

FCC PART 15C TEST REPORT FOR CERTIFICATION  
On Behalf of

Polk Audio

SOUNDBAR 5500 SYSTEM

Model Number: SPEAKER ASSY SB5500

FCC ID: WLQSB5500TX

Prepared for : Polk Audio

5601 Metro Drive, Baltimore, Maryland, United States, 21215

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Report Number: ESTE-R1407029

Date of Test : July 03 ~ 28, 2014

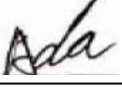
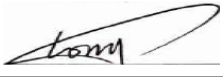

Date of Report : July 31, 2014

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## Test Report Verification

|  |  |   |                    |
|--|--|---|--------------------|
| <b>Applicant:</b>  | Polk Audio   |   |                    |
| <b>Address:</b>  | 5601 Metro Drive, Baltimore, Maryland, United States, 21215  |   |                    |
| <b>Manufacturer Address:</b>   | Zhao Yang Electronic (Shenzhen) Co.,Ltd<br>Section A, 4th Floor, Building 1& Building 2, De Yong Jia Industrial Park,<br>Guang Qiao Road, Yu Lv Community, Gong Ming Street, Guang Ming New District, Shenzhen   |   |                    |
| <b>E.U.T:</b>  | SOUNDBAR 5500 SYSTEM   |   |                    |
| <b>Model Number:</b>   | SPEAKER ASSY SB5500  |   |                    |
| <b>Power Supply:</b>   | DC 20V From Adapter Input AC 100-240V~50/60Hz  |   |                    |
| <b>Test Voltage:</b>   | DC 20V From Adapter Input AC 120V/60Hz   |   |                    |
| <b>Trade Name:</b>   | Polk   | Serial No.:   | -----              |
| <b>Date of Receipt:</b>  | July 03, 2014  | <b>Date of Test:</b>  | July 03 ~ 28, 2014 |
| <b>Test Specification:</b>   | FCC Rules and Regulations Part 15 Subpart C:2013<br>ANSI C63.4:2009  |   |                    |
| <b>Test Result:</b>  | <p>The device described above is tested by EST Technology Co., Ltd.. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the ETSI EN FCC Rules and Regulations Part 15 Subpart C requirements.</p> <p>This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd.</p> <p style="text-align: right;">Date: July 31, 2014</p> |   |                    |
| Prepared by:   | Tested by:   | Approved by:  |                    |
| <br><hr style="width: 100%;"/>  | <br><hr style="width: 100%;"/>  | <br><hr style="width: 100%;"/> |                    |
| Ada / Assistant  | Tony.Tang/ Engineer  | IcemanHu / Manager  |                    |
| <b>Other Aspects:</b>  | None.  |   |                    |
| <i>Abbreviations: OK/P=passed    fail/F=failed    n.a/N=not applicable    E.U.T=equipment under tested</i>   |  |   |                    |
| <i>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.</i> |  |   |                    |

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

|                            |   |                                |
|----------------------------|---|--------------------------------|
| <b>Product Name</b>        | : | SOUNDBAR 5500 SYSTEM           |
| <b>Model Number</b>        | : | SPEAKER ASSY SB5500            |
| <b>FCC ID</b>              | : | WLQSB5500TX                    |
| <b>Operation frequency</b> | : | 2403.5MHz~2477.3MHz            |
| <b>Number of channel</b>   | : | 49                             |
| <b>Antenna</b>             | : | Internal antenna, 3.3 dBi gain |
| <b>Modulation</b>          | : | FHSS (GFSK)                    |
| <b>Sample Type</b>         | : | Prototype production           |

## 2. SUMMARY OF TEST

### 2.1. Summary of test result

| Description of Test Item       | Standard   | Results |
|--------------------------------|--|---------|
| Maximum Peak Output Power      | FCC Part 15: 15.247(b)(1)<br>DA 00-705   | PASS    |
| 20dB Bandwidth                 | FCC Part 15: 15.215<br>DA 00-705   | PASS    |
| Carrier Frequency Separation   | FCC Part 15: 15.247(a)(1)<br>DA 00-705   | PASS    |
| Number Of Hopping Channel      | FCC Part 15: 15.247(a)(1)(iii)<br>DA 00-705                                    | PASS    |
| Dwell Time                     | FCC Part 15: 15.247(a)(1)(iii)<br>DA 00-705                                    | PASS    |
| Radiated Emission              | FCC Part 15: 15.209<br>FCC Part 15: 15.247(d)<br>ANSI C63.4: 2009<br>DA 00-705 | PASS    |
| Band Edge Compliance           | FCC Part 15: 15.247(d)<br>DA 00-705  | PASS    |
| Power Line Conducted Emissions | FCC Part 15: 15.207<br>ANSI C63.4: 2009<br>DA 00-705                           | PASS    |
| Antenna requirement            | FCC Part 15: 15.203  | PASS    |

## 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: November 20, 2013

                          Certificated by Industry Canada  
                          Registration No.: 46405-9405  
                          Test Side Number: 9405A-1  
                          Date of registration: January 03, 2013

                          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

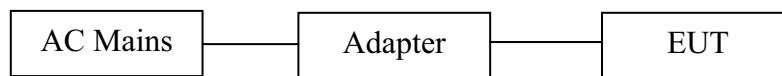
## 2.3. Assistant equipment used for test

### 2.3.1. Adapter

|        |   |                     |            |
|--------|---|---------------------|------------|
| M/N    | : | S065BP2000220       |            |
| Input  | : | AC 100-240V~50/60Hz | 1800mA Max |
| Output | : | DC 20V/2200mA       |            |

## 2.4. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 meter high above ground. EUT was be set into BT test mode by software before test.



(EUT: SOUNDBAR 5500 SYSTEM)



## 2.5. Test mode

The test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode

| Mode | Channel | Frequency |
|------|---------|-----------|
| GFSK | Low     | 2403.5MHz |
|      | Middle  | 2440.4MHz |
|      | High    | 2477.3MHz |

## 2.6. Channel List for FHSS

|    |        |    |        |
|----|--------|----|--------|
| 1  | 2.4035 | 26 | 2.4420 |
| 2  | 2.4051 | 27 | 2.4435 |
| 3  | 2.4066 | 28 | 2.4450 |
| 4  | 2.4081 | 29 | 2.4466 |
| 5  | 2.4097 | 30 | 2.4481 |
| 6  | 2.4112 | 31 | 2.4496 |
| 7  | 2.4128 | 32 | 2.4512 |
| 8  | 2.4143 | 33 | 2.4527 |
| 9  | 2.4158 | 34 | 2.4543 |
| 10 | 2.4174 | 35 | 2.4558 |
| 11 | 2.4189 | 36 | 2.4573 |
| 12 | 2.4204 | 37 | 2.4589 |
| 13 | 2.4220 | 38 | 2.4604 |
| 14 | 2.4235 | 39 | 2.4619 |
| 15 | 2.4251 | 40 | 2.4635 |
| 16 | 2.4266 | 41 | 2.4650 |
| 17 | 2.4281 | 42 | 2.4666 |
| 18 | 2.4297 | 43 | 2.4681 |
| 19 | 2.4312 | 44 | 2.4696 |
| 20 | 2.4327 | 45 | 2.4712 |
| 21 | 2.4343 | 46 | 2.4727 |
| 22 | 2.4358 | 47 | 2.4742 |
| 23 | 2.4374 | 48 | 2.4758 |
| 24 | 2.4389 | 49 | 2.4773 |
| 25 | 2.4404 |    |        |

## 2.7. Test Equipment

### 2.7.1. For conducted emission test

| Equipment               | Manufacturer    | Model No. | Serial No. | Last Cal.  | Next Cal. |
|-------------------------|-----------------|-----------|------------|------------|-----------|
| EMI Test Receiver       | Rohde & Schwarz | ESHS30    | 832354     | June,28,14 | 1 Year    |
| Artificial Mains Networ | Rohde & Schwarz | ENV216    | 101260     | June,28,14 | 1 Year    |
| Pulse Limiter           | Rohde & Schwarz | ESH3-Z2   | 101100     | June,28,14 | 1 Year    |

### 2.7.2. For radiated emission test(30-1000MHz)

| Equipment         | Manufacturer    | Model No. | Serial No. | Last Cal.  | Next Cal. |
|-------------------|-----------------|-----------|------------|------------|-----------|
| EMI Test Receiver | Rohde & Schwarz | ESVS10    | 100004     | June,28,14 | 1 Year    |
| Spectrum Analyzer | Agilent         | E4411B    | MY50140697 | June,28,14 | 1 Year    |
| Bilog Antenna     | Teseq           | CBL 6111D | 27090      | June,28,14 | 1 Year    |
| Signal Amplifier  | Agilent         | 310N      | 187037     | June,28,14 | 1 Year    |

### 2.7.3. For radiated emission test(above 1GHz)

| Equipment         | Manufacturer    | Model No.   | Serial No.    | Last Cal.  | Next Cal. |
|-------------------|-----------------|-------------|---------------|------------|-----------|
| Horn Antenna      | SCHWARZB<br>ECK | BBHA 9120 D | BBHA9120D1002 | June,28,14 | 1 Year    |
| Signal Amplifier  | SCHWARZB<br>ECK | BBV9718     | 9718-212      | June,28,14 | 1 Year    |
| Spectrum Analyzer | Agilent         | E4408B      | MY44211139    | June,28,14 | 1 Year    |
| RF Cable          | Hubersuhner     | RG 214/U    | 513423        | June,28,14 | 1 Year    |

### 3. MAXIMUM PEAK OUTPUT POWER

#### 3.1. Limit

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, the e.i.r.p shall not exceed 4W

#### 3.2. Test Procedure

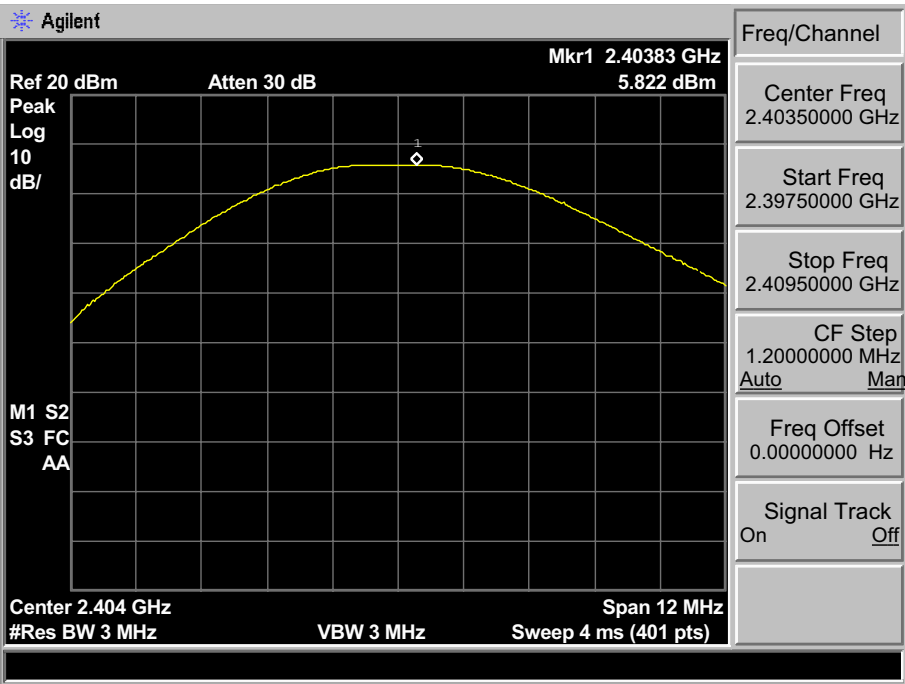
The transmitter output (antenna port) was connected to the spectrum analyzer

#### 3.3. Test Result

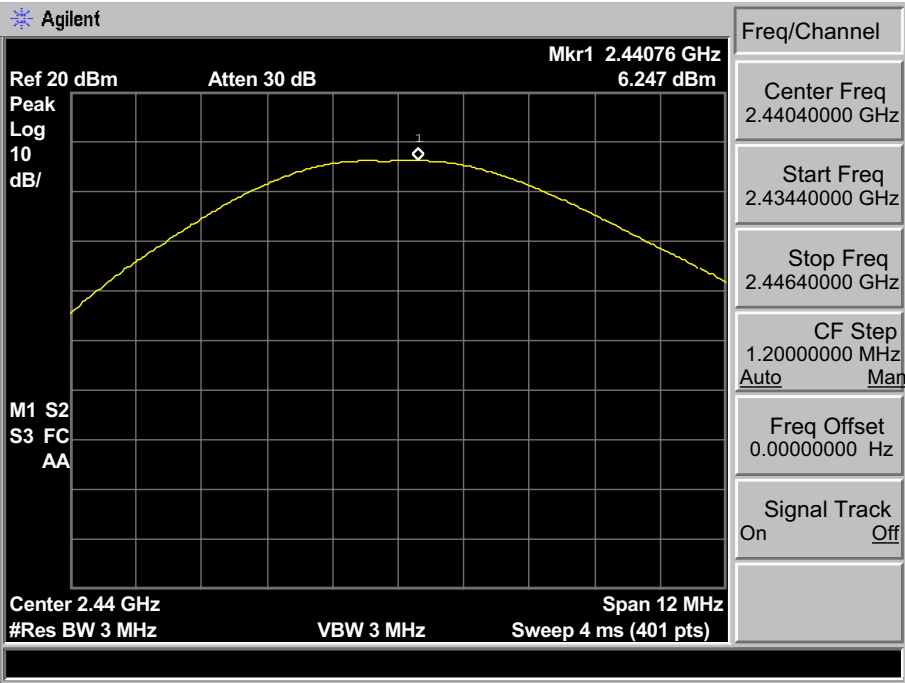
| EUT: SOUNDBAR 5500 SYSTEM |            |                    |       |                      |             |
|---------------------------|------------|--------------------|-------|----------------------|-------------|
| M/N: SPEAKER ASSY SB5500  |            |                    |       |                      |             |
| Test date: 2014-07-25     |            | Test site: RF site |       | Tested by: Tony Tang |             |
| Mode                      | Freq (MHz) | Result (dBm)       | Limit |                      | Margin (dB) |
|                           |            |                    | dBm   | W                    |             |
| GFSK                      | 2403.5     | 5.822              | 21.00 | 0.125                | 15.178      |
|                           | 2440.4     | 6.247              | 21.00 | 0.125                | 14.753      |
|                           | 2477.3     | 5.457              | 21.00 | 0.125                | 15.543      |
| Conclusion: PASS          |            |                    |       |                      |             |

3.4. Test Data

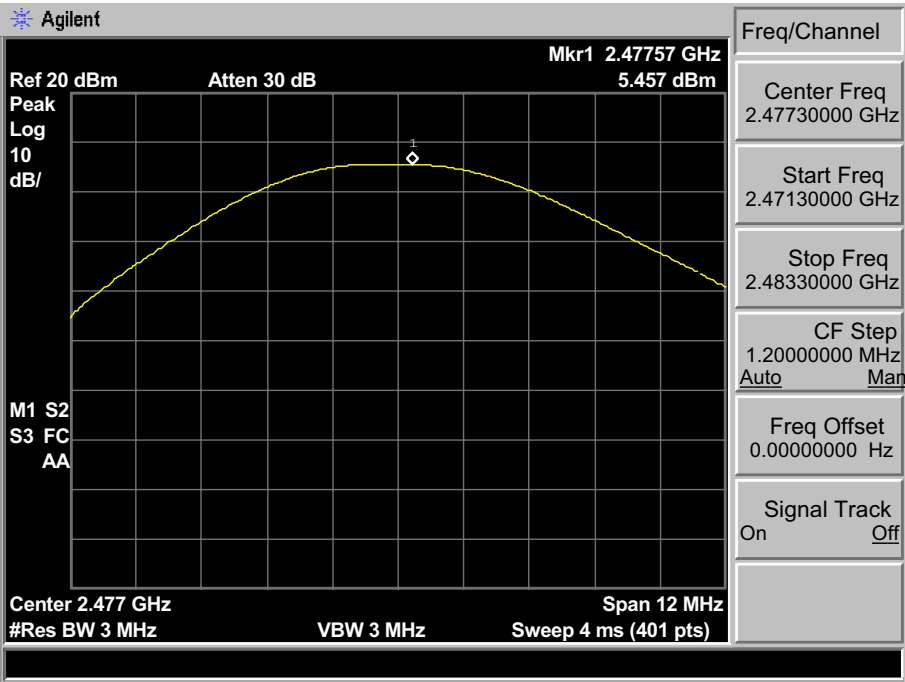
GFSK 2403.5 MHz



GFSK 2440.4 MHz



GFSK 2477.3 MHz



## 4. 20 DB BANDWIDTH

### 4.1. 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.

### 4.2. Test Procedure

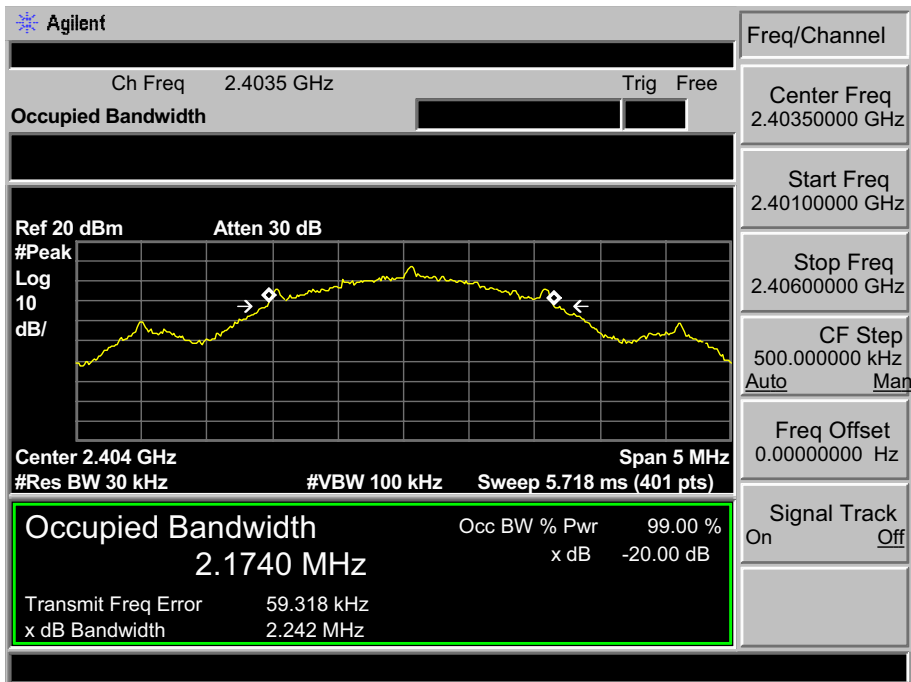
The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

### 4.3. Test Result

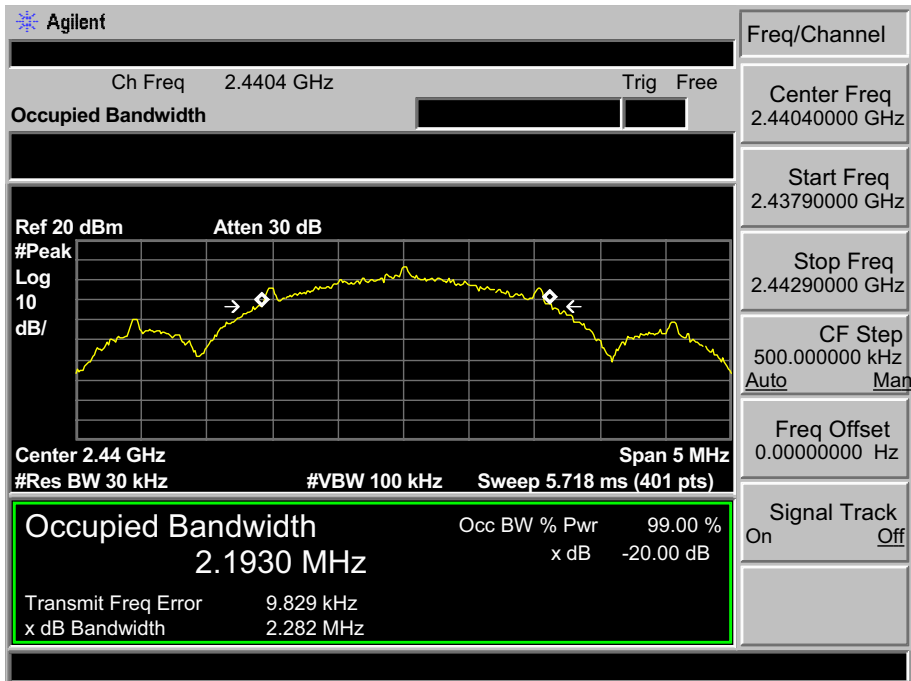
| EUT: SOUNDBAR 5500 SYSTEM |            |                      |             |                      |
|---------------------------|------------|----------------------|-------------|----------------------|
| M/N: SPEAKER ASSY SB5500  |            |                      |             |                      |
| Test date: 2014-07-25     |            | Test site: RF site   |             | Tested by: Tony Tang |
| Mode                      | Freq (MHz) | 20dB Bandwidth (MHz) | Limit (kHz) | Conclusion           |
| GFSK                      | 2403.5     | 2.242                | /           | PASS                 |
|                           | 2440.4     | 2.282                | /           | PASS                 |
|                           | 2477.3     | 2.210                | /           | PASS                 |

