



Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street,
Bao'an District, Shenzhen, China

FCC PART 15 SUBPART C TEST REPORT

FCC PART 15 SUBPART C 15.249

Report Reference No.: CTA25032601601

FCC ID.: 2A6PB-WS-5G

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Date of issue.....: Apr. 02, 2025

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: Zhuhai Kuwee Technology Co., LTD.

Address: North factory building 4-3-402, Honghui 2nd Road, Hongqi Town
Industrial Zone, Jinwan District, Zhuhai, China

Test specification

Standard: FCC PART 15 SUBPART C 15.249

TRF Originator: Shenzhen CTA Testing Technology Co., Ltd.

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Test item description: 5.8GHz Wireless Guitar System

Trade Mark: N/A

Manufacturer: Zhuhai Kuwee Technology Co., LTD.

Model/Type reference.....: WS-5G

Listed Models: WS-5A, WS-5B, WS-5D, WS-5E, WS-5H, WS-5K, WS-5T,
WS-5M, WS-5X

Modulation: GFSK

Frequency.....: 5745MHz to 5840MHz

Ratings: DC 3.7V From battery and DC 5.0V From external circuit

Result.....: PASS

Shenzhen CTA Testing Technology Co., Ltd.

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TEST REPORT

Equipment under Test : 5.8GHz Wireless Guitar System

Model /Type : WS-5G

Serial Models : WS-5A, WS-5B, WS-5D, WS-5E, WS-5H, WS-5K, WS-5T,
WS-5M, WS-5X

Model difference : The PCB board, circuit, structure and internal of these models
are the same, Only model number and colour is different for
these model.

Applicant : **Zhuhai Kuwee Technology Co., LTD.**

Address : North factory building 4-3-402, Honghui 2nd Road, Hongqi Town
Industrial Zone, Jinwan District, Zhuhai, China

Manufacturer : **Zhuhai Kuwee Technology Co., LTD.**

Address : North factory building 4-3-402, Honghui 2nd Road, Hongqi Town
Industrial Zone, Jinwan District, Zhuhai, China

Test Result:	PASS
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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.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

ANSI C63.10:2013 : American National Standard for Testing Unlicensed Wireless Devices

ANSI C63.4: 2014: –American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz
Range of 9 kHz to 40GHz

2 SUMMARY

2.1 General Remarks

Date of receipt of test sample	:	Mar. 26, 2025
Testing commenced on	:	Mar. 26, 2025
Testing concluded on	:	Apr. 02, 2025

2.2 Product Description

Product Description:	5.8GHz Wireless Guitar System
Model:	WS-5G
Power supply:	DC 3.7V From battery and DC 5.0V From external circuit
testing sample ID:	CTA250326016-1# (Engineer sample), CTA250326016-2# (Normal sample)
Hardware version:	V1.0
Software version:	V1.0
SRD	
Operation frequency:	5745MHz to 5840MHz
Modulation:	GFSK
Antenna type:	PCB antenna
Antenna gain:	0.60 dBi

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 3.7V From battery and DC 5.0V From external circuit

2.4 Short description of the Equipment under Test (EUT)

This is a 5.8GHz Wireless Guitar System.

For more details, refer to the user's manual of the EUT.

2.5 EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- ☐ - supplied by the manufacturer
- ☒ - supplied by the lab

☐ Adapter	Model: EP-TA20CBC Input: AC 100-240V 50/60Hz Output: DC 5V 2A
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2.6 EUT operation mode

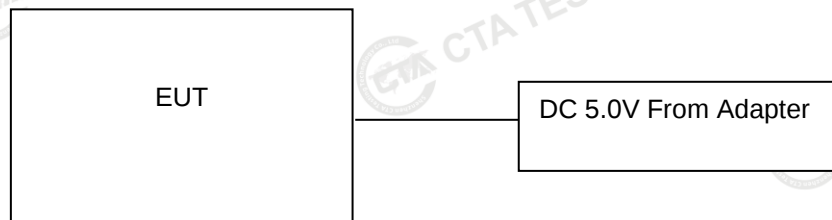
The Applicant provides communication tools software (CMD command) to control the EUT for staying in continuous transmitting and receiving mode for testing.

All test performed at the low, middle and high of operational frequency range of each mode.

Testing Frequency List

Channel	Frequency
01	5745
02	5795
03	5840

2.7 Block Diagram of Test Setup



2.8 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended to comply with Section FCC Part 15.249 Rules.

2.9 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:	25 ° C
Humidity:	45 %
Atmospheric pressure:	950-1050mbar

Conducted testing:

Temperature:	25 ° C
Humidity:	44 %
Atmospheric pressure:	950-1050mbar

AC Power Conducted Emission

Temperature:	24 ° C
Humidity:	44 %
Atmospheric pressure:	950-1050mbar

3.4 Test Description

FCC PART 15.249		
FCC Part 15.249(a)	Field Strength of Fundamental	PASS
FCC Part 15.209	Spurious Emission	PASS
FCC Part 15.215(c)	20dB bandwidth	PASS
FCC Part 15.207	Conducted Emission	PASS
FCC Part 15.203	Antenna Requirement	PASS

Note 1: The measurement uncertainty is not included in the test result.

