



NVLAP LAB CODE 200707-0



# FCC PART 15.247

## MEASUREMENT AND TEST REPORT

For

### Zhongshan K-mate General Electronics Co. Ltd.

3th Floor, B1 building, Fuwan Industrial Zone, Sunwen East Road,

Zhongshan, China, 528403

**FCC ID: WAD-BTE001**

|   |  |   |  |
|---|--|---|--|
| <b>This Report Concerns:</b><br><input checked="" type="checkbox"/> Original Report |  | <b>Equipment Type:</b><br>Bluetooth headset |  |
| <b>Test Engineer:</b>   | Bruce Zhang  | <i>Bruce Zhang</i>                          |  |
| <b>Report No.:</b>  | RSZ08061002  |   |  |
| <b>Test Date:</b>   | 2008-06-16 to 2008-07-11   |   |  |
| <b>Report Date:</b>   | 2008-07-14   |   |  |
| <b>Reviewed By:</b>   | EMC Manager: Green Xu  | <i>Green Xu</i>                             |  |
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## GENERAL INFORMATION

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### Product Description for Equipment under Test (EUT)

The *Zhongshan K-mate General Electronics Co. Ltd.* 's product, model number: *BTE001* or the "EUT" as referred to in this report is a *Bluetooth headset*, which measures approximately: 6.1 cm L x 1.6 cm W x 2.2 cm H, rated input voltage: DC 3.7 battery.

*\* All measurement and test data in this report was gathered from production sample serial number: 0806021 (Assigned by BACL, Shenzhen). The EUT was received on 2008-06-10.*

### Objective

This Type approval report is prepared on behalf of *Zhongshan K-mate General Electronics Co. Ltd* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.209 and 15.247 rules.

### Related Submittal(s)/Grant(s)

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

### Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at  
<http://ts.nist.gov/Standards/scopes/2007070.htm>.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

### EUT Exercise Software

N/A.

### Special Accessories

The special accessories were provided by Bay Area Compliance Laboratories Corp. (Shenzhen).

### Equipment Modifications

No modification was made to the unit tested.

### Host System Configuration List and Details

| Manufacturer | Description | Model             | Serial Number            | FCC ID |
|--------------|-------------|-------------------|--------------------------|--------|
| DELL         | Motherboard | OWC297            | CN-OWC297-70821-564-00NI | DoC    |
| DELL         | Power       | NPS-250KB D       | CN-0H2678-17972-56E-80BM | DoC    |
| Seagate      | Hard Disk   | ST340014A         | 5JXK3GXE                 | DoC    |
| DELL         | 3.5' Floppy | N/A               | CN-0N8893-69802-54Q-02P0 | DoC    |
| Lite-ON      | CD-Rom      | LTN-489S          | N/A                      | DoC    |
| Intel        | Ethernet    | PRO 10/100 VE     | N/A                      | DoC    |
| ProMOS       | Memory      | V826632K24SATG-C0 | 0525-K1933700            | N/A    |
| Intel        | CPU         | Celeron D-2533    | N/A                      | N/A    |

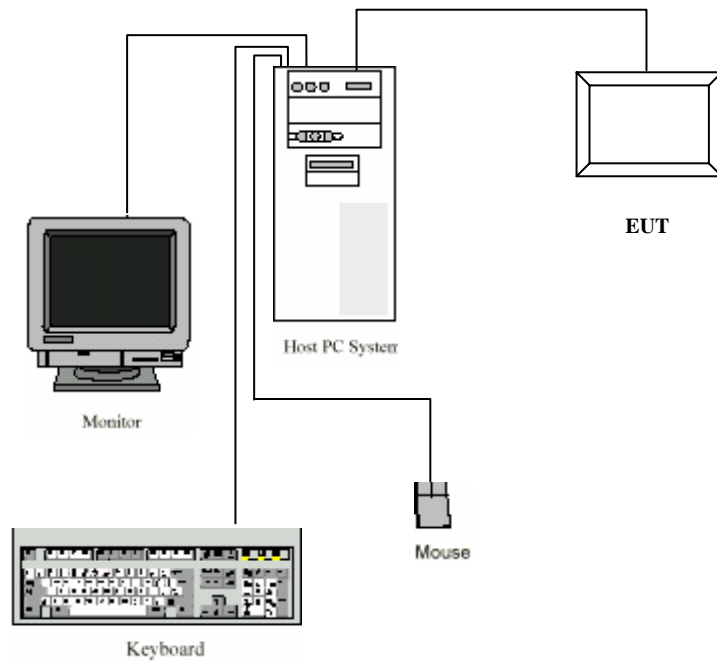
### Local Support Equipment List and Details

| Manufacturer | Description | Model     | Serial Number            | FCC ID |
|--------------|-------------|-----------|--------------------------|--------|
| DELL         | PC          | DELL 170L | CN-0TC670-70821-560-F4Q6 | DoC    |
| DELL         | Keyboard    | SK-8110   | CN07N244-71616-56A-1B1E  | DoC    |
| DELL         | Mouse       | M071KC    | 520027907                | DoC    |
| DELL         | LCD Monitor | 1505FP    | Y4287-7168-571-GBSH      | DoC    |
| HP           | Laser Jet5L | C3941A    | JPTVOB2337               | DoC    |
| ECOM         | Modem       | EM-56DEV  | 6588D51200013            | DoC    |

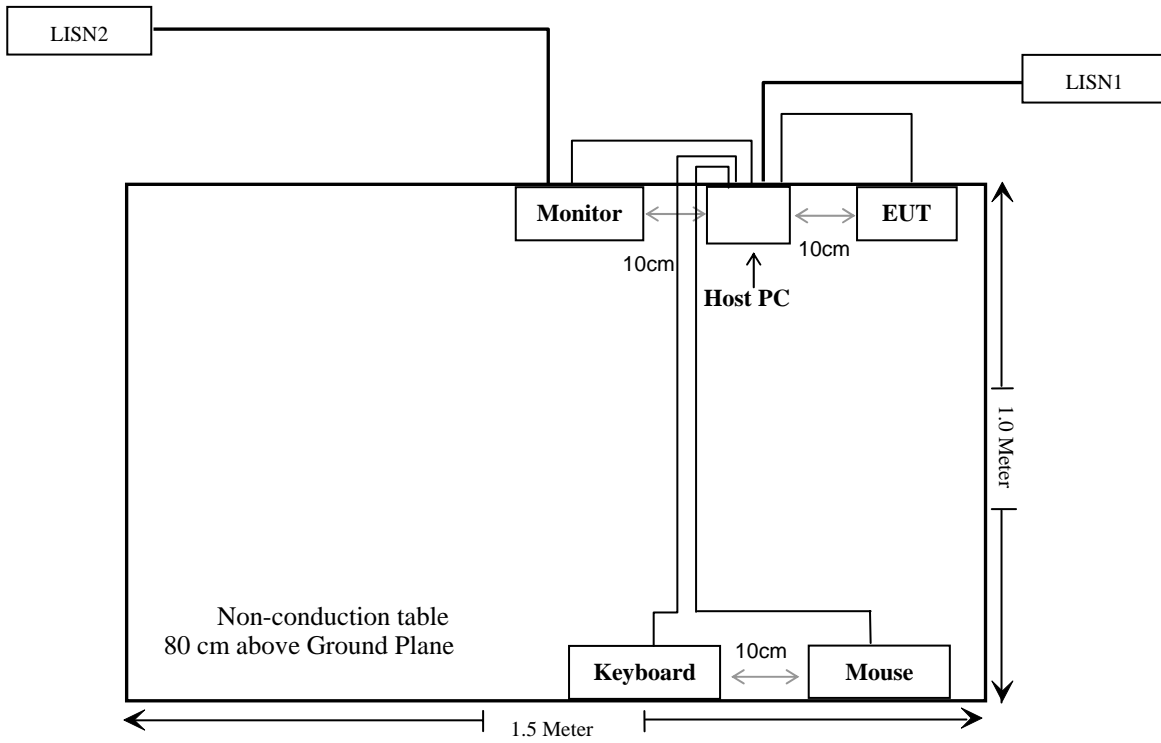
**External I/O Cable**

| Cable Description               | Length (M) | From/Port | To |
|---------------------------------|------------|-----------|----|
| Unshielded Detachable USB Cable | 1.23       | EUT       | PC |

**Configuration of Test Setup**



### Block Diagram of Test Setup





**SUMMARY OF TEST RESULTS**

| <b>FCC Rules</b>                      | <b>Description of Test</b>       | <b>Result</b> |
|---------------------------------------|----------------------------------|---------------|
| CFR47 §15.203                         | Antenna Requirement              | Compliant     |
| CFR47 §15.207 (a)                     | Conducted Emissions              | Compliant     |
| CFR47 §15.205                         | Restricted Band                  | Compliant     |
| CFR47 §15.205, §15.209,<br>§15.247(d) | Radiated Emission                | Compliant     |
| CFR47 §15.247 (a)(1)                  | 20 dB Bandwidth                  | Compliant     |
| CFR47 §15.247(a)(1)                   | Channel Separation Test          | Compliant     |
| CFR47 §15.247(a)(1)(iii)              | Time of occupancy (Dwell Time)   | Compliant     |
| CFR47 §15.247(a)(1)(iii)              | Quantity of hopping channel Test | Compliant     |
| CFR47 §15.247(b)(1)                   | Peak Output Power Measurement    | Compliant     |
| CFR47 §15.247(d)                      | Band edges                       | Compliant     |

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## **CFR47 §15.203 - ANTENNA REQUIREMENT**

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### **Standard Applicable**

According to CFR47 § 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### **Antenna Connector Construction**

The EUT has a printed antenna on PCB. The maximum gain is below 2 dBi.

**Result:** Compliance.

Please refer to the EUT internal photos.

## §1.1310 §2.1093 - RF EXPOSURE

### Standard Applicable

According to § 1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to FCC Exclusion list, In the following table,  $f_{\text{GHz}}$  is mid-band frequency in GHz, and  $d$  is the distance to a person's body, excluding hands, wrists, feet, and ankles.

| Exposure category  | <u>low threshold</u>  | <u>high threshold</u>                   |
|--------------------|---|---|
| general population | $(60/f_{\text{GHz}})$ mW, $d < 2.5$ cm<br>$(120/f_{\text{GHz}})$ mW, $d \geq 2.5$ cm  | $(900/f_{\text{GHz}})$ mW, $d < 20$ cm  |
| occupational       | $(375/f_{\text{GHz}})$ mW, $d < 2.5$ cm<br>$(900/f_{\text{GHz}})$ mW, $d \geq 2.5$ cm | $(2250/f_{\text{GHz}})$ mW, $d < 20$ cm |

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

### Measurement Result:

This is a portable device and the Max peak output power is  $1.072\text{mW} < 24.58\text{mW} = (60/2.441\text{GHz})$  mW

The SAR measurement is not necessary.

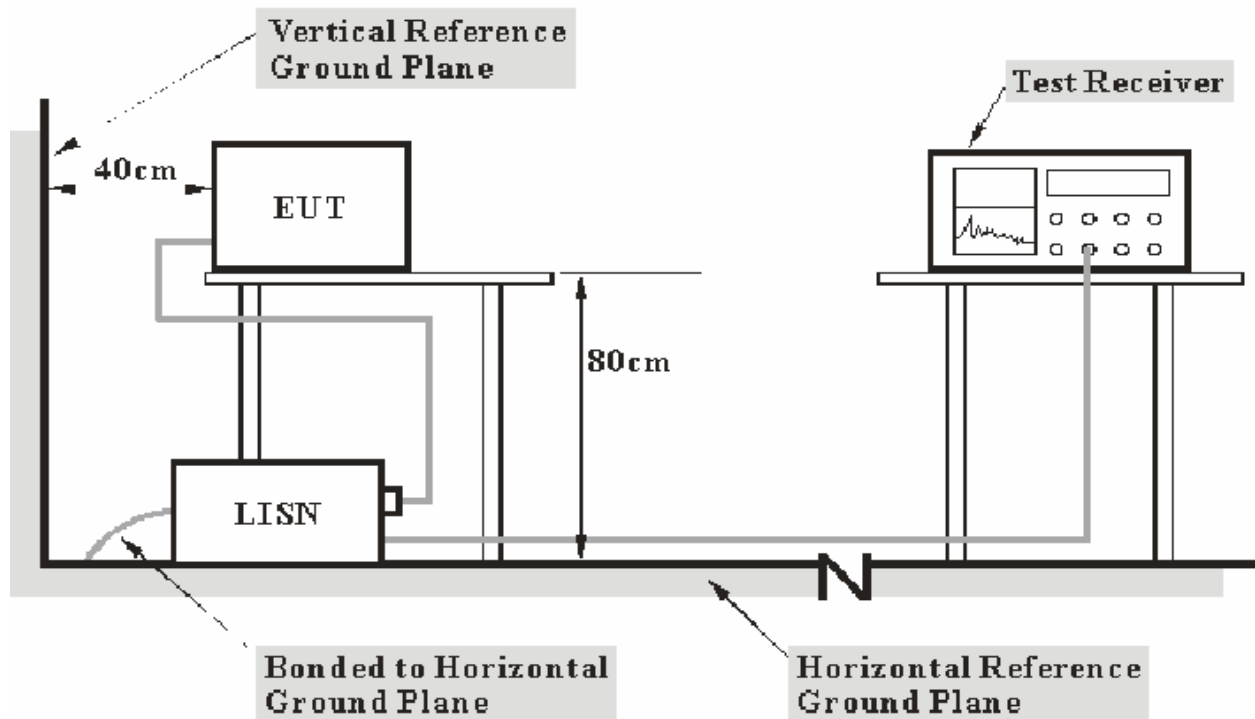
## CFR47 §15.207 (a) - CONDUCTED EMISSIONS

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 2.4$  dB.

### EUT Setup



- Note:**
1. Support units were connected to second LISN.
  2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The host PC was connected to a 120 VAC/60 Hz power source.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| <i>Frequency Range</i> | <i>IF B/W</i> |
|------------------------|---------------|
| 150 kHz – 30 MHz       | 9 kHz         |

## Test Equipment List and Details

| Manufacturer    | Description       | Model   | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|---------|---------------|------------------|----------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCI    | 100035        | 2007-10-16       | 2008-10-16           |
| Rohde & Schwarz | L.I.S.N.          | ESH2-Z5 | 892107/021    | 2008-03-25       | 2009-03-25           |

\* Com-Power's LISN were used as the supporting equipment.

