

APPLICATION CERTIFICATION
On Behalf of
Dongguan Earson Audio Technology Co., Ltd

2.1 Speaker System With Subwoofer
Model No.: ER2809VI, IHB23B

FCC ID: RI5-ER2809VI

Prepared for : Dongguan Earson Audio Technology Co., Ltd
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Report Number : ATE20122767
Date of Test : Dec 4-Dec 17, 2012
Date of Report : Dec 17, 2012

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Test Report Certification

Applicant : Dongguan Earson Audio Technology Co., Ltd
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd
 EUT Description : 2.1 Speaker System With Subwoofer
 MODEL NO.: ER2809VI, IHB23B
 (A) Trade Name.: EARSON, ILIVE
 (B) POWER SUPPLY: 120V AC

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247
 ANSI C63.4: 2009
 ANSI C63.10: 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 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 the above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test :

Dec 4-Dec 17, 2012

Prepared by :

Terry. Yang

(Engineer)

Approved & Authorized Signer :

Sean

(Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : 2.1 Speaker System With Subwoofer
 Model Number : ER2809VI, IHB23B
 NOTE: These models are identical in interior structure; electrical circuits and components, and just model names, plastic surface and color are different for the marketing requirement. So we prepare ER2809VI for test only
 Frequency Band : 2402MHz-2480MHz
 Number of Channels : 79
 Antenna Gain : 2dBi
 Power Supply : 120V AC
 Applicant : Dongguan Earson Audio Technology Co., Ltd
 Address : Chuangye Industrial Area, Guanqiaojiao Community, Wanjiang District, Dongguan City, Guangdong, China
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd
 Address : Chuangye Industrial Area, Guanqiaojiao Community, Wanjiang District, Dongguan City, Guangdong, China
 Date of sample received : Dec 4, 2012
 Date of Test : Dec 4-Dec 17, 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 date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 7, 2012	Jan. 7, 2013
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 7, 2012	Jan. 7, 2013
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 7, 2012	Jan. 7, 2013
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 7, 2012	Jan. 7, 2013
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 7, 2012	Jan. 7, 2013
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 7, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 7, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 7, 2012	Jan. 7, 2013
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 7, 2012	Jan. 7, 2013
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 7, 2012	Jan. 7, 2013

3. OPERATION OF EUT DURING TESTING

3.1. Operating Mode

The mode is used: Transmitting mode

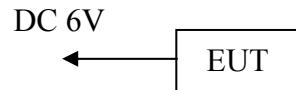
Low Channel: 2402MHz

Middle Channel: 2441MHz

High Channel: 2480MHz

Hopping

3.2. Configuration and peripherals



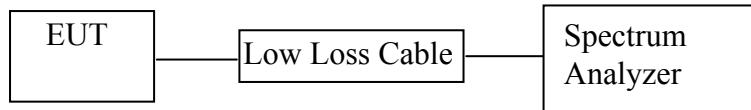
(EUT: 2.1 Speaker System With Subwoofer)

4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission Test	N/A
Section 15.247(a)(1)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii)	Dwell Time Test	Compliant
Section 15.247(b)(1)	Maximum Peak Output Power Test	Compliant
Section 15.247(d) Section 15.209	Radiated Emission Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. 20DB BANDWIDTH TEST

5.1. Block Diagram of Test Setup



(EUT: 2.1 Speaker System With Subwoofer)

5.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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.

5.3.1.2.1 Speaker System With Subwoofer (EUT)

Model Number : ER2809VI
 Serial Number : N/A
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd

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 (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz 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 30 kHz and VBW to 100 kHz.
- 5.5.3. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

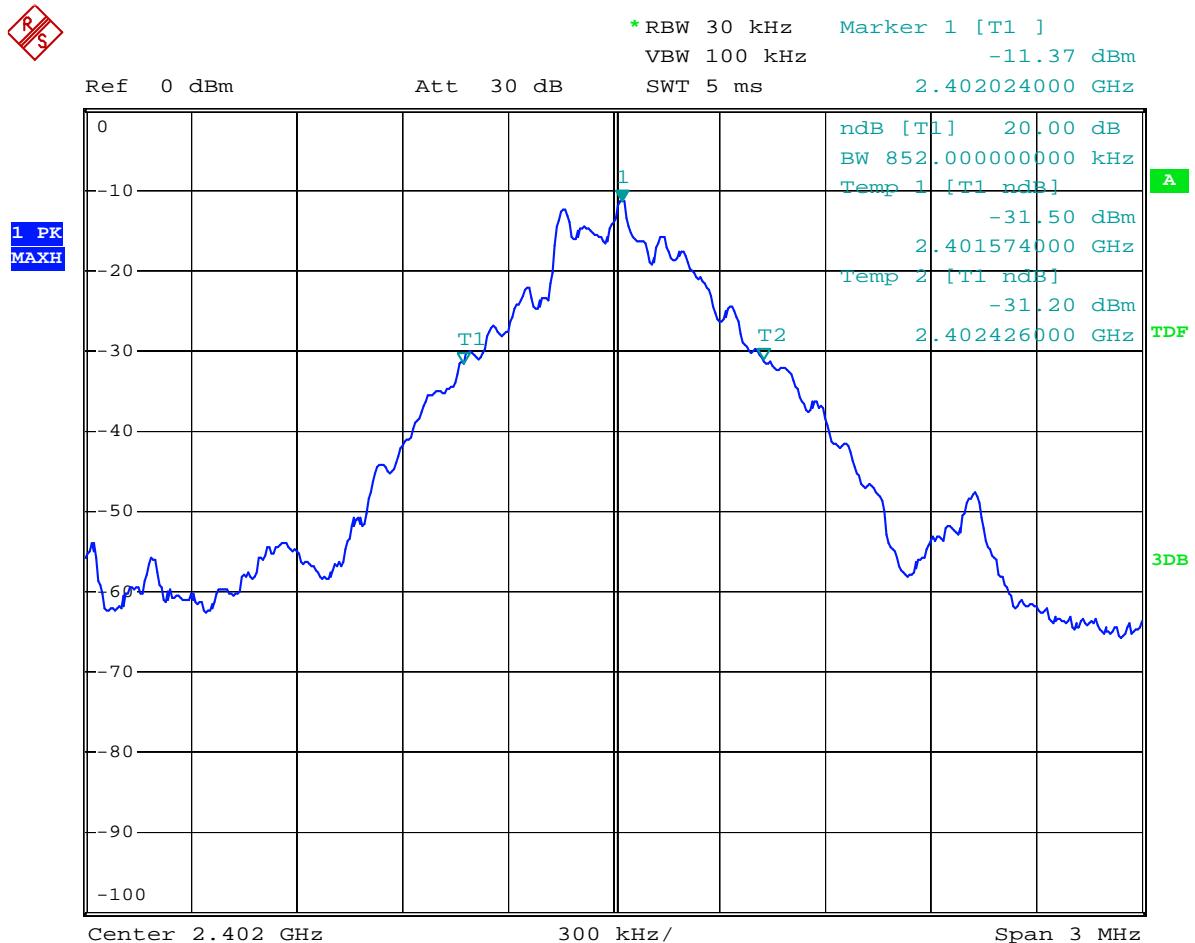
5.6. Test Result

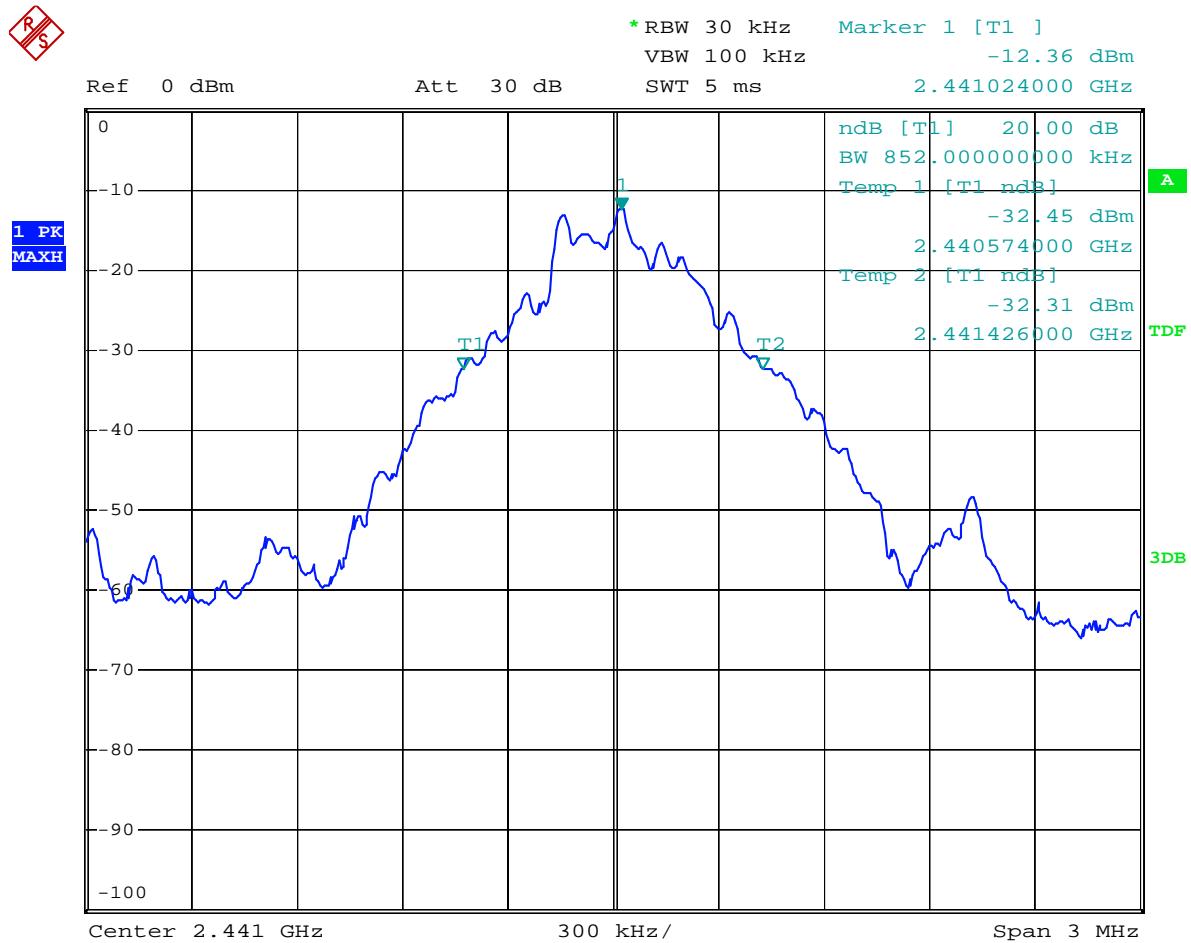
PASS.

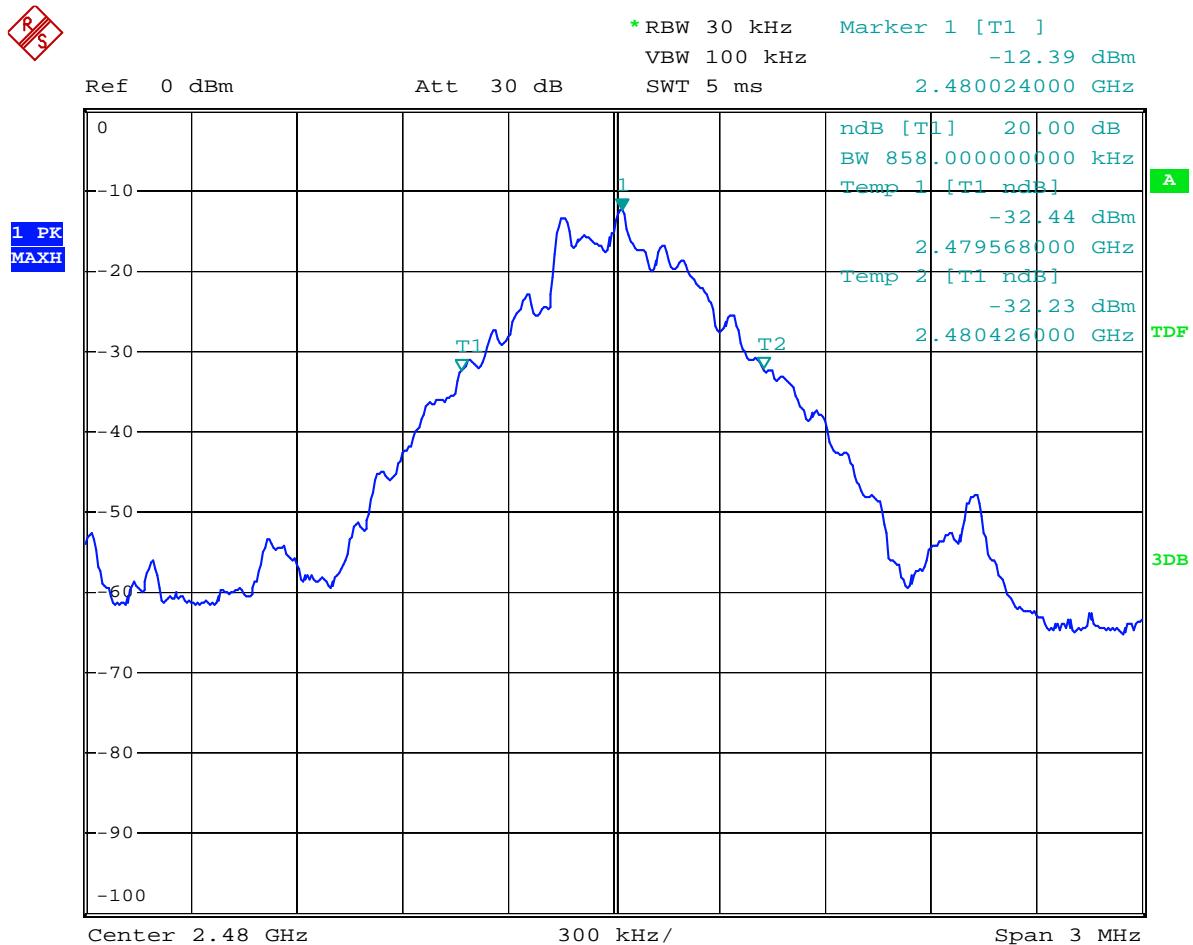
Date of Test:	Dec 14, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX	Test Engineer:	Ricky

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	0.852	---
Middle	2441	0.852	---
High	2480	0.858	---

The spectrum analyzer plots are attached as below.

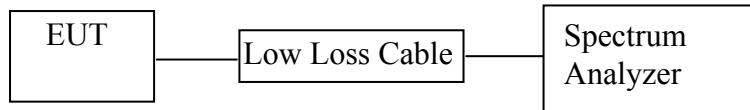






6. CARRIER FREQUENCY SEPARATION TEST

6.1. Block Diagram of Test Setup



(EUT: 2.1 Speaker System With Subwoofer)

6.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

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.

