FCC Test Report

Report No.: AGC10212200504FE02

FCC ID	:	2AWEI162A
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Remote control of the Remote control car
BRAND NAME	:	N/A
MODEL NAME	:	162A, 161, 162, 163, 165, 166, 167, 168, 169, 161-1, 162-1, 163-1, 165-1, 166-1, 167-1, 168-1, 169-1, 165-2, 165-3, 165-5, 165-6, 165-7, 165-8, 165-9, 165-10, 165-11, 165-12, 165-13, 165-15, 165-16, 165-17, 165-18, 165-19, 165-20, 165-21, 165-22, 165-23, 165-25, 165-26, 161A, 163A, 165A, 166A,167A, 168A, 169A, 161-1A, 162-1A, 163-1A, 165-1A, 166-1A, 167-1A, 168-1A, 169-1A, 165-2A, 165-3A, 165-5A, 165-6A, 165-7A, 165-8A, 165-9A, 165-10A, 165-11A, 165-12A, 165-13A, 165-15A, 165-16A, 165-17A, 165-18A, 165-19A, 165-20A, 165-21A, 165-22A, 165-23A, 165-25A, 165-26A
APPLICANT	:	Shantou chenghai district wanhuida toys factory
DATE OF ISSUE	:	May 25, 2020
STANDARD(S)	:	FCC Part 15.247
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 25, 2020	Valid	Initial Release

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1. VERIFICATION OF COMPLIANCE

Applicant	Shantou chenghai district wanhuida toys factory
Address	Beilong guihua roadside Guangyi street Chenghai district Shantou city Guangdong province
Manufacturer	Shantou chenghai district wanhuida toys factory
Address	Beilong guihua roadside Guangyi street Chenghai district Shantou city Guangdong province
Factory	Shantou chenghai district wanhuida toys factory
Address	Beilong guihua roadside Guangyi street Chenghai district Shantou city Guangdong province
Product Designation	Remote control of the Remote control car
Brand Name	N/A
Test Model	162A
Series Model	161, 162, 163, 165, 166, 167, 168, 169, 161-1, 162-1, 163-1, 165-1, 166-1, 167-1, 168-1, 169-1, 165-2, 165-3, 165-5, 165-6, 165-7, 165-8, 165-9, 165-10, 165-11, 165-12, 165-13, 165-15, 165-16, 165-17, 165-18, 165-19, 165-20, 165-21, 165-22, 165-23, 165-25, 165-26, 161A, 163A, 165A, 166A,167A, 168A, 169A, 161-1A, 162-1A, 163-1A, 165-1A, 166-1A, 167-1A, 168-1A, 169-1A, 165-2A, 165-3A, 165-5A, 165-6A, 165-7A, 165-8A, 165-9A, 165-10A, 165-11A, 165-12A, 165-13A, 165-15A, 165-16A, 165-17A, 165-18A, 165-19A, 165-20A, 165-21A, 165-22A, 165-23A, 165-25A, 165-26A
Difference Description	All the same except for the model name and appearance modelling color
Date of test	Mar. 11, 2020 to May 22, 2020
Deviation	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-BLE/RF

We hereby certify that:
The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC part 15.247.

Prepared By	Erik Yang (Project Engineer)	May 22, 2020
Reviewed By	Max Zhang (Reviewer)	May 25, 2020
Approved By	Forrest Lei (Authorized Officer)	May 25, 2020

2.GENERAL INFORMATION

2.1PRODUCT DESCRIPTION

The EUT is designed as a “Remote control of the Remote control car”. It is designed by way of utilizing the GFSK technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.410 GHz to 2.473GHz
RF Output Power	3.713dBm(Max)
Modulation	GFSK
Number of channels	32 Channel
Antenna Designation	Integral Antenna(Comply with requirements of the FCC part 15.203)
Antenna Gain	0dBi
Hardware Version	TS-729T
Software Version	N/A
Power Supply	DC3V by battery

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency	Channel Number	Frequency
2400~2483.5MHZ	1	2410MHZ	17	2441MHZ
	2	2414MHZ	18	2442MHZ
	3	2415MHZ	19	2444MHZ
	4	2416MHZ	20	2446MHZ
	5	2417MHZ	21	2450MHZ
	6	2418MHZ	22	2452MHZ
	7	2419MHZ	23	2454MHZ
	8	2421MHZ	24	2456MHZ
	9	2426MHZ	25	2458MHZ
	10	2428MHZ	26	2462MHZ
	11	2429MHZ	27	2464MHZ
	12	2430MHZ	28	2465MHZ
	13	2431MHZ	29	2466MHZ
	14	2433MHZ	30	2467MHZ
	15	2434MHZ	31	2469MHZ
	16	2439MHZ	32	2473MHZ

2.3 RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for **FCC ID: 2AWEI162A** filing to comply with the FCC Part 15.247 requirements.

2.4TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.5 SPECIAL ACCESSORIES

Refer to section 2.2.

2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

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

- Uncertainty of Conducted Emission, Uc = ±3.2 dB
- Uncertainty of Radiated Emission below 1GHz, Uc = ±3.9 dB
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB
- Uncertainty of total RF power, conducted, Uc = ±0.8dB
- Uncertainty of RF power density, conducted, Uc = ±2.6dB
- Uncertainty of spurious emissions, conducted, Uc = ±2.7dB
- Uncertainty of Occupied Channel Bandwidth: Uc = ±2 %

4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel TX(2410MHz)
2	Middle channel TX(2442MHz)
3	High channel TX(2473MHz)

Note:
1. Only the result of the worst case was recorded in the report, if no other cases.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.
4. The EUT enters test modes by pressing button of EUT.

5. SYSTEM TEST CONFIGURATION

5.1 CONFIGURATION OF TESTED SYSTEM

EUT

5.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	Remote control of the Remote control car	162A	2AWEI162A	EUT

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
15.247 (b)(3)	Peak Output Power	Compliant
15.247 (a)(2)	6 dB Bandwidth	Compliant
15.247 (d)	Conducted Spurious Emission	Compliant
15.247 (e)	Maximum Conducted Output Power Density	Compliant
15.209	Radiated Emission	Compliant
15.207	Conducted Emission	N/A

Note: The EUT is only powered by battery.

6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun. 12, 2019	Jun. 26, 2020
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 12, 2019	Dec. 11, 2020
2.4GHz Fliter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2021
Attenuator	ZHINAN	E-002	N/A	Aug. 26, 2019	Aug. 25, 2020
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 09, 2019	Sep. 08, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	Jun. 14, 2018	Jun. 13, 2020
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May. 26, 2018	May. 25, 2020
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Oct. 15, 2019	Oct. 14, 2020
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 09, 2019	Jan. 08, 2021
Test software	Tonscend	JS32-RE (Ver.2.5)	N/A	N/A	N/A

7. PEAK OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

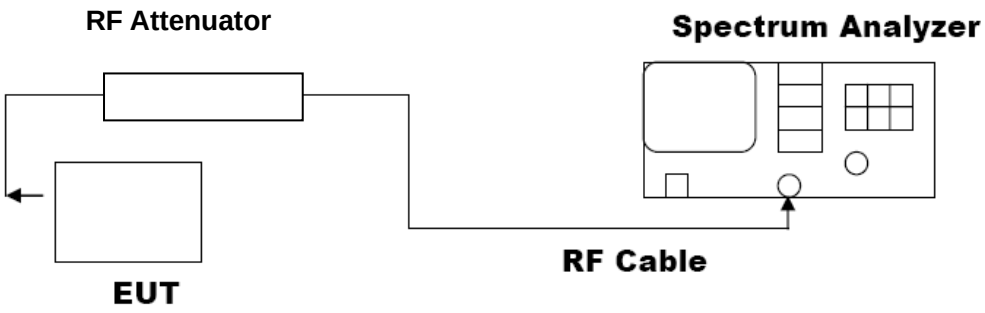
For peak power test:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. RBW⩾DTS bandwidth
3. VBW⩾3*RBW.
4. SPAN⩾VBW.
5. Sweep: Auto.
6. Detector function: Peak.
7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

