

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
XI FU TOYS CO., LTD.

R/C Flying Fire Dragon
Model No.: 5F62039

FCC ID: 2ACF7-5F62039

Prepared for : XI FU TOYS CO., LTD.
Address : 7/F Pearl Oriental Tower, 225 Nathan Road,
Tsimshatsui, H.K.
Prepared by : ACCURATE TECHNOLOGY CO., LTD
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Report Number : ATE20140815
Date of Test : May 19-30, 2014
Date of Report : May 30, 2014

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Test Report Certification

Applicant& : XI FU TOYS CO., LTD.
address : 7/F Pearl Oriental Tower, 225 Nathan Road, Tsimshatsui, H.K.
Manufacturer& : Dongguan City De Hong Industrial Investment Co., Ltd.
address : 3006 XIN GANG ROAD, XIN AN AREA, CHANG AN TOWN,
DONGGUAN, GUANGDONG
Product : R/C Flying Fire Dragon
Model No. : 5F62039
Trade name : TRU

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249
ANSI C63.4: 2009

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 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 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 ACCURATE TECHNOLOGY CO. LTD.

Date of Test : May 19-30, 2014

Prepared by : Tim Zhang
(Tim.zhang, Engineer)

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

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

The submitted sample is a R/C Flying Fire Dragon.
The sample is powered by DC 9V (Powered by battery).

		2.4G R/C Flying Fire Dragon
Frequency Range	:	2.406-2.480GHz
Channel frequency	:	2406MHz, 2414MHz, 2424MHz, 2428MHz, 2437MHz, 2440MHz, 2445MHz, 2447MHz, 2450MHz, 2454MHz, 2461MHz, 2464MHz, 2467MHz, 2471MHz, 2474MHz, 2480MHz
Number of Channels	:	16
Modulation Type	:	GFSK
Type of Antenna	:	Integral Antenna
Max antenna gain	:	2.54 dBi
Power Supply	:	DC 9V(Powered by battery)

1.2. Special Accessory and Auxiliary Equipment

N/A

1.3.Description of Test Facility

EMC Lab	: Accredited by TUV Rheinland Shenzhen Listed by FCC The Registration Number is 752051
	Listed by Industry Canada The Registration Number is 5077A-2
	Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193
Name of Firm	: ACCURATE TECHNOLOGY CO. LTD
Site Location	: F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.4.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	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 11, 2014	Jan. 10, 2015
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 11, 2014	Jan. 10, 2015
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 11, 2014	Jan. 10, 2015
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 11, 2014	Jan. 10, 2015
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 15, 2014	Jan. 14, 2015
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 15, 2014	Jan. 14, 2015
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 15, 2014	Jan. 14, 2015
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 15, 2014	Jan. 14, 2015
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 11, 2014	Jan. 10, 2015
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 11, 2014	Jan. 10, 2015
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 11, 2014	Jan. 10, 2015
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 11, 2014	Jan. 10, 2015

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **Transmitting mode**

Low Channel: 2406MHz

Middle Channel: 2440MHz

High Channel: 2480MHz

3.2.Configuration and peripherals

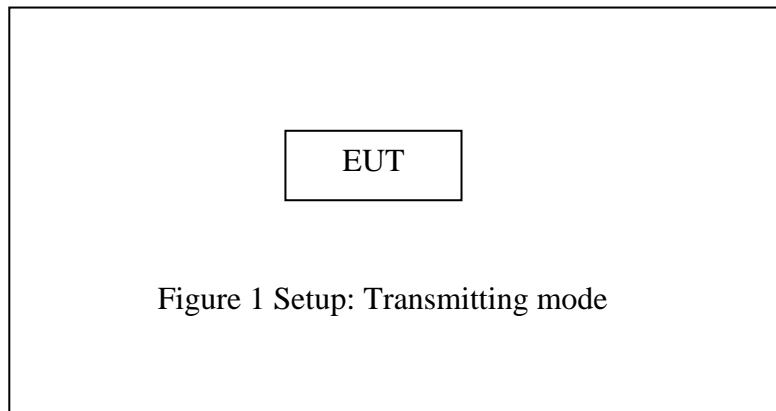


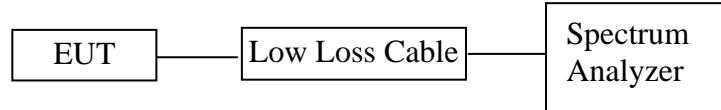
Figure 1 Setup: Transmitting mode

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

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 2406-2480MHz. We select 2406MHz, 2440MHz, and 2480MHz TX frequency to transmit.

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 300kHz , Detector function=peak, Trace=max hold, Sweep=auto.

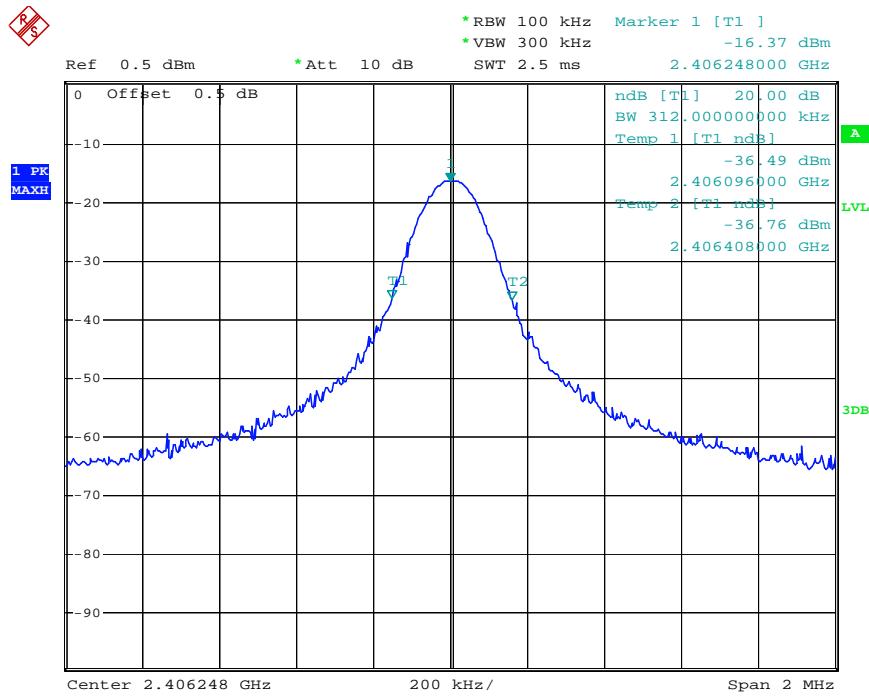
5.4.4. Set the measured low, middle and high frequency and test 20dB bandwidth with spectrum analyzer.

5.5. Test Result

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2406	0.312
Mid	2440	0.344
High	2480	0.316

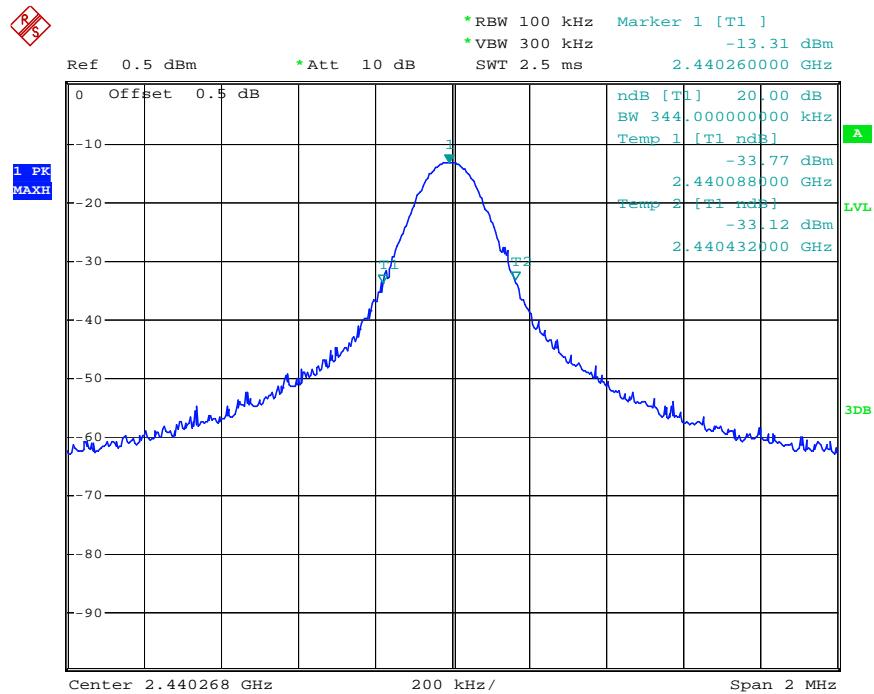
The spectrum analyzer plots are attached as below.

