



Test Report

Report No.: RKEYS250819042

Date: Dec.08, 2025

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FCC RF TEST REPORT

For

Product: Remote Control

Model: M1260F28, M1260H14, M630F28, M630H14

FCC ID: 2BRWO-M1260F28

Report No.: RKEYS250819042

Issued for

Micro ENE Inc.

12030 E Lake Circle, Greenwood Village, CO 80111 United States

Issued by

Guangdong KEYS Testing Technology Co., Ltd.

**Building 1, No.18, Shihuan Road, Dongcheng Subdistrict, Dongguan, Guangdong,
China**

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1. TEST CERTIFICATION

Product:	Remote Control
Trade mark:	/
Main Model:	M1260F28
Applicant :	Micro ENE Inc.
Address:	12030 E Lake Circle, Greenwood Village, CO 80111 United States
Manufacturer:	Guangdong Shone Lighting Co., Ltd.
Address:	No.11 Heyun Road, Jianggao Town, Baiyun District, Guangzhou, Guangdong, China
Sample Receive Date:	Aug.19, 2025
Test Date:	Aug.20, 2025~Dec.05, 2025
Applicable Standards:	CFR 47, FCC Part 15C
Application Purpose	Original Grant

The above equipment has been tested by Guangdong KEYS Testing Technology Co., Ltd. and found compliance with the requirements in the technical standards mentioned above. The test results presented in this report only relate to the product/system tested. The other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.



Prepared by:

Evan Fang / Engineer



Approved by:

Bruce Zhang / Manager

2. TEST SUMMARY

FCC Part 15C	Description of Test	Result
15.203	Antenna Requirement	Pass
15.231(a)	Manually Activated Transmitter	Pass
15.231(c)	20dB and 99% Bandwidth	Pass
15.231(b)& 15.231(e)	Field Strength of Fundamental and Radiated Spurious Emissions	Pass
15.207	Conducted Emission on AC Mains	N/A

Note:N/A means not applicable.

3. TEST SITE

3.1. TEST FACILITY

Guangdong KEYS Testing Technology Co., Ltd.

Address: Building 1, No.18, Shihuan Road, Dongcheng Subdistrict, Dongguan, Guangdong, China

A2LA Certificate Number.:7547.01

FCC Designation Number:CN1419

FCC Test Firm Registration Number:361541

3.2. MEASUREMENT UNCERTAINTY

Parameter	Uncertainty
Conducted Emission(150KHz-30MHz)	$\pm 3.2\text{dB}$
Radiated Emission(30MHz-1GHz)	$\pm 4.7\text{dB}$
Radiated Emission (1GHz-6GHz)	$\pm 5.1\text{dB}$
Radiated Emission (6GHz-18GHz)	$\pm 5.1\text{dB}$

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

3.3. TEST ENVIRONMENT CONDITION

Ambient Temperature:	24~25°C
Ambient Relative Humidity:	55~60 %

4. TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Equipment No.	Cal. Date	Cal. Interval
EMI Test Receiver	Rohde&Schwarz	ESCI	KEYS-EL-203	Mar. 03, 2025	1 Year
Pulse limiter	Rohde&Schwarz	ESH3-Z2	KEYS-EL-201	Mar. 03, 2025	1 Year
LISN	Rohde&Schwarz	ENV216	KEYS-EL-202	Mar. 03, 2025	1 Year
Shielding Room	Taihe Mao Rui Electronic Equipment Co., Ltd.	8m*4m*4m	KEYS-EL-230	Oct. 12, 2025	5 Year
EMI Test Receiver	Rohde&Schwarz	ESCI7	KEYS-EL-205	Mar. 03, 2025	1 Year
Logarithmic Periodic Broadband Antenna	SCHWARZBECK	VULB9168	KEYS-EL-209	Mar. 06, 2025	3 Year
Preamplifier	HP	8447F	KEYS-EL-210	Mar. 03, 2025	1 Year
Horn Antenna	SCHWARZBECK	BBHA 9120D	KEYS-EL-239	Mar. 06, 2025	3 Year
Preamplifier	/	1-18-53G22	KEYS-EL-240	Mar. 03, 2025	1 Year
Anechoic Chamber	Taihe Mao Rui Electronic Equipment Co., Ltd.	9m*6m*6m	KEYS-EL-230	Oct. 12, 2025	5 Year
Signal Analyzer	Keysight	N9020A	KEYS-EL-238	Mar. 03, 2025	1 Year
DC Power	Agilent	E3632A	KEYS-EL-243	Mar. 03, 2025	1 Year
EMI Test Software	Tonscend	JS32-RE	Version 5.0.0		

5. EUT DESCRIPTION

Product	Remote Control
Test Model	M1260F28
Additional Model	M1260H14, M630F28, M630H14
Rating	DC 1.5V*2, AAA
FCC ID	2BRWO-M1260F28
Antenna Type	PCB Antenna
Antenna Gain	-0.78dBi
Operation Frequency	433.92 MHz
Number of Channels:	1
Modulation Type	FSK
Note: 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2) Antenna gain was provided by the applicant/ manufacturer, and the applicant/ manufacturer is responsible for its validity. 3) Models difference: All models are same as the samples except model name,they have the same PCB layout, electronic schematic and Antenna. 4) The test results in the report only apply to the tested sample.	

