

APPLICATION CERTIFICATION FCC Part 15C
On Behalf of

SHENZHEN QI SHENGLONG INDUSTRIALIST CO., LTD.

VIDEO GAME
Model No.: C-12, C-37

FCC ID: Y56QSLC12C37

Prepared for : SHENZHEN QI SHENGLONG INDUSTRIALIST CO.,
LTD.

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Report Number : ATE20171327
Date of Test : July 17-July 20, 2017
Date of Report : July 21, 2017

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Test Report Certification

Applicant : SHENZHEN QI SHENGLONG INDUSTRIALIST CO., LTD.
Address : 5F., Blk 6A, Jing Nan Industry, Bai Ge long, Buji, Shenzhen, China
518112

Manufacturer : DONGGUAN FEIHAO INDUSTRIALIST CO., LTD
Address : No.8, Fengyi Road, Dakan Village, Huangjiang, DongGuan, China

Product : VIDEO GAME
Model No. : C-12, C-37
(Note: Above models are identical in schematic, structure and critical components, except for The configuration of accessories is different. So we prepare C-12 for test only)

Trade Mark : N/A

Measurement Procedure Used:

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

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

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

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

Date of Test : July 17-July 20, 2017
Date of Report: July 21, 2017

Prepared by : Star Yang
(Star Yang, Engineer)

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

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

The submitted sample is a VIDEO GAME.

The sample is powered by DC 3V (Powered by battery).

		Wireless Module(2.4G)
Frequency Range	:	2404MHz-2478MHz
Channel frequency	:	2404MHz, 2405MHz, 2406MHz, 2408MHz, 2410MHz, 2414MHz, 2421MHz, 2425MHz, 2435MHz, 2441MHz, 2452MHz, 2454MHz, 2456MHz, 2458MHz, 2460MHz, 2466MHz, 2470MHz, 2474MHz, 2477MHz, 2478MHz
Number of Channels	:	20
Modulation Type	:	GFSK
Type of Antenna	:	PCB Antenna
Max antenna gain	:	0 dBi
Power Supply	:	DC 3V(Powered by battery)

1.2. Special Accessory and Auxiliary Equipment

N/A

1.3. Description of Test Facility

EMC Lab	: Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358 Listed by Innovation, Science and Economic Development Canada (ISED) The Registration Number is 5077A-2 Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193 Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	: Accurate Technology Co., Ltd.
Site Location	: F1, Bldg. A&D, Changyuan New Material Port, Keyuan Rd., Science & Industry Park, Nanshan District, Shenzhen 518057, P.R. China

1.4. Measurement Uncertainty

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

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 07, 2017	Jan. 06, 2018
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 07, 2017	Jan. 06, 2018
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 07, 2017	Jan. 06, 2018
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 07, 2017	Jan. 06, 2018
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	Jan. 12, 2018
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	Jan. 12, 2018
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	Jan. 12, 2018
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	Jan. 12, 2018
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 07, 2017	Jan. 06, 2018
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 07, 2017	Jan. 06, 2018
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 07, 2017	Jan. 06, 2018
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 07, 2017	Jan. 06, 2018

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **Transmitting mode**

Low Channel: 2404MHz

Middle Channel: 2441MHz

High Channel: 2478MHz

3.2.Configuration and peripherals

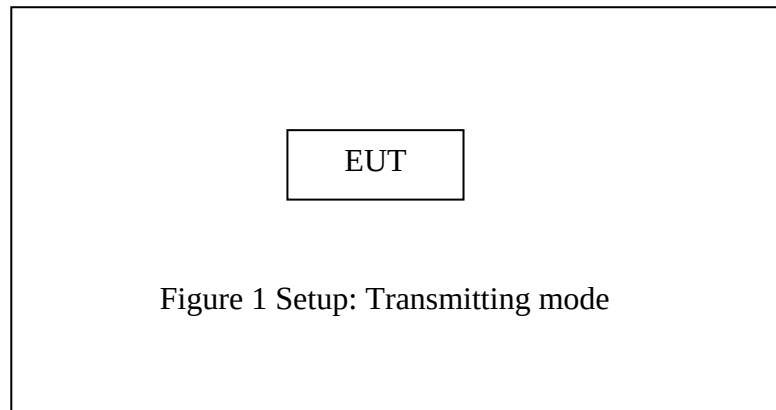


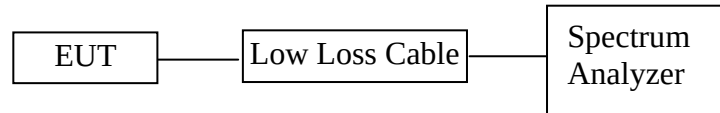
Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

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

5. 20DB BANDWIDTH MEASUREMENT

5.1. Block Diagram of Test Setup



5.2. The Requirement For Section 15.215(c)

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

5.3. Operating Condition of EUT

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

5.3.2. Turn on the power of all equipment.

5.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 2404-2478 MHz. We select 2404MHz, 2441MHz, and 2478MHz TX frequency to transmit.

5.4. Test Procedure

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

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

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

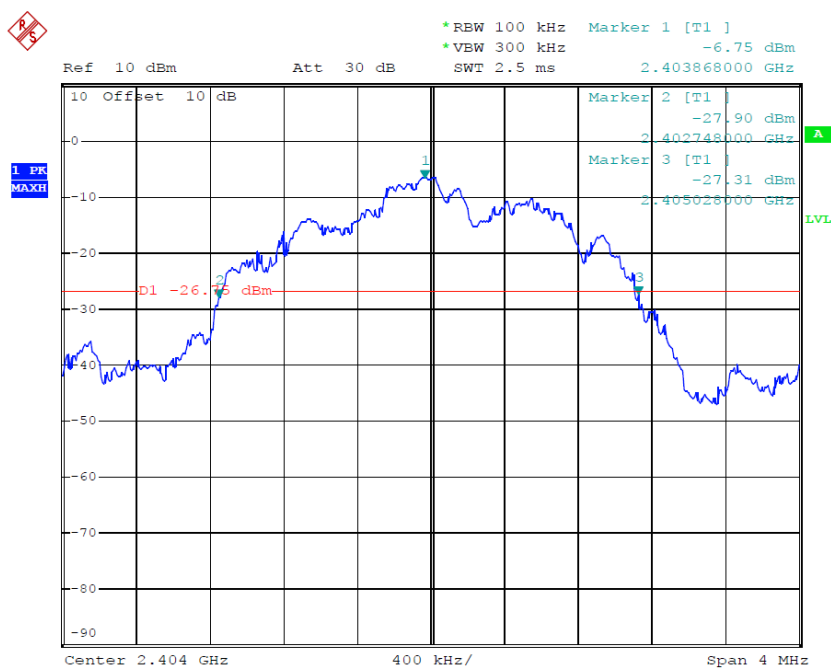
5.4.4. Set the measured low, middle and high frequency and test 20dB bandwidth with spectrum analyzer.

5.5. Test Result

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
1	2404	2.28
10	2441	2.25
20	2478	2.22

The spectrum analyzer plots are attached as below.

Low channel



Comment A:
Date: 20.JUL.2017 12:03:41

Middle channel



Comment A:
Date: 20.JUL.2017 12:05:22

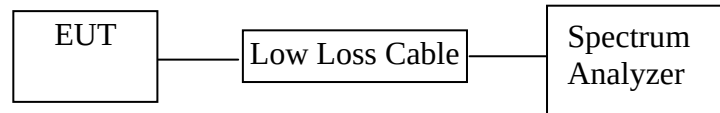
High channel



Comment A:
Date: 20.JUL.2017 12:07:20

6. BAND EDGE COMPLIANCE TEST

6.1. Block Diagram of Test Setup



(EUT: VIDEO GAME)

6.2. The Requirement For Section 15.249

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

6.3. EUT Configuration on Measurement

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

6.4.Operating Condition of EUT

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

6.4.2.Turn on the power of all equipment.

6.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2404-2478 MHz. We select 2404MHz, 2478MHz TX frequency to transmit.

6.5.Test Procedure

Conducted Band Edge:

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

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

Radiate Band Edge:

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

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

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

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

RBW=1MHz, VBW=1MHz

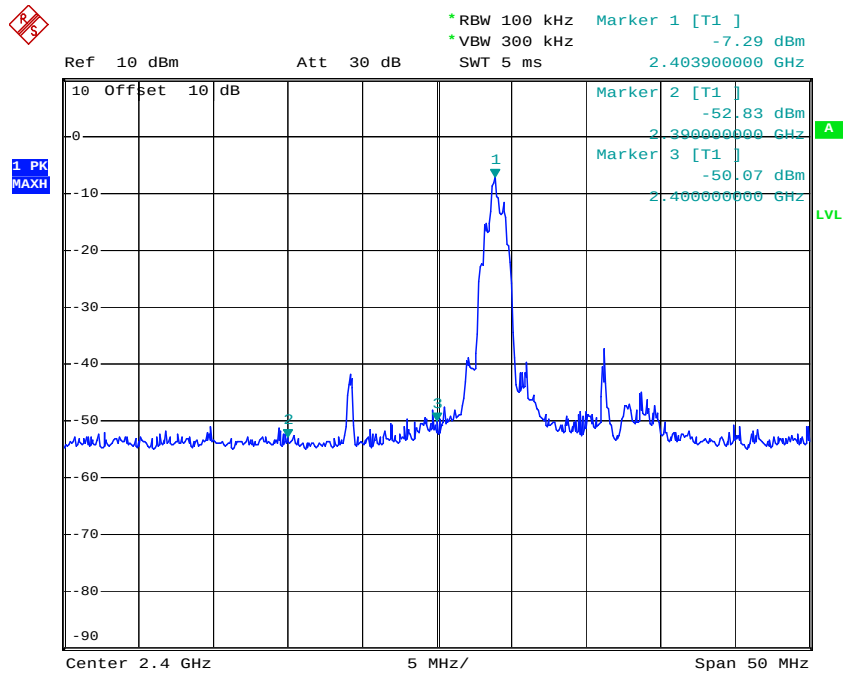
6.5.7.The band edges was measured and recorded.

