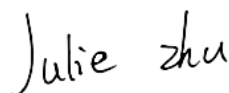
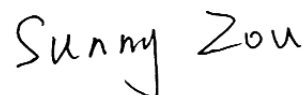


TEST REPORT

Applicant: SHENZHEN 8BITDO TECH CO., LTD.
Address: Room 210, Building 1, Nanhai Ecool, No.6 Xinghua Road, Shekou, Nanshan District, Shenzhen, China
Equipment Type: 8BitDo Lite SE 2.4G Wireless Controller for Xbox
Model Name: 81KA
Brand Name: 8BITDO
FCC ID: 2AOWF-LITESEX
ISED Number: 29401-LITESEX
Test Standard: 47 CFR Part 15 Subpart C
RSS-Gen Issue 5
RSS-247 Issue 3
(refer to section 3.1)
Sample Arrival Date: May 10, 2024
Test Date: May 16, 2024 - Aug. 16, 2024
Date of Issue: Nov. 11, 2024

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Julie Zhu**Checked by:** Ye Hongji**Approved by:** Sunny Zou
(Technical Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Nov. 11, 2024</u>	<u>Initial Issue</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION	4
1.1	Test Laboratory	4
1.2	Test Location	4
2	PRODUCT INFORMATION	5
2.1	Applicant Information	5
2.2	Manufacturer Information	5
2.3	General Description for Equipment under Test (EUT)	5
2.4	Technical Information	6
3	SUMMARY OF TEST RESULTS	8
3.1	Test Standards	8
3.2	Verdict	8
4	GENERAL TEST CONFIGURATIONS	9
4.1	Test Environments	9
4.1	Test Equipment List	9
4.2	Test Software List	9
4.2	Measurement Uncertainty	10
4.3	Description of Test Setup	10
4.4	Measurement Results Explanation Example	13
5	TEST ITEMS	14
5.1	Antenna Requirements	14
5.2	Number of Hopping Frequency	15
5.3	Peak Output Power and E.I.R.P	16
5.4	Occupied Bandwidth	17
5.5	Carrier Frequency Separation	18

5.6	Time of Occupancy (Dwell time)	19
5.7	Conducted Spurious Emission & Authorized-band band-edge	20
5.8	Conducted Emission	21
5.9	Radiated Spurious Emission	22
5.10	Band Edge (Restricted-band band-edge).....	24
ANNEX A	TEST RESULT	25
A.1	Number of Hopping Frequency	25
A.2	Peak Output Power and E.I.R.P	26
A.3	Occupied Bandwidth	28
A.4	Hopping Frequency Separation.....	30
A.5	Time of Occupancy (Dwell time)	31
A.6	Conducted Spurious Emissions & Authorized-band band-edge	32
A.7	Conducted Emissions.....	36
A.8	Radiated Emission	38
A.9	Band Edge (Restricted-band band-edge).....	46
ANNEX B	TEST SETUP PHOTOS	48
ANNEX C	EUT EXTERNAL PHOTOS	48
ANNEX D	EUT INTERNAL PHOTOS	48

1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	SHENZHEN 8BITDO TECH CO., LTD.
Address	Room 210, Building 1, Nanhai Ecool, No.6 Xinghua Road, Shekou, Nanshan District, Shenzhen, China

2.2 Manufacturer Information

Manufacturer	SHENZHEN ONEBITDO TECH CO., LTD.
Address	Room 203, Building 1, Huajian Building, Xinghua Road, Shekou, Shuiwan Community, Zhaoshang Street, Nanshan District, Shenzhen, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	8BitDo Lite SE 2.4G Wireless Controller for Xbox
Model Name Under Test	81KA
Series Model Name	N/A
Description of Model name differentiation	N/A
Serial Number	81KA010 24613 001281
Hardware Version	1.13.24
Software Version	1.16.07
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	2.4G ISM Band
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The requirement for the following technical information of the EUT was tested in this report:

Modulation Technology	FHSS
Modulation Type	GFSK
Product Type	☐ Mobile ☒ Portable ☐ Fix Location
Transfer Rate	1 Mbps
Frequency Range	The frequency range used is 2403 MHz – 2479 MHz; The frequency block is 2400 MHz to 2483.5 MHz.
Number of Channel	77
Tested Channel	Low (2403 MHz), Middle (2441 MHz), High (2479 MHz)
Antenna Type	PCB Antenna
Antenna Gain	2.63 dBi
The Max RF Output power	1.40 dBm
Adaptive or non-adaptive	non-adaptive

All Channel List:

Channel number	Freq. (MHz)	Channel number	Freq. (MHz)	Channel number	Freq. (MHz)	Channel number	Freq. (MHz)
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	--	--
19	2421	39	2441	59	2461	--	--
20	2422	40	2442	60	2462	--	--

Note: The modulation is GFSK with FHSS, there are total 77 channels (frequency range is 2403-2479 MHz, channel step is 1 MHz, totally 77 channels), when this part works, it will choose 77 channels, each channel band width is 1 MHz, if one channel is chosen, adjacent two channels cannot be chosen to make sure step of working channels is more than 2 MHz. the equipment select the lowest, middle and highest channel from 79 channels, Which are 2403 MHz, 2441 MHz and 2479 MHz. The more information please refer to the manufacturer's instructions.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Intentional radiators of radio frequency equipment
2	RSS-Gen Issue 5	General Requirements for Compliance of Radio Apparatus
3	RSS-247 Issue 3	Digital Transmission Systems (DTSS), Frequency Hopping Systems(FHSS) and Licence-Exemp Local Area Network (LE-LAN) Devices
4	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
5	KDB 558074 D01 15.247 Meas Guidance v05r02	Guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the FCC rules

3.2 Verdict

No.	Description	FCC Part No.	ISED Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	RSS-247, 5.4 (6)	--	Pass ^{Note 1}
2	Number of Hopping Frequency	15.247(a)	RSS-247, 5.1 (4)	ANNEX A.1	Pass
3	Peak Output Power and E.I.R.P	15.247(b)	RSS-247, 5.4 (2)	ANNEX A.2	Pass
4	Occupied Bandwidth	15.247(a)	RSS-247, 5.1 (1)	ANNEX A.3	Pass
5	Hopping Frequency Separation	15.247(a)	RSS-247, 5.1 (2)	ANNEX A.4	Pass
6	Time of Occupancy (Dwell time)	15.247(a)	RSS-247, 5.1 (4)	ANNEX A.5	Pass
7	Conducted Spurious Emission& Authorized-band band-edge	15.247(d)	RSS-247, 5.5	ANNEX A.6	Pass
8	Conducted Emission	15.207	RSS-GEN, 8.8	ANNEX A.7	Pass
9	Radiated Spurious Emission	15.209 15.247(d)	RSS-247, 5.5	ANNEX A.8	Pass
10	Band Edge (Restricted-band band-edge)	15.209 15.247(d)	RSS-247, 5.5	ANNEX A.9	Pass
11	Receiver Spurious Emissions	--	RSS-Gen, 7.1.2	--	N/A ^{Note 2}

Note ¹: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

Note ²: Only radio communication receivers operating in stand-alone mode within the band 30-960 MHz, as well as scanner receivers, are subject to Industry Canada requirements, so this test is not applicable.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

Relative Humidity	45% to 53%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+19.5°C to +25.2°C
Working Voltage of the EUT	NV (Normal Voltage)	3.7 V

4.1 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	MY50330200	2024.05.08	2025.05.07
Spectrum Analyzer	KEYSIGHT	N9020A	MY52510065	2023.09.05	2024.09.04
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01631	2022.02.23	2025.02.22
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2021.07.02	2024.07.01
				2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	144	2022.02.19	2024.09.03
Amplifier	COM-MV	LSCX_LNA1-12G-01	180602	2023.09.05	2024.09.04
Amplifier	COM-MV	XKu_LNA7-18G-01	180601	2023.09.05	2024.09.04
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2023.09.05	2024.09.04
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-01162	2023.08.04	2026.08.03
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2025.01.22
Amplifier	COM-MV	ZT30-1000M	B2018054558	2023.12.05	2024.12.04
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	130	2021.08.15	2024.08.14
				2024.07.13	2027.07.12
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2023.09.05	2024.09.04
LISN	SCHWARZBECK	NSLK 8127	8127-687	2024.05.09	2025.05.08
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8 m	112	2022.02.19	2025.02.18

4.2 Test Software List

Description	Manufacturer	Software Version	Serial No.	Applicable test Setup
BL410R	BALUN	V2.1.1.488	N/A	The section 4.5.1
BL410E	BALUN	V22.930	N/A	The section 4.5.2&4.5.3&4.5.4&4.5.5

4.2 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

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

Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.8°C
Humidity	4%

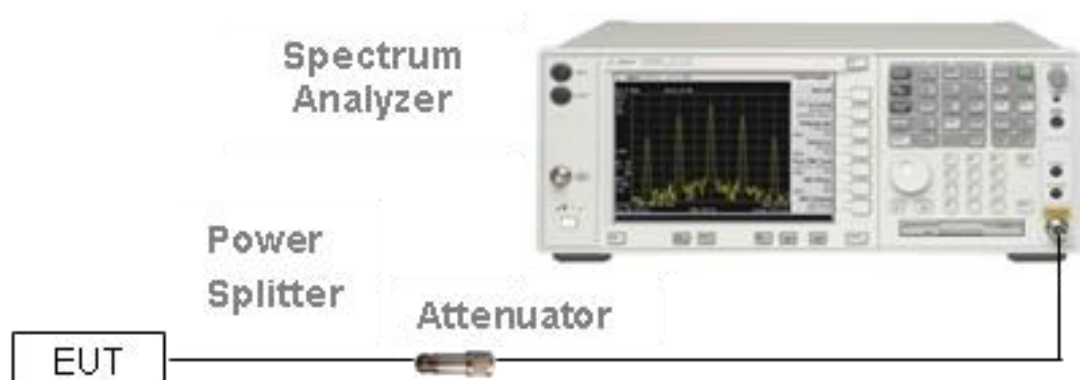
4.3 Description of Test Setup

4.4.1 For Antenna Port Test

Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



(Diagram 1)