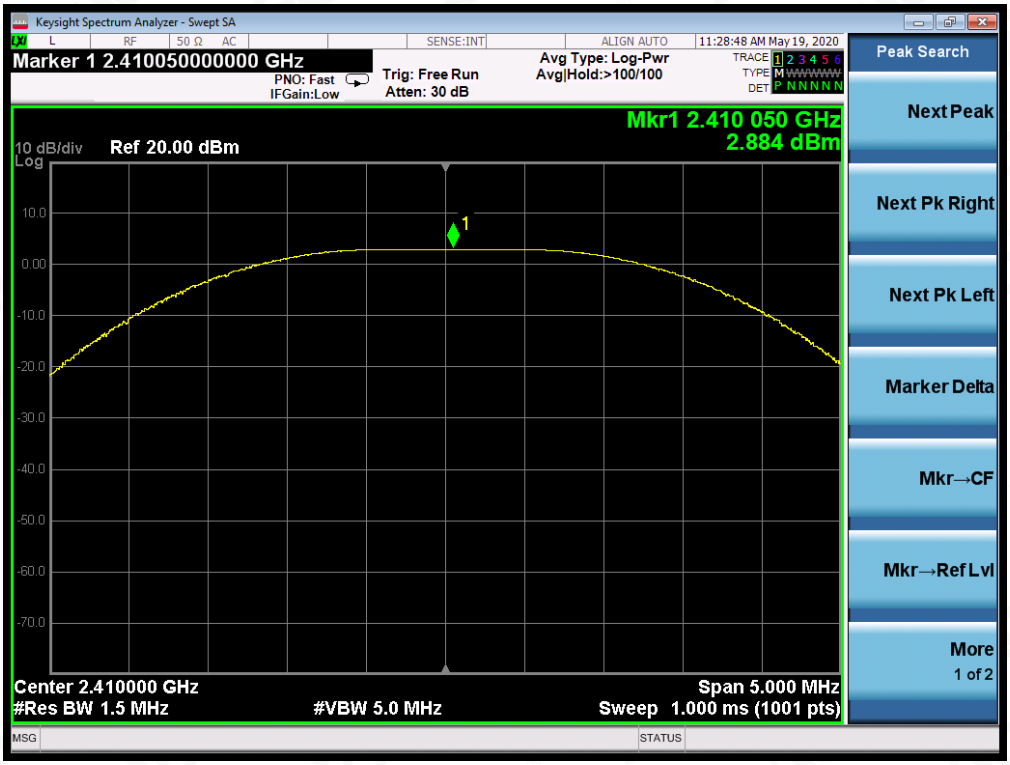
PEAK POWER TEST SETUP



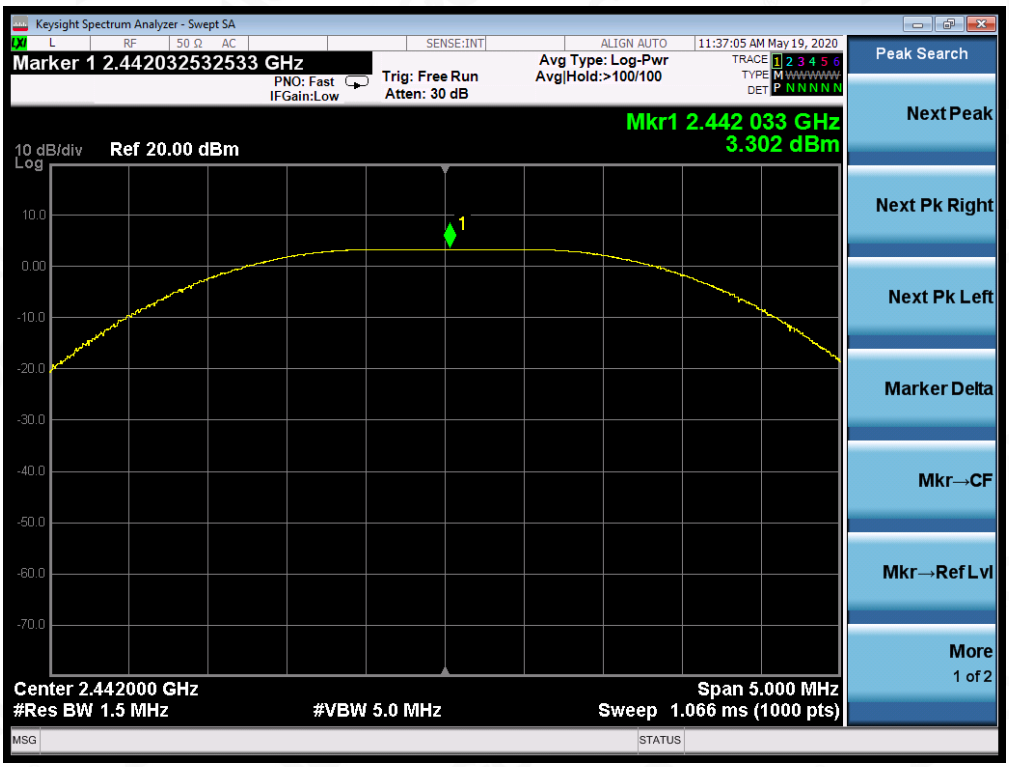
7.3. LIMITS AND MEASUREMENT RESULT

PEAK OUTPUT POWER MEASUREMENT RESULT FOR GFSK MOUDULATION			
Frequency (GHz)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.410	2.884	30	Pass
2.442	3.302	30	Pass
2.473	3.713	30	Pass

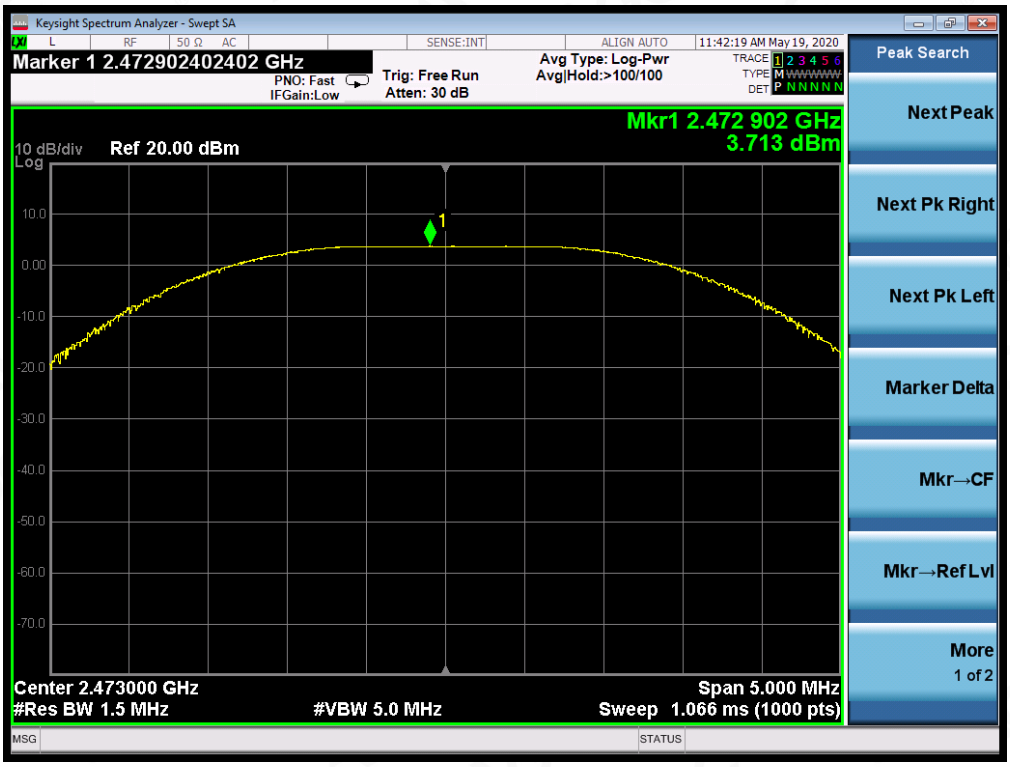
CH0



CH19


Keysight Spectrum Analyzer - Swept SA
Marker 1 2.442032532533 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
11:37:05 AM May 19, 2020
Mkr1 2.442 033 GHz
3.302 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 2.442000 GHz
#Res BW 1.5 MHz
#VBW 5.0 MHz
Span 5.000 MHz
Sweep 1.066 ms (1000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

CH39


Keysight Spectrum Analyzer - Swept SA
Marker 1 2.472902402402 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
11:42:19 AM May 19, 2020
Mkr1 2.472 902 GHz
3.713 dBm
10 dB/div
Ref 20.00 dBm
Log
Center 2.473000 GHz
#Res BW 1.5 MHz
#VBW 5.0 MHz
Span 5.000 MHz
Sweep 1.066 ms (1000 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

8. 6 DB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW⩾3×RBW.
4. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

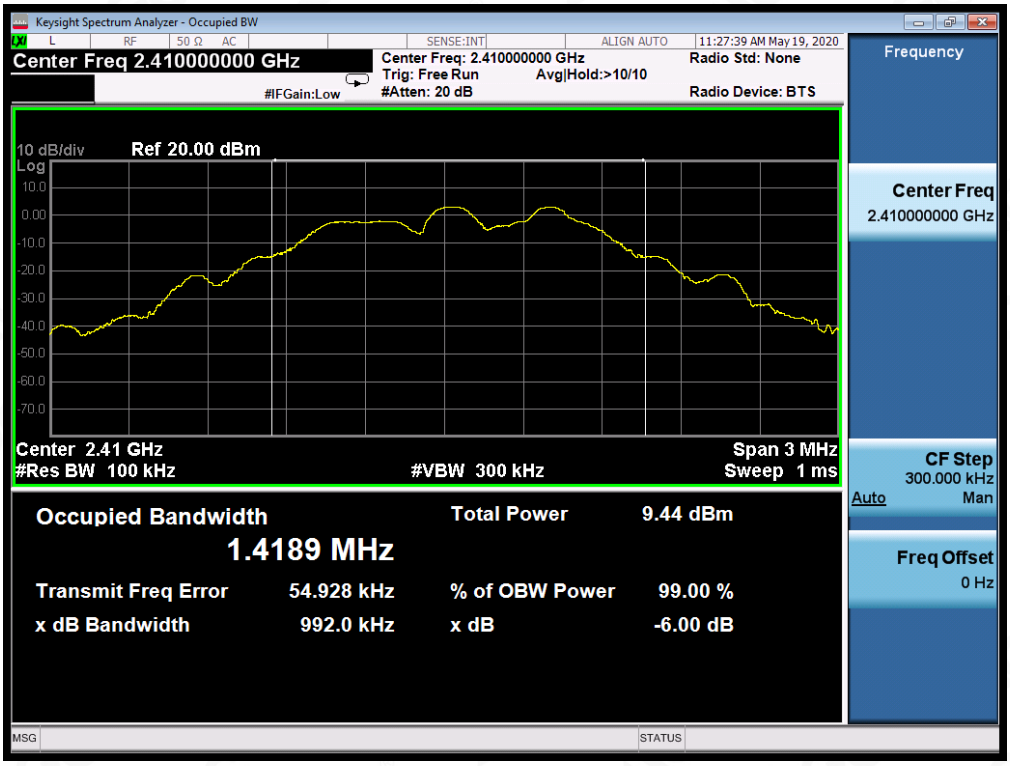
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