5.1. DESCRIPTION OF TEST CONFIGURATION

Channel No.	Frequency (MHz)
1	433.92

5.2. EQUIPMENT MODIFICATIONS

Any modifications installed previous to testing by Micro ENE Inc. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by KEYS Testing Technology Co., Ltd.

6. TEST METHODOLOGY

ANSI C63.10-2020.

FCC KDB 414788 D01 Radiated Test Site v01r01

6.1. EUT SYSTEM OPERATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. The EUT was powered by DC 3V during the test.

7. SETUP OF EQUIPMENT UNDER TEST

7.1. DESCRIPTION OF SUPPORT UNITS

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

Support Equipment

No.	Equipment	Model	Serial No.	Manufacturer
1	/	/	/	/
2	/	/	/	/

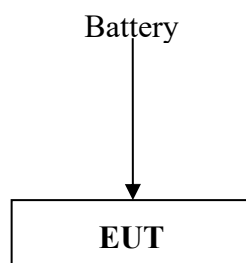
Support Cable

No.	Description	Shield	Length	Manufacturer
1	/	/	/	/
2	/	/	/	/

Note: 1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

7.2. BLOCK DIAGRAM OF EUT CONFIGURATION



(EUT: Remote Control)

7.3. EUT EXERCISE SOFTWARE

N/A.The EUT transmitting signals.is Controlled by button.

8. TEST RESULTS AND MEASUREMENT DATA

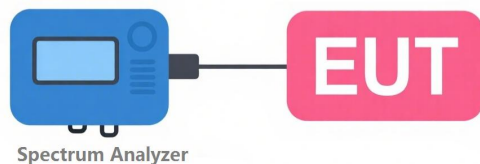
8.1. ANTENNA REQUIREMENT

Test Requirement:	Part 15.203 An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, 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.
Test Result:	According to the manufacturer declared, the EUT has a PCB antenna, the directional gain of antenna is -0.78 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision. Refer to EUT Photo for further details.

8.2. MANUALLY ACTIVATED TRANSMITTER

Test Requirement:	FCC Part15.231(a)
Test Mode:	Transmitting mode with modulation
Limit:	A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.
Test Procedure:	1. According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Use the following spectrum analyzer settings RBW =100KHz, VBW>RBW; Span =0; Sweep Time > T(on)+5S; Detector function = peak; 4. Measure and record the results in the test report.
Test Result:	PASS

