

TEST REPORT

Product Name : Seating system control box
Brand Mark : N/A
Model No. : CU155+
FCC ID : 2AVJ8-CU155CCA
Report Number : BLA-EMC-202101-A1902
Date of Sample Receipt : 2021/1/7
Date of Test : 2021/1/7 to 2021/3/16
Date of Issue : 2021/7/12
Test Standard : 47 CFR Part 15, Subpart C 15.249
Test Result : Pass

Prepared for:

DewertOkin Technology Group Co.,Ltd
Room 247, Tower 6, Guangfu Technology Part, JiaXing.Zhejiang

Prepared by:

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.
Building C, No. 107, Shihuan Road, Shiyuan Sub-District, Baoan District,
Shenzhen, Guangdong Province, China
TEL: +86-755-23059481

Compiled by:

Jozu.

Review by:

Sueels

Approved by:

Imen li

Date: 2021/7/12



REPORT REVISE RECORD

| Version No. | Date | Description |
|--------------------|-------------|--------------------|
| 00 | 2021/7/12 | Original |

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1 TEST SUMMARY

| Test item | Test Requirement | Test Method | Class/Severity | Result |
|--|----------------------------------|--|---|--------|
| Conducted Emissions at AC Power Line (150kHz-30MHz) | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.2 | 47 CFR Part 15, Subpart C 15.207 | Pass |
| Antenna Requirement | 47 CFR Part 15, Subpart C 15.249 | N/A | 47 CFR Part 15, Subpart C 15.203 | Pass |
| Radiated Emissions | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.4&6.5&6.6 | 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d) | Pass |
| Restricted Band Around Fundamental Frequency | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.4&6.5&6.6 | 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209 | Pass |
| Field Strength of the Fundamental Signal (15.249(a)) | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.5&6.6 | 47 CFR Part 15, Subpart C 15.249(a) | Pass |
| 20dB Bandwidth | 47 CFR Part 15, Subpart C 15.249 | ANSI C63.10 (2013) Section 6.9 | 47 CFR Part 15, Subpart C 15.215 | Pass |

2 GENERAL INFORMATION

| | |
|-----------------------|--|
| Applicant | DewertOkin Technology Group Co.,Ltd |
| Address | Room 247, Tower 6, Guangfu Technology Part, JiaXing, Zhejiang |
| Manufacturer | Shenzhen C&D Electronics Co., Ltd. |
| Address | 9/F, Tower 9A, Baoneng Science&Technology Park, Qingxiang Road, Longhua New District, Shenzhen(518109) , China |
| Factory | Shenzhen C&D Electronics Co., Ltd. |
| Address | 9/F, Tower 9A, Baoneng Science&Technology Park, Qingxiang Road, Longhua New District, Shenzhen(518109) , China |
| Product Name | Seating system control box |
| Test Model No. | CU155+ |

3 GENERAL DESCRIPTION OF E.U.T.

| | |
|----------------------------|---|
| Hardware Version | 1004106b |
| Software Version | STM32_94014_Rev.4.4 |
| Frequency Range: | 2402 MHz ~ 2480MHz |
| Frequency Band: | 2.4GHz ISM band |
| Channel Spacing: | 1MHz |
| Modulation Type: | GFSK |
| Number of Channels: | 79 (declared by the client) |
| Sample Type: | Portable production(mobile production ;fixed production) |
| Antenna Type: | PCB ANT |
| Antenna Gain: | 2.3dBi(declared by the client) |
| Power supply: | Model No.:ZBHWX-A290020-A Input:100~240V, 50/60Hz, 1.5A Output:DC29V=2.0A |

| Operation Frequency each of channel | | | | | | | |
|-------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 2 | 2402MHz | 22 | 2422MHz | 42 | 2442MHz | 62 | 2462MHz |
| 3 | 2403MHz | 23 | 2423MHz | 43 | 2443MHz | 63 | 2463MHz |
| 4 | 2404MHz | 24 | 2424MHz | 44 | 2444MHz | 64 | 2464MHz |
| 5 | 2405MHz | 225 | 2425MHz | 45 | 2445MHz | 65 | 2465MHz |
| ... | ... | ... | ... | ... | ... | ... | ... |
| 19 | 2419MHz | 39 | 2439MHz | 59 | 2459MHz | 79 | 2479MHz |
| 20 | 2420MHz | 40 | 2440MHz | 60 | 2460MHz | 80 | 2480MHz |
| 21 | 2421MHz | 41 | 2441MHz | 61 | 2461MHz | | |

Remark: The EUT operation in above frequency list, and used test software to control the EUT for staying in continuous transmitting and receiving mode. Channel 2, 40 and 80 of Bluetooth were chosen for testing.

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Channel | Frequency |
|---------------------------|-----------|
| The Lowest channel(CH2) | 2402MHz |
| The Middle channel(CH40) | 2440MHz |
| The Highest channel(CH80) | 2480MHz |

4 TEST ENVIRONMENT

| Environment | Temperature | Voltage |
|-------------|-------------|---------|
| Nomal | +22°C | DC29V |

5 TEST MODE

| TEST MODE | TEST MODE DESCRIPTION |
|-----------|---|
| TX | Keep the EUT in transmitting mode with modulation |

Remark: Only the data of the worst mode would be recorded in this report.

6 MEASUREMENT UNCERTAINTY

| Parameter | Expanded Uncertainty (Confidence of 95%) |
|---------------------------------|--|
| Radiated Emission(9kHz-30MHz) | ±4.34dB |
| Radiated Emission(30Mz-1000MHz) | ±4.24dB |

| | |
|--|---------------------|
| Radiated Emission(1GHz-18GHz) | $\pm 4.68\text{dB}$ |
| AC Power Line Conducted Emission(150kHz-30MHz) | $\pm 3.45\text{dB}$ |

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7 DESCRIPTION OF SUPPORT UNIT

| Device Type | Manufacturer | Model Name | Serial No. | Remark |
|---------------|--------------|-----------------|------------|--------|
| PC | HASEE | K610D | N/A | N/A |
| AC/DC Adapter | HWX | ZBHWX-A290020-A | N/A | N/A |

8 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Building C, No. 107, Shihuan Road, Shiyuan Sub-District, Baoan District, Shenzhen, Guangdong Province,
China
Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673
No tests were sub-contracted.

