FCC TEST REPORT
FCC ID:2BMVA-23-6GB

Report Number	ZKT-24112716755E
Date of Test	Dec. 01, 2024 to Dec. 16, 2024
Date of issue	Dec. 16, 2024
Total number of pages	23
Test Result	PASS
Testing Laboratory	**Shenzhen ZKT Technology Co., Ltd.**
Address	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name	**JIHUANG TOYS FACTORY**
Address	CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA
Manufacturer's name	**JIHUANG TOYS FACTORY**
Address	CHENGHAI DISTRICT, SHANTOU CITY, GUANGDONG PROVINCE, CHINA
Test specification:	
Standard	47CFR Part 15, Subpart C (15.227)
Test procedure	/
Non-standard test method	N/A
Test Report Form No	TRF-EL-111_V0
Test Report Form(s) Originator	ZKT Testing
Master TRF	Dated: 2022-02-21

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Product name	Remote control car series
Trademark	N/A
Model/Type reference	23-6GB 19-1A, 19-1B, 23-6GA, 23-5GA, 23-5GB, 865A, 866A, 867A, 868A, 869A, 870A
Ratings	Telecontroller input: DC 1.5V For Battery(AA battery)*2 Battery Capacity: AA 1.5V*2

Testing procedure and testing location:

Testing Laboratory..... :	Shenzhen ZKT Technology Co., Ltd.
Address..... :	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Tested by (name + signature)..... :	Alen He
Reviewer (name + signature)..... :	Joe Liu
Approved (name + signature)..... :	Lake Xie

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1.VERSION

Report No.	Version	Description	Approved
ZKT-24112716755E	Rev.01	Initial issue of report	Dec. 16, 2024

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.227) , Subpart C			
Standard Section	Test Item	Judgment	Remark
FCC part 15.203	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	N/A	
FCC Part 15.209(a)	Spurious Radiated Emissions	PASS	
FCC part15.215(a)	20dB Bandwidth	PASS	
FCC part15.227(a)	Field Strength of Fundamental	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.2 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	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power conducted	±0.16dB
3	Spurious emissions conducted	±0.21dB
4	All emissions radiated(<1G)	±4.68dB
5	All emissions radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Remote control car series
Model No.:	23-6GB 19-1A, 19-1B, 23-6GA, 23-6GB, 23-5GA, 23-5GB, 865A, 866A, 867A, 868A, 869A, 870A
Model Different.:	All the model are the same circuit and RF module, except for model name.
Serial No.:	N/A
Hardware Version:	H1.0
Software Version:	S1.0
Sample(s) Status:	Engineer sample
Operation Frequency:	27.145MHz
Channel Numbers:	1
Modulation Type:	FSK
Antenna Type:	External antenna
Antenna gain:	0 dBi
Power supply:	Telecontroller input: DC 1.5V For Battery(AA battery)*2 Battery Capacity: AA1.5V*2

Channel	Frequency (MHz)
CH1	27.145

Channel	**Frequency**
test channel	27.145MHz

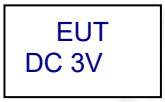
3.2 DESCRIPTION OF TEST MODES

For All Emission	
Final Test Mode	Description
Transmitting mode	Keep the EUT in continuously transmitting mode

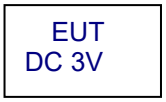
Note: Fully-charged battery is used during the test

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Emission



Conducted Spurious



3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Remote control car series	/	23-6GB	/	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	/	/	/	/

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Sep. 30, 2024	Sep. 29, 2025
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Sep. 30, 2024	Sep. 29, 2025
3	Test Cable	N/A	C-01	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
4	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Sep. 29, 2024	Sep. 28, 2025
5	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Emissions & Radiation Spurious Emissions Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 29, 2024	Sep. 28, 2025
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 30, 2024	Sep. 29, 2025
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Sep. 29, 2024	Sep. 28, 2025
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	00877	N/A	Sep. 30, 2024	Sep. 29, 2025
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Sep. 30, 2024	Sep. 29, 2025
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Sep. 30, 2024	Sep. 29, 2025
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Oct. 11, 2024	Oct. 10, 2025
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Sep. 29, 2024	Sep. 28, 2025
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Sep. 29, 2024	Sep. 28, 2025
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Sep. 30, 2024	Sep. 29, 2025
11	Test Cable	N/A	R-01	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
12	Test Cable	N/A	R-02	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
13	Test Cable	N/A	R-03	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802BS	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\

RF Conducted Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 29, 2024	Sep. 28, 2025
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 30, 2024	Sep. 29, 2025

3	Test Cable	N/A	RF-01	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
4	Test Cable	N/A	RF-02	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
5	Test Cable	N/A	RF-03	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
6	ESG Signal Generator	Agilent	E4421B	N/A	B.03.84	Sep. 29, 2024	Sep. 28, 2025
7	Signal Generator	Agilent	N5182A	N/A	A.01.87	Sep. 29, 2024	Sep. 28, 2025
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344/M-1752	N/A	Nov. 16, 2023	Nov. 15, 2024
9	Van der Hoofden measuring head	Schwarzbeck Mess-elektronik	VDHH 9502	9502-039	N/A	Sep. 30, 2024	Sep. 29, 2025
10	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Sep. 30, 2024	Sep. 29, 2025
11	MWRF Power Meter Test system	MW	MW100-RFCB	N/A	N/A	Sep. 29, 2024	Sep. 28, 2025
12	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	Sep. 29, 2024	Sep. 28, 2025
13	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

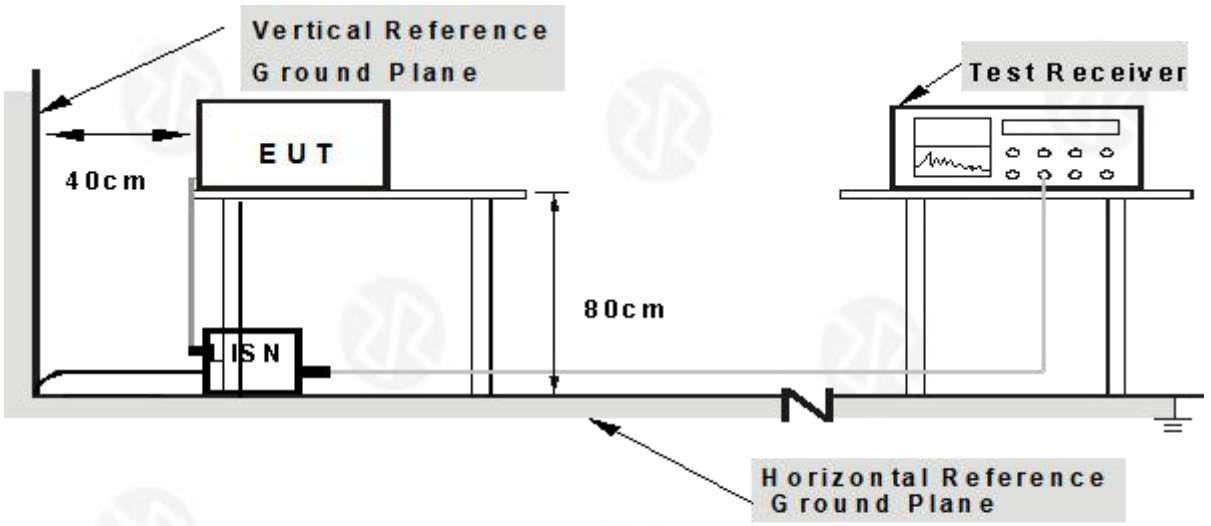
4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 Test Result

The EUT is powered by DC only. The test items is not applicable.

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.227(a), then the 15.209(a) limit in the table below has to be followed.

(a) The field strength of any emission within this band shall not exceed 10,000 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in§15.35 for limiting peak emissions apply.

Frequency (MHz)	Field Strength (micorvolts/meter)	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

Receiver setup:

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

4.2.2 TEST PROCEDURE

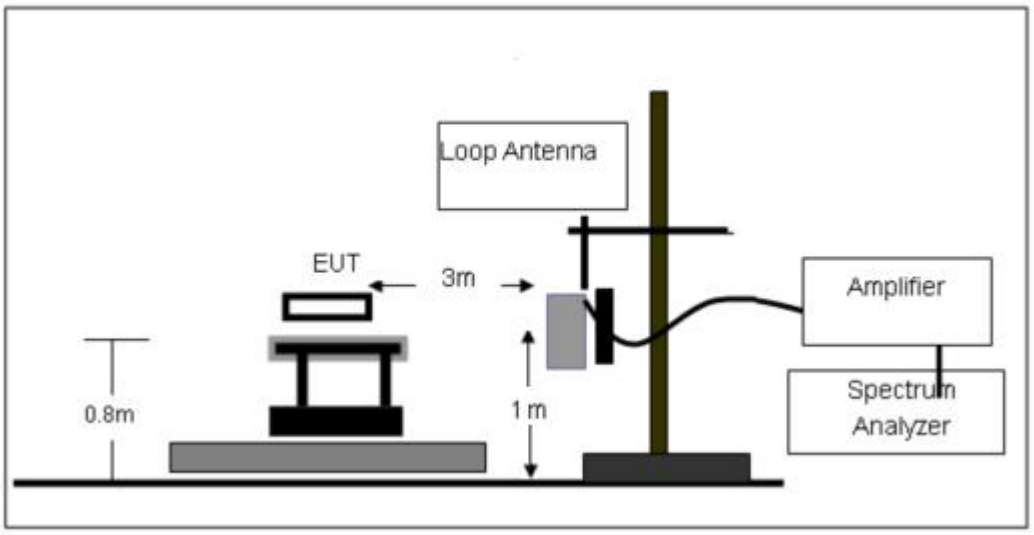
Below 1GHz test procedure as below:
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. 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.
d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.2.3 DEVIATION FROM TEST STANDARD

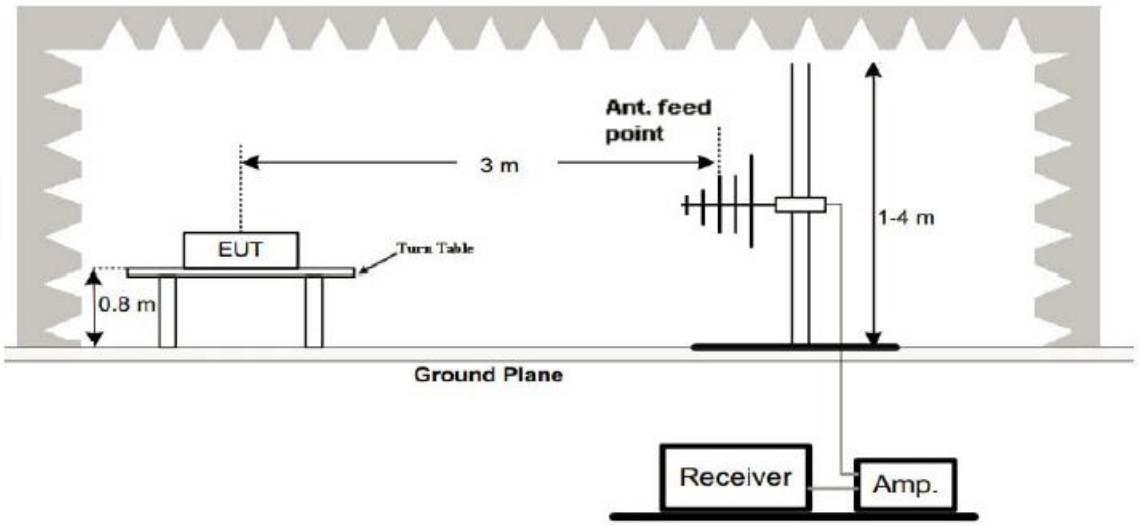
No deviation

4.2.4 TEST SETUP

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



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.6 TEST RESULTS (Between 9KHz – 30 MHz)