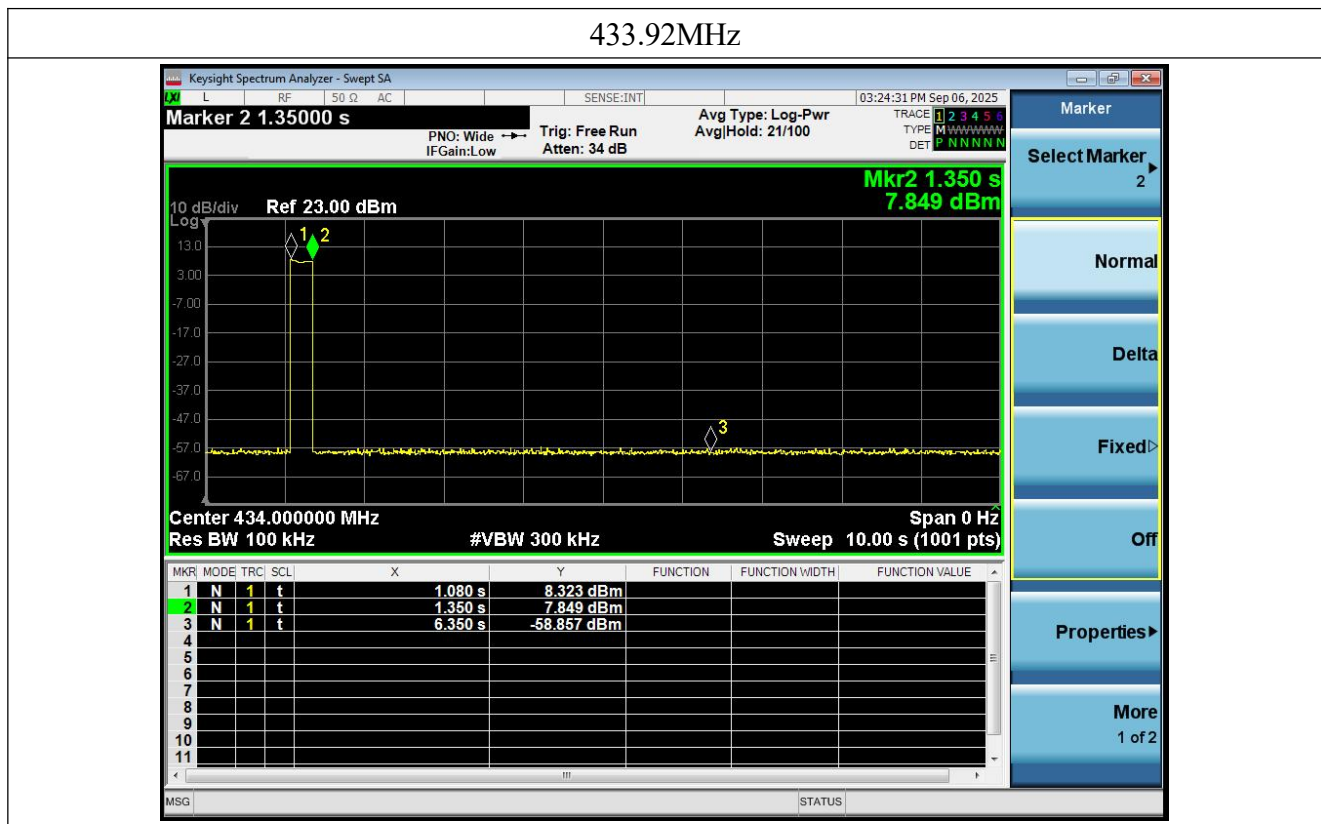
8.2.1. Test Setup:



8.2.2. Test Result

TEST Frequency (MHz)	Manually Activated Transmitter (s)	Limit(s)	Result
433.92	0.27	5	Pass

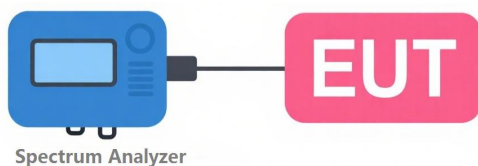
Test plots as follows



8.3. 20DB BANDWIDTH AND 99% BANDWIDTH

Test Requirement:	FCC Part15.231(c)
Test Mode:	Transmitting mode with modulation
Limit:	0.25% of the center frequency (in Range 70-900MHz) 0.5 % of the center frequency (for frequencies above 900MHz)
Test Procedure:	1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode. 2.The resolution bandwidth of 3 kHz and the video bandwidth of 10 kHz were used. 3.Use the following spectrum analyzer settings for 20dB Bandwidth measurement. 4.Measured 99% bandwidth.
Test Result:	PASS