9 TEST INSTRUMENTS LIST

| Test Equipment Of Conducted Emissions at AC Power Line (150kHz-30MHz) | | | | | |
|---|--------------|---------|---------------|------------|------------|
| Equipment | Manufacturer | Model | S/N | Cal.Date | Cal.Due |
| Shield room | SKET | 833 | N/A | 2020/11/25 | 2023/11/24 |
| Receiver | R&S | ESPI3 | 101082 | 2020/10/12 | 2021/10/11 |
| LISN | R&S | ENV216 | 3560.6550.15 | 2020/10/12 | 2021/10/11 |
| LISN | AT | AT166-2 | AKK1806000003 | 2020/10/12 | 2021/10/11 |
| EMI software | EZ | EZ-EMC | EEMC-3A1 | N/A | N/A |

| Test Equipment Of Radiated Emissions | | | | | |
|--------------------------------------|--------------|---------------|------------------|------------|------------|
| Equipment | Manufacturer | Model | S/N | Cal.Date | Cal.Due |
| Chamber | SKET | 966 | N/A | 2020/11/10 | 2023/11/9 |
| Spectrum | R&S | FSP40 | 100817 | 2020/10/12 | 2021/10/11 |
| Receiver | R&S | ESR7 | 101199 | 2020/10/12 | 2021/10/11 |
| broadband Antenna | Schwarzbeck | VULB9168 | 00836 P:00227 | 2020/9/26 | 2022/9/25 |
| Horn Antenna | Schwarzbeck | 9120D | 01892 P:00331 | 2020/9/26 | 2022/9/25 |
| Amplifier | SKET | PA-000318G-45 | N/A | 2020/10/16 | 2021/10/15 |
| EMI software | EZ | EZ-EMC | EEMC-3A1 | N/A | N/A |
| Loop antenna | SCHNARZBECK | FMZB1519B | 00102 | 2020/9/26 | 2022/9/25 |
| Controller | SKET | N/A | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-02 | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-03 | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-01 | N/A | N/A | N/A |

| Test Equipment Of Restricted Band Around Fundamental Frequency | | | | | |
|---|---------------------|---------------|------------------|-----------------|----------------|
| Equipment | Manufacturer | Model | S/N | Cal.Date | Cal.Due |
| Chamber | SKET | 966 | N/A | 2020/11/10 | 2023/11/9 |
| Spectrum | R&S | FSP40 | 100817 | 2020/10/12 | 2021/10/11 |
| Receiver | R&S | ESR7 | 101199 | 2020/10/12 | 2021/10/11 |
| broadband Antenna | Schwarzbeck | VULB9168 | 00836 P:00227 | 2020/9/26 | 2022/9/25 |
| Horn Antenna | Schwarzbeck | 9120D | 01892 P:00331 | 2020/9/26 | 2022/9/25 |
| Amplifier | SKET | PA-000318G-45 | N/A | 2020/10/16 | 2021/10/15 |
| EMI software | EZ | EZ-EMC | EEMC-3A1 | N/A | N/A |
| Loop antenna | SCHNARZBECK | FMZB1519B | 00102 | 2020/9/26 | 2022/9/25 |
| Controller | SKET | N/A | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-02 | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-03 | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-01 | N/A | N/A | N/A |

| Test Equipment Of Field Strength of the Fundamental Signal (15.249(a)) | | | | | |
|---|---------------------|--------------|------------------|-----------------|----------------|
| Equipment | Manufacturer | Model | S/N | Cal.Date | Cal.Due |
| Chamber | SKET | 966 | N/A | 2020/11/10 | 2023/11/9 |
| Spectrum | R&S | FSP40 | 100817 | 2020/10/12 | 2021/10/11 |
| Receiver | R&S | ESR7 | 101199 | 2020/10/12 | 2021/10/11 |
| broadband Antenna | Schwarzbeck | VULB9168 | 00836 P:00227 | 2020/9/26 | 2022/9/25 |
| Horn Antenna | Schwarzbeck | 9120D | 01892 P:00331 | 2020/9/26 | 2022/9/25 |

| | | | | | |
|---------------|-------------|---------------|----------|------------|------------|
| Amplifier | SKET | PA-000318G-45 | N/A | 2020/10/16 | 2021/10/15 |
| EMI software | EZ | EZ-EMC | EEMC-3A1 | N/A | N/A |
| Loop antenna | SCHNARZBECK | FMZB1519B | 00102 | 2020/9/26 | 2022/9/25 |
| Controller | SKET | N/A | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-02 | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-03 | N/A | N/A | N/A |
| Coaxial Cable | BlueAsia | BLA-XC-01 | N/A | N/A | N/A |

Test Equipment Of 20dB Bandwidth

| Equipment | Manufacturer | Model | S/N | Cal.Date | Cal.Due |
|--------------|--------------|---------|---------------|------------|------------|
| Shield room | SKET | 833 | N/A | 2020/11/25 | 2023/11/24 |
| Receiver | R&S | ESPI3 | 101082 | 2020/10/12 | 2021/10/11 |
| LISN | R&S | ENV216 | 3560.6550.15 | 2020/10/12 | 2021/10/11 |
| LISN | AT | AT166-2 | AKK1806000003 | 2020/10/12 | 2021/10/11 |
| EMI software | EZ | EZ-EMC | EEMC-3A1 | N/A | N/A |

1 CONDUCTED EMISSIONS AT AC POWER LINE (150KHZ-30MHZ)

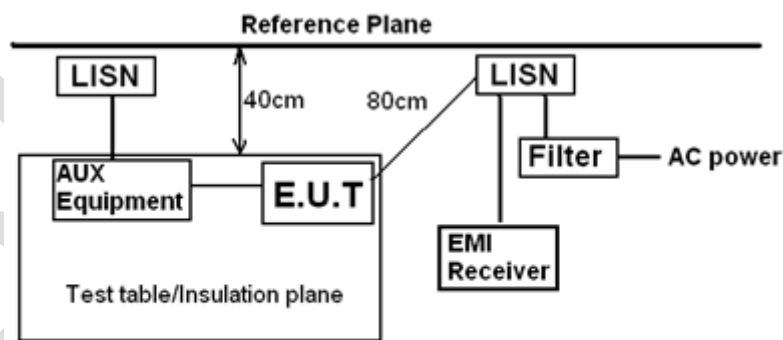
| | |
|------------------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.249 |
| Test Method | ANSI C63.10 (2013) Section 6.2 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

1.1 LIMITS

| Frequency of emission(MHz) | Conducted limit(dB μ V) | |
|----------------------------|-----------------------------|-----------|
| | 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.

