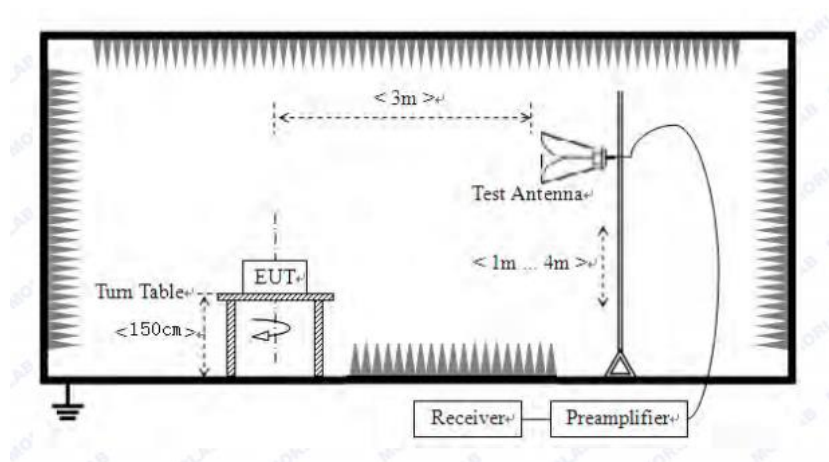


9. Band Edge Compliance

9.1. Block Diagram of Test Setup



9.2. Limit

All the lower and upper band-edges emissions appearing within restricted frequency bands shall not exceed the limits shown in FCC part 15.209 and RSS-GEN, all the other emissions outside operation shall be at least 20dB below the fundamental emissions, or comply with FCC part 15.209 and RSS-GEN limits.

9.3. Test Procedure

Refer to ANSI C 63.10, Clause 6.10.

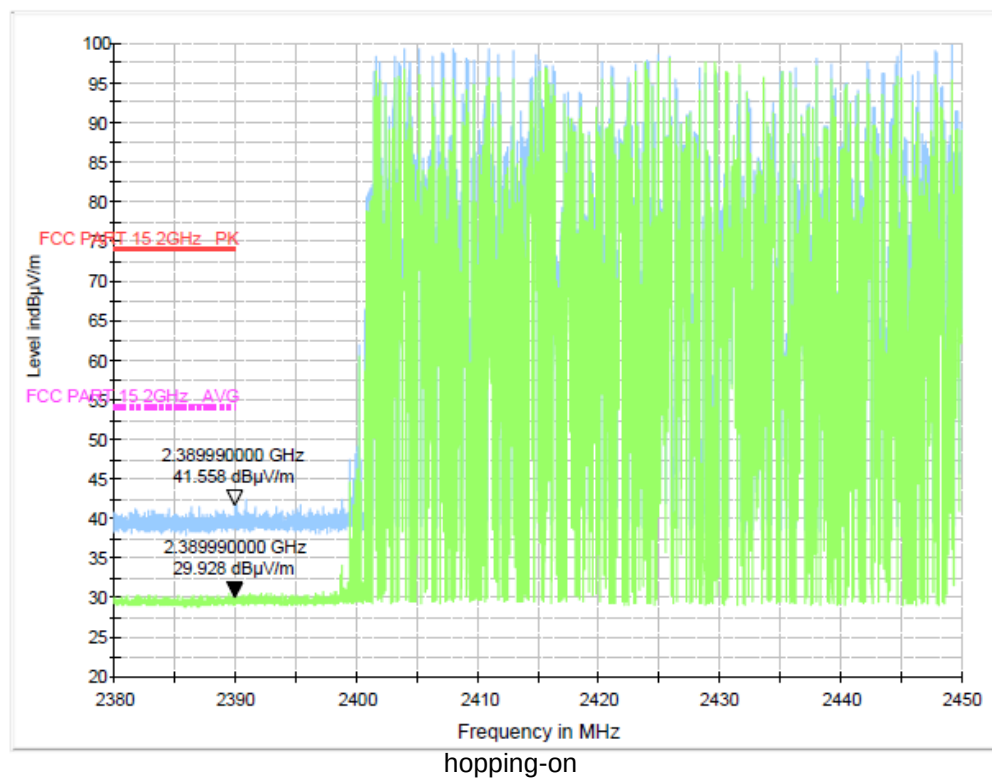
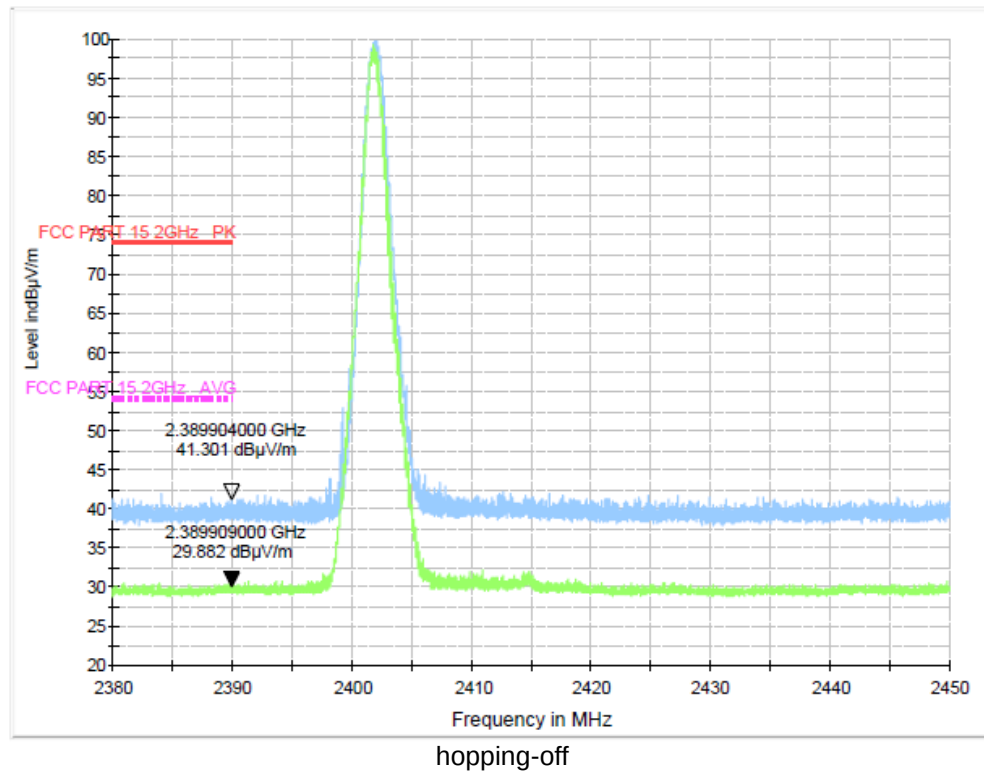
All restriction band and non- restriction band have been tested, only worse case is reported.

9.4. Test Result

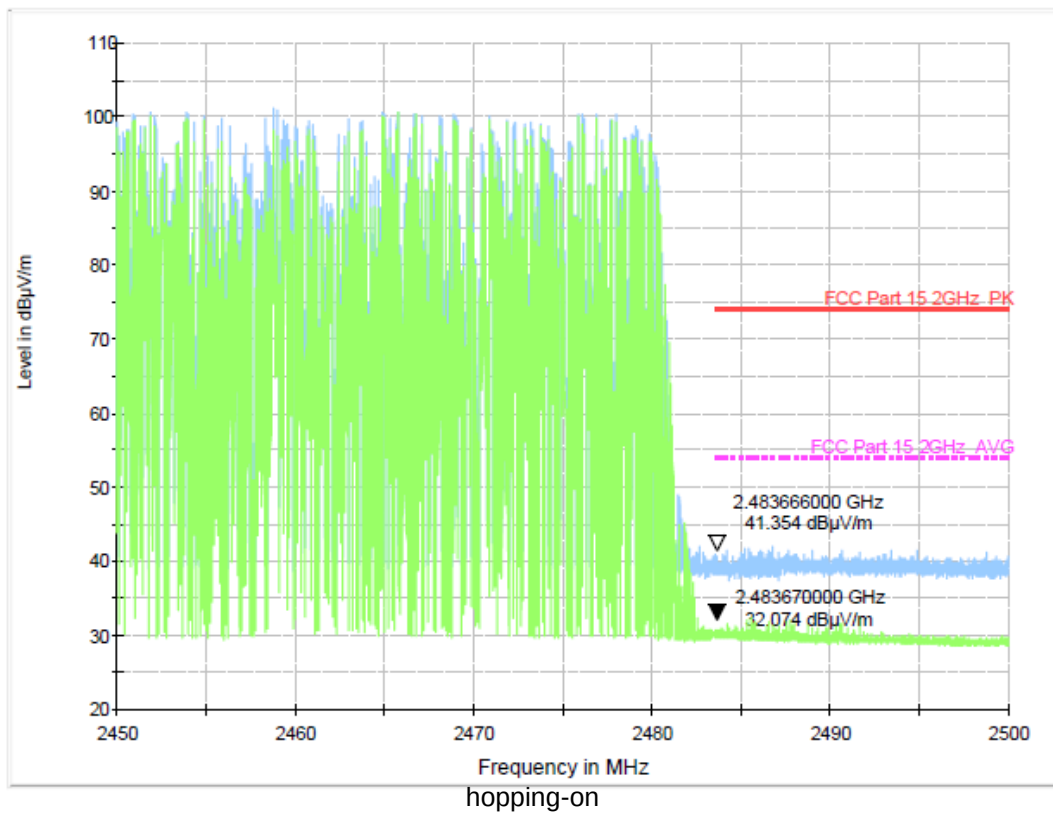
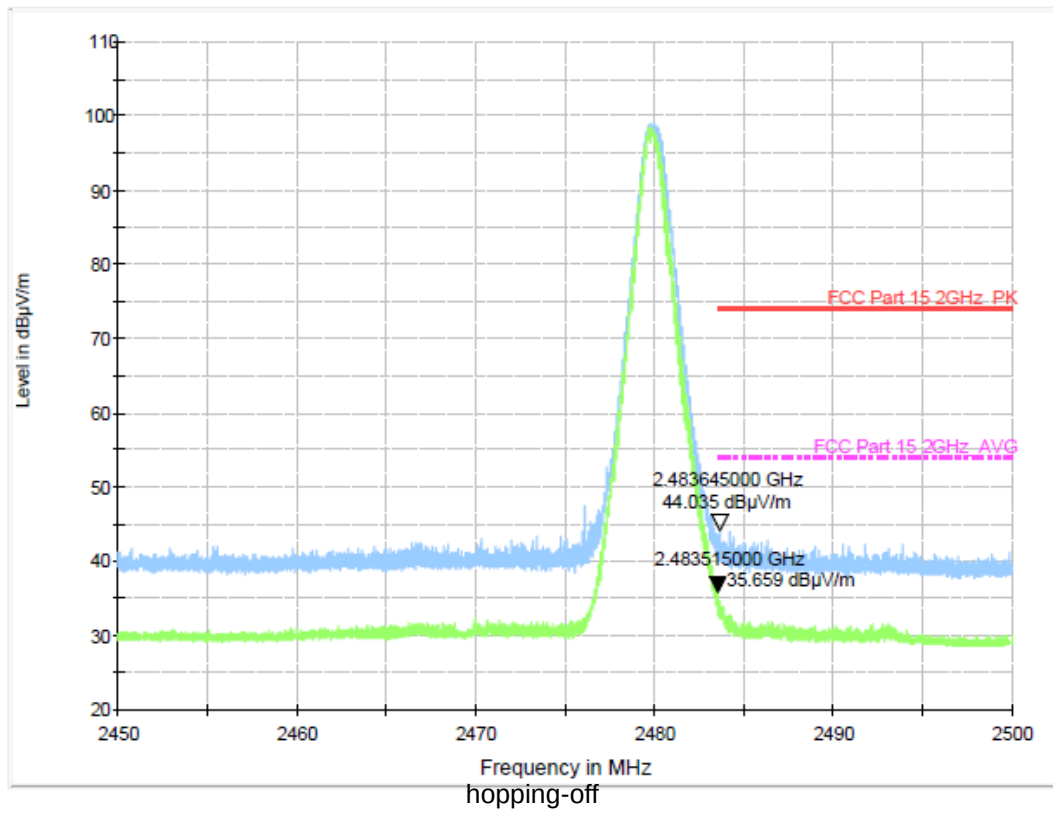
PASS. (See below detailed test data)

