FCC PART 15 SUBPART C TEST REPORT

FCC PART 15.239

Report Reference No......:	**CTA23081500302**
FCC ID..... **:**	**2AML6KR828**
Compiled by (position+printed name+signature)..:	File administrators Kevin Liu
Supervised by (position+printed name+signature)..:	Project Engineer Kevin Liu
Approved by (position+printed name+signature)..:	RF Manager Eric Wang
Date of issue.....:	Aug. 17, 2023

Testing Laboratory Name .....:	**Shenzhen CTA Testing Technology Co., Ltd.**
Address .....:	Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name.....:	**KINGRAY ELECTRONICS Co., LTD**
Address .....:	3rd floor, Building A5, Mingxi Industrial Park, No 4, Huaide South Road, Fuyong Town, Baoan District, Shenzhen,China
Test specification .....**:**	
Standard .....:	**FCC Part 15.239**

Test item description .....:	**Wireless FM Transmitter**
Trade Mark .....:	N/A
Manufacturer .....:	KINGRAY ELECTRONICS Co., LTD
Model/Type reference.....:	011822134828
Listed Models .....:	BB2926, BB2896
Modulation .....:	FM
Frequency.....	From 88.1MHz to 107.9MHz
Rating .....:	DC 12V-24V
Result.....:	**PASS**

TEST REPORT

Equipment under Test	:	**Wireless FM Transmitter**
Model /Type	:	011822134828
Listed Models	:	BB2926, BB2896
Applicant	:	**KINGRAY ELECTRONICS Co., LTD**
Address	:	3rd floor, Building A5, Mingxi Industrial Park, No 4, Huaide South Road, Fuyong Town, Baoan District, Shenzhen,China
Manufacturer	:	**KINGRAY ELECTRONICS Co., LTD**
Address	:	3rd floor, Building A5, Mingxi Industrial Park, No 4, Huaide South Road, Fuyong Town, Baoan District, Shenzhen,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.

Contents

1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.239: Operation in the band 88–108 MHz.
ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices

2 SUMMARY

2.1 General Remarks

Date of receipt of test sample	:	July 13, 2023
Testing commenced on	:	July 13, 2023
Testing concluded on	:	Aug. 15, 2023

2.2 Product Description

Product Name:	Wireless FM Transmitter
Model/Type reference:	011822134828
Power supply:	DC 12V-24V
Hardware version:	X3_5602_V1.0
Software version:	V1.0
Testing sample ID:	CTA230815003-1# (Engineer sample) CTA230815003-2# (Normal sample)
FM:	
Modulation:	FM
Operation frequency:	88.1MHz~107.9MHz
Channel number:	199
Channel separation:	100KHz
Antenna type:	Monopole Antenna
Antenna gain:	0dBi

Note:Antenna gain is provide by the manufacturer.

2.3 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 12V-24V

2.4 Short description of the Equipment under Test (EUT)

This is a Wireless FM Transmitter.
For more details, refer to the user's manual of the EUT.

2.5 EUT operation mode

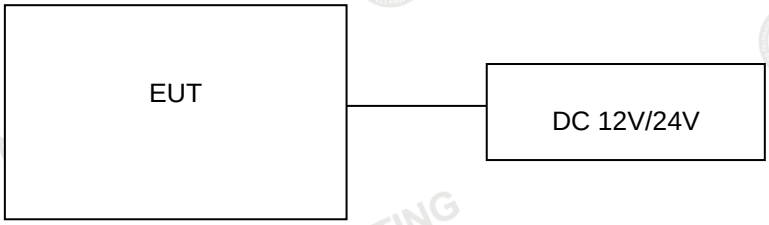
The EUT can set to test channel staying in continuous transmitting (Duty Cycle more than 98%) and receiving mode for testing .There are 199 channels provided to the EUT and Channel 01/101/199 were selected to test.
In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Operation Frequency List：

Channel	Frequency (MHz)
01	**88.1**
02	88.2
⋮	⋮
100	98.0
101	**98.1**
102	98.2
⋮	⋮
198	107.8
199	**107.9**

Note: The line display in grey is the channel selected to perform test.

2.6 Block Diagram of Test Setup



2.7 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for the device filing to comply with Section 15.239 of the FCC Part 15, Subpart C Rules.

2.8 Modifications

No modifications were implemented to meet testing criteria.

3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Shenzhen CTA Testing Technology Co., Ltd.
Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community,Fuhai Street, Bao‘an District, Shenzhen, China

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:
FCC-Registration No.: 517856 Designation Number: CN1318

Shenzhen CTA Testing Technology Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA-Lab Cert. No.: 6534.01

Shenzhen CTA Testing Technology Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.10 and CISPR 16-1-4:2010.

3.3 Environmental conditions

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

Temperature:	24 ° C
Humidity:	46 %
Atmospheric pressure:	950-1050mbar

AC Power Conducted Emission:

Temperature:	25 ° C
Humidity:	47 %
Atmospheric pressure:	950-1050mbar

Conducted testing:

Temperature:	24 ° C
Humidity:	46 %
Atmospheric pressure:	950-1050mbar

3.4 Summary of measurement results

FCC PART 15.239		
FCC Part 15.239(a)	Field Strength of Fundamental	PASS
FCC Part 15.209/15.239(c)	Spurious Emission	PASS
FCC Part 15.239(a)	20dB bandwidth	PASS
FCC Part 15.207	Conducted Emission	N/A
FCC Part 15.203	Antenna Requirement	PASS

Remark:
1. The measurement uncertainty is not included in the test result.
2. We tested all test mode and recorded worst case in report

3.5 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 TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen CTA Testing Technology 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 CTA Testing Technology Co., Ltd. :

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.06 dB	(1)
Radiated Emission	1~18GHz	5.14 dB	(1)
Radiated Emission	18-40GHz	5.38 dB	(1)
Conducted Disturbance	0.15~30MHz	2.14 dB	(1)

