

# FCC / ISED CANADA TEST REPORT

**Project Number** : EA1908C-042  
**Test Report Number** : TR-W1910-005  
**Type of Equipment** : G-Series Site Equipment  
**FCC ID.** : ABZ89FC5810B  
**IC ID** : 109AB-5810B  
**Model Name** : GTR 8000  
**Multiple Model Name** : N/A  
**Applicant** : Motorola Solutions Inc.  
**Address** : 1301 East Algonquin Road, Schaumburg, IL 60196  
**Manufacturer** : Motorola Solutions Malaysia Sdn. Bhd.  
**Address** : 12A, Medan Bayan Lepas, Bayan Lepas Technoplex, 11900  
Bayan Lepas, Pulau Pinang  
**Regulation** : FCC Part 90 and ISED Canada RSS-119 Issue 12  
**Total page of Report** : 78 Pages  
**Date of Receipt** : 2019-08-05  
**Date of Issue** : October 18, 2019  
**Test Result** : PASS

This test report only contains the result of a single test of the sample supplied for the examination.  
It is not a generally valid assessment of the features of the respective products of the mass-production.

Prepared by Chu, Woo-Sik / Senior Engineer

  
Signature

2019-10-18

Date

Reviewed by Choi, Young-min / Technical Manager

  
Signature

2019-10-18

Date

## CONTENTS

### Page

|                                                              |    |
|--------------------------------------------------------------|----|
| 1. TEST SUMMARY .....                                        | 4  |
| 2. EUT (EQUIPMENT UNDER TEST) INFORMATION.....               | 6  |
| 3. TEST CONDITION.....                                       | 7  |
| 4. TEST RESULT .....                                         | 11 |
| 4.1 RADIATED SPURIOUS EMISSIONS .....                        | 11 |
| APPENDIX I - TEST SETUP PHOTOS: RADIATED EMISSION TEST ..... | 76 |
| APPENDIX II - TEST INSTRUMENTATION .....                     | 78 |

### Release Control Record

| Issue Report No. | Issued Date | Details/Revisions |
|------------------|-------------|-------------------|
| TR-W1910-005     | 2019-10-18  | Initial Release   |
|                  |             |                   |

## 1. TEST SUMMARY

### 1.1 Regulations and results

The sample submitted for evaluation (Referred to below as the EUT) has been tested in accordance with the following regulations or standards.

| Agency      | APPLICABLE Part | APPLICABLE SECTION     | TEST DESCRIPTION                     | RESULTS |
|-------------|-----------------|------------------------|--------------------------------------|---------|
| FCC         | Part 90         | Part 90.210            | Field Strength of Spurious radiation | PASS    |
| ISED Canada | RSS-119         | RAA-119 Clause 5.8.9.2 | Field Strength of Spurious radiation | PASS    |

### 1.2 Test Methodology

The tests mentioned in clause 1.1 in this test report were performed according to FCC CFR 47 Part 2, ANSI C63.26: 2015.

### 1.3 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

### 1.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in Section 1.1 and 1.2.

## 1.5 Test Facility

The measurement facilities are located at 135-60 Gyeongchung-daero, Gonjam-eup, Gwangju-si, Gyeonggi-do 12813, Korea. Our test facilities are accredited as a Conformity Assessment Body (CAB) by the FCC and ISCED Canada, designated by the RRA (National Radio Research Agency), and accredited by KOLAS (Korea Laboratory Accreditation Scheme) in Korea and approved by TUV Rheinland, TUV SÜD and Korean Register of Shipping according to the requirement of ISO/IEC 17025.

| Laboratory Qualification                   | Registration No.            | Mark                                                                                                                  |
|--------------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| FCC                                        | KR0160                      |                                    |
| ISED Canada                                | 12721A                      |                                    |
| RRA                                        | KR0160                      |  National Radio Research Agency    |
| TUV Rheinland                              | UA 50314109-0002            |  TÜVRheinland®<br>Precisely Right. |
| TUV SÜD                                    | CARAT 094465 0004<br>Rev.00 |                                  |
| Korean Agency for Technology and Standards | KT733                       |                                  |
| KOREAN REGISTER OF SHIPPING                | PCT40841-TL001              |                                  |

Remark. This report is not related to KOLAS accreditation and relevant regulation.

## 2. EUT (Equipment Under Test) INFORMATION

### 2.1 General Description

The EUT, G-Series Site Equipment is from conventional to trunking, single repeater to multisite, FDMA to TDMA, and available in multiple frequency bands, the GTR 8000 offers design flexibility and investment protection in a high performance package. The product specification described herein was obtained from product data sheet or user's manual.

|                     |                                             |                                                                                                                                                                                             |                                                   |
|---------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Antenna Connector   | TX                                          | N Female                                                                                                                                                                                    |                                                   |
|                     | RX                                          | Standard: BNC Female,. Optional Preselector: N female                                                                                                                                       |                                                   |
| Modulation          |                                             | C4FM, LSM, H-DQPSK, FM, FSK, 4-level FM Widepulse Astro, HPD                                                                                                                                |                                                   |
| Channel Spacing     |                                             | 12.5 kHz, 25 kHz                                                                                                                                                                            |                                                   |
| Frequency Stability |                                             | 100 ppb/2 yr or External Reference                                                                                                                                                          |                                                   |
| Transmitter         | Operating Frequency                         |                                                                                                                                                                                             | 851~870 MHz                                       |
|                     | Power Output                                |                                                                                                                                                                                             | 2 ~ 100 W                                         |
|                     | Electronic Bandwidth                        |                                                                                                                                                                                             | Full Bandwidth                                    |
|                     | Modulation Fidelity                         |                                                                                                                                                                                             | 5 %                                               |
|                     | Intermodulation Attenuation                 |                                                                                                                                                                                             | 80 dB                                             |
|                     | Spurious and Harmonic Emissions Attenuation |                                                                                                                                                                                             | 90 dB                                             |
|                     | Analog Audio Distortion                     |                                                                                                                                                                                             | < 2 % @ 1 000 Hz                                  |
| Emission Designator |                                             | 8K70D1E, 8K70D1D, 8K70D1W, 8K10F1E, 8K10F1D, 8K10F1W, 10K0F1E, 10K0F1D, 10K0F1W, 9K80D7E, 9K80D7D, 9K80D7W, 17K7D7D, 16K0F1D, 16K0F3E, 11K0F3E, 14K0F1D, 14K0F3E, 21K7D7E, 21K7D7D, 21K7D7W |                                                   |
| Receiver            | Operating Frequency                         |                                                                                                                                                                                             | 806~ 825 MHz                                      |
|                     | Analog Sensitivity                          |                                                                                                                                                                                             | 12.5 kHz Ch.: - 118 dBm,<br>25 kHz Ch.: - 117 dBm |
|                     | Intermodulation Rejection                   |                                                                                                                                                                                             | 85 dB                                             |
|                     | Spurious and Image Response Rejection       |                                                                                                                                                                                             | 85 dB                                             |
|                     | Analog Audio Distortion                     |                                                                                                                                                                                             | 3 % or 5 % (Adjustable)                           |
|                     | Intermediate Freq.                          |                                                                                                                                                                                             | First: 73.35 MHz, Second: 2.16 MHz                |
| Electrical Rating   |                                             | AC: (90 - 264) VAC (47 - 63) HZ, DC: (43.2 - 60) V                                                                                                                                          |                                                   |

### 2.2 Additional Model

None

### 3. TEST CONDITION

#### 3.1 Equipment Used During Test

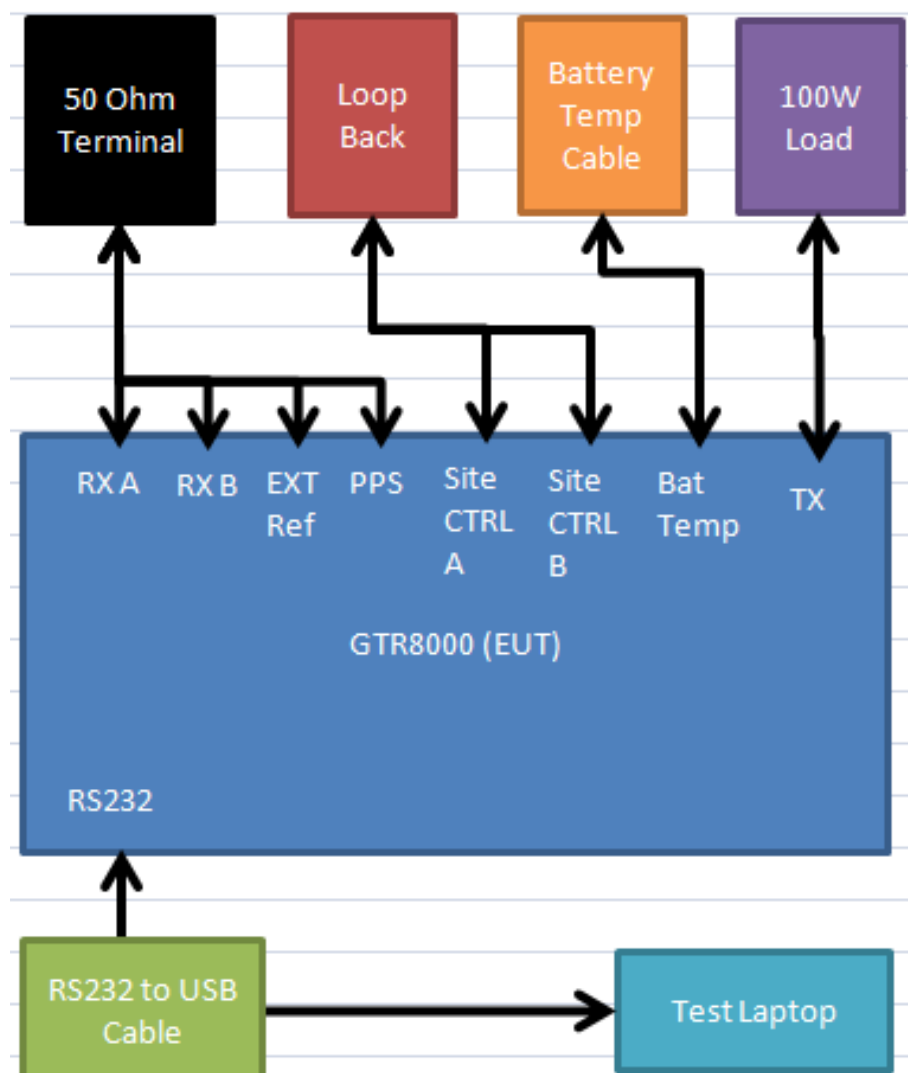
The following peripheral devices and/or interface cables were connected during the measurement:

| Description                   | Model No.    | Serial No.       | Manufacturer.                               |
|-------------------------------|--------------|------------------|---------------------------------------------|
| G-Series Site Equipment (EUT) | GTR 8000     | R001PP0001       | Motorola                                    |
| Notebook PC                   | HSTNN-F10C   | 5CB2242D3R       | HP                                          |
| AC/DC Adapter for Notebook PC | HSTNN-CA24   | F122461344002920 | Chicony Power Technology (SUZHOU) Co., Ltd. |
| Keyboard                      | DK-3100 USB  | N/A              | N/A                                         |
| Mouse                         | AA-SM7PCP    | N/A              | Acrox Technologies                          |
| 30 dB Attenuator              | 49-30-43-LIM | NH248            | Aeroflex                                    |
| Load                          | L22          | N/A              | Revex                                       |
| RS 232 to USB                 | U232-P9      | N/A              | Konig                                       |

#### 3.2 Cable Description

| Ports Name  | Shielded (Y/N) | Ferrite Bead (Y/N) | Length (m) | Connected to       |
|-------------|----------------|--------------------|------------|--------------------|
| AC IN       | N              | N                  | 1.5        | AC Mains           |
| Tx          | Y              | N                  | 1.5        | 100 W Load         |
| Bat Temp    | N              | N                  | 1.5        | Battery Temp Cable |
| Site CTRL A | N              | N                  | 1.5        | SITE CTRL B        |
| RX A        | N              | N                  | N/A        | 50 Ohms Terminal   |
| RX B        | N              | N                  | N/A        | 50 Ohms Terminal   |
| EXT Ref     | N              | N                  | N/A        | 50 Ohms Terminal   |
| PPS         | N              | N                  | N/A        | 50 Ohms Terminal   |
| Ground      | N              | N                  | 1.5        | Ground plane       |

### 3.3 System Block Diagram





### 3.4 Mode of operation during the test

For finding worse case configuration and operating mode, preliminary testing was performed and radiated emission and conducted emission were performed with the EUT set to transmit at the channel with the high and Low RF output power condition as following table according to applicant's requirement.

For radiated and conducted emissions were performed as following test plan, but DC mode for conducted emissions were not measured.

| Band         | Test Mode | Input Voltage | Test Freq. (MHz) | Tx Power | Channel Spacing (kHz)  |
|--------------|-----------|---------------|------------------|----------|------------------------|
| 851 -870 MHz | Mode #1   | AC 120 V      | 851.0125         | Max      | 25 (Analog Voice (FM)) |
|              | Mode #2   |               | 851.0125         | Max      | 12.5 (C4FM)            |
|              | Mode #3   |               | 851.0125         | Max      | 12.5 (H-DQPSK)         |
|              | Mode #4   |               | 851.0125         | Low      | 25 (Analog Voice (FM)) |
|              | Mode #5   |               | 851.0125         | Low      | 12.5 (C4FM)            |
|              | Mode #6   |               | 851.0125         | Low      | 12.5 (H-DQPSK)         |
|              | Mode #7   |               | 860.0125         | Max      | 25 (Analog Voice (FM)) |
|              | Mode #8   |               | 860.0125         | Max      | 12.5 (C4FM)            |
|              | Mode #9   |               | 860.0125         | Max      | 12.5 (H-DQPSK)         |
|              | Mode #10  |               | 860.0125         | Low      | 25 (Analog Voice (FM)) |
|              | Mode #11  |               | 860.0125         | Low      | 12.5 (C4FM)            |
|              | Mode #12  |               | 860.0125         | Low      | 12.5 (H-DQPSK)         |
|              | Mode #13  |               | 868.8875         | Max      | 25 (Analog Voice (FM)) |
|              | Mode #14  |               | 868.8875         | Max      | 12.5 (C4FM)            |
|              | Mode #15  |               | 868.8875         | Max      | 12.5 (H-DQPSK)         |
|              | Mode #16  |               | 868.8875         | Low      | 25 (Analog Voice (FM)) |
|              | Mode #17  |               | 868.8875         | Low      | 12.5 (C4FM)            |
|              | Mode #18  |               | 868.8875         | Low      | 12.5 (H-DQPSK)         |
|              | Mode #19  | DC 48 V       | 860.0125         | Max      | 25 (Analog Voice (FM)) |
|              | Mode #20  |               | 860.0125         | Max      | 12.5 (C4FM)            |
|              | Mode #21  |               | 860.0125         | Max      | 12.5 (H-DQPSK)         |

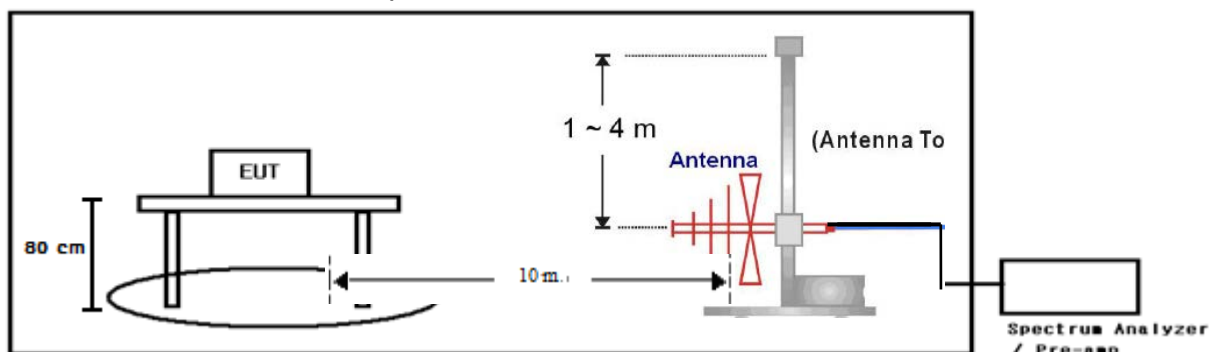
### 3.5 Test Report Configuration

The EUT has Transmitting and Receiving functions, and this report is only covering 800 MHz band transmitter portion in accordance with FCC part 90 and RSS-119 requirements.

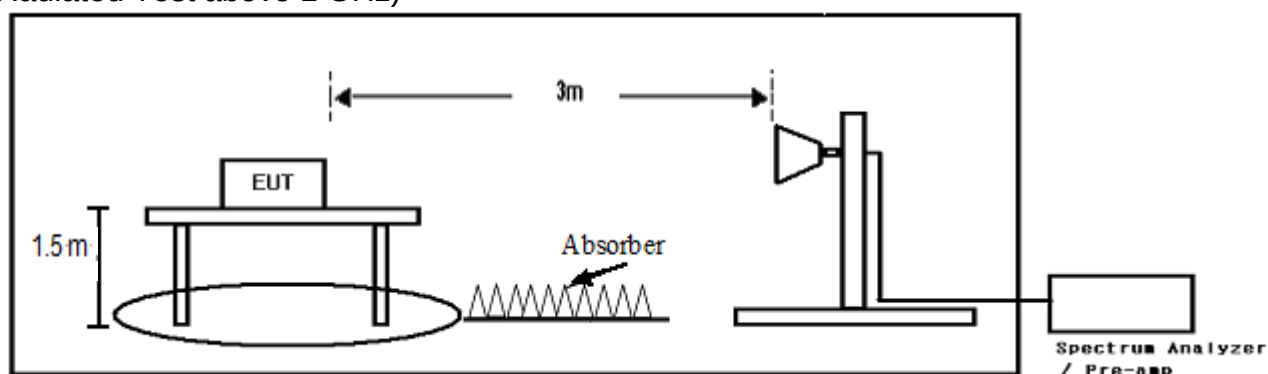
The test report for receiver portion is issued separately due to different rule section and authorization procedure.

### 3.6 Test Setup Drawing

(Radiated Test below 1 GHz)



(Radiated Test above 1 GHz)



### 3.7 EUT Modifications

Following modifications were implemented on the EUT for fixing the problem caused by EMC testing and the product will have all of the modifications incorporated into the product when manufactured and placed on the market.

- None.

## 4. TEST RESULT

### 4.1 Radiated Spurious Emissions

#### 4.1.1 Method of Measurement

The radiated emissions measurements were on 3 m / 10 m semi-anechoic chamber. The EUT and other support equipment were placed on a non-conductive table 80 cm above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable. The frequency spectrum from 30 MHz to tenth harmonic of the highest fundamental frequency or to 40 GHz was scanned and emission levels maximized at each frequency recorded. The system was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

The maximum radiated emission was recorded and used as reference for the effective radiated power measurement. The EUT was then replaced by a tuned dipole antenna or Horn antenna and was oriented for vertical polarization and then the length of dipole antenna was adjusted to correspond to the frequency of the transmitter. The substitution antenna was connected to a signal generator with a coaxial cable. The receiving antenna height was raised and lowered again through the specified range of height until maximum signal level is detected by the measuring receiver. The signal to the substitution antenna was adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the EUT radiated power measured, corrected for the change of input attenuation setting of the measuring receiver. The signal generator level was recorded and corrected by the power loss in the cable between the signal generator and substitution antenna and further corrected for the gain of the dipole antenna or horn antenna used relative to an ideal tuned dipole antenna. The measurement was repeated with the test antenna and the substitution antenna oriented for horizontal polarization. The measure of the effective radiated power is the larger of the two levels recorded.

For measurement below 1 GHz, the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

The spectrum from 30 MHz to tenth harmonic of the highest fundamental frequency or to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

Used Software for measurement is manufactured by TSJ.

For Substitution method

EUT is mounted on a non-conducted table height of 1.5 meter above ground plane. During the exploratory measurement, turn table and antenna height was varied to find the maximum emission level. Record the field strength level of test receiver. Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator. Increase the signal generator output power until the field strength receiver's level is equal to the previous exploratory measurement. The signal generator level with antenna gain, cable loss are the resulting ERP or EIRP

#### 4.1.2 Sample Calculation for radiated measurement

##### Example of Field strength level

At 78.50 MHz

Limit = 40.0 dBuV/m

Result = Receiver reading value + Antenna Factor + Cable Loss - Pre-amplifier gain = 37.0 dBuV/m

Margin = Limit - Result = 40 - 37.0 = 3.0

so the EUT has 3.0 dB margin at 78.50 MHz

##### Example of Substitution method

ERP / EIRP = Substitute level (SG output) + Antenna gain - Cable loss

#### 4.1.3 Measurement Uncertainty

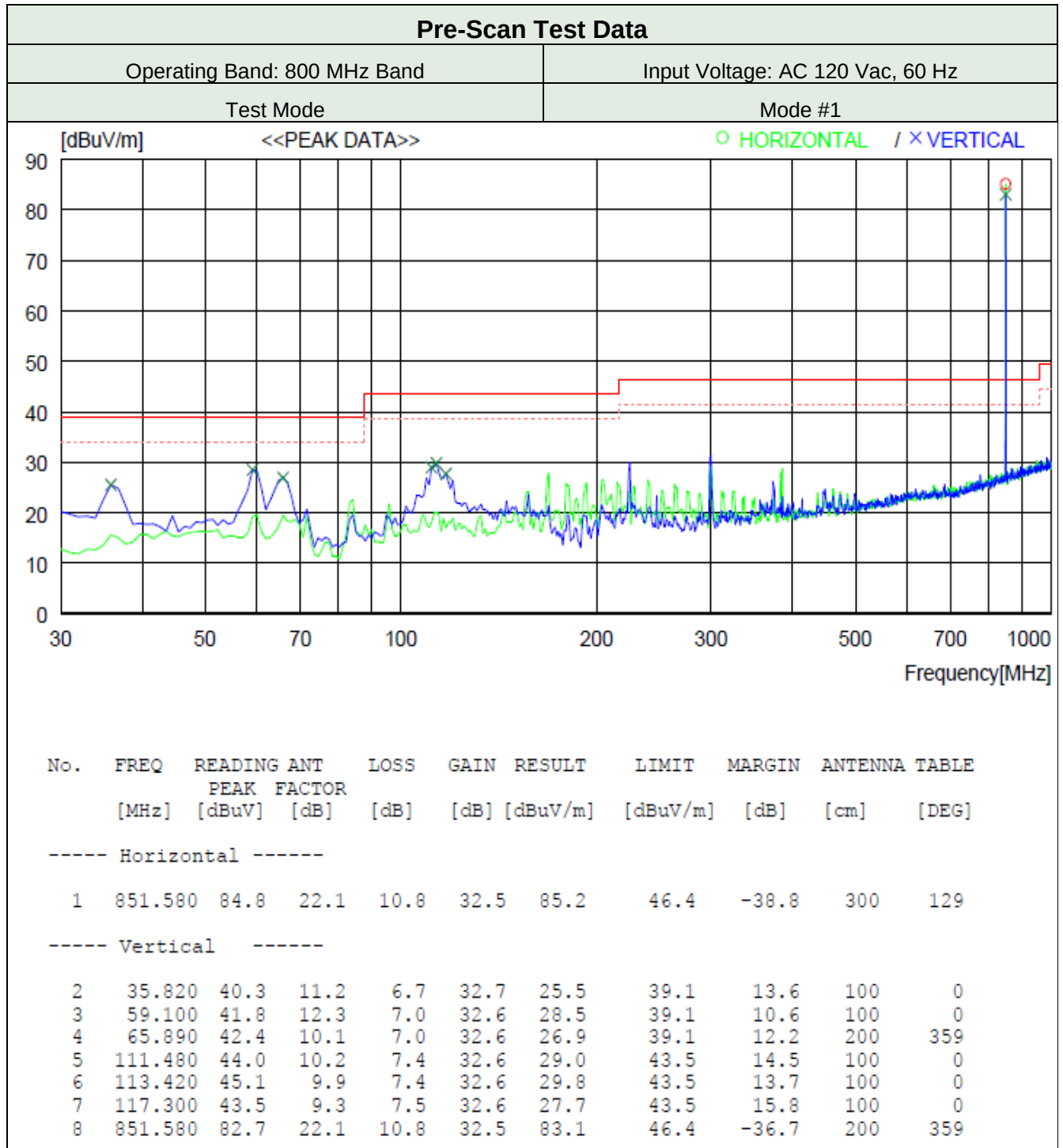
Measurement uncertainties were not taken into account and following uncertainty levels have been estimated for tests performed on the apparatus. The measurement uncertainties are given with at least 95 % confidence.

| Frequency Range | Uncertainty | Frequency Range | Uncertainty |
|-----------------|-------------|-----------------|-------------|
| 9 kHz ~ 30 MHz  | ± 3.2 dB    | 30 MHz ~ 1 GHz  | ± 3.8 dB    |
| 1 GHz ~ 18 GHz  | ± 4.9 dB    | 18 GHz ~ 40 GHz | ± 5.1 dB    |

#### 4.1.4 Test Data

|                    |                         |                   |                      |                      |
|--------------------|-------------------------|-------------------|----------------------|----------------------|
| Date of Test       | 2019-08.07 ~ 2019.08.09 | Temperature       | (23.7 ~ 24.4) °C     |                      |
|                    |                         | Relative humidity | (53.8 ~ 54.6) % R.H. |                      |
| <b>Test Result</b> | <b>PASS</b>             | Tested By         | Im, Jin-young        |                      |
| Frequency range    | Resolution Bandwidth    | Video Bandwidth   | Detector Mode        | Measurement distance |
| Below 1 000 MHz    | 100 kHz or 120 kHz      | 300 kHz           | Peak or Q.P.         | 10 m                 |
| Above 1 000 MHz    | 1 MHz                   | 1 MHz or 10 Hz    | Peak or Average      | 3 m                  |

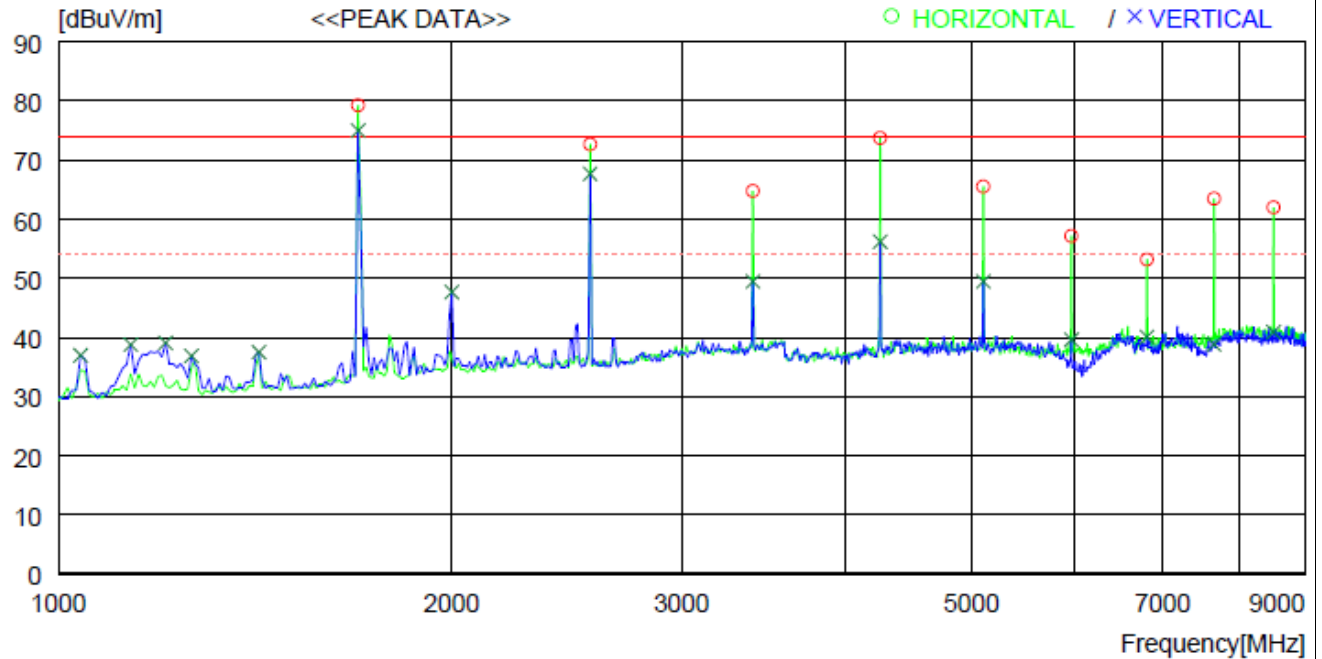
## Radiated Spurious Emissions Test Data



## Pre-Scan Test Data

Test Mode

Mode #1



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|-----------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                       |              |              |                    |                   |                |                 |                |
| 1                      | 1696.000      | 85.5              | 26.6                  | 6.8          | 39.6         | 79.3               | 74.0              | -5.3           | 100             | 3              |
| 2                      | 2552.000      | 74.8              | 28.9                  | 8.5          | 39.5         | 72.7               | 74.0              | 1.3            | 100             | 359            |
| 3                      | 3400.000      | 63.2              | 31.3                  | 10.0         | 39.7         | 64.8               | 74.0              | 9.2            | 100             | 359            |
| 4                      | 4256.000      | 69.7              | 32.9                  | 11.1         | 39.9         | 73.8               | 74.0              | .2             | 100             | 359            |
| 5                      | 5104.000      | 59.4              | 33.9                  | 12.1         | 39.9         | 65.5               | 74.0              | 8.5            | 100             | 7              |
| 6                      | 5960.000      | 49.9              | 34.2                  | 12.8         | 39.7         | 57.2               | 74.0              | 16.8           | 100             | 359            |
| 7                      | 6808.000      | 43.9              | 34.9                  | 13.9         | 39.5         | 53.2               | 74.0              | 20.8           | 100             | 359            |
| 8                      | 7664.000      | 53.1              | 35.4                  | 14.5         | 39.5         | 63.5               | 74.0              | 10.5           | 100             | 359            |
| 9                      | 8512.000      | 50.3              | 36.0                  | 15.1         | 39.4         | 62.0               | 74.0              | 12             | 100             | 7              |
| ----- Vertical -----   |               |                   |                       |              |              |                    |                   |                |                 |                |
| 10                     | 1040.000      | 47.2              | 24.3                  | 5.3          | 39.8         | 37.0               | 74.0              | 37             | 100             | 271            |
| 11                     | 1136.000      | 48.4              | 24.6                  | 5.6          | 39.8         | 38.8               | 74.0              | 35.2           | 100             | 194            |
| 12                     | 1208.000      | 48.4              | 24.8                  | 5.7          | 39.8         | 39.1               | 74.0              | 34.9           | 100             | 179            |
| 13                     | 1264.000      | 45.9              | 24.9                  | 5.9          | 39.8         | 36.9               | 74.0              | 37.1           | 100             | 0              |
| 14                     | 1424.000      | 45.7              | 25.3                  | 6.3          | 39.8         | 37.5               | 74.0              | 36.5           | 100             | 62             |
| 15                     | 1696.000      | 81.2              | 26.6                  | 6.8          | 39.6         | 75.0               | 74.0              | -1             | 100             | 0              |
| 16                     | 2000.000      | 51.4              | 28.2                  | 7.5          | 39.4         | 47.7               | 74.0              | 26.3           | 100             | 0              |
| 17                     | 2552.000      | 69.8              | 28.9                  | 8.5          | 39.5         | 67.7               | 74.0              | 6.3            | 100             | 0              |
| 18                     | 3400.000      | 47.9              | 31.3                  | 10.0         | 39.7         | 49.5               | 74.0              | 24.5           | 100             | 202            |
| 19                     | 4256.000      | 52.1              | 32.9                  | 11.1         | 39.9         | 56.2               | 74.0              | 17.8           | 100             | 202            |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #1                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 113.42                             | V                 | 55.1                  | -51.90             | 0.27               | -0.72                  | -57.75            | -13.0          | 44.75          |
| 1696.00                            | H                 | 85.5                  | - 25.42            | 2.01               | 8.46                   | -18.97            |                | 5.97           |
| 2552.00                            | H                 | 74.8                  | - 33.4             | 2.51               | 9.87                   | -26.04            |                | 13.04          |
| 3400.00                            | H                 | 63.2                  | - 42.71            | 2.89               | 10.06                  | -35.54            |                | 22.54          |
| 4256.00                            | H                 | 69.7                  | - 34.71            | 3.25               | 10.85                  | -27.11            |                | 14.11          |
| 5104.00                            | H                 | 59.4                  | - 42.82            | 3.64               | 10.96                  | -35.50            |                | 22.5           |
| 5960.00                            | H                 | 49.9                  | -50.69             | 3.90               | 11.41                  | -43.18            |                | 30.18          |
| 6808.00                            | H                 | 43.9                  | -59.63             | 4.18               | 11.61                  | -52.20            |                | 39.2           |
| 7664.00                            | H                 | 53.10                 | -44.62             | 4.61               | 11.63                  | -37.60            |                | 24.6           |
| 8512.00                            | H                 | 50.30                 | -45.90             | 5.23               | 12.14                  | -38.99            |                | 25.99          |

