

FCC CERTIFICATION
On Behalf of
Interactive Toy Concepts Limited

2.4G Flier
Model No.: 22033V2RX

FCC ID: RSD-22033V2RX

Prepared for : Interactive Toy Concepts Limited
Address : Unit 709, 7/F., Tower 2, Cheung Sha Wan Plaza, No.833
Cheung Sha Wan Rd., Kowloon, Hong Kong

Prepared by : ACCURATE TECHNOLOGY CO. LTD
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APPENDIX I (TEST CURVES) (27 pages)

Test Report Certification

Measurement Procedure Used:

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

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 Section15.249 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : April 29, 2014

Prepared by : _____

Bob Wang

(Engineer)

Approved & Authorized Signer :

George

(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : 2.4G Flier
 Model Number : 22033V2RX

 Power Supply : 3.7V DC (Power by Li-Ion battery) and AC120V/60Hz
 (Power by USB Port)
 Operate Frequency : 2414.000-2473.000MHz

 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 : April 29, 2014

 Date of Test : April 29, 2014

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 (9kHz-30MHz) = 3.08dB, k=2

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

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

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 11, 2014	Jan. 10, 2015
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 11, 2014	Jan. 10, 2015
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 11, 2014	Jan. 10, 2015
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 11, 2014	Jan. 10, 2015
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 15, 2014	Jan. 14, 2015
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 15, 2014	Jan. 14, 2015
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 15, 2014	Jan. 14, 2015
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 15, 2014	Jan. 14, 2015
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 11, 2014	Jan. 10, 2015
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 11, 2014	Jan. 10, 2015

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	Compliant
Section 15.249(a)	Fundamental and Harmonics Radiated Emission	Compliant
Section 15.249(d)	Spurious Radiated Emission	Compliant
Section 15.249(d)	Band Edge	Compliant
Section 15.203	Antenna Requirement	Compliant
Section 15.207	AC Power Line Conducted Emission Test	Compliant

Remark: “N/A” means “Not applicable”.

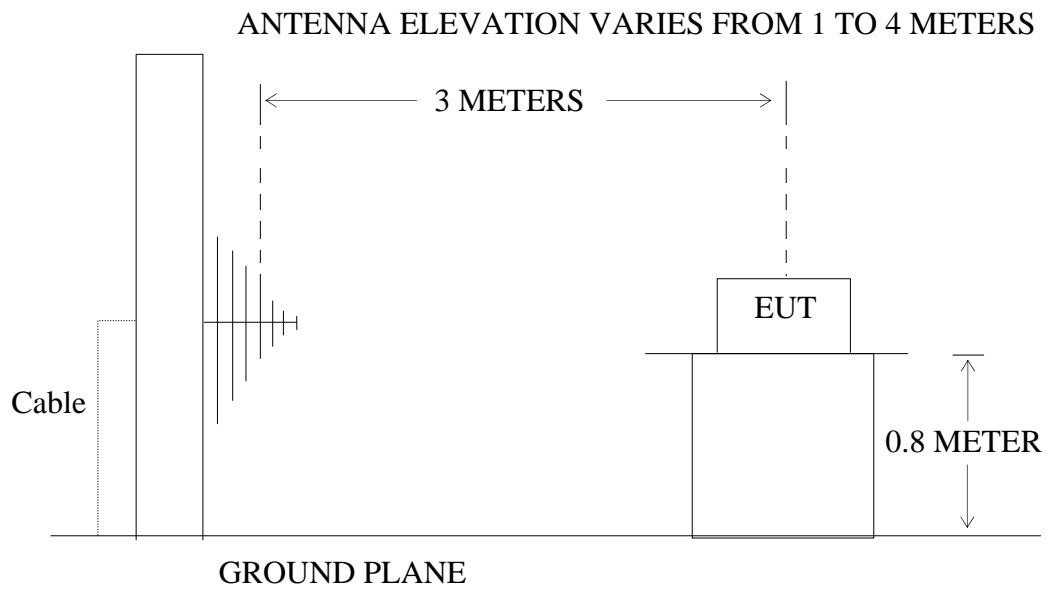
4. FUNDAMENTAL AND HARMONICS RADIATED EMISSION FOR SECTION 15.249(A)

4.1. Block Diagram of Test Setup

4.1.1. Block diagram of connection between the EUT and simulators



4.1.2. Semi-Anechoic Chamber Test Setup Diagram



(EUT: 2.4G Flier)

4.2.The Emission Limit

4.2.1.For intentional radiators, According to section 15.249(a), Operation within the frequency band of 2.4 to 2.4835GHz, The fundamental field strength shall not exceed 94 dB μ V/m and the harmonics shall not exceed 54 dB μ V/m.

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of harmonics (microvolts/meter)
902-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

4.2.2.According to section 15.249(e), as shown in section 15.35(b), the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

4.3.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.

4.3.1. 2.4G Flier (EUT)

Model Number : 22033V2RX
 Serial Number : N/A
 Manufacturer : Interactive Toy Concepts Limited

4.4.Operating Condition of EUT

4.4.1.Setup the EUT and simulator as shown as Section 4.1.

4.4.2.Turn on the power of all equipment.

4.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2414.000 - 2473.000 MHz MHz. We are select 2414.000MHz, 2447.000MHz, 2473.000MHz TX frequency to transmit.

4.5. 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 bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

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

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

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

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2414.000MHz	Test Engineer:	Pei

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB) Corr.	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2414.000	80.11	88.68	-6.71	73.40	81.97	94.00	114.00	-20.60	-32.03	Vertical
2414.000	78.14	86.85	-6.71	71.43	80.14	94.00	114.00	-22.57	-33.86	Horizontal

Harmonics Radiated Emissions

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB) Corr.	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4828.000	47.36	52.67	-1.51	45.85	51.16	54.00	74.00	-8.15	-22.84	Vertical
7242.000	44.51	50.91	1.33	45.84	52.24	54.00	74.00	-8.16	-21.76	Vertical
4828.000	44.10	50.36	-1.51	42.59	48.85	54.00	74.00	-11.41	-25.15	Horizontal
7242.000	43.96	50.62	1.32	42.28	51.94	54.00	74.00	-8.72	-22.06	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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2447.000MHz	Test Engineer:	Pei

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB)	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		Corr.	AV	PEAK	AV	PEAK	AV	
2447.000	80.41	87.37	-6.63	73.78	80.74	94.00	114.00	-20.22	-33.26	Vertical
2447.000	76.52	84.96	-6.63	69.89	78.33	94.00	114.00	-24.11	-35.67	Horizontal

Harmonics Radiated Emissions

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB)	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		Corr.	AV	PEAK	AV	PEAK	AV	
4894.000	45.90	51.65	-1.34	44.56	50.31	54.00	74.00	-9.44	-23.69	Vertical
7341.000	42.20	48.68	1.42	43.62	50.10	54.00	74.00	-10.38	-23.90	Vertical
4894.000	45.22	51.89	-1.34	43.88	50.55	54.00	74.00	-10.12	-23.45	Horizontal
7341.000	44.25	50.11	1.42	45.67	51.53	54.00	74.00	-8.33	-22.47	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:

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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2473.000MHz	Test Engineer:	Pei

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB)	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		Corr.	AV	PEAK	AV	PEAK	AV	
2473.000	76.22	84.92	-6.56	-69.66	78.36	94.00	114.00	-24.34	-35.64	Vertical
2473.000	81.75	88.16	-6.56	75.19	81.60	94.00	114.00	-18.81	-32.40	Horizontal

Harmonics Radiated Emissions

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB)	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		Corr.	AV	PEAK	AV	PEAK	AV	
4946.000	49.99	56.37	-1.15	48.84	55.22	54.00	74.00	-5.16	-18.78	Vertical
7419.000	45.10	50.93	1.47	46.57	52.40	54.00	74.00	-7.43	-21.60	Vertical
4946.000	43.21	49.34	-1.15	42.06	48.19	54.00	74.00	-11.94	-25.81	Horizontal
7419.000	44.25	50.71	1.49	45.74	52.20	54.00	74.00	-8.26	-21.80	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:

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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

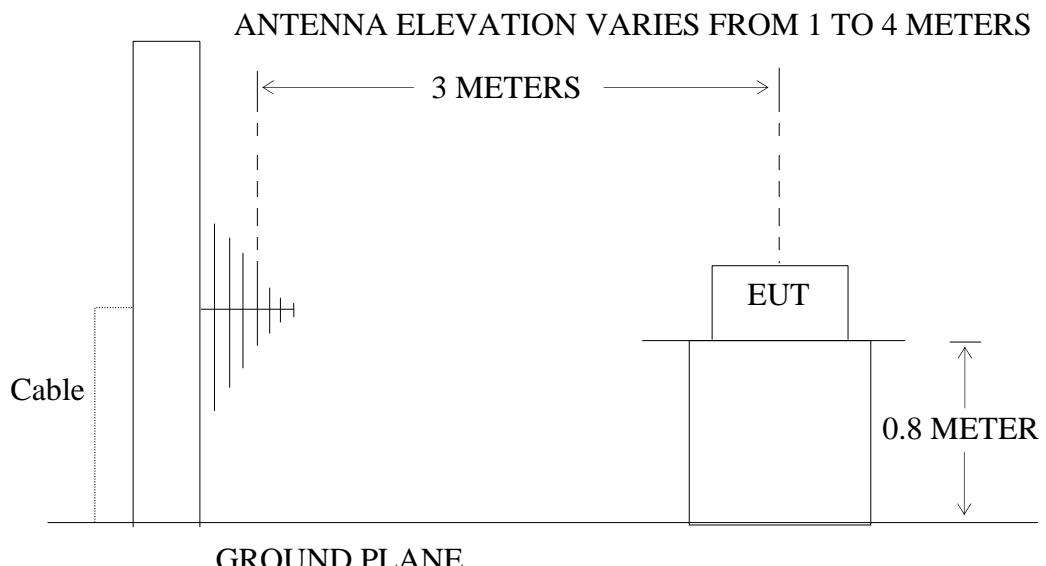
5. SPURIOUS RADIATED EMISSION FOR SECTION 15.249(D)

5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators



5.1.2. Semi-Anechoic Chamber Test Setup Diagram



(EUT: 2.4G Flier)

5.2. The Emission Limit For Section 15.249(d)

5.2.1. Emission radiated outside of the specified frequency bands, except for harmonics, shall be comply with the general radiated emission limits in Section 15.209.

Radiation Emission Measurement Limits According to Section 15.209

Frequency (MHz)	Limit		
	Field Strength (microvolts/meter)	Measurement Distance (meters)	The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector.
0.009 – 0.490	2400/F(kHz)	300	

0.490 – 1.705	24000/F(kHz)	30	Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
1.705 – 30.0	30	30	
30 - 88	100	3	
88 - 216	150	3	
216 - 960	200	3	
Above 960	500	3	

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. 2.4G Flier (EUT)

Model Number : 22033V2RX
 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 2414.000 - 2473.000 MHz. We are select 2414.000MHz, 2447.000MHz, 2473.000MHz TX frequency to transmit.

5.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

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

The frequency range from 9kHz to 25GHz 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.

5.6.The Emission Measurement Result

PASS.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2414.000MHz	Test Engineer:	Pei

30MHz-25GHz

Frequency (MHz)	Reading (dB μ V/m)	Factor(dB) Corr.	Result	Limit	Margin	Polarization
			(dB μ V/m)	(dB μ V/m)	(dB)	
372.0045	37.31	-15.84	21.47	46.00	-24.53	Vertical
	42.15	-15.67	26.48	46.00	-19.52	
	37.45	-14.78	22.67	46.00	-23.33	
	48.29	-16.31	31.98	46.00	-14.02	
372.0045	50.67	-15.84	34.83	46.00	-11.17	Horizontal
396.2414	52.17	-15.67	36.50	46.00	-9.50	

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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2447.000MHz	Test Engineer:	Pei

30MHz-25GH

Frequency (MHz)	Reading (dB μ V/m)	Factor(dB) Corr.	Result	Limit	Margin	Polarization
			(dB μ V/m)	(dB μ V/m)	(dB)	
396.2414	37.48	-15.67	21.81	46.00	-24.19	Vertical
444.8514	36.08	-14.78	21.30	46.00	-24.70	
550.9479	37.03	-12.82	24.21	46.00	-21.79	
372.0045	50.09	-15.84	34.25	46.00	-11.75	Horizontal
396.2415	51.91	-15.67	36.24	46.00	-9.76	
420.5803	46.71	-15.36	31.35	46.00	-14.65	

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:

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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2473.000MHz	Test Engineer:	Pei

30MHz-25GH

Frequency (MHz)	Reading (dB μ V/m)	Factor(dB) Corr.	Result	Limit	Margin	Polarization
			(dB μ V/m)	(dB μ V/m)	(dB)	
280.0237	38.21	-18.28	19.93	46.00	-26.07	Vertical
372.0045	36.90	-15.84	21.06	46.00	-24.94	
396.2415	37.14	-15.67	21.47	46.00	-24.53	
372.0045	50.03	-15.84	34.19	46.00	-11.81	Horizontal
396.2414	52.22	-15.67	36.55	46.00	-9.45	
420.5803	47.39	-15.36	32.03	46.00	-13.97	

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:

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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

6. BAND EDGES

6.1. The Requirement

6.1.1. Band Edge from 2400MHz to 2483.5MHz. Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

6.2. 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.

6.2.1. 2.4G Flier (EUT)

Model Number : 22033V2RX
 Serial Number : N/A
 Manufacturer : Interactive Toy Concepts Limited

6.3. Operating Condition of EUT

6.3.1. Setup the EUT and simulator as shown as Section 4.1.

6.3.2. Turn on the power of all equipment.

6.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 2414.000-2473.000MHz MHz. We are select 2414.000MHz, 2473.000MHz TX frequency to transmit.