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

3.6 Equipments Used during the Test

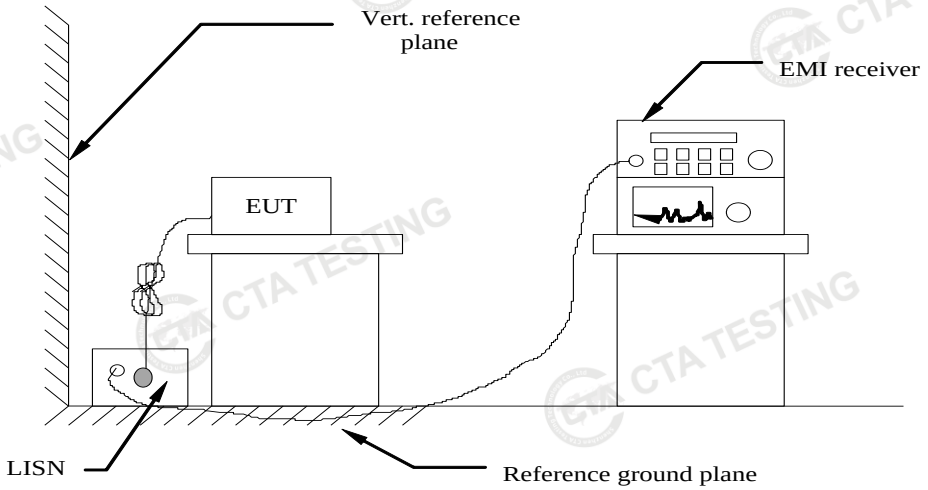
Test Equipment	Manufacturer	Model No.	Equipment No.	Last Calibration Date	New Calibration Date	Calibration Due Date
LISN	R&S	ENV216	CTA-308	2022/08/03	2023/08/02	2024/08/01
LISN	R&S	ENV216	CTA-314	2022/08/03	2023/08/02	2024/08/01
EMI Test Receiver	R&S	ESPI	CTA-307	2022/08/03	2023/08/02	2024/08/01
EMI Test Receiver	R&S	ESCI	CTA-306	2022/08/03	2023/08/02	2024/08/01
Spectrum Analyzer	Agilent	N9020A	CTA-301	2022/08/03	2023/08/02	2024/08/01
Spectrum Analyzer	R&S	FSP	CTA-337	2022/08/03	2023/08/02	2024/08/01
Vector Signal generator	Agilent	N5182A	CTA-305	2022/08/03	2023/08/02	2024/08/01
Analog Signal Generator	R&S	SML03	CTA-304	2022/08/03	2023/08/02	2024/08/01

Universal Radio Communication	CMW500	R&S	CTA-302	2022/08/03	2023/08/02	2024/08/01
Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2022/08/03	2023/08/02	2024/08/01
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2021/08/07	/	2024/08/06
Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2021/08/07	/	2024/08/06
Loop Antenna	Zhinan	ZN30900C	CTA-311	2021/08/07	/	2024/08/06
Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2021/08/07	/	2024/08/06
Amplifier	Schwarzbeck	BBV 9745	CTA-312	2022/08/03	2023/08/02	2024/08/01
Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2022/08/03	2023/08/02	2024/08/01
Directional coupler	NARDA	4226-10	CTA-303	2022/08/03	2023/08/02	2024/08/01
High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2022/08/03	2023/08/02	2024/08/01
High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2022/08/03	2023/08/02	2024/08/01
Automated filter bank	Tonscend	JS0806-F	CTA-404	2022/08/03	2023/08/02	2024/08/01
Power Sensor	Agilent	U2021XA	CTA-405	2022/08/03	2023/08/02	2024/08/01
Amplifier	Schwarzbeck	BBV9719	CTA-406	2022/08/03	2023/08/02	2024/08/01

4 TEST CONDITIONS AND RESULTS

4.1 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 ANSI C63.10-2013.
2 Support equipment, if needed, was placed as per ANSI C63.10-2013
3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013
4 The EUT received power from adapter, the adapter received AC120V/60Hz and AC 240V/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 intentional device, according to § 15.207(a) AC Power 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.		

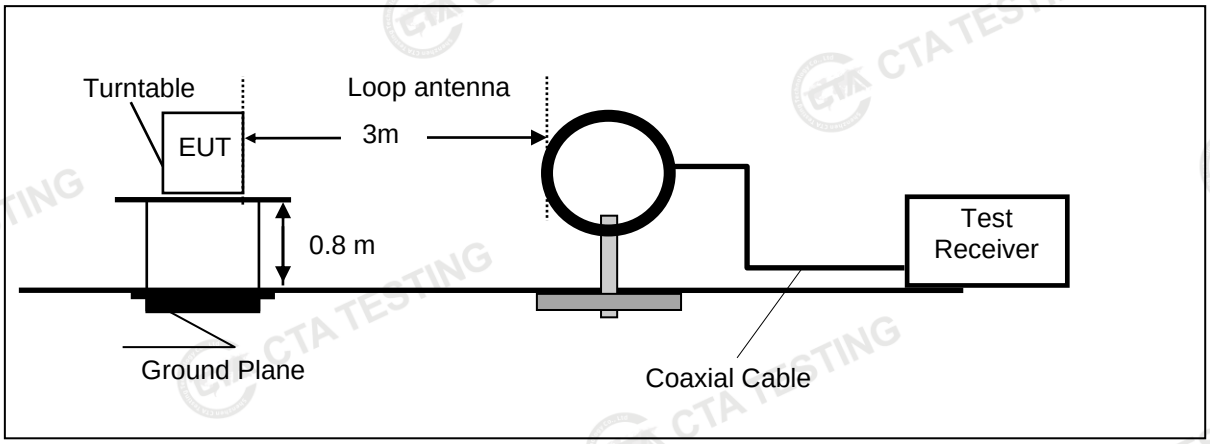
TEST RESULTS

Not applicable, this device is powered by battery.