Note

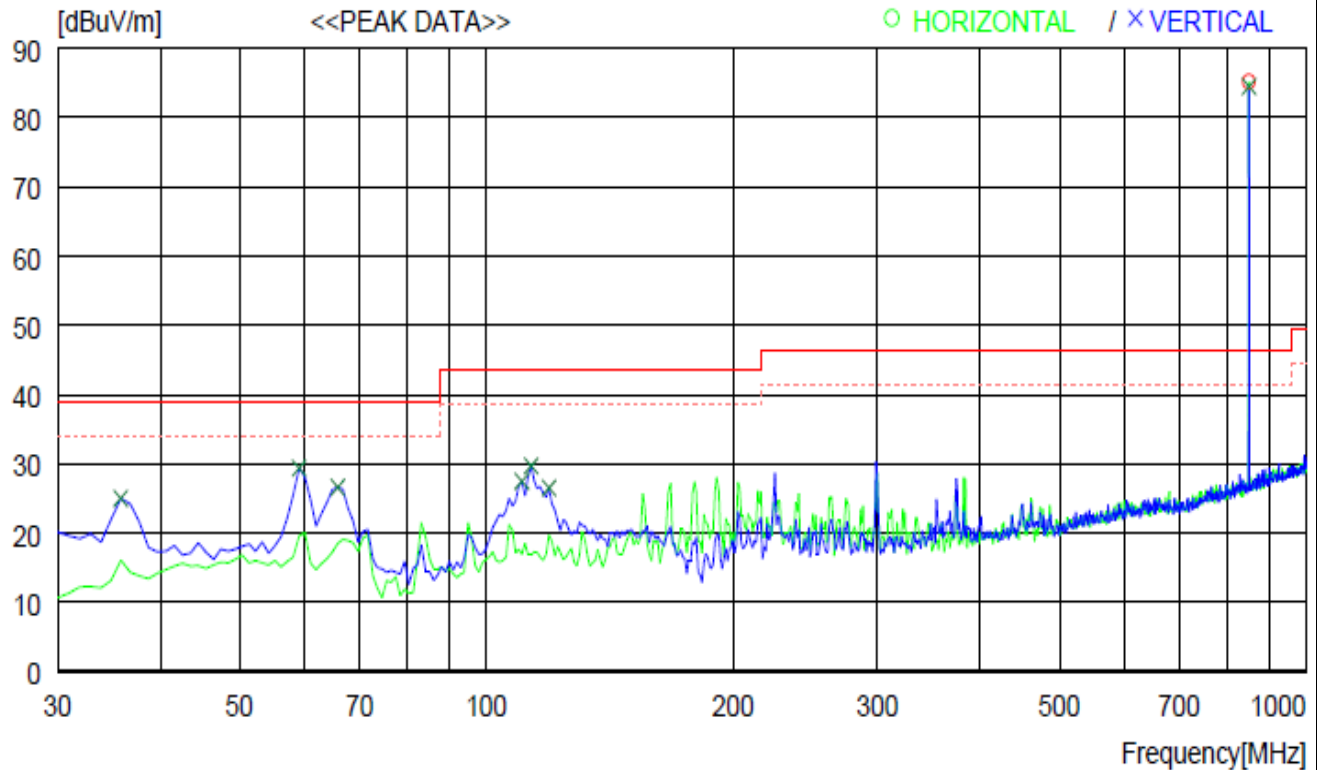
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

### Pre-Scan Test Data

Test Mode

Mode #2



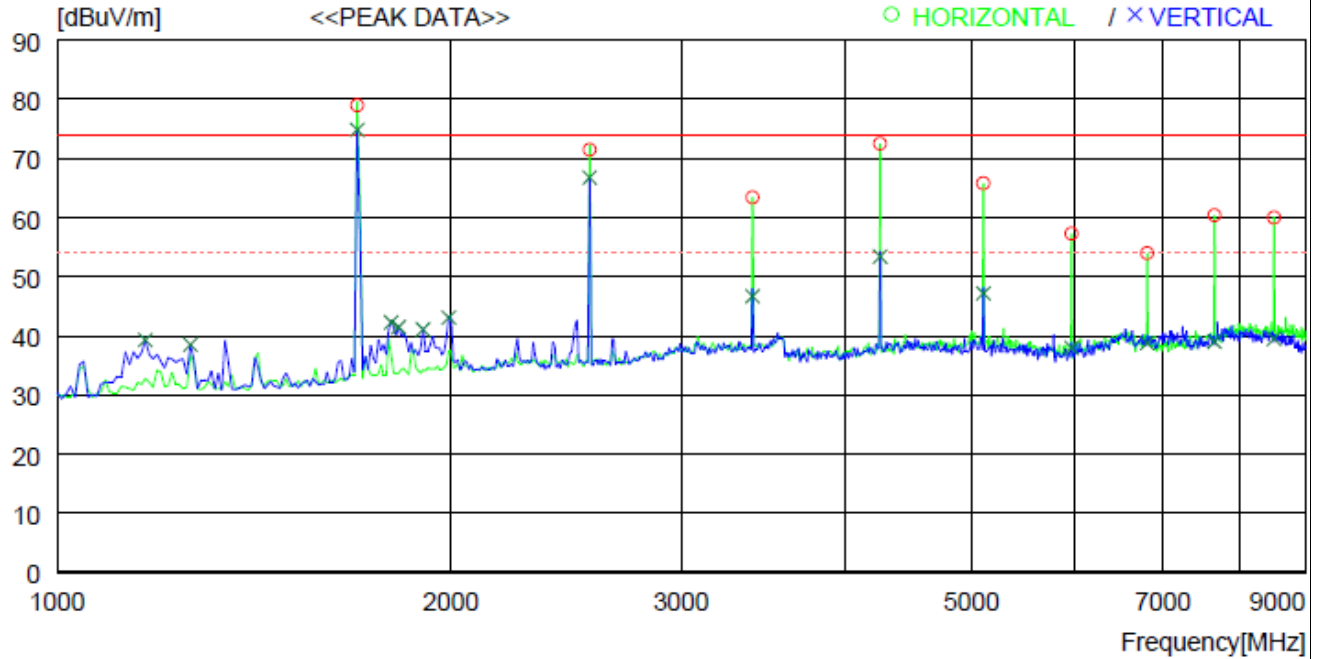
| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 851.580       | 84.8              | 22.1                       | 10.8         | 32.5         | 85.2               | 46.4              | -38.8          | 300             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 39.8              | 11.2                       | 6.7          | 32.7         | 25.0               | 39.1              | 14.1           | 100             | 0              |
| 3                      | 59.100        | 42.7              | 12.3                       | 7.0          | 32.6         | 29.4               | 39.1              | 9.7            | 100             | 38             |
| 4                      | 65.890        | 42.1              | 10.1                       | 7.0          | 32.6         | 26.6               | 39.1              | 12.5           | 100             | 0              |
| 5                      | 110.510       | 42.4              | 10.3                       | 7.4          | 32.6         | 27.5               | 43.5              | 16             | 200             | 122            |
| 6                      | 113.420       | 45.0              | 9.9                        | 7.4          | 32.6         | 29.7               | 43.5              | 13.8           | 100             | 0              |
| 7                      | 119.240       | 42.6              | 9.0                        | 7.5          | 32.6         | 26.5               | 43.5              | 17             | 100             | 0              |
| 8                      | 851.580       | 84.1              | 22.1                       | 10.8         | 32.5         | 84.5               | 46.4              | -38.1          | 200             | 359            |



## Pre-Scan Test Data

Test Mode

Mode #2



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1696.000      | 85.9              | 26.6                       | 6.3          | 39.8         | 79.0               | 74.0              | -5             | 100             | 7              |
| 2                      | 2552.000      | 74.5              | 28.9                       | 7.5          | 39.4         | 71.5               | 74.0              | 2.5            | 100             | 7              |
| 3                      | 3400.000      | 61.8              | 31.3                       | 10.0         | 39.7         | 63.4               | 74.0              | 10.6           | 100             | 359            |
| 4                      | 4256.000      | 68.4              | 32.9                       | 11.1         | 39.9         | 72.5               | 74.0              | 1.5            | 100             | 2              |
| 5                      | 5104.000      | 59.7              | 33.9                       | 12.1         | 39.9         | 65.8               | 74.0              | 8.2            | 100             | 359            |
| 6                      | 5960.000      | 50.0              | 34.2                       | 12.8         | 39.7         | 57.3               | 74.0              | 16.7           | 100             | 359            |
| 7                      | 6808.000      | 44.7              | 34.9                       | 13.9         | 39.5         | 54.0               | 74.0              | 20             | 100             | 359            |
| 8                      | 7664.000      | 50.0              | 35.4                       | 14.5         | 39.5         | 60.4               | 74.0              | 13.6           | 100             | 359            |
| 9                      | 8512.000      | 48.3              | 36.0                       | 15.1         | 39.4         | 60.0               | 74.0              | 14             | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 10                     | 1168.000      | 48.8              | 24.7                       | 5.6          | 39.8         | 39.3               | 74.0              | 34.7           | 100             | 0              |
| 11                     | 1264.000      | 47.5              | 24.9                       | 5.9          | 39.8         | 38.5               | 74.0              | 35.5           | 100             | 0              |
| 12                     | 1696.000      | 81.1              | 26.6                       | 6.8          | 39.6         | 74.9               | 74.0              | -9             | 100             | 192            |
| 13                     | 1800.000      | 48.0              | 27.1                       | 6.8          | 39.6         | 42.3               | 74.0              | 31.7           | 100             | 303            |
| 14                     | 1824.000      | 46.7              | 27.3                       | 7.0          | 39.5         | 41.5               | 74.0              | 32.5           | 100             | 0              |
| 15                     | 1904.000      | 45.8              | 27.7                       | 7.1          | 39.5         | 41.1               | 74.0              | 32.9           | 100             | 333            |
| 16                     | 1992.000      | 47.1              | 28.2                       | 7.3          | 39.5         | 43.1               | 74.0              | 30.9           | 100             | 0              |
| 17                     | 2552.000      | 68.9              | 28.9                       | 8.5          | 39.5         | 66.8               | 74.0              | 7.2            | 100             | 199            |
| 18                     | 3400.000      | 46.4              | 31.3                       | 8.5          | 39.5         | 46.7               | 74.0              | 27.3           | 100             | 0              |
| 19                     | 4256.000      | 50.2              | 32.9                       | 10.0         | 39.7         | 53.4               | 74.0              | 20.6           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #2                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 113.42                             | V                 | 55.0                  | -56.87             | 0.27               | -0.72                  | -57.86            | -13.0          | 44.86          |
| 1696.00                            | H                 | 85.90                 | -25.03             | 2.01               | 8.46                   | -18.58            |                | 5.58           |
| 2552.00                            | H                 | 74.50                 | -33.71             | 2.51               | 9.87                   | -26.35            |                | 13.35          |
| 3400.00                            | H                 | 61.80                 | -44.20             | 2.89               | 10.06                  | -37.03            |                | 24.03          |
| 4256.00                            | H                 | 68.40                 | -36.01             | 3.25               | 10.85                  | -28.41            |                | 15.41          |
| 5104.00                            | H                 | 59.70                 | -42.50             | 3.64               | 10.96                  | -35.18            |                | 22.18          |
| 5960.00                            | H                 | 50.00                 | -50.58             | 3.90               | 11.41                  | -43.07            |                | 30.07          |
| 6808.00                            | H                 | 44.70                 | -58.52             | 4.18               | 11.61                  | -51.09            |                | 38.09          |
| 7664.00                            | H                 | 50.00                 | -48.04             | 4.61               | 11.63                  | -41.02            |                | 28.02          |
| 8512.00                            | H                 | 48.30                 | -47.79             | 5.23               | 12.14                  | -40.88            |                | 27.88          |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

**Pre-Scan Test Data**

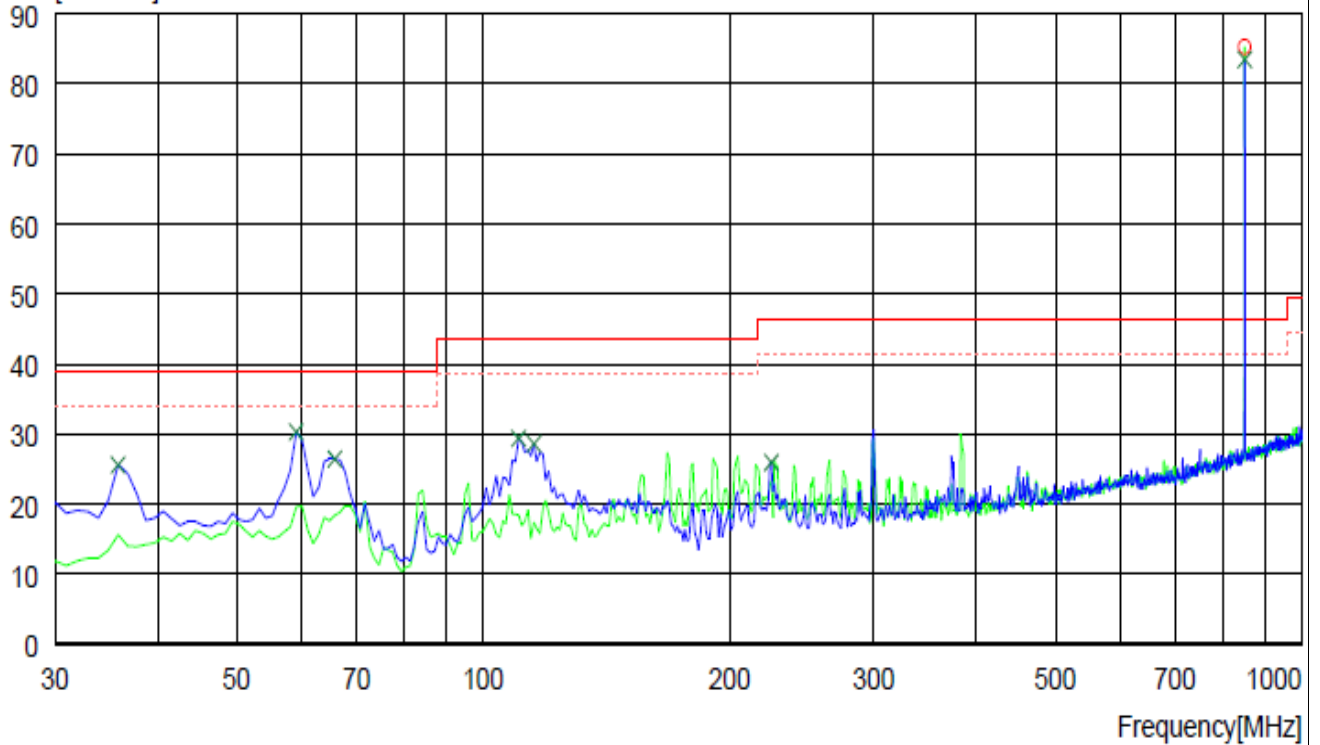
Test Mode

Mode #3

[dBuV/m]

<<PEAK DATA>>

○ HORIZONTAL / × VERTICAL

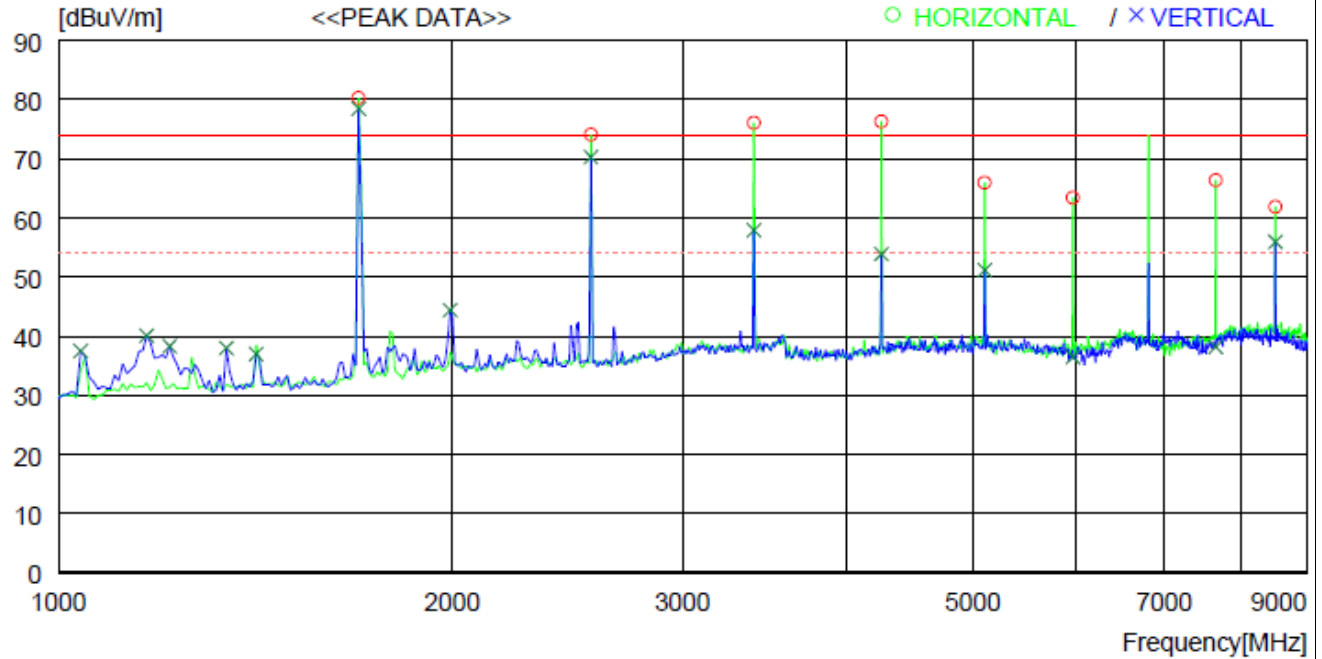


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 851.580       | 84.9              | 22.1                       | 10.8         | 32.5         | 85.3               | 46.4              | -38.9          | 300             | 129            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.4              | 11.2                       | 6.7          | 32.7         | 25.6               | 39.1              | 13.5           | 100             | 0              |
| 3                      | 59.100        | 43.6              | 12.3                       | 7.0          | 32.6         | 30.3               | 39.1              | 8.8            | 100             | 0              |
| 4                      | 65.890        | 41.9              | 10.1                       | 7.0          | 32.6         | 26.4               | 39.1              | 12.7           | 200             | 359            |
| 5                      | 110.510       | 44.3              | 10.3                       | 7.4          | 32.6         | 29.4               | 43.5              | 14.1           | 200             | 158            |
| 6                      | 115.360       | 44.2              | 9.6                        | 7.4          | 32.6         | 28.6               | 43.5              | 14.9           | 100             | 0              |
| 7                      | 224.970       | 38.3              | 12.1                       | 8.1          | 32.6         | 25.9               | 46.4              | 20.5           | 100             | 146            |
| 8                      | 851.580       | 83.1              | 22.1                       | 10.8         | 32.5         | 83.5               | 46.4              | -37.1          | 200             | 151            |

## Pre-Scan Test Data

Test Mode

Mode #3



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1696.000      | 86.5              | 26.6                       | 6.8          | 39.6         | 80.3               | 74.0              | -6.3           | 100             | 359            |
| 2                      | 2552.000      | 76.2              | 28.9                       | 8.5          | 39.5         | 74.1               | 74.0              | -1.1           | 100             | 13             |
| 3                      | 3400.000      | 74.5              | 31.3                       | 10.0         | 39.7         | 76.1               | 74.0              | -2.1           | 100             | 3              |
| 4                      | 4256.000      | 72.2              | 32.9                       | 11.1         | 39.9         | 76.3               | 74.0              | -2.3           | 100             | 359            |
| 5                      | 5104.000      | 59.9              | 33.9                       | 12.1         | 39.9         | 66.0               | 74.0              | 8              | 100             | 359            |
| 6                      | 5960.000      | 56.1              | 34.2                       | 12.8         | 39.7         | 63.4               | 74.0              | 10.6           | 100             | 359            |
| 7                      | 7664.000      | 56.0              | 35.4                       | 14.5         | 39.5         | 66.4               | 74.0              | 7.6            | 100             | 359            |
| 8                      | 8512.000      | 50.2              | 36.0                       | 15.1         | 39.4         | 61.9               | 74.0              | 12.1           | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 9                      | 1040.000      | 47.7              | 24.3                       | 5.3          | 39.8         | 37.5               | 74.0              | 36.5           | 100             | 0              |
| 10                     | 1168.000      | 49.6              | 24.7                       | 5.6          | 39.8         | 40.1               | 74.0              | 33.9           | 100             | 203            |
| 11                     | 1216.000      | 47.6              | 24.8                       | 5.7          | 39.8         | 38.3               | 74.0              | 35.7           | 100             | 218            |
| 12                     | 1344.000      | 46.6              | 25.1                       | 6.1          | 39.8         | 38.0               | 74.0              | 36             | 100             | 279            |
| 13                     | 1416.000      | 45.2              | 25.3                       | 6.3          | 39.8         | 37.0               | 74.0              | 37             | 100             | 347            |
| 14                     | 1696.000      | 84.7              | 26.6                       | 6.8          | 39.6         | 78.5               | 74.0              | -4.5           | 100             | 0              |
| 15                     | 1992.000      | 48.1              | 28.2                       | 7.5          | 39.4         | 44.4               | 74.0              | 29.6           | 100             | 1              |
| 16                     | 2552.000      | 72.4              | 28.9                       | 8.5          | 39.5         | 70.3               | 74.0              | 3.7            | 100             | 196            |
| 17                     | 3400.000      | 56.3              | 31.3                       | 10.0         | 39.7         | 57.9               | 74.0              | 16.1           | 100             | 196            |
| 18                     | 4256.000      | 49.8              | 32.9                       | 11.1         | 39.9         | 53.9               | 74.0              | 20.1           | 100             | 12             |
| 19                     | 5104.000      | 45.1              | 33.9                       | 12.1         | 39.9         | 51.2               | 74.0              | 22.8           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #3                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 59.1                               | V                 | 53.60                 | -59.85             | 0.20               | -1.70                  | -61.75            | -13.0          | 48.75          |
| 110.51                             | V                 | 54.30                 | -57.50             | 0.27               | -0.70                  | -58.47            |                | 45.47          |
| 1696.00                            | H                 | 86.50                 | -24.44             | 2.01               | 8.46                   | -17.99            |                | 4.99           |
| 2552.00                            | H                 | 76.20                 | -31.99             | 2.51               | 9.87                   | -24.63            |                | 11.63          |
| 3400.00                            | H                 | 74.50                 | -31.15             | 2.89               | 10.06                  | -23.98            |                | 10.98          |
| 4256.00                            | H                 | 72.20                 | -32.20             | 3.25               | 10.85                  | -24.60            |                | 11.6           |
| 5104.00                            | H                 | 59.90                 | -42.29             | 3.64               | 10.96                  | -34.97            |                | 21.97          |
| 5960.00                            | H                 | 56.10                 | -44.45             | 3.90               | 11.41                  | -36.94            |                | 23.94          |
| 7664.00                            | H                 | 56.00                 | -41.41             | 4.61               | 11.63                  | -34.39            |                | 21.39          |
| 8512.00                            | H                 | 50.20                 | -46.00             | 5.23               | 12.14                  | -39.09            |                | 26.09          |

Note

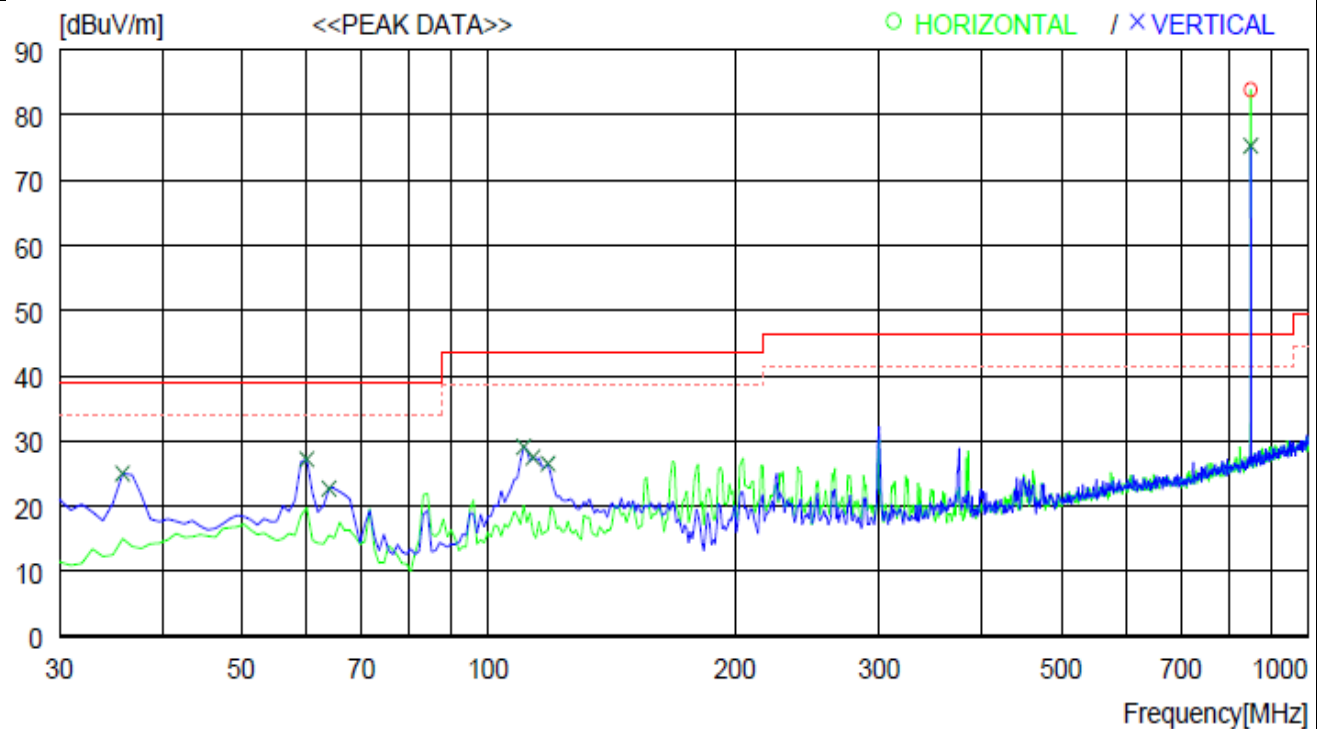
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

# Pre-Scan Test Data

Test Mode

Mode #4

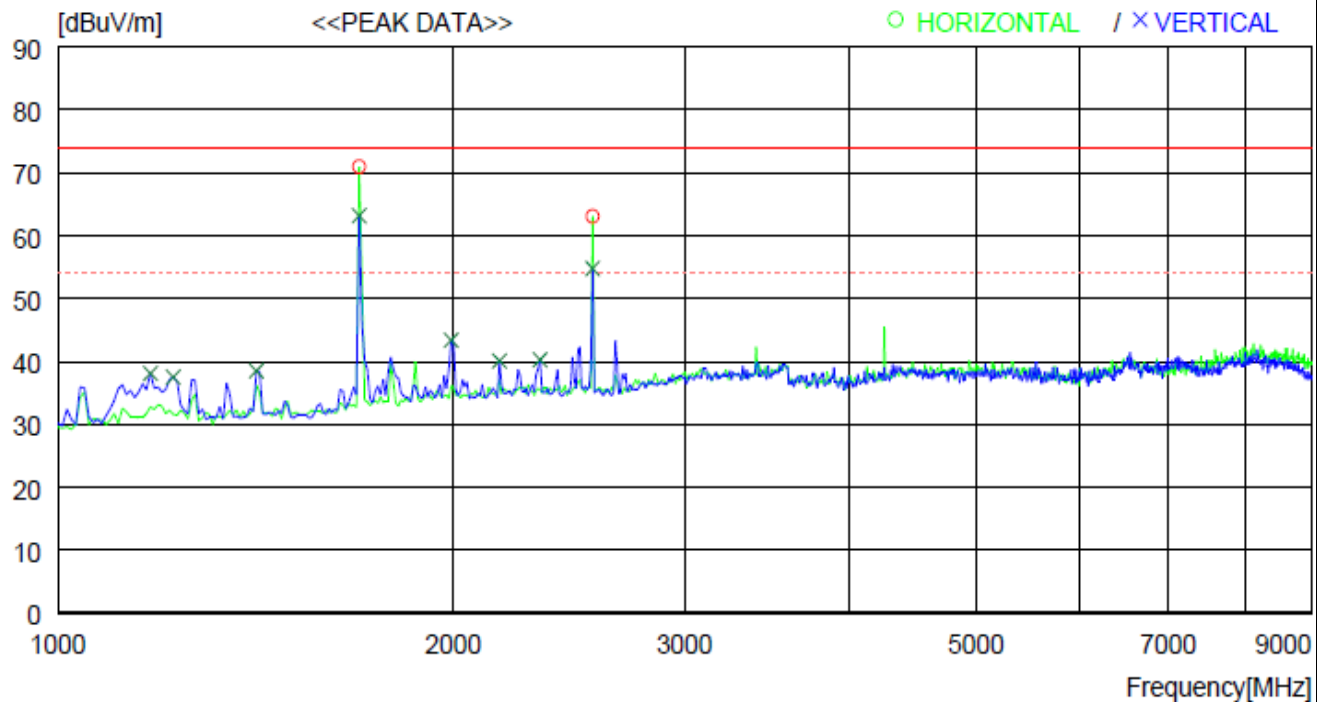


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 851.580       | 83.5              | 22.1                       | 10.8         | 32.5         | 83.9               | 46.4              | -37.5          | 300             | 139            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 39.8              | 11.2                       | 6.7          | 32.7         | 25.0               | 39.1              | 14.1           | 100             | 0              |
| 3                      | 60.070        | 40.8              | 12.0                       | 7.0          | 32.6         | 27.2               | 39.1              | 11.9           | 100             | 277            |
| 4                      | 63.950        | 37.6              | 10.7                       | 7.0          | 32.6         | 22.7               | 39.1              | 16.4           | 200             | 358            |
| 5                      | 110.510       | 44.0              | 10.3                       | 7.4          | 32.6         | 29.1               | 43.5              | 14.4           | 100             | 151            |
| 6                      | 113.420       | 42.8              | 9.9                        | 7.4          | 32.6         | 27.5               | 43.5              | 16             | 100             | 0              |
| 7                      | 118.270       | 42.5              | 9.1                        | 7.5          | 32.6         | 26.5               | 43.5              | 17             | 100             | 0              |
| 8                      | 851.580       | 74.9              | 22.1                       | 10.8         | 32.5         | 75.3               | 46.4              | -28.9          | 200             | 359            |