4.4.2 For AC Power Supply Port Test



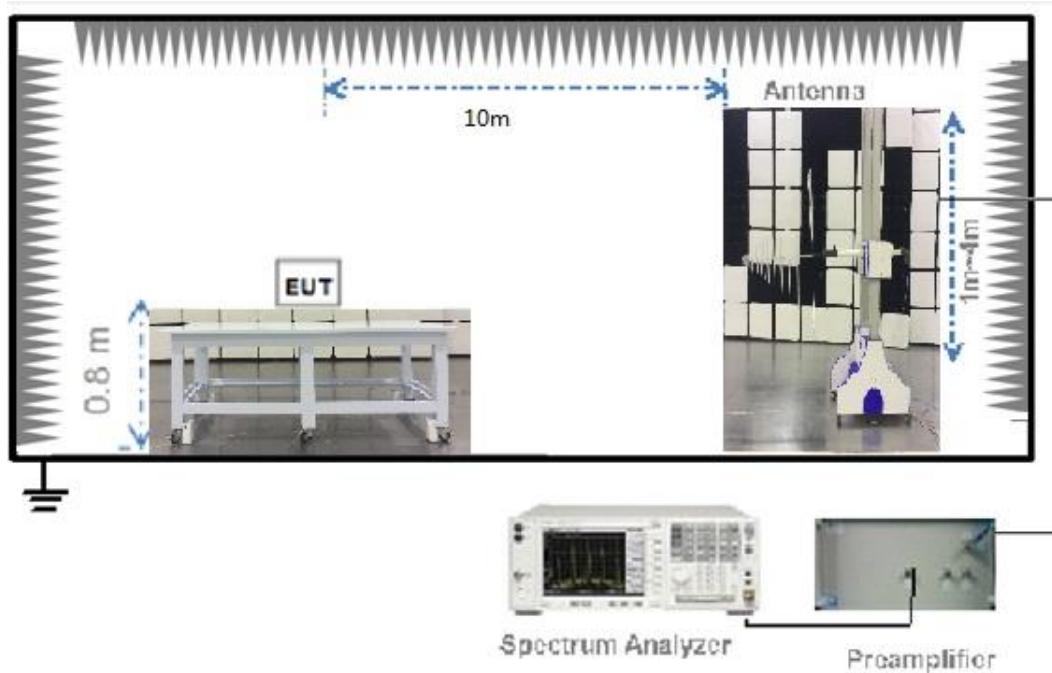
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



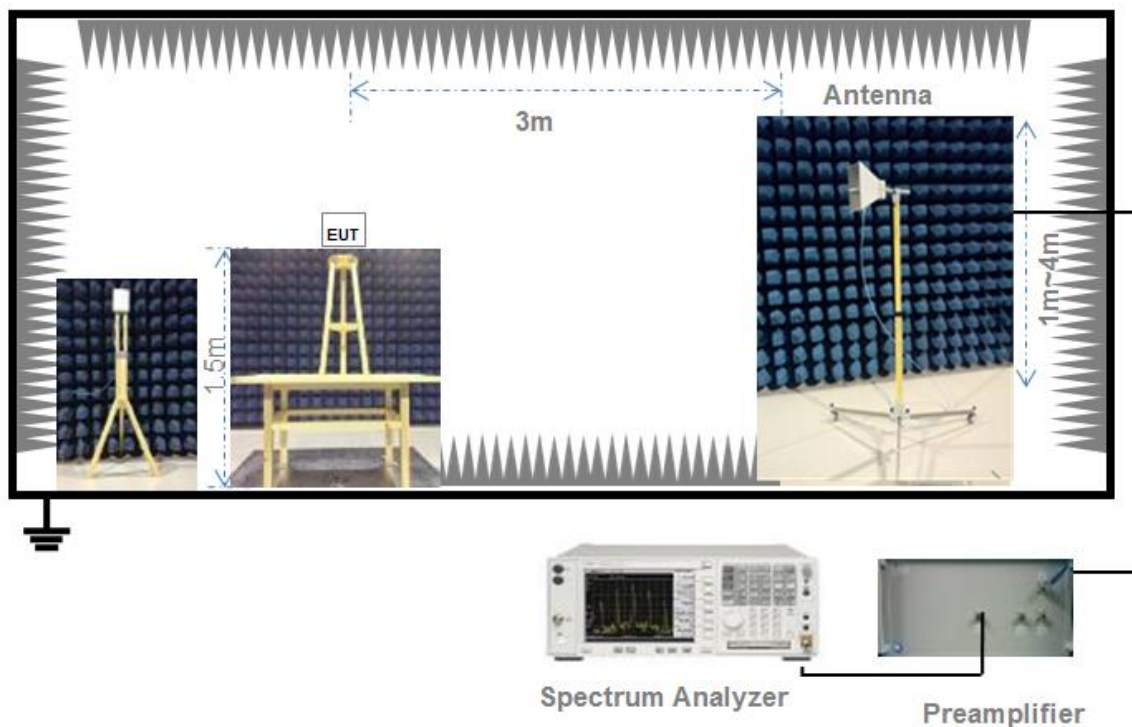
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.4 Measurement Results Explanation Example

4.5.1 For conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

4.5.2 For radiated band edges and spurious emission test:

Per part 15.35(c), the EUT Bluetooth average emission level could be determined by the peak emission level applying duty cycle correction factor, to represent averaging over the whole pulse train.

The average level is derived from the peak level corrected with "Duty cycle correction factor".

Average Emission Level (dBuV/m) = Peak Emission Level (dBuV/m) + Duty cycle correction factor (dB)

Duty cycle correction factor (dB) = $20 * \log (\text{Duty cycle})$.

Duty cycle = on time / 100 milliseconds

On time = dwell time * hopping number in 100 ms

For example: bluetooth with dwell time 2.9 ms and 3 hops in 100 ms, then

Duty cycle correction factor (dB) = $20 * \log ((2.9 * 3) / 100) = -21.21 \text{ dB}$

Following shows an average computation example with duty cycle correction factor = -21.21 dB, and the peak emission level is 45.61 dBuV/m.

Example:

Average Emission Level (dBuV/m) = Peak Emission Level (dBuV/m) + duty cycle correction factor (dB)
= $45.61 + (-21.21) = 24.4 \text{ (dBuV/m)}$

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203 & 15.247(b); RSS-247, 5.4 (6)

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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. 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 FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna design is used.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.1Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 Number of Hopping Frequency

5.2.1 Limit

FCC §15.247(a) (1) (iii); RSS-247, 5.1 (4)

Frequency hopping systems operating in the 2400 MHz to 2483.5 MHz bands shall use at least 15 hopping frequencies.

5.2.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = the frequency band of operation

RBW $\geq$ 1% of the span

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 Peak Output Power and E.I.R.P

5.3.1 Test Limit

FCC § 15.247(b)

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

RSS-247, 5.4 (2)

For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W and the e.i.r.p. shall not exceed 4 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W and the e.i.r.p. shall not exceed 0.5 W if the hopset uses less than 75 hopping channels (see Section 5.4(5) for exceptions).

5.3.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The Bluetooth Module operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

Use the following spectrum analyzer settings:

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

RBW > the 20 dB bandwidth of the emission being measured

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize.

EIRP= Maximum peak conducted output power +Antenna Gain.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Occupied Bandwidth

5.4.1 Limit

FCC §15.247(a); RSS-247, 5.1 (1)

Measurement of the 20dB bandwidth of the modulated signal.

5.4.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW $\geq$ 1% of the 20 dB bandwidth

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate, Allow the trace to stabilize.

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Carrier Frequency Separation

5.5.1 Limit

FCC §15.247(a); RSS-247, 5.1 (2)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

5.5.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = wide enough to capture the peaks of two adjacent channels

Resolution (or IF) Bandwidth (RBW) $\geq$ 1% of the span

Video (or Average) Bandwidth (VBW) $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

5.5.4 Test Result

Please refer to ANNEX A.4.

5.6 Time of Occupancy (Dwell time)

5.6.1 Limit

FCC §15.247(a); RSS-247, 5.1 (4)

Frequency hopping systems in the 2400 MHz - 2483.5 MHz band shall use at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

5.6.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The average time of occupancy on any channel within the Period can be calculated with formulas:

$$\{\text{Total of Dwell}\} = \{\text{Pulse Time}\} * \{\text{Number of Hopping Frequency in Period}\}$$

$$\{\text{Period}\} = 0.4s * \{\text{Number of Hopping Frequency}\}$$

The middle channels are selected to perform testing to record the dwell time of each occupation measured in this channel, which is called Pulse Time here.

5.6.4 Test Result

Please refer to ANNEX A.5

5.7 Conducted Spurious Emission & Authorized-band band-edge

5.7.1 Limit

FCC §15.247(d); RSS-247, 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.7.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

RBW = 100 kHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize

5.7.4 Test Result

Please refer to ANNEX A.6.

5.8 Conducted Emission

5.8.1 Limit

FCC §15.207; RSS-GEN, 8.8

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 within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.8.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.8.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

5.8.4 Test Result

Please refer to ANNEX A.7.

5.9 Radiated Spurious Emission

5.9.1 Limit

FCC §15.209&15.247(d); RSS-247, 5.5

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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

Note:

1. Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].
2. In the emission tables above, the tighter limit applies at the band edges.
3. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
4. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.9.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.9.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.9.4 Test Result

Please refer to ANNEX A.8.

5.10 Band Edge (Restricted-band band-edge)

5.10.1 Limit

FCC §15.209&15.247(d); RSS-247, 5.5

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.10.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.10.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.10.4 Test Result

Please refer to ANNEX A.9.

ANNEX A TEST RESULT

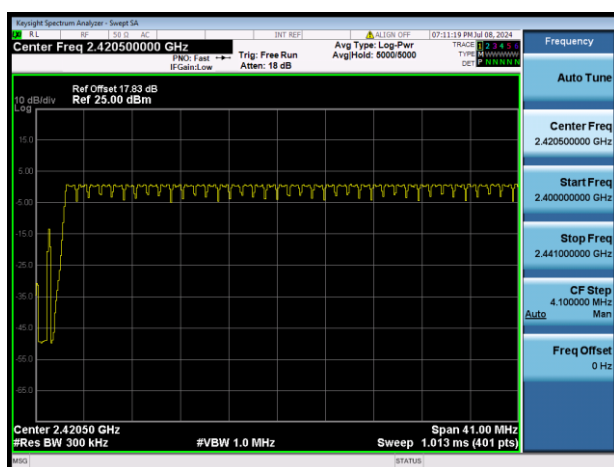
A.1 Number of Hopping Frequency

Test Data

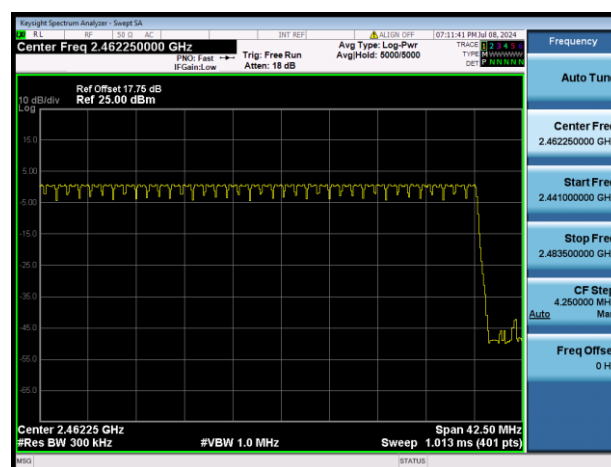
Test Mode	Frequency Block (MHz)	Measured Channel Numbers	Min. Limit	Verdict
GFSK	2400 - 2483.5	77	15	Pass

Test Plots

GFSK 2.4 GHz ~ 2.4415 GHz



GFSK 2.4415 GHz ~ 2.4835 GHz



A.2 Peak Output Power and E.I.R.P

Peak Power Test Data

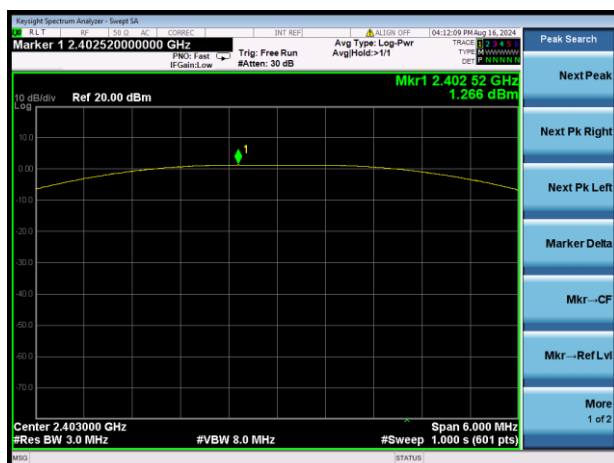
Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	1.27	1.34	30	1000	Pass
Middle	1.40	1.38			Pass
High	1.33	1.36			Pass

