# FCC RADIO TEST REPORT

| | | |
|---|---|---|
| **FCC ID** | **:** | **A4RGQML3** |
| **Equipment** | **:** | **Phone** |
| **Applicant** | **:** | **Google LLC**<br>**1600 Amphitheatre Parkway,**<br>**Mountain View, California, 94043 USA** |
| **Standard** | **:** | **FCC Part 15 Subpart C §15.209** |

**The product was received on Mar. 24, 2022 and testing was performed from Apr. 09, 2022 to May 29, 2022. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.**

Louis Wu

**Approved by: Louis Wu**

***Sporton International Inc. EMC & Wireless Communications Laboratory***
*No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)*

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# History of this test report

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| FR1O2843-05H | 01 | Initial issue of report | Jun. 08, 2022 |
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# Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---|---|---|---|---|
| 3.1 | 15.207 | AC Power Line Conducted Emissions | Pass | 21.78 dB under the limit at 0.440MHz |
| 3.2 | 15.215(c) | 20dB Spectrum Bandwidth | Reporting only | - |
| | 2.1049 | 99% OBW Spectrum Bandwidth | Reporting only | - |
| 3.3 | 15.209 | Field Strength of Fundamental Emissions | Pass | Max level -13.39 dBµV/m at 0.147 MHz |
| | | Radiated Spurious Emissions | Pass | 8.74 dB under the limit at 30.000MHz |
| 3.4 | 15.203 | Antenna Requirements | Pass | - |

| **Declaration of Conformity:** |
|---|
| 1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.<br>2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation". |
| **Comments and Explanations:** |
| The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity. |

**Reviewed by: William Chen**

**Report Producer: Lucy Wu**

# 1. General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature | |
|---|---|
| **Equipment** | Phone |
| **FCC ID** | A4RGQML3 |
| **EUT supports Radios application** | GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/NFC/GNSS/ WPC/WPT<br>WLAN 11b/g/n HT20<br>WLAN 11a/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80/VHT160<br>WLAN 11ax HE20/HE40/HE80/HE160<br>Bluetooth BR/EDR/LE |

**Remark:** The above EUT's information was declared by manufacturer.

| EUT Information List | |
|---|---|
| **S/N** | **Performed Test Item** |
| 23121FDH20000R | RF Near Field measurement |
| 22281FDH20003J<br>22281FDH20009B | Radiated Spurious Emissions |
| 23121FDH20005C | Conducted Emission |

## 1.2 Product Specification of Equipment Under Test

| Product Specification is subjective to this standard | |
|---|---|
| **Transmitter Frequency Range** | 110 kHz ~ 148.5 kHz |
| **99%OBW** | 0.666 kHz |
| **Antenna Type** | Coil Antenna |
| **Type of Modulation** | ASK |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

## 1.3 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.4 Testing Location

| | | | |
|---|---|---|---|
| **Test Site** | Sporton International Inc. EMC & Wireless Communications Laboratory | | |
| **Test Site Location** | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City 333, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 | | |
| **Test Site No.** | **Sporton Site No.** | | |
| | TH03-HY | CO05-HY | 03CH07-HY |
| **Test Engineer** | Oscar Chi | Calvin Wang | Jesse Wang, Stan Hsieh and Ken Wu |
| **Temperature (℃)** | 22~24 | 23~26 | 24.3~25.2 |
| **Relative Humidity (%)** | 53~55 | 45~55 | 58.6~59.7 |

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190

## 1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.209
- FCC KDB 414788 D01 Radiated Test Site v01r01
- ANSI C63.10-2013

**Remark:**

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.

# 2. Test Configuration of Equipment Under Test

## 2.1 Descriptions of Test Mode

Investigation has been done on all the possible configurations.

The following table is a list of the test modes shown in this test report.

| Test Items | |
|---|---|
| AC Power Line Conducted Emissions | 20dB Spectrum Bandwidth |
| Field Strength of Fundamental Emissions | |
| Radiated Emissions 9kHz~30MHz | Radiated Emissions 30MHz~1GHz |

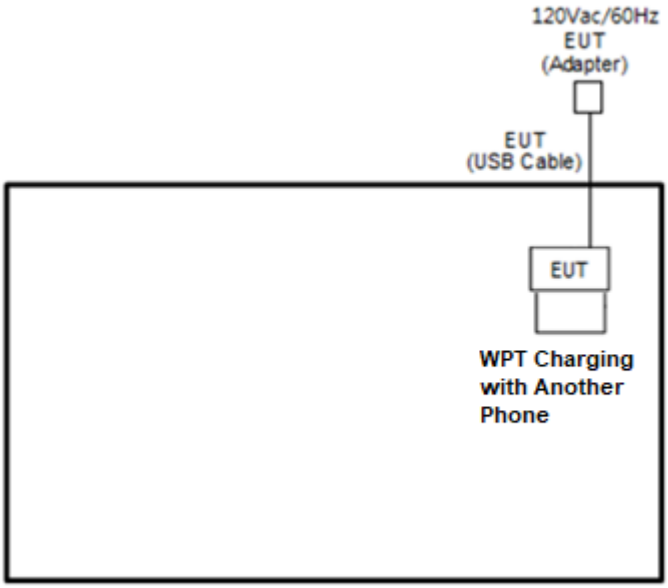
The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape) and accessory (Adapter or Earphone), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Z plane with Adapter as worst plane.

| Test Cases | |
|---|---|
| **AC Conducted Emission** | Mode 1: WPT Charging with Another Phone + USB Cable 1 (Charging from Adapter 2); Battery 50% |

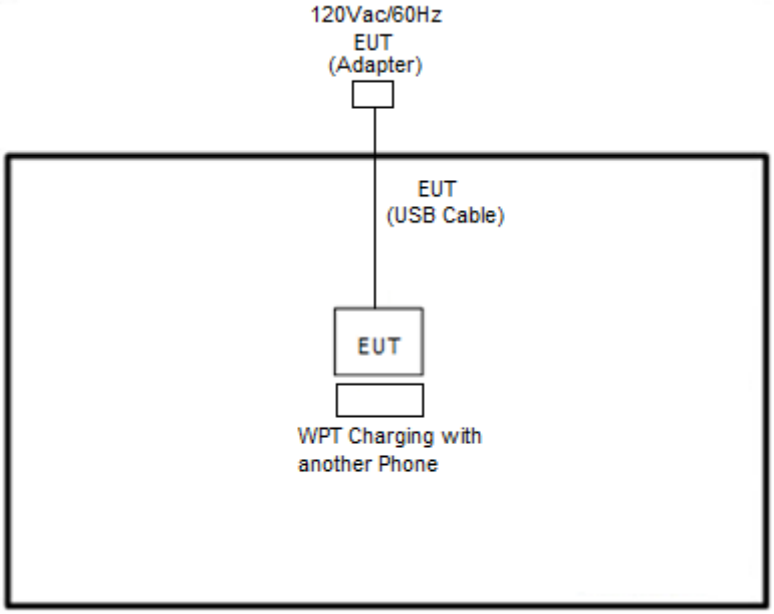
**Remark:**
1. For Radiated Test Cases, the tests were performed with Adapter 2 and USB Cable 1.
2. During the preliminary scan, the battery residual power does not affect the test result significantly. The AC power line conducted emission test is performed with a general setup condition.
3. During the preliminary scan, the battery residual power does not affect the test result significantly. The WPT test is performed with a general setup condition.

