Shenzhen CTA Testing Technology Co., Ltd.



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

	TEST REPORT ules and Regulations Part PART 15	5.249
Report Reference No:	CTA24040100901	
FCC ID	2BFVQ-X7	ATESTING
Compiled by (position+printed name+signature	e File administrators Jinghua Xiao	Jungtura Storo
Supervised by (position+printed name+signature	Project Engineer Zoey Cao	Corr Any
Approved by (position+printed name+signature	RF Manager Eric Wang	approved Lyin Aug
Date of issue	Apr. 10, 2024	
Testing Laboratory Name	Shenzhen CTA Testing Technology Co	o., Ltd.
Address	Room 106, Building 1, Yibaolai Industrial Fuhai Street, Bao'an District, Shenzhen,	
Applicant's name	Shenzhen Binsky Technology Co., Ltd	
Address	336, No.12, Gaoqiao First Industrial Zone Street, Longgang District, Shenzhen City	• • •
Standard	FCC Rules and Regulations PAR	T 15.249
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Test item description	Game console	GA
Trade Mark	Coopreme	
Manufacturer	··· Shenzhen Binsky Technology Co., Ltd.	
Model/Type reference	X7	
Model/Type reference		
Gette	Refer to page 2	
Listed Models		TATESTIN
Gette		CTA TESTIN
Listed Models	2408-2470MHz	CTA TESTIN
Listed Models	2408-2470MHz DC 3.0V From battery	GA CTATESTIN
Listed Models Modulation Frequency Ratings Result	2408-2470MHz DC 3.0V From battery	CTA TESTIN

TEST REPORT

Game console

: X7

Equipment under Test

Model /Type

CTATESTING Listed Models

Applicant

Address

Manufacturer

Address

: X1, X2, X5, X6, X9, X10, X11, X12, X13, X15, X16, X18, X19, X20, M8, M9, M10, M11, M12, M13, M15, M16, M18, M19, M20, Q20, miyoo mini+, Miyoo A30, miyoo flip, XU10, XU20, XU30, XU40, XU mini M, XU mini Slide, XU mini Flip, XU CPT, XP18, RG353V, RG353VS, RG405M, RG505M, RG353PS, RG405V, RG35XX, RG35XX PLUS, RG35XX H, RG406P, RG556, RG CUBE, RG35XXSP, G1, G2, G3, G5, G6, G7, G10, G11, G12, G13, G15, G16, G18, G19, G20, Y5, Y6, Y7, Y8, Y9 CTATESTING

: 336, No.12, Gaoqiao First Industrial Zone, Pingxi Community, Pingdi Street, Longgang District, Shenzhen City, China

Shenzhen Binsky Technology Co., Ltd.

: Shenzhen Binsky Technology Co., Ltd.

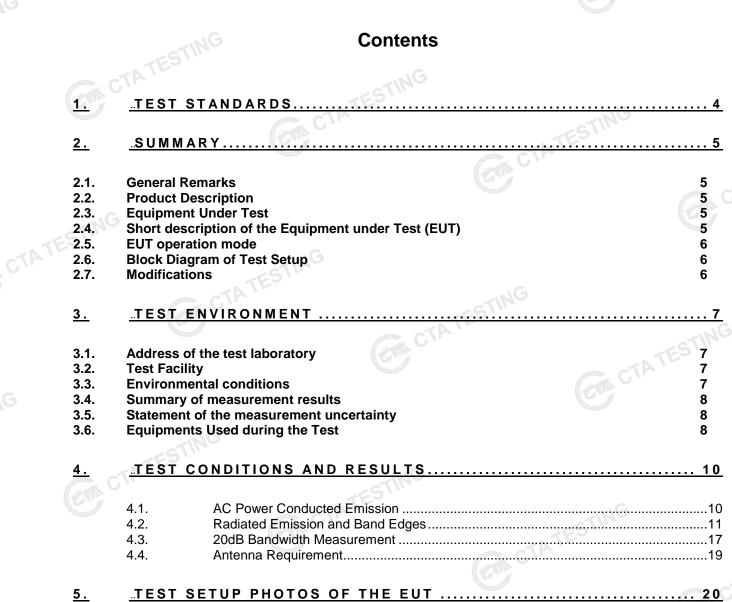
336, No.12, Gaoqiao First Industrial Zone, Pingxi Community, Pingdi Street, Longgang District, Shenzhen City, China

Test Result:

PASS

CTATE

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 CTATES laboratory.



