

# Test Report

**Report No.** : MTi260623002-0202E1  
**Date of issue** : 2026-07-16  
**Applicant** : Dongguan Mingjian Mould Co., Ltd.  
**Product** : Wireless Keyboard  
**Model(s)** : K33  
**FCC ID** : 2BSYG-K33

**Shenzhen Microtest Co., Ltd.**

# TEST REPORT

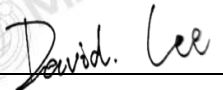
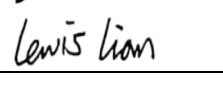
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| Test Result Certification |                                                                                                                     |                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Applicant                 | Dongguan Mingjian Mould Co., Ltd.                                                                                   |                                                                                       |
| Applicant Address         | Room 103, Building 1, No. 11 Fengping Road, Sanzhong Village, Qingxi Town, Dongguan City, Guangdong Province, China |                                                                                       |
| Manufacturer              | Dongguan Mingjian Mould Co., Ltd.                                                                                   |                                                                                       |
| Manufacturer Address      | Room 103, Building 1, No. 11 Fengping Road, Sanzhong Village, Qingxi Town, Dongguan City, Guangdong Province, China |                                                                                       |
| Factory                   | Dongguan Mingjian Mould Co., Ltd.                                                                                   |                                                                                       |
| Factory Address           | Room 103, Building 1, No. 11 Fengping Road, Sanzhong Village, Qingxi Town, Dongguan City, Guangdong Province, China |                                                                                       |
| Product description       |                                                                                                                     |                                                                                       |
| Product name              | Wireless Keyboard                                                                                                   |                                                                                       |
| Trademark                 | N/A                                                                                                                 |                                                                                       |
| Model name                | K33                                                                                                                 |                                                                                       |
| Series Model(s)           | N/A                                                                                                                 |                                                                                       |
| Standards                 | 47 CFR Part 15.249                                                                                                  |                                                                                       |
| Test Method               | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024                                                    |                                                                                       |
| Testing Information       |                                                                                                                     |                                                                                       |
| Date of test              | 2026-07-09 to 2026-07-13                                                                                            |                                                                                       |
| Test result               | Pass                                                                                                                |                                                                                       |
| Prepared by:              | Yanice Xie                                                                                                          |  |
| Reviewed by:              | David Lee                                                                                                           |  |
| Approved by:              | Lewis Lian                                                                                                          |  |

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## 1 General Description

### 1.1 Description of the EUT

|                            |                                         |
|----------------------------|-----------------------------------------|
| Product name:              | Wireless Keyboard                       |
| Model name:                | K33                                     |
| Series Model(s):           | N/A                                     |
| Model difference:          | N/A                                     |
| Electrical rating:         | Input: DC 5V<br>Battery:DC 3.7V 3000mAh |
| Accessories:               | N/A                                     |
| Hardware version:          | V1.0-BK2483                             |
| Software version:          | V7.0-QFN48                              |
| Test sample(s) number:     | MTi260623002-02-R001                    |
| <b>RF specification</b>    |                                         |
| Operating frequency range: | 2403.75-2479.75MHz                      |
| Channel number:            | 16                                      |
| Modulation type:           | GFSK                                    |
| Antenna(s) type:           | PCB Antenna                             |
| Antenna(s) gain:           | 1.92 dBi                                |

### 1.2 Description of test modes

| No.   | Emission test modes |
|-------|---------------------|
| Mode1 | TX                  |

#### 1.2.1 Operation channel list

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| 1       | 2403.75         | 5       | 2407.75         | 9       | 2414.75         | 13      | 2419.75         |
| 2       | 2426.75         | 6       | 2422.75         | 10      | 2436.75         | 14      | 2439.75         |
| 3       | 2441.75         | 7       | 2445.75         | 11      | 2459.75         | 15      | 2453.75         |
| 4       | 2463.75         | 8       | 2466.75         | 12      | 2473.75         | 16      | 2479.75         |

#### Test Channel List

##### Operation Band: 2.4G

| Bandwidth (MHz) | Lowest Channel (LCH) (MHz) | Middle Channel (MCH) (MHz) | Highest Channel (HCH) (MHz) |
|-----------------|----------------------------|----------------------------|-----------------------------|
| 1               | 2403.75                    | 2441.75                    | 2479.75                     |

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Note: The test software provided by manufacturer is used to control EUT for working in engineering mode, that enables selectable channel, and capable of continuous transmitting mode.

### Test Software: EUT Setting

For power setting, refer to below table.

| Mode | 2403.75MHz | 2441.75MHz | 2479.75MHz |
|------|------------|------------|------------|
| GFSK | default    | default    | default    |

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### 1.3 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

|                       |                  |
|-----------------------|------------------|
| Temperature:          | 15°C ~ 35°C      |
| Humidity:             | 20% RH ~ 75% RH  |
| Atmospheric pressure: | 98 kPa ~ 101 kPa |

### 1.4 Description of support units

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

| Support equipment list |            |                                      |              |
|------------------------|------------|--------------------------------------|--------------|
| Description            | Model      | Serial No.                           | Manufacturer |
| Adapter                | A1443      | /                                    | Apple        |
| Laptop                 | e485       | 0E20AC5E-BE55-4970-8F1E-152D2E4549B1 | Lenovo       |
| Support cable list     |            |                                      |              |
| Description            | Length (m) | From                                 | To           |
| /                      | /          | /                                    | /            |

### 1.5 Measurement uncertainty

| Measurement                              | Uncertainty |
|------------------------------------------|-------------|
| Conducted emissions (AMN 150kHz~30MHz)   | ±3.1dB      |
| Occupied channel bandwidth               | ±3 %        |
| Radiated spurious emissions (30MHz~1GHz) | ±4.7dB      |
| Radiated spurious emissions (above 1GHz) | ±5.3dB      |
| Radiated spurious emissions (9kHz~30MHz) | ±4.3dB      |
| Temperature                              | ±1 °C       |
| Humidity                                 | ± 5 %       |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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### 2 Summary of Test Result

| No. | Item                                      | Standard           | Requirement                                              | Result |
|-----|-------------------------------------------|--------------------|----------------------------------------------------------|--------|
| 1   | Antenna requirement                       | 47 CFR Part 15.249 | 47 CFR Part 15.203                                       | Pass   |
| 2   | Conducted Emission at AC power line       | 47 CFR Part 15.249 | 47 CFR 15.207(a)                                         | Pass   |
| 3   | Occupied Bandwidth                        | 47 CFR Part 15.249 | 47 CFR 15.215(c)                                         | Pass   |
| 4   | Field strength of fundamental             | 47 CFR Part 15.249 | 47 CFR 15.249(a)                                         | Pass   |
| 5   | Band edge emissions (Radiated)            | 47 CFR Part 15.249 | 47 CFR 15.249(d)                                         | Pass   |
| 6   | Emissions in frequency bands (below 1GHz) | 47 CFR Part 15.249 | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e) | Pass   |
| 7   | Emissions in frequency bands (above 1GHz) | 47 CFR Part 15.249 | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e) | Pass   |

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### 3 Test Facilities and accreditations

#### 3.1 Test laboratory

|                        |                                                                                                                                      |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Test laboratory:       | Shenzhen Microtest Co., Ltd.                                                                                                         |
| Test site location:    | 101, No.7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China |
| Telephone:             | (86-755)88850135                                                                                                                     |
| Fax:                   | (86-755)88850136                                                                                                                     |
| CNAS Registration No.: | CNAS L5868                                                                                                                           |
| FCC Registration No.:  | 448573                                                                                                                               |
| IC Registration No.:   | 21760                                                                                                                                |
| CABID:                 | CN0093                                                                                                                               |

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## 4 List of test equipment

| No.                                                                      | Equipment                            | Manufacturer    | Model                | Serial No.    | Cal. date  | Cal. Due   |
|--------------------------------------------------------------------------|--------------------------------------|-----------------|----------------------|---------------|------------|------------|
| Conducted Emission at AC power line                                      |                                      |                 |                      |               |            |            |
| 1                                                                        | EMI Test Receiver                    | Rohde&schwarz   | ESCI3                | 101368        | 2026-03-10 | 2027-03-09 |
| 2                                                                        | Artificial mains network             | Schwarzbeck     | NSLK 8127            | 183           | 2026-03-11 | 2027-03-10 |
| 3                                                                        | Artificial Mains Network             | Rohde & Schwarz | ESH2-Z5              | 100263        | 2026-03-10 | 2027-03-09 |
| 4                                                                        | EMI Test Software                    | Farad           | EZ-EMC               | Ver. EMEC-3A1 | /          | /          |
| Occupied Bandwidth                                                       |                                      |                 |                      |               |            |            |
| 1                                                                        | Wideband Radio Communication Tester  | Rohde&schwarz   | CMW500               | 149155        | 2026-03-09 | 2027-03-08 |
| 2                                                                        | ESG Series Analog Ssignal Generator  | Agilent         | E4421B               | GB40051240    | 2026-03-09 | 2027-03-08 |
| 3                                                                        | PXA Signal Analyzer                  | Agilent         | N9030A               | MY51350296    | 2026-03-10 | 2027-03-09 |
| 4                                                                        | Synthesized Sweeper                  | Agilent         | 83752A               | 3610A01957    | 2026-03-10 | 2027-03-09 |
| 5                                                                        | MXA Signal Analyzer                  | Agilent         | N9020A               | MY50143483    | 2026-03-09 | 2027-03-08 |
| 6                                                                        | RF Control Unit                      | Tonscend        | JS0806-1             | 19D8060152    | 2026-03-11 | 2027-03-10 |
| 7                                                                        | Band Reject Filter Group             | Tonscend        | JS0806-F             | 19D8060160    | 2026-03-11 | 2027-03-10 |
| 8                                                                        | ESG Vector Signal Generator          | Agilent         | N5182A               | MY50143762    | 2026-03-10 | 2027-03-09 |
| 9                                                                        | DC Power Supply                      | Agilent         | E3632A               | MY40027695    | 2026-03-09 | 2027-03-08 |
| 10                                                                       | RF Test System                       | Tonscend        | JS1120-3 Test System | V3.6.21       | /          | /          |
| Field strength of fundamental Emissions in frequency bands (below 1GHz)  |                                      |                 |                      |               |            |            |
| 1                                                                        | EMI Test Receiver                    | Rohde&schwarz   | ESCI7                | 101166        | 2026-03-10 | 2027-03-09 |
| 2                                                                        | TRILOG Broadband Antenna             | schwarabeck     | VULB 9163            | 9163-1338     | 2025-05-23 | 2027-05-22 |
| 3                                                                        | Active Loop Antenna                  | Schwarzbeck     | FMZB 1519 B          | 00066         | 2026-03-08 | 2028-03-07 |
| 4                                                                        | Amplifier                            | Hewlett-Packard | 8447F                | 3113A06184    | 2026-03-10 | 2027-03-09 |
| 5                                                                        | EMI Test Software                    | Farad           | EZ-EMC               | Ver. EMEC-3A1 | /          | /          |
| Band edge emissions (Radiated) Emissions in frequency bands (above 1GHz) |                                      |                 |                      |               |            |            |
| 1                                                                        | EMI Test Receiver                    | Rohde&schwarz   | ESCI7                | 101166        | 2026-03-10 | 2027-03-09 |
| 2                                                                        | Double Ridged Broadband Horn Antenna | schwarabeck     | BBHA 9120 D          | 2278          | 2025-05-27 | 2027-05-26 |

