

APPLICATION CERTIFICATION FCC Part 15C

On Behalf of
Interactive Toy Concepts Limited

Wi-Spi Helicopter
Model No.: 44077

FCC ID: QE844077

Prepared for : Interactive Toy Concepts Limited
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Report Number : ATE20120527
Date of Test : March 27-31, 2012
Date of Report : March 31, 2012

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Test Report Certification

Applicant : Interactive Toy Concepts Limited

Manufacturer : Interactive Toy Concepts Limited

EUT Description : Wi-Spi Helicopter

(A) MODEL NO.: 44077

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: DC 3.7V

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.4: 2003

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 15.247 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 :

March 27-31, 2012

Prepared by :



(Engineer)

Approved & Authorized Signer :



(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	Wi-Spi Helicopter
Model Number	:	44077
Frequency Band	:	2412-2462MHz
Number of Channels	:	11
Antenna Gain	:	2dBi
Power Supply	:	DC 3.7V (Lithium ion battery)
Data Rate	:	IEEE 802.11b: 11/5.5/2/1Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6Mbps
Applicant	:	Interactive Toy Concepts Limited
Address	:	Unit 709, 7/F., Tower 2, Cheung Sha Wan Plaza, No.833 Cheung Sha Wan Rd., Kowloon, Hong Kong
Manufacturer	:	Interactive Toy Concepts Limited
Address	:	Unit 709, 7/F., Tower 2, Cheung Sha Wan Plaza, No.833 Cheung Sha Wan Rd., Kowloon, Hong Kong
Date of sample received	:	March 27, 2012
Date of Test	:	March 27-31, 2012

1.2. 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

1.3. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2
(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2
(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2
(Above 1GHz)

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 7, 2013
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 7, 2013
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 7, 2013
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 7, 2013
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 7, 2013
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 7, 2013
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 7, 2013
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 7, 2013

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **802.11b Transmitting mode**

Low Channel: 2412MHz

Middle Channel: 2437MHz

High Channel: 2462MHz

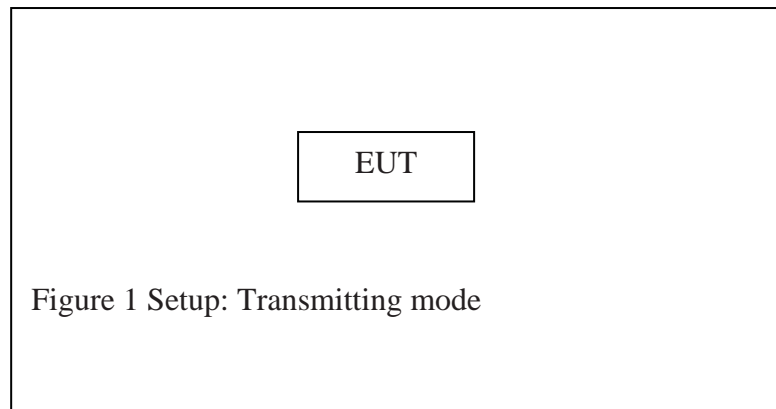
802.11g Transmitting mode

Low Channel: 2412MHz

Middle Channel: 2437MHz

High Channel: 2462MHz

3.2.Configuration and peripherals

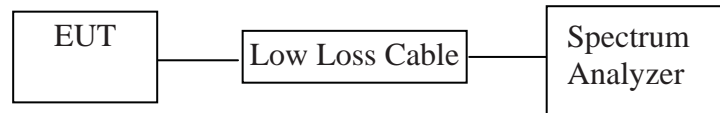


4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.247(a)(2)	6dB Bandwidth Test	Compliant
Section 15.247(e)	Power Spectral Density Test	Compliant
Section 15.247(b)(3)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.247(d)	Antenna Conducted Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. 6DB BANDWIDTH MEASUREMENT

5.1. Block Diagram of Test Setup



(EUT: Wi-Spi Helicopter)

5.2. The Requirement For Section 15.247(a)(2)

Section 15.247(a)(2): Systems using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

5.3. EUT Configuration on Measurement

The following 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.

5.3.1. Wi-Spi Helicopter (EUT)

Model Number	:	44077
Serial Number	:	N/A
Manufacturer	:	Interactive Toy Concepts Limited

5.4. Operating Condition of EUT

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

5.4.2. Turn on the power of all equipment.

5.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

5.5. Test Procedure

5.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

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

5.5.3. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

5.6. Test Result

PASS.

Date of Test:	March 28, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	TX	Test Engineer:	Apple

The test was performed with 802.11b

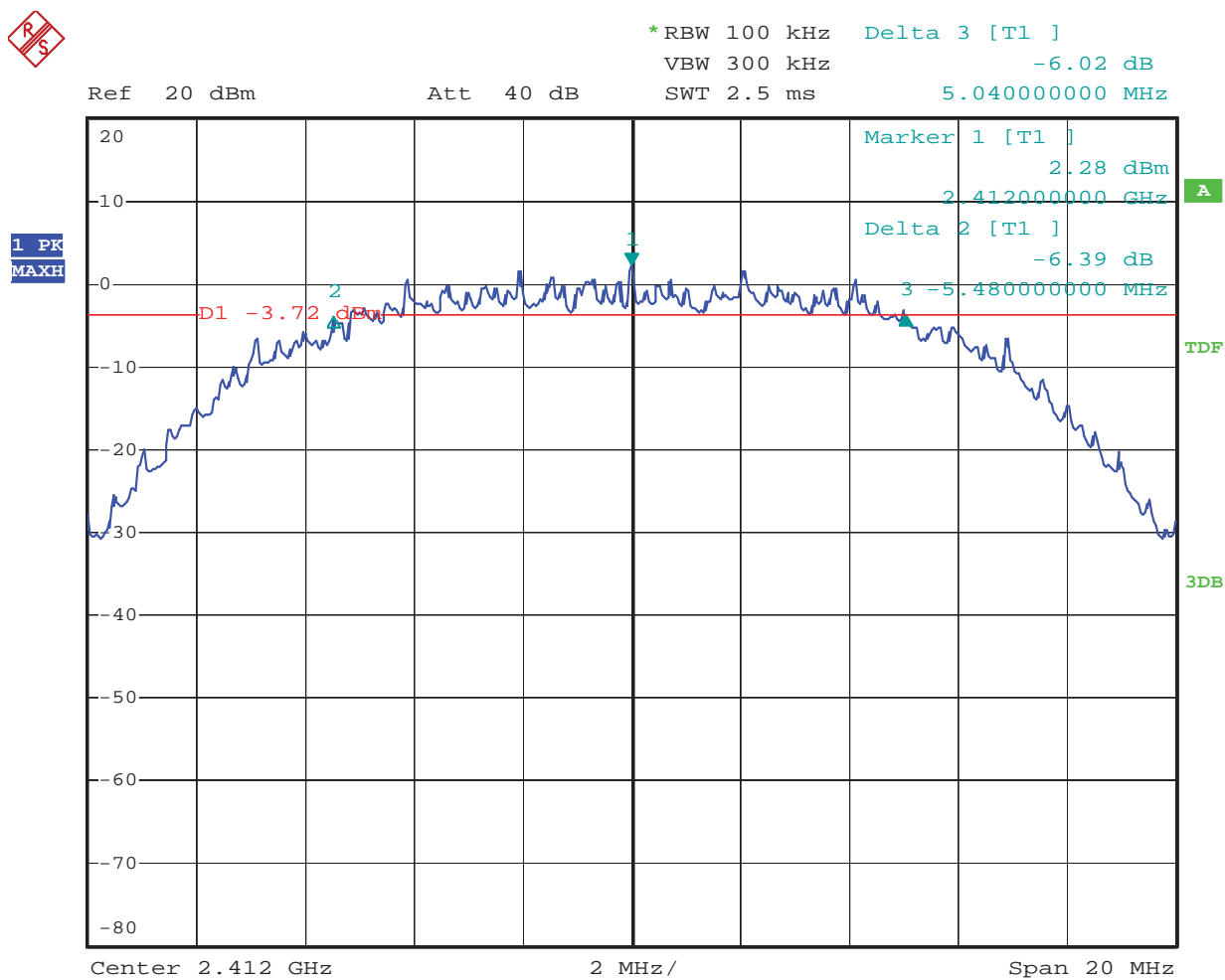
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	10.52	> 0.5MHz
Middle	2437	10.28	> 0.5MHz
High	2462	10.20	> 0.5MHz

The test was performed with 802.11g

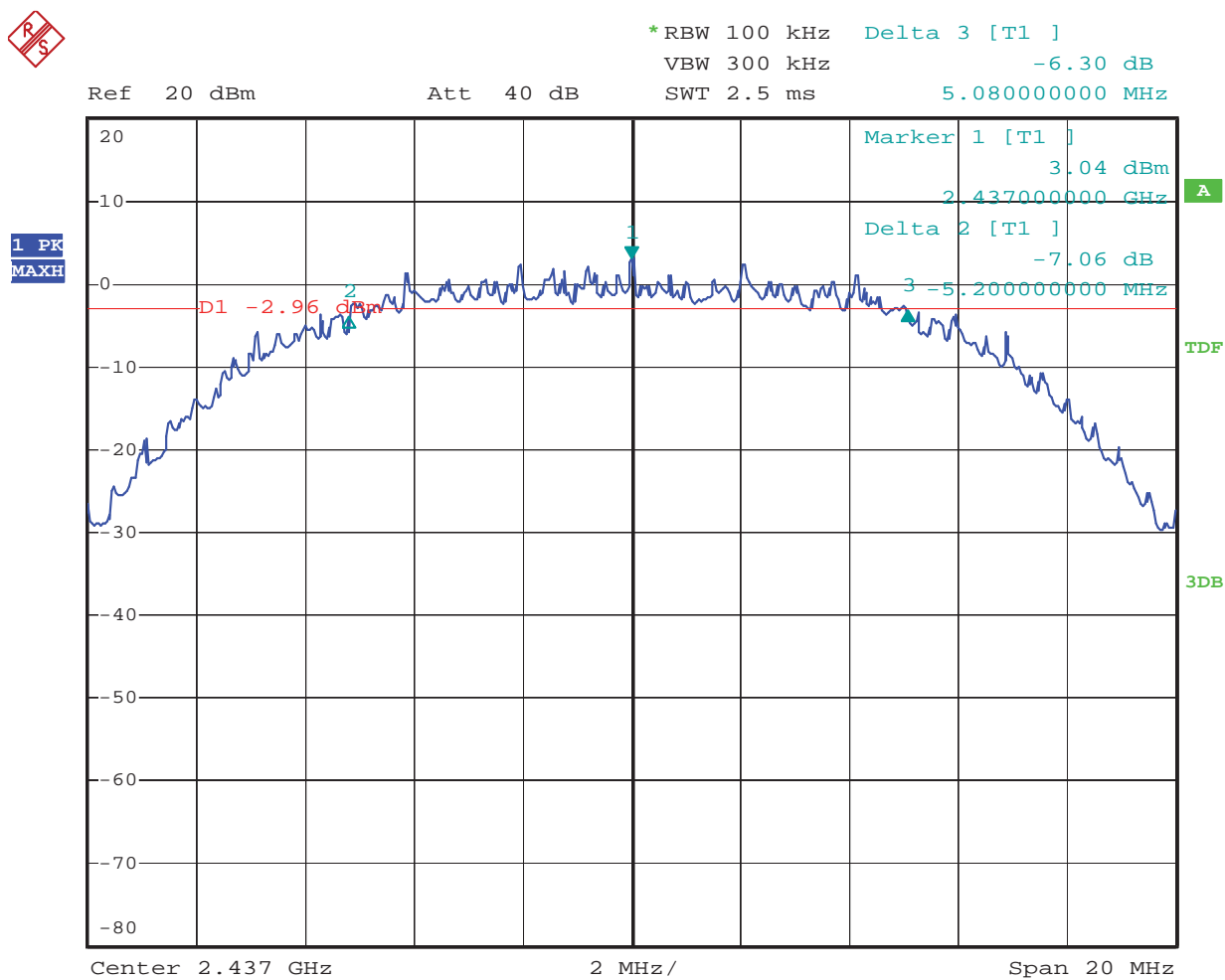
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
Low	2412	16.44	> 0.5MHz
Middle	2437	16.44	> 0.5MHz
High	2462	17.48	> 0.5MHz

The spectrum analyzer plots are attached as below.

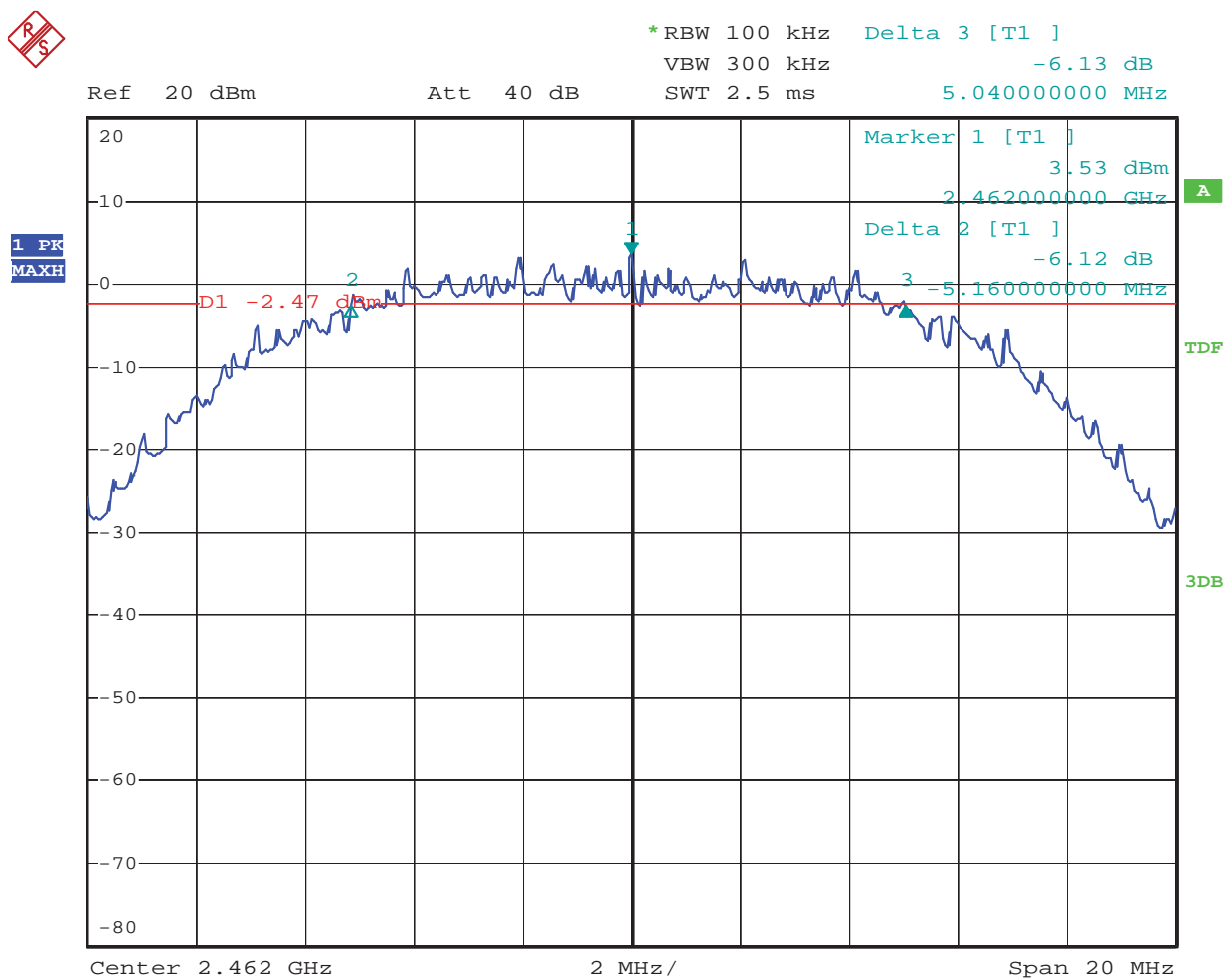
802.11b Channel Low 2412MHz



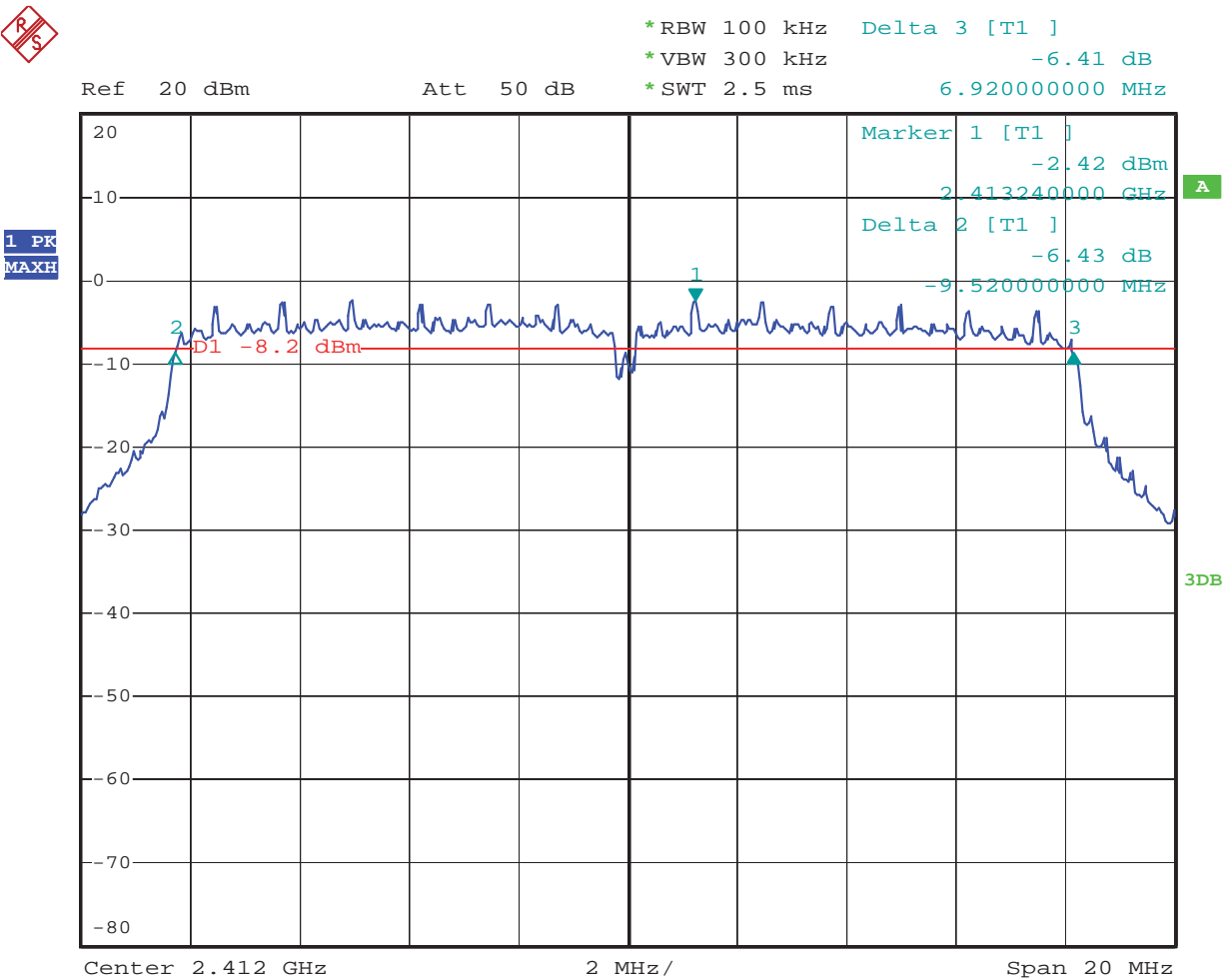
802.11b Channel Middle 2437MHz



802.11b Channel High 2462MHz



802.11g Channel Low 2412MHz



802.11g Channel Middle 2437MHz

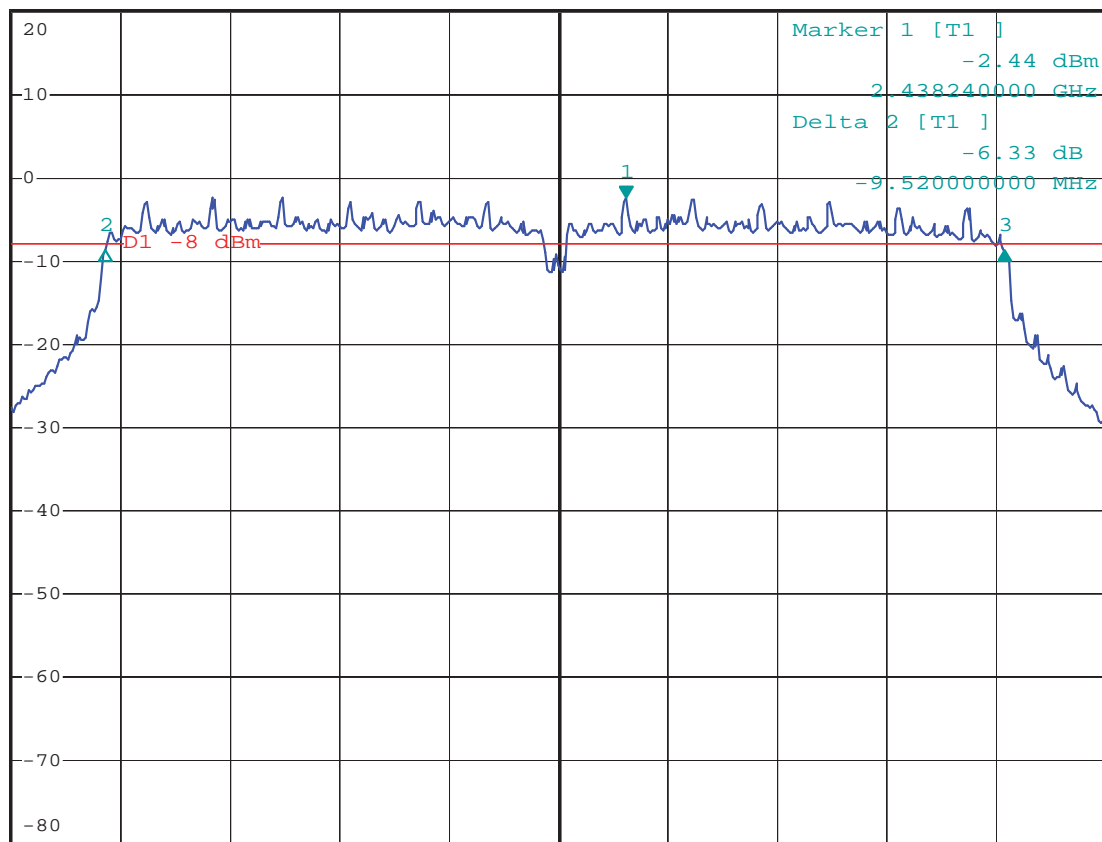


*RBW 100 kHz Delta 3 [T1]
 *VBW 300 kHz -6.38 dB
 *SWT 2.5 ms 6.920000000 MHz

Ref 20 dBm

Att 50 dB

1 PK
MAXH



3DB

Center 2.437 GHz

2 MHz/

Span 20 MHz

802.11g Channel High 2462MHz

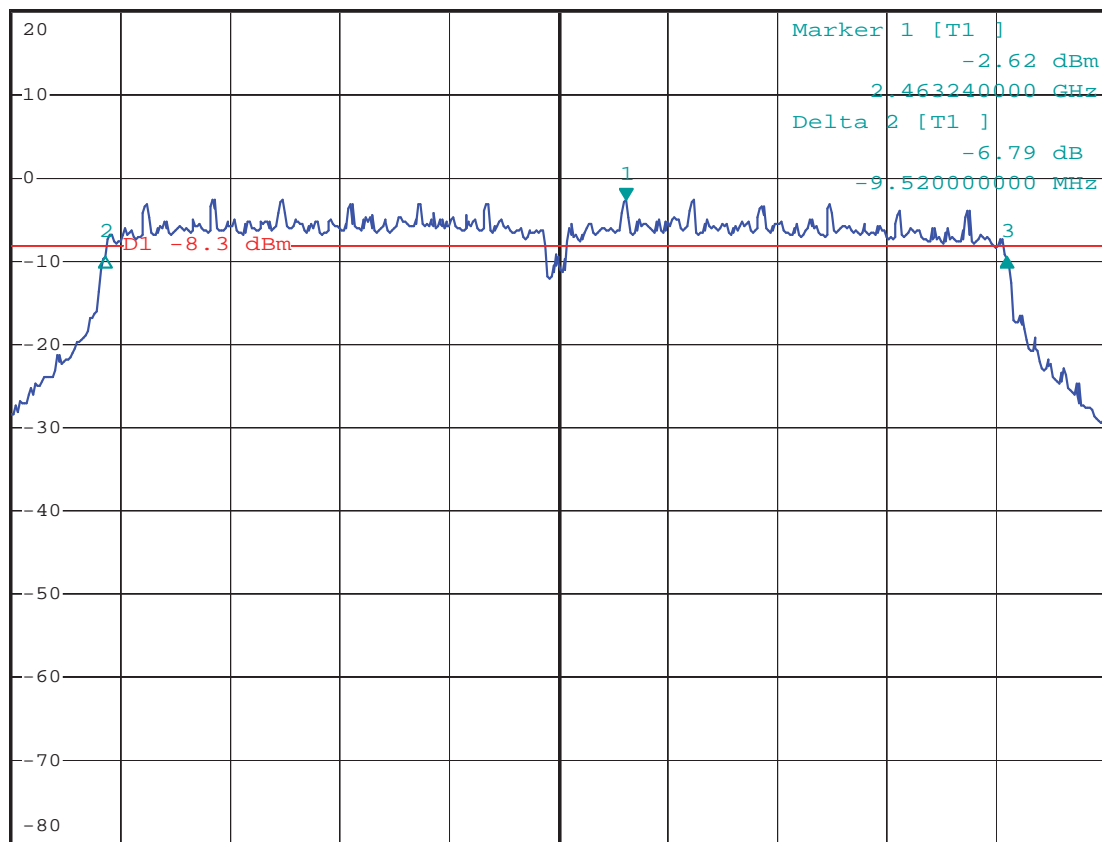


*RBW 100 kHz Delta 3 [T1]
 *VBW 300 kHz -6.82 dB
 *SWT 2.5 ms 6.960000000 MHz

Ref 20 dBm

Att 50 dB

1 PK
MAXH



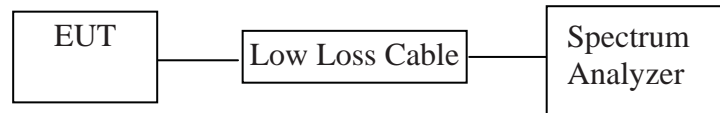
Center 2.462 GHz

2 MHz/

Span 20 MHz

6. MAXIMUM PEAK OUTPUT POWER

6.1. Block Diagram of Test Setup



(EUT: Wi-Spi Helicopter)

6.2. The Requirement For Section 15.247(b)(3)

Section 15.247(b)(3): For systems using digital modulation in the 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz bands: 1 Watt.

6.3. EUT Configuration on Measurement

The following 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.

6.3.1. Wi-Spi Helicopter (EUT)

Model Number	:	44077
Serial Number	:	N/A
Manufacturer	:	Interactive Toy Concepts Limited

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 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

6.5.Test Procedure

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

6.5.2.Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

6.5.3.Measurement the maximum peak output power.

6.6.Test Result

PASS.