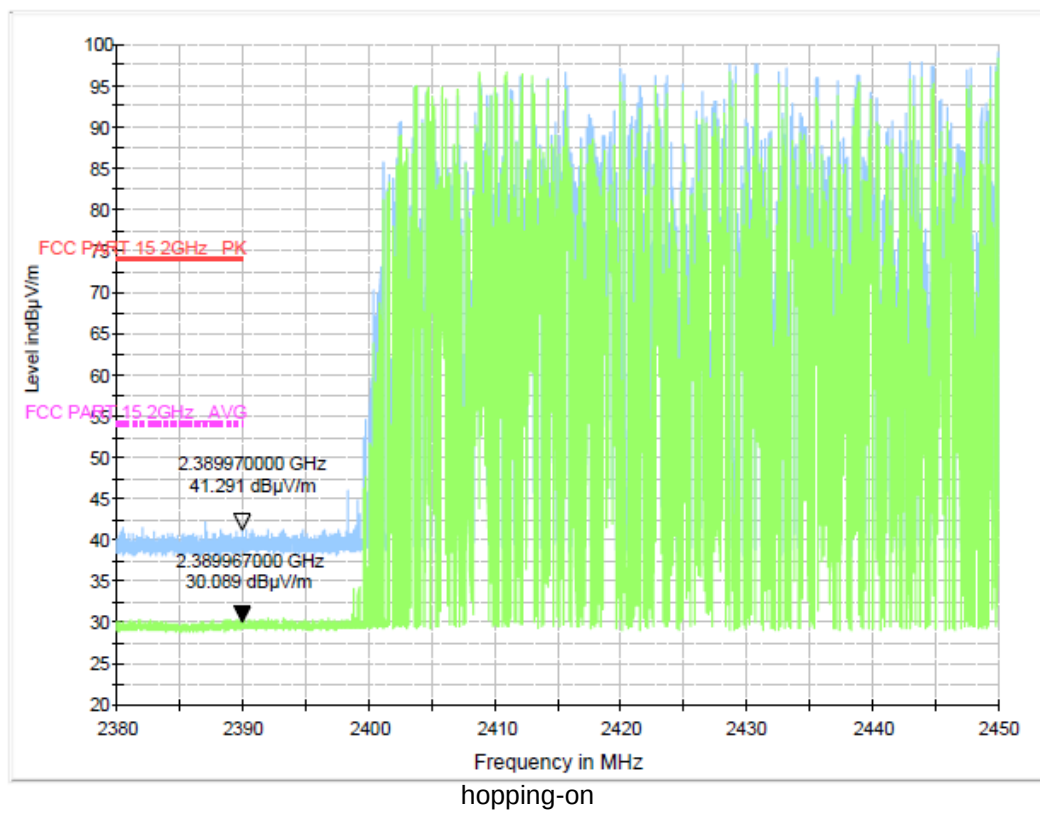
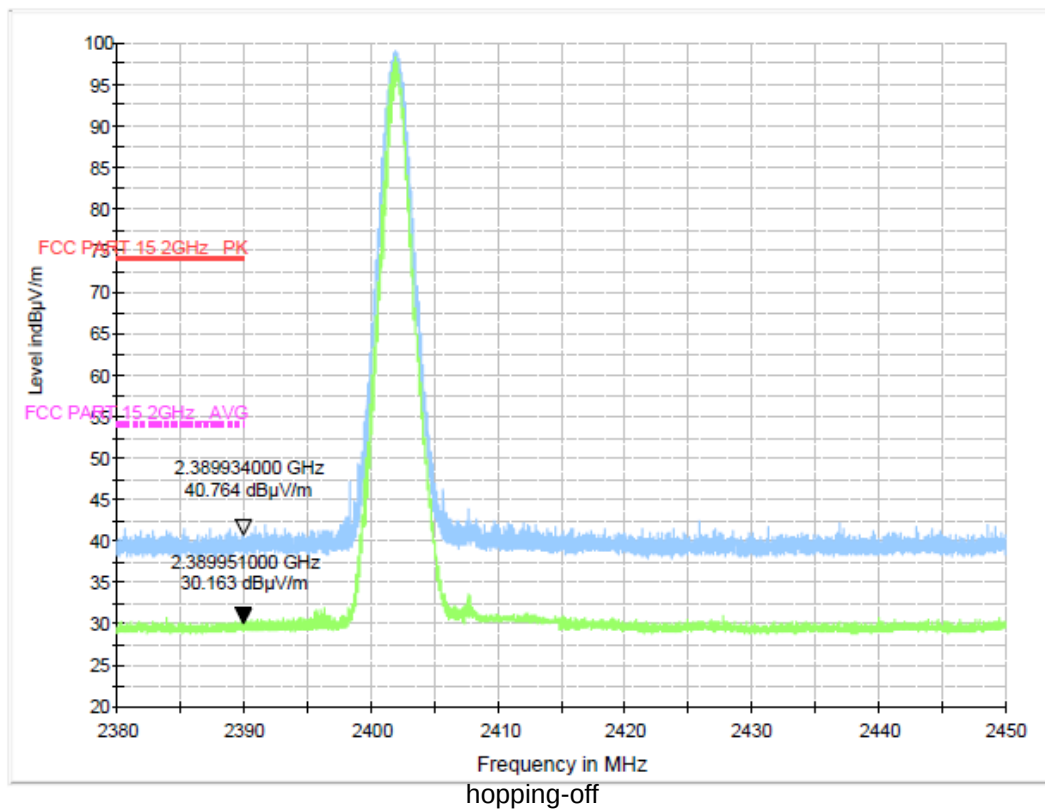
Radiated Method:

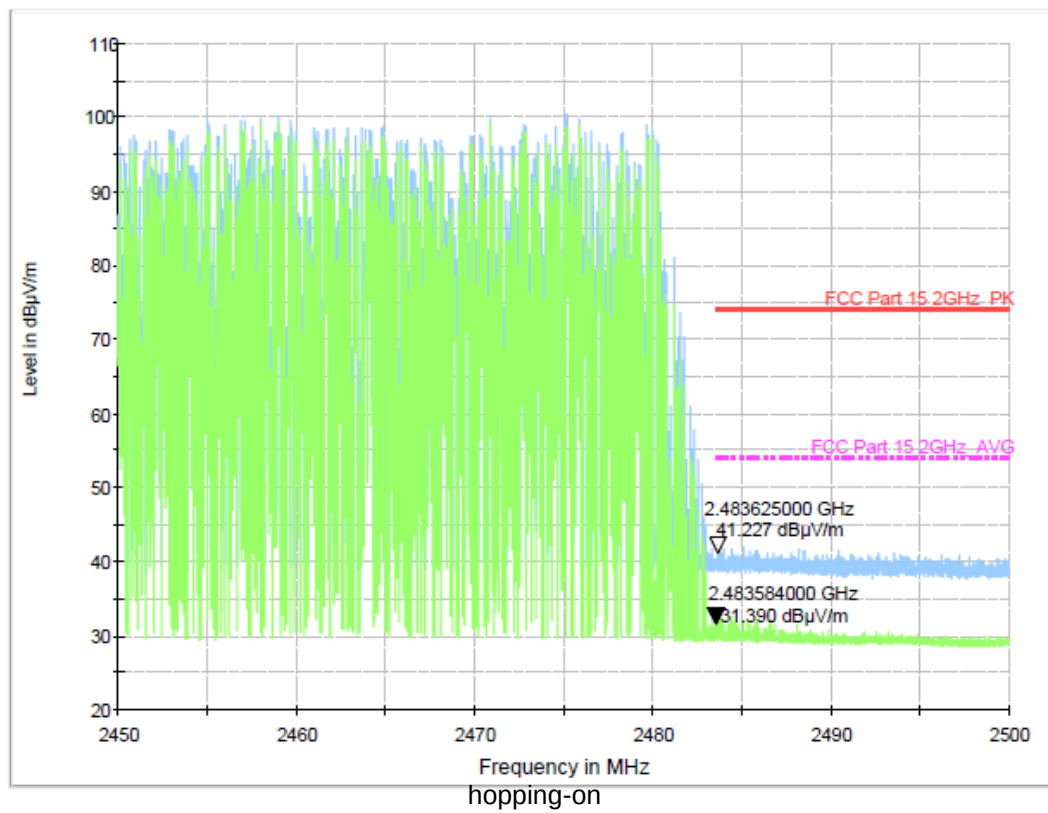
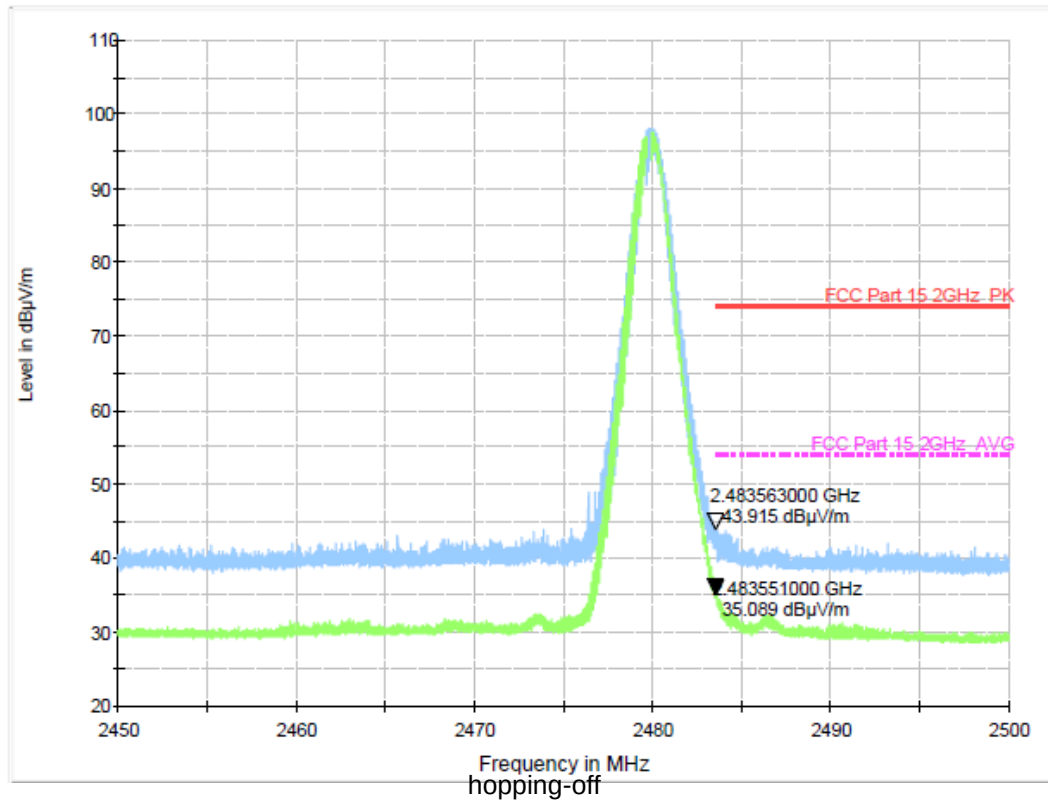
Test Mode: GFSK-Low