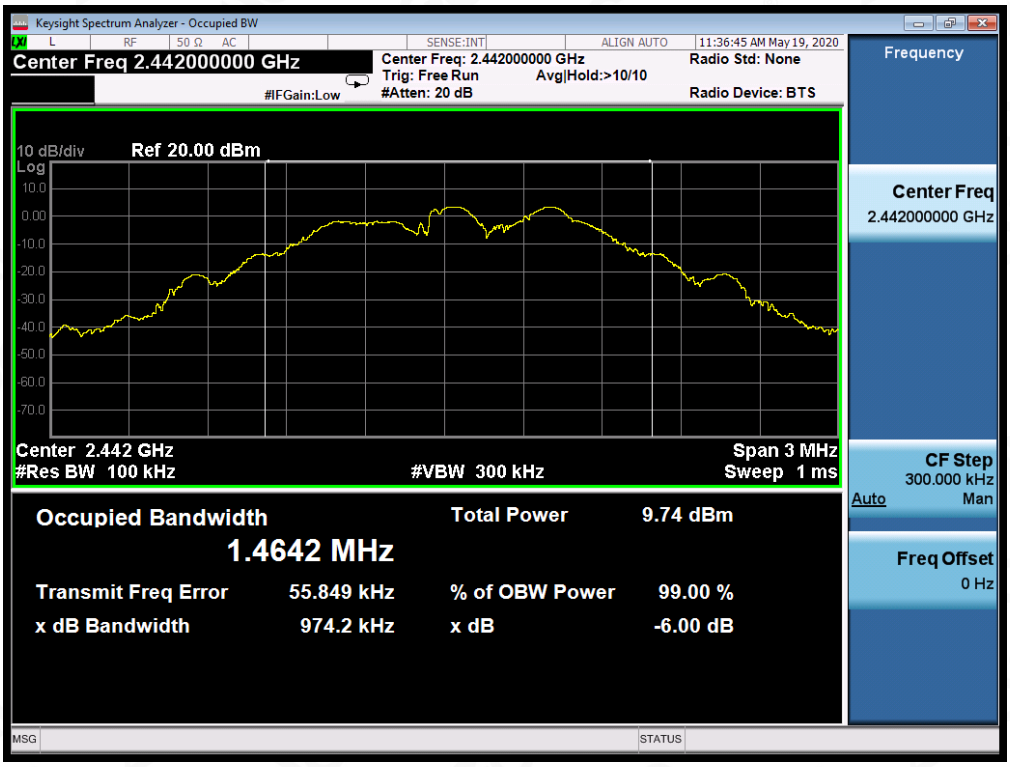
8.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT			
Applicable Limits	Applicable Limits		
	Test Data (kHz)		Criteria
>500KHZ	Low Channel	992.0	PASS
	Middle Channel	974.2	PASS
	High Channel	1000.0	PASS

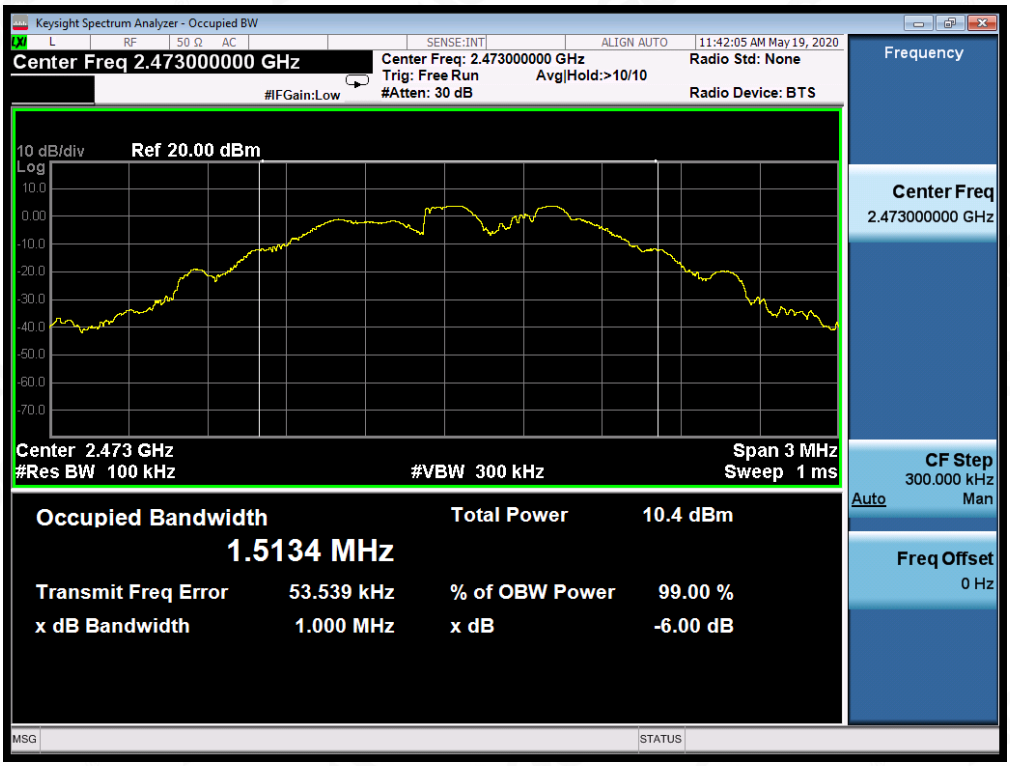
TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



9. CONDUCTED SPURIOUS EMISSION

9.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to ANSI C63.10 for compliance to FCC PART 15.247 requirements.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 7.2.

9.3. MEASUREMENT EQUIPMENT USED

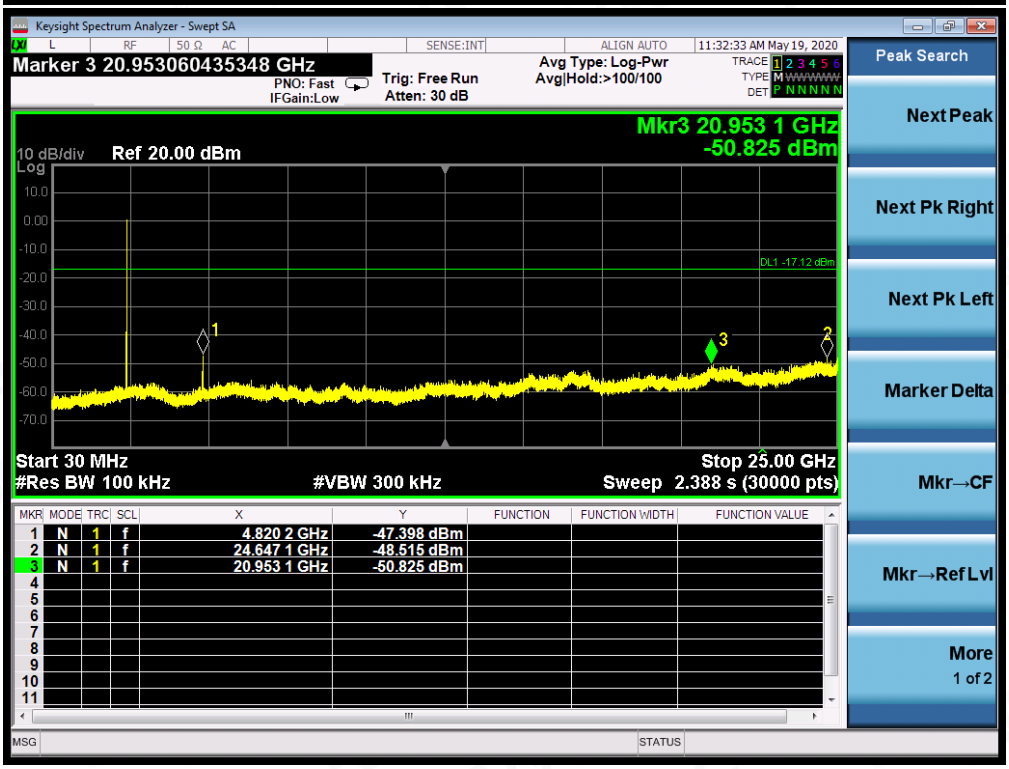
The same as described in section 6.

9.4. LIMITS AND MEASUREMENT RESULT

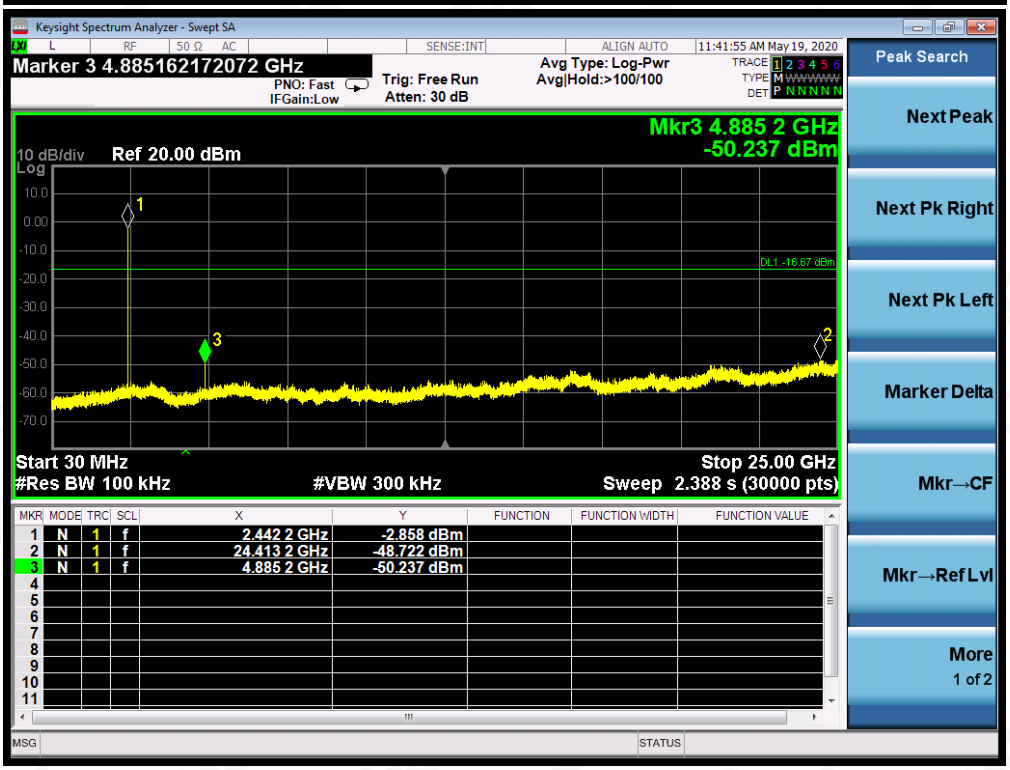
LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test Data	Criteria
In any 100 KHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.	At least -20dBc than the reference level	PASS

