# TEST REPORT

**FCC Rules Part 15.249**

| | |
|---|---|
| **Report Reference No.....** : | **MTEB26080069-R** |
| **FCC ID..... :** | **2BE9P-KL2KKUQ8F** |
| Compiled by ( position+printed name+signature).. : | File administrators Alisa Luo |
| Supervised by ( position+printed name+signature).. : | Test Engineer Sunny Deng |
| Approved by ( position+printed name+signature).. : | Manager Yvette Zhou |
| Date of issue.....: | **Aug.11,2026** |
| **Representative Laboratory Name. :** | **Shenzhen Most Technology Service Co., Ltd.** |
| Address..... : | No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China. |
| **Applicant's name**.....: | **Shenzhen Yizhita Technology Co., Ltd** |
| Address..... : | Room 1306, Xingtong Building, No. 88 Baoxing Road, Haiwang Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong Province, China |
| **Test specification/** Standard.....: | **FCC Part15 Subpart C, Section 15.249** |
| TRF Originator.....: | Shenzhen Most Technology Service Co., Ltd. |

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| | |
|---|---|
| **Test item description.....:** | ATK BLAZING SKY F1 Ultra-Lightweight Solid-Shell Mouse |
| Trade Mark.....: | N/A |
| Model/Type reference..... : | ATK F1 V3 ULTIMATE+ |
| Listed Models ..... : | N/A |
| Modulation Type..... : | GFSK |
| Operation Frequency..... : | 2403-2480MHz |
| Hardware version : | V1.0 |
| Software version : | V1.0 |
| Rating : | DC 3.85V by Battery/DC 5V by USB Port |
| Result.....: | **PASS** |

# TEST REPORT

| | | |
|---|---|---|
| Equipment under Test | : | ATK BLAZING SKY F1 Ultra-Lightweight Solid-Shell Mouse |
| Model /Type | : | ATK F1 V3 ULTIMATE+ |
| Listed Models | : | N/A |
| Remark | | N/A |
| Applicant | : | **Shenzhen Yizhita Technology Co., Ltd** |
| Address | : | Room 1306, Xingtong Building, No. 88 Baoxing Road, Haiwang Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong Province, China |
| Manufacturer | : | **Shenzhen Yizhita Technology Co., Ltd** |
| Address | : | Room 1306, Xingtong Building, No. 88 Baoxing Road, Haiwang Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong Province, China |

| **Test Result**: | **PASS** |
|---|---|

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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# 1. Revision History

| Revision | Issue Date | Revisions | Revised By |
|---|---|---|---|
| 00 | 2026.08.11 | Initial Issue | Alisa Luo |
| | | | |
| | | | |

# 2. TEST STANDARDS

The tests were performed according to following standards:

The tests were performed according to following standards:
FCC Rules Part 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz.

RSS-210: Licence-Exempt Radio Apparatus: Category I Equipment
ANSIC63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024: American National Standard for Testing Unlicensed Wireless Devices.

# 3. SUMMARY

## 3.1. General Remarks

| | | |
|---|---|---|
| Date of receipt of test sample | : | 2026.07.27 |
| | | |
| Testing commenced on | : | 2026.07.28 |
| | | |
| Testing concluded on | : | 2026.08.11 |

## 3.2. Product Description

| | |
|---|---|
| Product Name: | ATK BLAZING SKY F1 Ultra-Lightweight Solid-Shell Mouse |
| Model/Type reference: | ATK F1 V3 ULTIMATE+ |
| Power Supply： | DC 3.85V by Battery/DC 5V by USB Port |
| Testing sample ID： | MTYP13760 |
| **FCC Test :** | |
| Modulation: | GFSK |
| Operation frequency: | 2403-2480MHz |
| Channel number: | 16 |
| Antenna type: | PCB antenna |
| Antenna gain: | -2.39dBi |

## 3.3. Equipment Under Test

## Power supply system utilised

| | | | | | |
|---|---|---|---|---|---|
| Power supply voltage | : | ○ | 230V / 50 Hz | ○ | 120V / 60Hz |
| | | ○ | 12 V DC | ○ | 24 V DC |
| | | ● | Other (specified in blank below) | | |

DC 3.85V by Battery/DC 5V by USB Port

## 3.4. Short description of the Equipment under Test (EUT)

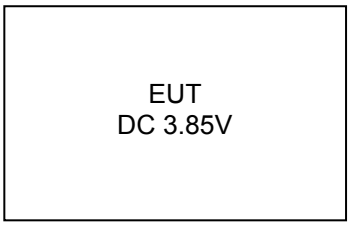
This is a ATK BLAZING SKY F1 Ultra-Lightweight Solid-Shell Mouse For more details, refer to the user's manual of the EUT.

## 3.5. EUT operation mode

The Applicant provides communication tools software to control the EUT for staying in continuous transmitting (Duty Cycle more than 98%) and receiving mode for testing .There are 16 channels provided to the EUT. Channel 01/07/13 was selected to test.

| CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) | CHANNEL | FREQ. (MHz) |
|---|---|---|---|---|---|---|---|
| 1 | **2403** | 5 | 2450 | 9 | 2424 | 13 | **2480** |
| 2 | 2472 | 6 | 2462 | 10 | 2474 | 14 | 2444 |
| 3 | 2466 | 7 | **2442** | 11 | 2446 | 15 | 2470 |
| 4 | 2458 | 8 | 2468 | 12 | 2464 | 16 | 2452 |

## 3.6. Block Diagram of Test Setup




## 3.7. Test Item (Equipment Under Test) Description*

| Short designation | EUT Name | EUT Description | Serial number | Hardware status | Software status |
|---|---|---|---|---|---|
| EUT A | / | / | / | / | / |
| EUT B | / | / | / | / | / |
| | | | | | |

## 3.8. Auxiliary Equipment (AE) Description

| AE short designation | EUT Name (if available) | EUT Description | Serial number (if available) | Software (if used) |
|---|---|---|---|---|
| AE 1 | / | / | / | / |
| AE 2 | / | / | / | / |

## 3.9. Antenna Information*

| Short designation | Antenna Name | Antenna Type | Frequency Range | Serial number | Antenna Peak Gain |
|---|---|---|---|---|---|
| Antenna 1 | --- | PCB antenna | 2403-2480MHz | --- | -2.39dBi |
| Antenna 2 | / | / | / | / | / |
| | | | | | |

*: declared by the applicant.