Low channel



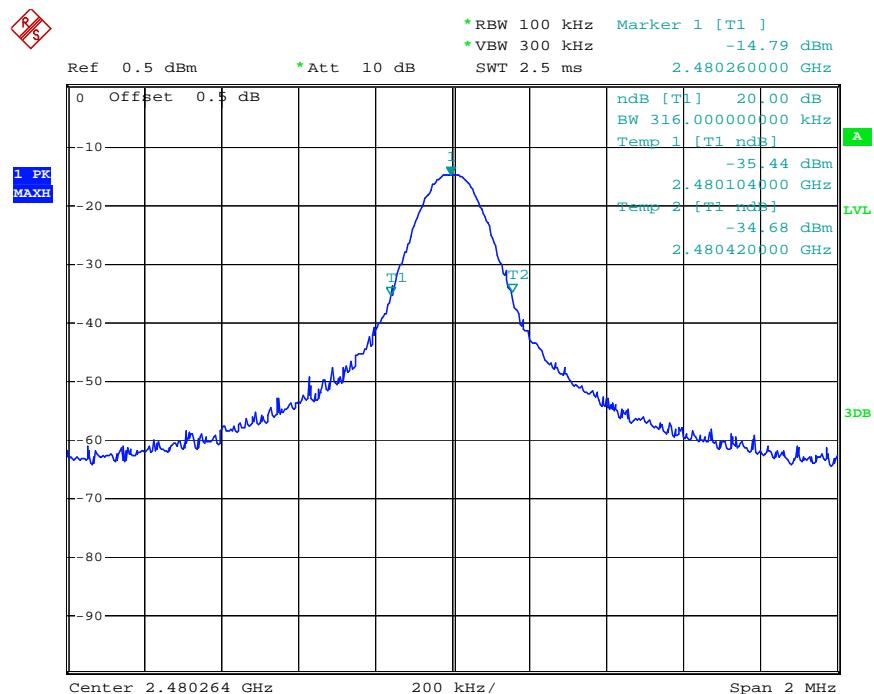
Date: 30.MAY.2014 10:47:18

Middle channel



Date: 30.MAY.2014 10:53:50

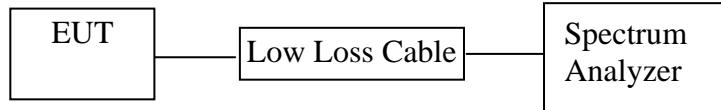
High channel



Date: 30.MAY.2014 11:00:26

6. BAND EDGE COMPLIANCE TEST

6.1. Block Diagram of Test Setup



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 2406-2480 MHz. We select 2406MHz, 2480MHz TX frequency to transmit.

6.5. Test Procedure

Conducted Band Edge:

6.5.1. The transmitter output was connected to the spectrum analyzer via a low loss cable.

6.5.2. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.

Radiate Band Edge:

6.5.3. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.

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

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

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

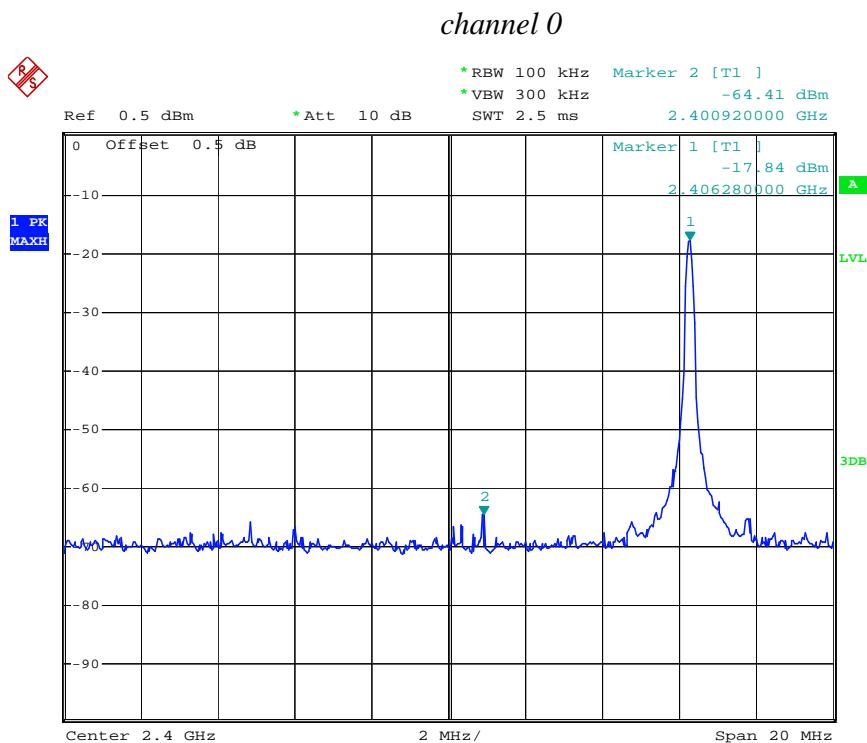
6.5.7. RBW=1MHz, VBW=1MHz

6.5.8. The band edges was measured and recorded.

6.6. Test Result

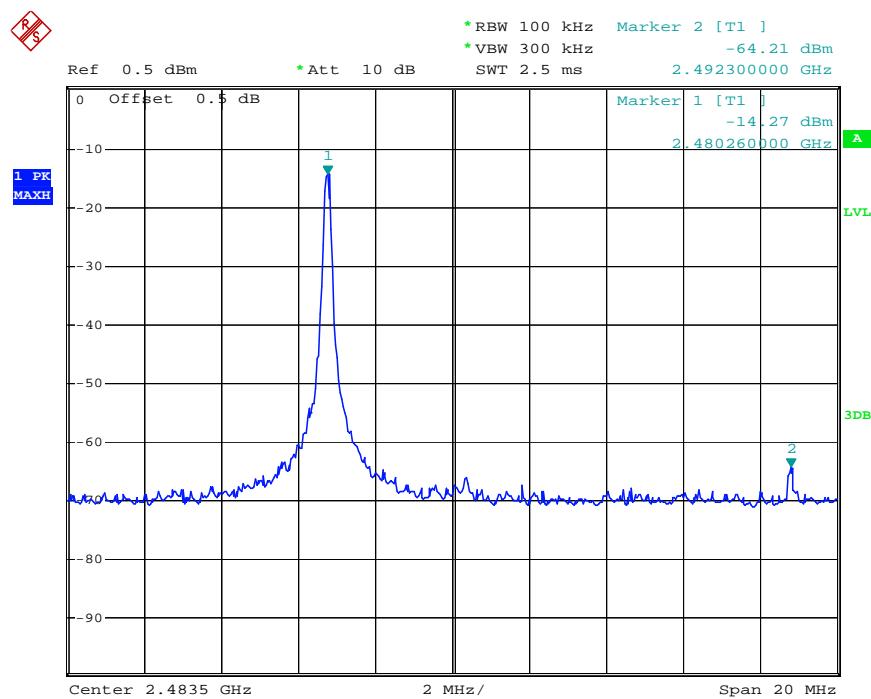
Pass

Channel	Frequency	Delta peak to band emission	Limit(dBc)
0	2400.00MHz	46.57	20
15	2492.30MHz	49.94	20



Date: 30.MAY.2014 10:45:28

channel 15



Date: 30.MAY.2014 11:01:37

Radiated Band Edge Result



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.ChinaSite: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: alen #4154

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:26:16

EUT: R/C Flying Fire Dragon

Engineer Signature:

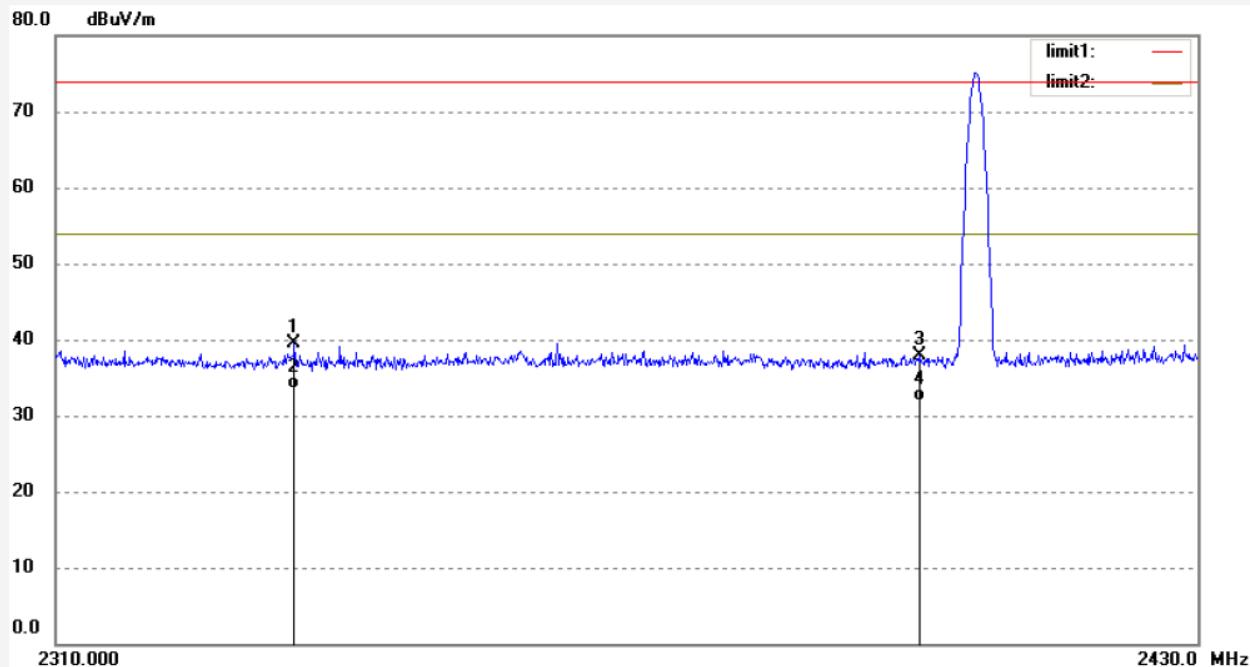
Mode: TX 2406MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2334.600	46.45	-6.93	39.52	74.00	-34.48	peak			
2	2334.600	40.39	-6.93	33.46	54.00	-20.54	AVG			
3	2400.240	44.58	-6.76	37.82	74.00	-36.18	peak			
4	2400.240	38.75	-6.76	31.99	54.00	-22.01	AVG			