TEST RESULT FOR ENTIRE FREQUENCY RANGE

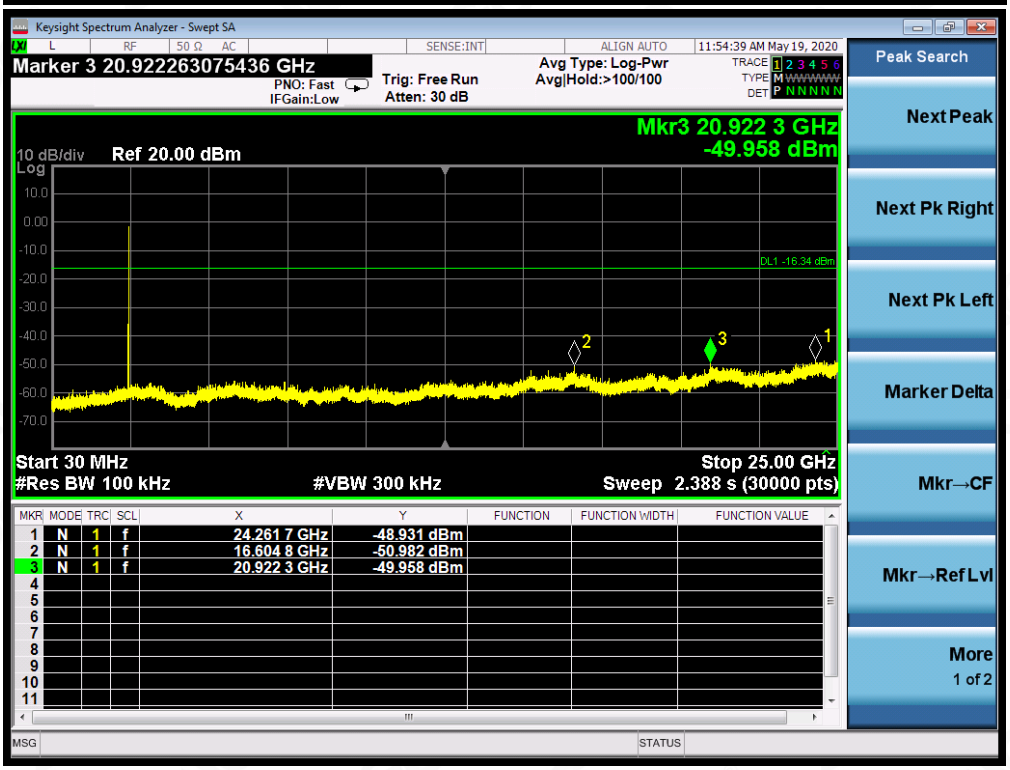
GFSK MODULATION IN LOW CHANNEL



GFSK MODULATION IN MIDDLE CHANNEL

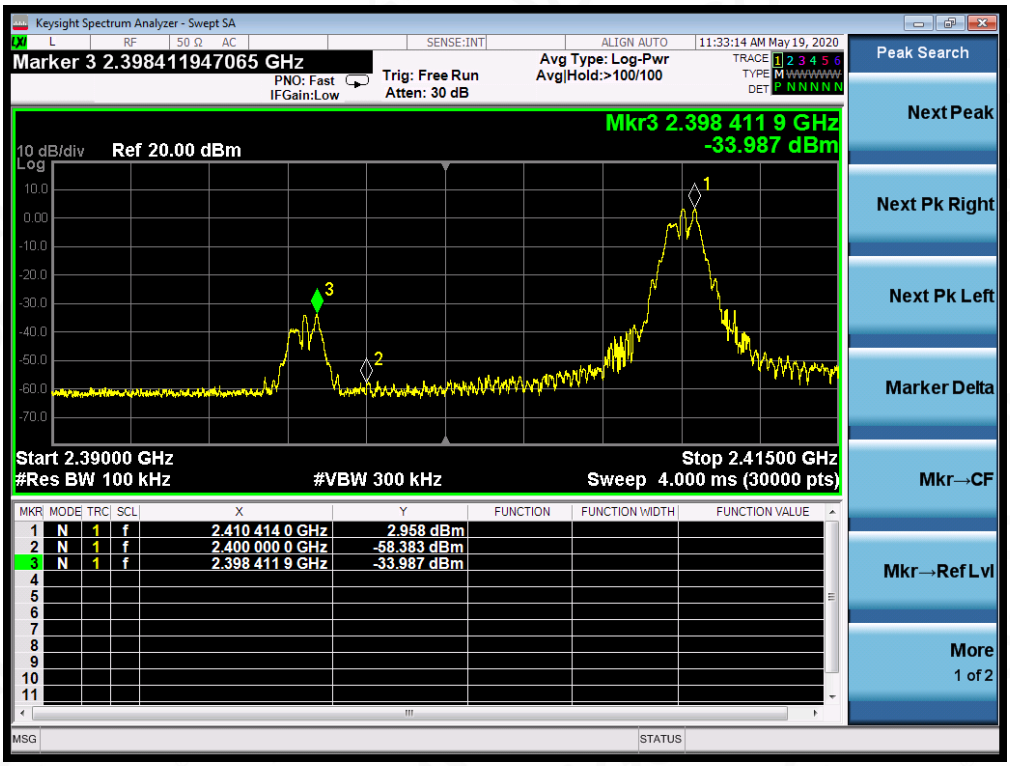


GFSK MODULATION IN HIGH CHANNEL

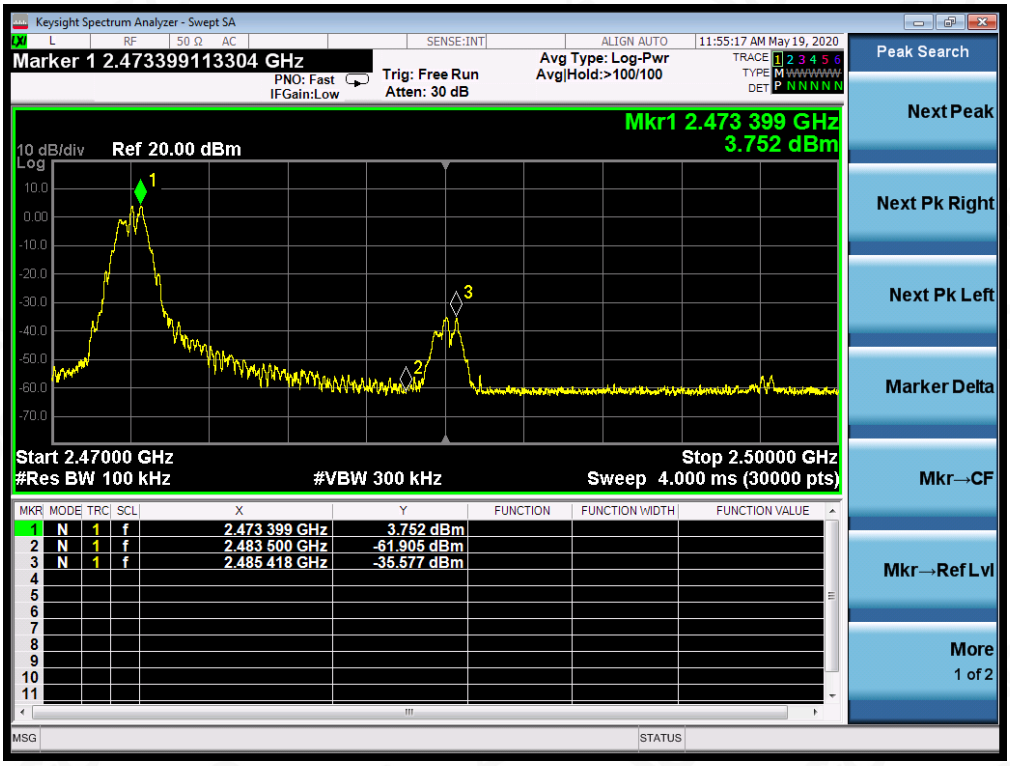


TEST RESULT FOR BAND EDGE

GFSK MODULATION IN LOW CHANNEL



GFSK MODULATION IN HIGH CHANNEL



10. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

(1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
(2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
(3). Set SPA Trace 1 Max hold, then View.

Note: The method of PKPSD in the KDB 558074 item 10.2 was used in this testing.

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 7.2.

10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

Channel No.	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	0.225	8	Pass
Middle Channel	0.739	8	Pass
High Channel	1.139	8	Pass

TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

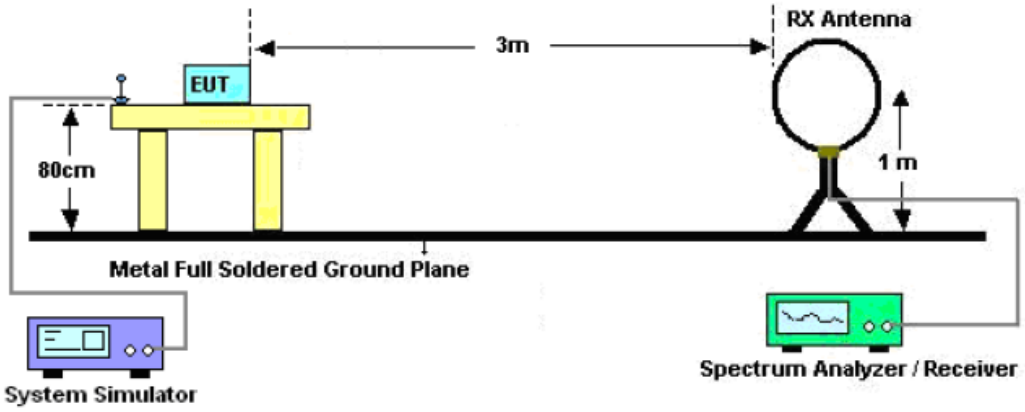
11. RADIATED EMISSION

11.1. MEASUREMENT PROCEDURE

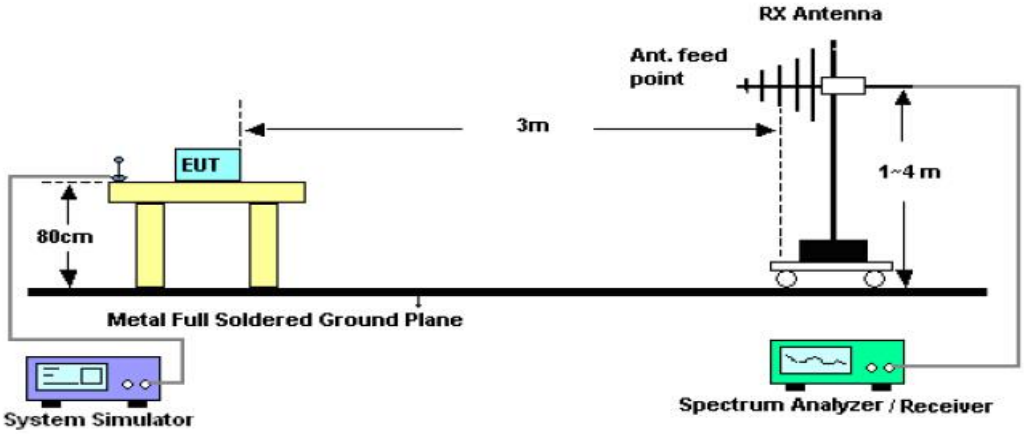
1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

