

Class II Permissive Change FCC TEST REPORT

Product : 1:24 RC CAR(storm crusher)
Trade mark : N/A
Model/Type reference : KD0785(5F62DB2)
Serial Number : N/A
Report Number : EED32I001526
FCC ID : XRZKD0785
Date of Issue : May 23, 2016
Test Standards : 47 CFR Part 15 Subpart C (2015)
Test result : PASS

Prepared for:

KIDSROCK LTD

**Unit 08A, 25/F Gammon House, 12 Harcourt Road, Admiralty,
Hong Kong, China.**

Prepared by:

**Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
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Date:

May 23, 2016

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Lab supervisor

Check No.: 2384390908

2 Version

Version No.	Date	Description
00	May 23, 2016	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
Field Strength of the Fundamental Signal	47 CFR Part 15 Subpart C Section 15.249 (a)	ANSI C63.10-2013	PASS
Spurious Emissions	47 CFR Part 15 Subpart C Section 15.249 (a)/15.209	ANSI C63.10-2013	PASS

Remark:

The tested sample(s) and the sample information are provided by the client.

Model No.: KD0785(5F62DB2))

This test report (Ref. No.: EED32I001526) is only valid with the original test report (Ref. No.: EED32H000389-1).

Review this report and original report, this report just add the storage on the remote-control.

According to the declaration from the applicant, the models in this report and models in original report were identical, only added the storage on the remote-control.

Considering to the difference, pre-scan were performed on the sample in this report to find the items which can be influential to the result in the original test report for fully retest.

Therefore in this report Field Strength of the Fundamental Signal and Spurious Emissions were fully retested and shown the data in this report, other tests please refer to original report EED32H000389-1.

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5 General Information

5.1 Client Information

Applicant:	KIDSRock LTD
Address of Applicant:	Unit 08A, 25/F Gammon House, 12 Harcourt Road, Admiralty, Hong Kong, China.
Manufacturer:	KIDSRock LTD
Address of Manufacturer:	Unit 08A, 25/F Gammon House, 12 Harcourt Road, Admiralty, Hong Kong, China.
Factory:	DONGGUAN DESHEN METAL & PLASTIC PRODUCTS CO., LTD
Address of Factory:	Xiasha, No.3 Industrial Zone, Shipai Town, Dongguan City, Dongguan Province, China

5.2 General Description of EUT

Product Name:	1:24 RC CAR(storm crusher)
Mode No.(EUT):	KD0785(5F62DB2)
Trade Mark:	N/A
EUT Supports Radios application:	2406MHz~2480MHz
Power Supply:	6V  (Supply with 4xAA 1.5V Alkaline Batteries)

5.3 Product Specification subjective to this standard

Frequency Range:	2406MHz~2480MHz
Modulation Type:	GFSK
Sample Type:	Portable production
Test Power Grade:	N/A (manufacturer declare)
Test Software of EUT:	N/A (manufacturer declare)
Antenna Type:	Integral
Antenna Gain:	2.54dBi
Test voltage:	DC 6V
Sample Received Date:	May 19, 2016
Sample tested Date:	May 19, 2016 to May 22, 2016

5.4 Test Environment and Mode

Operating Environment:	
Temperature:	24°C
Humidity:	52% RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode:	Keep the EUT transmitted the continuous modulation test signal at the specific channel(s)

5.5 Description of Support Units

The EUT has been tested independently.

5.6 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

5.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1910

Centre Testing International Group Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories..

A2LA-Lab Cert. No. 3061.01

Centre Testing International Group Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 886427

Centre Testing International (Shenzhen) Corporation. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 886427.

IC-Registration No.: 7408A-2

The 3m Alternate Test Site of Centre Testing International (Shenzhen) Corporation. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408A-2 .

IC-Registration No.: 7408B-1

The 10m Alternate Test Site of Centre Testing International (Shenzhen) Corporation., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408B-1.

NEMKO-Aut. No.: ELA503

Centre Testing International Group Co., Ltd. has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

VCCI

The Radiation 3 & 10 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-4096.

Main Ports Conducted Interference Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-4563.

Telecommunication Ports Conducted Disturbance Measurement of

Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-2146.

The Radiation 3 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-758

5.8 Deviation from Standards

None.

5.9 Abnormalities from Standard Conditions

None.

5.10 Other Information Requested by the Customer

None.