6.4. Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 RBW=1MHz, VBW=1MHz

6.5.The Measurement Result

Pass.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2414.000MHz	Test Engineer:	Pei

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB) Corr.	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2310.000	33.55	43.95	-6.99	26.56	36.96	54.00	74.00	-27.44	-37.04	Vertical
2390.000	32.47	43.40	-6.78	25.69	36.62	54.00	74.00	-28.31	-37.38	Vertical
2310.000	31.97	43.76	-6.99	24.98	36.77	54.00	74.00	-29.02	-37.23	Horizontal
2390.000	32.58	44.28	-6.78	25.80	37.50	54.00	74.00	-28.20	-36.50	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:

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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	DC 3.7V
Test Mode:	TX 2473.000MHz	Test Engineer:	Pei

Frequency (MHz)	Reading(dB μ V/m)		Factor(dB) Corr.	Result(dB μ V/m)		Limit(dB μ V/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2483.500	35.25	44.60	-6.54	28.71	38.06	54.00	74.00	-25.29	-35.94	Vertical
2500.000	32.93	43.32	-6.50	26.43	36.82	54.00	74.00	-27.57	-37.18	Vertical
2483.500	33.21	44.74	-6.54	26.67	38.20	54.00	74.00	-27.33	-35.80	Horizontal
2500.000	32.90	44.07	-6.50	26.40	37.57	54.00	74.00	-27.60	-36.43	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

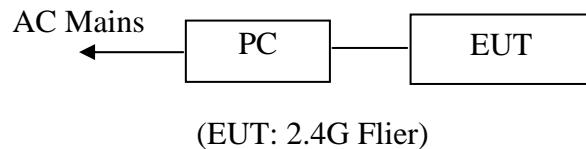
Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams in appendix I display the measurement of peak values.

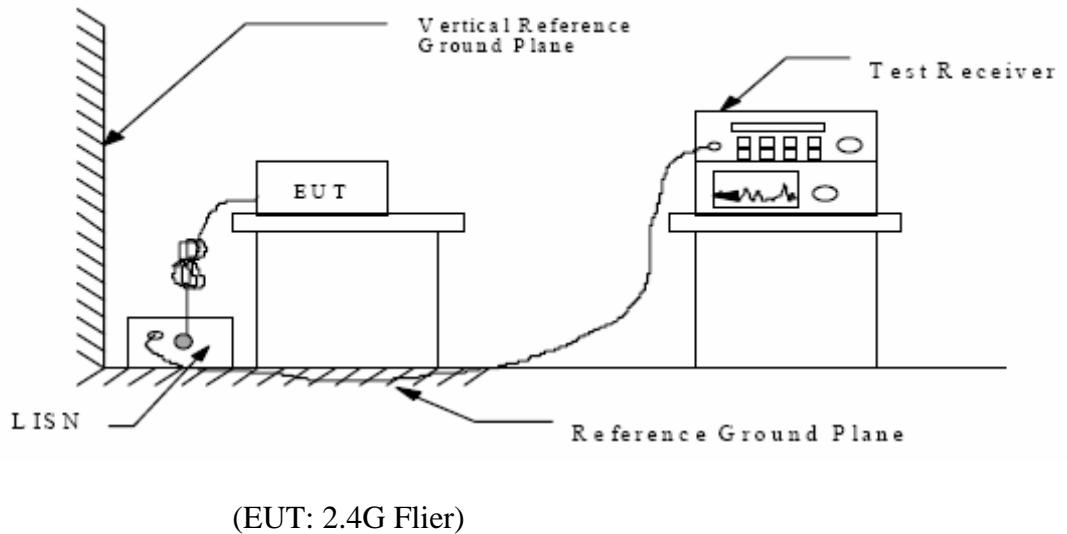
7. AC POWER LINE CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.207(A)

7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and simulators



7.1.2. Shielding Room Test Setup Diagram



7.2. The Emission Limit

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

Frequency (MHz)	Limit dB(µV)	
	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.

7.3.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.

7.3.1.2.4G Flier (EUT)

Model Number : 22033V2RX
 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 charging mode measure it.

7.5.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.

7.6. Power Line Conducted Emission Measurement Results

PASS.

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

Date of Test:	April 29, 2014	Temperature:	25°C
EUT:	2.4G Flier	Humidity:	50%
Model No.:	22033V2RX	Power Supply:	AC 120/60Hz
Test Mode:	Charging	Test Engineer:	Pei

Frequency (MHz)	Result (dB μ V)	Limit (dB μ V)	Margin (dB)	Detector	Line
0.177396	58.60	65	-6.0	QP	Neutral
0.234385	52.10	65	-10.2	QP	
0.289065	45.90	61	-14.7	QP	
0.174759	42.10	55	-12.6	AV	
0.233684	34.80	52	-17.5	AV	
0.290802	29.50	51	-21.0	AV	
0.183889	57.00	64	-7.3	QP	Live
0.235794	49.30	62	-12.9	QP	
0.289932	36.50	61	-24.0	QP	
0.183889	41.80	54	-12.5	AV	
0.235794	28.70	52	-23.5	AV	
0.294307	22.50	50	-27.9	AV	

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

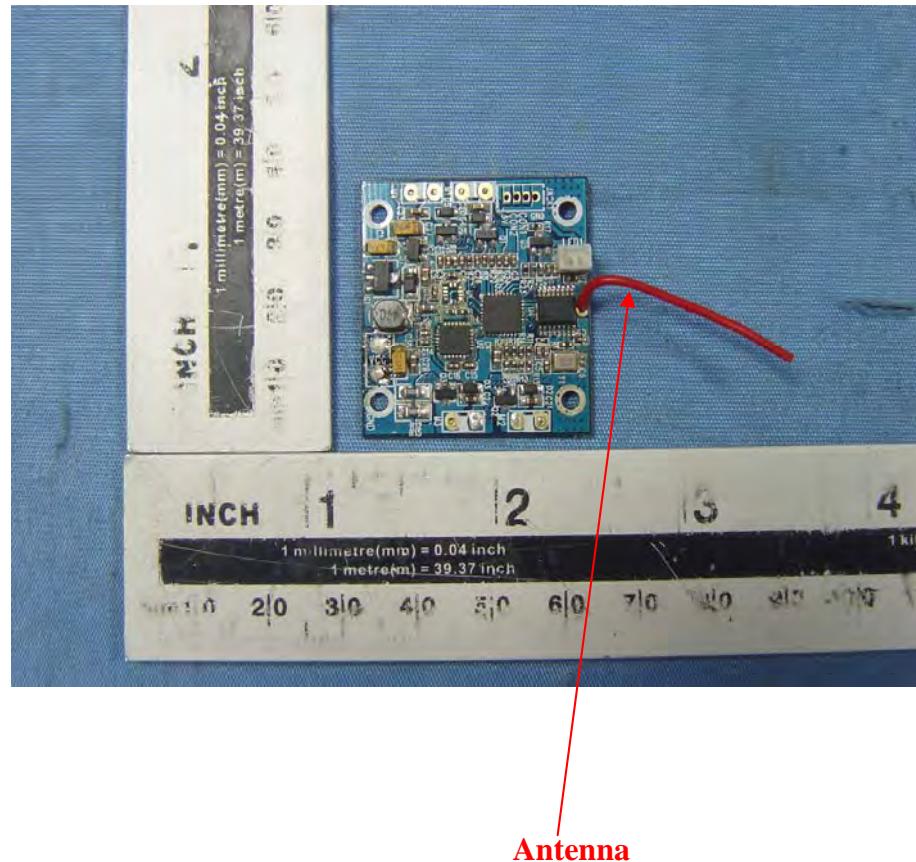
8. ANTENNA REQUIREMENT

8.1. The Requirement

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

8.2. Antenna Construction

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



APPENDIX I (Test Curves)


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #123

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 14/42/39

EUT: 2.4G Flier

Engineer Signature: STAR

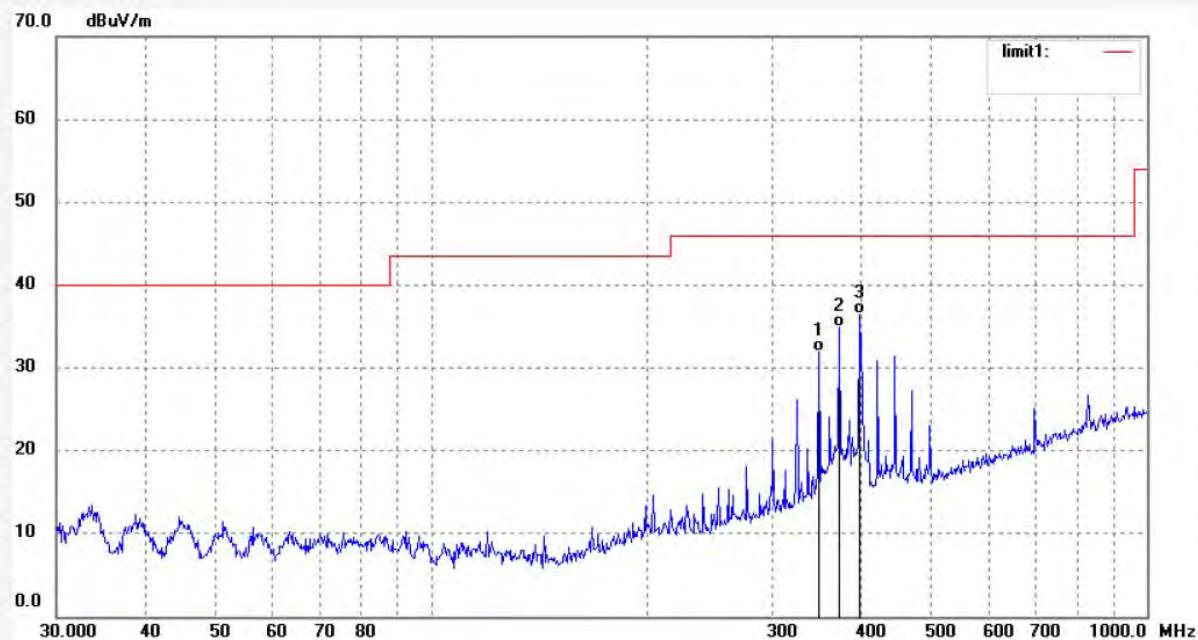
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	348.0274	48.29	-16.31	31.98	46.00	-14.02	QP			
2	372.0045	50.67	-15.84	34.83	46.00	-11.17	QP			
3	396.2414	52.17	-15.67	36.50	46.00	-9.50	QP			



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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #124

Polarization: Vertical

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 14/46/39

EUT: 2.4G Flier

Engineer Signature: STAR

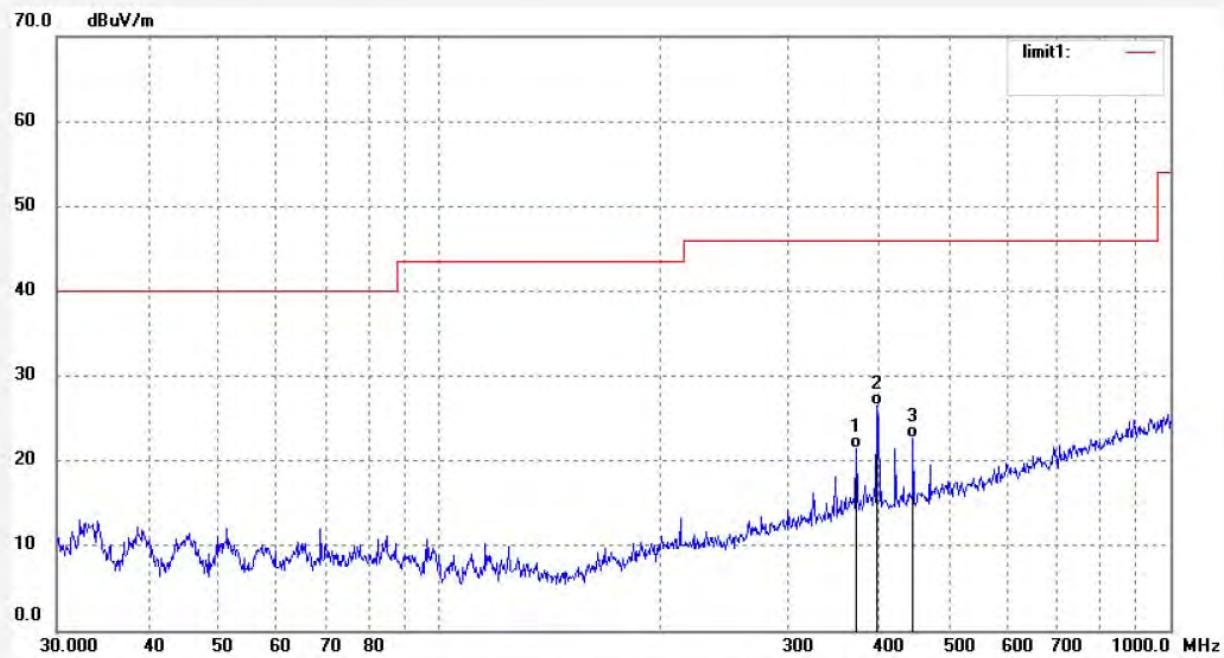
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	372.0045	37.31	-15.84	21.47	46.00	-24.53	QP			
2	396.2414	42.15	-15.67	26.48	46.00	-19.52	QP			
3	444.8514	37.45	-14.78	22.67	46.00	-23.33	QP			