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| No. | Equipment           | Manufacturer   | Model       | Serial No.    | Cal. date  | Cal. Due   |
|-----|---------------------|----------------|-------------|---------------|------------|------------|
| 3   | Amplifier           | Agilent        | 8449B       | 3008A01120    | 2026-03-10 | 2027-03-09 |
| 4   | MXA signal analyzer | Agilent        | N9020A      | MY54440859    | 2026-03-10 | 2027-03-09 |
| 5   | PXA Signal Analyzer | Agilent        | N9030A      | MY51350296    | 2026-03-10 | 2027-03-09 |
| 6   | Horn antenna        | Schwarzbeck    | BBHA 9170   | 00987         | 2025-05-27 | 2027-05-26 |
| 7   | Pre-amplifier       | Space-Dtronics | EWLAN18 40G | 210405001     | 2026-03-11 | 2027-03-10 |
| 8   | EMI Test Software   | Farad          | EZ-EMC      | Ver. EMEC-3A1 | /          | /          |

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### 5 Evaluation Results (Evaluation)

#### 5.1 Antenna requirement

|                   |                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

##### 5.1.1 Conclusion:

The antenna of the EUT is permanently attached.  
The EUT complies with the requirement of FCC PART 15.203.

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## 6 Radio Spectrum Matter Test Results (RF)

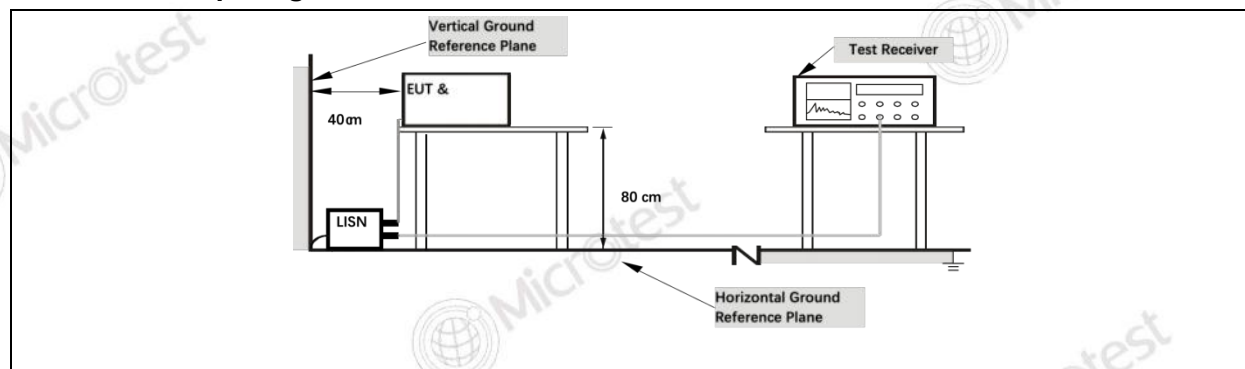
### 6.1 Conducted Emission at AC power line

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              |           |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------|
| Test Requirement: | Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 $\mu$ H/50 ohms line impedance stabilization network (LISN). |                              |           |
| Test Limit:       | Frequency of emission (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                          | Conducted limit (dB $\mu$ 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.                                                                                                                                                                                                                                                                                                                                                                                                      |                              |           |
| Test Method:      | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.2                                                                                                                                                                                                                                                                                                                                                                         |                              |           |
| Procedure:        | Refer to ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices                                                                                                                                                                                                                                                                   |                              |           |

#### 6.1.1 E.U.T. Operation:

|                        |         |           |      |                       |         |
|------------------------|---------|-----------|------|-----------------------|---------|
| Operating Environment: |         |           |      |                       |         |
| Temperature:           | 22.2 °C | Humidity: | 59 % | Atmospheric Pressure: | 101 kPa |
| Pre test mode:         | Mode1   |           |      |                       |         |
| Final test mode:       | Mode1   |           |      |                       |         |

#### 6.1.2 Test Setup Diagram:

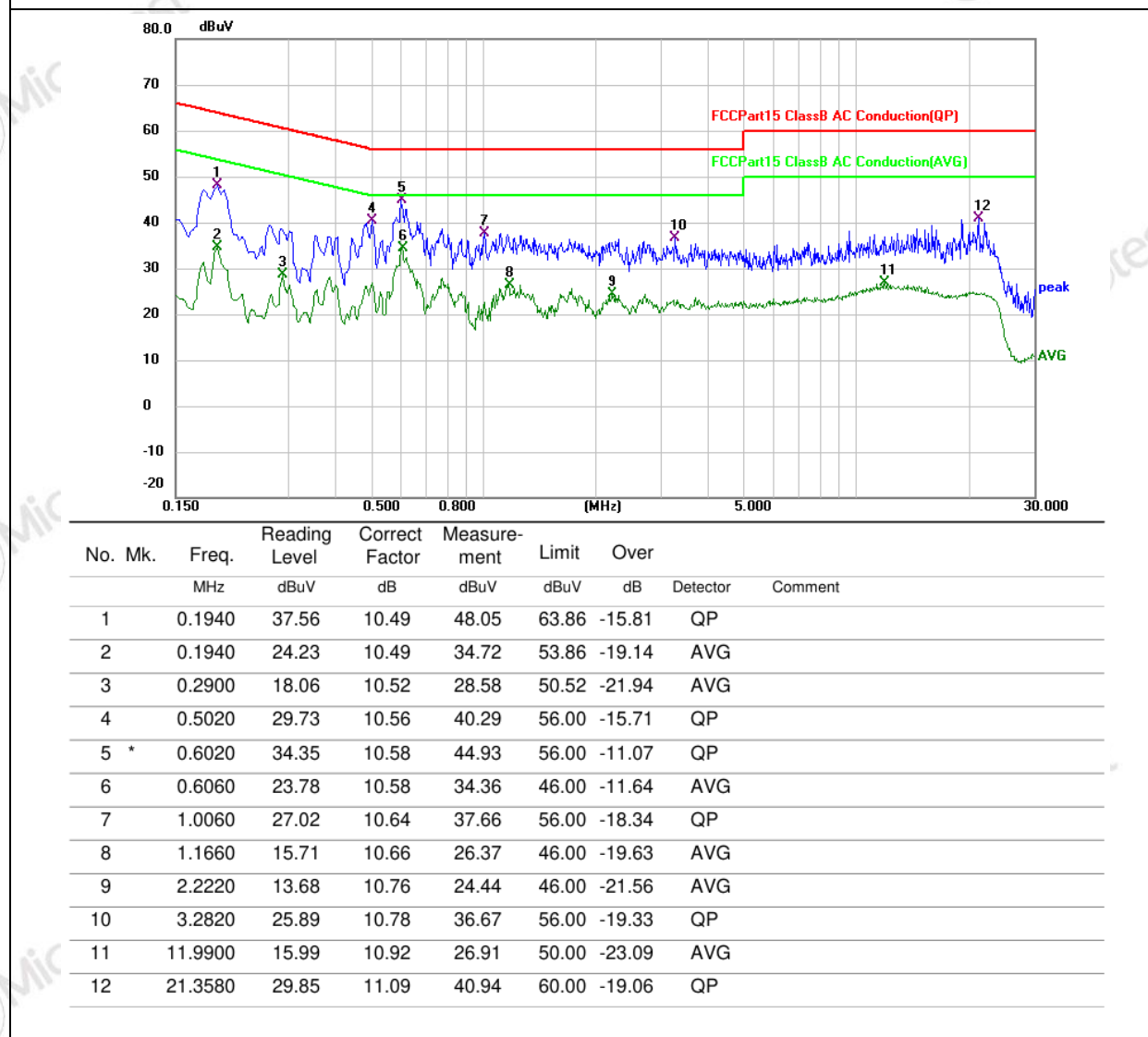


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## 6.1.3 Test Data:

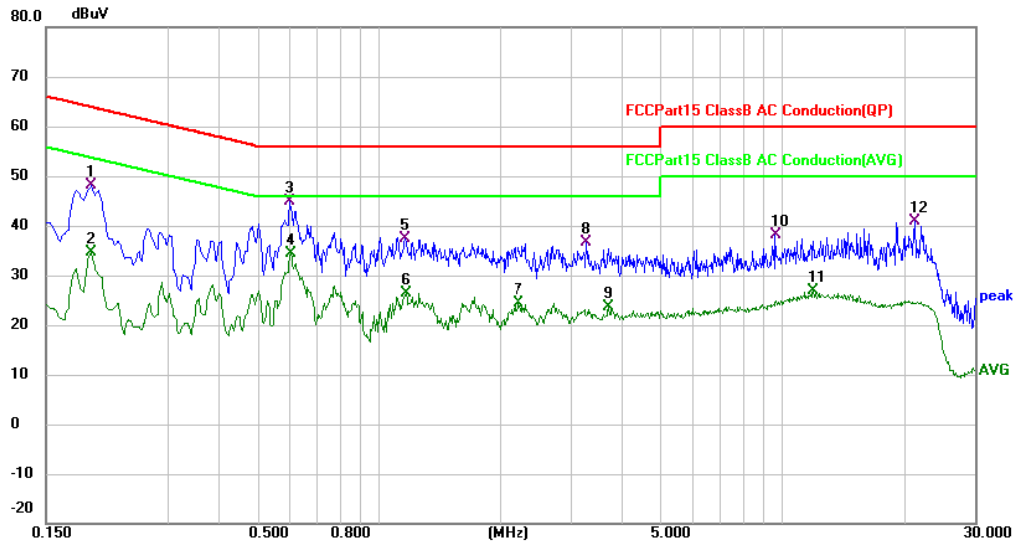
Mode1 / Line: Line / CH: L



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Mode1 / Line: Neutral / CH: L