## 2.2 Connection Diagram of Test System

**<AC Conducted Emission Mode>**




**<WPT Mode>**




## 2.3 Support Unit used in test configuration and system

| Item | Equipment | Brand Name | Model Name | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | Phone | Google | N/A | A4RGQML3 | N/A | N/A |

## 2.4 EUT Operation Test Setup

The Wireless Charging with another phone via wireless power transfer function.

# 3. Test Results

## 3.1 AC Power Line Conducted Emissions Measurement

### 3.1.1 Limit of AC Conducted Emission

For equipment 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.

| Frequency of Emission (MHz) | Conducted Limit (dBμV) | |
|---|---|---|
| | 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.

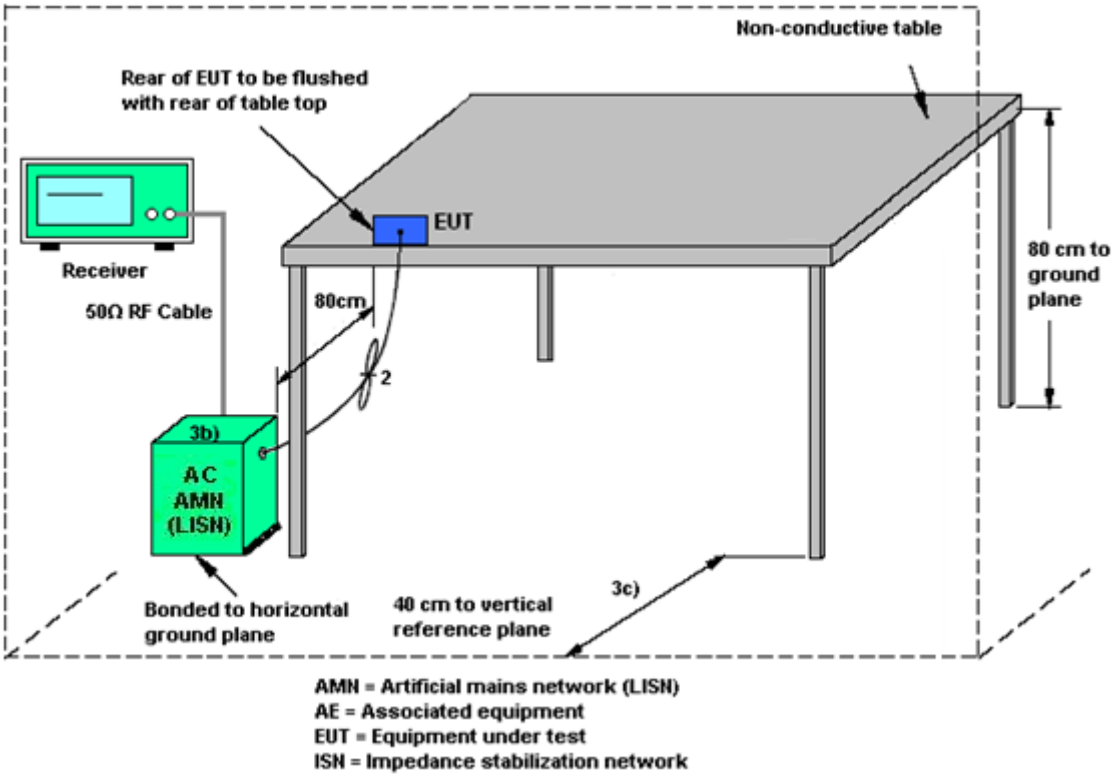
### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

### 3.1.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

### 3.1.4 Test setup




### 3.1.5 Test Result of AC Conducted Emission

Please refer to Appendix A.

# 3.2 20dB and 99% OBW Spectrum Bandwidth Measurement

## 3.2.1 Limit

Reporting only

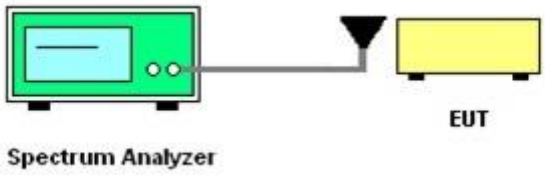
## 3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

## 3.2.3 Test Procedures

1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
2. The resolution bandwidth of 300 Hz and the video bandwidth of 300 Hz were used.
3. Measured the spectrum width with power higher than 20dB below carrier.
4. Measured the 99% OBW.

## 3.2.4 Test Setup




## 3.2.5 Test Result of RF Near Field Test Items

Please refer to Appendix B.

## 3.3 Radiated Emissions Measurement

### 3.3.1 Limit

The field strength of any emissions which appear band shall not exceed the general radiated emissions limits.

| Frequencies (MHz) | Field Strength (μV/m) | 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 |

### 3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

### 3.3.3 Measuring Instrument Setting

The following table is the setting of receiver:

| Receiver Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Frequency Range: 9kHz~150kHz | RBW 200Hz for QP |
| Frequency Range: 150kHz~30MHz | RBW 9kHz for QP |
| Frequency Range: 30MHz~1000MHz | RBW 120kHz for Peak |

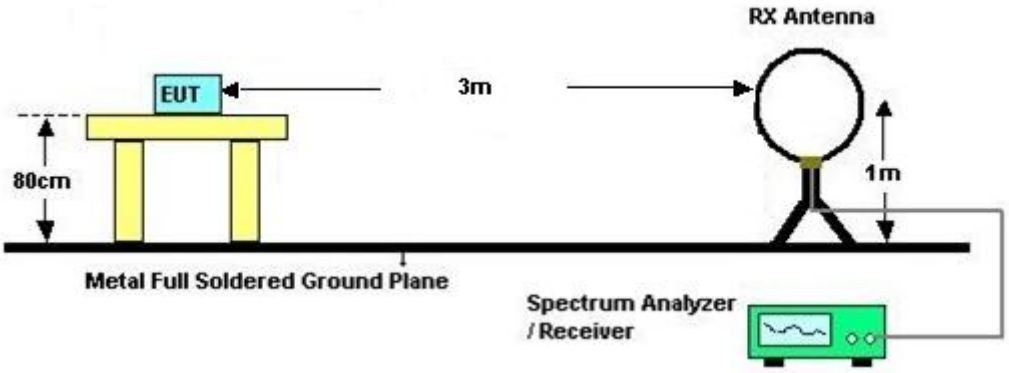
**Note:** The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz and 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

