



MAXLAB Testing Co.,Ltd.

Report No.: MAX250525110P01-R02

FCC TEST REPORT

FCC ID: 2BFZP-C69

Product : Car Charger

Model Name : C69, C76, C77, K32, K38, K39, Y5, Y6

Brand : /

Report No. : MAX250525110P01-R02

Prepared for

Dongguan KWD Technology Co.,Ltd
9F, Building B, Caiqiao Industrial Park, Puxinhu, Tangxia Town, Dongguan
City, Guangdong Province, P.R.C

Prepared by

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1 TEST RESULT CERTIFICATION

Applicant's name : Dongguan KWD Technology Co.,Ltd
Address : 9F, Building B, Caiqiao Industrial Park, Puxihu, Tangxia Town, Dongguan City, Guangdong Province, P.R.C
Manufacturer's name : Dongguan KWD Technology Co.,Ltd
Address : 9F, Building B, Caiqiao Industrial Park, Puxihu, Tangxia Town, Dongguan City, Guangdong Province, P.R.C
Product name : Car Charger
Model name : C69, C76, C77, K32, K38, K39, Y5, Y6
Standards : FCC CFR47 Part 15 Section 15.239
Test procedure : ANSI C63.10:2020
Date of test : Jun. 10, 2025 to Jun. 18, 2025
Date of Issue : Jun. 18, 2025

This device described above has been tested by MAXLAB, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

Engineer/ Cindy Zheng

Technical Manager:

RF Manager/ Vivian Jiang

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2 Test Summary

| Test Items | Test Requirement | Result |
|--|----------------------------|--------|
| Conduct Emission | FCC Part 15.207 | N/A |
| Fundamental & Radiated / Conducted Spurious Emission Measurement | FCC Part 15.209 & 15.239 c | PASS |
| Band edge | FCC Part 15.239 c | PASS |
| Bandwidth | FCC Part 15.239 a | PASS |
| Antenna Requirement | FCC Part 15.203 | PASS |

Remark:

1. "N/A" denotes test is not applicable in this Test Report.



2.1 Test Site

Site Description

EMC Lab. : Accredited by CNAS, 2022-09-27

The certificate is valid until 2028.01.07

The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2017)

The Certificate Registration Number is L8251

Designation Number: CN1347

Test Firm Registration Number: 894804

Accredited by A2LA, June 14, 2023

The Certificate Registration Number is 6837.01

Accredited by Industry Canada, November 09, 2018

The Conformity Assessment Body Identifier is CN0150

Company Number: 30806

Name of Firm : MAXLAB Testing Co.,Ltd.

Site Location : 1/F, Building B, Xinshidai GR Park, Shiyan Street, Bao'an District, Shenzhen, Guangdong, 518052, People's Republic of China



3 General Information

3.1 General Description of E.U.T.

| | | |
|--|---|---------------------------------------|
| Product Name | : | Car Charger |
| Model Name | : | C69 |
| Sample ID | : | 250525110P01-R02 |
| Sample(s) Status: | : | Engineer sample |
| Series Model | : | C76, C77, K32, K38, K39, Y5, Y6 |
| Model Different.: | : | All the same except the model number. |
| Operating frequency | : | 88.1-107.9MHz |
| Number of Channels | : | 199 channels |
| Type of Modulation | : | FM |
| Antenna installation | : | Spring antenna |
| Antenna Gain | : | 0 dBi |
| Power supply | : | DC 12-24V From Battery |
| Hardware Version | : | N/A |
| Software Version | : | N/A |
| Remark: the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant. | | |



3.2 Channel List

The EUT has been tested under its typical operating condition. Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting. Only the worst case data were reported.

The EUT has been associated with peripherals pursuant to ANSI C63.10-2020 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The details of test channels and bandwidth were for RF conductive measurement.

Channel List:

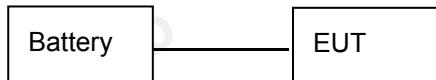
| Channel | Frequency (MHz) |
|---------|-----------------|
| 01 | 88.1 |
| 02 | 88.2 |
| ~ | ~ |
| 100 | 98.0 |
| ~ | ~ |
| 198 | 107.8 |
| 199 | 107.9 |

Note:

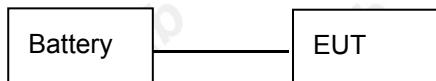
1. Test of channel was included the lowest, middle and highest frequency in highest data rate and to perform the test, then record on this report.

