

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
ZEGO ELECTRONIC COMPANY LIMITED

HoverJet (F22)
Model No.: RGR4120/2232

FCC ID: 2ACS626TX

Prepared for : ZEGO ELECTRONIC COMPANY LIMITED
Address : ROOM 703, KOWLOON BUILDING, 555 NATHAN
ROAD, KOWLOON, HONG KONG

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Report Number : ATE20180363
Date of Test : March 23-March 26, 2018
Date of Report : March 28, 2018

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Test Report Certification

Applicant : ZEGO ELECTRONIC COMPANY LIMITED
Address : ROOM 703, KOWLOON BUILDING, 555 NATHAN ROAD,
KOWLOON, HONG KONG

Manufacturer : Shenzhen Yangri Electronic Company Limited
Address : The Third Industrial Area, Luotian community, Songgang town,
Shenzhen City, China

Product : HoverJet (F22)

Model No. : RGR4120/2232

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.249
ANSI C63.10: 2013**

The EUT was tested according to FCC 47CFR 15.249 for compliance to FCC 47CFR 15.249 requirements

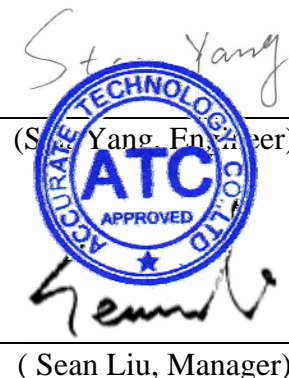
The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.249 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Accurate Technology Co., Ltd.

Date of Test : March 23-March 26, 2018
Date of Report : March 28, 2018

Prepared by : Sean Yang
(Sean Yang, Engineer)

Approved & Authorized Signer : Sean Liu
(Sean Liu, Manager)



1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	HoverJet (F22)
Model Number	:	RGR4120/2232
Frequency Range	:	2420MHz-2460MHz
Number of Channels	:	41
Modulation mode	:	GFSK
Antenna Gain	:	0dBi
Antenna type	:	Integral Antenna
Power Supply	:	DC 4.5V
Applicant	:	ZEGO ELECTRONIC COMPANY LIMITED
Address	:	ROOM 703, KOWLOON BUILDING, 555 NATHAN ROAD, KOWLOON, HONG KONG
Manufacturer	:	Shenzhen Yangri Electronic Company Limited
Address	:	The Third Industrial Area, Luotian community, Songgang town, Shenzhen City, China
Date of sample received	:	March 14, 2018
Date of Test	:	March 23-March 26, 2018

1.2. Frequency List

2420	2421	2422	2423	2424
2425	2426	2427	2428	2429
2430	2431	2432	2433	2434
2435	2436	2437	2438	2439
2440	2441	2442	2443	2444
2445	2446	2447	2448	2449
2450	2451	2452	2453	2454
2455	2456	2457	2458	2459
2460				

1.3. Special Accessory and Auxiliary Equipment

N/A

1.4. Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358
		Listed by Innovation, Science and Economic Development Canada (ISED) The Registration Number is 5077A-2
		Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193
		Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd.
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.5. Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Cal. Interval
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	One Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 06, 2018	One Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 06, 2018	One Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 06, 2018	One Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 12, 2018	One Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 12, 2018	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 12, 2018	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Jan. 12, 2018	One Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 06, 2018	One Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	One Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 06, 2018	One Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 06, 2018	One Year

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

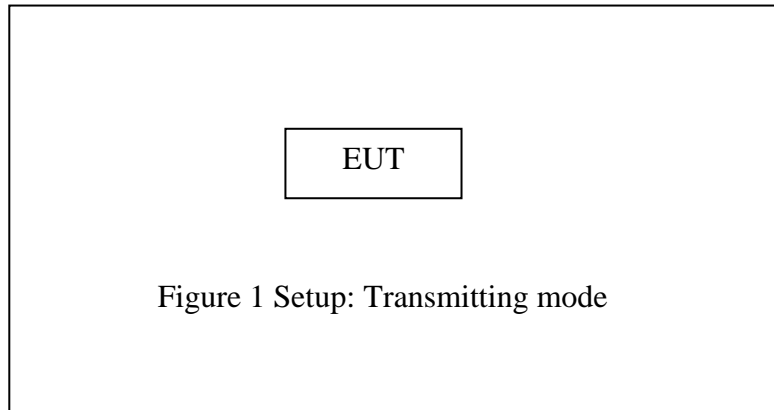
The mode is used: **Transmitting mode**

Low Channel: 2420MHz

Middle Channel: 2440MHz

High Channel: 2460MHz

3.2. Configuration and peripherals



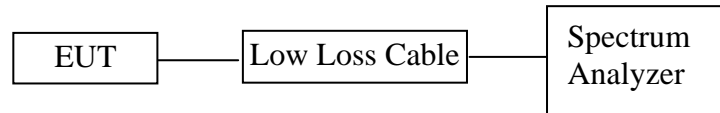
4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.215(c)	20dB Bandwidth	Compliant
Section 15.249(d)	Band Edge Compliance Test	Compliant
Section 15.205(a), Section 15.209(a), Section 15.249, Section 15.35	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	N/A
Section 15.203	Antenna Requirement	Compliant

Note: The power supply mode of the EUT is DC 4.5V, According to the FCC standard requirements, conducted emission is not applicable.

5. 20DB BANDWIDTH MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. The Requirement For Section 15.215(c)

The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped. The system RF bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The hopset shall be such that the near-term distribution of frequencies appears random, with sequential hops randomly distributed in both direction and magnitude of change in the hopset while the long-term distribution appears evenly distributed.

5.3. Operating Condition of EUT

5.3.1. Setup the EUT and simulator as shown as Section 5.1.

5.3.2. Turn on the power of all equipment.

5.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 2420, 2440, 2460MHz.

5.4. Test Procedure

5.4.1. Place the EUT on the table and set it in transmitting mode.

5.4.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

5.4.3. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz, Detector function=peak, Trace=max hold, Sweep=auto.

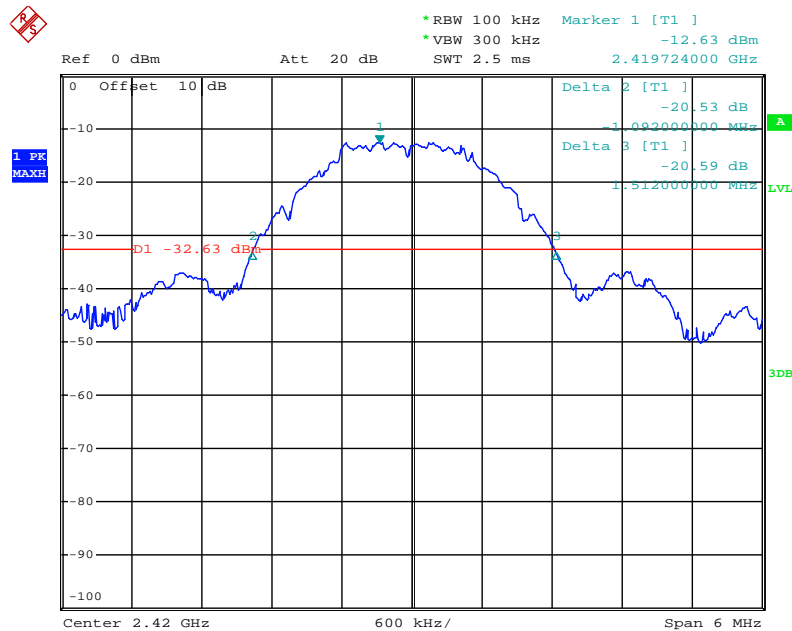
5.4.4. Set the measured low, middle and high frequency and test 20dB bandwidth with spectrum analyzer.

5.5. Test Result

Channel	Frequency(MHz)	20 dB Bandwidth(MHz)
Low	2420	2.604
Middle	2440	2.604
High	2460	2.604

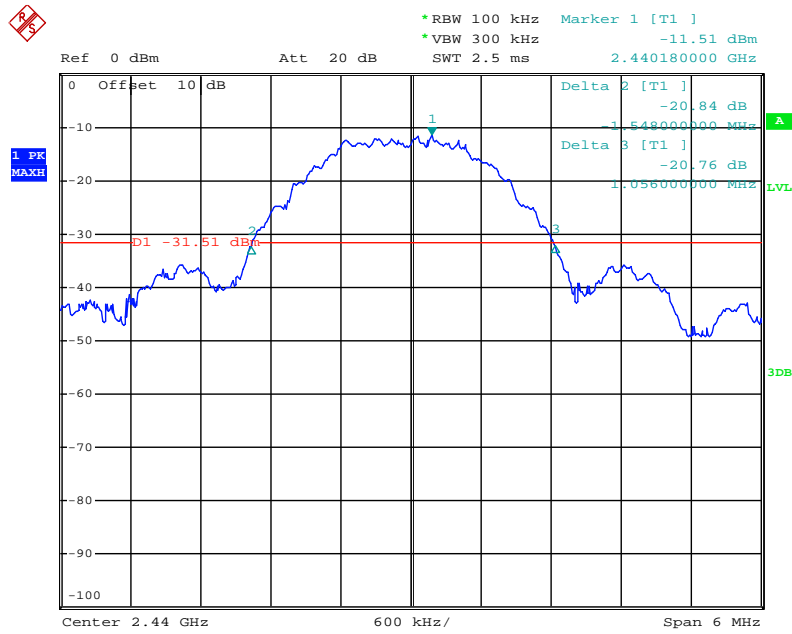
The spectrum analyzer plots are attached as below.