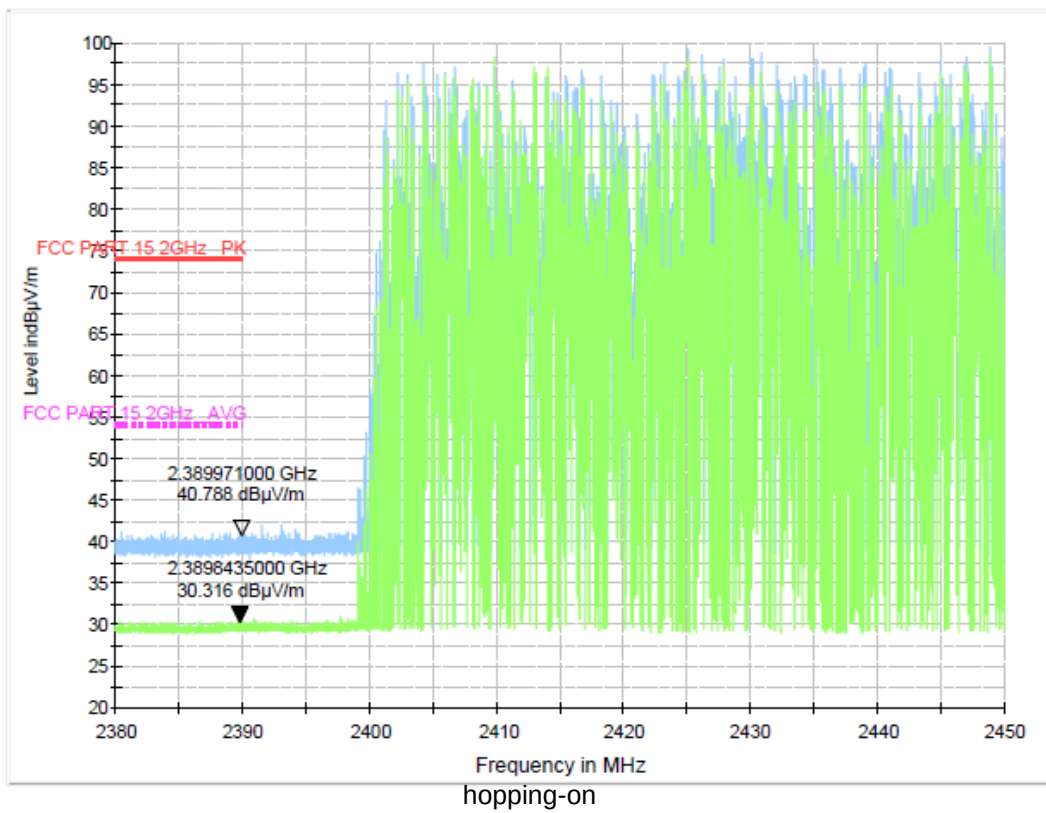
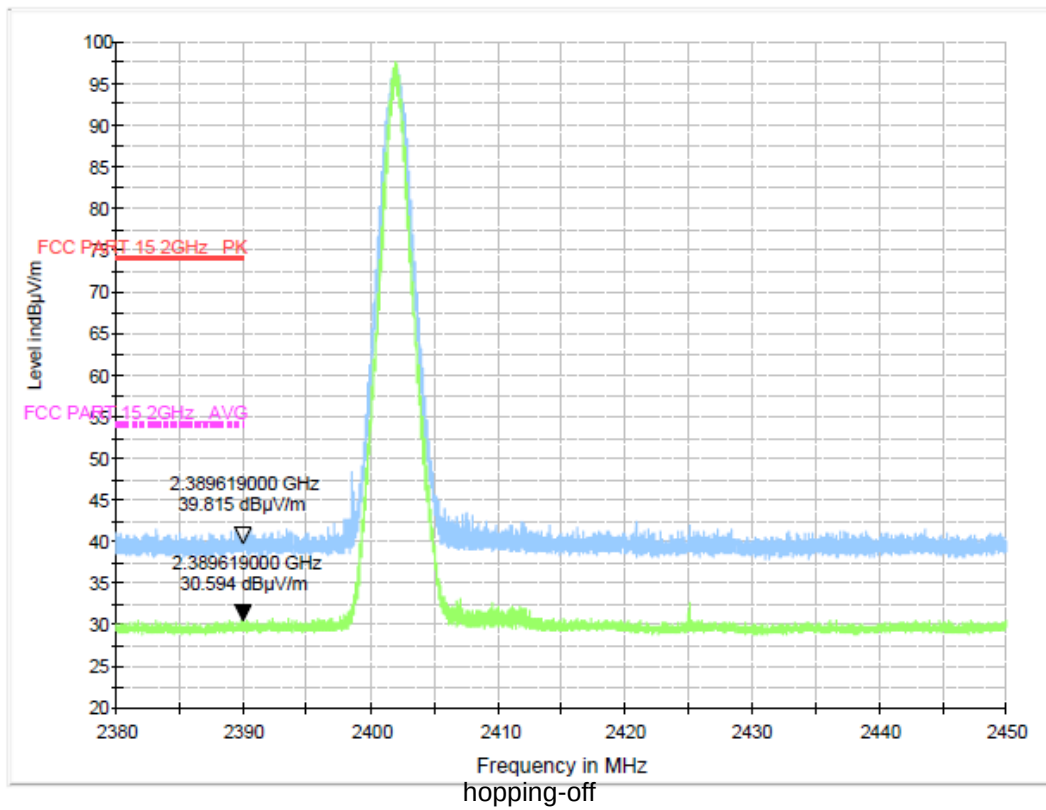
Test Mode: GFSK-High



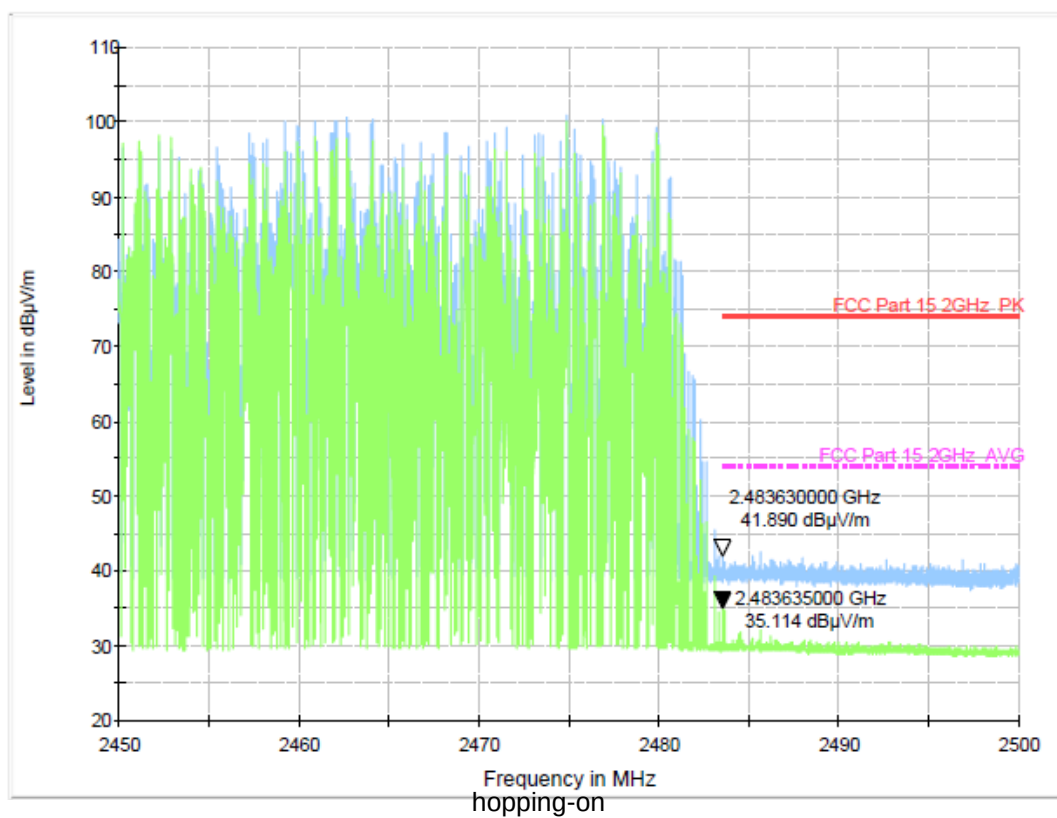
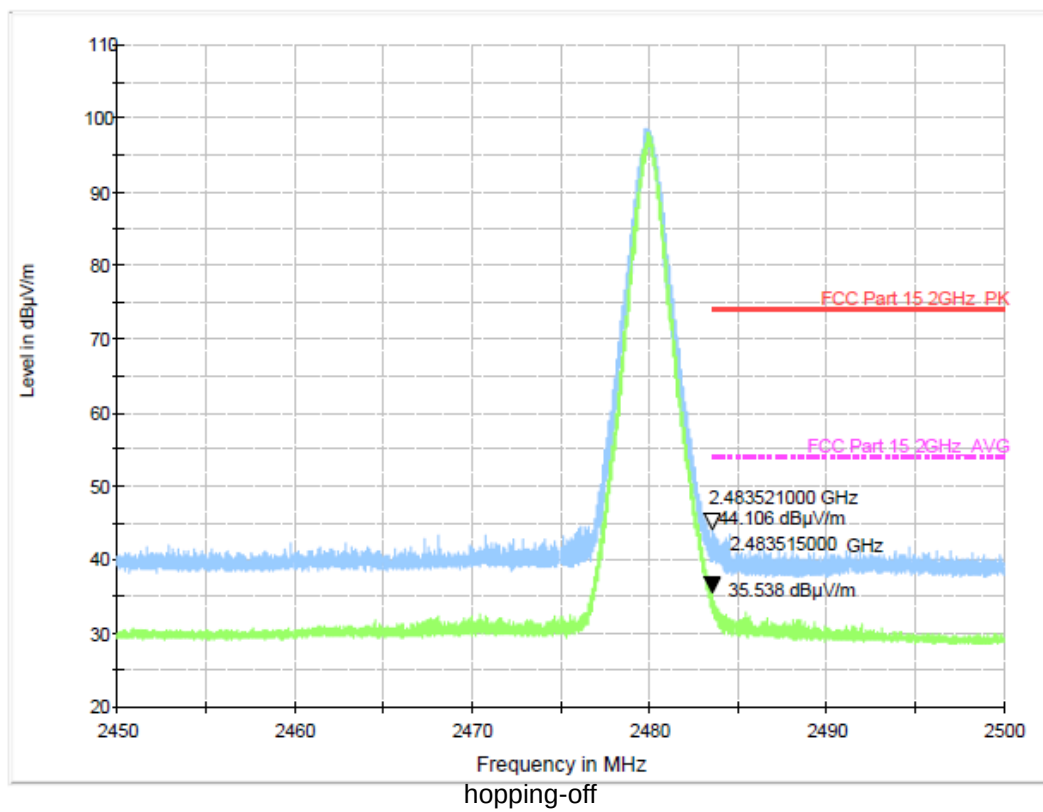
Test Mode: $\pi/4$ DQPSK-Low

Test Mode: $\pi/4$ DQPSK-High

Test Mode: 8DPSK-Low



Test Mode: 8DPSK-High



Note: 1. *:Maximum data; x:Over limit; !:over margin.

