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# FCC Test Report

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Report No.: AGC10268211201FE03

**FCC ID** : 2A3VL869189

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION** : R/C CAR

**BRAND NAME** : N/A

**MODEL NAME** : Please see page 6

**APPLICANT** : XINLIFANG TOYS FACTORY

**DATE OF ISSUE** : Dec. 24, 2021

**STANDARD(S)  
TEST PROCEDURE(S)** : FCC Part 15 Rules

**REPORT VERSION** : V1.0



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**REPORT REVISE RECORD**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Dec. 24, 2021	Valid	Initial Release

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**1. VERIFICATION OF CONFORMITY**

<b>Applicant</b>	XINLIFANG TOYS FACTORY
<b>Address</b>	NO.11 MEIHU ROAD CHENGHAI ZONE SHANTOU CITY GUANGDONG CHINA
<b>Manufacturer</b>	XINLIFANG TOYS FACTORY
<b>Address</b>	NO.11 MEIHU ROAD CHENGHAI ZONE SHANTOU CITY GUANGDONG CHINA
<b>Factory</b>	XINLIFANG TOYS FACTORY
<b>Address</b>	NO.11 MEIHU ROAD CHENGHAI ZONE SHANTOU CITY GUANGDONG CHINA
<b>Product Designation</b>	R/C CAR
<b>Brand Name</b>	N/A
<b>Test Model</b>	X-07
<b>Series Model</b>	Please see page 6
<b>Difference Description</b>	The packing is different, but everything else is the same.
<b>Date of test</b>	Dec. 10, 2021 to Dec. 24, 2021
<b>Deviation</b>	No any deviation from the test method
<b>Condition of Test Sample</b>	Normal
<b>Test Result</b>	Pass
<b>Report Template</b>	AGCRT-US-BR/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 Rules Part 15.249.

Prepared By

*Bibo Zhang*  
Bibo Zhang  
(Project Engineer)

Dec. 24, 2021

Reviewed By

*Calvin Liu*  
Calvin Liu  
(Reviewer)

Dec. 24, 2021

Approved By

*Max Zhang*  
Max Zhang  
(Authorized Officer)

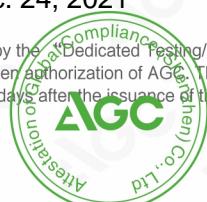
Dec. 24, 2021

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## 2. GENERAL INFORMATION

### 2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

<b>Operation Frequency</b>	2418MHz-2465MHz
<b>Maximum field strength</b>	92.16dBuV/m(Average)@3m
<b>Modulation</b>	GFSK
<b>Number of channels</b>	45
<b>Antenna Gain</b>	0dBi
<b>Antenna Designation</b>	Whip antenna
<b>Hardware Version</b>	V1.0
<b>Software Version</b>	V1.0
<b>Power Supply</b>	DC 6V by battery

<b>Test Model</b>	X-07
<b>Series Model</b>	F-10, F-11, F-12, F-13, F-14, F-15, F-16, F-17, F-18, F-19, F-20, F-21, F-22, F-23, F-24, F-25, F-26, F-27, F-28, F-29, F-30, F-31, F-32, F-33, F-34, F-35, F-36, F-37, X-03, X-04, X-05, X-06, X-08, X-09, X-10, X-11, X-12, X-13, X-14, X-15, X-16, X-17, X-18, X-19, X-20, X-21, X-22, X-23, X-24, X-25, X-26, X-27, X-28, X-29, X-30, F-17P, X-03A, X-04A, X-05A, X-06A, X-07A, X-08A, X-09A, X-10A, X-11A, X-12A, X-13A, X-14A, X-15A, X-16A, X-17A, X-18A, X-19A, X-20A, X-21A, X-22A, X-23A, X-24A, X-25A, X-26A, X-27A, X-28A, X-29A, X-30A, X-03A MAX, X-04A MAX, F-21A, F-21B, F-22A, F-22B, F-23A, F-23B, F-24A, F-24B, F-25A, F-25B, F-26A, F-26B

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**2.2. TABLE OF CARRIER FREQUENCY**

Frequency Band	Channel Number	Frequency(MHZ)	Channel Number	Frequency(MHZ)
2400~2483.5MHZ	1	2418	24	2441
	2	2419	25	2442
	3	2420	26	2443
	4	2421	27	2445
	5	2422	28	2446
	6	2423	29	2447
	7	2424	30	2448
	8	2425	31	2449
	9	2426	32	2450
	10	2427	33	2451
	11	2428	34	2452
	12	2429	35	2453
	13	2430	36	2456
	14	2431	37	2457
	15	2432	38	2458
	16	2433	39	2459
	17	2434	40	2460
	18	2435	41	2461
	19	2436	42	2462
	20	2437	43	2463
	21	2438	44	2464
	22	2439	45	2465
	23	2440		

**2.3. ANTENNA REQUIREMENT**

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

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### 3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in measurement" (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission,  $U_c = \pm 3.1 \text{ dB}$
- Uncertainty of Radiated Emission below 1GHz,  $U_c = \pm 4.0 \text{ dB}$
- Uncertainty of Radiated Emission above 1GHz,  $U_c = \pm 4.8 \text{ dB}$

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**4. DESCRIPTION OF TEST MODES**

NO.	TEST MODE DESCRIPTION
1	TX mode at 2418MHz
2	TX mode at 2440MHz
3	TX mode at 2465MHz

**Note:**

1. All the test modes can be supply by battery, 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. Set the EUT into the individual test modes by pressing the EUT buttons.
4. For battery operated equipment, the equipment tests are performed using a new battery.