3.3 Test Setup Configuration

Radiated Emission(30MHz-1GHz)



Radiated Emission(above 1GHz)



Conducted Spurious



3.4 Test Mode

| | |
|-------------------|---|
| Transmitting mode | Keep the EUT in continuously transmitting mode. |
|-------------------|---|

Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

| Channel | Frequency(MHz) |
|---------|----------------|
| 01 | 88.1 |
| 100 | 98.0 |
| 199 | 107.9 |



4 Equipment During Test

4.1 Equipments List

| Conducted Emission | | | | | |
|---------------------------|-------------------------|----------------------|------------|--------------|------------|
| Test Equipment | Manufacturer | Model | Serial No. | Date of Cal. | Due Date |
| Shielding Room | ZhongYu Electron | 7.3(L)x3.1(W)x2.9(H) | MAX252 | 2024-10-27 | 2025-10-26 |
| EMI Test Receiver | R&S | ESCI 7 | MAX552 | 2024-10-27 | 2025-10-26 |
| Coaxial Switch | ANRITSU CORP | MP59B | MAX225 | 2024-10-27 | 2025-10-26 |
| ENV216 2-L-V-NETZNACHB.DE | ROHDE&SCHWARTZ | ENV216 | MAX226 | 2024-10-27 | 2025-10-26 |
| Coaxial Cable | MAX | N/A | MAX227 | N/A | N/A |
| Thermo meter | KTJ | TA328 | MAX233 | 2024-10-27 | 2025-10-26 |
| Absorbing clamp | Elektronik-Feinmechanik | MDS21 | MAX229 | 2024-10-27 | 2025-10-26 |
| LISN | R&S | ENV216 | 308 | 2024-10-27 | 2025-10-26 |
| LISN | R&S | ENV216 | 314 | 2024-10-27 | 2025-10-26 |

| Radiation Test equipment | | | | | |
|-------------------------------------|-----------------------------|-----------------------------|------------|--------------|------------|
| Test Equipment | Manufacturer | Model | Serial No. | Date of Cal. | Due Date |
| 3m Semi- Anechoic Chamber | ZhongYu Electron | 9.2(L)*6.2(W)*6.4(H) | MAX250 | 2024-10-27 | 2025-10-26 |
| Control Room | ZhongYu Electron | 6.2(L)*2.5(W)*2.4(H) | MAX251 | N/A | N/A |
| EMI Test Receiver | Rohde & Schwarz | ESU26 | MAX203 | 2024-10-27 | 2025-10-26 |
| BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | MAX214 | 2024-10-27 | 2025-10-26 |
| Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | BBHA 9120 D | MAX208 | 2024-10-27 | 2025-10-26 |
| Horn Antenna | ETS-LINDGREN | 3160 | MAX217 | 2024-10-27 | 2025-10-26 |
| Coaxial Cable | MAX | N/A | MAX213 | 2024-10-27 | 2025-10-26 |
| Coaxial Cable | MAX | N/A | MAX211 | 2024-10-27 | 2025-10-26 |
| Coaxial cable | MAX | N/A | MAX210 | 2024-10-27 | 2025-10-26 |
| Coaxial Cable | MAX | N/A | MAX212 | 2024-10-27 | 2025-10-26 |
| Amplifier(100kHz-3GHz) | HP | 8347A | MAX204 | 2024-10-27 | 2025-10-26 |
| Amplifier(2GHz-20GHz) | HP | 84722A | MAX206 | 2024-10-27 | 2025-10-26 |
| Amplifier (18-26GHz) | Rohde & Schwarz | AFS33-18002 650-30-8P-44 | MAX218 | 2024-10-27 | 2025-10-26 |
| Band filter | Amindeon | 82346 | MAX219 | 2024-10-27 | 2025-10-26 |
| Power Meter | Anritsu | ML2495A | MAX540 | 2024-10-27 | 2025-10-26 |
| Power Sensor | Anritsu | MA2411B | MAX541 | 2024-10-27 | 2025-10-26 |
| Wideband Radio Communication Tester | Rohde & Schwarz | CMW500 | MAX575 | 2024-10-27 | 2025-10-26 |
| Splitter | Agilent | 11636B | MAX237 | 2024-10-27 | 2025-10-26 |



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| | | | | | |
|------------------------------|-----------------|-----------|--------|------------|------------|
| Loop Antenna | ZHINAN | ZN30900A | MAX534 | 2024-10-27 | 2025-10-26 |
| Breitband hornantenne | SCHWARZBECK | BBHA 9170 | MAX579 | 2024-10-27 | 2025-10-26 |
| Amplifier | TDK | PA-02-02 | MAX574 | 2024-10-27 | 2025-10-26 |
| Amplifier | TDK | PA-02-03 | MAX576 | 2024-10-27 | 2025-10-26 |
| PSA Series Spectrum Analyzer | Rohde & Schwarz | FSP | MAX578 | 2024-10-27 | 2025-10-26 |