5.11 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

6 Equipment List

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06-02-2013	06-01-2016
TRILOG Broadband Antenna	SCHWARZBECK	VULB9163	9163-484	05-25-2015	05-23-2016
Microwave Preamplifier	Agilent	8449B	3008A02425	02-04-2016	02-03-2017
Horn Antenna	ETS-LINDGREN	3117	00057410	06-30-2015	06-28-2018
Loop Antenna	ETS	6502	00071730	07-30-2015	07-28-2017
Spectrum Analyzer	R&S	FSP40	100416	06-30-2015	06-28-2016
Receiver	R&S	ESCI	100435	06-30-2015	06-28-2016
Multi device Controller	matur	NCD/070/10711112	---	01-12-2016	01-11-2017
LISN	schwarzbeck	NNBM8125	81251547	06-30-2015	06-28-2016
LISN	schwarzbeck	NNBM8125	81251548	06-30-2015	06-28-2016
Signal Generator	Agilent	E4438C	MY45095744	04-01-2016	03-31-2017
Signal Generator	Keysight	E8257D	MY53401106	04-01-2016	03-31-2017
Temperature/Humidity Indicator	TAYLOR	1451	1905	07-08-2015	07-06-2016
Communication test set	Agilent	E5515C	GB47050534	04-01-2016	03-31-2017
Cable line	Fulai(7M)	SF106	5219/6A	01-12-2016	01-11-2017
Cable line	Fulai(6M)	SF106	5220/6A	01-12-2016	01-11-2017
Cable line	Fulai(3M)	SF106	5216/6A	01-12-2016	01-11-2017
Cable line	Fulai(3M)	SF106	5217/6A	01-12-2016	01-11-2017
Communication test set	R&S	CMW500	152394	04-01-2016	03-31-2017
High-pass filter(3-18GHz)	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-12-2016	01-11-2017
High-pass filter(6-18GHz)	MICRO-TRONICS	SPA-F-63029-4	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	01-12-2016	01-11-2017
band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	01-12-2016	01-11-2017

7 Test results and Measurement Data

7.1 Radiated Spurious Emission

Test Requirement: 47 CFR Part 15C Section 15.249 and 15.209

Test Method: ANSI C63.10

Test Site: Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30KHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30KHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30KHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30KHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Setup:

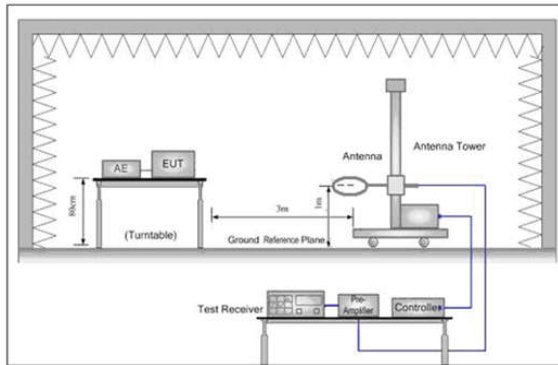


Figure 1. Below 30MHz

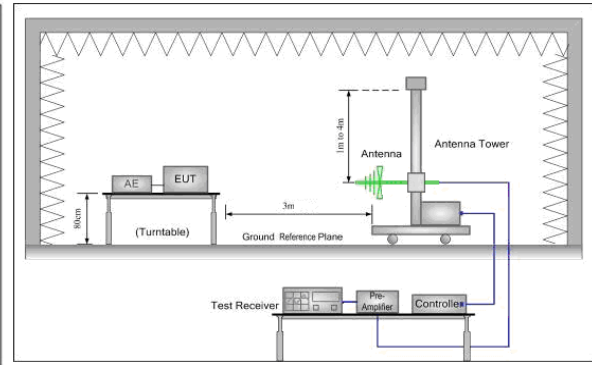


Figure 2. 30MHz to 1GHz

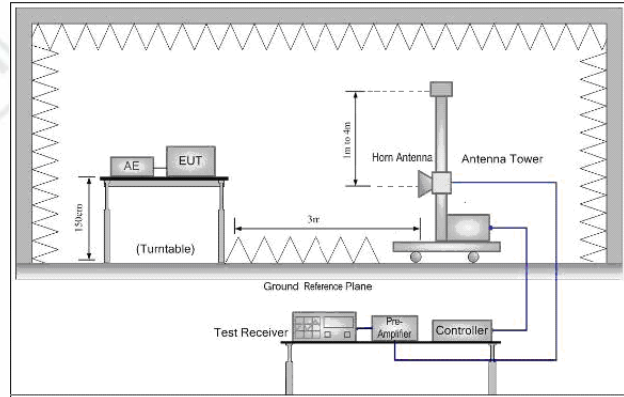


Figure 3. Above 1GHz

Test Procedure:

Below 1GHz test procedure as below:

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

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.

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 rotating table was turned from 0 degrees to 360 degrees to find the maximum reading.

The test-receiver system was set to Peak Detect Function and Specified Bandwidth with

Maximum Hold Mode.

If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).

Test the EUT in the lowest channel ,middle channel, the Highest channel

The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

Limit:
(Spurious
Emissions)

Frequency	Field strength (microvolt/meter)	Limit (dB μ V/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Limit:
(Field strength of
the fundamental
signal)

Frequency	Limit (dB μ V/m @3m)	Remark
2400MHz-2483.5MHz	94.0	Average Value
	114.0	Peak Value

Test Mode:

Transmitting mode

Instruments Used:

Refer to section 6 for details

Test Results:

Pass

Measurement Data

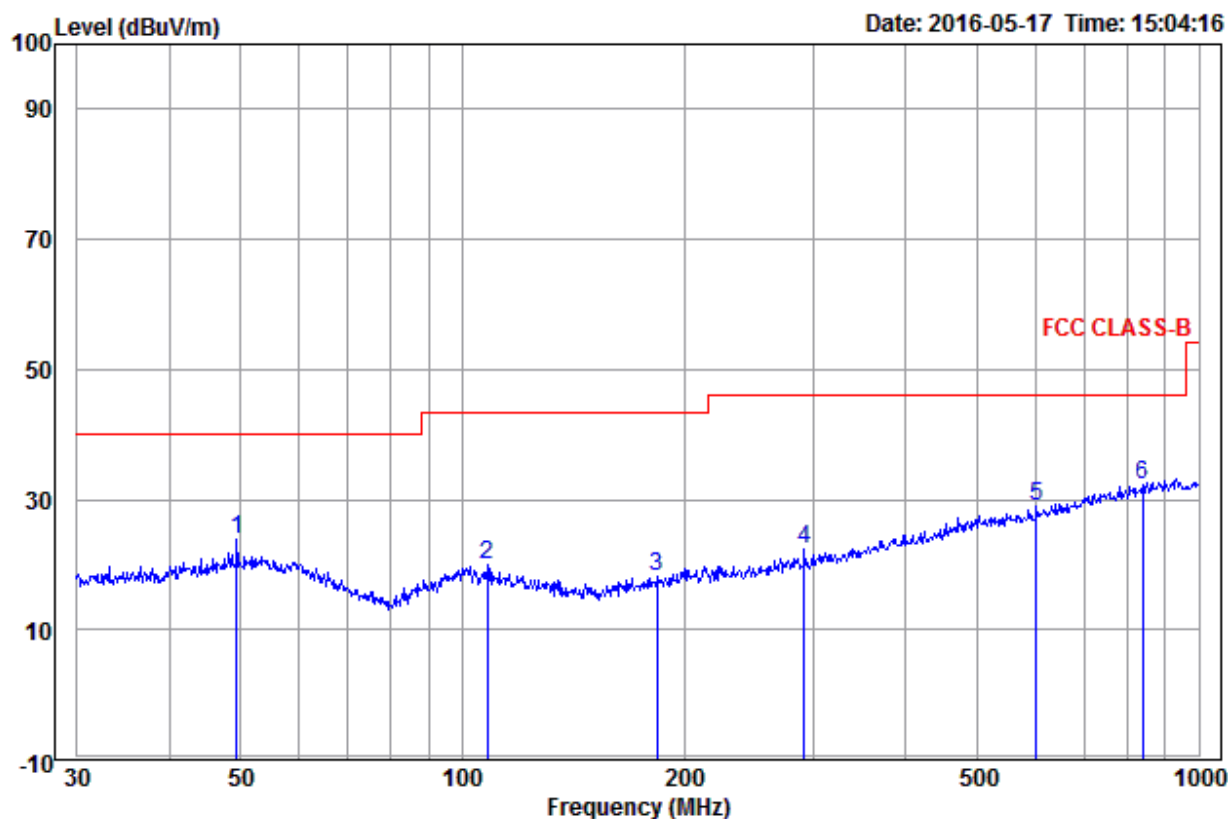
Field Strength Of The Fundamental Signal

Peak value:

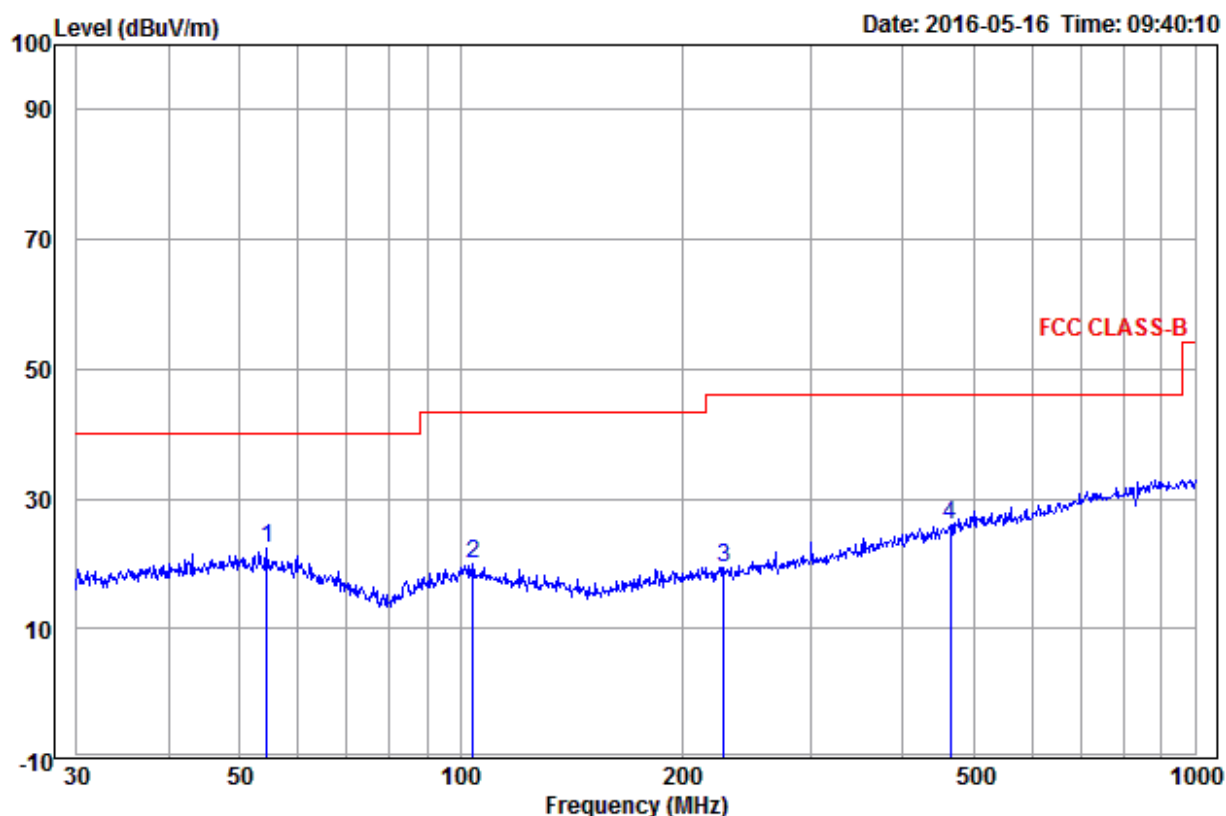
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
2406.00	32.57	3.17	34.39	79.44	80.79	114	-33.21	Pass	H
2406.00	32.57	3.17	34.39	77.68	79.03	114	-34.97	Pass	V
2443.00	32.64	3.19	34.40	77.48	78.91	114	-35.09	Pass	H
2443.00	32.64	3.19	34.40	82.65	84.08	114	-29.92	Pass	V
2480.00	32.71	3.22	34.41	74.37	75.89	114	-38.11	Pass	H
2480.00	32.71	3.22	34.41	80.9	82.42	114	-31.58	Pass	V