# Pre-Scan Test Data

Test Mode

Mode #4



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1696.000      | 77.2              | 26.6                       | 6.8          | 39.6         | 71.0               | 74.0              | 3              | 100             | 2              |
| 2                      | 2552.000      | 65.2              | 28.9                       | 8.5          | 39.5         | 63.1               | 74.0              | 10.9           | 100             | 2              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 1176.000      | 47.6              | 24.7                       | 5.6          | 39.8         | 38.1               | 74.0              | 35.9           | 100             | 0              |
| 4                      | 1224.000      | 46.7              | 24.8                       | 5.8          | 39.8         | 37.5               | 74.0              | 36.5           | 100             | 0              |
| 5                      | 1416.000      | 46.7              | 25.3                       | 6.3          | 39.8         | 38.5               | 74.0              | 35.5           | 100             | 0              |
| 6                      | 1696.000      | 69.4              | 26.6                       | 6.8          | 39.6         | 63.2               | 74.0              | 10.8           | 100             | 195            |
| 7                      | 1992.000      | 47.1              | 28.2                       | 7.5          | 39.4         | 43.4               | 74.0              | 30.6           | 100             | 3              |
| 8                      | 2168.000      | 43.3              | 28.4                       | 7.8          | 39.4         | 40.1               | 74.0              | 33.9           | 100             | 354            |
| 9                      | 2328.000      | 43.2              | 28.5                       | 8.1          | 39.5         | 40.3               | 74.0              | 33.7           | 100             | 0              |
| 10                     | 2552.000      | 56.9              | 28.9                       | 8.5          | 39.5         | 54.8               | 74.0              | 19.2           | 100             | 195            |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #4                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1696.00                            | H                 | 77.20                 | -33.68             | 2.01               | 8.46                   | -27.23            | -13.0          | 14.23          |
| 2552.00                            | H                 | 65.20                 | -43.18             | 2.51               | 9.87                   | -35.82            |                | 22.82          |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

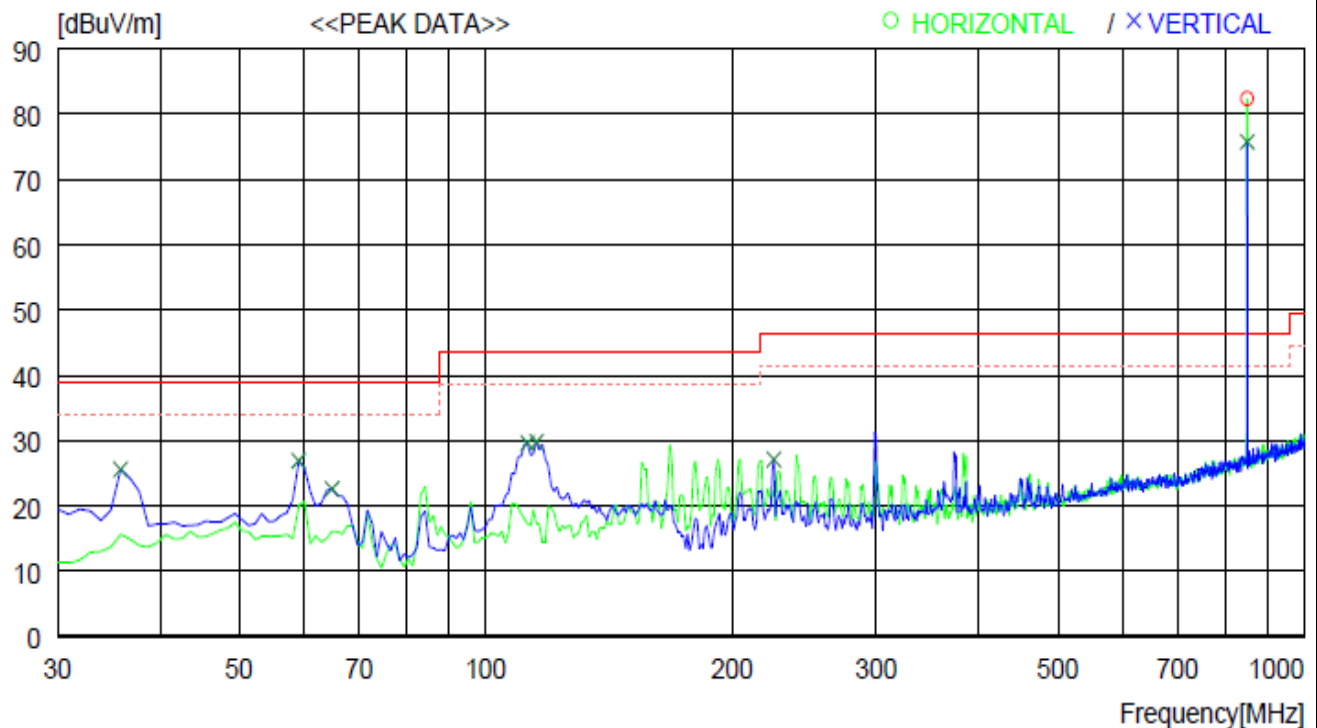
$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$



# Pre-Scan Test Data

Test Mode

Mode #4



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 851.580       | 82.0              | 22.1                       | 10.8         | 32.5         | 82.4               | 46.4              | -36            | 300             | 135            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.4              | 11.2                       | 6.7          | 32.7         | 25.6               | 39.1              | 13.5           | 100             | 271            |
| 3                      | 59.100        | 40.2              | 12.3                       | 7.0          | 32.6         | 26.9               | 39.1              | 12.2           | 100             | 0              |
| 4                      | 64.920        | 37.8              | 10.4                       | 7.0          | 32.6         | 22.6               | 39.1              | 16.5           | 200             | 321            |
| 5                      | 112.450       | 44.8              | 10.0                       | 7.4          | 32.6         | 29.6               | 43.5              | 13.9           | 100             | 0              |
| 6                      | 115.360       | 45.4              | 9.6                        | 7.4          | 32.6         | 29.8               | 43.5              | 13.7           | 100             | 139            |
| 7                      | 224.970       | 39.5              | 12.1                       | 8.1          | 32.6         | 27.1               | 46.4              | 19.3           | 100             | 0              |
| 8                      | 851.580       | 75.4              | 22.1                       | 10.8         | 32.5         | 75.8               | 46.4              | -29.4          | 200             | 359            |

# Pre-Scan Test Data

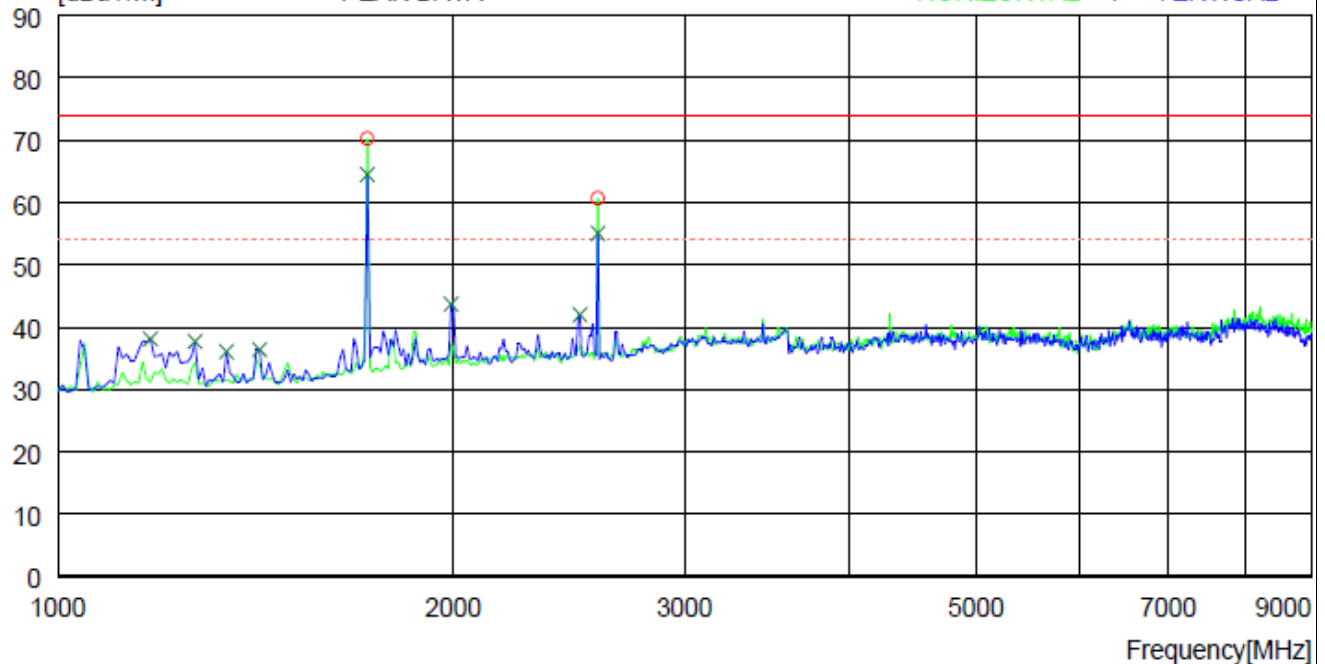
Test Mode

Mode #5

[dBuV/m]

<<PEAK DATA>>

○ HORIZONTAL / × VERTICAL



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 76.3              | 26.7                       | 6.9          | 39.6         | 70.3               | 74.0              | 3.7            | 100             | 7              |
| 2                      | 2576.000      | 62.6              | 29.0                       | 8.6          | 39.5         | 60.7               | 74.0              | 13.3           | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 1176.000      | 47.6              | 24.7                       | 5.6          | 39.8         | 38.1               | 74.0              | 35.9           | 100             | 0              |
| 4                      | 1272.000      | 46.7              | 24.9                       | 5.9          | 39.8         | 37.7               | 74.0              | 36.3           | 100             | 285            |
| 5                      | 1344.000      | 44.7              | 25.1                       | 6.1          | 39.8         | 36.1               | 74.0              | 37.9           | 100             | 262            |
| 6                      | 1424.000      | 44.6              | 25.3                       | 6.3          | 39.8         | 36.4               | 74.0              | 37.6           | 100             | 0              |
| 7                      | 1720.000      | 70.5              | 26.7                       | 6.9          | 39.6         | 64.5               | 74.0              | 9.5            | 100             | 0              |
| 8                      | 1992.000      | 47.4              | 28.2                       | 7.5          | 39.4         | 43.7               | 74.0              | 30.3           | 100             | 0              |
| 9                      | 2496.000      | 44.4              | 28.7                       | 8.4          | 39.5         | 42.0               | 74.0              | 32             | 100             | 146            |
| 10                     | 2576.000      | 57.0              | 29.0                       | 8.6          | 39.5         | 55.1               | 74.0              | 18.9           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #5                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 76.30                 | -34.40             | 2.02               | 8.44                   | -27.98            | -13.0          | 14.98          |
| 2576.00                            | H                 | 62.60                 | -45.87             | 2.52               | 9.86                   | -38.53            |                | 25.53          |

Note

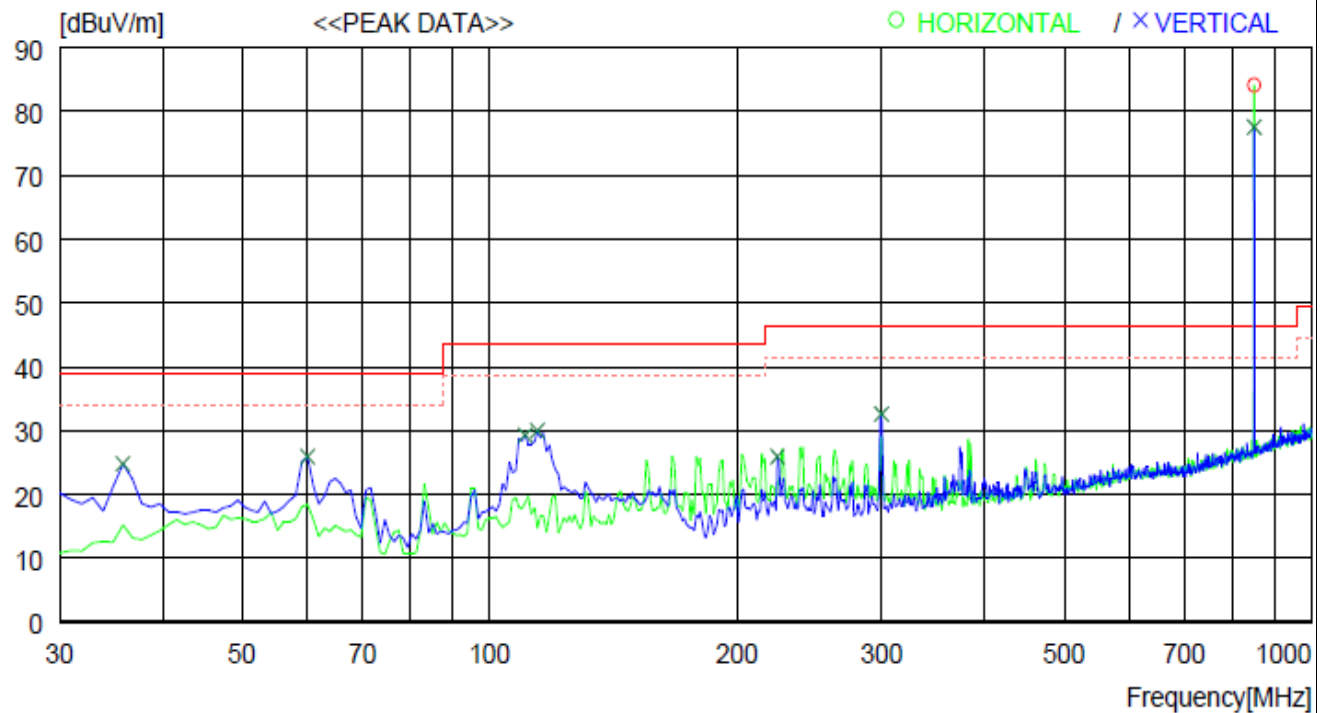
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

# Pre-Scan Test Data

Test Mode

Mode #6

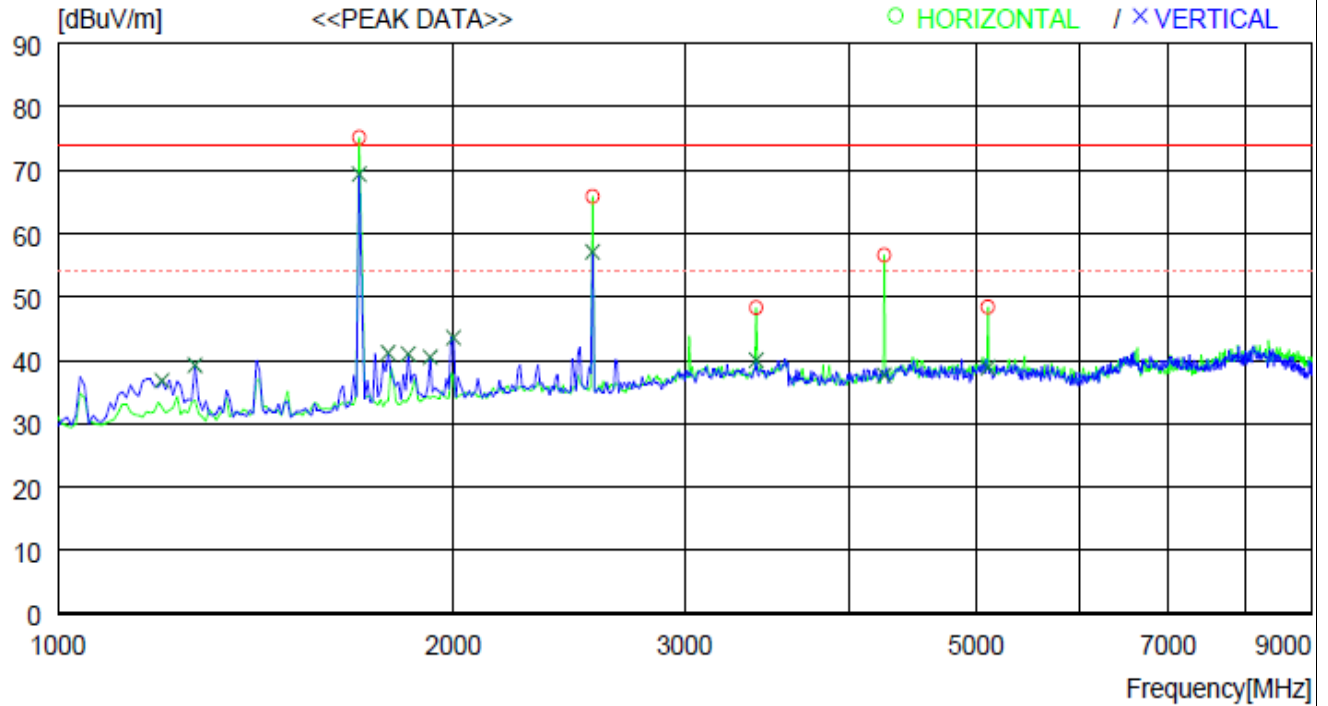


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 851.580       | 83.8              | 22.1                       | 10.8         | 32.5         | 84.2               | 46.4              | -37.8          | 300             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 39.6              | 11.2                       | 6.7          | 32.7         | 24.8               | 39.1              | 14.3           | 100             | 353            |
| 3                      | 60.070        | 39.5              | 12.0                       | 7.0          | 32.6         | 25.9               | 39.1              | 13.2           | 100             | 272            |
| 4                      | 110.510       | 44.2              | 10.3                       | 7.4          | 32.6         | 29.3               | 43.5              | 14.2           | 200             | 20             |
| 5                      | 114.390       | 45.5              | 9.7                        | 7.4          | 32.6         | 30.0               | 43.5              | 13.5           | 100             | 0              |
| 6                      | 224.000       | 38.3              | 12.1                       | 8.1          | 32.6         | 25.9               | 46.4              | 20.5           | 100             | 0              |
| 7                      | 299.660       | 43.2              | 13.4                       | 8.6          | 32.6         | 32.6               | 46.4              | 13.8           | 100             | 178            |
| 8                      | 851.580       | 77.2              | 22.1                       | 10.8         | 32.5         | 77.6               | 46.4              | -31.2          | 200             | 128            |

# Pre-Scan Test Data

Test Mode

Mode #6



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1696.000      | 81.4              | 26.6                       | 6.8          | 39.6         | 75.2               | 74.0              | -1.2           | 100             | 359            |
| 2                      | 2552.000      | 68.0              | 28.9                       | 8.5          | 39.5         | 65.9               | 74.0              | 8.1            | 100             | 359            |
| 3                      | 3400.000      | 46.7              | 31.3                       | 10.0         | 39.7         | 48.3               | 74.0              | 25.7           | 100             | 359            |
| 4                      | 4256.000      | 52.5              | 32.9                       | 11.1         | 39.9         | 56.6               | 74.0              | 17.4           | 100             | 7              |
| 5                      | 5104.000      | 42.3              | 33.9                       | 12.1         | 39.9         | 48.4               | 74.0              | 25.6           | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 6                      | 1200.000      | 46.2              | 24.7                       | 5.7          | 39.8         | 36.8               | 74.0              | 37.2           | 100             | 0              |
| 7                      | 1272.000      | 48.2              | 24.9                       | 5.9          | 39.8         | 39.2               | 74.0              | 34.8           | 100             | 295            |
| 8                      | 1696.000      | 75.6              | 26.6                       | 6.8          | 39.6         | 69.4               | 74.0              | 4.6            | 100             | 202            |
| 9                      | 1784.000      | 46.8              | 27.0                       | 7.0          | 39.6         | 41.2               | 74.0              | 32.8           | 100             | 256            |
| 10                     | 1848.000      | 46.0              | 27.4                       | 7.1          | 39.5         | 41.0               | 74.0              | 33             | 100             | 0              |
| 11                     | 1920.000      | 44.9              | 27.8                       | 7.3          | 39.5         | 40.5               | 74.0              | 33.5           | 100             | 0              |
| 12                     | 2000.000      | 47.3              | 28.2                       | 7.5          | 39.4         | 43.6               | 74.0              | 30.4           | 100             | 0              |
| 13                     | 2552.000      | 59.2              | 28.9                       | 8.5          | 39.5         | 57.1               | 74.0              | 16.9           | 100             | 0              |
| 14                     | 3400.000      | 38.4              | 31.3                       | 10.0         | 39.7         | 40.0               | 74.0              | 34             | 100             | 5              |
| 15                     | 4256.000      | 33.5              | 32.9                       | 11.1         | 39.9         | 37.6               | 74.0              | 36.4           | 100             | 0              |
| 16                     | 5104.000      | 32.8              | 33.9                       | 12.1         | 39.9         | 38.9               | 74.0              | 35.1           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #6                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1696.00                            | H                 | 81.40                 | -29.46             | 2.01               | 8.46                   | -23.01            | -13.0          | 10.01          |
| 2552.00                            | H                 | 68.00                 | -40.26             | 2.51               | 9.87                   | -32.90            |                | 19.9           |
| 3400.00                            | H                 | 46.70                 | -62.62             | 2.89               | 10.06                  | -55.45            |                | 42.45          |
| 4256.00                            | H                 | 52.50                 | -52.29             | 3.25               | 10.85                  | -44.69            |                | 31.69          |
| 5104.00                            | H                 | 42.30                 | -64.35             | 3.64               | 10.96                  | -57.03            |                | 44.03          |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

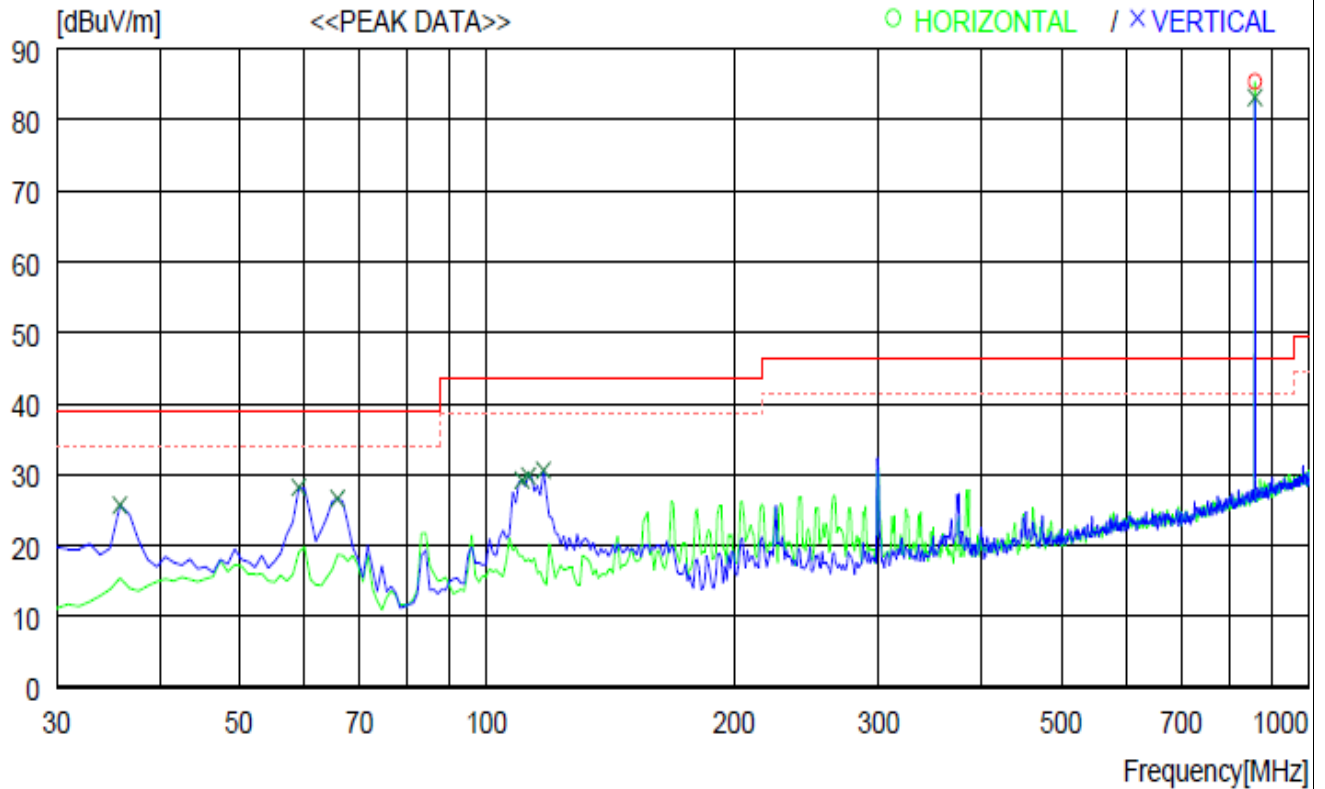
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #7

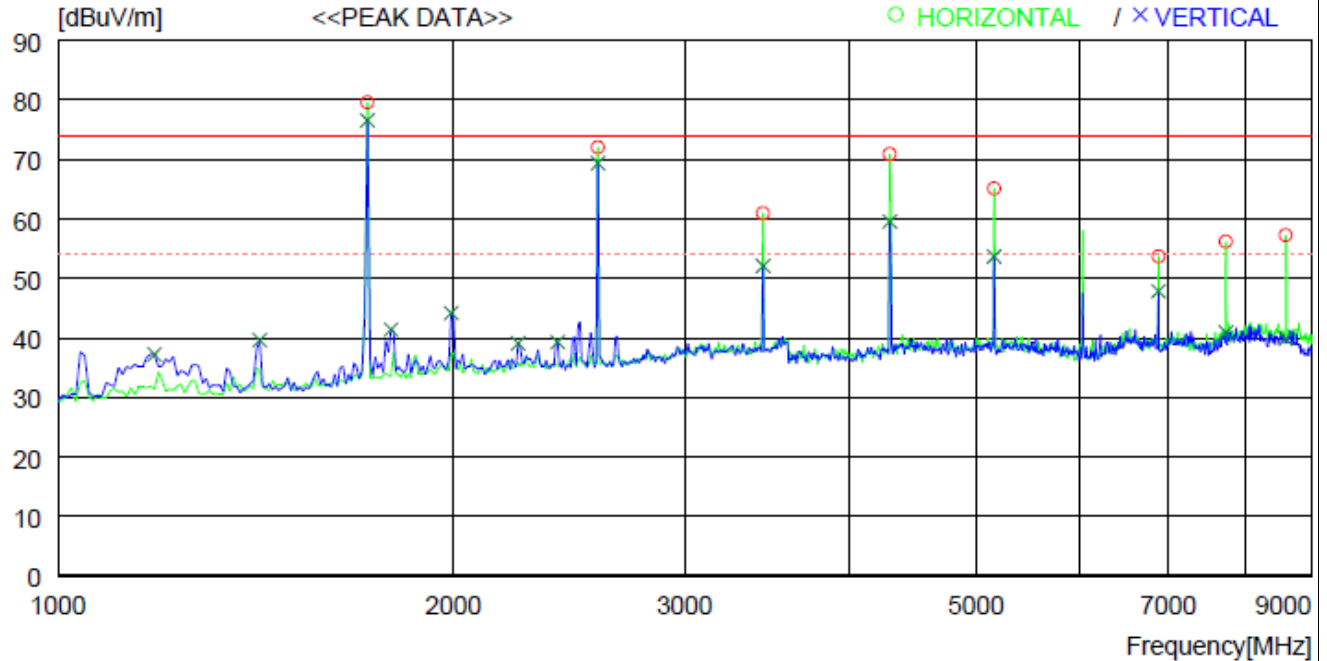


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 84.8              | 22.2                       | 10.8         | 32.4         | 85.4               | 46.4              | -39            | 300             | 121            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.5              | 11.2                       | 6.7          | 32.7         | 25.7               | 39.1              | 13.4           | 200             | 291            |
| 3                      | 59.100        | 41.5              | 12.3                       | 7.0          | 32.6         | 28.2               | 39.1              | 10.9           | 100             | 0              |
| 4                      | 65.890        | 42.1              | 10.1                       | 7.0          | 32.6         | 26.6               | 39.1              | 12.5           | 200             | 359            |
| 5                      | 110.510       | 44.1              | 10.3                       | 7.4          | 32.6         | 29.2               | 43.5              | 14.3           | 100             | 162            |
| 6                      | 112.450       | 45.0              | 10.0                       | 7.4          | 32.6         | 29.8               | 43.5              | 13.7           | 100             | 138            |
| 7                      | 117.300       | 46.4              | 9.3                        | 7.5          | 32.6         | 30.6               | 43.5              | 12.9           | 200             | 7              |
| 8                      | 860.310       | 82.6              | 22.2                       | 10.8         | 32.4         | 83.2               | 46.4              | -36.8          | 200             | 322            |

## Pre-Scan Test Data

Test Mode

Mode #7



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 85.6              | 26.7                       | 6.9          | 39.6         | 79.6               | 74.0              | -5.6           | 100             | 6              |
| 2                      | 2576.000      | 74.0              | 29.0                       | 8.6          | 39.5         | 72.1               | 74.0              | 1.9            | 100             | 6              |
| 3                      | 3440.000      | 59.3              | 31.4                       | 10.0         | 39.7         | 61.0               | 74.0              | 13             | 100             | 2              |
| 4                      | 4296.000      | 66.6              | 32.9                       | 11.3         | 39.9         | 70.9               | 74.0              | 3.1            | 100             | 2              |
| 5                      | 5160.000      | 59.0              | 33.9                       | 12.1         | 39.9         | 65.1               | 74.0              | 8.9            | 100             | 2              |
| 6                      | 6880.000      | 44.2              | 34.9                       | 14.1         | 39.5         | 53.7               | 74.0              | 20.3           | 100             | 359            |
| 7                      | 7744.000      | 45.6              | 35.4                       | 14.7         | 39.5         | 56.2               | 74.0              | 17.8           | 100             | 6              |
| 8                      | 8600.000      | 45.7              | 36.0                       | 15.1         | 39.5         | 57.3               | 74.0              | 16.7           | 100             | 6              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 9                      | 1184.000      | 46.6              | 24.7                       | 5.7          | 39.8         | 37.2               | 74.0              | 36.8           | 100             | 211            |
| 10                     | 1424.000      | 47.8              | 25.3                       | 6.3          | 39.8         | 39.6               | 74.0              | 34.4           | 100             | 325            |
| 11                     | 1720.000      | 82.6              | 26.7                       | 6.9          | 39.6         | 76.6               | 74.0              | -2.6           | 100             | 0              |
| 12                     | 1792.000      | 46.8              | 27.1                       | 7.0          | 39.5         | 41.4               | 74.0              | 32.6           | 100             | 0              |
| 13                     | 1992.000      | 47.9              | 28.2                       | 7.5          | 39.4         | 44.2               | 74.0              | 29.8           | 100             | 0              |
| 14                     | 2240.000      | 42.2              | 28.5                       | 7.9          | 39.5         | 39.1               | 74.0              | 34.9           | 100             | 286            |
| 15                     | 2400.000      | 41.9              | 28.6                       | 8.3          | 39.5         | 39.3               | 74.0              | 34.7           | 100             | 54             |
| 16                     | 2576.000      | 71.3              | 29.0                       | 8.6          | 39.5         | 69.4               | 74.0              | 4.6            | 100             | 0              |
| 17                     | 3440.000      | 50.4              | 31.4                       | 10.0         | 39.7         | 52.1               | 74.0              | 21.9           | 100             | 194            |
| 18                     | 4296.000      | 55.3              | 32.9                       | 11.3         | 39.9         | 59.6               | 74.0              | 14.4           | 100             | 194            |
| 19                     | 5160.000      | 47.6              | 33.9                       | 12.1         | 39.9         | 53.7               | 74.0              | 20.3           | 100             | 0              |



| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    | Mode #7            |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 85.60                 | -25.15             | 2.02               | 8.44                   | -18.73            | -13.0          | 5.73           |
| 2576.00                            | H                 | 74.00                 | -34.16             | 2.52               | 9.86                   | -26.82            |                | 13.82          |
| 3440.00                            | H                 | 59.30                 | -46.63             | 2.91               | 10.11                  | -39.43            |                | 26.43          |
| 4296.00                            | H                 | 66.60                 | -37.81             | 3.26               | 10.93                  | -30.14            |                | 17.14          |
| 5160.00                            | H                 | 59.00                 | -43.15             | 3.64               | 10.98                  | -35.81            |                | 22.81          |
| 6880.00                            | H                 | 44.20                 | -58.77             | 4.21               | 11.56                  | -51.42            |                | 38.42          |
| 8600.00                            | H                 | 45.70                 | -51.58             | 5.07               | 12.16                  | -44.49            |                | 31.49          |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