11.2. TEST SETUP

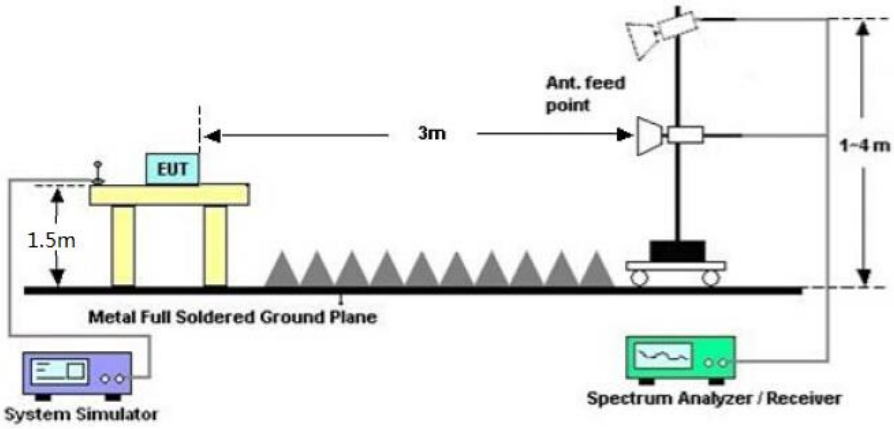
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



11.3. LIMITS AND MEASUREMENT RESULT

15.209 Limit in the below table has to be followed

Frequencies (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

Note: All modes were tested For restricted band radiated emission,
the test records reported below are the worst result compared to other modes.

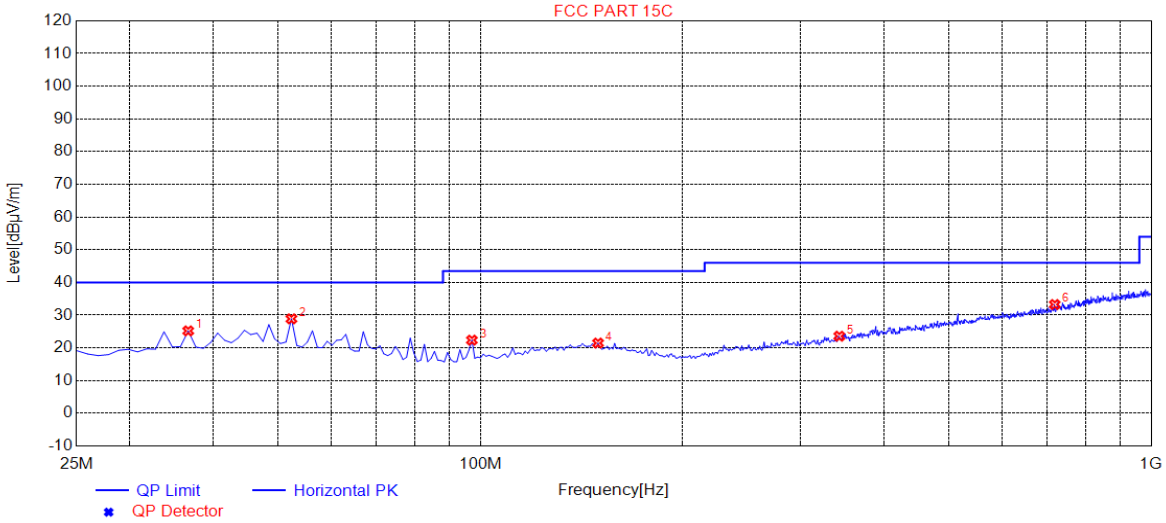
11.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION BELOW 1GHZ

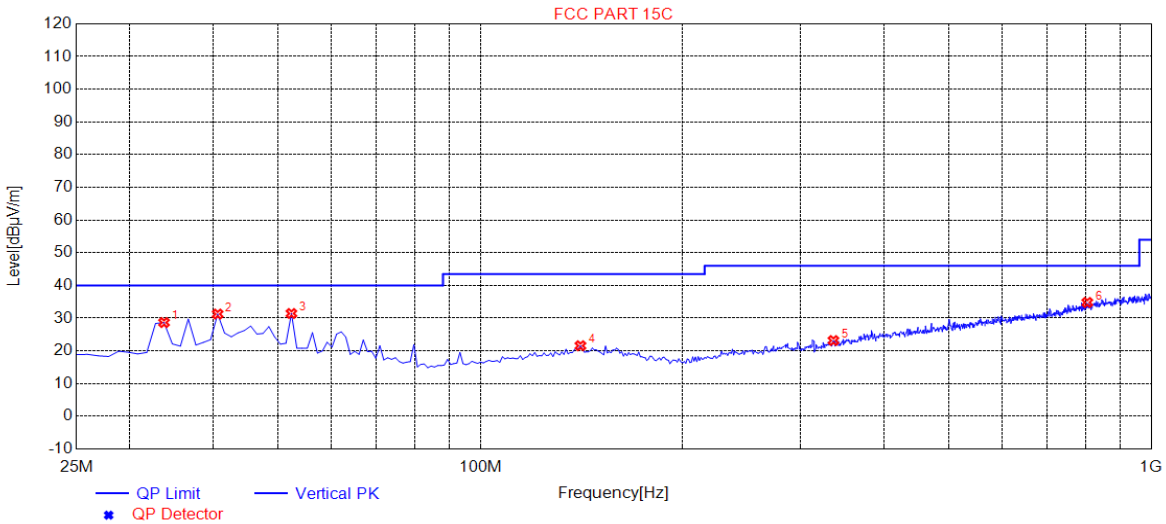
EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 3	**Antenna**	Horizontal



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.7000	25.20	14.14	40.00	14.80	100	37	Horizontal
2	52.3000	28.88	14.50	40.00	11.12	100	21	Horizontal
3	97.1500	22.38	11.06	43.50	21.12	200	72	Horizontal
4	149.8000	21.48	14.88	43.50	22.02	100	144	Horizontal
5	342.8500	23.58	17.58	46.00	22.42	200	1	Horizontal
6	718.2250	33.27	26.41	46.00	12.73	100	92	Horizontal

RESULT: PASS

EUT	Remote control of the Remote control car	Model Name	162A
Temperature	25° C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.7750	28.67	13.51	40.00	11.33	100	171	Vertical
2	40.6000	31.27	14.92	40.00	8.73	100	347	Vertical
3	52.3000	31.44	14.50	40.00	8.56	100	56	Vertical
4	141.0250	21.58	14.88	43.50	21.92	100	305	Vertical
5	336.0250	23.17	17.34	46.00	22.83	100	281	Vertical
6	803.0500	34.81	28.52	46.00	11.19	100	271	Vertical

RESULT: PASS

Note:

1. Factor=Antenna Factor + Cable loss, Margin= Limit - Level.
2. All test modes had been tested. The mode 3 is the worst case and recorded in the report.

RADIATED EMISSION ABOVE 1GHZ

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 1	**Antenna**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4820.000	47.29	0.08	47.37	74	-26.63	peak
4820.000	40.45	0.08	40.53	54	-13.47	AVG
7230.000	43.76	2.21	45.97	74	-28.03	peak
7230.000	35.13	2.21	37.34	54	-16.66	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 1	**Antenna**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4820.000	45.94	0.08	46.02	74	-27.98	peak
4820.000	38.23	0.08	38.31	54	-15.69	AVG
7230.000	41.87	2.21	44.08	74	-29.92	peak
7230.000	35.44	2.21	37.65	54	-16.35	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 2	**Antenna**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4884.000	46.92	0.14	47.06	74	-26.94	peak
4884.000	38.47	0.14	38.61	54	-15.39	AVG
7326.000	42.16	2.36	44.52	74	-29.48	peak
7326.000	34.83	2.36	37.19	54	-16.81	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 2	**Antenna**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4884.000	45.19	0.14	45.33	74	-28.67	peak
4884.000	39.13	0.14	39.27	54	-14.73	AVG
7326.000	42.78	2.36	45.14	74	-28.86	peak
7326.000	34.51	2.36	36.87	54	-17.13	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 3	**Antenna**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4946.000	44.96	0.22	45.18	74	-28.82	peak
4946.000	37.13	0.22	37.35	54	-16.65	AVG
7419.000	42.48	2.64	45.12	74	-28.88	peak
7419.000	34.16	2.64	36.8	54	-17.2	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 3	**Antenna**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4946.000	44.59	0.22	44.81	74	-29.19	peak
4946.000	37.42	0.22	37.64	54	-16.36	AVG
7419.000	40.48	2.64	43.12	74	-30.88	peak
7419.000	33.67	2.64	36.31	54	-17.69	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RESULT: PASS

Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report.