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## 5. SYSTEM TEST CONFIGURATION

### 5.1. CONFIGURATION OF EUT SYSTEM

Configure:



### 5.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	R/C CAR	X-07	2A3VL869189	EUT

### 5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.249&15.209	Radiated Emission	Compliant
§15.249	Band Edges	Compliant
§15.215	20dB bandwidth	Compliant
§15.207	Conducted Emission	Not applicable

Note: The conducted emission tests at AC port are not required for devices which only employ battery power for operation.

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## 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	May 15, 2021	May 14, 2022
EXA Signal Analyzer	Agilent	N9010A	MY53470504	Nov. 17, 2021	Nov. 16, 2022
2.4GHz Fliter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Oct. 09, 2020	Oct. 08, 2022
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00154520	Sep. 06, 2021	Sep. 05, 2023
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 08, 2021	Jan. 07, 2023
Test software	Tonscend	JS32-RE (Ver.2.5)	N/A	N/A	N/A

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**7. RADIATED EMISSION****7.1 TEST LIMIT****Standard FCC15.249**

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
900-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

**Standard FCC 15.209**

Frequency (MHz)	Distance Meters	Field Strengths Limit	
		µ V/m	dB(µV)/m
0.009 ~ 0.490	300	2400/F(kHz)	---
0.490 ~ 1.705	30	24000/F(kHz)	---
1.705 ~ 30	30	30	---
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	Other: 74.0 dB(µV)/m (Peak) 54.0 dB(µV)/m (Average)	

Remark: (1) Emission level dB µ V = 20 log Emission level µ V/m  
(2) The smaller limit shall apply at the cross point between two frequency bands.  
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

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## 7.2. 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 minimum resolution bandwidth of 1 MHz. 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.

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The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz RBW 2.4MHz/ VBW 8MHz for Peak, RBW 2.4MHz/3MHz for Average

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

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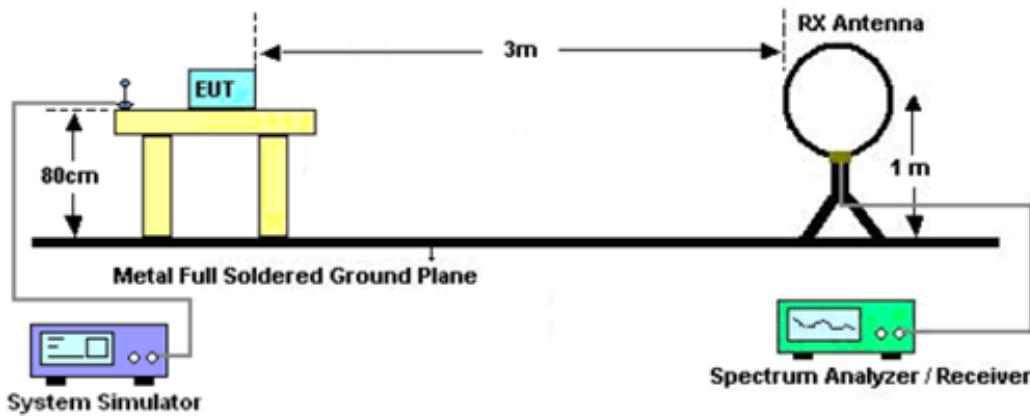
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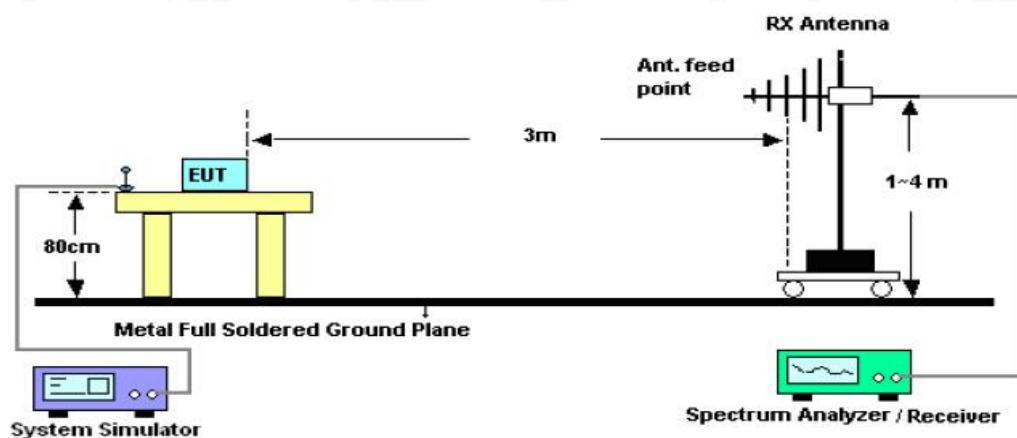