### 3.3.4 Test Procedures

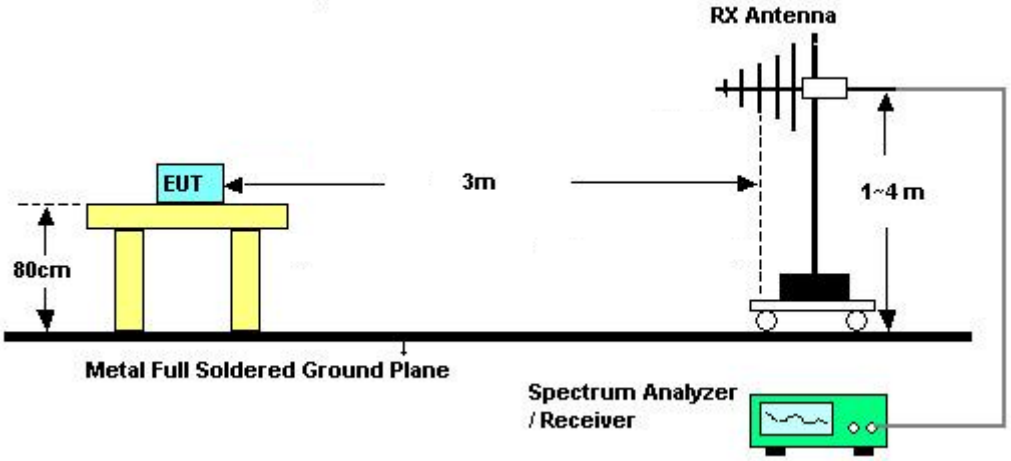
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver.
8. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-“.

### 3.3.5 Test Setup

**For radiated emissions below 30MHz**




**For radiated emissions above 30MHz**




### 3.3.6 Test Result of Radiated Emissions Measurement

Please refer to Appendix C.

**Remark:**

1. There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.
2. According to C63.10 radiated test, the EUT pre-scanned horizontal, vertical, and ground-parallel three polarization's, the worst case is horizontal & vertical polarization, test data of two mode was reported.

## 3.4 Antenna Requirements

### 3.4.1 Standard Applicable

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. 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 the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

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 rule.

### 3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

# 4. List of Measuring Equipment

| Instrument | Brand Name | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Bilog Antenna | TESEQ | CBL 6111D & 00800N1D01N -06 | 35419 & 03 | 30MHz~1GHz | Apr. 28, 2021 | Apr. 09, 2022 | Apr. 27, 2022 | Radiation (03CH07-HY) |
| Loop Antenna | Rohde & Schwarz | HFH2-Z2 | 100315 | 9 kHz~30 MHz | Jan. 07, 2022 | Apr. 09, 2022 | Jan. 06, 2023 | Radiation (03CH07-HY) |
| Preamplifier | COM-POWER | PA-103A | 161241 | 10MHz~1GHz | Oct. 04, 2021 | Apr. 09, 2022 | Oct. 03, 2022 | Radiation (03CH07-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | MY15682-4 | 30MHz to 18GHz | Feb. 23, 2022 | Apr. 09, 2022 | Feb. 22, 2023 | Radiation (03CH07-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | MY24971-4 | 9kHz to 18GHz | Feb. 23, 2022 | Apr. 09, 2022 | Feb. 22, 2023 | Radiation (03CH07-HY) |
| RF Cable | HUBER + SUHNER | SUCOFLEX 104 | MY28655-4 | 9kHz to 18GHz | Feb. 23, 2022 | Apr. 09, 2022 | Feb. 22, 2023 | Radiation (03CH07-HY) |
| Controller | EMEC | EM1000 | N/A | Control Ant Mast | N/A | Apr. 09, 2022 | N/A | Radiation (03CH07-HY) |
| Controller | MF | MF-7802 | N/A | Control Turn table | N/A | Apr. 09, 2022 | N/A | Radiation (03CH07-HY) |
| Antenna Mast | EMEC | AM-BS-4500E | N/A | Boresight mast 1M~4M | N/A | Apr. 09, 2022 | N/A | Radiation (03CH07-HY) |
| Turn Table | ChainTek | Chaintek 3000 | N/A | 0~360 Degree | N/A | Apr. 09, 2022 | N/A | Radiation (03CH07-HY) |
| Software | Audix | E3 | N/A | N/A | N/A | Apr. 09, 2022 | N/A | Radiation (03CH07-HY) |
| USB Data Logger | TECPEL | TR-32 | HE17XB2495 | N/A | Mar. 07, 2022 | Apr. 09, 2022 | Mar. 06, 2023 | Radiation (03CH07-HY) |
| EMI Test Receiver | Agilent | N9038A(MXE) | MY53290053 | 20Hz~26.5GHz | May 24, 2021 | Apr. 09, 2022 | May 23, 2022 | Radiation (03CH07-HY) |
| Hygrometer | TECPEL | DTM-303B | TP210073 | N/A | Nov. 16, 2021 | Apr. 11, 2022 | Nov. 15, 2022 | Near Field (TH03-HY) |
| Spectrum Analyzer | Rohde & Schwarz | FSP30 | 101329 | 9kHz~30GHz | Sep. 30, 2021 | Apr. 11, 2022 | Sep. 29, 2022 | Near Field (TH03-HY) |
| Nearby field probe | LANGER EMV-TECHNIK | LF-U5 | 02-559 | 100 kHz up to 50 MHz | Apr. 04, 2022 | Apr. 11, 2022 | Apr. 03, 2023 | Near Field (TH03-HY) |
| AC Power Source | ChainTek | APC-1000W | N/A | N/A | N/A | May 29, 2022 | N/A | Conduction (CO05-HY) |
| EMI Test Receiver | Rohde & Schwarz | ESR3 | 102388 | 9kHz~3.6GHz | Dec. 01, 2021 | May 29, 2022 | Nov. 30, 2022 | Conduction (CO05-HY) |
| Hygrometer | Testo | 608-H1 | 34913912 | N/A | Nov. 17, 2021 | May 29, 2022 | Nov. 16, 2022 | Conduction (CO05-HY) |
| LISN | Rohde & Schwarz | ENV216 | 100080 | 9kHz~30MHz | Dec. 03, 2021 | May 29, 2022 | Dec. 02, 2022 | Conduction (CO05-HY) |
| Software | Rohde & Schwarz | EMC32 | N/A | N/A | N/A | May 29, 2022 | N/A | Conduction (CO05-HY) |
| Pulse Limiter | SCHWARZBECK | VTSD 9561-F N | 00691 | N/A | Jul. 28, 2021 | May 29, 2022 | Jul. 27, 2022 | Conduction (CO05-HY) |
| LISN Cable | MVE | RG-400 | 260260 | N/A | Dec. 30, 2021 | May 29, 2022 | Dec. 29, 2022 | Conduction (CO05-HY) |