Note 2: NA = Not Applicable; NP = Not Performed

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	9KHz~30MHz	3.02 dB	(1)
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)
Output Peak power	30MHz~18GHz	0.55 dB	(1)
Power spectral density	/	0.57 dB	(1)
Spectrum bandwidth	/	1.1%	(1)
Radiated spurious emission (30MHz-1GHz)	30~1000MHz	4.10 dB	(1)
Radiated spurious emission (1GHz-18GHz)	1~18GHz	4.32 dB	(1)
Radiated spurious emission (18GHz-40GHz)	18-40GHz	5.54 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.	Calibration Date	Calibration Due Date
LISN	R&S	ENV216	CTA-308	2024/08/03	2025/08/02
LISN	R&S	ENV216	CTA-314	2024/08/03	2025/08/02
EMI Test Receiver	R&S	ESPI	CTA-307	2024/08/03	2025/08/02
EMI Test Receiver	R&S	ESCI	CTA-306	2024/08/03	2025/08/02

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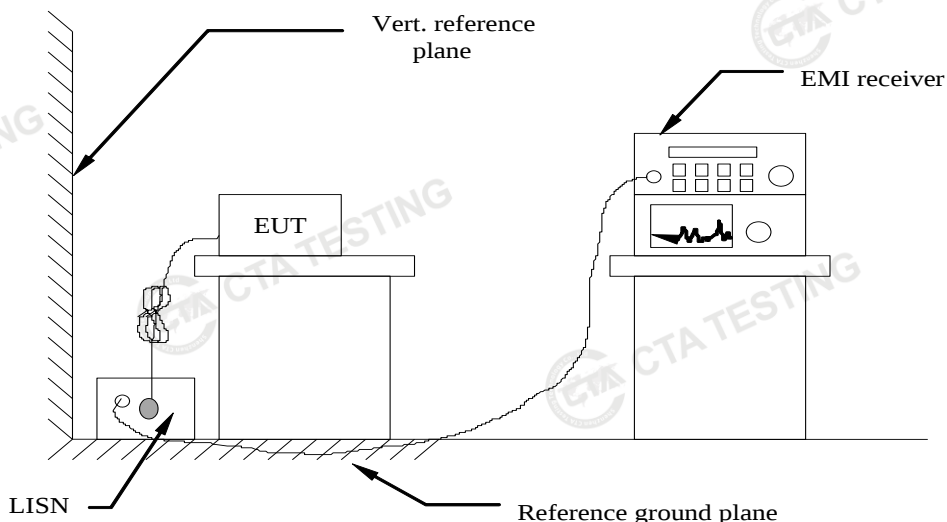
Spectrum Analyzer	Agilent	N9020A	CTA-301	2024/08/03	2025/08/02
Spectrum Analyzer	R&S	FSU	CTA-337	2024/08/03	2025/08/02
Vector Signal generator	Agilent	N5182A	CTA-305	2024/08/03	2025/08/02
Analog Signal Generator	R&S	SML03	CTA-304	2024/08/03	2025/08/02
Universal Radio Communication	CMW500	R&S	CTA-302	2024/08/03	2025/08/02
Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2024/08/03	2025/08/02
Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2023/10/17	2026/10/16
Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2023/10/13	2026/10/12
Loop Antenna	Zhinan	ZN30900C	CTA-311	2023/10/17	2026/10/16
Broadband Horn Antenna	A-INFOMW	LB-180500H-2.4F	CTA-336	2023/09/13	2026/09/12
Amplifier	Schwarzbeck	BBV 9745	CTA-312	2024/08/03	2025/08/02
Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2024/08/03	2025/08/02
Directional coupler	NARDA	4226-10	CTA-303	2024/08/03	2025/08/02
High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2024/08/03	2025/08/02
High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2024/08/03	2025/08/02
Automated filter bank	Tonscend	JS0806-F	CTA-404	2024/08/03	2025/08/02
Power Sensor	Agilent	U2021XA	CTA-405	2024/08/03	2025/08/02
Amplifier	Schwarzbeck	BBV9719	CTA-406	2024/08/03	2025/08/02

Test Equipment	Manufacturer	Model No.	Version number	Calibration Date	Calibration Due Date
EMI Test Software	Tonscend	TS@JS32-RE	5.0.0.2	N/A	N/A
EMI Test Software	Tonscend	TS@JS32-CE	5.0.0.1	N/A	N/A
RF Test Software	Tonscend	TS@JS1120-3	3.1.65	N/A	N/A
RF Test Software	Tonscend	TS@JS1120	3.1.46	N/A	N/A

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 :