| RF Conducted Test: | | | | | |
|--|--------------|------------------|------------|--------------|------------|
| Test Equipment | Manufacturer | Model | Serial No. | Date of Cal. | Due Date |
| MXA Signal Analyzer | Agilent | N9020A | MAX566 | 2024-10-27 | 2025-10-26 |
| EMI Test Receiver | R&S | ESCI 7 | MAX552 | 2024-10-27 | 2025-10-26 |
| Spectrum Analyzer | Agilent | E4440A | MAX533 | 2024-10-27 | 2025-10-26 |
| MXG vector Signal Generator | Agilent | N5182A | MAX567 | 2024-10-27 | 2025-10-26 |
| ESG Analog Signal Generator | Agilent | E4428C | MAX568 | 2024-10-27 | 2025-10-26 |
| USB RF Power Sensor | DARE | RPR3006W | MAX569 | 2024-10-27 | 2025-10-26 |
| RF Switch Box | Shongyi | RFSW3003328 | MAX571 | 2024-10-27 | 2025-10-26 |
| Programmable Constant Temp & Humi Test Chamber | WEWON | WHTH-150L-40-880 | MAX572 | 2024-10-27 | 2025-10-26 |

Other

| Item | Name | Manufacturer | Model | Software version |
|------|------------------------------|--------------|--------|--------------------|
| 1 | EMC Conduction Test System | FALA | EZ-EMC | Ver.EMC-CON 3A1.1+ |
| 2 | EMC radiation test system | FALA | EZ-EMC | Ver.FA-03A2 RE+ |
| 3 | RF test system | TACHOY | RFTest | V1.0.0 |
| 4 | RF communication test system | TACHOY | RFTest | V1.0.0 |



4.2 Measurement Uncertainty

| Parameter | Uncertainty |
|---|--------------------------|
| RF output power, conducted | $\pm 1.0\text{dB}$ |
| Power Spectral Density, conducted | $\pm 2.2\text{dB}$ |
| Radio Frequency | $\pm 1 \times 10^{-6}$ |
| Bandwidth | $\pm 1.5 \times 10^{-6}$ |
| Time | $\pm 2\%$ |
| Duty Cycle | $\pm 2\%$ |
| Temperature | $\pm 1^\circ\text{C}$ |
| Humidity | $\pm 5\%$ |
| DC and low frequency voltages | $\pm 3\%$ |
| Conducted Emissions (150kHz~30MHz) | $\pm 3.64\text{dB}$ |
| Radiated Emission(9KHz~30MHz) | $\pm 4.51\text{dB}$ |
| Radiated Emission(30MHz~1GHz) | $\pm 5.03\text{dB}$ |
| Radiated Emission(1GHz~25GHz) | $\pm 4.74\text{dB}$ |
| Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95% | |

4.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. | Note |
|------|-------------|-----------|----------------|------------|-----------|
| E-1 | Car Charger | N/A | C69 | N/A | EUT |
| E-2 | Battery | RITAR | RA12-75 | N/A | Auxiliary |
| | | | | | |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

5 Conducted Emission

| | |
|------------------|-------------------------------------|
| Test Requirement | : FCC CFR 47 Part 15 Section 15.207 |
| Test Method | : ANSI C63.10: 2020 |
| Test Result | : N/A |
| Frequency Range | : 150kHz to 30MHz |
| Class/Severity | : Class B |

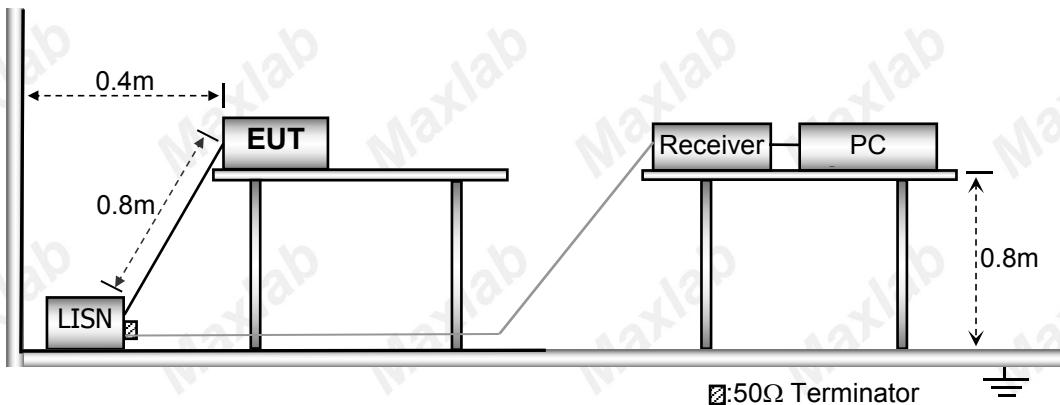
5.1 E.U.T. Operation

Operating Environment :

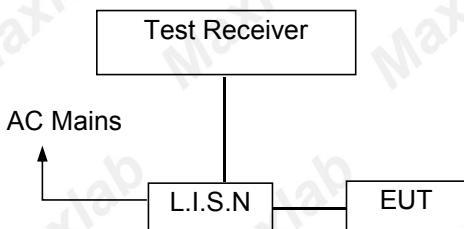
| | |
|----------------------|-----------|
| Temperature | : 26°C |
| Humidity | : 54 % RH |
| Atmospheric Pressure | : 101kPa |

5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2020.