8.3.1.Test Setup

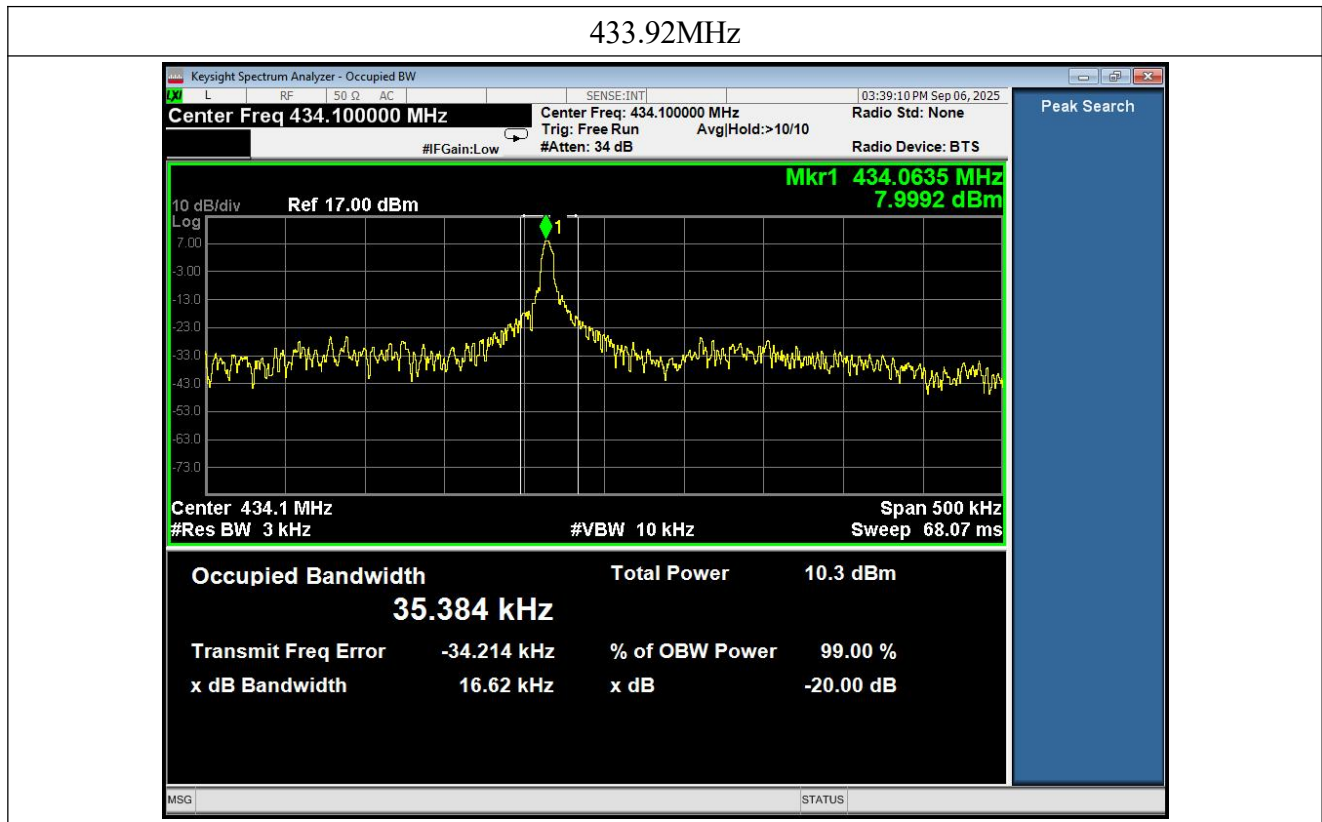


8.3.2.Test Result

TEST Frequency (MHz)	99% Bandwidth (kHz)	20dB Bandwidth (kHz)	20dB Bandwidth Limit(kHz)	Result
433.92	35.384	16.62	1084.80kHz	Pass

Note: Limit =433.92MHz*0.25%=1084.80 kHz.