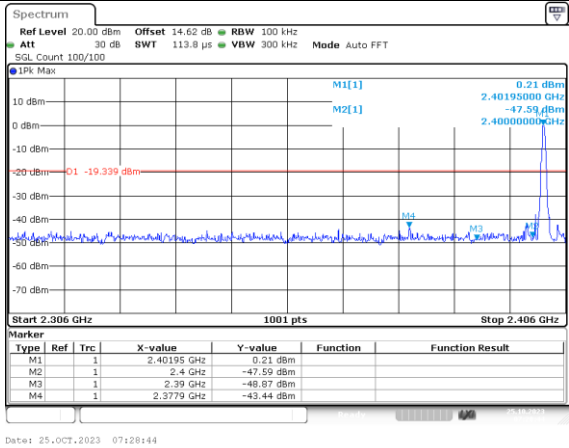
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Conducted Method

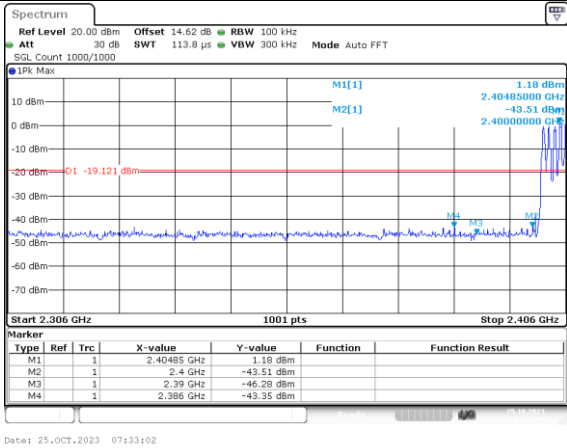
GFSK Mode:

Test channel:

Lowest channel



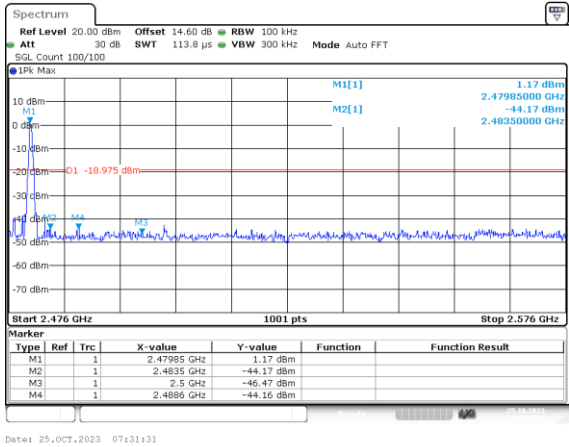
No-hopping mode



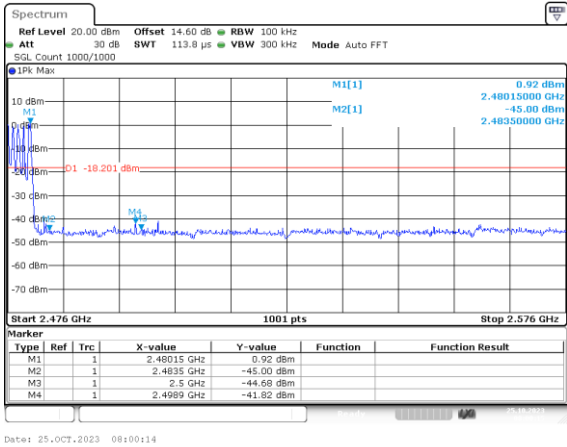
Hopping mode

Test channel:

Highest channel



No-hopping mode

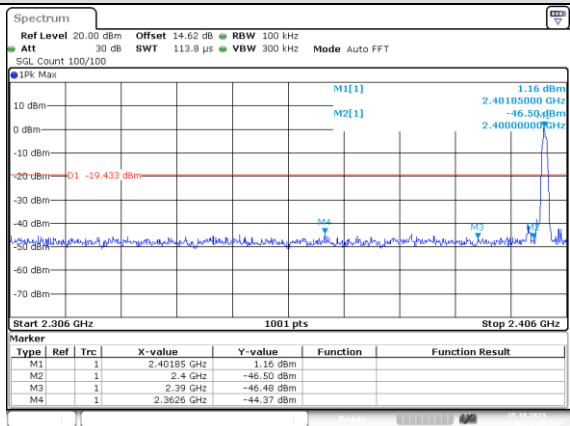


Hopping mode

Pi/4QPSK Mode:

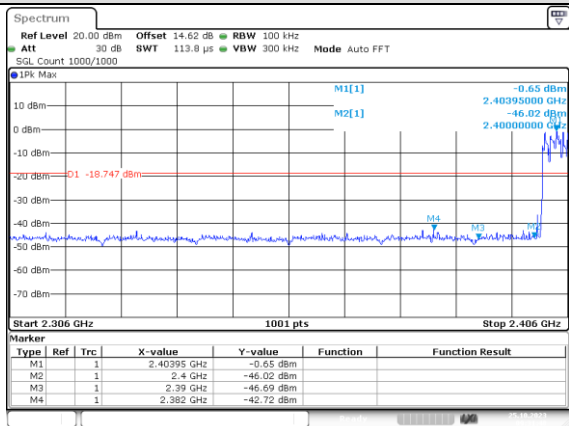
Test channel:

Lowest channel



Date: 25.OCT.2023 09:22:25

No-hopping mode

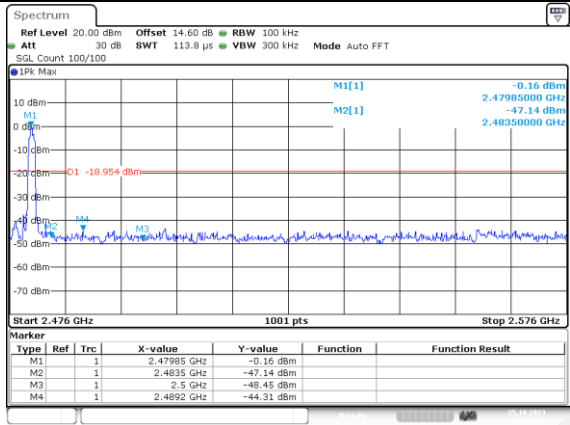


Date: 25.OCT.2023 09:31:48

Hopping mode

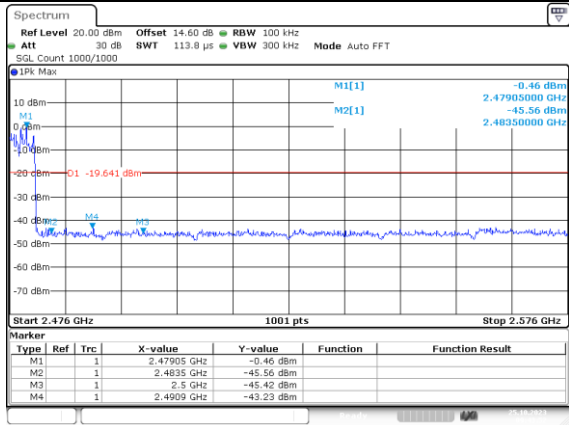
Test channel:

Highest channel



Date: 25.OCT.2023 09:29:05

No-hopping mode

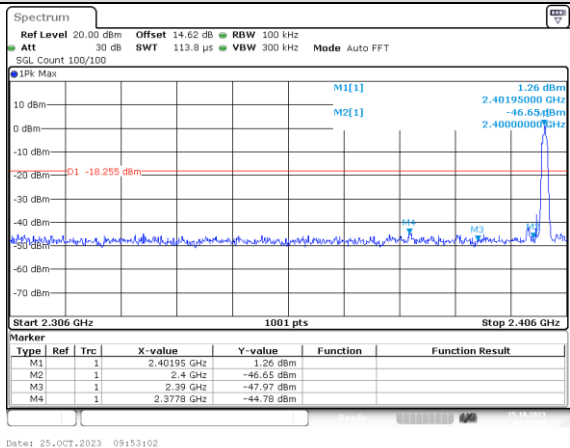


Date: 25.OCT.2023 09:43:52

Hopping mode

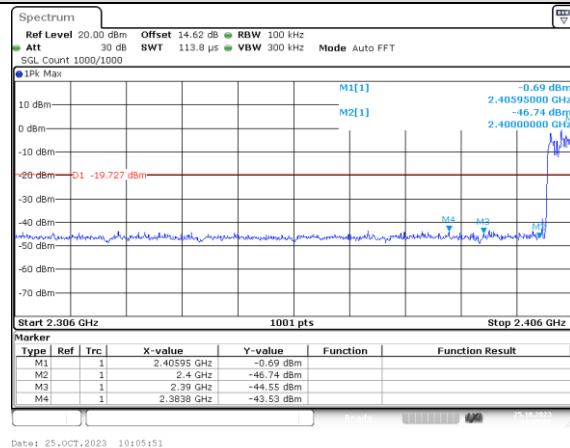
8DPSK Mode:

Test channel:



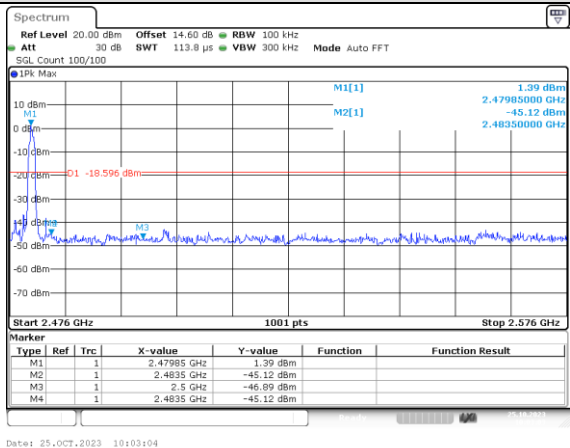
No-hopping mode

Lowest channel



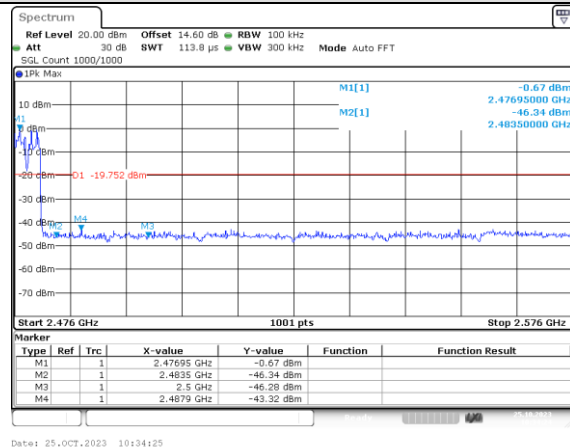
Hopping mode

Test channel:



No-hopping mode

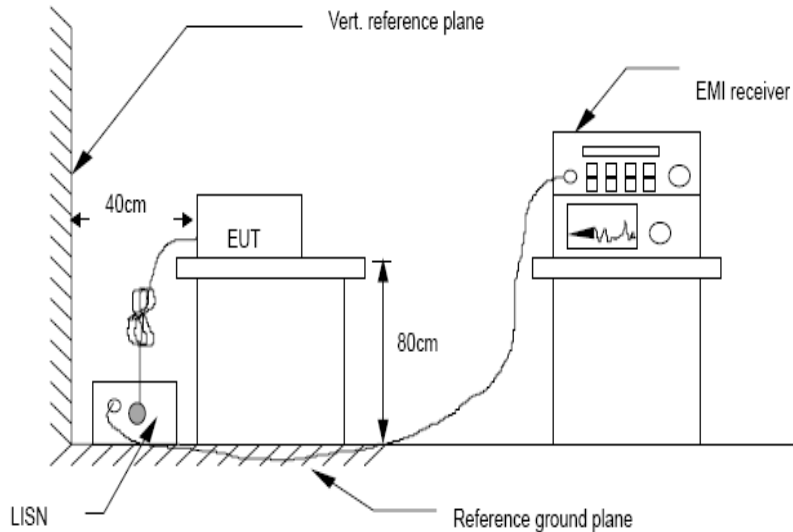
Highest channel



Hopping mode

10. Power Line Conducted Emissions

10.1. Block Diagram of Test Setup



10.2. Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

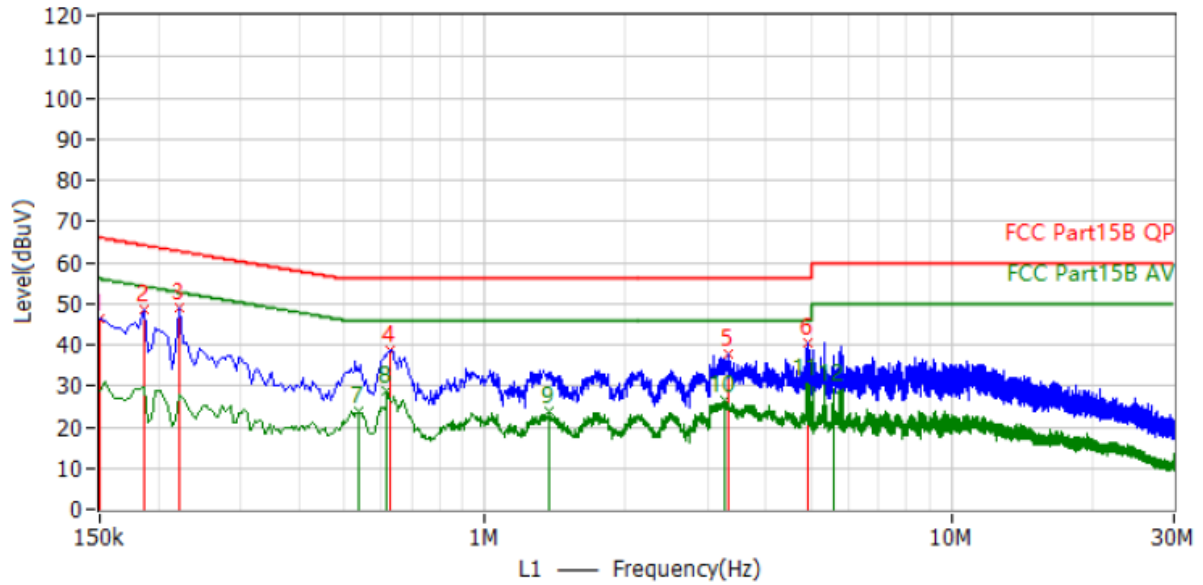
10.3. Test Procedure

- (1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
- (2) Setup the EUT and simulator as shown in 10.1
- (3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013on conducted Emission test.
- (4) The bandwidth of test receiver is set at 10KHz.
- (5) The frequency range from 150 KHz to 30MHz is checked.

10.4. Test Result

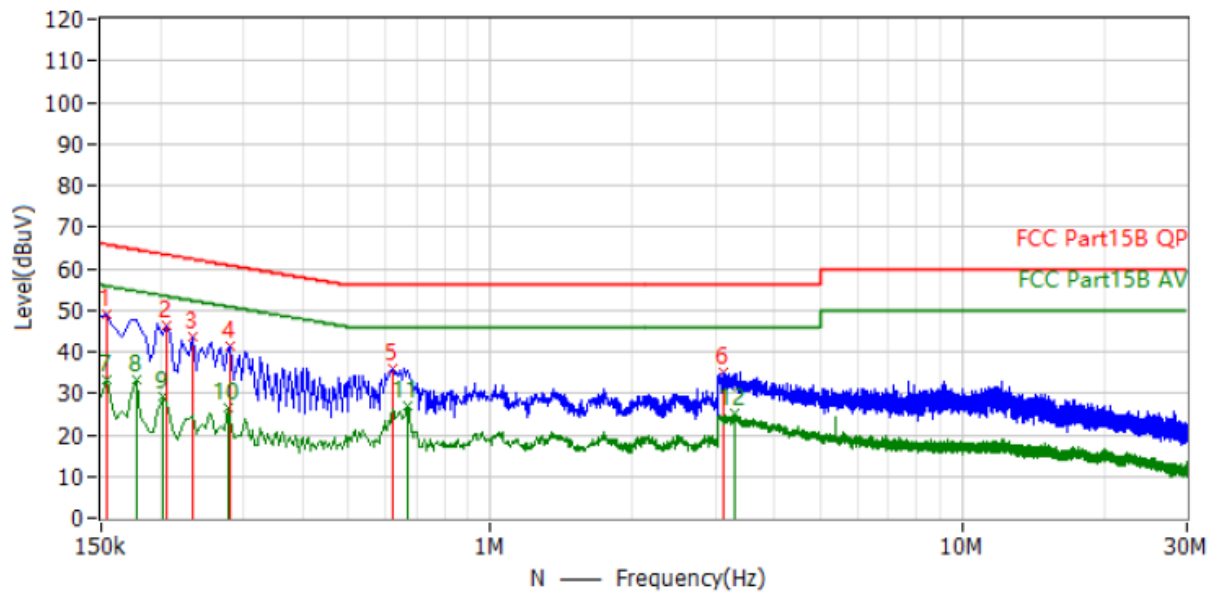
Pass

Polarity: L



No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Factor dB	Detector	Polar
1*	150.000 kHz	66.0	46.4	-19.6	9.7	PK	L1
2*	186.000 kHz	64.2	48.5	-15.7	9.7	PK	L1
3*	222.000 kHz	62.7	48.8	-13.9	9.7	PK	L1
4*	630.000 kHz	56.0	38.7	-17.3	9.8	PK	L1
5*	3.322 MHz	56.0	37.6	-18.4	9.9	PK	L1
6*	4.914 MHz	56.0	40.3	-15.7	10.0	PK	L1
7*	538.000 kHz	46.0	23.9	-22.1	9.8	AV	L1
8*	618.000 kHz	46.0	28.6	-17.4	9.8	AV	L1
9*	1.374 MHz	46.0	23.7	-22.3	9.9	AV	L1
10*	3.266 MHz	46.0	26.3	-19.7	9.9	AV	L1
11*	4.910 MHz	46.0	30.7	-15.3	10.0	AV	L1
12*	5.578 MHz	50.0	29.1	-20.9	10.0	AV	L1

Polarity: N



No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Factor dB	Detector	Polar
1*	154.000 kHz	65.8	49.2	-16.6	9.7	PK	N
2*	206.000 kHz	63.4	46.5	-16.9	9.7	PK	N
3*	234.000 kHz	62.3	43.4	-18.9	9.7	PK	N
4*	282.000 kHz	60.8	41.4	-19.4	9.7	PK	N
5*	622.000 kHz	56.0	36.0	-20.0	9.7	PK	N
6*	3.122 MHz	56.0	35.2	-20.8	9.9	PK	N
7*	154.000 kHz	55.8	33.2	-22.5	9.7	AV	N
8*	178.000 kHz	54.6	33.1	-21.5	9.7	AV	N
9*	202.000 kHz	53.5	29.0	-24.6	9.7	AV	N
10*	278.000 kHz	50.9	26.3	-24.6	9.7	AV	N
11*	670.000 kHz	46.0	26.8	-19.2	9.7	AV	N
12*	3.310 MHz	46.0	25.3	-20.7	9.9	AV	N

Remark: All modes have been tested, and only worst data of GFSK mode, Channel 2441MHz was listed in this report.

11. Antenna Requirements

11.1.Limit

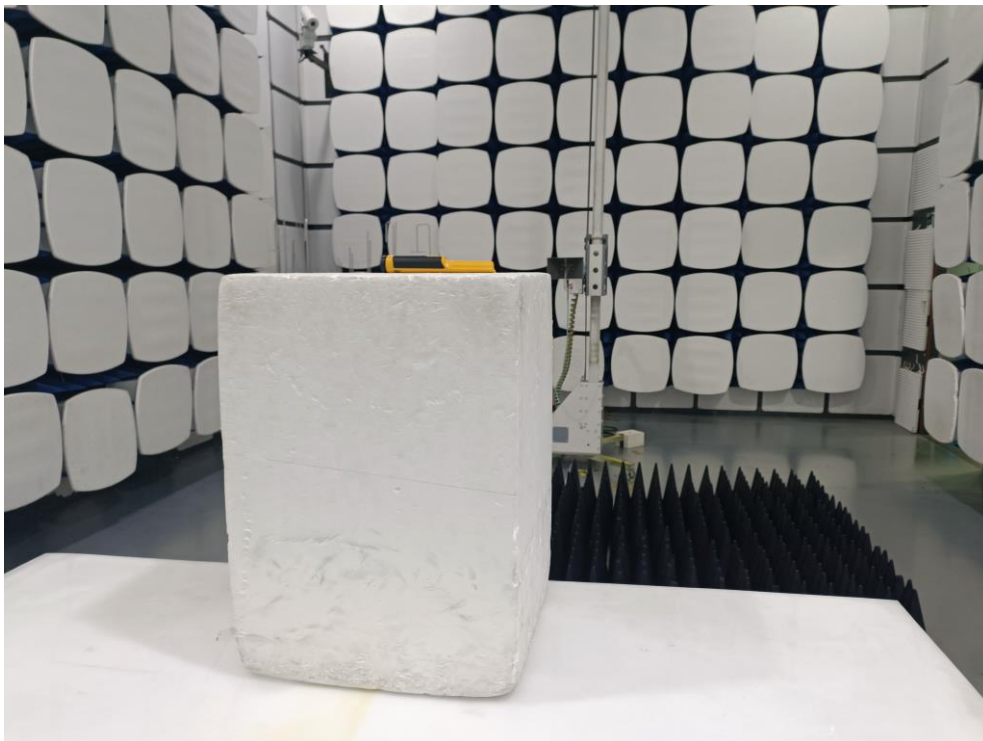
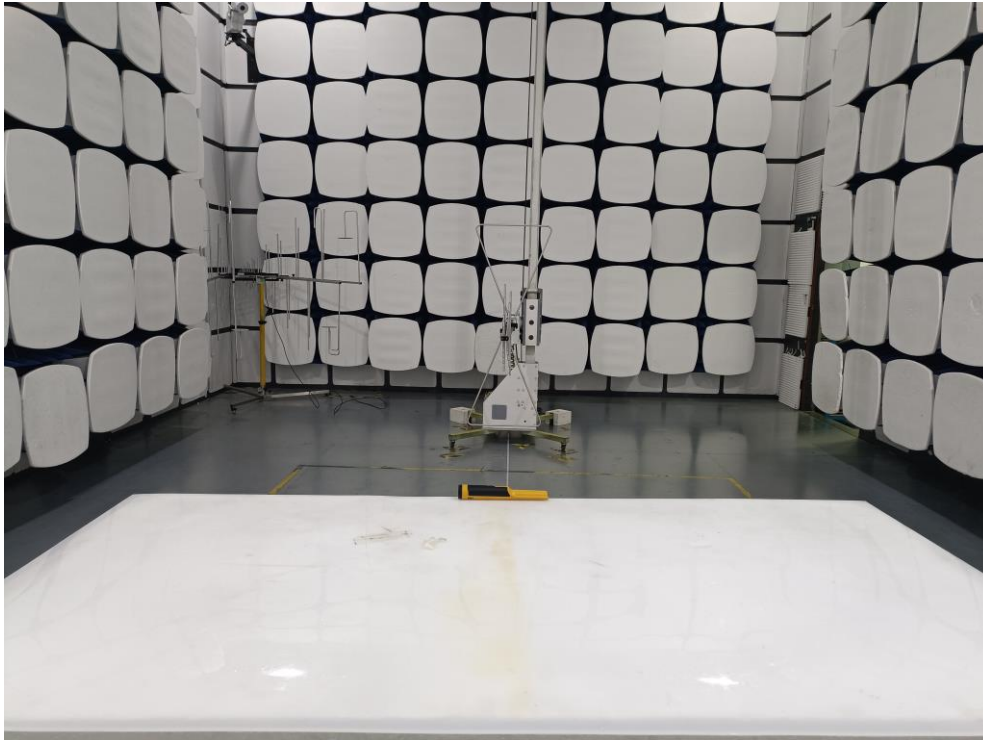
For intentional device, according to FCC 47 CFR Section 15.203 and RSS-GEN, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2.Result