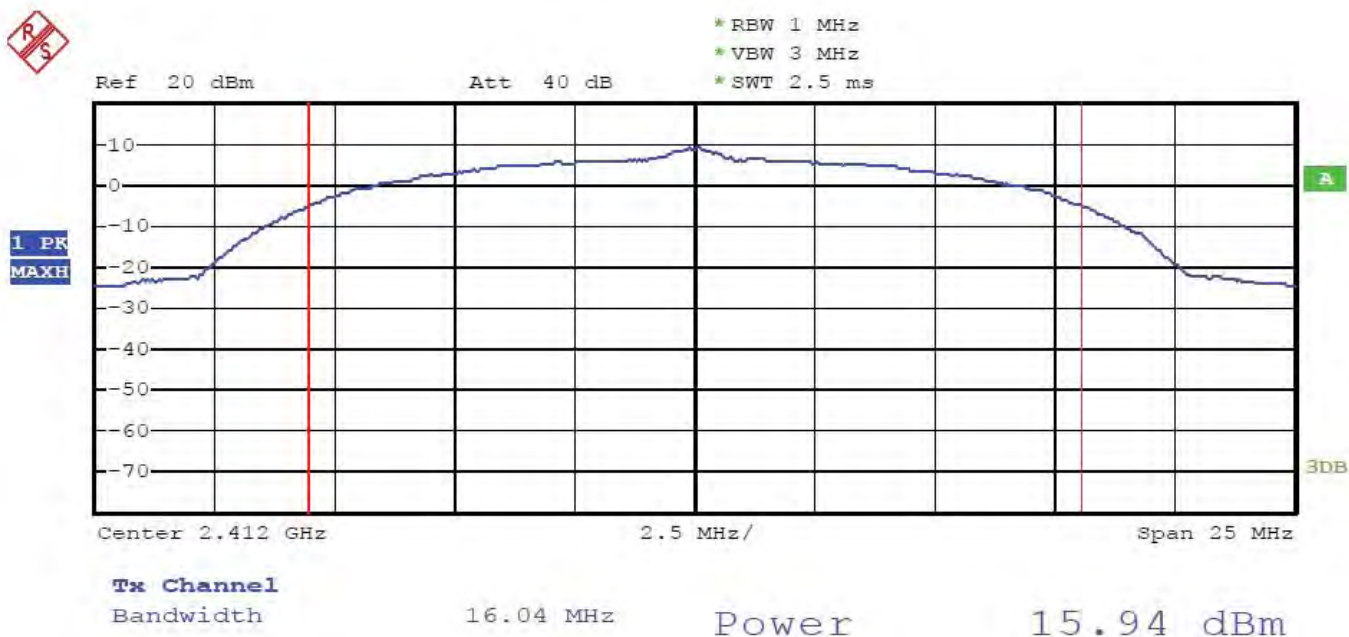
Date of Test:	<u>March 28, 2012</u>	Temperature:	<u>25°C</u>
EUT:	<u>Wi-Spi Helicopter</u>	Humidity:	<u>50%</u>
Model No.:	<u>44077</u>	Power Supply:	<u>DC 3.7V</u>
Test Mode:	<u>TX</u>	Test Engineer:	<u>Apple</u>

The test was performed with 802.11b				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2412	15.94	39.26	30 dBm / 1 W
Middle	2437	16.23	41.98	30 dBm / 1 W
High	2462	16.05	40.27	30 dBm / 1 W

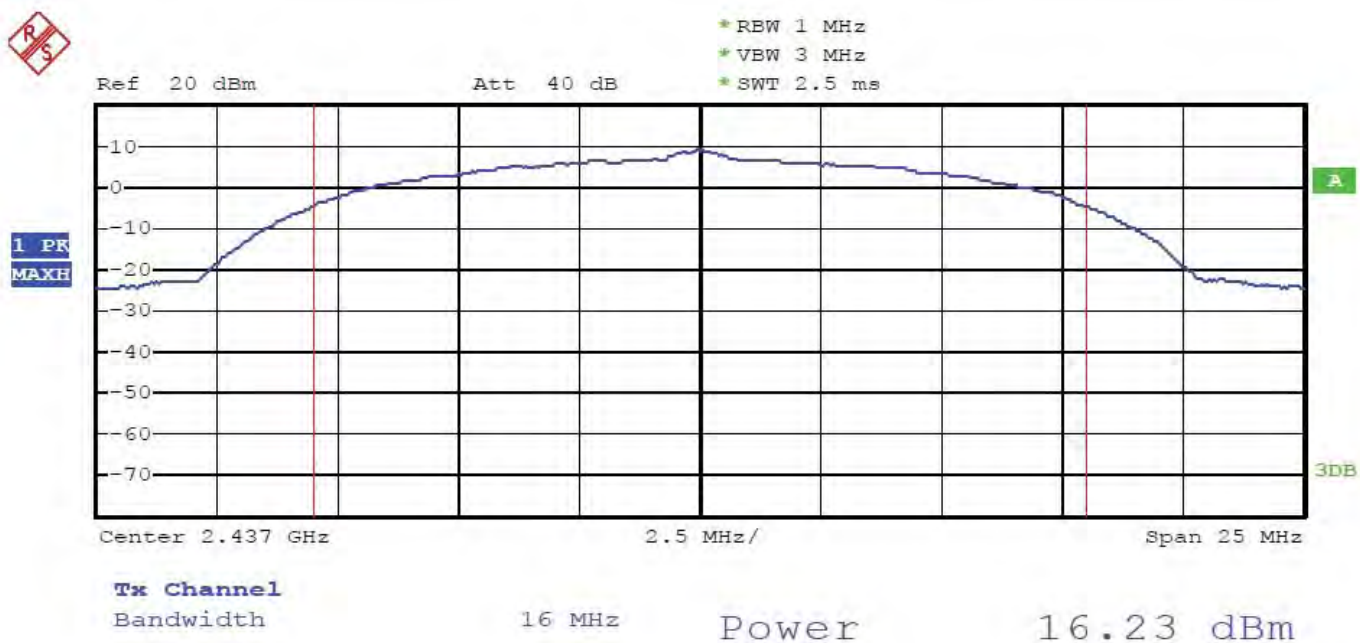
The test was performed with 802.11g				
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2412	17.23	52.84	30 dBm / 1 W
Middle	2437	17.65	58.21	30 dBm / 1 W
High	2462	17.74	59.43	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

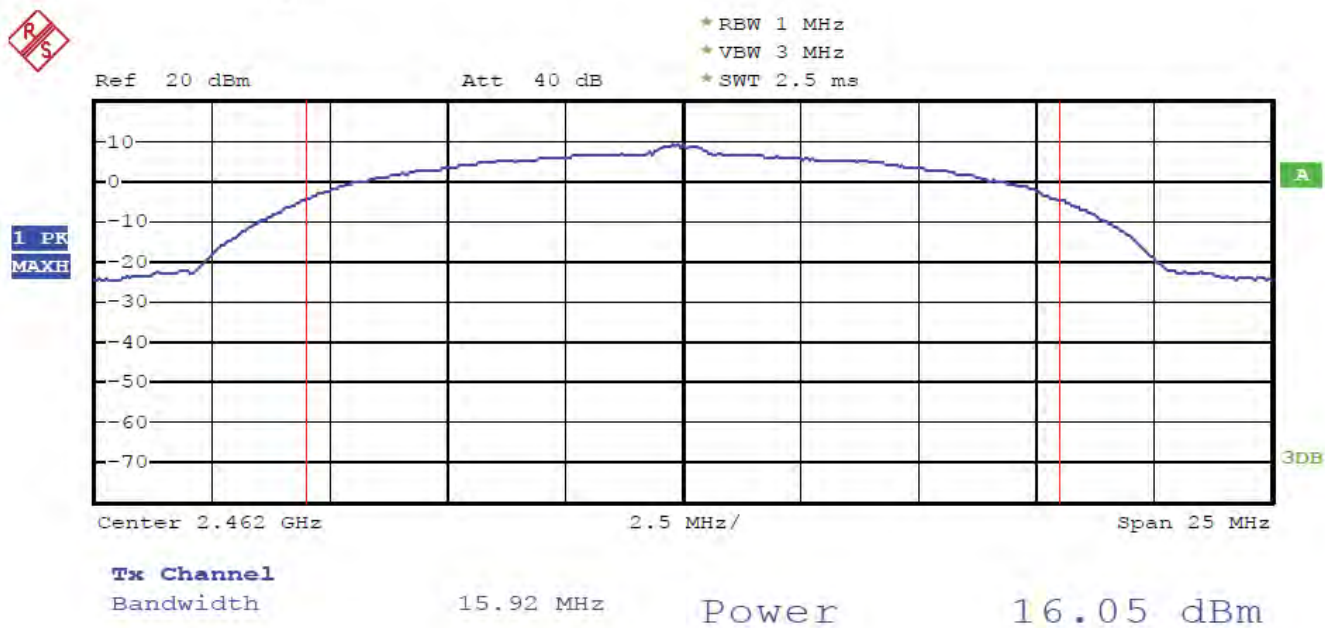
802.11b Channel Low 2412MHz



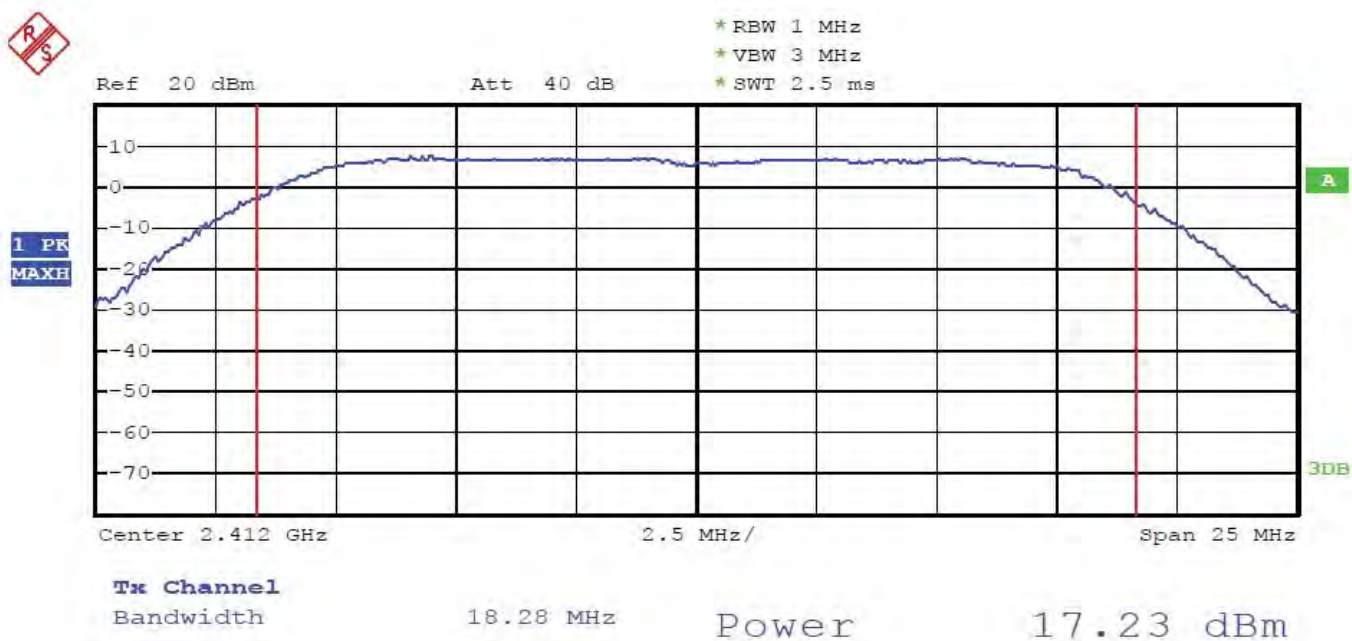
802.11b Channel Middle 2437MHz



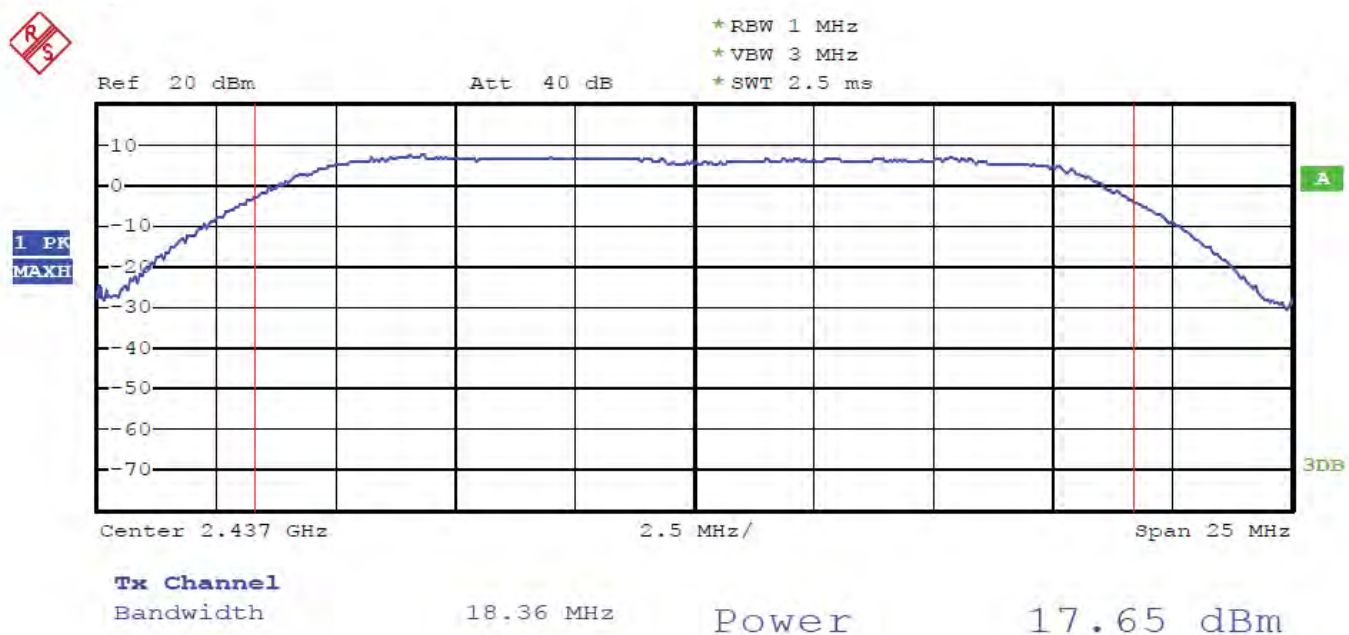
802.11b Channel High 2462MHz



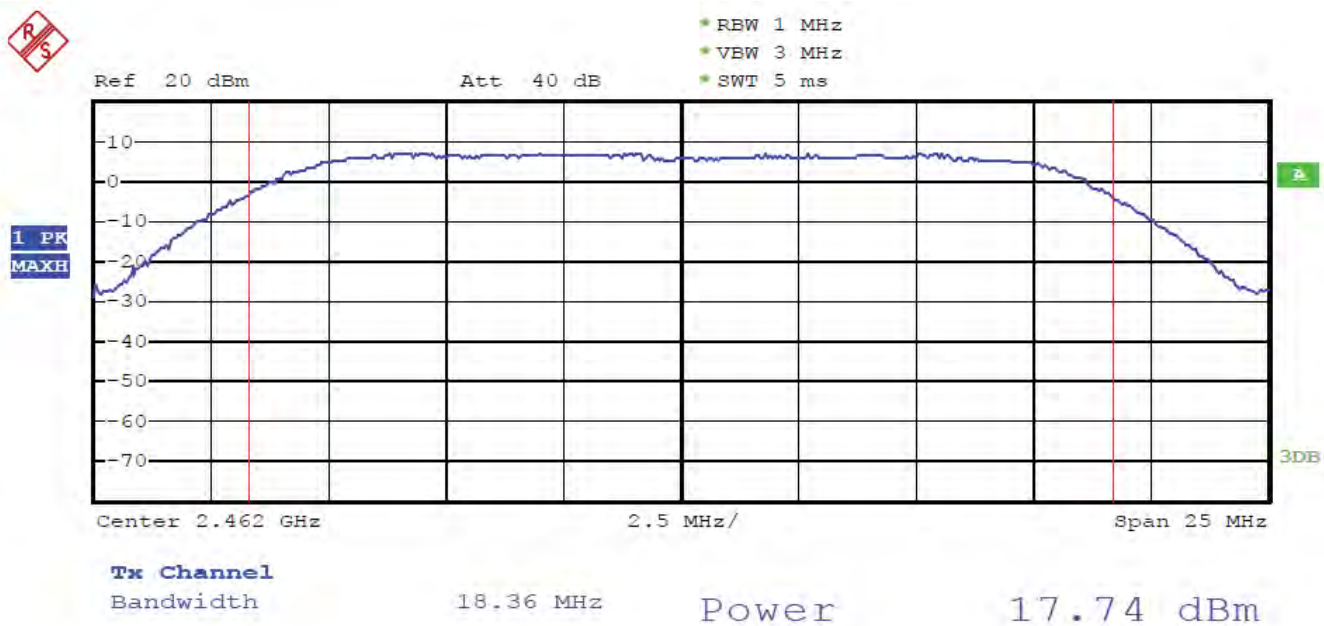
802.11g Channel Low 2412MHz



802.11g Channel Middle 2437MHz

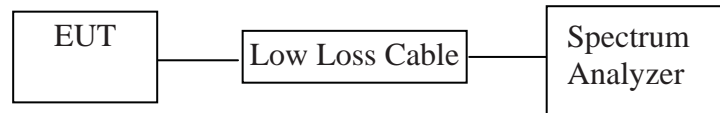


802.11g Channel High 2462MHz



7. POWER SPECTRAL DENSITY MEASUREMENT

7.1. Block Diagram of Test Setup



(EUT: Wi-Spi Helicopter)

7.2. The Requirement For Section 15.247(e)

Section 15.247(e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

7.3. EUT Configuration on Measurement

The following 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.

7.3.1. Wi-Spi Helicopter (EUT)

Model Number	:	44077
Serial Number	:	N/A
Manufacturer	:	Interactive Toy Concepts Limited

7.4. Operating Condition of EUT

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

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

7.5. Test Procedure

7.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.5.2. Set RBW of spectrum analyzer to 3kHz and VBW to 10kHz, sweep time = Span/3kHz.

7.5.3. Measurement the maximum power spectral density.

7.6. Test Result

PASS.

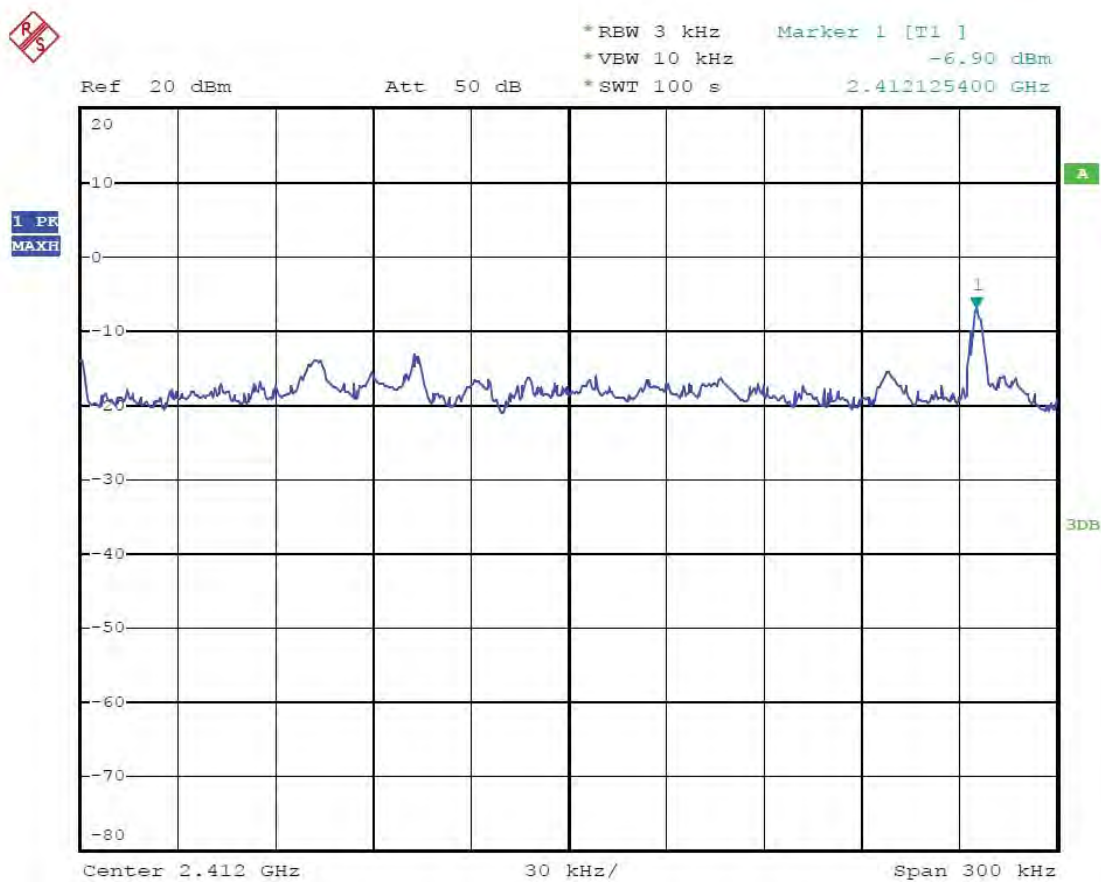
Date of Test:	March 28, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	TX	Test Engineer:	Apple

The test was performed with 802.11b			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-6.90	8 dBm
Middle	2437	-6.67	8 dBm
High	2462	-6.48	8 dBm

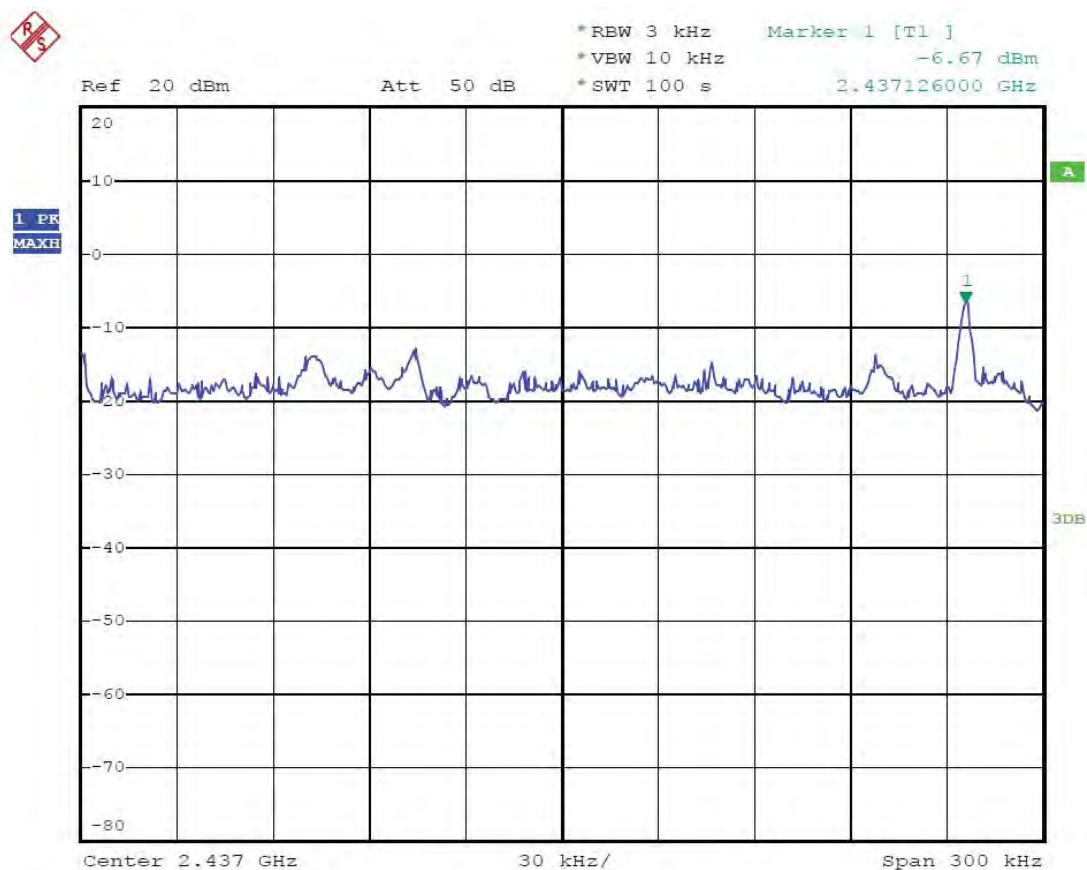
The test was performed with 802.11g			
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)
Low	2412	-13.32	8 dBm
Middle	2437	-13.58	8 dBm
High	2462	-13.75	8 dBm

The spectrum analyzer plots are attached as below.

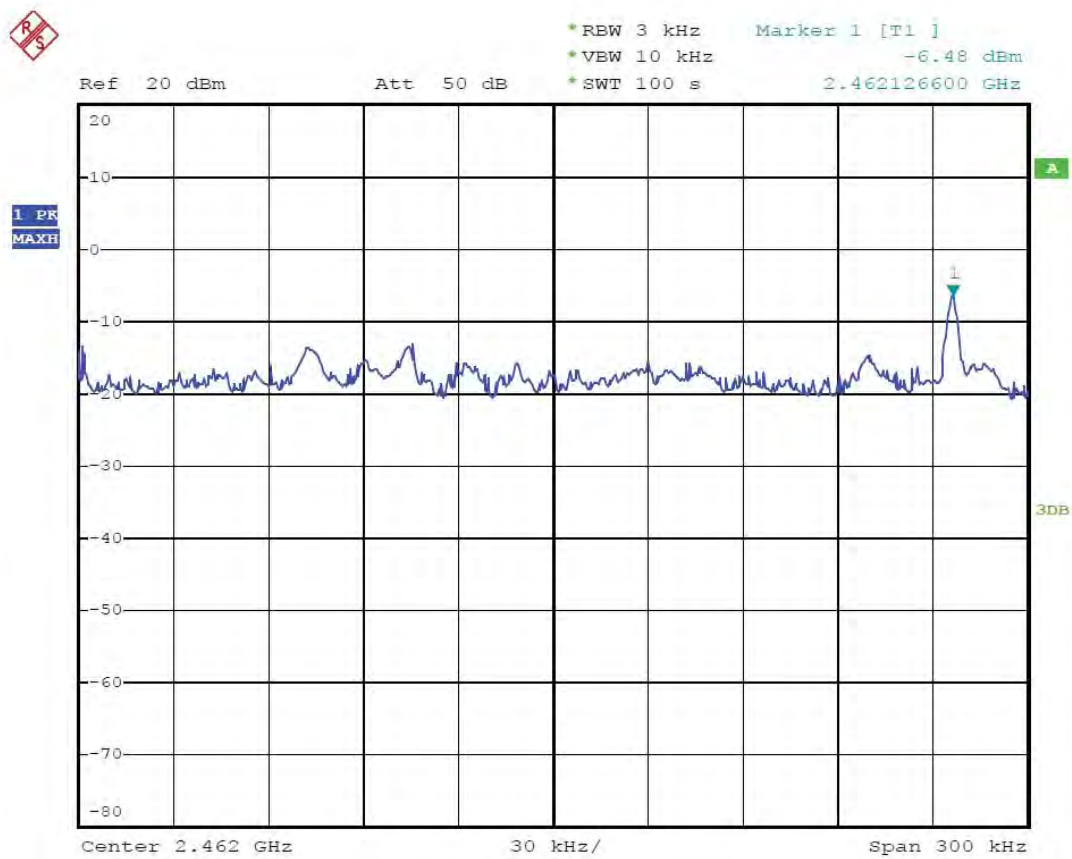
802.11b Channel Low 2412MHz



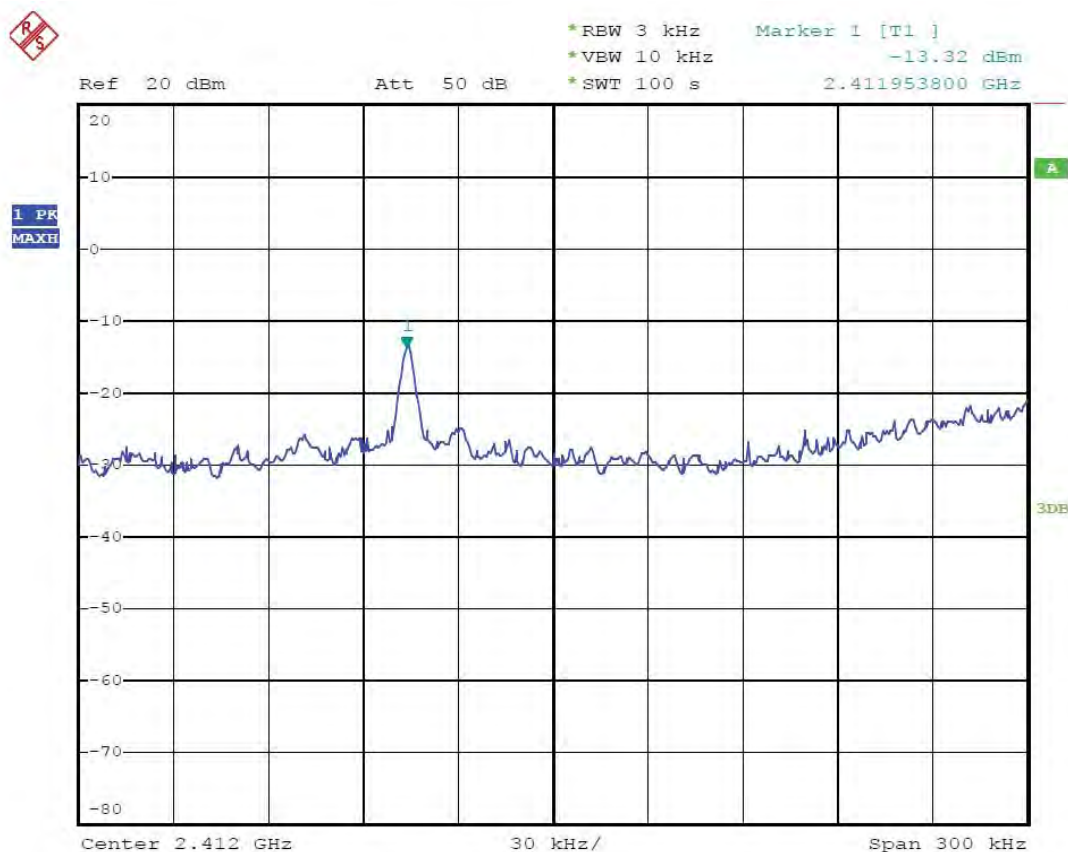
802.11b Channel Middle 2437MHz



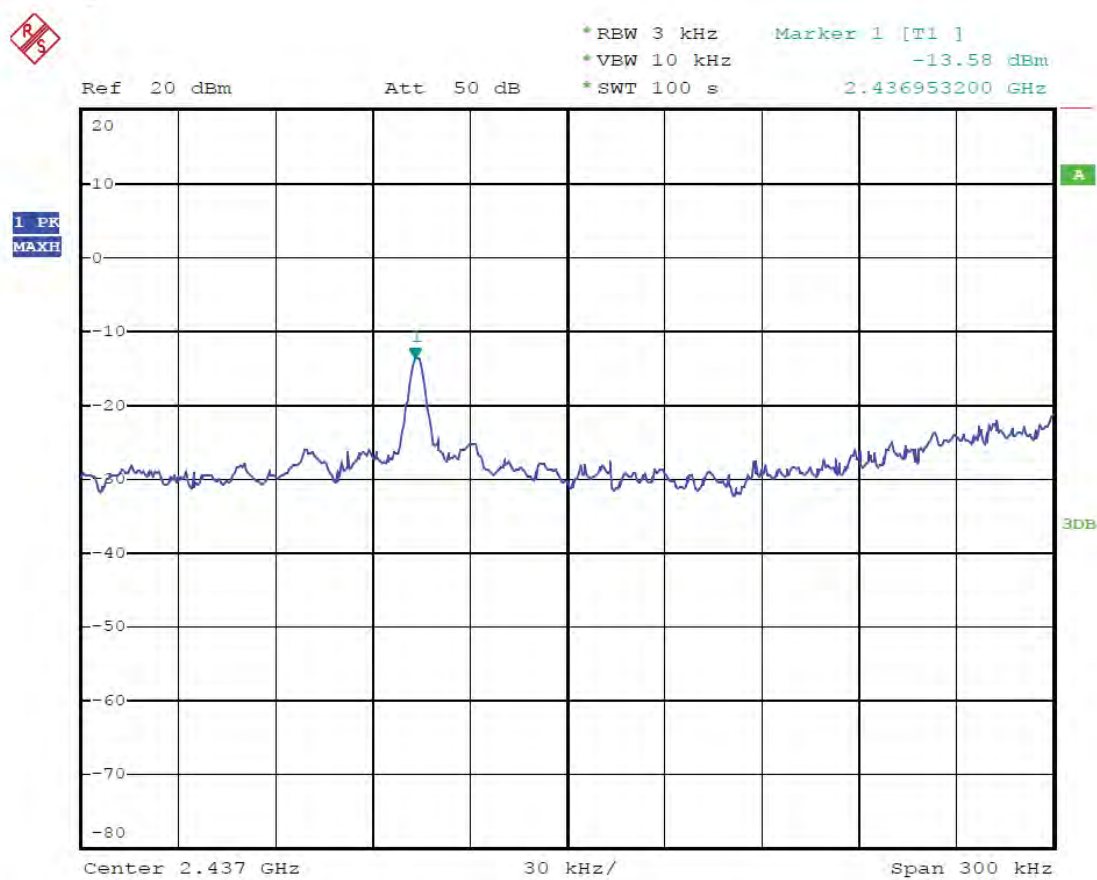
802.11b Channel High 2462MHz



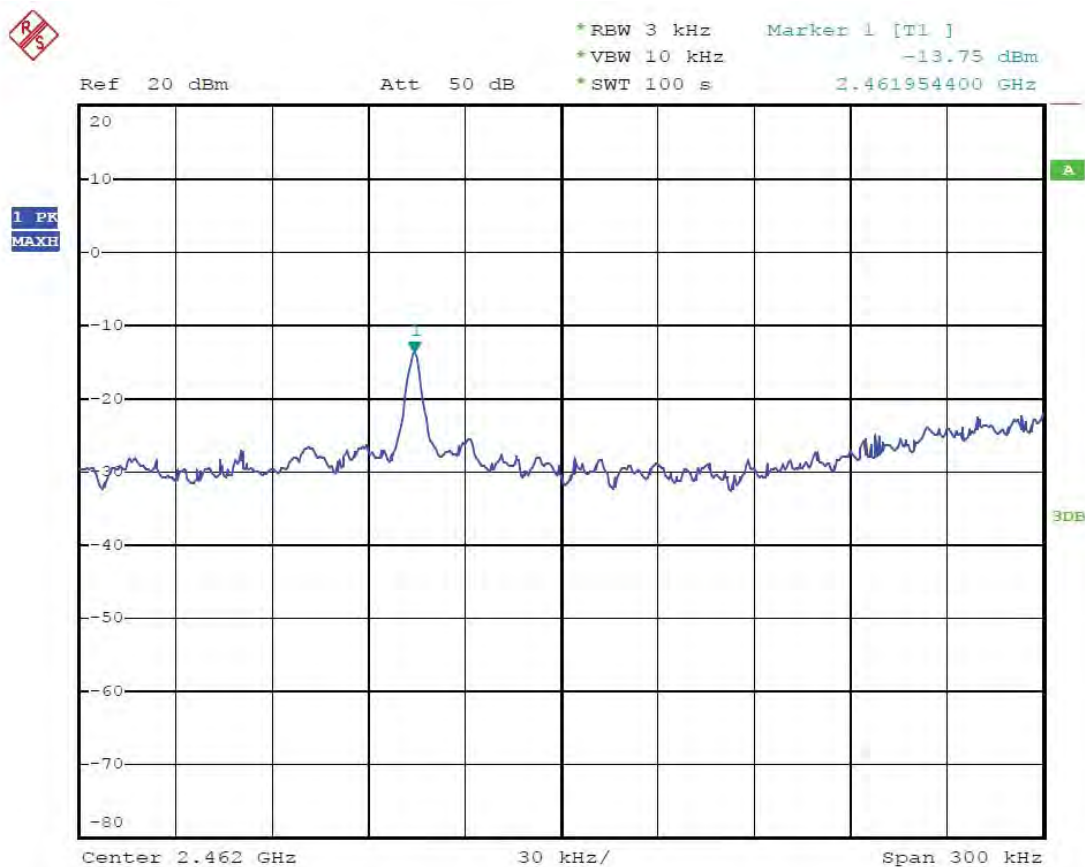
802.11g Channel Low 2412MHz



802.11g Channel Middle 2437MHz

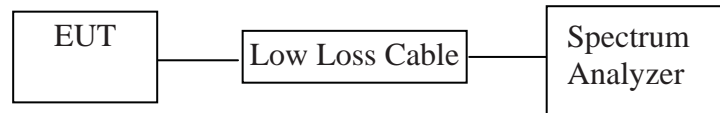


802.11g Channel High 2462MHz



8. BAND EDGE COMPLIANCE TEST

8.1. Block Diagram of Test Setup



(EUT: Wi-Spi Helicopter)

8.2. The Requirement For Section 15.247(d)

Section 15.247(d): 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 (b)(3) of this section, 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).

8.3. EUT Configuration on Measurement

The following 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.

8.3.1. Wi-Spi Helicopter (EUT)

Model Number	:	44077
Serial Number	:	N/A
Manufacturer	:	Interactive Toy Concepts Limited

8.4.Operating Condition of EUT

8.4.1. Setup the EUT and simulator as shown as Section 8.1.

8.4.2. Turn on the power of all equipment.

8.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2462MHz TX frequency to transmit.

8.5.Test Procedure

Conducted Band Edge:

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

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

Radiate Band Edge:

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

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

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

8.5.6. 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

8.5.7. The band edges was measured and recorded.

8.6.Test Result

Pass**Conducted test**

Date of Test:	March 28, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	TX	Test Engineer:	Apple

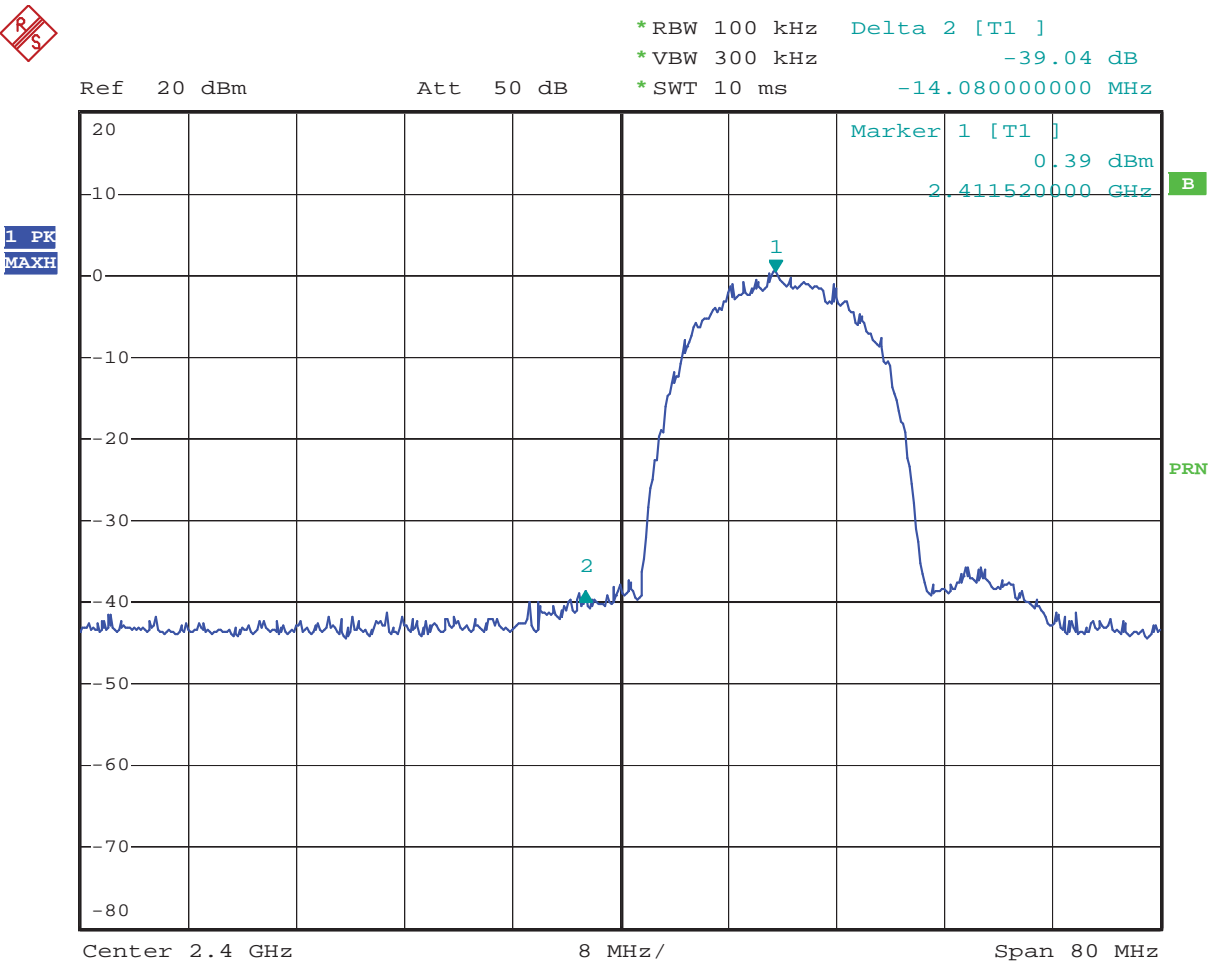
The test was performed with 802.11b

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2412	39.04	> 20dBc
2462	42.72	> 20dBc

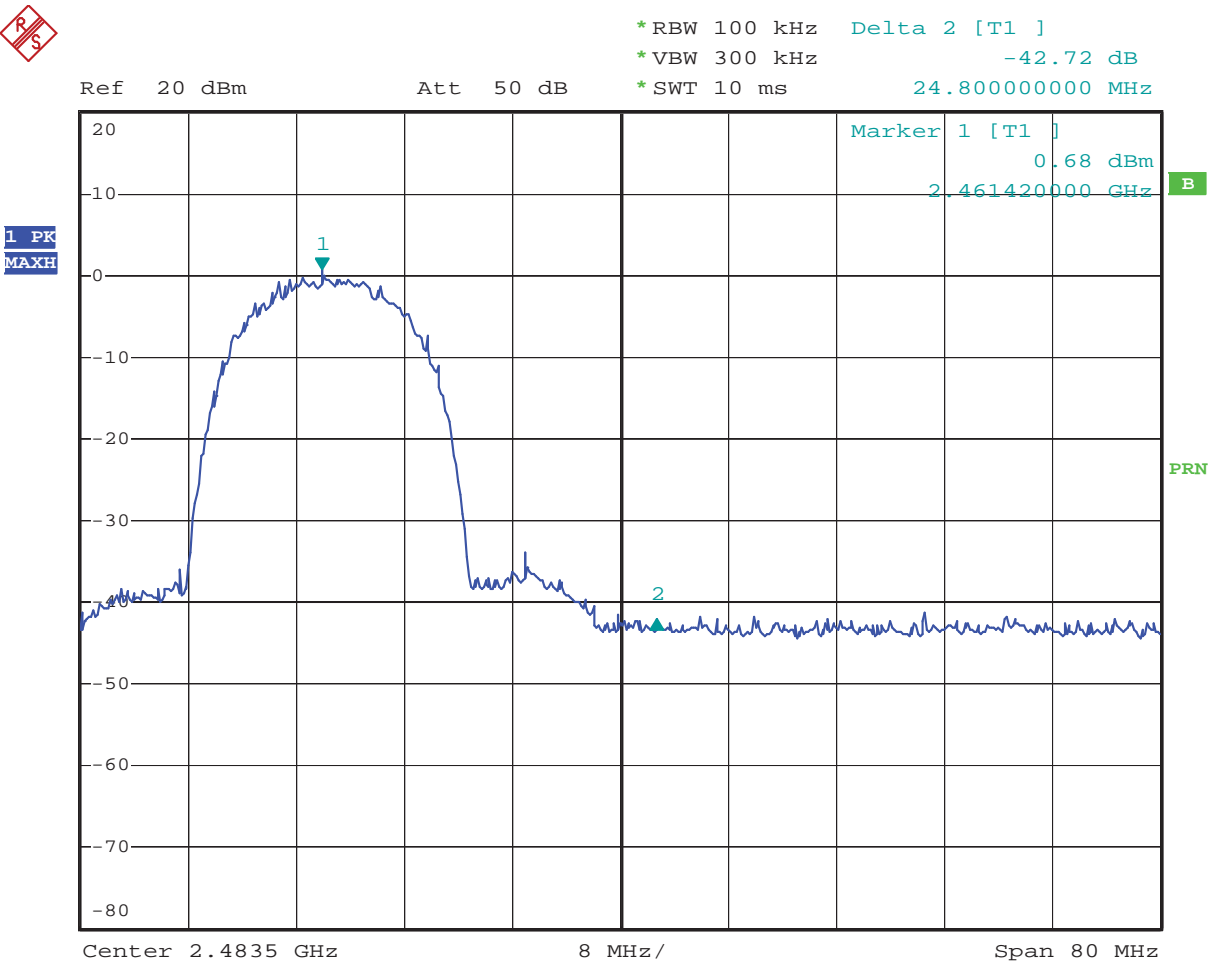
The test was performed with 802.11g

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2412	36.45	> 20dBc
2462	39.54	> 20dBc

802.11b Channel Low 2412MHz



802.11b Channel High 2462MHz



802.11g Channel Low 2412MHz

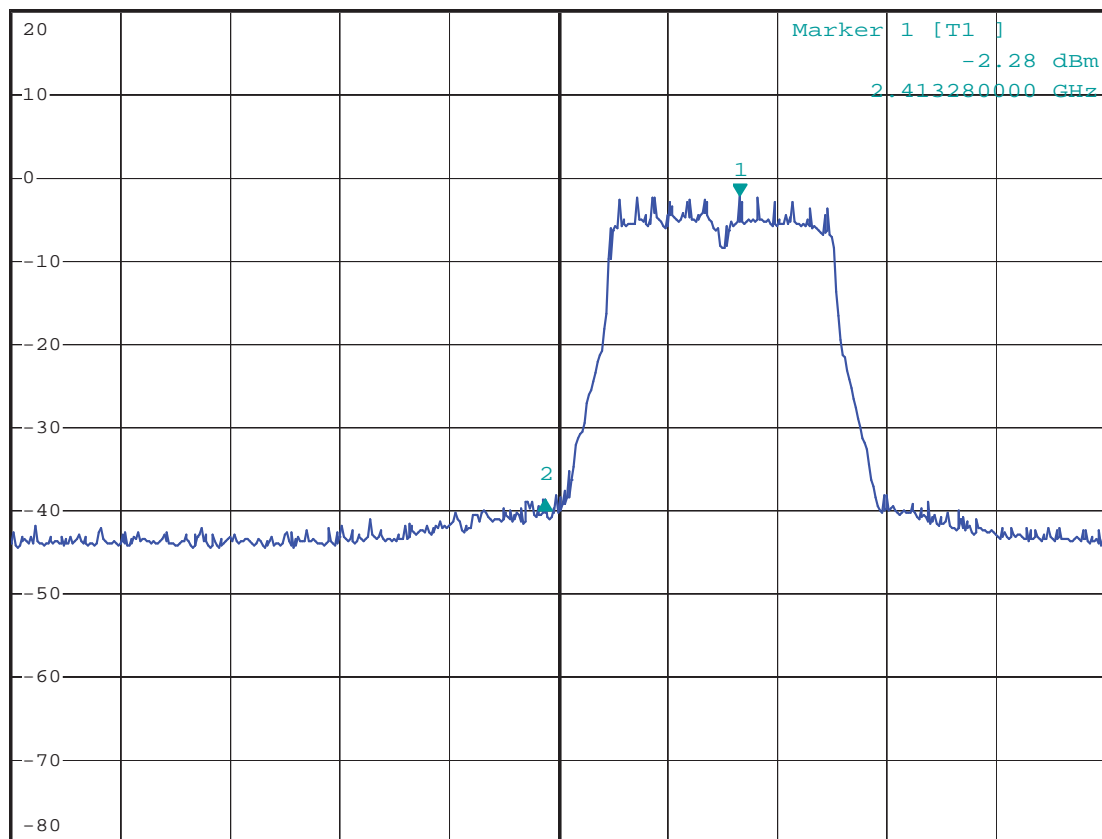


*RBW 100 kHz Delta 2 [T1]
 *VBW 300 kHz -36.45 dB
 *SWT 10 ms -14.240000000 MHz

Ref 20 dBm

Att 50 dB

1 PK
 MAXH

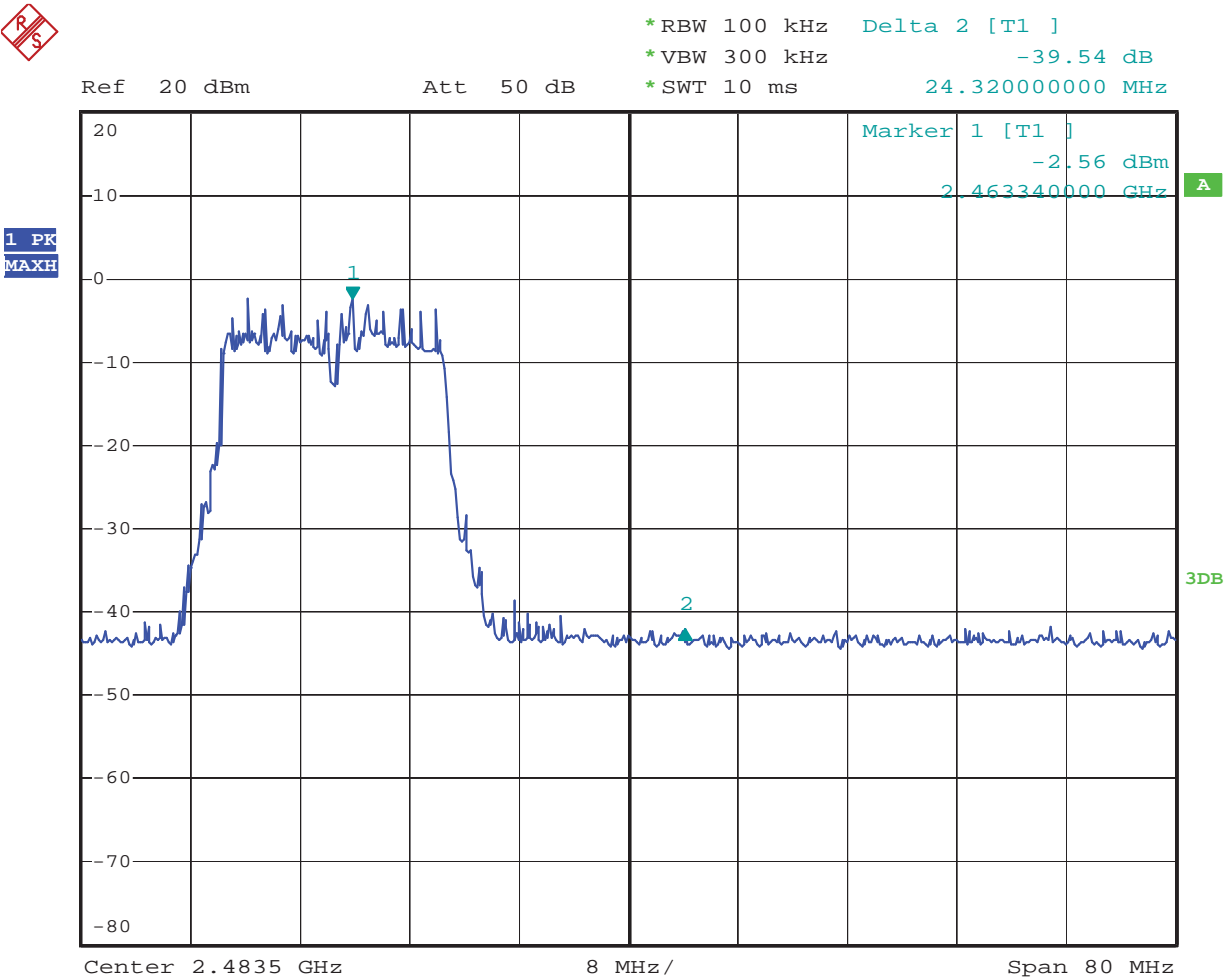


Center 2.4 GHz

8 MHz/

Span 80 MHz

802.11g Channel High 2462MHz



Radiated Band Edge Result

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11b Channel Low 2412MHz	Test Engineer:	Apple

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	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. 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:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

3. Display the measurement of peak values.

Date of Test:	<u>March 29, 2012</u>	Temperature:	<u>25°C</u>
EUT:	<u>Wi-Spi Helicopter</u>	Humidity:	<u>50%</u>
Model No.:	<u>44077</u>	Power Supply:	<u>DC 3.7V</u>
Test Mode:	<u>802.11b Channel High 2462MHz</u>	Test Engineer:	<u>Apple</u>

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	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. 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.

Date of Test:	<u>March 29, 2012</u>	Temperature:	<u>25°C</u>
EUT:	<u>Wi-Spi Helicopter</u>	Humidity:	<u>50%</u>
Model No.:	<u>44077</u>	Power Supply:	<u>DC 3.7V</u>
Test Mode:	<u>802.11g Channel Low 2412MHz</u>	Test Engineer:	<u>Apple</u>

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	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. 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:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$
3. Display the measurement of peak values.

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11g Channel High 2462MHz	Test Engineer:	Apple

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	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. 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.


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Site: 986 chamber

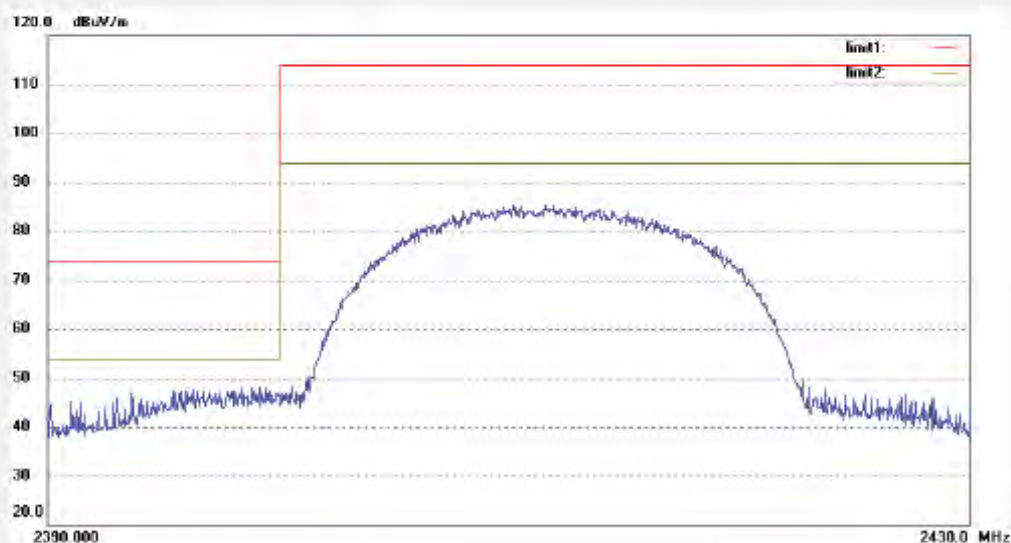
Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #010
Standard: FCC Part 15 PEAK 2.4G
Test item: Radiation Test
Temp.(C)/Hum.(%) 24 C / 48 %
EUT: Wi-Spi Helicopter
Mode: TX Channel 1 (802.11b)
Model: 44077
Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2012/03/29
Time: 19:42:28
Engineer Signature: Apple
Distance: 3m

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #011

Polarization: Vertical

Standard: FCC Part 15 PEAK 2.4G

Power Source: DC 3.7V

Test item: Radiation Test

Date: 2012/03/29

Temp.(C)/Hum.(%) 24 C / 48 %

Time: 19:44:12

EUT: Wi-Spi Helicopter

Engineer Signature: Apple

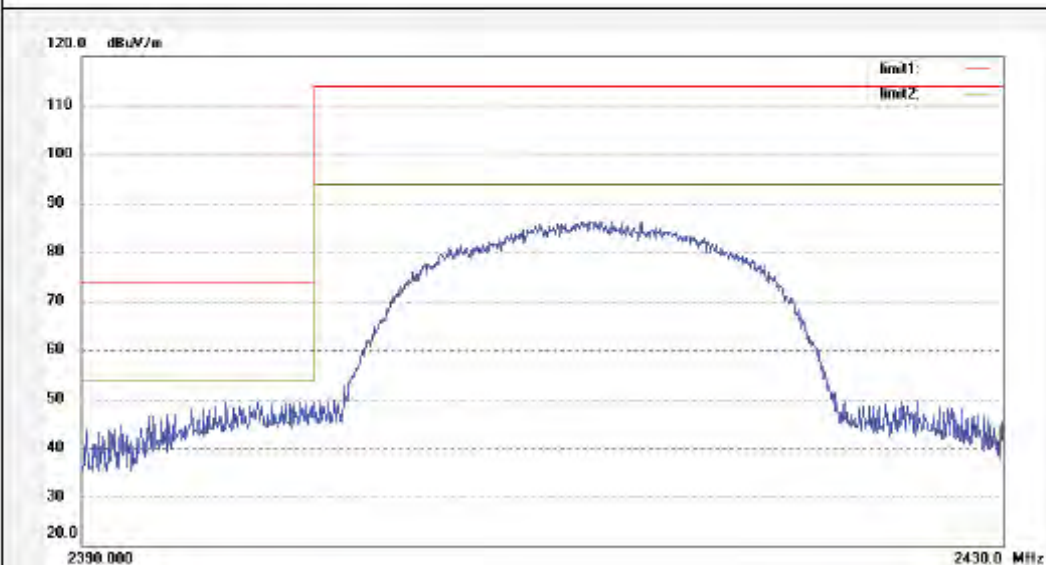
Mode: TX Channel 1 (802.11b)

Distance: 3m

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

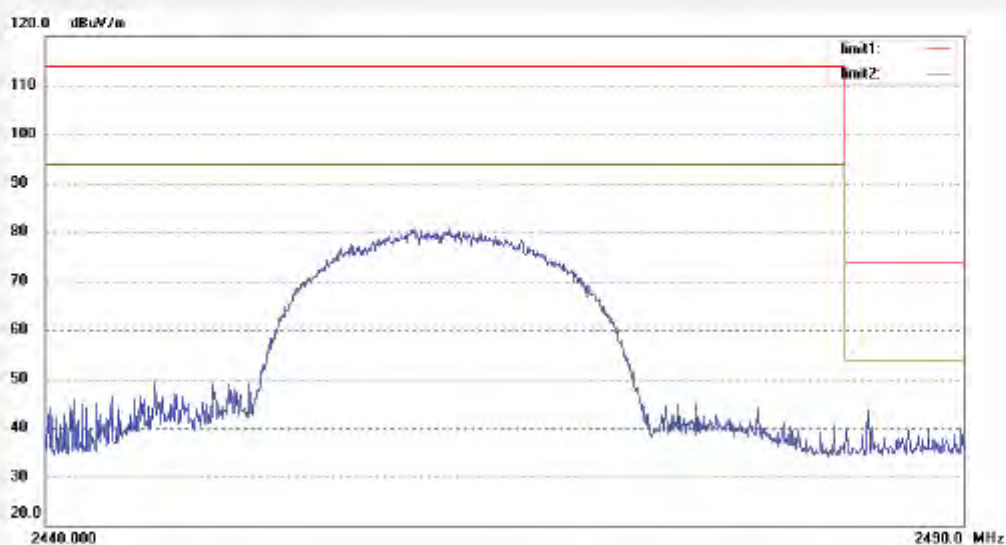
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #012
Standard: FCC Part 15 PEAK 2.4G
Test item: Radiation Test
Temp.(C)/Hum.(%) 24 C / 48 %
EUT: Wi-Spi Helicopter
Mode: TX Channel 11 (802.11b)
Model: 44077
Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2012/03/29
Time: 19:49:02
Engineer Signature: Apple
Distance: 3m

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

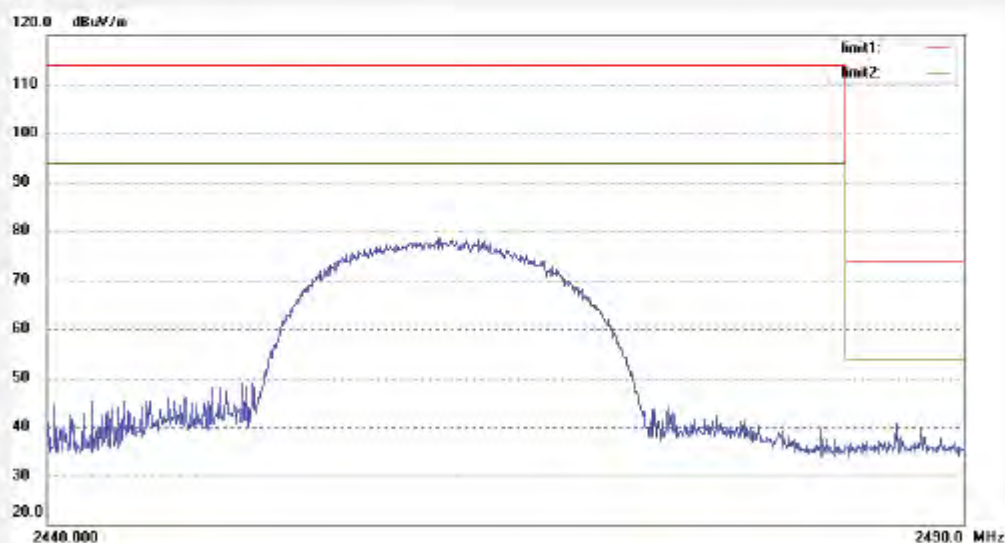
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #013
 Standard: FCC Part 15 PEAK 2.4G
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 11 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 19:50:37
 Engineer Signature: Apple
 Distance: 3m

