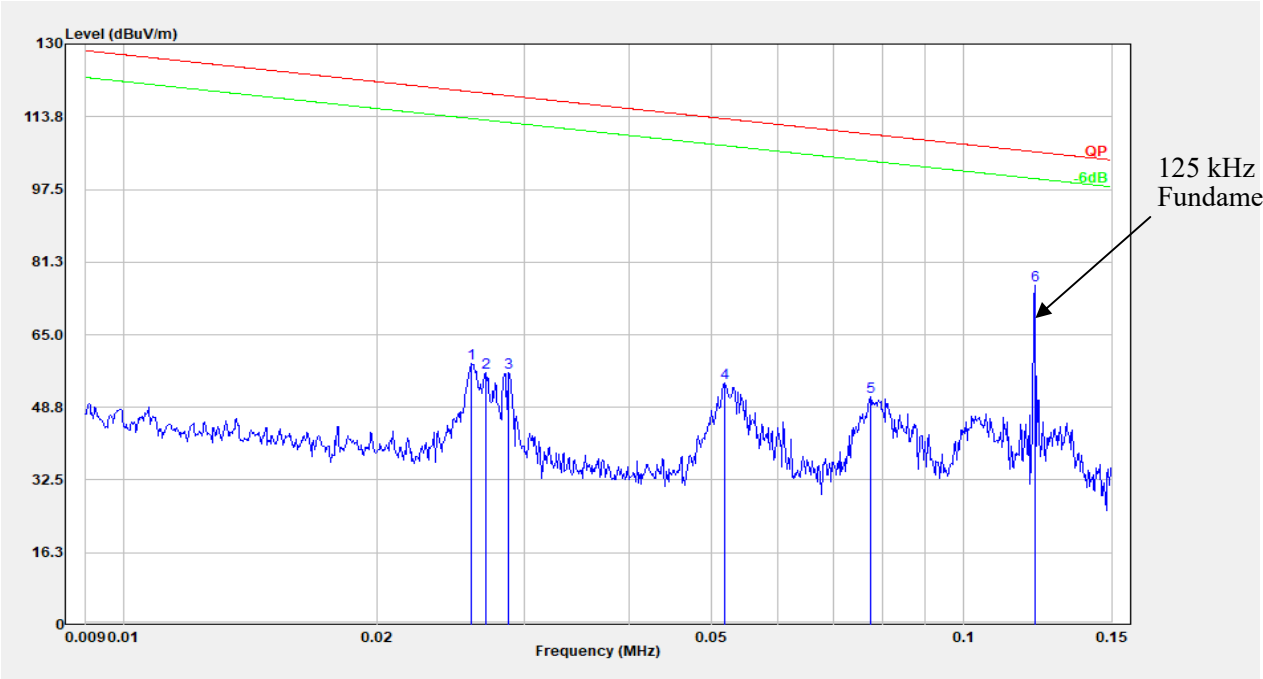
**Test Equipment List and Details:**

| Manufacturer | Description | Model | Serial Number | Calibration Date | Calibration Due Date |
|---|---|---|---|---|---|
| TESEQ | HF Loop Antenna | HLA6120 | 33561 | 2021-02-03 | 2024-02-02 |
| Sunol Sciences | Antenna | JB6 | A082520-5 | 2020-10-19 | 2023-10-18 |
| R&S | EMI Test Receiver | ESR3 | 102724 | 2022-07-15 | 2023-07-14 |
| TIMES MICROWAVE | Coaxial Cable | LMR-600-UltraFlex | C-0470-02 | 2022-07-17 | 2023-07-16 |
| TIMES MICROWAVE | Coaxial Cable | LMR-600-UltraFlex | C-0780-01 | 2022-07-17 | 2023-07-16 |
| Sonoma | Amplifier | 310N | 186165 | 2022-07-17 | 2023-07-16 |
| Audix | Test Software | E3 | 201021 (V9) | N/A | N/A |

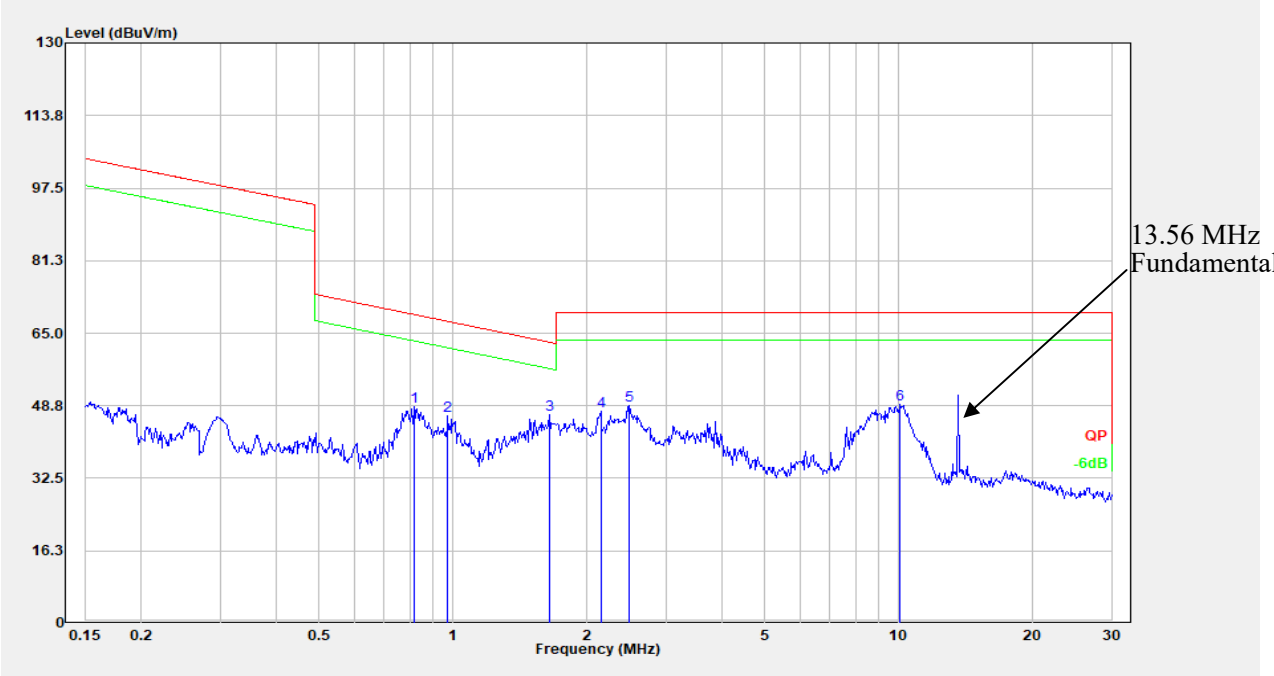
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

**Test Data:**
1) 9kHz-30MHz:

Adapter mode:
Parallel:

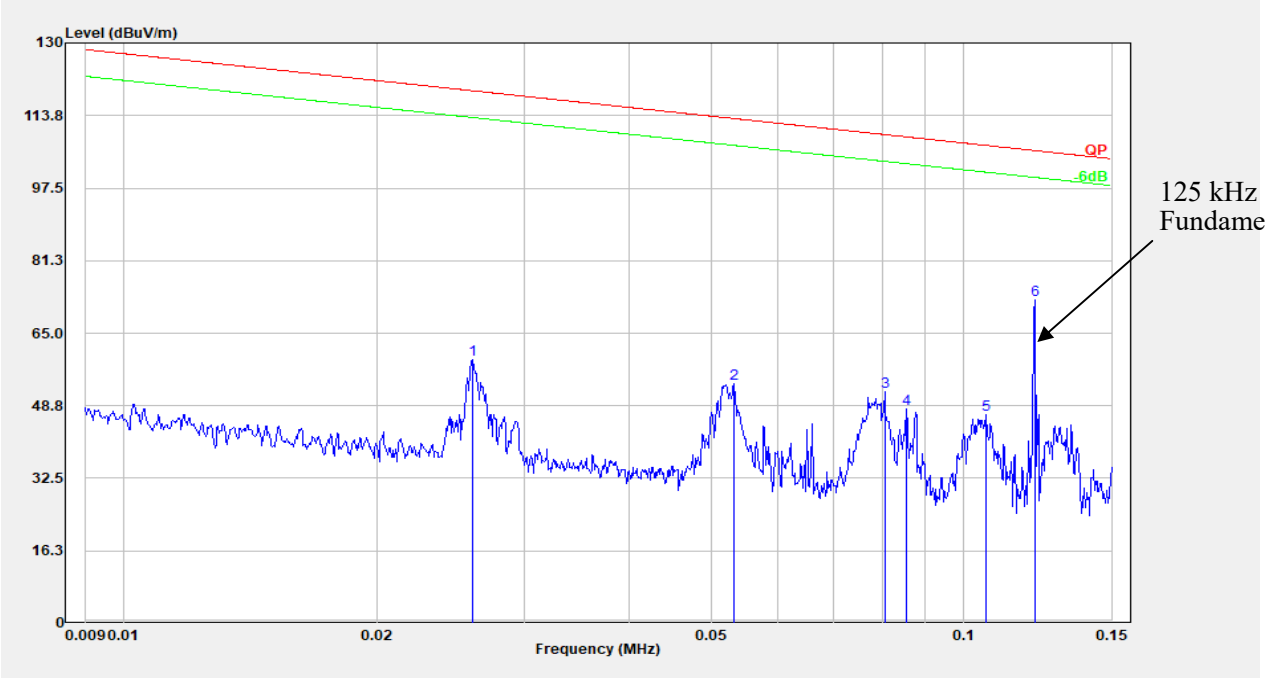



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.026 | 38.06 | 20.41 | 58.47 | 119.33 | 60.86 | Peak |
| 2 | 0.027 | 36.09 | 20.41 | 56.50 | 118.99 | 62.49 | Peak |
| 3 | 0.029 | 36.08 | 20.41 | 56.49 | 118.45 | 61.96 | Peak |
| 4 | 0.052 | 33.92 | 20.41 | 54.33 | 113.30 | 58.97 | Peak |
| 5 | 0.077 | 30.81 | 20.37 | 51.18 | 109.83 | 58.65 | Peak |
| 6 | 0.121 | 55.86 | 20.22 | 76.08 | 105.91 | 29.83 | Peak |

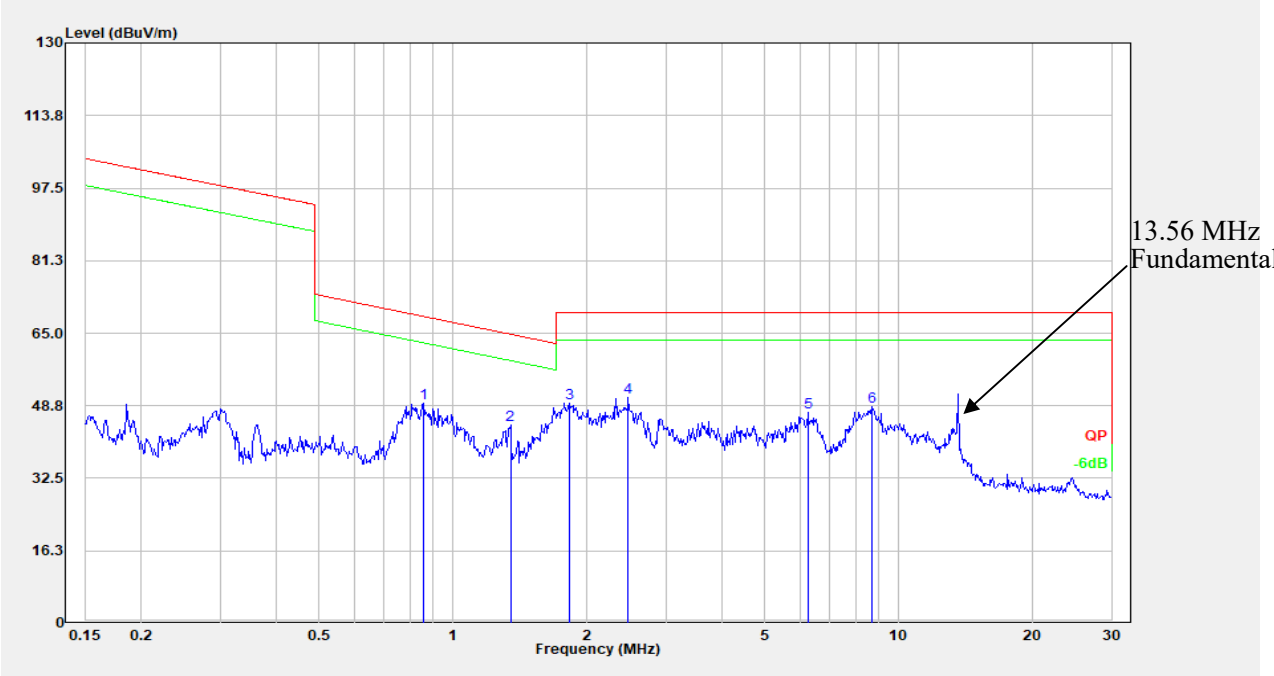



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.817 | 28.56 | 20.03 | 48.59 | 69.26 | 20.67 | Peak |
| 2 | 0.974 | 26.44 | 20.03 | 46.47 | 67.71 | 21.24 | Peak |
| 3 | 1.645 | 26.72 | 19.95 | 46.67 | 63.06 | 16.39 | Peak |
| 4 | 2.144 | 27.50 | 19.96 | 47.46 | 69.54 | 22.08 | Peak |
| 5 | 2.487 | 28.75 | 19.97 | 48.72 | 69.54 | 20.82 | Peak |
| 6 | 10.072 | 28.77 | 20.30 | 49.07 | 69.54 | 20.47 | Peak |

Perpendicular:

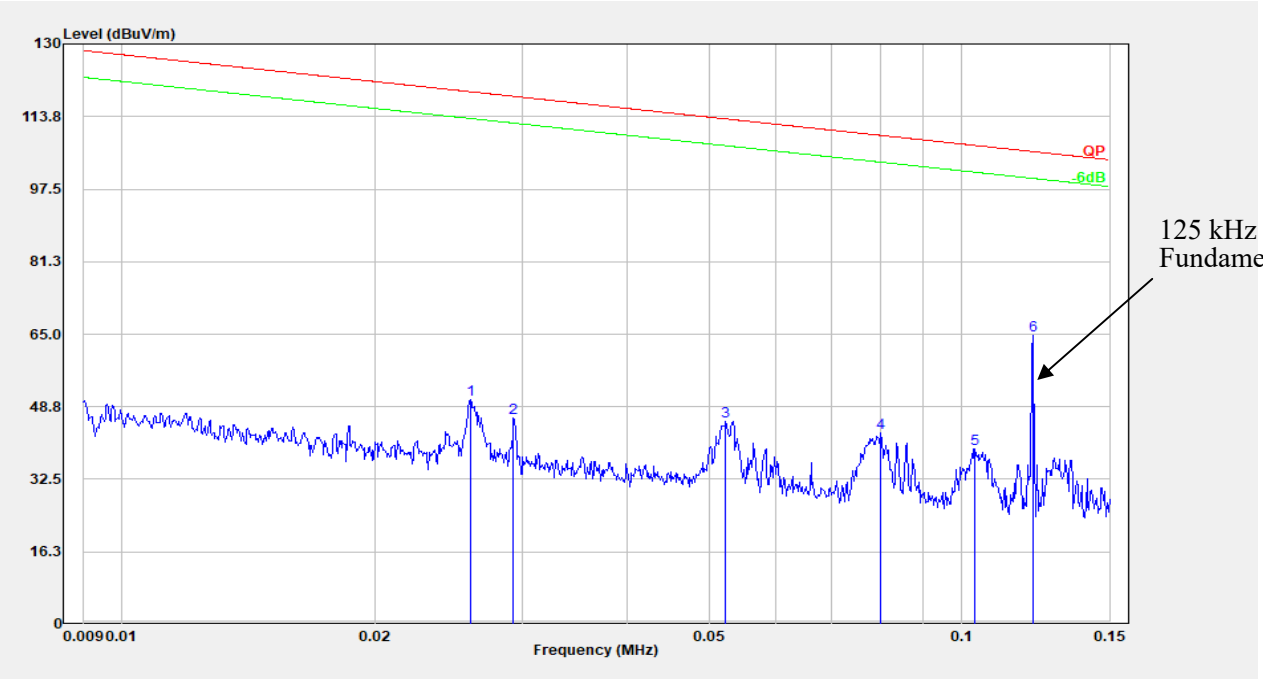



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.026 | 38.62 | 20.41 | 59.03 | 119.31 | 60.28 | Peak |
| 2 | 0.053 | 33.37 | 20.41 | 53.78 | 113.08 | 59.30 | Peak |
| 3 | 0.081 | 31.54 | 20.35 | 51.89 | 109.48 | 57.59 | Peak |
| 4 | 0.085 | 27.67 | 20.32 | 47.99 | 108.97 | 60.98 | Peak |
| 5 | 0.106 | 26.66 | 20.22 | 46.88 | 107.06 | 60.19 | Peak |
| 6 | 0.121 | 52.16 | 20.22 | 72.38 | 105.92 | 33.53 | Peak |

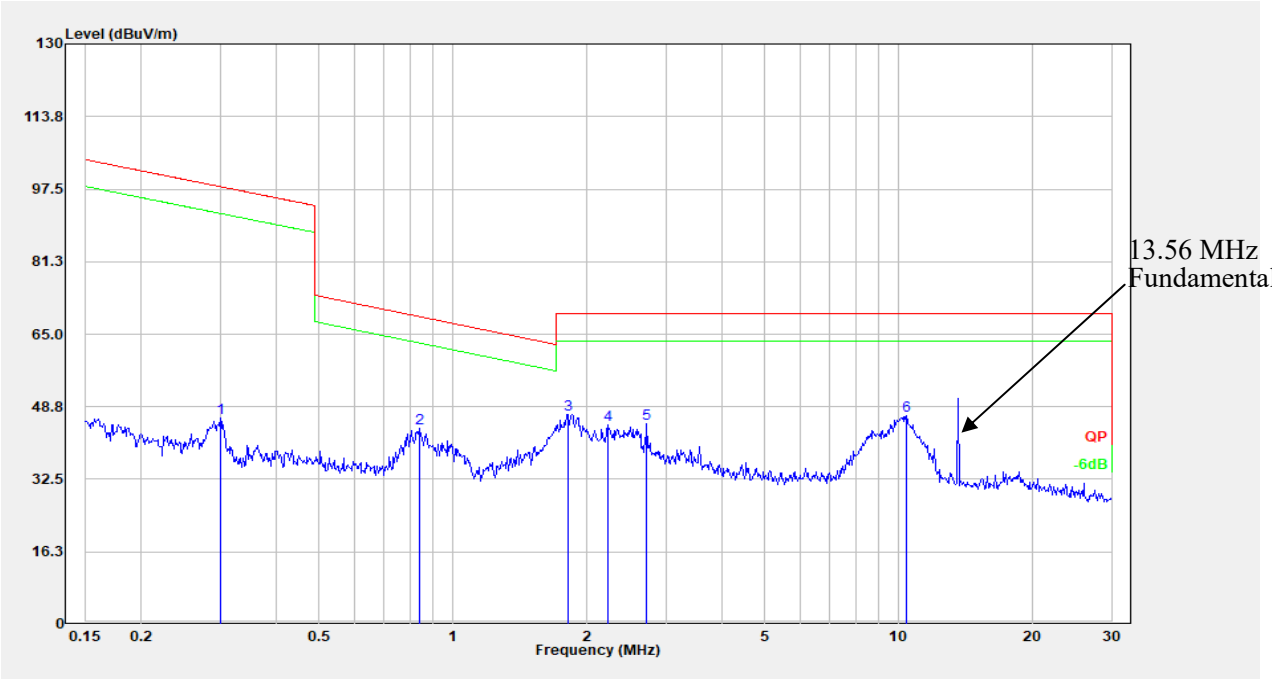



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.857 | 29.26 | 20.03 | 49.29 | 68.84 | 19.55 | Peak |
| 2 | 1.345 | 24.44 | 19.97 | 44.42 | 64.84 | 20.43 | Peak |
| 3 | 1.819 | 29.49 | 19.95 | 49.45 | 69.54 | 20.09 | Peak |
| 4 | 2.474 | 30.70 | 19.97 | 50.67 | 69.54 | 18.87 | Peak |
| 5 | 6.252 | 27.26 | 20.05 | 47.31 | 69.54 | 22.23 | Peak |
| 6 | 8.683 | 28.47 | 20.19 | 48.66 | 69.54 | 20.88 | Peak |

Ground-parallel:

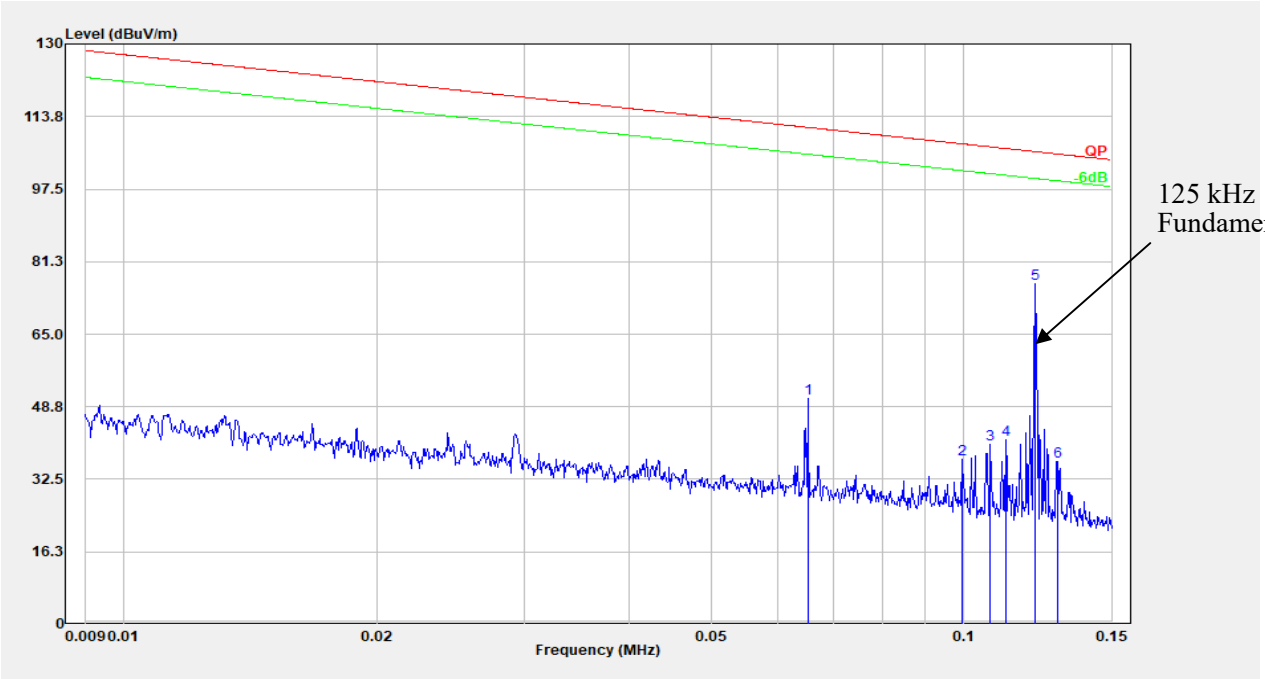



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.026 | 29.88 | 20.41 | 50.29 | 119.31 | 69.02 | Peak |
| 2 | 0.029 | 25.75 | 20.41 | 46.16 | 118.28 | 72.12 | Peak |
| 3 | 0.052 | 25.07 | 20.41 | 45.48 | 113.22 | 67.74 | Peak |
| 4 | 0.080 | 22.65 | 20.35 | 43.00 | 109.53 | 66.53 | Peak |
| 5 | 0.104 | 19.17 | 20.22 | 39.39 | 107.28 | 67.89 | Peak |
| 6 | 0.121 | 44.63 | 20.22 | 64.85 | 105.91 | 41.06 | Peak |

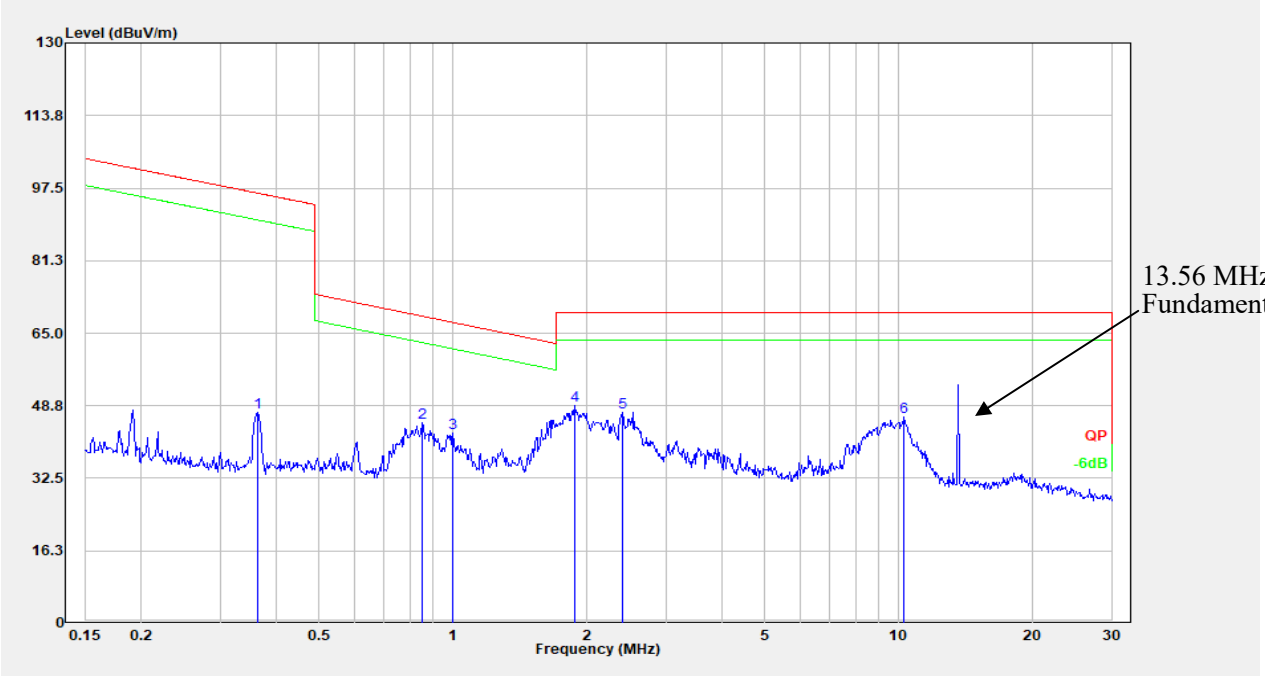



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.300 | 26.07 | 20.12 | 46.19 | 98.05 | 51.86 | Peak |
| 2 | 0.844 | 23.87 | 20.03 | 43.90 | 68.98 | 25.08 | Peak |
| 3 | 1.810 | 27.00 | 19.95 | 46.96 | 69.54 | 22.58 | Peak |
| 4 | 2.225 | 24.69 | 19.96 | 44.65 | 69.54 | 24.89 | Peak |
| 5 | 2.721 | 24.87 | 19.97 | 44.84 | 69.54 | 24.70 | Peak |
| 6 | 10.397 | 26.52 | 20.31 | 46.83 | 69.54 | 22.71 | Peak |

POE mode:
Parallel:

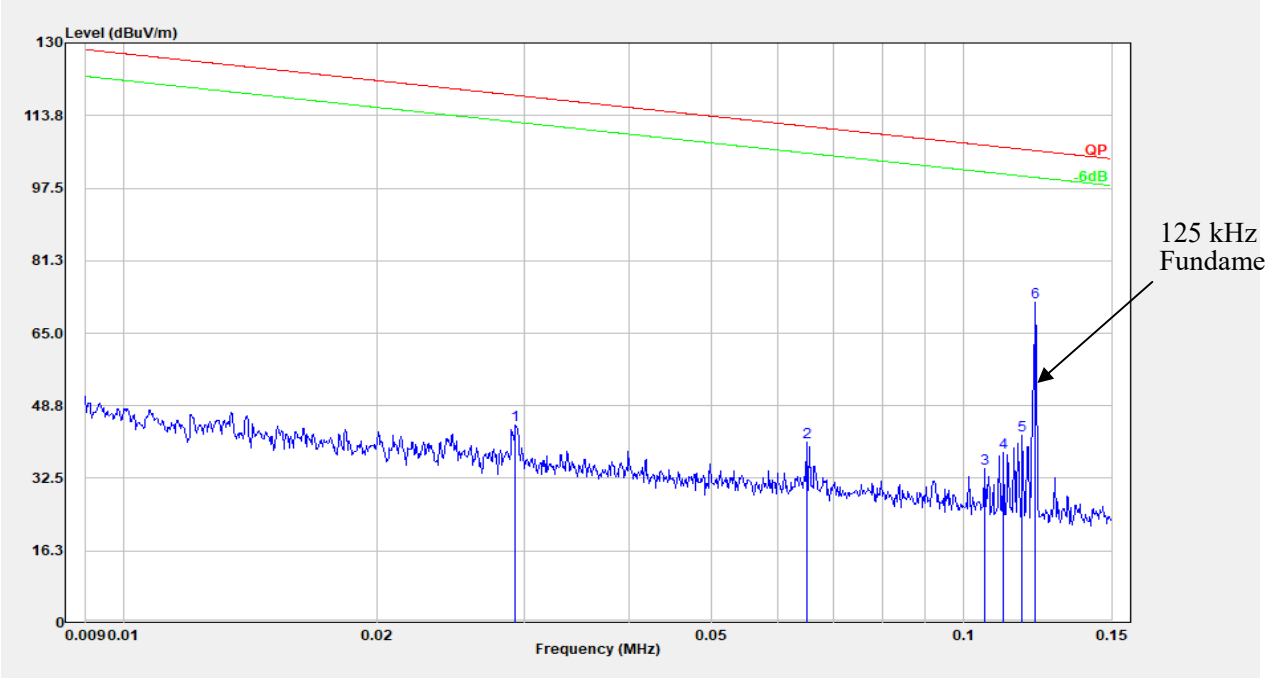



| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.065 | 30.14 | 20.42 | 50.56 | 111.32 | 60.76 | Peak |
| 2 | 0.099 | 16.67 | 20.22 | 36.89 | 107.65 | 70.76 | Peak |
| 3 | 0.108 | 20.22 | 20.22 | 40.44 | 106.97 | 66.53 | Peak |
| 4 | 0.112 | 21.20 | 20.22 | 41.42 | 106.60 | 65.18 | Peak |
| 5 | 0.122 | 55.96 | 20.22 | 76.18 | 105.89 | 29.71 | Peak |
| 6 | 0.129 | 16.18 | 20.22 | 36.40 | 105.38 | 68.98 | Peak |



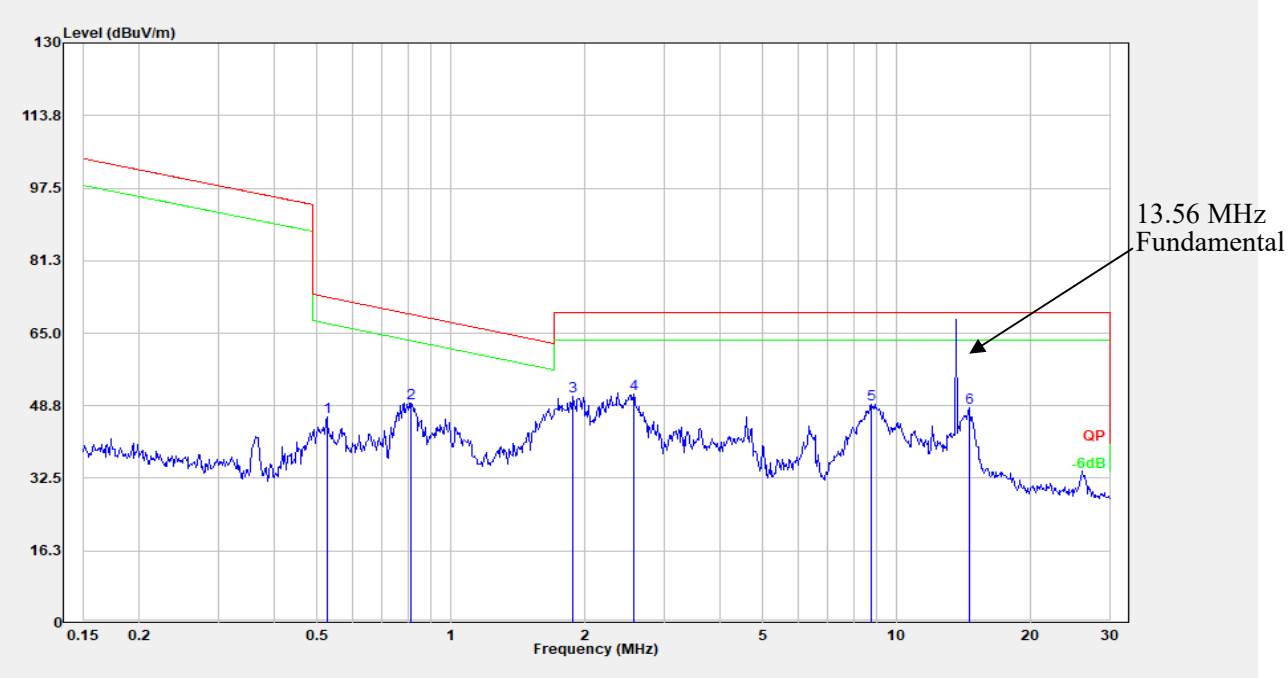

| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.363 | 27.23 | 20.09 | 47.32 | 96.40 | 49.08 | Peak |
| 2 | 0.853 | 24.97 | 20.03 | 45.00 | 68.89 | 23.88 | Peak |
| 3 | 1.000 | 22.52 | 20.03 | 42.55 | 67.48 | 24.92 | Peak |
| 4 | 1.878 | 28.83 | 19.96 | 48.79 | 69.54 | 20.75 | Peak |
| 5 | 2.396 | 27.39 | 19.97 | 47.36 | 69.54 | 22.18 | Peak |
| 6 | 10.288 | 25.82 | 20.31 | 46.13 | 69.54 | 23.41 | Peak |

Perpendicular:



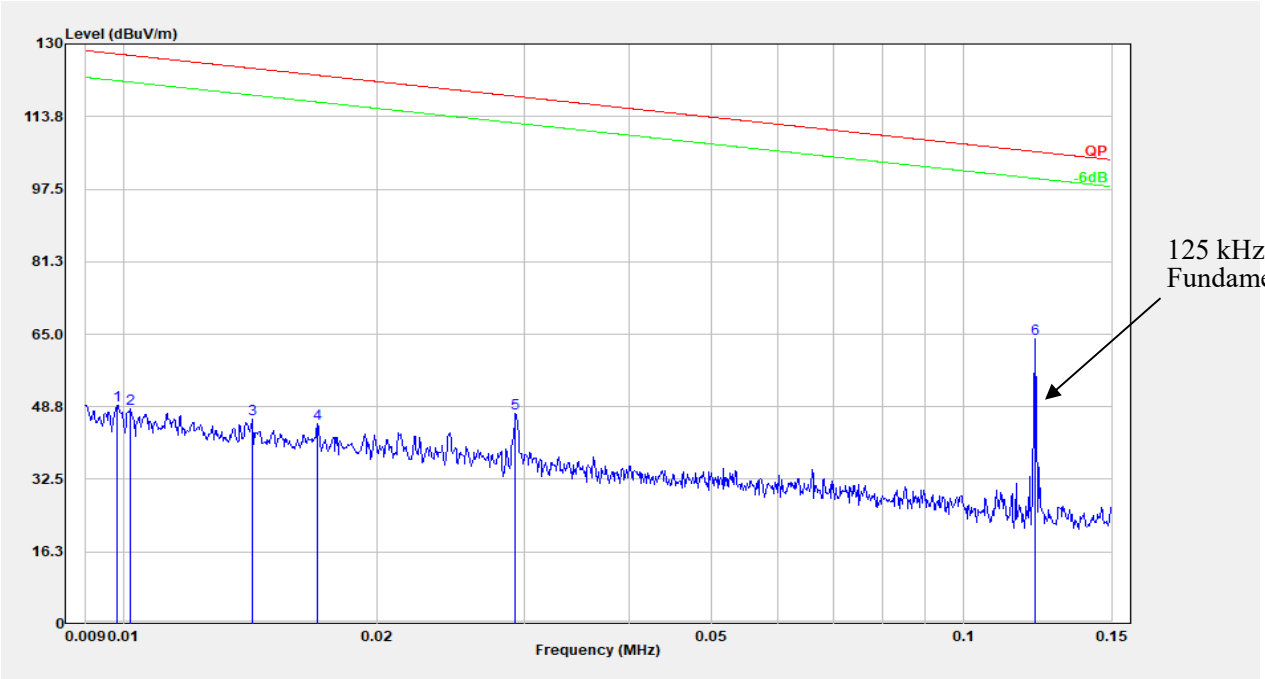

| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.029 | 24.03 | 20.41 | 44.44 | 118.28 | 73.84 | Peak |
| 2 | 0.065 | 20.23 | 20.42 | 40.65 | 111.34 | 70.69 | Peak |
| 3 | 0.106 | 14.37 | 20.22 | 34.59 | 107.11 | 72.53 | Peak |
| 4 | 0.112 | 17.96 | 20.22 | 38.18 | 106.65 | 68.46 | Peak |
| 5 | 0.117 | 21.97 | 20.22 | 42.19 | 106.21 | 64.01 | Peak |
| 6 | 0.122 | 51.82 | 20.22 | 72.04 | 105.89 | 33.85 | Peak |

**Horizontal**



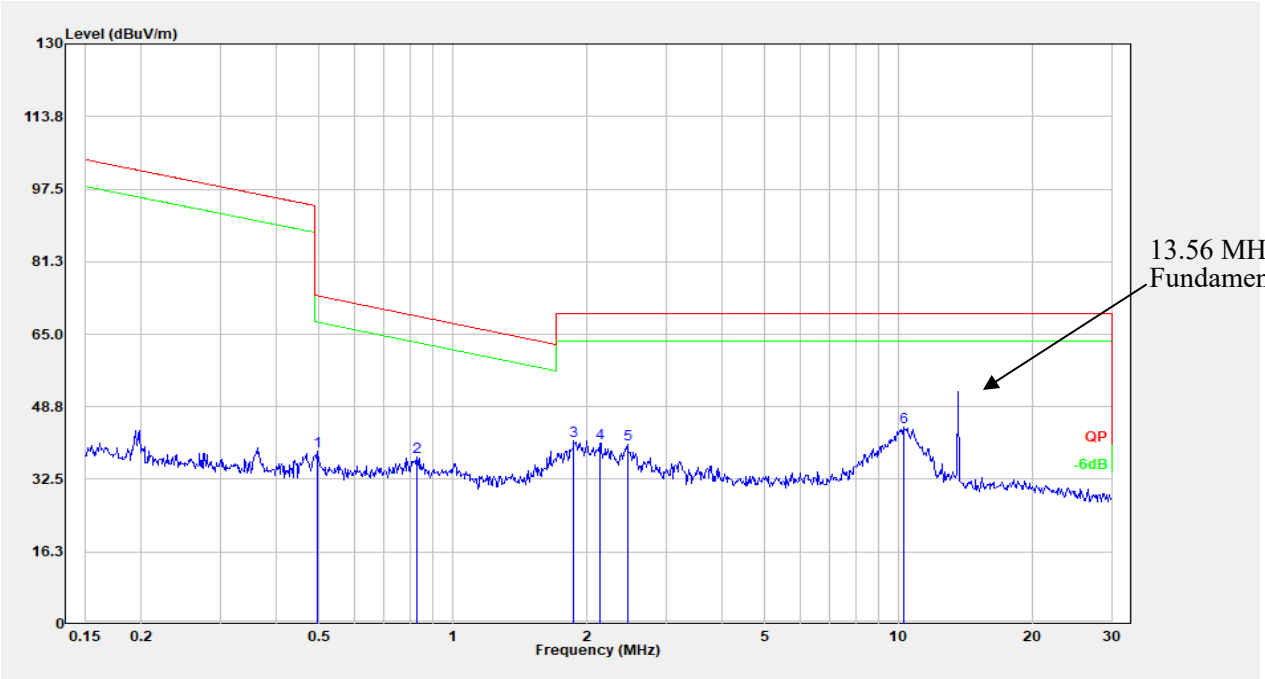

| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.527 | 26.29 | 20.02 | 46.31 | 73.16 | 26.85 | Peak |
| 2 | 0.813 | 29.37 | 20.03 | 49.40 | 69.31 | 19.91 | Peak |
| 3 | 1.878 | 30.80 | 19.96 | 50.76 | 69.54 | 18.78 | Peak |
| 4 | 2.567 | 31.48 | 19.97 | 51.45 | 69.54 | 18.09 | Peak |
| 5 | 8.776 | 28.92 | 20.20 | 49.12 | 69.54 | 20.42 | Peak |
| 6 | 14.517 | 27.89 | 20.41 | 48.30 | 69.54 | 21.24 | Peak |

Ground-parallel:
**Horizontal**




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.010 | 28.63 | 20.51 | 49.14 | 127.76 | 78.63 | Peak |
| 2 | 0.010 | 27.92 | 20.51 | 48.43 | 127.44 | 79.02 | Peak |
| 3 | 0.014 | 25.44 | 20.51 | 45.95 | 124.56 | 78.62 | Peak |
| 4 | 0.017 | 24.38 | 20.51 | 44.89 | 123.00 | 78.10 | Peak |
| 5 | 0.029 | 26.74 | 20.41 | 47.15 | 118.28 | 71.13 | Peak |
| 6 | 0.121 | 43.65 | 20.22 | 63.87 | 105.92 | 42.04 | Peak |