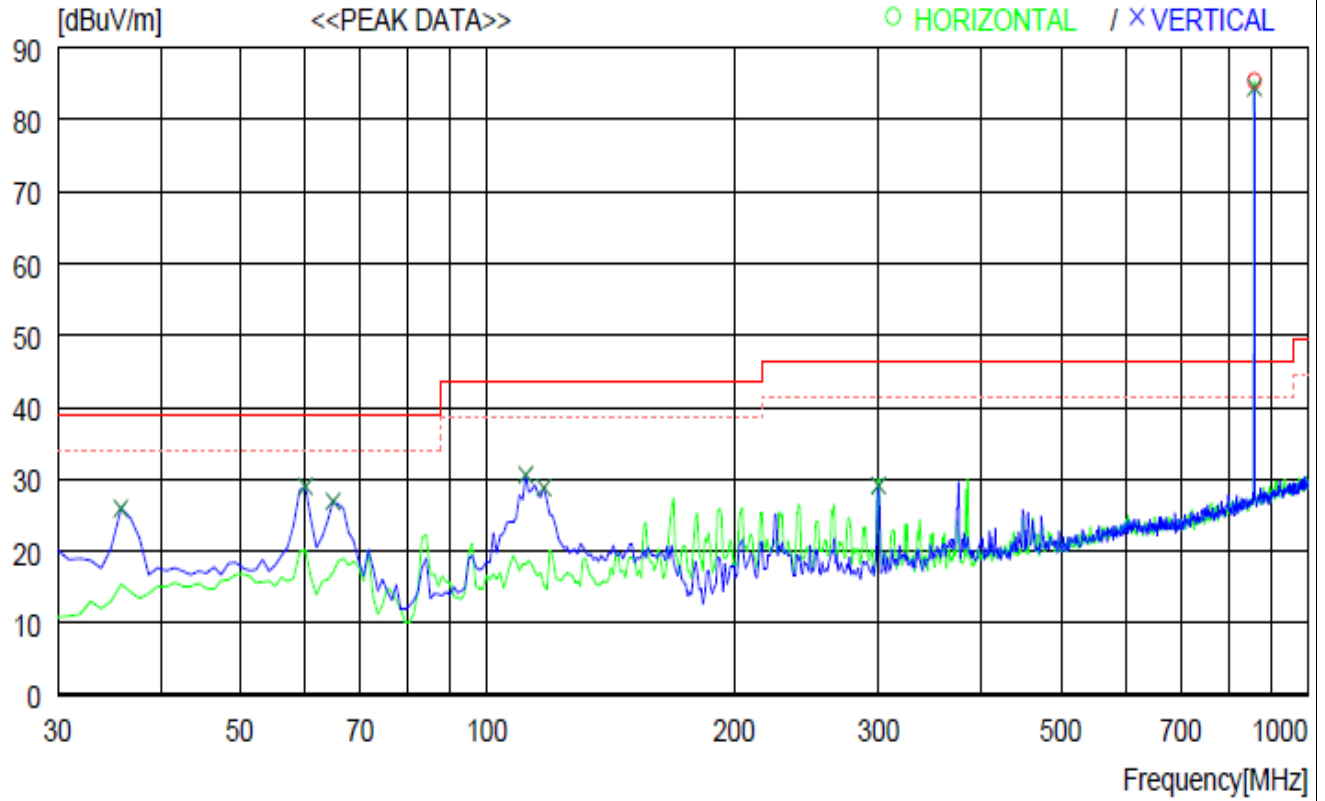
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #8

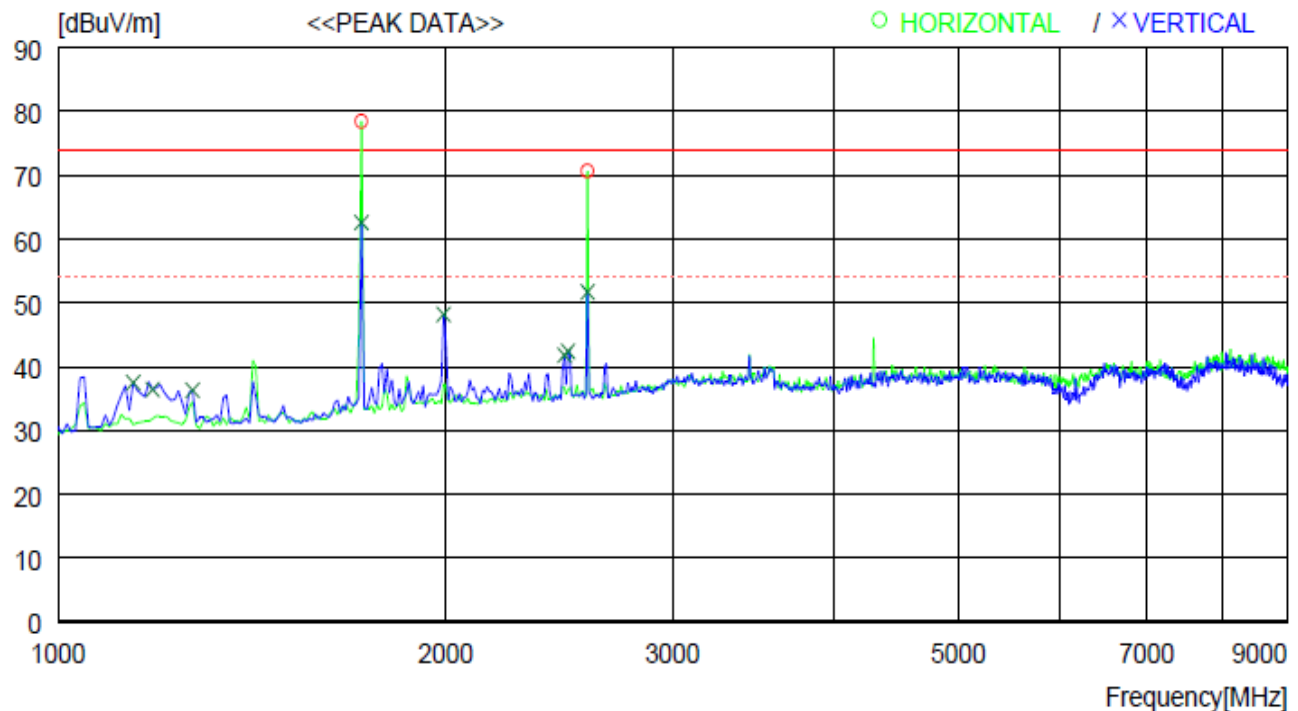


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 84.8              | 22.2                       | 10.8         | 32.4         | 85.4               | 46.4              | -39            | 300             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.7              | 11.2                       | 6.7          | 32.7         | 25.9               | 39.1              | 13.2           | 200             | 359            |
| 3                      | 60.070        | 42.6              | 12.0                       | 7.0          | 32.6         | 29.0               | 39.1              | 10.1           | 100             | 10             |
| 4                      | 64.920        | 42.1              | 10.4                       | 7.0          | 32.6         | 26.9               | 39.1              | 12.2           | 100             | 326            |
| 5                      | 111.480       | 45.6              | 10.2                       | 7.4          | 32.6         | 30.6               | 43.5              | 12.9           | 100             | 0              |
| 6                      | 117.300       | 44.6              | 9.3                        | 7.5          | 32.6         | 28.8               | 43.5              | 14.7           | 200             | 352            |
| 7                      | 299.660       | 39.7              | 13.4                       | 8.6          | 32.6         | 29.1               | 46.4              | 17.3           | 100             | 185            |
| 8                      | 860.310       | 83.9              | 22.2                       | 10.8         | 32.4         | 84.5               | 46.4              | -38.1          | 200             | 331            |

# Pre-Scan Test Data

Test Mode

Mode #8



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 84.5              | 26.7                       | 6.9          | 39.6         | 78.5               | 74.0              | -4.5           | 100             | 359            |
| 2                      | 2576.000      | 72.6              | 29.0                       | 8.6          | 39.5         | 70.7               | 74.0              | 3.3            | 100             | 3              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 1144.000      | 47.1              | 24.6                       | 5.6          | 39.8         | 37.5               | 74.0              | 36.5           | 100             | 0              |
| 4                      | 1184.000      | 45.8              | 24.7                       | 5.7          | 39.8         | 36.4               | 74.0              | 37.6           | 100             | 0              |
| 5                      | 1272.000      | 45.3              | 24.9                       | 5.9          | 39.8         | 36.3               | 74.0              | 37.7           | 100             | 286            |
| 6                      | 1720.000      | 68.6              | 26.7                       | 6.9          | 39.6         | 62.6               | 74.0              | 11.4           | 100             | 194            |
| 7                      | 1992.000      | 51.9              | 28.2                       | 7.5          | 39.4         | 48.2               | 74.0              | 25.8           | 100             | 0              |
| 8                      | 2472.000      | 44.2              | 28.7                       | 8.4          | 39.5         | 41.8               | 74.0              | 32.2           | 100             | 53             |
| 9                      | 2488.000      | 44.8              | 28.7                       | 8.4          | 39.5         | 42.4               | 74.0              | 31.6           | 100             | 0              |
| 10                     | 2576.000      | 53.6              | 29.0                       | 8.6          | 39.5         | 51.7               | 74.0              | 22.3           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #8                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 84.50                 | -26.23             | 2.02               | 8.44                   | -19.81            | -13.0          | 6.81           |
| 2576.00                            | H                 | 72.60                 | -35.57             | 2.52               | 9.86                   | -28.23            |                | 15.23          |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

# Pre-Scan Test Data

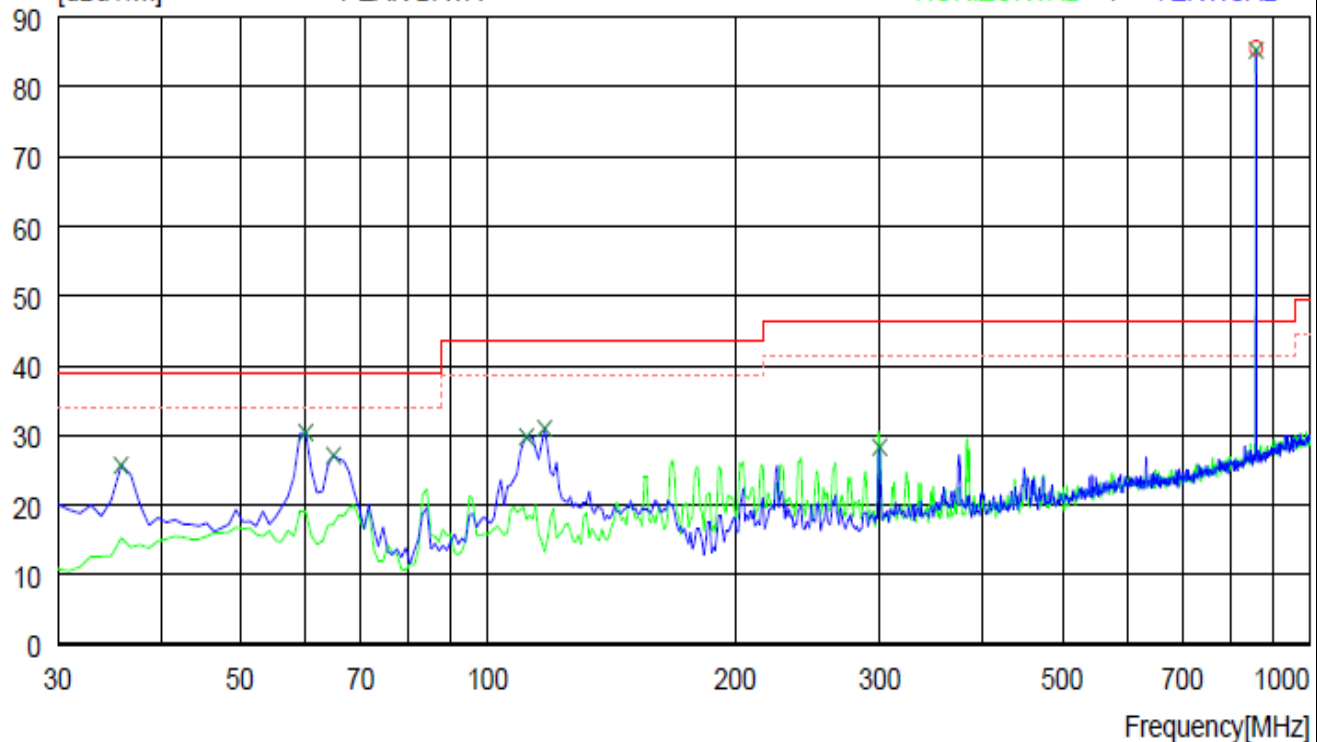
Test Mode

Mode #9

[dBuV/m]

<<PEAK DATA>>

○ HORIZONTAL / × VERTICAL

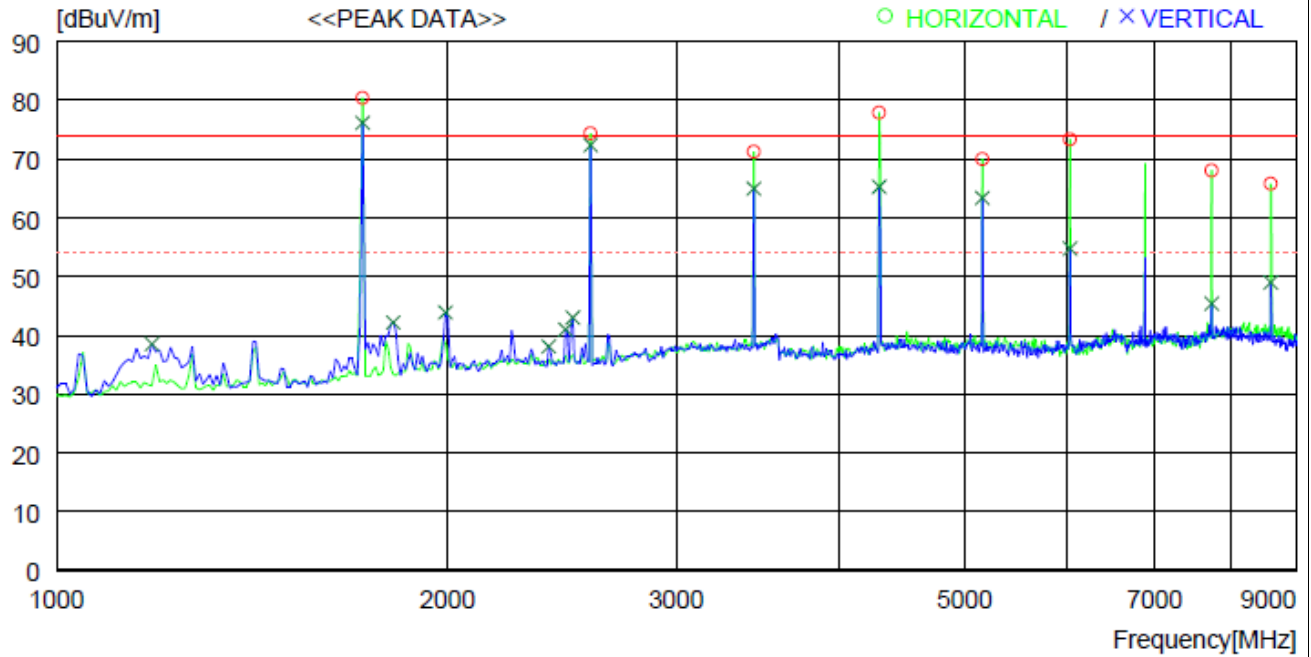


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 85.0              | 22.2                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 300             | 128            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.5              | 11.2                       | 6.7          | 32.7         | 25.7               | 39.1              | 13.4           | 200             | 255            |
| 3                      | 60.070        | 44.0              | 12.0                       | 7.0          | 32.6         | 30.4               | 39.1              | 8.7            | 100             | 2              |
| 4                      | 64.920        | 42.3              | 10.4                       | 7.0          | 32.6         | 27.1               | 39.1              | 12             | 200             | 358            |
| 5                      | 111.480       | 44.8              | 10.2                       | 7.4          | 32.6         | 29.8               | 43.5              | 13.7           | 100             | 0              |
| 6                      | 117.300       | 46.8              | 9.3                        | 7.5          | 32.6         | 31.0               | 43.5              | 12.5           | 100             | 310            |
| 7                      | 299.660       | 38.9              | 13.4                       | 8.6          | 32.6         | 28.3               | 46.4              | 18.1           | 100             | 38             |
| 8                      | 860.310       | 84.7              | 22.2                       | 10.8         | 32.4         | 85.3               | 46.4              | -38.9          | 200             | 326            |

## Pre-Scan Test Data

Test Mode

Mode #9



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 86.4              | 26.7                       | 6.9          | 39.6         | 80.4               | 74.0              | -6.4           | 100             | 7              |
| 2                      | 2576.000      | 76.3              | 29.0                       | 8.6          | 39.5         | 74.4               | 74.0              | -4.4           | 100             | 7              |
| 3                      | 3440.000      | 69.6              | 31.4                       | 10.0         | 39.7         | 71.3               | 74.0              | 2.7            | 100             | 3              |
| 4                      | 4296.000      | 73.6              | 32.9                       | 11.3         | 39.9         | 77.9               | 74.0              | -3.9           | 100             | 3              |
| 5                      | 5160.000      | 63.9              | 33.9                       | 12.1         | 39.9         | 70.0               | 74.0              | 4.4            | 100             | 7              |
| 6                      | 6024.000      | 65.9              | 34.2                       | 12.9         | 39.6         | 73.4               | 74.0              | .6             | 100             | 3              |
| 7                      | 7744.000      | 57.5              | 35.4                       | 14.7         | 39.5         | 68.1               | 74.0              | 5.9            | 100             | 359            |
| 8                      | 8600.000      | 54.2              | 36.0                       | 15.1         | 39.5         | 65.8               | 74.0              | 8.2            | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 9                      | 1184.000      | 47.9              | 24.7                       | 5.7          | 39.8         | 38.5               | 74.0              | 35.5           | 100             | 194            |
| 10                     | 1720.000      | 82.2              | 26.7                       | 6.9          | 39.6         | 76.2               | 74.0              | -2.2           | 100             | 194            |
| 11                     | 1816.000      | 47.4              | 27.2                       | 7.1          | 39.5         | 42.2               | 74.0              | 31.8           | 100             | 325            |
| 12                     | 1992.000      | 47.6              | 28.2                       | 7.5          | 39.4         | 43.9               | 74.0              | 30.1           | 100             | 357            |
| 13                     | 2392.000      | 40.7              | 28.6                       | 8.3          | 39.5         | 38.1               | 74.0              | 35.9           | 100             | 263            |
| 14                     | 2464.000      | 43.4              | 28.7                       | 8.4          | 39.5         | 41.0               | 74.0              | 33.4           | 100             | 0              |
| 15                     | 2496.000      | 45.4              | 28.7                       | 8.4          | 39.5         | 43.0               | 74.0              | 31.4           | 100             | 0              |
| 16                     | 2576.000      | 74.3              | 29.0                       | 8.6          | 39.5         | 72.4               | 74.0              | 1.6            | 100             | 0              |
| 17                     | 3440.000      | 63.3              | 31.4                       | 10.0         | 39.7         | 65.0               | 74.0              | 9.0            | 100             | 0              |
| 18                     | 4296.000      | 61.0              | 32.9                       | 11.3         | 39.9         | 65.3               | 74.0              | 8.7            | 100             | 0              |
| 19                     | 5160.000      | 57.3              | 33.9                       | 12.1         | 39.9         | 63.4               | 74.0              | 10.6           | 100             | 202            |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #9                |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 86.40                 | -24.36             | 2.02               | 8.44                   | -17.94            | -13.0          | 4.94           |
| 2576.00                            | H                 | 76.30                 | -31.84             | 2.52               | 9.86                   | -24.50            |                | 11.5           |
| 3440.00                            | H                 | 69.60                 | -35.96             | 2.91               | 10.11                  | -28.76            |                | 15.76          |
| 4296.00                            | H                 | 73.60                 | -30.78             | 3.26               | 10.93                  | -23.11            |                | 10.11          |
| 5160.00                            | H                 | 63.90                 | -38.02             | 3.64               | 10.98                  | -30.68            |                | 17.68          |
| 6024.00                            | H                 | 65.90                 | -34.60             | 3.92               | 11.46                  | -27.06            |                | 14.06          |
| 7744.00                            | H                 | 57.50                 | -39.99             | 4.67               | 11.64                  | -33.02            |                | 20.02          |
| 8600.00                            | H                 | 54.20                 | -42.78             | 5.07               | 12.16                  | -35.69            |                | 22.69          |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

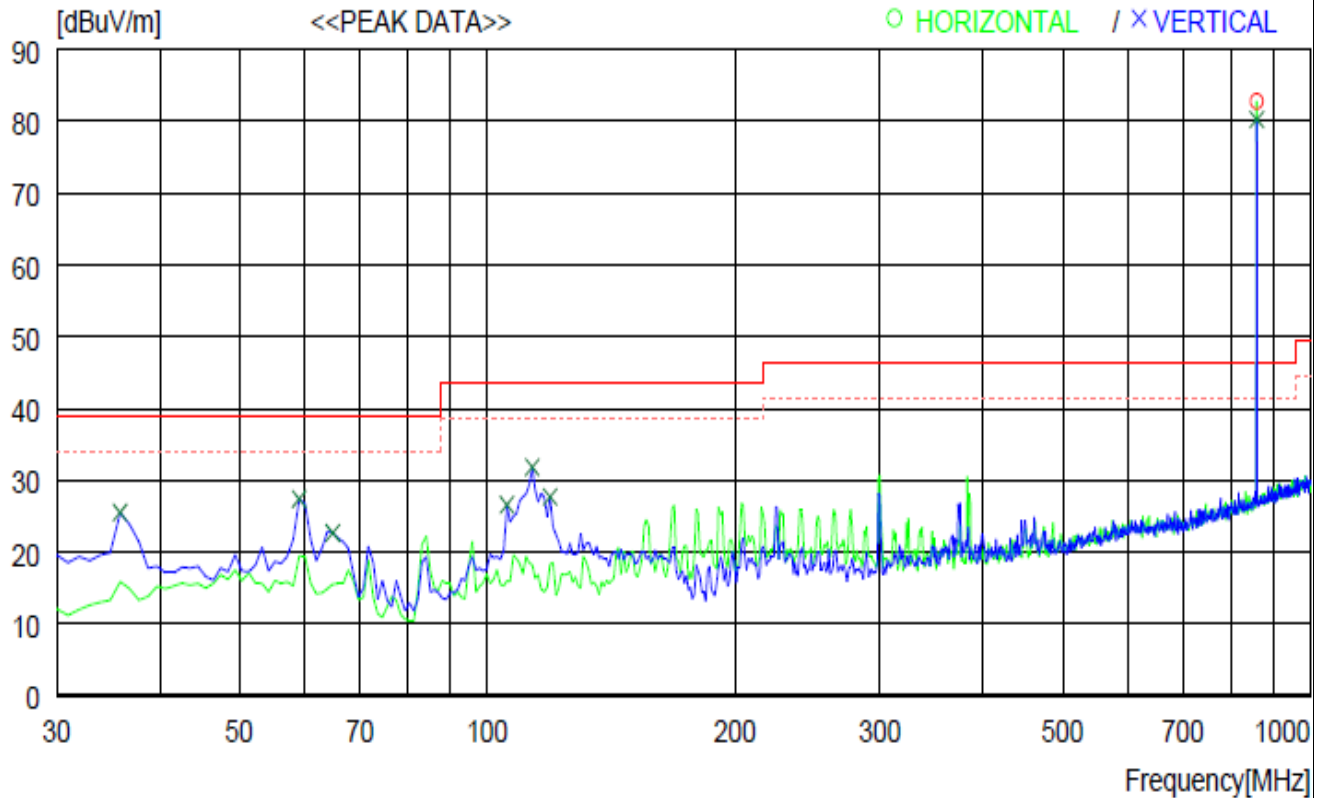
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

# Pre-Scan Test Data

Test Mode

Mode #10



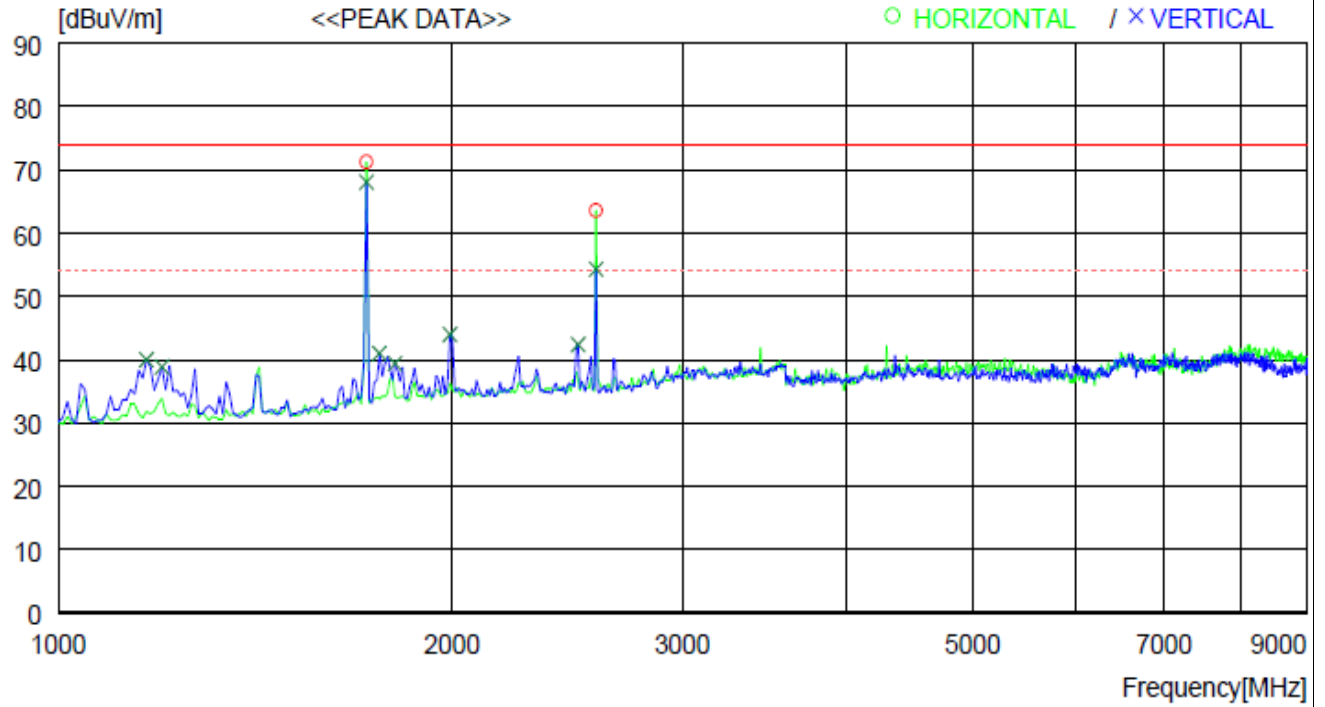
| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 82.2              | 22.2                       | 10.8         | 32.4         | 82.8               | 46.4              | -36.4          | 300             | 136            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.3              | 11.2                       | 6.7          | 32.7         | 25.5               | 39.1              | 13.6           | 100             | 3              |
| 3                      | 59.100        | 40.7              | 12.3                       | 7.0          | 32.6         | 27.4               | 39.1              | 11.7           | 100             | 0              |
| 4                      | 64.920        | 37.9              | 10.4                       | 7.0          | 32.6         | 22.7               | 39.1              | 16.4           | 100             | 0              |
| 5                      | 105.660       | 40.8              | 11.1                       | 7.3          | 32.6         | 26.6               | 43.5              | 16.9           | 100             | 0              |
| 6                      | 113.420       | 47.1              | 9.9                        | 7.4          | 32.6         | 31.8               | 43.5              | 11.7           | 100             | 46             |
| 7                      | 119.240       | 43.8              | 9.0                        | 7.5          | 32.6         | 27.7               | 43.5              | 15.8           | 100             | 0              |
| 8                      | 860.310       | 79.7              | 22.2                       | 10.8         | 32.4         | 80.3               | 46.4              | -33.9          | 200             | 359            |



## Pre-Scan Test Data

Test Mode

Mode #10



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 77.3              | 26.7                       | 6.9          | 39.6         | 71.3               | 74.0              | 2.7            | 100             | 359            |
| 2                      | 2576.000      | 65.5              | 29.0                       | 8.6          | 39.5         | 63.6               | 74.0              | 10.4           | 100             | 6              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 1168.000      | 49.5              | 24.7                       | 5.6          | 39.8         | 40.0               | 74.0              | 34             | 100             | 0              |
| 4                      | 1200.000      | 48.3              | 24.7                       | 5.7          | 39.8         | 38.9               | 74.0              | 35.1           | 100             | 199            |
| 5                      | 1720.000      | 74.1              | 26.7                       | 6.9          | 39.6         | 68.1               | 74.0              | 5.9            | 100             | 192            |
| 6                      | 1760.000      | 46.8              | 26.9                       | 6.9          | 39.6         | 41.0               | 74.0              | 33             | 100             | 0              |
| 7                      | 1808.000      | 44.6              | 27.2                       | 7.1          | 39.5         | 39.4               | 74.0              | 34.6           | 100             | 152            |
| 8                      | 1992.000      | 47.7              | 28.2                       | 7.5          | 39.4         | 44.0               | 74.0              | 30             | 100             | 1              |
| 9                      | 2496.000      | 44.8              | 28.7                       | 8.4          | 39.5         | 42.4               | 74.0              | 31.6           | 100             | 0              |
| 10                     | 2576.000      | 56.2              | 29.0                       | 8.6          | 39.5         | 54.3               | 74.0              | 19.7           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #10               |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 77.30                 | -33.40             | 2.02               | 8.44                   | -26.98            | -13.0          | 13.98          |
| 2576.00                            | H                 | 65.50                 | -42.83             | 2.52               | 9.86                   | -35.49            |                | 22.49          |