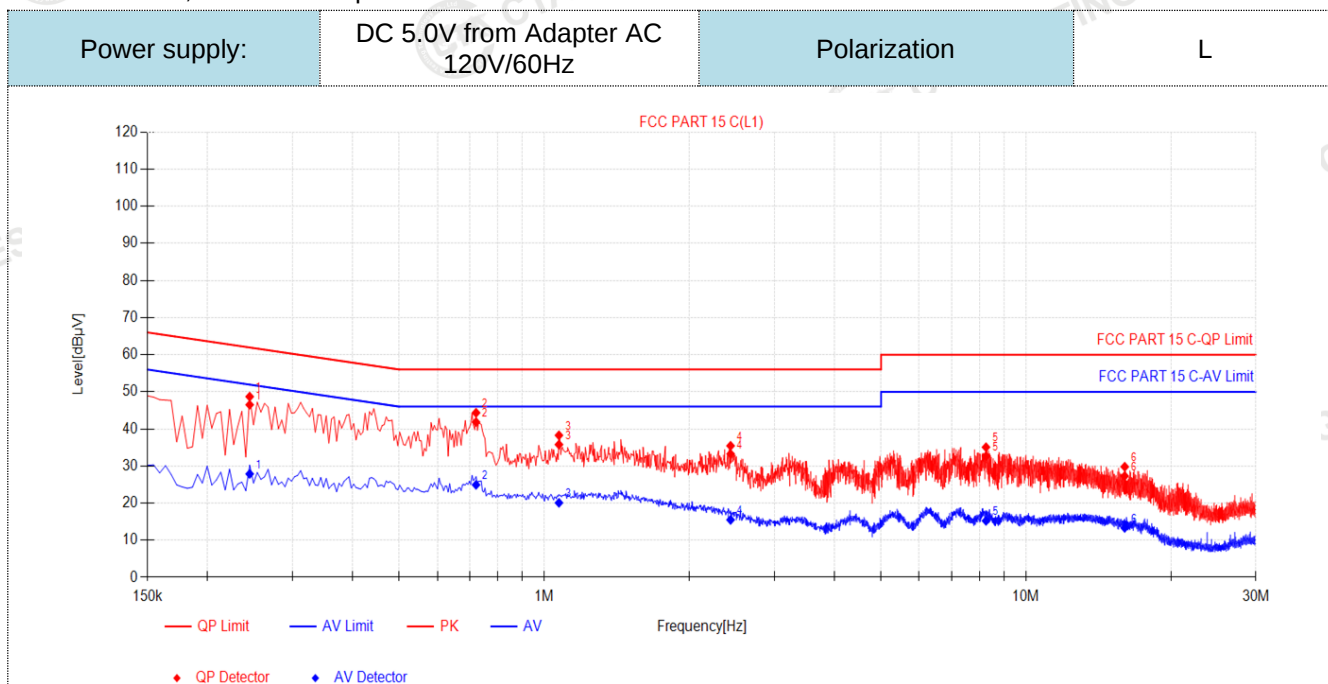
Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST RESULTS

Remark:

1. All modes were tested at Low, Middle, and High channel; only the worst result of Mid Channel was reported as below:
2. Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:

**Final Data List**

NO.	Freq. [MHz]	Factor [dB]	QP Reading[dB μV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.2445	9.95	36.56	46.51	61.94	15.43	17.92	27.87	51.94	24.07	PASS
2	0.7215	9.92	31.93	41.85	56.00	14.15	15.00	24.92	46.00	21.08	PASS
3	1.0725	9.91	25.87	35.78	56.00	20.22	10.17	20.08	46.00	25.92	PASS
4	2.436	10.08	23.18	33.26	56.00	22.74	5.42	15.50	46.00	30.50	PASS
5	8.259	10.28	22.40	32.68	60.00	27.32	4.95	15.23	50.00	34.77	PASS
6	16.0305	10.33	16.97	27.30	60.00	32.70	3.01	13.34	50.00	36.66	PASS

Note:1). QP Value (dBμV) = QP Reading (dBμV) + Factor (dB)

2). Factor (dB) = insertion loss of LISN (dB) + Cable loss (dB)

3). QPMargin(dB) = QP Limit (dBμV) - QP Value (dBμV)

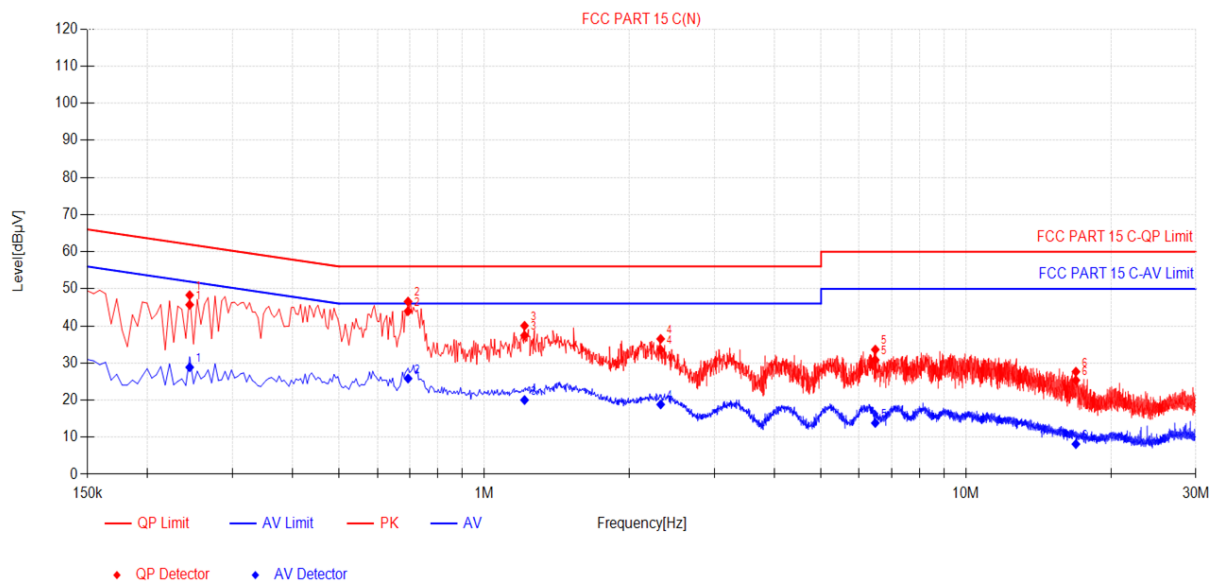
4). AVMargin(dB) = AV Limit (dBμV) - AV Value (dBμV)