## 3.10. EUT configuration

**The following peripheral devices and interface cables were connected during the measurement:**

○ - supplied by the manufacturer

● - Supplied by the lab

| | | | |
|---|---|---|---|
| ○ | ADAPTER | M/N: | |
| | | Manufacturer: | |

## 3.11. Modifications

No modifications were implemented to meet testing criteria.

# 4. TEST ENVIRONMENT

## 4.1. Address of the test laboratory

**Shenzhen Most Technology Service Co., Ltd.**
No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.
The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

## Test Facility

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

## FCC-Registration No.: 0031192610

Shenzhen Most Technology Service Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

## A2LA-Lab Cert. No.: 6343.01

Shenzhen Most Technology Service Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

## 4.2. Environmental conditions

Radiated Emission:

| | |
|---|---|
| Temperature: | 23 ° C |
| | |
| Humidity: | 48 % |
| | |
| Atmospheric pressure: | 950-1050mbar |

Conducted testing：

| | |
|---|---|
| Temperature: | 24 ° C |
| | |
| Humidity: | 45 % |
| | |
| Atmospheric pressure: | 950-1050mbar |

## 4.3. Test Description

| FCC and IC Requirements | | |
|---|---|---|
| FCC Part 15.203 | Antenna Requirement | PASS |
| FCC Part 15.207 | AC Power Conducted Emission | PASS |
| FCC Part 15. 15.249(a) | Field strength of the Fundamental signal | PASS |
| FCC Part 15.209/15.249(a) | Spurious Emissions | PASS |
| FCC Part 15.205/15.249(d) | Band edge Emissions | PASS |
| FCC Part 15.215/15.249 | 20dB Occupied Bandwidth | PASS |

Remark:
1. The measurement uncertainty is not included in the test result.
2. NA = Not Applicable; NP = Not Performed

## 4.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Most Technology Service Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Most Technology Service Co., Ltd. is reported:

| Test | Range | Measurement Uncertainty | Notes |
|---|---|---|---|
| Radiated Emission | 30~1000MHz | 4.10 dB | (1) |
| Radiated Emission | 1~18GHz | 4.32 dB | (1) |
| Radiated Emission | 18-40GHz | 5.54 dB | (1) |
| Conducted Disturbance | 0.15~30MHz | 3.12 dB | (1) |

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

## 4.5. Equipments Used during the Test

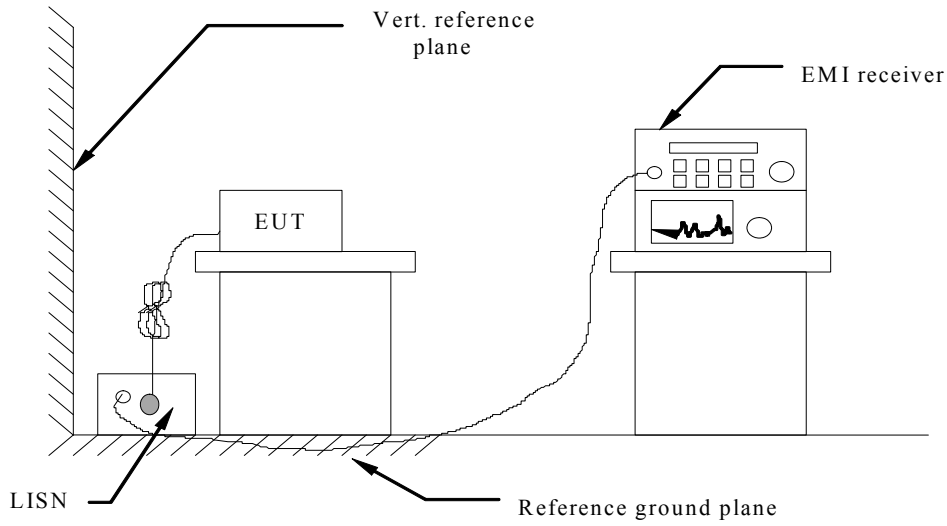
| Item | Equipment | Manufacturer | Model No. | Serial No. | Firmware versions | Last Cal. |
|---|---|---|---|---|---|---|
| 1. | L.I.S.N. | R&S | ENV216 | 100093 | / | 2026/02/28 |
| 2 | Three-phase artificial power network | Schwarzback Mess | NNLK8129 | 8129178 | / | 2026/02/28 |
| 3. | Receiver | R&S | ESCI | 100492 | V3.0-10-2 | 2026/02/28 |
| 4 | Receiver | R&S | ESPI | 101202 | V3.0-10-2 | 2026/02/28 |
| 5 | Spectrum analyzer | Agilent | 9020A | MT-E306 | A14.16 | 2026/02/28 |
| 6 | Bilong Antenna | Sunol Sciences | JB3 | A121206 | / | 2025/11/22 |
| 7 | Horn antenna | HF Antenna | HF Antenna | MT-E158 | / | 2026/03/08 |
| 8 | Loop antenna | Beijing Daze | ZN30900B | / | / | 2026/02/28 |
| 9 | Horn antenna | R&S | OBH100400 | 26999002 | / | 2026/03/08 |
| 10 | Wireless Communication Test Set | R&S | CMW500 | / | CMW-BASE-3.7.21 | 2026/02/28 |
| 11 | Spectrum analyzer | R&S | FSP | 100019 | V4.40 SP2 | 2026/02/28 |
| 12 | High gain antenna | Schwarzbeck | LB-180400KF | MT-E389 | / | 2026/02/28 |
| 13 | Preamplifier | Schwarzbeck | BBV 9743 | MT-E390 | / | 2026/02/28 |
| 14 | Pre-amplifier | EMCI | EMC051845SE | MT-E391 | / | 2026/02/28 |
| 15 | Pre-amplifier | Agilent | 83051A | MT-E392 | / | 2026/02/28 |
| 16 | High pass filter unit | Tonscend | JS0806-F | MT-E393 | / | 2026/02/28 |
| 17 | RF Cable(below1GHz) | Times | 9kHz-1GHz | MT-E394 | / | 2026/02/28 |
| 18 | RF Cable(above 1GHz) | Times | 1-40G | MT-E395 | / | 2026/02/28 |
| 19 | RF Cable (9KHz-40GHz) | Tonscend | 170660 | N/A | / | 2026/02/28 |
| 20 | Power meter | R&S | NRVS | 100444 | / | 2026/02/28 |

Note: 1. The Cal.Interval was one year.