Note

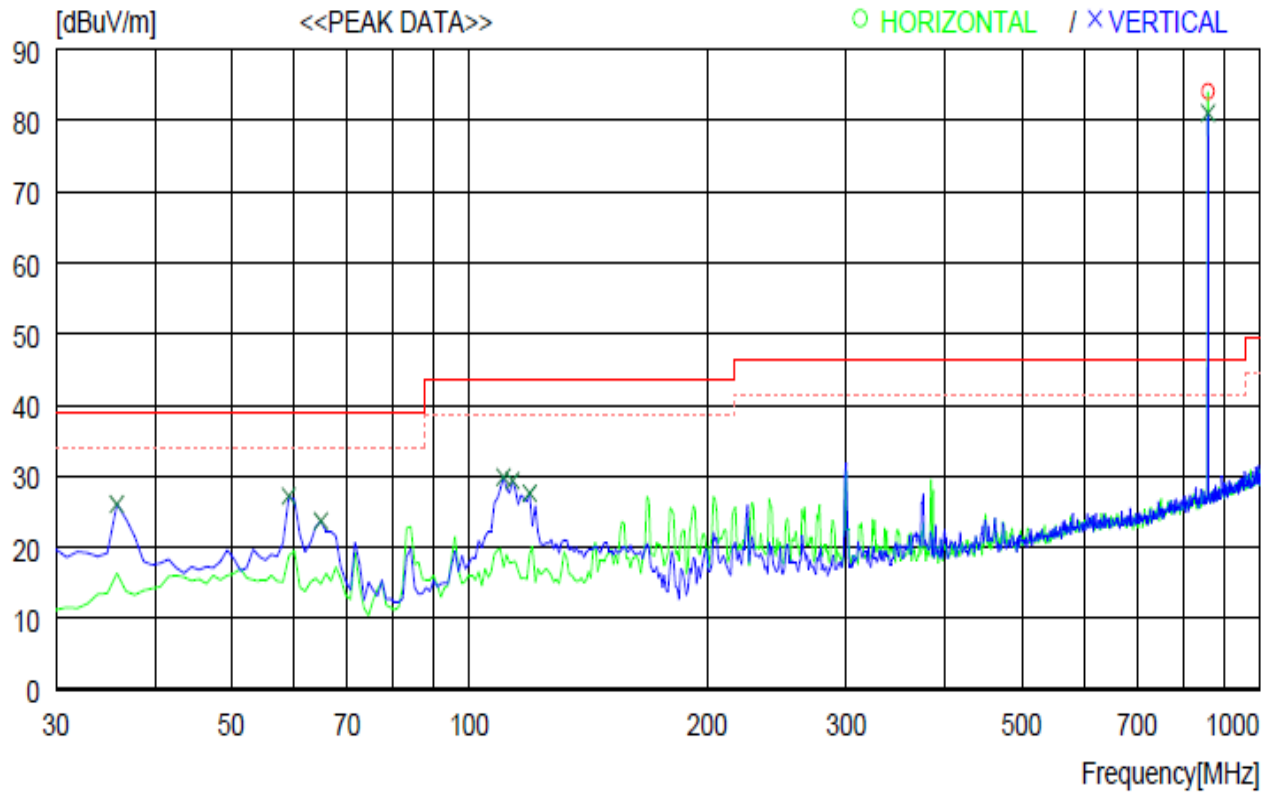
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #11

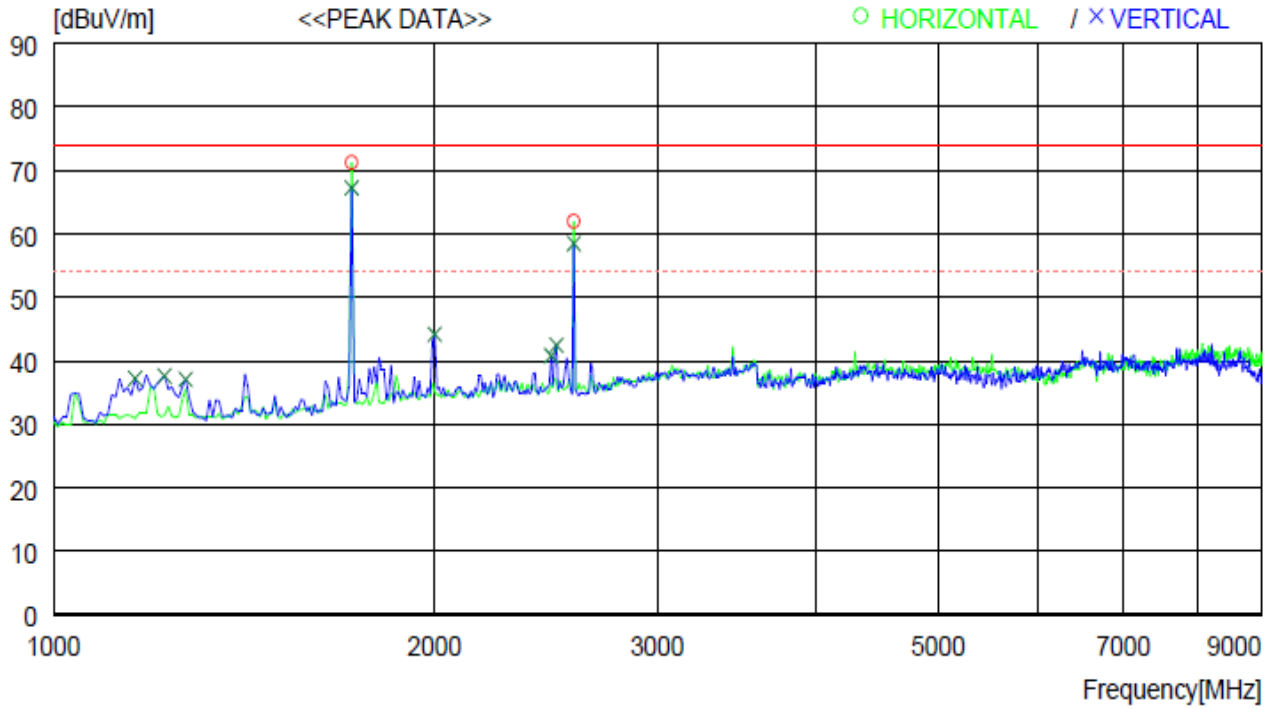


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 83.5              | 22.2                       | 10.8         | 32.4         | 84.1               | 46.4              | -37.7          | 300             | 129            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 35.820        | 40.9              | 11.2                       | 6.7          | 32.7         | 26.1               | 39.1              | 13             | 100             | 184            |
| 3                      | 59.100        | 40.5              | 12.3                       | 7.0          | 32.6         | 27.2               | 39.1              | 11.9           | 100             | 0              |
| 4                      | 64.920        | 38.9              | 10.4                       | 7.0          | 32.6         | 23.7               | 39.1              | 15.4           | 200             | 321            |
| 5                      | 110.510       | 44.8              | 10.3                       | 7.4          | 32.6         | 29.9               | 43.5              | 13.6           | 100             | 15             |
| 6                      | 113.420       | 44.7              | 9.9                        | 7.4          | 32.6         | 29.4               | 43.5              | 14.1           | 100             | 0              |
| 7                      | 119.240       | 43.7              | 9.0                        | 7.5          | 32.6         | 27.6               | 43.5              | 15.9           | 200             | 359            |
| 8                      | 860.310       | 80.5              | 22.2                       | 10.8         | 32.4         | 81.1               | 46.4              | -34.7          | 200             | 359            |

## Pre-Scan Test Data

Test Mode

Mode #11



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 77.3              | 26.7                       | 6.9          | 39.6         | 71.3               | 74.0              | 2.7            | 100             | 359            |
| 2                      | 2576.000      | 63.9              | 29.0                       | 8.6          | 39.5         | 62.0               | 74.0              | 12             | 100             | 13             |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 1160.000      | 46.8              | 24.6                       | 5.6          | 39.8         | 37.2               | 74.0              | 36.8           | 100             | 0              |
| 4                      | 1224.000      | 46.8              | 24.8                       | 5.8          | 39.8         | 37.6               | 74.0              | 36.4           | 100             | 0              |
| 5                      | 1272.000      | 46.1              | 24.9                       | 5.9          | 39.8         | 37.1               | 74.0              | 36.9           | 100             | 271            |
| 6                      | 1720.000      | 73.3              | 26.7                       | 6.9          | 39.6         | 67.3               | 74.0              | 6.7            | 100             | 0              |
| 7                      | 2000.000      | 47.9              | 28.2                       | 7.5          | 39.4         | 44.2               | 74.0              | 29.8           | 100             | 0              |
| 8                      | 2472.000      | 43.2              | 28.7                       | 8.4          | 39.5         | 40.8               | 74.0              | 33.2           | 100             | 255            |
| 9                      | 2496.000      | 44.9              | 28.7                       | 8.4          | 39.5         | 42.5               | 74.0              | 31.5           | 100             | 0              |
| 10                     | 2576.000      | 60.4              | 29.0                       | 8.6          | 39.5         | 58.5               | 74.0              | 15.5           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #11               |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 77.30                 | -33.40             | 2.02               | 8.44                   | -26.98            | -13.0          | 13.98          |
| 2576.00                            | H                 | 63.90                 | -44.51             | 2.52               | 9.86                   | -37.17            |                | 24.17          |

Note

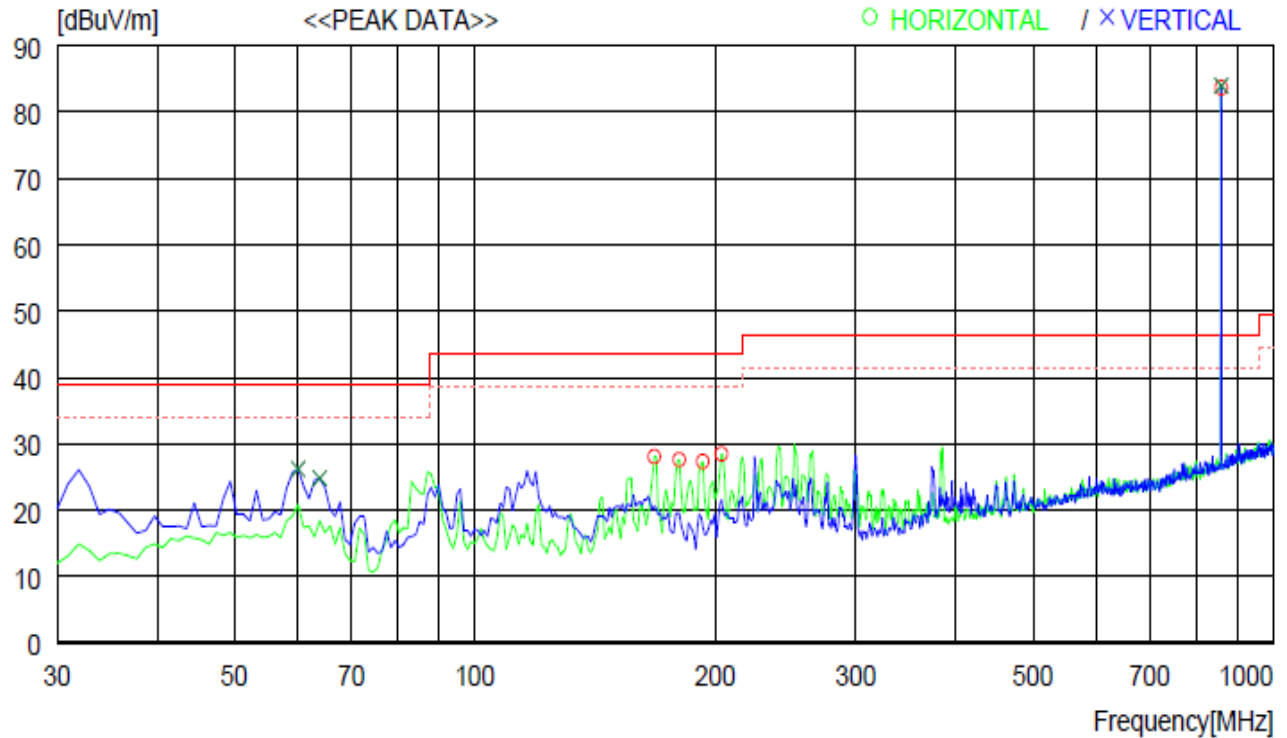
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #12

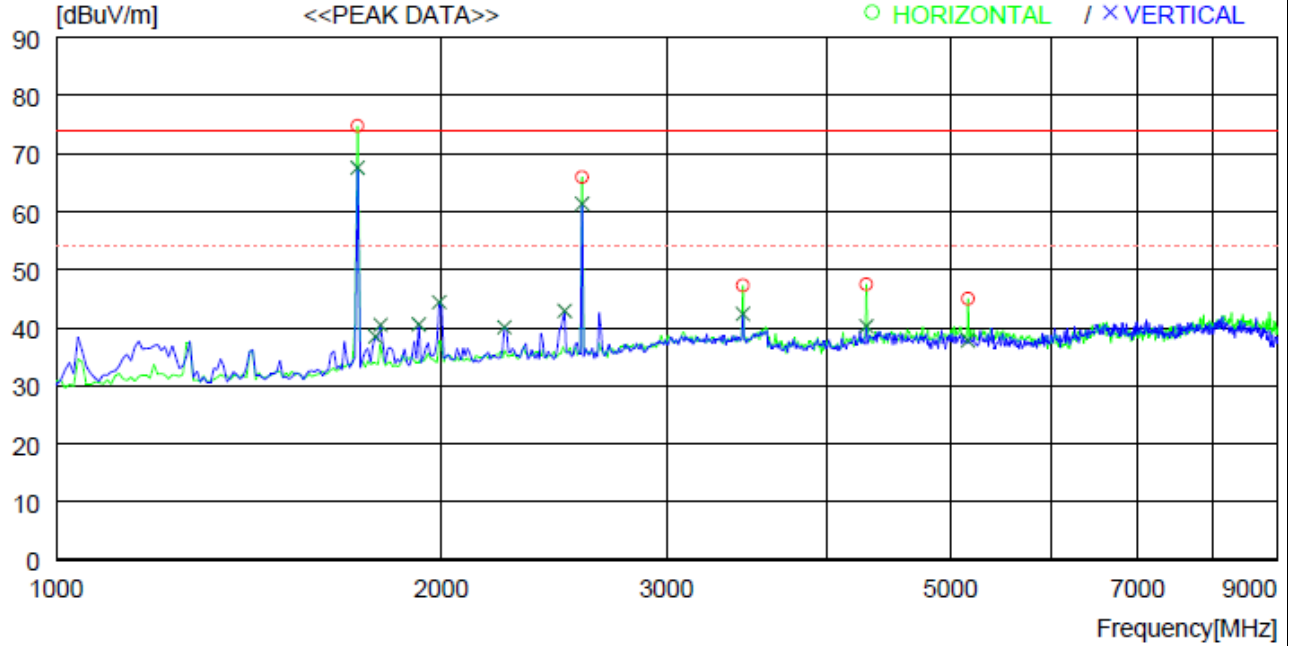


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|-----------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                       |              |              |                    |                   |                |                 |                |
| 1                      | 167.740       | 44.2              | 8.7                   | 7.8          | 32.6         | 28.1               | 43.5              | 15.4           | 300             | 205            |
| 2                      | 180.350       | 43.0              | 9.3                   | 7.9          | 32.6         | 27.6               | 43.5              | 15.9           | 400             | 359            |
| 3                      | 192.960       | 41.4              | 10.6                  | 7.9          | 32.6         | 27.3               | 43.5              | 16.2           | 400             | 359            |
| 4                      | 203.630       | 41.6              | 11.5                  | 8.0          | 32.6         | 28.5               | 43.5              | 15             | 300             | 214            |
| 5                      | 860.310       | 83.1              | 22.2                  | 10.8         | 32.4         | 83.7               | 46.4              | -37.3          | 300             | 136            |
| ----- Vertical -----   |               |                   |                       |              |              |                    |                   |                |                 |                |
| 6                      | 60.070        | 39.8              | 12.0                  | 7.0          | 32.6         | 26.2               | 39.1              | 12.9           | 100             | 359            |
| 7                      | 63.950        | 39.7              | 10.7                  | 7.0          | 32.6         | 24.8               | 39.1              | 14.3           | 200             | 0              |
| 8                      | 860.310       | 83.4              | 22.2                  | 10.8         | 32.4         | 84.0               | 46.4              | -37.6          | 200             | 0              |

## Pre-Scan Test Data

Test Mode

Mode #12



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 80.8              | 26.7                       | 6.9          | 39.6         | 74.8               | 74.0              | - .8           | 100             | 359            |
| 2                      | 2576.000      | 67.9              | 29.0                       | 8.6          | 39.5         | 66.0               | 74.0              | 8              | 100             | 359            |
| 3                      | 3440.000      | 45.6              | 31.4                       | 10.0         | 39.7         | 47.3               | 74.0              | 26.7           | 100             | 2              |
| 4                      | 4296.000      | 43.2              | 32.9                       | 11.3         | 39.9         | 47.5               | 74.0              | 26.5           | 100             | 359            |
| 5                      | 5160.000      | 38.9              | 33.9                       | 12.1         | 39.9         | 45.0               | 74.0              | 29             | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 6                      | 1720.000      | 73.6              | 26.7                       | 6.9          | 39.6         | 67.6               | 74.0              | 6.4            | 100             | 0              |
| 7                      | 1776.000      | 44.1              | 27.0                       | 7.0          | 39.6         | 38.5               | 74.0              | 35.5           | 100             | 0              |
| 8                      | 1792.000      | 45.9              | 27.1                       | 7.0          | 39.5         | 40.5               | 74.0              | 33.5           | 100             | 303            |
| 9                      | 1920.000      | 45.0              | 27.8                       | 7.3          | 39.5         | 40.6               | 74.0              | 33.4           | 100             | 263            |
| 10                     | 1992.000      | 48.1              | 28.2                       | 7.5          | 39.4         | 44.4               | 74.0              | 29.6           | 100             | 3              |
| 11                     | 2240.000      | 43.2              | 28.5                       | 7.9          | 39.5         | 40.1               | 74.0              | 33.9           | 100             | 263            |
| 12                     | 2496.000      | 45.3              | 28.7                       | 8.4          | 39.5         | 42.9               | 74.0              | 31.1           | 100             | 0              |
| 13                     | 2576.000      | 63.3              | 29.0                       | 8.6          | 39.5         | 61.4               | 74.0              | 12.6           | 100             | 0              |
| 14                     | 3440.000      | 40.7              | 31.4                       | 10.0         | 39.7         | 42.4               | 74.0              | 31.6           | 100             | 201            |
| 15                     | 4296.000      | 36.0              | 32.9                       | 11.3         | 39.9         | 40.3               | 74.0              | 33.7           | 100             | 0              |
| 16                     | 5160.000      | 31.7              | 33.9                       | 12.1         | 39.9         | 37.8               | 74.0              | 36.2           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #12               |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 80.80                 | -29.87             | 2.02               | 8.44                   | -23.45            | -13.0          | 10.45          |
| 2576.00                            | H                 | 67.90                 | -40.32             | 2.52               | 9.86                   | -32.98            |                | 19.98          |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

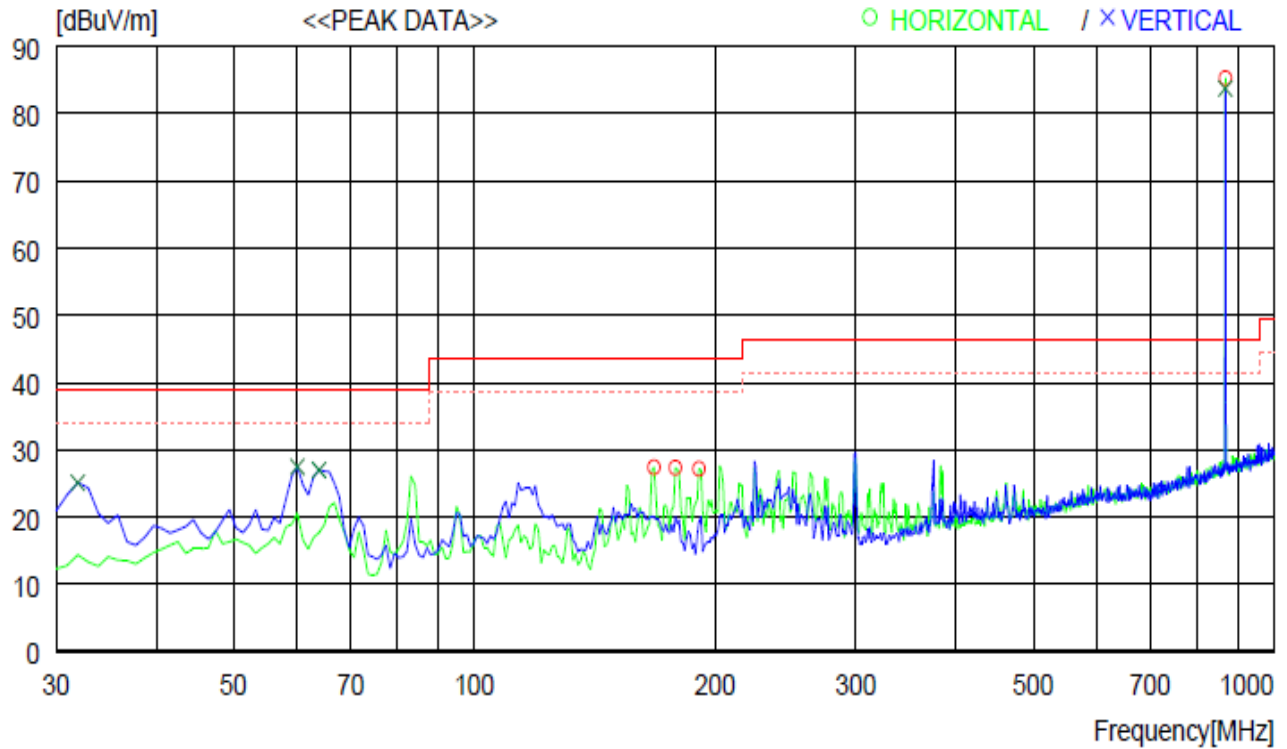
$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$



## Pre-Scan Test Data

Test Mode

Mode #13

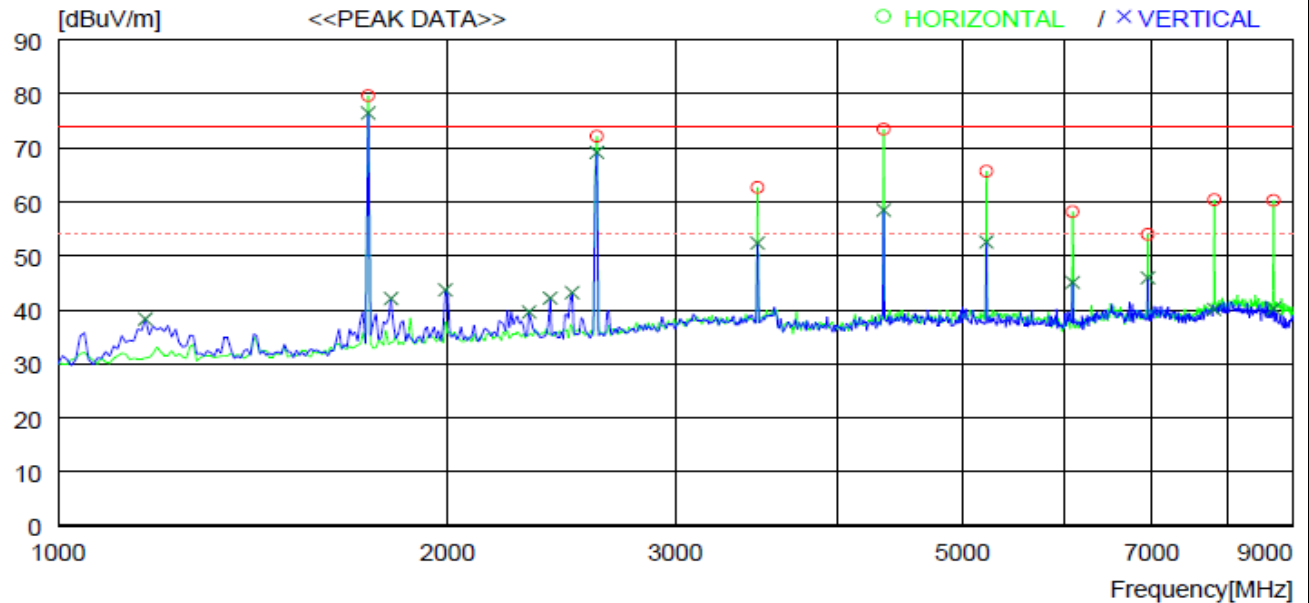


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 167.740       | 43.5              | 8.7                        | 7.8          | 32.6         | 27.4               | 43.5              | 16.1           | 300             | 200            |
| 2                      | 178.410       | 42.8              | 9.2                        | 7.9          | 32.6         | 27.3               | 43.5              | 16.2           | 400             | 223            |
| 3                      | 191.020       | 41.5              | 10.4                       | 7.9          | 32.6         | 27.2               | 43.5              | 16.3           | 400             | 223            |
| 4                      | 869.040       | 84.5              | 22.4                       | 10.8         | 32.4         | 85.3               | 46.4              | -38.9          | 300             | 0              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 5                      | 31.940        | 41.3              | 9.9                        | 6.6          | 32.7         | 25.1               | 39.1              | 14             | 100             | 359            |
| 6                      | 60.070        | 41.1              | 12.0                       | 7.0          | 32.6         | 27.5               | 39.1              | 11.6           | 100             | 359            |
| 7                      | 63.950        | 41.9              | 10.7                       | 7.0          | 32.6         | 27.0               | 39.1              | 12.1           | 100             | 261            |
| 8                      | 869.040       | 83.0              | 22.4                       | 10.8         | 32.4         | 83.8               | 46.4              | -37.4          | 200             | 0              |

## Pre-Scan Test Data

Test Mode

Mode #13



| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|

----- Horizontal -----

|   |          |      |      |      |      |      |      |      |     |     |
|---|----------|------|------|------|------|------|------|------|-----|-----|
| 1 | 1736.000 | 85.6 | 26.8 | 6.9  | 39.6 | 79.7 | 74.0 | -5.7 | 100 | 359 |
| 2 | 2608.000 | 74.0 | 29.1 | 8.6  | 39.5 | 72.2 | 74.0 | 1.8  | 100 | 359 |
| 3 | 3472.000 | 60.9 | 31.5 | 10.0 | 39.7 | 62.7 | 74.0 | 11.3 | 100 | 3   |
| 4 | 4344.000 | 69.0 | 33.0 | 11.4 | 39.9 | 73.5 | 74.0 | .5   | 100 | 3   |
| 5 | 5216.000 | 59.5 | 33.9 | 12.2 | 39.9 | 65.7 | 74.0 | 8.3  | 100 | 3   |
| 6 | 6080.000 | 50.6 | 34.3 | 12.9 | 39.6 | 58.2 | 74.0 | 15.8 | 100 | 359 |
| 7 | 6952.000 | 44.4 | 35.0 | 14.2 | 39.6 | 54.0 | 74.0 | 20   | 100 | 8   |
| 8 | 7824.000 | 49.4 | 35.5 | 14.9 | 39.4 | 60.4 | 74.0 | 13.6 | 100 | 8   |
| 9 | 8696.000 | 48.7 | 36.1 | 15.1 | 39.6 | 60.3 | 74.0 | 13.7 | 100 | 359 |

----- Vertical -----

|    |          |      |      |      |      |      |      |      |     |     |
|----|----------|------|------|------|------|------|------|------|-----|-----|
| 10 | 1168.000 | 47.8 | 24.7 | 5.6  | 39.8 | 38.3 | 74.0 | 35.7 | 100 | 200 |
| 11 | 1736.000 | 82.4 | 26.8 | 6.9  | 39.6 | 76.5 | 74.0 | -2.5 | 100 | 0   |
| 12 | 1808.000 | 47.3 | 27.2 | 7.1  | 39.5 | 42.1 | 74.0 | 31.9 | 100 | 0   |
| 13 | 1992.000 | 47.4 | 28.2 | 7.5  | 39.4 | 43.7 | 74.0 | 30.3 | 100 | 0   |
| 14 | 2312.000 | 42.5 | 28.5 | 8.1  | 39.5 | 39.6 | 74.0 | 34.4 | 100 | 255 |
| 15 | 2400.000 | 44.8 | 28.6 | 8.3  | 39.5 | 42.2 | 74.0 | 31.8 | 100 | 0   |
| 16 | 2496.000 | 45.6 | 28.7 | 8.4  | 39.5 | 43.2 | 74.0 | 30.8 | 100 | 316 |
| 17 | 2608.000 | 71.0 | 29.1 | 8.6  | 39.5 | 69.2 | 74.0 | 4.8  | 100 | 200 |
| 18 | 3472.000 | 50.6 | 31.5 | 10.0 | 39.7 | 52.4 | 74.0 | 21.6 | 100 | 200 |
| 19 | 4344.000 | 54.0 | 33.0 | 11.4 | 39.9 | 58.5 | 74.0 | 15.5 | 100 | 200 |

| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| 20  | 5216.000      | 46.4              | 33.9                          | 12.2         | 39.9         | 52.6               | 74.0              | 21.4           | 100             | 0              |
| 21  | 6080.000      | 37.5              | 34.3                          | 12.9         | 39.6         | 45.1               | 74.0              | 28.9           | 100             | 200            |
| 22  | 6952.000      | 36.4              | 35.0                          | 14.2         | 39.6         | 46.0               | 74.0              | 28             | 100             | 0              |
| 23  | 7824.000      | 29.1              | 35.5                          | 14.9         | 39.4         | 40.1               | 74.0              | 33.9           | 100             | 0              |
| 24  | 8696.000      | 28.7              | 36.1                          | 15.1         | 39.6         | 40.3               | 74.0              | 33.7           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    | Mode #13           |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1736.00                            | H                 | 85.60                 | -25.03             | 2.04               | 8.42                   | -18.65            | -13.0          | 5.65           |
| 2608.00                            | H                 | 74.00                 | -34.08             | 2.53               | 9.83                   | -26.78            |                | 13.78          |
| 3472.00                            | H                 | 60.90                 | -44.79             | 2.93               | 10.15                  | -37.57            |                | 24.57          |
| 4344.00                            | H                 | 69.00                 | -35.39             | 3.29               | 11.02                  | -27.66            |                | 14.66          |
| 5216.00                            | H                 | 59.50                 | -42.52             | 3.65               | 10.99                  | -35.18            |                | 22.18          |
| 6080.00                            | H                 | 50.60                 | -50.01             | 3.93               | 11.50                  | -42.44            |                | 29.44          |
| 6952.00                            | H                 | 44.40                 | -58.08             | 4.24               | 11.52                  | -50.80            |                | 37.8           |
| 7824.00                            | H                 | 49.40                 | -49.70             | 4.72               | 11.66                  | -42.76            |                | 29.76          |
| 8696.00                            | H                 | 48.70                 | -49.70             | 4.90               | 12.18                  | -42.42            |                | 29.42          |