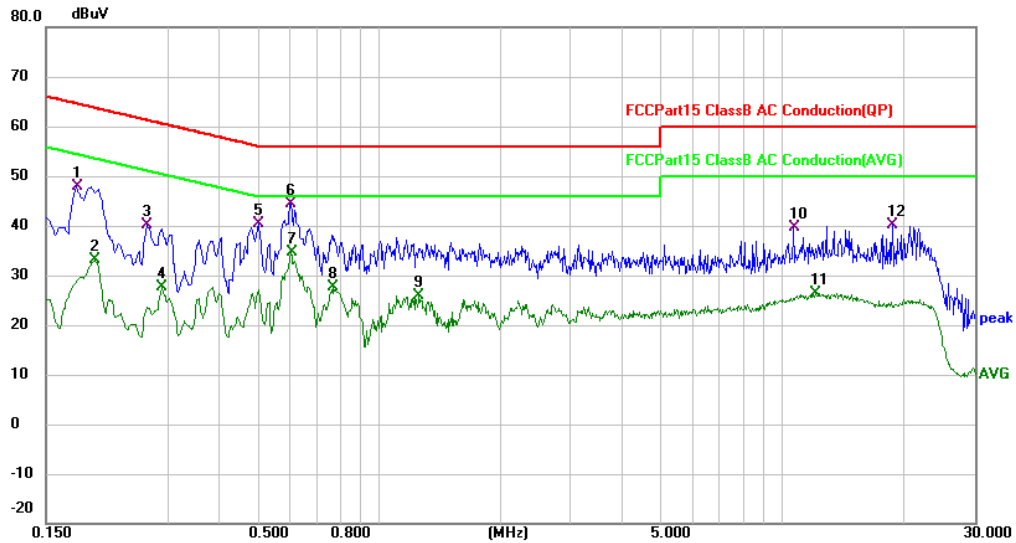


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1       | 0.1940       | 37.56                    | 10.49                   | 48.05                    | 63.86         | -15.81     | QP       |         |
| 2       | 0.1940       | 24.23                    | 10.49                   | 34.72                    | 53.86         | -19.14     | AVG      |         |
| 3 *     | 0.6020       | 34.35                    | 10.58                   | 44.93                    | 56.00         | -11.07     | QP       |         |
| 4       | 0.6060       | 23.78                    | 10.58                   | 34.36                    | 46.00         | -11.64     | AVG      |         |
| 5       | 1.1620       | 26.69                    | 10.66                   | 37.35                    | 56.00         | -18.65     | QP       |         |
| 6       | 1.1660       | 15.71                    | 10.66                   | 26.37                    | 46.00         | -19.63     | AVG      |         |
| 7       | 2.2220       | 13.68                    | 10.76                   | 24.44                    | 46.00         | -21.56     | AVG      |         |
| 8       | 3.2820       | 25.89                    | 10.78                   | 36.67                    | 56.00         | -19.33     | QP       |         |
| 9       | 3.7300       | 12.89                    | 10.78                   | 23.67                    | 46.00         | -22.33     | AVG      |         |
| 10      | 9.6340       | 27.22                    | 10.88                   | 38.10                    | 60.00         | -21.90     | QP       |         |
| 11      | 11.9900      | 15.99                    | 10.92                   | 26.91                    | 50.00         | -23.09     | AVG      |         |
| 12      | 21.3580      | 29.85                    | 11.09                   | 40.94                    | 60.00         | -19.06     | QP       |         |

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Mode1 / Line: Line / CH: M

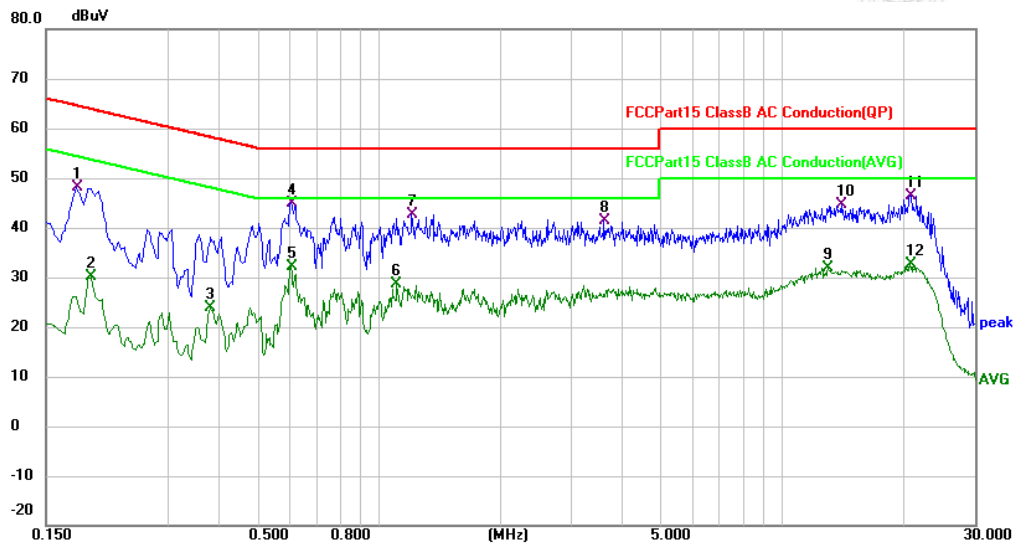


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1       | 0.1780       | 37.46                    | 10.48                   | 47.94                    | 64.58         | -16.64     | QP       |         |
| 2       | 0.1980       | 22.66                    | 10.49                   | 33.15                    | 53.69         | -20.54     | AVG      |         |
| 3       | 0.2660       | 29.62                    | 10.50                   | 40.12                    | 61.24         | -21.12     | QP       |         |
| 4       | 0.2900       | 17.23                    | 10.52                   | 27.75                    | 50.52         | -22.77     | AVG      |         |
| 5       | 0.5020       | 29.84                    | 10.56                   | 40.40                    | 56.00         | -15.60     | QP       |         |
| 6       | 0.6020       | 33.90                    | 10.58                   | 44.48                    | 56.00         | -11.52     | QP       |         |
| 7 *     | 0.6060       | 24.04                    | 10.58                   | 34.62                    | 46.00         | -11.38     | AVG      |         |
| 8       | 0.7700       | 17.02                    | 10.61                   | 27.63                    | 46.00         | -18.37     | AVG      |         |
| 9       | 1.2579       | 15.24                    | 10.67                   | 25.91                    | 46.00         | -20.09     | AVG      |         |
| 10      | 10.7260      | 28.69                    | 10.89                   | 39.58                    | 60.00         | -20.42     | QP       |         |
| 11      | 12.0860      | 15.56                    | 10.92                   | 26.48                    | 50.00         | -23.52     | AVG      |         |
| 12      | 18.7939      | 29.10                    | 11.06                   | 40.16                    | 60.00         | -19.84     | QP       |         |

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Mode1 / Line: Neutral / CH: M



| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1       | 0.1780       | 37.53                    | 10.49                   | 48.02                    | 64.58         | -16.56     | QP       |         |
| 2       | 0.1940       | 19.58                    | 10.49                   | 30.07                    | 53.86         | -23.79     | AVG      |         |
| 3       | 0.3820       | 13.40                    | 10.53                   | 23.93                    | 48.24         | -24.31     | AVG      |         |
| 4 *     | 0.6060       | 34.42                    | 10.57                   | 44.99                    | 56.00         | -11.01     | QP       |         |
| 5       | 0.6060       | 21.50                    | 10.57                   | 32.07                    | 46.00         | -13.93     | AVG      |         |
| 6       | 1.1100       | 18.06                    | 10.64                   | 28.70                    | 46.00         | -17.30     | AVG      |         |
| 7       | 1.2059       | 31.92                    | 10.65                   | 42.57                    | 56.00         | -13.43     | QP       |         |
| 8       | 3.6380       | 30.56                    | 10.77                   | 41.33                    | 56.00         | -14.67     | QP       |         |
| 9       | 12.9938      | 21.03                    | 10.94                   | 31.97                    | 50.00         | -18.03     | AVG      |         |
| 10      | 14.0059      | 33.56                    | 10.95                   | 44.51                    | 60.00         | -15.49     | QP       |         |
| 11      | 20.7139      | 35.38                    | 11.09                   | 46.47                    | 60.00         | -13.53     | QP       |         |
| 12      | 20.7139      | 21.54                    | 11.09                   | 32.63                    | 50.00         | -17.37     | AVG      |         |

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## 6.2 Occupied Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | 47 CFR 15.215(c)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Test Limit:       | Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Test Method:      | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024, section 6.9.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Procedure:        | <p>a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.</p> <p>b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.</p> <p>c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.</p> <p>d) Steps a) through c) might require iteration to adjust within the specified tolerances.</p> <p>e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.</p> <p>f) Set detection mode to peak and trace mode to max hold.</p> <p>g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).</p> <p>h) Determine the “-xx dB down amplitude” using [(reference value) - xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.</p> <p>i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).</p> <p>j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified</p> |

# TEST REPORT

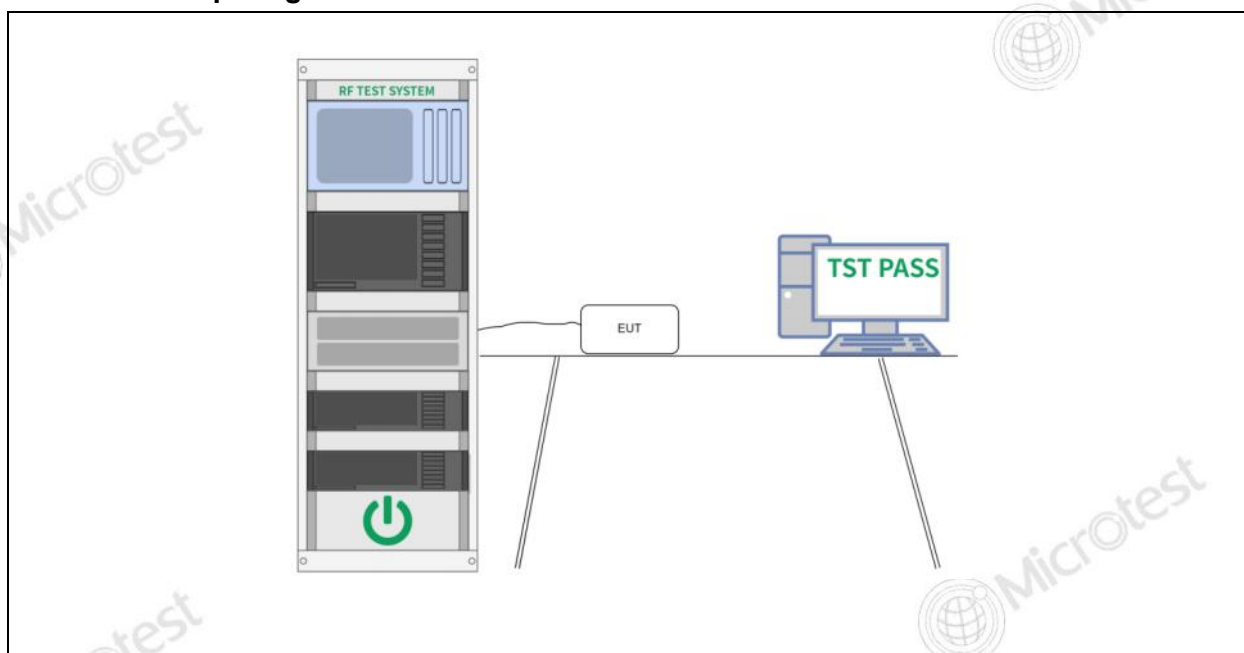
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|  |                                                                                                                                                                                                                                                                |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | emission bandwidth.<br>k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s). |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 6.2.1 E.U.T. Operation:

|                        |         |           |      |                       |         |
|------------------------|---------|-----------|------|-----------------------|---------|
| Operating Environment: |         |           |      |                       |         |
| Temperature:           | 23.6 °C | Humidity: | 57 % | Atmospheric Pressure: | 101 kPa |
| Pre test mode:         | Mode1   |           |      |                       |         |
| Final test mode:       | Mode1   |           |      |                       |         |

