

TEST REPORT

Application No.: SZCR2404001208AT
Applicant: Standard Euler, Inc.
Address of Applicant: 479 Jessie Street San Francisco California 94103 United States
Manufacturer: Jetta Company Limited
Address of Manufacturer: 19 On Kui St., On Lok Tsuen, Fanling, NT, HK, Hong Kong
Equipment Under Test (EUT):
EUT Name: Bridge
Model No.: BRIDGE-1.0
Trade Mark: Flair
FCC ID: 2AK78BRIDGE
Standard(s) : 47 CFR Part 15, Subpart C 15.249
Date of Receipt: 2024-04-07
Date of Test: 2024-04-09 to 2024-04-23
Date of Issue: 2024-04-24

| | |
|---------------------|--------------|
| Test Result: | Pass* |
|---------------------|--------------|

* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager





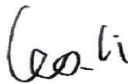
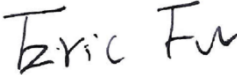
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SZEMC-TRF-01 Rev. A/1

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| Revision Record | | | | |
|-----------------|---------|------------|----------|----------|
| Version | Chapter | Date | Modifier | Remark |
| 01 | | 2024-04-24 | | Original |
| | | | | |
| | | | | |

| | | | | |
|--------------------------|--|--|--|--|
| Authorized for issue by: | | | | |
| | |  | | |
| | | Leo Li/Project Engineer | | |
| | |  | | |
| | | Eric Fu/Reviewer | | |



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2 Test Summary

| Radio Spectrum Technical Requirement | | | | |
|--------------------------------------|----------------------------------|--------|----------------------------------|--------|
| Item | Standard | Method | Requirement | Result |
| Antenna Requirement | 47 CFR Part 15, Subpart C 15.249 | N/A | 47 CFR Part 15, Subpart C 15.203 | Pass |

| Radio Spectrum Matter Part | | | | |
|--|----------------------------------|------------------------------------|---|--------|
| Item | Standard | Method | Requirement | 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 |
| 20dB Bandwidth | | ANSI C63.10 (2013) Section 6.9 | 47 CFR Part 15, Subpart C 15.215 | Pass |
| Field Strength of the Fundamental Signal (15.249(a)) | | ANSI C63.10 (2013) Section 6.5&6.6 | 47 CFR Part 15, Subpart C 15.249(a) | Pass |
| Restricted Band Around Fundamental Frequency | | ANSI C63.10 (2013) Section 6.10.5 | 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209 | Pass |
| Radiated Emissions Below 1GHz | | ANSI C63.10 (2013) Section 6.4&6.5 | 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d) | Pass |
| Radiated Emissions Above 1GHz | | ANSI C63.10 (2013) Section 6.6 | 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d) | Pass |



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4 General Information

4.1 Details of E.U.T.

| | |
|----------------------|---|
| Power supply: | DC 5V from adapter input AC 120V/60Hz Adapter Model: SAW06-050-1000U Input: 100-240V~, 50/60Hz 0.3A Output: 5V= 1000mA |
| Cable(s): | RJ45 cable: 120cm unshielded Type-C cable: 180cm shielded |
| Operation Frequency: | 915MHz |
| Modulation Type: | GFSK |
| Number of Channels: | 1 |
| Antenna Type: | Glue stick antenna |
| Antenna Gain: | 1.93dBi |

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

| Description | Manufacturer | Model No. | Serial No. |
|-------------|--------------|----------------------|------------------|
| RF cable | SGS | N/A(cable loss:-2dB) | REF. No.SEL001A0 |

4.3 Measurement Uncertainty

| Test Item | Measurement Uncertainty |
|--|---|
| Conducted Emissions at AC Power Line (150kHz-30MHz) | $\pm 3.1\text{dB}$ |
| 20dB Bandwidth | $\pm 3\%$ |
| Field Strength of the Fundamental Signal (15.249(a)) | $\pm 4.5\text{dB}$ (Below 1GHz); $\pm 4.8\text{dB}$ (Above 1GHz) |
| Restricted Band Around Fundamental Frequency | $\pm 6.0\text{dB}$ (Below 1GHz); $\pm 4.6\text{dB}$ (Above 1GHz) |
| Radiated Emissions Below 1GHz | $\pm 6.0\text{dB}$ for 3m; $\pm 5.0\text{dB}$ for 10m |
| Radiated Emissions Above 1GHz | $\pm 4.6\text{dB}$ (1GHz-18GHz); $\pm 4.8\text{dB}$ (18MHz-40GHz) |

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{\text{CISPR/ETSI}}$ (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

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4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

| Conducted Emissions at AC Power Line (150kHz-30MHz) | | | | | |
|---|------------------|------------------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| Shielding Room | ZhongYu Electron | GB-88 | SEM001-06 | 2022-05-14 | 2025-05-13 |
| EMI Test Receiver | Rohde&Schwarz | ESCI | SEM004-02 | 2024-03-14 | 2025-03-13 |
| Measurement Software | AUDIX | e3 V8.2014-6-27a | N/A | N/A | N/A |
| Coaxial Cable | SGS | N/A | SEM024-01 | 2023-07-07 | 2024-07-06 |
| LISN | Rohde&Schwarz | ENV216 | SEM007-01 | 2023-09-19 | 2024-09-18 |
| LISN | ETS-LINDGREN | 3816/2 | SEM007-02 | 2024-03-14 | 2025-03-13 |

| 20dB Bandwidth | | | | | |
|---|------------------------------|---------------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| DC Power Supply | Chroma | 62012P-80-60 | SEM011-11 | 2023-10-19 | 2024-10-18 |
| MXA Signal Analyzer | KEYSIGHT | N9020A | SEM004-19 | 2024-03-14 | 2025-03-13 |
| Measurement Software | TST PASS | TST PASS V2.0 | N/A | N/A | N/A |
| Coaxial Cable | SGS | N/A | SEM031-01 | 2023-07-07 | 2024-07-06 |
| Attenuator | Huber+Suhner | 6620_SMA-50-1 | SEM021-09 | 2024-03-27 | 2025-03-26 |
| Programmable Temperature & Humidity Chamber | Votsch Industrietechnik GmbH | VT 4002 | SEM002-15 | 2024-03-19 | 2025-03-18 |

| Field Strength of the Fundamental Signal (15.249(a)) | | | | | |
|--|----------------------|-----------------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| 3m Semi-Anechoic Chamber | ETS-LINDGREN | N/A | SEM001-01 | 2023-06-19 | 2026-06-18 |
| MXE EMI Receiver | Agilent Technologies | N9038A | SEM004-15 | 2023-10-19 | 2024-10-18 |
| BiConiLog Antenna | ETS-LINDGREN | 3142C | SEM003-01 | 2023-09-16 | 2025-09-15 |
| Pre-Amplifier | Agilent Technologies | 8447D | SEM005-01 | 2024-03-14 | 2025-03-13 |
| Measurement Software | AUDIX | e3 V8.2014-6-27 | N/A | N/A | N/A |
| Coaxial Cable | SGS | N/A | SEM025-01 | 2023-07-07 | 2024-07-06 |