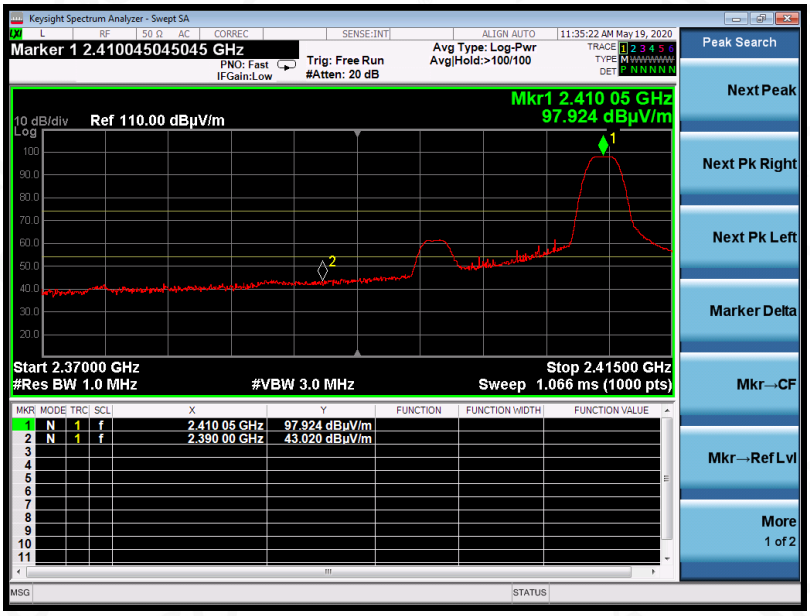
Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The “Factor” value can be calculated automatically by software of measurement system.

TEST RESULT FOR RESTRICTED BANDS REQUIREMENTS

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 1	**Antenna**	Horizontal

PK



AV

RESULT: PASS

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 1	**Antenna**	Vertical

PK

AV

RESULT: PASS

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 3	**Antenna**	Horizontal

PK

AV

RESULT: PASS

EUT	Remote control of the Remote control car	**Model Name**	162A
Temperature	25° C	**Relative Humidity**	55.4%
Pressure	960hPa	**Test Voltage**	Normal Voltage
Test Mode	Mode 3	**Antenna**	Vertical

PK

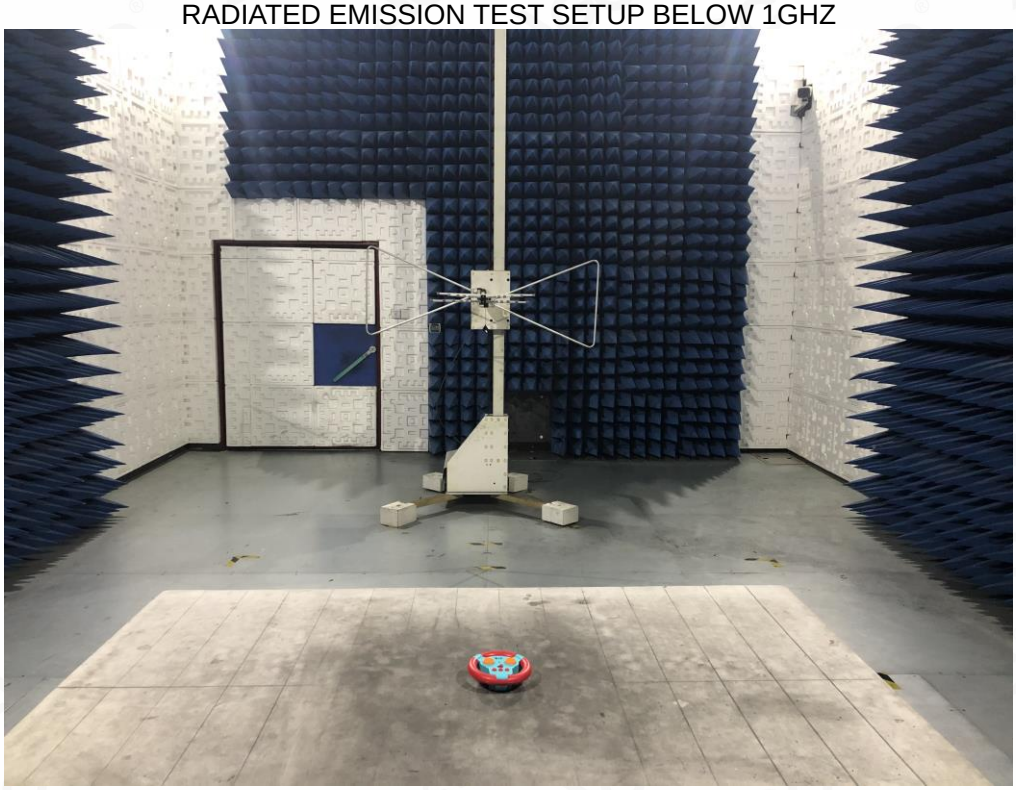
AV

RESULT: PASS

Note: The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(µV) to represent the Amplitude. Use the F dB(µV/m) to represent the Field Strength. So A=F.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED EMISSION TEST SETUP BELOW 1GHZ



