

FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

ZHONGSHAN HITREND TECHNOLOGY.,LTD

2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM

Model Number: AIO-860;

Additional Mode: CSMP95

FCC ID: NZGAIO-860

Prepared for : ZHONGSHAN HITREND TECHNOLOGY.,LTD
NO 42 INDUSTRIAL CENTRAL ROAD, XIOALAN,
ZHONGSHAN, GUANGDONG, CHINA

Prepared By : EST Technology Co., Ltd.
Santun(guantai Road), Houjie Town,
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Report Number : ESTE-R1205001
Date of Test : May.5~May.12, 2012
Date of Report : May.15, 2012

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TEST REPORT CERTIFICATION

Applicant : ZHONGSHAN HITREND TECHNOLOGY.,LTD
 Manufacturer : ZHONGSHAN HITREND TECHNOLOGY.,LTD
 EUT Description : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM

FCC ID : NZGAIO-860

(A) MODEL NO. : AIO-860
 : CSMP95

(B) Additional Model : The products are difference in model number and appearance only.

(C) SERIAL NO. : N/A

(D) Trade Name : COBY; CCyAudio

(D) POWER SUPPLY : AC 120V/60Hz

(E) TEST VOLTAGE : AC 120V/60Hz

Tested for comply with:
 FCC Rules and Regulations Part 15 Subpart C: 2011

Test procedure used:
 ANSI C63.4:2003

The device described above is tested by EST Technology Co., Ltd. to confirm comply with all the FCC Part 15 Subpart C requirements.

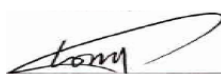
The test results are contained in this test report and EST Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment under test (EUT) is to be technically compliant with the FCC requirements.

Prepared by:



Ada / Assistant

Tested by:



Tony.Tang/ Engineer

Approved by:



Iceman Hu / Manager

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.

1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.4-2003	PASS
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.4-2003	PASS
Band Edge Compliance Test	FCC Part 15: 15.249 ANSI C63.4-2003	PASS
20dB Bandwidth Test	FCC Part 15: 15.215 ANSI C63.4-2003	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product Name : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM

Model Number : AIO-860

FCC ID : NZGAIO-860

Operation frequency : 2404MHz~2479MHz

Number of channel : 16

Antenna : Diversity unit antenna, 2dBi gain

Modulation : GFSK

Power Supply : AC 120V/60Hz

Applicant : ZHONGSHAN HITREND TECHNOLOGY.,LTD
NO 42 INDUSTRIAL CENTRAL ROAD, XIOALAN,
ZHONGSHAN, GUANGDONG, CHINA

Manufacturer : ZHONGSHAN HITREND TECHNOLOGY.,LTD
NO 42 INDUSTRIAL CENTRAL ROAD, XIOALAN,
ZHONGSHAN, GUANGDONG, CHINA

Sample Type : Prototype production

2.2. Test Facilities

EMC Lab : Certificated by CNAL, CHINA
 Registration No.: L5288
 Date of registration: October 28, 2011

 Certificated by FCC, USA
 Registration No.: 989591
 Date of registration: December 07, 2010

 Certificated by Industry Canada
 Registration No.: 46405-9405
 Date of registration: December 16, 2010

 Certificated by VCCI, Japan
 Registration No.: R-3663 & C-4103
 Date of registration: July 25, 2011

 Certificated by TUV Rheinland, Germany
 Registration No.: UA 50195514 0001
 Date of registration: January 07, 2011

 Certificated by TUV/PS, Shenzhen
 Registration No.: SCN1017
 Date of registration: January 27, 2011

 Certificated by Intertek ETL SEMKO
 Registration No.: 2011-RTL-L1-18
 Date of registration: April 28, 2011

 Certificated by Siemic, Inc.
 Registration No.: SLCN021
 Date of registration: November 8, 2011

 Certificated by Nemko, Hong Kong
 Registration No.: 175193
 Date of registration: May 4, 2011

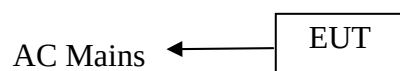
Name of Firm : EST Technology Co., Ltd.

Site Location : San Tun Management Zone, Houjie Town, Dongguan,
 Guangdong, China

2.3. Tested Supporting System Details

None

2.4. EUT Configuration and operation conditions for test.



EUT work continues Tx mode and frequency as below:

Channel	Frequency
Low	2404MHz
Middle	2444MHz
High	2479MHz

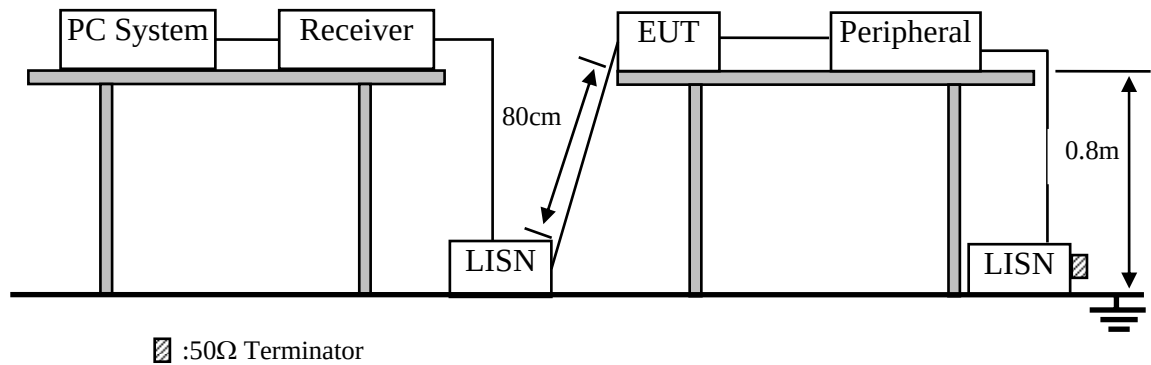
Note: A typical modulation was applied when performance test.

3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Nov.05, 11	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Nov.05, 11	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.02, 12	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.02, 12	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	May.02, 12	1 Year
6.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.02, 12	1Year
7.	Coaxial Switch	Anritsu	MP59B	M55367	May.02, 12	1 Year
8.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.02, 12	1 Year
9.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.02, 12	1 Year

3.2. Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

Frequency range MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0,15 to 0,5	66~56*	56~46*
0,5 to 5	56	46
5 to 30	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Operating Condition of EUT

- 3.4.1. Setup the EUT and simulator as shown as Section 2.3
- 3.4.2. Turn on the power of all equipment.
- 3.4.3. Let the EUT work in test mode (Tx Mode) and measure it.

3.5. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Powered from PC which mains connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4-2003 on conducted Emission test.

The bandwidth of test receiver (R&S TEST RECEIVER ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 3.7.

3.6. Conducted Disturbance at Mains Terminals Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes were tested and selected to read Q.P values and average values, all the test results are listed in next pages.

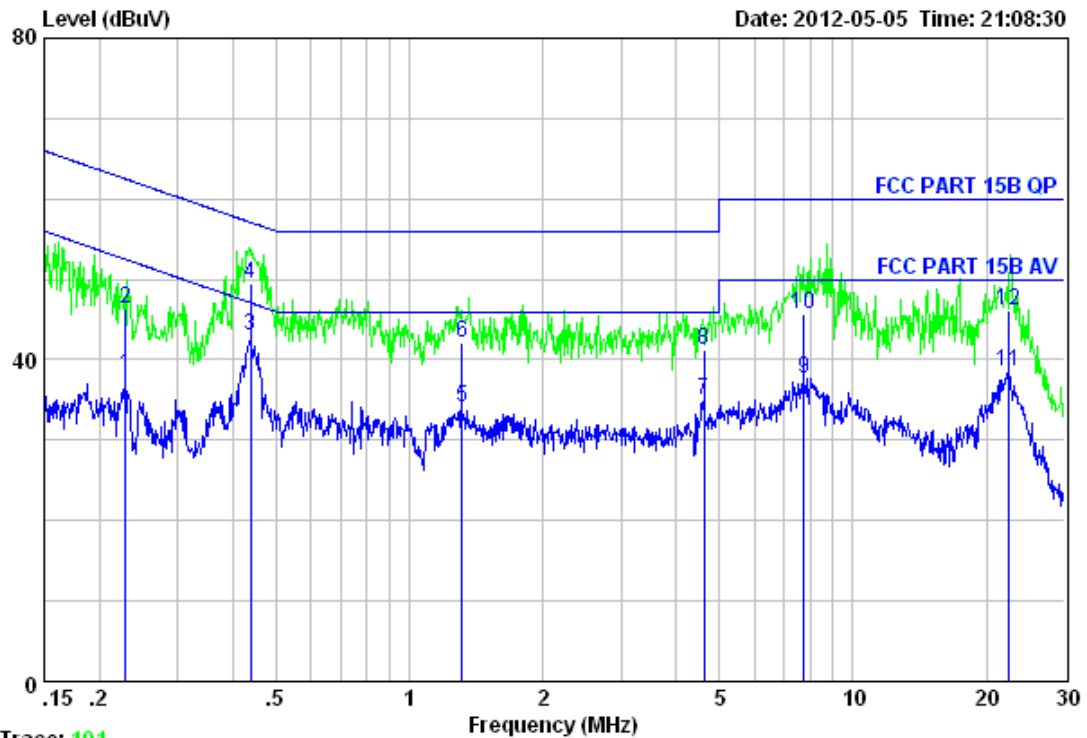
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Data: 322

File: D:\test data\2012\H\haichuan.EMI (324)

Date: 2012-05-05 Time: 21:08:30



Site no. : EST 844 Shielded Room Data no. : 322
Limit : FCC PART 15B QP LINE Phase : NEUTRAL
Env. / Ins. : Temp:24.3'C Humi:52% Press:101.50kPa
Engineer : Tony
EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
Power : AC 120V/60Hz
M/N : AIO-860
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	0.23	9.60	9.80	18.73	38.13	52.48	14.35	Average
2	0.23	9.60	9.80	26.93	46.33	62.48	16.15	QP
3	0.44	9.59	9.81	23.56	42.96	47.11	4.15	Average
4	0.44	9.59	9.81	29.96	49.36	57.11	7.75	QP
5	1.32	9.61	9.81	14.57	33.99	46.00	12.01	Average
6	1.32	9.61	9.81	22.73	42.15	56.00	13.85	QP
7	4.62	9.65	9.86	15.58	35.09	46.00	10.91	Average
8	4.62	9.65	9.86	21.80	41.31	56.00	14.69	QP
9	7.77	9.67	9.87	18.21	37.75	50.00	12.25	Average
10	7.77	9.67	9.87	26.14	45.68	60.00	14.32	QP
11	22.54	9.76	9.99	18.71	38.46	50.00	11.54	Average
12	22.54	9.76	9.99	26.35	46.10	60.00	13.90	QP

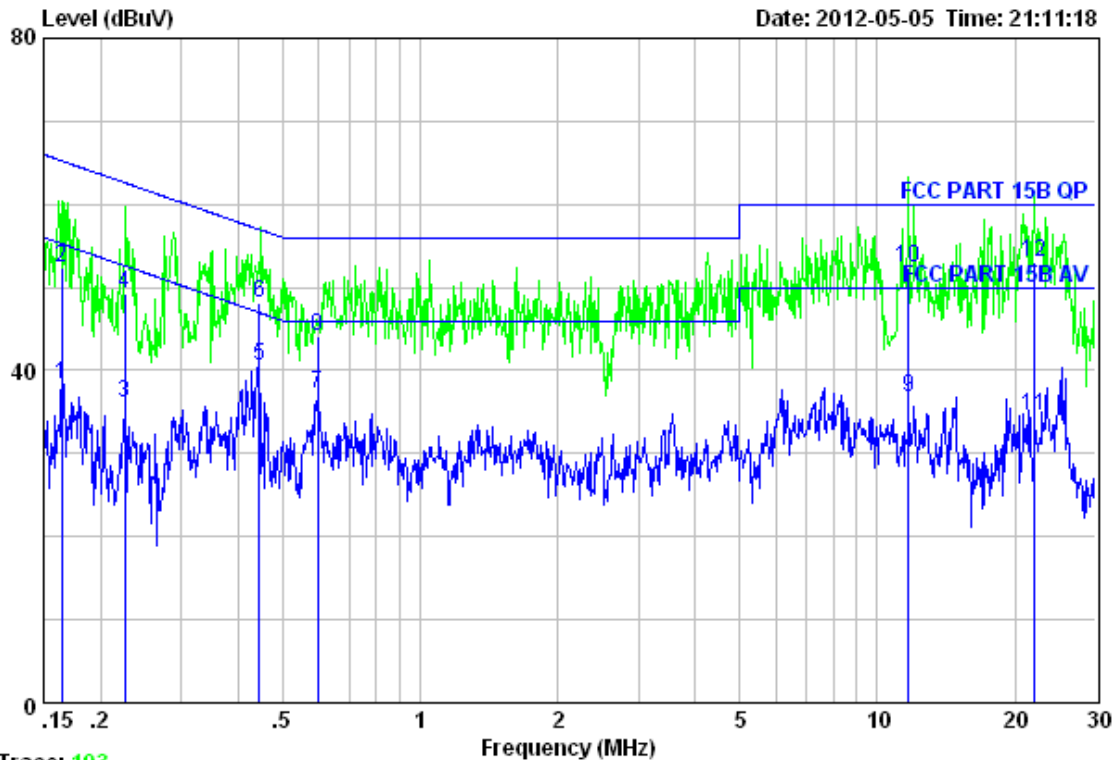
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Data: 324

File: D:\test data\2012\H\haichuan.EMI (324)

Date: 2012-05-05 Time: 21:11:18



Trace: 193

Site no. : EST 844 Shielded Room Data no. : 324
Limit : FCC PART 15B QP LINE Phase : LINE
Env. / Ins. : Temp:24.3'C Humi:52% Press:101.50kPa
Engineer : Sean
EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
Power : AC 120V/60Hz
M/N : AIO-860
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	0.16	9.61	9.81	19.02	38.44	55.25	16.81	Average
2	0.16	9.61	9.81	32.88	52.30	65.25	12.95	QP
3	0.23	9.61	9.80	16.71	36.12	52.61	16.49	Average
4	0.23	9.61	9.80	29.74	49.15	62.61	13.46	QP
5	0.44	9.61	9.81	21.23	40.65	46.98	6.33	Average
6	0.44	9.61	9.81	28.78	48.20	56.98	8.78	QP
7	0.60	9.60	9.82	17.90	37.32	46.00	8.68	Average
8	0.60	9.60	9.82	24.78	44.20	56.00	11.80	QP
9	11.68	9.67	9.89	17.11	36.67	50.00	13.33	Average
10	11.68	9.67	9.89	32.71	52.27	60.00	7.73	QP
11	22.06	9.68	9.98	14.94	34.60	50.00	15.40	Average
12	22.06	9.68	9.98	33.44	53.10	60.00	6.90	QP

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency rang: 30~1000MHz

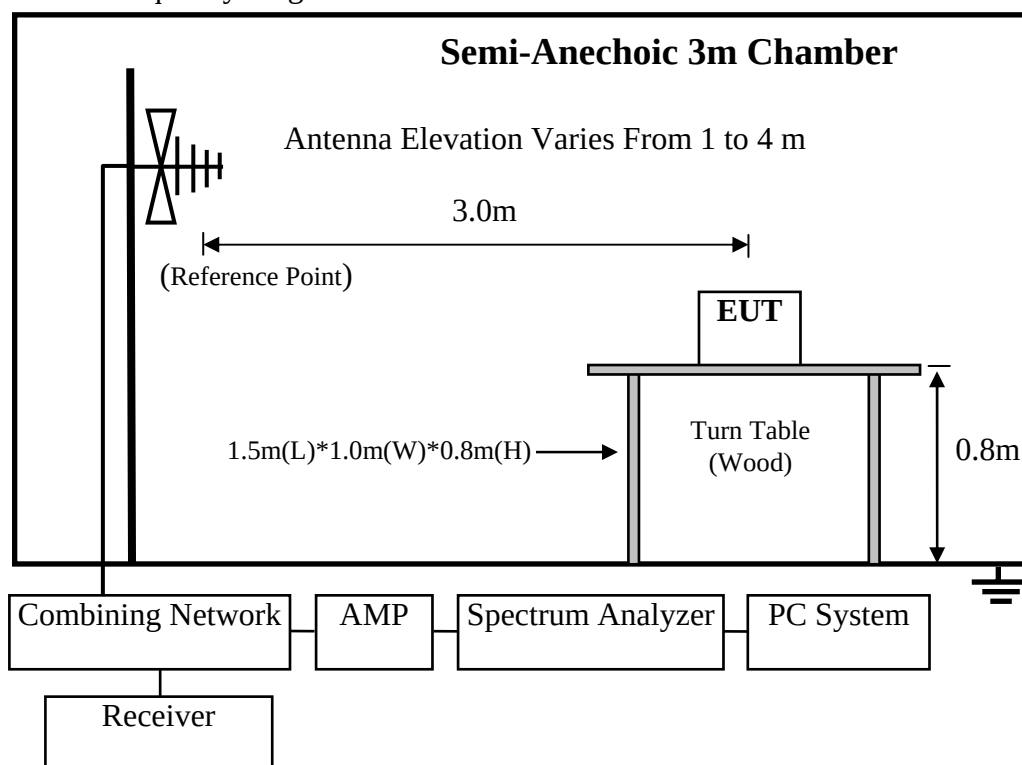
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05, 11	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.02, 12	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.02, 12	1 Year
4	Amplifier	HP	8447D	2648A04738	May.02, 12	1 Year
5	Bilog Antenna	Schaffner	CBL6112D	25237	Mar. 26,12	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.02, 12	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.02, 12	1 Year

