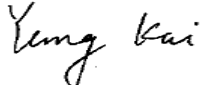


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                      |                                                                                                                               |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Prüfbericht - Nr.: 16802090 001</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                      |                                                                                                                               | Seite 1 von 37<br>Page 1 of 37 |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| Test Report No.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |                                                                                                                               |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Auftraggeber:</b><br>Client:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                      | Beijing ConST Instruments Technology Inc.<br>D05A Keshi Plaza, No.A28 Xinxi Road, Haidian District, Beijing 100085 P.R. China |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Gegenstand der Prüfung:</b><br>Test item:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                      | Digital Pressure Gauge                                                                                                        |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Bezeichnung:</b><br>Identification:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ConST218                                                                                             | <b>Serien-Nr.:</b><br>Serial No.:                                                                                             | Engineering sample             |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Wareneingangs-Nr.:</b><br>Receipt No.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1140004039                                                                                           | <b>Eingangsdatum:</b><br>Date of receipt:                                                                                     | 2013-03-14                     |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Zustand des Prüfgegenstandes bei Anlieferung:</b><br>Condition of test item at delivery:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                      | The sample is ok for test and not damaged.                                                                                    |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Prüfört:</b><br>Testing location:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                      | Refer to section 1.1                                                                                                          |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Prüfgrundlage:</b><br>Test specification:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                      | FCC Part 15 Subpart C Section 15.209<br>FCC Part 15 Subpart C Section 15.247                                                  |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Prüfergebnis:</b><br>Test Result:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                      | Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).<br>The test item passed the test specification(s).             |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Prüflaboratorium:</b><br>Testing Laboratory:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                      | Refer to section 1.1                                                                                                          |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>geprüft/ tested by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                      | <b>kontrolliert/ reviewed by:</b>                                                                                             |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| 2013-4-23    Yang, Kai/PE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                      | 2013-4-23    Sun, Lixun/Reviewer                                                                                              |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                      |                                          |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <b>Datum</b><br>Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Name/Stellung</b><br>Name/Position                                                                | <b>Unterschrift</b><br>Signature                                                                                              | <b>Datum</b><br>Date           | <b>Name/Stellung</b><br>Name/Position | <b>Unterschrift</b><br>Signature |                                                                                                                                                   |                                                                                                      |
| <b>Sonstiges/ Other Aspects:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                      |                                                                                                                               |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>Abkürzungen:</b>    P(ass) = entspricht Prüfgrundlage<br/>                                          F(ail) = entspricht nicht Prüfgrundlage<br/>                                          N/A = nicht anwendbar<br/>                                          N/T = nicht getestet                   </td> <td style="width: 50%; vertical-align: top;"> <b>Abbreviations:</b>    P(ass) = passed<br/>                                                  F(ail) = failed<br/>                                                  N/A = not applicable<br/>                                                  N/T = not tested                   </td> </tr> </table> |                                                                                                      |                                                                                                                               |                                |                                       |                                  | <b>Abkürzungen:</b> P(ass) = entspricht Prüfgrundlage<br>F(ail) = entspricht nicht Prüfgrundlage<br>N/A = nicht anwendbar<br>N/T = nicht getestet | <b>Abbreviations:</b> P(ass) = passed<br>F(ail) = failed<br>N/A = not applicable<br>N/T = not tested |
| <b>Abkürzungen:</b> P(ass) = entspricht Prüfgrundlage<br>F(ail) = entspricht nicht Prüfgrundlage<br>N/A = nicht anwendbar<br>N/T = nicht getestet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Abbreviations:</b> P(ass) = passed<br>F(ail) = failed<br>N/A = not applicable<br>N/T = not tested |                                                                                                                               |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |
| <p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report relates to the a. m. test item. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>                                                                                                                                                                                                                                                                      |                                                                                                      |                                                                                                                               |                                |                                       |                                  |                                                                                                                                                   |                                                                                                      |

## TEST SUMMARY

**4.1.1 ANTENNA REQUIREMENT**

RESULT: Passed

**4.1.2 PEAK OUTPUT POWER**

RESULT: Passed

**4.1.3 6dB BANDWIDTH AND 26dB BANDWIDTH**

RESULT: Passed

**4.1.4 CONDUCTED SPURIOUS EMISSIONS IN 100KHz BANDWIDTH**

RESULT: Passed

**4.1.5 POWER SPECTRAL DENSITY**

RESULT: Passed

**4.1.6 SPURIOUS EMISSION**

RESULT: Passed

**4.2.1 ELECTROMAGNETIC FIELDS**

RESULT: Passed

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## 1. Test Sites

### 1.1 Test Facilities

**Laboratory 1: TA Beijing Limited (FCC Registration No.: 413514)**  
**Address: Building B-4, No.1, JingHai 3rd Road, BDA East Park, Beijing,**  
**100176 China**

The used test equipment is in accordance with CISPR 16-1 for measurement of radio interference.

### 1.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

| Kind of Equipment                  | Manufacturer    | Type      | S/N      | Calibrated until |
|------------------------------------|-----------------|-----------|----------|------------------|
| <b>Spurious Radiated Emissions</b> |                 |           |          |                  |
| Bi-log Antenna                     | Rohde & Schwarz | HL562     | 100488   | 2014-02-15       |
| Double Ridge Guide Horn Antenna    | ETS-Lindgren    | EMCO 3117 | 00056662 | 2014-02-15       |
| EMI Test Receiver                  | Rohde & Schwarz | ESIB26    | 100301   | 2014-02-21       |
| <b>Radio Frequency Test Suite</b>  |                 |           |          |                  |
| Signal Analyzer                    | Rohde & Schwarz | FSQ26     | 100846   | 2014-01-29       |
| DC Power Supply                    | TFS             | RS-1303DF | 05022506 | 2013-05-24       |

## 1.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology P.R. China) or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

## 1.4 Calibration

Equipment requiring calibration is calibrated periodically by the lab or according to lab's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 1.5 Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO/IEC 17025 are:

**Table 2: Measurement Uncertainty**

| Items              |                         | Extended Uncertainty                          |
|--------------------|-------------------------|-----------------------------------------------|
| RE<br>(30-1000MHz) | Field strength (dBuV/m) | $U=\pm 4.94\text{dB}$ , $k=2$ , $\sigma=95\%$ |
| RE<br>(1-26GHz)    | Field strength (dBuV/m) | $U=\pm 4.34\text{dB}$ , $k=2$ , $\sigma=95\%$ |

## 2. General Product Information

### 2.1 Product Function and Intended Use

The EUT (equipment under test) is a digital pressure gauge which designed to offer a truly compact, cost effective digital pressure guage to cover a wide range of applications. It is not only can calibrate the precision pressure gauge, industry pressure gauge, blood-presure meter and other pressure gauges, but also it can measure the high-accurary pressure. The digital pressure gauge used the ZigBee technology(IEEE Std 802.15.4-2003 compliant) to communicate with the master device.

### 2.2 Ratings and System Details

**Table 3: Rating of EUT**

|                     |                        |
|---------------------|------------------------|
| Kind of Equipment:  | Digital Pressure Gauge |
| Type Designation:   | ConST218               |
| FCC ID              | SSQ-ConST218           |
| Rated Input Voltage | DC 3.0V (AA battery)   |

**Table 4: Technical Specification**

| Item                     | Description                                                                                                                                    |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Frequency band | 2.405GHz—2.480GHz                                                                                                                              |
| Channel Number           | 16                                                                                                                                             |
| Channel Center Frequency | 2405MHz, 2410MHz, 2415MHz, 2420MHz, 2425MHz, 2430MHz, 2435MHz, 2440MHz, 2445MHz, 2450MHz, 2455MHz, 2460MHz, 2465MHz, 2470MHz, 2475MHz, 2480MHz |
| Modulation               | DSSS                                                                                                                                           |
| Antenna                  | Integrated Antenna                                                                                                                             |
| Antenna Gain (dBi)       | 0                                                                                                                                              |

## 2.3 Independent Operation Modes

The basic operation modes are:

- A. On, transmitting
- B. On, receiving
- C. Off

## 2.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

## 2.5 Submitted Documents

- |                    |                      |
|--------------------|----------------------|
| - Bill of Material | - Circuit Diagram    |
| - PCB Layout       | - Instruction Manual |
| - Photo Document   | - Rating Label       |

## **3. Test Set-up and Operation Modes**

### **3.1 Principle of Configuration Selection**

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use. And prior to the measurements, the test object operated about 5 minutes (warm-up) in order to stabilize its operating conditions and to ensure reliable measurement values.

### **3.2 Test Operation and Test Software**

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2009.