Remark: As shown in this section, for field strength of the fundamental signal measurements, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above. So, only the peak measurements were shown in the report.

For fundamental frequency , RBW 3MHz VBW 3MHz peak detector is for PK value



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	49.359	15.05	1.35	7.45	23.85	40.00	-16.15	Horizontal	
2	108.267	12.51	1.57	5.78	19.86	43.50	-23.64	Horizontal	
3	183.844	11.04	2.03	5.14	18.21	43.50	-25.29	Horizontal	
4	291.036	13.32	2.38	6.62	22.32	46.00	-23.68	Horizontal	
5	601.427	18.82	3.51	6.54	28.87	46.00	-17.13	Horizontal	
6 pp	839.182	21.84	4.11	6.18	32.13	46.00	-13.87	Horizontal	



	Ant	Cable	Read		Limit	Over		
Freq	Factor	Loss	Level	Level	Line	Limit	Pol/Phase	Remark
MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1 pp 54.452	14.49	1.41	6.36	22.26	40.00	-17.74	Vertical	
2 103.806	12.88	1.57	5.48	19.93	43.50	-23.57	Vertical	
3 228.490	12.08	2.29	5.09	19.46	46.00	-26.54	Vertical	
4 463.970	17.48	3.03	5.51	26.02	46.00	-19.98	Vertical	

Above 1GHz

Test mode:		Transmitting		Test channel:		Lowest(2406MHz)			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1276.818	30.41	2.60	34.88	39.63	37.76	74	-36.24	Pass	H
1597.401	31.05	2.92	34.59	39.46	38.84	74	-35.16	Pass	H
4812.000	34.70	5.11	34.35	34.90	40.36	74	-33.64	Pass	H
6032.401	35.92	7.40	34.32	31.99	40.99	74	-33.01	Pass	H
7218.000	36.42	6.67	34.90	34.10	42.29	74	-31.71	Pass	H
9624.000	37.90	7.72	35.07	31.55	42.10	74	-31.90	Pass	H
1132.844	30.06	2.43	35.04	38.38	35.83	74	-38.17	Pass	V
1777.646	31.36	3.07	34.45	37.03	37.01	74	-36.99	Pass	V
4812.000	34.70	5.11	34.35	34.78	40.24	74	-33.76	Pass	V
5689.36	35.67	6.73	34.30	30.30	38.40	74	-35.60	Pass	V
7218.000	36.42	6.67	34.90	29.77	37.96	74	-36.04	Pass	V
9624.000	37.90	7.72	35.07	25.35	35.90	74	-38.10	Pass	V

Test mode:		Transmitting		Test channel:		Middle(2443MHz)			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1135.731	30.07	2.44	35.03	41.40	38.88	74	-35.12	Pass	H
1597.401	31.05	2.92	34.59	39.54	38.92	74	-35.08	Pass	H
4886.000	34.86	5.08	34.33	33.03	38.64	74	-35.36	Pass	H
6544.350	36.18	6.89	34.64	29.96	38.39	74	-35.61	Pass	H
7329.000	36.43	6.78	34.90	30.28	38.59	74	-35.41	Pass	H
9772.000	38.06	7.59	35.04	27.58	38.19	74	-35.81	Pass	H
1129.964	30.05	2.43	35.04	38.53	35.97	74	-38.03	Pass	V
1378.143	30.63	2.71	34.78	37.35	35.91	74	-38.09	Pass	V
4886.000	34.86	5.08	34.33	32.89	38.50	74	-35.50	Pass	V
5762.235	35.72	6.90	34.30	30.69	39.01	74	-34.99	Pass	V
7329.000	36.43	6.78	34.90	29.38	37.69	74	-36.31	Pass	V
9772.000	38.06	7.59	35.04	26.90	37.51	74	-36.49	Pass	V