4.4. Test Data

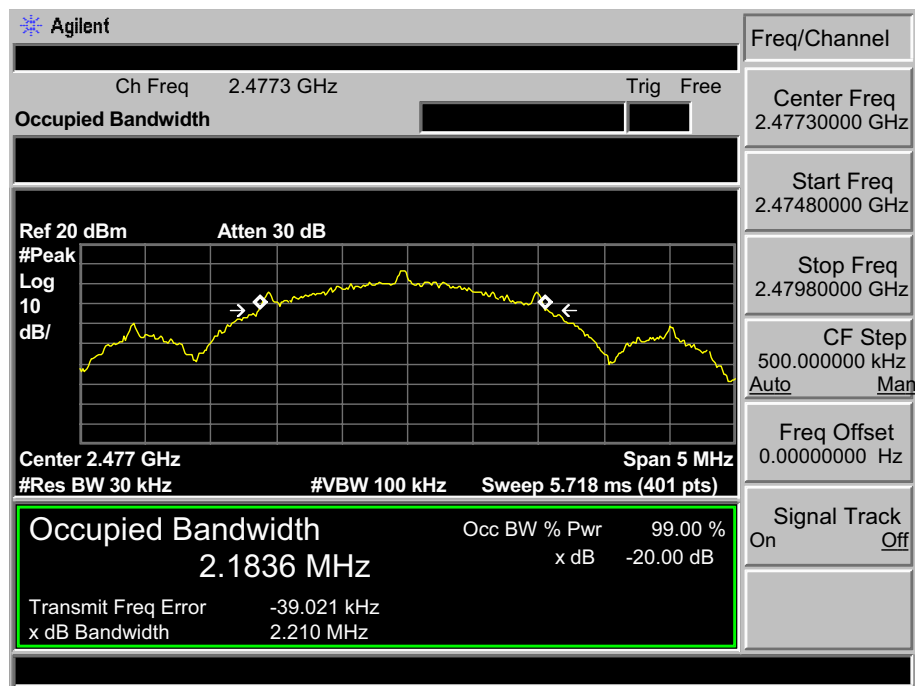
GFSK 2403.5MHz



GFSK 2440.4MHz



GFSK 2477.3MHz





## 5. CARRIER FREQUENCY SEPARATION

### 5.1. Limit

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

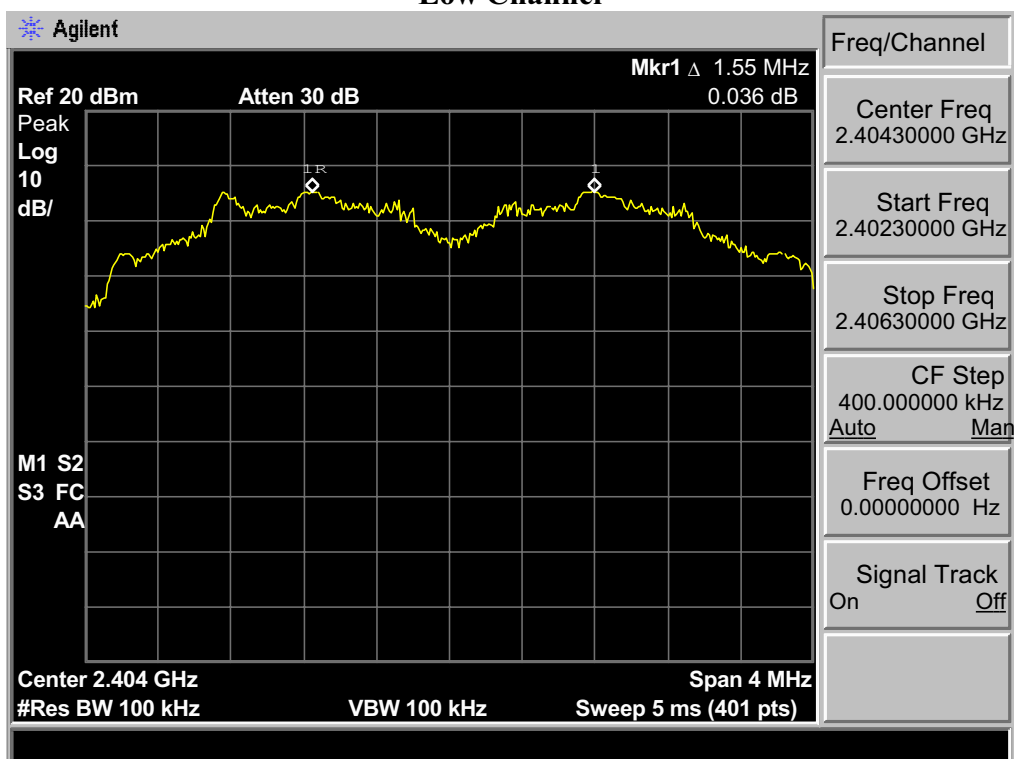
### 5.2. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a antenna. The carrier frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW.

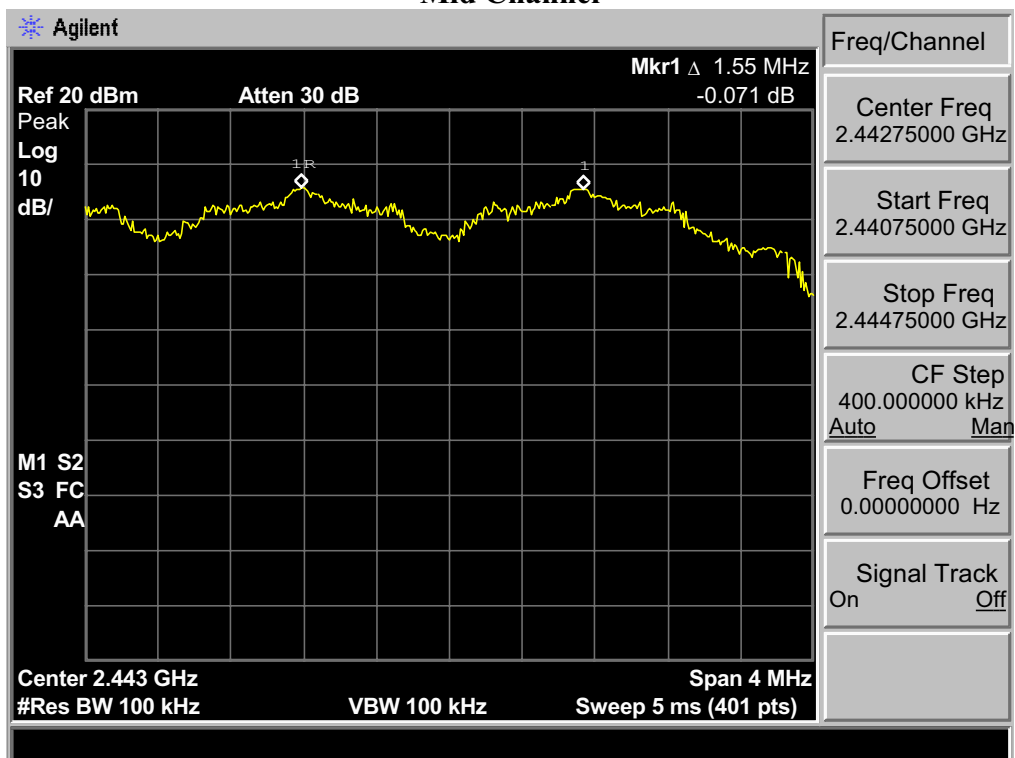
### 5.3. Test Result

| EUT: SOUNDBAR 5500 SYSTEM |         |                          |   |                      |
|---------------------------|---------|--------------------------|---|----------------------|
| M/N: SPEAKER ASSY SB5500  |         |                          |   |                      |
| Test date: 2014-07-25     |         | Test site: RF site       |   | Tested by: Tony Tang |
| Mode                      | Channel | Channel separation (MHz) | Limit   | Conclusion           |
| GFSK                      | Low CH  | 1.55                     | > 2/3 of the 20dB Bandwidth or 25[kHz]( whichever is greater) | PASS                 |
|                           | Mid CH  | 1.55                     |   | PASS                 |
|                           | High CH | 1.53                     |   | PASS                 |

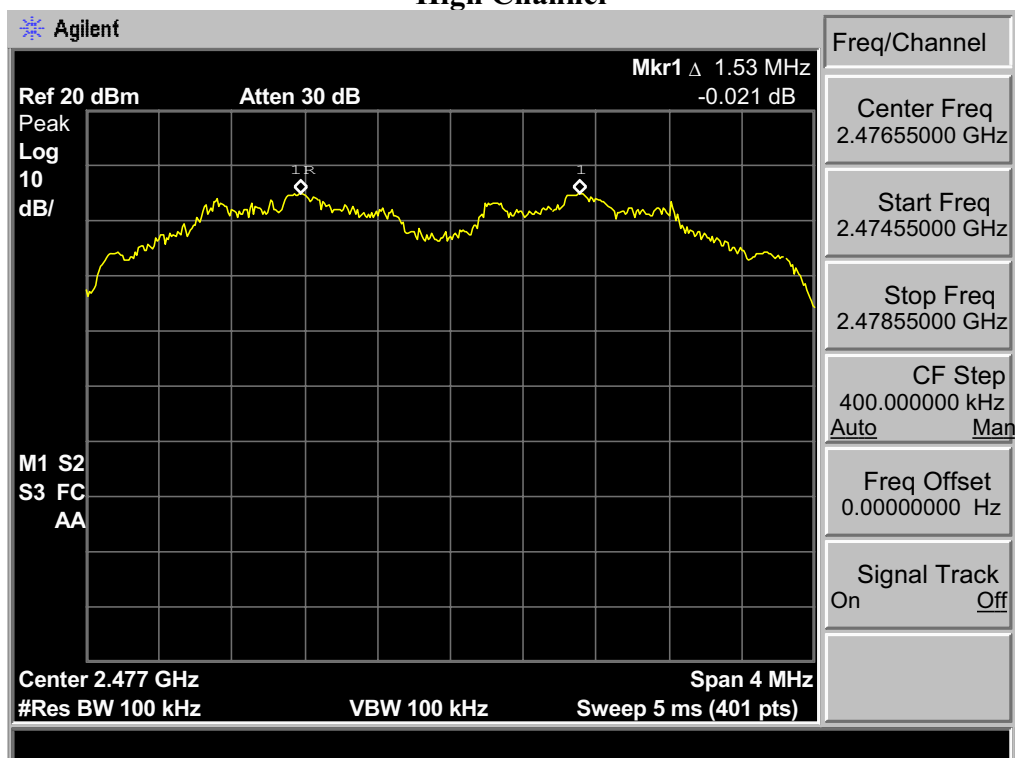
## 5.4. Test Data

GFSK  
Low Channel

## Mid Channel



## High Channel



## 6. NUMBER OF HOPPING CHANNEL

### 6.1. Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels

### 6.2. Test Procedure

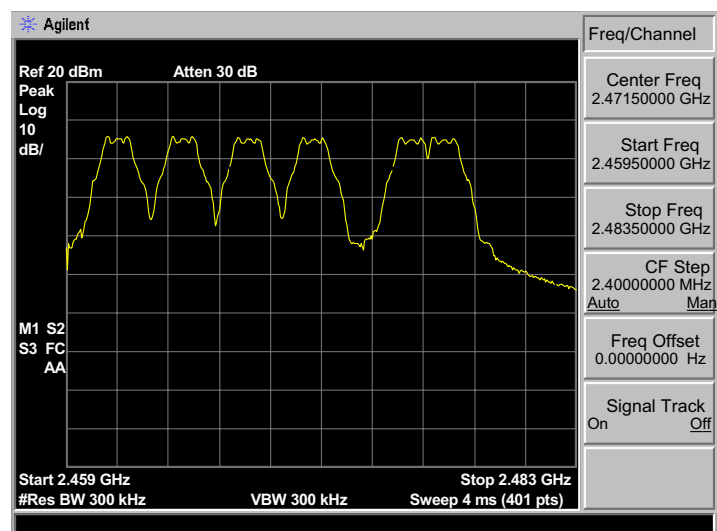
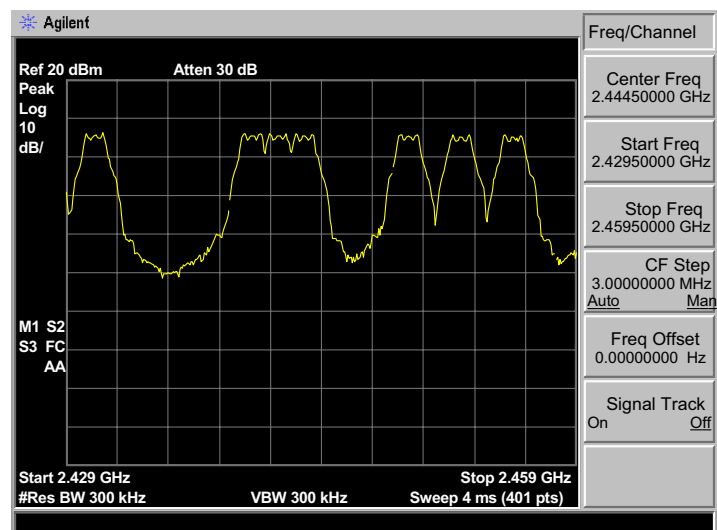
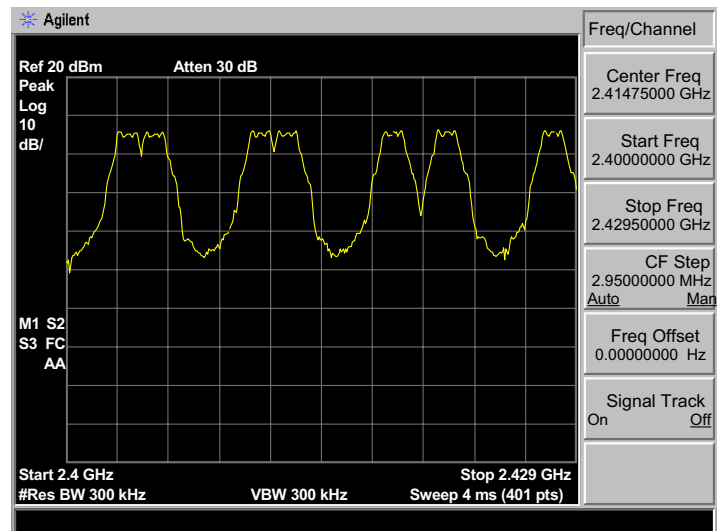
The transmitter output was coupled to a spectrum analyzer via a antenna. The number of hopping channel was measured by spectrum analyzer with 300kHz RBW and 300kHz VBW.

### 6.3. Test Result

|                           |                           |                    |                      |
|---------------------------|---------------------------|--------------------|----------------------|
| EUT: SOUNDBAR 5500 SYSTEM |                           |                    |                      |
| M/N: SPEAKER ASSY SB5500  |                           |                    |                      |
| Test date: 2014-07-25     |                           | Test site: RF site | Tested by: Tony.Tang |
| Mode                      | Number of hopping channel | Limit              | Conclusion           |
| GFSK                      | 20                        | >15                | PASS                 |

## 6.4. Test Data

## GFSK



## 7. DWELL TIME

### 7.1. Limit

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.

### 7.2. Test procedure

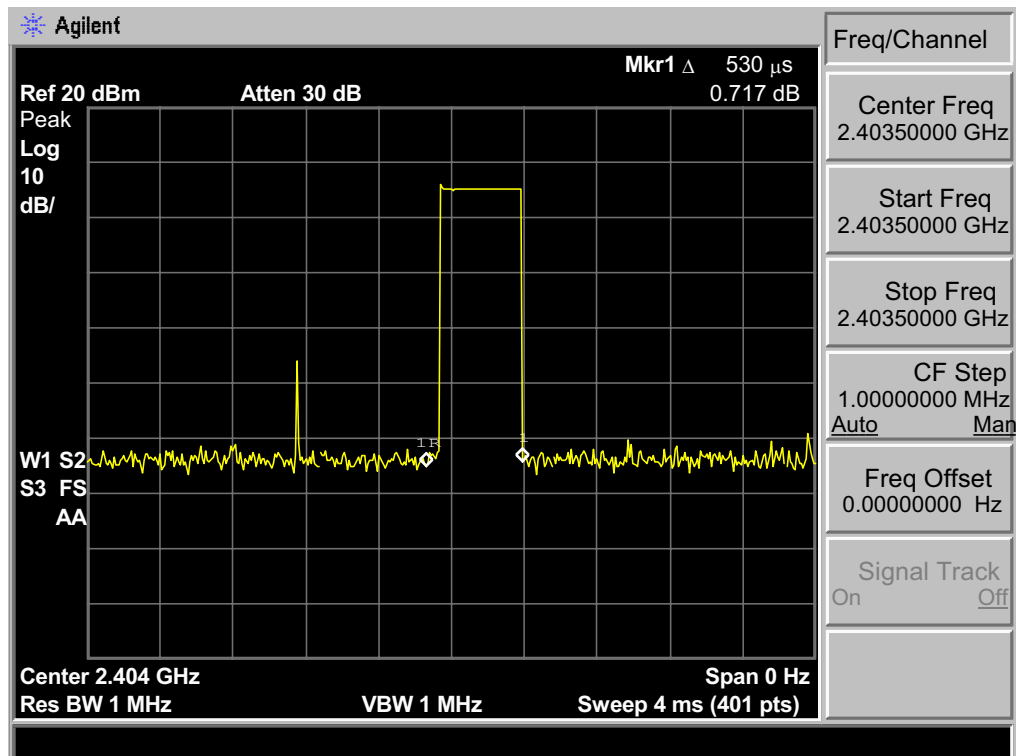
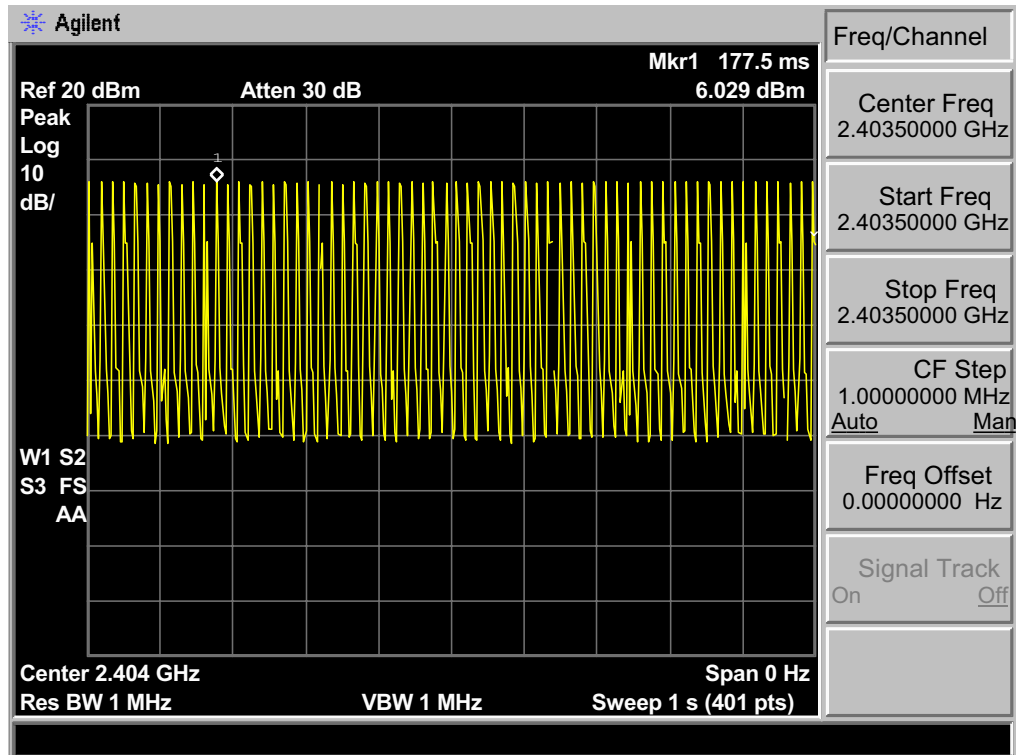
1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.
2. Set the EUT to proper test mode with relative test software and hardware.
3. Spectrum analyzer setting: Centered Frequency = measured channel, RBW = 1MHz, VBW= 1MHz, Frequency Span = 0 Hz.
4. Set sweep time properly to capture the entire dwell time per hopping channel.
5. Set detector type to Peak and trace mode to Max Hold and make the measurement.
6. Repeat step 3-5 until all channels measured were complete.