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #014

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

Date: 2012/03/29

Time: 22:42:51

Engineer Signature: Kai

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #015

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

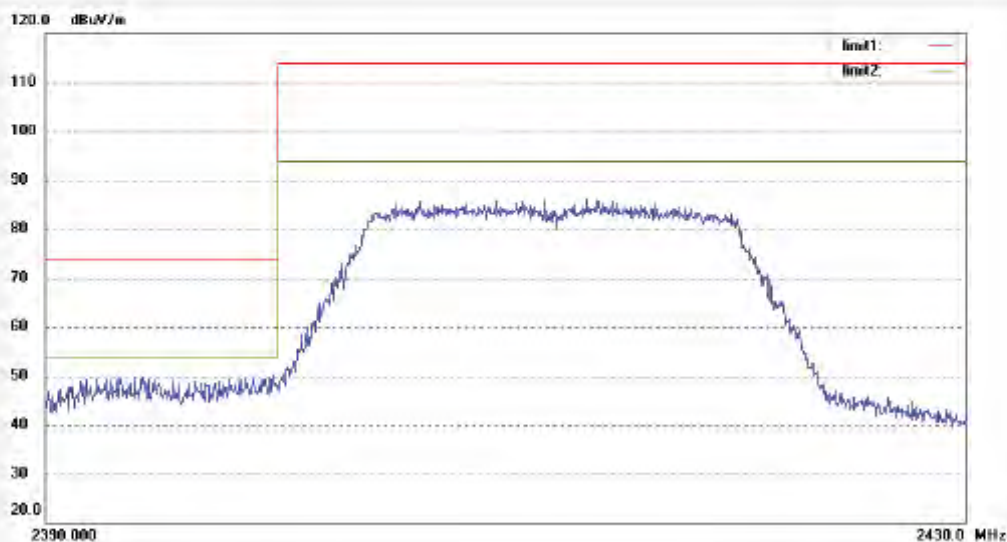
Date: 2012/03/29

Time: 22:44:01

Engineer Signature: Kai

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
-----	----------------	---------------------	----------------	--------------------	-------------------	----------------	----------	----------------	------------------	--------


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Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #013

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

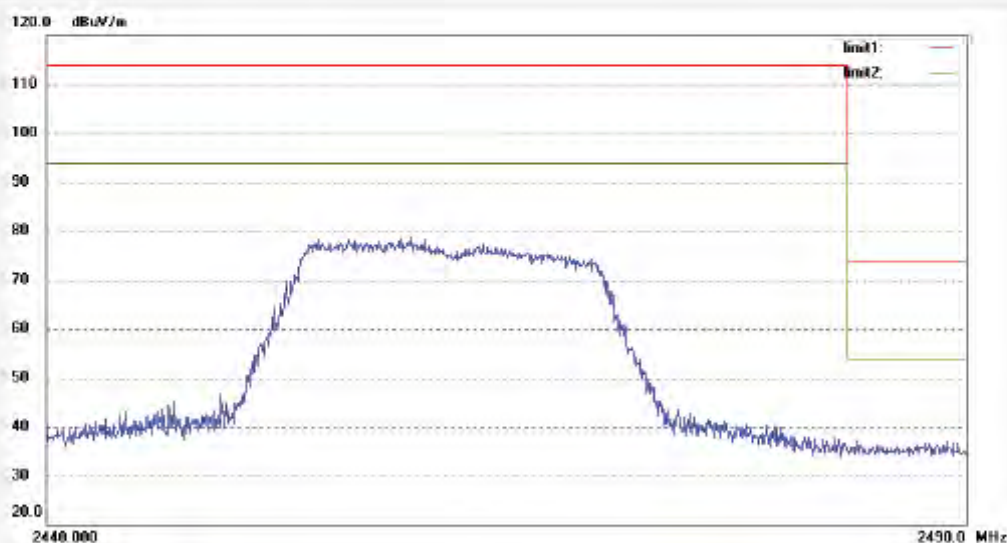
Date: 2012/03/29

Time: 22:50:06

Engineer Signature: Kai

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

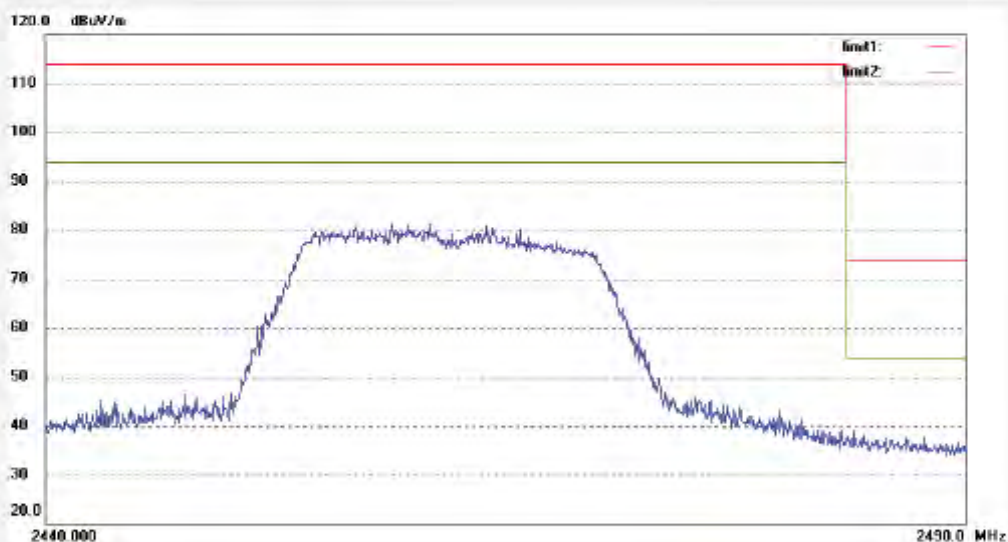
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #016
 Standard: FCC Part 15 PEAK 2.4G
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 11 (802.11g)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 22:48:57
 Engineer Signature: Kai
 Distance:

Note: Report No.:ATE20120527

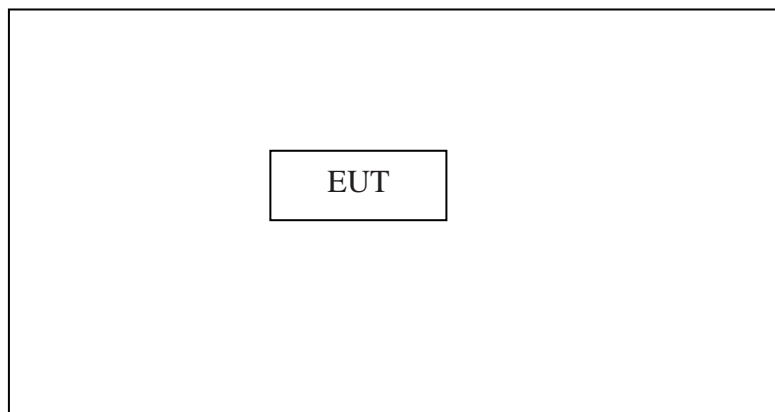


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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9. RADIATED SPURIOUS EMISSION TEST

9.1. Block Diagram of Test Setup

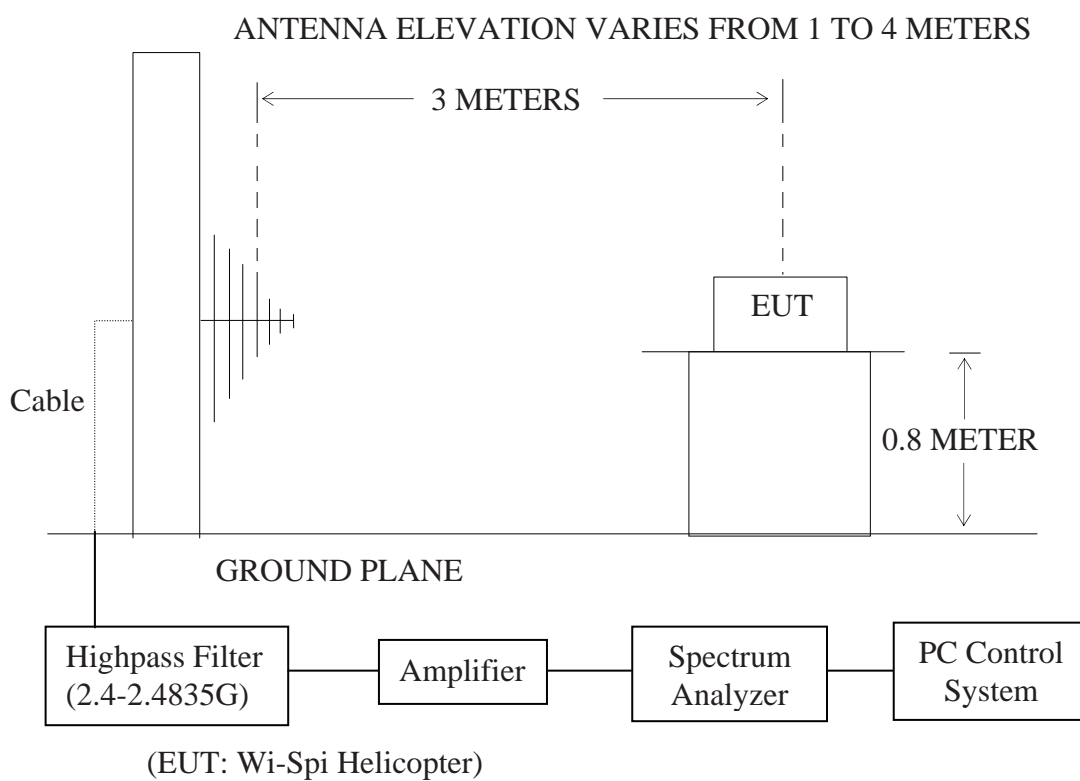
9.1.1. Block diagram of connection between the EUT and peripherals



Setup: Transmitting mode

(EUT: Wi-Spi Helicopter)

9.1.2. Semi-Anechoic Chamber Test Setup Diagram



9.2.The Limit For Section 15.247(d)

Section 15.247(d): 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 (b)(3) of this section, 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).

9.3.Restricted bands of operation

9.3.1.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.

9.4.Configuration of EUT on Measurement

The following 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.

9.4.1.Wi-Spi Helicopter (EUT)

Model Number : 44077
 Serial Number : N/A
 Manufacturer : Interactive Toy Concepts Limited

9.5.Operating Condition of EUT

9.5.1.Setup the EUT and simulator as shown as Section 9.1.

9.5.2.Turn on the power of all equipment.

9.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

9.6.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: 2003 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The worst-case data rate for this channel to be 11Mbps for 802.11b mode and 54Mbps for 802.11g mode, based on previous with 802.11 WLAN product design architectures.

The bandwidth of test receiver (R&S ESI26) is set at 120kHz in 30-1000MHz. and set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 25000MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz 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

Between the antenna and Amplifier have a Highpass Filter (Restricted bands of operation is 2.4-2.4835G), setup show to 9.1.2

9.7.The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11b Channel Low 2412MHz	Test Engineer:	Apple

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
208.9046	17.07	16.32	33.39	43.50	-10.11	Vertical
448.6722	12.66	22.94	35.60	46.00	-10.40	Vertical
485.3263	13.20	23.90	37.10	46.00	-8.90	Vertical
288.2611	22.40	18.55	40.95	46.00	-5.05	Horizontal
301.6440	22.61	18.72	41.33	46.00	-4.67	Horizontal
436.3396	15.34	22.91	38.25	46.00	-7.75	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	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.

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11b Channel Middle 2437MHz	Test Engineer:	Pei

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
202.7460	18.05	16.20	34.25	43.50	-9.25	Vertical
448.2619	12.57	22.94	35.51	46.00	-10.49	Vertical
485.3263	13.36	23.90	37.26	46.00	-8.74	Vertical
288.2611	22.39	18.55	40.94	46.00	-5.06	Horizontal
301.6441	22.56	18.72	41.28	46.00	-4.72	Horizontal
436.3397	15.42	22.91	38.33	46.00	-7.67	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	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.**

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11b Channel High 2462MHz	Test Engineer:	Pei

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
208.6579	17.29	16.31	33.60	43.50	-9.90	Vertical
448.2619	12.46	22.94	35.40	46.00	-10.60	Vertical
479.1394	14.74	23.84	38.58	46.00	-7.42	Vertical
288.2611	22.53	18.55	41.08	46.00	-4.92	Horizontal
301.6441	22.14	18.72	40.86	46.00	-5.14	Horizontal
436.3397	15.48	22.91	38.39	46.00	-7.61	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	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.**

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11g Channel Low 2412MHz	Test Engineer:	Pei

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
208.8929	17.26	16.32	33.58	43.50	-9.92	Vertical
356.3500	14.20	21.15	35.35	46.00	-10.65	Vertical
485.3600	13.15	23.90	37.05	46.00	-8.95	Vertical
288.7580	23.41	18.57	41.98	46.00	-4.02	Horizontal
301.0550	22.09	18.70	40.79	46.00	-5.21	Horizontal
436.2090	15.33	22.90	38.24	46.00	-7.76	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	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.**

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11g Channel Middle 2437MHz	Test Engineer:	Pei

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
208.9010	17.17	16.32	33.49	43.50	-10.01	Vertical
356.3299	13.57	21.15	34.72	46.00	-11.28	Vertical
480.0281	13.16	23.86	37.02	46.00	-8.98	Vertical
288.7620	22.32	18.57	40.89	46.00	-5.11	Horizontal
301.0500	22.24	18.70	40.94	46.00	-5.06	Horizontal
313.3420	20.07	19.14	39.21	46.00	-6.79	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	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.**

Date of Test:	March 29, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	DC 3.7V
Test Mode:	802.11g Channel High 2462MHz	Test Engineer:	Pei

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
208.9124	17.45	16.32	33.77	43.50	-9.73	Vertical
448.5140	12.56	22.94	35.50	46.00	-10.50	Vertical
485.3690	13.50	23.90	37.40	46.00	-8.60	Vertical
288.4611	22.51	18.56	41.07	46.00	-4.93	Horizontal
301.5440	22.26	18.72	40.98	46.00	-5.02	Horizontal
436.3396	15.24	22.91	38.15	46.00	-7.85	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	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.**


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Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #081

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

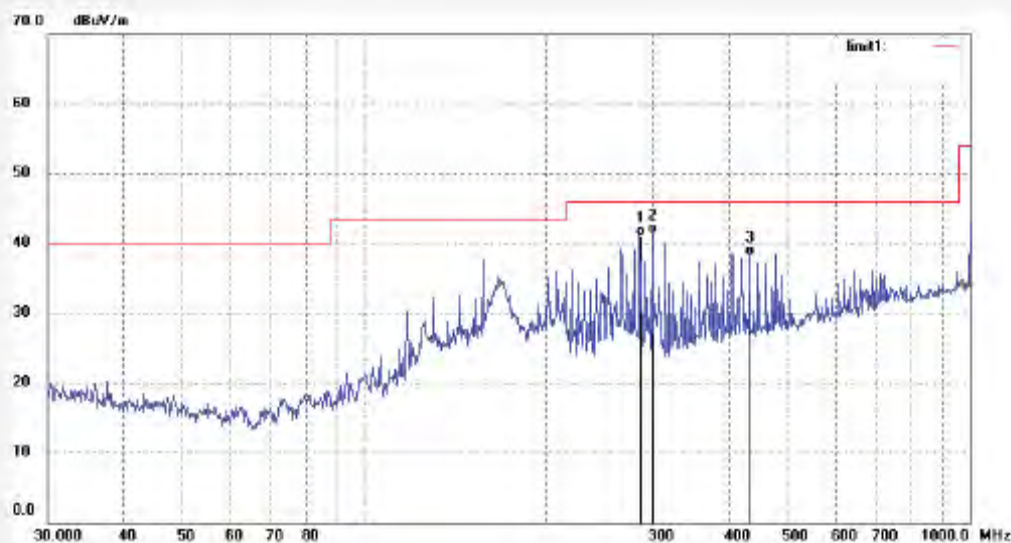
Date: 2012/03/29

Time: 11:17:41

Engineer Signature: Applei

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	288.2611	22.40	18.55	40.95	46.00	-5.05	QP			
2	301.6440	22.61	18.72	41.33	46.00	-4.67	QP			
3	438.3396	15.34	22.91	38.25	46.00	-7.75	QP			


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 Site: 966 chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: Apple #060

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

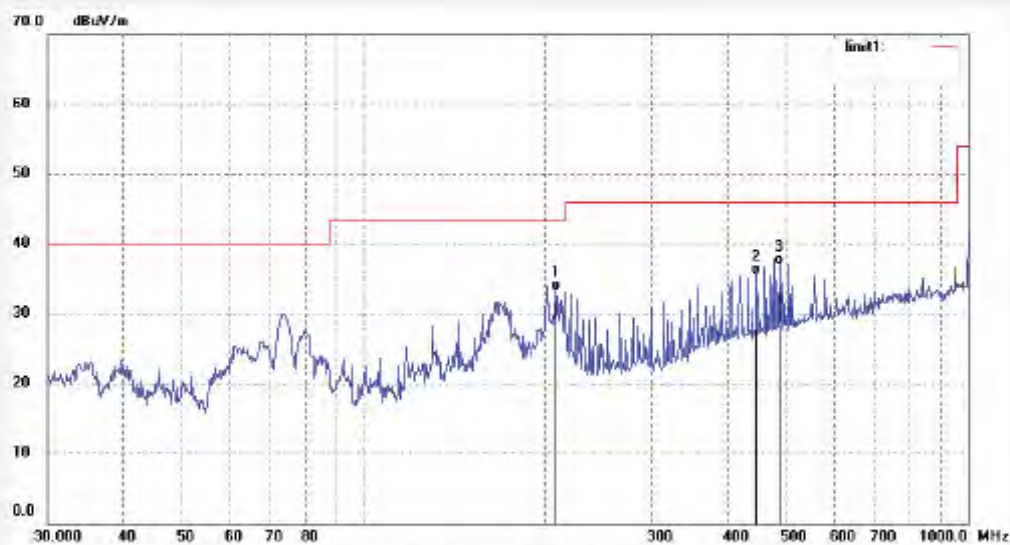
Date: 2012/03/29

Time: 11:16:21

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	208.9046	17.07	16.32	33.39	43.50	-10.11	QP			
2	448.6722	12.66	22.94	35.60	46.00	-10.40	QP			
3	485.3263	13.20	23.90	37.10	46.00	-8.90	QP			


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Site: 966 chamber

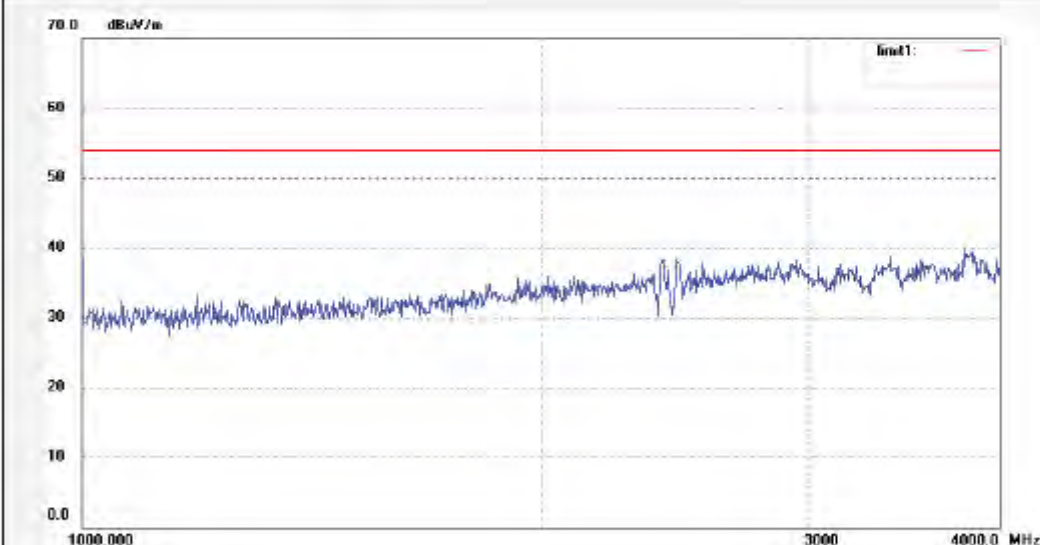
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #049
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 1 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 21:11:54
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #048

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 2012/03/29

Temp.(C)/Hum.(%) 24 C / 48 %

Time: 21:10:48

EUT: Wi-Spi Helicopter

Engineer Signature: Apple

Mode: TX Channel 1 (802.11b)

Distance:

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #050

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

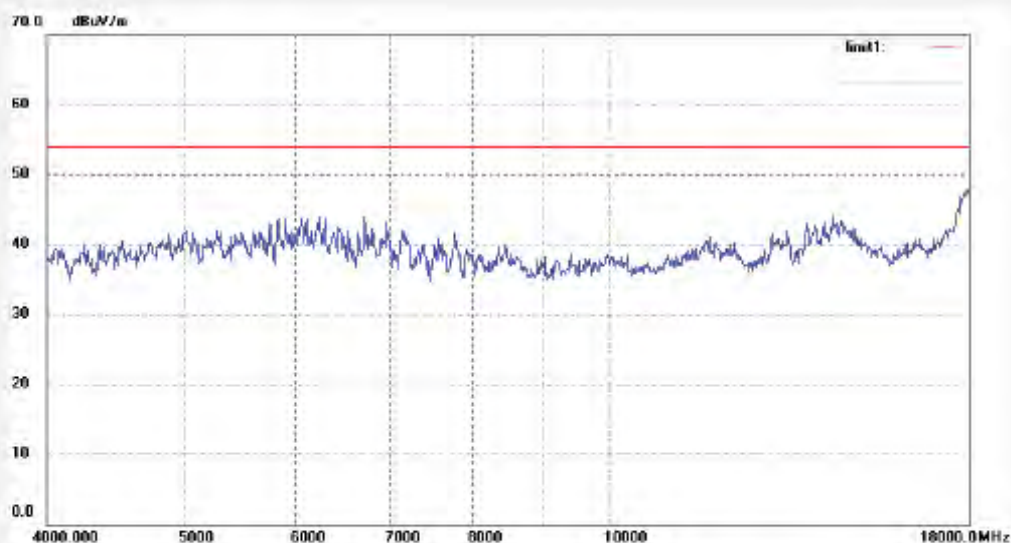
Date: 2012/03/29

Time: 21:13:10

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

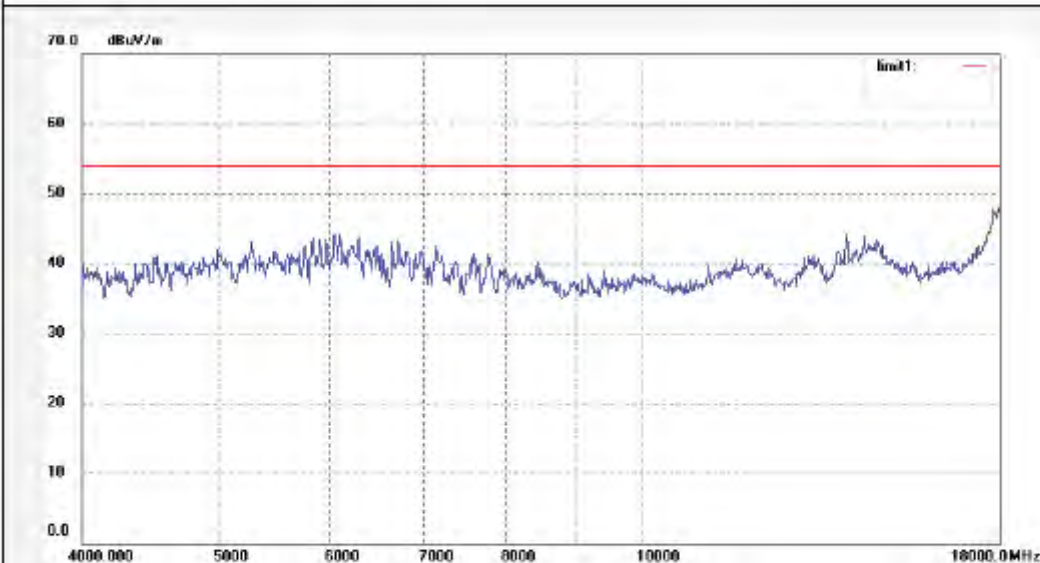
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #051
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 1 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 21:14:11
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #053

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

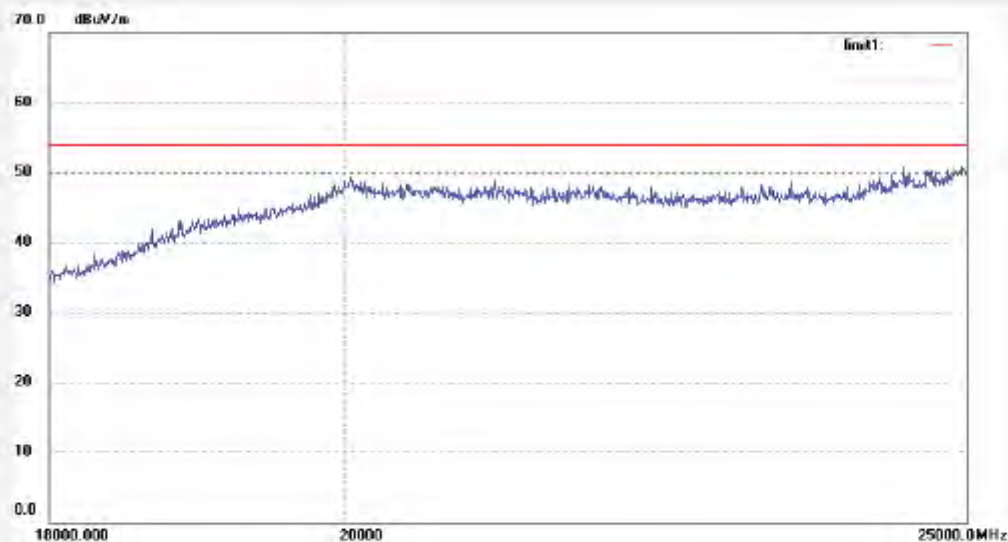
Date: 2012/03/29

Time: 21:16:53

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 988 chamber

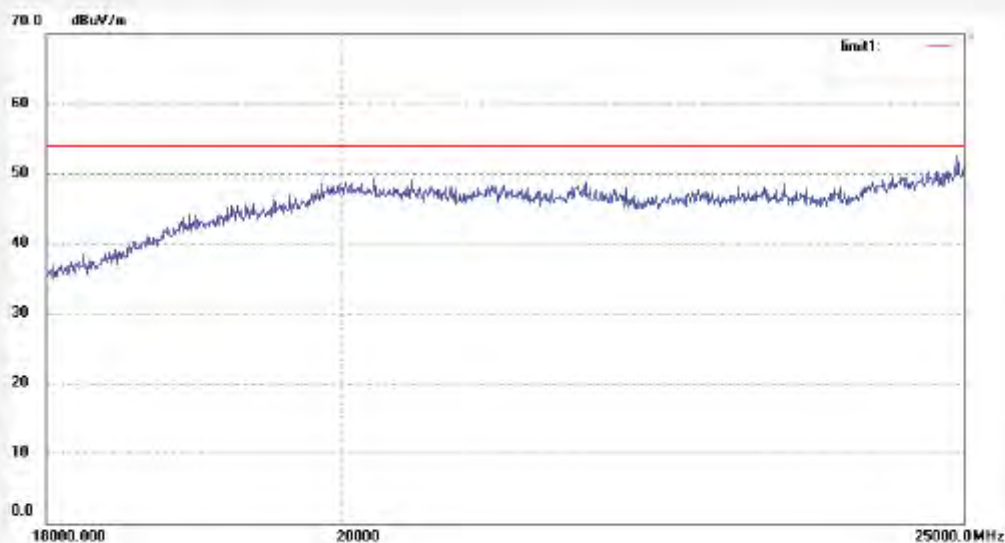
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #052
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 1 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 21:15:22
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #082

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

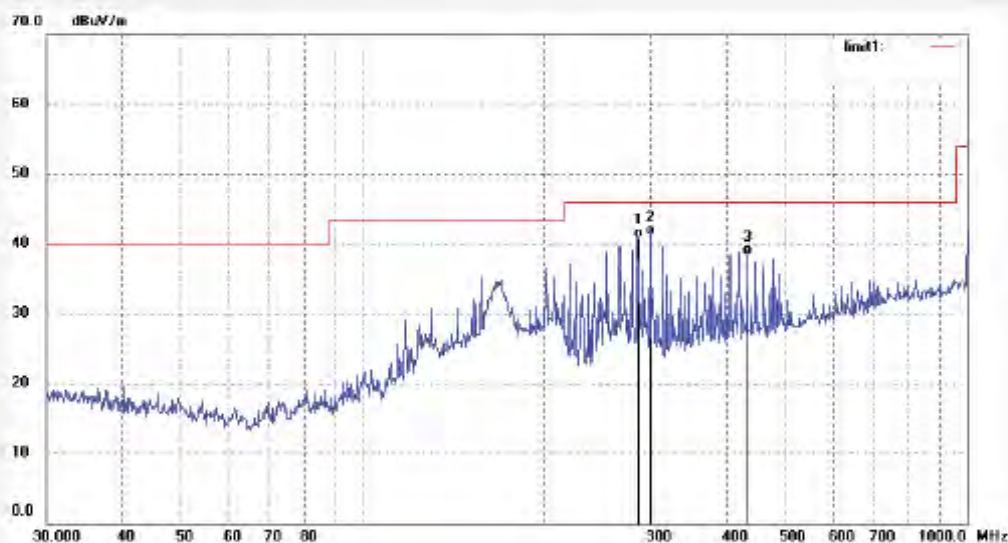
Date: 2012/03/29

Time: 11:25:26

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	288.2611	22.39	18.55	40.94	46.00	-5.06	QP			
2	301.6441	22.56	18.72	41.28	46.00	-4.72	QP			
3	436.3397	15.42	22.91	38.33	46.00	-7.67	QP			


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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #083