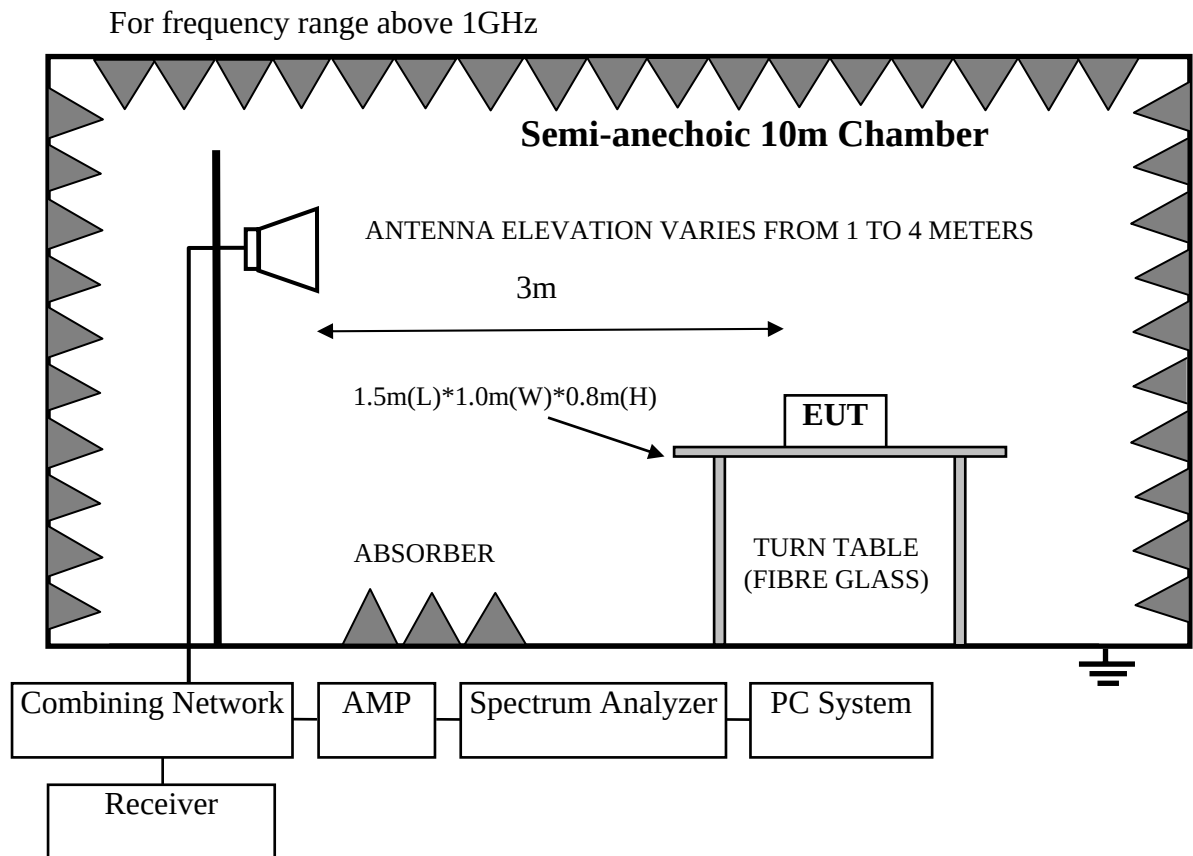
Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4408B	MY44211139	May.02, 12	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May.02, 12	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	May.02, 12	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.02, 12	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.02, 12	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.02, 12	1 Year

4.2. Block Diagram of Test Setup

For frequency range 30MHz-1000MHz





4.3. Radiated Emission Limit Standard: FCC 15.209 and 15.249

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000MHz	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	
Field Strength of fundamental emissions for 2.4GHz-2.4835GHz	3	114.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 94.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

- Remark :
- (1) Emission level $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
 - (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.2.

4.4.2. Turned on the power of all equipment.

4.4.3. Let EUT work in test mode(Tx mode) and test it.

4.5. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 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 polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz

The bandwidth of the Spectrum Analyzer's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz, and 1MHz RBW, 10Hz VBW for average measurement above 1GHz.

Note: For fundamental emissions, it's bandwidth is about 1.3MHz, so the Spectrum Analyzer's RBW was set at 2MHz and VBW was set at 3MHz for fundamental emissions measure.

4.6. Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 25GHz were comply with the 15.209 Limit.

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

Emissions from 30MHz to 1GHz:

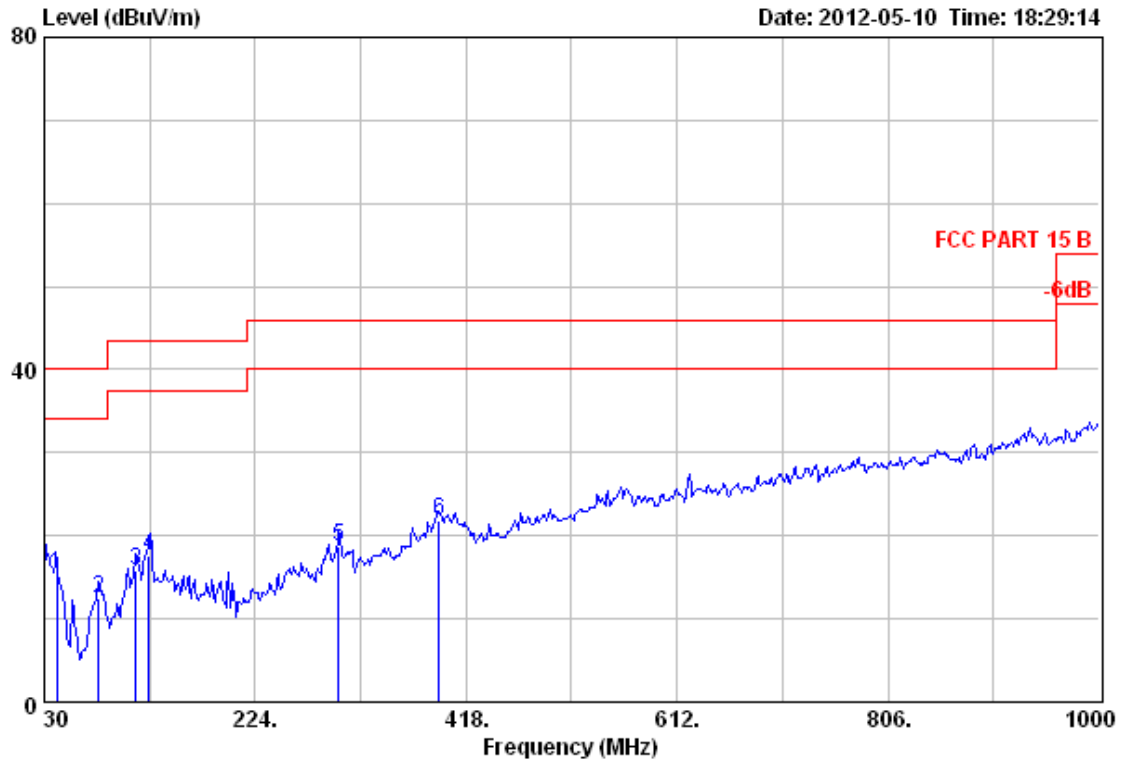
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Data: 117

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 18:29:14



Site no. : 3m Chamber Data no. : 117
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark (dB)
1	41.64	11.75	2.17	1.53	15.45	40.00	24.55	QP
2	80.44	7.07	2.84	2.54	12.45	40.00	27.55	QP
3	114.39	10.85	3.26	1.69	15.80	43.50	27.70	QP
4	126.03	11.34	3.44	2.84	17.62	43.50	25.88	QP
5	300.63	13.03	5.24	0.55	18.82	46.00	27.18	QP
6	392.78	15.73	5.90	0.25	21.88	46.00	24.12	QP

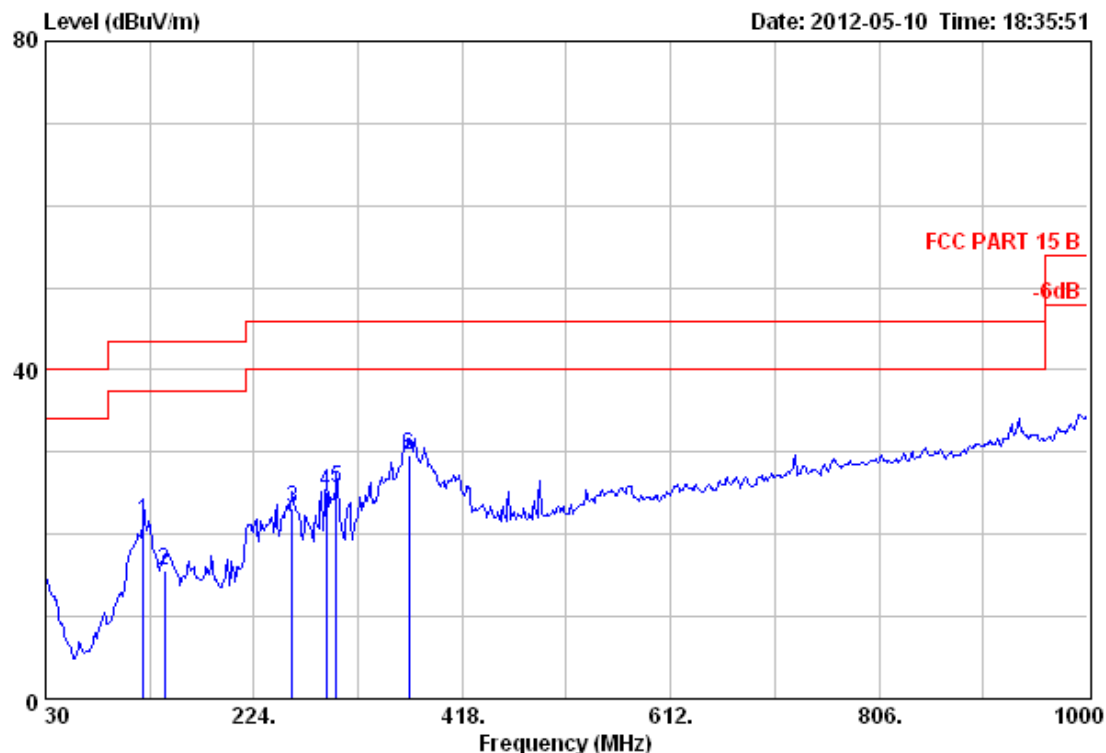
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Data: 118

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 18:35:51



Site no. : 3m Chamber Data no. : 118
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark (dB)
1	121.18	11.20	3.38	7.13	21.71	43.50	21.79	QP
2	140.58	11.40	3.66	0.64	15.70	43.50	27.80	QP
3	259.89	12.97	4.93	5.20	23.10	46.00	22.90	QP
4	290.93	12.78	5.17	7.34	25.29	46.00	20.71	QP
5	300.63	13.03	5.24	7.25	25.52	46.00	20.48	QP
6	368.53	14.80	5.73	9.04	29.57	46.00	16.43	QP

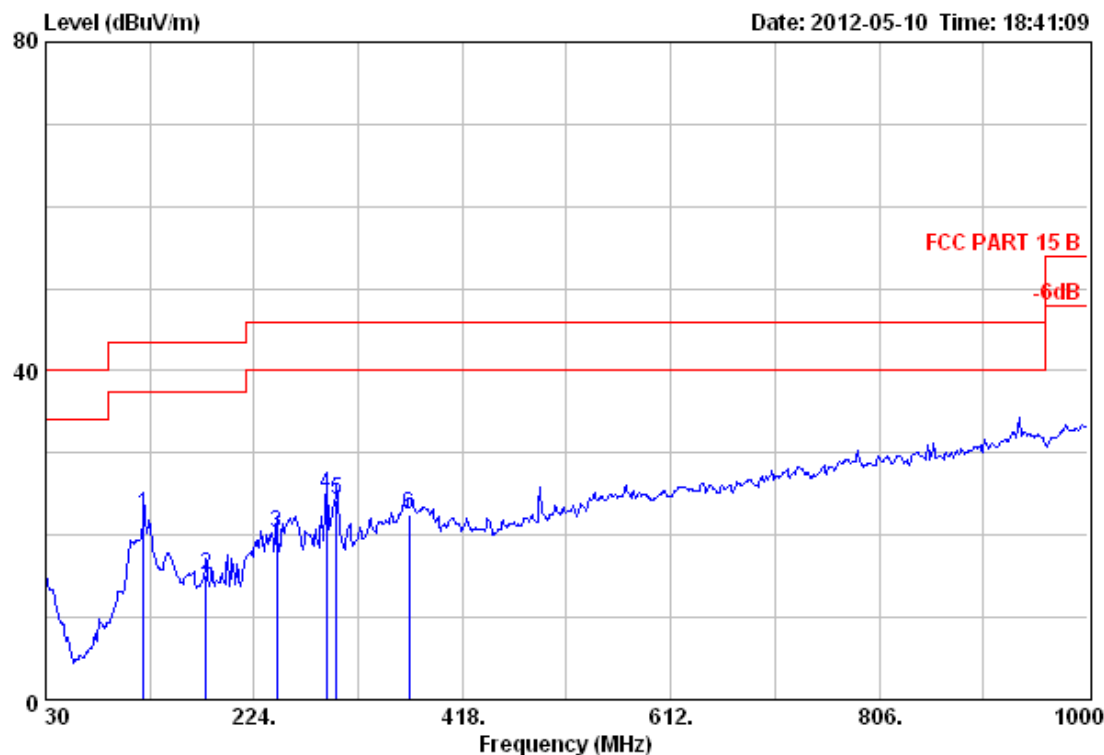
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Data: 119

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 18:41:09



Site no. : 3m Chamber Data no. : 119
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2444MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark (dB)
1	121.18	11.20	3.38	7.89	22.47	43.50	21.03	QP
2	179.38	8.96	4.11	2.13	15.20	43.50	28.30	QP
3	245.34	11.06	4.77	4.44	20.27	46.00	25.73	QP
4	290.93	12.78	5.17	6.92	24.87	46.00	21.13	QP
5	300.63	13.03	5.24	6.09	24.36	46.00	21.64	QP
6	368.53	14.80	5.73	2.03	22.56	46.00	23.44	QP

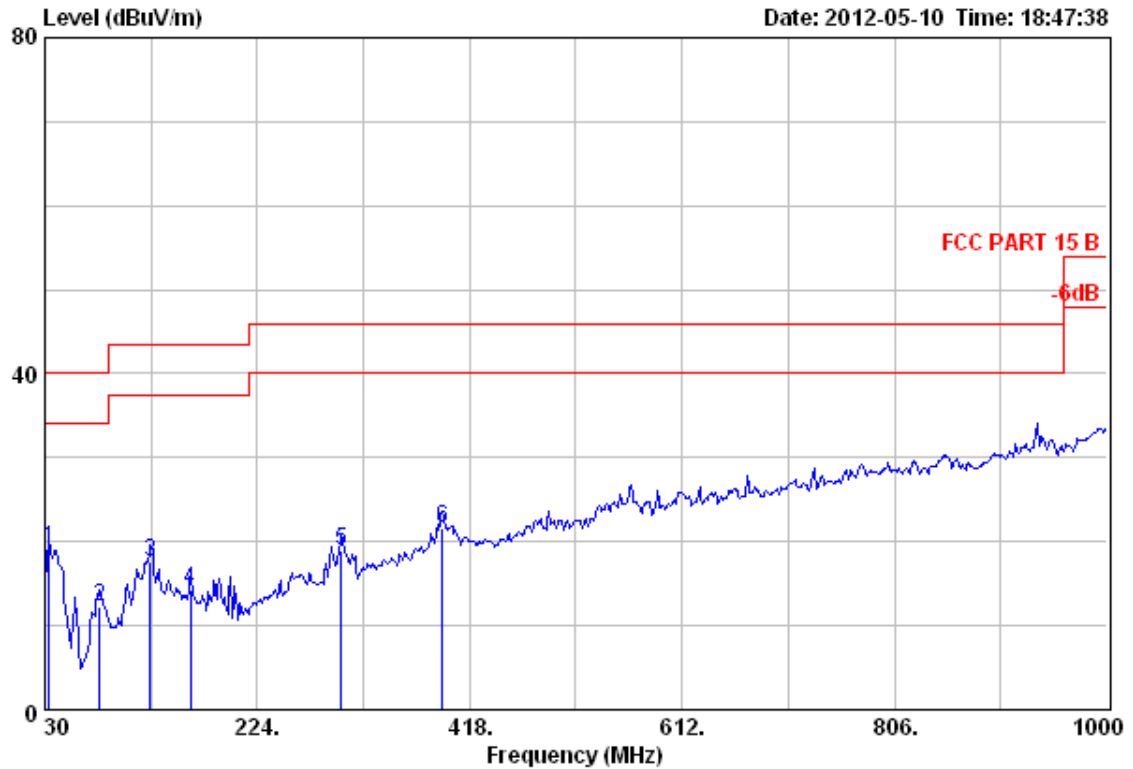
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Data: 120