5.3 Test SET-UP (Block Diagram of Configuration)



5.4 Measurement Procedure

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

5.5 Conducted Emission Limit

Conducted Emission

| Frequency(MHz) | Quasi-peak | Average |
|----------------|------------|---------|
| 0.15-0.5 | 66-56 | 56-46 |
| 0.5-5.0 | 56 | 46 |
| 5.0-30.0 | 60 | 50 |

Note:

1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.6 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

5.7 Conducted Emission Test Result

Not applicable, As power supplied by Car's battery and can't connect to AC main network



6 Radiated Spurious Emissions

Test Requirement : FCC CFR47 Part 15 Section 15.209 & 15.239

Test Method : ANSI C63.10:2020

Test Result : PASS

Measurement Distance : 3m

Limit : See the follow table

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.209&15.239 limit in the table below has to be followed.

| Frequency (MHz) | Field Strength | | Field Strength Limit at 3m Measurement Dist | |
|-----------------|----------------|--------------|---|--------------------------------|
| | uV/m | Distance (m) | uV/m | dBuV/m |
| 0.009 ~ 0.490 | 2400/F(kHz) | 300 | 10000 * 2400/F(kHz) | $20\log^{(2400/F(kHz))} + 80$ |
| 0.490 ~ 1.705 | 24000/F(kHz) | 30 | 100 * 24000/F(kHz) | $20\log^{(24000/F(kHz))} + 40$ |
| 1.705 ~ 30 | 30 | 30 | 100 * 30 | $20\log^{(30)} + 40$ |
| 30 ~ 88 | 100 | 3 | 100 | $20\log^{(100)}$ |
| 88 ~ 216 | 150 | 3 | 150 | $20\log^{(150)}$ |
| 216 ~ 960 | 200 | 3 | 200 | $20\log^{(200)}$ |
| Above 960 | 500 | 3 | 500 | $20\log^{(500)}$ |

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz) | Limit (dBuV/m) (at 3M) | |
|-----------------|------------------------|---------|
| | PEAK | AVERAGE |
| Above 1000 | 74 | 54 |

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)= $20\log$ Emission level (uV/m).

**FUNDAMENTAL AND HARMONICS EMISSION LIMITS**

The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in § 15.35 for limiting peak emissions apply.

FREQUENCY RANGE OF RADIATED MEASUREMENT (For intentional radiators)

| Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz) | Range (MHz) |
|---|---|
| Below 1.705 | 30 |
| 1.705 – 108 | 1000 |
| 108 – 500 | 2000 |
| 500 – 1000 | 5000 |
| Above 1000 | 5 th harmonic of the highest frequency or 40 GHz, whichever is lower |

6.1 EUT Operation

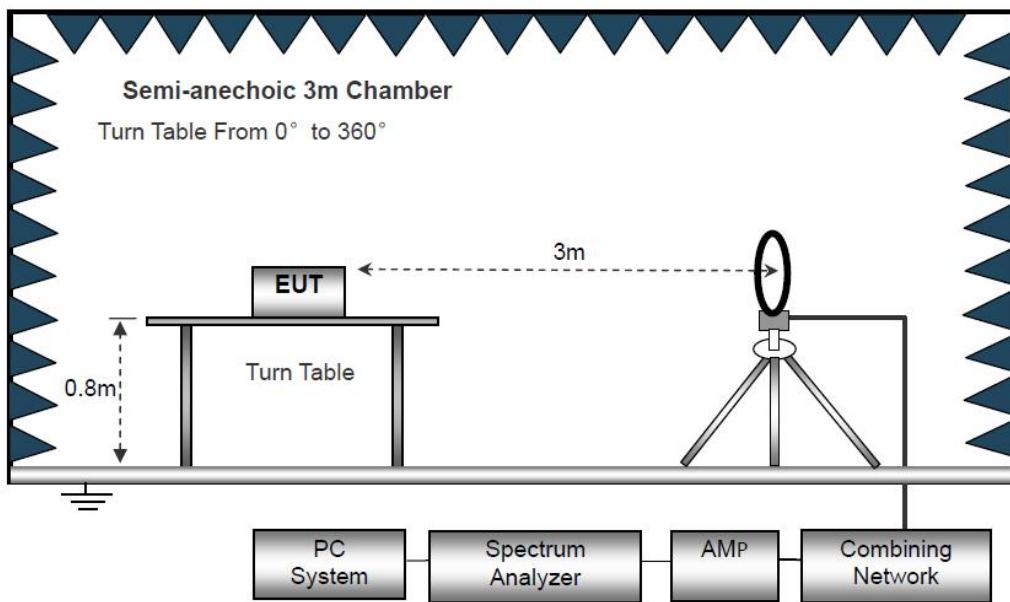
Operating Environment :