# 5. Uncertainty of Evaluation

**Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **3.1 dB** |

**Uncertainty of Radiated Emission Measurement (9 kHz ~ 30 MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **3.7 dB** |

**Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)**

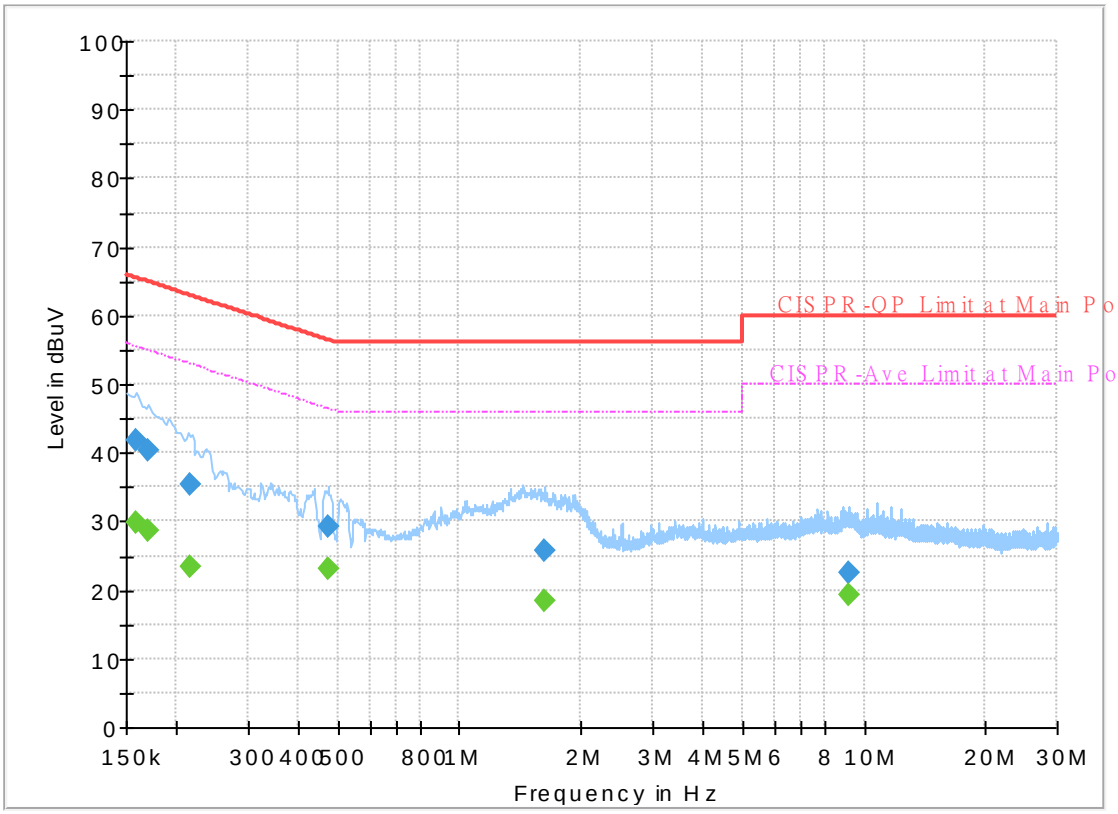
| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **5.1 dB** |

# Appendix A. Test Results of Conducted Emission Test

# EUT Information

| | |
|---|---|
| Report NO : | 1O2843-05 |
| Test Mode : | Mode 1 |
| Test Voltage : | 120Vac/60Hz |
| Phase : | Line |