Note

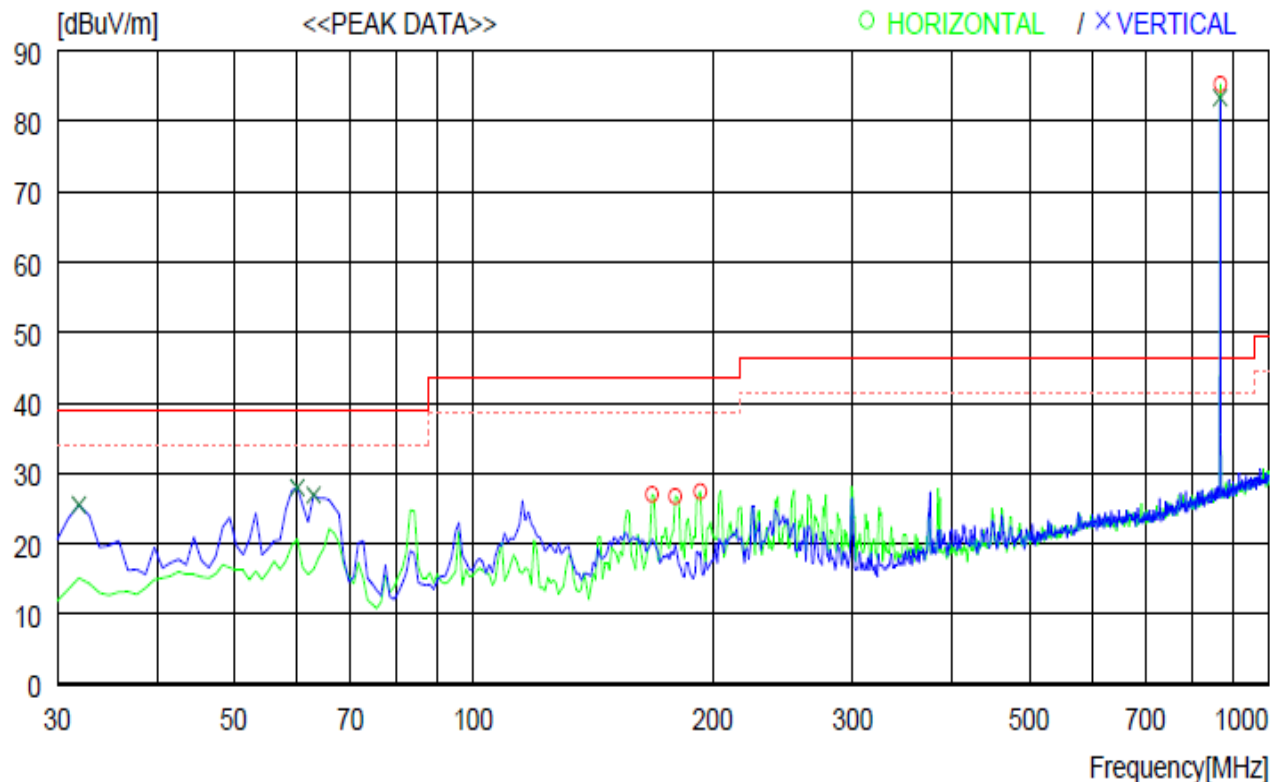
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #14

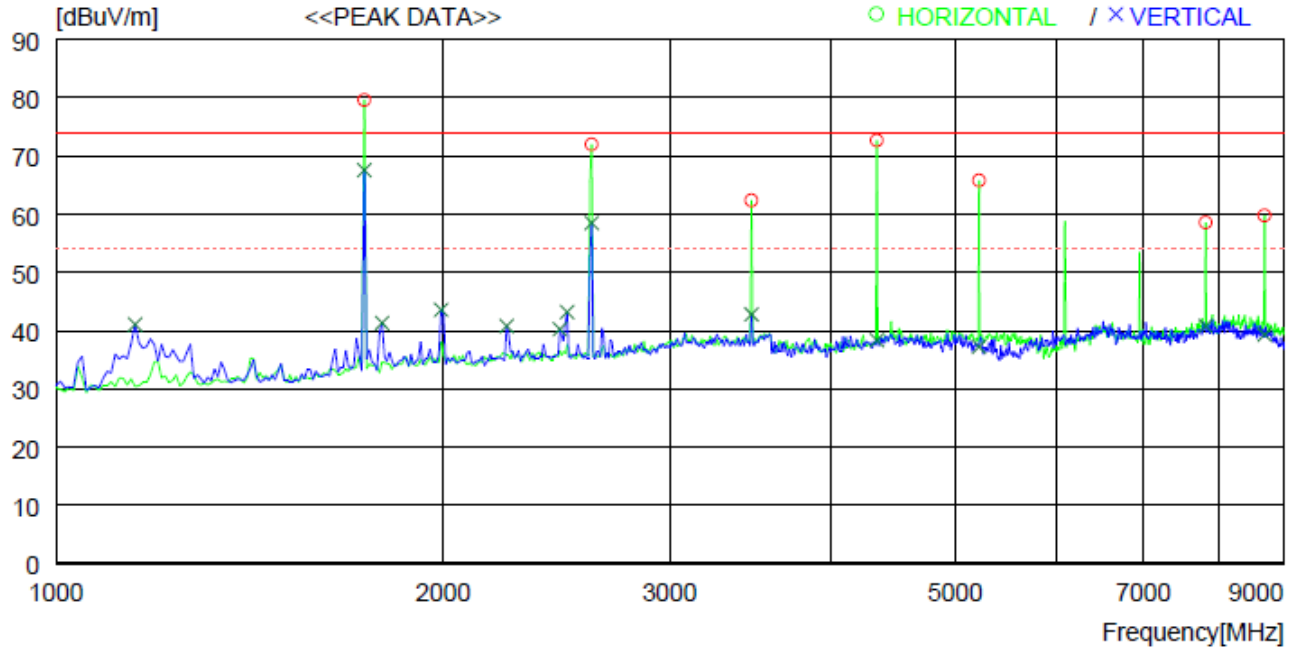


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 167.740       | 43.1              | 8.7                        | 7.8          | 32.6         | 27.0               | 43.5              | 16.5           | 300             | 0              |
| 2                      | 179.380       | 42.2              | 9.2                        | 7.9          | 32.6         | 26.7               | 43.5              | 16.8           | 400             | 359            |
| 3                      | 192.960       | 41.5              | 10.6                       | 7.9          | 32.6         | 27.4               | 43.5              | 16.1           | 300             | 209            |
| 4                      | 869.040       | 84.5              | 22.4                       | 10.8         | 32.4         | 85.3               | 46.4              | -38.9          | 300             | 0              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 5                      | 31.940        | 41.7              | 9.9                        | 6.6          | 32.7         | 25.5               | 39.1              | 13.6           | 100             | 330            |
| 6                      | 60.070        | 41.6              | 12.0                       | 7.0          | 32.6         | 28.0               | 39.1              | 11.1           | 100             | 359            |
| 7                      | 62.980        | 41.4              | 11.1                       | 7.0          | 32.6         | 26.9               | 39.1              | 12.2           | 200             | 0              |
| 8                      | 869.040       | 82.6              | 22.4                       | 10.8         | 32.4         | 83.4               | 46.4              | -37            | 200             | 0              |

## Pre-Scan Test Data

Test Mode

Mode #14



| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|

----- Horizontal -----

|   |          |      |      |      |      |      |      |      |     |     |
|---|----------|------|------|------|------|------|------|------|-----|-----|
| 1 | 1736.000 | 85.5 | 26.8 | 6.9  | 39.6 | 79.6 | 74.0 | -5.6 | 100 | 359 |
| 2 | 2608.000 | 73.8 | 29.1 | 8.6  | 39.5 | 72.0 | 74.0 | 2    | 100 | 359 |
| 3 | 3472.000 | 60.6 | 31.5 | 10.0 | 39.7 | 62.4 | 74.0 | 11.6 | 100 | 359 |
| 4 | 4344.000 | 68.2 | 33.0 | 11.4 | 39.9 | 72.7 | 74.0 | 1.3  | 100 | 359 |
| 5 | 5216.000 | 59.6 | 33.9 | 12.2 | 39.9 | 65.8 | 74.0 | 8.2  | 100 | 359 |
| 6 | 7824.000 | 47.6 | 35.5 | 14.9 | 39.4 | 58.6 | 74.0 | 15.4 | 100 | 359 |
| 7 | 8696.000 | 48.2 | 36.1 | 15.1 | 39.6 | 59.8 | 74.0 | 14.2 | 100 | 7   |

----- Vertical -----

|    |          |      |      |      |      |      |      |      |     |     |
|----|----------|------|------|------|------|------|------|------|-----|-----|
| 8  | 1152.000 | 50.7 | 24.6 | 5.6  | 39.8 | 41.1 | 74.0 | 32.9 | 100 | 194 |
| 9  | 1736.000 | 73.5 | 26.8 | 6.9  | 39.6 | 67.6 | 74.0 | 6.4  | 100 | 0   |
| 10 | 1792.000 | 46.7 | 27.1 | 7.0  | 39.5 | 41.3 | 74.0 | 32.7 | 100 | 340 |
| 11 | 1992.000 | 47.3 | 28.2 | 7.5  | 39.4 | 43.6 | 74.0 | 30.4 | 100 | 357 |
| 12 | 2240.000 | 43.9 | 28.5 | 7.9  | 39.5 | 40.8 | 74.0 | 33.2 | 100 | 0   |
| 13 | 2464.000 | 42.7 | 28.7 | 8.4  | 39.5 | 40.3 | 74.0 | 33.7 | 100 | 0   |
| 14 | 2496.000 | 45.6 | 28.7 | 8.4  | 39.5 | 43.2 | 74.0 | 30.8 | 100 | 147 |
| 15 | 2608.000 | 60.3 | 29.1 | 8.6  | 39.5 | 58.5 | 74.0 | 15.5 | 100 | 357 |
| 16 | 3472.000 | 41.0 | 31.5 | 10.0 | 39.7 | 42.8 | 74.0 | 31.2 | 100 | 0   |
| 17 | 4344.000 | 33.9 | 33.0 | 11.4 | 39.9 | 38.4 | 74.0 | 35.6 | 100 | 333 |
| 18 | 5216.000 | 31.0 | 33.9 | 12.2 | 39.9 | 37.2 | 74.0 | 36.8 | 100 | 132 |
| 19 | 7824.000 | 29.8 | 35.5 | 14.9 | 39.4 | 40.8 | 74.0 | 33.2 | 100 | 54  |

| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|

|    |          |      |      |      |      |      |      |      |     |     |
|----|----------|------|------|------|------|------|------|------|-----|-----|
| 20 | 8696.000 | 27.7 | 36.1 | 15.1 | 39.6 | 39.3 | 74.0 | 34.7 | 100 | 231 |
|----|----------|------|------|------|------|------|------|------|-----|-----|

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    | Mode #14           |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1736.00                            | H                 | 85.50                 | -25.13             | 2.04               | 8.42                   | -18.75            | -13.0          | 5.75           |
| 2608.00                            | H                 | 73.80                 | -34.28             | 2.53               | 9.83                   | -26.98            |                | 13.98          |
| 4344.00                            | H                 | 68.20                 | -36.19             | 3.29               | 11.02                  | -28.46            |                | 15.46          |
| 5216.00                            | H                 | 59.60                 | -42.41             | 3.65               | 10.99                  | -35.07            |                | 22.07          |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

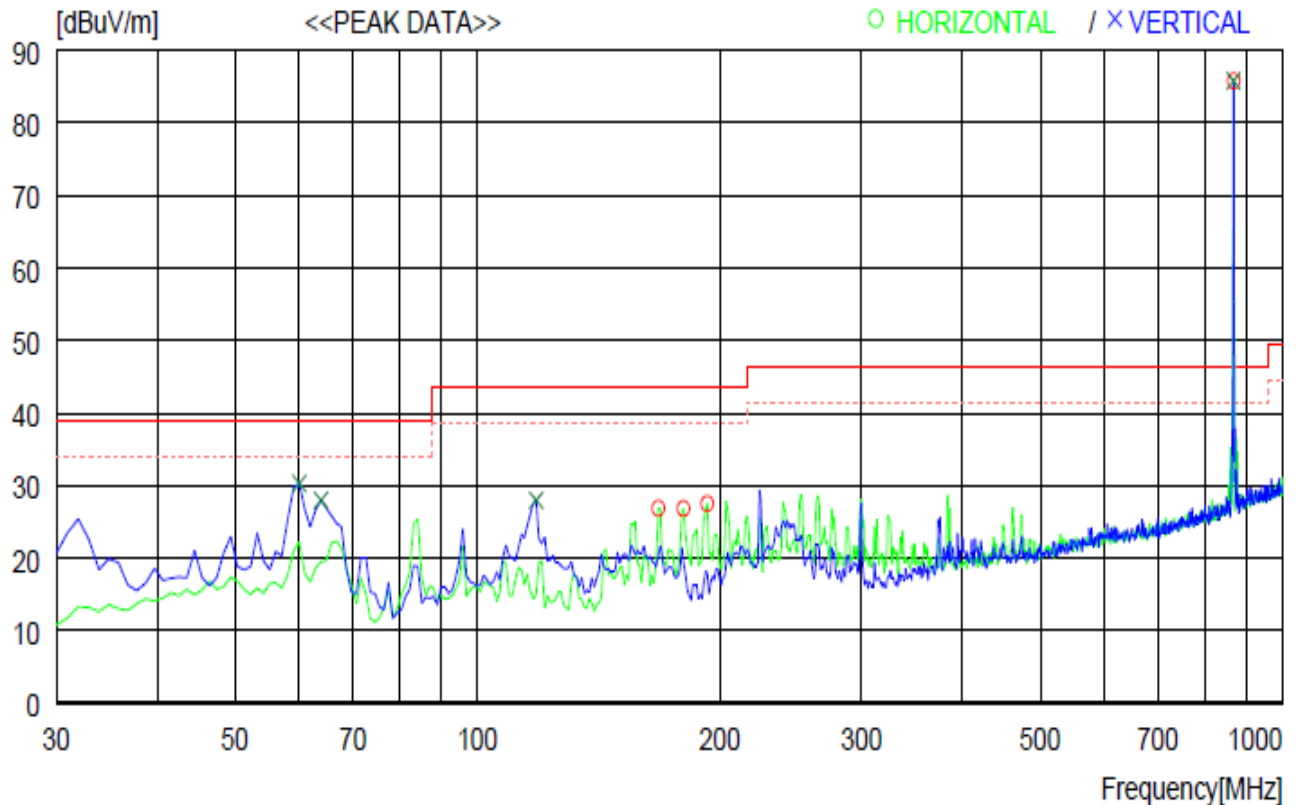
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #15



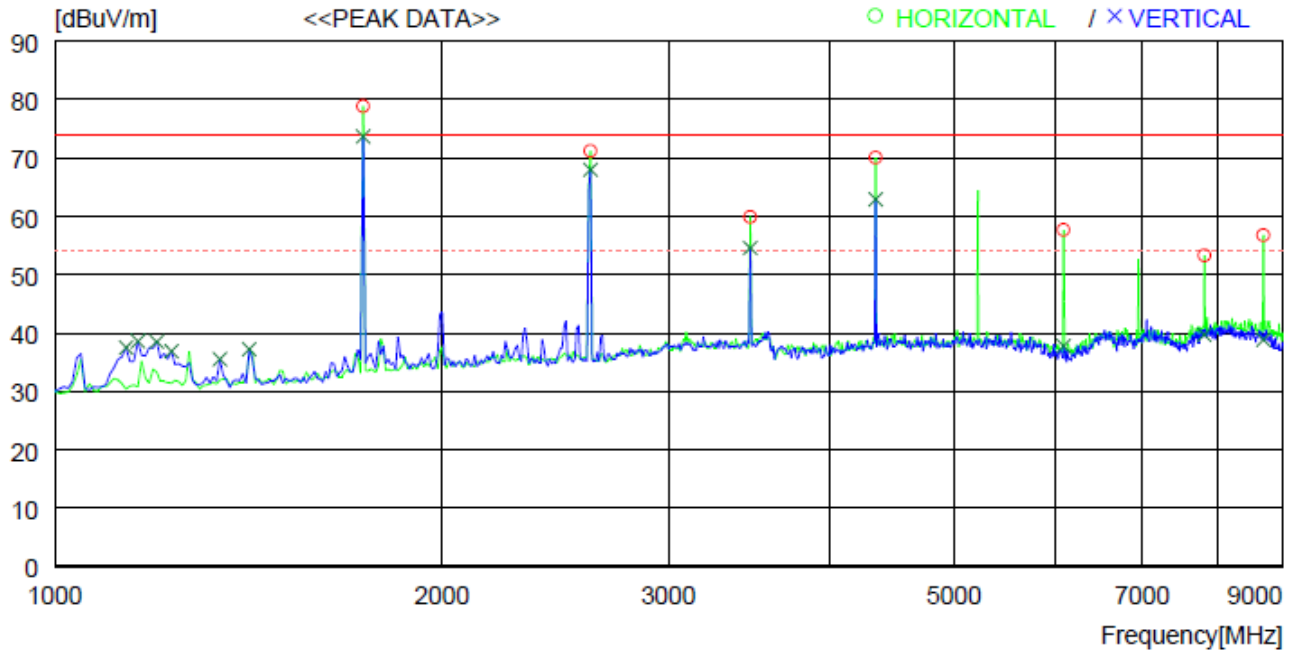
| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 167.740       | 43.0              | 8.7                        | 7.8          | 32.6         | 26.9               | 43.5              | 16.6           | 300             | 0              |
| 2                      | 180.350       | 42.2              | 9.3                        | 7.9          | 32.6         | 26.8               | 43.5              | 16.7           | 300             | 0              |
| 3                      | 192.960       | 41.6              | 10.6                       | 7.9          | 32.6         | 27.5               | 43.5              | 16             | 400             | 206            |
| 4                      | 869.040       | 85.0              | 22.4                       | 10.8         | 32.4         | 85.8               | 46.4              | -39.4          | 400             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 5                      | 60.070        | 43.9              | 12.0                       | 7.0          | 32.6         | 30.3               | 39.1              | 8.8            | 100             | 359            |
| 6                      | 63.950        | 42.9              | 10.7                       | 7.0          | 32.6         | 28.0               | 39.1              | 11.1           | 200             | 270            |
| 7                      | 118.270       | 44.0              | 9.1                        | 7.5          | 32.6         | 28.0               | 43.5              | 15.5           | 100             | 359            |
| 8                      | 869.040       | 85.0              | 22.4                       | 10.8         | 32.4         | 85.8               | 46.4              | -39.4          | 200             | 0              |



## Pre-Scan Test Data

Test Mode

Mode #15



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1736.000      | 84.8              | 26.8                       | 6.9          | 39.6         | 78.9               | 74.0              | -4.9           | 100             | 359            |
| 2                      | 2608.000      | 73.0              | 29.1                       | 8.6          | 39.5         | 71.2               | 74.0              | 2.8            | 100             | 359            |
| 3                      | 3472.000      | 58.1              | 31.5                       | 10.0         | 39.7         | 59.9               | 74.0              | 14.1           | 100             | 359            |
| 4                      | 4344.000      | 65.6              | 33.0                       | 11.4         | 39.9         | 70.1               | 74.0              | 3.9            | 100             | 359            |
| 5                      | 6080.000      | 50.1              | 34.3                       | 12.9         | 39.6         | 57.7               | 74.0              | 16.3           | 100             | 4              |
| 6                      | 7824.000      | 42.3              | 35.5                       | 14.9         | 39.4         | 53.3               | 74.0              | 20.7           | 100             | 359            |
| 7                      | 8696.000      | 45.2              | 36.1                       | 15.1         | 39.6         | 56.8               | 74.0              | 17.2           | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 8                      | 1136.000      | 47.1              | 24.6                       | 5.6          | 39.8         | 37.5               | 74.0              | 36.5           | 100             | 0              |
| 9                      | 1160.000      | 48.2              | 24.6                       | 5.6          | 39.8         | 38.6               | 74.0              | 35.4           | 100             | 0              |
| 10                     | 1200.000      | 47.9              | 24.7                       | 5.7          | 39.8         | 38.5               | 74.0              | 35.5           | 100             | 201            |
| 11                     | 1232.000      | 46.1              | 24.8                       | 5.8          | 39.8         | 36.9               | 74.0              | 37.1           | 100             | 0              |
| 12                     | 1344.000      | 44.1              | 25.1                       | 6.1          | 39.8         | 35.5               | 74.0              | 38.5           | 100             | 286            |
| 13                     | 1416.000      | 45.4              | 25.3                       | 6.3          | 39.8         | 37.2               | 74.0              | 36.8           | 100             | 11             |
| 14                     | 1736.000      | 79.6              | 26.8                       | 6.9          | 39.6         | 73.7               | 74.0              | .3             | 100             | 201            |
| 15                     | 2608.000      | 69.8              | 29.1                       | 8.6          | 39.5         | 68.0               | 74.0              | 6              | 100             | 201            |
| 16                     | 3472.000      | 52.8              | 31.5                       | 10.0         | 39.7         | 54.6               | 74.0              | 19.4           | 100             | 201            |
| 17                     | 4344.000      | 58.4              | 33.0                       | 11.4         | 39.9         | 62.9               | 74.0              | 11.1           | 100             | 201            |
| 18                     | 6080.000      | 30.2              | 34.3                       | 12.9         | 39.6         | 37.8               | 74.0              | 36.2           | 100             | 132            |
| 19                     | 7824.000      | 28.7              | 35.5                       | 14.9         | 39.4         | 39.7               | 74.0              | 34.3           | 100             | 32             |



| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    | Mode #15           |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1736.00                            | H                 | 84.80                 | -25.82             | 2.04               | 8.42                   | -19.44            | -13.0          | 6.44           |
| 2608.00                            | H                 | 73.00                 | -35.09             | 2.53               | 9.83                   | -27.79            |                | 14.79          |
| 4344.00                            | H                 | 65.60                 | -38.80             | 3.29               | 11.02                  | -31.07            |                | 18.07          |
| 6080.00                            | H                 | 50.10                 | -50.58             | 3.93               | 11.50                  | -43.01            |                | 30.01          |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

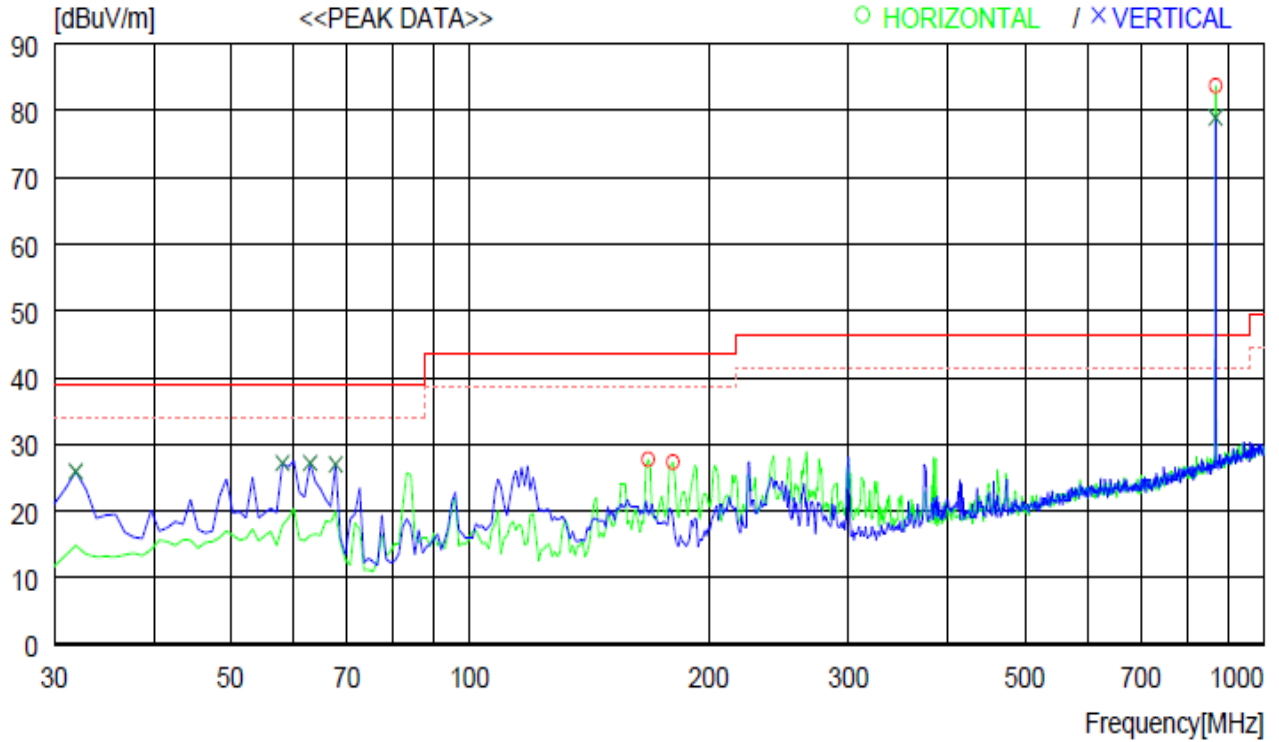
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #16

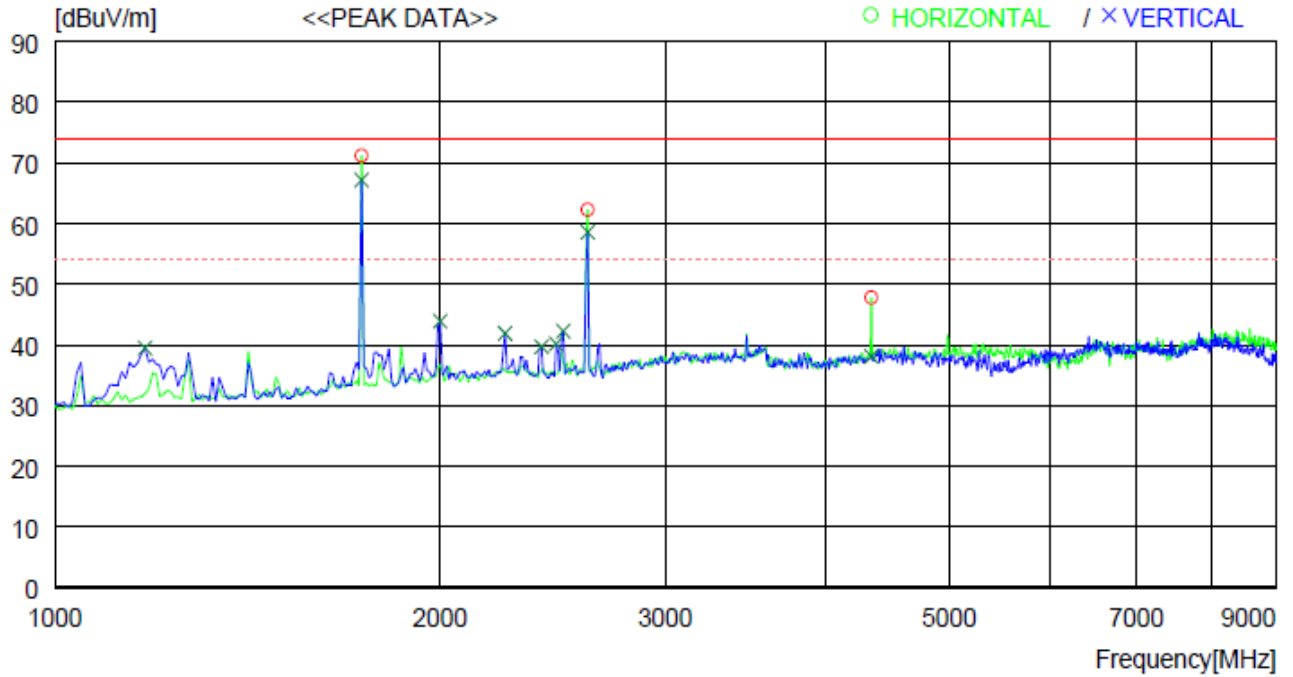


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 167.740       | 43.8              | 8.7                        | 7.8          | 32.6         | 27.7               | 43.5              | 15.8           | 300             | 0              |
| 2                      | 180.350       | 42.7              | 9.3                        | 7.9          | 32.6         | 27.3               | 43.5              | 16.2           | 300             | 194            |
| 3                      | 869.040       | 83.0              | 22.4                       | 10.8         | 32.4         | 83.8               | 46.4              | -37.4          | 300             | 0              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 4                      | 31.940        | 42.1              | 9.9                        | 6.6          | 32.7         | 25.9               | 39.1              | 13.2           | 100             | 359            |
| 5                      | 58.130        | 40.4              | 12.5                       | 6.9          | 32.6         | 27.2               | 39.1              | 11.9           | 100             | 359            |
| 6                      | 62.980        | 41.7              | 11.1                       | 7.0          | 32.6         | 27.2               | 39.1              | 11.9           | 100             | 359            |
| 7                      | 67.830        | 43.2              | 9.4                        | 7.0          | 32.6         | 27.0               | 39.1              | 12.1           | 100             | 245            |
| 8                      | 869.040       | 78.2              | 22.4                       | 10.8         | 32.4         | 79.0               | 46.4              | -32.6          | 200             | 0              |

## Pre-Scan Test Data

Test Mode

Mode #16



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1736.000      | 77.1              | 26.8                       | 6.9          | 39.6         | 71.2               | 74.0              | 2.8            | 100             | 2              |
| 2                      | 2608.000      | 64.1              | 29.1                       | 8.6          | 39.5         | 62.3               | 74.0              | 11.7           | 100             | 359            |
| 3                      | 4344.000      | 43.3              | 33.0                       | 11.4         | 39.9         | 47.8               | 74.0              | 26.2           | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 4                      | 1176.000      | 49.0              | 24.7                       | 5.6          | 39.8         | 39.5               | 74.0              | 34.5           | 100             | 0              |
| 5                      | 1736.000      | 73.1              | 26.8                       | 6.9          | 39.6         | 67.2               | 74.0              | 6.8            | 100             | 0              |
| 6                      | 2000.000      | 47.6              | 28.2                       | 7.5          | 39.4         | 43.9               | 74.0              | 30.1           | 100             | 0              |
| 7                      | 2248.000      | 45.0              | 28.5                       | 7.9          | 39.5         | 41.9               | 74.0              | 32.1           | 100             | 271            |
| 8                      | 2400.000      | 42.3              | 28.6                       | 8.3          | 39.5         | 39.7               | 74.0              | 34.3           | 100             | 256            |
| 9                      | 2464.000      | 42.6              | 28.7                       | 8.4          | 39.5         | 40.2               | 74.0              | 33.8           | 100             | 0              |
| 10                     | 2496.000      | 44.7              | 28.7                       | 8.4          | 39.5         | 42.3               | 74.0              | 31.7           | 100             | 148            |
| 11                     | 2608.000      | 60.4              | 29.1                       | 8.6          | 39.5         | 58.6               | 74.0              | 15.4           | 100             | 202            |
| 12                     | 4344.000      | 33.6              | 33.0                       | 11.4         | 39.9         | 38.1               | 74.0              | 35.9           | 100             | 209            |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #16               |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1736.00                            | H                 | 77.10                 | -33.48             | 2.04               | 8.42                   | -27.10            | -13.0          | 14.1           |
| 2608.00                            | H                 | 64.10                 | -44.26             | 2.53               | 9.83                   | -36.96            |                | 23.96          |