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

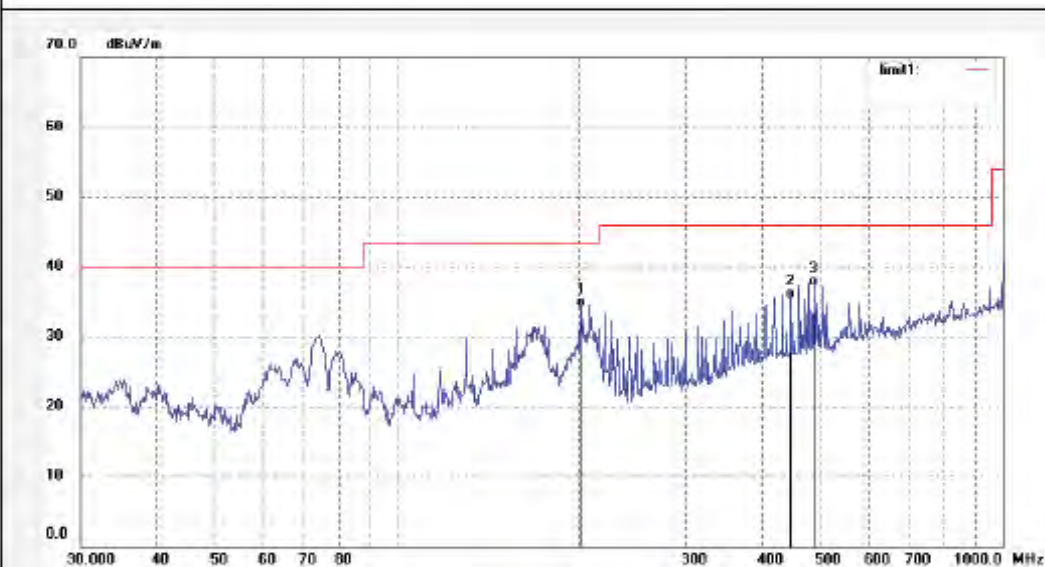
Date: 2012/03/29

Time: 11:27:41

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	202.7460	18.05	16.20	34.25	43.50	-9.25	QP			
2	448.2619	12.57	22.94	35.51	46.00	-10.49	QP			
3	485.3263	13.36	23.90	37.26	46.00	-8.74	QP			


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Site: 966 chamber

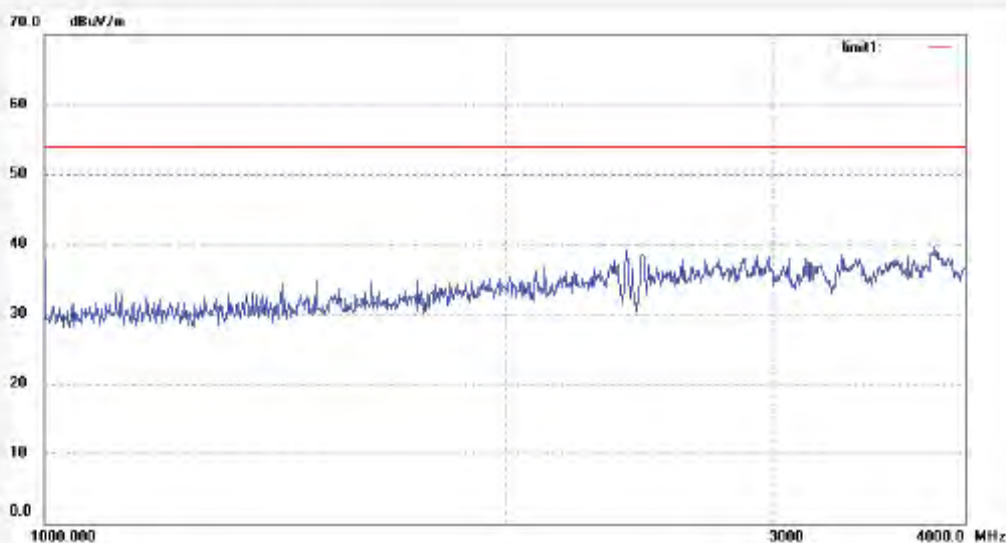
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #042
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 6 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 21:02:25
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #043

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 2012/03/29

Temp.(C)/Hum.(%) 24 C / 48 %

Time: 21:03:43

EUT: Wi-Spi Helicopter

Engineer Signature: Apple

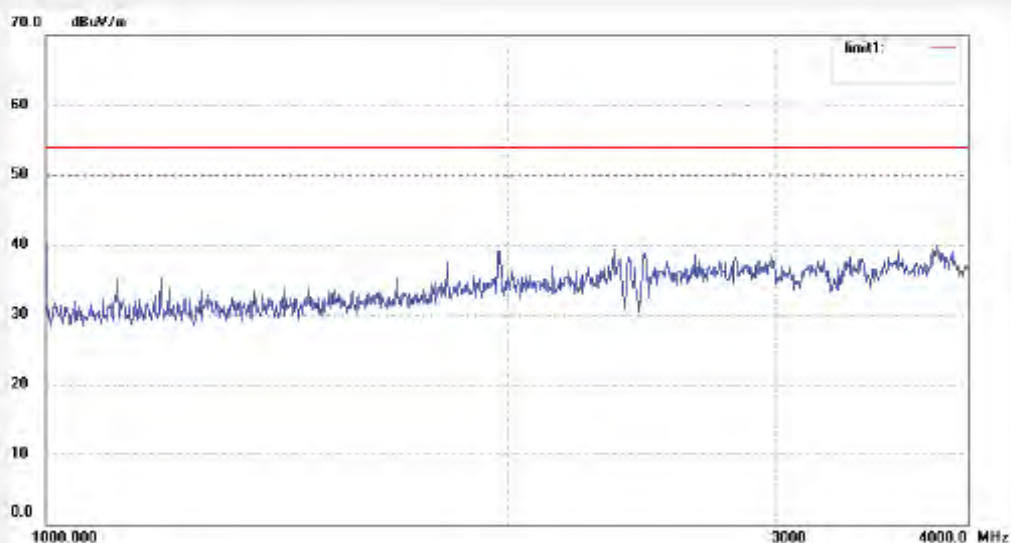
Mode: TX Channel 6 (802.11b)

Distance:

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

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Job No.: Apple #045

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

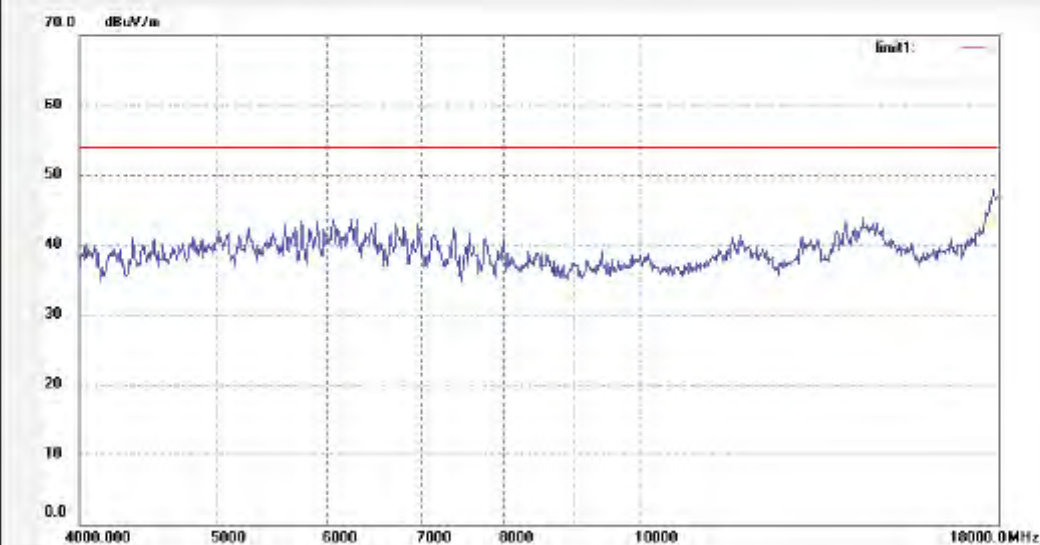
Date: 2012/03/29

Time: 21:05:59

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #044

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

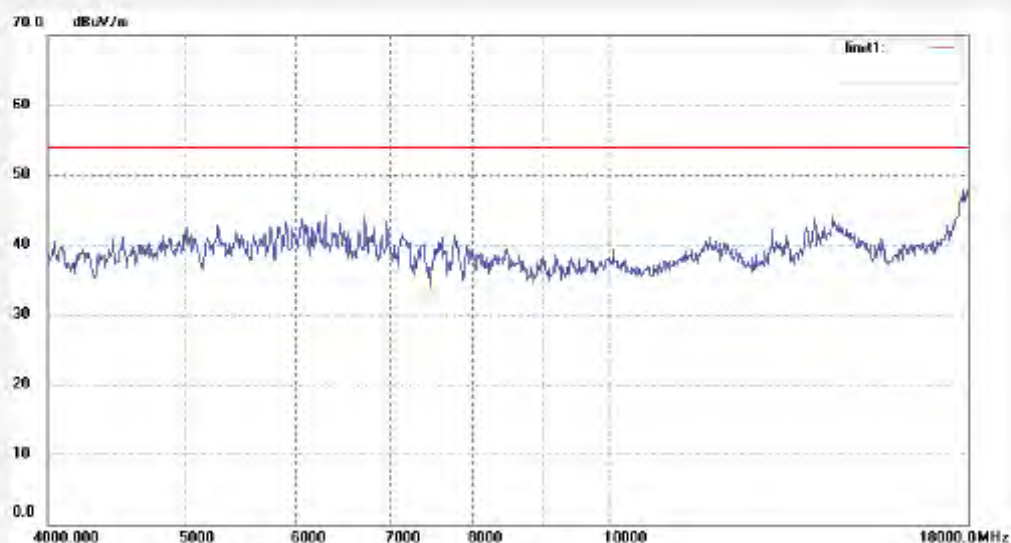
Date: 2012/03/29

Time: 21:04:56

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #046

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

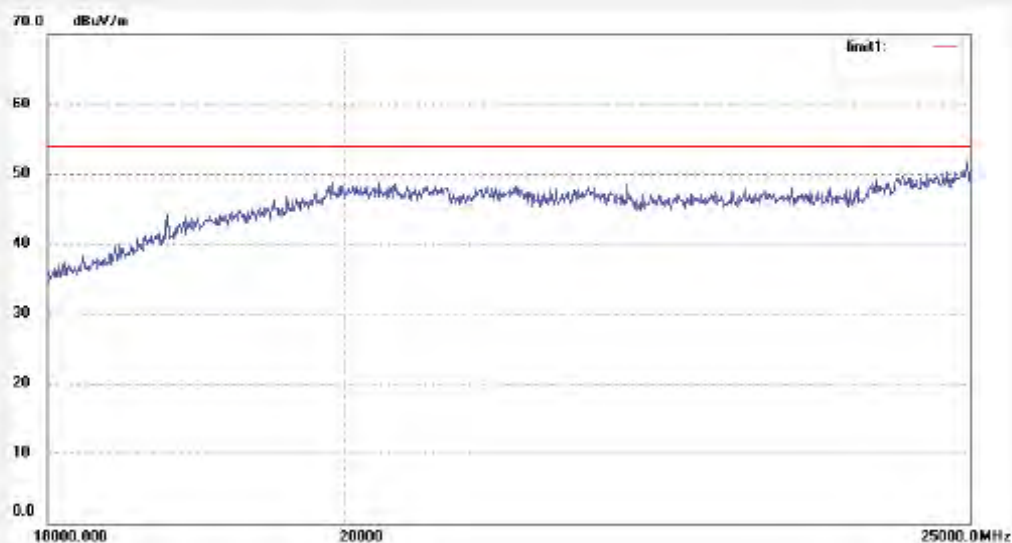
Date: 2012/03/29

Time: 21:07:07

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

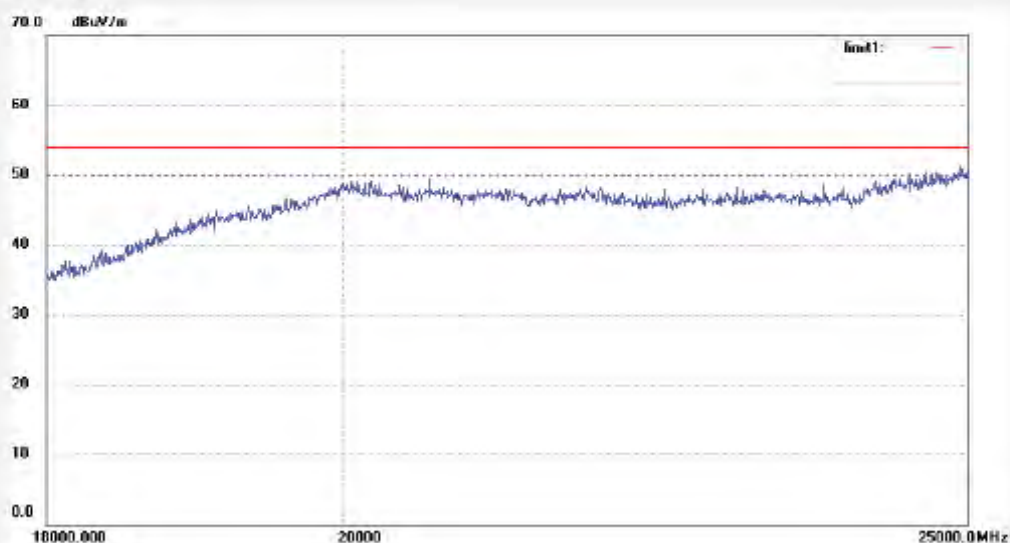
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #047
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 8 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 21:08:59
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-28503290

Fax:+86-0755-28503398

Job No.: Apple #085

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

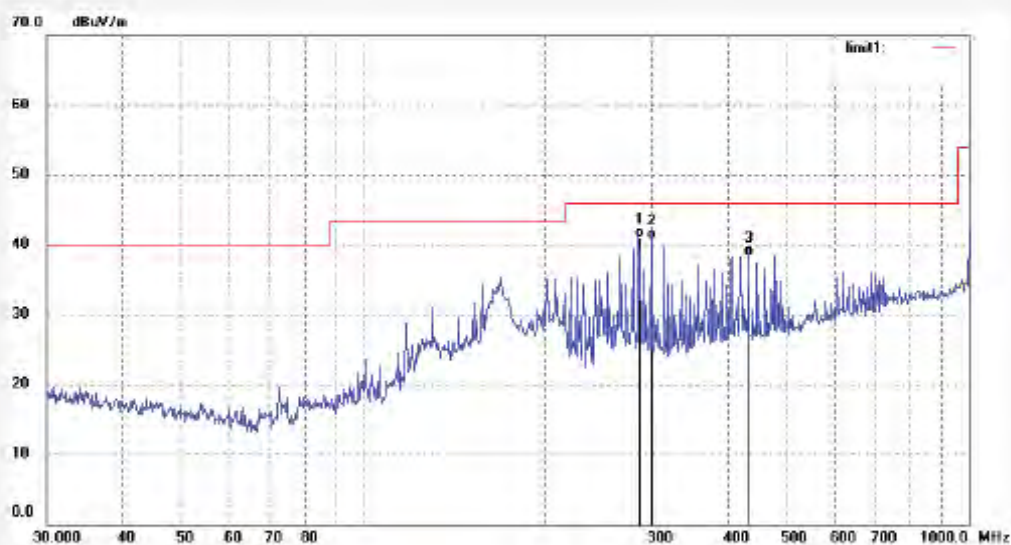
Date: 2012/03/29

Time: 11:35:10

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	288.2811	22.53	18.55	41.08	46.00	-4.92	QP			
2	301.6441	22.14	18.72	40.86	46.00	-5.14	QP			
3	436.3397	15.48	22.91	38.39	46.00	-7.61	QP			


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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #064

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

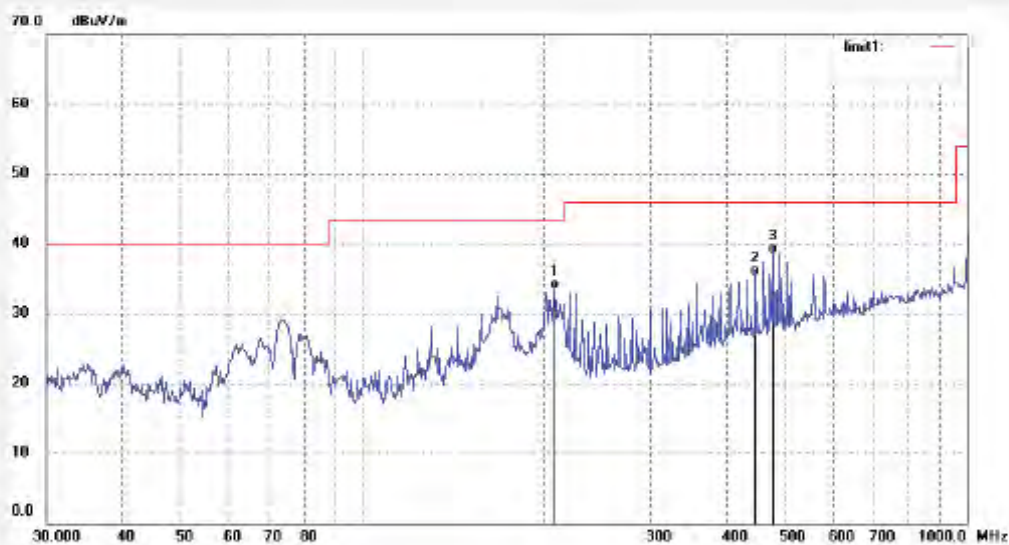
Date: 2012/03/29

Time: 11:32:33

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	208.6579	17.29	16.31	33.60	43.50	-9.90	QP			
2	448.2619	12.46	22.94	35.40	46.00	-10.60	QP			
3	479.1394	14.74	23.84	38.58	46.00	-7.42	QP			


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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #037

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

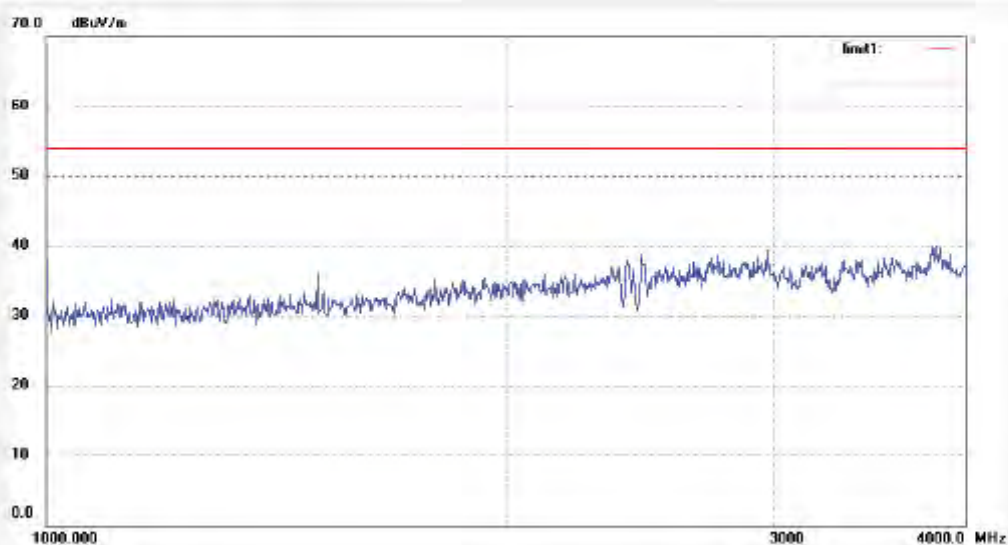
Date: 2012/03/29

Time: 20:55:37

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

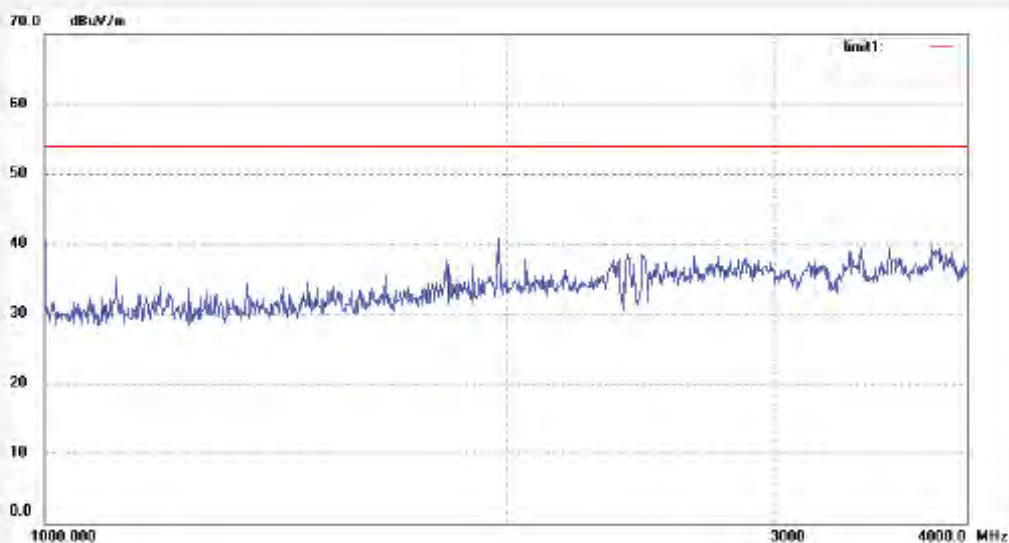
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #036
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 11 (802.11b)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 20:54:27
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #038

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

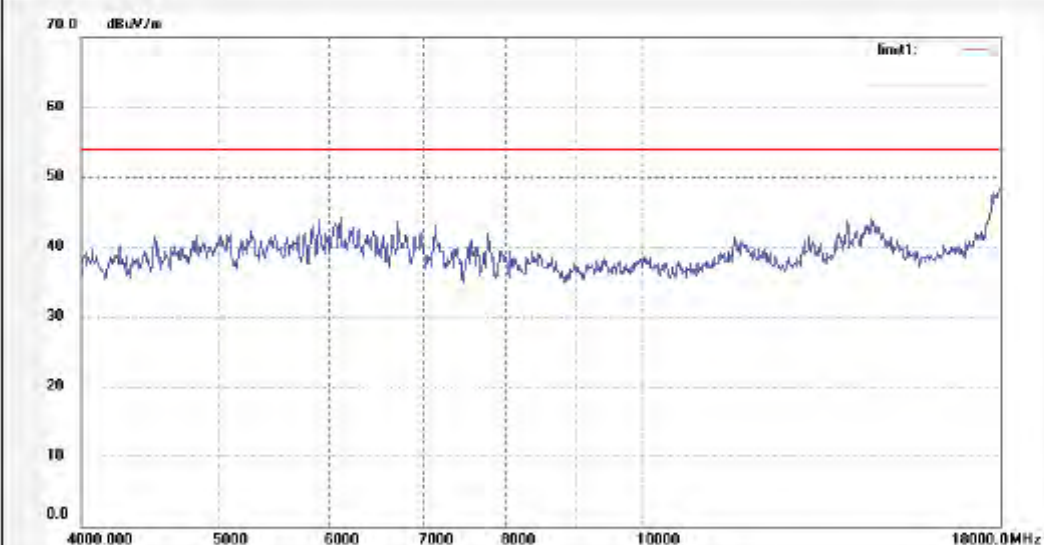
Date: 2012/03/29

Time: 20:56:47

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #039

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

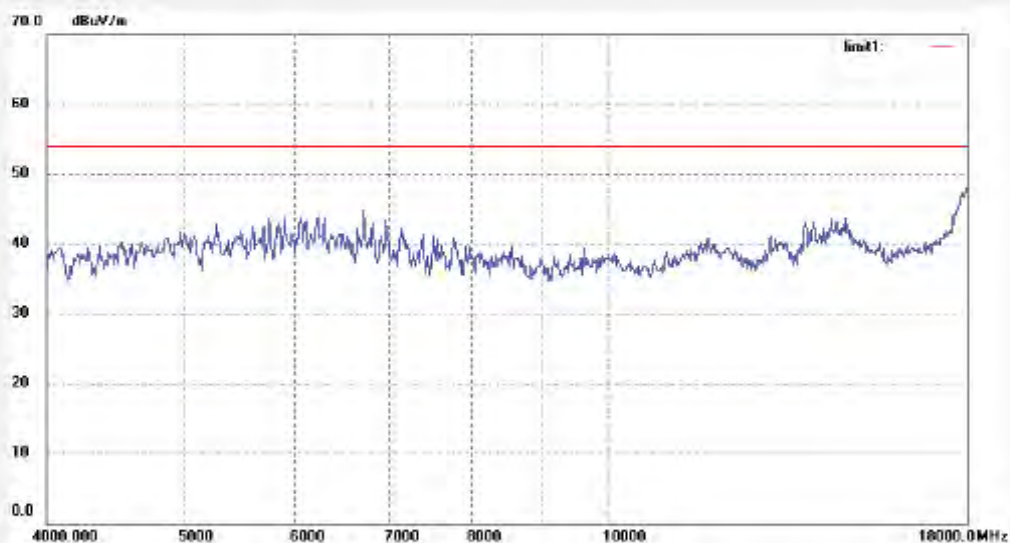
Date: 2012/03/29

Time: 20:57:49

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 986 chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Apple #041

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

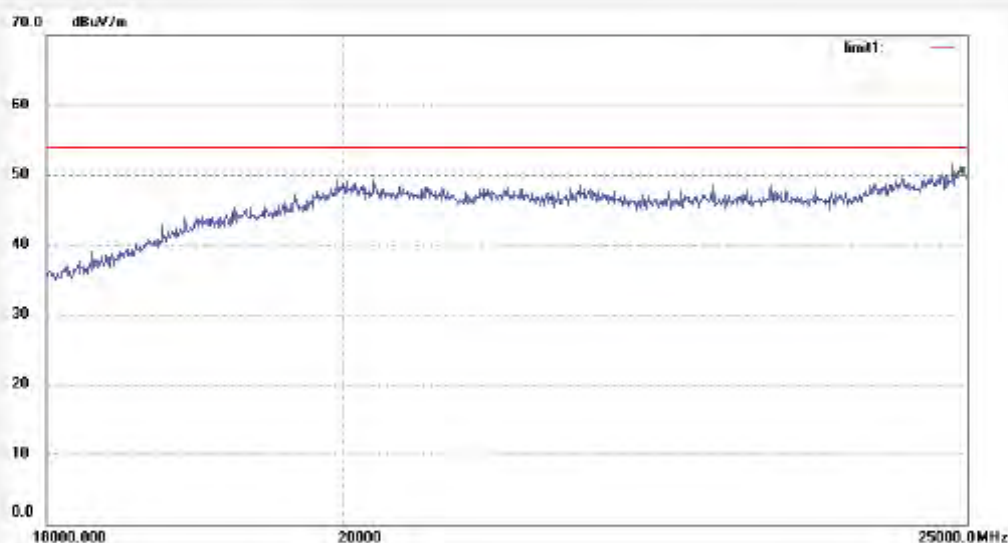
Date: 2012/03/29

Time: 21:00:33

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #040

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11b)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

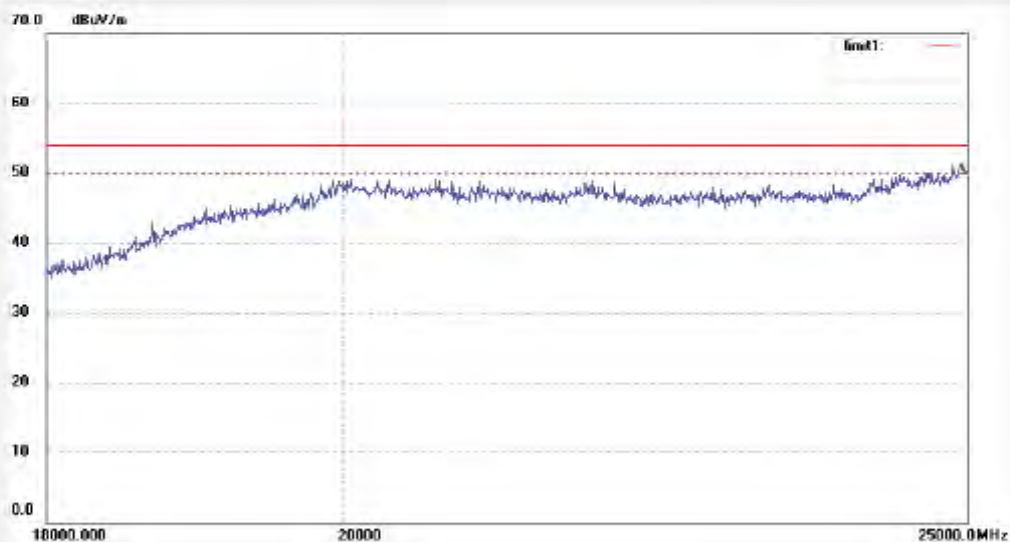
Date: 2012/03/29

Time: 20:59:08

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #054

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

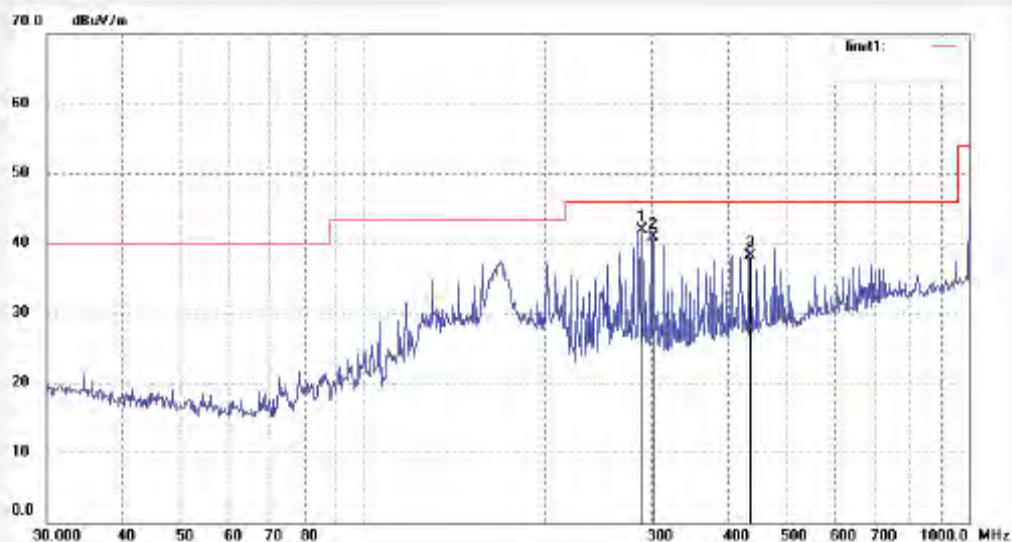
Date: 2012/03/29

Time: 10/32/20

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	288.7580	23.41	18.57	41.98	46.00	-4.02	peak			
2	301.0550	22.09	18.70	40.79	46.00	-5.21	peak			
3	436.2090	15.33	22.91	38.24	46.00	-7.76	peak			