Full Spectrum



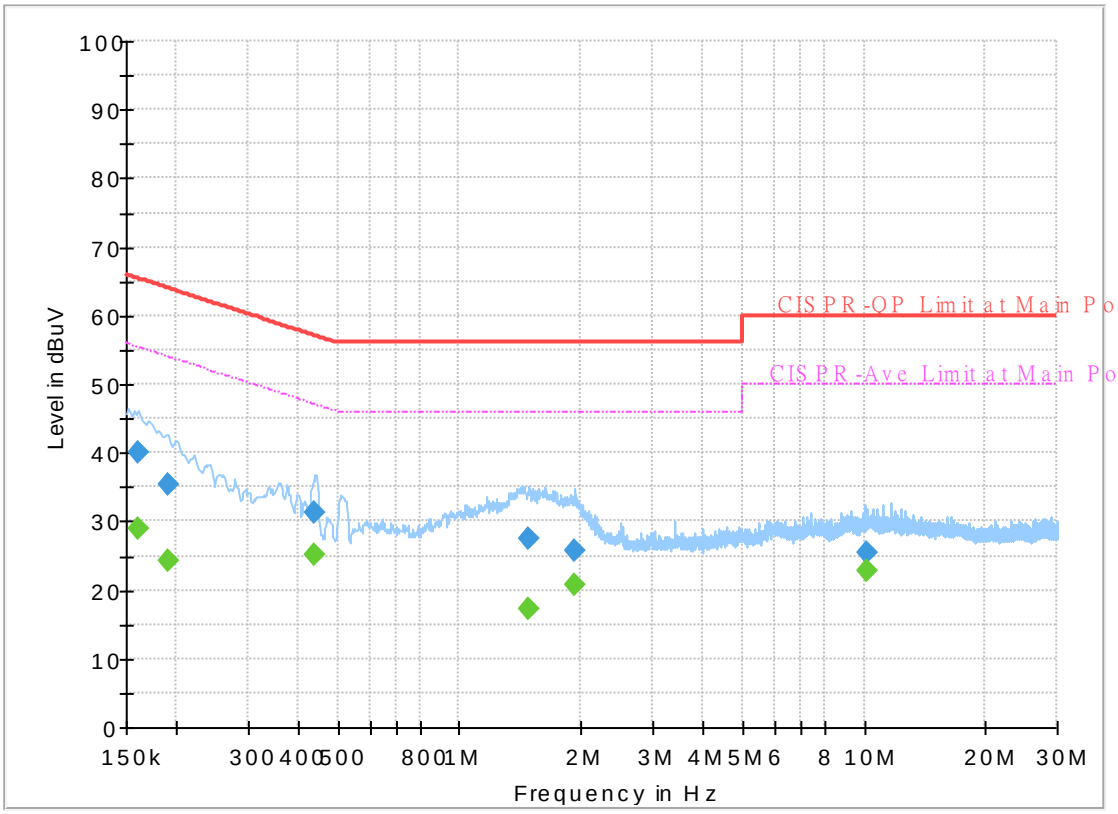

# Final_Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Filter | Corr. (dB) |
|---|---|---|---|---|---|---|---|
| 0.159000 | --- | 29.94 | 55.52 | 25.58 | L1 | OFF | 19.6 |
| 0.159000 | 41.85 | --- | 65.52 | 23.67 | L1 | OFF | 19.6 |
| 0.170250 | --- | 28.52 | 54.95 | 26.43 | L1 | OFF | 19.6 |
| 0.170250 | 40.46 | --- | 64.95 | 24.49 | L1 | OFF | 19.6 |
| 0.215250 | --- | 23.34 | 53.00 | 29.66 | L1 | OFF | 19.6 |
| 0.215250 | 35.33 | --- | 63.00 | 27.67 | L1 | OFF | 19.6 |
| 0.474000 | --- | 23.16 | 46.44 | 23.28 | L1 | OFF | 19.6 |
| 0.474000 | 29.28 | --- | 56.44 | 27.16 | L1 | OFF | 19.6 |
| 1.621500 | --- | 18.52 | 46.00 | 27.48 | L1 | OFF | 19.6 |
| 1.621500 | 25.63 | --- | 56.00 | 30.37 | L1 | OFF | 19.6 |
| 9.170250 | --- | 19.29 | 50.00 | 30.71 | L1 | OFF | 19.7 |
| 9.170250 | 22.43 | --- | 60.00 | 37.57 | L1 | OFF | 19.7 |

# EUT Information

| | |
|---|---|
| Report NO : | 1O2843-05 |
| Test Mode : | Mode 1 |
| Test Voltage : | 120Vac/60Hz |
| Phase : | Neutral |

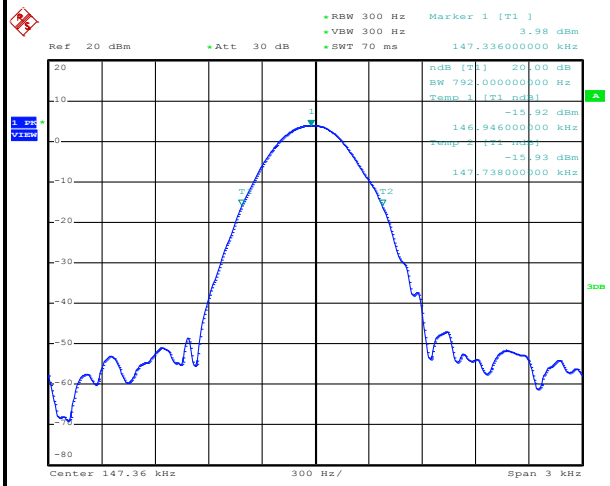
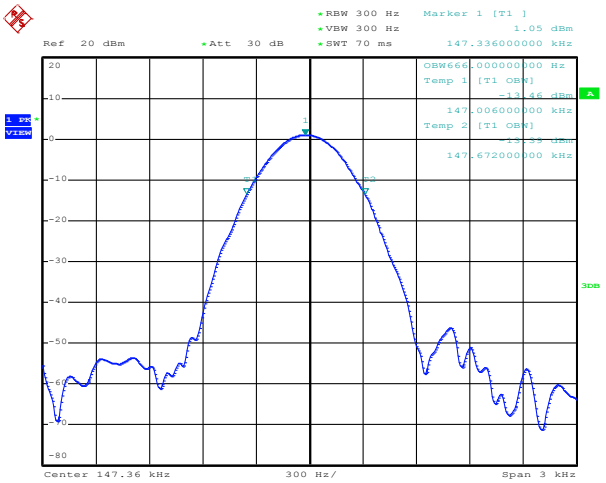
Full Spectrum

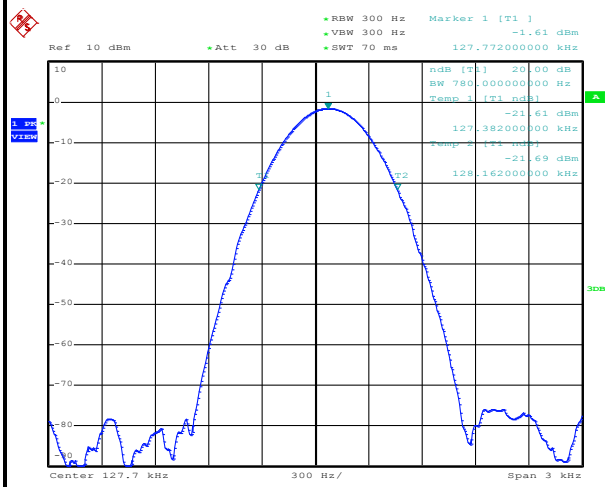
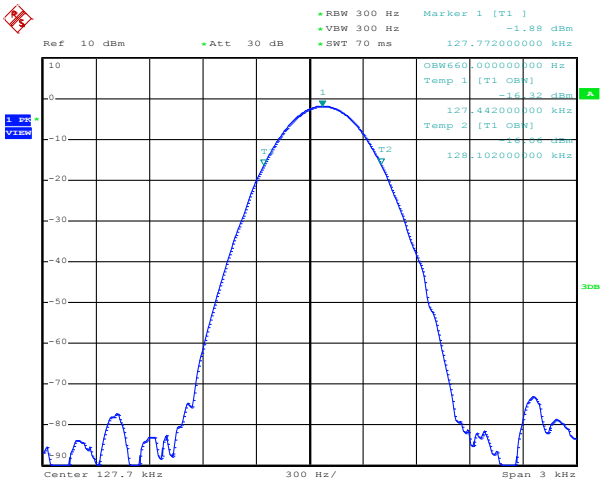



# Final_Result

| Frequency (MHz) | QuasiPeak (dBuV) | CAverage (dBuV) | Limit (dBuV) | Margin (dB) | Line | Filter | Corr. (dB) |
|---|---|---|---|---|---|---|---|
| 0.161250 | --- | 28.95 | 55.40 | 26.45 | N | OFF | 19.6 |
| 0.161250 | 40.07 | --- | 65.40 | 25.33 | N | OFF | 19.6 |
| 0.190500 | --- | 24.38 | 54.02 | 29.64 | N | OFF | 19.6 |
| 0.190500 | 35.37 | --- | 64.02 | 28.65 | N | OFF | 19.6 |
| 0.440250 | --- | 25.28 | 47.06 | 21.78 | N | OFF | 19.6 |
| 0.440250 | 31.33 | --- | 57.06 | 25.73 | N | OFF | 19.6 |
| 1.479750 | --- | 17.36 | 46.00 | 28.64 | N | OFF | 19.6 |
| 1.479750 | 27.49 | --- | 56.00 | 28.51 | N | OFF | 19.6 |
| 1.923000 | --- | 20.62 | 46.00 | 25.38 | N | OFF | 19.6 |
| 1.923000 | 25.85 | --- | 56.00 | 30.15 | N | OFF | 19.6 |
| 10.205250 | --- | 22.67 | 50.00 | 27.33 | N | OFF | 19.8 |
| 10.205250 | 25.42 | --- | 60.00 | 34.58 | N | OFF | 19.8 |

