FCC Test Report

Test Report
On Behalf of
Shanxiyitongdianzishangwu Co., Ltd.
For
Ceiling fan with light
Model No.: CA-YG341-2, CA-YG341-1

FCC ID: 2BXRN-CA-YG341-2

Prepared For:	**Shanxiyitongdianzishangwu Co., Ltd.** **No. 332, Group2, Licun, Wadi Town, Wenxi County, Yuncheng City,Shanxi Province, China**
Prepared By:	**Shenzhen HUAK Testing Technology Co., Ltd.** **1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**
Date of Test:	**Aug. 10, 2026 ~ Aug. 17, 2026**
Date of Report:	**Aug. 17, 2026**
Report Number:	**HK2608100806-E**

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Test Result Certification

Applicant's Name.....:	Shanxiyitongdianzishangwu Co., Ltd.
Address .....:	No. 332, Group2, Licun, Wadi Town, Wenxi County, Yuncheng City,Shanxi Province, China
Manufacturer's Name .....:	Shanxiyitongdianzishangwu Co., Ltd.
Address .....:	No. 332, Group2, Licun, Wadi Town, Wenxi County, Yuncheng City,Shanxi Province, China
Product Description	
Trade Mark .....:	N/A
Product Name..... :	Ceiling fan with light
Model and/or Type Reference :	CA-YG341-2, CA-YG341-1
Standards .....:	FCC Part15 Subpart C, Section 15.231 ANSI C63.10: 2020

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Date of Test.....:	
Date (s) of Performance of Tests.....:	**Aug. 10, 2026 ~ Aug. 17, 2026**
Date of Issue.....:	**Aug. 17, 2026**
Test Result .....:	**Pass**

Testing Engineer

Len Liao

Technical Manager

Sliver Wan

Authorized Signatory

Jason Zhou

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** Issued history **

Revision	Description	Issued Date	Remark
Revision 1.0	Initial Test Report Release	Aug. 17, 2026	Jason Zhou

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1. Summary

1.1 Test Procedures and Results

Standard Section	Test Item	Result
15.203	Antenna Requirement	PASS
15.207	AC Conducted Emission	N/A
15.205/15.209/15.231(b)	Spurious Emission	PASS
15.231(c)	20dB Occupied Bandwidth	PASS
15.231(a)	Deactivation Testing	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

1.2 Information of the Test Laboratory

Shenzhen HUAK Testing Technology Co., Ltd.
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

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1.3 Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission 0.15~30MHz	±2.22dB
2	All Emissions, Radiated(<1G)	±3.60dB
3	All Emissions, Radiated(1-18G)	±3.86dB
4	All Emissions, Radiated(18-40G)	±4.76dB
5	Transmitter Power Conducted	±0.37dB
6	Conducted Spurious Emission	±2.20dB
7	Occupied Bandwidth	±3.68%
8	Temperature	±0.1°C
9	Humidity	±1.0%

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2. General Information

2.1 Description of Device (EUT)

Product Name	:	Ceiling fan with light	
Model No.	:	CA-YG341-2	
Series Model(s)	:	CA-YG341-1	
Model Difference	:	All model's the function, software and electric circuit are the same, only with model named different. Test sample model: CA-YG341-2.	
Test Power Supply	:	DC3V From Battery	
Product Description	:	Operation Frequency:	433.90MHz
		Number of Channel:	1 Channels
		Modulation Type:	ASK
		Antenna Type:	PCB Antenna
		Antenna Gain(Peak):	2dBi

Remark:

1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2) Antenna gain Refer to the antenna specifications.
3) The cable loss data is obtained from the supplier.
4) The test results in the report only apply to the tested sample.

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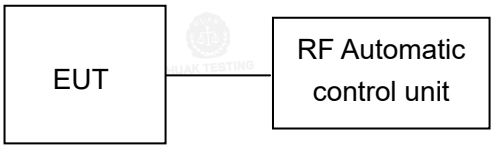
2.2 Description of Test Setup

Operation of EUT during Radiation testing:

Operation of EUT during RF Conducted testing:



The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.

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2.3 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.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Note
1	Ceiling fan with light	N/A	CA-YG341-2	N/A	EUT

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.

3. For conducted measurements (20dB Occupy Bandwidth, Transmission Time, Duty Cycle), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

2.4 List of Channels

Channel	Freq. (MHz)	Note (Modulation Type)
01	433.90	ASK

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2.5 Test Equipment List for All Test Items

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N.	R&S	ENV216	HKE-002	2026/02/11	1 Year
2	L.I.S.N.	R&S	ENV216	HKE-059	2026/02/04	1 Year
3	EMI Test Receiver	R&S	ESR-7	HKE-005	2026/02/06	1 Year
4	Spectrum analyzer	Agilent	N9020A	HKE-025	2026/02/06	1 Year
5	Spectrum analyzer	KEYSIGHT	N9020A	HKE-117	2026/02/06	1 Year
6	Spectrum analyzer	R&S	FSV3044	HKE-126	2026/02/06	1 Year
7	Preamplifier	Schwarzbeck	EMC051845SE	HKE-006	2026/02/04	1 Year
8	Preamplifier	Agilent	83051A	HKE-016	2026/02/04	1 Year
9	Preamplifier	QJD	QJD18-40-50	HKE-030	2026/02/05	1 Year
10	6dB Attenuator	Pasternack	6dB	HKE-152	2026/02/06	1 Year
11	EMI Test Receiver	R&S	ESR-7	HKE-010	2026/02/06	1 Year
12	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2026/02/06	2 Year
13	Loop Antenna	COM-POWER	AL-130R	HKE-014	2026/02/06	2 Year
14	Horn Antenna	Schwarzbeck	9120D	HKE-013	2026/02/06	2 Year
15	Broadband Horn Antenna	A-INFO	LB-180400-KF	HKE-031	2026/02/06	2 Year
16	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
17	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
18	RF Automatic control unit	Tonscend	JS0806-2	HKE-060	2026/02/06	1 Year
19	High pass filter unit	Tonscend	JS0806-F	HKE-055	2026/02/06	1 Year
20	Wireless Communication Test Set	R&S	CMW500	HKE-027	2026/02/06	1 Year
21	High-low temperature chamber	Guangke	HT-80L	HKE-118	2026/02/06	1 Year
22	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2026/03/06	1 Year
23	RF Test Software	Tonscend	JS1120-3 Version 3.6.21	HKE-083	/	/
24	10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	2026/02/04	1 Year
25	RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	/	/

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3. AC Conducted Emission Test

3.1 AC Conducted Power Line Emission Limit

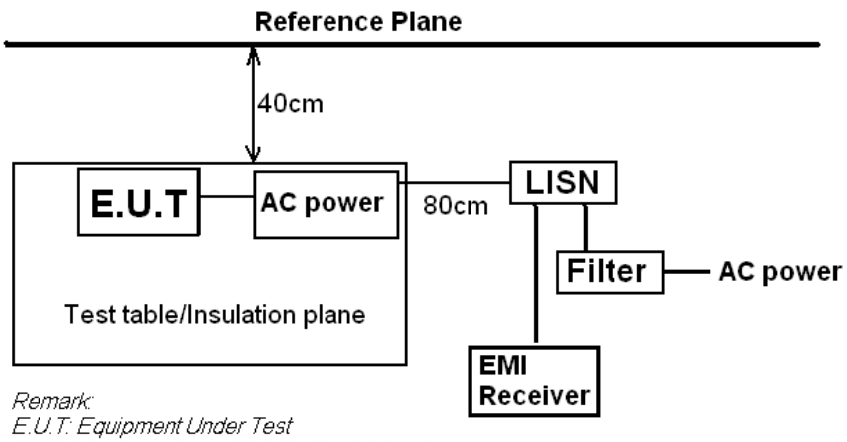
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2 Test Setup



Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m

3.3 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.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

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3.4 Test Data

Not applicable.

Note: EUT Power Supply by Battery Powered, so this test item not applicable.

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4. Radiated Emissions

4.1 Standard Applicable

According to §15.231(b), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66 - 40.70	2,250	225
70 - 130	1,250	125
130 - 174	1,250 to 3,750 **	125 to 375 **
174 - 260	3,750	375
260 - 470	3,750 to 12,500 **	375 to 1,250 **
Above 470	12,500	1,250

** linear interpolations

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.

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. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

Compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

4.2 Test Procedure

The setup of EUT is according with per ANSI C63.10: 2020 measurement procedure. The specification used was with the FCC Part 15.205 15.231(b) and FCC Part 15.209 Limit.

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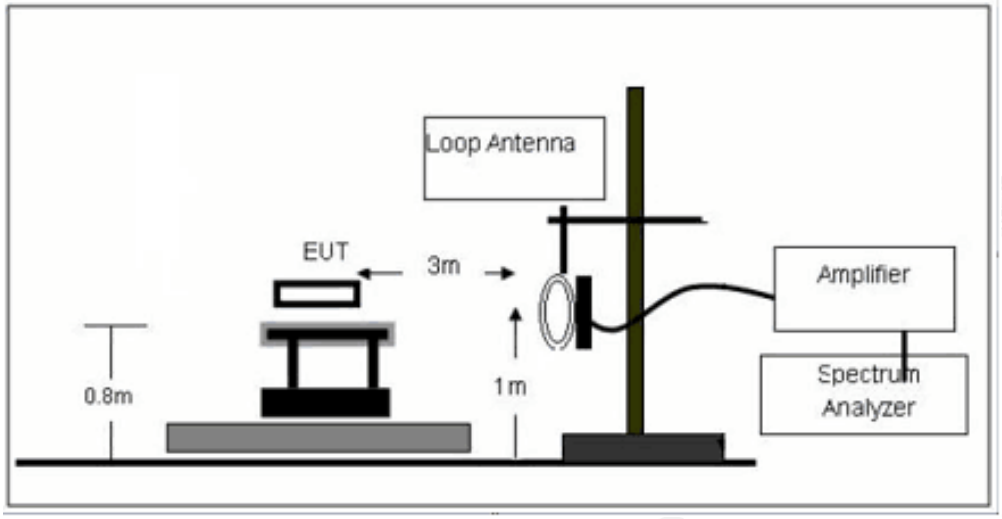

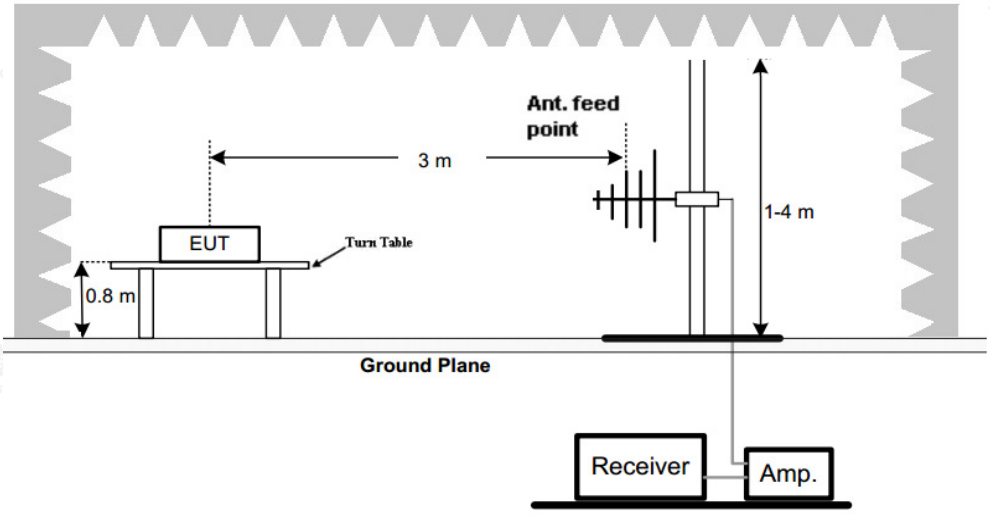

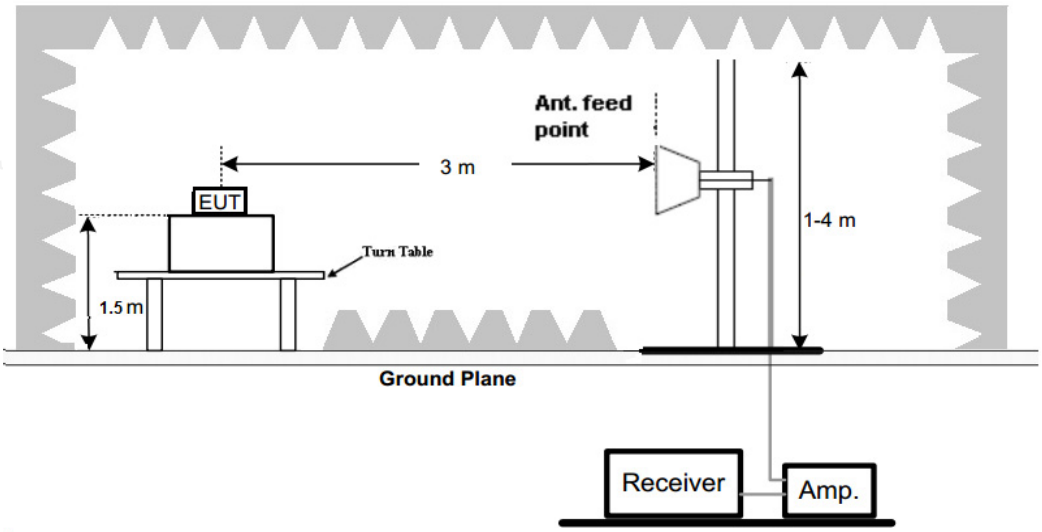

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4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Ant.Loss +Cab. Loss – Ampl.Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μV means the emission is 6dB μV below the maximum limit. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Part15C Limit

4.4 Environmental Conditions

Temperature:	21℃
Relative Humidity:	50%
ATM Pressure:	1011 mbar

4.5 Test Data

According to the data below, the FCC Part 15.205, 15.209 and 15.231 standards, and had the worst margin of:

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

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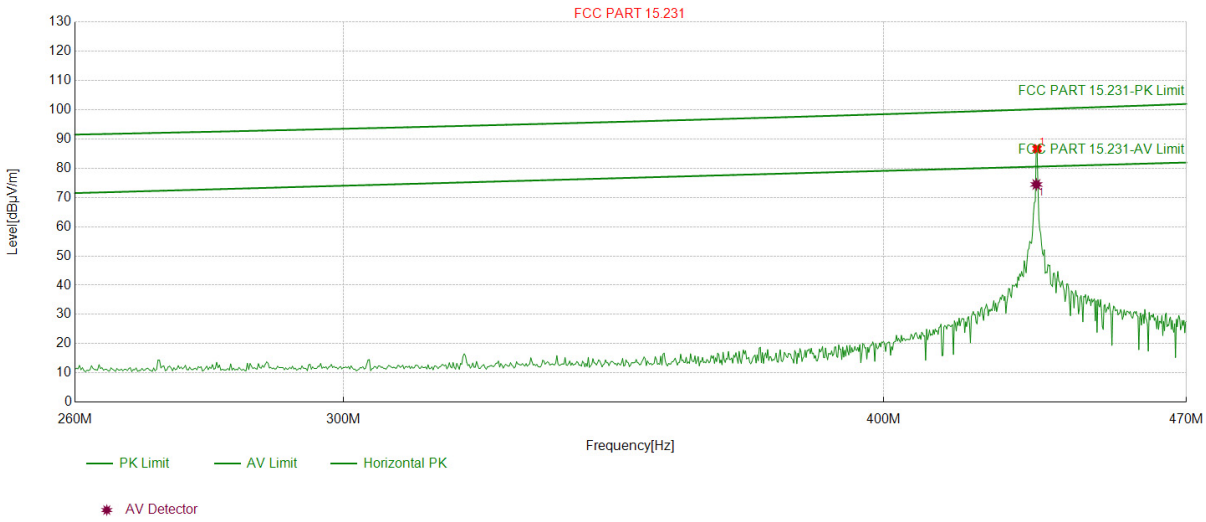
(Fundamental 433.90MHz)

Antenna polarity: Horizontal



Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	434.054	95.83	86.63	-9.20	100.15	13.52	100	171	Horizontal

AV Final Data List								
NO	Freq. [MHz]	Factor [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	433.903	-9.20	74.45	80.53	6.08	100	171	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

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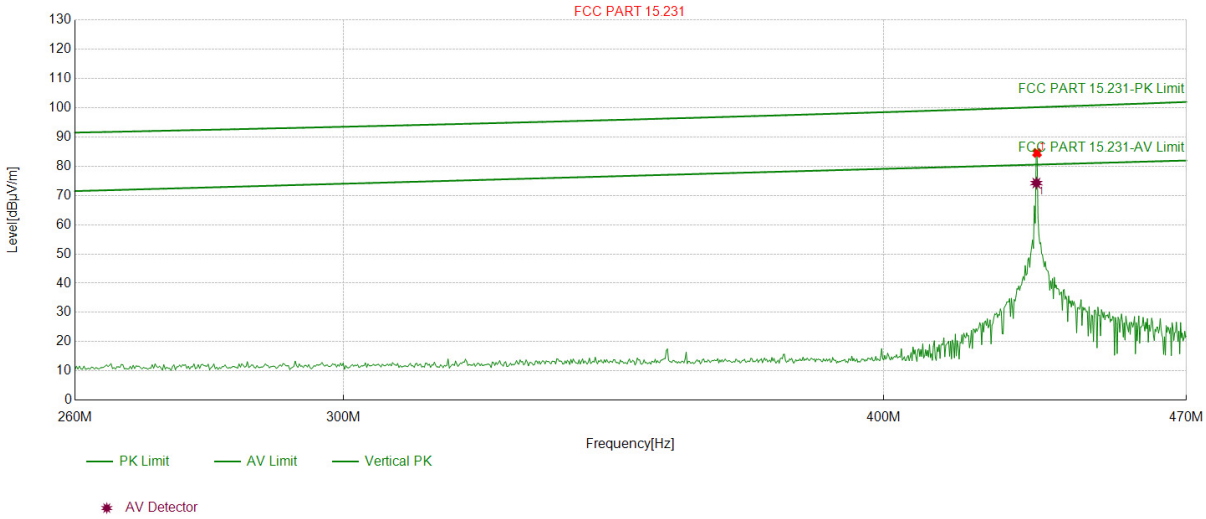
Antenna polarity: Vertical



Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	434.054	93.72	84.52	-9.20	100.15	15.63	100	108	Vertical

AV Final Data List								
NO	Freq. [MHz]	Factor [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	433.903	-9.20	74.23	80.53	6.30	100	108	Vertical

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

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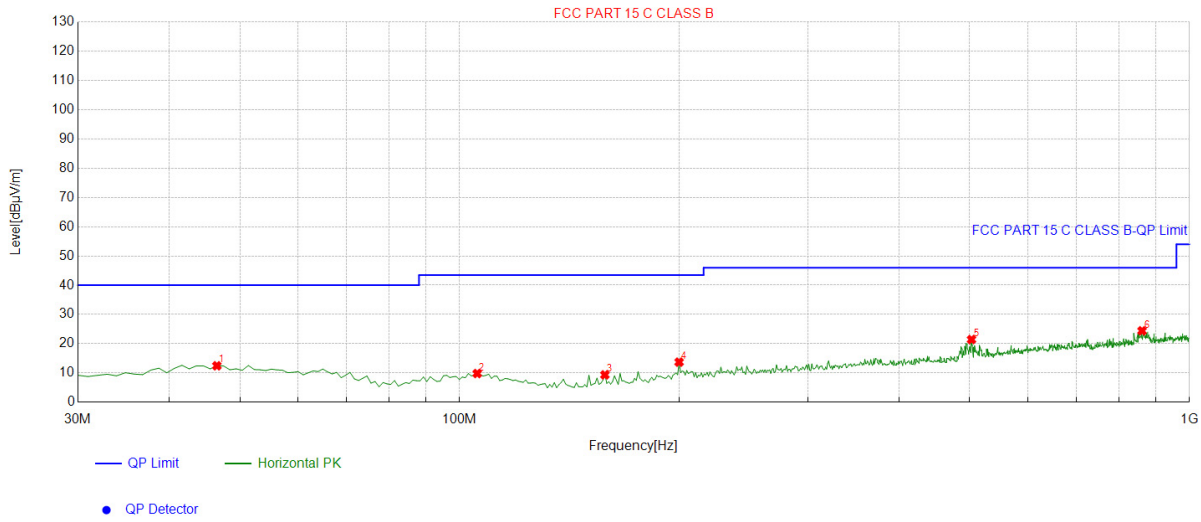
Radiated Emission

Antenna polarity: Horizontal



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	46.507	-11.49	23.96	12.47	40.00	27.53	100	79	Horizontal
2	105.736	-14.68	24.51	9.83	43.50	33.67	100	24	Horizontal
3	158.168	-17.72	27.09	9.37	43.50	34.13	100	123	Horizontal
4	199.920	-14.69	28.41	13.72	43.50	29.78	100	344	Horizontal
5	502.863	-7.94	29.38	21.44	46.00	24.56	100	46	Horizontal
6	861.151	-2.45	26.87	24.42	46.00	21.58	100	123	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

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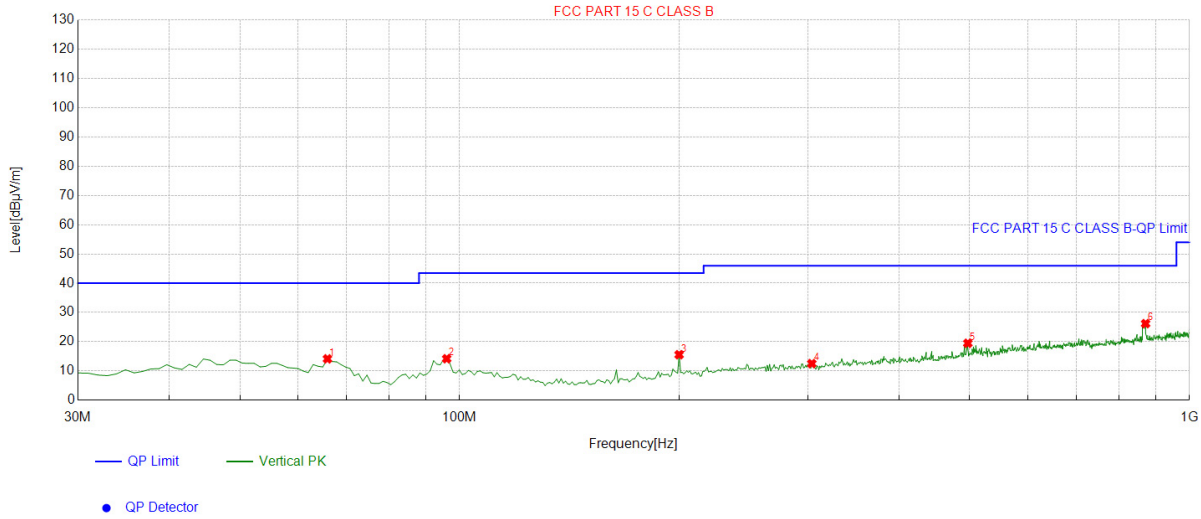
Antenna polarity: Vertical



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	65.926	-14.48	28.63	14.15	40.00	25.85	100	47	Vertical
2	96.026	-15.26	29.46	14.20	43.50	29.30	100	216	Vertical
3	199.920	-14.69	30.26	15.57	43.50	27.93	100	155	Vertical
4	303.814	-12.04	24.57	12.53	46.00	33.47	100	351	Vertical
5	497.037	-8.08	27.56	19.48	46.00	26.52	100	127	Vertical
6	870.861	-2.32	28.52	26.20	46.00	19.80	100	127	Vertical

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

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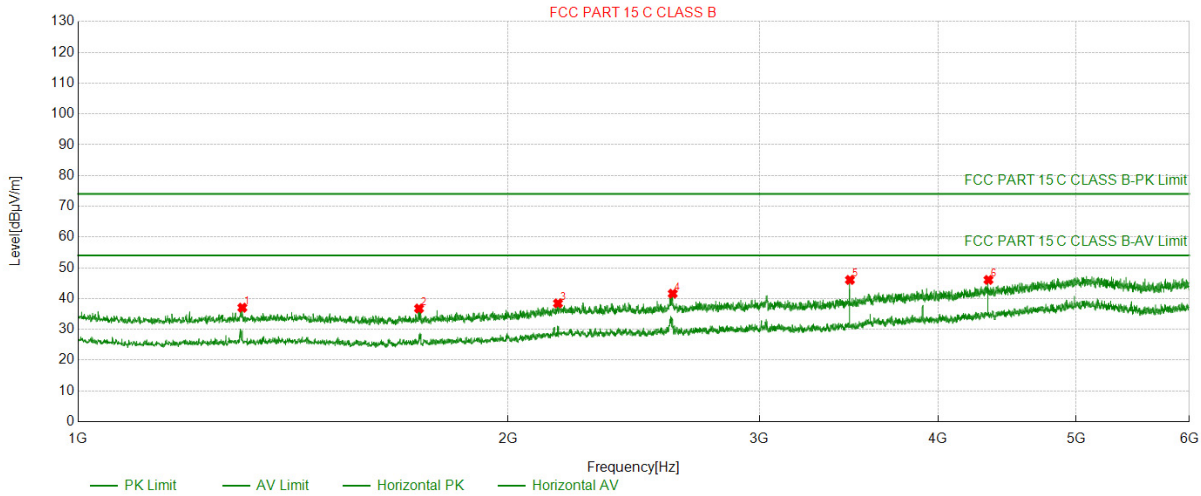
Above 1GHz Test Results

Antenna polarity: Horizontal



Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1303.530	55.44	37.02	-18.42	74.00	36.98	150	359	Horizontal
2	1733.073	54.97	36.75	-18.22	74.00	37.25	150	1	Horizontal
3	2168.117	53.45	38.42	-15.03	74.00	35.58	150	52	Horizontal
4	2608.661	55.94	41.58	-14.36	74.00	32.42	150	67	Horizontal
5	3471.247	58.03	46.05	-11.98	74.00	27.95	150	128	Horizontal
6	4339.834	54.15	46.06	-8.09	74.00	27.94	150	40	Horizontal

Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

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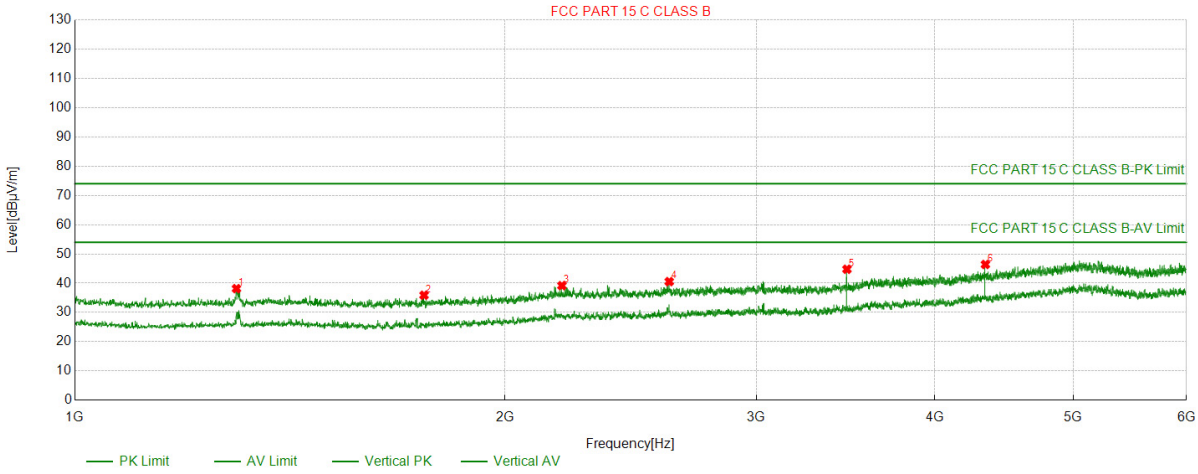
Antenna polarity: Vertical



Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	PK Level [dBμV/m]	Factor [dB]	PK Limit [dBμV/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1297.530	56.59	38.15	-18.44	74.00	35.85	150	314	Vertical
2	1755.576	54.05	35.90	-18.15	74.00	38.10	150	19	Vertical
3	2192.619	53.93	39.18	-14.75	74.00	34.82	150	356	Vertical
4	2606.661	54.93	40.55	-14.38	74.00	33.45	150	56	Vertical
5	3471.247	56.76	44.78	-11.98	74.00	29.22	150	19	Vertical
6	4339.334	54.50	46.41	-8.09	74.00	27.59	150	148	Vertical

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level;

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBμV/m)		Limit@3m (dBμV/m)	
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--

Note: 1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement.

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5. 20dB Occupy Bandwidth Test

5.1 Standard Applicable

According to FCC Part 15.231(c), The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

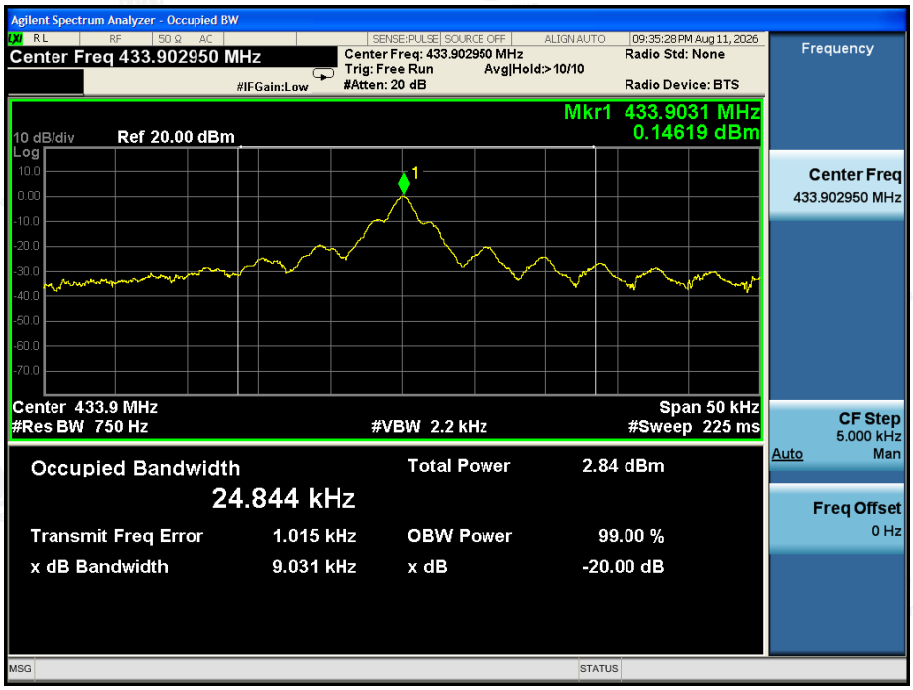
5.2 Test Procedure

With the EUT's antenna attached, the EUT's 20dB Bandwidth power was received by the test antenna, which was connected to the spectrum analyzer with the START, and STOP frequencies set to the EUT's operation band.

Temperature:	21℃
Relative Humidity:	52%
ATM Pressure:	1011 mbar

5.3 Test Data

Freq. (MHz)	Modulation Type	Bandwidth (kHz)	Limit (kHz)	Results
433.90	ASK	9.031	<1084.8	PASS



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6. Transmission Time

6.1 Standard Applicable

According to FCC Part 15.231(a), the transmitter shall be complied the following requirements:

(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

(2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

(3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour.

6.2 Test Procedure

With the EUT's antenna attached, the EUT's output signal was received by the test antenna, which was connected to the spectrum analyzer. Set the center frequency to 433.971MHz, than set the spectrum analyzer to Zero Span for the release time reading. During the testing, the switch was released then the EUT automatically deactivated.

6.3 Environmental Conditions

Temperature:	20℃
Relative Humidity:	52%
ATM Pressure:	1011 mbar

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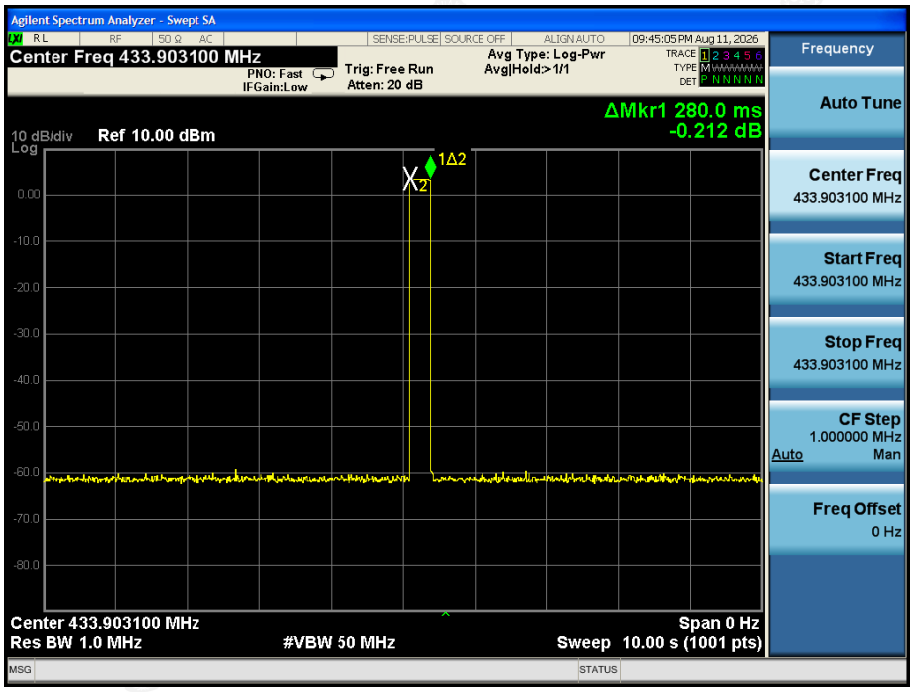
6.4 Test Data

Transmission Type	Test Frequency MHz	Transmission Time seconds	Limit s	Result
Manually	433.90	0.28	5	PASS

Please refer the following plot.



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7. Duty Cycle

7.1 Standard Applicable

According to FCC Part 15.231(b)(2) and 15.35 (c),For pulse operation transmitter, the averaging pulsed emissions are calculated by peak value of measured emission plus duty cycle factor.

7.2 Test Procedure

1) The EUT was placed on a turntable which is 0.8m above ground plane.

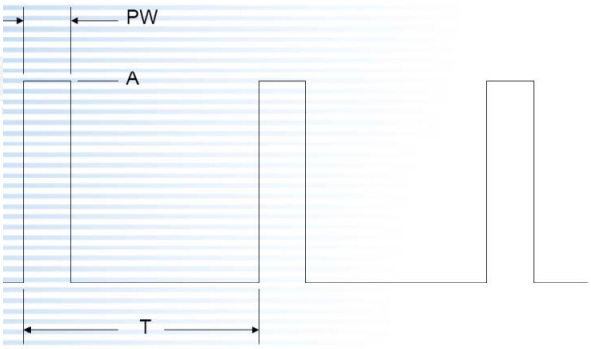
2) Set EUT operating in continuous transmitting mode

3) Set Test Receiver into spectrum analyzer mode, Tune the spectrum analyzer to the transmitter carrier frequency, and set the spectrum analyzer resolution bandwidth(RBW) to 1000kHz and video bandwidth(VBW) to 1000kHz, Span was set to 0Hz.

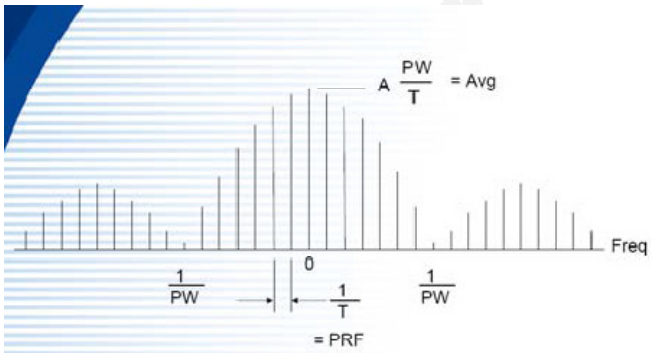
4) The Duty Cycle was measured and recorded.

7.3 Introduction to PDCF Reference:

(§15.35 Measurement detector functions and bandwidths.)
1) Part 15 of the FCC Rules provides for the operation of low power communication devices without an individual license (e.g., intrusion detectors, pulsed water tank level gauges, etc.), subject to certain requirements. Some of these devices use extremely narrow pulses to generate wideband emissions, which are measured to determine compliance with the rules. These measurements are typically performed with a receiver or spectrum analyzer. Depending on a number of factors (e.g., resolution bandwidth, pulse width, etc.), the spectrum analyzer may not always display the true peak value of the measured emission. This effect, called “pulse desensitization,” relates to the capabilities of the measuring instrument. For the measurement and reporting of the true peak of pulsed emissions, it may be necessary to apply a “pulse desensitization correction factor” (PDCF) to the measured value, pursuant to 47 CFR 15.35(a).



Periodic Square Pulse



Frequency Spectrum of Periodic Square Pulse

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If using spectrum analyzer to measure pulse signal, it have to make sure the RBW use is at least 2/PW.
•When RBW is less than 2/PW, you are able to measure the true peak level of the pulse signal. If this is the case.
PDCF is required to compensate to determine true peak value.
Pulse desensitization:
PW =29250usec (0.6* 13+ 1.65*13), Period=67500usec, Level=A
RBW>2/PW=0.068K, 1/T=0.15K
NOTE: 2 / PW < RBW, first don't need

2). For the actual test, please refer to the ANSI C63.10, Annex C refer to section 5 for more detail

7.4 Test Data

Type of Pulse	Width of Pulse ms	Quantity of Pulse	Transmission Time ms	Total Time (T_{on}) ms
Pulse 1	0.76	10	7.60	13.12
Pulse 2	0.24	23	5.52	

Test Period (T_p) ms	Total Time (T_{on}) ms	Duty Cycle %	Duty Cycle Factor dB
40.3	13.12	32.56	-9.75

Remark: Duty Cycle Factor=20*log (Duty Cycle)

Please refer to the attached test plots

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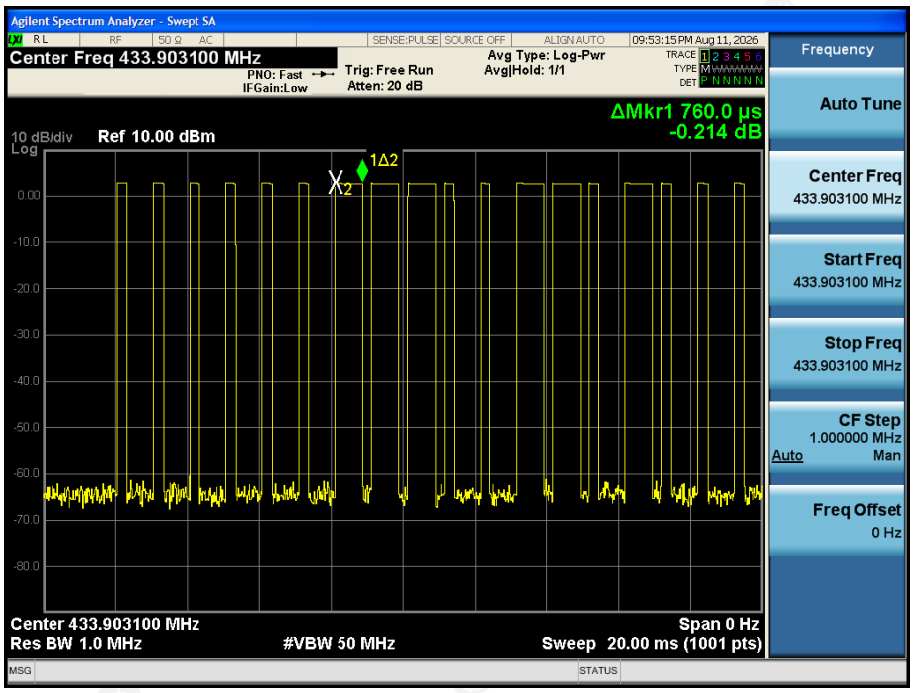

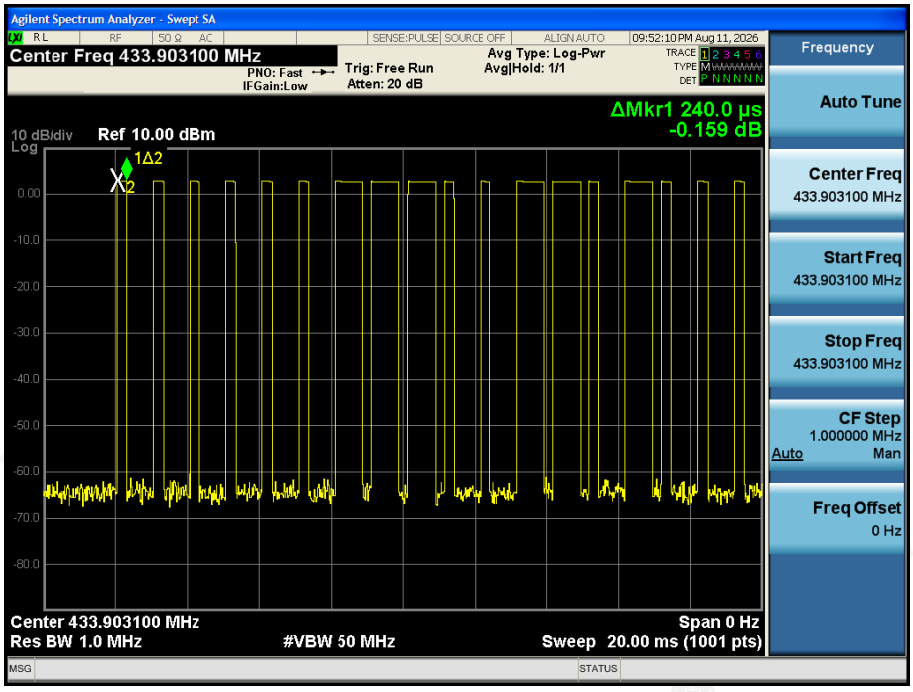

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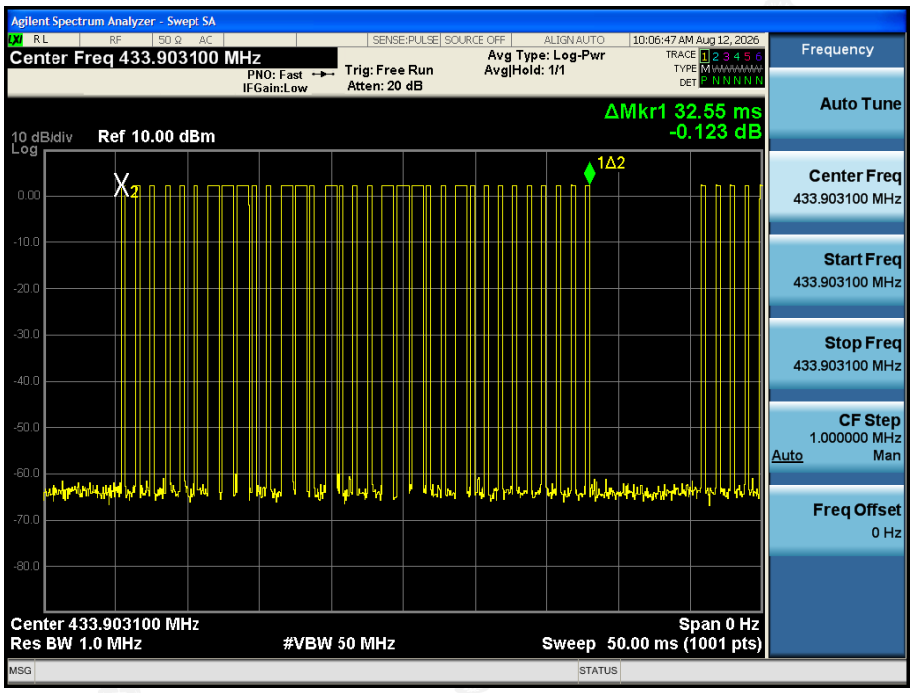