1.2 BLOCK DIAGRAM OF TEST SETUP



Remark
 E.U.T: Equipment Under Test
 LISN: Line Impedance Stabilization Network
 Test table height=0.8m

1.3 PROCEDURE

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50 μ H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor

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2 ANTENNA REQUIREMENT

| | |
|---------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.249 |
| Test Method | N/A |

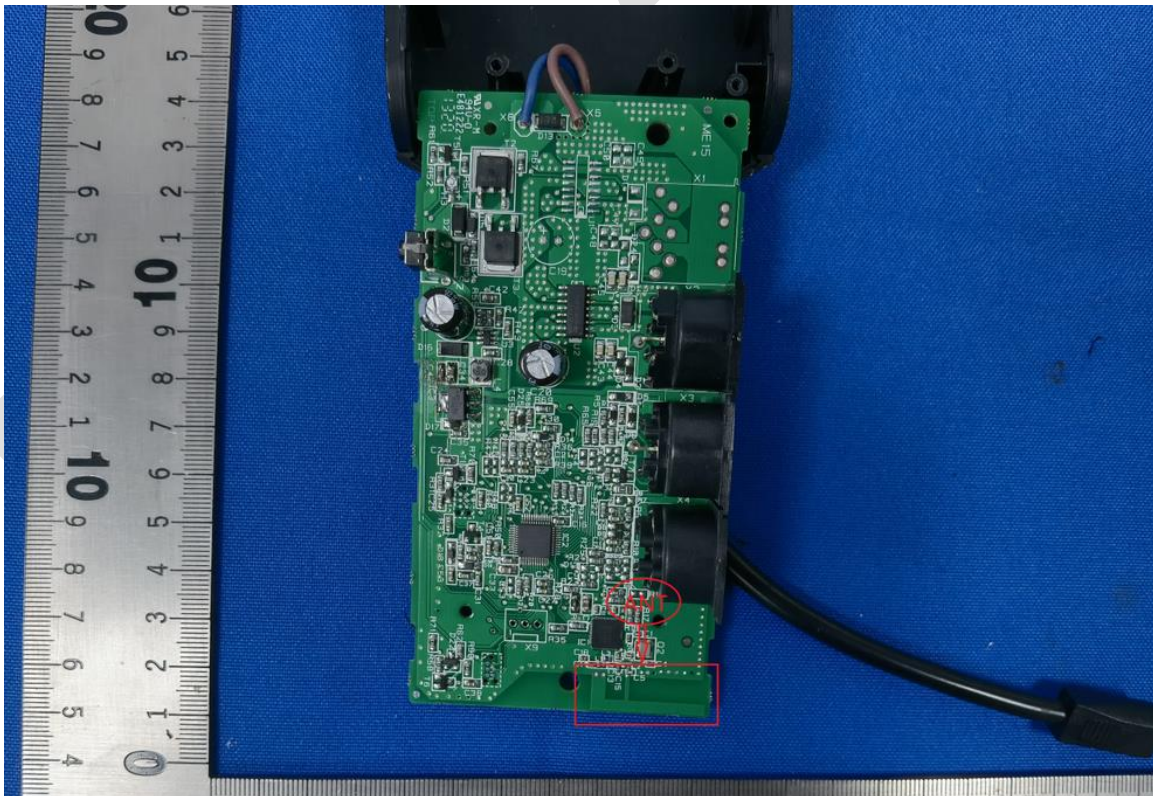
2.1 CONCLUSION

Standard Requirement:

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 an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.3dBi.



3 RADIATED EMISSIONS

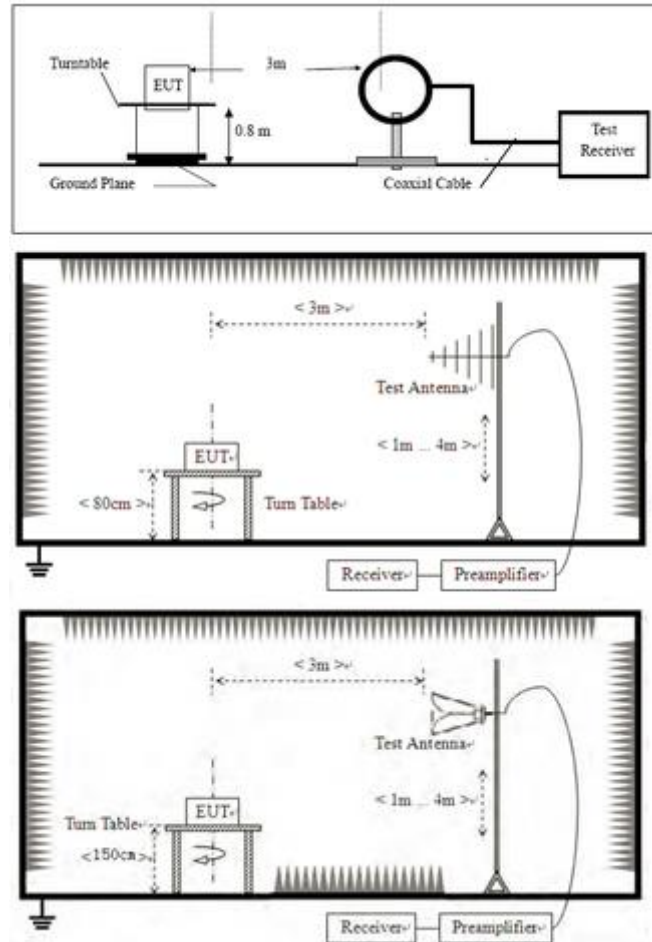
| | |
|-------------------------------|---|
| Test Standard | 47 CFR Part 15, Subpart C 15.249 |
| Test Method | ANSI C63.10 (2013) Section 6.4&6.5&6.6 |
| Test Mode (Pre-Scan) | TX mode (SE) below 1G;TX mode (SE) Above 1G |
| Test Mode (Final Test) | TX mode (SE) below 1G;TX mode (SE) Above 1G |
| Tester | Jozu |
| Temperature | 25℃ |
| Humidity | 60% |