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| Restricted Band Around Fundamental Frequency | | | | | |
|--|----------------------|-----------------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| 3m Semi-Anechoic Chamber | ETS-LINDGREN | N/A | SEM001-01 | 2023-06-19 | 2026-06-18 |
| MXE EMI Receiver | Agilent Technologies | N9038A | SEM004-15 | 2023-10-19 | 2024-10-18 |
| BiConiLog Antenna | ETS-LINDGREN | 3142C | SEM003-01 | 2023-09-16 | 2025-09-15 |
| Pre-Amplifier | Agilent Technologies | 8447D | SEM005-01 | 2024-03-14 | 2025-03-13 |
| Measurement Software | AUDIX | e3 V8.2014-6-27 | N/A | N/A | N/A |
| Coaxial Cable | SGS | N/A | SEM025-01 | 2023-07-07 | 2024-07-06 |

| Radiated Emissions Below 1GHz | | | | | |
|-------------------------------|----------------------|-----------------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| Loop Antenna | ETS-Lindgren | 6502 | SEM003-08 | 2023-11-20 | 2025-11-19 |
| 3m Semi-Anechoic Chamber | ETS-LINDGREN | N/A | SEM001-01 | 2023-06-19 | 2026-06-18 |
| MXE EMI Receiver | Agilent Technologies | N9038A | SEM004-15 | 2023-10-19 | 2024-10-18 |
| BiConiLog Antenna | ETS-LINDGREN | 3142C | SEM003-01 | 2023-09-16 | 2025-09-15 |
| Pre-Amplifier | Agilent Technologies | 8447D | SEM005-01 | 2024-03-14 | 2025-03-13 |
| Measurement Software | AUDIX | e3 V8.2014-6-27 | N/A | N/A | N/A |
| Coaxial Cable | SGS | N/A | SEM025-01 | 2023-07-07 | 2024-07-06 |



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| Radiated Emissions Above 1GHz | | | | | |
|-------------------------------|-----------------|-----------------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| 3m Fully-Anechoic Chamber | AUDIX | N/A | SEM001-02 | 2023-04-01 | 2026-03-31 |
| Signal Analyzer | Rohde & Schwarz | FSV40 | SEM008-04 | 2024-03-15 | 2025-03-14 |
| Horn Antenna | Rohde&Schwarz | HF907 | SEM003-07 | 2023-07-23 | 2025-07-22 |
| Microwave system amplifier | Agilent | 83017A | SEM005-25 | 2023-09-19 | 2024-09-18 |
| Measurement Software | AUDIX | e3 V8.2014-6-27 | N/A | N/A | N/A |
| Coaxial Cable | SGS | N/A | SEM026-01 | 2023-07-07 | 2024-07-06 |

| General used equipment | | | | | |
|---------------------------------|---|-----------|---------------|------------|--------------|
| Equipment | Manufacturer | Model No. | Inventory No. | Cal Date | Cal Due Date |
| Humidity/ Temperature Indicator | deli | 8838 | SEM002-32 | 2023-07-28 | 2024-07-27 |
| Humidity/ Temperature Indicator | deli | 8838 | SEM002-33 | 2023-07-28 | 2024-07-27 |
| Barometer | Changchun Meteorological Industry Factory | DYM3 | SEM002-01 | 2024-03-18 | 2025-03-17 |



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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 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 a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, 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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.93dBi

Antenna location: Refer to internal photo.



7 Radio Spectrum Matter Test Results

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

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

| 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.

Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

7.1.1 E.U.T. Operation

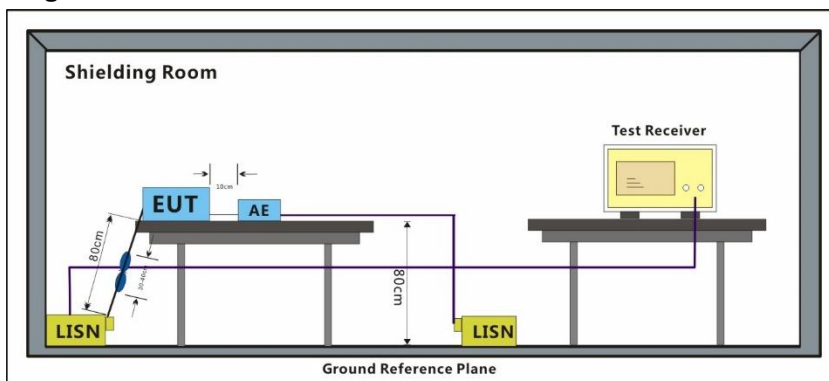
Operating Environment:

Temperature: 23.5 °C Humidity: 45.5 % RH Atmospheric Pressure: 1020 mbar

7.1.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|-----------------------|-----------|--|
| Final test | 00 | TX mode_Keep the EUT in transmitting with modulation mode. |

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

- 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/50μH + 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: Level=Read Level+ Cable Loss+ LISN Factor



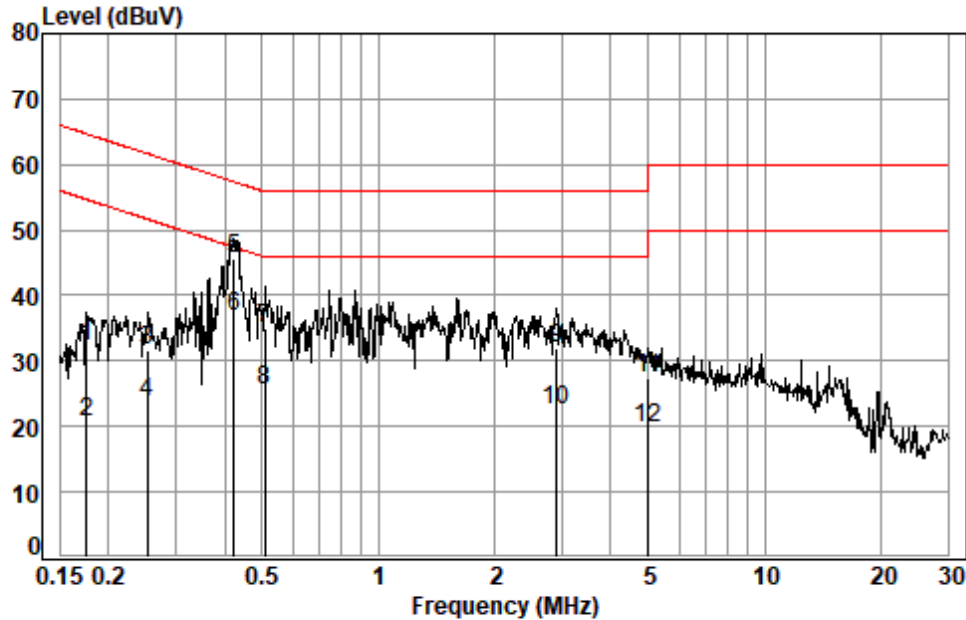
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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Test Mode: 00; Line: Live line