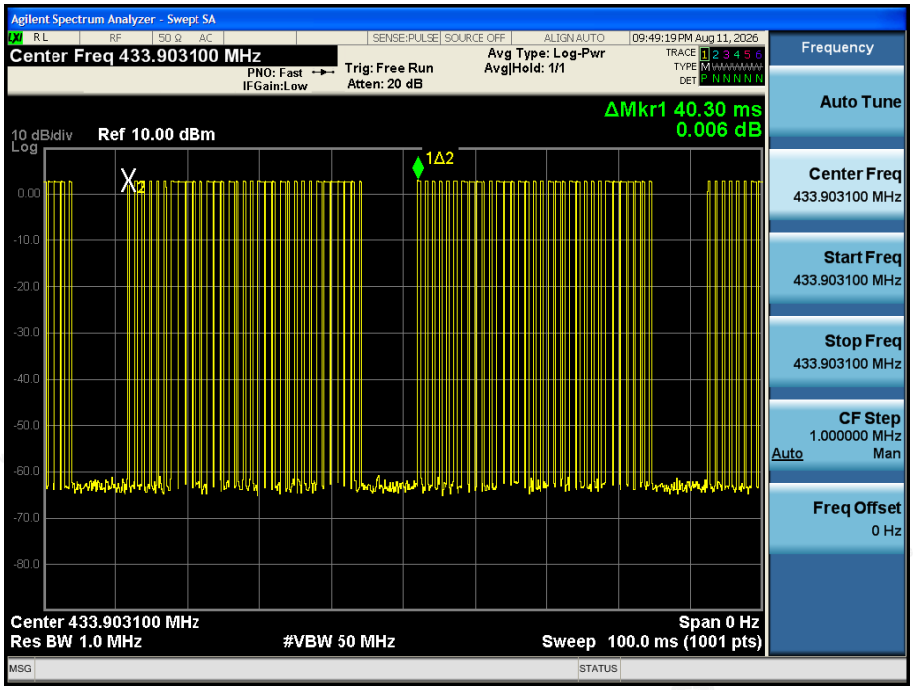

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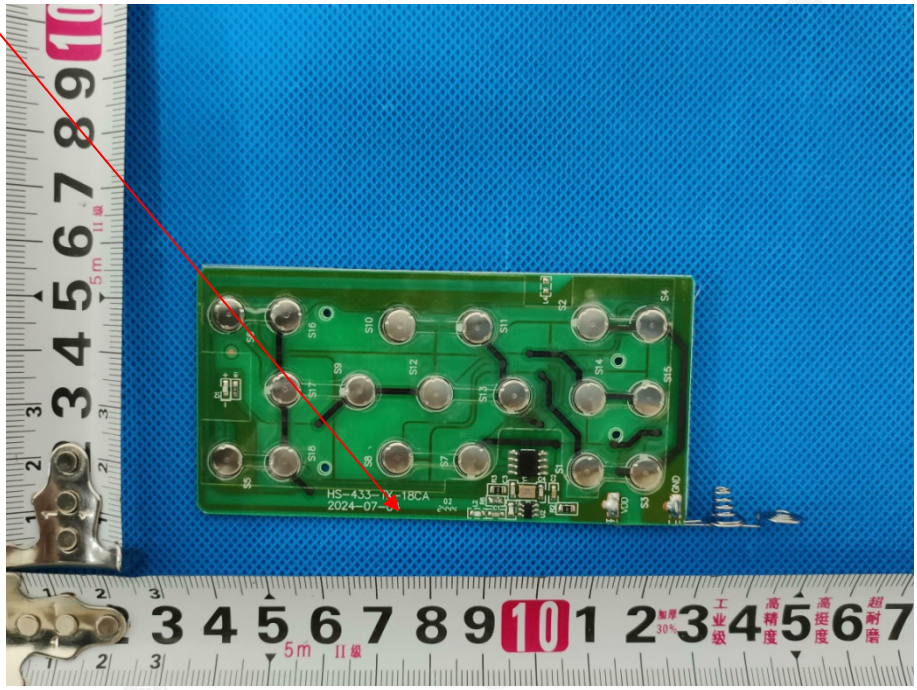
8. Antenna Requirement

The antenna used in this product is a PCB Antenna, is a permanently attached antenna on the PCB. It conforms to the standard requirements. The gain of antenna used for transmitting is 2dBi.

Antenna



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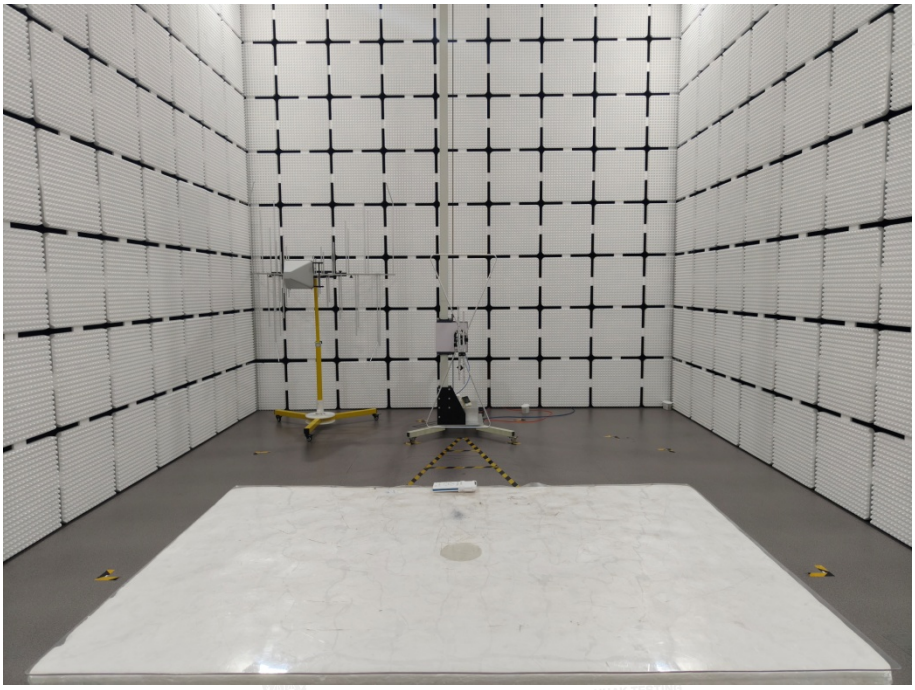
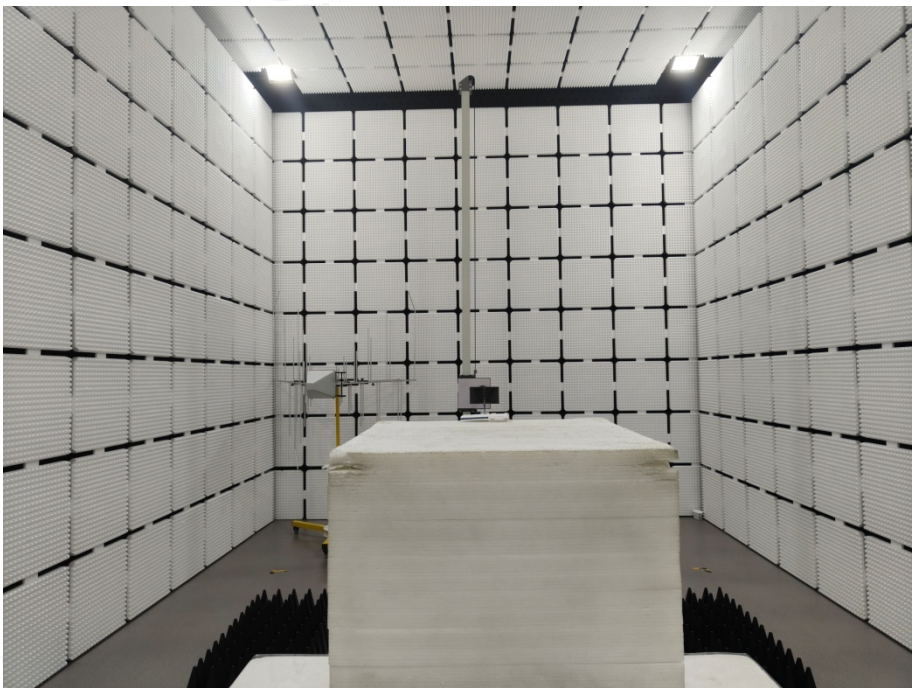
9. Test Setup Photos of the EUT

Radiated Emission





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RF Conducted Emission

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10. Photos of the EUT

Reference to the report: ANNEX A of External photos and ANNEX B of Internal photos

---------End of test report---------

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