Measurement data:

Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80
Limit dBuV/m @3m = Limit dBuV/m @30m + 40

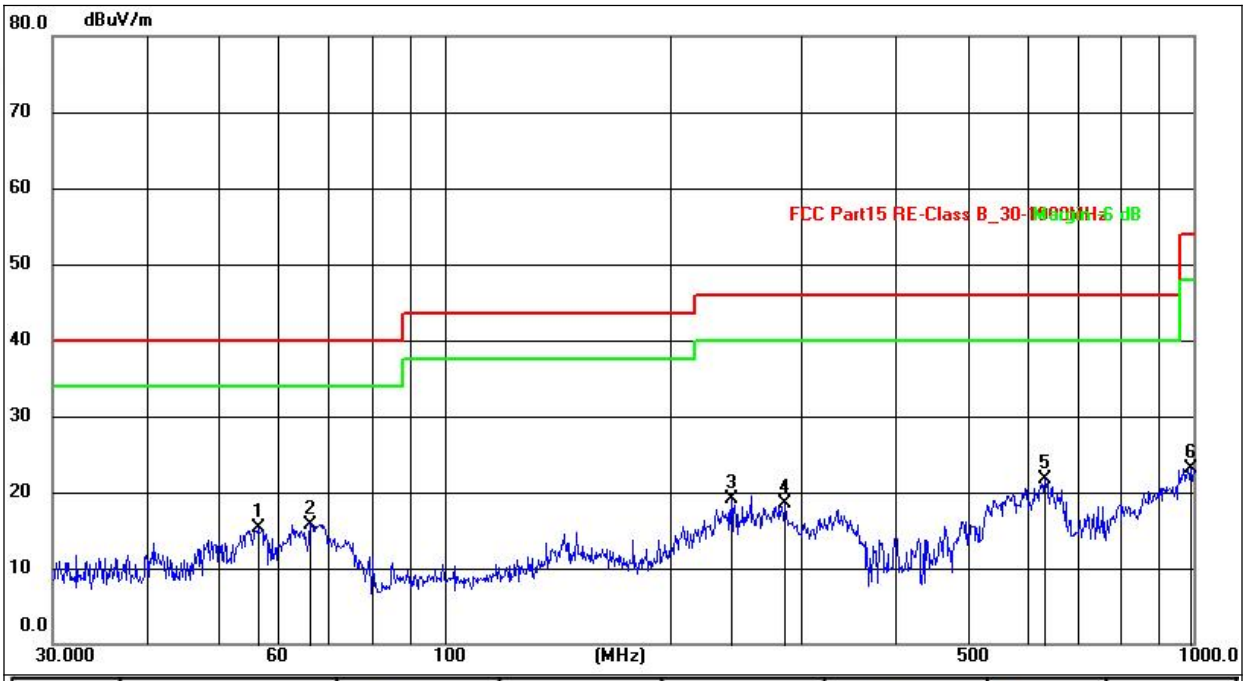
9 kHz~30 MHz
The main frequency tested was 27.145MHz

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(kHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
26.48	43.38	20.45	63.83	119.15	-55.31	AV
63.18	32.74	20.70	53.44	111.59	-58.15	AV
123.80	33.14	21.13	54.27	105.75	-51.48	AV
695.99	33.13	21.11	54.23	70.75	-16.52	QP
976.42	32.65	21.45	54.10	67.81	-13.71	QP
1242.70	26.02	22.36	48.38	65.72	-17.34	QP

Note:
Pre-scan in the all of mode, the worst case in of was recorded.
Factor = antenna factor + cable loss – pre-amplifier.
Margin = Emission Level- Limit.

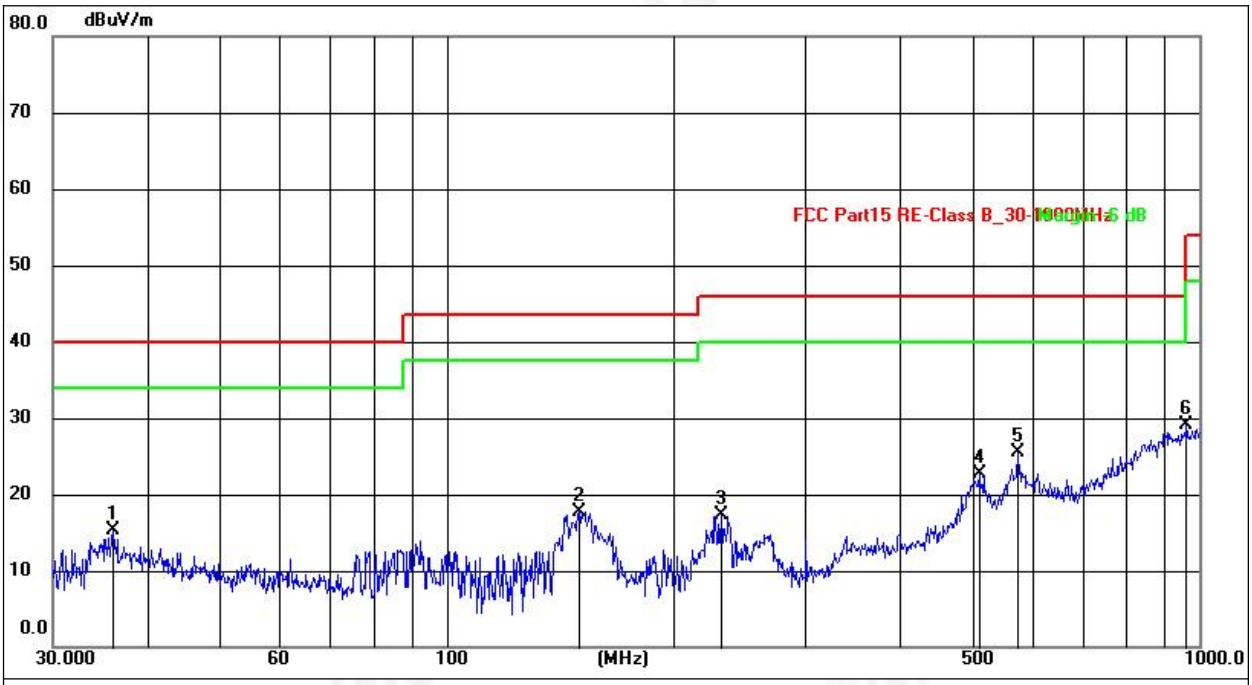
4.2.7 TEST RESULTS Between 30MHz – 1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3V	Model	FSK 27.145MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	56.3947	29.32	-14.06	15.26	40.00	-24.74	QP
2	66.2660	31.59	-15.79	15.80	40.00	-24.20	QP
3	241.6759	34.96	-15.86	19.10	46.00	-26.90	QP
4	284.9766	32.99	-14.58	18.41	46.00	-27.59	QP
5	633.9071	29.36	-7.72	21.64	46.00	-24.36	QP
6	993.0113	27.78	-4.71	23.07	54.00	-30.93	QP

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3V	Model	FSK 27.145MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	36.0007	32.60	-17.35	15.25	40.00	-24.75	QP
2	150.0107	38.15	-20.35	17.80	43.50	-25.70	QP
3	231.7178	37.20	-19.98	17.22	46.00	-28.78	QP
4	510.0434	33.40	-10.61	22.79	46.00	-23.21	QP
5	574.6258	33.72	-8.27	25.45	46.00	-20.55	QP
6	962.1621	29.21	-0.11	29.10	54.00	-24.90	QP

Remarks:
1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2.The emission levels of other frequencies are very lower than the limit and not show in test report.

5. Field strength of fundamental

5.1 Limit

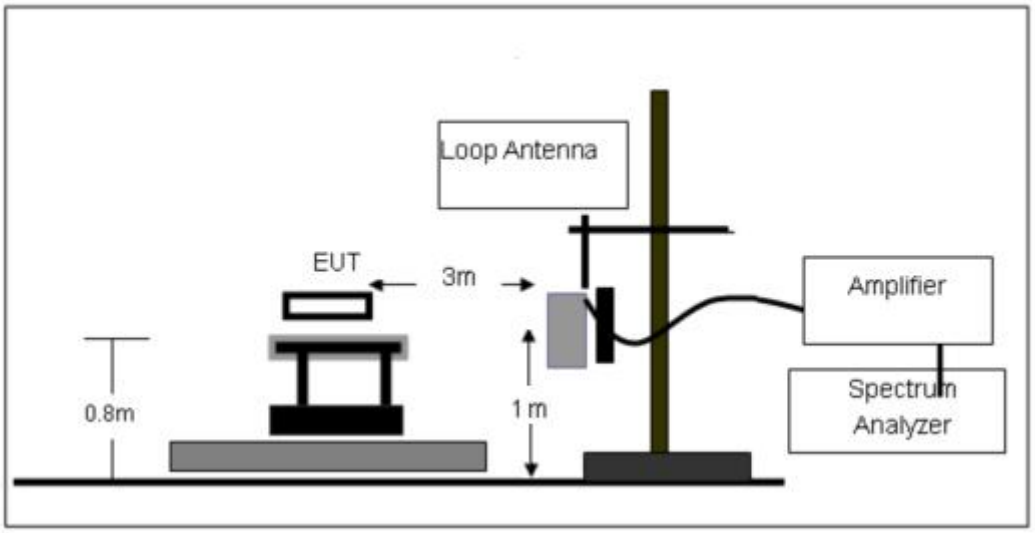
§ 15.227 Operation within the band 26.96-27.28 MHz.

(a) The field strength of any emission within this band shall not exceed 10,000 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in § 15.35 for limiting peak emissions apply.

(b) The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in § 15.209.

Note:
1. Average Limit (dBμV/m)=20×log[1000×Field Strength (mV/m)].
2. Peak Limit (dBμV/m)= Average Limit (dBμV/m)+20dB

5.2 Test Setup



5.2 Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	≥OBW
VBW	3xRBW
Frequency	27.145MHz
Sweep Time	Auto
Detector	AV/Peaka

5.4 Test Procedure

Below 1GHz test procedure as below:
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. 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.
d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5.5 Test Result

Test frequency (MHz)	Fundamental Frequency (MHz)	Field strength of fundamental level (dBμV/m)		Limit (dBuV)		Result
		AV	Peak	AV	Peak	
27.145	27.145	59.76	78.62	80	100	Pass

6. BANDWIDTH TEST

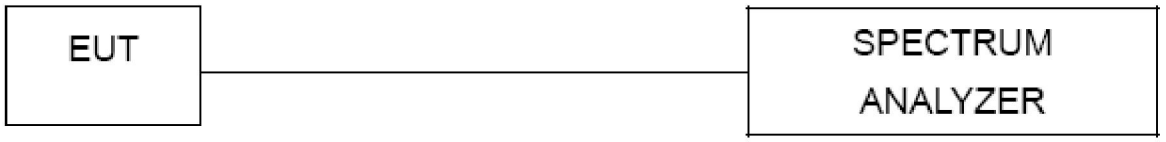
6.1 TEST PROCEDURE

1. Set RBW = 300Hz.
2. Set VBW = 1KHz.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

6.1.1 DEVIATION FROM STANDARD

No deviation.

6.1.2 TEST SETUP



6.1.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.4 TEST RESULTS

Frequency (MHz)	20dB Bandwidth (KHz)	99% bandwidth (KHz)	Result
27.145	8.492	18.320	Pass

FSK

7. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: 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.	
EUT Antenna:	
The antennas are External antenna, the best case gain of the antennas are 0 dBi, reference to the appendix II for details.	

7. TEST SETUP PHOTO

Reference to the appendix I for details.

8. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※