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CTATES 6. ING <u>- ri</u>

1. <u>TEST STANDARDS</u>

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

Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz Range of 9 kHz to 40GHz Americ Americ Range of 9 kHz to 40GHz CTA TESTING

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	Apr. 01, 2024	
	and the second	GVP	
Testing commenced on		Apr. 01, 2024	TE
	CALL STREET, ST	C. T.	- CTA
Testing concluded on	:	Apr. 10, 2024	

Name of EUT	Game console
Model Number	X7
Power Rating	DC 3.0V From battery
Hardware version	V1.0
Software version	V1.0
Sample ID	CTA240401009-1# (Engineer sample) CTA240401009-2# (Normal sample)
Operation frequency	2408-2470MHz
Modulation	GFSK
Antenna Type	PCB antenna
Antenna Gain	0.50 dBi

CTATE Inde	TETING		
2.3. Equipment Unde	Test		
Power supply system	utilised		
Power supply veltage	: 0 230V / 50 Hz	O 120V / 60Hz	
Power supply voltage			
	0 12 V DC	0 24 V DC	TI
	 Other (specified in 	blank below)	CTH.
TING	DC 3.0V From batte	rу	GIA

CTATESTING 2.4. Short description of the Equipment under Test (EUT) GA CTATESTING

This is a Game console.

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

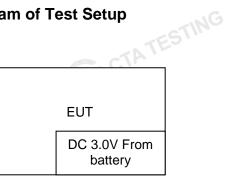
2.5. EUT operation mode

The Applicant use Key to control the EUT for staying in continuous transmitting and receiving mode for testing. CTA TESTING There is 5 channels provided to the EUT. Channel Low, Mid and High was selected to test.

	Operation Frequency:	ATA		_
	Channel	F	requency (MHz)	C
	1		2408	Care and S
	2		2420	
	3		2438	
TATE	4		2452	
CTA	5		2470	
Ÿ.	Test frequency:	ATEC	CTATES	
	Channel	Frequency	A O	

Test frequency:	ATES	211.147
Channel	Frequency (MHz)	A N
Low	2408	
Mid	2438	
High	2470	

2.6. Block Diagram of Test Setup



2.7. Modifications

No modifications were implemented to meet testing criteria. GIA CTATESTING CTA

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.

Industry Canada Registration Number. Is: 27890 CAB identifier: CN0127 The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio TATEST equipment testing.

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: GTA CTATE

Radiated Emission:

Tamanaratura	23 ° C
Temperature:	23 0
Humidity:	48 %
NG	
Atmospheric pressure:	950-1050mbar

CTATES AC Main Conducted testing:

C Main Conducted testing:	
Temperature:	24 ° C
G	
Humidity:	45 %
	C/
Atmospheric pressure:	950-1050mbar

Conducted testina:

o o na a o to o a no	
Temperature:	24 ° C
Humidity:	45 %
STIN	
Atmospheric pressure:	950-1050mbar
C.	GIA CTATESTING

3.4. Summary of measurement results

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

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	1	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)

PIN CTATESTING (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

OTA TESTING

Test Equipment	Manufacturer	Model No.	Equipment No.	Calibration Date	Calibration Due Date
LISN	G R&S	ENV216	CTA-308	2023/08/02	2024/08/01
LISN	R&S	ENV216	CTA-314	2023/08/02	2024/08/01
EMI Test Receiver	R&S	ESPI	CTA-307	2023/08/02	2024/08/01
EMI Test Receiver	R&S	ESCI	CTA-306	2023/08/02	2024/08/01
Spectrum Analyzer	Agilent	N9020A	CTA-301	2023/08/02	2024/08/01
GIG					GIA