## 6.2.2 Test Setup Diagram:



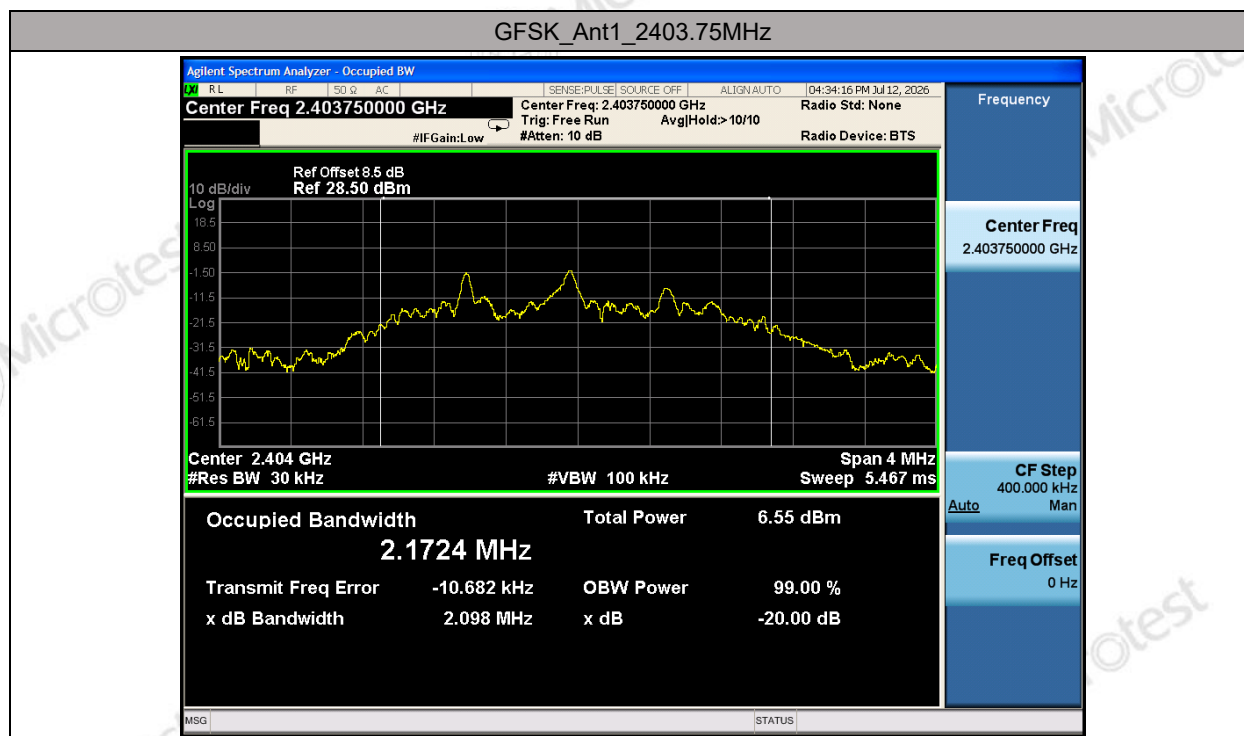
# TEST REPORT

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## 6.2.3 Test Data:

| Test Mode | Antenna | Frequency [MHz] | 99% OBW [MHz] | 20db BW [MHz] |
|-----------|---------|-----------------|---------------|---------------|
| GFSK      | Ant1    | 2403.75         | 2.1724        | 2.098         |
|           |         | 2441.75         | 2.1239        | 2.093         |
|           |         | 2479.75         | 2.1216        | 2.100         |

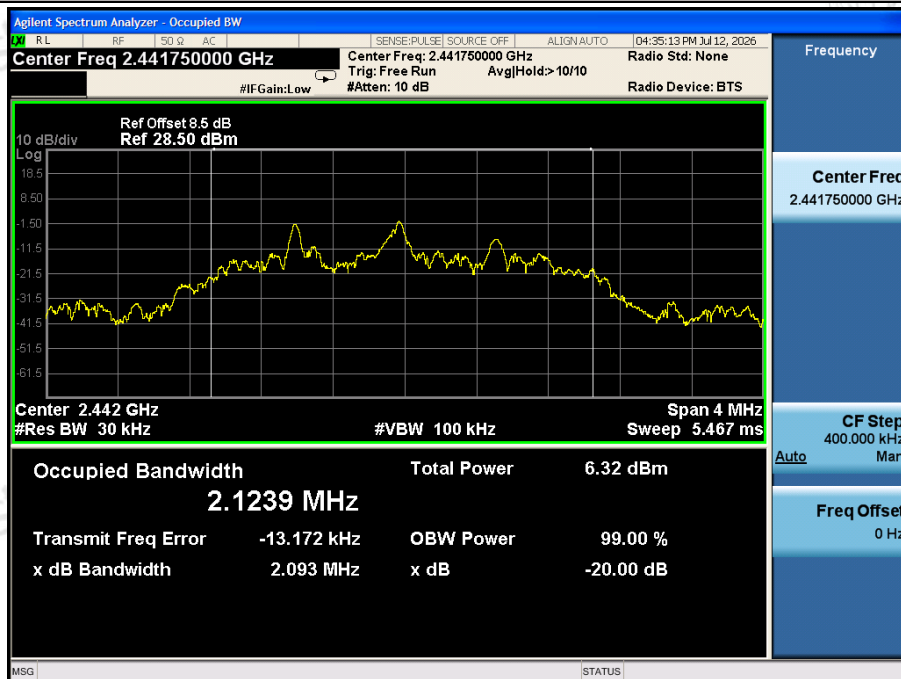
## Test Graphs



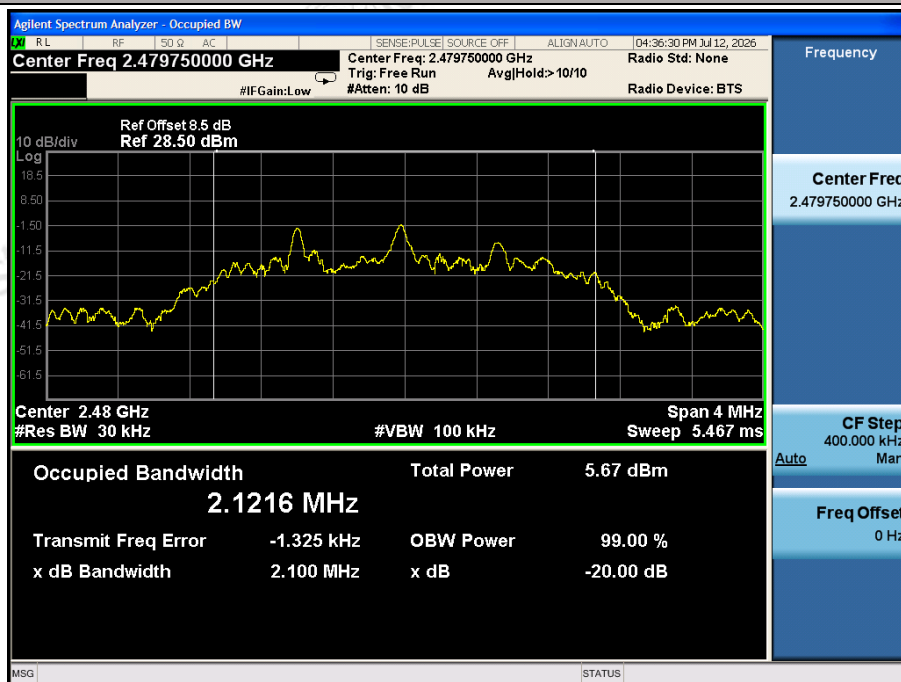
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## GFSK\_Ant1\_2441.75MHz



## GFSK\_Ant1\_2479.75MHz



# TEST REPORT

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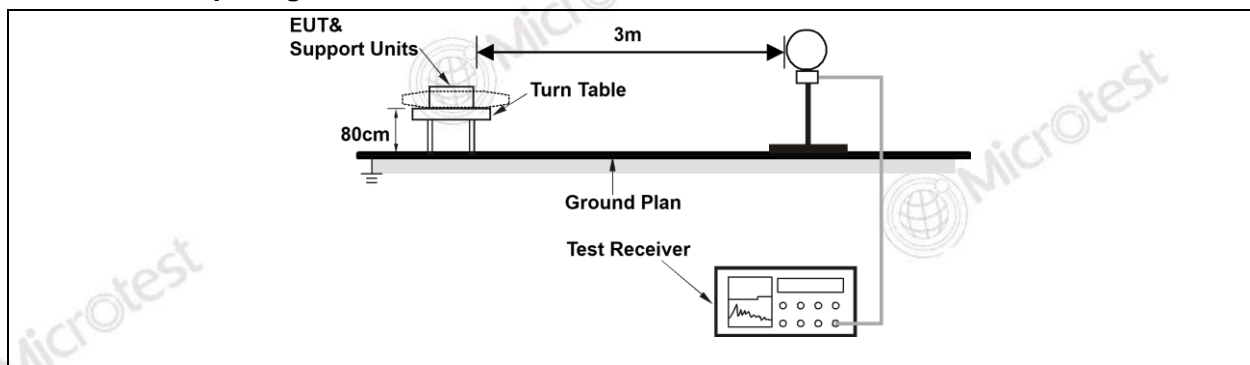
## 6.3 Field strength of fundamental

|                   |                                                                                                                                                                                        |                                                  |                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------|
| Test Requirement: | Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following: |                                                  |                                                |
|                   | Fundamental frequency                                                                                                                                                                  | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|                   | 902-928 MHz                                                                                                                                                                            | 50                                               | 500                                            |
|                   | 2400-2483.5 MHz                                                                                                                                                                        | 50                                               | 500                                            |
|                   | 5725-5875 MHz                                                                                                                                                                          | 50                                               | 500                                            |
|                   | 24.0-24.25 GHz                                                                                                                                                                         | 250                                              | 2500                                           |
| Test Limit:       | Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following: |                                                  |                                                |
|                   | Fundamental frequency                                                                                                                                                                  | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|                   | 902-928 MHz                                                                                                                                                                            | 50                                               | 500                                            |
|                   | 2400-2483.5 MHz                                                                                                                                                                        | 50                                               | 500                                            |
|                   | 5725-5875 MHz                                                                                                                                                                          | 50                                               | 500                                            |
|                   | 24.0-24.25 GHz                                                                                                                                                                         | 250                                              | 2500                                           |
| Test Method:      | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.5                                                                                                           |                                                  |                                                |
| Procedure:        | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.5                                                                                                           |                                                  |                                                |