### 7.3. TEST SETUP

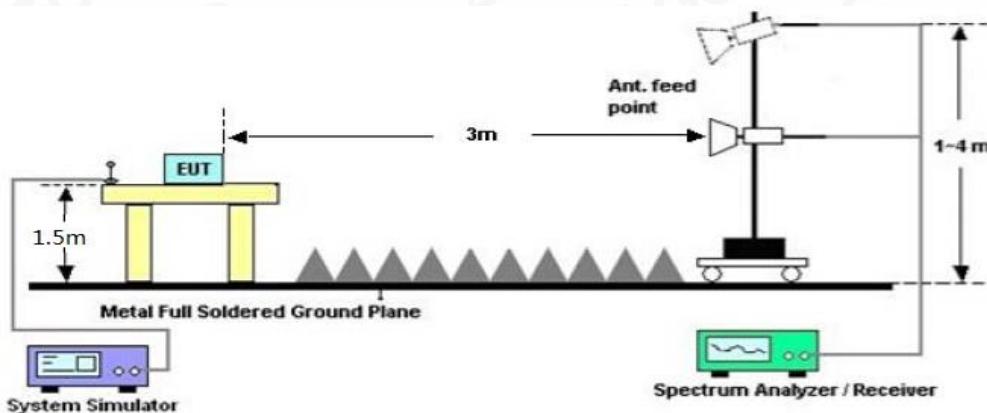
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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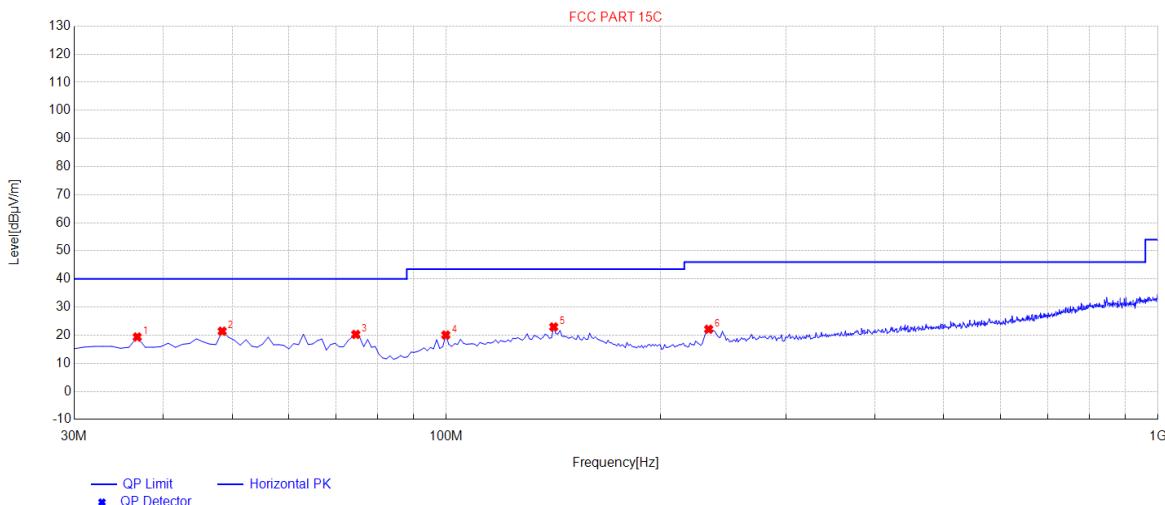
## 7.4. TEST RESULT

### RADIATED EMISSION BELOW 30MHZ

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

### RADIATED EMISSION 30MHz- 1GHZ

EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 1	Polarization	Horizontal



NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.79	19.35	10.73	40.00	20.65	100	28	Horizontal
2	48.43	21.40	11.53	40.00	18.60	100	117	Horizontal
3	74.62	20.26	8.27	40.00	19.74	100	83	Horizontal
4	99.84	20.05	11.30	43.50	23.45	100	317	Horizontal
5	141.55	22.93	14.88	43.50	20.57	100	290	Horizontal
6	233.7	22.11	13.50	46.00	23.89	100	311	Horizontal

**RESULT: PASS**

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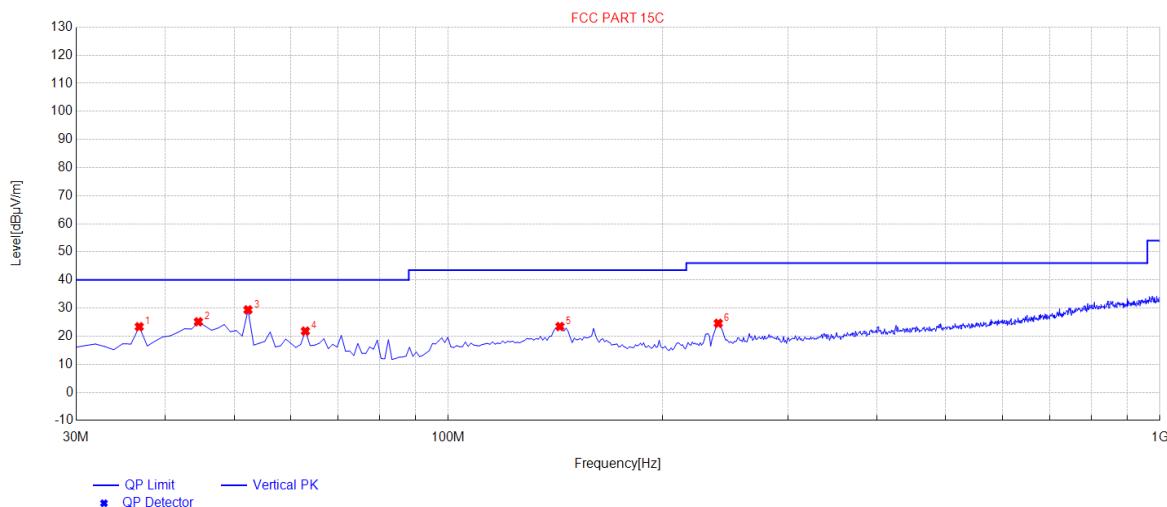
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EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 1	Polarization	Vertical



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.79	23.35	10.73	40.00	16.65	100	173	Vertical
2	44.55	25.11	11.17	40.00	14.89	100	332	Vertical
3	52.31	29.37	11.49	40.00	10.63	100	131	Vertical
4	62.98	21.80	10.42	40.00	18.20	100	92	Vertical
5	143.49	23.43	14.88	43.50	20.07	100	170	Vertical
6	239.52	24.58	13.64	46.00	21.42	100	279	Vertical

## RESULT: PASS

**Note:** Factor=Antenna Factor + Cable loss, Margin=Limit-Level.

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

All modes of each antenna are tested. The mode 1 is the worst case and recorded in the report.