Temperature : 26 °C
Humidity : 54 % RH
Atmospheric Pressure : 101kPa

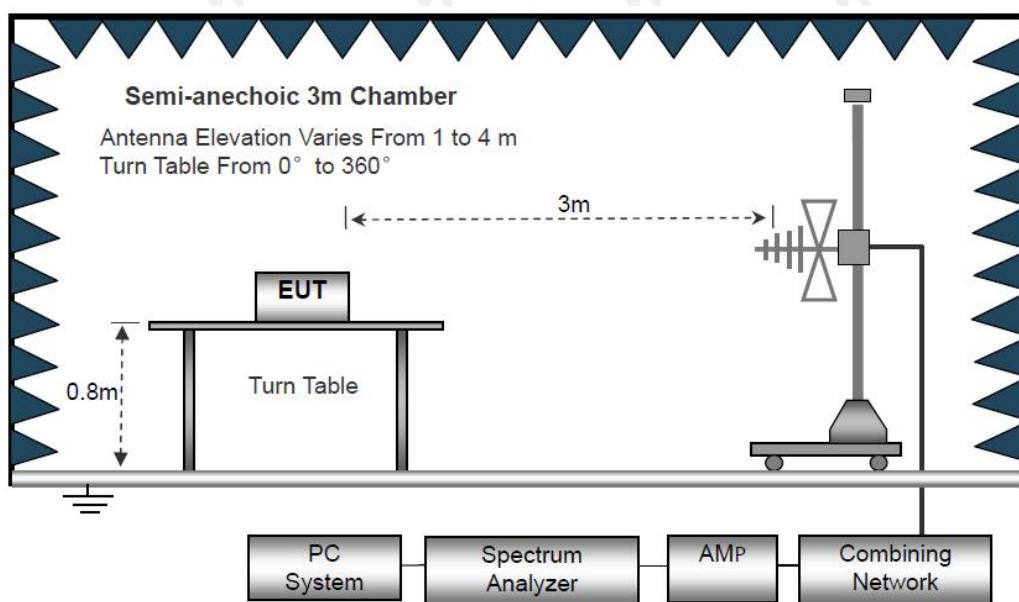
6.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site

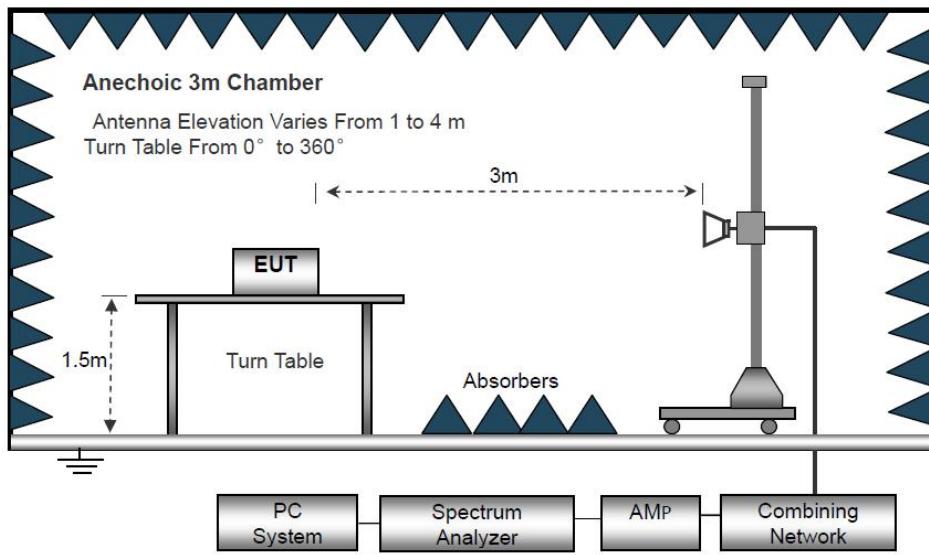
The test setup for emission measurement below 30MHz



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz



6.3 Spectrum Analyzer Setup

| | Frequency | Detector | RBW | VBW | Remark |
|----------------|--------------|------------|--------|--------|------------------|
| Receiver Setup | Below 30MHz | -- | 10kHz | 10kHz | -- |
| | 30MHz ~ 1GHz | Quasi-peak | 120kHz | 300kHz | Quasi-peak Value |
| | Above 1GHz | Peak | 1MHz | 3MHz | Peak Value |
| | | RMS | 1MHz | 3MHz | Average Value |