### 6.3.1 E.U.T. Operation:

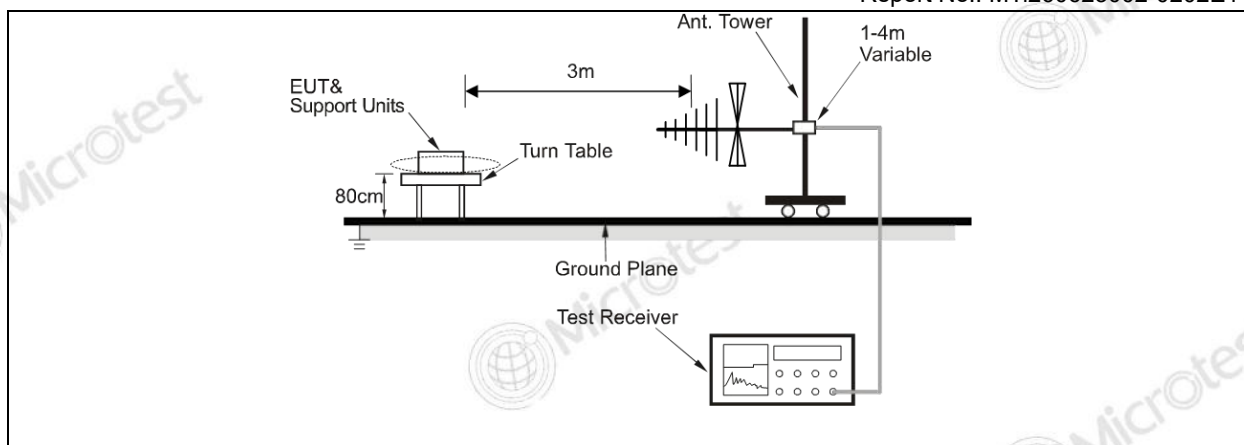
|                        |       |           |      |
|------------------------|-------|-----------|------|
| Operating Environment: |       |           |      |
| Temperature:           | 23 °C | Humidity: | 45 % |
| Pre test mode:         | Mode1 |           |      |
| Final test mode:       | Mode1 |           |      |

### 6.3.2 Test Setup Diagram:



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## 6.3.3 Test Data:

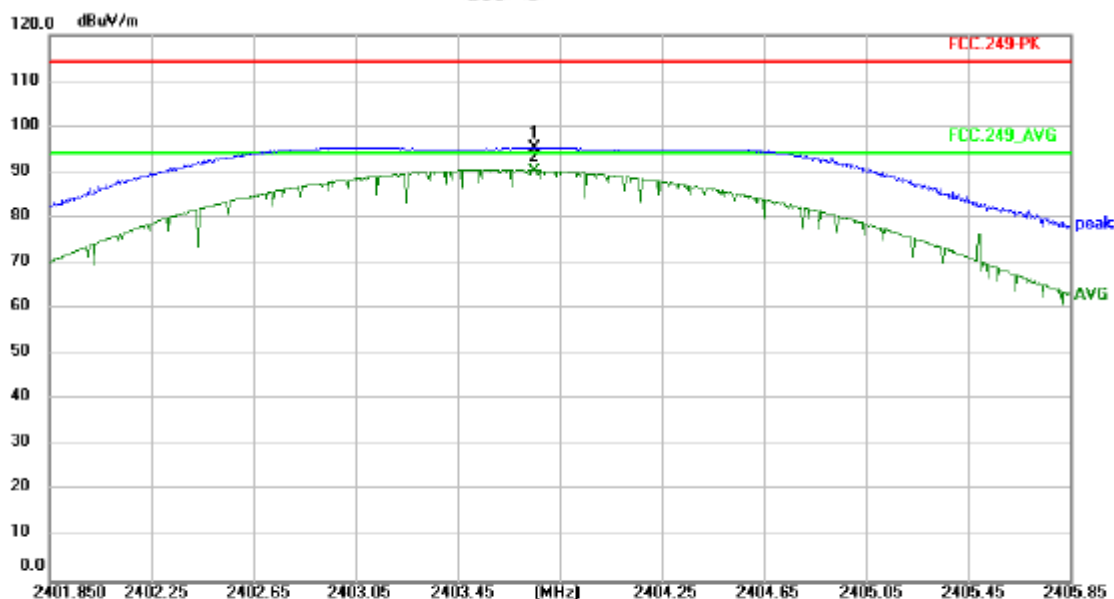
### Calculation formula:

Measurement (dBμV/m) = Reading Level (dBμV) + Correct Factor (dB)

Correct Factor (dB) = Antenna Factor + Cable Loss - Preamplifier Factor

Over (dB) = Measurement (dBμV/m) - Limit (dBμV/m)

Mode1 / Polarization: Horizontal / CH: L



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz      | dBμV          | dB             | dBμV/m      | dBμV/m | dB     | Detector | Comment |
| 1   |     | 2403.750 | 99.42         | -4.30          | 95.12       | 114.00 | -18.88 | peak     |         |
| 2   | *   | 2403.750 | 94.43         | -4.30          | 90.13       | 94.00  | -3.87  | AVG      |         |

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Mode1 / Polarization: Vertical / CH: L

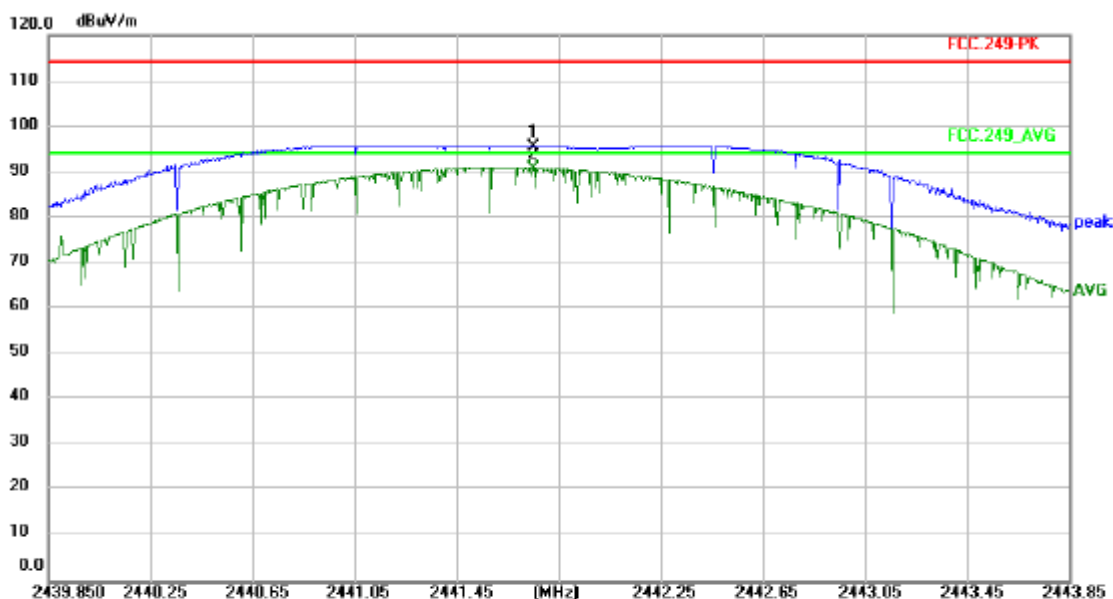


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measure-ment | Limit  | Over   |          |         |
|-----|-----|----------|---------------|----------------|--------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector | Comment |
| 1   |     | 2403.750 | 94.42         | -4.30          | 90.12        | 114.00 | -23.88 | peak     |         |
| 2   | *   | 2403.750 | 89.40         | -4.30          | 85.10        | 94.00  | -8.90  | AVG      |         |

# TEST REPORT

Report No.: MTi260623002-0202E1

Mode1 / Polarization: Horizontal / CH: M



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Detector | Comment |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     |          |         |
| 1   |     | 2441.750 | 99.82         | -4.35          | 95.47       | 114.00 | -18.53 | peak     |         |
| 2   | *   | 2441.750 | 95.05         | -4.35          | 90.70       | 94.00  | -3.30  | AVG      |         |

# TEST REPORT

Report No.: MTi260623002-0202E1

Mode1 / Polarization: Vertical / CH: M

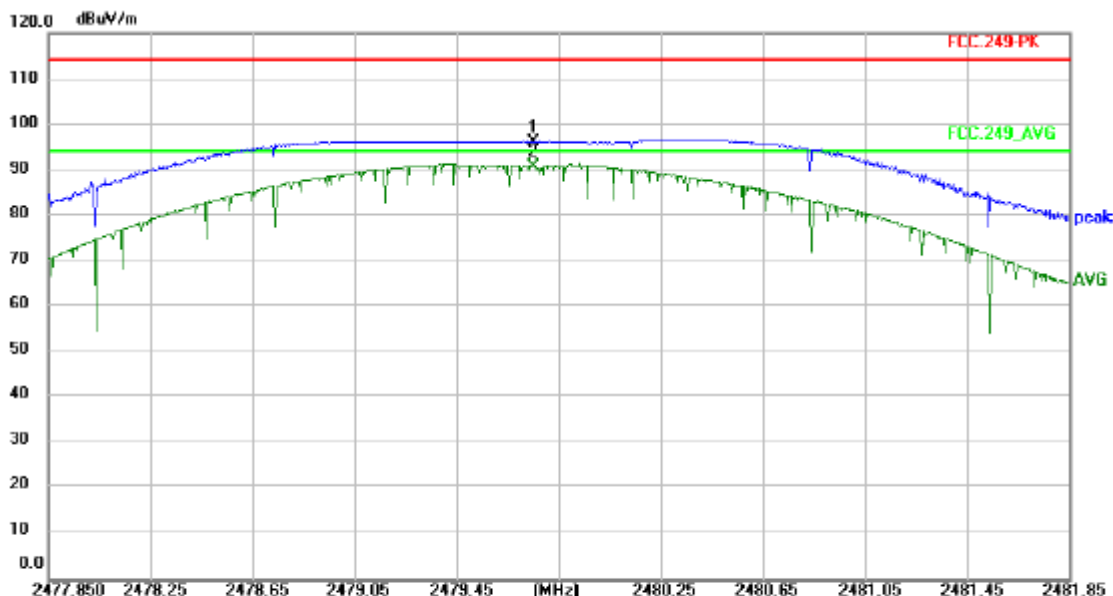


| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   |     | 2441.750 | 94.29         | -4.35          | 89.94       | 114.00 | -24.06 | peak     |         |
| 2   | *   | 2441.750 | 89.94         | -4.35          | 85.59       | 94.00  | -8.41  | AVG      |         |

# TEST REPORT

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Mode1 / Polarization: Horizontal / CH: H

