# FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

ShenZhen Junlan Electronic Ltd

BLUETOOTH iPAD iTOWER SPEAKER

Model Number: BITS-1/5616

FCC ID: OKUSBP9015060

Prepared for : SHENZHEN JUNLAN ELECTRONIC LTD
District 2 type A plant in the second layer 1-4,NO.2 Industrial ,Fuyuan, Tangwei ,Fuyong ,Baoan ,Shenzhen China.

Prepared By : EST Technology Co., Ltd.
Santun Management Zone , Houjie District, Dongguan, Guangdong, China
Tel: 86-769-83081888-808

Report Number: ESTE-R1207001
Date of Test : July 4~13, 2012
Date of Report : July 16,2012

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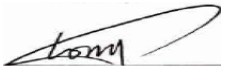
# Test Report Verification

| | |
|---|---|
| **Applicant:**<br>**Address:** | ShenZhen Junlan Electronic Ltd<br>District 2 type A plant in the second layer 1-4,NO.2 Industrial ,Fuyuan, Tangwei ,Fuyong ,Baoan ,Shenzhen China. |
| **Manufacturer:**<br>**Address:** | ShenZhen Junlan Electronic Ltd<br>District 2 type A plant in the second layer 1-4,NO.2 Industrial ,Fuyuan, Tangwei ,Fuyong ,Baoan ,Shenzhen China. |
| **E.U.T:** | BLUETOOTH iPAD iTOWER SPEAKER |
| **Model Number:** | BITS-1/5616<br>Additional Model:BITS-1/5616(For Brand "SOUNDLOGIC XT"); BITS-1/5616 (For Brand "Soundlogic"); BITS-1/5616 (For Brand "Soundlogic TM");17512(For Brand "Deluxa"); IP9050GBMO(For Brand "ITrak by Encore Technology"); 17512（For Brand "Soundlogic"); 17512(For Brand "soundlogic TM");BP-59200(For Brand "b-plug"); BP-59210(For Brand "b-plug");<br>IP9050W(For Brand "iTrak by Encore Technology");305862; IPT9112; 17512; BITS-1/5616; SBP-3210; SBP-3211; SBI-9012; CHT-907R; SBP-9013; CHT-917; SBP-9014; CHT-917BT; SBP-9015; SBP-9016; SPB-9112; CHT-910; SBB-9921; CHT-909; SBB-9920; CHT-909C; SBP-9113; SBP-9114; SBI-9112;SBI-9015; SBP-8112; IP9040; IP9040GB; IP9040GBMO; IP9040MO;SBP-8811;IP9050; IP9050GB; IP9050GBMO; IP9050MO;SBP-9015;BP-59200<br>Note: The products are difference in model number and appearance only. |
| **Power Supply:** | AC 120V/60Hz |
| **Test Voltage:** | AC 120V/60Hz |
| **Trade Name:** | ------ Serial No.: ------ |
| **Date of Receipt:** | June 28,2012 Date of Test: July 4~13, 2012 |
| **Test Specification:** | FCC Rules and Regulations Part 15 Subpart C:2011<br>ANSI C63.4:2003 |
| **Test Result:** | The device described above is tested by EST Technology Co., Ltd.. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the ETSI EN FCC Rules and Regulations Part 15 Subpart C requirements.<br><br>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:July 25, 2012 |

| Prepared by: | Tested by: | Approved by: |
|---|---|---|
|  |  |  |
| Ada / Assistant | Tony.Tang/ Engineer | IcemanHu / Manager |

**Other Aspects:**

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)

| | | |
|---|---|---|
| **Product Name** | : | BLUETOOTH iPAD iTOWER SPEAKER |
| **Model Number** | : | BITS-1/5616 |
| **FCC ID** | : | OKUSBP9015060 |
| **Operation frequency** | : | 2402MHz~2480MHz |
| **Number of channel** | : | 79 |
| **Antenna** | : | Integrated PCB antenna, 0 dBi gain |
| **Modulation** | : | FHSS (GFSK, π/4-DQPSK, 8-DPSK) |
| **Power Supply** | : | AC 120V/60Hz |
| **Applicant** | : | ShenZhen Junlan Electronic Ltd<br>District 2 type A plant in the second layer 1-4,NO.2 Industrial ,Fuyuan, Tangwei ,Fuyong ,Baoan ,Shenzhen China. |
| **Manufacturer** | : | ShenZhen Junlan Electronic Ltd<br>District 2 type A plant in the second layer 1-4,NO.2 Industrial ,Fuyuan, Tangwei ,Fuyong ,Baoan ,Shenzhen China. |
| **Sample Type** | : | 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 : Certificated by CNAL, CHINA
Registration No.: L5288
Date of registration: October 28, 2011

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

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

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

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

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

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

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

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

Name of Firm : EST Technology Co., Ltd.

Site Location : Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China

## 2.3. Assistant equipment used for test

N/A

## 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 Bluesuite software before test.


## 2.5. Test mode

The test software "Bluesuite" 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 |
| π/4-DQPSK | Low | 2402MHz |
| | Middle | 2441MHz |
| | High | 2480MHz |
| 8-DPSK | Low | 2402MHz |
| | Middle | 2441MHz |
| | High | 2480MHz |

## 2.6. Test Equipment

### 2.6.1. For conducted emission test

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| EMI Test Receiver | Rohde & Schwarz | ESHS30 | 832354 | May,30,12 | 1 Year |
| Artificial Mains Networ | Rohde & Schwarz | ENV216 | 101260 | May,30,12 | 1 Year |
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 101100 | Aug 25,11 | 1 Year |

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

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| EMI Test Receiver | Rohde & Schwarz | ESVS10 | 100004 | Mar,19,12 | 1 Year |
| Spectrum Analyzer | Agilent | E4411B | MY50140697 | Mar,19,12 | 1 Year |
| Bilog Antenna | Teseq | CBL 6111D | 25872 | June.08,11 | 1 .5Year |
| Signal Amplifier | Agilent | 310N | 187037 | Aug,25,11 | 1 Year |

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

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| Temperature controller | Terchy | MHQ | 120 | May.08,12 | 1 Year |
| Spectrum Analyzer | Agilent | E4408B | MY44211139 | May.08,12 | 1 Year |
| Vector Signal Generator | R&S | SMBV100A | 1407.6004K02 | May.08,12 | 1 Year |
| Double Ridged Horn Antenna | R&S | HF907 | 100276 | Jan.16.11 | 2 Year |
| Double Ridged Horn Antenna | R&S | HF907 | 100268 | Jan.16.11 | 2 Year |
| Log-periodic Dipole Antenna | R&S | HL223 | 100435 | Jan.16.11 | 2 Year |
| Biconical Antenna | R&S | HK116 | 100431 | Jan.16.11 | 2 Year |
| Trilog Broadband Antenna | Schwarzbeck | VULB 9163 | 9163-462 | Jan.16.11 | 2 Year |
| Pre-amplifer | AH | PAM-0118 | 10008 | May.08,12 | 1 Year |
| Pre-amplifer | R&S | SCU-01 | 10049 | May.08,12 | 1 Year |
| High Pass filter | Micro | HPM50111 | 324455 | May.08,12 | 1 Year |
| RF Cable | Hubersuhner | W10.02 | 534096 | May.08,12 | 1 Year |
| RF Cable | Hubersuhner | W10.02 | 534123 | May.08,12 | 1 Year |
| RF Cable | Hubersuhner | RG 214/U | 513423 | May.08,12 | 1 Year |
| RF Cable | Hubersuhner | RG 214/U | 523455 | May.08,12 | 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

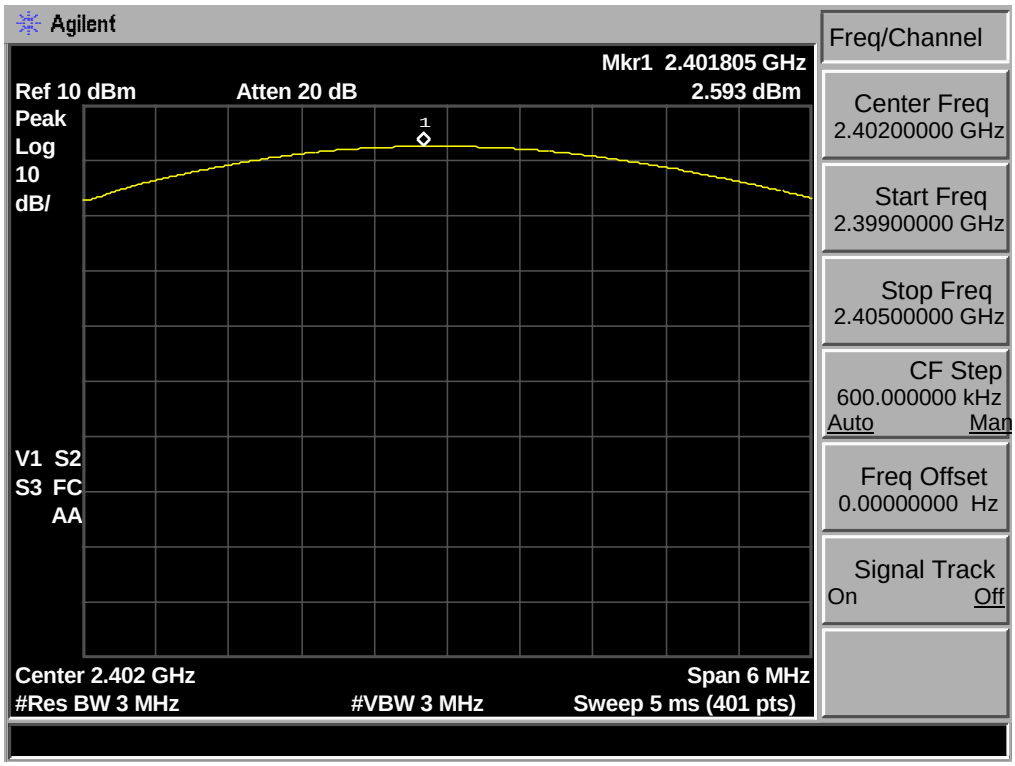
The transmitter output (antenna port) was connected to the spectrum analyzer

## 3.3. Test Result

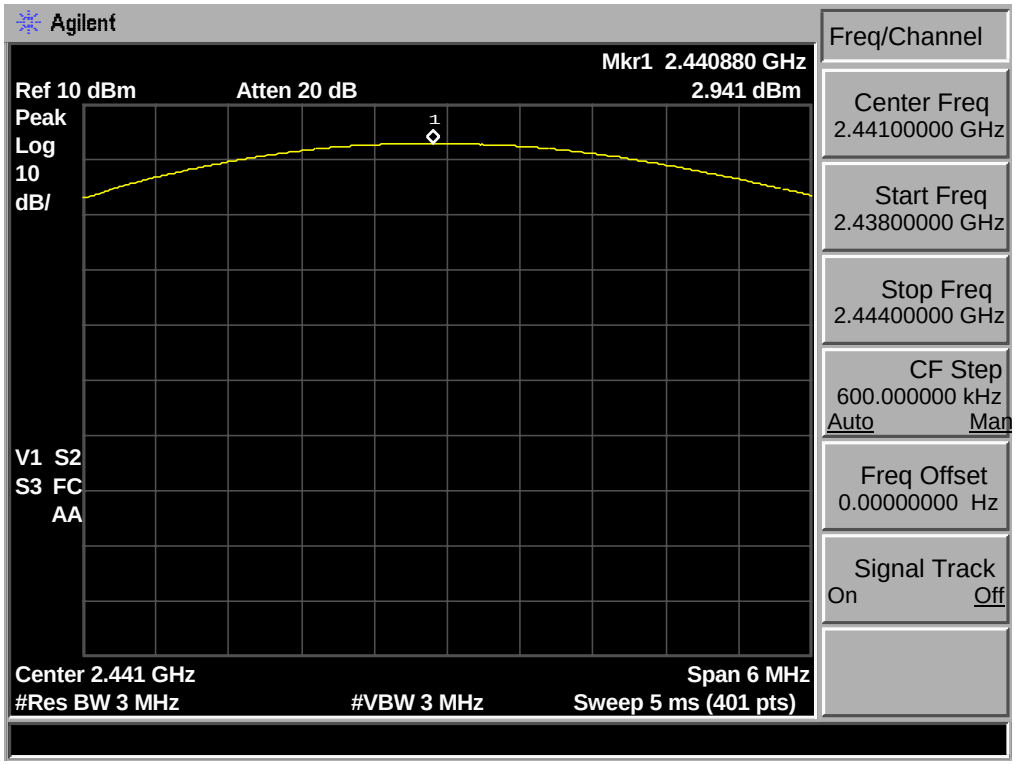
| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 | | | | | |
|---|---|---|---|---|---|
| Test date: 2012-7-13 | | Test site: RF site | Tested by: Tony Tang | | |
| Mode | Freq (MHz) | Result (dBm) | Limit | | Margin (dB) |
| | | | dBm | W | |
| GFSK | 2402 | 2.593 | 21.00 | 0.125 | 18.407 |
| | 2441 | 2.941 | 21.00 | 0.125 | 18.059 |
| | 2480 | 3.892 | 21.00 | 0.125 | 17.108 |
| π/4-DQPSK | 2402 | 1.750 | 21.00 | 0.125 | 19.250 |
| | 2441 | 2.020 | 21.00 | 0.125 | 18.980 |
| | 2480 | 2.704 | 21.00 | 0.125 | 18.296 |
| 8-DPSK | 2402 | 1.898 | 21.00 | 0.125 | 19.102 |
| | 2441 | 2.232 | 21.00 | 0.125 | 18.768 |
| | 2480 | 3.011 | 21.00 | 0.125 | 17.989 |
| Conclusion: PASS | | | | | |

## 3.4. Test Data

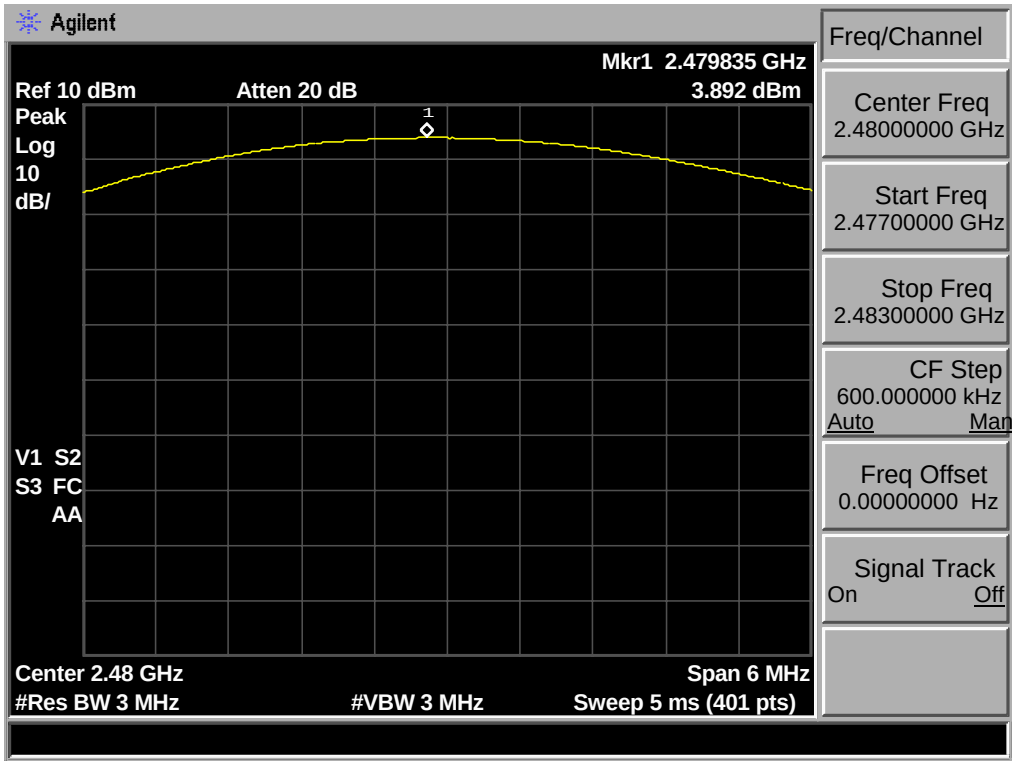
### GFSK 2402 MHz



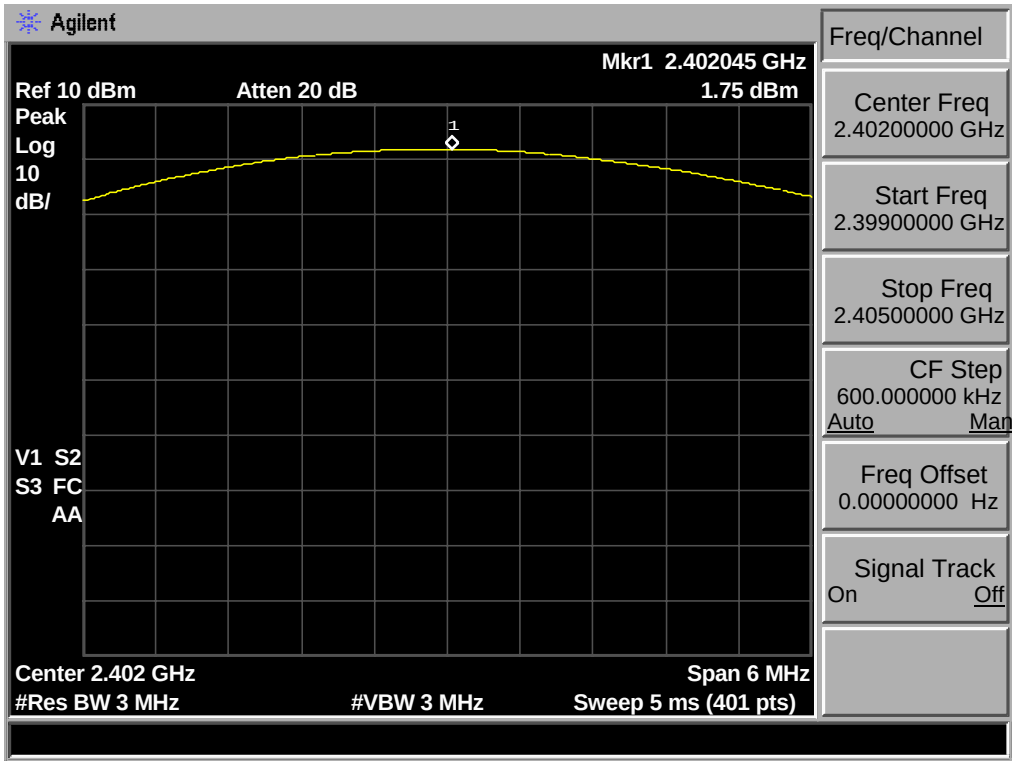

### GFSK 2441 MHz



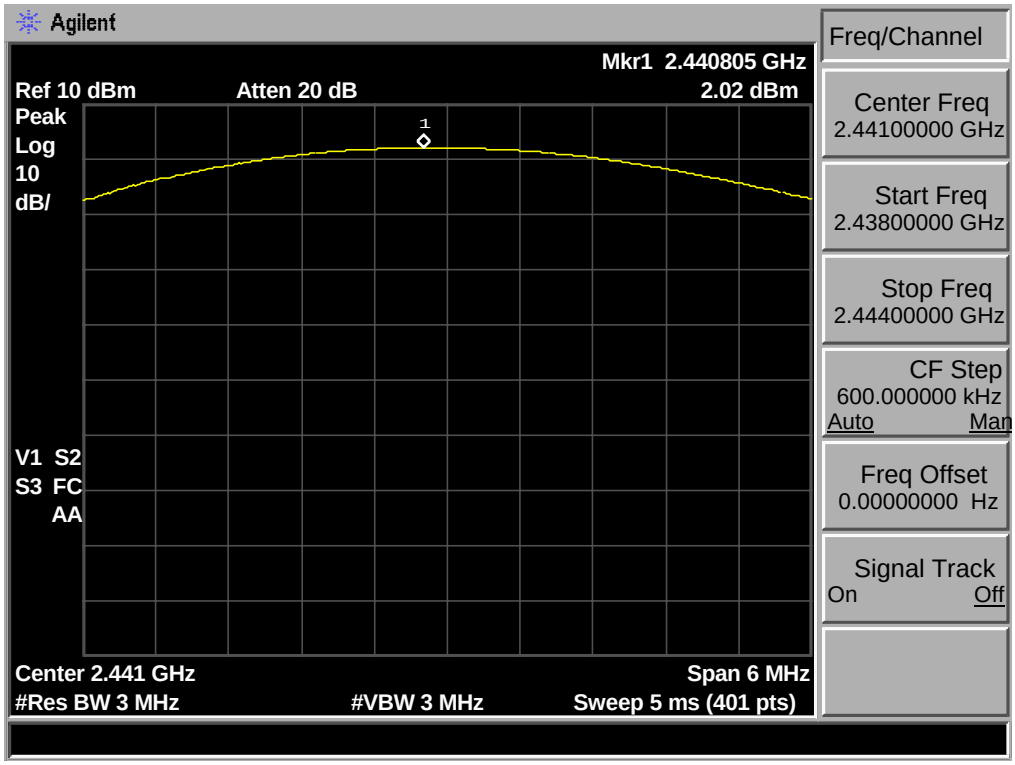
## GFSK 2480 MHz



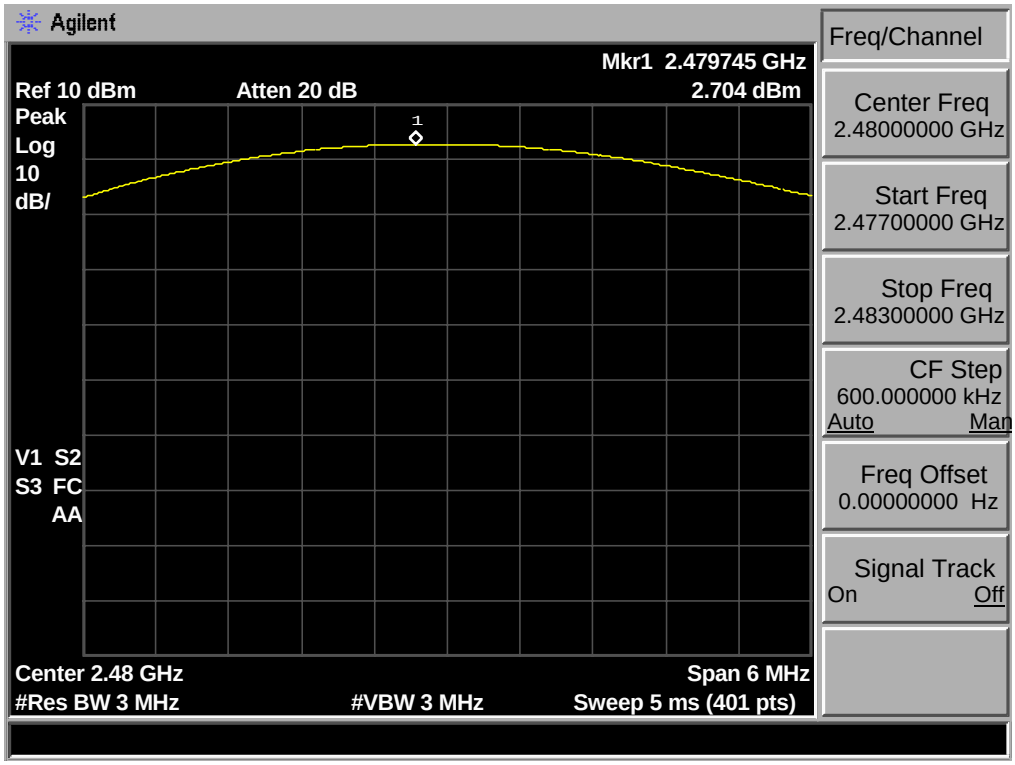
## π/4-DQPSK 2402MHz



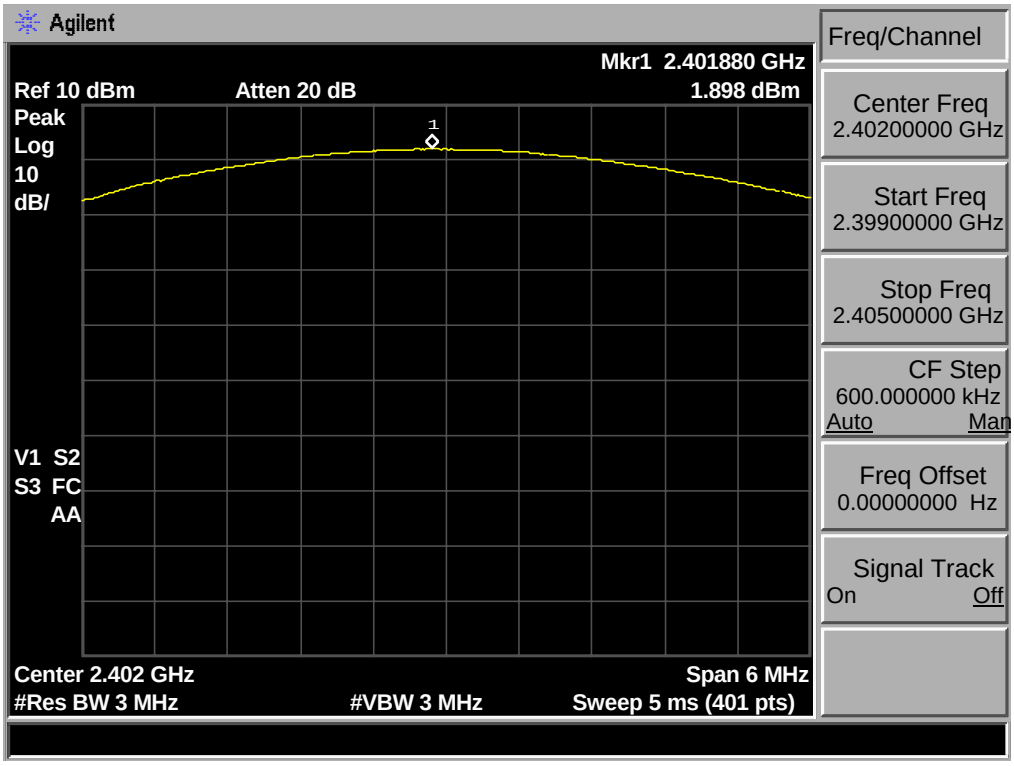

## π/4-DQPSK 2441MHz



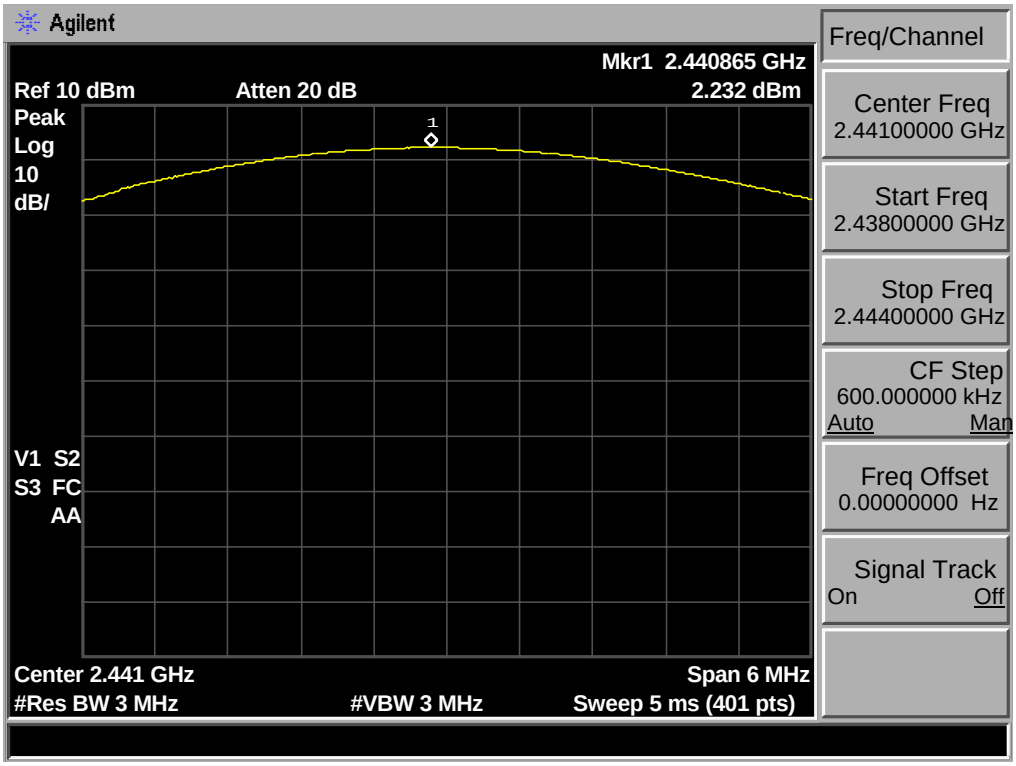
## π/4-DQPSK 2480MHz



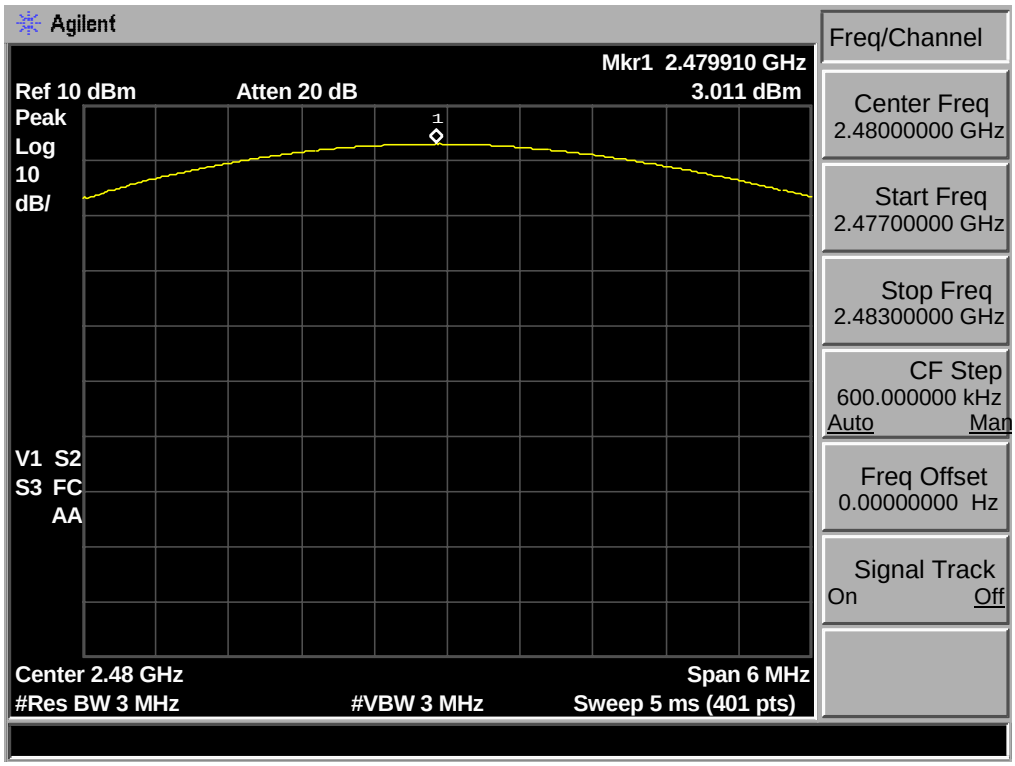
## 8-DPSK 2402MHz




## 8-DPSK 2441MHz



## 8-DPSK 2480MHz



# 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

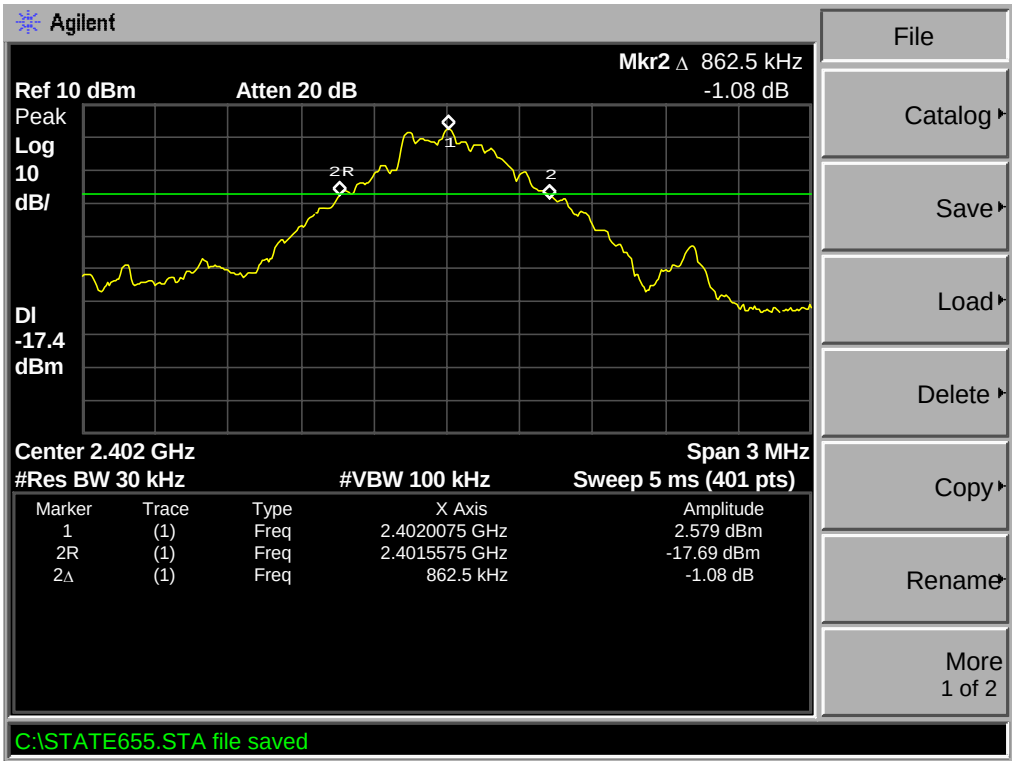
The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

## 4.3. Test Result

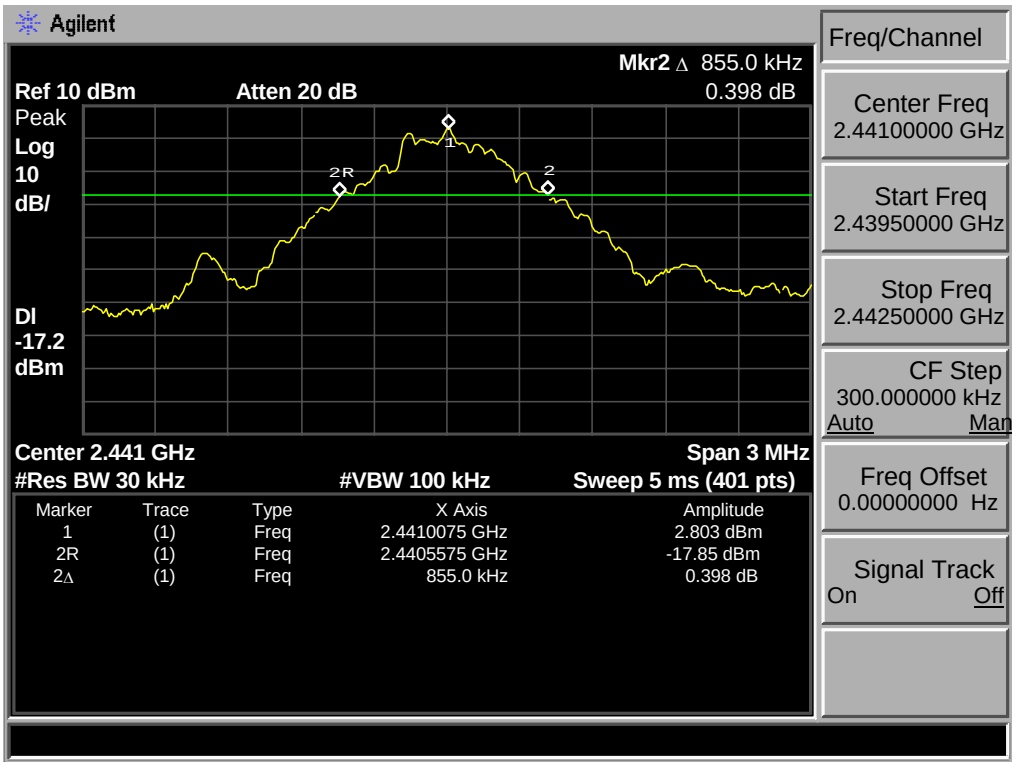
| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 | | | | |
|---|---|---|---|---|
| Test date: 2012-7-13 | | Test site: RF site | | Tested by: Tony Tang |
| Mode | Freq (MHz) | 20dB Bandwidth (MHz) | Limit (kHz) | Conclusion |
| GFSK | 2402 | 0.8625 | / | PASS |
| | 2441 | 0.8550 | / | PASS |
| | 2480 | 0.8550 | / | PASS |
| π/4-DQPSK | 2402 | 1.2300 | / | PASS |
| | 2441 | 1.2300 | / | PASS |
| | 2480 | 1.2300 | / | PASS |
| 8-DPSK | 2402 | 1.2225 | / | PASS |
| | 2441 | 1.2225 | / | PASS |
| | 2480 | 1.2225 | / | PASS |