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #153

Polarization: Vertical

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/02/16

EUT: 2.4G Flier

Engineer Signature: STAR

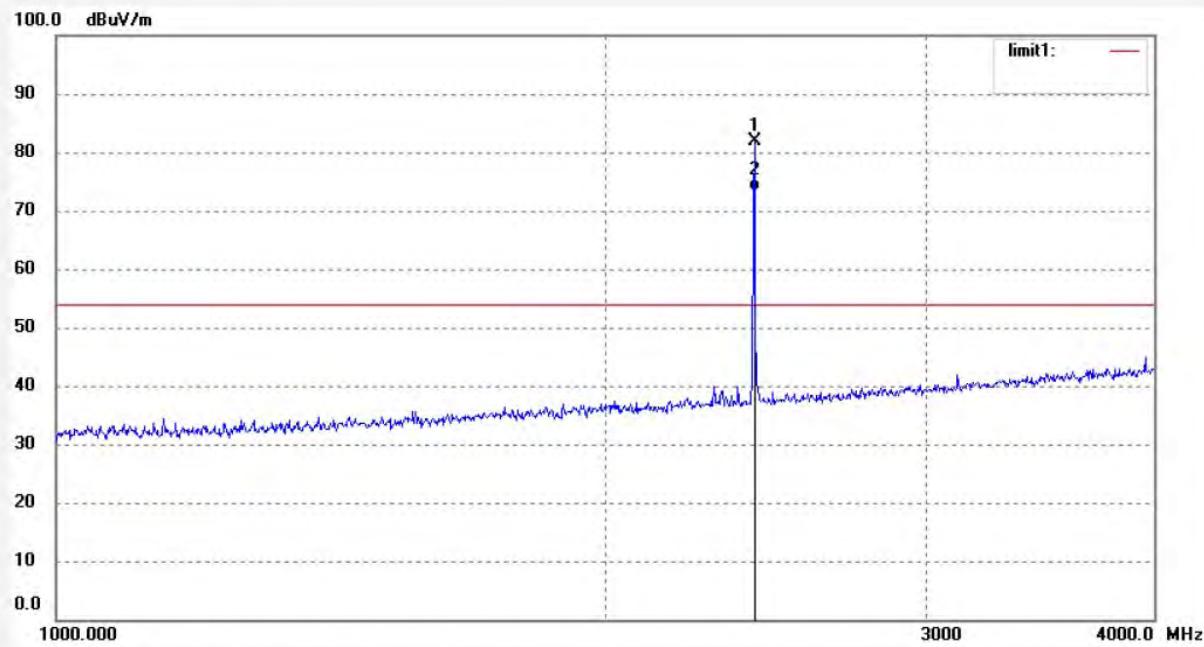
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2414.000	88.68	-6.71	81.97	114.00	-32.03	peak			
2	2414.000	80.11	-6.71	73.40	94.00	-20.60	AVG			


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Job No.: star2014 #154

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/06/17

EUT: 2.4G Flier

Engineer Signature: STAR

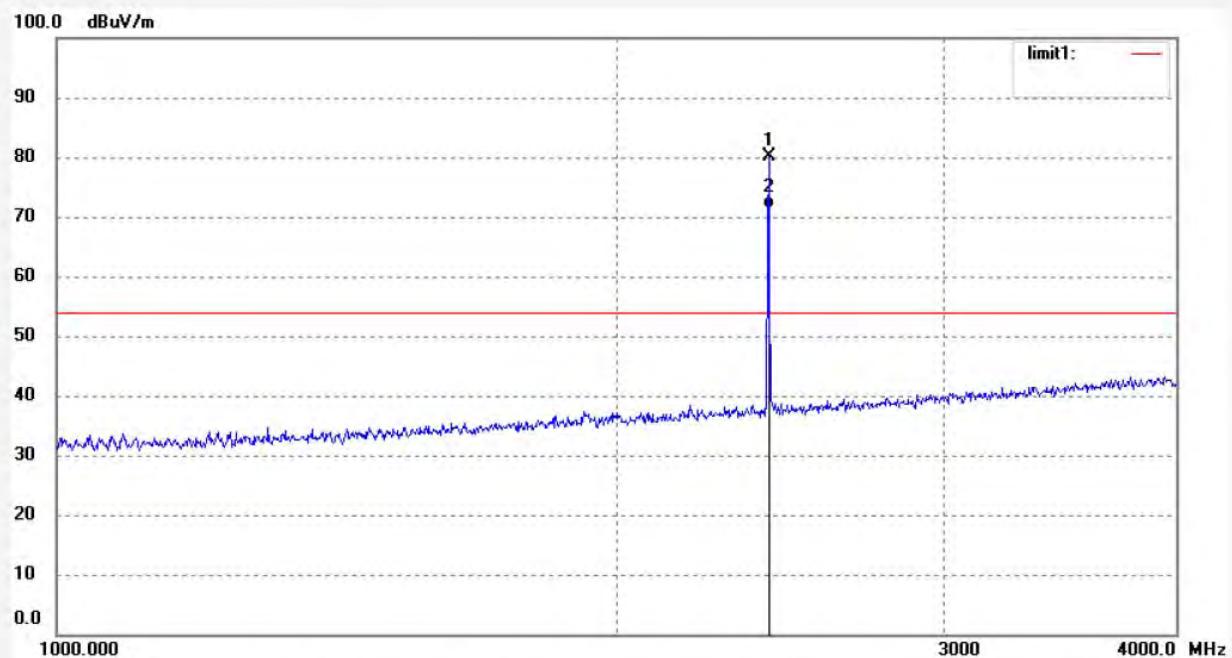
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2414.000	86.85	-6.71	80.14	114.00	-33.86	peak			
2	2414.000	78.14	-6.71	71.43	94.00	-22.57	AVG			


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Job No.: star2014 #159

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/25/48

EUT: 2.4G Flier

Engineer Signature: STAR

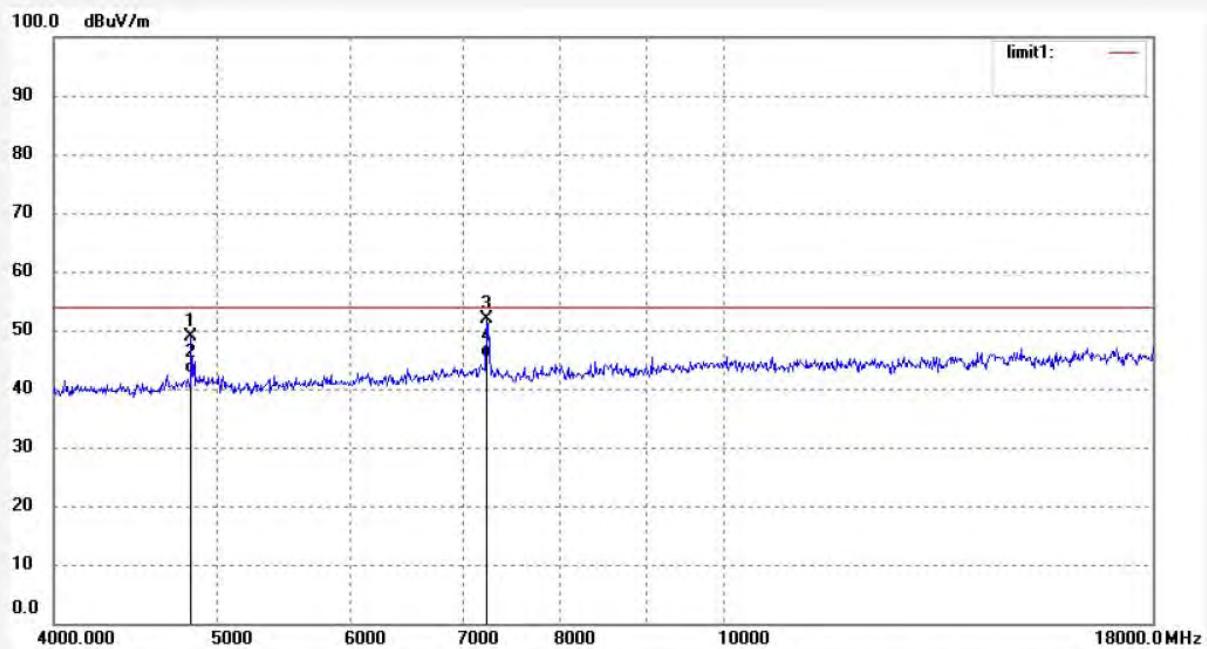
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4828.000	50.36	-1.51	48.85	74.00	-25.15	peak			
2	4828.000	44.10	-1.51	42.59	54.00	-11.41	AVG			
3	7242.000	50.62	1.32	51.94	74.00	-22.06	peak			
4	7242.000	43.96	1.32	45.28	54.00	-8.72	AVG			


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Job No.: star2014 #160

Polarization: Vertical

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/28/10

EUT: 2.4G Flier

Engineer Signature: STAR

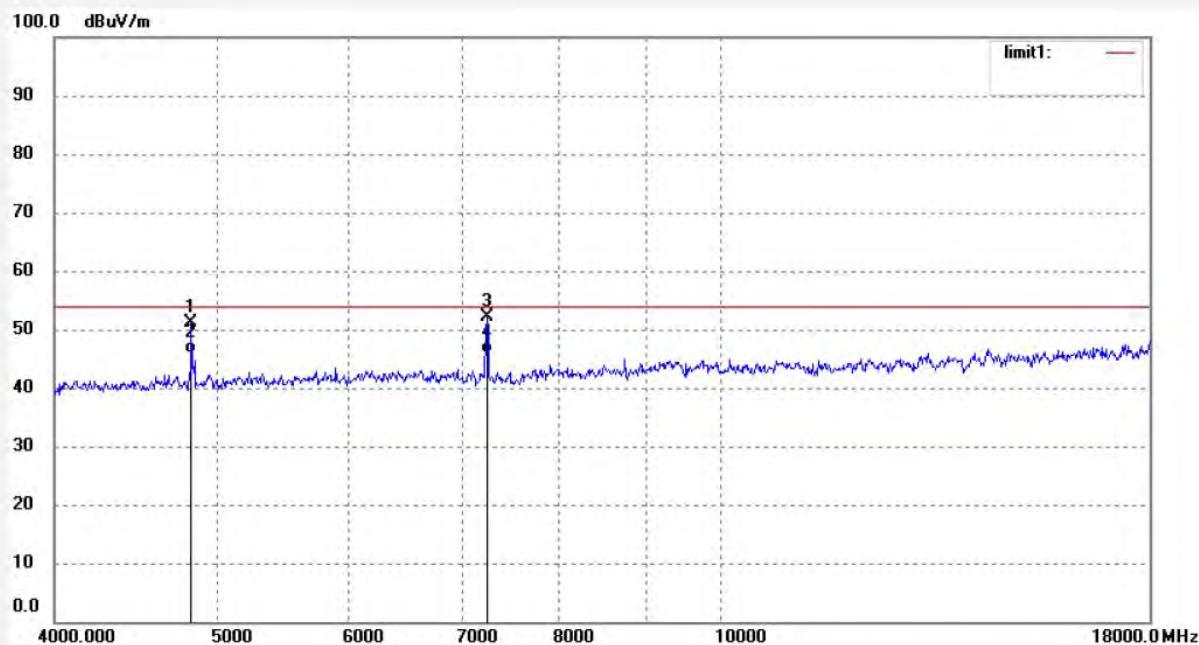
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4828.000	52.67	-1.51	51.16	74.00	-22.84	peak			
2	4828.000	47.36	-1.51	45.85	54.00	-8.15	AVG			
3	7242.000	50.91	1.33	52.24	74.00	-21.76	peak			
4	7242.000	44.51	1.33	45.84	54.00	-8.16	AVG			


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Job No.: star2014 #147

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 16/38/25

EUT: 2.4G Flier

Engineer Signature: STAR

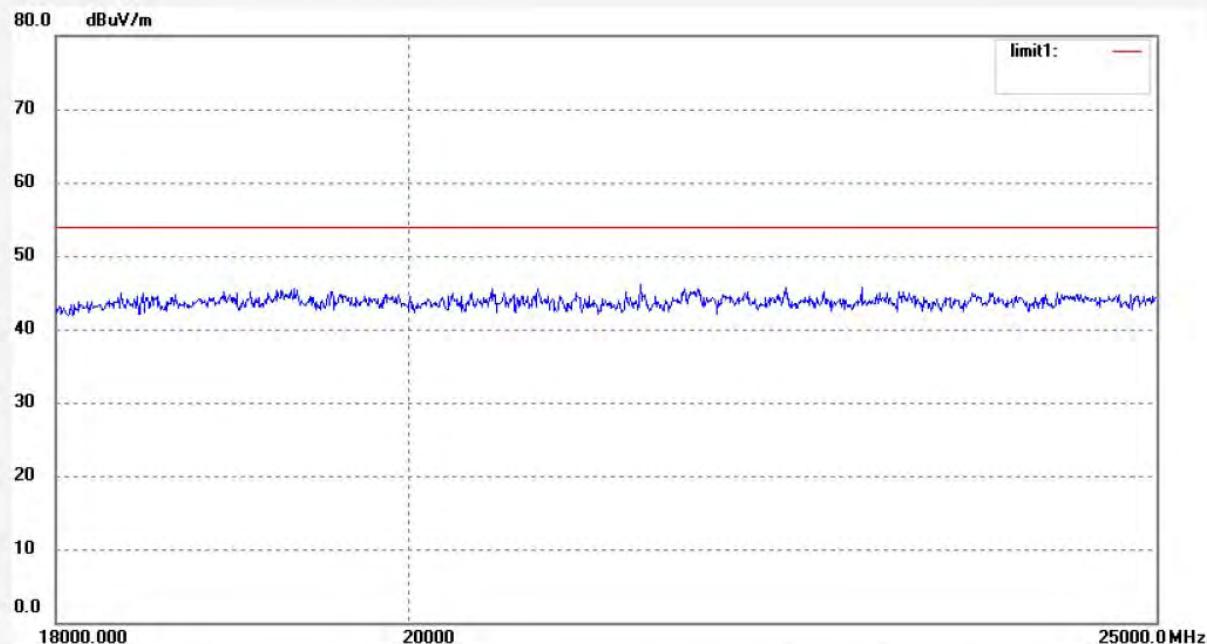
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



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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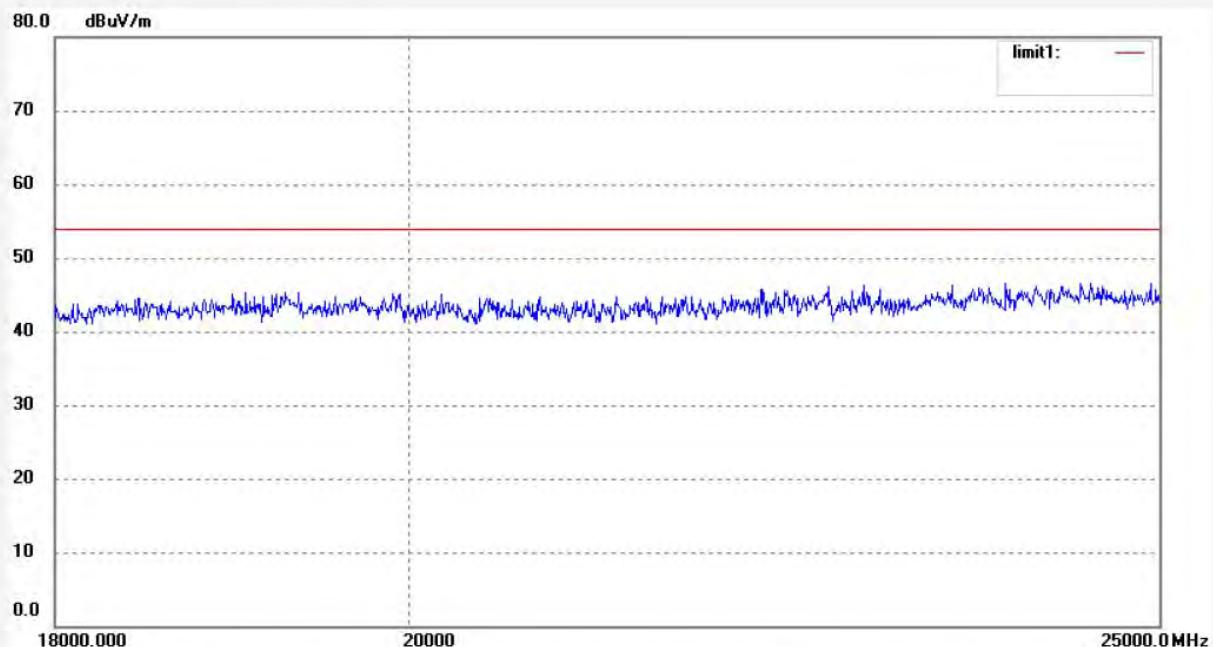
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 Site: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: star2014 #148
 Standard: FCC PART 15B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: 2.4G Flier
 Mode: TX 2414MHz
 Model: 22033V2RX
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
 Power Source: DC 3.7V
 Date: 14/04/29/
 Time: 16/42/59
 Engineer Signature: STAR
 Distance: 3m

Note: Report No.:ATE20140652



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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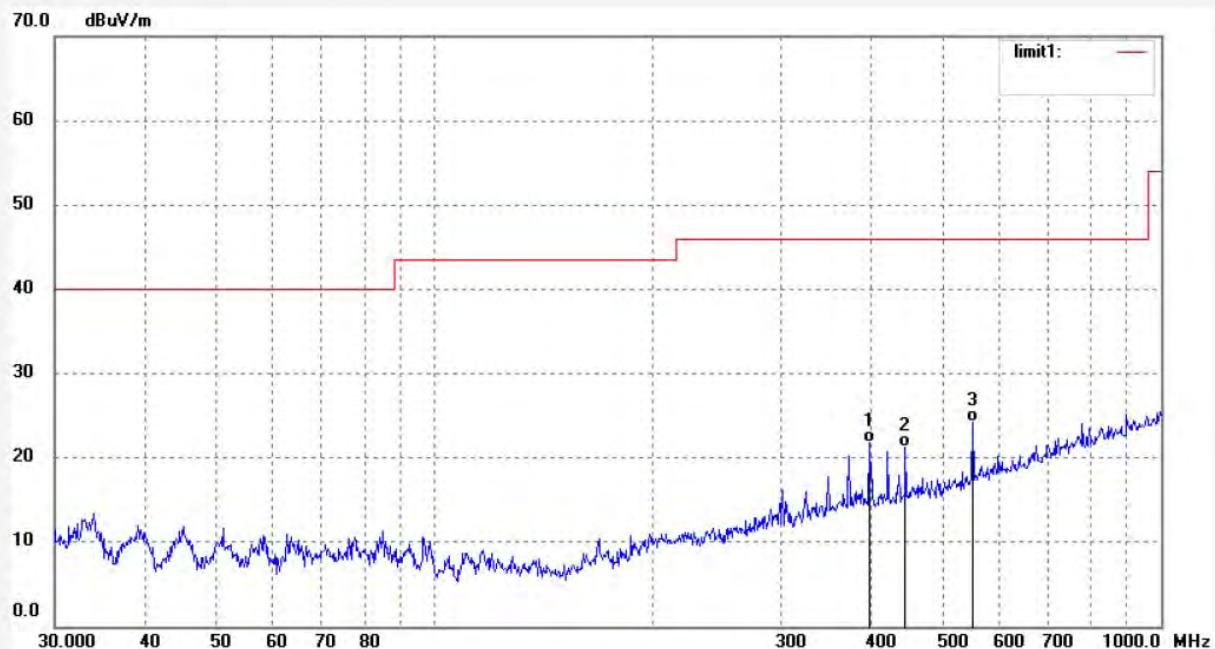
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
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Site: 1# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: star2014 #125
Standard: FCC PART 15B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: 2.4G Flier
Mode: TX 2447MHz
Model: 22033V2RX
Manufacturer: Interactive Toy Concepts Limited

Polarization: Vertical
Power Source: DC 3.7V
Date: 14/04/29/
Time: 14:49:41
Engineer Signature: STAR
Distance: 3m

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	396.2414	37.48	-15.67	21.81	46.00	-24.19	QP			
2	444.8514	36.08	-14.78	21.30	46.00	-24.70	QP			
3	550.9479	37.03	-12.82	24.21	46.00	-21.79	QP			


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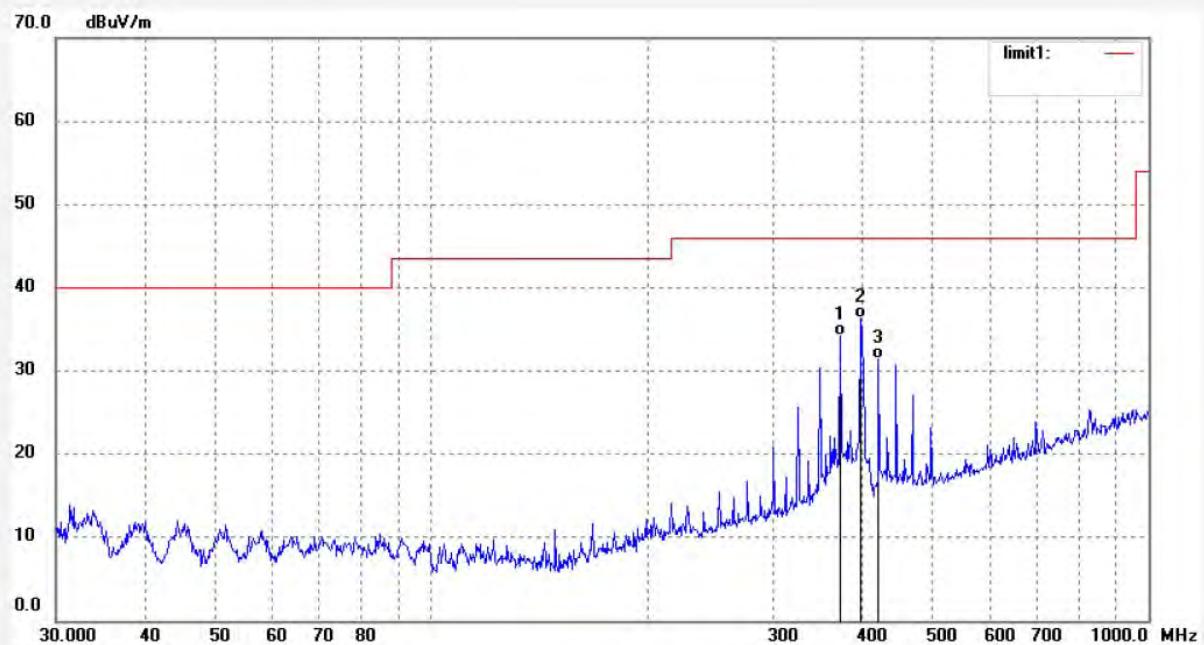
 F1,Bldg.A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

 Site: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: star2014 #126
 Standard: FCC PART 15B 3M Radiated
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 55 %
 EUT: 2.4G Flier
 Mode: TX 2447MHz
 Model: 22033V2RX
 Manufacturer: Interactive Toy Concepts Limited

Polarization: Horizontal
 Power Source: DC 3.7V
 Date: 14/04/29/
 Time: 14:53:30
 Engineer Signature: STAR
 Distance: 3m

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	372.0045	50.09	-15.84	34.25	46.00	-11.75	QP			
2	396.2415	51.91	-15.67	36.24	46.00	-9.76	QP			
3	420.5803	46.71	-15.36	31.35	46.00	-14.65	QP			


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #155

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/10/12

EUT: 2.4G Flier

Engineer Signature: STAR

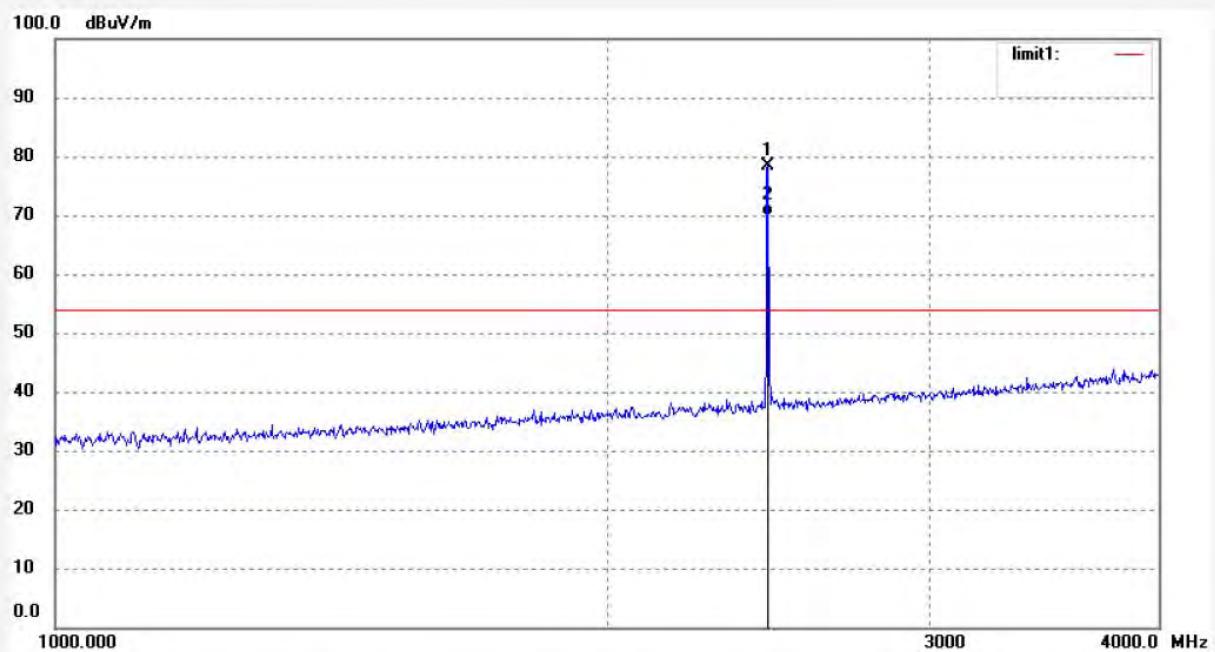
Mode: TX 2447MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2447.000	84.96	-6.63	78.33	114.00	-35.67	peak			
2	2447.000	76.52	-6.63	69.89	94.00	-24.11	AVG			

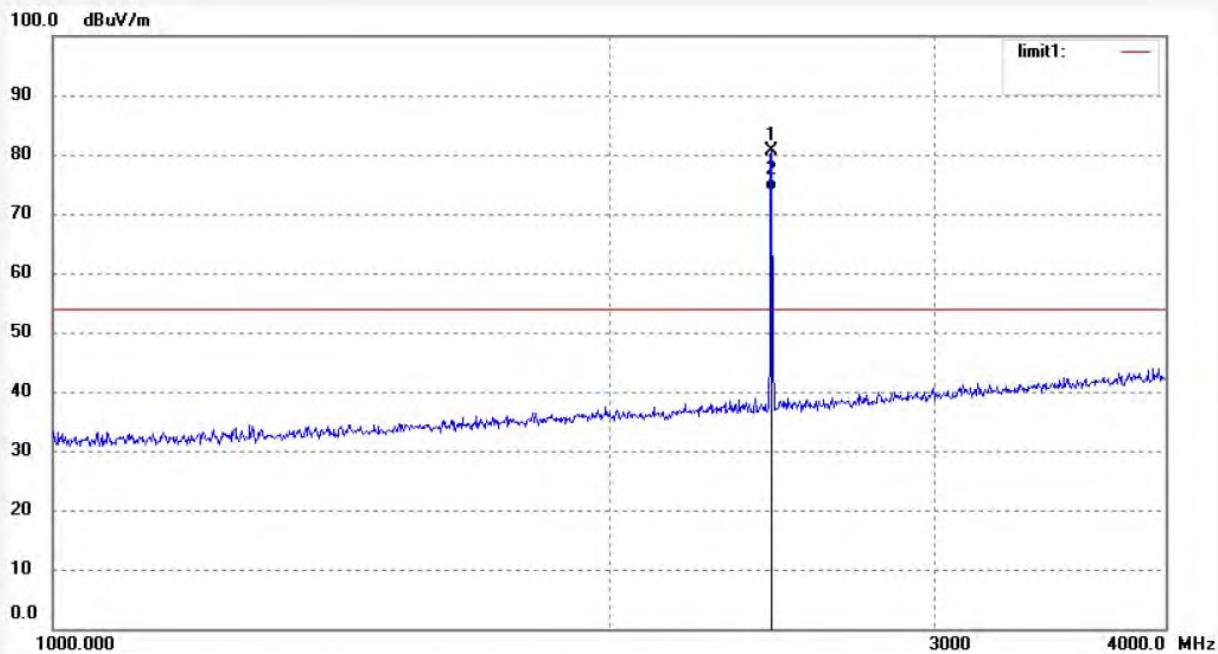

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 Site: 1# Chamber
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 Fax:+86-0755-26503396

Job No.: star2014 #156	Polarization: Vertical
Standard: FCC PART 15B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 14/04/29/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17/14/07
EUT: 2.4G Flier	Engineer Signature: STAR
Mode: TX 2447MHz	Distance: 3m
Model: 22033V2RX	
Manufacturer: Interactive Toy Concepts Limited	

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2447.000	87.37	-6.63	80.74	114.00	-33.26	peak			
2	2447.000	80.41	-6.63	73.78	94.00	-20.22	AVG			

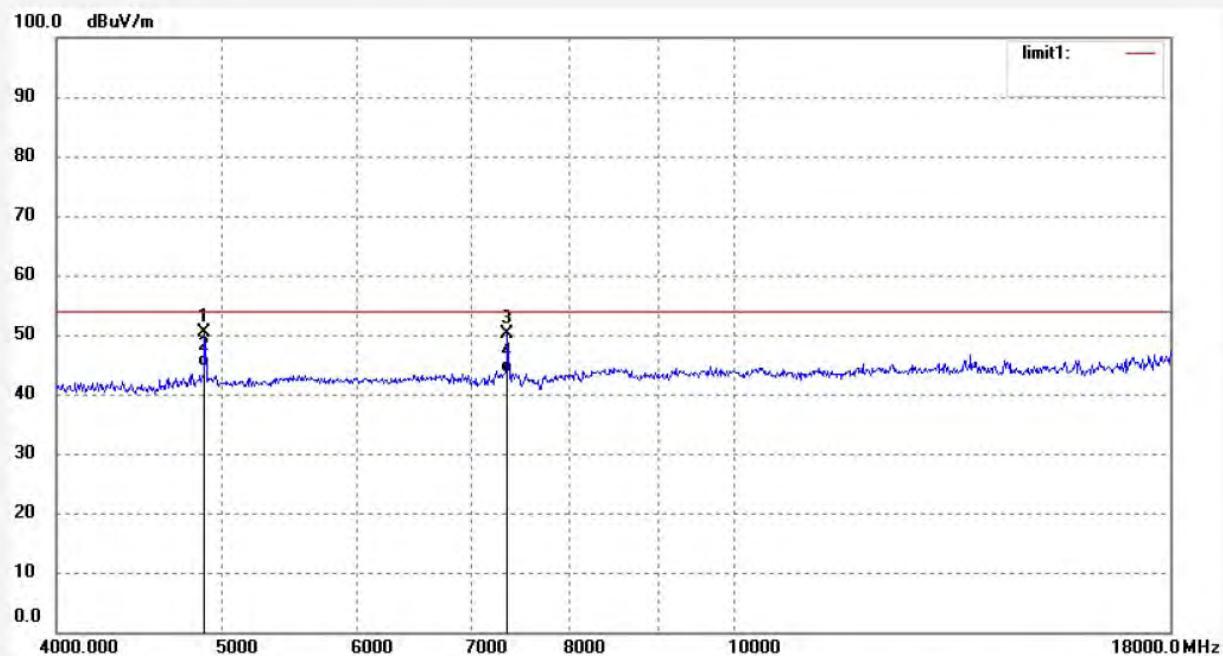

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 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

 Site: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: star2014 #161 Polarization: Vertical
 Standard: FCC PART 15B 3M Radiated Power Source: DC 3.7V
 Test item: Radiation Test Date: 14/04/29/
 Temp.(C)/Hum.(%) 25 C / 55 % Time: 17/31/53
 EUT: 2.4G Flier Engineer Signature: STAR
 Mode: TX 2447MHz Distance: 3m
 Model: 22033V2RX
 Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4894.000	51.65	-1.34	50.31	74.00	-23.69	peak			
2	4894.000	45.90	-1.34	44.56	54.00	-9.44	AVG			
3	7341.000	48.68	1.42	50.10	74.00	-23.90	peak			
4	7341.000	42.20	1.42	43.62	54.00	-10.38	AVG			


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #162

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/35/48

EUT: 2.4G Flier

Engineer Signature: STAR

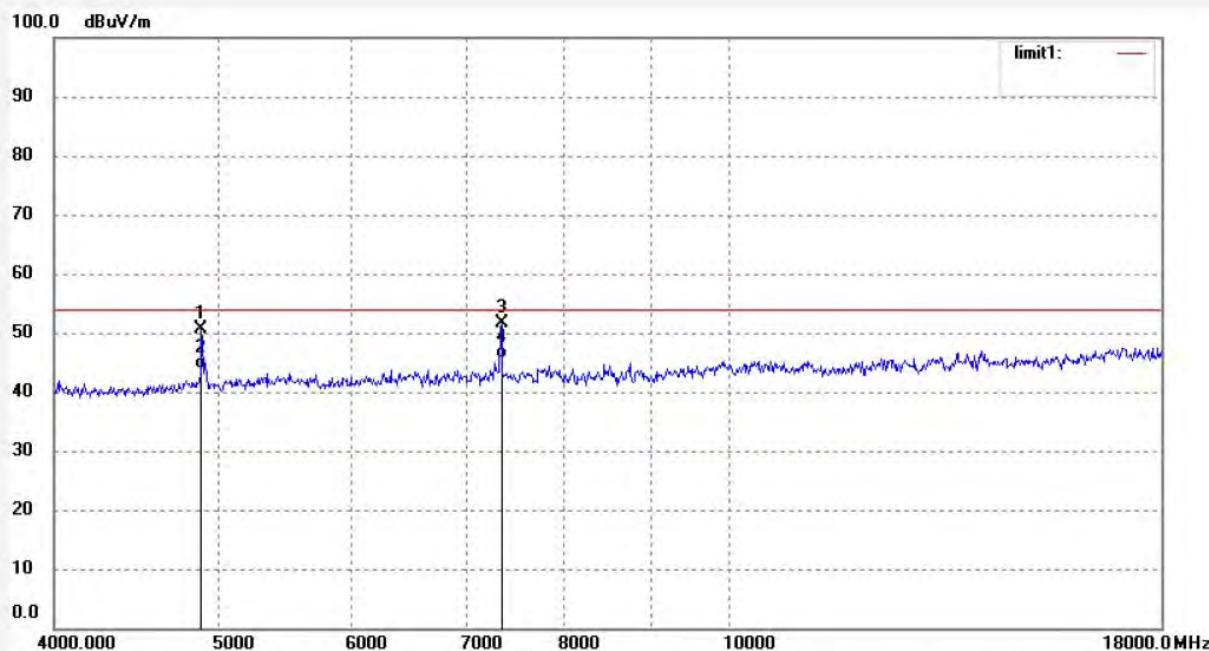
Mode: TX 2447MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4894.000	51.89	-1.34	50.55	74.00	-23.45	peak			
2	4894.000	45.22	-1.34	43.88	54.00	-10.12	AVG			
3	7341.000	50.11	1.42	51.53	74.00	-22.47	peak			
4	7341.000	44.25	1.42	45.67	54.00	-8.33	AVG			


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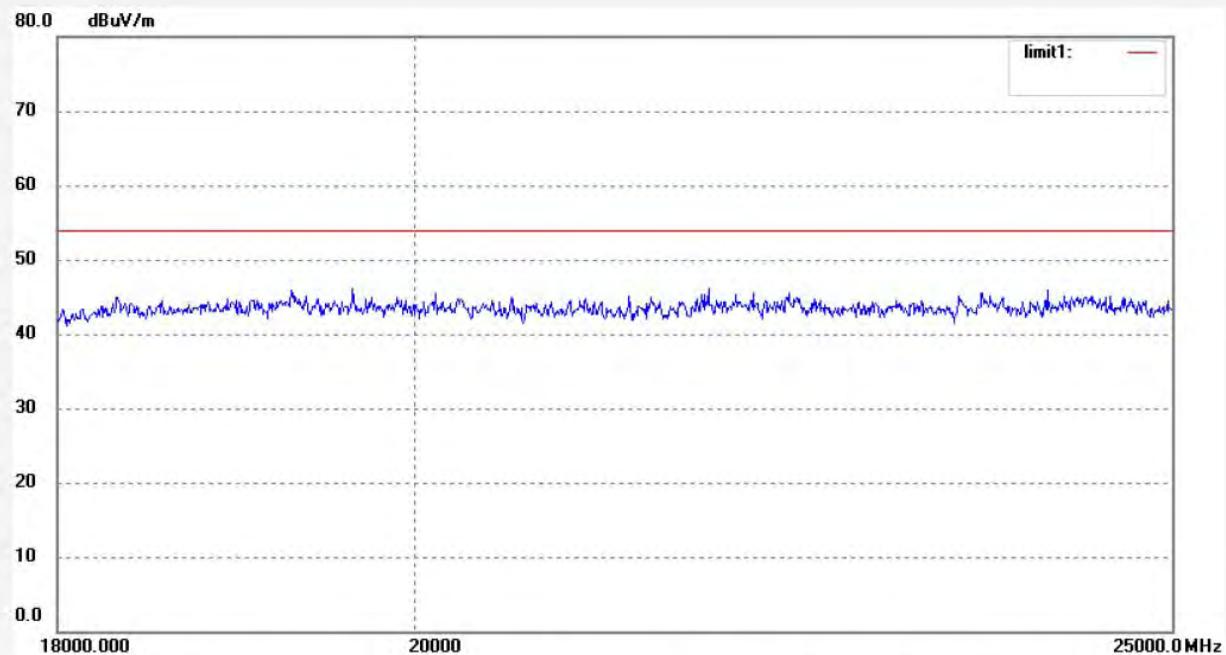
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.:	star2014 #149	Polarization:	Vertical
Standard:	FCC PART 15B 3M Radiated	Power Source:	DC 3.7V
Test item:	Radiation Test	Date:	14/04/29/
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16:46:43
EUT:	2.4G Flier	Engineer Signature:	STAR
Mode:	TX 2447MHz	Distance:	3m
Model:	22033V2RX		
Manufacturer:	Interactive Toy Concepts Limited		
Note:	Report No.:ATE20140652		



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: 1# Chamber

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Fax:+86-0755-26503396

Job No.: star2014 #150

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 16/50/21

EUT: 2.4G Flier

Engineer Signature: STAR

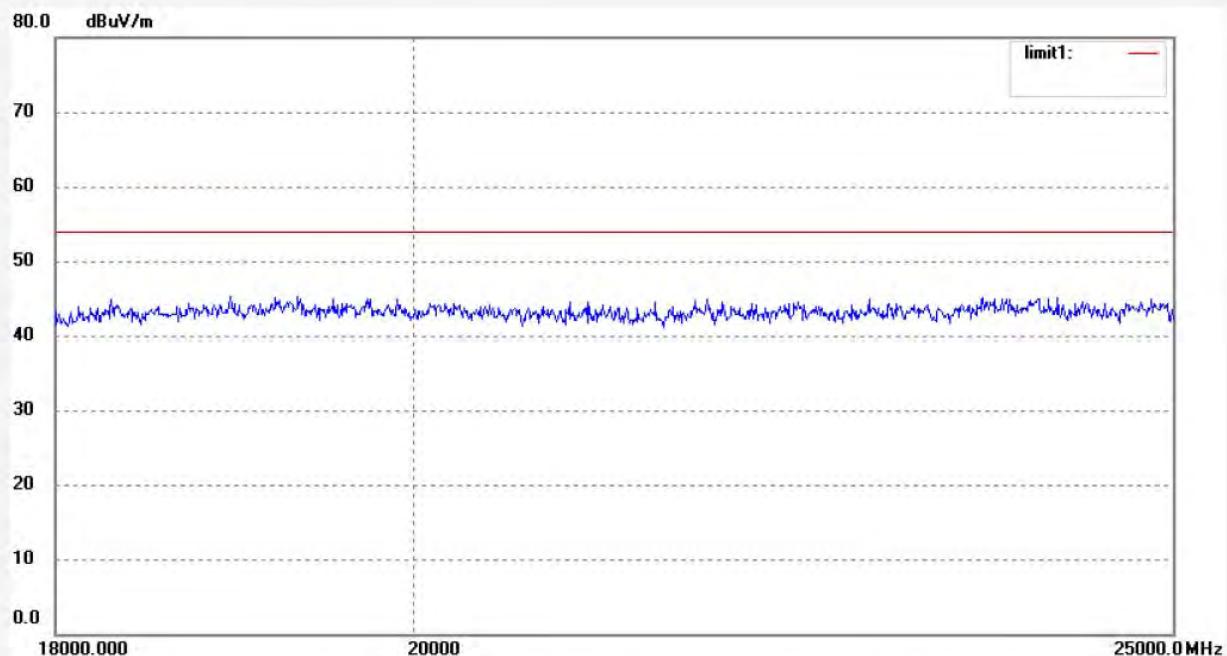
Mode: TX 2447MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



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: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #127

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 14/57/42

EUT: 2.4G Flier

Engineer Signature: STAR

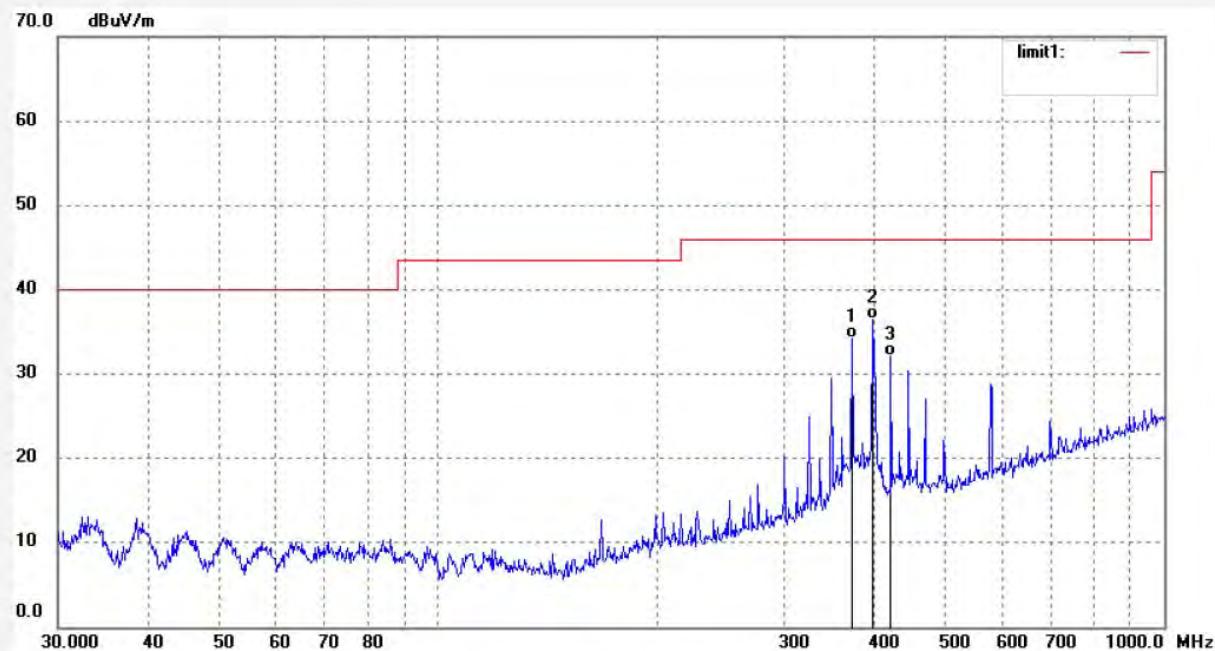
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	372.0045	50.03	-15.84	34.19	46.00	-11.81	QP			
2	396.2414	52.22	-15.67	36.55	46.00	-9.45	QP			
3	420.5803	47.39	-15.36	32.03	46.00	-13.97	QP			


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 Site: 1# Chamber
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 Fax:+86-0755-26503396

Job No.: star2014 #128

Polarization: Vertical

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 15/01/30

EUT: 2.4G Flier

Engineer Signature: STAR

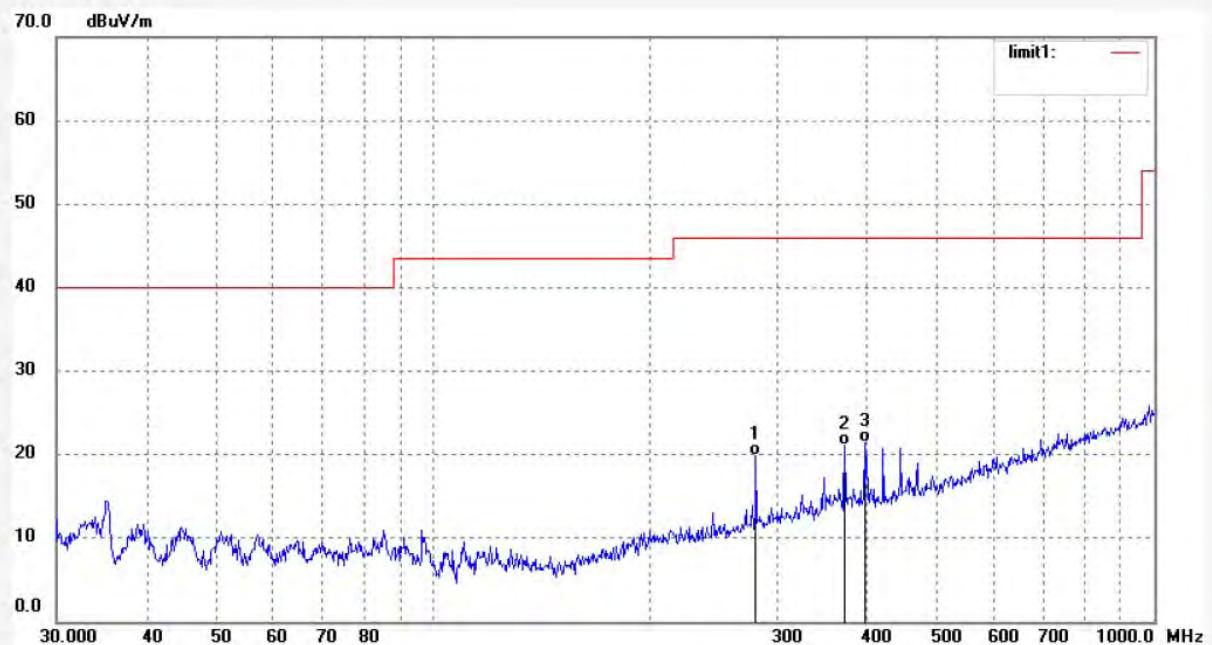
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	280.0237	38.21	-18.28	19.93	46.00	-26.07	QP			
2	372.0045	36.90	-15.84	21.06	46.00	-24.94	QP			
3	396.2415	37.14	-15.67	21.47	46.00	-24.53	QP			


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #157

Polarization: Vertical

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/18/39

EUT: 2.4G Flier

Engineer Signature: STAR

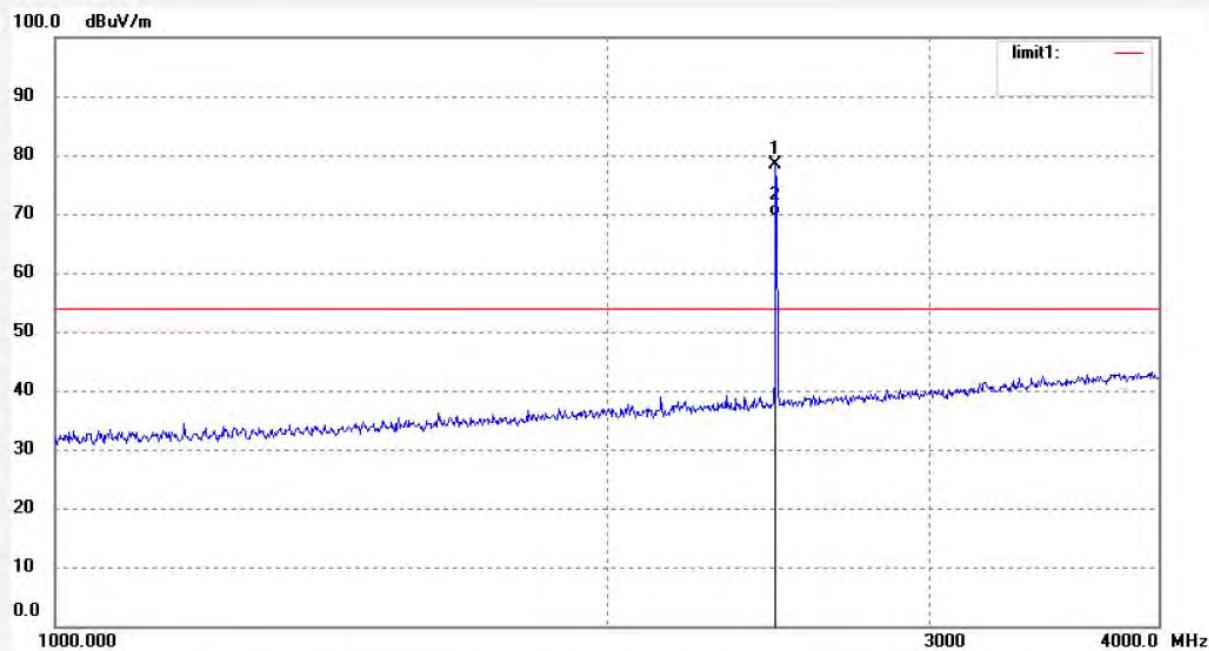
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2473.000	84.92	-6.56	78.36	114.00	-35.64	peak			
2	2473.000	76.22	-6.56	69.66	94.00	-24.34	AVG			


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Site: 1# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2014 #158

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/22/11

EUT: 2.4G Flier

Engineer Signature: STAR

Mode: TX 2473MHz

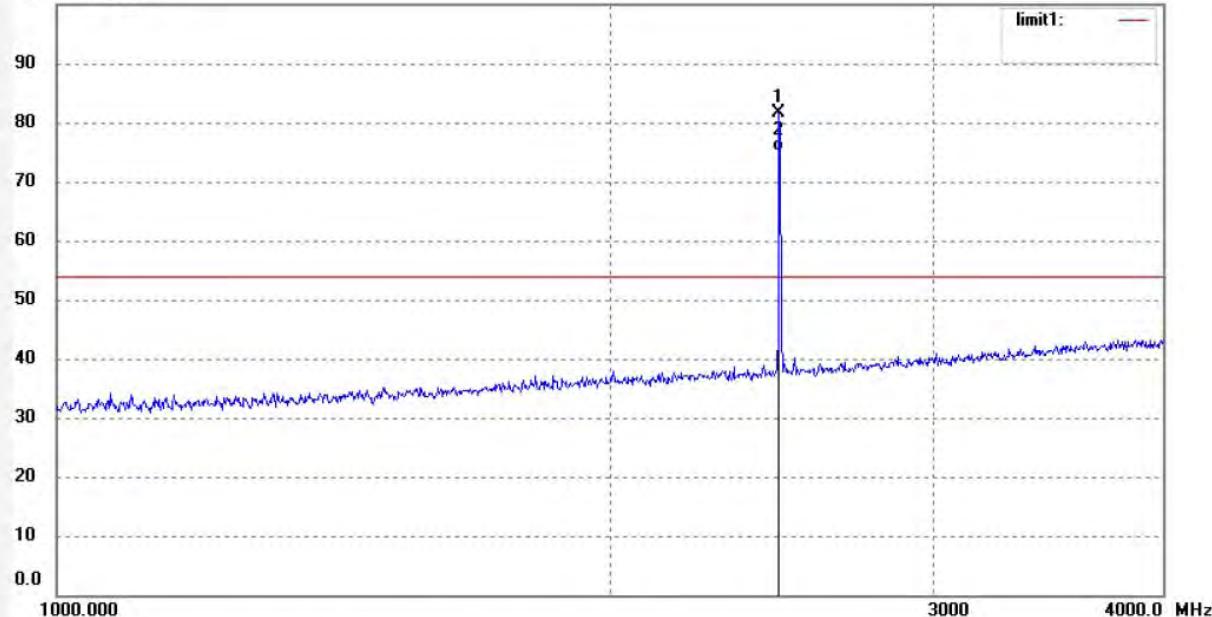
Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652

100.0 dBuV/m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2473.000	88.16	-6.56	81.60	114.00	-32.40	peak			
2	2473.000	81.75	-6.56	75.19	94.00	-18.81	AVG			


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Site: 1# Chamber

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Fax:+86-0755-26503396

Job No.: star2014 #163

Polarization: Horizontal

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/38/47

EUT: 2.4G Flier

Engineer Signature: STAR

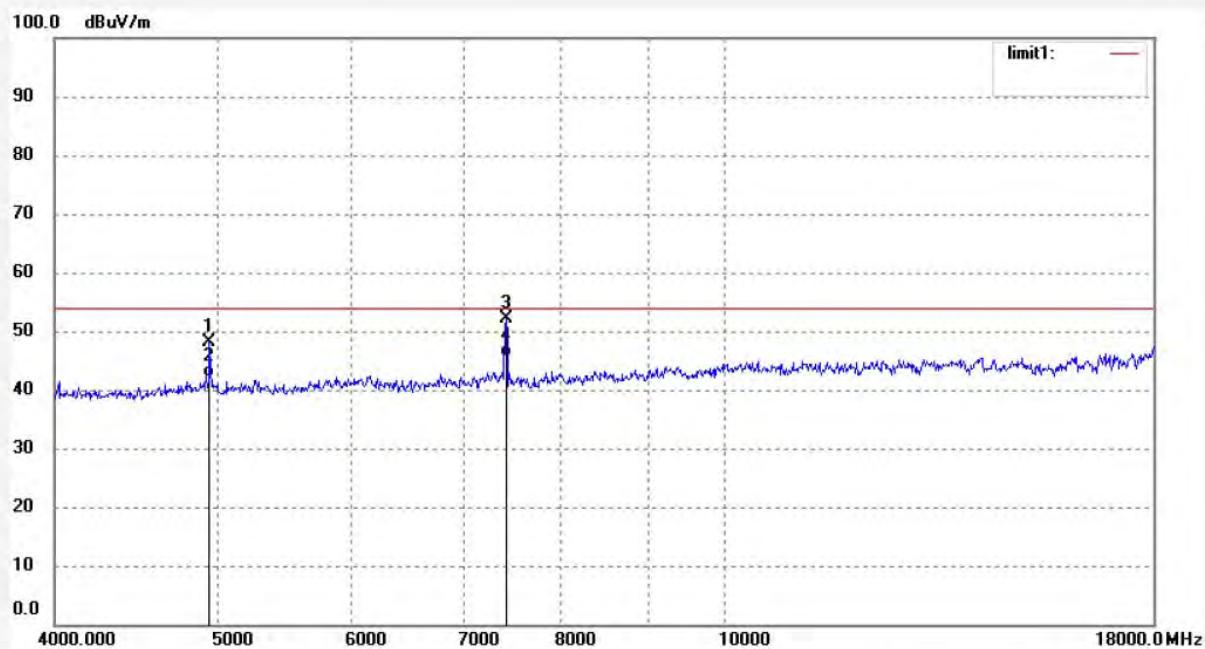
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4946.000	49.34	-1.15	48.19	74.00	-25.81	peak			
2	4946.000	43.21	-1.15	42.06	54.00	-11.94	AVG			
3	7419.000	50.71	1.49	52.20	74.00	-21.80	peak			
4	7419.000	44.25	1.49	45.74	54.00	-8.26	AVG			



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Site: 1# Chamber
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Fax:+86-0755-26503396

Job No.: star2014 #164

Polarization: Vertical

Standard: FCC PART 15B 3M Radiated

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/42/33

EUT: 2.4G Flier

Engineer Signature: STAR

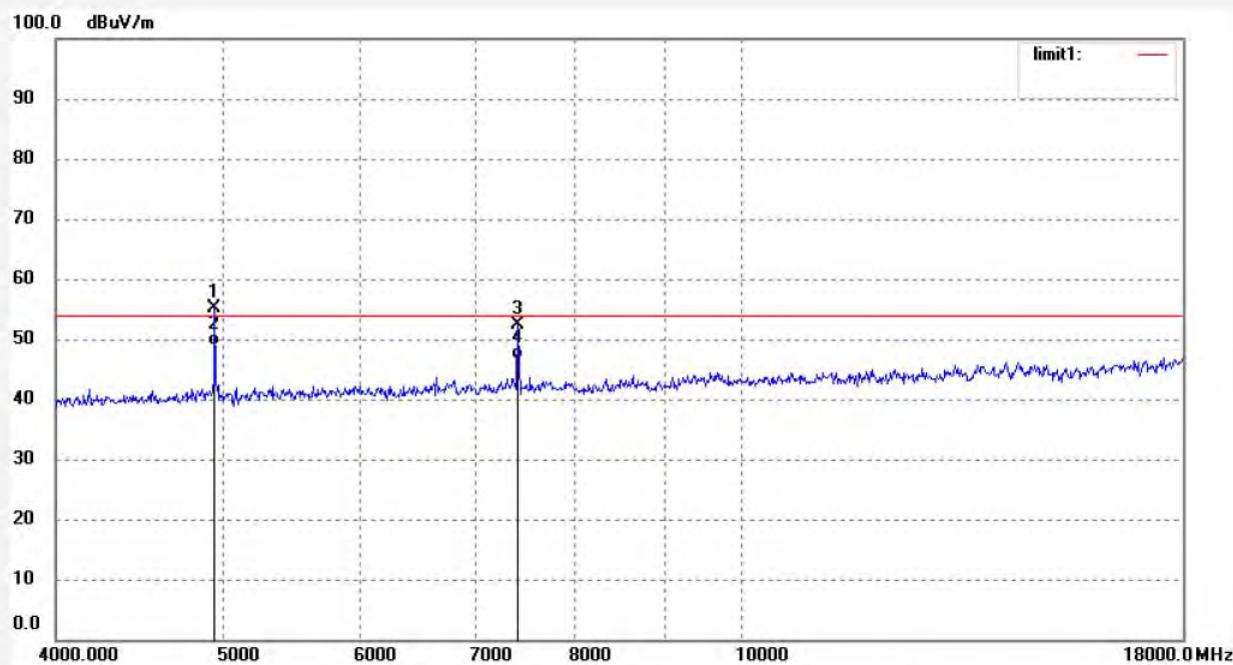
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4946.000	56.37	-1.15	55.22	74.00	-18.78	peak			
2	4946.000	49.99	-1.15	48.84	54.00	-5.16	AVG			
3	7419.000	50.93	1.47	52.40	74.00	-21.60	peak			
4	7419.000	45.10	1.47	46.57	54.00	-7.43	AVG			


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 Site: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.:	star2014 #151	Polarization:	Horizontal							
Standard:	FCC PART 15B 3M Radiated	Power Source:	DC 3.7V							
Test item:	Radiation Test	Date:	14/04/29/							
Temp.(C)/Hum.(%)	25 C / 55 %	Time:	16/53/06							
EUT:	2.4G Flier	Engineer Signature:	STAR							
Mode:	TX 2473MHz	Distance:	3m							
Model:	22033V2RX									
Manufacturer:	Interactive Toy Concepts Limited									
Note:	Report No.:ATE20140652									
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

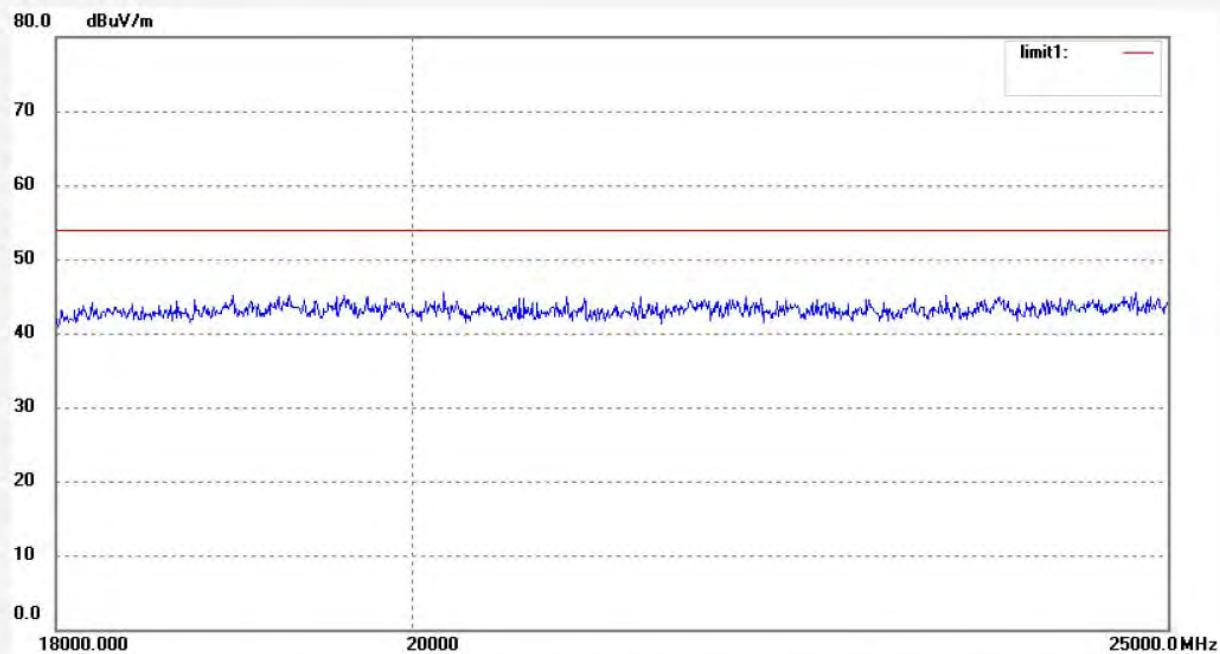

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 Site: 1# Chamber
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 Fax:+86-0755-26503396

Job No.: star2014 #152	Polarization: Vertical
Standard: FCC PART 15B 3M Radiated	Power Source: DC 3.7V
Test item: Radiation Test	Date: 14/04/29/
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 16/57/44
EUT: 2.4G Flier	Engineer Signature: STAR
Mode: TX 2473MHz	Distance: 3m
Model: 22033V2RX	
Manufacturer: Interactive Toy Concepts Limited	

Note: Report No.:ATE20140652



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: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: star2014 #168

Polarization: Vertical

Standard: FCC PK

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/07/28

EUT: 2.4G Flier

Engineer Signature: STAR

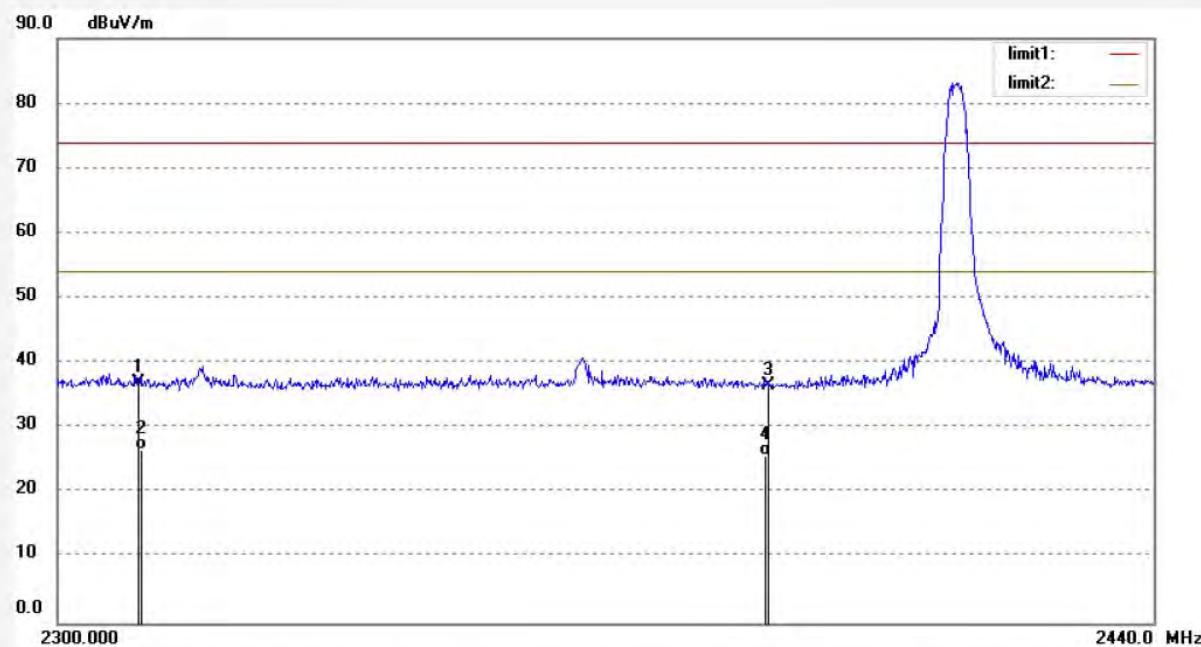
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.95	-6.99	36.96	74.00	-37.04	peak			
2	2310.000	33.55	-6.99	26.56	54.00	-27.44	AVG			
3	2390.000	43.40	-6.78	36.62	74.00	-37.38	peak			
4	2390.000	32.47	-6.78	25.69	54.00	-28.31	AVG			


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 Site: 1# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: star2014 #167

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/06/28

EUT: 2.4G Flier

Engineer Signature: STAR

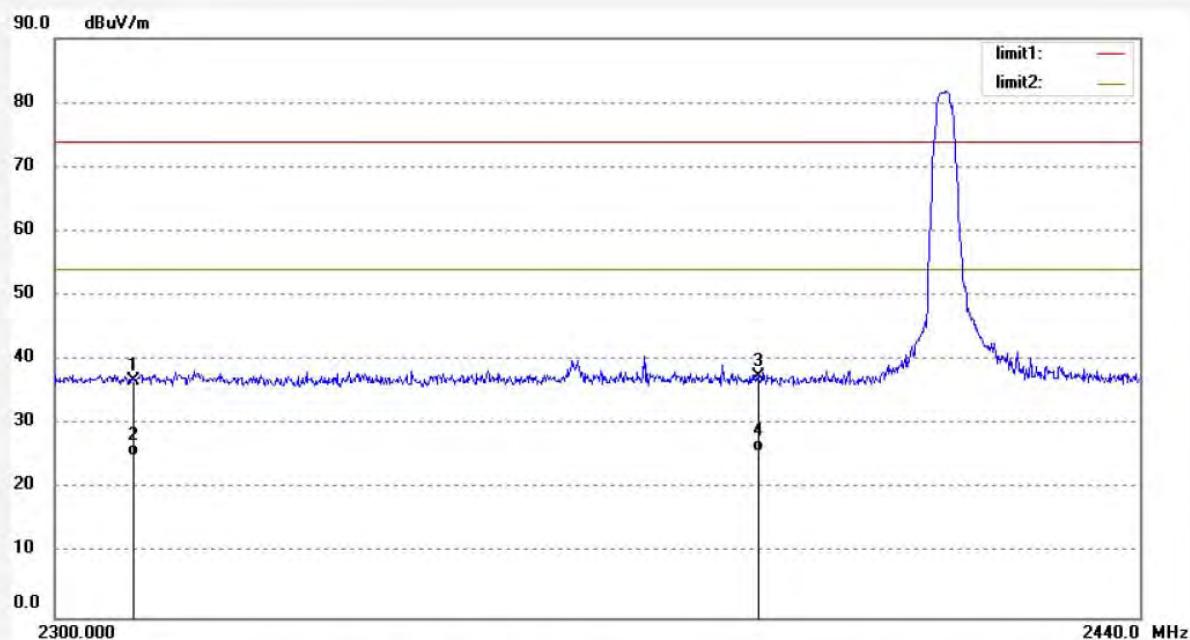
Mode: TX 2414MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.76	-6.99	36.77	74.00	-37.23	peak			
2	2310.000	31.97	-6.99	24.98	54.00	-29.02	AVG			
3	2390.000	44.28	-6.78	37.50	74.00	-36.50	peak			
4	2390.000	32.58	-6.78	25.80	54.00	-28.20	AVG			


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Site: 1# Chamber

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Fax:+86-0755-26503396

Job No.: star2014 #166

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/04/54

EUT: 2.4G Flier

Engineer Signature: STAR

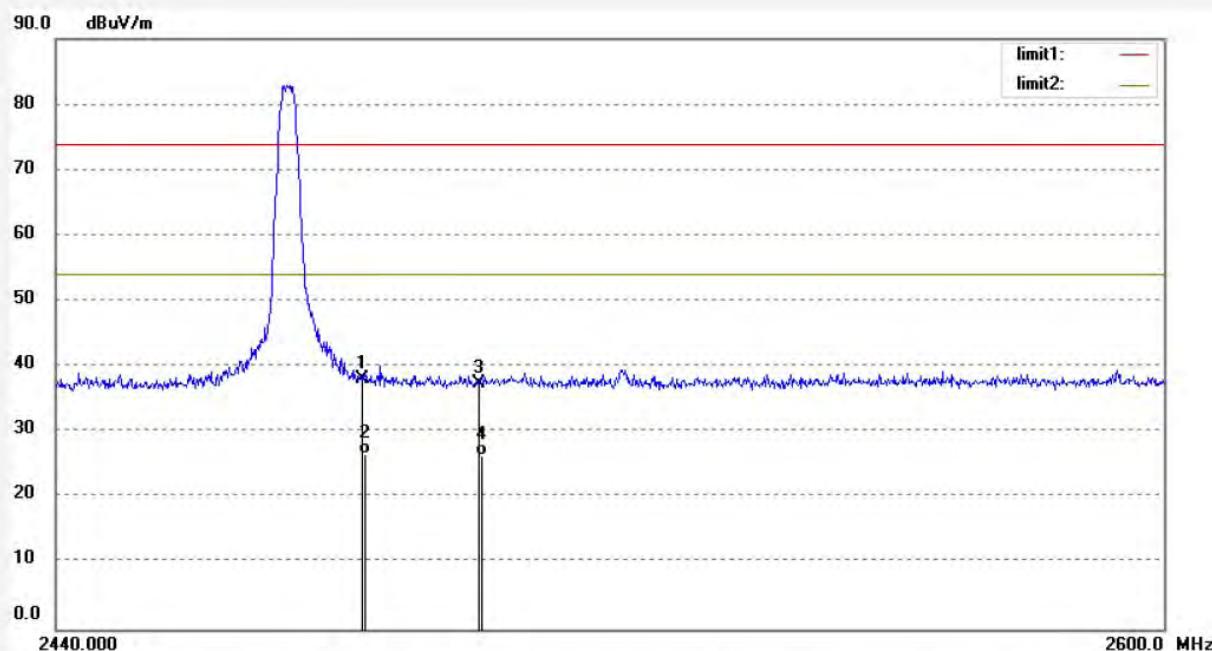
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	44.74	-6.54	38.20	74.00	-35.80	peak			
2	2483.500	33.21	-6.54	26.67	54.00	-27.33	AVG			
3	2500.000	44.07	-6.50	37.57	74.00	-36.43	peak			
4	2500.000	32.90	-6.50	26.40	54.00	-27.60	AVG			


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 Site: 1# Chamber
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 Fax:+86-0755-26503396

Job No.: star2014 #165

Polarization: Vertical

Standard: FCC PK

Power Source: DC 3.7V

Test item: Radiation Test

Date: 14/04/29/

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

Time: 17/03/45

EUT: 2.4G Flier

Engineer Signature: STAR

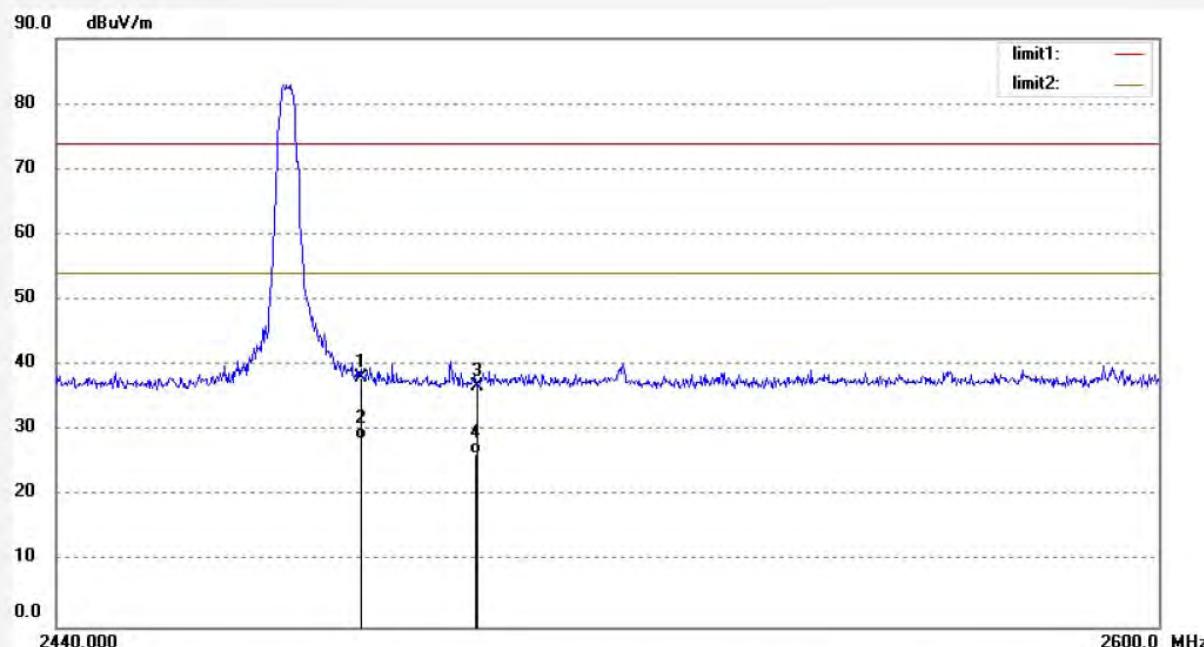
Mode: TX 2473MHz

Distance: 3m

Model: 22033V2RX

Manufacturer: Interactive Toy Concepts Limited

Note: Report No.:ATE20140652



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	44.60	-6.54	38.06	74.00	-35.94	peak			
2	2483.500	35.25	-6.54	28.71	54.00	-25.29	AVG			
3	2500.000	43.32	-6.50	36.82	74.00	-37.18	peak			
4	2500.000	32.93	-6.50	26.43	54.00	-27.57	AVG			

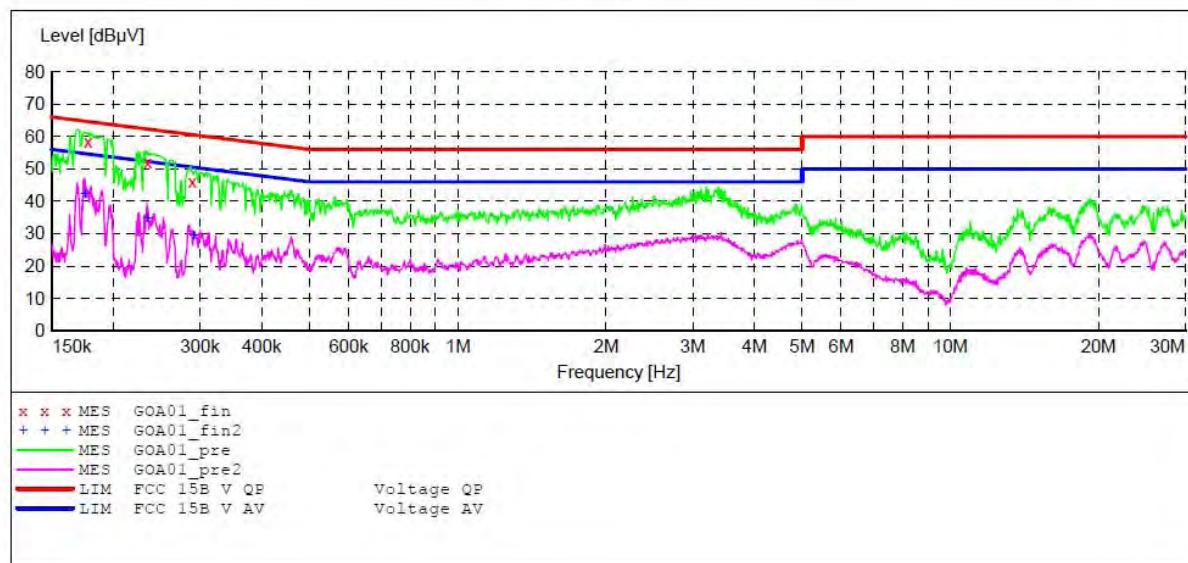
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15B

EUT: 2.4G Flier M/N:22033V2RX
 Manufacturer: Interactive Toy Concepts Limited
 Operating Condition: Charging
 Test Site: 2#Shielding Room
 Operator: STAR
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20140652
 Start of Test: 2014-4-29 / 17:16:24

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 0.4 % QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5)
 Average



MEASUREMENT RESULT: "GOA01_fin"

2014-4-29 17:18

Frequency MHz	Level dB \rightarrow X	Transd dB	Limit dB \rightarrow X	Margin dB	Detector	Line	PE
0.177396	58.60	10.6	65	6.0	QP	N	GND
0.234385	52.10	11.1	62	10.2	QP	N	GND
0.289065	45.90	11.5	61	14.7	QP	N	GND

MEASUREMENT RESULT: "GOA01_fin2"

2014-4-29 17:18

Frequency MHz	Level dB μ V	Transd dB	Limit dB \rightarrow X	Margin dB	Detector	Line	PE
0.174759	42.10	10.6	55	12.6	AV	N	GND
0.233684	34.80	11.1	52	17.5	AV	N	GND
0.290802	29.50	11.5	51	21.0	AV	N	GND

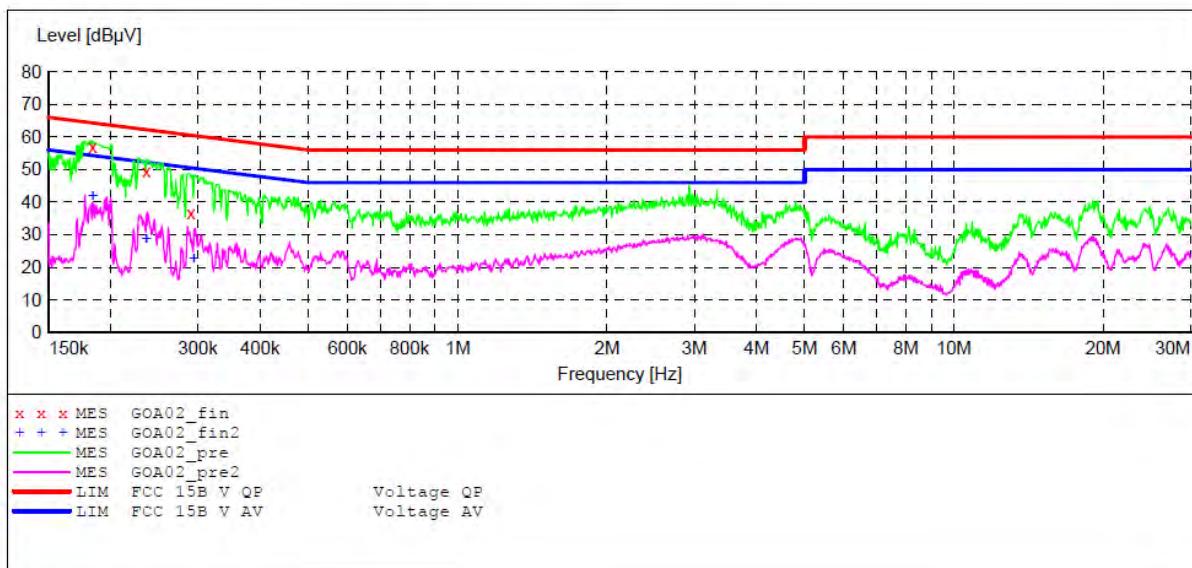
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15B

EUT: 2.4G Flier M/N:22033V2RX
 Manufacturer: Interactive Toy Concepts Limited
 Operating Condition: Charging
 Test Site: 2#Shielding Room
 Operator: STAR
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20140652
 Start of Test: 2014-4-29 / 17:18:42

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 0.4 % QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5)
 Average



MEASUREMENT RESULT: "GOA02_fin"

2014-4-29 17:20

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.183889	57.00	10.7	64	7.3	QP	L1	GND
0.235794	49.30	11.2	62	12.9	QP	L1	GND
0.289932	36.50	11.5	61	24.0	QP	L1	GND

MEASUREMENT RESULT: "GOA02_fin2"

2014-4-29 17:20

Frequency MHz	Level dB μ V	Transd dB	Limit dB μ V	Margin dB	Detector	Line	PE
0.183889	41.80	10.7	54	12.5	AV	L1	GND
0.235794	28.70	11.2	52	23.5	AV	L1	GND
0.294307	22.50	11.5	50	27.9	AV	L1	GND