RF Test Software

N/A

N/A

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	Report No.: CTA2404	0100901			Page	e 9 of 27
	Spectrum Analyzer	R&S	FSP	CTA-337	2023/08/02	2024/08/01
	Vector Signal generator	Agilent	N5182A	CTA-305	2023/08/02	2024/08/01
	Analog Signal Generator	R&S	SML03	CTA-304	2023/08/02	2024/08/01
	WIDEBAND RADIO COMMUNICATION TESTER	CMW500	R&S	CTA-302	2023/08/02	2024/08/01
	Temperature and humidity meter	Chigo	ZG-7020	CTA-326	2023/08/02	2024/08/01
	Ultra-Broadband Antenna	Schwarzbeck	VULB9163	CTA-310	2023/10/17	2024/10/16
TE	Horn Antenna	Schwarzbeck	BBHA 9120D	CTA-309	2023/10/13	2024/10/12
A	Loop Antenna	Zhinan	ZN30900C	CTA-311	2023/10/17	2024/10/16
	Horn Antenna	Beijing Hangwei Dayang	OBH100400	CTA-336	2021/08/07	2024/08/06
	Amplifier	Schwarzbeck	BBV 9745	CTA-312	2023/08/02	2024/08/01
	Amplifier	Taiwan chengyi	EMC051845B	CTA-313	2023/08/02	2024/08/01
	Directional coupler	NARDA	4226-10	CTA-303	2023/08/02	2024/08/01
	High-Pass Filter	XingBo	XBLBQ-GTA18	CTA-402	2023/08/02	2024/08/01
	High-Pass Filter	XingBo	XBLBQ-GTA27	CTA-403	2023/08/02	2024/08/01
	Automated filter bank	Tonscend	JS0806-F	CTA-404	2023/08/02	2024/08/01
	Power Sensor	Agilent	U2021XA	CTA-405	2023/08/02	2024/08/01
	Amplifier	Schwarzbeck	BBV9719	CTA-406	2023/08/02	2024/08/01
ſ	 [[
	Test Equipment	Manufacturer	Model No.	Version number	Calibration Date	Calibration Due Date
ATE	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
		1 1	i			

TS®JS1120

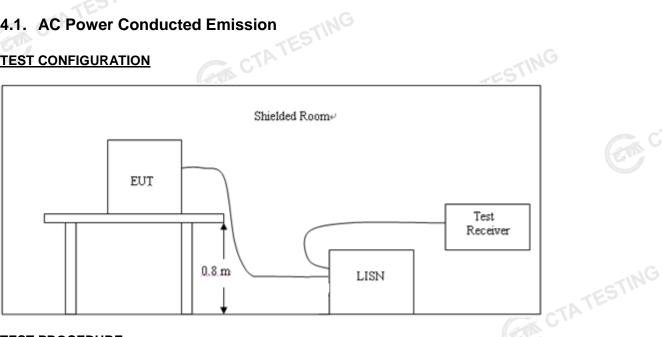
Tonscend

3.1.46

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.
- 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 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.

AC Power Conducted Emission Limit

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following :

	Limit (dBuV)
Frequency range (MHz)	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 legarithm of the freque		Constant and Constant

Decreases with the logarithm of the frequency.