Test mode:		Transmitting		Test channel:		Highest(2480MHz)			
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1257.465	30.36	2.58	34.90	33.67	31.71	74	-42.29	Pass	H
1724.166	31.27	3.02	34.49	33.61	33.41	74	-40.59	Pass	H
4960.000	35.02	5.05	34.31	36.05	41.81	74	-32.19	Pass	H
6299.178	36.06	7.13	34.49	30.26	38.96	74	-35.04	Pass	H
7440.000	36.45	6.88	34.90	28.78	37.21	74	-36.79	Pass	H
9920.000	38.22	7.47	35.02	25.46	36.13	74	-37.87	Pass	H
1192.011	30.21	2.51	34.97	38.41	36.16	74	-37.84	Pass	V
1759.638	31.33	3.05	34.47	38.47	38.38	74	-35.62	Pass	V
4958.678	35.01	5.05	34.31	33.76	39.51	74	-34.49	Pass	V
6047.776	35.93	7.38	34.33	30.38	39.36	74	-34.64	Pass	V
7440.000	36.45	6.88	34.90	30.73	39.16	74	-34.84	Pass	V
9920.000	38.22	7.47	35.02	29.02	39.69	74	-34.31	Pass	V

Remark:

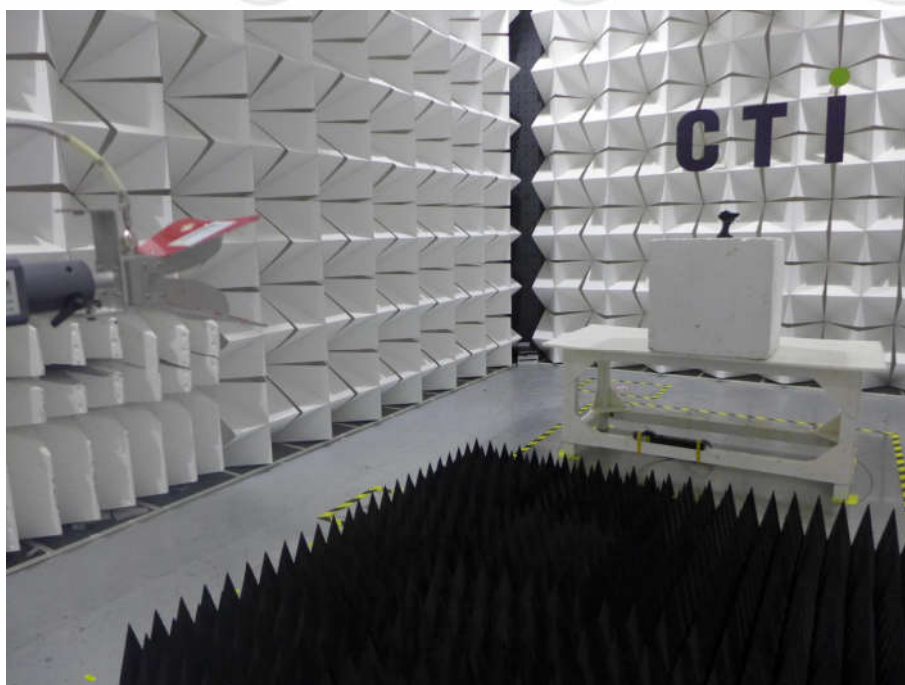
- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
 Final Test Level = Receiver Reading - Correct Factor
 Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor
- 2) Scan from 9kHz to 25GHz, The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

Test Model No.: KD0785(5F62DB2)



Radiated emission Test Setup-1(Below 1GHz)



Radiated spurious emission Test Setup-2(Above 1GHz)

APPENDIX 2 PHOTOGRAPHS OF EUT

Test mode No.: KD0785(5F62DB2)