Test plots as follows

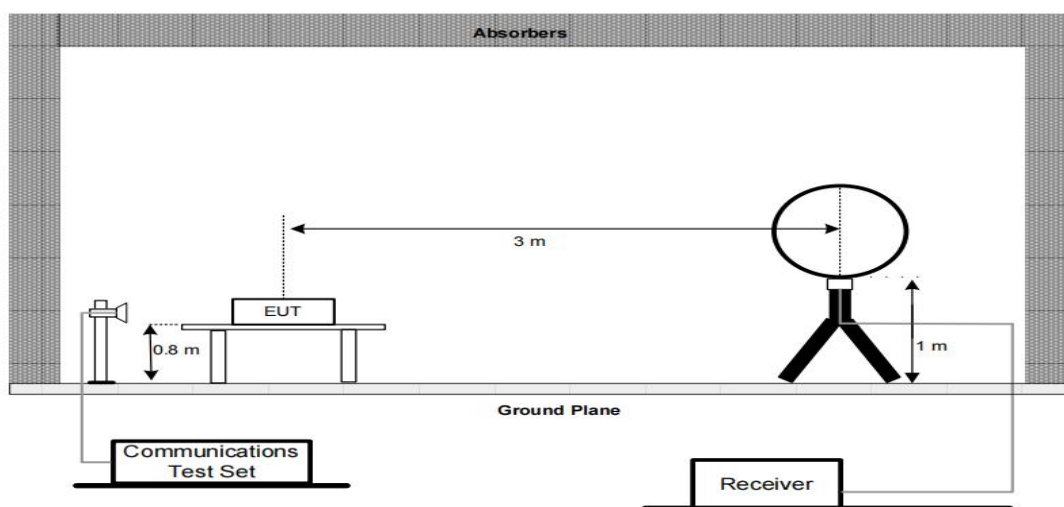


8.4. FIELD STRENGTH OF FUNDAMENTAL AND RADIATED SPURIOUS EMISSIONS

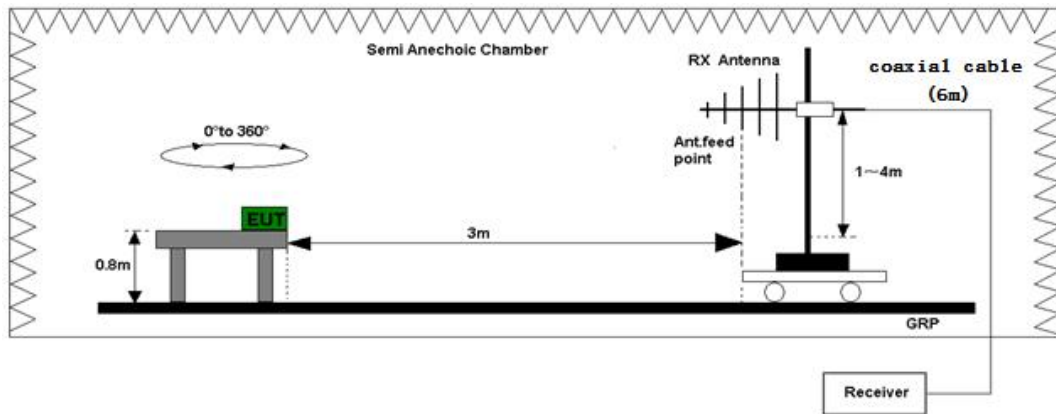
Test Requirement:	FCC Part 15.231(b),15.231(e)		
Test Mode:	Transmitting mode with modulation		
Limit:	In addition to the provisions of 15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following From 15.231 (b)(3), the limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in 15.209, whichever limit permits a higher field strength.		
	FCC Part 15.231		
	Frequency Range (MHz)	Field Strength Limit (μV/m) at 3 m	Measurement Distance(meters)
	40.66~40.77	2250	225
	70~130	1250	125
	130~174	1250 to 3750	125 to 375*
	174~260	3750	375
	260-470	3750 to 12500	375 to 1250*
	Above 470	12500	1250
	*Linear interpolation with frequency, f, in MHz		
	FCC Part 15.209		
	Frequency Range	Field Strength Limit (μV/m) at 3 m	Measurement Distance(meters)
	0.009~0.490	2400/F(kHz)	300
	0.490~1.705	24000/F(kHz)	30
	1.705~30.0	30	30
	30-88	100	3
88-216	150	3	
216-960	200	3	
Above 960	500	3	

Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8meters above the ground at a 3 meter camber in below 1GHz,1.5m above the ground in above1GHz. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. 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. 4. 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. 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.
Test Result:	Pass

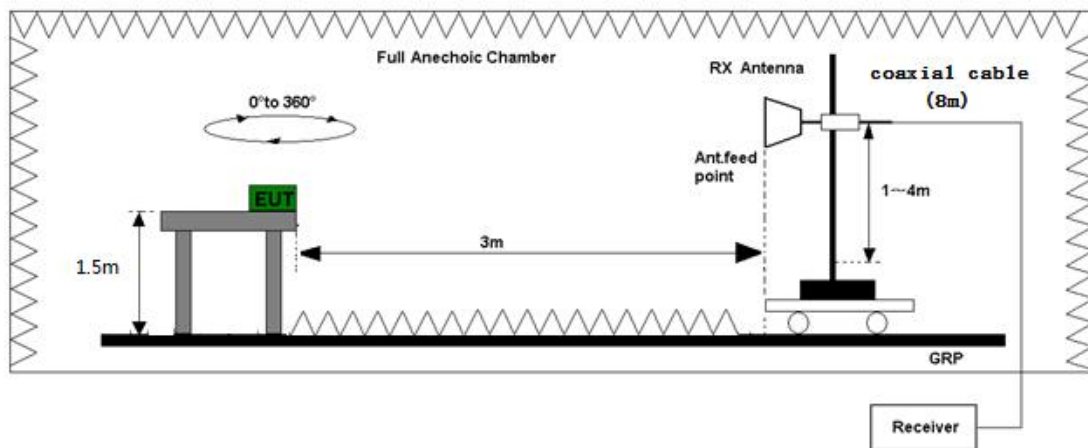
8.4.1.Test Setup:



Test set-up of radiated disturbance (Up to 30MHz)



Test set-up of radiated disturbance (30MHz to 1GHz)



Test set-up of radiated disturbance (Above 1GHz)

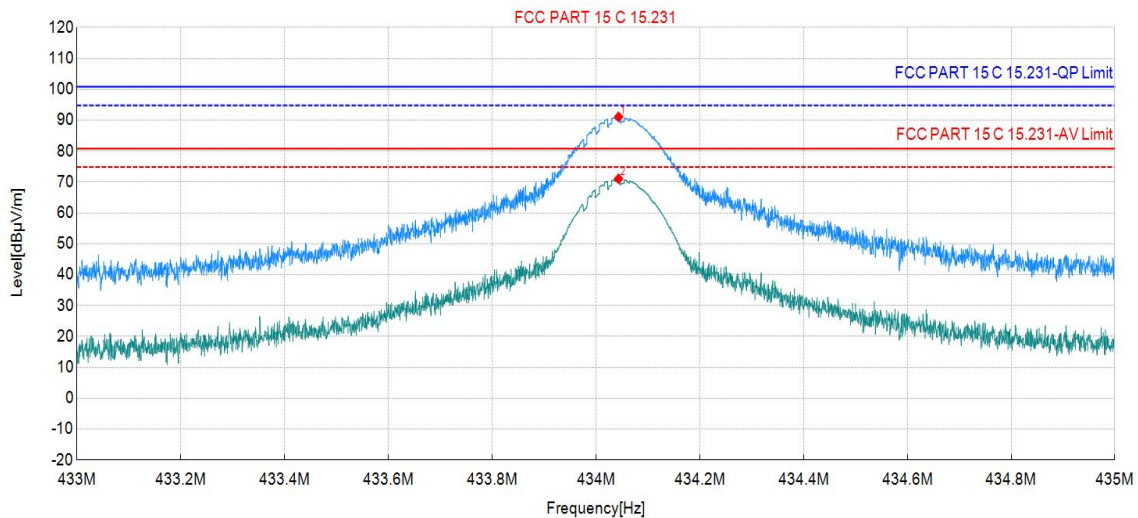
8.4.2. Test Result

Test Voltage	DC 3V
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Field Strength of Fundamental Emissions

Please refer to the following diagram:

Vertical:



Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	433.92	99.27	85.54	-13.73	100.83	15.29	100	306	PK	Vert	PASS
2	434.04	84.79	71.06	-13.73	80.83	9.77	100	101	AV	Vert	PASS

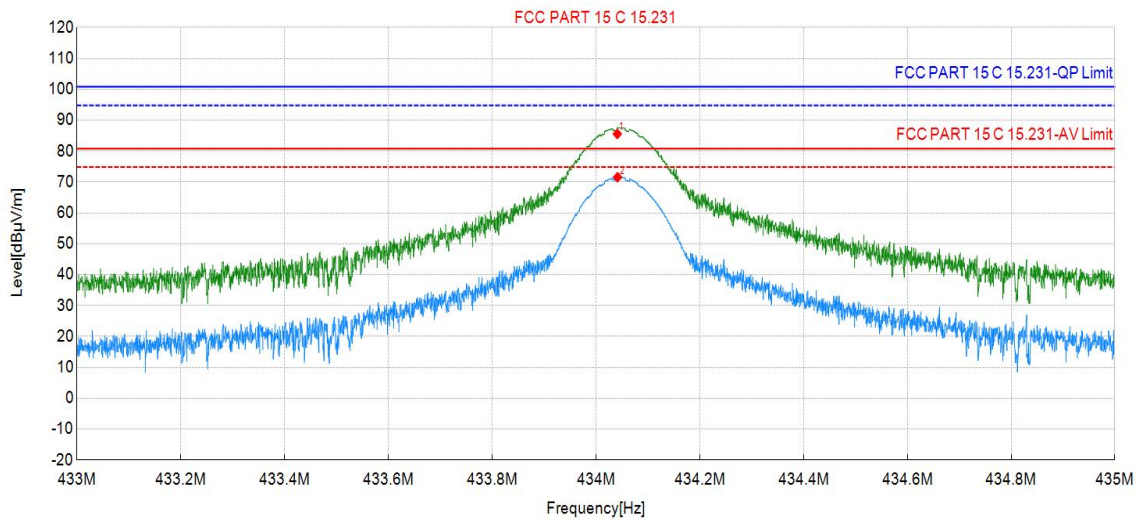
Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

(3)Factor=Antenna Factor+ Cable Loss - Amplifier Factor

Please refer to the following diagram:

Horizontal:



Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	433.92	99.53	85.80	-13.73	100.83	15.03	100	359	PK	Hori	PASS
2	434.04	85.30	71.57	-13.73	80.83	9.26	100	341	AV	Hori	PASS