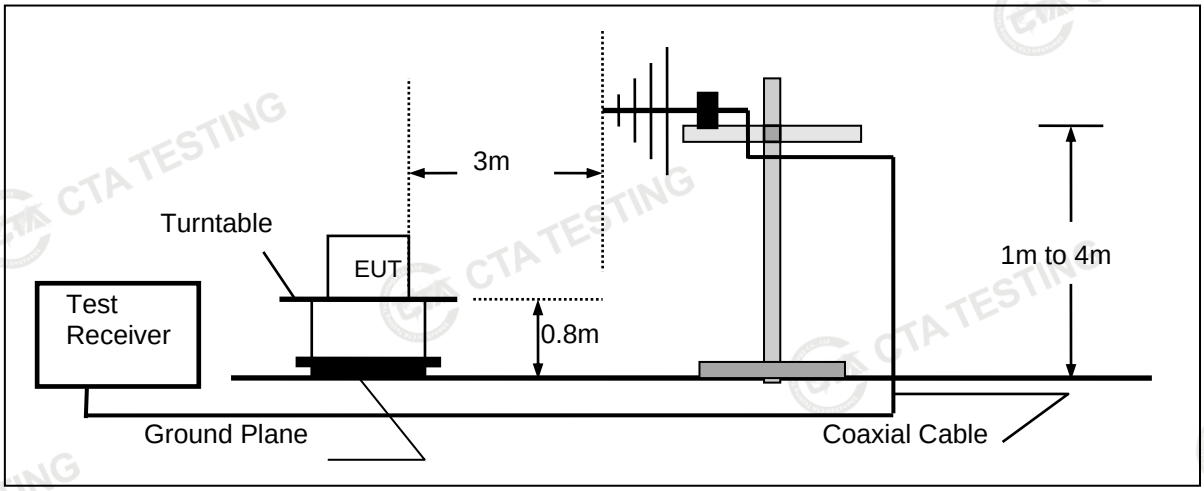
4.2 Radiated Emission

TEST CONFIGURATION

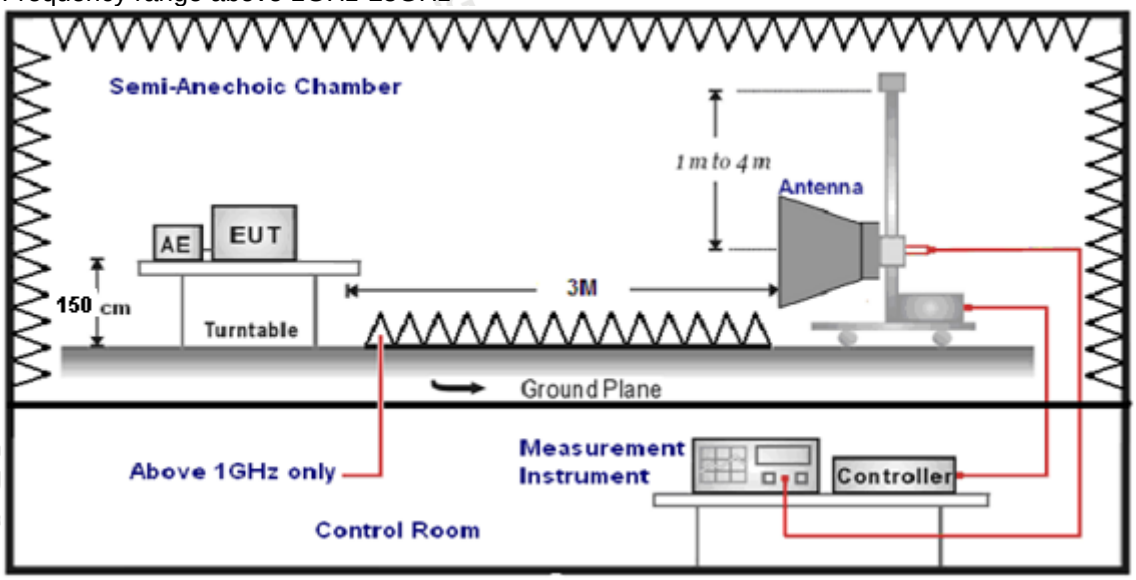
Frequency range 9 KHz – 30MHz



Frequency range 30MHz – 1000MHz



Frequency range above 1GHz-25GHz



TEST PROCEDURE

1. The EUT was placed on a turn table which is 0.8m above ground plane when testing frequency range 9 KHz –1GHz;the EUT was placed on a turn table which is 1.5m above ground plane when testing frequency range 1GHz – 25GHz.
2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.
5. Radiated emission test frequency band from 9KHz to 25GHz.
6. The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Ultra-Broadband Antenna	3
1GHz-18GHz	Double Ridged Horn Antenna	3
18GHz-25GHz	Horn Anternna	1

7. Setting test receiver/spectrum as following table states:

Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz,Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz,Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz,Sweep time=Auto	QP
1GHz-40GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Transd=AF +CL-AG

RADIATION LIMIT

15.239(b) The field strength of any emissions within the permitted 200 KHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in § 15.35 for limiting peak emissions apply.
Unless otherwise specified, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

The field strength of any emissions radiated on any frequency outside of the specified 200 kHz band shall not exceed the general radiated emission limits in § 15.209 as table below:

Radiated emission limits

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	20log(2400/F(KHz))+40log(300/3)	2400/F(KHz)
0.49-1.705	3	20log(24000/F(KHz))+ 40log(30/3)	24000/F(KHz)
1.705-30	3	20log(30)+ 40log(30/3)	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST RESULTS

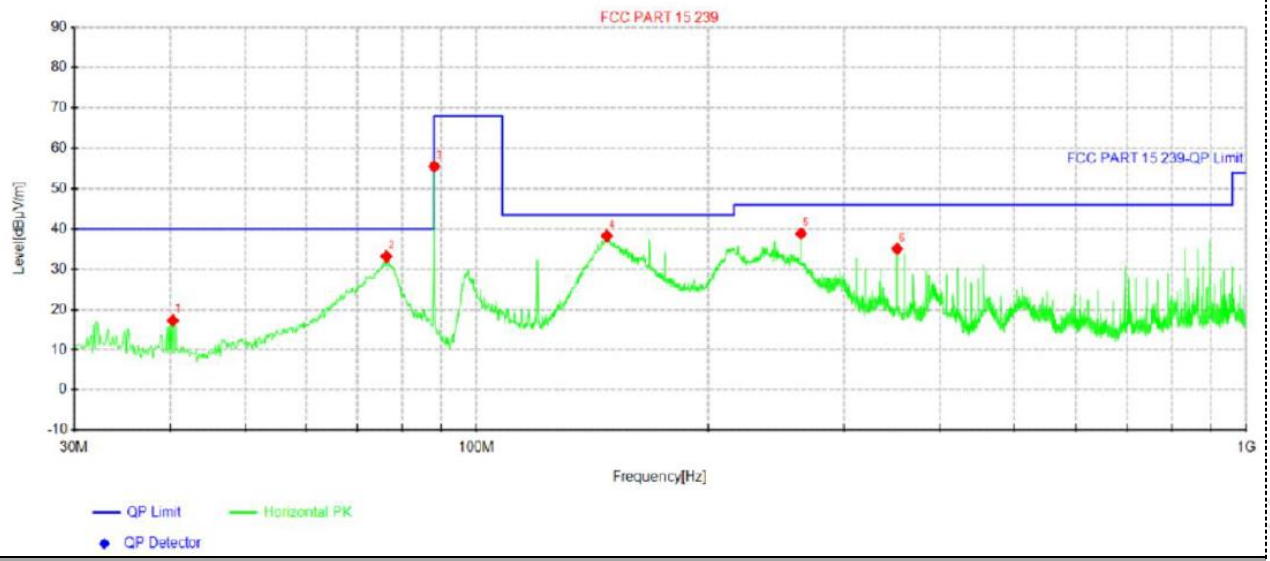
Remark:

1. This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
2. The prescan radiated emissions for each supply voltage (DC12V/24V) in the range 9 KHz to 10th harmonic of fundamental, only the worst case condition (supply DC 12V) was recorded as below.
3. No emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz

Low Channel:

Horizontal



Suspected Data List

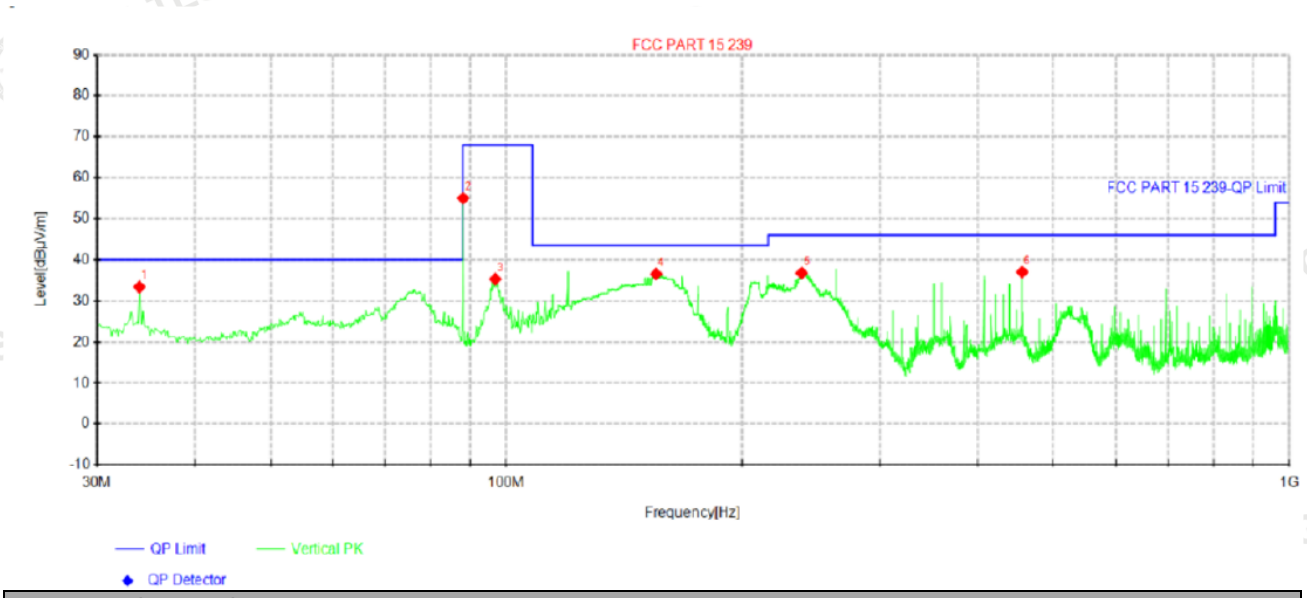
NO.	Freq. [Mhz]	Reading [dBuV]	Level [dBuV/m]	Factor [dB/m]	Limitd [BuV/m]	Margin [dB]	Height [cm]	Angle [º]	Det	Polarity
1	40.3052	34.45	17.35	-17.10	40.00	22.65	100	110	Peak	Horizontal
2	76.3135	57.41	33.25	-24.16	40.00	6.75	100	25	Peak	Horizontal
3	88.1000	75.79	55.58	-20.21	68.00	12.42	100	203	Peak	Horizontal
/	88.1000	60.32	40.11	-20.21	48.00	7.89	100	203	AVG	Horizontal
4	147.6165	60.04	38.28	-21.76	43.50	5.22	100	54	Peak	Horizontal
5	264.0125	56.61	38.89	-17.72	46.00	7.11	100	115	Peak	Horizontal
6	352.0475	51.11	35.10	-16.01	46.00	10.90	100	78	Peak	Horizontal

Note:1).Level (dBµV/m)= Reading (dBµV/m)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBµV/m) - Level (dBµV/m)

Vertical



Suspected Data List

NO.	Freq. [Mhz]	Reading [dBuV]	Level [dBuV/m]	Factor [dB/m]	Limitd [BuV/m]	Margin [dB]	Height [cm]	Angle [º]	Det	Polarity
1	34.0012	51.45	33.40	-18.05	40.00	6.60	100	188	Peak	Vertical
2	88.1000	75.26	55.05	-20.21	68.00	12.95	100	115	Peak	Vertical
/	88.1000	60.41	40.20	-20.21	48.00	7.80	100	115	AVG	Vertical
3	96.8088	54.41	35.53	-18.88	68.00	32.47	100	88	Peak	Vertical
4	155.3725	58.22	36.52	-21.70	43.50	6.98	100	166	Peak	Vertical
5	238.4288	55.06	36.76	-18.30	46.00	9.24	100	17	Peak	Vertical
6	455.9512	54.08	37.03	-17.05	46.00	8.97	100	168	Peak	Vertical

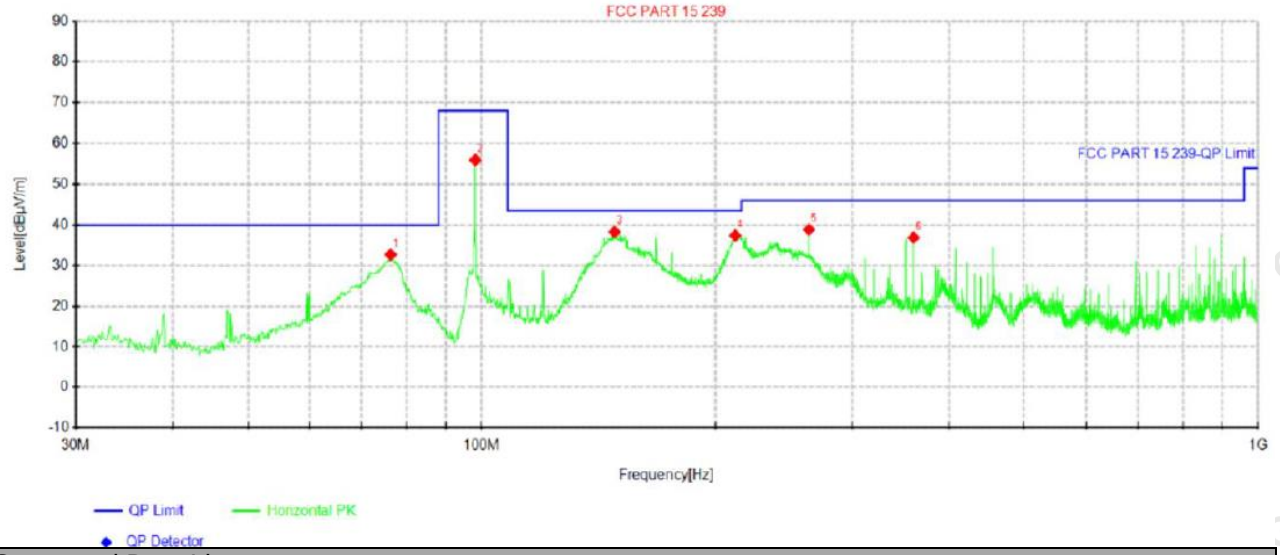
Note:1).Level (dBµV/m)= Reading (dBµV/m)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBµV/m) - Level (dBµV/m)