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Site: 966 chamber

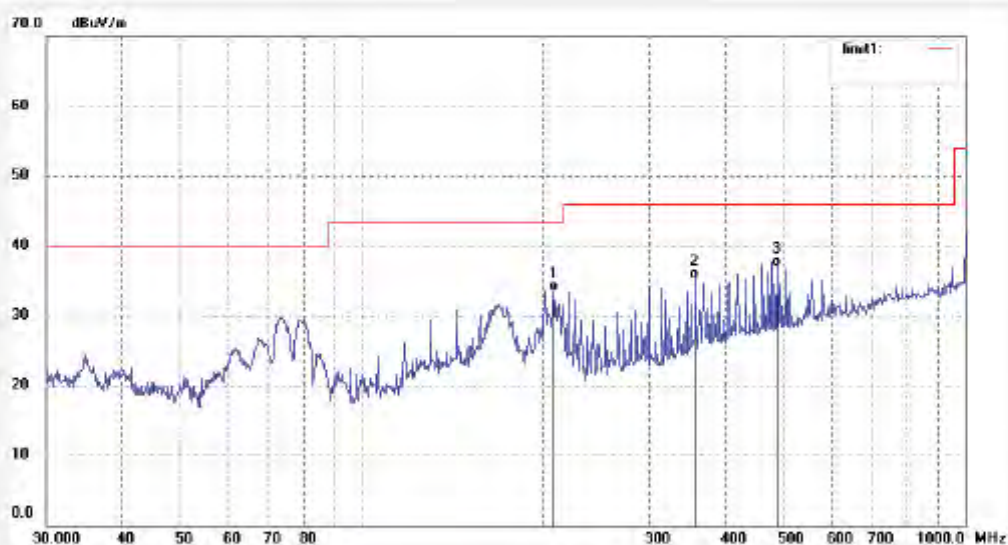
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #055
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 1 (802.11g)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 2012/03/29/
 Time: 10/34/35
 Engineer Signature: Apple
 Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	208.8928	17.26	16.32	33.58	43.50	-9.92	QP			
2	356.3500	14.20	21.15	35.35	46.00	-10.65	QP			
3	485.3600	13.15	23.90	37.05	46.00	-8.95	QP			


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Site: 986 chamber

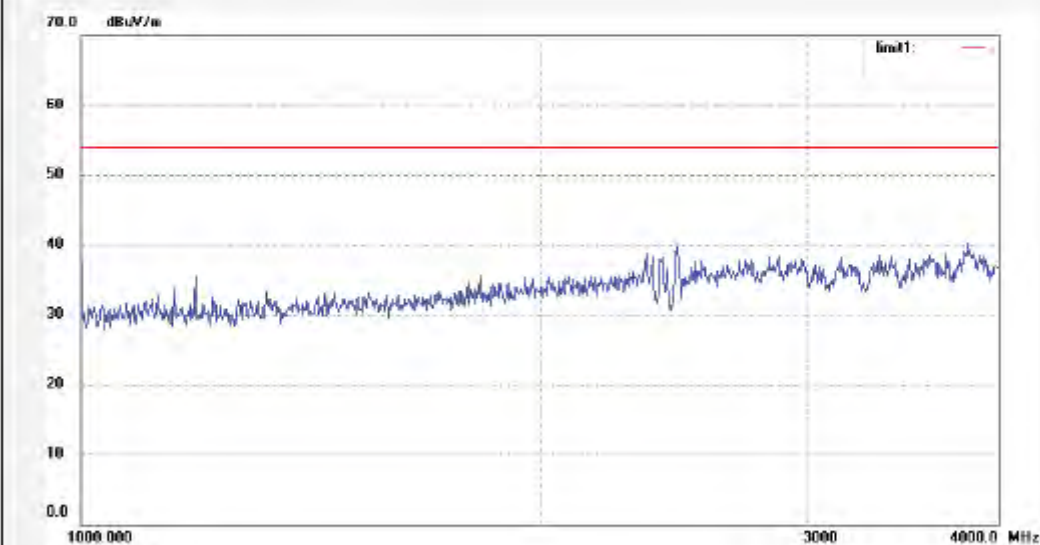
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #018
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 1 (802.11g)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 20:25:30
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #019

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

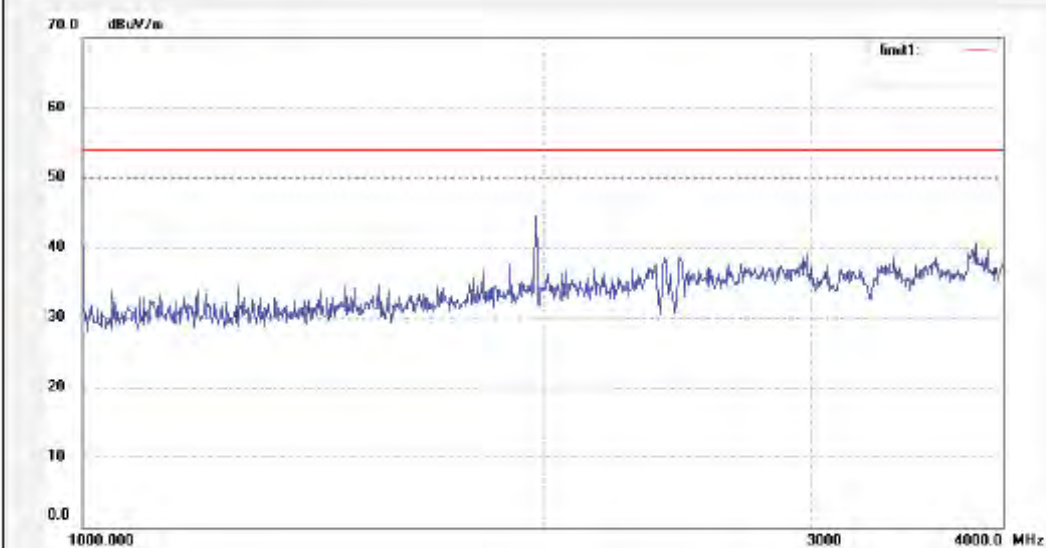
Date: 2012/03/29

Time: 20:26:26

Engineer Signature: Applei

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #021

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

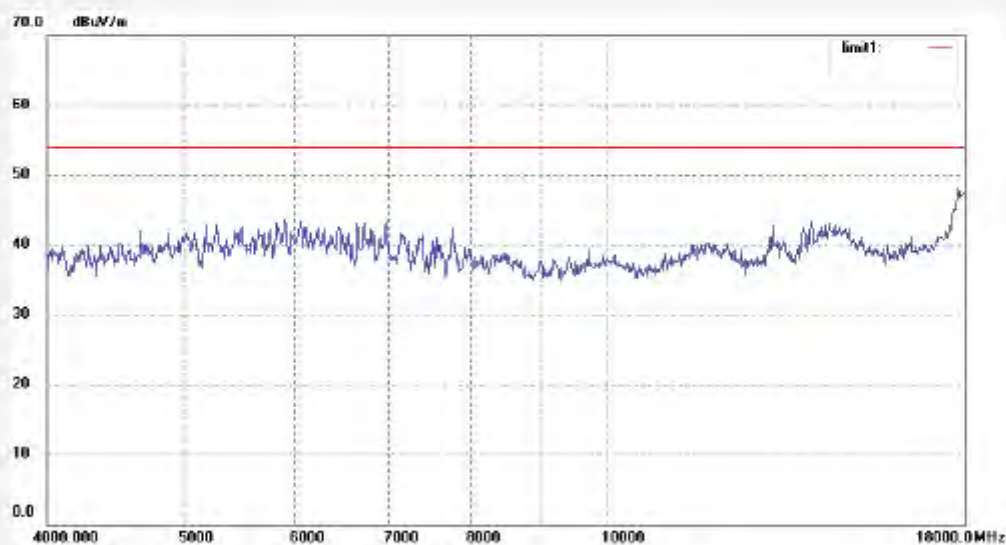
Date: 2012/03/29

Time: 20:28:58

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #020

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

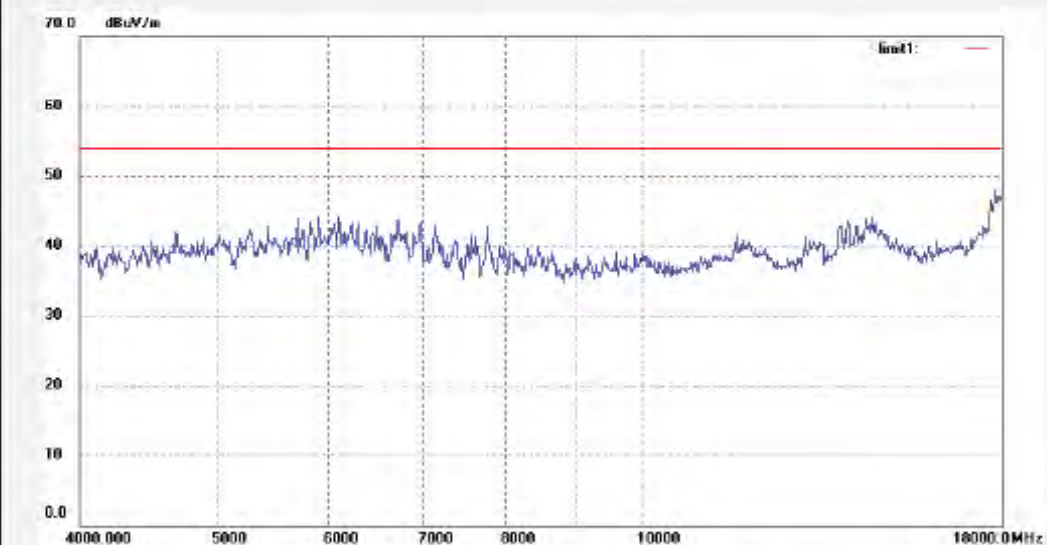
Date: 2012/03/29

Time: 20:28:03

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #022

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

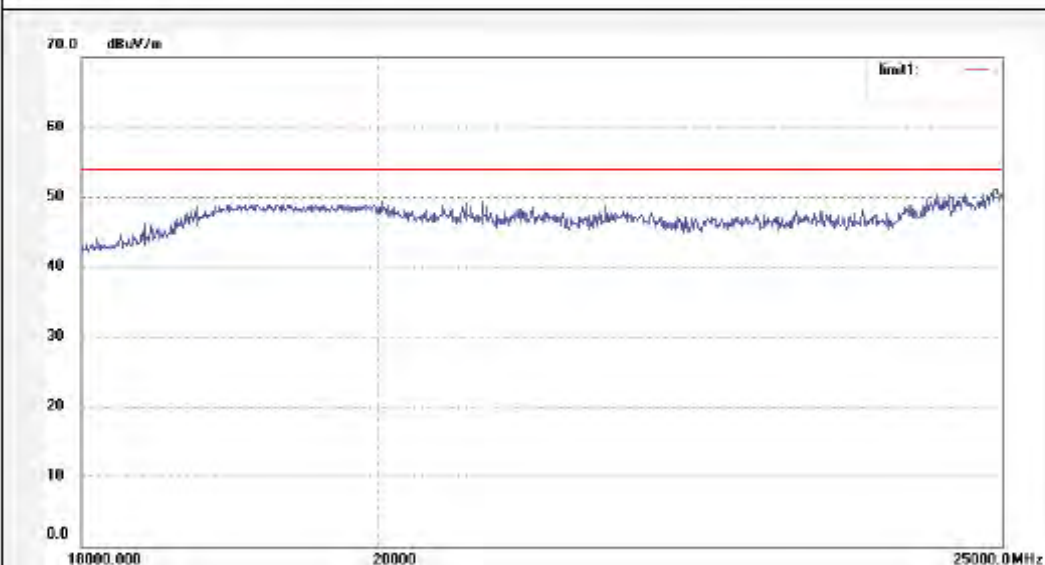
Date: 2012/03/29

Time: 20:30:25

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #023

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 1 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

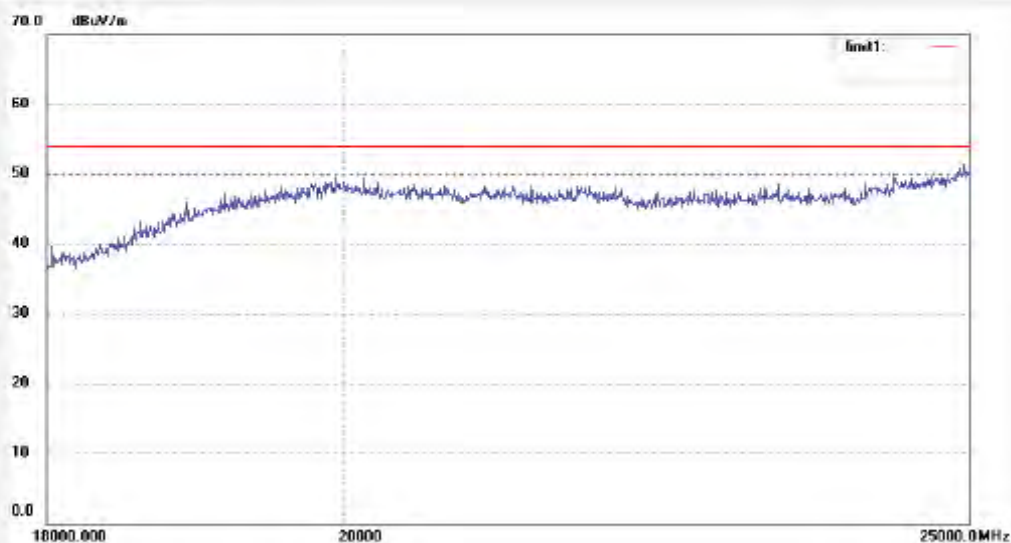
Date: 2012/03/29

Time: 20:32:16

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #057

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 2012/03/29

Temp.(C)/Hum.(%) 24 C / 48 %

Time: 10/52/45

EUT: Wi-Spi Helicopter

Engineer Signature: Apple

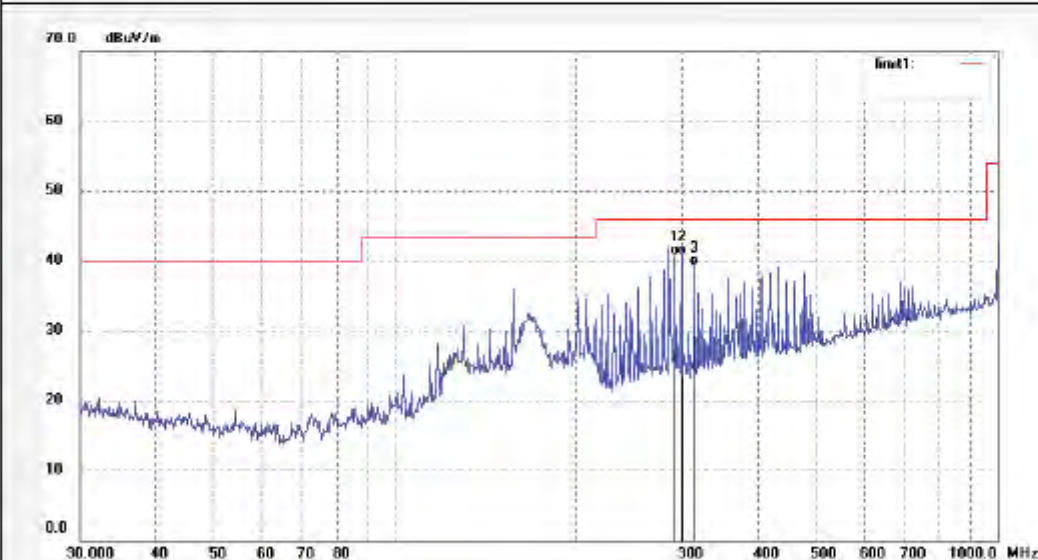
Mode: TX Channel 8 (802.11g)

Distance:

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	288.7620	22.32	18.57	40.89	46.00	-5.11	QP			
2	301.0500	22.24	18.70	40.94	46.00	-5.06	QP			
3	313.3420	20.07	19.14	39.21	46.00	-6.79	QP			


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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #056

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 2012/03/29

Temp.(C)/Hum.(%) 24 C / 48 %

Time: 10/49/30

EUT: Wi-Spi Helicopter

Engineer Signature: Apple

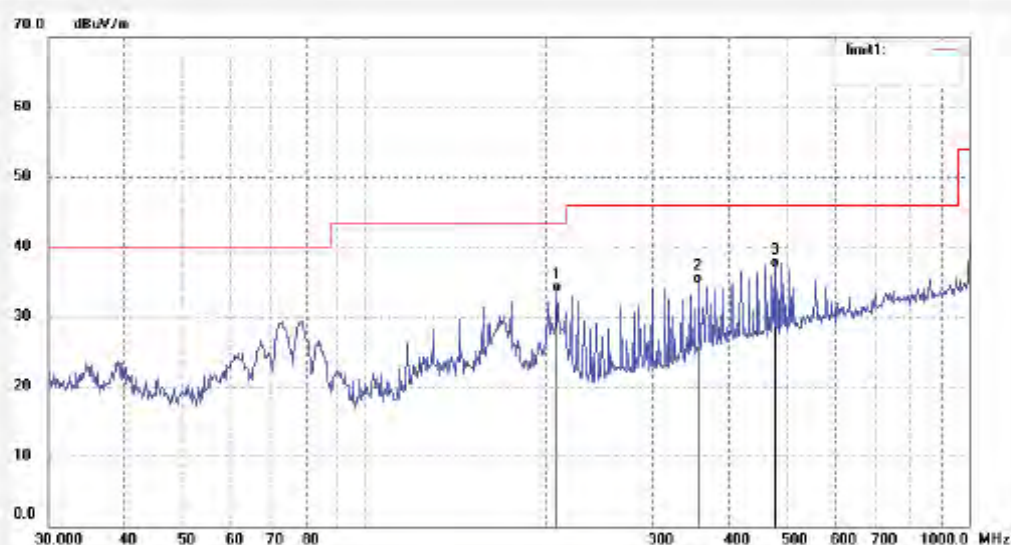
Mode: TX Channel 6 (802.11g)

Distance:

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	208.9010	17.17	16.32	33.49	43.50	-10.01	QP			
2	356.3299	13.57	21.15	34.72	46.00	-11.28	QP			
3	480.0281	13.16	23.86	37.02	46.00	-8.98	QP			


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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #025

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

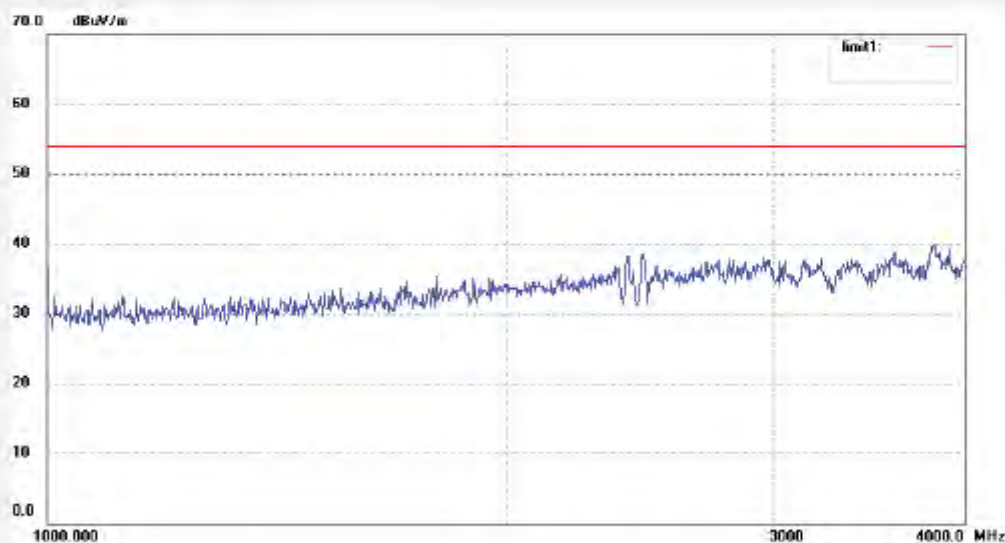
Date: 2012/03/29

Time: 20:35:28

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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ACCURATE TECHNOLOGY CO., LTD.

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 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #024

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

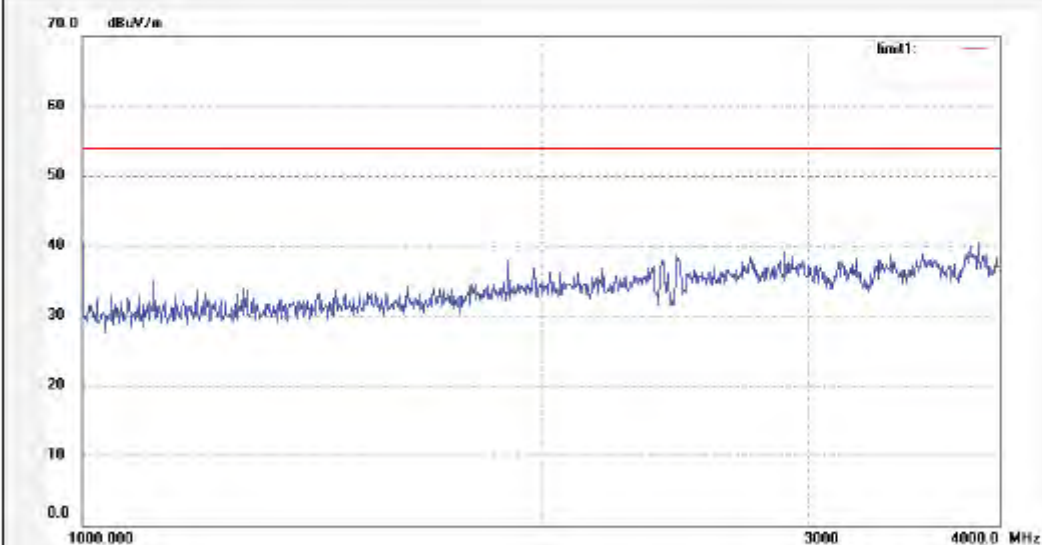
Date: 2012/03/29

Time: 20:34:24

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

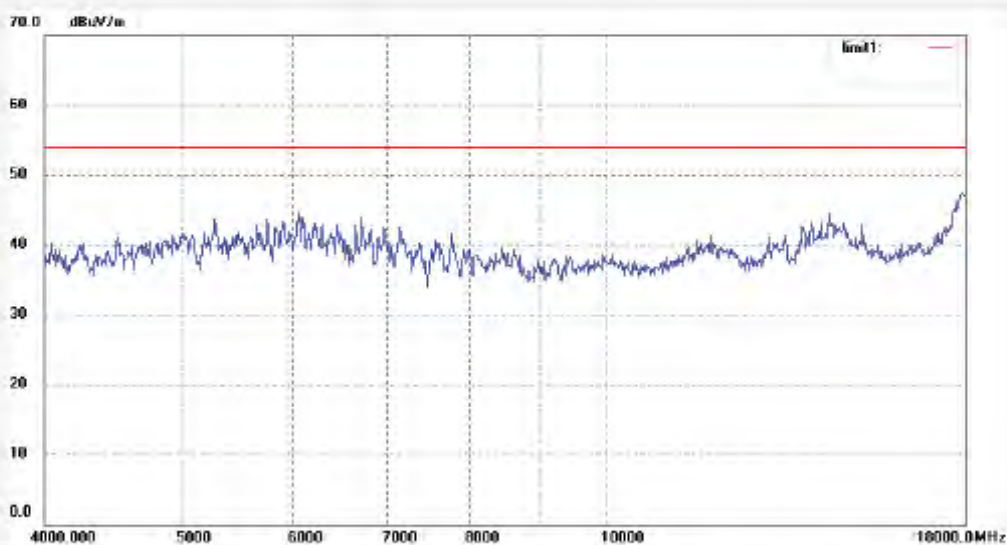
Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #026
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 24 C / 48 %
EUT: Wi-Spi Helicopter
Mode: TX Channel 6 (802.11g)
Model: 44077
Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
Power Source: DC 3.7V
Date: 2012/03/29
Time: 20:38:39
Engineer Signature: Apple
Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #027

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 6 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

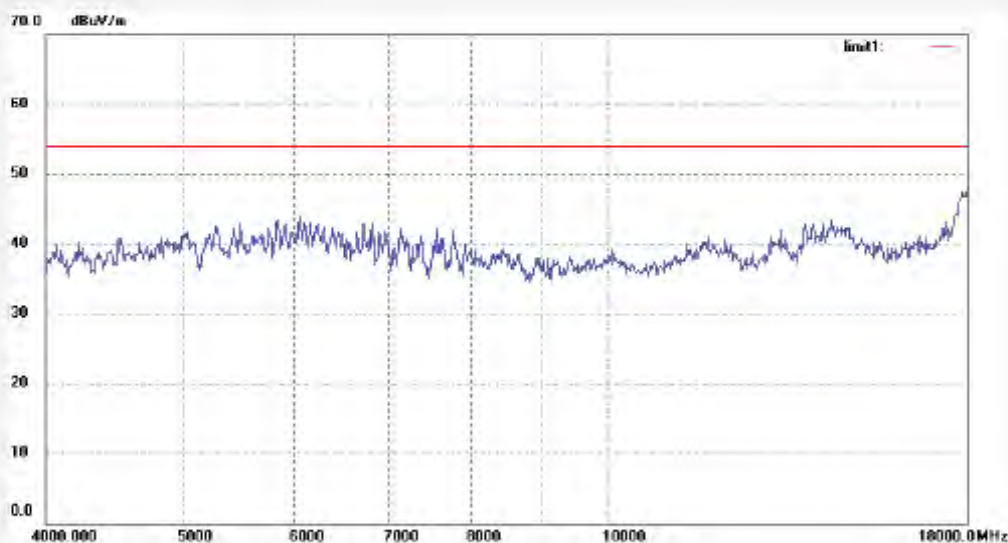
Date: 2012/03/29

Time: 20:37:36

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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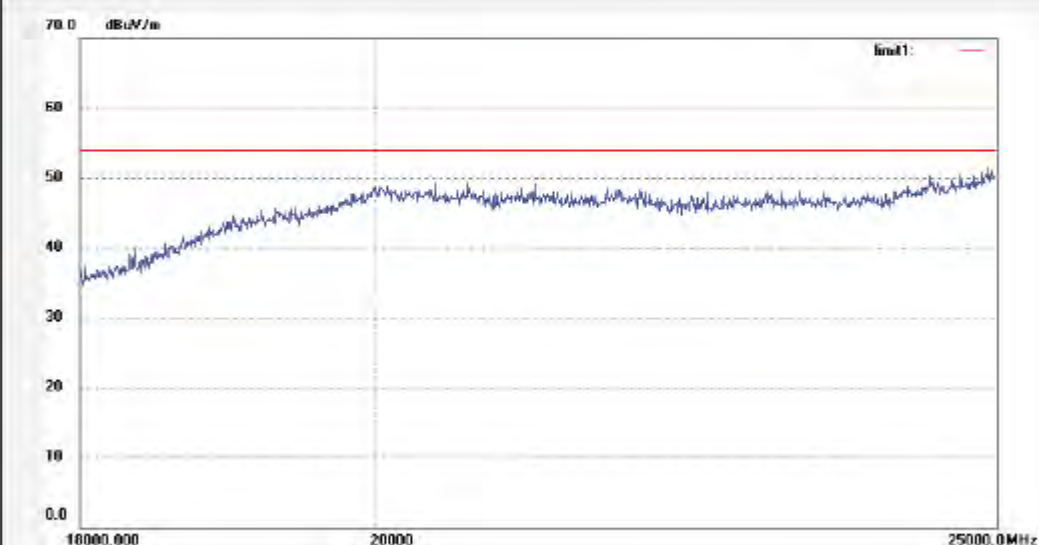
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #029
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 24 C / 48 %
 EUT: Wi-Spi Helicopter
 Mode: TX Channel 6 (802.11g)
 Model: 44077
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
 Power Source: DC 3.7V
 Date: 2012/03/29
 Time: 20:40:38
 Engineer Signature: Apple
 Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #028

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 2012/03/29

Temp.(C)/Hum.(%) 24 C / 48 %

Time: 20:38:55

EUT: Wi-Spi Helicopter

Engineer Signature: Apple

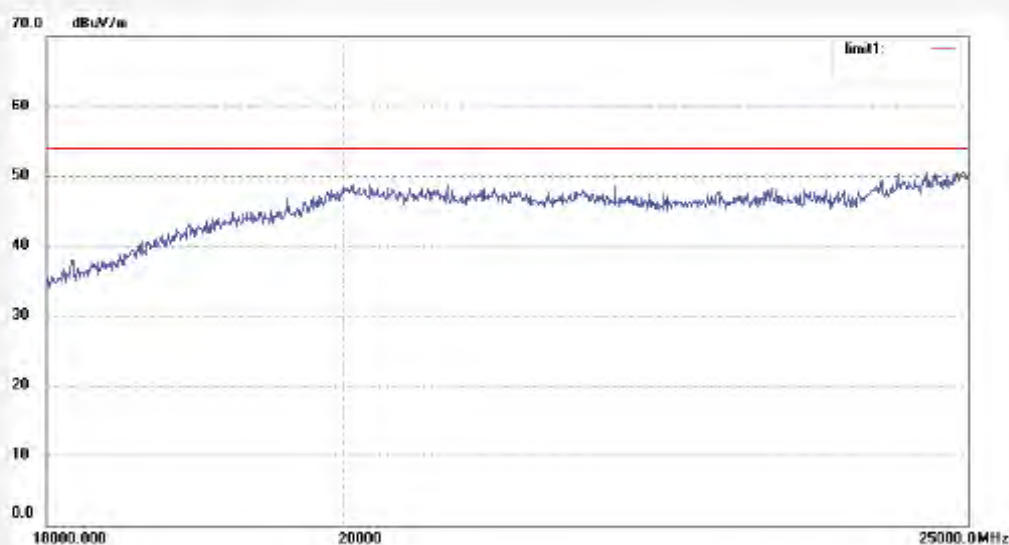
Mode: TX Channel 6 (802.11g)

Distance:

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 988 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #058

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

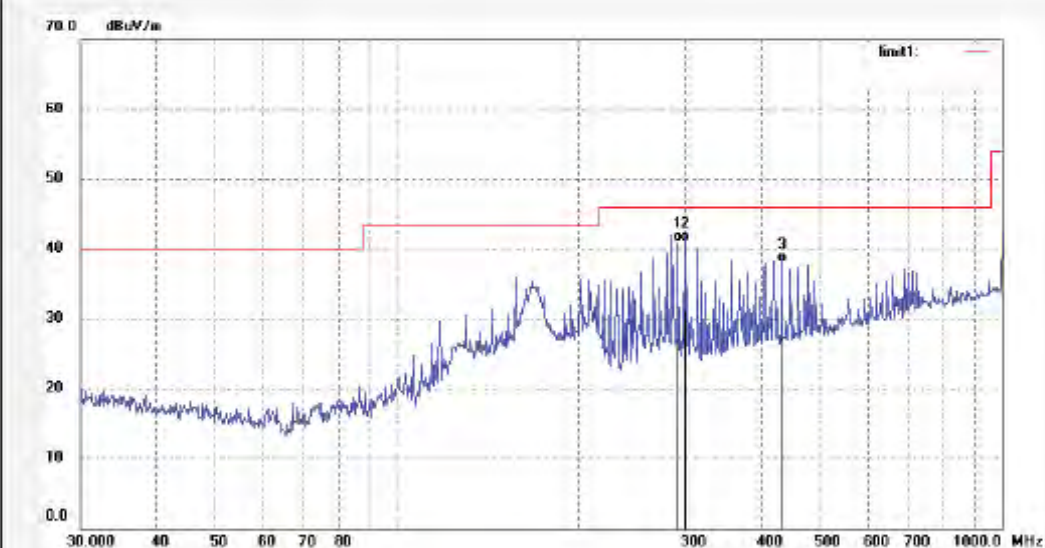
Date: 2012/03/29

Time: 11:03:02

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	288.4611	22.51	18.56	41.07	46.00	-4.93	QP			
2	301.5440	22.26	18.72	40.98	46.00	-5.02	QP			
3	436.3396	15.24	22.91	38.15	46.00	-7.85	QP			


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Site: 986 chamber

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Fax:+86-0755-26503396

Job No.: Apple #059

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

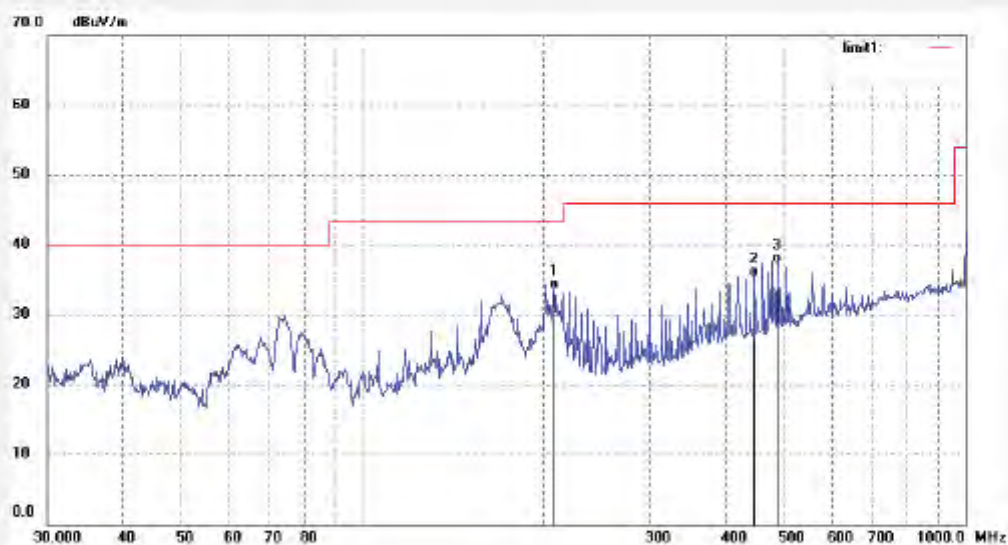
Date: 2012/03/29

Time: 11:06:15

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	208.9124	17.45	16.32	33.77	43.50	-9.73	QP			
2	448.5140	12.56	22.94	35.50	46.00	-10.50	QP			
3	485.3690	13.50	23.90	37.40	46.00	-8.60	QP			


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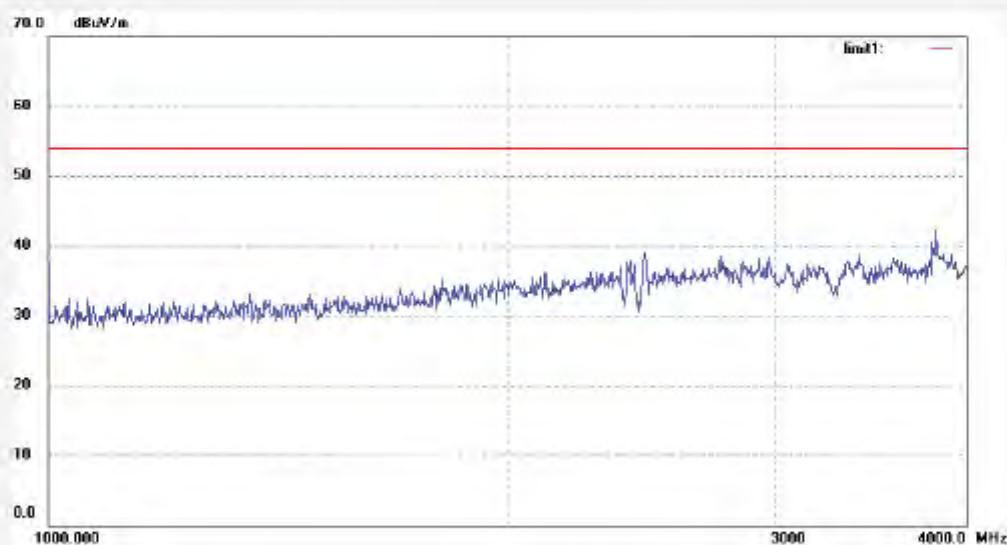
Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #030	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/03/29
Temp.(C)/Hum.(%) 24 C / 48 %	Time: 20:42:21
EUT: Wi-Spi Helicopter	Engineer Signature: Apple
Mode: TX Channel 11 (802.11g)	Distance:
Model: 44077	
Manufacturer: Interactive Toy Concepts Limited	

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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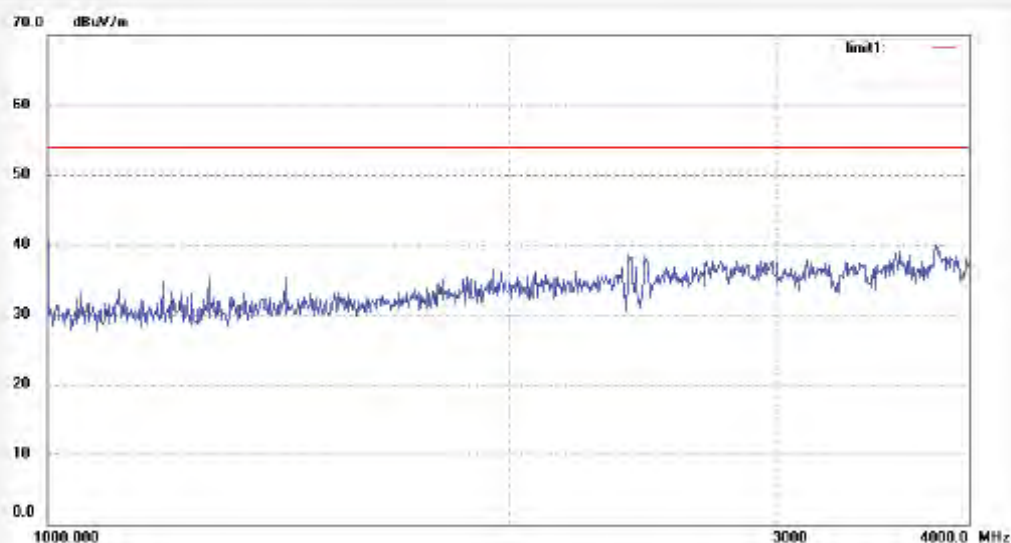

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Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Apple #031	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2012/03/29
Temp.(C)/Hum.(%) 24 C / 48 %	Time: 20:43:24
EUT: Wi-Spi Helicopter	Engineer Signature: Apple
Mode: TX Channel 11 (802.11g)	Distance:
Model: 44077	
Manufacturer: Interactive Toy Concepts Limited	

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 988 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #033

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

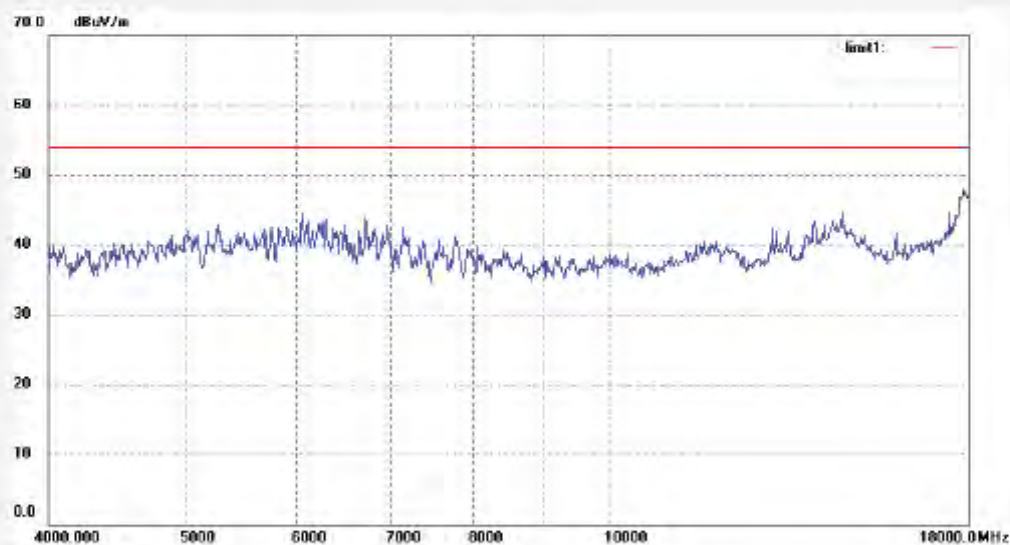
Date: 2012/03/29

Time: 20:48:08

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 986 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503398

Job No.: Apple #032

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

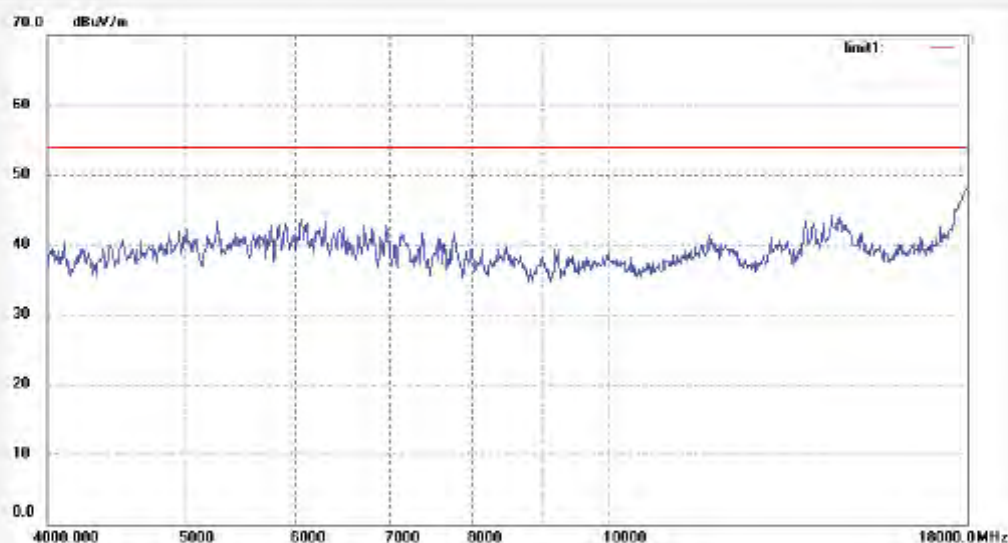
Date: 2012/03/29

Time: 20:45:04

Engineer Signature: Apple

Distance:

Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #034

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal

Power Source: DC 3.7V

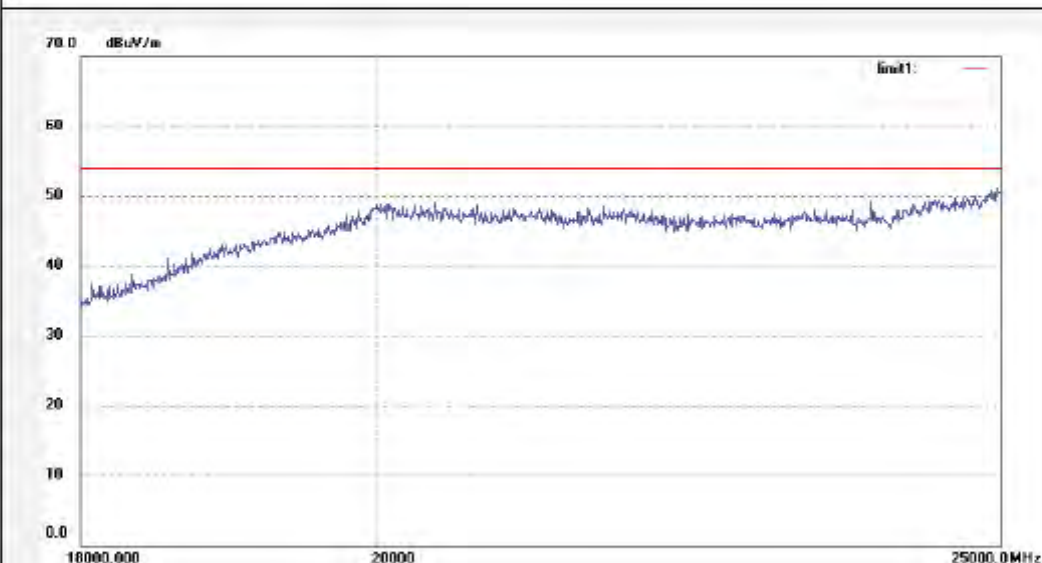
Date: 2012/03/29

Time: 20:47:26

Engineer Signature: Apple

Distance:

Note: Report No.:ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Apple #035

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: Wi-Spi Helicopter

Mode: TX Channel 11 (802.11g)

Model: 44077

Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical

Power Source: DC 3.7V

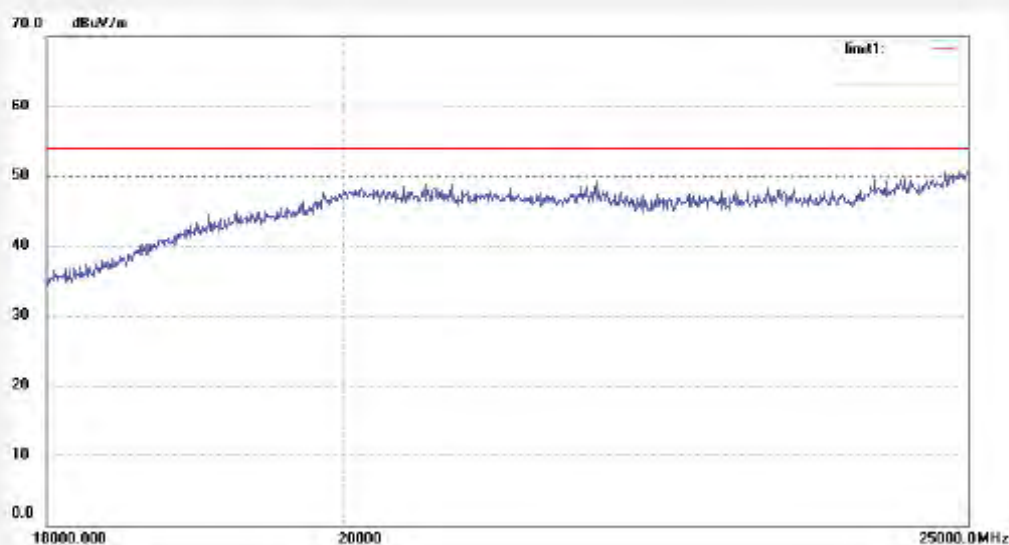
Date: 2012/03/29

Time: 20:49:08

Engineer Signature: Apple

Distance:

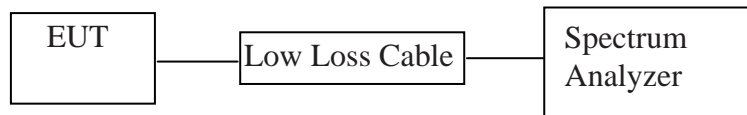
Note: Report No.: ATE20120527



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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10.CONDUCTED SPURIOUS EMISSION COMPLIANCE TEST

10.1.Block Diagram of Test Setup



(EUT: Wi-Spi Helicopter)

10.2.The Requirement For Section 15.247(d)

Section 15.247(d): 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 (b)(3) of this section, 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).

10.3.EUT Configuration on Measurement

The following equipment is 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.

10.3.1.Wi-Spi Helicopter (EUT)

Model Number	:	44077
Serial Number	:	N/A
Manufacturer	:	Interactive Toy Concepts Limited

10.4.Operating Condition of EUT

10.4.1.Setup the EUT and simulator as shown as Section 10.1.

10.4.2.Turn on the power of all equipment.

10.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2412-2462MHz. We select 2412MHz, 2437MHz, 2462MHz TX frequency to transmit.

10.5.Test Procedure

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

10.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz (below 1GHz).

Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz (above 1GHz).

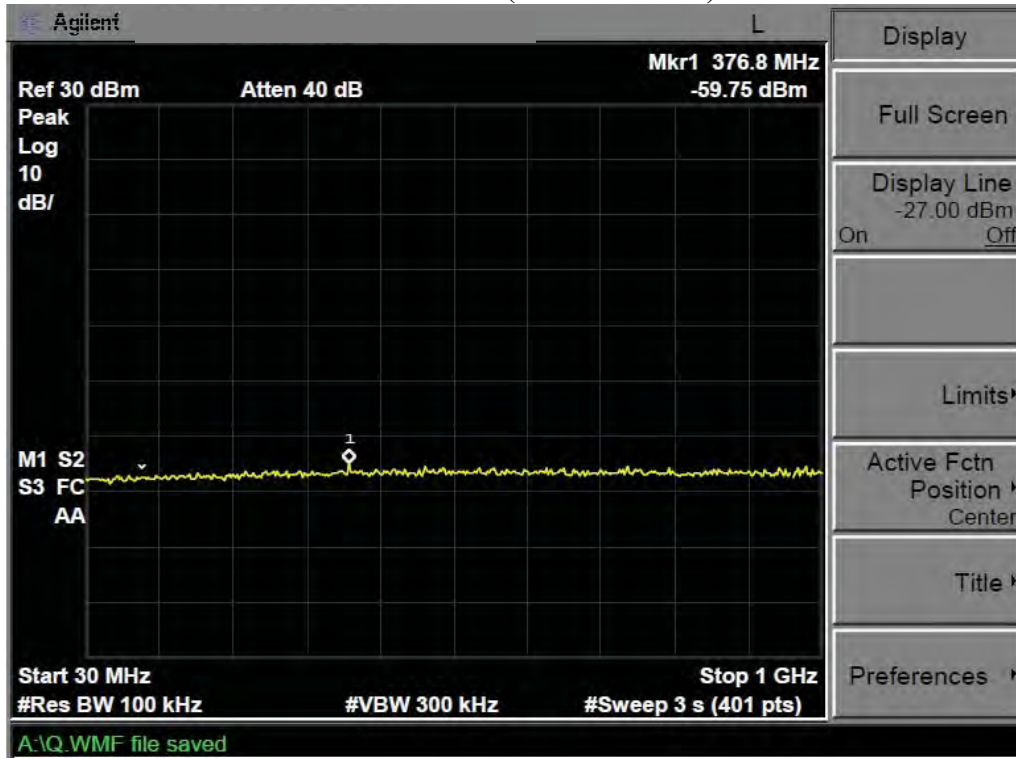
10.5.3.The Conducted Spurious Emission was measured and recorded.

10.6.Test Result

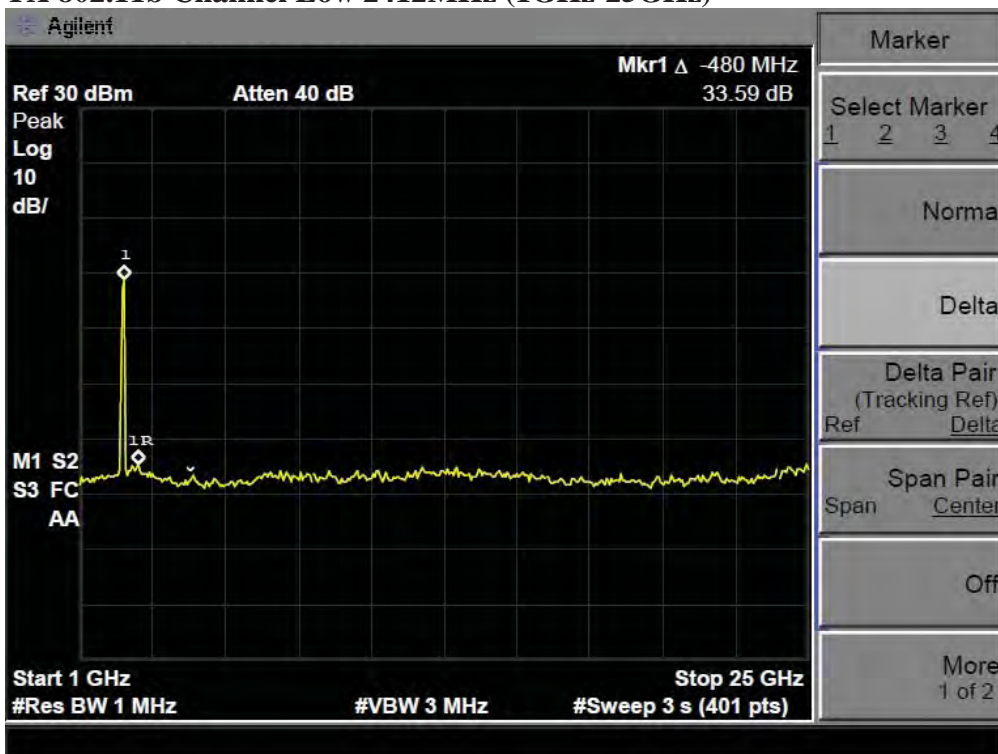
Pass.

The spectrum analyzer plots are attached as below.

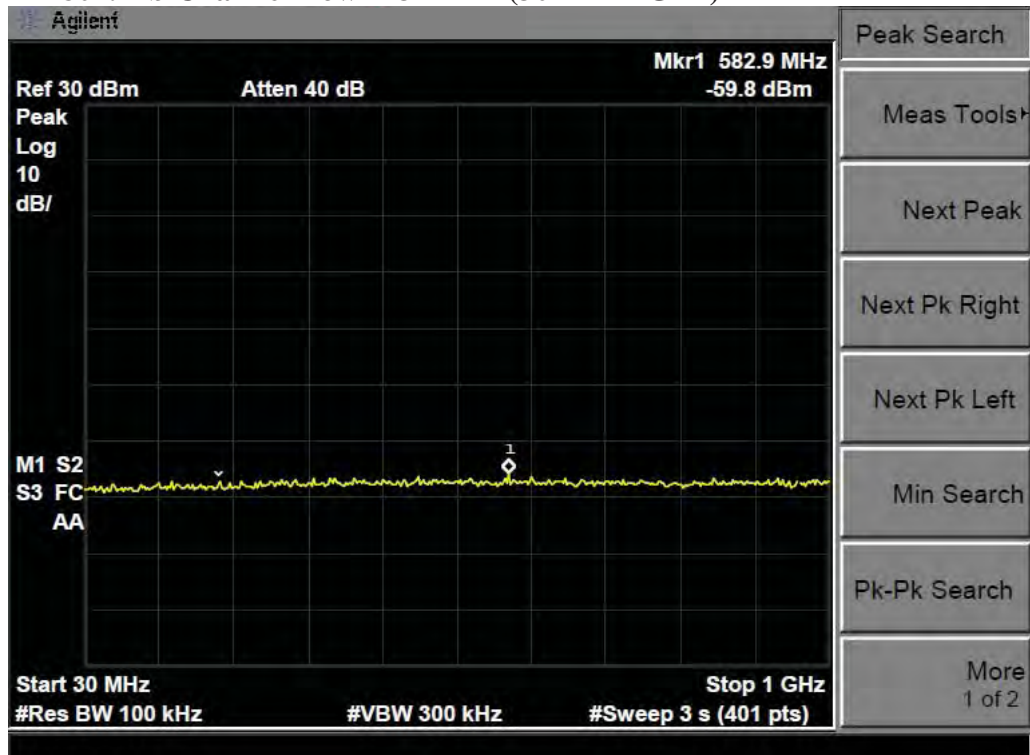
TX 802.11b Channel Low 2412MHz (30MHz-1GHz)



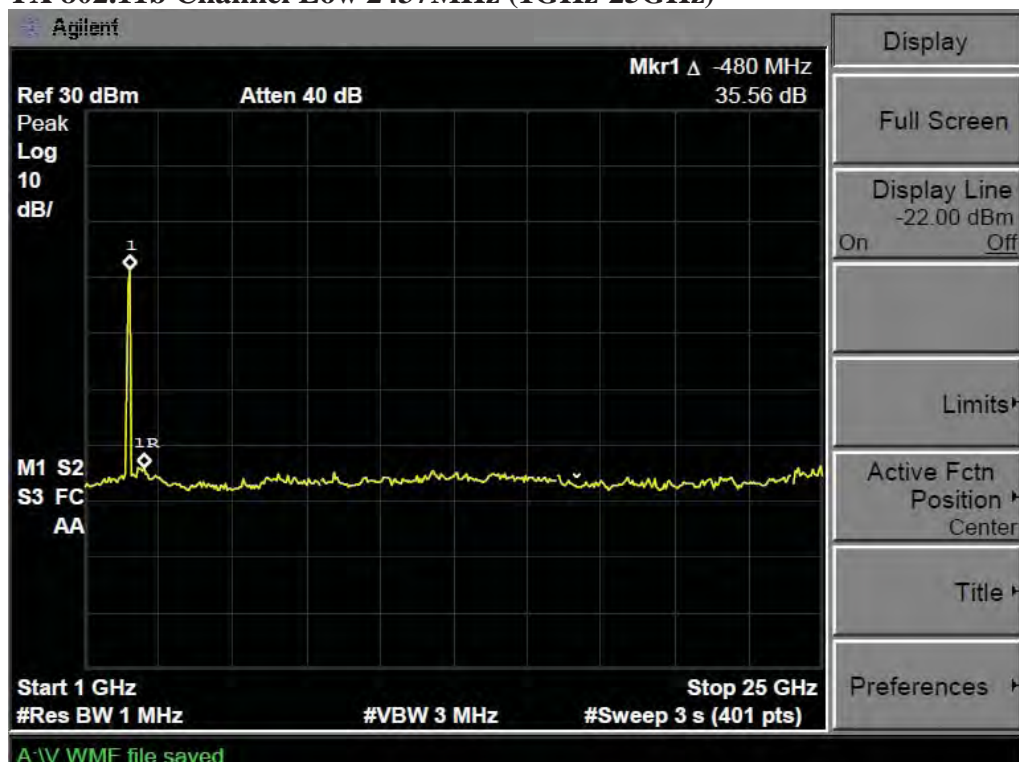
TX 802.11b Channel Low 2412MHz (1GHz-25GHz)



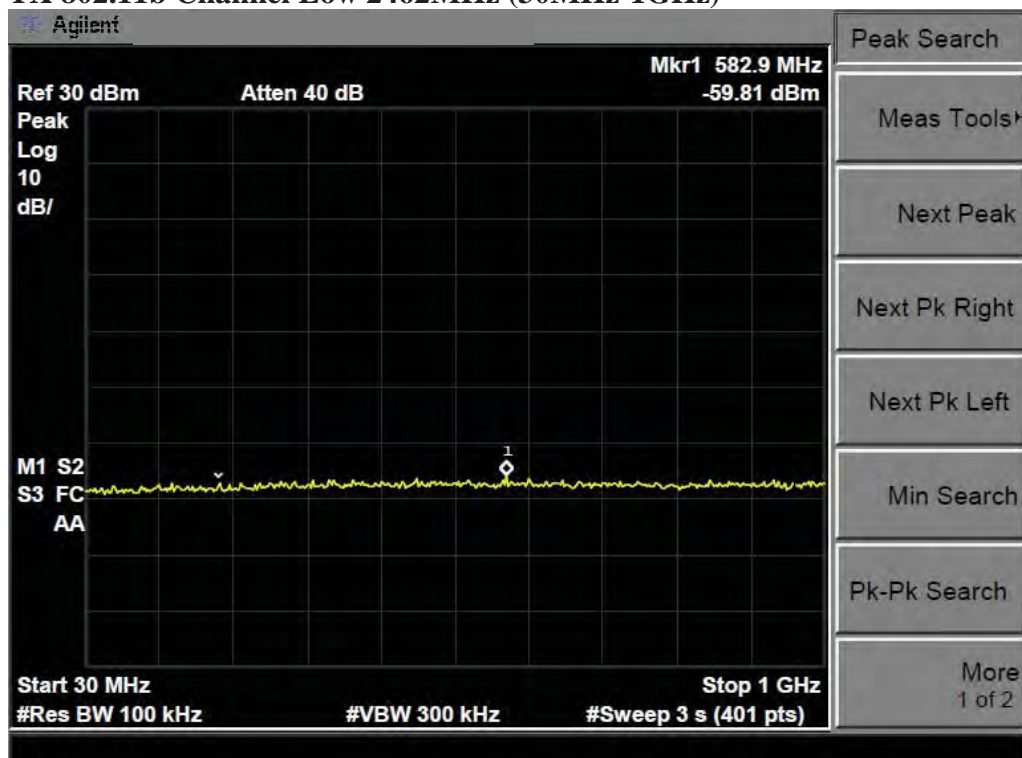
TX 802.11b Channel Low 2437MHz (30MHz-1GHz)



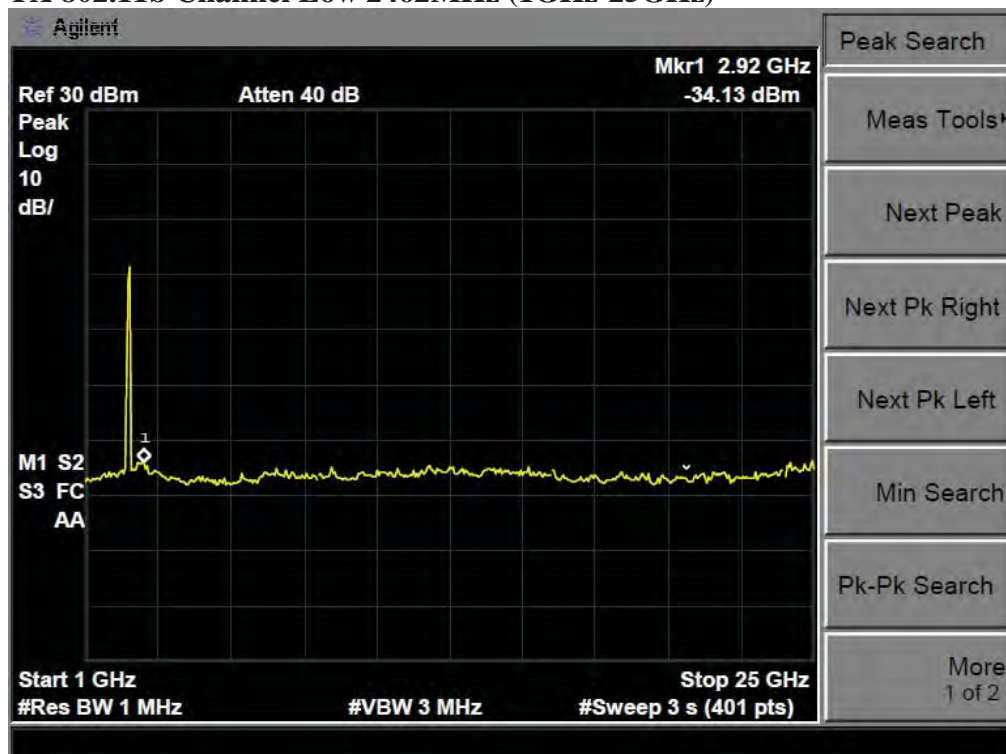
TX 802.11b Channel Low 2437MHz (1GHz-25GHz)



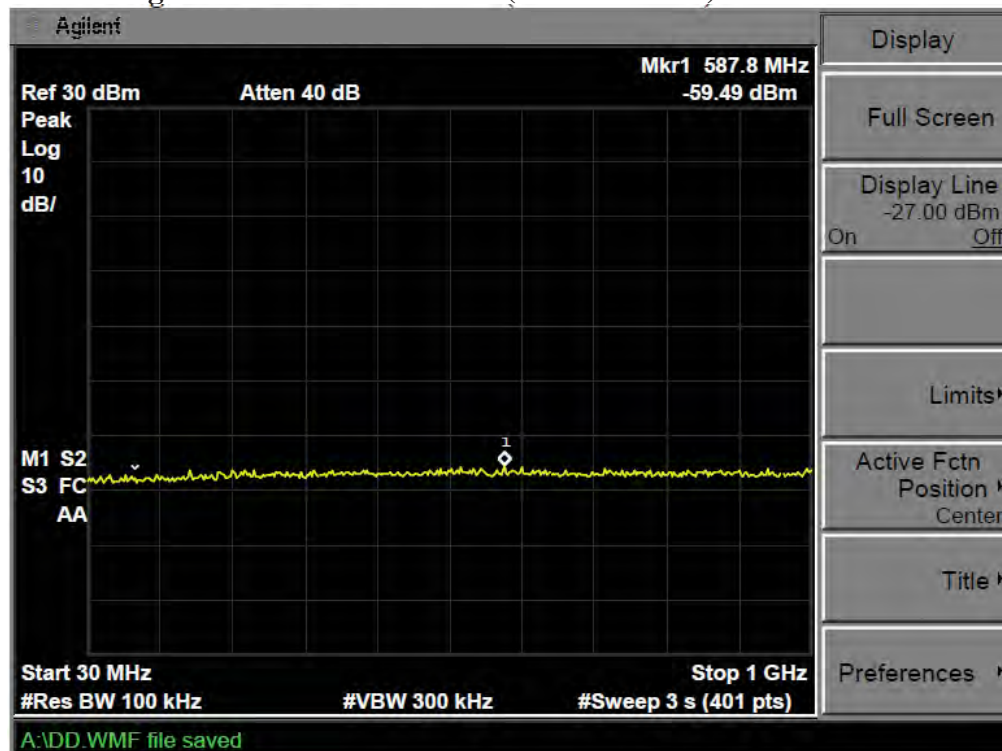
TX 802.11b Channel Low 2462MHz (30MHz-1GHz)



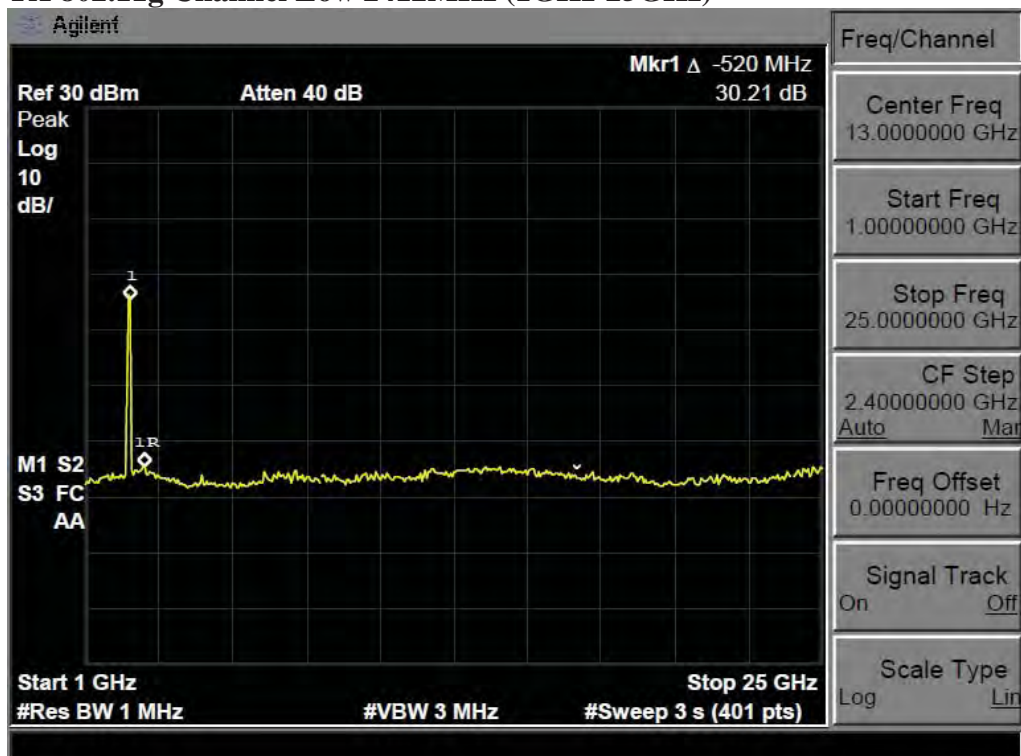
TX 802.11b Channel Low 2462MHz (1GHz-25GHz)



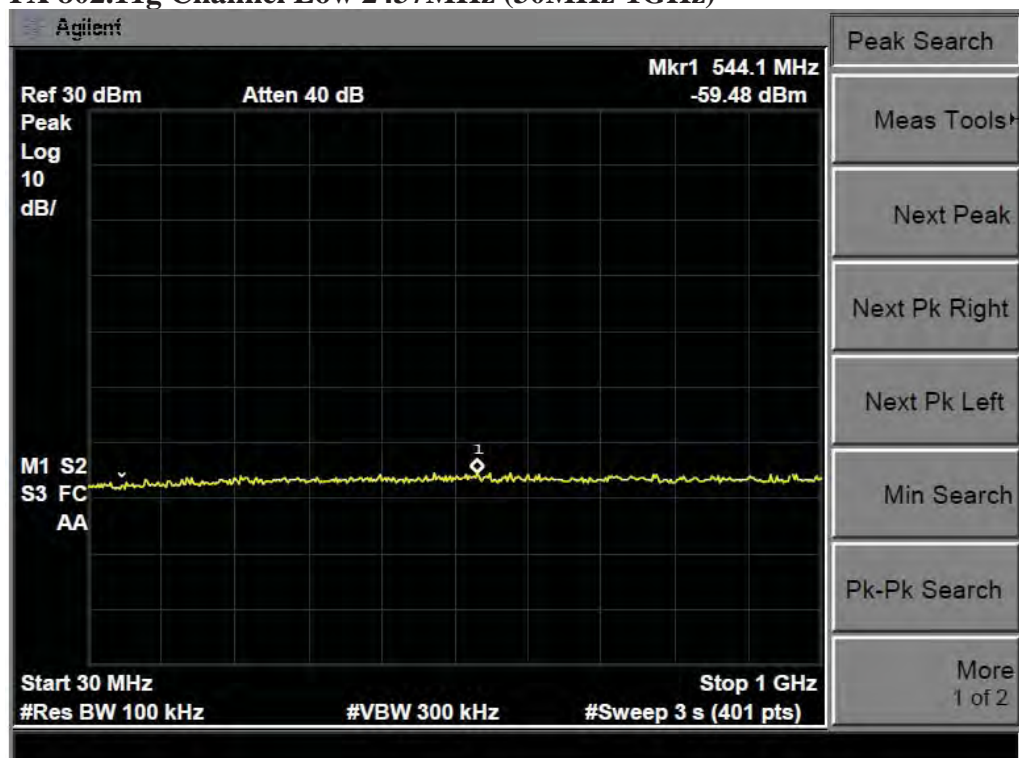
TX 802.11g Channel Low 2412MHz (30MHz-1GHz)



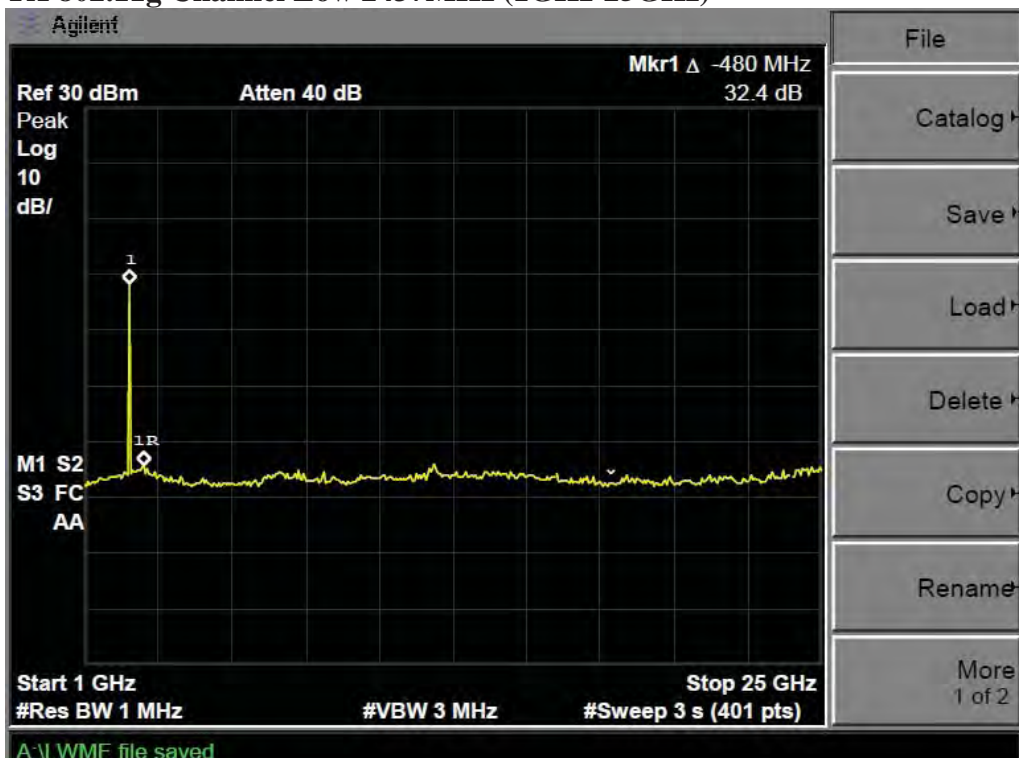
TX 802.11g Channel Low 2412MHz (1GHz-25GHz)



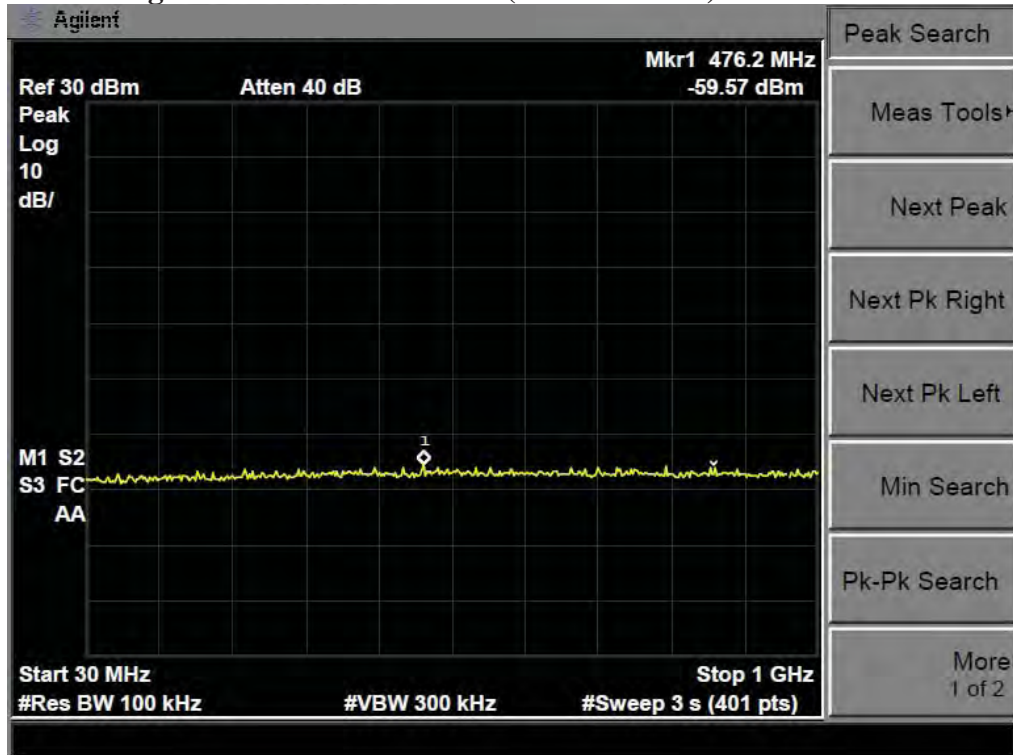
TX 802.11g Channel Low 2437MHz (30MHz-1GHz)



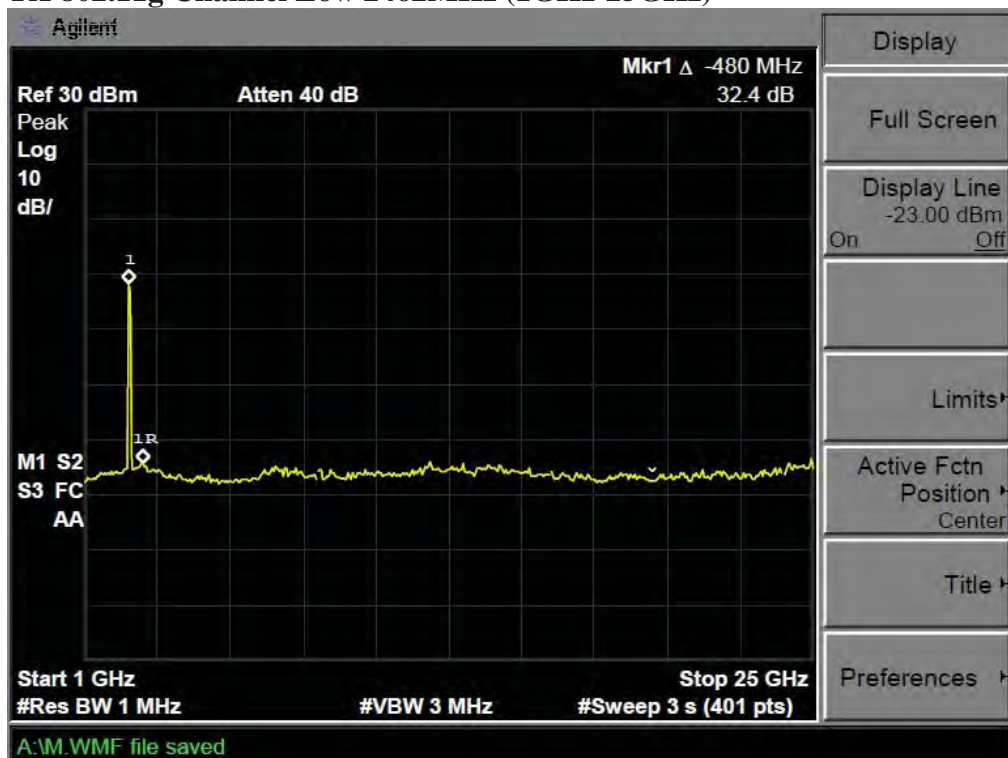
TX 802.11g Channel Low 2437MHz (1GHz-25GHz)



TX 802.11g Channel Low 2462MHz (30MHz-1GHz)



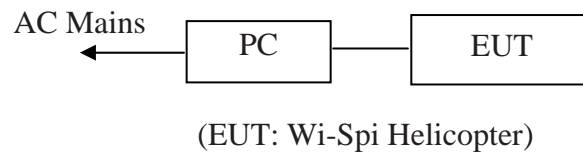
TX 802.11g Channel Low 2462MHz (1GHz-25GHz)



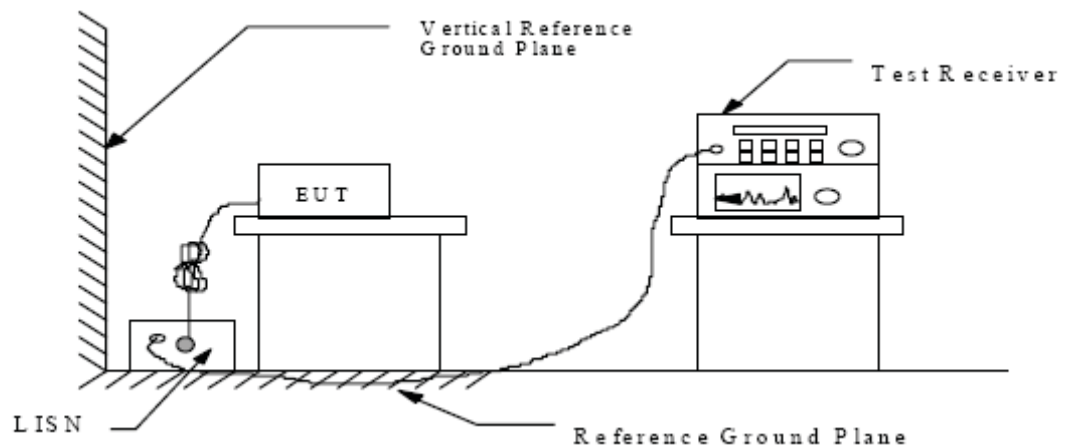
11.AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

11.1.Block Diagram of Test Setup

11.1.1.Block diagram of connection between the EUT and simulators



11.1.2.Shielding Room Test Setup Diagram



(EUT: Wi-Spi Helicopter)

11.2.The Emission Limit

11.2.1.Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency (MHz)	Limit dB(μ V)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

* Decreases with the logarithm of the frequency.

11.3.Configuration of EUT on Measurement

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

11.3.1.Wi-Spi Helicopter (EUT)

Model Number : 44077
Serial Number : N/A
Manufacturer : Interactive Toy Concepts Limited

11.4.Operating Condition of EUT

11.4.1.Setup the EUT and simulator as shown as Section 11.1.

11.4.2.Turn on the power of all equipment.

11.4.3.Let the EUT work in Charging mode measure it.

11.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

11.6.Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Date of Test:	March 30, 2012	Temperature:	25°C
EUT:	Wi-Spi Helicopter	Humidity:	50%
Model No.:	44077	Power Supply:	AC 120/60Hz
Test Mode:	Charging	Test Engineer:	Pei

Frequency (MHz)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Line
0.157990	39.00	66	26.6	QP	Neutral
0.471701	32.30	57	24.2	QP	
12.014561	31.40	60	28.6	QP	
0.159256	30.20	56	25.3	AV	
0.481211	27.40	46	18.9	AV	
12.110870	24.70	50	25.3	AV	
0.151202	33.20	66	32.7	QP	Live
0.473588	36.40	57	20.1	QP	
12.256783	33.30	60	26.7	QP	
0.187577	33.70	54	20.4	AV	
0.475482	31.30	46	15.1	AV	
12.355033	26.90	50	23.1	AV	

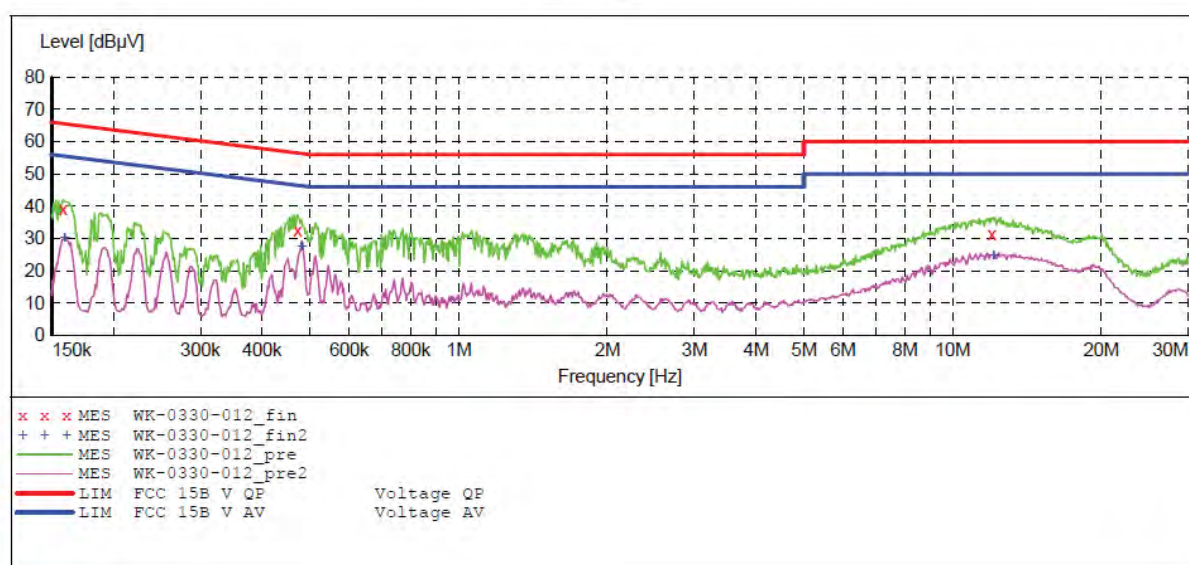
Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

ACCURATE TECHNOLOGY CO., LTD**CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: Wi-Spi Helicopter M/N:44077
 Manufacturer: Interactive Toy Concepts Limited
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: Apple
 Test Specification: N 120V/60Hz
 Comment: Mains port
 Report No.: ATE20120527

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average

**MEASUREMENT RESULT: "WK-0330-012_fin"**

3/30/2012 8:37PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.157990	39.00	11.0	66	26.6	QP	N	GND
0.471701	32.30	12.0	57	24.2	QP	N	GND
12.014561	31.40	11.2	60	28.6	QP	N	GND

MEASUREMENT RESULT: "WK-0831-012_fin2"

3/30/2011 8:37PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.159256	30.20	11.0	56	25.3	AV	N	GND
0.481211	27.40	12.0	46	18.9	AV	N	GND
12.110870	24.70	11.2	50	25.3	AV	N	GND

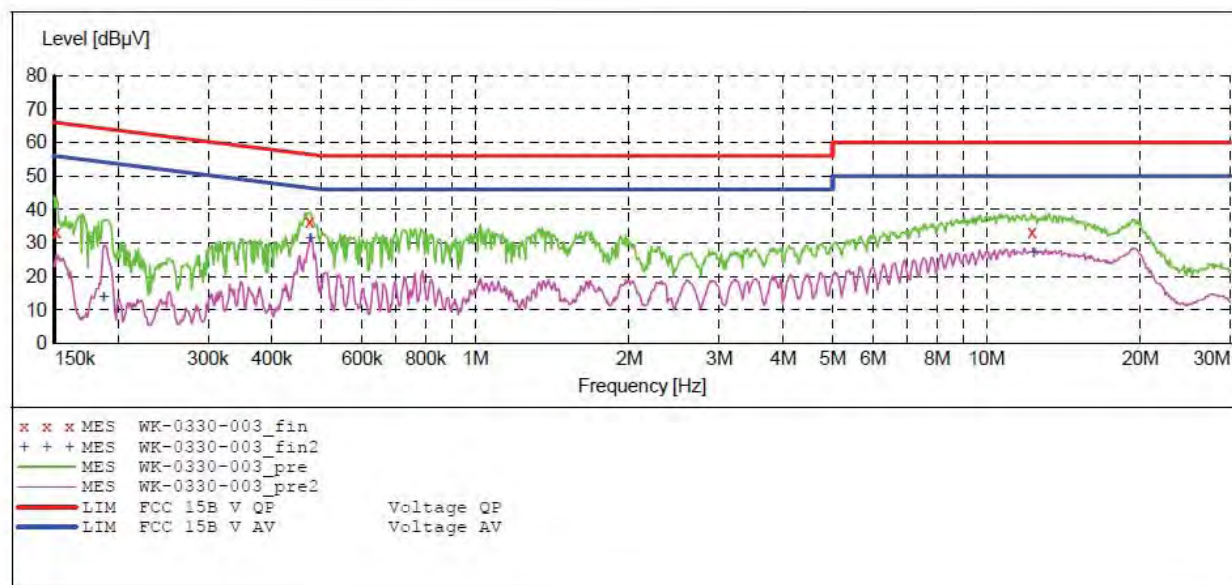
ACCURATE TECHNOLOGY CO.,LTD**CONDUCTED EMISSION STANDARD FCC PART 15 B**

EUT: Wi-Spi Helicopter M/N:44077
 Manufacturer: Interactive Toy Concepts Limited
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: Apple
 Test Specification: L 120V/60Hz
 Comment: Mains port
 Report No.:ATE20120527

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	0.8 %	QuasiPeak	1.0 s	9 kHz	NSLK8126 2008
Average						

**MEASUREMENT RESULT: "WK-0330-003_fin"**

3/30/2011 5:00PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.151202	33.20	11.0	66	32.7	QP	L1	GND
0.473588	36.40	12.0	57	20.1	QP	L1	GND
12.256783	33.30	11.2	60	26.7	QP	L1	GND

MEASUREMENT RESULT: "WK-0908-003_fin2"

3/30/2011 5:00PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.187577	33.70	11.2	54	20.4	AV	L1	GND
0.475482	31.30	12.0	46	15.1	AV	L1	GND
12.355033	26.90	11.2	50	23.1	AV	L1	GND

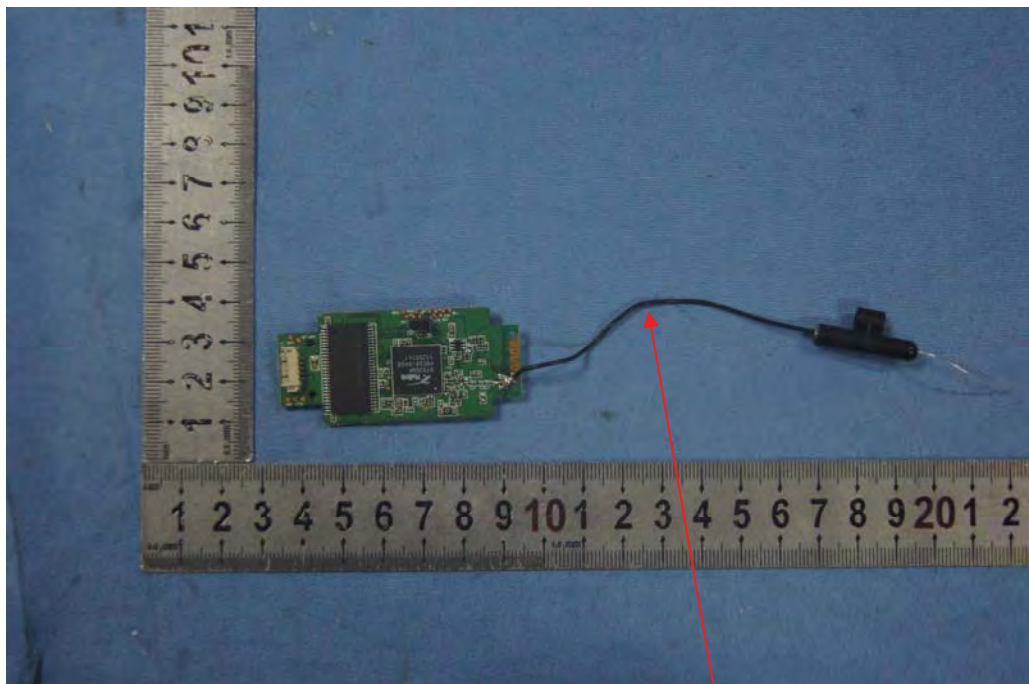
12.ANTENNA REQUIREMENT

12.1.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.

12.2.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.



Antenna