Low channel



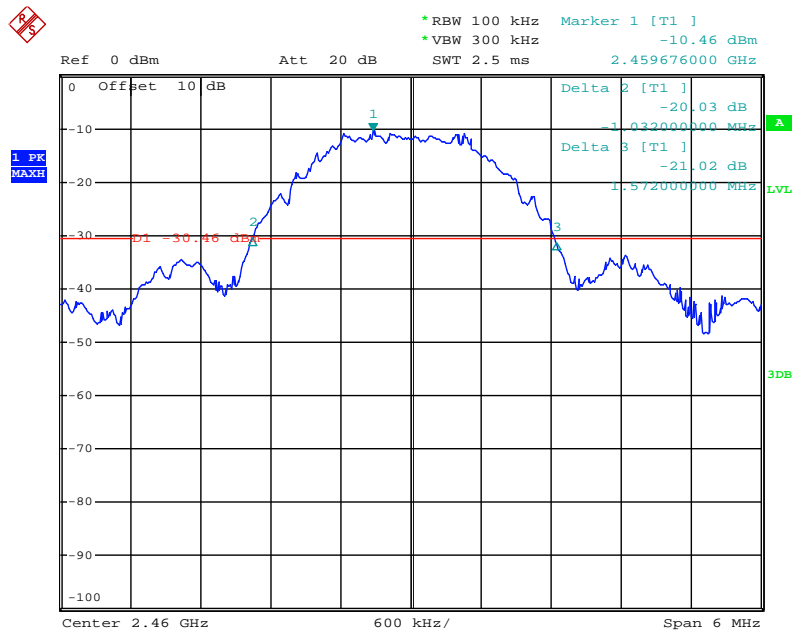
Date: 23.MAR.2018 14:01:23

Middle channel



Date: 23.MAR.2018 13:57:51

High channel

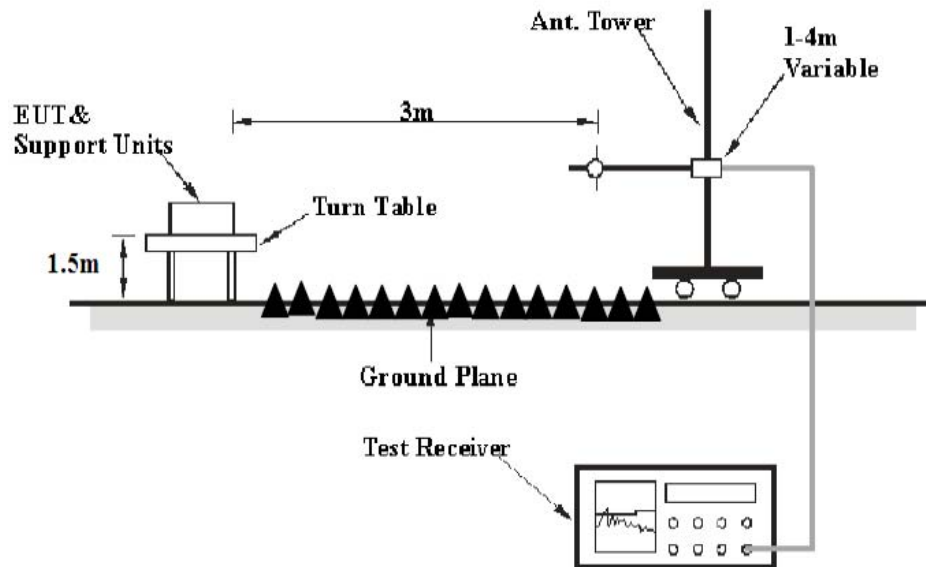


Date: 23.MAR.2018 13:55:05

6. BAND EDGE COMPLIANCE TEST

6.1. Block Diagram of Test Setup

(C) Radiated Emission Test Set-Up, Frequency above 1GHz



6.2. The Requirement For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

6.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2420, 2460MHz.

6.5. Test Procedure

Radiate Band Edge:

6.5.1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.

6.5.2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

6.5.3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

6.5.4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

6.5.5. The band edges was measured and recorded.

6.6. Test Result

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

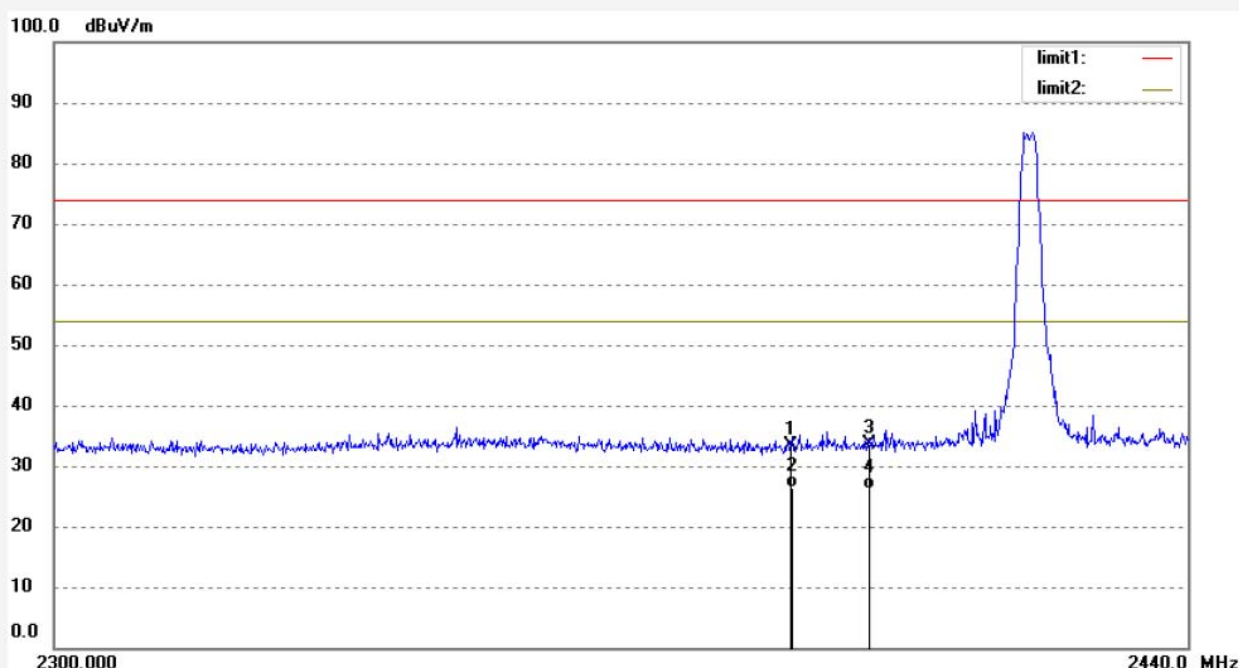
4. The average measurement was not performed when peak measured data under the limit of average detection.

The spectrum analyzer plots are attached as below.

Job No.: STAR2018 #112
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2420MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:45:58
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363

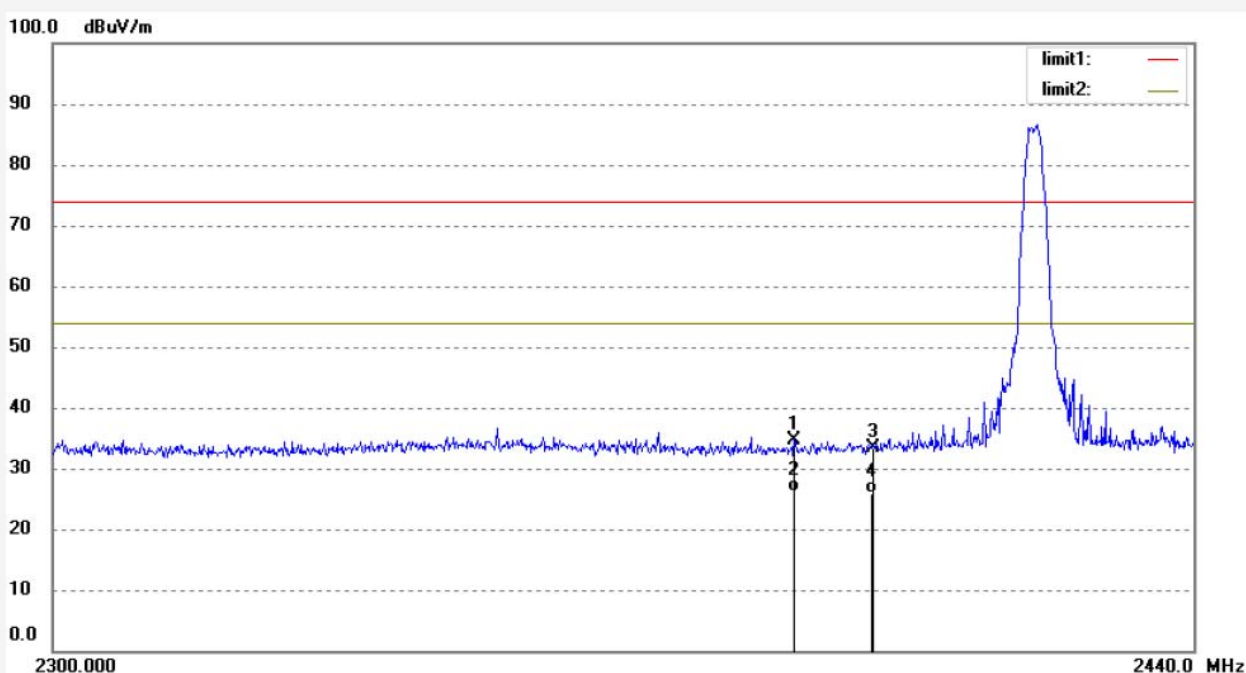


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	41.32	-8.00	33.32	74.00	-40.68	peak	200	112	
2	2390.000	34.46	-8.00	26.46	54.00	-27.54	AVG	200	49	
3	2400.000	41.60	-7.97	33.63	74.00	-40.37	peak	200	269	
4	2400.000	34.02	-7.97	26.05	54.00	-27.95	AVG	200	198	