Middle Channel:

Horizontal



Suspected Data List

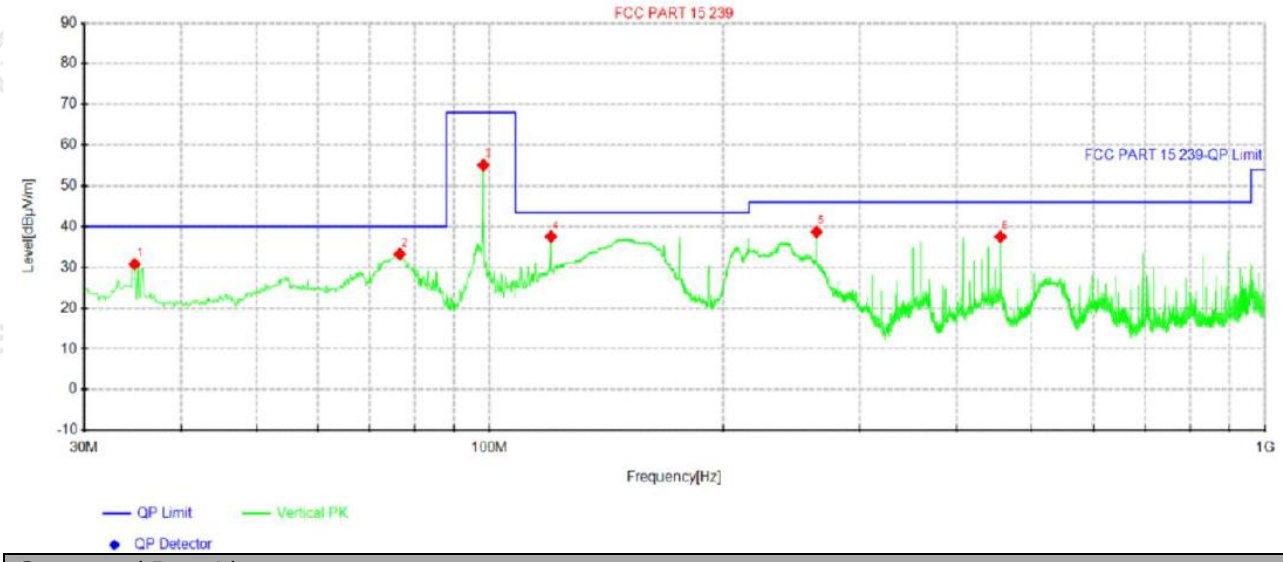
NO.	Freq. [Mhz]	Reading [dBuV]	Level [dBuV/m]	Factor [dB/m]	Limitd [BuV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity
1	76.3185	53.83	32.65	-21.18	40.00	7.35	100	55	Peak	Horizontal
2	98.1000	74.65	55.99	-18.66	68.00	12.01	100	18	Peak	Horizontal
/	98.1000	59.50	40.84	-18.66	48.00	7.16	100	18	AVG	Horizontal
3	148.3425	60.05	38.30	-21.75	43.50	5.20	100	125	Peak	Horizontal
4	212.1150	56.42	37.39	-19.03	43.50	6.11	100	325	Peak	Horizontal
5	264.0150	56.62	38.87	-17.75	46.00	7.13	100	223	Peak	Horizontal
6	360.0450	52.87	36.91	-15.96	46.00	9.09	100	16	Peak	Horizontal

Note:1).Level (dBµV/m)= Reading (dBµV/m)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBµV/m) - Level (dBµV/m)

Vertical



Suspected Data List

NO.	Freq. [Mhz]	Reading [dBuV]	Level [dBuV/m]	Factor [dB/m]	Limitd [BuV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity
1	34.8000	48.70	30.82	-17.88	40.00	9.18	100	105	Peak	Vertical
2	76.5625	57.44	33.27	-24.17	40.00	6.73	100	117	Peak	Vertical
3	98.1000	73.73	55.07	-18.66	68.00	12.93	100	70	Peak	Vertical
/	98.1000	58.27	39.61	-18.66	48.00	8.39	100	70	AVG	Vertical
4	119.9650	57.86	37.56	-20.30	43.50	5.94	100	250	Peak	Vertical
5	264.0150	56.47	38.73	-17.74	46.00	7.27	100	250	Peak	Vertical
6	455.9525	52.52	37.50	-15.02	46.00	8.50	100	257	Peak	Vertical

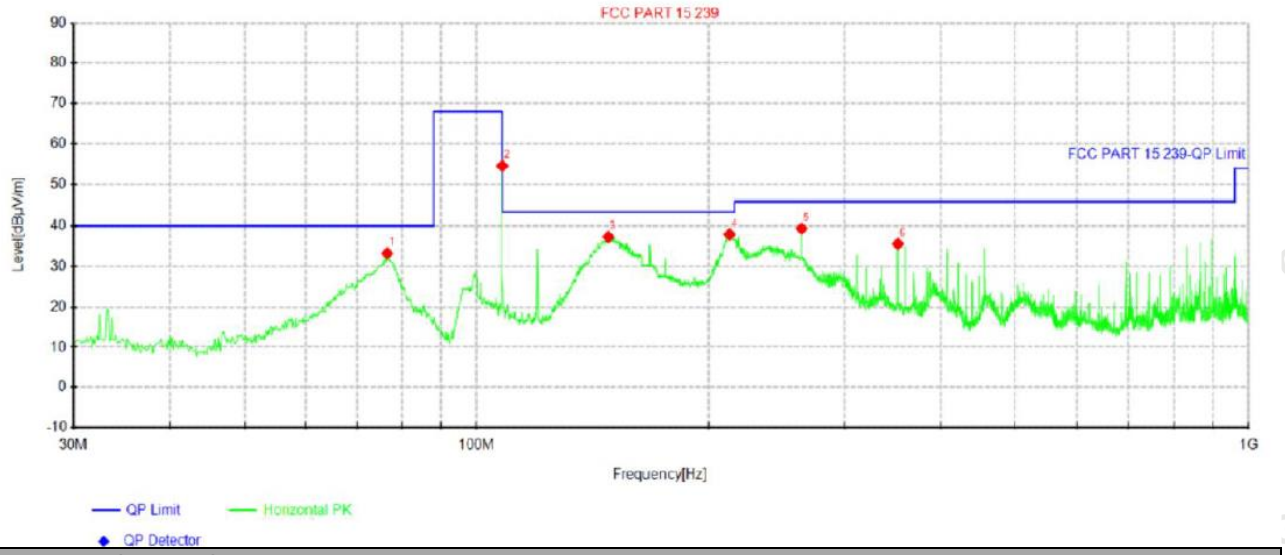
Note:1).Level (dBµV/m)= Reading (dBµV/m)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBµV/m) - Level (dBµV/m)