E.I.R.P Test Data (For ISSED)

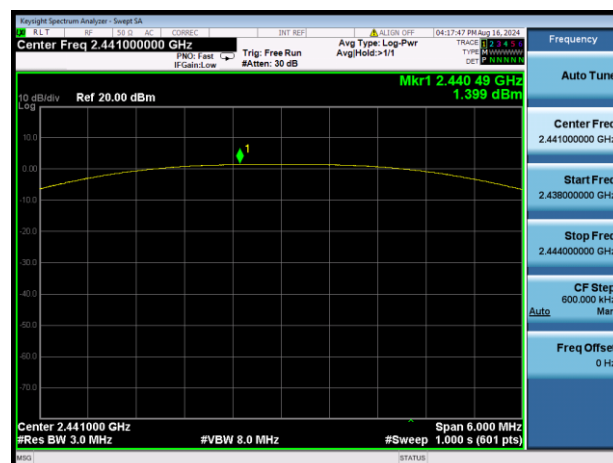
Channel	E.I.R.P		Limit		Verdict
	dBm	mW	dBm	mW	
Low	3.90	2.45	36	4000	Pass
Middle	4.03	2.53			Pass
High	3.96	2.49			Pass

Test Plots

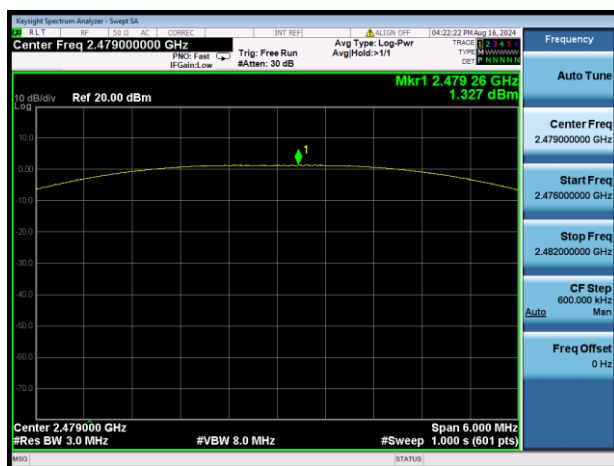
GFSK LOW CHANNEL



GFSK MIDDLE CHANNEL



GFSK HIGH CHANNEL



A.3 Occupied Bandwidth

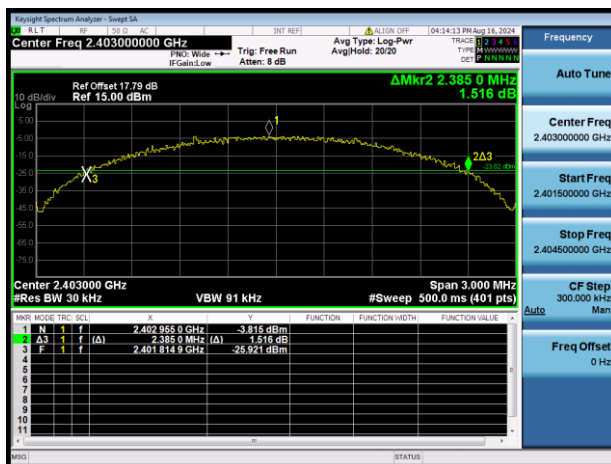
Test Data

Test Mode	GFSK	
Channel	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	2.385000	2.018900
Middle Channel	2.302500	2.018000
High Channel	2.340100	2.027900

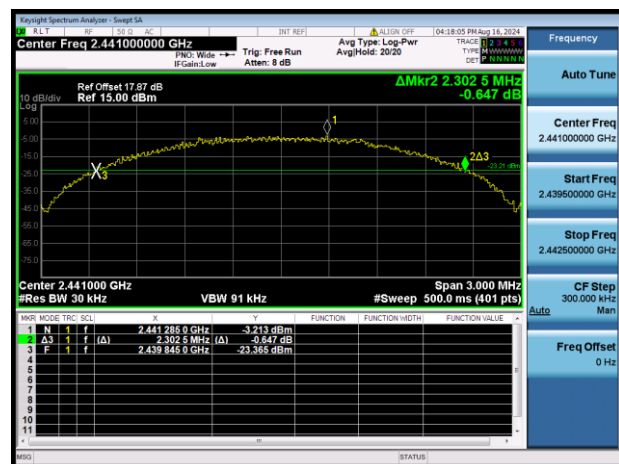
Test Plots

20 dB Bandwidth

GFSK LOW CHANNEL



GFSK MIDDLE CHANNEL



GFSK HIGH CHANNEL



99% Bandwidth

GFSK LOW CHANNEL



GFSK MIDDLE CHANNEL



GFSK HIGH CHANNEL



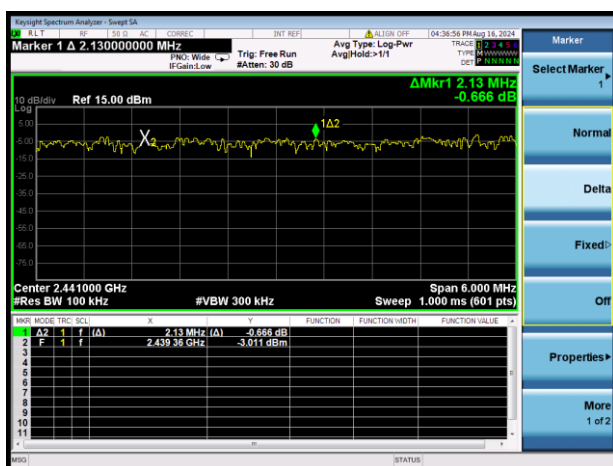
A.4 Hopping Frequency Separation

Test Data

Mode	Frequency separation (MHz)	2/3 of the 20 dB Bandwidth (MHz)	Verdict
GFSK	2.130	1.590	Pass

Test Plot

GFSK



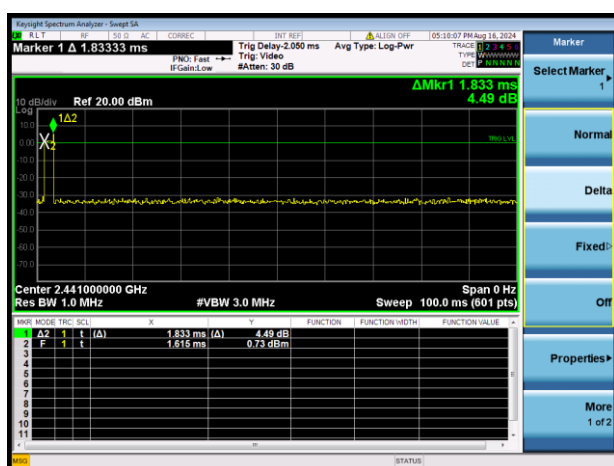
A.5 Time of Occupancy (Dwell time)

Test Data

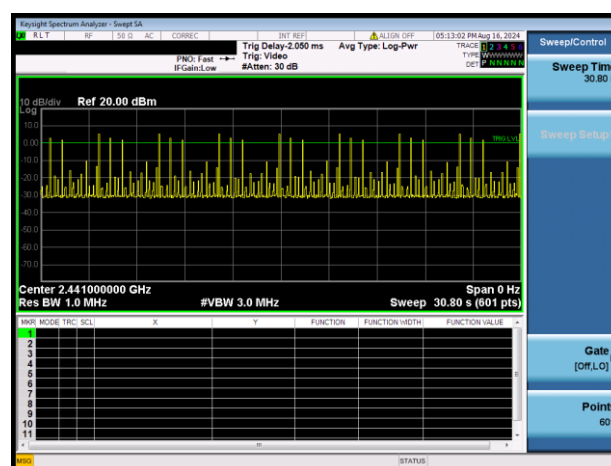
GFSK			
Pulse Width (ms)	Total of Dwell (ms)	Limit (sec)	Verdict
1.833	42.159	0.4	Pass

Test Plots

Pulse Width



Total of Dwell



A.6 Conducted Spurious Emissions & Authorized-band band-edge

Test Data

GFSK Mode:

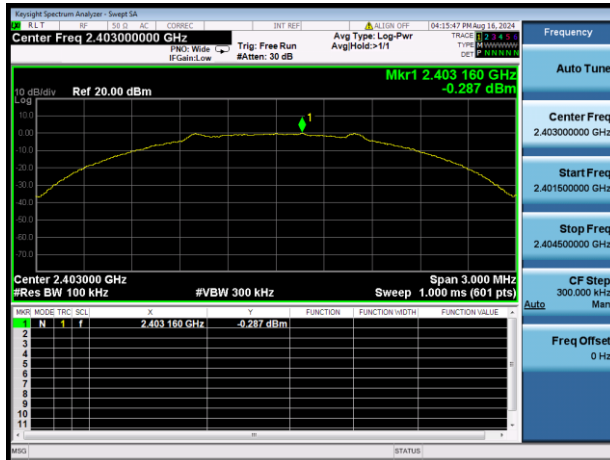
GFSK				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-23.86	-0.29	-20.29	Pass
Middle	-24.26	-0.25	-20.25	Pass
High	-24.32	-0.67	-20.67	Pass

Hopping Mode:

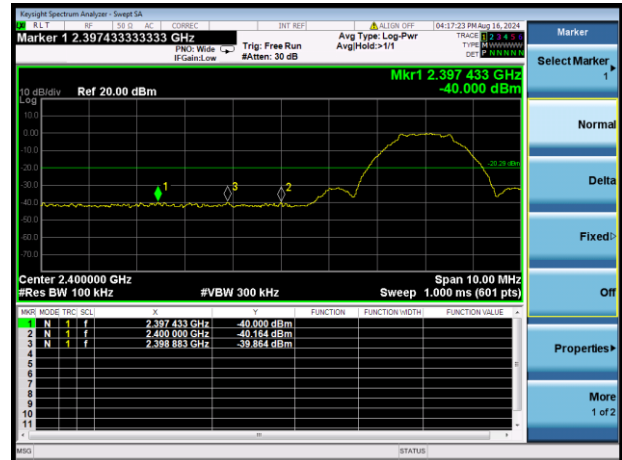
GFSK				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
GFSK	-24.66	-1.08	-21.08	Pass