Job No.: STAR2018 #111
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2420MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Vertical
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:44:27
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	42.75	-8.00	34.75	74.00	-39.25	peak	150	177	
2	2390.000	34.14	-8.00	26.14	54.00	-27.86	AVG	150	213	
3	2400.000	41.25	-7.97	33.28	74.00	-40.72	peak	150	99	
4	2400.000	33.90	-7.97	25.93	54.00	-28.07	AVG	150	114	

Job No.: STAR2018 #109

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: HoverJet (F22)

Mode: TX 2460MHz

Model: RGR4120/2232

Manufacturer: YangRi

Polarization: Horizontal

Power Source: DC 4.5V

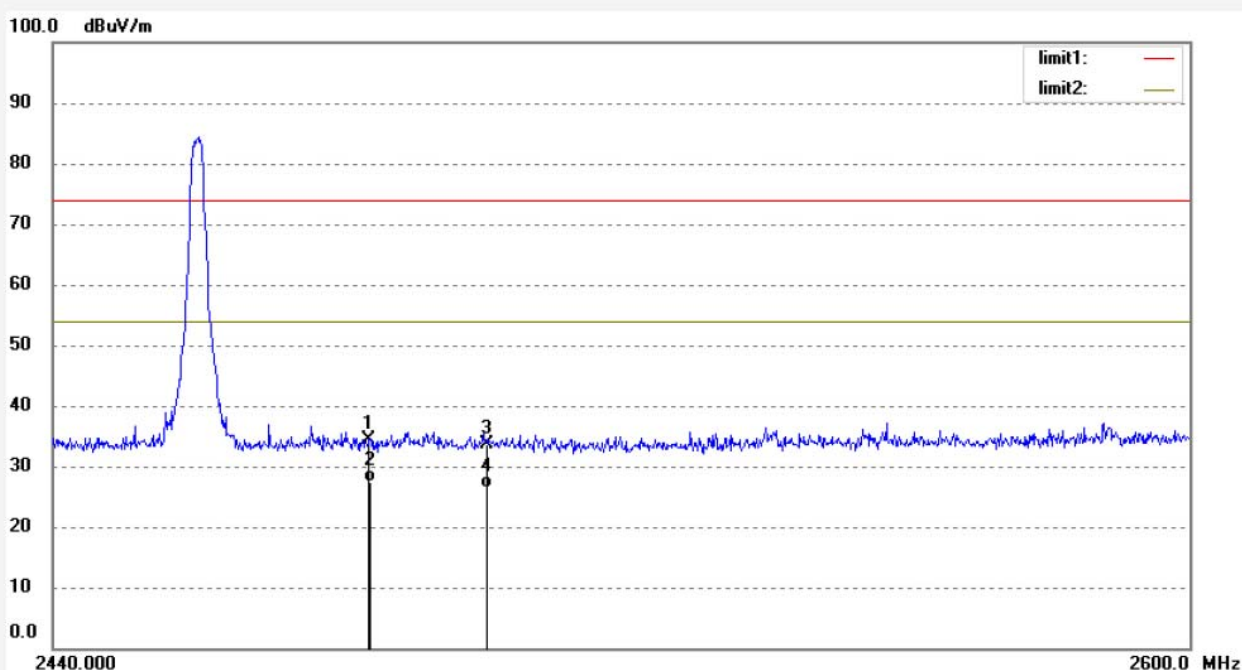
Date: 2018/03/26

Time: 14:41:10

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.09	-7.76	34.33	74.00	-39.67	peak	200	168	
2	2483.500	35.19	-7.76	27.43	54.00	-26.57	AVG	200	52	
3	2500.000	41.43	-7.71	33.72	74.00	-40.28	peak	200	102	
4	2500.000	33.98	-7.71	26.27	54.00	-27.73	AVG	200	46	

Job No.: STAR2018 #110

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: HoverJet (F22)

Mode: TX 2460MHz

Model: RGR4120/2232

Manufacturer: YangRi

Polarization: Vertical

Power Source: DC 4.5V

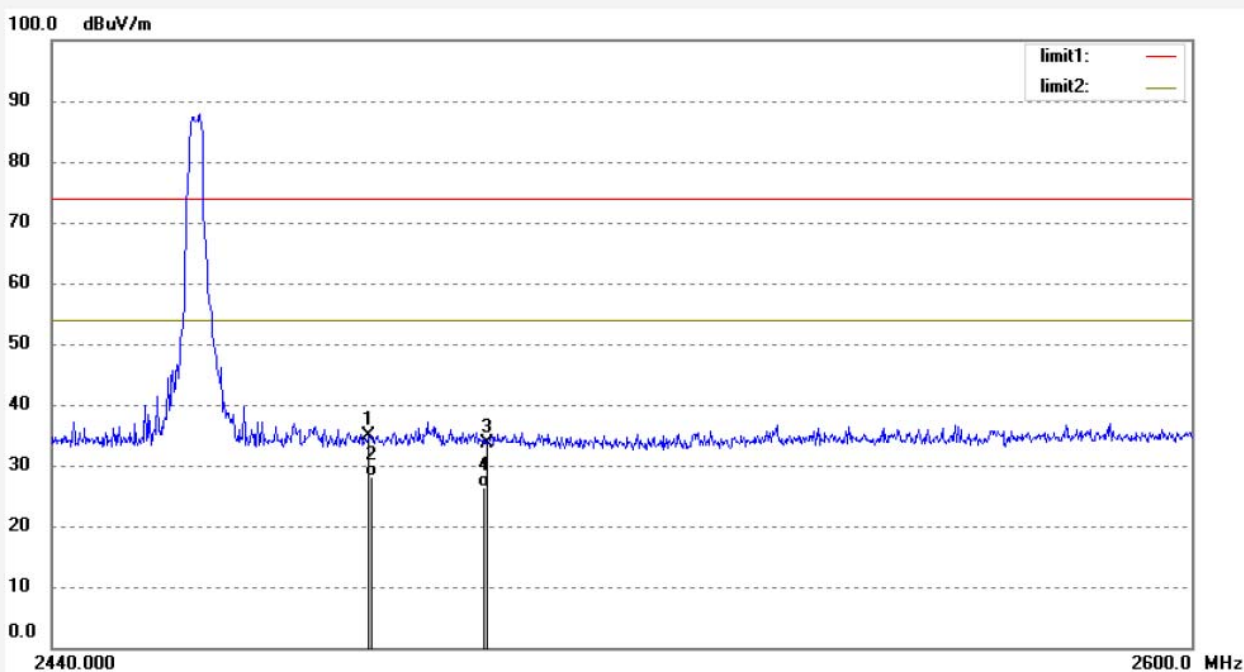
Date: 2018/03/26

Time: 14:42:43

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180363

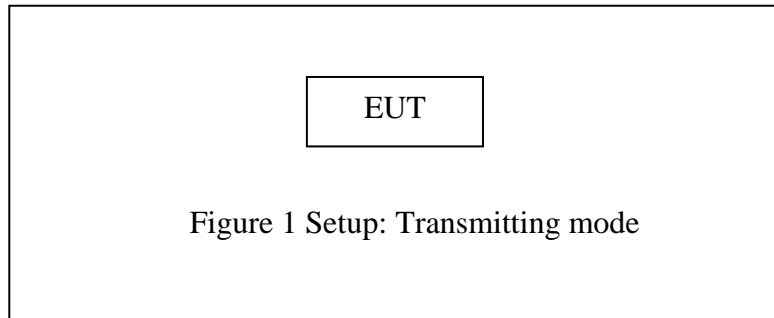


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	42.52	-7.76	34.76	74.00	-39.24	peak	150	187	
2	2483.500	35.99	-7.76	28.23	54.00	-25.77	AVG	150	200	
3	2500.000	41.27	-7.71	33.56	74.00	-40.44	peak	150	239	
4	2500.000	34.04	-7.71	26.33	54.00	-27.67	AVG	150	258	

7. RADIATED SPURIOUS EMISSION TEST

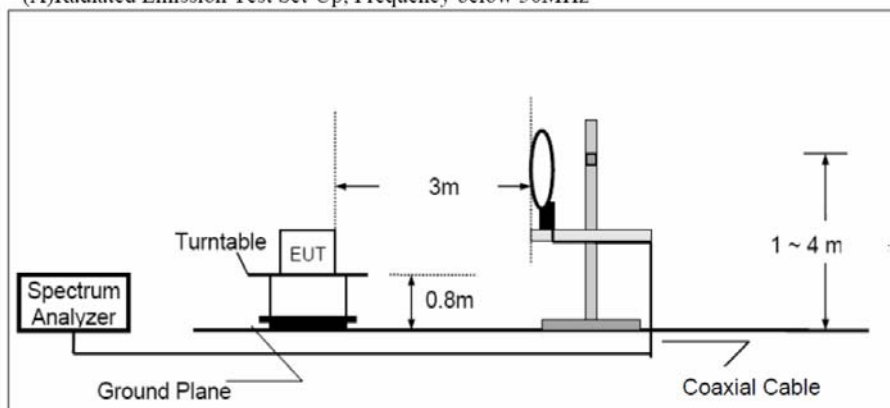
7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and peripherals

