

# TEST REPORT

**Application No.:** SZCR2511005149AT

**Applicant:** Dreame Trading (Tianjin) Co.,Ltd.

**Address of Applicant:** Room 2112-1-1South District Finance andTradeCenter No. 6975 Yazhou Road Dongjiang Bonded Port Area, Tianjin, 300463 China

**Manufacturer:** Dreame Trading (Tianjin) Co.,Ltd.

**Address of Manufacturer:** Room 2112-1-1, South District, Finance and Trade Center, No.6975 Yazhou Road, Dongjiang Bonded Port Area, Tianjin Pilot Free Trade Zone, Tianjin, China

**Factory:** Dreame Trading (Tianjin) Co.,Ltd.

**Address of Factory:** Room 2112-1-1, South District, Finance and Trade Center, No.6975 Yazhou Road, Dongjiang Bonded Port Area, Tianjin Pilot Free Trade Zone, Tianjin, China

**Equipment Under Test (EUT):**

**EUT Name:** Dreame NAVO Smart Lock A10

**Model No.:** B311

**Trade Mark:** DREAME

**FCC ID:** 2AXGD-B311

**Standard(s) :** 47 CFR Part 15, Subpart C 15.225

**Date of Receipt:** 2025-11-21

**Date of Test:** 2025-11-29 to 2025-12-12

**Date of Issue:** 2025-12-19

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>Pass*</b> |
|---------------------|--------------|

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

Kenx Xu

Keny Xu  
EMC Laboratory Manager





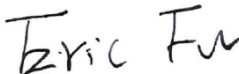
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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2025-12-19 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                                                                                    |  |  |
|--------------------------|--|------------------------------------------------------------------------------------|--|--|
| Authorized for issue by: |  |                                                                                    |  |  |
|                          |  |   |  |  |
|                          |  | Martin 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 15.225 | N/A    | 47 CFR Part 15, Subpart C 15.203 | Pass   |

| Radio Spectrum Matter Part      |                                  |                                |                                              |        |
|---------------------------------|----------------------------------|--------------------------------|----------------------------------------------|--------|
| Item                            | Standard                         | Method                         | Requirement                                  | Result |
| 20dB Bandwidth                  | 47 CFR Part 15, Subpart C 15.225 | ANSI C63.10 (2020) Section 6.9 | 47 CFR Part 15, Subpart C 15.215             | Pass   |
| Emission Mask                   |                                  | ANSI C63.10 (2020) Section 6.4 | 47 CFR Part 15, Subpart C 15.225(a)&(b)&(C ) | Pass   |
| Frequency tolerance             |                                  | ANSI C63.10 (2020) Section 6.8 | 47 CFR Part 15, Subpart C 15.225(e)          | Pass   |
| Radiated Emissions (9kHz-30MHz) |                                  | ANSI C63.10 (2020) Section 6.4 | 47 CFR Part 15, Subpart C 15.225(d) & 15.209 | Pass   |
| Radiated Emissions (30MHz-1GHz) |                                  | ANSI C63.10 (2020) Section 6.5 | 47 CFR Part 15, Subpart C 15.225(d) & 15.209 | Pass   |



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## 4 General Information

### 4.1 Details of E.U.T.

|                                     |                                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------------------------|
| Power supply:                       | Rechargeable Lithium-ion Battery Pack: 3.6V 9400mAh/33.84Wh charged by Type-C port<br>Model: 909001 |
| Cable Loss (for RF conducted test): | 0.68dB                                                                                              |
| Operation Frequency:                | 13.56MHz                                                                                            |
| Modulation Type:                    | ASK                                                                                                 |
| Antenna Type:                       | Loop Antenna                                                                                        |

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       | SEM031-03  |

### 4.3 Measurement Uncertainty

| Test Item                       | Measurement Uncertainty                               |
|---------------------------------|-------------------------------------------------------|
| 20dB Bandwidth                  | $\pm 3\%$                                             |
| Emission Mask                   | $\pm 4.5\text{dB}$ (Below 1GHz)                       |
| Frequency tolerance             | $\pm 3\%$                                             |
| Radiated Emissions (9kHz-30MHz) | $\pm 3.6\text{dB}$                                    |
| Radiated Emissions (30MHz-1GHz) | $\pm 6.0\text{dB}$ for 3m; $\pm 5.0\text{dB}$ for 10m |

Remark:

The  $U_{\text{lab}}$  (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:

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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

| 20dB Bandwidth       |                 |               |               |            |              |
|----------------------|-----------------|---------------|---------------|------------|--------------|
| Equipment            | Manufacturer    | Model No.     | Inventory No. | Cal Date   | Cal Due Date |
| DC Power Supply      | Zhao Xin        | PS-305D       | SEM011-13     | 2025-07-24 | 2026-07-23   |
| Spectrum Analyzer    | Rohde & Schwarz | FSP30         | SEM004-06     | 2025-09-10 | 2026-09-09   |
| Measurement Software | TST PASS        | TST PASS V2.0 | N/A           | N/A        | N/A          |
| Coaxial Cable        | SGS             | N/A           | SEM031-01     | 2025-07-05 | 2026-07-04   |
| Attenuator           | Huber+Suhner    | 6620_SMA-50-1 | SEM021-09     | 2025-03-03 | 2026-03-02   |

| Emission Mask             |                      |                 |               |            |              |
|---------------------------|----------------------|-----------------|---------------|------------|--------------|
| Equipment                 | Manufacturer         | Model No.       | Inventory No. | Cal Date   | Cal Due Date |
| 10m Semi-Anechoic Chamber | SAEMC                | FSAC1018        | SEM001-03     | 2025-03-21 | 2026-03-20   |
| MXE EMI receiver          | KEYSIGHT             | N9038A          | SEM004-16     | 2025-07-25 | 2026-07-24   |
| Trilog-Broadband Antenna  | Schwarzbeck          | VULB9168        | SEM003-18     | 2025-08-29 | 2027-08-28   |
| Pre-amplifier             | Sonoma Instrument Co | 310N            | SEM005-04     | 2025-03-04 | 2026-03-03   |
| Loop Antenna              | ETS-Lindgren         | 6502            | SEM003-08     | 2025-11-17 | 2027-11-16   |
| Measurement Software      | AUDIX                | e3 V8.2014-6-27 | N/A           | N/A        | N/A          |
| Coaxial Cable             | SGS                  | N/A             | SEM029-01     | 2025-07-05 | 2026-07-04   |