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: alen #4155

Polarization: Vertical

Standard: FCC PK

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:27:25

EUT: R/C Flying Fire Dragon

Engineer Signature:

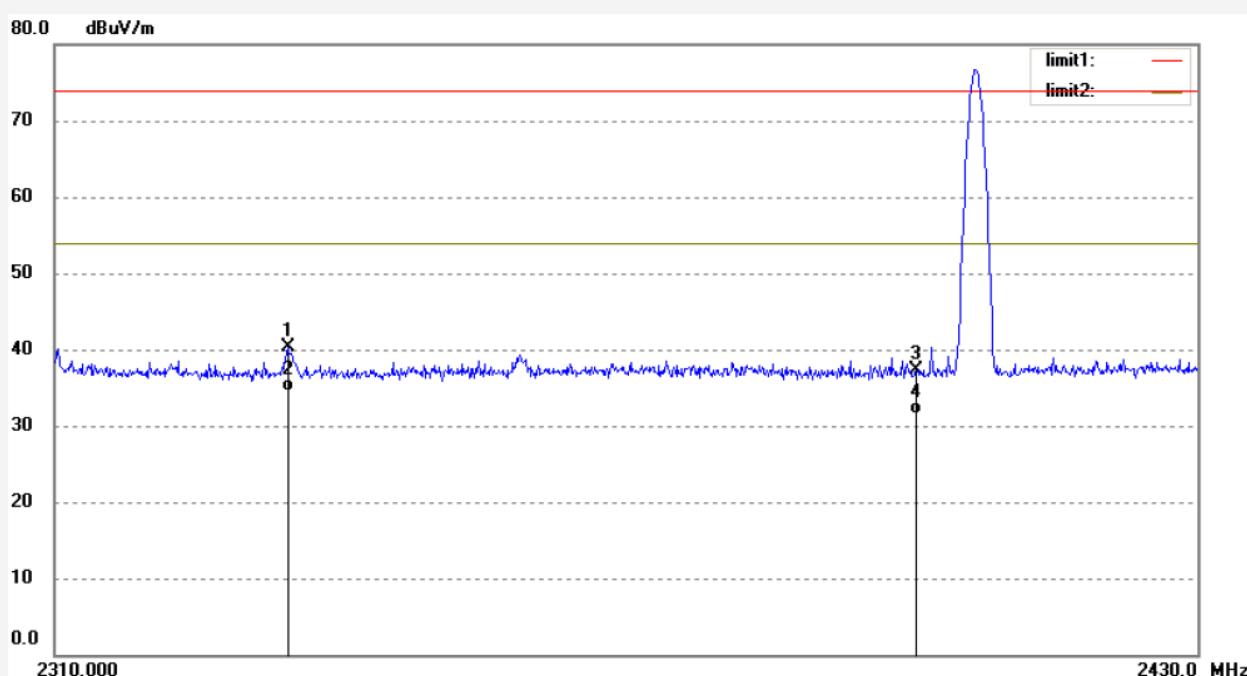
Mode: TX 2406MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2334.000	47.29	-6.93	40.36	74.00	-33.64	peak			
2	2334.000	41.35	-6.93	34.42	54.00	-19.58	AVG			
3	2400.000	44.13	-6.76	37.37	74.00	-36.63	peak			
4	2400.000	38.32	-6.76	31.56	54.00	-22.44	AVG			

Job No.: alen #4157

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:33:43

EUT: R/C Flying Fire Dragon

Engineer Signature:

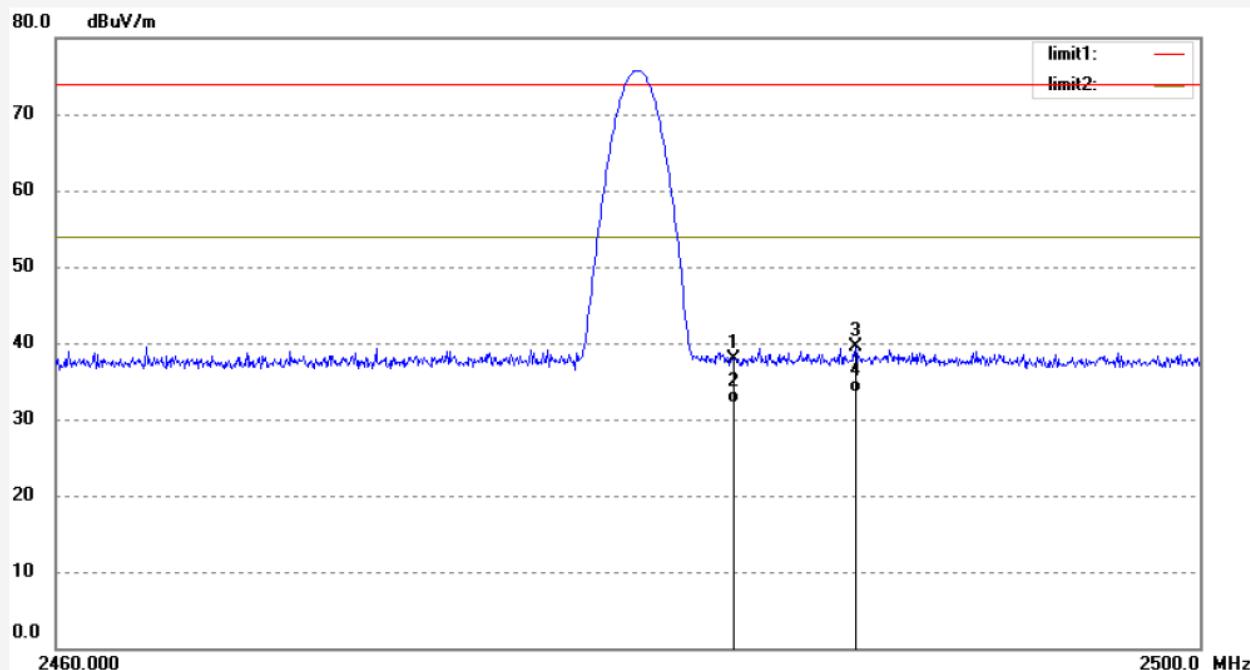
Mode: TX 2480MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.680	44.49	-6.54	37.95	74.00	-36.05	peak			
2	2483.680	38.69	-6.54	32.15	54.00	-21.85	AVG			
3	2487.920	46.00	-6.52	39.48	74.00	-34.52	peak			
4	2487.920	40.01	-6.52	33.49	54.00	-20.51	AVG			

Job No.: alen #4156

Polarization: Vertical

Standard: FCC PK

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:32:30

EUT: R/C Flying Fire Dragon

Engineer Signature:

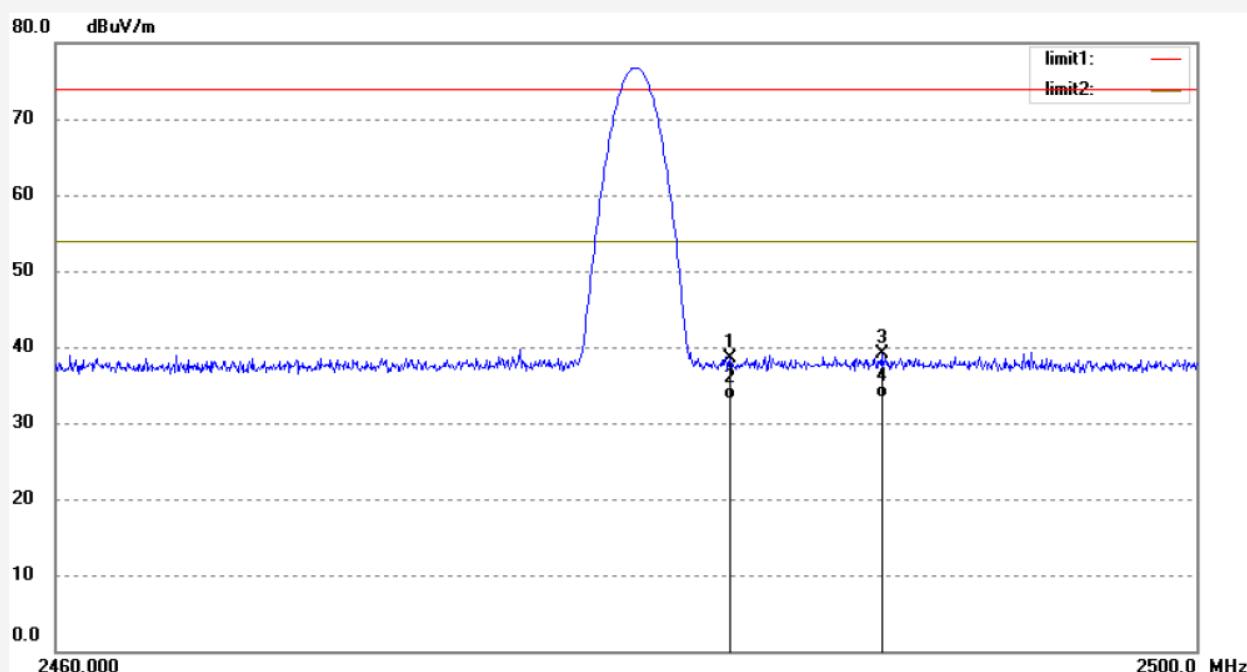
Mode: TX 2480MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.600	45.03	-6.54	38.49	74.00	-35.51	peak			
2	2483.600	39.65	-6.54	33.11	54.00	-20.89	AVG			
3	2488.920	45.53	-6.52	39.01	74.00	-34.99	peak			
4	2488.920	39.81	-6.52	33.29	54.00	-20.71	AVG			

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:

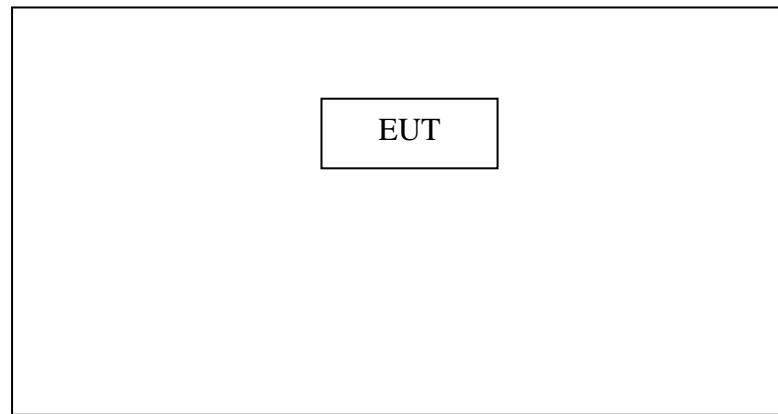
Result = Reading + Corrected Factor

3. Display the measurement of peak values.

7. RADIATED SPURIOUS EMISSION TEST

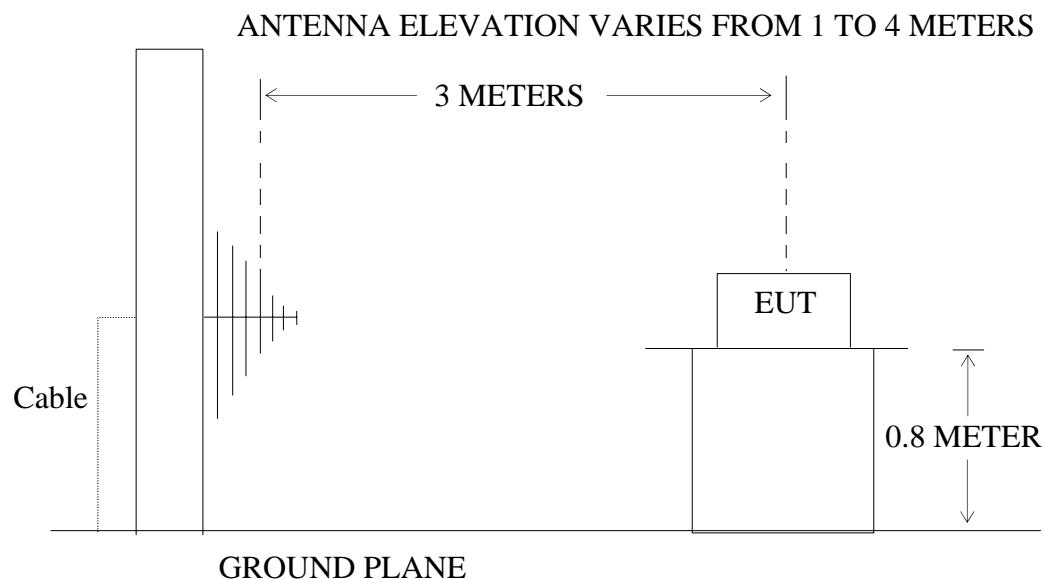
7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and peripherals



Setup: Transmitting mode

7.1.2. Semi-Anechoic Chamber Test Setup Diagram



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 is 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 measure it. The transmit frequency are 2406-2480 MHz. We select 2406MHz, 2440MHz, and 2480MHz TX frequency to transmit.

7.6. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter 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 C63.4: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

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 25GHz 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.

The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

7.7. The Field Strength of Radiation Emission Measurement Results
PASS.

For Below 30MHz

Frequency (MHz)	Reading (dB μ V/m)	Factor(dB) Corr.	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Polarization
			QP	QP		
-	-	-	-	-	-	X
-	-	-	-	-	-	Y
-	-	-	-	-	-	Z

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dB μ V/m)	Factor Corr. (dB)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Polarization
			QP	QP		
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Vertical
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal
---	---	---	---	---	---	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dB μ V/m)		Factor Corr. (dB)	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB μ V/m)		Polarizati on
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	-	Vertical
-	-	-	-	-	-	-	-	-	-	Horizontal

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 at Low, Middle, High channel in three axes. The worst emissions are reported in all channels.

4. The radiation emissions from 18-25GHz are not reported, because the test values lower than the limits of 20dB.

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: alen #4151

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:08:19

EUT: R/C Flying Fire Dragon

Engineer Signature:

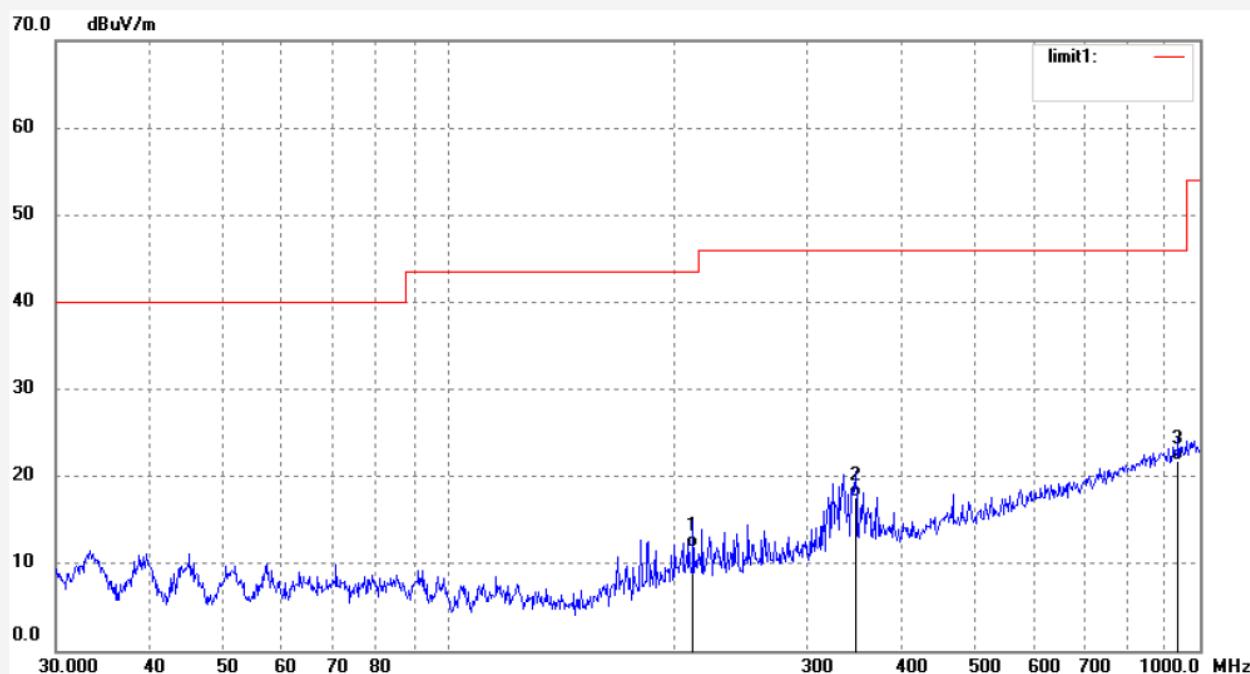
Mode: TX 2406MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	211.5264	31.84	-20.00	11.84	43.50	-31.66	QP			
2	348.0274	33.89	-16.31	17.58	46.00	-28.42	QP			
3	935.5462	27.36	-5.59	21.77	46.00	-24.23	QP			