Power supply:

DC 5.0V from Adapter AC
120V/60Hz

Polarization

N



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.2445	10.01	35.69	45.70	61.94	16.24	18.83	28.84	51.94	23.10	PASS
2	0.6945	10.06	33.91	43.97	56.00	12.03	15.75	25.81	46.00	20.19	PASS
3	1.212	10.18	27.27	37.45	56.00	18.55	9.84	20.02	46.00	25.98	PASS
4	2.3235	10.14	23.46	33.60	56.00	22.40	8.69	18.83	46.00	27.17	PASS
5	6.4815	10.34	20.47	30.81	60.00	29.19	3.49	13.83	50.00	36.17	PASS
6	16.9125	10.47	14.89	25.36	60.00	34.64	-2.32	8.15	50.00	41.85	PASS

Note:1). QP Value (dBμV) = QP Reading (dBμV) + Factor (dB)

2). Factor (dB) = insertion loss of LISN (dB) + Cable loss (dB)

3). QPMargin (dB) = QP Limit (dBμV) - QP Value (dBμV)

4). AVMargin (dB) = AV Limit (dBμV) - AV Value (dBμV)

4.2 Radiated Emissions

Limit

(1) According to §15.249 (a): Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental		Field strength of harmonics	
	millivolts/meter	dBuV/m	microvolts/meter	dBuV/m
902-928 MHz	50	94	500	54
2400-2483.5 MHz	50	94	500	54
5725-5875 MHz	50	94	500	54
24.0-24.25 GHz	250	108	2500	68

As shown in §15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter at 3 meters along the antenna azimuth

(2) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209

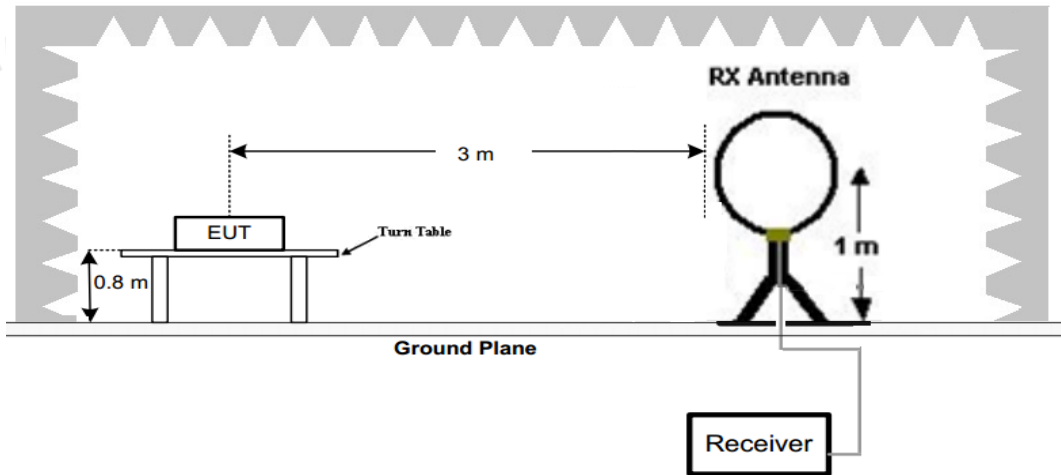
(3) In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Radiated emission limits

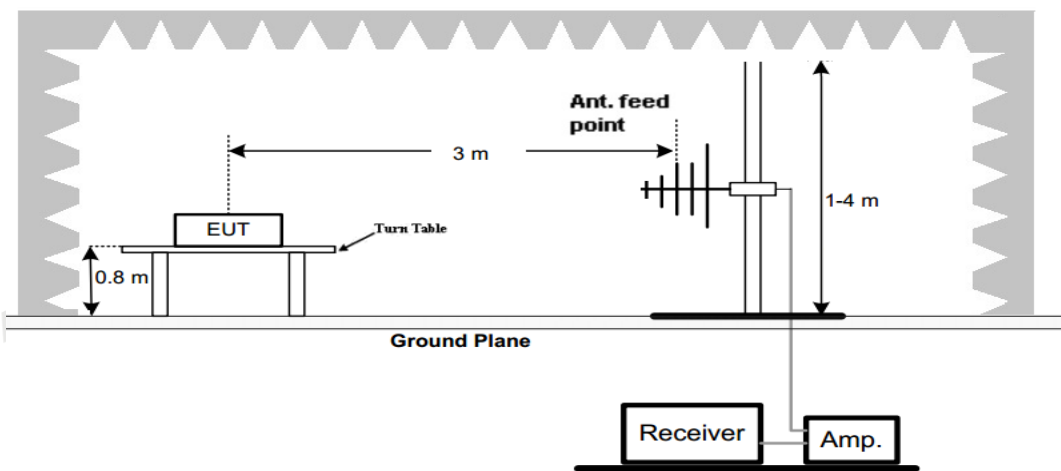
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	$2400/F(\text{KHz})$
0.49-1.705	3	$20\log(24000/F(\text{KHz}))+40\log(30/3)$	$24000/F(\text{KHz})$
1.705-30	3	$20\log(30)+40\log(30/3)$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960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