3.1 LIMITS

| 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 |

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

3.2 BLOCK DIAGRAM OF TEST SETUP

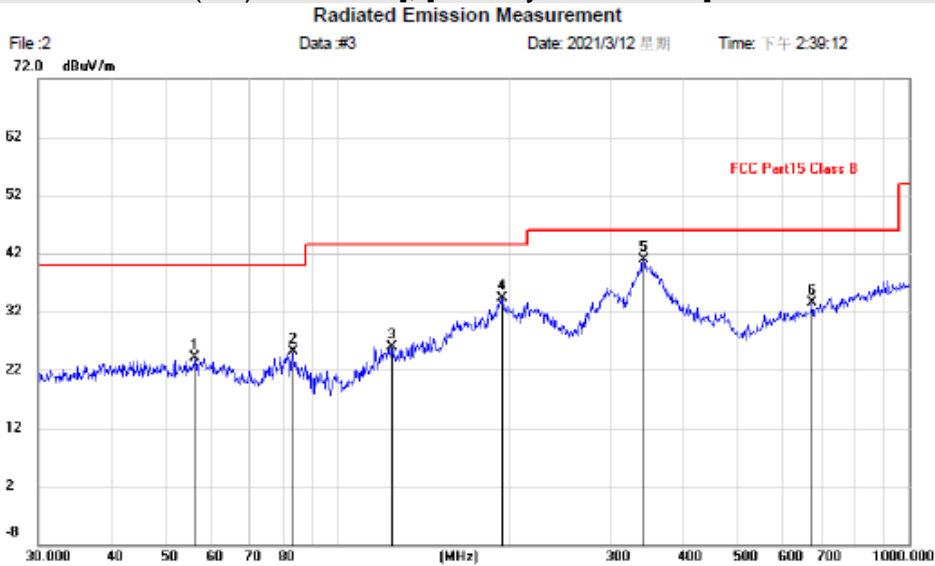


3.3 PROCEDURE

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

3.4 TEST DATA

[TestMode: TX mode (SE) below 1G]; [Polarity: Horizontal]



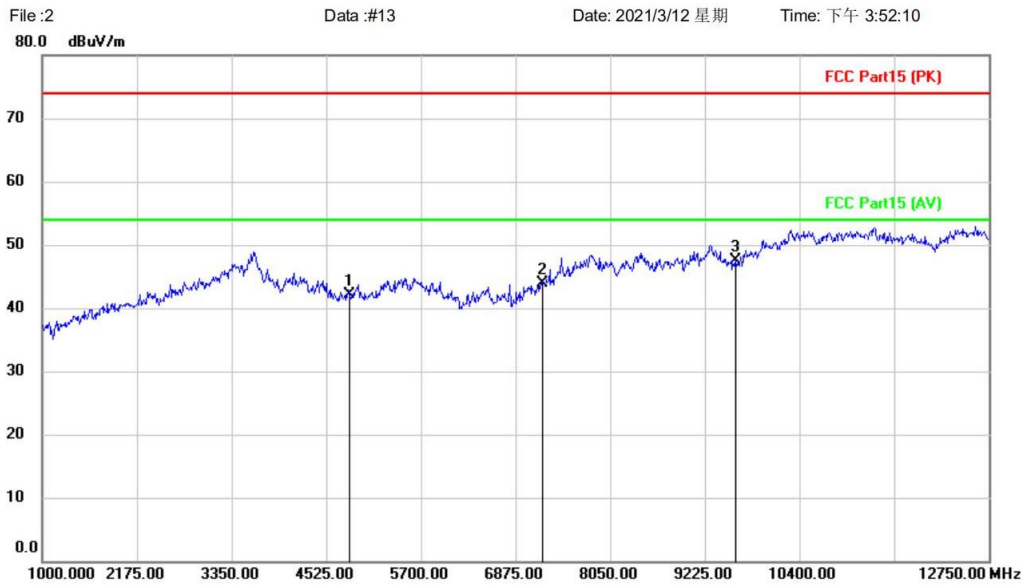
Site: Polarization: *Horizontal* Temperature: Humidity: %
 Limit: FCC Part15 Class B Power: Distance: 3m
 EUT: Seating system control bos
 M/N: CU155+
 Mode: 2.4G mode
 Note:

| No. Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measurement dBuV/m | Limit dBuV/m | Over dB | Detector | Antenna Height cm | Table Degree | Comment |
|---------|-----------|--------------------|-------------------|--------------------|--------------|---------|----------|-------------------|--------------|---------|
| 1 | 56.1974 | 0.75 | 23.37 | 24.12 | 40.00 | -15.88 | QP | | | |
| 2 | 83.5222 | 5.74 | 19.37 | 25.11 | 40.00 | -14.89 | QP | | | |
| 3 | 124.1330 | 3.31 | 22.64 | 25.95 | 43.50 | -17.55 | QP | | | |
| 4 | 194.4534 | 13.54 | 20.78 | 34.32 | 43.50 | -9.18 | QP | | | |
| 5 * | 343.1800 | 15.53 | 25.36 | 40.89 | 46.00 | -5.11 | QP | | | |
| 6 | 677.5798 | 1.47 | 31.95 | 33.42 | 46.00 | -12.58 | QP | | | |

Test Result: Pass

[TestMode: TX Low channel]; [Polarity: Horizontal]

Radiated Emission Measurement



| | | |
|---------------------------------|---------------------------------|--------------|
| Site | Polarization: Horizontal | Temperature: |
| Limit: FCC Part15 (PK) | Power: | Humidity: % |
| EUT: Seating system control bos | Distance: 3m | |
| M/N: CU155+ | | |
| Mode: TX-L | | |
| Note: | | |

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | Antenna Height | Table Degree | |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|--------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | cm | degree |
| 1 | | 4806.000 | 49.36 | -7.28 | 42.08 | 74.00 | -31.92 | peak | | |
| 2 | | 7209.000 | 48.28 | -4.40 | 43.88 | 74.00 | -30.12 | peak | | |
| 3 | * | 9612.000 | 47.79 | -0.27 | 47.52 | 74.00 | -26.48 | peak | | |

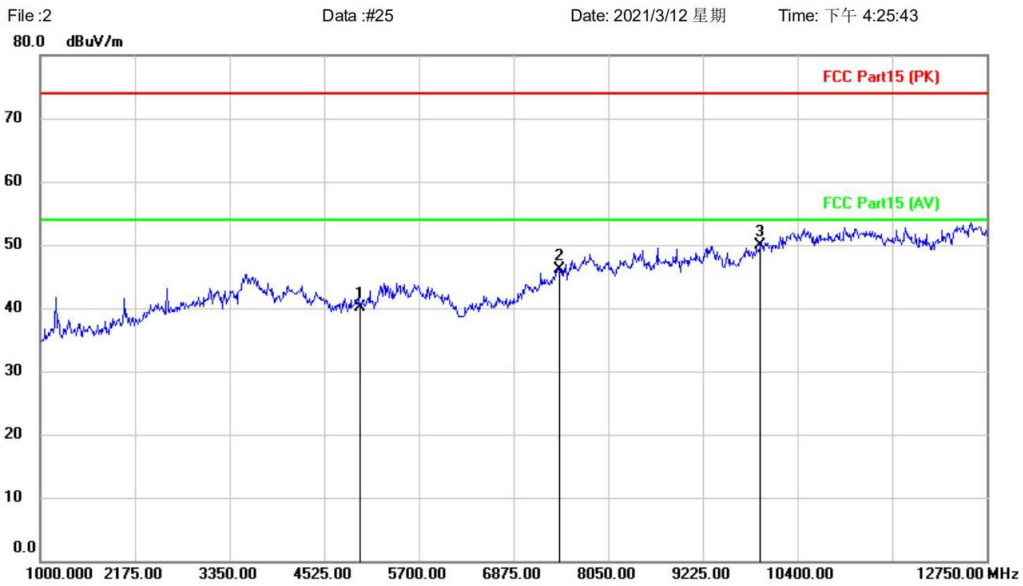
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX high channel]; [Polarity: Vertical]