# Appendix B. Test Results of RF Near Field Test Items

| Test mode | WPT Charging with Another Phone | | |
|---|---|---|---|
|  <br>Date: 11.APR.2022 13:46:48 | |  <br>Date: 11.APR.2022 13:45:55 | |
| **20dB Bandwidth (kHz)** | 0.792 | **99% Occupied BW(kHz)** | 0.666 |

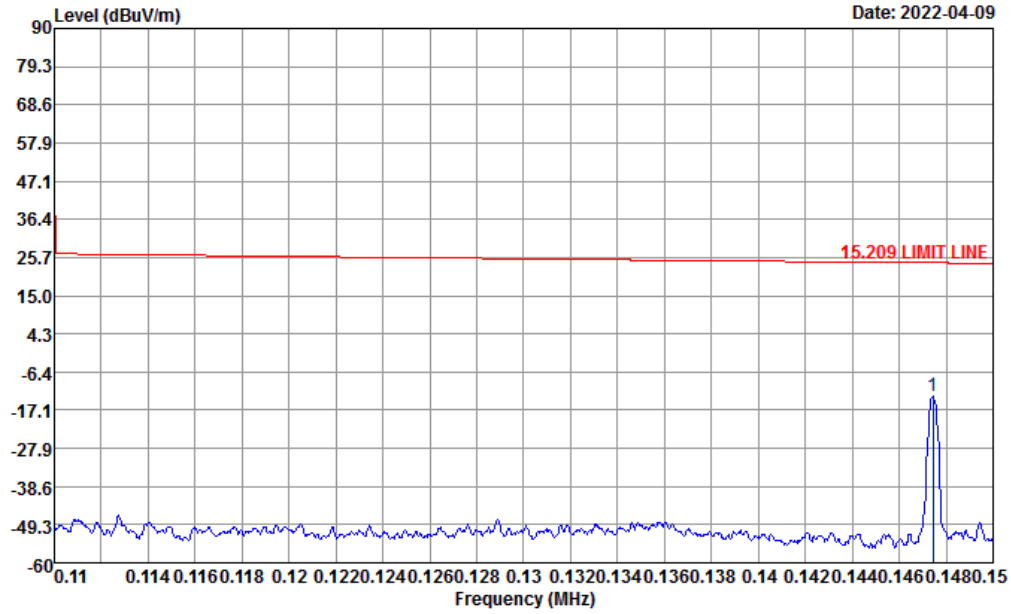
| Test mode | WPC Charging with Wireless Charger | | |
|---|---|---|---|
|  <br>Date: 11.APR.2022 13:53:15 | |  <br>Date: 11.APR.2022 13:51:29 | |
| **20dB Bandwidth (kHz)** | 0.780 | **99% Occupied BW(kHz)** | 0.660 |

**Remark:** Because the measured signal is CW adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

# Appendix C. Test Results of Radiated Test Items

## C1. Test Result of Field Strength of Fundamental Emissions

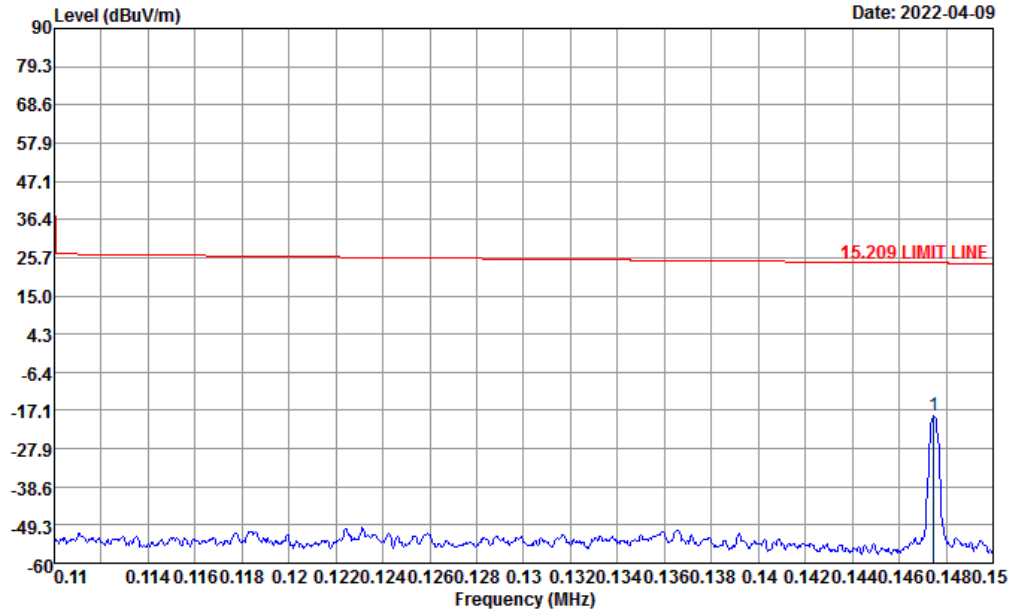
| Test Mode : | WPT Tx | Polarization : | Horizontal |
|---|---|---|---|




Site : 03CH07-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(H)_100315 HORIZONTAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

| Frequency ( MHz ) | Level ( dBµV/m ) | Distance extrapolation Factor ( dB ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.14744 | -13.39 | 80 | -37.62 | 24.23 | 47.81 | 18.77 | 0.03 | 100 | 293 | Average |

| Test Mode : | WPT Tx | Polarization : | Vertical |
|---|---|---|---|




Site : 03CH07-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(V)_100315 VERTICAL
: RBW:0.200KHz VBW:0.600KHz SWT:Auto