RADIATED EMISSION TEST SETUP ABOVE 1GHZ

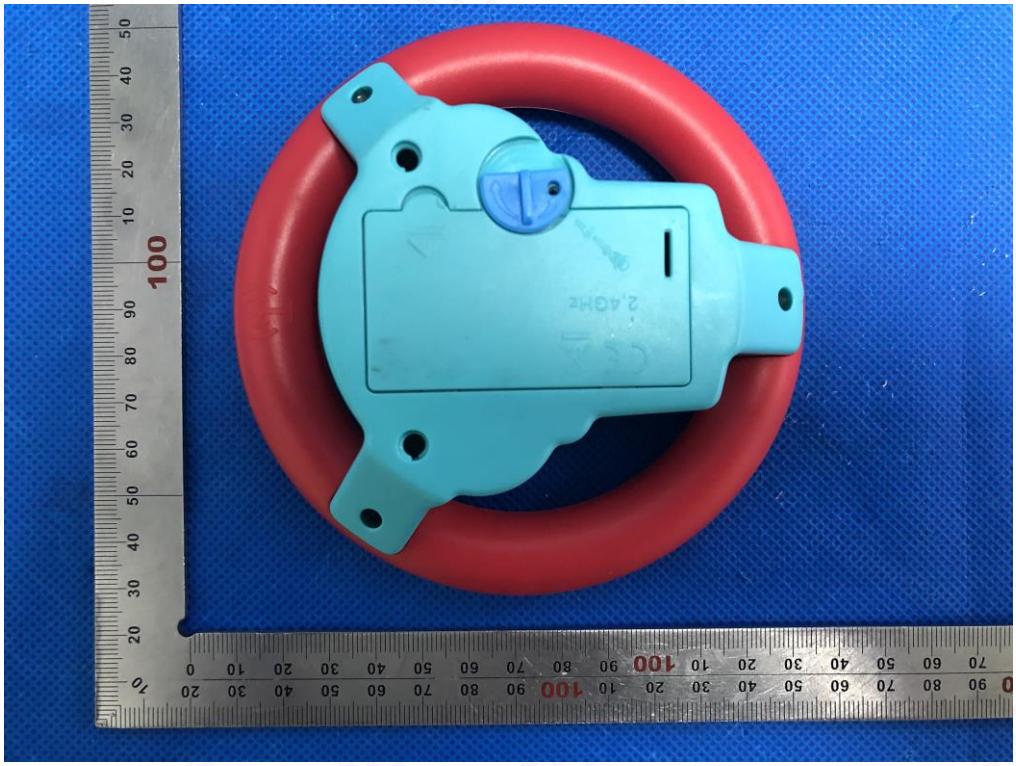
APPENDIX B: PHOTOGRAPHS OF EUT

ALL VIEW OF EUT

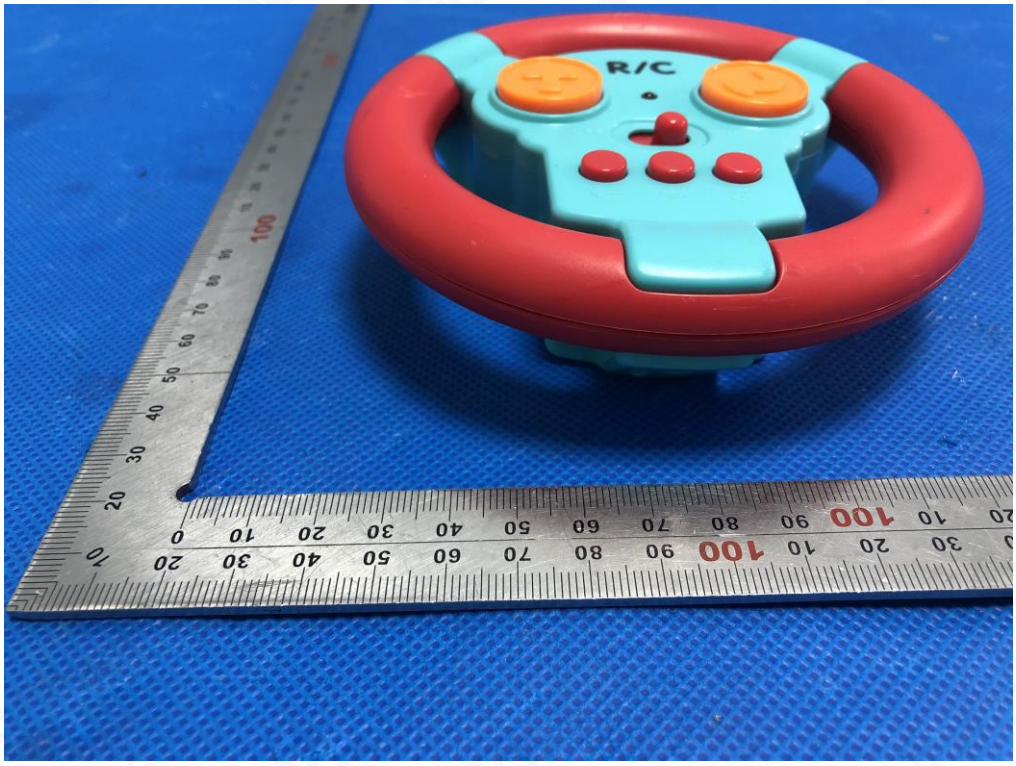
TOTAL VIEW OF EUT

TOP VIEW OF EUT

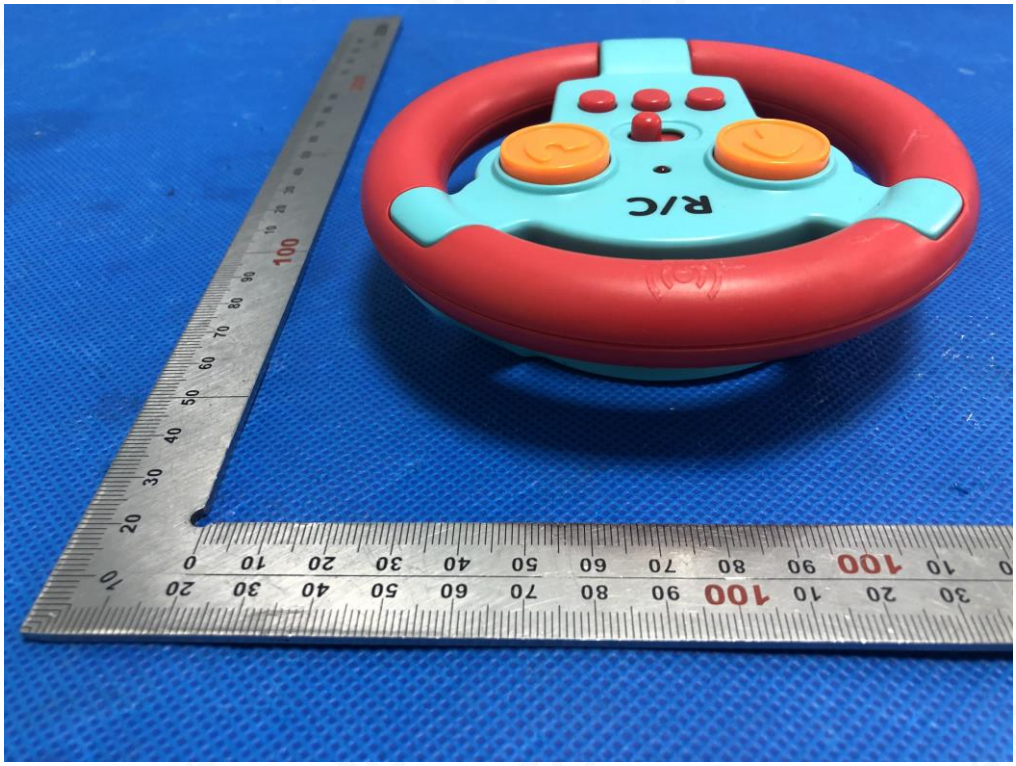
BOTTOM VIEW OF EUT



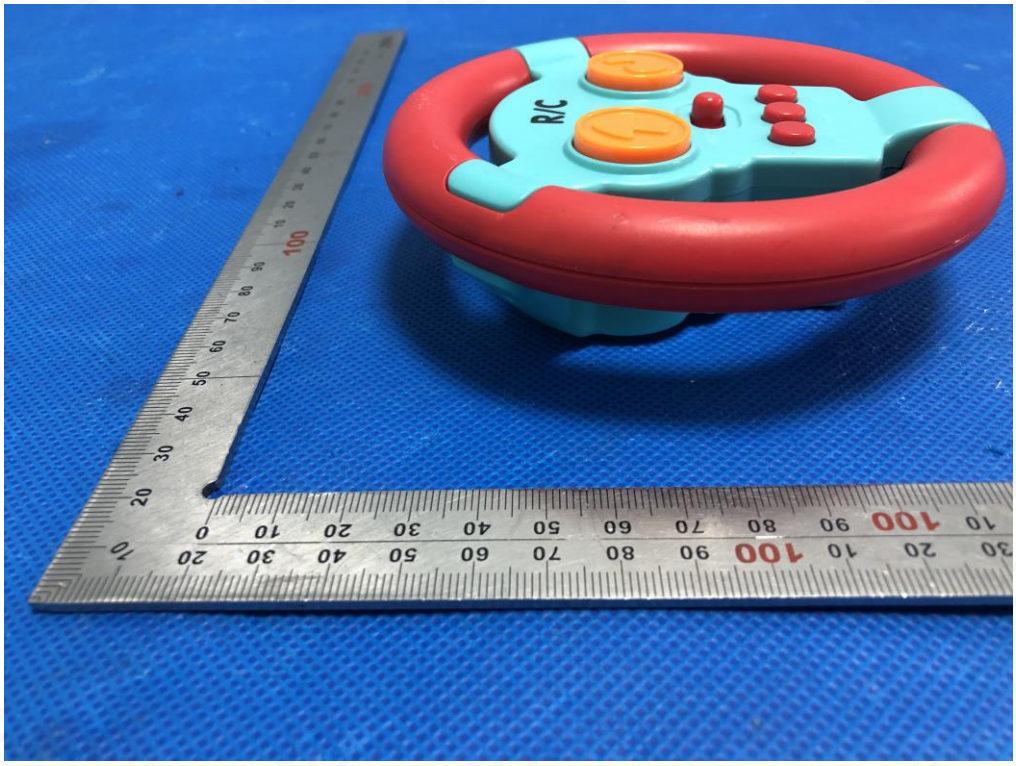
FRONT VIEW OF EUT



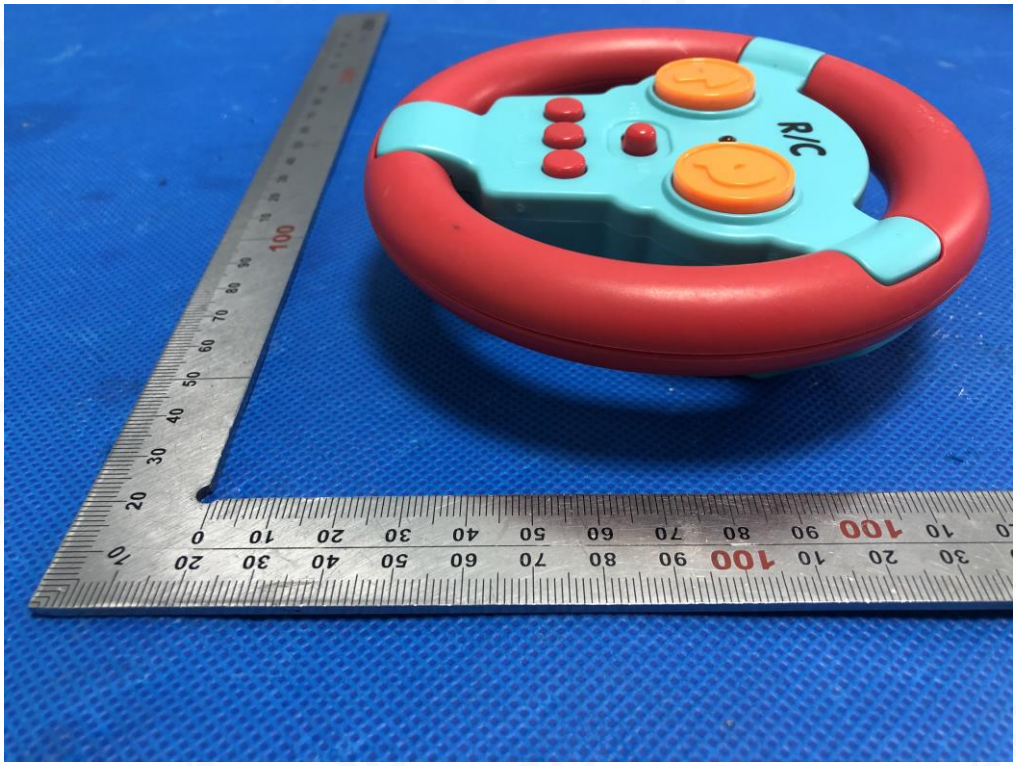
BACK VIEW OF EUT