Radiated Emission Measurement



| | | |
|---------------------------------|-------------------------------|--------------|
| Site | Polarization: Vertical | Temperature: |
| Limit: FCC Part15 (PK) | Power: | Humidity: % |
| EUT: Seating system control bos | Distance: 3m | |
| M/N: CU155+ | | |
| Mode: TX-H | | |
| Note: | | |

| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV/m | Limit dBuV/m | Over dB | Detector | Antenna Height cm | Table Degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|-----------------|---------|
| 1 | | 4960.000 | 47.11 | -6.99 | 40.12 | 74.00 | -33.88 | peak | | | |
| 2 | | 7440.000 | 48.59 | -2.43 | 46.16 | 74.00 | -27.84 | peak | | | |
| 3 | * | 9920.000 | 48.31 | 1.63 | 49.94 | 74.00 | -24.06 | peak | | | |

*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

4 RESTRICTED BAND AROUND FUNDAMENTAL FREQUENCY

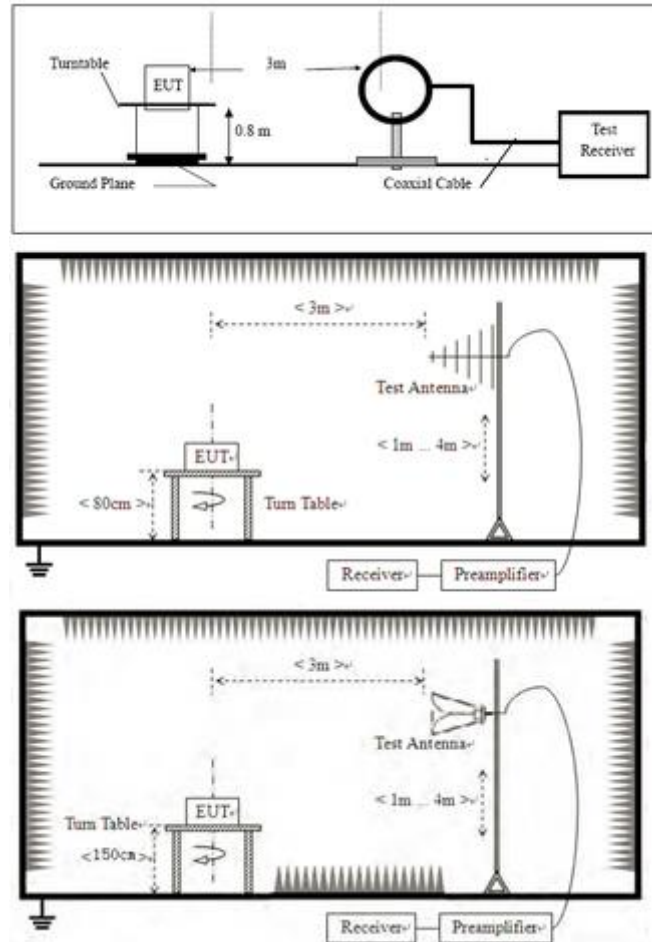
| | |
|-------------------------------|--|
| Test Standard | 47 CFR Part 15, Subpart C 15.249 |
| Test Method | ANSI C63.10 (2013) Section 6.4&6.5&6.6 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

4.1 LIMITS

| Frequency | Limit (dBuV/m @3m) | Remark |
|---------------|--------------------|------------------|
| 30MHz-88MHz | 40.0 | Quasi-peak Value |
| 88MHz-216MHz | 43.5 | Quasi-peak Value |
| 216MHz-960MHz | 46.0 | Quasi-peak Value |
| 960MHz-1GHz | 54.0 | Quasi-peak Value |
| Above 1GHz | 54.0 | Average Value |
| Above 1GHz | 74.0 | Peak Value |

Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

4.2 BLOCK DIAGRAM OF TEST SETUP



4.3 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

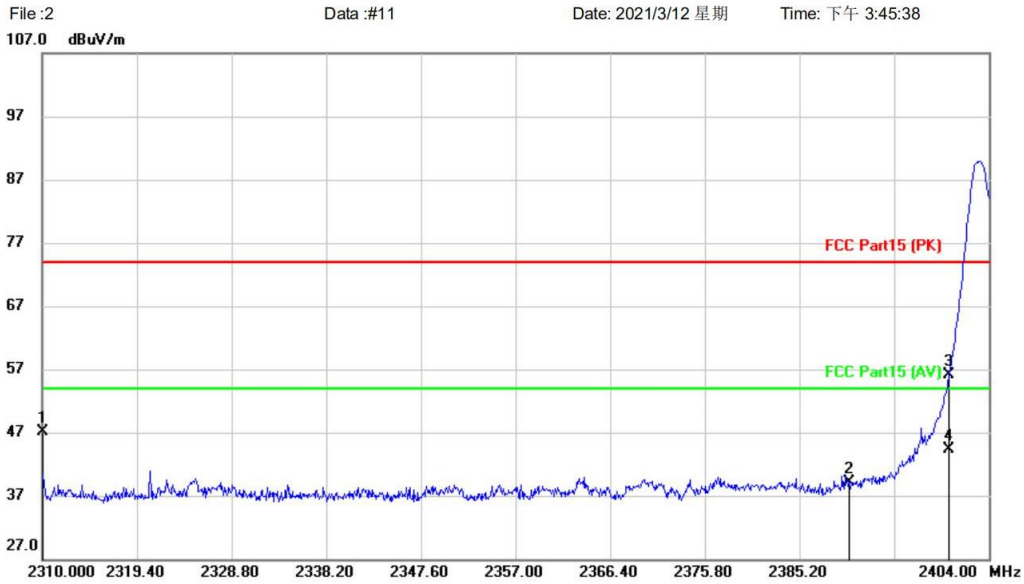
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
 - i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
 - j. Repeat above procedures until all frequencies measured was complete.
- Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