## 4.4. Test Data

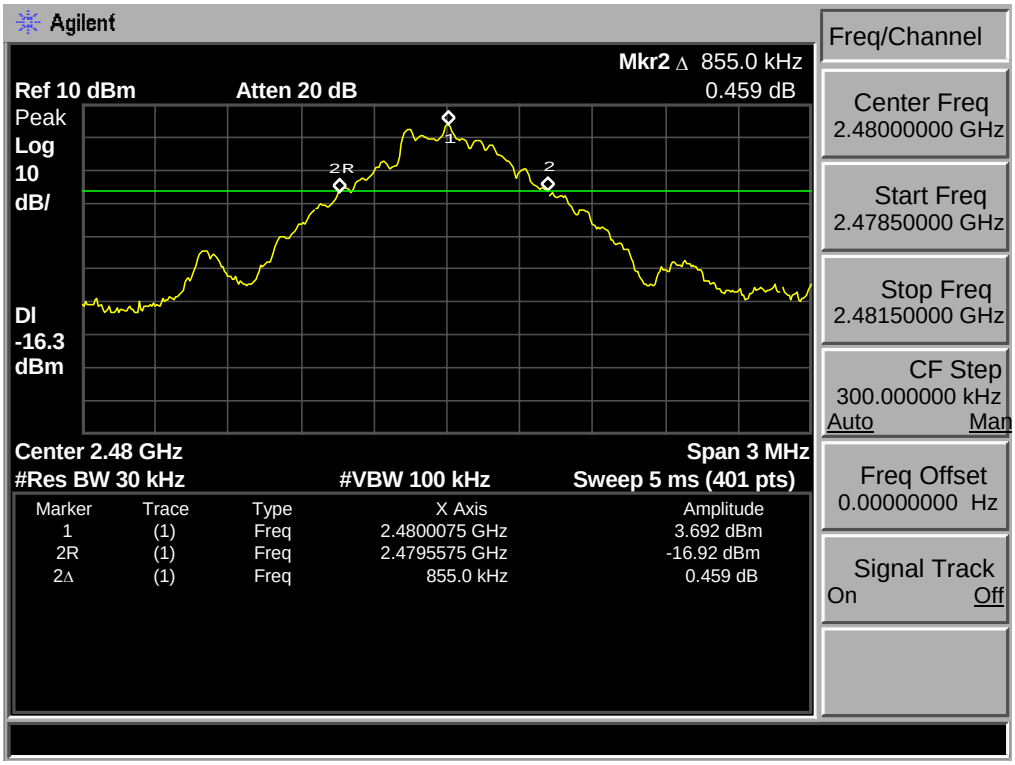
### GFSK 2402MHz



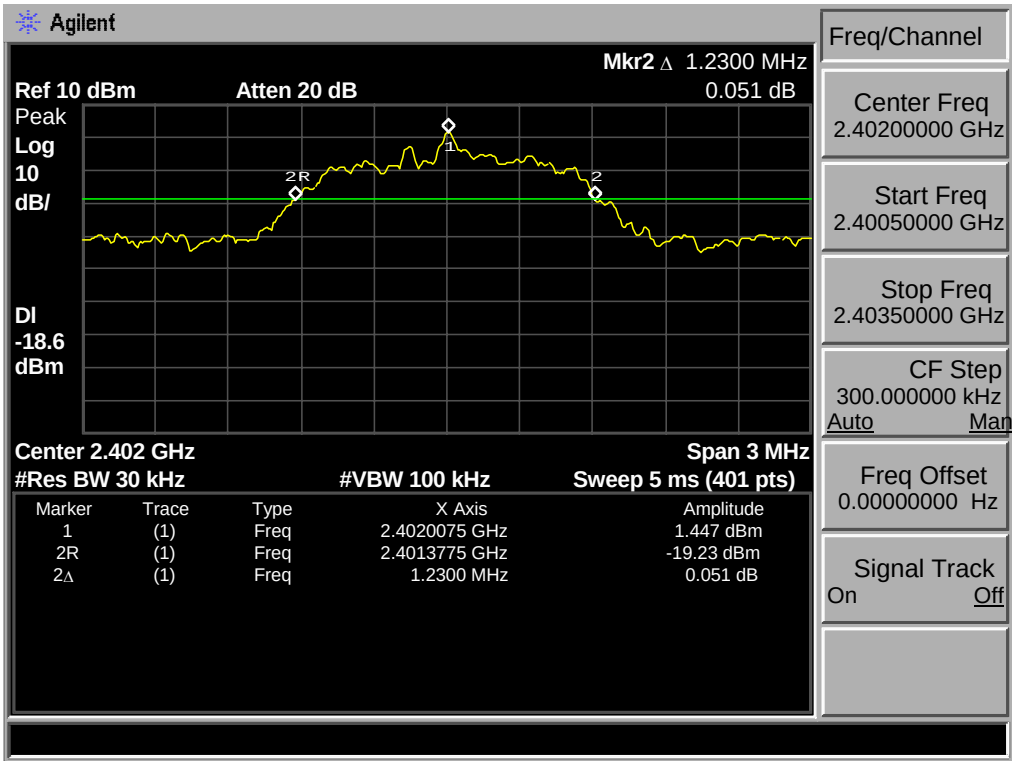

### GFSK 2441MHz



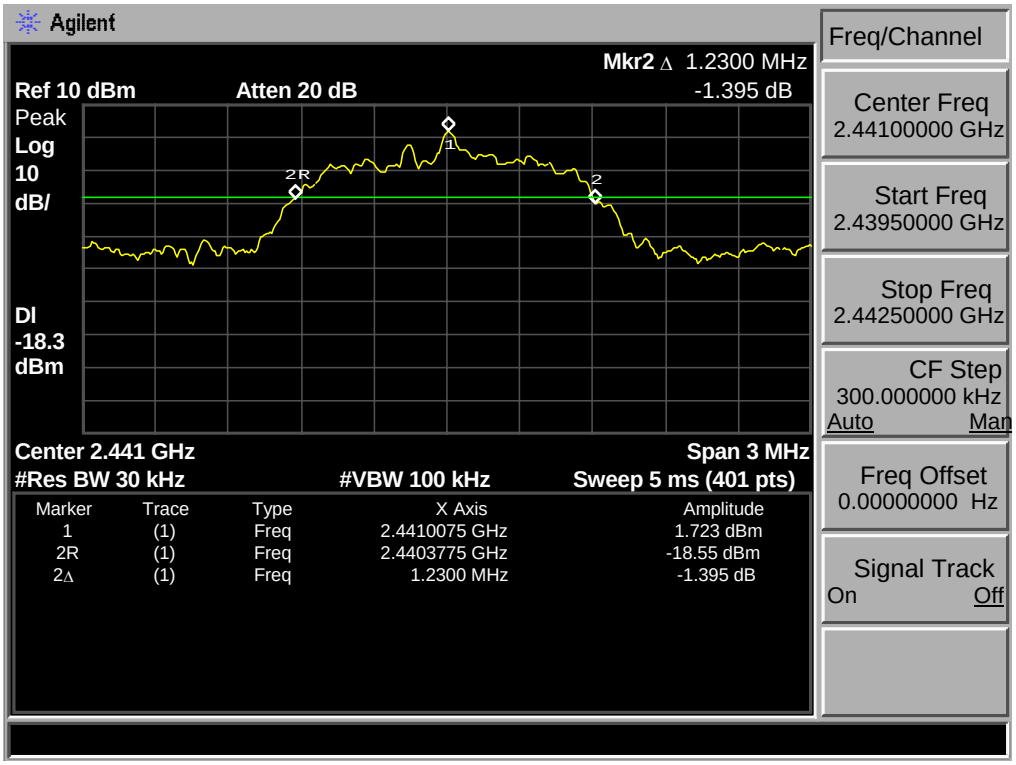
## GFSK 2480MHz



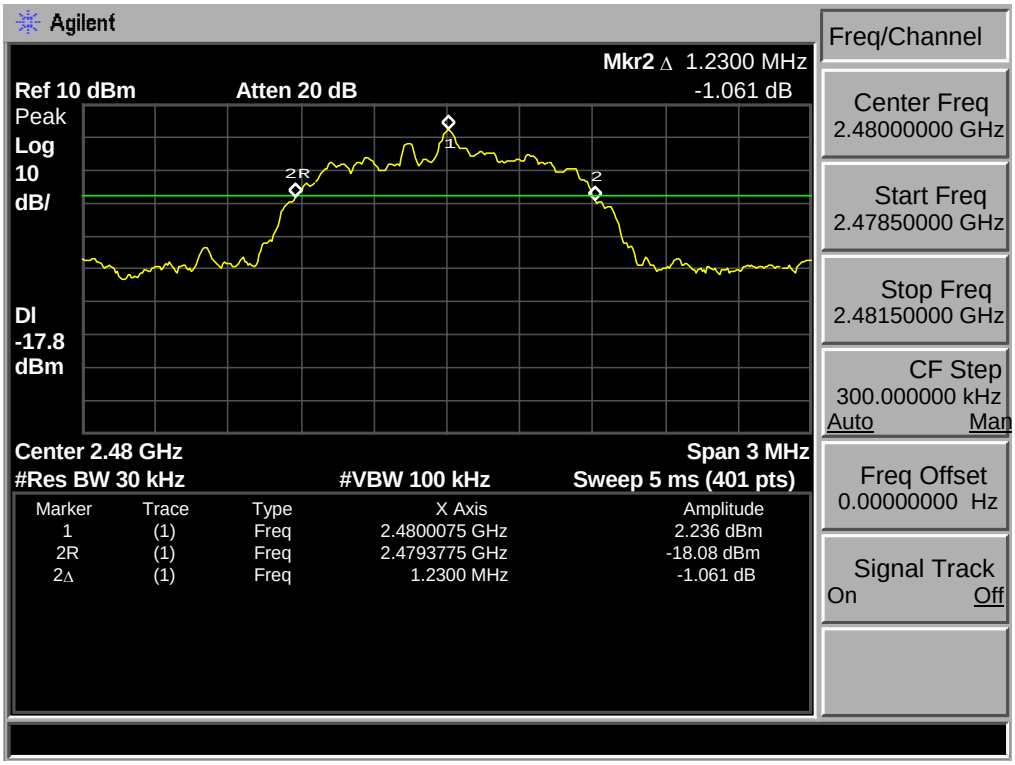
## π/4-DQPSK 2402MHz



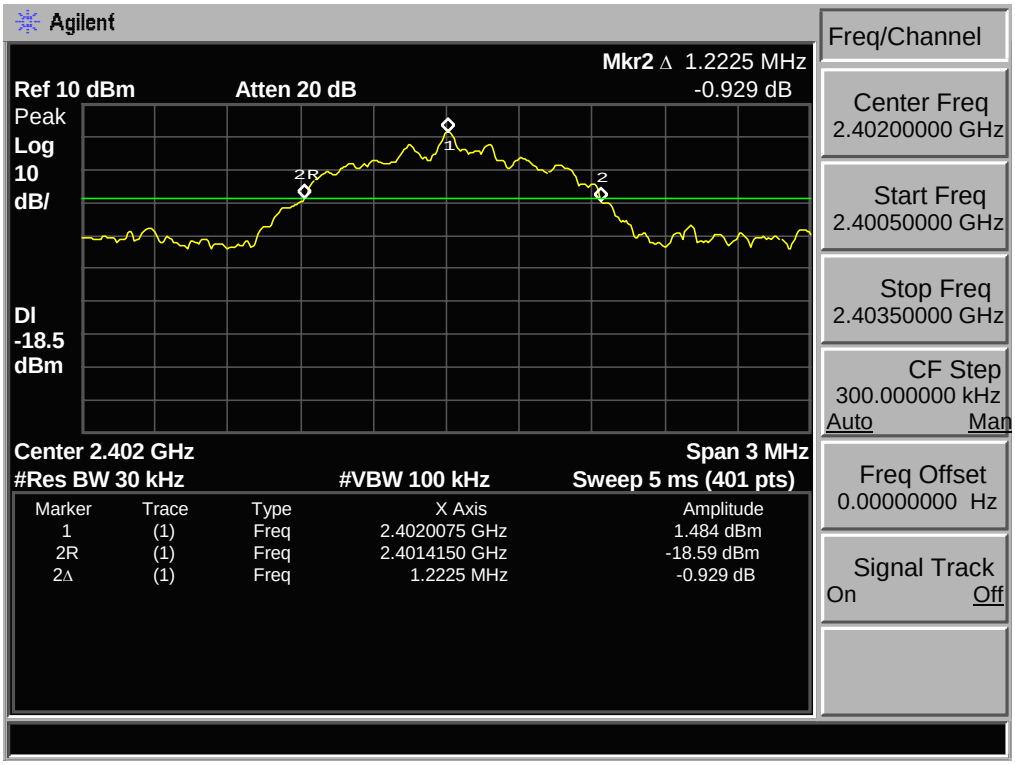

## π/4-DQPSK 2441MHz



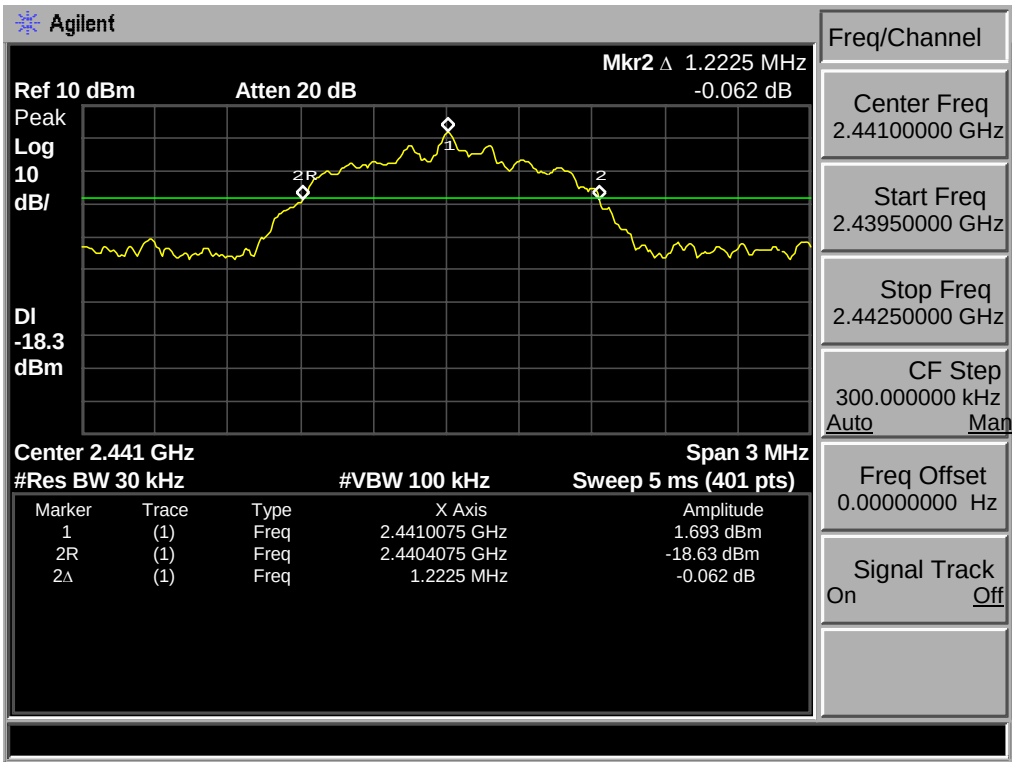
## π/4-DQPSK 2480MHz



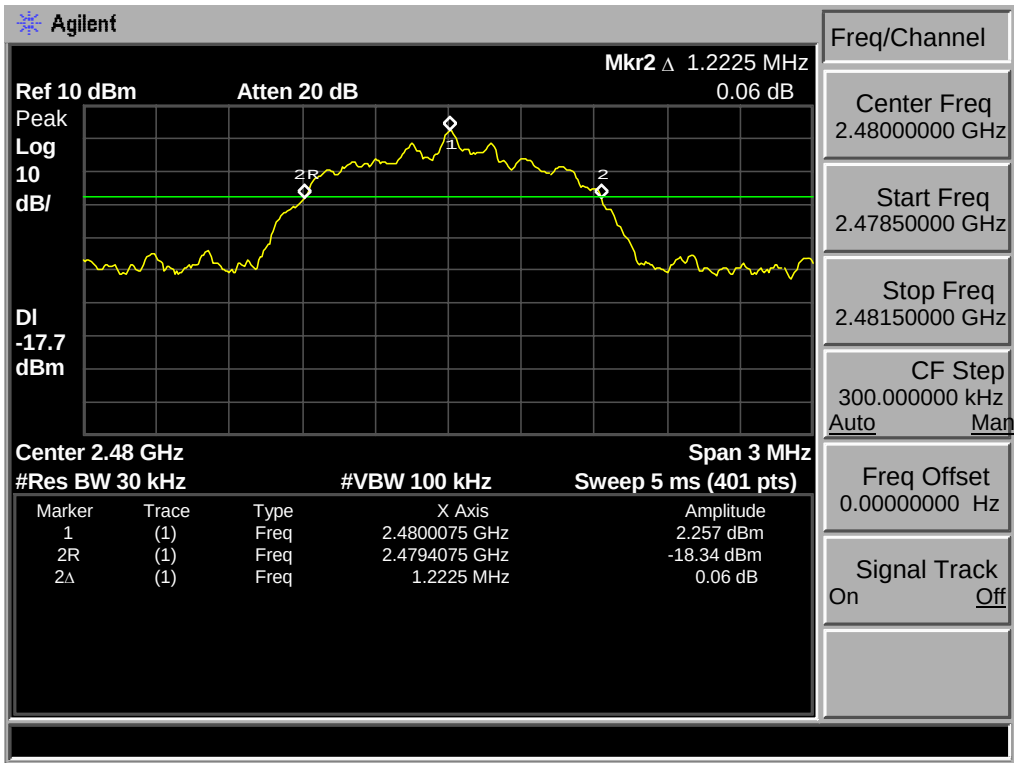
## 8-DPSK 2402MHz




## 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.

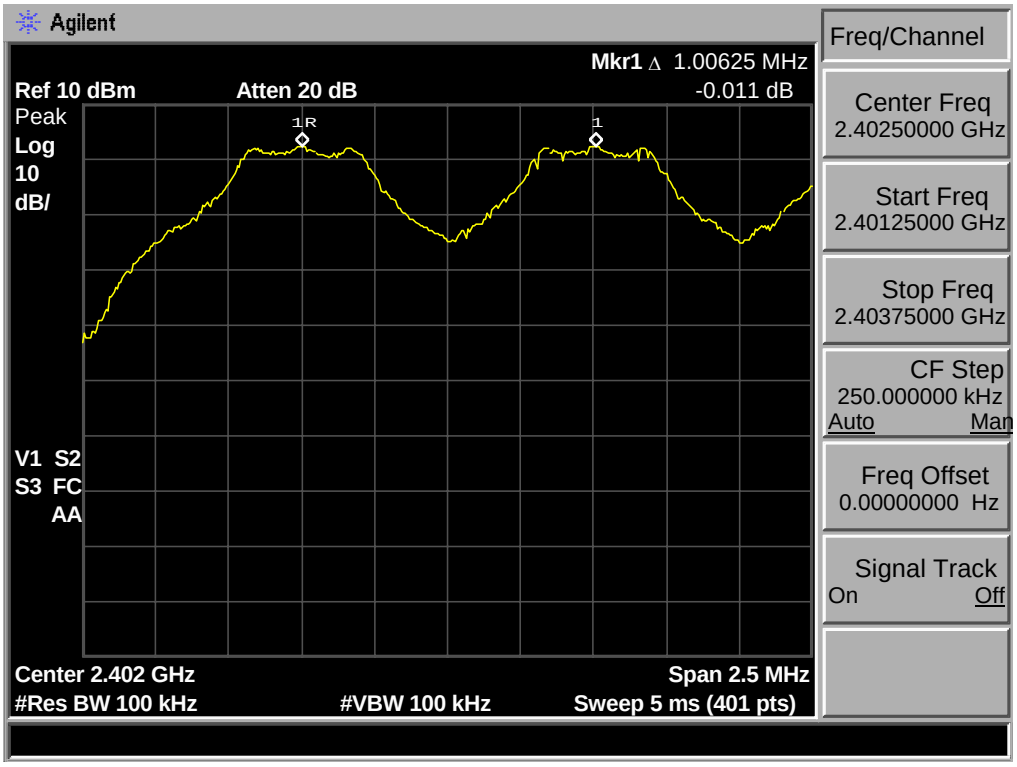
## 5.3. Test Result

| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 | | | | |
|---|---|---|---|---|
| Test date: 2012-7-13 | | | Test site: RF site Tested by: Tony Tang | |
| Mode | Channel | Channel separation (MHz) | Limit | Conclusion |
| GFSK | Low CH | 1.00625 | > 2/3 of the 20dB Bandwidth or 25[kHz]( whichever is greater) | PASS |
| | Mid CH | 1.00625 | | PASS |
| | High CH | 1.00000 | | PASS |
| π/4-DQPS | Low CH | 1.00625 | | PASS |
| | Mid CH | 1.00000 | | PASS |
| | High CH | 1.00000 | | PASS |
| 8-DPSK | Low CH | 1.00000 | | PASS |
| | Mid CH | 1.00625 | | PASS |
| | High CH | 1.00000 | | PASS |

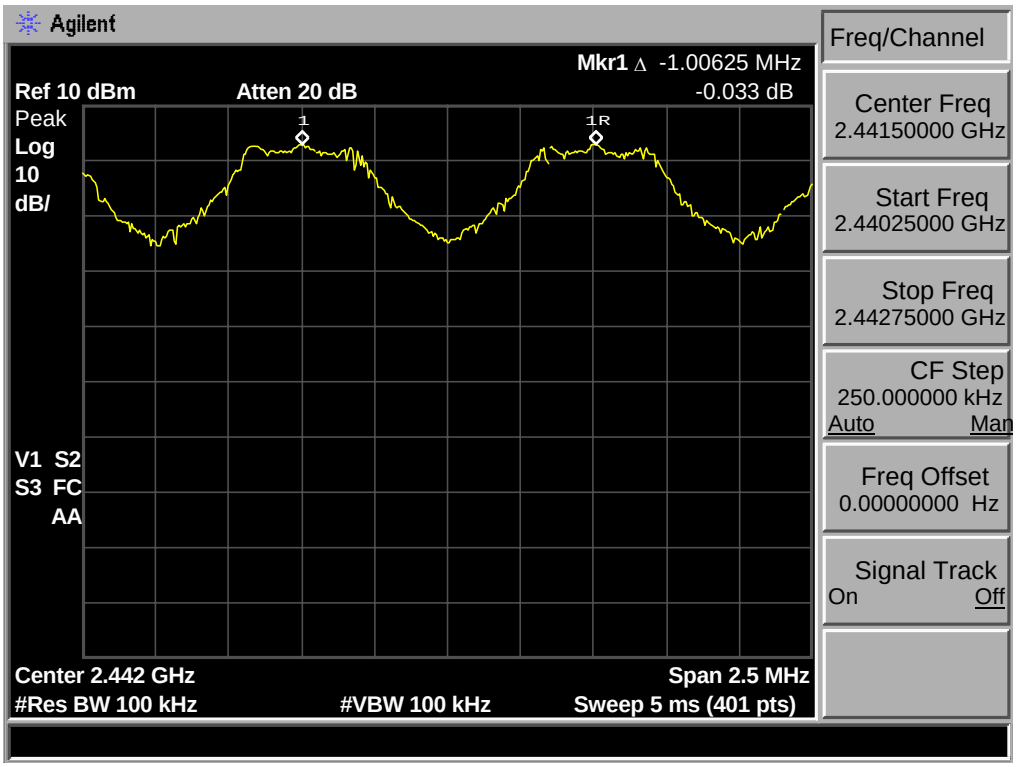
## 5.4. Test Data

**GFSK**

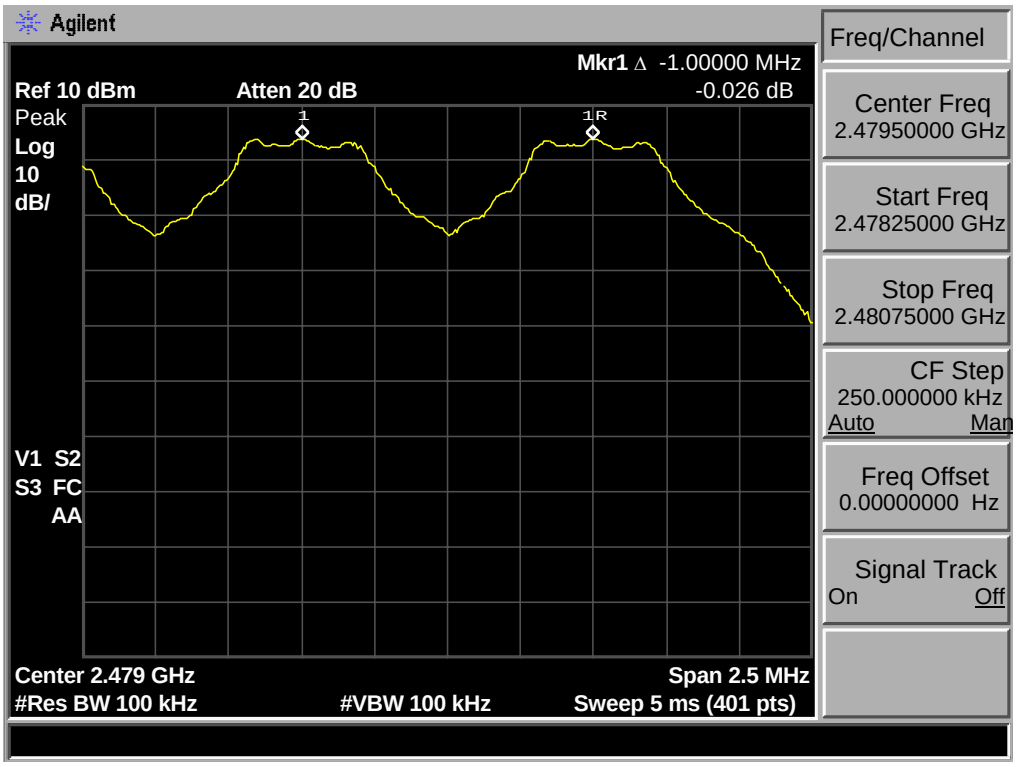
**Low Channel**




**Mid Channel**

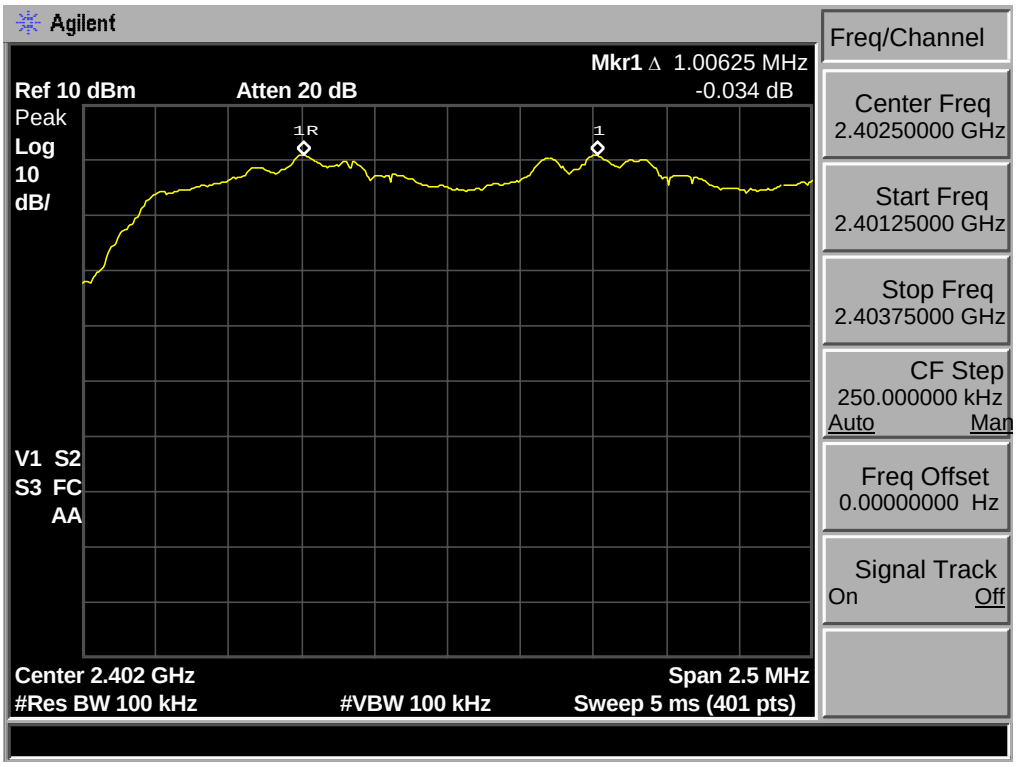


**High Channel**

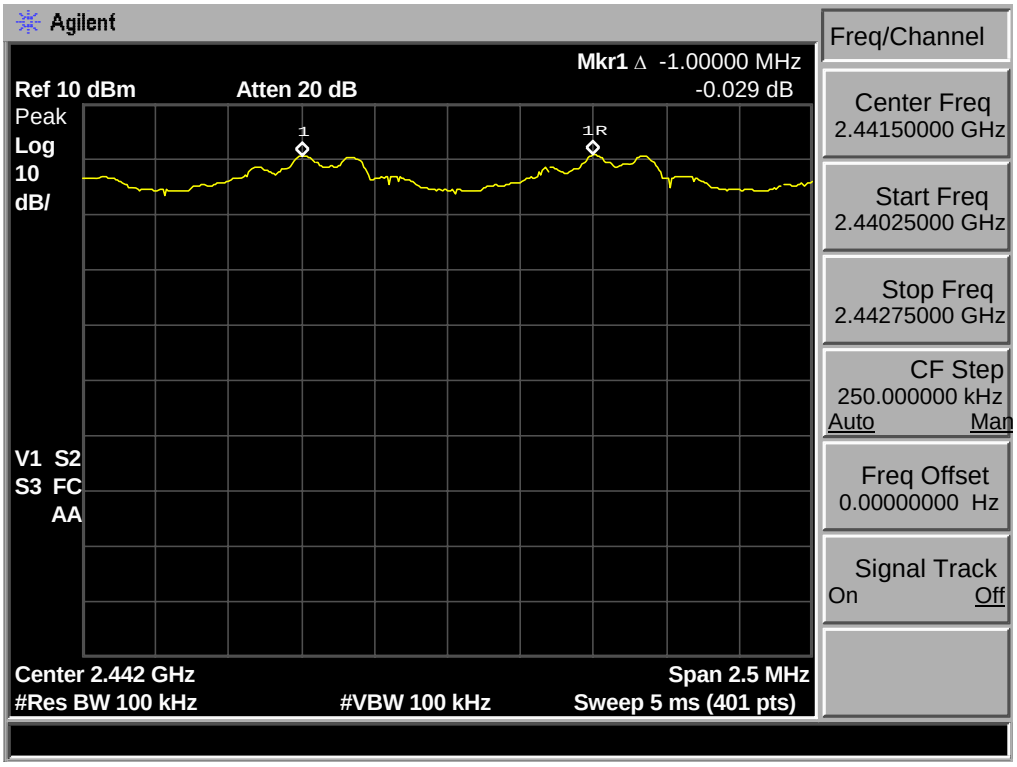


**π/4-DQPSK**

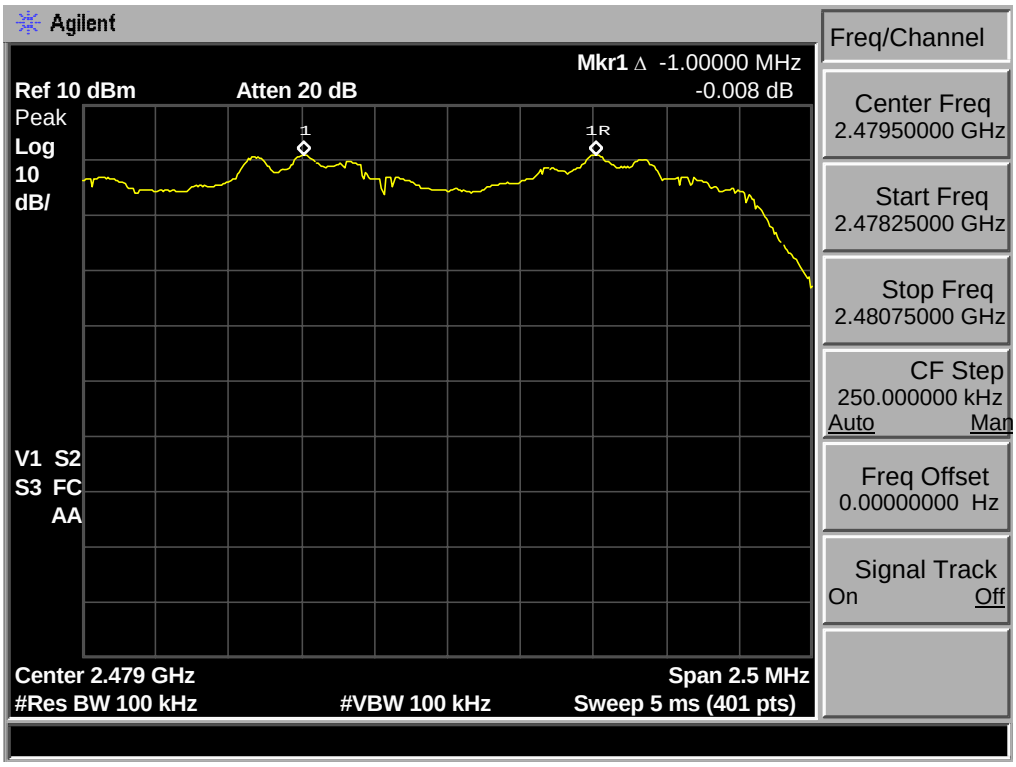
**Low Channel**




**Mid Channel**

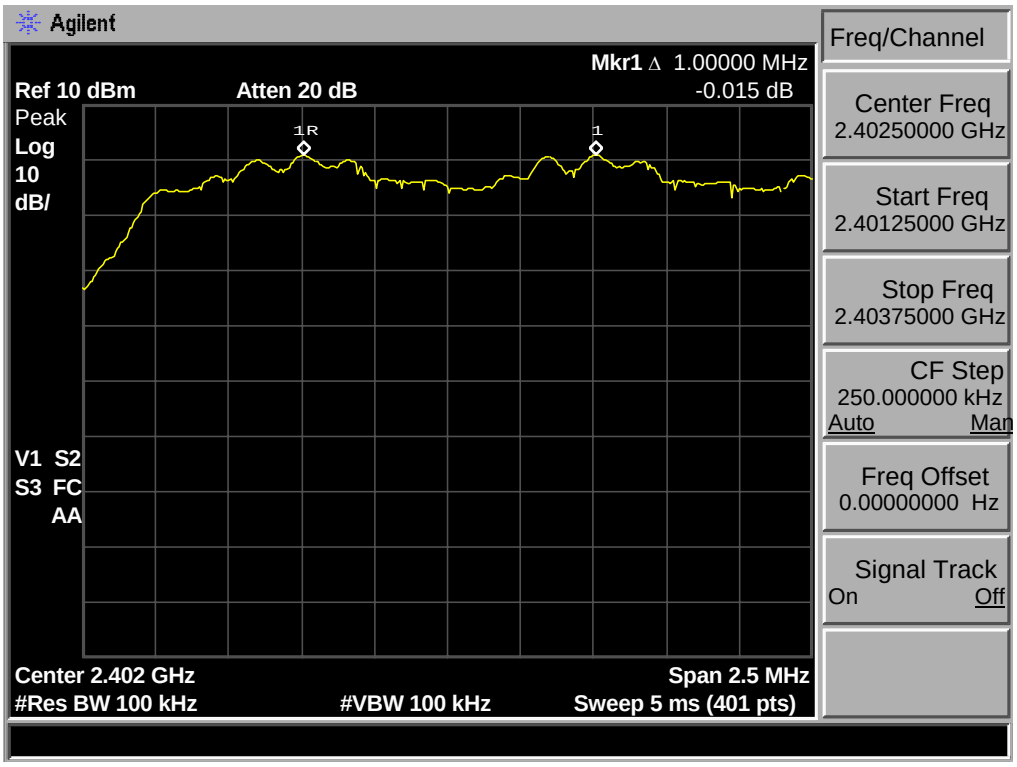


## High Channel

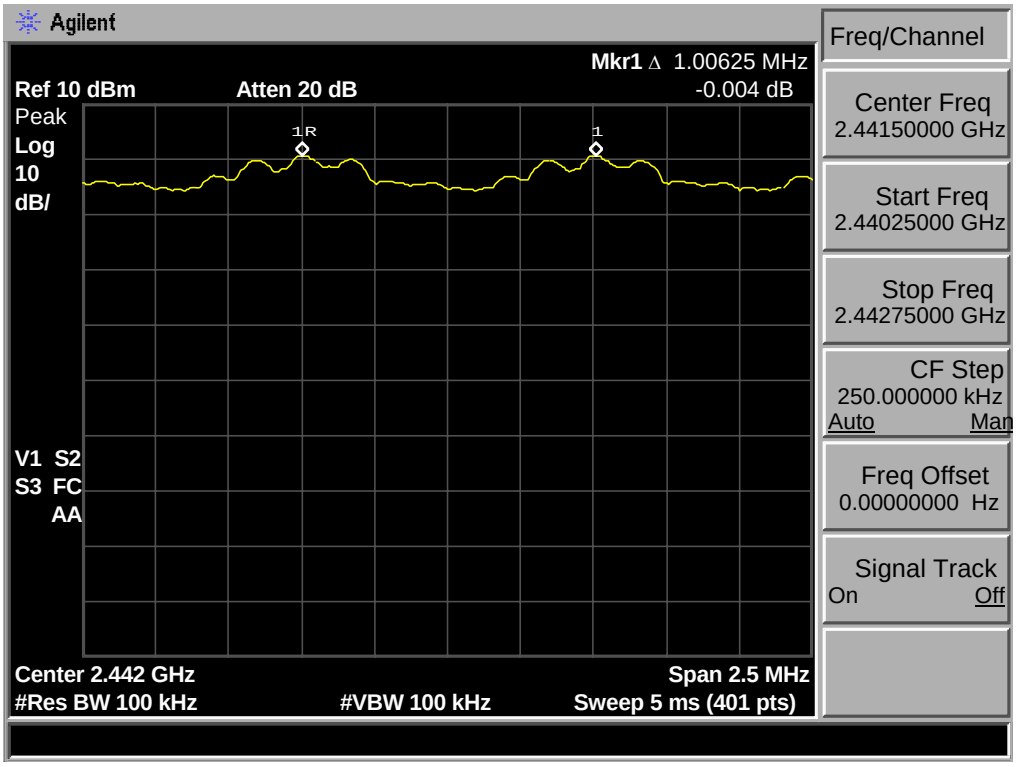


**8-DPSK**

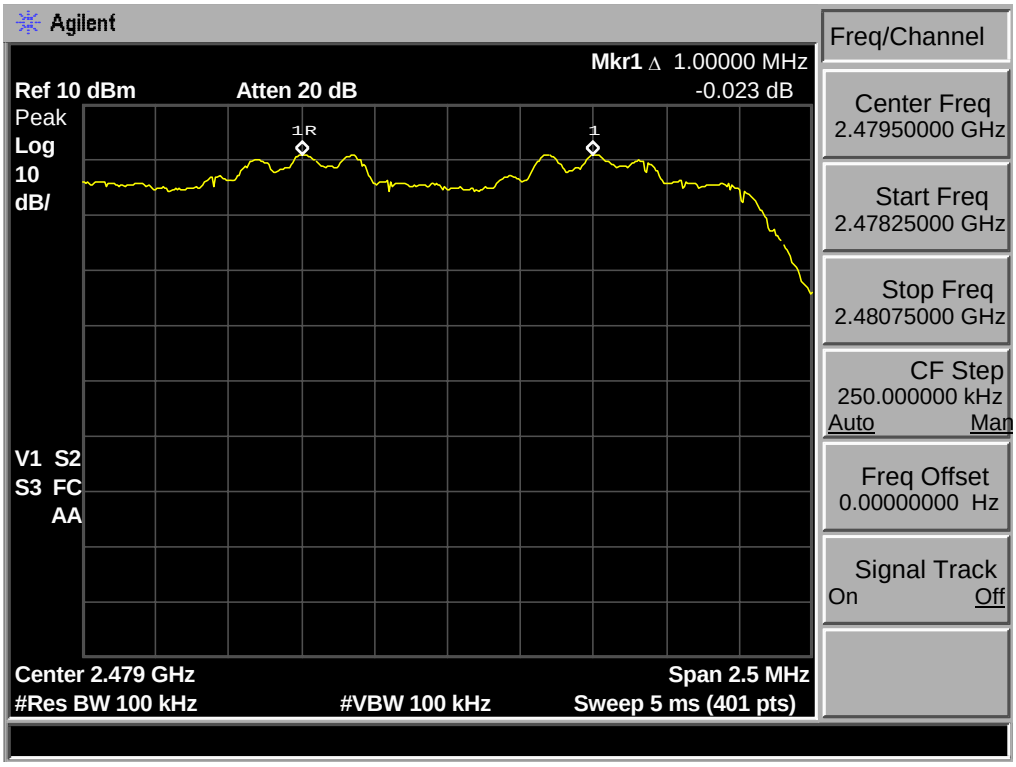
**Low Channel**




**Mid Channel**



**High Chanel**


Agilent
Mkr1 Δ 1.00000 MHz
Ref 10 dBm
Atten 20 dB
-0.023 dB
Peak
Log
10
dB/
1R
1
V1 S2
S3 FC
AA
Center 2.479 GHz
#Res BW 100 kHz
#VBW 100 kHz
Span 2.5 MHz
Sweep 5 ms (401 pts)
Freq/Channel
Center Freq
2.47950000 GHz
Start Freq
2.47825000 GHz
Stop Freq
2.48075000 GHz
CF Step
250.000000 kHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

# 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

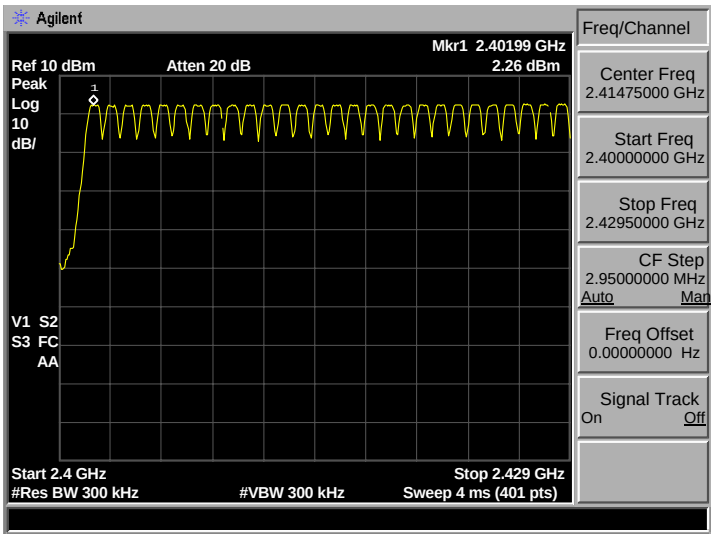
The transmitter output was coupled to a spectrum analyzer via a antenna. The number of hopping channel was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW.

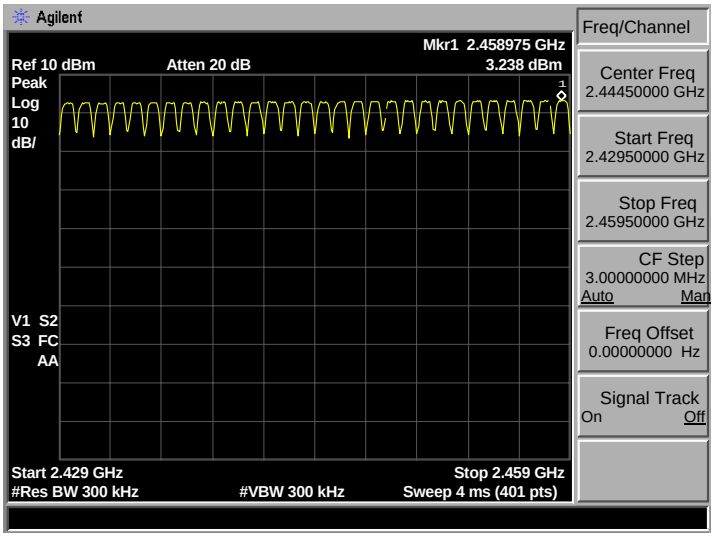
## 6.3. Test Result

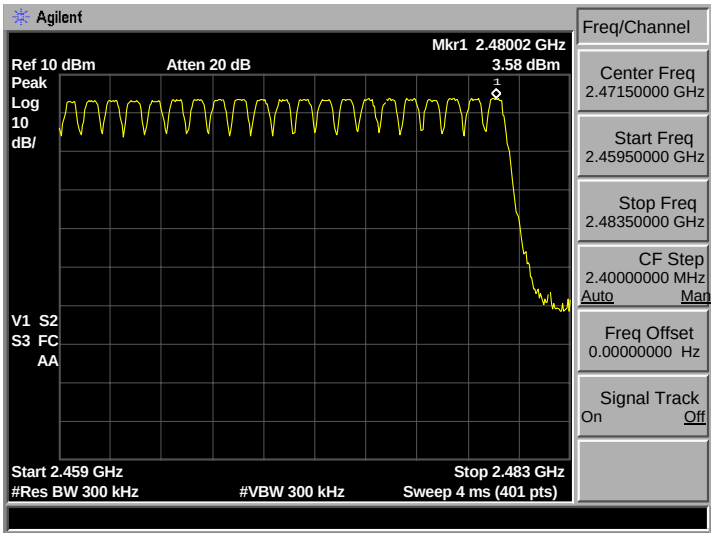
| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 | | | |
|---|---|---|---|
| Test date: 2012-7-13 | Test site: RF site | Tested by: Tony.Tang | |
| Mode | Number of hopping channel | I | Conclusion |
| GFSK | 79 | >15 | PASS |
| π/4-DQPSK | 79 | >15 | PASS |
| 8-DPSK | 79 | >15 | PASS |

## 6.4. Test Data

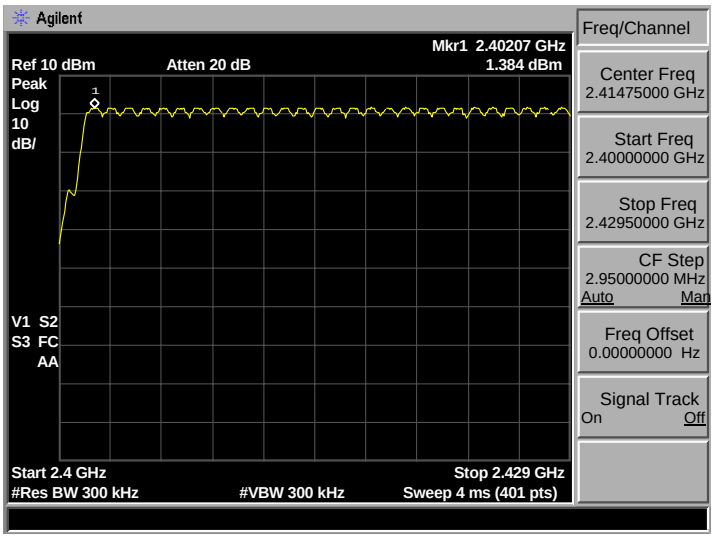
**GFSK**

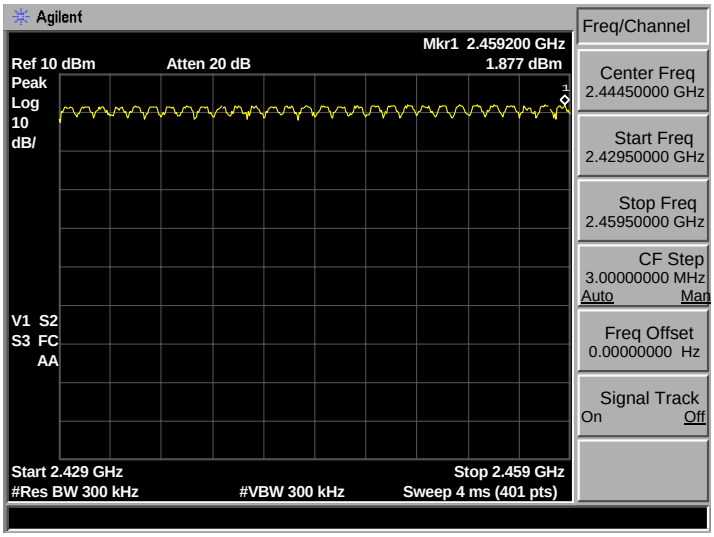


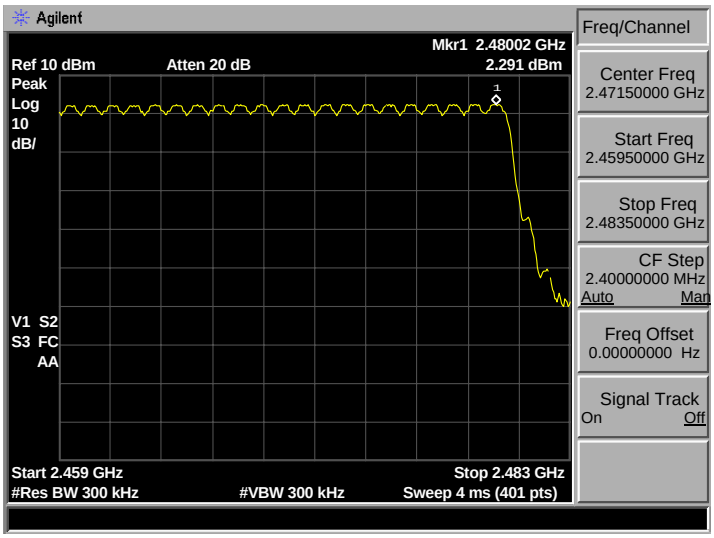



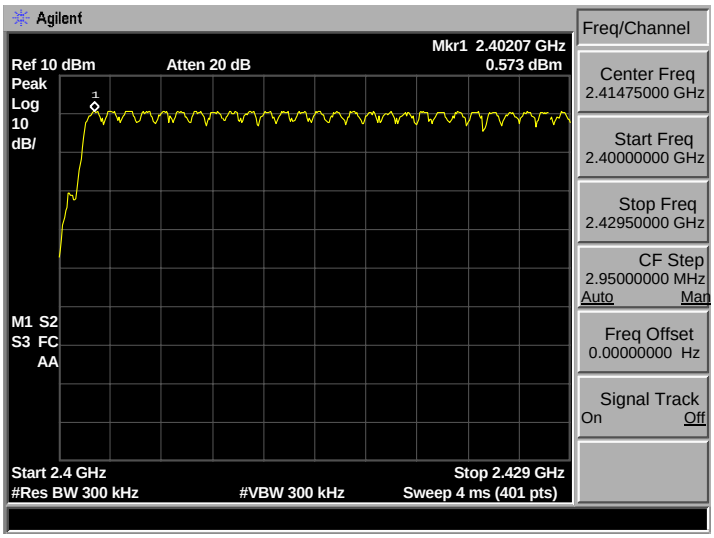
## π/4 DQPSK

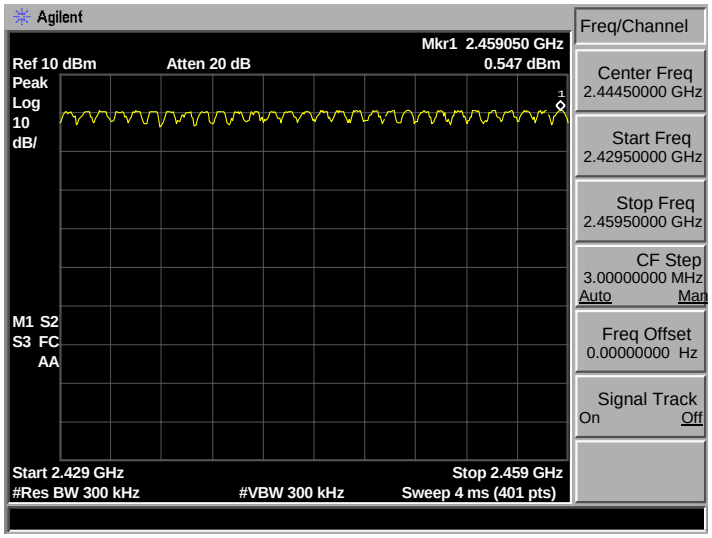

Agilent
Mkr1 2.40207 GHz
Ref 10 dBm
Atten 20 dB
1.384 dBm
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 2.4 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.429 GHz
Sweep 4 ms (401 pts)
Freq/Channel
Center Freq
2.41475000 GHz
Start Freq
2.40000000 GHz
Stop Freq
2.42950000 GHz
CF Step
2.95000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

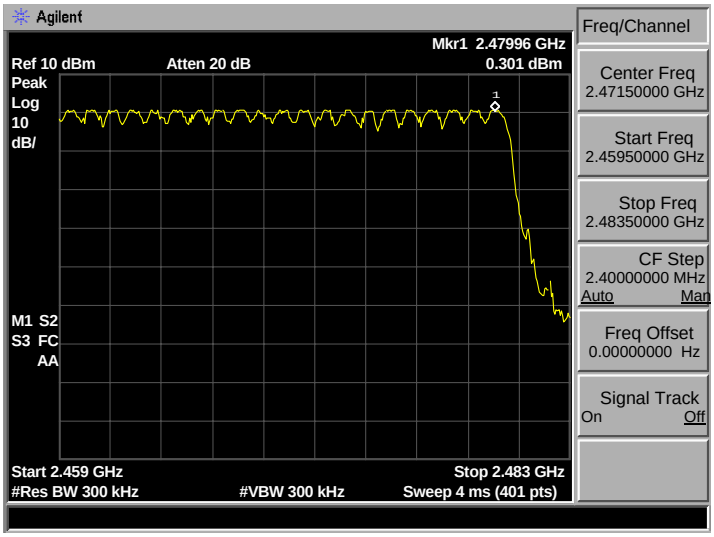

Agilent
Mkr1 2.459200 GHz
Ref 10 dBm
Atten 20 dB
1.877 dBm
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 2.429 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.459 GHz
Sweep 4 ms (401 pts)
Freq/Channel
Center Freq
2.44450000 GHz
Start Freq
2.42950000 GHz
Stop Freq
2.45950000 GHz
CF Step
3.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent
Mkr1 2.48002 GHz
Ref 10 dBm
Atten 20 dB
2.291 dBm
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 2.459 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.483 GHz
Sweep 4 ms (401 pts)
Freq/Channel
Center Freq
2.47150000 GHz
Start Freq
2.45950000 GHz
Stop Freq
2.48350000 GHz
CF Step
2.40000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

## 8-DPSK


Agilent
Mkr1 2.40207 GHz
Ref 10 dBm
Atten 20 dB
0.573 dBm
Peak
Log
10
dB/
M1 S2
S3 FC
AA
Start 2.4 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.429 GHz
Sweep 4 ms (401 pts)
Freq/Channel
Center Freq
2.41475000 GHz
Start Freq
2.40000000 GHz
Stop Freq
2.42950000 GHz
CF Step
2.95000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent
Mkr1 2.459050 GHz
Ref 10 dBm
Atten 20 dB
0.547 dBm
Peak
Log
10
dB/
M1 S2
S3 FC
AA
Start 2.429 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.459 GHz
Sweep 4 ms (401 pts)
Freq/Channel
Center Freq
2.44450000 GHz
Start Freq
2.42950000 GHz
Stop Freq
2.45950000 GHz
CF Step
3.00000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent
Mkr1 2.47996 GHz
Ref 10 dBm
Atten 20 dB
0.301 dBm
Peak
Log
10
dB/
M1 S2
S3 FC
AA
Start 2.459 GHz
#Res BW 300 kHz
#VBW 300 kHz
Stop 2.483 GHz
Sweep 4 ms (401 pts)
Freq/Channel
Center Freq
2.47150000 GHz
Start Freq
2.45950000 GHz
Stop Freq
2.48350000 GHz
CF Step
2.40000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

# 7. DWELL TIME

## 7.1. Limit

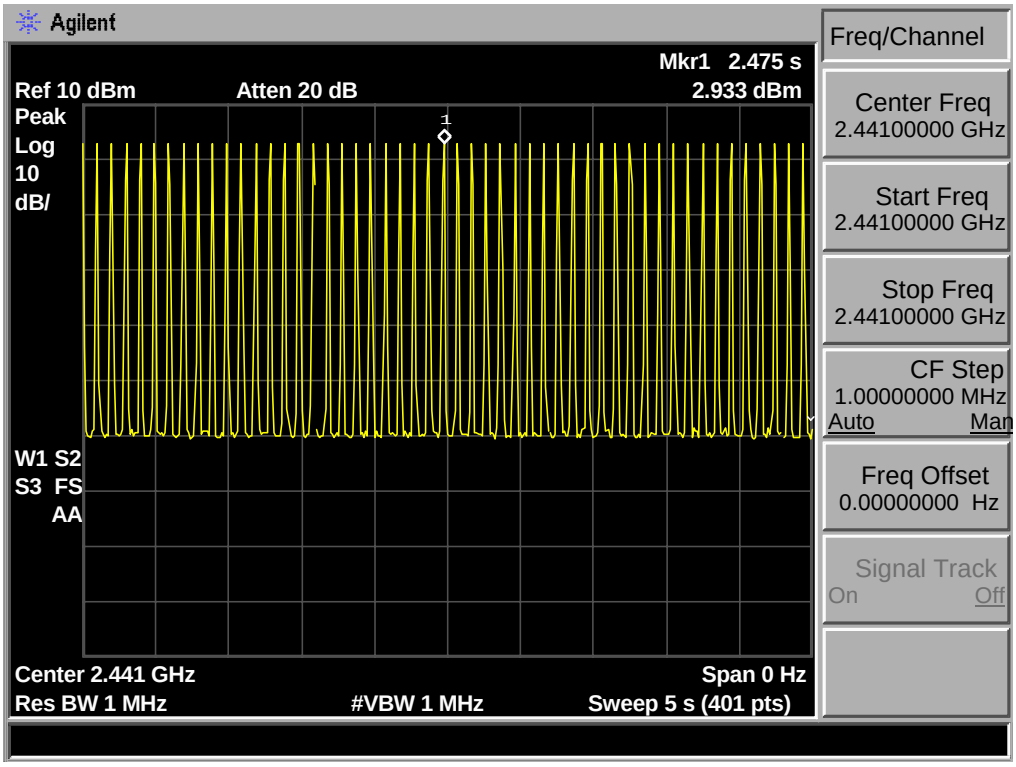
The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