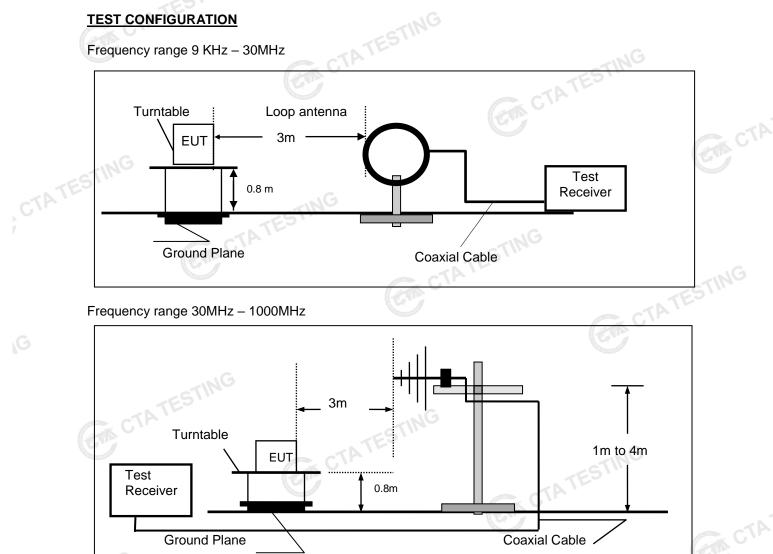
TEST RESULTS

The EUT is powered by the Battery, so this test item is not applicable for the EUT. GTA CTATESTING

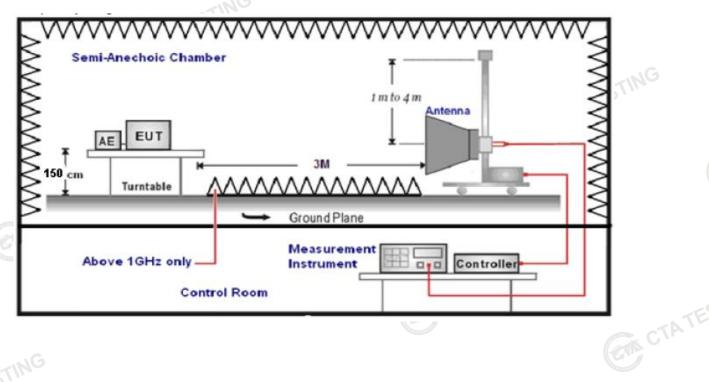
4.2. Radiated Emission and Band Edges

TEST CONFIGURATION

Frequency range 9 KHz – 30MHz



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 -25GHz.

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- 2. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C 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.
- Repeat above procedures until all frequency measurements have been completed. 4.
- The EUT minimum operation frequency was 26MHz and maximum operation frequency 5. was 1910MHz.so radiated emission test frequency band from 9KHz to 25GHz. 6.

. The distance between test a	antenna and EUT as following tabl	e 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

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

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

	-111
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

According 15.249, the field strength of emissions from intentional radiators operated within 2400MHz-2483.5 MHz shall not exceed 94dBµV/m (50mV/m):

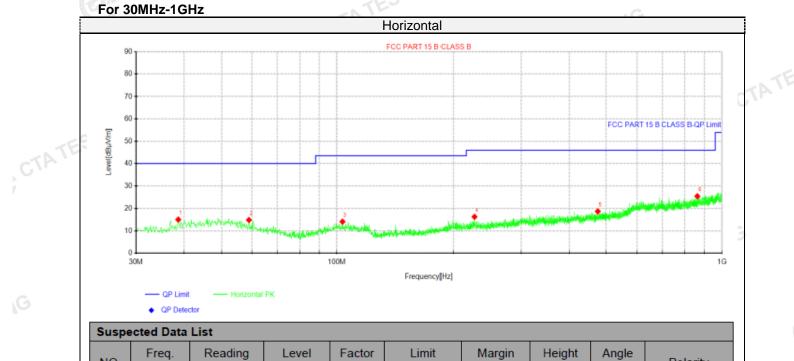
FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

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)

	Rac	liated 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	3 614	43.5	150 NG
216-960	3	46.0	200
Above 960	3	54.0	500
TEST RESULTS Remark:			CA CTA

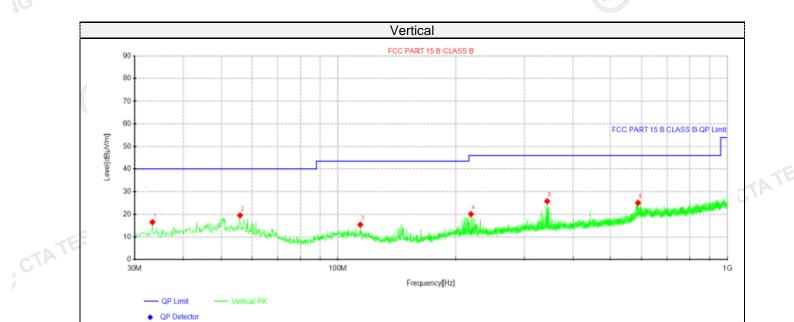
Remark: CTA TESTING

- 1. This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.
- 2. Both modes of GFSK were tested at Low, Middle, and High channel and recorded worst mode at GFSK
- 3. 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.



NO.	Freq. [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	38.6088	27.66	14.93	-12.73	40.00	25.07	100	220	Horizontal	
2	58.9788	27.69	14.74	-12.95	40.00	25.26	100	150	Horizontal	
3	103.477	27.40	13.99	-13.41	43.50	29.51	100	70	Horizontal	
4	227.031	29.14	16.18	-12.96	46.00	29.82	100	94	Horizontal	
5	475.108	28.29	18.64	-9.65	46.00	27.36	100	338	Horizontal	
6	861.532	28.82	25.46	-3.36	46.00	20.54	100	82	Horizontal	-NTE
2). Fa	ctor(dB/m)=	⊌µV/m)= Rea -Antenna Fa Limit (dBµV/ι	ctor (dB/m)	+ Cable I	(dB/m) oss (dB) - Pre	e Amplifier g	gain (dB)		GIA	C/r

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)



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COM CTATE

Suspected Data List

- usps									
NO	Freq.	Reading	Level	Factor	Limit	Margin	Height	Angle	Polarity
NO.	[MHz]	[dBµV]	[dBµV/m]	[dB/m]	[dBµV/m]	[dB]	[cm]	[°]	Folanty
1	33.2738	30.67	16.48	-14.19	40.00	23.52	100	103	Vertical
2	55.9475	31.69	19.51	-12.18	40.00	20.49	100	174	Vertical
3	114.026	29.29	15.33	-13.96	43.50	28.17	100	195	Vertical
4	218.786	33.16	20.06	-13.10	46.00	25.94	100	184	Vertical
5	343.795	37.11	25.81	-11.30	46.00	20.19	100	355	Vertical
6	587.992	31.18	25.10	-6.08	46.00	20.90	100	360	Vertical
	NO. 1 2 3 4 5	Freq. [MHz] 1 33.2738 2 55.9475 3 114.026 4 218.786 5 343.795	NO. [MHz] [dBµV] 1 33.2738 30.67 2 55.9475 31.69 3 114.026 29.29 4 218.786 33.16 5 343.795 37.11	NO. Freq. [MHz] Reading [dBμV] Level [dBμV/m] 1 33.2738 30.67 16.48 2 55.9475 31.69 19.51 3 114.026 29.29 15.33 4 218.786 33.16 20.06 5 343.795 37.11 25.81	NO. Freq. [MHz] Reading [dBµV] Level [dBµV/m] Factor [dB/m] 1 33.2738 30.67 16.48 -14.19 2 55.9475 31.69 19.51 -12.18 3 114.026 29.29 15.33 -13.96 4 218.786 33.16 20.06 -13.10 5 343.795 37.11 25.81 -11.30	NO. Freq. [MHz] Reading [dBμV] Level [dBμV/m] Factor [dBμV/m] Limit [dBμV/m] 1 33.2738 30.67 16.48 -14.19 40.00 2 55.9475 31.69 19.51 -12.18 40.00 3 114.026 29.29 15.33 -13.96 43.50 4 218.786 33.16 20.06 -13.10 46.00 5 343.795 37.11 25.81 -11.30 46.00	NO. Freq. [MHz] Reading [dBμV] Level [dBμV/m] Factor [dBμ] Limit [dBμV/m] Margin [dBμ] 1 33.2738 30.67 16.48 -14.19 40.00 23.52 2 55.9475 31.69 19.51 -12.18 40.00 20.49 3 114.026 29.29 15.33 -13.96 43.50 28.17 4 218.786 33.16 20.06 -13.10 46.00 25.94 5 343.795 37.11 25.81 -11.30 46.00 20.19	NO. Freq. [MHz] Reading [dBμV] Level [dBμV/m] Factor [dB/m] Limit [dBμV/m] Margin [dB] Height [cm] 1 33.2738 30.67 16.48 -14.19 40.00 23.52 100 2 55.9475 31.69 19.51 -12.18 40.00 20.49 100 3 114.026 29.29 15.33 -13.96 43.50 28.17 100 4 218.786 33.16 20.06 -13.10 46.00 20.19 100 5 343.795 37.11 25.81 -11.30 46.00 20.19 100	NO. Freq. [MHz] Reading [dBμV] Level [dBμV/m] Factor [dB/m] Limit [dBμV/m] Margin [dB] Height [cm] Angle [°] 1 33.2738 30.67 16.48 -14.19 40.00 23.52 100 103 2 55.9475 31.69 19.51 -12.18 40.00 20.49 100 174 3 114.026 29.29 15.33 -13.96 43.50 28.17 100 195 4 218.786 33.16 20.06 -13.10 46.00 20.19 100 355