TEST CONFIGURATION

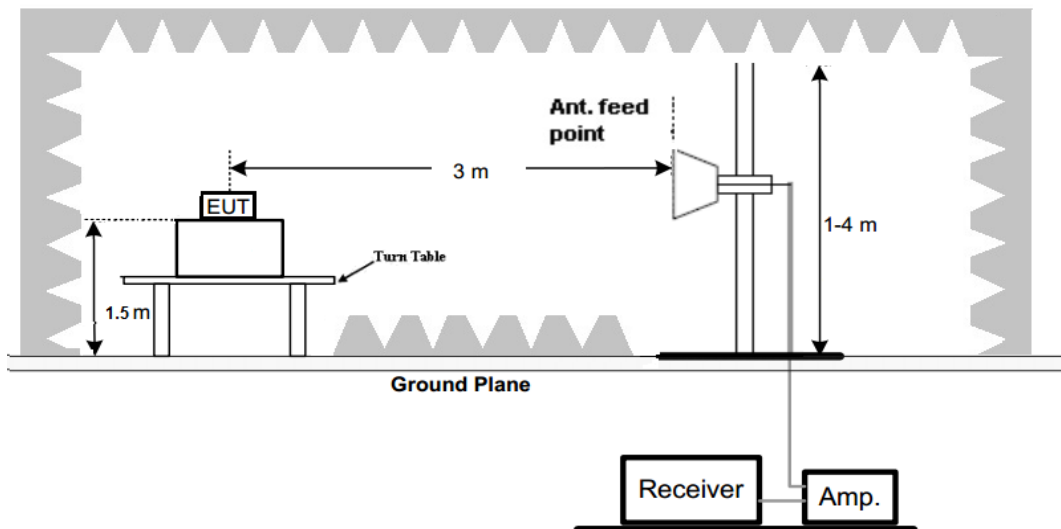
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



Test Procedure

- Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
- 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
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until all frequency measurements have been completed.
- Radiated emission test frequency band from 9KHz to 40GHz.
- 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	Bilog Antenna	3
1GHz-18GHz	Horn Antenna	3
18GHz-25GHz	Horn Antenna	1

- 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

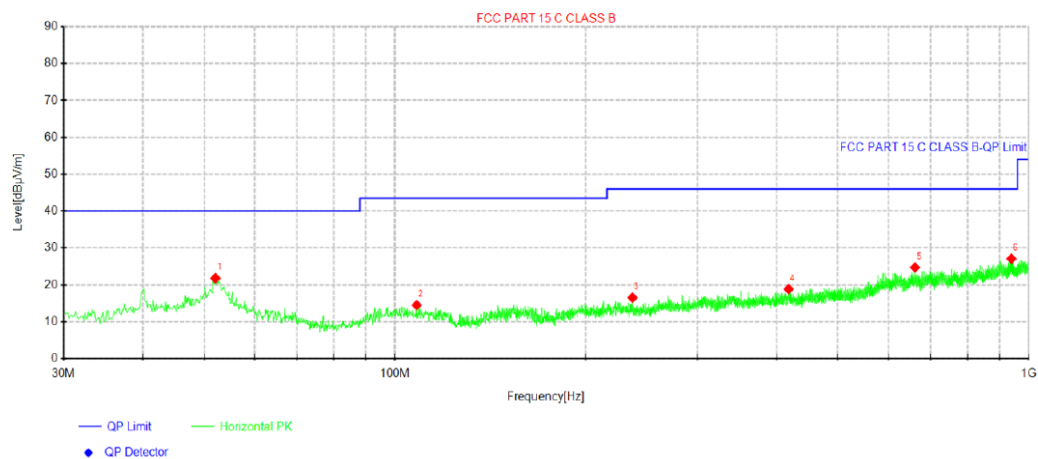
TEST RESULTS

Remark:

- This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
- All modes have been tested for below 1GHz test, only the worst case of Mid Channel was recorded
- Radiated emission test from 9 KHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9 KHz to 30MHz and not recorded in this report.

For 30MHz-1GHz

Horizontal



Suspected Data List

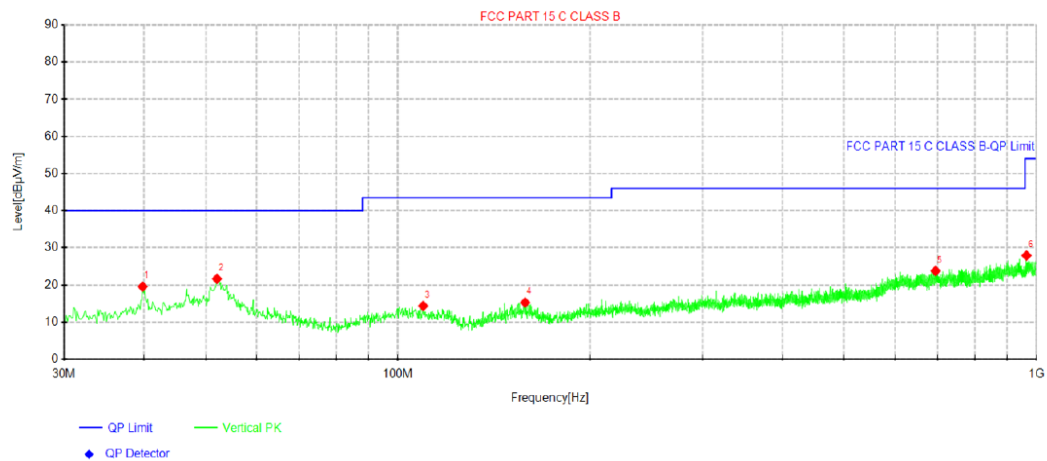
NO.	Freq. [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	52.0675	33.11	21.80	-11.31	40.00	18.20	100	236	Horizontal
2	108.206	27.74	14.51	-13.23	43.50	28.99	200	10	Horizontal
3	236.973	28.90	16.53	-12.37	46.00	29.47	100	1	Horizontal
4	417.878	28.83	18.84	-9.99	46.00	27.16	100	63	Horizontal
5	661.47	30.18	24.71	-5.47	46.00	21.29	200	10	Horizontal
6	938.647	29.46	27.08	-2.38	46.00	18.92	100	294	Horizontal