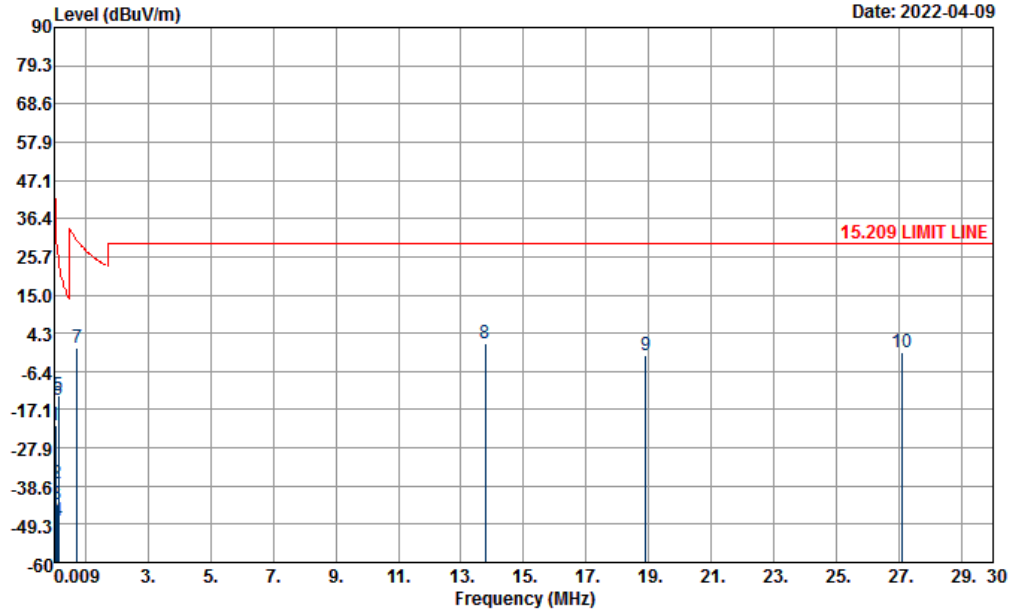
| Frequency ( MHz ) | Level ( dBµV/m ) | Distance extrapolation Factor ( dB ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.14748 | -18.82 | 80 | -43.05 | 24.23 | 42.38 | 18.77 | 0.03 | 100 | 199 | Average |

**Note:**

1. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
2. Level= Read Level + Antenna Factor + Cable loss - distance extrapolation factor.

## C2. Results of Radiated Spurious Emissions (9 kHz~30MHz)

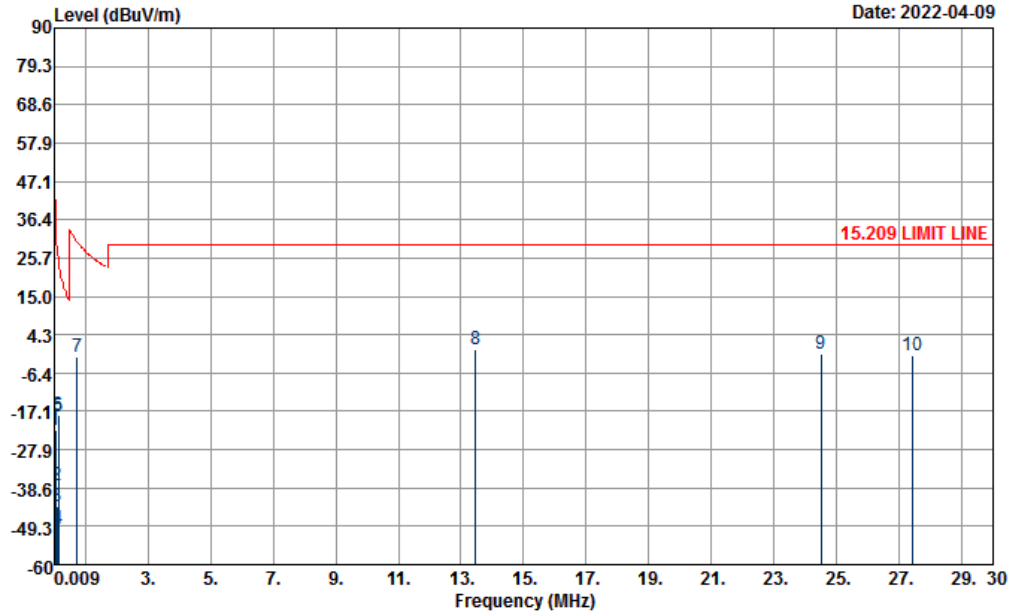
| Test Mode : | WPT Tx | Polarization : | Horizontal |
|---|---|---|---|




Site : 03CH07-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(H)_100315 HORIZONTAL

| Frequency ( MHz ) | Level ( dBµV/m ) | Distance extrapolation Factor ( dB ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.05011 | -21.75 | 80 | -55.36 | 33.61 | 38.53 | 19.7 | 0.02 | - | - | Average |
| 0.06024 | -37.95 | 80 | -69.96 | 32.01 | 22.56 | 19.47 | 0.02 | - | - | Average |
| 0.09018 | -43.66 | 80 | -72.16 | 28.5 | 17.5 | 18.82 | 0.02 | - | - | QP |
| 0.11436 | -48.47 | 80 | -74.91 | 26.44 | 12.86 | 18.65 | 0.02 | - | - | Average |
| 0.14744 | -13.39 | 80 | -37.62 | 24.23 | 47.81 | 18.77 | 0.03 | - | - | Average |
| 0.15102 | -14.33 | 80 | -38.35 | 24.02 | 46.86 | 18.78 | 0.03 | - | - | Average |
| 0.73783 | 0.13 | 40 | -30.11 | 30.24 | 20.49 | 19.54 | 0.1 | - | - | QP |
| 13.776 | 1.52 | 40 | -27.98 | 29.5 | 19.18 | 21.94 | 0.4 | - | - | QP |
| 18.898 | -1.79 | 40 | -31.29 | 29.5 | 15.3 | 22.4 | 0.51 | - | - | QP |
| 27.095 | -1.12 | 40 | -30.62 | 29.5 | 15.41 | 22.71 | 0.76 | - | - | QP |