| Frequency tolerance                         |                              |               |               |            |              |
|---------------------------------------------|------------------------------|---------------|---------------|------------|--------------|
| Equipment                                   | Manufacturer                 | Model No.     | Inventory No. | Cal Date   | Cal Due Date |
| DC Power Supply                             | Zhao Xin                     | PS-305D       | SEM011-13     | 2025-07-24 | 2026-07-23   |
| Spectrum Analyzer                           | Rohde & Schwarz              | FSP30         | SEM004-06     | 2025-09-10 | 2026-09-09   |
| Measurement Software                        | TST PASS                     | TST PASS V2.0 | N/A           | N/A        | N/A          |
| Coaxial Cable                               | SGS                          | N/A           | SEM031-01     | 2025-07-05 | 2026-07-04   |
| Attenuator                                  | Huber+Suhner                 | 6620_SMA-50-1 | SEM021-09     | 2025-03-03 | 2026-03-02   |
| Programmable Temperature & Humidity Chamber | Votsch Industrietechnik GmbH | VT 4002       | SEM002-15     | 2025-02-26 | 2026-02-25   |

| Radiated Emissions (9kHz-30MHz) |              |           |               |            |              |
|---------------------------------|--------------|-----------|---------------|------------|--------------|
| Equipment                       | Manufacturer | Model No. | Inventory No. | Cal Date   | Cal Due Date |
| 10m Semi-Anechoic               | SAEMC        | FSAC1018  | SEM001-03     | 2025-03-21 | 2026-03-20   |



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| Chamber                  |                      |                 |           |            |            |
|--------------------------|----------------------|-----------------|-----------|------------|------------|
| MXE EMI receiver         | KEYSIGHT             | N9038A          | SEM004-16 | 2025-07-25 | 2026-07-24 |
| Trilog-Broadband Antenna | Schwarzbeck          | VULB9168        | SEM003-18 | 2025-08-29 | 2027-08-28 |
| Pre-amplifier            | Sonoma Instrument Co | 310N            | SEM005-04 | 2025-03-04 | 2026-03-03 |
| Loop Antenna             | ETS-Lindgren         | 6502            | SEM003-08 | 2025-11-17 | 2027-11-16 |
| Measurement Software     | AUDIX                | e3 V8.2014-6-27 | N/A       | N/A        | N/A        |
| Coaxial Cable            | SGS                  | N/A             | SEM029-01 | 2025-07-05 | 2026-07-04 |

## Radiated Emissions (30MHz-1GHz)

| 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     | 2025-07-25 | 2026-07-24   |
| BiConiLog Antenna        | ETS-LINDGREN         | 3142C           | SEM003-01     | 2025-08-29 | 2027-08-28   |
| Pre-Amplifier            | Agilent Technologies | 8447D           | SEM005-01     | 2025-03-04 | 2026-03-03   |
| Measurement Software     | AUDIX                | e3 V8.2014-6-27 | N/A           | N/A        | N/A          |
| Coaxial Cable            | SGS                  | N/A             | SEM025-01     | 2025-07-05 | 2026-07-04   |

## General used equipment

| Equipment                       | Manufacturer                              | Model No. | Inventory No. | Cal Date   | Cal Due Date |
|---------------------------------|-------------------------------------------|-----------|---------------|------------|--------------|
| Humidity/ Temperature Indicator | deli                                      | 8838      | SEM002-32     | 2025-07-23 | 2026-07-22   |
| Humidity/ Temperature Indicator | deli                                      | 8838      | SEM002-33     | 2025-07-23 | 2026-07-22   |
| Barometer                       | Changchun Meteorological Industry Factory | DYM3      | SEM002-01     | 2025-03-03 | 2026-03-02   |



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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

15.203 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.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement.

Antenna location: Refer to Internal photos



## 7 Radio Spectrum Matter Test Results

### 7.1 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215  
 Test Method: ANSI C63.10 (2020) Section 6.9  
 Test Engineer: Linvo Ding

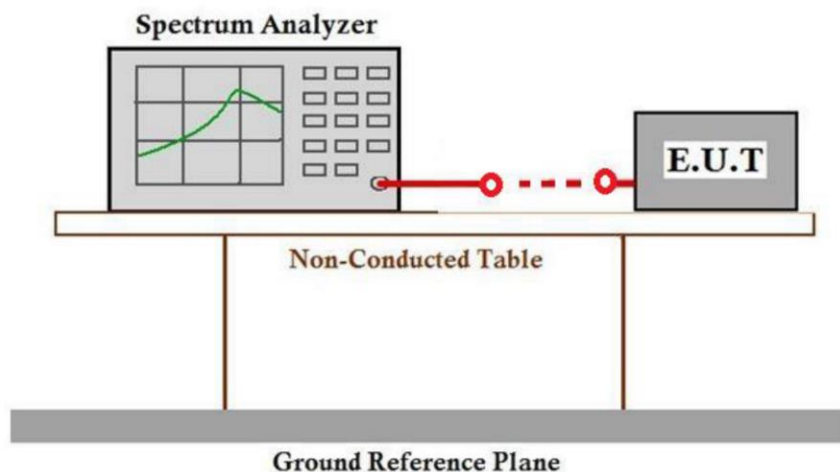
#### 7.1.1 E.U.T. Operation

Operating Environment:  
 Temperature: 24.3 °C Humidity: 43.4 % RH Atmospheric Pressure: 1020 mbar

#### 7.1.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description                                            |
|--------------------------|--------------|--------------------------------------------------------|
| Final test               | 04           | TX mode_Keep the EUT in continuously transmitting mode |

#### 7.1.3 Test Setup Diagram



#### 7.1.4 Measurement Procedure and Data

The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.