Site : Shielding Room
Condition: Line
Job No. : 01208AT
Test mode: 00

| | Freq | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|-----|--------|------------|-------------|------------|-------|------------|------------|---------|
| | MHz | dB | dB | dBuV | dBuV | dBuV | dB | |
| 1 | 0.1758 | 0.02 | 9.91 | 22.43 | 32.36 | 64.68 | -32.32 | QP |
| 2 | 0.1758 | 0.02 | 9.91 | 10.84 | 20.77 | 54.68 | -33.91 | Average |
| 3 | 0.2521 | 0.03 | 9.97 | 21.61 | 31.61 | 61.69 | -30.08 | QP |
| 4 | 0.2521 | 0.03 | 9.97 | 13.75 | 23.75 | 51.69 | -27.94 | Average |
| 5 * | 0.4237 | 0.03 | 10.01 | 35.53 | 45.57 | 57.37 | -11.80 | QP |
| 6 * | 0.4237 | 0.03 | 10.01 | 26.69 | 36.73 | 47.37 | -10.64 | Average |
| 7 | 0.5074 | 0.04 | 9.99 | 24.90 | 34.93 | 56.00 | -21.07 | QP |
| 8 | 0.5074 | 0.04 | 9.99 | 15.57 | 25.60 | 46.00 | -20.40 | Average |
| 9 | 2.8998 | 0.07 | 10.04 | 21.80 | 31.91 | 56.00 | -24.09 | QP |
| 10 | 2.8998 | 0.07 | 10.04 | 12.41 | 22.52 | 46.00 | -23.48 | Average |
| 11 | 5.0046 | 0.09 | 10.04 | 17.39 | 27.52 | 60.00 | -32.48 | QP |
| 12 | 5.0046 | 0.09 | 10.04 | 9.54 | 19.67 | 50.00 | -30.33 | Average |



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Shenzhen Branch Testing and Calibration Laboratory

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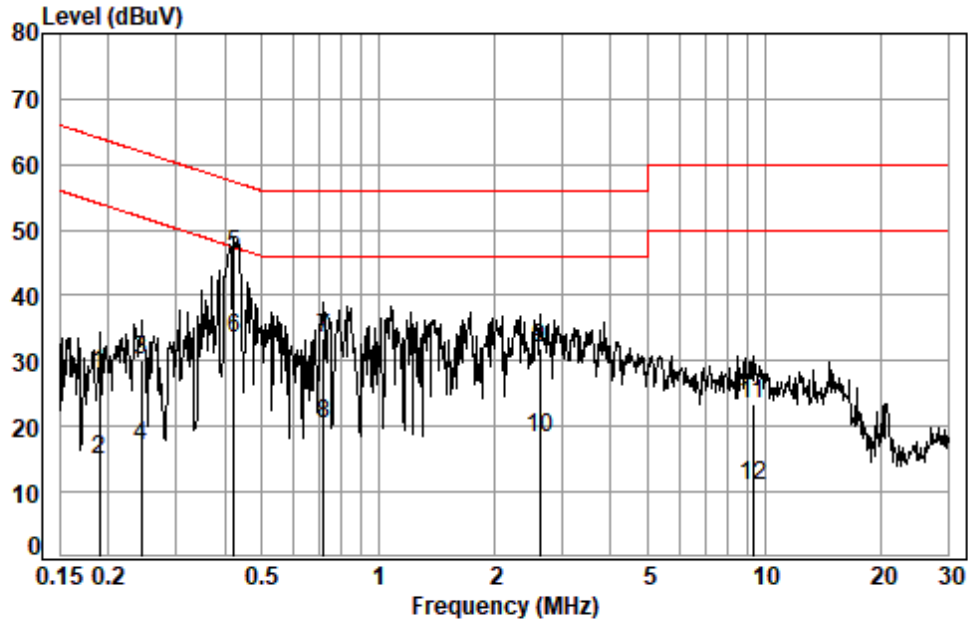
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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Test Mode: 00; Line: Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 01208AT
Test mode: 00

| | Freq | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|-----|--------|------------|-------------|------------|-------|------------|------------|---------|
| | MHz | dB | dB | dBuV | dBuV | dBuV | dB | |
| 1 | 0.1904 | 0.02 | 9.91 | 17.99 | 27.92 | 64.02 | -36.10 | QP |
| 2 | 0.1904 | 0.02 | 9.91 | 4.98 | 14.91 | 54.02 | -39.11 | Average |
| 3 | 0.2442 | 0.03 | 9.91 | 20.14 | 30.08 | 61.95 | -31.87 | QP |
| 4 | 0.2442 | 0.03 | 9.91 | 7.16 | 17.10 | 51.95 | -34.85 | Average |
| 5 * | 0.4237 | 0.03 | 9.92 | 36.15 | 46.10 | 57.37 | -11.27 | QP |
| 6 * | 0.4237 | 0.03 | 9.92 | 23.66 | 33.61 | 47.37 | -13.76 | Average |
| 7 | 0.7236 | 0.05 | 9.96 | 23.60 | 33.61 | 56.00 | -22.39 | QP |
| 8 | 0.7236 | 0.05 | 9.96 | 10.24 | 20.25 | 46.00 | -25.75 | Average |
| 9 | 2.6221 | 0.07 | 9.96 | 21.91 | 31.94 | 56.00 | -24.06 | QP |
| 10 | 2.6221 | 0.07 | 9.96 | 8.16 | 18.19 | 46.00 | -27.81 | Average |
| 11 | 9.3518 | 0.16 | 10.24 | 12.87 | 23.27 | 60.00 | -36.73 | QP |
| 12 | 9.3518 | 0.16 | 10.24 | 0.67 | 11.07 | 50.00 | -38.93 | Average |



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7.2 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215

