

# FCC Radio Test Report

## FCC ID: XRSCRMXCORE101

This report concerns (check one): ☒ Original Grant ☐ Class II Change

**Project No.** : 1412C254  
**Equipment** : 2.4G Wireless Control Module  
**Model Name** : 200-1901  
**Applicant** : LumenRadio AB  
**Address** : Svagatan 2B, SE-41668 Gothenburg, Sweden

**Date of Receipt** : Dec. 30, 2014  
**Date of Test** : Dec. 30, 2014 ~ Mar. 04, 2015  
**Issued Date** : Mar. 05, 2015  
**Tested by** : BTL Inc.

**Testing Engineer** : David Mao  
(David Mao)

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**Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (NML) of **CHINA**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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**REPORT ISSUED HISTORY**

| Issued No.          | Description     | Issued Date   |
|---------------------|-----------------|---------------|
| BTL-FCCP-1-1412C254 | Original Issue. | Mar. 05, 2015 |

## 1. CERTIFICATION

Equipment : 2.4G Wireless Control Module  
Brand Name : CRMX CORE  
Model Name : 200-1901  
Applicant : LumenRadio AB  
Manufacturer : LumenRadio AB  
Address : Svangatan 2B, SE-41668 Gothenburg, Sweden  
Factory : Inission AB  
Address : Rimmaregatan 6, SE 422 55 Gothenburg, Sweden  
Date of Test : Dec. 30, 2014 ~ Mar. 04, 2015  
Test Item : ENGINEERING SAMPLE  
Standard(s) : FCC Part15, Subpart C : 2013 (15.247) / ANSI C63.4 : 2009 /

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc..

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1412C254) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| Applied Standard(s): FCC Part15 (15.247) , Subpart C: 2013 |                                     |          |        |
|------------------------------------------------------------|-------------------------------------|----------|--------|
| Standard(s) Section                                        | Test Item                           | Judgment | Remark |
| FCC                                                        |                                     |          |        |
| 15.207                                                     | Conducted Emission                  | PASS     |        |
| 15.247(d)                                                  | Antenna conducted Spurious Emission | PASS     |        |
| 15.247(a)(2)                                               | 6dB Bandwidth                       | PASS     |        |
| 15.247(b)(3)                                               | Peak Output Power                   | PASS     |        |
| 15.247(e)                                                  | Power Spectral Density              | PASS     |        |
| 15.203                                                     | Antenna Requirement                 | PASS     |        |
| 15.209/15.205                                              | Transmitter Radiated Emissions      | PASS     |        |

NOTE:

(1) "N/A" denotes test is not applicable in this test report.

## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-CB03** at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dong Guan, China.523792

BTL's test firm number for FCC: 319330

## 2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

### A. Conducted Measurement :

| Test Site | Method | Measurement Frequency Range | U, (dB) | NOTE |
|-----------|--------|-----------------------------|---------|------|
| DG-C02    | CISPR  | 150 KHz ~ 30MHz             | 1.94    |      |

### B. Radiated Measurement :

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U , (dB) | Note |
|-----------|--------|-----------------------------|------------|----------|------|
| DG-CB03   | CISPR  | 9KHz~30MHz                  | V          | 3.79     |      |
|           |        | 9KHz~0MHz                   | H          | 3.57     |      |
|           |        | 30MHz ~ 200MHz              | V          | 3.82     |      |
|           |        | 30MHz ~ 200MHz              | H          | 3.60     |      |
|           |        | 200MHz ~ 1,000MHz           | V          | 3.86     |      |
|           |        | 200MHz ~ 1,000MHz           | H          | 3.94     |      |
|           |        | 1GHz~18GHz                  | V          | 3.12     |      |
|           |        | 1GHz~18GHz                  | H          | 3.68     |      |
|           |        | 18GHz~40GHz                 | V          | 4.15     |      |
|           |        | 18GHz~40GHz                 | H          | 4.14     |      |

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                        |                                     |                     |
|------------------------|-------------------------------------|---------------------|
| Equipment              | 2.4G Wireless Control Module        |                     |
| Brand Name             | CRMX CORE                           |                     |
| Model Name             | 200-1901                            |                     |
| Model Difference       | N/A                                 |                     |
| Output Power (Max.)    | Operation Frequency                 | 2405 MHz ~ 2480 MHz |
|                        | Modulation Technology               | QPSK                |
|                        | Bit Rate of Transmitter             | 250kbps             |
|                        | Output Power Max for Dipole Antenna | 14.12 dBm           |
|                        | Output Power Max for Chip Antenna   | 14.85 dBm           |
| Power Source           | Supplied from DC source.            |                     |
| Power Rating           | DC 3V                               |                     |
| Connecting I/O Port(s) | Please refer to the User's Manual   |                     |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

| Channel   | Frequency (MHz) |
|-----------|-----------------|
| <b>11</b> | <b>2405</b>     |
| 12        | 2410            |
| 13        | 2415            |
| 14        | 2420            |
| 15        | 2425            |
| 16        | 2430            |
| 17        | 2435            |
| 18        | 2440            |
| <b>19</b> | <b>2445</b>     |
| 20        | 2450            |
| 21        | 2455            |
| 22        | 2460            |
| 23        | 2465            |
| 24        | 2470            |
| 25        | 2475            |
| <b>26</b> | <b>2480</b>     |

3. Table for Filed Antenna

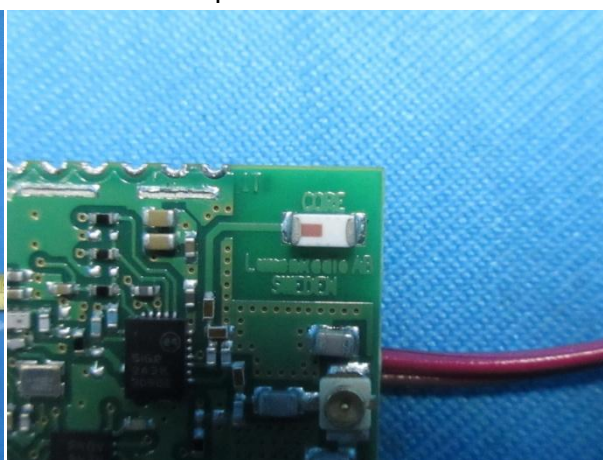
| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-------|------------|--------------|-----------|------------|
| 1    | N/A   | 104-1001   | Dipole       | N/A       | 2.15       |
| 2    | N/A   | N/A        | Chip         | N/A       | 0.5        |

There are two kinds of antennas, Dipole Antenna and Chip Antenna. Only one antenna works per time. Radiated emission of test results are recorded for two kinds of antennas.

Dipole



Chip



### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description        |
|--------------|--------------------|
| Mode 1       | TX Mode CH11/19/26 |
| Mode 2       | TX MODE            |

| For Conducted Test |             |
|--------------------|-------------|
| Final Test Mode    | Description |
| Mode 2             | TX MODE     |

| For Radiated Emission |                     |
|-----------------------|---------------------|
| Final Test Mode       | Description         |
| Mode 1                | TX Mode CH 11/16/26 |

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

**Note:**

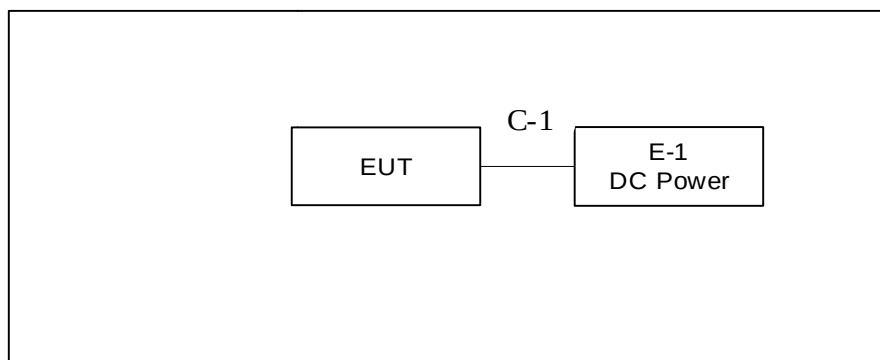
- (1) The measurements are performed at the high, middle, low available channels.

### 3.3 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

| Test software version | realterm |          |          |
|-----------------------|----------|----------|----------|
| Frequency             | 2405 MHz | 2445 MHz | 2480 MHz |
| Parameters            | 120      | 196      | 200      |

### 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | FCC ID | Series No. | Note |
|------|-----------|-----------|----------------|--------|------------|------|
| E-1  | DC POWER  | N/A       | GPC-3030DN     | N/A    | N/A        | -    |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| C-1  | NO            | NO           | 50CM   | -    |

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

| Frequency of Emission (MHz) | Conducted Limit (dBμV) |           |
|-----------------------------|------------------------|-----------|
|                             | Quasi-peak             | Average   |
| 0.15 -0.5                   | 66 to 56*              | 56 to 46* |
| 0.50 -5.0                   | 56                     | 46        |
| 5.0 -30.0                   | 60                     | 50        |

Note:

- (1) The limit of " \* " decreases with the logarithm of the frequency
- (2) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
 Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

| Receiver Parameters | Setting  |
|---------------------|----------|
| Attenuation         | 10 dB    |
| Start Frequency     | 0.15 MHz |
| Stop Frequency      | 30 MHz   |
| IF Bandwidth        | 9 KHz    |

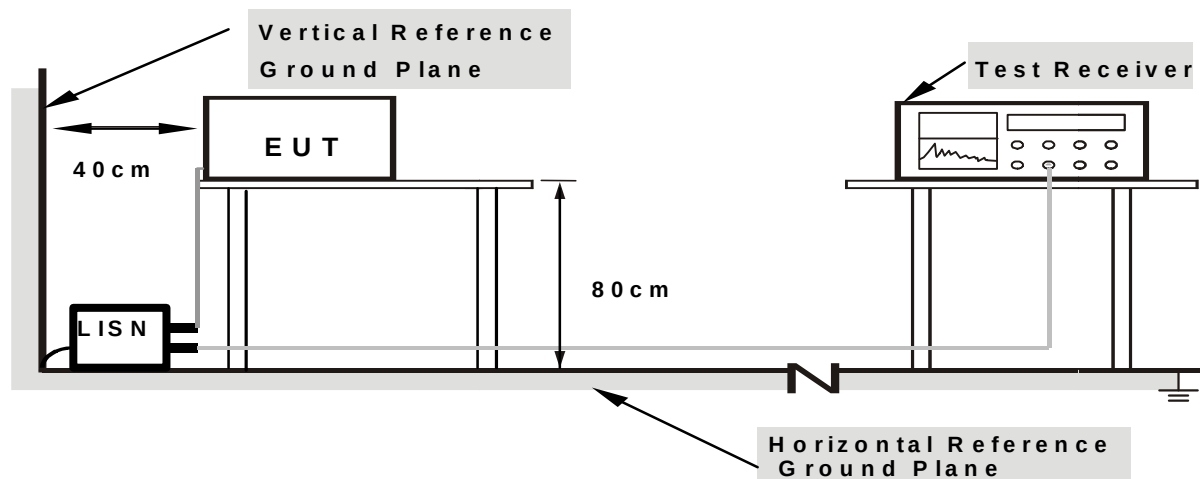
#### 4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.4 TEST SETUP



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

#### 4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

#### 4.1.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 3V

#### 4.1.7 TEST RESULTS

Please refer to the Attachment A.

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS

20dB in any 100 KHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

#### LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

| Frequency<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|--------------------|--------------------------------------|----------------------------------|
| 0.009~0.490        | 2400/F(KHz)                          | 300                              |
| 0.490~1.705        | 24000/F(KHz)                         | 30                               |
| 1.705~30.0         | 30                                   | 30                               |
| 30~88              | 100                                  | 3                                |
| 88~216             | 150                                  | 3                                |
| 216~960            | 200                                  | 3                                |
| 960~1000           | 500                                  | 3                                |

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| Frequency (MHz) | (dBuV/m) (at 3 meters) |         |
|-----------------|------------------------|---------|
|                 | PEAK                   | AVERAGE |
| Above 1000      | 74                     | 54      |

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
 Margin Level = Measurement Value - Limit Value

| Spectrum Parameter | Setting                                                                |
|--------------------|------------------------------------------------------------------------|
| Attenuation        | Auto                                                                   |
| Start Frequency    | 1000 MHz                                                               |
| Stop Frequency     | 10th carrier harmonic                                                  |
| RBW / VBW          | RBW1MHz VBW 3MHz Peak detector for PK value ,RMS detector for AV value |

| Receiver Parameter     | Setting                           |
|------------------------|-----------------------------------|
| Attenuation            | Auto                              |
| Start ~ Stop Frequency | 9KHz~90KHz for PK/AVG detector    |
| Start ~ Stop Frequency | 90KHz~110KHz for QP detector      |
| Start ~ Stop Frequency | 110KHz~490KHz for PK/AVG detector |
| Start ~ Stop Frequency | 490KHz~30MHz for QP detector      |
| Start ~ Stop Frequency | 30MHz~1000MHz for QP detector     |

#### 4.2.2 TEST PROCEDURE

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

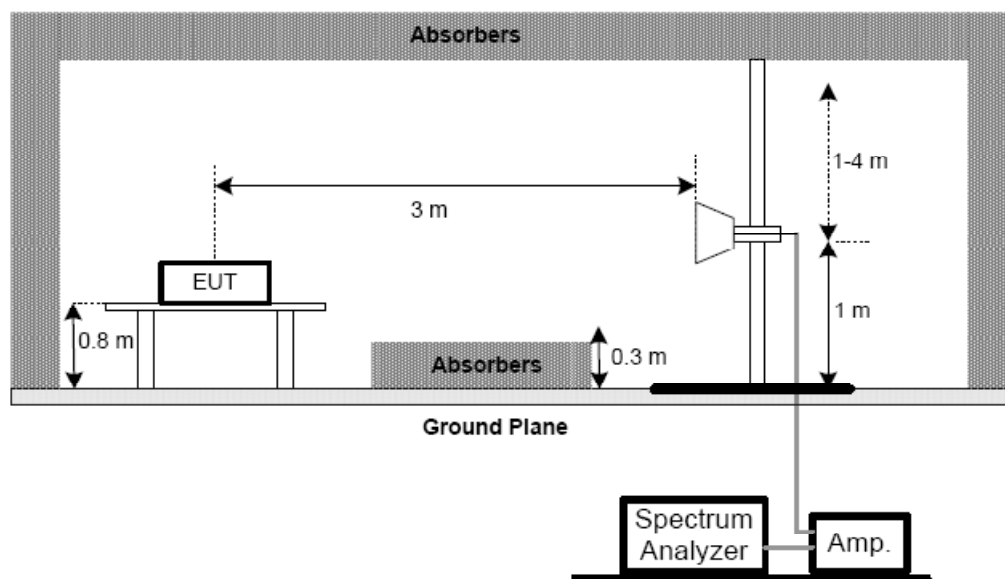
#### 4.2.3 DEVIATION FROM TEST STANDARD

No deviation

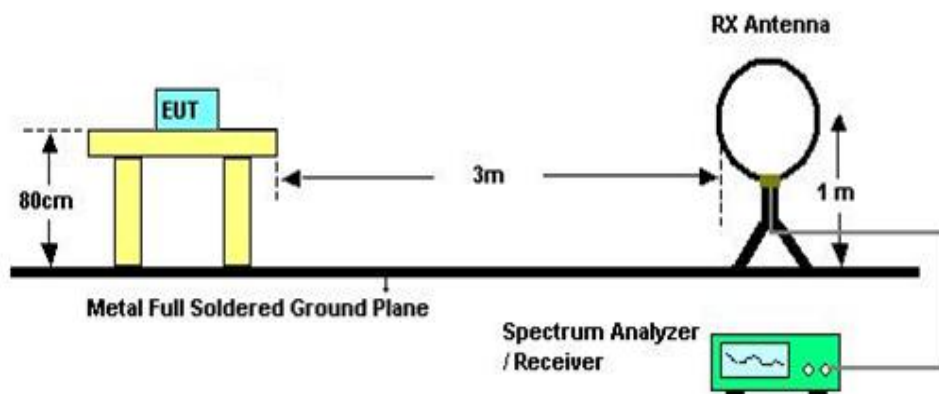
#### 4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz

(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



(C) For radiated emissions below 30MHz



#### 4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.5 Unless** otherwise a special operating condition is specified in the follows during the testing.

#### 4.2.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 3V

**4.2.7 TEST RESULTS (9KHZ TO 30MHZ)**

Please refer to the Attachment B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

**4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)**

Please refer to the Attachment C.

**4.2.9 TEST RESULTS (ABOVE 1000 MHZ)**

Please refer to the Attachment D.

Remark:

- (1) No limit: This is fundamental signal, the judgment is not applicable.  
For fundamental signal judgment was referred to Peak output test.

## 5. BANDWIDTH TEST

### 5.1 APPLIED PROCEDURES

| FCC Part15 (15.247) , Subpart C |           |                       |        |
|---------------------------------|-----------|-----------------------|--------|
| Section                         | Test Item | Frequency Range (MHz) | Result |
| 15.247(a)(2)                    | Bandwidth | 2400-2483.5           | PASS   |

#### 5.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

#### 5.1.2 DEVIATION FROM STANDARD

No deviation.

#### 5.1.3 TEST SETUP



#### 5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 3V

#### 5.1.6 TEST RESULTS

Please refer to the Attachment E.

## 6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

### 6.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |                      |                 |                       |        |
|---------------------------------|----------------------|-----------------|-----------------------|--------|
| Section                         | Test Item            | Limit           | Frequency Range (MHz) | Result |
| 15.247(b)(3)                    | Maximum Output Power | 1 Watt or 30dBm | 2400-2483.5           | PASS   |

#### 6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,

#### 6.1.2 DEVIATION FROM STANDARD

No deviation.

#### 6.1.3 TEST SETUP



#### 6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing. Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

#### 6.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 3V

#### 6.1.6 TEST RESULTS

Please refer to the Attachment F.

## 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 APPLIED PROCEDURES / LIMIT

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 measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

#### 7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.

#### 7.1.2 DEVIATION FROM STANDARD

No deviation.

#### 7.1.3 TEST SETUP



#### 7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 7.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 3V

#### 7.1.6 TEST RESULTS

Please refer to the Attachment G.

## 8. POWER SPECTRAL DENSITY TEST

### 8.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |                        |                     |                       |        |
|---------------------------------|------------------------|---------------------|-----------------------|--------|
| Section                         | Test Item              | Limit               | Frequency Range (MHz) | Result |
| 15.247(e)                       | Power Spectral Density | 8 dBm (in any 3KHz) | 2400-2483.5           | PASS   |

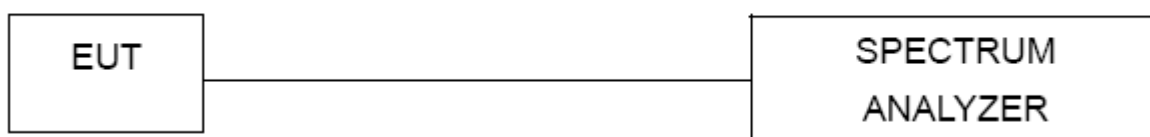
#### 8.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

#### 8.1.2 DEVIATION FROM STANDARD

No deviation.

#### 8.1.3 TEST SETUP



#### 8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 8.1.5 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 55%    Test Voltage: DC 3V

#### 8.1.6 TEST RESULTS

Please refer to the Attachment H.

## 9. MEASUREMENT INSTRUMENTS LIST

| Conducted Emission Measurement |                      |              |                          |            |                  |
|--------------------------------|----------------------|--------------|--------------------------|------------|------------------|
| Item                           | Kind of Equipment    | Manufacturer | Type No.                 | Serial No. | Calibrated until |
| 1                              | LISN                 | EMCO         | 3816/2                   | 00052765   | Mar. 29, 2015    |
| 2                              | LISN                 | R&S          | ENV216                   | 101447     | Mar. 29, 2015    |
| 3                              | Test Cable           | N/A          | C_17                     | N/A        | Mar. 14, 2015    |
| 4                              | EMI TEST RECEIVER    | R&S          | ESCS30                   | 833364/017 | Mar. 29, 2015    |
| 5                              | 50Ω Terminator       | SHX          | TF2-3G-A                 | 08122902   | Mar. 29, 2015    |
| 6                              | Measurement Software | Farad        | EZ-EMC<br>Ver.NB-03A1-01 | N/A        | N/A              |

| Radiated Emission Measurement |                                     |                |                          |                |                  |
|-------------------------------|-------------------------------------|----------------|--------------------------|----------------|------------------|
| Item                          | Kind of Equipment                   | Manufacturer   | Type No.                 | Serial No.     | Calibrated until |
| 1                             | Antenna                             | Schwarbeck     | VULB9160                 | 9160-3232      | Mar. 29, 2015    |
| 2                             | Amplifier                           | HP             | 8447D                    | 2944A09673     | Mar. 29, 2015    |
| 3                             | Receiver                            | AGILENT        | N9038A                   | MY5213003<br>9 | Sep. 30, 2015    |
| 4                             | Test Cable                          | N/A            | C-01_CB03                | N/A            | Jul. 01, 2015    |
| 5                             | Controller                          | CT             | SC100                    | N/A            | N/A              |
| 6                             | Antenna                             | ETS            | 3115                     | 00075789       | Mar. 29, 2015    |
| 7                             | Amplifier                           | Agilent        | 8449B                    | 3008A02274     | Mar. 29, 2015    |
| 8                             | Receiver                            | AGILENT        | N9038A                   | MY5213003<br>9 | Sep. 30, 2015    |
| 9                             | Test Cable                          | HUBER+SUHNER   | C-48                     | N/A            | Apr. 30, 2015    |
| 10                            | Controller                          | CT             | SC100                    | N/A            | N/A              |
| 11                            | Broad-Band Horn Antenna             | Schwarzbeck    | BBHA 9170                | 9170319        | Feb. 22, 2016    |
| 12                            | Microwave Preamplifier With Adaptor | EMC INSTRUMENT | EMC2654045               | 980039 & HA01  | Feb. 22, 2016    |
| 13                            | Active Loop Antenna                 | R&S            | HFH2-Z2                  | 830749/020     | Mar. 29, 2015    |
| 14                            | Measurement Software                | Farad          | EZ-EMC<br>Ver.NB-03A1-01 | N/A            | N/A              |

| 6dB Bandwidth Measurement |                   |              |          |            |                  |
|---------------------------|-------------------|--------------|----------|------------|------------------|
| Item                      | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                         | Spectrum Analyzer | R&S          | FSP 40   | 100185     | Nov. 02, 2015    |

| Peak Output Power Measurement |                       |              |          |            |                  |
|-------------------------------|-----------------------|--------------|----------|------------|------------------|
| Item                          | Kind of Equipment     | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                             | P-series Power meter  | Agilent      | N1911A   | MY45100473 | Mar. 29, 2015    |
| 2                             | Wireband Power sensor | Agilent      | N1921A   | MY51100041 | Mar. 29, 2015    |

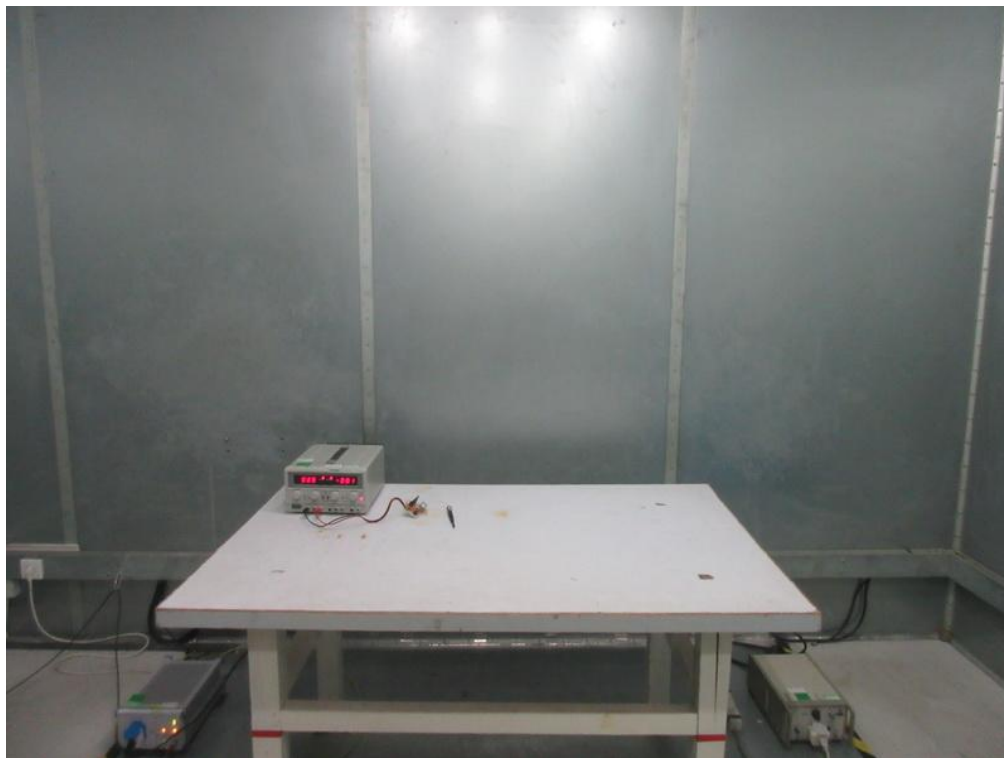
| Antenna Conducted Spurious Emission Measurement |                   |              |          |            |                  |
|-------------------------------------------------|-------------------|--------------|----------|------------|------------------|
| Item                                            | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                                               | Spectrum Analyzer | R&S          | FSP 40   | 100185     | Nov. 02, 2015    |

| Power Spectral Density Measurement |                   |              |          |            |                  |
|------------------------------------|-------------------|--------------|----------|------------|------------------|
| Item                               | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                                  | Spectrum Analyzer | R&S          | FSP 40   | 100185     | Nov. 02, 2015    |

Remark: "N/A" denotes no model name, serial no. or calibration specified.  
All calibration period of equipment list is one year.

## 10. EUT TEST PHOTO

### Conducted Measurement Photos



## Radiated Measurement Photos

9KHz to 30MHz



## Radiated Measurement Photos

30MHz to 1000MHz



## Radiated Measurement Photos

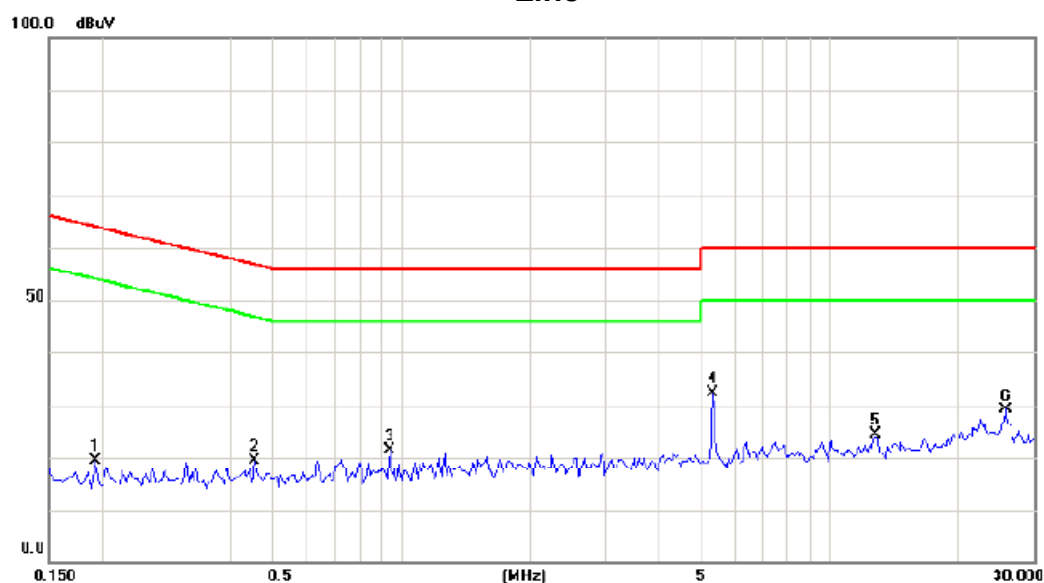
Above 1000MHz



## **ATTACHMENT A - CONDUCTED EMISSION**

Test Mode : TX MODE

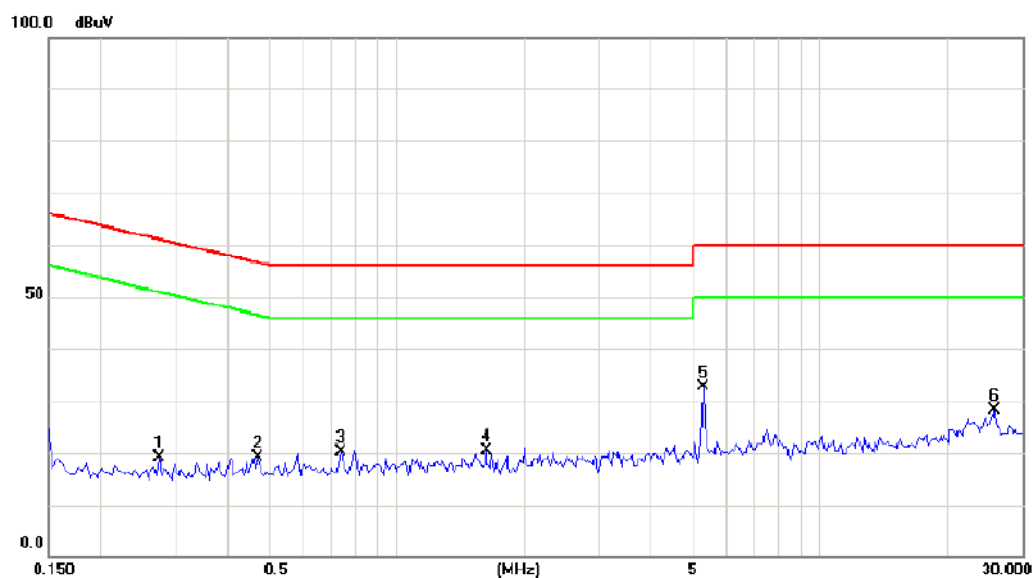
# Line



| No | Mk | Freq<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|----|----|-------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|---------|
| 1  |    | 0.1930      | 9.84                     | 9.50                    | 19.34                    | 63.91         | -44.57       | peak     |         |
| 2  |    | 0.4547      | 9.70                     | 9.02                    | 19.32                    | 56.79         | -37.47       | peak     |         |
| 3  |    | 0.9352      | 11.67                    | 9.61                    | 21.28                    | 56.00         | -34.72       | peak     |         |
| 4  | *  | 5.3510      | 22.05                    | 9.09                    | 32.34                    | 60.00         | -27.66       | peak     |         |
| 5  |    | 12.7617     | 14.62                    | 9.84                    | 24.46                    | 60.00         | -35.54       | peak     |         |
| 6  |    | 25.6914     | 18.85                    | 10.16                   | 29.01                    | 60.00         | -30.99       | peak     |         |

Test Mode : TX MODE

### Neutral



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|---------|
| 1   |     | 0.2750       | 9.54                     | 9.57                    | 19.11                    | 60.97         | -41.86       | peak     |         |
| 2   |     | 0.4703       | 9.65                     | 9.58                    | 19.23                    | 56.51         | -37.28       | peak     |         |
| 3   |     | 0.7398       | 10.58                    | 9.59                    | 20.17                    | 56.00         | -35.83       | peak     |         |
| 4   |     | 1.6227       | 10.64                    | 9.62                    | 20.26                    | 56.00         | -35.74       | peak     |         |
| 5   | *   | 5.3008       | 22.97                    | 9.69                    | 32.66                    | 60.00         | -27.34       | peak     |         |
| 6   |     | 25.6953      | 17.68                    | 10.39                   | 28.07                    | 60.00         | -31.93       | peak     |         |

## **ATTACHMENT B - RADIATED EMISSION (9KHZ-30MHZ)**

### Dipole Antenna

|            |         |
|------------|---------|
| Test Mode: | TX Mode |
|------------|---------|

| Freq.<br>(MHz) | Ant.<br>0°/90° | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|----------------|-----------------------|-------------------------|--------------------------|--------------------|----------------|------|
| 0.0127         | 0°             | 1.25                  | 24.30                   | 25.55                    | 125.53             | -99.98         | AVG  |
| 0.0127         | 0°             | 5.55                  | 24.30                   | 29.85                    | 145.53             | -115.68        | PEAK |
| 0.0253         | 0°             | 1.58                  | 23.96                   | 25.54                    | 119.54             | -94.00         | AVG  |
| 0.0253         | 0°             | 5.13                  | 23.96                   | 29.09                    | 139.54             | -110.45        | PEAK |
| 0.0295         | 0°             | 0.69                  | 23.70                   | 24.39                    | 118.21             | -93.82         | AVG  |
| 0.0295         | 0°             | 4.26                  | 23.70                   | 27.96                    | 138.21             | -110.25        | PEAK |
| 0.0441         | 0°             | 0.13                  | 22.77                   | 22.90                    | 114.72             | -91.82         | AVG  |
| 0.0441         | 0°             | 4.87                  | 22.77                   | 27.64                    | 134.72             | 107.08         | PEAK |
| 0.4937         | 0°             | 21.36                 | 19.82                   | 41.18                    | 73.73              | -32.55         | QP   |
| 1.5265         | 0°             | 25.69                 | 19.55                   | 45.24                    | 63.93              | -18.69         | QP   |

| Freq.<br>(MHz) | Ant.<br>0°/90° | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|----------------|-----------------------|-------------------------|--------------------------|--------------------|----------------|------|
| 0.0125         | 90°            | 2.66                  | 24.30                   | 26.96                    | 125.67             | -98.71         | AVG  |
| 0.0125         | 90°            | 6.31                  | 24.30                   | 30.61                    | 145.67             | -115.06        | PEAK |
| 0.0161         | 90°            | 2.69                  | 24.30                   | 26.99                    | 123.47             | -96.48         | AVG  |
| 0.0161         | 90°            | 6.03                  | 24.30                   | 30.33                    | 143.47             | -113.14        | PEAK |
| 0.0383         | 90°            | 1.85                  | 23.14                   | 24.99                    | 115.94             | -90.95         | AVG  |
| 0.0383         | 90°            | 5.97                  | 23.14                   | 29.11                    | 135.94             | -106.83        | PEAK |
| 0.0443         | 90°            | 1.00                  | 22.76                   | 23.76                    | 114.68             | -90.92         | AVG  |
| 0.0443         | 90°            | 4.96                  | 22.76                   | 27.72                    | 134.68             | -106.96        | PEAK |
| 0.4718         | 90°            | 20.69                 | 19.87                   | 40.56                    | 94.13              | -53.57         | QP   |
| 1.5369         | 90°            | 23.88                 | 19.55                   | 43.43                    | 63.87              | -20.44         | QP   |

### Chip Antenna

|            |         |
|------------|---------|
| Test Mode: | TX Mode |
|------------|---------|

| Freq.<br>(MHz) | Ant.<br>0°/90° | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|----------------|-----------------------|-------------------------|--------------------------|--------------------|----------------|------|
| 0.0129         | 0°             | 1.26                  | 24.30                   | 25.56                    | 125.39             | -99.83         | AVG  |
| 0.0129         | 0°             | 5.39                  | 24.30                   | 29.69                    | 145.39             | -115.70        | PEAK |
| 0.0252         | 0°             | 1.57                  | 23.97                   | 25.54                    | 119.58             | -94.04         | AVG  |
| 0.0252         | 0°             | 5.03                  | 23.97                   | 29.00                    | 139.58             | -110.58        | PEAK |
| 0.0296         | 0°             | 0.98                  | 23.69                   | 24.67                    | 118.18             | -93.51         | AVG  |
| 0.0296         | 0°             | 4.79                  | 23.69                   | 28.48                    | 138.18             | -109.70        | PEAK |
| 0.0443         | 0°             | 0.77                  | 22.76                   | 23.53                    | 114.68             | -91.15         | AVG  |
| 0.0443         | 0°             | 4.63                  | 22.76                   | 27.39                    | 134.68             | -107.29        | PEAK |
| 0.4936         | 0°             | 20.39                 | 19.82                   | 40.21                    | 73.74              | -33.53         | QP   |
| 1.5271         | 0°             | 23.87                 | 19.55                   | 43.42                    | 63.93              | -20.51         | QP   |

| Freq.<br>(MHz) | Ant.<br>0°/90° | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|----------------|-----------------------|-------------------------|--------------------------|--------------------|----------------|------|
| 0.0122         | 90°            | 2.39                  | 24.30                   | 26.69                    | 125.88             | -99.19         | AVG  |
| 0.0122         | 90°            | 6.58                  | 24.30                   | 30.88                    | 145.88             | -115.00        | PEAK |
| 0.0163         | 90°            | 2.14                  | 24.30                   | 26.44                    | 123.36             | -96.92         | AVG  |
| 0.0163         | 90°            | 6.28                  | 24.30                   | 30.58                    | 143.36             | -112.78        | PEAK |
| 0.0385         | 90°            | 1.36                  | 23.13                   | 24.49                    | 115.90             | -91.41         | AVG  |
| 0.0385         | 90°            | 5.66                  | 23.13                   | 28.79                    | 135.90             | -107.11        | PEAK |
| 0.0446         | 90°            | 1.08                  | 22.74                   | 23.82                    | 114.62             | -90.80         | AVG  |
| 0.0446         | 90°            | 5.09                  | 22.74                   | 27.83                    | 134.62             | -106.79        | PEAK |
| 0.4715         | 90°            | 19.68                 | 19.87                   | 39.55                    | 94.13              | -54.58         | QP   |
| 1.5863         | 90°            | 22.37                 | 19.54                   | 41.91                    | 63.60              | -21.69         | QP   |

## **ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)**

# Dipole Antenna

Test Mode: TX 2405MHz \_CH11

## Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 75.5900      | 41.18                    | -16.67                  | 24.51                      | 40.00           | -15.49       | peak     |         |
| 2   |     | 138.6400     | 31.83                    | -13.15                  | 18.68                      | 43.50           | -24.82       | peak     |         |
| 3   |     | 377.2600     | 30.26                    | -10.56                  | 19.70                      | 46.00           | -26.30       | peak     |         |
| 4   |     | 458.7400     | 30.55                    | -8.95                   | 21.60                      | 46.00           | -24.40       | peak     |         |
| 5   |     | 549.9200     | 30.99                    | -7.93                   | 23.06                      | 46.00           | -22.94       | peak     |         |
| 6   |     | 660.5000     | 29.40                    | -5.10                   | 24.30                      | 46.00           | -21.70       | peak     |         |

Test Mode: TX 2405MHz \_CH11

# Horizontal



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Margin |          |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 69.7700  | 37.67         | -16.22         | 21.45       | 40.00  | -18.55 | peak     |         |
| 2   |     | 178.4100 | 30.93         | -12.96         | 17.97       | 43.50  | -25.53 | peak     |         |
| 3   |     | 320.0300 | 30.92         | -11.31         | 19.61       | 46.00  | -26.39 | peak     |         |
| 4   |     | 416.0600 | 30.55         | -9.24          | 21.31       | 46.00  | -24.69 | peak     |         |
| 5   |     | 624.6100 | 29.84         | -6.55          | 23.29       | 46.00  | -22.71 | peak     |         |
| 6   |     | 676.0200 | 29.09         | -5.04          | 24.05       | 46.00  | -21.95 | peak     |         |

Test Mode: TX 2445MHz \_CH19

# Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 75.5900      | 41.35                    | -16.67                  | 24.68                      | 40.00           | -15.32       | peak     |         |
| 2   |     | 138.6400     | 31.69                    | -13.15                  | 18.54                      | 43.50           | -24.96       | peak     |         |
| 3   |     | 364.6500     | 29.67                    | -11.13                  | 18.54                      | 46.00           | -27.46       | peak     |         |
| 4   |     | 466.5000     | 31.01                    | -9.25                   | 21.76                      | 46.00           | -24.24       | peak     |         |
| 5   |     | 547.0100     | 29.26                    | -8.08                   | 21.18                      | 46.00           | -24.82       | peak     |         |
| 6   |     | 719.6700     | 27.50                    | -4.81                   | 22.69                      | 46.00           | -23.31       | peak     |         |

|            |                  |
|------------|------------------|
| Test Mode: | TX 2445MHz _CH19 |
|------------|------------------|

### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 69.7700      | 37.74                    | -16.22                  | 21.52                      | 40.00           | -18.48       | peak     |         |
| 2   |     | 139.6100     | 30.18                    | -13.15                  | 17.03                      | 43.50           | -26.47       | peak     |         |
| 3   |     | 320.0300     | 30.68                    | -11.31                  | 19.37                      | 46.00           | -26.63       | peak     |         |
| 4   |     | 416.0600     | 31.92                    | -9.24                   | 22.68                      | 46.00           | -23.32       | peak     |         |
| 5   |     | 609.0900     | 27.84                    | -7.41                   | 20.43                      | 46.00           | -25.57       | peak     |         |
| 6   |     | 785.6300     | 28.41                    | -3.39                   | 25.02                      | 46.00           | -20.98       | peak     |         |

Test Mode: TX 2480MHz \_CH26

# Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 75.5900      | 40.82                    | -16.67                  | 24.15                      | 40.00           | -15.85       | peak     |         |
| 2   |     | 138.6400     | 31.84                    | -13.15                  | 18.69                      | 43.50           | -24.81       | peak     |         |
| 3   |     | 353.0100     | 33.64                    | -11.65                  | 21.99                      | 46.00           | -24.01       | peak     |         |
| 4   |     | 397.6300     | 31.65                    | -9.63                   | 22.02                      | 46.00           | -23.98       | peak     |         |
| 5   |     | 565.4400     | 30.66                    | -7.92                   | 22.74                      | 46.00           | -23.26       | peak     |         |
| 6   |     | 747.8000     | 31.00                    | -4.63                   | 26.37                      | 46.00           | -19.63       | peak     |         |

Test Mode: TX 2480MHz \_CH26

# Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 69.7700      | 37.54                    | -16.22                  | 21.32                      | 40.00           | -18.68       | peak     |         |
| 2   |     | 288.0200     | 30.34                    | -11.40                  | 18.94                      | 46.00           | -27.06       | peak     |         |
| 3   |     | 320.0300     | 32.34                    | -11.31                  | 21.03                      | 46.00           | -24.97       | peak     |         |
| 4   |     | 416.0600     | 32.85                    | -9.24                   | 23.61                      | 46.00           | -22.39       | peak     |         |
| 5   |     | 538.2800     | 29.49                    | -8.54                   | 20.95                      | 46.00           | -25.05       | peak     |         |
| 6   |     | 629.4600     | 28.30                    | -6.28                   | 22.02                      | 46.00           | -23.98       | peak     |         |

# Chip Antenna

Test Mode: TX 2405MHz \_CH11

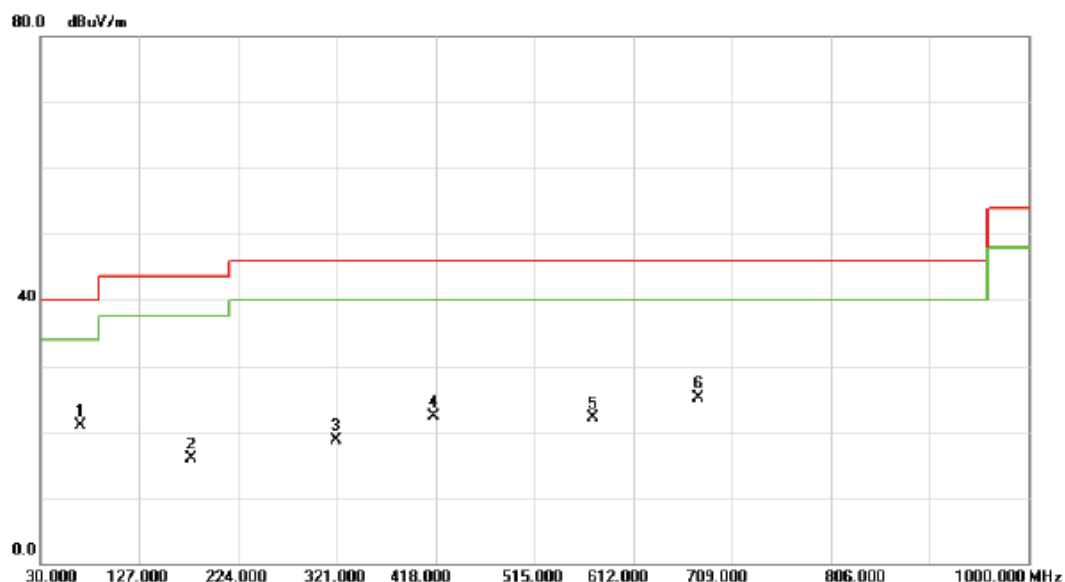
## Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 75.5900      | 40.68                    | -16.67                  | 24.01                      | 40.00           | -15.99       | peak     |         |
| 2   |     | 138.6400     | 31.33                    | -13.15                  | 18.18                      | 43.50           | -25.32       | peak     |         |
| 3   |     | 303.5400     | 28.78                    | -11.05                  | 17.73                      | 46.00           | -28.27       | peak     |         |
| 4   |     | 458.7400     | 30.05                    | -8.95                   | 21.10                      | 46.00           | -24.90       | peak     |         |
| 5   |     | 549.9200     | 29.99                    | -7.93                   | 22.06                      | 46.00           | -23.94       | peak     |         |
| 6   |     | 660.5000     | 29.40                    | -5.10                   | 24.30                      | 46.00           | -21.70       | peak     |         |

Test Mode: TX 2405MHz \_CH11

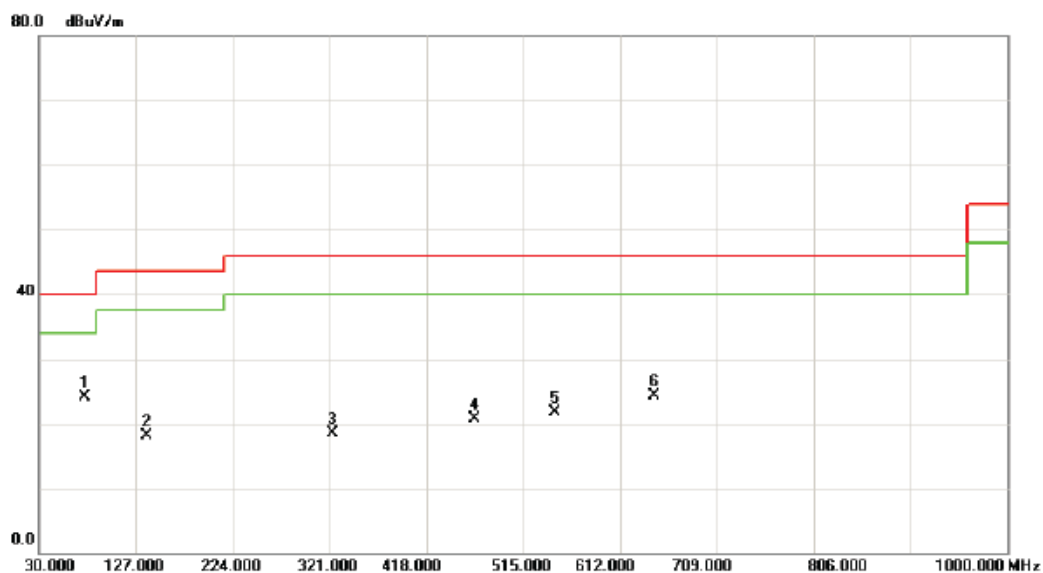
# Horizontal



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Margin |          |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 69.7700  | 37.17         | -16.22         | 20.95       | 40.00  | -19.05 | peak     |         |
| 2   |     | 178.4100 | 28.93         | -12.96         | 15.97       | 43.50  | -27.53 | peak     |         |
| 3   |     | 320.0300 | 29.92         | -11.31         | 18.61       | 46.00  | -27.39 | peak     |         |
| 4   |     | 416.0600 | 31.55         | -9.24          | 22.31       | 46.00  | -23.69 | peak     |         |
| 5   |     | 572.2300 | 30.08         | -7.92          | 22.16       | 46.00  | -23.84 | peak     |         |
| 6   |     | 676.0200 | 30.09         | -5.04          | 25.05       | 46.00  | -20.95 | peak     |         |

|            |                  |
|------------|------------------|
| Test Mode: | TX 2445MHz _CH19 |
|------------|------------------|

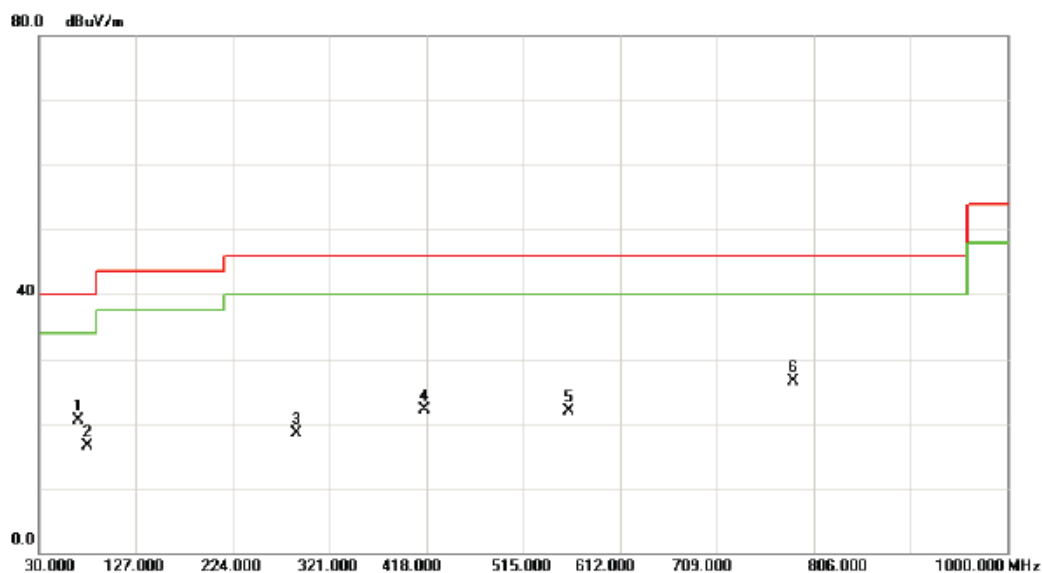
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 75.5900      | 40.85                    | -16.67                  | 24.18                      | 40.00           | -15.82       | peak     |         |
| 2   |     | 138.6400     | 31.19                    | -13.15                  | 18.04                      | 43.50           | -25.46       | peak     |         |
| 3   |     | 323.9100     | 29.82                    | -11.37                  | 18.45                      | 46.00           | -27.55       | peak     |         |
| 4   |     | 466.5000     | 30.01                    | -9.25                   | 20.76                      | 46.00           | -25.24       | peak     |         |
| 5   |     | 547.0100     | 29.76                    | -8.08                   | 21.68                      | 46.00           | -24.32       | peak     |         |
| 6   |     | 645.9500     | 29.78                    | -5.38                   | 24.40                      | 46.00           | -21.60       | peak     |         |

|            |                  |
|------------|------------------|
| Test Mode: | TX 2445MHz _CH19 |
|------------|------------------|

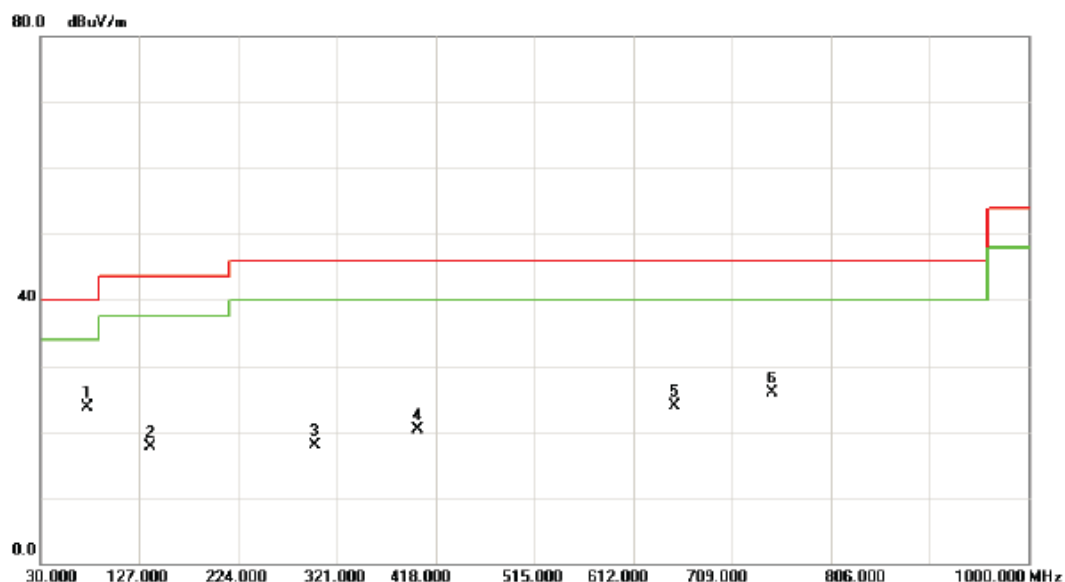
### Horizontal



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Margin |          |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz      | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 69.7700  | 36.74         | -16.22         | 20.52       | 40.00  | -19.48 | peak     |         |
| 2   |     | 78.5000  | 33.56         | -16.98         | 16.58       | 40.00  | -23.42 | peak     |         |
| 3   |     | 288.0200 | 29.88         | -11.40         | 18.48       | 46.00  | -27.52 | peak     |         |
| 4   |     | 416.0600 | 31.42         | -9.24          | 22.18       | 46.00  | -23.82 | peak     |         |
| 5   |     | 560.5900 | 29.77         | -7.92          | 21.85       | 46.00  | -24.15 | peak     |         |
| 6   |     | 785.6300 | 29.91         | -3.39          | 26.52       | 46.00  | -19.48 | peak     |         |

Test Mode: TX 2480MHz \_CH26

# Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 75.5900      | 40.32                    | -16.67                  | 23.65                      | 40.00           | -16.35       | peak     |         |
| 2   |     | 138.6400     | 30.84                    | -13.15                  | 17.69                      | 43.50           | -25.81       | peak     |         |
| 3   |     | 299.6600     | 28.91                    | -10.99                  | 17.92                      | 46.00           | -28.08       | peak     |         |
| 4   |     | 400.5400     | 29.83                    | -9.52                   | 20.31                      | 46.00           | -25.69       | peak     |         |
| 5   |     | 652.7400     | 29.11                    | -5.13                   | 23.98                      | 46.00           | -22.02       | peak     |         |
| 6   |     | 747.8000     | 30.50                    | -4.63                   | 25.87                      | 46.00           | -20.13       | peak     |         |

|            |                  |
|------------|------------------|
| Test Mode: | TX 2480MHz _CH26 |
|------------|------------------|

### Horizontal



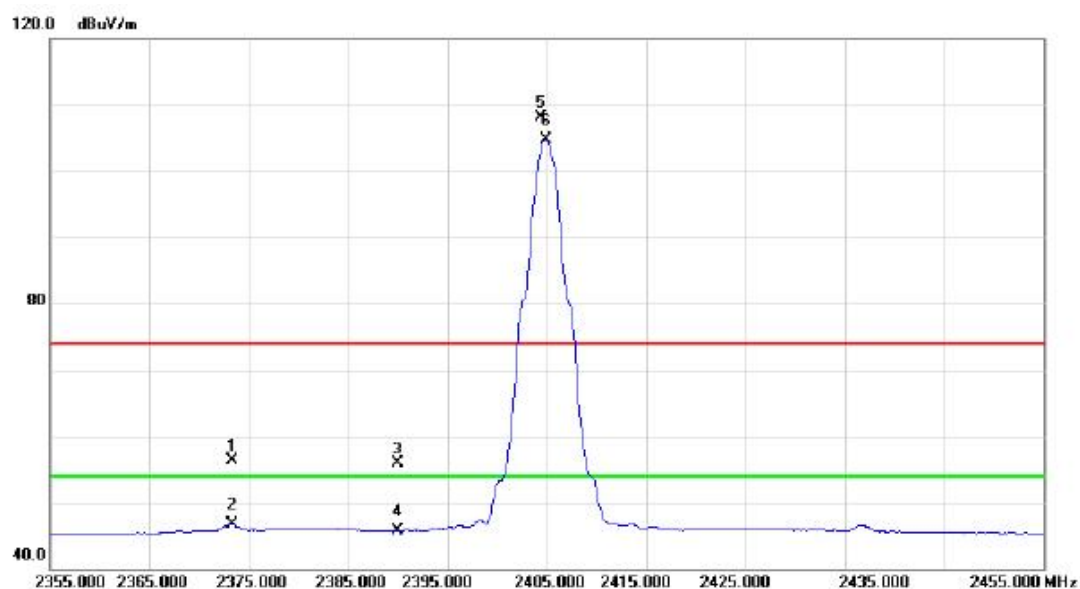
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 69.7700      | 37.04                    | -16.22                  | 20.82                      | 40.00           | -19.18       | peak     |         |
| 2   |     | 224.0000     | 30.50                    | -14.62                  | 15.88                      | 46.00           | -30.12       | peak     |         |
| 3   |     | 320.0300     | 31.34                    | -11.31                  | 20.03                      | 46.00           | -25.97       | peak     |         |
| 4   |     | 416.0600     | 31.85                    | -9.24                   | 22.61                      | 46.00           | -23.39       | peak     |         |
| 5   |     | 538.2800     | 29.99                    | -8.54                   | 21.45                      | 46.00           | -24.55       | peak     |         |
| 6   |     | 702.2100     | 29.45                    | -4.93                   | 24.52                      | 46.00           | -21.48       | peak     |         |

## **ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)**

# Dipole Antenna

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

## Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   |     | 2373.300     | 24.47                    | 31.86                   | 56.33                      | 74.00           | -17.67       | peak     |          |
| 2   |     | 2373.300     | 14.91                    | 31.86                   | 46.77                      | 54.00           | -7.23        | AVG      |          |
| 3   |     | 2390.000     | 24.09                    | 31.88                   | 55.97                      | 74.00           | -18.03       | peak     |          |
| 4   |     | 2390.000     | 13.87                    | 31.88                   | 45.75                      | 54.00           | -8.25        | AVG      |          |
| 5   | X   | 2404.400     | 76.13                    | 31.89                   | 108.02                     | 74.00           | 34.02        | peak     | no limit |
| 6   | *   | 2404.900     | 72.91                    | 31.89                   | 104.80                     | 54.00           | 50.80        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

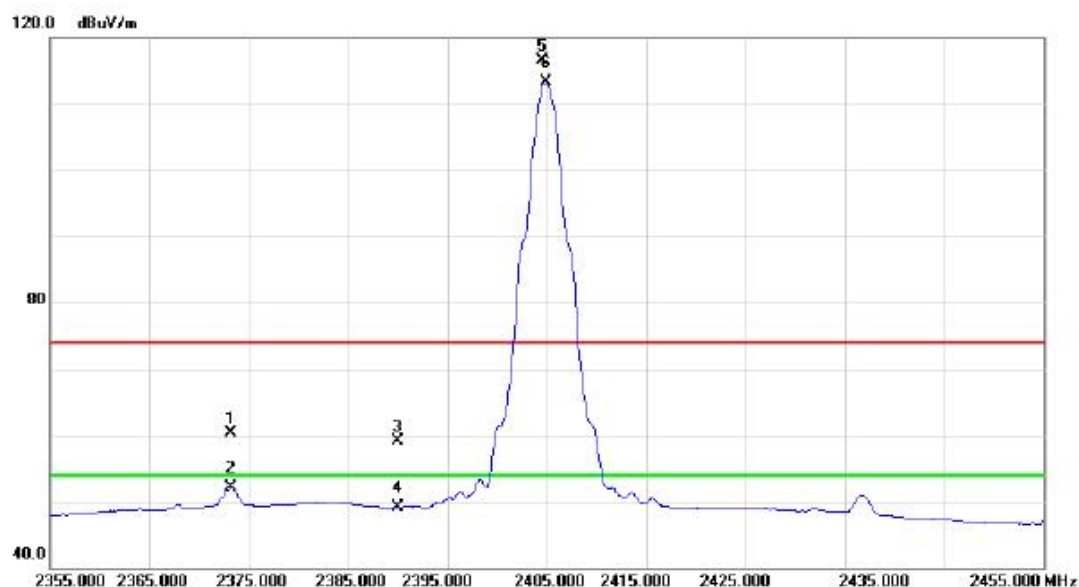
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4810.330     | 50.68                    | 3.60                    | 54.28                      | 74.00           | -19.72       | peak     |         |
| 2   | *   | 4810.330     | 44.61                    | 3.60                    | 48.21                      | 54.00           | -5.79        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   |     | 2373.200     | 28.49                    | 31.86                   | 60.35                      | 74.00           | -13.65       | peak     |          |
| 2   |     | 2373.200     | 20.17                    | 31.86                   | 52.03                      | 54.00           | -1.97        | AVG      |          |
| 3   |     | 2390.000     | 27.30                    | 31.88                   | 59.18                      | 74.00           | -14.82       | peak     |          |
| 4   |     | 2390.000     | 17.17                    | 31.88                   | 49.05                      | 54.00           | -4.95        | AVG      |          |
| 5   | X   | 2404.500     | 84.63                    | 31.89                   | 116.52                     | 74.00           | 42.52        | peak     | no limit |
| 6   | *   | 2404.900     | 81.37                    | 31.89                   | 113.26                     | 54.00           | 59.26        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

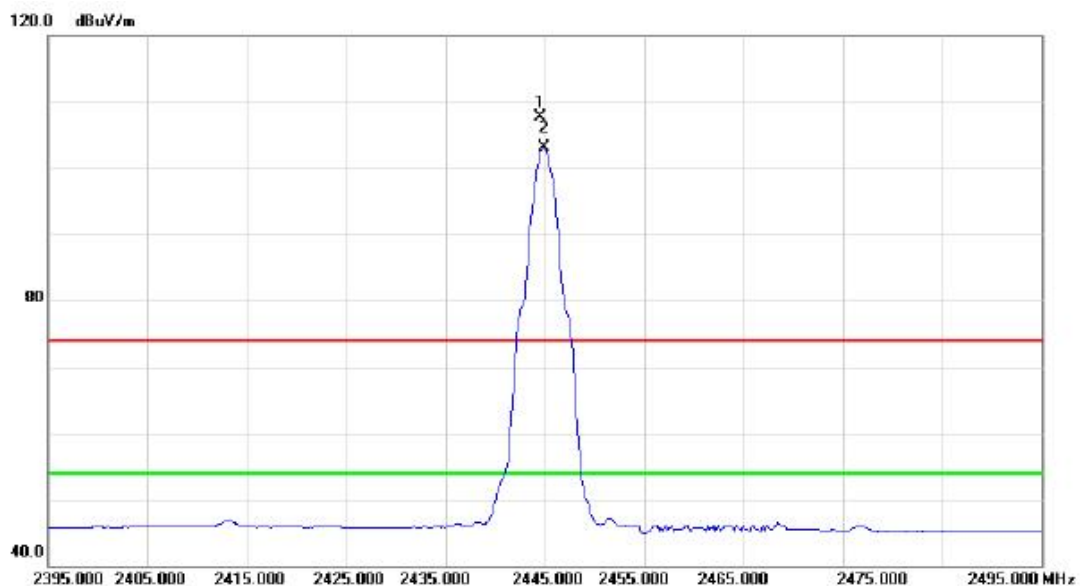
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4810.250     | 49.08                    | 3.60                    | 52.68                      | 74.00           | -21.32       | peak     |         |
| 2   | *   | 4810.250     | 41.63                    | 3.60                    | 45.23                      | 54.00           | -8.77        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2444.500     | 75.72                    | 31.96                   | 107.68                     | 74.00           | 33.68        | peak     | no limit |
| 2   | *   | 2444.900     | 71.06                    | 31.96                   | 103.02                     | 54.00           | 49.02        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

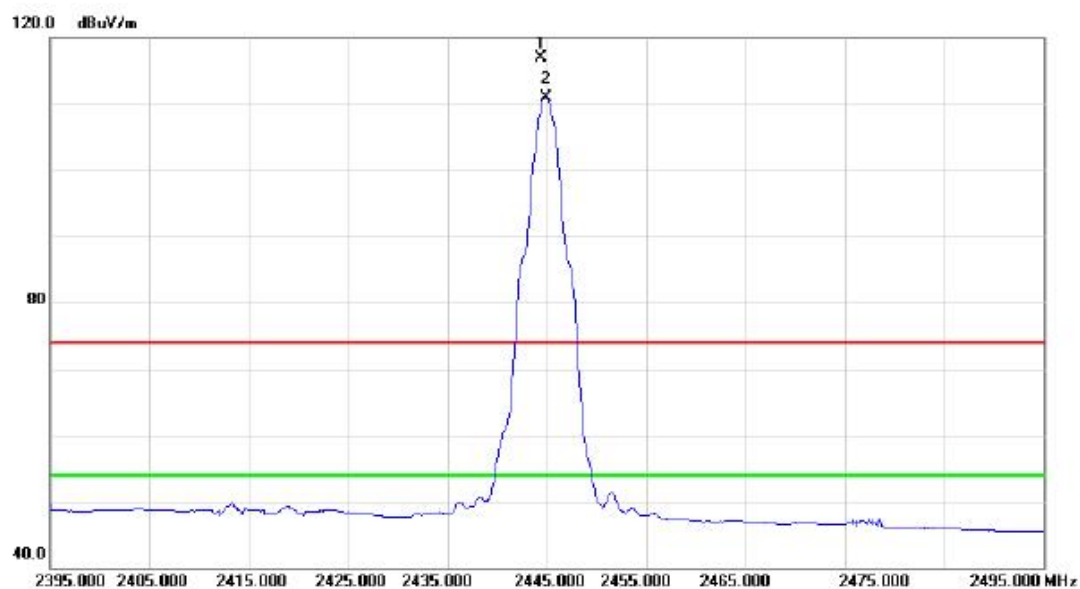
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4890.540     | 50.23                    | 3.74                    | 53.97                      | 74.00           | -20.03       | peak     |         |
| 2   | *   | 4890.540     | 44.52                    | 3.74                    | 48.26                      | 54.00           | -5.74        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2444.400     | 84.88                    | 31.96                   | 116.84                     | 74.00           | 42.84        | peak     | no limit |
| 2   | *   | 2444.900     | 78.98                    | 31.96                   | 110.94                     | 54.00           | 56.94        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

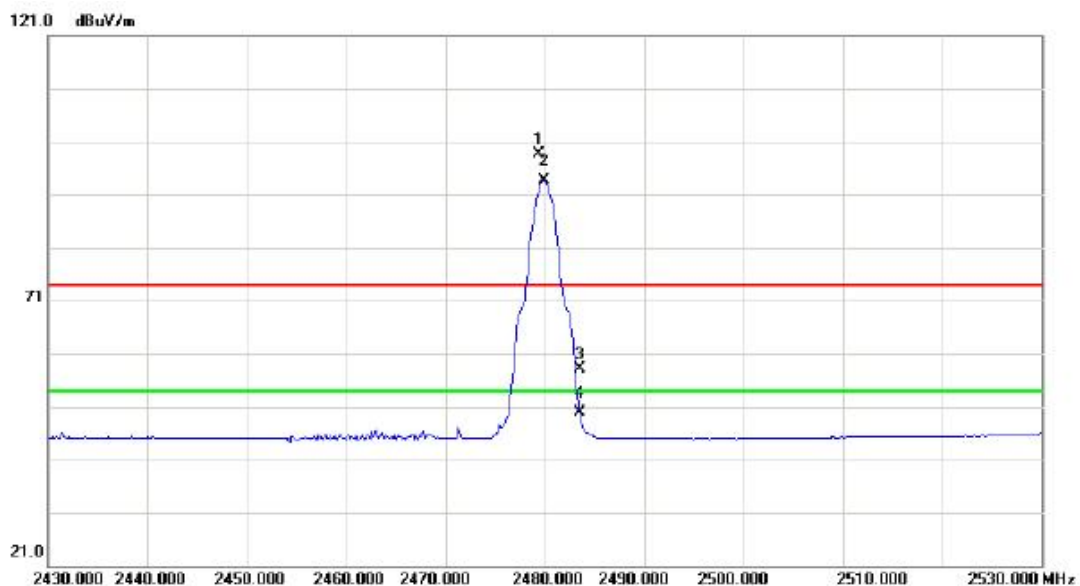
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4890.000     | 49.90                    | 3.74                    | 53.64                      | 74.00           | -20.36       | peak     |         |
| 2   | *   | 4890.000     | 41.53                    | 3.74                    | 45.27                      | 54.00           | -8.73        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2479.400     | 66.57                    | 32.00                   | 98.57                      | 74.00           | 24.57        | peak     | no limit |
| 2   | *   | 2479.900     | 61.67                    | 32.00                   | 93.67                      | 54.00           | 39.67        | AVG      | no limit |
| 3   |     | 2483.500     | 26.24                    | 32.01                   | 58.25                      | 74.00           | -15.75       | peak     |          |
| 4   |     | 2483.500     | 17.89                    | 32.01                   | 49.90                      | 54.00           | -4.10        | AVG      |          |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

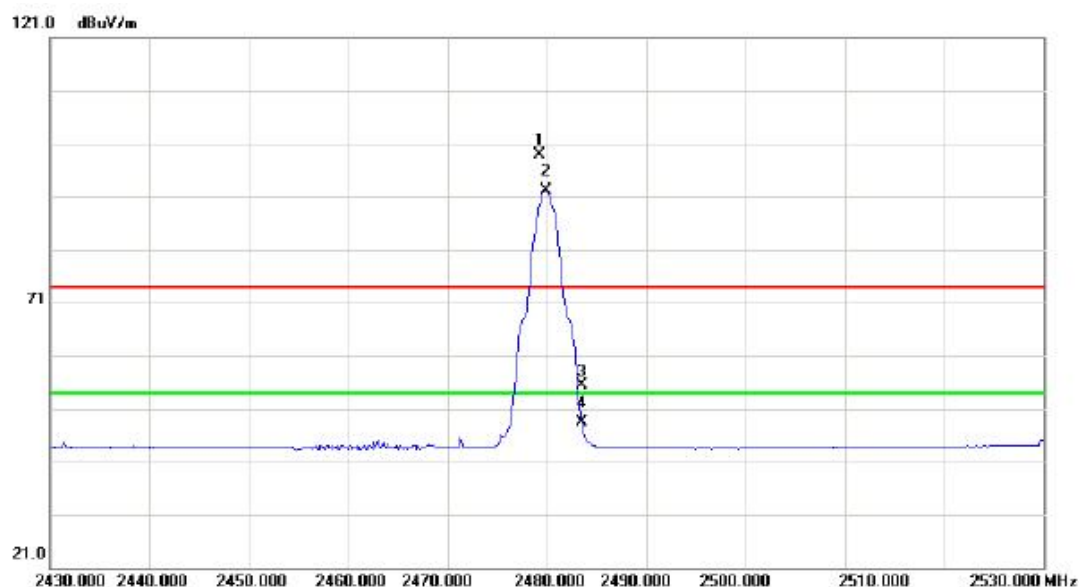
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4960.000     | 41.83                    | 3.88                    | 45.71                      | 74.00           | -28.29       | peak     |         |
| 2   | *   | 4960.000     | 34.81                    | 3.88                    | 38.69                      | 54.00           | -15.31       | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2479.310     | 66.88                    | 32.00                   | 98.88                      | 74.00           | 24.88        | peak     | no limit |
| 2   | *   | 2479.900     | 60.17                    | 32.00                   | 92.17                      | 54.00           | 38.17        | AVG      | no limit |
| 3   |     | 2483.500     | 23.38                    | 32.01                   | 55.39                      | 74.00           | -18.61       | peak     |          |
| 4   |     | 2483.500     | 16.39                    | 32.01                   | 48.40                      | 54.00           | -5.60        | AVG      |          |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

### Horizontal

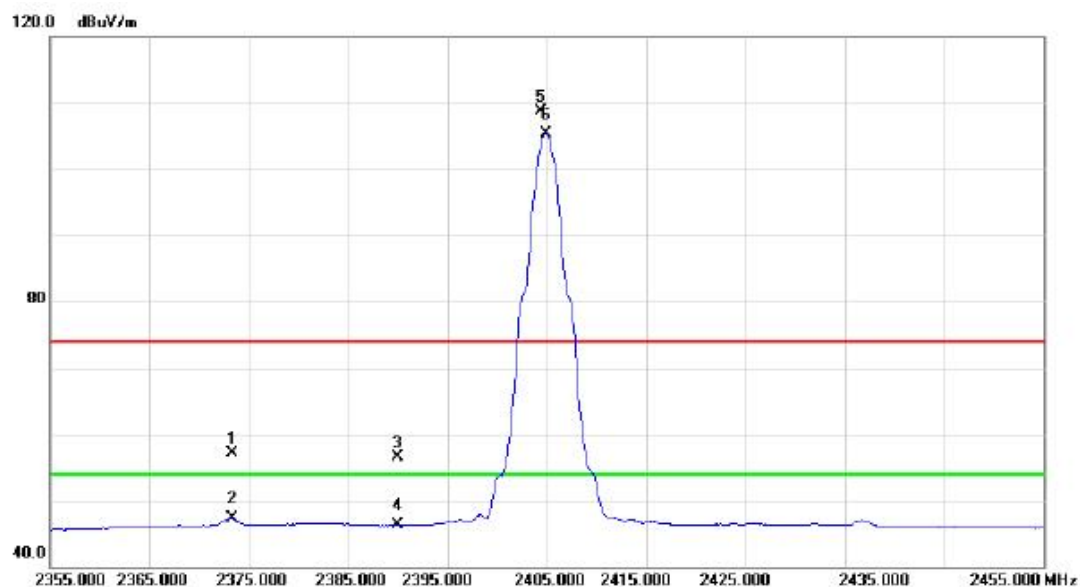


| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4960.030     | 42.50                    | 3.88                    | 46.38                      | 74.00           | -27.62       | peak     |         |
| 2   | *   | 4960.030     | 34.87                    | 3.88                    | 38.75                      | 54.00           | -15.25       | AVG      |         |

# Chip Antenna

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

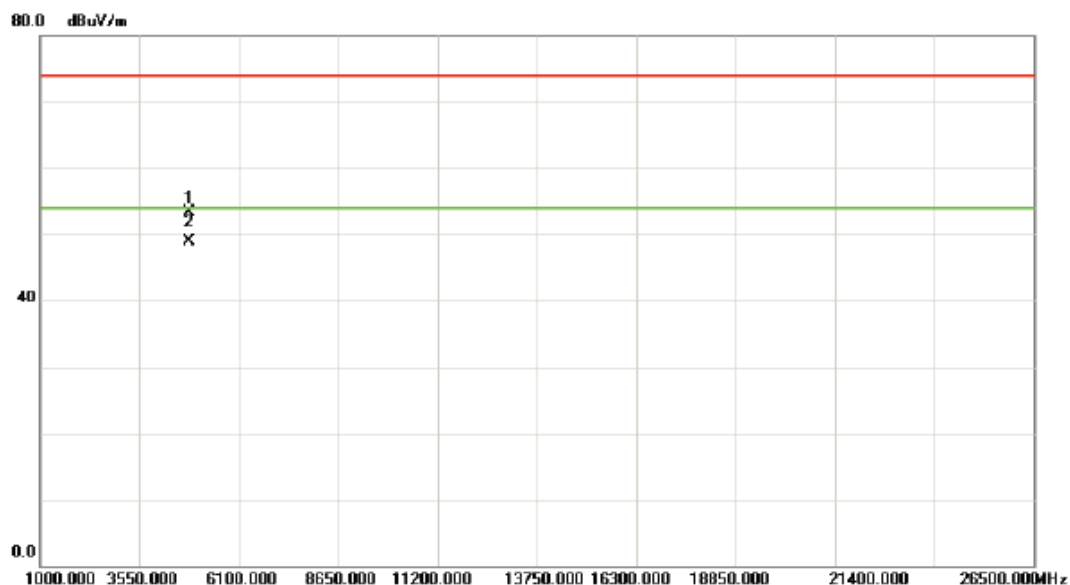
## Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   |     | 2373.300     | 25.16                    | 31.86                   | 57.02                      | 74.00           | -16.98       | peak     |          |
| 2   |     | 2373.300     | 15.41                    | 31.86                   | 47.27                      | 54.00           | -6.73        | AVG      |          |
| 3   |     | 2390.000     | 24.63                    | 31.88                   | 56.51                      | 74.00           | -17.49       | peak     |          |
| 4   |     | 2390.000     | 14.37                    | 31.88                   | 46.25                      | 54.00           | -7.75        | AVG      |          |
| 5   | X   | 2404.400     | 76.86                    | 31.89                   | 108.75                     | 74.00           | 34.75        | peak     | no limit |
| 6   | *   | 2404.900     | 73.41                    | 31.89                   | 105.30                     | 54.00           | 51.30        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

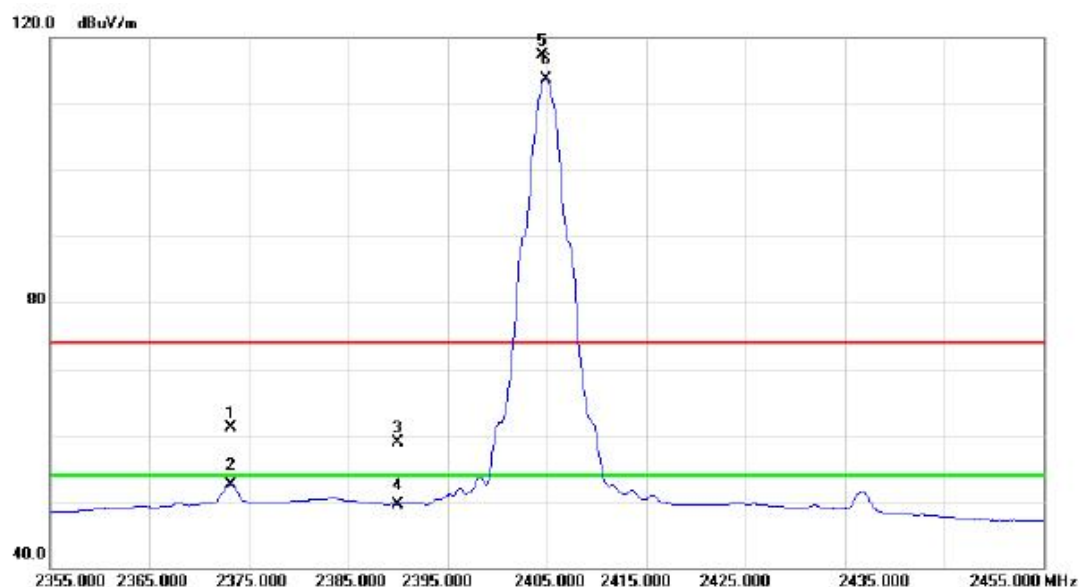
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4810.800     | 49.64                    | 3.60                    | 53.24                      | 74.00           | -20.76       | peak     |         |
| 2   | *   | 4810.800     | 45.33                    | 3.60                    | 48.93                      | 54.00           | -5.07        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

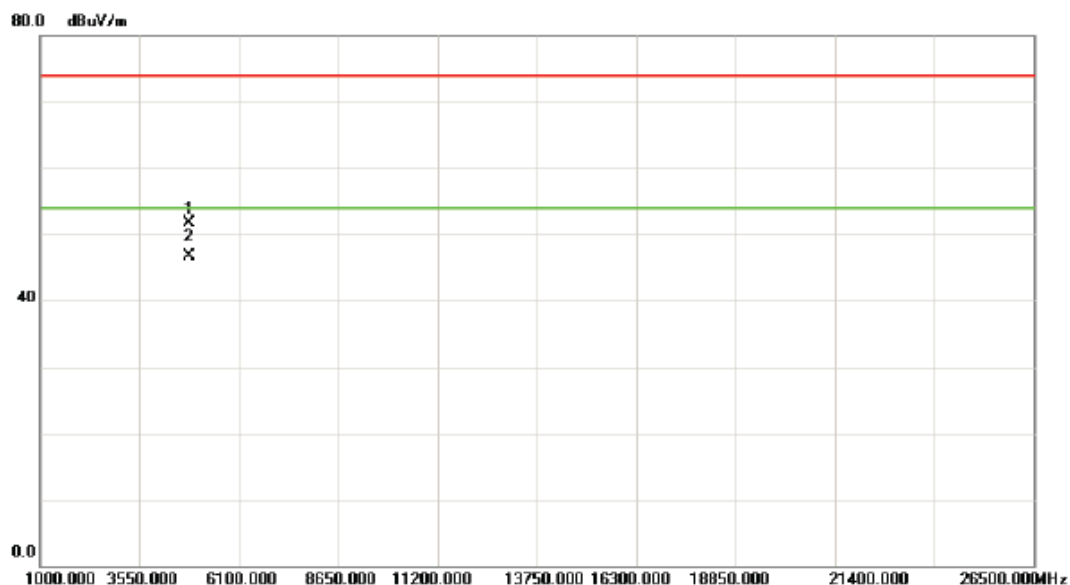
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   |     | 2373.200     | 29.23                    | 31.86                   | 61.09                      | 74.00           | -12.91       | peak     |          |
| 2   |     | 2373.200     | 20.67                    | 31.86                   | 52.53                      | 54.00           | -1.47        | AVG      |          |
| 3   |     | 2390.000     | 27.03                    | 31.88                   | 58.91                      | 74.00           | -15.09       | peak     |          |
| 4   |     | 2390.000     | 17.67                    | 31.88                   | 49.55                      | 54.00           | -4.45        | AVG      |          |
| 5   | X   | 2404.500     | 85.41                    | 31.89                   | 117.30                     | 74.00           | 43.30        | peak     | no limit |
| 6   | *   | 2404.900     | 81.87                    | 31.89                   | 113.76                     | 54.00           | 59.76        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2405MHz _CH11 |

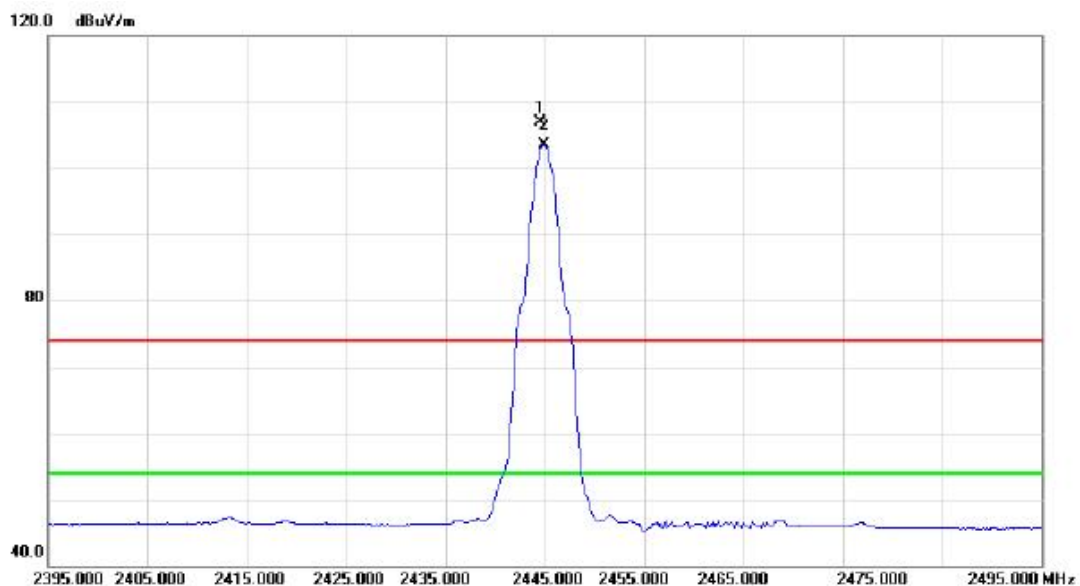
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4810.820     | 48.02                    | 3.60                    | 51.62                      | 74.00           | -22.38       | peak     |         |
| 2   | *   | 4810.820     | 43.09                    | 3.60                    | 46.69                      | 54.00           | -7.31        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

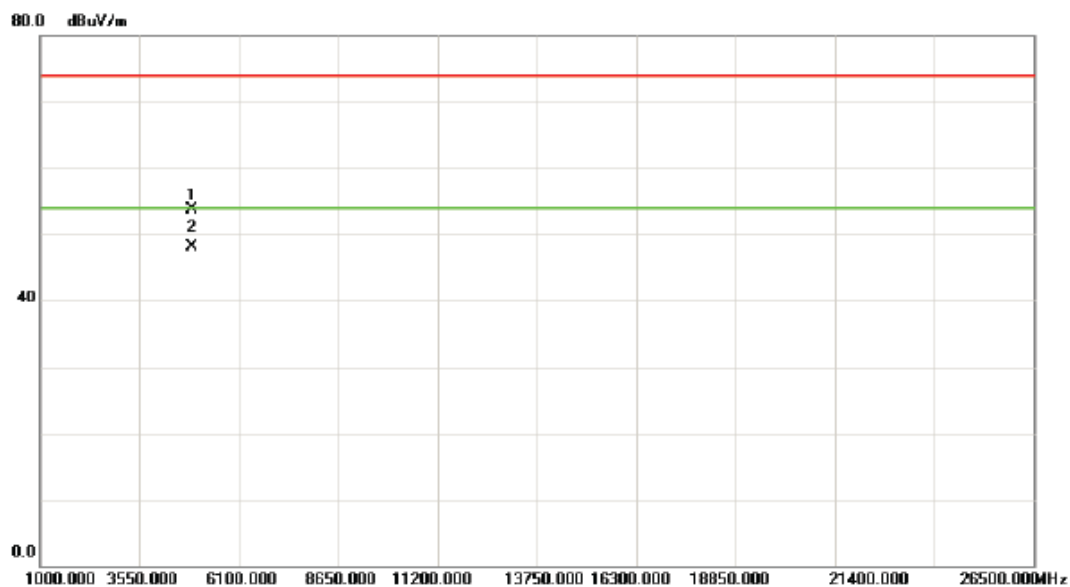
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2444.500     | 74.96                    | 31.96                   | 106.92                     | 74.00           | 32.92        | peak     | no limit |
| 2   | *   | 2444.900     | 71.56                    | 31.96                   | 103.52                     | 54.00           | 49.52        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

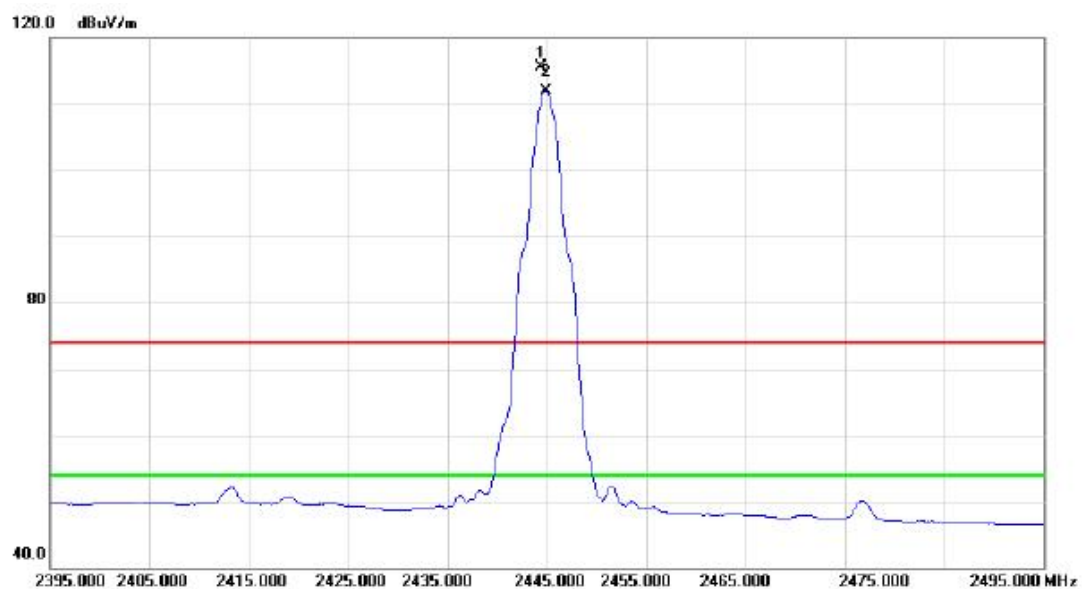
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4890.320     | 49.94                    | 3.74                    | 53.68                      | 74.00           | -20.32       | peak     |         |
| 2   | *   | 4890.320     | 44.29                    | 3.74                    | 48.03                      | 54.00           | -5.97        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

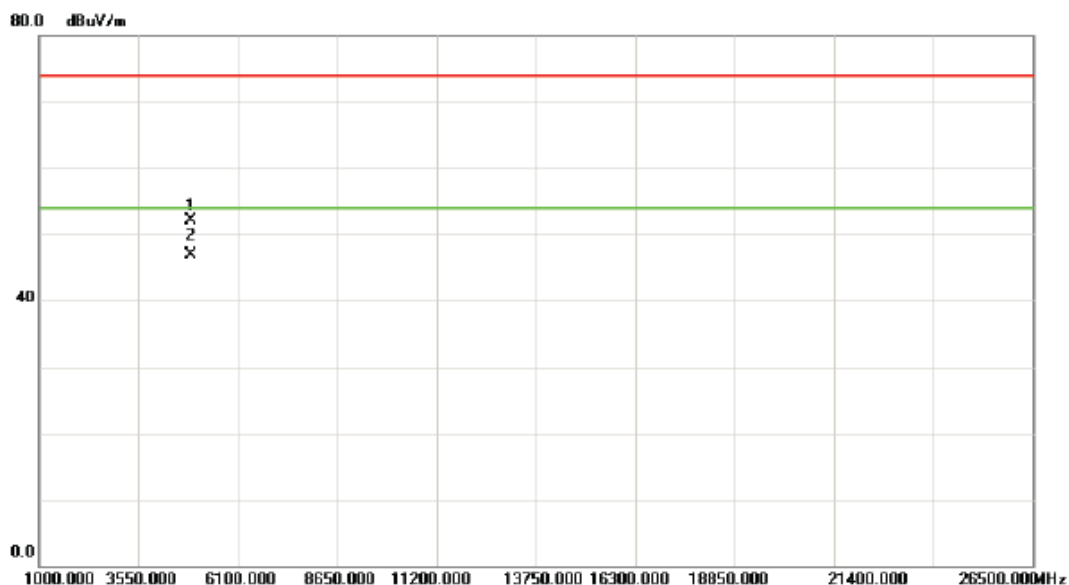
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2444.400     | 83.48                    | 31.96                   | 115.44                     | 74.00           | 41.44        | peak     | no limit |
| 2   | *   | 2444.900     | 79.98                    | 31.96                   | 111.94                     | 54.00           | 57.94        | AVG      | no limit |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2445MHz _CH19 |

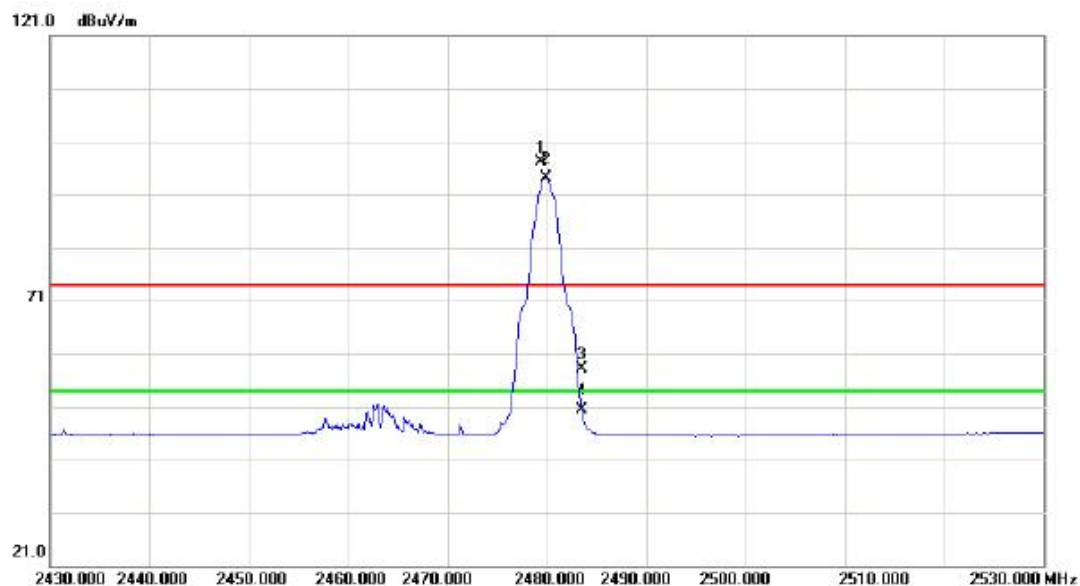
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4890.150     | 48.32                    | 3.74                    | 52.06                      | 74.00           | -21.94       | peak     |         |
| 2   | *   | 4890.150     | 43.23                    | 3.74                    | 46.97                      | 54.00           | -7.03        | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

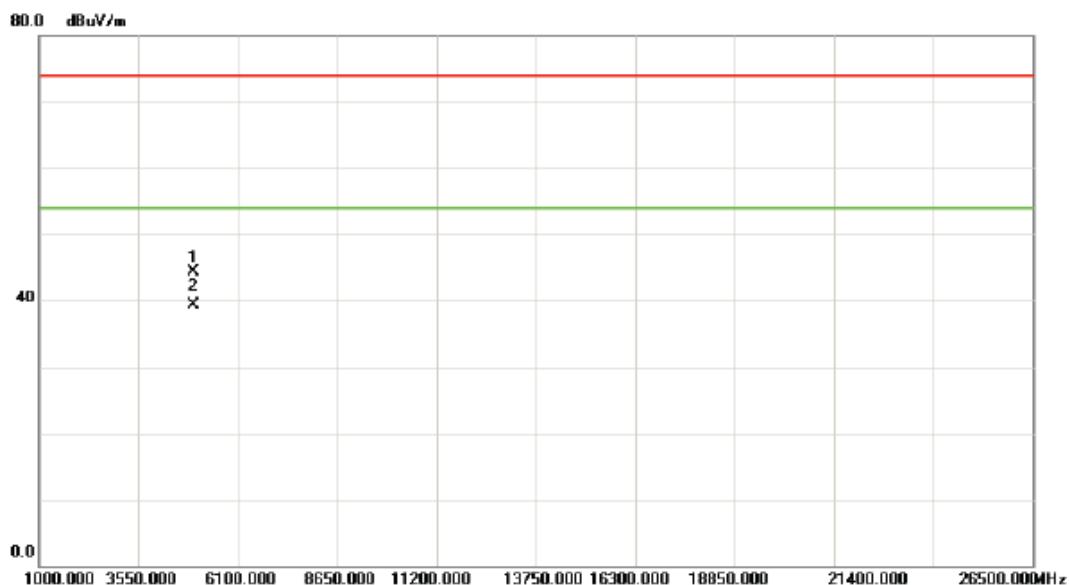
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2479.400     | 65.20                    | 32.00                   | 97.20                      | 74.00           | 23.20        | peak     | no limit |
| 2   | *   | 2479.900     | 62.17                    | 32.00                   | 94.17                      | 54.00           | 40.17        | AVG      | no limit |
| 3   |     | 2483.500     | 26.04                    | 32.01                   | 58.05                      | 74.00           | -15.95       | peak     |          |
| 4   |     | 2483.500     | 18.39                    | 32.01                   | 50.40                      | 54.00           | -3.60        | AVG      |          |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

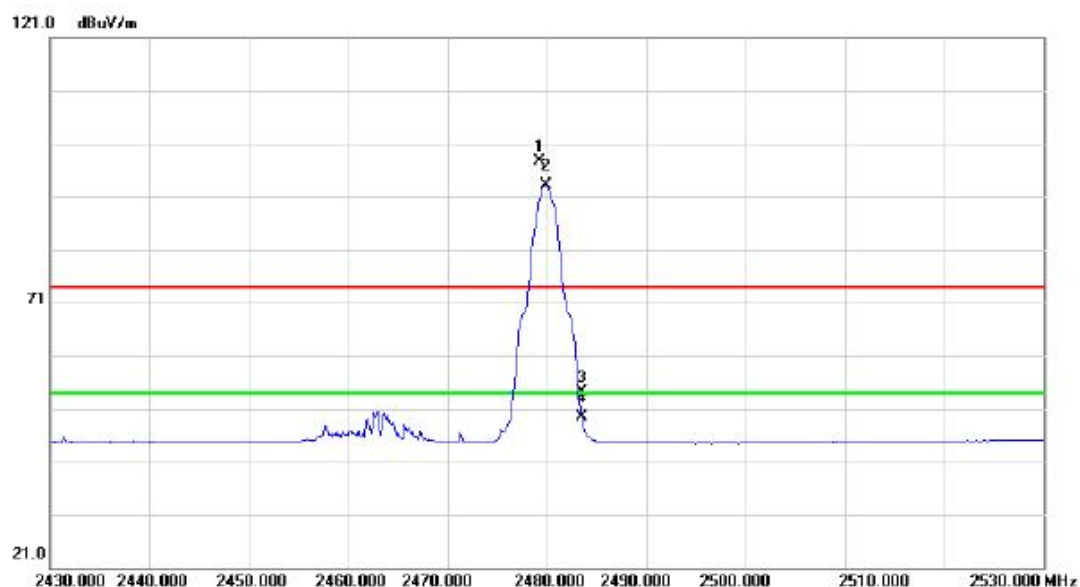
### Vertical



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4960.030     | 40.51                    | 3.88                    | 44.39                      | 74.00           | -29.61       | peak     |         |
| 2   | *   | 4960.030     | 35.38                    | 3.88                    | 39.26                      | 54.00           | -14.74       | AVG      |         |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

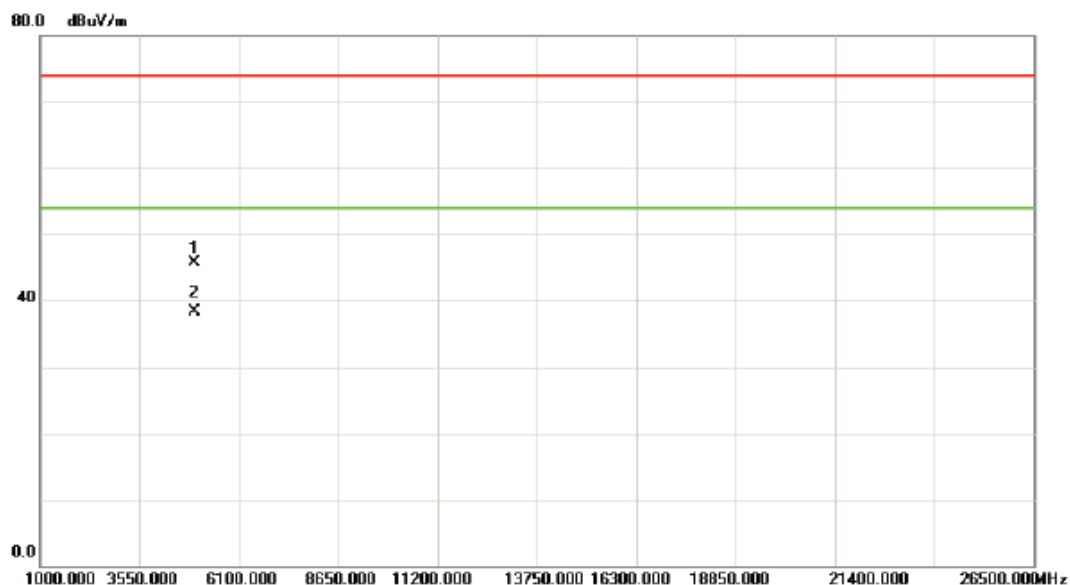
### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|----------|
| 1   | X   | 2479.310     | 65.58                    | 32.00                   | 97.58                      | 74.00           | 23.58        | peak     | no limit |
| 2   | *   | 2479.900     | 61.17                    | 32.00                   | 93.17                      | 54.00           | 39.17        | AVG      | no limit |
| 3   |     | 2483.500     | 22.11                    | 32.01                   | 54.12                      | 74.00           | -19.88       | peak     |          |
| 4   |     | 2483.500     | 17.39                    | 32.01                   | 49.40                      | 54.00           | -4.60        | AVG      |          |

|                   |                  |
|-------------------|------------------|
| Orthogonal Axis : | X                |
| Test Mode :       | TX 2480MHz _CH26 |

### Horizontal



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 4960.250     | 41.84                    | 3.88                    | 45.72                      | 74.00           | -28.28       | peak     |         |
| 2   | *   | 4960.250     | 34.38                    | 3.88                    | 38.26                      | 54.00           | -15.74       | AVG      |         |

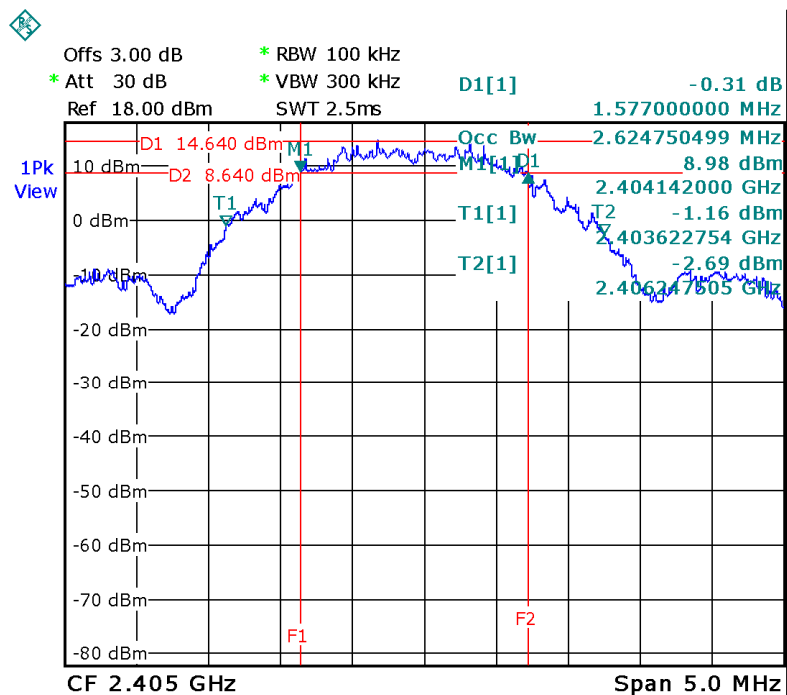
## **ATTACHMENT E - BANDWIDTH**

**Test Mode: CH11/19/26**

| Frequency<br>(MHz) | 6dB Bandwidth<br>(MHz) | 99% Occupied BW<br>(MHz) | Min. Limit<br>(kHz) | Test Result |
|--------------------|------------------------|--------------------------|---------------------|-------------|
| 2405               | 1.58                   | 2.62                     | 500                 | Complies    |
| 2445               | 1.60                   | 2.59                     | 500                 | Complies    |
| 2480               | 1.70                   | 2.58                     | 500                 | Complies    |

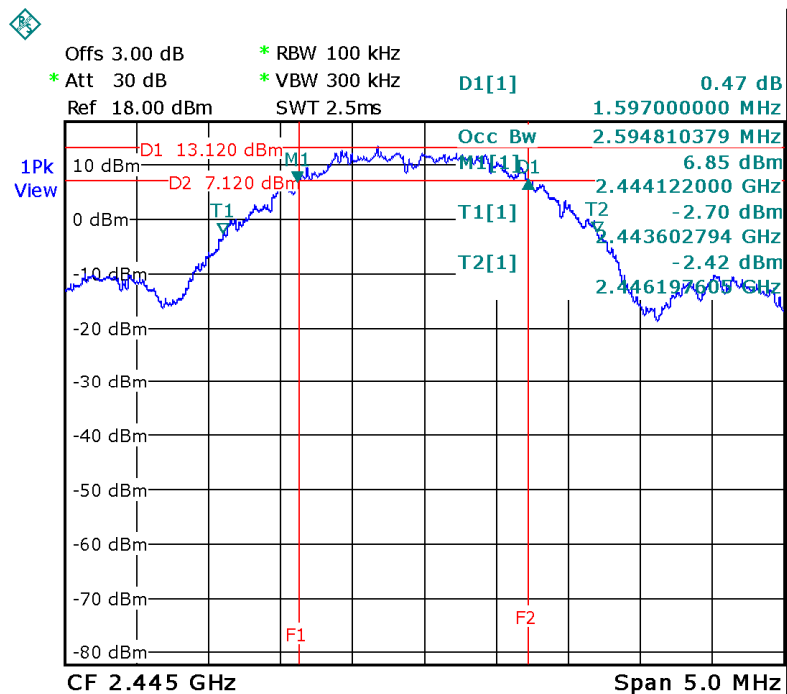
\* 2 antenna port all have been tested, only worse case is reported.

## CH11



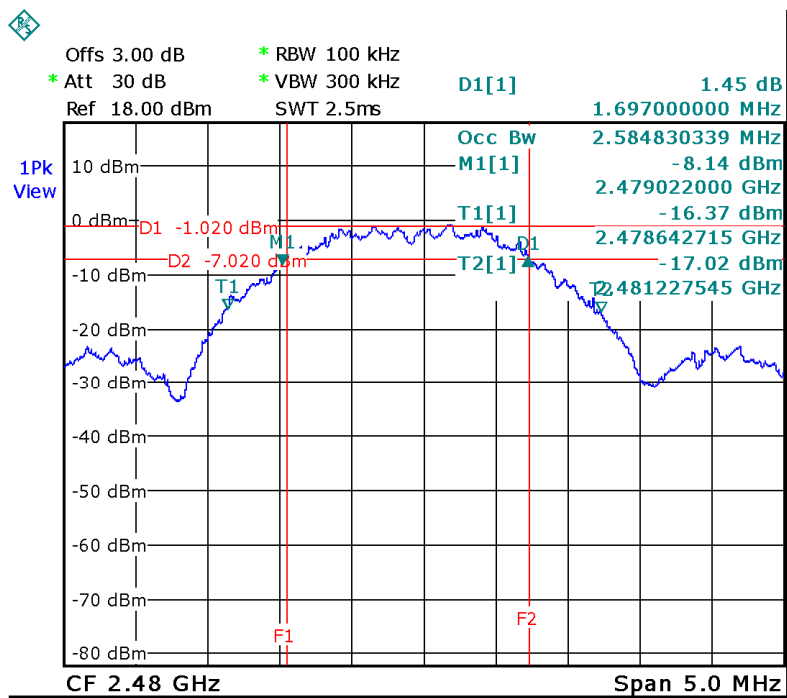
Date: 27.FEB.2015 14:36:08

## CH11



Date: 27.FEB.2015 14:38:24

## CH26



Date: 27.FEB.2015 14:42:49

## **ATTACHMENT F - PEAK OUTPUT POWER**

### Dipole Antenna

**Test Mode: CH11/19/26**

| Frequency (MHz) | Conducted Power (dBm) | Conducted Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|-----------------|-----------------------|---------------------|------------------|----------------|----------|
| 2405            | 14.11                 | 0.0258              | 30.00            | 1.00           | Complies |
| 2445            | 14.12                 | 0.0258              | 30.00            | 1.00           | Complies |
| 2480            | 4.46                  | 0.0028              | 30.00            | 1.00           | Complies |

### Chip Antenna

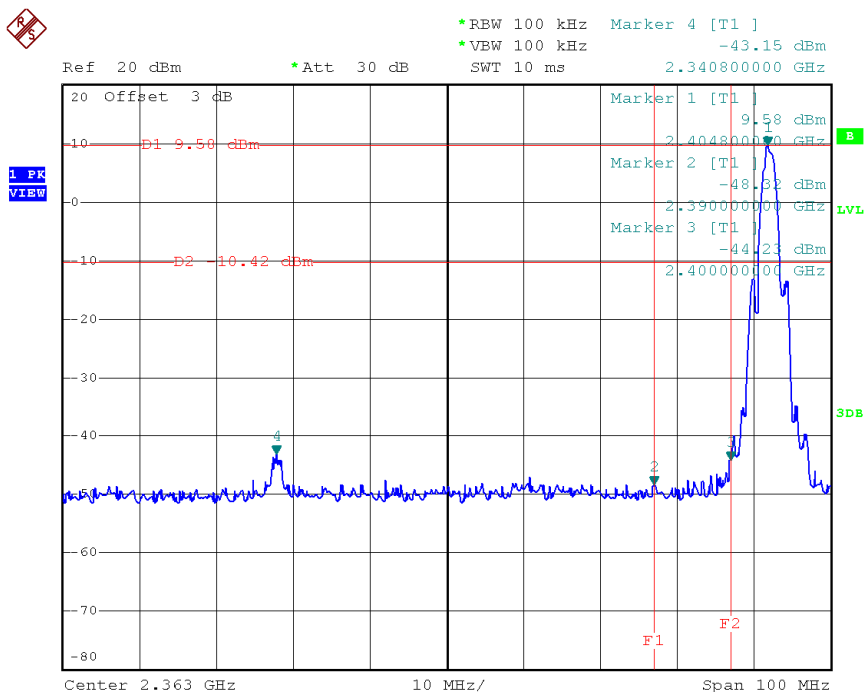
**Test Mode: CH11/19/26**

| Frequency (MHz) | Conducted Power (dBm) | Conducted Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|-----------------|-----------------------|---------------------|------------------|----------------|----------|
| 2405            | 14.85                 | 0.0305              | 30.00            | 1.00           | Complies |
| 2445            | 14.20                 | 0.0263              | 30.00            | 1.00           | Complies |
| 2480            | 4.47                  | 0.0028              | 30.00            | 1.00           | Complies |

## **ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION**

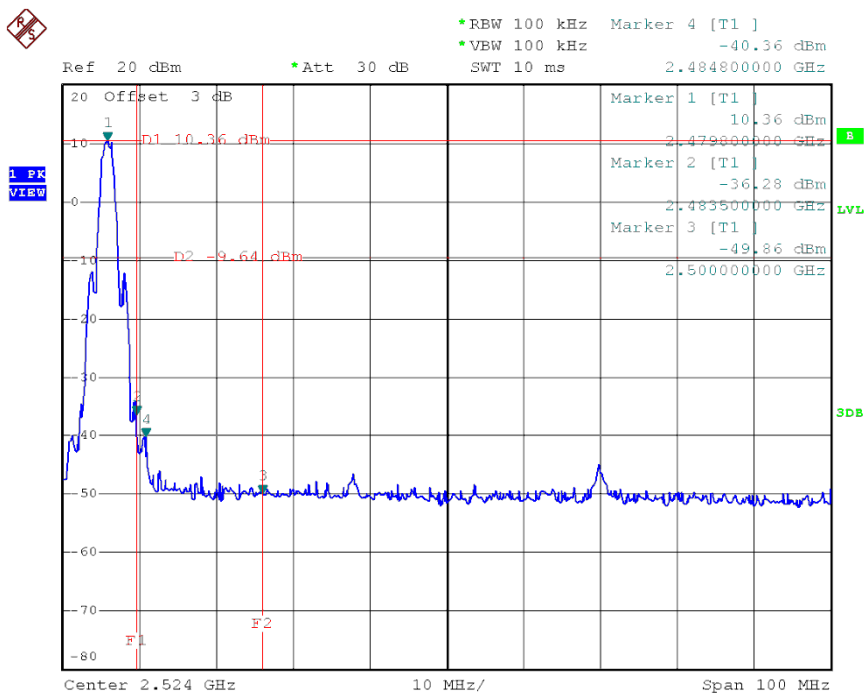
# Dipole Antenna

## CH11(Lower)



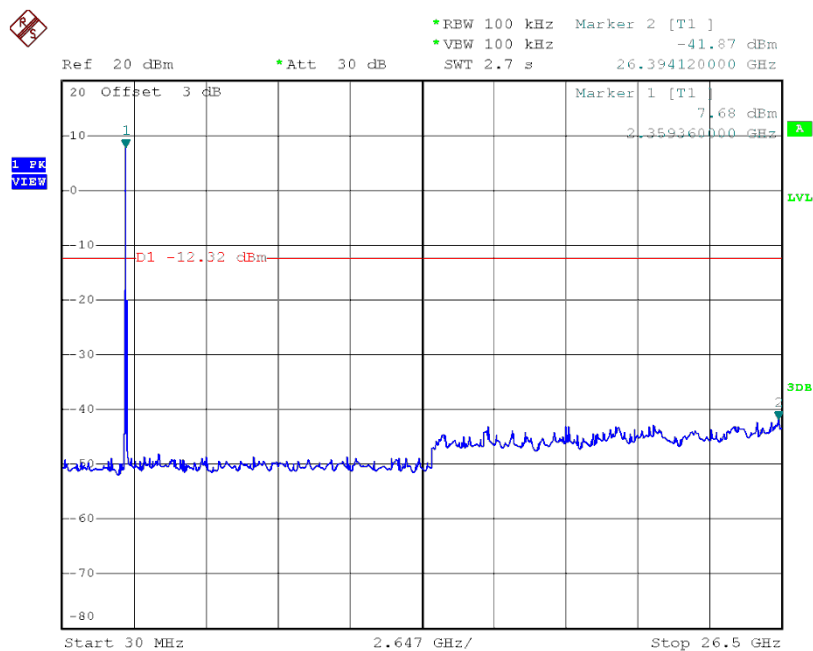
Date: 16.JAN.2015 16:16:20

## CH26 (Upper)



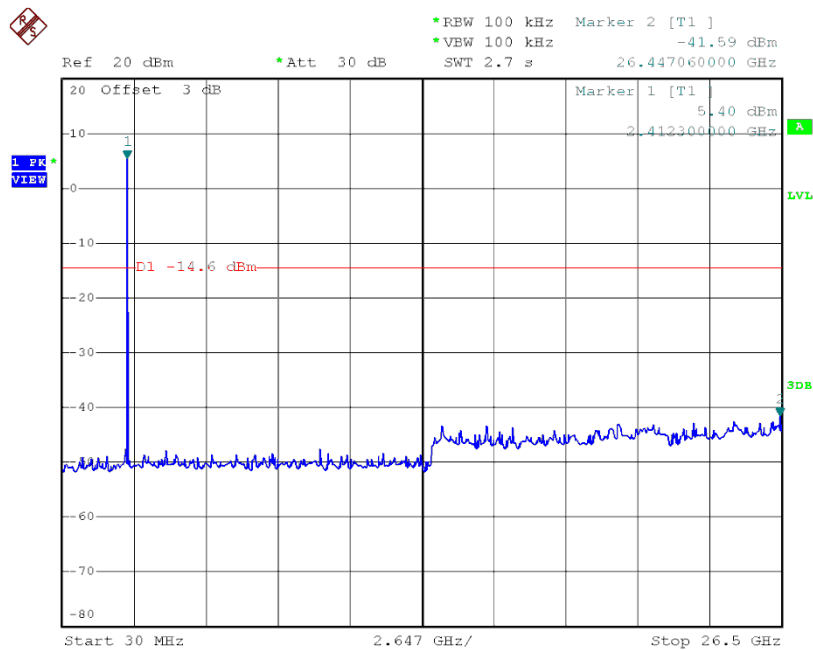
Date: 16.JAN.2015 16:13:12

### CH11 (1GHz~10<sup>th</sup> Harmonic)



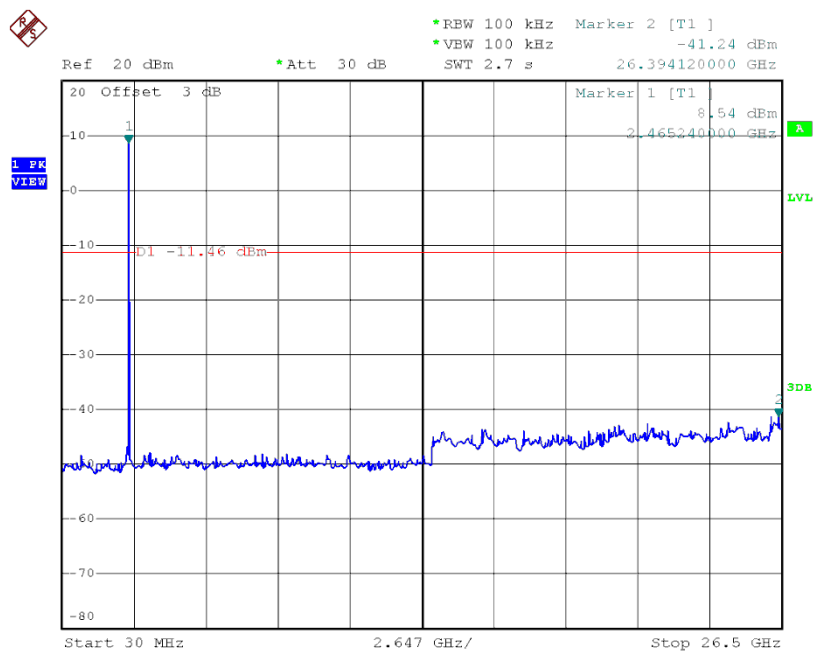
Date: 16.JAN.2015 16:15:16

### CH19(1GHz~10<sup>th</sup> Harmonic)



Date: 16.JAN.2015 16:14:33

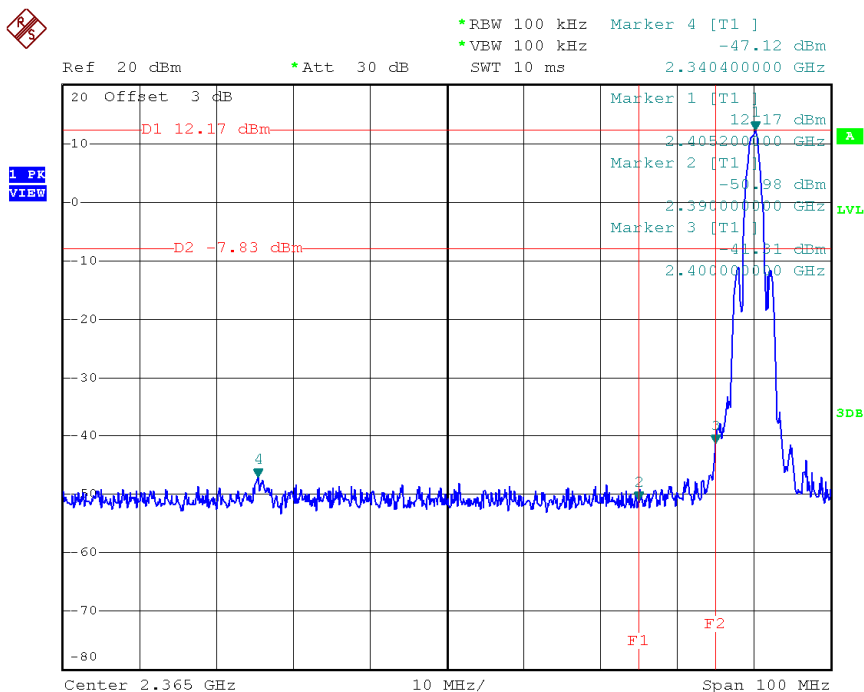
# CH26 (1GHz~10<sup>th</sup> Harmonic)



Date: 16.JAN.2015 16:10:57

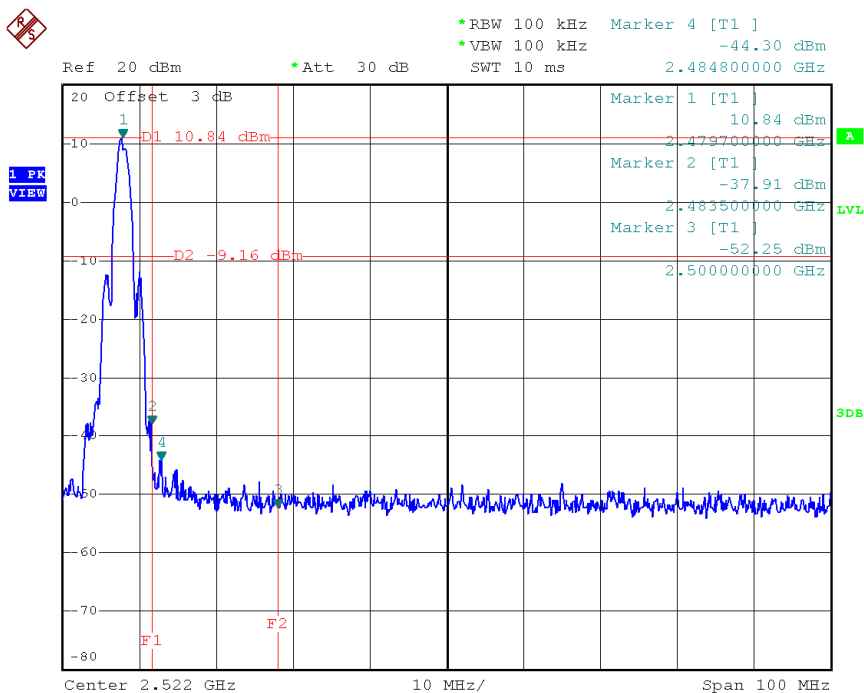
# Chip Antenna

## CH11(Lower)



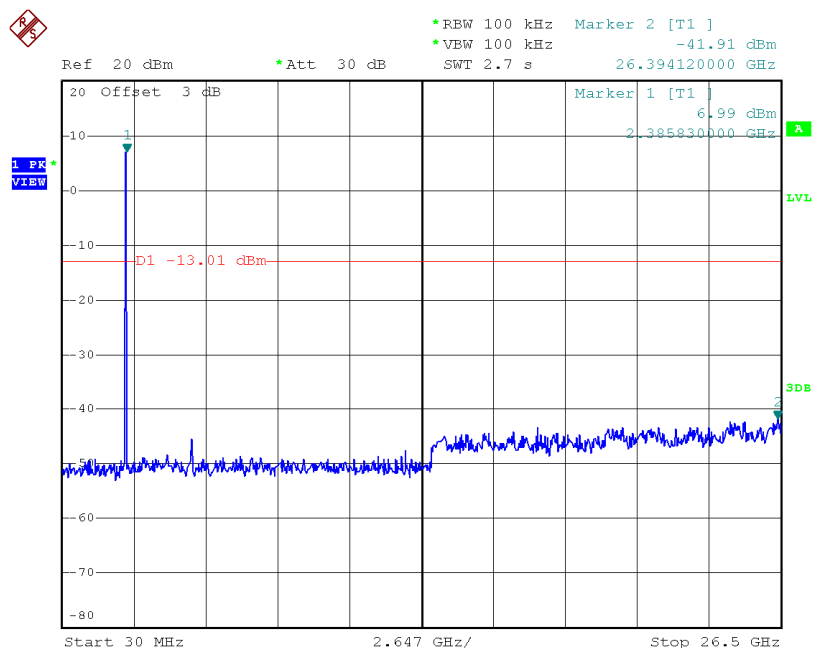
Date: 16.JAN.2015 17:04:10

## CH26 (Upper)



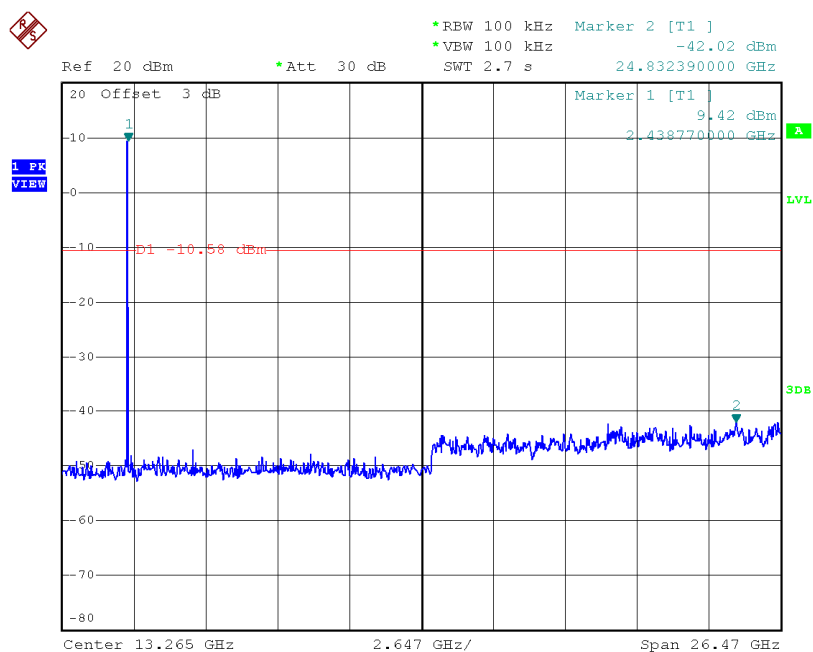
Date: 16.JAN.2015 17:02:26

### CH11 (1GHz~10<sup>th</sup> Harmonic)



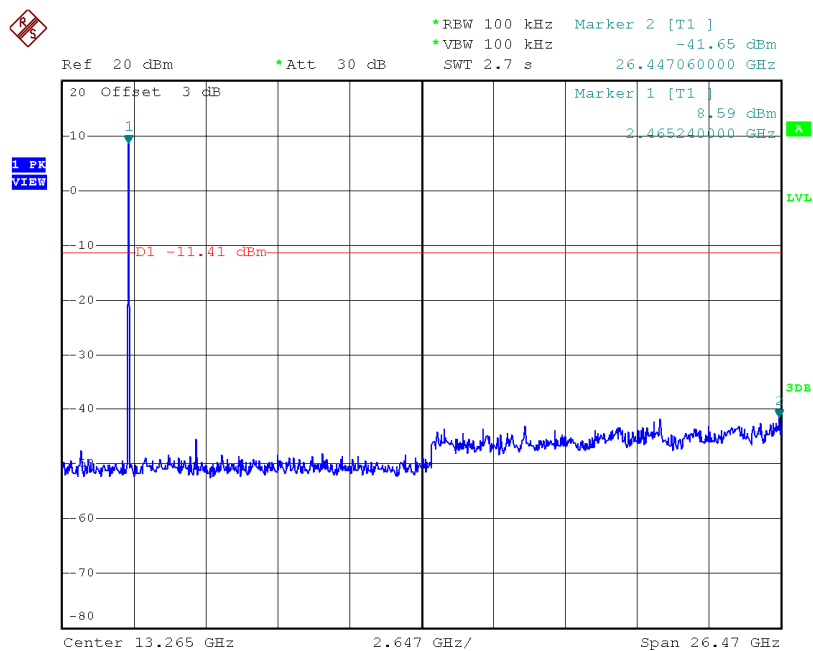
Date: 16.JAN.2015 16:53:55

### CH19(1GHz~10<sup>th</sup> Harmonic)



Date: 16.JAN.2015 16:58:52

## CH26 (1GHz~10<sup>th</sup> Harmonic)



Date: 16.JAN.2015 17:00:57

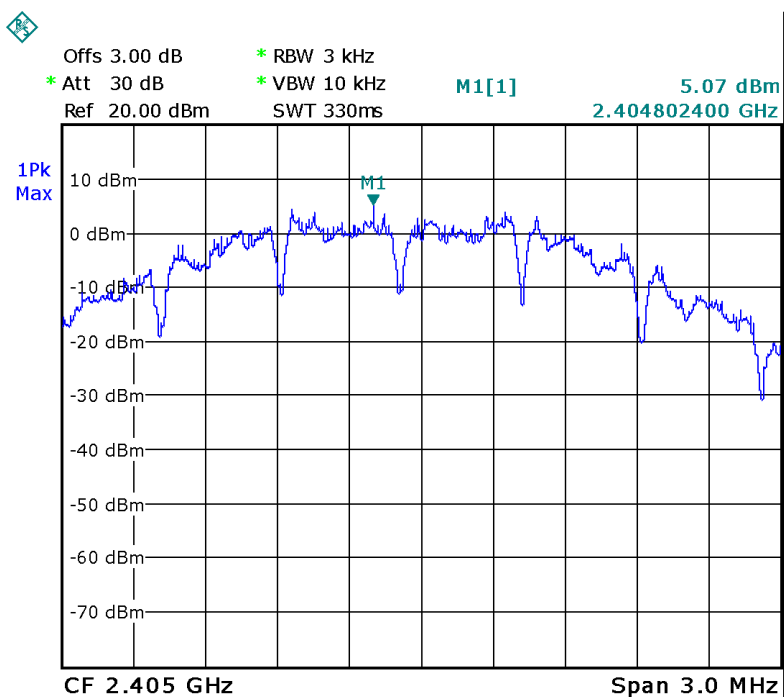
## **ATTACHMENT H - POWER SPECTRAL DENSITY**

## Dipole Antenna

Test Mode :TX CH11/19/26

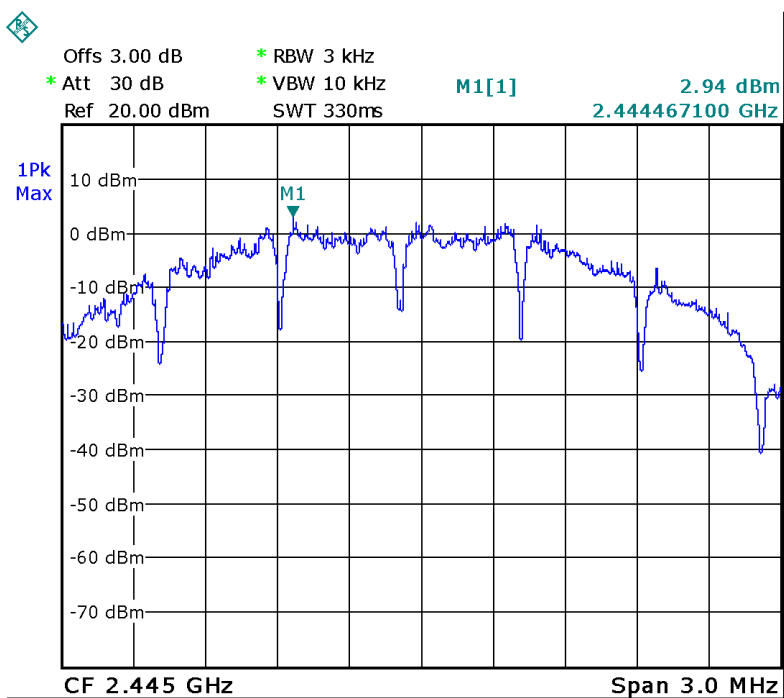
| Frequency<br>MHz | Power Density<br>(dBm/3kHz) | Power Density<br>(mW/3kHz) | Max. Limit<br>(dBm) | Result   |
|------------------|-----------------------------|----------------------------|---------------------|----------|
| 2405             | 5.07                        | 3.21                       | 8.00                | Complies |
| 2445             | 2.94                        | 1.97                       | 8.00                | Complies |
| 2480             | 2.79                        | 1.90                       | 8.00                | Complies |

### TX CH11



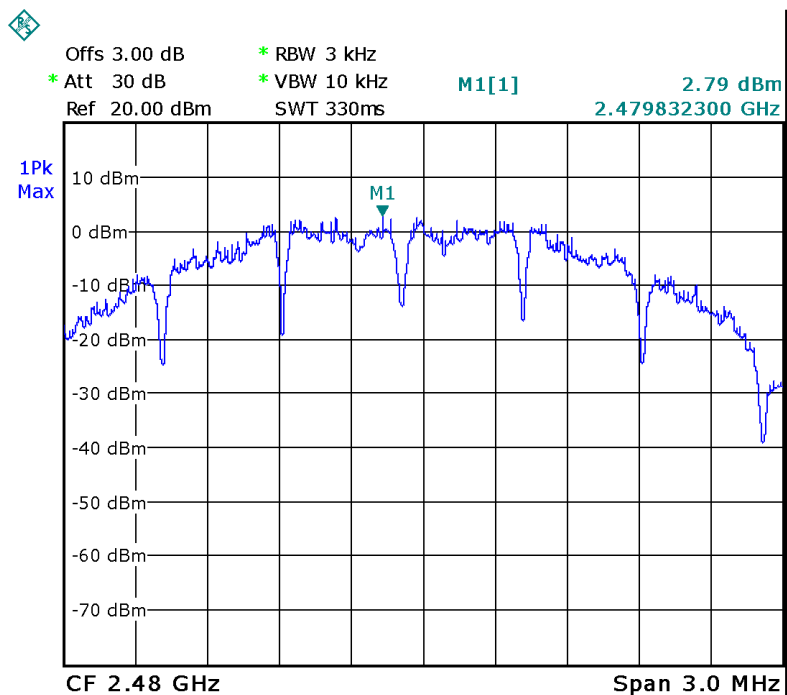
Date: 3.MAR.2015 08:34:00

### TX CH19



Date: 3.MAR.2015 08:35:05

# TX CH26



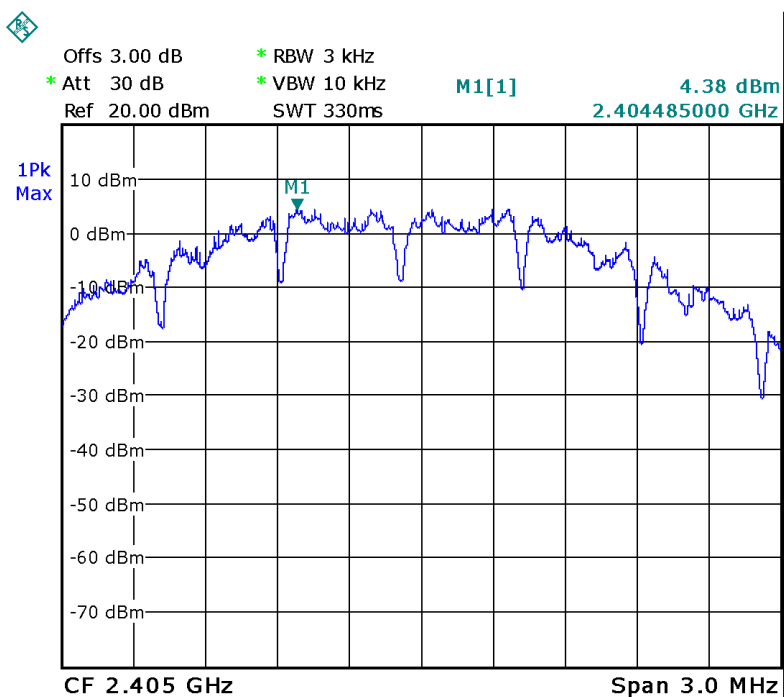
Date: 3.MAR.2015 08:36:07

### Chip Antenna

Test Mode :TX CH11/19/26

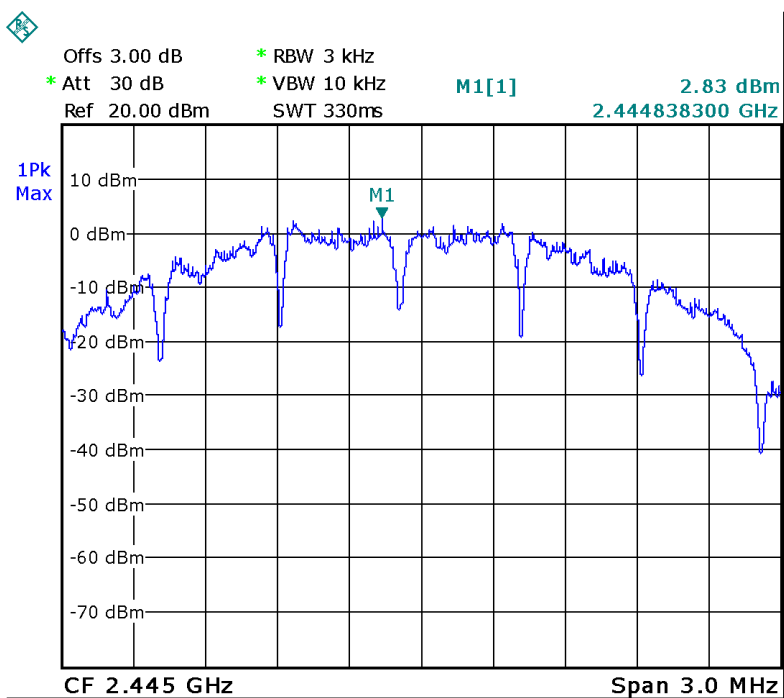
| Frequency<br>MHz | Power Density<br>(dBm/3kHz) | Power Density<br>(mW/3kHz) | Max. Limit<br>(dBm) | Result   |
|------------------|-----------------------------|----------------------------|---------------------|----------|
| 2405             | 4.38                        | 2.74                       | 8.00                | Complies |
| 2445             | 2.83                        | 1.92                       | 8.00                | Complies |
| 2480             | 3.12                        | 2.05                       | 8.00                | Complies |

### TX CH11



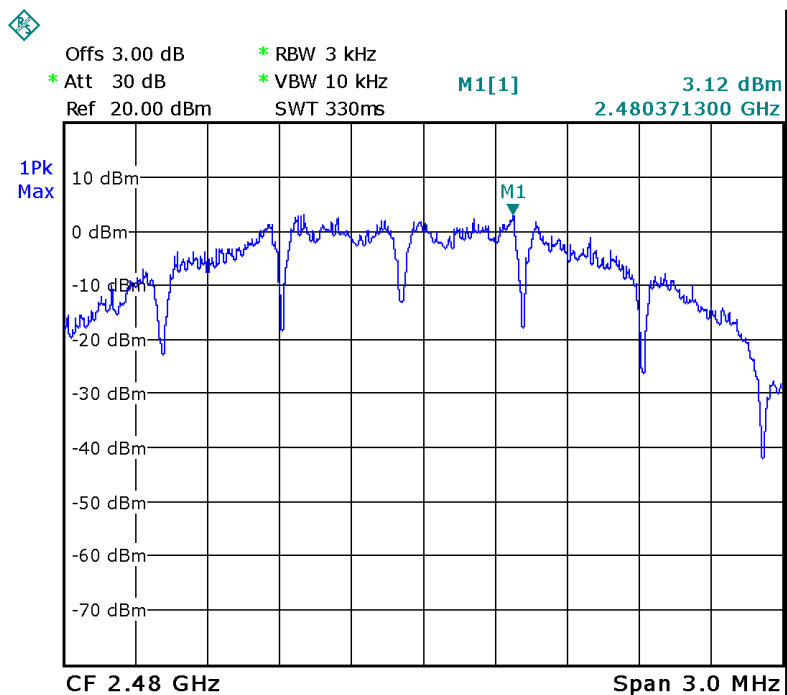
Date: 3.MAR.2015 08:33:37

### TX CH19



Date: 3.MAR.2015 08:34:36

# TX CH26



Date: 3.MAR.2015 08:35:34