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 18:47:38



Site no. : 3m Chamber Data no. : 120
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2444MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark (dB)
1	33.88	16.11	1.99	0.96	19.06	40.00	20.94	QP
2	80.44	7.07	2.84	2.34	12.25	40.00	27.75	QP
3	126.03	11.34	3.44	2.82	17.60	43.50	25.90	QP
4	162.89	10.01	3.91	0.45	14.37	43.50	29.13	QP
5	300.63	13.03	5.24	0.78	19.05	46.00	26.95	QP
6	392.78	15.73	5.90	0.07	21.70	46.00	24.30	QP

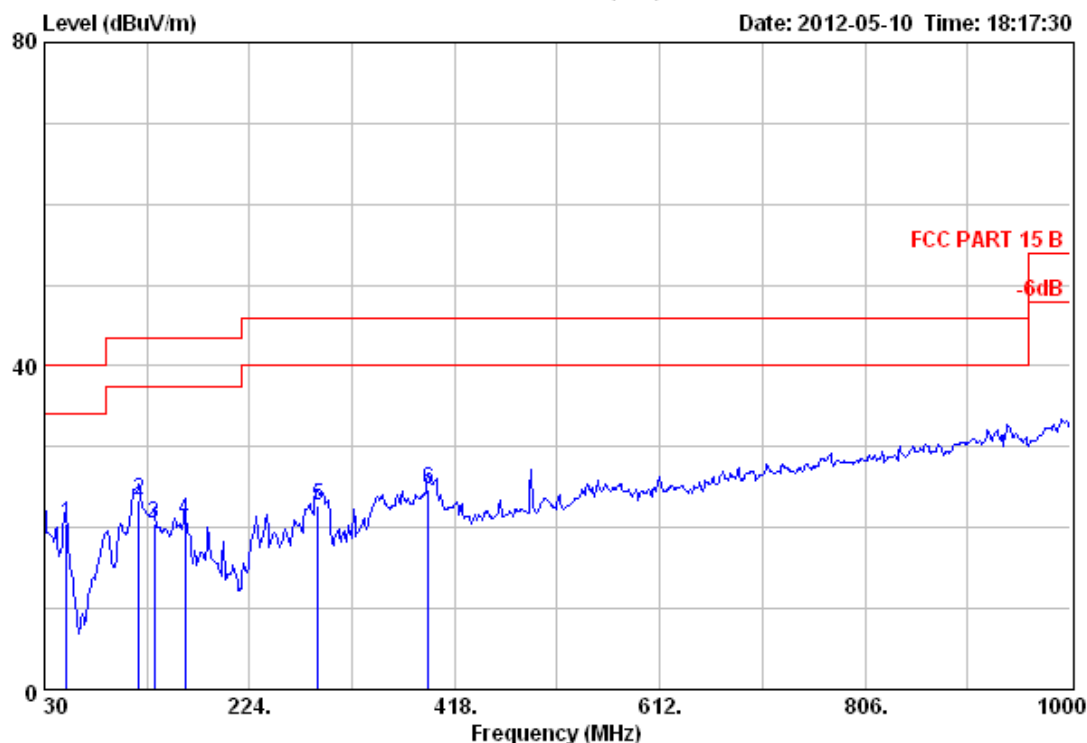
EST Technology

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Data: 115

File: D:\test data\2012\HHAICHUAN.EMI (136)

Date: 2012-05-10 Time: 18:17:30



Site no. : 3m Chamber Data no. : 115
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark (dB)
1	51.34	6.92	2.38	11.15	20.45	40.00	19.55	QP
2	119.24	11.11	3.34	8.87	23.32	43.50	20.18	QP
3	133.79	11.36	3.58	5.54	20.48	43.50	23.02	QP
4	162.89	10.01	3.91	7.09	21.01	43.50	22.49	QP
5	288.99	12.70	5.16	4.85	22.71	46.00	23.29	QP
6	392.78	15.73	5.90	3.08	24.71	46.00	21.29	QP

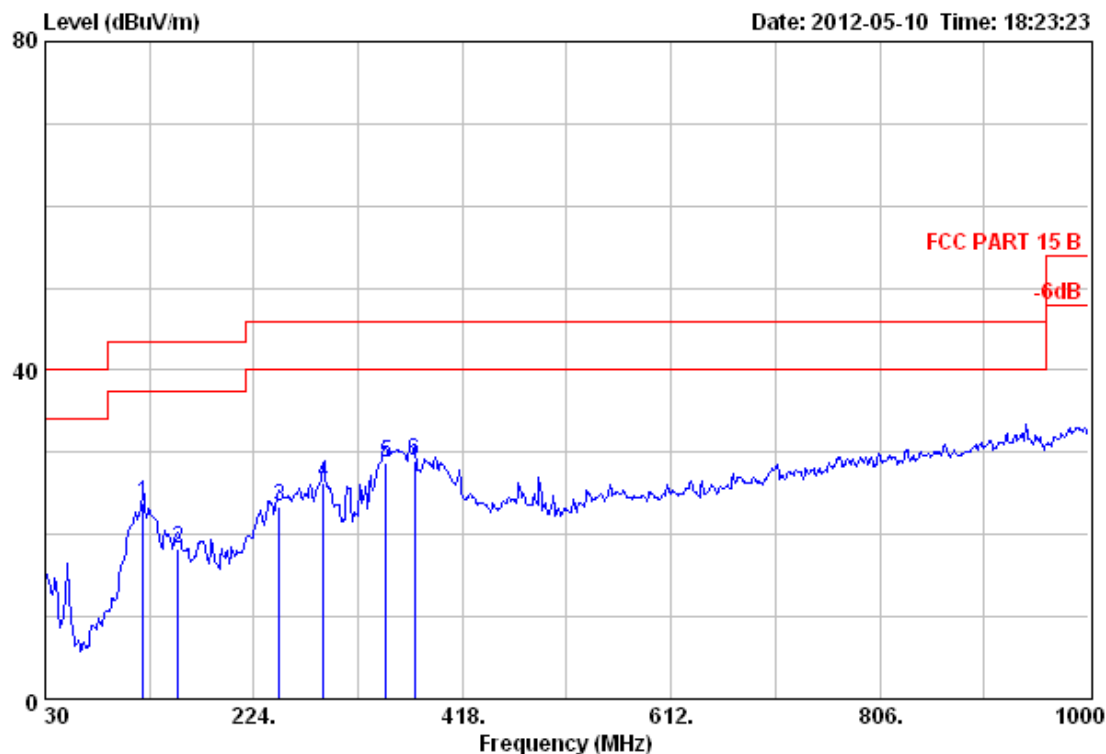
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Data: 116

File: D:\test data\2012\H\HAICHUAN.EMI (136)

Date: 2012-05-10 Time: 18:23:23



Site no. : 3m Chamber Data no. : 116
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Reamark (dB)
1	121.18	11.20	3.38	9.27	23.85	43.50	19.65	QP
2	153.19	10.75	3.81	3.68	18.24	43.50	25.26	QP
3	247.28	11.36	4.78	7.20	23.34	46.00	22.66	QP
4	288.99	12.70	5.16	8.35	26.21	46.00	19.79	QP
5	347.19	14.38	5.67	8.75	28.80	46.00	17.20	QP
6	373.38	14.92	5.76	8.19	28.87	46.00	17.13	QP

Emissions from 1GHz to 18GHz:

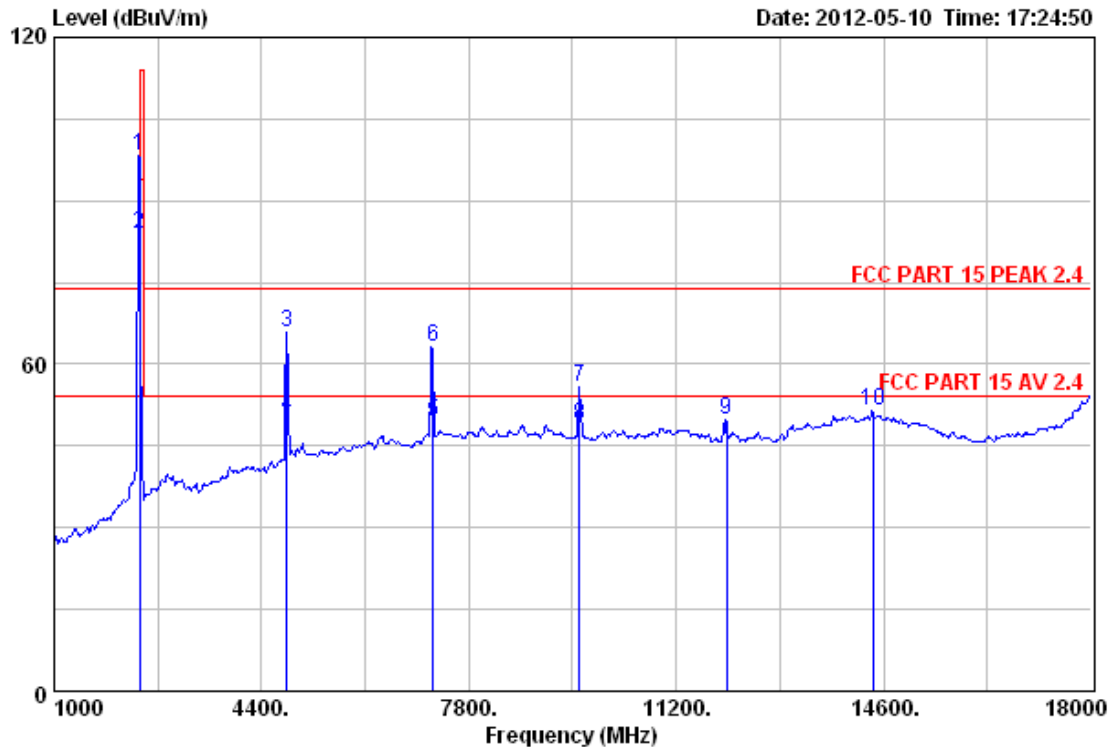
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Data: 97

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 17:24:50



Site no. : 3m Chamber Data no. : 97
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2404.00	27.61	6.64	35.18	99.33	98.40	114.00	15.60	Peak
2	2404.00	27.61	6.64	35.18	85.00	84.07	94.00	9.93	Average
3	4808.00	31.25	11.77	34.50	57.27	65.79	74.00	8.21	Peak
4	4808.00	31.25	11.77	34.50	42.00	50.52	54.00	3.48	Average
5	7212.00	36.52	11.54	34.44	36.00	49.62	54.00	4.38	Average
6	7212.00	36.52	11.54	34.44	49.56	63.18	74.00	10.82	Peak
7	9616.00	37.93	11.68	35.90	42.16	55.87	74.00	18.13	Peak
8	9616.00	37.93	11.68	35.90	35.01	48.72	54.00	5.28	Average
9	12020.00	38.62	11.40	36.39	36.28	49.91	74.00	24.09	Peak
10	14424.00	41.82	10.93	35.49	34.10	51.36	74.00	22.64	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

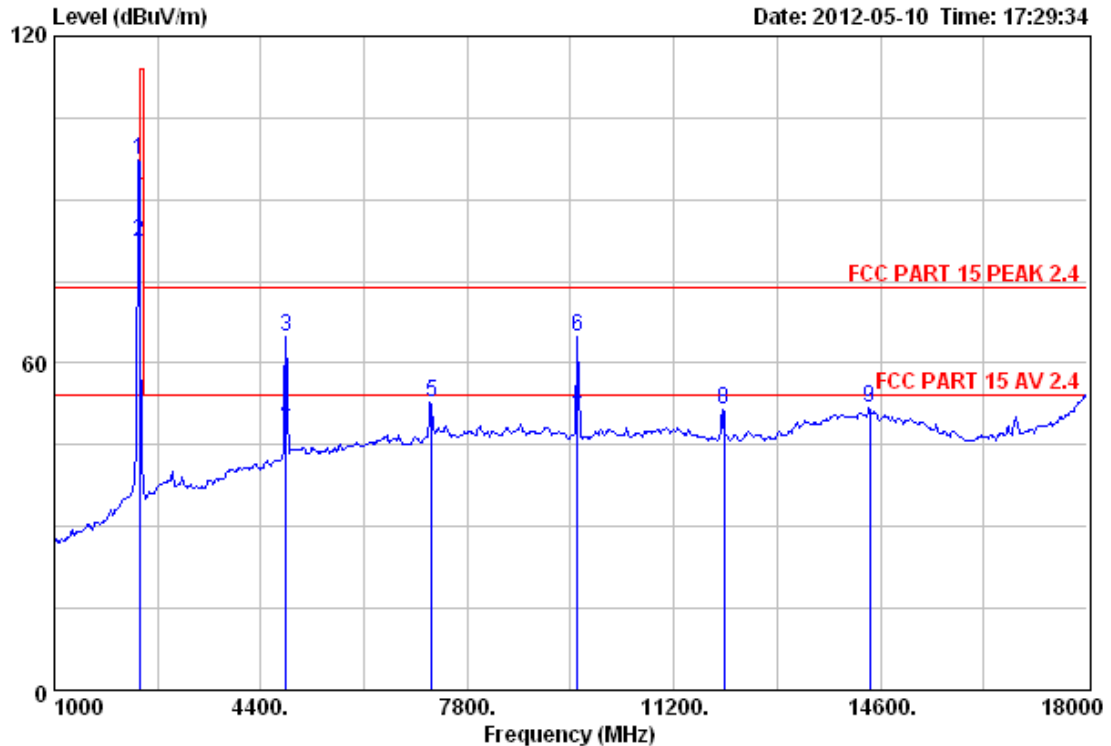
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Data: 98

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 17:29:34



Site no. : 3m Chamber Data no. : 98
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2404.00	27.61	6.64	35.18	98.35	97.42	114.00	16.58	Peak
2	2404.00	27.61	6.64	35.18	83.00	82.07	94.00	11.93	Average
3	4808.00	31.25	11.77	34.50	56.19	64.71	74.00	9.29	Peak
4	4808.00	31.25	11.77	34.50	41.00	49.52	54.00	4.48	Average
5	7212.00	36.52	11.54	34.44	39.28	52.90	74.00	21.10	Peak
6	9616.00	37.93	11.68	35.90	51.16	64.87	74.00	9.13	Peak
7	9616.00	37.93	11.68	35.90	36.01	49.72	54.00	4.28	Average
8	12020.00	38.62	11.40	36.39	37.90	51.53	74.00	22.47	Peak
9	14424.00	41.82	10.93	35.49	34.62	51.88	74.00	22.12	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