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.: alen #4150

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:06:43

EUT: R/C Flying Fire Dragon

Engineer Signature:

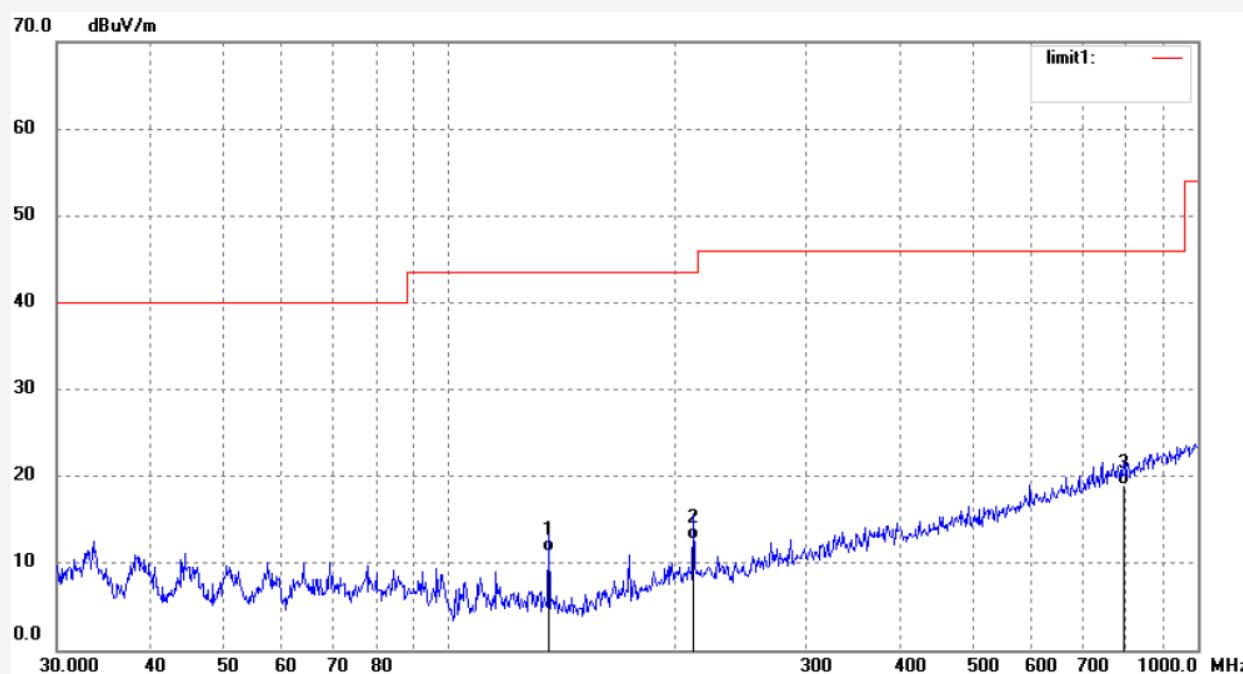
Mode: TX 2406MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	135.9822	34.54	-23.31	11.23	43.50	-32.27	QP			
2	212.2694	32.68	-20.00	12.68	43.50	-30.82	QP			
3	796.1829	26.87	-7.82	19.05	46.00	-26.95	QP			

Job No.: alen #4148

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:03:29

EUT: R/C Flying Fire Dragon

Engineer Signature:

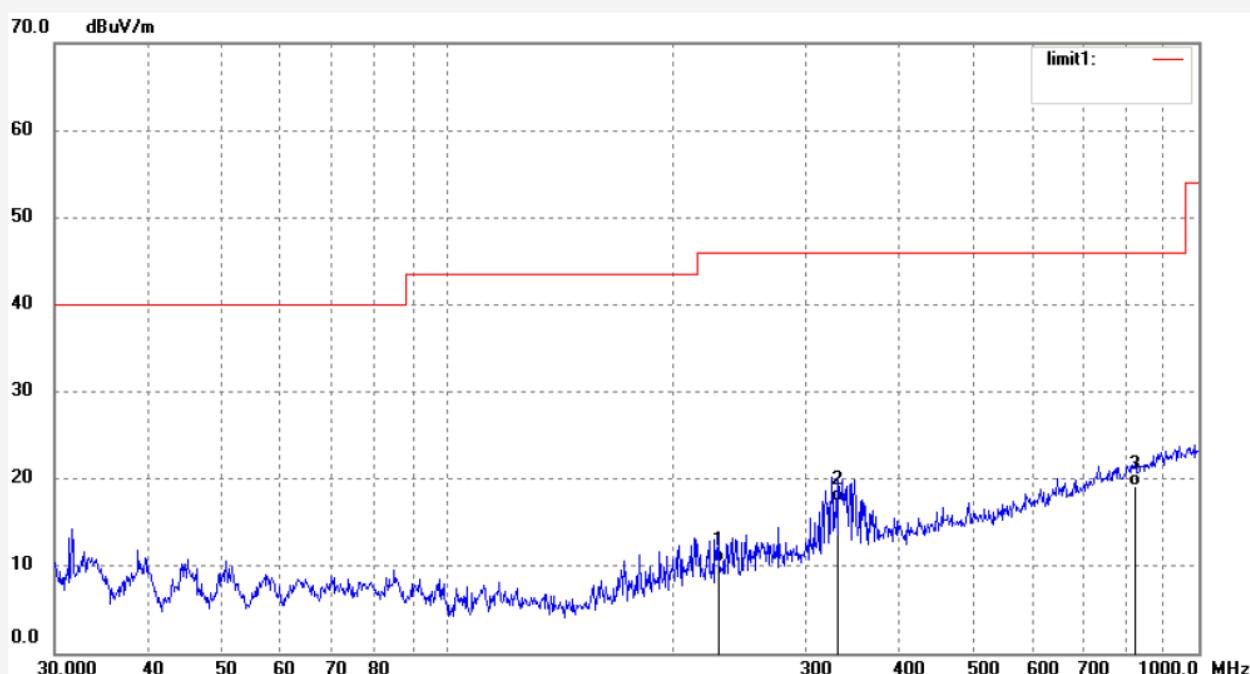
Mode: TX 2440MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	229.2931	30.28	-19.86	10.42	46.00	-35.58	QP			
2	331.3546	34.35	-16.92	17.43	46.00	-28.57	QP			
3	824.5968	26.54	-7.39	19.15	46.00	-26.85	QP			

Job No.: alen #4149

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:06:22

EUT: R/C Flying Fire Dragon

Engineer Signature:

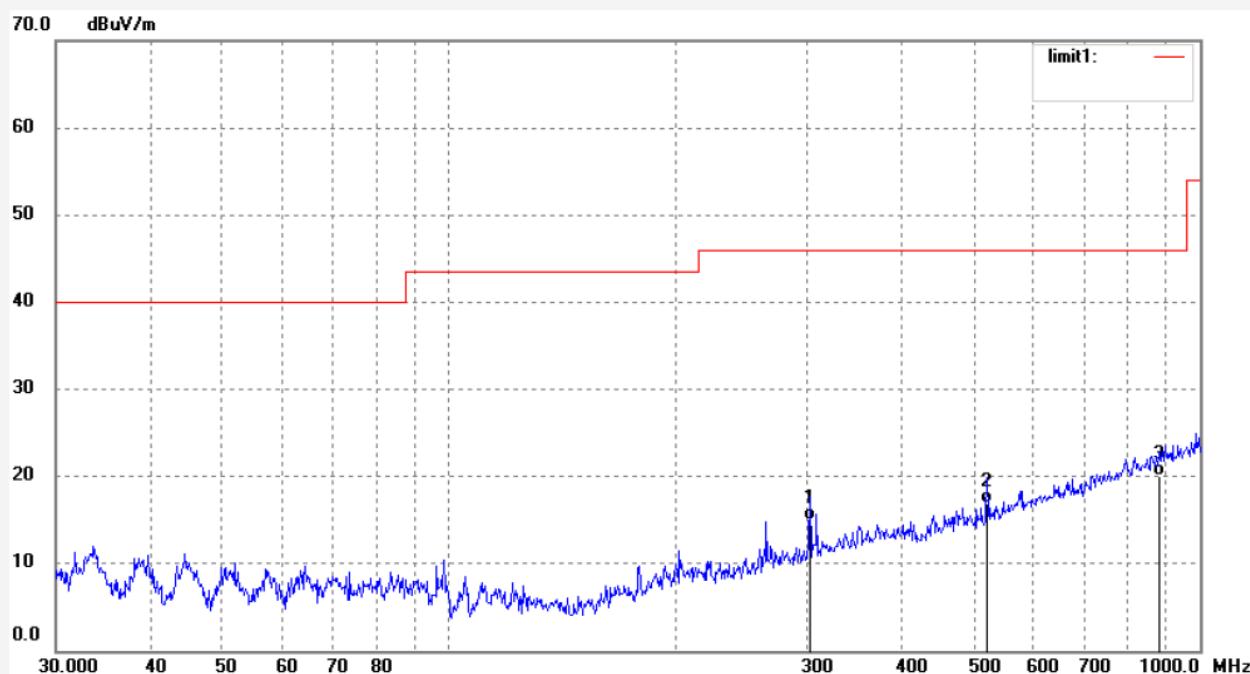
Mode: TX 2440MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	302.4812	32.78	-17.81	14.97	46.00	-31.03	QP			
2	520.8881	30.32	-13.47	16.85	46.00	-29.15	QP			
3	884.5028	26.35	-6.37	19.98	46.00	-26.02	QP			