6.6.Test Result

Pass

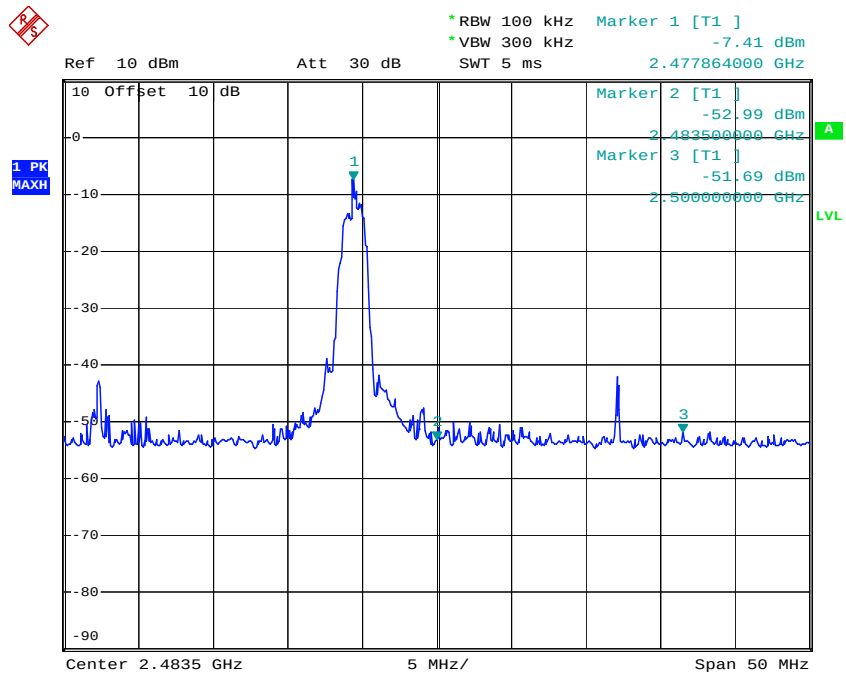
Channel	Frequency	Delta peak to band emission	Limit(dBc)
1	2404 MHz	42.78	20
20	2478 MHz	45.58	20

channel 1



Comment A:
Date: 20.JUL.2017 11:32:37

channel 8



Comment A:
Date: 20.JUL.2017 11:30:13

Radiated Band Edge Result

Date of Test:	July 17.2017	Temperature:	25°C
EUT:	VIDEO GAME	Humidity:	50%
Model No.:	C-12	Power Supply:	DC 3V
Test Mode:	TX (2404MHz) GFSK	Test Engineer:	Frank

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	
2390.000	33.79	42.75	-1.71	32.08	41.04	54.00	74.00	21.92	32.96	Vertical
2400.000	34.25	43.06	-1.71	32.63	41.44	54.00	74.00	21.37	32.56	Vertical
2390.000	34.80	44.14	-1.62	33.09	42.43	54.00	74.00	20.91	31.57	Horizontal
2400.000	35.64	44.28	-1.62	34.02	42.66	54.00	74.00	19.98	31.34	Horizontal

Date of Test:	July 17.2017	Temperature:	25°C
EUT:	VIDEO GAME	Humidity:	50%
Model No.:	C-12	Power Supply:	DC 3V
Test Mode:	TX (2477MHz) GFSK	Test Engineer:	Frank

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	
2483.500	34.13	43.49	-1.40	32.73	42.09	54.00	74.00	21.27	31.91	Vertical
2500.000	34.56	43.44	-1.40	33.16	42.04	54.00	74.00	20.84	31.96	Vertical
2483.500	34.26	43.26	-1.40	32.86	41.86	54.00	74.00	19.05	35.75	Horizontal
2500.000	34.57	43.77	-1.40	33.17	42.37	54.00	74.00	17.10	33.80	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:
Result = Reading + Corrected Factor
3. Display the measurement of peak values.

Job No.: Frank2017 #197

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2404MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

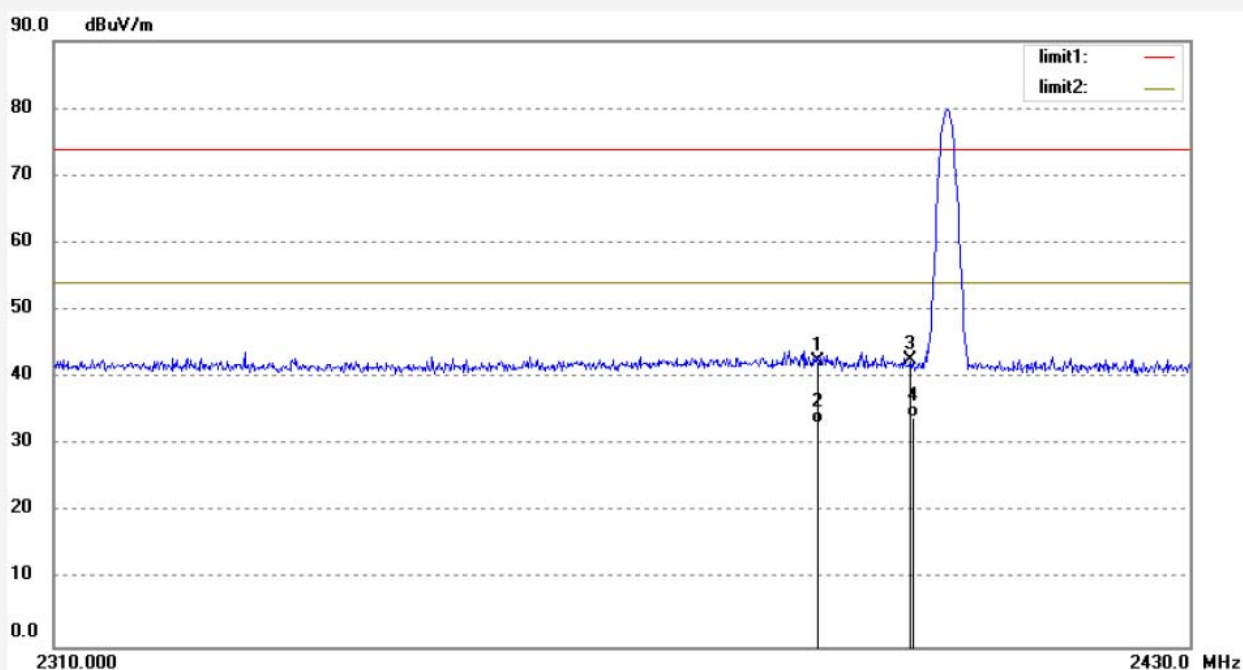
Date: 17/07/17/

Time: 11/32/13

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	44.14	-1.71	42.43	74.00	-31.57	peak			
2	2390.000	34.80	-1.71	33.09	54.00	-20.91	AVG			
3	2400.000	44.28	-1.62	42.66	74.00	-31.34	peak			
4	2400.000	35.64	-1.62	34.02	54.00	-19.98	AVG			

Job No.: Frank2017 #198

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2404MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Vertical