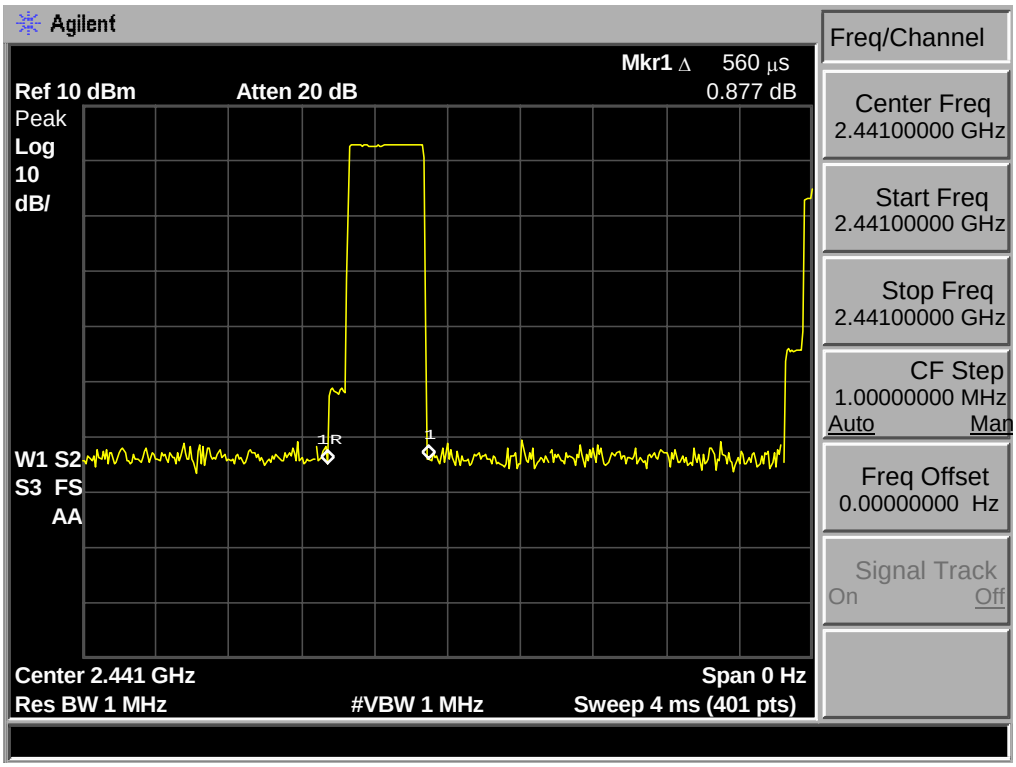
## 7.2. Test Result

| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 | | | |
|---|---|---|---|
| Test date: 2012-7-13 | Test site: RF site | Tested by: Tony Tang | |
| Mode | Dwell time | Limit | Conclusion |
| GFSK DH1 | 176.96 | <400ms | PASS |
| GFSK DH3 | 284.40 | <400ms | PASS |
| GFSK DH5 | 328.76 | <400ms | PASS |
| π/4 DQPSK DH1 | 176.96 | <400ms | PASS |
| π/4 DQPSK DH3 | 287.56 | <400ms | PASS |
| π/4 DQPSK DH5 | 330.91 | <400ms | PASS |
| 8-DPSK DH1 | 180.12 | <400ms | PASS |
| 8-DPSK DH3 | 284.40 | <400ms | PASS |
| 8-DPSK DH5 | 329.84 | <400ms | PASS |

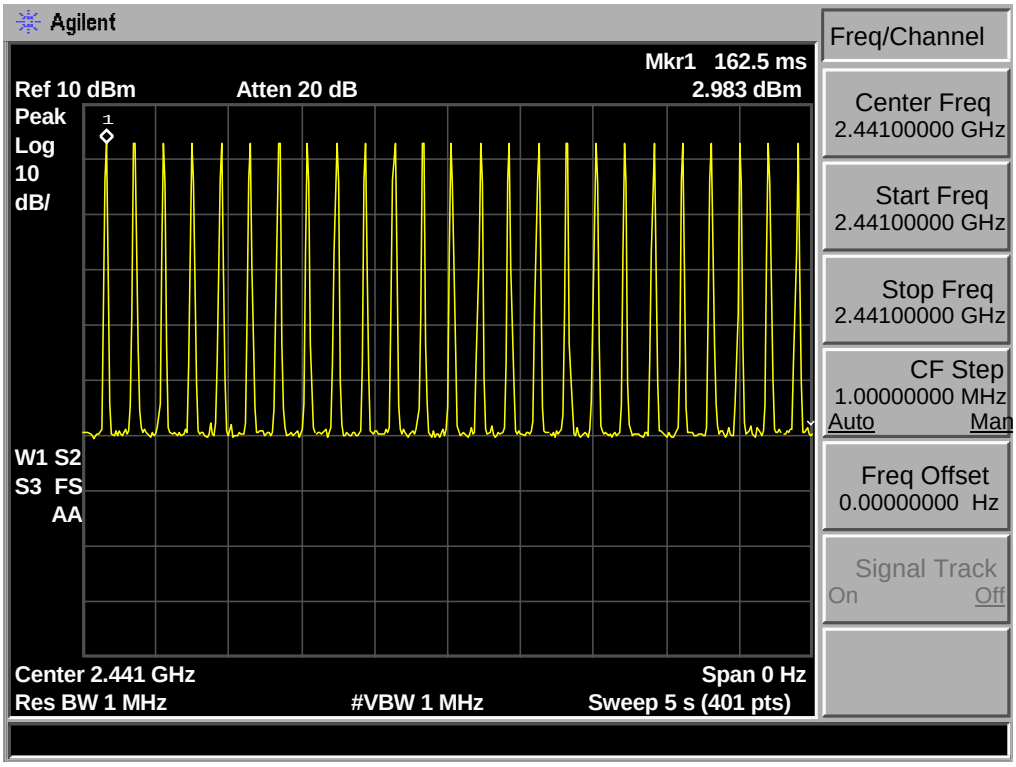
## 7.3. Test Data

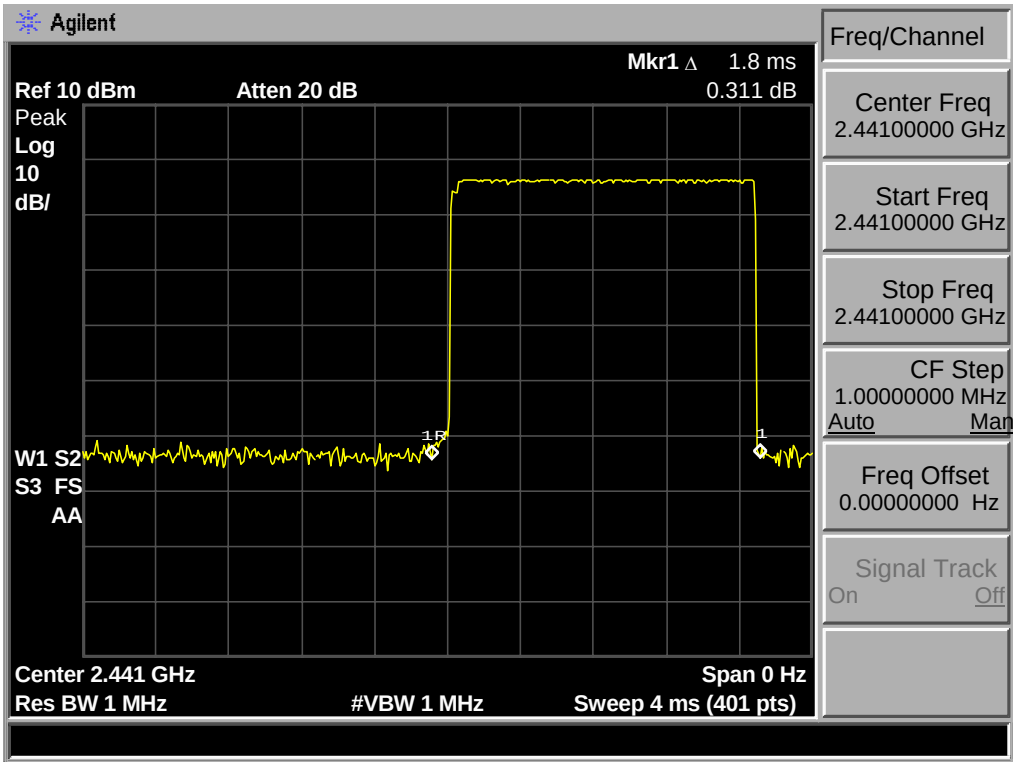
**GFSK DH1 : 50hop/5s * 0.4 * 79 * 0.560ms = 176.96**



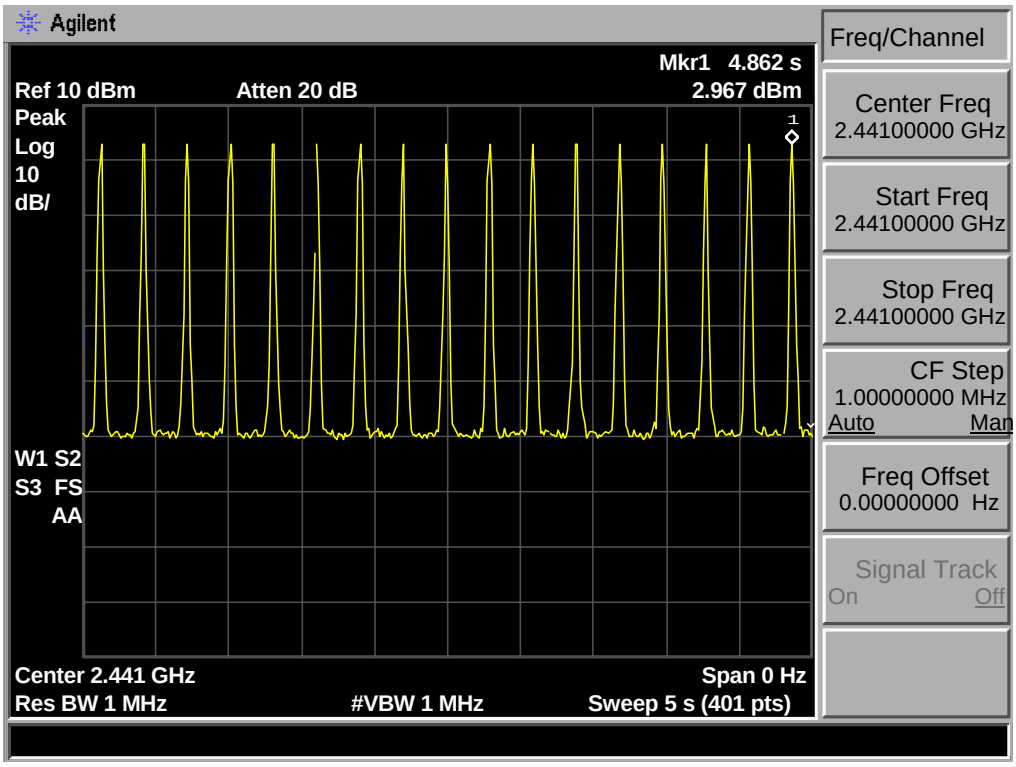



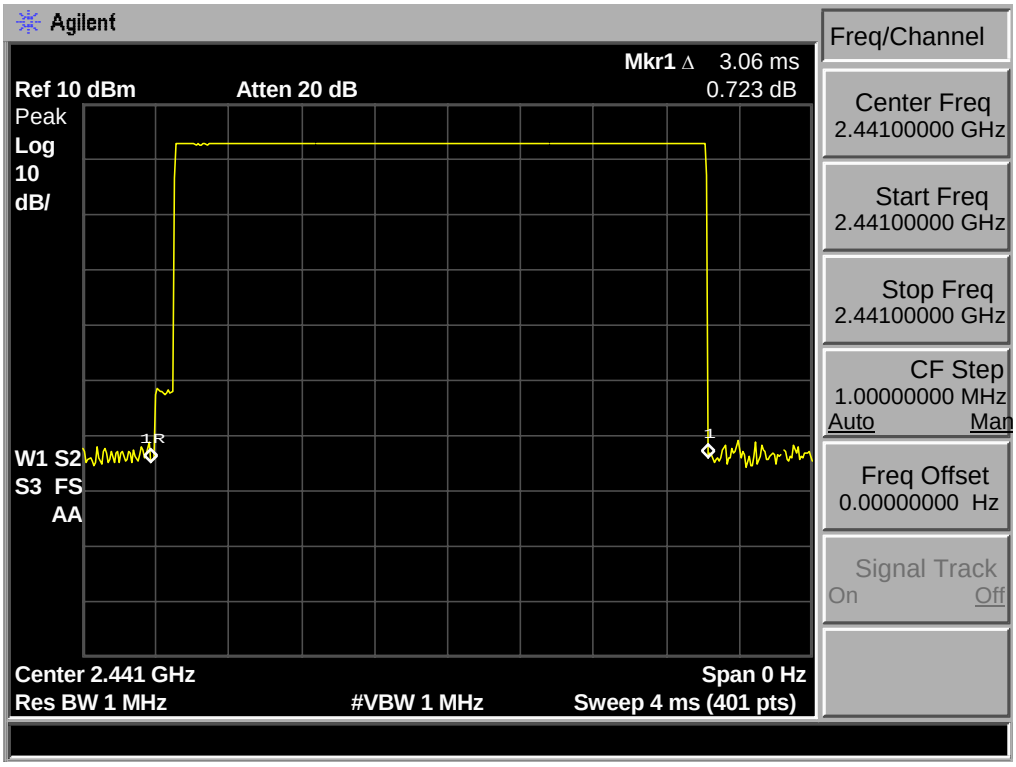
**GFSK DH3 : 25hop/5s * 0.4 * 79 * 1.80ms= 284.40**



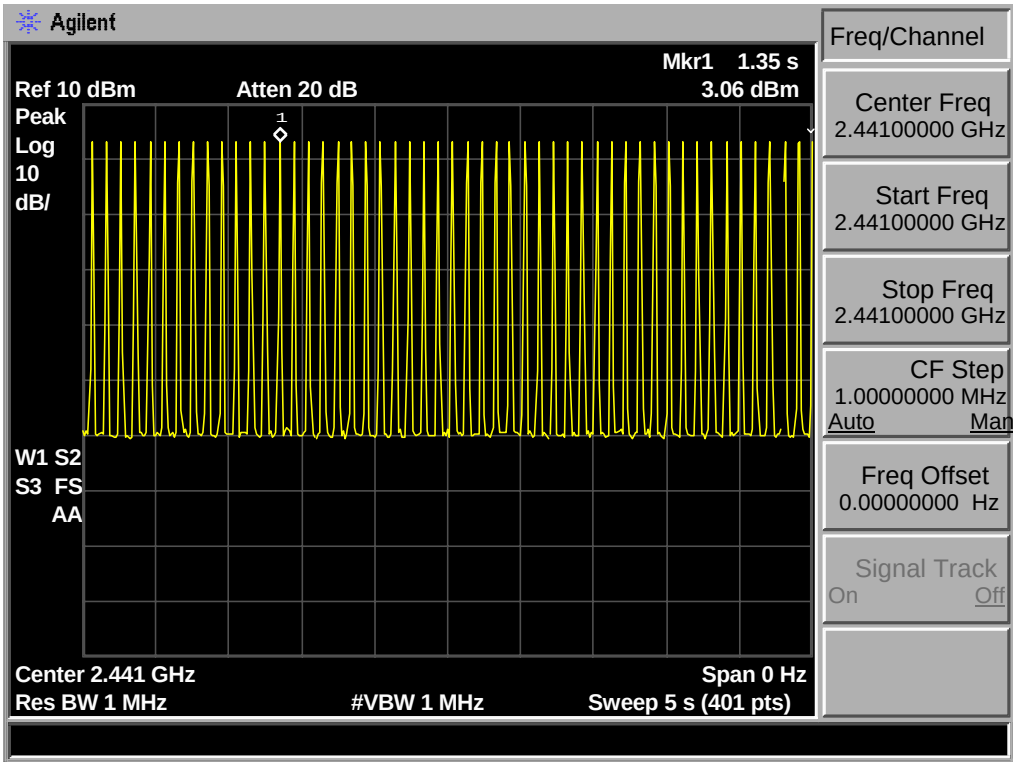



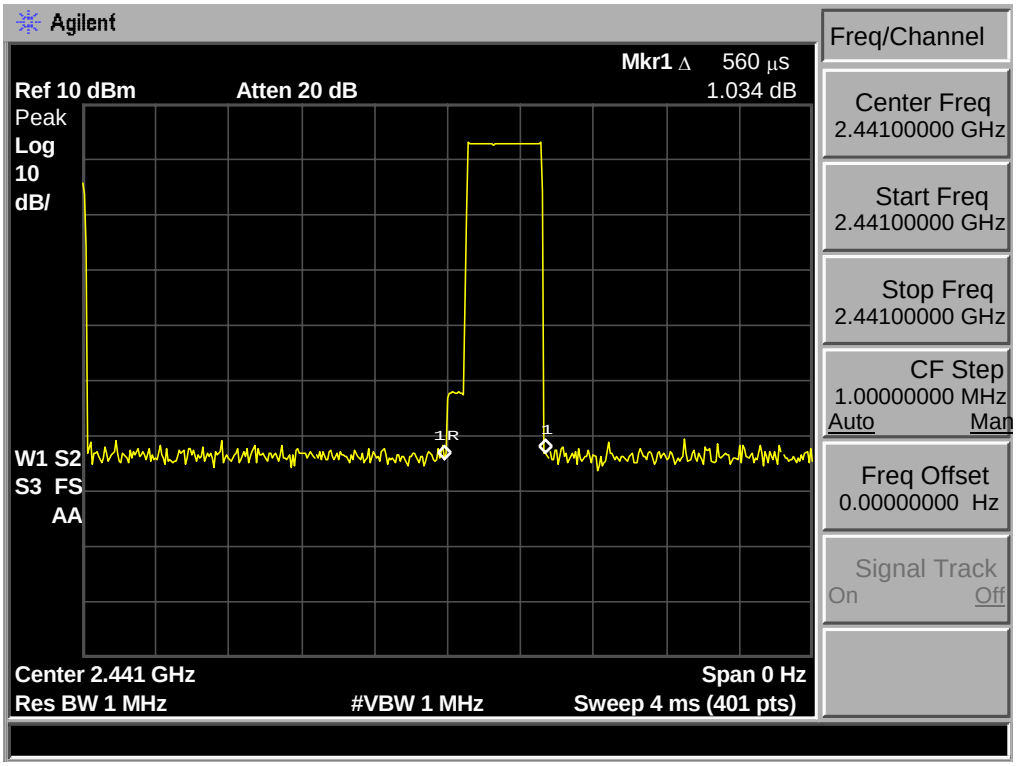
**GSFK DH5 : 17hop/5s * 0.4 * 79 *3.06ms = 328.766**



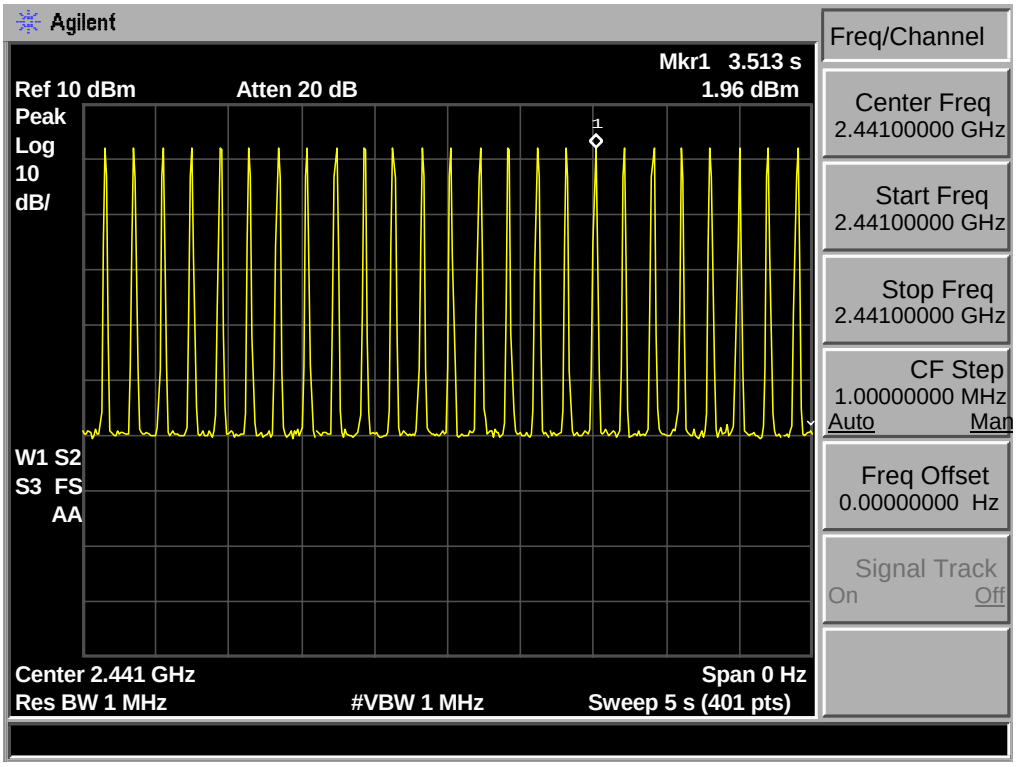



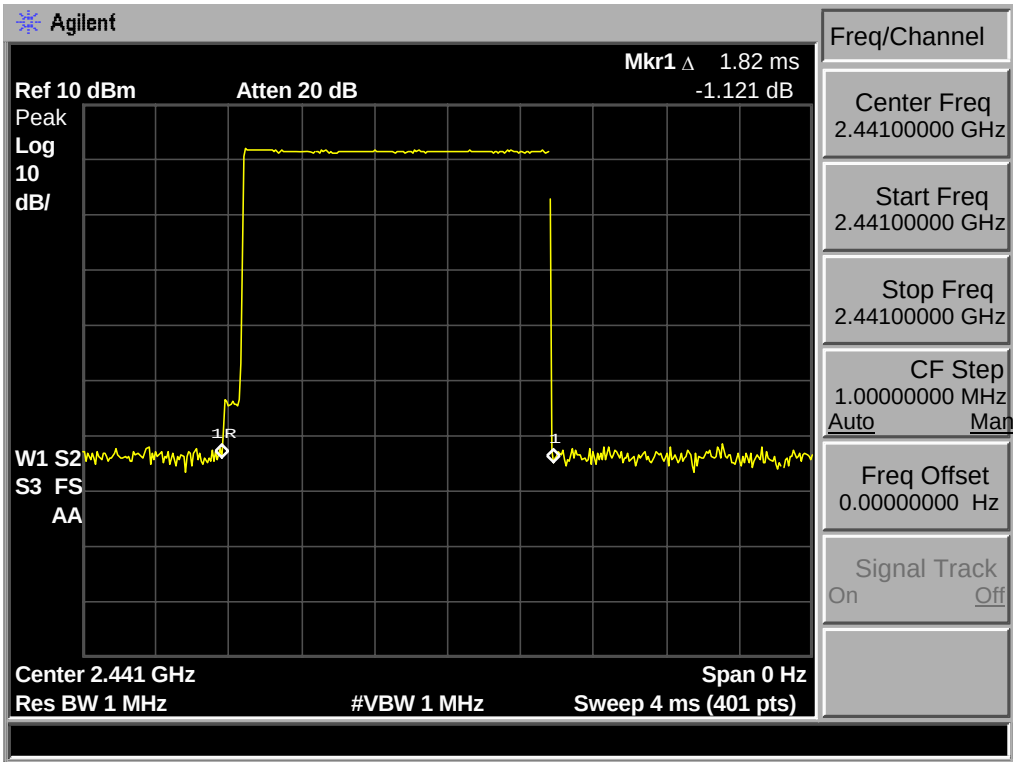
**π/4-DQPSK DH1: 50hop/5 * 0.4 * 79 *0.560ms=176.96**



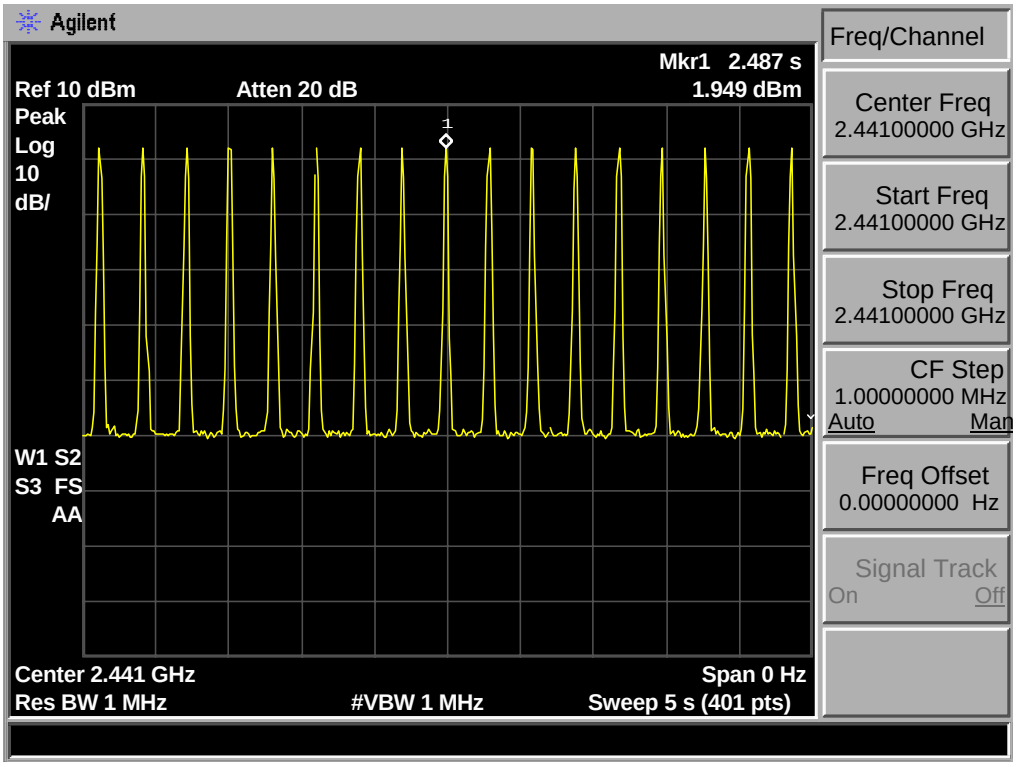



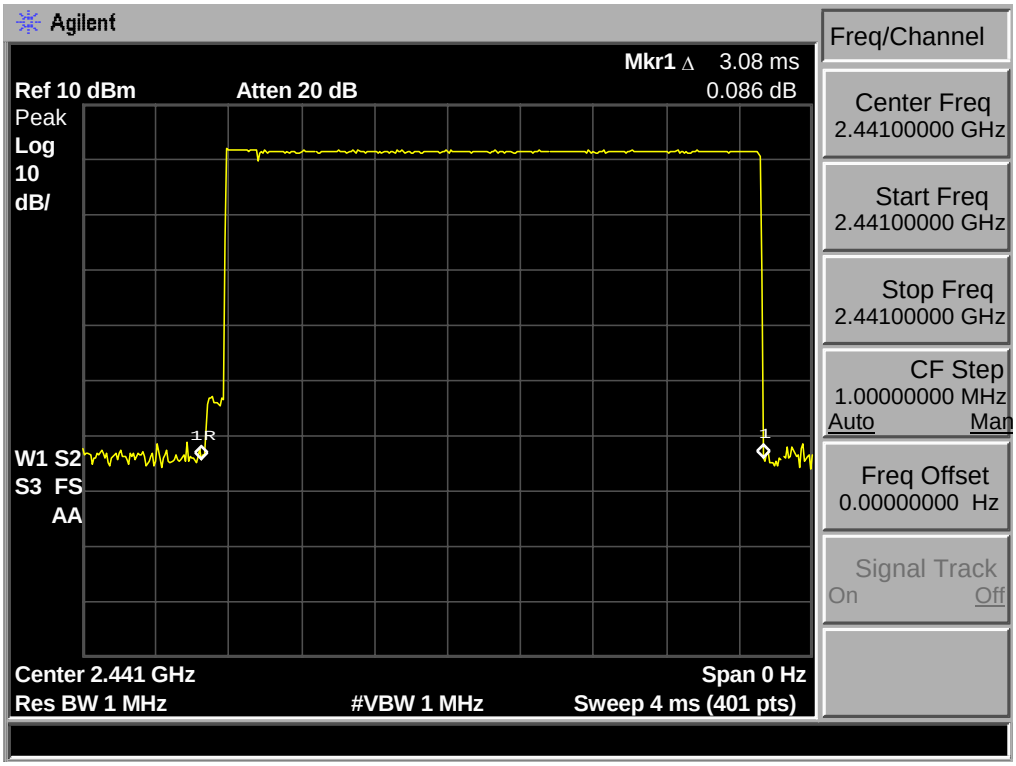
**π/4-DQPSK DH3: 25hop/5 * 0.4 * 79 *1.82 = 287.56**



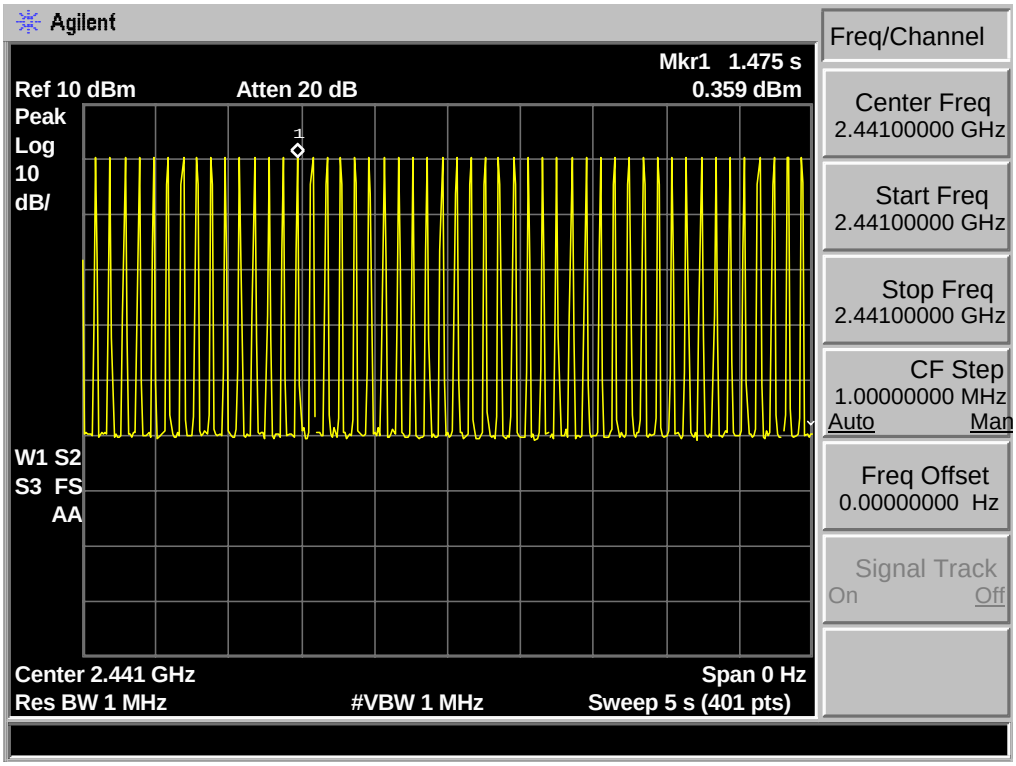



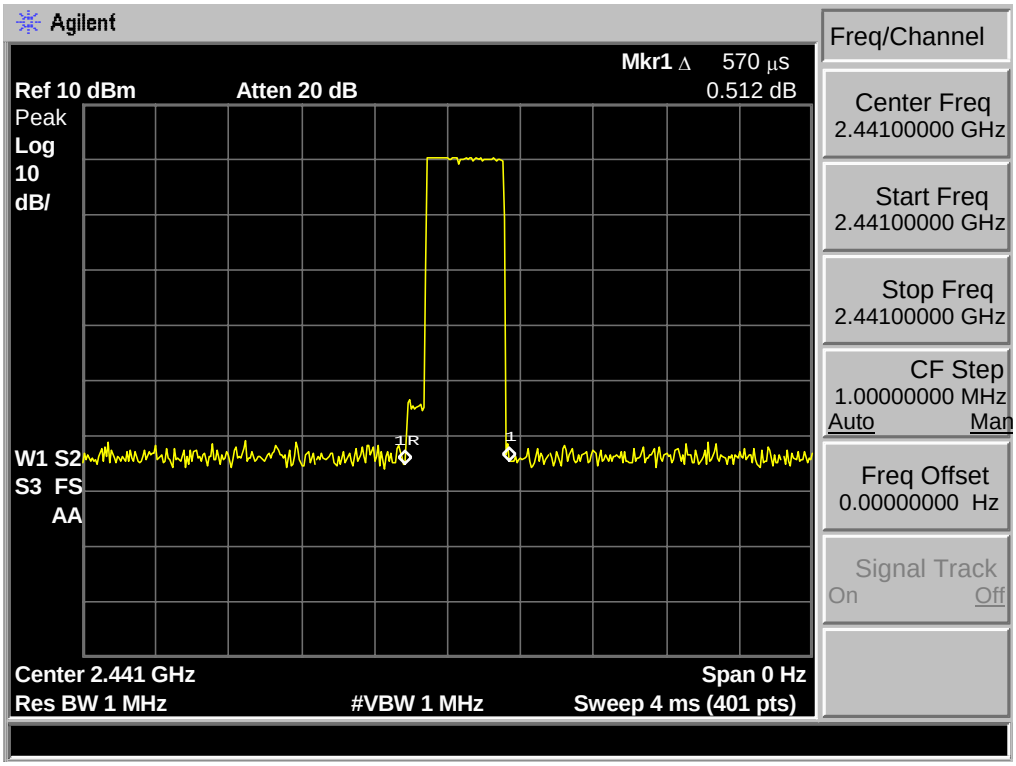
**π/4-DQPSK DH5: 17hop/5 * 0.4 * 79 *3.08ms= 330.91**



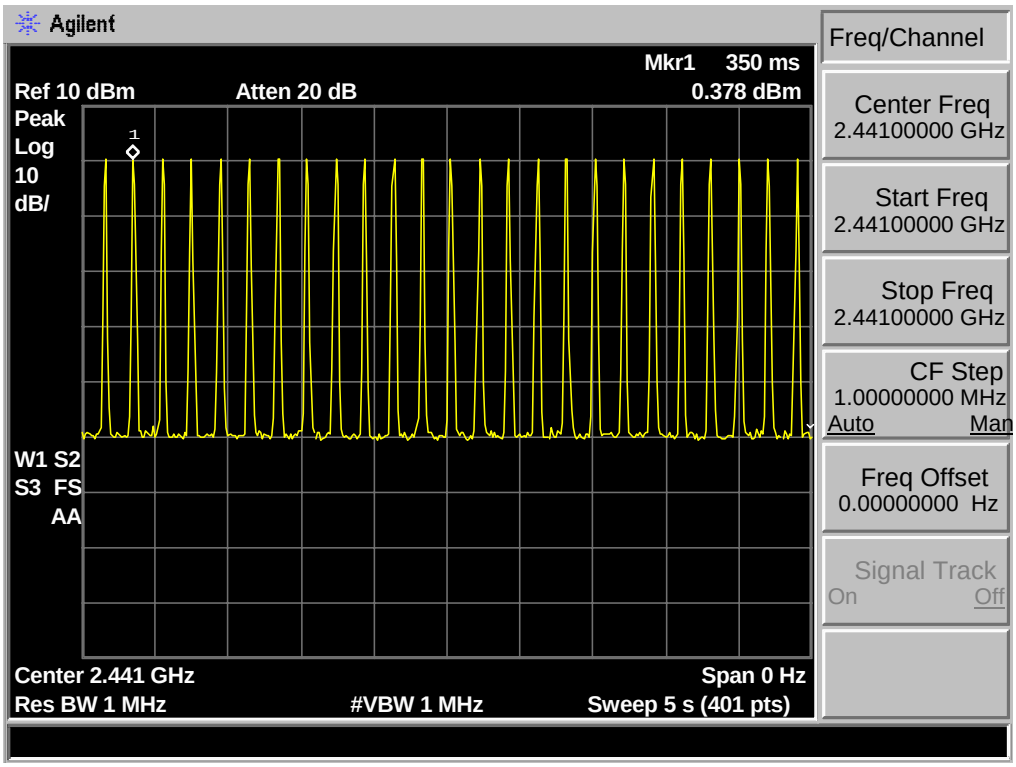



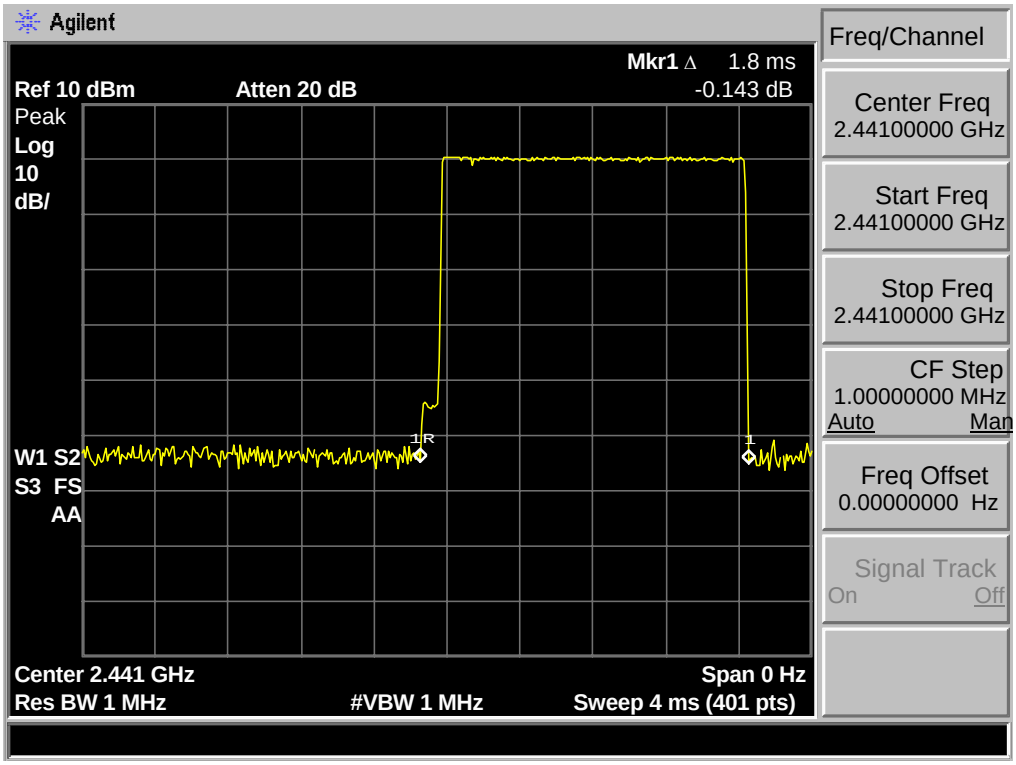
**8-DPSK DH1: 50hop/5 * 0.4 * 79 * 0.570ms=180.12**



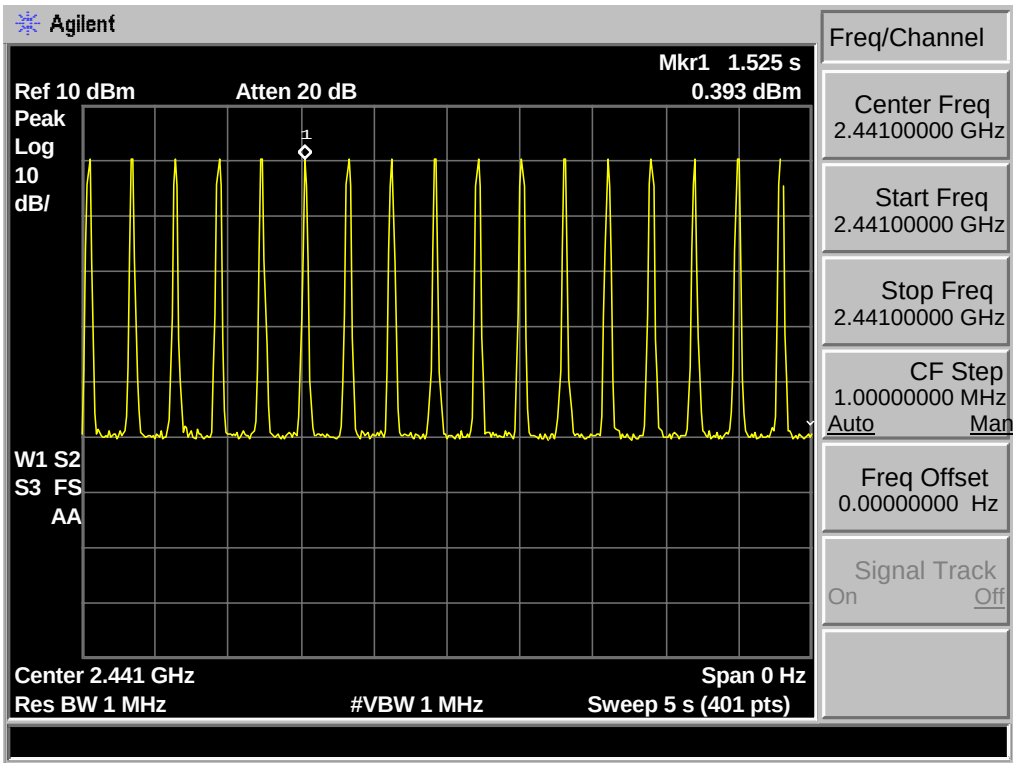



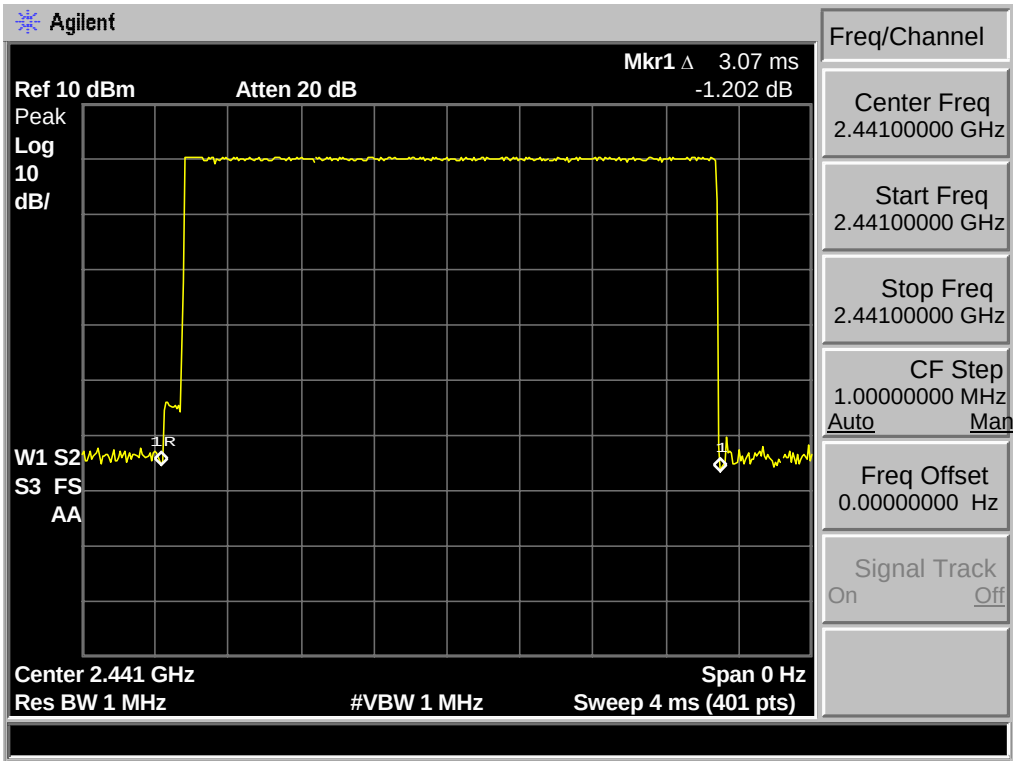
**8-DPSK DH3: 25/5 * 0.4 *79 *1.80ms=284.40**



**8-DPSK DH5: 17/5 * 0.4 *79 *3.07ms=329.84**



# 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.

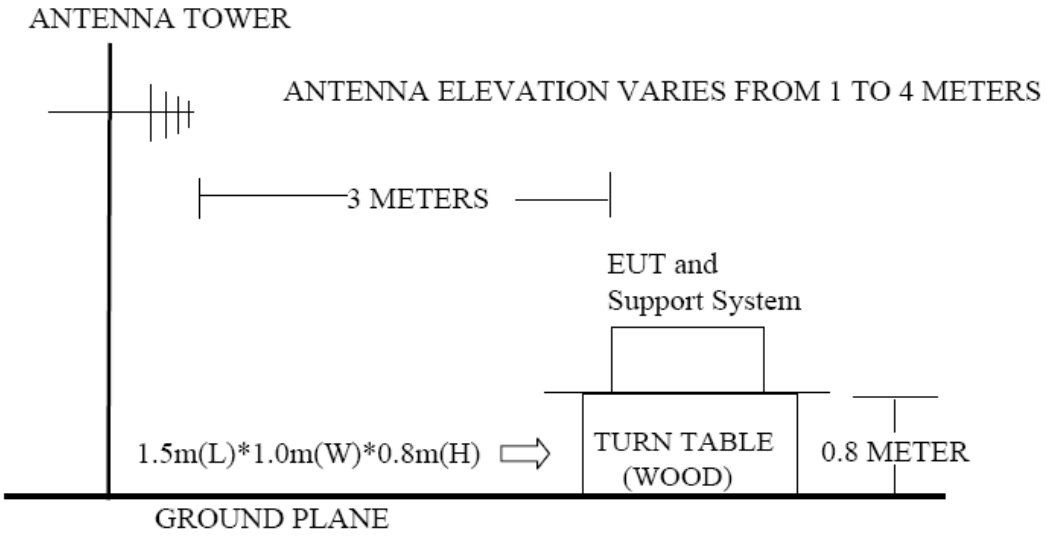
15.205 Restricted frequency band

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

15.209 Limit

| FREQUENCY MHz | DISTANCE 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—26GHz Radiated emissison Test result |
|---|
| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 |
| Power: AC 120V/60Hz |
| Test date: 2012-7-13 Test site: 3m Chamber Tested by: Tony Tang |
| Test mode: Tx Mode |
| Pass |

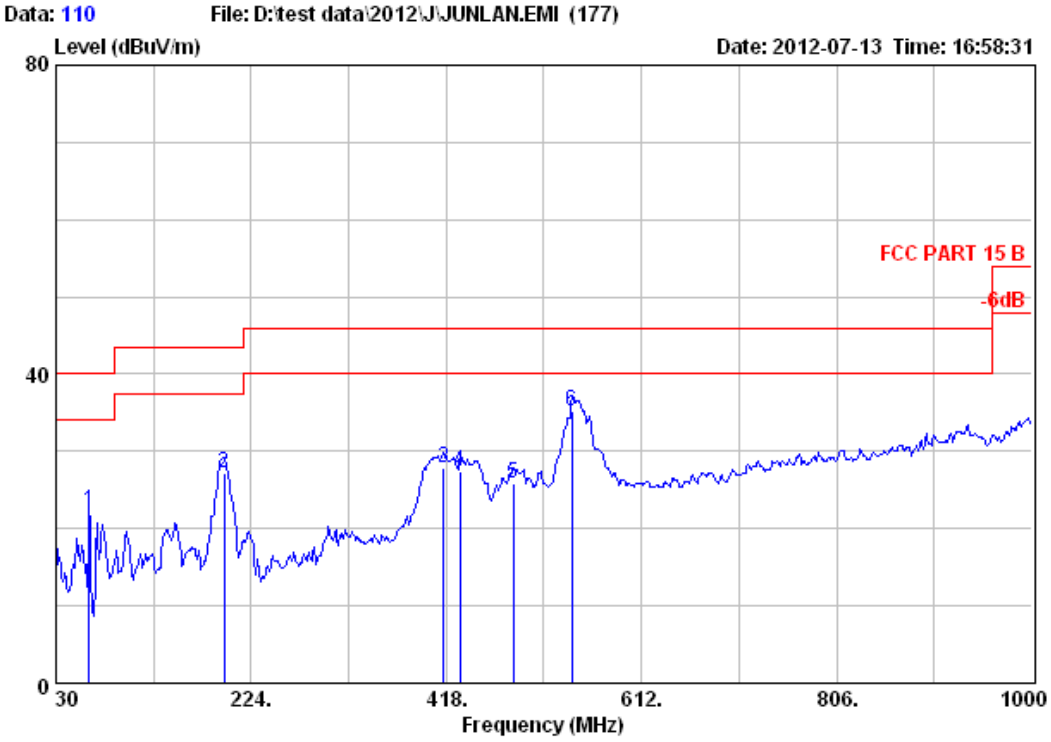
Note : If Peak Result comply with AV limit, AV Result is deemed to comply with AV limit

## 8.5. Test Data

30 MHz – 1000 MHz

EST Technology

Chilingxiang,Qishantou,Santun,
Houjie,Dongguan,Guangdong,China
Tel:+86-769-83081888
Fax:+86-769-83081878

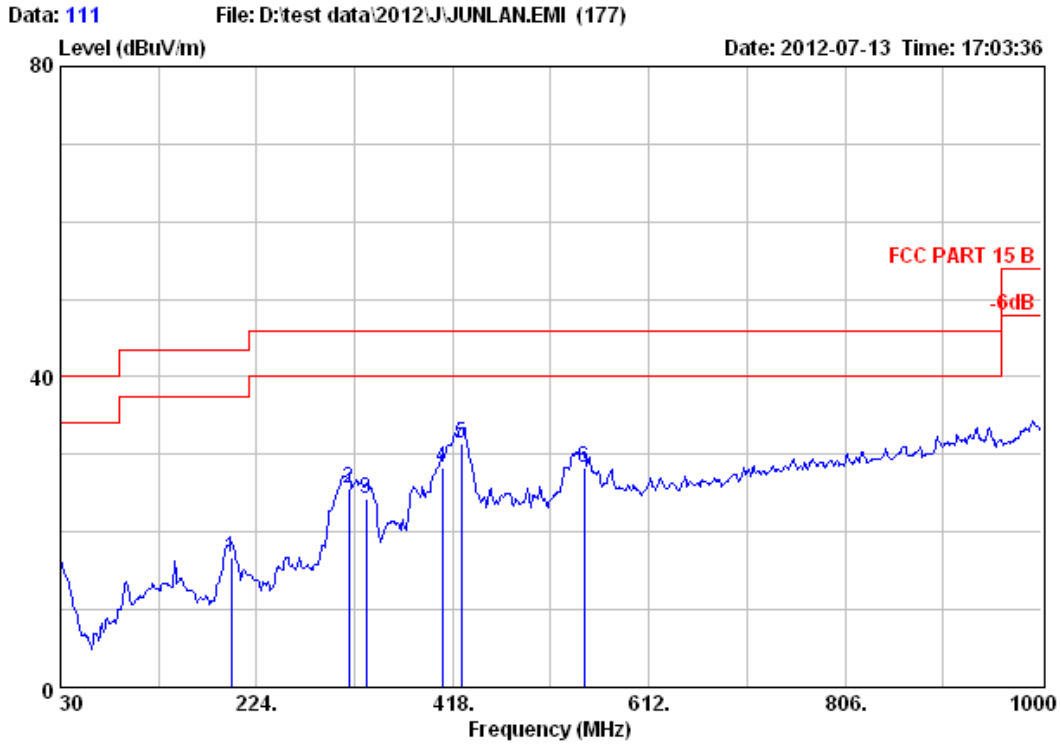



```
Site no.      : 3m Chamber                  Data no. : 110
Dis. / Ant.   : 3m   27137                  Ant. pol. : VERTICAL
Limit         : FCC PART 15 B
Env. / Ins.   : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer      : Tony
EUT           : BLUETOOTH iPAD iTOWER SPEAKER
Power         : AC 120V/60Hz
M/N           : BITS-1/5616
Test Mode     : GFSK TX 2402MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 62.98 | 4.82 | 2.63 | 14.80 | 22.25 | 40.00 | 17.75 | QP |
| 2 | 196.84 | 7.72 | 4.26 | 15.25 | 27.23 | 43.50 | 16.27 | QP |
| 3 | 415.09 | 16.30 | 6.17 | 5.49 | 27.96 | 46.00 | 18.04 | QP |
| 4 | 431.58 | 16.09 | 6.26 | 5.02 | 27.37 | 46.00 | 18.63 | QP |
| 5 | 484.93 | 17.63 | 6.67 | 1.47 | 25.77 | 46.00 | 20.23 | QP |
| 6 | 543.13 | 19.46 | 7.02 | 8.70 | 35.18 | 46.00 | 10.82 | QP |

EST Technology

Chilingxiang,Qishantou,Santun,
Houjie,Dongguan,Guangdong,China
Tel:+86-769-83081888
Fax:+86-769-83081878




Site no. : 3m Chamber Data no. : 111
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 iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 198.78 | 7.71 | 4.24 | 4.71 | 16.66 | 43.50 | 26.84 | QP |
| 2 | 315.18 | 13.39 | 5.33 | 6.89 | 25.61 | 46.00 | 20.39 | QP |
| 3 | 332.64 | 13.93 | 5.52 | 4.74 | 24.19 | 46.00 | 21.81 | QP |
| 4 | 407.33 | 16.22 | 6.08 | 5.97 | 28.27 | 46.00 | 17.73 | QP |
| 5 | 426.73 | 16.13 | 6.25 | 9.07 | 31.45 | 46.00 | 14.55 | QP |
| 6 | 547.98 | 19.45 | 7.04 | 1.92 | 28.41 | 46.00 | 17.59 | QP |

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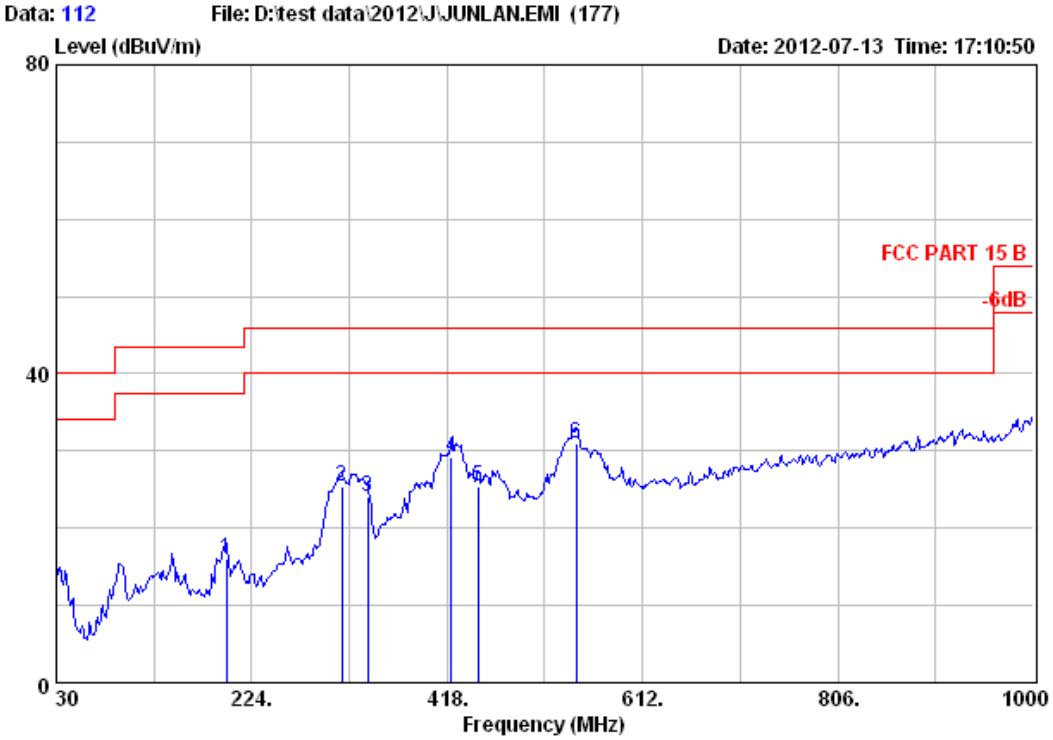


Site no. : 3m Chamber Data no. : 112
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 198.78 | 7.71 | 4.24 | 4.06 | 16.01 | 43.50 | 27.49 | QP |
| 2 | 313.24 | 13.31 | 5.34 | 6.80 | 25.45 | 46.00 | 20.55 | QP |
| 3 | 339.43 | 14.13 | 5.58 | 4.26 | 23.97 | 46.00 | 22.03 | QP |
| 4 | 421.88 | 16.25 | 6.21 | 6.77 | 29.23 | 46.00 | 16.77 | QP |
| 5 | 449.04 | 16.45 | 6.36 | 2.70 | 25.51 | 46.00 | 20.49 | QP |
| 6 | 546.04 | 19.45 | 7.05 | 4.39 | 30.89 | 46.00 | 15.11 | QP |

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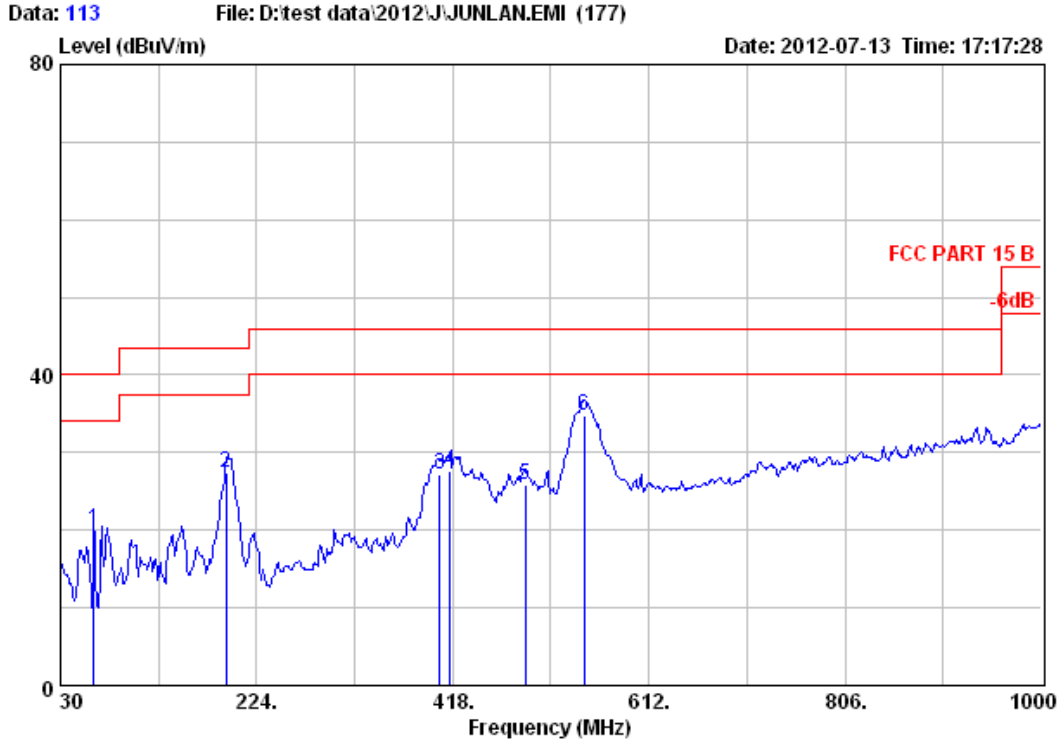


Site no. : 3m Chamber Data no. : 113
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 62.98 | 4.82 | 2.63 | 12.66 | 20.11 | 40.00 | 19.89 | QP |
| 2 | 193.93 | 7.76 | 4.21 | 15.43 | 27.40 | 43.50 | 16.10 | QP |
| 3 | 405.39 | 16.18 | 6.05 | 5.02 | 27.25 | 46.00 | 18.75 | QP |
| 4 | 415.09 | 16.30 | 6.17 | 5.10 | 27.57 | 46.00 | 18.43 | QP |
| 5 | 489.78 | 17.81 | 6.70 | 1.38 | 25.89 | 46.00 | 20.11 | QP |
| 6 | 547.98 | 19.45 | 7.04 | 8.36 | 34.85 | 46.00 | 11.15 | QP |

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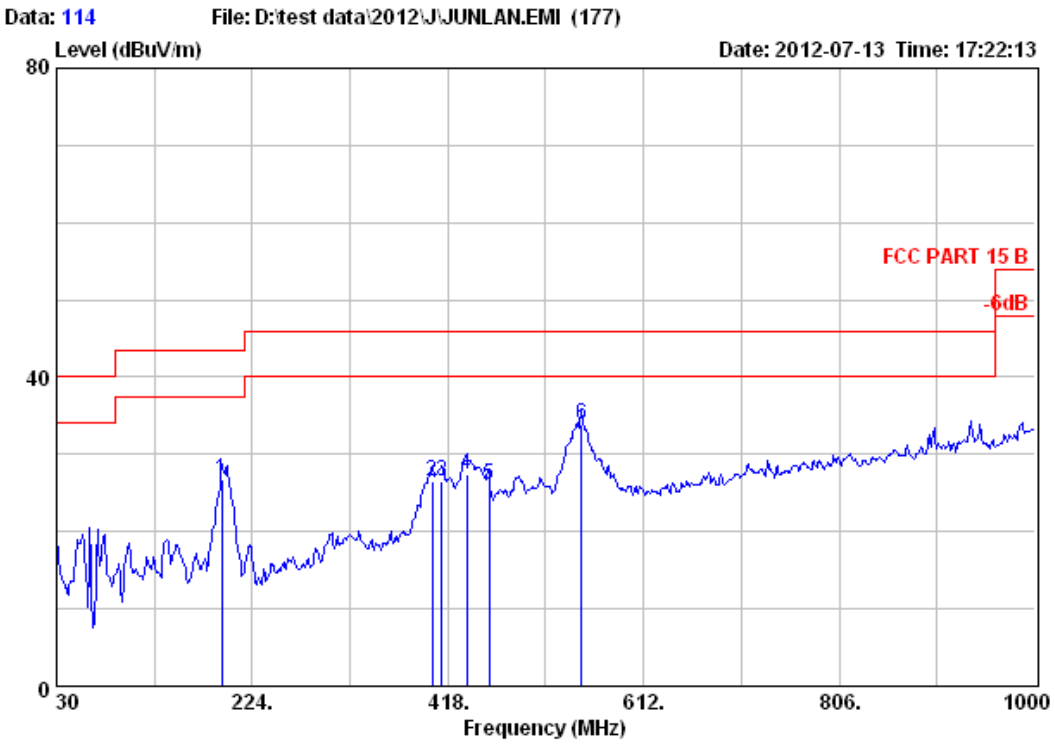


Site no. : 3m Chamber Data no. : 114
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 193.93 | 7.76 | 4.21 | 14.84 | 26.81 | 43.50 | 16.69 | QP |
| 2 | 402.48 | 16.12 | 6.01 | 4.31 | 26.44 | 46.00 | 19.56 | QP |
| 3 | 412.18 | 16.29 | 6.13 | 4.09 | 26.51 | 46.00 | 19.49 | QP |
| 4 | 436.43 | 16.18 | 6.29 | 4.86 | 27.33 | 46.00 | 18.67 | QP |
| 5 | 458.74 | 16.80 | 6.45 | 2.91 | 26.16 | 46.00 | 19.84 | QP |
| 6 | 550.89 | 19.48 | 7.06 | 7.37 | 33.91 | 46.00 | 12.09 | QP |

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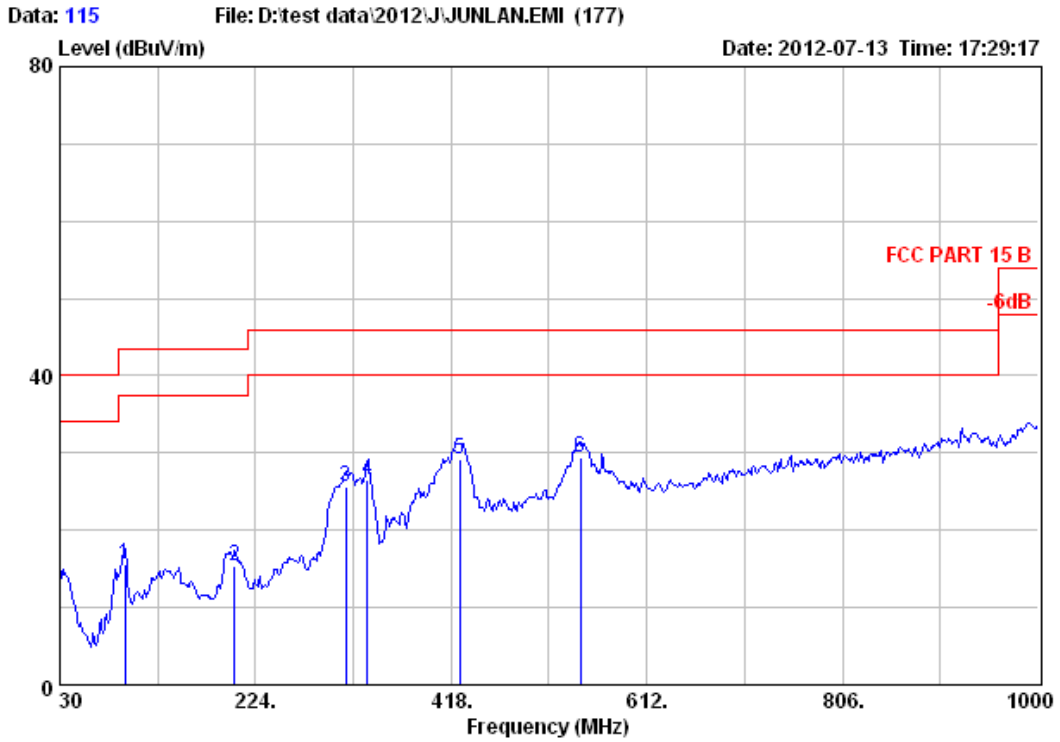


```
Site no.      : 3m Chamber                  Data no. : 115
Dis. / Ant.   : 3m   27137                  Ant. pol. : HORIZONTAL
Limit         : FCC PART 15 B
Env. / Ins.   : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer      : Tony
EUT           : BLUETOOTH iPAD iTOWER SPEAKER
Power         : AC 120V/60Hz
M/N           : BITS-1/5616
Test Mode     : GFSK TX 2480MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 94.99 | 8.83 | 2.99 | 3.68 | 15.50 | 43.50 | 28.00 | QP |
| 2 | 203.63 | 7.87 | 4.29 | 3.12 | 15.28 | 43.50 | 28.22 | QP |
| 3 | 313.24 | 13.31 | 5.34 | 7.03 | 25.68 | 46.00 | 20.32 | QP |
| 4 | 334.58 | 13.99 | 5.52 | 7.00 | 26.51 | 46.00 | 19.49 | QP |
| 5 | 426.73 | 16.13 | 6.25 | 6.91 | 29.29 | 46.00 | 16.71 | QP |
| 6 | 546.04 | 19.45 | 7.05 | 2.94 | 29.44 | 46.00 | 16.56 | QP |

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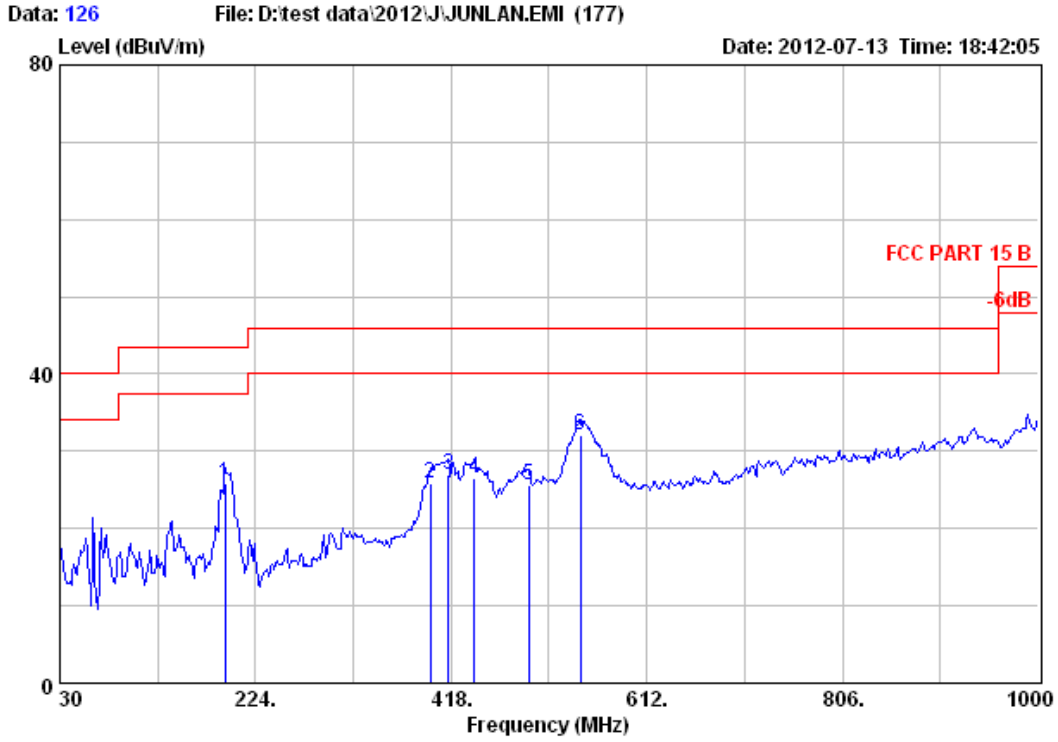


Site no. : 3m Chamber Data no. : 126
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 193.93 | 7.76 | 4.21 | 13.81 | 25.78 | 43.50 | 17.72 | QP |
| 2 | 397.63 | 15.96 | 5.96 | 3.84 | 25.76 | 46.00 | 20.24 | QP |
| 3 | 415.09 | 16.30 | 6.17 | 4.58 | 27.05 | 46.00 | 18.95 | QP |
| 4 | 441.28 | 16.27 | 6.31 | 4.03 | 26.61 | 46.00 | 19.39 | QP |
| 5 | 494.63 | 17.84 | 6.70 | 1.16 | 25.70 | 46.00 | 20.30 | QP |
| 6 | 546.04 | 19.45 | 7.05 | 5.54 | 32.04 | 46.00 | 13.96 | QP |

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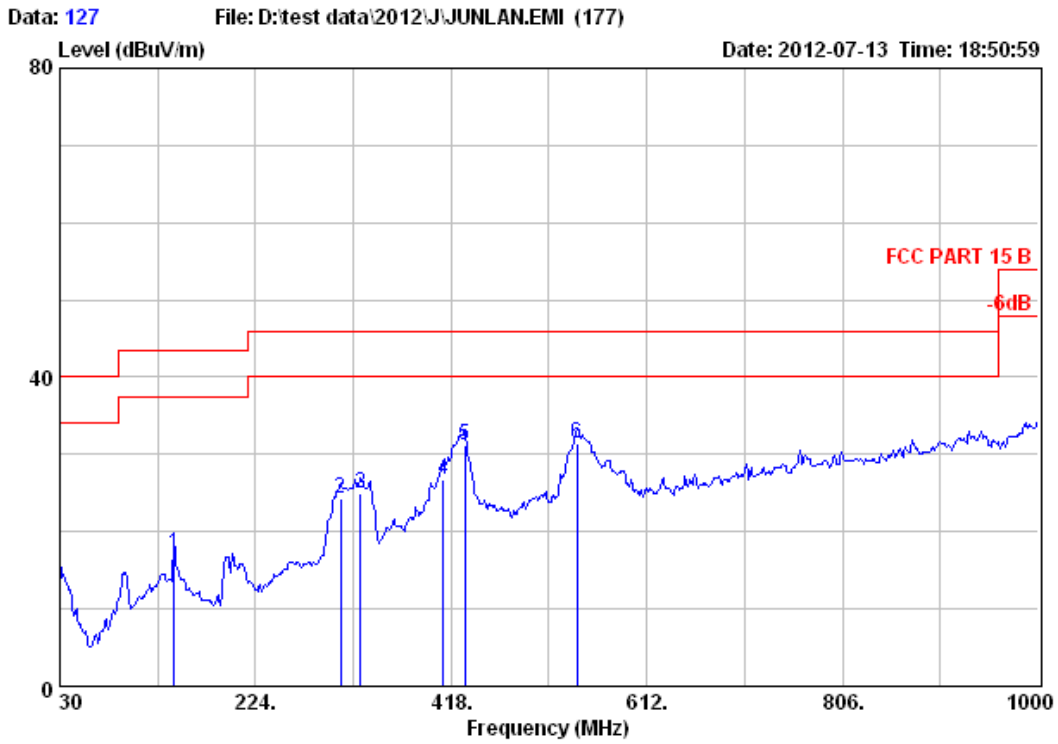


Site no. : 3m Chamber Data no. : 127
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 143.49 | 11.29 | 3.71 | 2.11 | 17.11 | 43.50 | 26.39 | QP |
| 2 | 308.39 | 13.17 | 5.30 | 5.90 | 24.37 | 46.00 | 21.63 | QP |
| 3 | 327.79 | 13.79 | 5.45 | 5.72 | 24.96 | 46.00 | 21.04 | QP |
| 4 | 410.24 | 16.29 | 6.10 | 4.32 | 26.71 | 46.00 | 19.29 | QP |
| 5 | 431.58 | 16.09 | 6.26 | 8.91 | 31.26 | 46.00 | 14.74 | QP |
| 6 | 543.13 | 19.46 | 7.02 | 4.85 | 31.33 | 46.00 | 14.67 | QP |

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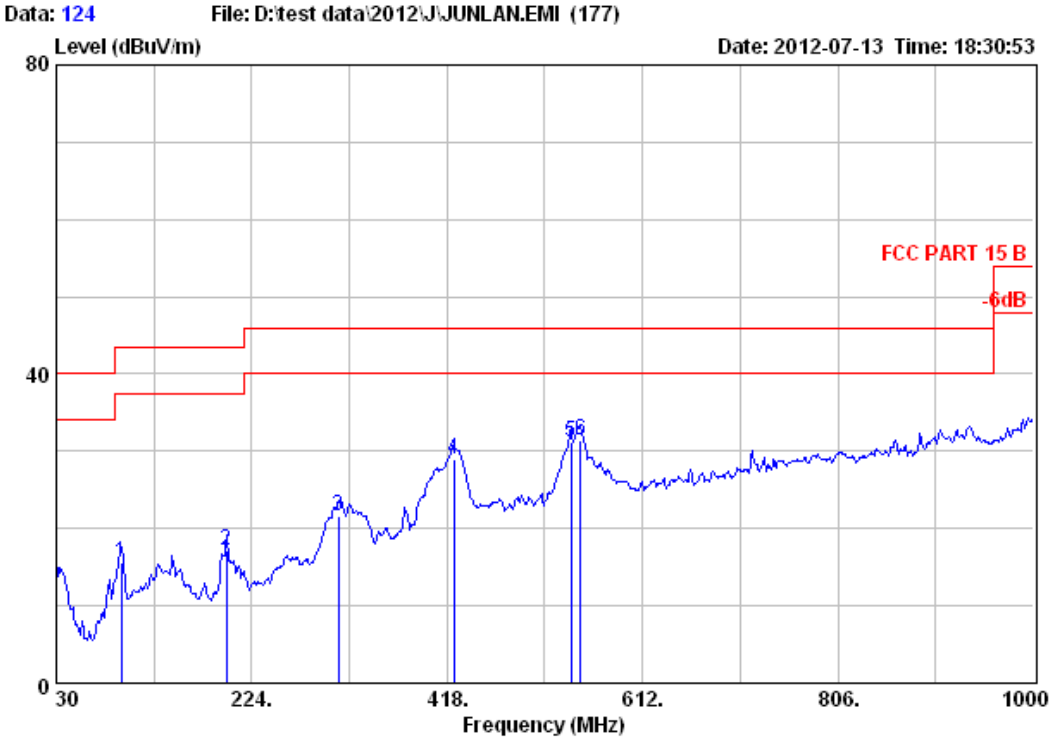


Site no. : 3m Chamber Data no. : 124
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 94.99 | 8.83 | 2.99 | 3.69 | 15.51 | 43.50 | 27.99 | QP |
| 2 | 198.78 | 7.71 | 4.24 | 5.15 | 17.10 | 43.50 | 26.40 | QP |
| 3 | 310.33 | 13.20 | 5.32 | 3.12 | 21.64 | 46.00 | 24.36 | QP |
| 4 | 424.79 | 16.18 | 6.24 | 6.54 | 28.96 | 46.00 | 17.04 | QP |
| 5 | 541.19 | 19.46 | 7.00 | 4.77 | 31.23 | 46.00 | 14.77 | QP |
| 6 | 550.89 | 19.48 | 7.06 | 4.91 | 31.45 | 46.00 | 14.55 | QP |

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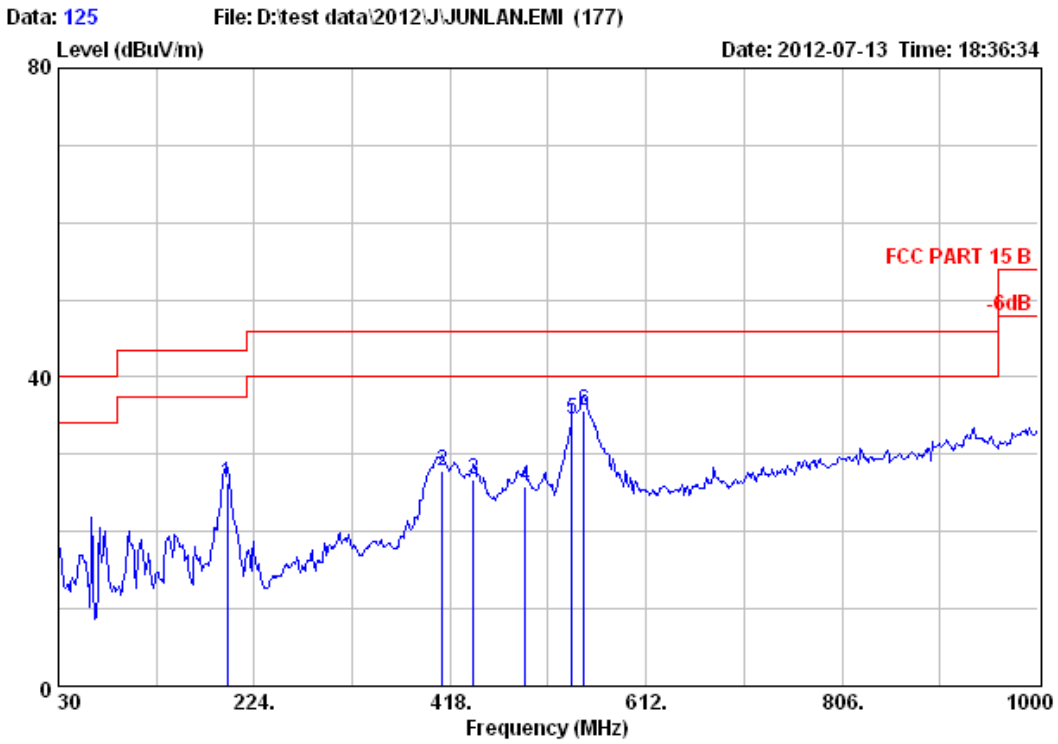


Site no. : 3m Chamber Data no. : 125
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 196.84 | 7.72 | 4.26 | 14.41 | 26.39 | 43.50 | 17.11 | QP |
| 2 | 410.24 | 16.29 | 6.10 | 5.37 | 27.76 | 46.00 | 18.24 | QP |
| 3 | 441.28 | 16.27 | 6.31 | 4.23 | 26.81 | 46.00 | 19.19 | QP |
| 4 | 492.69 | 17.83 | 6.69 | 1.39 | 25.91 | 46.00 | 20.09 | QP |
| 5 | 538.28 | 19.24 | 6.97 | 8.40 | 34.61 | 46.00 | 11.39 | QP |
| 6 | 550.89 | 19.48 | 7.06 | 9.18 | 35.72 | 46.00 | 10.28 | QP |

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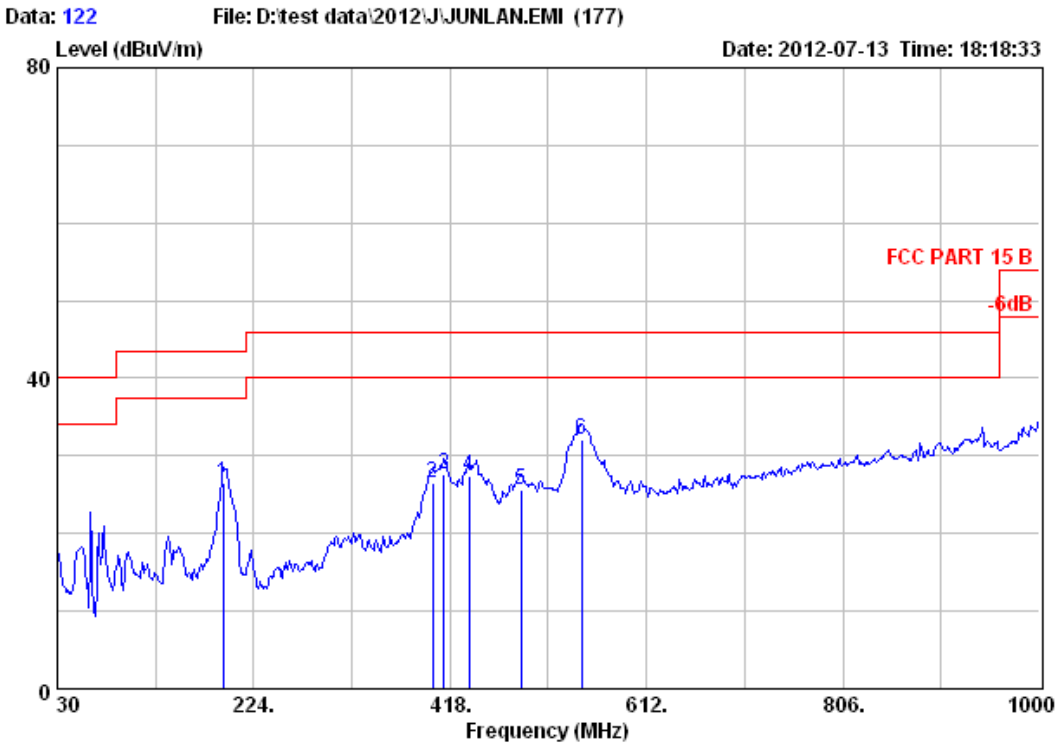


```
Site no.      : 3m Chamber                  Data no. : 122
Dis. / Ant.   : 3m   27137                  Ant. pol. : VERTICAL
Limit         : FCC PART 15 B
Env. / Ins.   : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer      : Tony
EUT           : BLUETOOTH iPAD iTOWER SPEAKER
Power         : AC 120V/60Hz
M/N           : BITS-1/5616
Test Mode     : π/4-DQPSK TX 2480MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 193.93 | 7.76 | 4.21 | 14.52 | 26.49 | 43.50 | 17.01 | QP |
| 2 | 400.54 | 16.07 | 5.98 | 4.55 | 26.60 | 46.00 | 19.40 | QP |
| 3 | 412.18 | 16.29 | 6.13 | 5.18 | 27.60 | 46.00 | 18.40 | QP |
| 4 | 436.43 | 16.18 | 6.29 | 4.93 | 27.40 | 46.00 | 18.60 | QP |
| 5 | 487.84 | 17.74 | 6.69 | 1.16 | 25.59 | 46.00 | 20.41 | QP |
| 6 | 547.98 | 19.45 | 7.04 | 5.66 | 32.15 | 46.00 | 13.85 | QP |

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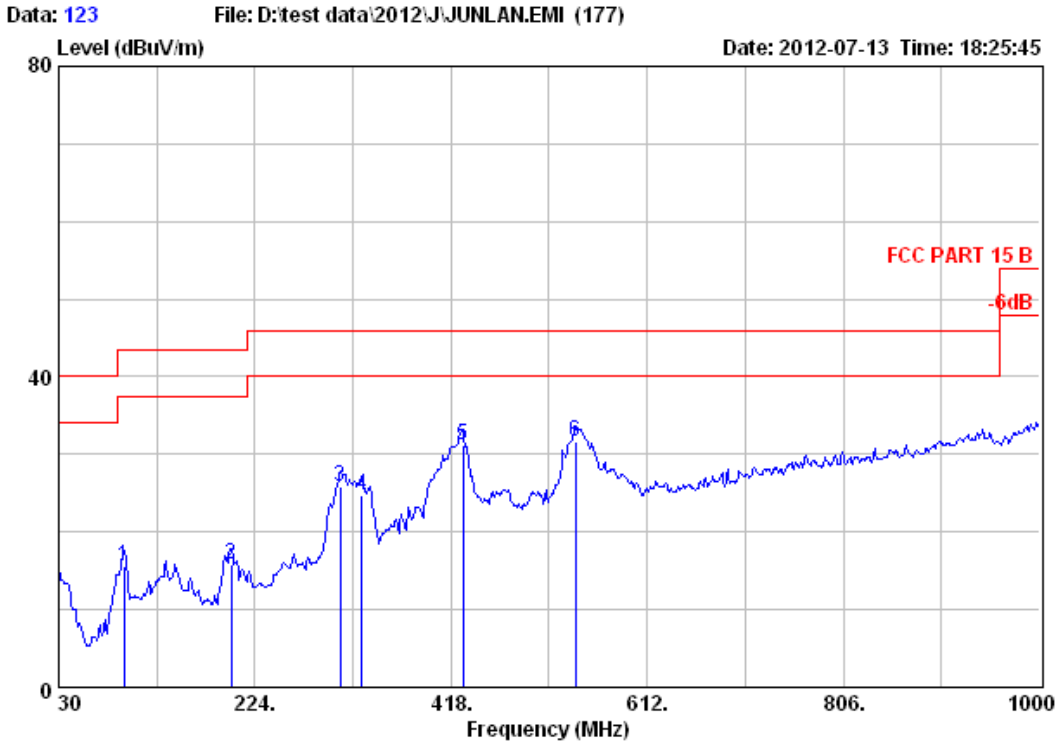


Site no. : 3m Chamber Data no. : 123
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 94.99 | 8.83 | 2.99 | 3.76 | 15.58 | 43.50 | 27.92 | QP |
| 2 | 200.72 | 7.75 | 4.30 | 3.75 | 15.80 | 43.50 | 27.70 | QP |
| 3 | 308.39 | 13.17 | 5.30 | 7.28 | 25.75 | 46.00 | 20.25 | QP |
| 4 | 329.73 | 13.85 | 5.47 | 5.36 | 24.68 | 46.00 | 21.32 | QP |
| 5 | 429.64 | 16.06 | 6.25 | 8.86 | 31.17 | 46.00 | 14.83 | QP |
| 6 | 541.19 | 19.46 | 7.00 | 5.23 | 31.69 | 46.00 | 14.31 | QP |

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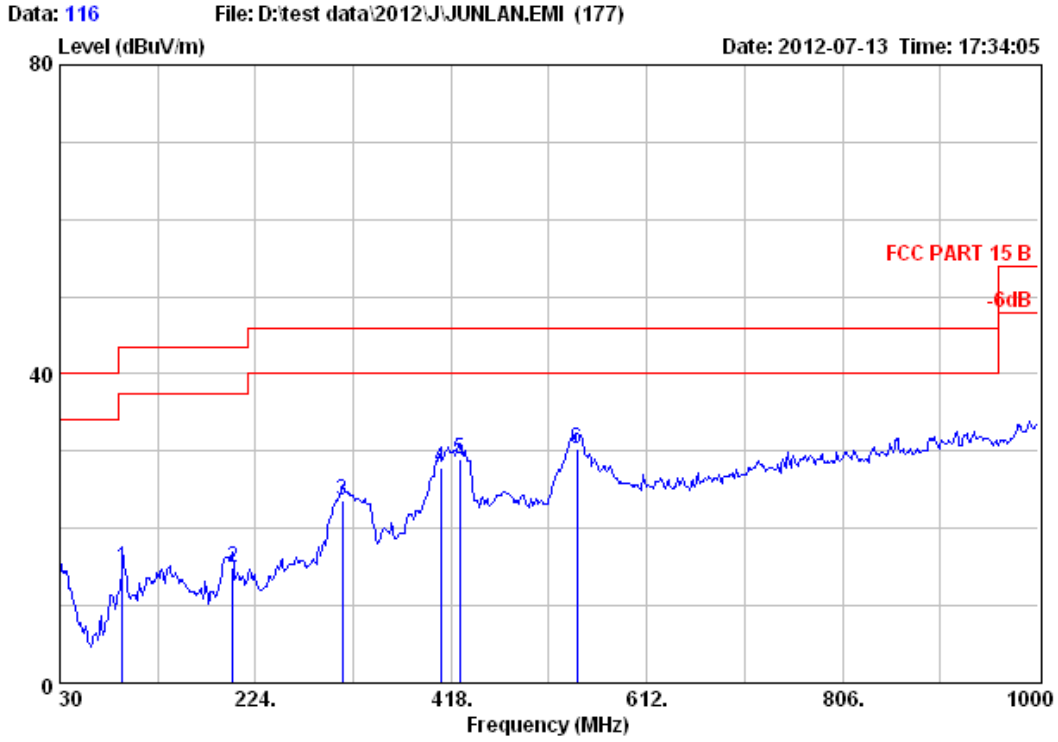


Site no. : 3m Chamber Data no. : 116
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 92.08 | 8.45 | 2.99 | 3.54 | 14.98 | 43.50 | 28.52 | QP |
| 2 | 201.69 | 7.79 | 4.30 | 2.83 | 14.92 | 43.50 | 28.58 | QP |
| 3 | 310.33 | 13.20 | 5.32 | 5.01 | 23.53 | 46.00 | 22.47 | QP |
| 4 | 407.33 | 16.22 | 6.08 | 5.55 | 27.85 | 46.00 | 18.15 | QP |
| 5 | 426.73 | 16.13 | 6.25 | 6.68 | 29.06 | 46.00 | 16.94 | QP |
| 6 | 543.13 | 19.46 | 7.02 | 3.73 | 30.21 | 46.00 | 15.79 | QP |

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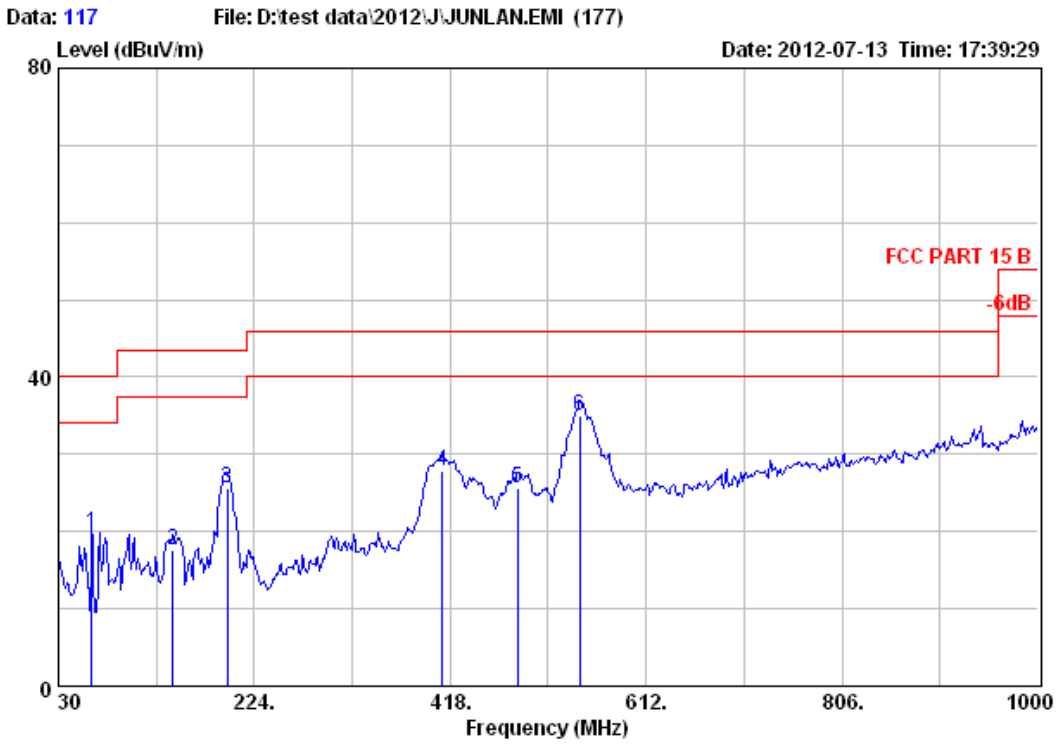


Site no. : 3m Chamber Data no. : 117
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 62.98 | 4.82 | 2.63 | 12.38 | 19.83 | 40.00 | 20.17 | QP |
| 2 | 143.49 | 11.29 | 3.71 | 2.54 | 17.54 | 43.50 | 25.96 | QP |
| 3 | 196.84 | 7.72 | 4.26 | 13.68 | 25.66 | 43.50 | 17.84 | QP |
| 4 | 410.24 | 16.29 | 6.10 | 5.52 | 27.91 | 46.00 | 18.09 | QP |
| 5 | 484.93 | 17.63 | 6.67 | 1.41 | 25.71 | 46.00 | 20.29 | QP |
| 6 | 546.04 | 19.45 | 7.05 | 8.60 | 35.10 | 46.00 | 10.90 | QP |

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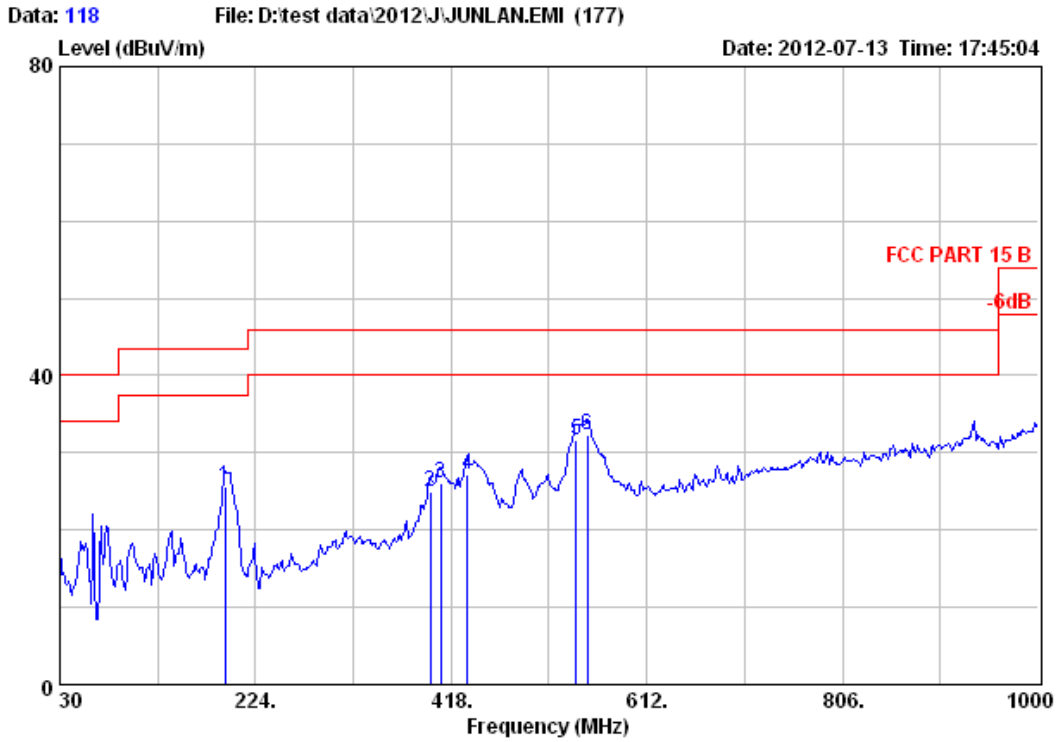


Site no. : 3m Chamber Data no. : 118
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 193.93 | 7.76 | 4.21 | 13.65 | 25.62 | 43.50 | 17.88 | QP |
| 2 | 397.63 | 15.96 | 5.96 | 3.08 | 25.00 | 46.00 | 21.00 | QP |
| 3 | 407.33 | 16.22 | 6.08 | 3.80 | 26.10 | 46.00 | 19.90 | QP |
| 4 | 434.49 | 16.15 | 6.27 | 4.83 | 27.25 | 46.00 | 18.75 | QP |
| 5 | 542.16 | 19.46 | 7.01 | 5.18 | 31.65 | 46.00 | 14.35 | QP |
| 6 | 552.83 | 19.53 | 7.07 | 5.70 | 32.30 | 46.00 | 13.70 | QP |

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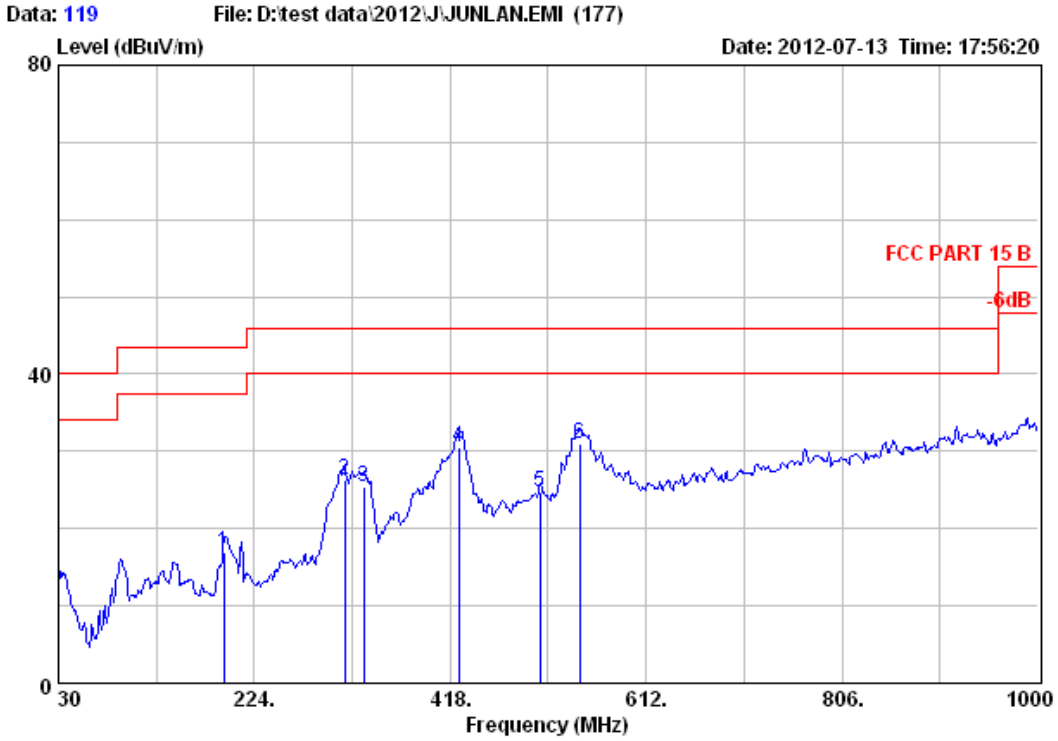


Site no. : 3m Chamber Data no. : 119
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 193.93 | 7.76 | 4.21 | 4.90 | 16.87 | 43.50 | 26.63 | QP |
| 2 | 313.24 | 13.31 | 5.34 | 7.59 | 26.24 | 46.00 | 19.76 | QP |
| 3 | 332.64 | 13.93 | 5.52 | 5.85 | 25.30 | 46.00 | 20.70 | QP |
| 4 | 426.73 | 16.13 | 6.25 | 8.21 | 30.59 | 46.00 | 15.41 | QP |
| 5 | 507.24 | 17.92 | 6.79 | 0.06 | 24.77 | 46.00 | 21.23 | QP |
| 6 | 546.04 | 19.45 | 7.05 | 4.38 | 30.88 | 46.00 | 15.12 | QP |

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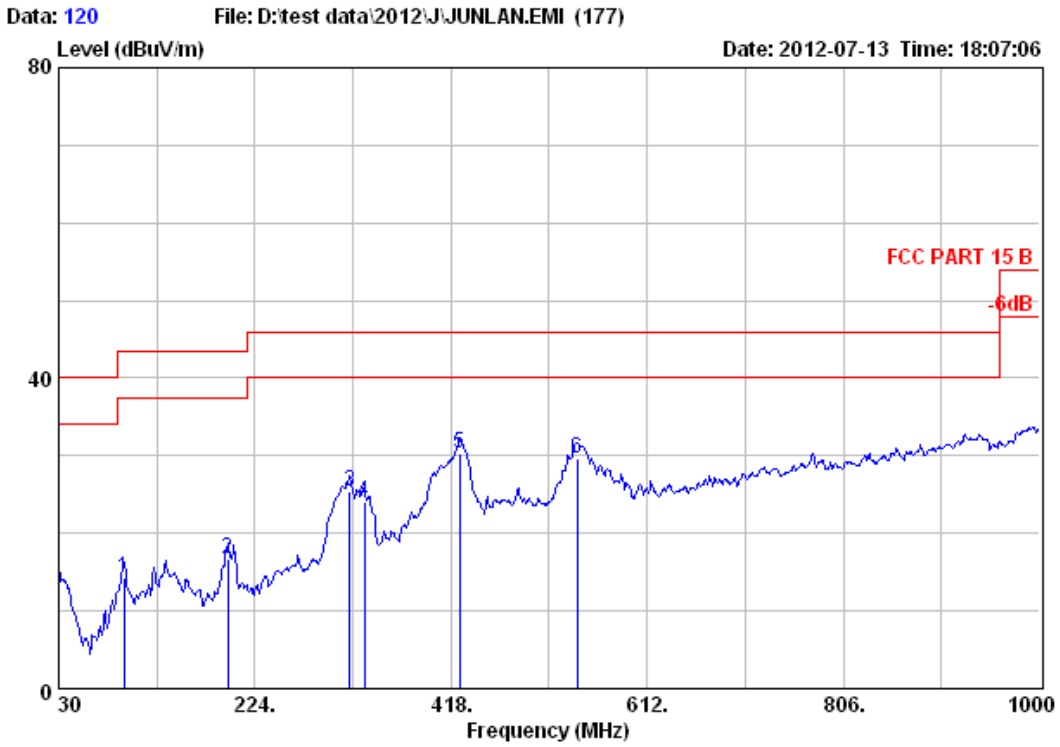


Site no. : 3m Chamber Data no. : 120
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 94.99 | 8.83 | 2.99 | 2.40 | 14.22 | 43.50 | 29.28 | QP |
| 2 | 196.84 | 7.72 | 4.26 | 4.75 | 16.73 | 43.50 | 26.77 | QP |
| 3 | 318.09 | 13.50 | 5.36 | 6.44 | 25.30 | 46.00 | 20.70 | QP |
| 4 | 332.64 | 13.93 | 5.52 | 4.56 | 24.01 | 46.00 | 21.99 | QP |
| 5 | 426.73 | 16.13 | 6.25 | 7.89 | 30.27 | 46.00 | 15.73 | QP |
| 6 | 543.13 | 19.46 | 7.02 | 3.12 | 29.60 | 46.00 | 16.40 | QP |

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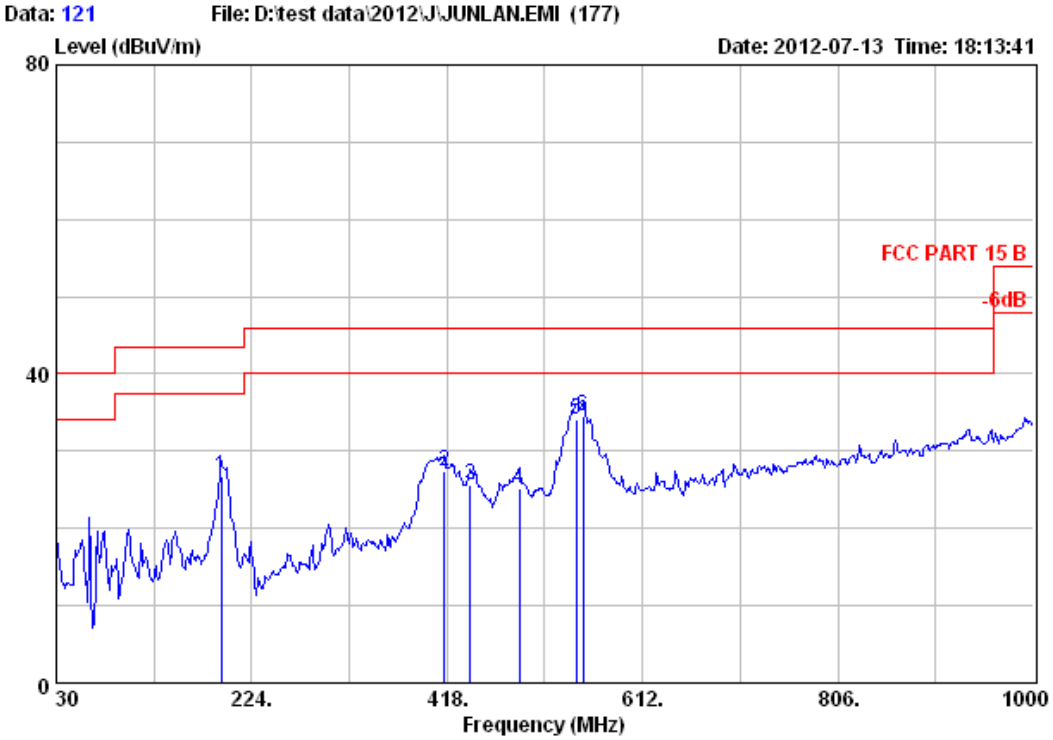


Site no. : 3m Chamber Data no. : 121
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
Limit : FCC PART 15 B
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Reamark (dB) |
|---|---|---|---|---|---|---|---|---|
| 1 | 193.93 | 7.76 | 4.21 | 14.79 | 26.76 | 43.50 | 16.74 | QP |
| 2 | 415.09 | 16.30 | 6.17 | 4.84 | 27.31 | 46.00 | 18.69 | QP |
| 3 | 441.28 | 16.27 | 6.31 | 2.95 | 25.53 | 46.00 | 20.47 | QP |
| 4 | 489.78 | 17.81 | 6.70 | 0.69 | 25.20 | 46.00 | 20.80 | QP |
| 5 | 546.04 | 19.45 | 7.05 | 7.66 | 34.16 | 46.00 | 11.84 | QP |
| 6 | 552.83 | 19.53 | 7.07 | 7.93 | 34.53 | 46.00 | 11.47 | QP |

**1000 MHz – 18000MHz**

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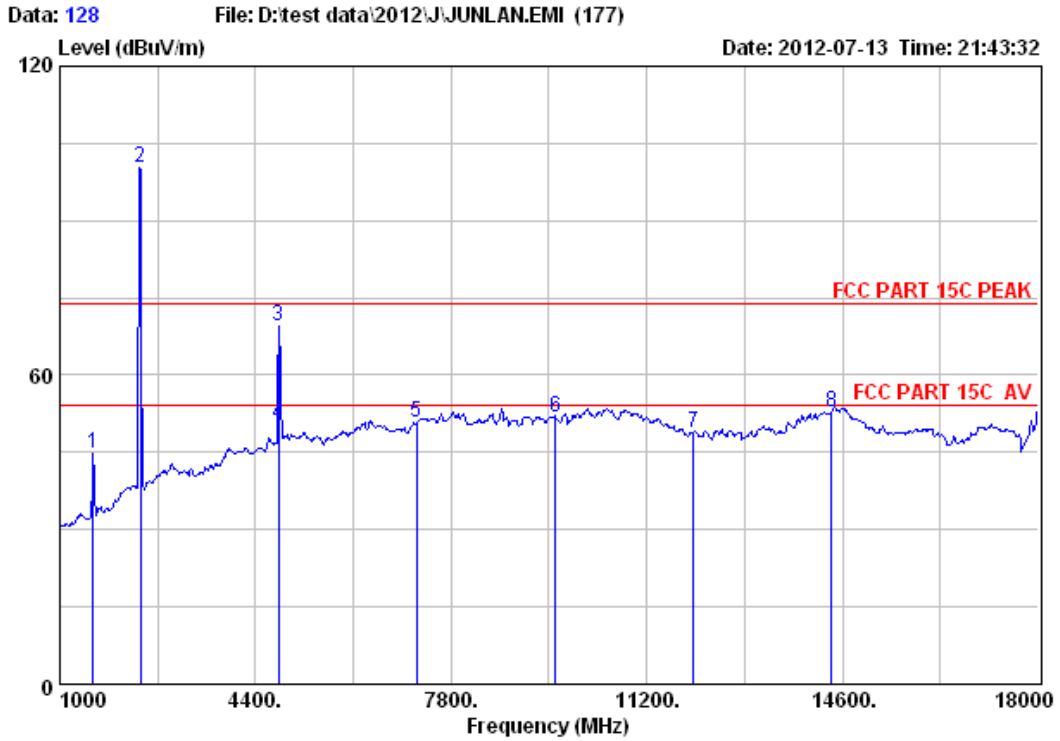


```
Site no.      : 3m Chamber                  Data no. : 128
Dis. / Ant.   : 3m   ANT 1-18G              Ant. pol. : VERTICAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer      : Tony
EUT           : BLUETOOTH iPAD iTOWER SPEAKER
Power         : AC 120V/60Hz
M/N           : BITS-1/5616
Test Mode     : GFSK TX 2402MHz
```

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1578.00 | 24.86 | 4.63 | 34.46 | 49.91 | 44.94 | 74.00 | 29.06 | Peak |
| 2 | 2402.00 | 27.61 | 6.62 | 34.18 | 100.08 | 100.13 | 74.00 | -26.13 | Peak |
| 3 | 4804.00 | 31.25 | 11.77 | 31.81 | 58.26 | 69.47 | 74.00 | 4.53 | Peak |
| 4 | 4804.00 | 31.25 | 11.77 | 31.81 | 39.26 | 50.47 | 54.00 | 3.53 | Average |
| 5 | 7206.00 | 36.52 | 11.54 | 32.11 | 34.80 | 50.75 | 74.00 | 23.25 | Peak |
| 6 | 9608.00 | 37.91 | 11.69 | 31.93 | 34.25 | 51.92 | 74.00 | 22.08 | Peak |
| 7 | 12010.00 | 38.62 | 11.40 | 35.53 | 34.48 | 48.97 | 74.00 | 25.03 | Peak |
| 8 | 14412.00 | 41.80 | 10.92 | 32.78 | 32.72 | 52.66 | 74.00 | 21.34 | Peak |

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

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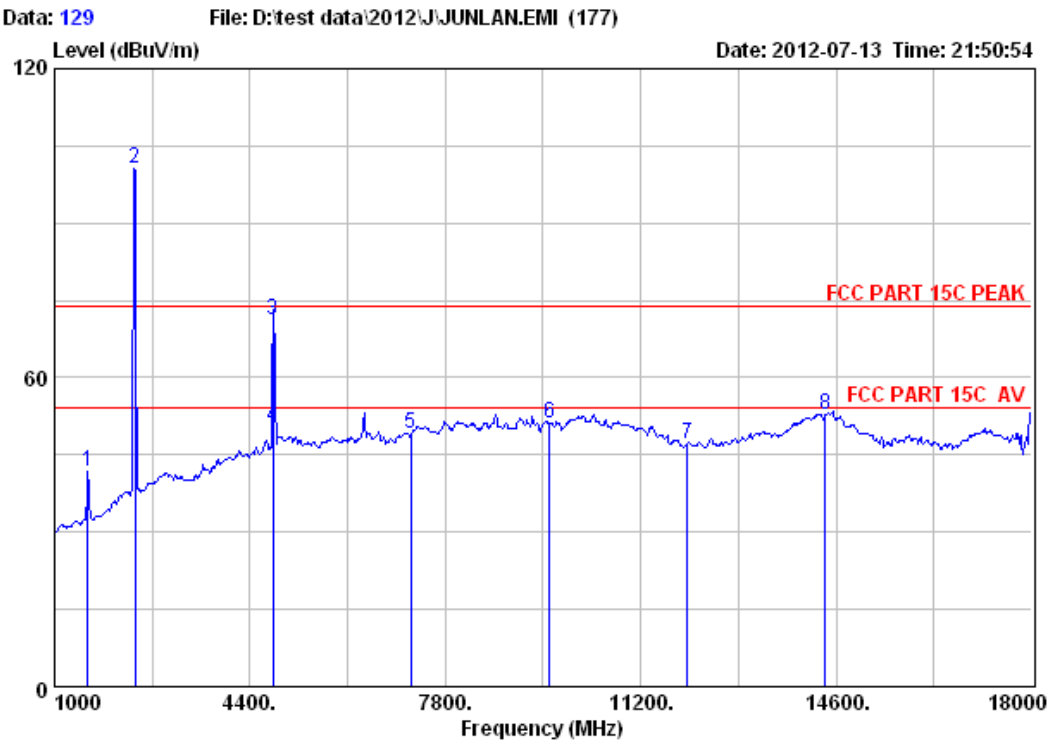


Site no. : 3m Chamber Data no. : 129
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1578.00 | 24.86 | 4.63 | 34.46 | 46.81 | 41.84 | 74.00 | 32.16 | Peak |
| 2 | 2402.00 | 27.61 | 6.62 | 34.18 | 100.65 | 100.70 | 74.00 | -26.70 | Peak |
| 3 | 4804.00 | 31.25 | 11.77 | 31.81 | 60.15 | 71.36 | 74.00 | 2.64 | Peak |
| 4 | 4804.00 | 31.25 | 11.77 | 31.81 | 39.15 | 50.36 | 54.00 | 3.64 | Average |
| 5 | 7206.00 | 36.52 | 11.54 | 32.11 | 33.10 | 49.05 | 74.00 | 24.95 | Peak |
| 6 | 9608.00 | 37.91 | 11.69 | 31.93 | 33.54 | 51.21 | 74.00 | 22.79 | Peak |
| 7 | 12010.00 | 38.62 | 11.40 | 35.53 | 32.79 | 47.28 | 74.00 | 26.72 | Peak |
| 8 | 14412.00 | 41.80 | 10.92 | 32.78 | 32.83 | 52.77 | 74.00 | 21.23 | Peak |

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

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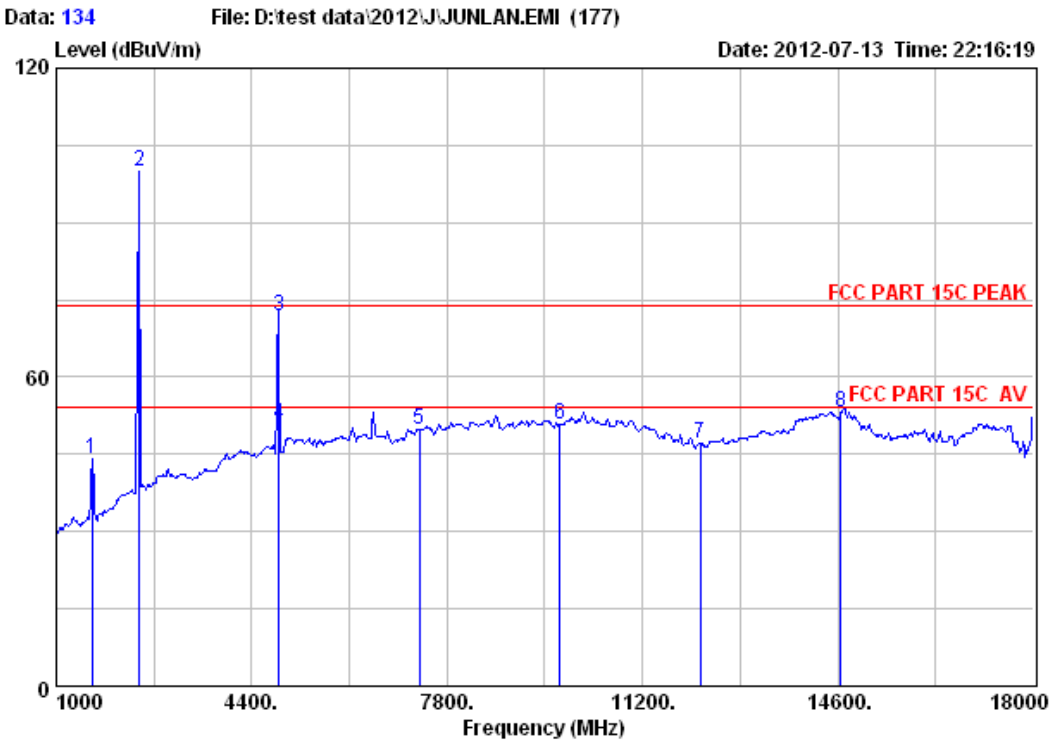


Site no. : 3m Chamber Data no. : 134
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 48.89 | 44.07 | 74.00 | 29.93 | Peak |
| 2 | 2441.00 | 27.60 | 6.67 | 34.12 | 99.77 | 99.92 | 74.00 | -25.92 | Peak |
| 3 | 4882.00 | 31.37 | 12.07 | 31.90 | 60.33 | 71.87 | 74.00 | 2.13 | Peak |
| 4 | 4882.00 | 31.37 | 12.07 | 31.90 | 39.26 | 50.80 | 54.00 | 3.20 | Average |
| 5 | 7323.00 | 36.55 | 11.57 | 31.99 | 33.67 | 49.80 | 74.00 | 24.20 | Peak |
| 6 | 9764.00 | 38.13 | 11.64 | 31.86 | 32.81 | 50.72 | 74.00 | 23.28 | Peak |
| 7 | 12205.00 | 38.68 | 11.20 | 35.71 | 32.99 | 47.16 | 74.00 | 26.84 | Peak |
| 8 | 14646.00 | 41.42 | 10.91 | 33.62 | 34.29 | 53.00 | 74.00 | 21.00 | 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.

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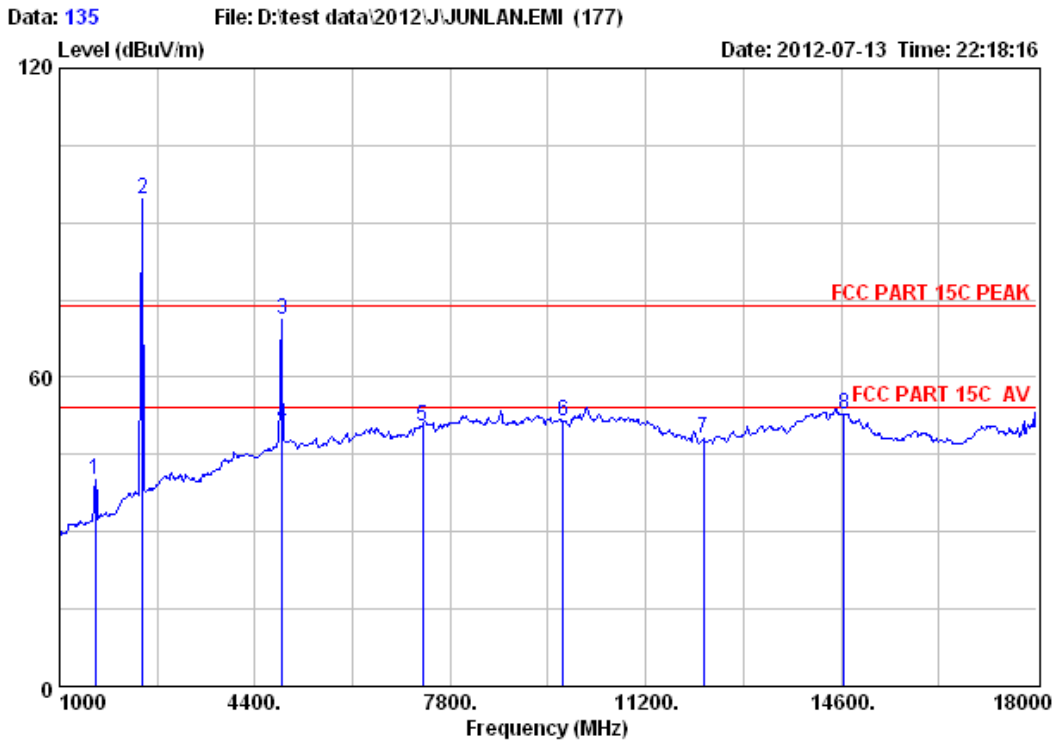


Site no. : 3m Chamber Data no. : 135
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 45.10 | 40.28 | 74.00 | 33.72 | Peak |
| 2 | 2441.00 | 27.60 | 6.67 | 34.12 | 94.60 | 94.75 | 74.00 | -20.75 | Peak |
| 3 | 4882.00 | 31.37 | 12.07 | 31.90 | 59.69 | 71.23 | 74.00 | 2.77 | Peak |
| 4 | 4882.00 | 31.37 | 12.07 | 31.90 | 39.16 | 50.70 | 54.00 | 3.30 | Average |
| 5 | 7323.00 | 36.55 | 11.57 | 31.99 | 34.45 | 50.58 | 74.00 | 23.42 | Peak |
| 6 | 9764.00 | 38.13 | 11.64 | 31.86 | 33.65 | 51.56 | 74.00 | 22.44 | Peak |
| 7 | 12205.00 | 38.68 | 11.20 | 35.71 | 33.83 | 48.00 | 74.00 | 26.00 | Peak |
| 8 | 14646.00 | 41.42 | 10.91 | 33.62 | 34.07 | 52.78 | 74.00 | 21.22 | 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.

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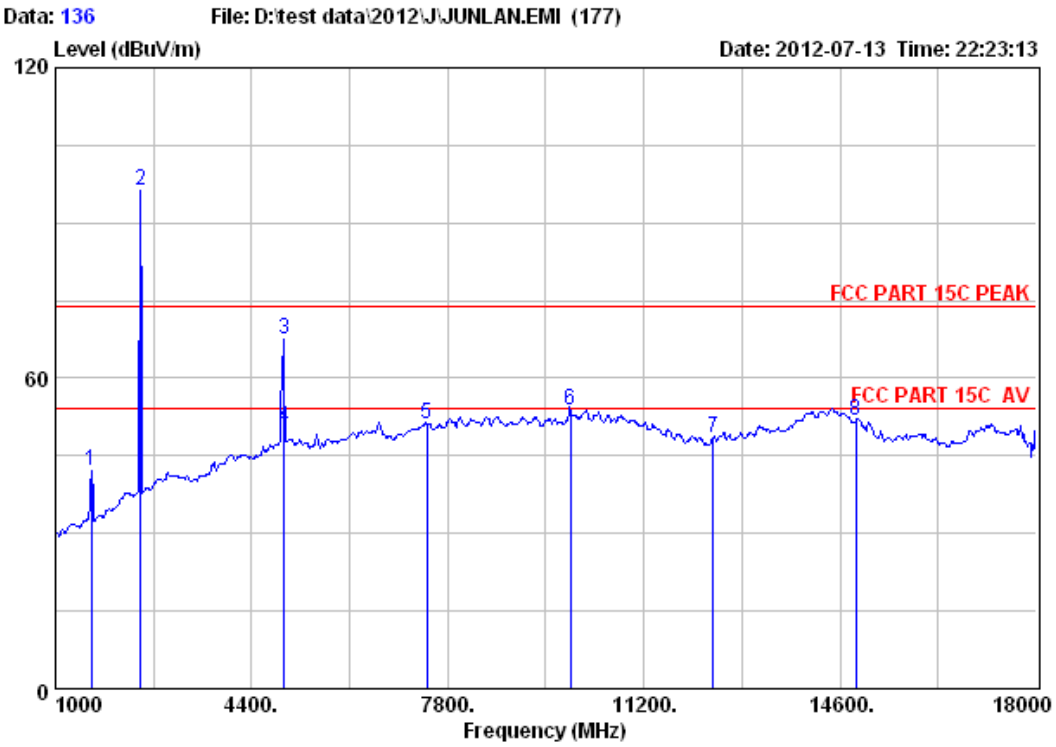


Site no. : 3m Chamber Data no. : 136
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 46.90 | 42.08 | 74.00 | 31.92 | Peak |
| 2 | 2480.00 | 27.58 | 6.71 | 34.03 | 96.08 | 96.34 | 74.00 | -22.34 | Peak |
| 3 | 4960.00 | 31.49 | 12.44 | 31.97 | 55.57 | 67.53 | 74.00 | 6.47 | Peak |
| 4 | 4960.00 | 31.49 | 12.44 | 31.97 | 38.64 | 50.60 | 54.00 | 3.40 | Average |
| 5 | 7440.00 | 36.54 | 11.61 | 31.93 | 34.92 | 51.14 | 74.00 | 22.86 | Peak |
| 6 | 9920.00 | 38.14 | 11.61 | 31.76 | 35.89 | 53.88 | 74.00 | 20.12 | Peak |
| 7 | 12400.00 | 38.73 | 10.99 | 35.36 | 34.25 | 48.61 | 74.00 | 25.39 | Peak |
| 8 | 14880.00 | 40.59 | 10.88 | 34.45 | 34.78 | 51.80 | 74.00 | 22.20 | Peak |

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

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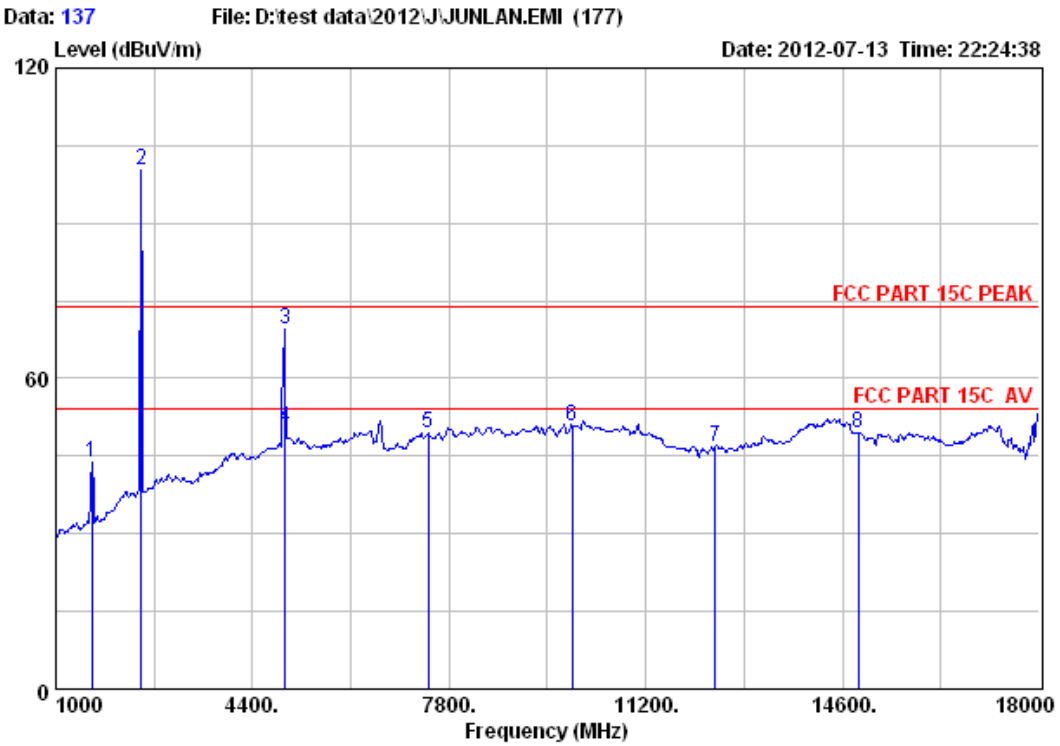


Site no. : 3m Chamber Data no. : 137
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 48.65 | 43.83 | 74.00 | 30.17 | Peak |
| 2 | 2480.00 | 27.58 | 6.71 | 34.03 | 99.91 | 100.17 | 74.00 | -26.17 | Peak |
| 3 | 4960.00 | 31.49 | 12.44 | 31.97 | 57.72 | 69.68 | 74.00 | 4.32 | Peak |
| 4 | 4960.00 | 31.49 | 12.44 | 31.97 | 38.54 | 50.50 | 54.00 | 3.50 | Average |
| 5 | 7440.00 | 36.54 | 11.61 | 31.93 | 33.16 | 49.38 | 74.00 | 24.62 | Peak |
| 6 | 9920.00 | 38.14 | 11.61 | 31.76 | 32.96 | 50.95 | 74.00 | 23.05 | Peak |
| 7 | 12400.00 | 38.73 | 10.99 | 35.36 | 32.57 | 46.93 | 74.00 | 27.07 | Peak |
| 8 | 14880.00 | 40.59 | 10.88 | 34.45 | 32.47 | 49.49 | 74.00 | 24.51 | 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.

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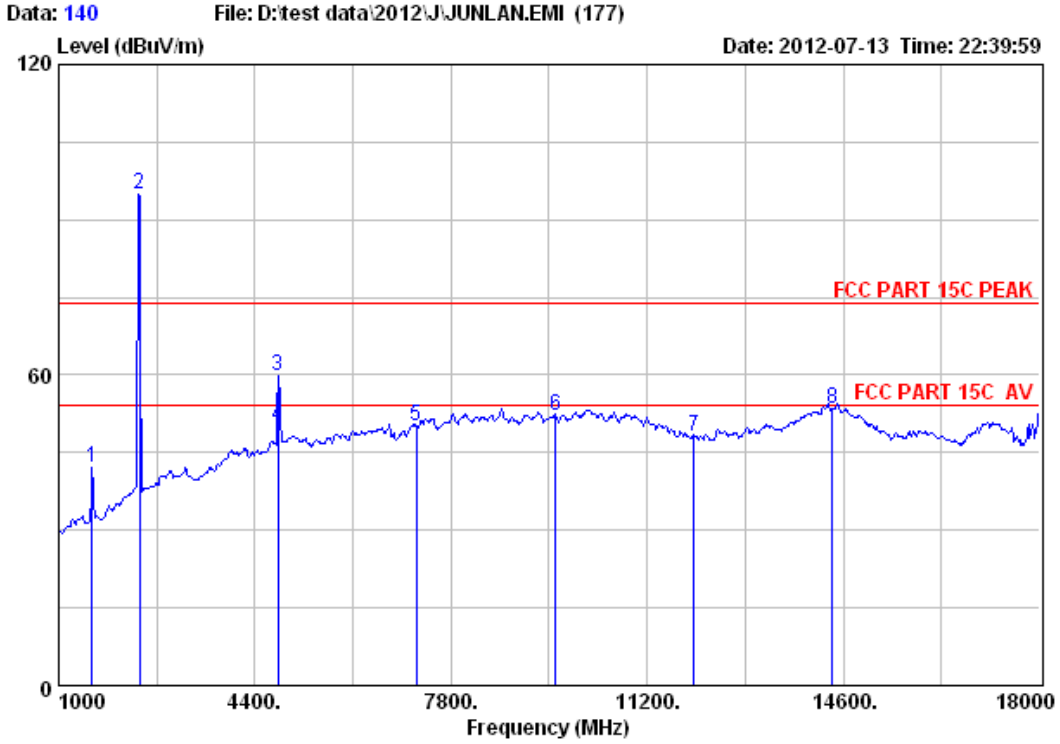


Site no. : 3m Chamber Data no. : 140
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1578.00 | 24.86 | 4.63 | 34.46 | 47.04 | 42.07 | 74.00 | 31.93 | Peak |
| 2 | 2402.00 | 27.61 | 6.62 | 34.18 | 94.91 | 94.96 | 74.00 | -20.96 | Peak |
| 3 | 4804.00 | 31.25 | 11.77 | 31.81 | 48.79 | 60.00 | 74.00 | 14.00 | Peak |
| 4 | 4804.00 | 31.25 | 11.77 | 31.81 | 38.79 | 50.00 | 54.00 | 4.00 | Average |
| 5 | 7206.00 | 36.52 | 11.54 | 32.11 | 34.22 | 50.17 | 74.00 | 23.83 | Peak |
| 6 | 9608.00 | 37.91 | 11.69 | 31.93 | 34.49 | 52.16 | 74.00 | 21.84 | Peak |
| 7 | 12010.00 | 38.62 | 11.40 | 35.53 | 33.77 | 48.26 | 74.00 | 25.74 | Peak |
| 8 | 14412.00 | 41.80 | 10.92 | 32.78 | 33.46 | 53.40 | 74.00 | 20.60 | Peak |

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

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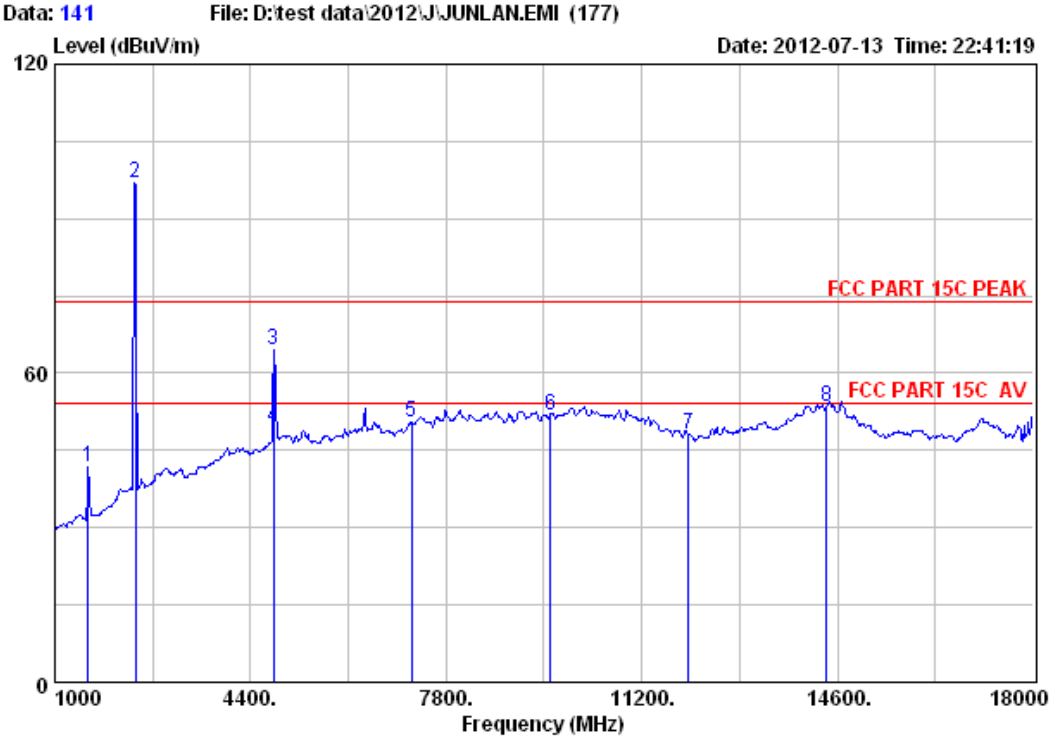


Site no. : 3m Chamber Data no. : 141
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1578.00 | 24.86 | 4.63 | 34.46 | 46.71 | 41.74 | 74.00 | 32.26 | Peak |
| 2 | 2402.00 | 27.61 | 6.62 | 34.18 | 96.77 | 96.82 | 74.00 | -22.82 | Peak |
| 3 | 4804.00 | 31.25 | 11.77 | 31.81 | 53.17 | 64.38 | 74.00 | 9.62 | Peak |
| 4 | 4804.00 | 31.25 | 11.77 | 31.81 | 38.17 | 49.38 | 54.00 | 4.62 | Average |
| 5 | 7206.00 | 36.52 | 11.54 | 32.11 | 34.46 | 50.41 | 74.00 | 23.59 | Peak |
| 6 | 9608.00 | 37.91 | 11.69 | 31.93 | 34.04 | 51.71 | 74.00 | 22.29 | Peak |
| 7 | 12010.00 | 38.62 | 11.40 | 35.53 | 33.72 | 48.21 | 74.00 | 25.79 | Peak |
| 8 | 14412.00 | 41.80 | 10.92 | 32.78 | 33.45 | 53.39 | 74.00 | 20.61 | Peak |

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

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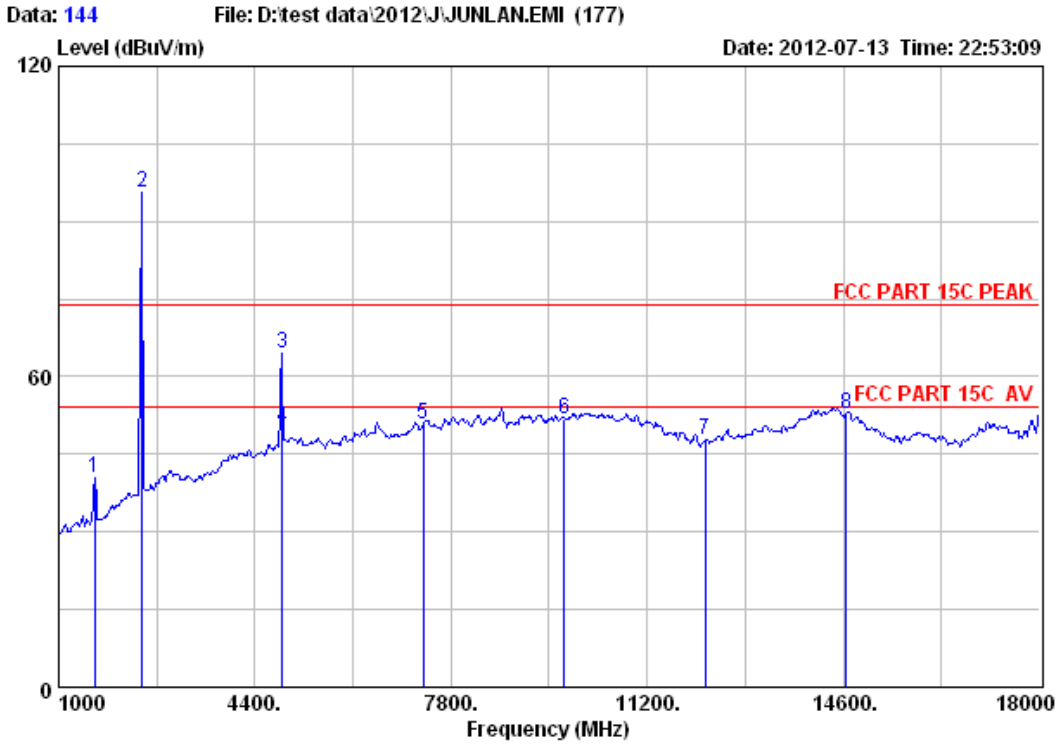


Site no. : 3m Chamber Data no. : 144
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 45.36 | 40.54 | 74.00 | 33.46 | Peak |
| 2 | 2441.00 | 27.60 | 6.67 | 34.12 | 95.41 | 95.56 | 74.00 | -21.56 | Peak |
| 3 | 4882.00 | 31.37 | 12.07 | 31.90 | 53.12 | 64.66 | 74.00 | 9.34 | Peak |
| 4 | 4882.00 | 31.37 | 12.07 | 31.90 | 38.46 | 50.00 | 54.00 | 4.00 | Average |
| 5 | 7323.00 | 36.55 | 11.57 | 31.99 | 34.79 | 50.92 | 74.00 | 23.08 | Peak |
| 6 | 9764.00 | 38.13 | 11.64 | 31.86 | 34.01 | 51.92 | 74.00 | 22.08 | Peak |
| 7 | 12205.00 | 38.68 | 11.20 | 35.71 | 33.62 | 47.79 | 74.00 | 26.21 | Peak |
| 8 | 14646.00 | 41.42 | 10.91 | 33.62 | 34.05 | 52.76 | 74.00 | 21.24 | Peak |

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

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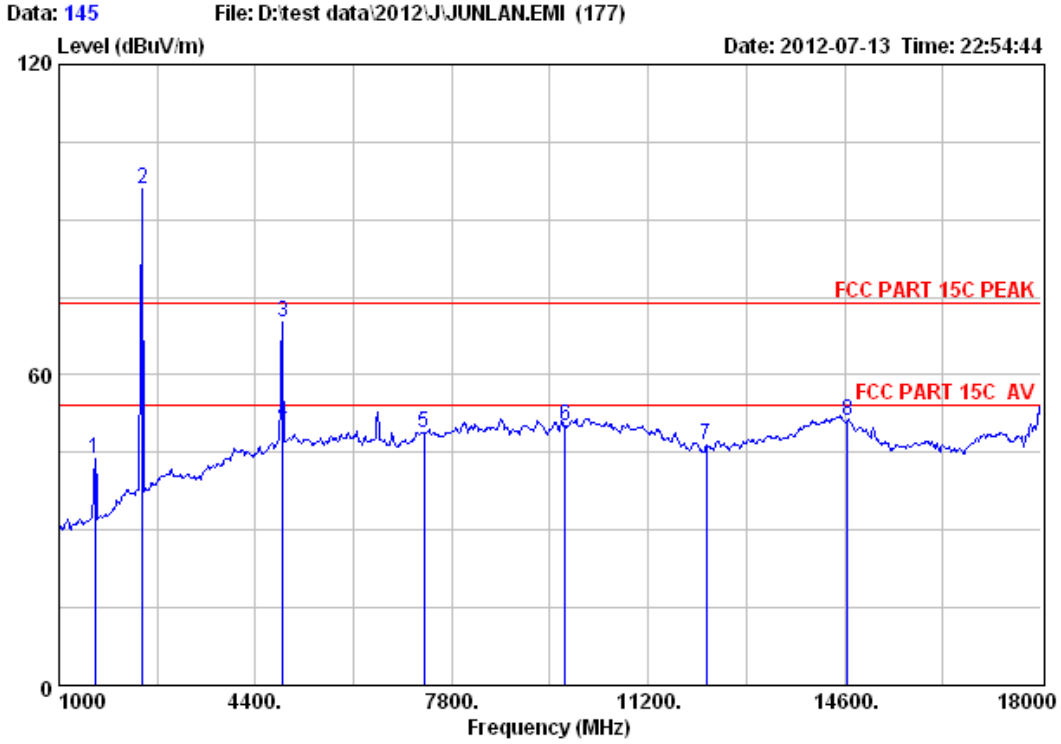


Site no. : 3m Chamber Data no. : 145
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 48.68 | 43.86 | 74.00 | 30.14 | Peak |
| 2 | 2441.00 | 27.60 | 6.67 | 34.12 | 95.82 | 95.97 | 74.00 | -21.97 | Peak |
| 3 | 4882.00 | 31.37 | 12.07 | 31.90 | 58.71 | 70.25 | 74.00 | 3.75 | Peak |
| 4 | 4882.00 | 31.37 | 12.07 | 31.90 | 39.36 | 50.90 | 54.00 | 3.10 | Average |
| 5 | 7323.00 | 36.55 | 11.57 | 31.99 | 32.57 | 48.70 | 74.00 | 25.30 | Peak |
| 6 | 9764.00 | 38.13 | 11.64 | 31.86 | 32.10 | 50.01 | 74.00 | 23.99 | Peak |
| 7 | 12205.00 | 38.68 | 11.20 | 35.71 | 32.15 | 46.32 | 74.00 | 27.68 | Peak |
| 8 | 14646.00 | 41.42 | 10.91 | 33.62 | 32.33 | 51.04 | 74.00 | 22.96 | Peak |

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

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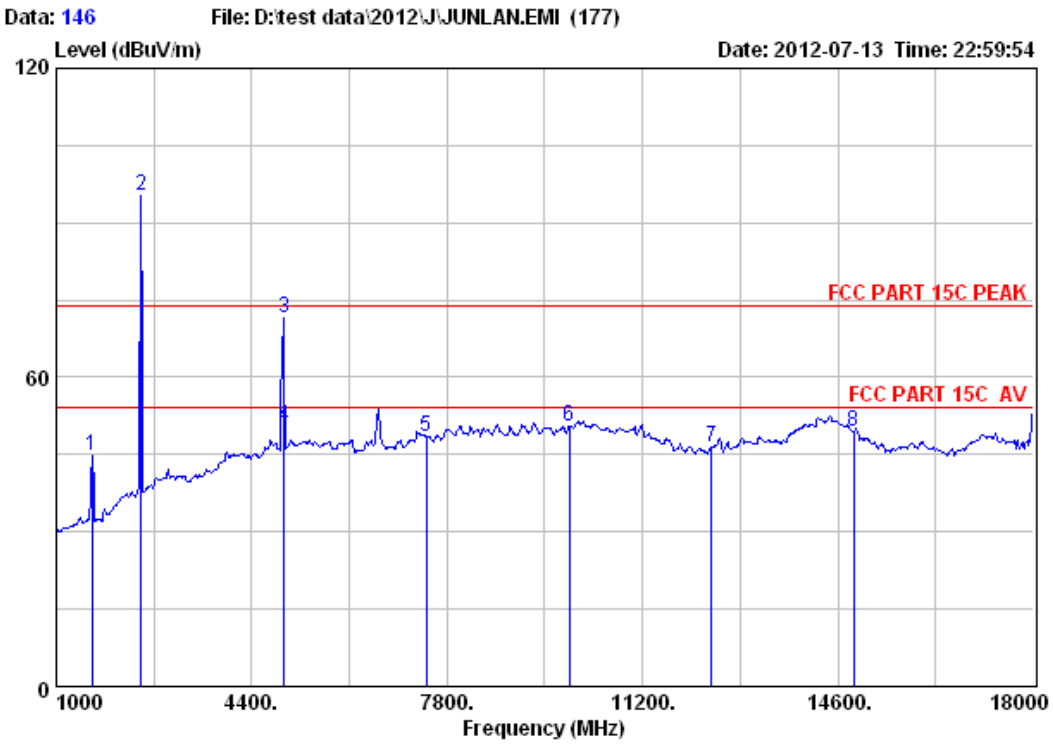


Site no. : 3m Chamber Data no. : 146
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 49.55 | 44.73 | 74.00 | 29.27 | Peak |
| 2 | 2480.00 | 27.58 | 6.71 | 34.03 | 95.01 | 95.27 | 74.00 | -21.27 | Peak |
| 3 | 4960.00 | 31.49 | 12.44 | 31.97 | 59.49 | 71.45 | 74.00 | 2.55 | Peak |
| 4 | 4960.00 | 31.49 | 12.44 | 31.97 | 38.49 | 50.45 | 54.00 | 3.55 | Average |
| 5 | 7440.00 | 36.54 | 11.61 | 31.93 | 32.08 | 48.30 | 74.00 | 25.70 | Peak |
| 6 | 9920.00 | 38.14 | 11.61 | 31.76 | 32.47 | 50.46 | 74.00 | 23.54 | Peak |
| 7 | 12400.00 | 38.73 | 10.99 | 35.36 | 31.96 | 46.32 | 74.00 | 27.68 | Peak |
| 8 | 14880.00 | 40.59 | 10.88 | 34.45 | 32.45 | 49.47 | 74.00 | 24.53 | Peak |

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

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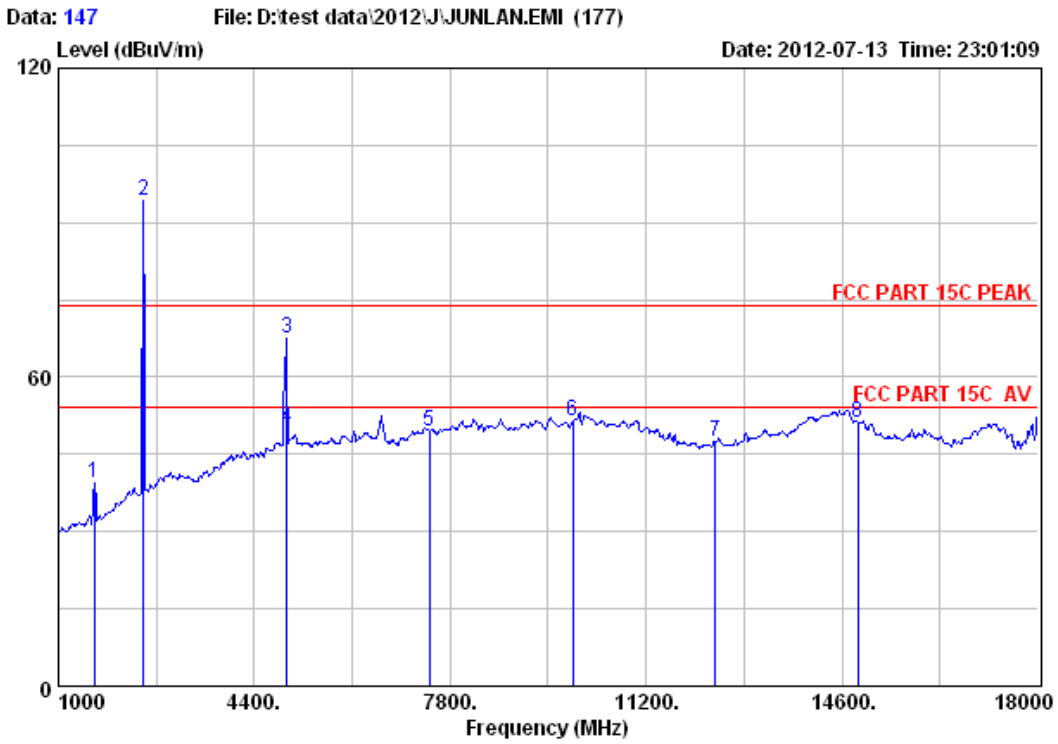


Site no. : 3m Chamber Data no. : 147
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 44.22 | 39.40 | 74.00 | 34.60 | Peak |
| 2 | 2480.00 | 27.58 | 6.71 | 34.03 | 94.04 | 94.30 | 74.00 | -20.30 | Peak |
| 3 | 4960.00 | 31.49 | 12.44 | 31.97 | 55.55 | 67.51 | 74.00 | 6.49 | Peak |
| 4 | 4960.00 | 31.49 | 12.44 | 31.97 | 38.34 | 50.30 | 54.00 | 3.70 | Average |
| 5 | 7440.00 | 36.54 | 11.61 | 31.93 | 33.40 | 49.62 | 74.00 | 24.38 | Peak |
| 6 | 9920.00 | 38.14 | 11.61 | 31.76 | 33.36 | 51.35 | 74.00 | 22.65 | Peak |
| 7 | 12400.00 | 38.73 | 10.99 | 35.36 | 33.12 | 47.48 | 74.00 | 26.52 | Peak |
| 8 | 14880.00 | 40.59 | 10.88 | 34.45 | 34.25 | 51.27 | 74.00 | 22.73 | Peak |

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

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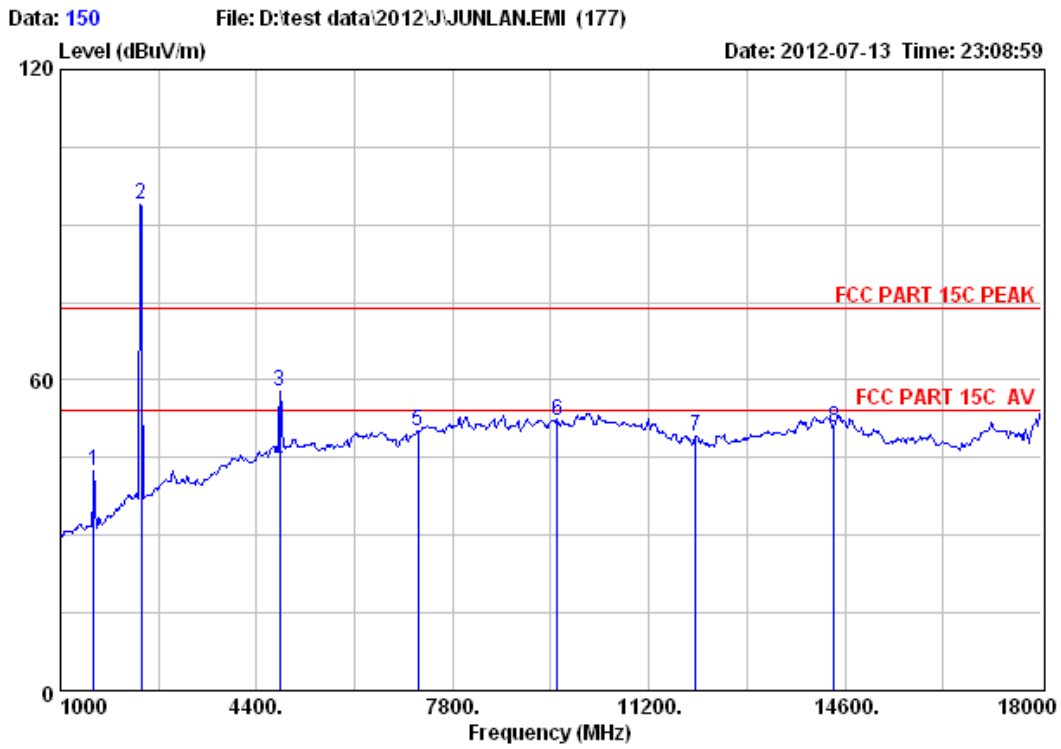


Site no. : 3m Chamber Data no. : 150
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1578.00 | 24.86 | 4.63 | 34.46 | 47.57 | 42.60 | 74.00 | 31.40 | Peak |
| 2 | 2402.00 | 27.61 | 6.62 | 34.18 | 93.75 | 93.80 | 74.00 | -19.80 | Peak |
| 3 | 4804.00 | 31.25 | 11.77 | 31.81 | 46.47 | 57.68 | 74.00 | 16.32 | Peak |
| 4 | 4804.00 | 31.25 | 11.77 | 31.81 | 32.79 | 44.00 | 54.00 | 10.00 | Average |
| 5 | 7206.00 | 36.52 | 11.54 | 32.11 | 34.23 | 50.18 | 74.00 | 23.82 | Peak |
| 6 | 9608.00 | 37.91 | 11.69 | 31.93 | 34.64 | 52.31 | 74.00 | 21.69 | Peak |
| 7 | 12010.00 | 38.62 | 11.40 | 35.53 | 34.48 | 48.97 | 74.00 | 25.03 | Peak |
| 8 | 14412.00 | 41.80 | 10.92 | 32.78 | 30.98 | 50.92 | 74.00 | 23.08 | Peak |

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

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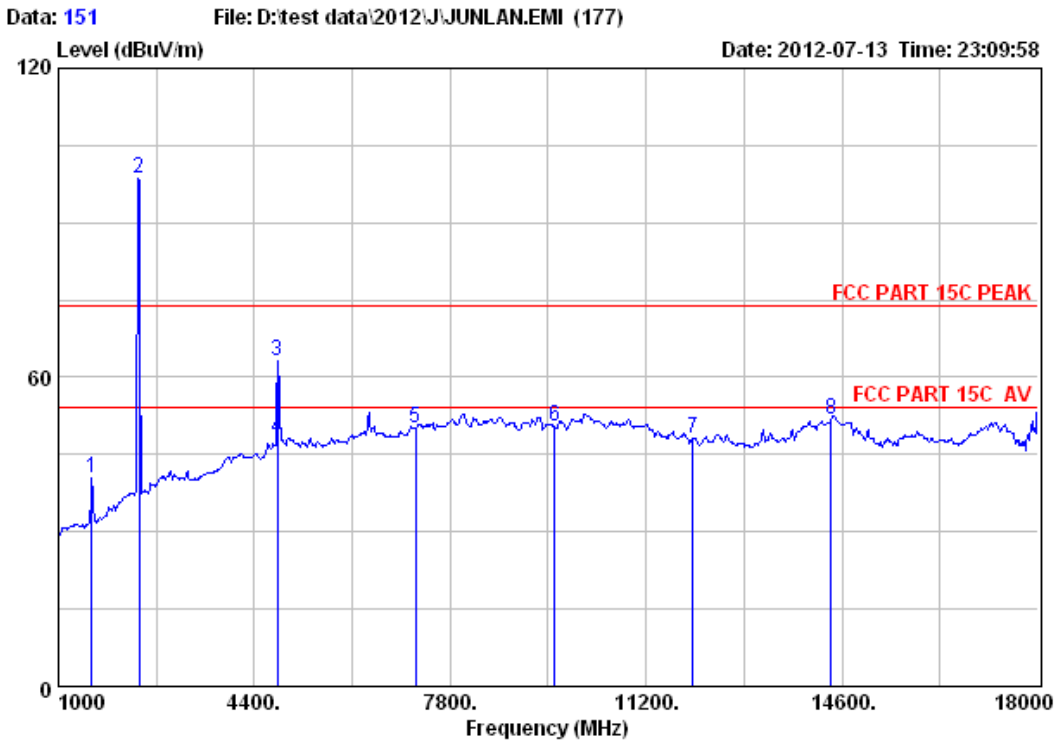


Site no. : 3m Chamber Data no. : 151
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1578.00 | 24.86 | 4.63 | 34.46 | 45.56 | 40.59 | 74.00 | 33.41 | Peak |
| 2 | 2402.00 | 27.61 | 6.62 | 34.18 | 98.66 | 98.71 | 74.00 | -24.71 | Peak |
| 3 | 4804.00 | 31.25 | 11.77 | 31.81 | 51.87 | 63.08 | 74.00 | 10.92 | Peak |
| 4 | 4804.00 | 31.25 | 11.77 | 31.81 | 36.79 | 48.00 | 54.00 | 6.00 | Average |
| 5 | 7206.00 | 36.52 | 11.54 | 32.11 | 34.34 | 50.29 | 74.00 | 23.71 | Peak |
| 6 | 9608.00 | 37.91 | 11.69 | 31.93 | 32.80 | 50.47 | 74.00 | 23.53 | Peak |
| 7 | 12010.00 | 38.62 | 11.40 | 35.53 | 33.72 | 48.21 | 74.00 | 25.79 | Peak |
| 8 | 14412.00 | 41.80 | 10.92 | 32.78 | 31.86 | 51.80 | 74.00 | 22.20 | Peak |

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

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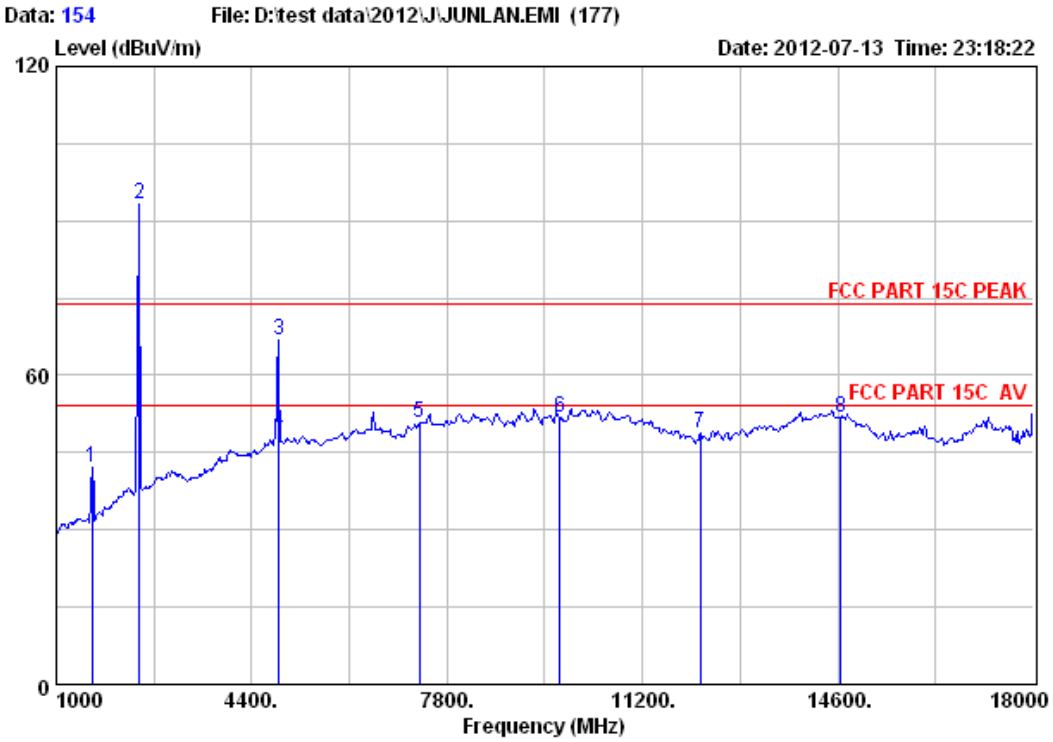


Site no. : 3m Chamber Data no. : 154
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 47.04 | 42.22 | 74.00 | 31.78 | Peak |
| 2 | 2441.00 | 27.60 | 6.67 | 34.12 | 93.18 | 93.33 | 74.00 | -19.33 | Peak |
| 3 | 4882.00 | 31.37 | 12.07 | 31.90 | 55.15 | 66.69 | 74.00 | 7.31 | Peak |
| 4 | 4882.00 | 31.37 | 12.07 | 31.90 | 37.46 | 49.00 | 54.00 | 5.00 | Average |
| 5 | 7323.00 | 36.55 | 11.57 | 31.99 | 34.70 | 50.83 | 74.00 | 23.17 | Peak |
| 6 | 9764.00 | 38.13 | 11.64 | 31.86 | 33.82 | 51.73 | 74.00 | 22.27 | Peak |
| 7 | 12205.00 | 38.68 | 11.20 | 35.71 | 34.47 | 48.64 | 74.00 | 25.36 | Peak |
| 8 | 14646.00 | 41.42 | 10.91 | 33.62 | 33.11 | 51.82 | 74.00 | 22.18 | Peak |

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

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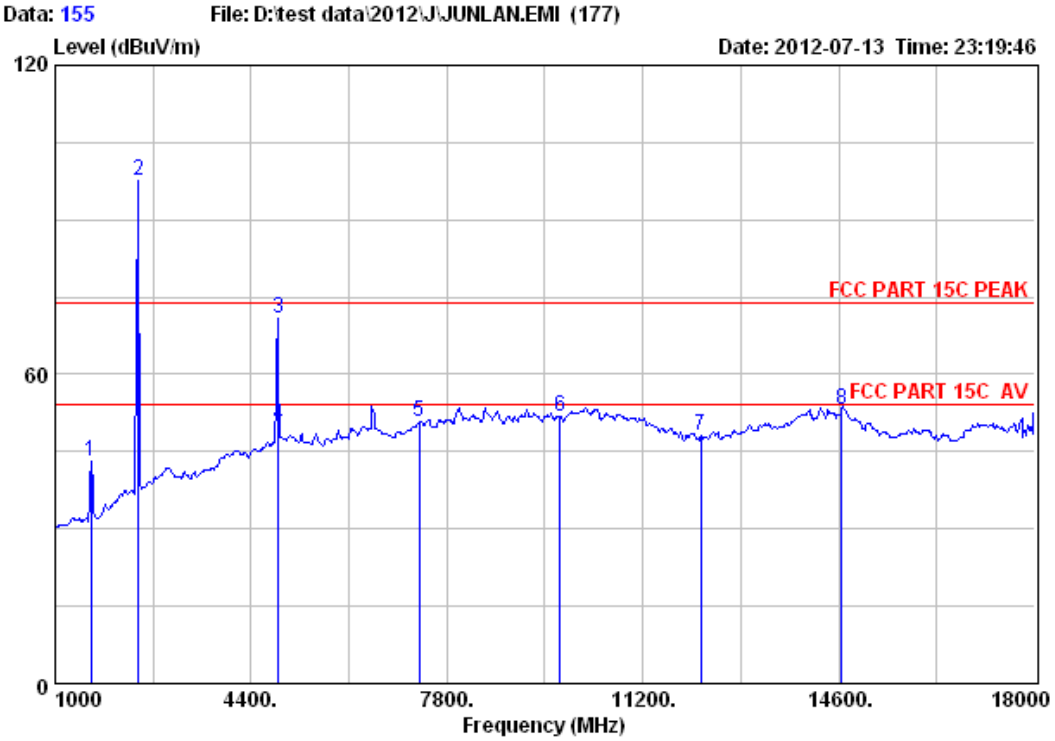


Site no. : 3m Chamber Data no. : 155
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 47.94 | 43.12 | 74.00 | 30.88 | Peak |
| 2 | 2441.00 | 27.60 | 6.67 | 34.12 | 97.52 | 97.67 | 74.00 | -23.67 | Peak |
| 3 | 4882.00 | 31.37 | 12.07 | 31.90 | 59.26 | 70.80 | 74.00 | 3.20 | Peak |
| 4 | 4882.00 | 31.37 | 12.07 | 31.90 | 38.46 | 50.00 | 54.00 | 4.00 | Average |
| 5 | 7323.00 | 36.55 | 11.57 | 31.99 | 34.56 | 50.69 | 74.00 | 23.31 | Peak |
| 6 | 9764.00 | 38.13 | 11.64 | 31.86 | 33.79 | 51.70 | 74.00 | 22.30 | Peak |
| 7 | 12205.00 | 38.68 | 11.20 | 35.71 | 33.98 | 48.15 | 74.00 | 25.85 | Peak |
| 8 | 14646.00 | 41.42 | 10.91 | 33.62 | 34.40 | 53.11 | 74.00 | 20.89 | Peak |

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

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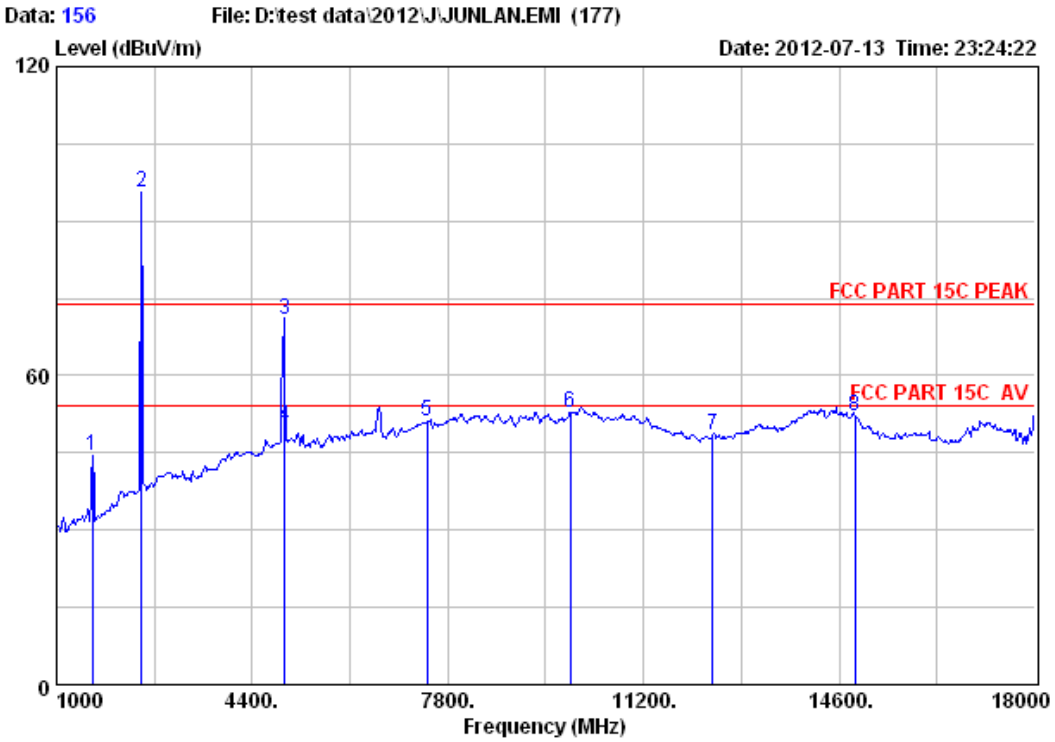


Site no. : 3m Chamber Data no. : 156
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 49.16 | 44.34 | 74.00 | 29.66 | Peak |
| 2 | 2480.00 | 27.58 | 6.71 | 34.03 | 95.37 | 95.63 | 74.00 | -21.63 | Peak |
| 3 | 4960.00 | 31.49 | 12.44 | 31.97 | 59.04 | 71.00 | 74.00 | 3.00 | Peak |
| 4 | 4960.00 | 31.49 | 12.44 | 31.97 | 38.34 | 50.30 | 54.00 | 3.70 | Average |
| 5 | 7440.00 | 36.54 | 11.61 | 31.93 | 34.90 | 51.12 | 74.00 | 22.88 | Peak |
| 6 | 9920.00 | 38.14 | 11.61 | 31.76 | 34.73 | 52.72 | 74.00 | 21.28 | Peak |
| 7 | 12400.00 | 38.73 | 10.99 | 35.36 | 34.25 | 48.61 | 74.00 | 25.39 | Peak |
| 8 | 14880.00 | 40.59 | 10.88 | 34.45 | 35.17 | 52.19 | 74.00 | 21.81 | 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.

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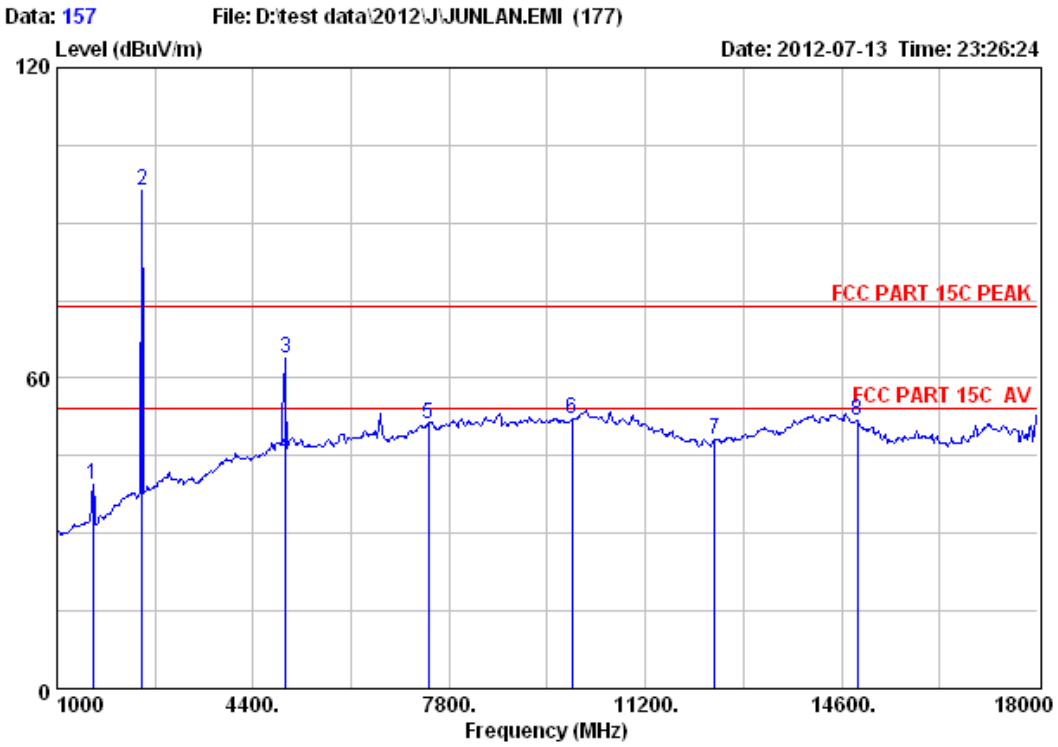


Site no. : 3m Chamber Data no. : 157
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1629.00 | 24.82 | 4.82 | 34.46 | 44.13 | 39.31 | 74.00 | 34.69 | Peak |
| 2 | 2480.00 | 27.58 | 6.71 | 34.03 | 95.92 | 96.18 | 74.00 | -22.18 | Peak |
| 3 | 4960.00 | 31.49 | 12.44 | 31.97 | 51.86 | 63.82 | 74.00 | 10.18 | Peak |
| 4 | 4960.00 | 31.49 | 12.44 | 31.97 | 33.04 | 45.00 | 54.00 | 9.00 | Average |
| 5 | 7440.00 | 36.54 | 11.61 | 31.93 | 34.99 | 51.21 | 74.00 | 22.79 | Peak |
| 6 | 9920.00 | 38.14 | 11.61 | 31.76 | 34.01 | 52.00 | 74.00 | 22.00 | Peak |
| 7 | 12400.00 | 38.73 | 10.99 | 35.36 | 33.72 | 48.08 | 74.00 | 25.92 | Peak |
| 8 | 14880.00 | 40.59 | 10.88 | 34.45 | 34.73 | 51.75 | 74.00 | 22.25 | Peak |

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

**18000MHz – 260000MHz**

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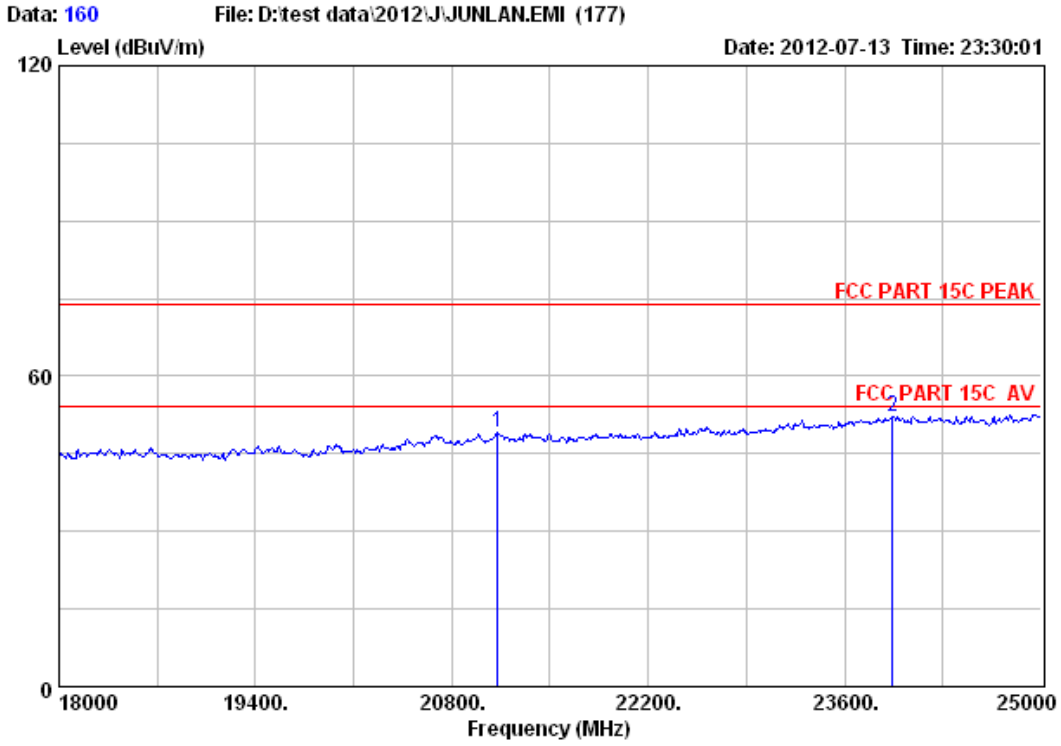


Site no. : 3m Chamber Data no. : 160
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21129.00 | 46.22 | 20.19 | 35.69 | 18.43 | 49.15 | 74.00 | 24.85 | Peak |
| 2 | 23943.00 | 45.61 | 21.99 | 32.85 | 17.46 | 52.21 | 74.00 | 21.79 | Peak |

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

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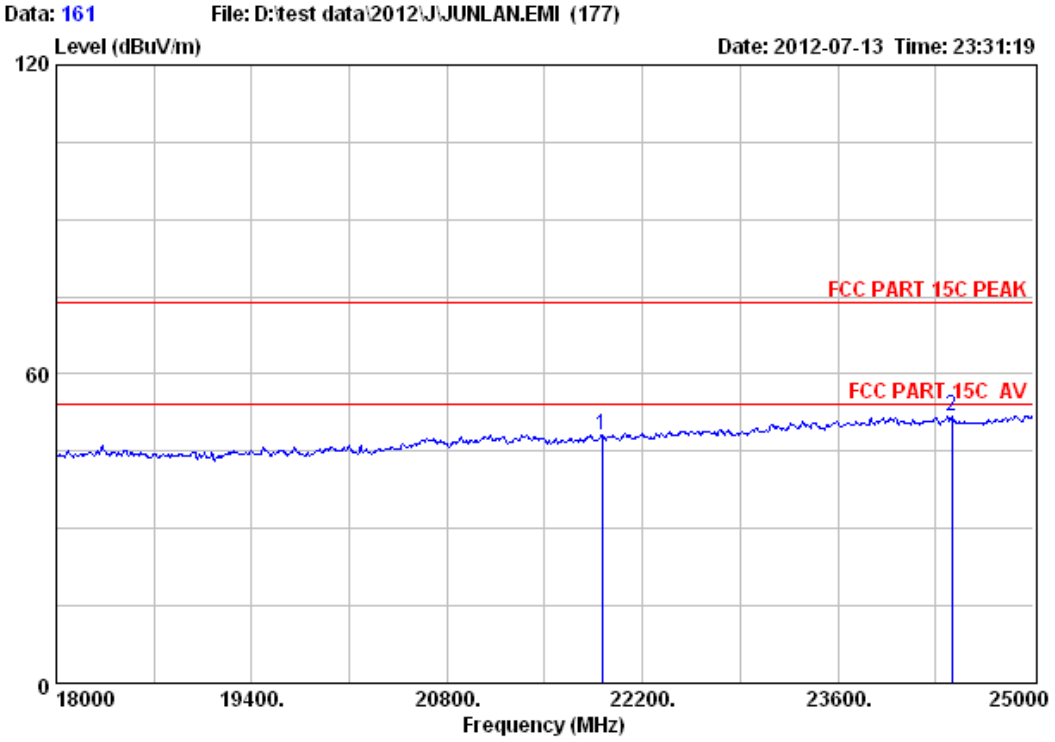


Site no. : 3m Chamber Data no. : 161
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21913.00 | 45.75 | 20.53 | 34.97 | 16.89 | 48.20 | 74.00 | 25.80 | Peak |
| 2 | 24419.00 | 45.69 | 22.27 | 33.46 | 17.39 | 51.89 | 74.00 | 22.11 | Peak |

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

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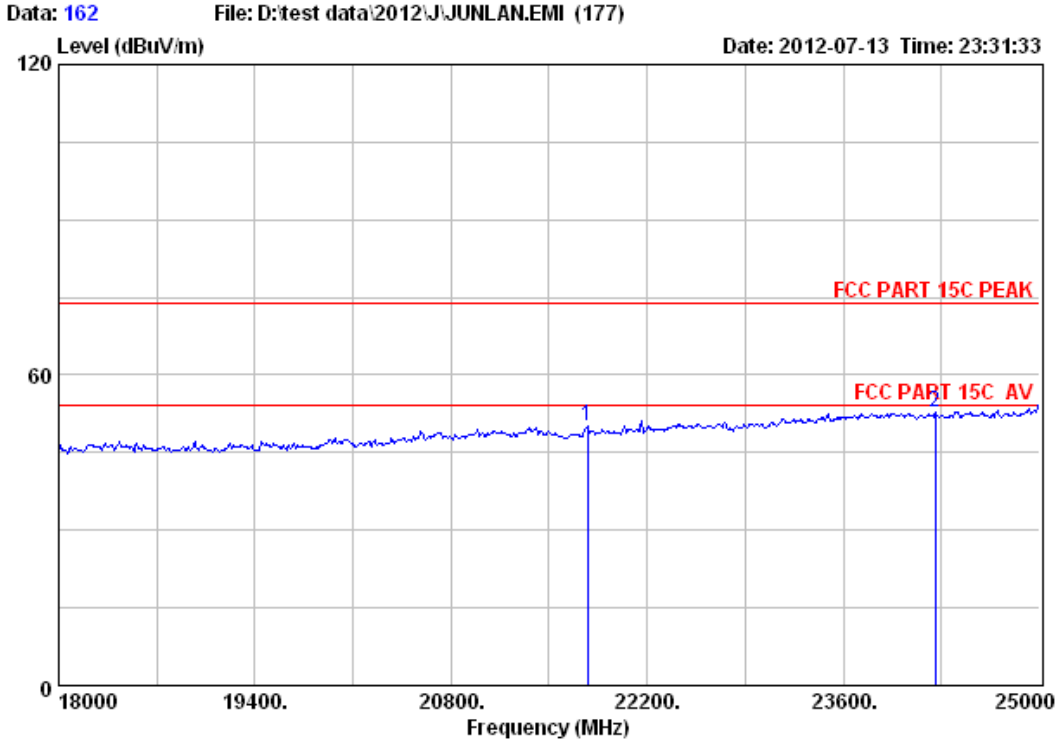


Site no. : 3m Chamber Data no. : 162
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21773.00 | 45.83 | 20.46 | 35.10 | 18.86 | 50.05 | 74.00 | 23.95 | Peak |
| 2 | 24258.00 | 45.65 | 22.19 | 33.19 | 18.13 | 52.78 | 74.00 | 21.22 | 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.