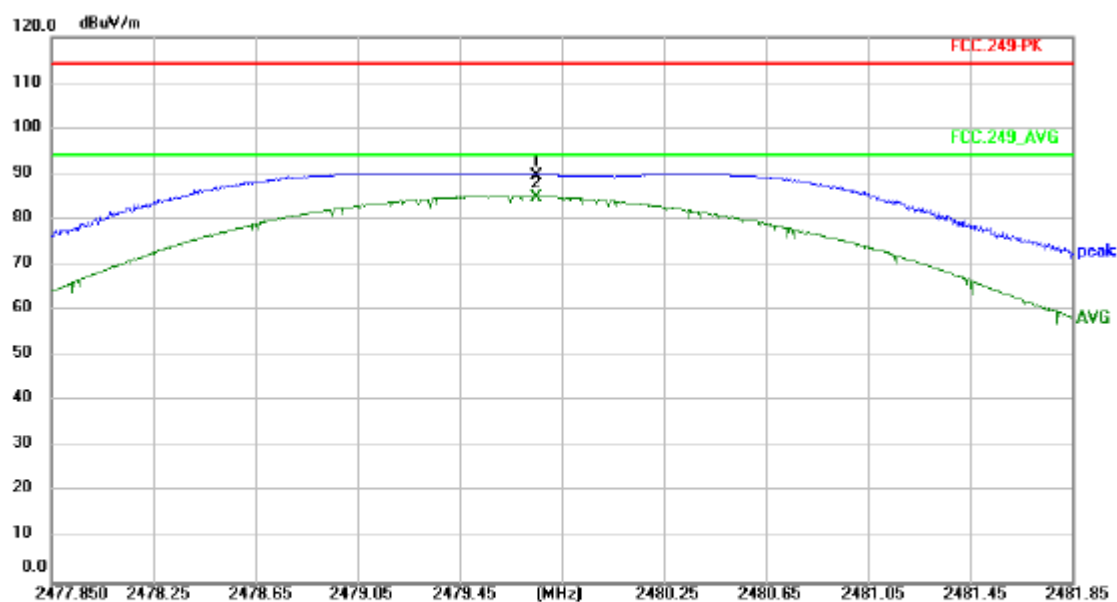


| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1   |     | 2479.750     | 100.47                   | -4.24                   | 96.23                      | 114.00          | -17.77     | peak     |         |
| 2   | *   | 2479.750     | 95.12                    | -4.24                   | 90.88                      | 94.00           | -3.12      | AVG      |         |

# TEST REPORT

Report No.: MTi260623002-0202E1

Mode1 / Polarization: Vertical / CH: H



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |                  |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|------------------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector Comment |
| 1   |     | 2479.750 | 93.90         | -4.24          | 89.66       | 114.00 | -24.34 | peak             |
| 2   | *   | 2479.750 | 89.12         | -4.24          | 84.88       | 94.00  | -9.12  | AVG              |

# TEST REPORT

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## 6.4 Band edge emissions (Radiated)

| Test Requirement: | Emissions 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 § 15.209, whichever is the lesser attenuation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |  |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--|-----------------|-----------------------------------|-------------------------------|-------------|-------------|-----|-------------|--------------|----|------------|----|----|-------|--------|---|--------|--------|---|---------|--------|---|-----------|-----|---|
| Test Limit:       | <div>Emissions 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 § 15.209, whichever is the lesser attenuation.</div> <table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr><tr><td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr><tr><td>1.705-30.0</td><td>30</td><td>30</td></tr><tr><td>30-88</td><td>100 **</td><td>3</td></tr><tr><td>88-216</td><td>150 **</td><td>3</td></tr><tr><td>216-960</td><td>200 **</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> <div>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</div> |                               |  | 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 |
| 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                             |  |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Test Method:      | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.6.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |  |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Procedure:        | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.6.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |  |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |

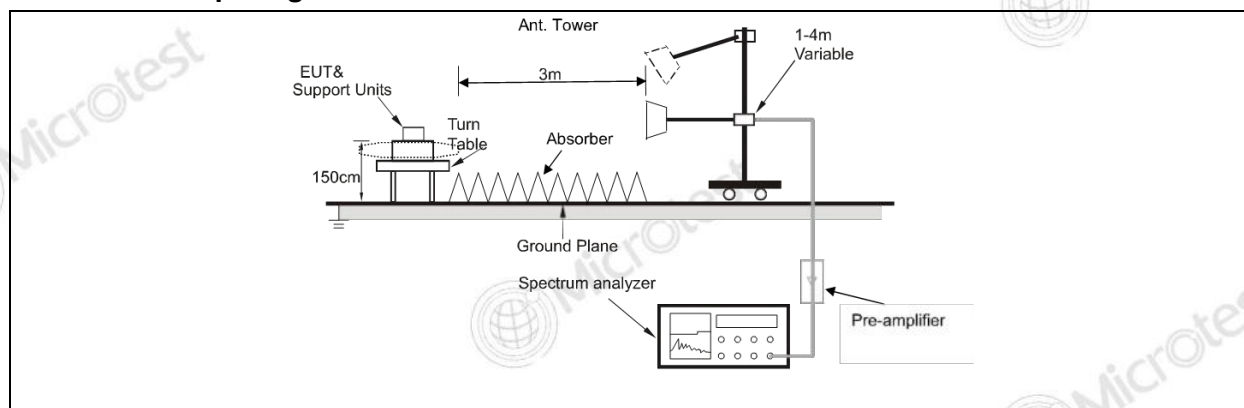
### 6.4.1 E.U.T. Operation:

|                                                                                                             |       |           |      |                       |         |
|-------------------------------------------------------------------------------------------------------------|-------|-----------|------|-----------------------|---------|
| Operating Environment:                                                                                      |       |           |      |                       |         |
| Temperature:                                                                                                | 23 °C | Humidity: | 45 % | Atmospheric Pressure: | 101 kPa |
| Pre test mode:                                                                                              | Mode1 |           |      |                       |         |
| Final test mode:                                                                                            | Mode1 |           |      |                       |         |
| Note:                                                                                                       |       |           |      |                       |         |
| The amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported. |       |           |      |                       |         |

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### 6.4.2 Test Setup Diagram:



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### 6.4.3 Test Data:

#### Calculation formula:

Measurement (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Correct Factor (dB)

Correct Factor (dB) = Antenna Factor + Cable Loss - Preamplifier Factor

Over (dB) = Measurement (dB $\mu$ V/m) - Limit (dB $\mu$ V/m)

Mode1 / Polarization: Horizontal / CH: L

| No. Mk. | Freq.    | Reading Level | Correct Factor | Measurement  | Limit        | Over   | Detector |
|---------|----------|---------------|----------------|--------------|--------------|--------|----------|
|         | MHz      | dB $\mu$ V    | dB             | dB $\mu$ V/m | dB $\mu$ V/m | dB     |          |
| 1       | 2310.000 | 48.37         | -4.50          | 43.87        | 74.00        | -30.13 | peak     |
| 2       | 2310.000 | 38.41         | -4.50          | 33.91        | 54.00        | -20.09 | AVG      |
| 3       | 2390.000 | 51.15         | -4.31          | 46.84        | 74.00        | -27.16 | peak     |
| 4       | 2390.000 | 40.80         | -4.31          | 36.49        | 54.00        | -17.51 | AVG      |
| 5       | 2400.000 | 61.60         | -4.29          | 57.31        | 74.00        | -16.69 | peak     |
| 6 *     | 2400.000 | 49.73         | -4.29          | 45.44        | 54.00        | -8.56  | AVG      |

Mode1 / Polarization: Vertical / CH: L

| No. Mk. | Freq.    | Reading Level | Correct Factor | Measurement  | Limit        | Over   | Detector |
|---------|----------|---------------|----------------|--------------|--------------|--------|----------|
|         | MHz      | dB $\mu$ V    | dB             | dB $\mu$ V/m | dB $\mu$ V/m | dB     |          |
| 1       | 2310.000 | 49.04         | -4.50          | 44.54        | 74.00        | -29.46 | peak     |
| 2       | 2310.000 | 38.35         | -4.50          | 33.85        | 54.00        | -20.15 | AVG      |
| 3       | 2390.000 | 49.11         | -4.31          | 44.80        | 74.00        | -29.20 | peak     |
| 4       | 2390.000 | 38.82         | -4.31          | 34.51        | 54.00        | -19.49 | AVG      |
| 5       | 2400.000 | 59.78         | -4.29          | 55.49        | 74.00        | -18.51 | peak     |
| 6 *     | 2400.000 | 46.20         | -4.29          | 41.91        | 54.00        | -12.09 | AVG      |

## TEST REPORT

Report No.: MTi260623002-0202E1

Mode1 / Polarization: Horizontal / CH: H

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measure-ment | Limit  | Over   |          |
|-----|-----|----------|---------------|----------------|--------------|--------|--------|----------|
|     |     | MHz      | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector |
| 1   |     | 2483.500 | 57.07         | -4.23          | 52.84        | 74.00  | -21.16 | peak     |
| 2   | *   | 2483.500 | 44.46         | -4.23          | 40.23        | 54.00  | -13.77 | AVG      |
| 3   |     | 2500.000 | 49.33         | -4.15          | 45.18        | 74.00  | -28.82 | peak     |
| 4   |     | 2500.000 | 38.67         | -4.15          | 34.52        | 54.00  | -19.48 | AVG      |

Mode1 / Polarization: Vertical / CH: H

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measure-ment | Limit  | Over   |          |
|-----|-----|----------|---------------|----------------|--------------|--------|--------|----------|
|     |     | MHz      | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector |
| 1   |     | 2483.500 | 63.35         | -4.23          | 59.12        | 74.00  | -14.88 | peak     |
| 2   | *   | 2483.500 | 49.63         | -4.23          | 45.40        | 54.00  | -8.60  | AVG      |
| 3   |     | 2500.000 | 49.33         | -4.15          | 45.18        | 74.00  | -28.82 | peak     |
| 4   |     | 2500.000 | 38.80         | -4.15          | 34.65        | 54.00  | -19.35 | AVG      |

# TEST REPORT

Report No.: MTi260623002-0202E1

## 6.5 Emissions in frequency bands (below 1GHz)

| Test Requirement:     | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------|--------------------------------------------------|------------------------------------------------|-------------|----|-----|-----------------|----|-----|---------------|----|-----|----------------|-----|------|-----------------|-----------------------------------|-------------------------------|-------------|-------------|-----|-------------|--------------|----|------------|----|----|-------|--------|---|--------|--------|---|---------|--------|---|-----------|-----|---|
| Test Limit:           | <p>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</p> <table border="1"> <thead> <tr> <th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr> </thead> <tbody> <tr> <td>902-928 MHz</td><td>50</td><td>500</td></tr> <tr> <td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr> <tr> <td>5725-5875 MHz</td><td>50</td><td>500</td></tr> <tr> <td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr> </tbody> </table> <p>Emissions 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 § 15.209, whichever is the lesser attenuation.</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr> </thead> <tbody> <tr> <td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr> <td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr> <td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr> <td>30-88</td><td>100 **</td><td>3</td></tr> <tr> <td>88-216</td><td>150 **</td><td>3</td></tr> <tr> <td>216-960</td><td>200 **</td><td>3</td></tr> <tr> <td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table> <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section 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 point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p> |                                                | Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) | 902-928 MHz | 50 | 500 | 2400-2483.5 MHz | 50 | 500 | 5725-5875 MHz | 50 | 500 | 24.0-24.25 GHz | 250 | 2500 | 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 |
| Fundamental frequency | Field strength of fundamental (millivolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Field strength of harmonics (microvolts/meter) |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 902-928 MHz           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 2400-2483.5 MHz       | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 5725-5875 MHz         | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 24.0-24.25 GHz        | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2500                                           |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 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                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Test Method:          | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |

# TEST REPORT

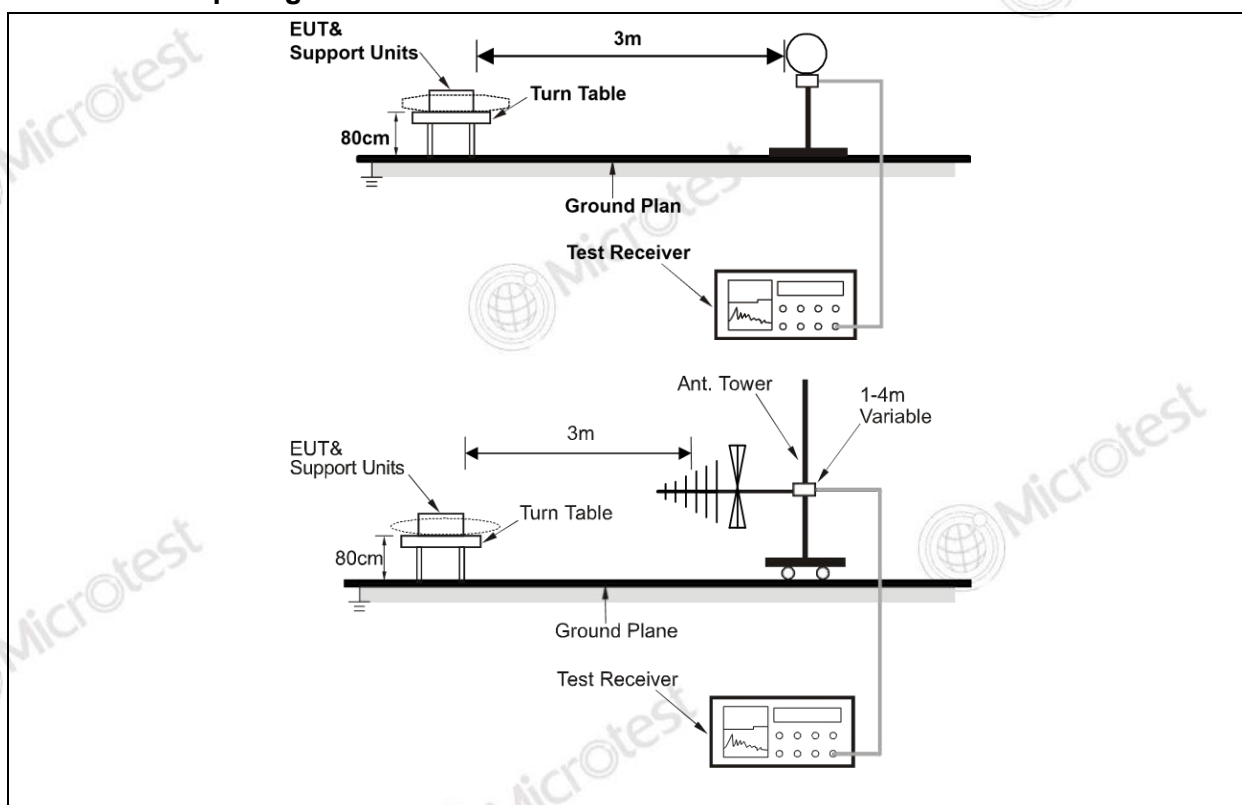
Report No.: MTi260623002-0202E1

|            |                                                                              |
|------------|------------------------------------------------------------------------------|
| Procedure: | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.5 |
|------------|------------------------------------------------------------------------------|

## 6.5.1 E.U.T. Operation:

|                                                                                                                                                                        |       |           |      |                       |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|------|-----------------------|---------|
| Operating Environment:                                                                                                                                                 |       |           |      |                       |         |
| Temperature:                                                                                                                                                           | 23 °C | Humidity: | 45 % | Atmospheric Pressure: | 101 kPa |
| Pre test mode:                                                                                                                                                         | Mode1 |           |      |                       |         |
| Final test mode:                                                                                                                                                       | Mode1 |           |      |                       |         |
| Note:                                                                                                                                                                  |       |           |      |                       |         |
| The amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported.                                                            |       |           |      |                       |         |
| All modes of operation of the EUT were investigated, and only the worst-case results are reported. There were no emissions found below 30MHz within 20dB of the limit. |       |           |      |                       |         |

## 6.5.2 Test Setup Diagram:



# TEST REPORT

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## 6.5.3 Test Data:

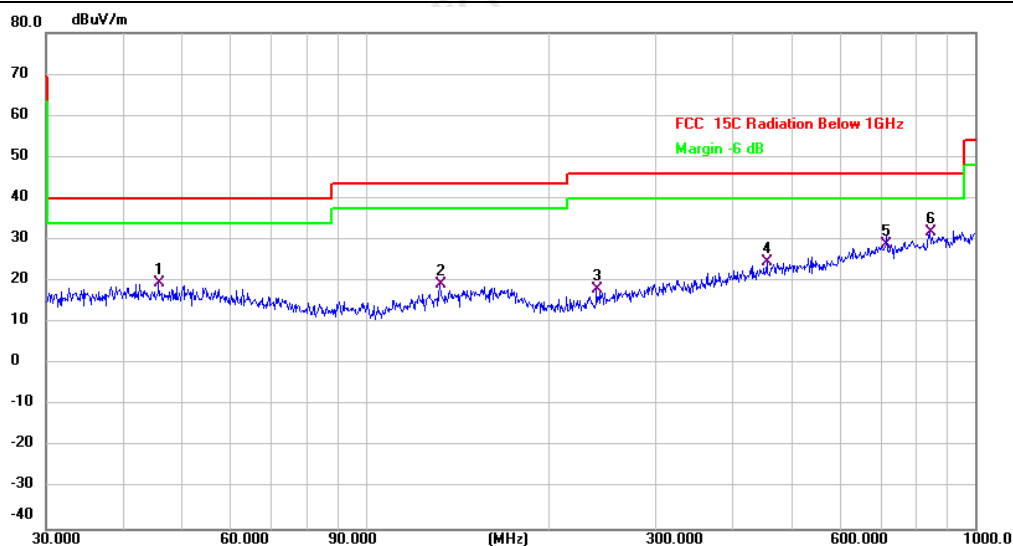
### Calculation formula:

Measurement (dBμV/m) = Reading Level (dBμV) + Correct Factor (dB)

Correct Factor (dB) = Antenna Factor + Cable Loss - Preamplifier Factor

Over (dB) = Measurement (dBμV/m) - Limit (dBμV/m)

Mode1 / Polarization: Horizontal / CH: H

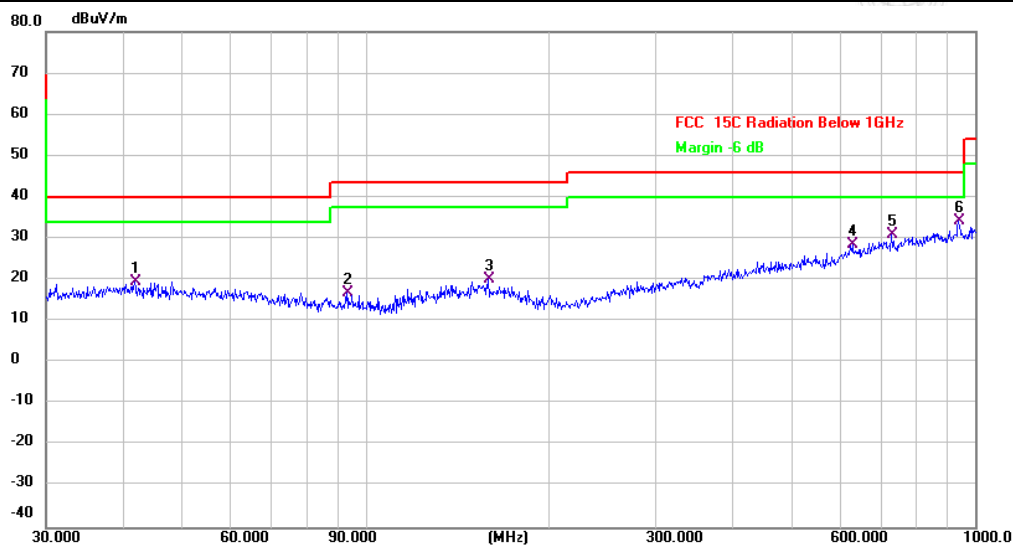


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1       | 45.8553      | 26.94                    | -7.39                   | 19.55                      | 40.00           | -20.45     | QP       |         |
| 2       | 132.2206     | 26.90                    | -7.77                   | 19.13                      | 43.50           | -24.37     | QP       |         |
| 3       | 239.9874     | 26.43                    | -8.28                   | 18.15                      | 46.00           | -27.85     | QP       |         |
| 4       | 455.9058     | 27.29                    | -2.68                   | 24.61                      | 46.00           | -21.39     | QP       |         |
| 5       | 714.1734     | 26.17                    | 2.58                    | 28.75                      | 46.00           | -17.25     | QP       |         |
| 6 *     | 842.1296     | 27.17                    | 4.60                    | 31.77                      | 46.00           | -14.23     | QP       |         |

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Mode1 / Polarization: Vertical / CH: H



| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1       | 41.8596      | 26.74                    | -7.18                   | 19.56                      | 40.00           | -20.44     | QP       |         |
| 2       | 93.1132      | 28.16                    | -11.41                  | 16.75                      | 43.50           | -26.75     | QP       |         |
| 3       | 158.6677     | 26.54                    | -6.52                   | 20.02                      | 43.50           | -23.48     | QP       |         |
| 4       | 629.4772     | 27.50                    | 1.06                    | 28.56                      | 46.00           | -17.44     | QP       |         |
| 5       | 729.3583     | 28.01                    | 2.92                    | 30.93                      | 46.00           | -15.07     | QP       |         |
| 6 *     | 938.8326     | 28.63                    | 5.63                    | 34.26                      | 46.00           | -11.74     | QP       |         |