Note

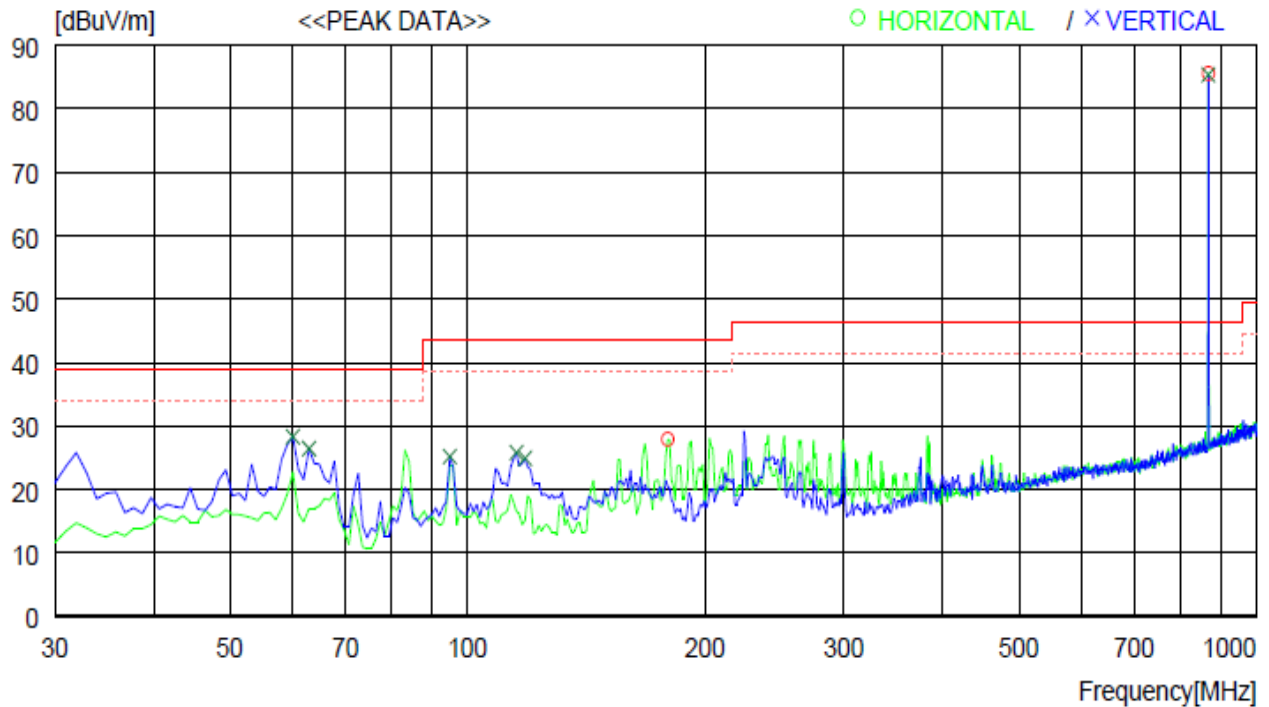
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #17

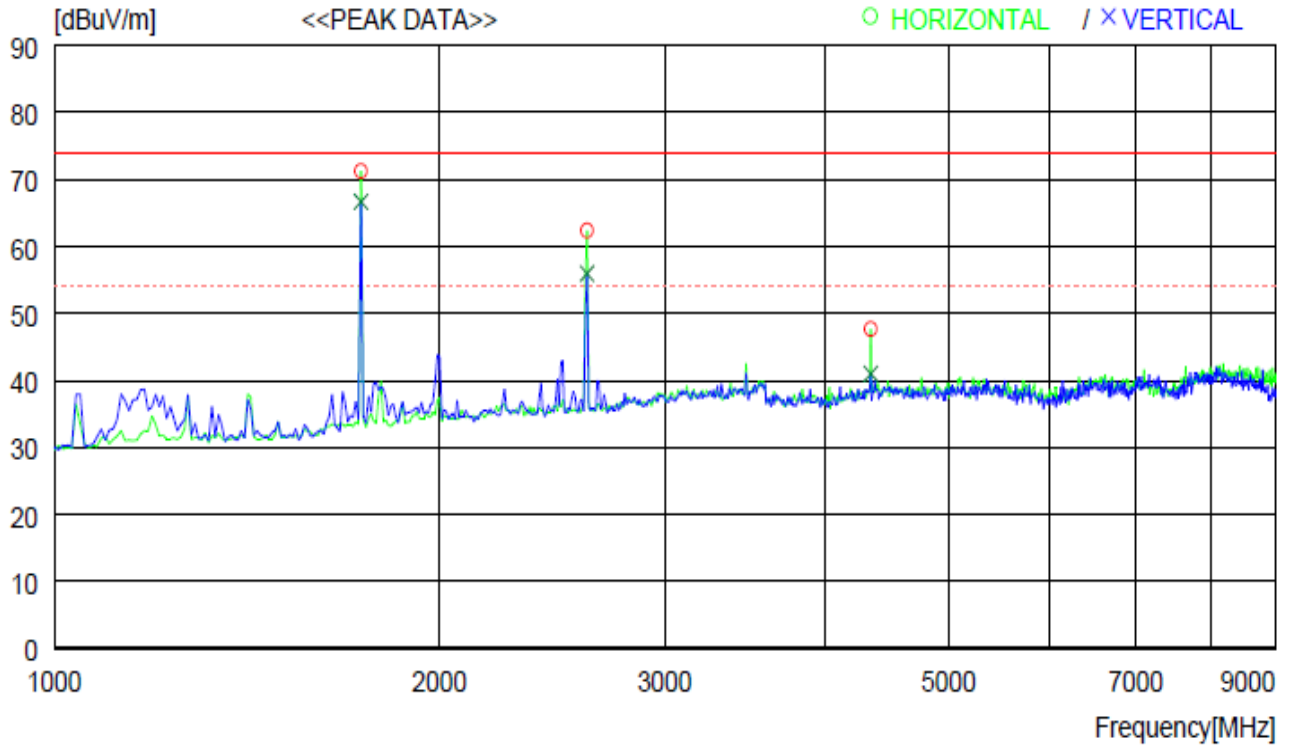


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 179.380       | 43.4              | 9.2                        | 7.9          | 32.6         | 27.9               | 43.5              | 15.6           | 400             | 0              |
| 2                      | 869.040       | 84.8              | 22.4                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 400             | 202            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 60.070        | 41.9              | 12.0                       | 7.0          | 32.6         | 28.3               | 39.1              | 10.8           | 100             | 293            |
| 4                      | 62.980        | 40.9              | 11.1                       | 7.0          | 32.6         | 26.4               | 39.1              | 12.7           | 200             | 284            |
| 5                      | 94.990        | 39.3              | 11.2                       | 7.3          | 32.6         | 25.2               | 43.5              | 18.3           | 200             | 359            |
| 6                      | 115.360       | 41.4              | 9.6                        | 7.4          | 32.6         | 25.8               | 43.5              | 17.7           | 100             | 0              |
| 7                      | 118.270       | 40.9              | 9.1                        | 7.5          | 32.6         | 24.9               | 43.5              | 18.6           | 100             | 340            |
| 8                      | 869.040       | 84.6              | 22.4                       | 10.8         | 32.4         | 85.4               | 46.4              | -39            | 200             | 44             |

## Pre-Scan Test Data

Test Mode

Mode #17



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1736.000      | 77.2              | 26.8                       | 6.9          | 39.6         | 71.3               | 74.0              | 2.7            | 100             | 7              |
| 2                      | 2608.000      | 64.2              | 29.1                       | 8.6          | 39.5         | 62.4               | 74.0              | 11.6           | 100             | 2              |
| 3                      | 4344.000      | 43.2              | 33.0                       | 11.4         | 39.9         | 47.7               | 74.0              | 26.3           | 100             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 4                      | 1736.000      | 72.6              | 26.8                       | 6.9          | 39.6         | 66.7               | 74.0              | 7.3            | 100             | 195            |
| 5                      | 2608.000      | 57.8              | 29.1                       | 8.6          | 39.5         | 56.0               | 74.0              | 18             | 100             | 0              |
| 6                      | 4344.000      | 36.5              | 33.0                       | 11.4         | 39.9         | 41.0               | 74.0              | 33             | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #17               |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1736.00                            | H                 | 77.20                 | -33.38             | 2.04               | 8.42                   | -27.00            | -13.0          | 14             |
| 2608.00                            | H                 | 64.20                 | -44.15             | 2.53               | 9.83                   | -36.85            |                | 23.85          |

Note

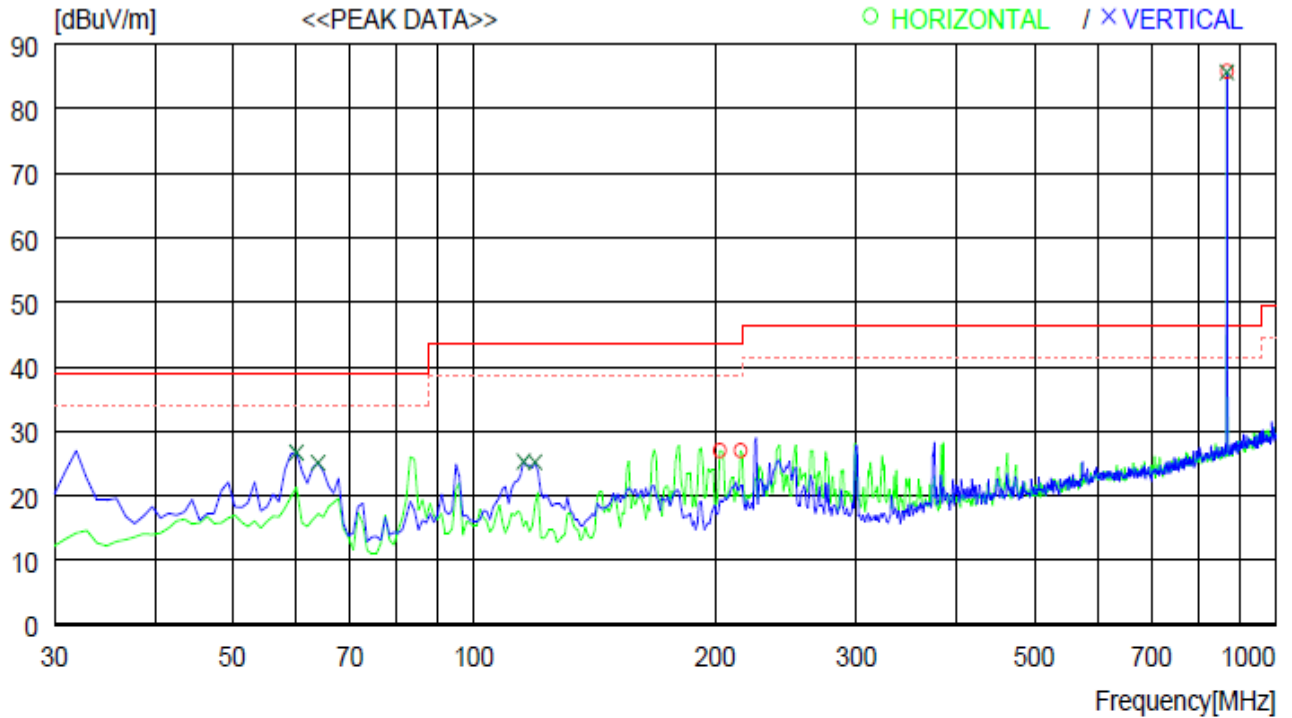
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #18



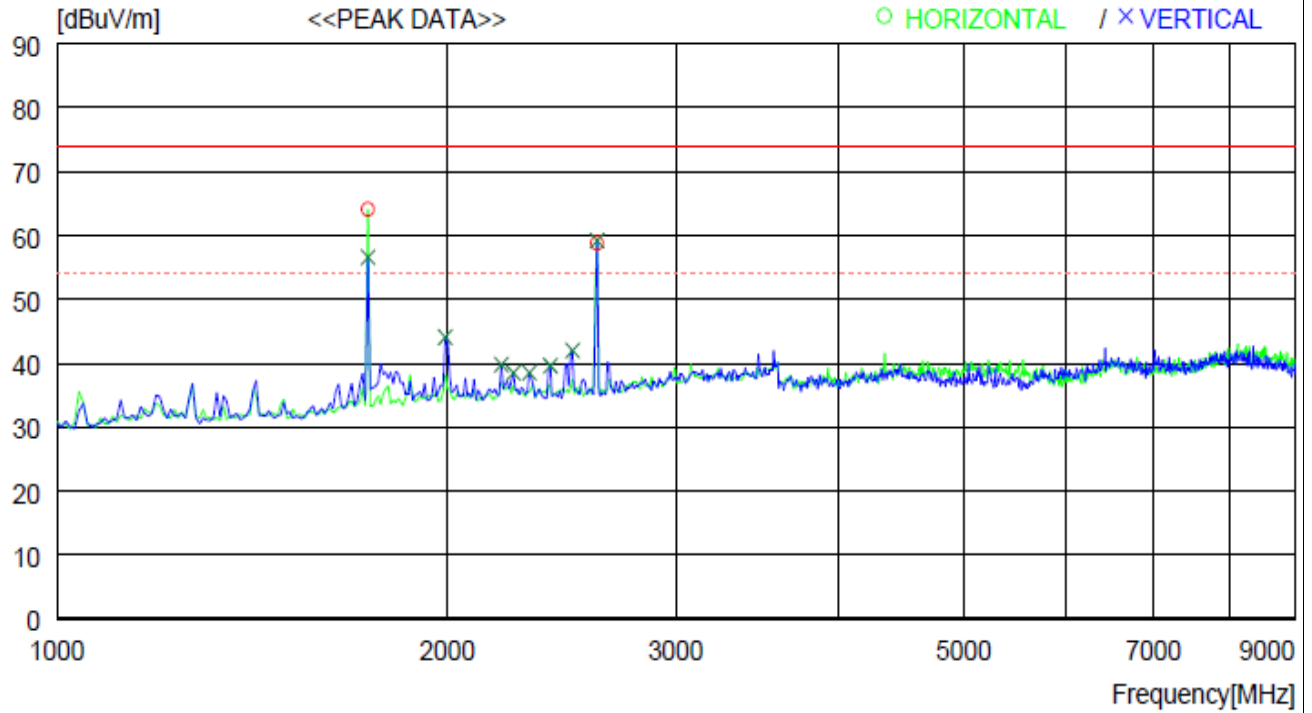
| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 202.660       | 40.1              | 11.5                       | 8.0          | 32.6         | 27.0               | 43.5              | 16.5           | 400             | 0              |
| 2                      | 215.270       | 39.7              | 11.8                       | 8.1          | 32.6         | 27.0               | 43.5              | 16.5           | 400             | 211            |
| 3                      | 869.040       | 85.0              | 22.4                       | 10.8         | 32.4         | 85.8               | 46.4              | -39.4          | 400             | 195            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 4                      | 60.070        | 40.3              | 12.0                       | 7.0          | 32.6         | 26.7               | 39.1              | 12.4           | 100             | 0              |
| 5                      | 63.950        | 40.0              | 10.7                       | 7.0          | 32.6         | 25.1               | 39.1              | 14             | 100             | 240            |
| 6                      | 115.360       | 40.9              | 9.6                        | 7.4          | 32.6         | 25.3               | 43.5              | 18.2           | 100             | 287            |
| 7                      | 119.240       | 41.3              | 9.0                        | 7.5          | 32.6         | 25.2               | 43.5              | 18.3           | 200             | 359            |
| 8                      | 869.040       | 84.9              | 22.4                       | 10.8         | 32.4         | 85.7               | 46.4              | -39.3          | 200             | 42             |



## Pre-Scan Test Data

Test Mode

Mode #18



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 1736.000      | 70.0              | 26.8                       | 6.9          | 39.6         | 64.1               | 74.0              | 9.9            | 100             | 359            |
| 2                      | 2608.000      | 60.6              | 29.1                       | 8.6          | 39.5         | 58.8               | 74.0              | 15.2           | 100             | 65             |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 3                      | 1736.000      | 62.5              | 26.8                       | 6.9          | 39.6         | 56.6               | 74.0              | 17.4           | 100             | 0              |
| 4                      | 1992.000      | 47.8              | 28.2                       | 7.5          | 39.4         | 44.1               | 74.0              | 29.9           | 100             | 0              |
| 5                      | 2200.000      | 42.9              | 28.4                       | 7.9          | 39.4         | 39.8               | 74.0              | 34.2           | 100             | 332            |
| 6                      | 2248.000      | 41.6              | 28.5                       | 7.9          | 39.5         | 38.5               | 74.0              | 35.5           | 100             | 270            |
| 7                      | 2312.000      | 41.4              | 28.5                       | 8.1          | 39.5         | 38.5               | 74.0              | 35.5           | 100             | 0              |
| 8                      | 2400.000      | 42.2              | 28.6                       | 8.3          | 39.5         | 39.6               | 74.0              | 34.4           | 100             | 0              |
| 9                      | 2496.000      | 44.4              | 28.7                       | 8.4          | 39.5         | 42.0               | 74.0              | 32             | 100             | 145            |
| 10                     | 2608.000      | 61.0              | 29.1                       | 8.6          | 39.5         | 59.2               | 74.0              | 14.8           | 100             | 115            |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    |                    | Mode #18               |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1736.00                            | H                 | 70.00                 | -40.64             | 2.04               | 8.42                   | -34.26            | -13.0          | 21.26          |
| 2608.00                            | H                 | 60.60                 | -47.94             | 2.53               | 9.83                   | -40.64            |                | 27.64          |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

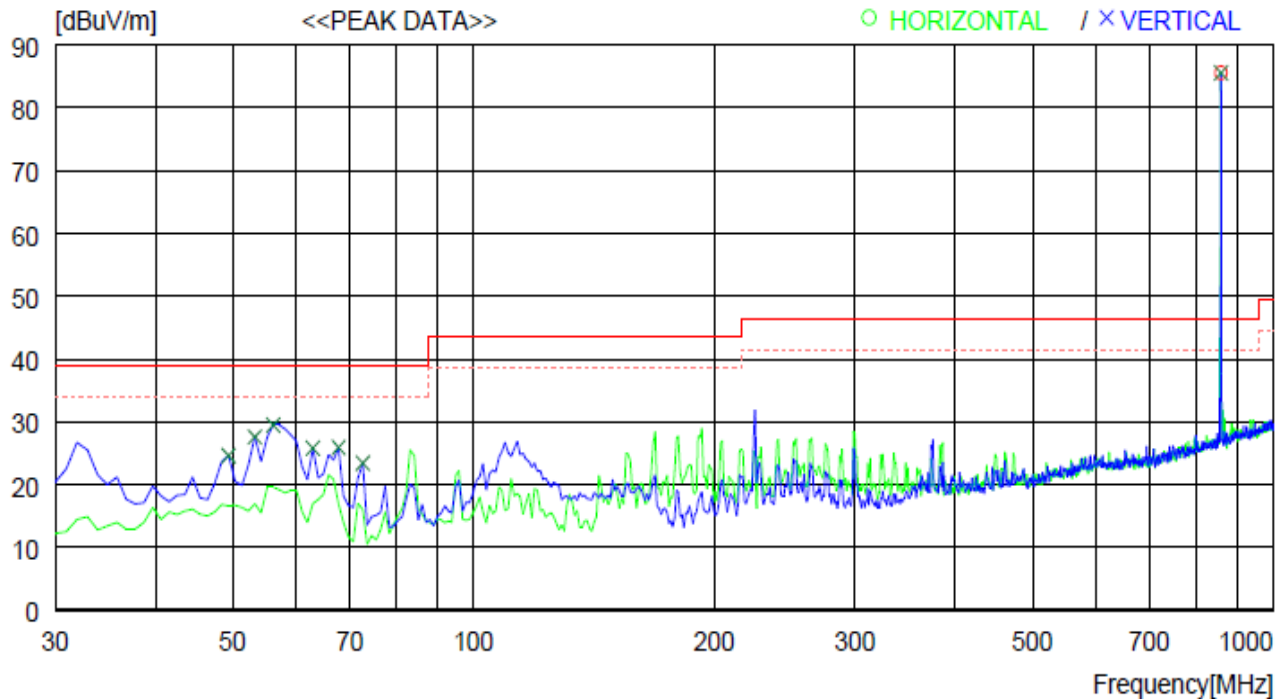
### Pre-Scan Test Data

Operating Band: 800 MHz Band

Input Voltage: DC 48 V

Test Mode

Mode #19

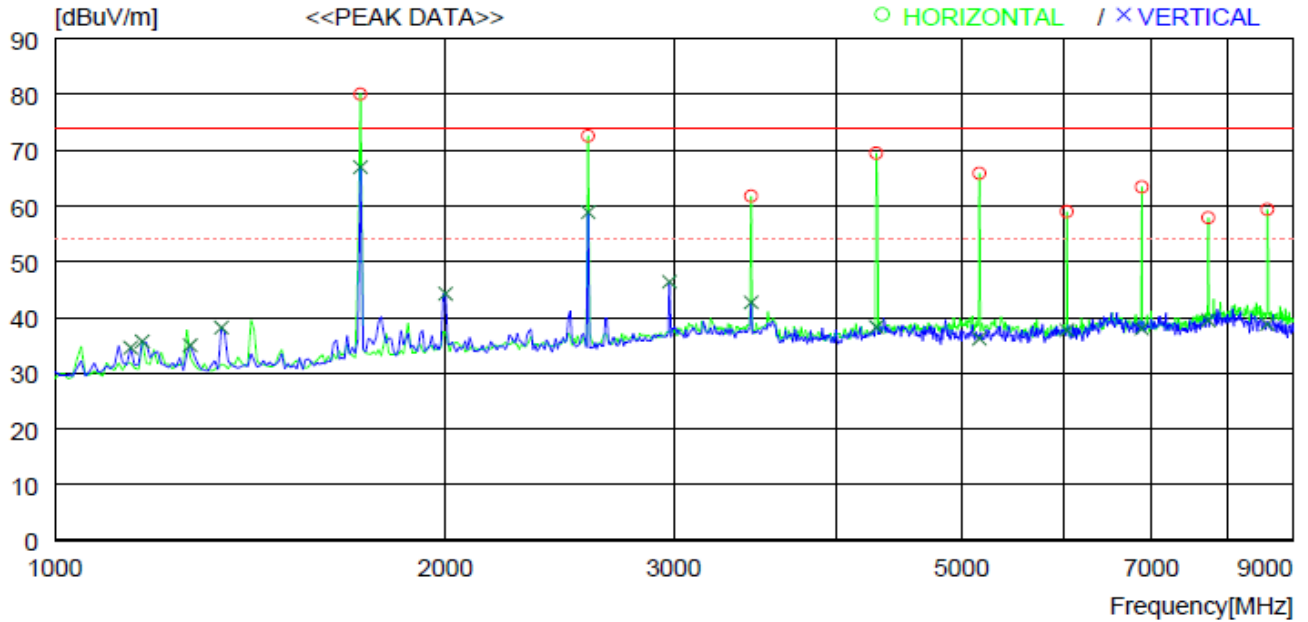


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 85.0              | 22.2                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 300             | 359            |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 49.400        | 36.2              | 14.2                       | 6.9          | 32.7         | 24.6               | 39.1              | 14.5           | 100             | 0              |
| 3                      | 53.280        | 39.8              | 13.5                       | 6.9          | 32.6         | 27.6               | 39.1              | 11.5           | 100             | 278            |
| 4                      | 56.190        | 42.3              | 12.9                       | 6.9          | 32.6         | 29.5               | 39.1              | 9.6            | 100             | 0              |
| 5                      | 62.980        | 40.3              | 11.1                       | 7.0          | 32.6         | 25.8               | 39.1              | 13.3           | 200             | 359            |
| 6                      | 67.830        | 42.1              | 9.4                        | 7.0          | 32.6         | 25.9               | 39.1              | 13.2           | 200             | 221            |
| 7                      | 72.680        | 40.7              | 8.2                        | 7.1          | 32.6         | 23.4               | 39.1              | 15.7           | 200             | 277            |
| 8                      | 860.310       | 85.0              | 22.2                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 200             | 7              |

## Pre-Scan Test Data

Test Mode

Mode #19



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                               |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 86.1              | 26.7                          | 6.9          | 39.6         | 80.1               | 74.0              | -6.1           | 100             | 0              |
| 2                      | 2576.000      | 74.5              | 29.0                          | 8.6          | 39.5         | 72.6               | 74.0              | 1.4            | 100             | 6              |
| 3                      | 3440.000      | 60.1              | 31.4                          | 10.0         | 39.7         | 61.8               | 74.0              | 12.2           | 100             | 3              |
| 4                      | 4296.000      | 65.2              | 32.9                          | 11.3         | 39.9         | 69.5               | 74.0              | 4.5            | 100             | 0              |
| 5                      | 5160.000      | 59.8              | 33.9                          | 12.1         | 39.9         | 65.9               | 74.0              | 8.1            | 100             | 0              |
| 6                      | 6024.000      | 51.5              | 34.2                          | 12.9         | 39.6         | 59.0               | 74.0              | 15             | 100             | 0              |
| 7                      | 6880.000      | 53.9              | 34.9                          | 14.1         | 39.5         | 63.4               | 74.0              | 10.6           | 100             | 6              |
| 8                      | 7744.000      | 47.3              | 35.4                          | 14.7         | 39.5         | 57.9               | 74.0              | 16.1           | 100             | 6              |
| 9                      | 8600.000      | 47.8              | 36.0                          | 15.1         | 39.5         | 59.4               | 74.0              | 14.6           | 100             | 16             |
| ----- Vertical -----   |               |                   |                               |              |              |                    |                   |                |                 |                |
| 10                     | 1144.000      | 44.2              | 24.6                          | 5.6          | 39.8         | 34.6               | 74.0              | 39.4           | 100             | 239            |
| 11                     | 1168.000      | 45.2              | 24.7                          | 5.6          | 39.8         | 35.7               | 74.0              | 38.3           | 100             | 230            |
| 12                     | 1272.000      | 44.0              | 24.9                          | 5.9          | 39.8         | 35.0               | 74.0              | 39             | 100             | 271            |
| 13                     | 1344.000      | 46.8              | 25.1                          | 6.1          | 39.8         | 38.2               | 74.0              | 35.8           | 100             | 271            |
| 14                     | 1720.000      | 73.0              | 26.7                          | 6.9          | 39.6         | 67.0               | 74.0              | 7              | 100             | 230            |
| 15                     | 2000.000      | 48.0              | 28.2                          | 7.5          | 39.4         | 44.3               | 74.0              | 29.7           | 100             | 230            |
| 16                     | 2576.000      | 60.8              | 29.0                          | 8.6          | 39.5         | 58.9               | 74.0              | 15.1           | 100             | 358            |
| 17                     | 2976.000      | 46.2              | 30.3                          | 9.5          | 39.6         | 46.4               | 74.0              | 27.6           | 100             | 302            |
| 18                     | 3440.000      | 41.0              | 31.4                          | 10.0         | 39.7         | 42.7               | 74.0              | 31.3           | 100             | 310            |
| 19                     | 4296.000      | 34.0              | 32.9                          | 11.3         | 39.9         | 38.3               | 74.0              | 35.7           | 100             | 358            |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    | Mode #19           |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 86.10                 | -24.66             | 2.02               | 8.44                   | -18.24            | -13.0          | 5.24           |
| 2576.00                            | H                 | 74.50                 | -33.65             | 2.52               | 9.86                   | -26.31            |                | 13.31          |
| 3440.00                            | H                 | 60.10                 | -45.79             | 2.91               | 10.11                  | -38.59            |                | 25.59          |
| 4296.00                            | H                 | 65.20                 | -39.22             | 3.26               | 10.93                  | -31.55            |                | 18.55          |
| 5160.00                            | H                 | 59.80                 | -42.30             | 3.64               | 10.98                  | -34.96            |                | 21.96          |
| 6880.00                            | H                 | 53.90                 | -46.35             | 4.21               | 11.56                  | -39.00            |                | 26             |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

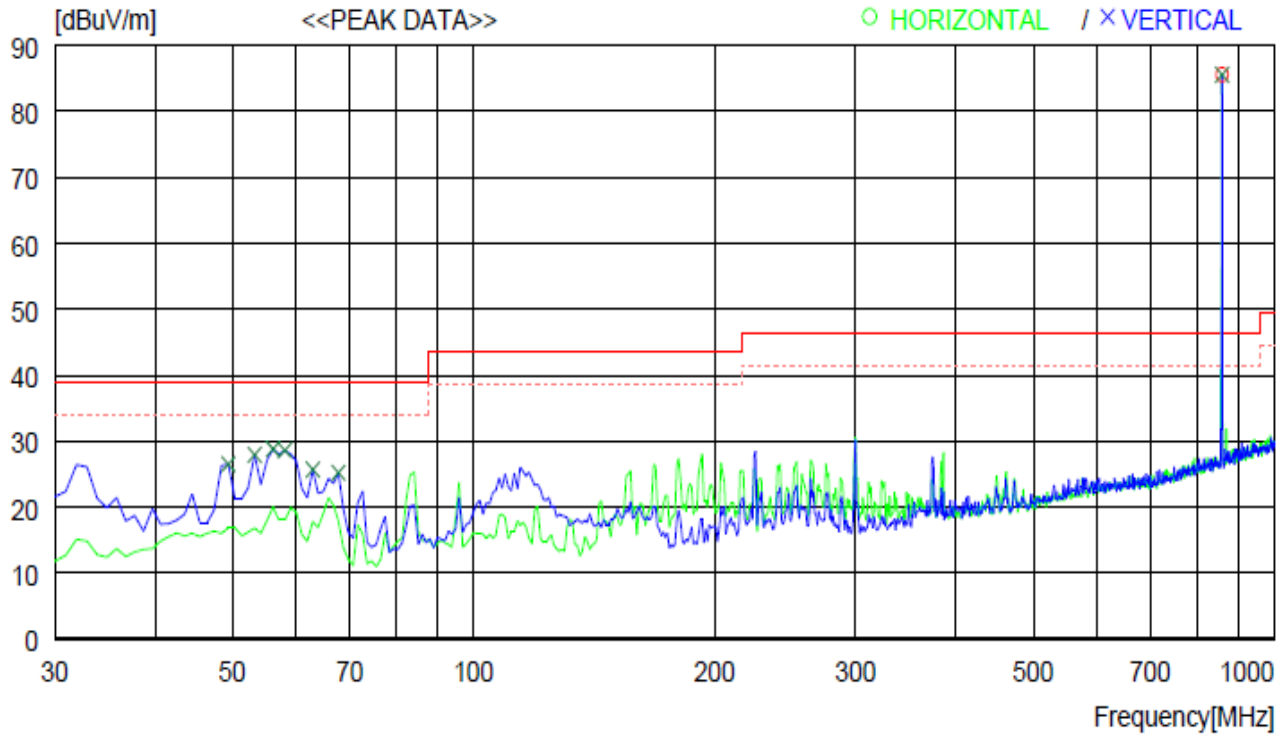
1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall is used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