Note:1). Level (dBμV/m)= Reading (dBμV)+ 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 [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	39.8212	31.56	19.55	-12.01	40.00	20.45	100	3	Vertical
2	52.0675	32.98	21.67	-11.31	40.00	18.33	200	182	Vertical
3	109.54	27.67	14.36	-13.31	43.50	29.14	100	360	Vertical
4	158.161	30.98	15.28	-15.70	43.50	28.22	100	360	Vertical
5	694.813	28.96	23.79	-5.17	46.00	22.21	200	194	Vertical
6	964.716	29.97	27.95	-2.02	54.00	26.05	100	240	Vertical

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

For 1GHz to 40GHz

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low (5745MHz)	5745.00	89.74	PK	H	114.00	24.26	92.52	33.42	6.04	42.24	-2.78
	5745.00	87.64	AV	H	94.00	6.36	90.42	33.42	6.04	42.24	-2.78
	--	--	--	--	--	--	--	--	--	--	--
Mid (5795MHz)	5795.00	91.54	PK	H	114.00	22.46	94.32	33.42	6.04	42.24	-2.78
	5795.00	90.19	AV	H	94.00	3.81	92.97	33.42	6.04	42.24	-2.78
	--	--	--	--	--	--	--	--	--	--	--
Hig (5840MHz)	5840.00	92.45	PK	H	114.00	21.55	94.85	33.9	6.49	42.79	-2.4
	5840.00	90.39	AV	H	94.00	3.61	92.79	33.9	6.49	42.79	-2.4
	--	--	--	--	--	--	--	--	--	--	--

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low (5745MHz)	5745.00	90.66	PK	v	114.00	23.34	93.44	33.42	6.04	42.24	-2.78
	5745.00	88.79	AV	v	94.00	5.21	91.57	33.42	6.04	42.24	-2.78
	--	--	--	--	--	--	--	--	--	--	--
Mid (5795MHz)	5795.00	93.45	PK	v	114.00	20.55	96.23	33.42	6.04	42.24	-2.78
	5795.00	91.64	AV	v	94.00	2.36	94.42	33.42	6.04	42.24	-2.78
	--	--	--	--	--	--	--	--	--	--	--
Hig (5840MHz)	5840.00	94.36	PK	v	114.00	19.64	96.76	33.9	6.49	42.79	-2.4
	5840.00	91.69	AV	v	94.00	2.31	94.09	33.9	6.49	42.79	-2.4
	--	--	--	--	--	--	--	--	--	--	--

GFSK Mode (above 1GHz)

Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low (5745MHz)	5720.00	46.51	PK	H	74.00	27.49	49.29	33.42	6.04	42.24	-2.78
	11490.00	52.17	PK	H	74.00	21.83	47.69	39.02	10.91	45.45	4.48
	--	--	--	--	--	--	--	--	--	--	--
Mid (5795MHz)	11590.00	52.54	PK	H	74.00	21.46	48.09	38.93	10.95	45.43	4.45
	--	--	--	--	--	--	--	--	--	--	--
Hig (5840MHz)	5875.00	46.97	PK	H	74.00	27.03	49.07	33.97	7.02	43.09	-2.1
	11680.00	52.89	PK	H	74.00	21.11	48.31	38.83	11.16	45.41	4.58
	--	--	--	--	--	--	--	--	--	--	--

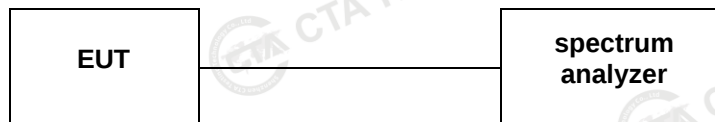
Tested Channel	Frequency (MHz)	Emission Level (dBuV/m)	Detector Mode	ANT Pol	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre amplifier (dB)	Correction Factor (dB/m)
Low (5729MHz)	5720.00	46.69	PK	V	74.00	27.31	49.47	33.42	6.04	42.24	-2.78
	11490.00	51.67	PK	V	74.00	22.33	47.19	39.02	10.91	45.45	4.48
	--	--	--	--	--	--	--	--	--	--	--
Mid (5785MHz)	11590.00	52.39	PK	V	74.00	21.61	47.94	38.93	10.95	45.43	4.45
	--	--	--	--	--	--	--	--	--	--	--
Hig (5840MHz)	5875.00	47.16	PK	V	74.00	26.84	49.26	33.97	7.02	43.09	-2.1
	11680.00	52.73	PK	V	74.00	21.27	48.15	38.83	11.16	45.41	4.58
	--	--	--	--	--	--	--	--	--	--	--

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
3. Margin value = Limit value - Emission level.
4. -- Mean the other emission levels were very low against the limit.
5. RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