6.4 Test Procedure

1. The testing follows the guidelines in Spurious Radiated Emissions of ANSI C63.10-2020.
2. Below 1000MHz, The EUT was placed on a turn table which is 0.8m above ground plane. And above 1000MHz, The EUT was placed on a styrofoam table which is 1.5m above ground plane.
3. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (From 1m to 4m) and turntable (from 0 degree to 360 degree) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Final measurement (Above 1GHz): The frequency range will be divided into different sub ranges depending of the frequency range of the used horn antenna. The EMI Receiver set to peak and average mode and a resolution bandwidth of 1MHz. The measurement will be performed in horizontal and vertical polarization of the measuring antenna and while rotating the EUT in its vertical axis in the range of 0 degree to 360 degree in order to have the antenna inside the cone of radiation.
7. Test Procedure of measurement (For Above 1GHz):
 - 1) Monitor the frequency range at horizontal polarization and move the antenna over all sides of the EUT(if necessary move the EUT to another orthogonal axis).
 - 2) Change the antenna polarization and repeat 1) with vertical polarization.
 - 3) Make a hardcopy of the spectrum.
 - 4) Measure the frequency of the detected emissions with a lower span and resolution bandwidth to increase the accuracy and note the frequency value.
 - 5) Change the analyser mode to Clear/ Write and found the cone of emission.
 - 6) Rotate and move the EUT, so that the measuring distance can be enlarged to 3m and the antenna will be still inside the cone of emission.
 - 7) Measure the level of the detected frequency with the correct resolution bandwidth, with the antenna polarization and azimuth and the peak and average detector, which causes the maximum emission.
 - 8) Repeat steps 1) to 7) for the next antenna spot if the EUT is larger than the antenna beamwidth.
8. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.



6.5 Summary of Test Results

Test Frequency: 9KHz-30MHz

| Freq. (MHz) | Ant.Pol. H/V | Emission Level (dBuV/m) | Limit 3m (dBuV/m) | Over (dB) |
|----------------|-----------------|----------------------------|----------------------|--------------|
| -- | -- | -- | -- | >20 |

Note:

The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

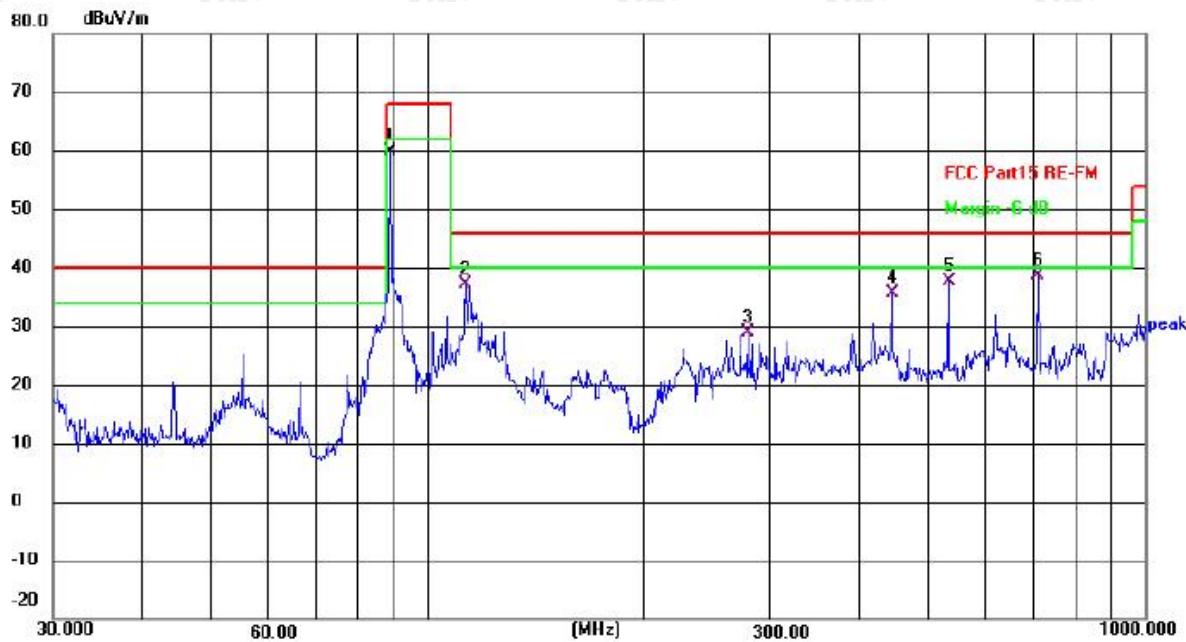
Distance extrapolation factor = $40\log(\text{Specific distance} / \text{test distance})$ (dB);
Limit line=Specific limits(dBuV) + distance extrapolation factor.

Test Frequency: 30MHz ~ 1GHz

Pass.