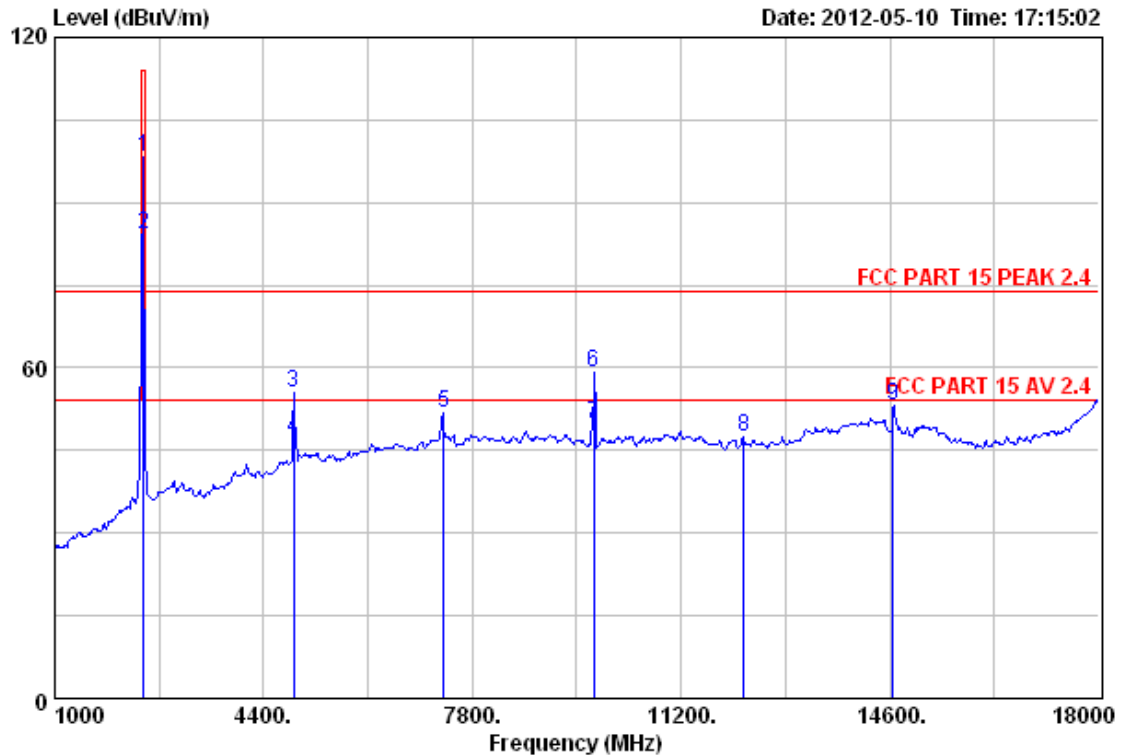
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Data: 95

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 17:15:02



Site no. : 3m Chamber Data no. : 95
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2444MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	2444.00	27.59	6.67	35.17	99.04	98.13	114.00	15.87	Peak
2	2444.00	27.59	6.67	35.17	85.01	84.10	94.00	9.90	Average
3	4888.00	31.40	12.14	34.48	46.31	55.37	74.00	18.63	Peak
4	4888.00	31.40	12.14	34.48	38.01	47.07	54.00	6.93	Average
5	7332.00	36.56	11.57	34.47	38.16	51.82	74.00	22.18	Peak
6	9776.00	38.16	11.64	36.02	45.33	59.11	74.00	14.89	Peak
7	9776.00	38.16	11.64	36.02	36.00	49.78	54.00	4.22	Average
8	12220.00	38.68	11.19	36.32	33.84	47.39	74.00	26.61	Peak
9	14644.00	41.42	10.91	35.38	36.13	53.08	74.00	20.92	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

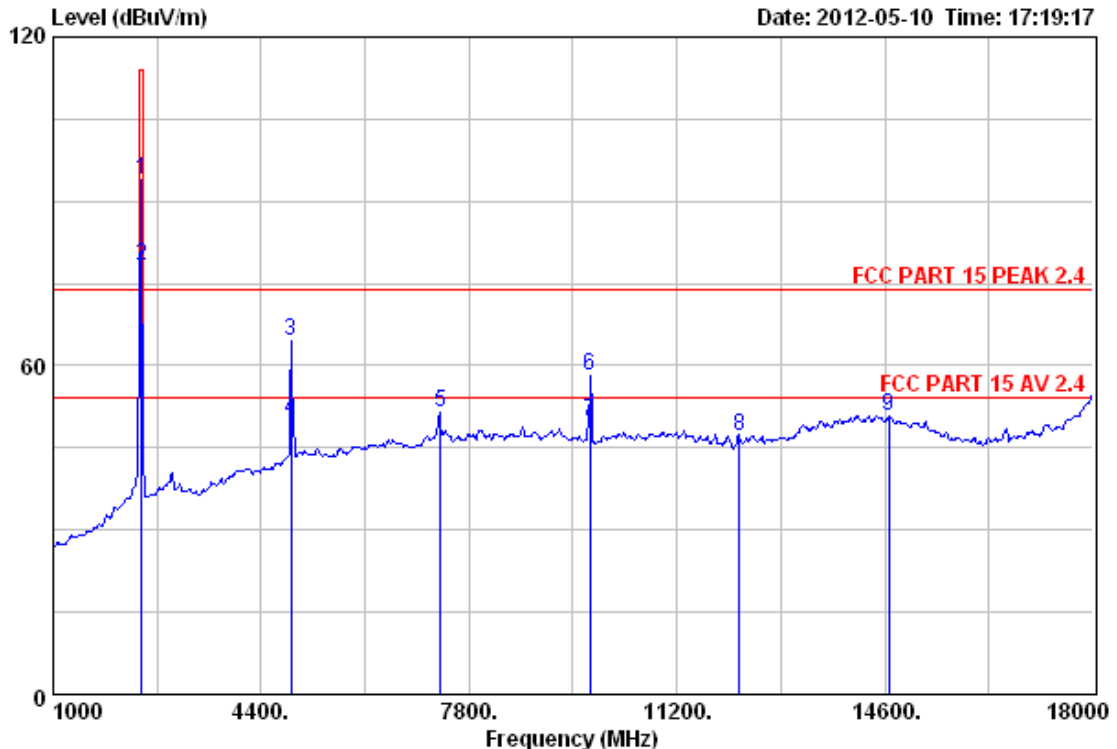
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Data: 96

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 17:19:17



Site no. : 3m Chamber Data no. : 96
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2444MHz

		Ant.	Cable	Amp	Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2444.00	27.59	6.67	35.17	95.00	94.09	114.00	19.91	Peak
2	2444.00	27.59	6.67	35.17	79.01	78.10	94.00	15.90	Average
3	4888.00	31.40	12.14	34.48	55.30	64.36	74.00	9.64	Peak
4	4888.00	31.40	12.14	34.48	41.01	50.07	54.00	3.93	Average
5	7332.00	36.56	11.57	34.47	37.87	51.53	74.00	22.47	Peak
6	9776.00	38.16	11.64	36.02	44.32	58.10	74.00	15.90	Peak
7	9776.00	38.16	11.64	36.02	36.00	49.78	54.00	4.22	Average
8	12220.00	38.68	11.19	36.32	33.72	47.27	74.00	26.73	Peak
9	14664.00	41.36	10.91	35.36	33.85	50.76	74.00	23.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

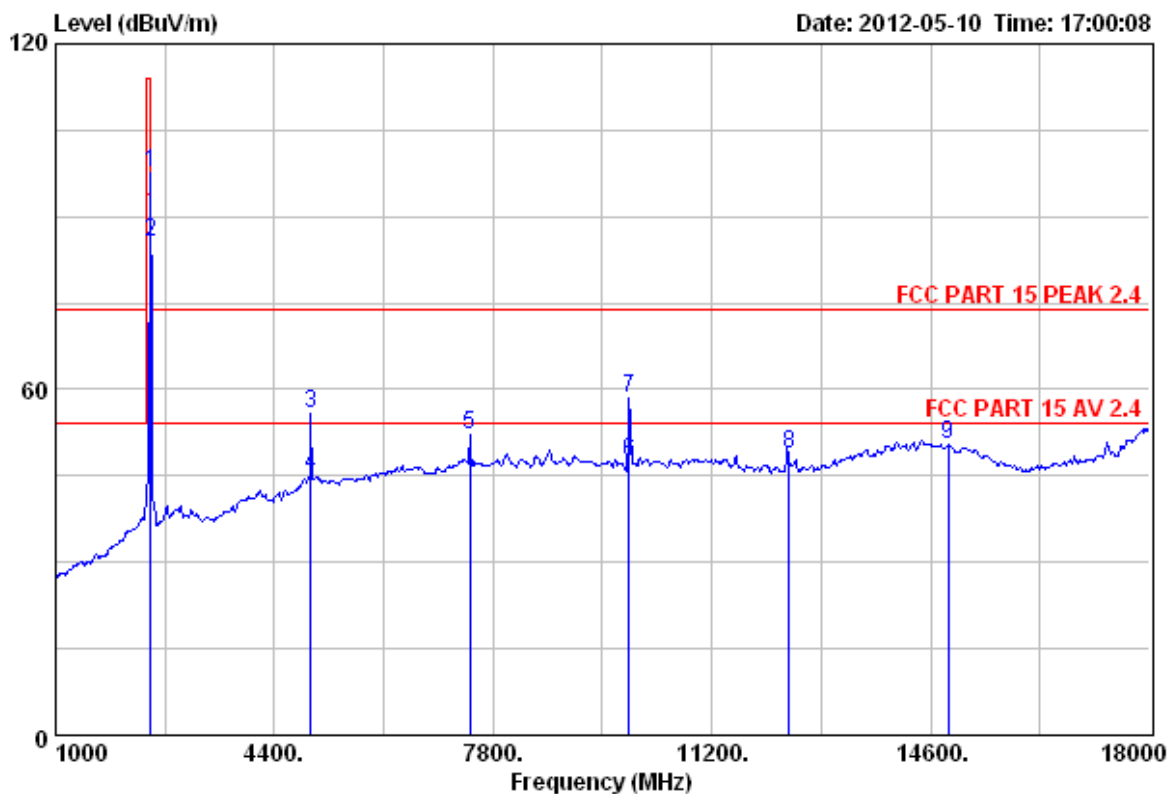
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Data: 93

File: D:\test data\2012\H\HAICHUAN.EMI (136)

Date: 2012-05-10 Time: 17:00:08



Site no. : 3m Chamber Data no. : 93
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
Power : AC 120V/60Hz
M/N : AIO-860
Test Mode : TX 2479MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.00	27.58	6.71	35.16	98.38	97.51	114.00	16.49	Peak
2	2479.00	27.58	6.71	35.16	86.38	85.51	94.00	8.49	Average
3	4958.00	31.49	12.44	34.46	46.51	55.98	74.00	18.02	Peak
4	4958.00	31.49	12.44	34.46	35.51	44.98	54.00	9.02	Average
5	7437.00	36.54	11.61	34.49	38.57	52.23	74.00	21.77	Peak
6	9916.00	38.14	11.61	36.14	33.99	47.60	54.00	6.40	Average
7	9916.00	38.14	11.61	36.14	44.99	58.60	74.00	15.40	Peak
8	12395.00	38.73	11.01	36.26	35.24	48.72	74.00	25.28	Peak
9	14874.00	40.65	10.88	35.26	34.08	50.35	74.00	23.65	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

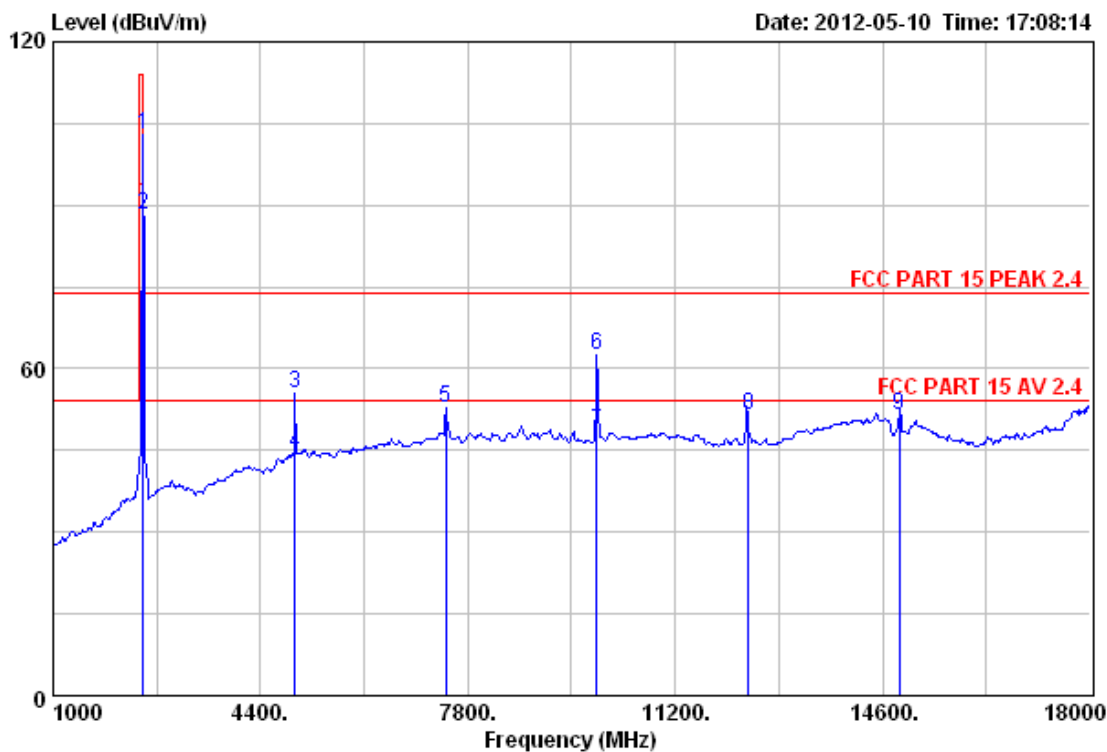
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Data: 94

File: D:\test data\2012\HHAICHUAN.EMI (136)

Date: 2012-05-10 Time: 17:08:14



Site no. : 3m Chamber Data no. : 94
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.00	27.58	6.71	35.16	103.97	103.10	114.00	10.90	Peak
2	2479.00	27.58	6.71	35.16	88.97	88.10	94.00	5.90	Average
3	4958.00	31.49	12.44	34.46	46.10	55.57	74.00	18.43	Peak
4	4958.00	31.49	12.44	34.46	35.10	44.57	54.00	9.43	Average
5	7437.00	36.54	11.61	34.49	39.00	52.66	74.00	21.34	Peak
6	9916.00	38.14	11.61	36.14	48.74	62.35	74.00	11.65	Peak
7	9916.00	38.14	11.61	36.14	34.74	48.35	54.00	5.65	Average
8	12395.00	38.73	11.01	36.26	37.83	51.31	74.00	22.69	Peak
9	14874.00	40.65	10.88	35.26	35.07	51.34	74.00	22.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Above 18GHz

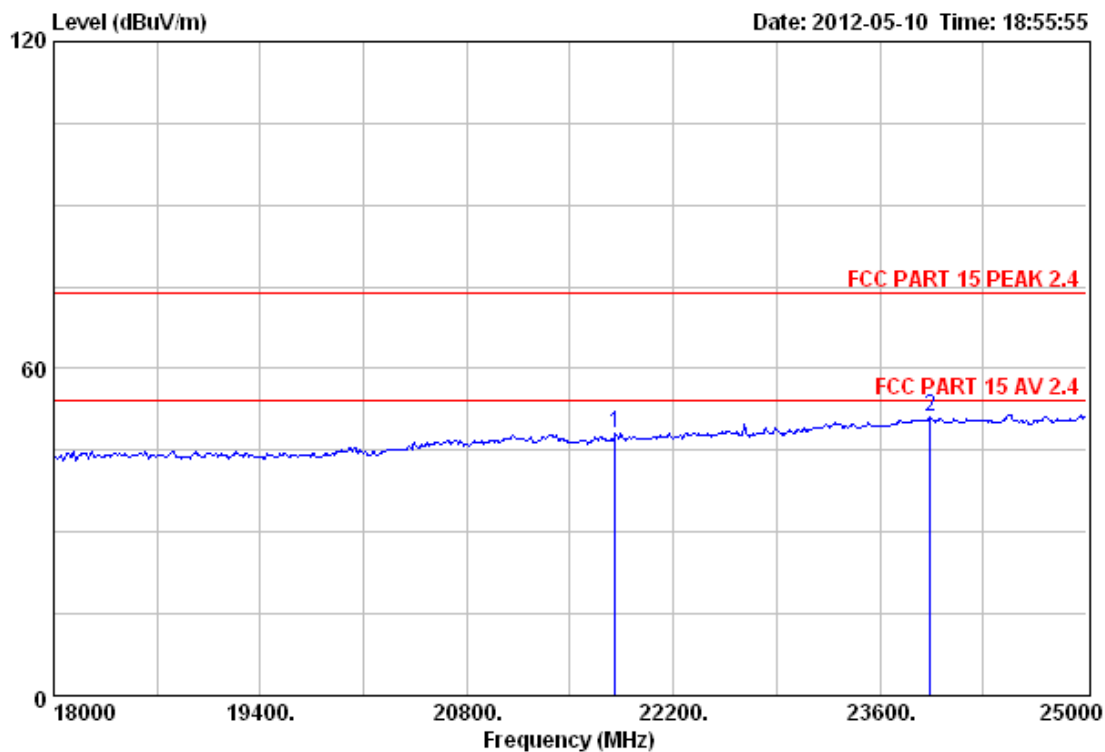
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Data: 121

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 18:55:55



Site no. : 3m Chamber Data no. : 121
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

		Ant.	Cable	Amp	Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	21808.00	45.82	20.48	35.08	16.99	48.21	74.00	25.79	Peak
2	23943.00	45.61	21.99	32.85	16.24	50.99	74.00	23.01	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