4.3 20dB Bandwidth Measurement

TEST CONFIGURATION



TEST PROCEDURE

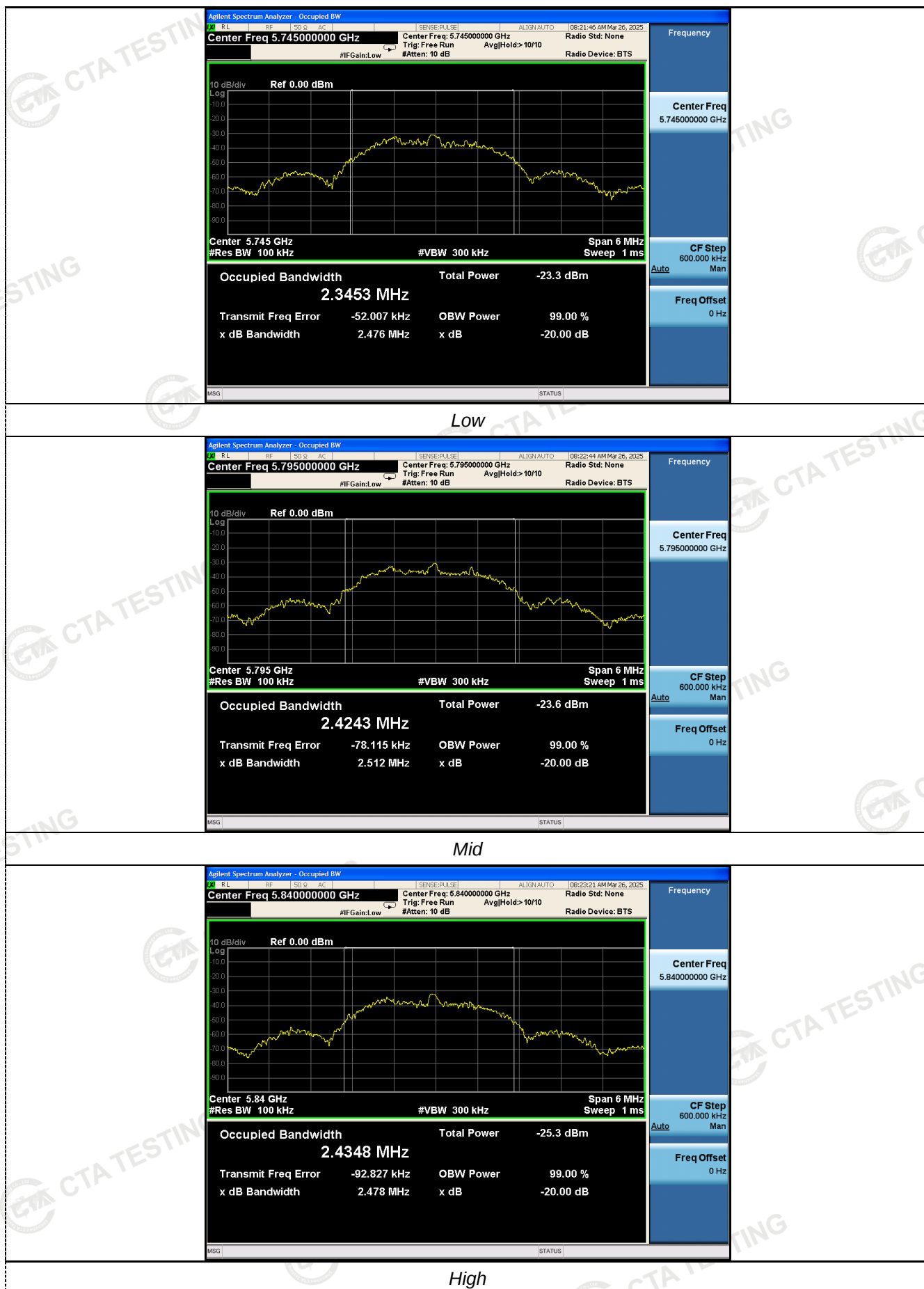
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30KHz RBW and 300KHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

LIMIT

Test Results

Type	Channel	20dB Bandwidth (MHz)	Result
GFSK	Low	2.476	Pass
	Mid	2.512	
	High	2.478	



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.

And according to FCC 47 CFR Section 15.247 (c), 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.

Antenna Information

The maximum gain of antenna was 0.60 dBi.

Remark: The antenna gain is provided by the customer, if the data provided by the customer is not accurate, Shenzhen CTA Testing Technology Co., Ltd. does not assume any responsibility.