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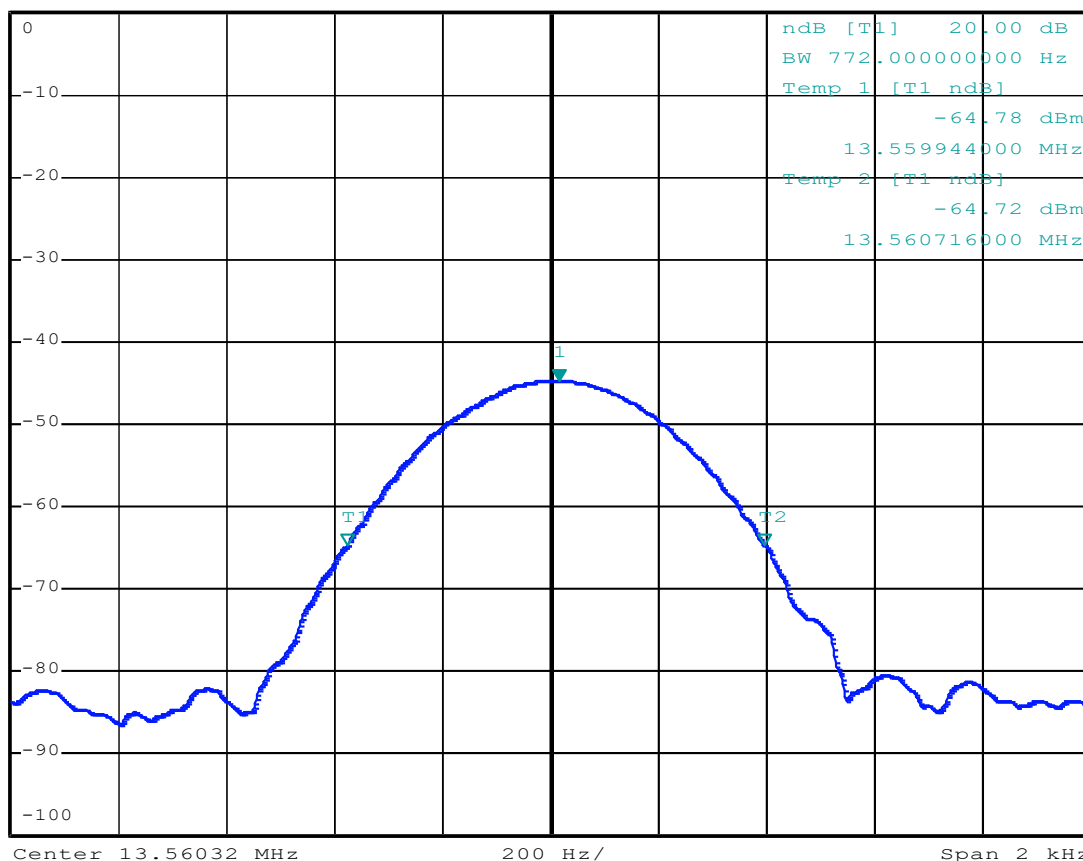
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| $f_L$ (MHz) | $f_H$ (MHz) | $f_c$ (MHz) | Limit(MHz)       | Result |
|-------------|-------------|-------------|------------------|--------|
| 13.559944   | 13.560716   | 13.560336   | 13.553 to 13.567 | PASS   |



\*RBW 300 Hz      Marker 1 [T1]  
 \*VBW 1 kHz      -44.72 dBm  
 \*Att 40 dB      13.560336000 MHz  
 Ref 0 dBm      SWT 35 ms

1 PK  
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### 7.2 Emission Mask

Test Requirement 47 CFR Part 15, Subpart C 15.225(a)&(b)&(C )  
 Test Method: ANSI C63.10 (2020) Section 6.4  
 Measurement Distance: 3m  
 Test Engineer: Ted Wu

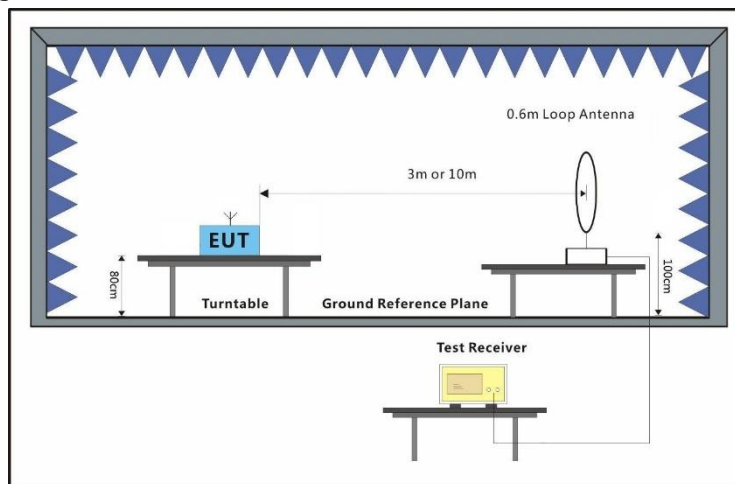
#### 7.2.1 E.U.T. Operation

Operating Environment:  
 Temperature: 23.6 °C Humidity: 46.5 % RH Atmospheric Pressure: 1020 mbar

#### 7.2.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                            |
|-----------------------|-----------|--------------------------------------------------------|
| Final test            | 04        | TX mode_Keep the EUT in continuously transmitting mode |

#### 7.2.3 Test Setup Diagram

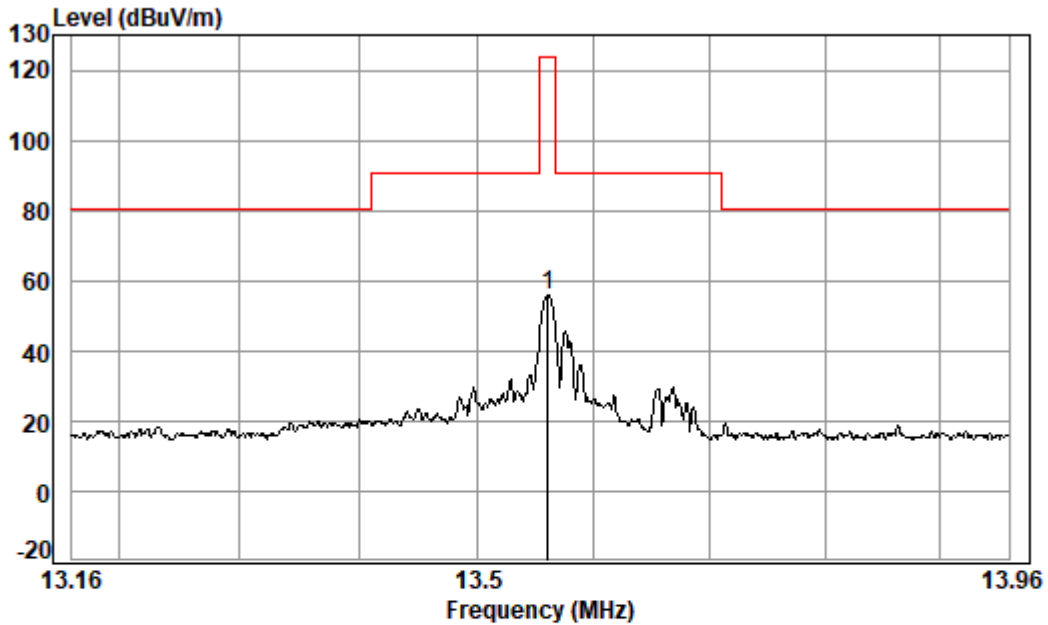


#### 7.2.4 Measurement Procedure and Data

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.