Test Method: ANSI C63.10 (2013) Section 6.9

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C

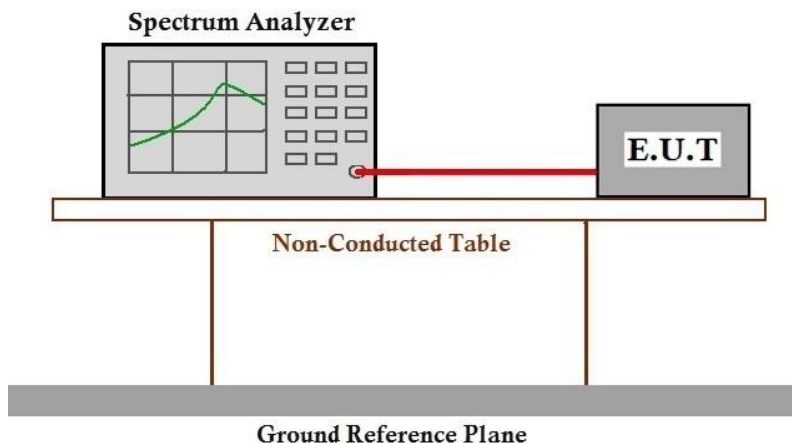
Humidity: 52.3 % RH

Atmospheric Pressure: 1020 mbar

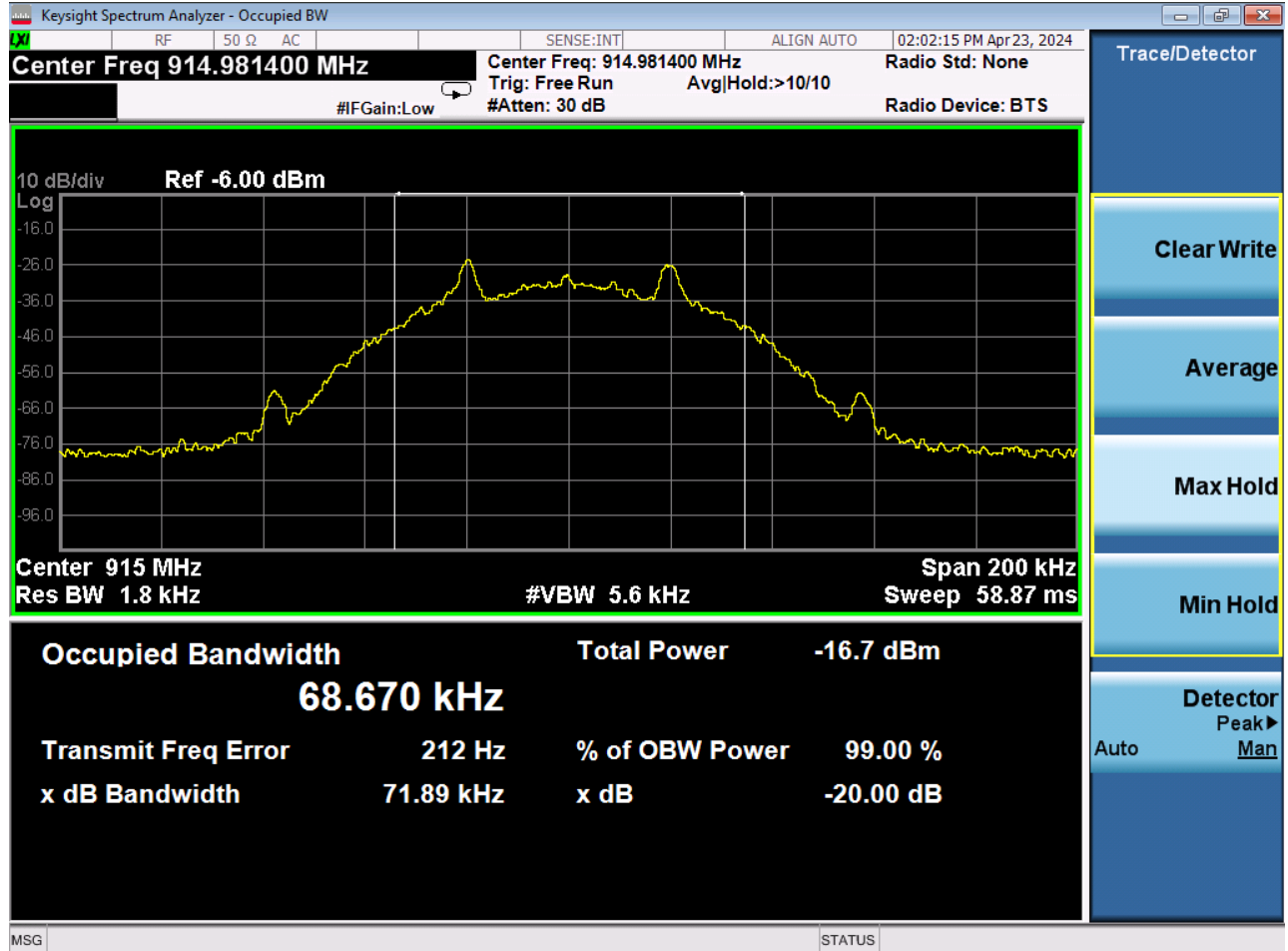
7.2.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|-----------------------|-----------|--|
| Final test | 00 | TX mode_Keep the EUT in transmitting with modulation mode. |

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data



7.3 Field Strength of the Fundamental Signal (15.249(a))

Test Requirement 47 CFR Part 15, Subpart C 15.249(a)

Test Method: ANSI C63.10 (2013) Section 6.5&6.6

Measurement Distance: 3m

Limit:

| Fundamental frequency(MHz) | Field strength of fundamental(millivolts/meter) | Field strength of harmonics(microvolts/meter) |
|----------------------------|---|---|
| 902-928 | 50 | 500 |
| 2400-2483.5 | 50 | 500 |
| 5725-5875 | 50 | 500 |
| 24000-24250 | 250 | 2500 |

Remark: The frequencies above 1000MHz are based on average limits. However, 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.

For fundamental frequency in "902-928MHz", the field strength of fundamental is based on Quasi-Peak.

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 23.4 °C

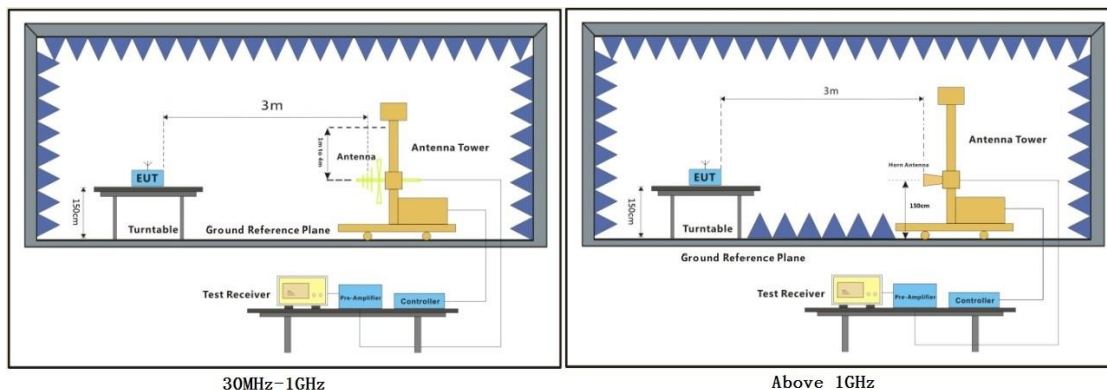
Humidity: 55.7 % RH

Atmospheric Pressure: 1020 mbar

7.3.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|-----------------------|-----------|--|
| Final test | 00 | TX mode_Keep the EUT in transmitting with modulation mode. |

7.3.3 Test Setup Diagram

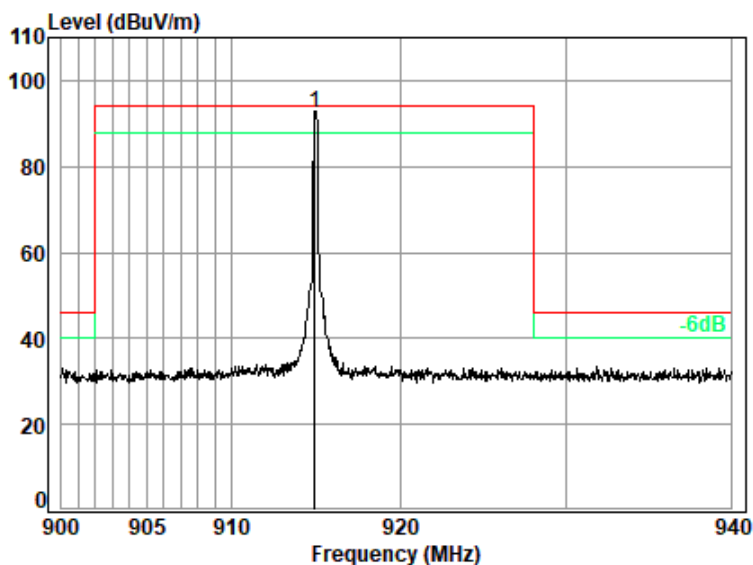


7.3.4 Measurement Procedure and Data

- 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



Test Mode: 00; Polarity: Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No. : 01208AT/01209AT
Mode : 00

| | Ant | Cable | Preamp | Read | Limit | Over | |
|------------|--------|-------|--------|-------|--------|--------|----------|
| Freq | Factor | Loss | Factor | Level | Line | Limit | Remark |
| MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 q 914.96 | 28.03 | 3.62 | 27.06 | 87.79 | 92.38 | 94.00 | -1.62 QP |