6.3.1.2.1 Speaker System With Subwoofer (EUT)

Model Number : ER2809VI
 Serial Number : N/A
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd

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 (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz 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 100 kHz and VBW to 300 kHz. Adjust Span to 3 MHz.
- 6.5.3. Set the adjacent channel of the EUT maxhold another trace.
- 6.5.4. Measurement the channel separation

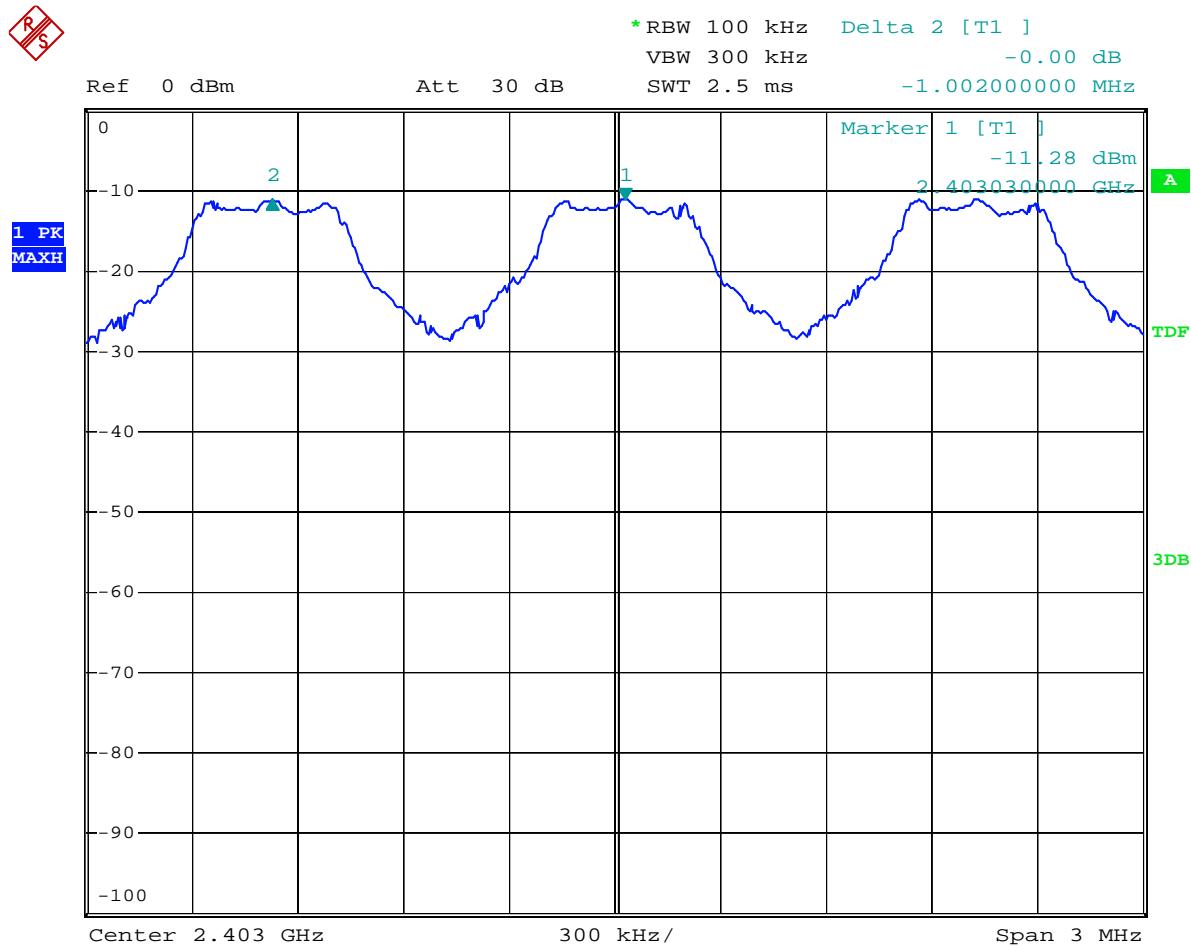
6.6. Test Result

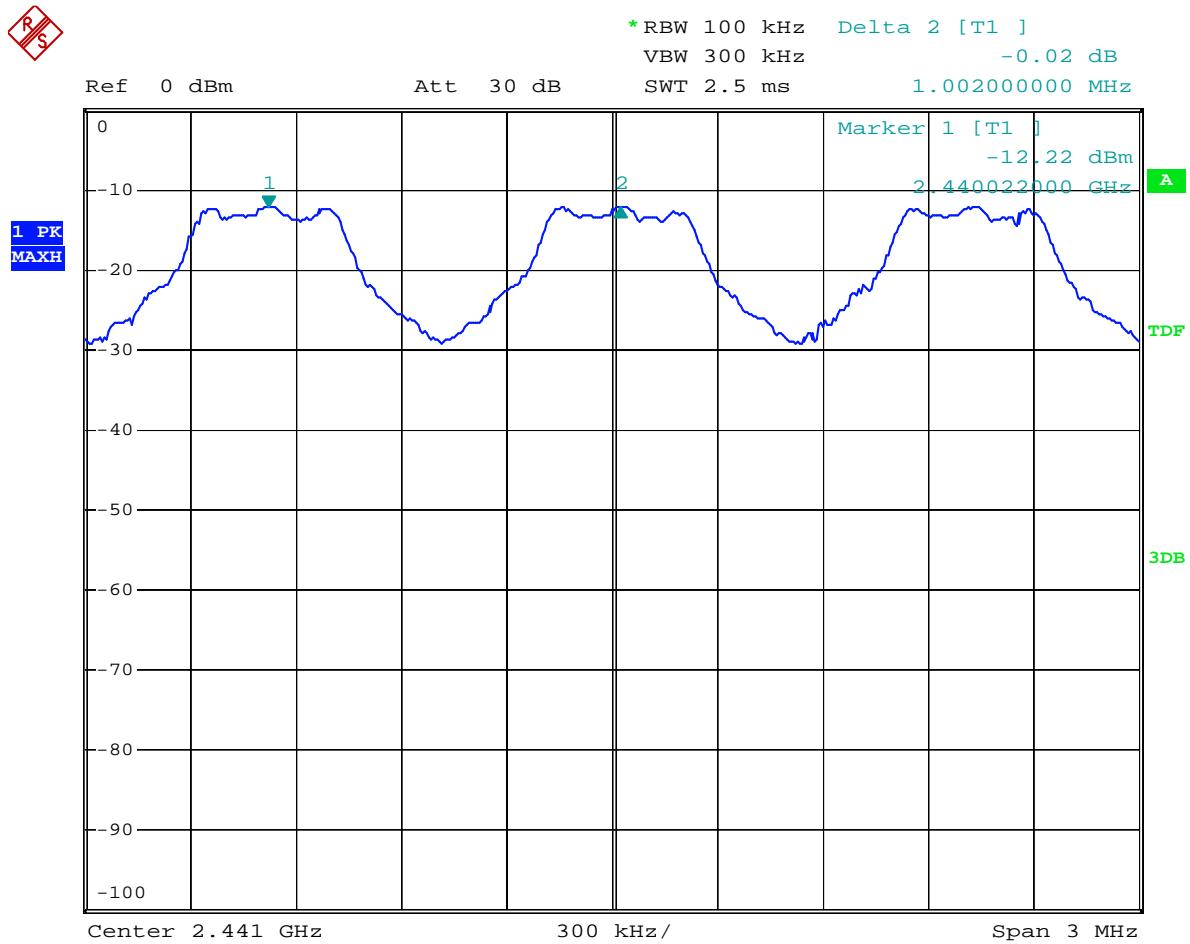
PASS.

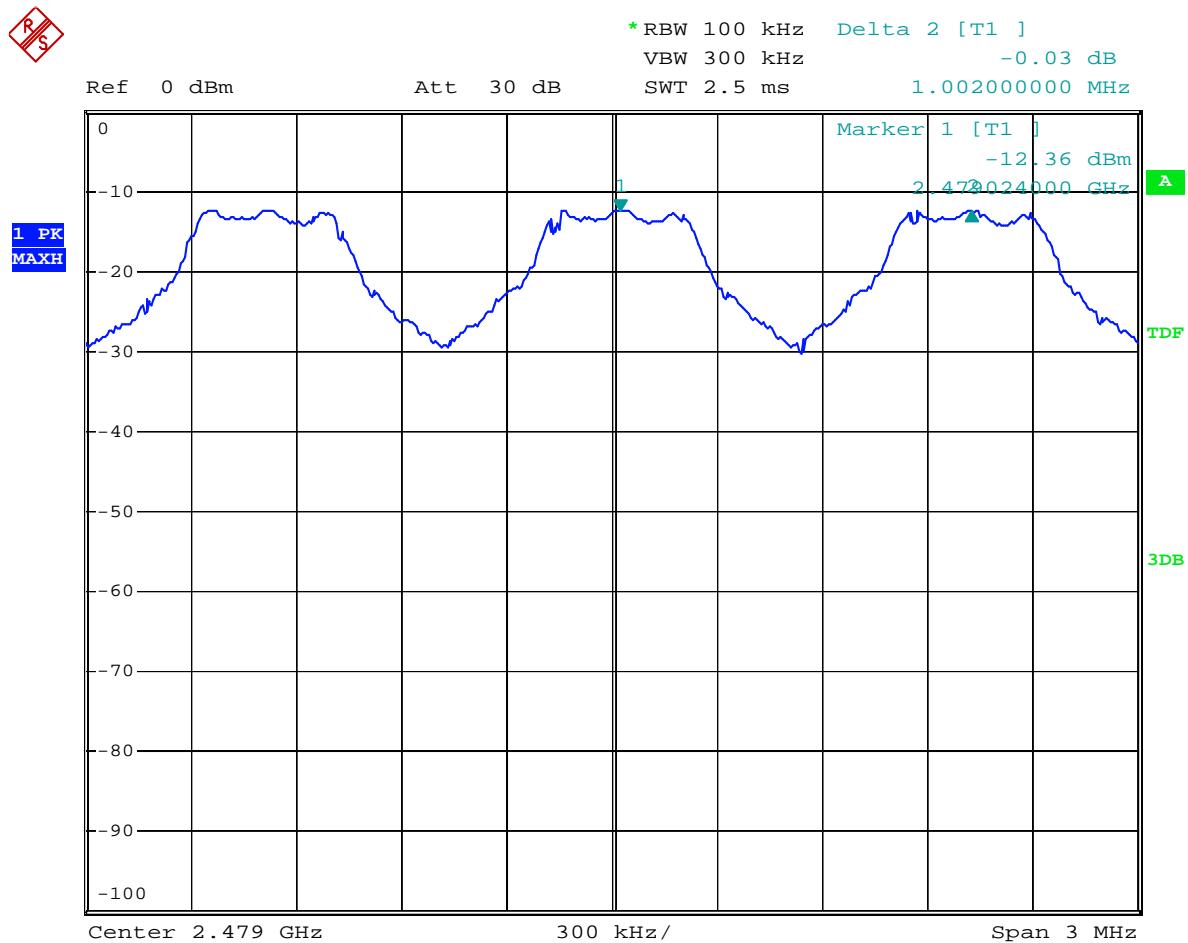
Date of Test:	Dec 14, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX	Test Engineer:	Ricky

Channel	Channel Frequency (MHz)	Channel separation (MHz)	Limit
Low	2402	1.002	0.852
Middle	2441	1.002	0.852
High	2480	1.002	0.858

The spectrum analyzer plots are attached as below.

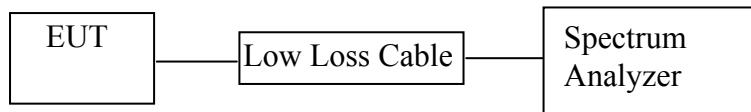






7. NUMBER OF HOPPING FREQUENCY TEST

7.1. Block Diagram of Test Setup



(EUT: 2.1 Speaker System With Subwoofer)

7.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

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.

7.3.1.2.1 Speaker System With Subwoofer (EUT)

Model Number : ER2809VI
 Serial Number : N/A
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd

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 (Hopping on) modes measure it.

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 the spectrum analyzer as Span=90MHz, RBW=100 kHz, VBW=300 kHz.

7.5.3. Max hold, view and count how many channel in the band.

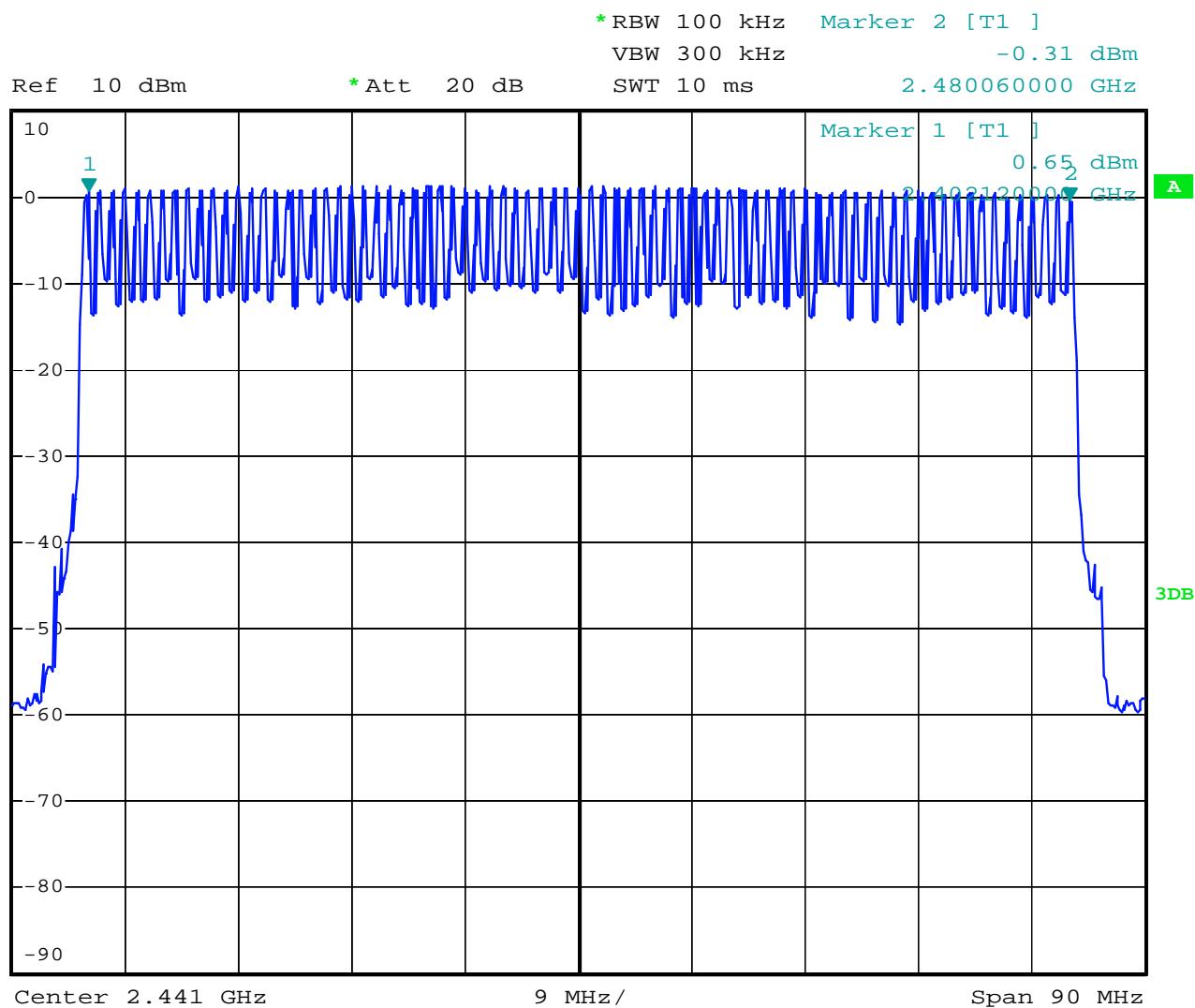
7.6. Test Result

PASS.

Date of Test:	<u>Dec 14, 2012</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.1 Speaker System With Subwoofer</u>	Humidity:	<u>50%</u>
Model No.:	<u>ER2809VI</u>	Power Supply:	<u>DC 6V</u>
Test Mode:	<u>Hopping</u>	Test Engineer:	<u>Ricky</u>

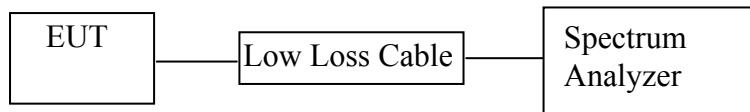
Total number of hopping channel	Measurement result (CH)	Limit (CH)
	79	>15

The spectrum analyzer plots are attached as below.



8. DWELL TIME TEST

8.1. Block Diagram of Test Setup



(EUT: 2.1 Speaker System With Subwoofer)

8.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

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.

8.3.1.2.1 Speaker System With Subwoofer (EUT)

Model Number : ER2809VI
 Serial Number : N/A
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd

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 (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

8.5. Test Procedure

- 8.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.
- 8.5.2. Set center frequency of spectrum analyzer = operating frequency.
- 8.5.3. Set the spectrum analyzer as RBW=100 kHz, VBW=300 kHz, Span=0Hz, Adjust Sweep=1s. Get the burst (in 1 sec.).
- 8.5.4. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=2ms. Get the pulse time.
- 8.5.5. Repeat above procedures until all frequency measured were complete.

8.6. Test Result

PASS.