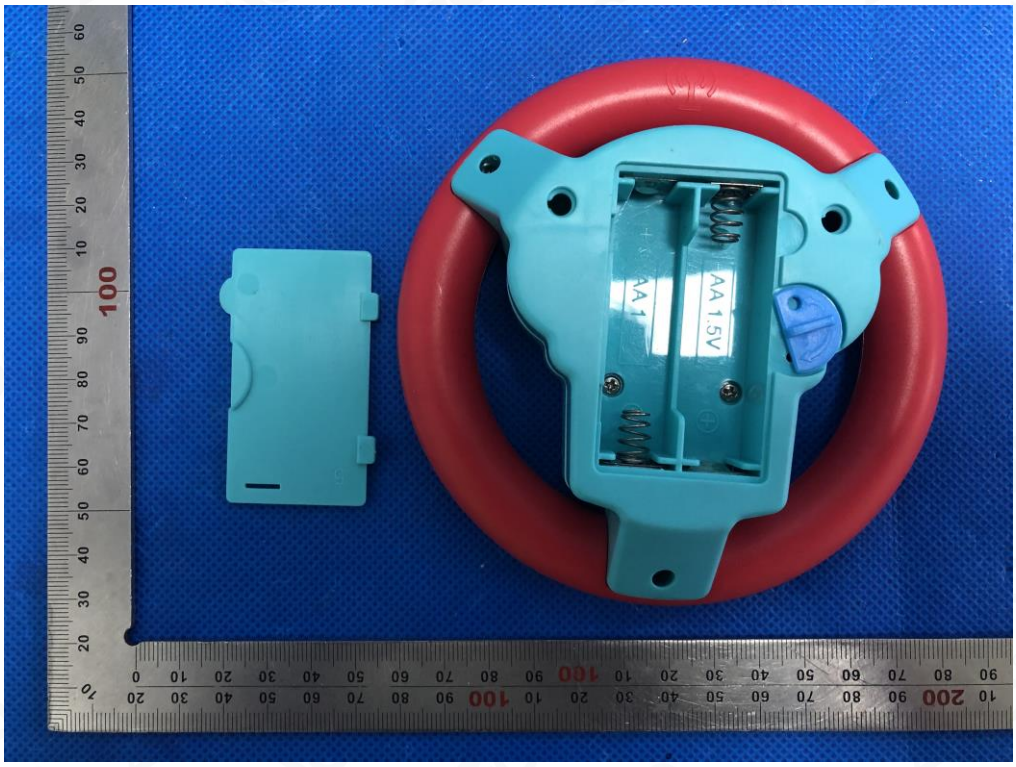
LEFT VIEW OF EUT



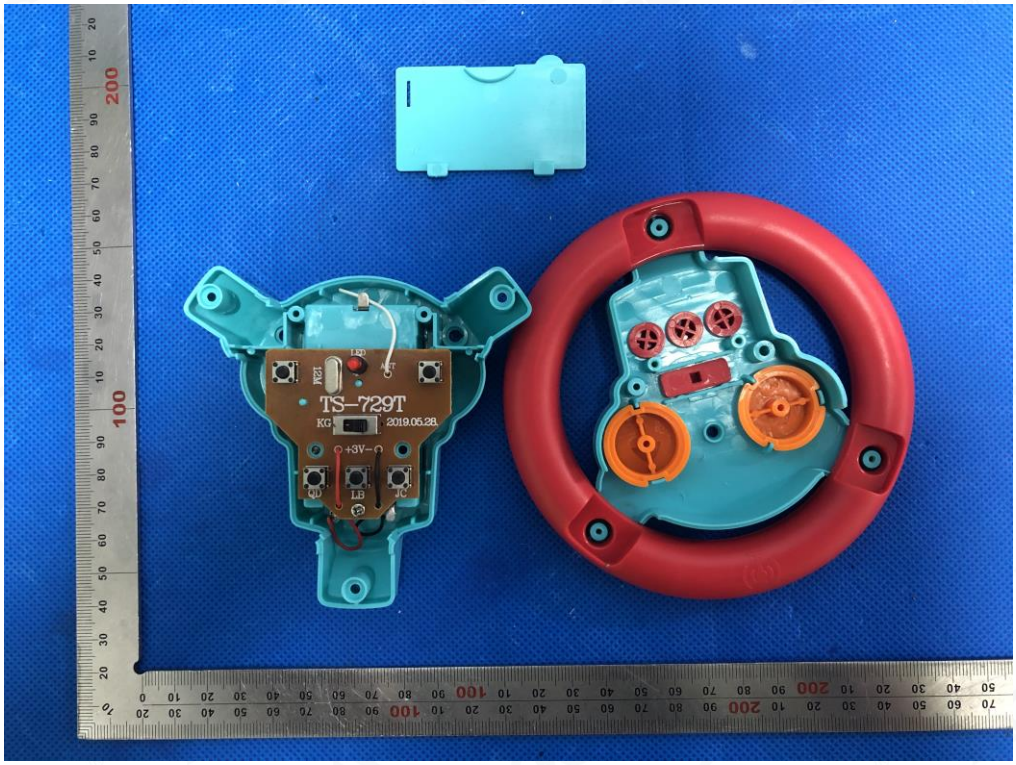
RIGHT VIEW OF EUT



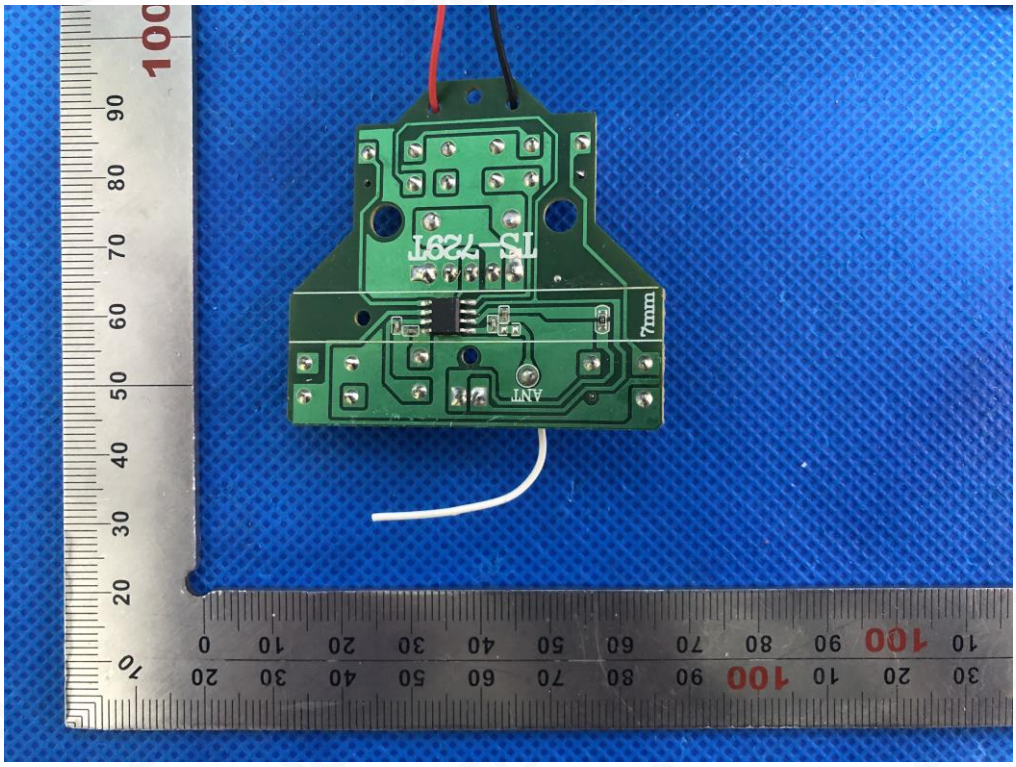
OPEN VIEW OF EUT-1



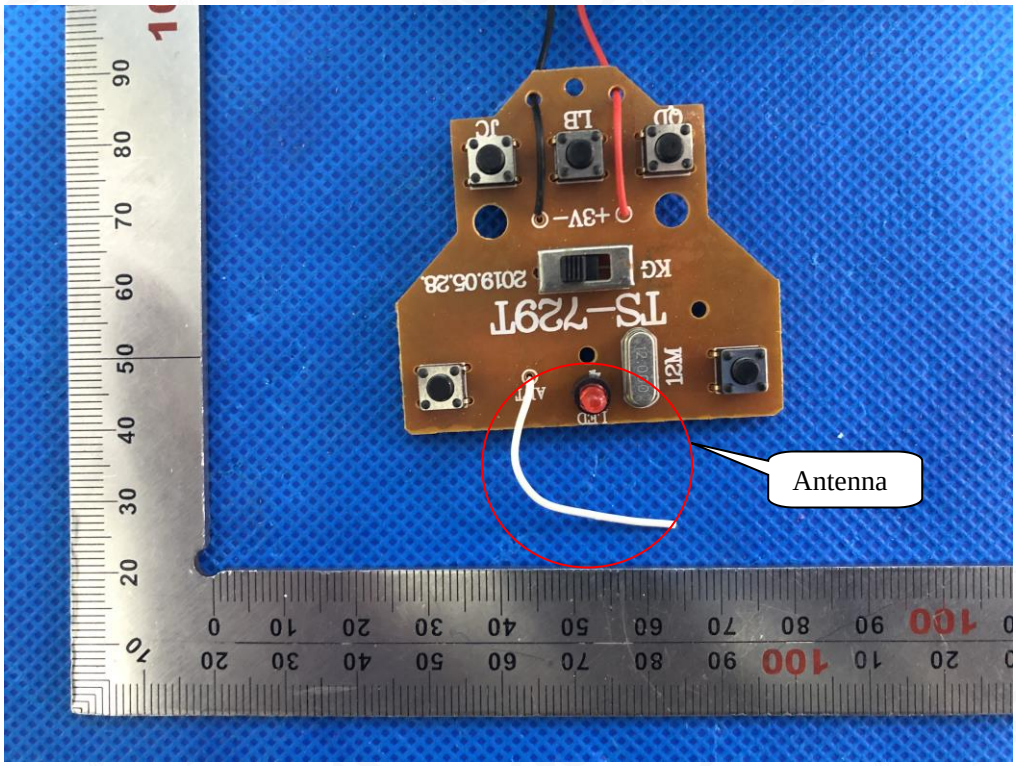
OPEN VIEW OF EUT-2



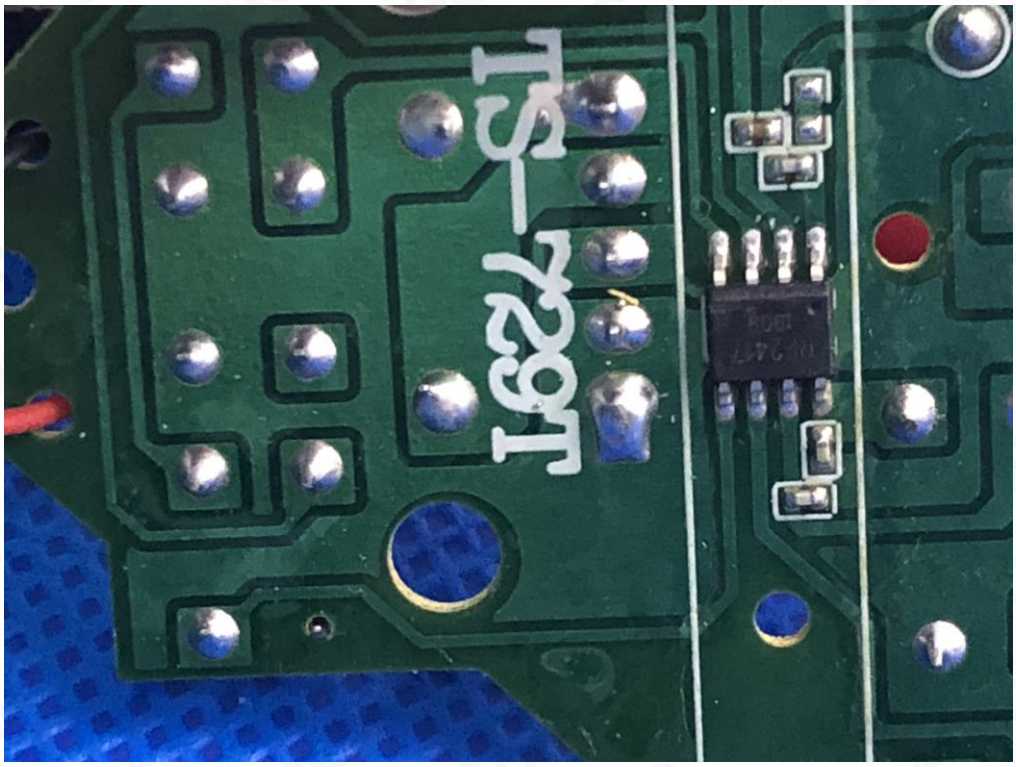
INTERNAL VIEW-1 OF EUT



INTERNAL VIEW-2 OF EUT



INTERNAL VIEW-3 OF EUT



----END OF REPORT----