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## 6.6 Emissions in frequency bands (above 1GHz)

| Test Requirement:     | 47 CFR 15.249(a)<br>47 CFR 15.249(d)<br>47 CFR 15.249(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------|--------------------------------------------------|------------------------------------------------|-------------|----|-----|-----------------|----|-----|---------------|----|-----|----------------|-----|------|-----------------|-----------------------------------|-------------------------------|-------------|-------------|-----|-------------|--------------|----|------------|----|----|-------|--------|---|--------|--------|---|---------|--------|---|-----------|-----|---|
| Test Limit:           | <p>Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:</p> <table border="1"> <thead> <tr> <th>Fundamental frequency</th><th>Field strength of fundamental (millivolts/meter)</th><th>Field strength of harmonics (microvolts/meter)</th></tr> </thead> <tbody> <tr> <td>902-928 MHz</td><td>50</td><td>500</td></tr> <tr> <td>2400-2483.5 MHz</td><td>50</td><td>500</td></tr> <tr> <td>5725-5875 MHz</td><td>50</td><td>500</td></tr> <tr> <td>24.0-24.25 GHz</td><td>250</td><td>2500</td></tr> </tbody> </table> <p>Emissions 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 § 15.209, whichever is the lesser attenuation.</p> <table border="1"> <thead> <tr> <th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr> </thead> <tbody> <tr> <td>0.009-0.490</td><td>2400/F(kHz)</td><td>300</td></tr> <tr> <td>0.490-1.705</td><td>24000/F(kHz)</td><td>30</td></tr> <tr> <td>1.705-30.0</td><td>30</td><td>30</td></tr> <tr> <td>30-88</td><td>100 **</td><td>3</td></tr> <tr> <td>88-216</td><td>150 **</td><td>3</td></tr> <tr> <td>216-960</td><td>200 **</td><td>3</td></tr> <tr> <td>Above 960</td><td>500</td><td>3</td></tr> </tbody> </table> <p>** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.</p> <p>In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. As shown in § 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section 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 point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth.</p> |                                                | Fundamental frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) | 902-928 MHz | 50 | 500 | 2400-2483.5 MHz | 50 | 500 | 5725-5875 MHz | 50 | 500 | 24.0-24.25 GHz | 250 | 2500 | 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 |
| Fundamental frequency | Field strength of fundamental (millivolts/meter)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Field strength of harmonics (microvolts/meter) |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 902-928 MHz           | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 2400-2483.5 MHz       | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 5725-5875 MHz         | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500                                            |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 24.0-24.25 GHz        | 250                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2500                                           |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| 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                                              |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |
| Test Method:          | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                |                       |                                                  |                                                |             |    |     |                 |    |     |               |    |     |                |     |      |                 |                                   |                               |             |             |     |             |              |    |            |    |    |       |        |   |        |        |   |         |        |   |           |     |   |

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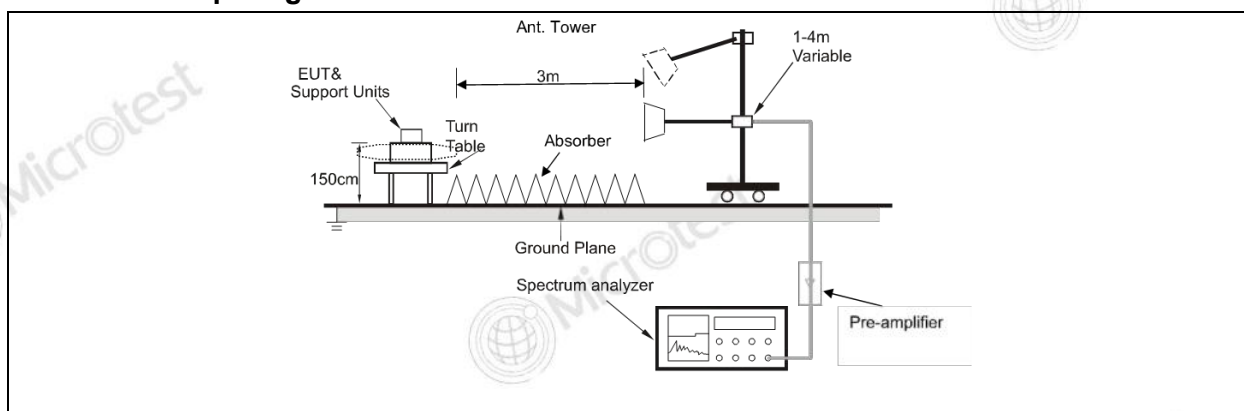
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|            |                                                                              |
|------------|------------------------------------------------------------------------------|
| Procedure: | ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024+Errata to C63.10a-2024 section 6.6 |
|------------|------------------------------------------------------------------------------|

## 6.6.1 E.U.T. Operation:

|                                                                                                                                                                                                                                                                |       |           |      |                       |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|------|-----------------------|---------|
| Operating Environment:                                                                                                                                                                                                                                         |       |           |      |                       |         |
| Temperature:                                                                                                                                                                                                                                                   | 23 °C | Humidity: | 45 % | Atmospheric Pressure: | 101 kPa |
| Pre test mode:                                                                                                                                                                                                                                                 | Mode1 |           |      |                       |         |
| Final test mode:                                                                                                                                                                                                                                               | Mode1 |           |      |                       |         |
| Note: Test frequency are from 1GHz to 25GHz, the amplitude of spurious emissions which are attenuated more than 20 dB below the limits are not reported.<br>All modes of operation of the EUT were investigated, and only the worst-case results are reported. |       |           |      |                       |         |

## 6.6.2 Test Setup Diagram:



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## 6.6.3 Test Data:

### Calculation formula:

Measurement (dB $\mu$ V/m) = Reading Level (dB $\mu$ V) + Correct Factor (dB)

Correct Factor (dB) = Antenna Factor + Cable Loss - Preamplifier Factor

Over (dB) = Measurement (dB $\mu$ V/m) - Limit (dB $\mu$ V/m)

Mode1 / Polarization: Horizontal / CH: L

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement  | Limit        | Over   |          |
|-----|-----|----------|---------------|----------------|--------------|--------------|--------|----------|
|     |     | MHz      | dB $\mu$ V    | dB             | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Detector |
| 1   |     | 4807.500 | 44.49         | 1.79           | 46.28        | 74.00        | -27.72 | peak     |
| 2   |     | 4807.500 | 41.77         | 1.79           | 43.56        | 54.00        | -10.44 | AVG      |
| 3   |     | 7211.250 | 43.15         | 7.55           | 50.70        | 74.00        | -23.30 | peak     |
| 4   | *   | 7211.250 | 39.95         | 7.55           | 47.50        | 54.00        | -6.50  | AVG      |
| 5   |     | 9615.000 | 44.54         | 8.84           | 53.38        | 74.00        | -20.62 | peak     |
| 6   |     | 9615.000 | 37.49         | 8.84           | 46.33        | 54.00        | -7.67  | AVG      |

Mode1 / Polarization: Vertical / CH: L

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement  | Limit        | Over   |          |
|-----|-----|----------|---------------|----------------|--------------|--------------|--------|----------|
|     |     | MHz      | dB $\mu$ V    | dB             | dB $\mu$ V/m | dB $\mu$ V/m | dB     | Detector |
| 1   |     | 4807.500 | 45.13         | 1.79           | 46.92        | 74.00        | -27.08 | peak     |
| 2   |     | 4807.500 | 42.73         | 1.79           | 44.52        | 54.00        | -9.48  | AVG      |
| 3   |     | 7211.250 | 42.83         | 7.55           | 50.38        | 74.00        | -23.62 | peak     |
| 4   |     | 7211.250 | 38.25         | 7.55           | 45.80        | 54.00        | -8.20  | AVG      |
| 5   |     | 9615.000 | 45.42         | 8.84           | 54.26        | 74.00        | -19.74 | peak     |
| 6   | *   | 9615.000 | 37.93         | 8.84           | 46.77        | 54.00        | -7.23  | AVG      |

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Mode1 / Polarization: Horizontal / CH: M

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector |
| 1   |     | 4883.500 | 43.04         | 2.10           | 45.14       | 74.00  | -28.86 | peak     |
| 2   |     | 4883.500 | 41.97         | 2.10           | 44.07       | 54.00  | -9.93  | AVG      |
| 3   |     | 7325.250 | 42.99         | 7.95           | 50.94       | 74.00  | -23.06 | peak     |
| 4   |     | 7325.250 | 37.37         | 7.95           | 45.32       | 54.00  | -8.68  | AVG      |
| 5   |     | 9767.000 | 44.04         | 9.34           | 53.38       | 74.00  | -20.62 | peak     |
| 6   | *   | 9767.000 | 36.76         | 9.34           | 46.10       | 54.00  | -7.90  | AVG      |

Mode1 / Polarization: Vertical / CH: M

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector |
| 1   |     | 4883.500 | 42.78         | 2.10           | 44.88       | 74.00  | -29.12 | peak     |
| 2   |     | 4883.500 | 40.92         | 2.10           | 43.02       | 54.00  | -10.98 | AVG      |
| 3   |     | 7325.250 | 43.14         | 7.95           | 51.09       | 74.00  | -22.91 | peak     |
| 4   | *   | 7325.250 | 37.85         | 7.95           | 45.80       | 54.00  | -8.20  | AVG      |
| 5   |     | 9767.000 | 44.59         | 9.34           | 53.93       | 74.00  | -20.07 | peak     |
| 6   |     | 9767.000 | 36.28         | 9.34           | 45.62       | 54.00  | -8.38  | AVG      |

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Mode1 / Polarization: Horizontal / CH: H

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector |
| 1   |     | 4959.500 | 44.82         | 2.45           | 47.27       | 74.00  | -26.73 | peak     |
| 2   |     | 4959.500 | 43.37         | 2.45           | 45.82       | 54.00  | -8.18  | AVG      |
| 3   |     | 7439.250 | 43.85         | 7.79           | 51.64       | 74.00  | -22.36 | peak     |
| 4   |     | 7439.250 | 38.75         | 7.79           | 46.54       | 54.00  | -7.46  | AVG      |
| 5   |     | 9919.000 | 42.91         | 9.17           | 52.08       | 74.00  | -21.92 | peak     |
| 6   | *   | 9919.000 | 38.33         | 9.17           | 47.50       | 54.00  | -6.50  | AVG      |

Mode1 / Polarization: Vertical / CH: H

| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   |          |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector |
| 1   |     | 4959.500 | 43.43         | 2.45           | 45.88       | 74.00  | -28.12 | peak     |
| 2   |     | 4959.500 | 41.65         | 2.45           | 44.10       | 54.00  | -9.90  | AVG      |
| 3   |     | 7439.250 | 42.77         | 7.79           | 50.56       | 74.00  | -23.44 | peak     |
| 4   |     | 7439.250 | 37.33         | 7.79           | 45.12       | 54.00  | -8.88  | AVG      |
| 5   |     | 9919.000 | 43.21         | 9.17           | 52.38       | 74.00  | -21.62 | peak     |
| 6   | *   | 9919.000 | 36.70         | 9.17           | 45.87       | 54.00  | -8.13  | AVG      |

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### Photographs of the test setup

Refer to Appendix - Test Setup Photos

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### Photographs of the EUT

Refer to Appendix - EUT Photos

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### Statement

1. This report is invalid without the seal and signature of the laboratory.
2. The test results of this report are only responsible for the samples submitted. Client shall be responsible for representativeness of the sample and authenticity of the material.
3. The report shall not be partially reproduced without the written consent of the Laboratory.
4. This report is invalid if transferred, altered or tampered with in any form without authorization.
5. The observations or tests with special mark fall outside the scope of accreditation, and are only used for purpose of commission, research, training, internal quality control etc.
6. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

\*\*\*\*\* END OF REPORT \*\*\*\*\*