Power Source: DC 3V

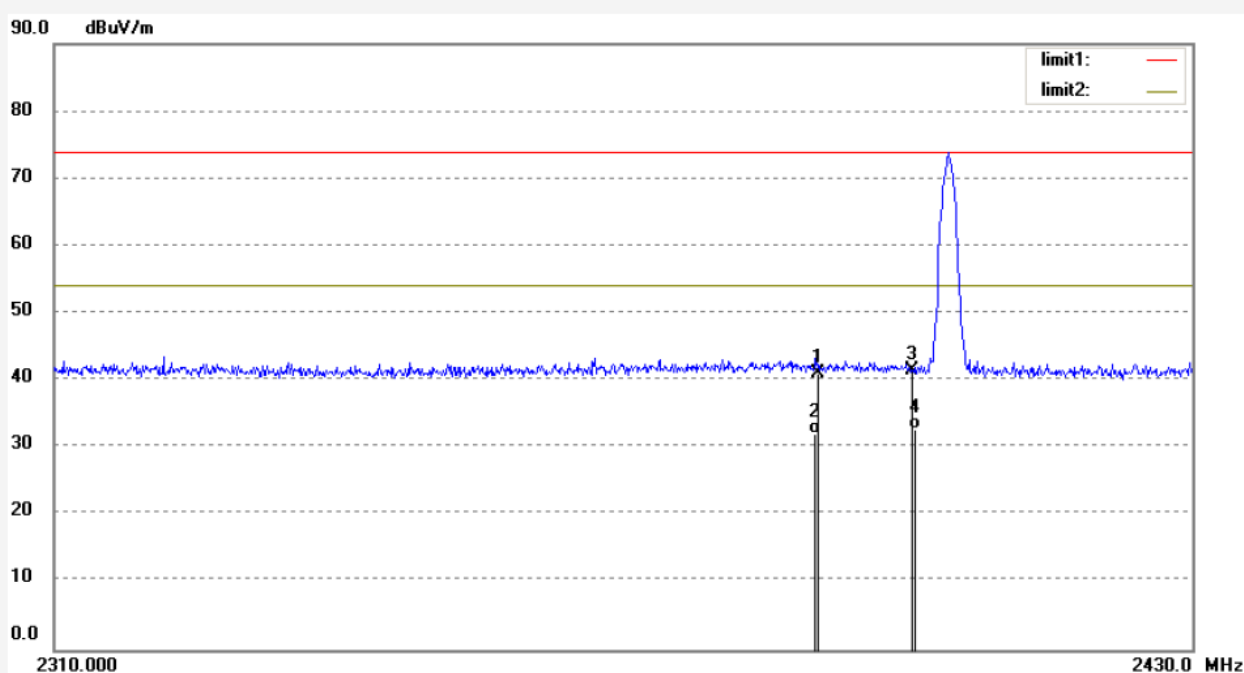
Date: 17/07/17/

Time: 11/34/10

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	42.75	-1.71	41.04	74.00	-32.96	peak			
2	2390.000	33.79	-1.71	32.08	54.00	-21.92	AVG			
3	2400.000	43.06	-1.62	41.44	74.00	-32.56	peak			
4	2400.000	34.25	-1.62	32.63	54.00	-21.37	AVG			



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Fax:+86-0755-26503396

Job No.: Frank2017 #200

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2478MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

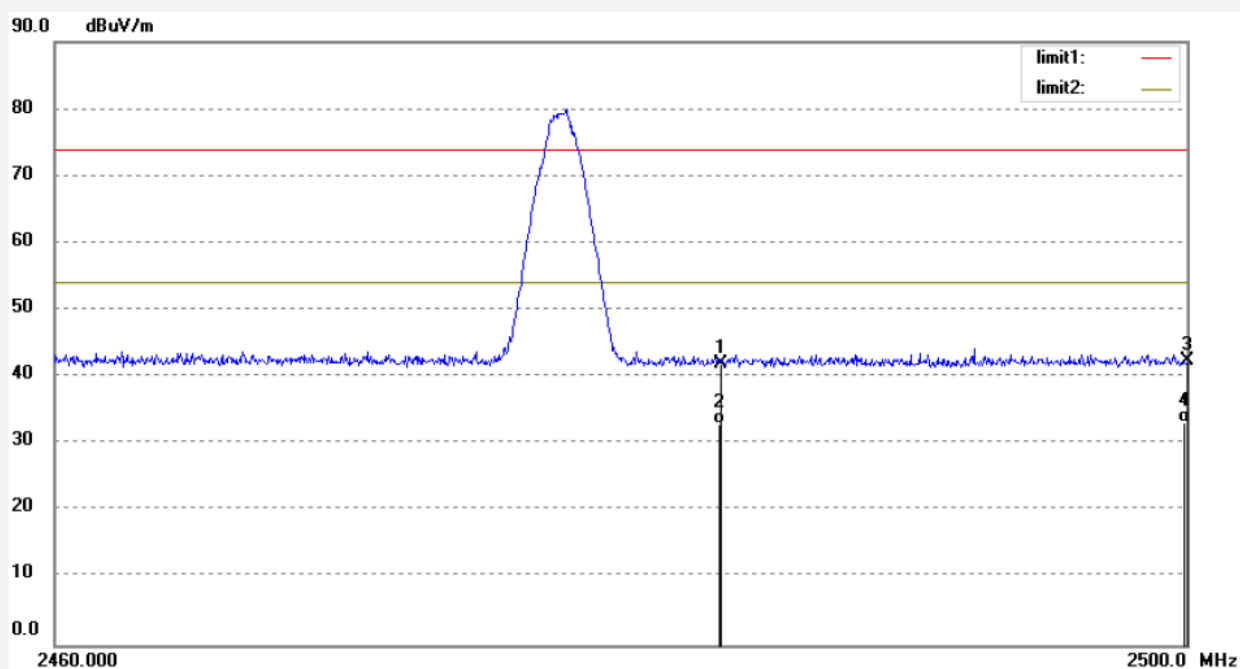
Date: 17/07/17/

Time: 11/39/56

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



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	43.26	-1.40	41.86	74.00	-32.14	peak			
2	2483.500	34.26	-1.40	32.86	54.00	-21.14	AVG			
3	2500.000	43.77	-1.40	42.37	74.00	-31.63	peak			
4	2500.000	34.57	-1.40	33.17	54.00	-20.83	AVG			

Job No.: Frank2017 #199

Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2478MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Vertical

Power Source: DC 3V

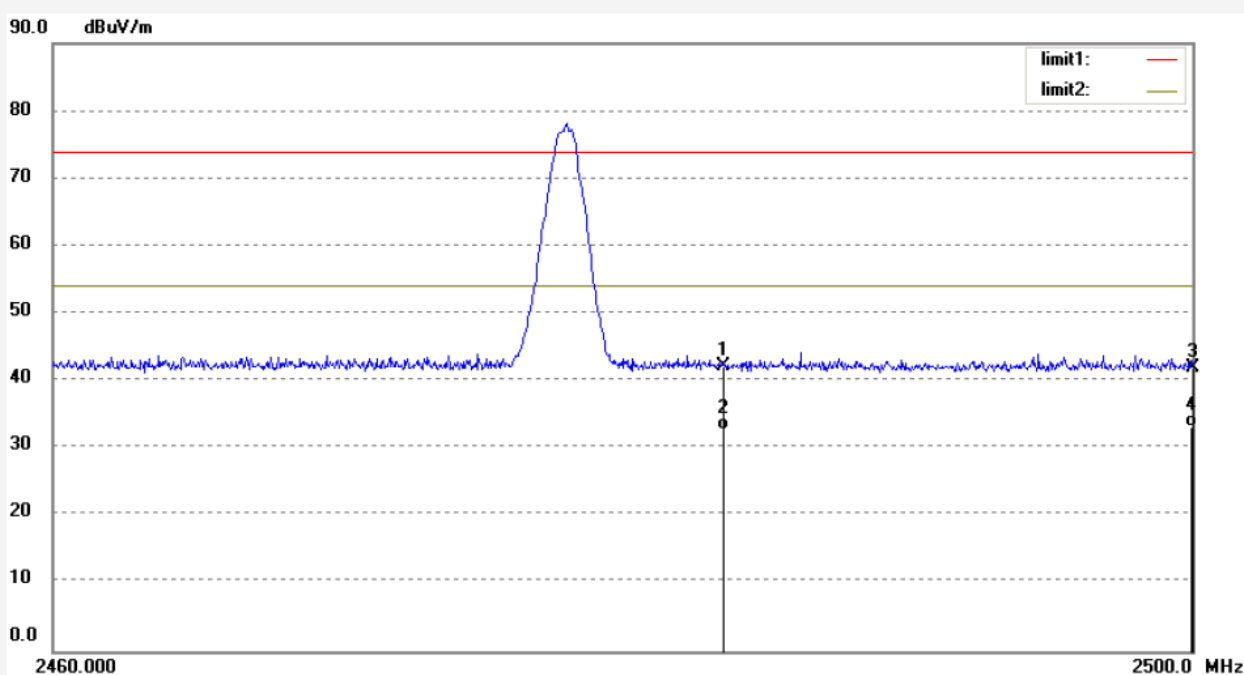
Date: 17/07/17/

Time: 11/36/37

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



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	43.49	-1.40	42.09	74.00	-31.91	peak			
2	2483.500	34.13	-1.40	32.73	54.00	-21.27	AVG			
3	2500.000	43.44	-1.40	42.04	74.00	-31.96	peak			
4	2500.000	34.56	-1.40	33.16	54.00	-20.84	AVG			

Note:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor
3. Display the measurement of peak values.

