

FCC PART 15C TEST REPORT FOR CERTIFICATION  
On Behalf of

Shenzhen 3nod Digital Technology Co., Ltd.

Bluetooth Speaker

Model Number: HX-P540A

FCC ID: 2AA3HHX-P540A

Prepared for : Shenzhen 3nod Digital Technology Co., Ltd.  
Building D Park 8# Road Tangxiayong Village, Industrial Zone  
Songgang Town, Baoan, Shenzhen, China

Prepared By : EST Technology Co., Ltd.  
Santun(guantai Road), Houjie Town, DongGuan City,  
GuangDong, China.

Tel: 86-769-83081888-808

Report Number: ESTE-R1405015  
Date of Test : May 13 ~ May 25, 2014  
Date of Report : May 26, 2014

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## Test Report Verification

|                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                       |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------|
| <b>Applicant:</b>                                                                                                                                                                                 | Shenzhen 3nod Digital Technology Co., Ltd.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                       |                       |
| <b>Address:</b>                                                                                                                                                                                   | Building D Park 8# Road Tangxiayong Village, Industrial Zone Songgang Town, Baoan, Shenzhen, China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                       |                       |
| <b>Manufacturer Address:</b>                                                                                                                                                                      | Shenzhen 3nod Digital Technology Co., Ltd.<br>Building D Park 8# Road Tangxiayong Village, Industrial Zone Songgang Town, Baoan, Shenzhen, China                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                       |                       |
| <b>E.U.T:</b>                                                                                                                                                                                     | Bluetooth Speaker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                       |                       |
| <b>Model Number:</b>                                                                                                                                                                              | HX-P540A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                       |                       |
| <b>Power Supply:</b>                                                                                                                                                                              | DC 3.7V From Internal Battery<br>DC 5V From USB for Charging                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                       |                       |
| <b>Test Voltage:</b>                                                                                                                                                                              | DC 3.7V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                       |                       |
| <b>Trade Name:</b>                                                                                                                                                                                | HMDX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Serial No.:                                                                           | -----                 |
| <b>Date of Receipt:</b>                                                                                                                                                                           | May 13, 2014                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Date of Test:</b>                                                                  | May 13 ~ May 25, 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 FCC Rules and Regulations Part 15 Subpart C requirements.</p> <p style="text-align: right;">This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd.<br/>Date: May 26, 2014</p> |                                                                                       |                       |
| Prepared by:                                                                                                                                                                                      | Tested by:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Approved by:                                                                          |                       |
|                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                       |
| Ada / Assistant                                                                                                                                                                                   | Tony.Tang/ Engineer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | IcemanHu / Manager                                                                    |                       |
| <b>Other Aspects:</b>                                                                                                                                                                             | None.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                       |                       |
| Abbreviations: OK/P=passed    fail/F=failed    n.a/N=not applicable    E.U.T=equipment under tested                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                       |                       |
| 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. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

|                            |                                       |
|----------------------------|---------------------------------------|
| <b>Product Name</b>        | : Bluetooth Speaker                   |
| <b>Model Number</b>        | : HX-P540A                            |
| <b>FCC ID</b>              | : 2AA3HHX-P540A                       |
| <b>Operation frequency</b> | : 2402MHz~2480MHz                     |
| <b>Number of channel</b>   | : 79                                  |
| <b>Antenna</b>             | : Internal antenna, 0 dBi gain        |
| <b>Modulation</b>          | : FHSS (GFSK, $\pi/4$ -DQPSK, 8-DPSK) |
| <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: 2003<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: 2003<br>DA 00-705                           | PASS    |
| Antenna requirement            | FCC Part 15: 15.203                                                            | PASS    |

## 2.2. Test Facilities

|               |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC Lab       | : | <p>Certificated by CNAL, CHINA<br/> Registration No.: L5288<br/> Date of registration: October 28, 2011</p> <p>Certificated by FCC, USA<br/> Registration No.: 989591<br/> Date of registration: November 20, 2013</p> <p>Certificated by Industry Canada<br/> Registration No.: 46405-9405<br/> Date of registration: January 03, 2013</p> <p>Certificated by VCCI, Japan<br/> Registration No.: R-3663 &amp; C-4103<br/> Date of registration: July 25, 2011</p> <p>Certificated by TUV Rheinland, Germany<br/> Registration No.: UA 50195514 0001<br/> Date of registration: January 07, 2011</p> <p>Certificated by TUV/PS, Shenzhen<br/> Registration No.: SCN1017<br/> Date of registration: January 27, 2011</p> <p>Certificated by Intertek ETL SEMKO<br/> Registration No.: 2011-RTL-L1-18<br/> Date of registration: April 28, 2011</p> <p>Certificated by Siemic, Inc.<br/> Registration No.: SLCN021<br/> Date of registration: November 8, 2011</p> <p>Certificated by Nemko, Hong Kong<br/> Registration No.: 175193<br/> Date of registration: May 4, 2011</p> |
| 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. PC

|              |   |                                 |
|--------------|---|---------------------------------|
| Manufacturer | : | DELL                            |
| M/N          | : | Laititude E6420                 |
| Adapter      | : | M/N: DA90PM111                  |
|              |   | Input: AC 100-240V~50/60Hz 1.5A |
|              |   | Output: DC 19.5V/4.62A          |

## 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: Bluetooth Speaker)

## 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     | 2402MHz   |
|        | Middle  | 2441MHz   |
|        | High    | 2480MHz   |
| 8-DPSK | Low     | 2402MHz   |
|        | Middle  | 2441MHz   |
|        | High    | 2480MHz   |

## 2.6. Channel List for Bluetooth

| Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) | Channel No. | Frequency (MHz) |
|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|
| 1           | 2402            | 2           | 2403            | 3           | 2404            | 4           | 2405            |
| 5           | 2406            | 6           | 2407            | 7           | 2408            | 8           | 2409            |
| 9           | 2410            | 10          | 2411            | 11          | 2412            | 12          | 2413            |
| 13          | 2414            | 14          | 2415            | 15          | 2416            | 16          | 2417            |
| 17          | 2418            | 18          | 2419            | 19          | 2420            | 20          | 2421            |
| 21          | 2422            | 22          | 2423            | 23          | 2424            | 24          | 2425            |
| 25          | 2426            | 26          | 2427            | 27          | 2428            | 28          | 2429            |
| 29          | 2430            | 30          | 2431            | 31          | 2432            | 32          | 2433            |
| 33          | 2434            | 34          | 2435            | 35          | 2436            | 36          | 2437            |
| 37          | 2438            | 38          | 2439            | 39          | 2440            | 40          | 2441            |
| 41          | 2442            | 42          | 2443            | 43          | 2444            | 44          | 2445            |
| 45          | 2446            | 46          | 2447            | 47          | 2448            | 48          | 2449            |
| 49          | 2450            | 50          | 2451            | 51          | 2452            | 52          | 2453            |
| 53          | 2454            | 54          | 2455            | 55          | 2456            | 56          | 2457            |
| 57          | 2458            | 58          | 2459            | 59          | 2460            | 60          | 2461            |
| 61          | 2462            | 62          | 2463            | 63          | 2464            | 64          | 2465            |
| 65          | 2466            | 66          | 2467            | 67          | 2468            | 68          | 2469            |
| 69          | 2470            | 70          | 2471            | 71          | 2472            | 72          | 2473            |
| 73          | 2474            | 74          | 2475            | 75          | 2476            | 76          | 2477            |
| 77          | 2478            | 78          | 2479            | 79          | 2480            | -           | -               |

## 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     | July,30,13 | 1 Year    |
| Artificial Mains Networ | Rohde & Schwarz | ENV216    | 101260     | July,30,13 | 1 Year    |
| Pulse Limiter           | Rohde & Schwarz | ESH3-Z2   | 101100     | July.25,13 | 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     | July,23,13  | 1 Year    |
| Spectrum Analyzer | Agilent         | E4411B    | MY50140697 | July ,23,13 | 1 Year    |
| Bilog Antenna     | Teseq           | CBL 6111D | 27090      | July ,29,13 | 1 Year    |
| Signal Amplifier  | Agilent         | 310N      | 187037     | July .23,13 | 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 | BBHA9120D1<br>002 | July.29,13 | 1 Year    |
| Signal Amplifier  | SCHWARZB<br>ECK | BBV9718     | 9718-212          | July.23,13 | 1 Year    |
| Spectrum Analyzer | Agilent         | E4408B      | MY44211139        | July.23,13 | 1 Year    |
| RF Cable          | Hubersuhner     | RG 214/U    | 513423            | July.21.13 | 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

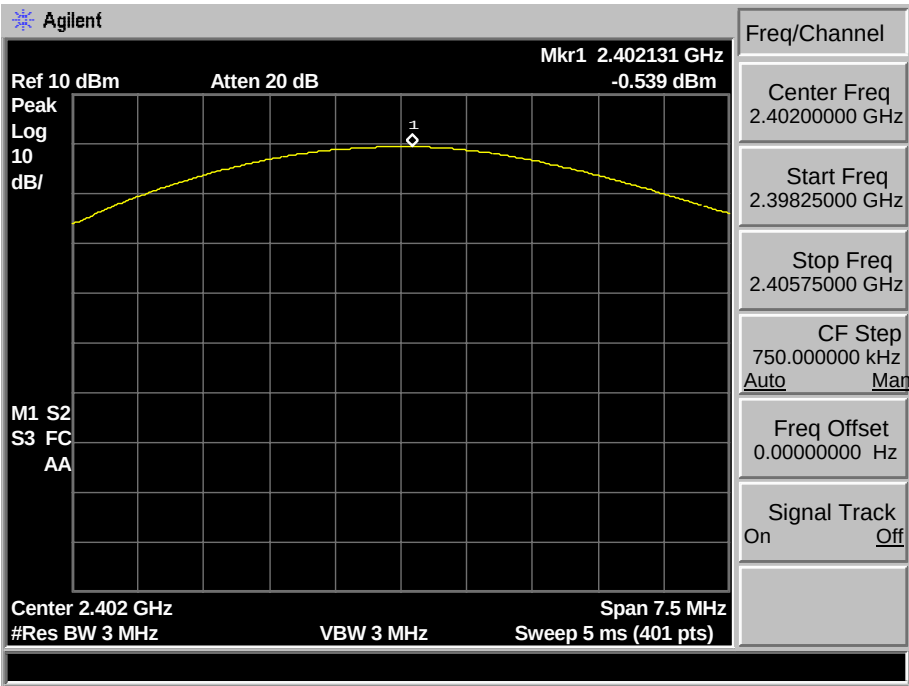
The transmitter output (antenna port) was connected to the spectrum analyzer

#### 3.3. Test Result

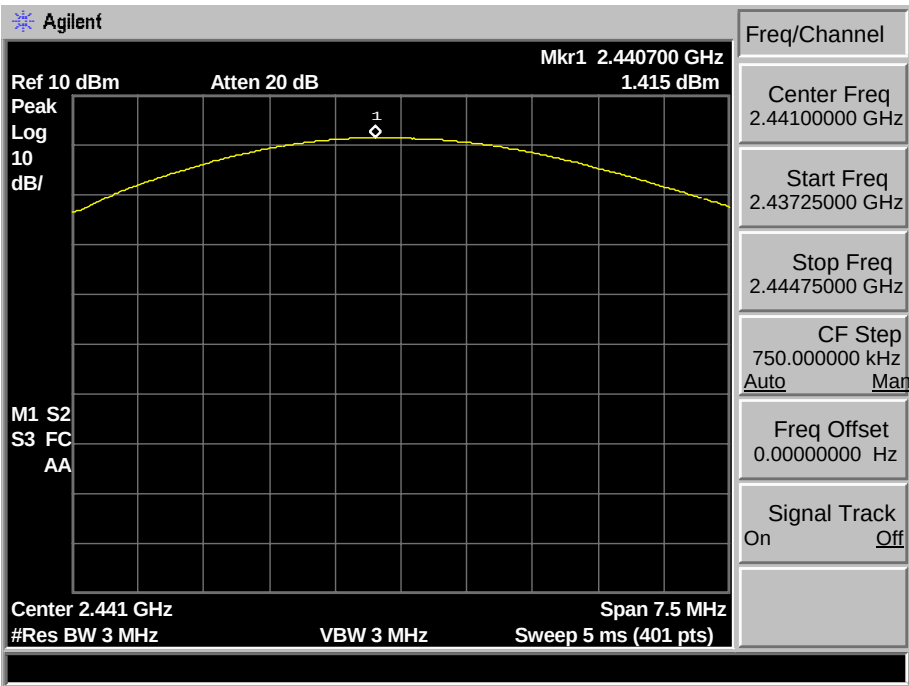
| EUT: Bluetooth Speaker |            |                    |       |                      |             |
|------------------------|------------|--------------------|-------|----------------------|-------------|
| M/N: HX-P540A          |            |                    |       |                      |             |
| Test date: 2014-05-21  |            | Test site: RF site |       | Tested by: Tony Tang |             |
| Mode                   | Freq (MHz) | Result (dBm)       | Limit |                      | Margin (dB) |
|                        |            |                    | dBm   | W                    |             |
| GFSK                   | 2402       | -0.539             | 30.00 | 1                    | 30.539      |
|                        | 2441       | 1.415              | 30.00 | 1                    | 28.585      |
|                        | 2480       | 2.014              | 30.00 | 1                    | 27.986      |
| 8-DPSK                 | 2402       | -2.475             | 21.00 | 0.125                | 23.475      |
|                        | 2441       | 0.460              | 21.00 | 0.125                | 20.540      |
|                        | 2480       | 1.030              | 21.00 | 0.125                | 19.970      |
| Conclusion: PASS       |            |                    |       |                      |             |

3.4. Test Data

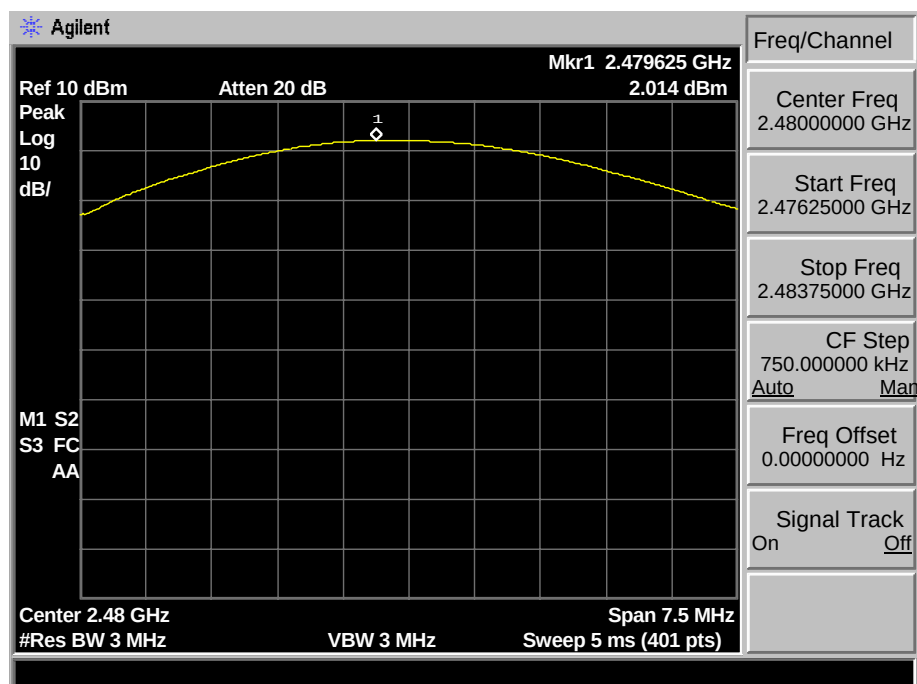
GFSK 2402 MHz



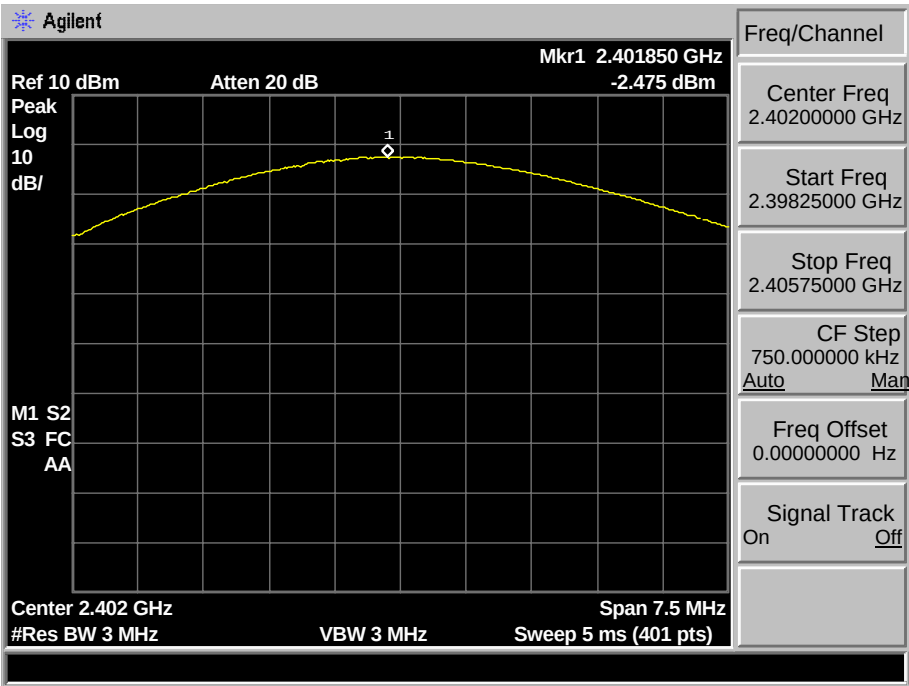
GFSK 2441 MHz



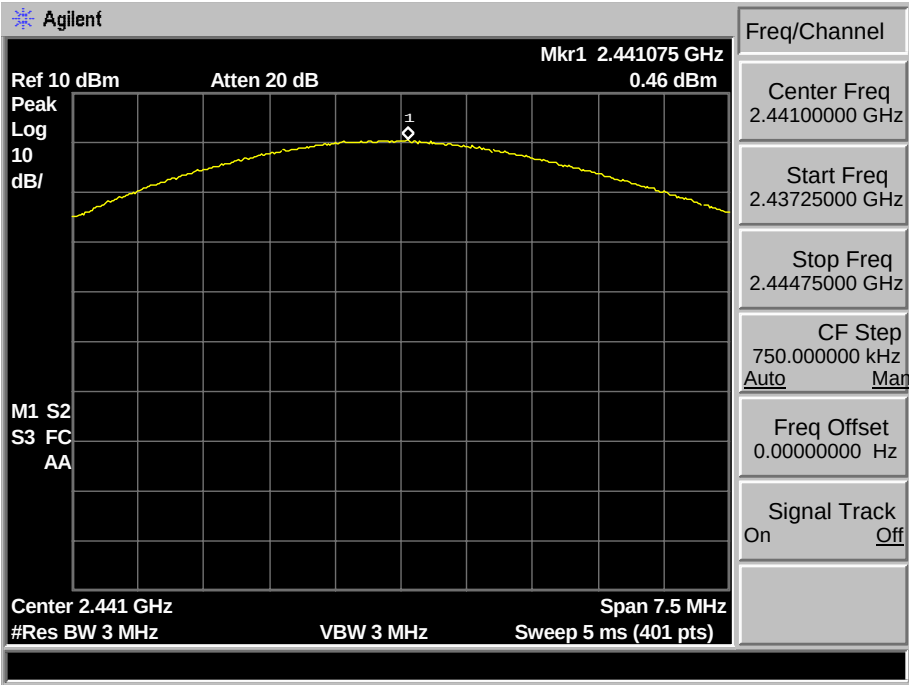
## GFSK 2480 MHz



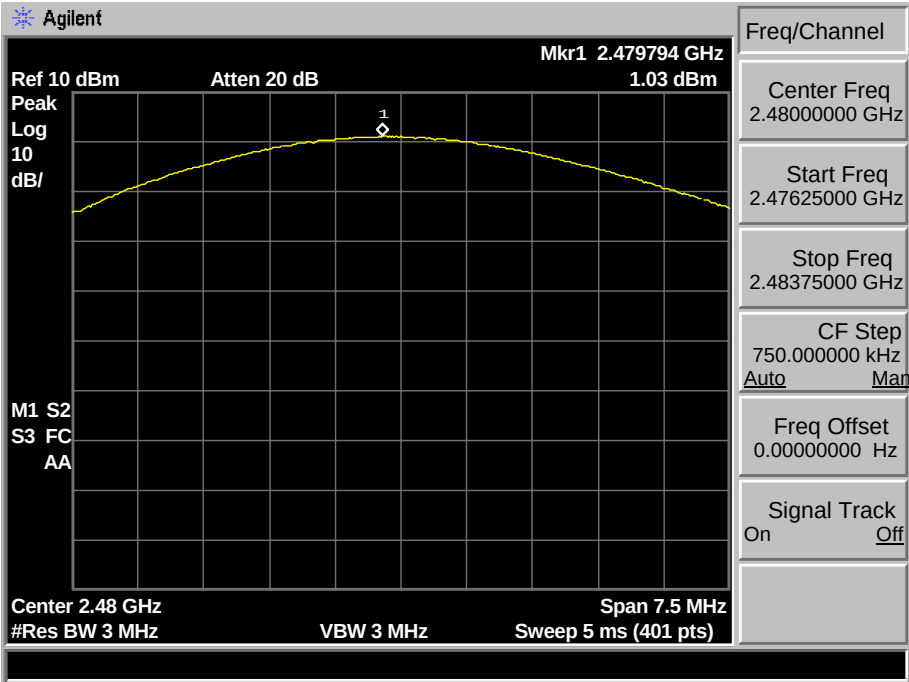
8-DPSK 2402 MHz



8-DPSK 2441 MHz



8-DPSK 2480 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

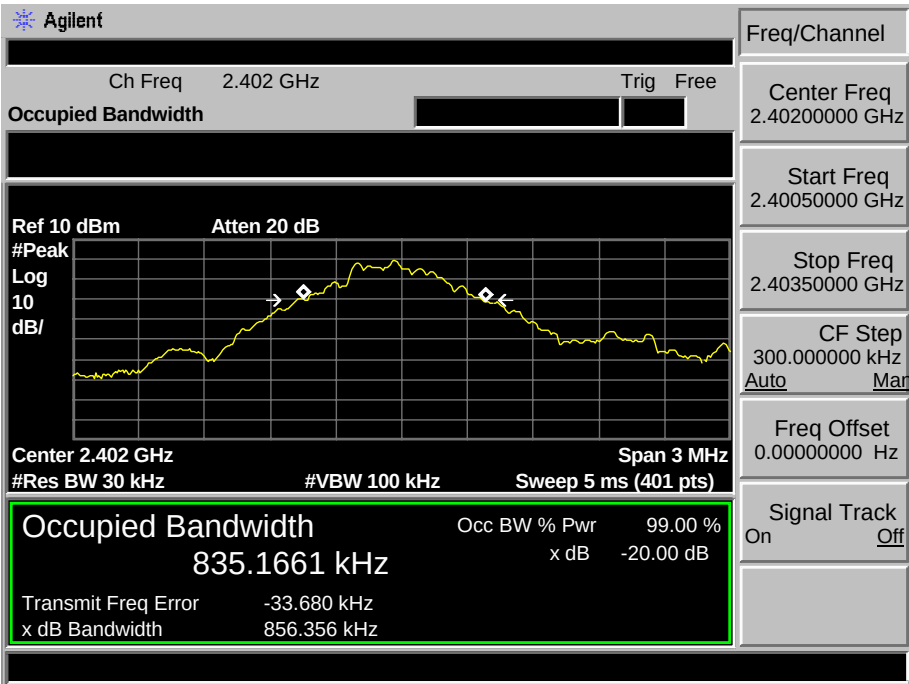
The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

### 4.3. Test Result

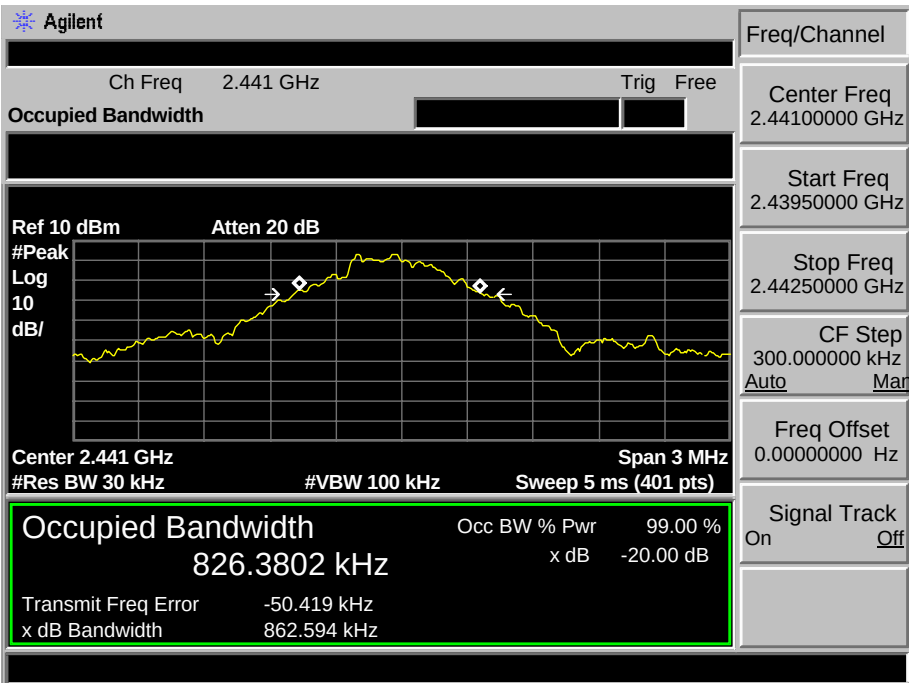
| EUT: Bluetooth Speaker |            |                      |             |                      |
|------------------------|------------|----------------------|-------------|----------------------|
| M/N: HX-P540A          |            |                      |             |                      |
| Test date: 2014-05-21  |            | Test site: RF site   |             | Tested by: Tony Tang |
| Mode                   | Freq (MHz) | 20dB Bandwidth (MHz) | Limit (kHz) | Conclusion           |
| GFSK                   | 2402       | 0.856                | /           | PASS                 |
|                        | 2441       | 0.863                | /           | PASS                 |
|                        | 2480       | 0.872                | /           | PASS                 |
| 8-DPSK                 | 2402       | 1.213                | /           | PASS                 |
|                        | 2441       | 1.222                | /           | PASS                 |
|                        | 2480       | 1.219                | /           | PASS                 |

4.4. Test Data

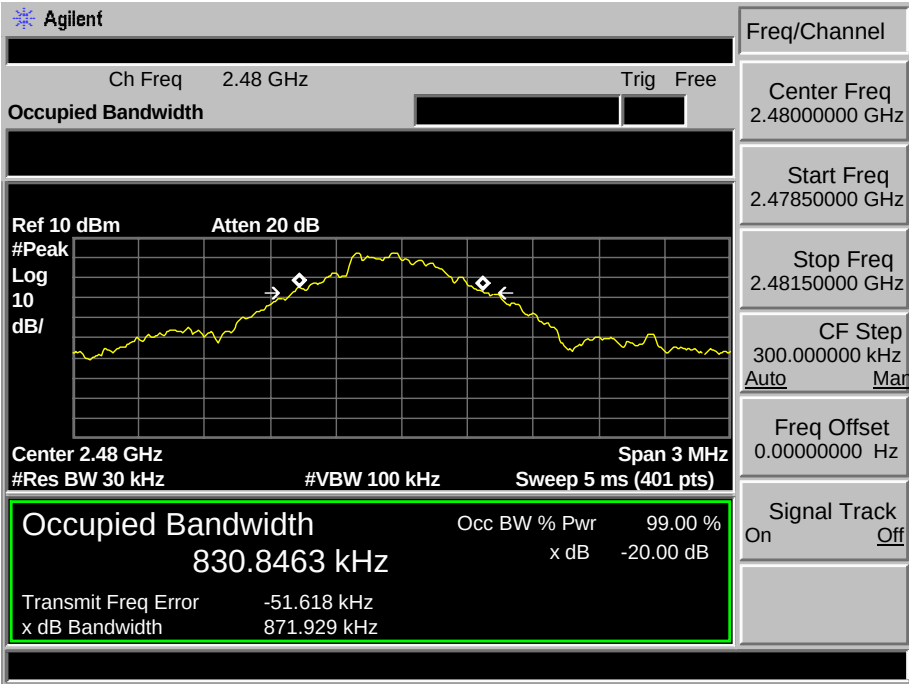
GFSK 2402MHz



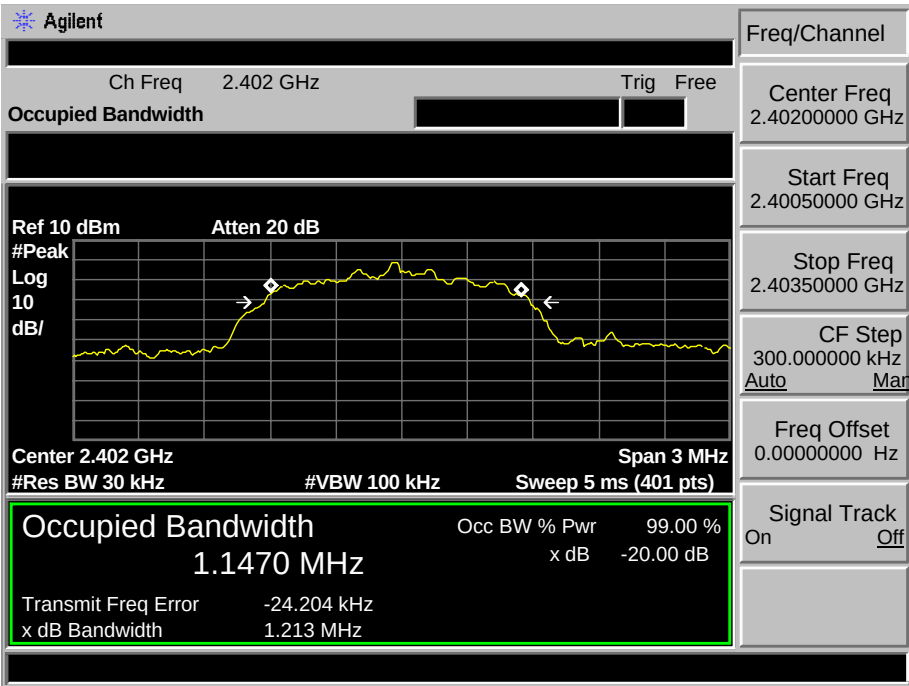
GFSK 2441MHz



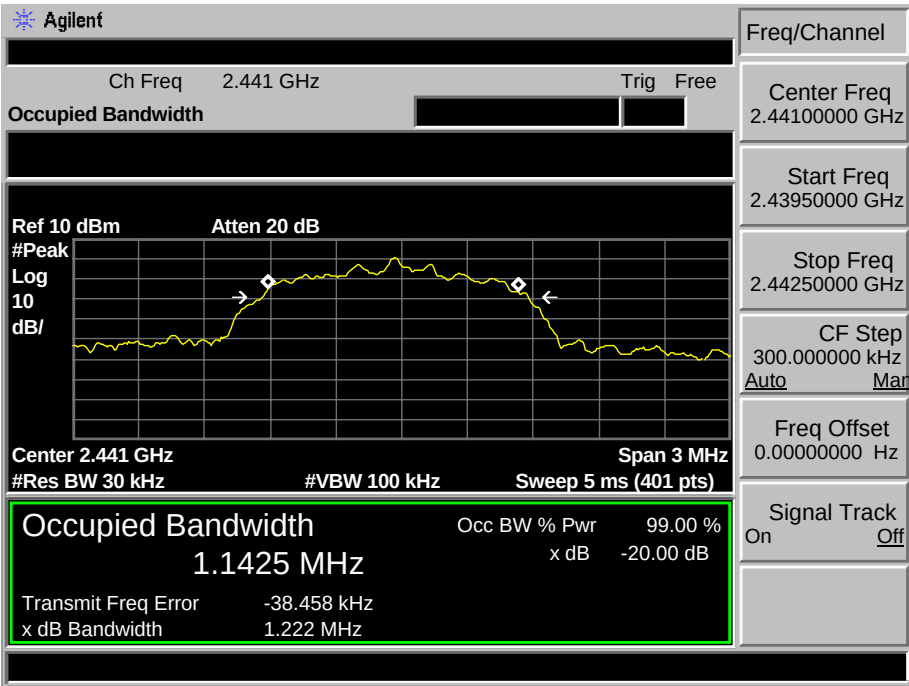
GFSK 2480MHz



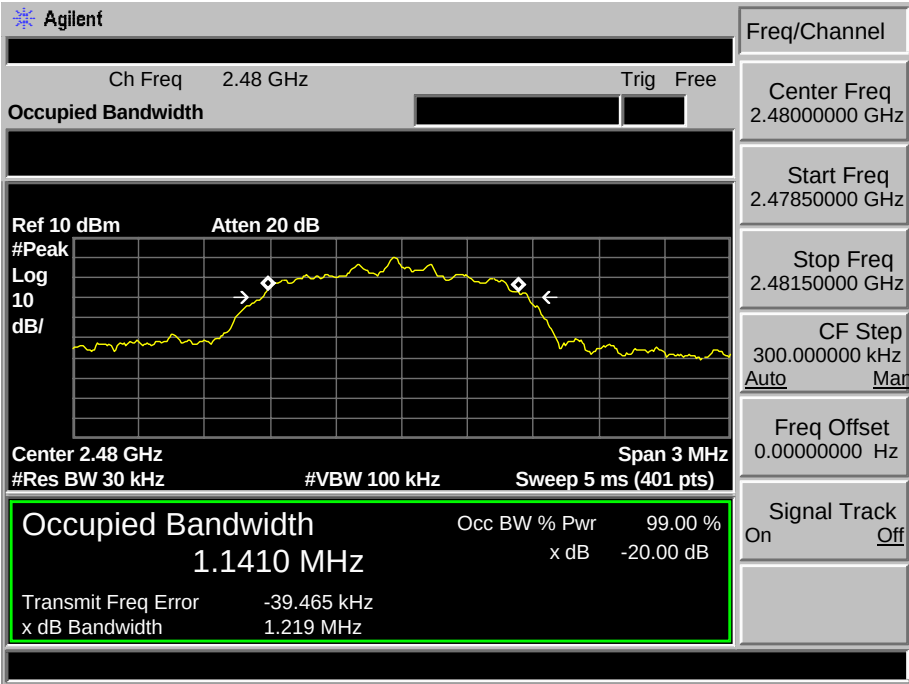
8-DPSK 2402MHz



8-DPSK 2441MHz



8-DPSK 2480MHz



## 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

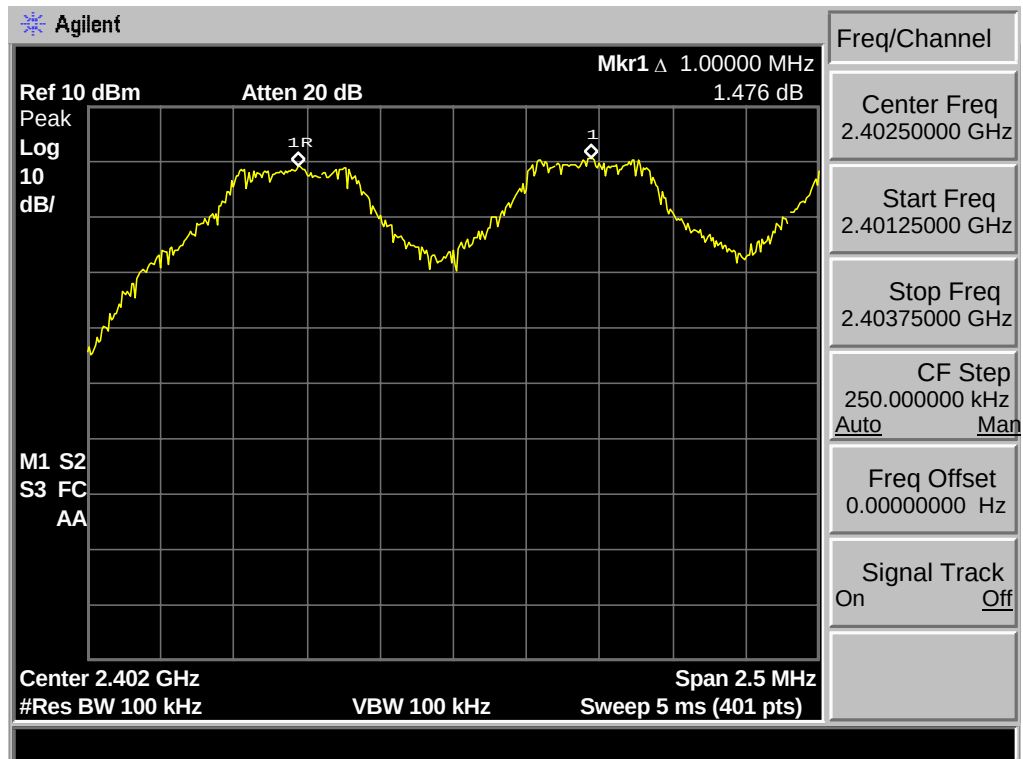
### 5.2. Test Procedure

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.

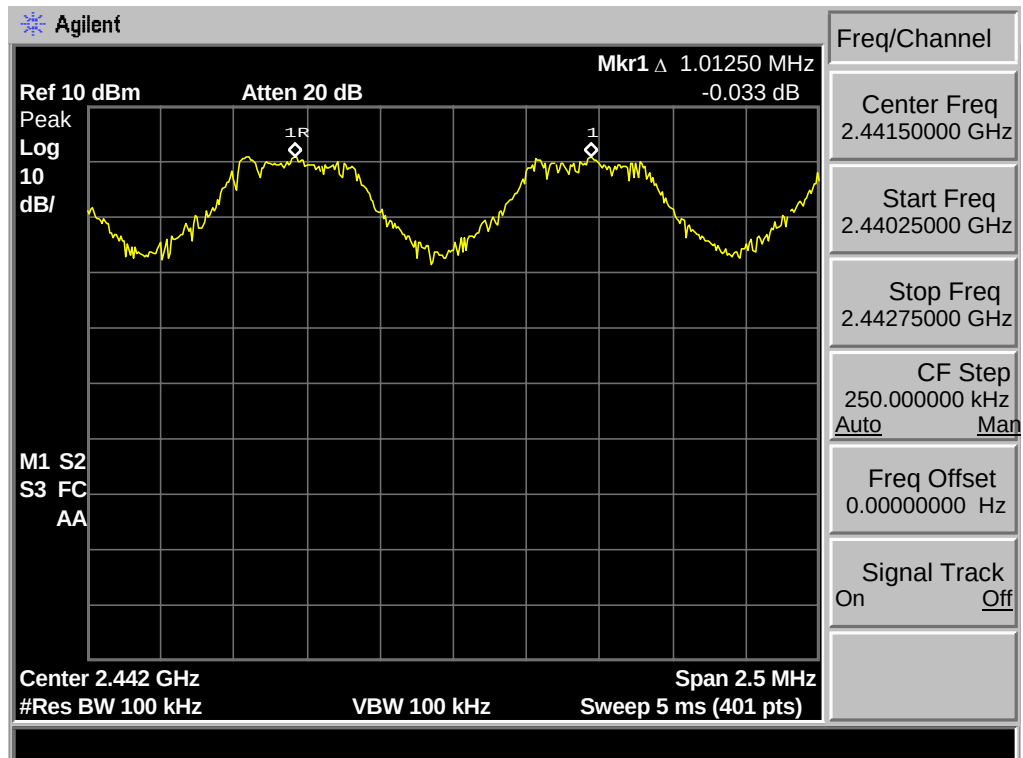
### 5.3. Test Result

| EUT: Bluetooth Speaker<br>M/N: HX-P540A |         |                          |                                                               |                      |
|-----------------------------------------|---------|--------------------------|---------------------------------------------------------------|----------------------|
| Test date: 2014-05-20                   |         |                          | Test site: RF site                                            | Tested by: Tony Tang |
| Mode                                    | Channel | Channel separation (MHz) | Limit                                                         | Conclusion           |
| GFSK                                    | Low CH  | 1.000                    | 0.856 MHz                                                     | PASS                 |
|                                         | Mid CH  | 1.013                    | 0.863 MHz                                                     | PASS                 |
|                                         | High CH | 1.006                    | 0.872 MHz                                                     | PASS                 |
| 8-DPSK                                  | Low CH  | 1.006                    | > 2/3 of the 20dB Bandwidth or 25[kHz]( whichever is greater) | PASS                 |
|                                         | Mid CH  | 1.000                    |                                                               | PASS                 |
|                                         | High CH | 1.013                    |                                                               | PASS                 |

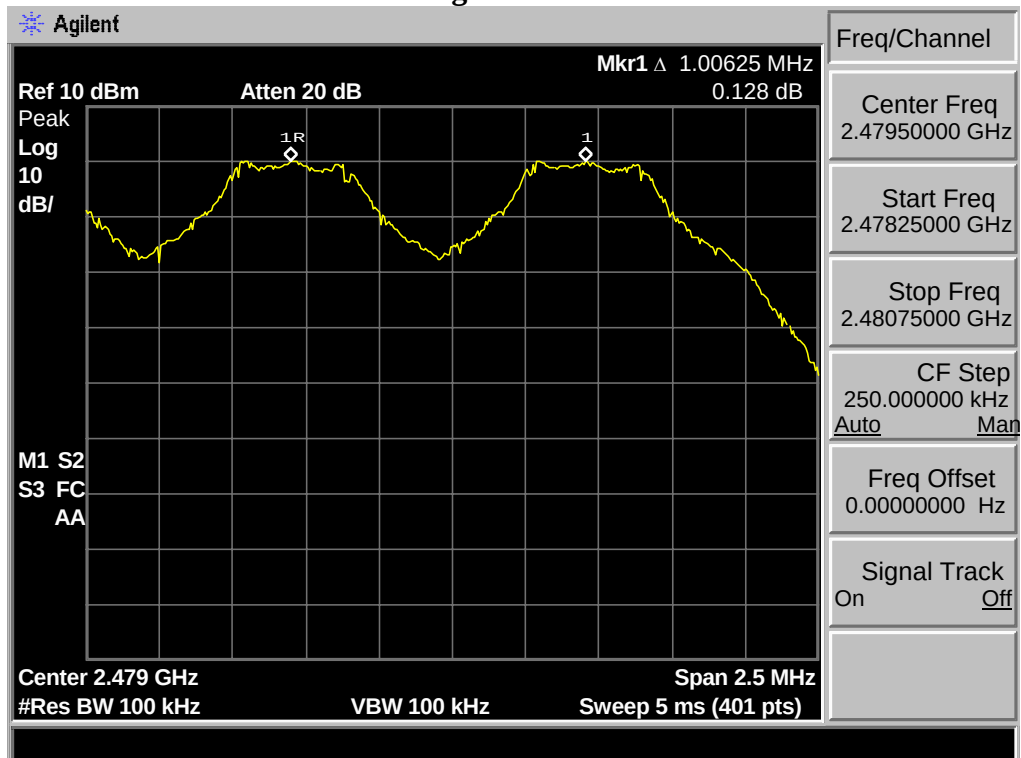
## 5.4. Test Data

GFSK  
Low Channel

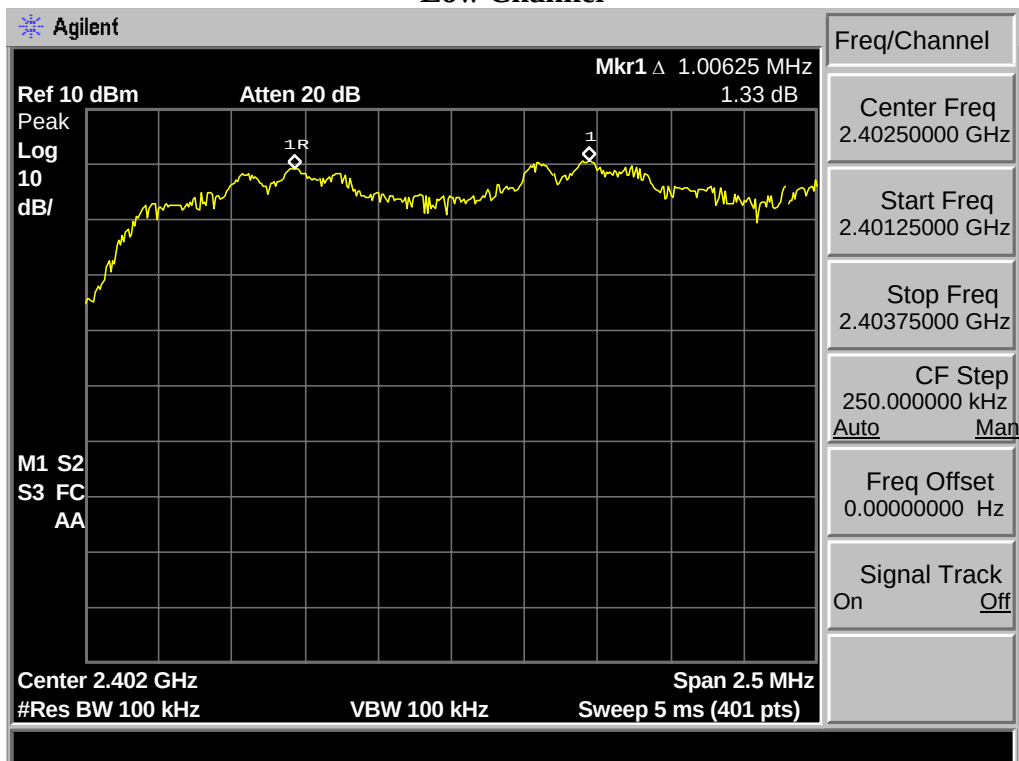
## Mid Channel



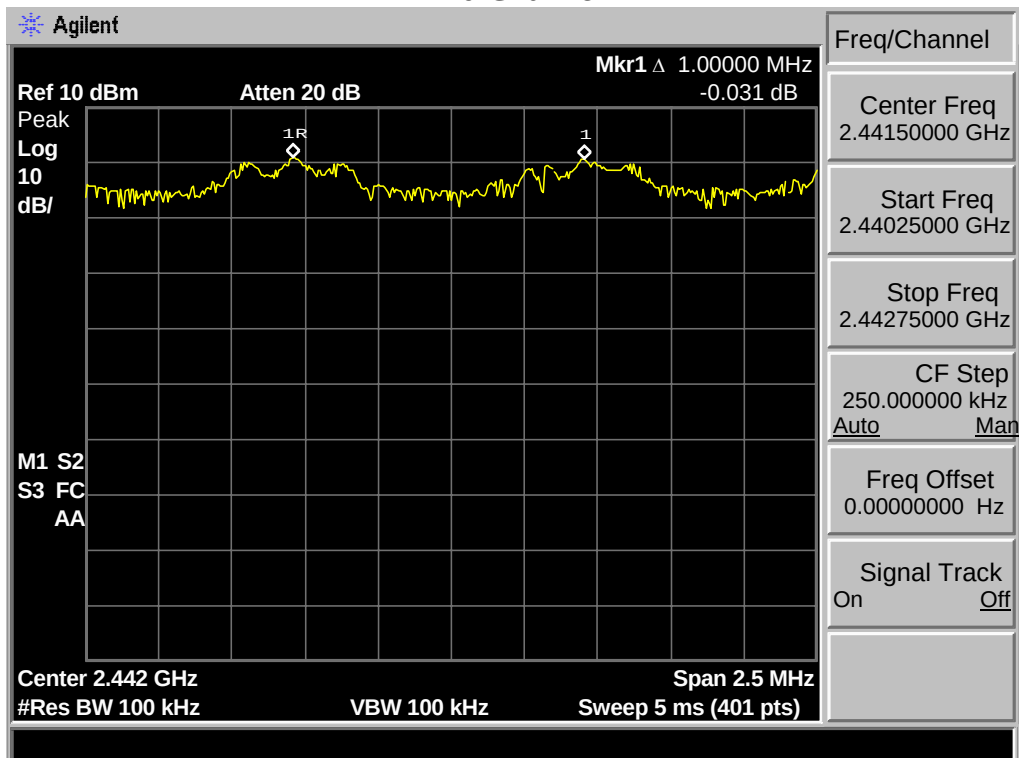
# High Channel



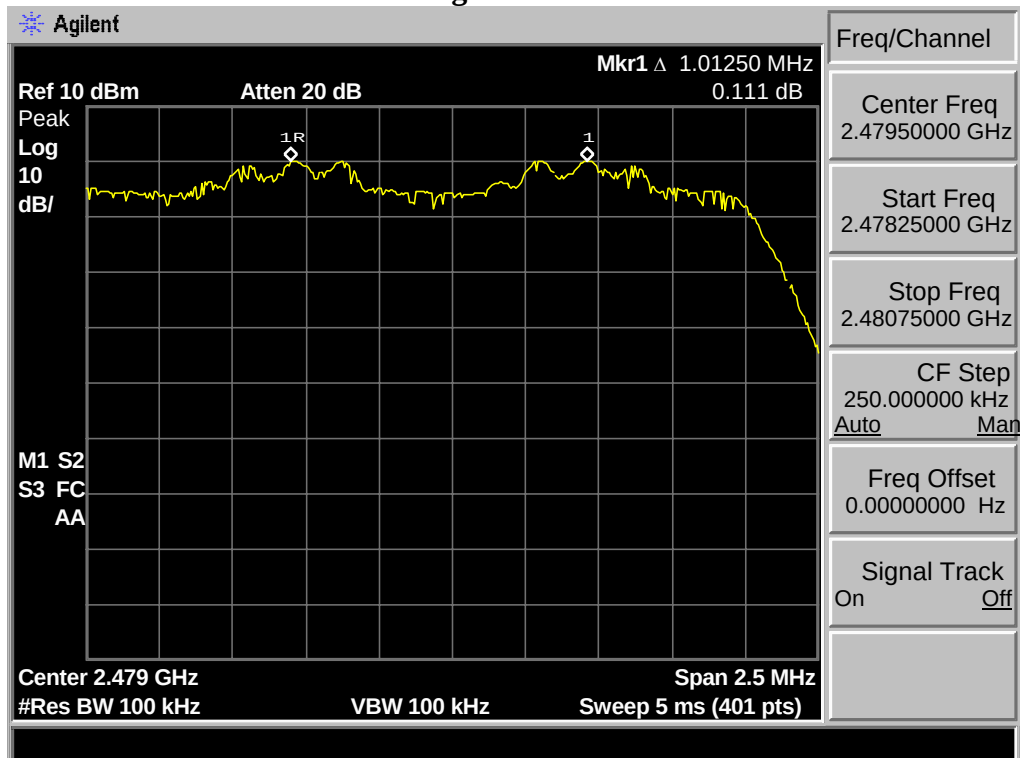
### 8-DPSK Low Channel



### 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

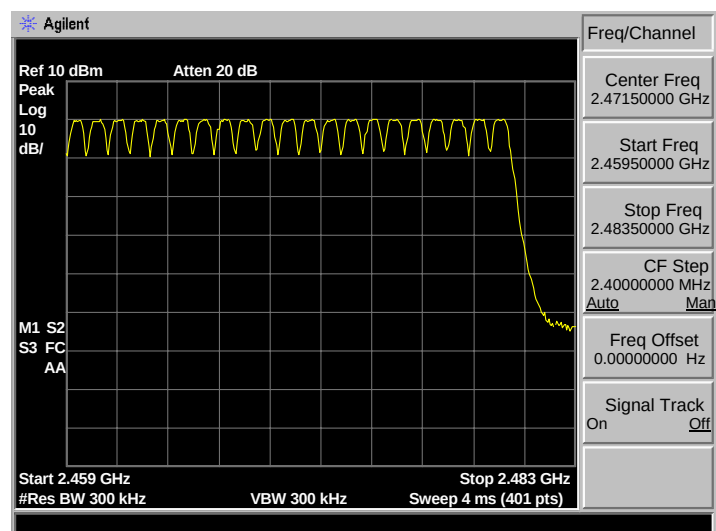
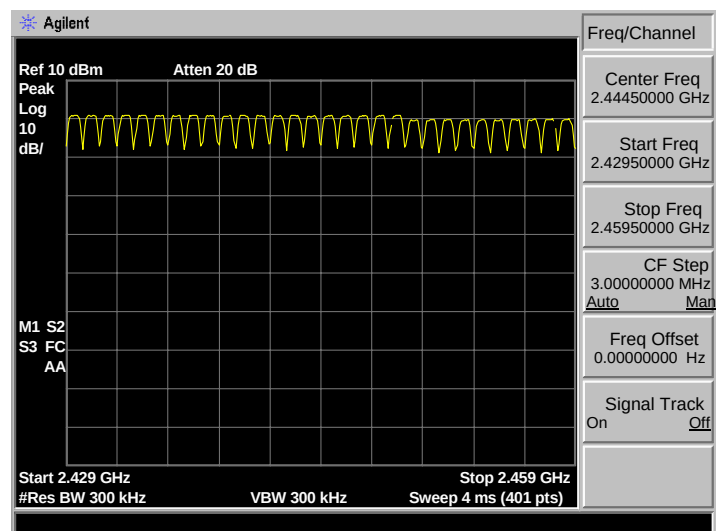
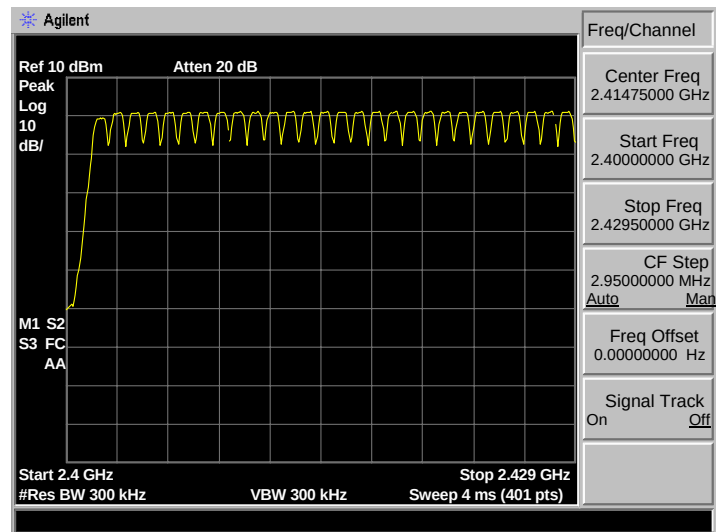
The transmitter output was coupled to a spectrum analyzer via a antenna. The number of hopping channel was measured by spectrum analyzer with 300kHz RBW and 300kHz VBW.

### 6.3. Test Result

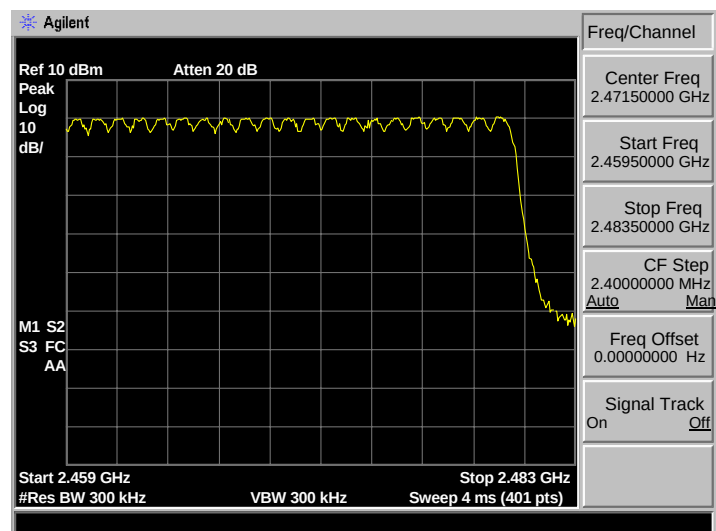
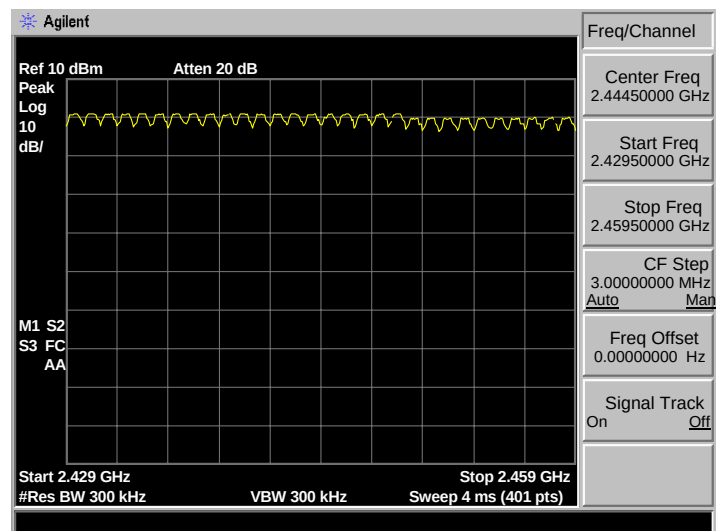
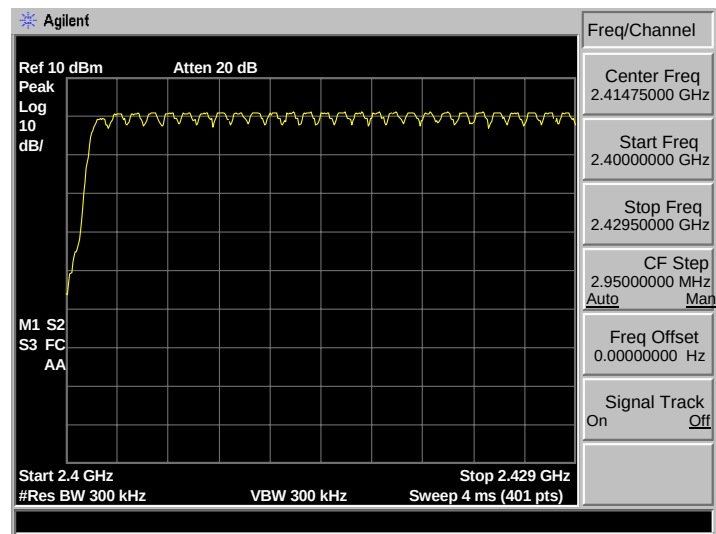
| EUT: Bluetooth Speaker |                           |                    |                      |
|------------------------|---------------------------|--------------------|----------------------|
| M/N: HX-P540A          |                           |                    |                      |
| Test date: 2014-05-20  |                           | Test site: RF site | Tested by: Tony.Tang |
| Mode                   | Number of hopping channel | Limit              | Conclusion           |
| GFSK                   | 79                        | >15                | PASS                 |
| 8-DPSK                 | 79                        | >15                | PASS                 |

## 6.4. Test Data

## GFSK



## 8-DPSK



## 7. DWELL TIME

### 7.1. Limit

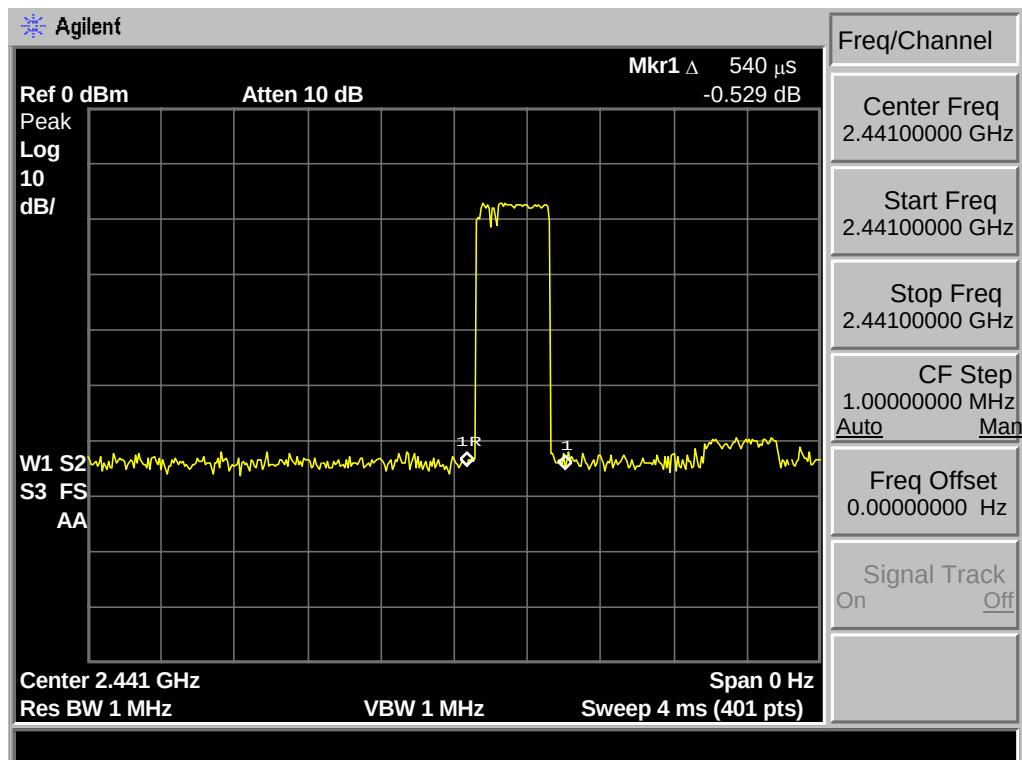
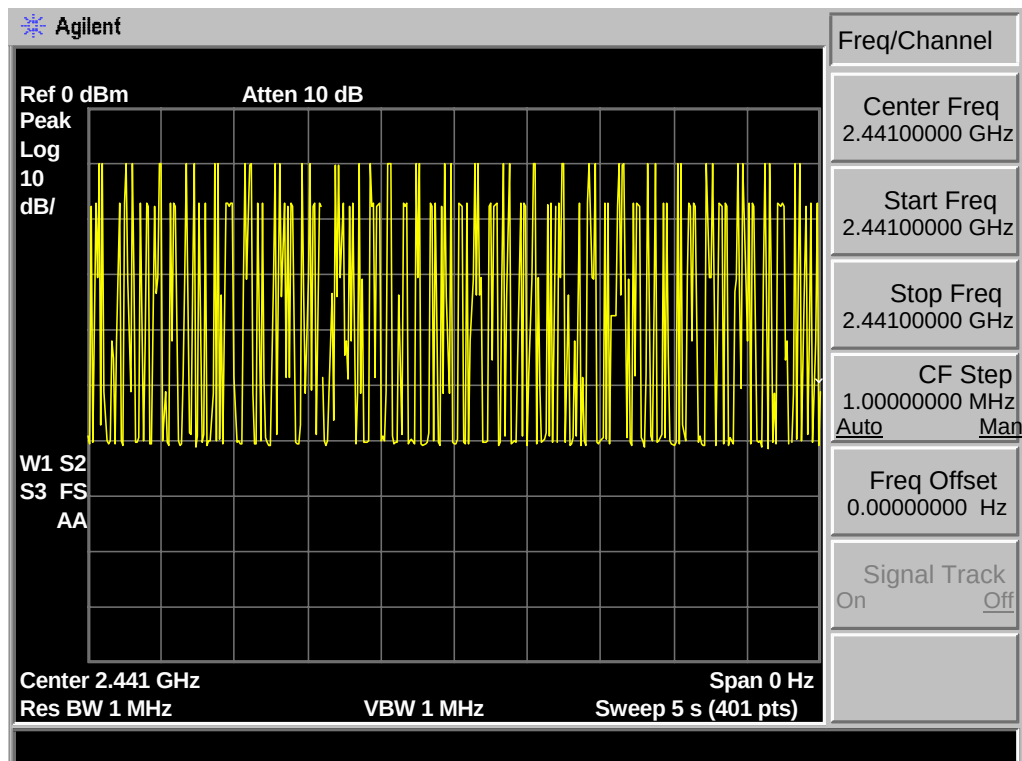
The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

### 7.2. Test Result

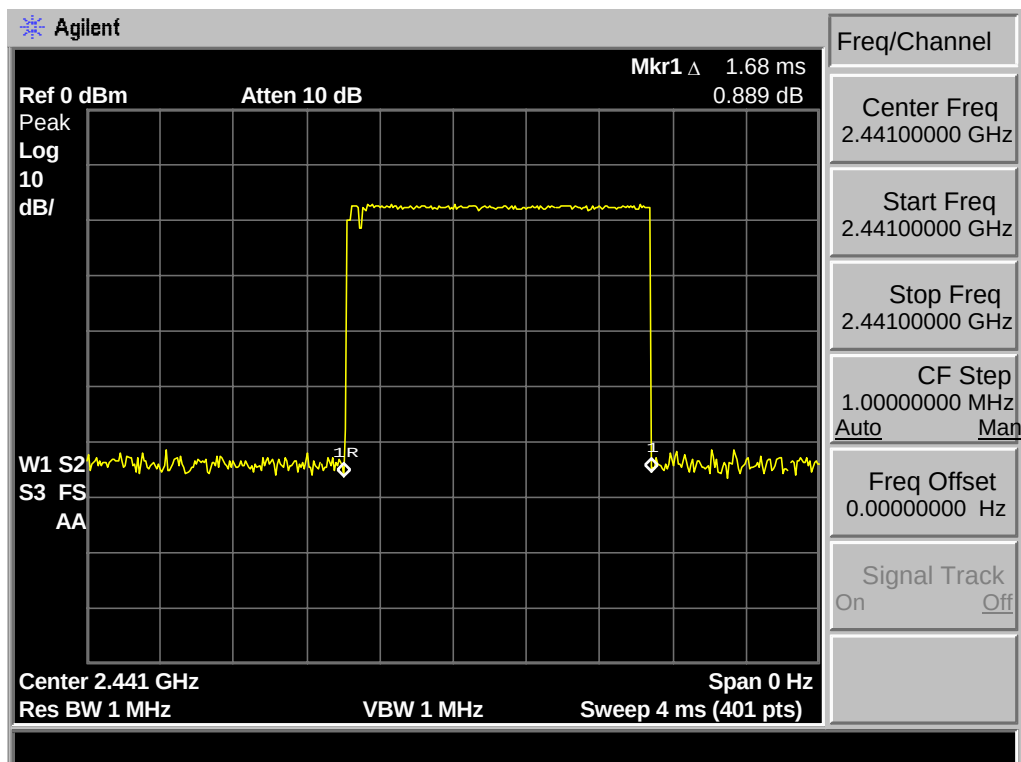
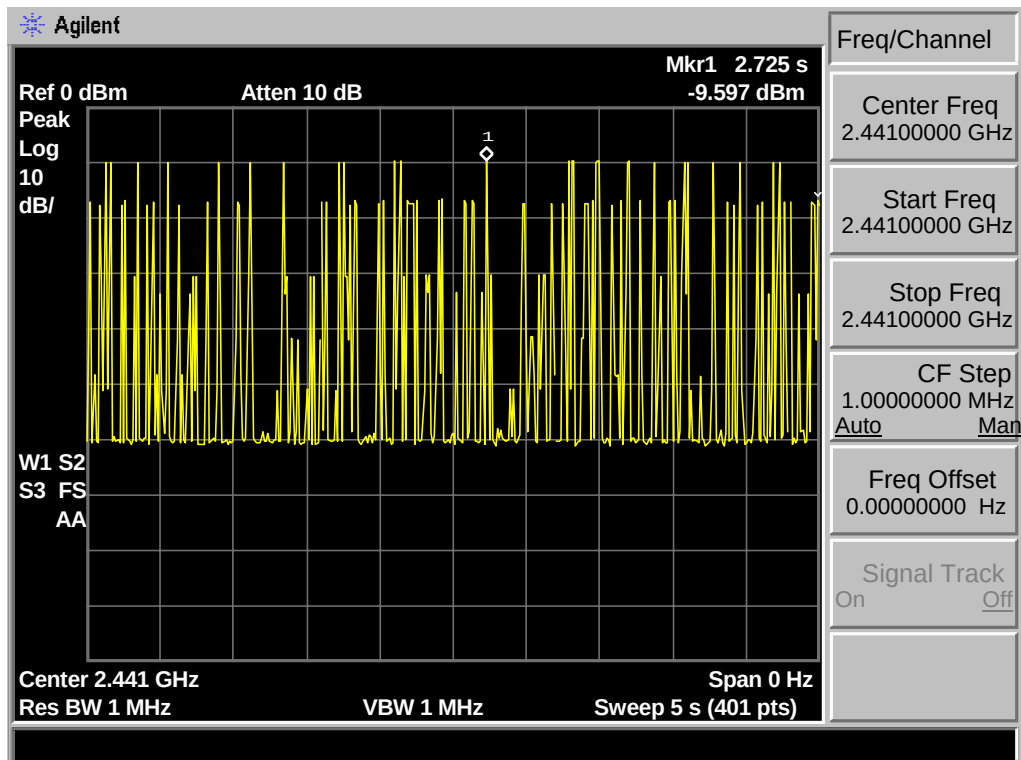
| EUT: Bluetooth Speaker |                 |                    |                      |
|------------------------|-----------------|--------------------|----------------------|
| M/N: HX-P540A          |                 |                    |                      |
| Test date: 2014-05-20  |                 | Test site: RF site | Tested by: Tony Tang |
| Mode                   | Dwell time (ms) | Limit              | Conclusion           |
| GFSK DH1               | 177.47          | <400ms             | PASS                 |
| GFSK DH3               | 265.44          | <400ms             | PASS                 |
| GFSK DH5               | 370.35          | <400ms             | PASS                 |
| 8-DPSK DH1             | 161.03          | <400ms             | PASS                 |
| 8-DPSK DH3             | 326.11          | <400ms             | PASS                 |
| 8-DPSK DH5             | 372.48          | <400ms             | PASS                 |

## 7.3. Test Data

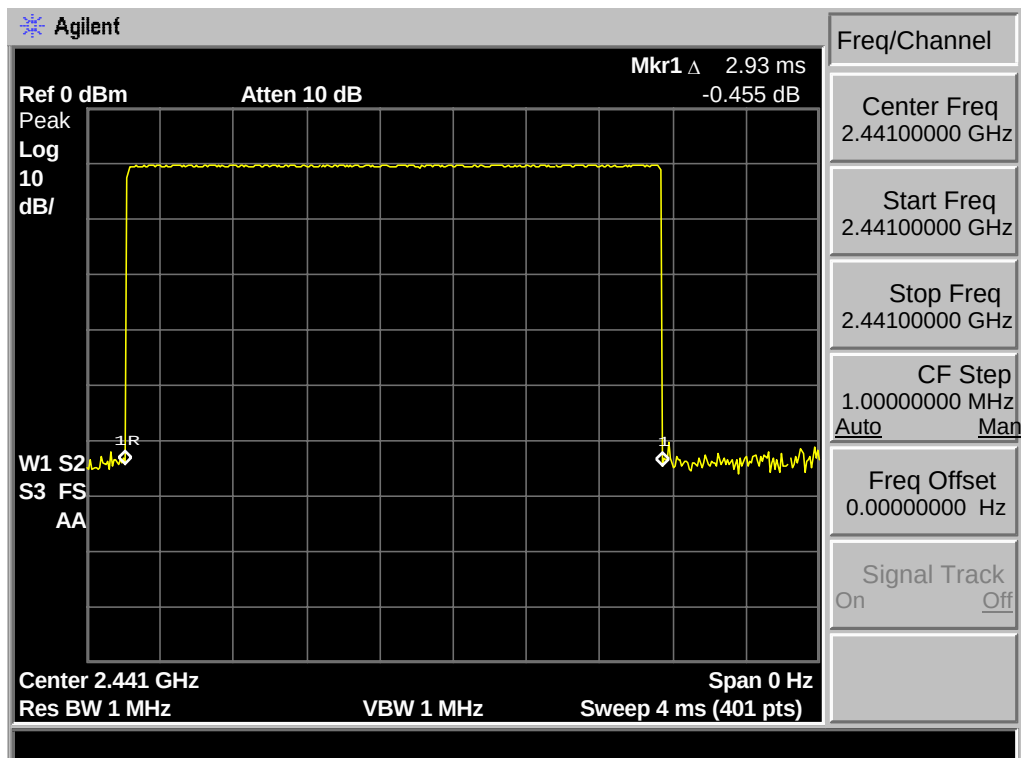
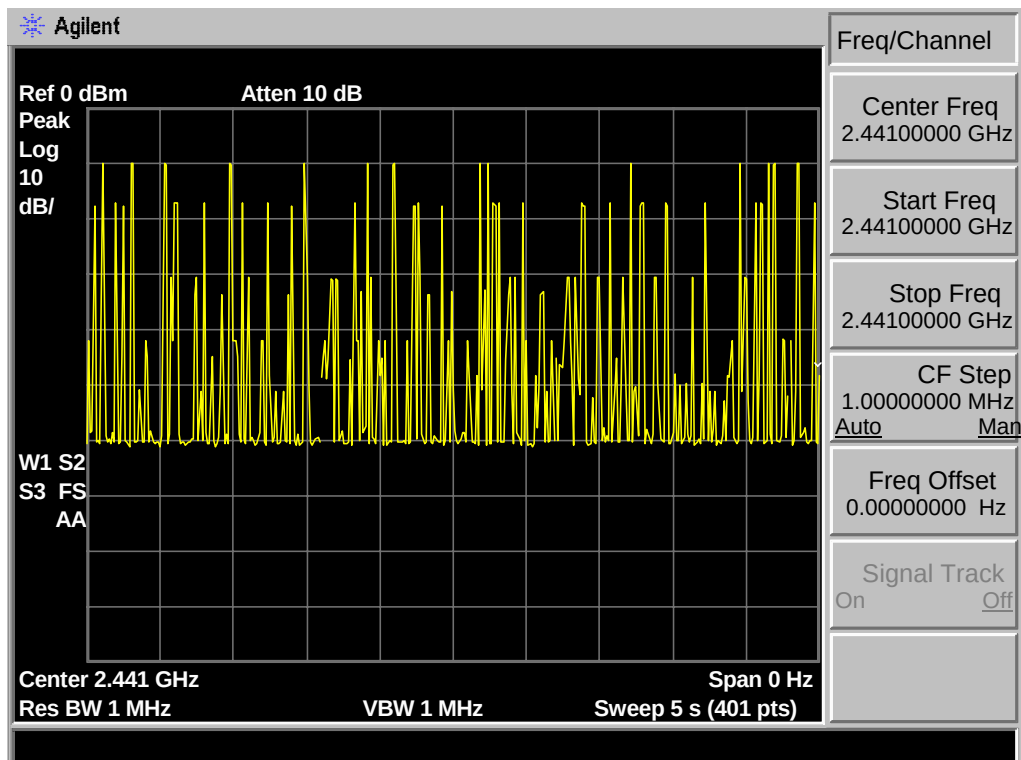
**GFSK DH1 : 52hop/5s \* 0.4 \* 79 \* 0.54ms = 177.47**



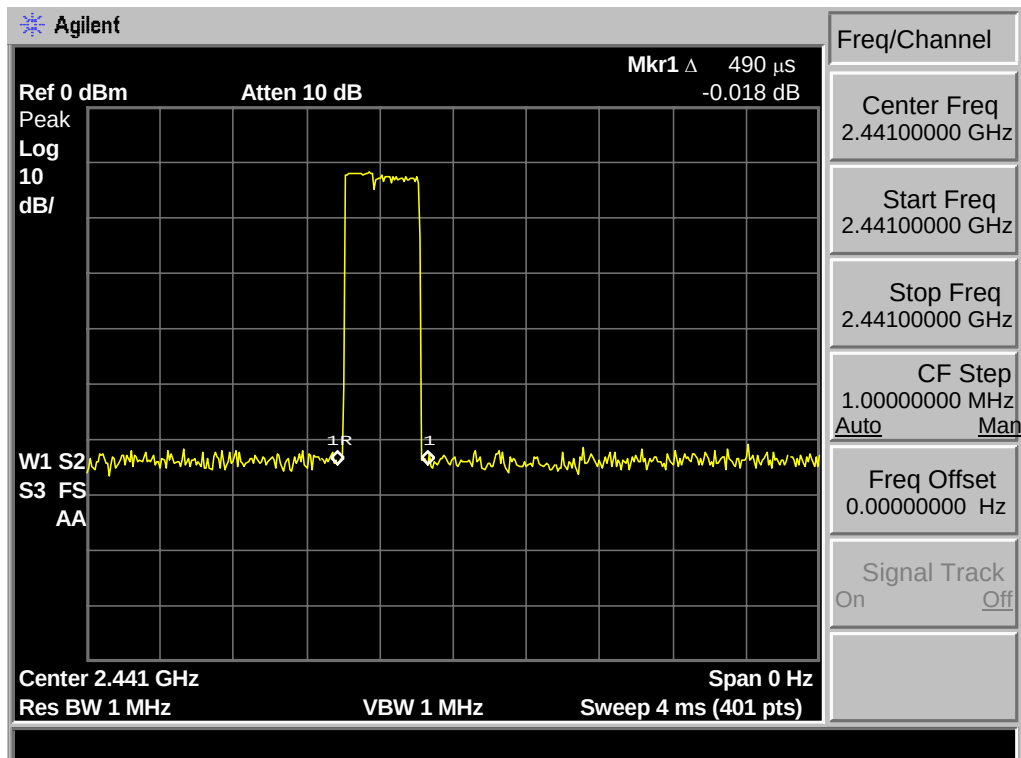
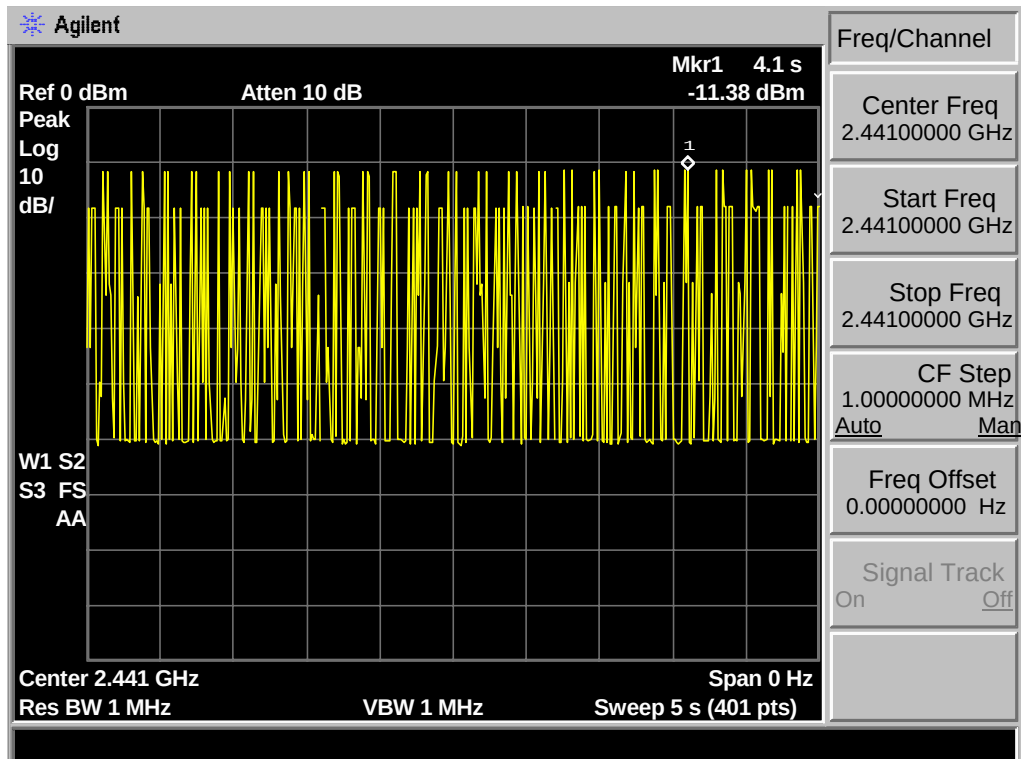
GFSK DH3 :  $25\text{hop}/5\text{s} * 0.4 * 79 * 1.68\text{ms} = 265.44$



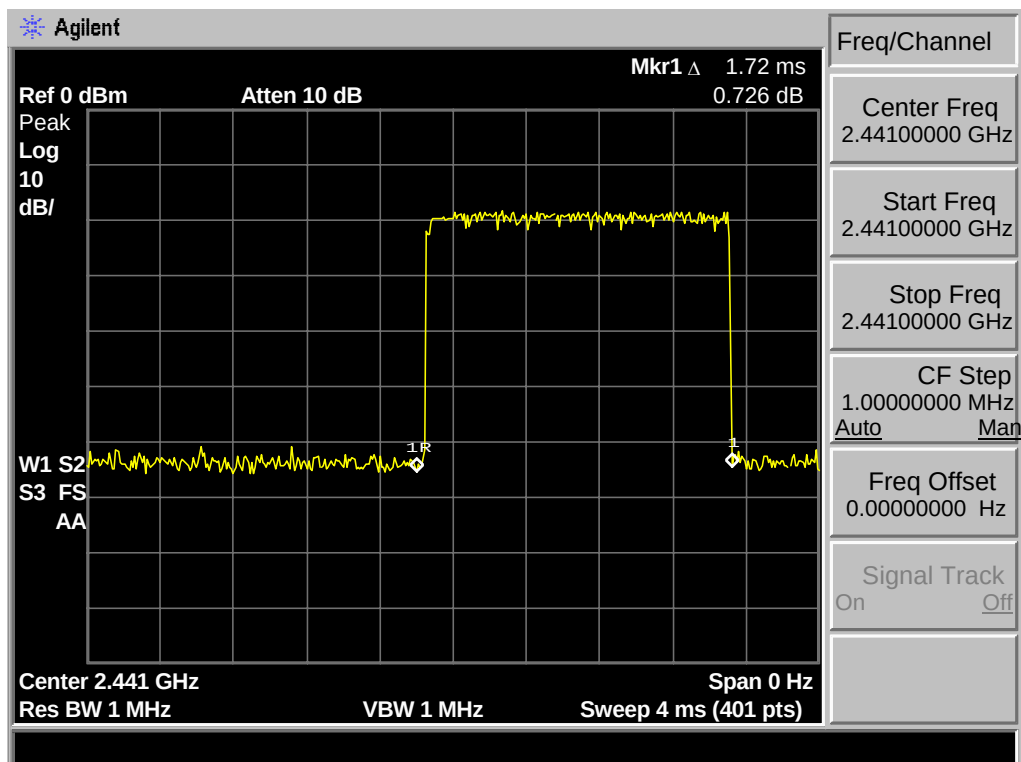
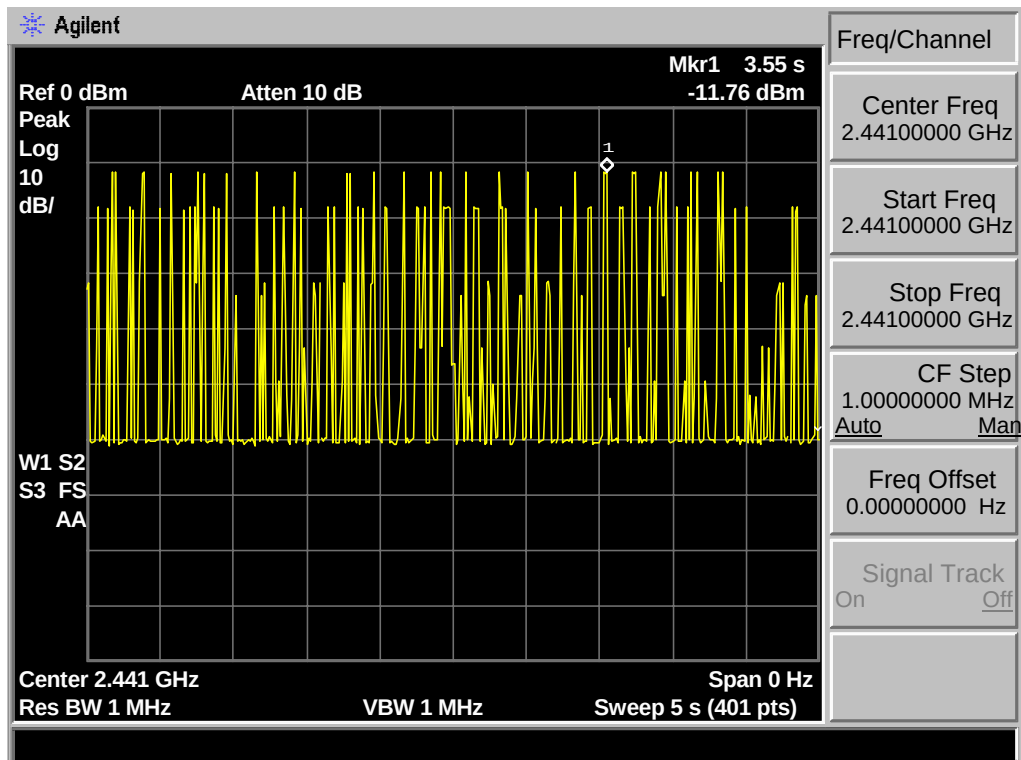
GSFK DH5 :  $20\text{hop}/5\text{s} * 0.4 * 79 * 2.93\text{ms} = 370.35$



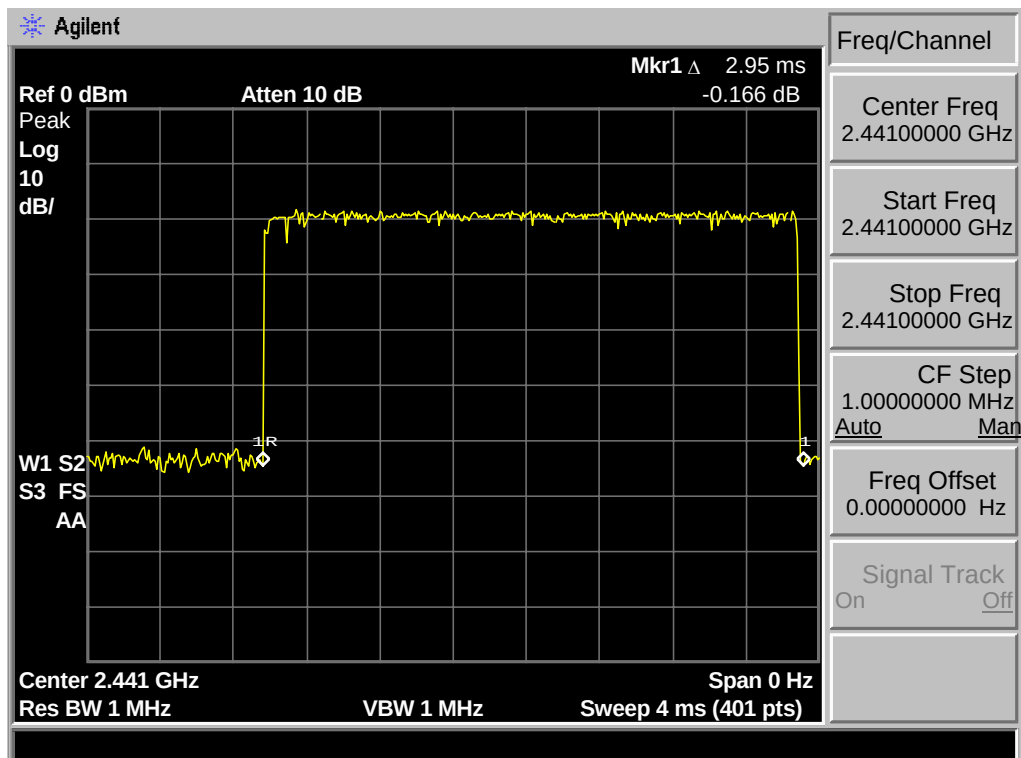
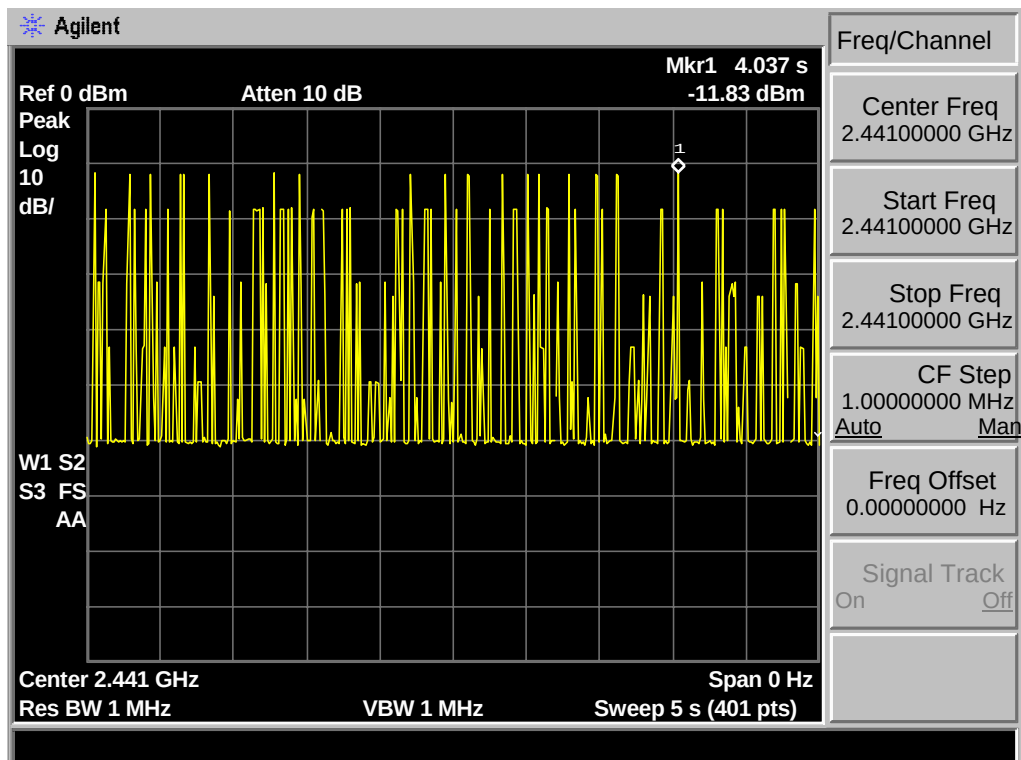
8-DPSK DH1 :  $52\text{hop}/5\text{s} * 0.4 * 79 * 0.49\text{ms} = 161.03$



8-DPSK DH3 :  $30\text{hop}/5\text{s} * 0.4 * 79 * 1.72\text{ms} = 326.11$



8-DPSK DH5 : 20hop/5s \* 0.4 \* 79 \* 2.95ms = 372.48



## 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.

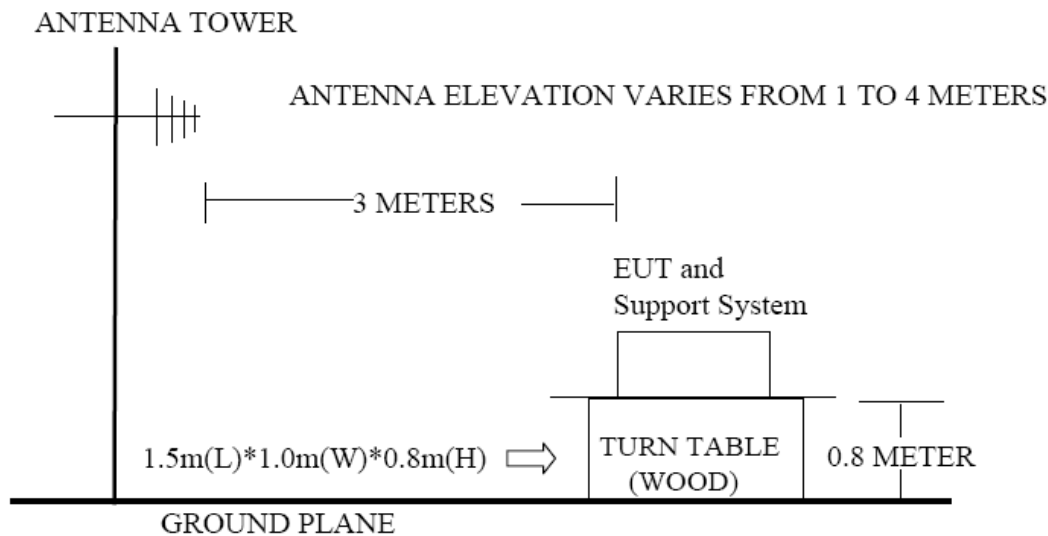
#### 15.205 Restricted frequency band

| 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

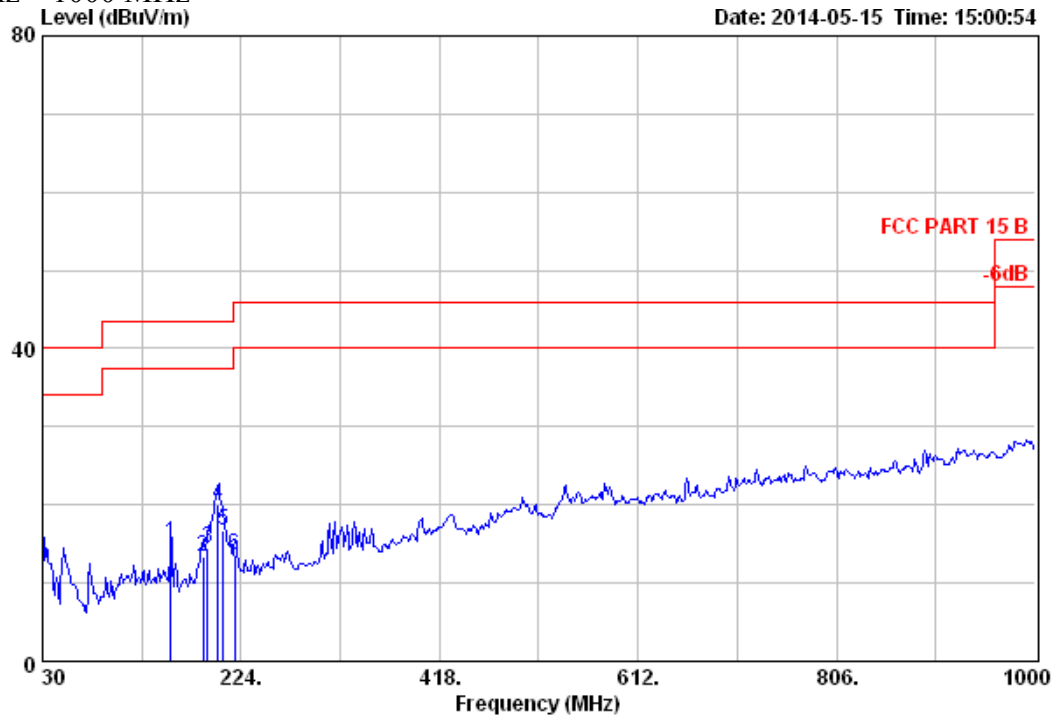
| 30MHz—25GHz Radiated emissison Test result                          |  |
|---------------------------------------------------------------------|--|
| EUT: Bluetooth Speaker                                              |  |
| M/N: HX-P540A                                                       |  |
| Power: DC 3.7V                                                      |  |
| Test date: 2014-05-15~18 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 2402MHz 、2441MHz and 2480MHz 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.

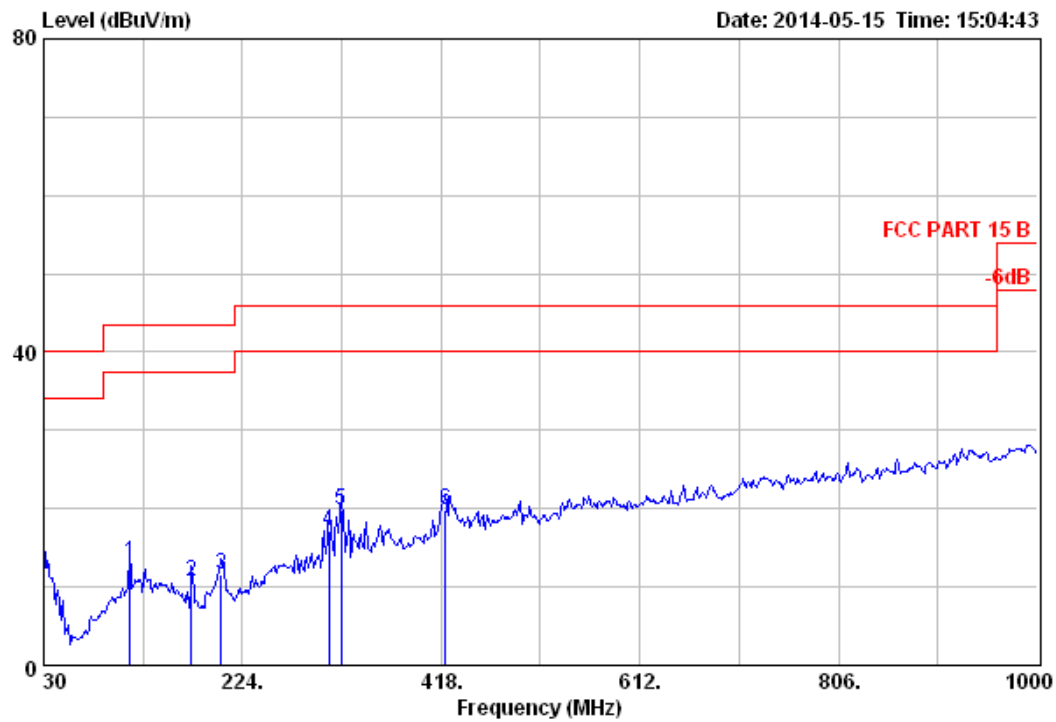
## 8.5. Test Data

30 MHz – 1000 MHz



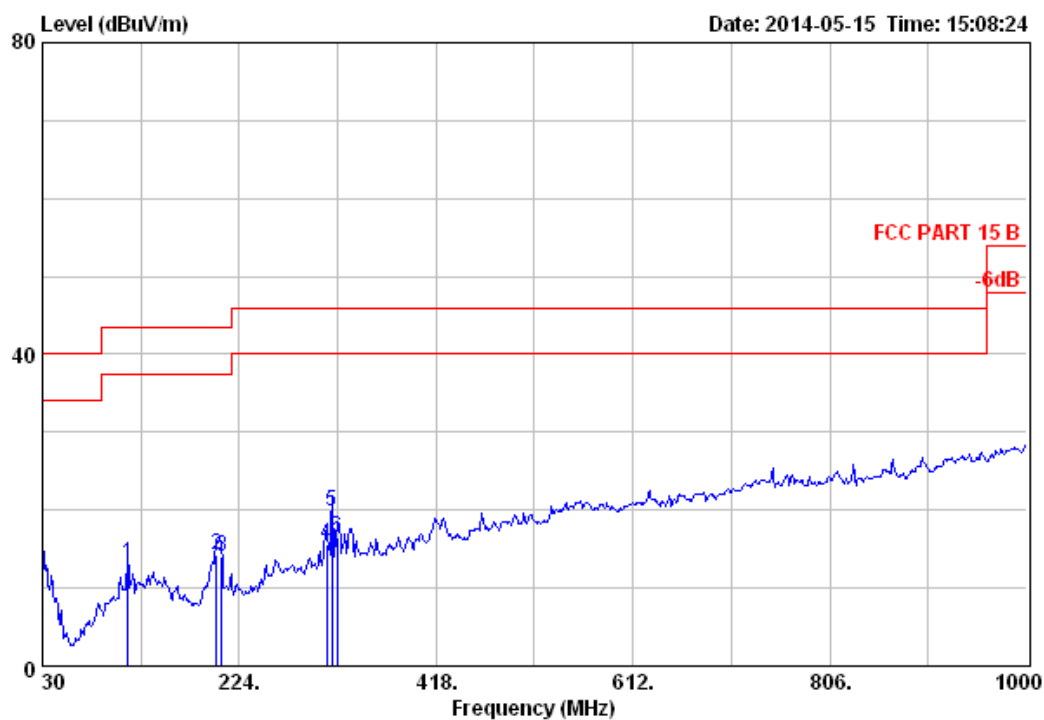
Site no : 3m Chamber Data no : 538  
 Dis. / Ant. : 3m 27137 Ant./Pol.: VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp: 25.6'; Humi: 56%; Press: 101.52 kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2402MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 155.13         | 10.67                   | 1.69                  | 2.90              | 15.26                         | 43.50             | 28.24          | QP     |
| 2 | 187.14         | 8.26                    | 1.84                  | 3.38              | 13.48                         | 43.50             | 30.02          | QP     |
| 3 | 191.02         | 7.90                    | 1.77                  | 4.70              | 14.37                         | 43.50             | 29.13          | QP     |
| 4 | 201.69         | 7.79                    | 1.77                  | 10.47             | 20.03                         | 43.50             | 23.47          | QP     |
| 5 | 206.54         | 8.09                    | 1.81                  | 6.90              | 16.80                         | 43.50             | 26.70          | QP     |
| 6 | 218.18         | 9.00                    | 1.90                  | 2.68              | 13.58                         | 46.00             | 32.42          | QP     |



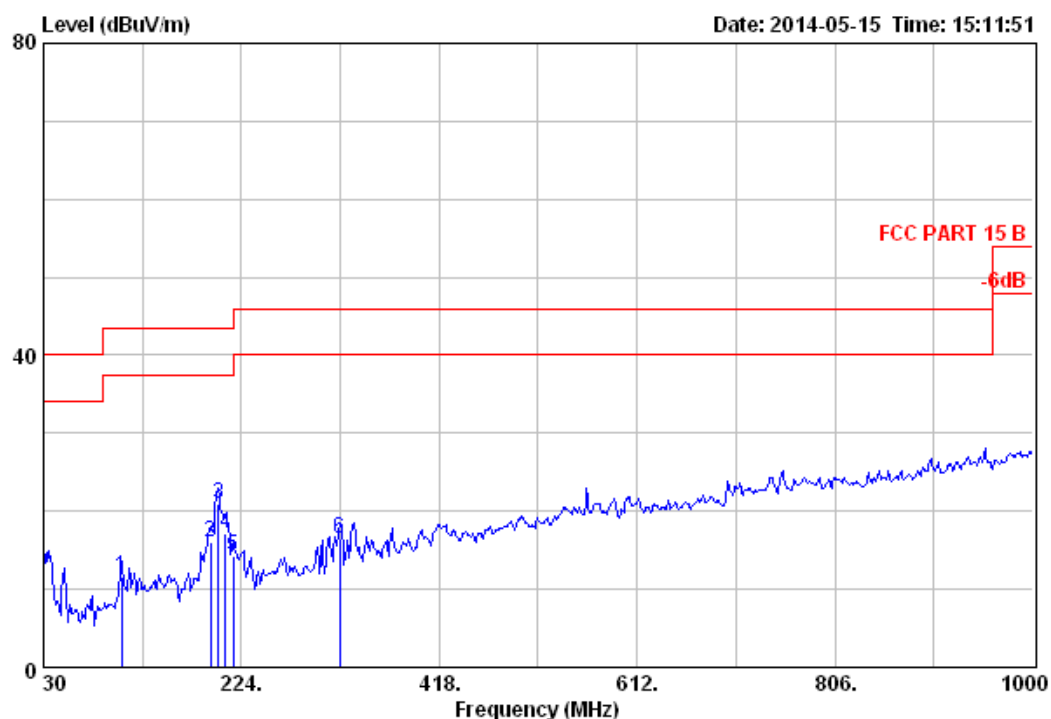
Site no : 3m Chamber Data no : 539  
 Dis. / Ant. : 3m 27137 Ant./Pol.: HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp: 25.6'; Humi: 56%; Press: 101.52 kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2402MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 114.39         | 10.85                   | 1.42                  | 0.94              | 13.21                         | 43.50             | 30.29          | QP     |
| 2 | 174.53         | 8.99                    | 1.68                  | 0.06              | 10.73                         | 43.50             | 32.77          | QP     |
| 3 | 203.63         | 7.87                    | 1.92                  | 1.88              | 11.67                         | 43.50             | 31.83          | QP     |
| 4 | 308.39         | 13.17                   | 2.44                  | 1.60              | 17.21                         | 46.00             | 28.79          | QP     |
| 5 | 320.03         | 13.57                   | 2.40                  | 3.94              | 19.91                         | 46.00             | 26.09          | QP     |
| 6 | 421.88         | 16.25                   | 2.73                  | 0.80              | 19.78                         | 46.00             | 26.22          | QP     |



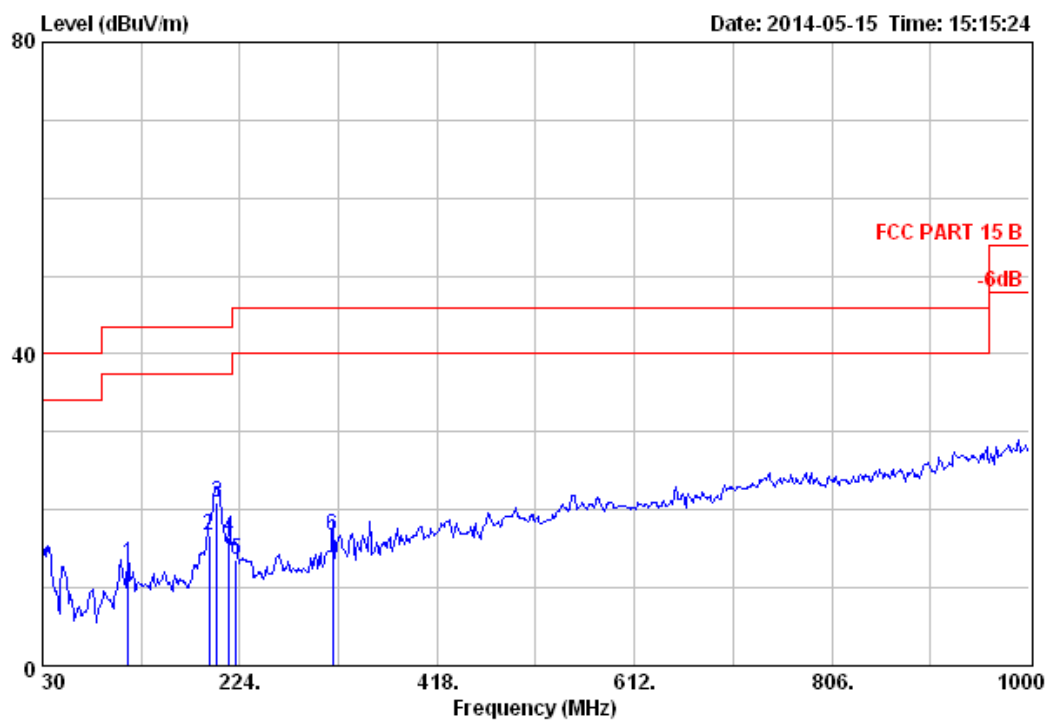
Site no : 3m Chamber Data no : 540  
 Dis. / Ant. : 3m 27137 Ant./Pol.: HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp: 25.6°; Humi: 56%; Press: 101.52 kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2441MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 114.39         | 10.85                   | 1.42                  | 0.85              | 13.12                         | 43.50             | 30.38          | QP     |
| 2 | 201.69         | 7.79                    | 1.77                  | 4.67              | 14.23                         | 43.50             | 29.27          | QP     |
| 3 | 206.54         | 8.09                    | 1.81                  | 4.07              | 13.97                         | 43.50             | 29.53          | QP     |
| 4 | 310.33         | 13.20                   | 2.28                  | 0.10              | 15.58                         | 46.00             | 30.42          | QP     |
| 5 | 315.18         | 13.39                   | 2.42                  | 4.02              | 19.83                         | 46.00             | 26.17          | QP     |
| 6 | 320.03         | 13.57                   | 2.40                  | 0.46              | 16.43                         | 46.00             | 29.57          | QP     |



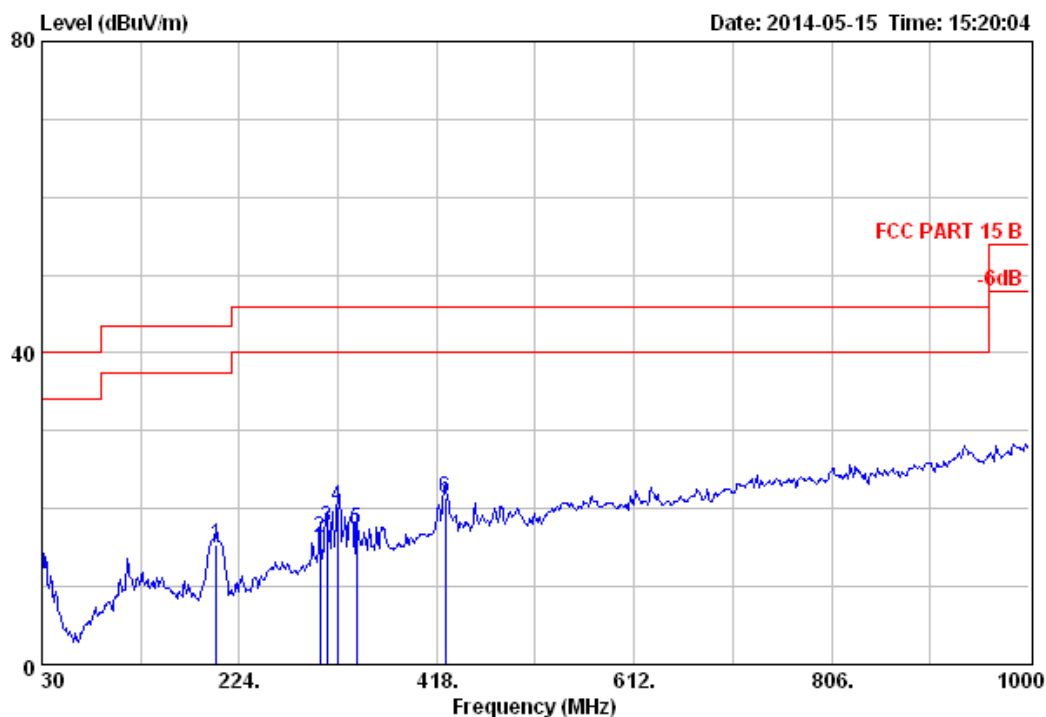
Site no : 3m Chamber Data no :541  
 Dis. / Ant. : 3m 27137 Ant./Pol.:VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2441MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 106.63         | 10.15                   | 1.38                  | 0.03              | 11.56                         | 43.50             | 31.94          | QP     |
| 2 | 193.93         | 7.76                    | 1.76                  | 6.58              | 16.10                         | 43.50             | 27.40          | QP     |
| 3 | 201.69         | 7.79                    | 1.77                  | 11.38             | 20.94                         | 43.50             | 22.56          | QP     |
| 4 | 208.48         | 8.28                    | 1.95                  | 6.98              | 17.21                         | 43.50             | 26.29          | QP     |
| 5 | 216.24         | 8.80                    | 1.95                  | 3.45              | 14.20                         | 46.00             | 31.80          | QP     |
| 6 | 320.03         | 13.57                   | 2.40                  | 0.52              | 16.49                         | 46.00             | 29.51          | QP     |



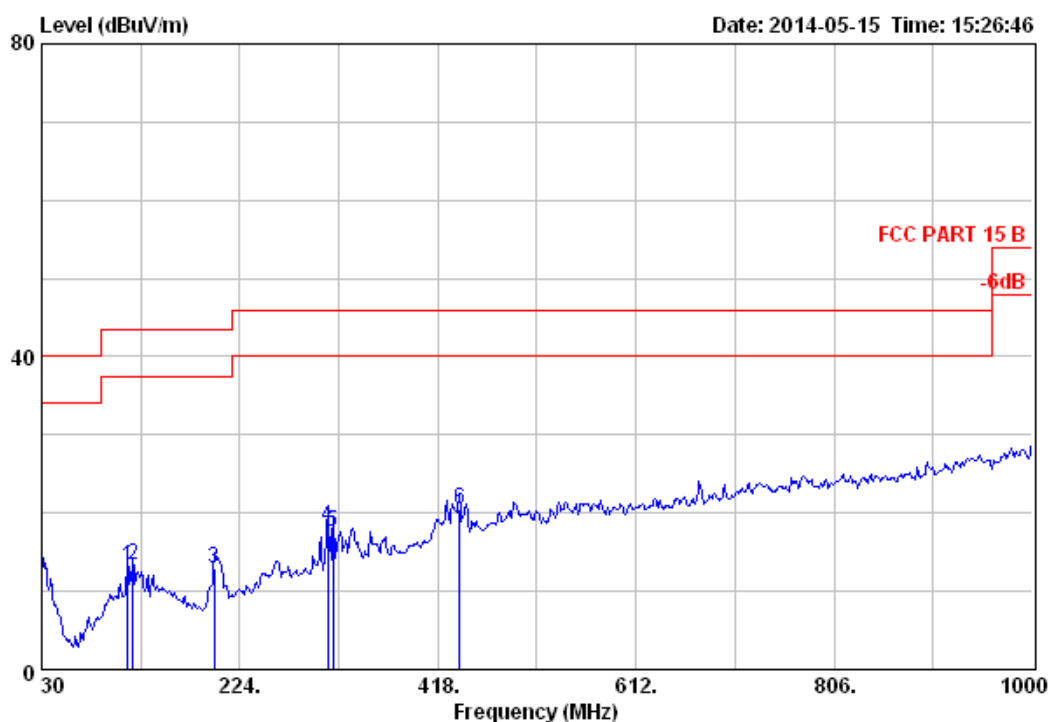
Site no : 3m Chamber Data no : 542  
 Dis. / Ant. : 3m 27137 Ant./Pol.: VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp: 25.6'; Humi: 56%; Press: 101.52 kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2480MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 114.39         | 10.85                   | 1.42                  | 0.97              | 13.24                         | 43.50             | 30.26          | QP     |
| 2 | 193.93         | 7.76                    | 1.76                  | 7.10              | 16.62                         | 43.50             | 26.88          | QP     |
| 3 | 201.69         | 7.79                    | 1.77                  | 11.48             | 21.04                         | 43.50             | 22.46          | QP     |
| 4 | 213.33         | 8.60                    | 1.97                  | 5.90              | 16.47                         | 43.50             | 27.03          | QP     |
| 5 | 220.12         | 9.20                    | 1.97                  | 2.40              | 13.57                         | 46.00             | 32.43          | QP     |
| 6 | 315.18         | 13.39                   | 2.42                  | 0.95              | 16.76                         | 46.00             | 29.24          | QP     |



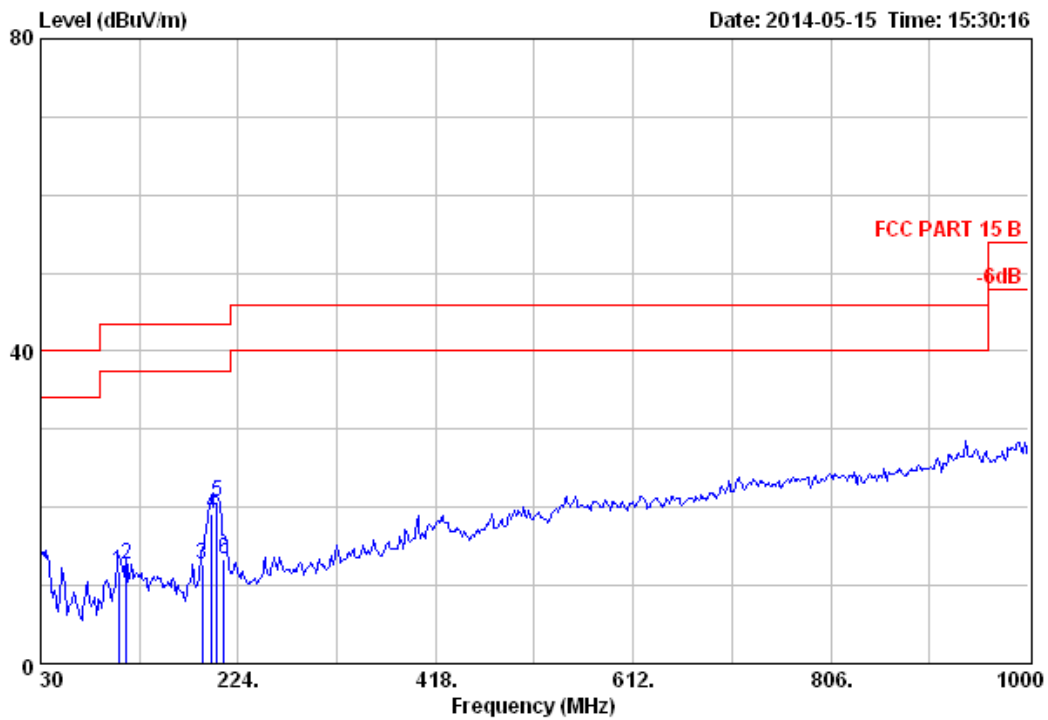
|                                                         |                       |
|---------------------------------------------------------|-----------------------|
| Site no : 3m Chamber                                    | Data no : 543         |
| Dis. / Ant. : 3m 27137                                  | Ant./Pol.: HORIZONTAL |
| Limit : FCC PART 15 B                                   |                       |
| Env. / Ins. : Temp: 25.6°; Humi: 56%; Press: 101.52 kPa |                       |
| Engineer : Tony                                         |                       |
| EUT : Bluetooth Speaker                                 |                       |
| Power : DC 3.7V                                         |                       |
| M/N : HX-P540A                                          |                       |
| Test Mode : GFSK TX 2480MHz                             |                       |

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 201.69         | 7.79                    | 1.77                  | 5.88              | 15.44                         | 43.50             | 28.06          | QP     |
| 2 | 303.54         | 13.08                   | 2.43                  | 0.86              | 16.37                         | 46.00             | 29.63          | QP     |
| 3 | 310.33         | 13.20                   | 2.28                  | 2.06              | 17.54                         | 46.00             | 28.46          | QP     |
| 4 | 320.03         | 13.57                   | 2.40                  | 4.31              | 20.28                         | 46.00             | 25.72          | QP     |
| 5 | 339.43         | 14.13                   | 2.49                  | 0.82              | 17.44                         | 46.00             | 28.56          | QP     |
| 6 | 426.73         | 16.13                   | 2.85                  | 2.38              | 21.36                         | 46.00             | 24.64          | QP     |



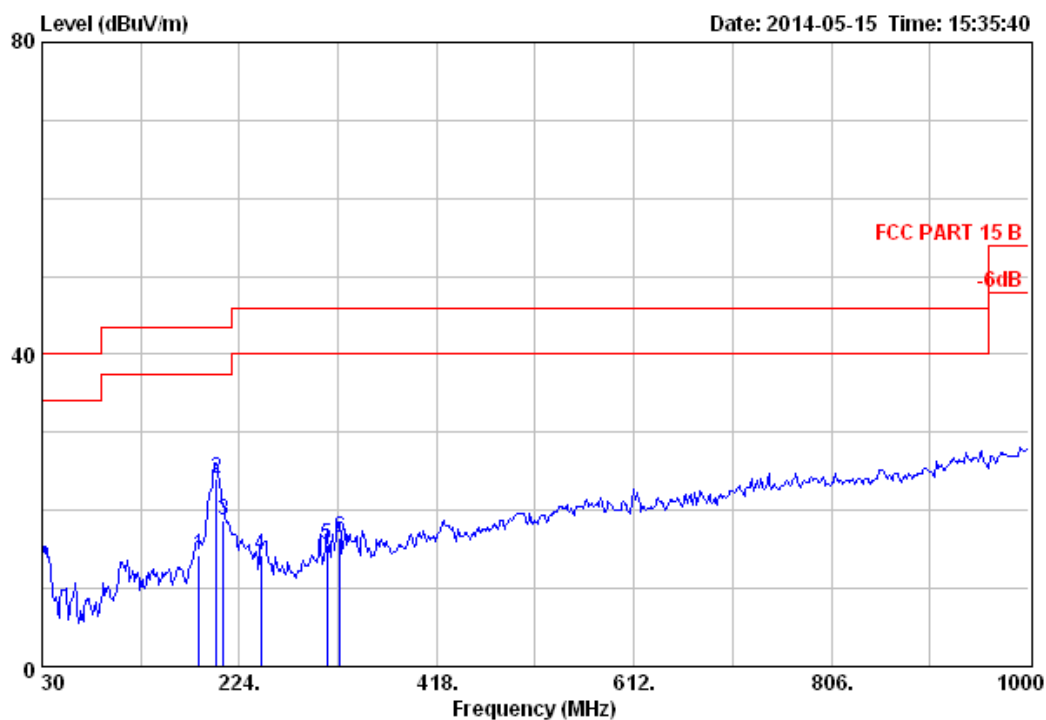
Site no : 3m Chamber Data no : 544  
 Dis. / Ant. : 3m 27137 Ant./Pol.: HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp: 25.6'; Humi: 56%; Press: 101.52 kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 114.39         | 10.85                   | 1.42                  | 0.94              | 13.21                         | 43.50             | 30.29          | QP     |
| 2 | 119.24         | 11.11                   | 1.42                  | 0.76              | 13.29                         | 43.50             | 30.21          | QP     |
| 3 | 198.78         | 7.71                    | 1.77                  | 3.37              | 12.85                         | 43.50             | 30.65          | QP     |
| 4 | 310.33         | 13.20                   | 2.28                  | 2.79              | 18.27                         | 46.00             | 27.73          | QP     |
| 5 | 315.18         | 13.39                   | 2.42                  | 1.78              | 17.59                         | 46.00             | 28.41          | QP     |
| 6 | 439.34         | 16.23                   | 2.89                  | 1.46              | 20.58                         | 46.00             | 25.42          | QP     |



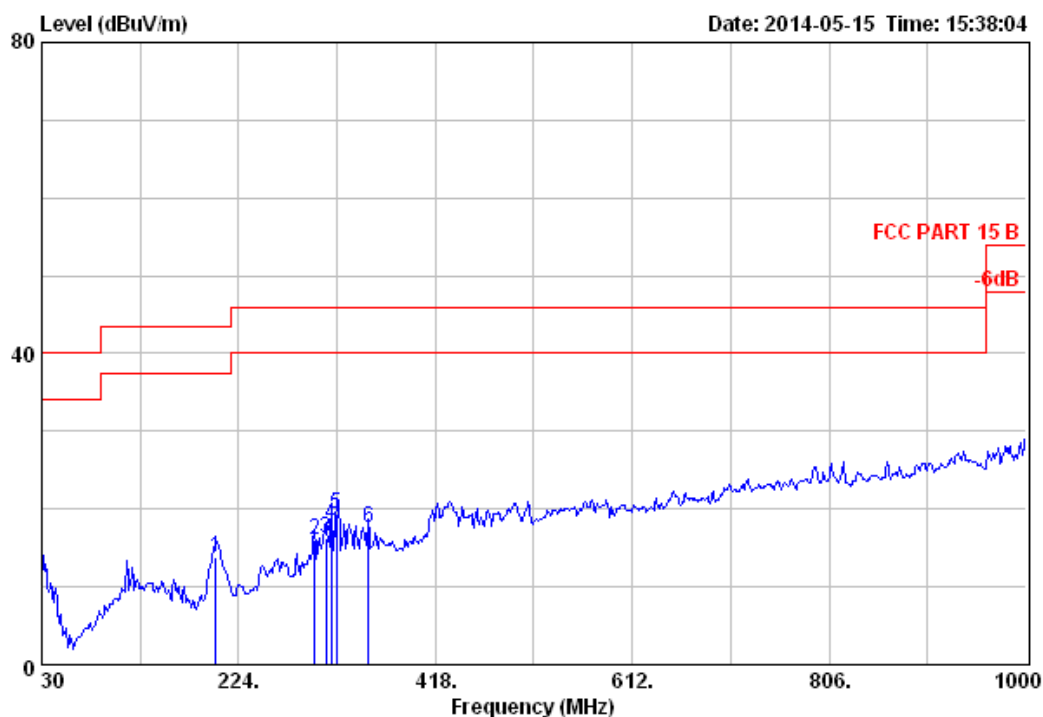
Site no : 3m Chamber Data no : 545  
 Dis. / Ant. : 3m 27137 Ant./Pol.: VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp: 25.6°; Humi: 56%; Press: 101.52 kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 106.63         | 10.15                   | 1.38                  | 0.19              | 11.72                         | 43.50             | 31.78          | QP     |
| 2 | 114.39         | 10.85                   | 1.42                  | 0.42              | 12.69                         | 43.50             | 30.81          | QP     |
| 3 | 189.08         | 8.05                    | 1.75                  | 2.98              | 12.78                         | 43.50             | 30.72          | QP     |
| 4 | 197.81         | 7.71                    | 1.79                  | 9.77              | 19.27                         | 43.50             | 24.23          | QP     |
| 5 | 203.63         | 7.87                    | 1.92                  | 10.88             | 20.67                         | 43.50             | 22.83          | QP     |
| 6 | 210.42         | 8.46                    | 1.88                  | 3.06              | 13.40                         | 43.50             | 30.10          | QP     |



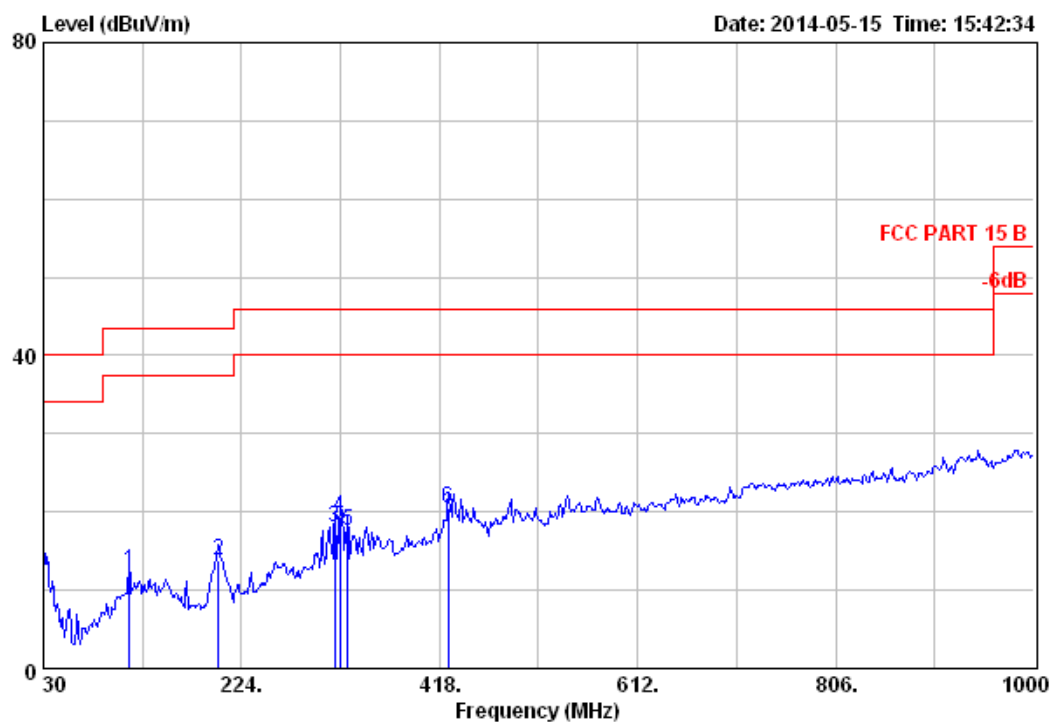
Site no : 3m Chamber Data no :546  
 Dis. / Ant. : 3m 27137 Ant./Pol.:VERTICAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2441MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 184.23         | 8.57                    | 1.71                  | 3.89              | 14.17                         | 43.50             | 29.33          | QP     |
| 2 | 201.69         | 7.79                    | 1.77                  | 14.60             | 24.16                         | 43.50             | 19.34          | QP     |
| 3 | 208.48         | 8.28                    | 1.95                  | 8.57              | 18.80                         | 43.50             | 24.70          | QP     |
| 4 | 245.34         | 11.06                   | 2.10                  | 1.02              | 14.18                         | 46.00             | 31.82          | QP     |
| 5 | 310.33         | 13.20                   | 2.28                  | 0.09              | 15.57                         | 46.00             | 30.43          | QP     |
| 6 | 322.94         | 13.65                   | 2.43                  | 0.42              | 16.50                         | 46.00             | 29.50          | QP     |



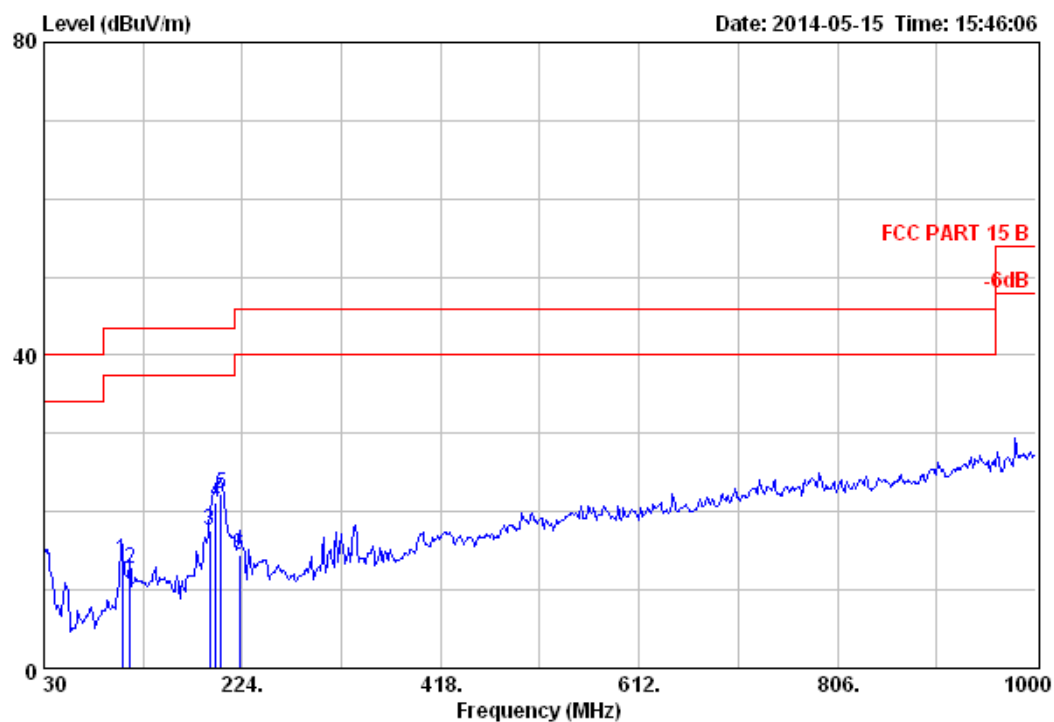
Site no : 3m Chamber Data no :547  
 Dis. / Ant. : 3m 27137 Ant./Pol.:HORIZONTAL  
 Limit : FCC PART 15 B  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2441MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 201.69         | 7.79                    | 1.77                  | 4.29              | 13.85                         | 43.50             | 29.65          | QP     |
| 2 | 298.69         | 13.00                   | 2.40                  | 0.72              | 16.12                         | 46.00             | 29.88          | QP     |
| 3 | 310.33         | 13.20                   | 2.28                  | 0.72              | 16.20                         | 46.00             | 29.80          | QP     |
| 4 | 315.18         | 13.39                   | 2.42                  | 2.21              | 18.02                         | 46.00             | 27.98          | QP     |
| 5 | 320.03         | 13.57                   | 2.40                  | 3.52              | 19.49                         | 46.00             | 26.51          | QP     |
| 6 | 352.04         | 14.47                   | 2.53                  | 0.65              | 17.65                         | 46.00             | 28.35          | QP     |



Site no : 3m Chamber Data no :548  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2480MHz

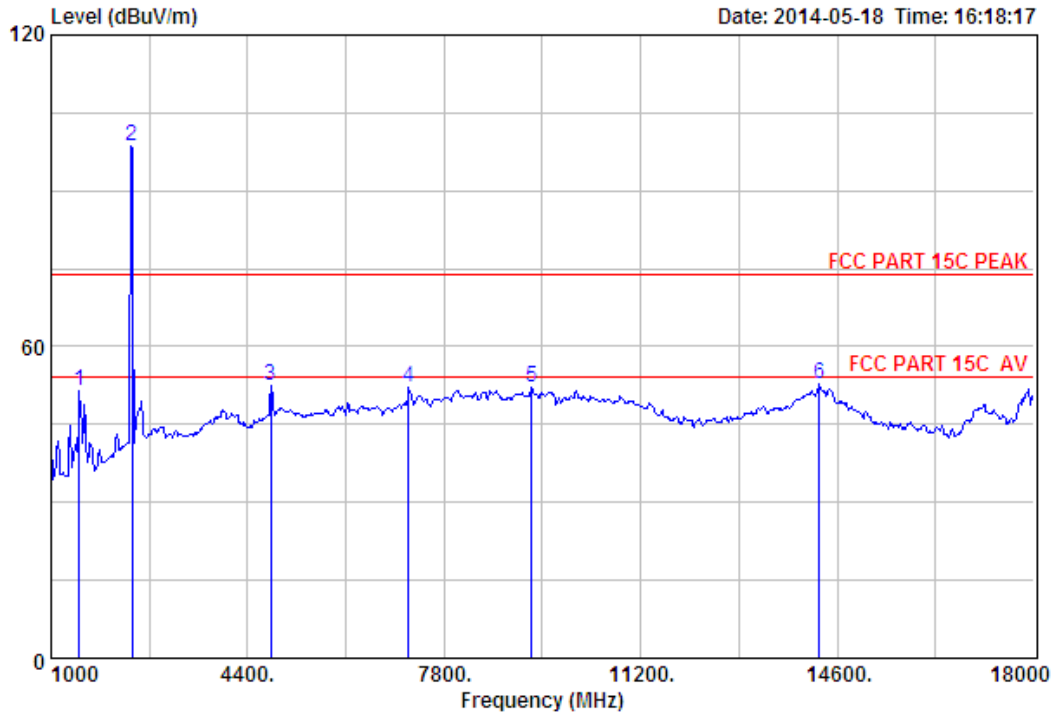
|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 114.39         | 10.85                   | 1.42                  | 0.14              | 12.41                         | 43.50             | 31.09          | QP     |
| 2 | 201.69         | 7.79                    | 1.77                  | 4.21              | 13.77                         | 43.50             | 29.73          | QP     |
| 3 | 315.18         | 13.39                   | 2.42                  | 2.22              | 18.03                         | 46.00             | 27.97          | QP     |
| 4 | 320.03         | 13.57                   | 2.40                  | 3.46              | 19.43                         | 46.00             | 26.57          | QP     |
| 5 | 327.79         | 13.79                   | 2.46                  | 1.39              | 17.64                         | 46.00             | 28.36          | QP     |
| 6 | 426.73         | 16.13                   | 2.85                  | 1.56              | 20.54                         | 46.00             | 25.46          | QP     |



Site no : 3m Chamber Data no :549  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2480MHz

|   | Freq.<br>(MHz) | Ant<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Reading<br>(dBuV) | Emission<br>Level<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|-------------------------|-----------------------|-------------------|-------------------------------|-------------------|----------------|--------|
| 1 | 106.63         | 10.15                   | 1.38                  | 2.26              | 13.79                         | 43.50             | 29.71          | QP     |
| 2 | 114.39         | 10.85                   | 1.42                  | 0.45              | 12.72                         | 43.50             | 30.78          | QP     |
| 3 | 191.99         | 7.85                    | 1.78                  | 7.89              | 17.52                         | 43.50             | 25.98          | QP     |
| 4 | 197.81         | 7.71                    | 1.79                  | 11.69             | 21.19                         | 43.50             | 22.31          | QP     |
| 5 | 203.63         | 7.87                    | 1.92                  | 12.57             | 22.36                         | 43.50             | 21.14          | QP     |
| 6 | 221.09         | 9.26                    | 2.01                  | 3.24              | 14.51                         | 46.00             | 31.49          | QP     |

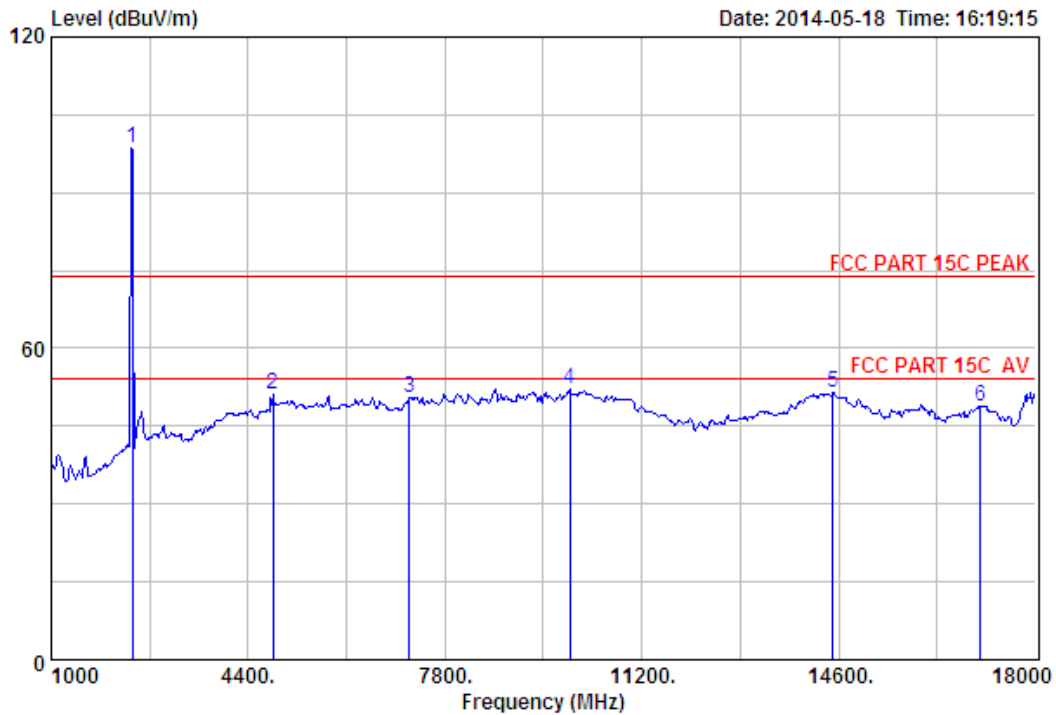
## 1000 MHz – 18000MHz



Site no. : 3m Chamber Data no. : 474  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2402MHz

|       | 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     | 1493.00  | 24.93 | 4.32   | 34.45   | 56.56    | 51.36    | 74.00  | 22.64  | Peak |
| 2     | 2402.00  | 27.61 | 6.62   | 34.18   | 98.57    | 98.62    | 74.00  | -24.62 | Peak |
| 3     | 4804.00  | 31.25 | 11.77  | 31.81   | 41.15    | 52.36    | 74.00  | 21.64  | Peak |
| 4     | 7188.00  | 36.43 | 11.53  | 32.14   | 36.42    | 52.24    | 74.00  | 21.76  | Peak |
| 5     | 9313.00  | 37.94 | 11.62  | 32.15   | 34.77    | 52.18    | 74.00  | 21.82  | Peak |
| 6     | 14294.00 | 41.71 | 10.92  | 33.08   | 33.10    | 52.65    | 74.00  | 21.35  | Peak |

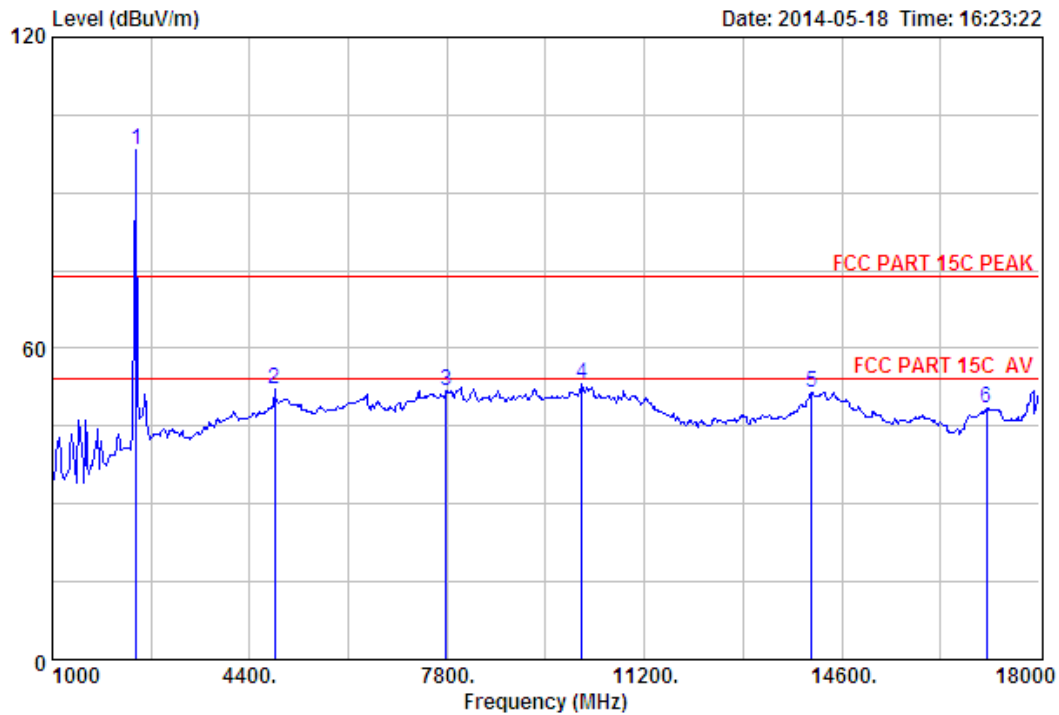
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 475  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2402MHz

|   | 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 | 2402.00        | 27.61                    | 6.62                  | 34.18                 | 98.57             | 98.62                         | 74.00              | -24.62         | Peak   |
| 2 | 4825.00        | 31.28                    | 11.84                 | 31.83                 | 39.80             | 51.09                         | 74.00              | 22.91          | Peak   |
| 3 | 7188.00        | 36.43                    | 11.53                 | 32.14                 | 34.77             | 50.59                         | 74.00              | 23.41          | Peak   |
| 4 | 9959.00        | 38.13                    | 11.60                 | 31.77                 | 34.02             | 51.98                         | 74.00              | 22.02          | Peak   |
| 5 | 14498.00       | 41.88                    | 10.93                 | 33.08                 | 31.73             | 51.46                         | 74.00              | 22.54          | Peak   |
| 6 | 17048.00       | 39.93                    | 10.97                 | 33.09                 | 31.13             | 48.94                         | 74.00              | 25.06          | Peak   |

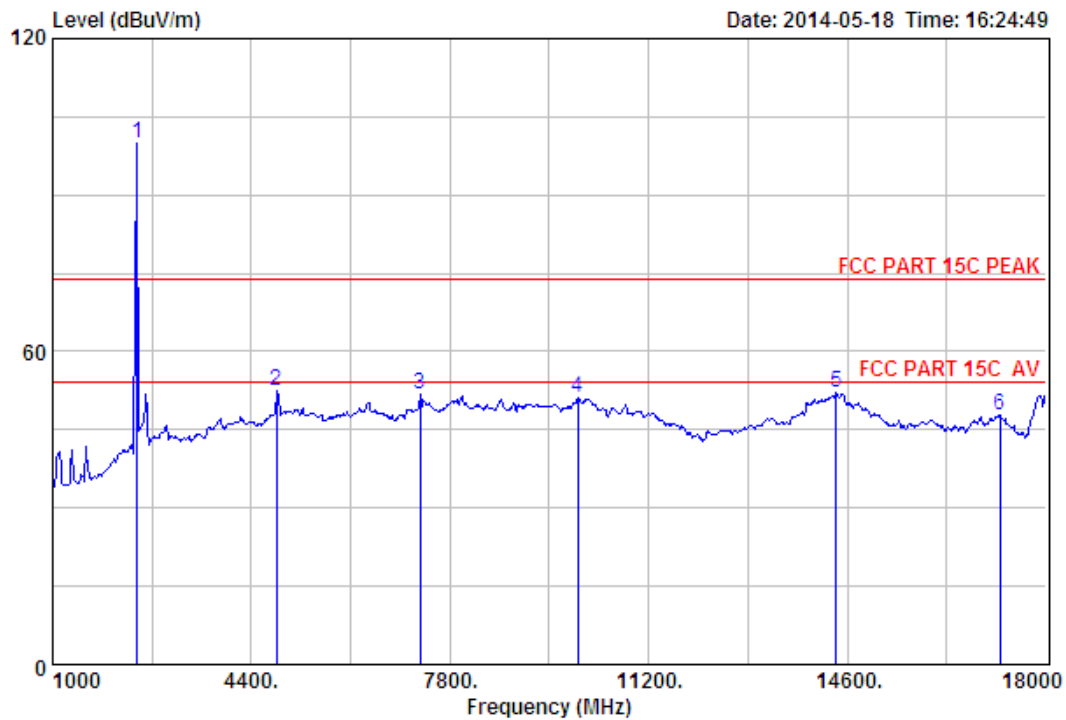
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 478  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2441MHz

|   | 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 | 2441.00  | 27.60  | 6.67  | 34.12  | 98.13    | 98.28    | 74.00    | -24.28 | Peak   |
| 2 | 4825.00  | 31.28  | 11.84 | 31.83  | 40.91    | 52.20    | 74.00    | 21.80  | Peak   |
| 3 | 7783.00  | 36.59  | 11.50 | 31.45  | 35.16    | 51.80    | 74.00    | 22.20  | Peak   |
| 4 | 10129.00 | 38.33  | 11.52 | 32.01  | 35.39    | 53.23    | 74.00    | 20.77  | Peak   |
| 5 | 14073.00 | 41.52  | 10.90 | 33.75  | 32.93    | 51.60    | 74.00    | 22.40  | Peak   |
| 6 | 17099.00 | 40.13  | 10.95 | 32.96  | 30.29    | 48.41    | 74.00    | 25.59  | Peak   |

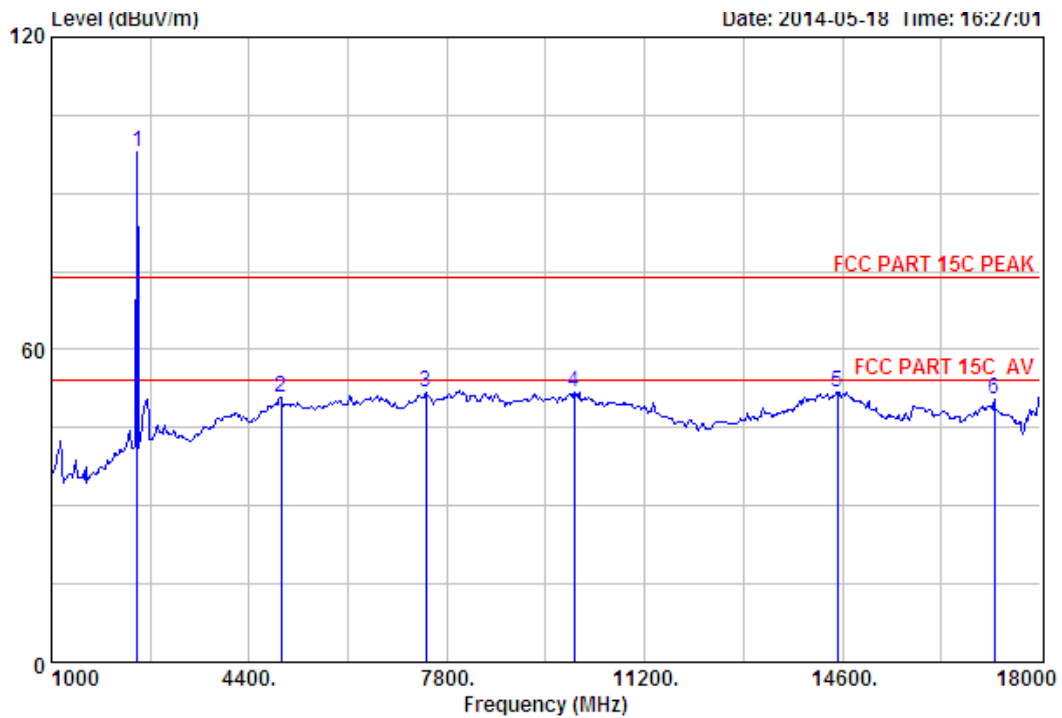
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 479  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2441MHz

|   | 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 | 2441.00        | 27.60                    | 6.67                  | 34.12                 | 99.73             | 99.88                         | 74.00              | -25.88         | Peak   |
| 2 | 4825.00        | 31.28                    | 11.84                 | 31.83                 | 41.26             | 52.55                         | 74.00              | 21.45          | Peak   |
| 3 | 7290.00        | 36.54                    | 11.56                 | 32.02                 | 35.81             | 51.89                         | 74.00              | 22.11          | Peak   |
| 4 | 9993.00        | 38.12                    | 11.59                 | 31.78                 | 33.34             | 51.27                         | 74.00              | 22.73          | Peak   |
| 5 | 14413.00       | 41.80                    | 10.92                 | 32.78                 | 32.19             | 52.13                         | 74.00              | 21.87          | Peak   |
| 6 | 17218.00       | 40.58                    | 10.91                 | 33.55                 | 29.84             | 47.78                         | 74.00              | 26.22          | Peak   |

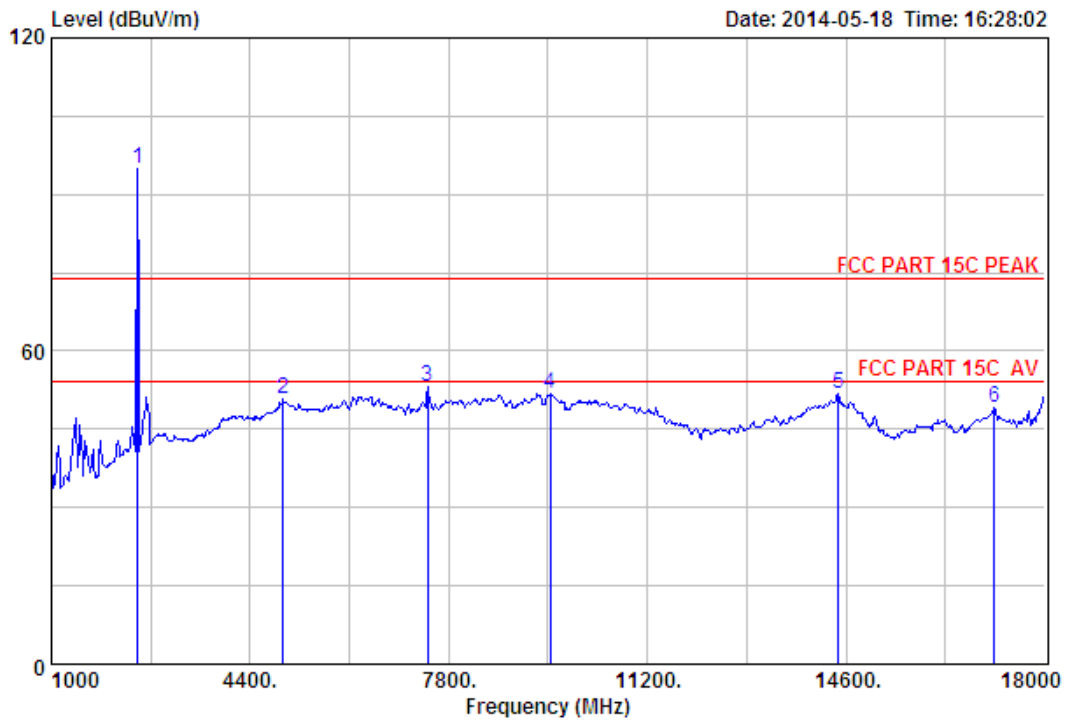
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 480  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2480MHz

|   | 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 | 2480.00  | 27.58  | 6.71  | 34.03  | 97.80    | 98.06    | 74.00    | -24.06 | Peak   |
| 2 | 4944.00  | 31.47  | 12.37 | 31.96  | 38.95    | 50.83    | 74.00    | 23.17  | Peak   |
| 3 | 7443.00  | 36.54  | 11.61 | 31.93  | 35.55    | 51.77    | 74.00    | 22.23  | Peak   |
| 4 | 9993.00  | 38.12  | 11.59 | 31.78  | 33.87    | 51.80    | 74.00    | 22.20  | Peak   |
| 5 | 14515.00 | 41.89  | 10.93 | 33.14  | 32.21    | 51.89    | 74.00    | 22.11  | Peak   |
| 6 | 17218.00 | 40.58  | 10.91 | 33.55  | 32.41    | 50.35    | 74.00    | 23.65  | Peak   |

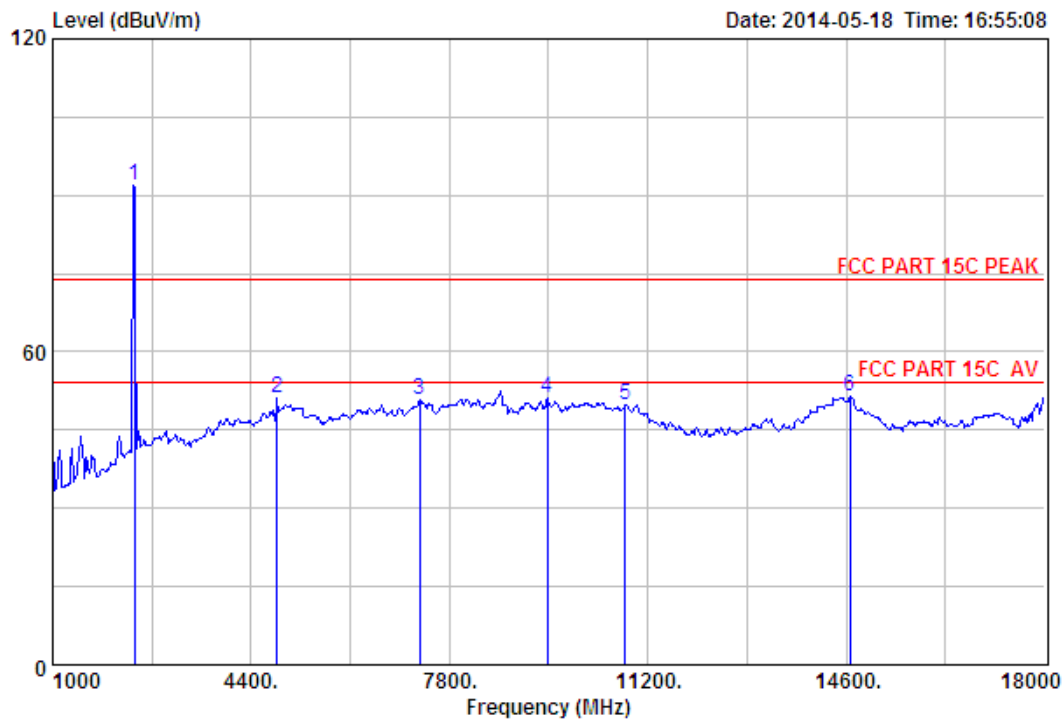
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 481  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2480MHz

|   | 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 | 2480.00        | 27.58                    | 6.71                  | 34.03                 | 94.53             | 94.79                         | 74.00              | -20.79         | Peak   |
| 2 | 4961.00        | 31.49                    | 12.44                 | 31.97                 | 38.91             | 50.87                         | 74.00              | 23.13          | Peak   |
| 3 | 7443.00        | 36.54                    | 11.61                 | 31.93                 | 36.99             | 53.21                         | 74.00              | 20.79          | Peak   |
| 4 | 9534.00        | 37.97                    | 11.70                 | 31.92                 | 34.16             | 51.91                         | 74.00              | 22.09          | Peak   |
| 5 | 14464.00       | 41.85                    | 10.93                 | 32.96                 | 31.98             | 51.80                         | 74.00              | 22.20          | Peak   |
| 6 | 17133.00       | 40.26                    | 10.94                 | 33.03                 | 31.01             | 49.18                         | 74.00              | 24.82          | Peak   |

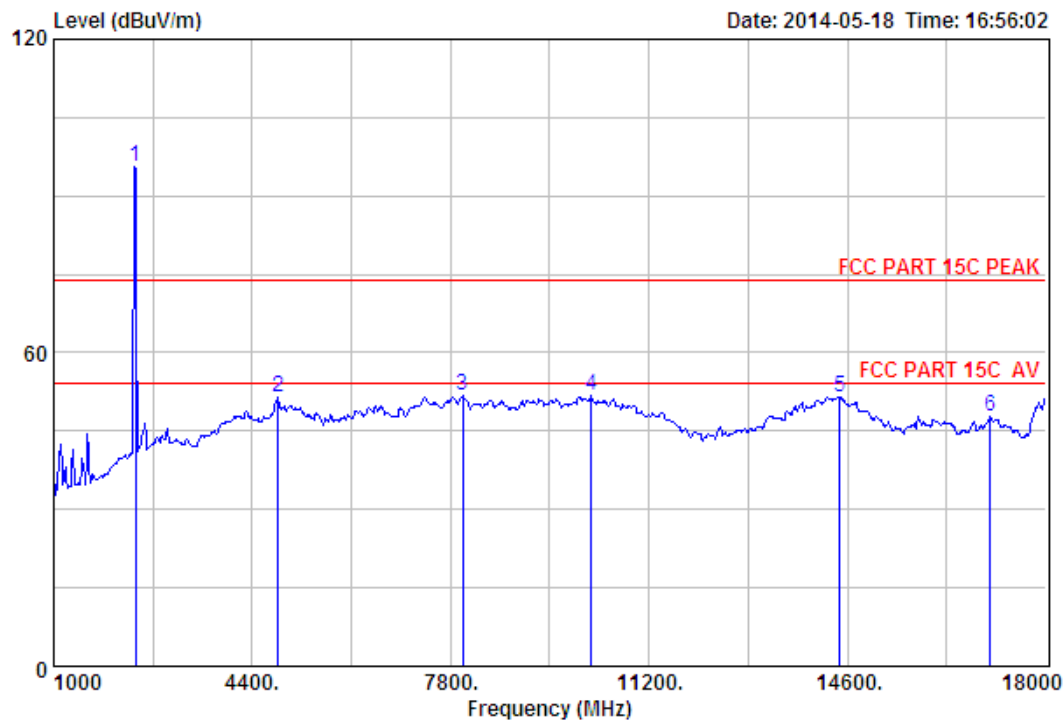
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 494  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz

|   | 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 | 2402.00  | 27.61  | 6.62  | 34.18  | 91.94    | 91.99    | 74.00    | -17.99 | Peak   |
| 2 | 4842.00  | 31.31  | 11.92 | 31.85  | 39.61    | 50.99    | 74.00    | 23.01  | Peak   |
| 3 | 7290.00  | 36.54  | 11.56 | 32.02  | 34.62    | 50.70    | 74.00    | 23.30  | Peak   |
| 4 | 9483.00  | 38.01  | 11.70 | 31.93  | 33.42    | 51.20    | 74.00    | 22.80  | Peak   |
| 5 | 10809.00 | 39.31  | 11.30 | 33.30  | 32.61    | 49.92    | 74.00    | 24.08  | Peak   |
| 6 | 14668.00 | 41.36  | 10.91 | 33.68  | 32.85    | 51.44    | 74.00    | 22.56  | Peak   |

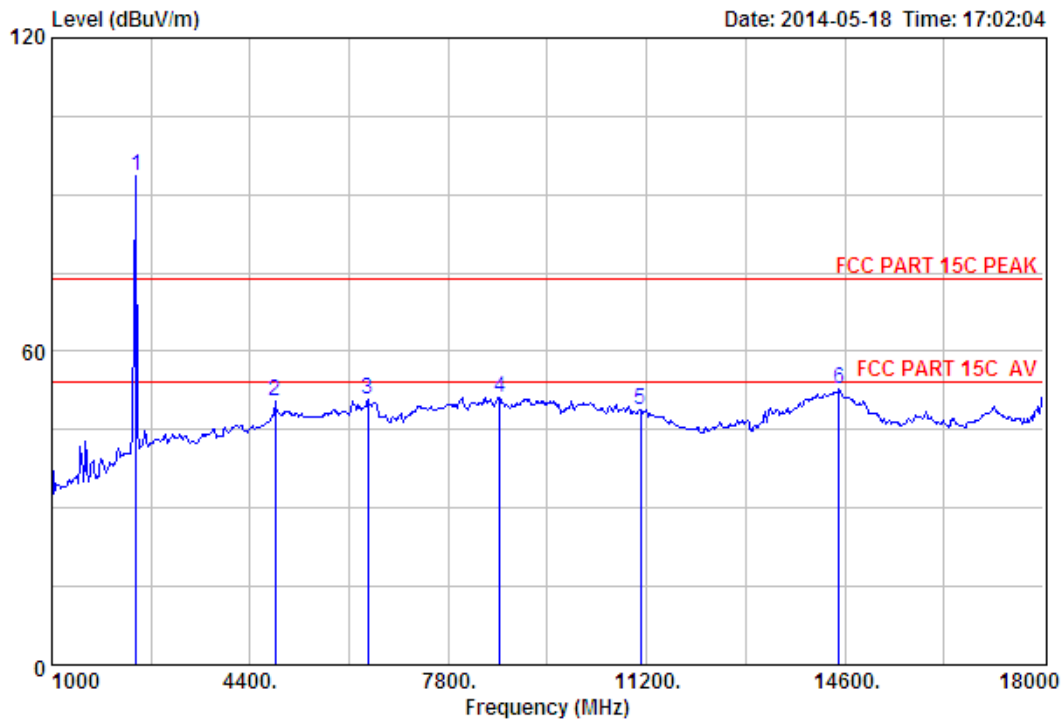
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 495  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz

| 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              | 2402.00                  | 27.61                 | 6.62                  | 34.18             | 95.57    | 95.62 | 74.00              | -21.62         | Peak   |
| 2              | 4842.00                  | 31.31                 | 11.92                 | 31.85             | 40.19    | 51.57 | 74.00              | 22.43          | Peak   |
| 3              | 8004.00                  | 37.01                 | 11.40                 | 31.22             | 34.72    | 51.91 | 74.00              | 22.09          | Peak   |
| 4              | 10214.00                 | 38.48                 | 11.47                 | 32.17             | 34.13    | 51.91 | 74.00              | 22.09          | Peak   |
| 5              | 14464.00                 | 41.85                 | 10.93                 | 32.96             | 31.62    | 51.44 | 74.00              | 22.56          | Peak   |
| 6              | 17048.00                 | 39.93                 | 10.97                 | 33.09             | 29.91    | 47.72 | 74.00              | 26.28          | Peak   |

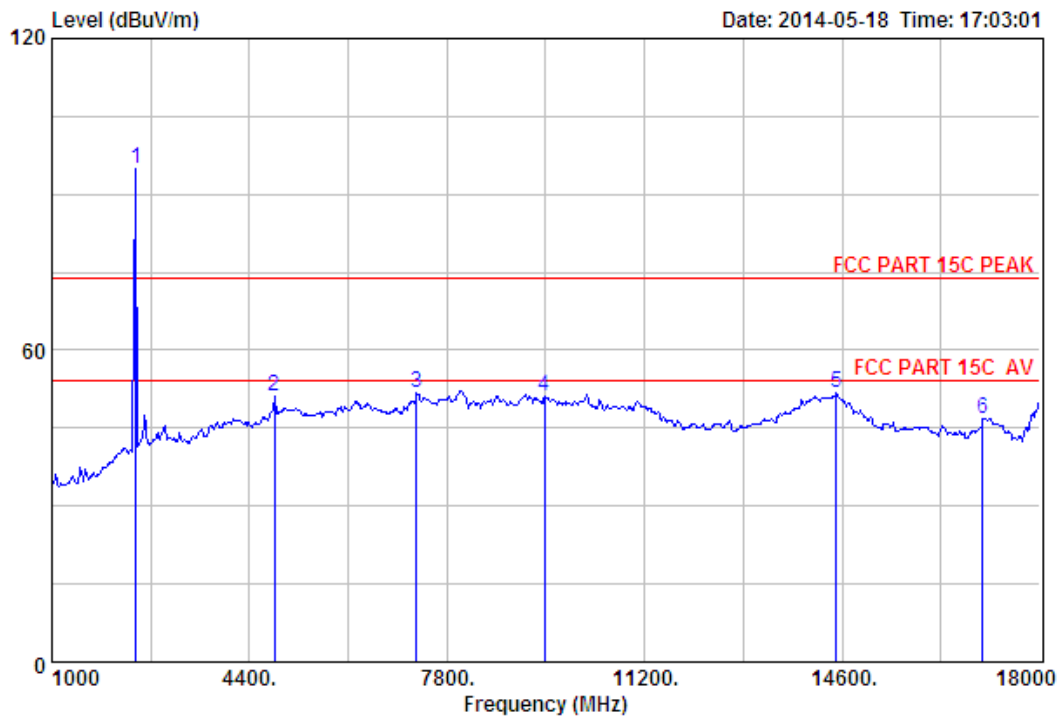
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 498  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2441MHz

|   | 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 | 2441.00        | 27.60                    | 6.67                  | 34.12                 | 93.45             | 93.60                         | 74.00              | -19.60         | Peak   |
| 2 | 4825.00        | 31.28                    | 11.84                 | 31.83                 | 39.14             | 50.43                         | 74.00              | 23.57          | Peak   |
| 3 | 6423.00        | 34.03                    | 12.21                 | 31.93                 | 36.39             | 50.70                         | 74.00              | 23.30          | Peak   |
| 4 | 8684.00        | 37.32                    | 11.45                 | 32.43                 | 34.91             | 51.25                         | 74.00              | 22.75          | Peak   |
| 5 | 11098.00       | 39.45                    | 11.22                 | 33.84                 | 32.12             | 48.95                         | 74.00              | 25.05          | Peak   |
| 6 | 14498.00       | 41.88                    | 10.93                 | 33.08                 | 33.14             | 52.87                         | 74.00              | 21.13          | Peak   |

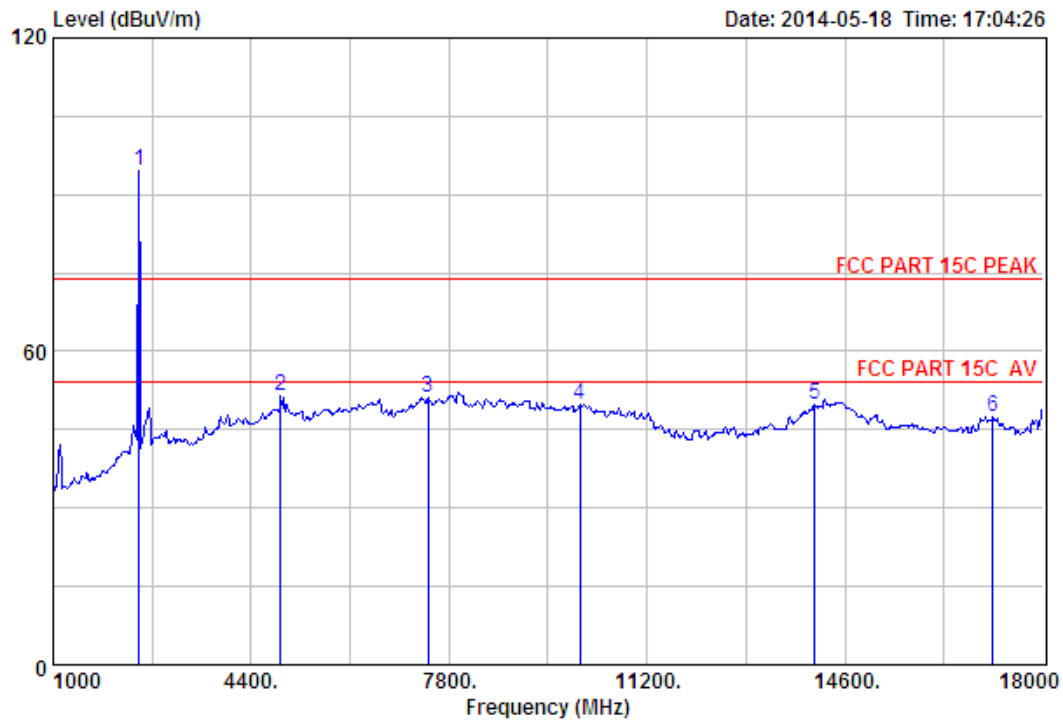
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 499  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2441MHz

|   | 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 | 2441.00  | 27.60  | 6.67  | 34.12  | 94.79    | 94.94    | 74.00    | -20.94 | Peak   |
| 2 | 4825.00  | 31.28  | 11.84 | 31.83  | 39.83    | 51.12    | 74.00    | 22.88  | Peak   |
| 3 | 7273.00  | 36.54  | 11.56 | 32.04  | 35.60    | 51.66    | 74.00    | 22.34  | Peak   |
| 4 | 9483.00  | 38.01  | 11.70 | 31.93  | 33.36    | 51.14    | 74.00    | 22.86  | Peak   |
| 5 | 14498.00 | 41.88  | 10.93 | 33.08  | 31.99    | 51.72    | 74.00    | 22.28  | Peak   |
| 6 | 17014.00 | 39.80  | 10.98 | 33.17  | 29.30    | 46.91    | 74.00    | 27.09  | Peak   |

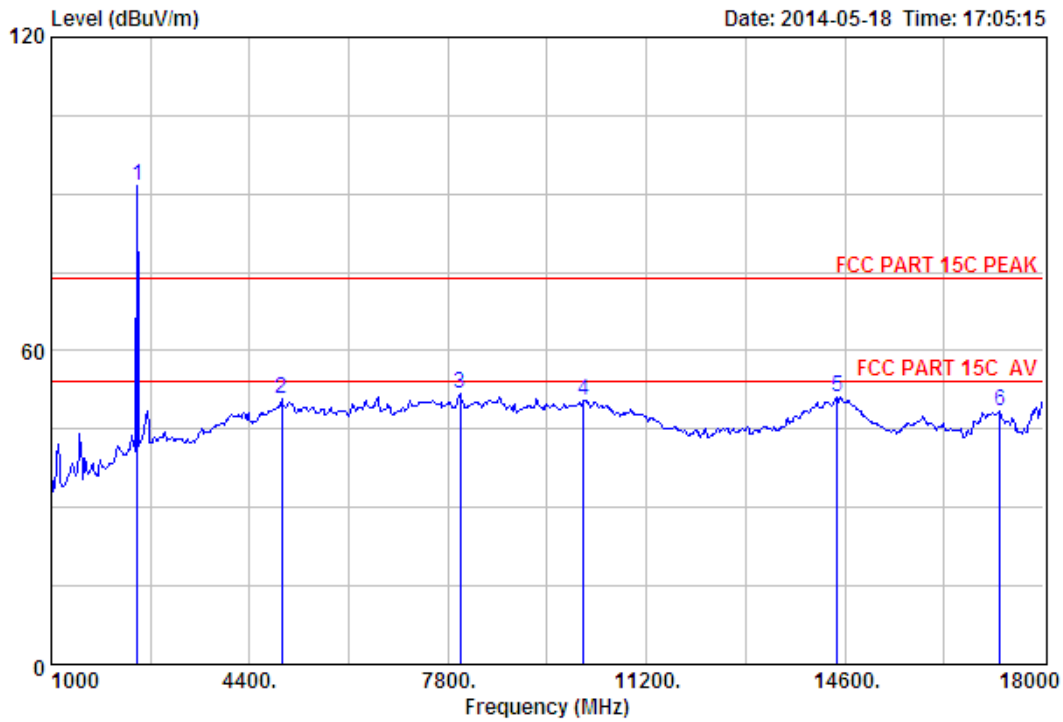
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 500  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2480MHz

|   | 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 | 2480.00  | 27.58  | 6.71  | 34.03  | 94.38    | 94.64    | 74.00    | -20.64 | Peak   |
| 2 | 4910.00  | 31.42  | 12.22 | 31.93  | 39.91    | 51.62    | 74.00    | 22.38  | Peak   |
| 3 | 7443.00  | 36.54  | 11.61 | 31.93  | 34.93    | 51.15    | 74.00    | 22.85  | Peak   |
| 4 | 10044.00 | 38.18  | 11.56 | 31.85  | 32.08    | 49.97    | 74.00    | 24.03  | Peak   |
| 5 | 14073.00 | 41.52  | 10.90 | 33.75  | 31.02    | 49.69    | 74.00    | 24.31  | Peak   |
| 6 | 17133.00 | 40.26  | 10.94 | 33.03  | 29.32    | 47.49    | 74.00    | 26.51  | 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.

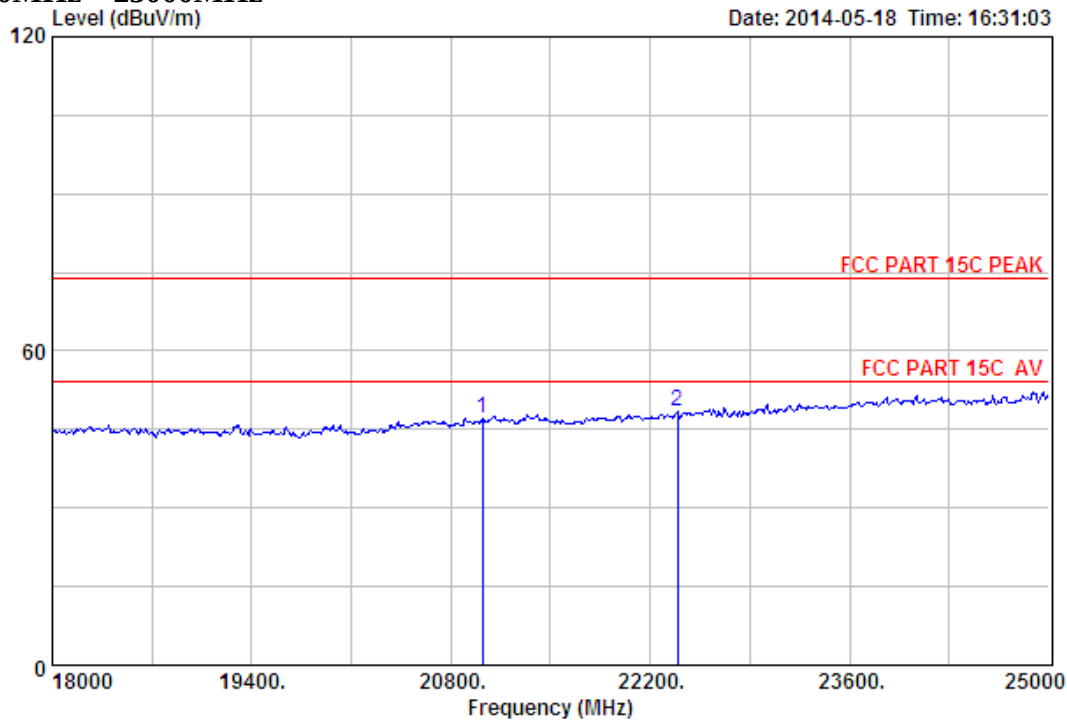


Site no. : 3m Chamber Data no. : 501  
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL  
 Limit : FCC PART 15C PEAK  
 Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2480MHz

|   | 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 | 2480.00  | 27.58  | 6.71  | 34.03  | 91.41    | 91.67    | 74.00    | -17.67 | Peak   |
| 2 | 4944.00  | 31.47  | 12.37 | 31.96  | 38.82    | 50.70    | 74.00    | 23.30  | Peak   |
| 3 | 8004.00  | 37.01  | 11.40 | 31.22  | 34.55    | 51.74    | 74.00    | 22.26  | Peak   |
| 4 | 10129.00 | 38.33  | 11.52 | 32.01  | 32.79    | 50.63    | 74.00    | 23.37  | Peak   |
| 5 | 14464.00 | 41.85  | 10.93 | 32.96  | 31.34    | 51.16    | 74.00    | 22.84  | Peak   |
| 6 | 17252.00 | 40.71  | 10.90 | 33.76  | 30.47    | 48.32    | 74.00    | 25.68  | 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.

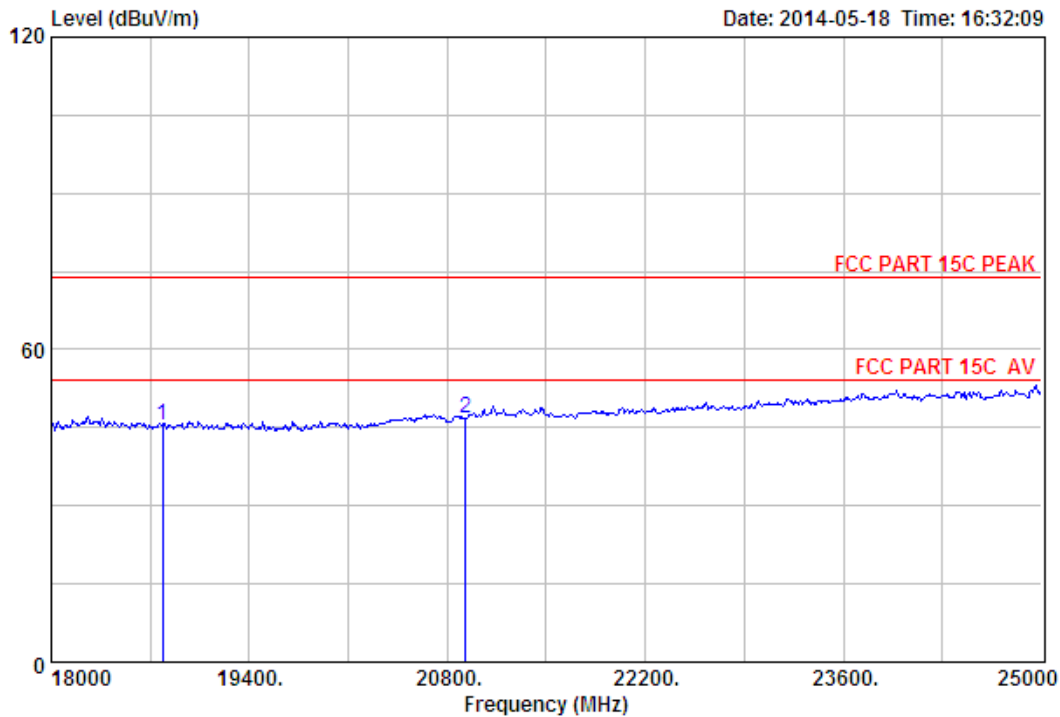
## 18000MHz – 25000MHz



Site no. : 3m Chamber Data no. : 484  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : RX-P540A  
 Test Mode : GFSK TX 2402MHz

|   |          | 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 | 21024.00 | 46.29  | 20.14 | 35.78  | 16.46    | 47.11    | 74.00    | 26.89  | Peak   |
| 2 | 22389.00 | 45.78  | 20.79 | 34.48  | 16.29    | 48.38    | 74.00    | 25.62  | Peak   |

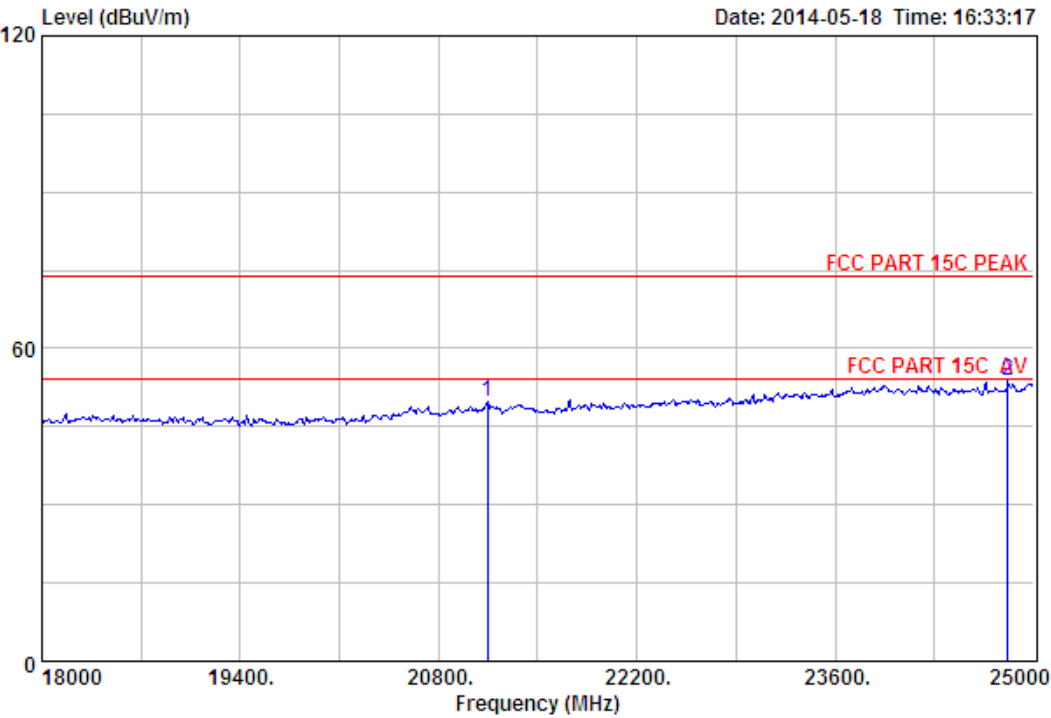
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 485  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2402MHz

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Emission          |                   | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) |                    |                |        |
| 1 18784.00     | 45.20                    | 18.28                 | 35.66                 | 17.60             | 45.42             | 74.00              | 28.58          | Peak   |
| 2 20926.00     | 46.26                    | 20.10                 | 35.87                 | 16.25             | 46.74             | 74.00              | 27.26          | Peak   |

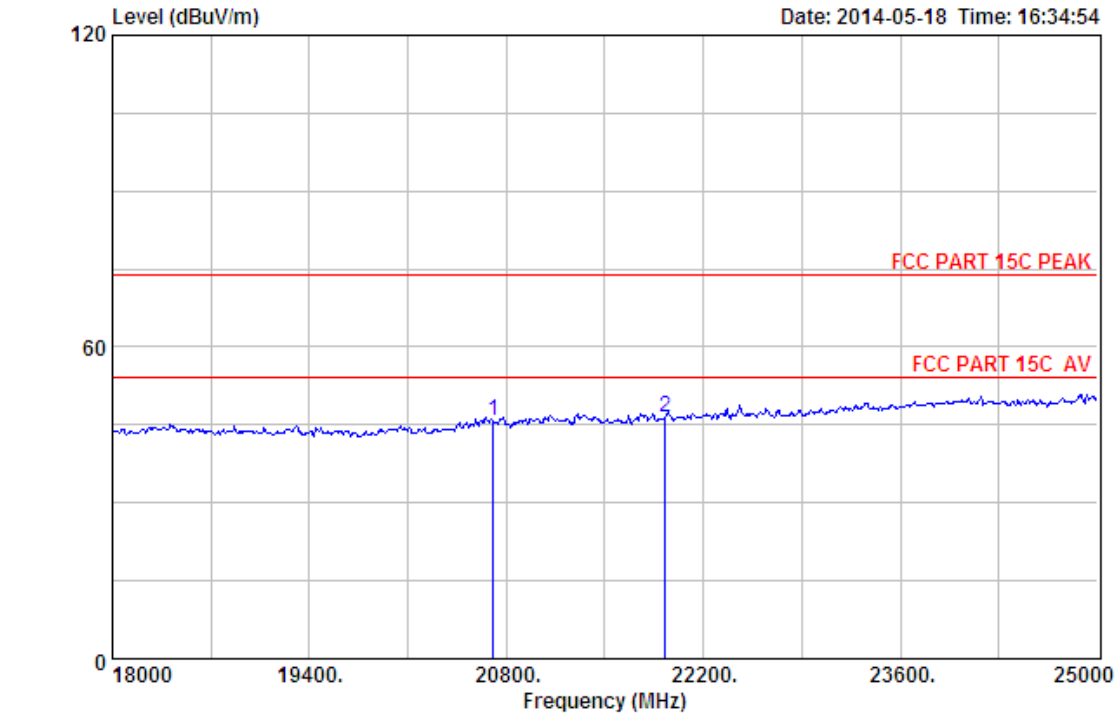
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 486  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2441MHz

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission          |                    | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       |                   | Level<br>(dBuV/m) | Limits<br>(dBuV/m) |                |        |
| 1 21143.00     | 46.21                    | 20.19                 | 35.67                 | 19.04             | 49.77             | 74.00              | 24.23          | Peak   |
| 2 24818.00     | 45.96                    | 22.49                 | 34.08                 | 19.32             | 53.69             | 74.00              | 20.31          | Peak   |

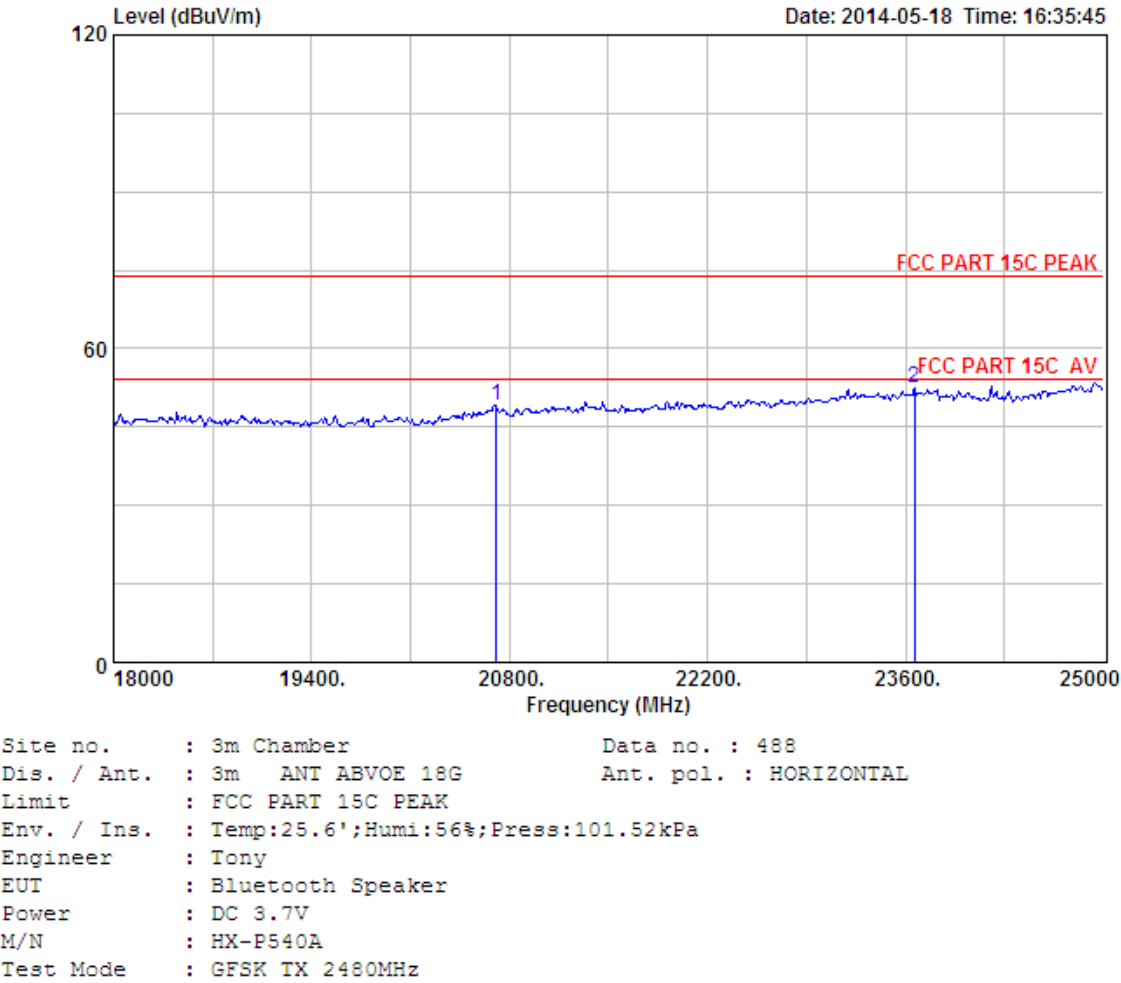
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 487  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2441MHz

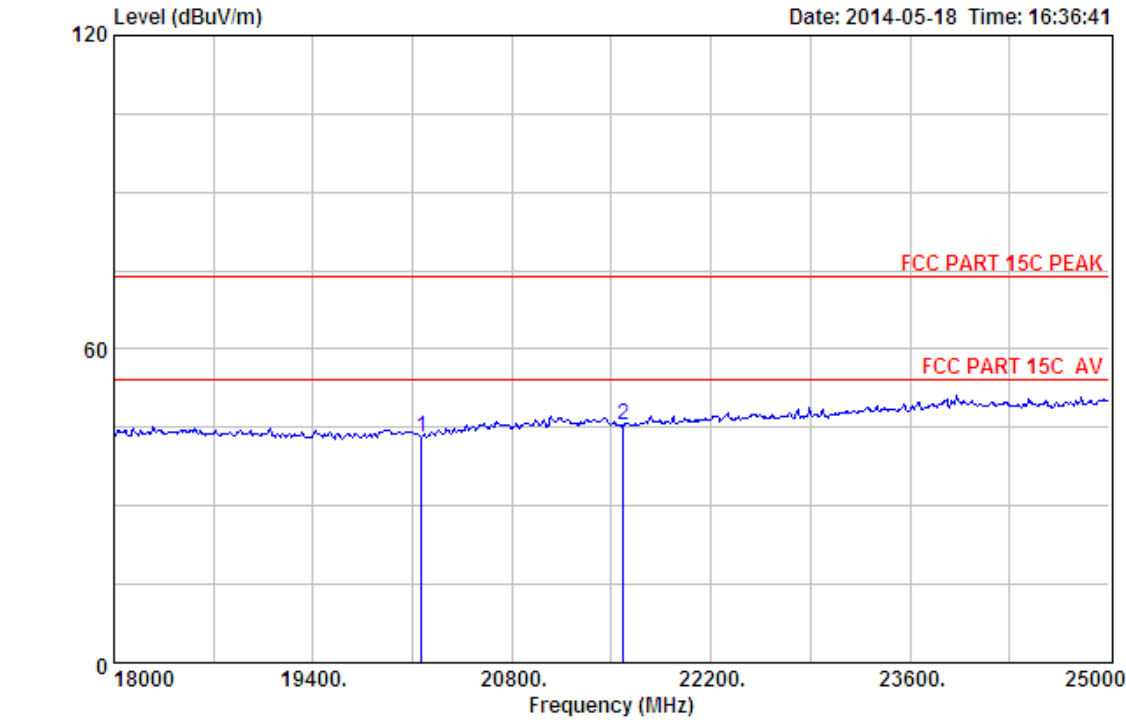
| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission          |                    | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       |                   | Level<br>(dBuV/m) | Limits<br>(dBuV/m) |                |        |
| 1 20709.00     | 46.12                    | 20.00                 | 36.07                 | 15.64             | 45.69             | 74.00              | 28.31          | Peak   |
| 2 21927.00     | 45.75                    | 20.53                 | 34.97                 | 15.30             | 46.61             | 74.00              | 27.39          | 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.



|   | 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 | 20709.00 | 46.12  | 20.00 | 36.07  | 19.25    | 49.30    | 74.00    | 24.70  | Peak   |
| 2 | 23663.00 | 45.67  | 21.74 | 33.14  | 18.07    | 52.34    | 74.00    | 21.66  | 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.

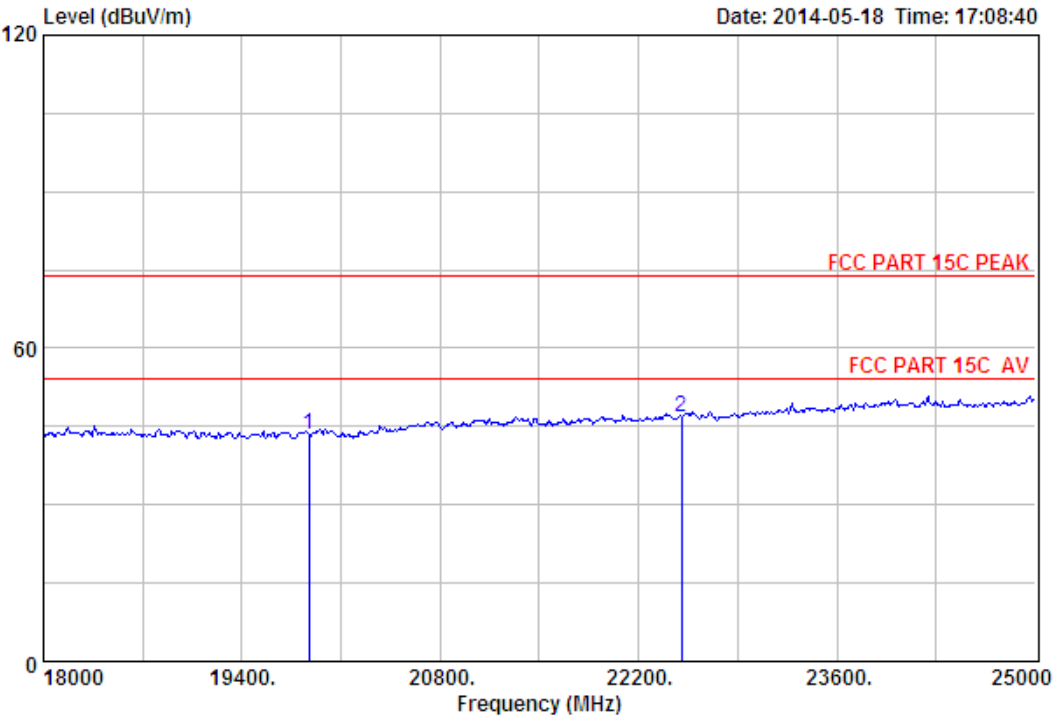


Site no. : 3m Chamber Data no. : 489  
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL  
Limit : FCC PART 15C PEAK  
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa  
Engineer : Tony  
EUT : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2480MHz

|       |          | 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     | 20163.00 | 46.07 | 19.75  | 36.54   | 13.81    | 43.09    | 74.00  | 30.91  | Peak |
| 2     | 21584.00 | 45.95 | 20.38  | 35.28   | 14.43    | 45.48    | 74.00  | 28.52  | Peak |

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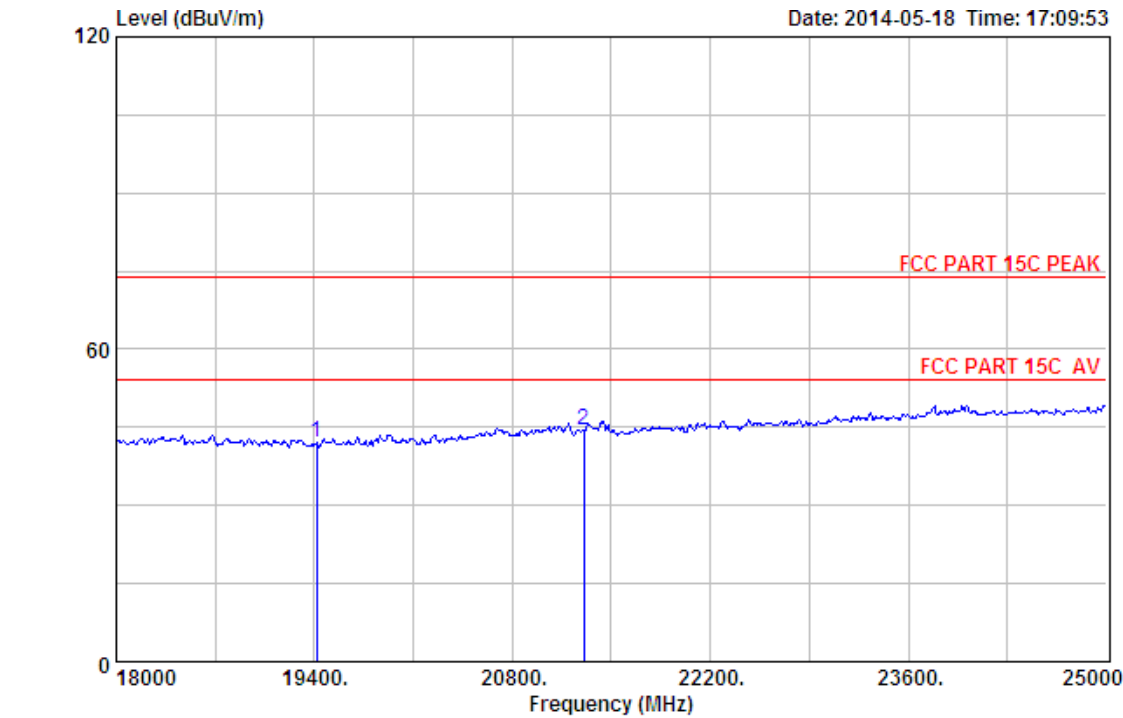
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 504  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : 8-DPSK TX 2402MHz

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Emission          |                   | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) |                    |                |        |
| 1 19876.00     | 46.05                    | 19.54                 | 36.59                 | 14.48             | 43.48             | 74.00              | 30.52          | Peak   |
| 2 22501.00     | 45.80                    | 20.85                 | 34.38                 | 14.68             | 46.95             | 74.00              | 27.05          | Peak   |

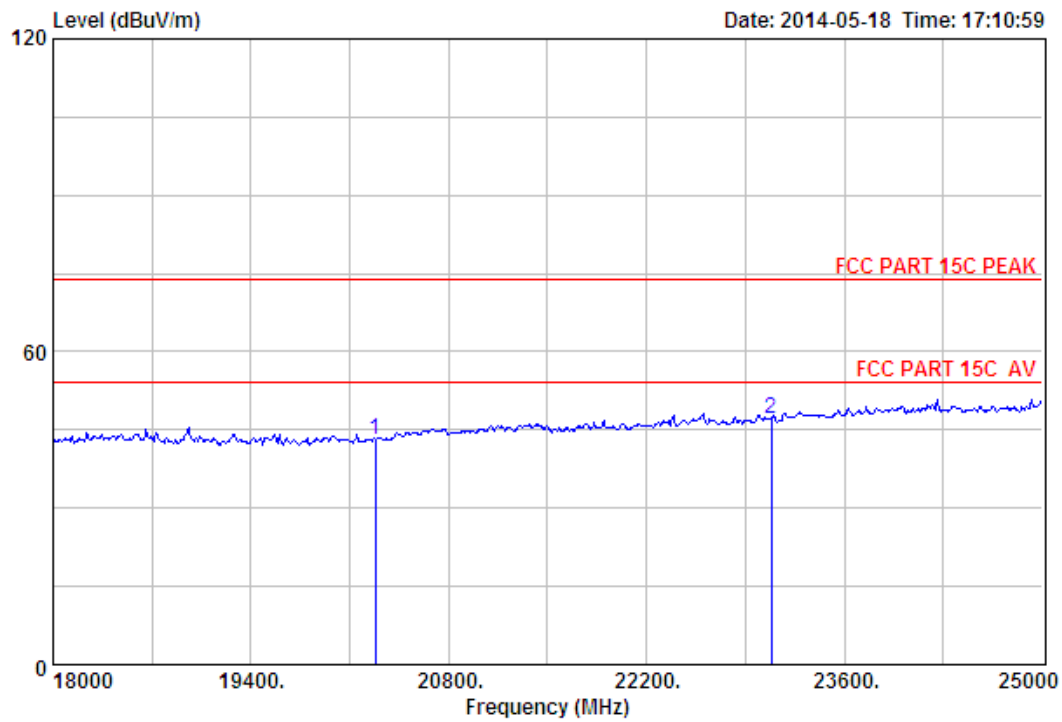
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 505  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : 8-DPSK TX 2402MHz

|   | 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 | 19414.00 | 45.81  | 19.01 | 36.21  | 13.56    | 42.17    | 74.00    | 31.83  | Peak   |
| 2 | 21304.00 | 46.12  | 20.26 | 35.53  | 13.56    | 44.41    | 74.00    | 29.59  | Peak   |

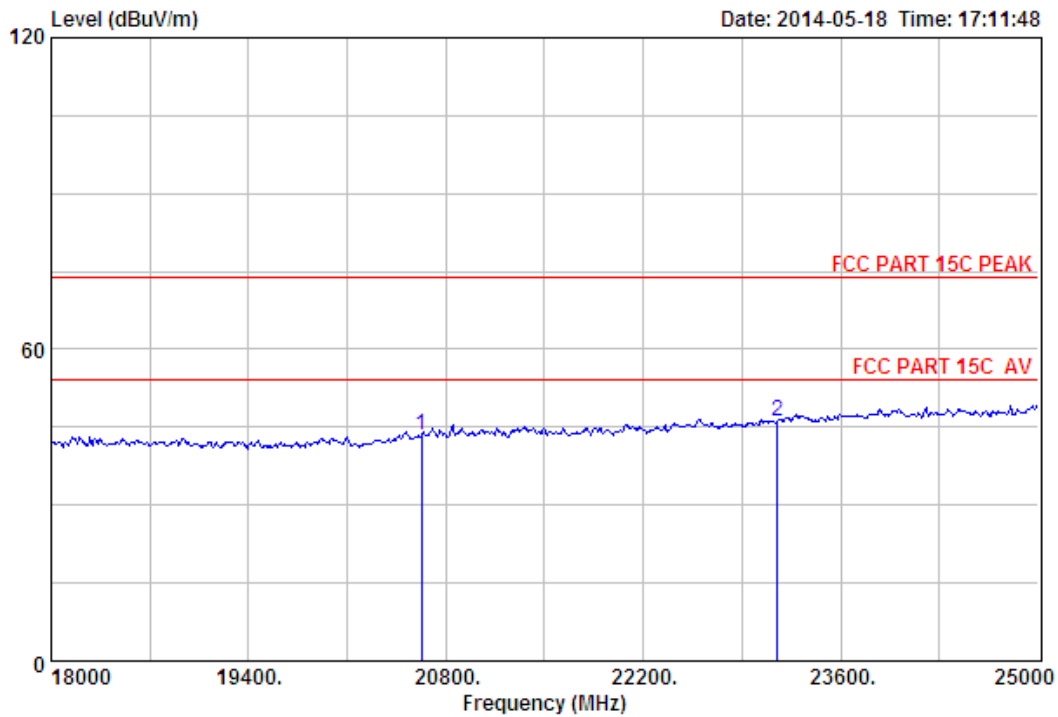
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 506  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2441MHz

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Reading<br>(dBuV) | Emission          |                    |                |  | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--|--------|
|                |                          |                       |                       |                   | Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) |  |        |
| 1 20282.00     | 46.04                    | 19.81                 | 36.45                 | 13.87             | 43.27             | 74.00              | 30.73          |  | Peak   |
| 2 23082.00     | 45.62                    | 21.22                 | 33.77                 | 14.15             | 47.22             | 74.00              | 26.78          |  | Peak   |

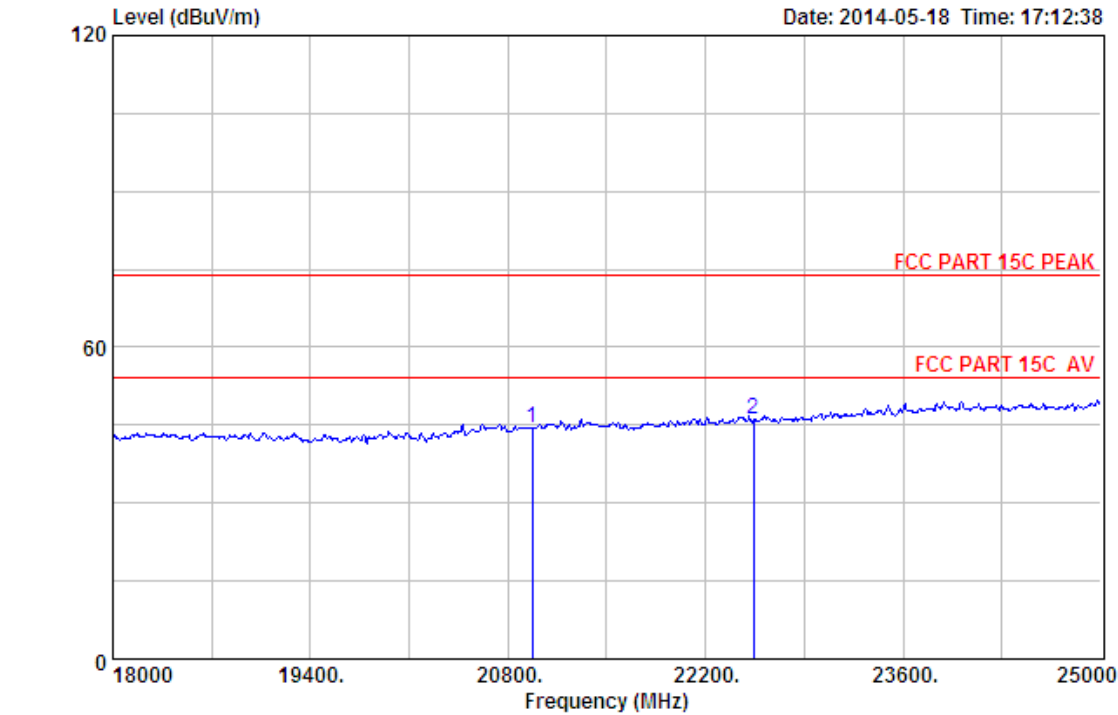
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 507  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2441MHz

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Emission          |                   | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) |                    |                |        |
| 1 20625.00     | 46.07                    | 19.96                 | 36.14                 | 13.63             | 43.52             | 74.00              | 30.48          | Peak   |
| 2 23152.00     | 45.63                    | 21.28                 | 33.69                 | 12.97             | 46.19             | 74.00              | 27.81          | Peak   |

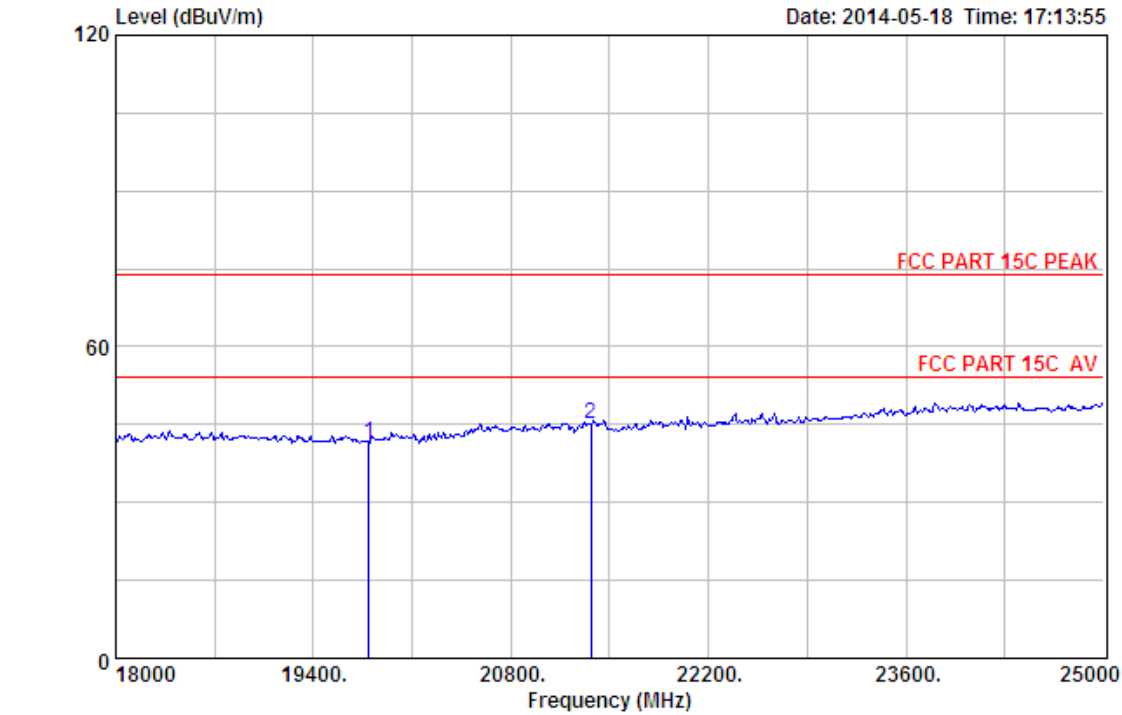
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 508  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : 8-DPSK TX 2480MHz

|   | Freq.<br>(MHz) | Ant.             | Cable        | Amp            | Emission          |                   |                    | Margin<br>(dB) | Remark |
|---|----------------|------------------|--------------|----------------|-------------------|-------------------|--------------------|----------------|--------|
|   |                | Factor<br>(dB/m) | Loss<br>(dB) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limits<br>(dBuV/m) |                |        |
| 1 | 20975.00       | 46.29            | 20.12        | 35.82          | 13.94             | 44.53             | 74.00              | 29.47          | Peak   |
| 2 | 22543.00       | 45.79            | 20.88        | 34.32          | 13.74             | 46.09             | 74.00              | 27.91          | 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. : 509  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : 8-DPSK TX 2480MHz

| 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              | 19792.00                 | 46.01                 | 19.44                 | 36.53             | 12.69    | 41.61 | 74.00              | 32.39          | Peak   |
| 2              | 21367.00                 | 46.08                 | 20.29                 | 35.46             | 14.10    | 45.01 | 74.00              | 28.99          | Peak   |

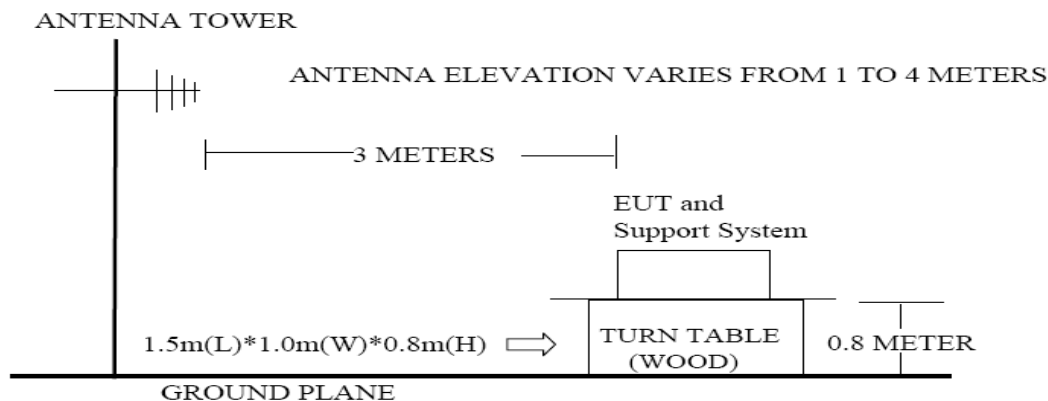
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.

## 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

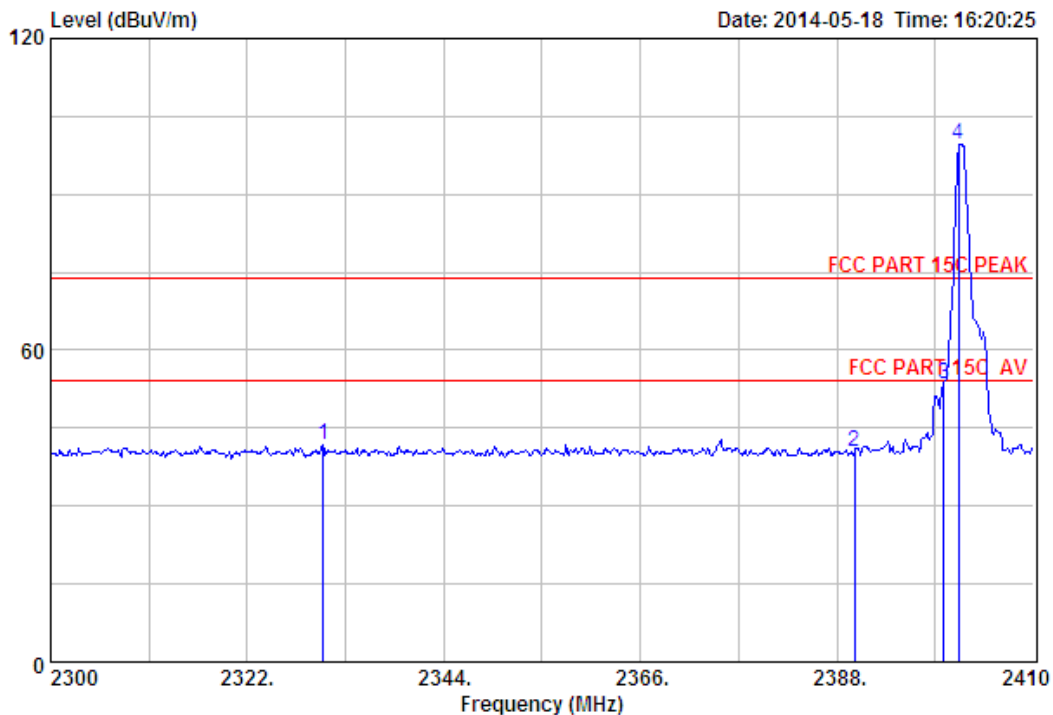
### 9.4. Test Result

|                                                                  |
|------------------------------------------------------------------|
| EUT: Bluetooth Speaker                                           |
| M/N: HX-P540A                                                    |
| Power: DC 3.7V                                                   |
| Test date: 2014-05-18 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 2402MHz 、 2441MHz and 2480MHz 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.

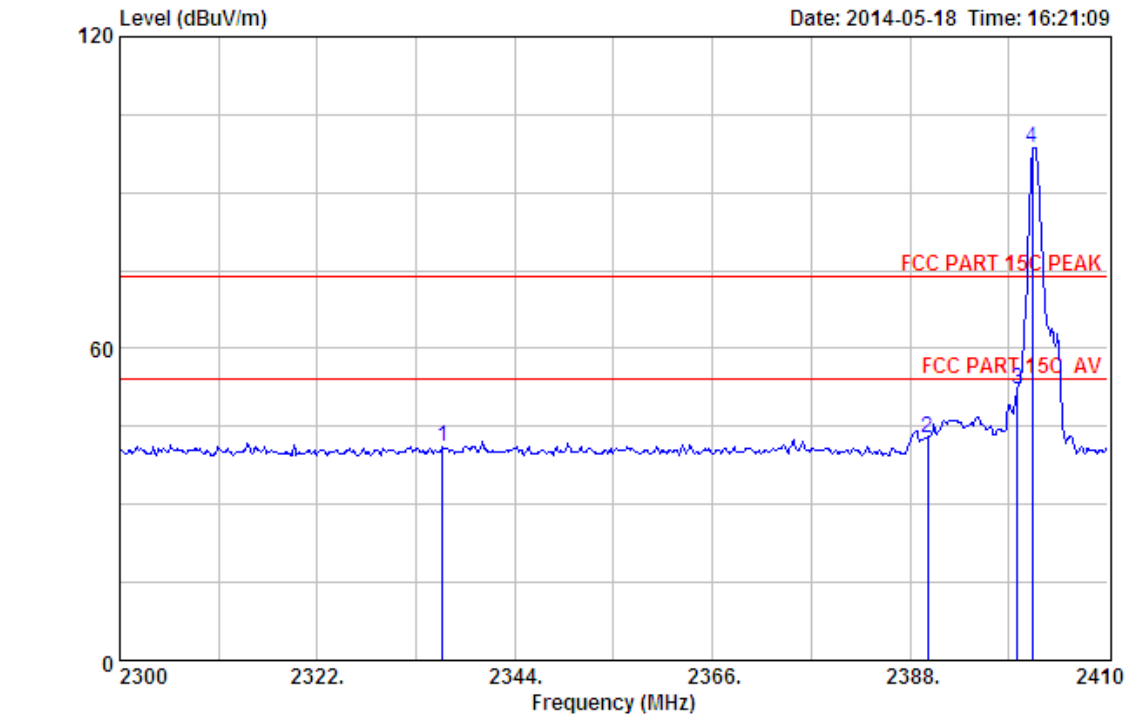
## 9.5. Test Data



Site no. : 3m Chamber Data no. : 476  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2402MHz (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 | 2330.47 | 27.73  | 6.54  | 34.23  | 41.58    | 41.62    | 74.00    | 32.38  | Peak   |
| 2 | 2390.00 | 27.64  | 6.62  | 34.19  | 40.49    | 40.56    | 74.00    | 33.44  | Peak   |
| 3 | 2400.00 | 27.61  | 6.62  | 34.18  | 53.55    | 53.60    | 74.00    | 20.40  | Peak   |
| 4 | 2401.64 | 27.61  | 6.62  | 34.18  | 99.62    | 99.67    | 74.00    | -25.67 | Peak   |

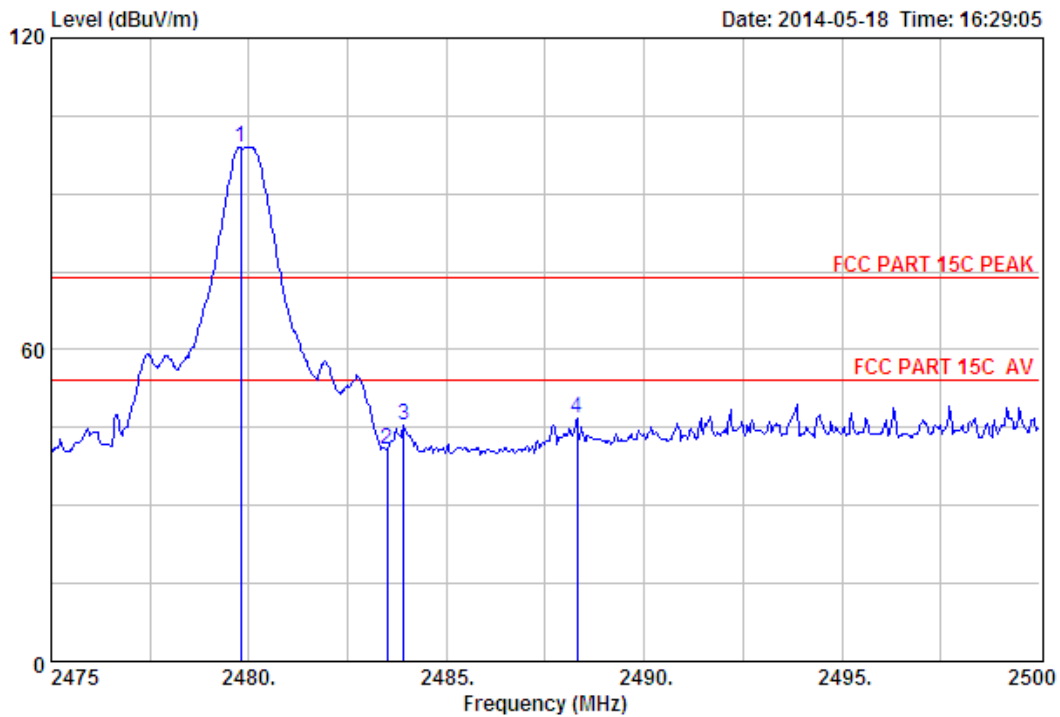
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 477  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2402MHz(No Hopping)

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Emission          |                   | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) |                    |                |        |
| 1              | 27.73                    | 6.56                  | 34.23                 | 41.13             | 41.19             | 74.00              | 32.81          | Peak   |
| 2              | 27.64                    | 6.62                  | 34.19                 | 42.76             | 42.83             | 74.00              | 31.17          | Peak   |
| 3              | 27.61                    | 6.62                  | 34.18                 | 51.93             | 51.98             | 74.00              | 22.02          | Peak   |
| 4              | 27.61                    | 6.62                  | 34.18                 | 98.47             | 98.52             | 74.00              | -24.52         | Peak   |

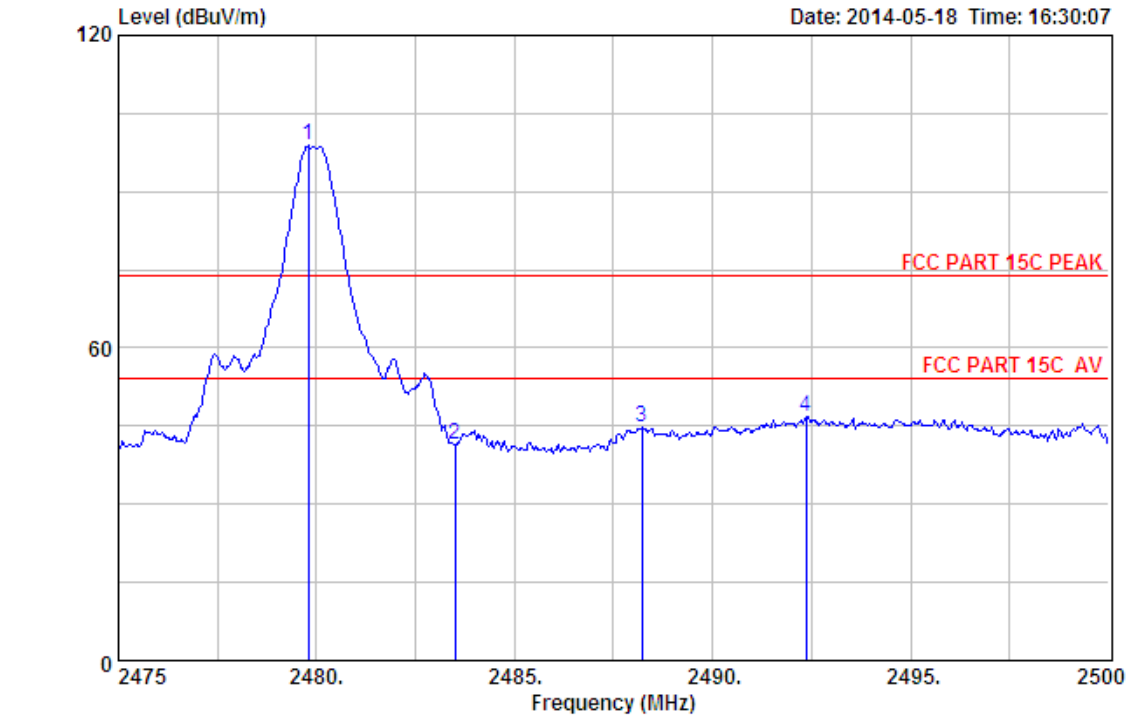
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 482  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2480MHz(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 | 2479.80 | 27.58  | 6.71  | 34.03  | 98.77    | 99.03    | 74.00    | -25.03 | Peak   |
| 2 | 2483.50 | 27.58  | 6.71  | 34.03  | 40.67    | 40.93    | 74.00    | 33.07  | Peak   |
| 3 | 2483.93 | 27.58  | 6.71  | 34.03  | 45.15    | 45.41    | 74.00    | 28.59  | Peak   |
| 4 | 2488.30 | 27.58  | 6.73  | 34.03  | 46.58    | 46.86    | 74.00    | 27.14  | Peak   |

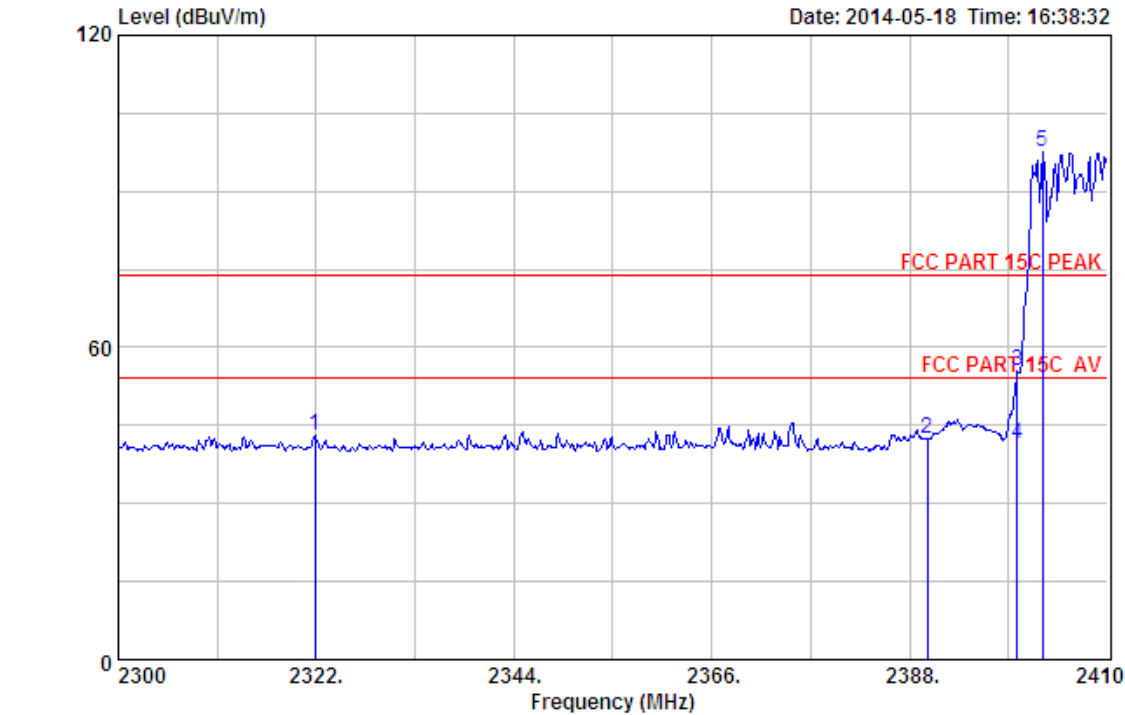
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 483  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2480MHz(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 | 2479.80 | 27.58  | 6.71  | 34.03  | 98.52    | 98.78    | 74.00    | -24.78 | Peak   |
| 2 | 2483.50 | 27.58  | 6.71  | 34.03  | 41.25    | 41.51    | 74.00    | 32.49  | Peak   |
| 3 | 2488.23 | 27.58  | 6.73  | 34.03  | 44.37    | 44.65    | 74.00    | 29.35  | Peak   |
| 4 | 2492.35 | 27.58  | 6.73  | 34.03  | 46.68    | 46.96    | 74.00    | 27.04  | Peak   |

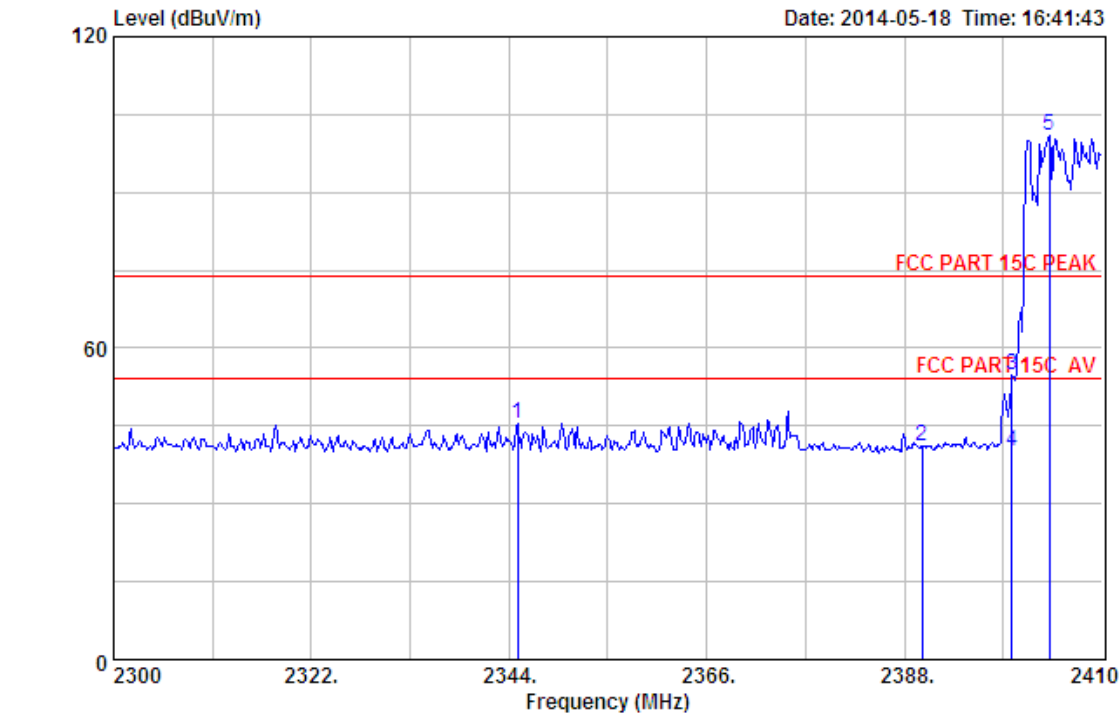
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 490  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2402MHz (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 | 2321.89 | 27.76  | 6.54  | 34.24  | 42.99    | 43.05    | 74.00    | 30.95  | Peak    |
| 2 | 2390.00 | 27.64  | 6.62  | 34.19  | 42.44    | 42.51    | 74.00    | 31.49  | Peak    |
| 3 | 2400.00 | 27.61  | 6.62  | 34.18  | 55.30    | 55.35    | 74.00    | 18.65  | Peak    |
| 4 | 2400.00 | 27.61  | 6.62  | 34.18  | 41.31    | 41.36    | 54.00    | 12.64  | Average |
| 5 | 2402.74 | 27.61  | 6.64  | 34.18  | 97.69    | 97.76    | 74.00    | -23.76 | Peak    |

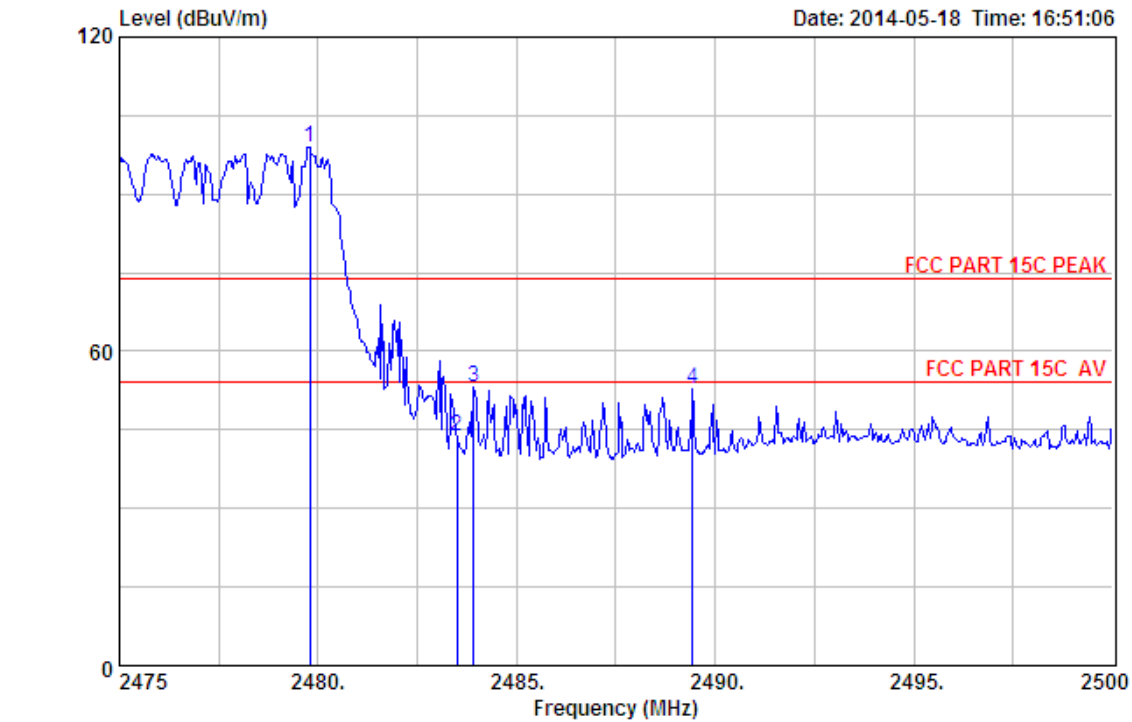
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 491  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2402MHz (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 | 2344.99 | 27.70  | 6.56  | 34.22  | 45.37    | 45.41    | 74.00    | 28.59  | Peak    |
| 2 | 2390.00 | 27.64  | 6.62  | 34.19  | 41.04    | 41.11    | 74.00    | 32.89  | Peak    |
| 3 | 2400.00 | 27.61  | 6.62  | 34.18  | 54.71    | 54.76    | 74.00    | 19.24  | Peak    |
| 4 | 2400.00 | 27.61  | 6.62  | 34.18  | 40.17    | 40.22    | 54.00    | 13.78  | Average |
| 5 | 2404.17 | 27.61  | 6.64  | 34.18  | 100.92   | 100.99   | 74.00    | -26.99 | Peak    |

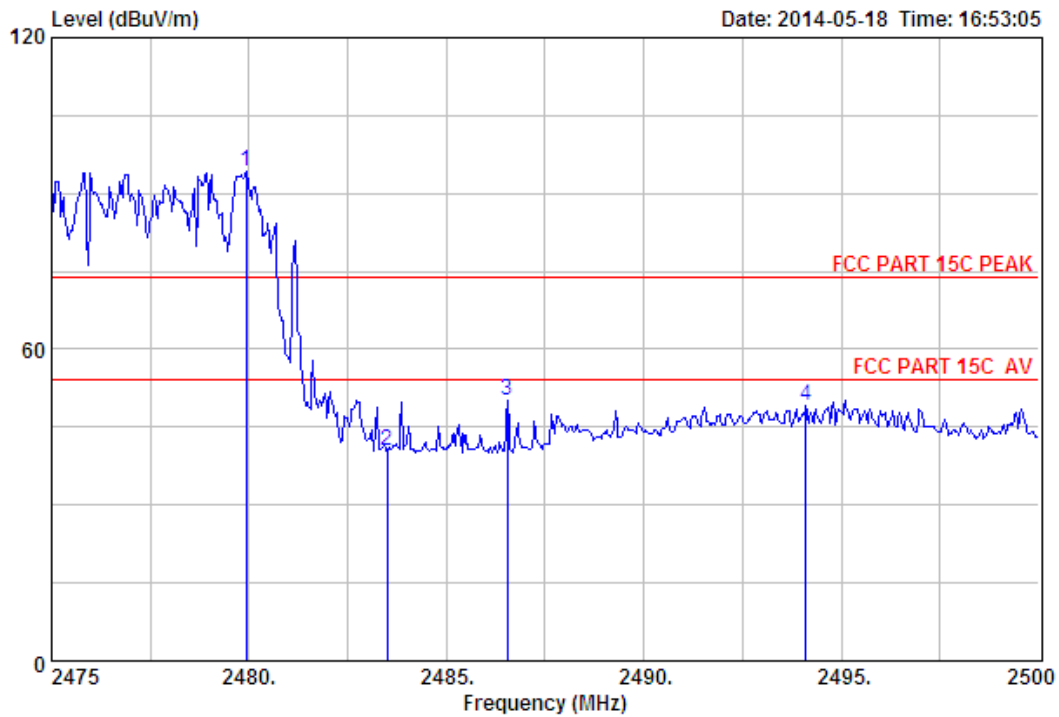
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 492  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : GFSK TX 2480MHz (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 |       | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|----------|-------|--------------------|----------------|--------|
|                |                          |                       |                       |                   | Level    |       |                    |                |        |
| 1              | 2479.80                  | 27.58                 | 6.71                  | 34.03             | 98.84    | 99.10 | 74.00              | -25.10         | Peak   |
| 2              | 2483.50                  | 27.58                 | 6.71                  | 34.03             | 43.47    | 43.73 | 74.00              | 30.27          | Peak   |
| 3              | 2483.93                  | 27.58                 | 6.71                  | 34.03             | 52.95    | 53.21 | 74.00              | 20.79          | Peak   |
| 4              | 2489.43                  | 27.58                 | 6.73                  | 34.03             | 52.43    | 52.71 | 74.00              | 21.29          | Peak   |

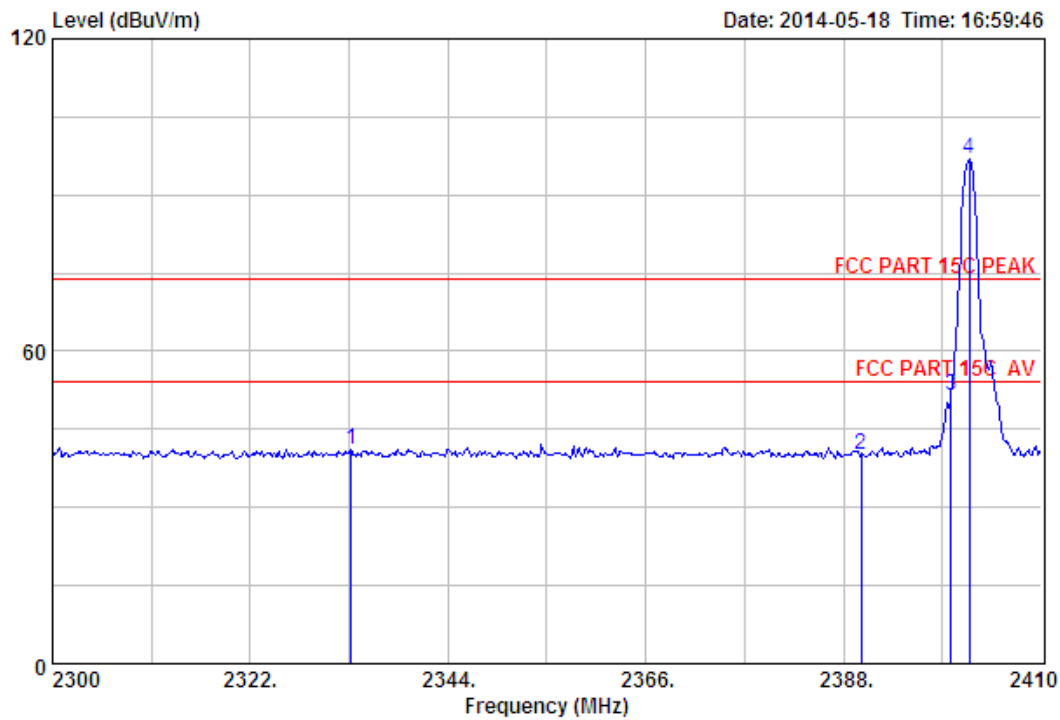
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 493  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : GFSK TX 2480MHz (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 | 2479.93        | 27.58                    | 6.71                  | 34.03                 | 94.03             | 94.29                         | 74.00              | -20.29         | Peak   |
| 2 | 2483.50        | 27.58                    | 6.71                  | 34.03                 | 40.34             | 40.60                         | 74.00              | 33.40          | Peak   |
| 3 | 2486.55        | 27.58                    | 6.71                  | 34.03                 | 50.00             | 50.26                         | 74.00              | 23.74          | Peak   |
| 4 | 2494.10        | 27.58                    | 6.73                  | 34.03                 | 48.86             | 49.14                         | 74.00              | 24.86          | Peak   |

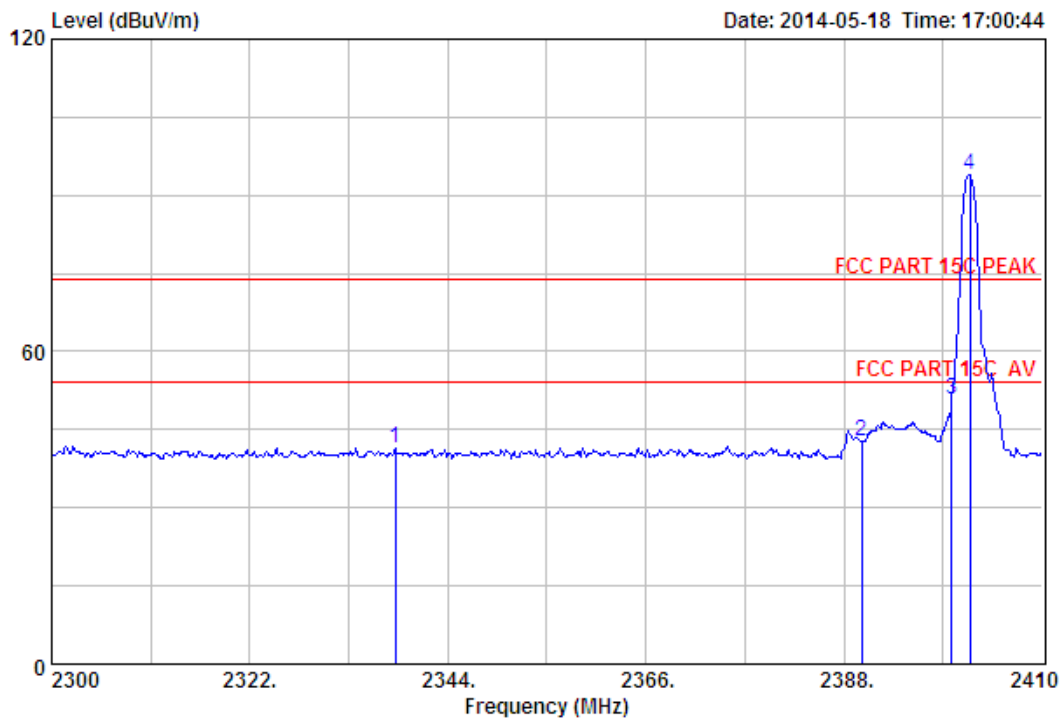
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 496  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz(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          |       | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|-------|--------------------|----------------|--------|
|                |                          |                       |                       |                   | Level<br>(dBuV/m) |       |                    |                |        |
| 1              | 2333.22                  | 27.73                 | 6.54                  | 34.23             | 41.19             | 41.23 | 74.00              | 32.77          | Peak   |
| 2              | 2390.00                  | 27.64                 | 6.62                  | 34.19             | 40.01             | 40.08 | 74.00              | 33.92          | Peak   |
| 3              | 2400.00                  | 27.61                 | 6.62                  | 34.18             | 51.57             | 51.62 | 74.00              | 22.38          | Peak   |
| 4              | 2401.97                  | 27.61                 | 6.62                  | 34.18             | 96.72             | 96.77 | 74.00              | -22.77         | Peak   |

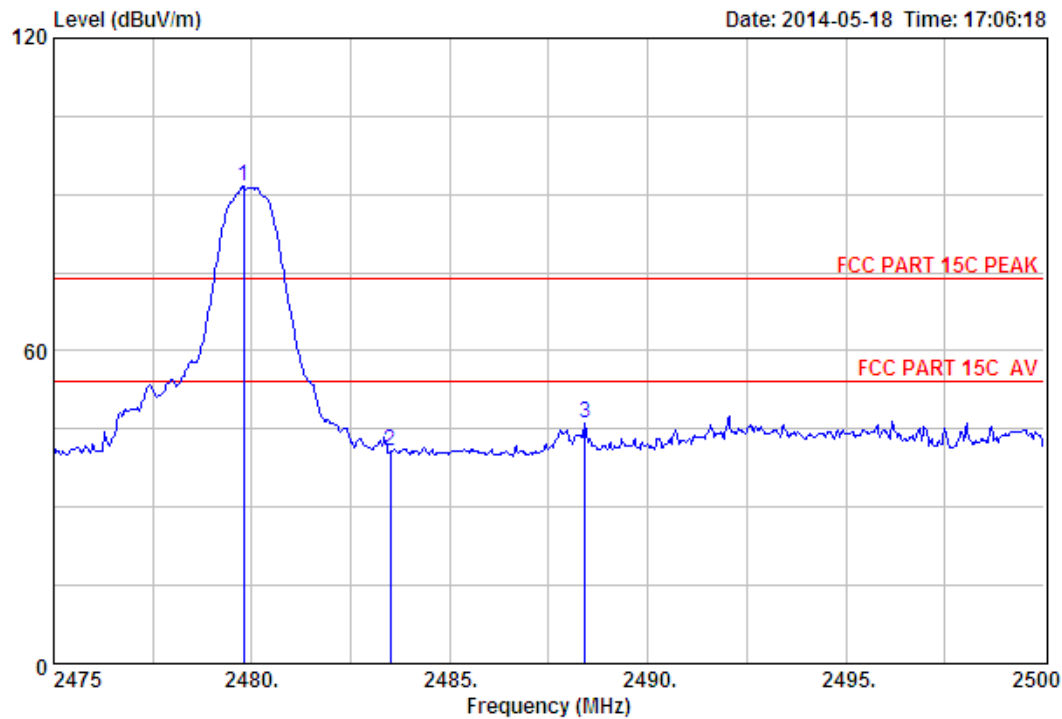
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 497  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz(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     | 2338.17 | 27.73 | 6.56   | 34.23   | 41.46    | 41.52    | 74.00  | 32.48  | Peak |
| 2     | 2390.00 | 27.64 | 6.62   | 34.19   | 42.77    | 42.84    | 74.00  | 31.16  | Peak |
| 3     | 2400.00 | 27.61 | 6.62   | 34.18   | 50.65    | 50.70    | 74.00  | 23.30  | Peak |
| 4     | 2401.97 | 27.61 | 6.62   | 34.18   | 93.95    | 94.00    | 74.00  | -20.00 | Peak |

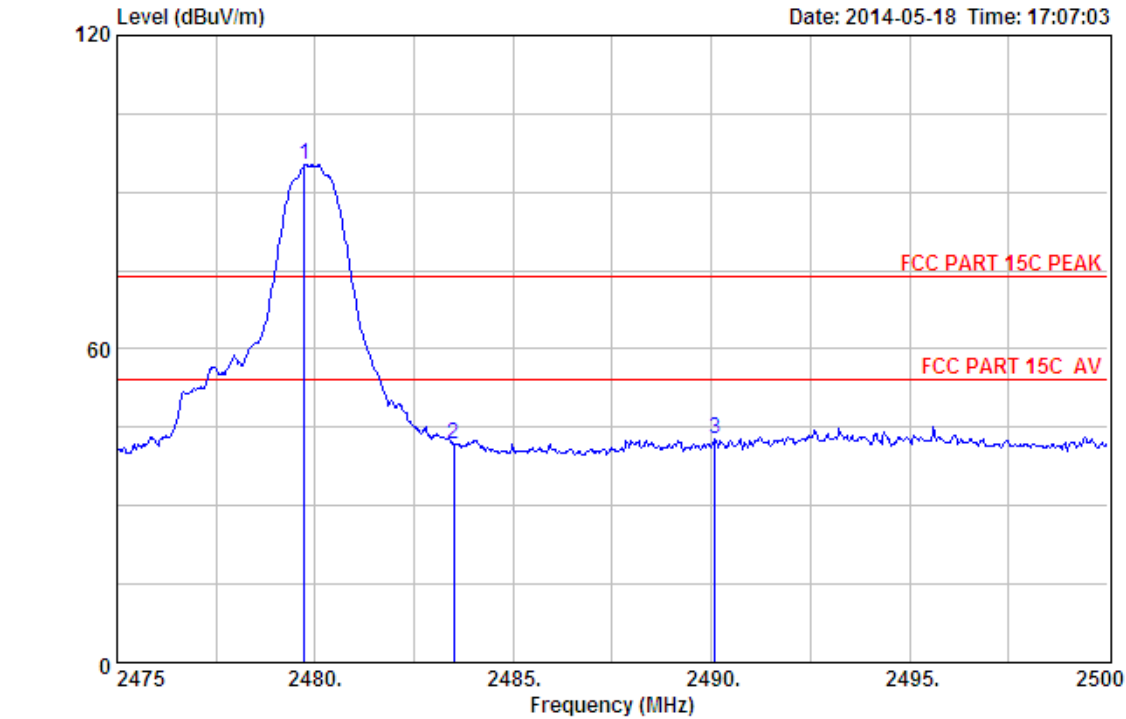
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 502  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2480MHz (No Hopping)

| Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Emission          |                   | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|                |                          |                       |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) |                    |                |        |
| 1 2479.80      | 27.58                    | 6.71                  | 34.03                 | 91.20             | 91.46             | 74.00              | -17.46         | Peak   |
| 2 2483.50      | 27.58                    | 6.71                  | 34.03                 | 40.35             | 40.61             | 74.00              | 33.39          | Peak   |
| 3 2488.43      | 27.58                    | 6.73                  | 34.03                 | 45.95             | 46.23             | 74.00              | 27.77          | Peak   |

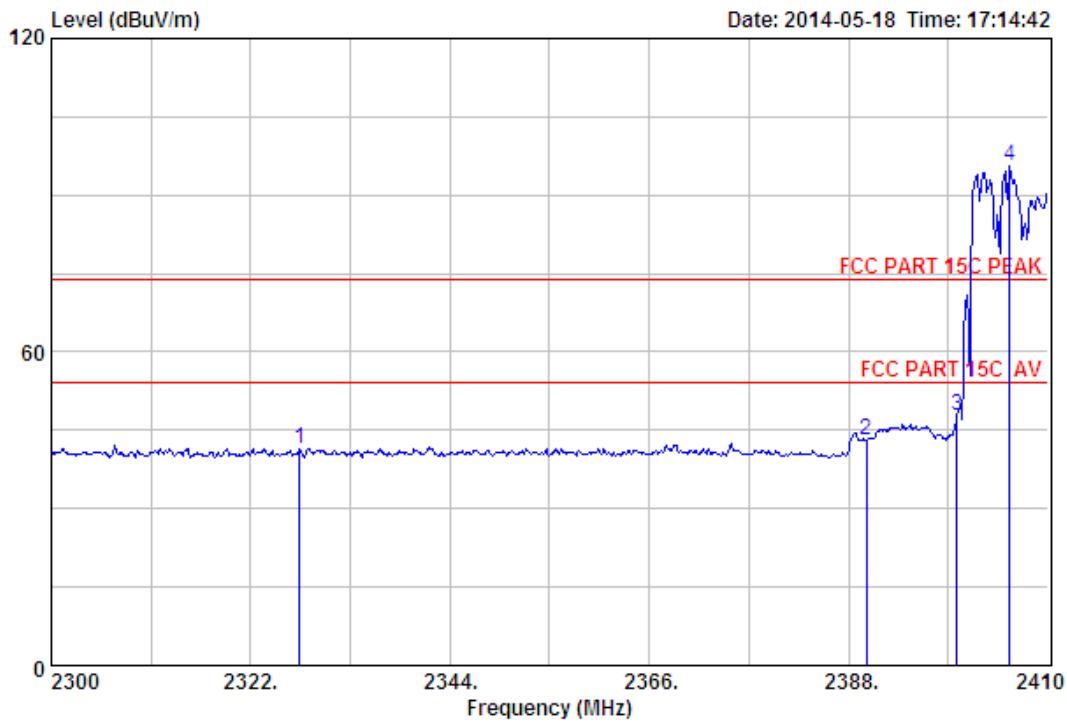
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 503  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : 8-DPSK TX 2480MHz (No Hopping)

|   | Freq.<br>(MHz) | Ant.             | Cable        | Amp            | Emission          |                   |                    |                | Remark |
|---|----------------|------------------|--------------|----------------|-------------------|-------------------|--------------------|----------------|--------|
|   |                | Factor<br>(dB/m) | Loss<br>(dB) | Factor<br>(dB) | Reading<br>(dBuV) | Level<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) |        |
| 1 | 2479.73        | 27.58            | 6.71         | 34.03          | 95.14             | 95.40             | 74.00              | -21.40         | Peak   |
| 2 | 2483.50        | 27.58            | 6.71         | 34.03          | 41.61             | 41.87             | 74.00              | 32.13          | Peak   |
| 3 | 2490.10        | 27.58            | 6.73         | 34.03          | 42.65             | 42.93             | 74.00              | 31.07          | Peak   |

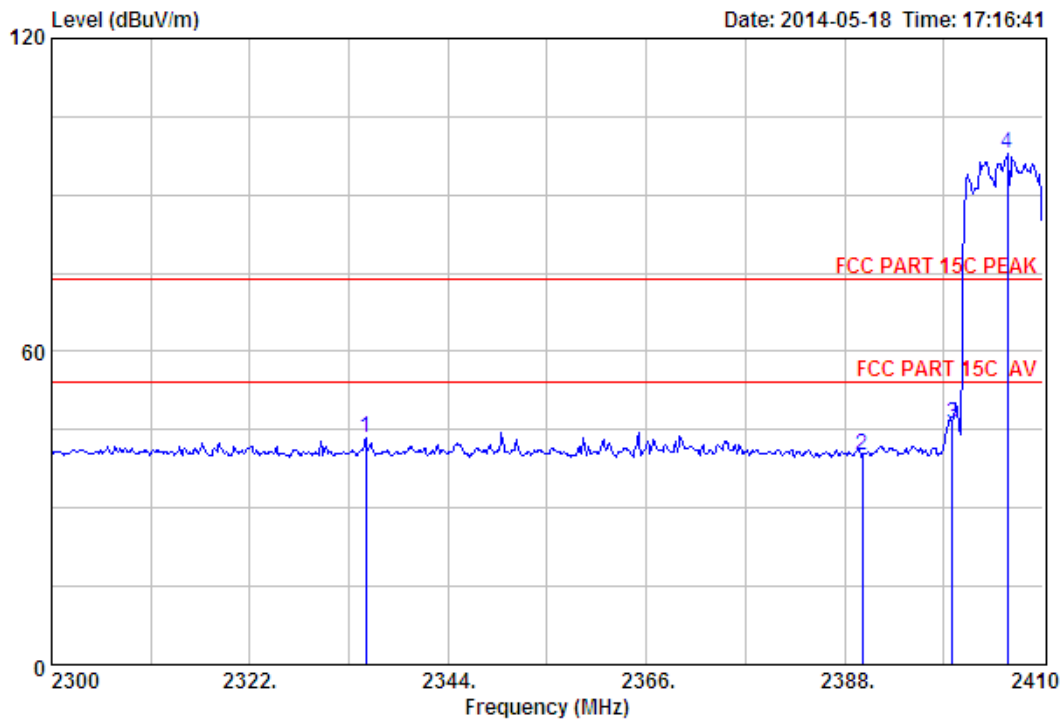
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 510  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz(Hopping On)

|   | Freq.<br>(MHz) | Ant.<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Amp<br>Factor<br>(dB) | Emission          |                   | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|---|----------------|--------------------------|-----------------------|-----------------------|-------------------|-------------------|--------------------|----------------|--------|
|   |                |                          |                       |                       | Reading<br>(dBuV) | Level<br>(dBuV/m) |                    |                |        |
| 1 | 2327.39        | 27.73                    | 6.54                  | 34.23                 | 41.56             | 41.60             | 74.00              | 32.40          | Peak   |
| 2 | 2390.00        | 27.64                    | 6.62                  | 34.19                 | 43.09             | 43.16             | 74.00              | 30.84          | Peak   |
| 3 | 2400.00        | 27.61                    | 6.62                  | 34.18                 | 47.86             | 47.91             | 74.00              | 26.09          | Peak   |
| 4 | 2405.82        | 27.61                    | 6.64                  | 34.18                 | 95.67             | 95.74             | 74.00              | -21.74         | Peak   |

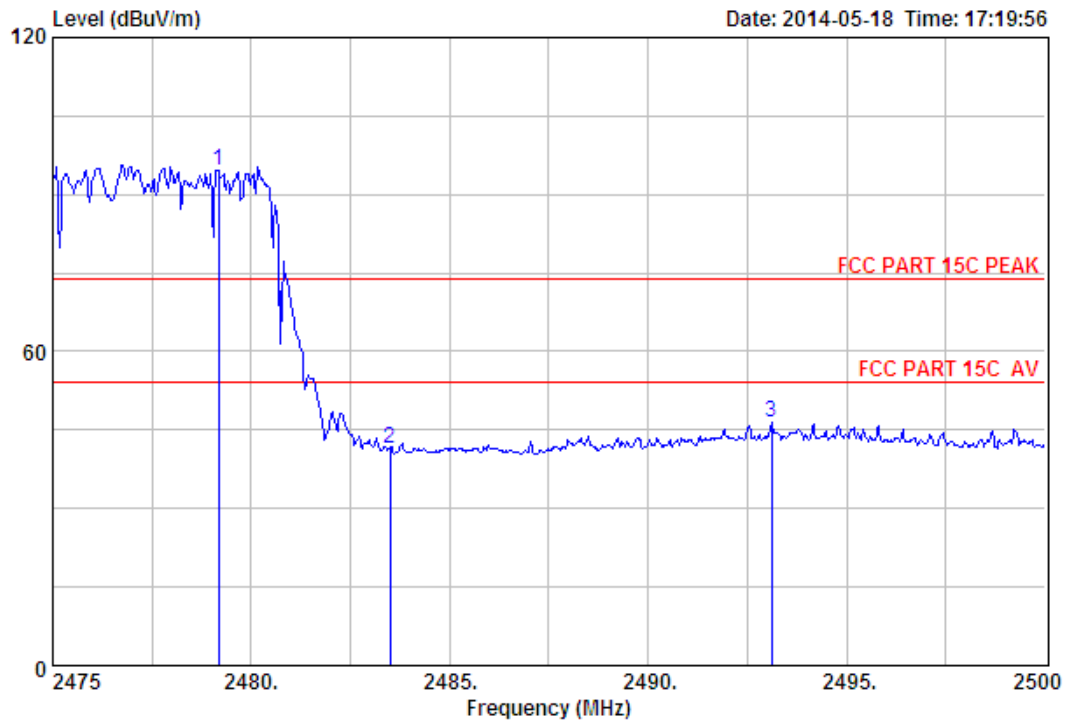
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 511  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2402MHz (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 | 2334.87 | 27.73  | 6.56  | 34.23  | 43.51    | 43.57    | 74.00    | 30.43  | Peak   |
| 2 | 2390.00 | 27.64  | 6.62  | 34.19  | 40.08    | 40.15    | 74.00    | 33.85  | Peak   |
| 3 | 2400.00 | 27.61  | 6.62  | 34.18  | 46.12    | 46.17    | 74.00    | 27.83  | Peak   |
| 4 | 2406.04 | 27.61  | 6.64  | 34.18  | 97.96    | 98.03    | 74.00    | -24.03 | Peak   |

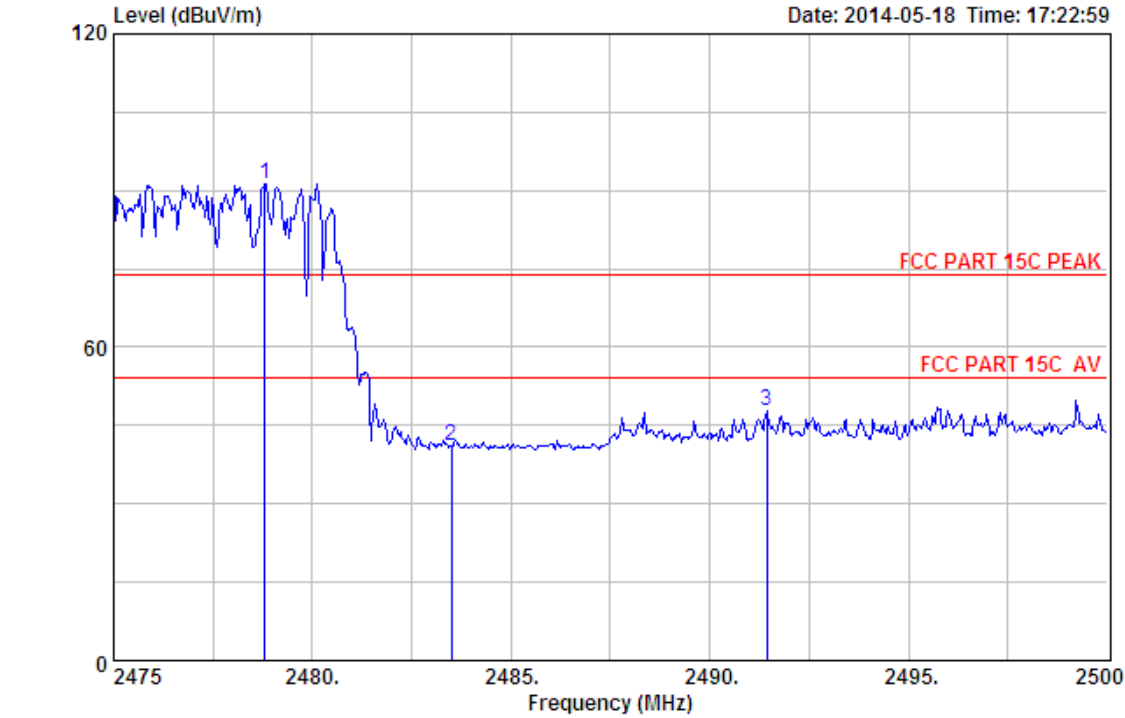
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.  
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 512  
 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 : Bluetooth Speaker  
 Power : DC 3.7V  
 M/N : HX-P540A  
 Test Mode : 8-DPSK TX 2480MHz (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 |       | Limits<br>(dBuV/m) | Margin<br>(dB) | Remark |
|----------------|--------------------------|-----------------------|-----------------------|-------------------|----------|-------|--------------------|----------------|--------|
|                |                          |                       |                       |                   | Level    |       |                    |                |        |
| 1              | 2479.18                  | 27.58                 | 6.71                  | 34.03             | 94.45    | 94.71 | 74.00              | -20.71         | Peak   |
| 2              | 2483.50                  | 27.58                 | 6.71                  | 34.03             | 41.28    | 41.54 | 74.00              | 32.46          | Peak   |
| 3              | 2493.10                  | 27.58                 | 6.73                  | 34.03             | 46.15    | 46.43 | 74.00              | 27.57          | 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.



Site no. : 3m Chamber Data no. : 513  
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 : Bluetooth Speaker  
Power : DC 3.7V  
M/N : HX-P540A  
Test Mode : 8-DPSK TX 2480MHz (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 | 2478.80 | 27.58  | 6.71  | 34.03  | 91.13    | 91.39    | 74.00    | -17.39 | Peak   |
| 2 | 2483.50 | 27.58  | 6.71  | 34.03  | 40.86    | 41.12    | 74.00    | 32.88  | Peak   |
| 3 | 2491.43 | 27.58  | 6.73  | 34.03  | 47.60    | 47.88    | 74.00    | 26.12  | 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.

## 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: 2003 on Conducted Emission Test.

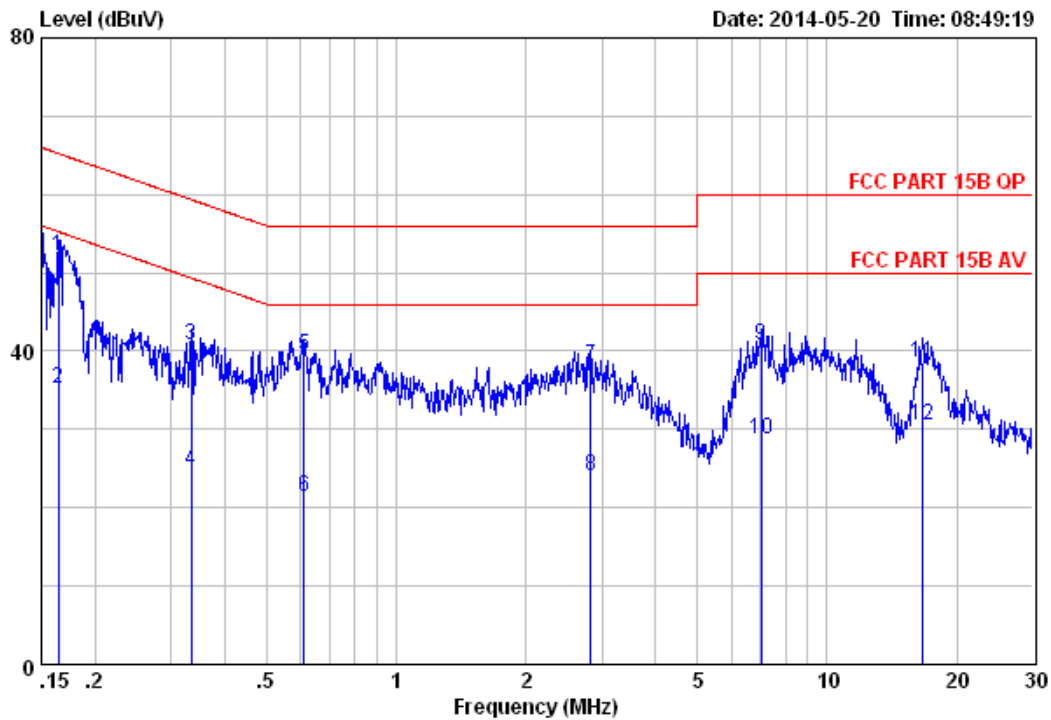
The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

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

### 10.3. Test Result

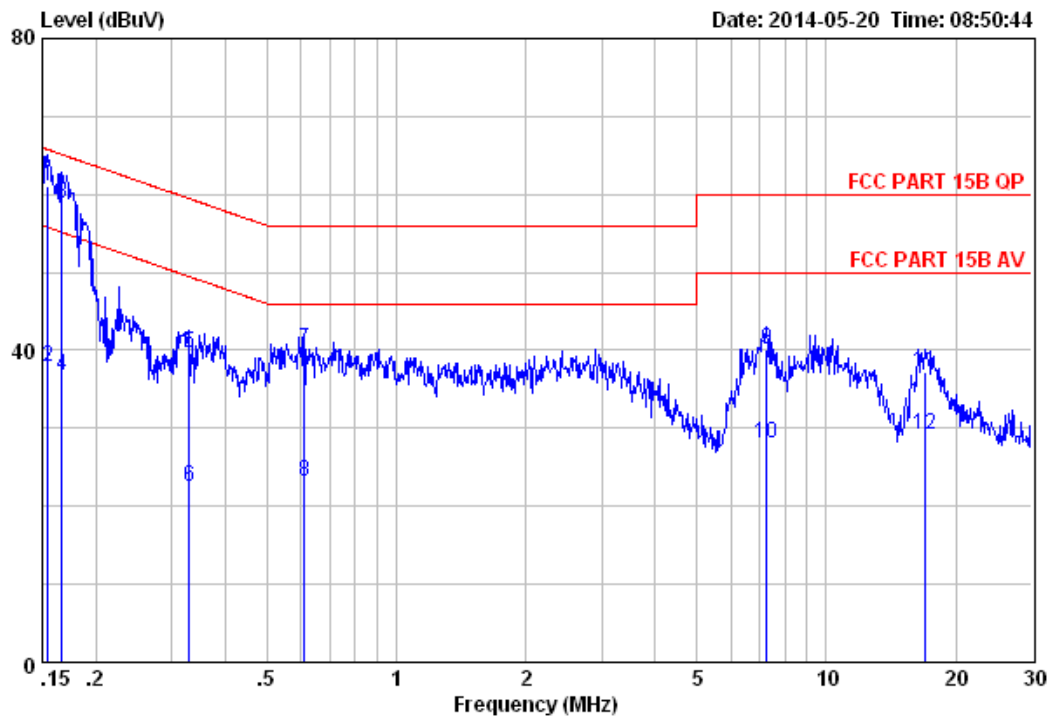
| 0.15MHz—30MHz Conducted emissison Test result |                       |                      |
|-----------------------------------------------|-----------------------|----------------------|
| EUT: Bluetooth Speaker                        |                       |                      |
| M/N: HX-P310                                  |                       |                      |
| Power: DC 5V from PC Input AC 120V/60Hz       |                       |                      |
| Test date: 2014-05-20                         | Test site: 3m Chamber | Tested by: Tony.Tang |
| Test mode: Charging for USB                   |                       |                      |
| Pass                                          |                       |                      |

## 10.4. Test data



Site no. : EST Conduction Shielded Room Data no. : 67  
 Limit : FCC PART 15B QP LINE Phase : NEUTRAL  
 Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 5V From PC Input AC 120V/60Hz  
 M/N : HX-P540A  
 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     | 0.16   | 9.50 | 9.81    | 32.89    | 52.20    | 65.25  | 13.05  | QP      |
| 2     | 0.16   | 9.50 | 9.81    | 15.89    | 35.20    | 55.25  | 20.05  | Average |
| 3     | 0.33   | 9.59 | 9.83    | 21.29    | 40.71    | 59.35  | 18.64  | QP      |
| 4     | 0.33   | 9.59 | 9.83    | 5.29     | 24.71    | 49.35  | 24.64  | Average |
| 5     | 0.61   | 9.61 | 9.82    | 19.97    | 39.40    | 56.00  | 16.60  | QP      |
| 6     | 0.61   | 9.61 | 9.82    | 1.97     | 21.40    | 46.00  | 24.60  | Average |
| 7     | 2.82   | 9.63 | 9.83    | 18.57    | 38.03    | 56.00  | 17.97  | QP      |
| 8     | 2.82   | 9.63 | 9.83    | 4.57     | 24.03    | 46.00  | 21.97  | Average |
| 9     | 7.02   | 9.66 | 9.87    | 21.32    | 40.85    | 60.00  | 19.15  | QP      |
| 10    | 7.02   | 9.66 | 9.87    | 9.32     | 28.85    | 50.00  | 21.15  | Average |
| 11    | 16.66  | 9.75 | 9.93    | 18.93    | 38.61    | 60.00  | 21.39  | QP      |
| 12    | 16.66  | 9.75 | 9.93    | 10.93    | 30.61    | 50.00  | 19.39  | Average |



Site no. : EST Conduction Shielded RoomData no. : 69  
 Limit : FCC PART 15B QP LINE Phase : LINE  
 Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa  
 Engineer : Tony  
 EUT : Bluetooth Speaker  
 Power : DC 5V From PC Input AC 120V/60Hz  
 M/N : HX-P540A  
 Test Mode : TX Mode

|    | Freq. | LISN   | Cable | Emission |          |          |        |         |
|----|-------|--------|-------|----------|----------|----------|--------|---------|
|    | (MHz) | Factor | Loss  | Reading  | Level    | Limits   | Margin | Remark  |
|    |       | (dB/m) | (dB)  | (dBuV)   | (dBuV/m) | (dBuV/m) | (dB)   |         |
| 1  | 0.15  | 9.61   | 9.81  | 41.57    | 60.99    | 65.74    | 4.75   | QP      |
| 2  | 0.15  | 9.61   | 9.81  | 18.57    | 37.99    | 55.74    | 17.75  | Average |
| 3  | 0.17  | 9.61   | 9.81  | 39.37    | 58.79    | 65.12    | 6.33   | QP      |
| 4  | 0.17  | 9.61   | 9.81  | 17.37    | 36.79    | 55.12    | 18.33  | Average |
| 5  | 0.33  | 9.61   | 9.83  | 20.13    | 39.57    | 59.44    | 19.87  | QP      |
| 6  | 0.33  | 9.61   | 9.83  | 3.13     | 22.57    | 49.44    | 26.87  | Average |
| 7  | 0.61  | 9.60   | 9.82  | 20.79    | 40.21    | 56.00    | 15.79  | QP      |
| 8  | 0.61  | 9.60   | 9.82  | 3.79     | 23.21    | 46.00    | 22.79  | Average |
| 9  | 7.25  | 9.66   | 9.87  | 20.50    | 40.03    | 60.00    | 19.97  | QP      |
| 10 | 7.25  | 9.66   | 9.86  | 8.51     | 28.03    | 50.00    | 21.97  | Average |
| 11 | 16.93 | 9.70   | 9.94  | 17.56    | 37.20    | 60.00    | 22.80  | QP      |
| 12 | 16.93 | 9.70   | 9.94  | 9.56     | 29.20    | 50.00    | 20.80  | Average |

## **11.ANTENNA REQUIREMENTS**

### **11.1.Limit**

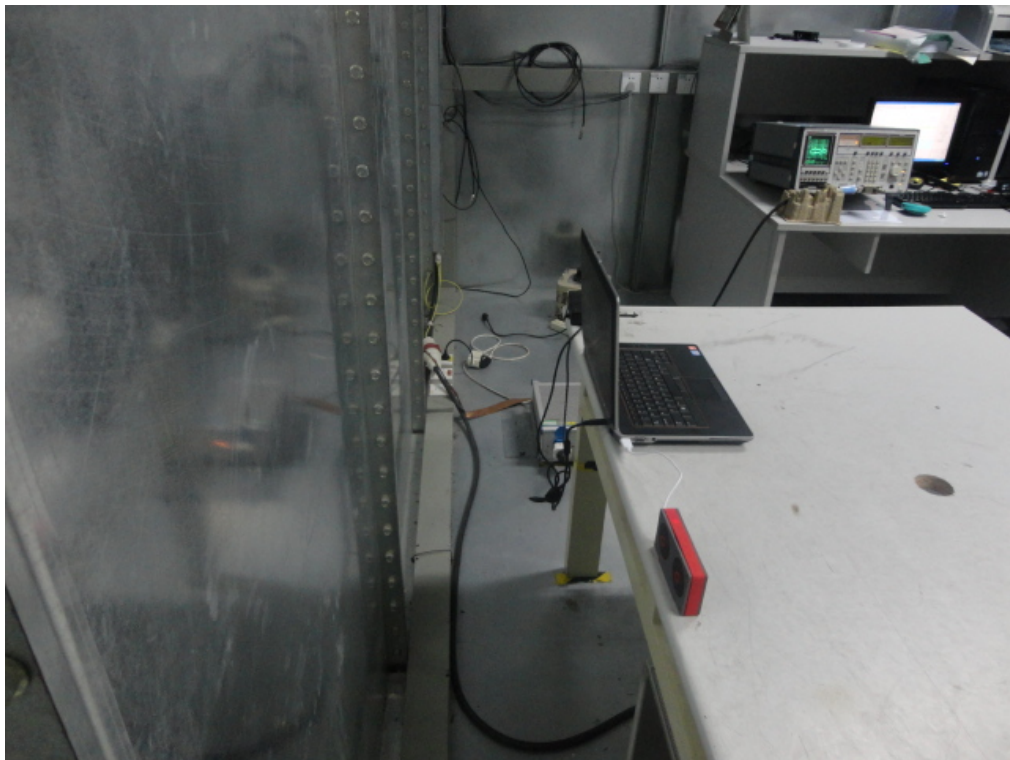
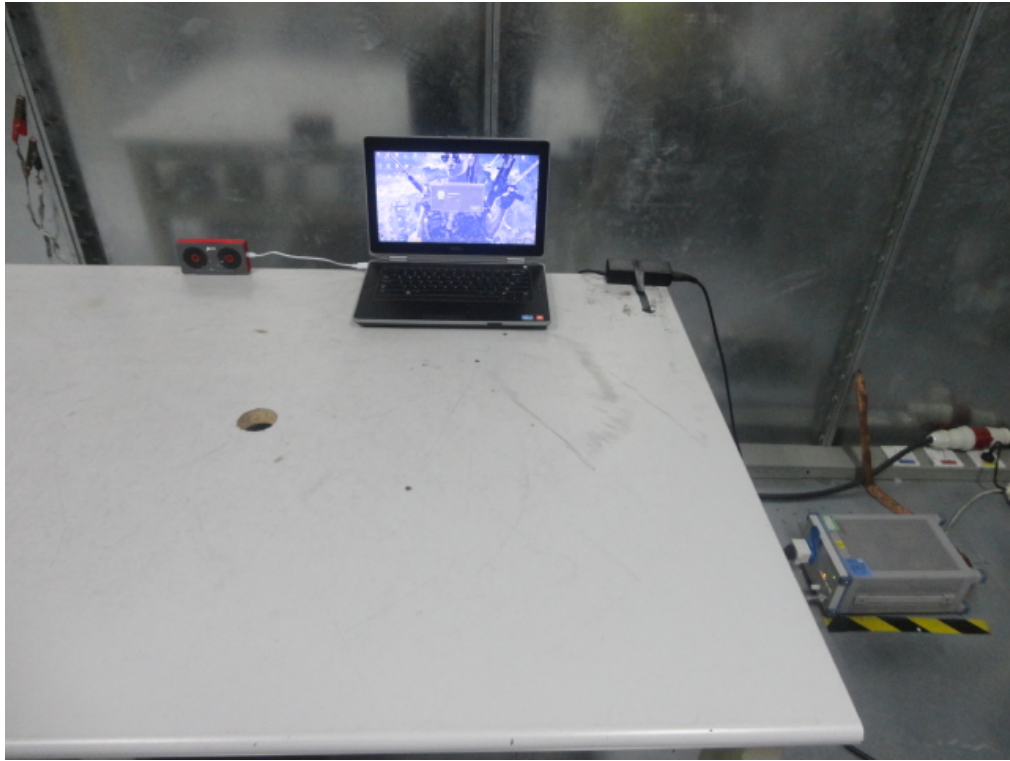
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional 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**

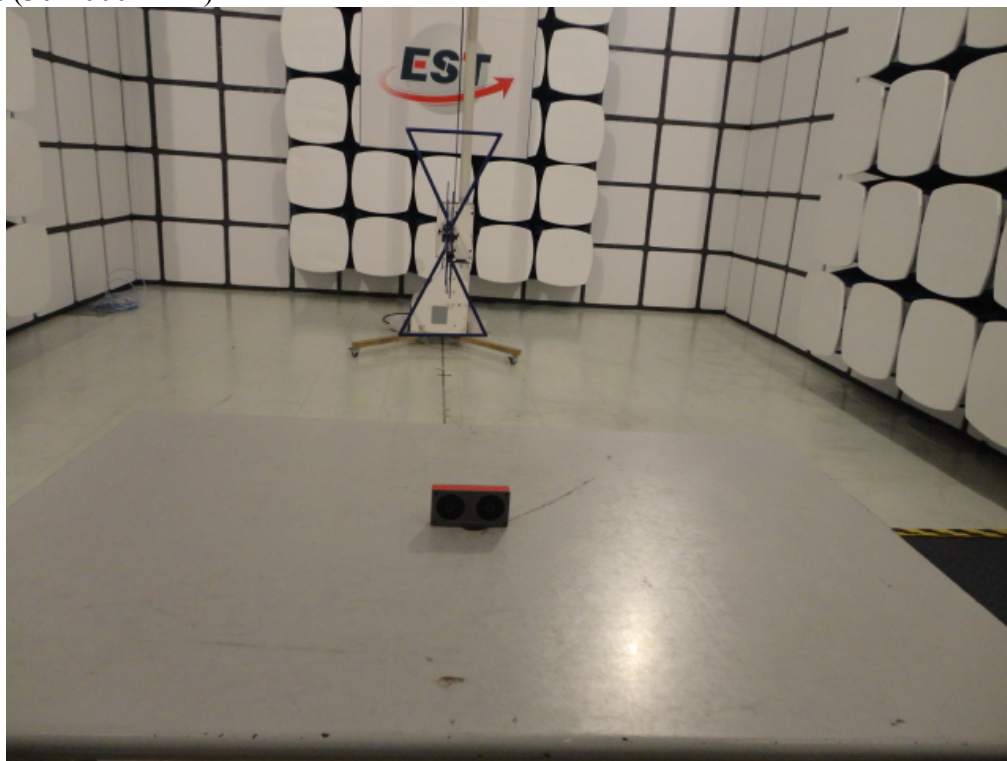
The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0dBi.

## 12. TEST SETUP PHOTO

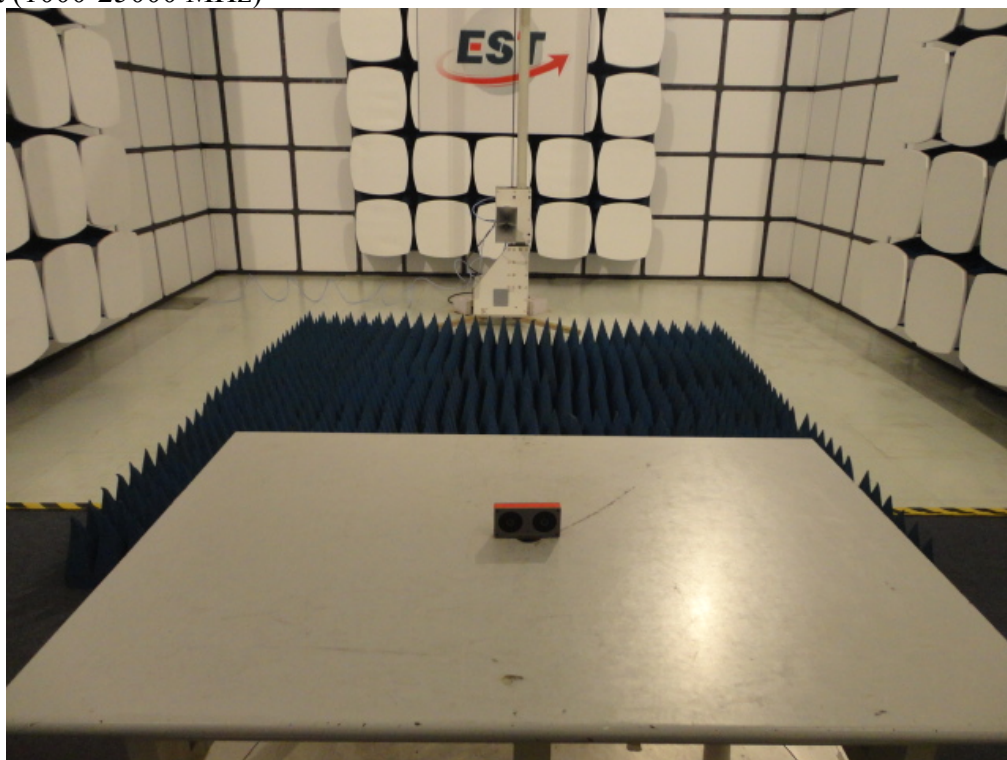
Conducted Test



Radiated Test (30-1000 MHz)

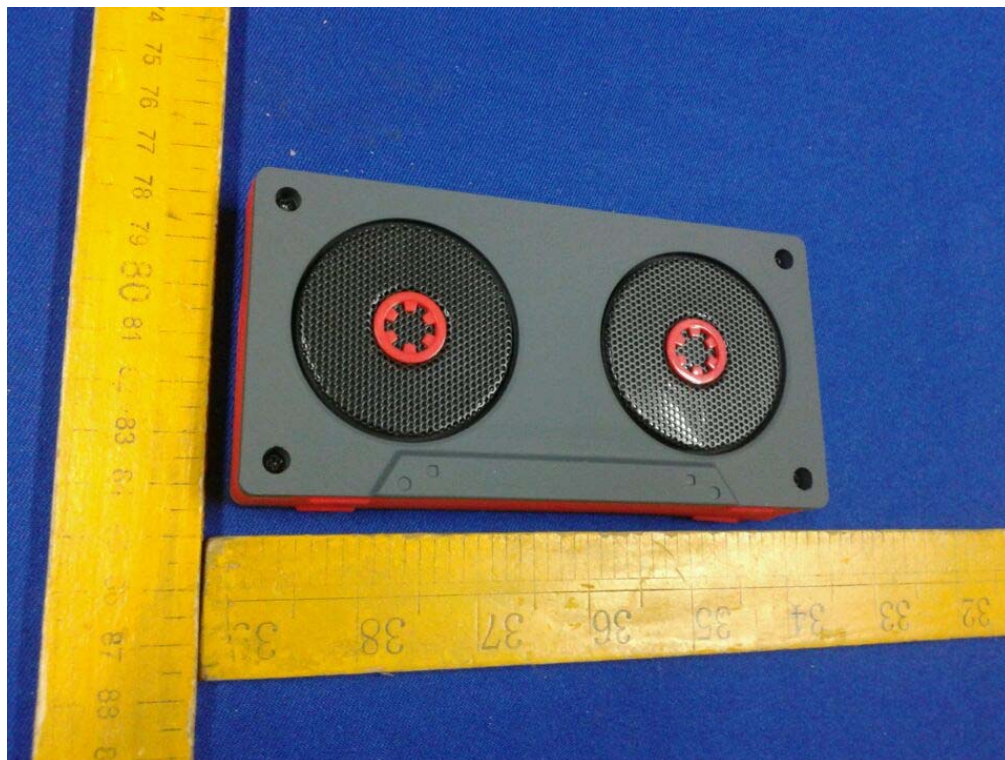


Radiated Test (1000-25000 MHz)



## 13. PHOTOS OF EUT

**External Photos**  
M/N: HX-P540A



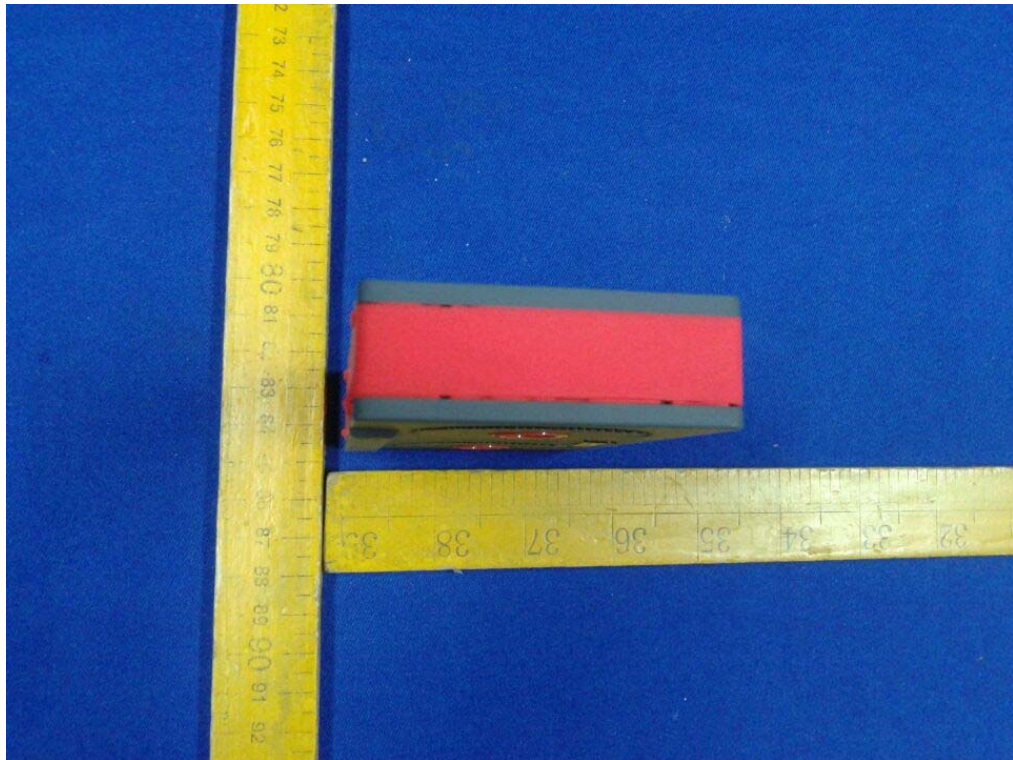
**External Photos**

M/N: HX-P540A



**External Photos**

M/N: HX-P540A

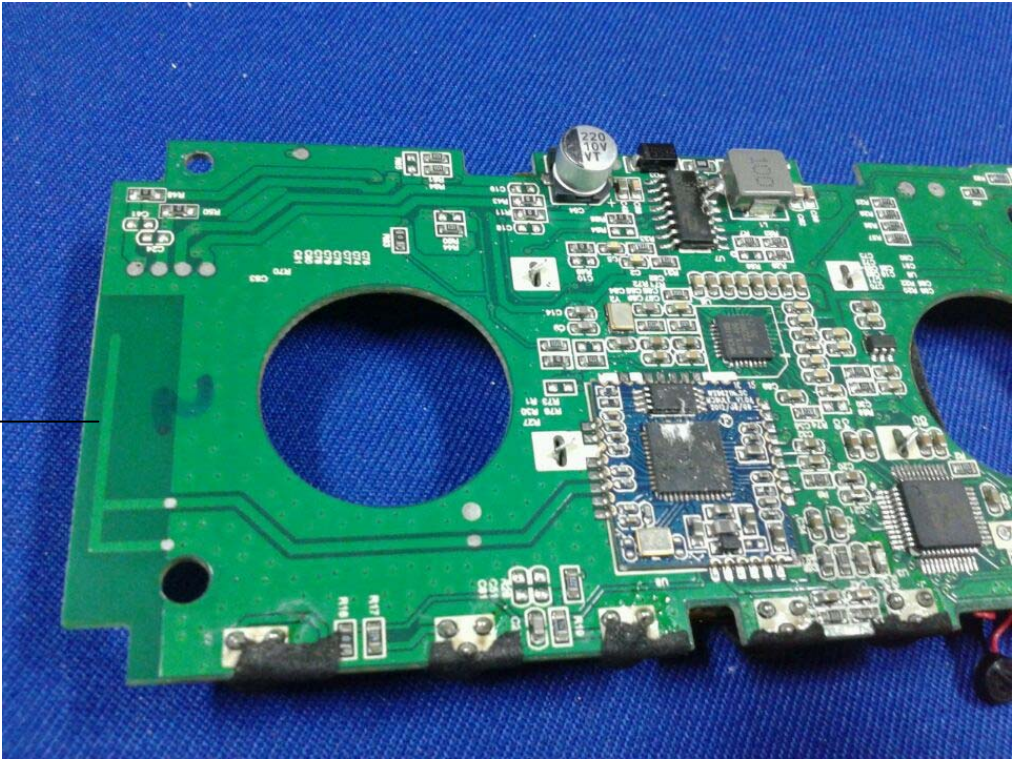


**Internal Photos**

M/N: HX-P540A

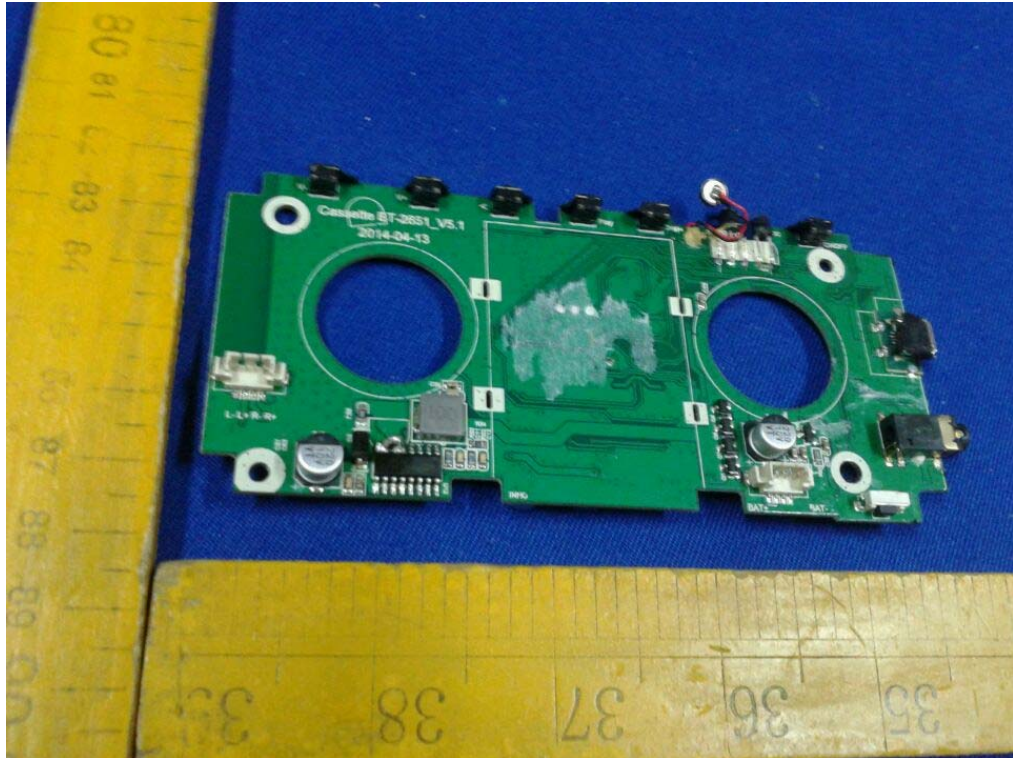


Internal Photos  
M/N: HX-P540A



### Internal Photos

M/N: HX-P540A



### Internal Photos

M/N: HX-P540A