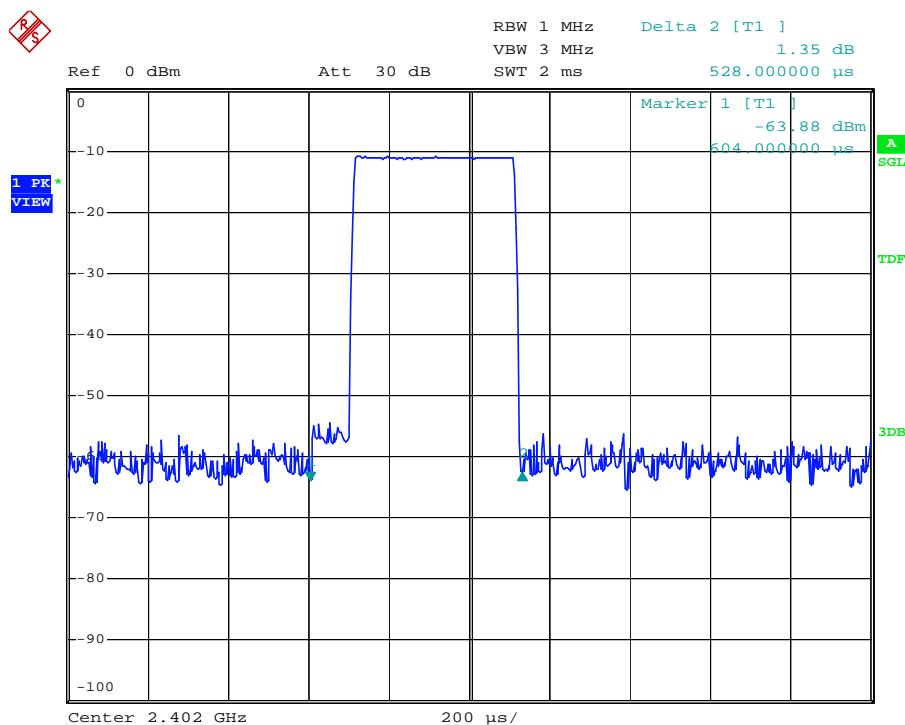
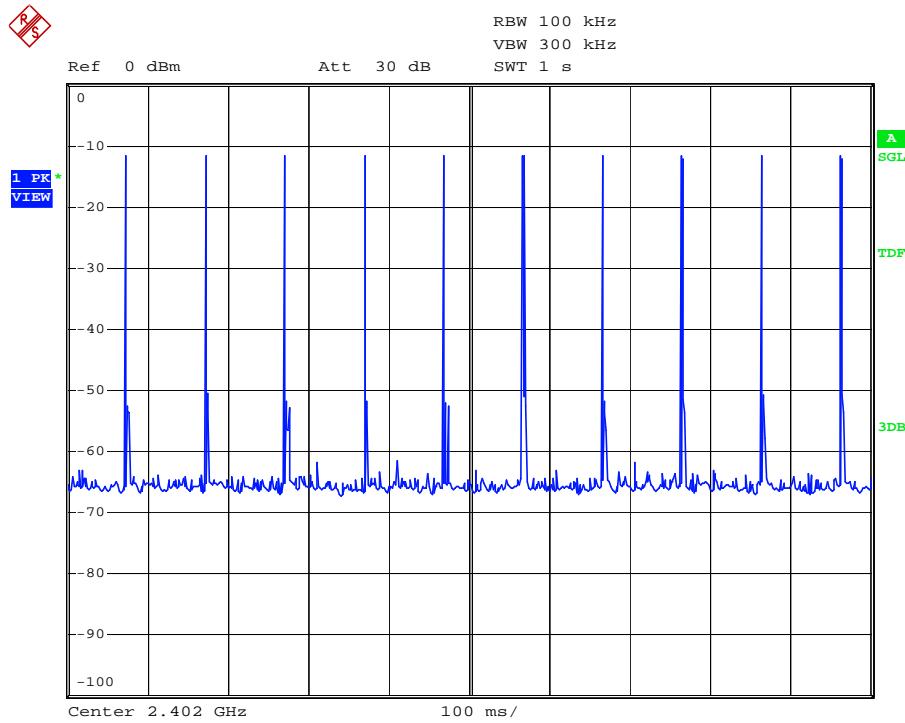
Date of Test:	Dec 14, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX	Test Engineer:	Ricky

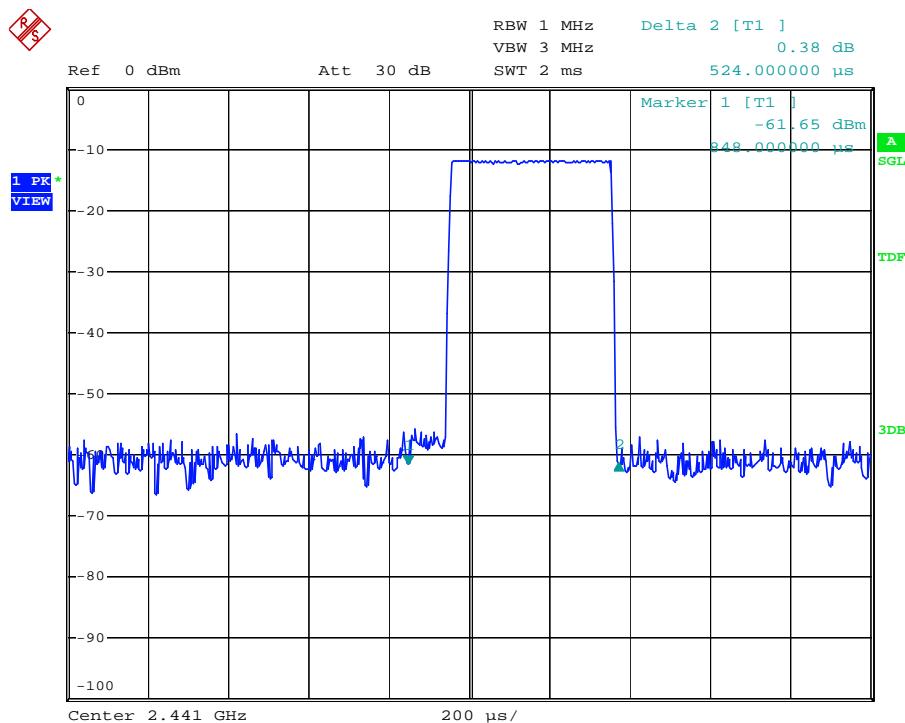
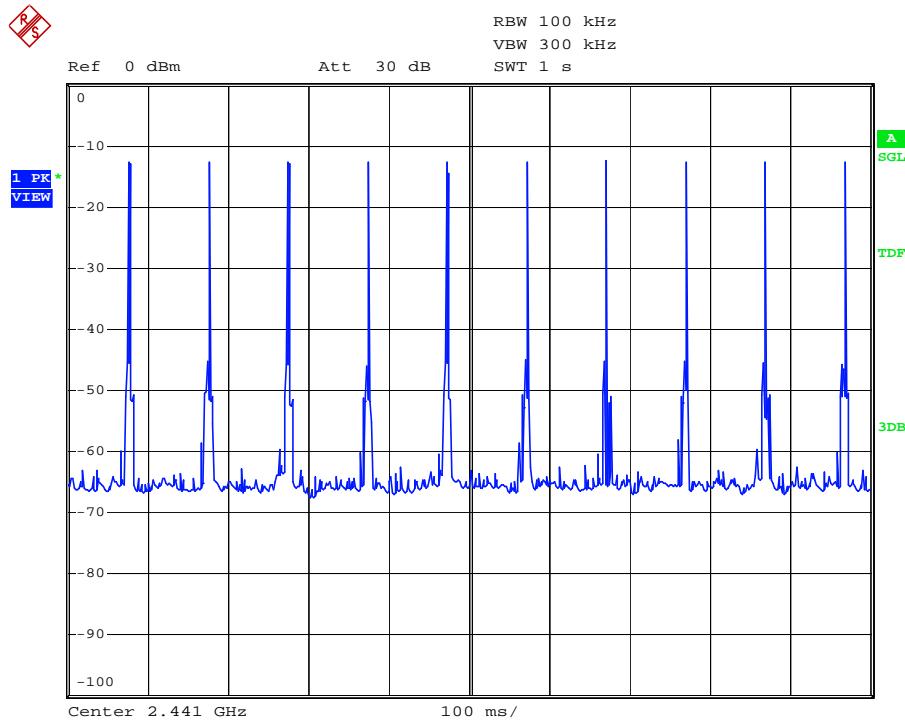
A period transmit time = $0.4 \times 79 = 31.6$

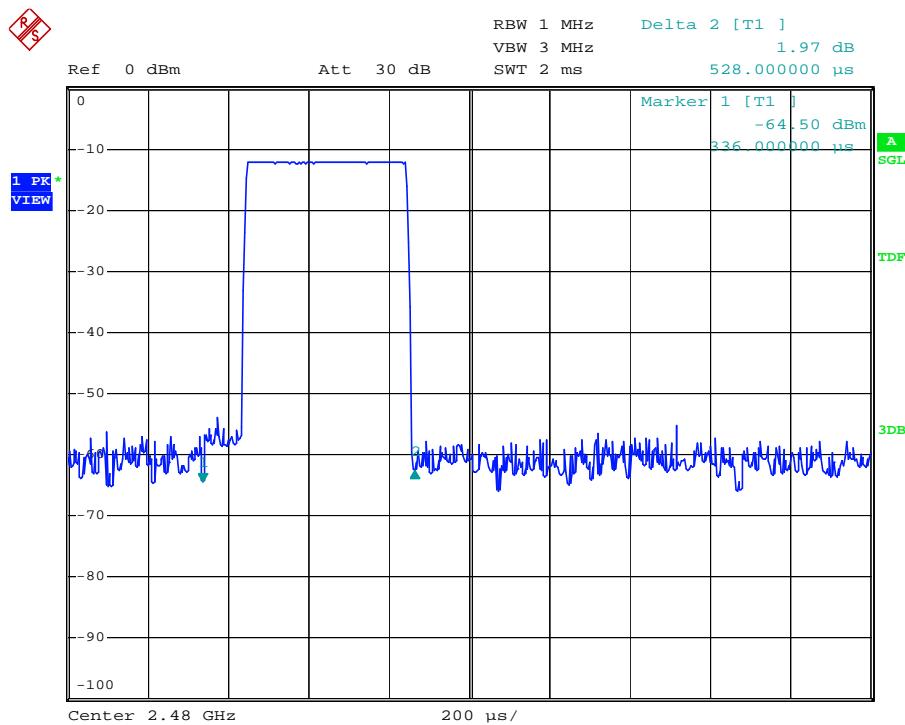
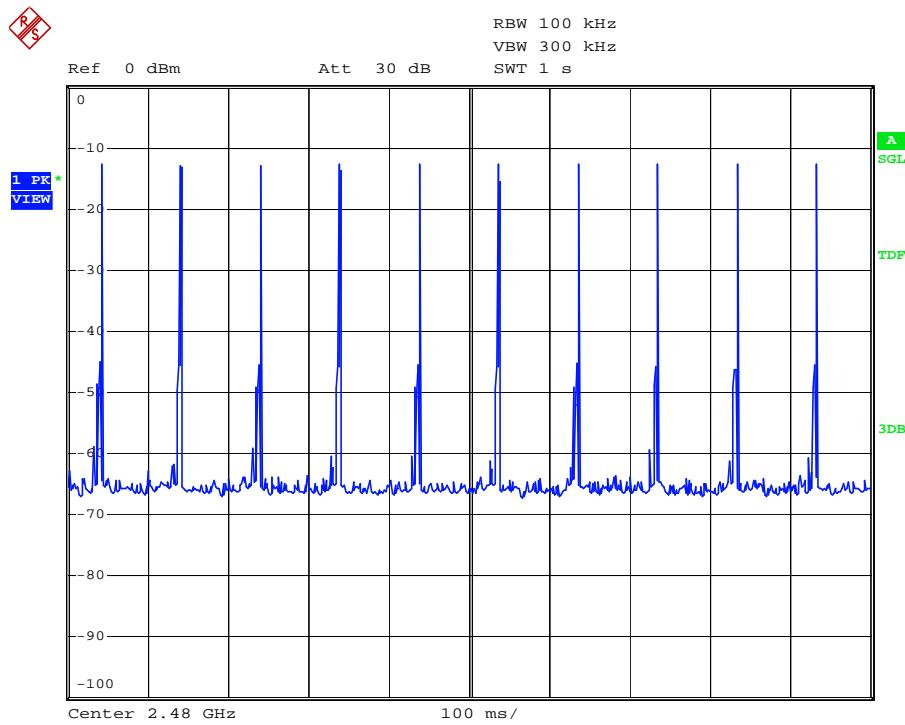
Dwell time = pulse time \times burst (in 1 sec.) \times 31.6

Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 1 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.528	10	166.85	400
Middle	2441	0.524	10	165.58	400
High	2480	0.528	10	166.85	400

The spectrum analyzer plots are attached as below.

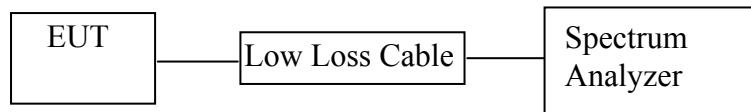






9. MAXIMUM PEAK OUTPUT POWER TEST

9.1. Block Diagram of Test Setup



(EUT: 2.1 Speaker System With Subwoofer)

9.2. The Requirement For Section 15.247(b)(1)

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

9.3. 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.

9.3.1.2.1 Speaker System With Subwoofer (EUT)

Model Number : ER2809VI
 Serial Number : N/A
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd

9.4. Operating Condition of EUT

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

9.4.2. Turn on the power of all equipment.

9.4.3. Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

9.5. Test Procedure

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

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

9.5.3. Measurement the maximum peak output power.

9.6. Test Result

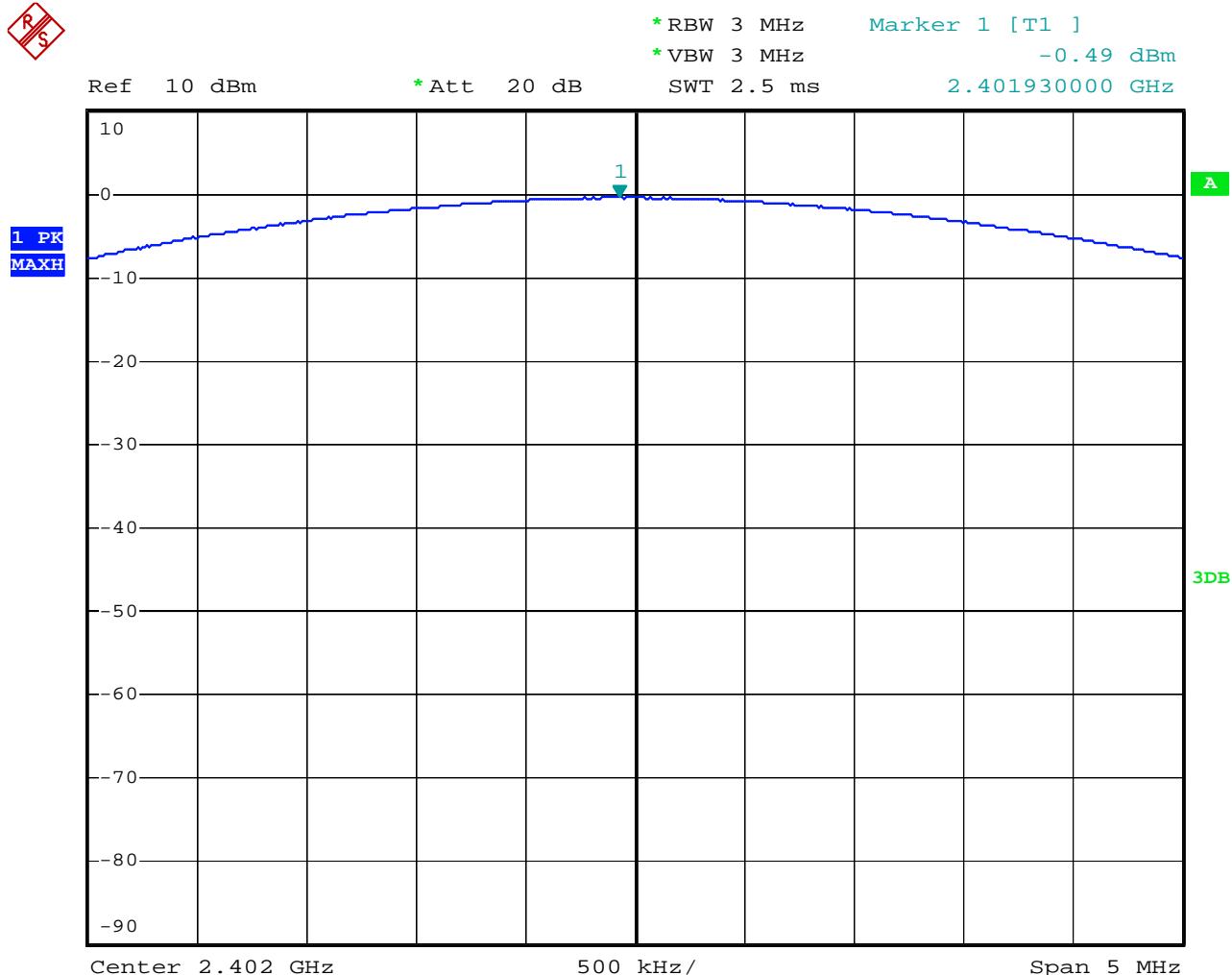
PASS.