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4.4 TEST DATA

[TestMode: TX Low channel]; [Polarity: Horizontal]

Radiated Emission Measurement



| | | |
|---------------------------------|---------------------------------|--------------|
| Site | Polarization: Horizontal | Temperature: |
| Limit: FCC Part15 (PK) | Power: | Humidity: % |
| EUT: Seating system control bos | Distance: 3m | |
| M/N: CU155+ | | |
| Mode: TX-L | | |
| Note: | | |

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | Antenna Height | Table Degree |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | cm | degree |
| 1 | | 2310.000 | 62.53 | -15.49 | 47.04 | 74.00 | -26.96 | peak | |
| 2 | | 2390.000 | 54.29 | -15.18 | 39.11 | 74.00 | -34.89 | peak | |
| 3 | | 2400.000 | 71.28 | -15.14 | 56.14 | 74.00 | -17.86 | peak | |
| 4 | * | 2400.000 | 59.39 | -15.14 | 44.25 | 54.00 | -9.75 | AVG | |

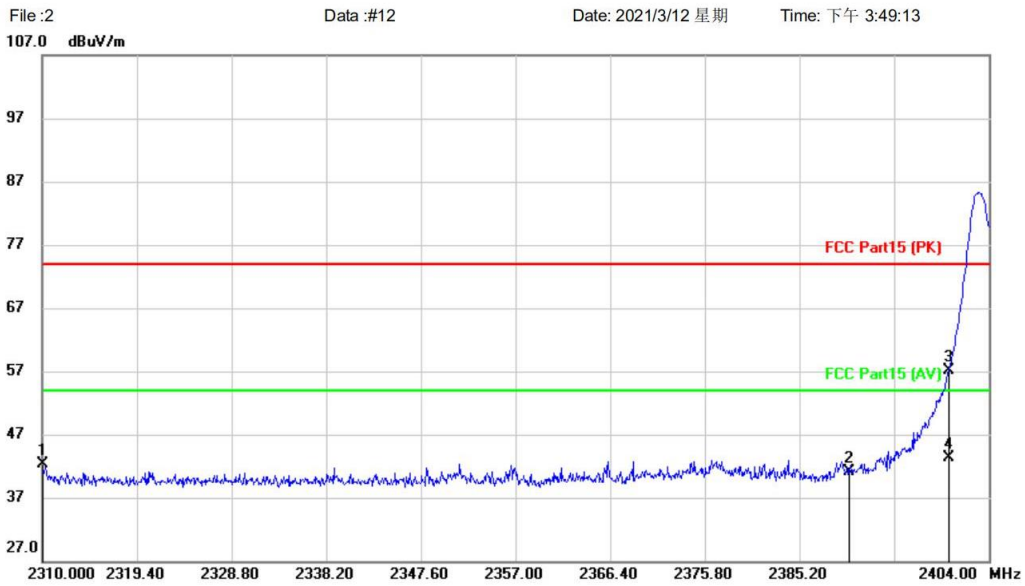
*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

[TestMode: TX Low channel]; [Polarity: Vertical]

Radiated Emission Measurement



| | | |
|---------------------------------|-------------------------------|--------------|
| Site | Polarization: Vertical | Temperature: |
| Limit: FCC Part15 (PK) | Power: | Humidity: % |
| EUT: Seating system control bos | Distance: 3m | |
| M/N: CU155+ | | |
| Mode: TX-L | | |
| Note: | | |

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | Antenna Height | Table Degree | |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | cm | degree | Comment |
| 1 | | 2310.000 | 57.71 | -15.49 | 42.22 | 74.00 | -31.78 | peak | | |
| 2 | | 2390.000 | 56.33 | -15.18 | 41.15 | 74.00 | -32.85 | peak | | |
| 3 | | 2400.000 | 72.17 | -15.14 | 57.03 | 74.00 | -16.97 | peak | | |
| 4 | * | 2400.000 | 58.51 | -15.14 | 43.37 | 54.00 | -10.63 | AVG | | |

*:Maximum data x:Over limit !:over margin

<Reference Only

Test Result: Pass

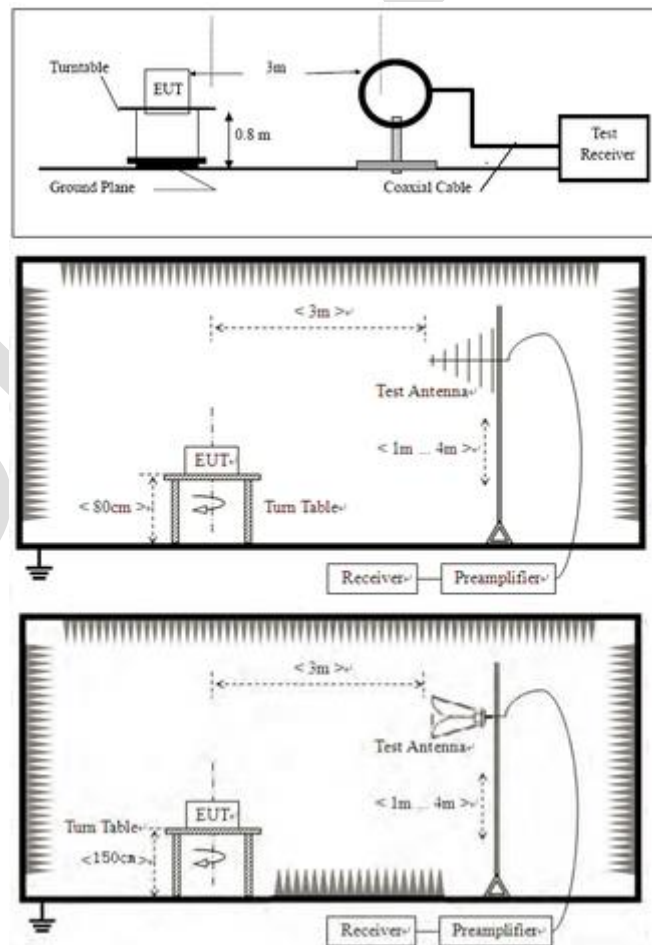
5 FIELD STRENGTH OF THE FUNDAMENTAL SIGNAL (15.249(A))

| | |
|------------------------|------------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.249 |
| Test Method | ANSI C63.10 (2013) Section 6.5&6.6 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

5.1 LIMITS

| Frequency | Limit (dBuV/m @3m) | Remark |
|-------------------|--------------------|---------------|
| 2400MHz-2483.5MHz | 94.0 | Average Value |
| | 114.0 | Peak Value |