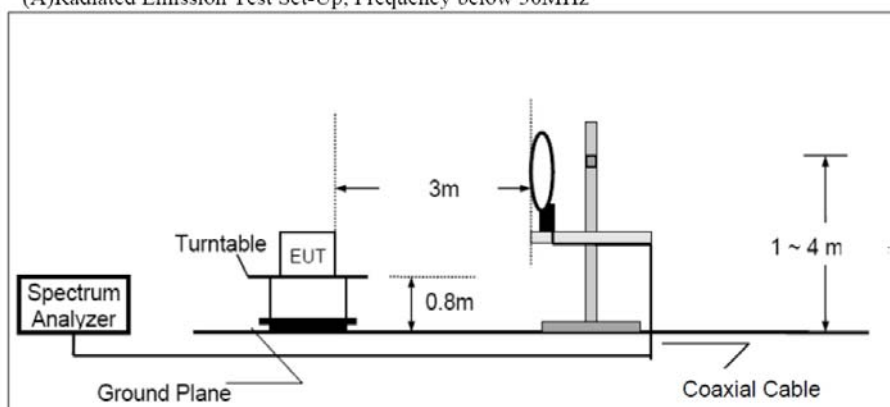
7.1. Block Diagram of Test Setup

7.1.1. Block diagram of connection between the EUT and peripherals

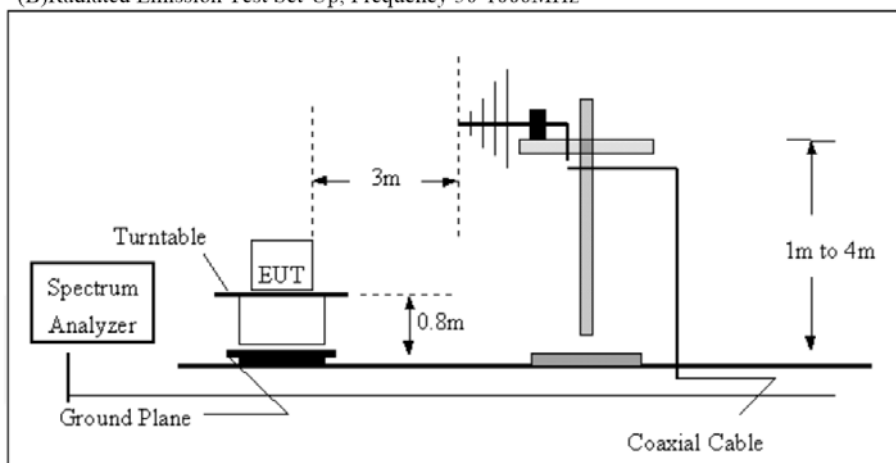


7.1.2.Semi-Anechoic Chamber Test Setup Diagram

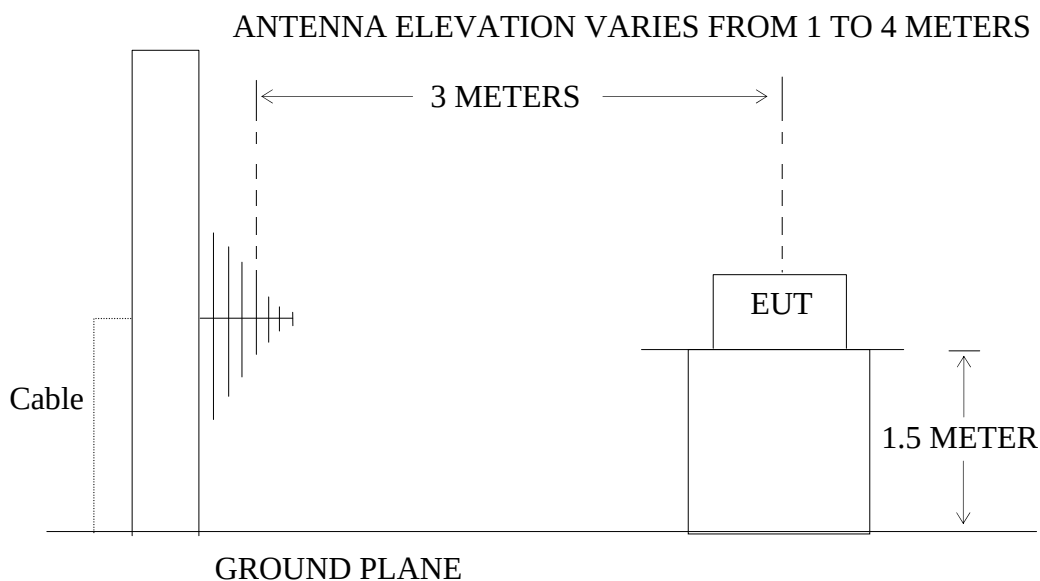
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency 30-1000MHz



7.1.3. Radiated Emission Test Set-Up, Frequency above 1GHz



7.2. The Limit For Section 15.249

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

7.3.Restricted bands of operation

7.3.1.FCC Part 15.205 Restricted bands of operation

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

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

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

²Above 38.6

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

7.4.Configuration of EUT on Measurement

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

7.5. Operating Condition of EUT

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

7.5.2. Turn on the power of all equipment.

7.5.3. Let the EUT work in TX modes measure it. The transmit frequency are 2404-2478 MHz. We select 2404MHz, 2441MHz, and 2478MHz TX frequency to transmit.

7.6. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground (Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground (Above 1GHz). 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 EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

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

The frequency range from 9 kHz to 25GHz is checked.

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

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

Result = Reading + Corrected Factor

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

7.7.The Field Strength of Radiation Emission Measurement Results

PASS.

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

2. *: Denotes restricted band of operation.

3. The EUT is tested radiation emission at Low, Middle, High channel in three axes. The worst emissions are reported in all channels.

4. The test frequency is from 30MHz to 25GHz, The 18-25GHz emissions are not reported, because the levels are too low against the limit..

Job No.: Frank2017 #201

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2404MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

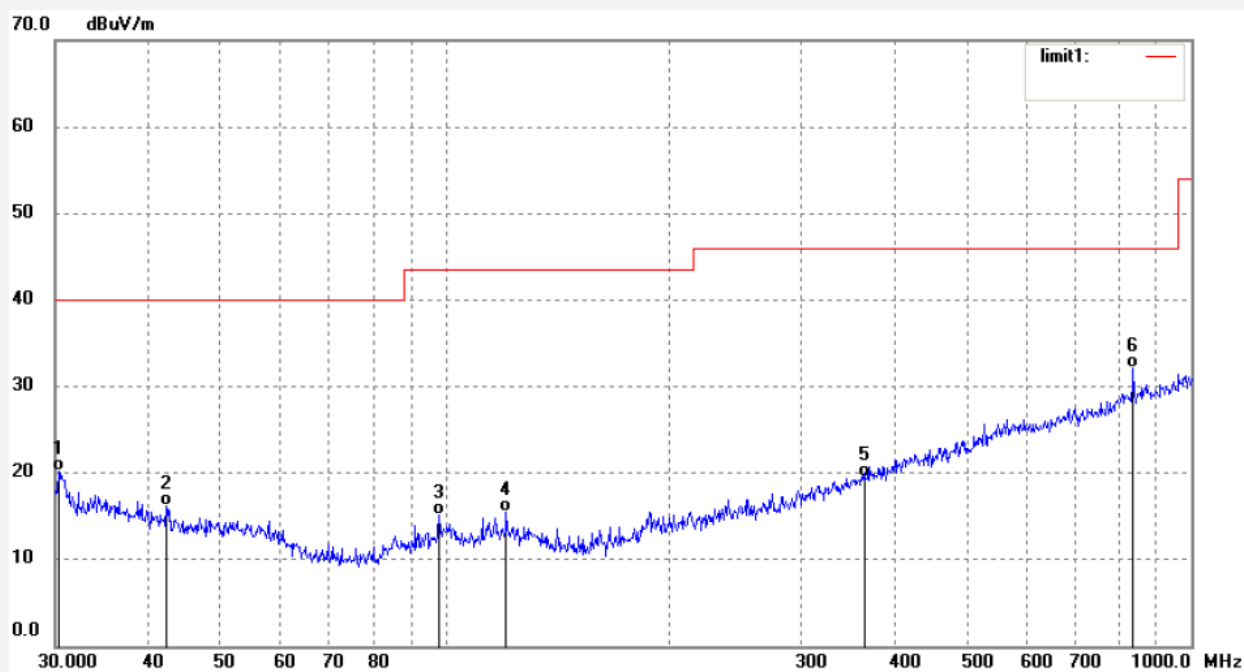
Date: 17/07/17/

Time: 11/43/19

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



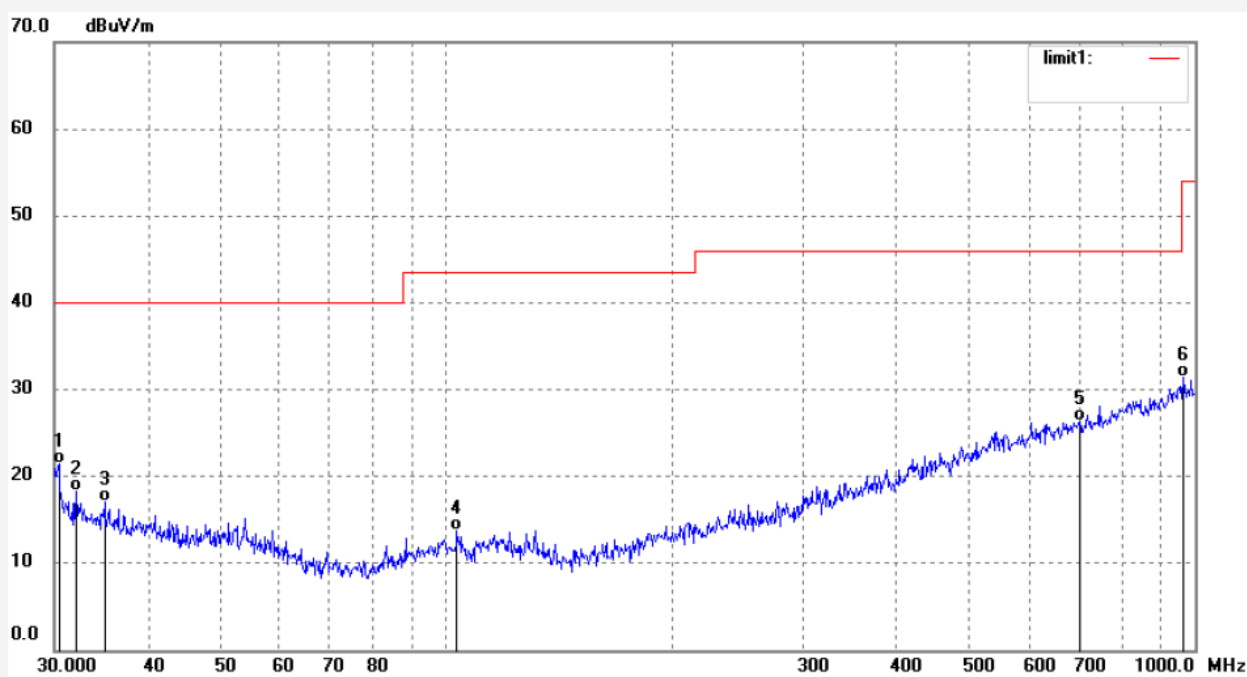
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.3172	30.22	-9.96	20.26	40.00	-19.74	QP			
2	42.3021	28.19	-12.04	16.15	40.00	-23.85	QP			
3	98.1419	28.81	-13.68	15.13	43.50	-28.37	QP			
4	120.6991	28.61	-13.13	15.48	43.50	-28.02	QP			
5	361.7139	26.72	-7.26	19.46	46.00	-26.54	QP			
6	836.2441	30.59	1.45	32.04	46.00	-13.96	QP			