Date of Test:	Dec 14, 2012	Temperature:	25°C
	2.1 Speaker System With		
EUT:	Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX	Test Engineer:	Ricky

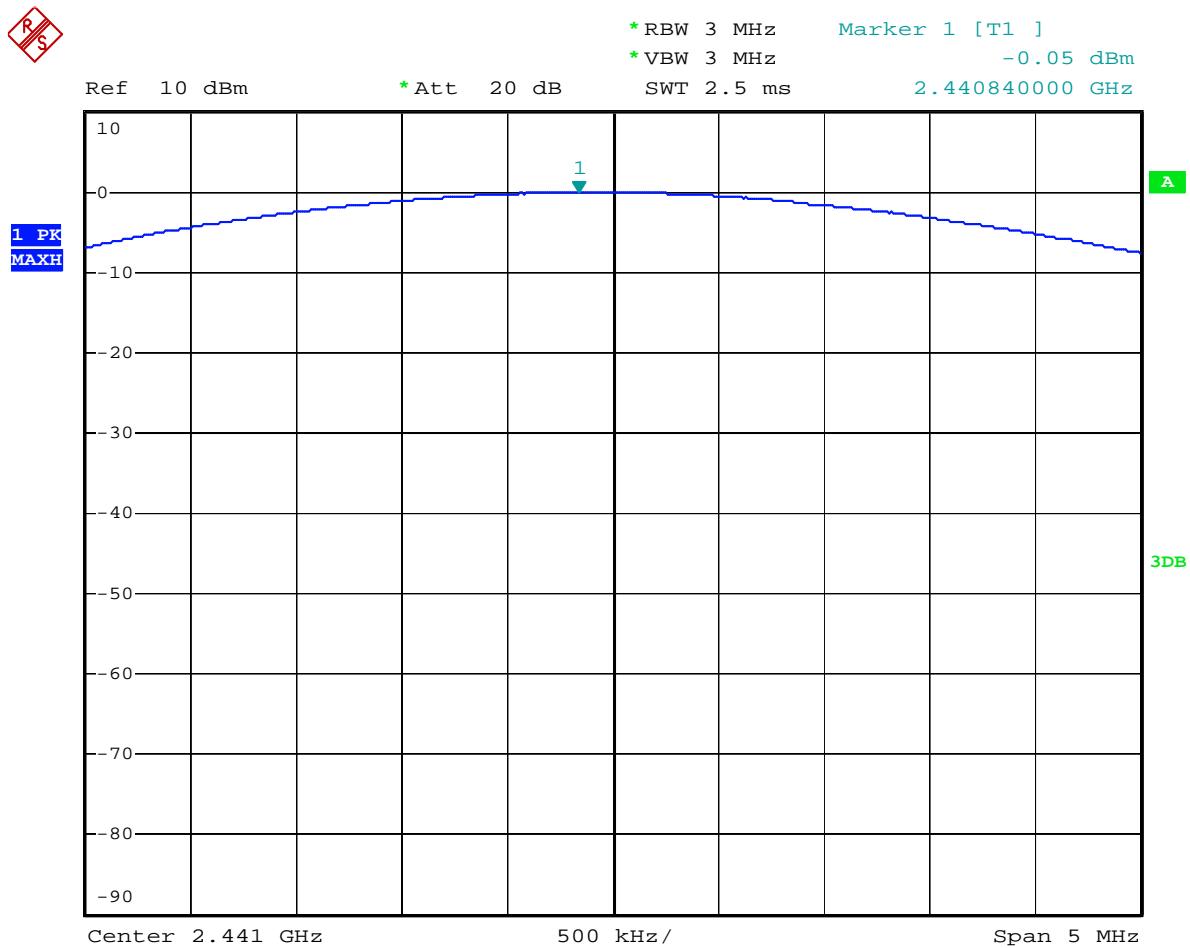
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-0.49	0.893	30 dBm / 1 W
Middle	2441	-0.05	0.989	30 dBm / 1 W
High	2480	-1.17	0.764	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

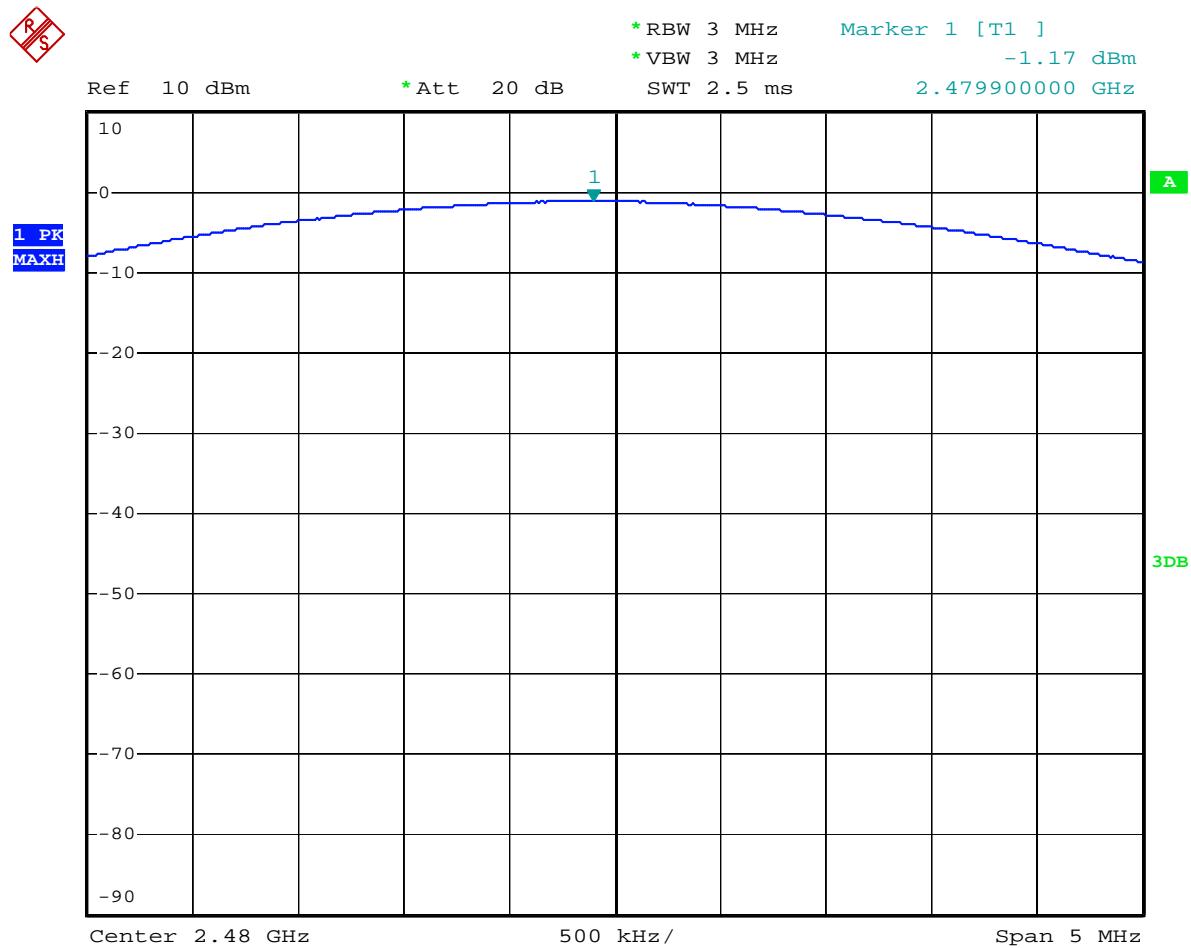
RS



Date: 24.MAR.2012 10:26:46



Date: 24.MAR.2012 10:28:02



10. RADIATED EMISSION TEST

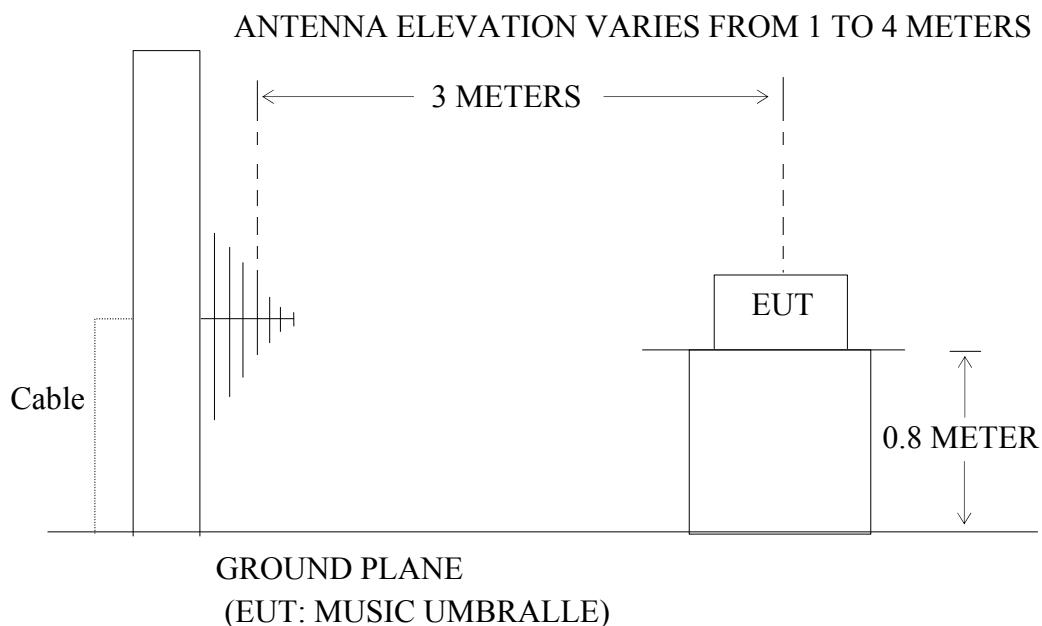
10.1. Block Diagram of Test Setup

10.1.1. Block diagram of connection between the EUT and simulators



(EUT: 2.1 Speaker System With Subwoofer)

10.1.2. Anechoic Chamber Test Setup Diagram



10.2. 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).

10.3. Restricted bands of operation

10.3.1. 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.

10.4. 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.

10.4.1.2.1 Speaker System With Subwoofer (EUT)

Model Number : ER2809VI
 Serial Number : N/A
 Manufacturer : Dongguan Earson Audio Technology Co., Ltd

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

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

The final measurement in band 9-90 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

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

Date of Test:	Dec 12, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX (2402MHz)	Test Engineer:	Ricky

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dB μ V/m)	Factor Corr. (dB)	Result	Limit	Margin	Polarization
			QP	QP	QP	
68.5038	14.76	19.32	34.08	40.00	-5.92	Vertical
293.3933	12.49	23.01	35.50	46.00	-10.50	Vertical
468.1650	13.13	26.10	39.23	46.00	-6.77	Vertical
221.5010	17.41	21.63	39.04	46.00	-6.96	Horizontal
444.1299	14.75	25.87	40.62	46.00	-5.38	Horizontal
698.8035	13.16	29.08	42.24	46.00	-3.76	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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

Note: 1.The emission emitted by the EUT is too low to be measured except the emission listed above.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by 2.4G Band Reject Filter in the attached plots.

Date of Test:	Dec 12, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 12V
Test Mode:	TX (2441MHz)	Test Engineer:	Ricky

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dB μ V/m)	Factor Corr. (dB)	Result	Limit	Margin	Polarization
			QP	QP	QP	
31.0728	10.93	24.97	35.90	40.00	-4.10	Vertical
69.4734	13.56	19.24	32.80	40.00	-7.20	Vertical
441.0199	13.86	25.85	39.71	40.00	-6.29	Vertical
31.1822	8.10	24.95	33.05	40.00	-6.95	Horizontal
250.4859	16.49	22.16	38.65	46.00	-7.35	Horizontal
364.8026	16.79	24.51	41.30	46.00	-4.70	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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

Note: 1. The emission emitted by the EUT is too low to be measured except the emission listed above.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by 2.4G Band Reject Filter in the attached plots.

Date of Test:	Dec 12, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX (2480MHz)	Test Engineer:	Ricky

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dB μ V/m)	Factor Corr. (dB)	Result	Limit	Margin	Polarization
			QP	QP	QP	
221.5010	18.74	21.63	40.37	46.00	-5.63	Vertical
363.5231	17.78	24.51	42.29	46.00	-3.71	Vertical
442.5722	16.52	25.86	42.38	46.00	-3.62	Vertical
216.1197	17.08	21.47	35.88	46.00	-7.45	Horizontal
294.4260	16.60	23.04	39.64	46.00	-6.36	Horizontal
584.1611	11.87	28.13	40.00	46.00	-6.00	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

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

Note: 1. The emission emitted by the EUT is too low to be measured except the emission listed above.

2. *: Denotes restricted band of operation.