5.2 BLOCK DIAGRAM OF TEST SETUP

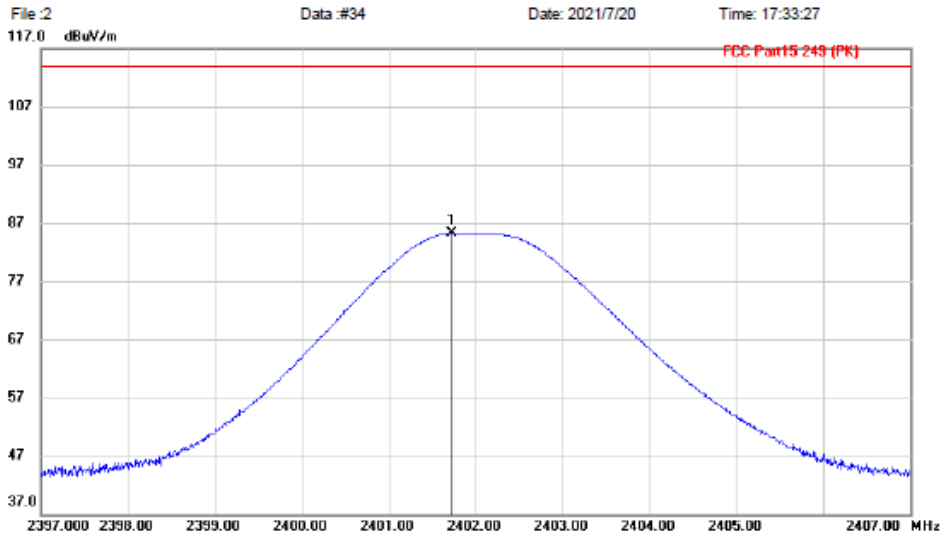


5.3 PROCEDURE

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
 - b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
 - c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
 - d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
 - e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
 - f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
 - g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
 - h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
 - i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
 - j. Repeat above procedures until all frequencies measured was complete.
- Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
RBW >20dB BW, VBW >=3XRBW, PK detector is for PK value, AV detector is for AV value

[TestMode: TX Low channel- Peak Value]; [Polarity: Vertical]

Radiated Emission Measurement



File :2
117.0 dBuV/m
Data :#34
Date: 2021/7/20
Time: 17:33:27

Site
Limit: FCC Part15 249 (PK)
EUT: Seating system control bos
M/N: CU155+
Mode: TX-L
Note:

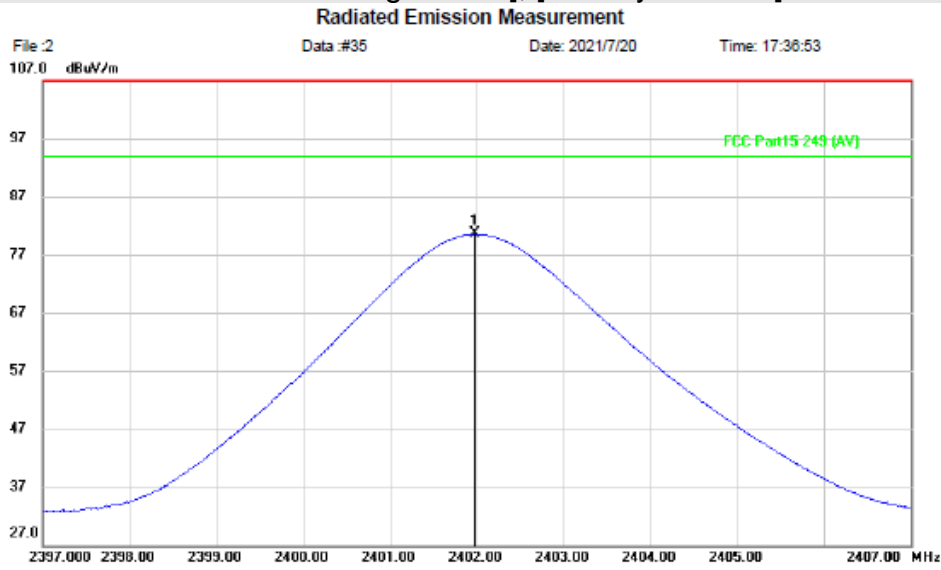
Polarization: *Vertical*
Power:
Distance: 3m

Temperature:
Humidity: %

| No. Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measurement dBuV/m | Limit dBuV/m | Over dB | Detector | Antenna Height cm | Table Degree degree | Comment |
|---------|--------------|-----------------------|----------------------|-----------------------|-----------------|------------|----------|----------------------|------------------------|---------|
| 1 * | 2401.720 | 89.59 | -4.23 | 85.36 | 114.00 | -28.64 | peak | | | |

Test Result: Pass

[TestMode: TX Low channel- Average Value]; [Polarity: Vertical]



| | | |
|---------------------------------|-------------------------------|--------------|
| Site | Polarization: <i>Vertical</i> | Temperature: |
| Limit: | Power: | Humidity: % |
| EUT: Seating system control bos | Distance: 3m | |
| M/N: CU155+ | | |
| Mode: TX-L avg | | |
| Note: | | |

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | Antenna Height | Table Degree | |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | cm | degree | Comment |
| 1 | * | 2401.980 | 84.84 | -4.23 | 80.61 | 94.00 | -13.39 | AVG | | |

Test Result: Pass

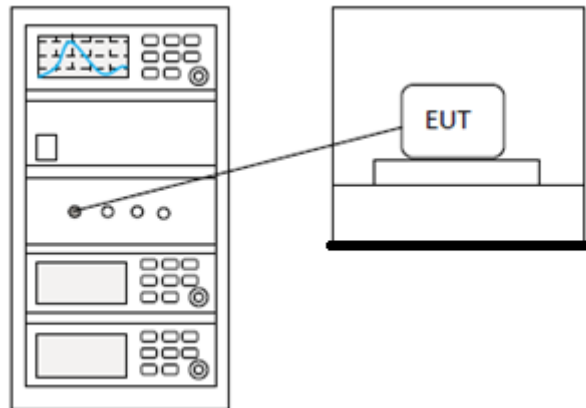
6 20DB BANDWIDTH

| | |
|-------------------------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart C 15.249 |
| Test Method | ANSI C63.10 (2013) Section 6.9 |
| Test Mode (Pre-Scan) | TX |
| Test Mode (Final Test) | TX |
| Tester | Jozu |
| Temperature | 25°C |
| Humidity | 60% |