View of Product-1



View of Product-2



View of Product-3



View of Product-4



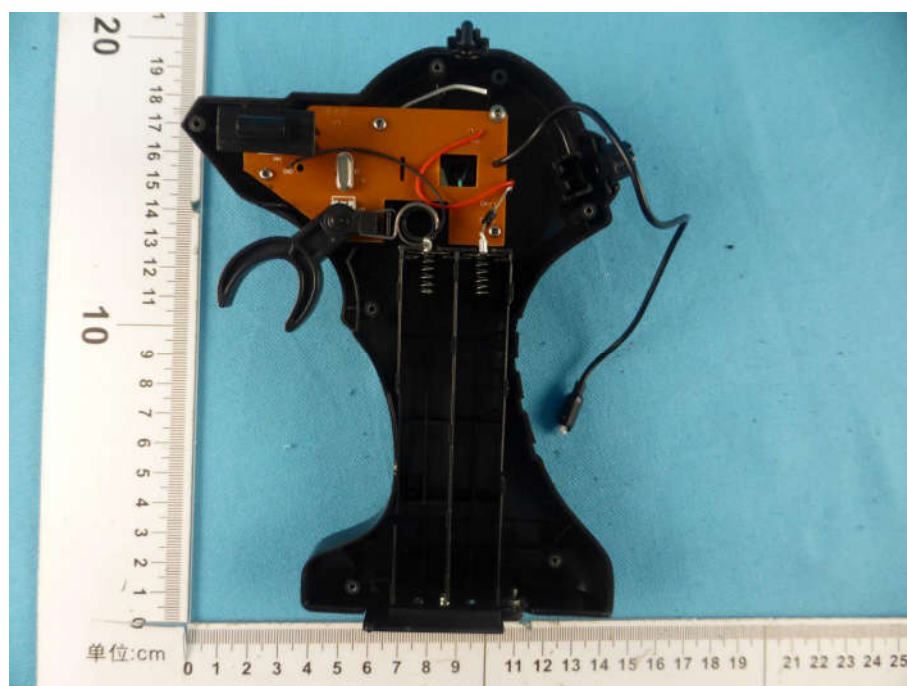
View of Product-5



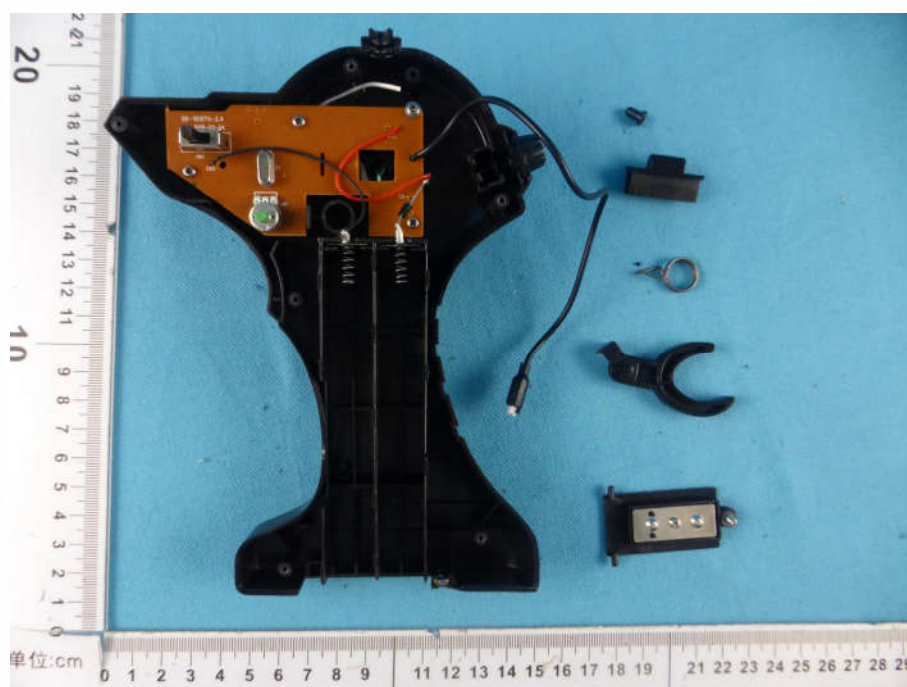
View of Product-6



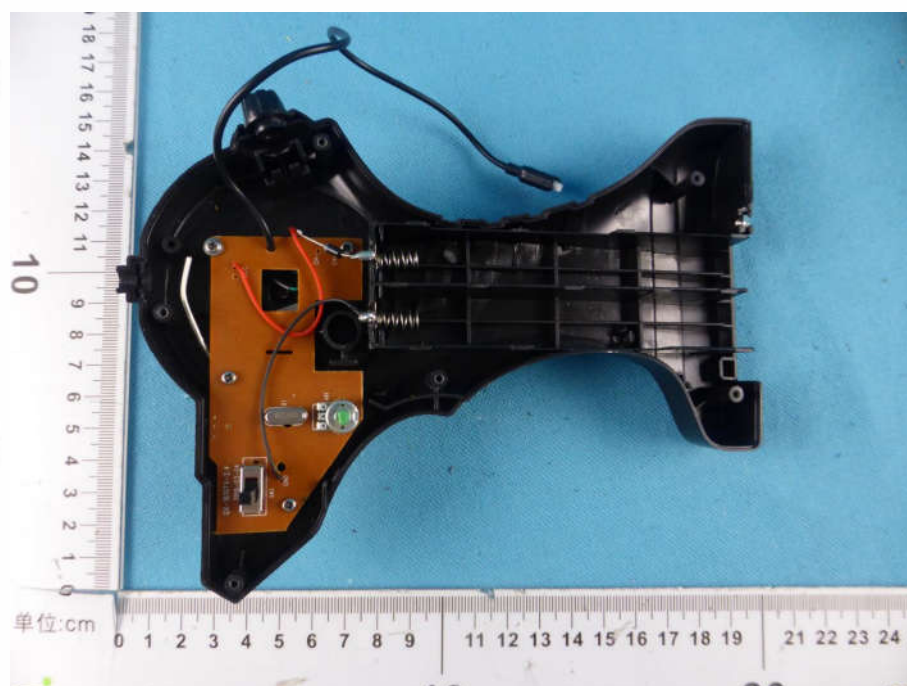