Test Plots

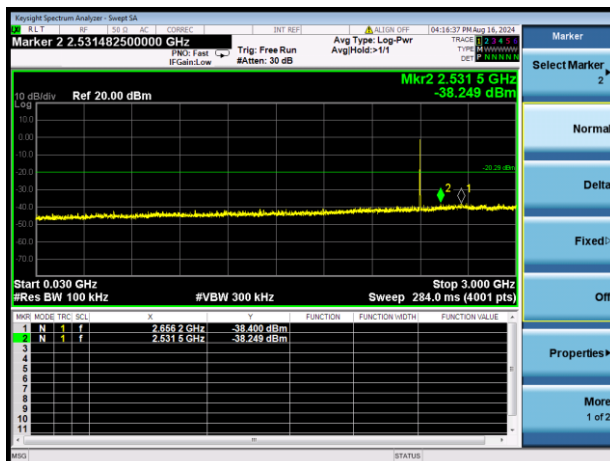
GFSK LOW CHANNEL, CARRIER LEVEL



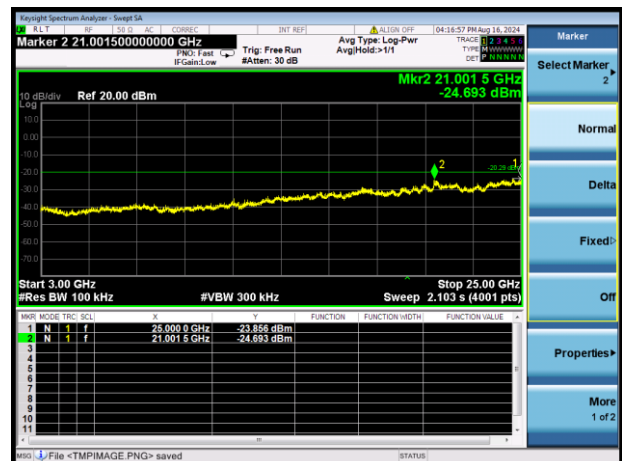
GFSK LOW CHANNEL, BAND EDGE



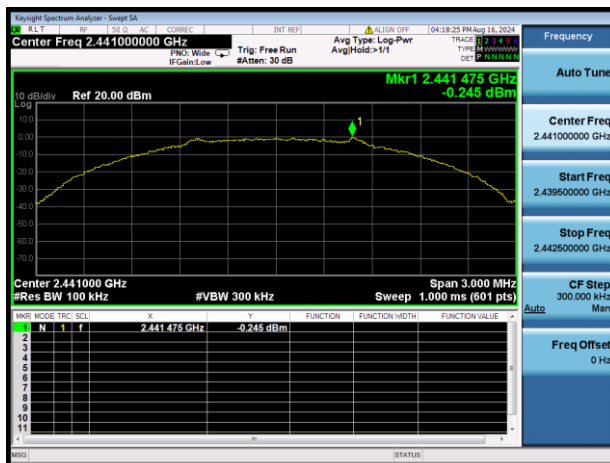
GFSK LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



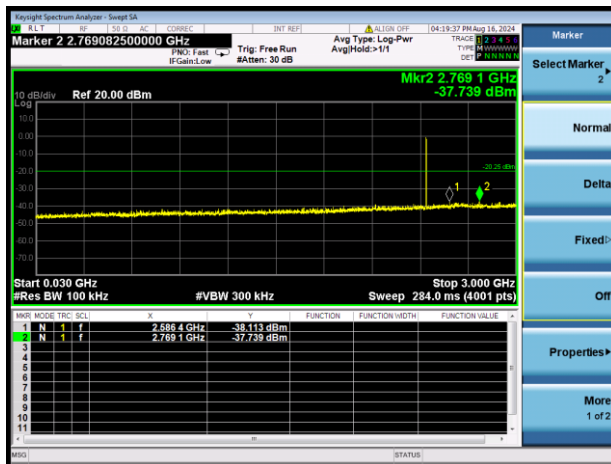
GFSK LOW CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



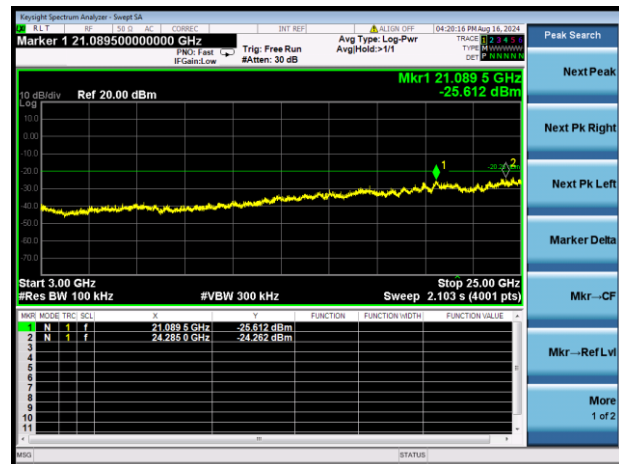
GFSK MIDDLE CHANNEL, CARRIER LEVEL



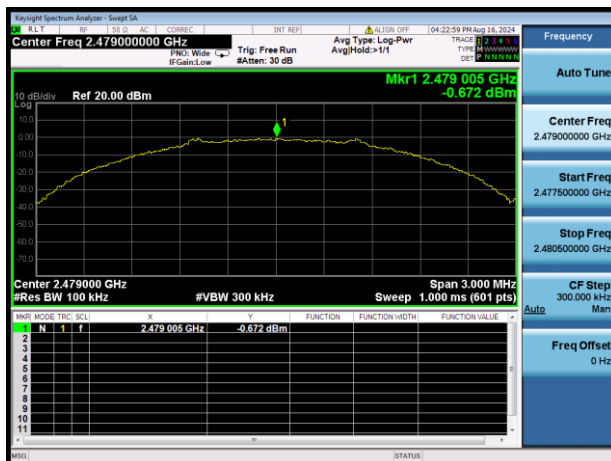
GFSK MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



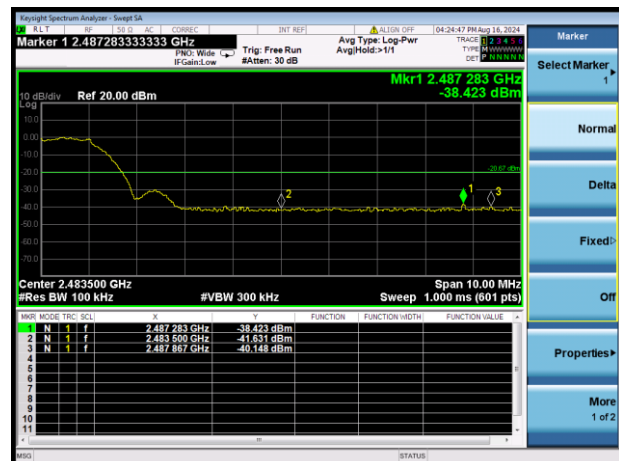
GFSK MIDDLE CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



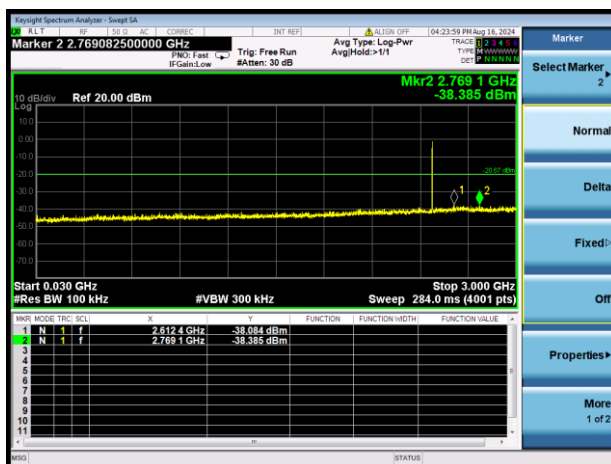
GFSK HIGH CHANNEL, CARRIER LEVEL



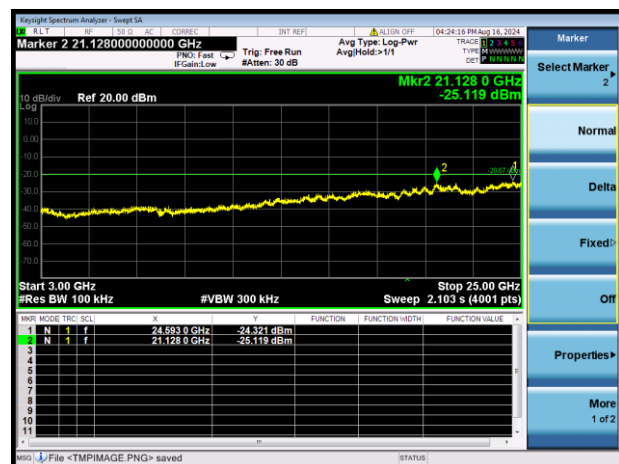
GFSK HIGH CHANNEL, BAND EDGE



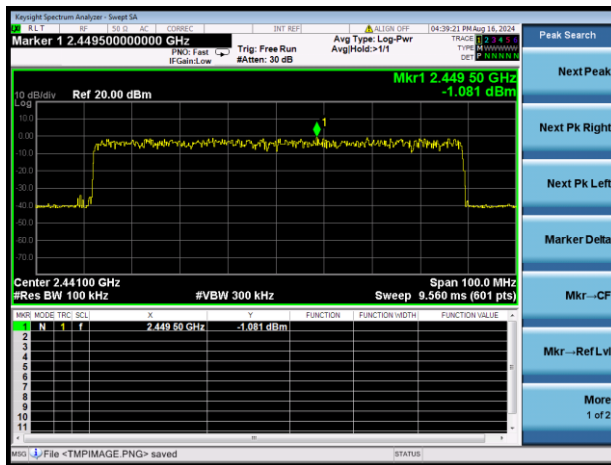
GFSK HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



GFSK HIGH CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



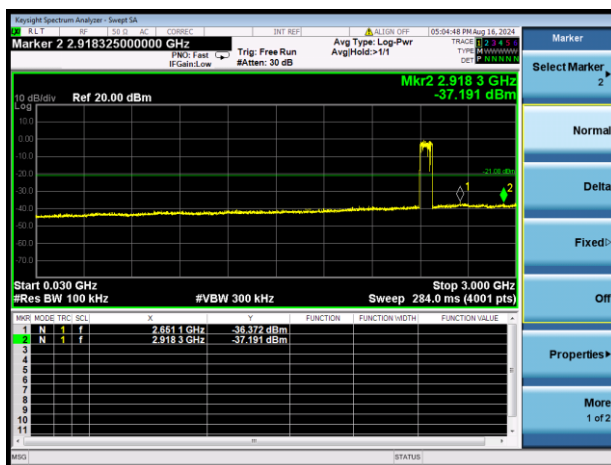
GFSK HOPPING, CARRIER LEVEL



GFSK HOPPING BAND EDGE (LOW)



GFSK HOPPING BAND EDGE (HIGH)

GFSK Hopping Mode, SPURIOUS
30 MHz ~ 3 GHzGFSK Hopping Mode, SPURIOUS
3GHz ~ 25 GHz

