

# FCC Radio Test Report

## FCC ID: V7TI24

This report concerns: Original Grant

**Project No.** : 1901C087  
**Equipment** : AC1200 Wave2 Gigabit Access Point  
**Test Model** : i24  
**Series Model** : N/A  
**Applicant** : SHENZHEN TENDA TECHNOLOGY CO.,LTD  
**Address** : 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052

**Date of Receipt** : Jan. 18, 2019  
**Date of Test** : Jan. 18, 2019 ~ Feb. 23, 2019  
**Issued Date** : Mar. 06, 2019  
**Tested by** : BTL Inc.

**Testing Engineer** : Welly Zhou  
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Certificate #5123.02

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**BTL** is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

## Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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**REPORT ISSUED HISTORY**

| Report Version | Description                                   | Issued Date   |
|----------------|-----------------------------------------------|---------------|
| R00            | Original Issue.                               | Mar. 01, 2019 |
| R01            | Revised report to address Eurofins's comments | Mar. 06, 2019 |

## 1. GENERAL SUMMARY

Equipment : AC1200 Wave2 Gigabit Access Point  
Brand Name : Tenda  
Test Model : i24  
Series Model : N/A  
Applicant : SHENZHEN TENDA TECHNOLOGY CO.,LTD  
Manufacturer : SHENZHEN TENDA TECHNOLOGY CO.,LTD  
Address : 6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District,  
Shenzhen, China. 518052  
Date of Test : Jan. 18, 2019 ~ Feb. 23, 2019  
Test Sample : Engineering Sample No.: D190100581  
Standard(s) : FCC Part15, Subpart C (15.247)  
ANSI C63.10-2013  
KDB558074 D01 15.247 Meas Guidance v05

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-1-1901C087) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

**Test results included in this report are only for the WLAN 2.4 GHz part.**

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| Applied Standard(s): FCC Part15 (15.247) , Subpart C |                                   |                                        |          |        |
|------------------------------------------------------|-----------------------------------|----------------------------------------|----------|--------|
| Standard(s) Section                                  | Test Item                         | Test Result                            | Judgment | Remark |
| 15.207                                               | AC Power Line Conducted Emissions | APPENDIX A                             | PASS     | -----  |
| 15.247(d)<br>15.205<br>15.209                        | Radiated Emissions                | APPENDIX B<br>APPENDIX C<br>APPENDIX D | PASS     | -----  |
| 15.247(a)(2)                                         | Bandwidth                         | APPENDIX E                             | PASS     | -----  |
| 15.247(b)(3)                                         | Maximum Output Power              | APPENDIX F                             | PASS     | -----  |
| 15.247(d)                                            | Conducted Spurious Emissions      | APPENDIX G                             | PASS     | -----  |
| 15.247(e)                                            | Power Spectral Density            | APPENDIX H                             | PASS     | -----  |
| 15.203                                               | Antenna Requirement               | -----                                  | 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 at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

## 2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

The BTL measurement uncertainty as below table:

### A. AC power line conducted emissions test:

| Test Site | Method | Measurement Frequency Range | U, (dB) |
|-----------|--------|-----------------------------|---------|
| DG-C02    | CISPR  | 150 kHz ~ 30 MHz            | 2.32    |

### B. Radiated emissions test:

| Test Site | Method | Measurement Frequency Range | Ant. H / V | U, (dB) |
|-----------|--------|-----------------------------|------------|---------|
| DG-CB03   | CISPR  | 9 KHz~30 MHz                | V          | 3.79    |
|           |        | 9 KHz~30 MHz                | H          | 3.57    |
|           |        | 30 MHz~200 MHz              | V          | 3.82    |
|           |        | 30 MH~200 MHz               | H          | 3.78    |
|           |        | 200 MHz~1,000 MHz           | V          | 4.10    |
|           |        | 200 MHz~1,000 MHz           | H          | 4.06    |
|           |        | 1 GHz~18 GHz                | V          | 3.12    |
|           |        | 1 GHz~18 GHz                | H          | 3.68    |
|           |        | 18 GHz~40 GHz               | V          | 4.15    |
|           |        | 18 GHz~40 GHz               | H          | 4.14    |

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                                      |                                                                                                                                                                    |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                            | AC1200 Wave2 Gigabit Access Point                                                                                                                                  |
| Brand Name                           | Tenda                                                                                                                                                              |
| Test Model                           | i24                                                                                                                                                                |
| Series Model                         | N/A                                                                                                                                                                |
| Model Difference(s)                  | N/A                                                                                                                                                                |
| Power Source                         | 1# DC voltage supplied from AC/DC adapter. (support unit)<br>2# DC voltage supplied from PoE adapter.                                                              |
| Power Rating                         | 1# I/P: 100-240V~ 50/60Hz 0.6A    O/P: 12V --- 1.5A<br>2# DC 48V                                                                                                   |
| Operation Frequency                  | 2412 MHz ~ 2462 MHz                                                                                                                                                |
| Modulation Type                      | IEEE 802.11b: DSSS<br>IEEE 802.11g: OFDM<br>IEEE 802.11n: OFDM                                                                                                     |
| Bit Rate of Transmitter              | IEEE 802.11b: 11/5.5/2/1 Mbps<br>IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps<br>IEEE 802.11n: up to 300 Mbps                                                          |
| Maximum Output Power Non-Beamforming | IEEE 802.11b: 27.15 dBm (0.5188 W)<br>IEEE 802.11g: 27.16 dBm (0.5200 W)<br>IEEE 802.11n (HT20): 26.81 dBm (0.4801 W)<br>IEEE 802.11n (HT40): 26.73 dBm (0.4706 W) |
| Maximum Output Power Beamforming     | IEEE 802.11n (HT20): 26.56 dBm (0.4530 W)<br>IEEE 802.11n (HT40): 26.61 dBm (0.4586 W)                                                                             |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. Channel List:

| CH01 - CH11 for 802.11b, 802.11g, 802.11n(20 MHz) |                 |         |                 |         |                 |         |                 |
|---------------------------------------------------|-----------------|---------|-----------------|---------|-----------------|---------|-----------------|
| CH03 - CH09 for 802.11n(40 MHz)                   |                 |         |                 |         |                 |         |                 |
| Channel                                           | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
| 01                                                | 2412            | 04      | 2427            | 07      | 2442            | 10      | 2457            |
| 02                                                | 2417            | 05      | 2432            | 08      | 2447            | 11      | 2462            |
| 03                                                | 2422            | 06      | 2437            | 09      | 2452            |         |                 |

### 3. Antenna Specification:

| Ant. | Brand | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|-------|------------|--------------|-----------|------------|
| 1    | N/A   | N/A        | Internal     | N/A       | 2.7        |
| 2    | N/A   | N/A        | Internal     | N/A       | 3          |

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), any transmit signals are correlated with each other, so Directional gain =  $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$  dBi, that is Directional gain =  $10\log[(10^{2.7/20} + 10^{3/20})^2 / 2]$  dBi = 5.86 .

(2) Beamforming Gain: 3dB.  
Directional gain = 3 + 3 = 6

### 4. Table for Antenna Configuration:

| Operating Mode / TX Mode | 1TX        | 2TX                 |
|--------------------------|------------|---------------------|
| IEEE 802.11b             | V (Ant. 2) | -                   |
| IEEE 802.11g             | V (Ant. 2) | -                   |
| IEEE 802.11n (HT20)      | -          | V (Ant. 1 + Ant. 2) |
| IEEE 802.11n (HT40)      | -          | V (Ant. 1 + Ant. 2) |

### 3.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

| Pretest Mode | Description                       |
|--------------|-----------------------------------|
| Mode 1       | TX B Mode Channel 01/06/11        |
| Mode 2       | TX G Mode Channel 01/06/11        |
| Mode 3       | TX N-20 MHz Mode Channel 01/06/11 |
| Mode 4       | TX N-40 MHz Mode Channel 03/06/09 |
| Mode 5       | TX G Mode Channel 01              |

Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

| AC power line conducted emissions test |                      |
|----------------------------------------|----------------------|
| Final Test Mode:                       | Description          |
| Mode 5                                 | TX G Mode Channel 01 |

| Radiated emissions test |                                   |
|-------------------------|-----------------------------------|
| Final Test Mode:        | Description                       |
| Mode 1                  | TX B Mode Channel 01/06/11        |
| Mode 2                  | TX G Mode Channel 01/06/11        |
| Mode 3                  | TX N-20 MHz Mode Channel 01/06/11 |
| Mode 4                  | TX N-40 MHz Mode Channel 03/06/09 |

| Conducted test   |                                   |
|------------------|-----------------------------------|
| Final Test Mode: | Description                       |
| Mode 1           | TX B Mode Channel 01/06/11        |
| Mode 2           | TX G Mode Channel 01/06/11        |
| Mode 3           | TX N-20 MHz Mode Channel 01/06/11 |
| Mode 4           | TX N-40 MHz Mode Channel 03/06/09 |

**NOTE:**

- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: DBPSK (1 Mbps)  
802.11g mode: OFDM (6 Mbps)  
802.11n HT20 mode : BPSK (13 Mbps)  
802.11n HT40 mode : BPSK (27 Mbps)  
For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated emission below 1 GHz test, the IEEE 802.11b is found to be the worst case and recorded.
- (4) For radiated emission above 1 GHz test, 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
- (5) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

### 3.3 PARAMETERS OF TEST SOFTWARE

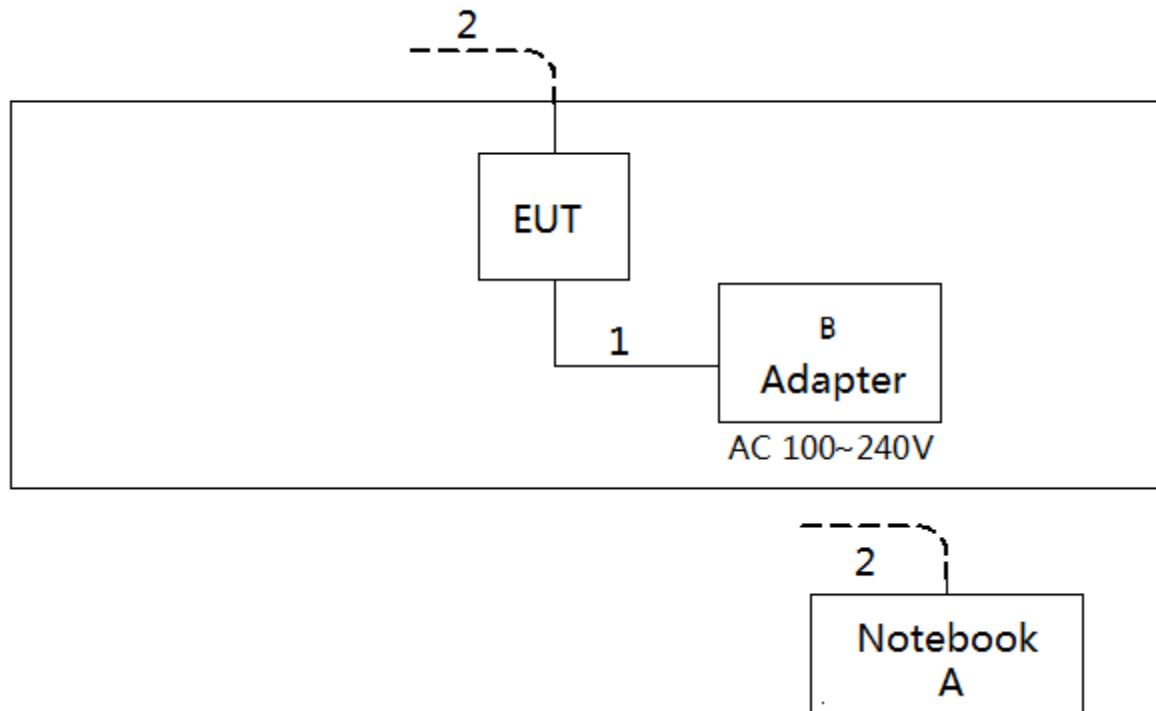
#### Non-Beamforming

| Test Software        | cart |      |      |
|----------------------|------|------|------|
| Test Frequency (MHz) | 2412 | 2437 | 2462 |
| IEEE 802.11b         | 19   | 20   | 23.5 |
| IEEE 802.11g         | 18   | 18   | 18   |
| IEEE 802.11n (HT20)  | 12.5 | 14.5 | 15.5 |
| Test Frequency (MHz) | 2422 | 2437 | 2452 |
| IEEE 802.11n (HT40)  | 14.5 | 15   | 15   |

#### Beamforming

| Test Software        | cart |      |      |
|----------------------|------|------|------|
| Test Frequency (MHz) | 2412 | 2437 | 2462 |
| IEEE 802.11n (HT20)  | 12.5 | 14.5 | 15.5 |
| Test Frequency (MHz) | 2422 | 2437 | 2452 |
| IEEE 802.11n (HT40)  | 14.5 | 15   | 15   |

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



### 3.5 SUPPORT UNITS

| Item | Equipment | Mfr/Brand | Model/Type No. | Series No. |
|------|-----------|-----------|----------------|------------|
| A    | Notebook  | Lenovo    | G410           | N/A        |
| B    | Adapter   | N/A       | N/A            | N/A        |

| Item | Shielded Type | Ferrite Core | Length | Note       |
|------|---------------|--------------|--------|------------|
| 1    | NO            | NO           | 1.2m   | DC Cable   |
| 2    | NO            | NO           | 10m    | RJ45 Cable |

## 4. AC POWER LINE CONDUCTED EMISSIONS TEST

### 4.1 LIMIT

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

#### NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) 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  
 Sample calculations: (Refer to page 31, test result No.1.)

| Reading Level |   | Correct Factor |   | Measurement Value |
|---------------|---|----------------|---|-------------------|
| 42.63         | + | 9.82           | = | 52.45             |

| Measurement Value |   | Limit Value |   | Margin Level |
|-------------------|---|-------------|---|--------------|
| 52.45             | - | 63.45       | = | -11.00       |

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    |

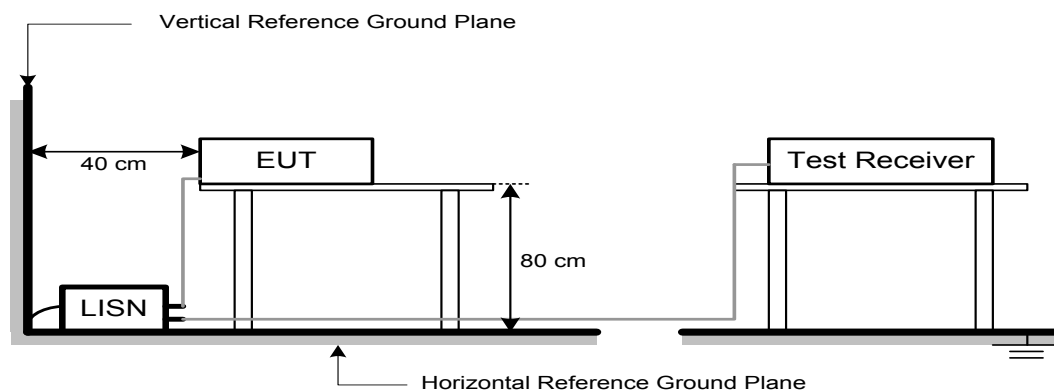
### 4.2 TEST PROCEDURE

- 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 equipment 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.

### 4.3 DEVIATION FROM TEST STANDARD

No deviation

#### 4.4 TEST SETUP



#### 4.5 EUT OPERATION CONDITIONS

The EUT was placed on the test table and programmed in normal function.

#### 4.6 EUT TEST CONDITIONS

Temperature: 25°C    Relative Humidity: 53%    Test Voltage: AC 120V/60Hz

#### 4.7 TEST RESULTS

Please refer to the APPENDIX A.



## 5. RADIATED EMISSIONS TEST

### 5.1 LIMIT

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 (9 kHz-1000 MHz)

| 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                                |
| Above 960          | 500                                  | 3                                |

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

| Frequency (MHz) | (dBuV/m at 3 m) |         |
|-----------------|-----------------|---------|
|                 | Peak            | Average |
| Above 1000      | 74              | 54      |

#### NOTE:

- (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

Sample calculations: (Refer to page 34, test result No.1.)

|               |   |                |   |                   |
|---------------|---|----------------|---|-------------------|
| Reading Level |   | Correct Factor |   | Measurement Value |
| 38.62         | + | 21.20          | = | 59.82             |

|                   |   |             |   |              |
|-------------------|---|-------------|---|--------------|
| Measurement Value |   | Limit Value |   | Margin Level |
| 59.82             | - | 126.32      | = | -66.50       |

| Spectrum Parameter                         | Setting                                            |
|--------------------------------------------|----------------------------------------------------|
| Attenuation                                | Auto                                               |
| Start Frequency                            | 1000 MHz                                           |
| Stop Frequency                             | 10th carrier harmonic                              |
| RBW / VBW<br>(Emission in restricted band) | 1 MHz / 3 MHz for Peak,<br>1 MHz / 1/T for Average |

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

## 5.2 TEST PROCEDURE

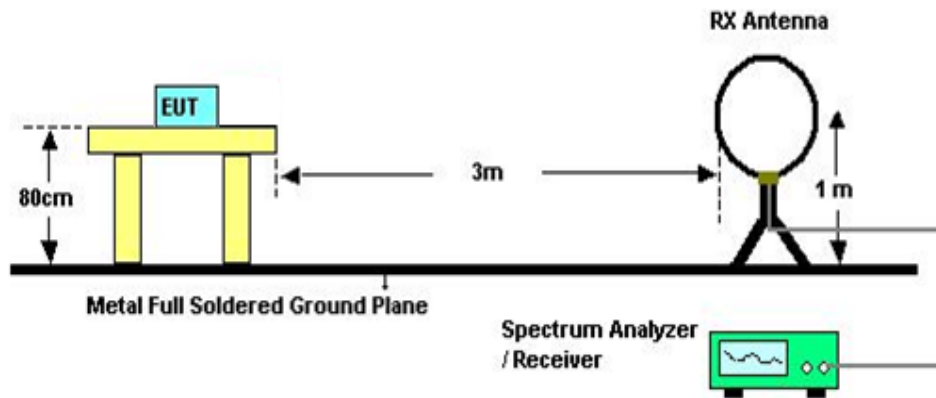
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter 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 1 GHz)
- The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; 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.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- 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. (below 1 GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- For the actual test configuration, please refer to the related Item -EUT Test Photos.

## 5.3 DEVIATION FROM TEST STANDARD

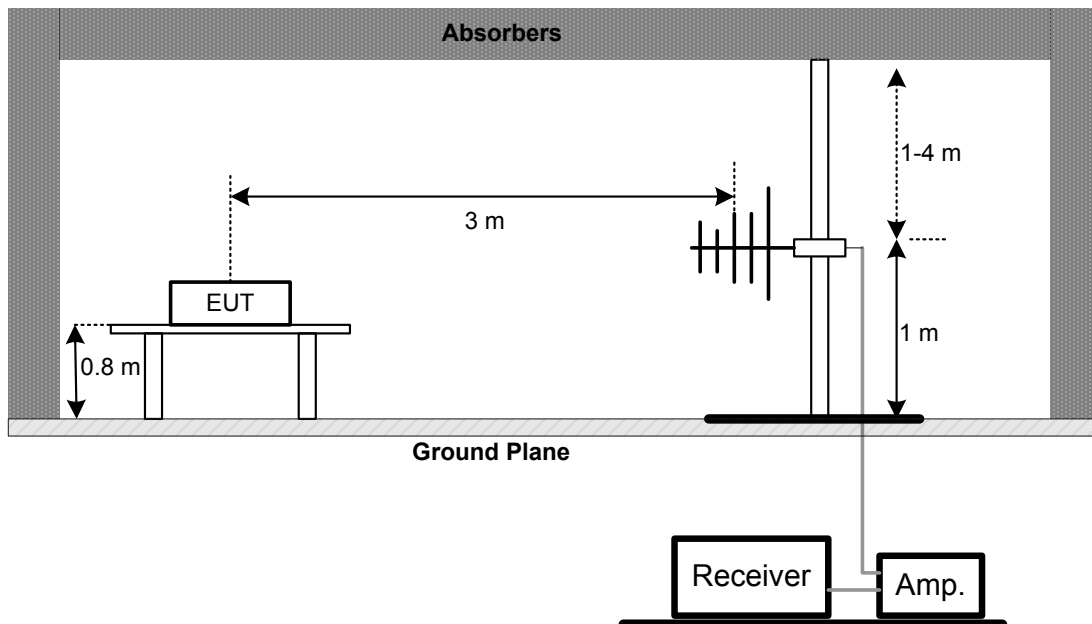
No deviation

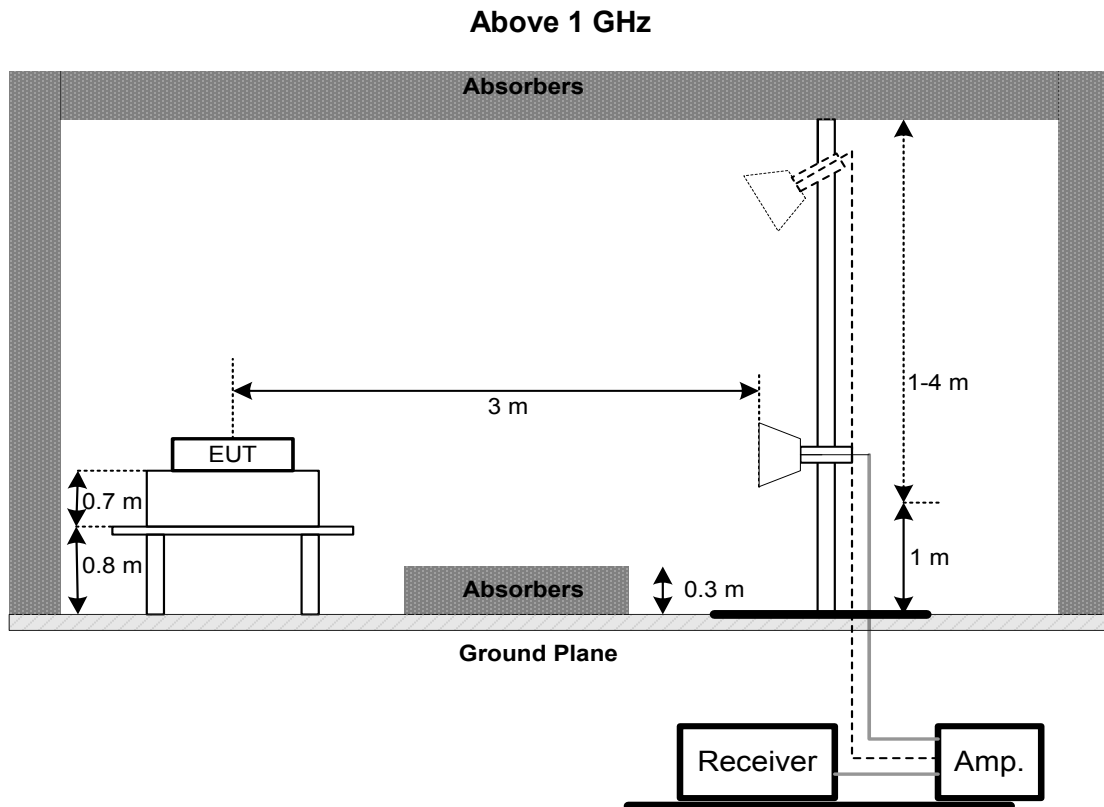
## 5.4 TEST SETUP

9 kHz-30 MHz



30 MHz to 1 GHz





## 5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

## 5.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 54% Test Voltage: AC 120V/60Hz

## 5.7 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX 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.

## 5.8 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

## 5.9 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

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

## 6. BANDWIDTH TEST

### 6.1 LIMIT

| FCC Part15 (15.247) , Subpart C |                        |                 |
|---------------------------------|------------------------|-----------------|
| Section                         | Test Item              | Limit           |
| 15.247(a)(2)                    | 6 dB Bandwidth         | Minimum 500 kHz |
|                                 | 99% Emission Bandwidth | -               |

### 6.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = 2.5 ms.
- The bandwidth was performed in accordance with method 11.8 of ANSI C63.10-2013.

### 6.3 DEVIATION FROM STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 6.6 EUT TEST CONDITIONS

Temperature: 21°C    Relative Humidity: 58%    Test Voltage: AC 120V/60Hz

### 6.7 TEST RESULTS

Please refer to the APPENDIX E.

## 7. MAXIMUM OUTPUT POWER TEST

### 7.1 LIMIT

| FCC Part15 (15.247) , Subpart C |                      |                 |
|---------------------------------|----------------------|-----------------|
| Section                         | Test Item            | Limit           |
| 15.247(b)(3)                    | Maximum Output Power | 1 Watt or 30dBm |

### 7.2 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.1.3 of ANSI C63.10-2013.

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 7.6 EUT TEST CONDITIONS

Temperature: 21°C    Relative Humidity: 58%    Test Voltage: AC 120V/60Hz

### 7.7 TEST RESULTS

Please refer to the APPENDIX F.

## 8. CONDUCTED SPURIOUS EMISSIONS

### 8.1 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 or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

### 8.2 TEST PROCEDURE

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

### 8.3 DEVIATION FROM STANDARD

No deviation.

### 8.4 TEST SETUP



### 8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 8.6 EUT TEST CONDITIONS

Temperature: 21°C    Relative Humidity: 58%    Test Voltage: AC 120V/60Hz

### 8.7 TEST RESULTS

Please refer to the APPENDIX G.

## 9. POWER SPECTRAL DENSITY TEST

### 9.1 LIMIT

| FCC Part15 (15.247) , Subpart C |                        |                         |
|---------------------------------|------------------------|-------------------------|
| Section                         | Test Item              | Limit                   |
| 15.247(e)                       | Power Spectral Density | 8 dBm<br>(in any 3 kHz) |

### 9.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW=3 kHz, VBW=10 kHz, Sweep time = Auto.
- The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

### 9.3 DEVIATION FROM STANDARD

No deviation.

### 9.4 TEST SETUP



### 9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 9.6 EUT TEST CONDITIONS

Temperature: 21°C    Relative Humidity: 58%    Test Voltage: AC 120V/60Hz

### 9.7 TEST RESULTS

Please refer to the APPENDIX H.



## 10. MEASUREMENT INSTRUMENTS LIST

| AC Power Line Conducted Emissions |                      |              |                       |            |                  |
|-----------------------------------|----------------------|--------------|-----------------------|------------|------------------|
| Item                              | Kind of Equipment    | Manufacturer | Type No.              | Serial No. | Calibrated until |
| 1                                 | EMI Test Receiver    | R&S          | ESCI                  | 100382     | Mar. 11, 2019    |
| 2                                 | LISN                 | EMCO         | 3816/2                | 52765      | Mar. 11, 2019    |
| 3                                 | 50Ω Terminator       | SHX          | TF2-3G-A              | 8122901    | Mar. 11, 2019    |
| 4                                 | TWO-LINE V-NETWORK   | R&S          | ENV216                | 101447     | Mar. 11, 2019    |
| 5                                 | Measurement Software | Farad        | EZ-EMC Ver.NB-03A1-01 | N/A        | N/A              |
| 6                                 | Cable                | N/A          | RG223                 | 12m        | Mar. 23, 2019    |

| Radiated Emissions - 9 kHz to 30 MHz |                      |              |                       |            |                  |
|--------------------------------------|----------------------|--------------|-----------------------|------------|------------------|
| Item                                 | Kind of Equipment    | Manufacturer | Type No.              | Serial No. | Calibrated until |
| 1                                    | Loop Antenna         | EM           | EM-6876-1             | 230        | Jan. 15, 2020    |
| 2                                    | Cable                | N/A          | RG 213/U              | C-102      | Jun. 01, 2019    |
| 3                                    | EMI Test Receiver    | R&S          | ESCI                  | 100382     | Mar. 11, 2019    |
| 4                                    | Measurement Software | Farad        | EZ-EMC Ver.NB-03A1-01 | N/A        | N/A              |

| Radiated Emissions - 30 MHz to 1 GHz |                      |              |                            |             |                  |
|--------------------------------------|----------------------|--------------|----------------------------|-------------|------------------|
| Item                                 | Kind of Equipment    | Manufacturer | Type No.                   | Serial No.  | Calibrated until |
| 1                                    | Antenna              | Schwarzbeck  | VULB9160                   | 9160-3232   | Mar. 11, 2019    |
| 2                                    | Amplifier            | HP           | 8447D                      | 2944A09673  | Aug. 11, 2019    |
| 3                                    | Receiver             | Agilent      | N9038A                     | MY52130039  | Aug. 11, 2019    |
| 4                                    | Cable                | emci         | LMR-400(30MHz-1GHz)(8m+5m) | N/A         | May 25, 2019     |
| 5                                    | Controller           | CT           | SC100                      | N/A         | N/A              |
| 6                                    | Controller           | MF           | MF-7802                    | MF780208416 | N/A              |
| 7                                    | Measurement Software | Farad        | EZ-EMC Ver.NB-03A1-01      | N/A         | N/A              |

| Radiated Emissions - Above 1 GHz |                                     |                |                       |               |                  |
|----------------------------------|-------------------------------------|----------------|-----------------------|---------------|------------------|
| Item                             | Kind of Equipment                   | Manufacturer   | Type No.              | Serial No.    | Calibrated until |
| 1                                | Double Ridged Guide Antenna         | ETS            | 3115                  | 75789         | Mar. 11, 2019    |
| 2                                | Broad-Band Horn Antenna             | Schwarzbeck    | BBHA 9170             | 9170319       | Jun. 30, 2019    |
| 3                                | Amplifier                           | Agilent        | 8449B                 | 3008A02274    | Mar. 11, 2019    |
| 4                                | Microwave Preamplifier With Adaptor | EMC INSTRUMENT | EMC2654045            | 980039 & HA01 | Mar. 11, 2019    |
| 5                                | Receiver                            | Agilent        | N9038A                | MY52130039    | Aug. 11, 2019    |
| 6                                | Controller                          | CT             | SC100                 | N/A           | N/A              |
| 7                                | Controller                          | MF             | MF-7802               | MF780208416   | N/A              |
| 8                                | Cable                               | mitron         | B10-01-01-12M         | 18072744      | Jul. 30, 2019    |
| 9                                | Measurement Software                | Farad          | EZ-EMC Ver.NB-03A1-01 | N/A           | N/A              |

| Bandwidth |                   |              |          |            |                  |
|-----------|-------------------|--------------|----------|------------|------------------|
| Item      | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1         | Spectrum Analyzer | R&S          | FSP40    | 100185     | Aug. 11, 2019    |

| Peak Output Power |                    |              |          |            |                  |
|-------------------|--------------------|--------------|----------|------------|------------------|
| Item              | Kind of Equipment  | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                 | Power Meter        | ANRITSU      | ML2495A  | 1128009    | Mar. 11, 2019    |
| 2                 | Pulse Power Sensor | ANRITSU      | MA 2411B | 1027500    | Mar. 11, 2019    |

| Antenna Conducted Spurious Emissions |                   |              |          |            |                  |
|--------------------------------------|-------------------|--------------|----------|------------|------------------|
| Item                                 | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                                    | Spectrum Analyzer | R&S          | FSP40    | 100185     | Aug. 11, 2019    |

| Power Spectral Density |                   |              |          |            |                  |
|------------------------|-------------------|--------------|----------|------------|------------------|
| Item                   | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
| 1                      | Spectrum Analyzer | R&S          | FSP40    | 100185     | Aug. 11, 2019    |

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

## 11. EUT TEST PHOTO

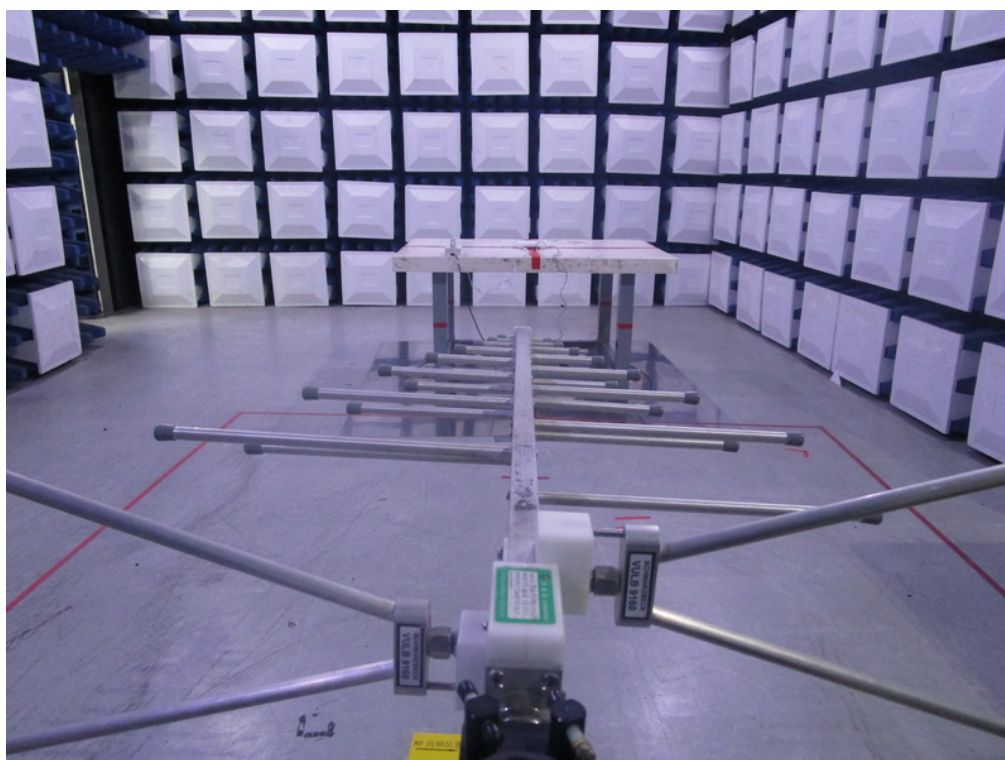
### Radiated Emissions Test Photos

9 kHz to 30 MHz



# **Radiated Emissions Test Photos**

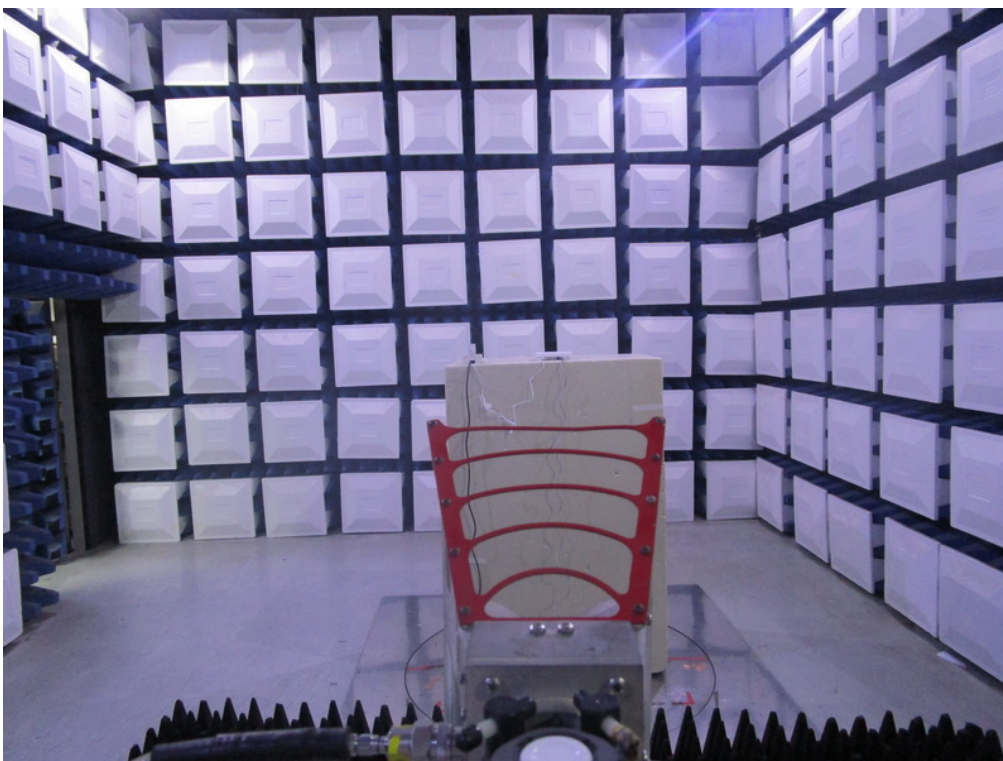
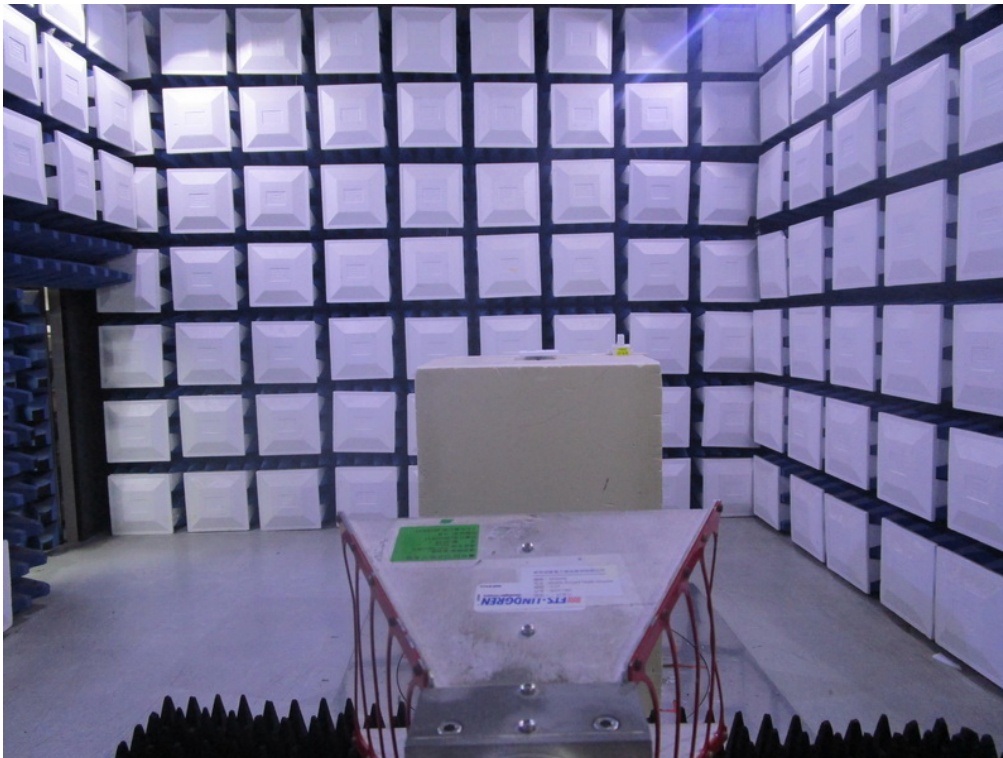
**30 MHz to 1 GHz**





## Radiated Emissions Test Photos

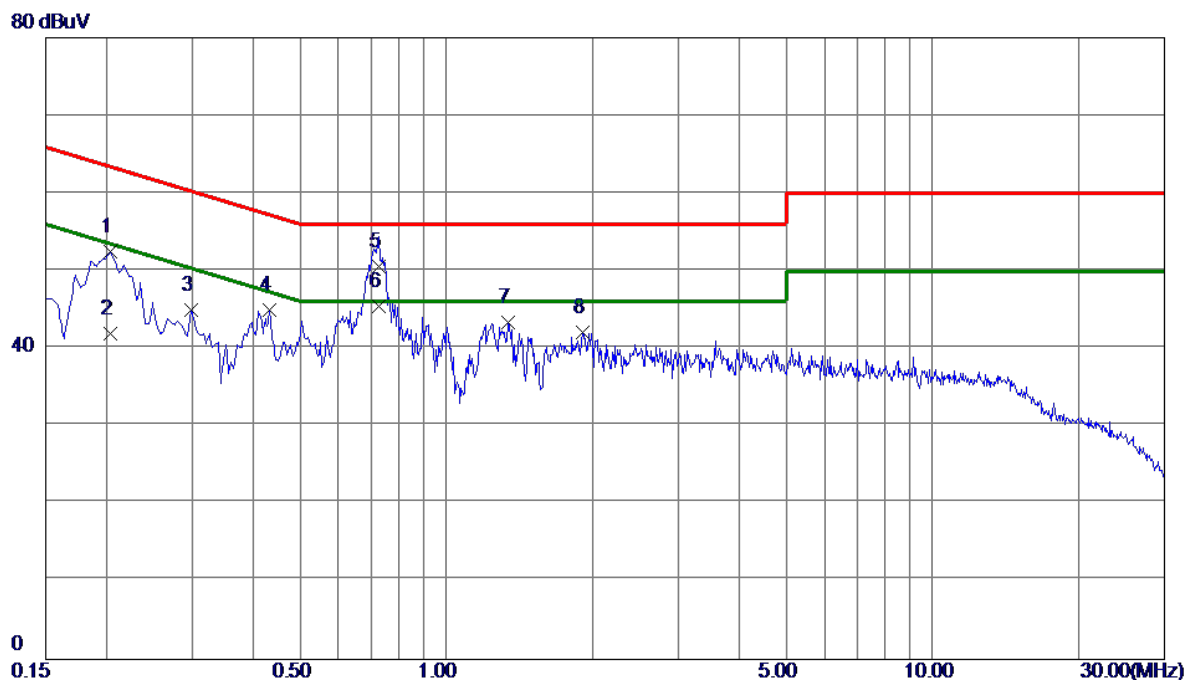
Above 1 GHz



## APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode: TX G MODE CHANNEL 01

# Line



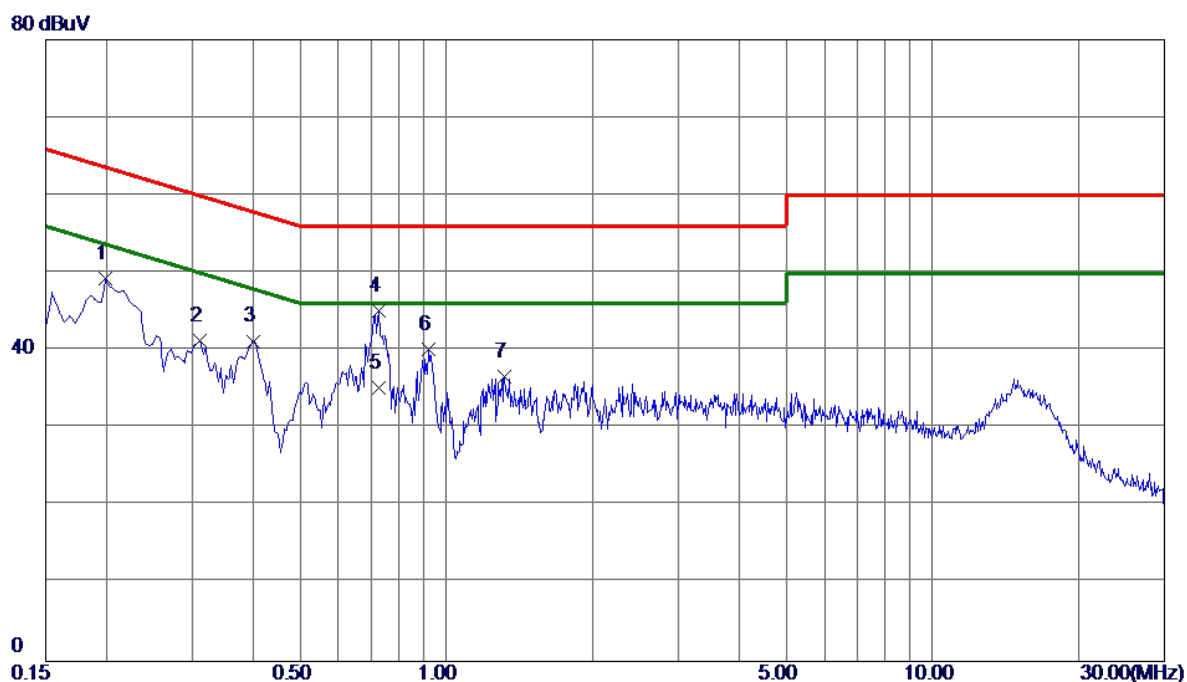
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|-----|--------------|--------------------------|-------------------------|-------------------------|---------------|--------------|----------|---------|
| 1   | 0.2040       | 42.63                    | 9.82                    | 52.45                   | 63.45         | -11.00       | Peak     |         |
| 2   | 0.2040       | 32.10                    | 9.82                    | 41.92                   | 53.45         | -11.53       | AVG      |         |
| 3   | 0.2985       | 35.21                    | 9.82                    | 45.03                   | 60.28         | -15.25       | Peak     |         |
| 4   | 0.4335       | 35.16                    | 9.80                    | 44.96                   | 57.19         | -12.23       | Peak     |         |
| 5   | 0.7260       | 40.70                    | 9.88                    | 50.58                   | 56.00         | -5.42        | QP       |         |
| 6 * | 0.7260       | 35.60                    | 9.88                    | 45.48                   | 46.00         | -0.52        | AVG      |         |
| 7   | 1.3380       | 33.46                    | 9.94                    | 43.40                   | 56.00         | -12.60       | Peak     |         |
| 8   | 1.9050       | 32.15                    | 9.99                    | 42.14                   | 56.00         | -13.86       | Peak     |         |

## REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX G MODE CHANNEL 01

# Neutral



| No. | 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   | 0.1995       | 39.29                    | 9.91                    | 49.20                   | 63.63         | -14.43       | Peak     |         |
| 2   | 0.3120       | 31.32                    | 9.93                    | 41.25                   | 59.92         | -18.67       | Peak     |         |
| 3   | 0.4020       | 31.25                    | 9.95                    | 41.20                   | 57.81         | -16.61       | Peak     |         |
| 4   | 0.7260       | 35.04                    | 10.05                   | 45.09                   | 56.00         | -10.91       | Peak     |         |
| 5 * | 0.7260       | 25.14                    | 10.05                   | 35.19                   | 46.00         | -10.81       | AVG      |         |
| 6   | 0.9195       | 30.05                    | 10.10                   | 40.15                   | 56.00         | -15.85       | Peak     |         |
| 7   | 1.3200       | 26.55                    | 10.14                   | 36.69                   | 56.00         | -19.31       | Peak     |         |

## REMARKS:

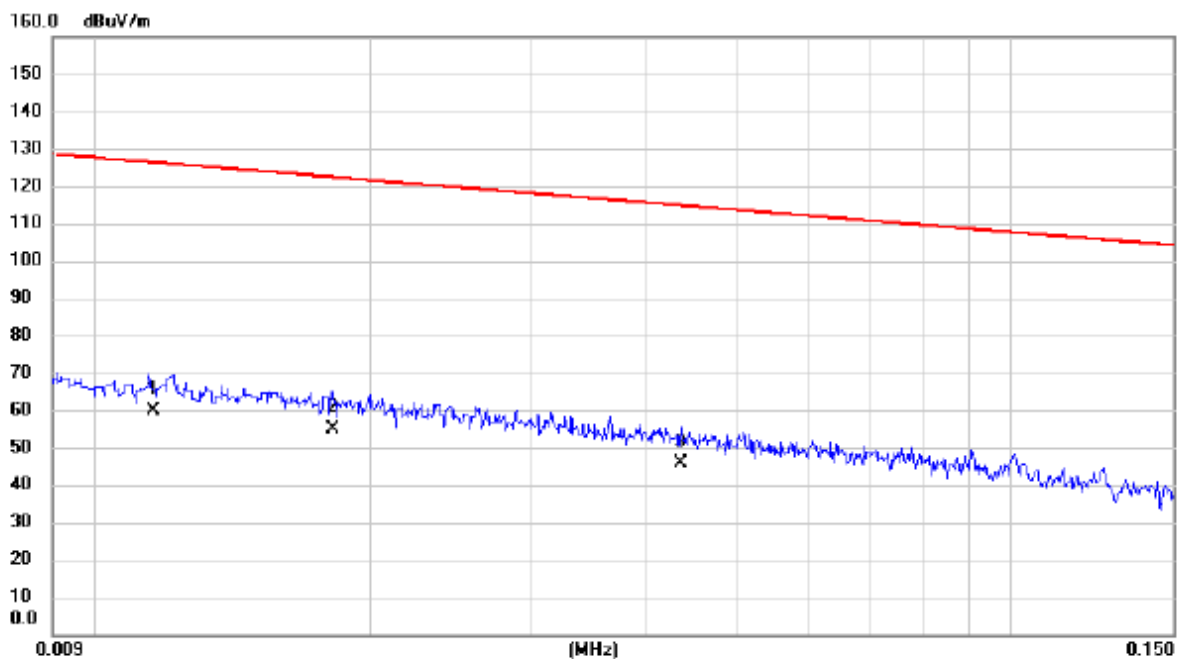
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



## APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Test Mode: TX B MODE CHANNEL 11

Ant 0°



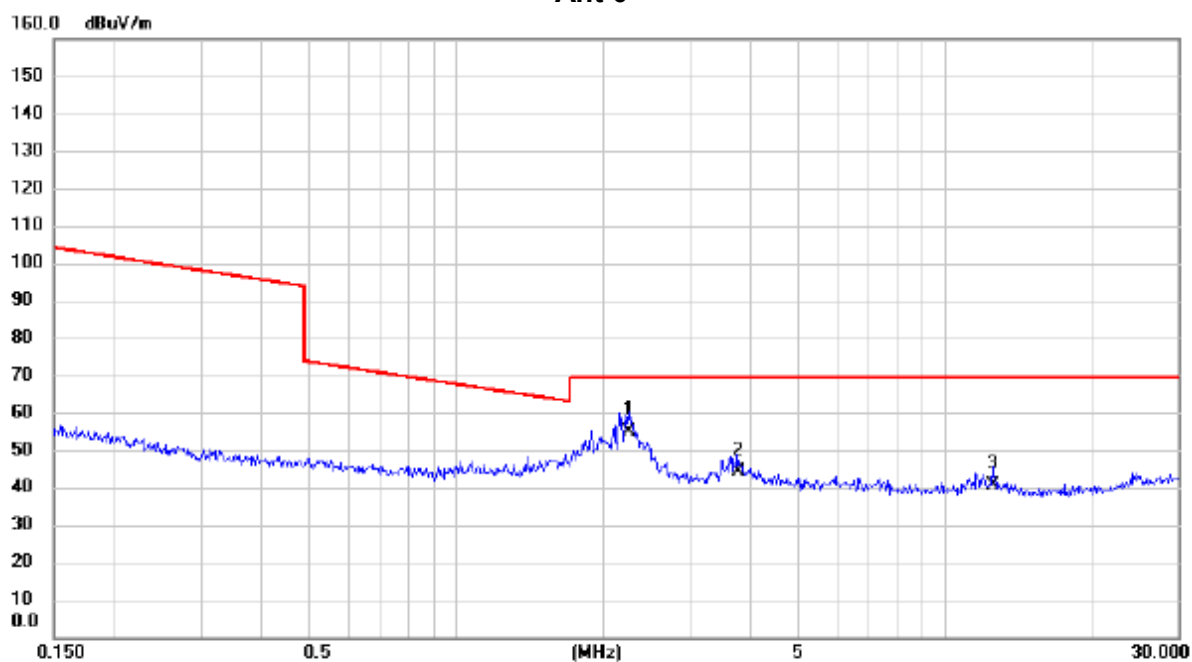
| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measurement | Limit  | Margin |          |         |
|-----|-----|--------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz    | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 0.0116 | 38.62         | 21.20          | 59.82       | 126.32 | -66.50 | AVG      |         |
| 2   |     | 0.0182 | 34.86         | 20.27          | 55.13       | 122.40 | -67.27 | AVG      |         |
| 3   |     | 0.0436 | 25.99         | 19.64          | 45.63       | 114.82 | -69.19 | AVG      |         |

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX B MODE CHANNEL 11

Ant 0°



| No. | Mk. | Freq.   | Reading Level | Correct Factor | Measurement | Limit  | Margin |          |         |
|-----|-----|---------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz     | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 2.2486  | 38.12         | 16.97          | 55.09       | 69.54  | -14.45 | QP       |         |
| 2   |     | 3.7594  | 28.31         | 15.93          | 44.24       | 69.54  | -25.30 | QP       |         |
| 3   |     | 12.5156 | 26.11         | 14.55          | 40.66       | 69.54  | -28.88 | QP       |         |

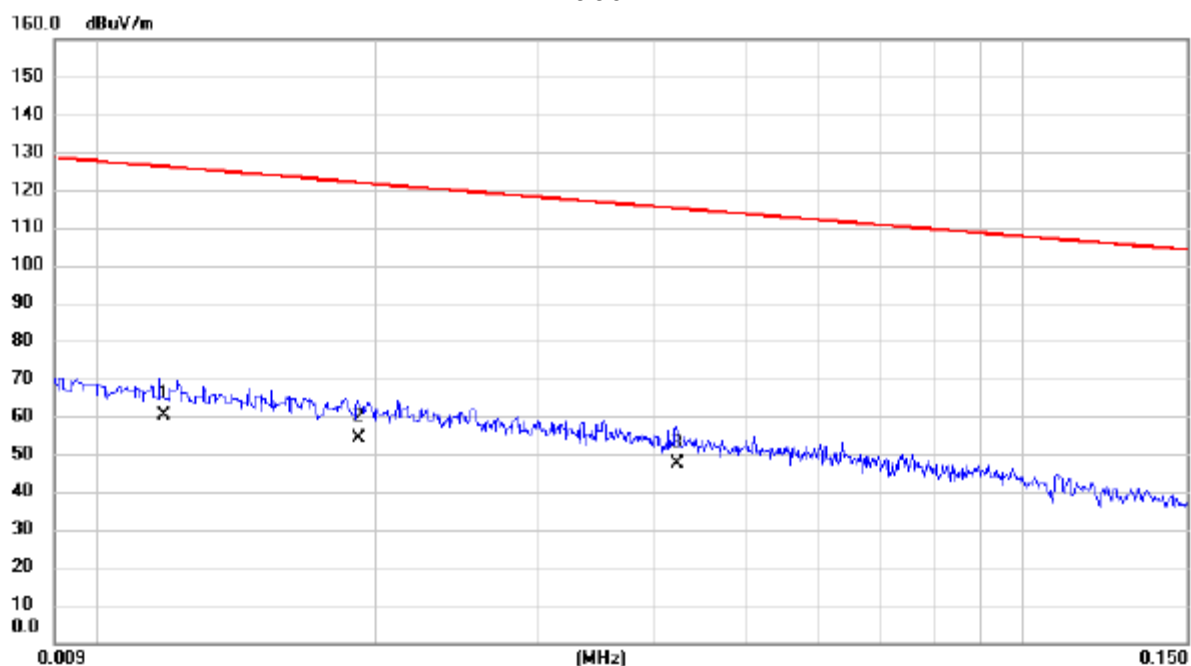
REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX B MODE CHANNEL 11

Ant 90°



| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measure-ment | Limit  | Margin |          |         |
|-----|-----|--------|---------------|----------------|--------------|--------|--------|----------|---------|
|     |     | MHz    | dBuV          | dB             | dBuV/m       | dBuV/m | dB     | Detector | Comment |
| 1   | *   | 0.0118 | 39.12         | 21.17          | 60.29        | 126.17 | -65.88 | AVG      |         |
| 2   |     | 0.0192 | 34.11         | 20.13          | 54.24        | 121.94 | -67.70 | AVG      |         |
| 3   |     | 0.0423 | 27.88         | 19.66          | 47.54        | 115.08 | -67.54 | AVG      |         |

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX B MODE CHANNEL 11

Ant 90°



| No. | Mk. | Freq.  | Reading Level | Correct Factor | Measurement | Limit  | Margin |          |         |
|-----|-----|--------|---------------|----------------|-------------|--------|--------|----------|---------|
|     |     | MHz    | dBuV          | dB             | dBuV/m      | dBuV/m | dB     | Detector | Comment |
| 1   |     | 0.2644 | 24.62         | 17.05          | 41.67       | 99.16  | -57.49 | AVG      |         |
| 2   | *   | 2.2606 | 28.76         | 16.96          | 45.72       | 69.54  | -23.82 | QP       |         |
| 3   |     | 3.6806 | 24.39         | 16.00          | 40.39       | 69.54  | -29.15 | QP       |         |

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

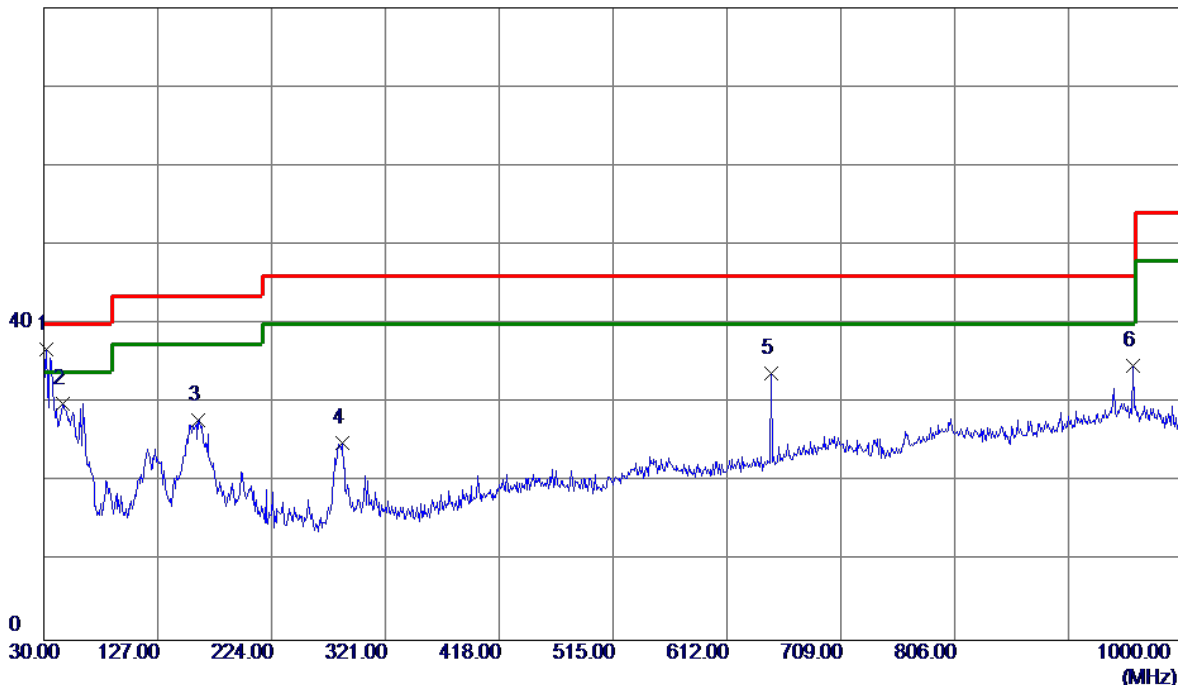
(2) Margin Level = Measurement Value - Limit Value.

## **APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ**

Test Mode: TX B MODE CHANNEL 11

Vertical

80 dBuV/m



REMARKS:

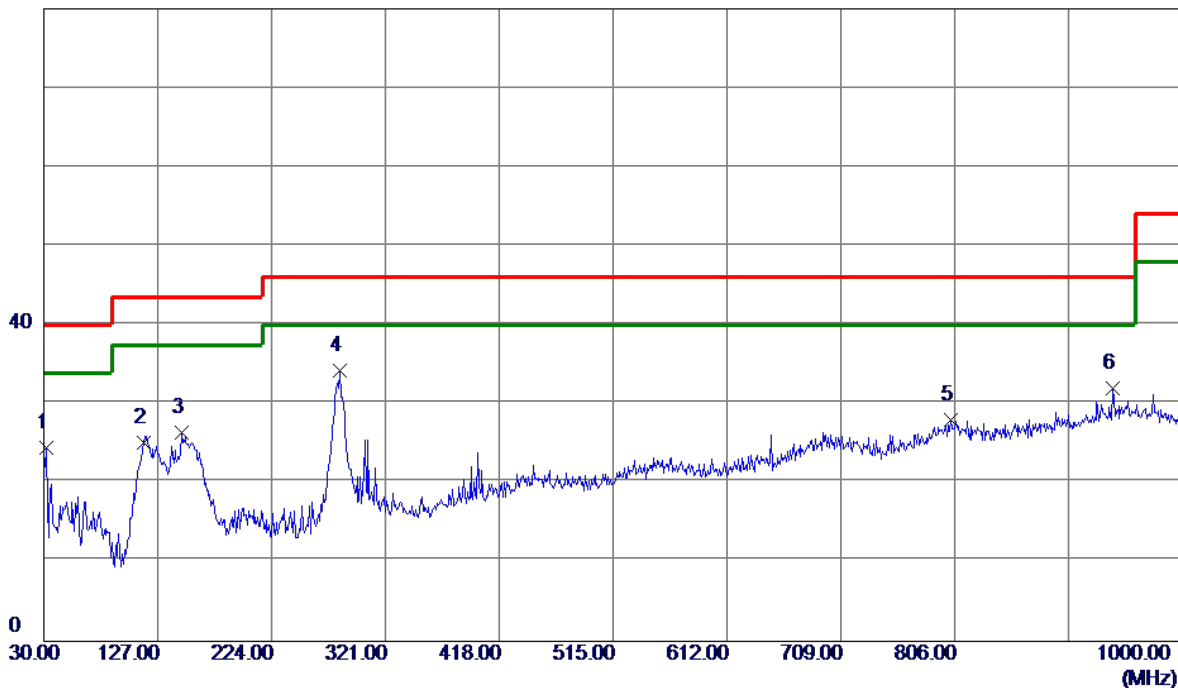
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX B MODE CHANNEL 11

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 31.9400      | 39.51                      | -15.04                  | 24.47                     | 40.00           | -15.53       | Peak     |         |
| 2   | 115.3600     | 40.51                      | -15.43                  | 25.08                     | 43.50           | -18.42       | Peak     |         |
| 3   | 147.3700     | 38.09                      | -11.65                  | 26.44                     | 43.50           | -17.06       | Peak     |         |
| 4 * | 282.2000     | 45.43                      | -11.25                  | 34.18                     | 46.00           | -11.82       | Peak     |         |
| 5   | 803.0900     | 29.16                      | -1.09                   | 28.07                     | 46.00           | -17.93       | Peak     |         |
| 6   | 940.8300     | 30.90                      | 1.04                    | 31.94                     | 46.00           | -14.06       | Peak     |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

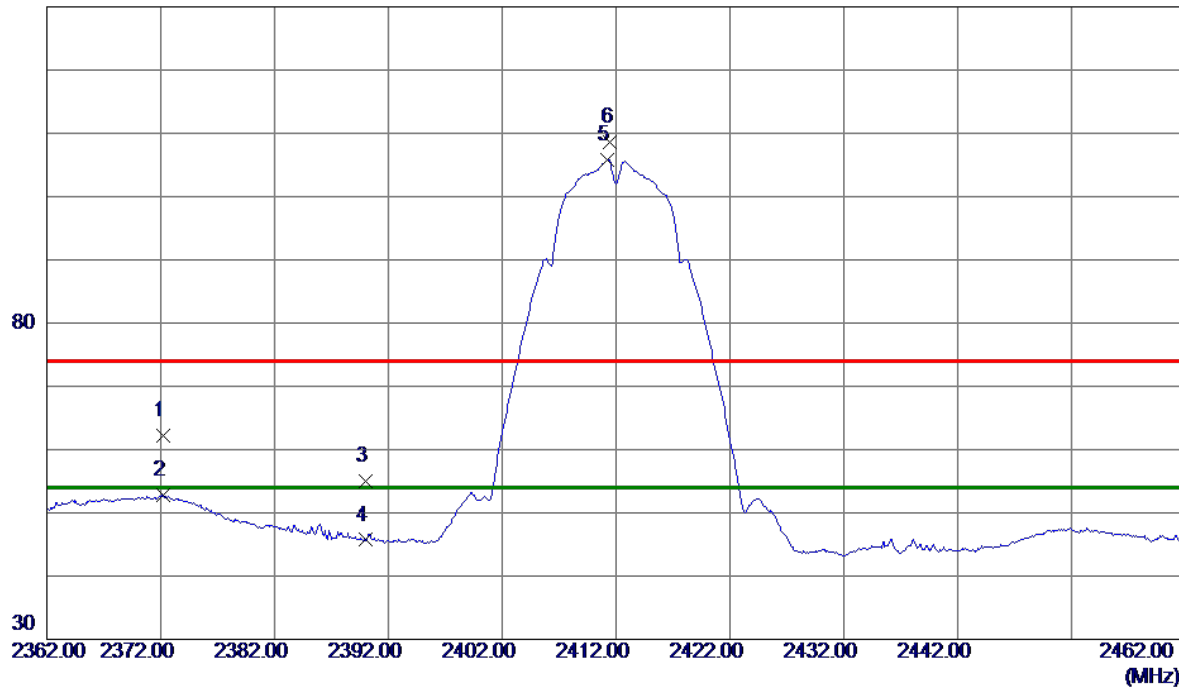


## APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2412 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2372.2000    | 55.13                      | 7.01                    | 62.14                     | 74.00           | -11.86       | Peak     |          |
| 2   | 2372.2000    | 45.75                      | 7.01                    | 52.76                     | 54.00           | -1.24        | AVG      |          |
| 3   | 2390.0000    | 47.90                      | 7.01                    | 54.91                     | 74.00           | -19.09       | Peak     |          |
| 4   | 2390.0000    | 38.69                      | 7.01                    | 45.70                     | 54.00           | -8.30        | AVG      |          |
| 5 * | 2411.2000    | 98.73                      | 7.02                    | 105.75                    | 54.00           | 51.75        | AVG      | No Limit |
| 6   | 2411.5000    | 101.52                     | 7.02                    | 108.54                    | 74.00           | 34.54        | Peak     | No Limit |

#### REMARKS:

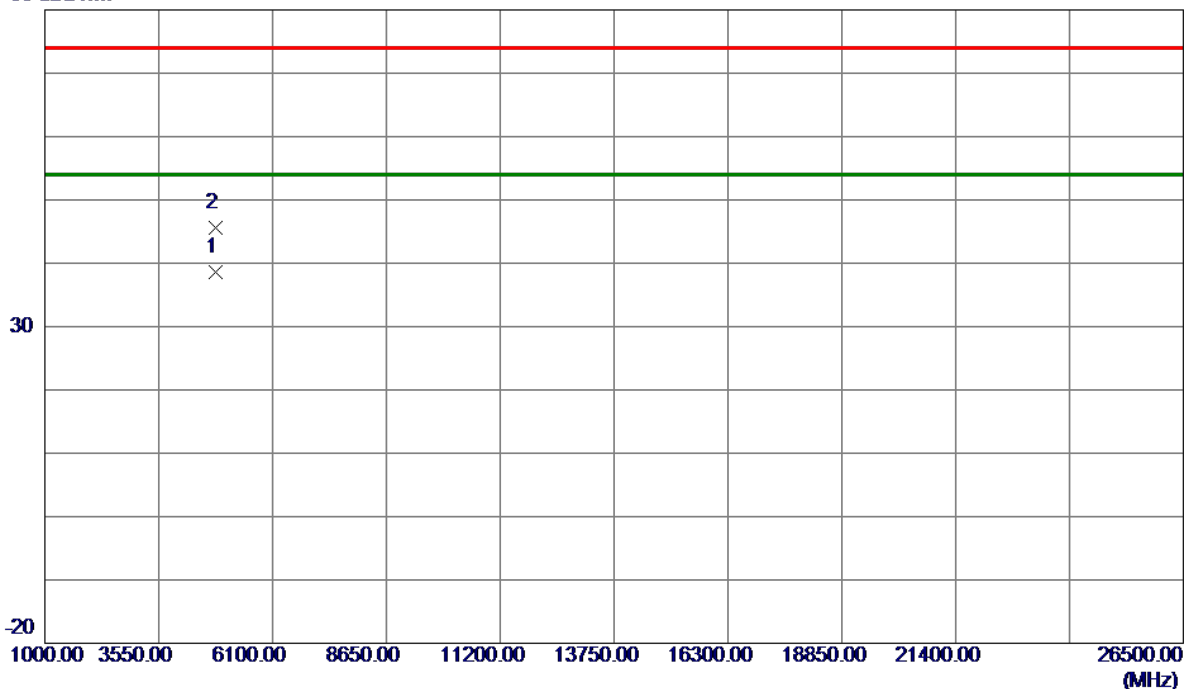
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2412 MHz |

### Vertical

80 dBuV/m



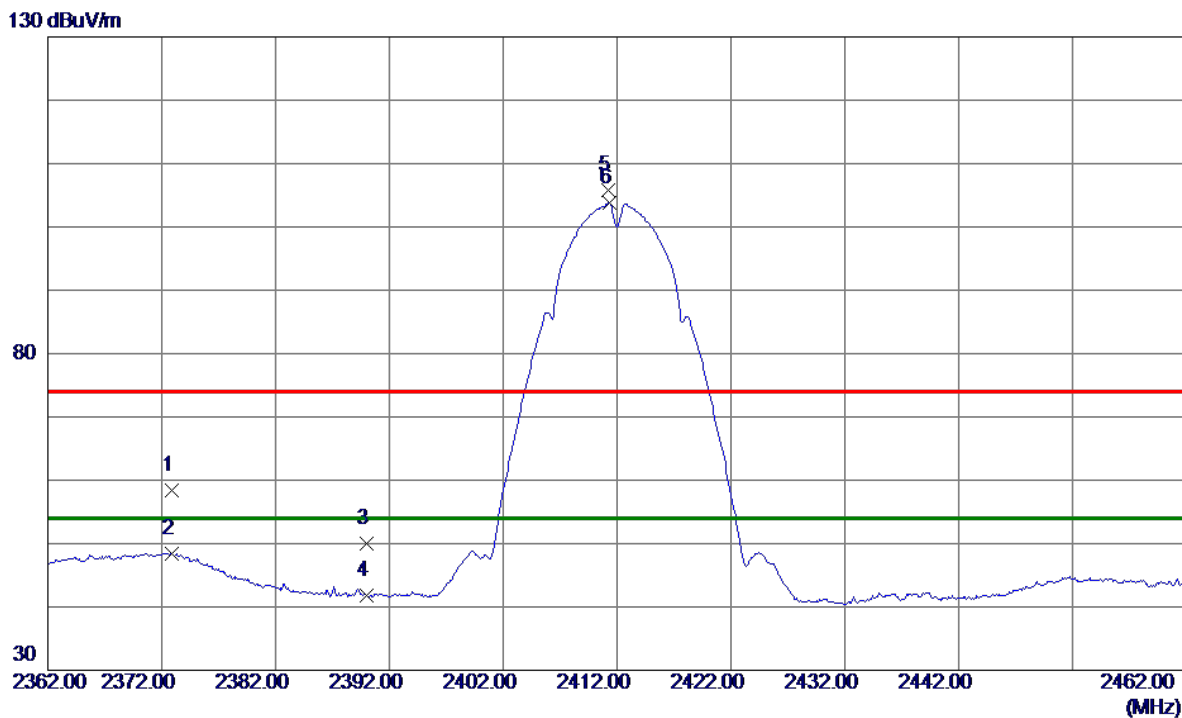
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4823.9100    | 34.42                      | 4.23                    | 38.65                     | 54.00           | -15.35       | AVG      |         |
| 2   | 4823.9700    | 41.44                      | 4.23                    | 45.67                     | 74.00           | -28.33       | Peak     |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2412 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2372.9000    | 51.33                      | 7.01                    | 58.34                     | 74.00           | -15.66       | Peak     |          |
| 2   | 2372.9000    | 41.47                      | 7.01                    | 48.48                     | 54.00           | -5.52        | AVG      |          |
| 3   | 2390.0000    | 43.07                      | 7.01                    | 50.08                     | 74.00           | -23.92       | Peak     |          |
| 4   | 2390.0000    | 34.83                      | 7.01                    | 41.84                     | 54.00           | -12.16       | AVG      |          |
| 5   | 2411.2000    | 98.83                      | 7.02                    | 105.85                    | 74.00           | 31.85        | Peak     | No Limit |
| 6 * | 2411.3000    | 96.78                      | 7.02                    | 103.80                    | 54.00           | 49.80        | AVG      | No Limit |

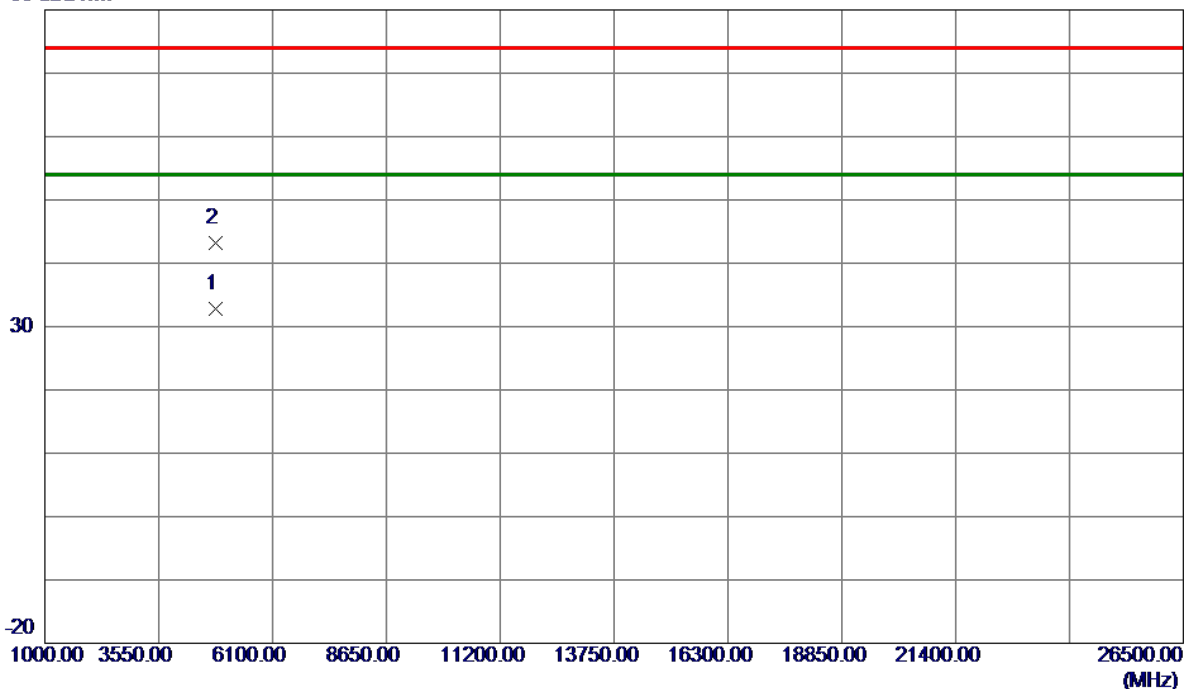
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2412 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4823.9900    | 28.62                      | 4.23                    | 32.85                     | 54.00           | -21.15       | AVG      |         |
| 2   | 4824.0700    | 39.00                      | 4.23                    | 43.23                     | 74.00           | -30.77       | Peak     |         |

#### REMARKS:

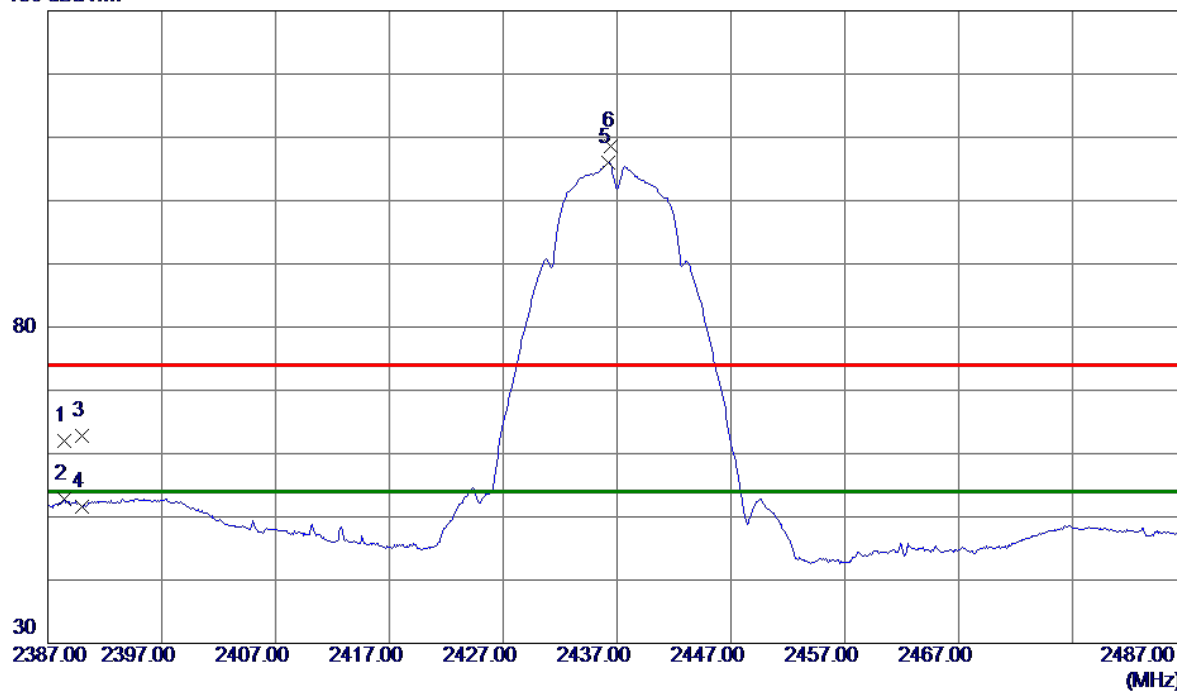
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2437 MHz |

Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2388.4000    | 55.03                      | 7.01                    | 62.04                     | 74.00           | -11.96       | Peak     |          |
| 2   | 2388.4000    | 45.77                      | 7.01                    | 52.78                     | 54.00           | -1.22        | AVG      |          |
| 3   | 2390.0000    | 55.88                      | 7.01                    | 62.89                     | 74.00           | -11.11       | Peak     |          |
| 4   | 2390.0000    | 44.55                      | 7.01                    | 51.56                     | 54.00           | -2.44        | AVG      |          |
| 5 * | 2436.2000    | 98.90                      | 7.02                    | 105.92                    | 54.00           | 51.92        | AVG      | No Limit |
| 6   | 2436.5000    | 101.66                     | 7.02                    | 108.68                    | 74.00           | 34.68        | Peak     | No Limit |

REMARKS:

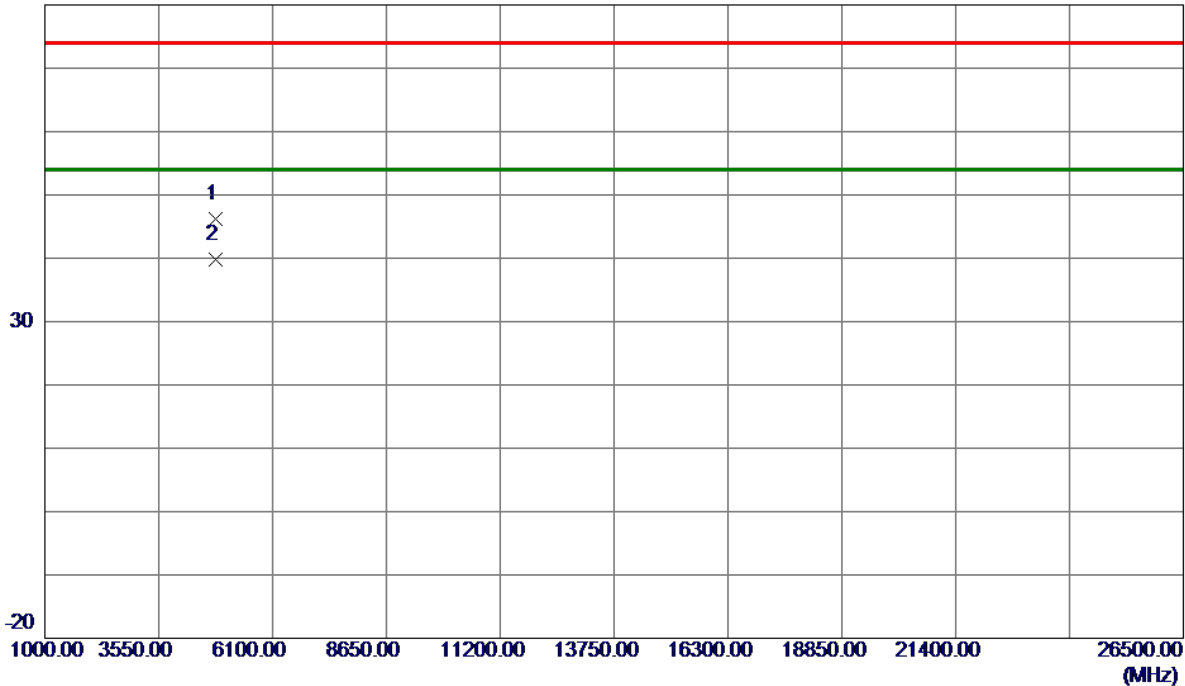
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2437 MHz |

### Vertical

80 dBuV/m



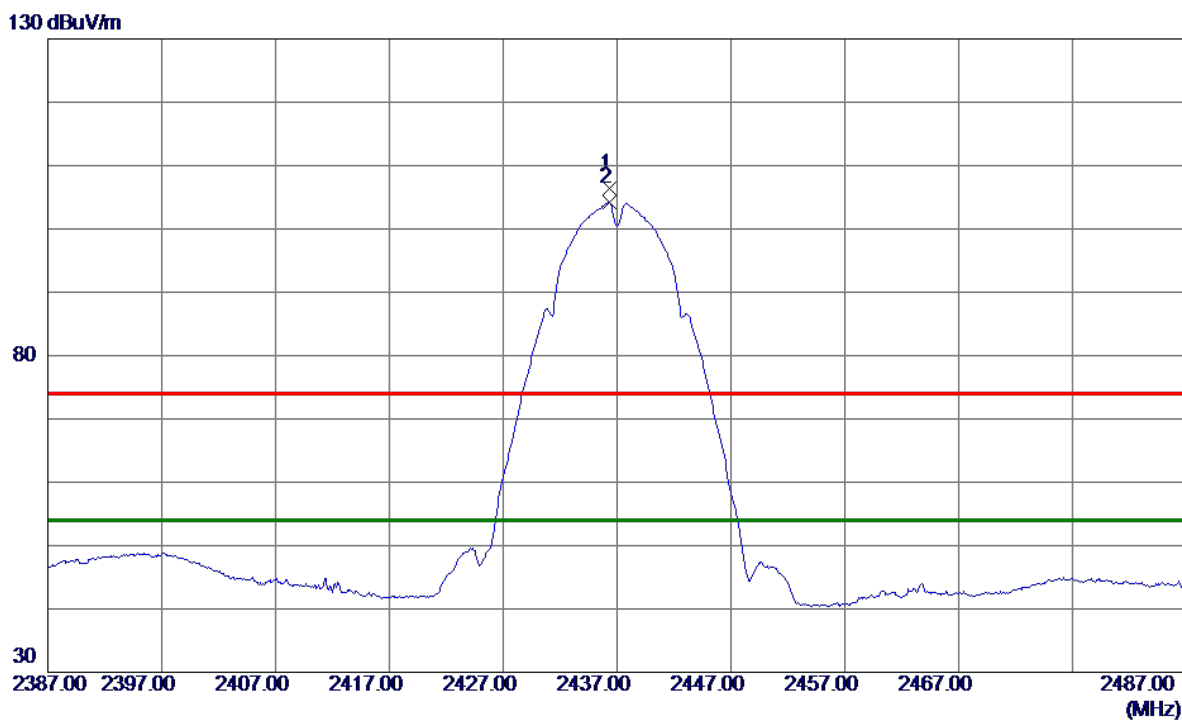
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4823.8150    | 41.98                      | 4.23                    | 46.21                     | 74.00           | -27.79       | Peak     |         |
| 2 * | 4823.9750    | 35.64                      | 4.23                    | 39.87                     | 54.00           | -14.13       | AVG      |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2437 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2436.3000    | 99.29                      | 7.02                    | 106.31                    | 74.00           | 32.31        | Peak     | No Limit |
| 2 * | 2436.3000    | 97.14                      | 7.02                    | 104.16                    | 54.00           | 50.16        | AVG      | No Limit |

#### REMARKS:

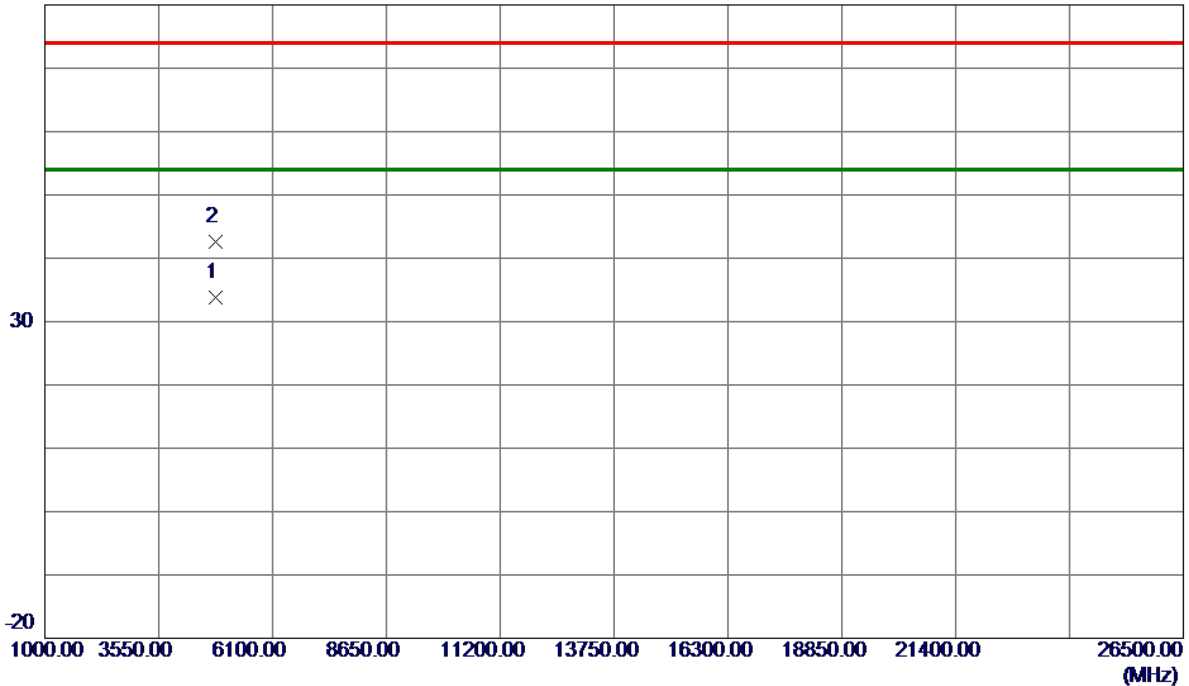
- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.



|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2437 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4823.9700    | 29.49                      | 4.23                    | 33.72                     | 54.00           | -20.28       | AVG      |         |
| 2   | 4823.9850    | 38.33                      | 4.23                    | 42.56                     | 74.00           | -31.44       | Peak     |         |

#### REMARKS:

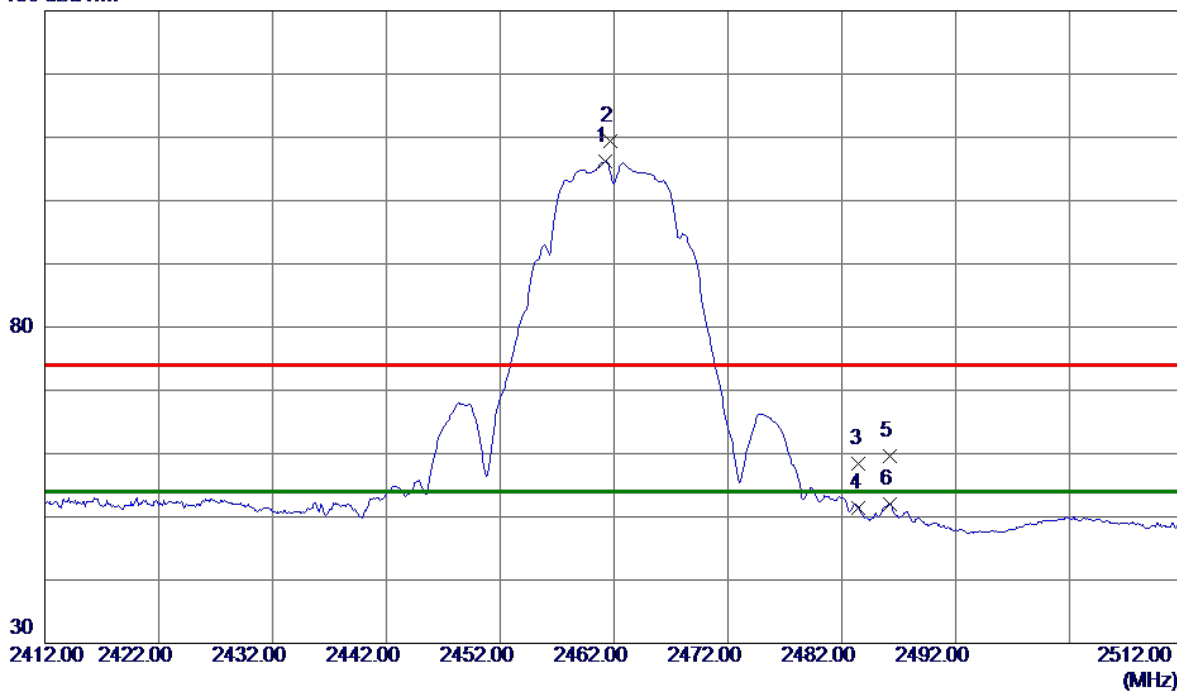
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2462 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2461.2000    | 99.14                      | 7.03                    | 106.17                    | 54.00           | 52.17        | AVG      | No Limit |
| 2   | 2461.7000    | 102.28                     | 7.03                    | 109.31                    | 74.00           | 35.31        | Peak     | No Limit |
| 3   | 2483.5000    | 51.43                      | 7.03                    | 58.46                     | 74.00           | -15.54       | Peak     |          |
| 4   | 2483.5000    | 44.34                      | 7.03                    | 51.37                     | 54.00           | -2.63        | AVG      |          |
| 5   | 2486.2000    | 52.49                      | 7.03                    | 59.52                     | 74.00           | -14.48       | Peak     |          |
| 6   | 2486.2000    | 45.00                      | 7.03                    | 52.03                     | 54.00           | -1.97        | AVG      |          |

#### REMARKS:

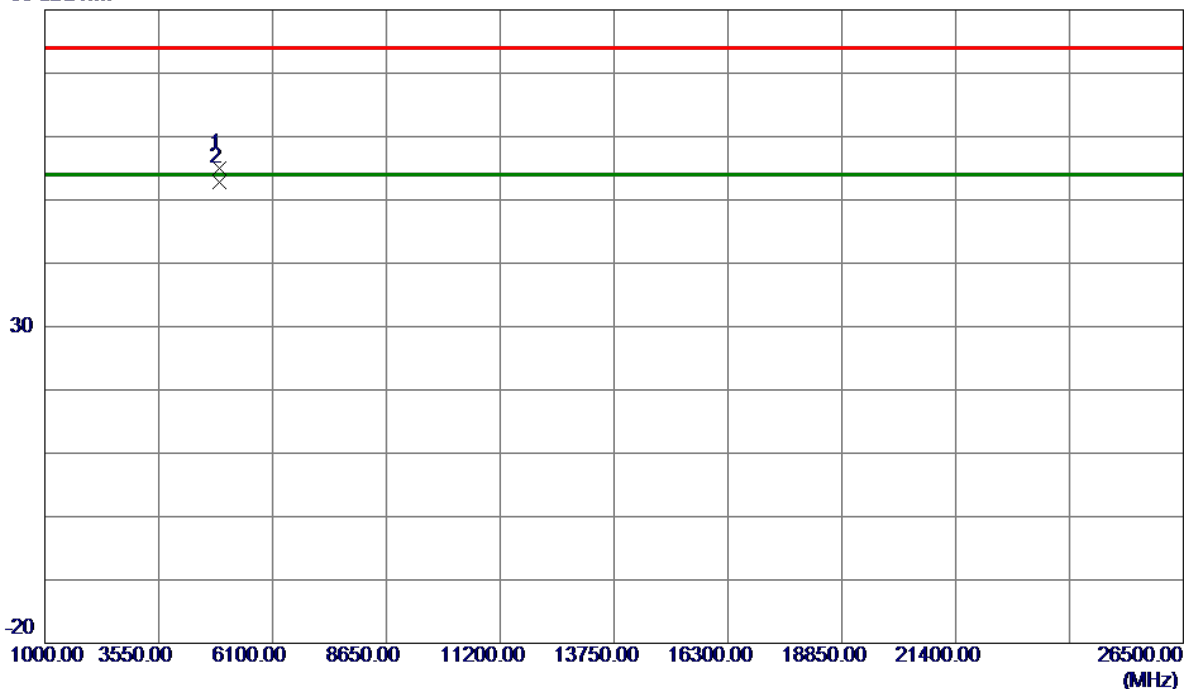
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2462 MHz |

### Vertical

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4923.8400    | 50.54                      | 4.44                    | 54.98                     | 74.00           | -19.02       | Peak     |         |
| 2 * | 4923.9200    | 48.36                      | 4.44                    | 52.80                     | 54.00           | -1.20        | AVG      |         |

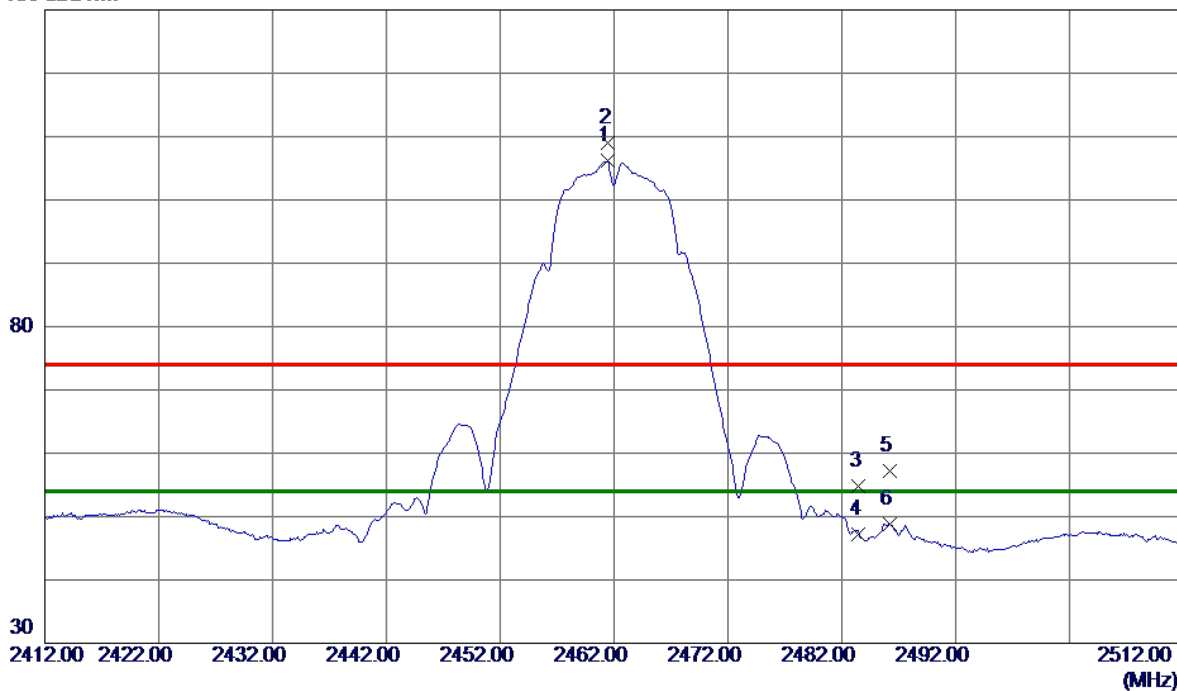
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2462 MHz |

### Horizontal

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2461.4000    | 99.08                      | 7.03                    | 106.11                    | 54.00           | 52.11        | AVG      | No Limit |
| 2   | 2461.5000    | 101.95                     | 7.03                    | 108.98                    | 74.00           | 34.98        | Peak     | No Limit |
| 3   | 2483.5000    | 47.75                      | 7.03                    | 54.78                     | 74.00           | -19.22       | Peak     |          |
| 4   | 2483.5000    | 40.14                      | 7.03                    | 47.17                     | 54.00           | -6.83        | AVG      |          |
| 5   | 2486.2000    | 50.22                      | 7.03                    | 57.25                     | 74.00           | -16.75       | Peak     |          |
| 6   | 2486.2000    | 41.75                      | 7.03                    | 48.78                     | 54.00           | -5.22        | AVG      |          |

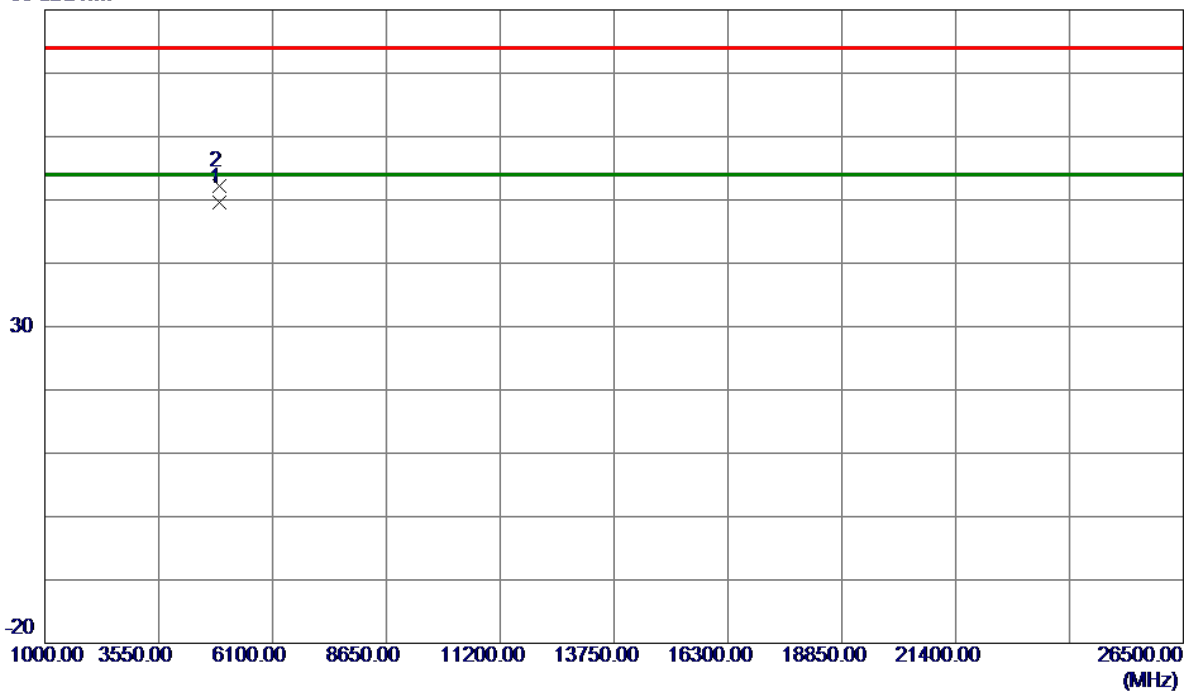
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX B Mode 2462 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4923.9700    | 45.14                      | 4.44                    | 49.58                     | 54.00           | -4.42        | AVG      |         |
| 2   | 4924.0099    | 47.77                      | 4.44                    | 52.21                     | 74.00           | -21.79       | Peak     |         |

#### REMARKS:

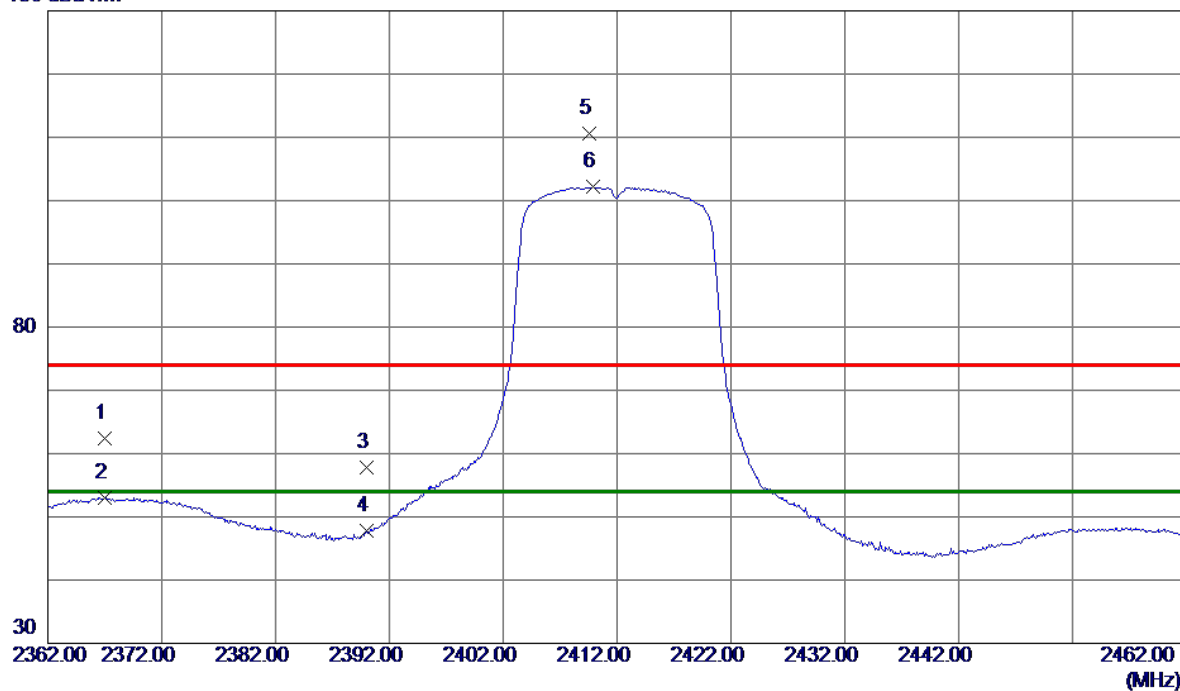
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2412 MHz |

Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2367.0000    | 55.46                      | 7.01                    | 62.47                     | 74.00           | -11.53       | Peak     |          |
| 2   | 2367.0000    | 46.07                      | 7.01                    | 53.08                     | 54.00           | -0.92        | AVG      |          |
| 3   | 2390.0000    | 50.84                      | 7.01                    | 57.85                     | 74.00           | -16.15       | Peak     |          |
| 4   | 2390.0000    | 40.70                      | 7.01                    | 47.71                     | 54.00           | -6.29        | AVG      |          |
| 5   | 2409.6000    | 103.50                     | 7.02                    | 110.52                    | 74.00           | 36.52        | Peak     | No Limit |
| 6 * | 2409.9000    | 95.15                      | 7.02                    | 102.17                    | 54.00           | 48.17        | AVG      | No Limit |

REMARKS:

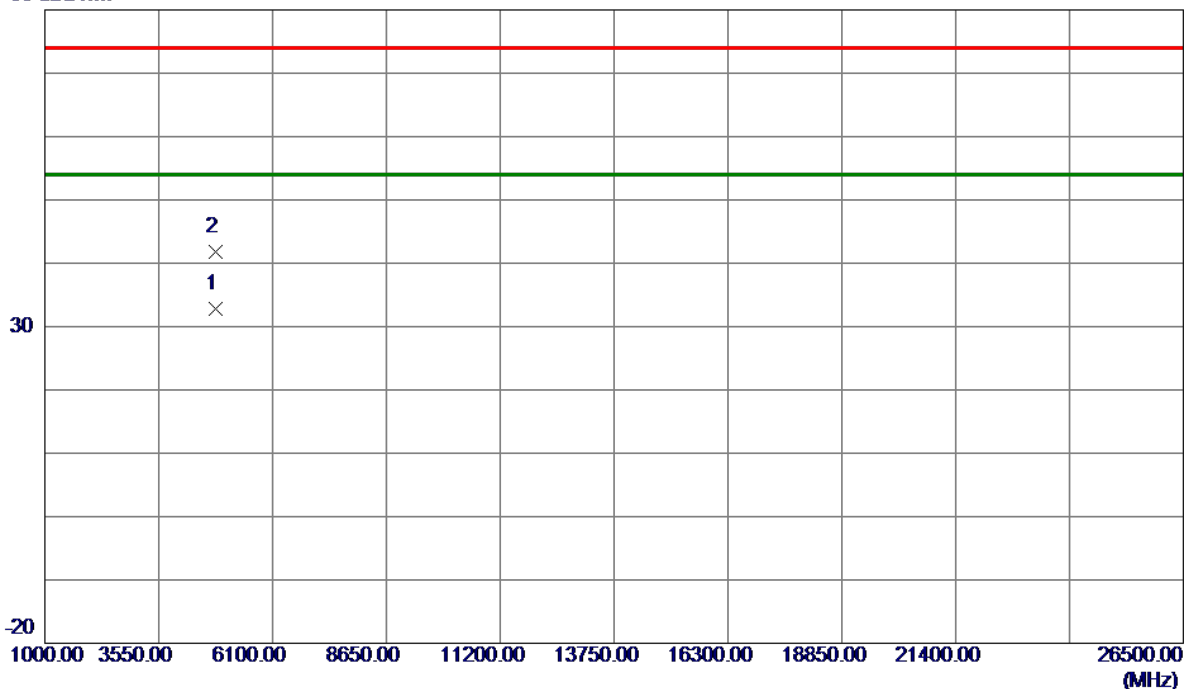
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2412 MHz |

### Vertical

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4823.9200    | 28.60                      | 4.23                    | 32.83                     | 54.00           | -21.17       | AVG      |         |
| 2   | 4825.2400    | 37.61                      | 4.23                    | 41.84                     | 74.00           | -32.16       | Peak     |         |

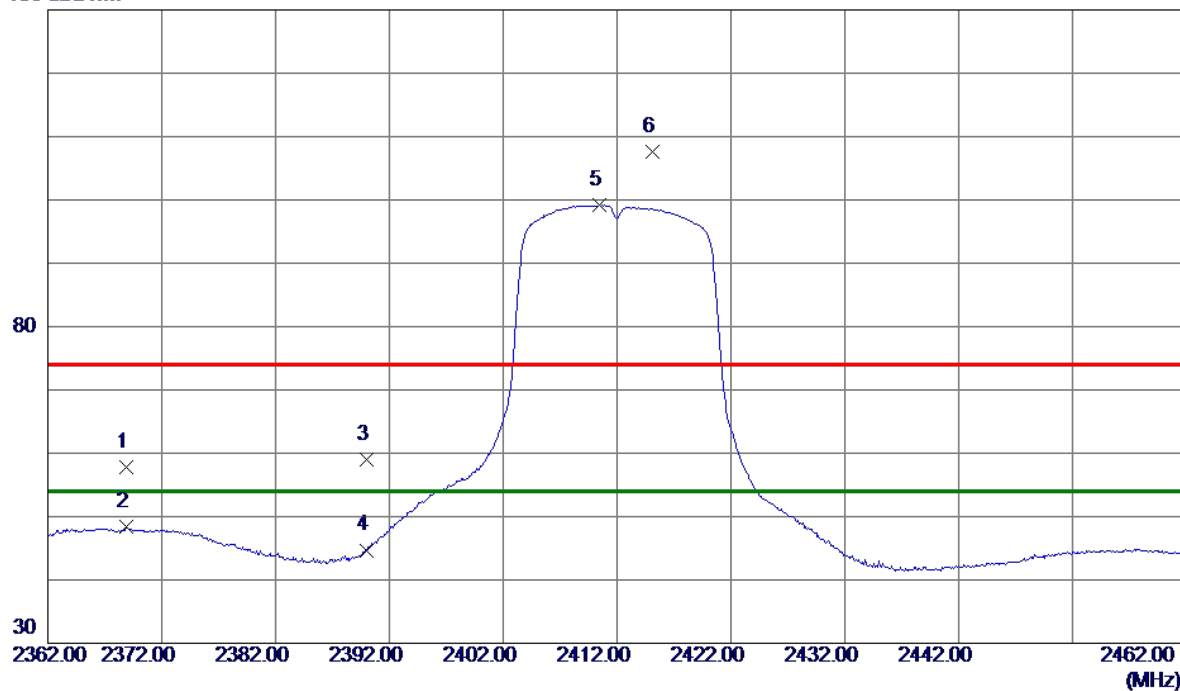
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2412 MHz |

### Horizontal

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2368.9000    | 50.80                      | 7.01                    | 57.81                     | 74.00           | -16.19       | Peak     |          |
| 2   | 2368.9000    | 41.31                      | 7.01                    | 48.32                     | 54.00           | -5.68        | AVG      |          |
| 3   | 2390.0000    | 52.01                      | 7.01                    | 59.02                     | 74.00           | -14.98       | Peak     |          |
| 4   | 2390.0000    | 37.69                      | 7.01                    | 44.70                     | 54.00           | -9.30        | AVG      |          |
| 5 * | 2410.4000    | 92.15                      | 7.02                    | 99.17                     | 54.00           | 45.17        | AVG      | No Limit |
| 6   | 2415.1000    | 100.61                     | 7.02                    | 107.63                    | 74.00           | 33.63        | Peak     | No Limit |

#### REMARKS:

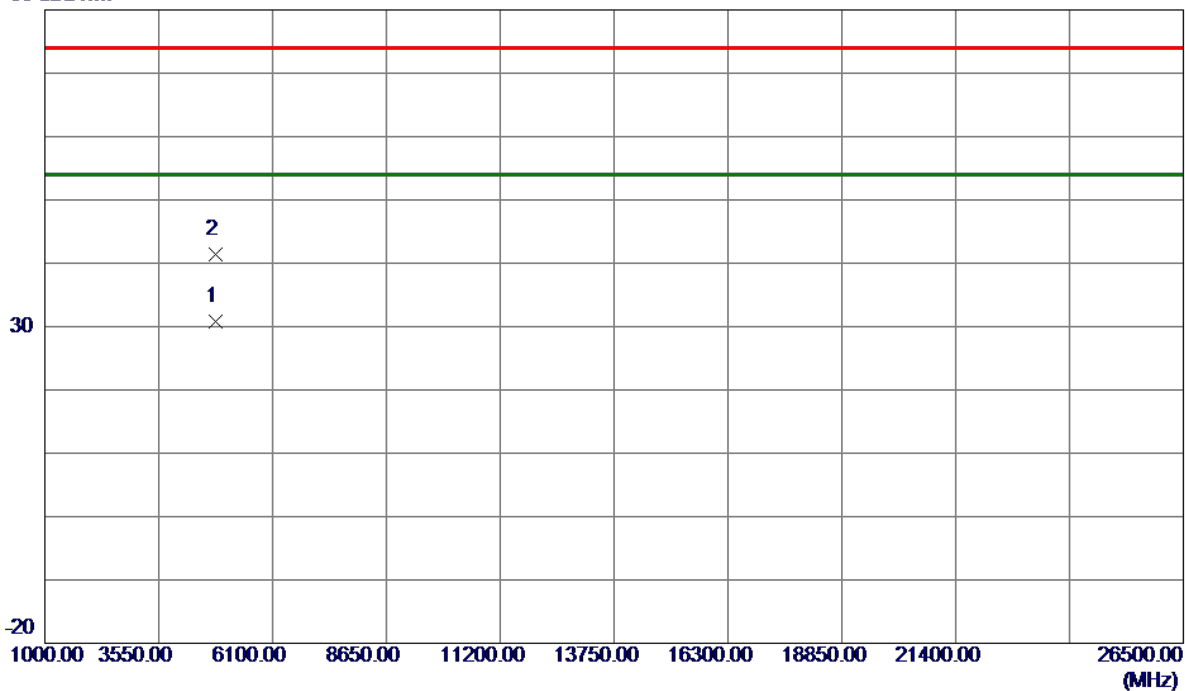
- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.



|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2412 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4823.9000    | 26.66                      | 4.23                    | 30.89                     | 54.00           | -23.11       | AVG      |         |
| 2   | 4824.5800    | 37.26                      | 4.23                    | 41.49                     | 74.00           | -32.51       | Peak     |         |

#### REMARKS:

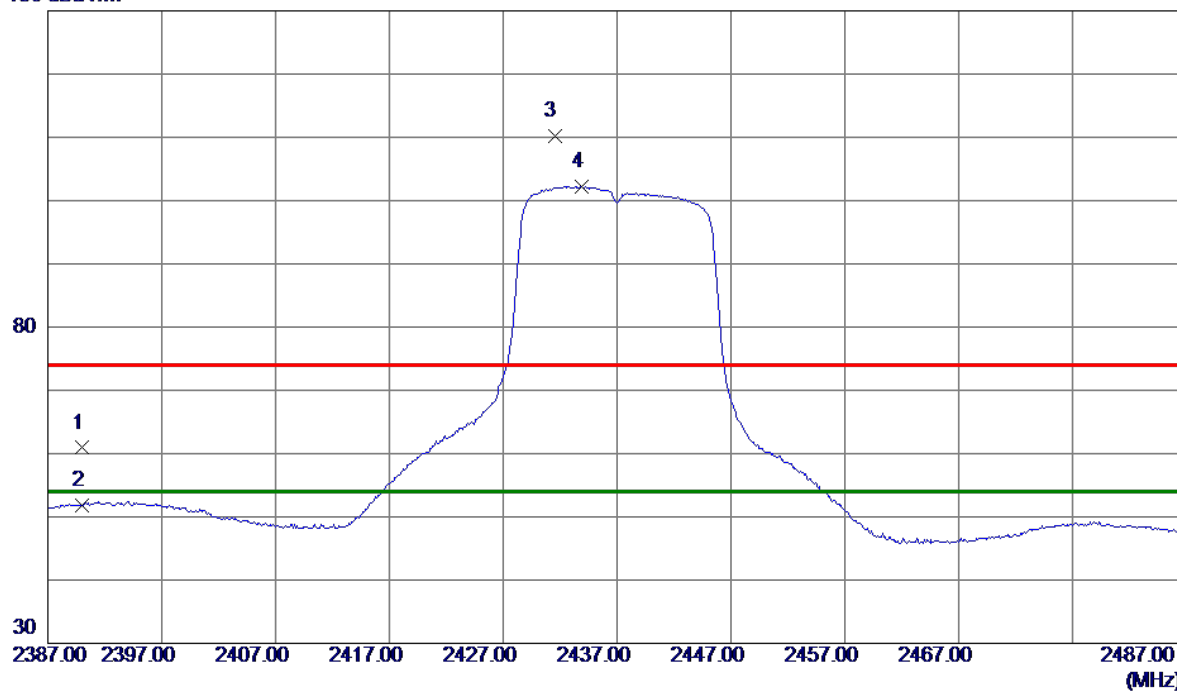
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2437 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2390.0000    | 53.89                      | 7.01                    | 60.90                     | 74.00           | -13.10       | Peak     |          |
| 2   | 2390.0000    | 44.82                      | 7.01                    | 51.83                     | 54.00           | -2.17        | AVG      |          |
| 3   | 2431.5000    | 103.09                     | 7.02                    | 110.11                    | 74.00           | 36.11        | Peak     | No Limit |
| 4 * | 2433.9000    | 95.21                      | 7.02                    | 102.23                    | 54.00           | 48.23        | AVG      | No Limit |

### REMARKS:

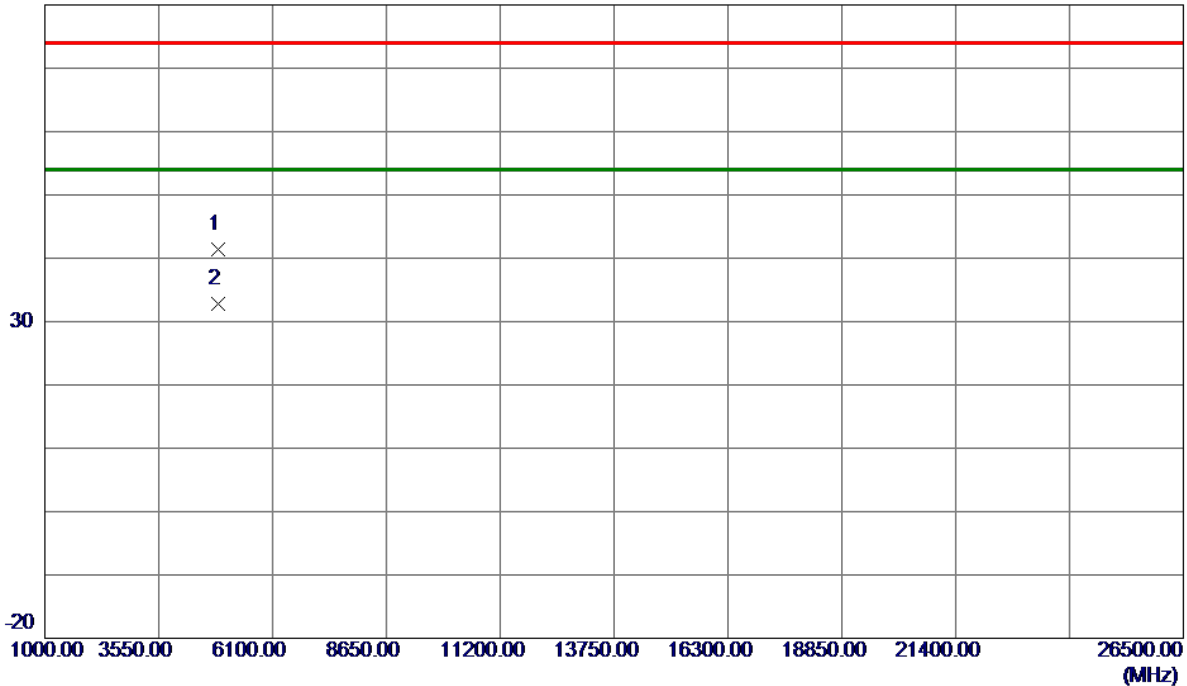
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2437 MHz |

### Vertical

80 dBuV/m



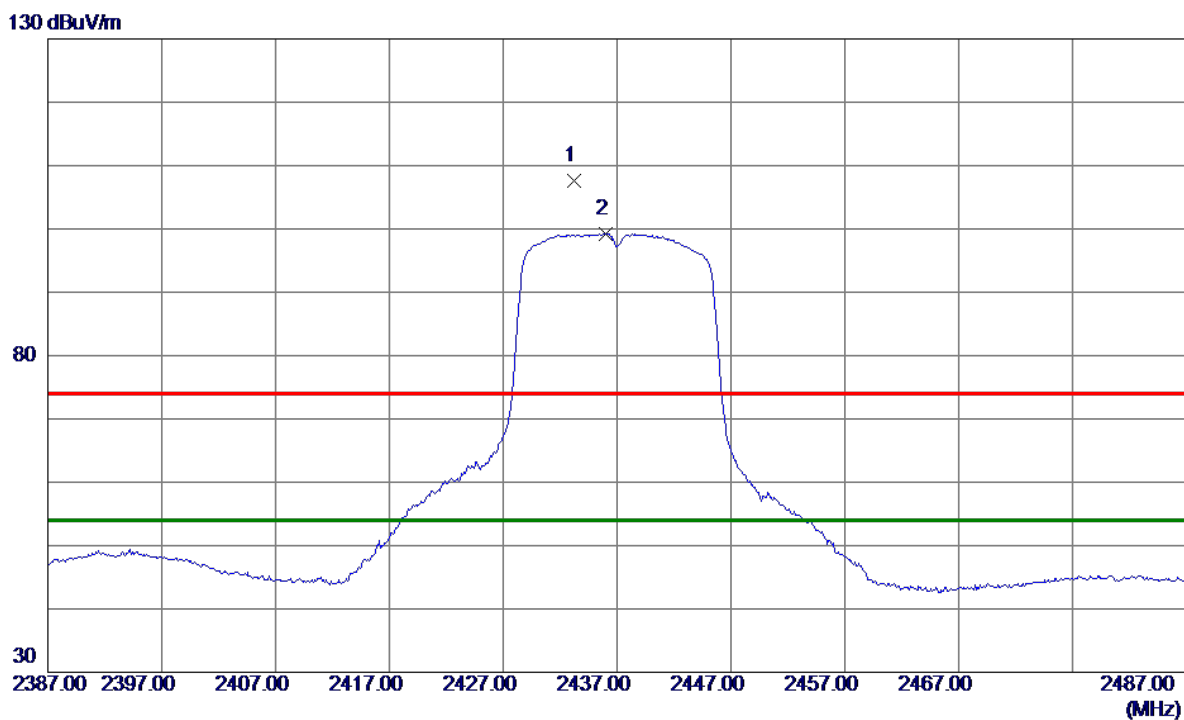
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4873.0800    | 37.07                      | 4.33                    | 41.40                     | 74.00           | -32.60       | Peak     |         |
| 2 * | 4873.9600    | 28.55                      | 4.34                    | 32.89                     | 54.00           | -21.11       | AVG      |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2437 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2433.2000    | 100.55                     | 7.02                    | 107.57                    | 74.00           | 33.57        | Peak     | No Limit |
| 2 * | 2436.0000    | 92.27                      | 7.02                    | 99.29                     | 54.00           | 45.29        | AVG      | No Limit |

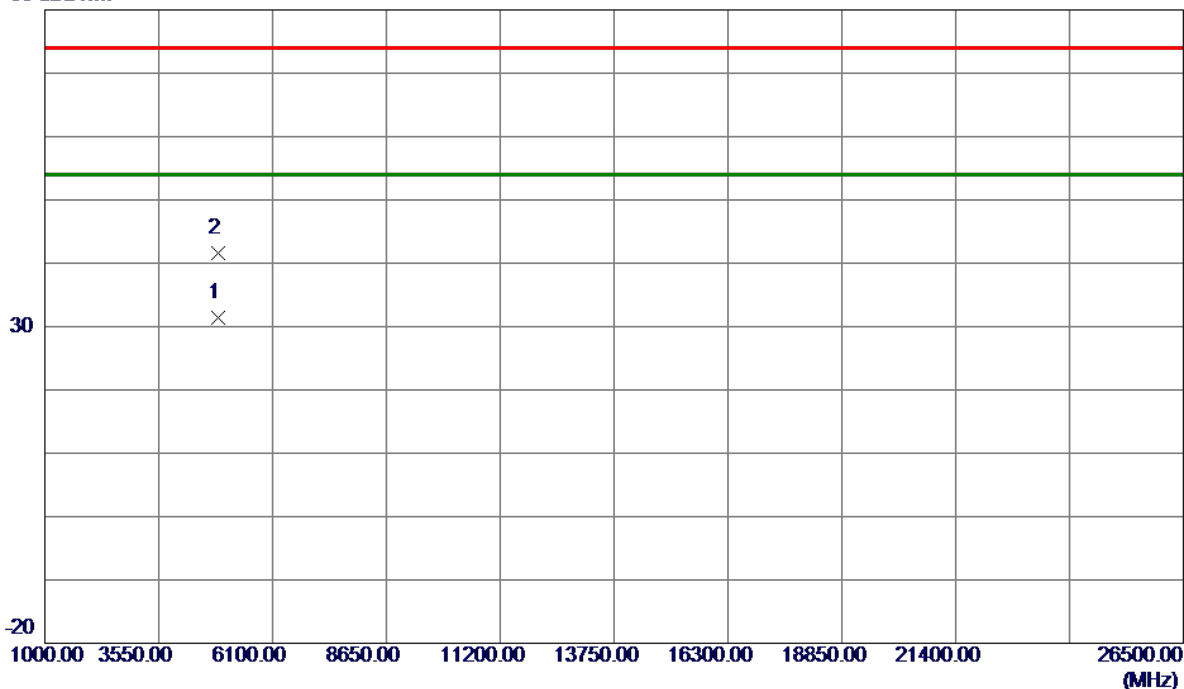
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2437 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4874.0600    | 27.01                      | 4.34                    | 31.35                     | 54.00           | -22.65       | AVG      |         |
| 2   | 4874.2000    | 37.33                      | 4.34                    | 41.67                     | 74.00           | -32.33       | Peak     |         |

#### REMARKS:

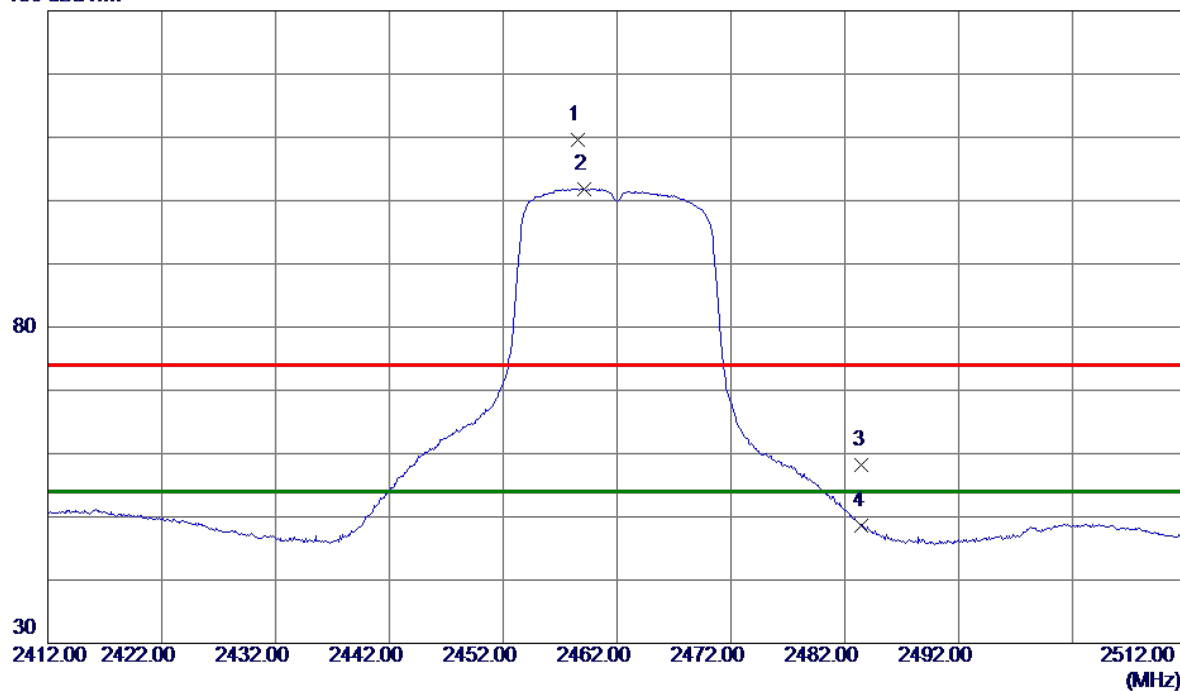
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2462 MHz |

**Vertical**

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2458.6000    | 102.66                     | 7.03                    | 109.69                    | 74.00           | 35.69        | Peak     | No Limit |
| 2 * | 2459.1000    | 94.86                      | 7.03                    | 101.89                    | 54.00           | 47.89        | AVG      | No Limit |
| 3   | 2483.5000    | 51.19                      | 7.03                    | 58.22                     | 74.00           | -15.78       | Peak     |          |
| 4   | 2483.5000    | 41.50                      | 7.03                    | 48.53                     | 54.00           | -5.47        | AVG      |          |

**REMARKS:**

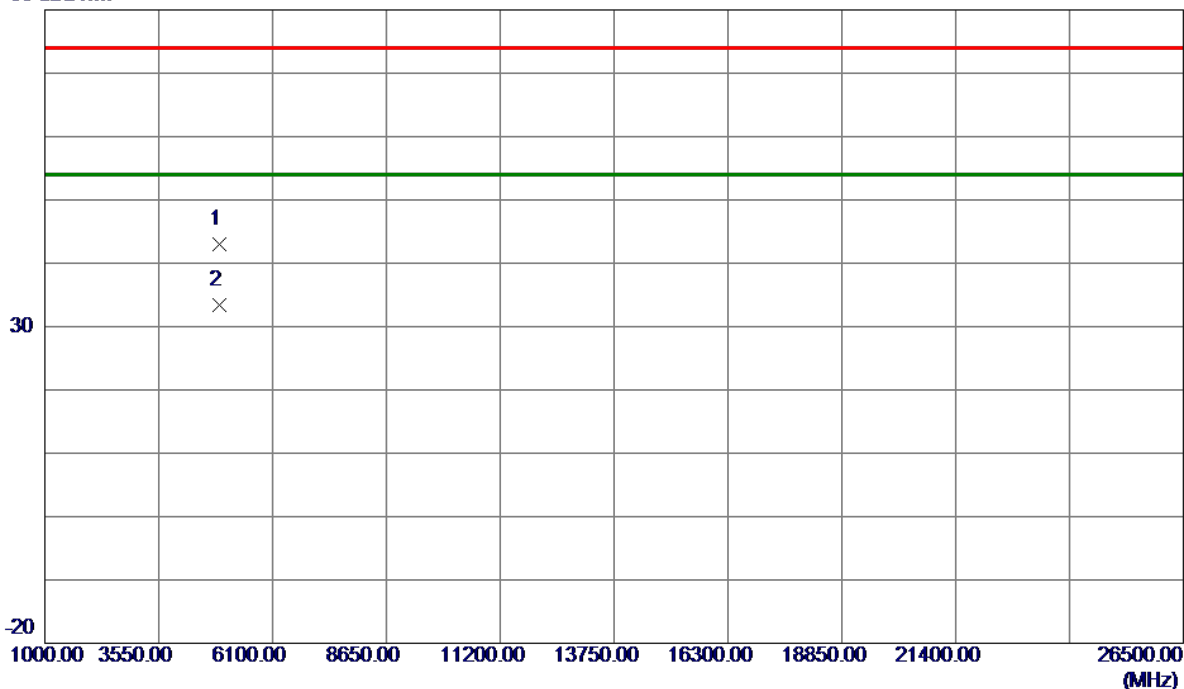
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2462 MHz |

**Vertical**

80 dBuV/m



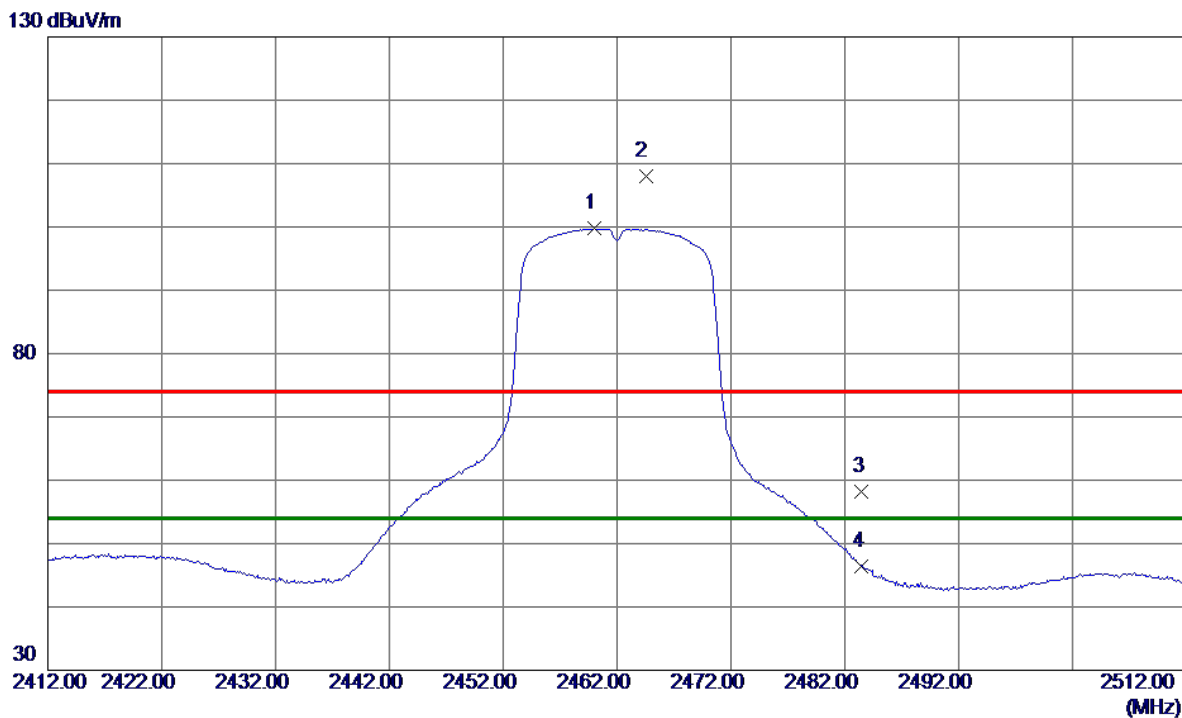
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4923.3800    | 38.49                      | 4.44                    | 42.93                     | 74.00           | -31.07       | Peak     |         |
| 2 * | 4923.9000    | 29.03                      | 4.44                    | 33.47                     | 54.00           | -20.53       | AVG      |         |

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2462 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2460.0000    | 92.70                      | 7.03                    | 99.73                     | 54.00           | 45.73        | AVG      | No Limit |
| 2   | 2464.5000    | 100.94                     | 7.03                    | 107.97                    | 74.00           | 33.97        | Peak     | No Limit |
| 3   | 2483.5000    | 51.10                      | 7.03                    | 58.13                     | 74.00           | -15.87       | Peak     |          |
| 4   | 2483.5000    | 39.44                      | 7.03                    | 46.47                     | 54.00           | -7.53        | AVG      |          |

#### REMARKS:

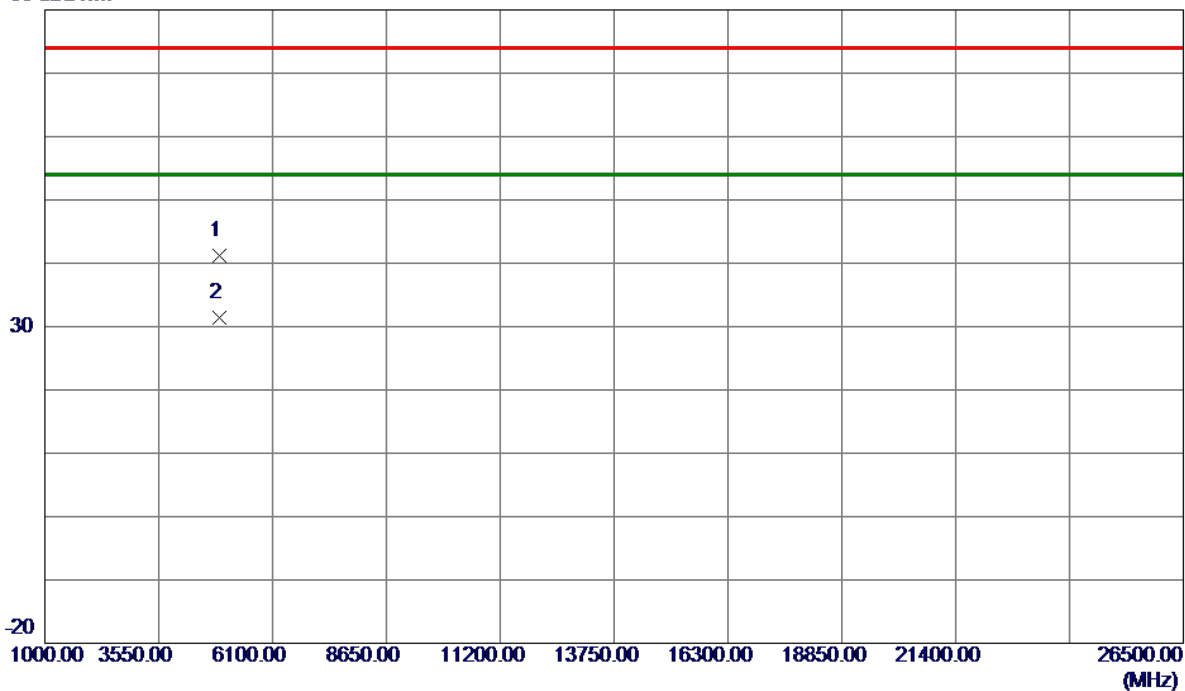
- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.



|                 |                    |
|-----------------|--------------------|
| Orthogonal Axis | X                  |
| Test Mode:      | TX G Mode 2462 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4923.6000    | 36.78                      | 4.44                    | 41.22                     | 74.00           | -32.78       | Peak     |         |
| 2 * | 4923.7799    | 26.94                      | 4.44                    | 31.38                     | 54.00           | -22.62       | AVG      |         |

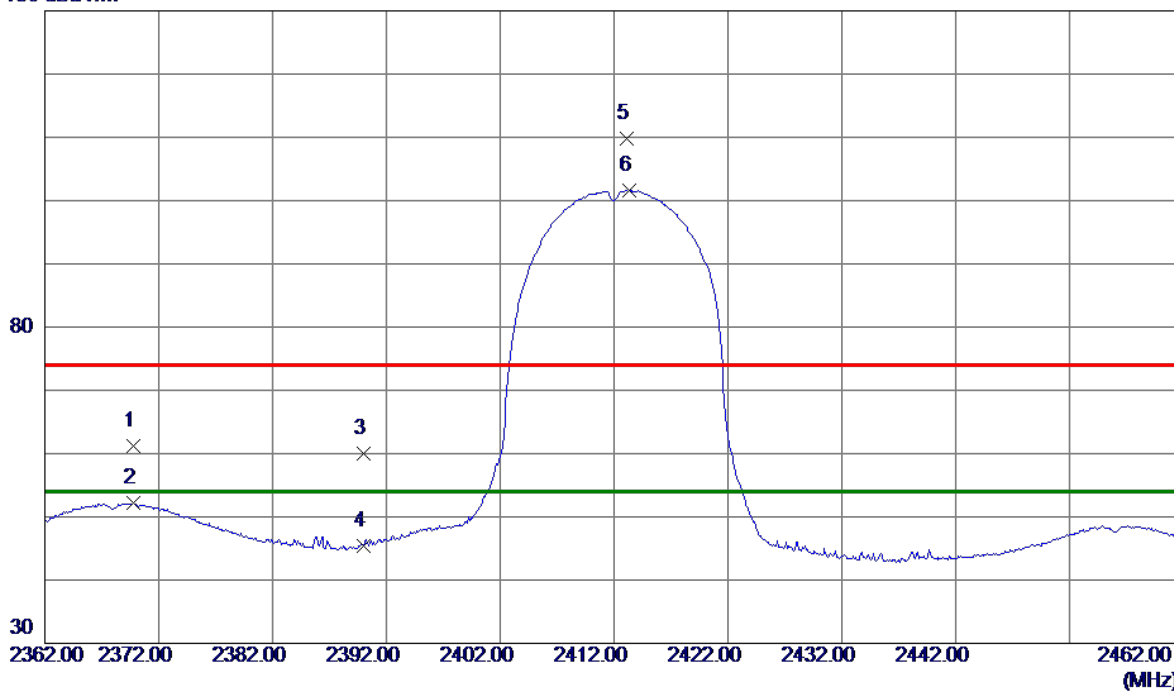
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2412 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2369.8000    | 54.10                      | 7.01                    | 61.11                     | 74.00           | -12.89       | Peak     |          |
| 2   | 2369.8000    | 45.12                      | 7.01                    | 52.13                     | 54.00           | -1.87        | AVG      |          |
| 3   | 2390.0000    | 53.03                      | 7.01                    | 60.04                     | 74.00           | -13.96       | Peak     |          |
| 4   | 2390.0000    | 38.41                      | 7.01                    | 45.42                     | 54.00           | -8.58        | AVG      |          |
| 5   | 2413.1000    | 102.80                     | 7.02                    | 109.82                    | 74.00           | 35.82        | Peak     | No Limit |
| 6 * | 2413.3000    | 94.53                      | 7.02                    | 101.55                    | 54.00           | 47.55        | AVG      | No Limit |

#### REMARKS:

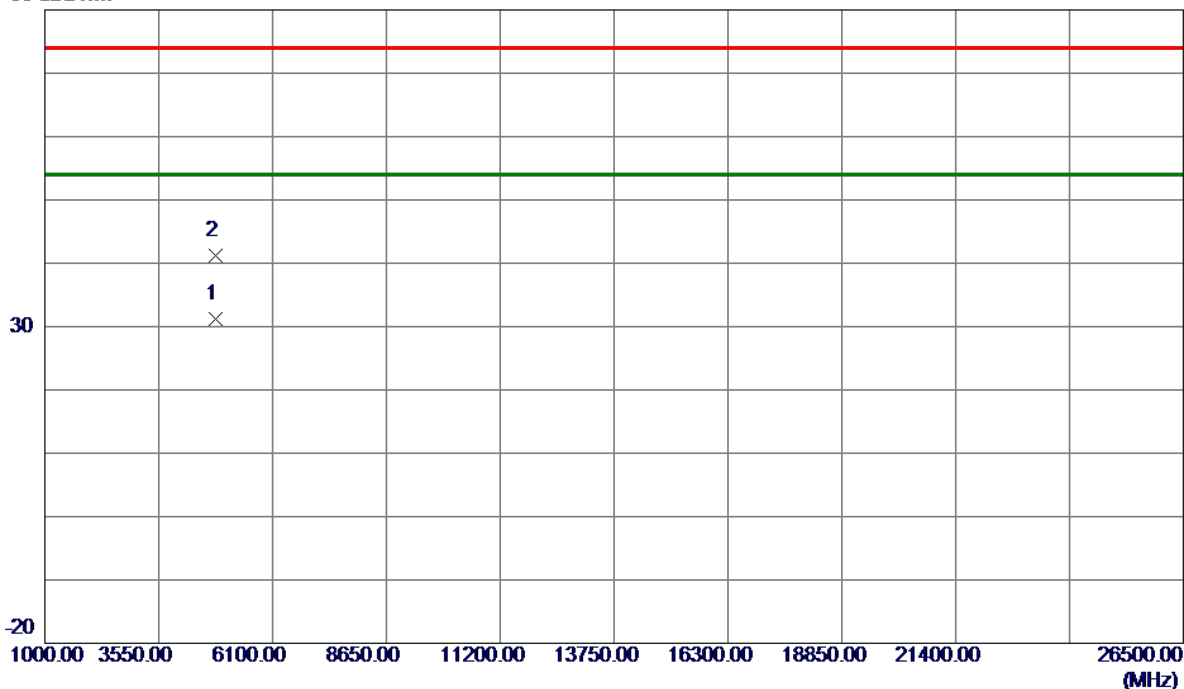
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2412 MHz |

### Vertical

80 dBuV/m



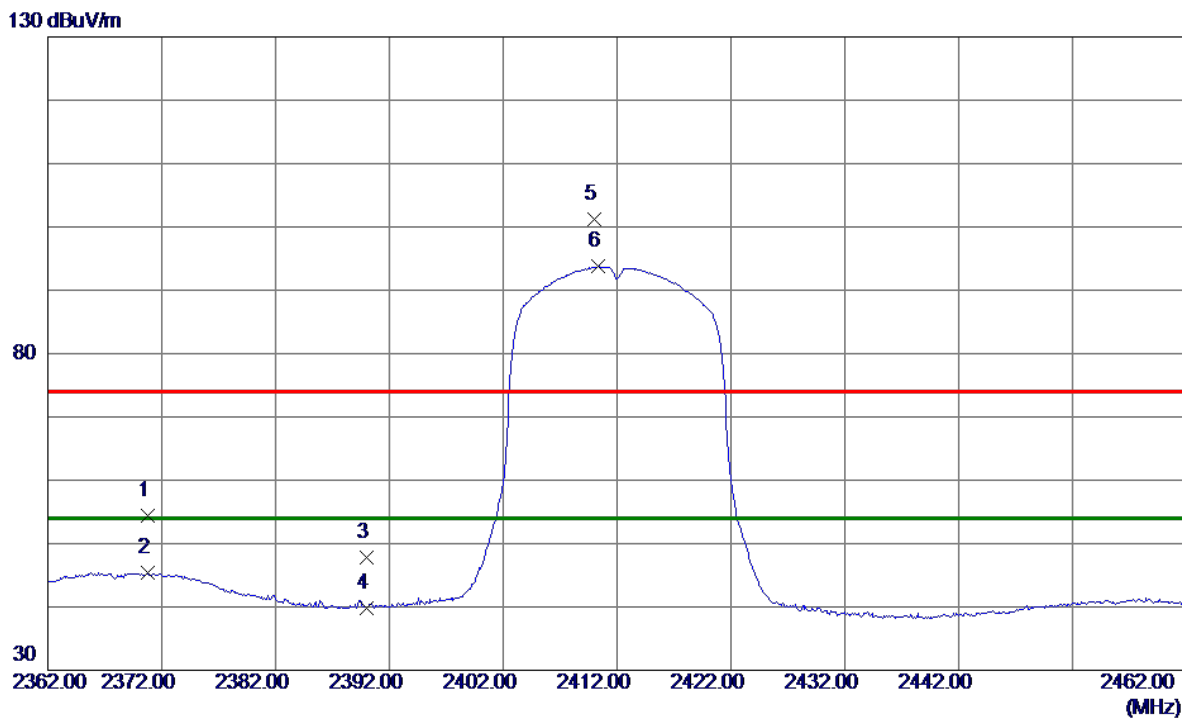
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4816.9000    | 27.04                      | 4.22                    | 31.26                     | 54.00           | -22.74       | AVG      |         |
| 2   | 4818.5500    | 36.97                      | 4.22                    | 41.19                     | 74.00           | -32.81       | Peak     |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2412 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2370.8000    | 47.46                      | 7.01                    | 54.47                     | 74.00           | -19.53       | Peak     |          |
| 2   | 2370.8000    | 38.34                      | 7.01                    | 45.35                     | 54.00           | -8.65        | AVG      |          |
| 3   | 2390.0000    | 40.85                      | 7.01                    | 47.86                     | 74.00           | -26.14       | Peak     |          |
| 4   | 2390.0000    | 32.75                      | 7.01                    | 39.76                     | 54.00           | -14.24       | AVG      |          |
| 5   | 2410.0000    | 94.25                      | 7.02                    | 101.27                    | 74.00           | 27.27        | Peak     | No Limit |
| 6 * | 2410.3000    | 86.73                      | 7.02                    | 93.75                     | 54.00           | 39.75        | AVG      | No Limit |

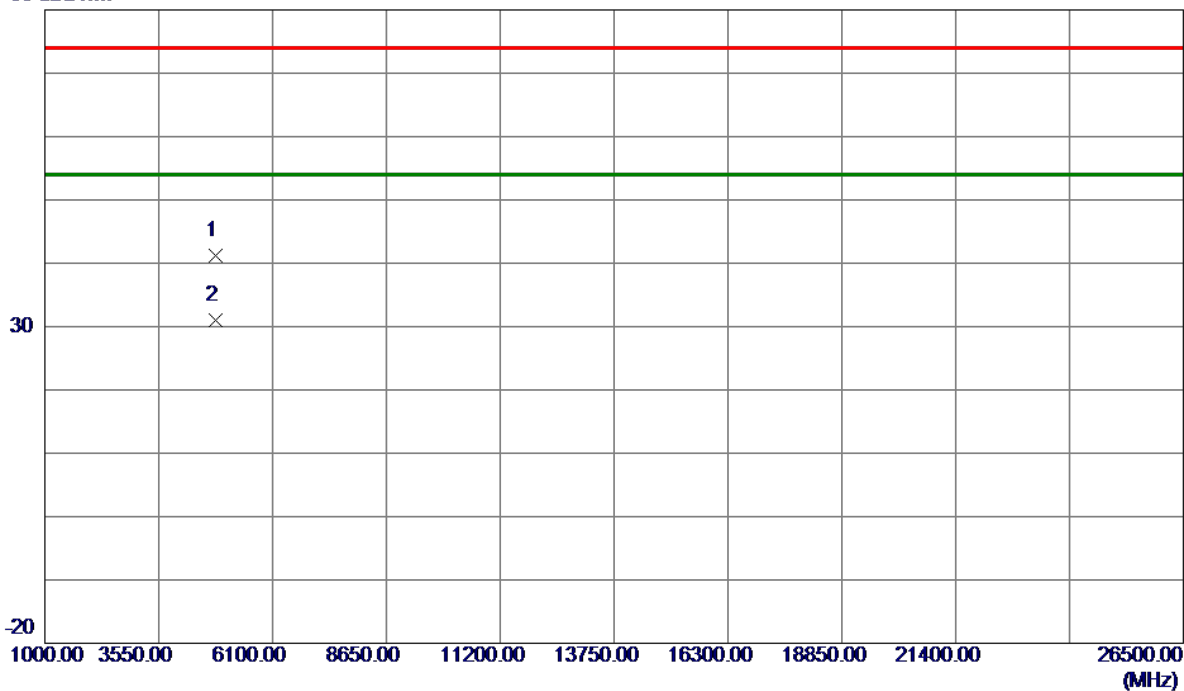
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2412 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4818.2000    | 37.01                      | 4.22                    | 41.23                     | 74.00           | -32.77       | Peak     |         |
| 2 * | 4823.8500    | 26.85                      | 4.23                    | 31.08                     | 54.00           | -22.92       | AVG      |         |

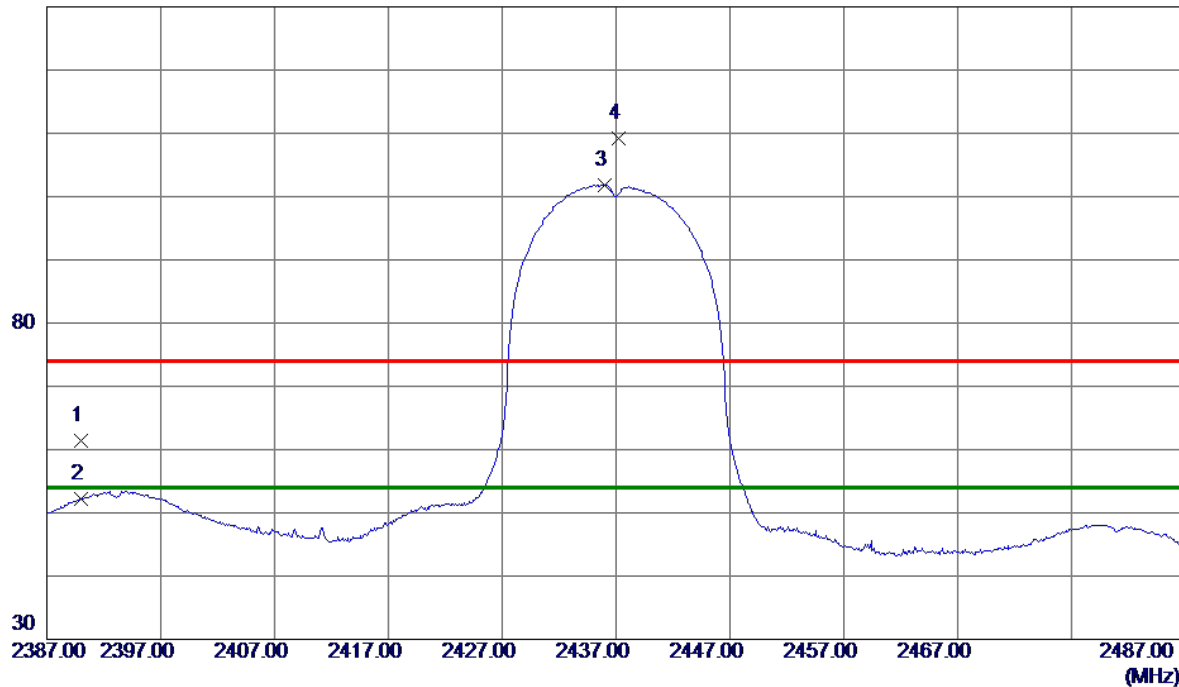
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2437 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2390.0000    | 54.30                      | 7.01                    | 61.31                     | 74.00           | -12.69       | Peak     |          |
| 2   | 2390.0000    | 45.21                      | 7.01                    | 52.22                     | 54.00           | -1.78        | AVG      |          |
| 3 * | 2436.0000    | 94.87                      | 7.02                    | 101.89                    | 54.00           | 47.89        | AVG      | No Limit |
| 4   | 2437.2000    | 102.26                     | 7.02                    | 109.28                    | 74.00           | 35.28        | Peak     | No Limit |

#### REMARKS:

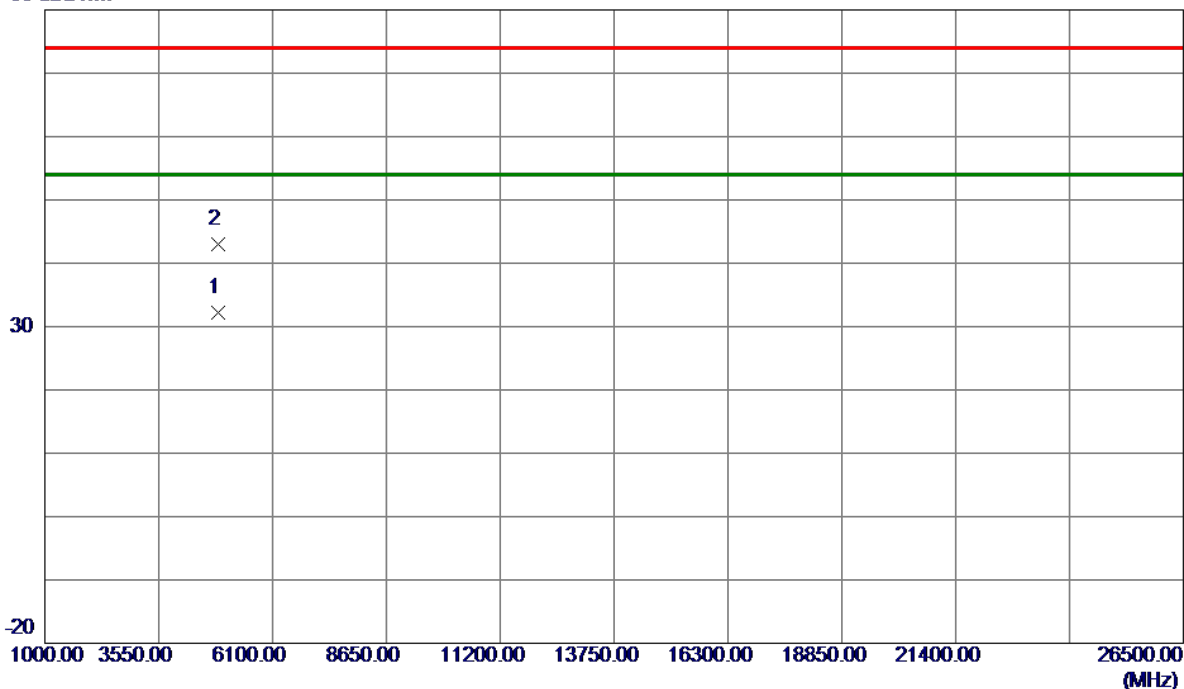
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2437 MHz |

### Vertical

80 dBuV/m



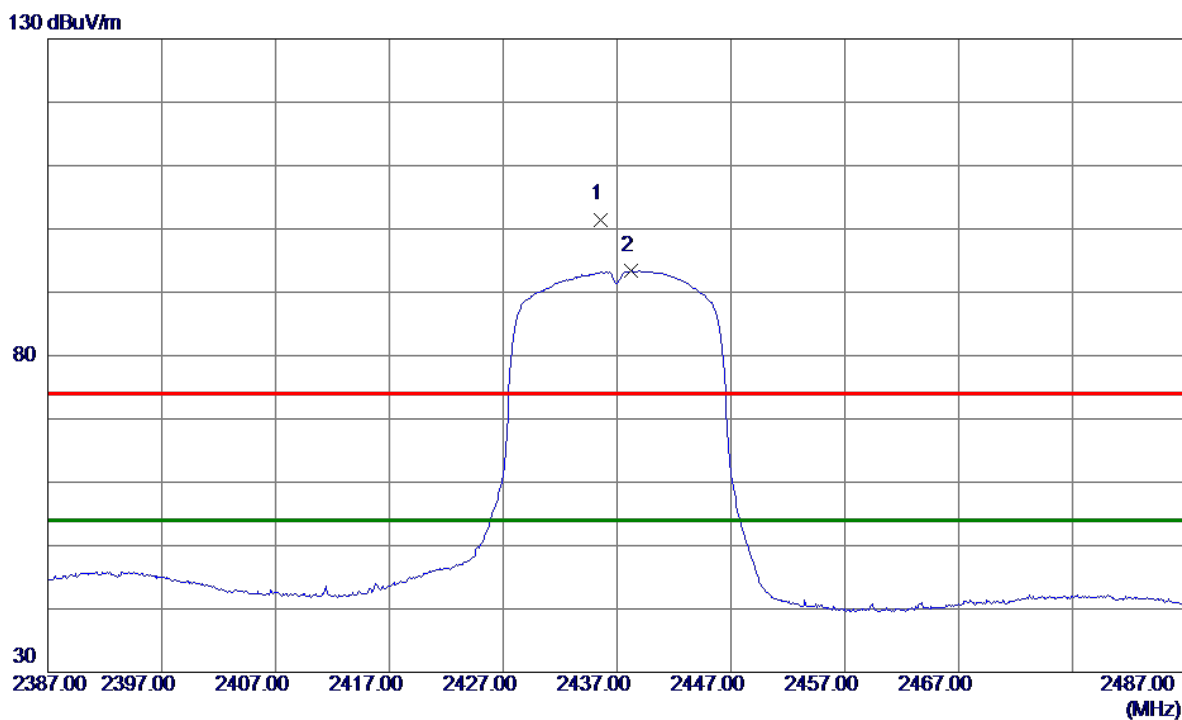
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4880.6500    | 27.85                      | 4.35                    | 32.20                     | 54.00           | -21.80       | AVG      |         |
| 2   | 4882.0000    | 38.62                      | 4.35                    | 42.97                     | 74.00           | -31.03       | Peak     |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2437 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2435.6000    | 94.48                      | 7.02                    | 101.50                    | 74.00           | 27.50        | Peak     | No Limit |
| 2 * | 2438.2000    | 86.36                      | 7.02                    | 93.38                     | 54.00           | 39.38        | AVG      | No Limit |

#### REMARKS:

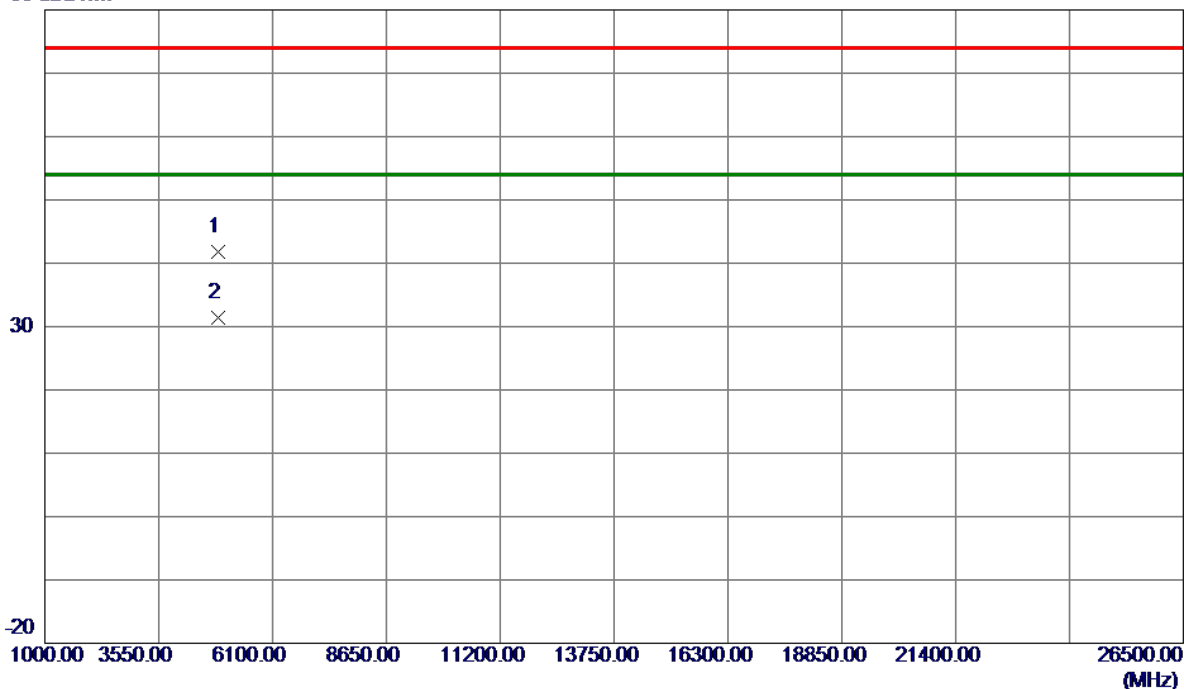
- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.



|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2437 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4872.5000    | 37.53                      | 4.33                    | 41.86                     | 74.00           | -32.14       | Peak     |         |
| 2 * | 4874.0000    | 27.09                      | 4.34                    | 31.43                     | 54.00           | -22.57       | AVG      |         |

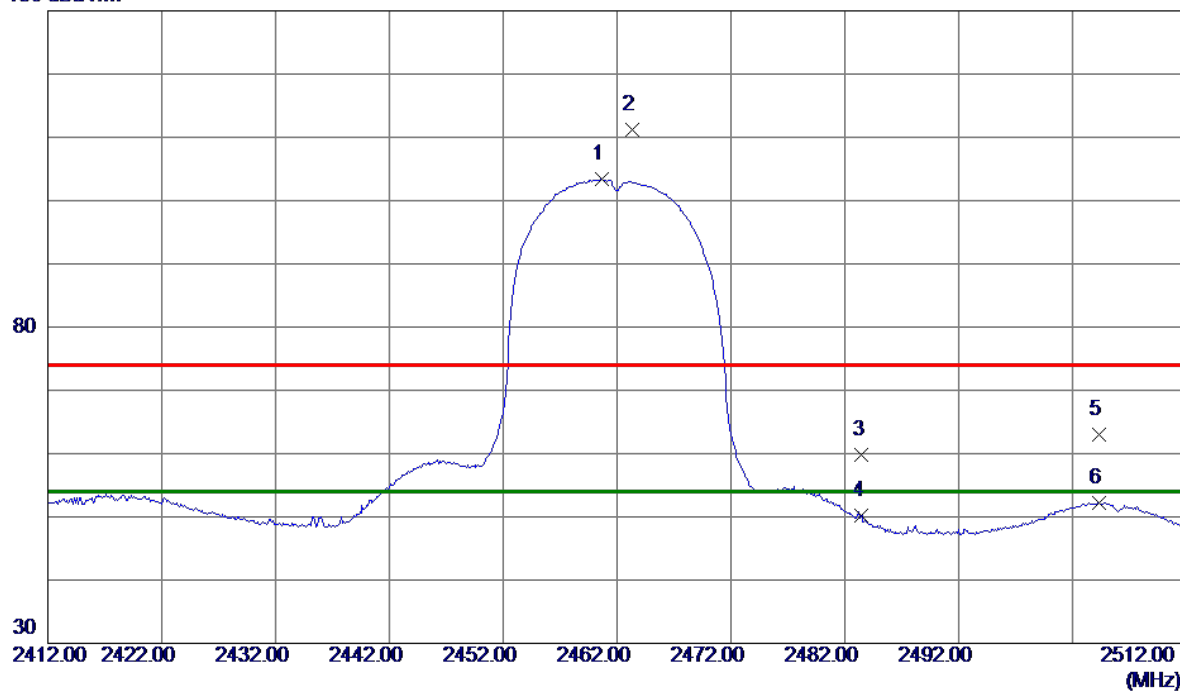
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2462 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2460.7000    | 96.31                      | 7.03                    | 103.34                    | 54.00           | 49.34        | AVG      | No Limit |
| 2   | 2463.3000    | 104.25                     | 7.03                    | 111.28                    | 74.00           | 37.28        | Peak     | No Limit |
| 3   | 2483.5000    | 52.69                      | 7.03                    | 59.72                     | 74.00           | -14.28       | Peak     |          |
| 4   | 2483.5000    | 43.09                      | 7.03                    | 50.12                     | 54.00           | -3.88        | AVG      |          |
| 5   | 2504.3000    | 55.98                      | 7.07                    | 63.05                     | 74.00           | -10.95       | Peak     |          |
| 6   | 2504.3000    | 45.09                      | 7.07                    | 52.16                     | 54.00           | -1.84        | AVG      |          |

#### REMARKS:

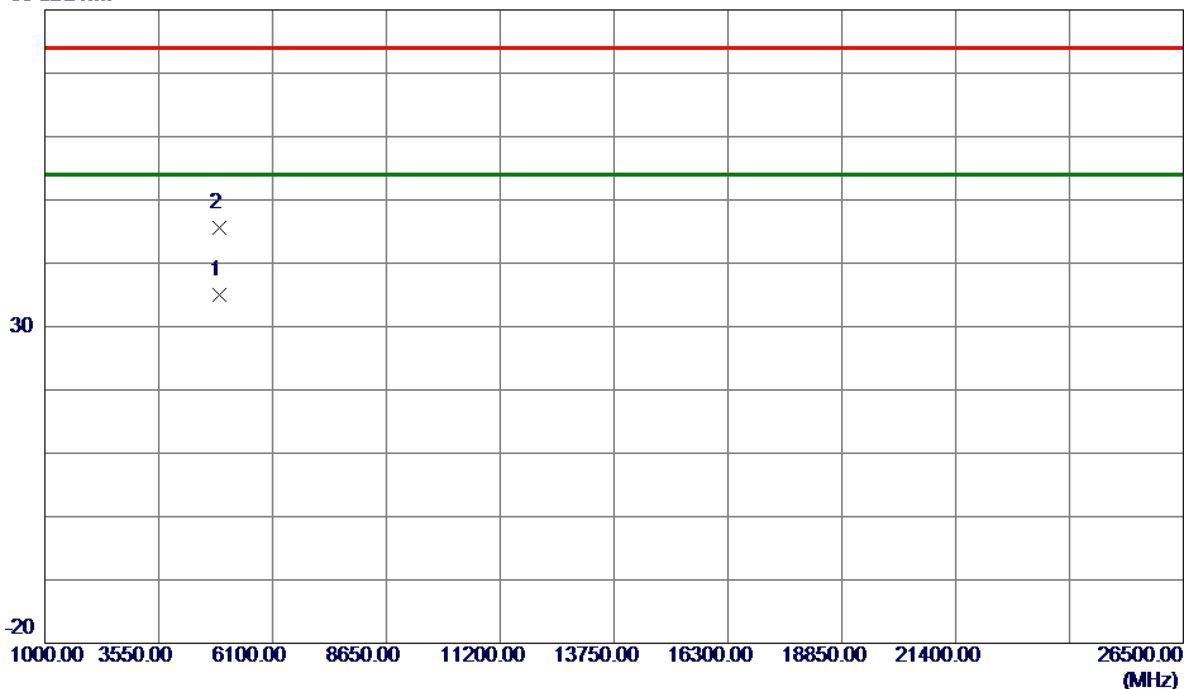
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2462 MHz |

### Vertical

80 dBuV/m



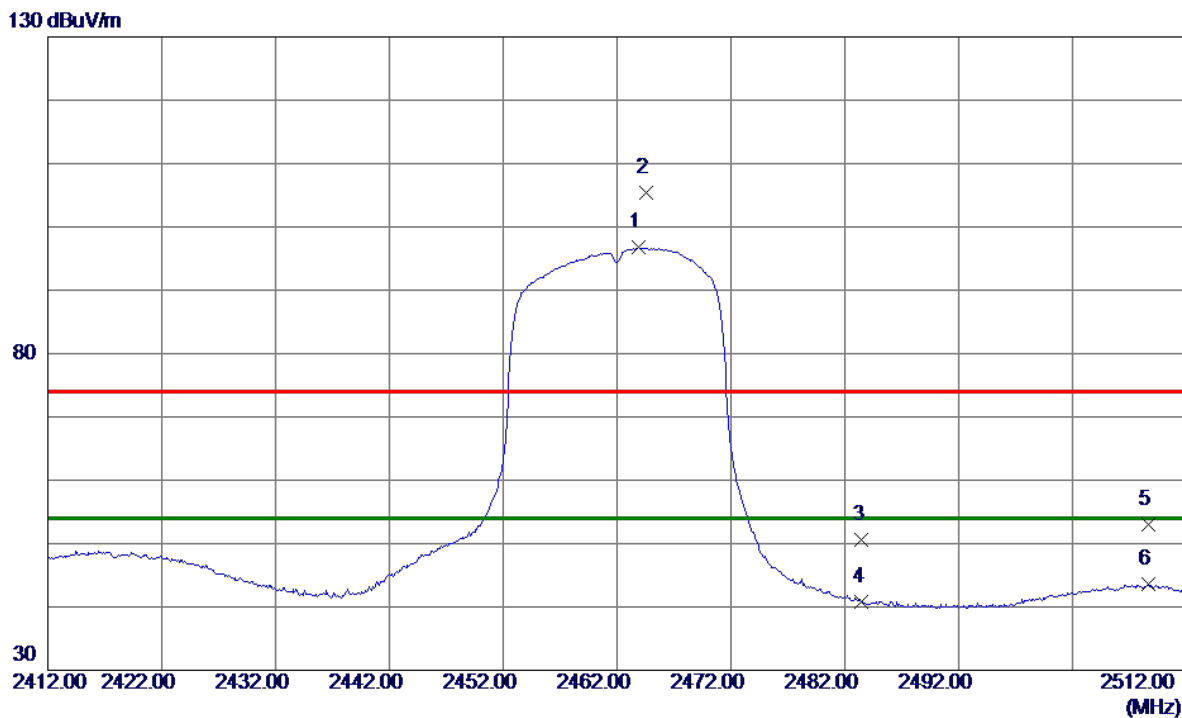
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4915.3500    | 30.54                      | 4.42                    | 34.96                     | 54.00           | -19.04       | AVG      |         |
| 2   | 4918.9500    | 41.20                      | 4.43                    | 45.63                     | 74.00           | -28.37       | Peak     |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2462 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2463.9000    | 89.72                      | 7.03                    | 96.75                     | 54.00           | 42.75        | AVG      | No Limit |
| 2   | 2464.6000    | 98.45                      | 7.03                    | 105.48                    | 74.00           | 31.48        | Peak     | No Limit |
| 3   | 2483.5000    | 43.63                      | 7.03                    | 50.66                     | 74.00           | -23.34       | Peak     |          |
| 4   | 2483.5000    | 33.78                      | 7.03                    | 40.81                     | 54.00           | -13.19       | AVG      |          |
| 5   | 2508.7000    | 45.90                      | 7.10                    | 53.00                     | 74.00           | -21.00       | Peak     |          |
| 6   | 2508.7000    | 36.46                      | 7.10                    | 43.56                     | 54.00           | -10.44       | AVG      |          |

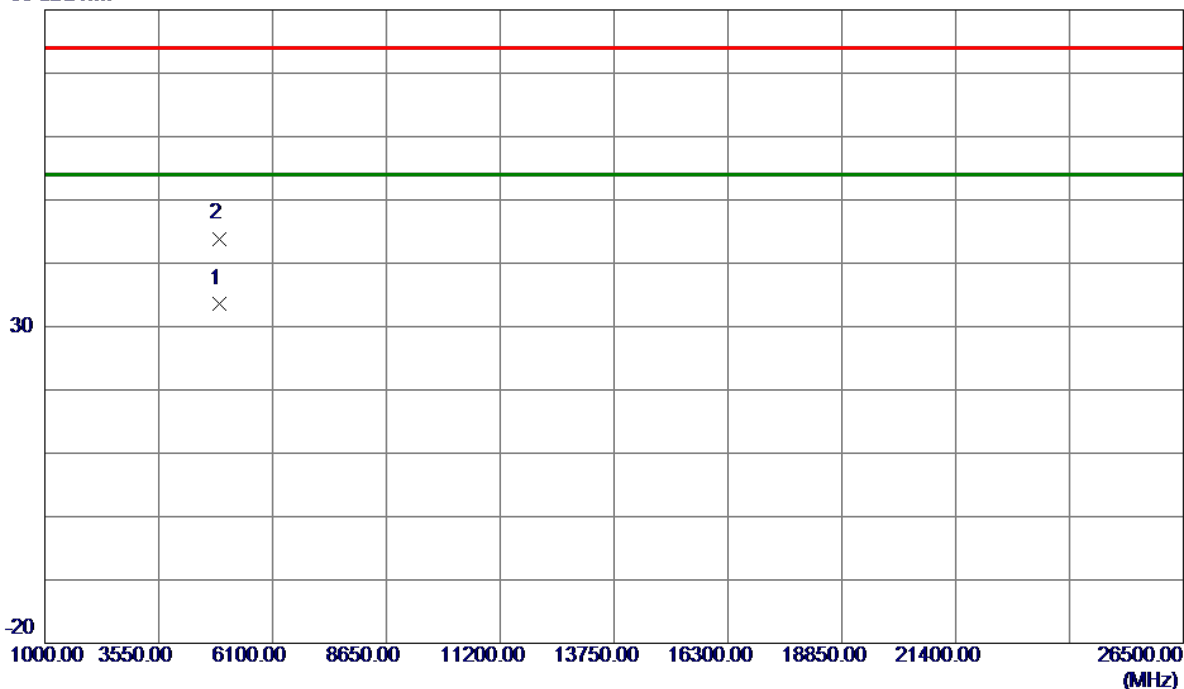
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-20M Mode 2462 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4915.5500    | 29.21                      | 4.42                    | 33.63                     | 54.00           | -20.37       | AVG      |         |
| 2   | 4916.7500    | 39.47                      | 4.43                    | 43.90                     | 74.00           | -30.10       | Peak     |         |

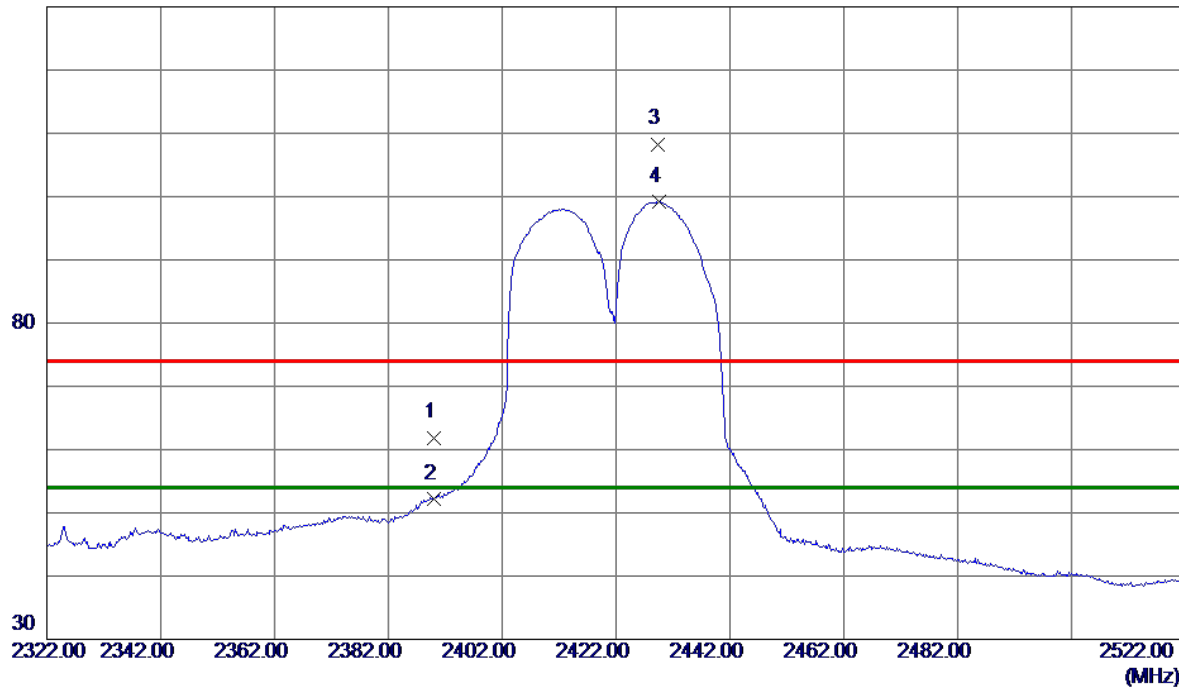
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                       |
|-----------------|-----------------------|
| Orthogonal Axis | X                     |
| Test Mode:      | TX N-40M Mode 2422MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2390.0000    | 54.89                      | 7.01                    | 61.90                     | 74.00           | -12.10       | Peak     |          |
| 2   | 2390.0000    | 45.21                      | 7.01                    | 52.22                     | 54.00           | -1.78        | AVG      |          |
| 3   | 2429.4000    | 101.28                     | 7.02                    | 108.30                    | 74.00           | 34.30        | Peak     | No Limit |
| 4 * | 2429.6000    | 92.18                      | 7.02                    | 99.20                     | 54.00           | 45.20        | AVG      | No Limit |

#### REMARKS:

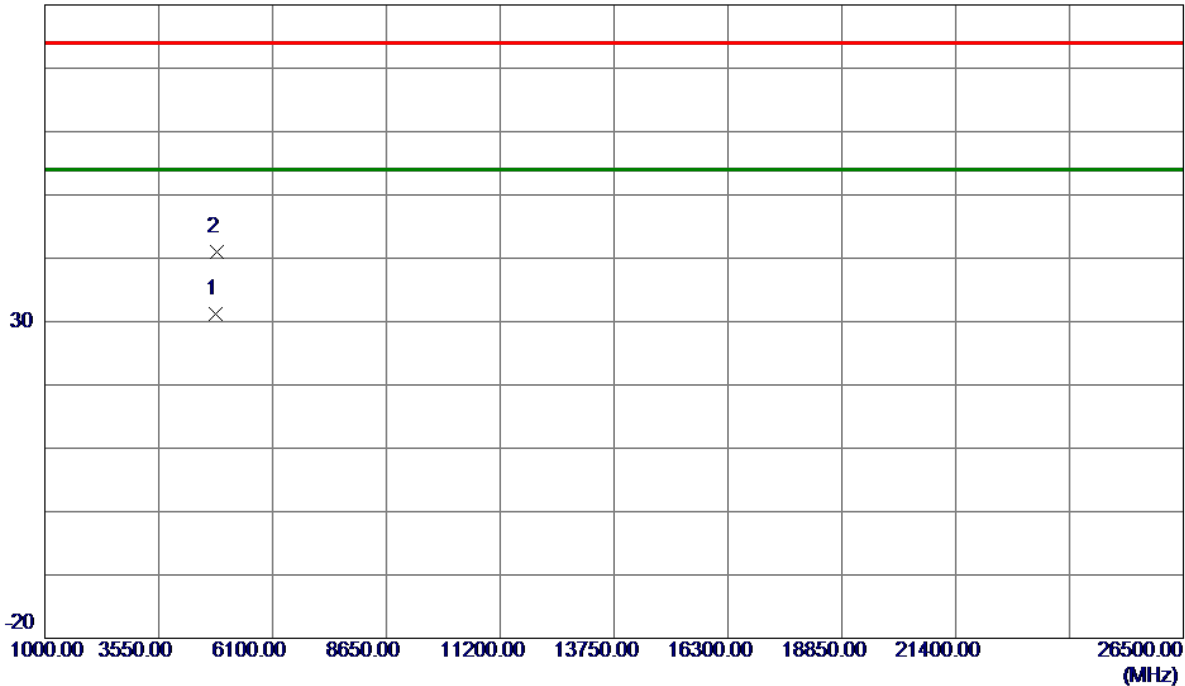
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                       |
|-----------------|-----------------------|
| Orthogonal Axis | X                     |
| Test Mode:      | TX N-40M Mode 2422MHz |

### Vertical

80 dBuV/m



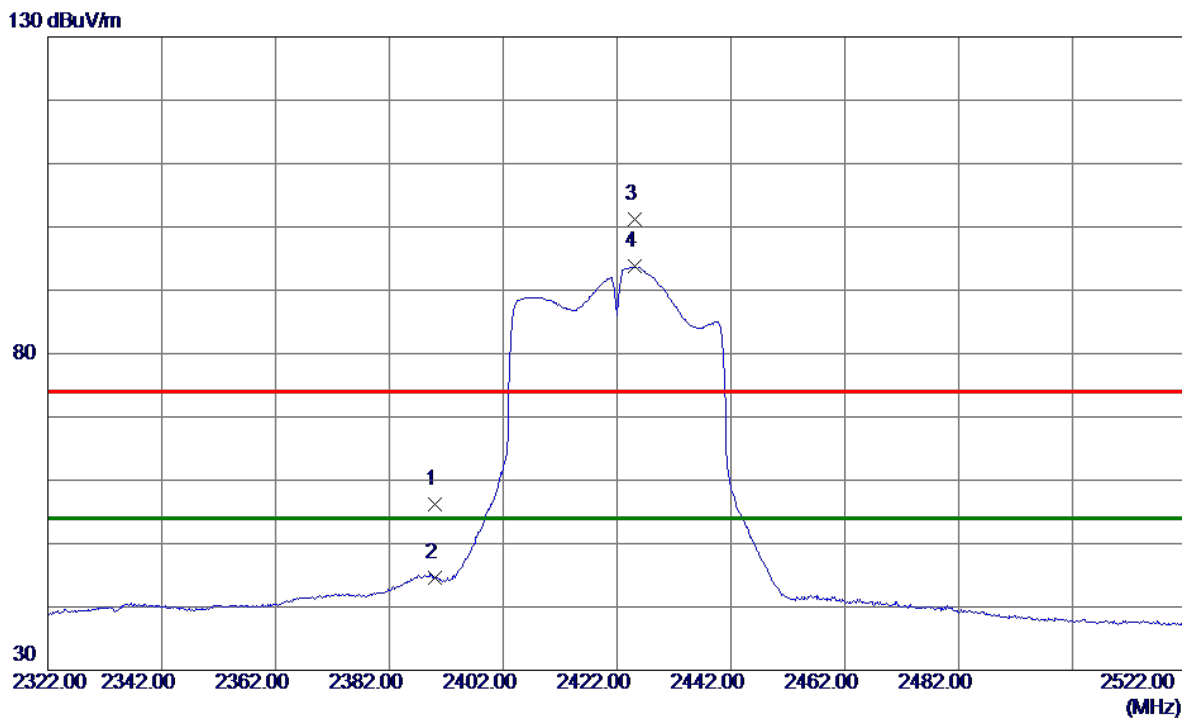
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4837.3500    | 26.99                      | 4.26                    | 31.25                     | 54.00           | -22.75       | AVG      |         |
| 2   | 4840.2000    | 36.76                      | 4.27                    | 41.03                     | 74.00           | -32.97       | Peak     |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                       |
|-----------------|-----------------------|
| Orthogonal Axis | X                     |
| Test Mode:      | TX N-40M Mode 2422MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2390.0000    | 49.21                      | 7.01                    | 56.22                     | 74.00           | -17.78       | Peak     |          |
| 2   | 2390.0000    | 37.55                      | 7.01                    | 44.56                     | 54.00           | -9.44        | AVG      |          |
| 3   | 2425.2000    | 94.22                      | 7.02                    | 101.24                    | 74.00           | 27.24        | Peak     | No Limit |
| 4 * | 2425.2000    | 86.69                      | 7.02                    | 93.71                     | 54.00           | 39.71        | AVG      | No Limit |

#### REMARKS:

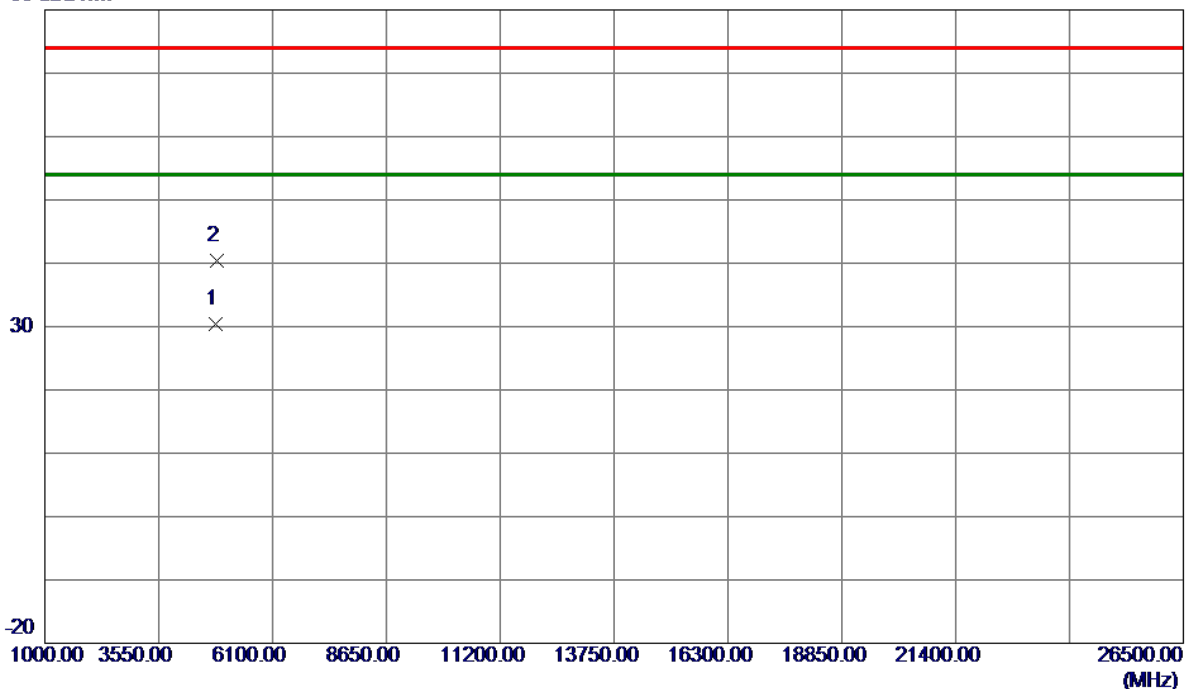
- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.



|                 |                       |
|-----------------|-----------------------|
| Orthogonal Axis | X                     |
| Test Mode:      | TX N-40M Mode 2422MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4836.2000    | 26.22                      | 4.26                    | 30.48                     | 54.00           | -23.52       | AVG      |         |
| 2   | 4839.2500    | 36.21                      | 4.26                    | 40.47                     | 74.00           | -33.53       | Peak     |         |

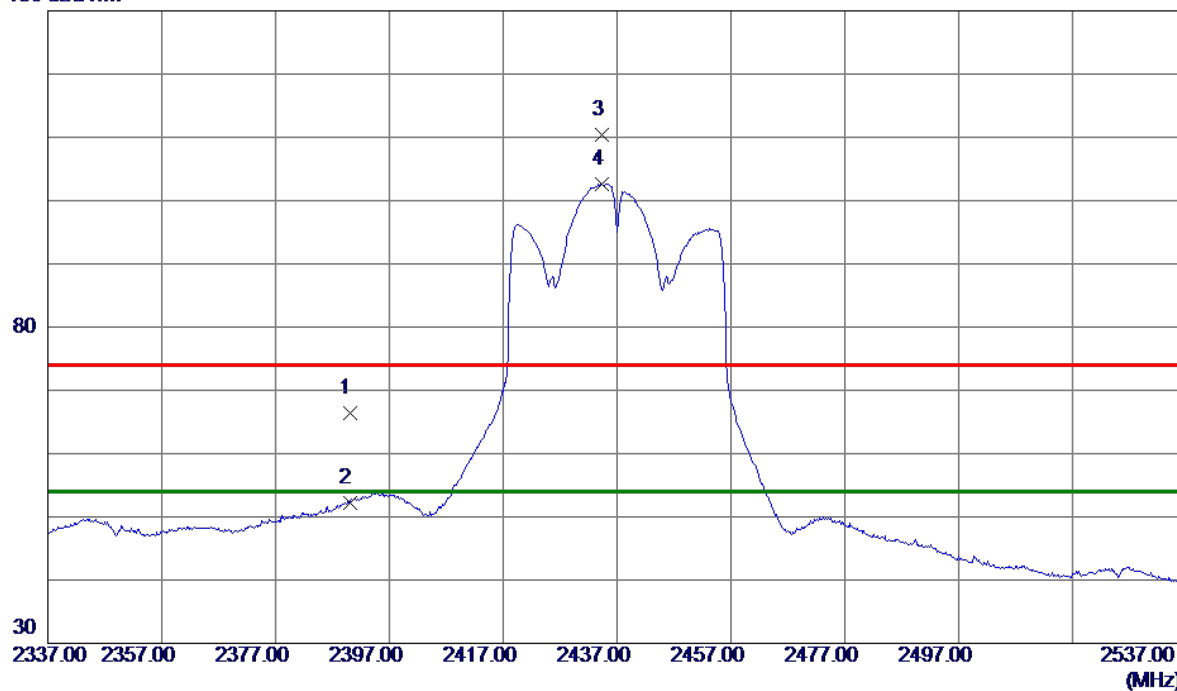
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2437 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2390.0000    | 59.37                      | 7.01                    | 66.38                     | 74.00           | -7.62        | Peak     |          |
| 2   | 2390.0000    | 45.14                      | 7.01                    | 52.15                     | 54.00           | -1.85        | AVG      |          |
| 3   | 2434.4000    | 103.46                     | 7.02                    | 110.48                    | 74.00           | 36.48        | Peak     | No Limit |
| 4 * | 2434.4000    | 95.53                      | 7.02                    | 102.55                    | 54.00           | 48.55        | AVG      | No Limit |

#### REMARKS:

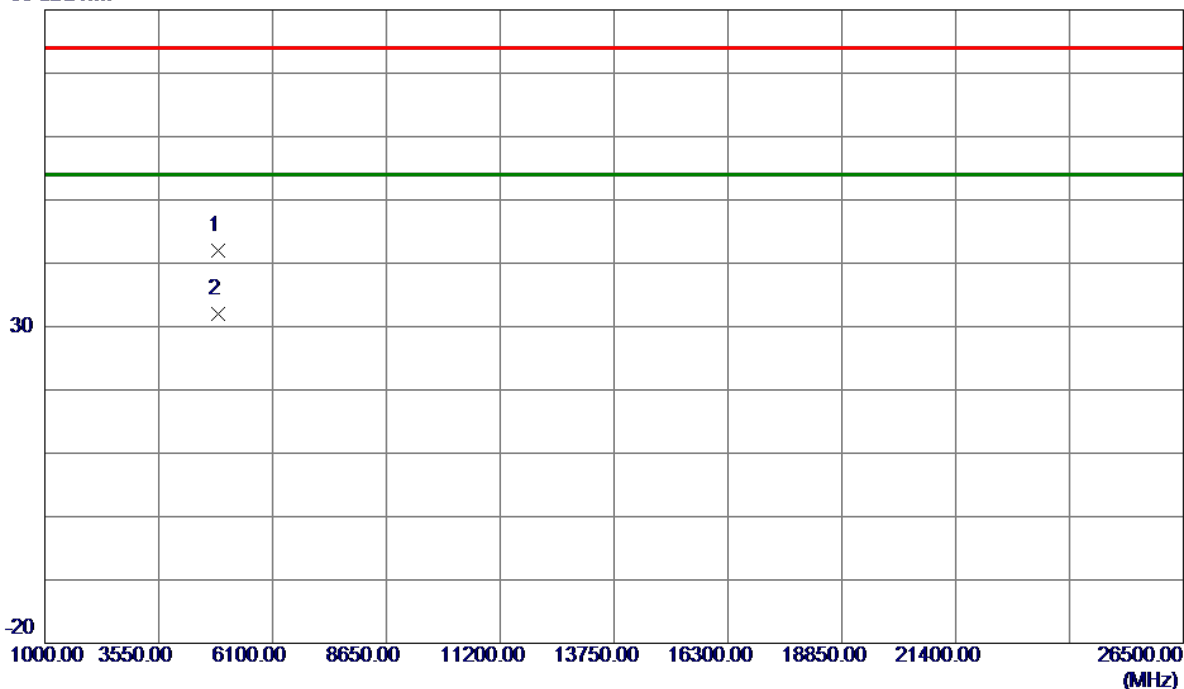
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2437 MHz |

### Vertical

80 dBuV/m



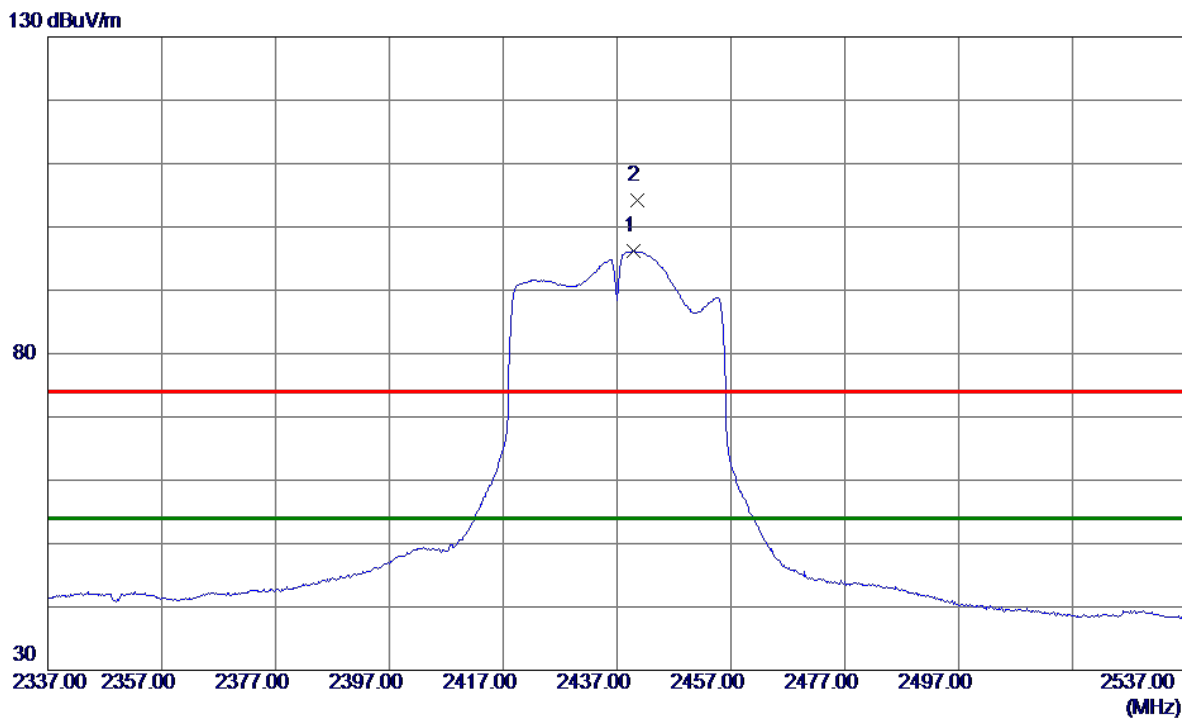
| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4882.1500    | 37.67                      | 4.35                    | 42.02                     | 74.00           | -31.98       | Peak     |         |
| 2 * | 4882.4000    | 27.74                      | 4.35                    | 32.09                     | 54.00           | -21.91       | AVG      |         |

#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2437 MHz |

### Horizontal



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2439.8000    | 89.17                      | 7.02                    | 96.19                     | 54.00           | 42.19        | AVG      | No Limit |
| 2   | 2440.6000    | 97.20                      | 7.02                    | 104.22                    | 74.00           | 30.22        | Peak     | No Limit |

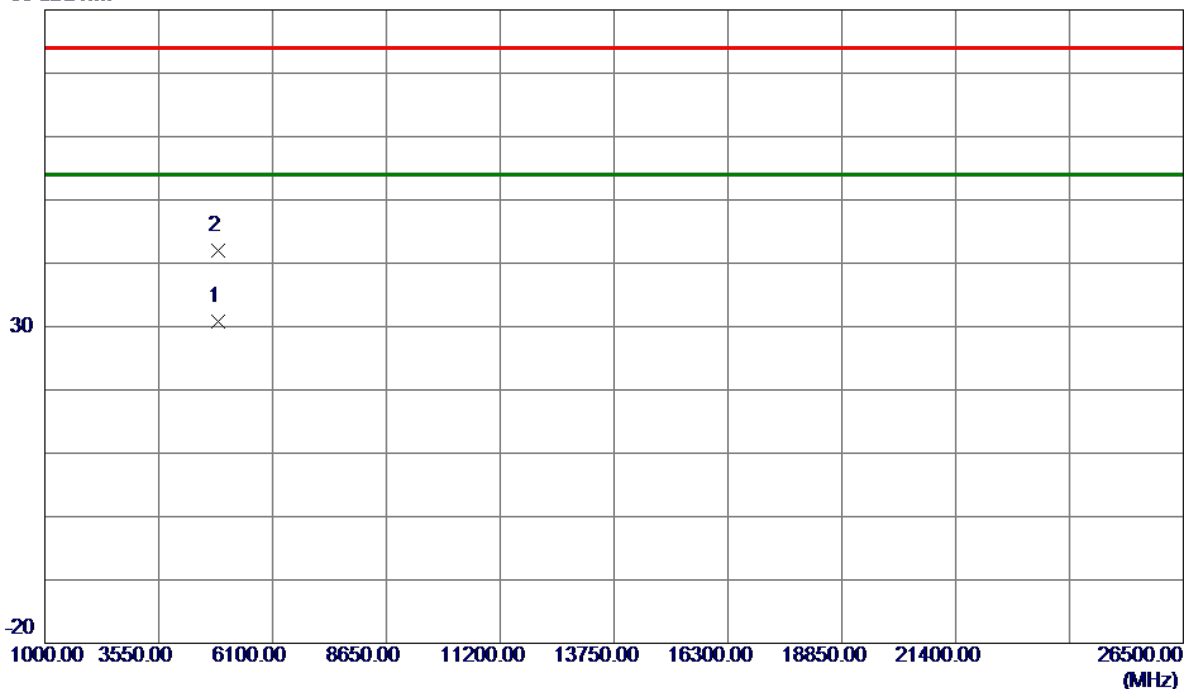
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2437 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1 * | 4874.0000    | 26.39                      | 4.34                    | 30.73                     | 54.00           | -23.27       | AVG      |         |
| 2   | 4874.8500    | 37.73                      | 4.34                    | 42.07                     | 74.00           | -31.93       | Peak     |         |

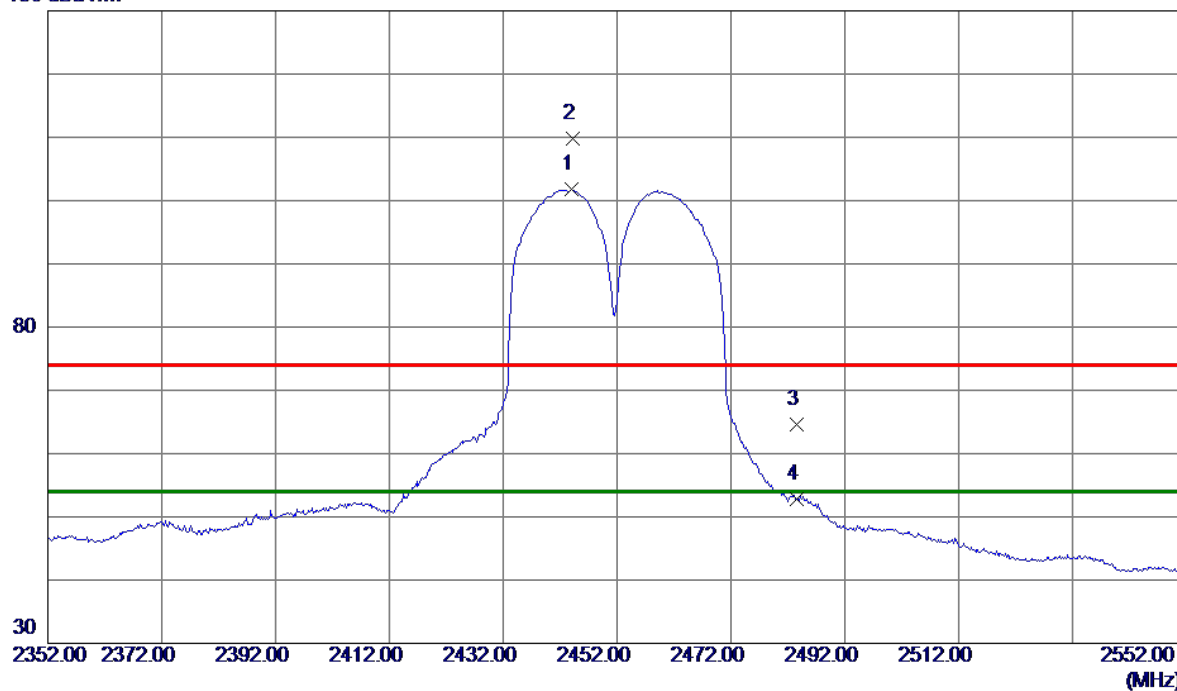
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2452 MHz |

### Vertical

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1 * | 2444.0000    | 94.76                      | 7.02                    | 101.78                    | 54.00           | 47.78        | AVG      | No Limit |
| 2   | 2444.2000    | 102.82                     | 7.02                    | 109.84                    | 74.00           | 35.84        | Peak     | No Limit |
| 3   | 2483.5000    | 57.50                      | 7.03                    | 64.53                     | 74.00           | -9.47        | Peak     |          |
| 4   | 2483.5000    | 45.76                      | 7.03                    | 52.79                     | 54.00           | -1.21        | AVG      |          |

#### REMARKS:

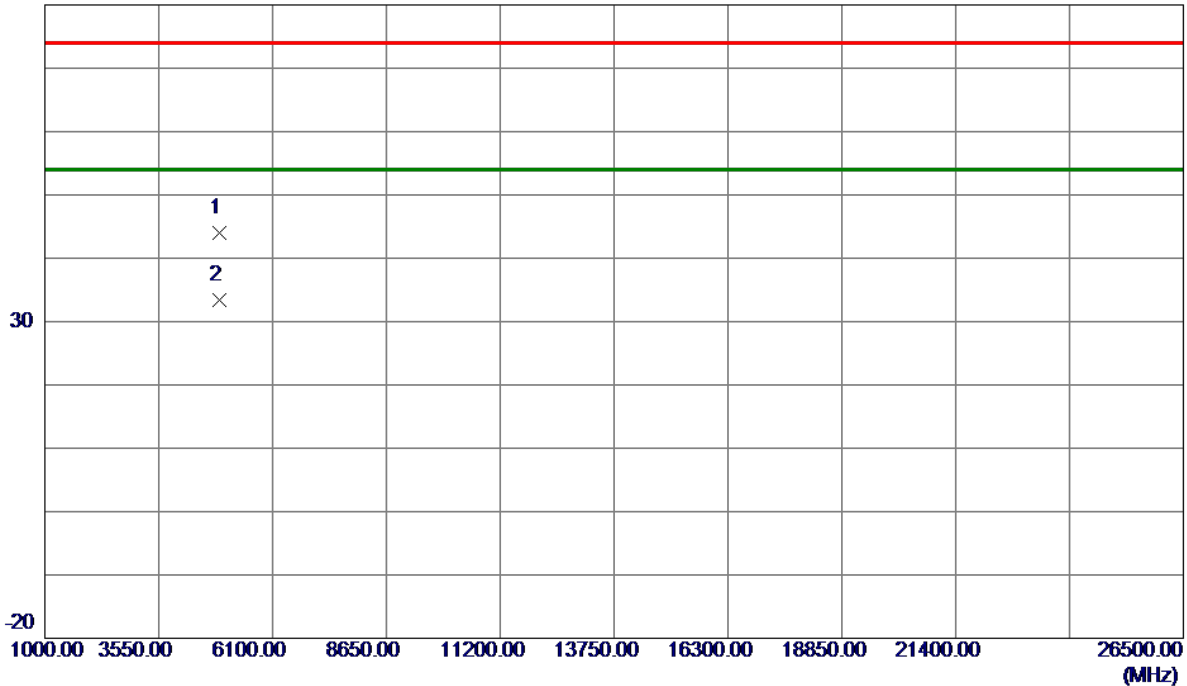
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2452 MHz |

### Vertical

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4900.7500    | 39.69                      | 4.39                    | 44.08                     | 74.00           | -29.92       | Peak     |         |
| 2 * | 4911.1500    | 28.91                      | 4.41                    | 33.32                     | 54.00           | -20.68       | AVG      |         |

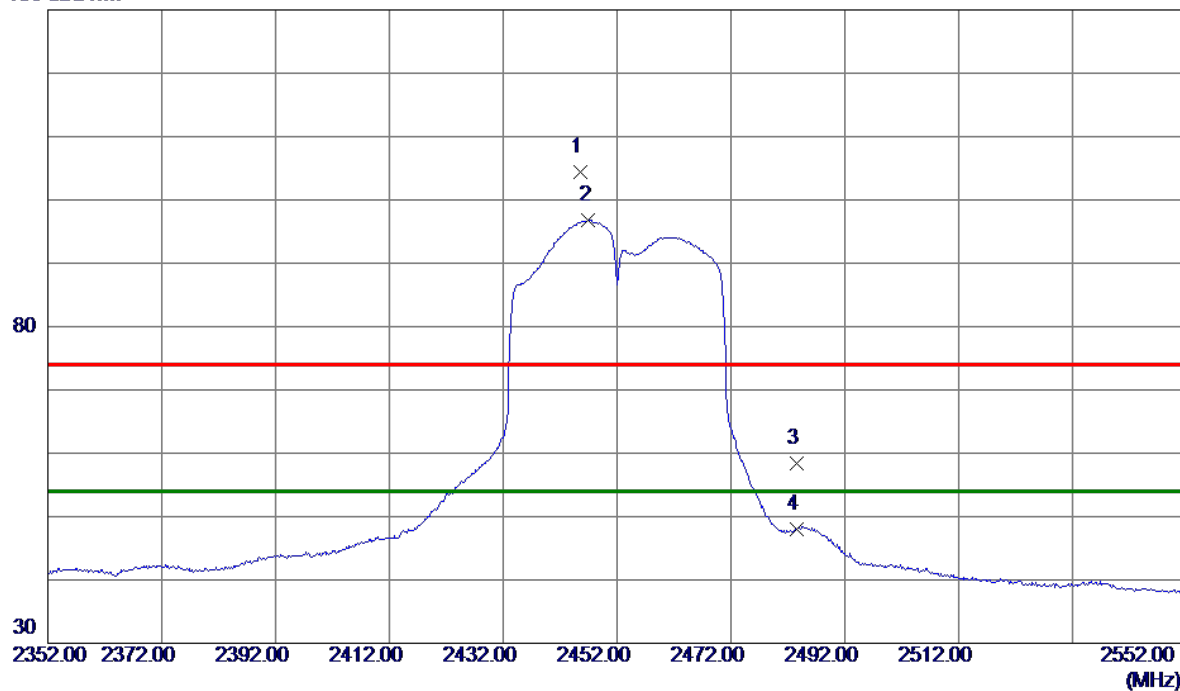
#### REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.

|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2452 MHz |

### Horizontal

130 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment  |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|----------|
| 1   | 2445.6000    | 97.31                      | 7.02                    | 104.33                    | 74.00           | 30.33        | Peak     | No Limit |
| 2 * | 2447.0000    | 89.76                      | 7.02                    | 96.78                     | 54.00           | 42.78        | AVG      | No Limit |
| 3   | 2483.5000    | 51.28                      | 7.03                    | 58.31                     | 74.00           | -15.69       | Peak     |          |
| 4   | 2483.5000    | 41.04                      | 7.03                    | 48.07                     | 54.00           | -5.93        | AVG      |          |

#### REMARKS:

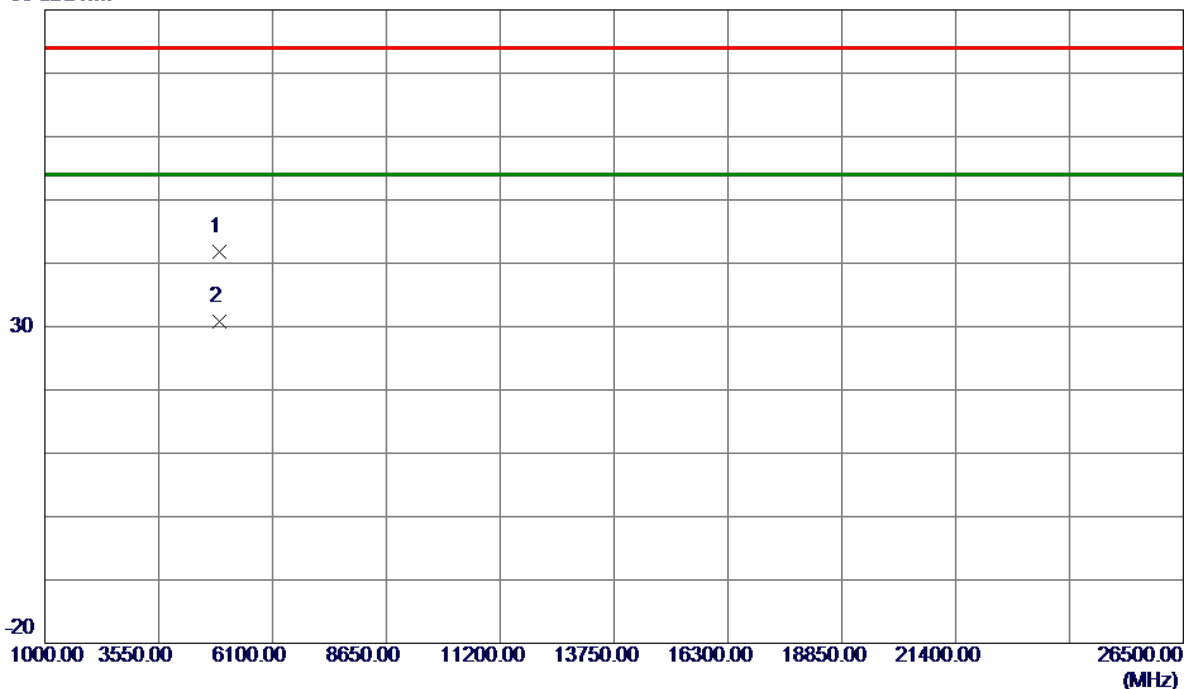
- (1) Measurement Value = Reading Level + Correct Factor.  
 (2) Margin Level = Measurement Value - Limit Value.



|                 |                        |
|-----------------|------------------------|
| Orthogonal Axis | X                      |
| Test Mode:      | TX N-40M Mode 2452 MHz |

### Horizontal

80 dBuV/m



| No. | Freq.<br>MHz | Reading<br>Level<br>dBuV/m | Correct<br>Factor<br>dB | Measure<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|--------------|----------------------------|-------------------------|---------------------------|-----------------|--------------|----------|---------|
| 1   | 4910.7500    | 37.40                      | 4.41                    | 41.81                     | 74.00           | -32.19       | Peak     |         |
| 2 * | 4914.0500    | 26.45                      | 4.42                    | 30.87                     | 54.00           | -23.13       | AVG      |         |

#### REMARKS:

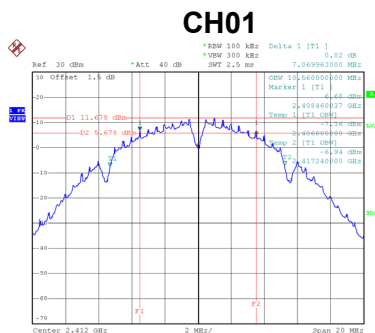
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

## APPENDIX E - BANDWIDTH

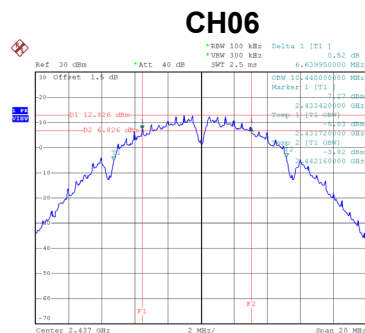
## Non-Beamforming

|           |           |
|-----------|-----------|
| Test Mode | TX B Mode |
|-----------|-----------|

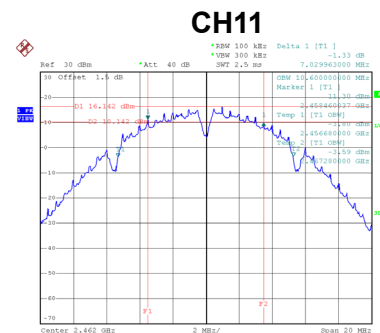
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result   |
|---------|-----------------|----------------------|-------------------------------|---------------------------------|----------|
| 01      | 2412            | 7.07                 | 10.56                         | 500                             | Complies |
| 06      | 2437            | 6.64                 | 10.44                         | 500                             | Complies |
| 11      | 2462            | 7.03                 | 10.60                         | 500                             | Complies |



Date: 1.FEB.2019 15:54:45



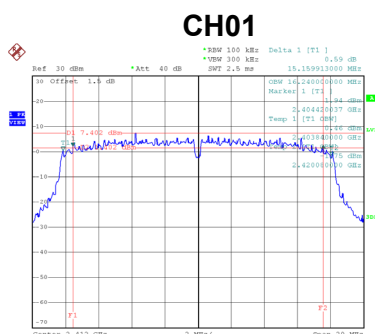
Date: 1.FEB.2019 15:57:15



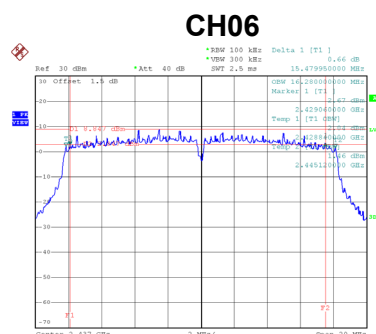
Date: 1.FEB.2019 15:59:17

|           |           |
|-----------|-----------|
| Test Mode | TX G Mode |
|-----------|-----------|

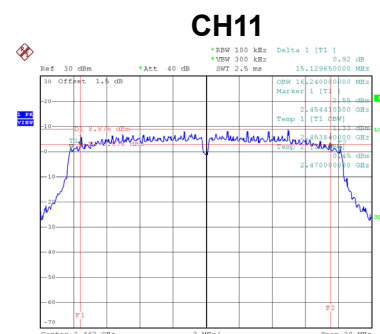
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result   |
|---------|-----------------|----------------------|-------------------------------|---------------------------------|----------|
| 01      | 2412            | 15.16                | 16.24                         | 500                             | Complies |
| 06      | 2437            | 15.48                | 16.28                         | 500                             | Complies |
| 11      | 2462            | 15.13                | 16.24                         | 500                             | Complies |



Date: 1.FEB.2019 16:03:03



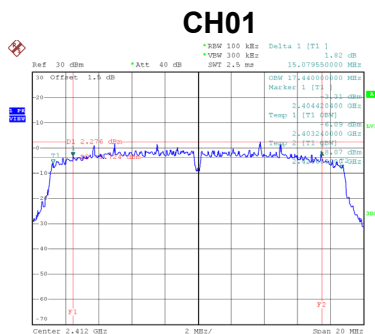
Date: 1.FEB.2019 16:07:48



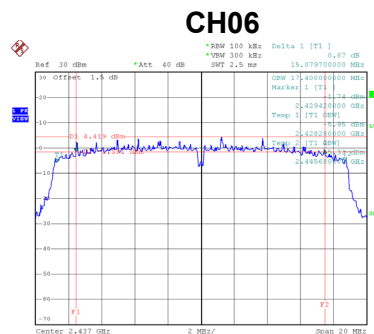
Date: 1.FEB.2019 16:12:21

Test Mode TX N (HT20) Mode

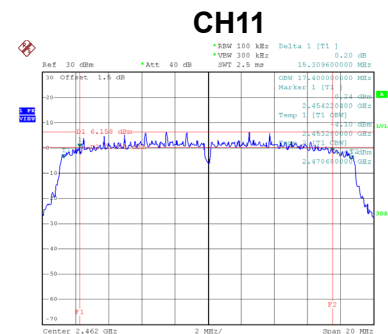
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result   |
|---------|-----------------|----------------------|-------------------------------|---------------------------------|----------|
| 01      | 2412            | 15.08                | 17.44                         | 500                             | Complies |
| 06      | 2437            | 15.08                | 17.40                         | 500                             | Complies |
| 11      | 2462            | 15.31                | 17.40                         | 500                             | Complies |



Date: 1.FEB.2019 16:17:47



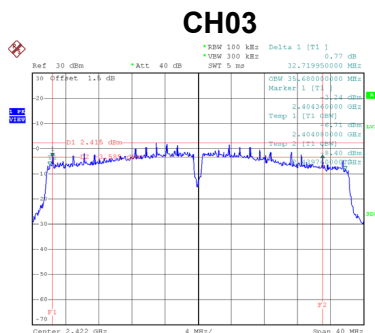
Date: 1.FEB.2019 16:19:23



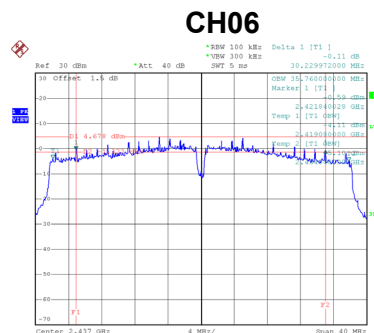
Date: 1.FEB.2019 16:21:05

Test Mode TX N (HT40) Mode

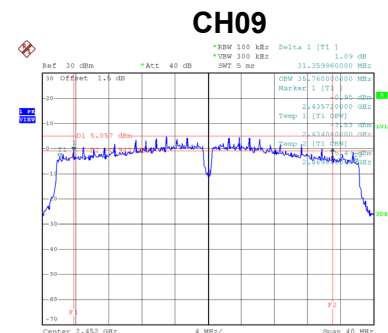
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result   |
|---------|-----------------|----------------------|-------------------------------|---------------------------------|----------|
| 03      | 2422            | 32.72                | 35.68                         | 500                             | Complies |
| 06      | 2437            | 30.23                | 35.76                         | 500                             | Complies |
| 09      | 2452            | 31.36                | 35.76                         | 500                             | Complies |



Date: 1.FEB.2019 16:25:36



Date: 1.FEB.2019 16:28:55

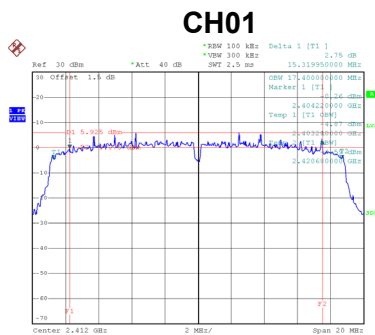


Date: 1.FEB.2019 16:30:44

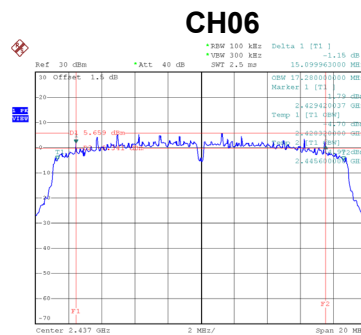
## Beamforming

|           |                  |
|-----------|------------------|
| Test Mode | TX N (HT20) Mode |
|-----------|------------------|

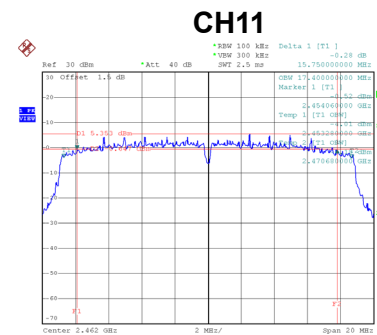
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result   |
|---------|-----------------|----------------------|-------------------------------|---------------------------------|----------|
| 01      | 2412            | 15.32                | 17.40                         | 500                             | Complies |
| 06      | 2437            | 15.10                | 17.28                         | 500                             | Complies |
| 11      | 2462            | 15.75                | 17.40                         | 500                             | Complies |



Date: 16.FEB.2019 11:34:42



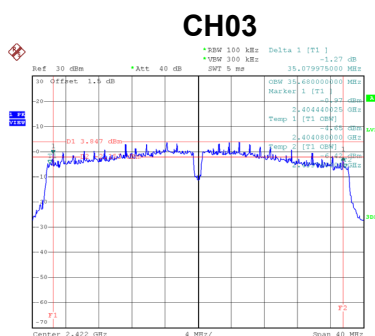
Date: 16.FEB.2019 11:37:09



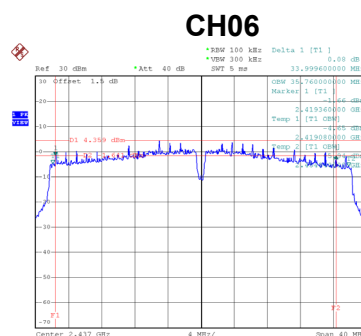
Date: 16.FEB.2019 11:39:13

|           |                  |
|-----------|------------------|
| Test Mode | TX N (HT40) Mode |
|-----------|------------------|

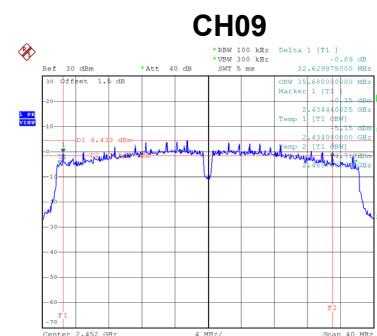
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | 99 % Emission Bandwidth (MHz) | 6 dB Bandwidth Min. Limit (kHz) | Result   |
|---------|-----------------|----------------------|-------------------------------|---------------------------------|----------|
| 03      | 2422            | 35.08                | 35.68                         | 500                             | Complies |
| 06      | 2437            | 34.00                | 35.76                         | 500                             | Complies |
| 09      | 2452            | 32.63                | 35.68                         | 500                             | Complies |



Date: 16.FEB.2019 11:47:32



Date: 16.FEB.2019 11:51:31



Date: 16.FEB.2019 11:53:13

## APPENDIX F - MAXIMUM OUTPUT POWER

### Non-Beamforming

|           |           |
|-----------|-----------|
| Test Mode | TX B Mode |
|-----------|-----------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 22.81              | 0.1910           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.82              | 0.2410           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 27.15              | 0.5188           | 30.00            | 1.0000         | Complies |

|           |           |
|-----------|-----------|
| Test Mode | TX G Mode |
|-----------|-----------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 27.16              | 0.5200           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 27.06              | 0.5082           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 27.12              | 0.5152           | 30.00            | 1.0000         | Complies |

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT20)_Ant. 1 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 21.15              | 0.1303           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.62              | 0.2301           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 23.65              | 0.2317           | 30.00            | 1.0000         | Complies |

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT20)_Ant. 2 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 21.48              | 0.1406           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.74              | 0.2366           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 23.95              | 0.2483           | 30.00            | 1.0000         | Complies |

|           |                   |
|-----------|-------------------|
| Test Mode | TX N (HT20)_Total |
|-----------|-------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 24.33              | 0.2709           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 26.69              | 0.4667           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 26.81              | 0.4801           | 30.00            | 1.0000         | Complies |



|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT40)_Ant. 1 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 03      | 2422            | 23.18              | 0.2080           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.22              | 0.2099           | 30.00            | 1.0000         | Complies |
| 09      | 2452            | 23.82              | 0.2410           | 30.00            | 1.0000         | Complies |

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT40)_Ant. 2 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 03      | 2422            | 24.14              | 0.2594           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.75              | 0.2371           | 30.00            | 1.0000         | Complies |
| 09      | 2452            | 23.61              | 0.2296           | 30.00            | 1.0000         | Complies |

|           |                   |
|-----------|-------------------|
| Test Mode | TX N (HT40)_Total |
|-----------|-------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 03      | 2422            | 26.70              | 0.4674           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 26.50              | 0.4470           | 30.00            | 1.0000         | Complies |
| 09      | 2452            | 26.73              | 0.4706           | 30.00            | 1.0000         | Complies |

## Beamforming

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT20)_Ant. 1 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 21.15              | 0.1303           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.52              | 0.2249           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 23.45              | 0.2213           | 30.00            | 1.0000         | Complies |

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT20)_Ant. 2 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 21.38              | 0.1374           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.54              | 0.2259           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 23.65              | 0.2317           | 30.00            | 1.0000         | Complies |

|           |                   |
|-----------|-------------------|
| Test Mode | TX N (HT20)_Total |
|-----------|-------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 01      | 2412            | 24.28              | 0.2677           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 26.54              | 0.4508           | 30.00            | 1.0000         | Complies |
| 11      | 2462            | 26.56              | 0.4530           | 30.00            | 1.0000         | Complies |

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT40)_Ant. 1 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 03      | 2422            | 23.12              | 0.2051           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.12              | 0.2051           | 30.00            | 1.0000         | Complies |
| 09      | 2452            | 23.52              | 0.2249           | 30.00            | 1.0000         | Complies |

|           |                    |
|-----------|--------------------|
| Test Mode | TX N (HT40)_Ant. 2 |
|-----------|--------------------|

| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 03      | 2422            | 24.04              | 0.2535           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 23.55              | 0.2265           | 30.00            | 1.0000         | Complies |
| 09      | 2452            | 23.47              | 0.2223           | 30.00            | 1.0000         | Complies |

|           |                   |
|-----------|-------------------|
| Test Mode | TX N (HT40)_Total |
|-----------|-------------------|

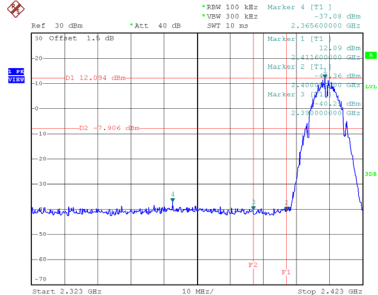
| Channel | Frequency (MHz) | Output Power (dBm) | Output Power (W) | Max. Limit (dBm) | Max. Limit (W) | Result   |
|---------|-----------------|--------------------|------------------|------------------|----------------|----------|
| 03      | 2422            | 26.61              | 0.4586           | 30.00            | 1.0000         | Complies |
| 06      | 2437            | 26.35              | 0.4316           | 30.00            | 1.0000         | Complies |
| 09      | 2452            | 26.51              | 0.4472           | 30.00            | 1.0000         | Complies |

## APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

## Non-Beamforming

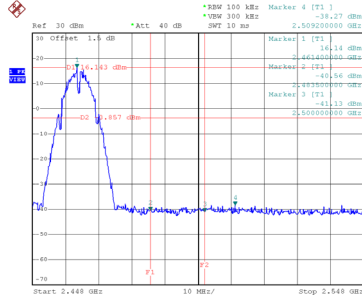
Test Mode TX B Mode

### Bandedge-CH01



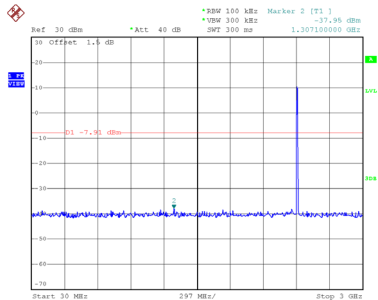
Date: 1.FEB.2019 15:54:53

### Bandedge-CH11

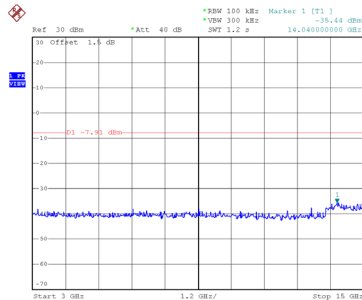


Date: 1.FEB.2019 15:59:25

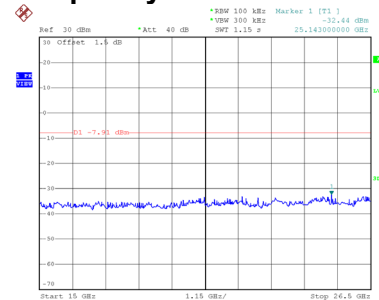
### CH01 – 10th Harmonic of the fundamental frequency



Date: 1.FEB.2019 15:55:07

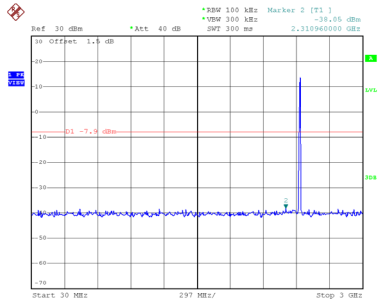


Date: 1.FEB.2019 15:55:15

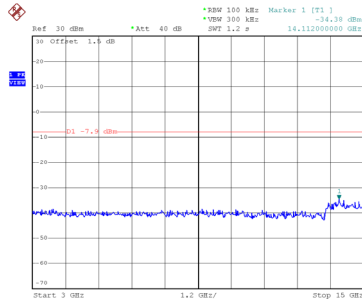


Date: 1.FEB.2019 15:55:24

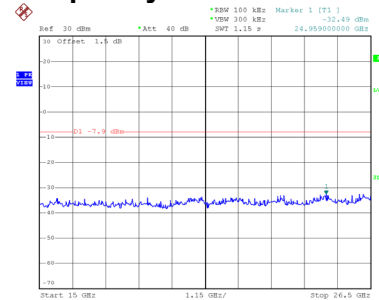
### CH06 – 10th Harmonic of the fundamental frequency



Date: 1.FEB.2019 15:57:37

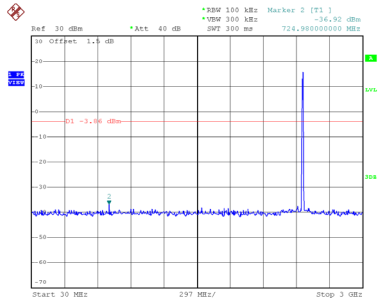


Date: 1.FEB.2019 15:57:46

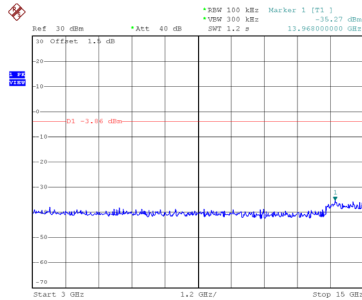


Date: 1.FEB.2019 15:57:54

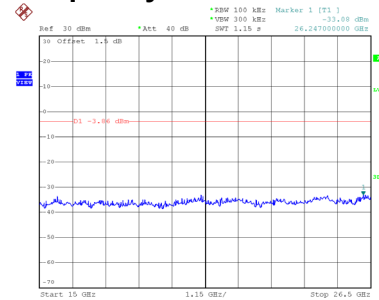
### CH11 – 10th Harmonic of the fundamental frequency



Date: 1.FEB.2019 15:59:39



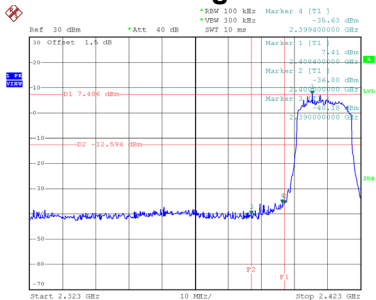
Date: 1.FEB.2019 15:59:48



Date: 1.FEB.2019 15:59:56

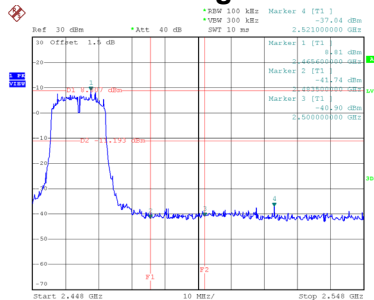
Test Mode TX G Mode

### Bandedge-CH01



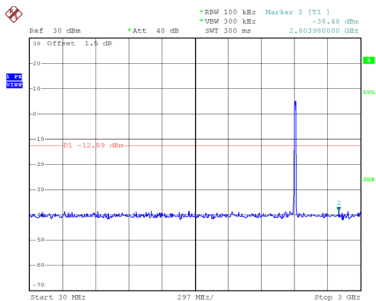
Date: 1.FEB.2019 16:03:11

### Bandedge-CH11

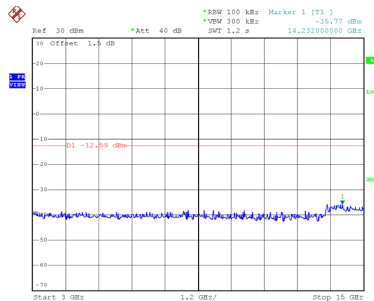


Date: 1.FEB.2019 16:12:29

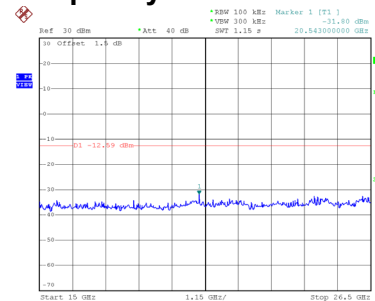
### CH01 – 10th Harmonic of the fundamental frequency



Date: 1.FEB.2019 16:03:25

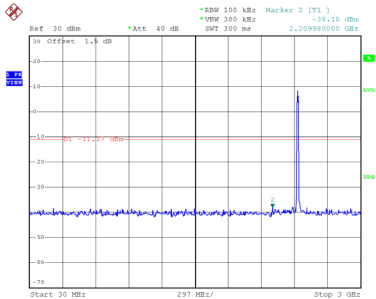


Date: 1.FEB.2019 16:03:33

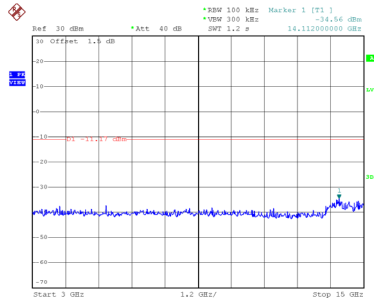


Date: 1.FEB.2019 16:03:42

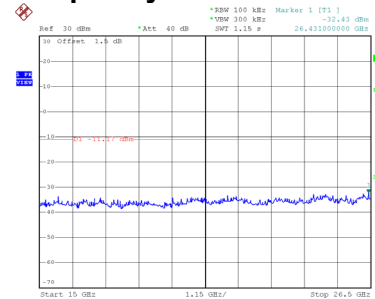
### CH06 – 10th Harmonic of the fundamental frequency



Date: 1.FEB.2019 16:08:10

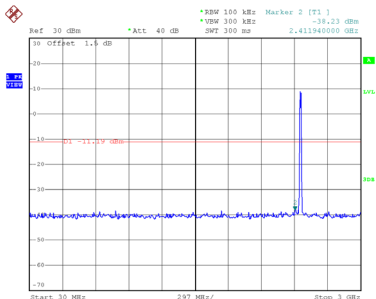


Date: 1.FEB.2019 16:08:19

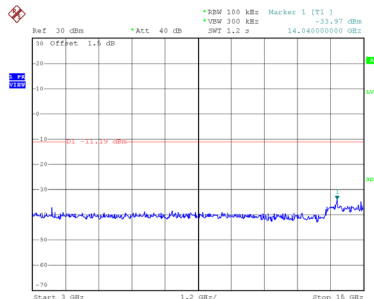


Date: 1.FEB.2019 16:08:27

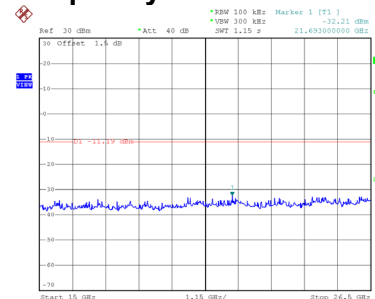
### CH11 – 10th Harmonic of the fundamental frequency



Date: 1.FEB.2019 16:12:43



Date: 1.FEB.2019 16:12:52



Date: 1.FEB.2019 16:13:00