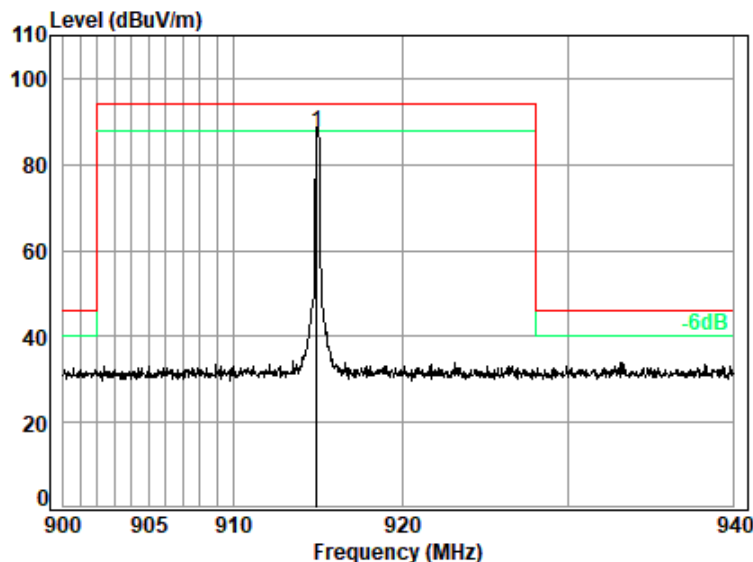
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

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Test Mode: 00; Polarity: Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : 01208AT/01209AT
Mode : 00

| | Ant | Cable | Preamp | Read | Limit | Over | |
|------------|--------|-------|--------|-------|--------|--------|--------------|
| Freq | Factor | Loss | Factor | Level | Level | Line | Limit Remark |
| MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 q 914.96 | 28.03 | 3.62 | 27.06 | 83.01 | 87.60 | 94.00 | -6.40 QP |



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7.4 Restricted Band Around Fundamental Frequency

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.249(d) & 15.209

Test Method: ANSI C63.10 (2013) Section 6.10.5

Measurement Distance: 3m

Limit:

| 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.

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C

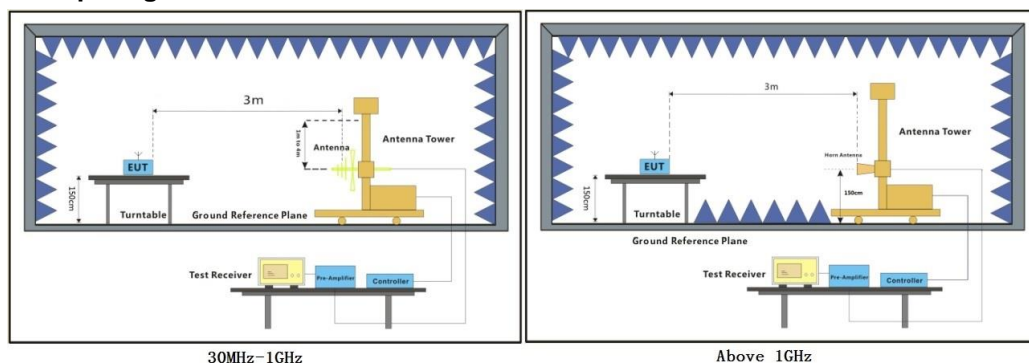
Humidity: 45.8 % RH

Atmospheric Pressure: 1020 mbar

7.4.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|-----------------------|-----------|--|
| Final test | 00 | TX mode_Keep the EUT in transmitting with modulation mode. |

7.4.3 Test Setup Diagram

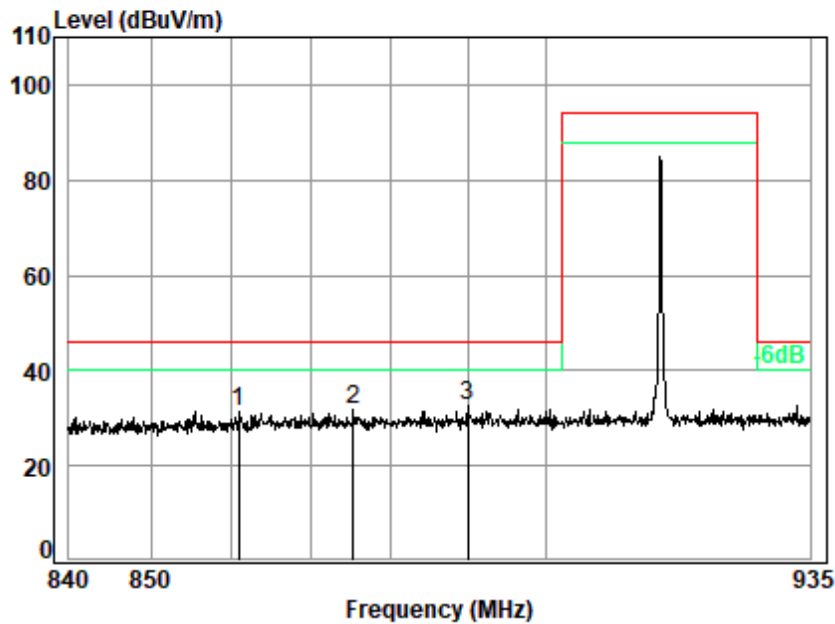


7.4.4 Measurement Procedure and Data

- 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



Test Mode: 00; Polarity: Horizontal



Site : chamber

Condition: 3m HORIZONTAL

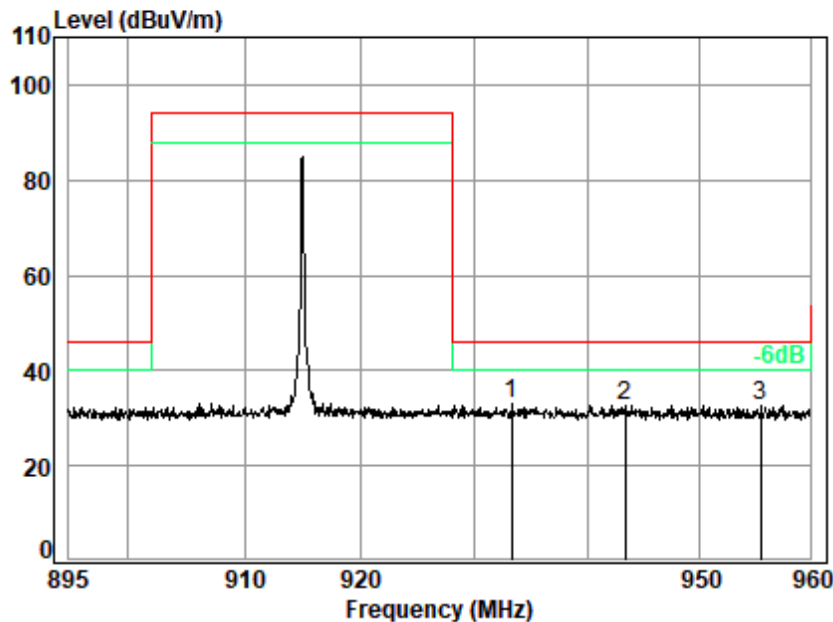
Job No. : 01208AT/01209AT

Mode : 00

| | Ant | Cable | Preamp | Read | Limit | Over | |
|------|--------|-------|--------|-------|--------|--------|--------------|
| Freq | Factor | Loss | Factor | Level | Level | Line | Limit Remark |
| MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 | 860.87 | 27.35 | 3.45 | 27.32 | 27.84 | 31.32 | 46.00 -14.68 |
| 2 | 875.28 | 27.67 | 3.50 | 27.25 | 27.78 | 31.70 | 46.00 -14.30 |
| 3 | 889.84 | 28.06 | 3.56 | 27.18 | 28.29 | 32.73 | 46.00 -13.27 |



Test Mode: 00; Polarity: Horizontal

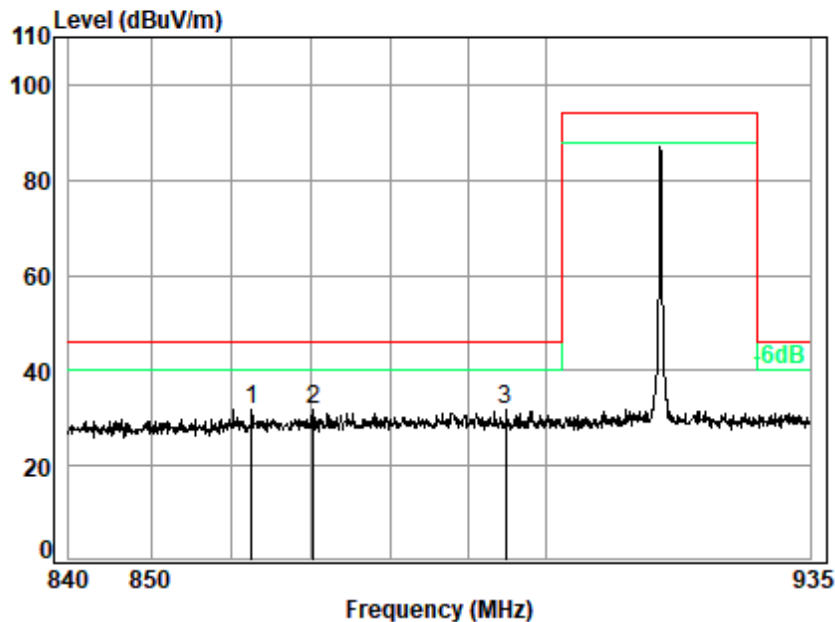


Site : chamber
Condition: 3m HORIZONTAL
Job No. : 01208AT/01209AT
Mode : 00

| | Ant | Cable | Preamp | Read | | Limit | Over | |
|------|--------|-------|--------|-------|--------|--------|-------|--------|
| Freq | Factor | Loss | Factor | Level | Level | Line | Limit | Remark |
| MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 933.26 | 28.17 | 3.63 | 26.97 | 28.25 | 33.08 | 46.00 | -12.92 |
| 2 | 943.39 | 28.22 | 3.65 | 26.92 | 27.71 | 32.66 | 46.00 | -13.34 |
| 3 | 955.57 | 28.10 | 3.66 | 26.86 | 27.78 | 32.68 | 46.00 | -13.32 |



Test Mode: 00; Polarity: Vertical



Site : chamber

Condition: 3m VERTICAL

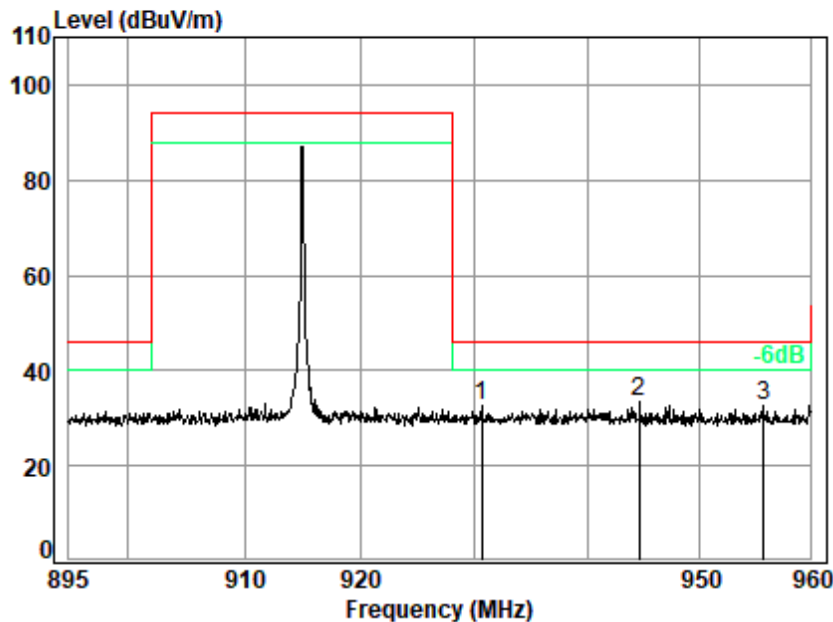
Job No. : 01208AT/01209AT

Mode : 00

| | | Ant | Cable | Preamp | Read | Limit | Over | |
|---|--------|--------|-------|--------|-------|--------|--------|--------------|
| | Freq | Factor | Loss | Factor | Level | Level | Line | Limit Remark |
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 | 862.53 | 27.48 | 3.46 | 27.31 | 28.11 | 31.74 | 46.00 | -14.26 |
| 2 | 870.23 | 27.65 | 3.49 | 27.27 | 27.87 | 31.74 | 46.00 | -14.26 |
| 3 | 894.82 | 28.00 | 3.59 | 27.15 | 27.50 | 31.94 | 46.00 | -14.06 |



Test Mode: 00; Polarity: Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : 01208AT/01209AT
Mode : 00

| | Ant | Cable | Preamp | Read | Limit | Over | |
|------|--------|-------|--------|-------|--------|--------|--------------|
| Freq | Factor | Loss | Factor | Level | Level | Line | Limit Remark |
| MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB |
| 1 | 930.64 | 28.15 | 3.63 | 26.98 | 27.66 | 32.46 | 46.00 -13.54 |
| 2 | 944.64 | 28.25 | 3.65 | 26.92 | 28.44 | 33.42 | 46.00 -12.58 |
| 3 | 955.77 | 28.10 | 3.66 | 26.86 | 27.70 | 32.60 | 46.00 -13.40 |



7.5 Radiated Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.4&6.5

Measurement Distance: 3m

Limit:

| 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 |
| 960-1000 | 500 | 3 |

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C

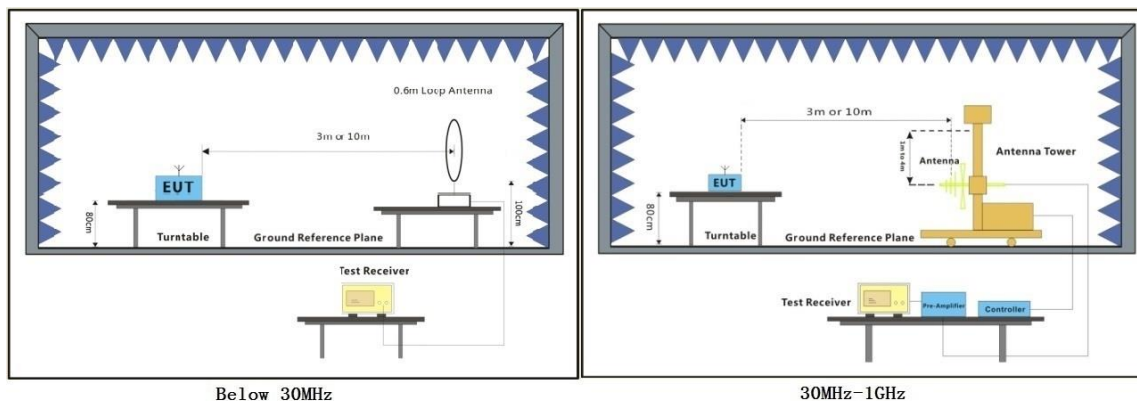
Humidity: 45.8 % RH

Atmospheric Pressure: 1020 mbar

7.5.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|-----------------------|-----------|--|
| Final test | 00 | TX mode_Keep the EUT in transmitting with modulation mode. |

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

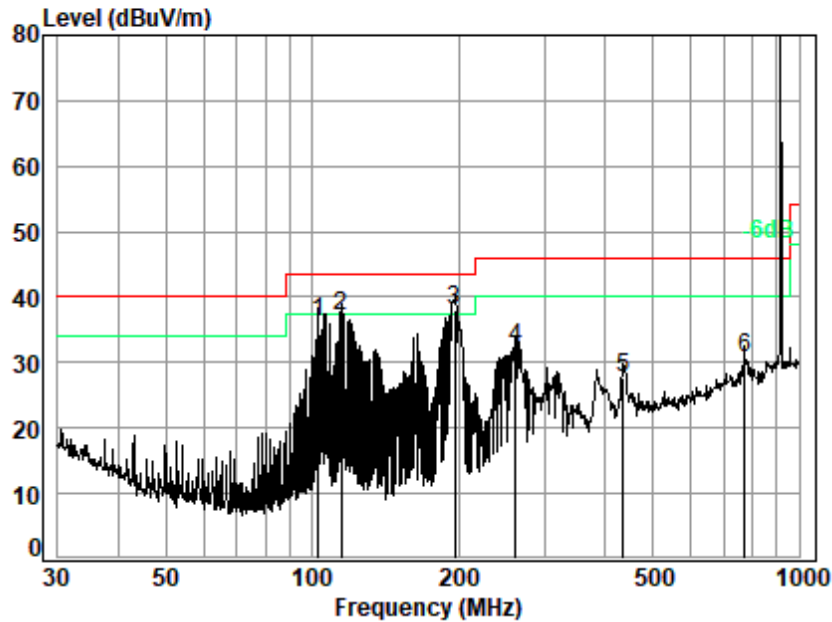
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. 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 quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. 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.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.



Test Mode: 00; Polarity: Horizontal

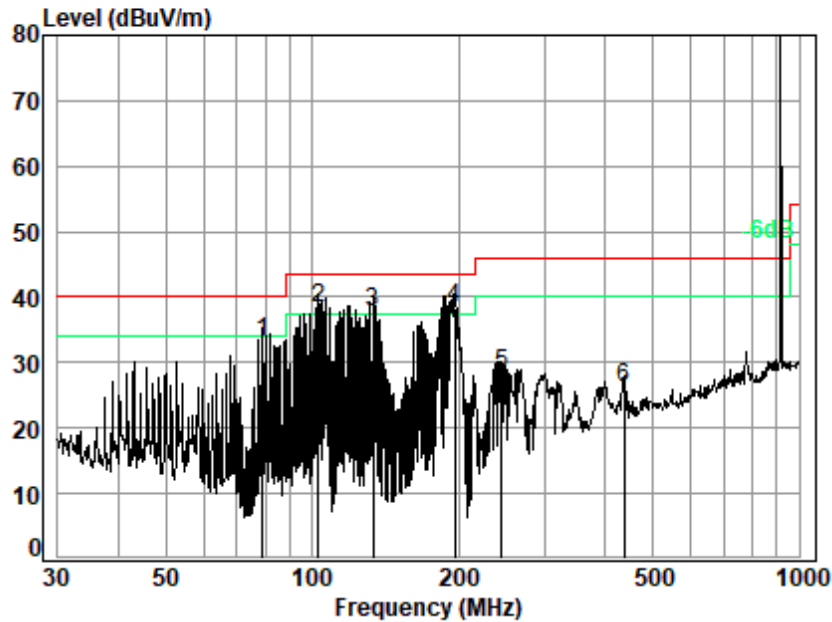


Site : chamber
Condition: 3m HORIZONTAL
Job No. : 01208AT
Test Mode: 00

| | Ant Freq | Cable Factor | Preamp Loss | Read Factor | Level dBuV | Level dBuV/m | Limit Line | Over Limit | Remark |
|-----|-------------|-----------------|----------------|----------------|---------------|-----------------|---------------|---------------|--------|
| | MHz | dB/m | dB | dB | | | | dB | |
| 1 | 102.72 | 12.29 | 1.20 | 27.60 | 50.46 | 36.35 | 43.50 | -7.15 | QP |
| 2 | 114.92 | 11.43 | 1.27 | 27.56 | 51.94 | 37.08 | 43.50 | -6.42 | QP |
| 3 q | 195.82 | 14.12 | 1.71 | 27.27 | 49.46 | 38.02 | 43.50 | -5.48 | QP |
| 4 | 261.98 | 17.16 | 2.00 | 27.03 | 40.03 | 32.16 | 46.00 | -13.84 | QP |
| 5 | 435.59 | 21.05 | 2.67 | 27.50 | 31.53 | 27.75 | 46.00 | -18.25 | QP |
| 6 | 771.45 | 26.76 | 3.74 | 27.70 | 27.87 | 30.67 | 46.00 | -15.33 | QP |



Test Mode: 00; Polarity: Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : 01208AT
Test Mode: 00

| | Ant Freq | Cable Factor | Preamp Loss | Preamp Factor | Read Level | Read Level | Limit Line | Over Limit | Remark |
|-----|-------------|-----------------|----------------|------------------|---------------|---------------|---------------|---------------|--------|
| | MHz | dB/m | dB | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 78.97 | 10.42 | 1.05 | 27.67 | 49.51 | 33.31 | 40.00 | -6.69 | QP |
| 2 | 102.72 | 12.29 | 1.20 | 27.60 | 52.52 | 38.41 | 43.50 | -5.09 | QP |
| 3 | 133.15 | 11.22 | 1.37 | 27.49 | 52.71 | 37.81 | 43.50 | -5.69 | QP |
| 4 q | 195.82 | 14.12 | 1.71 | 27.27 | 49.90 | 38.46 | 43.50 | -5.04 | QP |
| 5 | 245.09 | 17.10 | 1.93 | 27.09 | 36.32 | 28.26 | 46.00 | -17.74 | QP |
| 6 | 437.12 | 21.07 | 2.68 | 27.50 | 29.86 | 26.11 | 46.00 | -19.89 | QP |



7.6 Radiated Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.249 (a),(d)

Test Method: ANSI C63.10 (2013) Section 6.6

Measurement Distance: 3m

Limit:

| Frequency(MHz) | Field strength(microvolts/meter) | Measurement distance(meters) |
|----------------|----------------------------------|------------------------------|
| Above 1000 | 500 | 3 |

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 21.6 °C

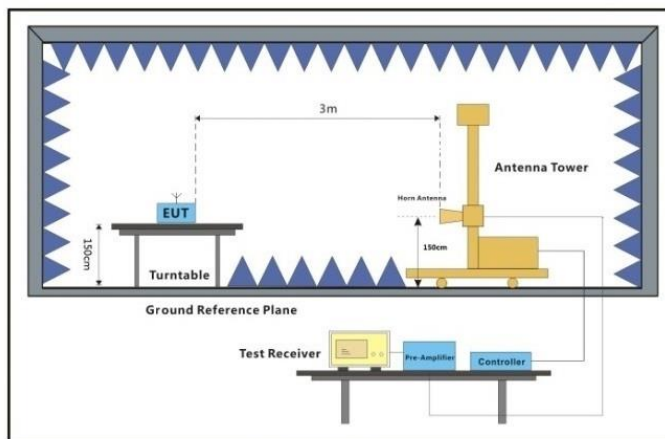
Humidity: 51.1 % RH

Atmospheric Pressure: 1020 mbar

7.6.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description |
|-----------------------|-----------|--|
| Final test | 00 | TX mode_Keep the EUT in transmitting with modulation mode. |

7.6.3 Test Setup Diagram



Above 1GHz



7.6.4 Measurement Procedure and Data

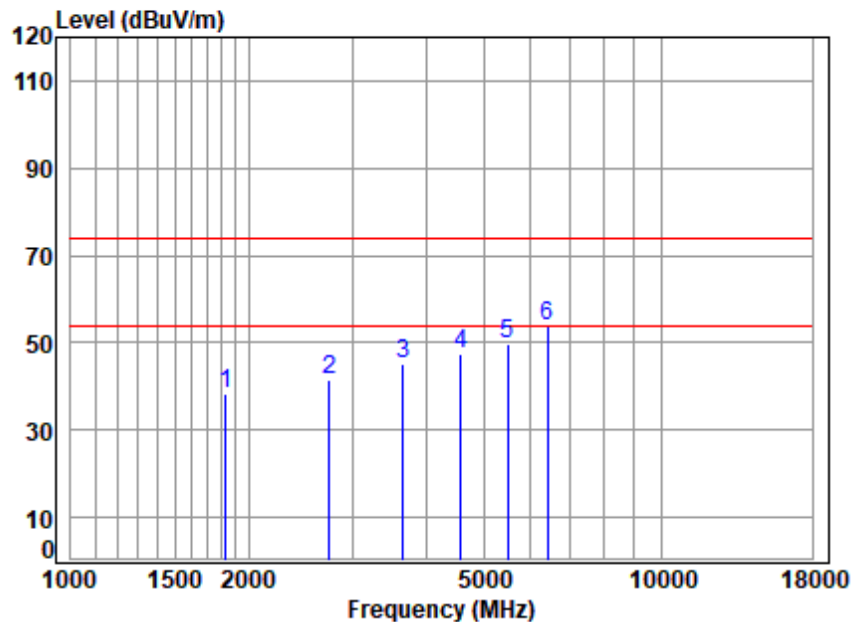
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. 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 or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. 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.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, 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. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



Test Mode: 00; Polarity: Horizontal; Modulation:GFSK; Channel:middle

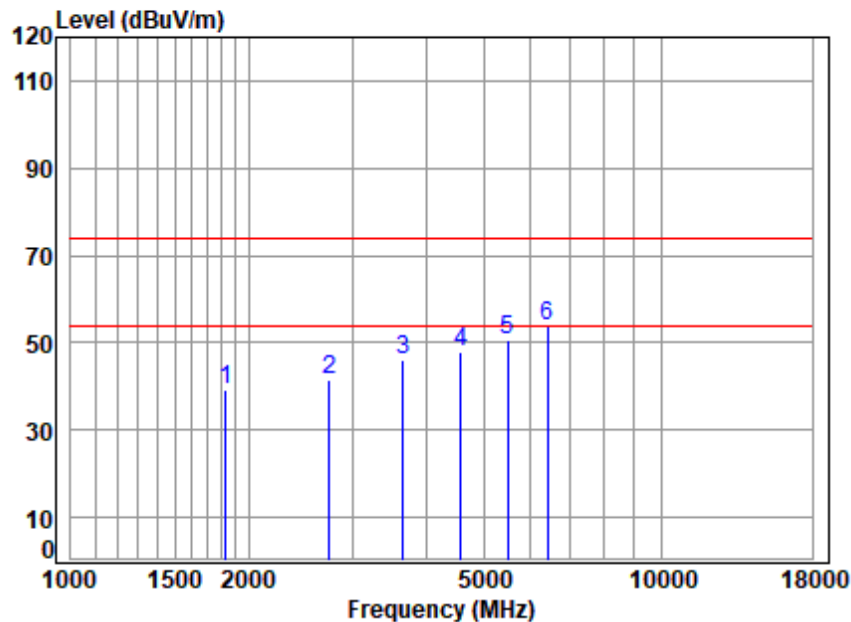


Site : chamber
Condition: 3m HORIZONTAL
Job No : 01208AT\01209AT
Mode : RSE TX

| | | Cable | Ant | Preamp | Read | | Limit | Over | |
|-----|----------|-------|--------|--------|-------|--------|--------|--------|--------|
| | Freq | Loss | Factor | Factor | Level | Level | Line | Limit | Remark |
| | MHz | dB | dB/m | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 1830.000 | 4.49 | 27.00 | 38.43 | 45.09 | 38.15 | 74.00 | -35.85 | Peak |
| 2 | 2745.000 | 5.38 | 29.70 | 36.65 | 43.01 | 41.44 | 74.00 | -32.56 | Peak |
| 3 | 3660.000 | 6.41 | 32.76 | 36.11 | 42.06 | 45.12 | 74.00 | -28.88 | Peak |
| 4 | 4575.000 | 7.17 | 33.30 | 35.67 | 42.71 | 47.51 | 74.00 | -26.49 | Peak |
| 5 | 5490.000 | 7.81 | 34.54 | 35.14 | 42.59 | 49.80 | 74.00 | -24.20 | Peak |
| 6 p | 6405.000 | 8.49 | 35.23 | 35.18 | 45.23 | 53.77 | 74.00 | -20.23 | Peak |



Test Mode: 00; Polarity: Vertical; Modulation:GFSK; Channel:middle



Site : chamber
Condition: 3m VERTICAL
Job No : 01208AT\01209AT
Mode : RSE TX

| | | Cable | Ant | Preamp | Read | | Limit | Over | |
|-----|----------|-------|--------|--------|-------|--------|--------|--------|--------|
| | Freq | Loss | Factor | Factor | Level | Level | Line | Limit | Remark |
| | MHz | dB | dB/m | dB | dBuV | dBuV/m | dBuV/m | dB | |
| 1 | 1830.000 | 4.49 | 27.00 | 38.43 | 45.95 | 39.01 | 74.00 | -34.99 | Peak |
| 2 | 2745.000 | 5.38 | 29.70 | 36.65 | 42.90 | 41.33 | 74.00 | -32.67 | Peak |
| 3 | 3660.000 | 6.41 | 32.76 | 36.11 | 43.19 | 46.25 | 74.00 | -27.75 | Peak |
| 4 | 4575.000 | 7.17 | 33.30 | 35.67 | 43.04 | 47.84 | 74.00 | -26.16 | Peak |
| 5 | 5490.000 | 7.81 | 34.54 | 35.14 | 43.29 | 50.50 | 74.00 | -23.50 | Peak |
| 6 p | 6405.000 | 8.49 | 35.23 | 35.18 | 45.41 | 53.95 | 74.00 | -20.05 | Peak |



8 Test Setup Photo

Refer to Setup Photo for SZCR2404001208AT

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2404001208AT

- End of the Report -