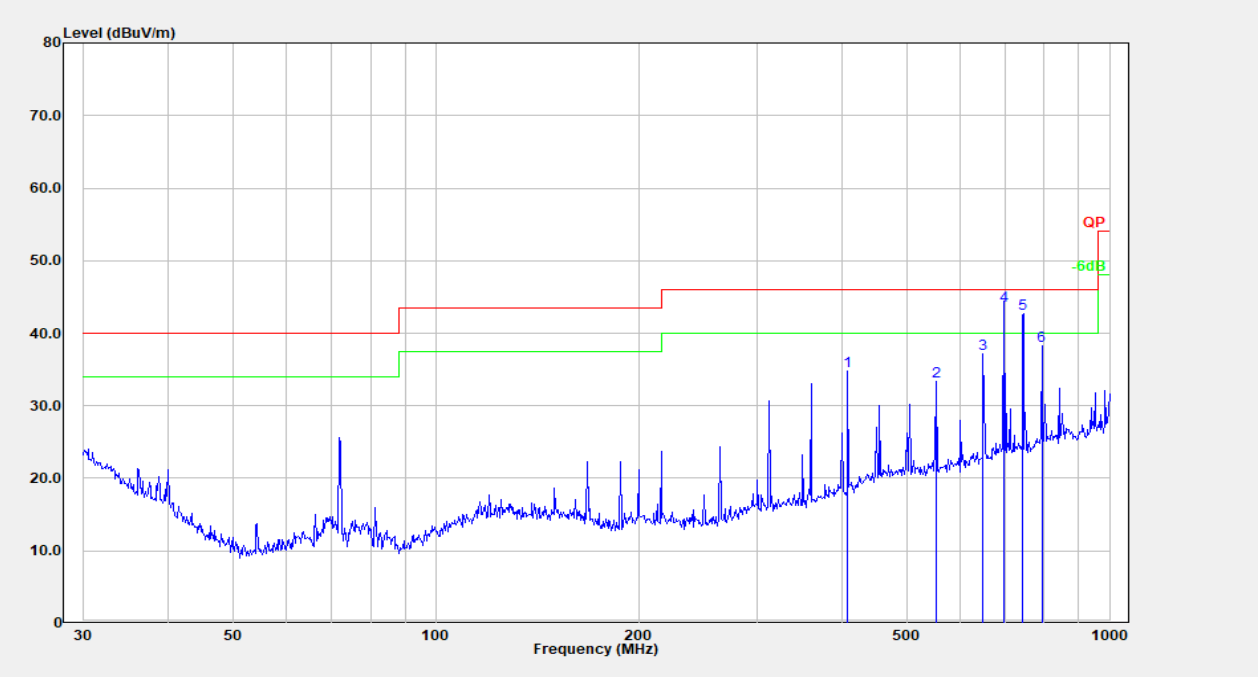
**Horizontal**




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 0.497 | 18.79 | 20.02 | 38.81 | 73.68 | 34.87 | Peak |
| 2 | 0.830 | 17.41 | 20.03 | 37.44 | 69.12 | 31.68 | Peak |
| 3 | 1.868 | 21.04 | 19.96 | 40.99 | 69.54 | 28.55 | Peak |
| 4 | 2.133 | 20.66 | 19.96 | 40.63 | 69.54 | 28.91 | Peak |
| 5 | 2.461 | 20.30 | 19.97 | 40.27 | 69.54 | 29.27 | Peak |
| 6 | 10.288 | 23.92 | 20.31 | 44.22 | 69.54 | 25.32 | Peak |

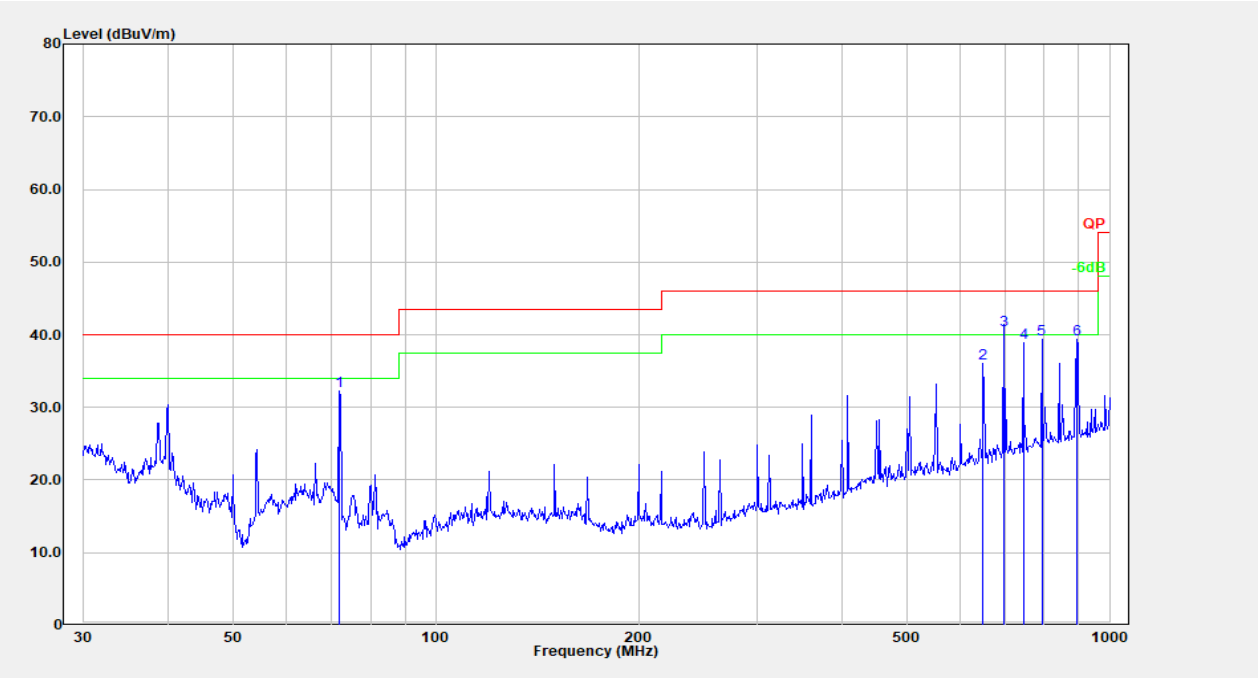
2) 30 MHz~1GHz

Adapter mode:
**Horizontal**




| No. | Frequency (MHz) | Reading (dBμV) | Factor (dB/m) | Result (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 408.946 | 43.49 | -8.66 | 34.84 | 46.00 | 11.16 | Peak |
| 2 | 552.883 | 39.24 | -5.95 | 33.29 | 46.00 | 12.71 | Peak |
| 3 | 649.660 | 41.57 | -4.40 | 37.16 | 46.00 | 8.84 | Peak |
| 4 | 696.022 | 47.41 | -3.66 | 43.75 | 46.00 | 2.25 | QP |
| 5 | 744.033 | 45.74 | -3.12 | 42.62 | 46.00 | 3.38 | QP |
| 6 | 793.396 | 40.74 | -2.51 | 38.23 | 46.00 | 7.77 | Peak |

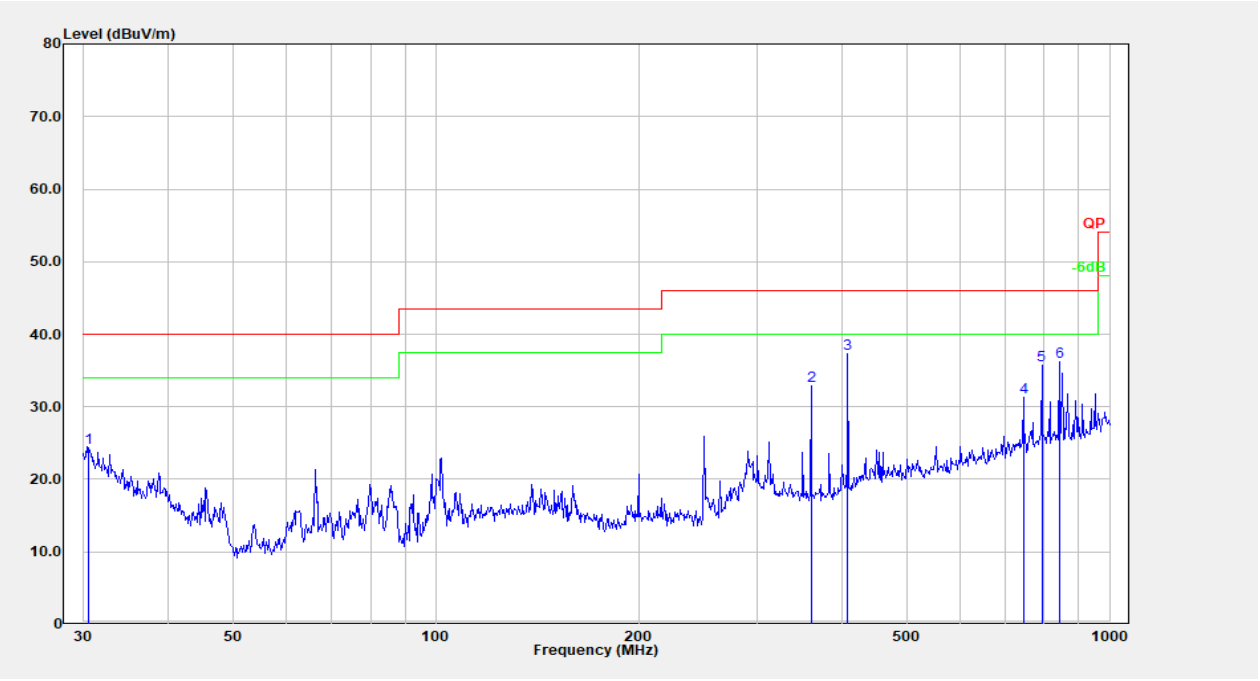
**Vertical**




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 71.832 | 49.20 | -16.91 | 32.29 | 40.00 | 7.71 | Peak |
| 2 | 649.660 | 40.39 | -4.40 | 35.99 | 46.00 | 10.01 | Peak |
| 3 | 696.050 | 44.29 | -3.66 | 40.63 | 46.00 | 5.37 | QP |
| 4 | 744.866 | 41.97 | -3.11 | 38.86 | 46.00 | 7.14 | Peak |
| 5 | 793.396 | 41.81 | -2.51 | 39.30 | 46.00 | 6.70 | Peak |
| 6 | 893.857 | 40.78 | -1.35 | 39.43 | 46.00 | 6.57 | Peak |

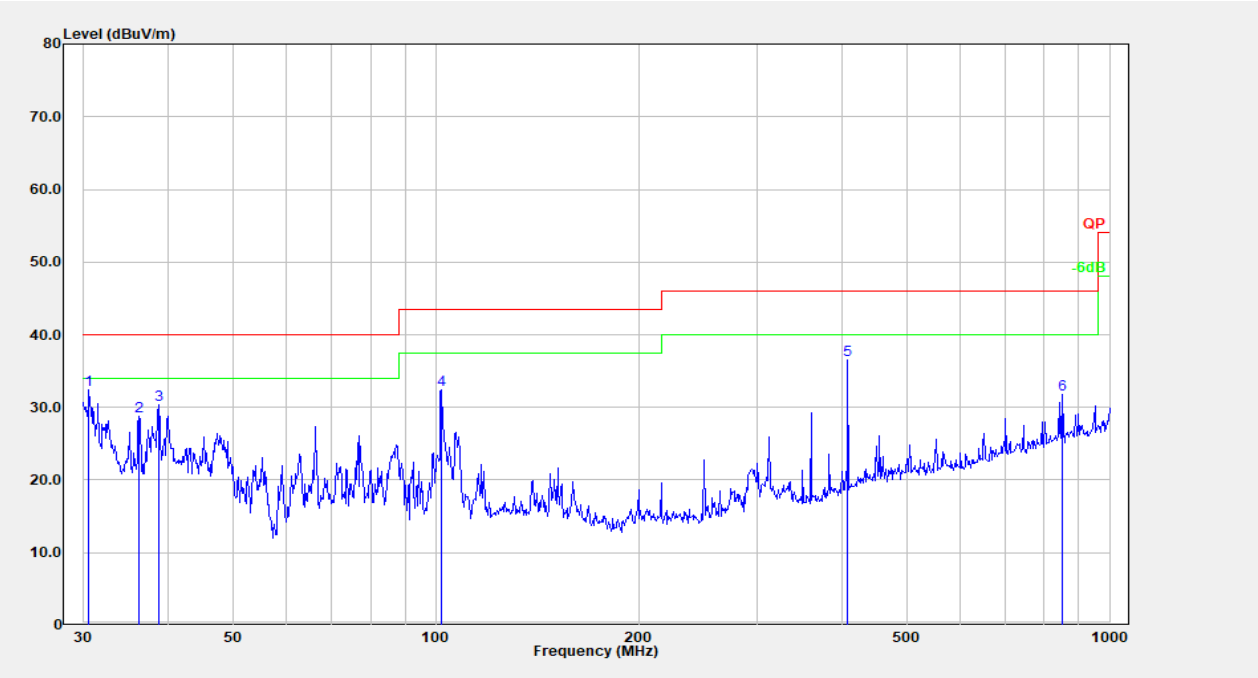
POE mode:

**Horizontal**




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 30.531 | 28.52 | -4.20 | 24.32 | 40.00 | 15.68 | Peak |
| 2 | 360.448 | 42.97 | -10.04 | 32.93 | 46.00 | 13.07 | Peak |
| 3 | 408.946 | 45.97 | -8.66 | 37.31 | 46.00 | 8.69 | Peak |
| 4 | 744.866 | 34.37 | -3.11 | 31.26 | 46.00 | 14.74 | Peak |
| 5 | 793.396 | 38.24 | -2.51 | 35.73 | 46.00 | 10.27 | Peak |
| 6 | 842.130 | 38.11 | -1.86 | 36.25 | 46.00 | 9.75 | Peak |

**Vertical**




| No. | Frequency (MHz) | Reading (dBµV) | Factor (dB/m) | Result (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector |
|---|---|---|---|---|---|---|---|
| 1 | 30.531 | 36.68 | -4.20 | 32.48 | 40.00 | 7.52 | Peak |
| 2 | 36.254 | 37.45 | -8.62 | 28.83 | 40.00 | 11.17 | Peak |
| 3 | 38.752 | 40.85 | -10.52 | 30.33 | 40.00 | 9.67 | Peak |
| 4 | 102.001 | 46.59 | -14.22 | 32.37 | 43.50 | 11.13 | Peak |
| 5 | 408.946 | 45.18 | -8.66 | 36.52 | 46.00 | 9.48 | Peak |
| 6 | 851.035 | 33.56 | -1.73 | 31.83 | 46.00 | 14.17 | Peak |

******* END OF REPORT *******