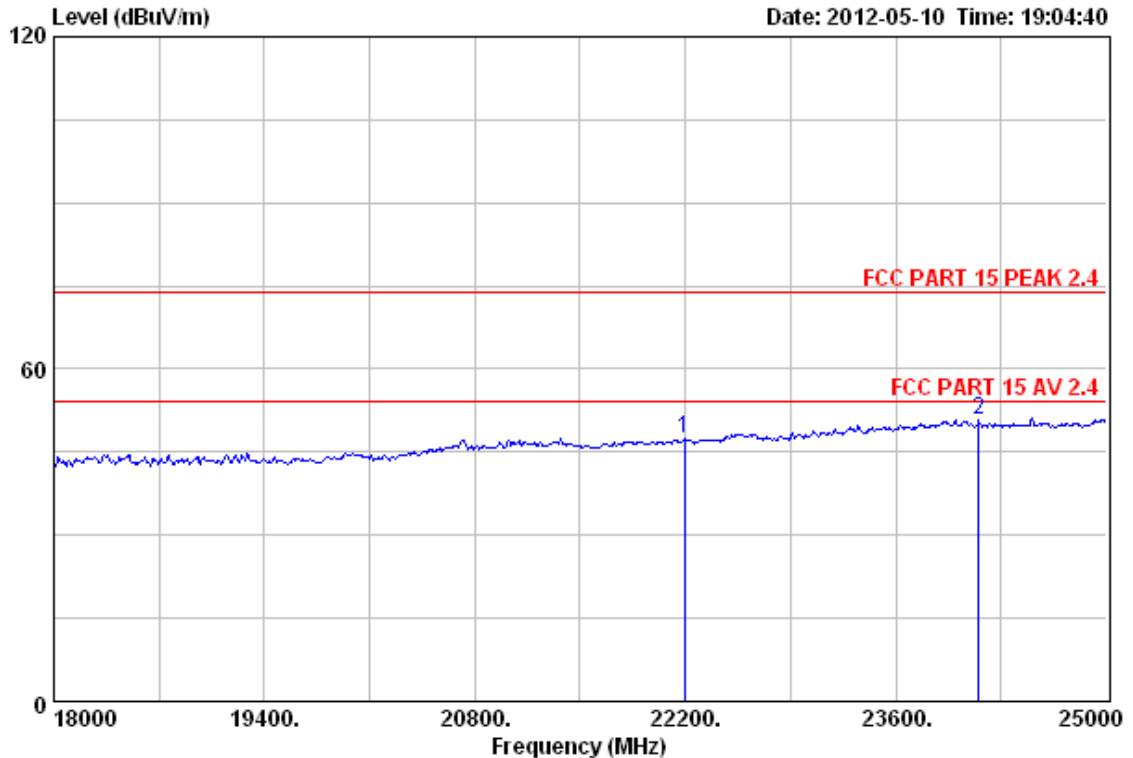
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Data: 122

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 19:04:40



Site no. : 3m Chamber Data no. : 122
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1 22193.00	45.74	20.68	34.69	15.89	47.62	74.00	26.38	Peak
2 24153.00	45.63	22.13	33.03	15.97	50.70	74.00	23.30	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

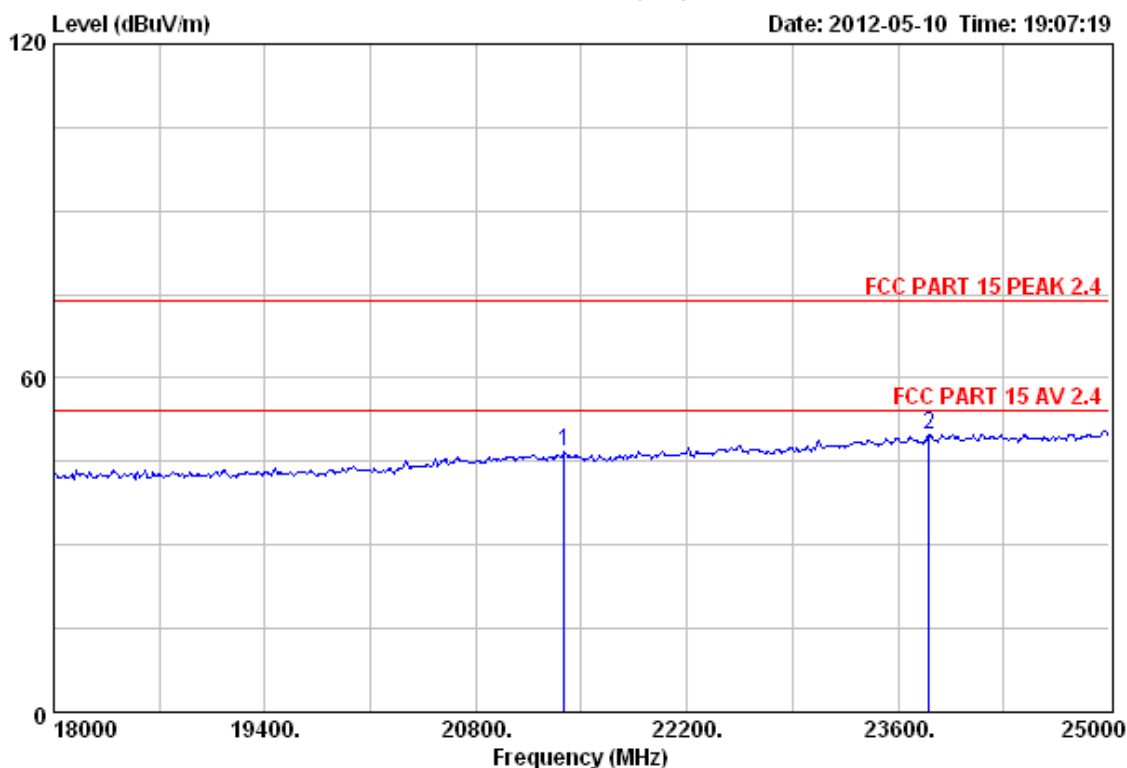
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Data: 123

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 19:07:19



Site no. : 3m Chamber Data no. : 123
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2444MHz

		Ant.	Cable	Amp	Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	21388.00	46.07	20.30	35.44	15.86	46.79	74.00	27.21	Peak
2	23803.00	45.64	21.87	33.01	15.32	49.82	74.00	24.18	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

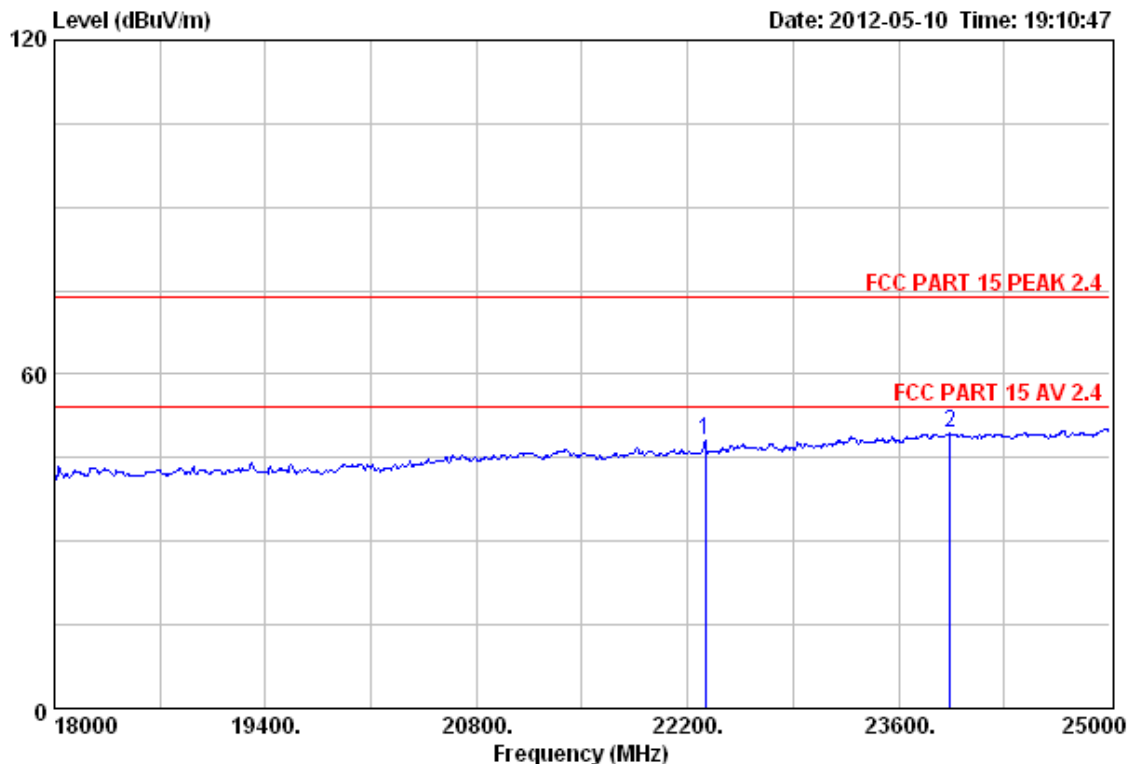
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Data: 124

File: D:\test data\2012\HHAICHUAN.EMI (130)

Date: 2012-05-10 Time: 19:10:47



Site no. : 3m Chamber Data no. : 124
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2444MHz

		Ant.	Cable	Amp	Emission				
Freq.		Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
(MHz)		(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	22319.00	45.76	20.75	34.56	16.04	47.99	74.00	26.01	Peak
2	23943.00	45.61	21.99	32.85	14.63	49.38	74.00	24.62	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

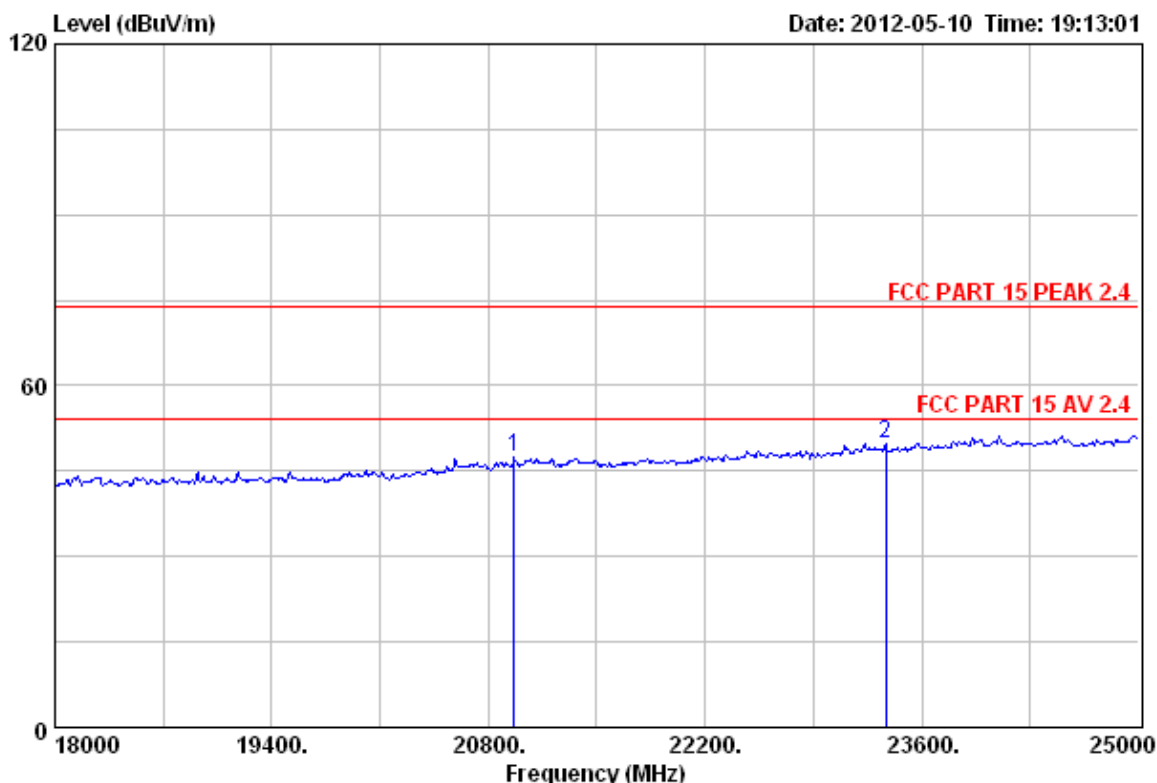
EST Technology

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Fax: +86-769-83081878

Data: 125

File: D:\test data\2012\H\HAICHUAN.EMI (136)

Date: 2012-05-10 Time: 19:13:01



Site no. : 3m Chamber Data no. : 125
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBUV/m)	Margin (dB)	Remark
				Reading (dBUV)	Level (dBUV/m)			
1 20968.00	46.29	20.12	35.82	16.72	47.31	74.00	26.69	Peak
2 23369.00	45.67	21.48	33.46	16.06	49.75	74.00	24.25	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

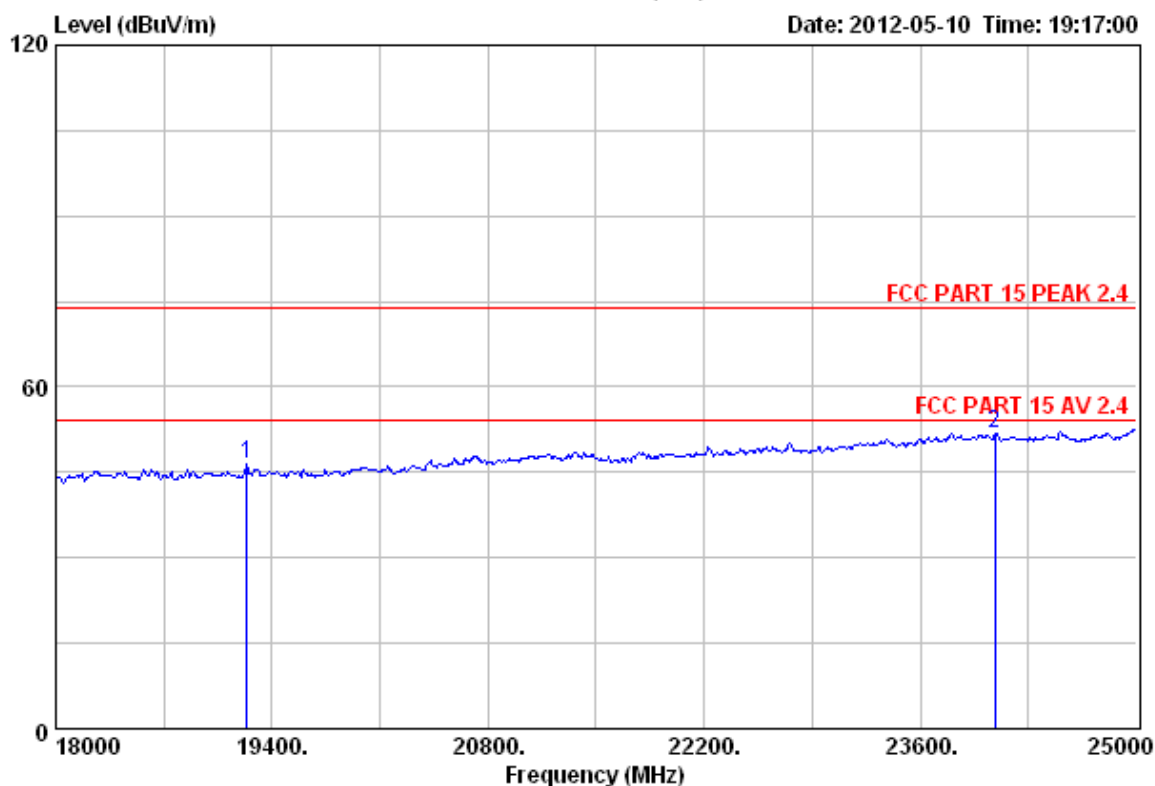
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Data: 126

File: D:\test data\2012\HHAICHUAN.EMI (136)

Date: 2012-05-10 Time: 19:17:00



Site no. : 3m Chamber Data no. : 126
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

		Ant.	Cable	Amp	Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	19239.00	45.64	18.82	36.06	18.07	46.47	74.00	27.53	Peak
2	24083.00	45.61	22.09	32.92	16.98	51.76	74.00	22.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

5. 20 DB BANDWIDTH TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4408B	MY44211139	May.02, 12	1 Year