# 5. TEST CONDITIONS AND RESULTS

## 5.1. AC Power Conducted Emission

**TEST CONFIGURATION**




**TEST PROCEDURE**

1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSIC63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024.
2 Support equipment, if needed, was placed as per ANSIC63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
3 All I/O cables were positioned to simulate typical actual usage as per ANSIC63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
4 The EUT received DC5V power, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5 All support equipments received AC power from a second LISN, if any.
6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8 During the above scans, the emissions were maximized by cable manipulation.

**AC Power Conducted Emission Limit**

For unintentional device, according to RSS Gen 8.8 and § 15.207(a) Line Conducted Emission Limits is as following:

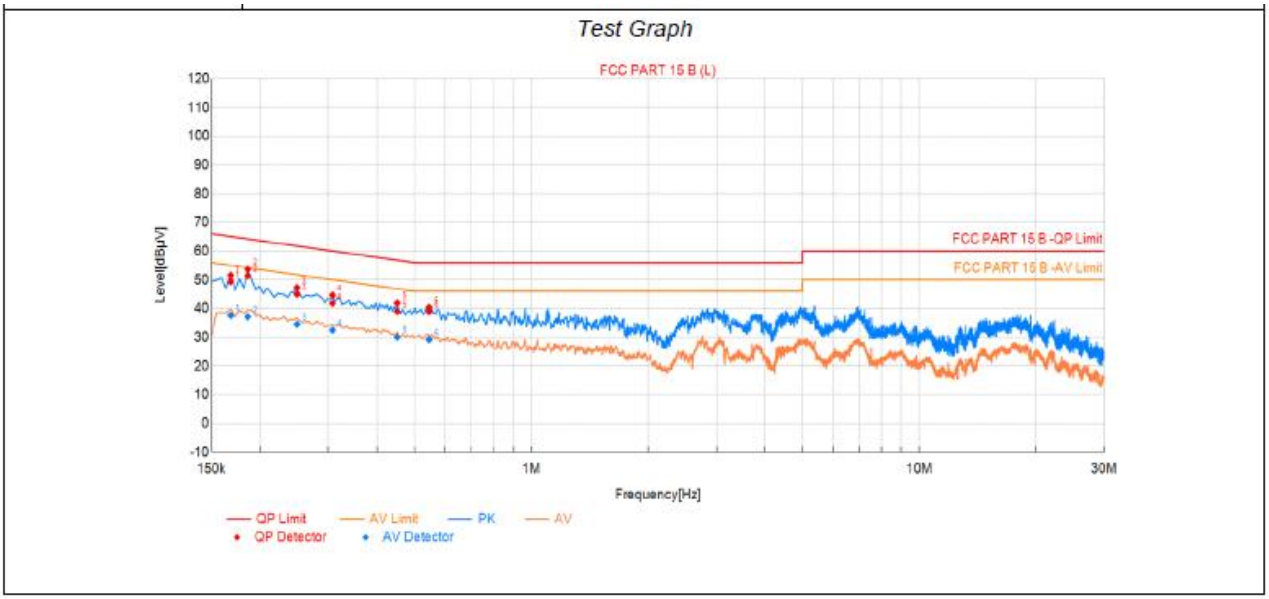
| Frequency range (MHz) | Limit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15-0.5 | 66 to 56* | 56 to 46* |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |
| * Decreases with the logarithm of the frequency. | | |

**TEST RESULTS**

Remark:

1. GFSK modes were test at Low, Middle, and High channel; only the worst result of GFSK Middle Channel was reported as below:

| Power supply: | DC 5V by USB Port | Polarization | L |
|---|---|---|---|



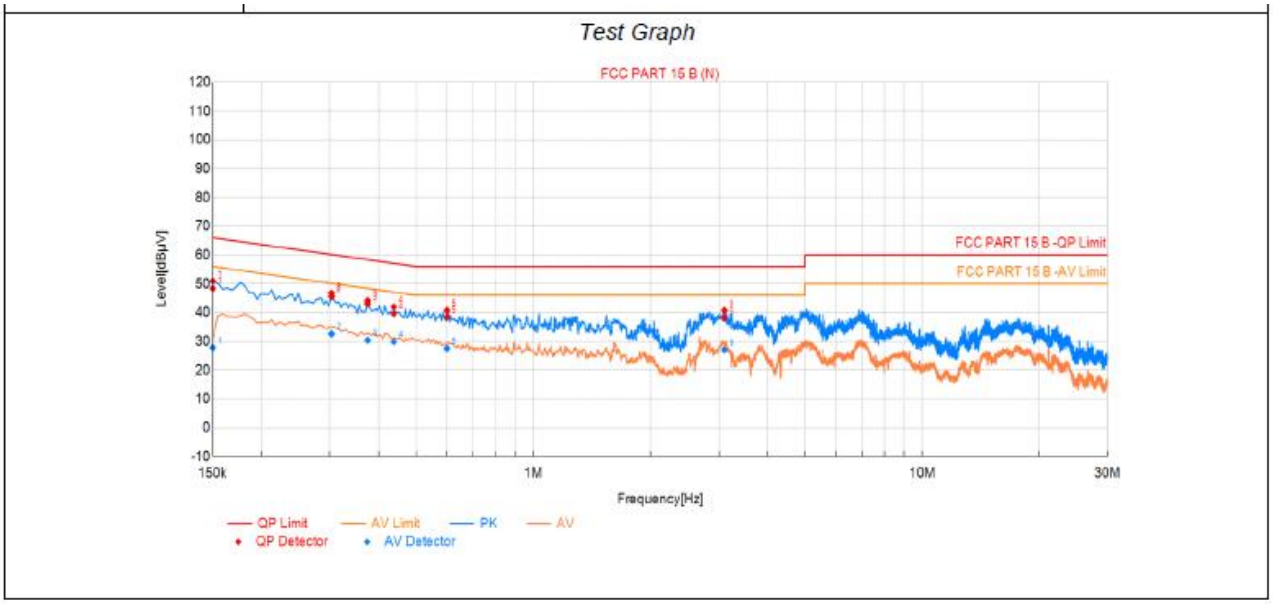

**Final Data List**

| NO. | Frequency [MHz] | Factor [dB] | QP Reading [dBμV] | QP Value [dBμV] | QP Limit [dBμV] | QP Margin [dB] | AV Reading [dBμV] | AV Value [dBμV] | AV Limit [dBμV] | AV Margin [dB] | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.168 | 9.61 | 39.74 | 49.35 | 65.06 | 15.71 | 28.05 | 37.66 | 55.06 | 17.40 | PASS |
| 2 | 0.186 | 9.60 | 41.82 | 51.42 | 64.21 | 12.79 | 27.57 | 37.17 | 54.21 | 17.04 | PASS |
| 3 | 0.249 | 9.60 | 35.43 | 45.03 | 61.79 | 16.76 | 24.94 | 34.54 | 51.79 | 17.25 | PASS |
| 4 | 0.3075 | 9.59 | 32.23 | 41.82 | 60.04 | 18.22 | 22.94 | 32.53 | 50.04 | 17.51 | PASS |
| 5 | 0.4515 | 9.59 | 29.44 | 39.03 | 56.85 | 17.82 | 20.46 | 30.05 | 46.85 | 16.80 | PASS |
| 6 | 0.546 | 9.59 | 29.34 | 38.93 | 56.00 | 17.07 | 19.61 | 29.20 | 46.00 | 16.80 | PASS |