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## FIELD STRENGTH OF FUNDAMENTAL

EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Modulation	GFSK	Polarization	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2418	50.09	49.05	99.14	114.00	-14.86	peak
2418	43.11	49.05	92.16	94.00	-1.84	AVG
2440	46.06	49.12	95.18	114.00	-18.82	peak
2440	41.22	49.12	90.34	94.00	-3.66	AVG
2465	44.04	49.25	93.29	114.00	-20.71	peak
2465	38.75	49.25	88.00	94.00	-6.00	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Modulation	GFSK	Polarization	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
2418	44.37	49.05	95.38	114.00	-18.62	peak
2418	29.51	49.05	91.02	94.00	-2.98	AVG
2440	45.31	49.12	92.94	114.00	-21.06	peak
2440	30.11	49.12	88.51	94.00	-5.49	AVG
2465	40.78	49.25	89.23	114.00	-24.77	peak
2465	30.48	49.25	84.39	94.00	-9.61	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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## RADIATED EMISSION ABOVE 1GHZ

EUT	R/C CAR	Model Name	X-07
Temperature	21.8 °C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 1	Polarization	Horizontal

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4836	43.15	0.08	41.36	74.00	-32.64	peak
4836	37.48	0.08	34.18	54.00	-19.82	AVG
7254	39.64	2.21	37.97	74.00	-36.03	peak
7254	32.44	2.21	34.23	54.00	-19.77	AVG

Remark:  
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	R/C CAR	Model Name	X-07
Temperature	21.8 °C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 1	Polarization	Vertical

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4836	41.43	0.08	41.89	74.00	-32.11	peak
4836	35.84	0.08	37.16	54.00	-16.84	AVG
7254	37.19	2.21	37.95	74.00	-36.05	peak
7254	31.52	2.21	35.14	54.00	-18.86	AVG

Remark:  
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 2	Polarization	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
4880	44.15	0.14	41.97	74.00	-32.03	peak
4880	36.54	0.14	37.96	54.00	-16.04	AVG
7320	38.16	2.36	37.15	74.00	-36.85	peak
7320	31.27	2.36	34.88	54.00	-19.12	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 2	Polarization	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dB $\mu$ V)	(dB)	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)	
4880	43.59	0.14	42.36	74.00	-31.64	peak
4880	36.27	0.14	38.18	54.00	-15.82	AVG
7320	39.42	2.36	37.04	74.00	-36.96	peak
7320	32.48	2.36	35.17	54.00	-18.83	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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EUT	R/C CAR	Model Name	X-07
Temperature	21.8 °C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 3	Polarization	Horizontal

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4930	42.16	0.22	39.83	74.00	-34.17	peak
4930	35.84	0.22	36.84	54.00	-17.16	AVG
7395	38.23	2.64	41.07	74.00	-32.93	peak
7395	32.17	2.64	35.39	54.00	-18.61	AVG

Remark:  
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT	R/C CAR	Model Name	X-07
Temperature	21.8 °C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 3	Polarization	Vertical

Frequency (MHz)	Meter Reading (dB $\mu$ V)	Factor (dB)	Emission Level (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)	Value Type
4930	40.15	0.22	39.87	74.00	-34.13	peak
4930	34.18	0.22	36.46	54.00	-17.54	AVG
7437	36.42	2.64	37.15	74.00	-36.85	peak
7437	30.49	2.64	36.79	54.00	-17.21	AVG

Remark:  
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

**Note:** The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Level-Limit.

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

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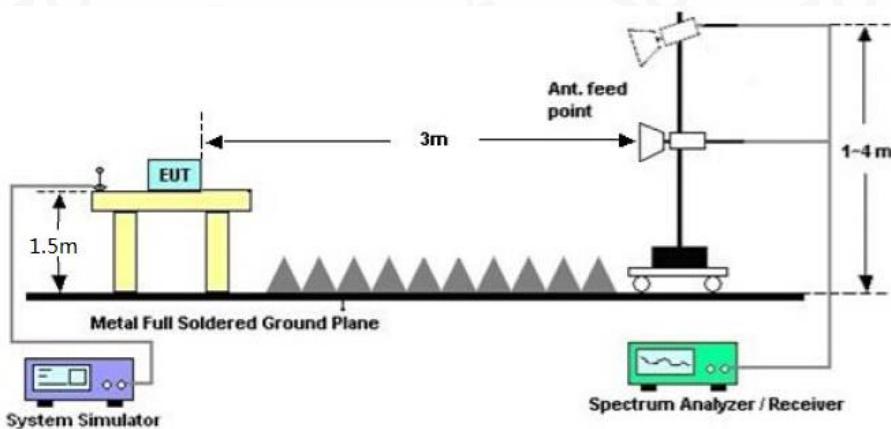
## 8. BAND EDGE EMISSION

### 8.1. MEASUREMENT PROCEDURE

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: (a) PEAK: RBW=1MHz, VBW=3MHz / Sweep=AUTO  
(b) AVERAGE: RBW=1MHz ; VBW=3MHz / Sweep=AUTO
3. Other procedures refer to clause 7.2.

### 8.2 TEST SETUP

RADIATED EMISSION TEST SETUP



### 8.3 RADIATED TEST RESULT

**Note:**

1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level
2. 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( $\mu$ V) to represent the Amplitude. Use the F dB( $\mu$ V/m) to represent the Field Strength. So A=F.