View of Product-7



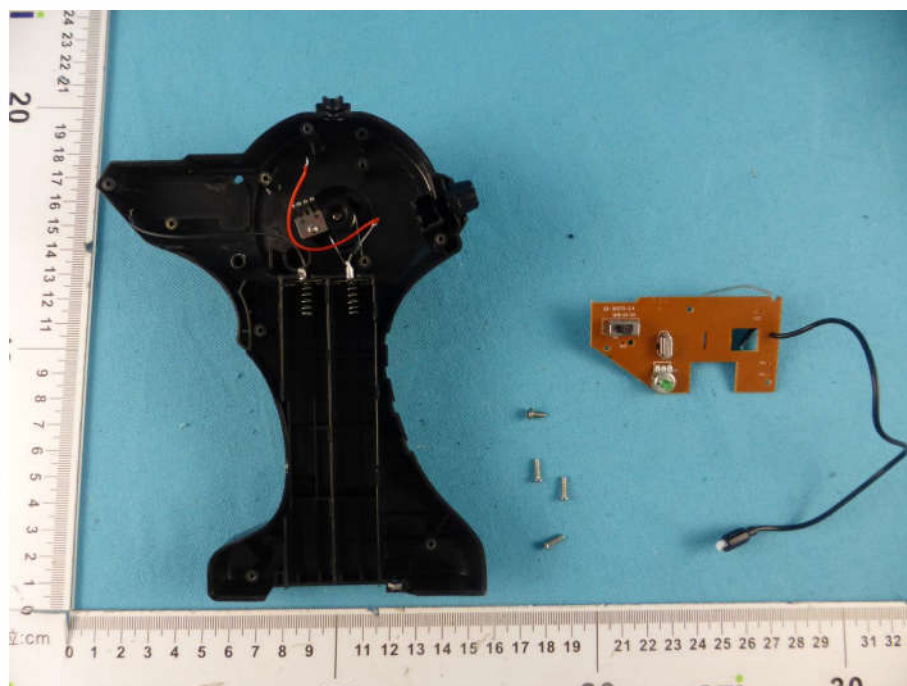
View of Product-8



View of Product-9



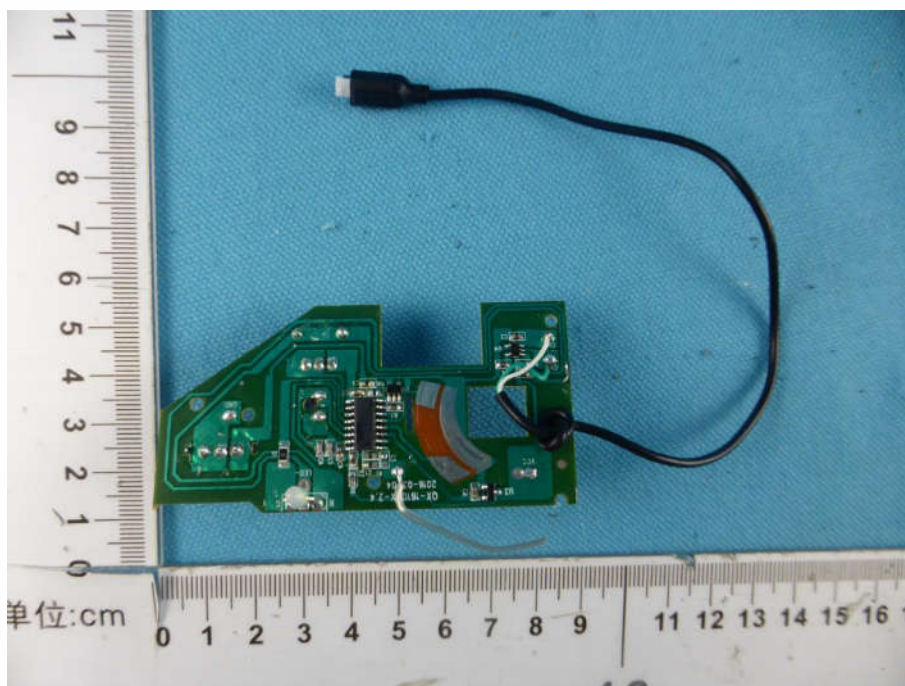
View of Product-10



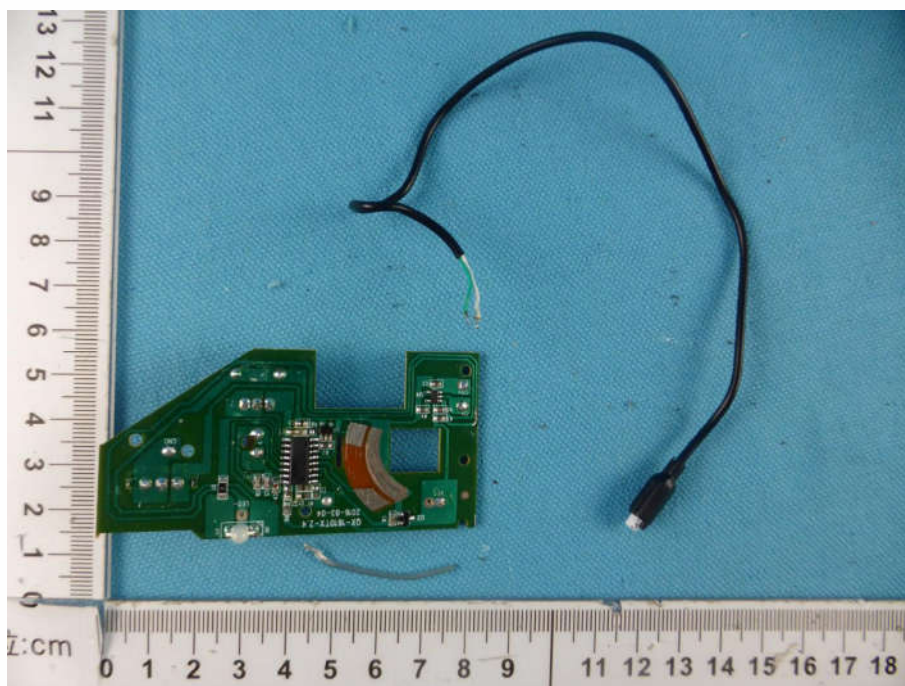
View of Product-11