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

| Power supply: | DC 5V by USB Port | Polarization | N |
|---|---|---|---|




| Final Data List | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NO. | Frequency [MHz] | Factor [dB] | QP Reading [dBµV] | QP Value [dBµV] | QP Limit [dBµV] | QP Margin [dB] | AV Reading [dBµV] | AV Value [dBµV] | AV Limit [dBµV] | AV Margin [dB] | Verdict |
| 1 | 0.15 | 9.60 | 38.80 | 48.40 | 66.00 | 17.60 | 18.27 | 27.87 | 56.00 | 28.13 | PASS |
| 2 | 0.303 | 9.59 | 36.00 | 45.59 | 60.16 | 14.57 | 23.04 | 32.63 | 50.16 | 17.53 | PASS |
| 3 | 0.375 | 9.59 | 33.41 | 43.00 | 58.39 | 15.39 | 20.80 | 30.39 | 48.39 | 18.00 | PASS |
| 4 | 0.438 | 9.59 | 30.01 | 39.60 | 57.10 | 17.50 | 20.25 | 29.84 | 47.10 | 17.26 | PASS |
| 5 | 0.6 | 9.59 | 28.81 | 38.40 | 56.00 | 17.60 | 17.96 | 27.55 | 46.00 | 18.45 | PASS |
| 6 | 3.102 | 9.61 | 28.55 | 38.16 | 56.00 | 17.84 | 17.45 | 27.06 | 46.00 | 18.94 | PASS |

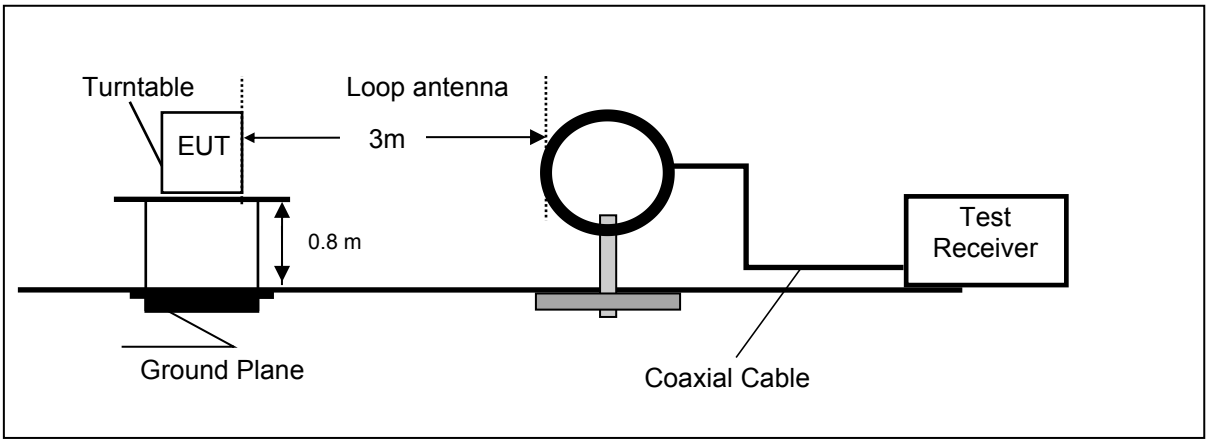
Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

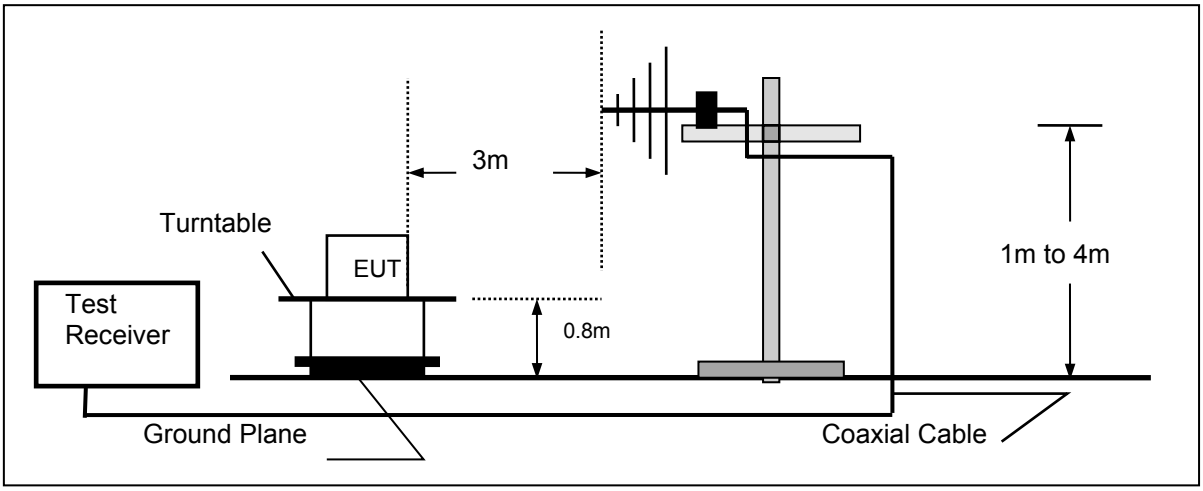
## 5.2. Radiated Spurious Emissions and Bandedge Emission

**TEST CONFIGURATION**

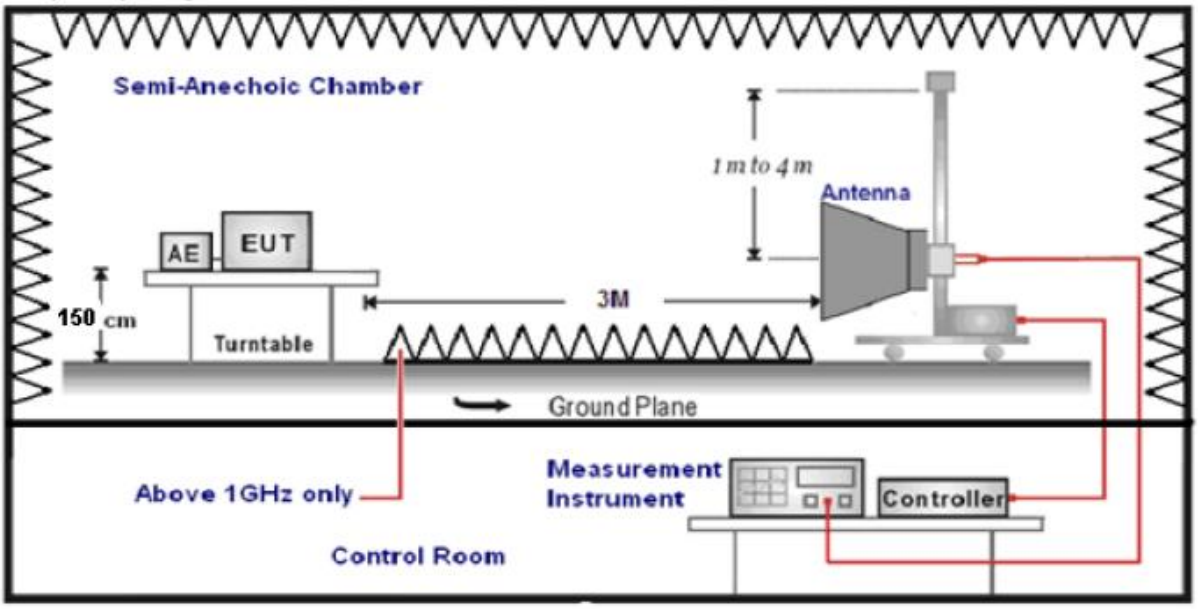
Frequency range 9 KHz – 30MHz




Frequency range 30MHz – 1000MHz




Frequency range above 1GHz-25GHz



**TEST PROCEDURE**

a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
Note: For the radiated emission test above 1GHz:
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table
e. was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
g. Test the EUT in the lowest channel,the middle channel,the Highest channel
h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

**RADIATION LIMIT**

Limit:(Spurious Emissions and band edge)

| Frequency | Field strength (microvolt/meter) | Limit (dBuV/m ) | Remark | Measurement distance (m) |
|---|---|---|---|---|
| 0.009MHz-0.490MHz | 2400/F(kHz) | - | - | 300 |
| 0.490MHz-1.705MHz | 24000/F(kHz) | - | - | 30 |
| 1.705MHz-30MHz | 30 | - | - | 30 |
| 30MHz-88MHz | 100 | 40.0 | Quasi-peak | 3 |
| 88MHz-216MHz | 150 | 43.5 | Quasi-peak | 3 |
| 216MHz-960MHz | 200 | 46.0 | Quasi-peak | 3 |
| 960MHz-1GHz | 500 | 54.0 | Quasi-peak | 3 |
| Above 1GHz | 500 | 54.0 | Average | 3 |

Note: 1) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.
2) 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 Section 15.209, whichever is the lesser attenuation.

Limit:(Field strength of the fundamental signal)

| Frequency | Limit (dBuV/m @3m) | Remark |
|---|---|---|
| 2402-2480MHz | 114 | PEAK |
| | 94 | AVG |

**Test Results**

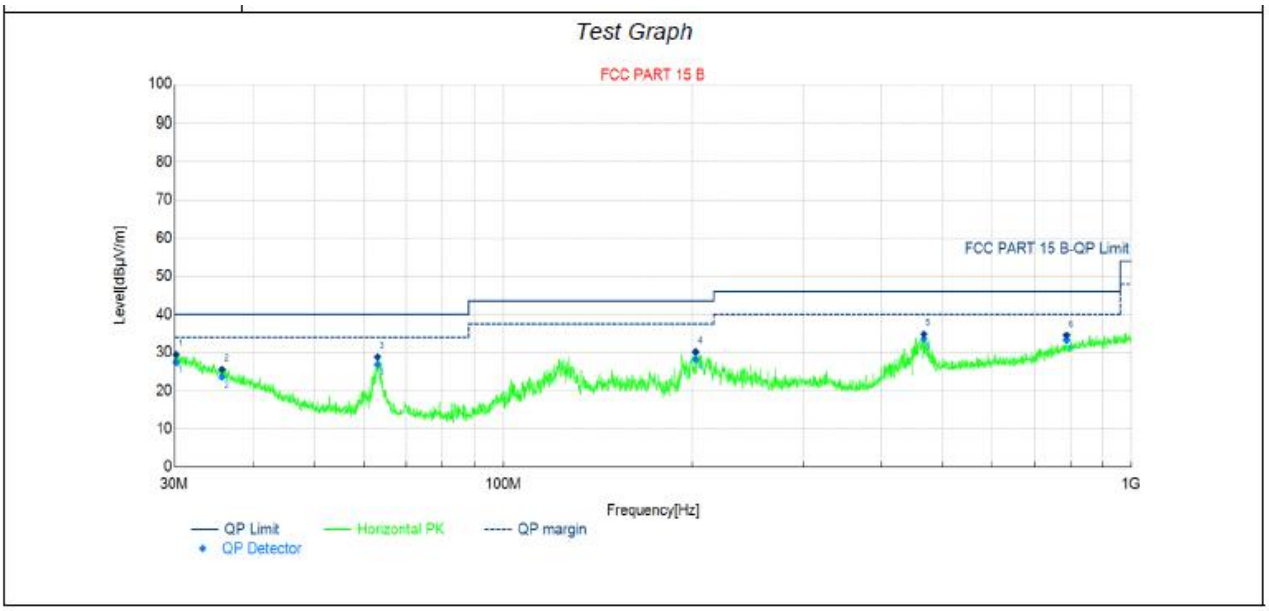
## Radiated Spurious Emissions

*Notes:*
*1). Measuring frequencies from 9 KHz - 10th harmonic (ex. 26.5GHz), No emission found between lowest internal used/generated frequency to 30 MHz.*
*2). Radiated emissions measured in frequency range from 9 KHz - 10th harmonic (ex. 26.5GHz) were made with an instrument using Peak detector mode.*
*3). 18~25 GHz at least have 20dB margin. No recording in the test report.*

Remark:
1.GFSK modes were test at Low, Middle, and High channel; only the worst result of GFSK Middle Channel was reported as below:

**For 30MHz-1GHz**

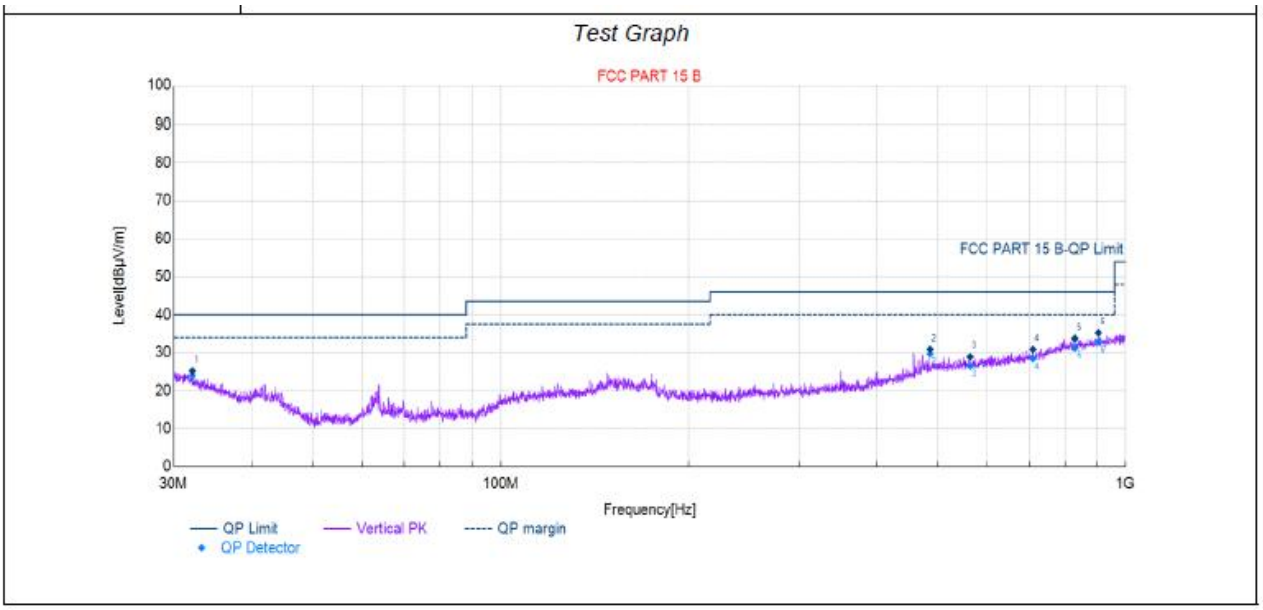
Horizontal




| Final Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Frequency [MHz] | Factor [dB/m] | QP Reading [dBμV/m] | QP Value [dBμV/m] | QP Limit [dBμV/m] | QP Margin [dB] | Pol | Verdict |
| 1 | 30.1318 | 25.51 | 1.99 | 27.50 | 40.00 | 12.50 | Horizontal | PASS |
| 2 | 35.6537 | 21.52 | 2.05 | 23.57 | 40.00 | 16.43 | Horizontal | PASS |
| 3 | 63.0246 | 10.57 | 16.31 | 26.88 | 40.00 | 13.12 | Horizontal | PASS |
| 4 | 202.3585 | 15.18 | 13.04 | 28.22 | 43.50 | 15.28 | Horizontal | PASS |
| 5 | 466.9144 | 21.28 | 12.34 | 33.62 | 46.00 | 12.38 | Horizontal | PASS |
| 6 | 787.8982 | 27.56 | 5.74 | 33.30 | 46.00 | 12.70 | Horizontal | PASS |

Note:(1)Level=Reading+Factor
(2)Margin=Limit-Level

Vertical




| Final Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Frequency [MHz] | Factor [dB/m] | QP Reading [dBµV/m] | QP Value [dBµV/m] | QP Limit [dBµV/m] | QP Margin [dB] | Pol | Verdict |
| 1 | 32.0944 | 19.48 | 4.54 | 24.02 | 40.00 | 15.98 | Vertical | PASS |
| 2 | 486.1228 | 22.10 | 7.62 | 29.72 | 46.00 | 16.28 | Vertical | PASS |
| 3 | 563.2367 | 23.40 | 3.09 | 26.49 | 46.00 | 19.51 | Vertical | PASS |
| 4 | 709.8651 | 25.38 | 3.05 | 28.43 | 46.00 | 17.57 | Vertical | PASS |
| 5 | 828.2582 | 28.21 | 3.1 | 31.31 | 46.00 | 14.69 | Vertical | PASS |
| 6 | 903.3323 | 29.03 | 3.78 | 32.81 | 46.00 | 13.19 | Vertical | PASS |

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

| Frequency | Antenna | Reading | Cable Loss | Ant Factor | Amplifier | Results | Limits | Det. | Results |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Pol. | (dBuV/m) | (dB) | (dB) | (dB) | (dBuV/m) | (dBuV/m) | Mode | P/F |
| 2403 | H | 88.99 | 3.32 | 27.49 | 36.22 | 83.58 | 114 | Peak | PASS |
| 2403 | H | 67.8 | 3.32 | 27.49 | 36.22 | 62.39 | 94 | AVG | PASS |
| 2403 | V | 88.11 | 3.32 | 27.49 | 36.22 | 82.7 | 114 | Peak | PASS |
| 2403 | V | 67.26 | 3.32 | 27.49 | 36.22 | 61.85 | 94 | AVG | PASS |
| 2442 | H | 86.69 | 3.35 | 27.47 | 36.28 | 81.23 | 114 | Peak | PASS |
| 2442 | H | 65.74 | 3.35 | 27.47 | 36.28 | 60.28 | 94 | AVG | PASS |
| 2442 | V | 87.46 | 3.35 | 27.47 | 36.28 | 82 | 114 | Peak | PASS |
| 2442 | V | 65.28 | 3.35 | 27.47 | 36.28 | 59.82 | 94 | AVG | PASS |
| 2480 | H | 86.97 | 3.38 | 27.45 | 36.34 | 81.46 | 114 | Peak | PASS |
| 2480 | H | 66.47 | 3.38 | 27.45 | 36.34 | 60.96 | 94 | AVG | PASS |
| 2480 | V | 87.37 | 3.38 | 27.45 | 36.34 | 81.86 | 114 | Peak | PASS |
| 2480 | V | 66.11 | 3.38 | 27.45 | 36.34 | 60.6 | 94 | AVG | PASS |