Please refer to the following test plots for the worst test mode (CH01: 88.1MHz).

| | | | |
|---------------|---------|--------------------|----------|
| Temperature: | 26°C | Relative Humidity: | 54% |
| Pressure: | 101 kPa | Polarization: | Vertical |
| Test Voltage: | DC 12V | | |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1 | 88.3421 | 78.35 | -18.56 | 59.79 | 68.00 | -8.21 | peak |
| 2 | 112.9196 | 53.42 | -16.17 | 37.25 | 46.00 | -8.75 | QP |
| 3 | 279.0436 | 42.96 | -13.97 | 28.99 | 46.00 | -17.01 | QP |
| 4 | 443.2941 | 46.23 | -10.59 | 35.64 | 46.00 | -10.36 | QP |
| 5 | 531.9633 | 46.84 | -9.14 | 37.70 | 46.00 | -8.30 | QP |
| 6 | 709.1820 | 44.86 | -6.15 | 38.71 | 46.00 | -7.29 | QP |

Remark: Emission Level=Reading+Cable Loss+ANT Factor-AMP Factor

| | | | |
|---------------|---------|--------------------|------------|
| Temperature: | 26°C | Relative Humidity: | 54% |
| Pressure: | 101 kPa | Polarization: | Horizontal |
| Test Voltage: | DC 12V | | |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Detector |
|-----|-----------------|----------------|---------------|----------------|----------------|-------------|----------|
| 1 | 88.6524 | 80.77 | -18.50 | 62.27 | 68.00 | -5.73 | peak |
| 2 | 129.4677 | 53.98 | -18.86 | 35.12 | 46.00 | -10.88 | QP |
| 3 | 265.6757 | 46.87 | -14.59 | 32.28 | 46.00 | -13.72 | QP |
| 4 | 443.2941 | 49.70 | -10.59 | 39.11 | 46.00 | -6.89 | QP |
| 5 | 620.7096 | 48.81 | -8.23 | 40.58 | 46.00 | -5.42 | QP |
| 6 | 906.4823 | 43.37 | -3.04 | 40.33 | 46.00 | -5.67 | QP |

Remark: Emission Level=Reading+Cable Loss+ANT Factor-AMP Factor



FIELD STRENGTH CALCULATION

| Frequency | Emission Level | Limits | Margin | Horizontal / Vertical | Detector Type |
|-----------|----------------|--------------|--------------|-----------------------|---------------|
| MHz | dB μ V/m | dB μ V/m | dB μ V/m | | |
| 88.10 | 59.79 | 68.00 | -8.21 | H | PK |
| 88.10 | 43.61 | 48.00 | -4.39 | H | AV |
| 88.10 | 62.27 | 68.00 | -5.73 | V | PK |
| 88.10 | 44.26 | 48.00 | -3.74 | V | AV |
| 98.00 | 56.9 | 68.00 | -11.1 | H | PK |
| 98.00 | 39.65 | 48.00 | -8.35 | H | AV |
| 98.00 | 52.31 | 68.00 | -15.69 | V | PK |
| 98.00 | 40.85 | 48.00 | -7.15 | V | AV |
| 107.99 | 54.42 | 68.00 | -13.58 | H | PK |
| 107.99 | 38.39 | 48.00 | -9.61 | H | AV |
| 107.99 | 54.51 | 68.00 | -13.49 | V | PK |
| 107.99 | 39.29 | 48.00 | -8.71 | V | AV |

**Test Frequency 1GHz-6GHz:**

| Polar (H/V) | Frequency | Meter Reading | Pre- amplifier | Cable Loss | Antenna Factor | Emission Level | Limits | Margin | Detector Type |
|----------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|----------|--------|------------------|
| | (MHz) | (dBuV) | (dB) | (dB) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| V | 1057.20 | 39.91 | 39.55 | 7.77 | 25.45 | 33.58 | 74.00 | -40.42 | Pk |
| V | 1057.20 | 34.7 | 39.55 | 7.77 | 25.45 | 28.37 | 54.00 | -25.63 | AV |
| V | 1176.00 | 44.28 | 38.33 | 7.3 | 24.34 | 37.59 | 74.00 | -36.41 | Pk |
| V | 1176.00 | 34.46 | 38.33 | 7.3 | 24.34 | 27.77 | 54.00 | -26.23 | AV |
| V | 1294.80 | 43.58 | 35.23 | 7.6 | 26.17 | 42.12 | 74.00 | -31.88 | Pk |
| V | 1294.80 | 33.98 | 35.23 | 7.6 | 26.17 | 32.52 | 54.00 | -21.48 | AV |
| H | 1145.30 | 45.86 | 38.34 | 7.32 | 24.25 | 39.09 | 74.00 | -34.91 | Pk |
| H | 1145.30 | 33.36 | 38.34 | 7.32 | 24.25 | 26.59 | 54.00 | -27.41 | AV |
| H | 1274.00 | 39.82 | 35.12 | 7.51 | 26.1 | 38.31 | 74.00 | -35.69 | Pk |
| H | 1274.00 | 32.16 | 35.12 | 7.51 | 26.1 | 30.65 | 54.00 | -23.35 | AV |
| H | 1402.70 | 41.44 | 35.45 | 7.68 | 23.6 | 37.27 | 74.00 | -36.73 | Pk |
| H | 1402.70 | 29.77 | 35.45 | 7.68 | 23.6 | 25.6 | 54.00 | -28.4 | AV |