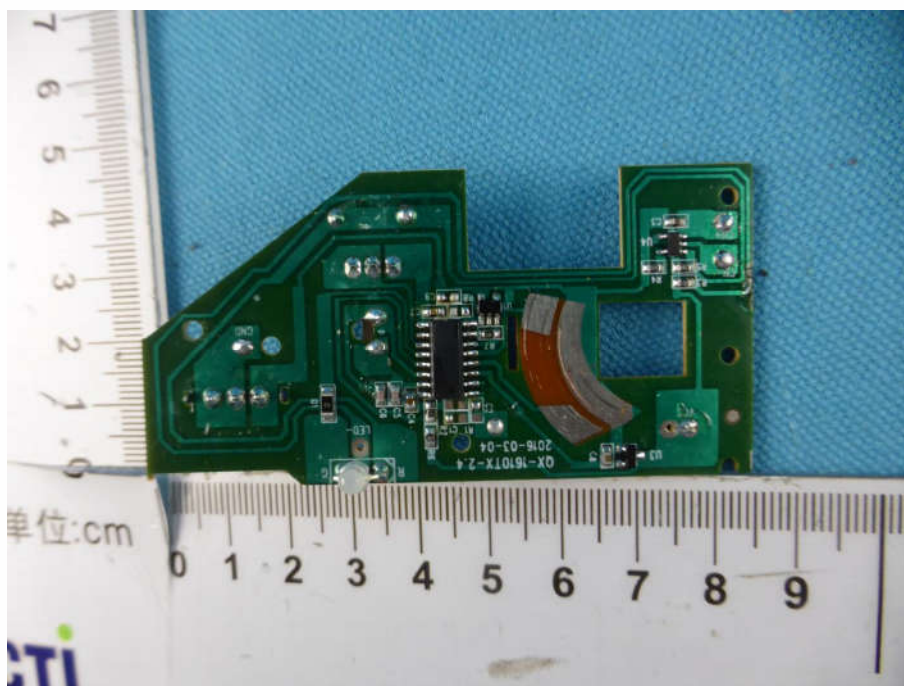
View of Product-12



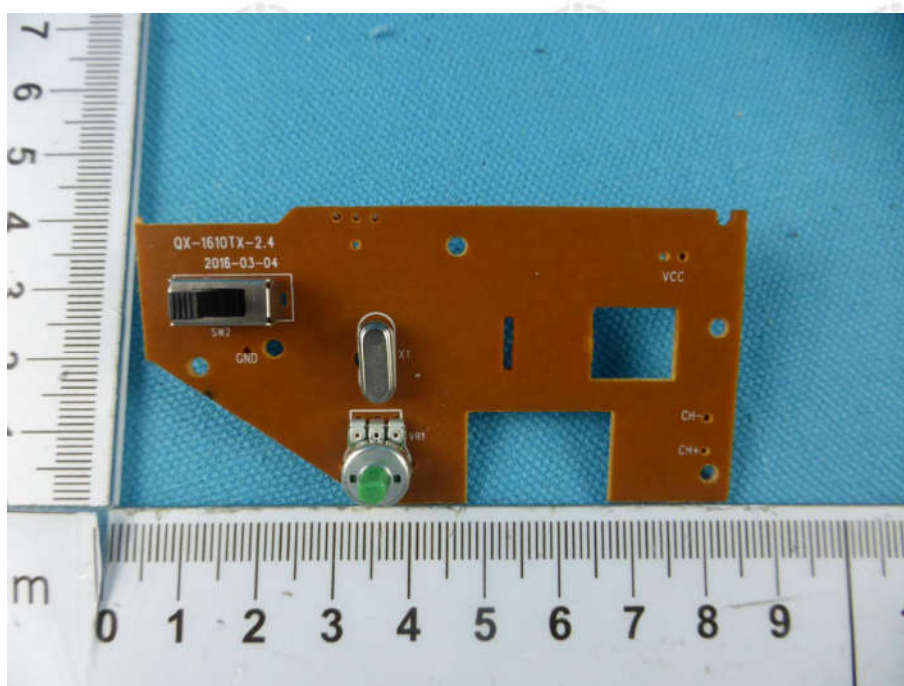
View of Product-13



View of Product-14



View of Product-15



View of Product-16

*** End of Report ***

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