Job No.: Frank2017 #202
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: VIDEO GAME
Mode: TX2404MHz
Model: C-12

Polarization: Vertical
Power Source: DC 3V
Date: 17/07/17/
Time: 11/43/52
Engineer Signature:
Distance: 3m

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.4237	30.41	-9.04	21.37	40.00	-18.63	QP			
2	32.0667	27.77	-9.54	18.23	40.00	-21.77	QP			
3	35.0048	27.54	-10.41	17.13	40.00	-22.87	QP			
4	103.4419	27.38	-13.62	13.76	43.50	-29.74	QP			
5	701.7609	27.44	-1.03	26.41	46.00	-19.59	QP			
6	965.5421	28.05	3.35	31.40	54.00	-22.60	QP			

Job No.: Frank2017 #204

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2441MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

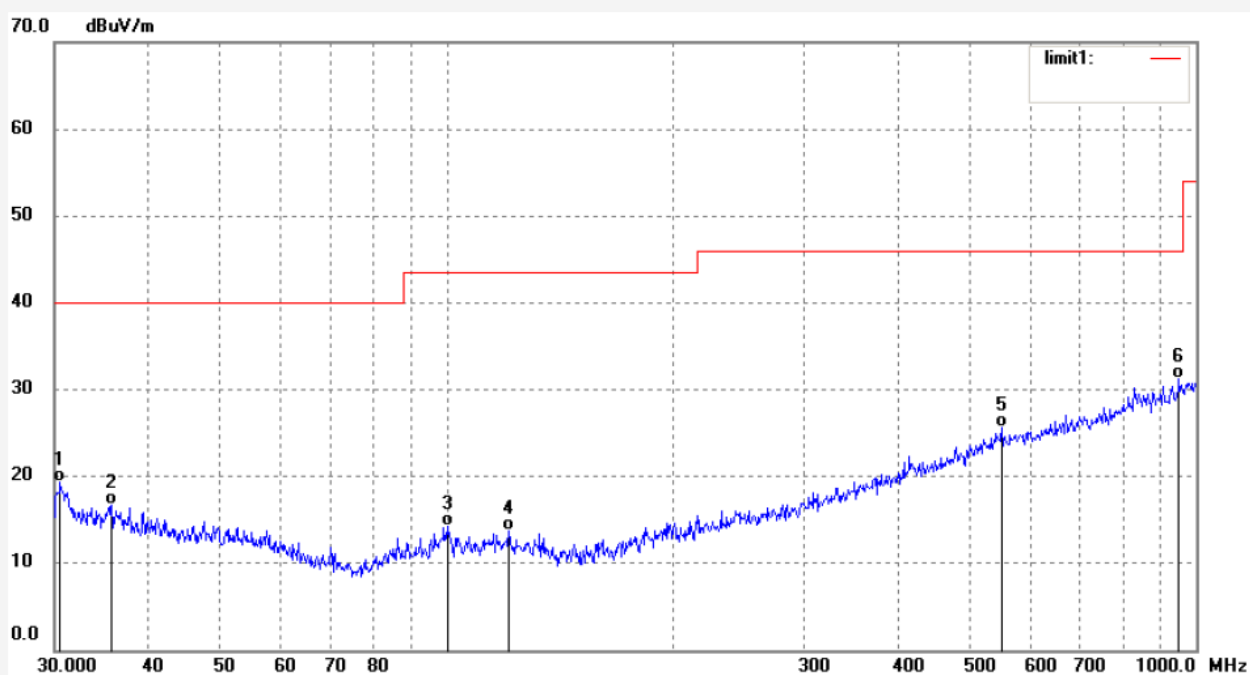
Date: 17/07/17/

Time: 11/44/47

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



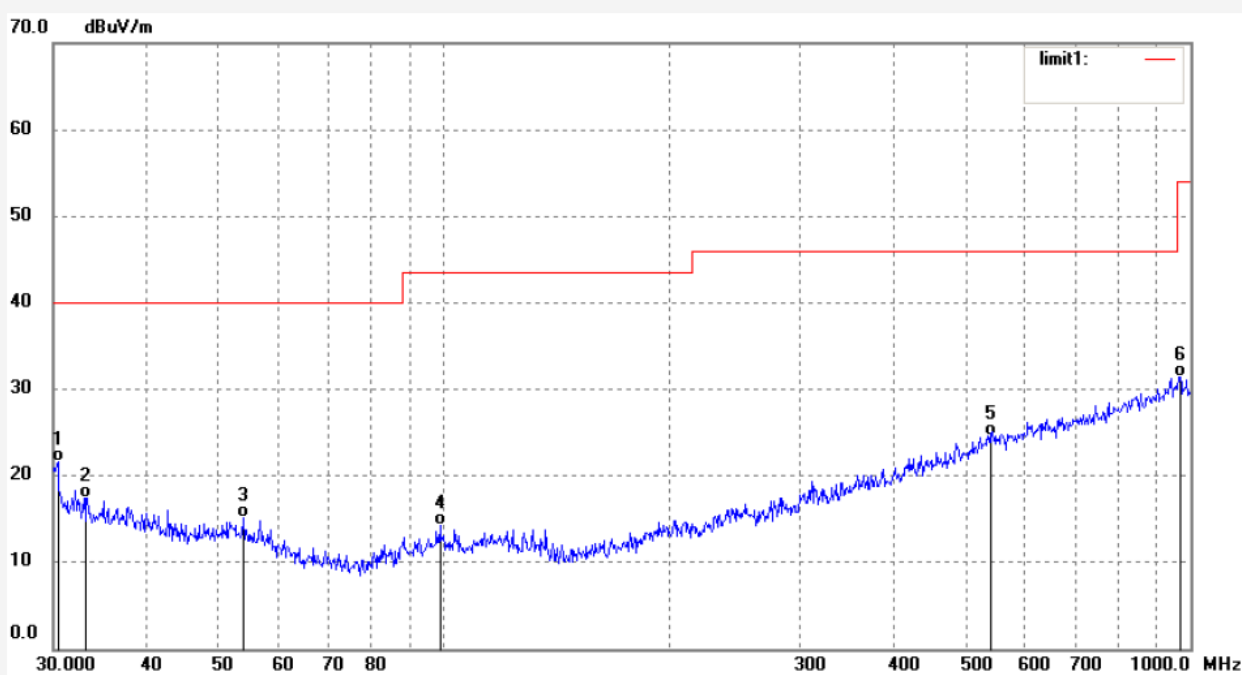
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.5305	29.32	-9.97	19.35	40.00	-20.65	QP			
2	35.7490	27.29	-10.58	16.71	40.00	-23.29	QP			
3	100.2286	27.30	-13.09	14.21	43.50	-29.29	QP			
4	121.1230	26.92	-13.19	13.73	43.50	-29.77	QP			
5	550.9479	28.69	-3.05	25.64	46.00	-20.36	QP			
6	948.7609	28.17	3.08	31.25	46.00	-14.75	QP			

Job No.: Frank2017 #203
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: VIDEO GAME
Mode: TX2441MHz
Model: C-12

Polarization: Vertical
Power Source: DC 3V
Date: 17/07/17/
Time: 11/44/07
Engineer Signature:
Distance: 3m

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.4237	30.69	-9.04	21.65	40.00	-18.35	QP			
2	33.2111	27.37	-9.89	17.48	40.00	-22.52	QP			
3	53.8817	28.08	-12.87	15.21	40.00	-24.79	QP			
4	98.8324	27.74	-13.44	14.30	43.50	-29.20	QP			
5	535.7073	28.00	-3.40	24.60	46.00	-21.40	QP			
6	968.9338	28.03	3.40	31.43	54.00	-22.57	QP			

Job No.: Frank2017 #205

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2478MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