## Pre-Scan Test Data

Test Mode

Mode #20

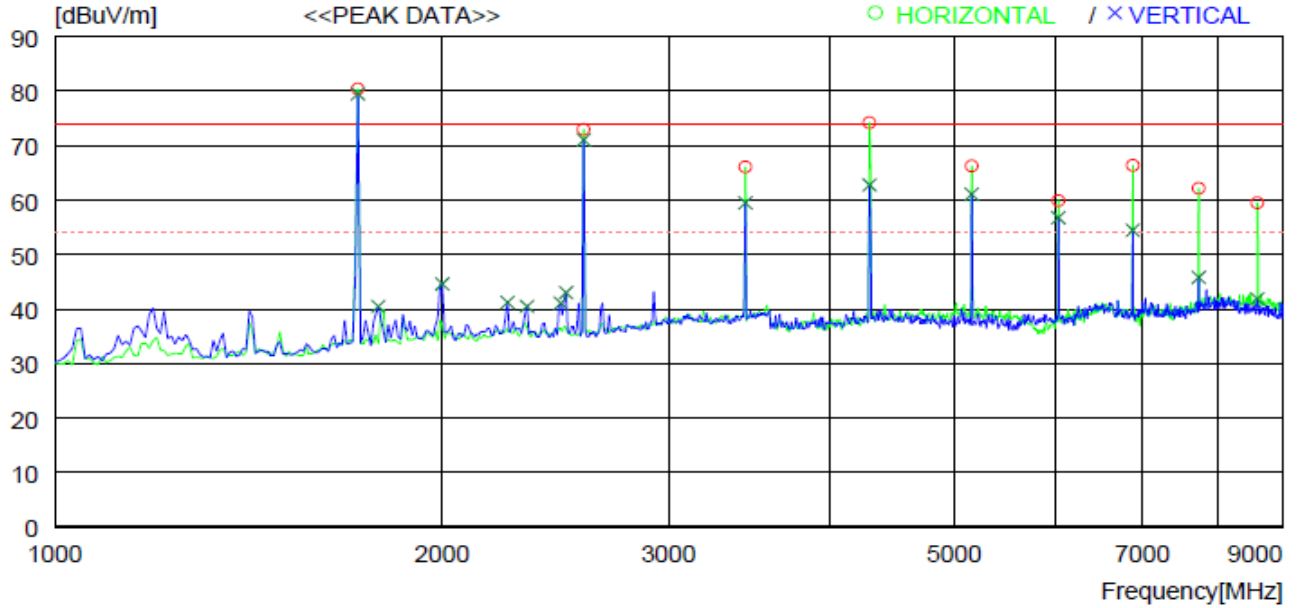


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 85.0              | 22.2                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 400             | 0              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 49.400        | 38.1              | 14.2                       | 6.9          | 32.7         | 26.5               | 39.1              | 12.6           | 200             | 359            |
| 3                      | 53.280        | 40.1              | 13.5                       | 6.9          | 32.6         | 27.9               | 39.1              | 11.2           | 100             | 0              |
| 4                      | 56.190        | 41.6              | 12.9                       | 6.9          | 32.6         | 28.8               | 39.1              | 10.3           | 100             | 0              |
| 5                      | 58.130        | 41.8              | 12.5                       | 6.9          | 32.6         | 28.6               | 39.1              | 10.5           | 100             | 277            |
| 6                      | 62.980        | 40.2              | 11.1                       | 7.0          | 32.6         | 25.7               | 39.1              | 13.4           | 100             | 0              |
| 7                      | 67.830        | 41.4              | 9.4                        | 7.0          | 32.6         | 25.2               | 39.1              | 13.9           | 100             | 231            |
| 8                      | 860.310       | 85.0              | 22.2                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 200             | 359            |

## Pre-Scan Test Data

Test Mode

Mode #20



| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                               |              |              |                    |                   |                |                 |                |
| 1                      | 1720.000      | 86.4              | 26.7                          | 6.9          | 39.6         | 80.4               | 74.0              | -6.4           | 100             | 359            |
| 2                      | 2576.000      | 74.9              | 29.0                          | 8.6          | 39.5         | 73.0               | 74.0              | 1              | 100             | 11             |
| 3                      | 3440.000      | 64.4              | 31.4                          | 10.0         | 39.7         | 66.1               | 74.0              | 7.9            | 100             | 11             |
| 4                      | 4296.000      | 69.9              | 32.9                          | 11.3         | 39.9         | 74.2               | 74.0              | -2             | 100             | 359            |
| 5                      | 5160.000      | 60.2              | 33.9                          | 12.1         | 39.9         | 66.3               | 74.0              | 7.7            | 100             | 359            |
| 6                      | 6024.000      | 52.4              | 34.2                          | 12.9         | 39.6         | 59.9               | 74.0              | 14.1           | 100             | 7              |
| 7                      | 6880.000      | 56.9              | 34.9                          | 14.1         | 39.5         | 66.4               | 74.0              | 7.6            | 100             | 359            |
| 8                      | 7744.000      | 51.6              | 35.4                          | 14.7         | 39.5         | 62.2               | 74.0              | 11.8           | 100             | 359            |
| 9                      | 8600.000      | 47.9              | 36.0                          | 15.1         | 39.5         | 59.5               | 74.0              | 14.5           | 100             | 88             |

----- Vertical -----

|    |          |      |      |      |      |      |      |      |     |     |
|----|----------|------|------|------|------|------|------|------|-----|-----|
| 10 | 1720.000 | 85.5 | 26.7 | 6.9  | 39.6 | 79.5 | 74.0 | -5.5 | 100 | 0   |
| 11 | 1784.000 | 46.1 | 27.0 | 7.0  | 39.6 | 40.5 | 74.0 | 33.5 | 100 | 169 |
| 12 | 2000.000 | 48.3 | 28.2 | 7.5  | 39.4 | 44.6 | 74.0 | 29.4 | 100 | 0   |
| 13 | 2248.000 | 44.3 | 28.5 | 7.9  | 39.5 | 41.2 | 74.0 | 32.8 | 100 | 0   |
| 14 | 2328.000 | 43.4 | 28.5 | 8.1  | 39.5 | 40.5 | 74.0 | 33.5 | 100 | 240 |
| 15 | 2472.000 | 43.5 | 28.7 | 8.4  | 39.5 | 41.1 | 74.0 | 32.9 | 100 | 255 |
| 16 | 2496.000 | 45.4 | 28.7 | 8.4  | 39.5 | 43.0 | 74.0 | 31   | 100 | 147 |
| 17 | 2576.000 | 73.0 | 29.0 | 8.6  | 39.5 | 71.1 | 74.0 | 2.9  | 100 | 201 |
| 18 | 3440.000 | 57.8 | 31.4 | 10.0 | 39.7 | 59.5 | 74.0 | 14.5 | 100 | 201 |
| 19 | 4296.000 | 58.5 | 32.9 | 11.3 | 39.9 | 62.8 | 74.0 | 11.2 | 100 | 201 |

| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| 20  | 5160.000      | 55.0              | 33.9                          | 12.1         | 39.9         | 61.1               | 74.0              | 12.9           | 100             | 201            |
| 21  | 6024.000      | 49.3              | 34.2                          | 12.9         | 39.6         | 56.8               | 74.0              | 17.2           | 100             | 201            |
| 22  | 6880.000      | 45.0              | 34.9                          | 14.1         | 39.5         | 54.5               | 74.0              | 19.5           | 100             | 201            |
| 23  | 7744.000      | 35.2              | 35.4                          | 14.7         | 39.5         | 45.8               | 74.0              | 28.2           | 100             | 0              |
| 24  | 8600.000      | 30.3              | 36.0                          | 15.1         | 39.5         | 41.9               | 74.0              | 32.1           | 100             | 0              |

| Substitution Measurement Test Data |                   |                       |                    |                    |                        |                   |                |                |
|------------------------------------|-------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                   |                       |                    | Mode #20           |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(HV) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                 | 86.40                 | -24.36             | 2.02               | 8.44                   | -17.94            | -13.0          | 4.94           |
| 2576.00                            | H                 | 74.90                 | -33.25             | 2.52               | 9.86                   | -25.91            |                | 12.91          |
| 3440.00                            | H                 | 64.40                 | -41.27             | 2.91               | 10.11                  | -34.07            |                | 21.07          |
| 4296.00                            | H                 | 69.90                 | -34.50             | 3.26               | 10.93                  | -26.83            |                | 13.83          |
| 5160.00                            | H                 | 60.20                 | -41.87             | 3.64               | 10.98                  | -34.53            |                | 21.53          |
| 6880.00                            | H                 | 56.90                 | -43.00             | 4.21               | 11.56                  | -35.65            |                | 22.65          |
|                                    |                   |                       |                    |                    |                        |                   |                |                |
|                                    |                   |                       |                    |                    |                        |                   |                |                |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

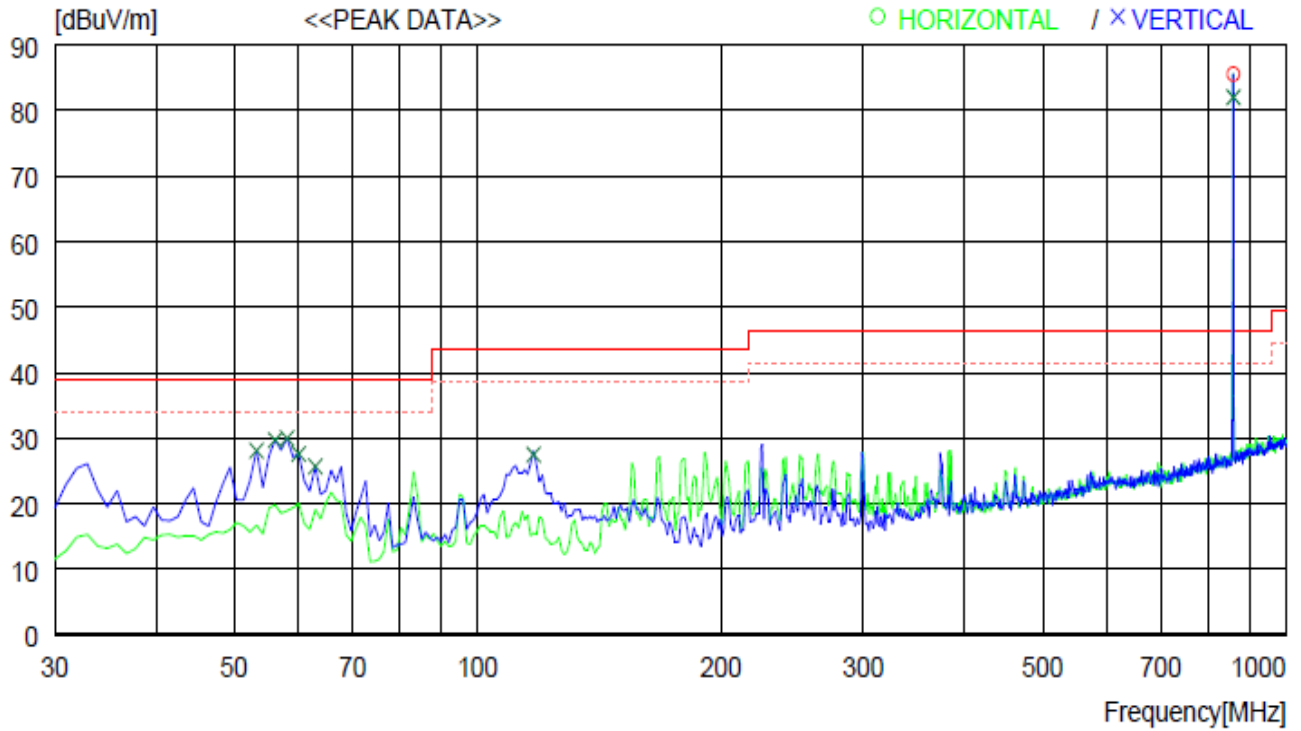
$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$



## Pre-Scan Test Data

Test Mode

Mode #21

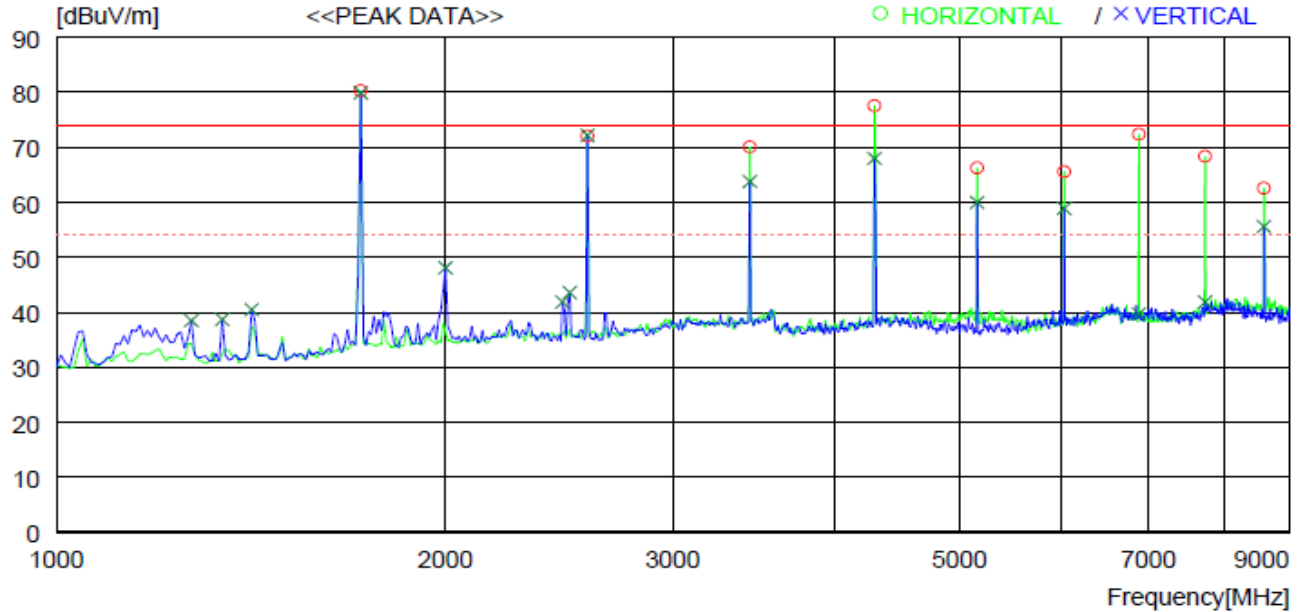


| No.                    | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|------------------------|---------------|-------------------|----------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| ----- Horizontal ----- |               |                   |                            |              |              |                    |                   |                |                 |                |
| 1                      | 860.310       | 85.0              | 22.2                       | 10.8         | 32.4         | 85.6               | 46.4              | -39.2          | 400             | 0              |
| ----- Vertical -----   |               |                   |                            |              |              |                    |                   |                |                 |                |
| 2                      | 53.280        | 40.4              | 13.5                       | 6.9          | 32.7         | 28.1               | 39.1              | 11             | 100             | 233            |
| 3                      | 56.190        | 42.5              | 12.9                       | 6.9          | 32.6         | 29.7               | 39.1              | 9.4            | 100             | 0              |
| 4                      | 58.130        | 43.2              | 12.5                       | 6.9          | 32.6         | 30.0               | 39.1              | 9.1            | 100             | 256            |
| 5                      | 60.070        | 41.3              | 12.0                       | 6.9          | 32.6         | 27.6               | 39.1              | 11.5           | 100             | 69             |
| 6                      | 62.980        | 40.2              | 11.1                       | 7.0          | 32.6         | 25.7               | 39.1              | 13.4           | 200             | 269            |
| 7                      | 117.300       | 43.8              | 9.3                        | 7.0          | 32.6         | 27.5               | 43.5              | 16             | 200             | 359            |
| 8                      | 860.310       | 85.0              | 22.2                       | 7.5          | 32.6         | 82.1               | 46.4              | -35.7          | 200             | 359            |

## Pre-Scan Test Data

Test Mode

Mode #21



| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|

----- Horizontal -----

|   |          |      |      |      |      |      |      |      |     |     |
|---|----------|------|------|------|------|------|------|------|-----|-----|
| 1 | 1720.000 | 86.3 | 26.7 | 6.9  | 39.6 | 80.3 | 74.0 | -6.3 | 100 | 359 |
| 2 | 2576.000 | 74.0 | 29.0 | 8.6  | 39.5 | 72.1 | 74.0 | 1.9  | 100 | 359 |
| 3 | 3440.000 | 68.4 | 31.4 | 10.0 | 39.7 | 70.1 | 74.0 | 3.9  | 100 | 3   |
| 4 | 4296.000 | 73.3 | 32.9 | 11.3 | 39.9 | 77.6 | 74.0 | -3.6 | 100 | 8   |
| 5 | 5160.000 | 60.2 | 33.9 | 12.1 | 39.9 | 66.3 | 74.0 | 7.7  | 100 | 359 |
| 6 | 6024.000 | 58.1 | 34.2 | 12.9 | 39.6 | 65.6 | 74.0 | 8.4  | 100 | 359 |
| 7 | 6880.000 | 62.9 | 34.9 | 14.1 | 39.5 | 72.4 | 74.0 | 1.6  | 100 | 359 |
| 8 | 7744.000 | 57.8 | 35.4 | 14.7 | 39.5 | 68.4 | 74.0 | 5.6  | 100 | 3   |
| 9 | 8600.000 | 51.0 | 36.0 | 15.1 | 39.5 | 62.6 | 74.0 | 11.4 | 100 | 8   |

----- Vertical -----

|    |          |      |      |      |      |      |      |      |     |     |
|----|----------|------|------|------|------|------|------|------|-----|-----|
| 10 | 1272.000 | 47.5 | 24.9 | 5.9  | 39.8 | 38.5 | 74.0 | 35.5 | 100 | 0   |
| 11 | 1344.000 | 47.3 | 25.1 | 6.1  | 39.8 | 38.7 | 74.0 | 35.3 | 100 | 0   |
| 12 | 1416.000 | 48.7 | 25.3 | 6.3  | 39.8 | 40.5 | 74.0 | 33.5 | 100 | 341 |
| 13 | 1720.000 | 85.9 | 26.7 | 6.9  | 39.6 | 79.9 | 74.0 | -5.9 | 100 | 0   |
| 14 | 2000.000 | 51.8 | 28.2 | 7.5  | 39.4 | 48.1 | 74.0 | 25.9 | 100 | 0   |
| 15 | 2464.000 | 44.3 | 28.7 | 8.4  | 39.5 | 41.9 | 74.0 | 32.1 | 100 | 56  |
| 16 | 2496.000 | 46.0 | 28.7 | 8.4  | 39.5 | 43.6 | 74.0 | 30.4 | 100 | 0   |
| 17 | 2576.000 | 74.1 | 29.0 | 8.6  | 39.5 | 72.2 | 74.0 | 1.8  | 100 | 0   |
| 18 | 3440.000 | 62.1 | 31.4 | 10.0 | 39.7 | 63.8 | 74.0 | 10.2 | 100 | 202 |
| 19 | 4296.000 | 63.7 | 32.9 | 11.3 | 39.9 | 68.0 | 74.0 | 6    | 100 | 0   |

| No. | FREQ<br>[MHz] | READING<br>[dBuV] | ANT<br>PEAK<br>FACTOR<br>[dB] | LOSS<br>[dB] | GAIN<br>[dB] | RESULT<br>[dBuV/m] | LIMIT<br>[dBuV/m] | MARGIN<br>[dB] | ANTENNA<br>[cm] | TABLE<br>[DEG] |
|-----|---------------|-------------------|-------------------------------|--------------|--------------|--------------------|-------------------|----------------|-----------------|----------------|
| 20  | 5160.000      | 53.9              | 33.9                          | 12.1         | 39.9         | 60.0               | 74.0              | 14             | 100             | 202            |
| 21  | 6024.000      | 51.4              | 34.2                          | 12.9         | 39.6         | 58.9               | 74.0              | 15.1           | 100             | 0              |
| 22  | 6880.000      | 30.2              | 34.9                          | 14.1         | 39.5         | 39.7               | 74.0              | 34.3           | 100             | 0              |
| 23  | 7744.000      | 31.3              | 35.4                          | 14.7         | 39.5         | 41.9               | 74.0              | 32.1           | 100             | 0              |
| 24  | 8600.000      | 44.0              | 36.0                          | 15.1         | 39.5         | 55.6               | 74.0              | 18.4           | 100             | 0              |

| Substitution Measurement Test Data |                    |                       |                    |                    |                        |                   |                |                |
|------------------------------------|--------------------|-----------------------|--------------------|--------------------|------------------------|-------------------|----------------|----------------|
| Test Mode                          |                    |                       |                    | Mode #21           |                        |                   |                |                |
| Freq.<br>(MHz)                     | Ant. Pol.<br>(H/V) | S/A Reading<br>(dBuV) | S/G Level<br>(dBm) | Cable Loss<br>(dB) | Ant. Gain<br>(dBd/dBi) | ERP/EIRP<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
| 1720.00                            | H                  | 86.30                 | -24.46             | 2.02               | 8.44                   | -18.04            | -13.0          | 5.04           |
| 2576.00                            | H                  | 74.00                 | -34.16             | 2.52               | 9.86                   | -26.82            |                | 13.82          |
| 3440.00                            | H                  | 68.40                 | -37.17             | 2.91               | 10.11                  | -29.97            |                | 16.97          |
| 4296.00                            | H                  | 73.30                 | -31.08             | 3.26               | 10.93                  | -23.41            |                | 10.41          |
| 5160.00                            | H                  | 60.20                 | -41.87             | 3.64               | 10.98                  | -34.53            |                | 21.53          |
| 6024.00                            | H                  | 58.10                 | -42.40             | 3.92               | 11.46                  | -34.86            |                | 21.86          |
| 6880.00                            | H                  | 62.90                 | -36.56             | 4.21               | 11.56                  | -29.21            |                | 16.21          |
| 7744.00                            | H                  | 57.80                 | -39.68             | 4.67               | 11.64                  | -32.71            |                | 19.71          |
|                                    |                    |                       |                    |                    |                        |                   |                |                |

Note

1. Pre-scan test data : Exploratory radiated measurements (pre-scans) to determine the general EUT radiated emissions characteristics and, EUT-to-measurement antenna orientation that produces the maximum emission amplitude. Pre-scans shall be used to determine the emission frequencies and emission levels for substitution method.
2. ERP/EIRP calculation  

$$\text{ERP/EIRP} = \text{Substitute Level (dBm)} + \text{Ant. Gain} - \text{CL (Cable Loss)}$$

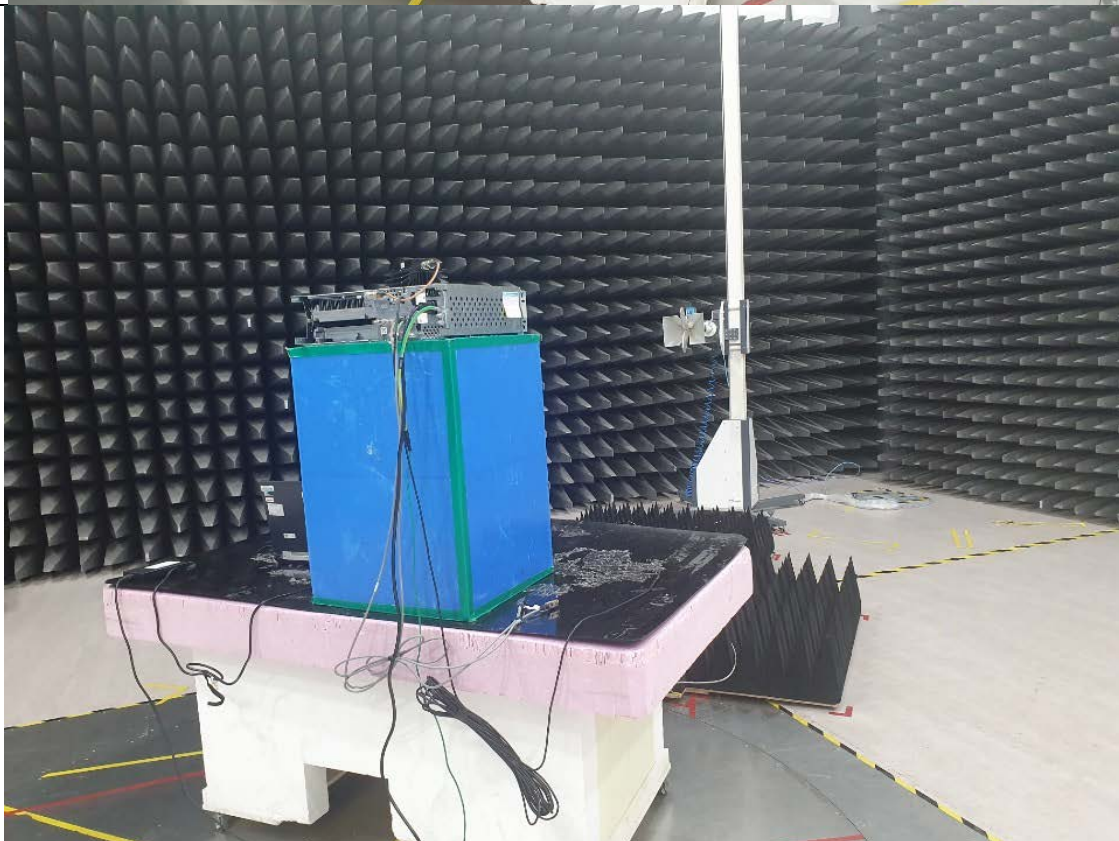
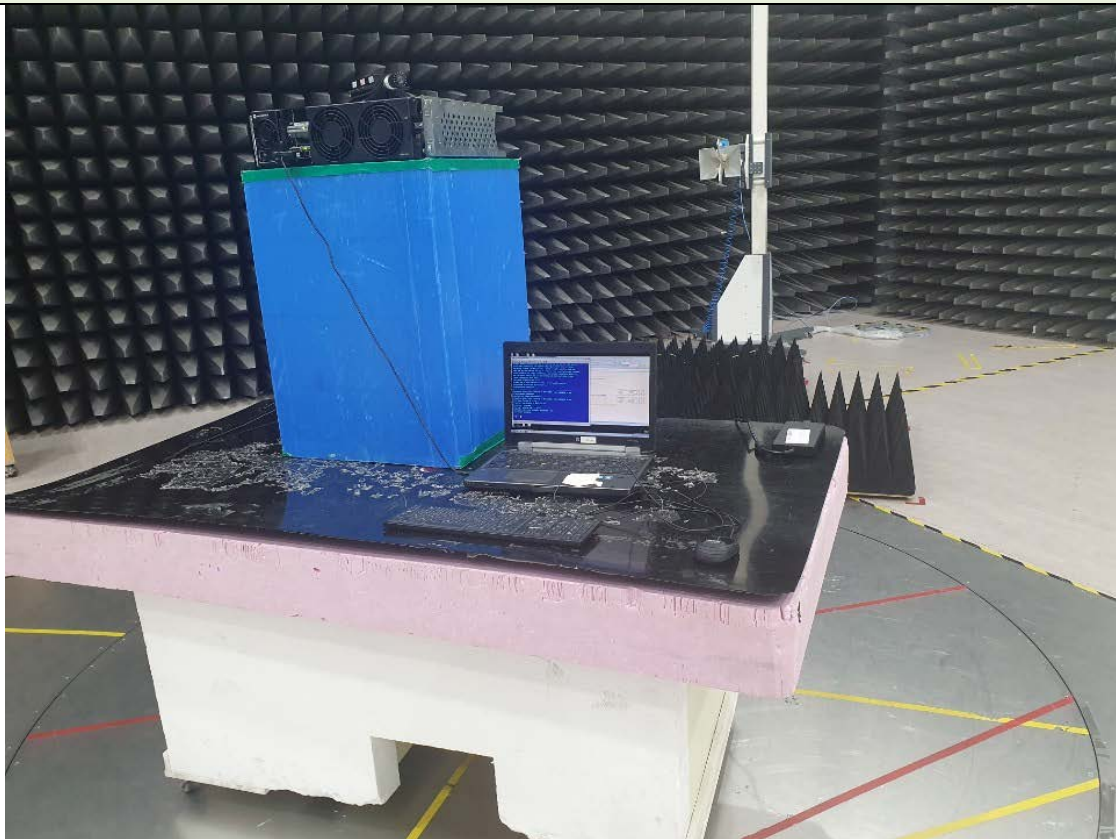
## Appendix I - Test Setup Photos: Radiated Emission Test

Test Setup for 30 MHz – 1 GHz





**Test Setup for above 1 GHz**



## Appendix II - Test Instrumentation

| Name of Equipment                             | Model Number | Manufacturer      | Serial Number          | Last Cal. (Interval) | USE                                 |
|-----------------------------------------------|--------------|-------------------|------------------------|----------------------|-------------------------------------|
| EMI Test Receiver                             | ESCI 7       | Rohde & Schwarz   | 100722                 | 2019-02-12(1Y)       | <input type="checkbox"/>            |
| Test Receiver                                 | ESIB 26      | Rohde & Schwarz   | 100298                 | 2019-01-18(1Y)       | <input checked="" type="checkbox"/> |
| LISN                                          | ENV4200      | Rohde & Schwarz   | 100203                 | 2019-01-18(1Y)       | <input checked="" type="checkbox"/> |
| LISN                                          | ENV216       | Rohde & Schwarz   | 100110                 | 2019-07-27(1Y)       | <input type="checkbox"/>            |
| LISN                                          | LS16C        | AFJ               | 16011403310            | 2019-08-08(1Y)       | <input type="checkbox"/>            |
| LISN                                          | NNLK8121     | SchwarzBeck       | 8121-163               | 2019-07-26(1Y)       | <input checked="" type="checkbox"/> |
| Voltage Probe                                 | TK9420       | Schwarzbeck       | 9420-165               | 2019-01-18(1Y)       | <input type="checkbox"/>            |
| Loop Antenna                                  | HFH2-Z2      | Rohde & Schwarz   | 100341                 | 2019-06-21(2Y)       | <input type="checkbox"/>            |
| 8-Wire ISN CAT 3                              | CAT3 8158    | Schwarzbeck       | CAT3 8158 #70          | 2019-01-30(1Y)       | <input type="checkbox"/>            |
| 8-Wire ISN CAT 5                              | CAT5 8158    | Schwarzbeck       | CAT5 8158 #126         | 2019-01-30(1Y)       | <input type="checkbox"/>            |
| 8-Wire ISN CAT 6                              | NTFM 8158    | Schwarzbeck       | NTFM 8158 #95          | 2019-01-28(1Y)       | <input type="checkbox"/>            |
| Test Receiver                                 | ESU          | Rohde & Schwarz   | 100303                 | 2019-01-18(1Y)       | <input checked="" type="checkbox"/> |
| TRILog Broadband Antenna                      | VULB9163     | Schwarzbeck       | 9163-799               | 2017-10-23(2Y)       | <input checked="" type="checkbox"/> |
| DOPPEL STEG HORN Antenna                      | HF 907       | Rohde & Schwarz   | 102426                 | 2019-01-11(2Y)       | <input checked="" type="checkbox"/> |
| Preamp (1-18) GHz                             | SCU 18D      | Rohde & Schwarz   | 19006450               | 2019-04-19(1Y)       | <input checked="" type="checkbox"/> |
| Preamp 9 kHz-1 GHz                            | 310N         | Sonoma Instrument | 344015                 | 2019-01-18(1Y)       | <input checked="" type="checkbox"/> |
| Attenuators                                   | 6 dB         | Rohde & Schwarz   | 272.4110.50            | 2019-01-18(1Y)       | <input checked="" type="checkbox"/> |
| Antenna Master                                | MA4000-EP    | INNCO SYSTEM      | 4600814                | N/A                  | <input checked="" type="checkbox"/> |
| Antenna Master                                | MA4000-XP-ET | INNCO SYSTEM      | N/A                    | N/A                  | <input checked="" type="checkbox"/> |
| Turn Table                                    | DT3000-3t    | INNCO SYSTEM      | 1310814                | N/A                  | <input checked="" type="checkbox"/> |
| CO3000 Controller                             | CO3000-4PORT | INNCO SYSTEM      | CO3000/806/34130814/L  | N/A                  | <input checked="" type="checkbox"/> |
| CO3000 Controller                             | CO3000-4PORT | INNCO SYSTEM      | CO3000/806/100300505/L | N/A                  | <input checked="" type="checkbox"/> |
| Digital Power Analyzer For Harmonic & Flicker | DPA 500      | EM Test           | V0713102356            | 2019-01-25(1Y)       | <input type="checkbox"/>            |
| AC Power Source                               | ACS 500      | EM Test           | V0713102357            | 2019-07-27(1Y)       | <input type="checkbox"/>            |

The above measuring equipments have been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.