Note: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

**Spurious Emission in Restricted Band**

| Polar (H/V) | Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Detector Type |
|----------------|-----------|------------------|--------|-------------------|----------|--------|------------------|
| | (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| 88.1MHz | | | | | | | |
| V | 75.05 | 37.46 | -19.55 | 17.91 | 40.00 | -22.09 | Pk |
| V | 88.00 | 38.74 | -19.58 | 19.16 | 40.00 | -20.84 | AV |
| V | 75.05 | 31.73 | -19.55 | 12.18 | 40.00 | -27.82 | Pk |
| V | 88.00 | 32.08 | -19.58 | 12.5 | 40.00 | -27.5 | AV |
| 107.90MHz | | | | | | | |
| H | 108.00 | 38.26 | -16.67 | 21.59 | 43.50 | -21.91 | Pk |
| H | 109.24 | 40.02 | -16.69 | 23.33 | 43.50 | -20.17 | AV |
| H | 108.00 | 37.47 | -16.67 | 20.8 | 43.50 | -22.7 | Pk |
| H | 109.24 | 35 | -16.69 | 18.31 | 43.50 | -25.19 | AV |

Note: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Factor= Antenna Factor + Cable Loss – Pre-amplifier

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



7 Bandwidth Measurement

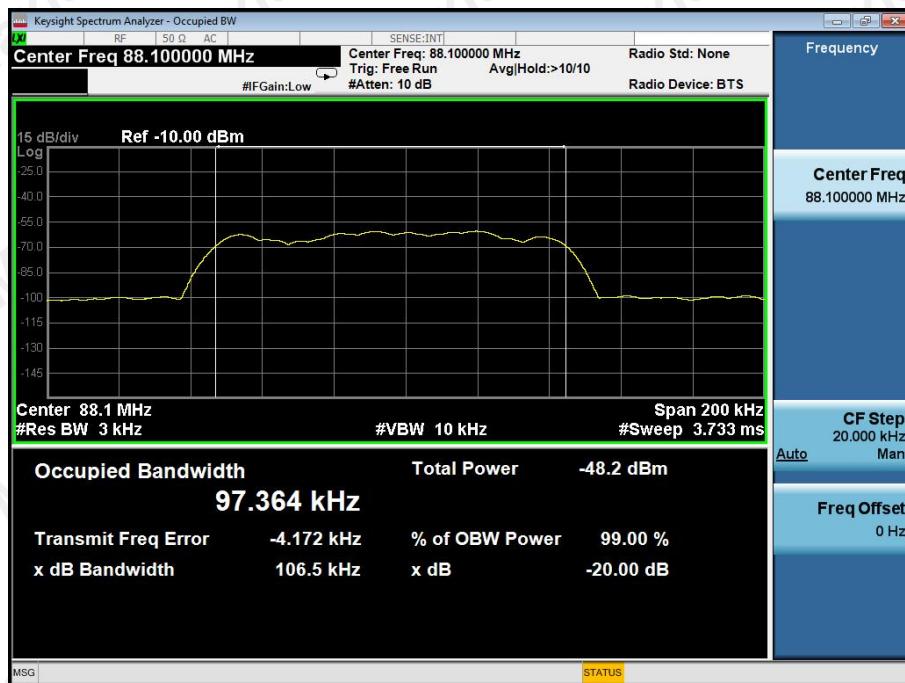
| | |
|------------------|--|
| Test Requirement | : FCC CFR47 Part 15 Section 15.239 |
| Test Method | : ANSI C63.10:2020 |
| Test Limit | Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz |

7.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 2kHz, VBW \geq 3*RBW

7.2 Test Result

| Channel number | Channel frequency (MHz) | Measurement level (KHz) | Required Limit (KHz) |
|----------------|-------------------------|-------------------------|----------------------|
| 01 | 88.10 | 106.5 | 200 |
| 100 | 98.00 | 103.4 | 200 |
| 199 | 107.90 | 105.0 | 200 |

CH01

CH100


CH199





8 Antenna Application

8.1 Antenna Requirement

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

8.2 Result

The antenna is Spring antenna, the best case gain of the antennas is 0 dBi, reference to the appendix for details.



9 EUT Photo and Test Setup Photo

Please see the attachment for details.

*****THE END REPORT*****