### **3.3 Special Accessories and Auxiliary Equipment**

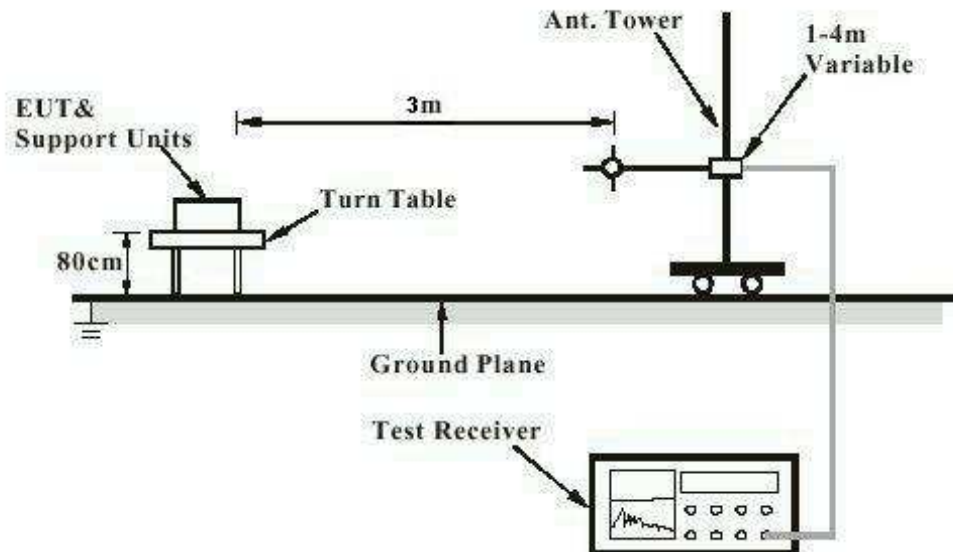
None.

### 3.4 Countermeasures to achieve EMC Compliance

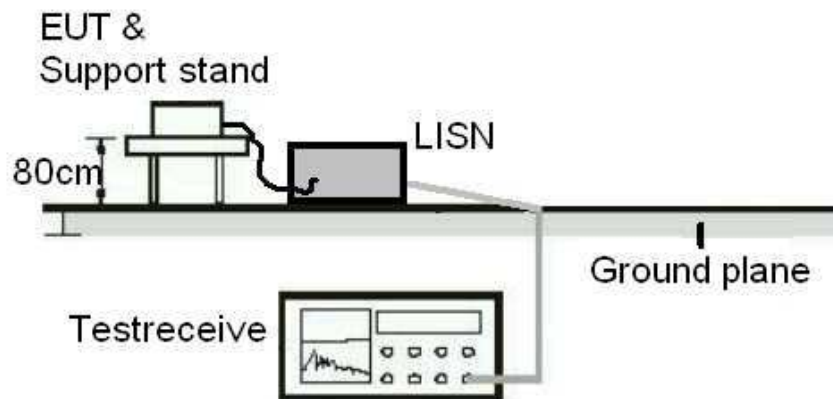
The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

### 3.5 Test Setup Diagram

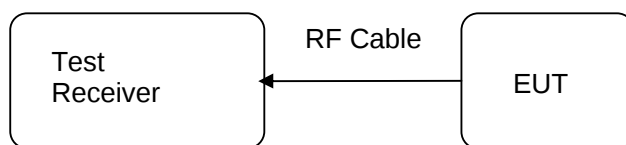
Diagram of Measurement Configuration for Radiation Test



### Diagram of Measurement Equipment Configuration for Conduction Measurement



### Diagram of Measurement Equipment Configuration for Transmitter Measurement



## 4. Test Results

### 4.1 Transmitter Requirement & Test Suites

#### 4.1.1 Antenna Requirement

**RESULT:****Passed**

|               |   |                                                                     |
|---------------|---|---------------------------------------------------------------------|
| Test date     | : | 2013-03-21                                                          |
| Test standard | : | FCC Part 15.247(b)(4) and Part 15.203                               |
| Limit         | : | the use of antennas with directional gains that do not exceed 6 dBi |

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

**4.1.2 Peak Output Power****RESULT:****Passed**

Test date : 2013-03-21  
Test standard : FCC Part 15.247(b)(1)  
Basic standard : ANSI C63.10: 2009  
Limit : 1 Watt  
Kind of test site : Shielded room

**Test setup**

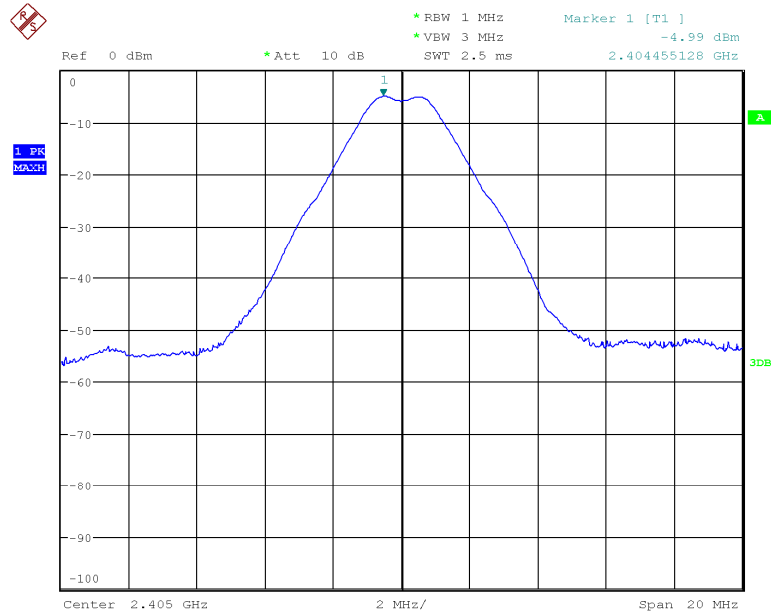
Test Channel : Low/ Middle/ High  
Operation Mode : A  
Ambient temperature : 23°C  
Relative humidity : 49%  
Atmospheric pressure : 101 kPa

**Table 5: Test result of Peak Output Power**

| Channel        | Channel Frequency (MHz) | Peak Output Power |      | Limit |
|----------------|-------------------------|-------------------|------|-------|
|                |                         | (dBm)             | (mW) | (W)   |
| Low Channel    | 2405                    | -4.99             | 0.32 | 1     |
| Middle Channel | 2440                    | -5.48             | 0.28 | 1     |
| High Channel   | 2480                    | -5.87             | 0.26 | 1     |

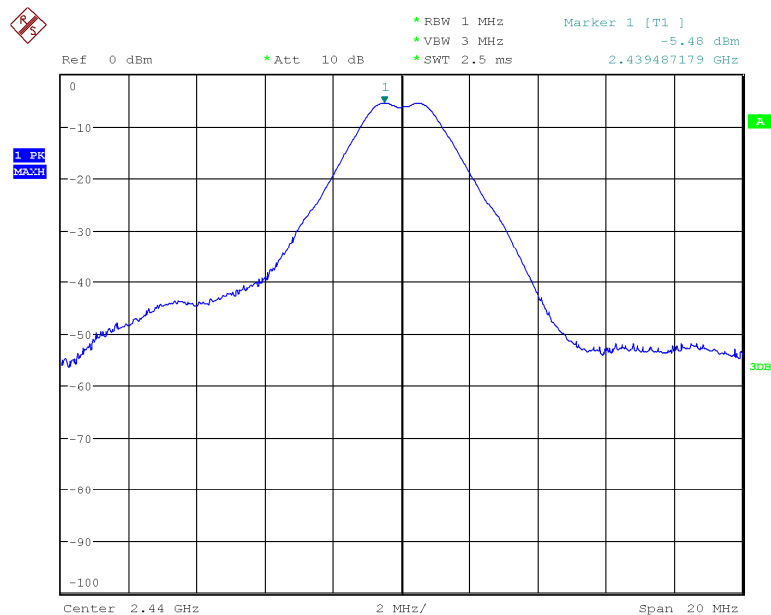
## Test Graph of Peak Output Power

### Low Channel

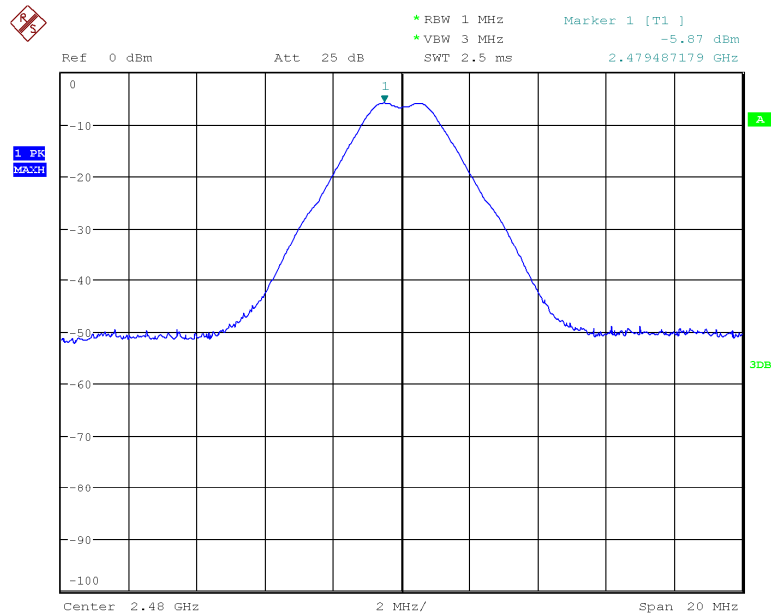


Date: 21.MAR.2013 13:09:52

### Middle Channel



Date: 21.MAR.2013 11:25:33

**High Channel**


Date: 21.MAR.2013 10:57:05

### 4.1.3 6dB Bandwidth and 26dB Bandwidth

**RESULT:**
**Passed**

Date of testing : 2013-03-21  
 Test standard : FCC Part 15.247(a)(2)  
 Basic standard : ANSI C63.10: 2009  
 Kind of test site : Shielded room

**Test setup**

Test Channel : Low/ Middle/ High  
 Operation Mode : A  
 Ambient temperature : 23°C  
 Relative humidity : 49%  
 Atmospheric pressure : 101 kPa

**Table 6: Test result of 6dB Bandwidth**

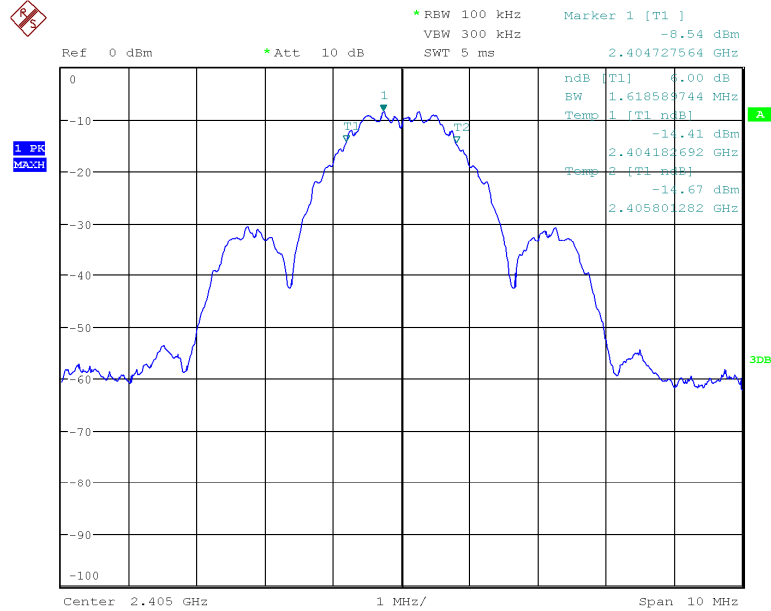
| Channel      | Channel Frequency (MHz) | 6dB Bandwidth (kHz) | Limit(kHz) |
|--------------|-------------------------|---------------------|------------|
| Low Channel  | 2405                    | 1618.6              | >500       |
| Mid Channel  | 2440                    | 1634.6              | >500       |
| High Channel | 2480                    | 1618.6              | >500       |

**Table 7: Test result of 26dB Bandwidth**

| Channel      | Channel Frequency (MHz) | 26dB Bandwidth (kHz) |
|--------------|-------------------------|----------------------|
| Low Channel  | 2405                    | 3076.9               |
| Mid Channel  | 2440                    | 3076.9               |
| High Channel | 2480                    | 3092.9               |

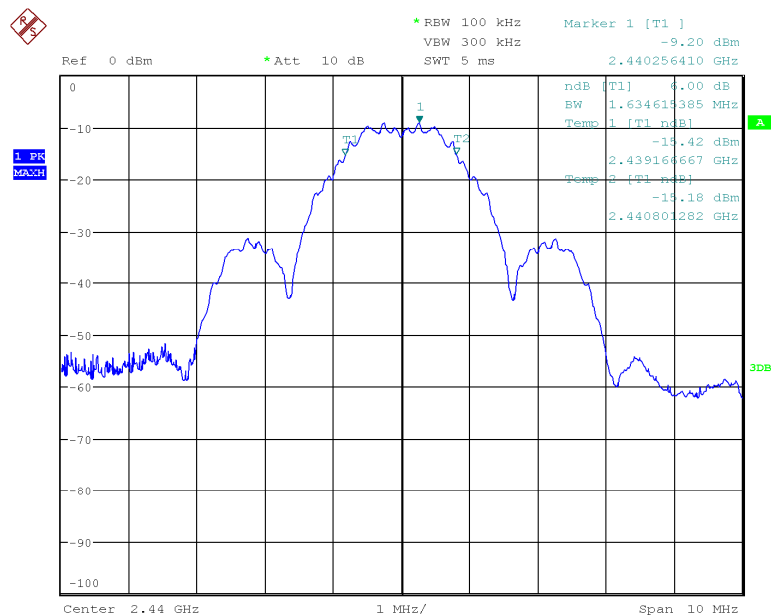
Notes: No specific 26dB bandwidth requirement in part 15.247(a) (1).

## Test Graph of 6dB Bandwidth Low Channel

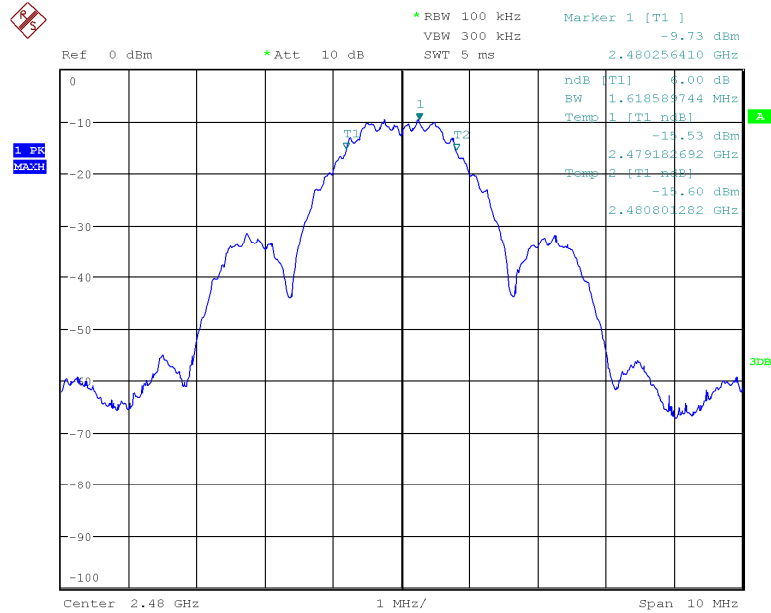


Date: 21.MAR.2013 10:21:54

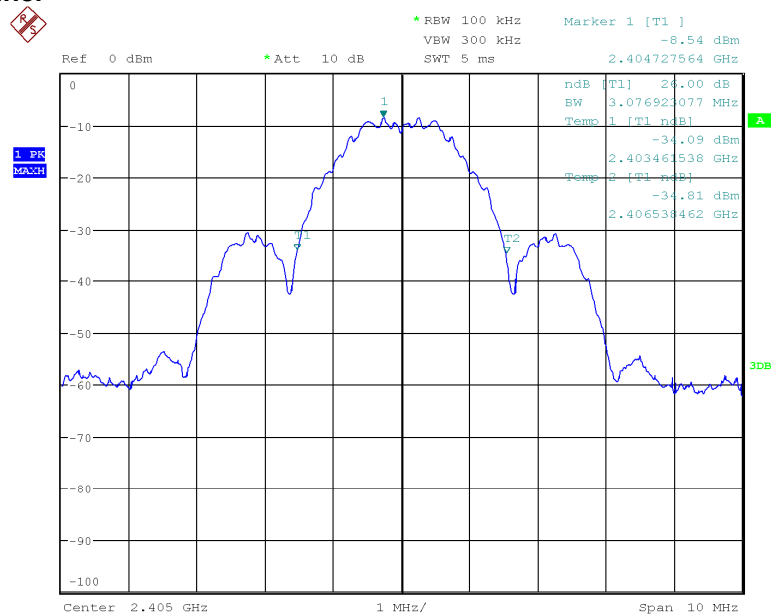
## Middle Channel



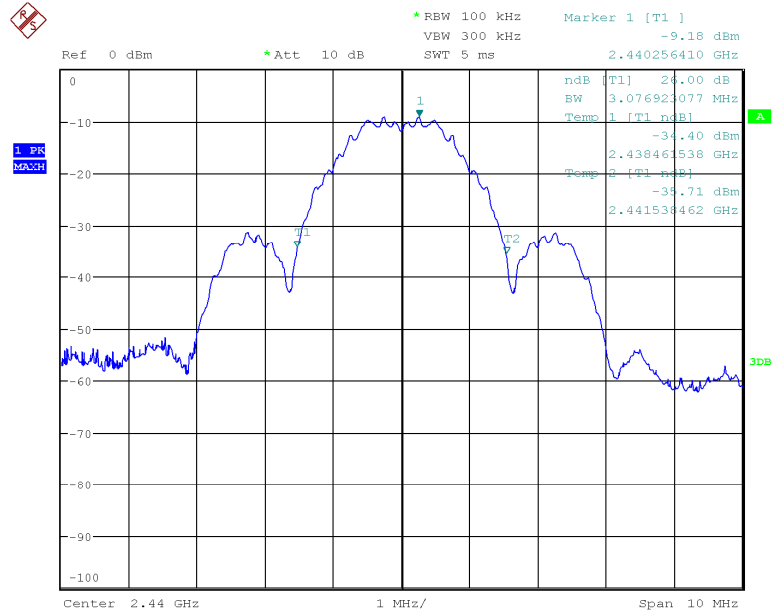
Date: 21.MAR.2013 10:29:34

**High Channel**


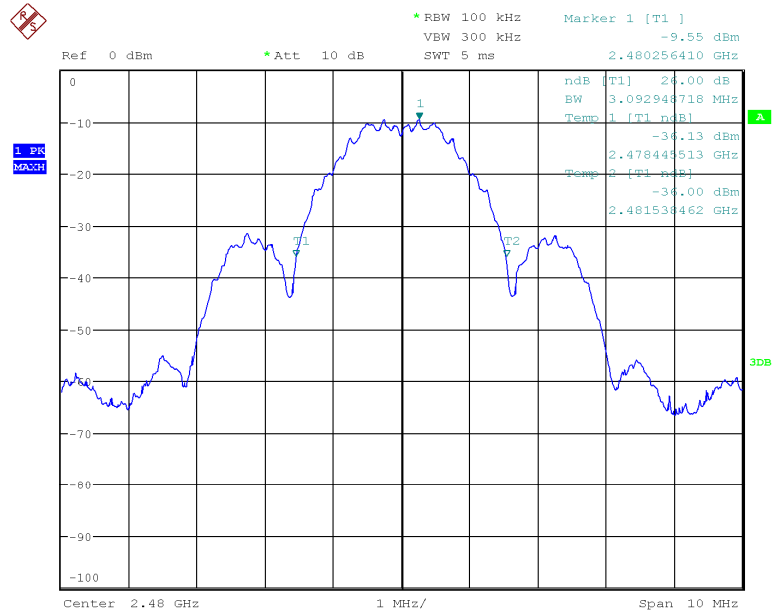
Date: 21.MAR.2013 10:34:51

**Test Graph of 26dB Bandwidth**  
**Low Channel**


Date: 21.MAR.2013 10:22:46

**Middle Channel**


Date: 21.MAR.2013 10:30:09

**High Channel**


Date: 21.MAR.2013 10:35:19

#### 4.1.4 Conducted Spurious Emissions in 100kHz Bandwidth

**RESULT:****Passed**

|                   |   |                                                                                                                                                                                                                                                                  |
|-------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date of testing   | : | 2013-03-21                                                                                                                                                                                                                                                       |
| Test standard     | : | FCC part 15.247(d)                                                                                                                                                                                                                                               |
| Basic standard    | : | ANSI C63.10: 2009                                                                                                                                                                                                                                                |
| Limit             | : | 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);<br>In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a) |
| Kind of test site | : | Shield room                                                                                                                                                                                                                                                      |

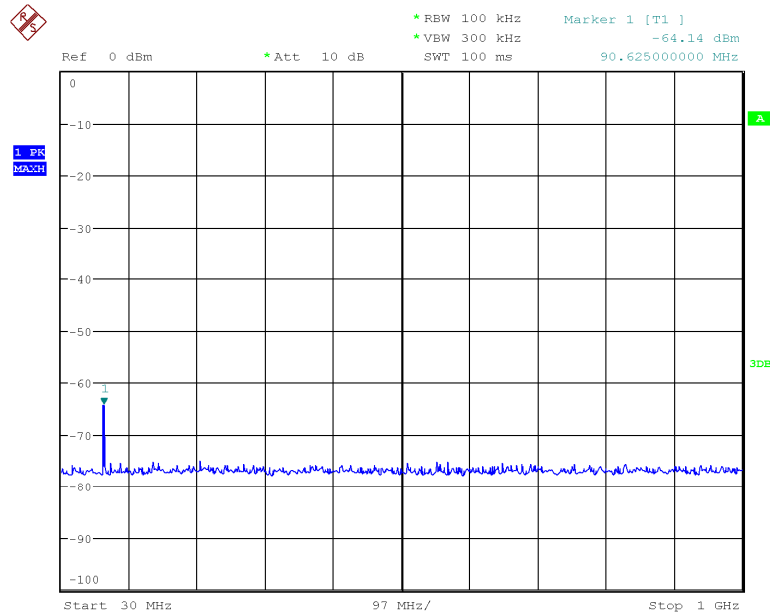
**Test setup**

|                      |   |               |
|----------------------|---|---------------|
| Test Channel         | : | Low/ Mid/High |
| Operation mode       | : | A             |
| Ambient temperature  | : | 23°C          |
| Relative humidity    | : | 49%           |
| Atmospheric pressure | : | 101 kPa       |

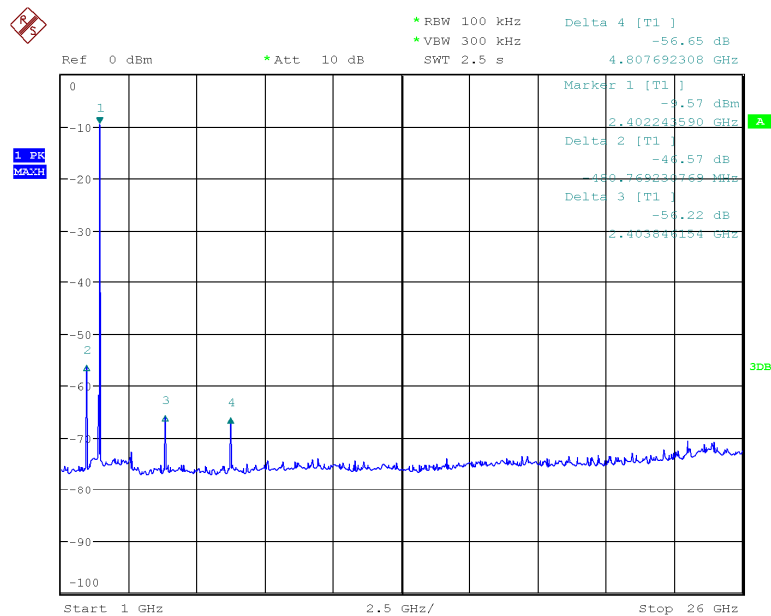
All emissions are more than 20dB below fundamental, details refer to following test Graph, and compliance is achieved as well.

## Test Graph of Conducted Spurious Emissions measured in 100kHz Bandwidth

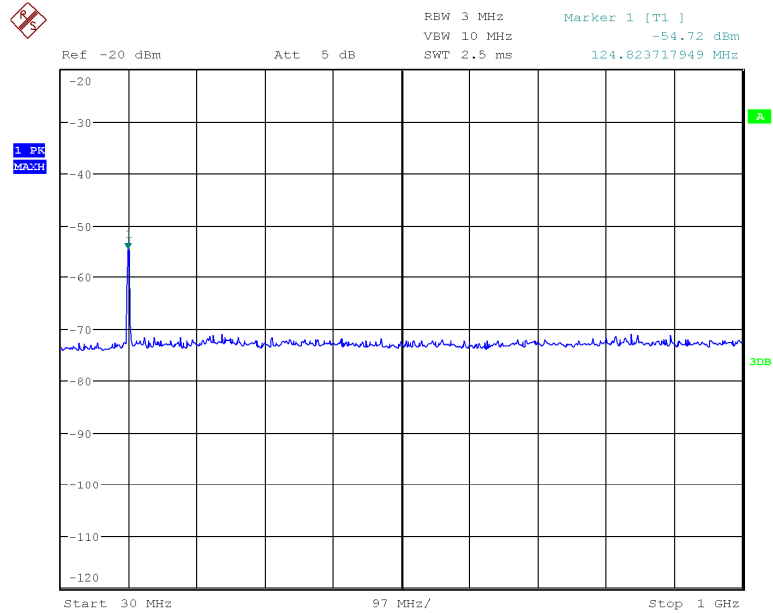
### Low Channel



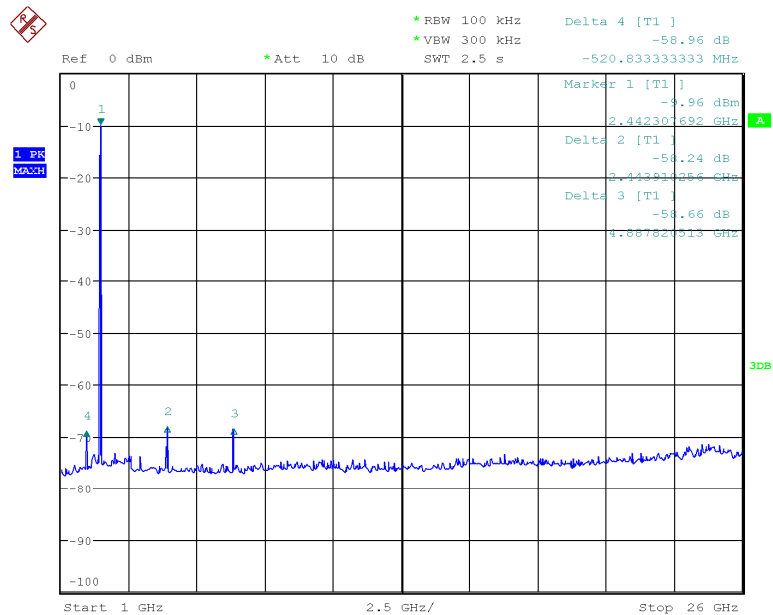
Date: 21.MAR.2013 13:11:19



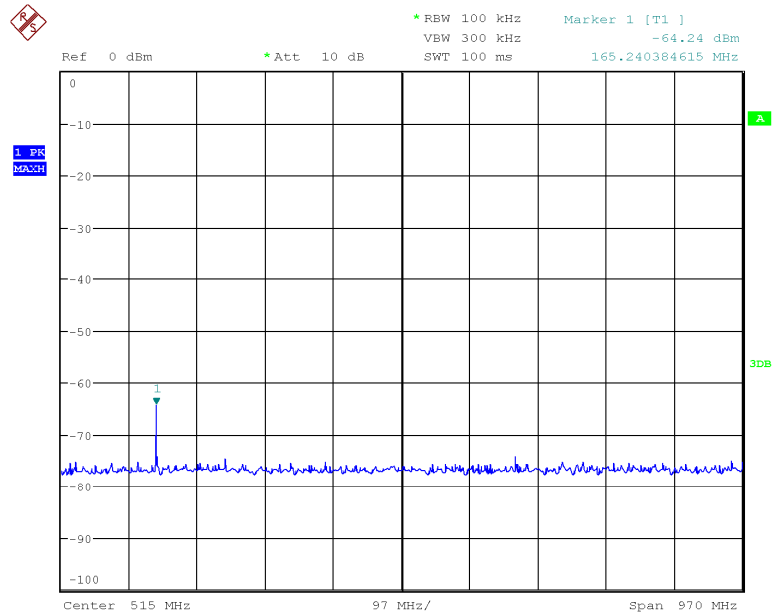
Date: 21.MAR.2013 13:13:10

**Middle Channel**


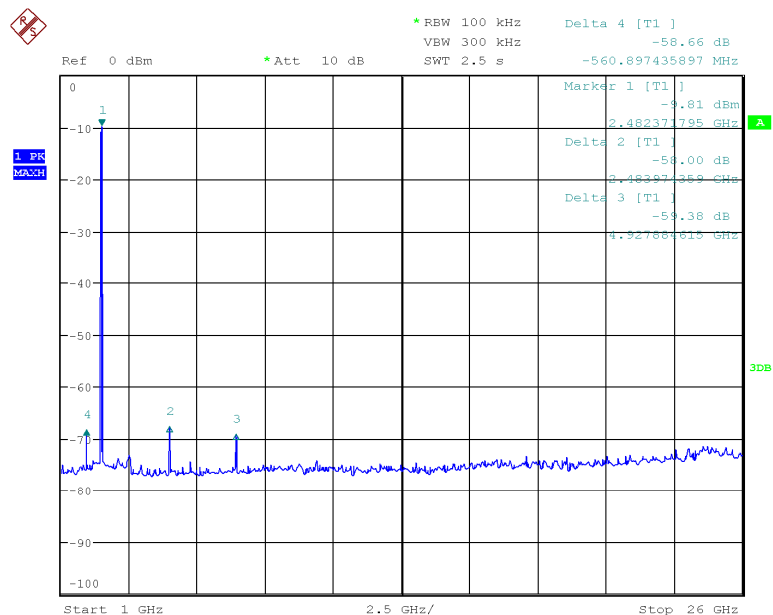
Date: 21.MAR.2013 11:16:50



Date: 21.MAR.2013 11:24:16

**High Channel**


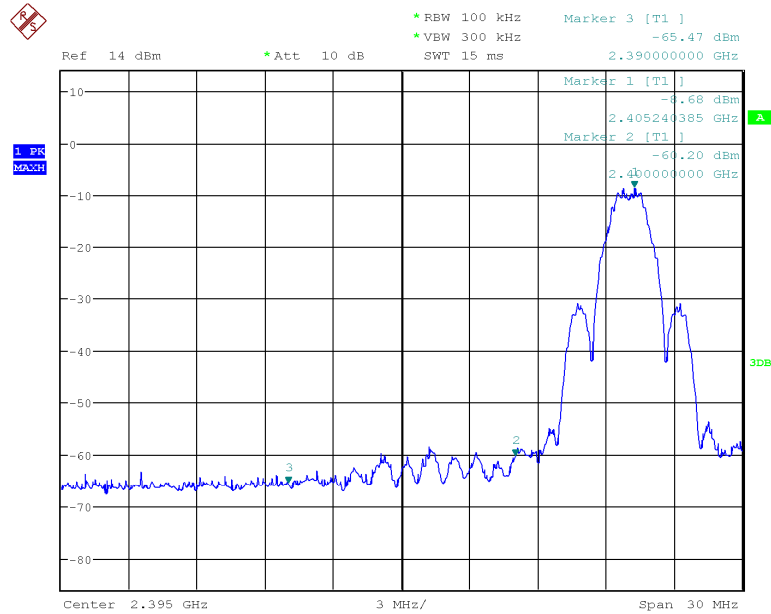
Date: 21.MAR.2013 10:41:06



Date: 21.MAR.2013 10:42:29

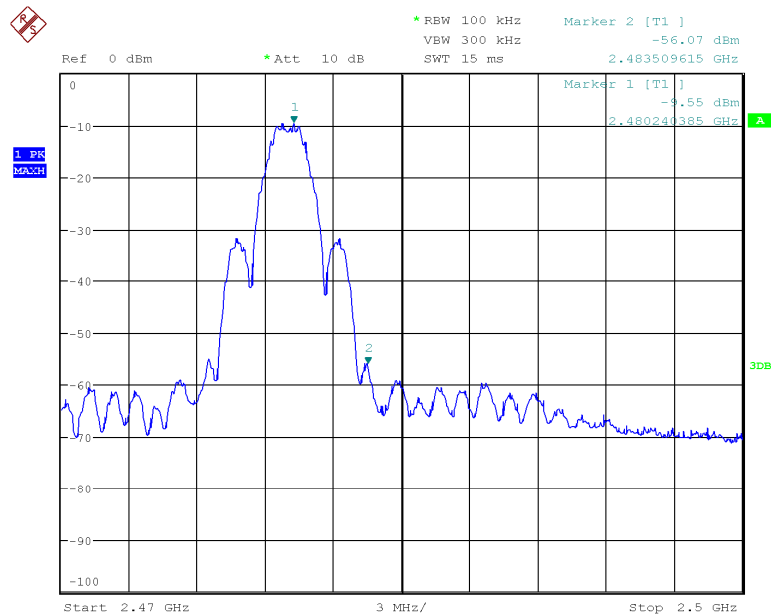
## Test Graph of Band Edge measured in 100kHz Bandwidth

### Low Channel



Date: 21.MAR.2013 13:20:42

### High Channel



Date: 21.MAR.2013 10:48:00

### 4.1.5 Power Spectral Density

**RESULT:**
**Passed**

Date of testing : 2013-03-21  
 Test standard : FCC part 15.247(e)  
 Basic standard : ANSI C63.10: 2009  
 Limits : 8.0 dBm (in any 3kHz band)  
 Kind of test site : Shield room

**Test Setup**

Test Channel : Low/ Middle/ High  
 Operation mode : A  
 Ambient temperature : 23°C  
 Relative humidity : 49%  
 Atmospheric pressure : 101 kPa

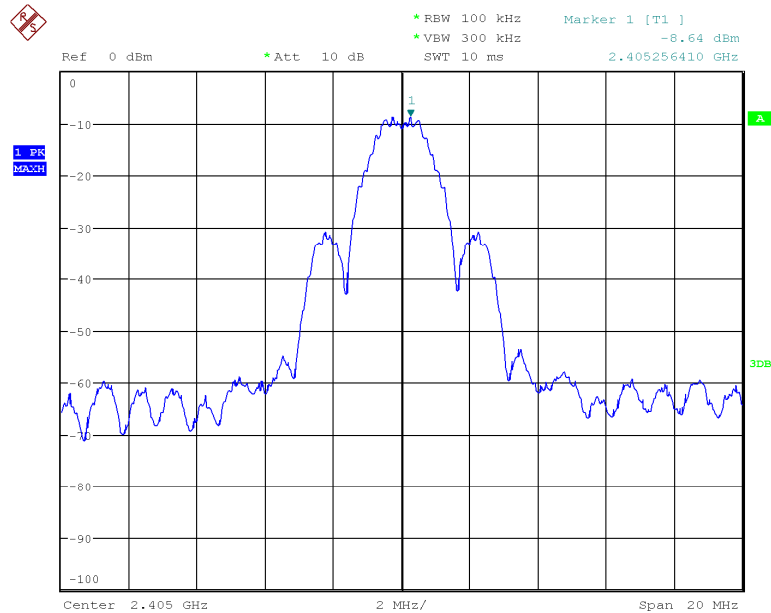
**Table 8: Test result of power spectral density(PSD)**

| Channel      | Maximum power spectral density (dBm/100kHz) | Maximum power spectral density (dBm/3kHz) | Limit (dBm/3kHz) |
|--------------|---------------------------------------------|-------------------------------------------|------------------|
| Low Channel  | -8.64                                       | -23.84                                    | 8                |
| Mid Channel  | -9.19                                       | -24.39                                    | 8                |
| High Channel | -9.54                                       | -24.74                                    | 8                |

Note: According to the KDB558074,  $PSD_{3kHz} = PSD_{100kHz} \times 10 \log(3kHz/100kHz) = PSD_{100kHz} - 15.2dB$

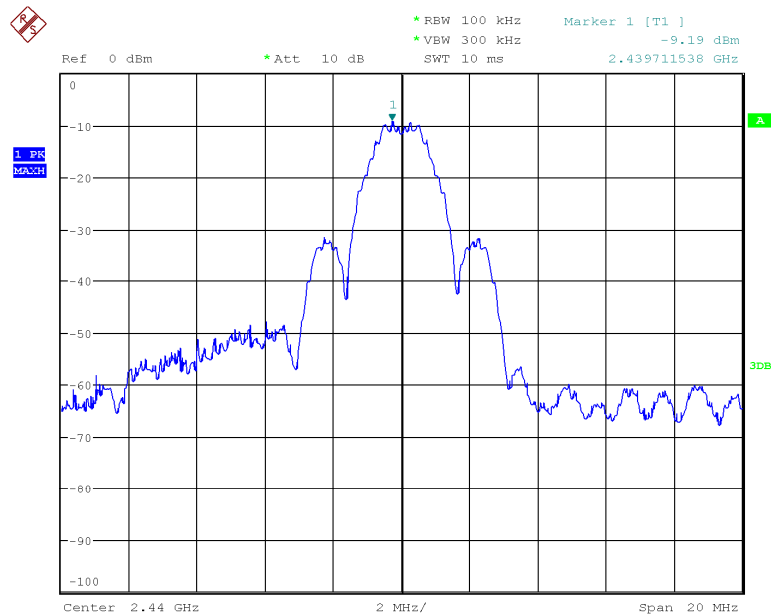
## Test Graph of Power Spectral Density

### Low Channel

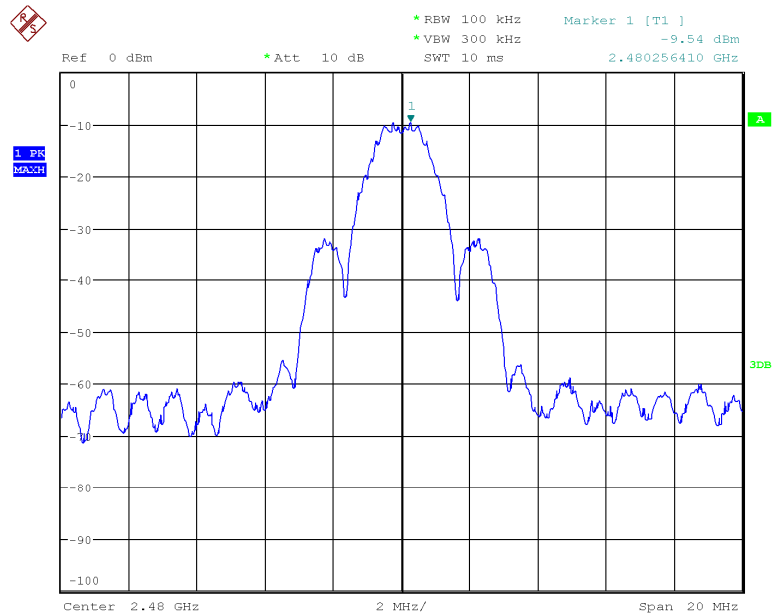


Date: 21.MAR.2013 13:15:07

### Middle Channel



Date: 21.MAR.2013 11:28:36

**High Channel**


Date: 21.MAR.2013 11:00:08

#### 4.1.6 Spurious Emission

**RESULT:****Passed**

|                   |   |                          |
|-------------------|---|--------------------------|
| Date of testing   | : | 2013-03-25               |
| Test standard     | : | FCC part 15.247(d)       |
| Basic standard    | : | ANSI C63.10: 2009        |
| Limits            | : | Refer to 15.209(a)       |
| Kind of test site | : | 3m Semi-Anechoic Chamber |

**Test setup**

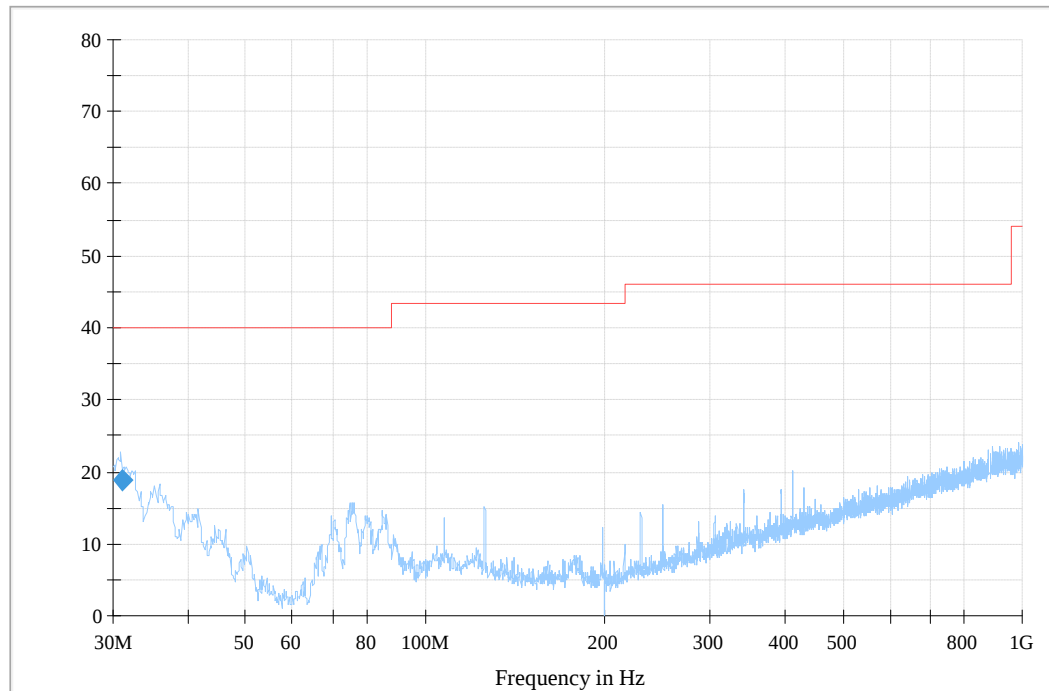
|                      |   |                   |
|----------------------|---|-------------------|
| Test Channel         | : | Low/ Middle/ High |
| Operation mode       | : | A                 |
| Ambient temperature  | : | 23°C              |
| Relative humidity    | : | 49%               |
| Atmospheric pressure | : | 100 kPa           |

During the test, the wooden table was rotated 360° around and the antenna was varied from 1m to 4m to find the maximum disturbance. The test was performed with the antenna both in its horizontal and vertical polarizations.

The following figures and tables were those measured by an automatic measurement system. The vertical results are marked with red, and the horizontal ones are marked with blue. Plots of the band edge are also shown.

**Figure 1: Spurious emission measurement results, low channel, 30-1000MHz, vertical and horizontal polarization**

Level in dB $\mu$ V/m

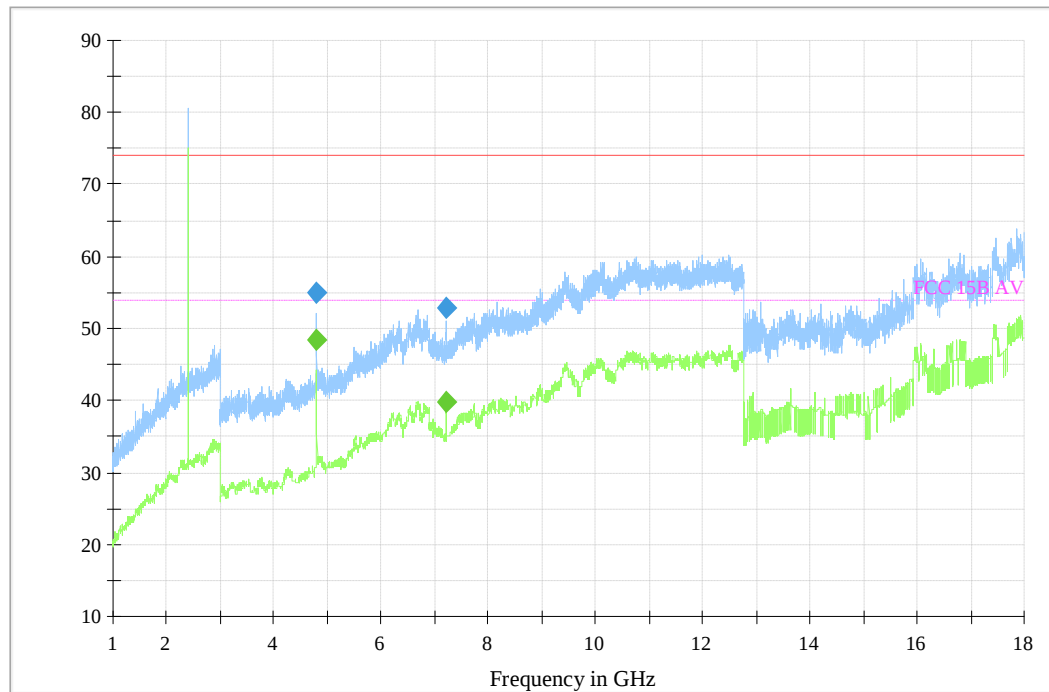


Final quasi-peak measurement result:

| Frequency (MHz) | QuasiPeak (dB $\mu$ V/m) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|--------------------------|-----------------|-------------|--------------|---------------|-------------|----------------------|
| 31.140000       | 18.8                     | 120.000         | 148.0       | H            | 268.0         | 21.20       | 40.00                |

**Figure 2: Spurious emission measurement results, low channel, 1-18GHz, vertical and horizontal polarization**

Level in dB $\mu$ V/m



Final measurement result:

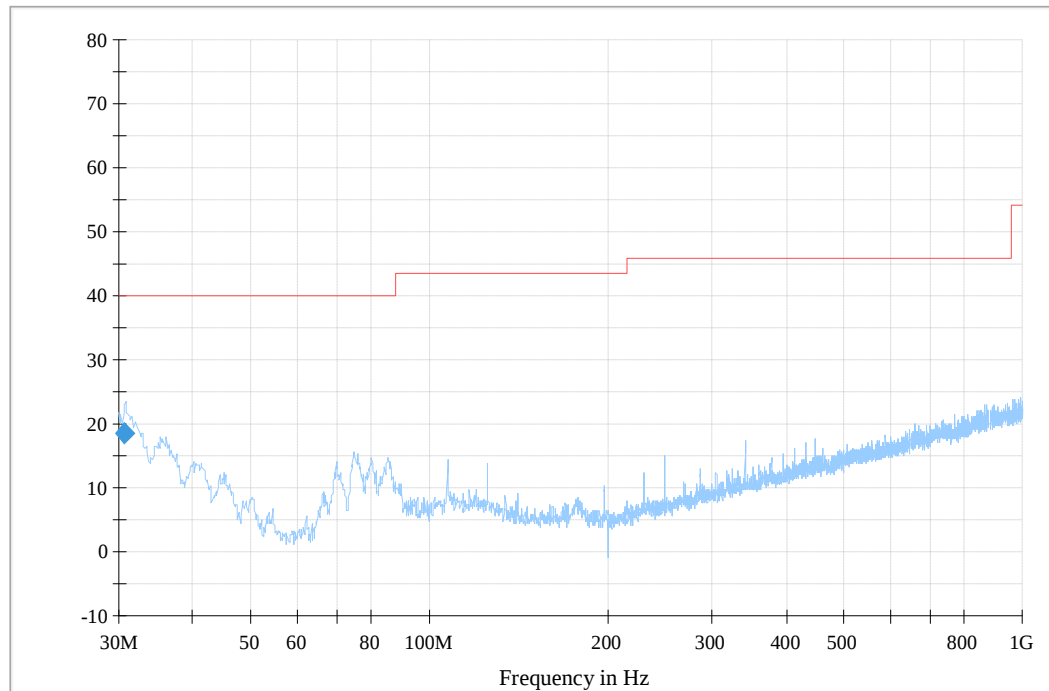
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|------------------------|-------------|--------------|---------------|-------------|----------------------|
| 4809.919840     | 54.9                   | 100.0       | H            | 307.0         | 19.10       | 74.00                |
| 7213.527655     | 53.0                   | 100.0       | V            | 307.0         | 21.00       | 74.00                |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|------------------------|-------------|--------------|---------------|-------------|----------------------|
| 4809.919840     | 48.4                   | 100.0       | H            | 285.0         | 5.60        | 54.00                |
| 7213.827655     | 39.7                   | 100.0       | H            | 285.0         | 14.30       | 54.00                |

Note: At the frequency from 18GHz-26GHz, no emission was found above the background noise.

**Figure 3: Spurious emission measurement results, mid channel, 30-1000MHz, vertical and horizontal polarization**

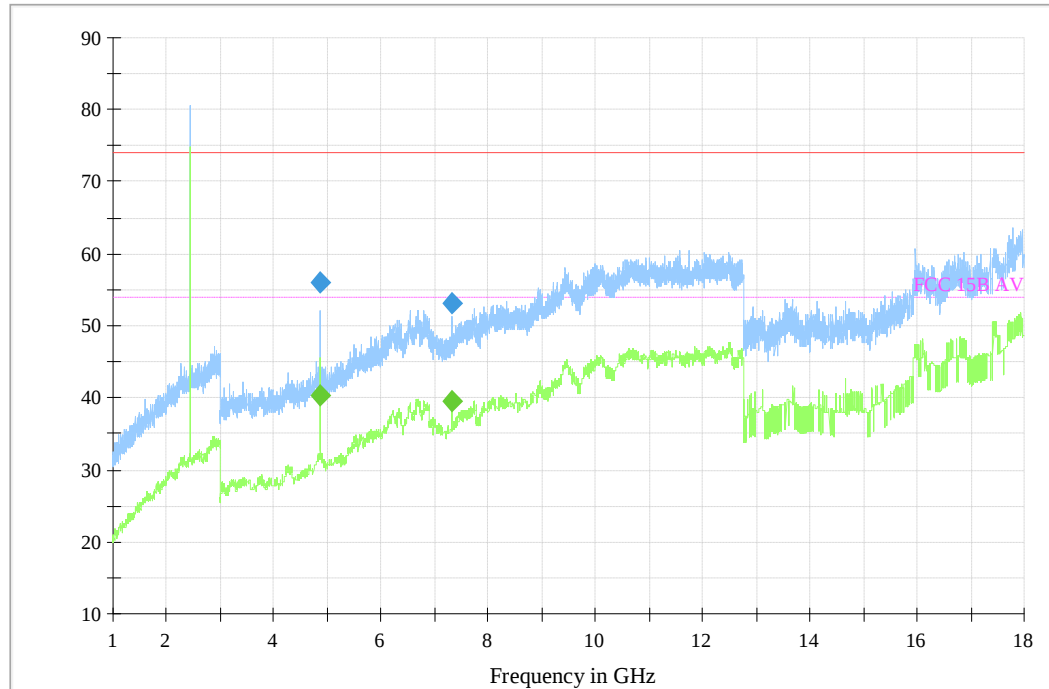
Level in dB $\mu$ V/m



Final quasi-peak measurement result:

| Frequency (MHz) | QuasiPeak (dB $\mu$ V/m) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|--------------------------|-----------------|-------------|--------------|---------------|-------------|----------------------|
| 30.690000       | 18.7                     | 120.000         | 126.0       | H            | 283.0         | 21.30       | 40.00                |

**Figure 4: Spurious emission measurement results, mid channel, 1-18GHz, vertical and horizontal polarization**

 Level in dB $\mu$ V/m


Final measurement result:

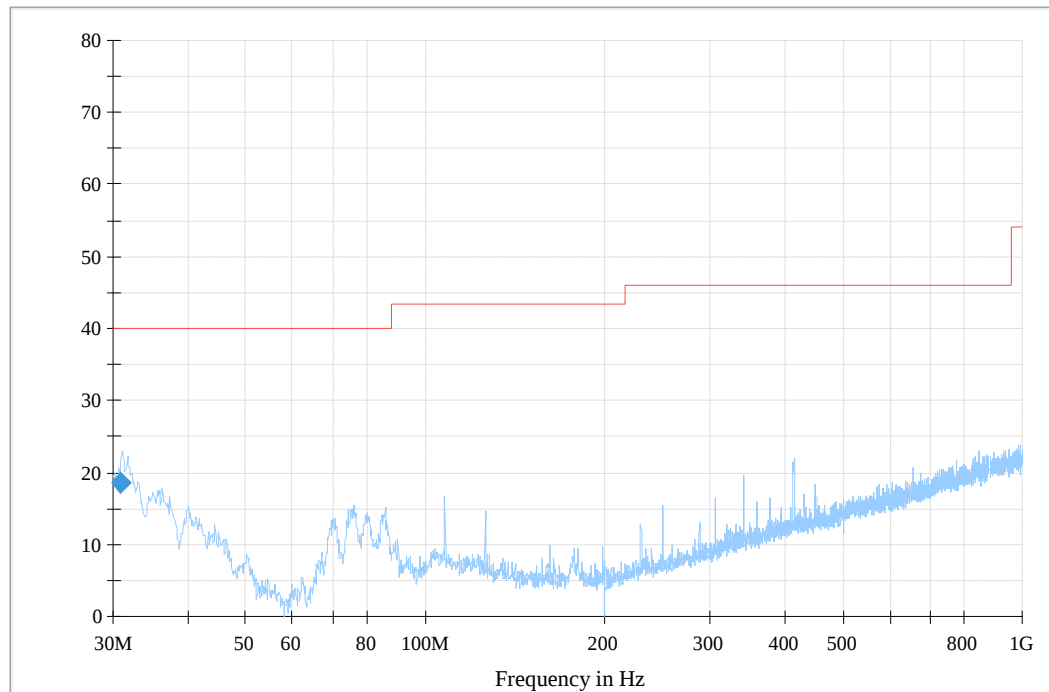
| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|------------------------|-------------|--------------|---------------|-------------|----------------------|
| 4879.958718     | 56.1                   | 100.0       | H            | 317.0         | 17.90       | 74.00                |
| 7318.536874     | 53.1                   | 100.0       | V            | 300.0         | 20.90       | 74.00                |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|------------------------|-------------|--------------|---------------|-------------|----------------------|
| 4879.358718     | 40.4                   | 100.0       | V            | 295.0         | 13.60       | 54.00                |
| 7322.044088     | 39.6                   | 100.0       | H            | 295.0         | 14.40       | 54.00                |

Note: At the frequency from 18GHz-26GHz, no emission was found above the background noise.

**Figure 5: Spurious emission measurement results, high channel, 30MHz-1GHz, vertical and horizontal polarization**

Level in dB $\mu$ V/m

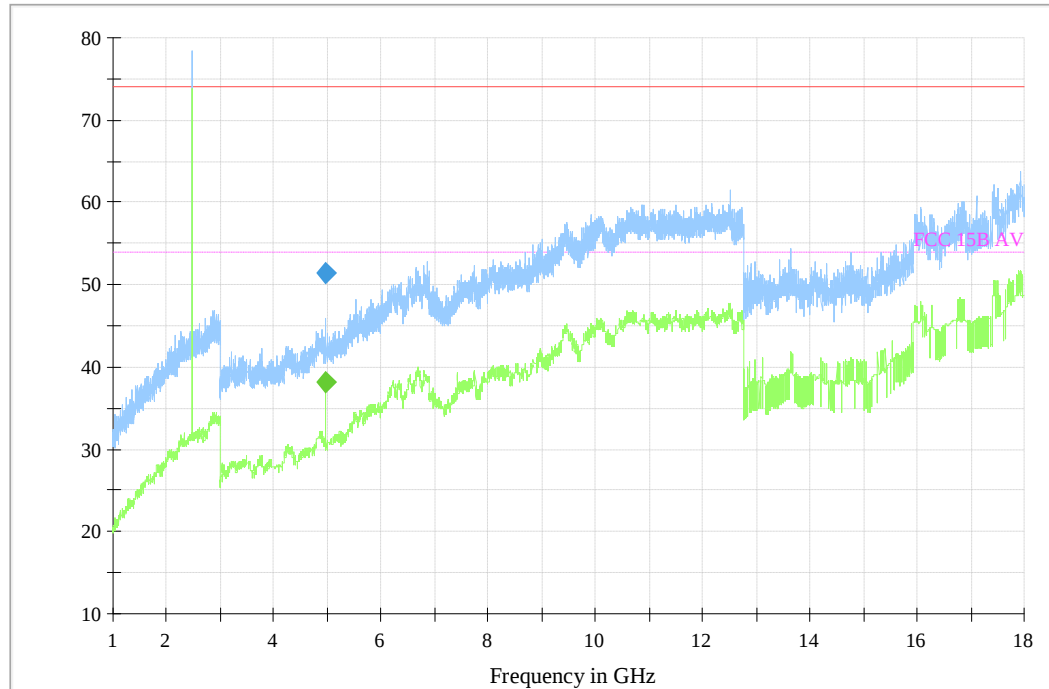


Final quasi-peak measurement result:

| Frequency (MHz) | QuasiPeak (dB $\mu$ V/m) | Bandwidth (kHz) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|--------------------------|-----------------|-------------|--------------|---------------|-------------|----------------------|
| 30.870000       | 18.5                     | 120.000         | 136.0       | V            | 22.0          | 21.50       | 40.00                |

**Figure 6: Spurious emission measurement results, high channel, 1-18GHz, vertical and horizontal polarization**

Level in dB $\mu$ V/m



Final measurement result:

| Frequency (MHz) | MaxPeak (dB $\mu$ V/m) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|------------------------|-------------|--------------|---------------|-------------|----------------------|
| 4959.719239     | 51.3                   | 100.0       | H            | 317.0         | 22.70       | 74.00                |

| Frequency (MHz) | Average (dB $\mu$ V/m) | Height (cm) | Polarization | Azimuth (deg) | Margin (dB) | Limit (dB $\mu$ V/m) |
|-----------------|------------------------|-------------|--------------|---------------|-------------|----------------------|
| 4959.619239     | 38.1                   | 100.0       | V            | 295.0         | 15.90       | 54.00                |

Note: At the frequency from 18GHz-26GHz, no emission was found above the background noise.

### **Band Edge measurement results**

No significant harmonic emissions was detected at the lower (2390MHz) and upper (2483.5MHz) restricted band.

## 4.2 Radio Frequency Exposure Compliance

### 4.2.1 Electromagnetic Fields

**RESULT:****Passed**

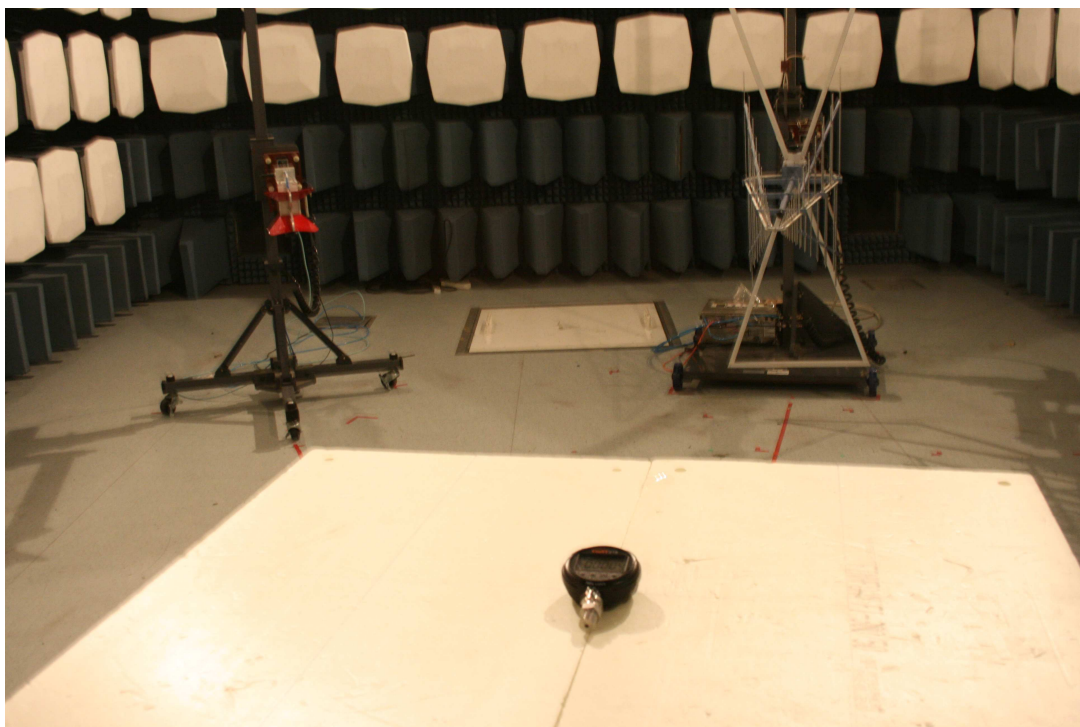
Date of testing : 2013-03-25  
Test standard : FCC KDB publication 447498

**Test setup**

Since maximum peak output power of the transmitter is  $<60/f$  (GHz) mW, i.e.  
 $0.32\text{mW} < 25 (=60/2.4)$  mW, hence the EUT is excluded from SAR evaluation according to  
FCC KDB publication 447498 D01: Mobile Portable RF Exposure.

## 5. Photographs of the Test Set-Up

**Photograph 1: Set-up for Spurious Emissions, below 1GHz**



**Photograph 2: Set-up for Spurious Emissions, above 1GHz**



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