High Channel:

Horizontal



Suspected Data List

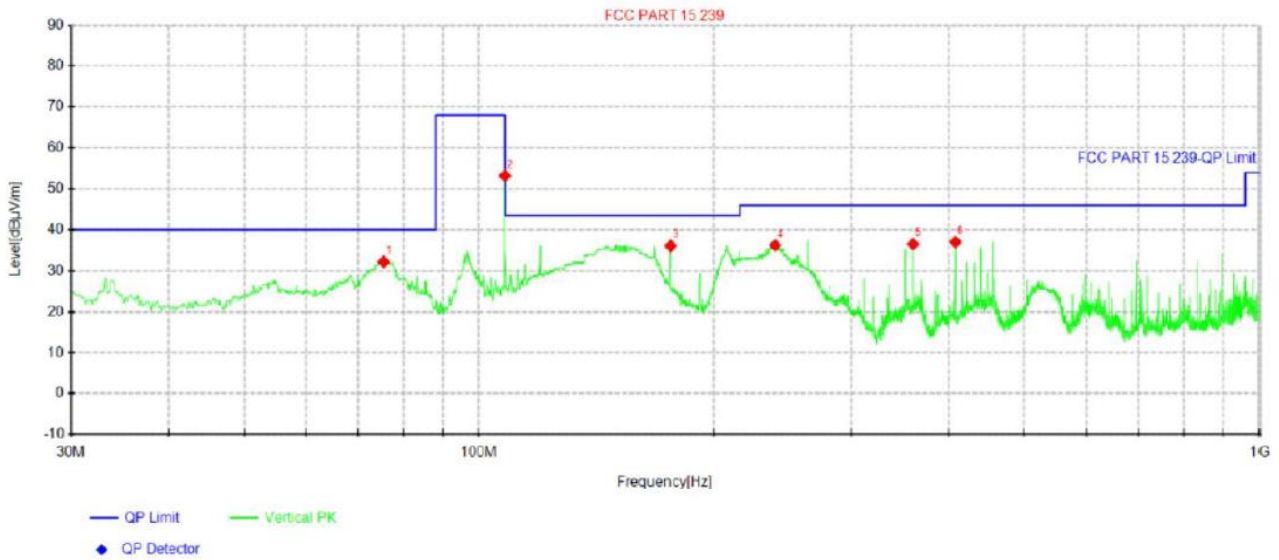
NO.	Freq. [Mhz]	Reading [dBuV]	Level [dBuV/m]	Factor [dB/m]	Limitd [BuV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Polarity
1	76.5650	54.39	33.21	-21.18	40.00	6.79	100	268	Peak	Horizontal
2	107.9000	73.81	55.06	-18.75	68.00	12.94	100	125	Peak	Horizontal
/	107.9000	59.68	40.93	-18.75	68.00	9.07	100	125	AVG	Horizontal
3	148.2185	59.03	37.28	-21.75	43.50	6.22	100	45	Peak	Horizontal
4	212.9575	56.92	37.90	-19.02	43.50	5.60	100	335	Peak	Horizontal
5	264.0135	57.12	39.37	-17.75	46.00	6.63	100	209	Peak	Horizontal
6	352.0425	51.59	35.58	-16.01	46.00	10.42	100	10	Peak	Horizontal

Note:1).Level (dBµV/m)= Reading (dBµV/m)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

3). Margin(dB) = Limit (dBµV/m) - Level (dBµV/m)

Vertical



Suspected Data List

NO.	Freq. [Mhz]	Reading [dBuV]	Level [dBuV/m]	Factor [dB/m]	Limitd [BuV/m]	Margin [dB]	Height [cm]	Angle [º]	Det	Polarity
1	75.4685	53.33	32.18	-21.15	40.00	7.82	100	268	Peak	Vertical
2	107.9000	74.42	55.67	-18.75	68.00	12.33	100	125	Peak	Vertical
/	107.9000	57.05	38.30	-18.75	48.00	9.70	100	125	AVG	Vertical
3	175.9850	56.80	36.05	-20.75	43.50	7.45	100	45	Peak	Vertical
4	239.6425	54.50	36.20	-18.30	46.00	9.80	100	335	Peak	Vertical
5	360.2475	52.40	36.47	-15.93	46.00	9.53	100	209	Peak	Vertical
6	408.0550	52.48	37.02	-15.46	46.00	8.98	100	10	Peak	Vertical

Note:1).Level (dBµV/m)= Reading (dBµV/m)+ Factor (dB/m)

2). Factor(dB/m)=Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB)

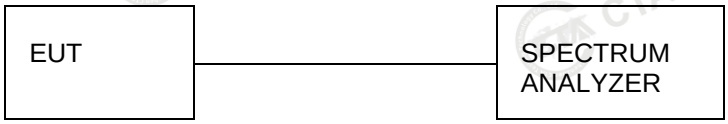
3). Margin(dB) = Limit (dBµV/m) - Level (dBµV/m)

4.3 20dB Bandwidth and Occupied Bandwidth

Limit

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88–108 MHz.