6.1 LIMITS

| | |
|---------------|-----|
| Limit: | N/A |
|---------------|-----|

6.2 BLOCK DIAGRAM OF TEST SETUP



6.3 TEST DATA

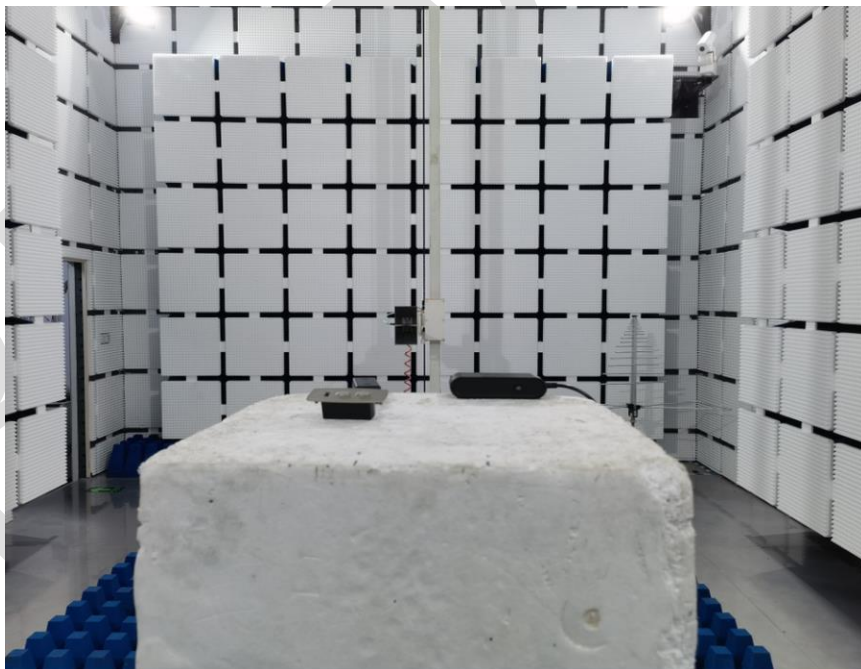
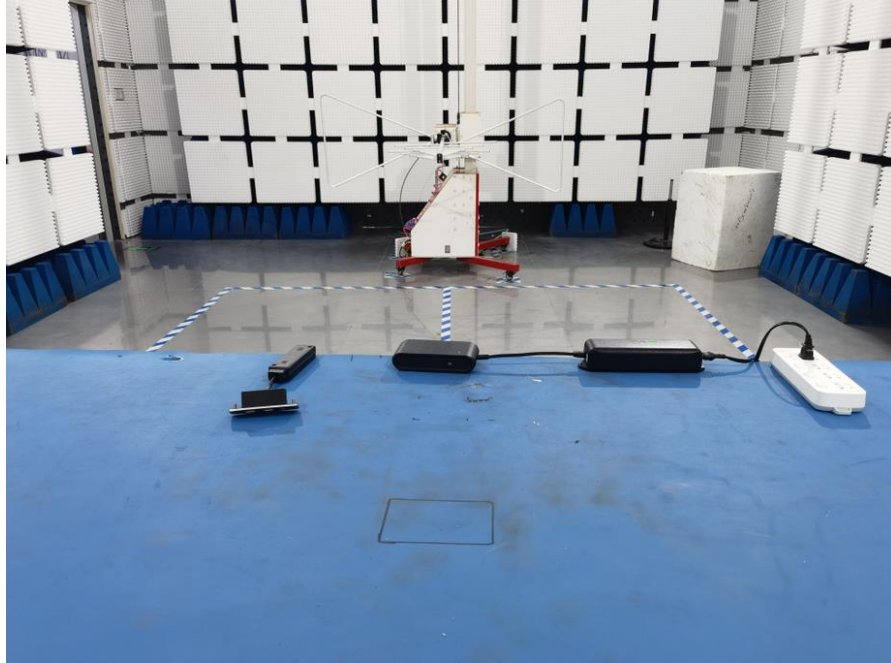
| Channel | Frequency(MHz) | 20dB Bandwidth (MHz) | 99% Bandwidth (MHz) | Result |
|---------|----------------|----------------------|---------------------|--------|
| Lowest | 2402 | 1.190 | 1.0312 | Pass |
| Middle | 2440 | 1.190 | 1.0298 | Pass |
| Highest | 2480 | 1.187 | 1.0280 | Pass |

Test Graphs

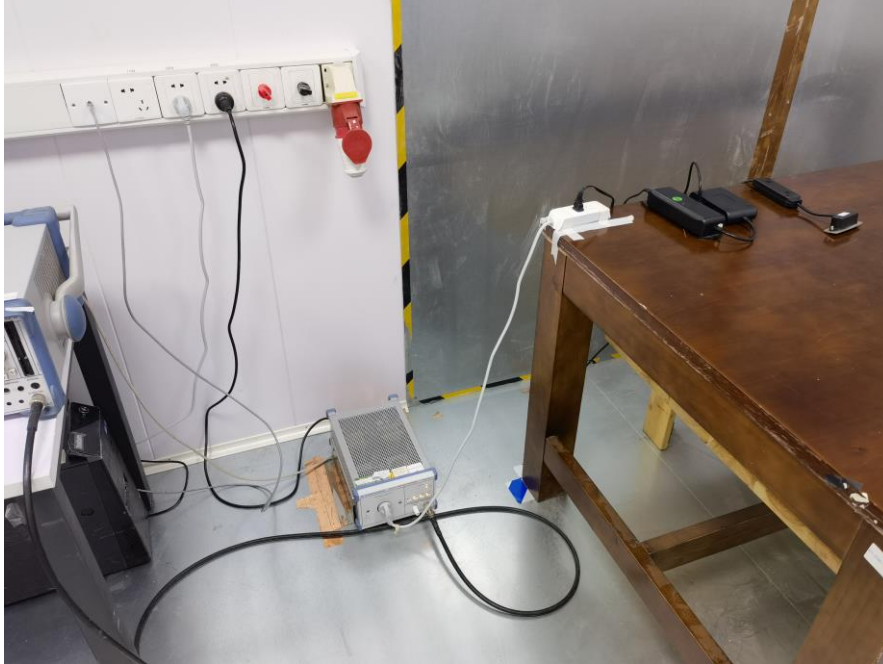


APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Radiated Spurious Emissions



Conducted Emissions at AC Power Line (150kHz-30MHz)



APPENDIX B: PHOTOGRAPHS OF EUT

Reference to the test report No. BLA-EMC-202101-A1903

----END OF REPORT----

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