### 7.3. Test Result

|                           |                 |                    |                      |
|---------------------------|-----------------|--------------------|----------------------|
| EUT: SOUNDBAR 5500 SYSTEM |                 |                    |                      |
| M/N: SPEAKER ASSY SB5500  |                 |                    |                      |
| Test date: 2014-07-25     |                 | Test site: RF site | Tested by: Tony Tang |
| Mode                      | Dwell time (ms) | Limit              | Conclusion           |
| GFSK                      | 271.36          | <400ms             | PASS                 |

## 7.4. Test Data

**GFSK DH1 :  $64\text{hop}/1\text{s} * 0.4 * 20 * 0.53\text{ms} = 271.36$**



## 8. RADIATED EMISSIONS

### 8.1. Limit

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

#### 15.205 Restricted frequency band

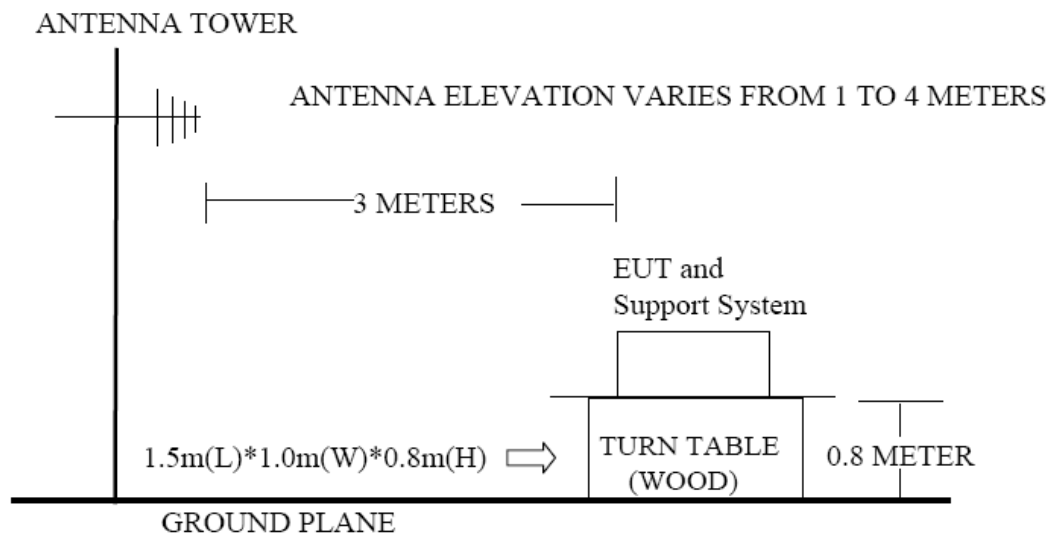
| MHz                        | MHz                   | MHz             | GHz              |
|----------------------------|-----------------------|-----------------|------------------|
| 0.090 - 0.110              | 16.42 - 16.423        | 399.9 - 410     | 4.5 - 5.15       |
| <sup>1</sup> 0.495 - 0.505 | 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     | ( <sup>2</sup> ) |

#### 15.209 Limit

| FREQUENCY<br>MHz | DISTANCE<br>Meters | FIELD STRENGTHS LIMIT                           |          |
|------------------|--------------------|---|----------|
|                  |                    | μV/m  | dB(μV)/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 1000       | 3                  | 74.0 dB(μV)/m (Peak)<br>54.0 dB(μV)/m (Average) |          |



## 8.2. Block Diagram of Test setup



## 8.3. Test Procedure

EUT was 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. Power on the EUT and let it working in test mode, then test it. 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. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

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

The frequency range from 30MHz to 10th harmonic (25GHz) are checked.

## 8.4. Test Result

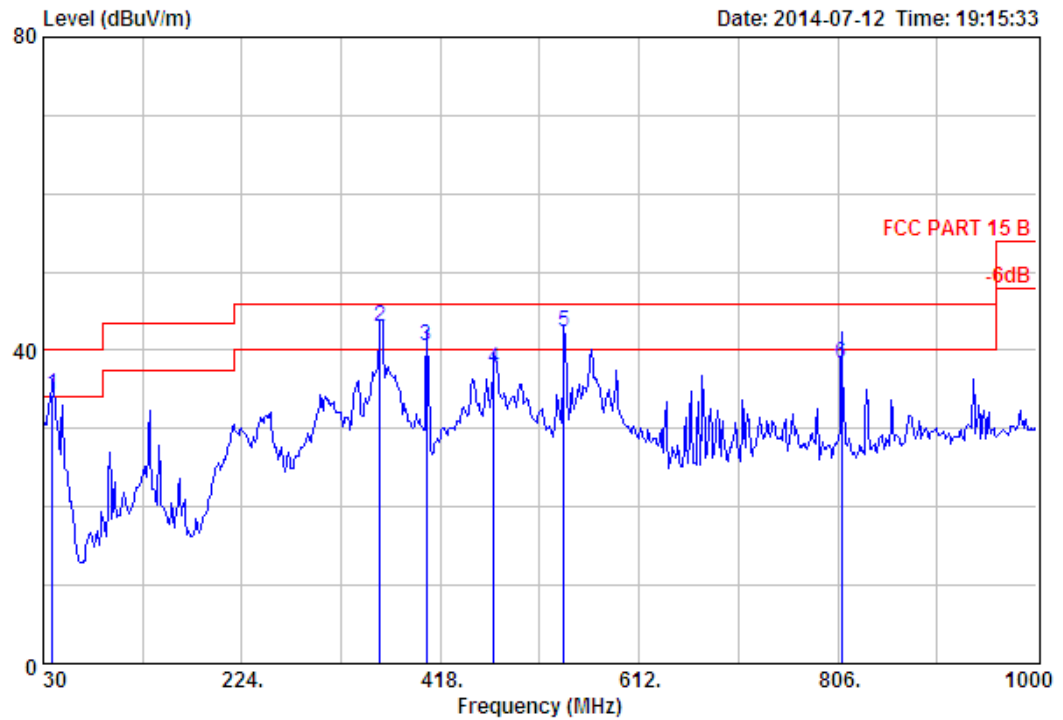
| 30MHz—25GHz Radiated emission Test result                           |
|---|
| EUT: SOUNDBAR 5500 SYSTEM   |
| M/N: SPEAKER ASSY SB5500  |
| Power: DC 20V From Adapter Input AC 120V/60Hz                       |
| Test date: 2014-07-12~16 Test site: 3m Chamber Tested by: Tony Tang |
| Test mode: Tx Mode  |
| Pass  |

Note: 1、 For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

- 2、 The frequency 2403.5MHz 、 2440.4MHz and 2477.3MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.

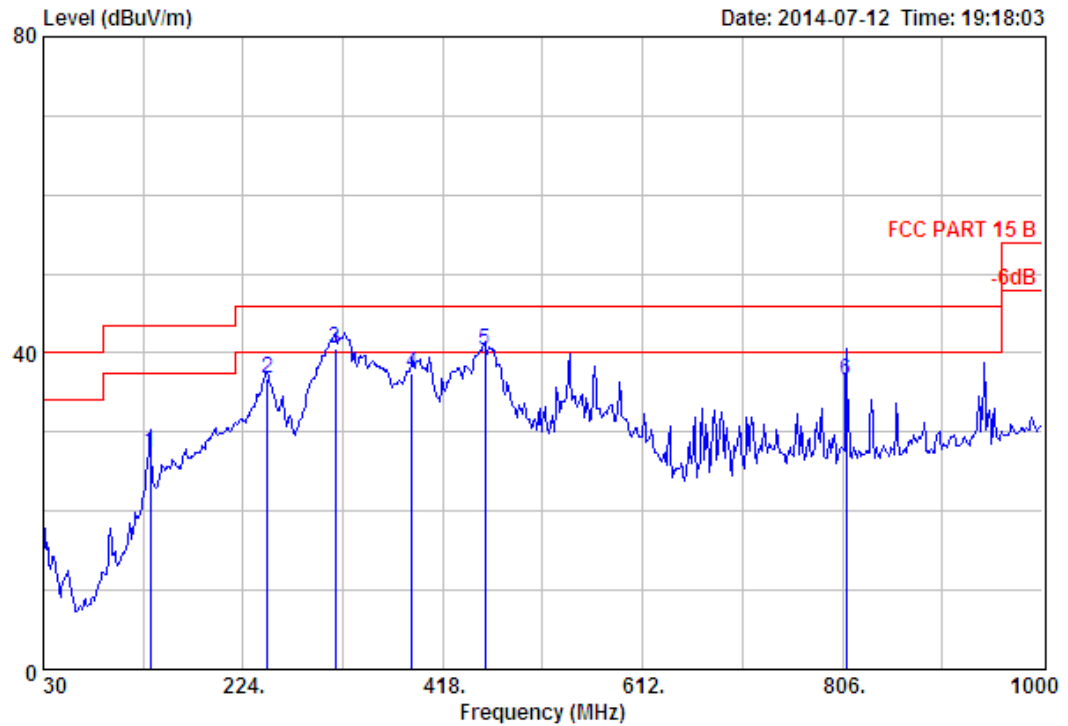
## 8.5. Test Data

30 MHz – 1000 MHz



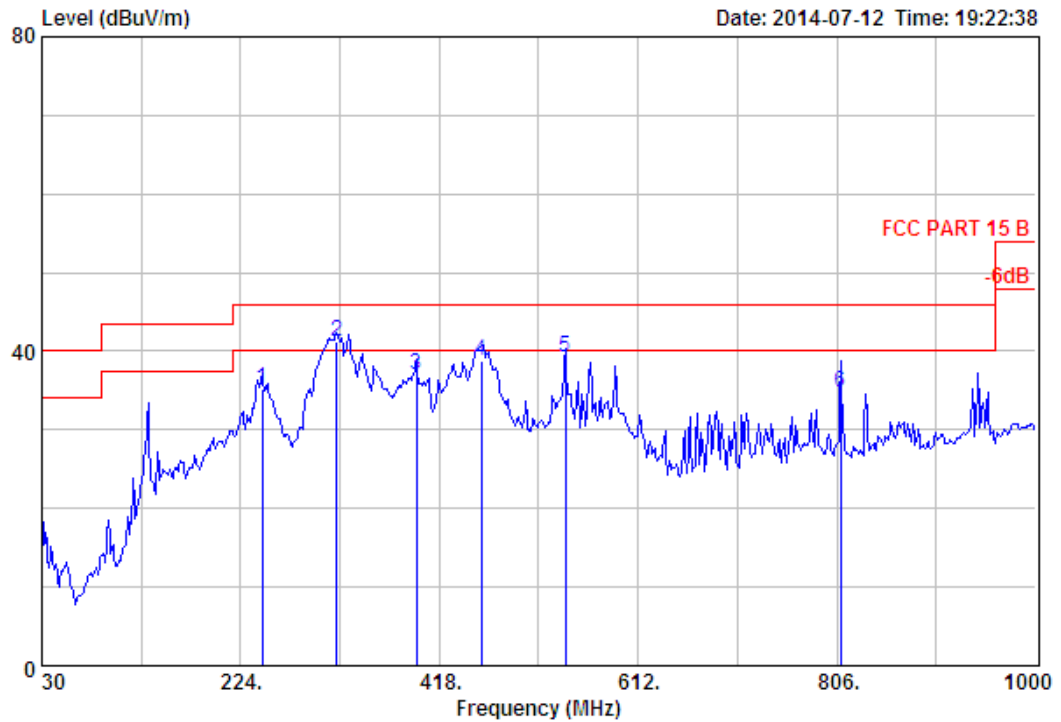
Site no. : 3m Chamber Data no. : 859  
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tong  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 38.73          | 13.48                    | 0.79                  | 20.01             | 34.28                         | 40.00              | 5.72           | QP     |
| 2 | 358.83         | 14.45                    | 2.56                  | 25.96             | 42.97                         | 46.00              | 3.03           | QP     |
| 3 | 404.42         | 16.16                    | 2.65                  | 21.67             | 40.48                         | 46.00              | 5.52           | QP     |
| 4 | 470.38         | 17.21                    | 3.13                  | 17.30             | 37.64                         | 46.00              | 8.36           | QP     |
| 5 | 538.28         | 19.24                    | 3.19                  | 19.83             | 42.26                         | 46.00              | 3.74           | QP     |
| 6 | 809.88         | 22.38                    | 3.83                  | 12.04             | 38.25                         | 46.00              | 7.75           | QP     |



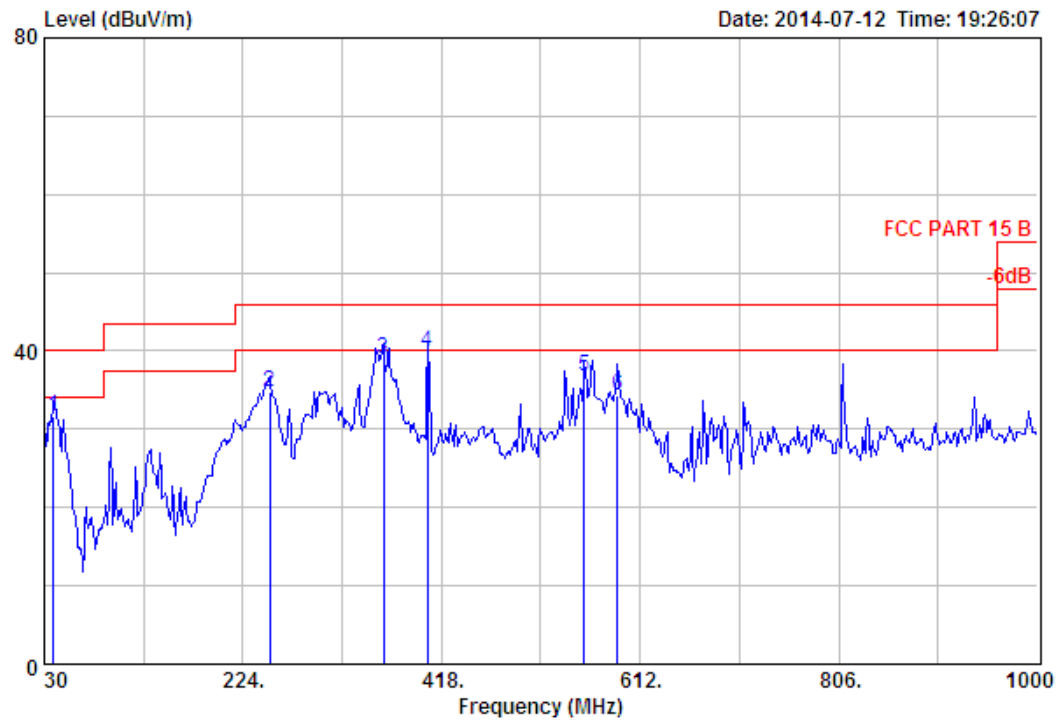
Site no. : 3m Chamber Data no. : 860  
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tong  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz

|   | Freq.  | Ant.   | Cable |         | Emission |          |        |        |
|---|--------|--------|-------|---------|----------|----------|--------|--------|
|   | (MHz)  | Factor | Loss  | Reading | Level    | Limits   | Margin | Remark |
|   |        | (dB/m) | (dB)  | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 133.79 | 11.36  | 1.56  | 14.39   | 27.31    | 43.50    | 16.19  | QP     |
| 2 | 247.28 | 11.36  | 2.15  | 23.17   | 36.68    | 46.00    | 9.32   | QP     |
| 3 | 313.24 | 13.31  | 2.44  | 24.74   | 40.49    | 46.00    | 5.51   | QP     |
| 4 | 387.93 | 15.48  | 2.65  | 19.37   | 37.50    | 46.00    | 8.50   | QP     |
| 5 | 458.74 | 16.80  | 3.00  | 20.62   | 40.42    | 46.00    | 5.58   | QP     |
| 6 | 809.88 | 22.38  | 3.83  | 10.44   | 36.65    | 46.00    | 9.35   | QP     |



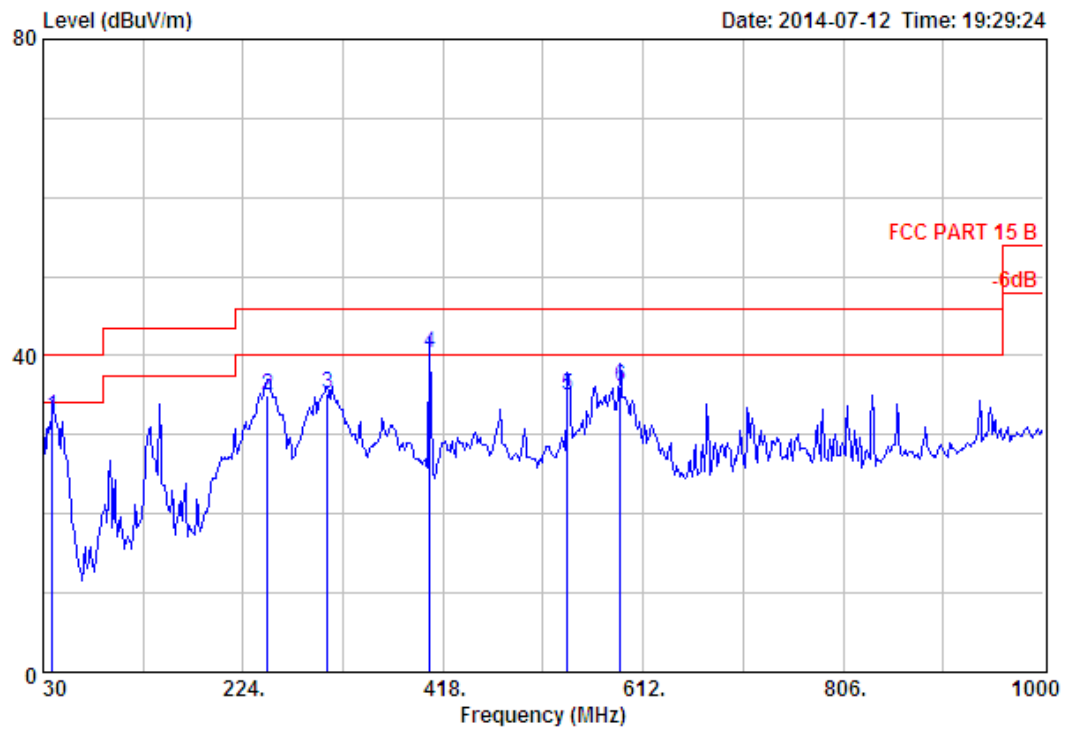
Site no. : 3m Chamber Data no. : 861  
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tong  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2440.4MHz

|   | Freq.  | Ant.   | Cable | Emission |          |          |        |        |
|---|--------|--------|-------|----------|----------|----------|--------|--------|
|   | (MHz)  | Factor | Loss  | Reading  | Level    | Limits   | Margin | Remark |
|   |        | (dB/m) | (dB)  | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 245.34 | 11.06  | 2.10  | 22.13    | 35.29    | 46.00    | 10.71  | QP     |
| 2 | 318.09 | 13.50  | 2.40  | 25.43    | 41.33    | 46.00    | 4.67   | QP     |
| 3 | 395.69 | 15.87  | 2.59  | 18.52    | 36.98    | 46.00    | 9.02   | QP     |
| 4 | 458.74 | 16.80  | 3.00  | 19.04    | 38.84    | 46.00    | 7.16   | QP     |
| 5 | 541.19 | 19.46  | 3.29  | 16.48    | 39.23    | 46.00    | 6.77   | QP     |
| 6 | 809.88 | 22.38  | 3.83  | 8.53     | 34.74    | 46.00    | 11.26  | QP     |



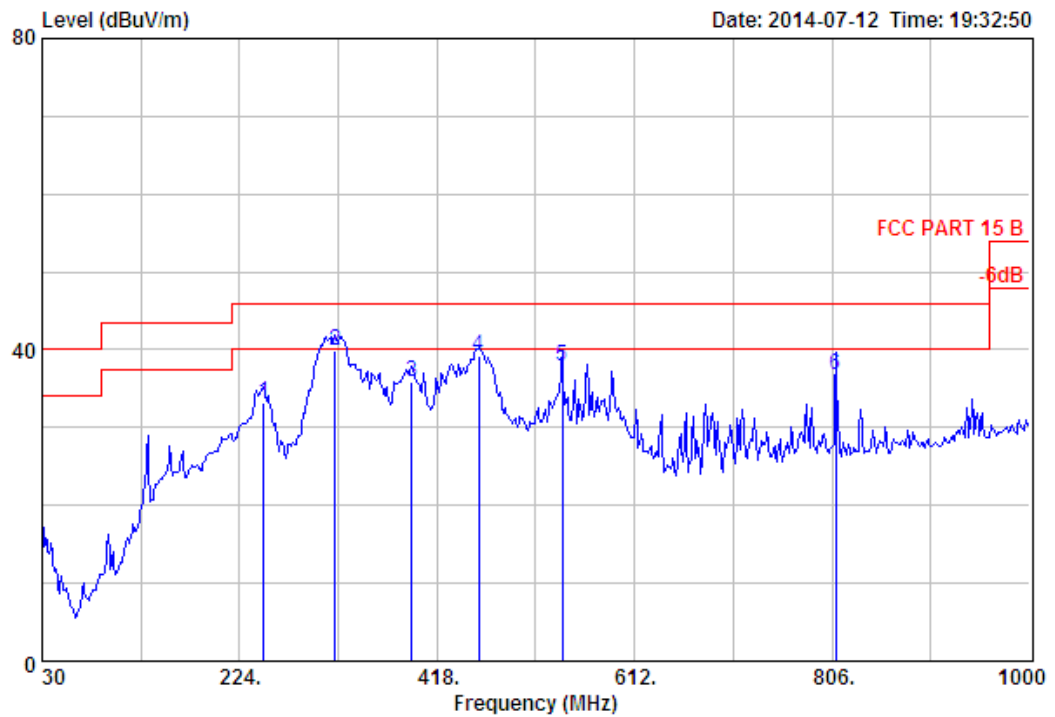
Site no. : 3m Chamber Data no. : 862  
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tong  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2440.4MHz

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 38.73          | 13.48                    | 0.79                  | 17.42             | 31.69                         | 40.00              | 8.31           | QP     |
| 2 | 250.19         | 11.82                    | 2.11                  | 20.79             | 34.72                         | 46.00              | 11.28          | QP     |
| 3 | 361.74         | 14.53                    | 2.63                  | 21.94             | 39.10                         | 46.00              | 6.90           | QP     |
| 4 | 404.42         | 16.16                    | 2.65                  | 21.14             | 39.95                         | 46.00              | 6.05           | QP     |
| 5 | 557.68         | 19.66                    | 3.27                  | 13.94             | 36.87                         | 46.00              | 9.13           | QP     |
| 6 | 589.69         | 19.43                    | 3.37                  | 11.46             | 34.26                         | 46.00              | 11.74          | QP     |



Site no. : 3m Chamber Data no. : 863  
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tong  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz

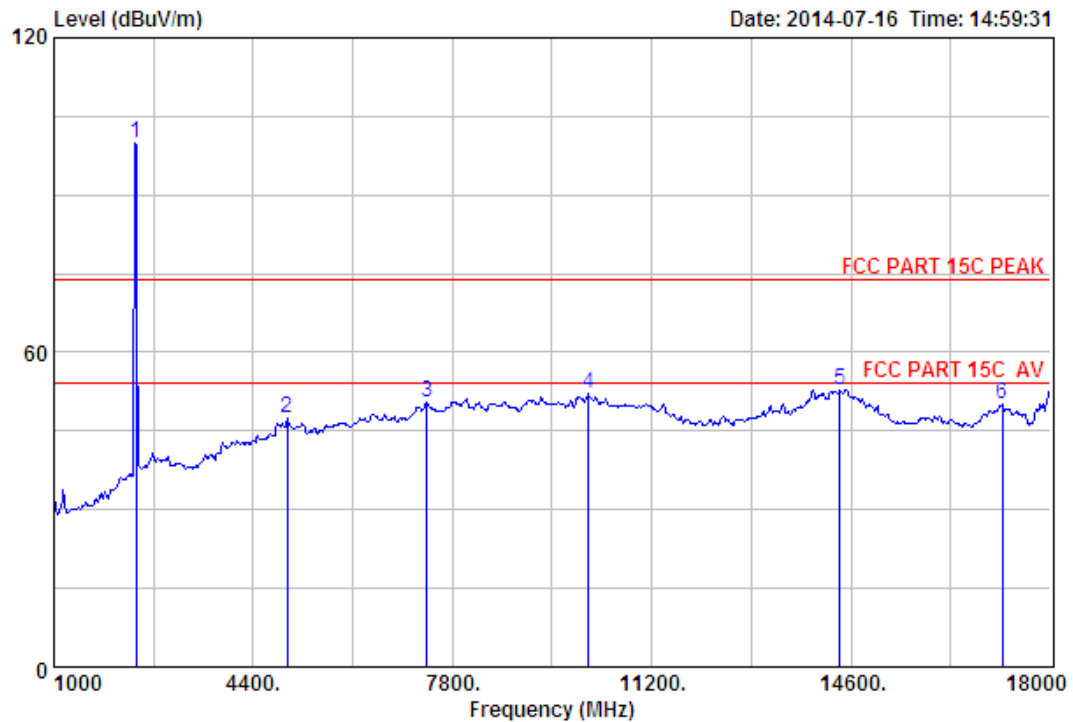
|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 38.73          | 13.48                    | 0.79                  | 18.03             | 32.30                         | 40.00              | 7.70           | QP     |
| 2 | 247.28         | 11.36                    | 2.15                  | 21.48             | 34.99                         | 46.00              | 11.01          | QP     |
| 3 | 305.48         | 13.11                    | 2.31                  | 19.68             | 35.10                         | 46.00              | 10.90          | QP     |
| 4 | 405.39         | 16.18                    | 2.61                  | 21.62             | 40.41                         | 46.00              | 5.59           | QP     |
| 5 | 538.28         | 19.24                    | 3.19                  | 12.55             | 34.98                         | 46.00              | 11.02          | QP     |
| 6 | 589.69         | 19.43                    | 3.37                  | 13.30             | 36.10                         | 46.00              | 9.90           | QP     |



Site no. : 3m Chamber Data no. : 864  
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tong  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 247.28         | 11.36                    | 2.15                  | 19.69             | 33.20                         | 46.00              | 12.80          | QP     |
| 2 | 318.09         | 13.50                    | 2.40                  | 24.04             | 39.94                         | 46.00              | 6.06           | QP     |
| 3 | 392.78         | 15.73                    | 2.58                  | 17.51             | 35.82                         | 46.00              | 10.18          | QP     |
| 4 | 458.74         | 16.80                    | 3.00                  | 19.44             | 39.24                         | 46.00              | 6.76           | QP     |
| 5 | 541.19         | 19.46                    | 3.29                  | 15.11             | 37.86                         | 46.00              | 8.14           | QP     |
| 6 | 809.88         | 22.38                    | 3.83                  | 10.53             | 36.74                         | 46.00              | 9.26           | QP     |

## 1000 MHz – 18000MHz

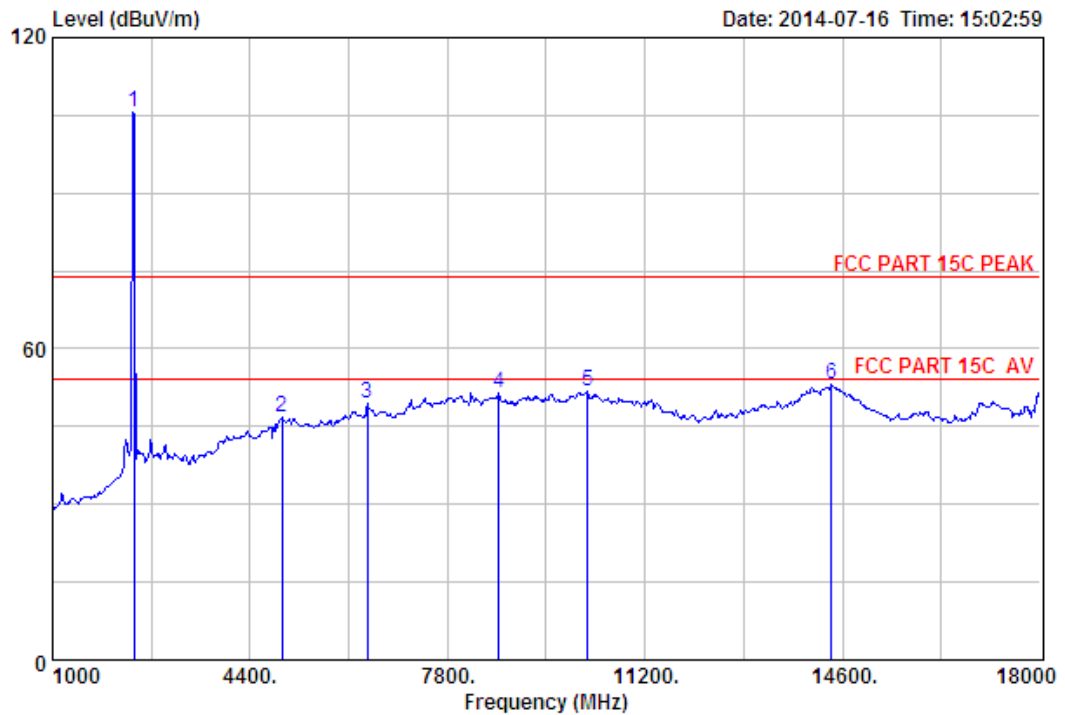


Site no. : 3m Chamber Data no. : 811  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz

|   | Freq.    | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|----------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)    | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |          | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 2403.50  | 27.61  | 6.64  | 34.18  | 99.83    | 99.90    | 74.00    | -25.90 | Peak   |
| 2 | 4978.00  | 31.52  | 12.52 | 31.99  | 35.31    | 47.36    | 74.00    | 26.64  | Peak   |
| 3 | 7358.00  | 36.56  | 11.58 | 31.99  | 34.20    | 50.35    | 74.00    | 23.65  | Peak   |
| 4 | 10129.00 | 38.33  | 11.52 | 32.01  | 34.27    | 52.11    | 74.00    | 21.89  | Peak   |
| 5 | 14413.00 | 41.80  | 10.92 | 32.78  | 32.93    | 52.87    | 74.00    | 21.13  | Peak   |
| 6 | 17184.00 | 40.45  | 10.92 | 33.34  | 31.95    | 49.98    | 74.00    | 24.02  | 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.

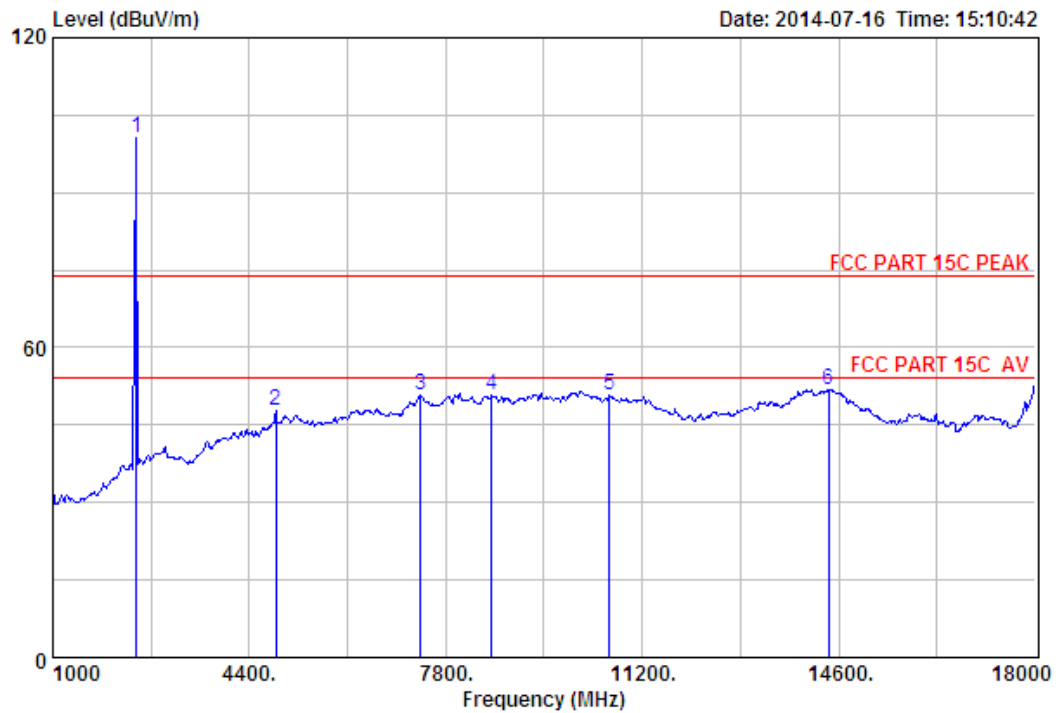




Site no. : 3m Chamber Data no. : 812  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6°;Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2403.50        | 27.61                    | 6.64                  | 34.18                 | 105.45            | 105.52                        | 74.00              | -31.52         | Peak   |
| 2 | 4944.00        | 31.47                    | 12.37                 | 31.96                 | 34.99             | 46.87                         | 74.00              | 27.13          | Peak   |
| 3 | 6423.00        | 34.03                    | 12.21                 | 31.93                 | 35.22             | 49.53                         | 74.00              | 24.47          | Peak   |
| 4 | 8684.00        | 37.32                    | 11.45                 | 32.43                 | 35.04             | 51.38                         | 74.00              | 22.62          | Peak   |
| 5 | 10214.00       | 38.48                    | 11.47                 | 32.17                 | 34.04             | 51.82                         | 74.00              | 22.18          | Peak   |
| 6 | 14413.00       | 41.80                    | 10.92                 | 32.78                 | 33.21             | 53.15                         | 74.00              | 20.85          | Peak   |

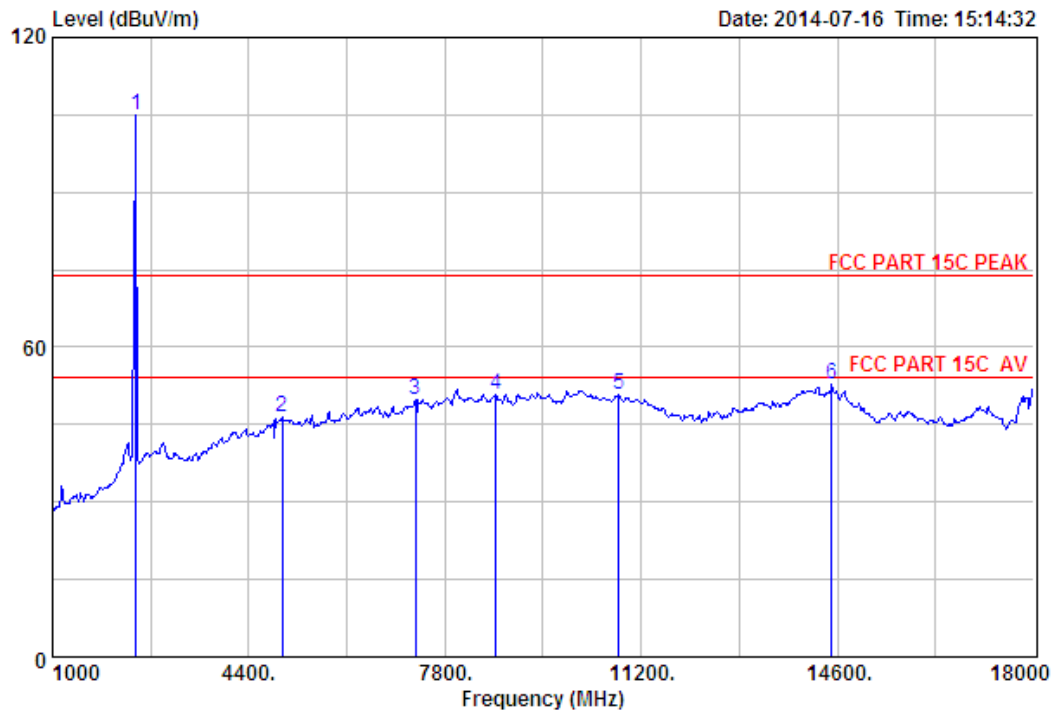
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 815  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2440.4MHz

|   | Freq.    | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|----------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)    | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |          | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 2440.40  | 27.60  | 6.67  | 34.12  | 100.32   | 100.47   | 74.00    | -26.47 | Peak   |
| 2 | 4859.00  | 31.34  | 11.99 | 31.88  | 36.22    | 47.67    | 74.00    | 26.33  | Peak   |
| 3 | 7358.00  | 36.56  | 11.58 | 31.99  | 34.52    | 50.67    | 74.00    | 23.33  | Peak   |
| 4 | 8599.00  | 37.19  | 11.45 | 32.23  | 34.43    | 50.84    | 74.00    | 23.16  | Peak   |
| 5 | 10639.00 | 39.13  | 11.30 | 32.98  | 33.28    | 50.73    | 74.00    | 23.27  | Peak   |
| 6 | 14430.00 | 41.82  | 10.93 | 32.84  | 31.83    | 51.74    | 74.00    | 22.26  | Peak   |

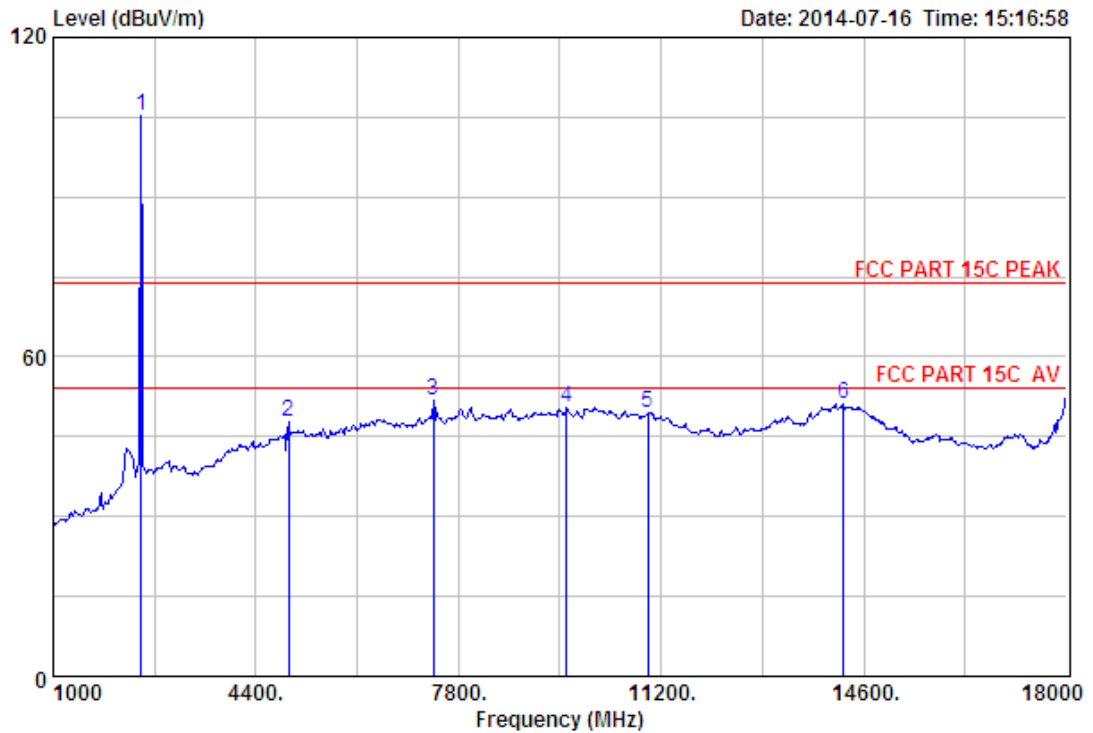
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 816  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6°;Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2440.4MHz

|   | Freq.    | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|----------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)    | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |          | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 2440.40  | 27.60  | 6.67  | 34.12  | 104.92   | 105.07   | 74.00    | -31.07 | Peak   |
| 2 | 4978.00  | 31.52  | 12.52 | 31.99  | 34.35    | 46.40    | 74.00    | 27.60  | Peak   |
| 3 | 7290.00  | 36.54  | 11.56 | 32.02  | 33.83    | 49.91    | 74.00    | 24.09  | Peak   |
| 4 | 8684.00  | 37.32  | 11.45 | 32.43  | 34.50    | 50.84    | 74.00    | 23.16  | Peak   |
| 5 | 10809.00 | 39.31  | 11.30 | 33.30  | 33.55    | 50.86    | 74.00    | 23.14  | Peak   |
| 6 | 14498.00 | 41.88  | 10.93 | 33.08  | 33.15    | 52.88    | 74.00    | 21.12  | Peak   |

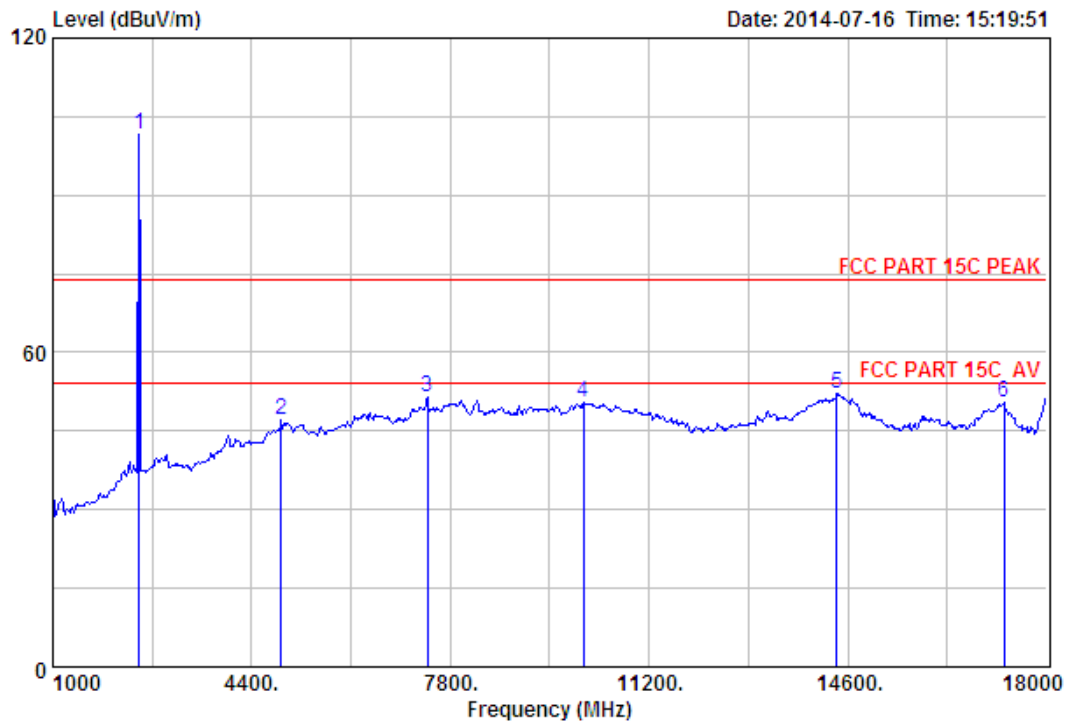
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 817  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz

|   |          | 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 | 2477.30  | 27.58  | 6.71  | 34.03  | 105.18   | 105.44   | 74.00    | -31.44 | Peak   |
| 2 | 4944.00  | 31.47  | 12.37 | 31.96  | 35.96    | 47.84    | 74.00    | 26.16  | Peak   |
| 3 | 7375.00  | 36.57  | 11.59 | 31.98  | 35.59    | 51.77    | 74.00    | 22.23  | Peak   |
| 4 | 9619.00  | 37.93  | 11.68 | 31.92  | 32.77    | 50.46    | 74.00    | 23.54  | Peak   |
| 5 | 10979.00 | 39.50  | 11.29 | 33.62  | 32.26    | 49.43    | 74.00    | 24.57  | Peak   |
| 6 | 14260.00 | 41.68  | 10.92 | 33.19  | 31.74    | 51.15    | 74.00    | 22.85  | 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.

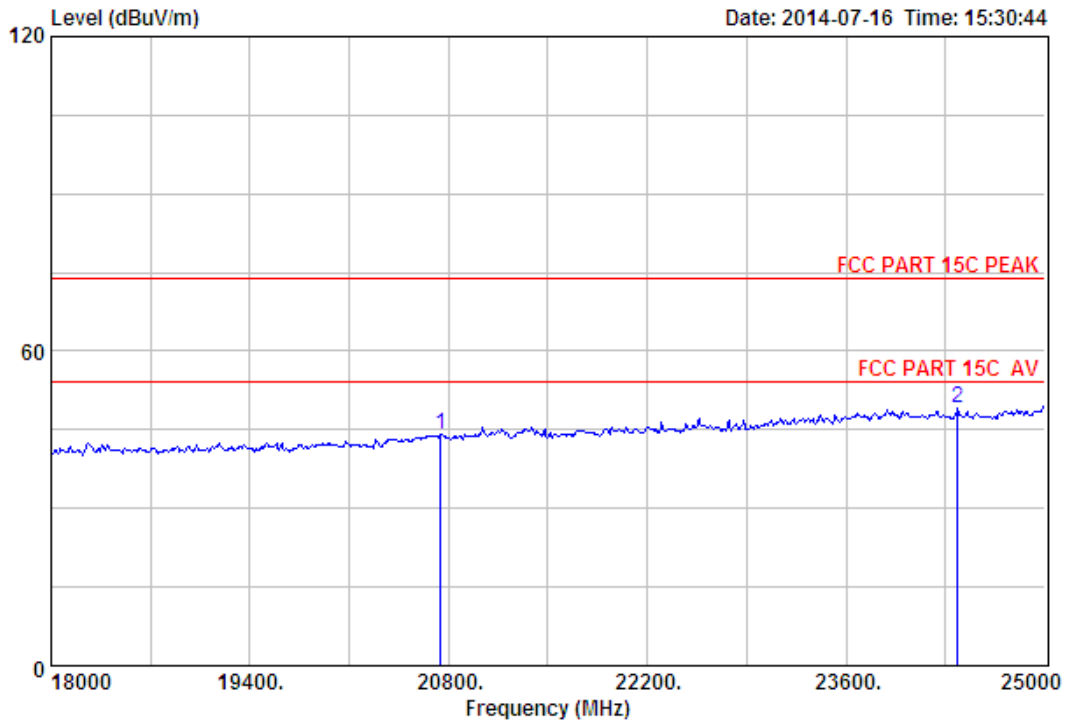


Site no. : 3m Chamber Data no. : 818  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2477.30        | 27.58                    | 6.71                  | 34.03                 | 101.30            | 101.56                        | 74.00              | -27.56         | Peak   |
| 2 | 4910.00        | 31.42                    | 12.22                 | 31.93                 | 35.28             | 46.99                         | 74.00              | 27.01          | Peak   |
| 3 | 7409.00        | 36.58                    | 11.60                 | 31.97                 | 35.12             | 51.33                         | 74.00              | 22.67          | Peak   |
| 4 | 10078.00       | 38.24                    | 11.54                 | 31.92                 | 32.57             | 50.43                         | 74.00              | 23.57          | Peak   |
| 5 | 14413.00       | 41.80                    | 10.92                 | 32.78                 | 32.19             | 52.13                         | 74.00              | 21.87          | Peak   |
| 6 | 17269.00       | 40.78                    | 10.89                 | 33.87                 | 32.63             | 50.43                         | 74.00              | 23.57          | 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.

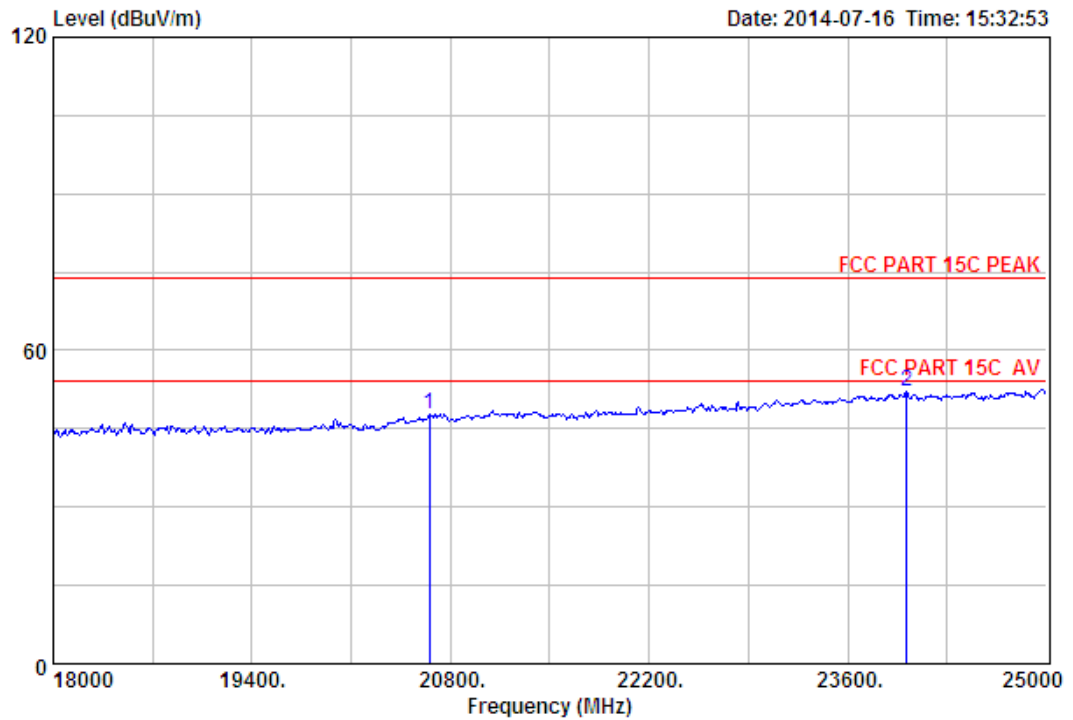
## 18000MHz – 25000MHz



Site no. : 3m Chamber Data no. : 821  
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz

|   | Freq.    | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|----------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)    | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |          | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 20744.00 | 46.15  | 20.02 | 36.03  | 14.10    | 44.24    | 74.00    | 29.76  | Peak   |
| 2 | 24384.00 | 45.68  | 22.25 | 33.38  | 14.44    | 48.99    | 74.00    | 25.01  | Peak   |

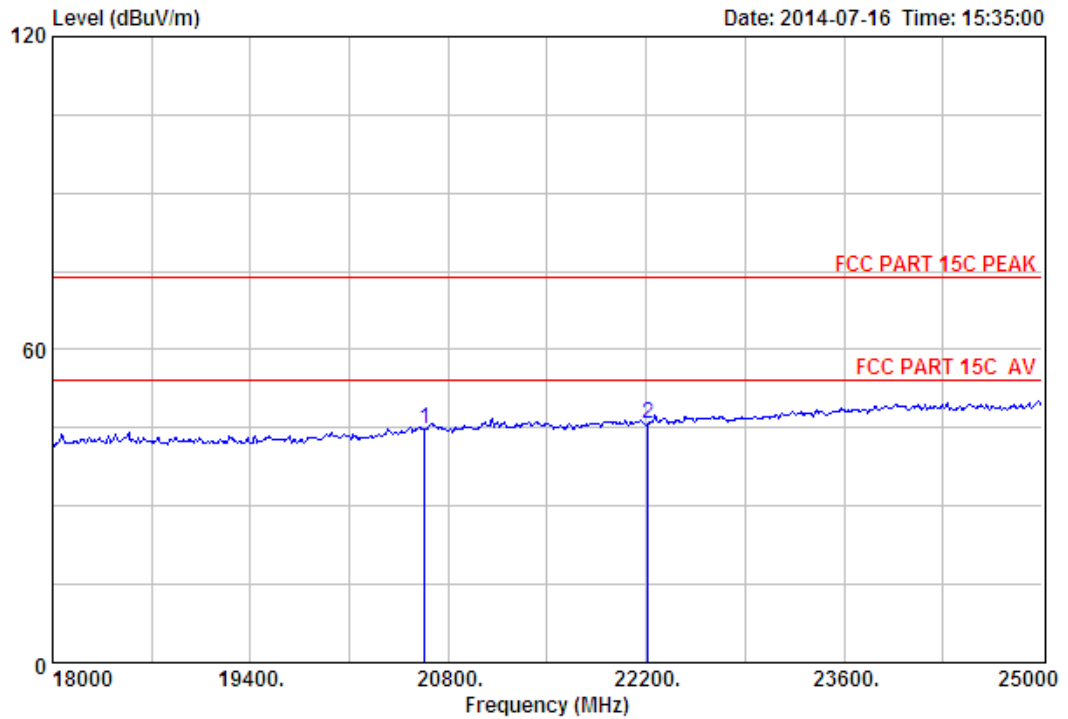
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 822  
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz

|   | Freq.    | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|----------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)    | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |          | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 20653.00 | 46.10  | 19.98 | 36.12  | 17.93    | 47.89    | 74.00    | 26.11  | Peak   |
| 2 | 24013.00 | 45.60  | 22.05 | 32.84  | 17.43    | 52.24    | 74.00    | 21.76  | 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.

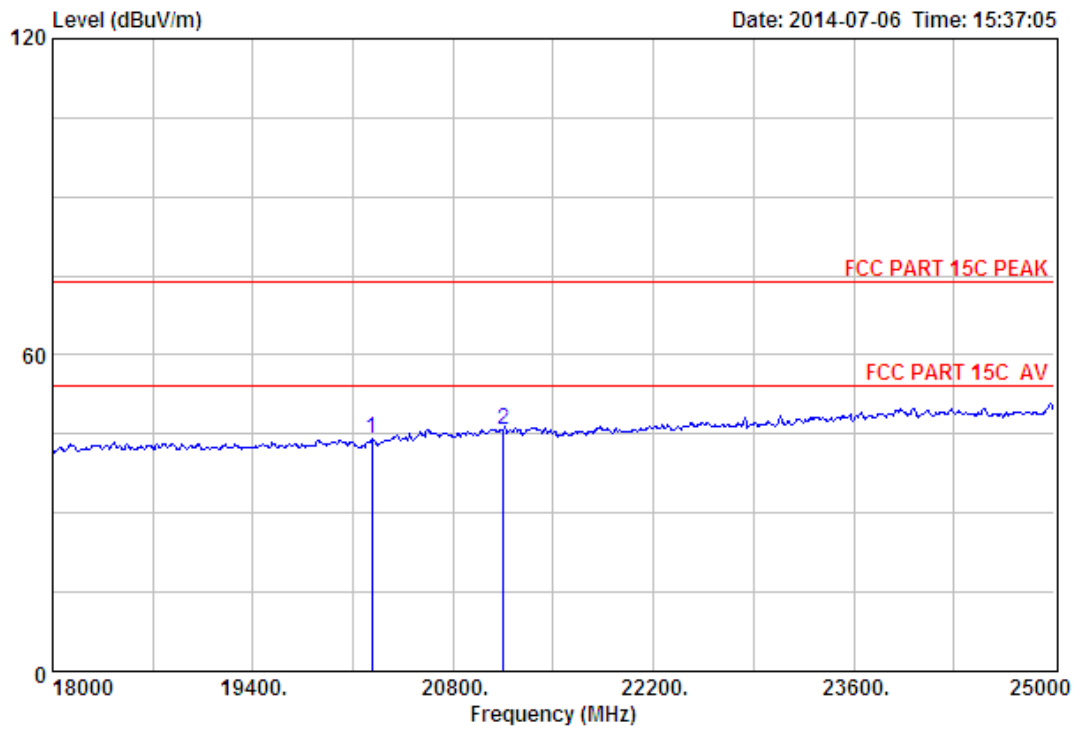


Site no. : 3m Chamber Data no. : 823  
 Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2440.4MHz

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission |  | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|----------|--|--------------------|----------------|--------|
|                |                          |                       |                       |                   | Level    |  |                    |                |        |
| 1 20632.00     | 46.08                    | 19.96                 | 36.14                 | 14.78             | 44.68    |  | 74.00              | 29.32          | Peak   |
| 2 22214.00     | 45.74                    | 20.69                 | 34.66                 | 14.08             | 45.85    |  | 74.00              | 28.15          | 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.

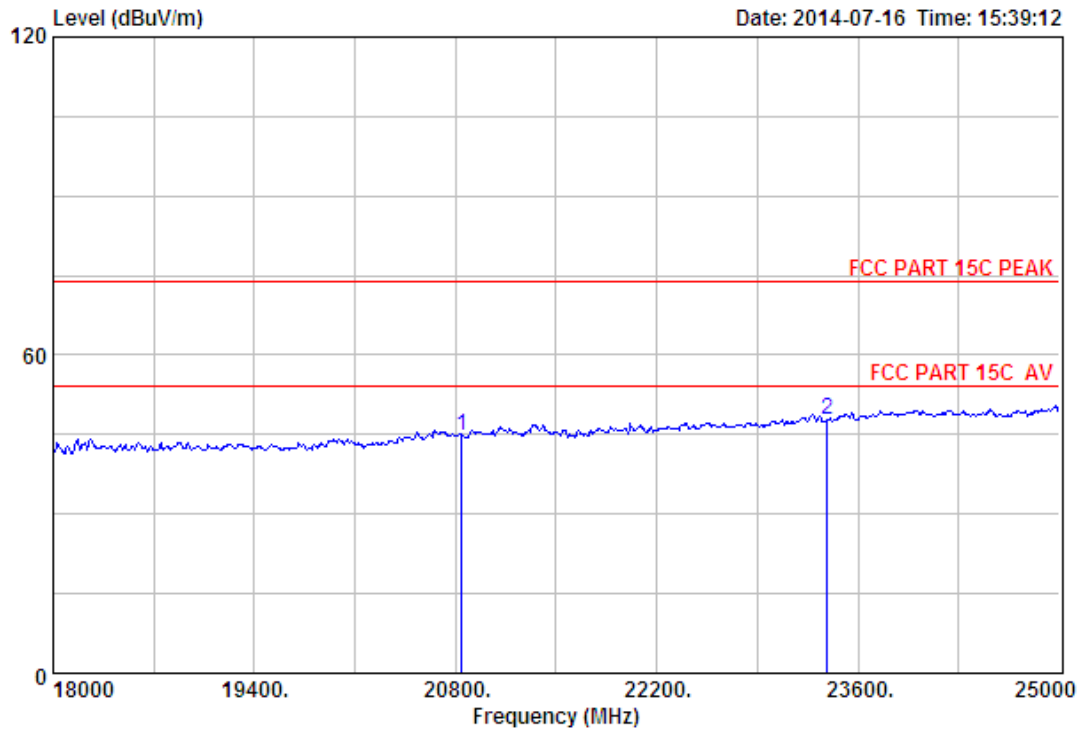




Site no. : 3m Chamber Data no. : 824  
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2440.4MHz

|   |          | 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 | 20233.00 | 46.05  | 19.79 | 36.50  | 14.66    | 44.00    | 74.00    | 30.00  | Peak   |
| 2 | 21150.00 | 46.21  | 20.20 | 35.67  | 15.19    | 45.93    | 74.00    | 28.07  | Peak   |

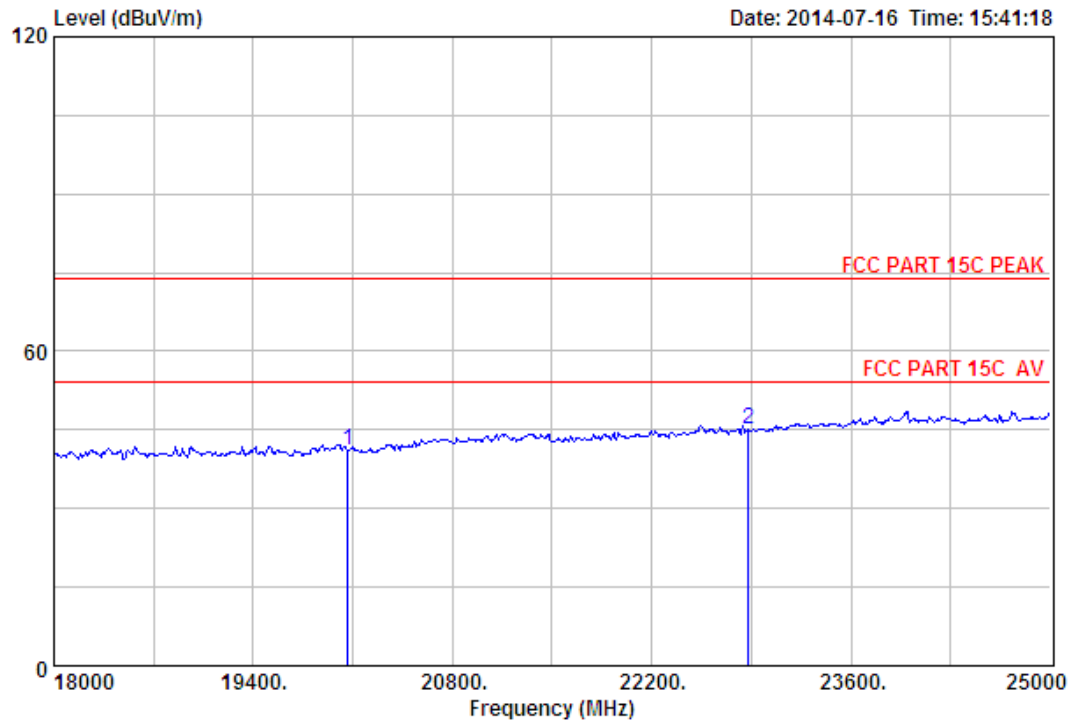
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 825  
 Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz

| Freq.<br>(MHz) | Ant. Cable Amp   |              |                | Emission          |                   |                   | Limits | Margin | Remark |
|----------------|------------------|--------------|----------------|-------------------|-------------------|-------------------|--------|--------|--------|
|                | Factor<br>(dB/m) | Loss<br>(dB) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Level<br>(dBuV/m) |        |        |        |
| 1 20842.00     | 46.20            | 20.06        | 35.94          | 14.62             | 44.94             | 44.94             | 74.00  | 29.06  | Peak   |
| 2 23383.00     | 45.68            | 21.49        | 33.46          | 14.04             | 47.75             | 47.75             | 74.00  | 26.25  | 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.



Site no. : 3m Chamber Data no. : 826  
 Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 20065.00       | 46.09                    | 19.71                 | 36.63                 | 11.85             | 41.02                         | 74.00              | 32.98          | Peak   |
| 2 | 22879.00       | 45.65                    | 21.08                 | 33.98                 | 12.28             | 45.03                         | 74.00              | 28.97          | Peak   |

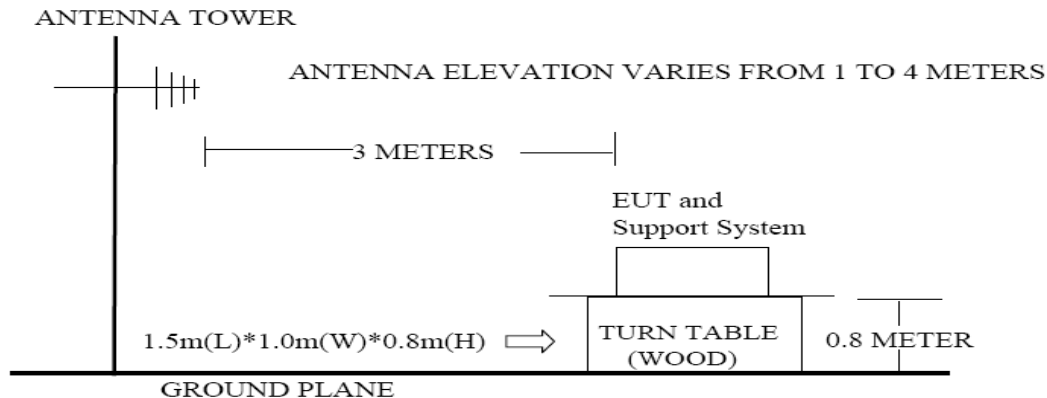
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.

## 9. BAND EDGE COMPLIANCE

### 9.1. 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.

### 9.2. Block Diagram of Test setup



### 9.3. Test Procedure

EUT was 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. Power on the EUT and let it working in test mode, then test it. 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. Both horizontal and vertical polarization of the antenna are set on test.

Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of emissions

- (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
- (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

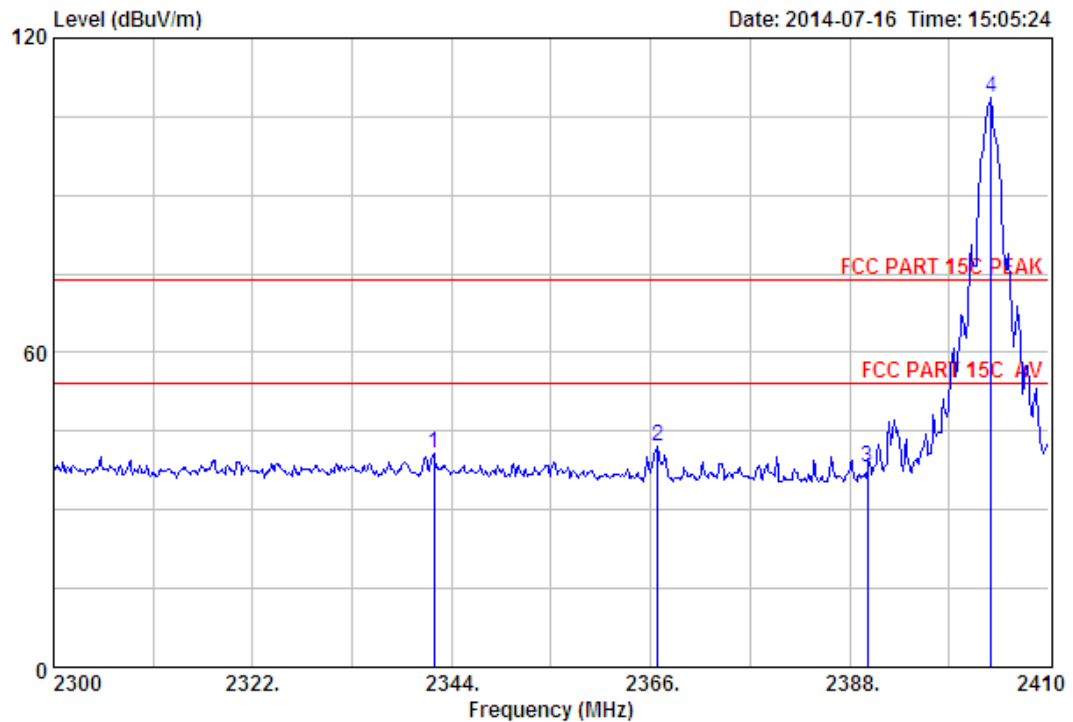
### 9.4. Test Result

|  |
|--|
| EUT: SOUNDBAR 5500 SYSTEM  |
| M/N: SPEAKER ASSY SB5500   |
| Power: DC 20V From Adapter Input AC 120V/60Hz                    |
| Test date: 2014-07-16 Test site: 3m Chamber Tested by: Tony Tang |
| Test mode: Tx Mode (Hopping On & No Hopping)                     |
| Pass   |

Note: 1、 For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

- 2、 The frequency 2403.5MHz 、 2440.4MHz and 2477.3MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.

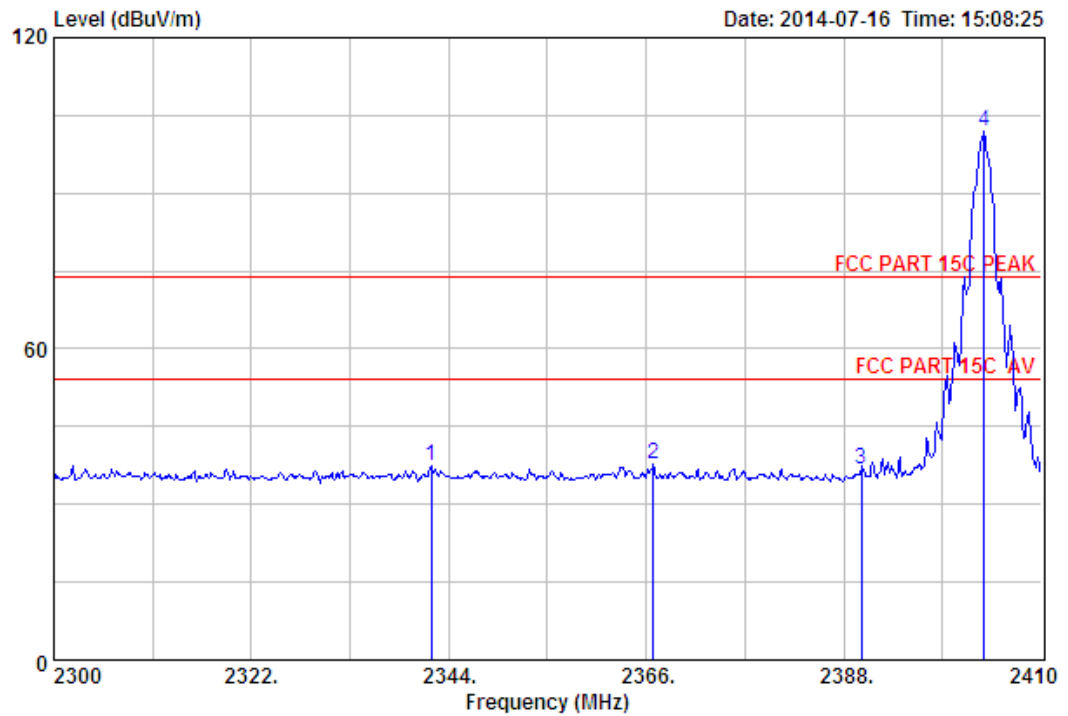
## 9.5. Test Data



Site no. : 3m Chamber Data no. : 813  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz(No Hopping)

|       | 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     | 2342.02 | 27.70 | 6.56   | 34.22    | 40.82    | 40.86    | 74.00  | 33.14  | Peak |
| 2     | 2366.77 | 27.67 | 6.58   | 34.20    | 42.10    | 42.15    | 74.00  | 31.85  | Peak |
| 3     | 2390.00 | 27.64 | 6.62   | 34.19    | 37.95    | 38.02    | 74.00  | 35.98  | Peak |
| 4     | 2403.62 | 27.61 | 6.64   | 34.18    | 108.53   | 108.60   | 74.00  | -34.60 | Peak |

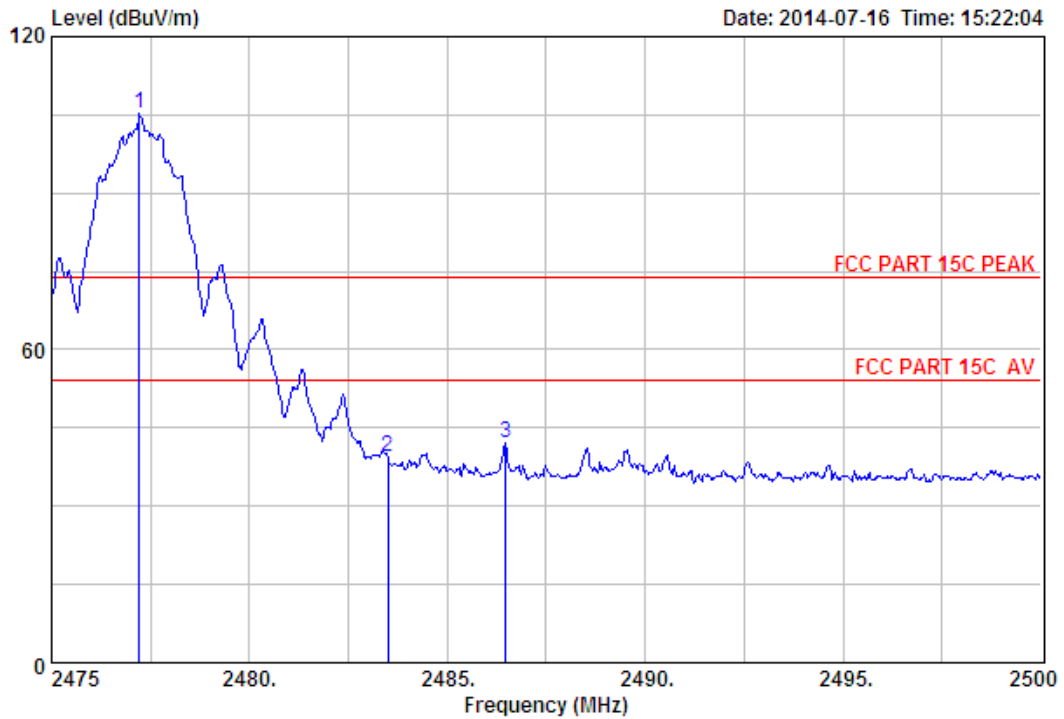
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 814  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz (No Hopping)

|       |         | 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     | 2342.02 | 27.70 | 6.56   | 34.22   | 37.46    | 37.50    | 74.00  | 36.50  | Peak |
| 2     | 2366.77 | 27.67 | 6.58   | 34.20   | 37.66    | 37.71    | 74.00  | 36.29  | Peak |
| 3     | 2390.00 | 27.64 | 6.62   | 34.19   | 36.71    | 36.78    | 74.00  | 37.22  | Peak |
| 4     | 2403.62 | 27.61 | 6.64   | 34.18   | 101.85   | 101.92   | 74.00  | -27.92 | Peak |

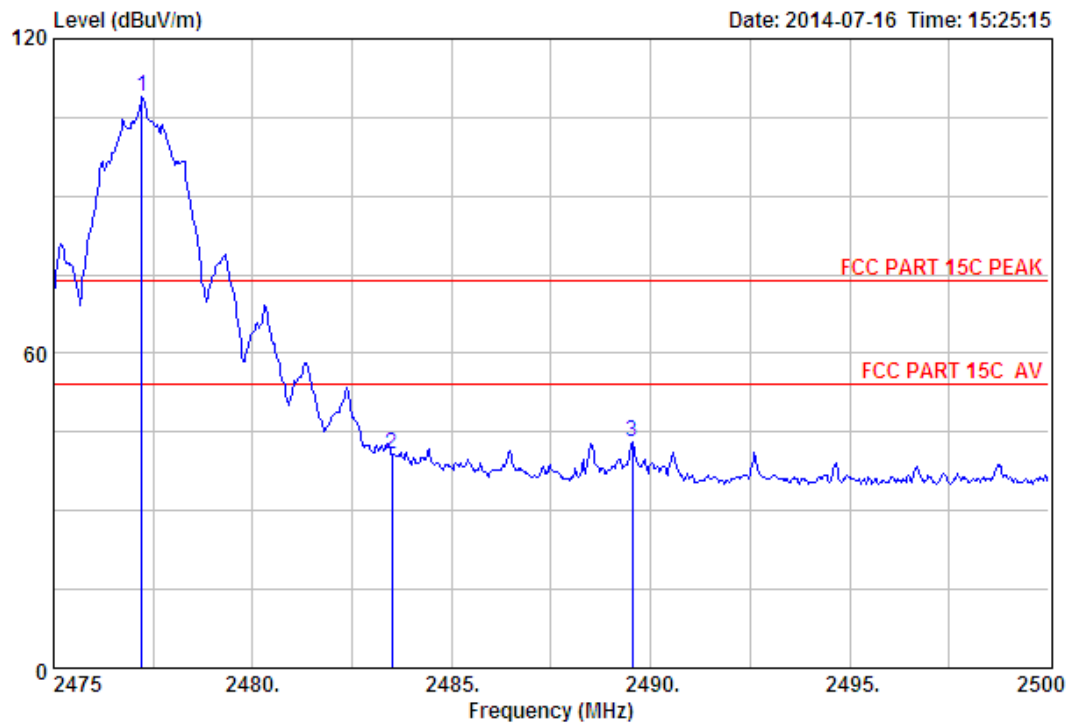
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 819  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz (No Hopping)

|   | Freq.   | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|---------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)   | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |         | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 2477.23 | 27.58  | 6.71  | 34.03  | 105.01   | 105.27   | 74.00    | -31.27 | Peak   |
| 2 | 2483.50 | 27.58  | 6.71  | 34.03  | 39.28    | 39.54    | 74.00    | 34.46  | Peak   |
| 3 | 2486.48 | 27.58  | 6.71  | 34.03  | 41.79    | 42.05    | 74.00    | 31.95  | 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.

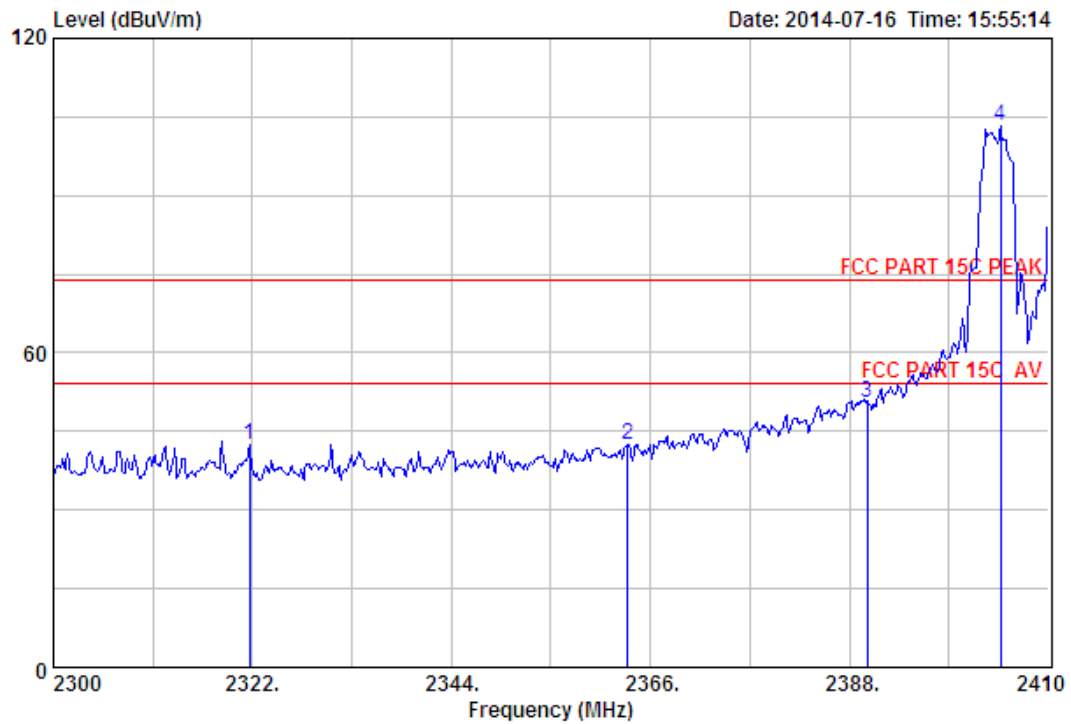


Site no. : 3m Chamber Data no. : 820  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz (No Hopping)

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2477.23        | 27.58                    | 6.71                  | 34.03                 | 108.80            | 109.06                        | 74.00              | -35.06         | Peak   |
| 2 | 2483.50        | 27.58                    | 6.71                  | 34.03                 | 40.59             | 40.85                         | 74.00              | 33.15          | Peak   |
| 3 | 2489.55        | 27.58                    | 6.73                  | 34.03                 | 42.78             | 43.06                         | 74.00              | 30.94          | 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.

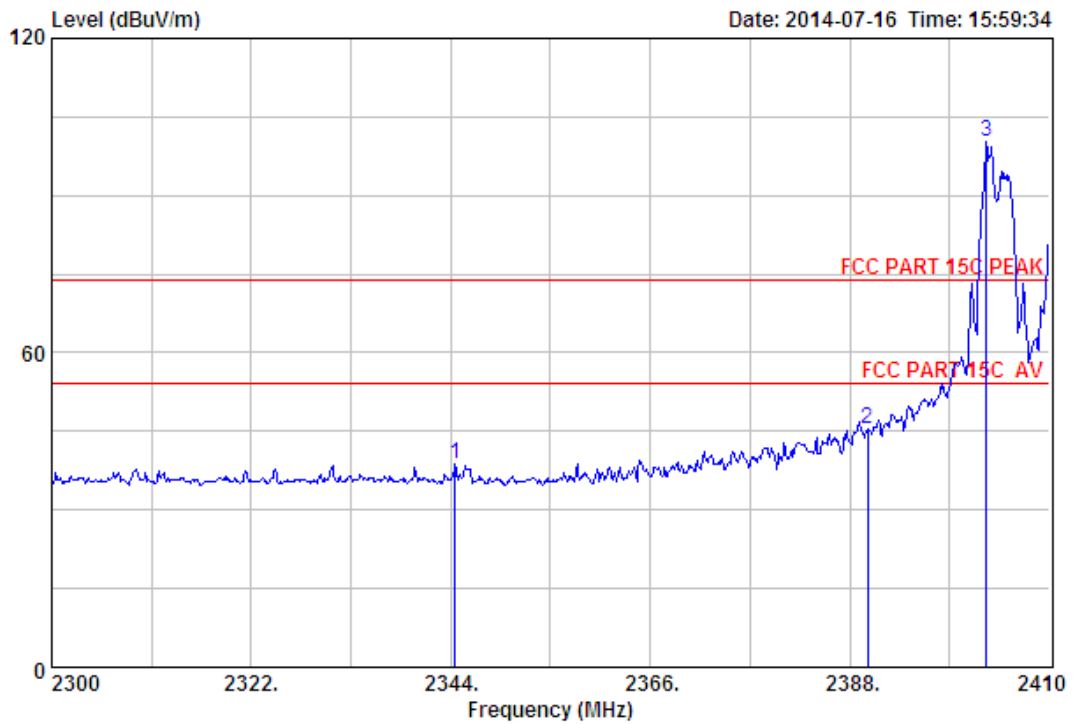




Site no. : 3m Chamber Data no. : 831  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz (Hopping On)

|       | 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     | 2321.67 | 27.76 | 6.54   | 34.24    | 42.42    | 42.48    | 74.00  | 31.52  | Peak |
| 2     | 2363.47 | 27.67 | 6.58   | 34.20    | 42.50    | 42.55    | 74.00  | 31.45  | Peak |
| 3     | 2390.00 | 27.64 | 6.62   | 34.19    | 50.56    | 50.63    | 74.00  | 23.37  | Peak |
| 4     | 2404.72 | 27.61 | 6.64   | 34.18    | 103.31   | 103.38   | 74.00  | -29.38 | Peak |

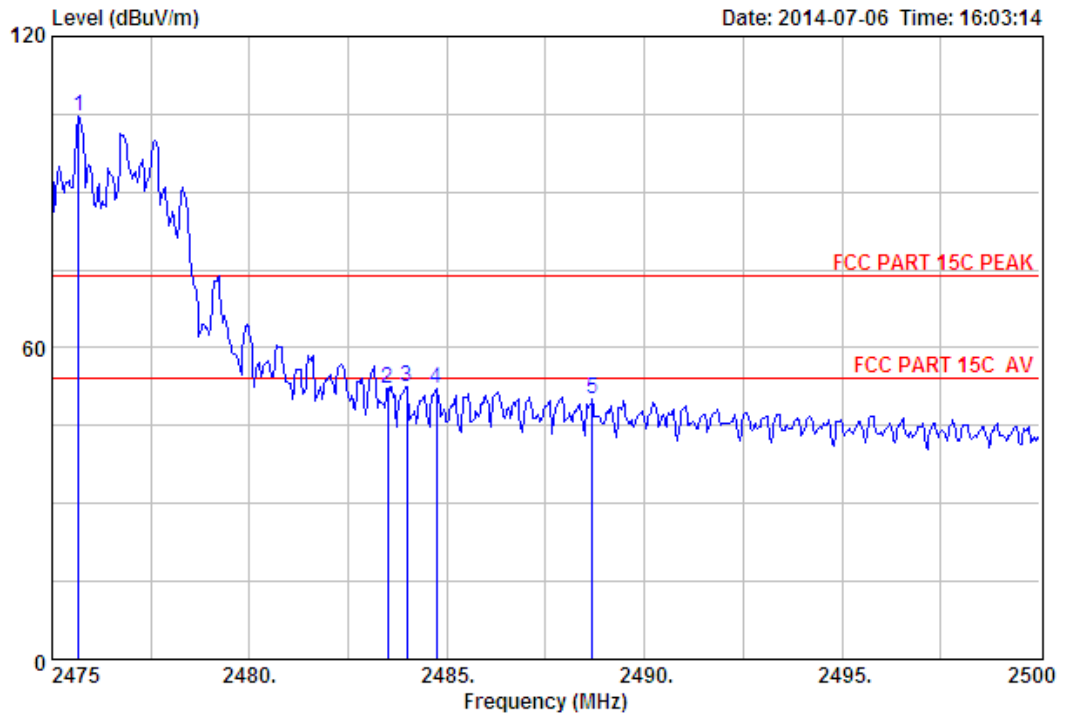
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 832  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2403.5MHz(Hopping On)

|   | Freq.   | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|---------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)   | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |         | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 2344.44 | 27.70  | 6.56  | 34.22  | 38.69    | 38.73    | 74.00    | 35.27  | Peak   |
| 2 | 2390.00 | 27.64  | 6.62  | 34.19  | 45.25    | 45.32    | 74.00    | 28.68  | Peak   |
| 3 | 2403.07 | 27.61  | 6.64  | 34.18  | 100.28   | 100.35   | 74.00    | -26.35 | Peak   |

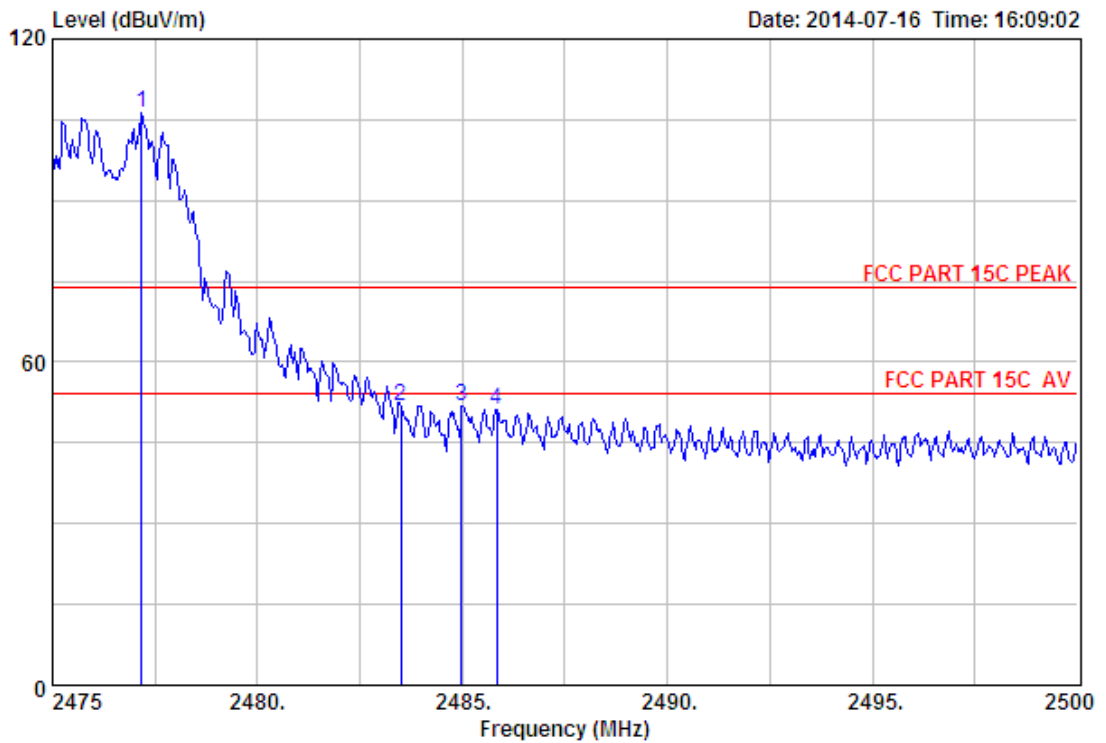
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 833  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz(Hopping On)

|   | Freq.   | Ant.   | Cable | Amp    | Emission |          |          |        |        |
|---|---------|--------|-------|--------|----------|----------|----------|--------|--------|
|   | (MHz)   | Factor | Loss  | Factor | Reading  | Level    | Limits   | Margin | Remark |
|   |         | (dB/m) | (dB)  | (dB)   | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1 | 2475.68 | 27.58  | 6.71  | 34.06  | 104.53   | 104.76   | 74.00    | -30.76 | Peak   |
| 2 | 2483.50 | 27.58  | 6.71  | 34.03  | 51.96    | 52.22    | 74.00    | 21.78  | Peak   |
| 3 | 2483.98 | 27.58  | 6.71  | 34.03  | 52.18    | 52.44    | 74.00    | 21.56  | Peak   |
| 4 | 2484.73 | 27.58  | 6.71  | 34.03  | 51.78    | 52.04    | 74.00    | 21.96  | Peak   |
| 5 | 2488.68 | 27.58  | 6.73  | 34.03  | 49.96    | 50.24    | 74.00    | 23.76  | 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.



Site no. : 3m Chamber Data no. : 834  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX 2477.3MHz (Hopping On)

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2477.18        | 27.58                    | 6.71                  | 34.03                 | 105.95            | 106.21                        | 74.00              | -32.21         | Peak   |
| 2 | 2483.50        | 27.58                    | 6.71                  | 34.03                 | 51.71             | 51.97                         | 74.00              | 22.03          | Peak   |
| 3 | 2484.98        | 27.58                    | 6.71                  | 34.03                 | 51.47             | 51.73                         | 74.00              | 22.27          | Peak   |
| 4 | 2485.83        | 27.58                    | 6.71                  | 34.03                 | 50.75             | 51.01                         | 74.00              | 22.99          | 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.

## 10. POWER LINE CONDUCTED EMISSIONS

### 10.1. Limit

| Frequency       | Maximum RF Line Voltage          |                               |
|-----------------|----------------------------------|-------------------------------|
|                 | Quasi-Peak Level<br>dB( $\mu$ V) | Average Level<br>dB( $\mu$ V) |
| 150kHz ~ 500kHz | 66 ~ 56*                         | 56 ~ 46*                      |
| 500kHz ~ 5MHz   | 56                               | 46                            |
| 5MHz ~ 30MHz    | 60                               | 50                            |

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

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

### 10.2. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT was charged from PC's USB port which connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#).. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2009 on Conducted Emission Test.

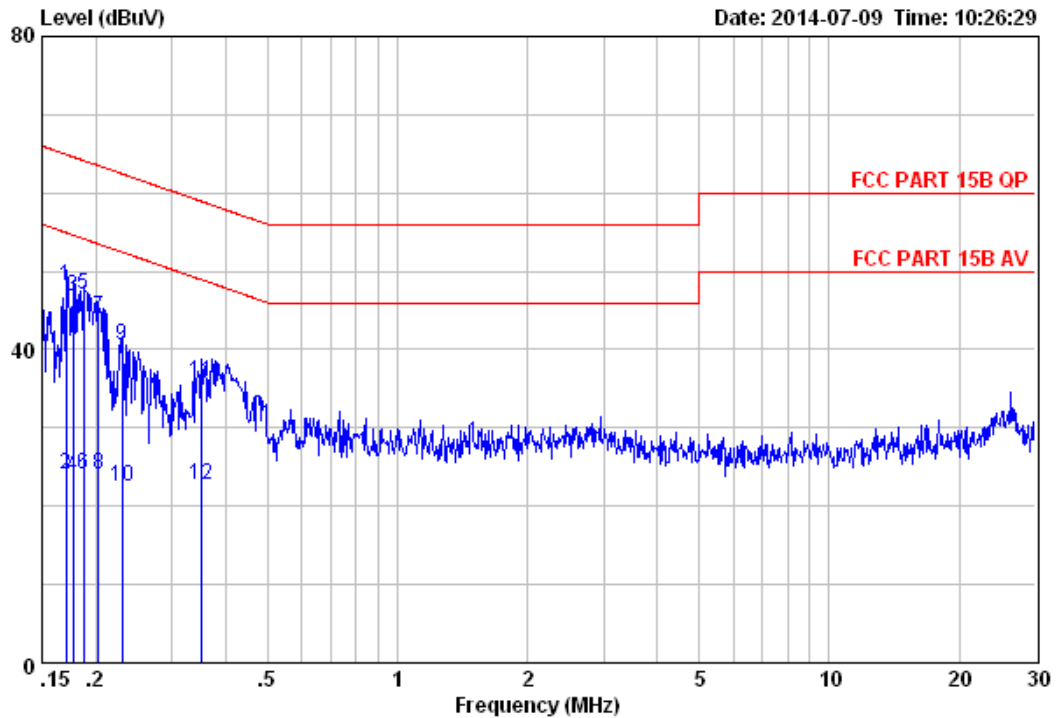
The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

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

### 10.3. Test Result

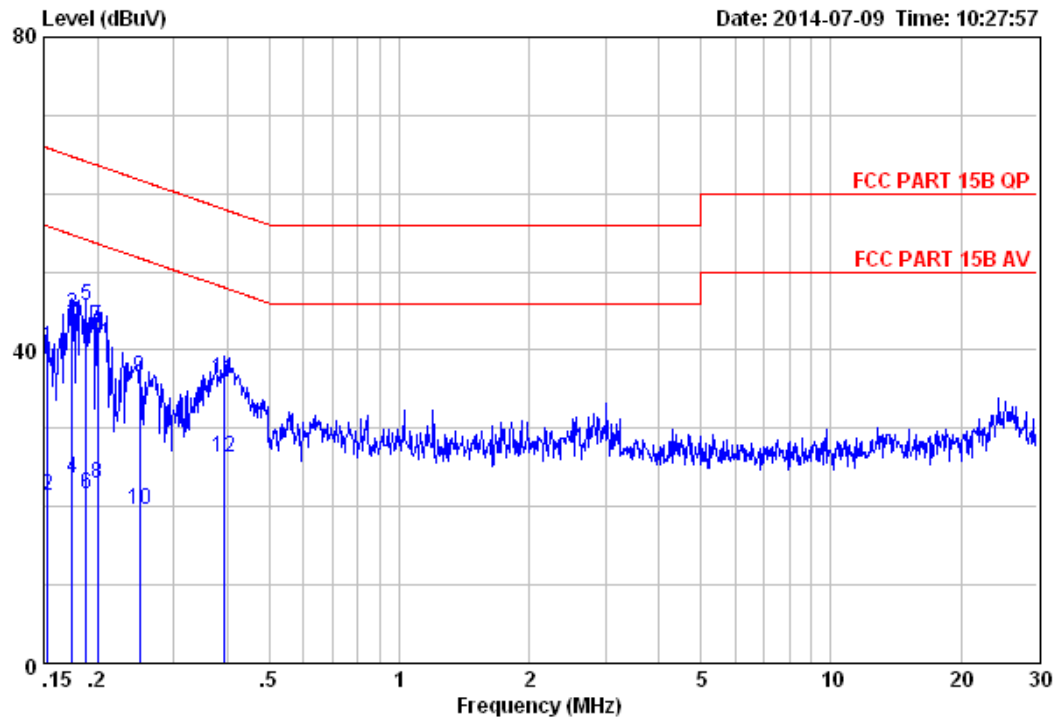
| 0.15MHz—30MHz Conducted emissison Test result                    |                         |
|--|-------------------------|
| EUT: SOUNDBAR 5500 SYSTEM  | M/N:SPEAKER ASSY SB5500 |
| Power: DC 20V From Adapter Input AC 120V/60Hz                    |                         |
| Test date: 2014-07-09 Test site: 3m Chamber Tested by: Tony.Tang |                         |
| Test mode: Tx Mode   |                         |
| Pass   |                         |

## 10.4. Test data



Site no. : EST Conduction Shielded Room Data no. : 313  
 Limit : FCC PART 15B QP LINE Phase : NEUTRAL  
 Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX Mode

|    |       | LISN   | Cable |         | Emission |          |        |         |
|----|-------|--------|-------|---------|----------|----------|--------|---------|
|    | Freq. | Factor | Loss  | Reading | Level    | Limits   | Margin | Remark  |
|    | (MHz) | (dB/m) | (dB)  | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |         |
| 1  | 0.17  | 9.52   | 9.81  | 28.84   | 48.17    | 64.94    | 16.77  | QP      |
| 2  | 0.17  | 9.52   | 9.81  | 4.84    | 24.17    | 54.94    | 30.77  | Average |
| 3  | 0.18  | 9.54   | 9.80  | 27.40   | 46.74    | 64.64    | 17.90  | QP      |
| 4  | 0.18  | 9.54   | 9.80  | 4.40    | 23.74    | 54.64    | 30.90  | Average |
| 5  | 0.19  | 9.57   | 9.80  | 27.68   | 47.05    | 64.15    | 17.10  | QP      |
| 6  | 0.19  | 9.57   | 9.80  | 4.68    | 24.05    | 54.15    | 30.10  | Average |
| 7  | 0.20  | 9.60   | 9.80  | 24.64   | 44.04    | 63.49    | 19.45  | QP      |
| 8  | 0.20  | 9.60   | 9.80  | 4.64    | 24.04    | 53.49    | 29.45  | Average |
| 9  | 0.23  | 9.60   | 9.80  | 21.17   | 40.57    | 62.44    | 21.87  | QP      |
| 10 | 0.23  | 9.60   | 9.80  | 3.17    | 22.57    | 52.44    | 29.87  | Average |
| 11 | 0.35  | 9.59   | 9.83  | 16.39   | 35.81    | 58.91    | 23.10  | QP      |
| 12 | 0.35  | 9.59   | 9.83  | 3.39    | 22.81    | 48.91    | 26.10  | Average |



Site no. : EST Conduction Shielded RoomData no. : 315  
 Limit : FCC PART 15B QP LINE Phase : LINE  
 Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa  
 Engineer : Tony  
 EUT : SOUNDBAR 5500 SYSTEM  
 Power : DC 20V From Adapter Input AC 120V/60Hz  
 M/N : SPEAKER ASSY SB5500  
 Test Mode : TX Mode

|    |       | LISN   | Cable |         | Emission |          |        |         |
|----|-------|--------|-------|---------|----------|----------|--------|---------|
|    | Freq. | Factor | Loss  | Reading | Level    | Limits   | Margin | Remark  |
|    | (MHz) | (dB/m) | (dB)  | (dBuV)  | (dBuV/m) | (dBuV/m) | (dB)   |         |
| 1  | 0.15  | 9.61   | 9.81  | 21.00   | 40.42    | 65.82    | 25.40  | QP      |
| 2  | 0.15  | 9.61   | 9.81  | 2.00    | 21.42    | 55.82    | 34.40  | Average |
| 3  | 0.17  | 9.61   | 9.80  | 25.21   | 44.62    | 64.72    | 20.10  | QP      |
| 4  | 0.17  | 9.61   | 9.80  | 4.21    | 23.62    | 54.72    | 31.10  | Average |
| 5  | 0.19  | 9.61   | 9.80  | 26.27   | 45.68    | 64.11    | 18.43  | QP      |
| 6  | 0.19  | 9.61   | 9.80  | 2.27    | 21.68    | 54.11    | 32.43  | Average |
| 7  | 0.20  | 9.61   | 9.80  | 23.64   | 43.05    | 63.62    | 20.57  | QP      |
| 8  | 0.20  | 9.61   | 9.80  | 3.64    | 23.05    | 53.62    | 30.57  | Average |
| 9  | 0.25  | 9.61   | 9.82  | 17.17   | 36.60    | 61.73    | 25.13  | QP      |
| 10 | 0.25  | 9.61   | 9.82  | 0.17    | 19.60    | 51.73    | 32.13  | Average |
| 11 | 0.39  | 9.61   | 9.82  | 16.82   | 36.25    | 57.99    | 21.74  | QP      |
| 12 | 0.39  | 9.61   | 9.82  | 6.82    | 26.25    | 47.99    | 21.74  | Average |

## 11. ANTENNA REQUIREMENTS

### 11.1. Limit

For intentional device, according to FCC 47 CFR 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

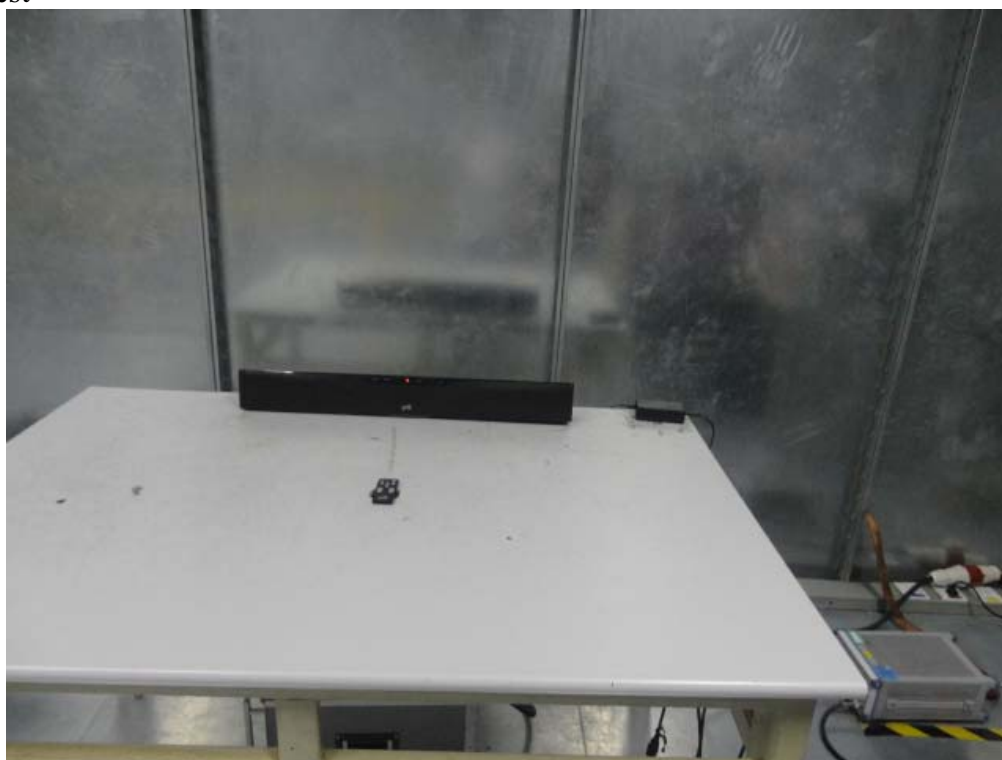
### 11.2. Result

The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 3.3dBi.

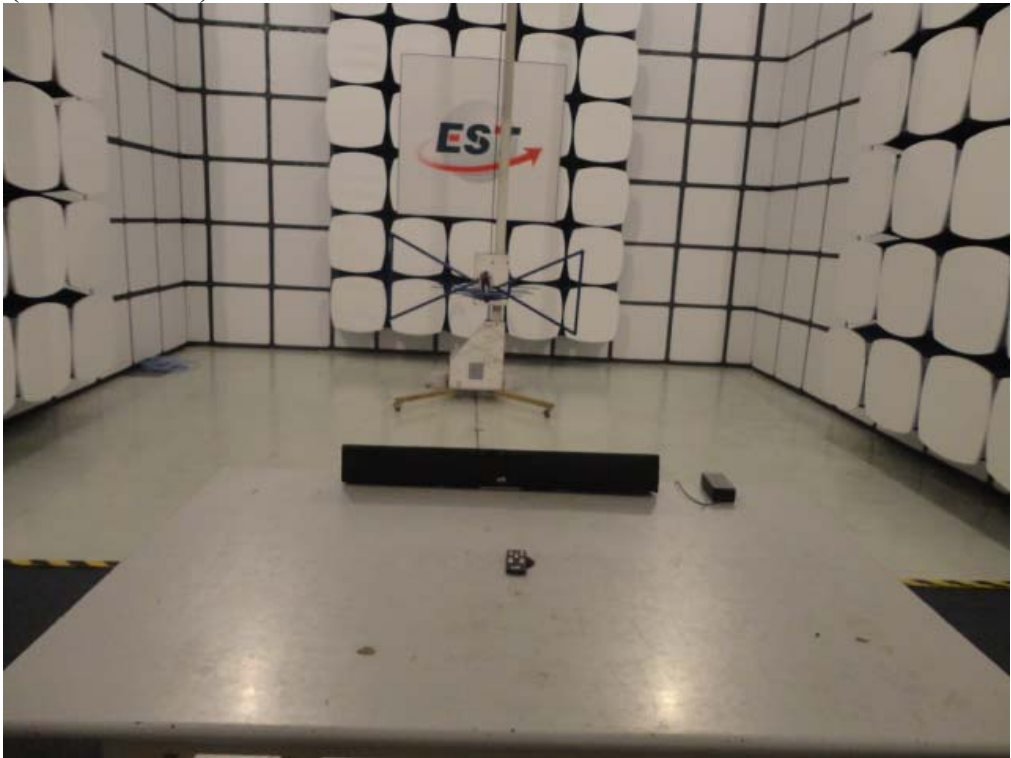


## 12. TEST SETUP PHOTO

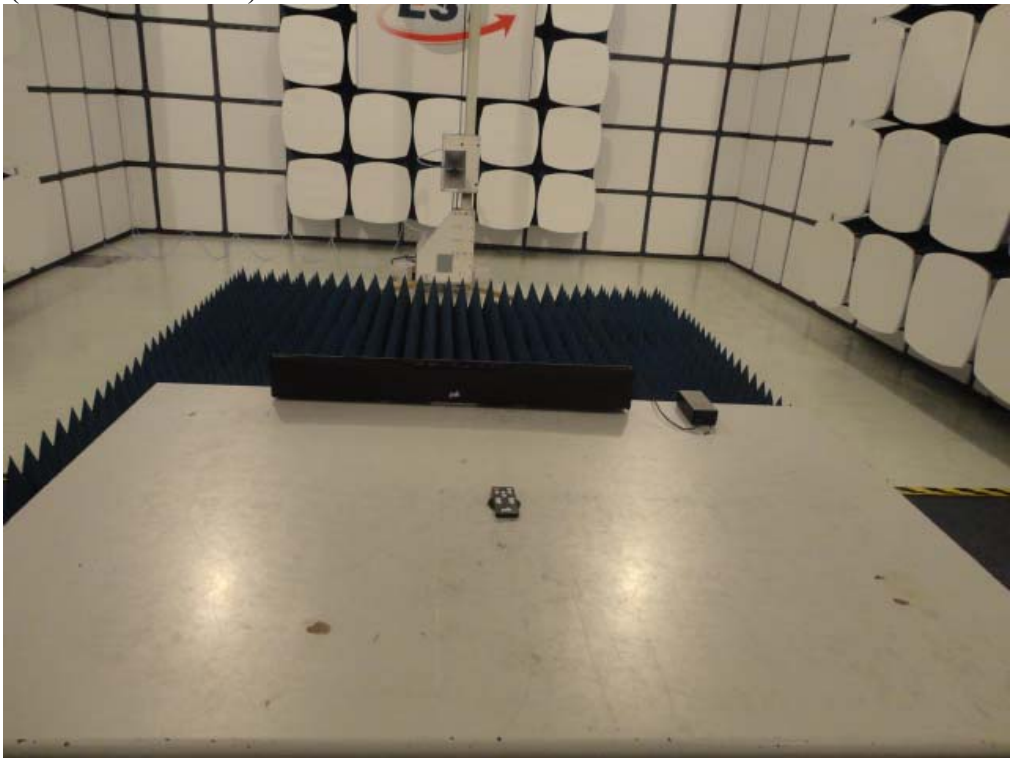
Conducted Test



Radiated Test (30-1000 MHz)



Radiated Test (1000-25000 MHz)



## 13. PHOTOS OF EUT

**External Photos**  
M/N: SPEAKER ASSY SB5500

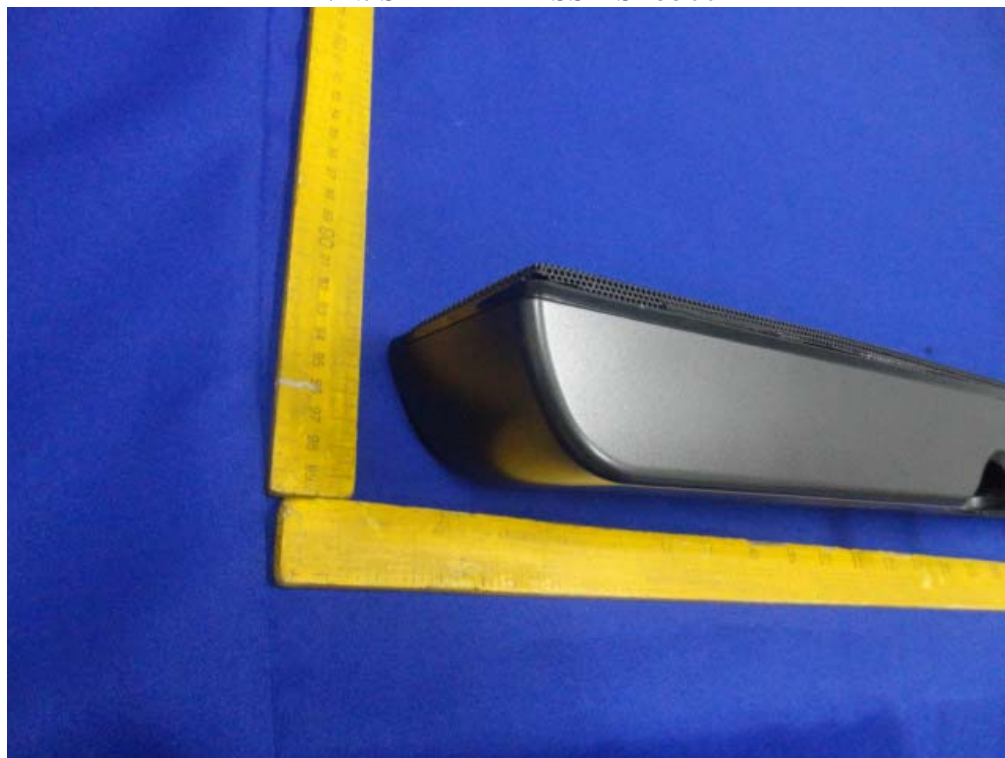




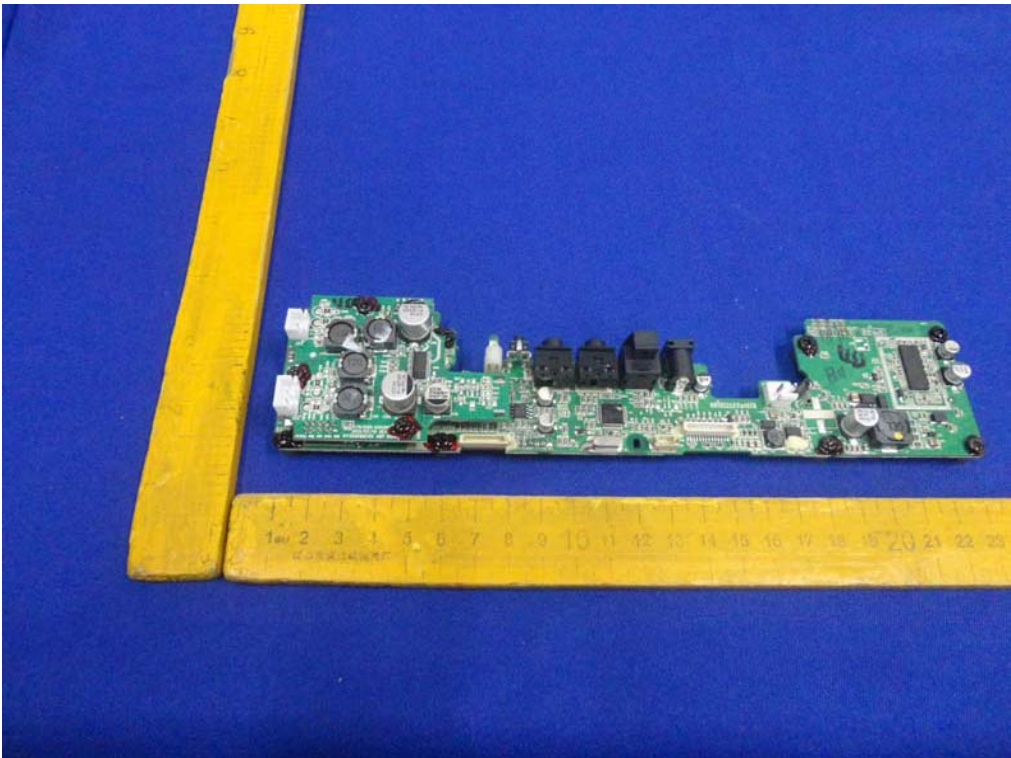
**External Photos**  
M/N: SPEAKER ASSY SB5500



**External Photos**  
M/N: SPEAKER ASSY SB5500

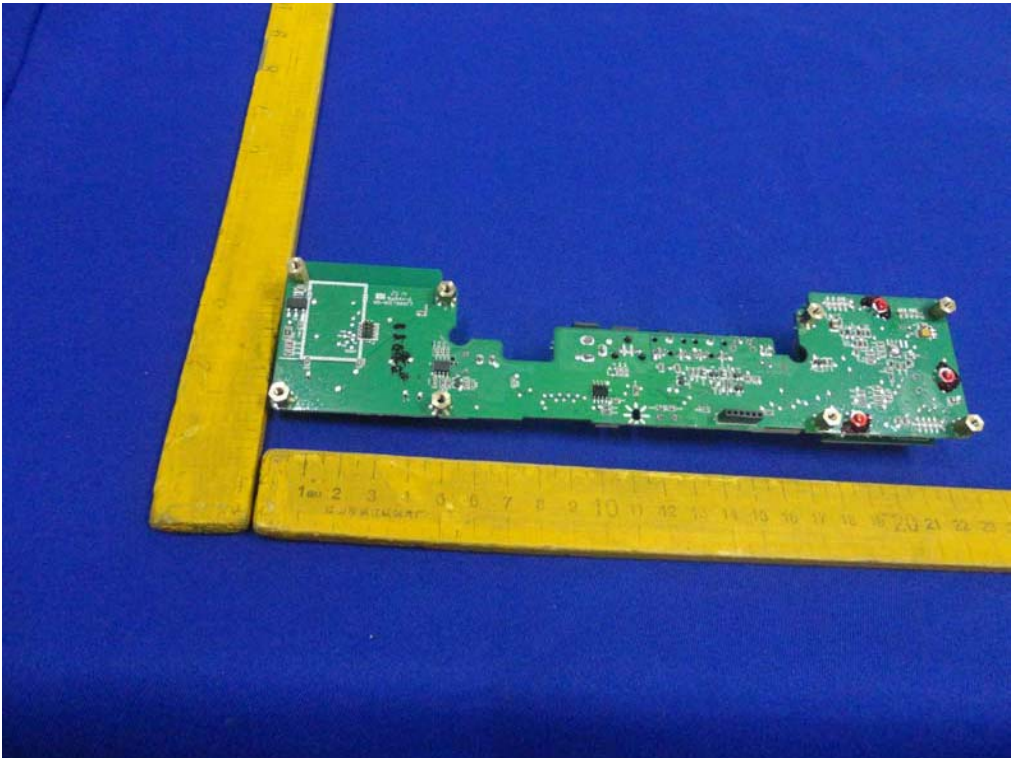


**Internal Photos**  
M/N: SPEAKER ASSY SB5500

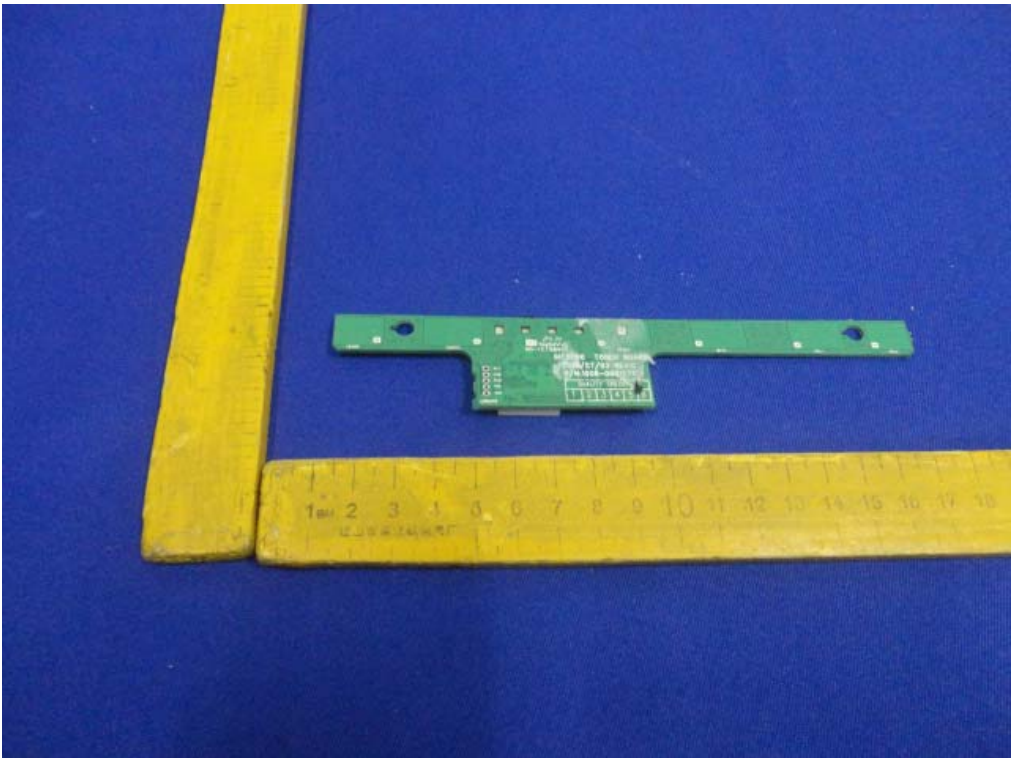
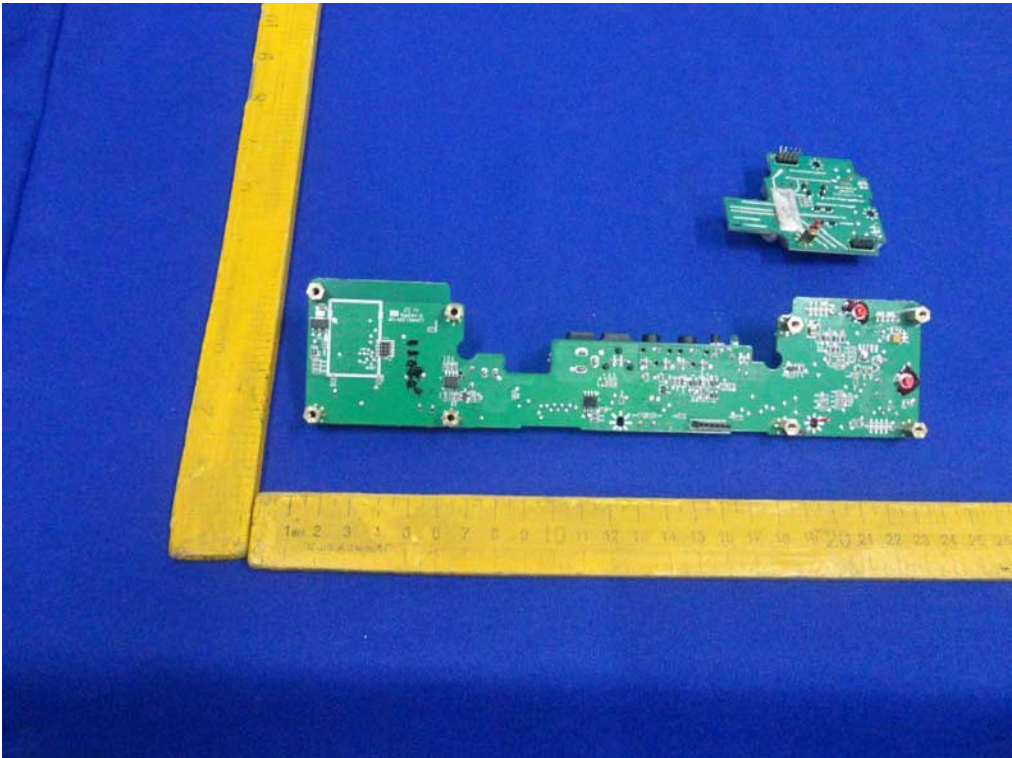




**Internal Photos**  
M/N: SPEAKER ASSY SB5500

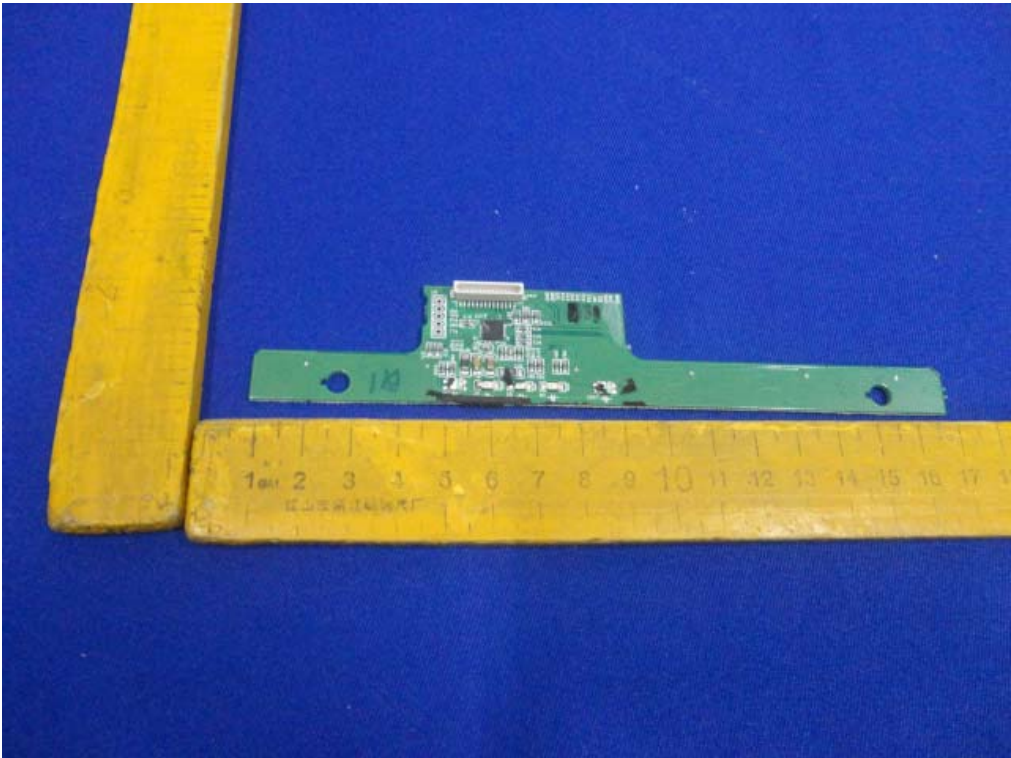


Internal Photos  
M/N: SPEAKER ASSY SB5500



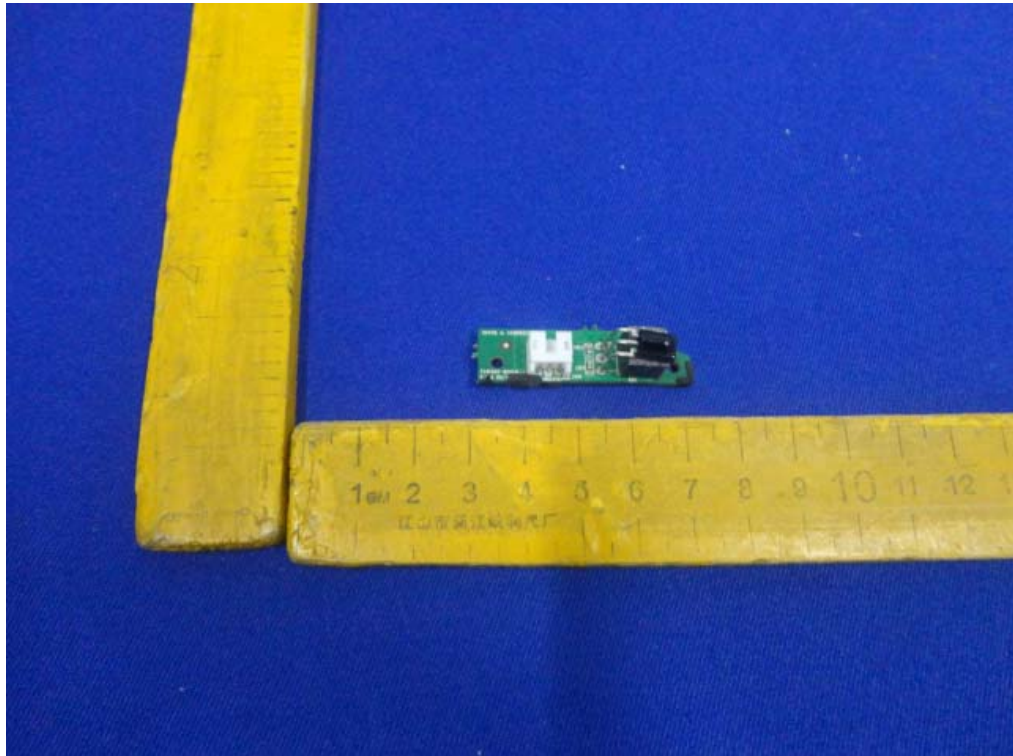


Internal Photos  
M/N: SPEAKER ASSY SB5500



FHSS  
Antenna

**Internal Photos**  
M/N: SPEAKER ASSY SB5500





Internal Photos  
M/N: SPEAKER ASSY SB5500



Bluetooth  
Antenna

**Internal Photos**  
M/N: SPEAKER ASSY SB5500



Adapter Photos





Remote Control Photos  
M/N: SPEAKER ASSY SB5500