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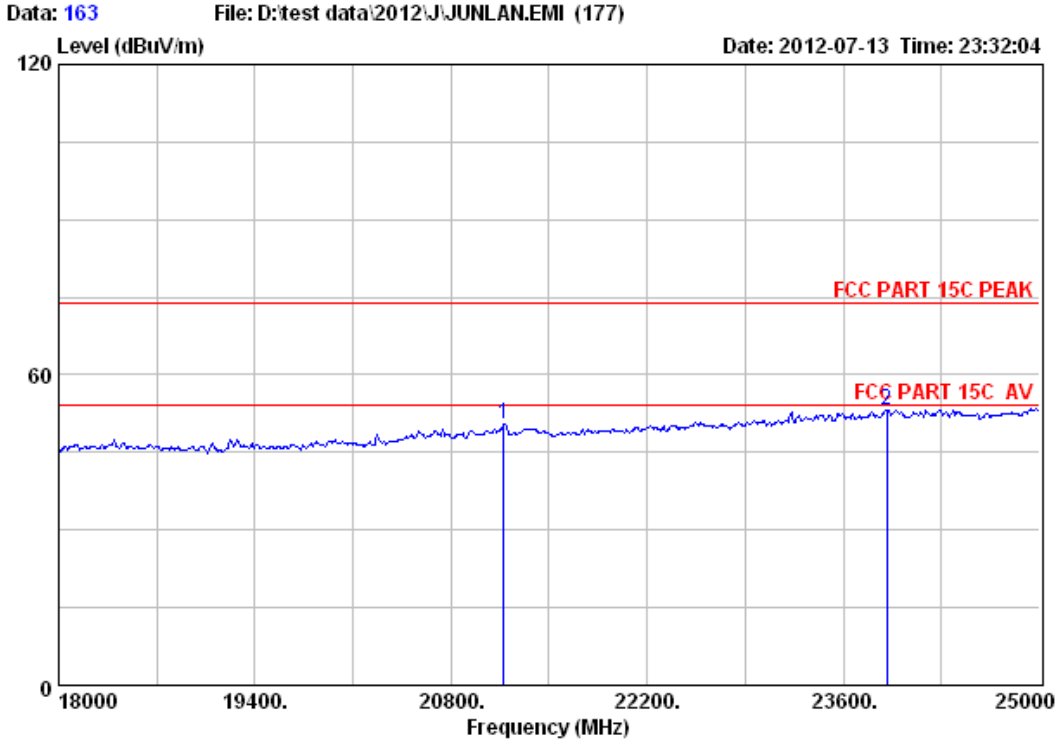


Site no. : 3m Chamber Data no. : 163
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21178.00 | 46.20 | 20.21 | 35.64 | 19.84 | 50.61 | 74.00 | 23.39 | Peak |
| 2 | 23908.00 | 45.62 | 21.96 | 32.90 | 18.63 | 53.31 | 74.00 | 20.69 | Peak |

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

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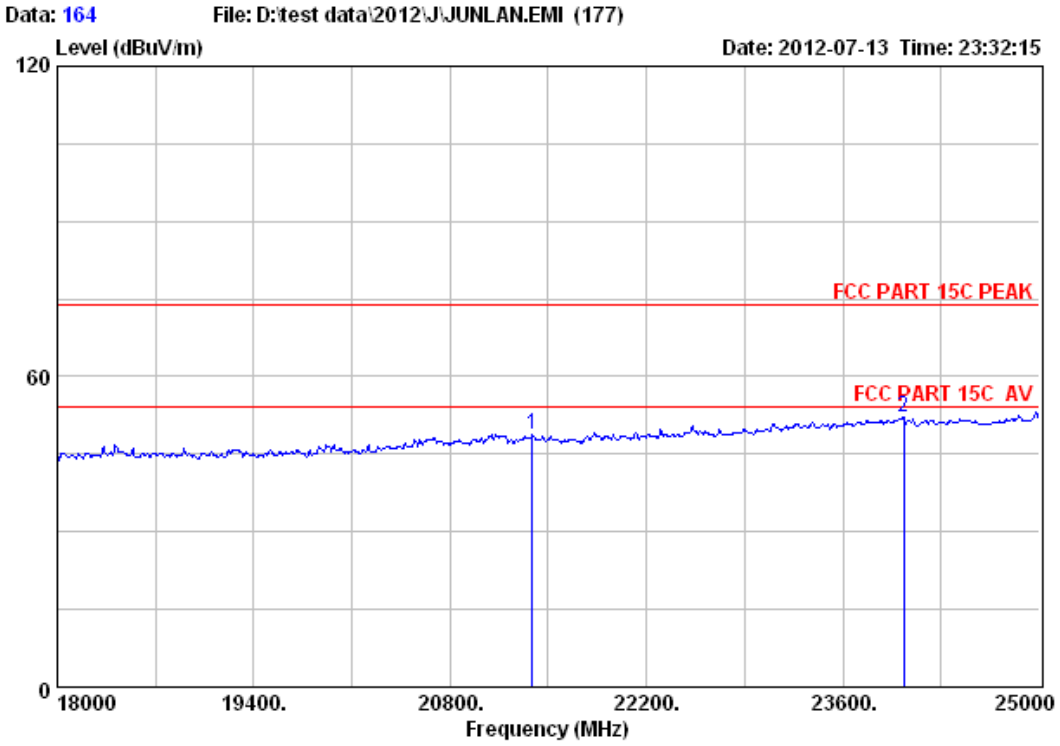


Site no. : 3m Chamber Data no. : 164
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21388.00 | 46.07 | 20.30 | 35.44 | 18.03 | 48.96 | 74.00 | 25.04 | Peak |
| 2 | 24034.00 | 45.60 | 22.06 | 32.84 | 17.38 | 52.20 | 74.00 | 21.80 | Peak |

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

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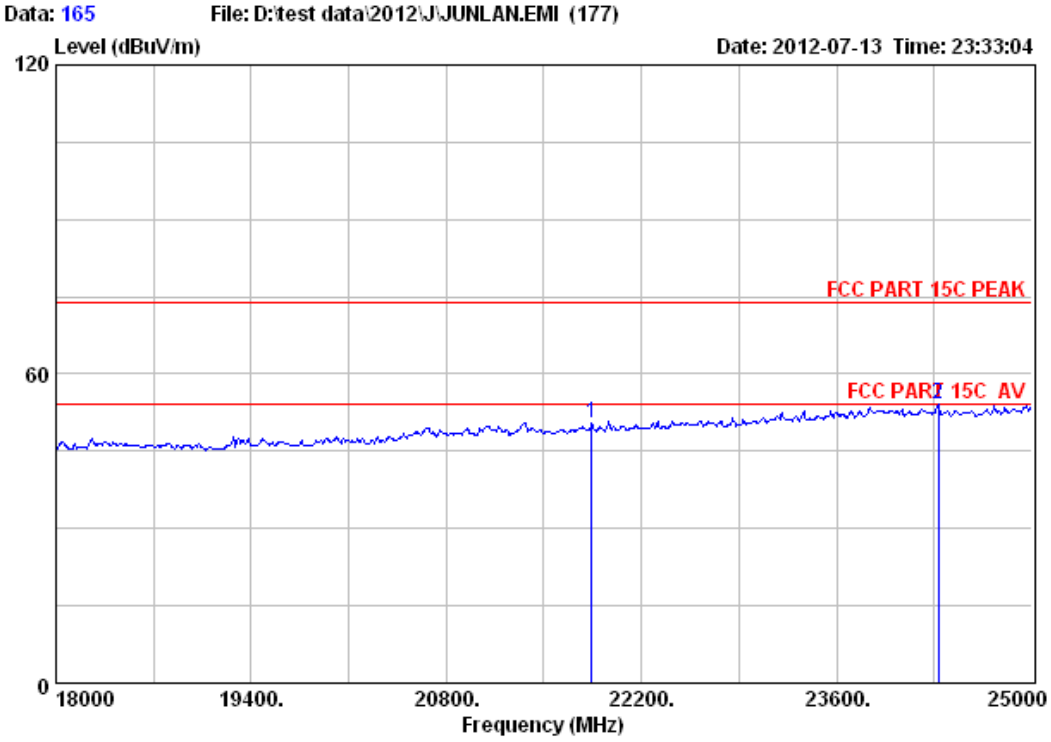


Site no. : 3m Chamber Data no. : 165
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21843.00 | 45.79 | 20.49 | 35.03 | 19.27 | 50.52 | 74.00 | 23.48 | Peak |
| 2 | 24328.00 | 45.67 | 22.23 | 33.30 | 19.57 | 54.17 | 74.00 | 19.83 | Peak |

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

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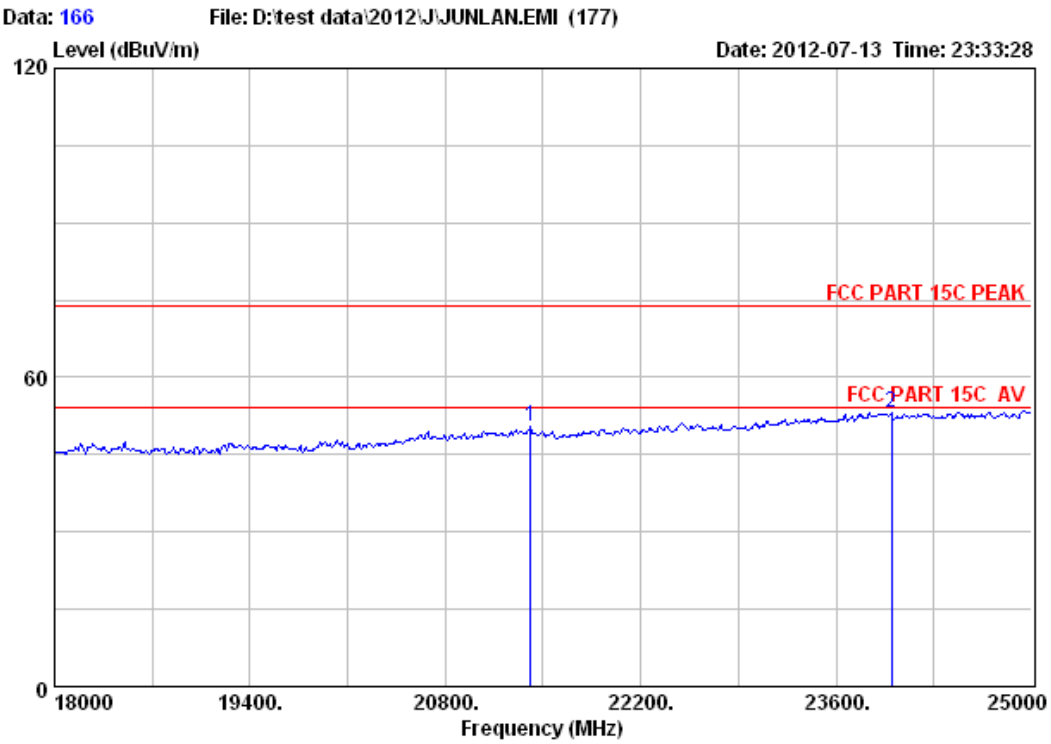


Site no. : 3m Chamber Data no. : 166
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21409.00 | 46.05 | 20.31 | 35.44 | 19.67 | 50.59 | 74.00 | 23.41 | Peak |
| 2 | 23999.00 | 45.60 | 22.05 | 32.80 | 18.15 | 53.00 | 74.00 | 21.00 | 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.

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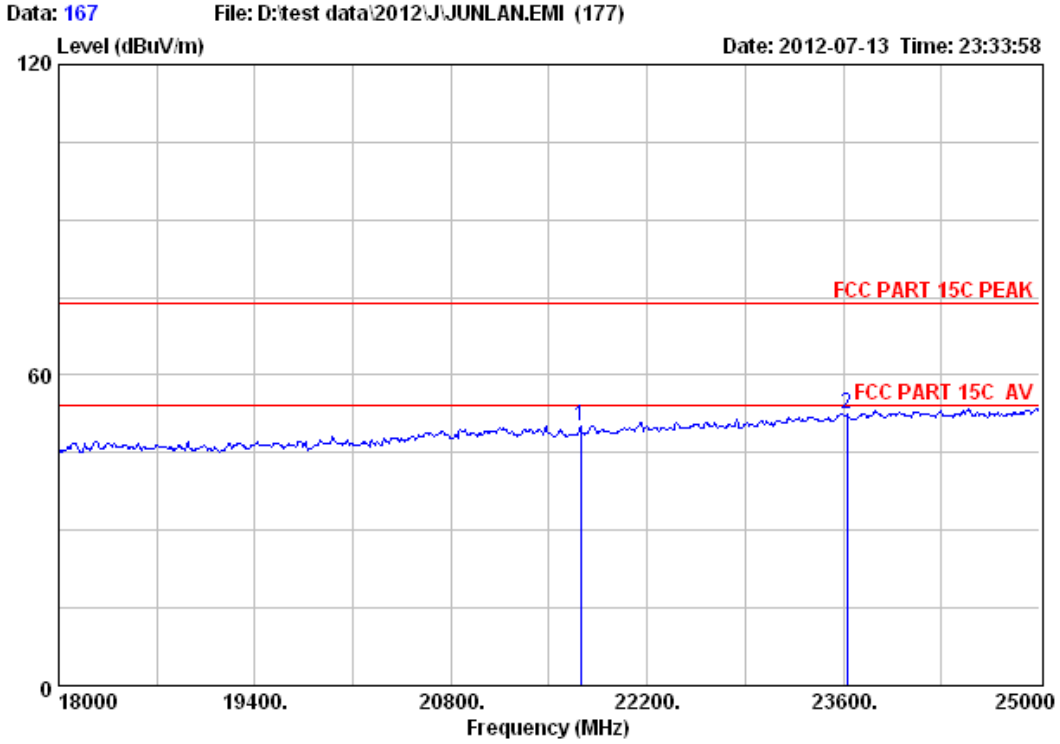


Site no. : 3m Chamber Data no. : 167
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21724.00 | 45.87 | 20.44 | 35.15 | 18.87 | 50.03 | 74.00 | 23.97 | Peak |
| 2 | 23628.00 | 45.67 | 21.71 | 33.19 | 18.35 | 52.54 | 74.00 | 21.46 | Peak |

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

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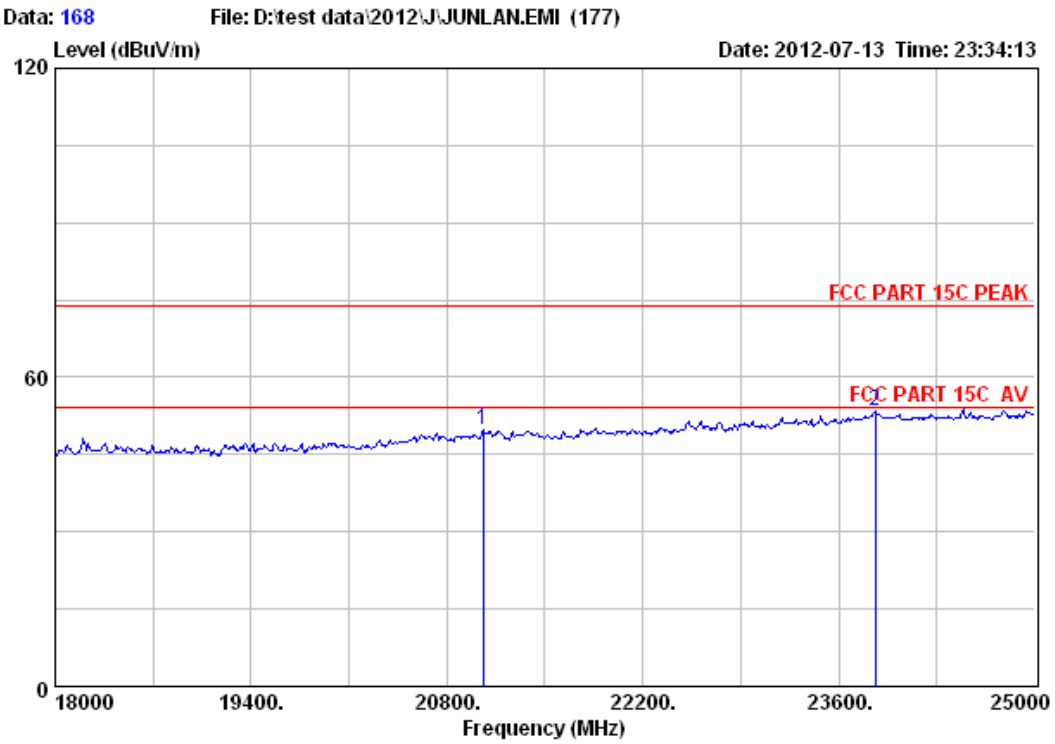


Site no. : 3m Chamber Data no. : 168
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21059.00 | 46.26 | 20.16 | 35.76 | 19.00 | 49.66 | 74.00 | 24.34 | Peak |
| 2 | 23859.00 | 45.63 | 21.92 | 32.96 | 18.89 | 53.48 | 74.00 | 20.52 | 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.

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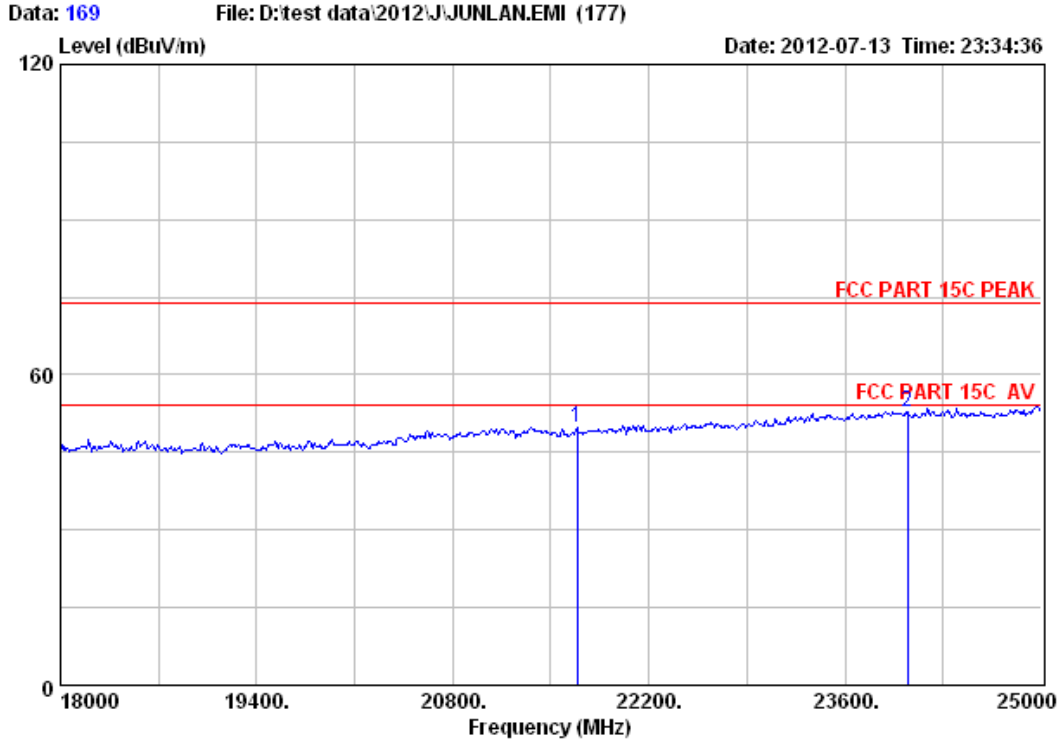


Site no. : 3m Chamber Data no. : 169
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21689.00 | 45.88 | 20.43 | 35.17 | 18.83 | 49.97 | 74.00 | 24.03 | Peak |
| 2 | 24048.00 | 45.61 | 22.07 | 32.88 | 18.14 | 52.94 | 74.00 | 21.06 | 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.

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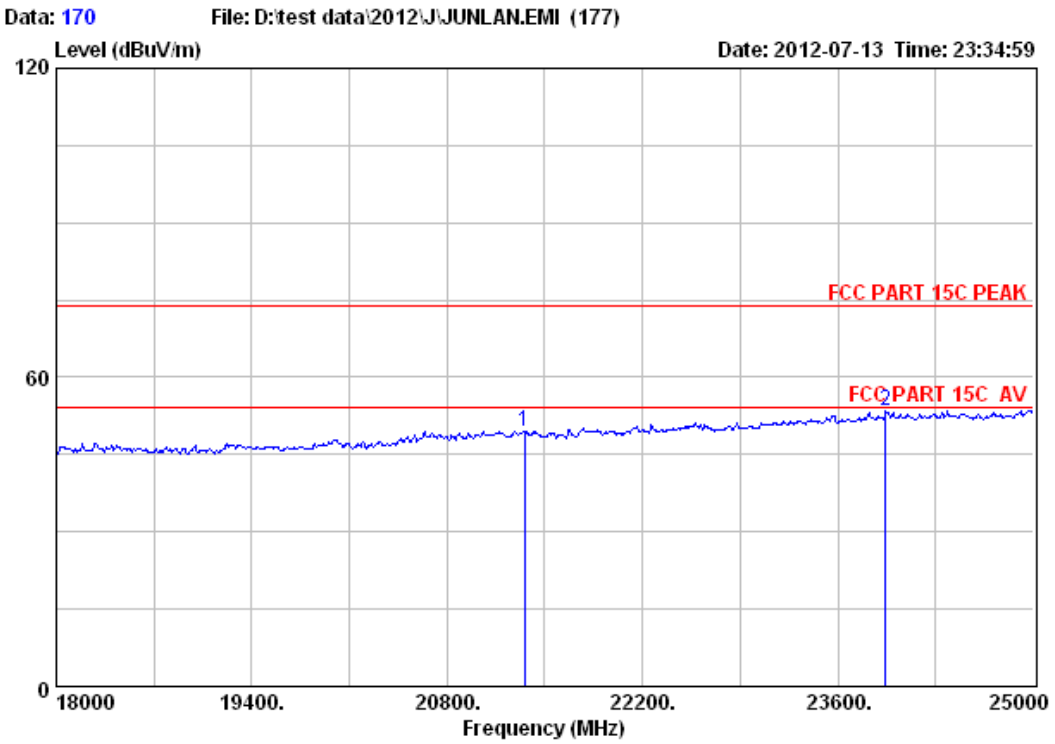


Site no. : 3m Chamber Data no. : 170
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21353.00 | 46.09 | 20.28 | 35.49 | 18.69 | 49.57 | 74.00 | 24.43 | Peak |
| 2 | 23943.00 | 45.61 | 21.99 | 32.85 | 18.75 | 53.50 | 74.00 | 20.50 | Peak |

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

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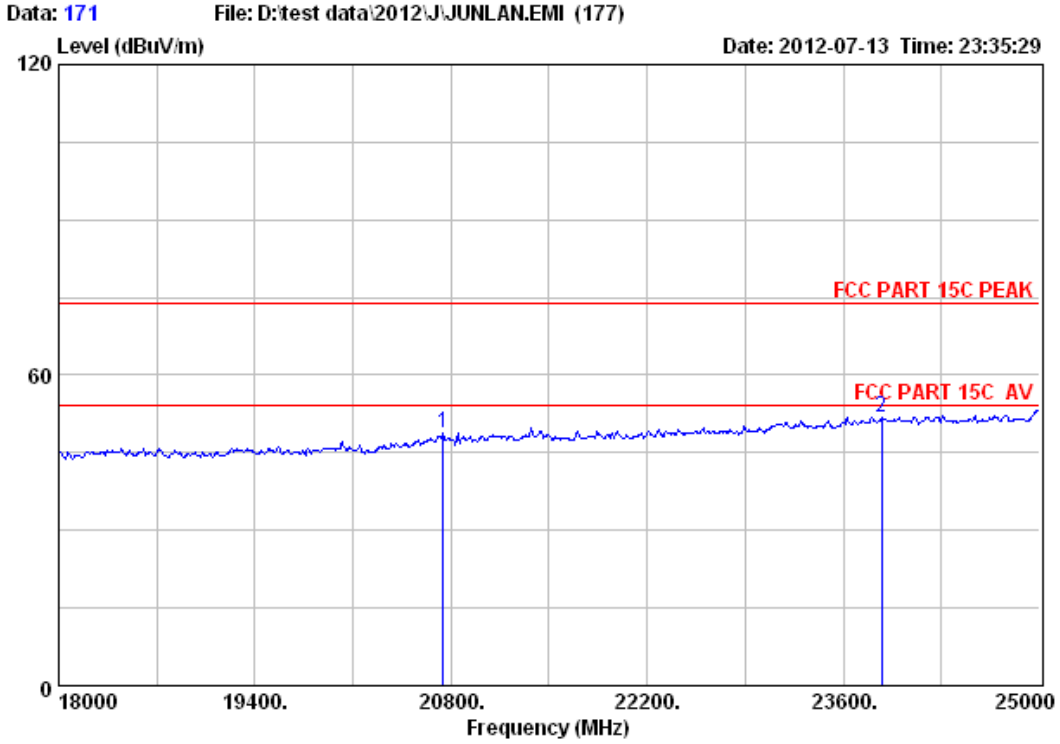


Site no. : 3m Chamber Data no. : 171
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20744.00 | 46.15 | 20.02 | 36.03 | 18.80 | 48.94 | 74.00 | 25.06 | Peak |
| 2 | 23873.00 | 45.63 | 21.94 | 32.93 | 17.13 | 51.77 | 74.00 | 22.23 | Peak |

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

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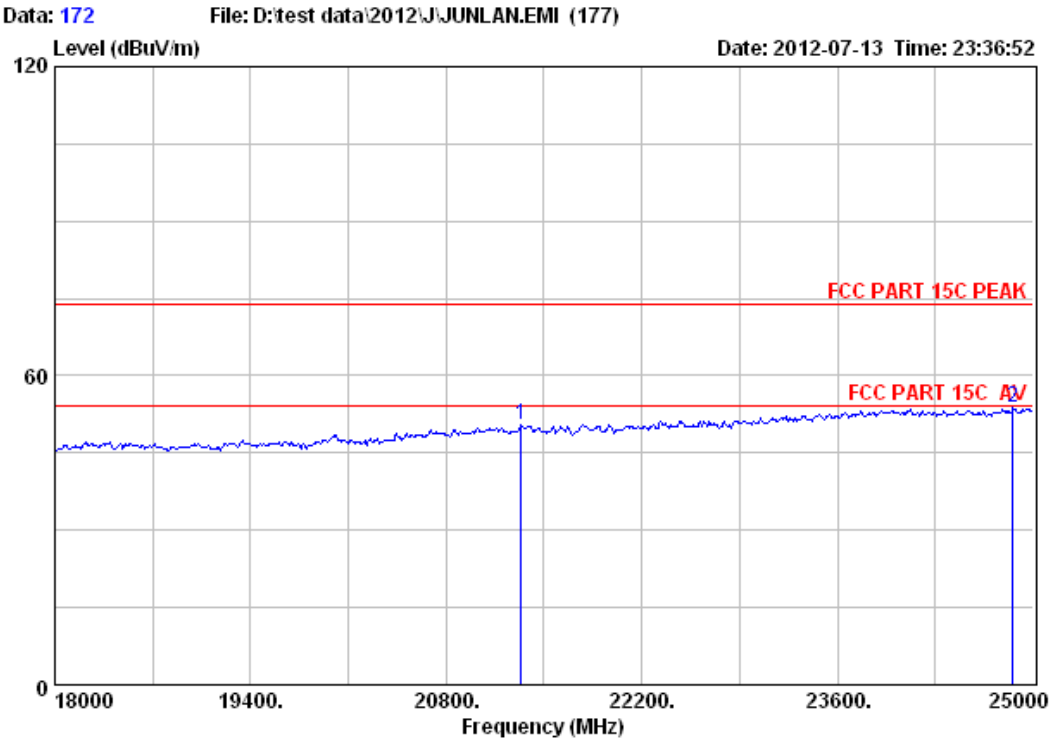


Site no. : 3m Chamber Data no. : 172
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21339.00 | 46.09 | 20.28 | 35.49 | 19.56 | 50.44 | 74.00 | 23.56 | Peak |
| 2 | 24853.00 | 46.00 | 22.51 | 34.12 | 19.29 | 53.68 | 74.00 | 20.32 | Peak |

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

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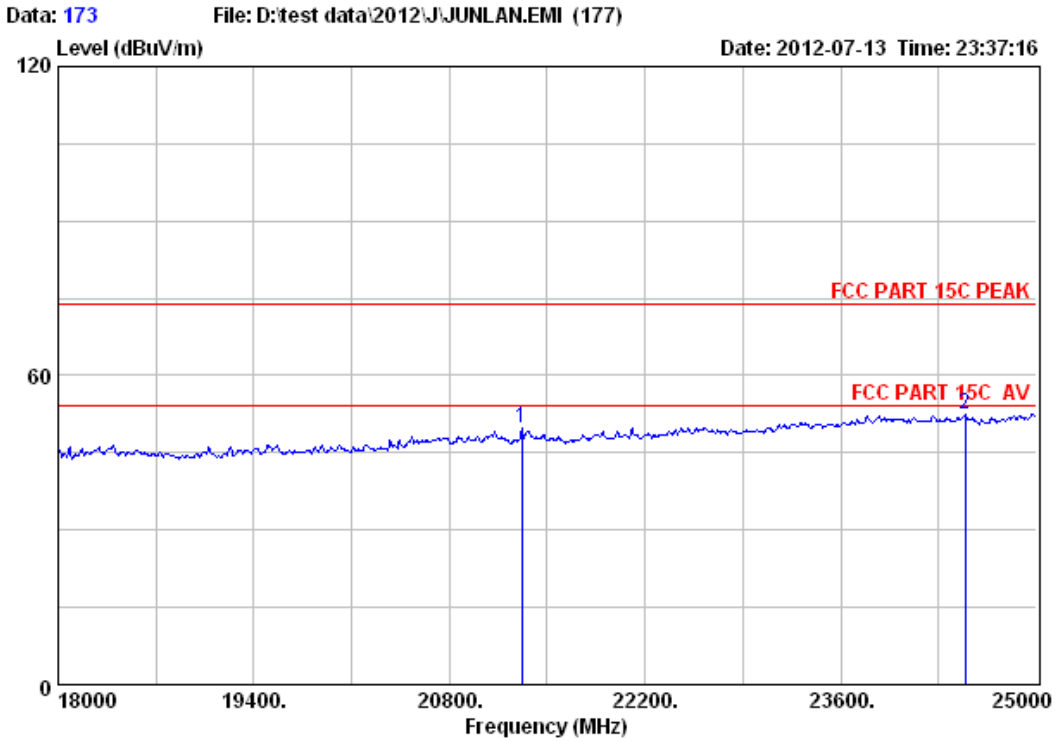


Site no. : 3m Chamber Data no. : 173
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21318.00 | 46.10 | 20.27 | 35.51 | 18.86 | 49.72 | 74.00 | 24.28 | Peak |
| 2 | 24489.00 | 45.70 | 22.31 | 33.58 | 17.91 | 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.

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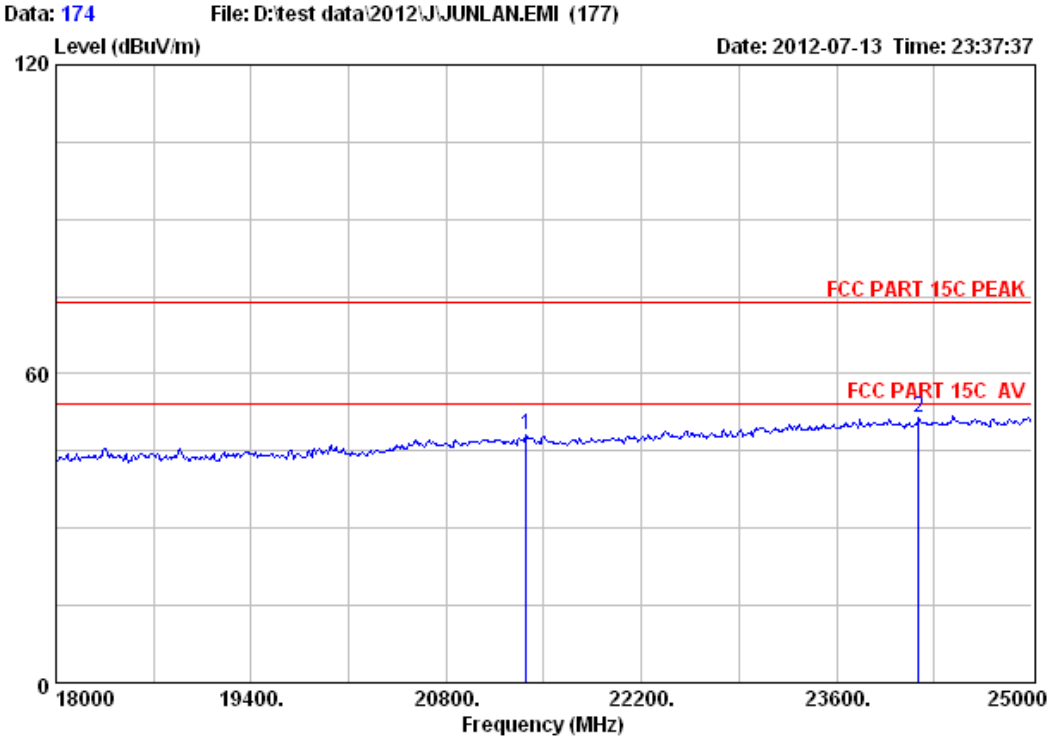


Site no. : 3m Chamber Data no. : 174
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21374.00 | 46.08 | 20.29 | 35.46 | 17.14 | 48.05 | 74.00 | 25.95 | Peak |
| 2 | 24188.00 | 45.64 | 22.15 | 33.11 | 16.78 | 51.46 | 74.00 | 22.54 | Peak |

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

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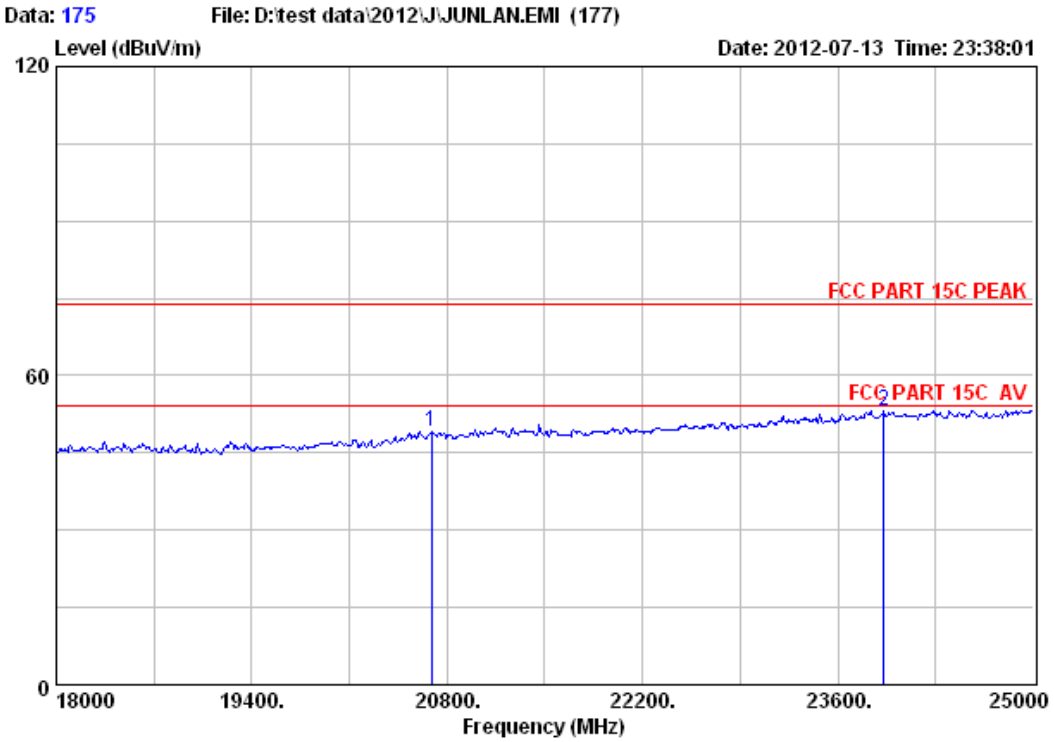
Fax:+86-769-83081878




Site no. : 3m Chamber Data no. : 175
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 iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2441MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 20688.00 | 46.11 | 19.99 | 36.07 | 19.02 | 49.05 | 74.00 | 24.95 | Peak |
| 2 | 23929.00 | 45.61 | 21.99 | 32.88 | 18.41 | 53.13 | 74.00 | 20.87 | Peak |

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

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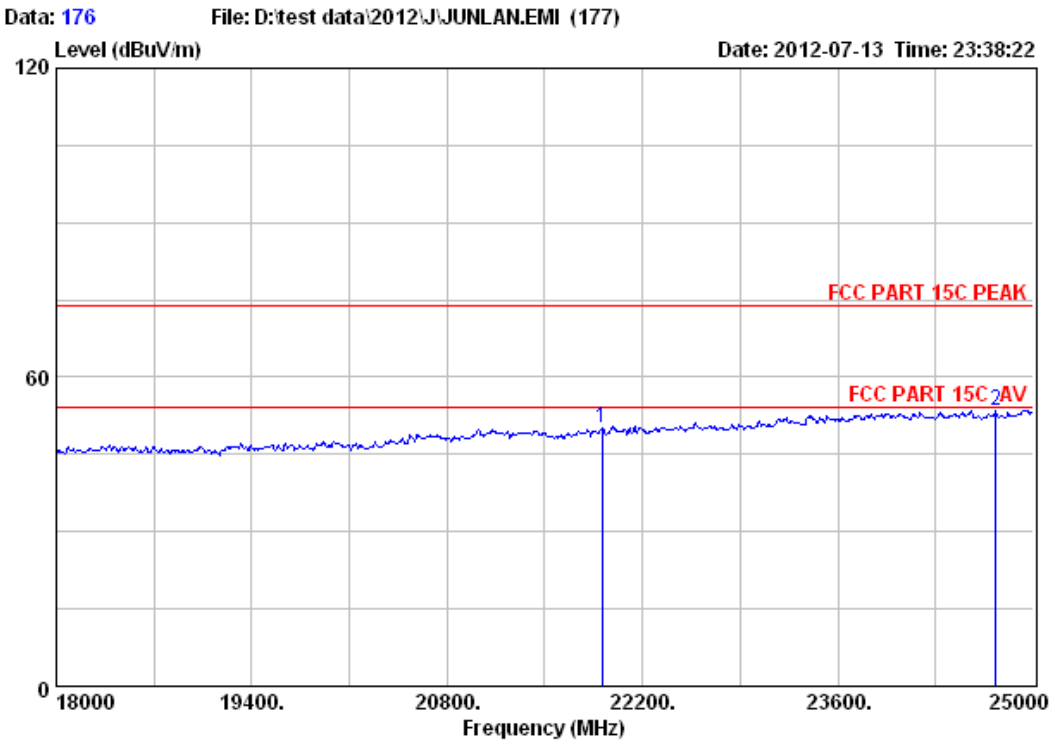


Site no. : 3m Chamber Data no. : 176
Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21913.00 | 45.75 | 20.53 | 34.97 | 18.90 | 50.21 | 74.00 | 23.79 | Peak |
| 2 | 24734.00 | 45.89 | 22.44 | 33.92 | 19.06 | 53.47 | 74.00 | 20.53 | Peak |

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

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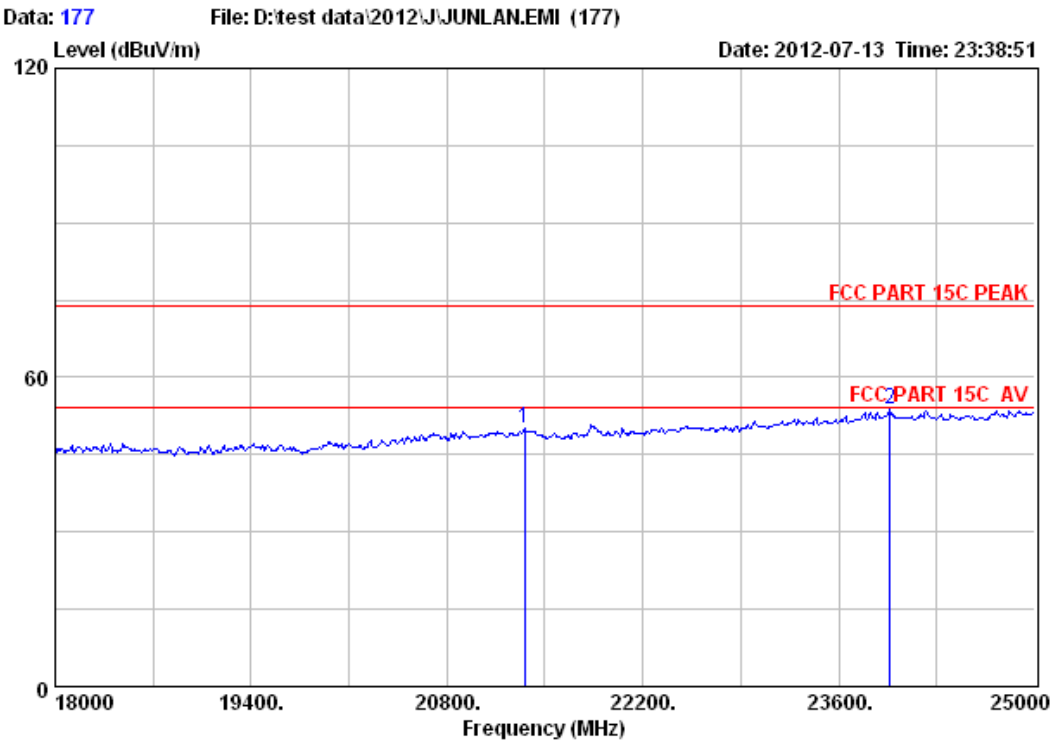



Site no. : 3m Chamber Data no. : 177
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 21353.00 | 46.09 | 20.28 | 35.49 | 19.11 | 49.99 | 74.00 | 24.01 | Peak |
| 2 | 23964.00 | 45.61 | 22.02 | 32.83 | 19.01 | 53.81 | 74.00 | 20.19 | Peak |

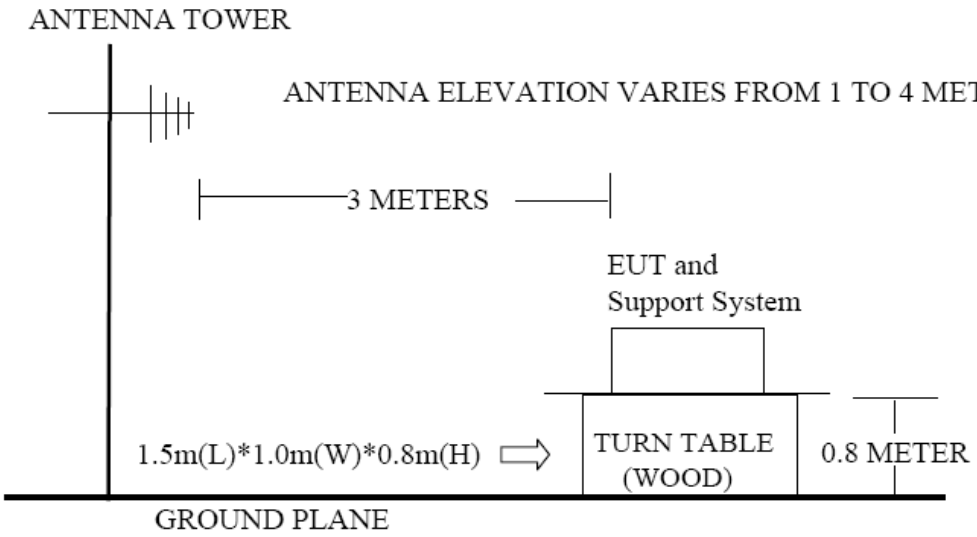
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

# 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 iPAD iTOWER SPEAKER M/N:BITS-1/5616 |
| Power: AC 120V/60Hz |
| Test date: 2012-07-13 Test site: 3m Chamber Tested by: Tony Tang |
| Test mode: Tx Mode |
| Pass |

Note : If Peak Result comply with AV limit, AV Result is deemed to comply with AV limit

## 9.5. Test Data

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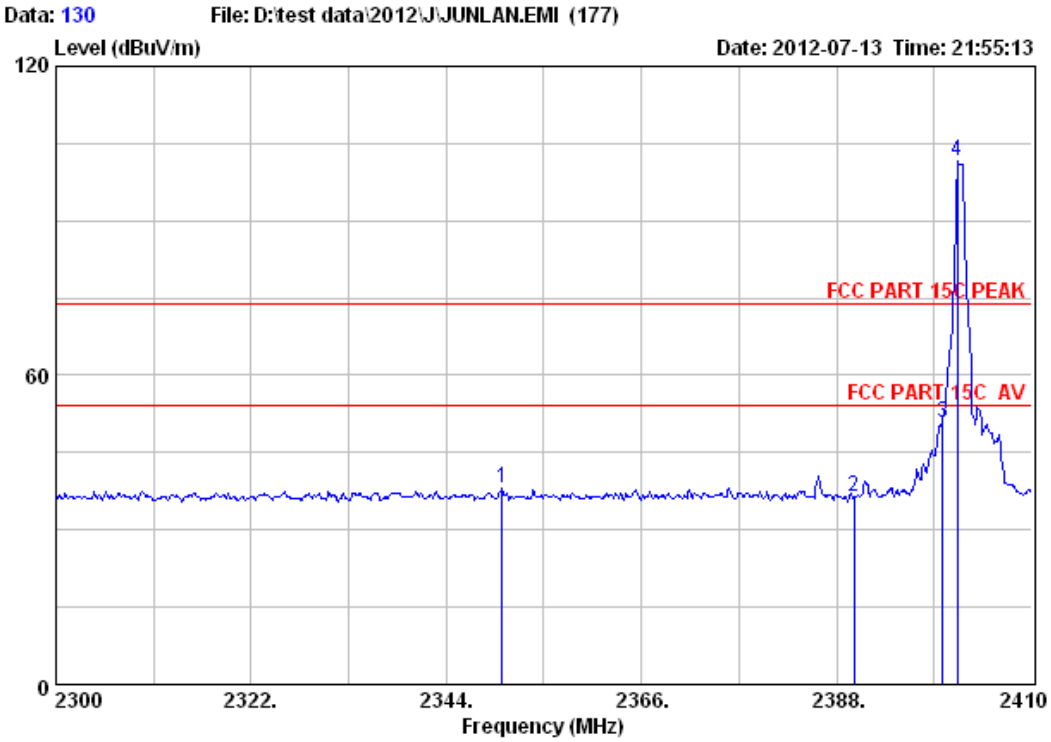


Site no. : 3m Chamber Data no. : 130
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2350.27 | 27.70 | 6.56 | 34.22 | 38.16 | 38.20 | 74.00 | 35.80 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.19 | 36.25 | 36.32 | 74.00 | 37.68 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.18 | 50.72 | 50.77 | 74.00 | 23.23 | Peak |
| 4 | 2401.64 | 27.61 | 6.62 | 34.18 | 101.50 | 101.55 | 74.00 | -27.55 | Peak |

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

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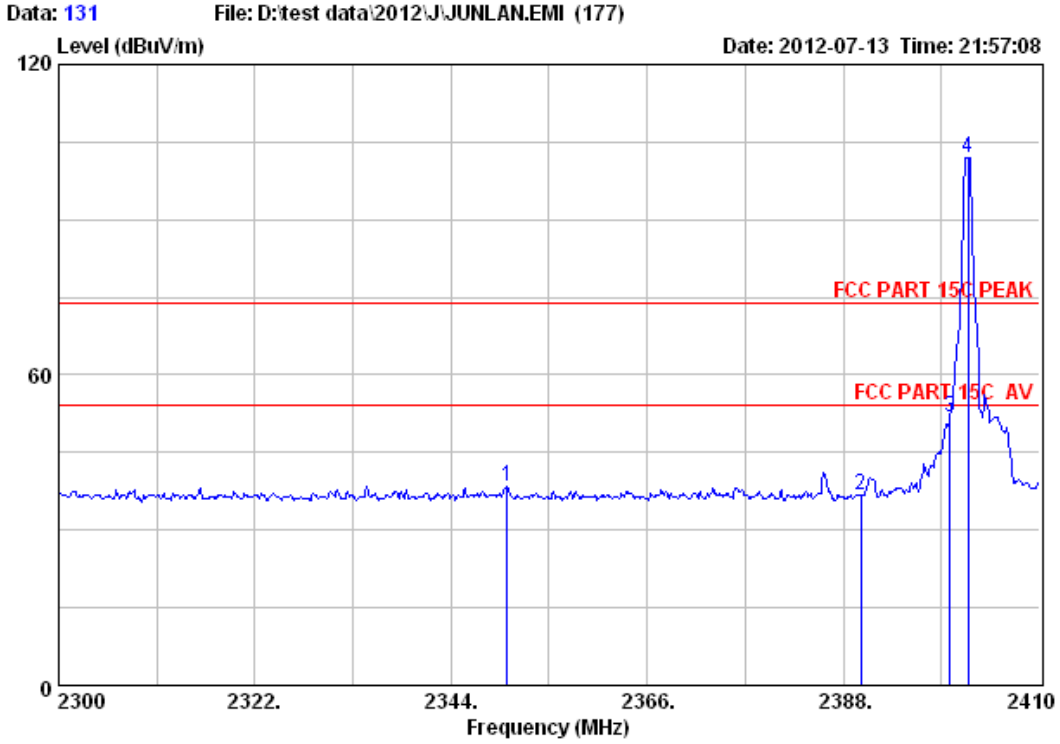


Site no. : 3m Chamber Data no. : 131
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2350.27 | 27.70 | 6.56 | 34.22 | 38.56 | 38.60 | 74.00 | 35.40 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.19 | 36.64 | 36.71 | 74.00 | 37.29 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.18 | 51.71 | 51.76 | 74.00 | 22.24 | Peak |
| 4 | 2401.97 | 27.61 | 6.62 | 34.18 | 101.97 | 102.02 | 74.00 | -28.02 | Peak |

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

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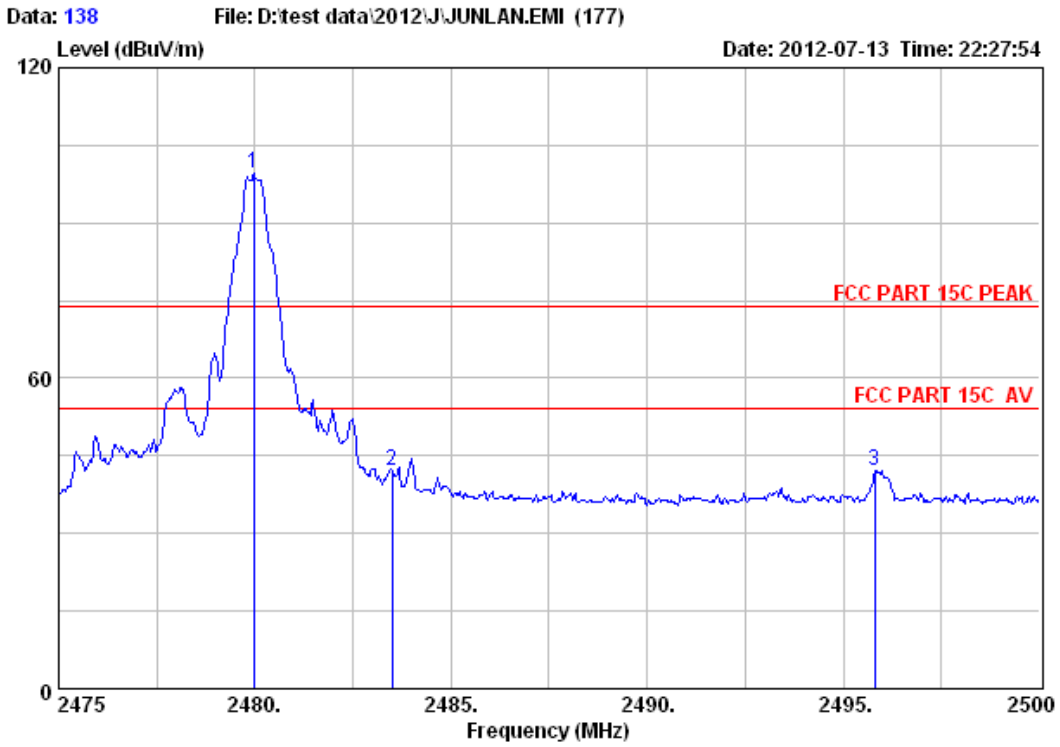


Site no. : 3m Chamber Data no. : 138
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2479.98 | 27.58 | 6.71 | 34.03 | 99.37 | 99.63 | 74.00 | -25.63 | Peak |
| 2 | 2483.50 | 27.58 | 6.71 | 34.03 | 41.83 | 42.09 | 74.00 | 31.91 | Peak |
| 3 | 2495.80 | 27.57 | 6.73 | 34.00 | 41.97 | 42.27 | 74.00 | 31.73 | Peak |

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

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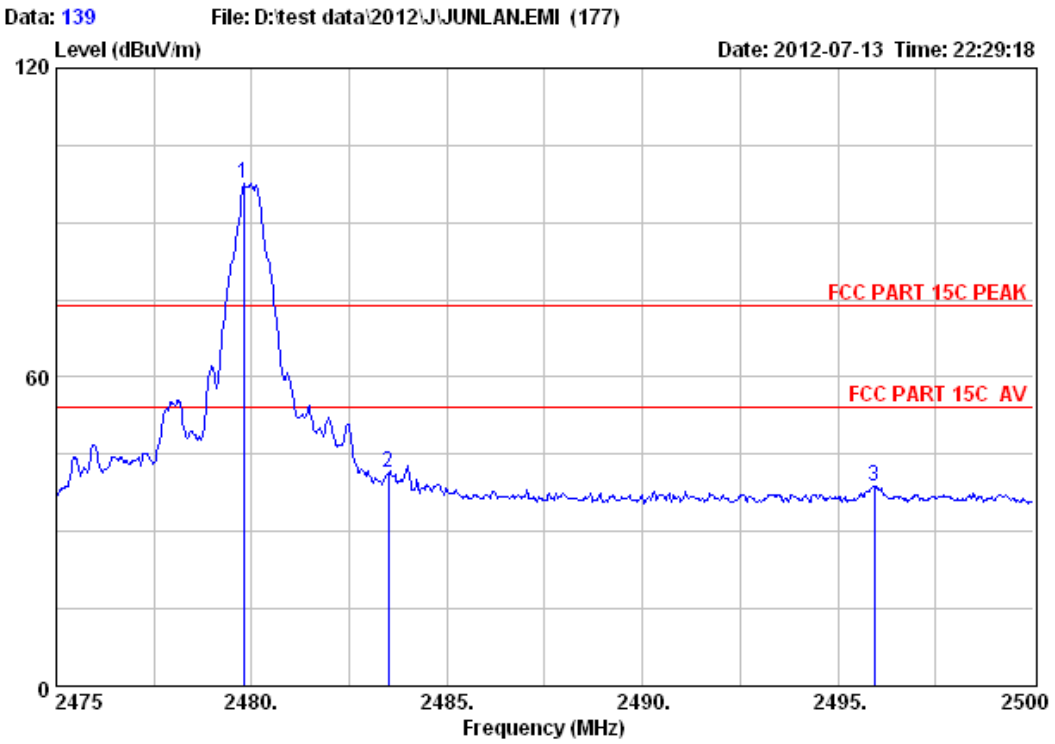


Site no. : 3m Chamber Data no. : 139
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : GFSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2479.80 | 27.58 | 6.71 | 34.03 | 97.41 | 97.67 | 74.00 | -23.67 | Peak |