A.7 Conducted Emissions

Note¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

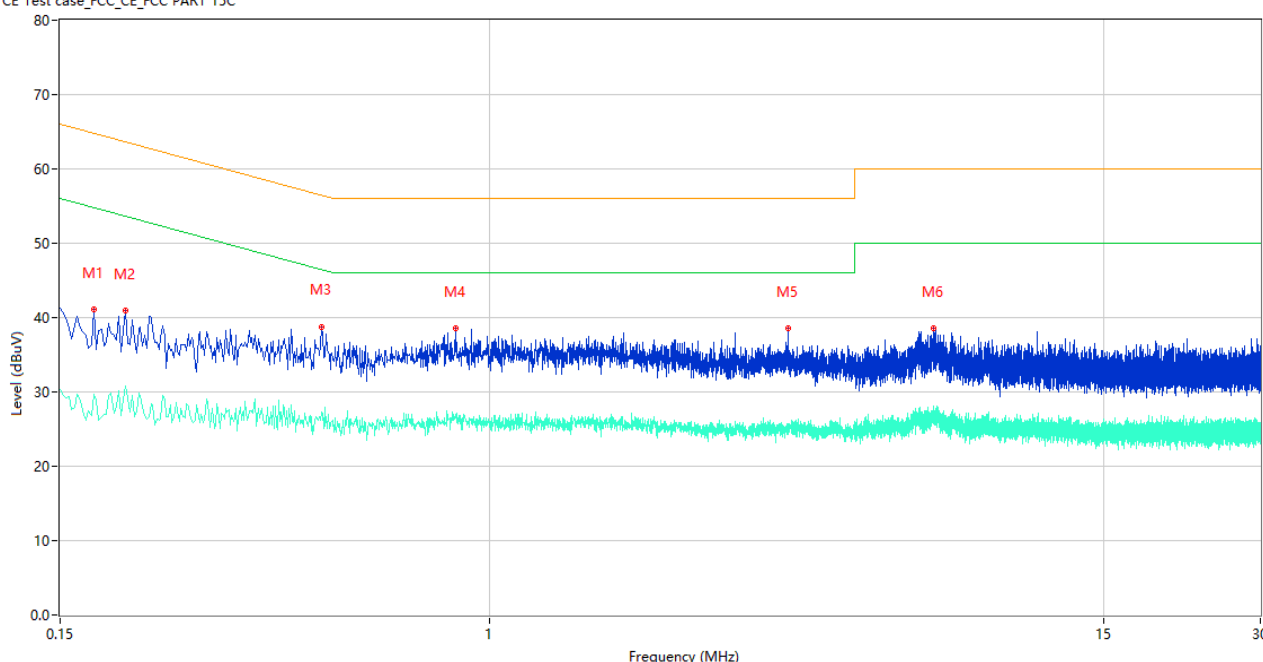
Note²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

PHASE L

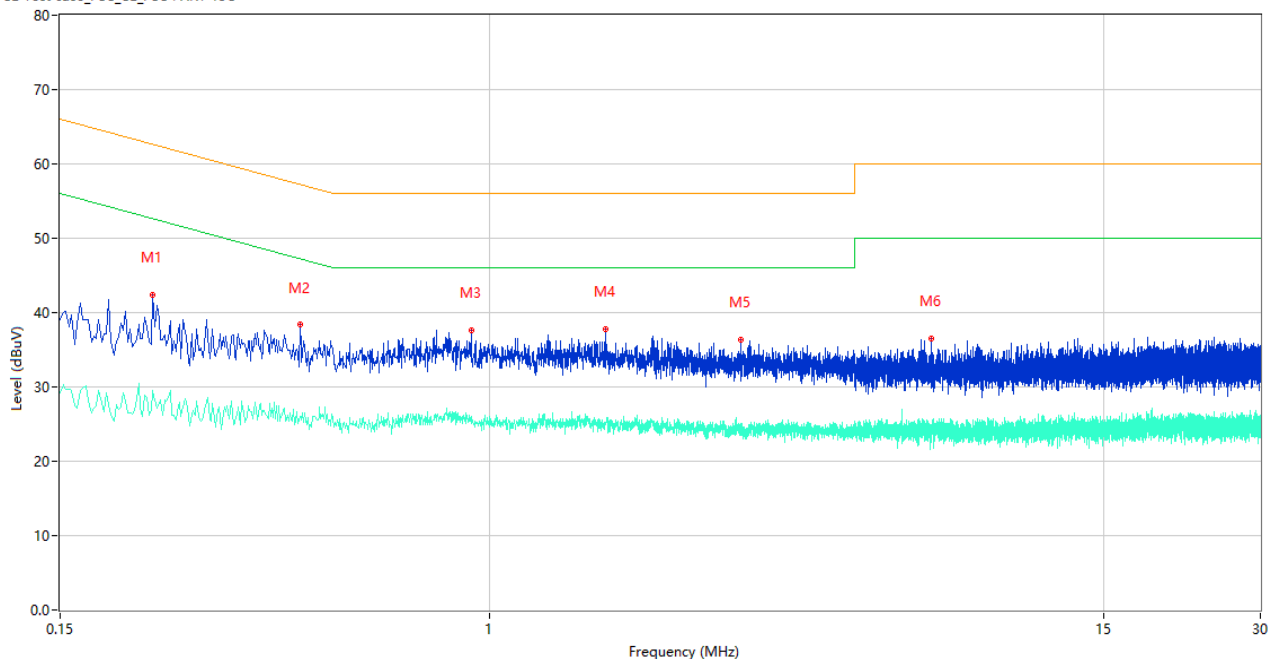
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.174	41.08	9.78	64.77	23.69	Peak	L	Pass
1**	0.174	29.66	9.78	54.77	25.11	AV	L	Pass
2	0.200	40.89	9.77	63.61	22.72	Peak	L	Pass
2**	0.200	30.77	9.77	53.61	22.84	AV	L	Pass
3	0.476	38.75	10.00	56.41	17.66	Peak	L	Pass
3**	0.476	27.23	10.00	46.41	19.18	AV	L	Pass
4	0.858	38.56	10.54	56.00	17.44	Peak	L	Pass
4**	0.858	27.03	10.54	46.00	18.97	AV	L	Pass
5	3.732	38.56	10.41	56.00	17.44	Peak	L	Pass
5**	3.732	25.18	10.41	46.00	20.82	AV	L	Pass
6	7.106	38.52	10.33	60.00	21.48	Peak	L	Pass
6**	7.106	26.61	10.33	50.00	23.39	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.226	42.41	9.77	62.60	20.19	Peak	N	Pass
1**	0.226	29.59	9.77	52.60	23.01	AV	N	Pass
2	0.432	38.37	10.22	57.21	18.84	Peak	N	Pass
2**	0.432	25.98	10.22	47.21	21.23	AV	N	Pass
3	0.920	37.69	10.13	56.00	18.31	Peak	N	Pass
3**	0.920	26.01	10.13	46.00	19.99	AV	N	Pass
4	1.666	37.78	10.02	56.00	18.22	Peak	N	Pass
4**	1.666	25.30	10.02	46.00	20.70	AV	N	Pass
5	3.022	36.42	10.19	56.00	19.58	Peak	N	Pass
5**	3.022	25.03	10.19	46.00	20.97	AV	N	Pass
6	7.022	36.46	10.31	60.00	23.54	Peak	N	Pass
6**	7.022	24.17	10.31	50.00	25.83	AV	N	Pass

A.8 Radiated Emission

Note ¹: The symbol of “--” in the table which means not application.

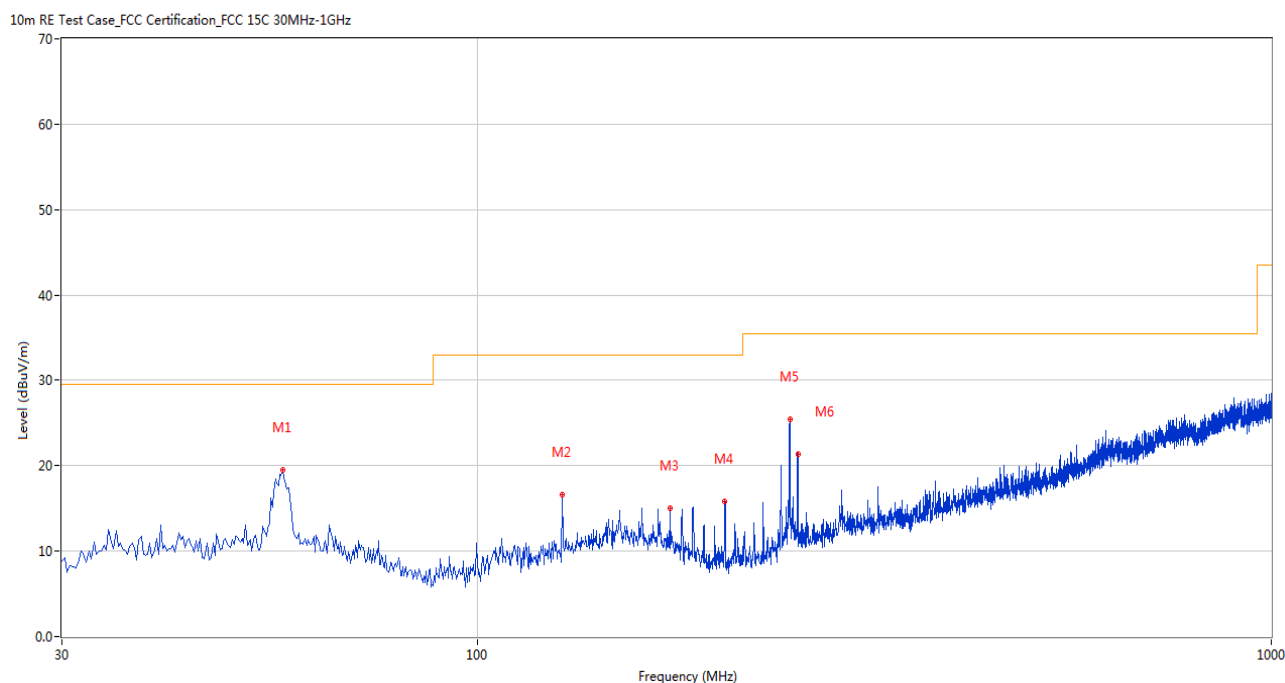
Note ²: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note ³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note ⁴: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