For Above 1 GHz

| Frequency | Antenna | Reading | Cable Loss | Ant Factor | Amplifier | Results | Limits | Det. | Results |
|---|---|---|---|---|---|---|---|---|---|
| (MHz) | Pol. | (dBuV/m) | (dB) | (dB) | (dB) | (dBuV/m) | (dBuV/m) | Mode | P/F |
| 4806 | H | 60.41 | 6.98 | 31.42 | 36.5 | 62.31 | 74 | PK | PASS |
| 4806 | H | 42.27 | 6.98 | 31.42 | 36.5 | 44.17 | 54 | AV | PASS |
| 4806 | V | 62.09 | 6.98 | 31.42 | 36.5 | 63.99 | 74 | PK | PASS |
| 4806 | V | 41.47 | 6.98 | 31.42 | 36.5 | 43.37 | 54 | AV | PASS |
| 4884 | H | 62.76 | 7.58 | 30.98 | 36.5 | 64.82 | 74 | PK | PASS |
| 4884 | H | 41.66 | 7.58 | 30.98 | 36.5 | 43.72 | 54 | AV | PASS |
| 4884 | V | 62.66 | 7.58 | 30.98 | 36.5 | 64.72 | 74 | PK | PASS |
| 4884 | V | 41.2 | 7.58 | 30.98 | 36.5 | 43.26 | 54 | AV | PASS |
| 4960 | H | 60.26 | 7.8 | 31.47 | 36.2 | 63.33 | 74 | PK | PASS |
| 4960 | H | 41.84 | 7.8 | 31.47 | 36.2 | 44.91 | 54 | AV | PASS |
| 4960 | V | 62.77 | 7.8 | 31.47 | 36.2 | 65.84 | 74 | PK | PASS |
| 4960 | V | 42.01 | 7.8 | 31.47 | 36.2 | 45.08 | 54 | AV | PASS |

REMARKS:

1. 1:Result = Reading + Cable Loss +Ant Factor –Amplifier
2. -- Mean the PK detector measured value is below average limit.
3. The other emission levels were very low against the limit.

## Bandedge Emission

**GFSK**

| Frequency(MHz): | | | 2403 | | Polarity: | | HORIZONTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Emission Level (dBuV/m) | | Limit (dBuV/m) | Margin (dB) | Raw Value (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Pre-amplifier (dB) | Correction Factor (dB/m) |
| 2400.00 | 59.51 | PK | 74 | 14.49 | 64.92 | 27.49 | 3.32 | 36.22 | -5.41 |
| 2400.00 | 38.92 | AV | 54 | 15.08 | 44.33 | 27.49 | 3.32 | 36.22 | -5.41 |
| **Frequency(MHz):** | | | **2403** | | **Polarity:** | | **VERTICAL** | | |
| Frequency (MHz) | Emission Level (dBuV/m) | | Limit (dBuV/m) | Margin (dB) | Raw Value (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Pre-amplifier (dB) | Correction Factor (dB/m) |
| 2400.00 | 56.33 | PK | 74 | 17.67 | 61.74 | 27.49 | 3.32 | 36.22 | -5.41 |
| 2400.00 | 41.53 | AV | 54 | 12.47 | 46.94 | 27.49 | 3.32 | 36.22 | -5.41 |
| **Frequency(MHz):** | | | **2480** | | **Polarity:** | | **HORIZONTAL** | | |
| Frequency (MHz) | Emission Level (dBuV/m) | | Limit (dBuV/m) | Margin (dB) | Raw Value (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Pre-amplifier (dB) | Correction Factor (dB/m) |
| 2483.50 | 58.73 | PK | 74 | 15.27 | 64.24 | 27.45 | 3.38 | 36.34 | -5.51 |
| 2483.50 | 41.89 | AV | 54 | 12.11 | 47.4 | 27.45 | 3.38 | 36.34 | -5.51 |
| **Frequency(MHz):** | | | **2480** | | **Polarity:** | | **VERTICAL** | | |
| Frequency (MHz) | Emission Level (dBuV/m) | | Limit (dBuV/m) | Margin (dB) | Raw Value (dBuV) | Antenna Factor (dB/m) | Cable Factor (dB) | Pre-amplifier (dB) | Correction Factor (dB/m) |
| 2483.50 | 54.88 | PK | 74 | 19.12 | 60.39 | 27.45 | 3.38 | 36.34 | -5.51 |
| 2483.50 | 40.41 | AV | 54 | 13.59 | 45.92 | 27.45 | 3.38 | 36.34 | -5.51 |

REMARKS:

1. Emission level (dBuV/m) =Raw Value (dBuV)+Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)- Pre-amplifier
3. Margin value = Limit value- Emission level.
4. -- Mean the PK detector measured value is below average limit.

## 5.3. 20dB Bandwidth

**TEST CONFIGURATION**

**TEST PROCEDURE**

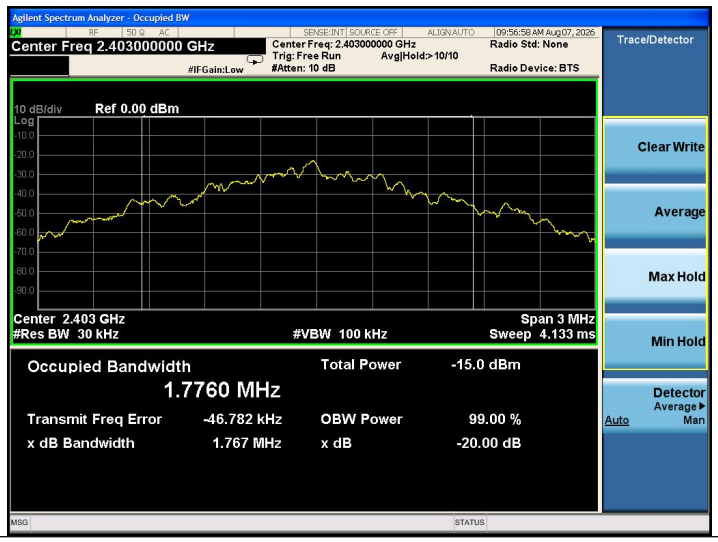
1:The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2:Set to the maximum power setting and enable the EUT transmit continuously.
3:Use the following spectrum analyzer settings:
Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a test channel RBW ⩾ 1% of the 20 dB bandwidth, VBW ⩾ RBW
Sweep = auto, Detector function = peak, Trace = max hold
4:Measure and record the results in the test report.

**TEST RESULTS**

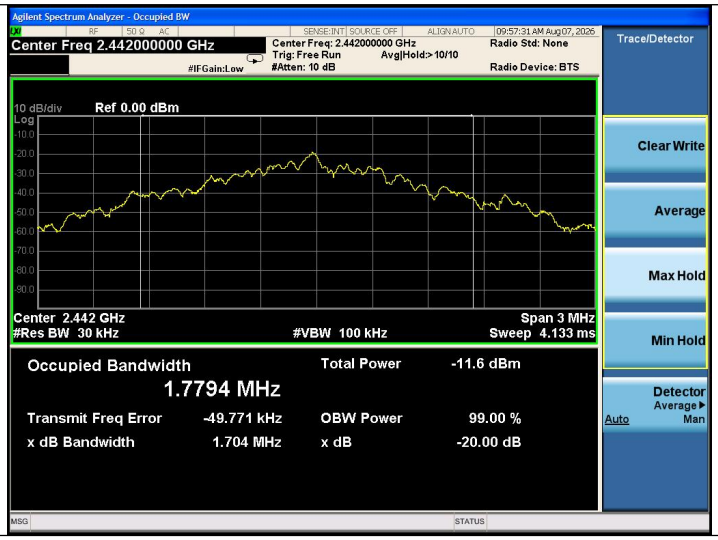
| Modulation | Channel Frequency (MHz) | 99% OBW (MHz) | 20dB bandwidth (MHz) | Result |
|---|---|---|---|---|
| GFSK | 2403 | 1.7760 | 1.767 | Pass |
| | 2442 | 1.7794 | 1.704 | Pass |
| | 2480 | 1.7821 | 1.780 | Pass |

**Test plot as follows:**

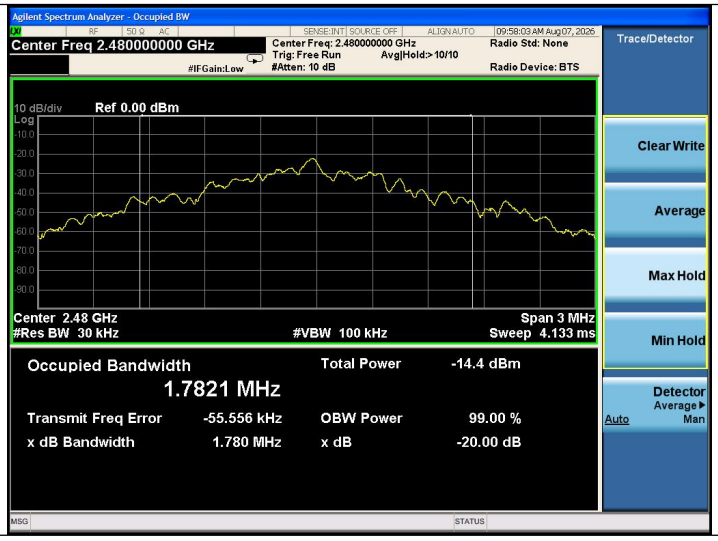
*GFSK Modulation*




2403Mhz




2442Mhz




2480Mhz

## 5.4. Antenna Requirement

**Standard Applicable**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

**Refer to statement below for compliance**

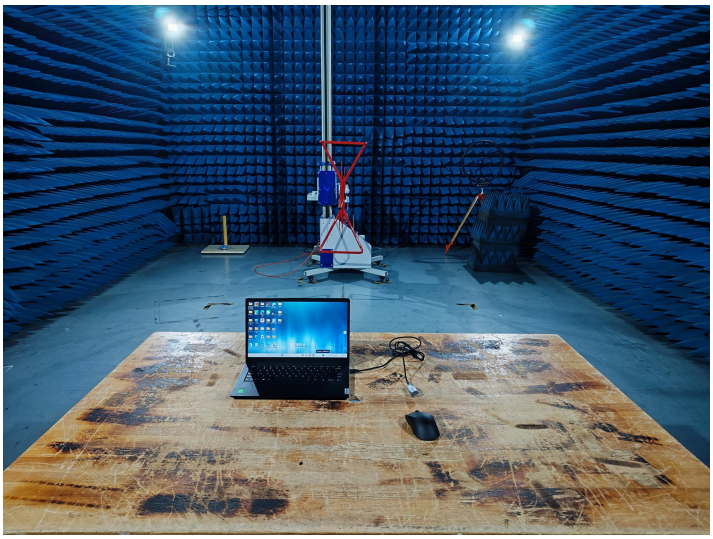
The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

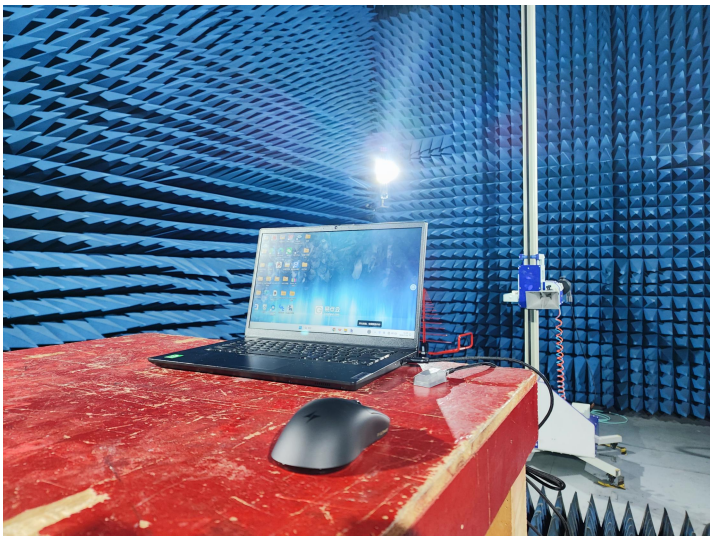
**Antenna Connected Construction**

The directional gains of antenna used for transmitting is -2.39dBi, and the antenna is a PCB antenna connect to PCB board and no consideration of replacement. Please see EUT photo for details.

Results: Compliance.

# 6. Test Setup Photos of the EUT





# 7. External and Internal Photos of the EUT

See related photo report.

**.....End of Report.....**