5 Test Setup Photos of the EUT



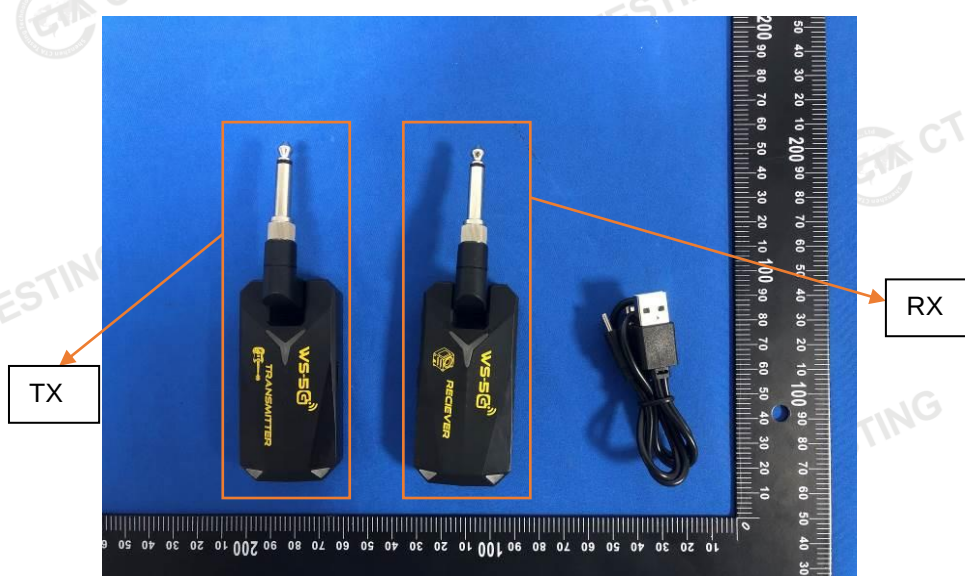
6 Photos of the EUT



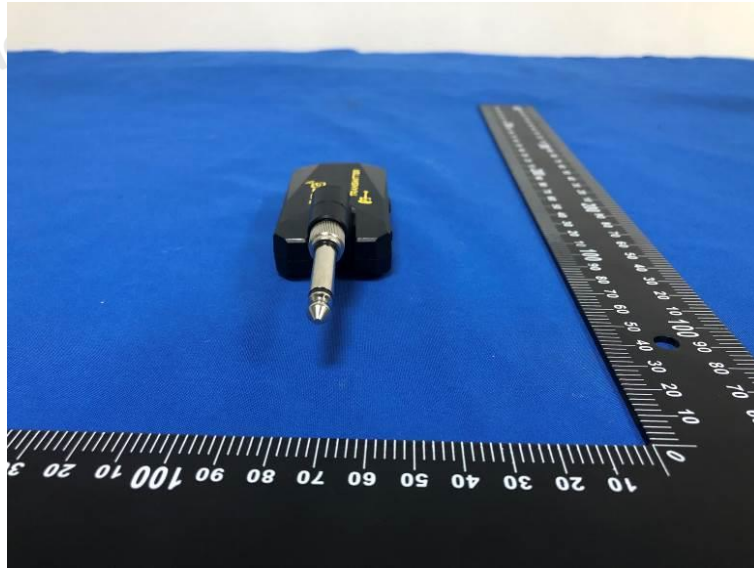
Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

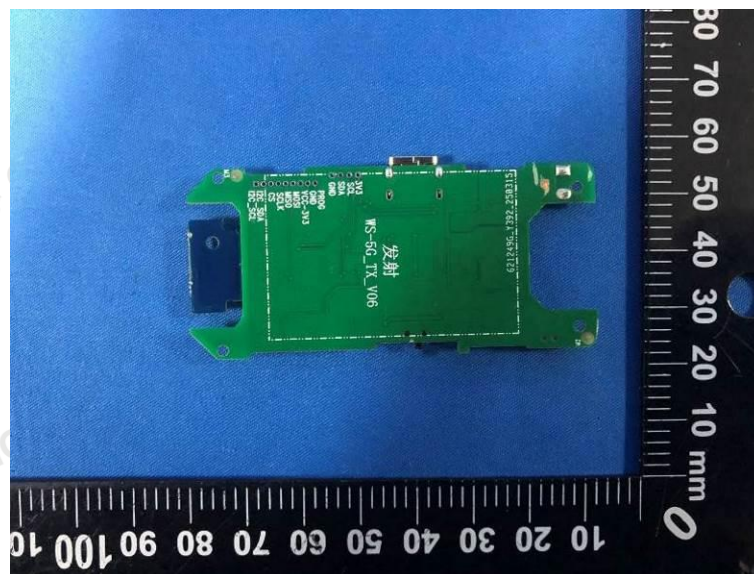
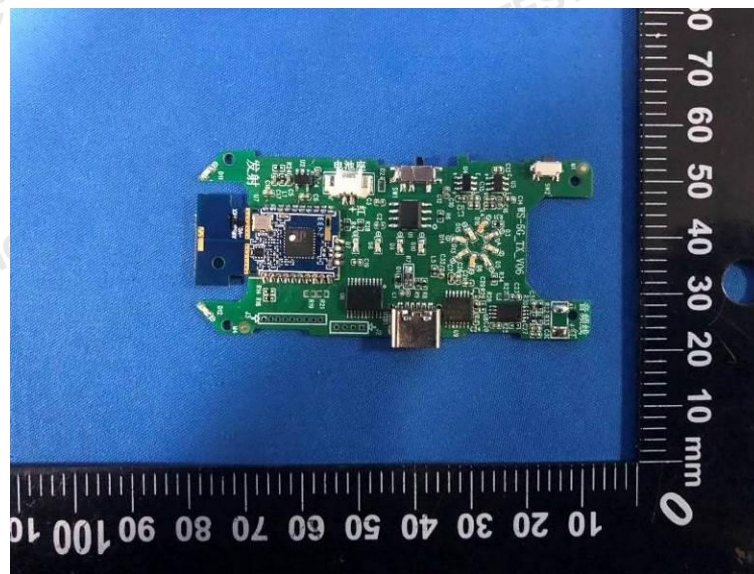
Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: <http://www.cta-test.cn>













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