| 2 | 2483.50 | 27.58 | 6.71 | 34.03 | 41.06 | 41.32 | 74.00 | 32.68 | Peak |
| 3 | 2495.93 | 27.57 | 6.73 | 34.00 | 38.61 | 38.91 | 74.00 | 35.09 | 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.

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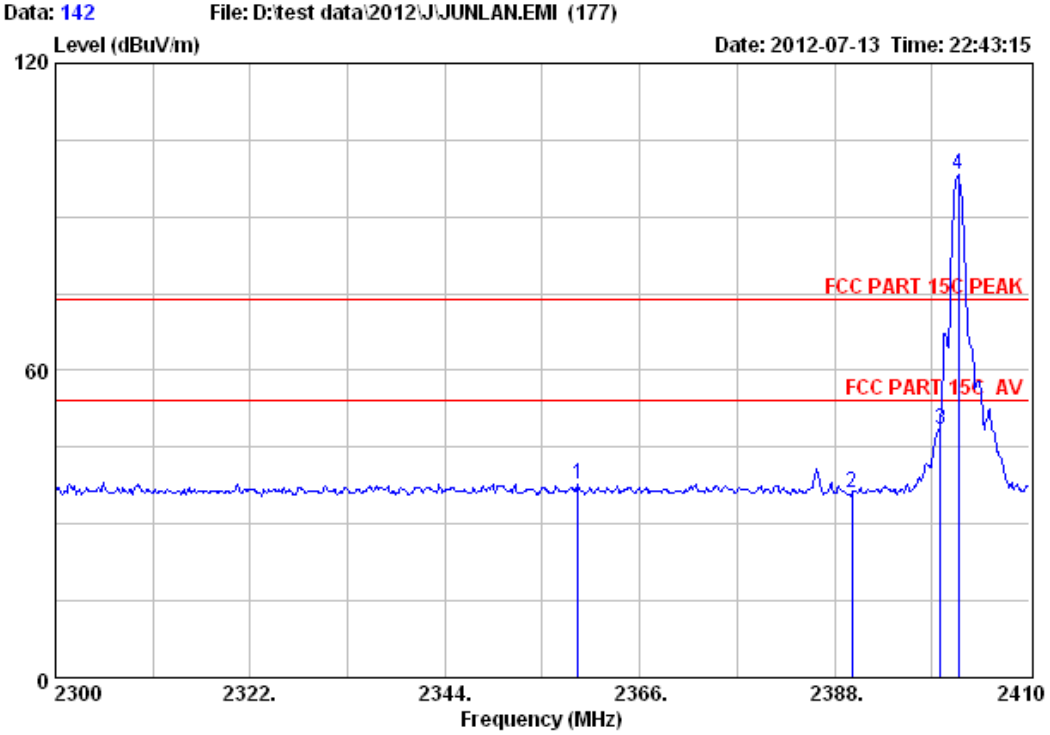


Site no. : 3m Chamber Data no. : 142
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2359.07 | 27.67 | 6.58 | 34.20 | 37.82 | 37.87 | 74.00 | 36.13 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.19 | 35.90 | 35.97 | 74.00 | 38.03 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.18 | 48.56 | 48.61 | 74.00 | 25.39 | Peak |
| 4 | 2401.97 | 27.61 | 6.62 | 34.18 | 98.09 | 98.14 | 74.00 | -24.14 | 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.

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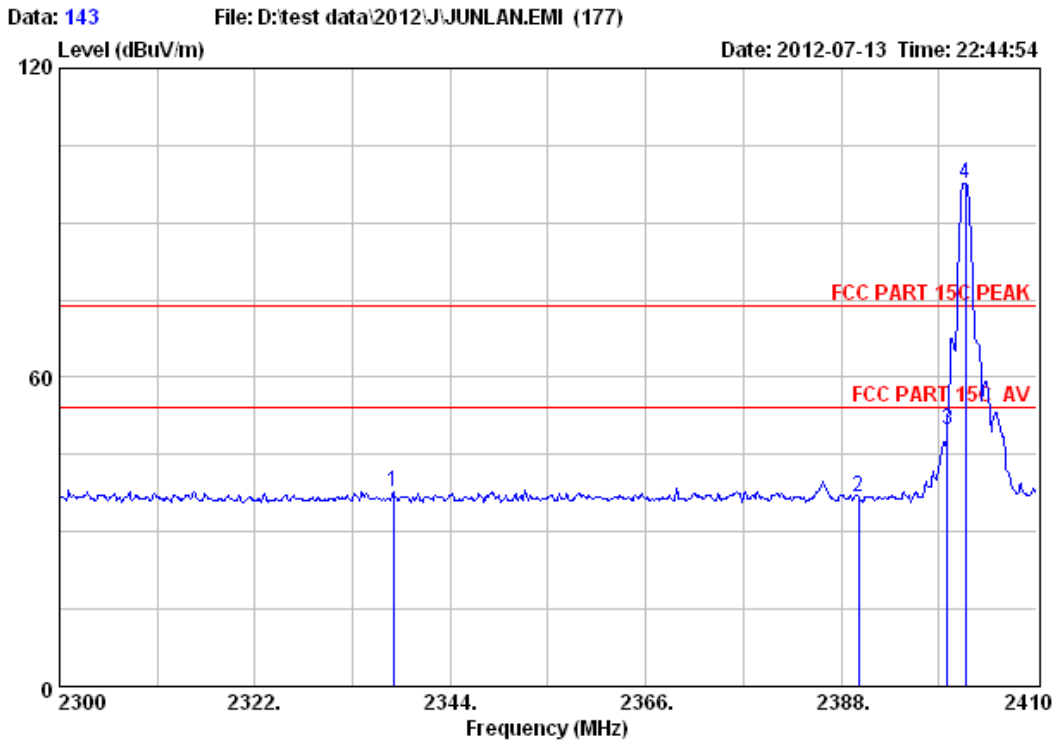


Site no. : 3m Chamber Data no. : 143
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2337.62 | 27.73 | 6.56 | 34.23 | 37.81 | 37.87 | 74.00 | 36.13 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.19 | 36.76 | 36.83 | 74.00 | 37.17 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.18 | 49.70 | 49.75 | 74.00 | 24.25 | Peak |
| 4 | 2401.97 | 27.61 | 6.62 | 34.18 | 97.46 | 97.51 | 74.00 | -23.51 | 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.

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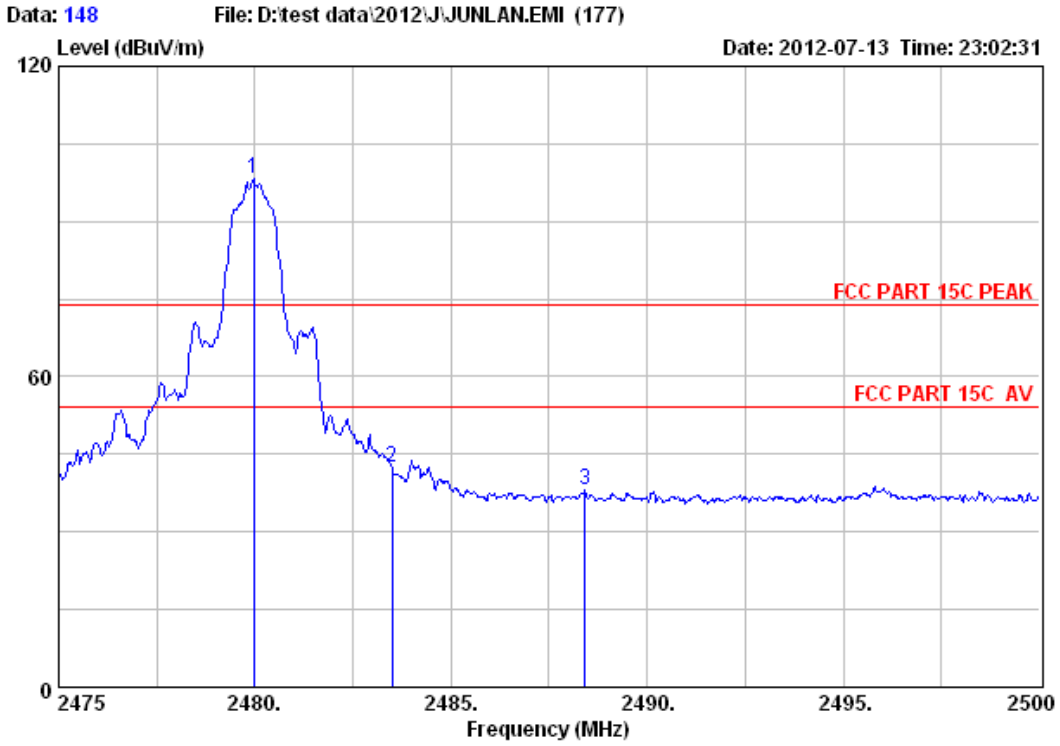


Site no. : 3m Chamber Data no. : 148
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2479.98 | 27.58 | 6.71 | 34.03 | 97.98 | 98.24 | 74.00 | -24.24 | Peak |
| 2 | 2483.50 | 27.58 | 6.71 | 34.03 | 42.11 | 42.37 | 74.00 | 31.63 | Peak |
| 3 | 2488.43 | 27.58 | 6.73 | 34.03 | 37.70 | 37.98 | 74.00 | 36.02 | Peak |

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

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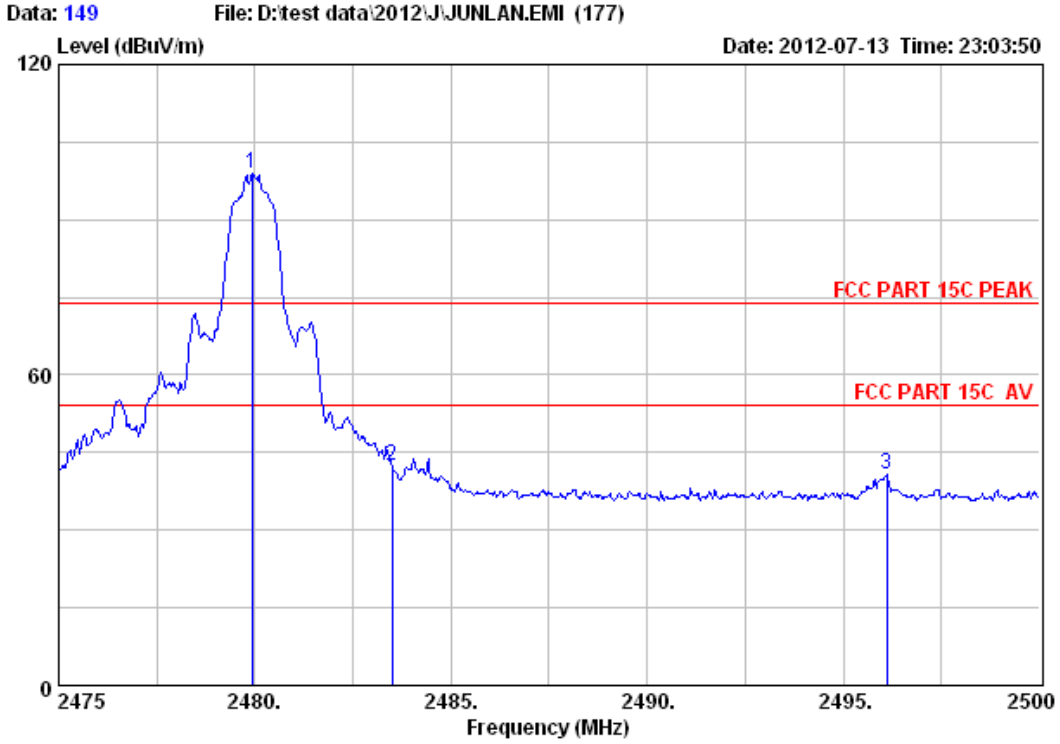


Site no. : 3m Chamber Data no. : 149
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : π/4-DQPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2479.93 | 27.58 | 6.71 | 34.03 | 98.78 | 99.04 | 74.00 | -25.04 | Peak |
| 2 | 2483.50 | 27.58 | 6.71 | 34.03 | 42.28 | 42.54 | 74.00 | 31.46 | Peak |
| 3 | 2496.10 | 27.57 | 6.73 | 34.00 | 40.39 | 40.69 | 74.00 | 33.31 | 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.

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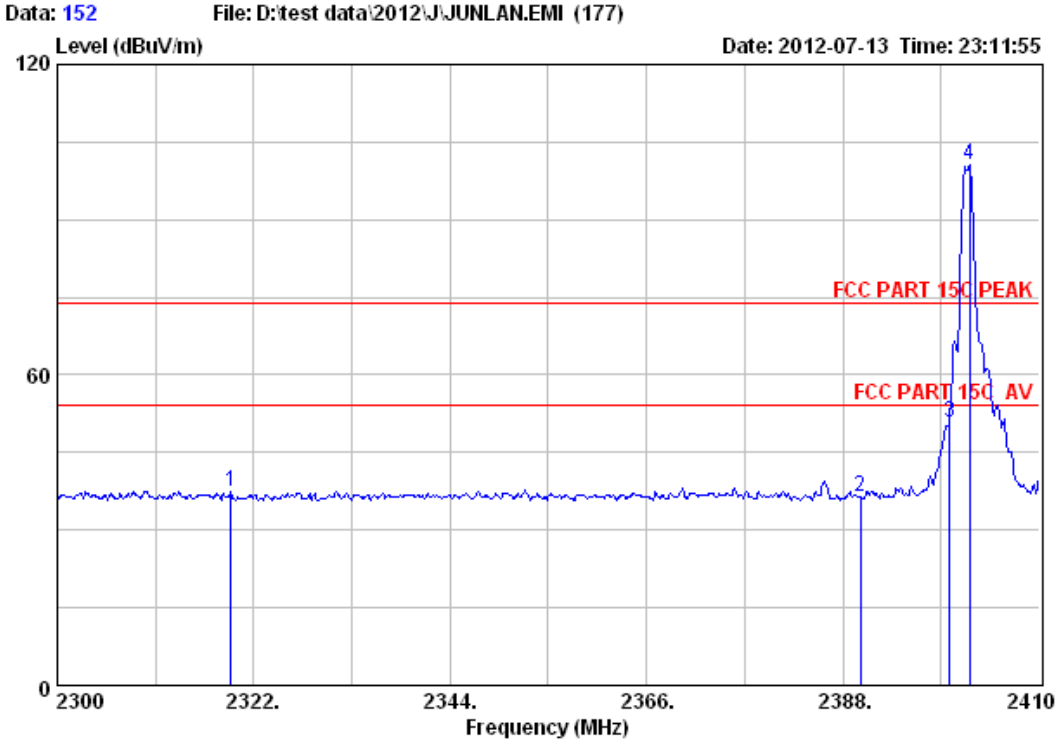


Site no. : 3m Chamber Data no. : 152
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2319.47 | 27.76 | 6.54 | 34.24 | 37.40 | 37.46 | 74.00 | 36.54 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.19 | 36.25 | 36.32 | 74.00 | 37.68 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.18 | 50.90 | 50.95 | 74.00 | 23.05 | Peak |
| 4 | 2402.19 | 27.61 | 6.62 | 34.18 | 100.59 | 100.64 | 74.00 | -26.64 | Peak |

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

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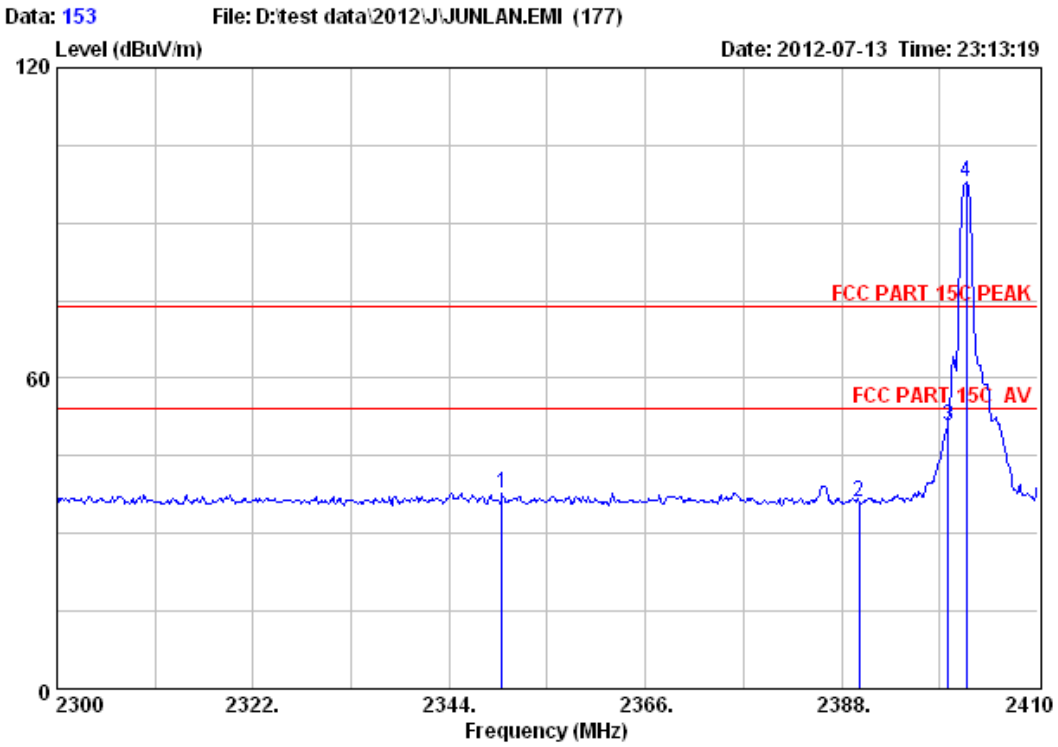


Site no. : 3m Chamber Data no. : 153
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2402MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Emission Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2349.94 | 27.70 | 6.56 | 34.22 | 37.70 | 37.74 | 74.00 | 36.26 | Peak |
| 2 | 2390.00 | 27.64 | 6.62 | 34.19 | 36.14 | 36.21 | 74.00 | 37.79 | Peak |
| 3 | 2400.00 | 27.61 | 6.62 | 34.18 | 50.84 | 50.89 | 74.00 | 23.11 | Peak |
| 4 | 2401.97 | 27.61 | 6.62 | 34.18 | 98.00 | 98.05 | 74.00 | -24.05 | 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.

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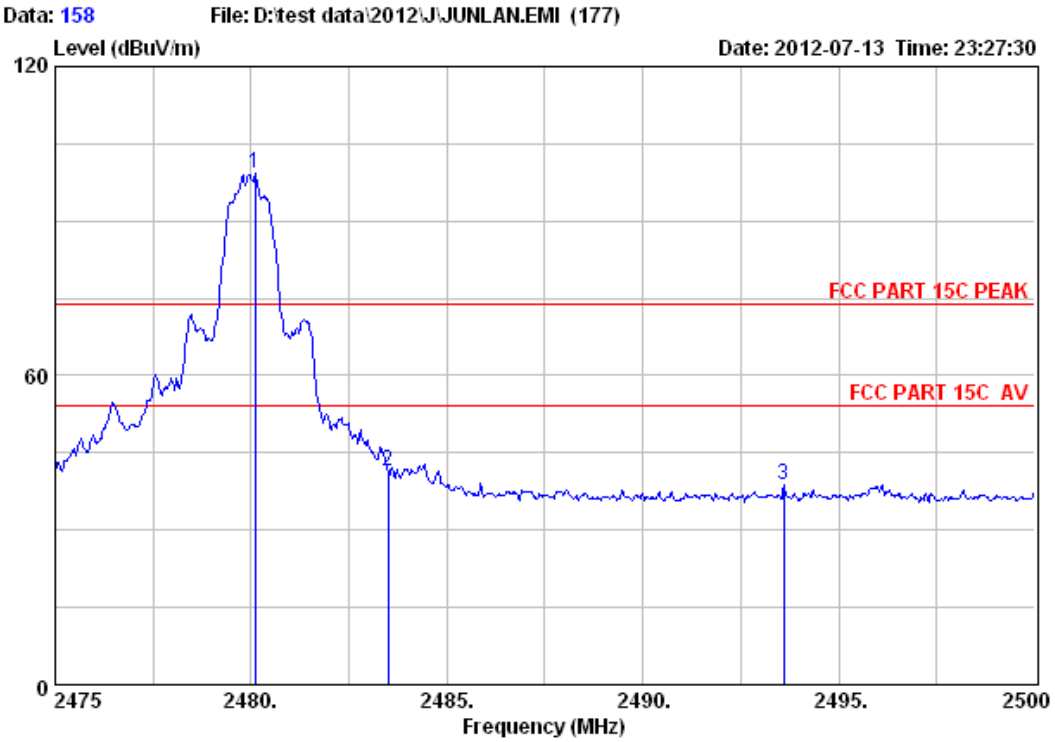


Site no. : 3m Chamber Data no. : 158
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2480.10 | 27.58 | 6.71 | 34.03 | 98.99 | 99.25 | 74.00 | -25.25 | Peak |
| 2 | 2483.50 | 27.58 | 6.71 | 34.03 | 41.20 | 41.46 | 74.00 | 32.54 | Peak |
| 3 | 2493.60 | 27.58 | 6.73 | 34.03 | 38.43 | 38.71 | 74.00 | 35.29 | 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.

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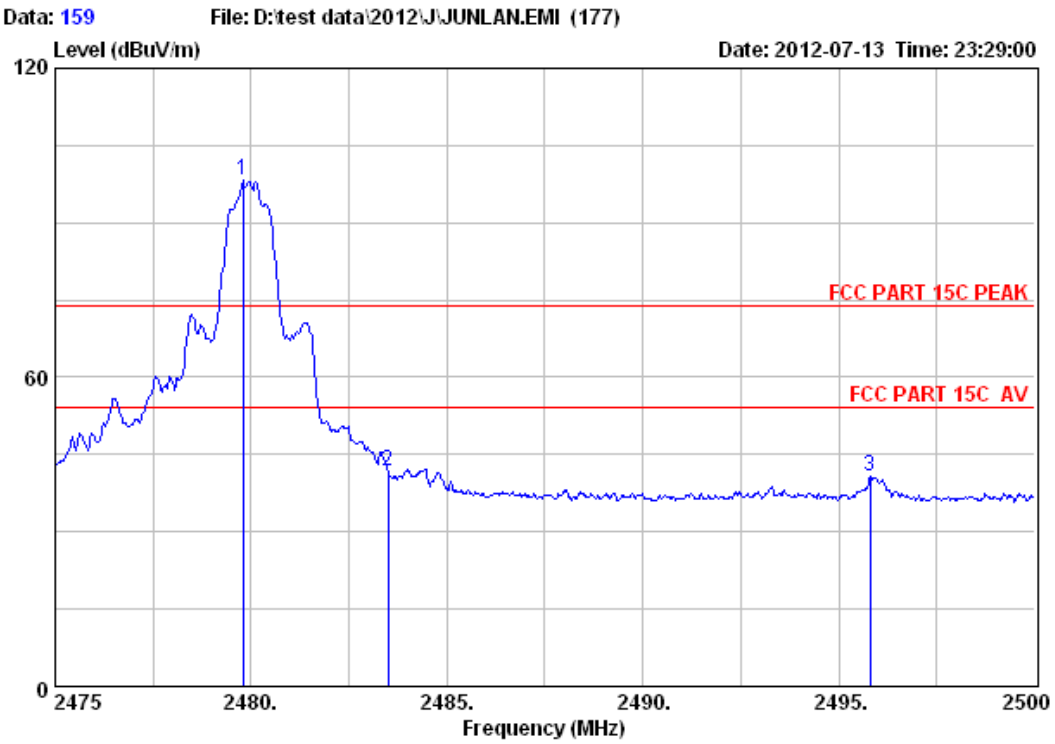


Site no. : 3m Chamber Data no. : 159
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS-1/5616
Test Mode : 8-DPSK TX 2480MHz

| | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Amp Factor (dB) | Reading (dBuV) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2479.80 | 27.58 | 6.71 | 34.03 | 97.86 | 98.12 | 74.00 | -24.12 | Peak |
| 2 | 2483.50 | 27.58 | 6.71 | 34.03 | 41.54 | 41.80 | 74.00 | 32.20 | Peak |
| 3 | 2495.80 | 27.57 | 6.73 | 34.00 | 40.51 | 40.81 | 74.00 | 33.19 | 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 dB(μV) | Average Level dB(μV) |
| 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 form 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 ESHS10) is set at 10kHz.

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

## 10.3. Test Result

| |
|---|
| EUT: BLUETOOTH iPAD iTOWER SPEAKER M/N:BITS-1/5616 |
| Power: AC 120V/60Hz |
| Test date: 2012-07-04 Tested by: Tony Tang |
| Test mode: Tx Mode |
| Pass |

## 10.4.Test Data

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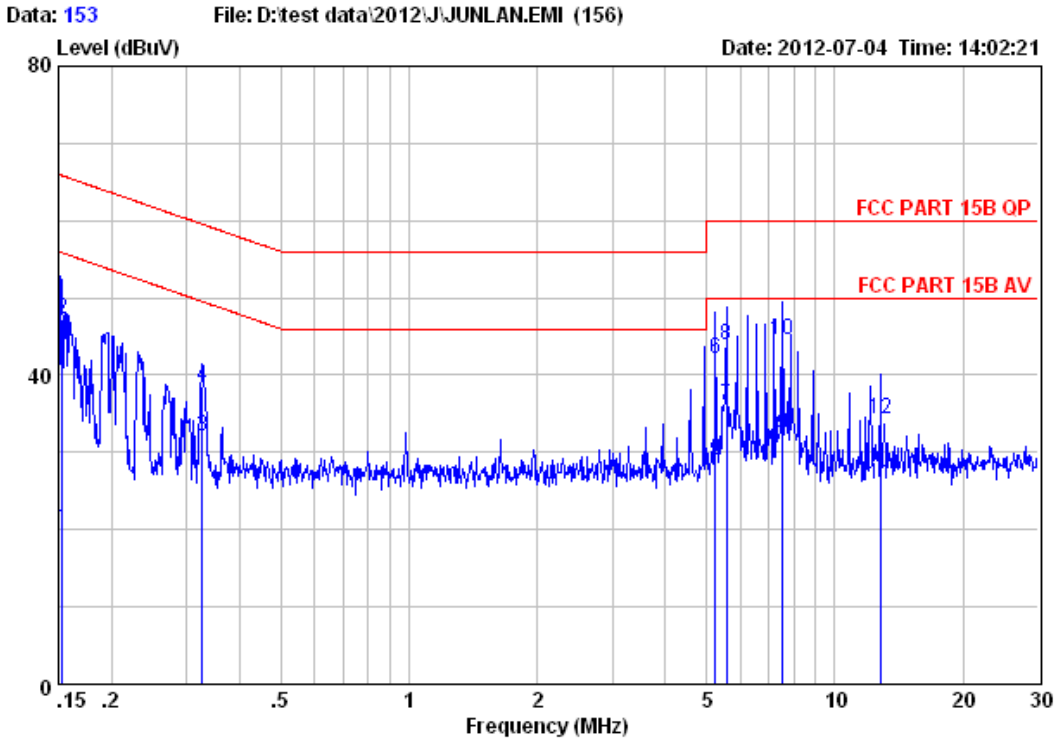


Site no. : EST 844 Shielded Room Data no. : 153
Limit : FCC PART 15B QP LINE Phase : LINE
Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS/5616
Test Mode : TX

| | Freq. (MHz) | LISN Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuv/m) | Limits (dBuv/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.15 | 9.61 | 9.81 | 0.68 | 20.10 | 55.82 | 35.72 | Average |
| 2 | 0.15 | 9.61 | 9.81 | 27.86 | 47.28 | 65.82 | 18.54 | QP |
| 3 | 0.33 | 9.61 | 9.83 | 12.76 | 32.20 | 49.53 | 17.33 | Average |
| 4 | 0.33 | 9.61 | 9.83 | 19.08 | 38.52 | 59.53 | 21.01 | QP |
| 5 | 5.25 | 9.65 | 9.86 | 9.39 | 28.90 | 50.00 | 21.10 | Average |
| 6 | 5.25 | 9.65 | 9.86 | 22.62 | 42.13 | 60.00 | 17.87 | QP |
| 7 | 5.56 | 9.65 | 9.86 | 16.69 | 36.20 | 50.00 | 13.80 | Average |
| 8 | 5.56 | 9.65 | 9.86 | 24.34 | 43.85 | 60.00 | 16.15 | QP |
| 9 | 7.53 | 9.66 | 9.87 | 12.77 | 32.30 | 50.00 | 17.70 | Average |
| 10 | 7.53 | 9.66 | 9.87 | 24.93 | 44.46 | 60.00 | 15.54 | QP |
| 11 | 12.78 | 9.67 | 9.93 | 6.20 | 25.80 | 50.00 | 24.20 | Average |
| 12 | 12.78 | 9.67 | 9.93 | 14.61 | 34.21 | 60.00 | 25.79 | QP |

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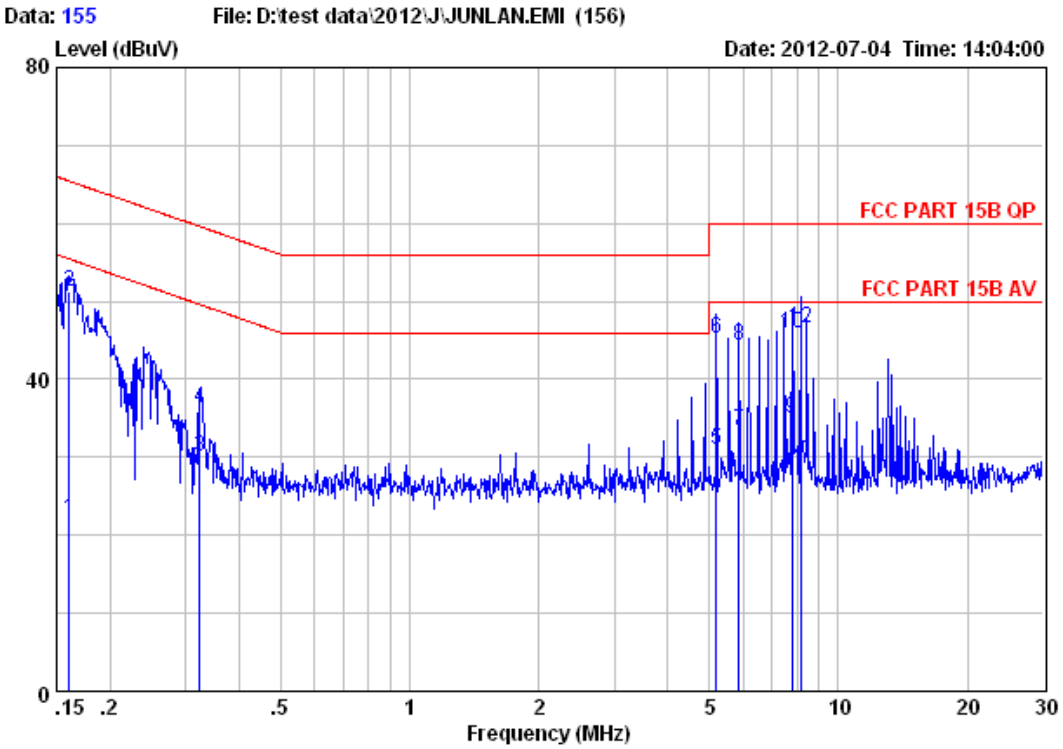



Site no. : EST 844 Shielded Room Data no. : 155
Limit : FCC PART 15B QP LINE Phase : NEUTRAL
Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa
Engineer : Tony
EUT : BLUETOOTH iPAD iPAD iTOWER SPEAKER
Power : AC 120V/60Hz
M/N : BITS/5616
Test Mode : TX

| | Freq. (MHz) | LISN Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuv/m) | Limits (dBuv/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.16 | 9.49 | 9.81 | 2.80 | 22.10 | 55.43 | 33.33 | Average |
| 2 | 0.16 | 9.49 | 9.81 | 32.01 | 51.31 | 65.43 | 14.12 | QP |
| 3 | 0.32 | 9.59 | 9.83 | 10.58 | 30.00 | 49.62 | 19.62 | Average |
| 4 | 0.32 | 9.59 | 9.83 | 16.89 | 36.31 | 59.62 | 23.31 | QP |
| 5 | 5.19 | 9.65 | 9.85 | 11.40 | 30.90 | 50.00 | 19.10 | Average |
| 6 | 5.19 | 9.65 | 9.85 | 25.78 | 45.28 | 60.00 | 14.72 | QP |
| 7 | 5.87 | 9.65 | 9.85 | 14.00 | 33.50 | 50.00 | 16.50 | Average |
| 8 | 5.87 | 9.65 | 9.85 | 24.75 | 44.25 | 60.00 | 15.75 | QP |
| 9 | 7.81 | 9.67 | 9.88 | 15.35 | 34.90 | 50.00 | 15.10 | Average |
| 10 | 7.81 | 9.67 | 9.88 | 26.30 | 45.85 | 60.00 | 14.15 | QP |
| 11 | 8.15 | 9.68 | 9.87 | 10.15 | 29.70 | 50.00 | 20.30 | Average |
| 12 | 8.15 | 9.68 | 9.87 | 27.04 | 46.59 | 60.00 | 13.41 | QP |

# 11. ANTENNA REQUIREMENTS

## 11.1. Limit

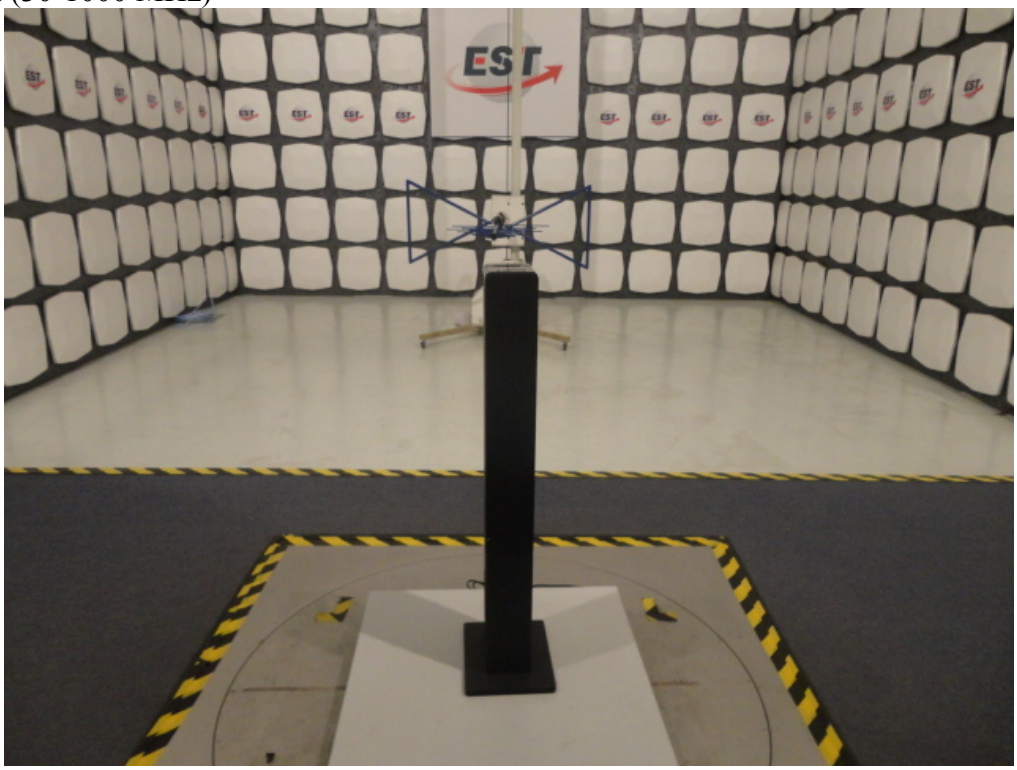
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional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

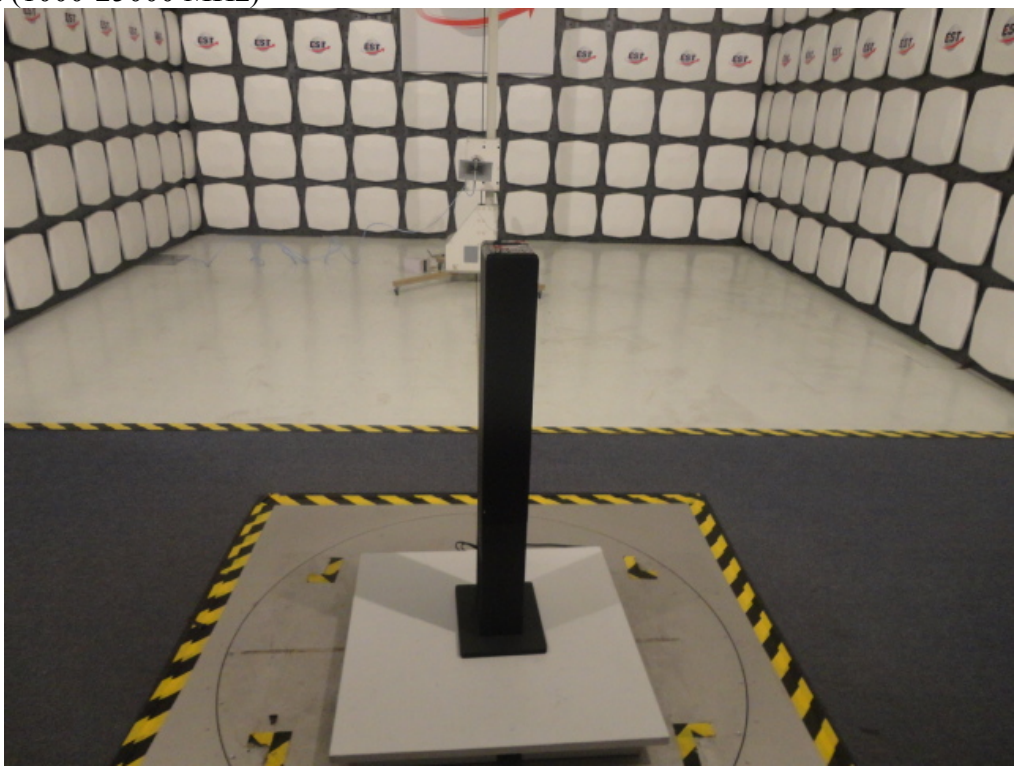
The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0dBi.

# 12. TEST SETUP PHOTO

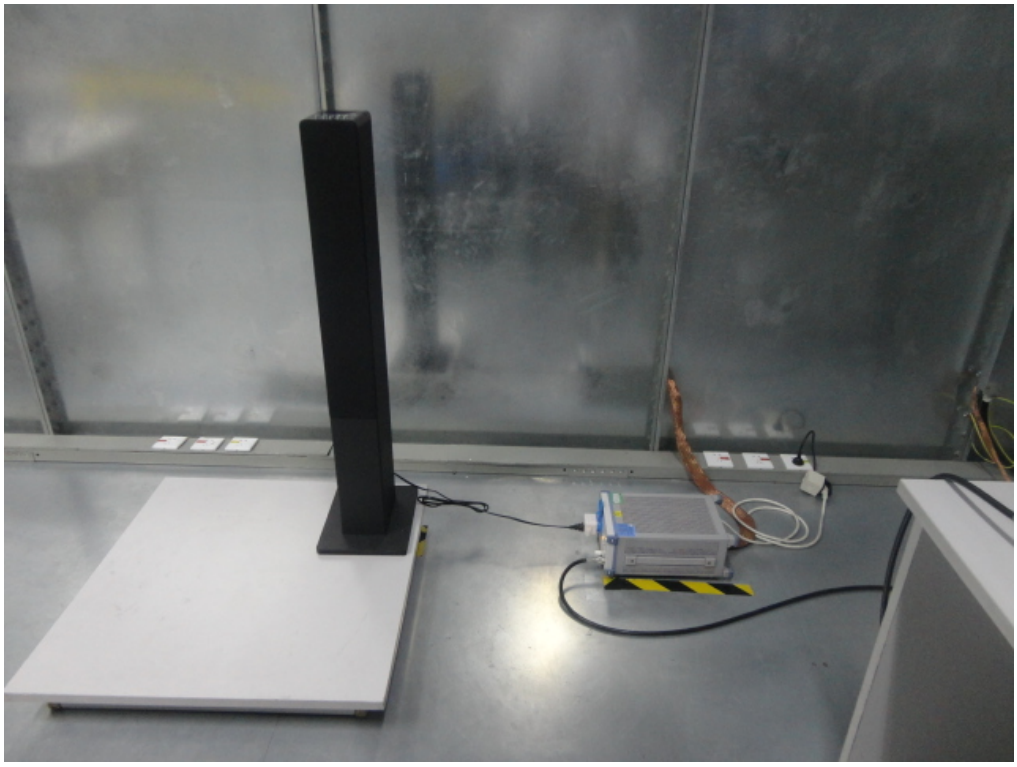
Radiated Test (30-1000 MHz)



Radiated Test (1000-25000 MHz)



Conducted test



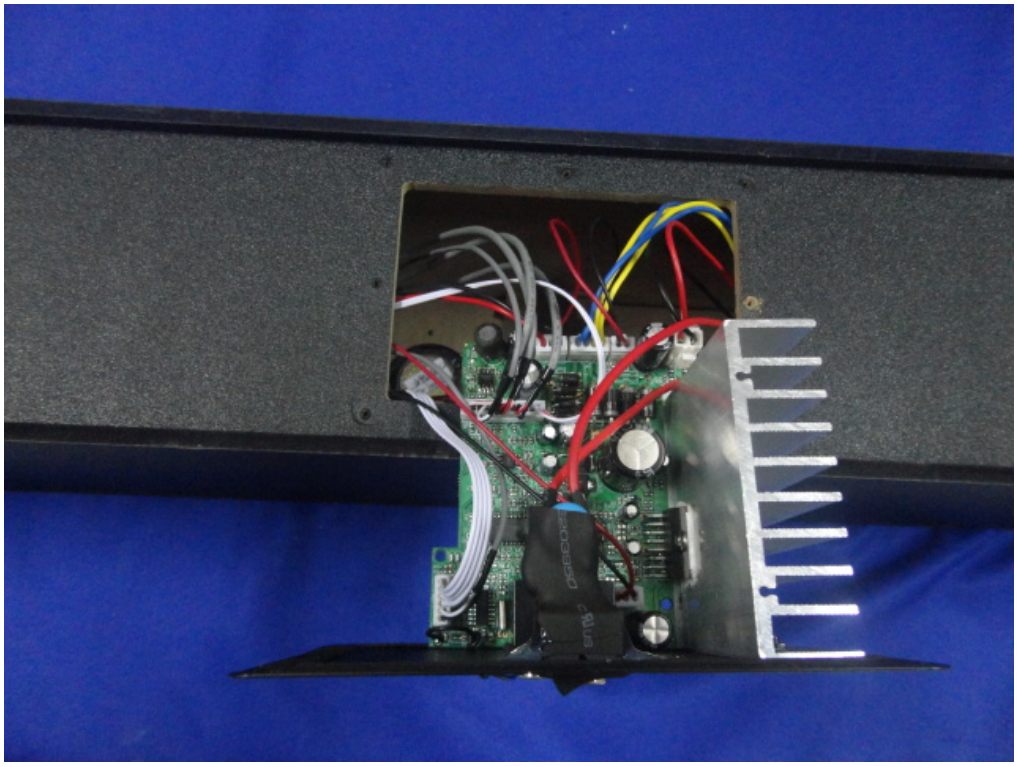
# 13. PHOTOS OF EUT

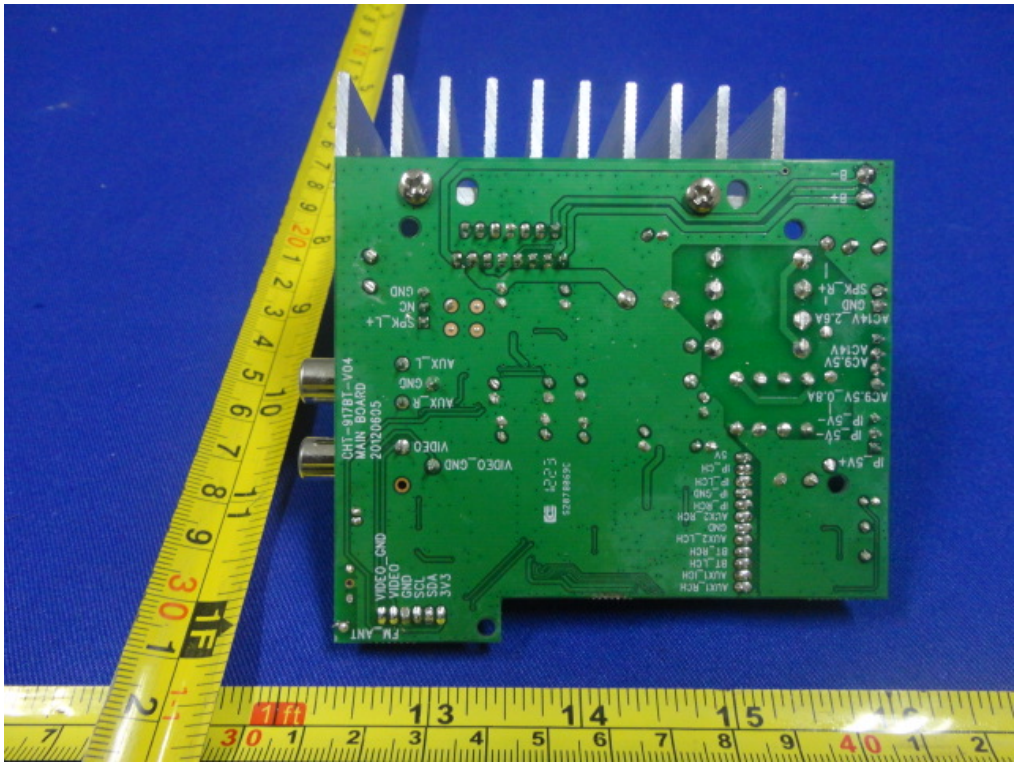
**External Photos**

## External Photos

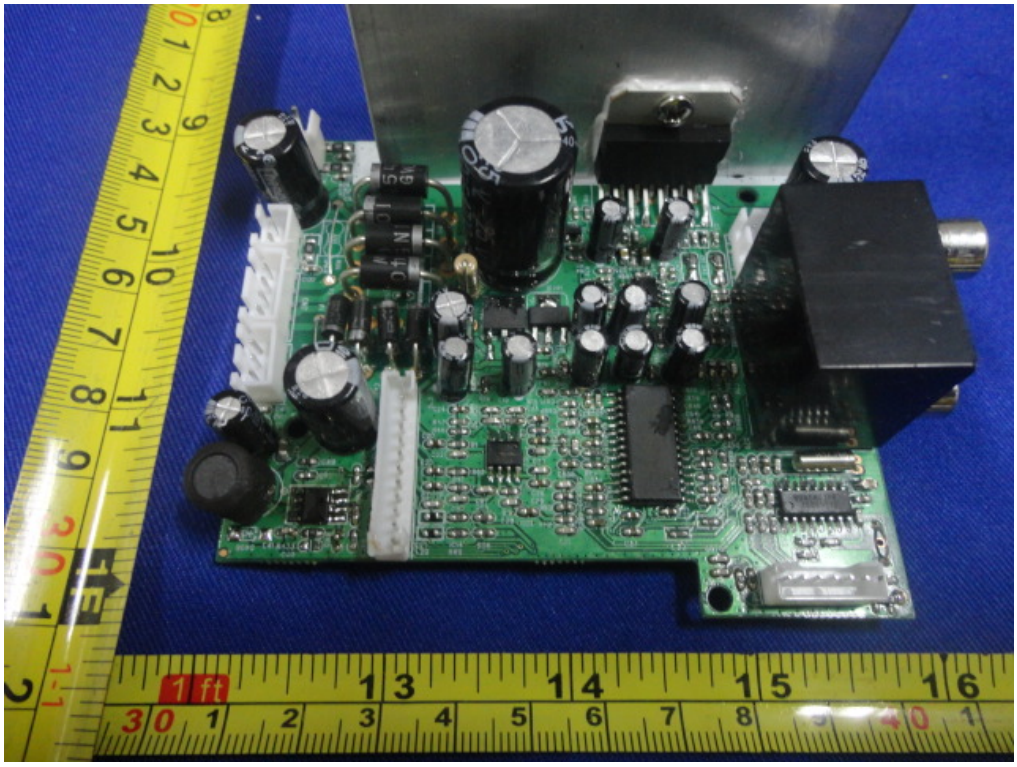
## External Photos

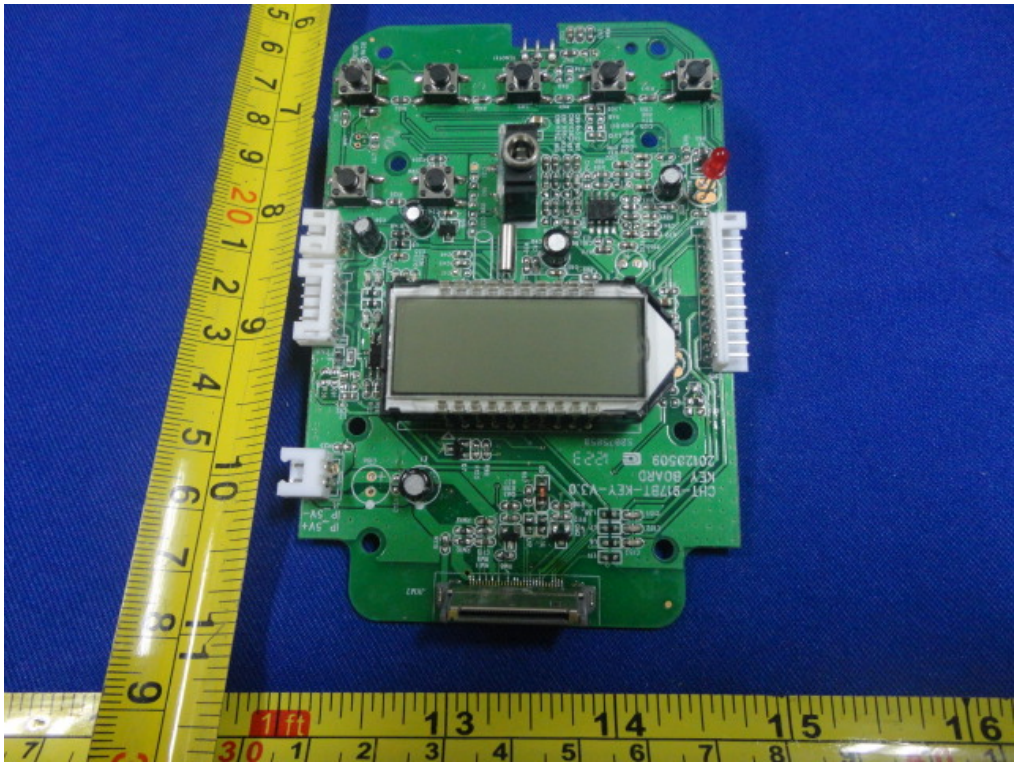
## Internal Photos





## Internal Photos





## Internal Photos