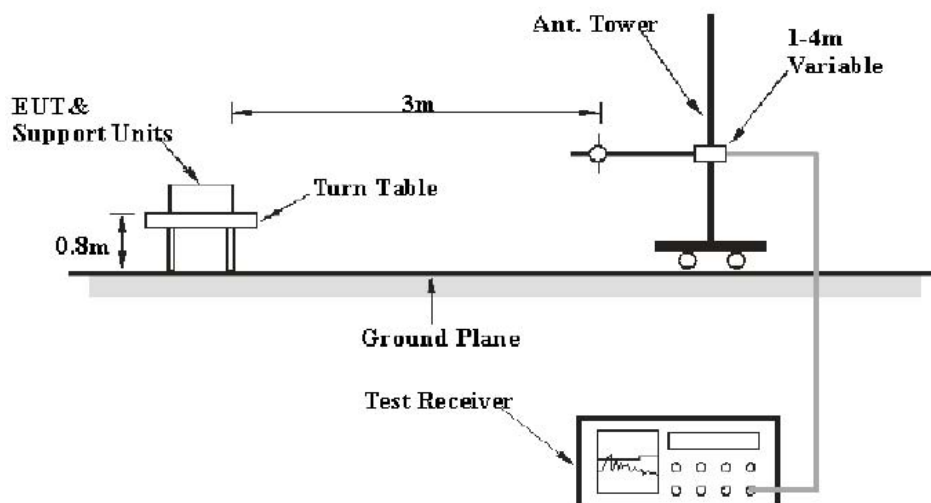


7.1.2. Semi-Anechoic Chamber Test Setup Diagram

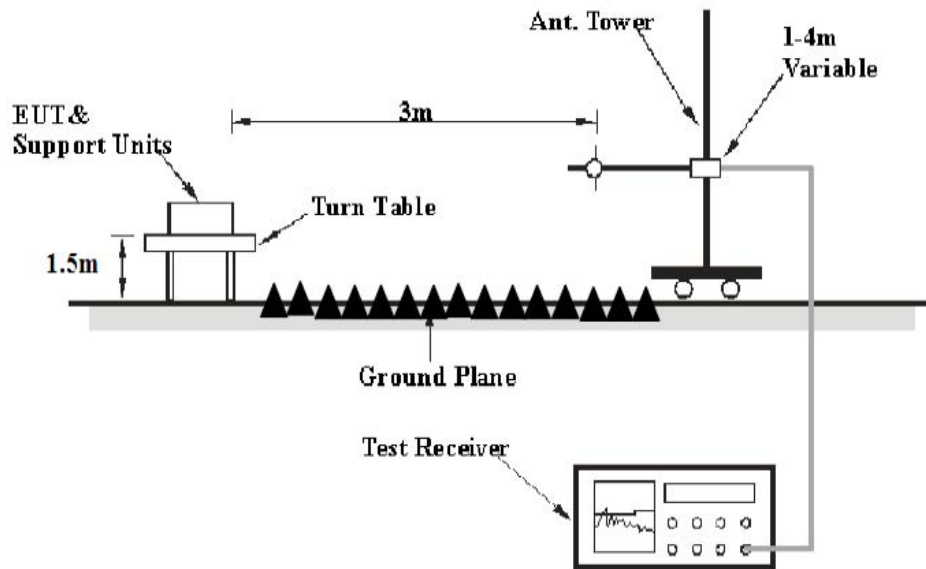
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



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



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



7.2. The Limit For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

7.3. Restricted bands of operation

7.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510

²Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

7.4.Configuration of EUT on Measurement

The equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.5. Operating Condition of EUT

7.5.1. Setup the EUT and simulator as shown as Section 7.1.

7.5.2. Turn on the power of all equipment.

7.5.3. Let the EUT work in TX modes and measure it. The transmit frequency are 2420, 2440, 2460MHz.

7.6. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter (Below 1GHz) and 1.5m (above 1GHz) high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated emission measurement. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9 kHz to 26.5GHz is checked.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz

Peak detector above 1GHz

RBW (1 MHz), VBW (3MHz) for Peak measurement

RBW (1 MHz), VBW (10Hz) for AV measurement

7.7. Data Sample

Frequency (MHz)	Reading (dB μ v)	Factor (dB/m)	Result (dB μ v/m)	Limit (dB μ v/m)	Margin (dB)	Remark
X.XX	48.69	-13.35	35.34	46	-10.66	QP

Frequency(MHz) = Emission frequency in MHz

Reading(dB μ v) = Uncorrected Analyzer/Receiver reading

Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain

Result(dB μ v/m) = Reading(dB μ v) + Factor(dB/m)

Limit (dB μ v/m) = Limit stated in standard

Margin (dB) = Result(dB μ v/m) - Limit (dB μ v/m)

QP = Quasi-peak Reading

Calculation Formula:

Margin(dB) = Result (dB μ V/m)–Limit(dB μ V/m)

Result(dB μ V/m)= Reading(dB μ V)+ Factor(dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

7.8.The Field Strength of Radiation Emission Measurement Results

PASS.

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. *: Denotes restricted band of operation.

3. The EUT is tested radiation emission in three axes. The worst emissions are reported in all channels.

4. The radiation emissions from 9KHz-30MHz and 18GHz-26.5GHz are not reported, because the test values lower than the limits of 20dB.

The spectrum analyzer plots are attached as below.

Below 1GHz


ACCURATE TECHNOLOGY CO., LTD.

 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

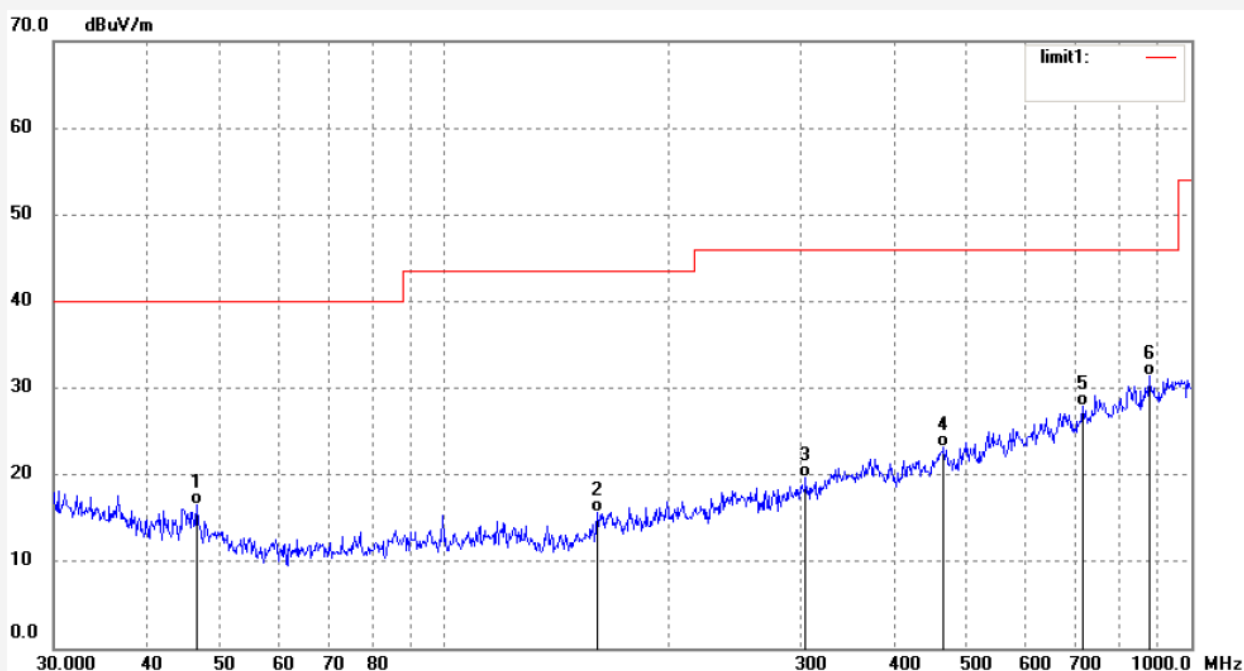
Tel:+86-0755-26503290

Fax:+86-0755-26503396

 Job No.: STAR2018 #97
 Standard: FCC Class C 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2420MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

 Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:17:03
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	46.7077	36.33	-19.83	16.50	40.00	-23.50	QP	200	135	
2	160.3209	37.04	-21.31	15.73	43.50	-27.77	QP	200	204	
3	304.9548	35.86	-16.16	19.70	46.00	-26.30	QP	200	196	
4	466.5230	35.82	-12.61	23.21	46.00	-22.79	QP	200	330	
5	716.2038	35.49	-7.58	27.91	46.00	-18.09	QP	200	256	
6	878.0931	35.98	-4.54	31.44	46.00	-14.56	QP	200	103	

Job No.: STAR2018 #98

Standard: FCC Class C 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: HoverJet (F22)