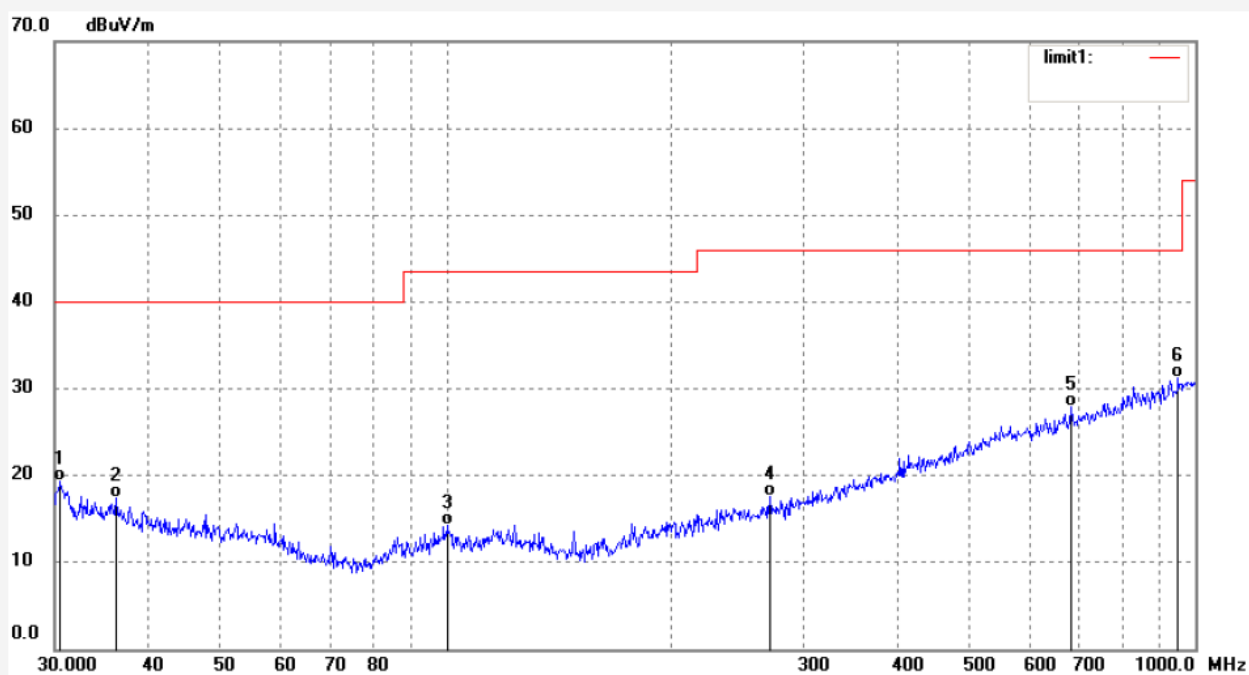
Date: 17/07/17/

Time: 11/45/13

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



Job No.: Frank2017 #206

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2478MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Vertical

Power Source: DC 3V

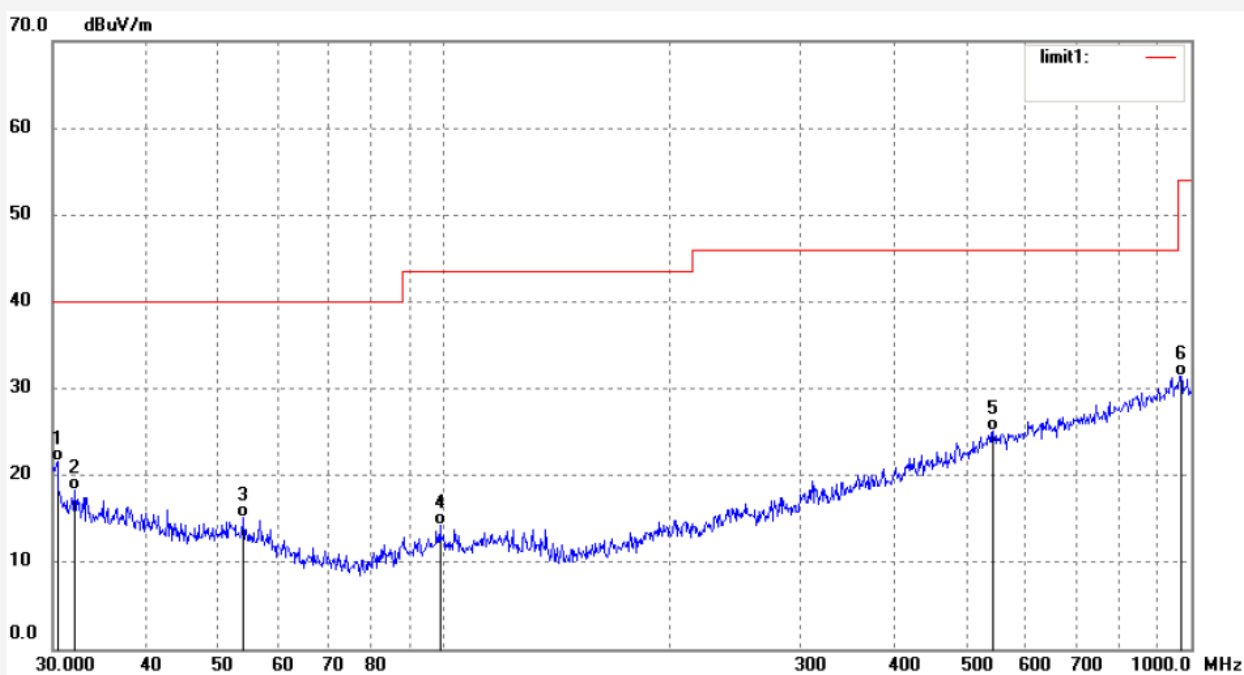
Date: 17/07/17/

Time: 11/44/07

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	30.4237	30.69	-9.04	21.65	40.00	-18.35	QP			
2	32.0667	27.77	-9.54	18.23	40.00	-21.77	QP			
3	53.8817	28.08	-12.87	15.21	40.00	-24.79	QP			
4	98.8324	27.74	-13.44	14.30	43.50	-29.20	QP			
5	543.2740	28.37	-3.27	25.10	46.00	-20.90	QP			
6	968.9338	28.03	3.40	31.43	54.00	-22.57	QP			

Job No.: Frank2017 #210

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2404MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

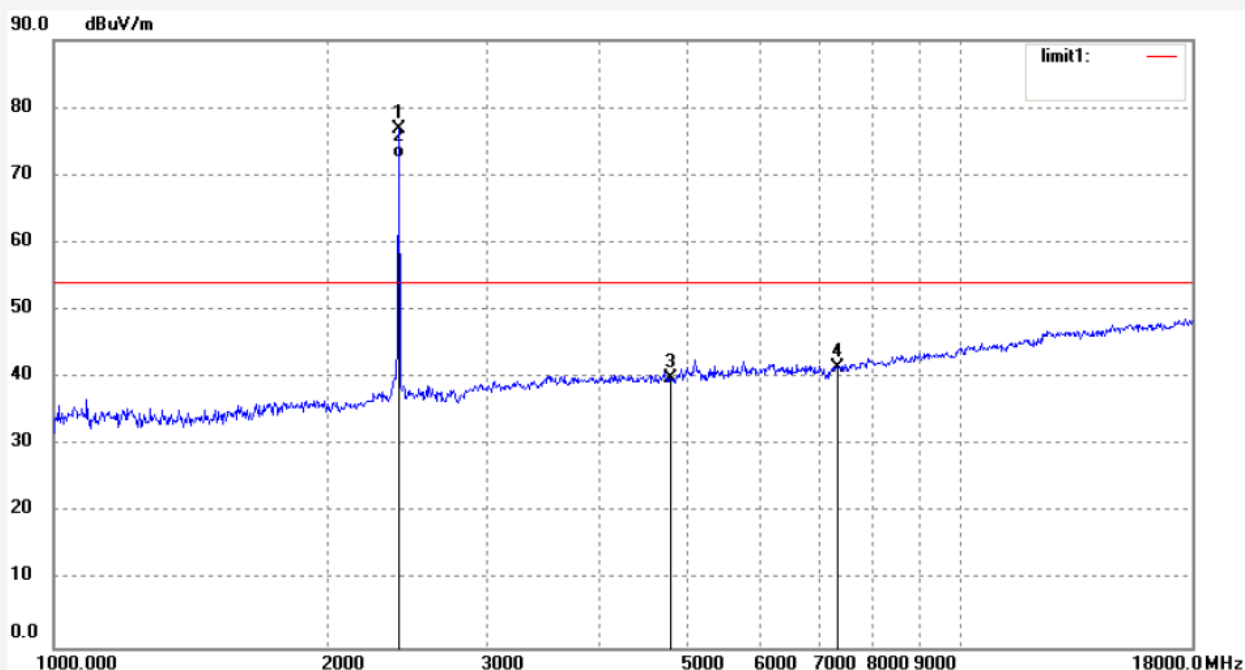
Date: 17/07/17/

Time: 16/15/20

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2404.753	78.51	-1.62	76.89	114.00	-37.11	peak			
2	2404.753	74.15	-1.62	72.53	94.00	-21.47	AVG			
3	4790.245	35.19	4.80	39.99	74.00	-34.01	peak			
4	7326.267	32.80	8.81	41.61	74.00	-32.39	peak			

Job No.: Frank2017 #211

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2404MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Vertical

Power Source: DC 3V

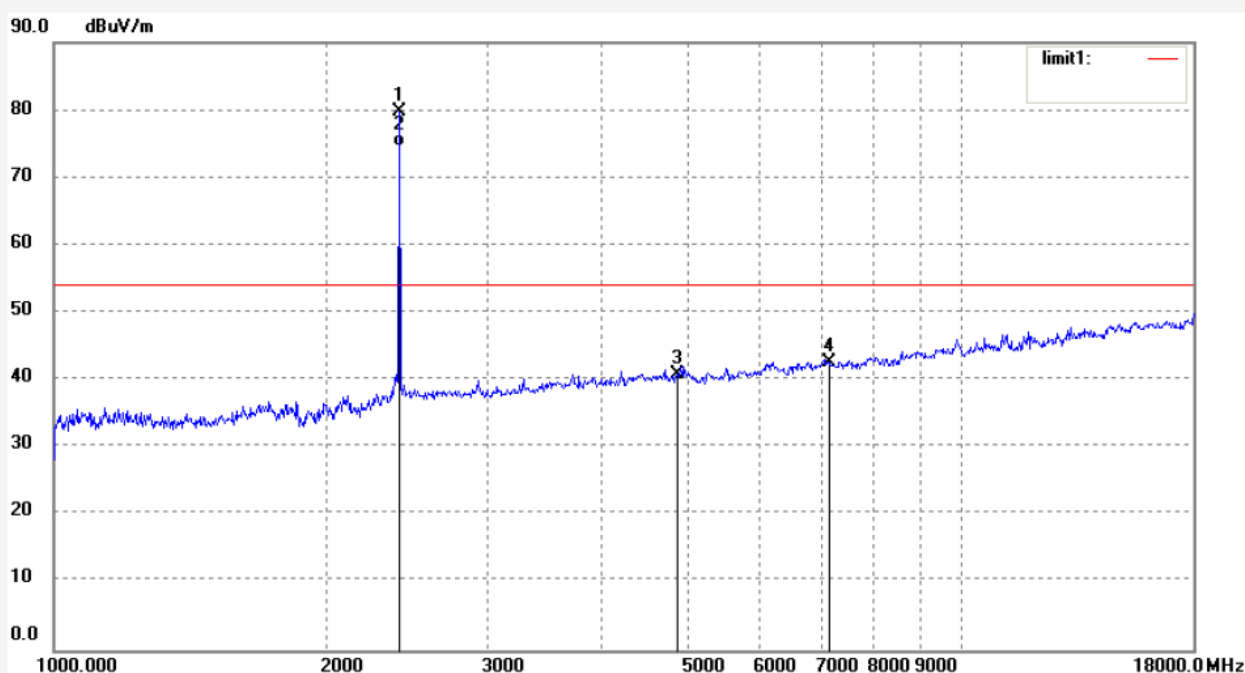
Date: 17/07/17/

Time: 16/15/32

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2404.753	81.30	-1.62	79.68	114.00	-34.32	peak			
2	2404.753	76.15	-1.62	74.53	94.00	-19.47	AVG			
3	4859.975	35.32	5.42	40.74	74.00	-33.26	peak			
4	7138.144	33.94	8.72	42.66	74.00	-31.34	peak			

Job No.: Frank2017 #213

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2441MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Horizontal

Power Source: DC 3V

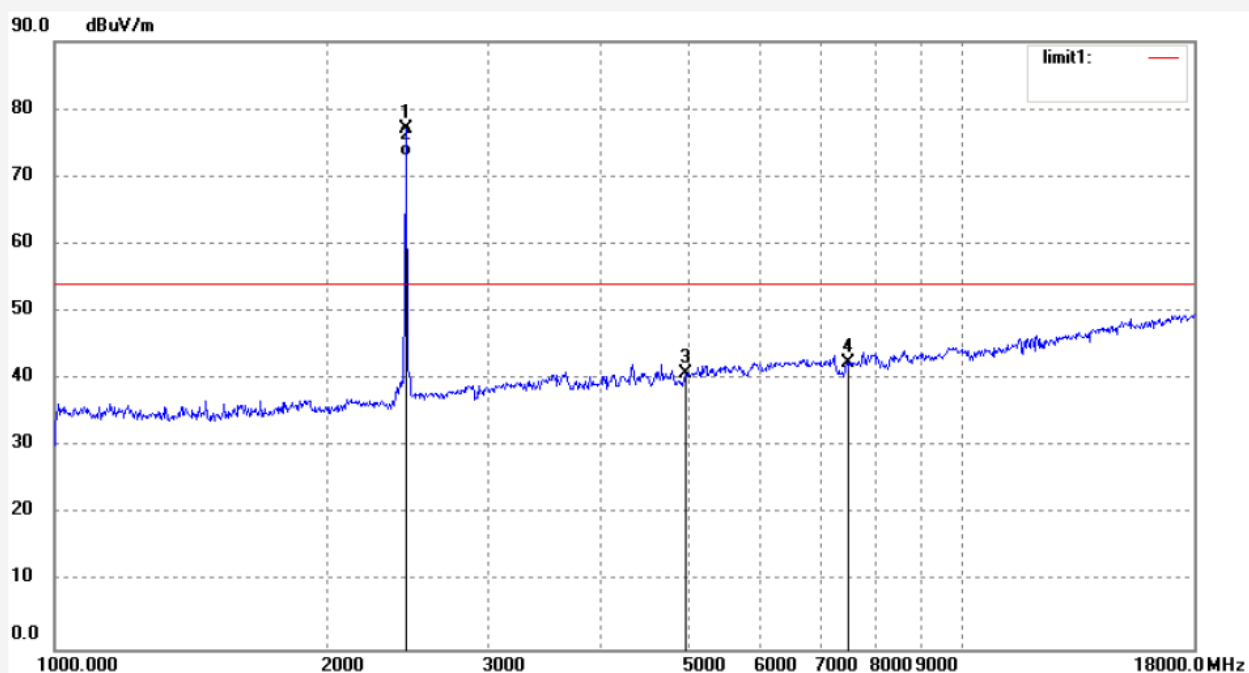
Date: 17/07/17/

Time: 16/16/46

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.751	78.58	-1.44	77.14	114.00	-36.86	peak			
2	2441.751	74.45	-1.44	73.01	94.00	-20.99	AVG			
3	4959.307	34.84	6.08	40.92	74.00	-33.08	peak			
4	7476.006	32.78	9.54	42.32	74.00	-31.68	peak			

Job No.: Frank2017 #212

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2441MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Vertical

Power Source: DC 3V

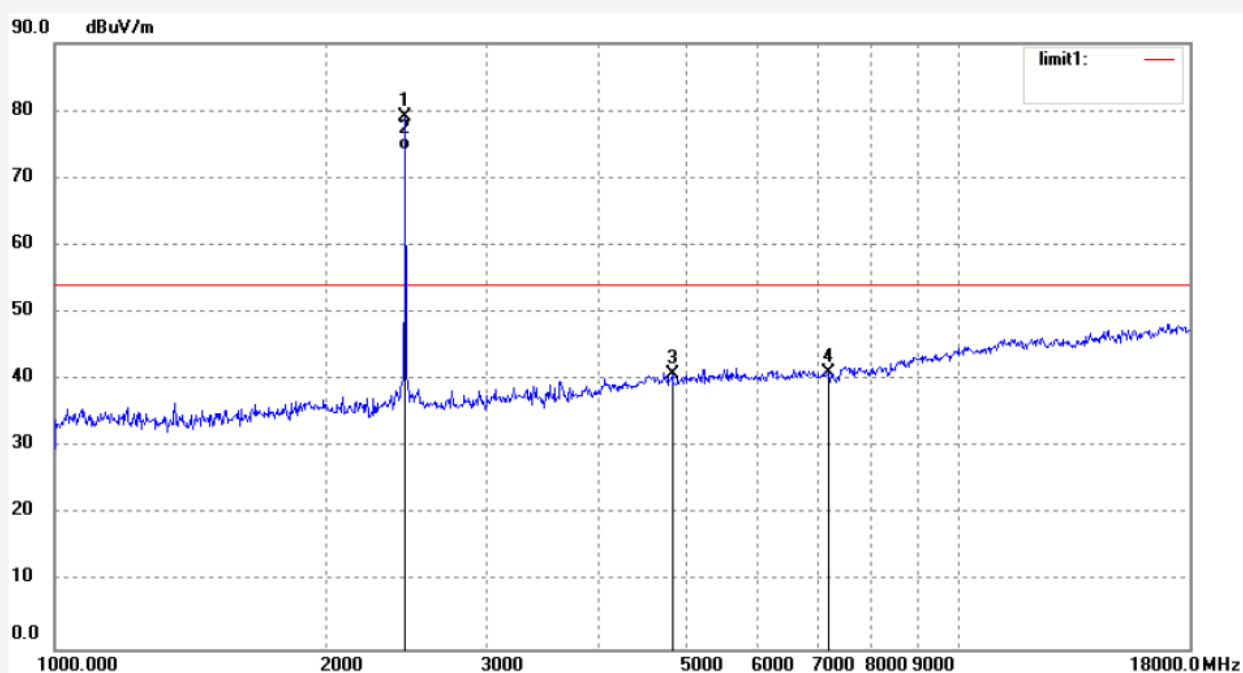
Date: 17/07/17/

Time: 16/16/12

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



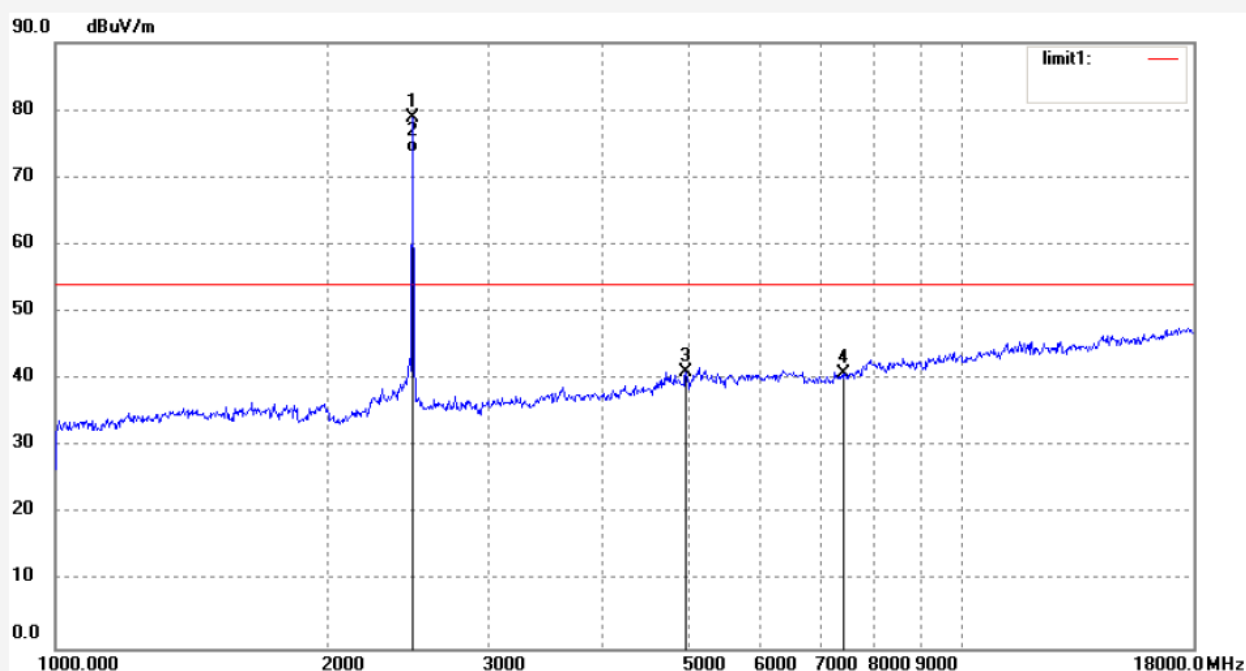
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.751	80.63	-1.44	79.19	114.00	-34.81	peak			
2	2441.751	75.56	-1.44	74.12	94.00	-19.88	AVG			
3	4818.016	35.78	5.03	40.81	74.00	-33.19	peak			
4	7179.527	32.55	8.51	41.06	74.00	-32.94	peak			

Job No.: Frank2017 #207
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %
EUT: VIDEO GAME
Mode: TX2478MHz
Model: C-12

Polarization: Horizontal
Power Source: DC 3V
Date: 17/07/17/
Time: 11/48/16
Engineer Signature:
Distance: 3m

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2477.310	80.22	-1.41	78.81	114.00	-35.19	peak			
2	2477.310	75.13	-1.41	73.72	94.00	-20.28	AVG			
3	4959.307	34.99	6.08	41.07	74.00	-32.93	peak			
4	7411.461	31.69	9.12	40.81	74.00	-33.19	peak			

Job No.: Frank2017 #208

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: VIDEO GAME

Mode: TX2478MHz

Model: C-12

Manufacturer: DONGGUAN FEIHAO INDUSTRIALIST CO.,LTD

Polarization: Vertical

Power Source: DC 3V

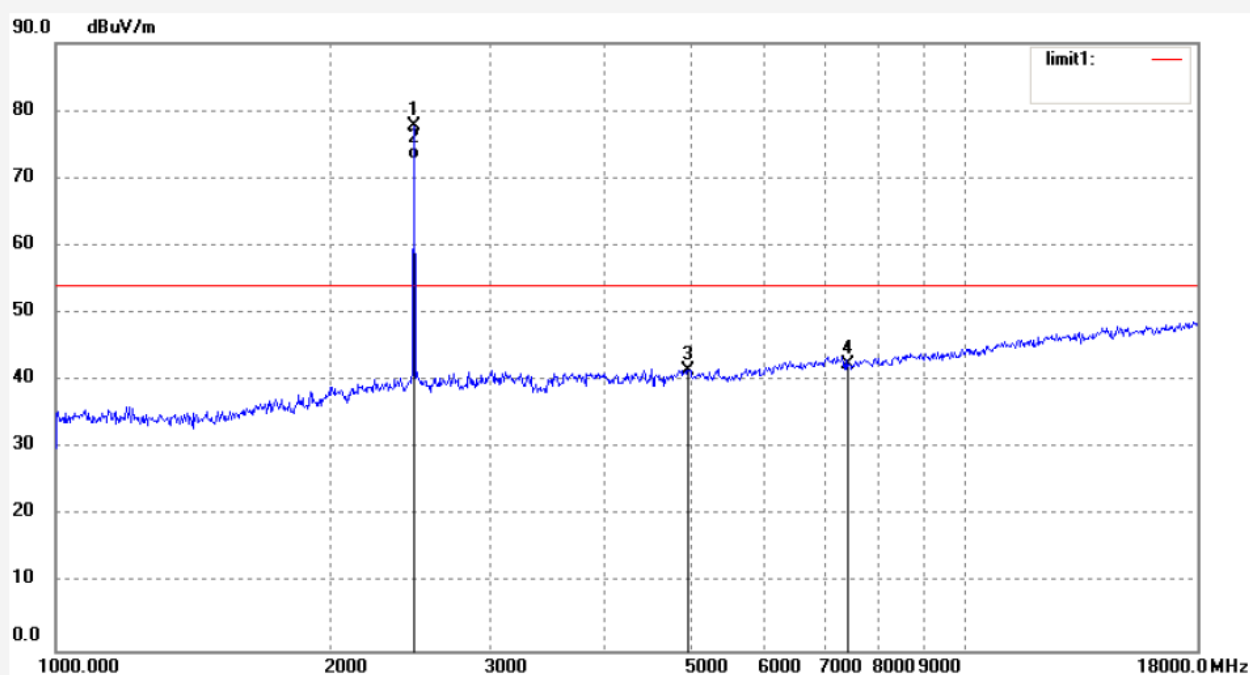
Date: 17/07/17/

Time: 11/52/21

Engineer Signature:

Distance: 3m

Note: Report NO.:ATE20171327



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2477.310	79.12	-1.41	77.71	114.00	-36.29	peak			
2	2477.310	74.15	-1.41	72.74	94.00	-21.26	AVG			
3	4960.000	35.37	6.10	41.47	74.00	-32.53	peak			
4	7441.000	33.01	9.30	42.31	74.00	-31.69	peak			

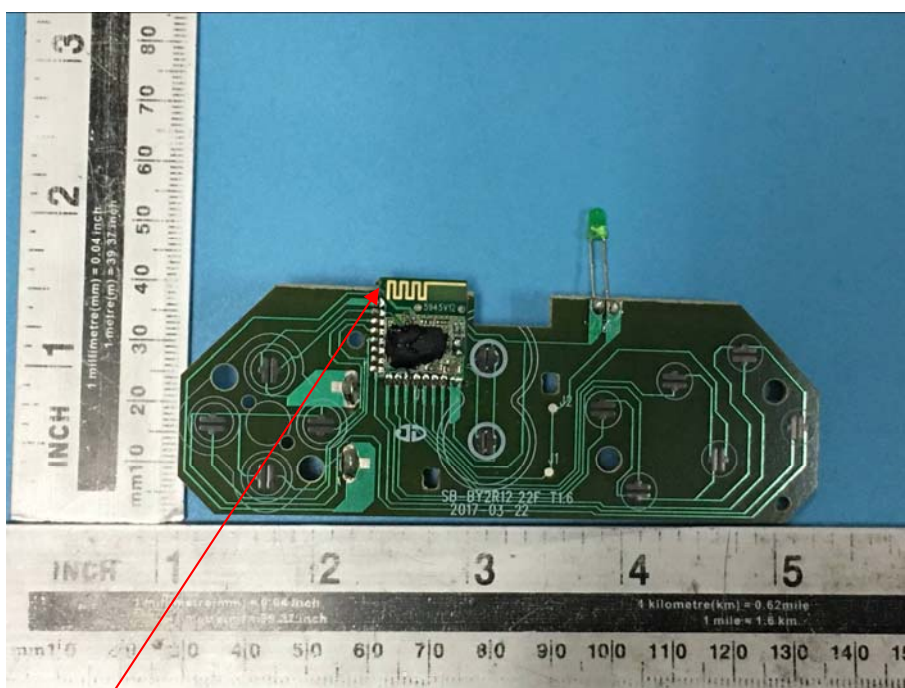
8. ANTENNA REQUIREMENT

8.1.The Requirement

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

8.2.Antenna Construction

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



Antenna

----- THE END OF TEST REPORT -----