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

During the conducted emission test, the host PC was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

**14.70 dB** at **17.7125 MHz** in the **Hot** conductor mode.

**Test Data****Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

The testing was performed by Bruce Zhang on 2008-07-08.

Test Mode: Charging

| Line Conducted Emissions |                        |                |                       | FCC PART 15.207    |             |
|--------------------------|------------------------|----------------|-----------------------|--------------------|-------------|
| Frequency (MHz)          | Amplitude (dB $\mu$ V) | Detector QP/AV | Conductor Hot/Neutral | Limit (dB $\mu$ V) | Margin (dB) |
| 17.7125                  | 35.30                  | AV             | Hot                   | 50.00              | 14.70       |
| 3.8880                   | 29.20                  | AV             | Hot                   | 46.00              | 16.80       |
| 0.1800                   | 36.80                  | AV             | Neutral               | 54.49              | 17.69       |
| 0.3650                   | 29.80                  | AV             | Neutral               | 48.61              | 18.81       |
| 6.1920                   | 30.40                  | AV             | Hot                   | 50.00              | 19.60       |
| 0.3050                   | 30.30                  | AV             | Neutral               | 50.11              | 19.81       |
| 6.7430                   | 29.40                  | AV             | Hot                   | 50.00              | 20.60       |
| 17.7086                  | 38.40                  | QP             | Hot                   | 60.00              | 21.60       |
| 17.7100                  | 37.30                  | QP             | Neutral               | 60.00              | 22.70       |
| 17.7100                  | 26.30                  | AV             | Neutral               | 50.00              | 23.70       |
| 6.5650                   | 36.00                  | QP             | Neutral               | 60.00              | 24.00       |
| 0.1810                   | 30.40                  | AV             | Hot                   | 54.44              | 24.04       |
| 6.6250                   | 25.70                  | AV             | Neutral               | 50.00              | 24.30       |
| 3.8880                   | 30.90                  | QP             | Hot                   | 56.00              | 25.10       |
| 0.3650                   | 33.00                  | QP             | Neutral               | 58.61              | 25.61       |
| 0.1850                   | 38.60                  | QP             | Neutral               | 64.26              | 25.66       |
| 15.2510                  | 24.10                  | AV             | Hot                   | 50.00              | 25.90       |
| 0.3050                   | 33.90                  | QP             | Neutral               | 60.11              | 26.21       |
| 14.4100                  | 22.60                  | AV             | Neutral               | 50.00              | 27.40       |
| 14.3500                  | 31.80                  | QP             | Neutral               | 60.00              | 28.20       |
| 6.7390                   | 30.40                  | QP             | Hot                   | 60.00              | 29.60       |
| 6.1960                   | 29.50                  | QP             | Hot                   | 60.00              | 30.50       |
| 15.2470                  | 26.30                  | QP             | Hot                   | 60.00              | 33.70       |
| 0.1810                   | 27.80                  | QP             | Hot                   | 64.44              | 36.64       |

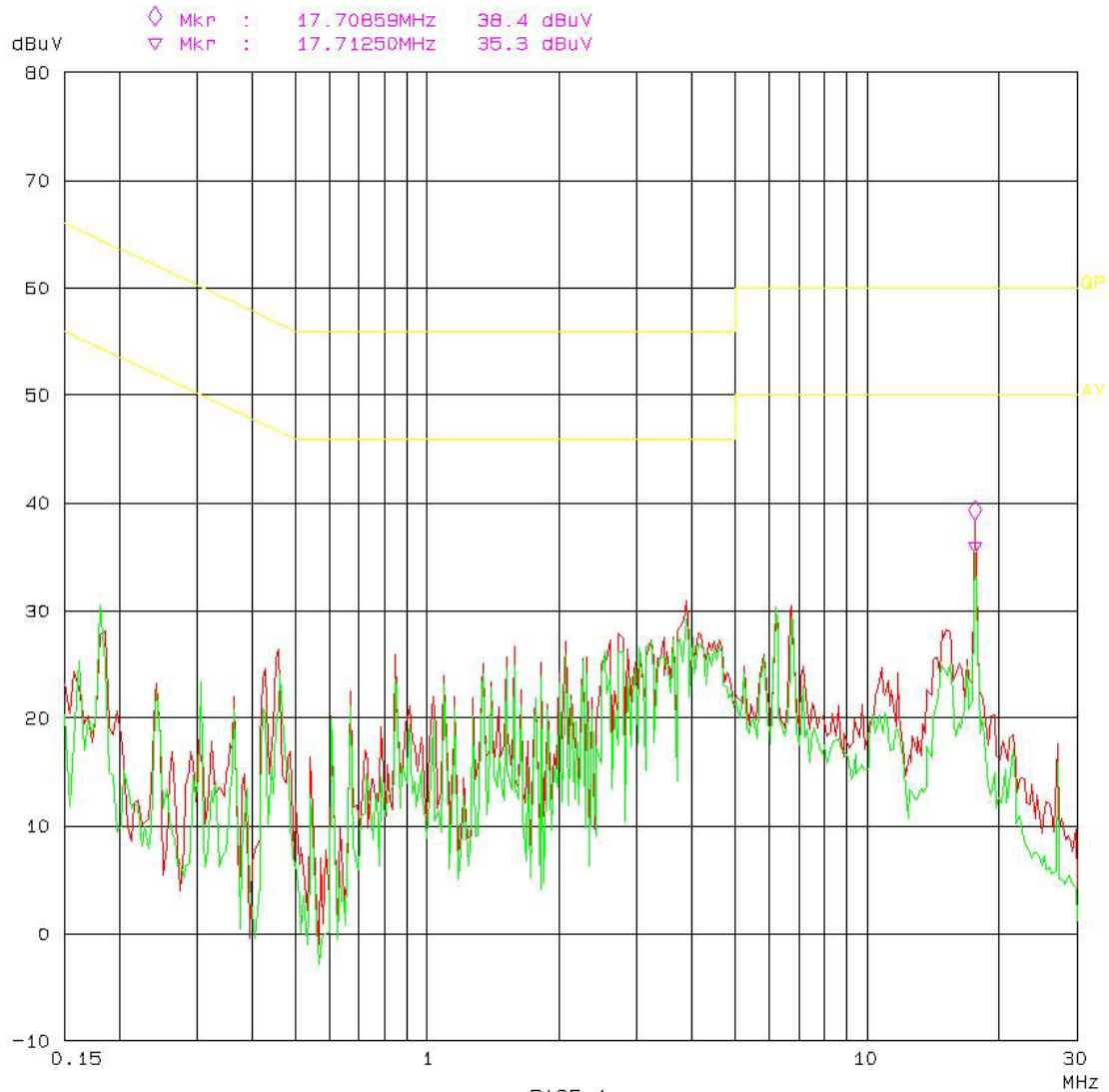
**Plot(s) of Test Data**

Plot(s) of Test Data is presented hereinafter as reference.

# Conduction Emission FCC 15 CLASS B

08. Jul 08 15:09

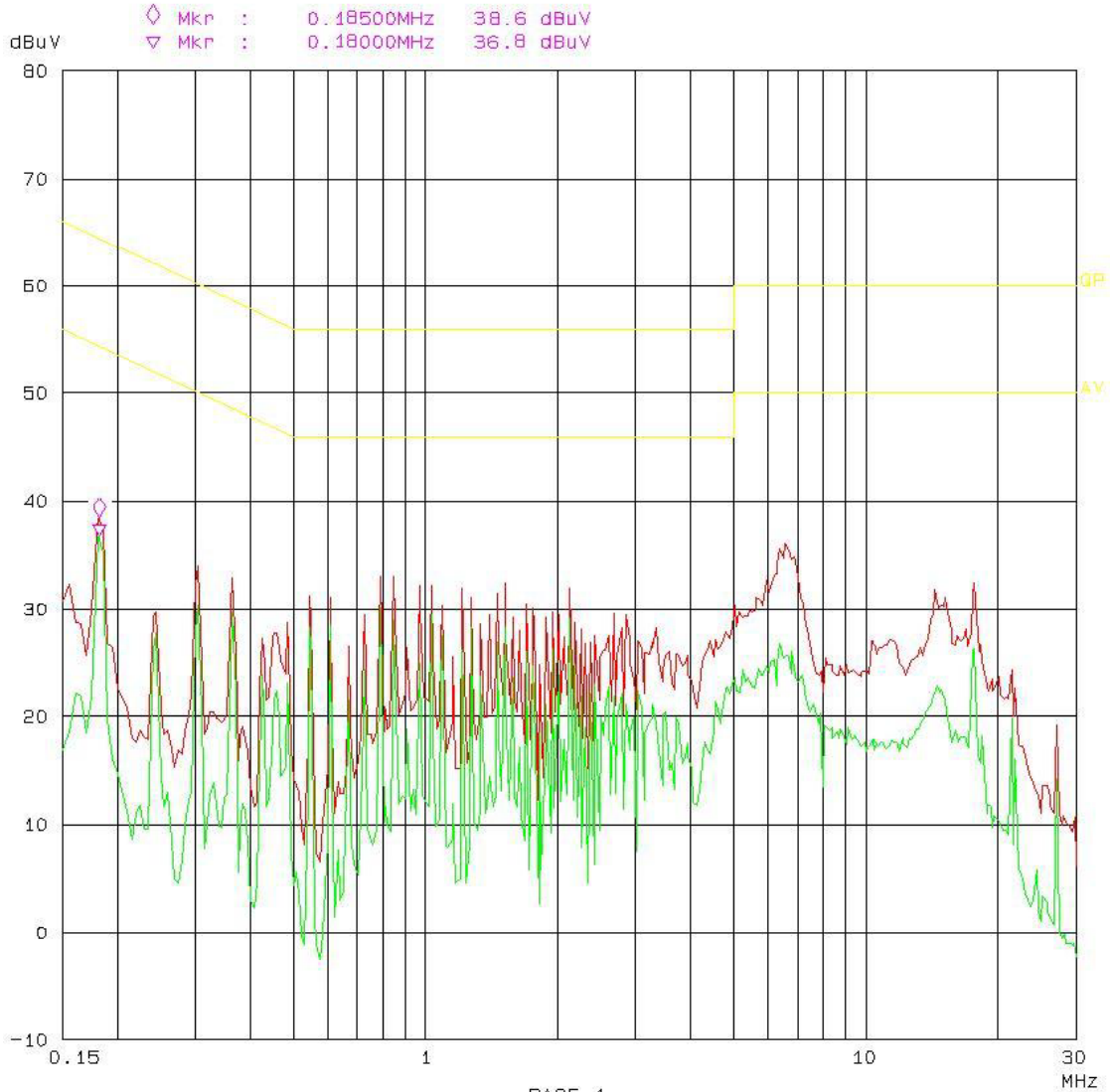
EUT: Bluetooth headset M/N: BTE001  
Manuf: K-mate  
Op Cond: Charging  
Operator: Bruce  
Test Spec: AC120V/60Hz Hbt  
Comment: Temp: 25 Hum: 56%



Conduction Emission  
FCC 15 CLASS B

08. Jul 08 15:09

EUT: Bluetooth headset M/N: BTE001  
Manuf: K-mate  
Op Cond: Charging  
Operator: Bruce  
Test Spec: AC120V/60Hz Neutral  
Comment: Temp: 25 Hum: 56%





## CFR47 §15.205, §15.209, §15.247 - RADIATED EMISSIONS

### Applicable Standard

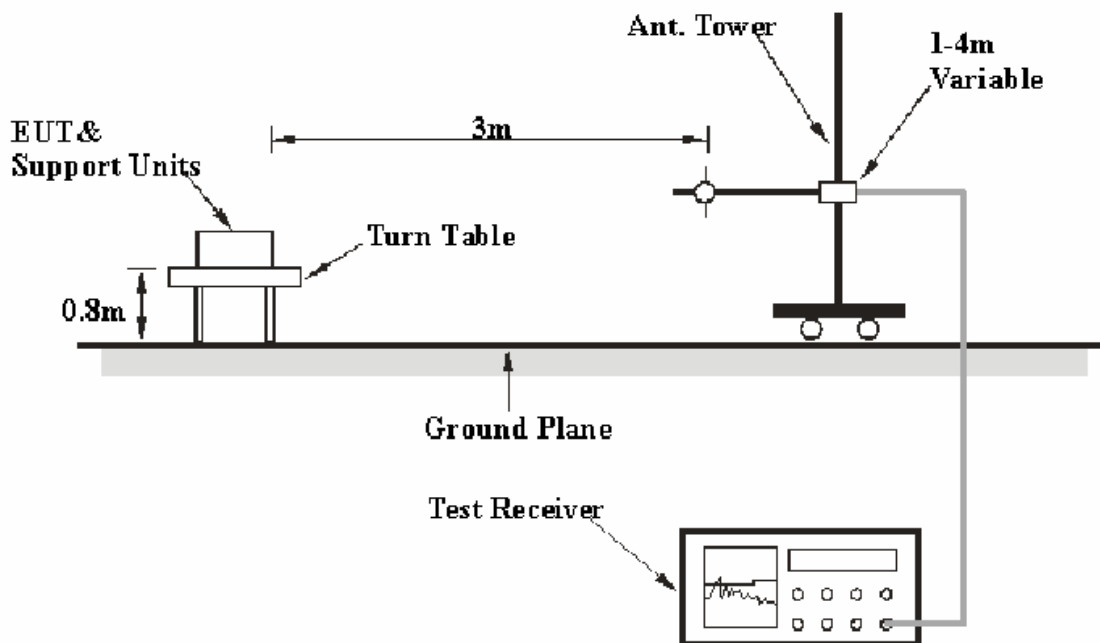
CFR47 §15.205; §15.209; §15.247 (d).

### Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is  $\pm 4.0$  dB.

### EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.109, FCC 15.209 and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The host PC was connected to a 120 VAC/60 Hz power source.

## EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

| <i>Frequency Range</i> | <i>RBW</i> | <i>Video B/W</i> |
|------------------------|------------|------------------|
| 30MHz – 1000 MHz       | 100 kHz    | 300 kHz          |
| 1000 MHz – 25 GHz      | 1 MHz      | 3 MHz            |

## Test Equipment List and Details

| Manufacturer    | Description       | Model   | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|---------|---------------|------------------|----------------------|
| HP              | Amplifier         | HP8447D | 2944A09795    | 2007-11-15       | 2008-11-15           |
| Rohde & Schwarz | EMI Test Receiver | ESCI    | 100035        | 2007-10-16       | 2008-10-16           |
| Sunol Sciences  | Broadband Antenna | JB1     | A040904-1     | 2007-08-14       | 2008-08-14           |
| HP              | Amplifier         | 8449B   | 3008A00277    | 2007-09-29       | 2008-09-29           |
| Sunol Sciences  | Horn Antenna      | DRH-118 | A052604       | 2007-09-25       | 2008-09-25           |
| Rohde & Schwarz | Spectrum Analyzer | FSEM30  | 849720/019    | 2008-05-09       | 2009-05-09           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## Test Procedure

For the radiated emissions test, the host PC was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz and peak and Average detection modes for frequencies above 1GHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude.} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

## Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.109, 15.205, 15.209, and 15.247, with the worst margin reading of:

**2.00 dB** at **166.015500 MHz** in the **Vertical** polarization, **for charging Mode**  
**5.50 dB** at **308.047050 MHz** in the **Horizontal** polarization, **for below 1 GHz**  
**9.0 dB** at **4804 MHz** in the **Vertical** polarization, **for above 1GHz (Low Channel)**  
**6.29 dB** at **4882 MHz** in the **Vertical** polarization, **for above 1GHz (Middle Channel)**  
**10.78dB** at **4960 MHz** in the **Horizontal** polarization, **for above 1GHz (High Channel)**

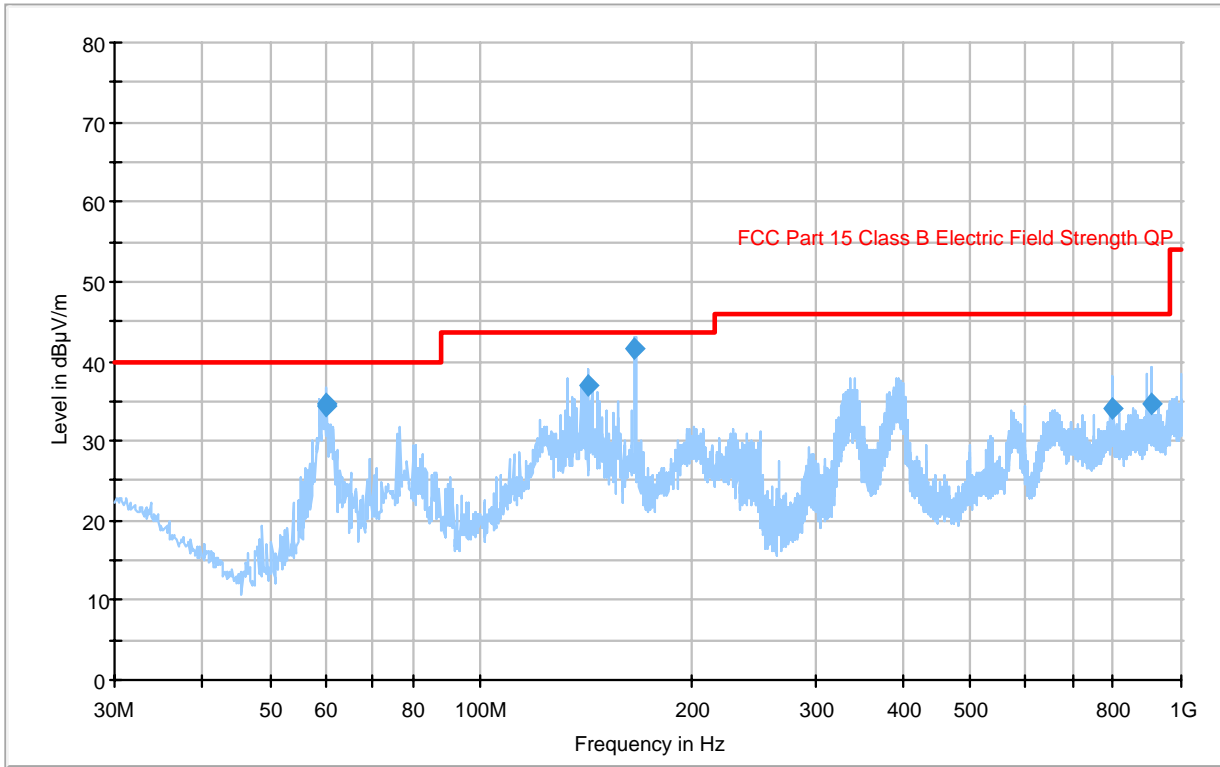
## Test Data

### Environmental Conditions

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

*The testing was performed by Bruce Zhang on 2008-07-08.*

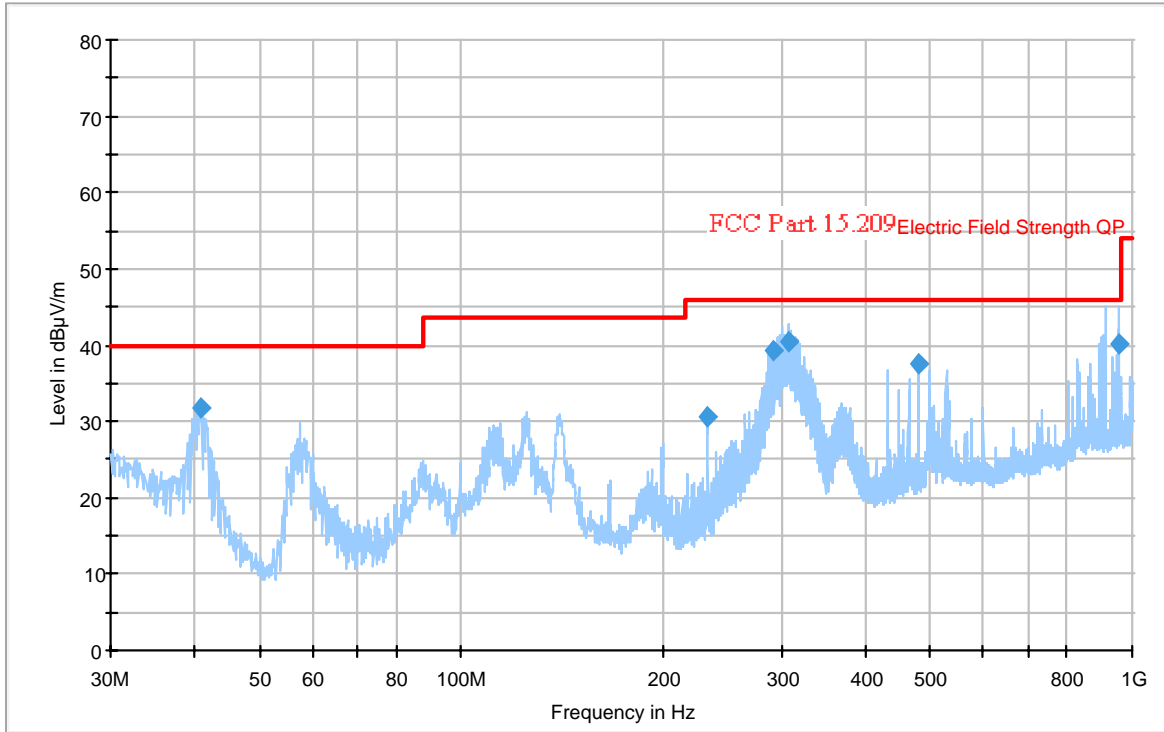
Test Mode: Charging



| Frequency (MHz) | Corrected Amp. (dBµV/m) | Ant. Height (cm) | Ant. Polarity (H/V) | Turntable Position (deg) | Correction Factor (dB) | Limit (dBµV/m) | Margin (dB) |
|-----------------|-------------------------|------------------|---------------------|--------------------------|------------------------|----------------|-------------|
| 166.015500      | 41.5                    | 106.0            | V                   | 82.0                     | -12.1                  | 43.5           | 2.0*        |
| 60.310500       | 34.8                    | 401.0            | H                   | 212.0                    | -17.3                  | 40.0           | 5.2         |
| 60.131475       | 34.3                    | 106.0            | V                   | 219.0                    | -17.3                  | 40.0           | 5.7         |
| 142.136075      | 37.1                    | 105.0            | V                   | 141.0                    | -11.1                  | 43.5           | 6.4         |
| 905.795525      | 34.6                    | 138.0            | H                   | 290.0                    | 1.2                    | 46.0           | 11.6        |
| 798.011350      | 34.2                    | 106.0            | V                   | 14.0                     | -0.3                   | 46.0           | 11.8        |

\* Within measurement uncertainty.

Test Mode: Transmitting (Below 1GHz)



| Frequency (MHz) | Corrected Amp. (dBµV/m) | Ant. Height (cm) | Ant. Polarity (H/V) | Turntable Position (deg) | Correction Factor (dB) | Limit (dBµV/m) | Margin (dB) |
|-----------------|-------------------------|------------------|---------------------|--------------------------|------------------------|----------------|-------------|
| 308.047050      | 40.5                    | 102.0            | H                   | 74.0                     | -9.2                   | 46.0           | 5.5*        |
| 955.274300      | 40.1                    | 206.0            | H                   | 77.0                     | 1.9                    | 46.0           | 5.9         |
| 290.677450      | 39.4                    | 102.0            | H                   | 73.0                     | -9.8                   | 46.0           | 6.6         |
| 41.033750       | 31.8                    | 401.0            | V                   | 0.0                      | 1.2                    | 40.0           | 8.2         |
| 479.958750      | 37.5                    | 138.0            | H                   | 333.0                    | 1.2                    | 46.0           | 8.5         |
| 233.093750      | 30.7                    | 218.0            | H                   | 76.0                     | 1.9                    | 46.0           | 15.3        |

Test Mode: Transmitting (Above 1GHz)

| Freq.<br>(MHz)        | Meter<br>Reading<br>(dBuV) | Detector<br>PK/QP/AV | Direction<br>Degree | Antenna       |                |                  | Cable<br>Loss<br>(dB) | Pre-<br>Amp.<br>Gain<br>(dB) | Corr.<br>Amp.<br>(dBuV/m) | FCC Part 15.247/209 |                |          |
|-----------------------|----------------------------|----------------------|---------------------|---------------|----------------|------------------|-----------------------|------------------------------|---------------------------|---------------------|----------------|----------|
|                       |                            |                      |                     | Height<br>(m) | Polar<br>(H/V) | Factor<br>(dB/m) |                       |                              |                           | Limit<br>(dBuV/m)   | Margin<br>(dB) | Remarks  |
| <b>Low Channel</b>    |                            |                      |                     |               |                |                  |                       |                              |                           |                     |                |          |
| 2402                  | 86.3                       | PK                   | 25                  | 1.80          | H              | 30.6             | 3.61                  | 34                           | 86.57                     |                     |                | Fund.    |
| 2402                  | 72.33                      | AV                   | 35                  | 1.80          | H              | 30.6             | 3.61                  | 34                           | 72.54                     |                     |                | Fund.    |
| 2402                  | 95.39                      | PK                   | 355                 | 1.75          | V              | 30.6             | 3.61                  | 34                           | 95.6                      |                     |                | Fund.    |
| 2402                  | 82.35                      | AV                   | 354                 | 1.75          | V              | 30.6             | 3.61                  | 34                           | 82.56                     |                     |                | Fund.    |
| 4804                  | 38.36                      | AV                   | 180                 | 1.05          | V              | 35.4             | 4.64                  | 33.4                         | 45.0                      | 54                  | 9.0            | Harmonic |
| 4804                  | 34.75                      | AV                   | 240                 | 1.02          | H              | 36.6             | 4.64                  | 33.4                         | 42.59                     | 54                  | 11.41          | Harmonic |
| 4804                  | 52.22                      | PK                   | 180                 | 1.05          | V              | 35.4             | 4.64                  | 33.4                         | 58.86                     | 74                  | 15.14          | Harmonic |
| 4804                  | 49.63                      | PK                   | 240                 | 1.02          | H              | 36.6             | 4.64                  | 33.4                         | 57.47                     | 74                  | 16.53          | Harmonic |
| 1596                  | 40.01                      | AV                   | 154                 | 1.55          | V              | 26.0             | 2.77                  | 34.6                         | 34.18                     | 54                  | 19.82          | Spurious |
| 1596                  | 39.57                      | AV                   | 225                 | 1.40          | H              | 26.0             | 2.77                  | 34.6                         | 33.74                     | 54                  | 20.26          | Spurious |
| 1596                  | 51.60                      | PK                   | 155                 | 1.55          | V              | 26.0             | 2.77                  | 34.6                         | 45.77                     | 74                  | 28.23          | Spurious |
| 1596                  | 51.02                      | PK                   | 225                 | 1.40          | H              | 26.0             | 2.77                  | 34.6                         | 45.19                     | 74                  | 28.81          | Spurious |
| <b>Middle Channel</b> |                            |                      |                     |               |                |                  |                       |                              |                           |                     |                |          |
| 2441                  | 85.91                      | PK                   | 25                  | 1.67          | H              | 30.6             | 3.61                  | 34                           | 86.12                     |                     |                | Fund.    |
| 2441                  | 69.84                      | AV                   | 25                  | 1.67          | H              | 30.6             | 3.61                  | 34                           | 70.05                     |                     |                | Fund.    |
| 2441                  | 94.35                      | PK                   | 0                   | 1.67          | V              | 30.6             | 3.61                  | 34                           | 94.56                     |                     |                | Fund.    |
| 2441                  | 81.76                      | AV                   | 0                   | 1.67          | V              | 30.6             | 3.61                  | 34                           | 81.97                     |                     |                | Fund.    |
| 4882                  | 39.87                      | AV                   | 178                 | 1.03          | V              | 36.6             | 4.64                  | 33.4                         | 47.71                     | 54                  | 6.29           | Harmonic |
| 4882                  | 35.41                      | AV                   | 250                 | 1.00          | H              | 35.4             | 4.64                  | 33.4                         | 42.05                     | 54                  | 11.95          | Harmonic |
| 4882                  | 53.00                      | PK                   | 178                 | 1.03          | V              | 36.6             | 4.64                  | 33.4                         | 60.84                     | 74                  | 13.16          | Harmonic |
| 4882                  | 50.93                      | PK                   | 250                 | 1.00          | H              | 35.4             | 4.64                  | 33.4                         | 57.57                     | 74                  | 16.43          | Harmonic |
| 1596                  | 36.66                      | AV                   | 175                 | 1.37          | H              | 26.0             | 2.77                  | 34.6                         | 30.83                     | 54                  | 23.17          | Spurious |
| 1364                  | 36.06                      | AV                   | 130                 | 1.07          | V              | 26.5             | 2.77                  | 34.6                         | 30.73                     | 54                  | 23.27          | Spurious |
| 1364                  | 49.02                      | PK                   | 130                 | 1.07          | V              | 26.5             | 2.77                  | 34.6                         | 43.69                     | 74                  | 30.31          | Spurious |
| 1596                  | 47.18                      | PK                   | 175                 | 1.37          | H              | 26.0             | 2.77                  | 34.6                         | 41.35                     | 74                  | 32.65          | Spurious |
| <b>High Channel</b>   |                            |                      |                     |               |                |                  |                       |                              |                           |                     |                |          |
| 2480                  | 87.35                      | PK                   | 35                  | 1.67          | H              | 30.6             | 3.61                  | 34                           | 87.56                     |                     |                | Fund.    |
| 2480                  | 74.28                      | AV                   | 35                  | 1.67          | H              | 30.6             | 3.61                  | 34                           | 74.49                     |                     |                | Fund.    |
| 2480                  | 94.50                      | PK                   | 355                 | 1.67          | V              | 30.6             | 3.61                  | 34                           | 94.71                     |                     |                | Fund.    |
| 2480                  | 81.84                      | AV                   | 355                 | 1.67          | V              | 30.6             | 3.61                  | 34                           | 82.05                     |                     |                | Fund.    |
| 4960                  | 35.47                      | AV                   | 35                  | 1.10          | H              | 36.6             | 4.55                  | 33.4                         | 43.22                     | 54                  | 10.78          | Harmonic |
| 4960                  | 36.37                      | AV                   | 355                 | 1.10          | V              | 35.4             | 4.55                  | 33.4                         | 42.92                     | 54                  | 11.08          | Harmonic |
| 4960                  | 50.52                      | PK                   | 35                  | 1.10          | H              | 36.6             | 4.55                  | 33.4                         | 58.27                     | 74                  | 15.73          | Harmonic |
| 4960                  | 51.14                      | PK                   | 355                 | 1.10          | V              | 35.4             | 4.55                  | 33.4                         | 57.69                     | 74                  | 16.31          | Harmonic |
| 1596                  | 38.35                      | AV                   | 280                 | 1.20          | V              | 26.0             | 2.77                  | 34.6                         | 32.52                     | 54                  | 21.48          | Spurious |
| 1596                  | 36.43                      | AV                   | 150                 | 1.15          | H              | 26.5             | 2.77                  | 34.6                         | 31.1                      | 54                  | 22.9           | Spurious |
| 1596                  | 49.71                      | PK                   | 280                 | 1.20          | V              | 26.0             | 2.77                  | 34.6                         | 43.88                     | 74                  | 30.12          | Spurious |
| 1596                  | 47.71                      | PK                   | 150                 | 1.15          | H              | 26.5             | 2.77                  | 34.6                         | 42.38                     | 74                  | 31.62          | Spurious |