3. The fundamental radiated emissions were reduced by 2.4G Band Reject Filter in the attached plots.

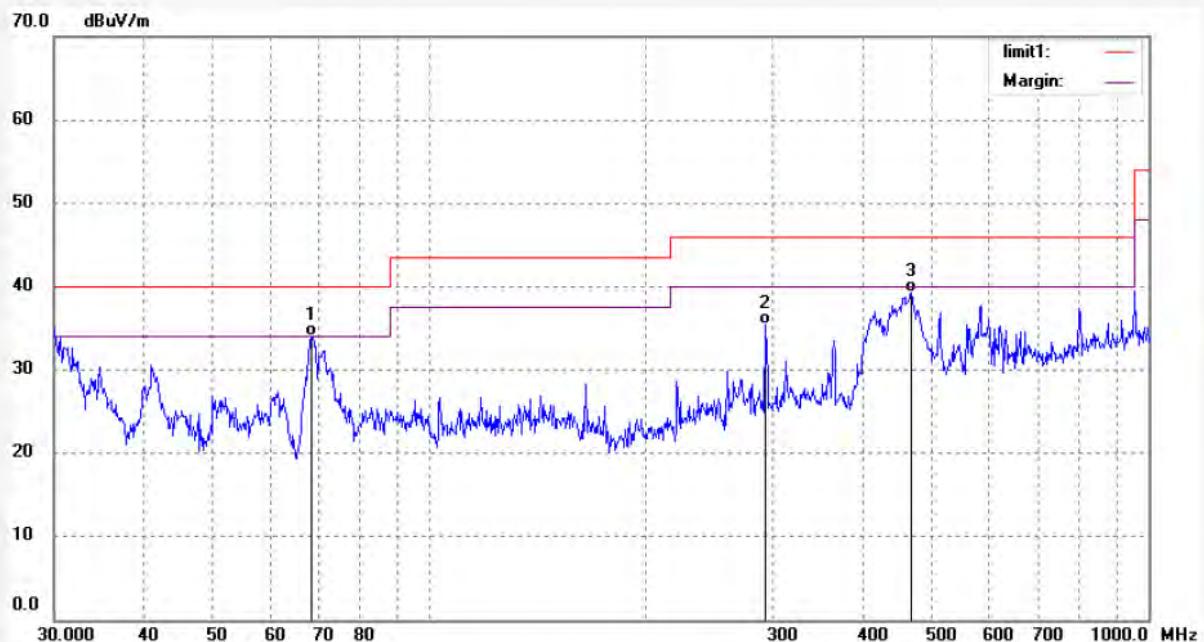

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Job No.:	RUCKY #504	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp.(C)/Hum.(%)	26 C / 60 %	Time:	22:47:49
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2402MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	68.5038	14.76	19.32	34.08	40.00	-5.92	QP			
2	293.3933	12.49	23.01	35.50	46.00	-10.50	QP			
3	468.1650	13.13	26.10	39.23	46.00	-6.77	QP			



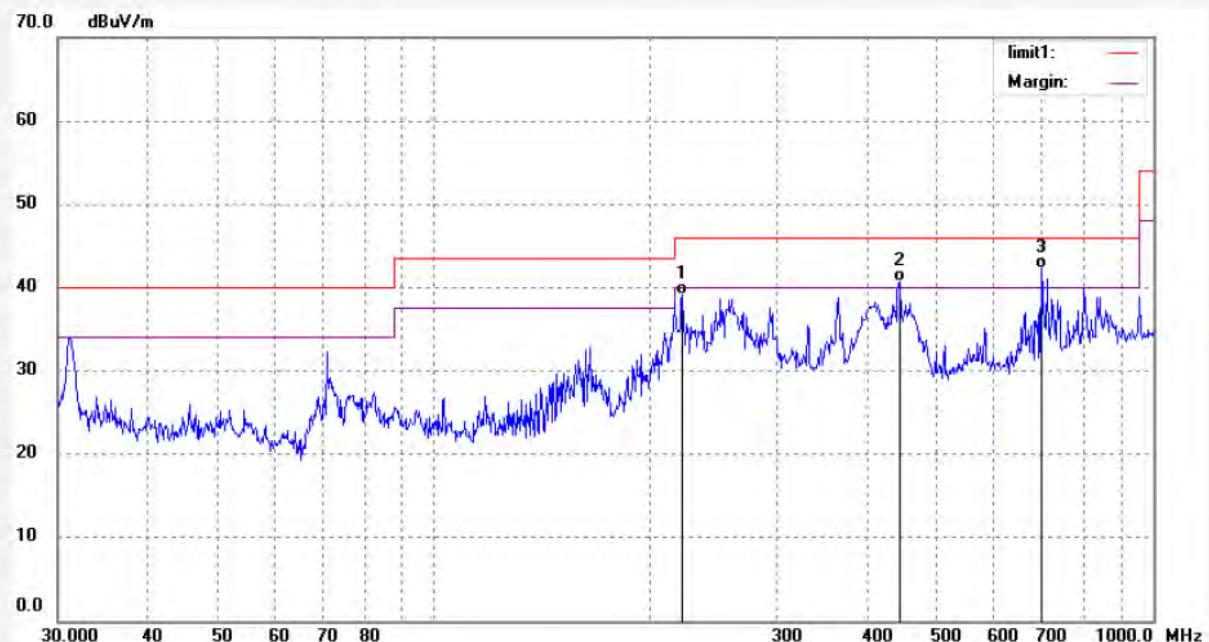
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Job No.:	RUCKY #503	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp. (C)/Hum. (%)	26 C / 60 %	Time:	22:44:32
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2402MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	221.5010	17.41	21.63	39.04	46.00	-6.96	QP			
2	444.1299	14.75	25.87	40.62	46.00	-5.38	QP			
3	698.8035	13.16	29.08	42.24	46.00	-3.76	QP			

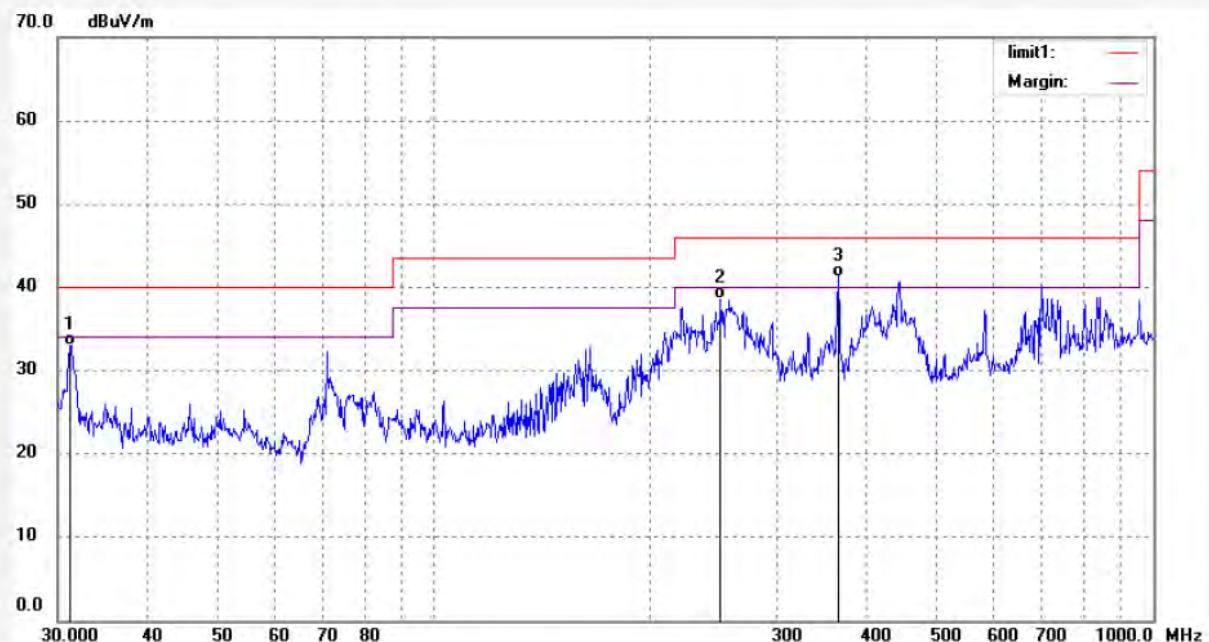

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Job No.:	RUCKY #502	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp. (C)/Hum. (%)	26 C / 60 %	Time:	22:42:21
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2441MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.1822	8.10	24.95	33.05	40.00	-6.95	QP			
2	250.4859	16.49	22.16	38.65	46.00	-7.35	QP			
3	364.8026	16.79	24.51	41.30	46.00	-4.70	QP			



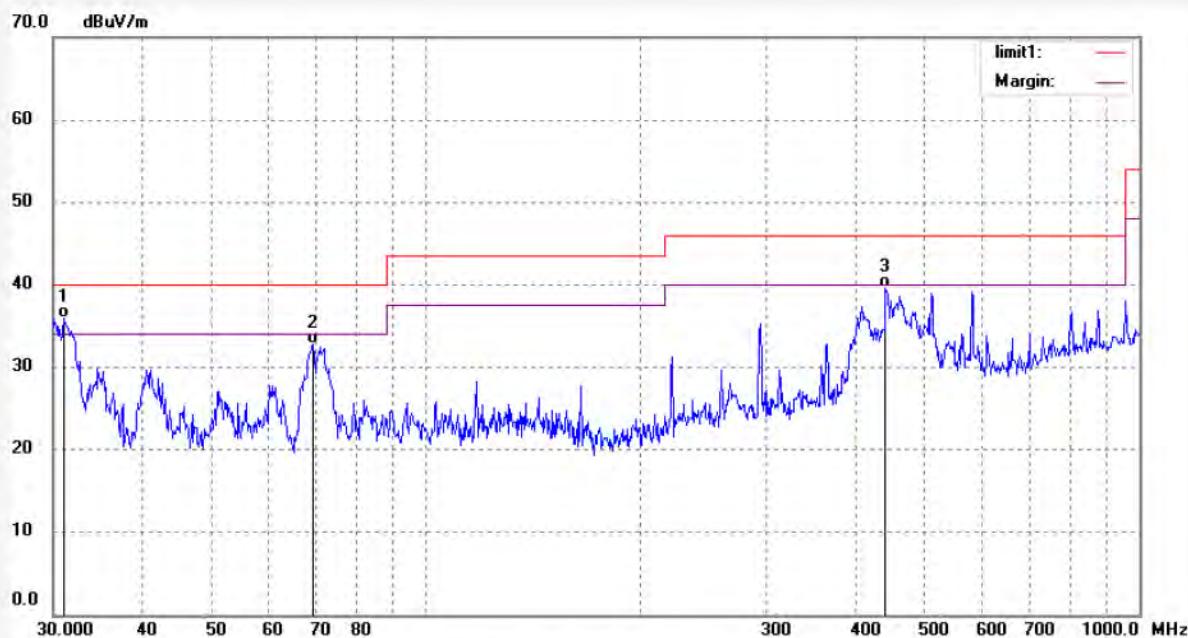
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Job No.:	RUCKY #501	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp. (C)/Hum.(%)	26 C / 60 %	Time:	22:40:27
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2441MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	31.0728	10.93	24.97	35.90	40.00	-4.10	QP			
2	69.4734	13.56	19.24	32.80	40.00	-7.20	QP			
3	441.0199	13.86	25.85	39.71	46.00	-6.29	QP			

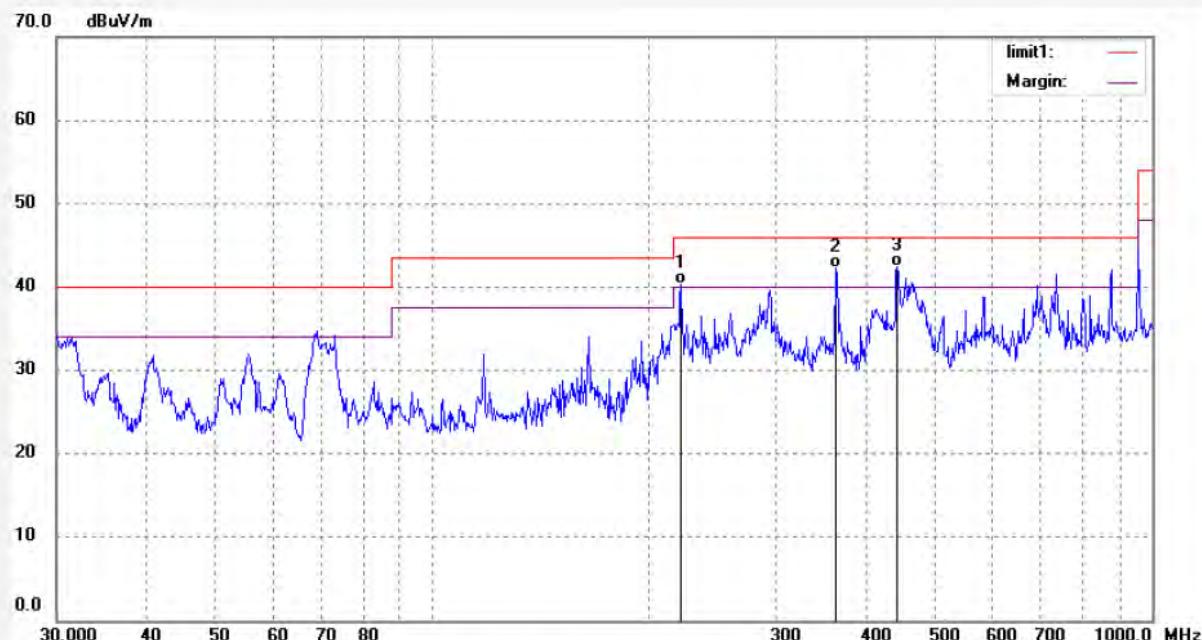

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Job No.: RUCKY #500	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2012/12/12
Temp. (C)/Hum.(%) 26 C / 60 %	Time: 22:39:08
EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature: Ricky
Mode: TX 2480MHz	Distance: 3m
Model: ER2809VI	
Manufacturer: Earson	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	221.5010	18.74	21.63	40.37	46.00	-5.63	QP			
2	363.5231	17.78	24.51	42.29	46.00	-3.71	QP			
3	442.5722	16.52	25.86	42.38	46.00	-3.62	QP			


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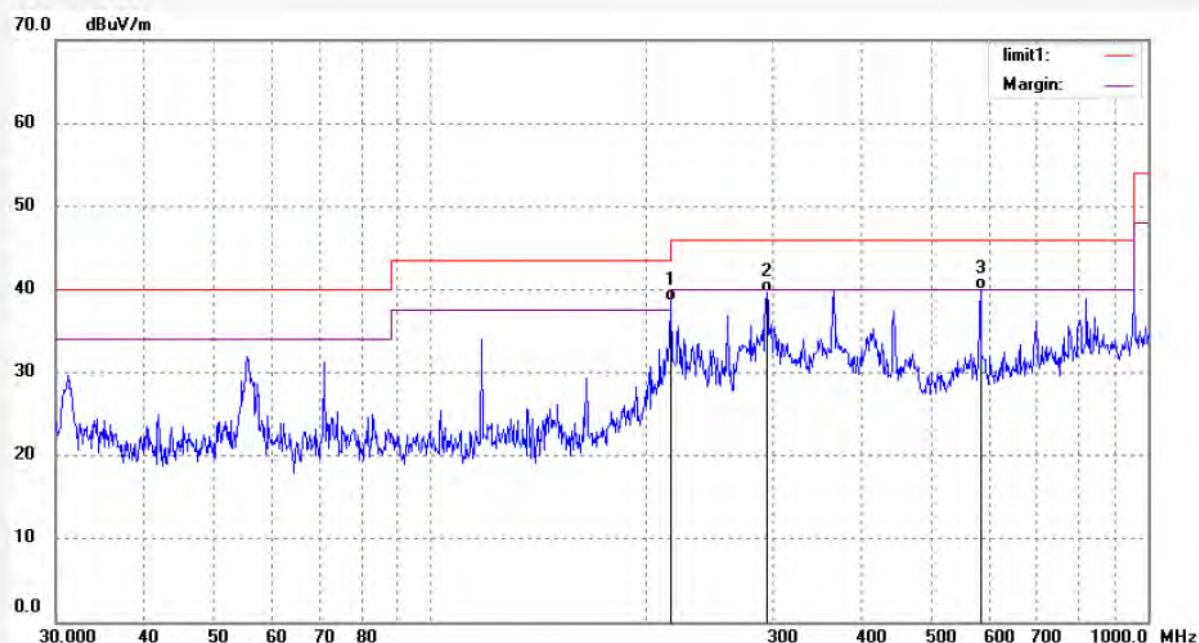
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Job No.: RUCKY #499
 Standard: FCC Class B 3M Radiated
 Test item: Radiation Test
 Temp. (C)/Hum.(%) 26 C / 60 %
 EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER
 Mode: TX 2480MHz
 Model: ER2809VI
 Manufacturer: Earson

Polarization: Horizontal
 Power Source: AC 120V/60Hz
 Date: 2012/12/12
 Time: 22:36:34
 Engineer Signature: Ricky
 Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	216.1197	17.08	21.47	38.55	46.00	-7.45	QP			
2	294.4260	16.60	23.04	39.64	46.00	-6.36	QP			
3	584.1611	11.87	28.13	40.00	46.00	-6.00	QP			


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Job No.:	RUCKY #488		Polarization:	Vertical						
Standard:	FCC PK		Power Source:	AC 120V/60Hz						
Test item:	Radiation Test		Date:	2012/12/12						
Temp. (C)/Hum.(%)	26 C / 60 %		Time:	21:54:24						
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER		Engineer Signature:	Ricky						
Mode:	TX 2402MHz		Distance:	3m						
Model:	ER2809VI									
Manufacturer:	Earson									
Note:										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark



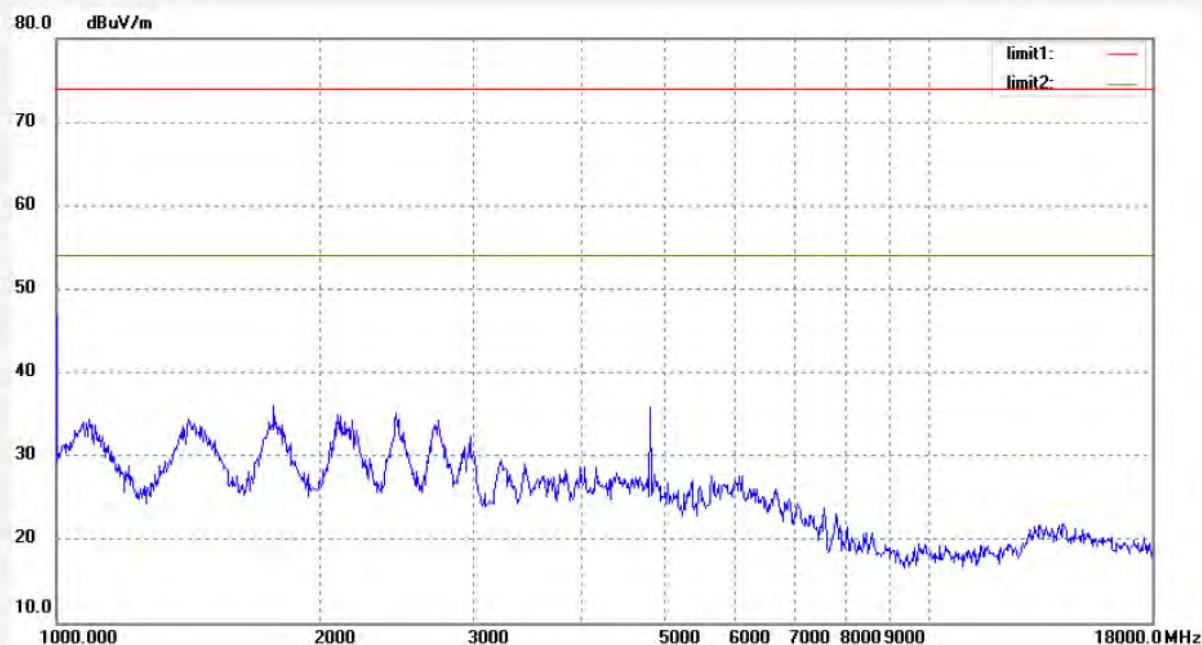
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Job No.:	RUCKY #489	Polarization:	Horizontal
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp.(C)/Hum.(%)	26 C / 60 %	Time:	22:00:17
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2402MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



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

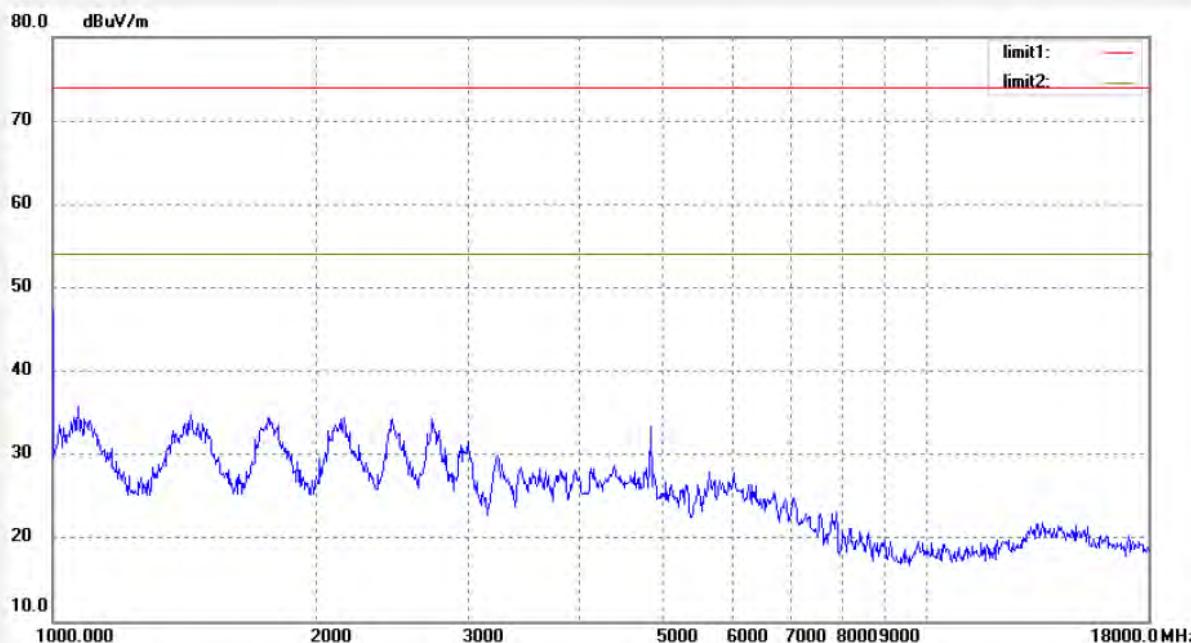

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Job No.:	RUCKY #490	Polarization:	Horizontal
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp.(C)/Hum.(%)	26 C / 60 %	Time:	22:05:13
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2441MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



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

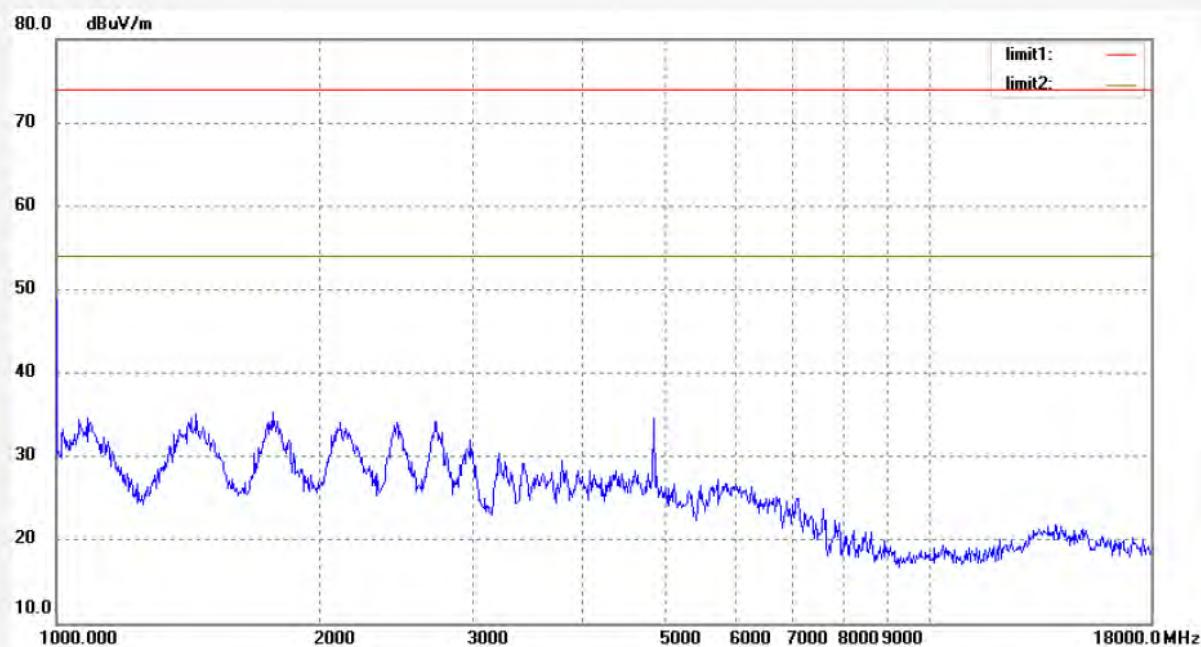

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Job No.: RUCKY #491	Polarization: Vertical
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2012/12/12
Temp. (C)/Hum.(%) 26 C / 60 %	Time: 22:07:26
EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature: Ricky
Mode: TX 2441MHz	Distance: 3m
Model: ER2809VI	
Manufacturer: Earson	

Note:



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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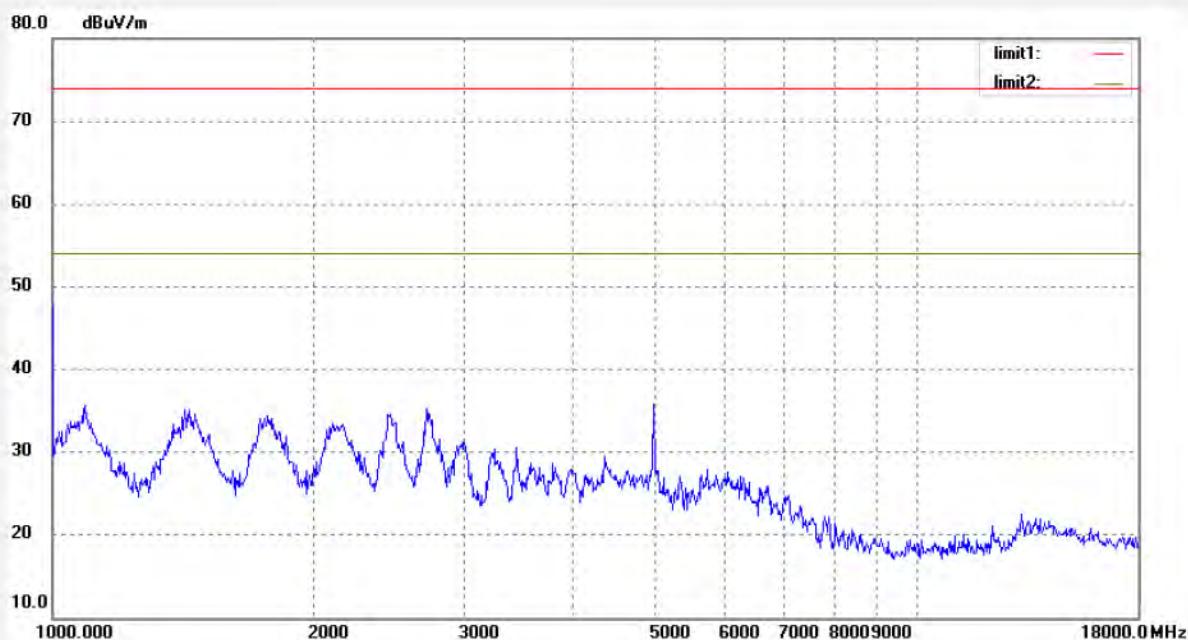

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Job No.:	RUCKY #492	Polarization:	Vertical
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp.(C)	Hum.(%) 26 C / 60 %	Time:	22:09:56
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2480MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



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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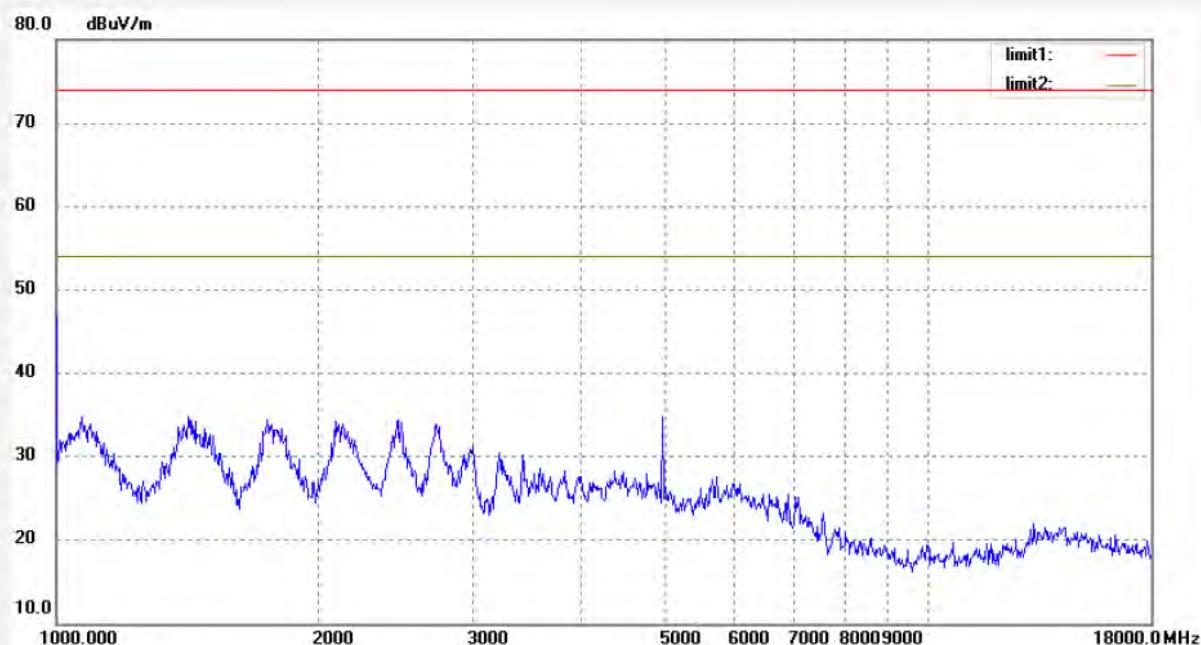
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Site: 2# Chamber
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Job No.: RUCKY #493	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2012/12/12
Temp. (C)/Hum.(%) 26 C / 60 %	Time: 22:12:14
EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature: Ricky
Mode: TX 2480MHz	Distance: 3m
Model: ER2809VI	
Manufacturer: Earson	

Note:



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.

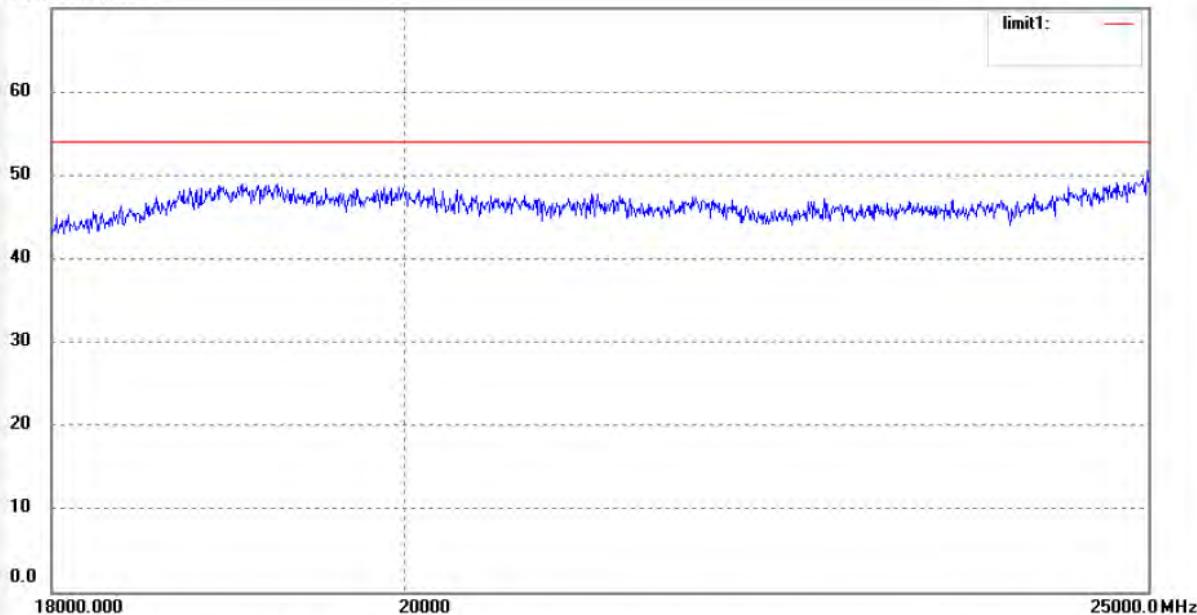
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 Site: 966 chamber
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Job No.:	Rucky #494	Polarization:	Vertical
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/13
Temp.(C)/Hum.(%)	25 C / 50 %	Time:	11:31:46
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2402MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:

70.0 dBuV/m



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

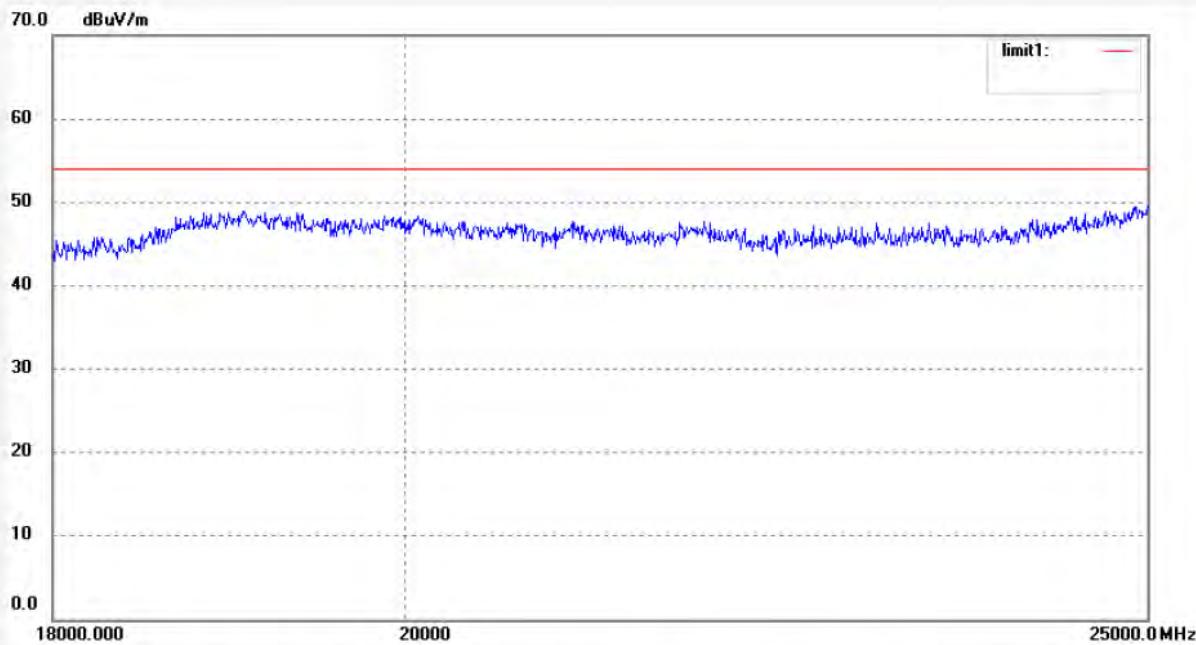

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 Site: 966 chamber
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 Fax:+86-0755-26503396

Job No.:	Rucky #495	Polarization:	Horizontal
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/13
Temp.(C)/Hum.(%)	25 C / 50 %	Time:	11:27:08
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2402MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



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

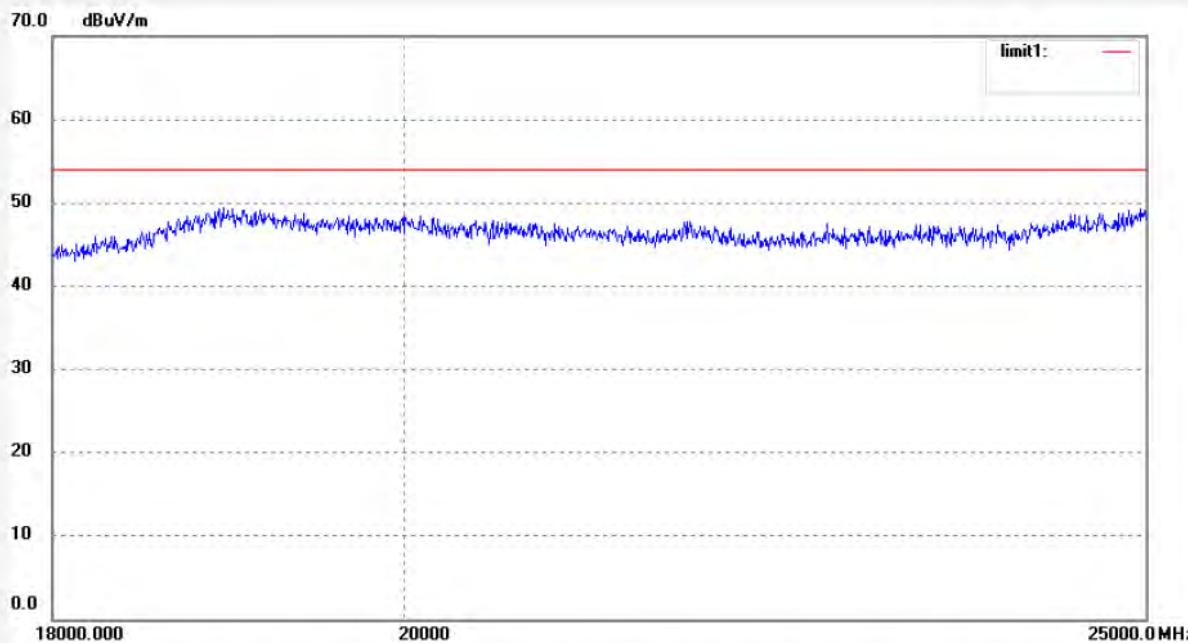

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Job No.:	Rucky #496	Polarization:	Horizontal
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/13
Temp.(C)/Hum.(%)	25 C / 50 %	Time:	11:21:31
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2441MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:



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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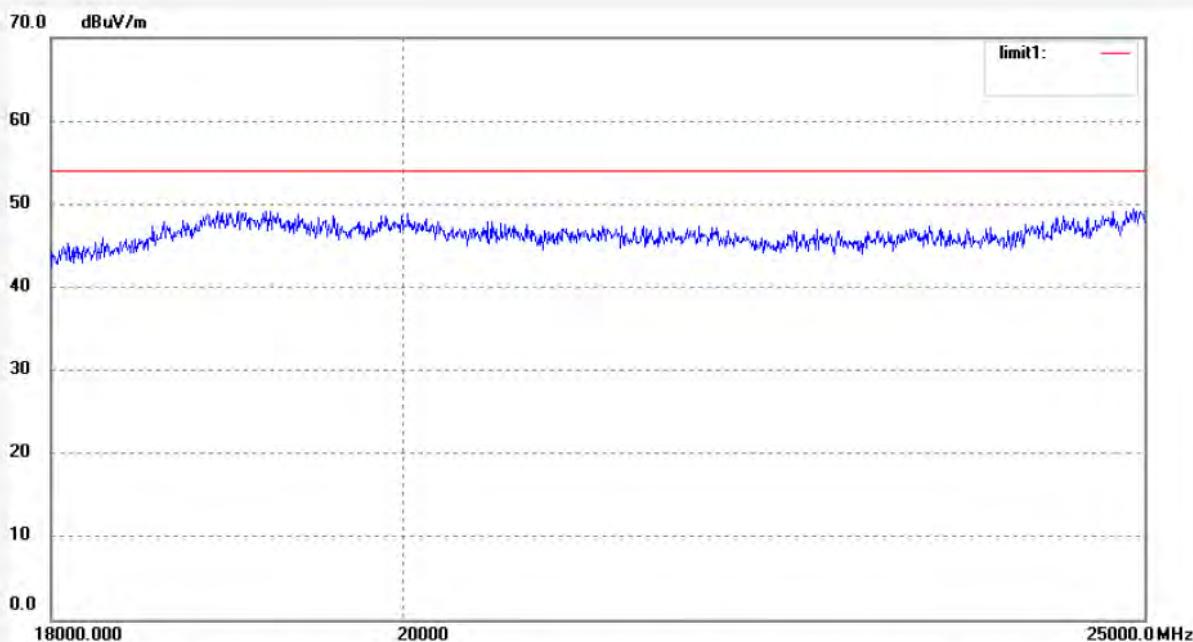
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 Tel:+86-0755-26503290
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Job No.: Rucky #497
 Standard: FCC PK
 Test item: Radiation Test
 Temp.(C)/Hum.(%) 25 C / 50 %
 EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER
 Mode: TX 2441MHz
 Model: ER2809VI
 Manufacturer: Earson

Polarization: Vertical
 Power Source: AC 120V/60Hz
 Date: 2012/12/13
 Time: 11:18:51
 Engineer Signature: Ricky
 Distance: 3m

Note:



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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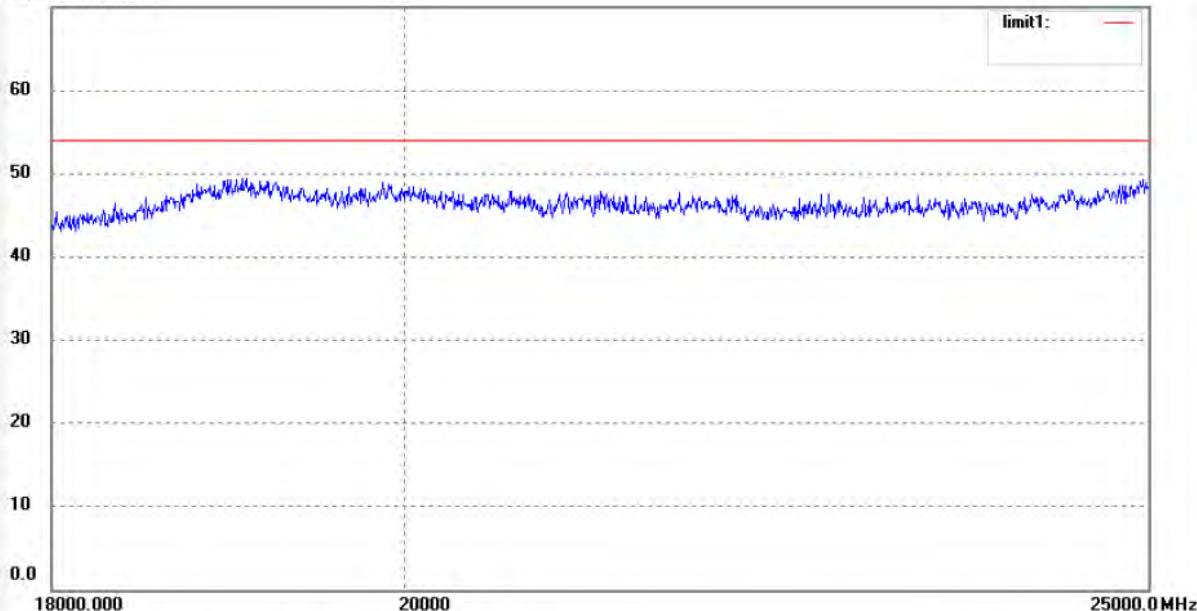
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Job No.:	Rucky #498	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/13
Temp.(C)/Hum.(%)	25 C / 50 %	Time:	11:15:09
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2480MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		

Note:

70.0 dBuV/m



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


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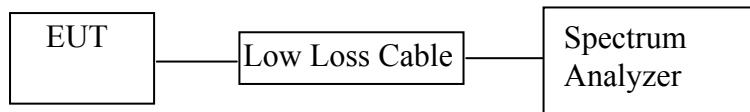
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 Site: 966 chamber
 Tel:+86-0755-26503290
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Job No.:	Ricky #499	Polarization:	Horizontal							
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz							
Test item:	Radiation Test	Date:	2012/12/13							
Temp.(C)/Hum.(%)	25 C / 50 %	Time:	11:12:35							
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky							
Mode:	TX 2480MHz	Distance:	3m							
Model:	ER2809VI									
Manufacturer:	Earson									
Note:										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark

11. BAND EDGE COMPLIANCE TEST

11.1. Block Diagram of Test Setup



(EUT: 2.1 Speaker System With Subwoofer)

11.2. 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).

11.3. 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.

11.3.1.2.1 Speaker System With Subwoofer (EUT)

Model Number	:	ER2809VI
Serial Number	:	N/A
Manufacturer	:	Dongguan Earson Audio Technology Co., Ltd

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 TX (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

11.5.Test Procedure

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

11.5.2.Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz with convenient frequency span including 100 kHz bandwidth from band edge.

11.5.3.The band edges was measured and recorded.

11.6. Test Result

Pass

Date of Test:	Dec 14, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX 2402MHz	Test Engineer:	Ricky

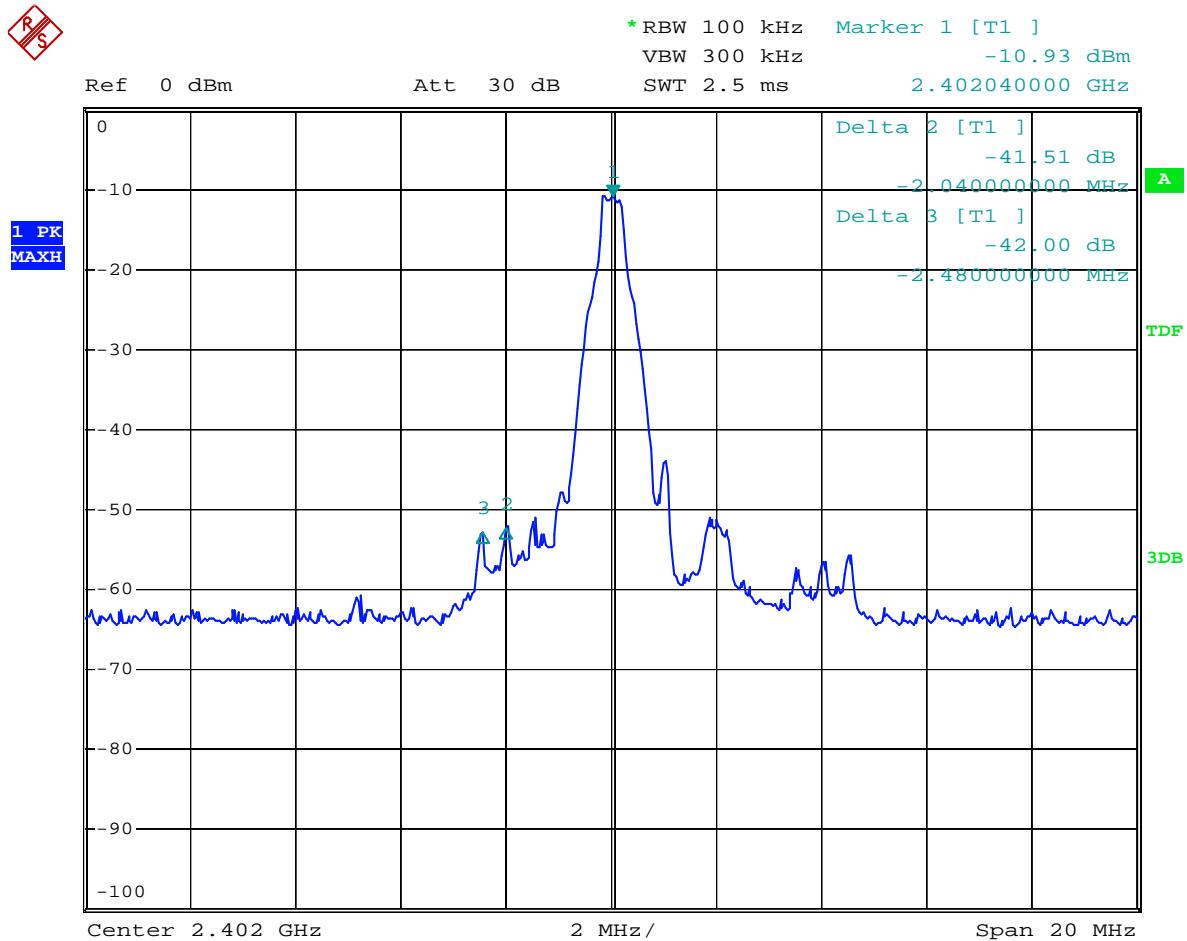
Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2400.000	41.51	> 20dBc
2399.560	42.00	> 20dBc