Test Configuration



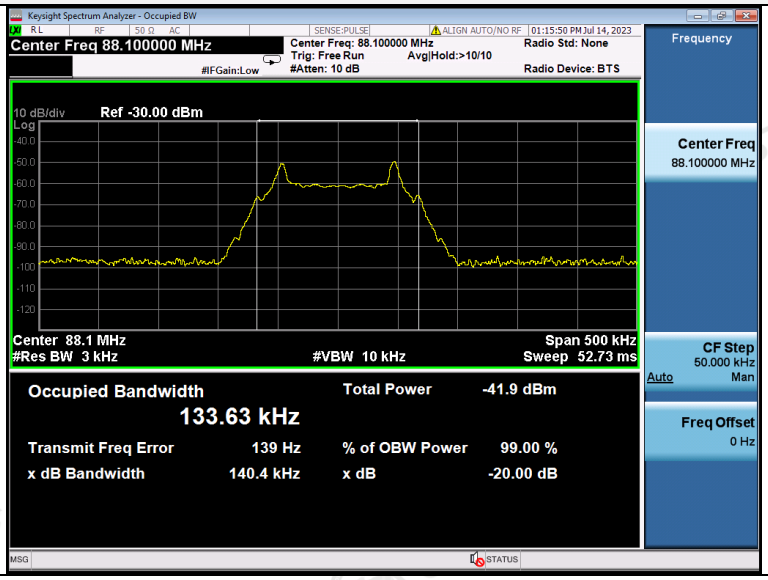
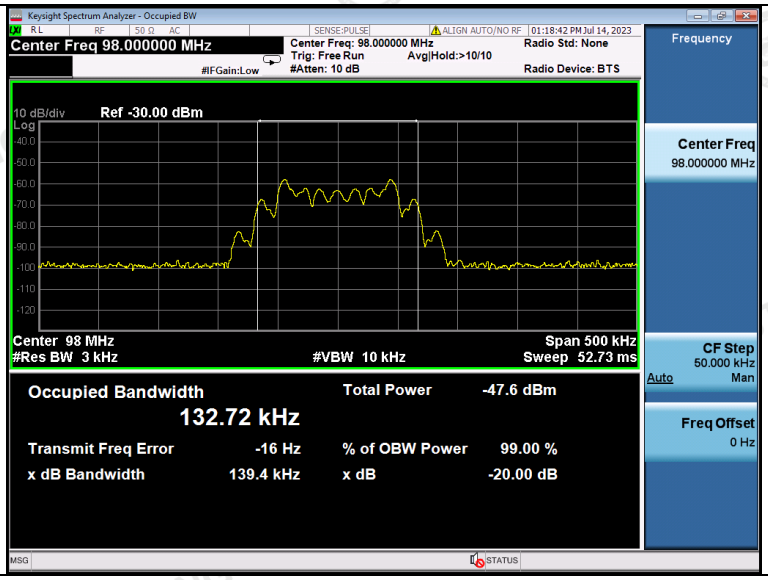
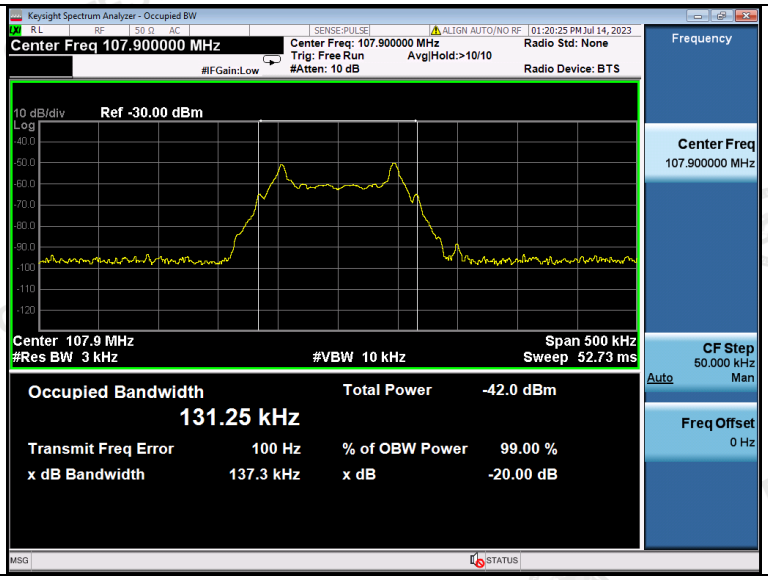
Test Procedure

The transmitter output was connected to the spectrum analyzer through RF cable. The EUT is modulated with a 2.5 kHz tone at a level 16 dB higher than the required level in order to produce a frequency deviation of 75 kHz. The bandwidth of the fundamental frequency was measured by spectrum analyzer set as follow:
RBW=1% to 5% of the OBW
VBW=approximately 3 X RBW
Detector=Peak
Trace Mode: Max Hold
Use the 99% power bandwidth function of the instrument to measure the Occupied Bandwidth and -20dB bandwidth.

Test Results

Modulation	Channel	99% OBW (KHz)	20dB bandwidth (KHz)	Limit (KHz)	Result
FM	CH01	133.63	140.4	200	Pass
	CH100	132.72	139.4	200	
	CH199	131.25	137.3	200	

Test plot as follows:

FM Modulation

CH01

CH100

CH199

4.4 Antenna Requirement

Standard Applicable

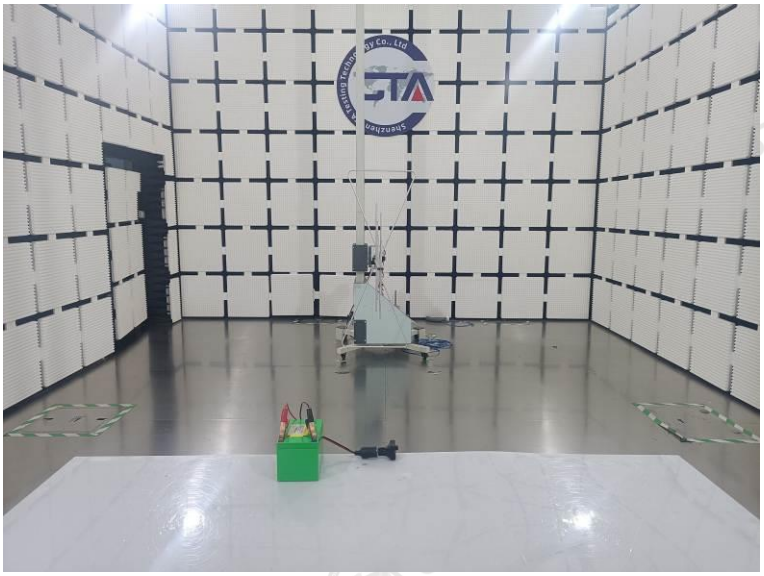
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

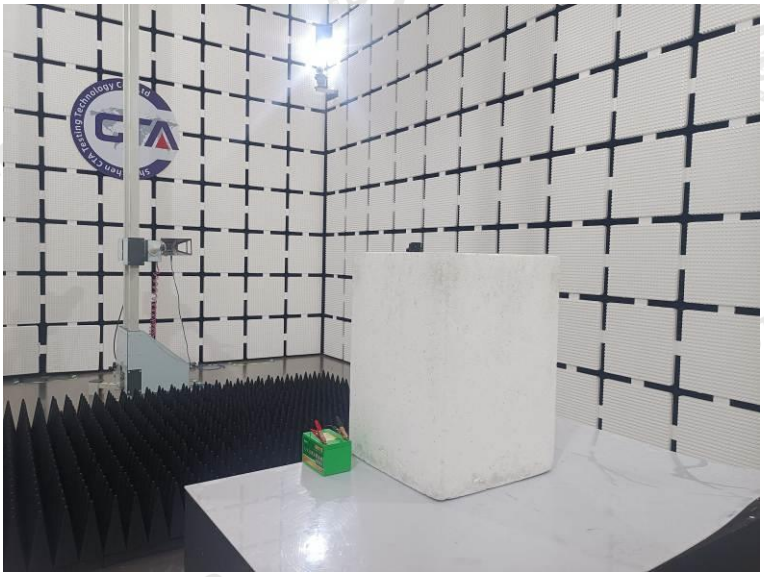
Refer to statement below for compliance.
The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The antenna used in this product is a monopole Antenna, The directional gains of antenna used for transmitting is 0dBi.