| Test Mode : | WPT Tx | Polarization : | Vertical |
|---|---|---|---|




Site : 03CH07-HY
Condition : 15.209 LIMIT LINE 3m LOOP_ANT(V)_100315 VERTICAL

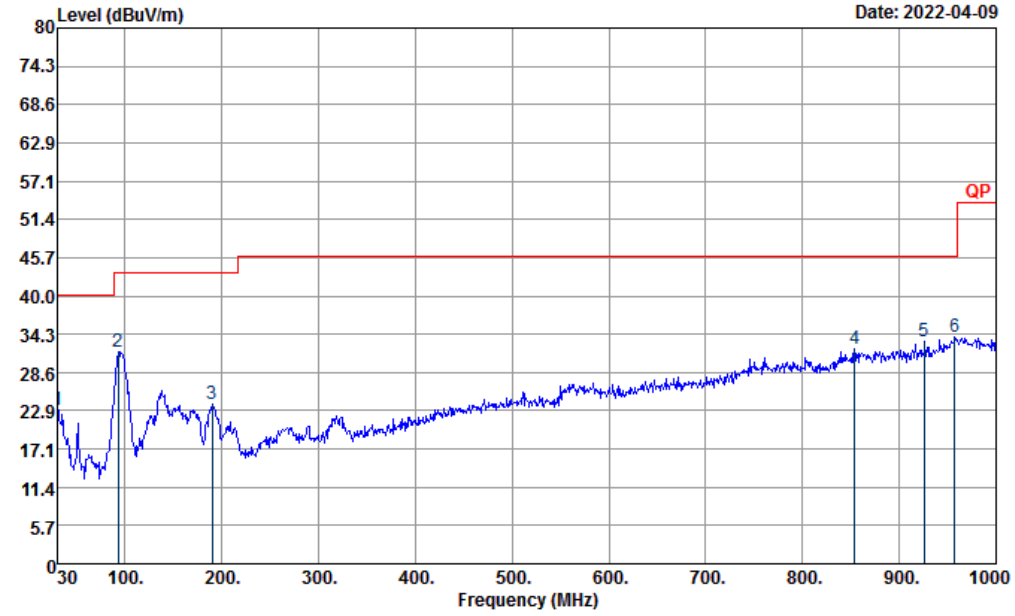
| Frequency ( MHz ) | Level ( dBµV/m ) | Distance extrapolation Factor ( dB ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.05016 | -22.21 | 80 | -55.81 | 33.6 | 38.07 | 19.7 | 0.02 | - | - | Average |
| 0.06 | -38.05 | 80 | -70.09 | 32.04 | 22.45 | 19.48 | 0.02 | - | - | Average |
| 0.0901 | -43.89 | 80 | -72.4 | 28.51 | 17.27 | 18.82 | 0.02 | - | - | QP |
| 0.12904 | -49.85 | 80 | -75.24 | 25.39 | 11.42 | 18.7 | 0.03 | - | - | Average |
| 0.14748 | -18.82 | 80 | -43.05 | 24.23 | 42.38 | 18.77 | 0.03 | - | - | Average |
| 0.15102 | -18.29 | 80 | -42.31 | 24.02 | 42.9 | 18.78 | 0.03 | - | - | Average |
| 0.73783 | -1.91 | 40 | -32.15 | 30.24 | 18.45 | 19.54 | 0.1 | - | - | QP |
| 13.464 | 0.33 | 40 | -29.17 | 29.5 | 18.03 | 21.91 | 0.39 | - | - | QP |
| 24.505 | -1.16 | 40 | -30.66 | 29.5 | 15.6 | 22.64 | 0.6 | - | - | QP |
| 27.405 | -1.41 | 40 | -30.91 | 29.5 | 15.09 | 22.72 | 0.78 | - | - | QP |

**Note:**

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. Level= Read Level + Antenna Factor + Cable loss - distance extrapolation factor.

## C3. Results of Radiated Spurious Emissions (30MHz~1GHz)

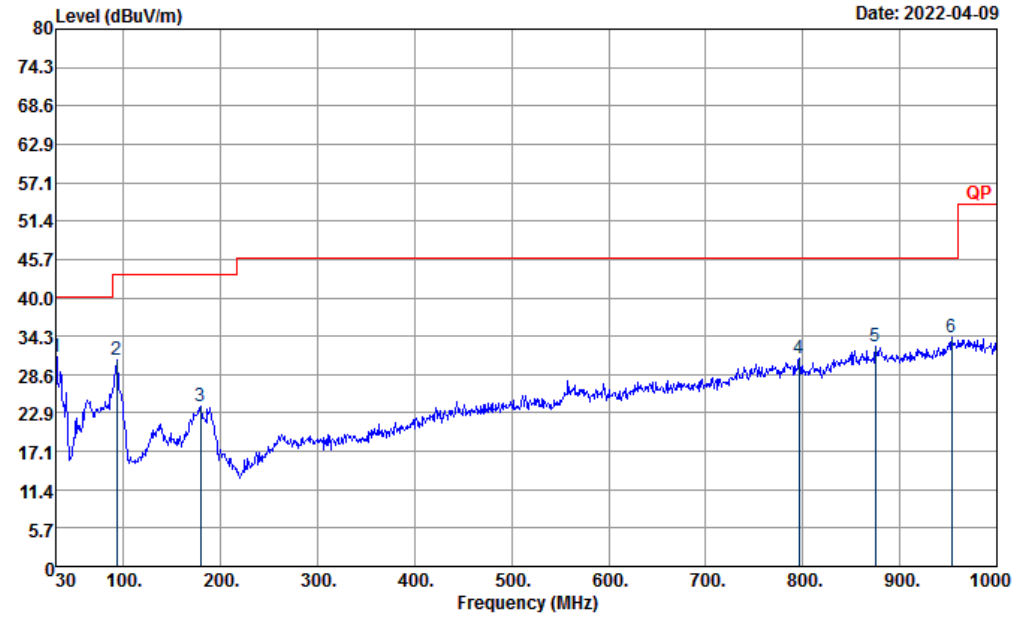
| Test Mode : | WPT Tx | Polarization : | Horizontal |
|---|---|---|---|




Site : 03CH07-HY
Condition : QP 3m LF-ANT-35419(6) HORIZONTAL

| Frequency ( MHz ) | Level ( dBµV/m ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 30.54 | 23.06 | -16.94 | 40 | 28.04 | 24.17 | 0.96 | 30.11 | - | - | Peak |
| 92.64 | 31.59 | -11.91 | 43.5 | 45 | 15.07 | 1.53 | 30.01 | - | - | Peak |
| 190.38 | 23.93 | -19.57 | 43.5 | 36.68 | 14.84 | 2.25 | 29.84 | - | - | Peak |
| 853.7 | 32.11 | -13.89 | 46 | 27.48 | 28.77 | 4.9 | 29.04 | - | - | Peak |
| 925.8 | 33.25 | -12.75 | 46 | 27.79 | 29.07 | 5.12 | 28.73 | - | - | Peak |
| 957.3 | 33.81 | -12.19 | 46 | 26.56 | 30.67 | 5.21 | 28.63 | - | - | Peak |

| Test Mode : | WPT Tx | Polarization : | Vertical |
|---|---|---|---|




Site : 03CH07-HY
Condition : QP 3m LF-ANT-35419(6) VERTICAL

| Frequency ( MHz ) | Level ( dBµV/m ) | Margin ( dB ) | Limit Line ( dBµV/m ) | Read Level (dBµV) | Antenna Factor ( dB ) | Cable Loss ( dB ) | Preamp Factor ( dB ) | Ant Pos ( cm ) | Table Pos ( deg ) | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 31.26 | -8.74 | 40 | 35.83 | 24.57 | 0.97 | 30.11 | - | - | Peak |
| 92.64 | 30.79 | -12.71 | 43.5 | 44.2 | 15.07 | 1.53 | 30.01 | - | - | Peak |
| 179.58 | 23.91 | -19.59 | 43.5 | 36.56 | 15.02 | 2.19 | 29.86 | - | - | Peak |
| 796.3 | 31.05 | -14.95 | 46 | 27.75 | 27.81 | 4.75 | 29.26 | - | - | Peak |
| 874.7 | 32.69 | -13.31 | 46 | 27.85 | 28.81 | 4.97 | 28.94 | - | - | Peak |
| 953.1 | 33.99 | -12.01 | 46 | 26.98 | 30.46 | 5.19 | 28.64 | - | - | Peak |

**Note:**

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBµV/m) = 20 log Emission level (µV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.

———THE END———