Mode: TX 2420MHz

Model: RGR4120/2232

Manufacturer: YangRi

Polarization: Vertical

Power Source: DC 4.5V

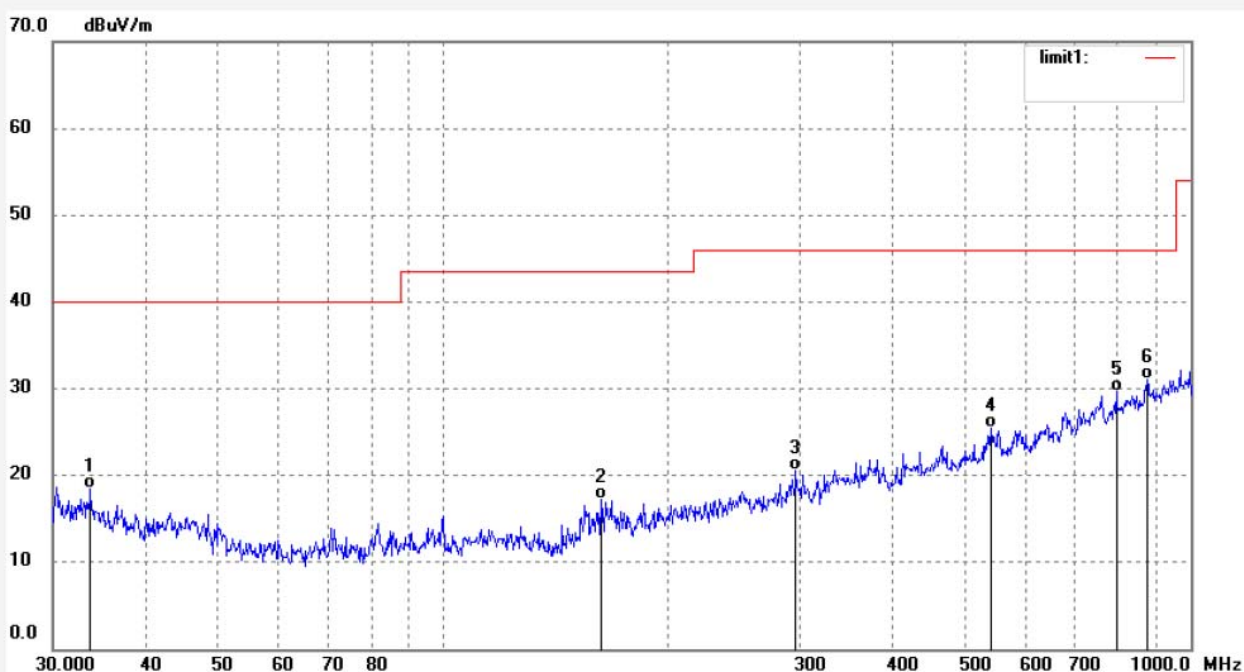
Date: 2018/03/26

Time: 14:17:48

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180363

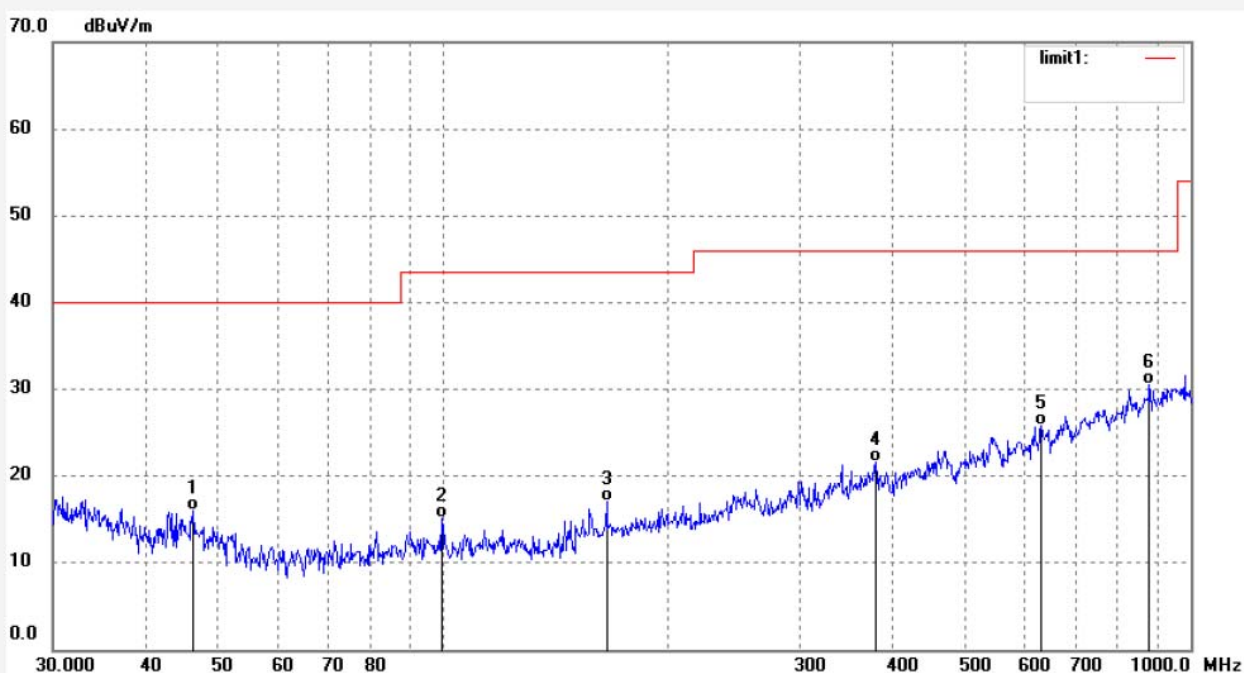


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.6881	35.83	-17.32	18.51	40.00	-21.49	QP	100	46	
2	162.5900	38.34	-21.07	17.27	43.50	-26.23	QP	100	103	
3	296.5023	36.97	-16.34	20.63	46.00	-25.37	QP	100	58	
4	540.7072	36.86	-11.32	25.54	46.00	-20.46	QP	100	111	
5	795.8194	35.62	-5.95	29.67	46.00	-16.33	QP	100	256	
6	875.0133	35.60	-4.61	30.99	46.00	-15.01	QP	100	301	

Job No.: STAR2018 #100
 Standard: FCC Class C 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2440MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:20:20
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363

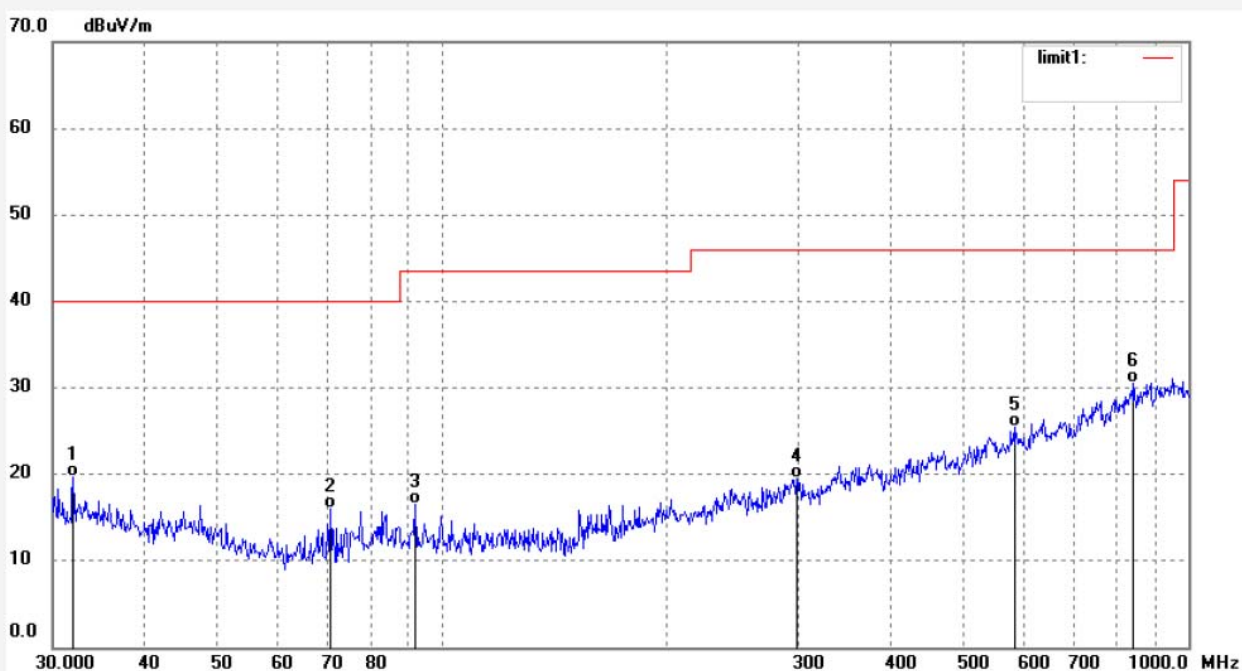


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	46.2180	35.67	-19.70	15.97	40.00	-24.03	QP	200	156	
2	99.4177	36.86	-21.67	15.19	43.50	-28.31	QP	200	122	
3	165.4716	37.75	-20.77	16.98	43.50	-26.52	QP	200	103	
4	379.1780	35.82	-14.15	21.67	46.00	-24.33	QP	200	28	
5	631.1070	35.05	-9.24	25.81	46.00	-20.19	QP	200	300	
6	881.1838	35.11	-4.49	30.62	46.00	-15.38	QP	200	153	

Job No.: STAR2018 #99
 Standard: FCC Class C 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2440MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Vertical
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:18:42
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363

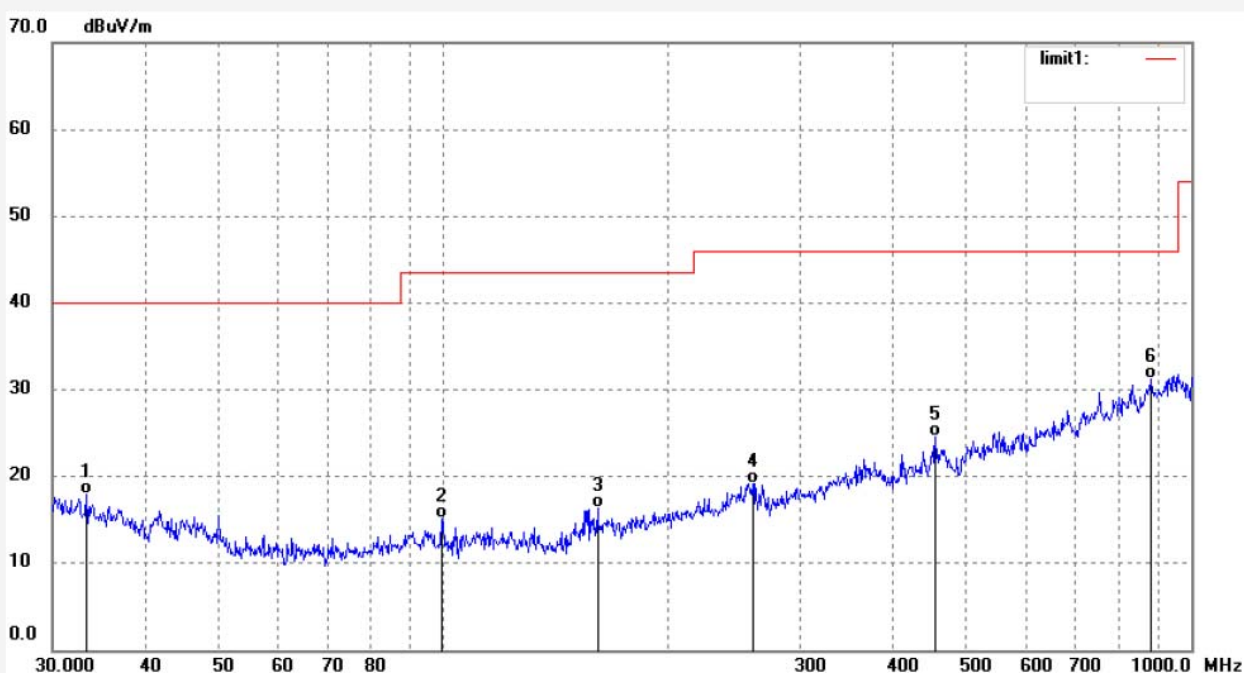


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.9586	36.82	-17.07	19.75	40.00	-20.25	QP	100	162	
2	70.7047	38.98	-22.89	16.09	40.00	-23.91	QP	100	255	
3	92.0223	38.22	-21.75	16.47	43.50	-27.03	QP	100	172	
4	298.5932	35.73	-16.30	19.43	46.00	-26.57	QP	100	136	
5	584.1611	35.76	-10.27	25.49	46.00	-20.51	QP	100	89	
6	844.8028	35.64	-5.15	30.49	46.00	-15.51	QP	100	130	

Job No.: STAR2018 #101
 Standard: FCC Class C 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2460MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:21:20
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363

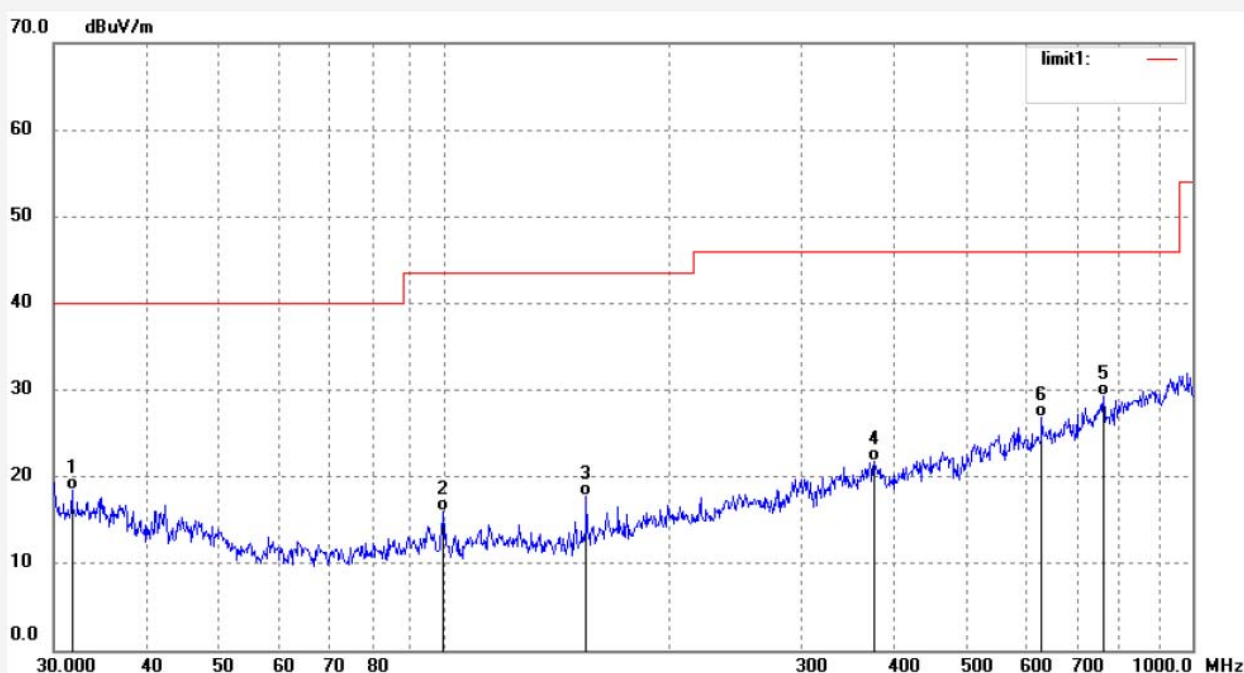


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	33.3348	35.22	-17.27	17.95	40.00	-22.05	QP	200	155	
2	99.4176	36.88	-21.67	15.21	43.50	-28.29	QP	200	139	
3	160.8851	37.64	-21.25	16.39	43.50	-27.11	QP	200	203	
4	259.4433	36.76	-17.60	19.16	46.00	-26.84	QP	200	214	
5	455.1888	37.41	-12.87	24.54	46.00	-21.46	QP	200	200	
6	884.2853	35.71	-4.44	31.27	46.00	-14.73	QP	200	268	

Job No.: STAR2018 #102
 Standard: FCC Class C 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2460MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Vertical
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:22:14
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.7347	35.53	-17.05	18.48	40.00	-21.52	QP	100	175	
2	99.4176	37.76	-21.67	16.09	43.50	-27.41	QP	100	123	
3	154.7856	39.63	-21.91	17.72	43.50	-25.78	QP	100	200	
4	375.2022	36.05	-14.19	21.86	46.00	-24.14	QP	100	269	
5	760.2866	35.91	-6.55	29.36	46.00	-16.64	QP	100	13	
6	628.8935	36.08	-9.30	26.78	46.00	-19.22	QP	100	86	

Above 1GHz


ACCURATE TECHNOLOGY CO., LTD.

 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

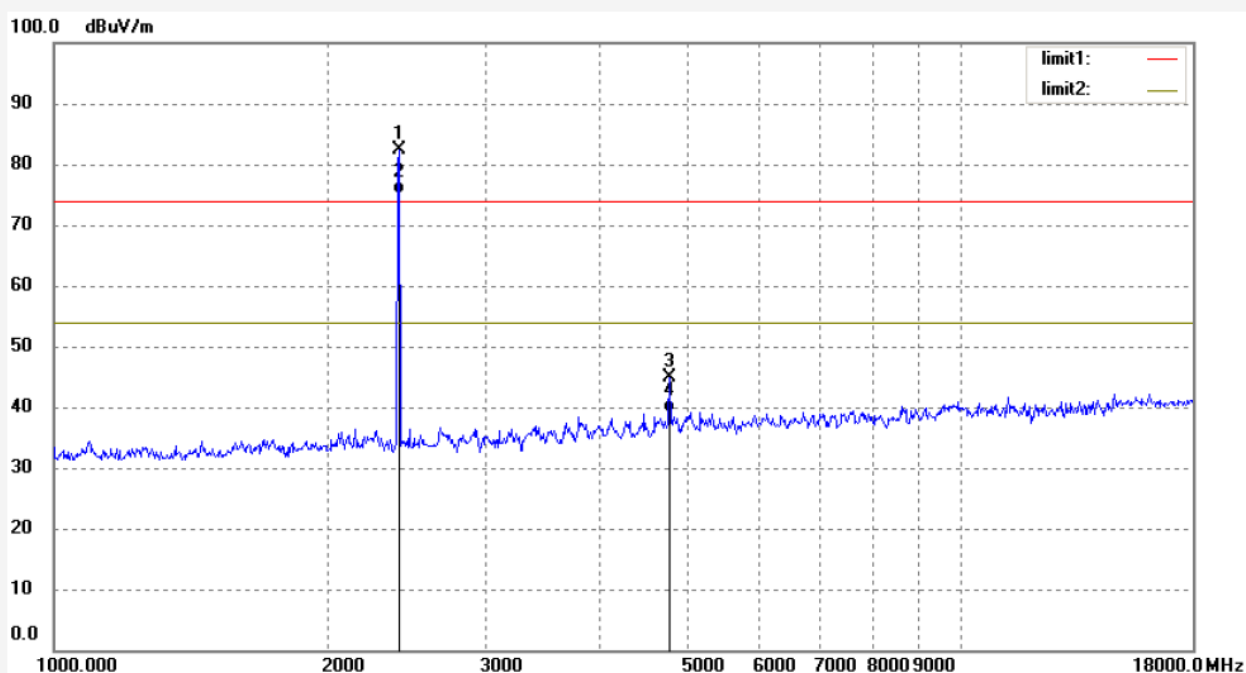
Tel:+86-0755-26503290

Fax:+86-0755-26503396

 Job No.: STAR2018 #104
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2420MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

 Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:26:20
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2420.199	90.39	-7.97	82.42	114.00	-31.58	peak	200	99	
2	2420.199	83.09	-7.97	75.12	94.00	-18.88	AVG	200	114	
3	4840.059	47.17	-2.39	44.78	74.00	-29.22	peak	200	136	
4	4840.059	41.58	-2.39	39.19	54.00	-14.81	AVG	200	239	

Job No.: STAR2018 #103

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: HoverJet (F22)

Mode: TX 2420MHz

Model: RGR4120/2232

Manufacturer: YangRi

Polarization: Vertical

Power Source: DC 4.5V

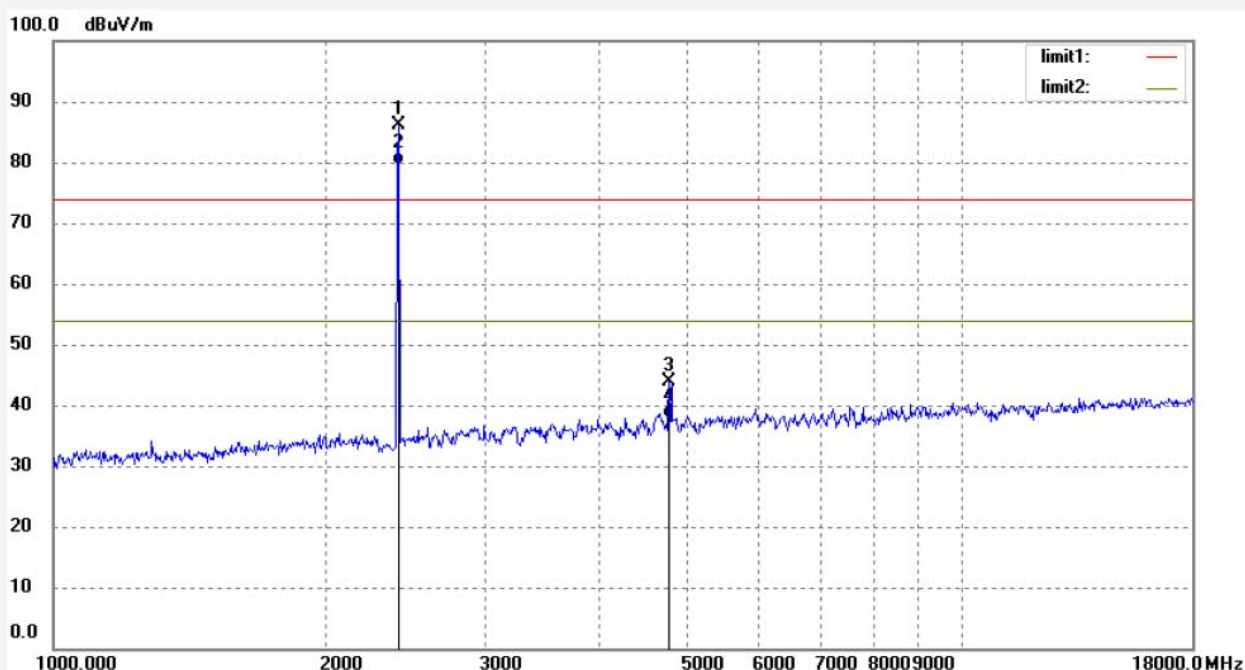
Date: 2018/03/26

Time: 14:24:45

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180363

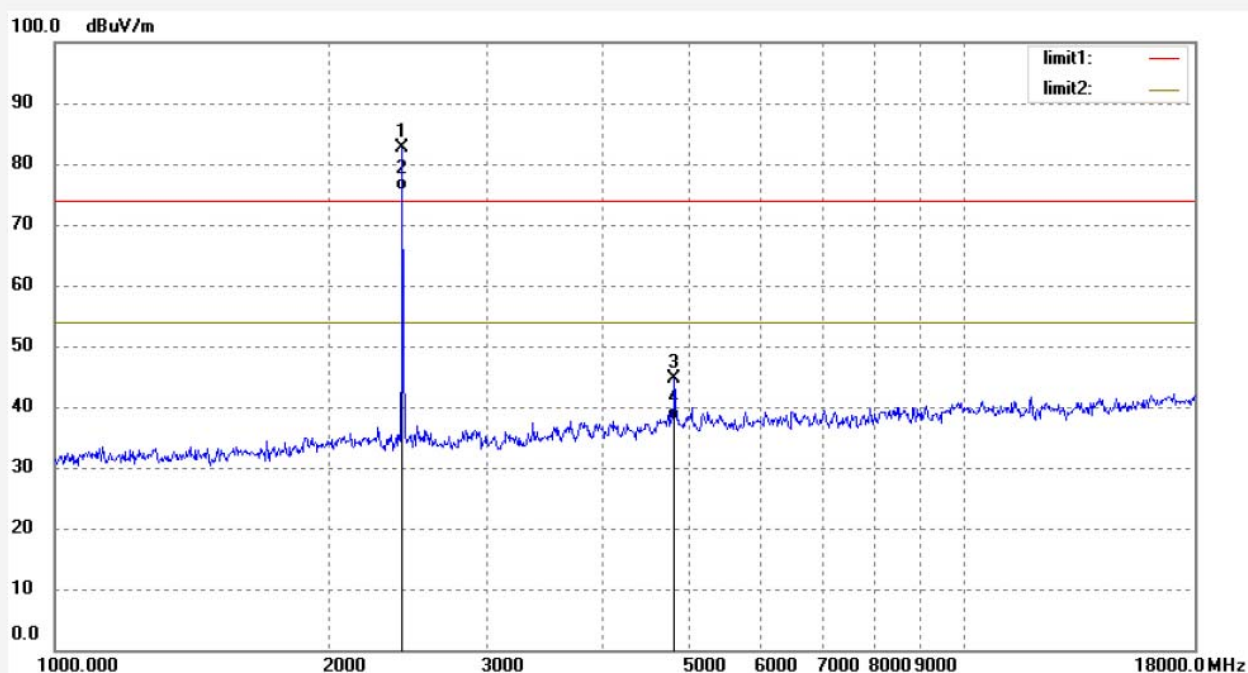


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2420.099	93.99	-7.97	86.02	114.00	-27.98	peak	150	188	
2	2420.099	87.65	-7.97	79.68	94.00	-14.32	AVG	150	267	
3	4840.059	46.38	-2.39	43.99	74.00	-30.01	peak	150	204	
4	4840.059	40.21	-2.39	37.82	54.00	-16.18	AVG	150	147	

Job No.: STAR2018 #105
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2440MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:28:09
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.021	90.62	-7.93	82.69	114.00	-31.31	peak	200	192	
2	2440.021	83.48	-7.93	75.55	94.00	-18.45	AVG	200	174	
3	4880.324	46.87	-2.25	44.62	74.00	-29.38	peak	200	225	
4	4880.324	40.11	-2.25	37.86	54.00	-16.14	AVG	200	300	

Job No.: STAR2018 #106

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: HoverJet (F22)