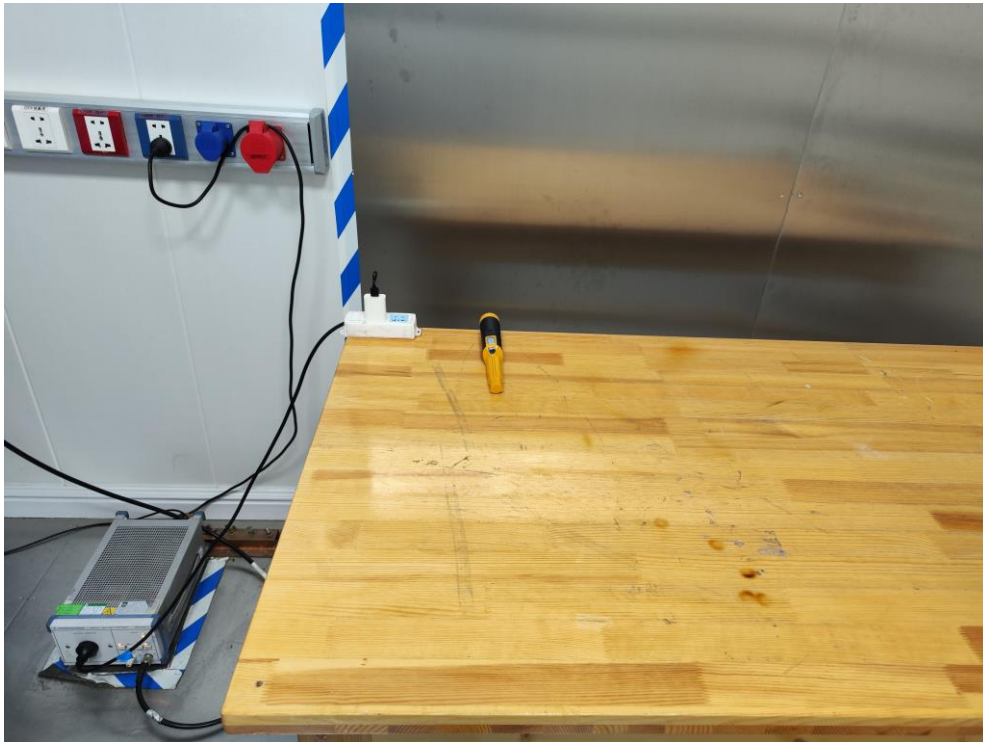
The EUT antenna is internal antenna. It complies with the standard requirement.