Note:(1)Level=Reading+Factor

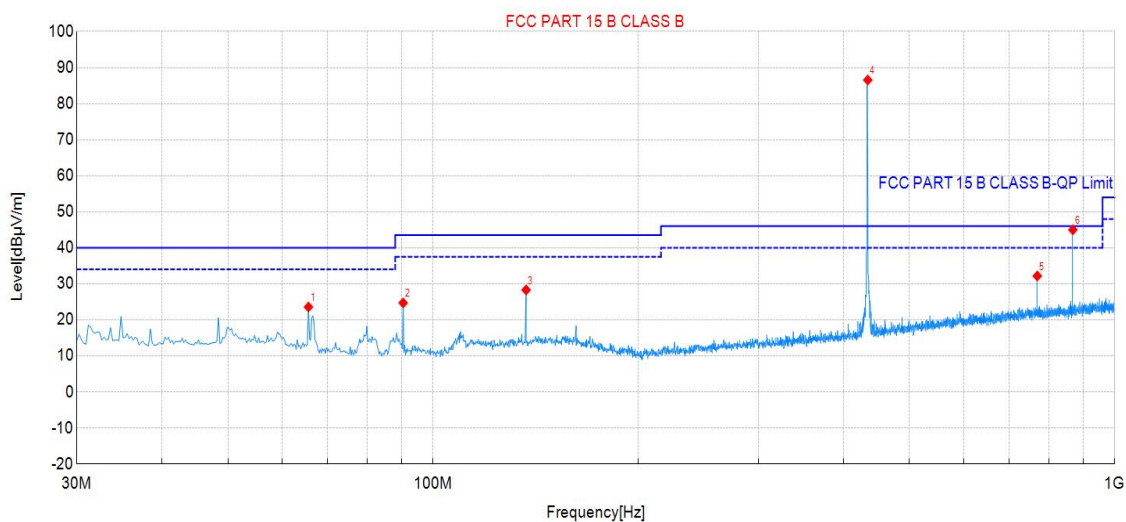
(2)Margin=Limit-Level

(3)Factor=Antenna Factor+ Cable Loss - Amplifier Factor

Radiated Emissions (below 1GHz)

Please refer to the following diagram:

Vertical:



Suspected Data List

NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	65.65	42.47	23.58	-18.89	40.00	16.42	100	269	PK	Vert	PASS
2	90.38	45.23	24.72	-20.51	43.50	18.78	100	1	PK	Vert	PASS
3	136.94	44.91	28.32	-16.59	43.50	15.18	100	9	PK	Vert	PASS
4	433.92	99.27	85.54	-13.73	--	--	100	327	PK	Vert	--
5	769.87	40.37	32.19	-8.18	46.00	13.81	100	279	PK	Vert	PASS
6	868.32	52.42	44.99	-7.43	46.00	1.01	100	306	PK	Vert	PASS

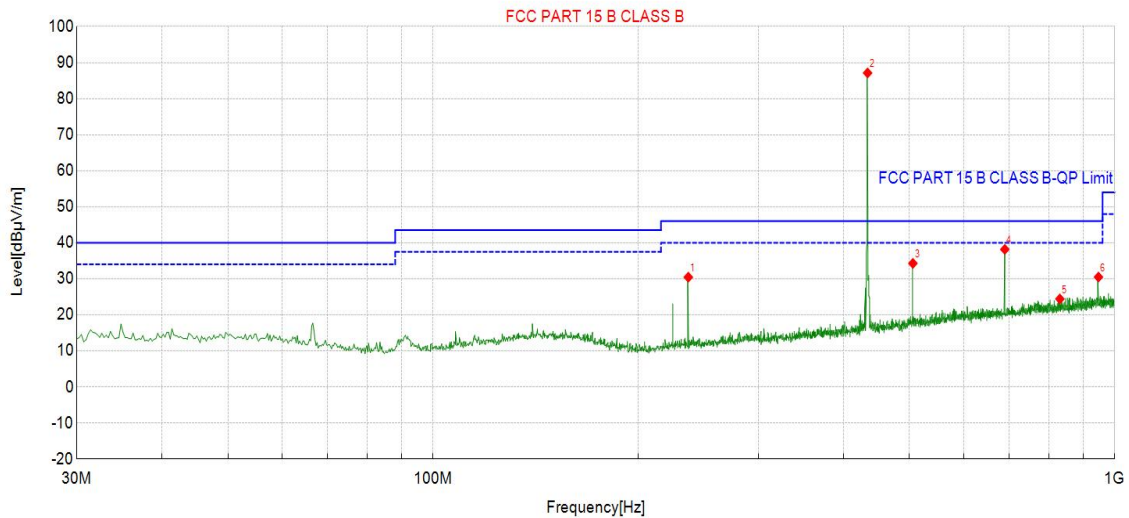
Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

(3)Factor=Antenna Factor+ Cable Loss - Amplifier Factor

Please refer to the following diagram:

Horizontal:



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	236.85	48.96	30.46	-18.50	46.00	15.54	100	356	PK	Hori	PASS
2	433.92	99.53	85.75	-13.73	--		100	81	PK	Hori	--
3	505.79	46.40	34.30	-12.10	46.00	11.70	100	44	PK	Hori	PASS
4	689.84	47.12	38.19	-8.93	46.00	7.81	100	194	PK	Hori	PASS
5	830.98	32.12	24.43	-7.69	46.00	21.57	100	26	PK	Hori	PASS
6	946.65	37.35	30.51	-6.84	46.00	15.49	100	194	PK	Hori	PASS

Note:(1)Level=Reading+Factor

(2)Margin=Limit-Level

(3)Factor=Antenna Factor+ Cable Loss - Amplifier Factor

Radiated Emissions (above 1GHz)

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Horizontal	1301.76	56.7	54.5	25.1	2.8	30.1	80.83	-50.73	PK
Horizontal	1735.68	56.9	54.9	25.7	3.4	31.1	80.83	-49.73	PK
Horizontal	2169.60	54.9	55.5	28.2	3.8	31.4	80.83	-49.43	PK

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector Type
Vertical	1301.76	56.8	54.5	25.1	2.8	30.2	80.83	-50.63	PK
Vertical	1735.68	57.1	54.9	25.7	3.4	31.3	80.83	-49.53	PK
Vertical	2169.60	55.2	55.5	28.2	3.8	31.7	80.83	-49.13	PK

Note:(1)Emission Level=Reading-Pre-Amp.Gain+Antenna+Cable loss

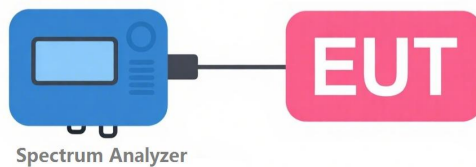
(2)Margin=Level-limit

(3)The peak value is lower than the AV limit, the AV value does not need to be shown.

8.5. DUTY CYCLE

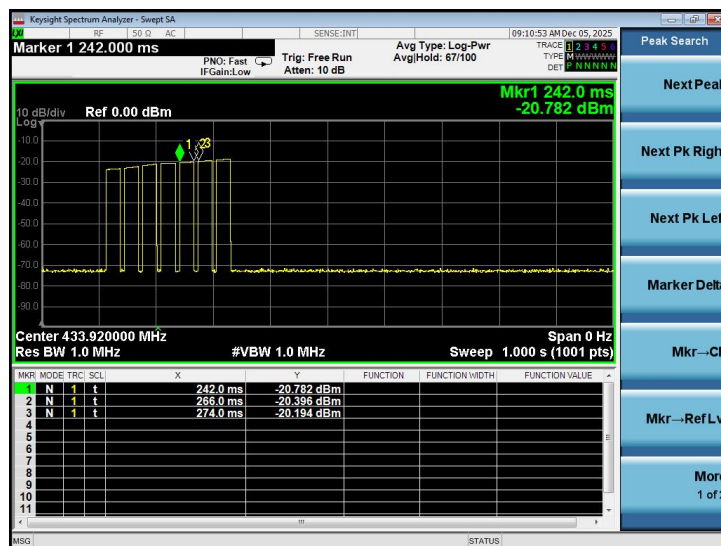
Test Procedure:	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings: Span=0Hz Set the RBW =8MHz Set the VBW$\geq$RBW Detector = Average. Sweep time = auto couple Trace mode = Clear write Use the marker-delta function to determine the Tx On and Tx off..
Test Result:	Pass

8.5.1.Test Setup



8.5.2.Test Result

Duty cycle Plot

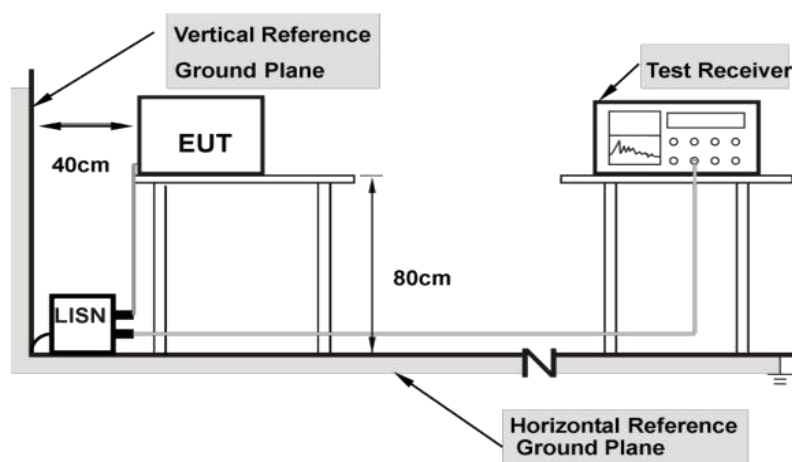


Frequency	On Time (ms)	Period (ms)	Duty Cycle (%)
433.92MHz	24	32	75

8.6. CONDUCTED EMISSION

Test Requirement:	FCC Part 15.207		
Test Mode:	Transmitting mode with modulation		
Limit:			
	Frequency of Emission (MHz)	Conducted 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 Procedure:	For tabletop equipment, the EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table. The EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled.		
Test Result:	Pass		

8.6.1. Test Setup



8.6.2. Test Result

N/A. The EUT is powered by battery.

9. PHOTOGRAPHS OF TEST SET-UP

For photographs of the test set-up, refer to the appendix file (Test Setup Photo).

10. PHOTOGRAPHS OF THE EUT

For photographs of the EUT, refer to the appendix file (EUT External Photos and EUT Internal Photos).

*** End of Report ***