Job No.: alen #4146

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:01:02

EUT: R/C Flying Fire Dragon

Engineer Signature:

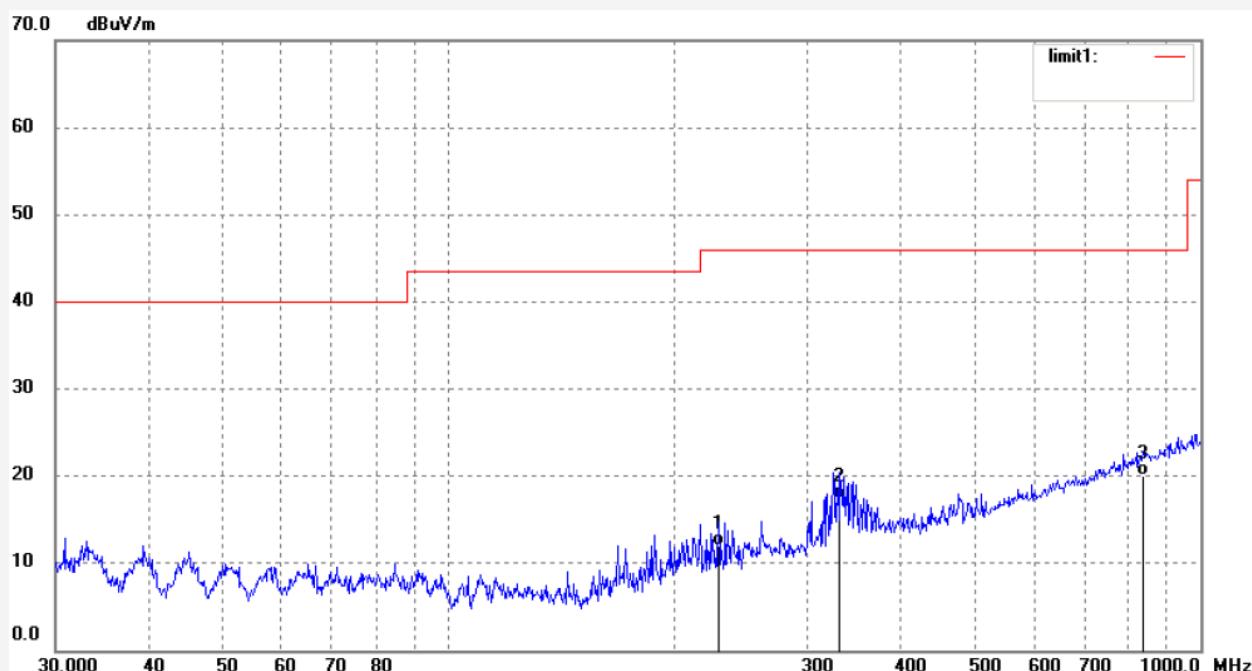
Mode: TX 2480MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	228.4903	31.85	-19.87	11.98	46.00	-34.02	QP			
2	331.3546	34.32	-16.92	17.40	46.00	-28.60	QP			
3	839.1817	27.23	-7.15	20.08	46.00	-25.92	QP			

Job No.: alen #4147

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:02:42

EUT: R/C Flying Fire Dragon

Engineer Signature:

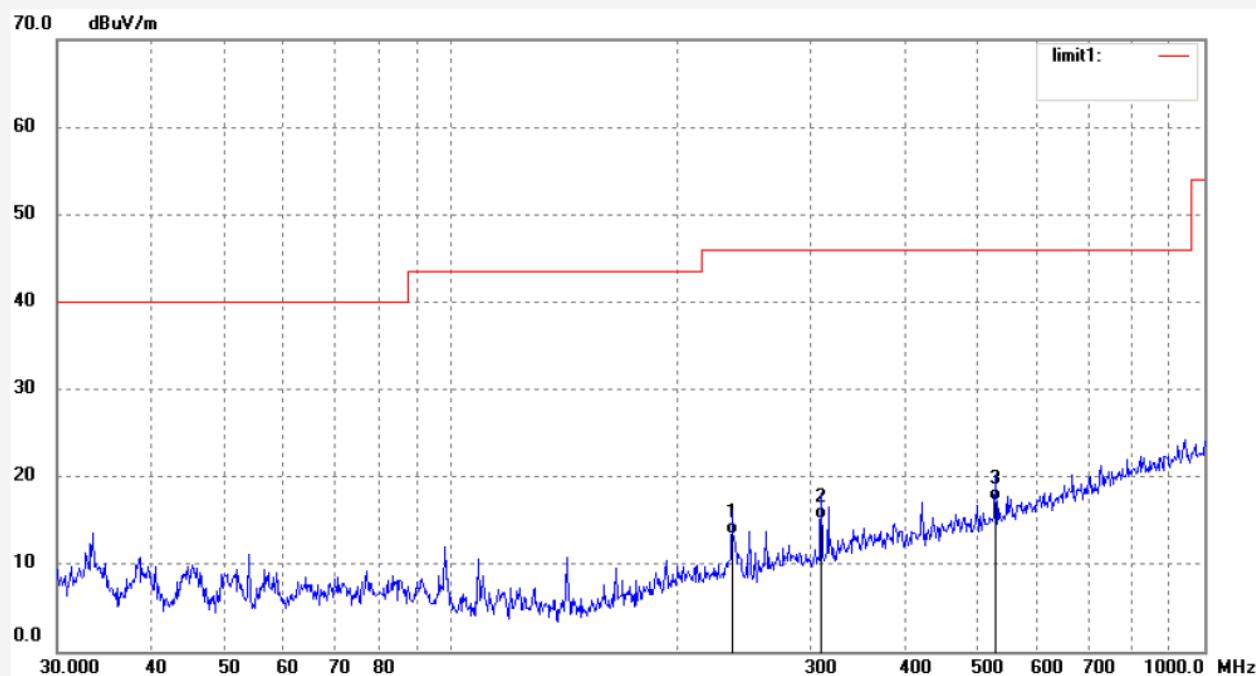
Mode: TX 2480MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	235.8163	33.25	-19.83	13.42	46.00	-32.58	QP			
2	309.9977	32.89	-17.67	15.22	46.00	-30.78	QP			
3	528.2458	30.56	-13.32	17.24	46.00	-28.76	QP			

Job No.: alen #4153

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:24:51

EUT: R/C Flying Fire Dragon

Engineer Signature:

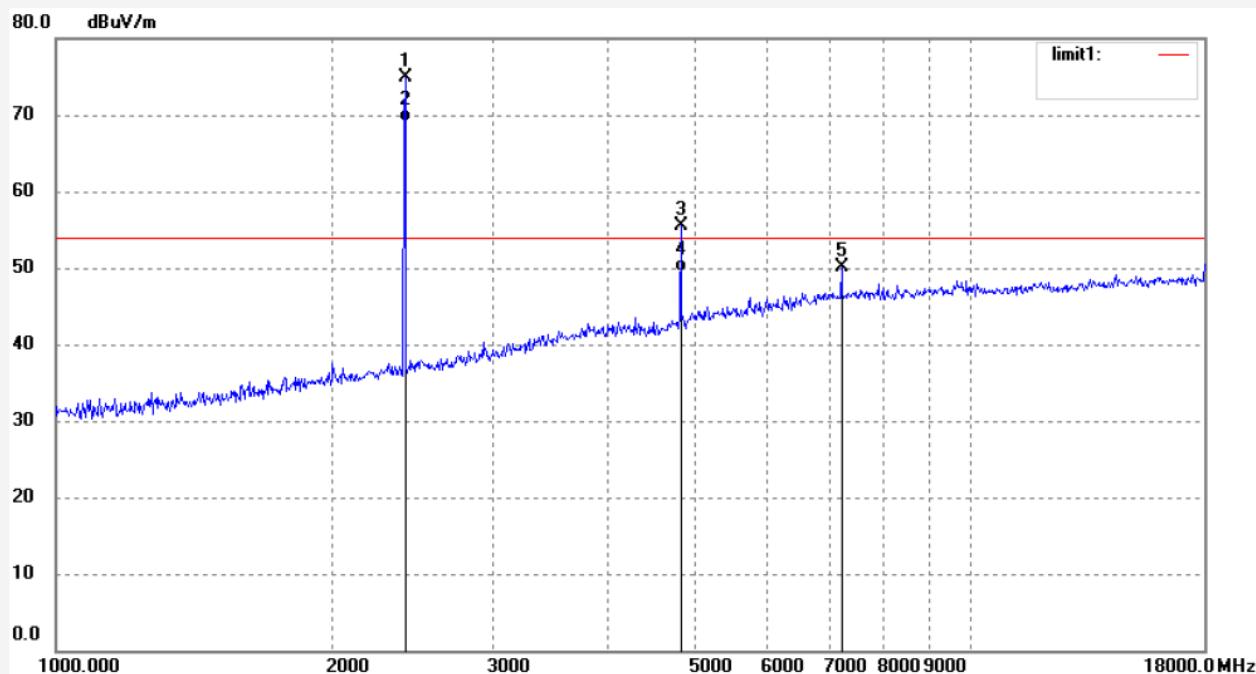
Mode: TX 2406MHz

Distance: 3m

Model: 5F62039

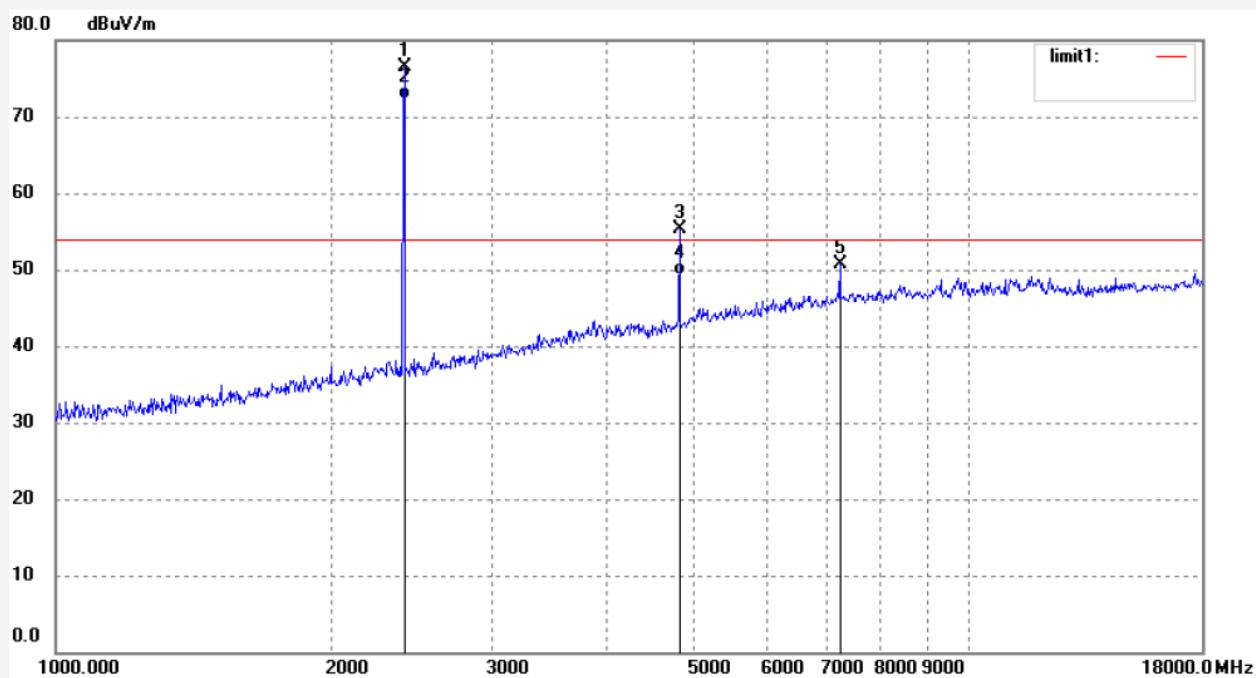
Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2406.703	81.72	-6.74	74.98	114.00	39.02	peak			
2	2406.703	75.89	-6.74	69.15	94.00	24.85	AVG			
3	4812.016	57.04	-1.54	55.50	74.00	18.50	peak			
4	4812.016	51.04	-1.54	49.50	54.00	4.50	AVG			
5	7218.150	48.84	1.31	50.15	74.00	23.85	peak			

Job No.:	alen #4152	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	DC 9.0V
Test item:	Radiation Test	Date:	2014/05/26
Temp. (C)/Hum.(%)	25 C / 55 %	Time:	11:23:37
EUT:	R/C Flying Fire Dragon	Engineer Signature:	
Mode:	TX 2406MHz	Distance:	3m
Model:	5F62039		
Manufacturer:	De Hong		
Note:	Report No:ATE20140815		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2406.703	83.17	-6.74	76.43	114.00	37.57	peak			
2	2406.703	78.96	-6.74	72.22	94.00	21.78	AVG			
3	4812.016	56.76	-1.54	55.22	74.00	18.78	peak			
4	4812.016	50.87	-1.54	49.33	54.00	4.67	AVG			
5	7218.150	49.30	1.31	50.61	74.00	23.39	peak			

Job No.: alen #4160

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:37:33

EUT: R/C Flying Fire Dragon

Engineer Signature:

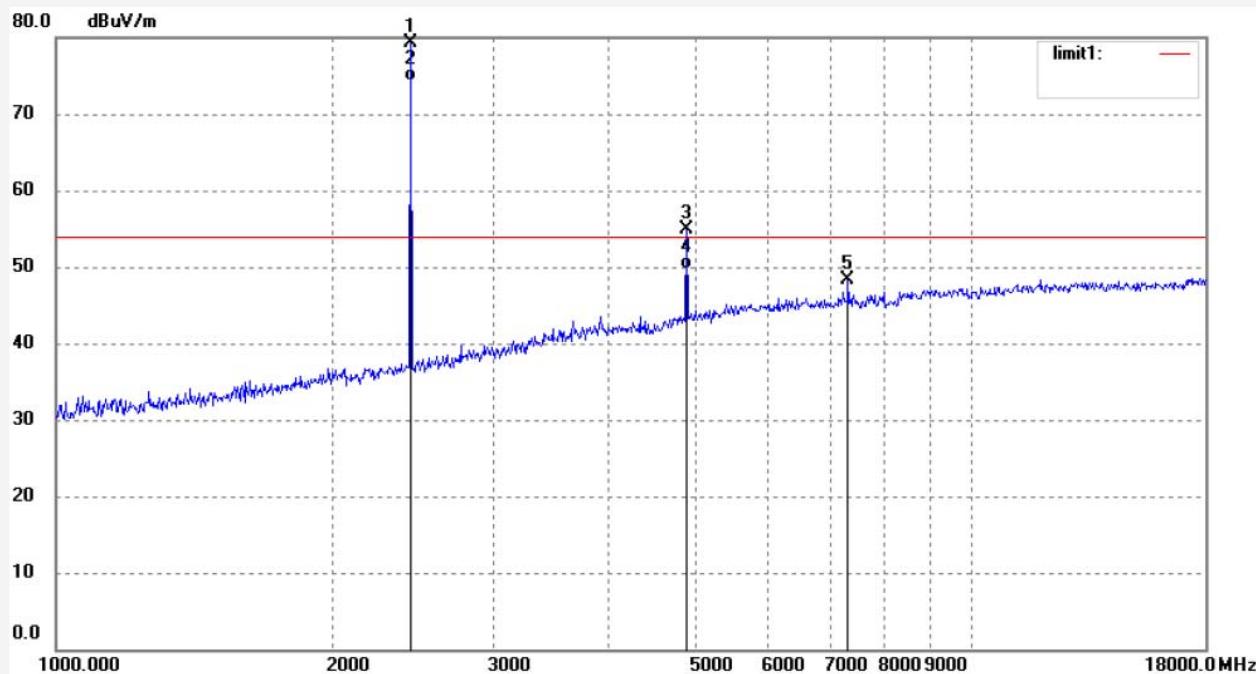
Mode: TX 2440MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.201	85.95	-6.67	79.28	114.00	34.72	peak			
2	2440.201	81.02	-6.67	74.35	94.00	19.65	AVG			
3	4880.151	56.26	-1.33	54.93	74.00	19.07	peak			
4	4880.151	51.07	-1.33	49.74	54.00	4.26	AVG			
5	7320.267	46.95	1.40	48.35	74.00	25.65	peak			

Job No.: alen #4161

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:38:08

EUT: R/C Flying Fire Dragon

Engineer Signature:

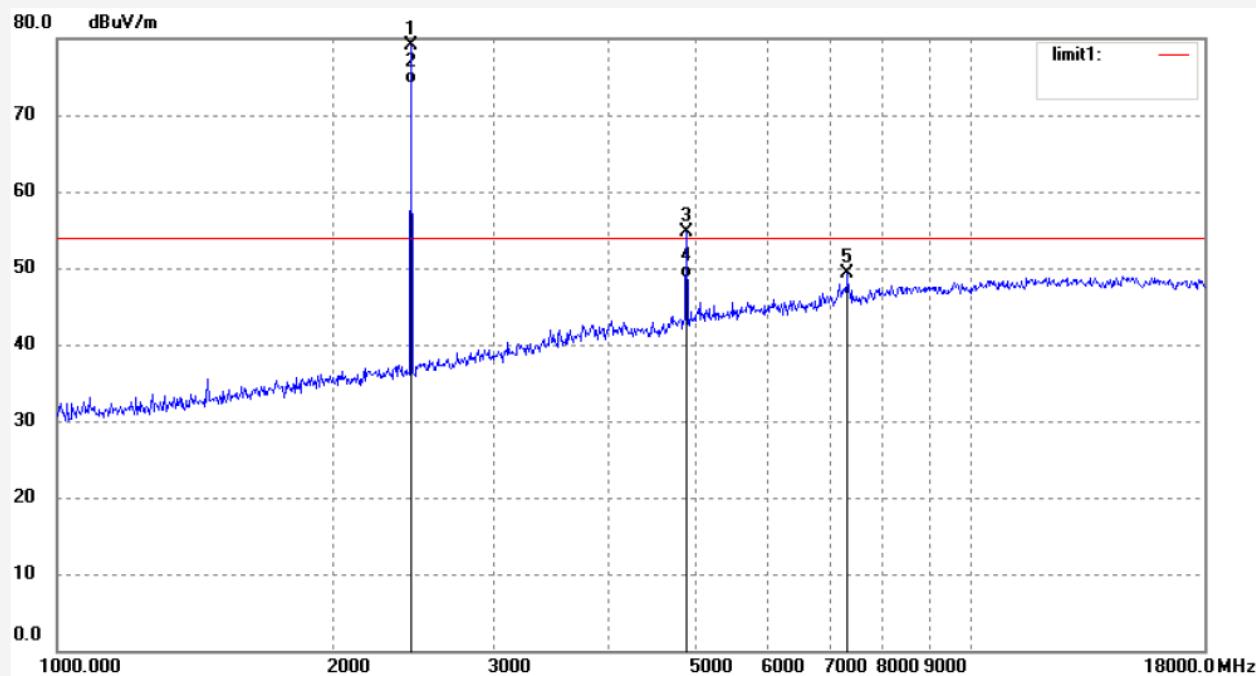
Mode: TX 2440MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.701	85.72	-6.67	79.05	114.00	34.95	peak			
2	2440.701	80.78	-6.67	74.11	94.00	19.89	AVG			
3	4880.151	56.07	-1.33	54.74	74.00	19.26	peak			
4	4880.151	50.01	-1.33	48.68	54.00	5.32	AVG			
5	7320.267	47.93	1.40	49.33	74.00	24.67	peak			

Job No.: alen #4159

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:35:40

EUT: R/C Flying Fire Dragon

Engineer Signature:

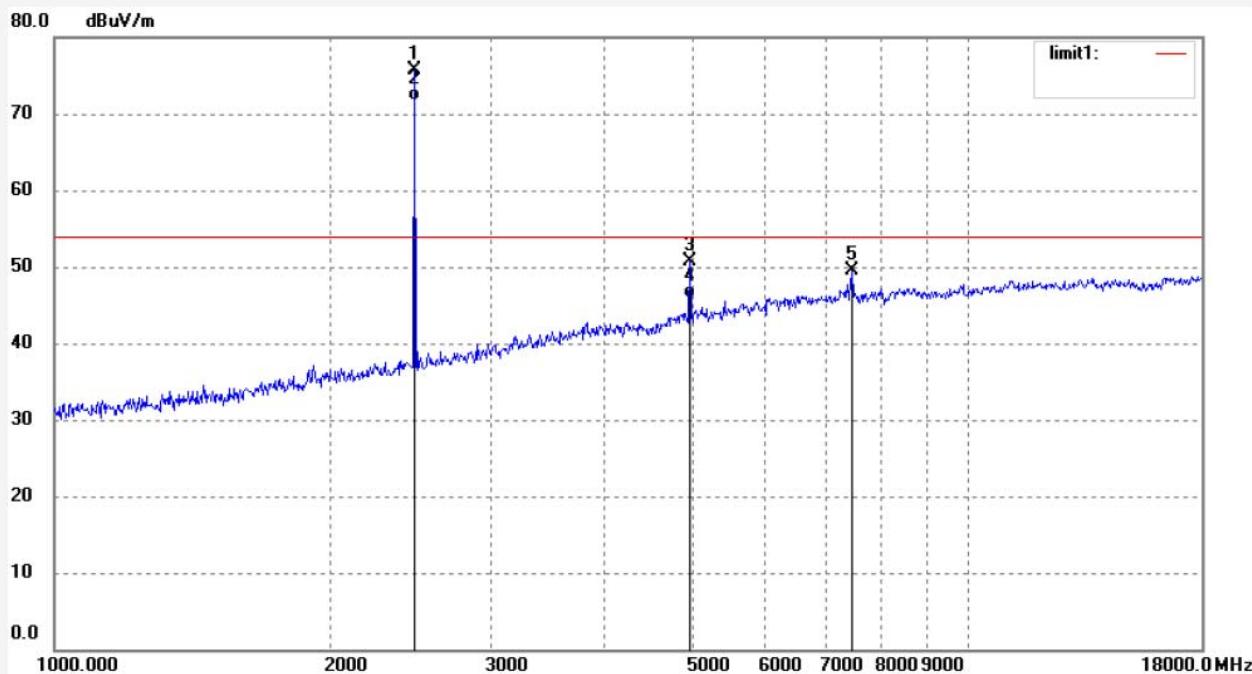
Mode: TX 2480MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.210	82.29	-6.56	75.73	114.00	38.27	peak			
2	2480.210	78.35	-6.56	71.79	94.00	22.21	AVG			
3	4960.307	51.80	-1.12	50.68	74.00	23.32	peak			
4	4960.307	47.01	-1.12	45.89	54.00	8.11	AVG			
5	7440.429	47.91	1.51	49.42	74.00	24.58	peak			

Job No.: alen #4158

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 9.0V

Test item: Radiation Test

Date: 2014/05/26

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

Time: 11:34:55

EUT: R/C Flying Fire Dragon

Engineer Signature:

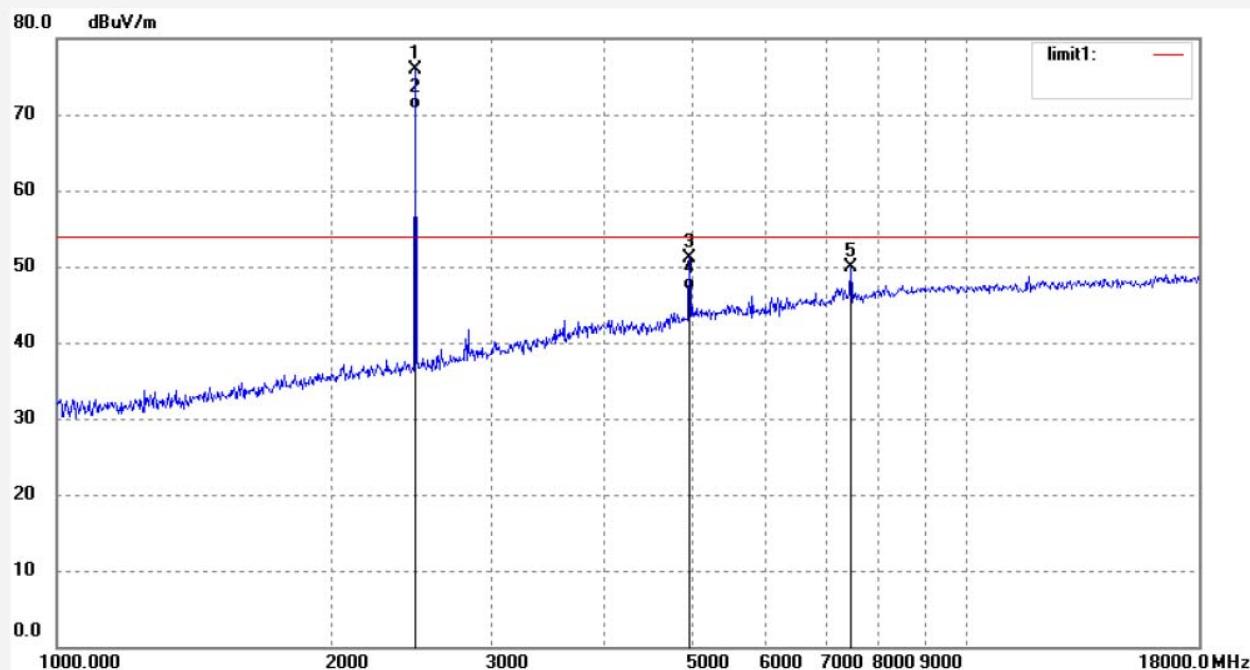
Mode: TX 2480MHz

Distance: 3m

Model: 5F62039

Manufacturer: De Hong

Note: Report No:ATE20140815



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.210	82.37	-6.56	75.81	114.00	38.19	peak			
2	2480.210	77.32	-6.56	70.76	94.00	23.24	AVG			
3	4960.307	52.22	-1.12	51.10	74.00	22.90	peak			
4	4960.307	48.01	-1.12	46.89	54.00	7.11	AVG			
5	7440.429	48.40	1.51	49.91	74.00	24.09	peak			

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 unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.