12. Test Setup Photo

12.1. Photos of Radiated emission



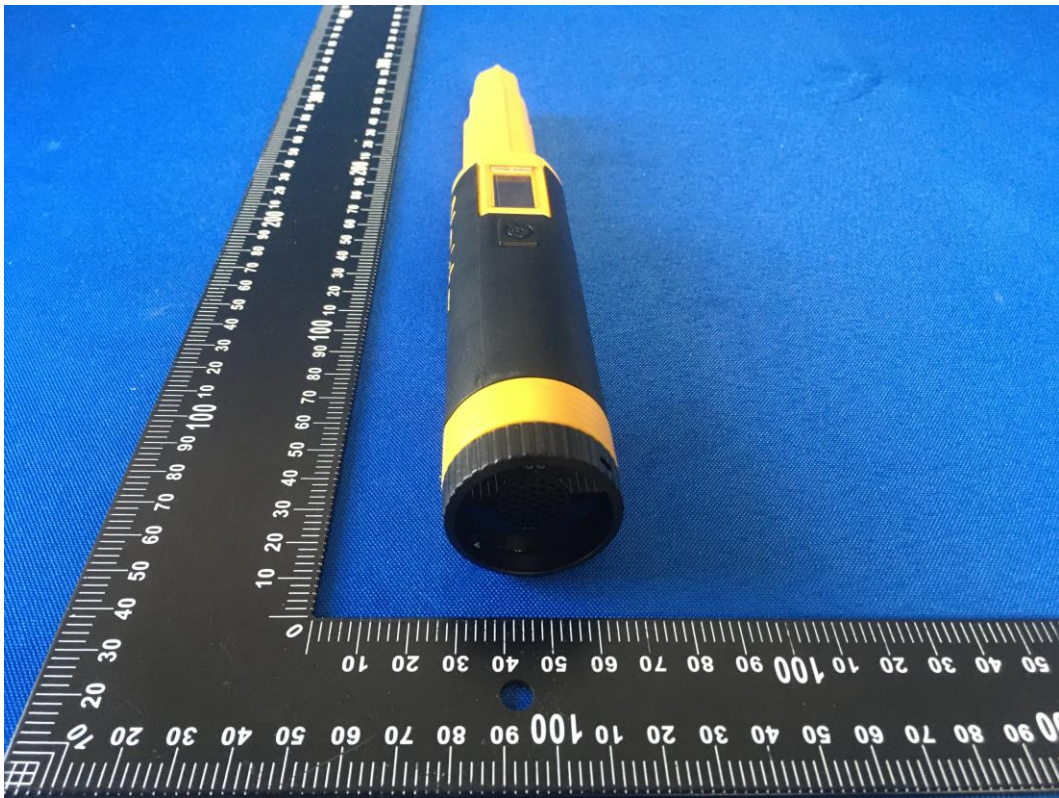
12.2. Power Line Conducted Emissions

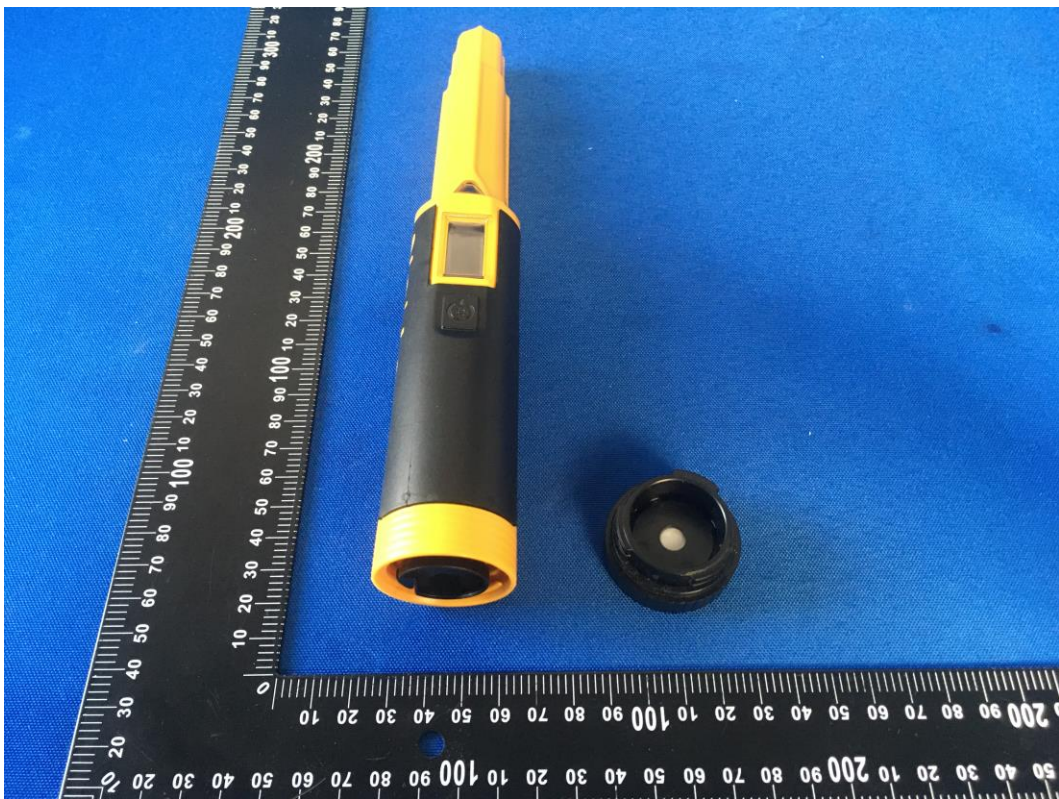


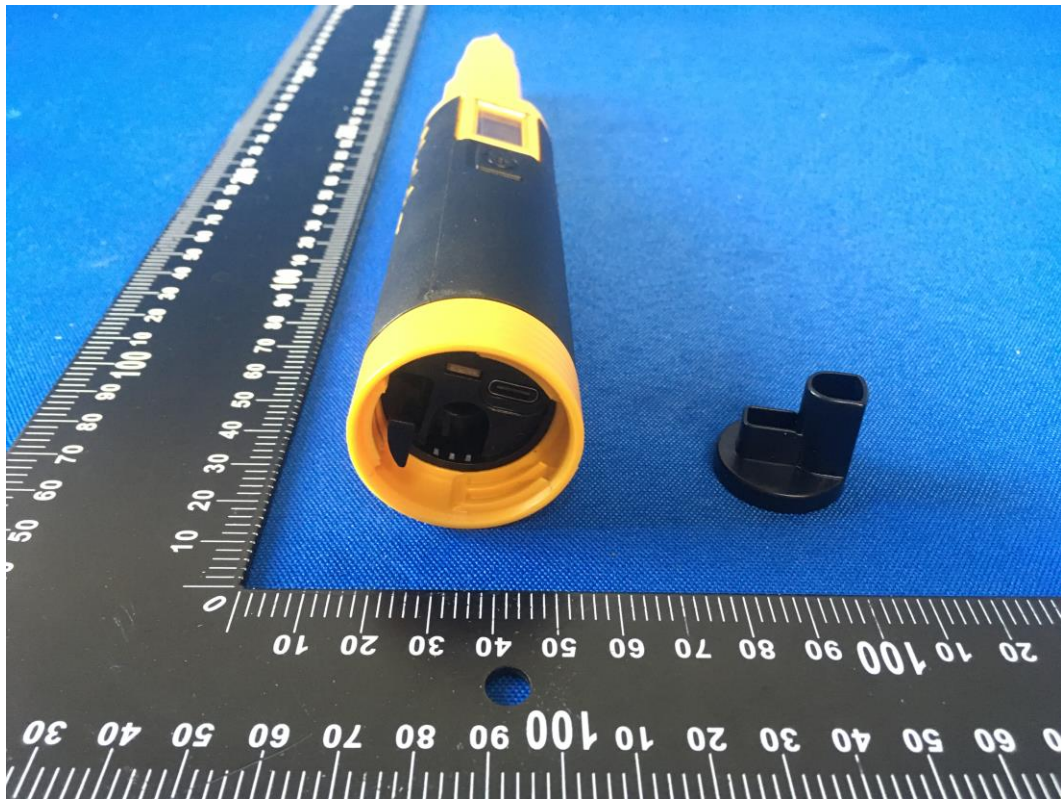
13. EUT Photo

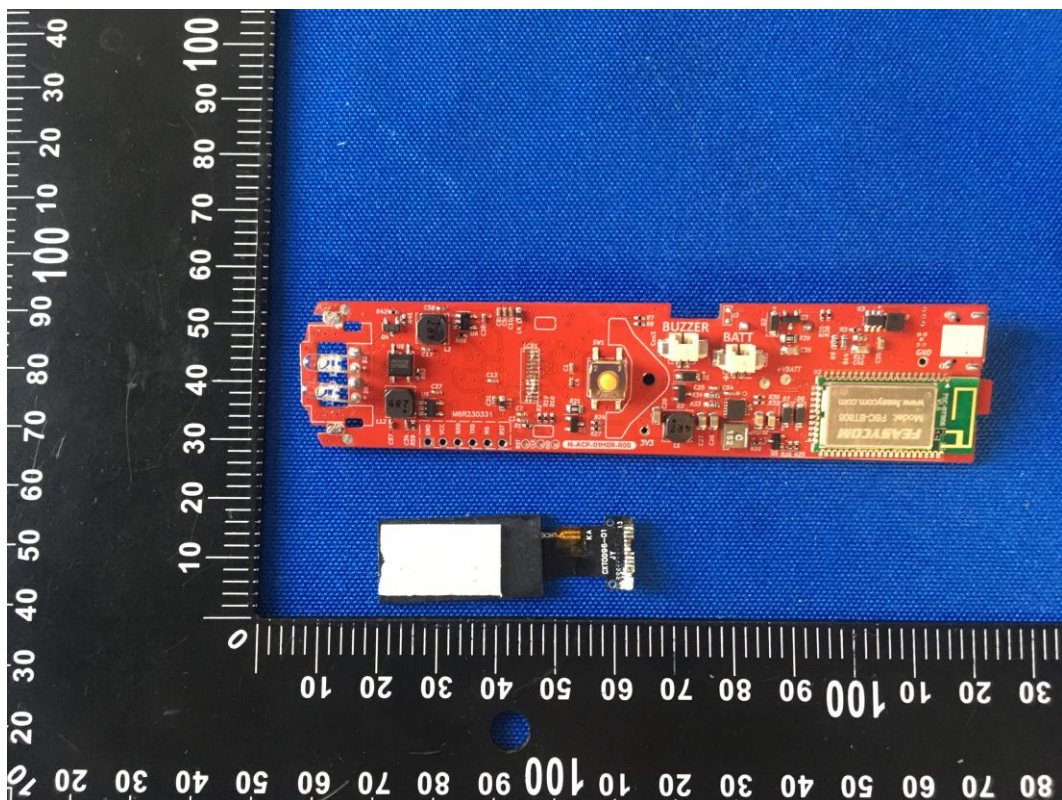
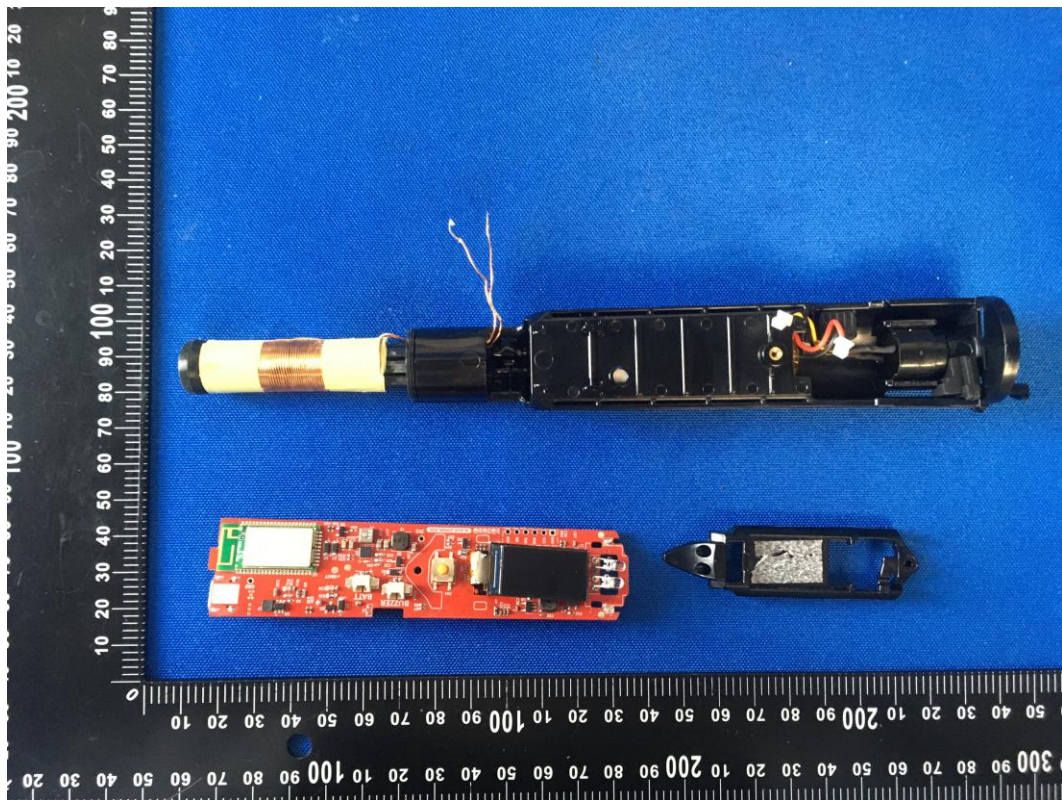


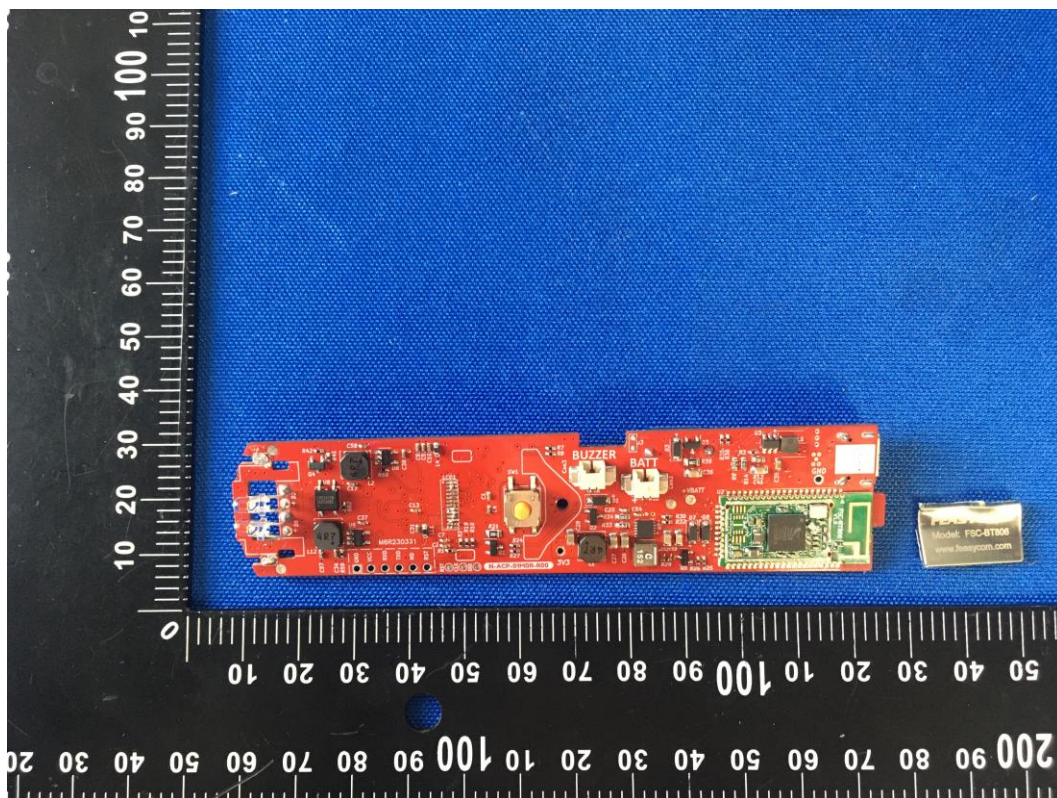
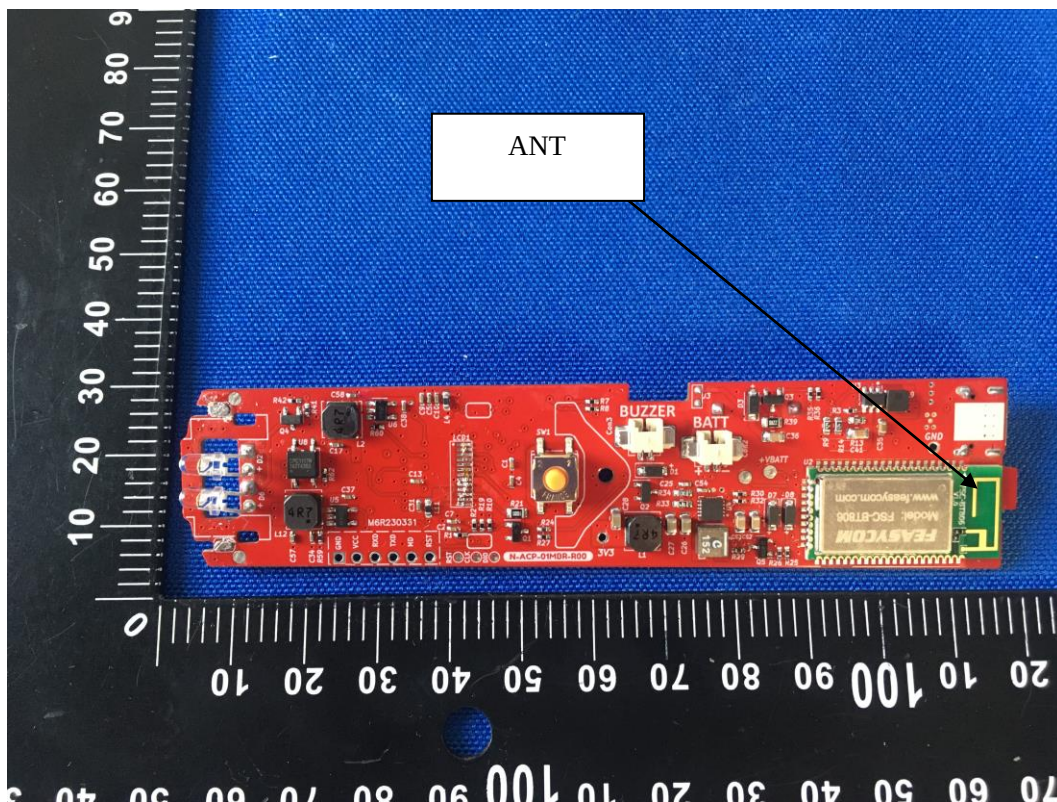