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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)

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For 1GHz to 25GHz

				GFSK (abo	ve 1GHz)				
Freque	ncy(MHz)	:	24	08	Pola	arity:	Н	IORIZONT/	AL .
Frequency (MHz)	Emis Lev (dBu)	/el	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2408.00	98.34	PK	114.00	15.66	109.62	27.48	3.43	42.19	-11.28
2408.00	80.65	AV	94.00	13.35	91.93	27.48	3.43	42.19	-11.28
4816.00	49.88	PK	74.00	24.12	54.13	32.34	5.16	41.75	-4.25
4816.00	41.13	AV	54.00	12.87	45.38	32.34	5.16	41.75	-4.25
7224.00	50.91	PK	74.00	23.09	51.44	36.61	6.52	43.66	-0.53
7224.00	37.27	AV	54.00	16.73	37.80	36.61	6.52	43.66	-0.53

Freque	ncy(MHz):		24	08	Polarity:		VERTICAL		
Frequency (MHz)	Emis Lev (dBu)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2408.00	96.65	PK	114.00	17.35	107.93	27.48	3.43	42.19	-11.28
2408.00	78.04	AV	94.00	15.96	89.32	27.48	3.43	42.19	-11.28
4816.00	47.83	PK	74.00	26.17	52.08	32.34	5.16	41.75	-4.25
4816.00	37.43	AV	54.00	16.57	41.68	32.34	5.16	41.75	-4.25
7224.00	48.56	PK	74.00	25.44	49.09	36.61	6.52	43.66	-0.53
7224.00	35.13	AV	54.00	18.87	35.66	36.61	6.52	43.66	-0.53

Freque	ncy(MHz)):	2438		Polarity:		HORIZONTAL			
Frequency (MHz)	Le	ssion vel V/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)	
2438.00	97.56	PK	114.00	16.44	108.81	27.52	3.45	42.22	-11.25	
2438.00	77.64	AV	94.00	16.36	88.89	27.52	3.45	G 42.22	-11.25	
4876.00	51.85	PK	74.00	22.15	55.76	32.58	5.33	41.82	-3.91	
4876.00	44.16	AV	54.00	9.84	48.07	32.58	5.33	41.82	-3.91	
7314.00	50.31	PK	74.00	23.69	50.25	36.97	6.8	43.71	0.06	
7314.00	37.66	AV	54.00	16.34	37.60	36.97	6.8	43.71	0.06	
					_				C V	
Freque	ncy(MHz)	:	24	38	Pola	arity:		VERTICAL		