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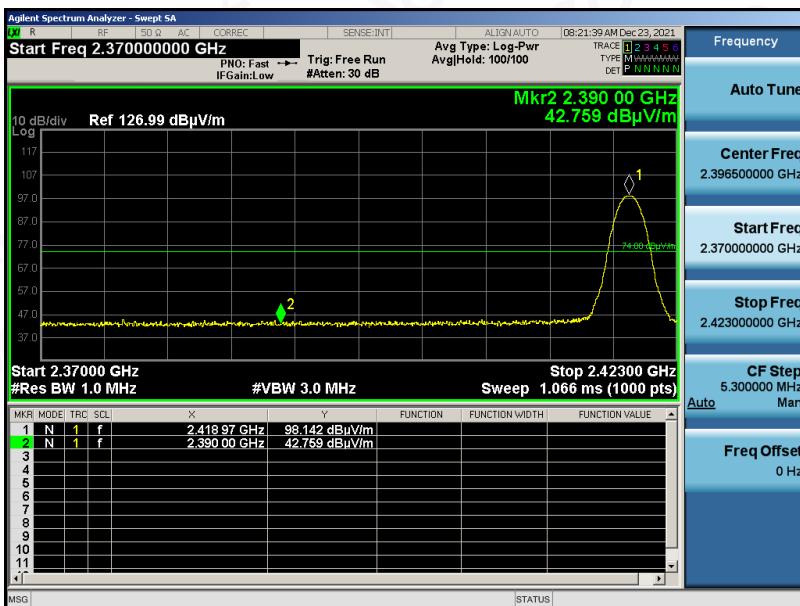
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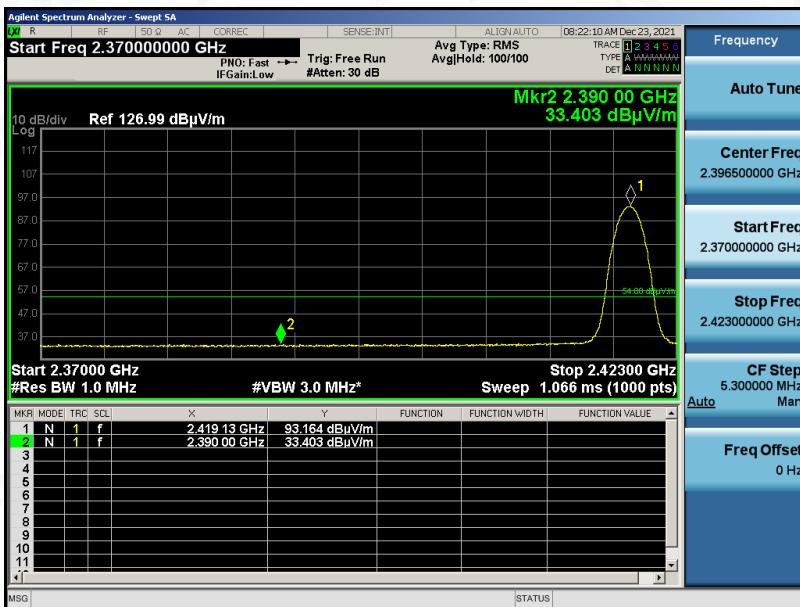


EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 1	Polarization	Horizontal

### Peak Value



### Average Value



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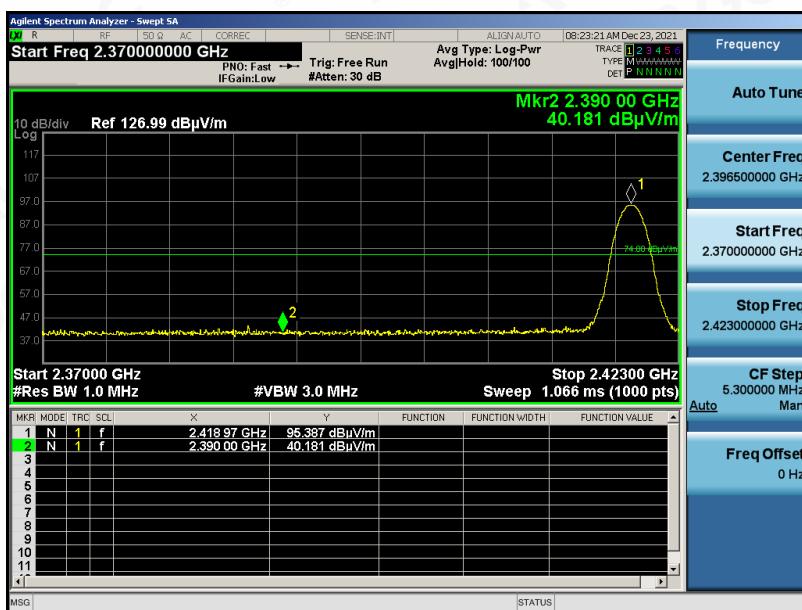
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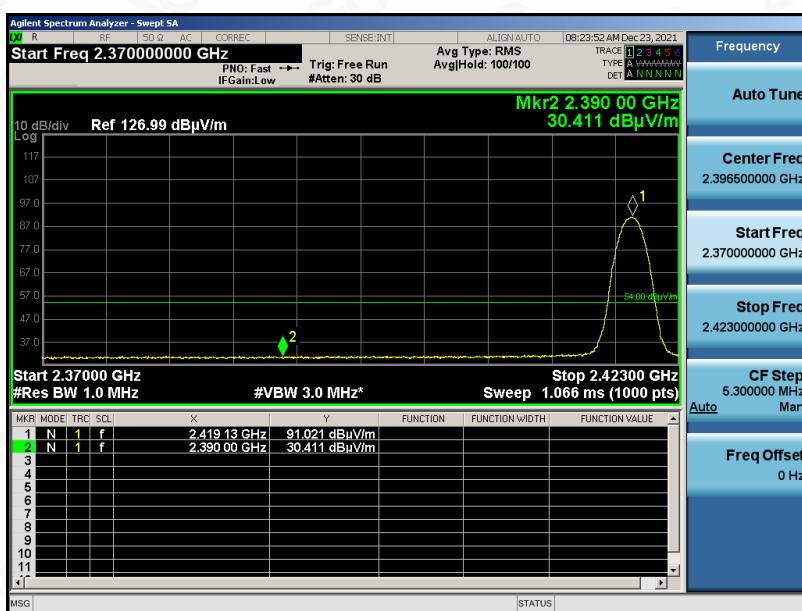


EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 1	Polarization	Vertical

### Peak Value



### Average Value



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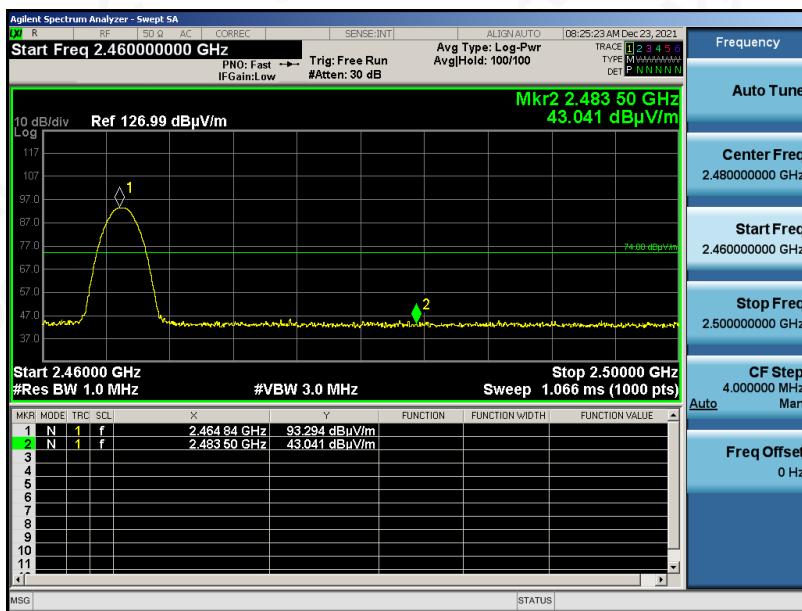
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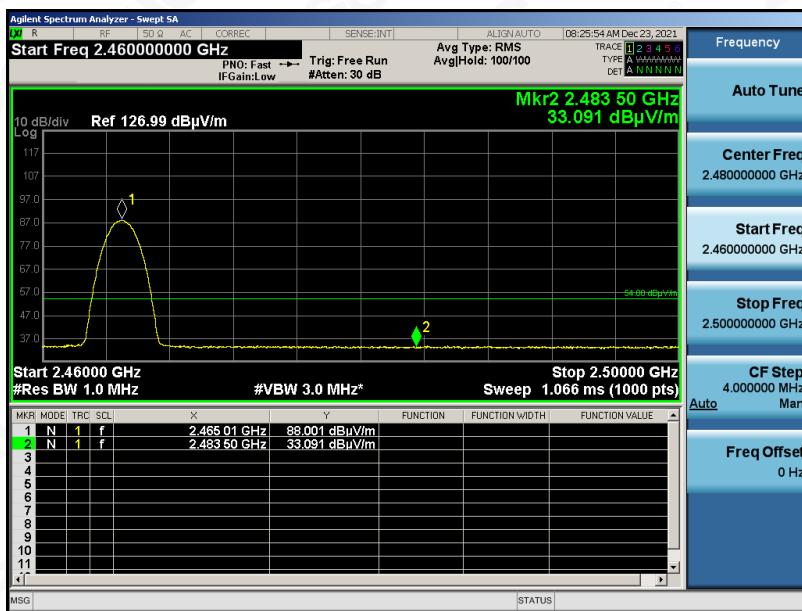


EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 3	Polarization	Horizontal

### Peak Value



### Average Value



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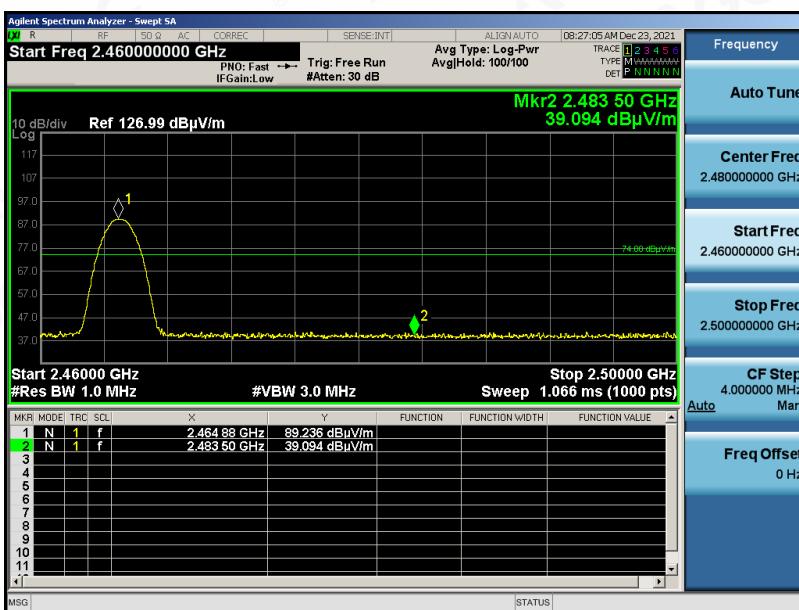
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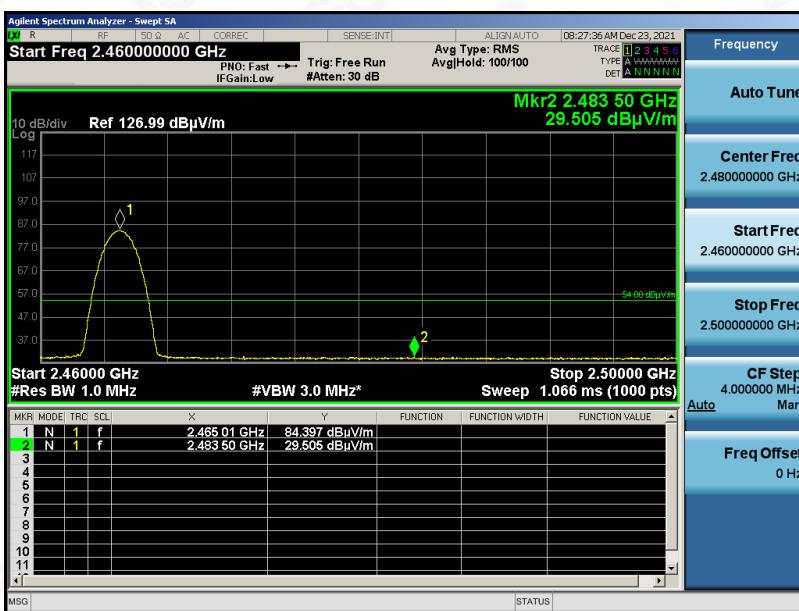


EUT	R/C CAR	Model Name	X-07
Temperature	21.8°C	Relative Humidity	58%
Pressure	101kPa	Test Voltage	DC 6V
Test Mode	Mode 3	Polarization	Vertical

### Peak Value



### Average Value



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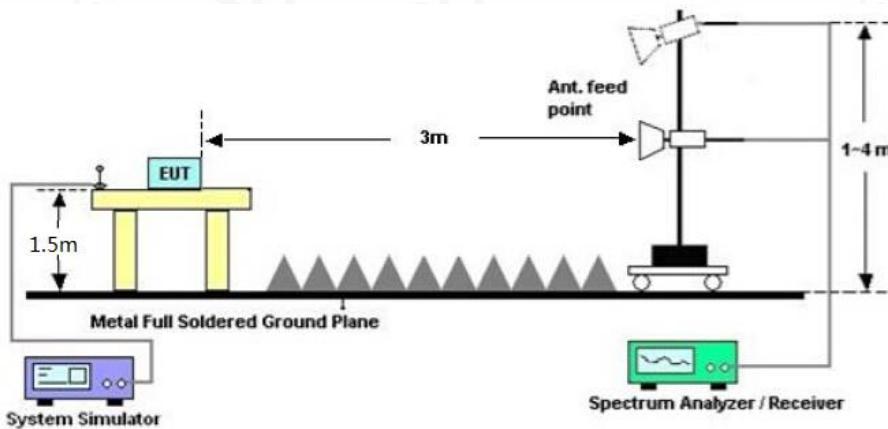


## 9. 20DB BANDWIDTH

### 9.1. MEASUREMENT PROCEDURE

1. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
2. Set SPA Centre Frequency = Operation Frequency, RBW= 30 KHz, VBW  $\geq \times$  RBW.
3. Set SPA Trace 1 Max hold, then View.

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



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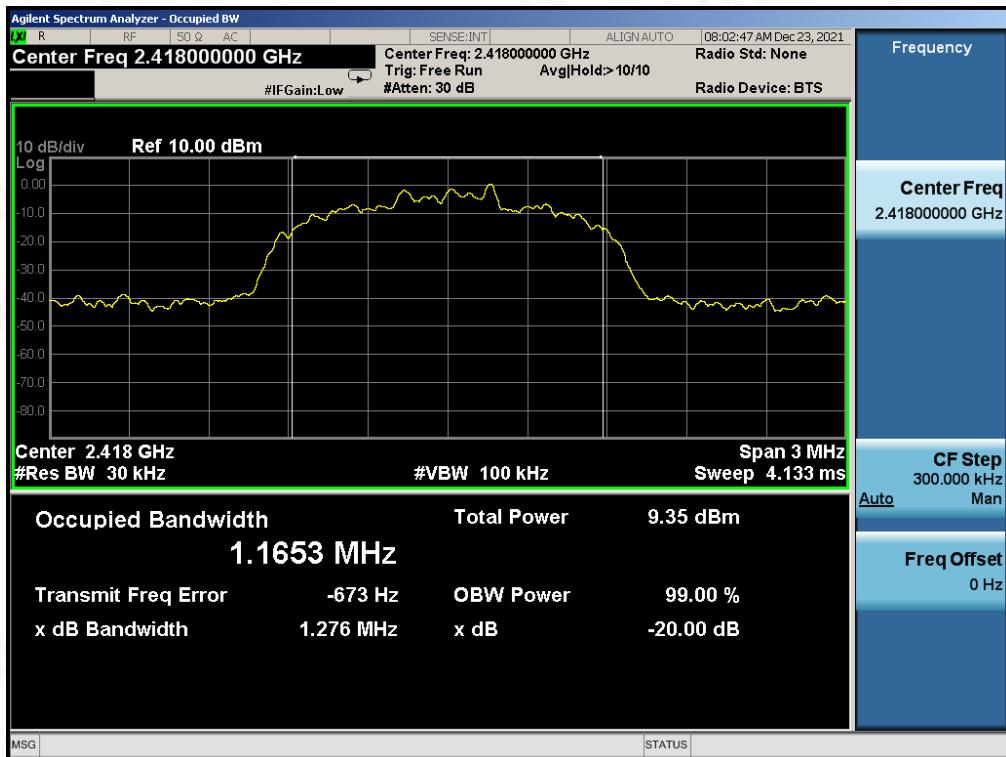