Test Data and Plots

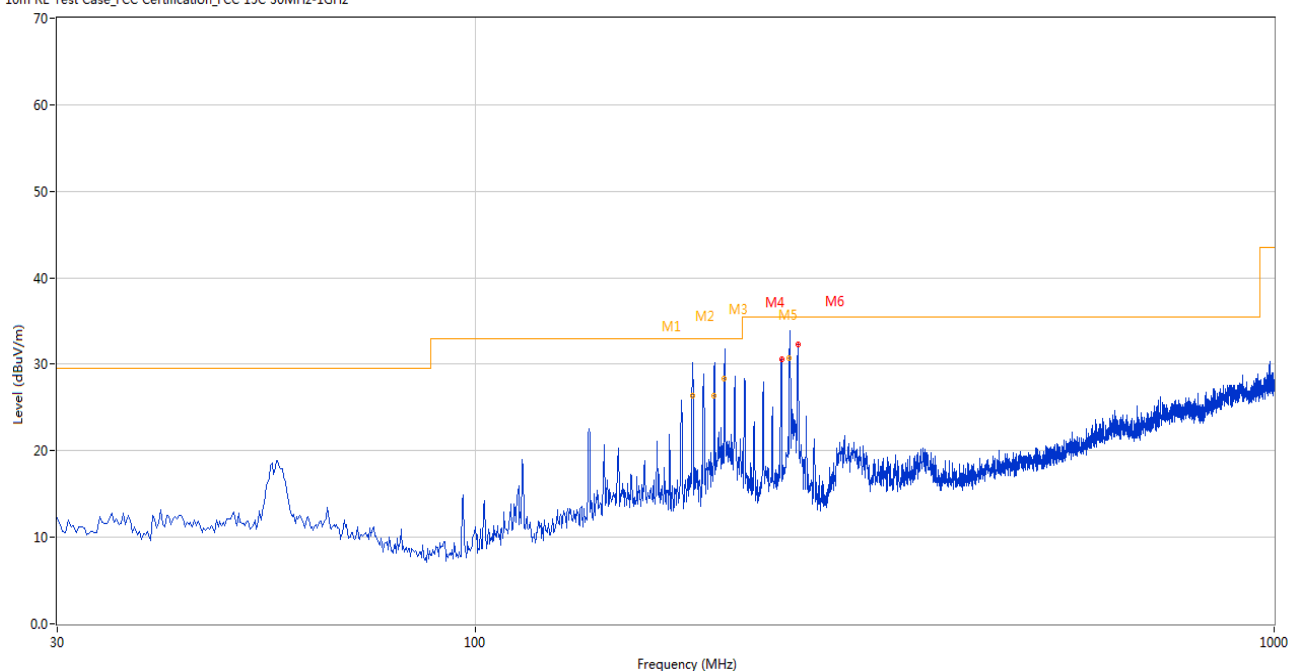
30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	56.911	19.50	-26.24	29.5	10.00	Peak	360.00	100	Horizontal	Pass
2	127.946	16.57	-27.49	33.0	16.43	Peak	220.00	100	Horizontal	Pass
3	174.979	15.07	-26.61	33.0	17.93	Peak	254.00	100	Horizontal	Pass
4	205.041	15.88	-28.97	33.0	17.12	Peak	301.00	100	Horizontal	Pass
5	247.468	25.44	-27.06	35.5	10.06	Peak	279.00	100	Horizontal	Pass
6	253.529	21.29	-26.84	35.5	14.21	Peak	264.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

10m RE Test Case_FCC Certification_FCC 15C 30MHz-1GHz



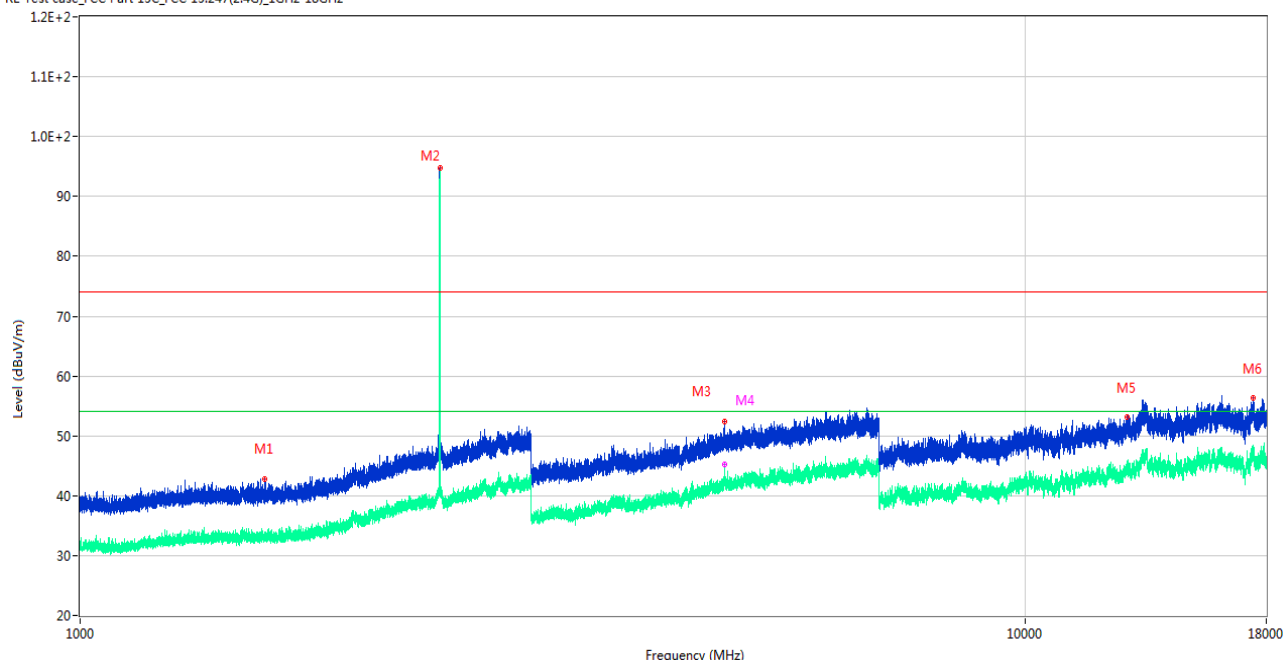
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	187.190	28.26	-28.05	33.0	4.74	Peak	271.00	125	Vertical	N/A
1*	187.190	26.34	-28.05	33.0	6.66	QP	271.00	125	Vertical	Pass
2	199.103	28.88	-28.97	33.0	4.12	Peak	221.00	100	Vertical	N/A
2*	199.103	26.35	-28.97	33.0	6.65	QP	221.00	100	Vertical	Pass
3	205.169	30.59	-28.96	33.0	2.41	Peak	203.00	101	Vertical	N/A
3*	205.169	28.35	-28.96	33.0	4.65	QP	203.00	101	Vertical	Pass
4	241.892	30.60	-27.18	35.5	4.90	Peak	59.00	100	Vertical	Pass
5	247.461	33.88	-27.06	35.5	1.62	Peak	243.00	123	Vertical	N/A
5*	247.461	30.69	-27.06	35.5	4.81	QP	243.00	123	Vertical	Pass
6	253.529	32.36	-26.84	35.5	3.14	Peak	237.00	100	Vertical	Pass

Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note 2: The spurious from 18GHz-25GHz is noise only, do not show on the report.

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT H

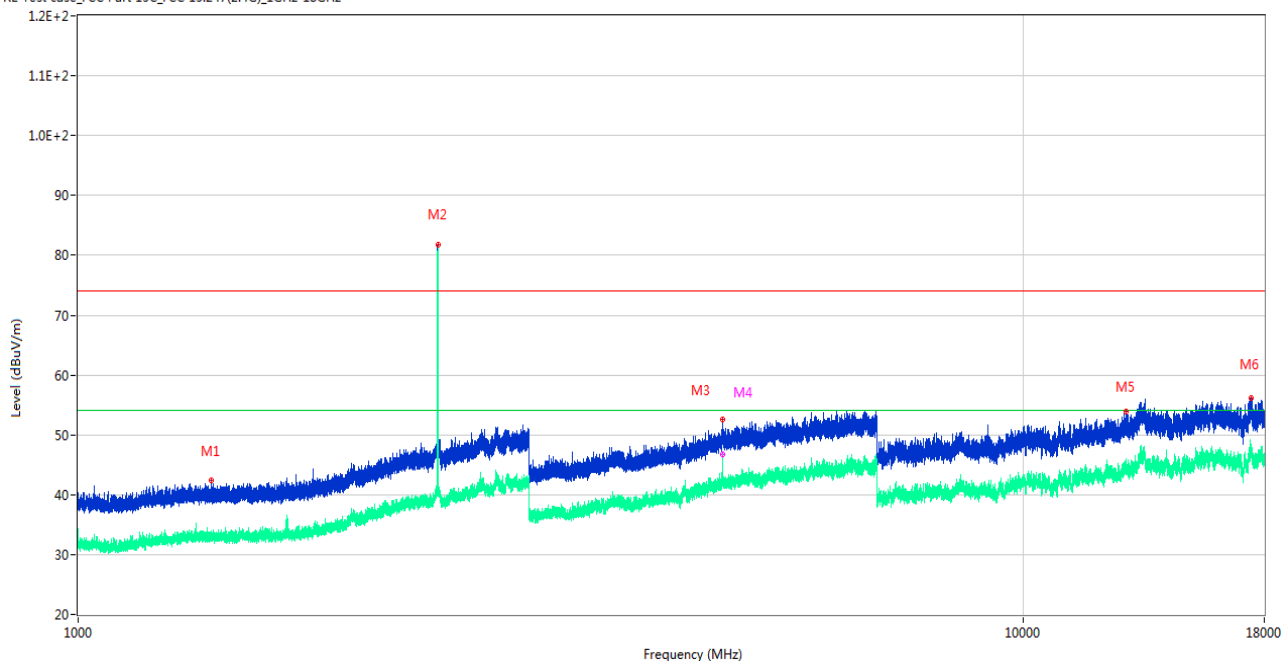
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1569.800	42.85	-17.07	74.0	31.15	Peak	89.00	400	Horizontal	Pass
1**	1569.800	33.26	-17.07	54.0	20.74	AV	89.00	400	Horizontal	Pass
2	2402.200	94.76	-9.74	74.0	-20.76	Peak	269.00	150	Horizontal	N/A
2**	2402.200	94.21	-9.74	54.0	-40.21	AV	269.00	150	Horizontal	N/A
3	4803.400	52.42	-2.91	74.0	21.58	Peak	158.00	150	Horizontal	Pass
3**	4803.400	44.51	-2.91	54.0	9.49	AV	158.00	150	Horizontal	Pass
4	4804.600	50.29	-2.78	74.0	23.71	Peak	127.00	150	Horizontal	Pass
4**	4804.600	45.29	-2.78	54.0	8.71	AV	127.00	150	Horizontal	Pass
5	12809.850	53.09	0.86	74.0	20.91	Peak	271.00	100	Horizontal	Pass
5**	12809.850	45.02	0.86	54.0	8.98	AV	271.00	100	Horizontal	Pass
6	17415.150	56.31	3.64	74.0	17.69	Peak	216.00	100	Horizontal	Pass
6**	17415.150	48.06	3.64	54.0	5.94	AV	216.00	100	Horizontal	Pass

GFSK LOW CHANNEL 1 GHz to 18 GHz, ANT V

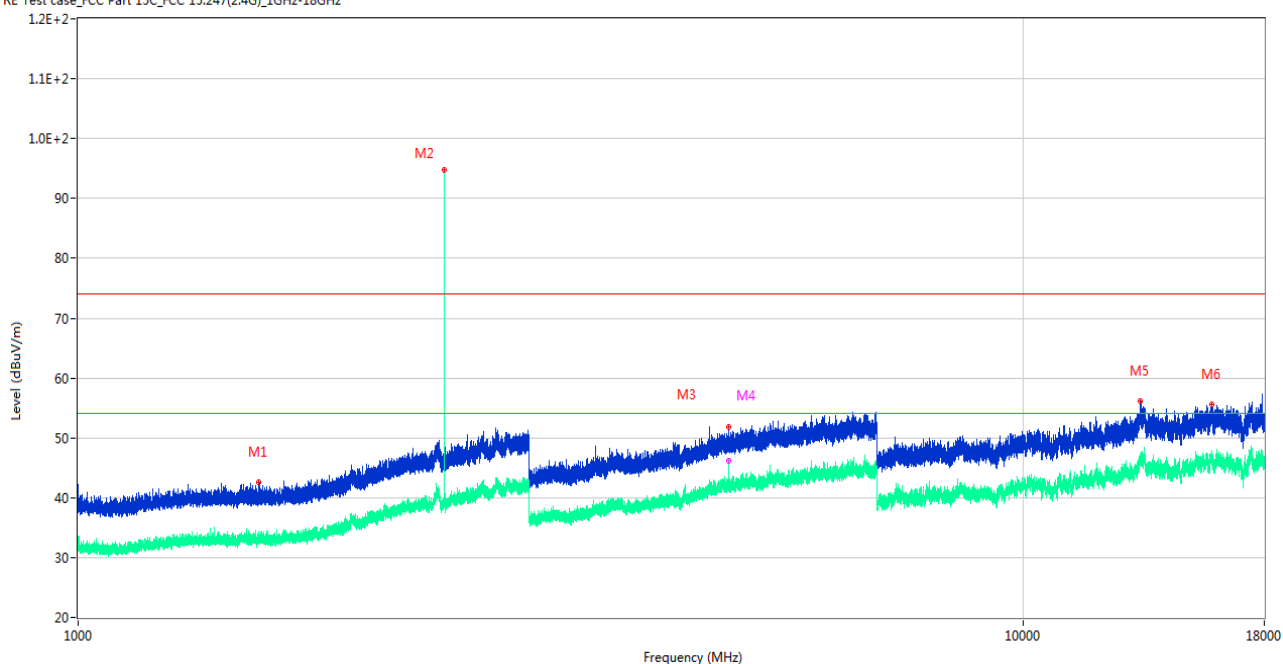
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1381.800	42.35	-17.26	74.0	31.65	Peak	155.00	200	Vertical	Pass
1**	1381.800	32.35	-17.26	54.0	21.65	AV	155.00	200	Vertical	Pass
2	2402.300	81.82	-9.73	74.0	-7.82	Peak	67.00	200	Vertical	N/A
2**	2402.300	81.10	-9.73	54.0	-27.10	AV	67.00	200	Vertical	N/A
3	4803.600	52.58	-2.89	74.0	21.42	Peak	86.00	150	Vertical	Pass
3**	4803.600	45.68	-2.89	54.0	8.32	AV	86.00	150	Vertical	Pass
4	4804.600	50.46	-2.78	74.0	23.54	Peak	158.00	150	Vertical	Pass
4**	4804.600	46.70	-2.78	54.0	7.30	AV	158.00	150	Vertical	Pass
5	12856.313	53.95	1.43	74.0	20.05	Peak	345.00	300	Vertical	Pass
5**	12856.313	44.17	1.43	54.0	9.83	AV	345.00	300	Vertical	Pass
6	17422.238	56.16	3.70	74.0	17.84	Peak	345.00	400	Vertical	Pass
6**	17422.238	47.38	3.70	54.0	6.62	AV	345.00	400	Vertical	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

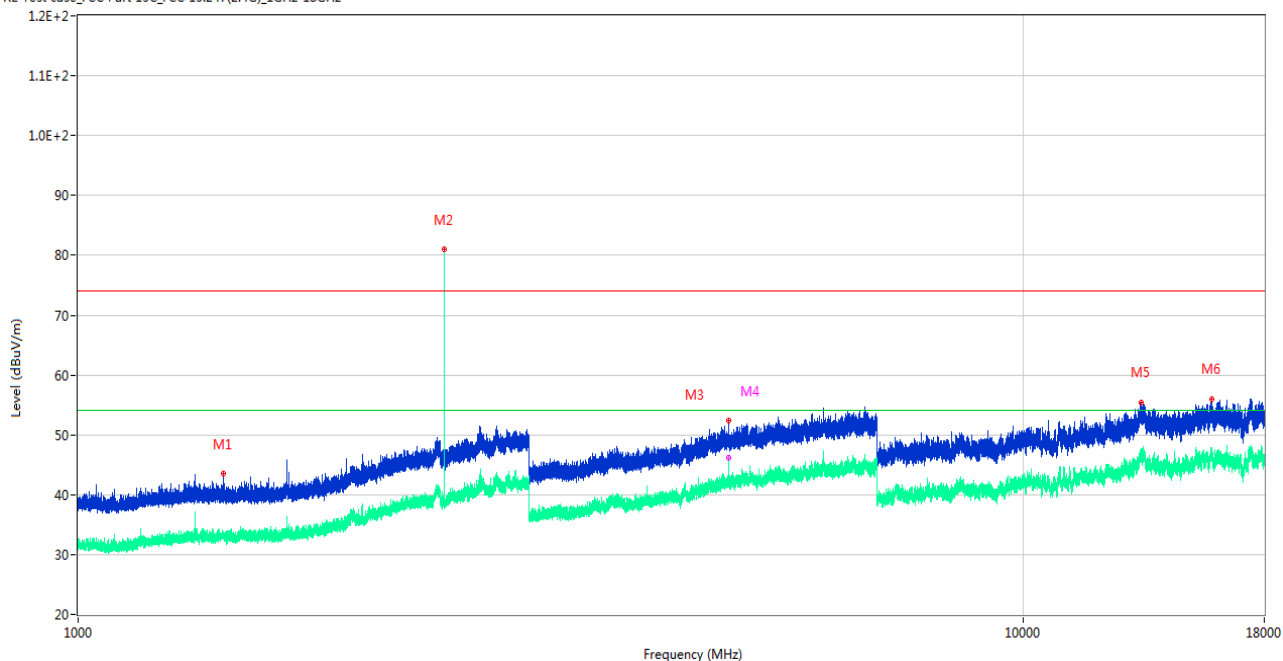
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1552.000	42.62	-17.07	74.0	31.38	Peak	68.00	300	Horizontal	Pass
1**	1552.000	33.01	-17.07	54.0	20.99	AV	68.00	300	Horizontal	Pass
2	2441.200	94.69	-12.38	74.0	-20.69	Peak	267.00	100	Horizontal	N/A
2**	2441.200	94.14	-12.38	54.0	-40.14	AV	267.00	100	Horizontal	N/A
3	4882.000	51.79	-2.61	74.0	22.21	Peak	238.00	150	Horizontal	Pass
3**	4882.000	45.64	-2.61	54.0	8.36	AV	238.00	150	Horizontal	Pass
4	4882.600	51.65	-2.57	74.0	22.35	Peak	142.00	150	Horizontal	Pass
4**	4882.600	46.22	-2.57	54.0	7.78	AV	142.00	150	Horizontal	Pass
5	13312.275	56.25	0.87	74.0	17.75	Peak	64.00	150	Horizontal	Pass
5**	13312.275	46.48	0.87	54.0	7.52	AV	64.00	150	Horizontal	Pass
6	15833.588	55.68	1.46	74.0	18.32	Peak	253.00	400	Horizontal	Pass
6**	15833.588	46.04	1.46	54.0	7.96	AV	253.00	400	Horizontal	Pass

GFSK MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

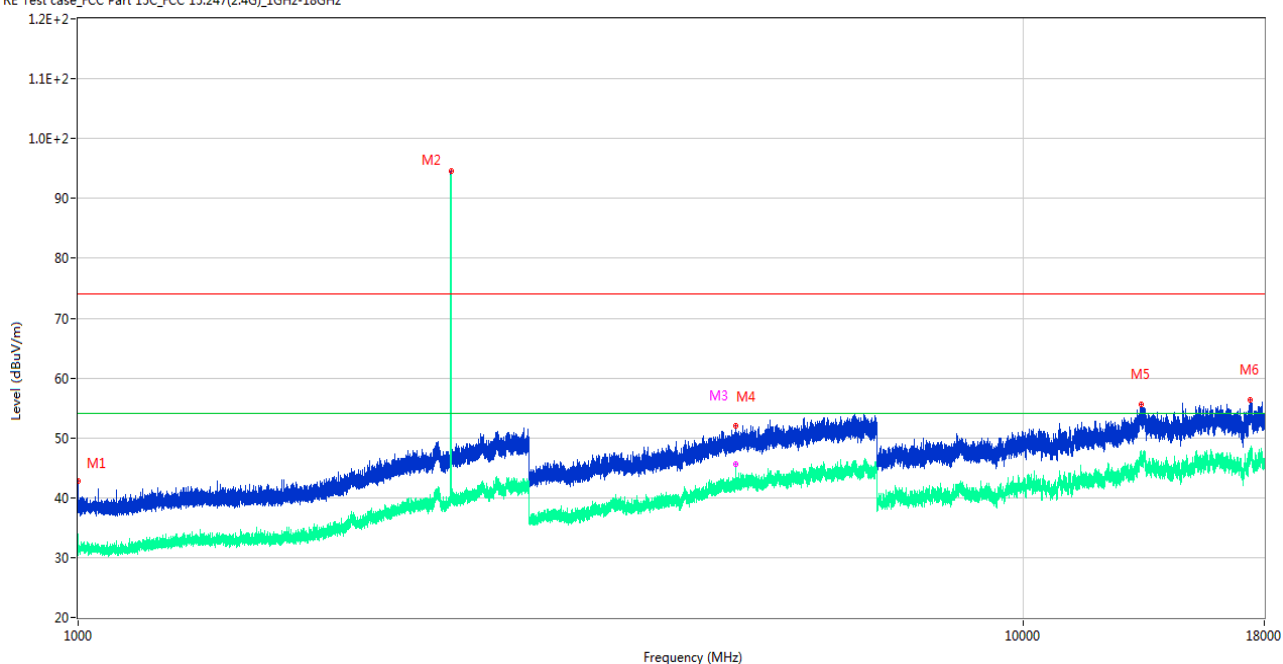
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1423.700	43.48	-16.92	74.0	30.52	Peak	266.00	200	Vertical	Pass
1**	1423.700	33.12	-16.92	54.0	20.88	AV	266.00	200	Vertical	Pass
2	2440.800	80.94	-12.38	74.0	-6.94	Peak	62.00	150	Vertical	N/A
2**	2440.800	79.93	-12.38	54.0	-25.93	AV	62.00	150	Vertical	N/A
3	4882.200	52.37	-2.60	74.0	21.63	Peak	88.00	200	Vertical	Pass
3**	4882.200	46.12	-2.60	54.0	7.88	AV	88.00	200	Vertical	Pass
4	4882.400	50.65	-2.58	74.0	23.35	Peak	77.00	150	Vertical	Pass
4**	4882.400	46.24	-2.58	54.0	7.76	AV	77.00	150	Vertical	Pass
5	13336.950	55.49	1.03	74.0	18.51	Peak	0.00	150	Vertical	Pass
5**	13336.950	46.69	1.03	54.0	7.31	AV	0.00	150	Vertical	Pass
6	15823.350	56.02	1.72	74.0	17.98	Peak	326.00	400	Vertical	Pass
6**	15823.350	46.90	1.72	54.0	7.10	AV	326.00	400	Vertical	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT H

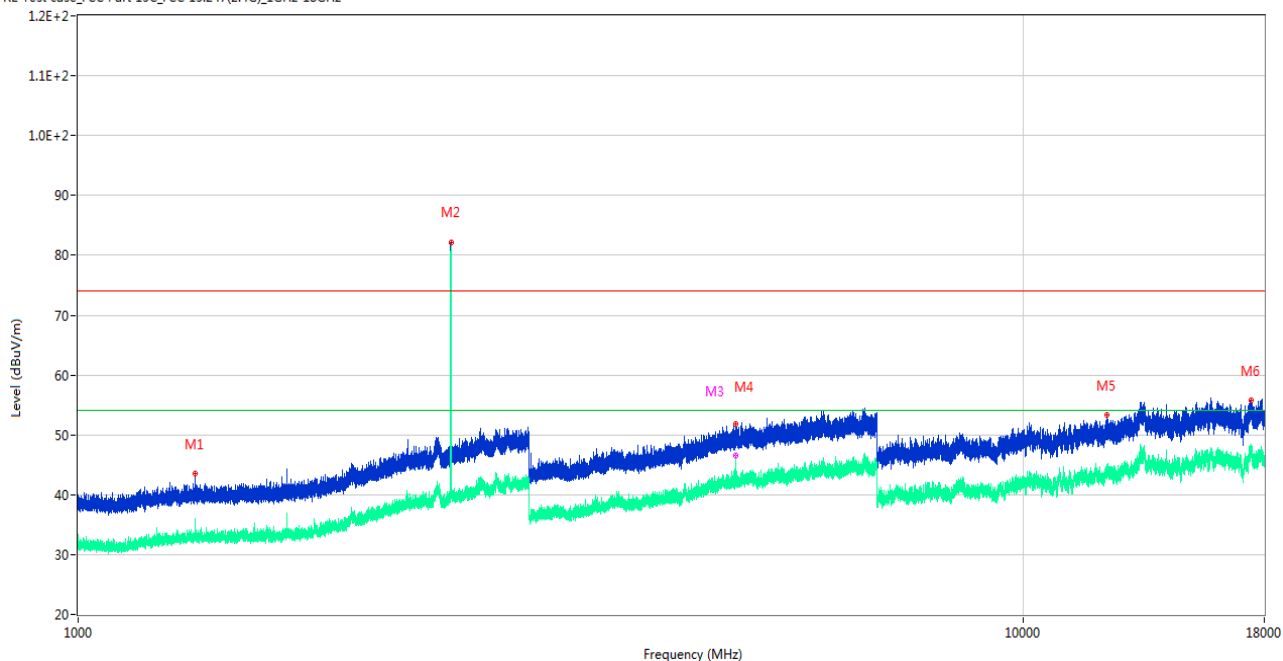
RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1000.100	42.86	-17.99	74.0	31.14	Peak	104.00	100	Horizontal	Pass
1**	1000.100	30.43	-17.99	54.0	23.57	AV	104.00	100	Horizontal	Pass
2	2479.800	94.63	-11.33	74.0	-20.63	Peak	270.00	150	Horizontal	N/A
2**	2479.800	93.70	-11.33	54.0	-39.70	AV	270.00	150	Horizontal	N/A
3	4959.600	49.82	-2.24	74.0	24.18	Peak	61.00	150	Horizontal	Pass
3**	4959.600	45.56	-2.24	54.0	8.44	AV	61.00	150	Horizontal	Pass
4	4959.800	52.01	-2.22	74.0	21.99	Peak	72.00	100	Horizontal	Pass
4**	4959.800	45.01	-2.22	54.0	8.99	AV	72.00	100	Horizontal	Pass
5	13324.088	55.58	0.92	74.0	18.42	Peak	123.00	150	Horizontal	Pass
5**	13324.088	47.29	0.92	54.0	6.71	AV	123.00	150	Horizontal	Pass
6	17403.075	56.39	3.26	74.0	17.61	Peak	178.00	300	Horizontal	Pass
6**	17403.075	46.90	3.26	54.0	7.10	AV	178.00	300	Horizontal	Pass

GFSK HIGH CHANNEL 1 GHz to 18 GHz, ANT V

RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.900	43.48	-17.00	74.0	30.52	Peak	90.00	200	Vertical	Pass
1**	1330.900	32.85	-17.00	54.0	21.15	AV	90.00	200	Vertical	Pass
2	2479.800	82.14	-11.33	74.0	-8.14	Peak	64.00	200	Vertical	N/A
2**	2479.800	80.44	-11.33	54.0	-26.44	AV	64.00	200	Vertical	N/A
3	4960.000	51.28	-2.23	74.0	22.72	Peak	88.00	150	Vertical	Pass
3**	4960.000	46.56	-2.23	54.0	7.44	AV	88.00	150	Vertical	Pass
4	4960.800	51.74	-2.34	74.0	22.26	Peak	88.00	100	Vertical	Pass
4**	4960.800	44.69	-2.34	54.0	9.31	AV	88.00	100	Vertical	Pass
5	12278.787	53.25	1.76	74.0	20.75	Peak	308.00	300	Vertical	Pass
5**	12278.787	44.24	1.76	54.0	9.76	AV	308.00	300	Vertical	Pass
6	17414.887	55.69	3.63	74.0	18.31	Peak	163.00	300	Vertical	Pass
6**	17414.887	46.97	3.63	54.0	7.03	AV	163.00	300	Vertical	Pass

A.9 Band Edge (Restricted-band band-edge)

Note ¹: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

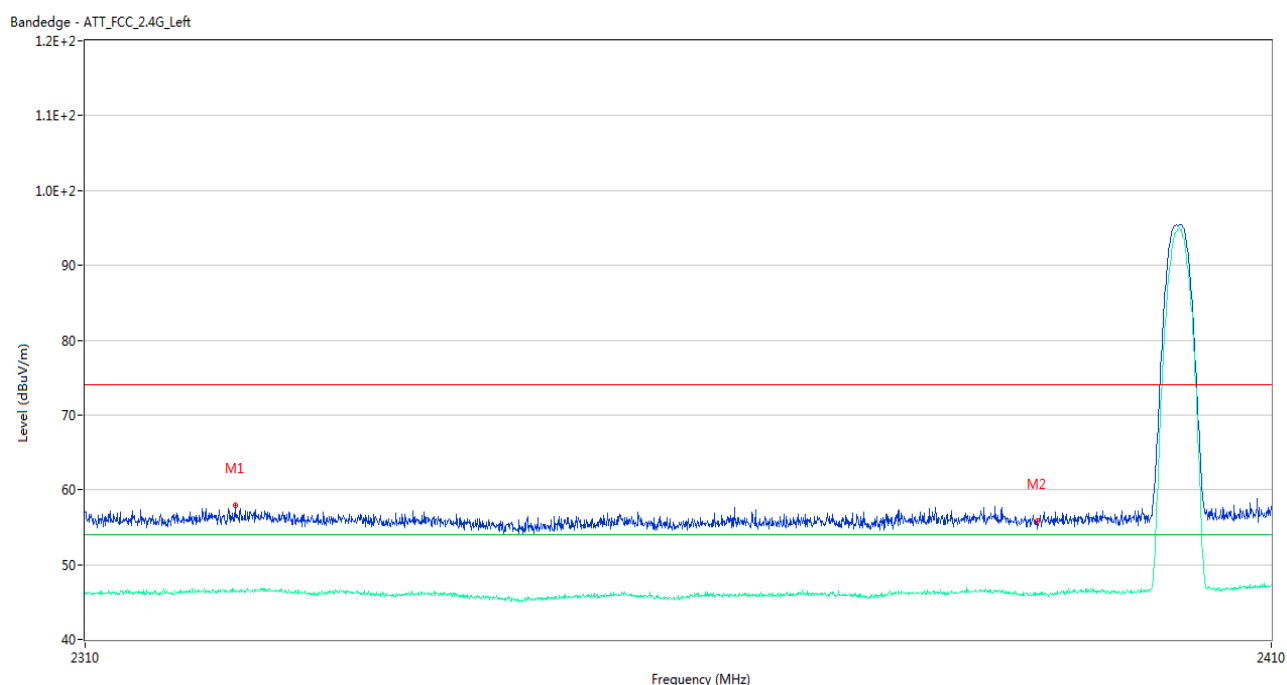
Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note ³: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note ⁴: The Level (dBuV/m) has been corrected by factor.

Test Data and Plots

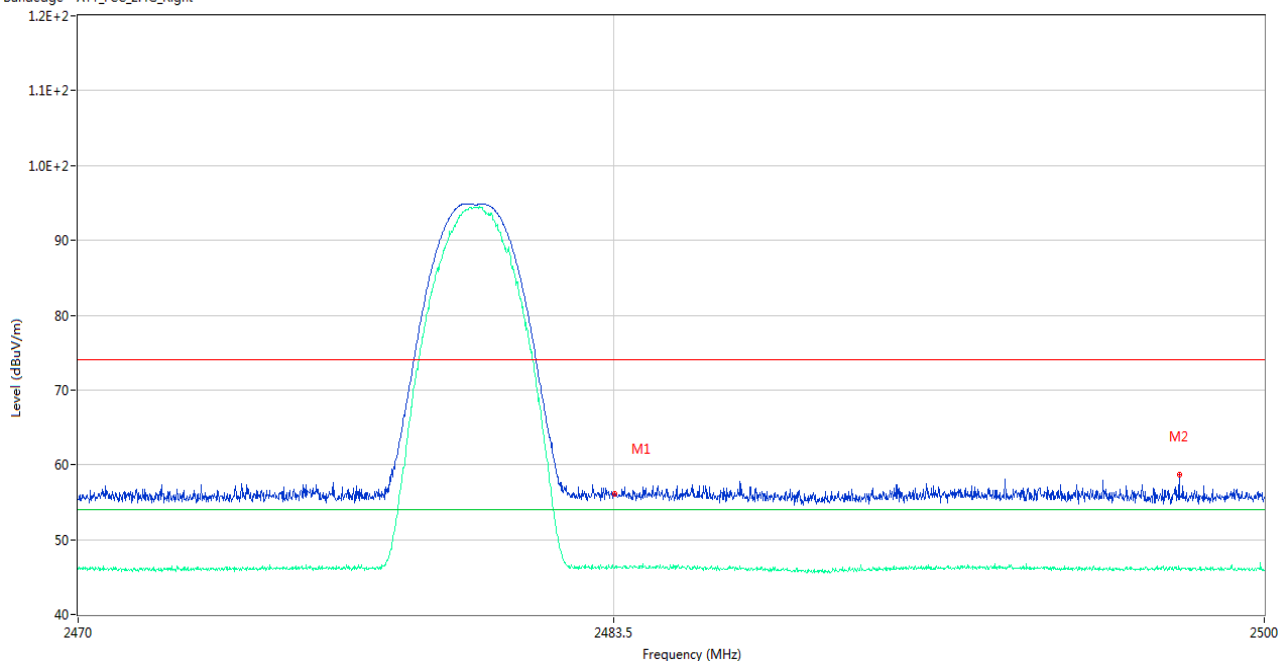
GFSK LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2322.400	57.95	1.63	74.0	16.05	Peak	258.00	150	Horizontal	Pass
1**	2322.400	46.38	1.63	54.0	7.62	AV	258.00	150	Horizontal	Pass
2	2389.950	55.79	1.92	74.0	18.21	Peak	277.00	100	Horizontal	Pass
2**	2389.950	46.00	1.92	54.0	8.00	AV	277.00	100	Horizontal	Pass

GFSK HIGH CHANNEL

Bandedge - ATT_FCC_2.4G_Right



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.515	56.12	2.11	74.0	17.88	Peak	187.00	100	Horizontal	Pass
1**	2483.515	46.12	2.11	54.0	7.88	AV	187.00	100	Horizontal	Pass
2	2497.840	58.74	1.68	74.0	15.26	Peak	231.00	150	Horizontal	Pass
2**	2497.840	46.08	1.68	54.0	7.92	AV	231.00	150	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2430881-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2430881-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2430881-AI.PDF”.

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--END OF REPORT--