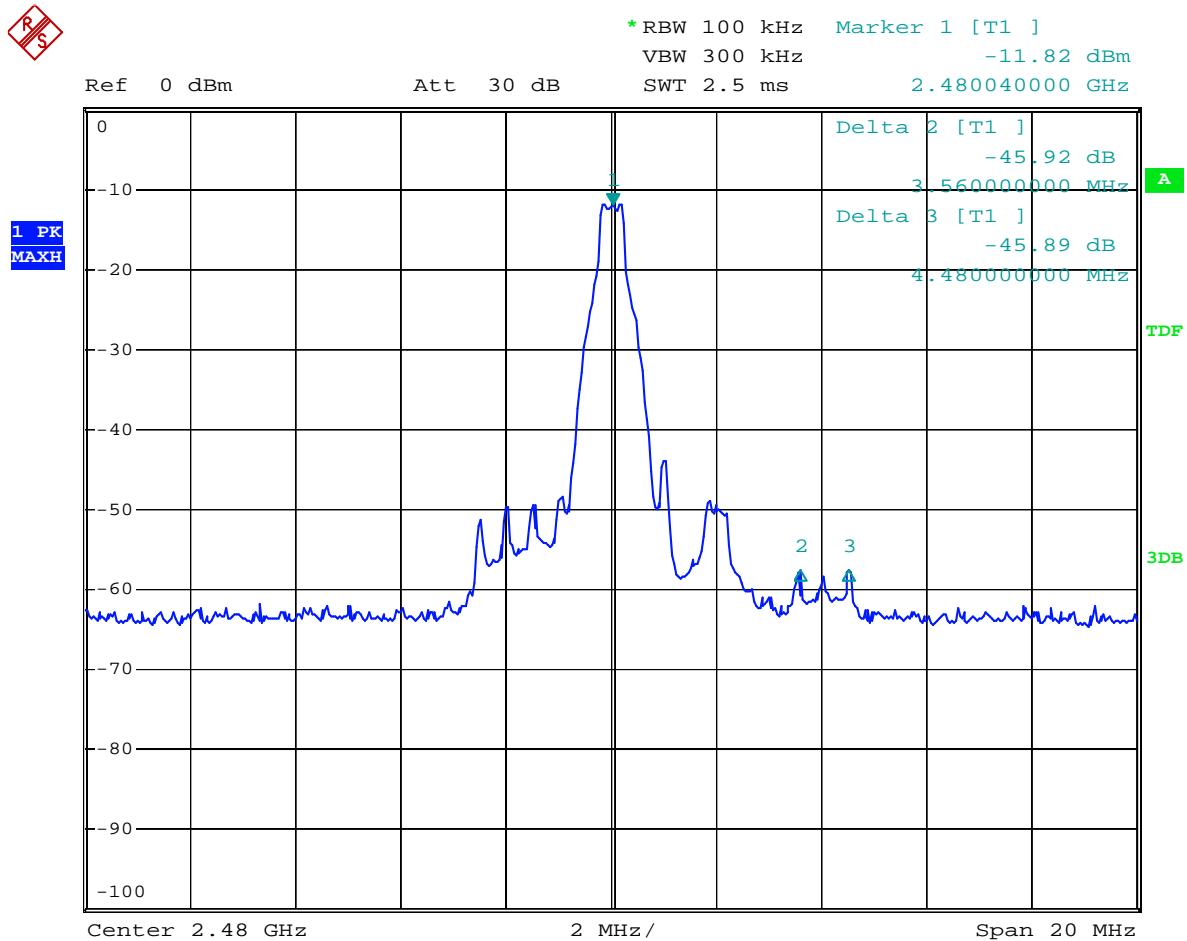
Date of Test:	Dec 14, 2012	Temperature:	25°C
EUT:	ER2809VI	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 6V
Test Mode:	TX 2480MHz	Test Engineer:	Ricky

Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2483.600	45.92	> 20dBc
2484.520	45.89	> 20dBc



Date: 29.NOV.2008 10:05:07



Date: 29.NOV.2008 10:01:53

Radiated Band Edge Result

Date of Test:	Dec 12, 2012	Temperature:	25°C
EUT:	2.1 Speaker System With Subwoofer	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 3V
Test Mode:	TX (2402MHz)	Test Engineer:	Ricky

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	
2400.000	55.21	58.01	-7.46	47.75	50.55	54.00	74.00	-6.25	-23.45	Vertical
2400.000	56.45	58.65	-7.46	48.99	51.19	54.00	74.00	-5.01	-22.81	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:	Dec 12, 2012	Temperature:	25°C
EUT:	MUSIC UMBRELLS	Humidity:	50%
Model No.:	ER2809VI	Power Supply:	DC 3V
Test Mode:	TX (2480MHz)	Test Engineer:	Ricky

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	38.98	41.23	-7.37	31.61	33.86	54.00	74.00	-22.39	-40.14	Vertical
2483.500	36.75	39.25	-7.37	29.38	31.88	54.00	74.00	-24.62	-42.12	Horizontal

Note:

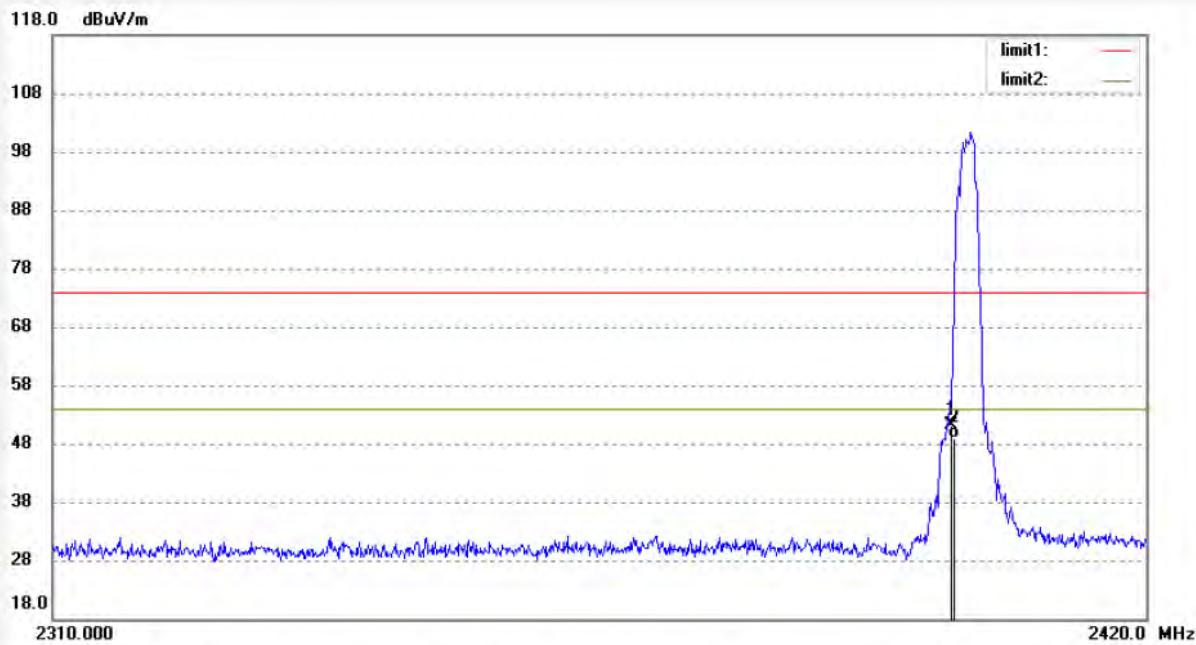
1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is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


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Job No.: RUCKY #507	Polarization: Horizontal
Standard: FCC PK	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 2012/12/12
Temp.(C)/Hum.(%) 23 C / 49 %	Time: 22:22:58
EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature: Ricky
Mode: TX 2402MHz	Distance: 3m
Model: ER2809VI	
Manufacturer: Earson	
Note: Report No:ATE20122289	



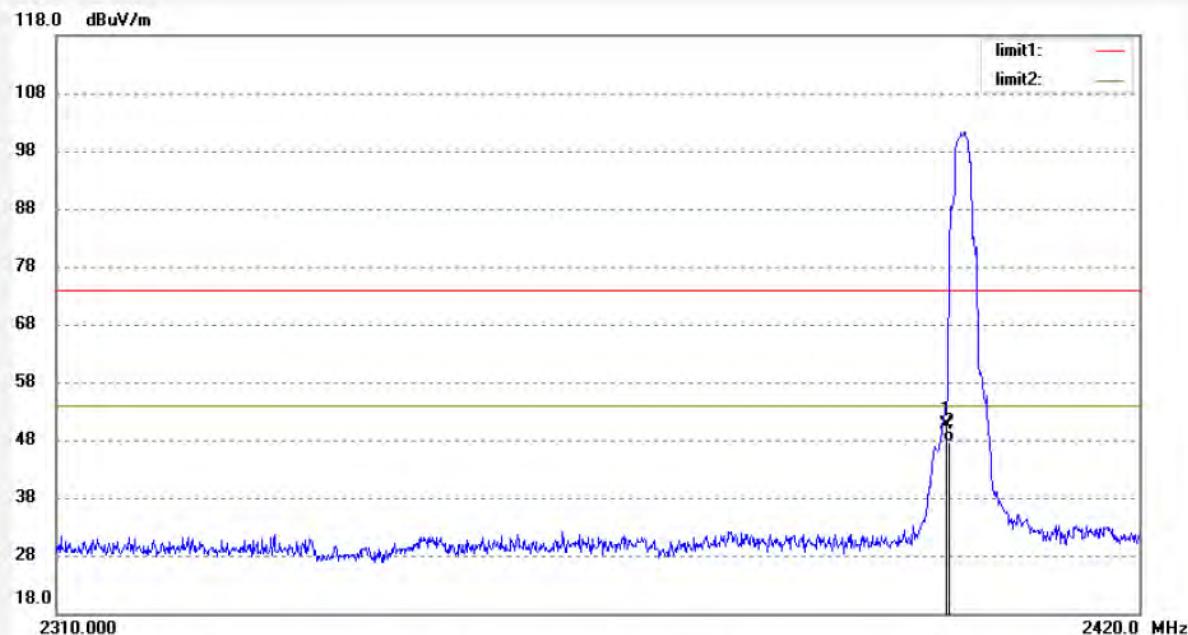
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2400.000	58.65	-7.46	51.19	74.00	-22.81	peak			
2	2400.000	56.45	-7.46	48.99	54.00	-5.01	AVG			


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Job No.:	RUCKY #508	Polarization:	Vertical
Standard:	FCC PK	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	2012/12/12
Temp.(C) / Hum.(%)	23 C / 49 %	Time:	22:28:24
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky
Mode:	TX 2402MHz	Distance:	3m
Model:	ER2809VI		
Manufacturer:	Earson		
Note: Report No:ATE20122289			



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2400.000	58.01	-7.46	50.55	74.00	-23.45	peak			
2	2400.000	55.21	-7.46	47.75	54.00	-6.25	AVG			


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Job No.:	RUCKY #506	Polarization:	Vertical							
Standard:	FCC PK	Power Source:	AC 120V/60Hz							
Test item:	Radiation Test	Date:	2012/12/12							
Temp. (C)/Hum.(%)	23 C / 49 %	Time:	22:19:19							
EUT:	2.1 SPEAKER SYSTEM WITH SUBWOOFER	Engineer Signature:	Ricky							
Mode:	TX 2480MHz	Distance:	3m							
Model:	ER2809VI									
Manufacturer:	Earson									
Note:										
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	41.23	-7.37	33.86	74.00	-40.14	peak			
2	2483.500	38.98	-7.37	31.61	54.00	-22.39	Avg			


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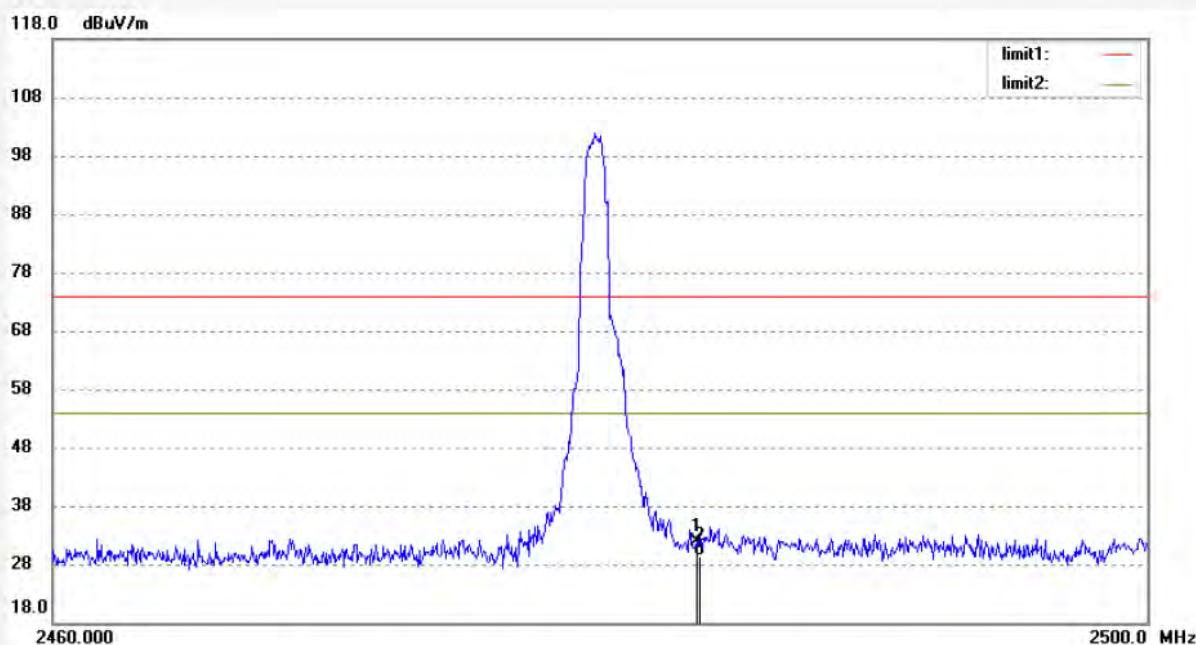
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Job No.: RUCKY #505
 Standard: FCC PK
 Test item: Radiation Test
 Temp. (C)/Hum.(%) 23 C / 49 %
 EUT: 2.1 SPEAKER SYSTEM WITH SUBWOOFER
 Mode: TX 2480MHz
 Model: ER2809VI
 Manufacturer: Earson

Polarization: Horizontal
 Power Source: AC 120V/60Hz
 Date: 2012/12/12
 Time: 22:16:55
 Engineer Signature: Ricky
 Distance: 3m

Note:



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	39.25	-7.37	31.88	74.00	-42.12	peak			
2	2483.500	36.75	-7.37	29.38	54.00	-24.62	AVG			

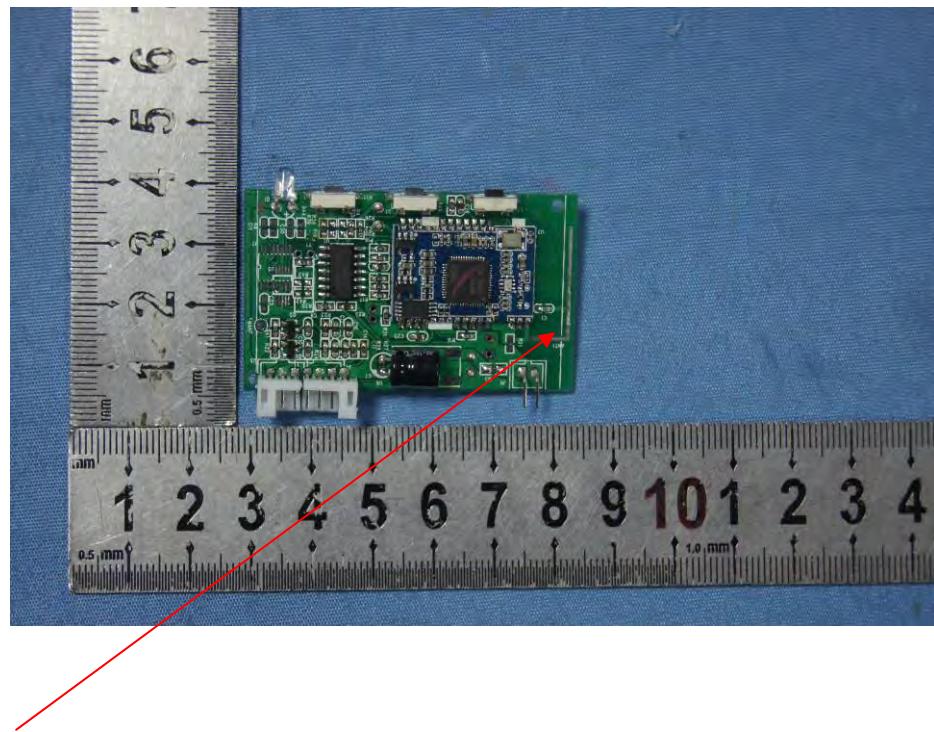
12. ANTENNA REQUIREMENT

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

The antenna is PCB Layout antenna, no consideration of replacement. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna