

# FCC Radio Test Report

## FCC ID: OMOTX143TH

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

**Project No.** : 1410C093  
**Equipment** : Wireless Color Weather Station.  
**Model Name** : TX143TH  
**Applicant** : La Crosse Technology Ltd  
**Address** : La Crosse Technology Ltd, 2809 Losey Blvd. South  
La Crosse, WI 54601, U.S.A.

**Date of Receipt** : Oct. 14, 2014  
**Date of Test** : Oct. 14, 2014 ~ Oct. 16, 2014  
**Issued Date** : Oct. 17, 2014  
**Tested by** : BTL Inc.

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

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# **B T L I N C .**

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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 R.O.C., 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-1-1410C093 | Original Issue. | Oct. 17, 2014 |

## 1. CERTIFICATION

Equipment : Wireless Color Weather Station.  
Brand Name : La Crosse Technology  
Model Name : TX143TH  
Applicant : La Crosse Technology Ltd  
Manufacturer : La Crosse Technology Ltd  
Address : La Crosse Technology Ltd, 2809 Losey Blvd. South La Crosse, WI 54601, U.S.A.  
Factory : La Crosse Technology Ltd  
Address : La Crosse Technology Ltd, 2809 Losey Blvd. South La Crosse, WI 54601, U.S.A.  
Date of Test : Oct. 14, 2014 ~ Oct. 16, 2014  
Test Sample : Engineering Sample  
Standard(s) : FCC Part15, Subpart C(15.249)/ 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-1-1410C093) 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):

| FCC Part15, Subpart C (15.249) |                                     |          |          |
|--------------------------------|-------------------------------------|----------|----------|
| StandardSection                | Test Item                           | Judgment | Remark   |
| FCC                            |                                     |          |          |
| 15.207                         | Conducted Emission                  | N/A      | Note (1) |
| 15.209<br>15.249               | Radiated Spurious Emission          | PASS     |          |
| -                              | Bandwidth                           | PASS     |          |
| -                              | Antenna Conducted Spurious Emission | 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,Dongguan, Guangdong, 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. Radiated Measurement :

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U,(dB) | NOTE |
|-----------|--------|-----------------------------|------------|--------|------|
| DG-CB03   | CISPR  | 9KHz~30MHz                  | V          | 3.79   |      |
|           |        | 9KHz~30MHz                  | 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           | Wireless Color Weather Station. |                     |
| Brand Name          | La Crosse Technology            |                     |
| Model Name          | TX143TH                         |                     |
| Model Difference    | N/A                             |                     |
| Product Description | Operation Frequency             | 915 MHz             |
|                     | Modulation Technology           | FSK(1.2kbps)        |
|                     | Data rate                       |                     |
|                     | Field Strength                  | 89.53dBuV/m(QP Max) |
| Power Source        | Supplied from 2*AA battery.     |                     |
| Power Rating        | DC 3V                           |                     |

Note:

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

#### 2. Channel List:

| Channe | Frequency (MHz) |
|--------|-----------------|
| 01     | 915             |

Table for Filed Antenna:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-------|------------|--------------|-----------|------------|
| 1    | N/A   | N/A        | Internal     | N/A       | 2          |

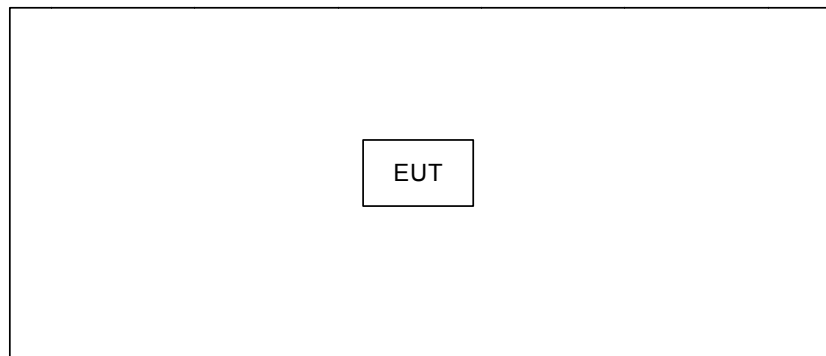
### 3.2 DESCRIPTION OF TEST MODES

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 possible 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     |

| Final Test Mode | Description |
|-----------------|-------------|
| Mode 1          | TX Mode     |

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



### 3.4 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 |
|------|-----------|-----------|----------------|--------|------------|------|
| -    | -         | -         | -              | -      | -          | -    |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| -    | -             | -            | -      | -    |

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)

| Frequency of Emission (MHz) | Conducted Limit (dBμV) |           |
|-----------------------------|------------------------|-----------|
|                             | Quasi-peak             | Average   |
| 0.1 -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

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    |

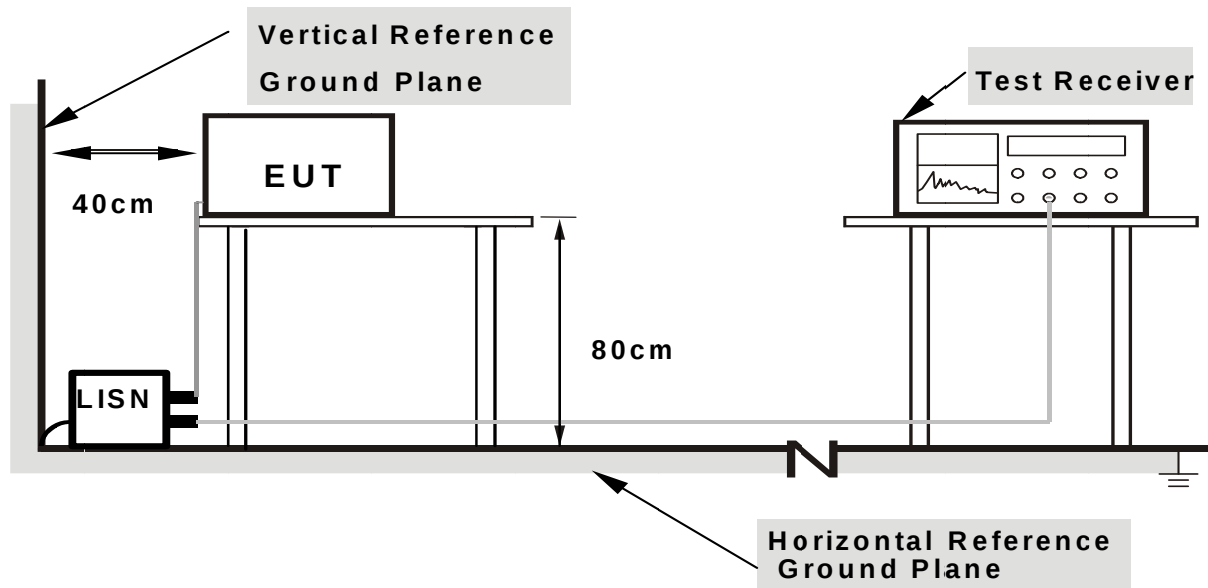
#### 4.1.2 TEST PROCEDURE

- 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.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- 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.

The EUT was programmed to be in continuously transmitting mode.

#### 4.1.6 EUT TEST CONDITIONS

Temperature: N/A

Relative Humidity: N/A

Test Voltage: N/A

#### 4.1.7 TEST RESULTS

Please refer to the Attachment A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of "Note". If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "\*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 RADIATED EMISSION LIMITS ( FCC 15.209 )

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (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                             |

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

### LIMITS OF RADIATED EMISSION MEASUREMENT ( FCC 15.209 )

| FREQUENCY (MHz) | (dBuV/m) (at 3m) |         |
|-----------------|------------------|---------|
|                 | 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).

### LIMITS OF RADIATED EMISSION MEASUREMENT (FCC Part 15.249)

| FCC Part15 (15.249) , Subpart C                                          |                       |
|--------------------------------------------------------------------------|-----------------------|
| Limit                                                                    | Frequency Range (MHz) |
| Field strength of fundamental<br>50000 $\mu$ V/m (94 dB $\mu$ V/m) @ 3 m | 915                   |
| Field strength of harmonics<br>500 $\mu$ V/m (54 dB $\mu$ V/m) @ 3 m     | 915                   |

| Spectrum Parameter | Setting               |
|--------------------|-----------------------|
| Attenuation        | Auto                  |
| Start Frequency    | 1000 MHz              |
| Stop Frequency     | 10th carrier harmonic |

| 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

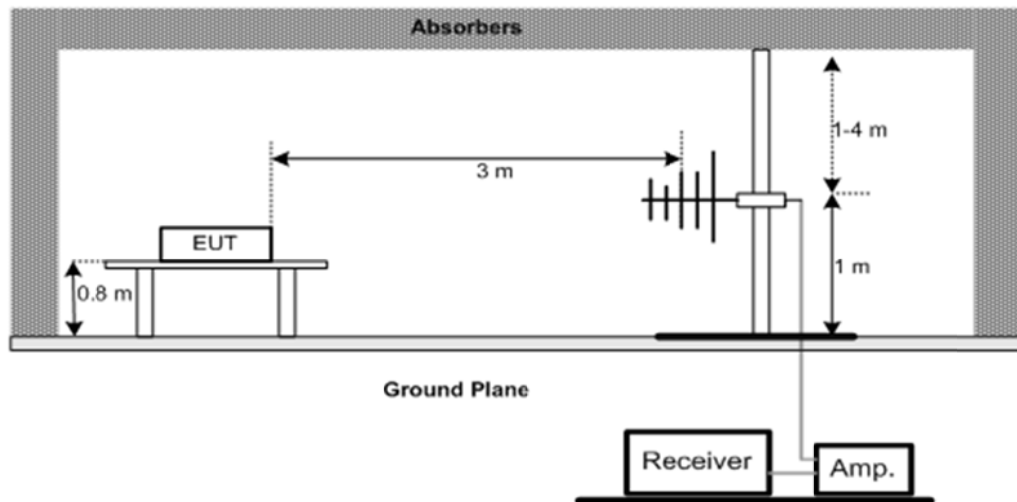
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-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 AV 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

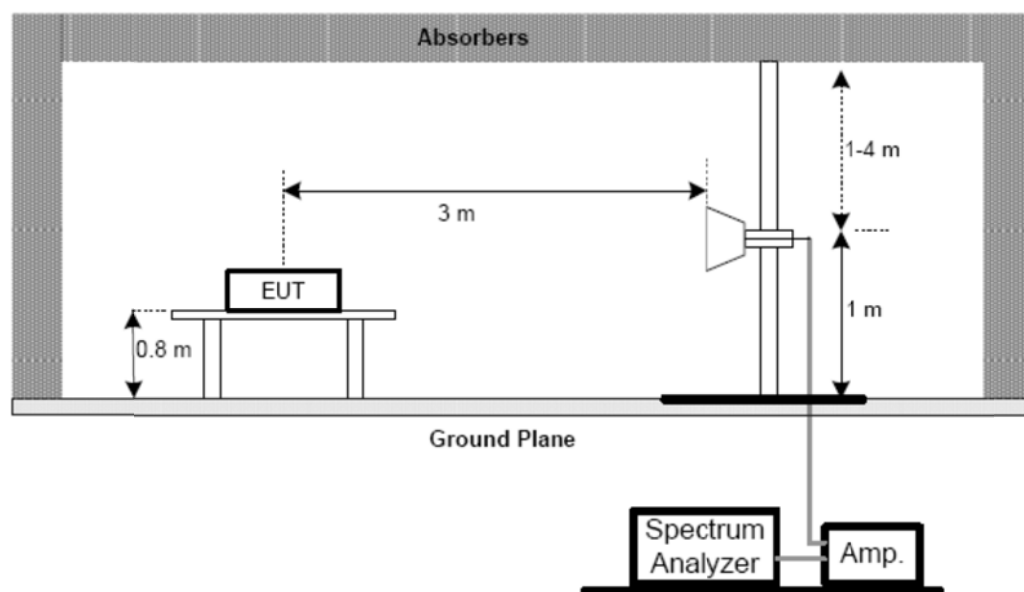
No deviation

#### 4.2.4 TEST SETUP

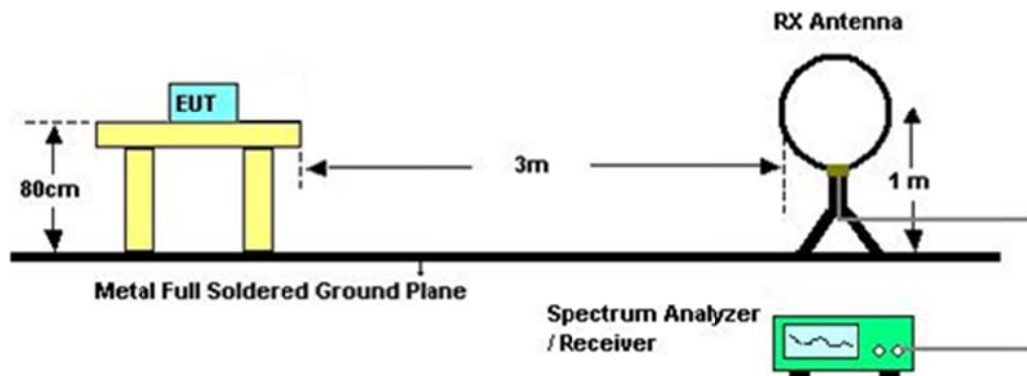
##### (A) Radiated Emission Test Set-Up Frequency Below 1 GHz



##### (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 (BELOW 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 (30 TO 1000 MHz)

Please refer to the Attachment C

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. RBW=120kHz, VBW= 300kHz.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .

#### 4.2.9 TEST RESULTS (ABOVE 1000 MHz)

Please refer to the Attachment D

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.  
RBW=1MHz, VBW =3MHz.
- (3) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (5) EUT Orthogonal Axis :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (6) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

## **5. BANDWIDTH TEST**

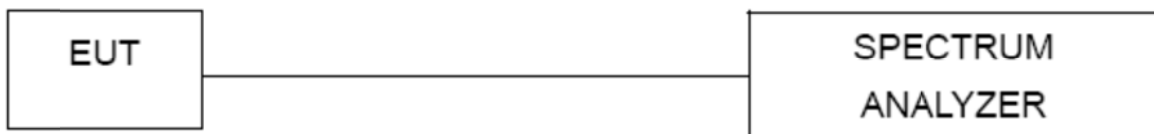
### **5.1 TEST PROCEDURE**

- 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=100KHz, Sweep time = Auto.

### **5.2 DEVIATION FROM STANDARD**

No deviation.

### **5.3 TEST SETUP**



### **5.4 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.

### **5.5 EUT TEST CONDITIONS**

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

### **5.6 TEST RESULTS**

Please refer to the Attachment E

## **6. ANTENNA CONDUCTED SPURIOUS EMISSION**

### **6.1 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.

### **6.2 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=100KHz, Sweep time = 10 ms.

### **6.3 DEVIATION FROM STANDARD**

No deviation.

### **6.4 TEST SETUP**



## **6.5 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.

## **6.6 EUT TEST CONDITIONS**

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: DC 3V

## **6.7 TEST RESULTS**

Please refer to the Attachment F

## 7. MEASUREMENT INSTRUMENTS LIST AND SETTING

| 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     | MY52130039    | Aug. 23, 2015    |
| 4                             | Test Cable                          | N/A            | C-01_CB03  | N/A           | Jul. 01, 2015    |
| 5                             | Antenna                             | ETS            | 3115       | 00075789      | Mar. 29, 2015    |
| 6                             | Amplifier                           | Agilent        | 8449B      | 3008A02274    | Mar. 29, 2015    |
| 7                             | Receiver                            | AGILENT        | N9038A     | MY52130039    | Aug. 23, 2015    |
| 8                             | Test Cable                          | HUBER+SUHNER   | C-48       | N/A           | Apr. 30, 2015    |
| 9                             | Controller                          | CT             | SC100      | N/A           | N/A              |
| 10                            | Broad-Band Horn Antenna             | Schwarzbeck    | BBHA 9170  | 9170319       | Feb. 22, 2015    |
| 11                            | Microwave Preamplifier With Adaptor | EMC INSTRUMENT | EMC2654045 | 980039 & HA01 | Feb. 22, 2015    |
| 12                            | Active Loop Antenna                 | R&S            | HFH2-Z2    | 830749/020    | Mar. 29, 2015    |

| Bandwidth |                   |              |          |            |                  |
|-----------|-------------------|--------------|----------|------------|------------------|
| Item      | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1         | Spectrum Analyzer | R&S          | FSP 40   | 100185     | Nov. 11, 2014    |

| Antenna Conducted Spurious Emission |                   |              |          |            |                  |
|-------------------------------------|-------------------|--------------|----------|------------|------------------|
| Item                                | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                                   | Spectrum Analyzer | R&S          | FSP 40   | 100185     | Nov. 11, 2014    |

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

## 8. EUT TEST PHOTO

### Radiated Measurement Photos

9KHz to 30MHz



## Radiated Measurement Photos

30MHz to 1000MHz



## Radiated Measurement Photos

Above 1000MHz



## ATTACHMENT A - CONDUCTED EMISSION

**Test Mode: N/A**

Note: "N/A" denotes test is not applicable to this device.

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

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

| Frequency (MHz) | Ant 0°/90° | Read level dBuV/m | Factor (dB) | Measured(FS) (dBuV/m) | Limit(QP) (dBuV/m) | Margin (dB) | Note |
|-----------------|------------|-------------------|-------------|-----------------------|--------------------|-------------|------|
| 0.0105          | 0°         | 9.84              | 24.90       | 34.74                 | 107.18             | -72.44      | AVG  |
| 0.0105          | 0°         | 14.46             | 24.90       | 39.36                 | 127.18             | -87.82      | PEAK |
| 0.0211          | 0°         | 15.34             | 24.23       | 39.57                 | 101.12             | -61.55      | AVG  |
| 0.0211          | 0°         | 21.95             | 24.23       | 46.18                 | 121.12             | -74.94      | PEAK |
| 0.0347          | 0°         | 16.42             | 23.37       | 39.79                 | 96.80              | -57.01      | AVG  |
| 0.0347          | 0°         | 22.08             | 23.37       | 45.45                 | 116.80             | -71.35      | PEAK |
| 0.0543          | 0°         | 17.62             | 22.31       | 39.93                 | 92.91              | -52.97      | AVG  |
| 0.0543          | 0°         | 23.16             | 22.31       | 45.47                 | 112.91             | -67.43      | PEAK |
| 0.4184          | 0°         | 19.75             | 20.00       | 39.75                 | 75.17              | -35.43      | QP   |
| 1.7028          | 0°         | 20.53             | 19.53       | 40.06                 | 62.98              | -22.92      | QP   |

| Frequency (MHz) | Ant 0°/90° | Read level dBuV/m | Factor (dB) | Measured(FS) (dBuV/m) | Limit(QP) (dBuV/m) | Margin (dB) | Note |
|-----------------|------------|-------------------|-------------|-----------------------|--------------------|-------------|------|
| 0.0105          | 90°        | 10.80             | 24.30       | 35.10                 | 127.18             | -92.08      | AVG  |
| 0.0105          | 90°        | 14.72             | 24.30       | 39.02                 | 147.18             | -108.16     | PEAK |
| 0.0253          | 90°        | 16.80             | 23.96       | 40.76                 | 119.54             | -78.78      | AVG  |
| 0.0253          | 90°        | 21.86             | 23.96       | 45.82                 | 139.54             | -93.72      | PEAK |
| 0.0341          | 90°        | 17.42             | 23.41       | 40.83                 | 116.95             | -76.12      | AVG  |
| 0.0341          | 90°        | 22.56             | 23.41       | 45.97                 | 136.95             | -90.98      | PEAK |
| 0.0449          | 90°        | 19.97             | 22.72       | 42.69                 | 114.56             | -71.87      | AVG  |
| 0.0449          | 90°        | 23.05             | 22.72       | 45.77                 | 134.56             | -88.79      | PEAK |
| 0.4189          | 90°        | 19.68             | 19.99       | 39.67                 | 95.16              | -55.49      | QP   |
| 1.5823          | 90°        | 20.39             | 19.54       | 39.93                 | 63.62              | -23.69      | QP   |

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

Test Mode: TX Mode

### Vertical

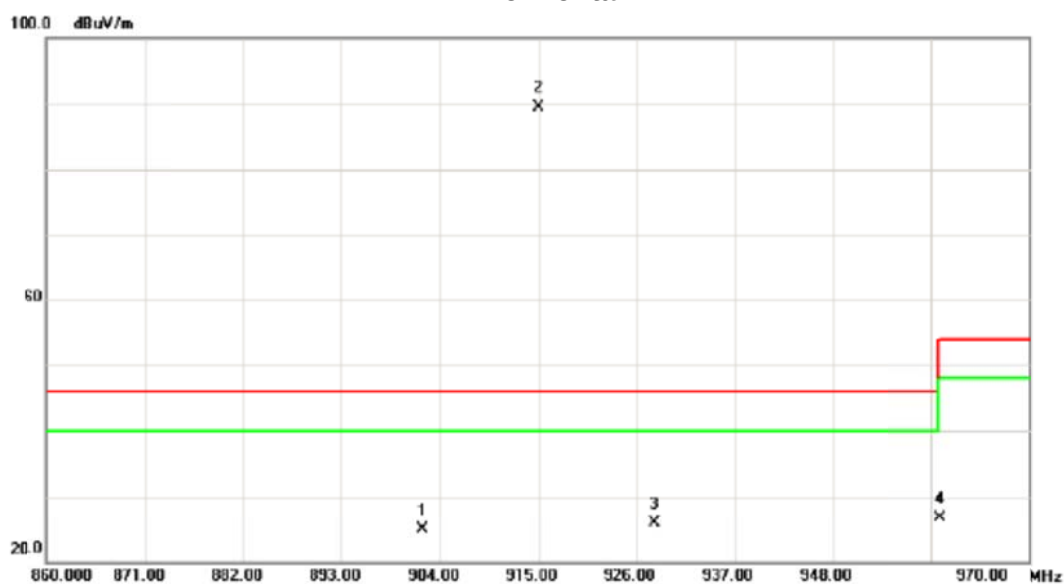


| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1       | 902.0000     | 26.05                    | -1.48                   | 24.57                      | 46.00           | -21.43     | QP       |         |
| 2 *     | 915.0000     | 85.97                    | -1.13                   | 84.84                      | 46.00           | 38.84      | QP       |         |
| 3       | 928.0000     | 25.99                    | -0.79                   | 25.20                      | 46.00           | -20.80     | QP       |         |
| 4       | 960.0000     | 26.12                    | -0.25                   | 25.87                      | 46.00           | -20.13     | QP       |         |

Note: QP limit is 94.

Test Mode: TX Mode

### Horizontal



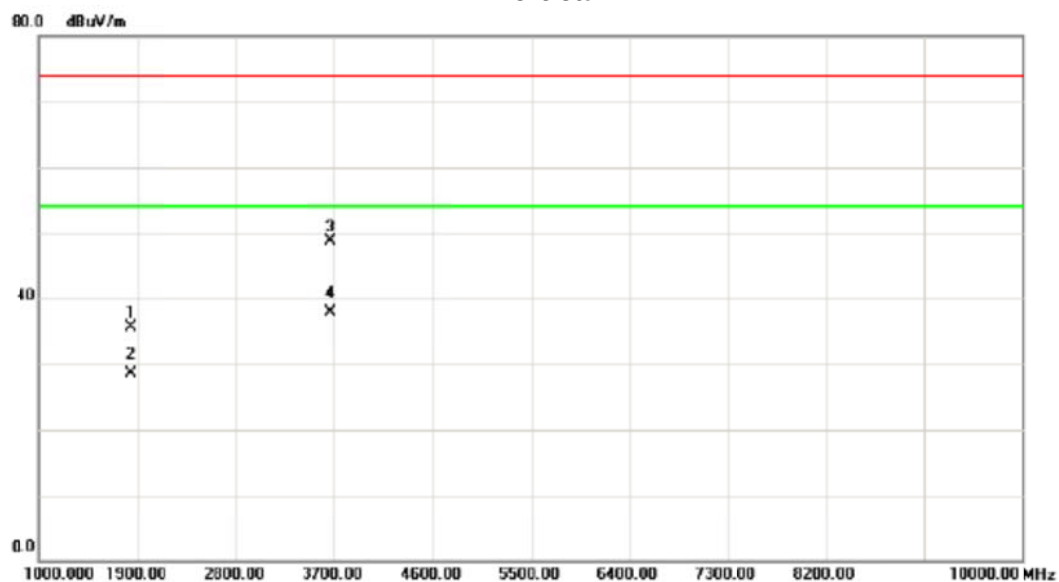
| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1       | 902.0000     | 26.45                    | -1.48                   | 24.97                      | 46.00           | -21.03     | QP       |         |
| 2 *     | 915.0000     | 90.66                    | -1.13                   | 89.53                      | 46.00           | 43.53      | QP       |         |
| 3       | 928.0000     | 26.63                    | -0.79                   | 25.84                      | 46.00           | -20.16     | QP       |         |
| 4       | 960.0000     | 26.98                    | -0.25                   | 26.73                      | 46.00           | -19.27     | QP       |         |

Note: QP limit is 94.

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

|                   |         |
|-------------------|---------|
| Orthogonal Axis : | X       |
| Test Mode :       | TX Mode |

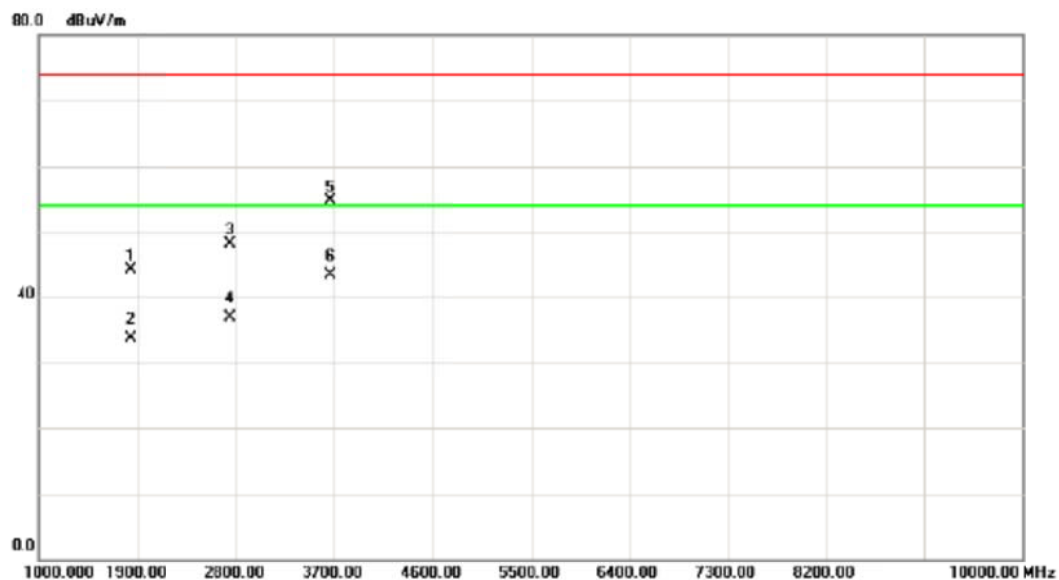
### Vertical



| 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 | Over<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1   |     | 1828.000     | 39.69                    | -3.91                   | 35.78                      | 74.00           | -38.22     | peak     |         |
| 2   |     | 1828.000     | 32.43                    | -3.91                   | 28.52                      | 54.00           | -25.48     | AVG      |         |
| 3   |     | 3664.000     | 46.89                    | 1.86                    | 48.75                      | 74.00           | -25.25     | peak     |         |
| 4   | *   | 3664.000     | 35.95                    | 1.86                    | 37.81                      | 54.00           | -16.19     | AVG      |         |

|                   |         |
|-------------------|---------|
| Orthogonal Axis : | X       |
| Test Mode :       | TX Mode |

### Horizontal



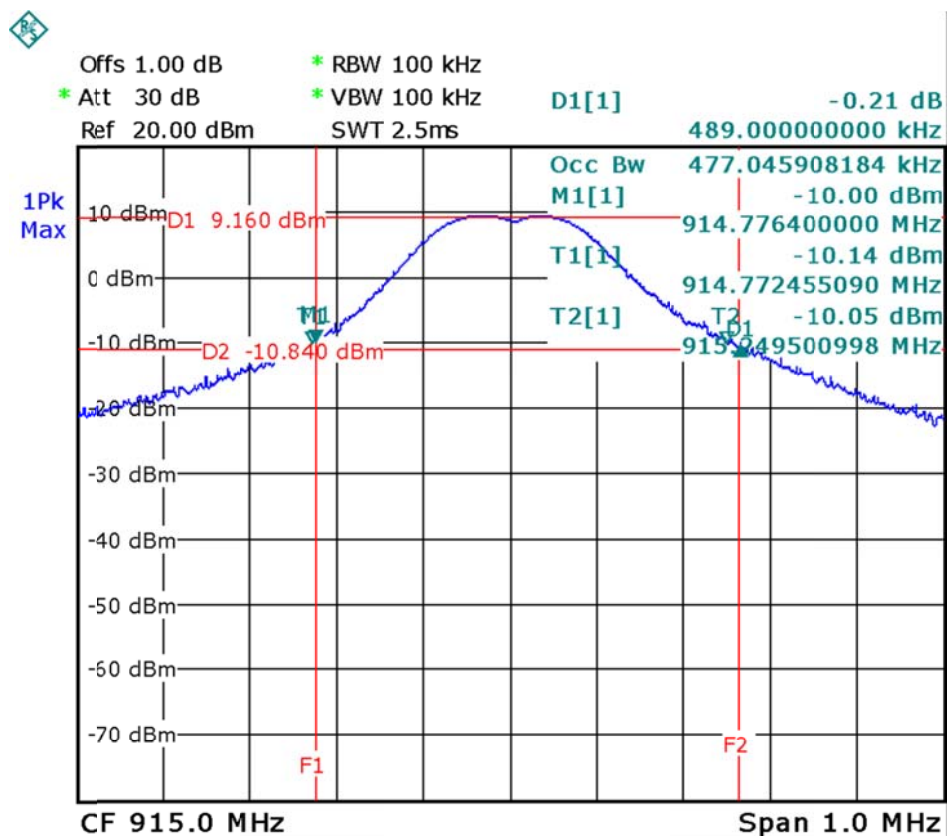
| No. Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Over<br>dB | Detector | Comment |
|---------|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|---------|
| 1       | 1828.000     | 48.08                    | -3.91                   | 44.17                      | 74.00           | -29.83     | peak     |         |
| 2       | 1828.000     | 37.62                    | -3.91                   | 33.71                      | 54.00           | -20.29     | AVG      |         |
| 3       | 2746.000     | 49.40                    | -1.25                   | 48.15                      | 74.00           | -25.85     | peak     |         |
| 4       | 2746.000     | 38.15                    | -1.25                   | 36.90                      | 54.00           | -17.10     | AVG      |         |
| 5       | 3664.000     | 52.81                    | 1.86                    | 54.67                      | 74.00           | -19.33     | peak     |         |
| 6 *     | 3664.000     | 41.46                    | 1.86                    | 43.32                      | 54.00           | -10.68     | AVG      |         |

## **ATTACHMENT E - BANDWIDTH**

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

| Frequency (MHz) | 20dB Bandwidth (MHz) | 99% Occupied BW (MHz) |
|-----------------|----------------------|-----------------------|
| 915.0           | 0.489                | 0.477                 |

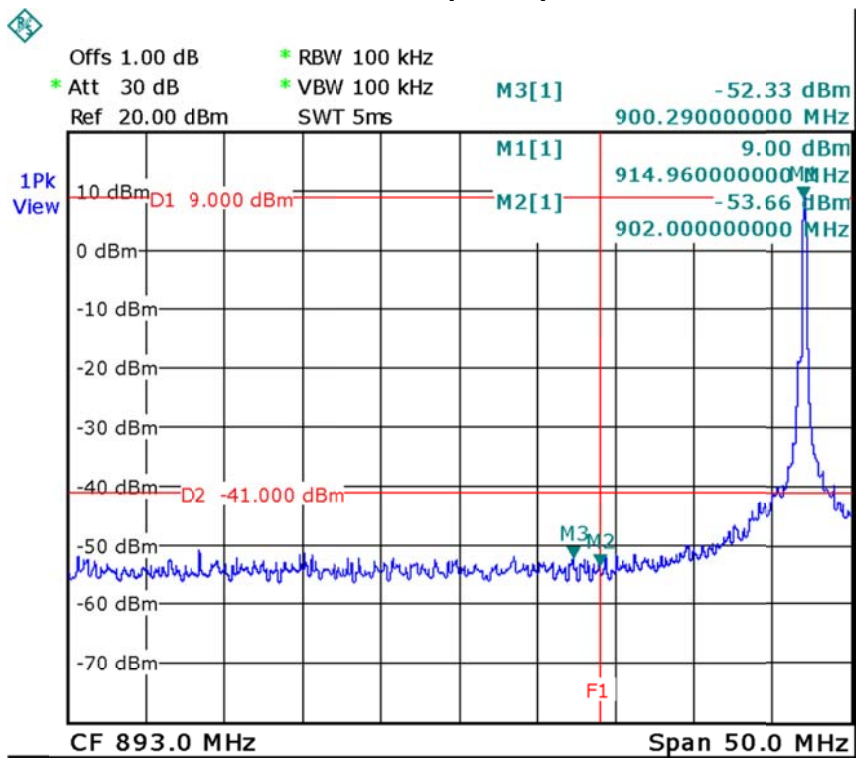
### TX Mode



Date: 16.OCT.2014 15:22:35

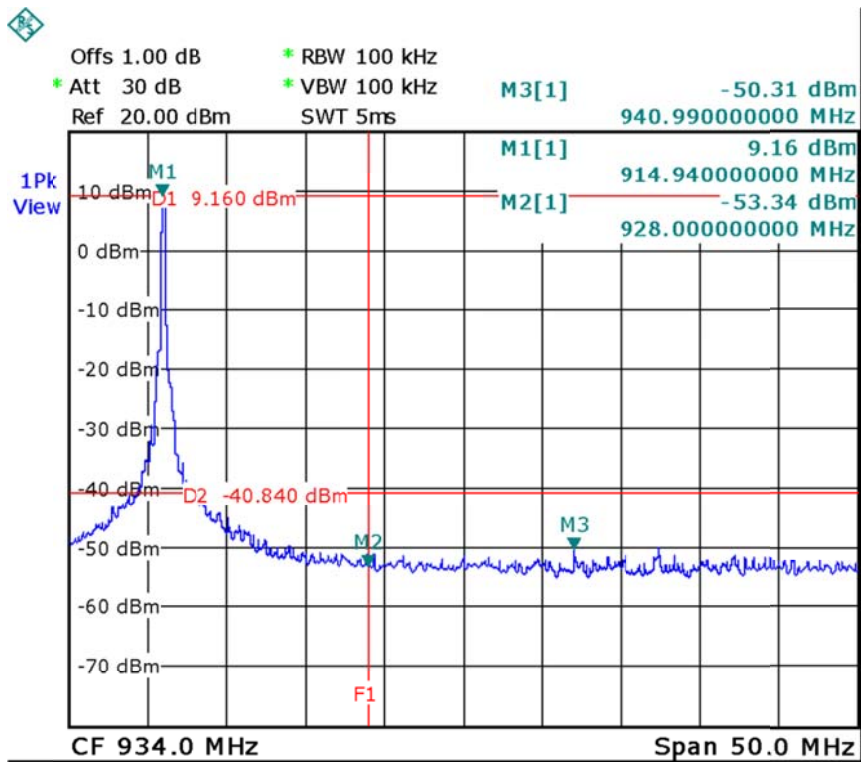
## **ATTACHMENT F - ANTENNA CONDUCTED SPURIOUS EMISSION**

### TX Mode (Lower)



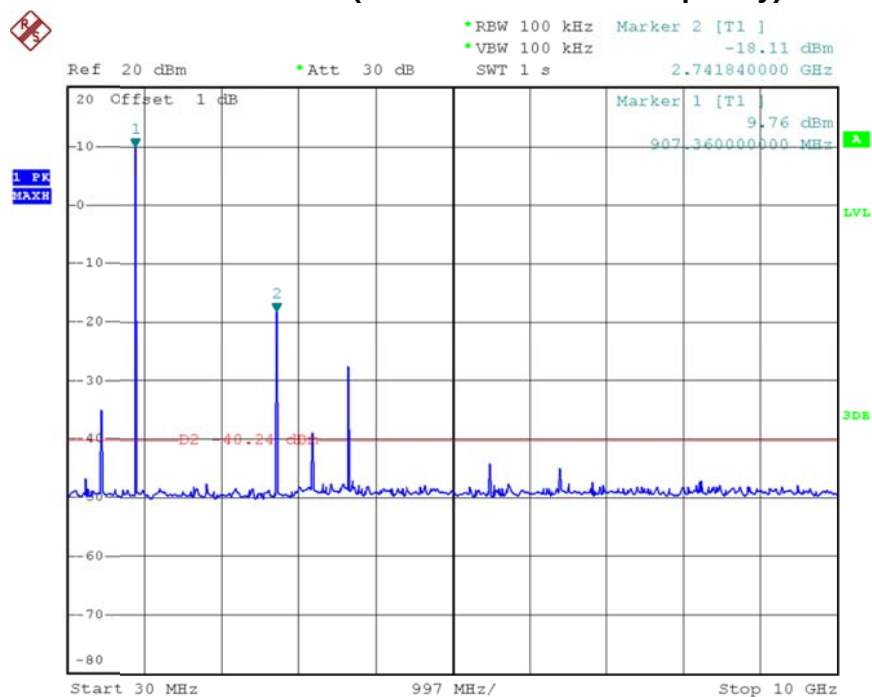
Date: 16.OCT.2014 15:28:10

### TX Mode (Upper)



Date: 16.OCT.2014 15:33:42

# TX Mode (10 Harmonic of the frequency)



Date: 16.OCT.2014 18:20:27