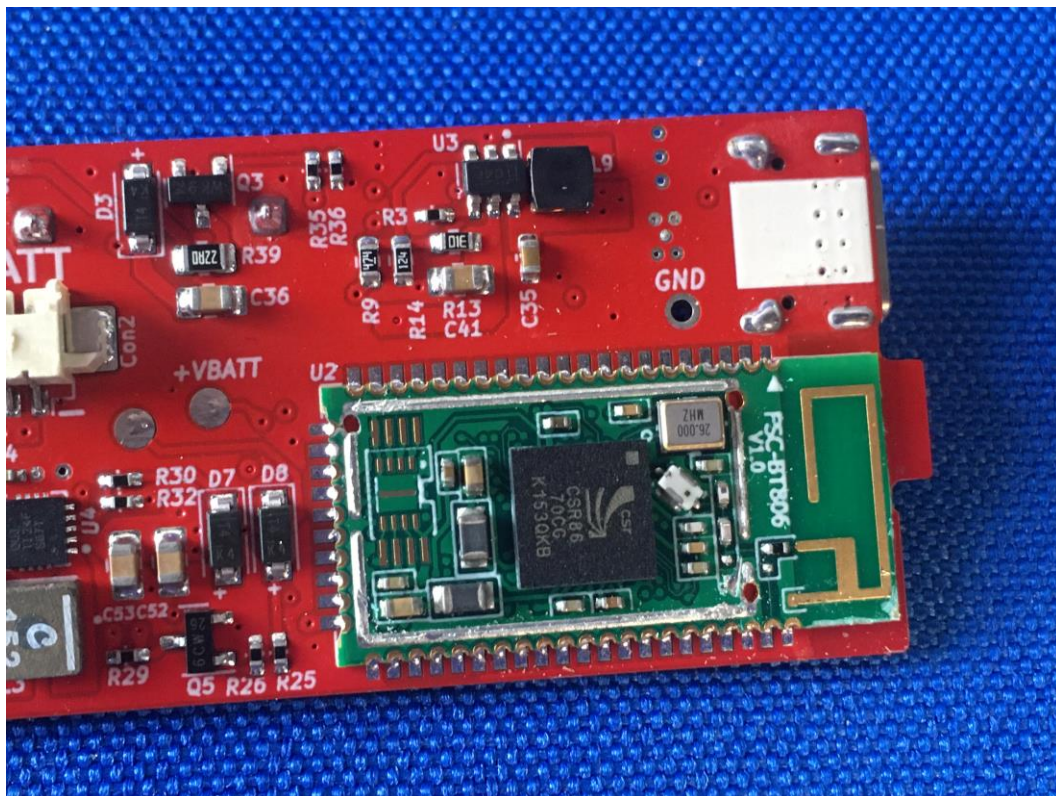
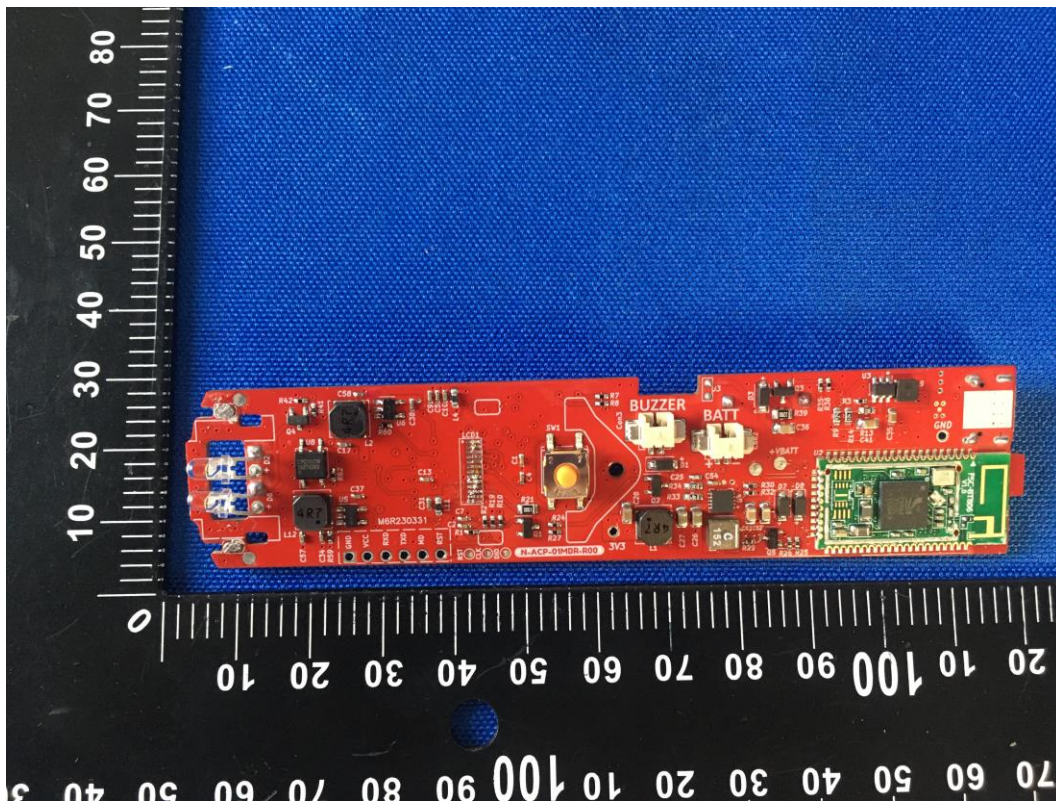


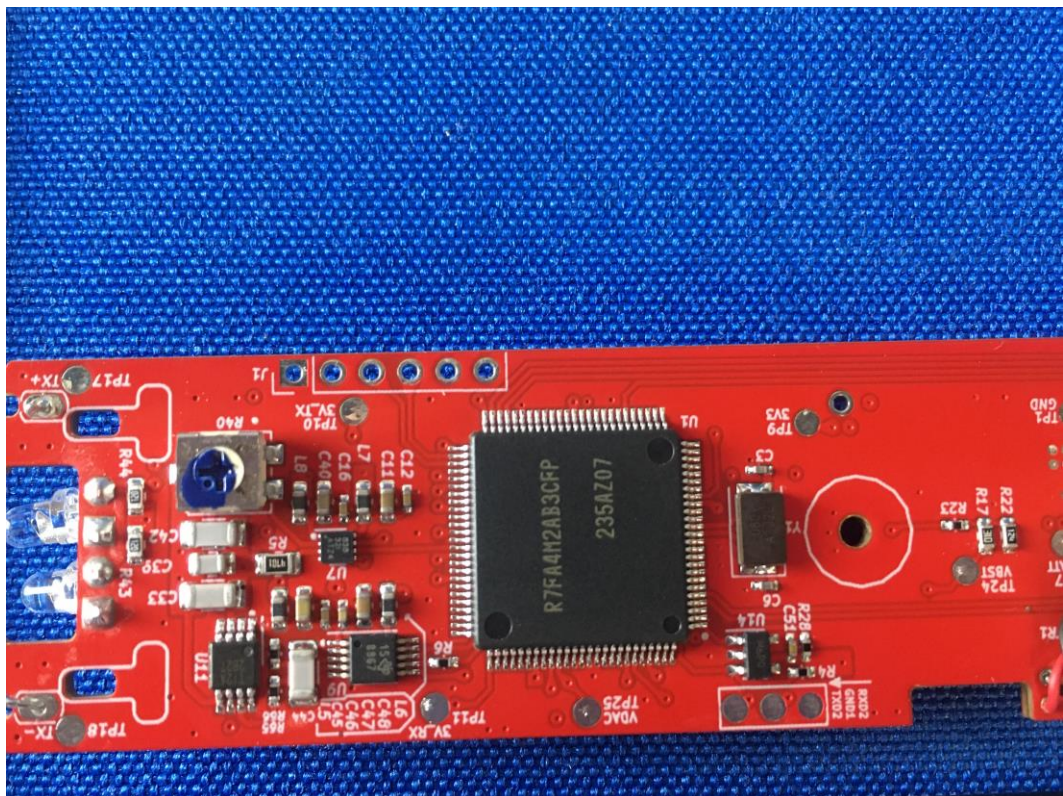
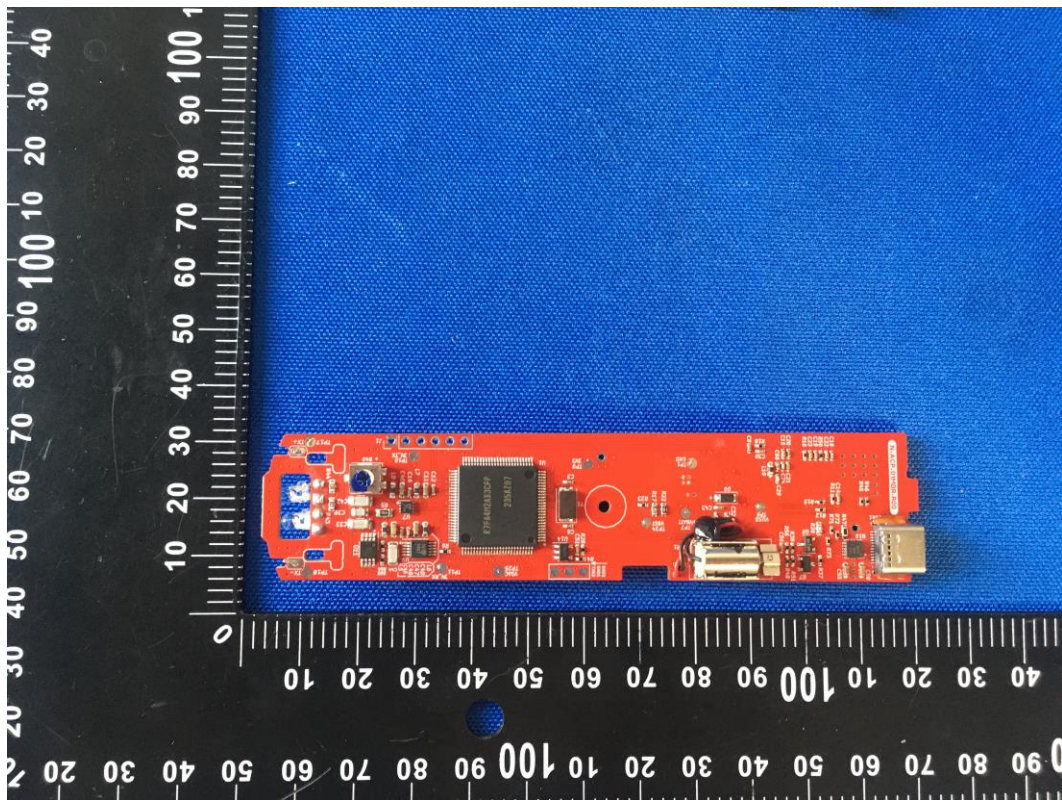


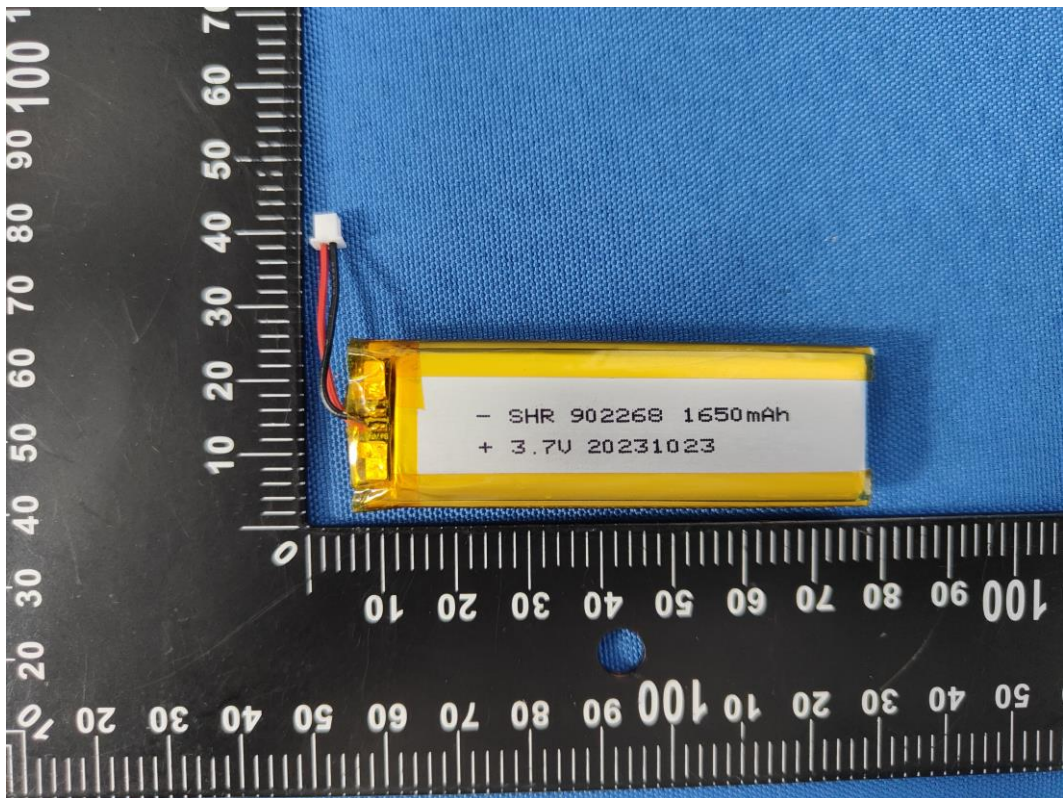












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