5 Test Setup Photos of the EUT



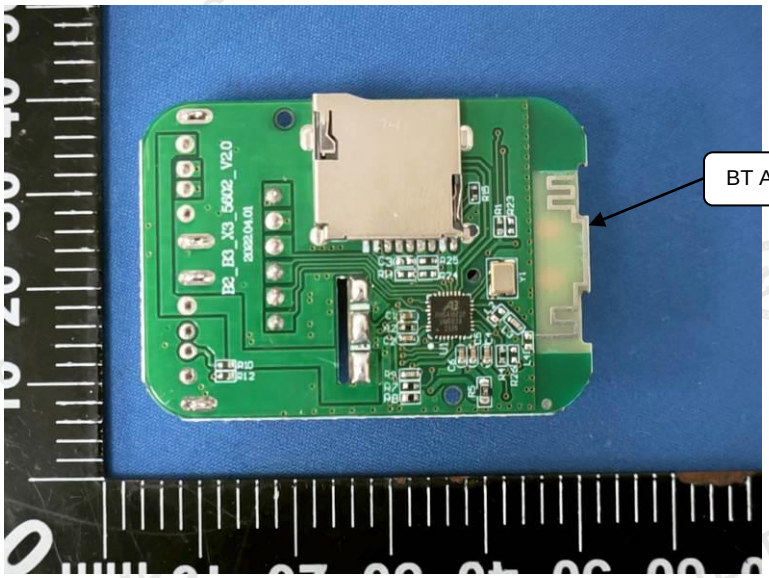


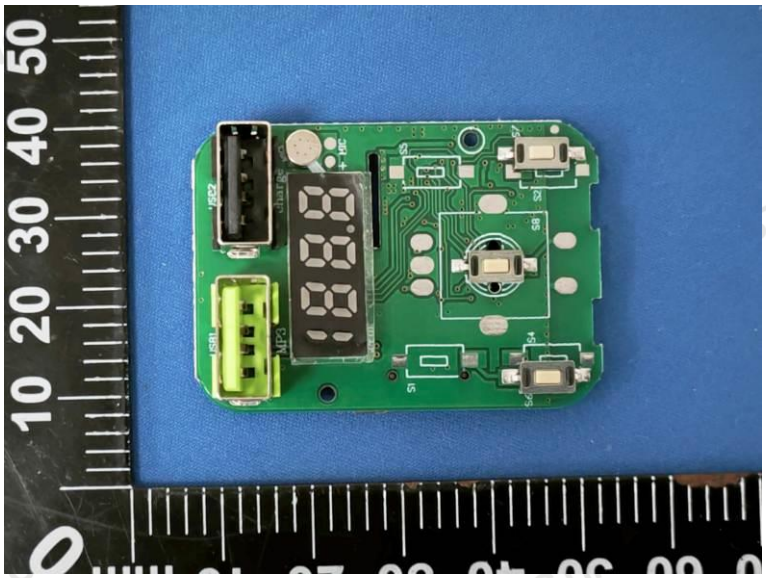
6 Photos of the EUT

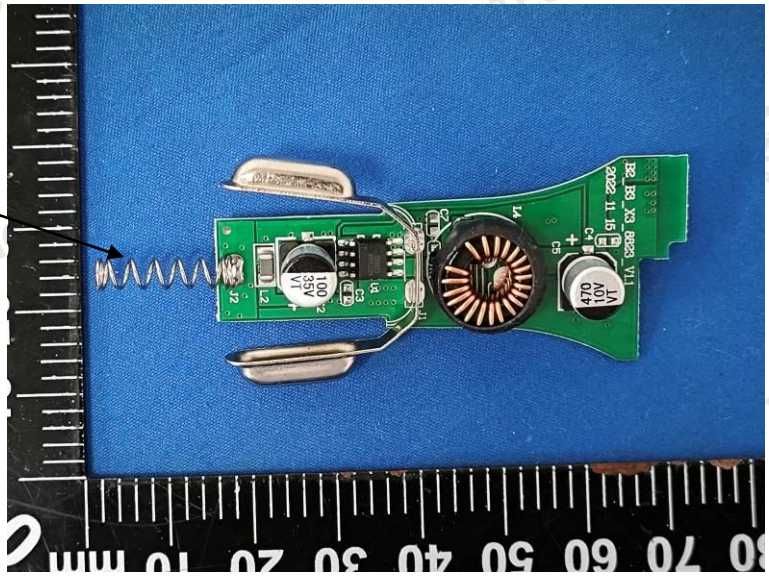
External photos

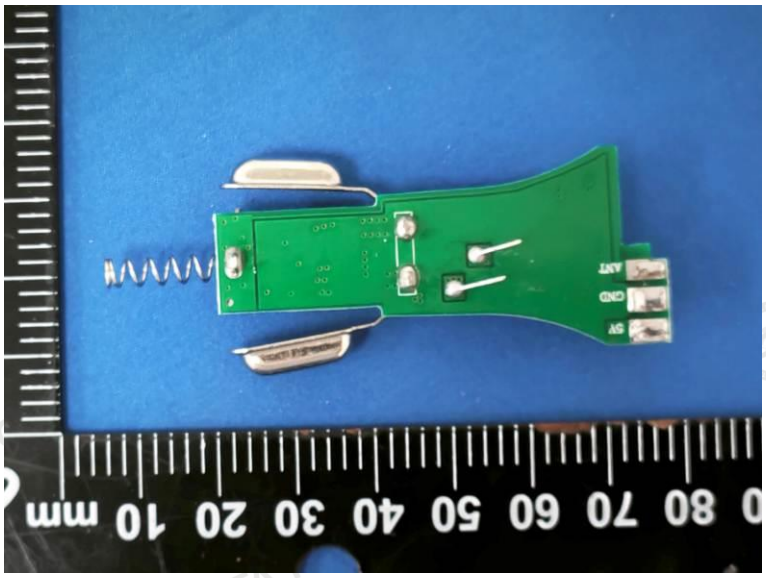

3.1A

Internal photos









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