## CFR47 §15.247(a) (1)-CHANNEL SEPARATION TEST

### Applicable Standard

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20dB 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 20dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW.

### Test Equipment List and Details

| Manufacturer    | Description       | Model | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|-------|---------------|------------------|----------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCI  | 100035        | 2007-10-16       | 2008-10-16           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test Procedure

1. Set the EUT in transmitting mode, spectrum Bandwidth was set at 100 kHz, maxhold the channel.
2. Set the adjacent channel of the EUT maxhold another truce
3. Measure the channel separation.

### Test Data

#### Environmental Conditions

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

*The testing was performed by Bruce Zhang on 2008-06-16.*

*Test Mode: Transmitting*

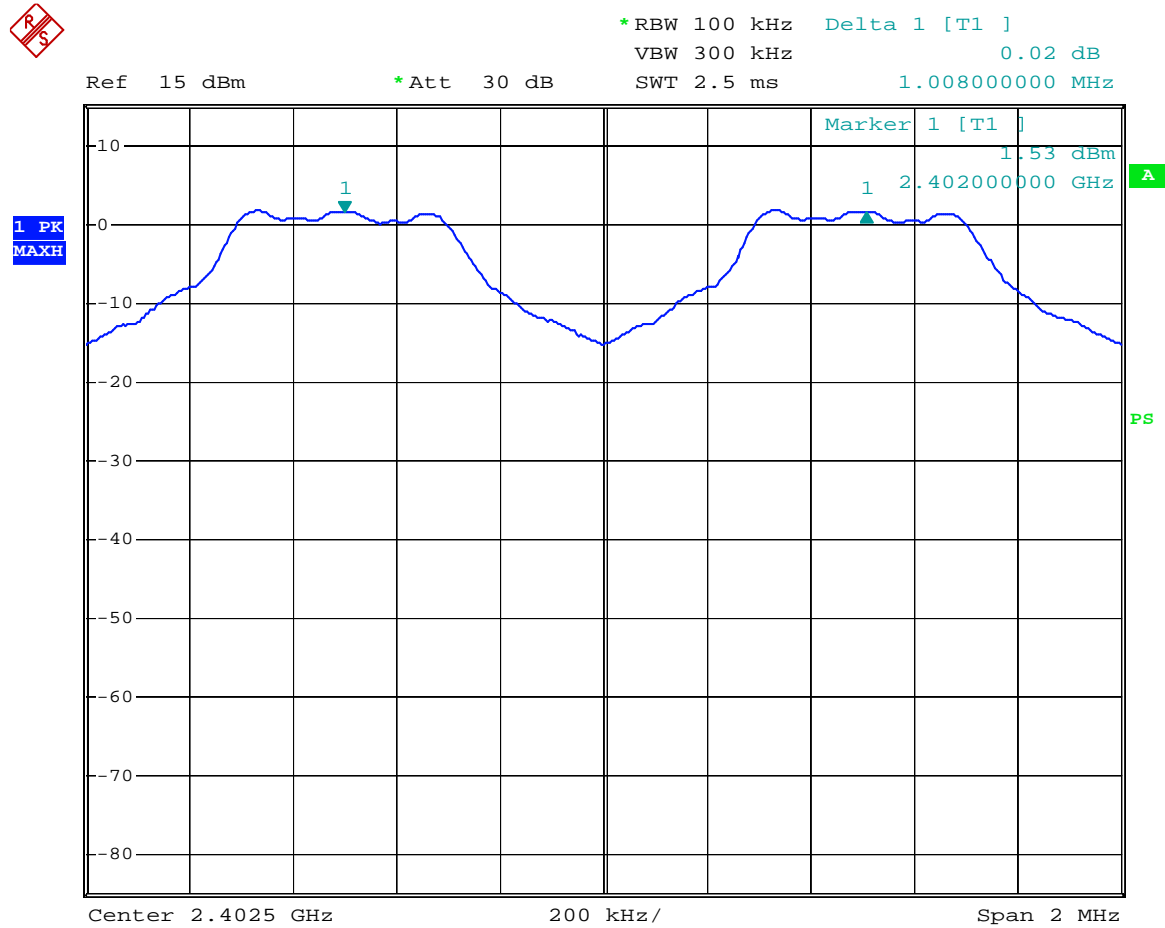
| Channel           | Channel Frequency (MHz) | Channel Separation (kHz) | Limit (kHz) | Result |
|-------------------|-------------------------|--------------------------|-------------|--------|
| Low Channel       | 2402                    | 1008                     | 568.0       | Pass   |
| Adjacency Channel | 2403                    |                          |             |        |
| Middle Channel    | 2441                    | 1008                     | 565.3       | Pass   |
| Adjacency Channel | 2442                    |                          |             |        |
| High Channel      | 2480                    | 1012                     | 568.0       | Pass   |
| Adjacency Channel | 2479                    |                          |             |        |

**Test Result:** Compliance.

Please refer to following plots



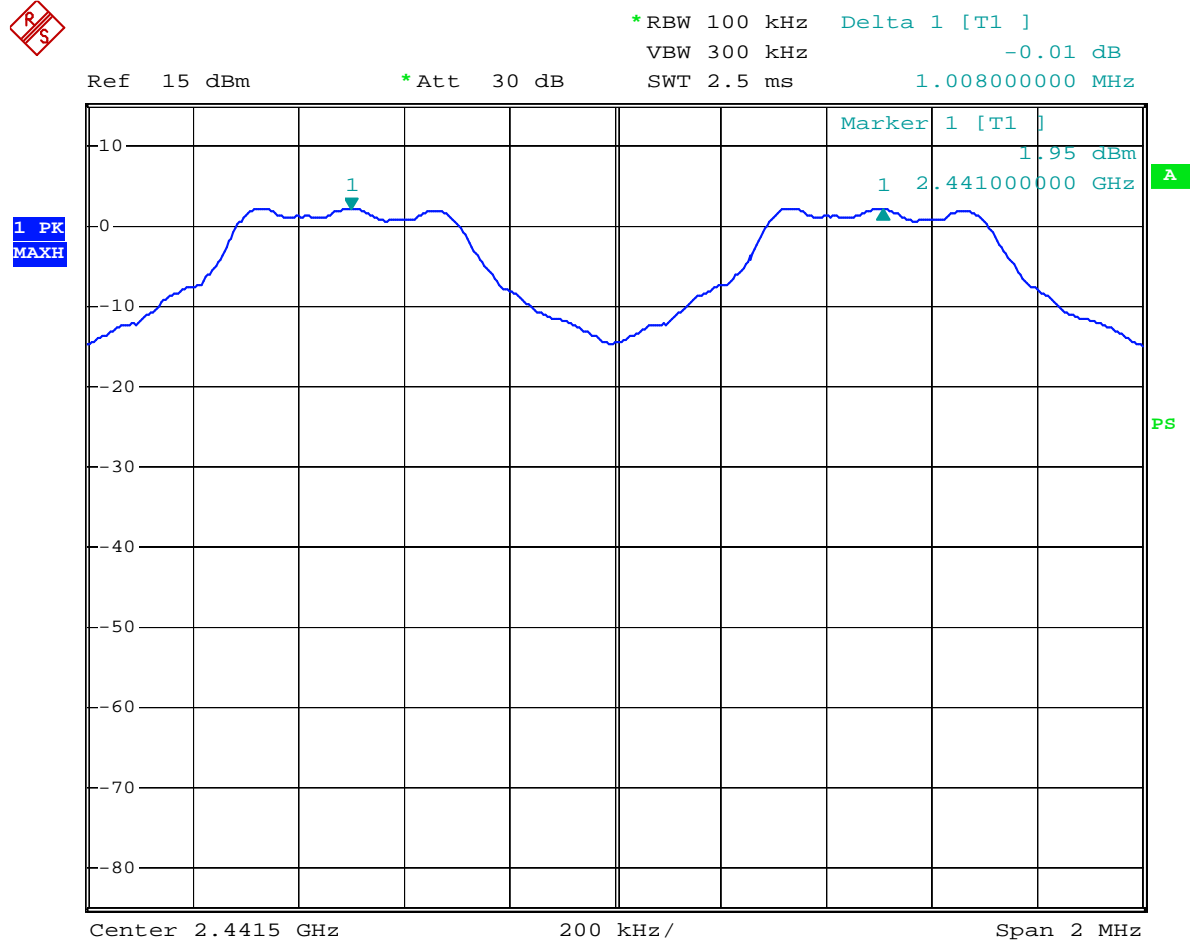
### Low Channel



Channel Separation Low Channel

Date: 16.JUN.2008 12:58:06

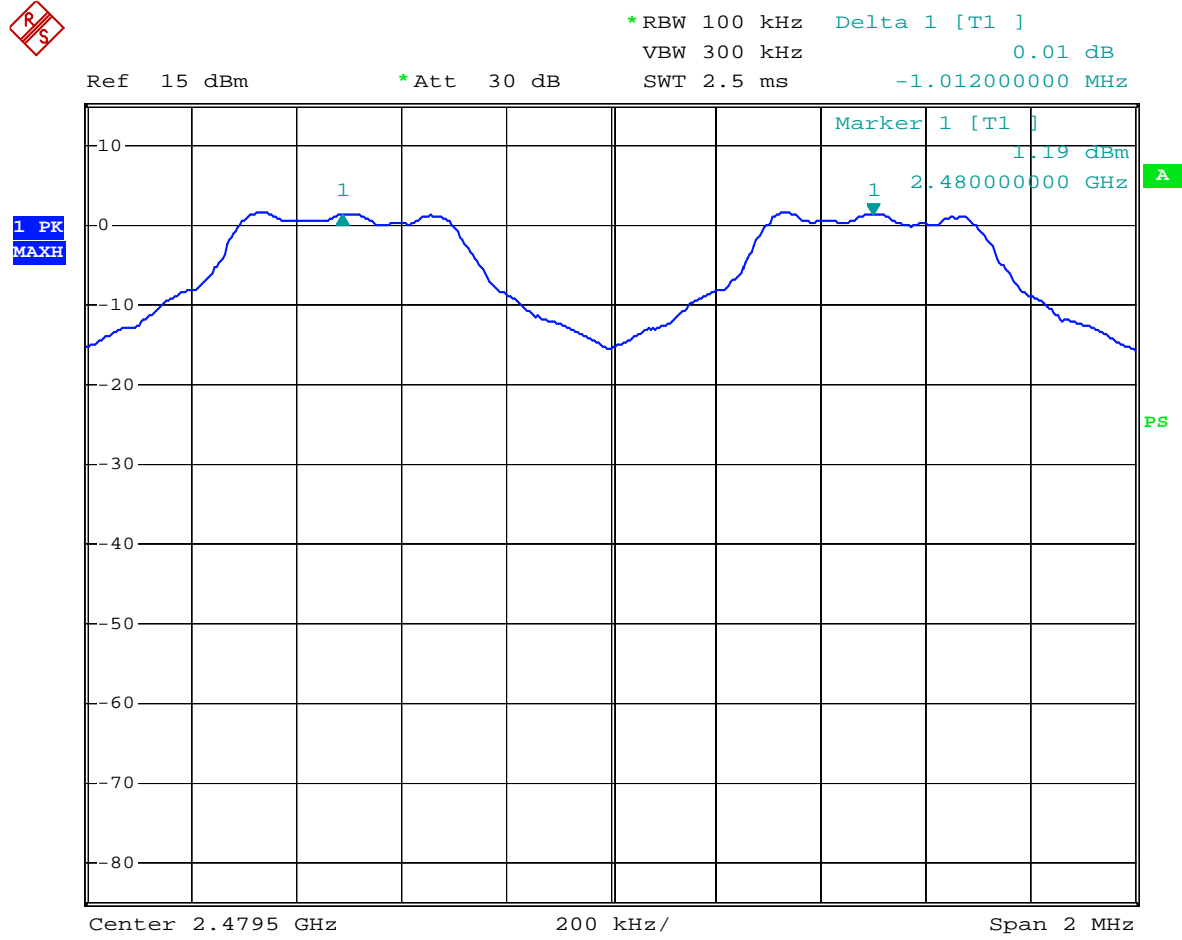
### Middle Channel



Channel Separation Midle Channel

Date: 16.JUN.2008 12:56:01

### High Channel



Channel Separation High Channel

Date: 16.JUN.2008 12:53:39

## CFR47 §15.247(a) (1) –20dB BANDWIDTH TESTING

### Applicable Standard

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 125mW.

### Test Equipment List and Details

| Manufacturer    | Description       | Model | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|-------|---------------|------------------|----------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCI  | 100035        | 2007-10-16       | 2008-10-16           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

### Test Data

#### Environmental Conditions

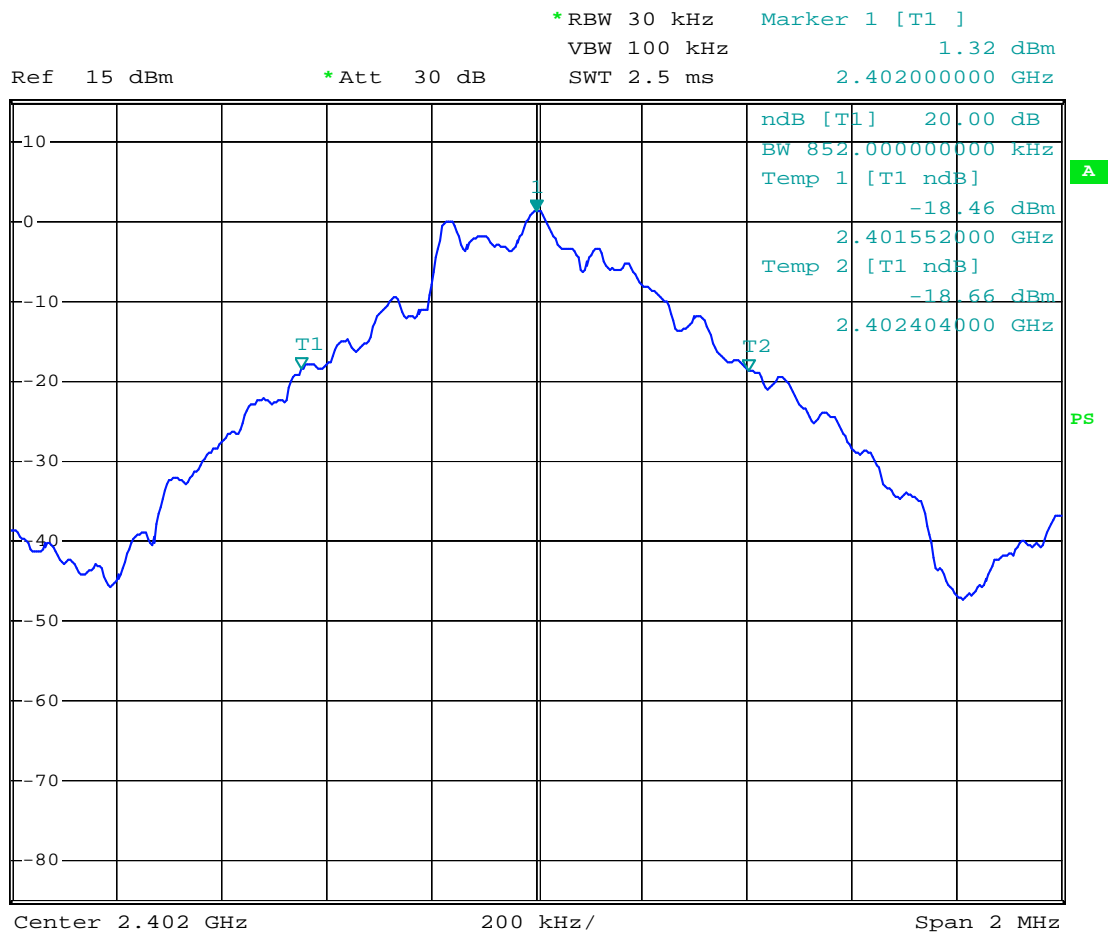
|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

*The testing was performed by Bruce Zhang on 2008-06-16.*

**Test Result:** Please refer to the following table and plots.

| Channel        | Channel Frequency (MHz) | 20dB Bandwidth (kHz) |
|----------------|-------------------------|----------------------|
| Low Channel    | 2402                    | 852                  |
| Middle Channel | 2441                    | 848                  |
| High Channel   | 2480                    | 852                  |

Low Channel



20dB Bandwidth Low chanel

Date: 16.JUN.2008 12:46:41

### Middle Channel

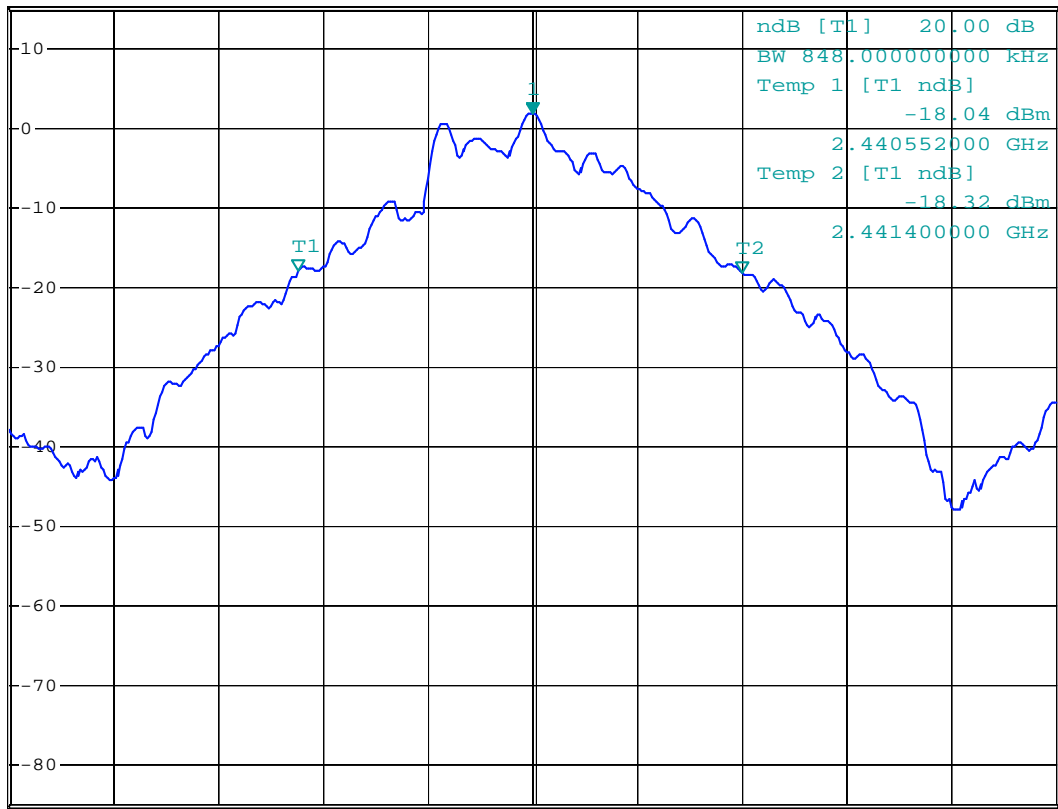


\*RBW 30 kHz     Marker 1 [T1 ]  
 VBW 100 kHz     1.81 dBm  
 SWT 2.5 ms     2.441000000 GHz

Ref 15 dBm

\*Att 30 dB

1 PK  
 MAXH



Center 2.441 GHz

200 kHz/

Span 2 MHz

20dB Bandwidth Middle channel

Date: 16.JUN.2008 12:48:12

### High Channel

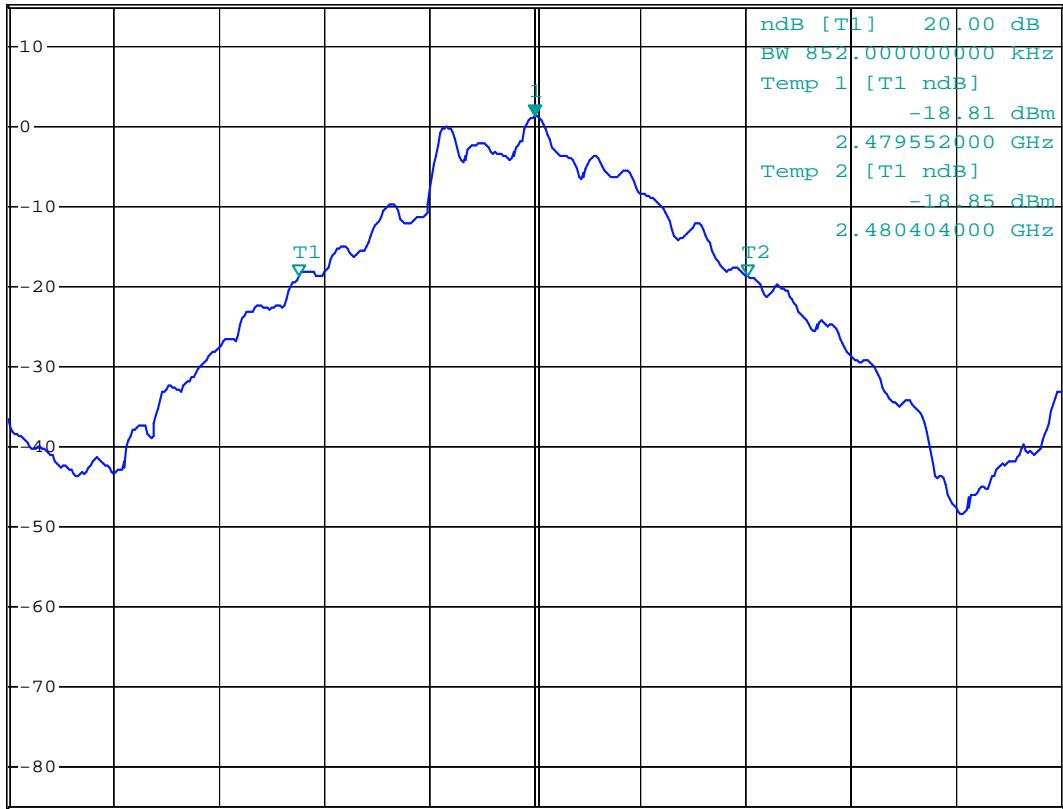


\*RBW 30 kHz    Marker 1 [T1 ]  
VBW 100 kHz                    1.12 dBm  
SWT 2.5 ms                      2.480000000 GHz

Ref 15 dBm

\*Att 30 dB

1 PK  
MAXH



Center 2.48 GHz

200 kHz/

Span 2 MHz

20dB Bandwidth High channel

Date: 16.JUN.2008 12:49:39

## CFR47 §15.247(a) (1) (iii)-QUANTITY OF HOPPING CHANNEL TEST

### Applicable Standard

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

### Test Equipment List and Details

| Manufacturer    | Description       | Model | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|-------|---------------|------------------|----------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCI  | 100035        | 2007-10-16       | 2008-10-16           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test Procedure

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Set the EUT in transmitting mode from first channel to last.
3. By using the Max-Hold function record the Quantity of the channel.

### Test Data

#### Environmental Conditions

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

*The testing was performed by Bruce Zhang on 2008-07-16.*

*Test Mode: Transmitting*

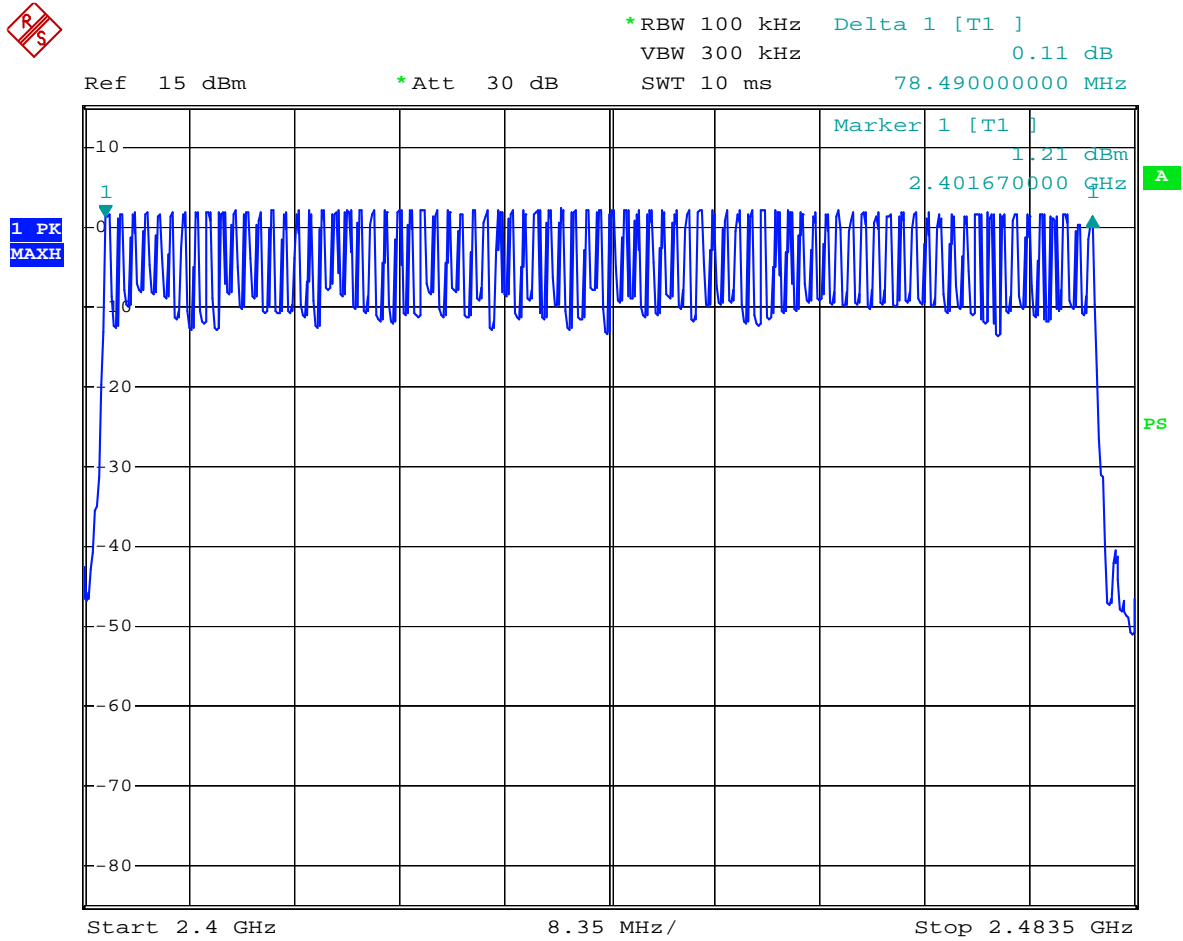
| Frequency Range (MHz) | Quantity of Hopping Channel (CH) | Limit (CH) |
|-----------------------|----------------------------------|------------|
| 2402-2480             | 79                               | >15        |

**Test Result:** Compliance.

Please refer to following plot.



### Number of Hopping Channels



Chanel Quantity

Date: 16.JUN.2008 13:04:51

**CFR47 §15.247(a) (1) (iii) -TIME OF OCCUPANCY (DWELL TIME)****Applicable Standard**

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

**Test Equipment List and Details**

| Manufacturer    | Description       | Model | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|-------|---------------|------------------|----------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCI  | 100035        | 2007-10-16       | 2008-10-16           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

**Test Procedure**

The EUT was worked in channel hopping; Spectrum SPAN was set as 0. Sweep was set as 0.4 X channel no. (s), the quantity of pulse was get from single sweep. In addition, the time of single pulses was tested.

Dwell Time= time slot length \* hope rate/ number of hopping channels \* 31.6s  
Hop rate=1600/s

**Test Data****Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

*The testing was performed by Bruce Zhang on 2008-07-16.*

*Test Mode: Transmitting*

**Test Result:** Compliance.

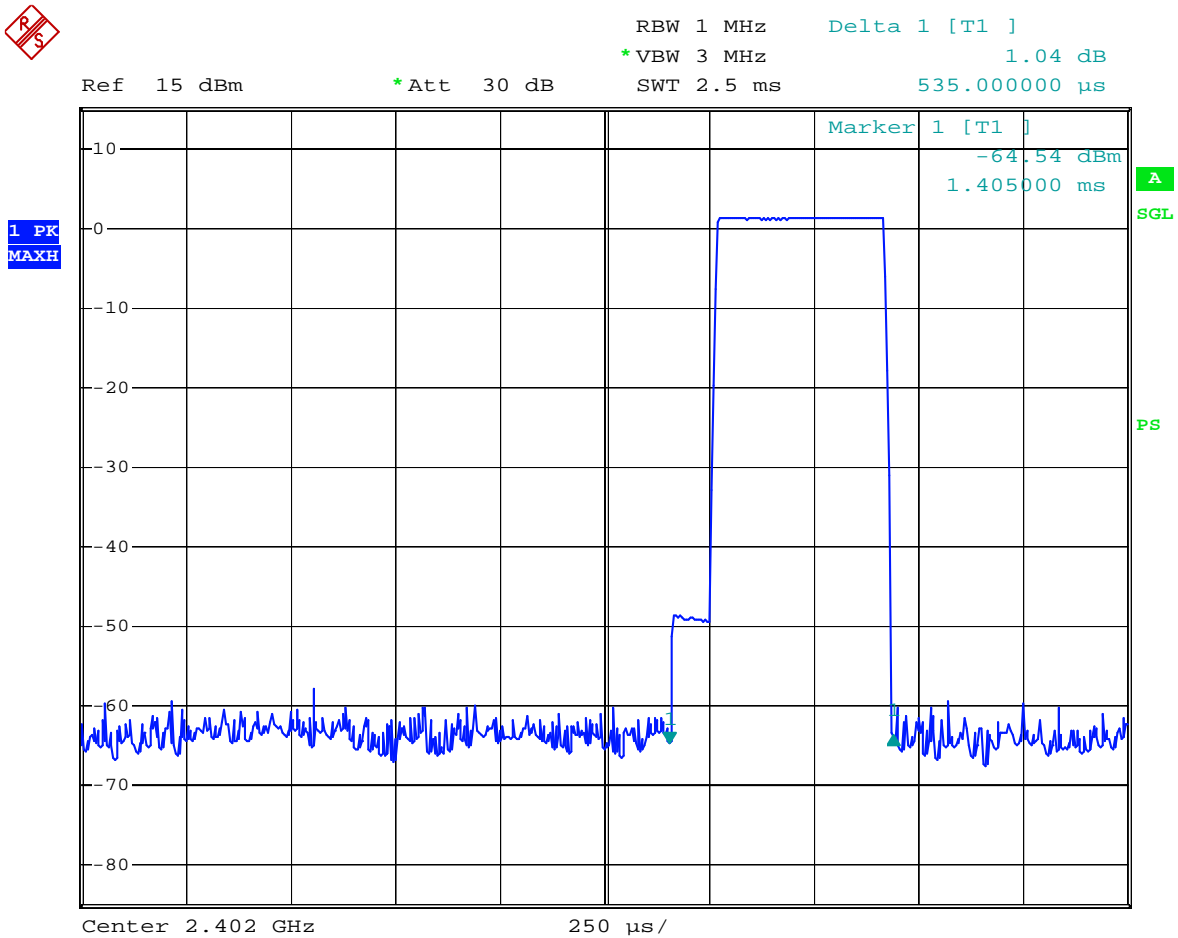
Please refer to following tables and plots

**DH1**

| Channel | Pulse width (msec) | Dwell time (sec) | Limit (sec) | Result |
|---------|--------------------|------------------|-------------|--------|
| Low     | 0.535              | 0.171            | 0.4         | Pass   |
| Middle  | 0.535              | 0.171            | 0.4         | Pass   |
| High    | 0.540              | 0.173            | 0.4         | Pass   |

*NOTE: Pulse time\*(1600/2/79)\*31.6S*

**Low Channel**



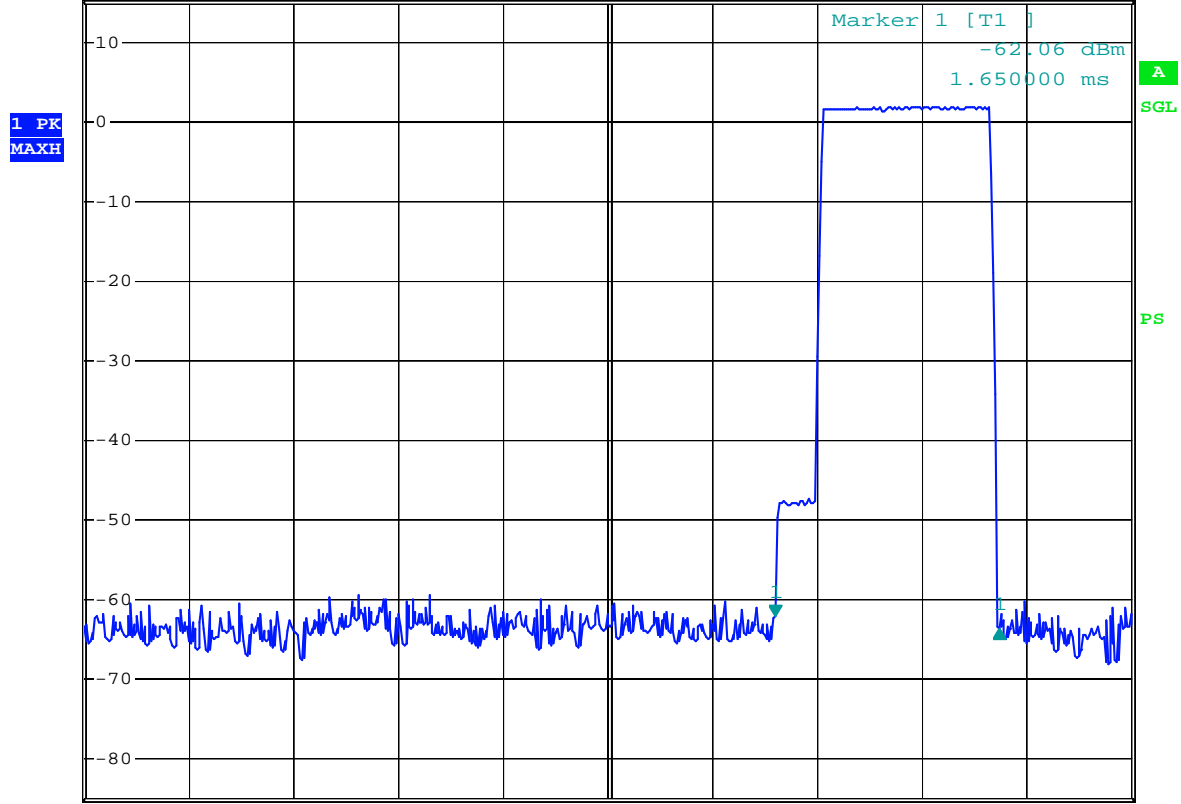
Dwell time Low Channel(DH1)

Date: 16.JUN.2008 13:17:51

### Middle Channel



Ref 15 dBm      \*Att 30 dB      RBW 1 MHz      Delta 1 [T1]      -1.48 dB  
\*VBW 3 MHz      SWT 2.5 ms      535.000000 μs



Center 2.441 GHz      250 μs/

Dwell time Middle Channel(DH1)

Date: 16.JUN.2008 13:19:23

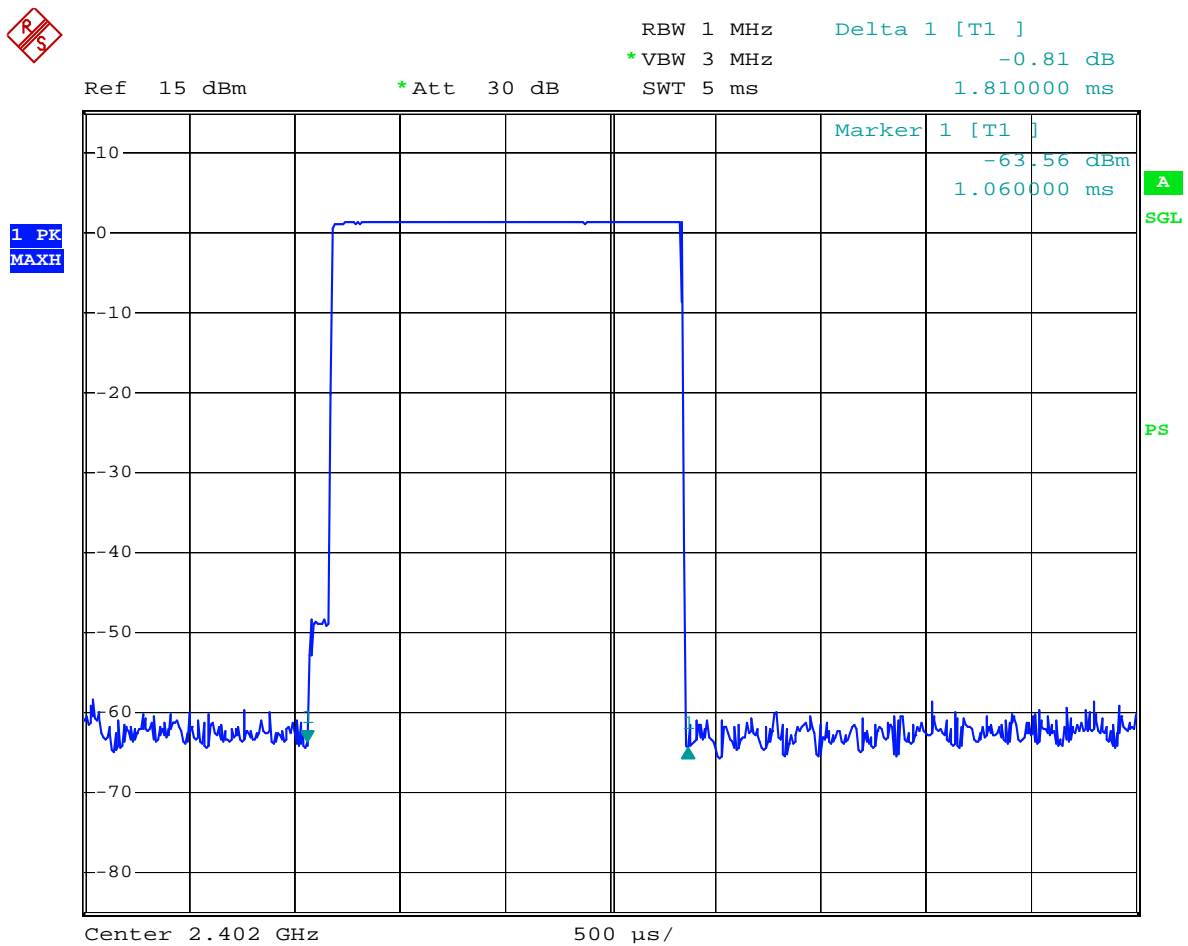


**DH3**

| Channel | Pulse width (msec) | Dwell time (sec) | Limit (sec) | Result |
|---------|--------------------|------------------|-------------|--------|
| Low     | 1.81               | 0.290            | 0.4         | Pass   |
| Middle  | 1.81               | 0.290            | 0.4         | Pass   |
| High    | 1.81               | 0.290            | 0.4         | Pass   |

**NOTE:** Pulse time\*(1600/2/79)\*31.6S

**Low Channel**



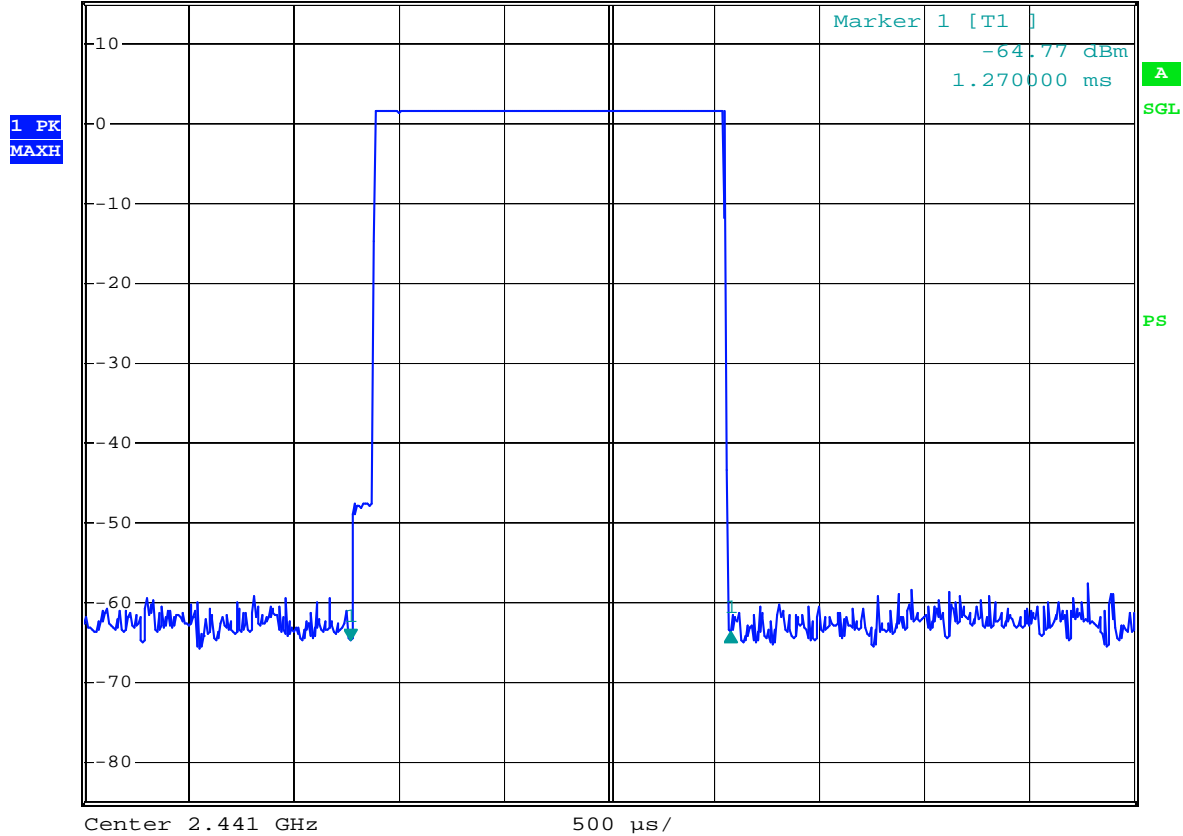
Dwell time Low Channel(DH3)

Date: 16.JUN.2008 13:33:01

### Middle Channel



Ref 15 dBm      \*Att 30 dB      RBW 1 MHz      Delta 1 [T1 ]  
\*VBW 3 MHz      1.25 dB  
SWT 5 ms      1.810000 ms



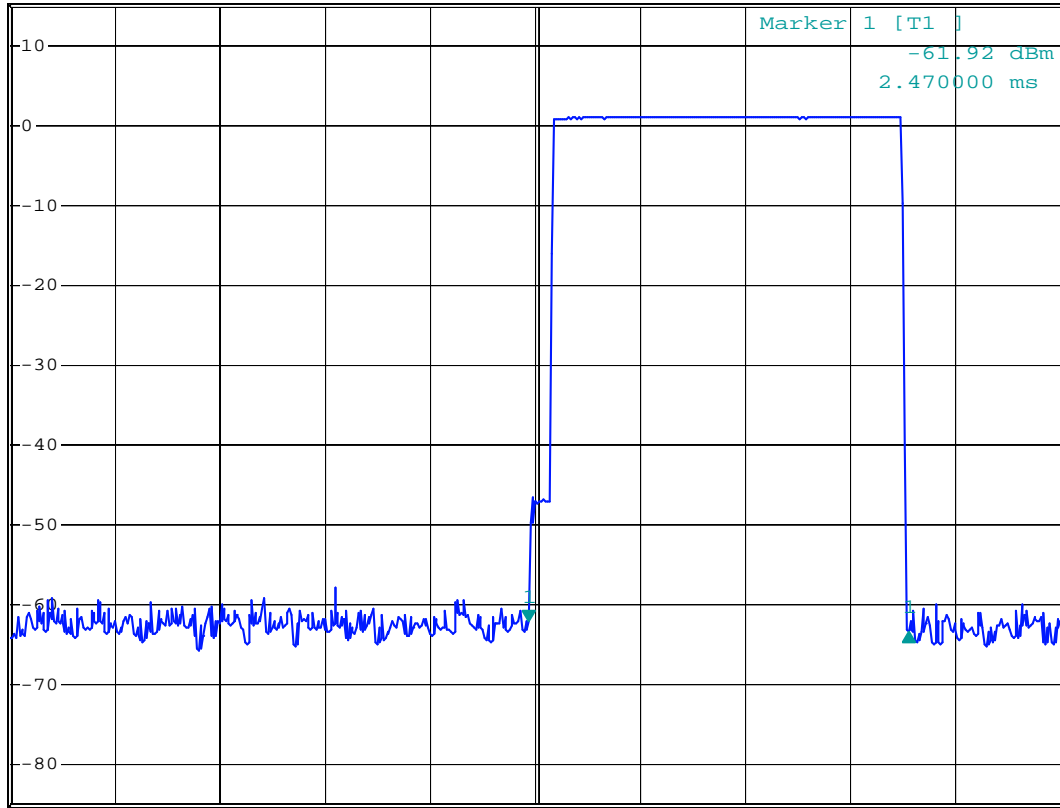
Dwell time Middle Channel(DH3)  
Date: 16.JUN.2008 13:29:57

### High Channel



Ref 15 dBm      \*Att 30 dB      RBW 1 MHz      Delta 1 [T1 ]  
\*VBW 3 MHz      -1.32 dB  
SWT 5 ms      1.810000 ms

1 PK  
MAXH



Center 2.48 GHz      500 μs/

Dwell time High Channel(DH3)

Date: 16.JUN.2008 13:31:08

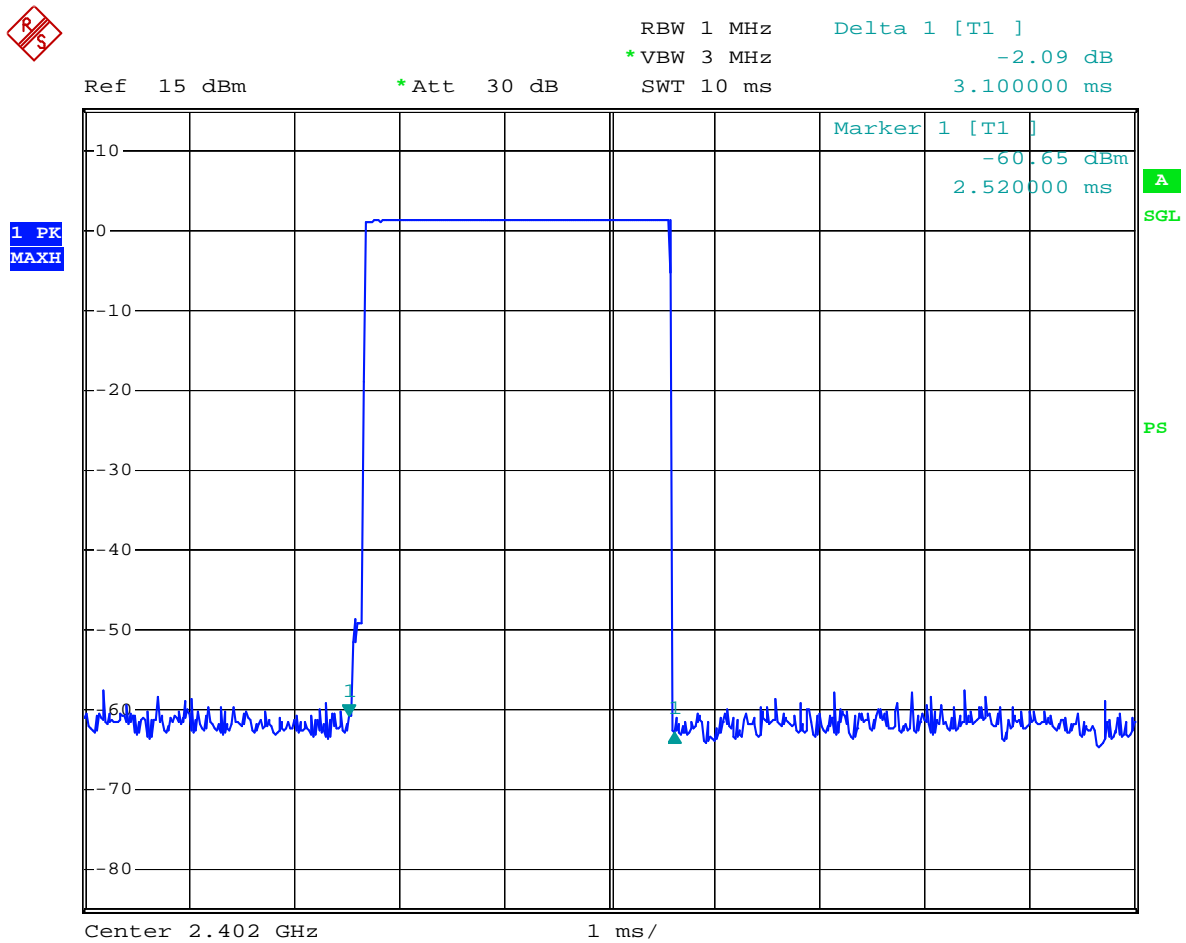


DH5

| Channel | Pulse width (msec) | Dwell time (sec) | Limit (sec) | Result |
|---------|--------------------|------------------|-------------|--------|
| Low     | 3.10               | 0.331            | 0.4         | Pass   |
| Middle  | 3.08               | 0.329            | 0.4         | Pass   |
| High    | 3.08               | 0.329            | 0.4         | Pass   |

NOTE: Pulse time\*(1600/2/79)\*31.6S

Low Channel



Dwell time Low Channel(DH5)

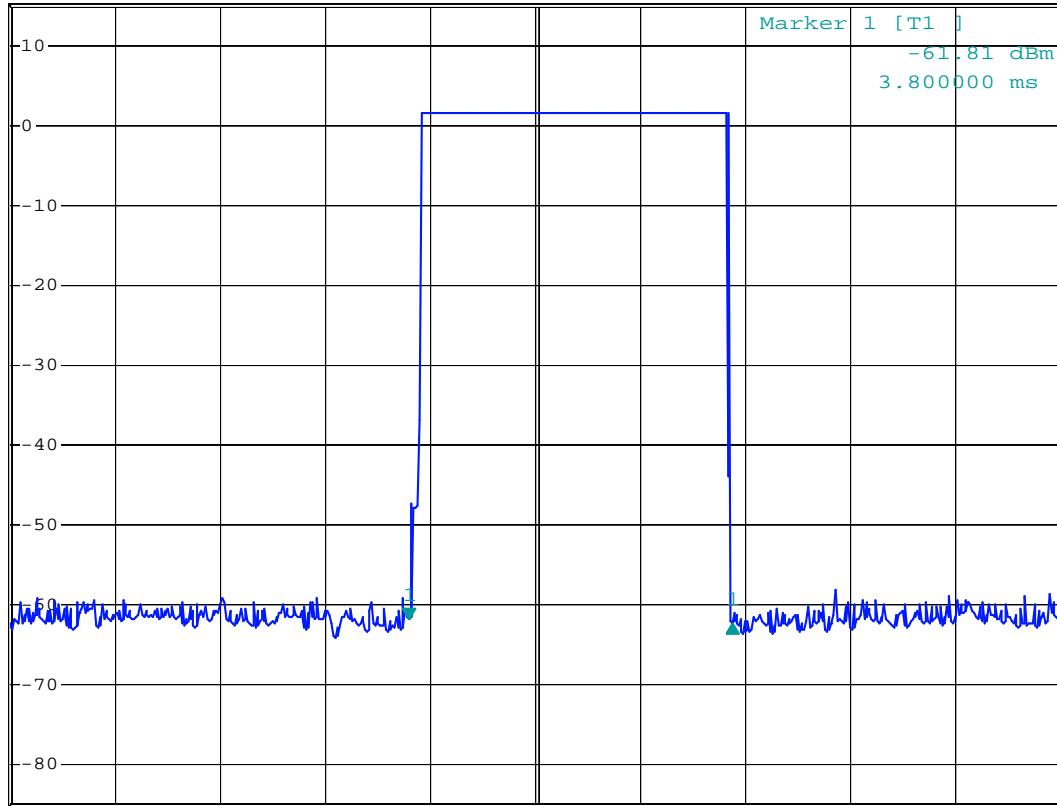
Date: 16.JUN.2008 13:36:25

### Middle Channel



Ref 15 dBm      \*Att 30 dB      RBW 1 MHz      Delta 1 [T1 ]  
\*VBW 3 MHz      -0.37 dB  
SWT 10 ms      3.080000 ms

1 PK  
MAXH



Center 2.441 GHz      1 ms/

Dwell time Middle Channel(DH5)

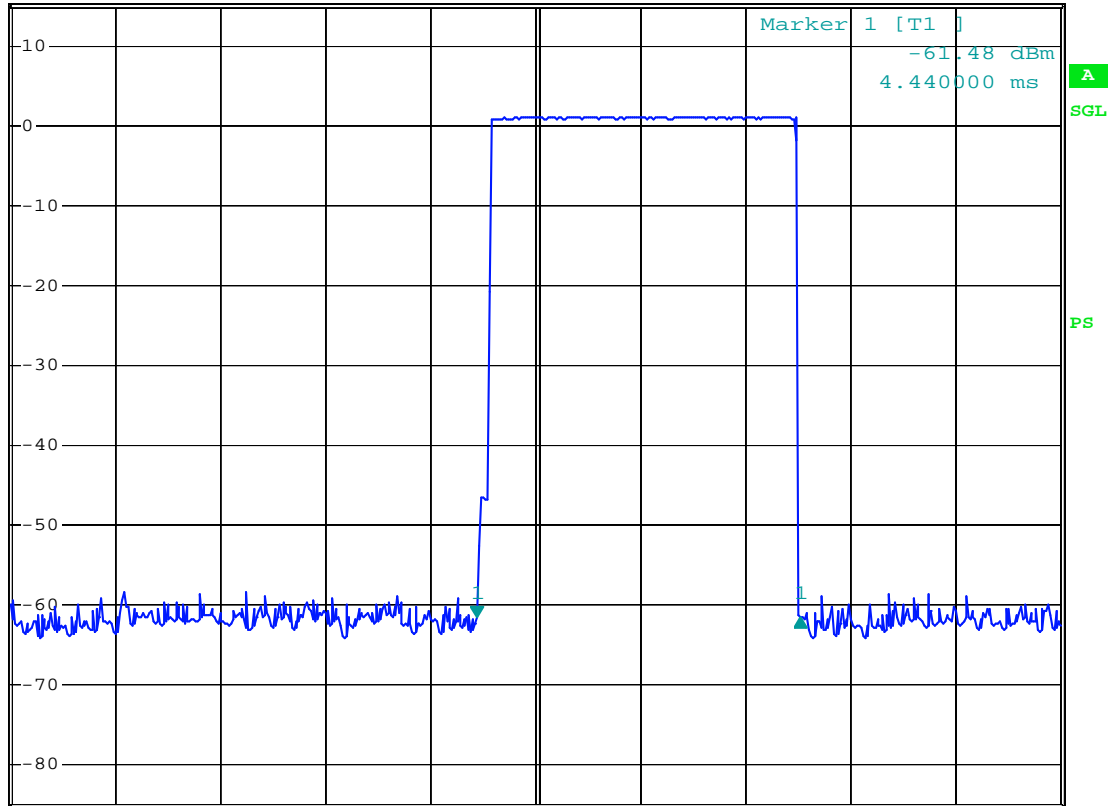
Date: 16.JUN.2008 13:38:55

### High Channel



Ref 15 dBm      \*Att 30 dB      RBW 1 MHz      Delta 1 [T1]      -0.14 dB  
\*VBW 3 MHz      SWT 10 ms      3.080000 ms

1 PK  
MAXH



Center 2.48 GHz      1 ms/

Dwell time High Channel(DH5)

Date: 16.JUN.2008 13:40:13

## CFR47 §15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT

### Applicable Standard

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

### Test Equipment List and Details

| Manufacturer    | Description       | Model   | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|---------|---------------|------------------|----------------------|
| HP              | Amplifier         | HP8447D | 2944A09795    | 2007-11-15       | 2008-11-15           |
| Rohde & Schwarz | EMI Test Receiver | ESCI    | 100035        | 2007-10-16       | 2008-10-16           |
| HP              | Amplifier         | 8449B   | 3008A00277    | 2007-09-29       | 2008-09-29           |
| Sunol Sciences  | Horn Antenna      | DRH-118 | A052604       | 2007-09-25       | 2008-09-25           |
| Rohde & Schwarz | Spectrum Analyzer | FSEM30  | 849720/019    | 2008-05-09       | 2009-05-09           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test Procedure

For the radiated emissions test, the host PC was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz and peak and Average detection modes for frequencies above 1GHz.

### Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude.} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

**Test Data****Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

The testing was performed by Bruce Zhang on 2008-07-11.

Test Mode: Transmitting

| Freq.<br>(MHz)        | Receiver<br>Reading<br>(dBuV/m) | Detector<br>PK | Table<br>Direction<br>Degree | Antenna       |                  | Cable<br>Loss<br>(dB) | Pre-<br>Amp.<br>(dB) | Cord.<br>Amp.<br>(dBuV/m) | Transducer<br>Factor<br>(dB) | EIRP  |       | Part15.247<br>Limit<br>(mW) |
|-----------------------|---------------------------------|----------------|------------------------------|---------------|------------------|-----------------------|----------------------|---------------------------|------------------------------|-------|-------|-----------------------------|
|                       |                                 |                |                              | Height<br>(m) | Factor<br>(dB/m) |                       |                      |                           |                              | (dBm) | mW    |                             |
| <b>Low Channel</b>    |                                 |                |                              |               |                  |                       |                      |                           |                              |       |       |                             |
| 2402                  | 95.36                           | PK             | 254                          | 1.7           | 30.6             | 3.61                  | 34                   | 95.57                     | 95.27                        | 0.30  | 1.072 | 1000                        |
| <b>Middle Channel</b> |                                 |                |                              |               |                  |                       |                      |                           |                              |       |       |                             |
| 2441                  | 94.91                           | PK             | 0                            | 1.7           | 30.6             | 3.61                  | 34                   | 95.12                     | 95.27                        | -0.15 | 0.966 | 1000                        |
| <b>High Channel</b>   |                                 |                |                              |               |                  |                       |                      |                           |                              |       |       |                             |
| 2480                  | 94.35                           | PK             | 355                          | 1.6           | 30.6             | 3.61                  | 34                   | 94.56                     | 95.27                        | -0.71 | 0.849 | 1000                        |

**Note:** P (dBm) = E (dBuV/m) – 95.27

## CFR47 §15.247(d) - BAND EDGES TESTING

### Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### Test Equipment List and Details

| Manufacturer    | Description       | Model | Serial Number | Calibration Date | Calibration Due Date |
|-----------------|-------------------|-------|---------------|------------------|----------------------|
| Rohde & Schwarz | EMI Test Receiver | ESCI  | 100035        | 2007-10-16       | 2008-10-16           |

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

### Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Put it on the Rotated table and turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge, for Radiated emissions restricted band RBW=1MHz, VBW=3MHz.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

**Test Data****Environmental Conditions**

|                           |           |
|---------------------------|-----------|
| <b>Temperature:</b>       | 27 °C     |
| <b>Relative Humidity:</b> | 50 %      |
| <b>ATM Pressure:</b>      | 100.9 kPa |

*The testing was performed by Bruce Zhang on 2008-06-16.*

*Test Mode: Transmitting*

| <b>Frequency<br/>(MHz)</b> | <b>Delta Peak to in-band emission<br/>(dBc)</b> | <b>Limit<br/>(dBc)</b> |
|----------------------------|---|------------------------|
| 2399.516                   | 40.60   | 20                     |
| 2484.502                   | 43.78   | 20                     |

**Test Result:** Pass

Low Band Edge



\*RBW 100 kHz Marker 2 [T1 ]  
\*VBW 100 kHz -41.91 dBm  
SWT 5 ms 2.399516000 GHz

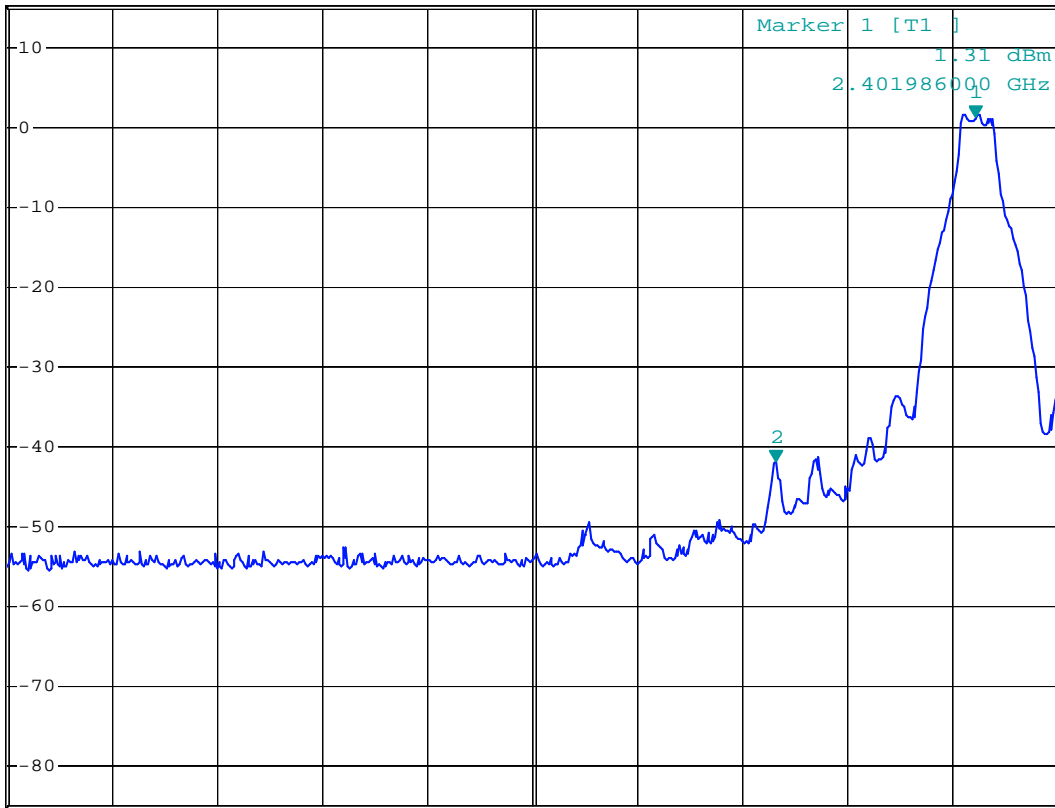
Ref 15 dBm

\*Att 30 dB

SWT 5 ms

2.399516000 GHz

1 PK  
MAXH



Center 2.3965 GHz

1.3 MHz/

Span 13 MHz

Bandedge left

Date: 16.JUN.2008 13:47:18



### High Band Edge



\*RBW 100 kHz    Marker 2 [T1 ]  
\*VBW 100 kHz    -44.94 dBm  
SWT 5 ms        2.484502000 GHz

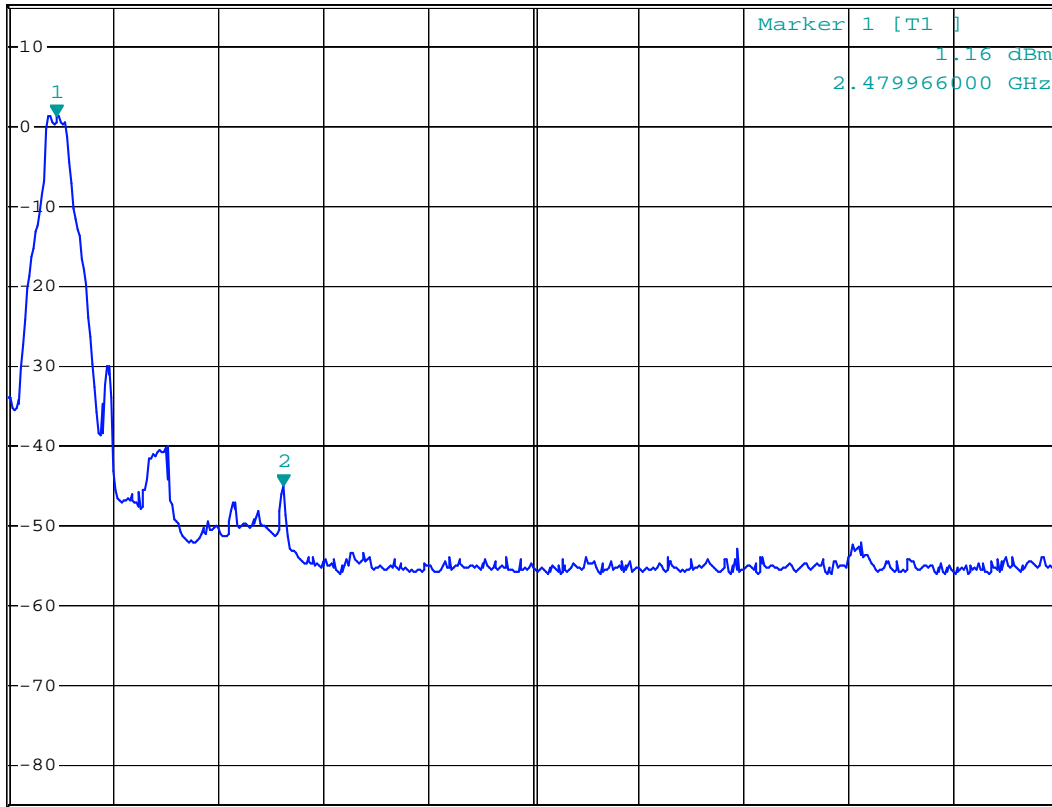
Ref 15 dBm

\*Att 30 dB

SWT 5 ms

2.484502000 GHz

1 PK  
MAXH



A

PS

Start 2.479 GHz

2.1 MHz/

Stop 2.5 GHz

Bandedge Right

Date: 16.JUN.2008 13:48:51

\*\*\*\*\* END OF REPORT \*\*\*\*\*