	Freque	ncy(MHz)	:	2438		Polarity:		VERTICAL		
CTA	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
1	2438.00	96.04	PK	114.00	17.96	107.29	27.52	3.45	42.22	-11.25
	2438.00	76.38	AV	94.00	17.62	87.63	27.52	3.45	42.22	-11.25
	4876.00	50.94	PK	74.00	23.06	54.85	32.58	5.33	41.82	-3.91
	4876.00	43.48	AV	54.00	10.52	47.39	32.58	5.33	41.82	-3.91
	7314.00	49.05	PK	74.00	24.95	48.99	36.97	6.8	43.71	0.06
	7314.00	37.02	AV	54.00	16.98	36.96	36.97	6.8	43.71	0.06
									U	

Freque	ency(MHz)	:	24	70	Pola	arity:	HORIZONTAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit Margin (dBuV/m) (dB)		Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2470.00	97.10	PK	114.00	16.90	6107.24	27.67	4.47	42.28	-10.14
2470.00	80.60	AV	94.00	13.40	90.74	27.67	4.47	42.28	-10.14
4940.00	52.14	PK	74.00	21.86	55.24	32.71	5.66	41.47	-3.1
4940.00	45.71	AV	54.00	8.29	48.81	32.71	5.66	41.47	-3.1
7410.00	52.14	PK	74.00	21.86	51.71	37.02	7.25	43.84	0.43
7410.00	40.61	AV	54.00	13.39	40.18	37.02	7.25	43.84	0.43

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Freque	ncy(MHz)	:	2470		Polarity:		VERTICAL				
Frequency (MHz)	Emission Level (dBuV/m)		Level		Limit Margin (dBuV/m) (dB)		Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2470.00	95.36	PK	114.00	18.64	105.50	27.67	4.47	42.28	-10.14		
2470.00	79.10	AV	94.00	14.90	89.24	27.67	4.47	42.28	-10.14		
4940.00	49.65	PK	74.00	24.35	52.75	32.71	5.66	41.47	-3.1		
4940.00	43.85	AV	54.00	10.15	46.95	32.71	5.66	41.47	-3.1		
7410.00	50.39	PK	74.00	23.61	49.96	37.02	7.25	43.84	0.43		
7410.00	38.57	AV	54.00	15.43	38.14	37.02	7.25	43.84	0.43		
REMARKS: 1. 2. 3.	Correctior Margin va	n Factor (dB lue = Limit v	/m) =Raw Value (d /m) = Antenna Fac value- Emission lev	ctor (dB/m)+Cable /el.	e Factor (dB)- P	re-amplifier			GTA CTA		

4. -- Mean the PK detector measured value is below average limit.

5. The other emission levels were very low against the limit.

CTATESTIN Results of Band Edges Test (Radiated)

Freque	ncy(MHz)	:	24	08	Pola	arity:	HORIZONTAL		
Frequency (MHz)	Emis Lev (dBu	vel	Limit (dBuV/m)	Margin (dB)	CRaw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2390.00	61.69	PK	74	12.31	72.11	27.42	4.31	42.15	-10.42
2390.00	42.65 AV		54	11.35	53.07	27.42	4.31	42.15	-10.42
Freque	ncy(MHz)	:	2408		Polarity:		VERTICAL		
Frequency (MHz)	Emis Lev (dBu		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2390.00	59.74	PK	74	14.26	70.16	27.42	4.31	42.15	-10.42
2390.00	41.11	AV	54	12.89	51.53	27.42	4.31	942.15	-10.42
Frequency(MHz):			2470		Polarity:		HORIZONTAL		
Frequency (MHz)	Emis Lev (dBu	vel	Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2483.50	61.03	PK	74	12.97	71.14	27.7	4.47	42.28	-10.11
2483.50	43.74	AV	54	10.26	53.85	27.7	4.47	42.28	-10.11
Freque	ncy(MHz)	:	24	70	Polarity:		VERTICAL		
Frequency (MHz)	Emis Lev (dBu		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre- amplifier (dB)	Correction Factor (dB/m)
2483.50	59.31	PK	74	14.69	69.42	27.7	4.47	42.28	-10.11
2483.50	41.16	AV	54	12.84	51.27	27.7	4.47	42.28	-10.11
			= Meter Read ission level.	ling+ antenna	Factor+ ca	ble loss- pre	eamp factor.	CTATES	STING