Mode: TX 2440MHz

Model: RGR4120/2232

Manufacturer: YangRi

Polarization: Vertical

Power Source: DC 4.5V

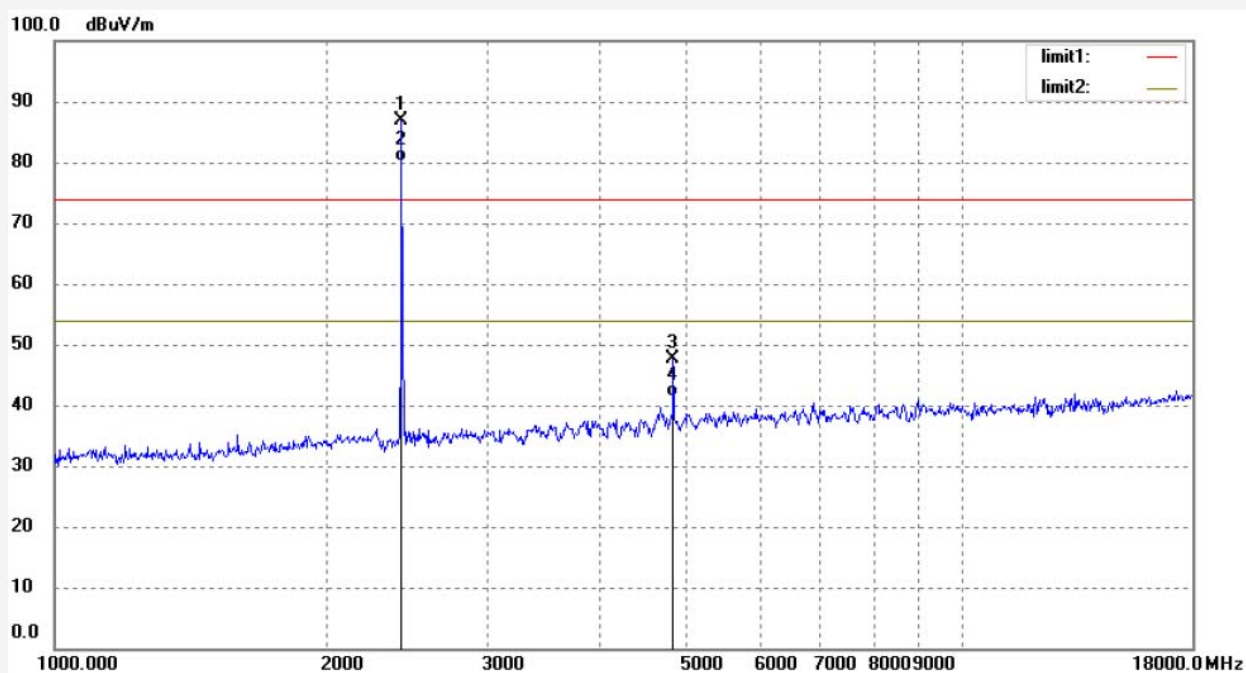
Date: 2018/03/26

Time: 14:29:53

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180363

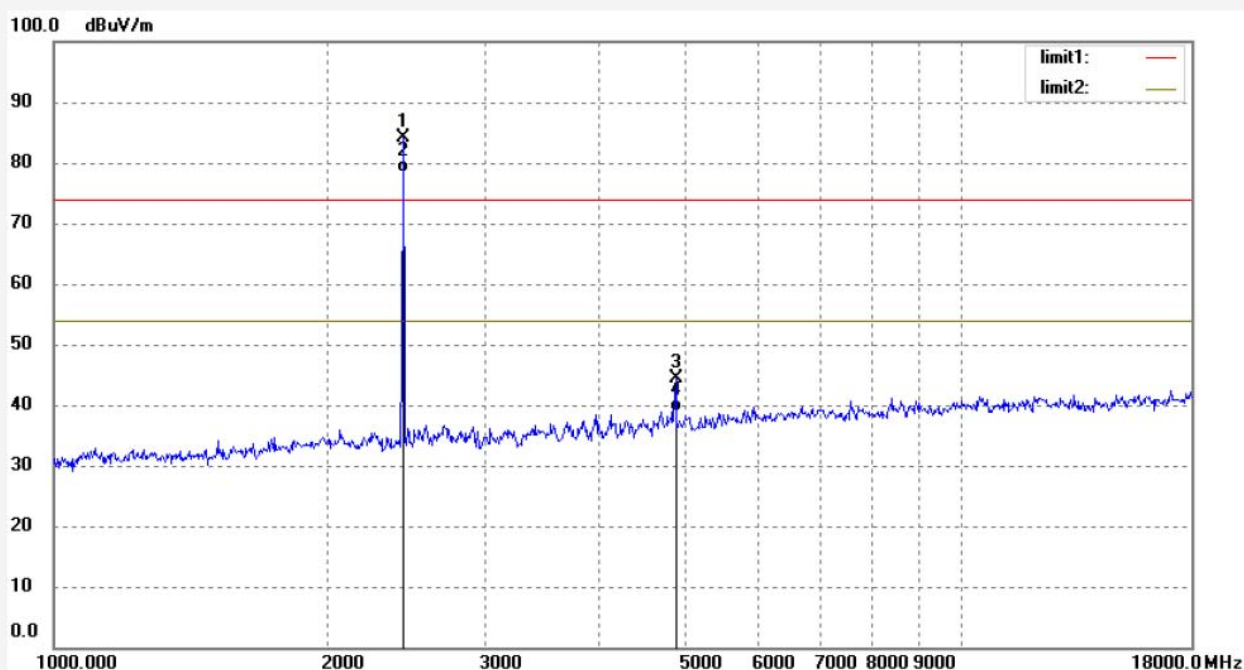


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.021	94.81	-7.93	86.88	114.00	-27.12	peak	150	44	
2	2440.021	88.14	-7.93	80.21	94.00	-13.79	AVG	150	92	
3	4880.124	49.97	-2.25	47.72	74.00	-26.28	peak	150	10	
4	4880.124	43.62	-2.25	41.37	54.00	-12.63	AVG	150	115	

Job No.: STAR2018 #108
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: HoverJet (F22)
 Mode: TX 2460MHz
 Model: RGR4120/2232
 Manufacturer: YangRi

Polarization: Horizontal
 Power Source: DC 4.5V
 Date: 2018/03/26
 Time: 14:33:45
 Engineer Signature: star
 Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2460.024	92.04	-7.90	84.14	114.00	-29.86	peak	200	163	
2	2460.024	86.35	-7.90	78.45	94.00	-15.55	AVG	200	203	
3	4920.157	46.52	-2.10	44.42	74.00	-29.58	peak	200	228	
4	4920.157	40.92	-2.10	38.82	54.00	-15.18	AVG	200	190	

Job No.: STAR2018 #107

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %

EUT: HoverJet (F22)

Mode: TX 2460MHz

Model: RGR4120/2232

Manufacturer: YangRi

Polarization: Vertical

Power Source: DC 4.5V

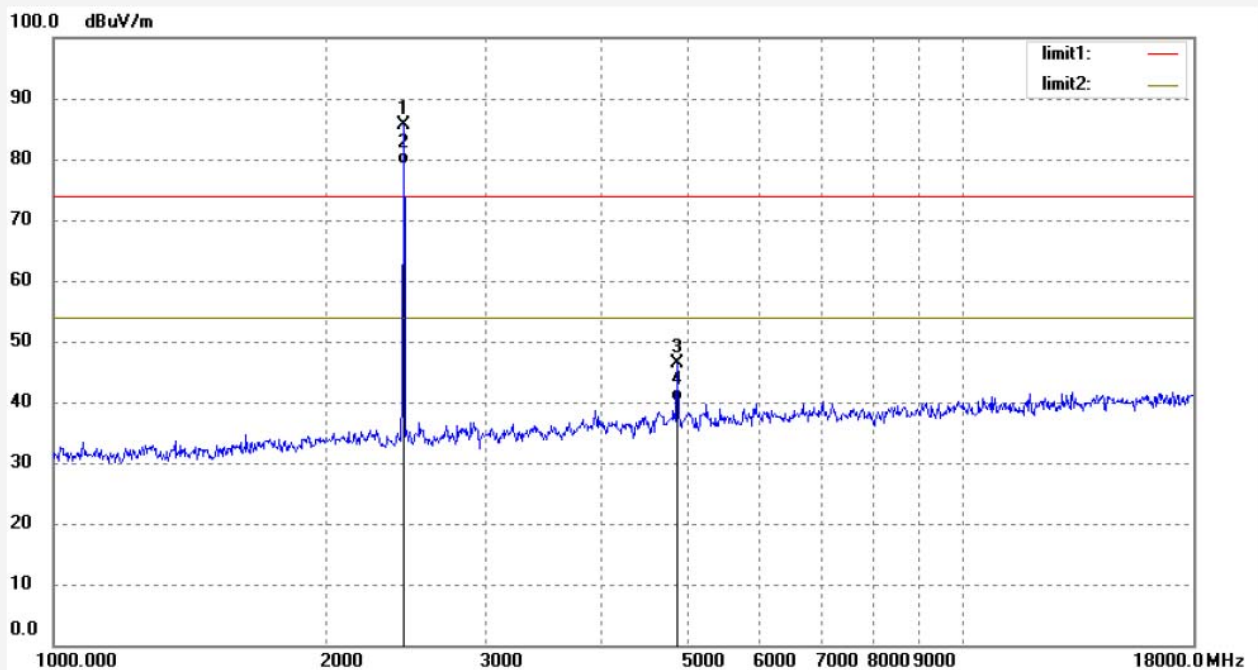
Date: 2018/03/26

Time: 14:32:13

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20180363



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2460.024	93.57	-7.90	85.67	114.00	-27.33	peak	150	330	
2	2460.024	87.12	-7.90	79.22	94.00	-14.78	AVG	150	241	
3	4920.057	48.40	-2.10	46.30	74.00	-27.70	peak	150	211	
4	4920.057	42.33	-2.10	40.23	54.00	-13.77	AVG	150	172	

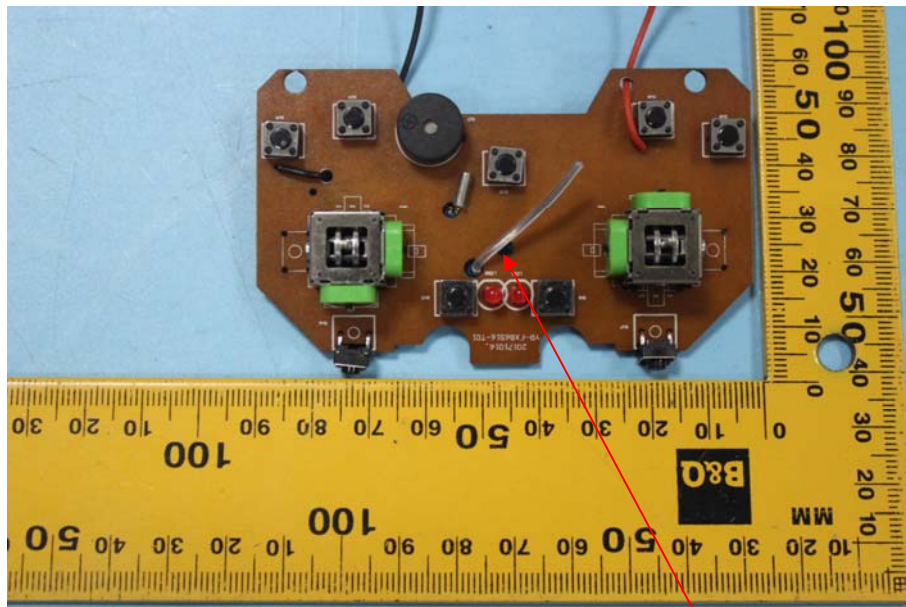
8. ANTENNA REQUIREMENT

8.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2.Antenna Construction

Device is equipped with permanent attached antenna, which isn't displaced by other antenna. The Antenna gain of EUT is 0dBi. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna

******* End of Test Report *******