5.2. Limit

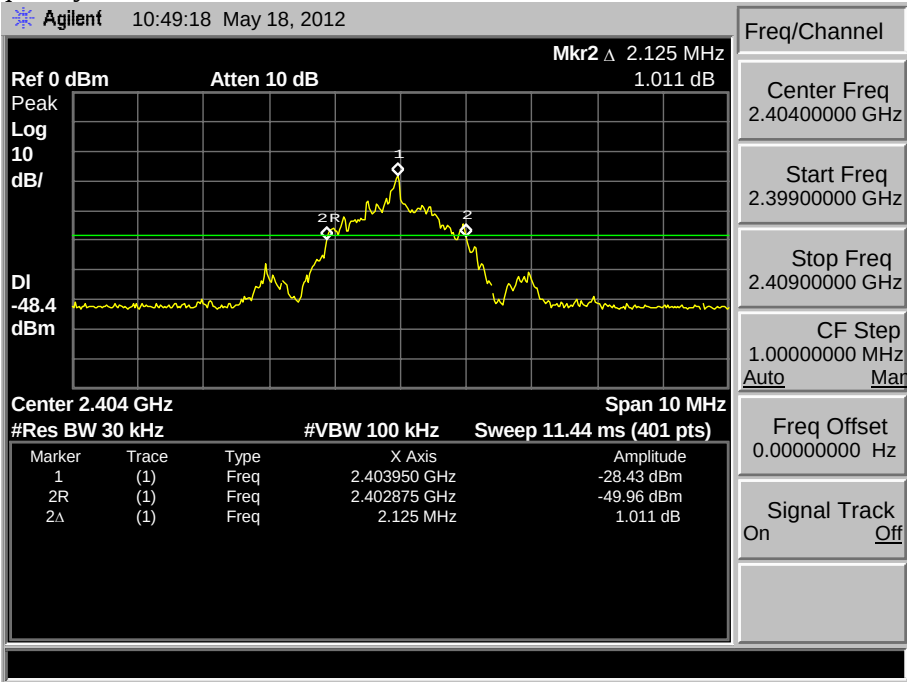
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.3. Test Results

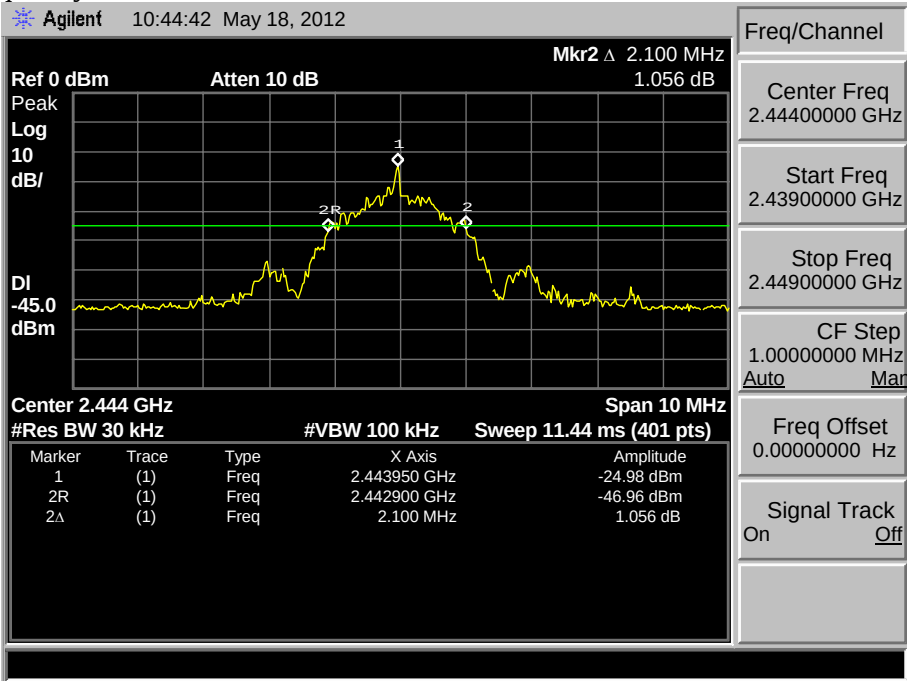
EUT: 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM		
M/N: AIO-860		
Test date:2012-05-11	Pressure:101.8 kpa	Humidity:54 %
Tested by: Tony.Tang	Test site: RF site	Temperature : 24.1 °C

Frequency	20% bandwidth (MHz)	Limit (KHz)
2404	2.125	N/A
2444	2.100	N/A
2479	2.075	N/A
Conclusion : PASS		

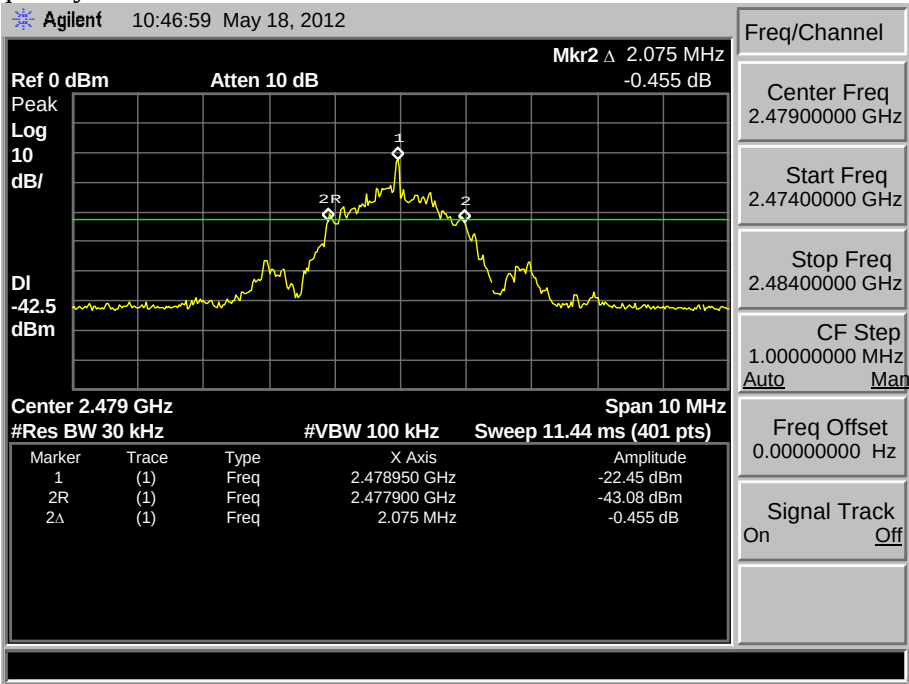
Test Frequency: 2404Hz



Test Frequency: 2444Hz



Test Frequency: 2479Hz



6. BAND EDGE COMPLIANCE TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4408B	MY44211139	May.02, 12	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	May.02, 12	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.02, 12	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.02, 12	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.02, 12	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.02, 12	1 Year

6.2. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3. Test Produce

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 upperband-edges of the emission:
 - (a) PEAK: RBW=1MHz ;VBW=3MHz, PK detector, Sweep=AUTO
 - (b) Average: RBW=1MHz ;VBW=10Hz, PK detector, Sweep=AUTO

6.4. Test Results

Pass (The testing data was attached in the next pages.)

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

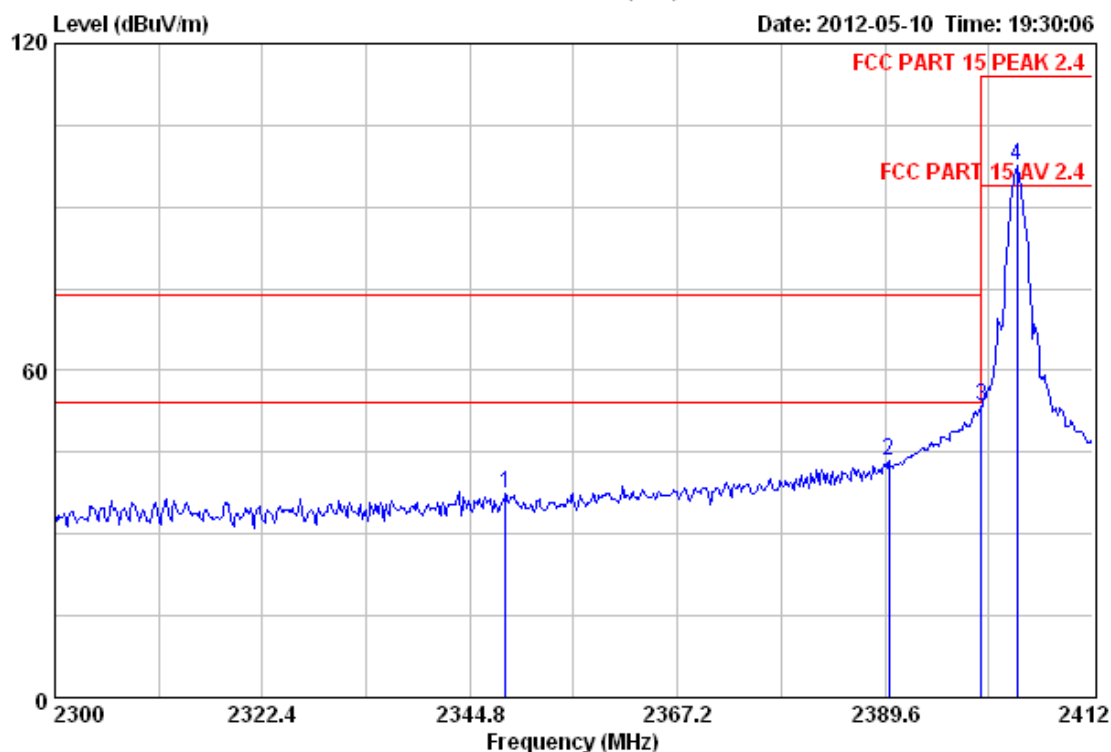
EST Technology

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Dongguan City, Guangdong, China
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Fax: +86-769-83081878

Data: 127

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 19:30:06



Site no. : 3m Chamber Data no. : 127
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1	2348.61	27.70	6.56	34.22	37.53	74.00	36.43	Peak
2	2390.00	27.64	6.62	34.19	43.26	74.00	30.67	Peak
3	2400.00	27.61	6.62	34.18	53.37	74.00	20.58	Peak
4	2403.82	27.61	6.64	34.18	97.63	114.00	16.30	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

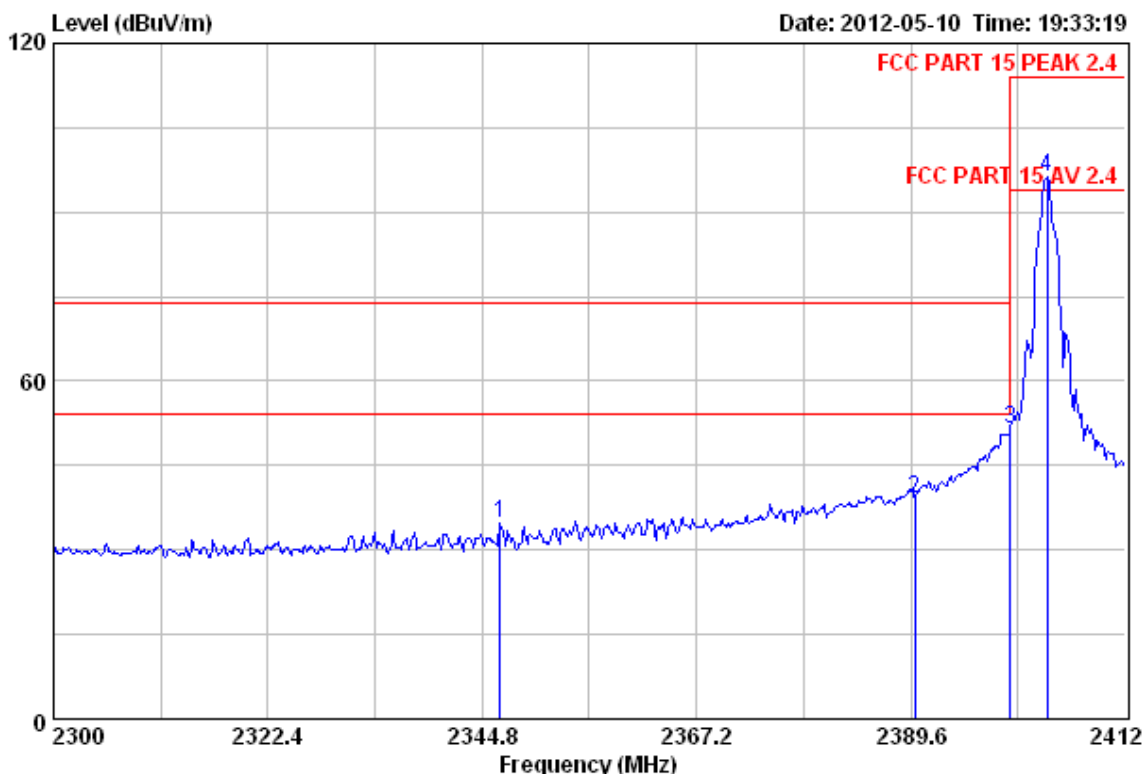
EST Technology

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Data: 128

File: D:\test data\2012\H\HAICHUAN.EMI (130)

Date: 2012-05-10 Time: 19:33:19



Site no. : 3m Chamber Data no. : 128
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2404MHz

	Freq. (MHz)	Ant.	Cable	Amp	Emission			Margin (dB)	Remark
		Factor (dB/m)	Loss (dB)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)		
1	2346.70	27.70	6.56	34.22	34.78	34.82	74.00	39.18	Peak
2	2390.00	27.64	6.62	34.19	39.17	39.24	74.00	34.76	Peak
3	2400.00	27.61	6.62	34.18	51.54	51.59	74.00	22.41	Peak
4	2403.82	27.61	6.64	34.18	96.15	96.22	114.00	17.78	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

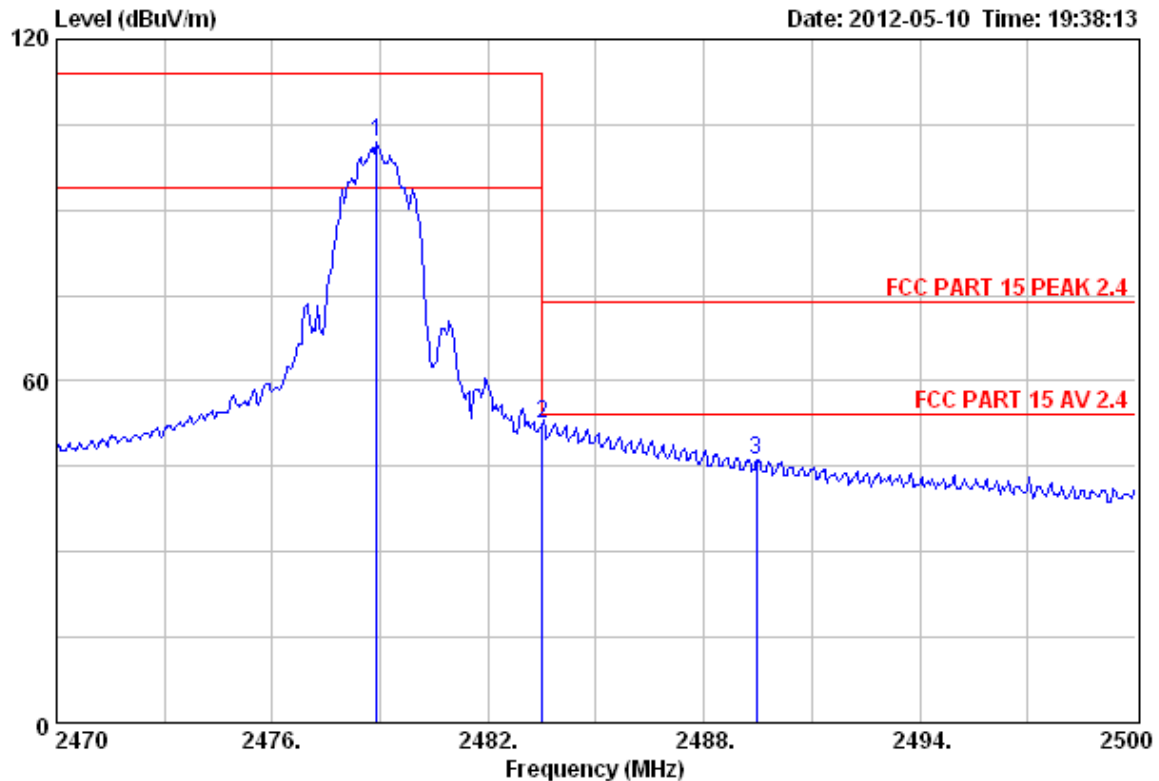
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Data: 129

File: D:\test data\2012\H\HAICHUAN.EMI (136)

Date: 2012-05-10 Time: 19:38:13



Site no. : 3m Chamber Data no. : 129
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

		Ant.	Cable	Amp	Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2478.91	27.58	6.71	34.03	101.73	101.99	114.00	12.01	Peak
2	2483.50	27.58	6.71	34.03	52.19	52.45	74.00	21.55	Peak
3	2489.47	27.58	6.73	34.03	45.82	46.10	74.00	27.90	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

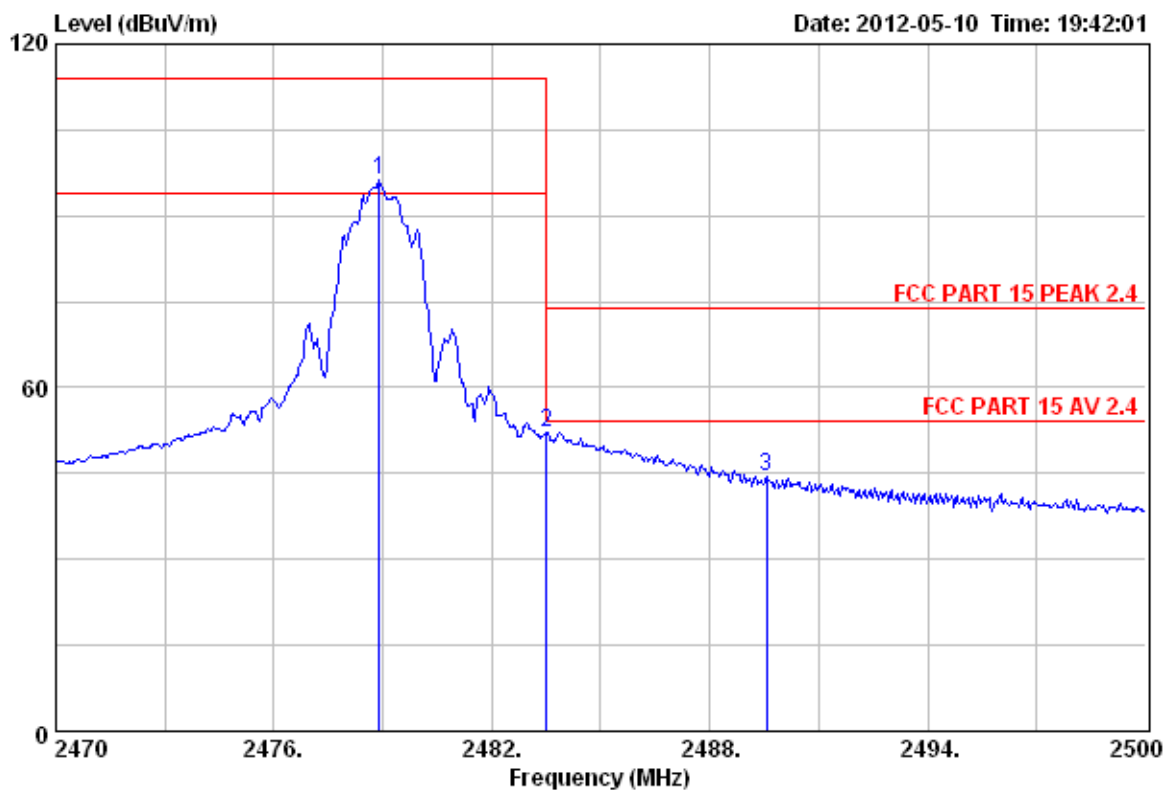
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Data: 130

File: D:\test data\2012\H\HAICHUAN.EMI (136)

Date: 2012-05-10 Time: 19:42:01



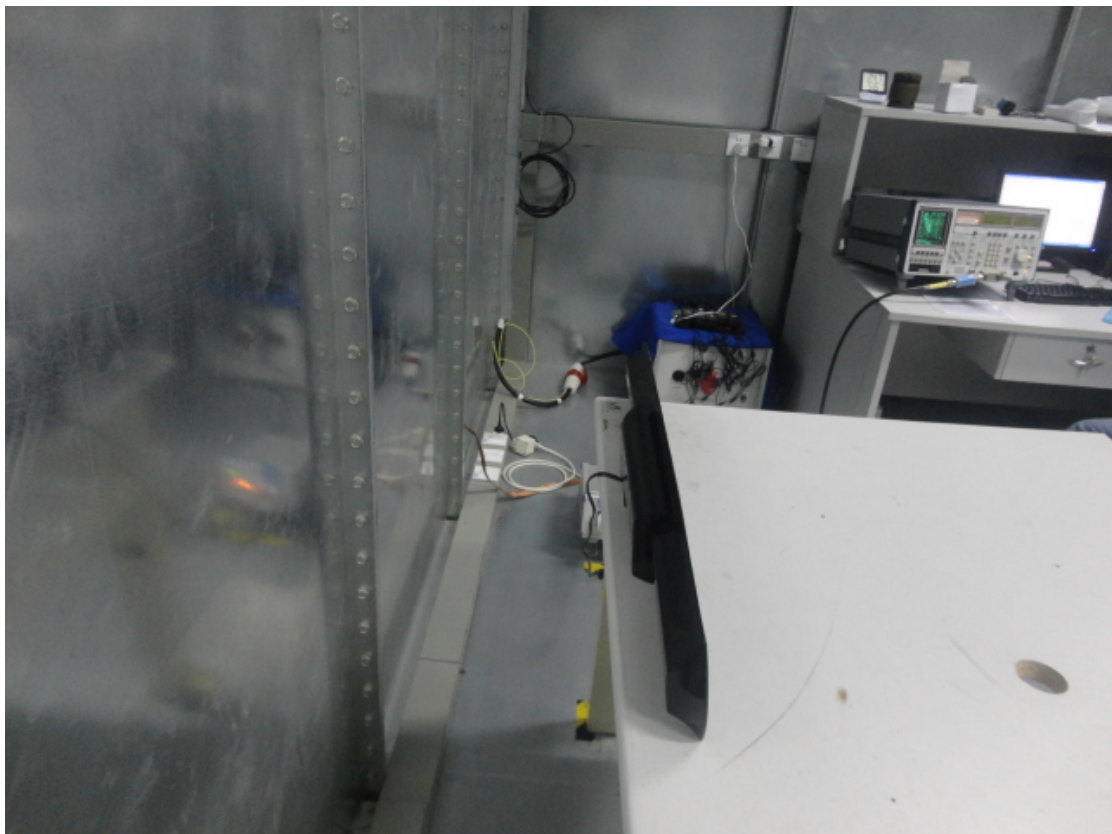
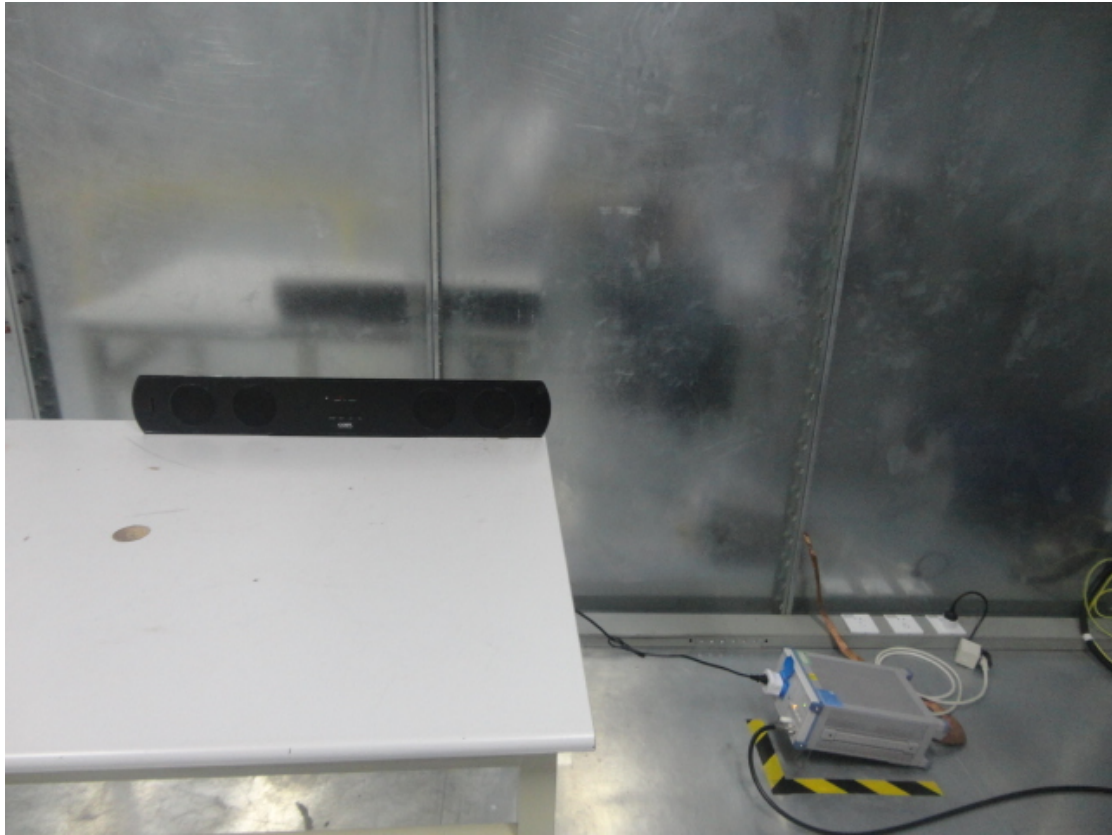
Site no. : 3m Chamber Data no. : 130
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15 PEAK 2.4
 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa
 Engineer : Tony
 EUT : 2.4G DIGITAL WIRELESS SOUNDBAR SYSTEM
 Power : AC 120V/60Hz
 M/N : AIO-860
 Test Mode : TX 2479MHz

		Ant.	Cable	Amp	Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2478.91	27.58	6.71	34.03	96.08	96.34	114.00	17.66	Peak
2	2483.50	27.58	6.71	34.03	51.78	52.04	74.00	21.96	Peak
3	2489.56	27.58	6.73	34.03	44.26	44.54	74.00	29.46	Peak

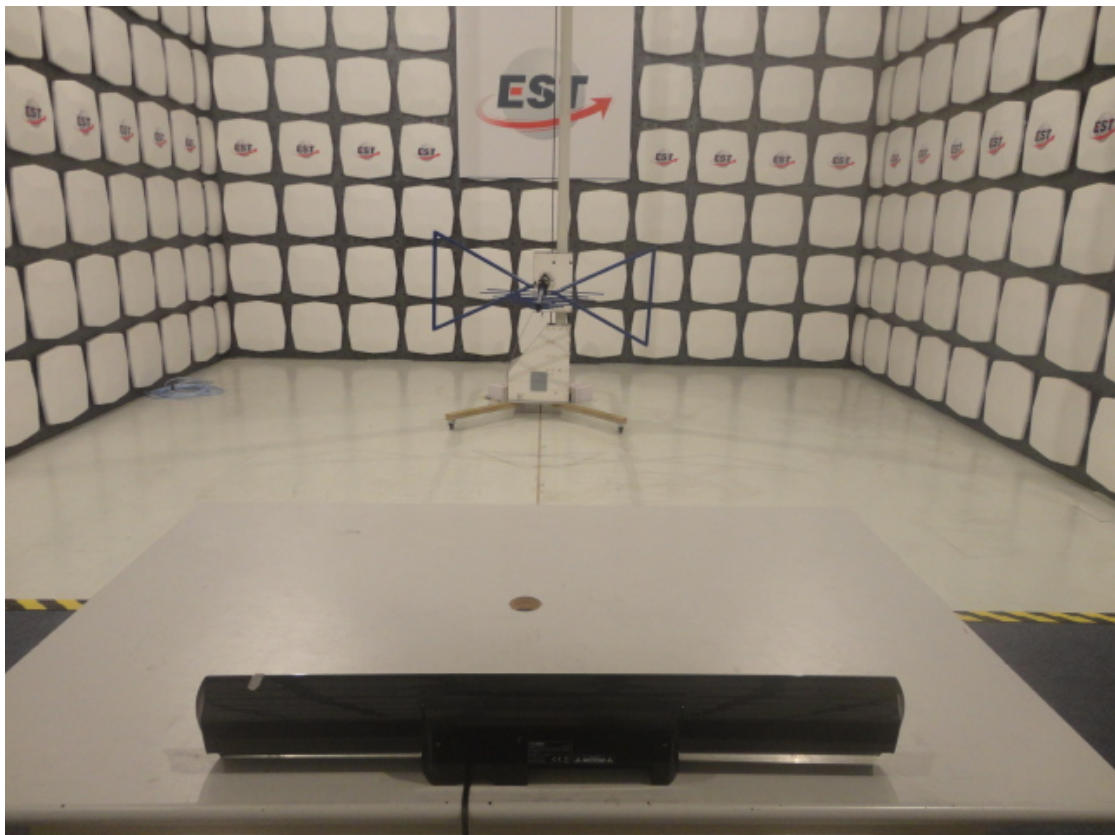
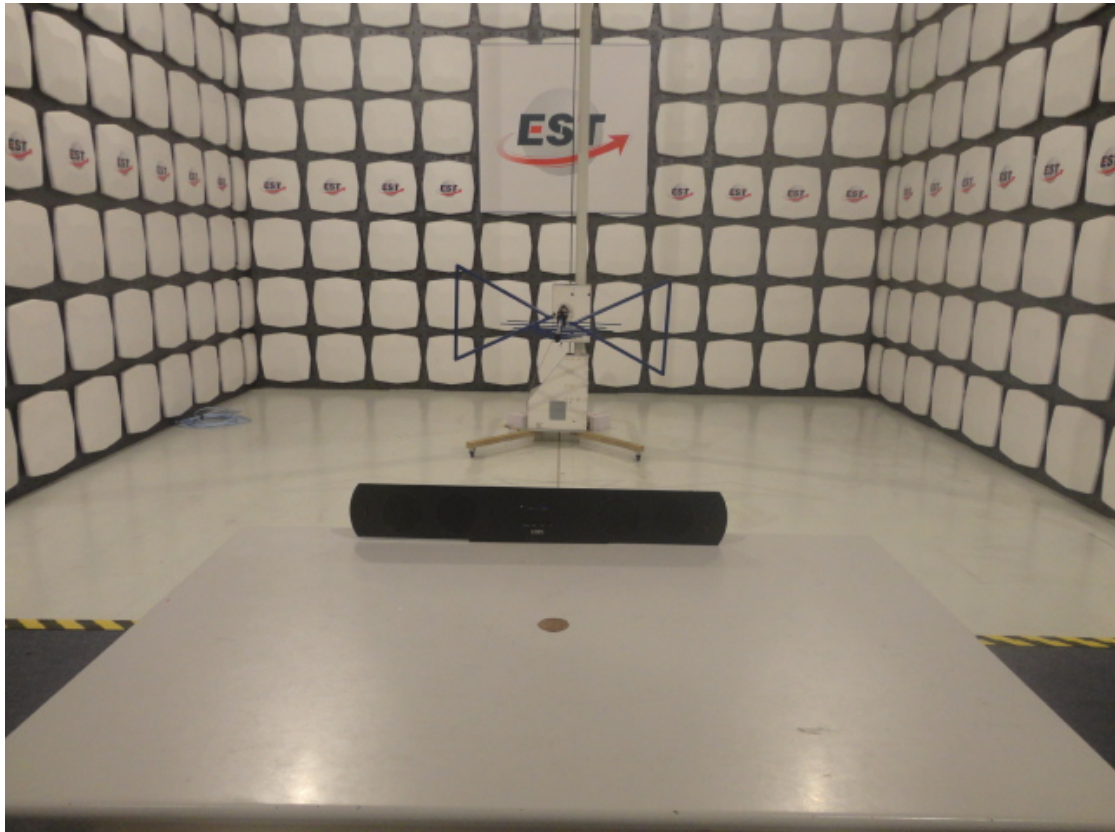
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