Condition: 3m

Job No. : 05149AT

Test Mode: 04

: coaxial

|             | Read  | Ant    | Cable | Preamp |        | Limit  | Over   |        |
|-------------|-------|--------|-------|--------|--------|--------|--------|--------|
| Freq        | Level | Factor | Loss  | Factor | Level  | Line   | Limit  | Remark |
| MHz         | dBuV  | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |        |
| 1 pp 13.561 | 78.66 | 8.55   | 1.00  | 32.46  | 55.75  | 124.00 | -68.25 | QP     |

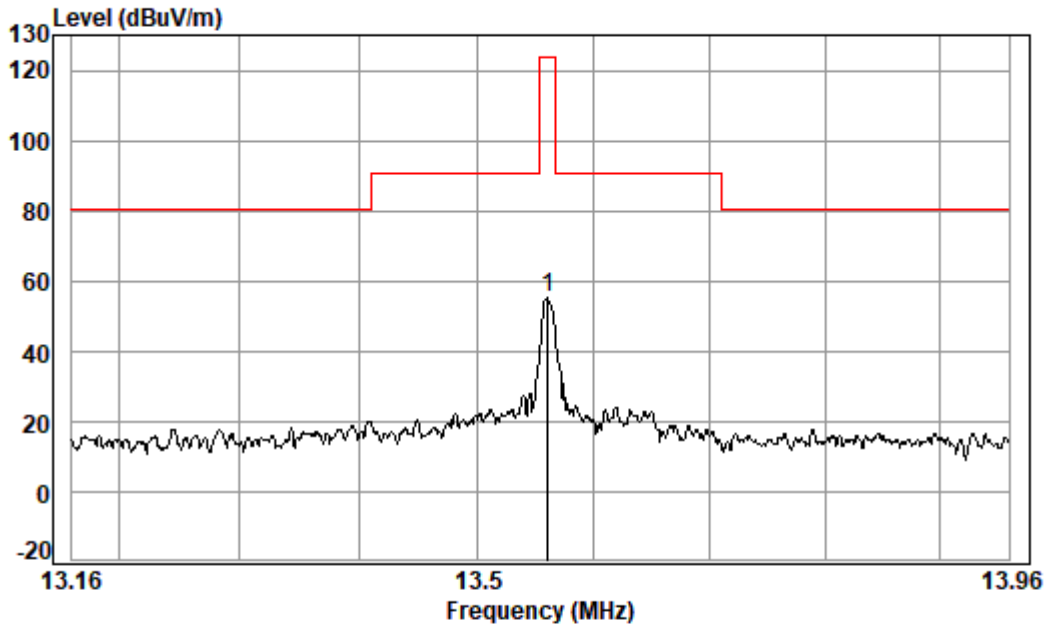
| Frequency (MHz) | Level @ 3m (dBuV/m) | Factor (dB) | Level @ 30m (dBuV/m) | Limit @ 30m (dBuV/m) | Margin (dB) |
|-----------------|---------------------|-------------|----------------------|----------------------|-------------|
| 13.561          | 55.75               | 40.00       | 15.75                | 84.00                | -68.25      |

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Condition: 3m

Job No. : 05149AT

Test Mode: 04

: coplanar

|      | Read   | Ant    | Cable | Preamp |        | Limit  | Over   |           |
|------|--------|--------|-------|--------|--------|--------|--------|-----------|
| Freq | Level  | Factor | Loss  | Factor | Level  | Line   | Limit  | Remark    |
| MHz  | dBuV   | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |           |
| 1 pp | 13.561 | 78.01  | 8.55  | 1.00   | 32.46  | 55.10  | 124.00 | -68.90 QP |

| Frequency (MHz) | Level @ 3m (dBuV/m) | Factor (dB) | Level @ 30m (dBuV/m) | Limit @ 30m (dBuV/m) | Margin (dB) |
|-----------------|---------------------|-------------|----------------------|----------------------|-------------|
| 13.561          | 55.10               | 40.00       | 15.10                | 84.00                | -68.90      |

### 7.3 Frequency tolerance

Test Requirement 47 CFR Part 15, Subpart C 15.225(e)  
 Test Method: ANSI C63.10 (2020) Section 6.8  
 Test Engineer: Linvo Ding

Limit:  
 $\pm 0.01\%$

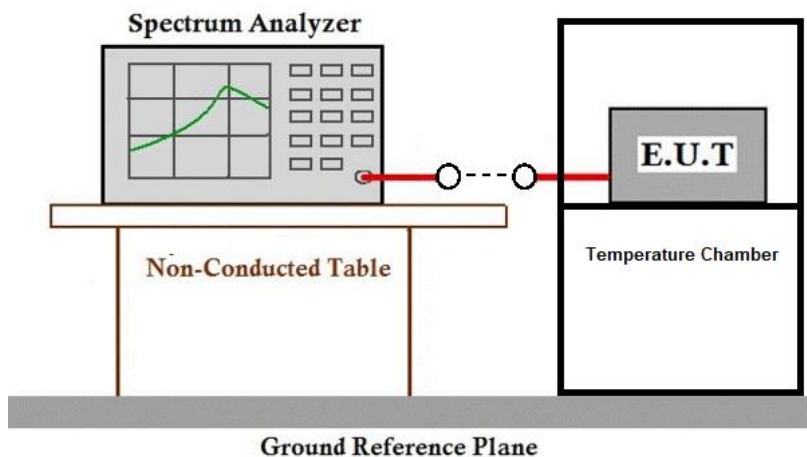
#### 7.3.1 E.U.T. Operation

Operating Environment:  
 Temperature: 24.3 °C Humidity: 43.4 % RH Atmospheric Pressure: 1020 mbar

#### 7.3.2 Test Mode Description

| Pre-scan /<br>Final test | Mode<br>Code | Description                                            |
|--------------------------|--------------|--------------------------------------------------------|
| Final test               | 04           | TX mode_Keep the EUT in continuously transmitting mode |

#### 7.3.3 Test Setup Diagram



#### 7.3.4 Measurement Procedure and Data

The EUT was placed in an environmental test chamber and powered such that control element received normal voltage and the transmitter provided maximum RF output.



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| Temperature (°C) | Voltage(VDC) | Measurement Frequency(MHz) | Frequency Tolerance (%) | Limit (%) | Result |
|------------------|--------------|----------------------------|-------------------------|-----------|--------|
| 50               | 3.6          | 13.560392                  | 0.002891                | ±0.01     | Pass   |
| 40               |              | 13.560315                  | 0.002323                |           | Pass   |
| 30               |              | 13.560301                  | 0.002220                |           | Pass   |
| 20               |              | 13.560336                  | 0.002478                |           | Pass   |
| 10               |              | 13.560314                  | 0.002316                |           | Pass   |
| 0                |              | 13.560360                  | 0.002655                |           | Pass   |
| -10              |              | 13.560306                  | 0.002257                |           | Pass   |
| -20              |              | 13.560394                  | 0.002906                |           | Pass   |
| 20               | 4.14         | 13.560322                  | 0.002375                |           | Pass   |
|                  | 3.06         | 13.560392                  | 0.002891                |           | Pass   |



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### 7.4 Radiated Emissions (9kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.225(d) & 15.209  
 Test Method: ANSI C63.10 (2020) Section 6.4  
 Measurement Distance: 3m  
 Test Engineer: Ted Wu

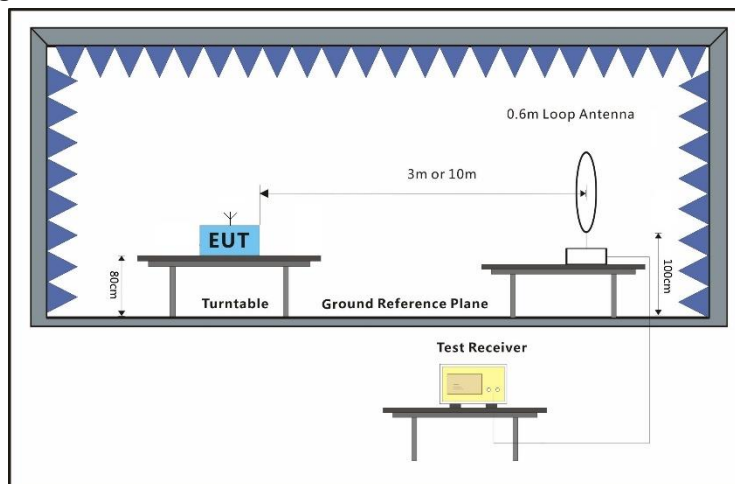
#### 7.4.1 E.U.T. Operation

Operating Environment:  
 Temperature: 23.6 °C Humidity: 46.5 % RH Atmospheric Pressure: 1020 mbar

#### 7.4.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                            |
|-----------------------|-----------|--------------------------------------------------------|
| Final test            | 04        | TX mode_Keep the EUT in continuously transmitting mode |

#### 7.4.3 Test Setup Diagram



#### 7.4.4 Measurement Procedure and Data

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.



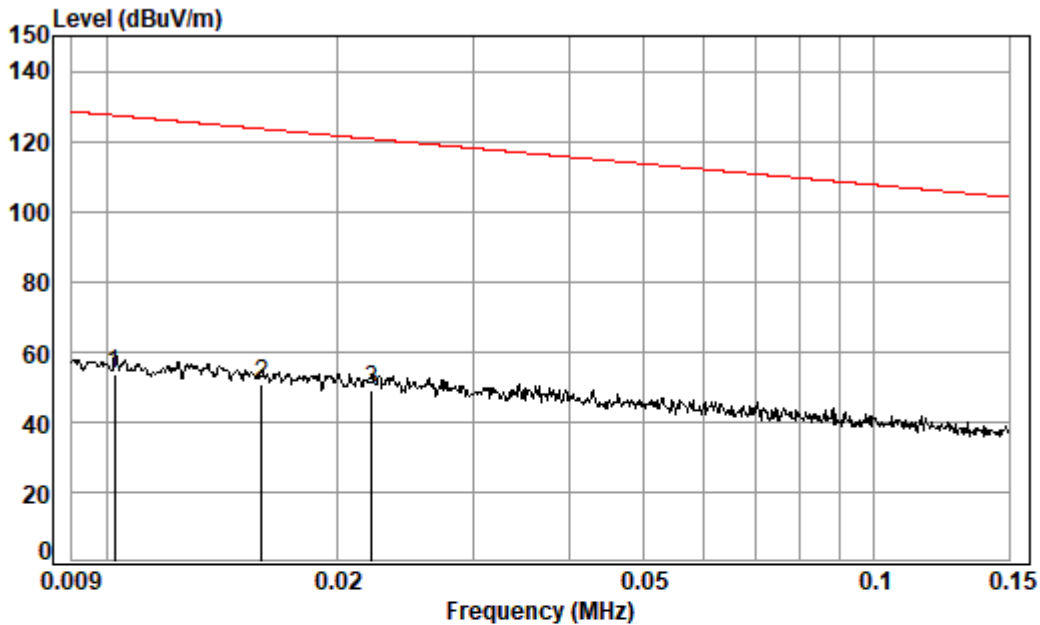


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Condition: 3m

Job No. : 05149AT

Test Mode: 04

: coaxial

|      |       | Read  | Ant    | Cable | Preamp |        | Limit  | Over   |         |
|------|-------|-------|--------|-------|--------|--------|--------|--------|---------|
|      | Freq  | Level | Factor | Loss  | Factor | Level  | Line   | Limit  | Remark  |
|      | MHz   | dBuV  | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |         |
| 1    | 0.010 | 66.70 | 18.09  | 0.10  | 31.19  | 53.70  | 127.38 | -73.68 | Average |
| 2    | 0.016 | 66.82 | 15.56  | 0.11  | 31.50  | 50.99  | 123.54 | -72.55 | Average |
| 3 pp | 0.022 | 67.47 | 13.41  | 0.11  | 31.73  | 49.26  | 120.68 | -71.42 | Average |



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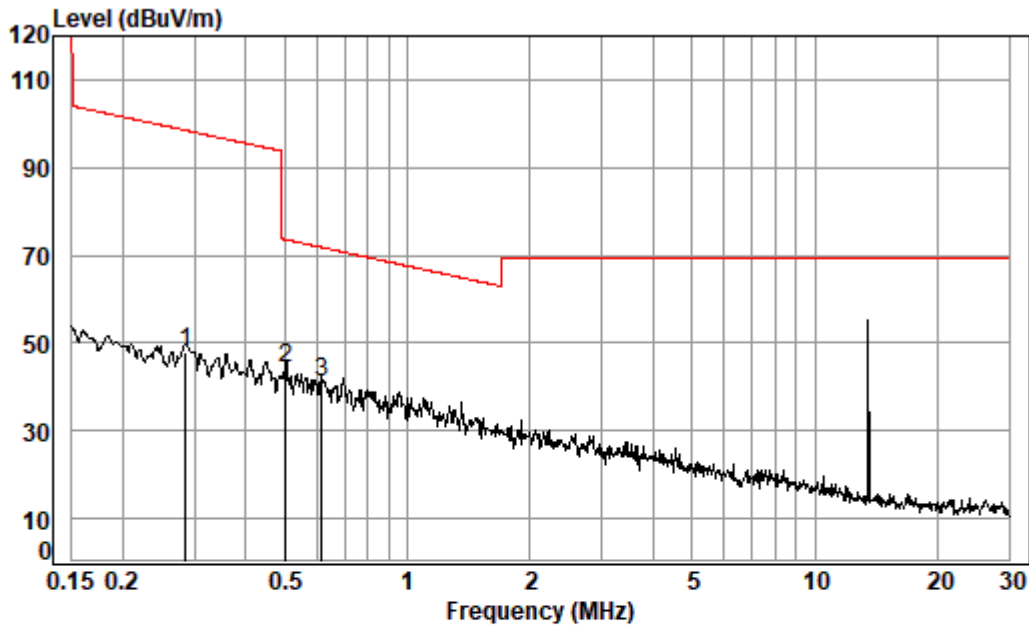
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Condition: 3m

Job No. : 05149AT

Test Mode: 04

: coaxial

|   |      | Read  | Ant    | Cable | Preamp |        | Limit  | Over  |                |
|---|------|-------|--------|-------|--------|--------|--------|-------|----------------|
|   | Freq | Level | Factor | Loss  | Factor | Level  | Line   | Limit | Remark         |
|   | MHz  | dBuV  | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB    |                |
| 1 | av   | 0.285 | 69.42  | 10.41 | 0.35   | 32.42  | 47.76  | 98.51 | -50.75 Average |
| 2 | pp   | 0.502 | 66.00  | 10.37 | 0.38   | 32.70  | 44.05  | 73.59 | -29.54 QP      |
| 3 |      | 0.617 | 62.92  | 10.36 | 0.39   | 32.65  | 41.02  | 71.78 | -30.76 QP      |

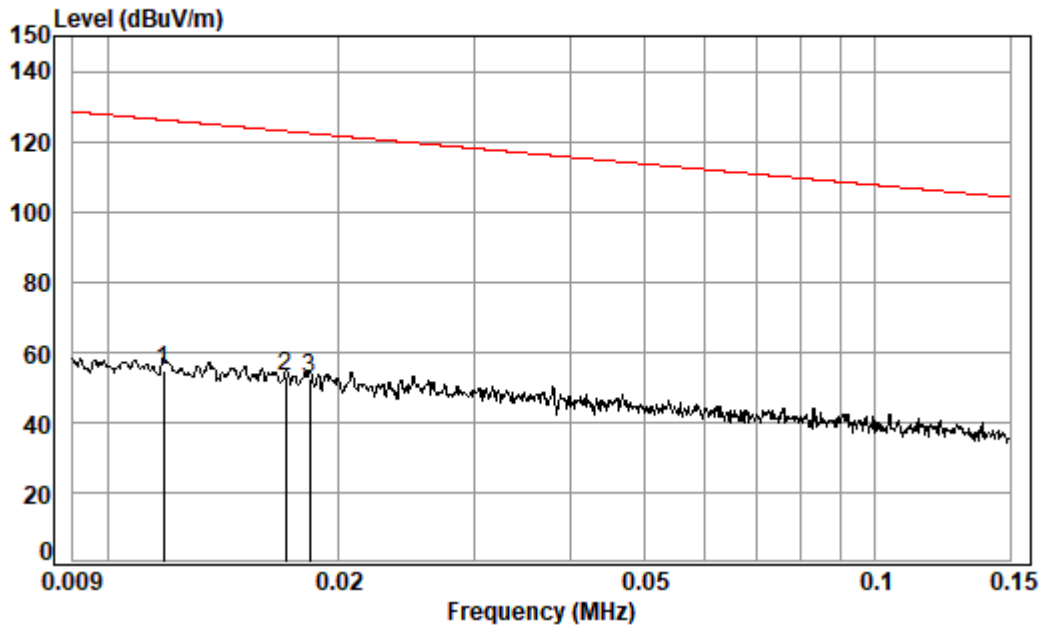
| Frequency (MHz) | Level @ 3m (dBuV/m) | Factor (dB) | Level @ 300m (dBuV/m) | Level @ 30m (dBuV/m) | Limit @ 300m (dBuV/m) | Limit @ 30m (dBuV/m) | Margin (dB) |
|-----------------|---------------------|-------------|-----------------------|----------------------|-----------------------|----------------------|-------------|
| 0.010           | 53.70               | 80.00       | -26.30                | -                    | 47.60                 | -                    | -73.90      |
| 0.016           | 50.99               | 80.00       | -29.01                | -                    | 43.52                 | -                    | -72.53      |
| 0.022           | 49.26               | 80.00       | -30.74                | -                    | 40.76                 | -                    | -71.50      |
| 0.285           | 47.76               | 80.00       | -32.24                | -                    | 18.51                 | -                    | -50.75      |
| 0.502           | 44.05               | 40.00       | -                     | 4.05                 | -                     | 33.59                | -29.54      |
| 0.617           | 41.02               | 40.00       | -                     | 1.02                 | -                     | 31.80                | -30.78      |



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Condition: 3m

Job No. : 05149AT

Test Mode: 04

: coplanar

|      |       | Read  | Ant    | Cable | Preamp |        | Limit  | Over   |         |
|------|-------|-------|--------|-------|--------|--------|--------|--------|---------|
|      | Freq  | Level | Factor | Loss  | Factor | Level  | Line   | Limit  | Remark  |
|      | MHz   | dBuV  | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |         |
| 1    | 0.012 | 68.39 | 17.39  | 0.10  | 31.29  | 54.59  | 126.13 | -71.54 | Average |
| 2    | 0.017 | 69.22 | 15.06  | 0.11  | 31.55  | 52.84  | 122.96 | -70.12 | Average |
| 3 pp | 0.018 | 69.74 | 14.49  | 0.11  | 31.60  | 52.74  | 122.32 | -69.58 | Average |

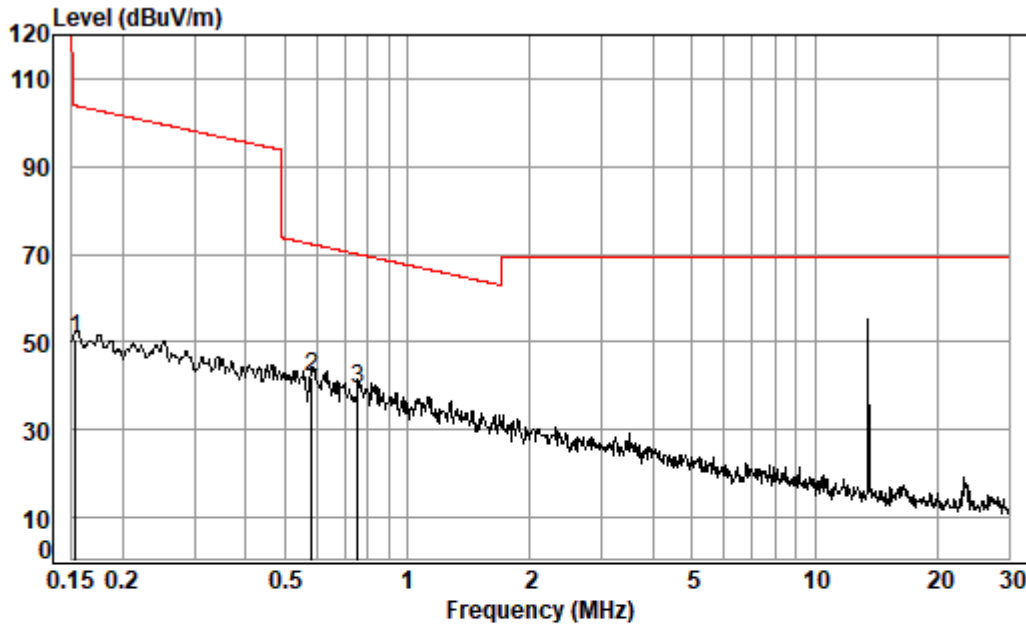


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Condition: 3m

Job No. : 05149AT

Test Mode: 04

: coplanar

|   |      | Read  | Ant    | Cable | Preamp |        | Limit  | Over   |                |
|---|------|-------|--------|-------|--------|--------|--------|--------|----------------|
|   | Freq | Level | Factor | Loss  | Factor | Level  | Line   | Limit  | Remark         |
|   | MHz  | dBuV  | dB/m   | dB    | dB     | dBuV/m | dBuV/m | dB     |                |
| 1 | av   | 0.153 | 72.30  | 10.50 | 0.33   | 32.62  | 50.51  | 103.89 | -53.38 Average |
| 2 | pp   | 0.582 | 63.90  | 10.36 | 0.39   | 32.67  | 41.98  | 72.29  | -30.31 QP      |
| 3 |      | 0.755 | 61.08  | 10.35 | 0.41   | 32.60  | 39.24  | 70.02  | -30.78 QP      |

| Frequency (MHz) | Level @ 3m (dBuV/m) | Factor (dB) | Level @ 300m (dBuV/m) | Level @ 30m (dBuV/m) | Limit @ 300m (dBuV/m) | Limit @ 30m (dBuV/m) | Margin (dB) |
|-----------------|---------------------|-------------|-----------------------|----------------------|-----------------------|----------------------|-------------|
| 0.012           | 54.59               | 80.00       | -25.41                | -                    | 46.02                 | -                    | -71.43      |
| 0.017           | 52.84               | 80.00       | -27.16                | -                    | 43.00                 | -                    | -70.16      |
| 0.018           | 52.74               | 80.00       | -27.26                | -                    | 42.50                 | -                    | -69.76      |
| 0.153           | 50.51               | 80.00       | -29.49                | -                    | 23.91                 | -                    | -53.40      |
| 0.582           | 41.98               | 40.00       | -                     | 1.98                 | -                     | 32.31                | -30.33      |
| 0.755           | 39.24               | 40.00       | -                     | -0.76                | -                     | 30.05                | -30.81      |



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## 7.5 Radiated Emissions (30MHz-1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.225(d) & 15.209  
 Test Method: ANSI C63.10 (2020) Section 6.5  
 Measurement Distance: 3m  
 Test Engineer: Mason Wu

Limit:

| Frequency(MHz) | Field strength(microvolts/meter) | Measurement distance(meters) |
|----------------|----------------------------------|------------------------------|
| 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 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.

### 7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C Humidity: 47.5 % RH Atmospheric Pressure: 1020 mbar

### 7.5.2 Test Mode Description

| Pre-scan / Final test | Mode Code | Description                                            |
|-----------------------|-----------|--------------------------------------------------------|
| Final test            | 04        | TX mode_Keep the EUT in continuously transmitting mode |



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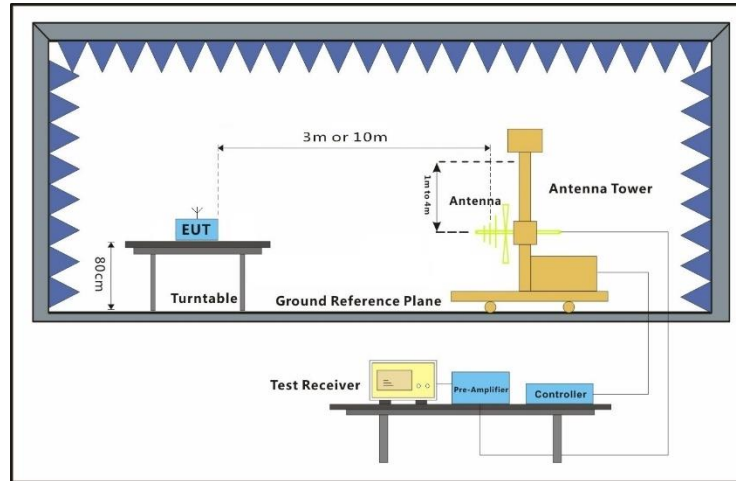
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### 7.5.3 Test Setup Diagram

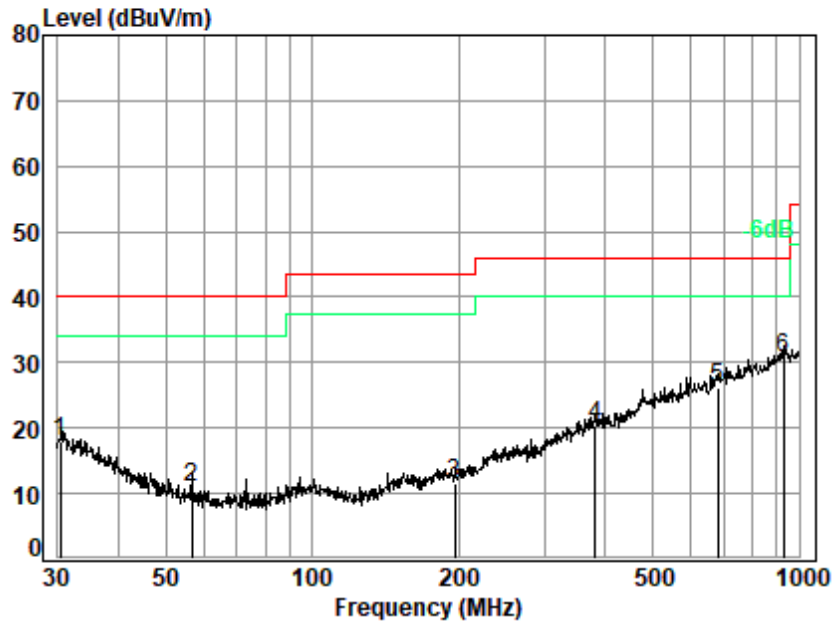


### 7.5.4 Measurement Procedure and Data

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground for below 1GHz 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 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, quasi-peak or average method as specified and then reported in a data sheet. g. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor



Test Mode: 04; Polarity: Horizontal

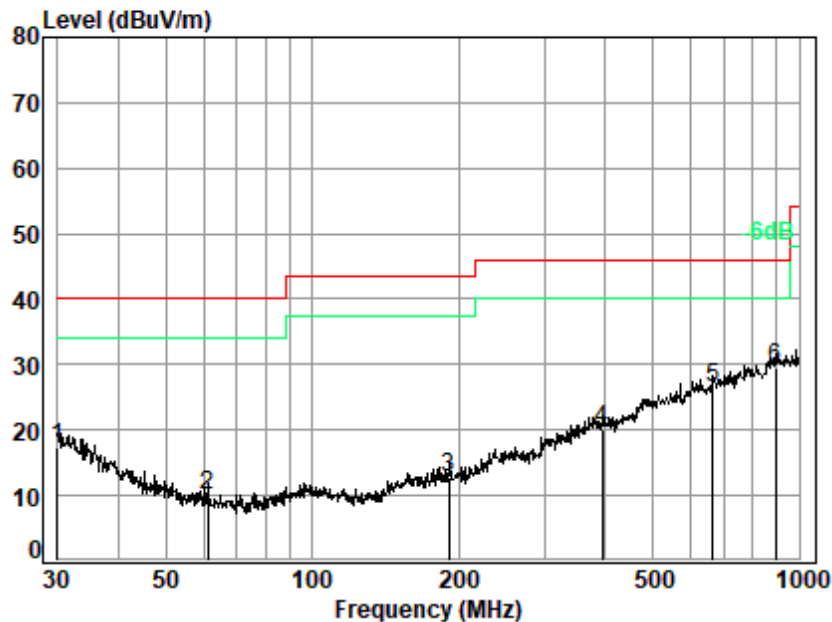


Site : chamber  
Condition: 3m HORIZONTAL  
Job No. : 05149AT/05150AT  
Test Mode: 04

|     | Ant     | Cable  | Preamp | Read   |       | Limit  | Over   |           |
|-----|---------|--------|--------|--------|-------|--------|--------|-----------|
|     | Freq    | Factor | Loss   | Factor | Level | Level  | Line   | Limit     |
|     | MHz     | dB/m   | dB     | dB     | dBuV  | dBuV/m | dBuV/m | dB        |
| 1   | 30.424  | 21.00  | 0.74   | 27.65  | 23.88 | 17.97  | 40.00  | -22.03 QP |
| 2   | 56.593  | 11.79  | 0.91   | 27.62  | 25.99 | 11.07  | 40.00  | -28.93 QP |
| 3   | 195.822 | 14.11  | 1.69   | 27.79  | 23.67 | 11.68  | 43.50  | -31.82 QP |
| 4   | 381.249 | 20.91  | 2.43   | 27.71  | 24.63 | 20.26  | 46.00  | -25.74 QP |
| 5   | 679.960 | 25.86  | 3.35   | 27.88  | 24.93 | 26.26  | 46.00  | -19.74 QP |
| 6 q | 929.008 | 28.16  | 4.04   | 26.80  | 25.25 | 30.65  | 46.00  | -15.35 QP |



Test Mode: 04; Polarity: Vertical



Site : chamber

Condition: 3m VERTICAL

Job No. : 05149AT/05150AT

Test Mode: 04

|      | 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    | 30.000  | 21.20 | 0.74   | 27.65 | 23.17  | 17.46  | 40.00 | -22.54 QP |
| 2    | 60.918  | 11.38 | 0.93   | 27.62 | 25.22  | 9.91   | 40.00 | -30.09 QP |
| 3    | 190.405 | 14.29 | 1.67   | 27.79 | 24.69  | 12.86  | 43.50 | -30.64 QP |
| 4    | 393.472 | 20.72 | 2.47   | 27.73 | 24.72  | 20.18  | 46.00 | -25.82 QP |
| 5    | 665.804 | 25.41 | 3.31   | 27.92 | 25.51  | 26.31  | 46.00 | -19.69 QP |
| 6 q  | 893.857 | 28.02 | 3.96   | 27.00 | 24.64  | 29.62  | 46.00 | -16.38 QP |



## 8 Test Setup Photo

Refer to Appendix NFC– Test Setup Photos for SZCR2511005149AT

## 9 EUT Constructional Details (EUT Photos)

Refer to Appendix - External and Internal photos for SZCR2511005149AT

- End of the Report -