3) -- Mean the PK detector measured value is below average limit.

4) The other emission levels were very low against the limit.

RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV 5) value. GTA CTATEST

4.3. 20dB Bandwidth Measurement



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.

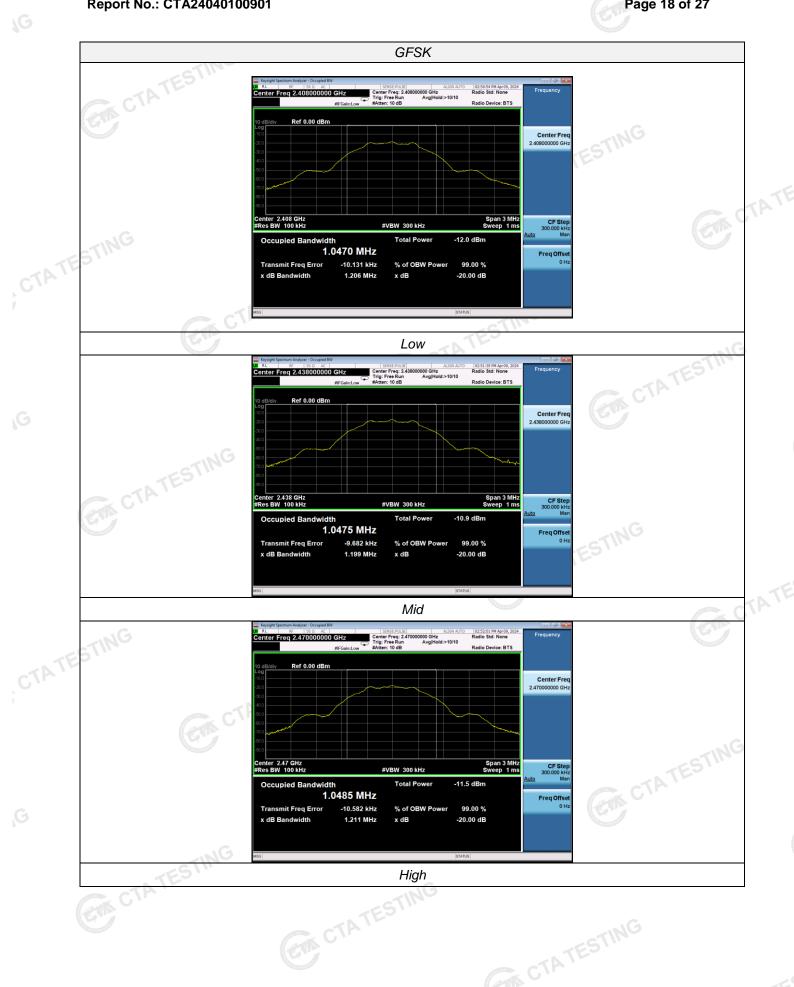
The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus CTA TESTING CTATE 20dB.

LIMIT

N/A

TEST RESULTS

Modulation	Channel	20dB bandwidth (MHz)	Result						
CTATE	Low	1.206							
GFSK	Mid	1.199	PASS						
and the second sec	High	1.211		ING					
Note: 1.The test results including the cable lose.									



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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 CTATE 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

The maximum gain of antenna was 0.50 dBi. Remark:The anter 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. CTATES

5. Test Setup Photos of the EUT



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6. Test Photos of the EUT

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End of Report.....