7. PHOTOGRAPH OF TEST

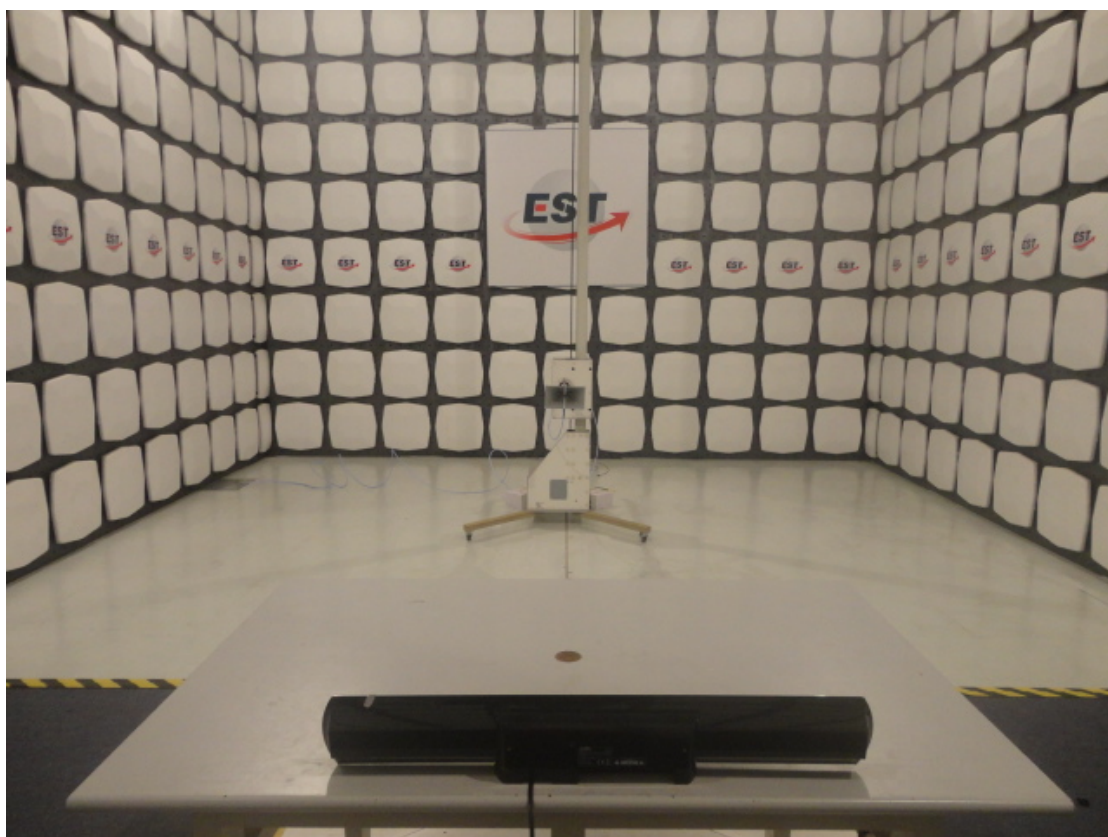
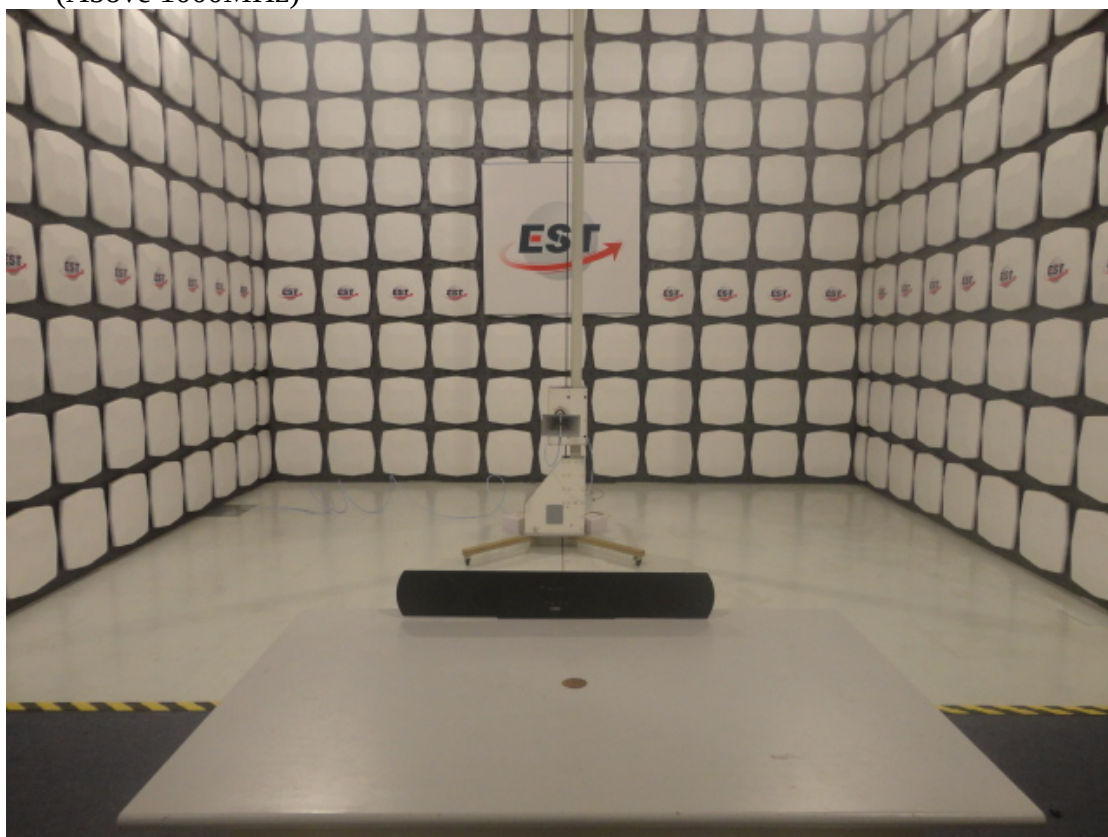
7.1.Photos of Conducted Emission Test (0.15-30MHz)



7.2.Photos of Radiated Emission Test (30-1000MHz)



(Above 1000MHz)



8. PHOTOGRAPH OF EUT

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
General Appearance of the EUT



Figure 4
Component Side of the PCB

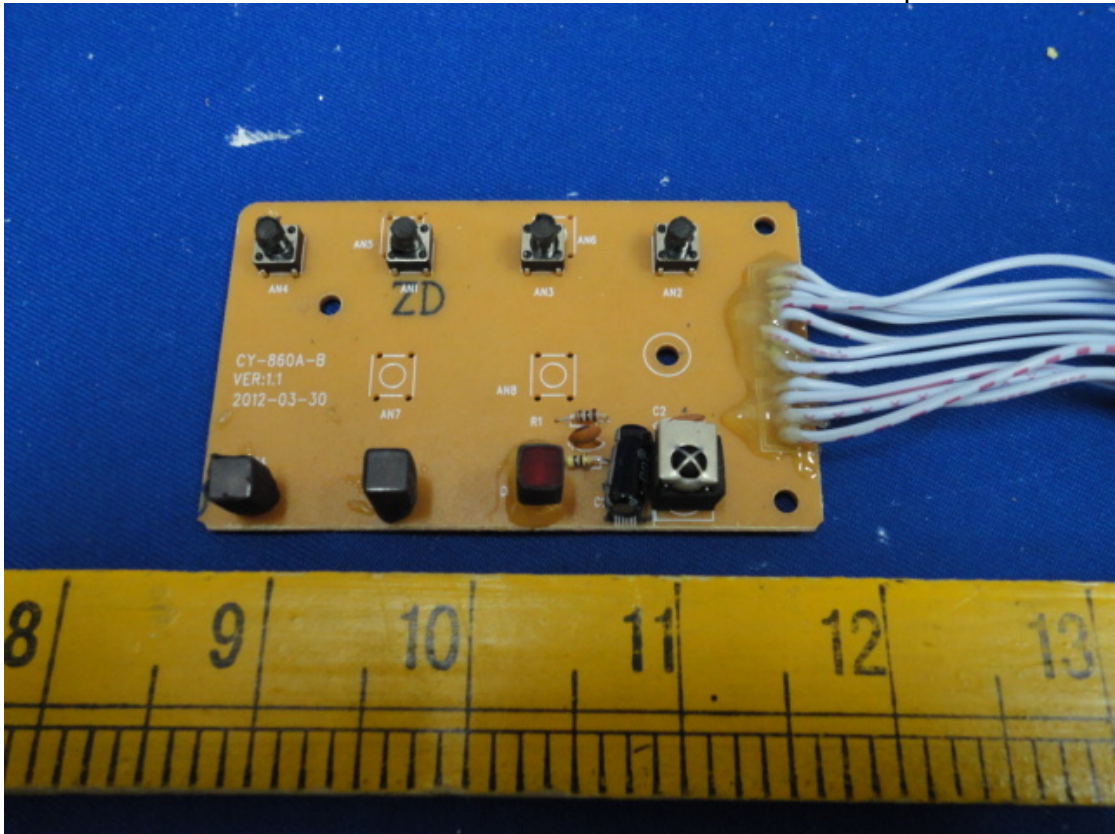


Figure 5
Component Side of the PCB

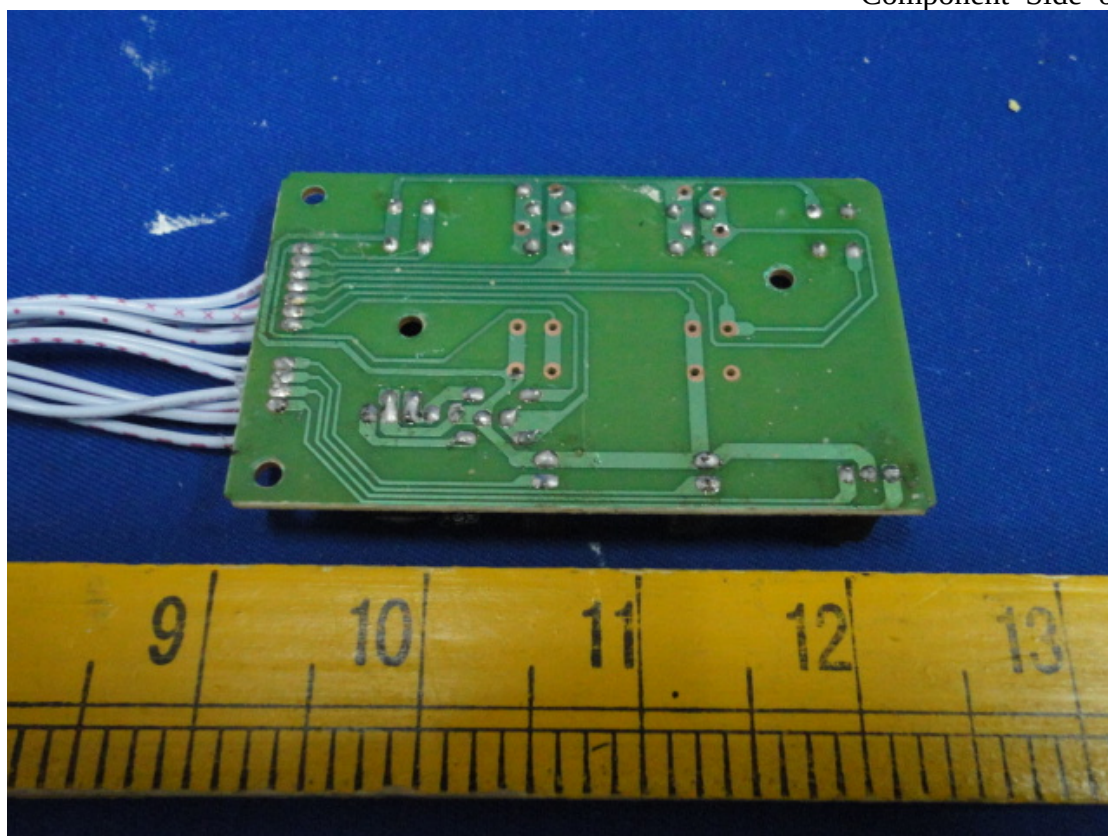


Figure 6
Component Side of the PCB



Figure 7
Component Side of the PCB

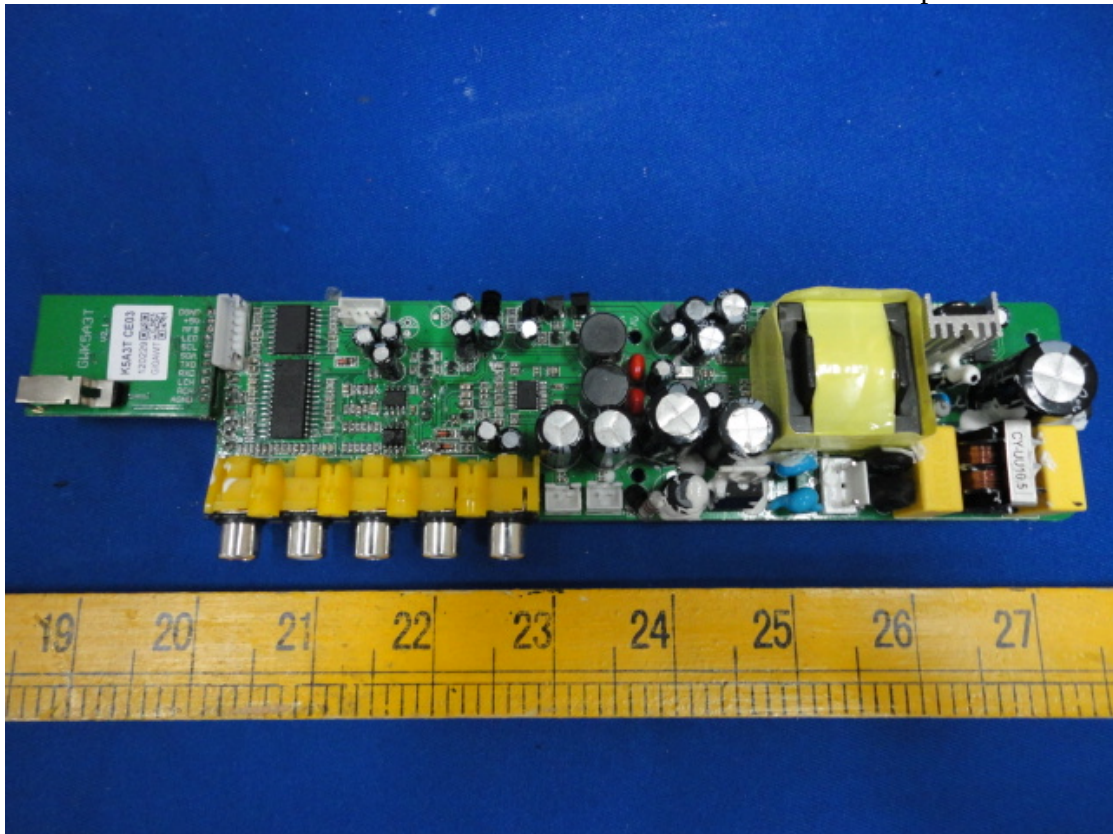
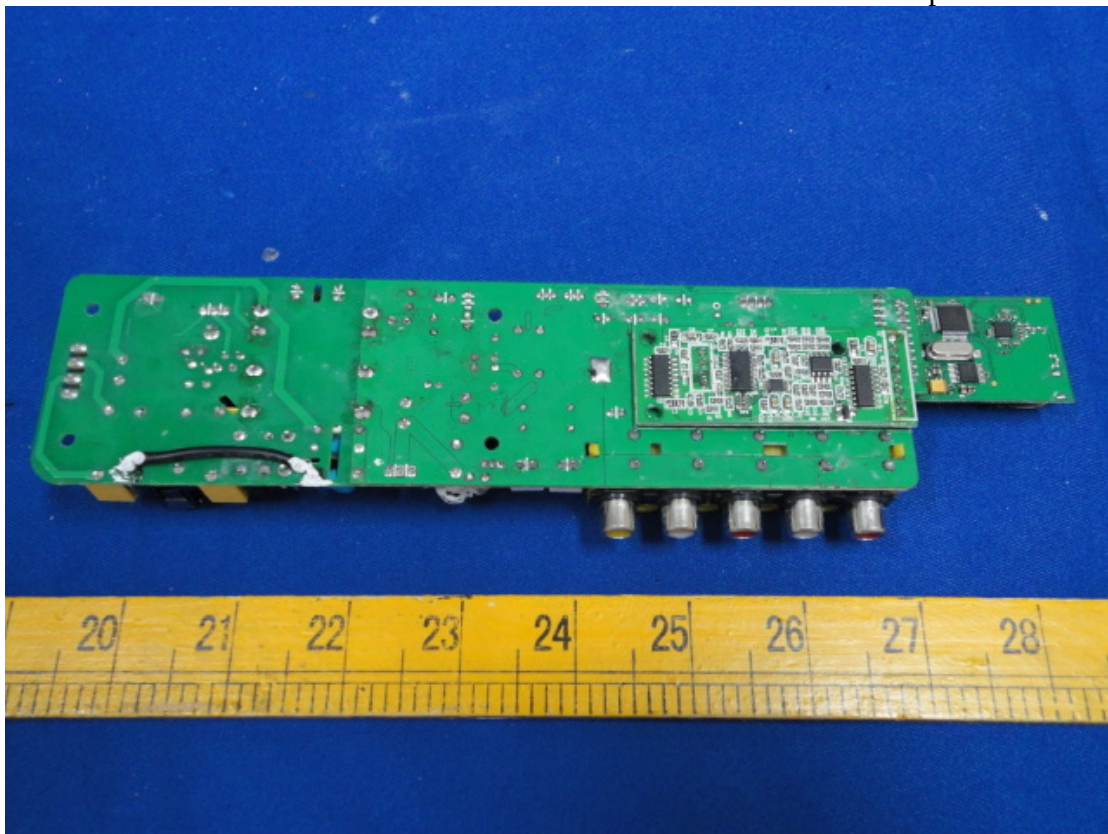


Figure 8
Component Side of the PCB



<End Of Report>