### 9.3. MEASUREMENT RESULTS

TEST ITEM	20DB BANDWIDTH
TEST MODULATION	GFSK

Test Channel (MHz)	20DB BANDWIDTH (MHz)	99% BANDWIDTH (MHz)	Criteria
2418	1.276	1.1653	PASS
2440	1.277	1.1646	PASS
2465	1.257	1.1466	PASS

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



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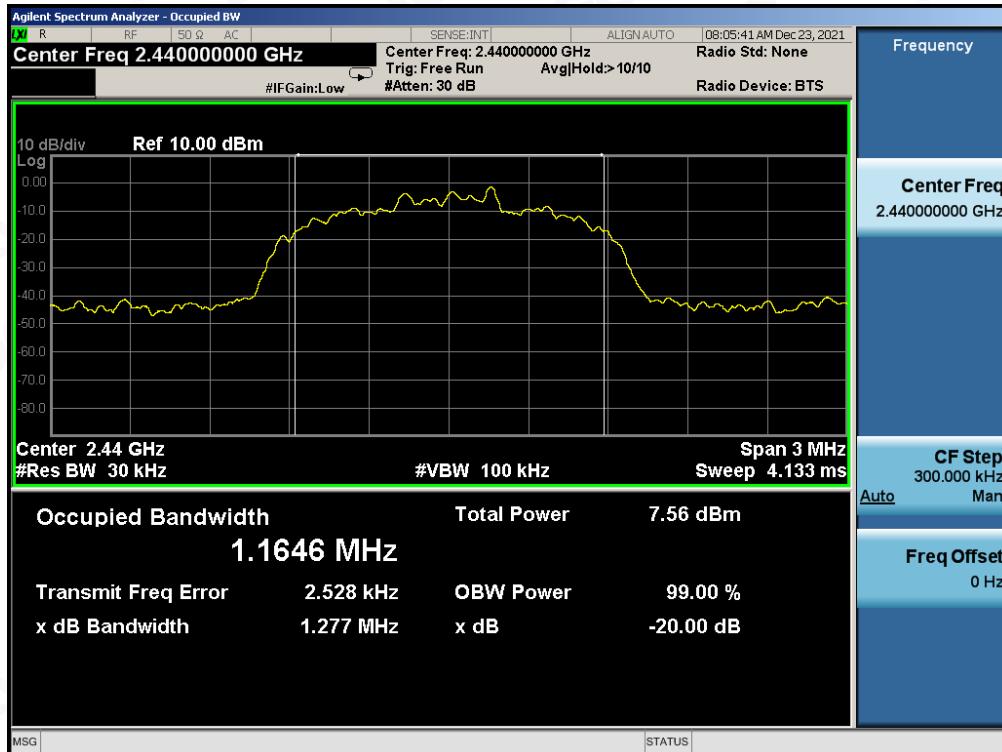
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## TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



## TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



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## 10. FCC LINE CONDUCTED EMISSION TEST

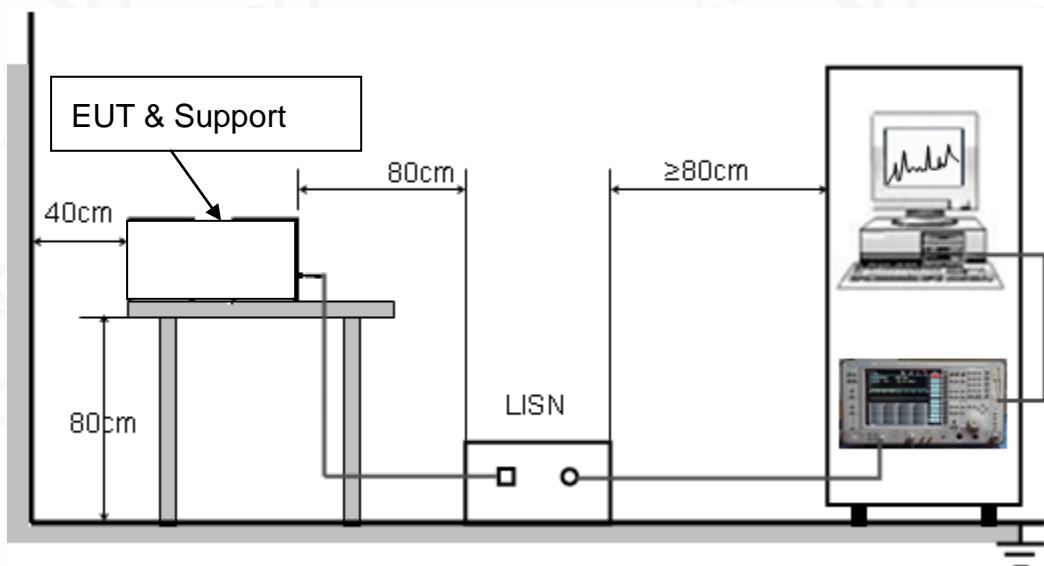
### 10.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P. (dBuV)	Average (dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



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### 10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When 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 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
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. All support equipment received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 4.5V power from PC which received AC120V/60Hz power from a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

### 12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

### 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

N/A

Note: The conducted emission tests at AC port are not required for devices which only employ battery power for operation.

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**APPENDIX A: PHOTOGRAPHS OF TEST SETUP**

Refer to the Report No.: AGC10268211201AP01

**APPENDIX B: PHOTOGRAPHS OF THE EUT**

Refer to the Report No.: AGC10268211201AP02

----END OF REPORT----

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