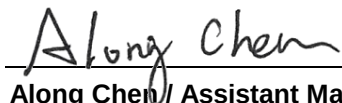


# FCC Test Report

**FCC ID** : IPH-A3697  
**Equipment** : Watch and activity monitor  
**Model No.** : AA3697  
**Brand Name** : GARMIN  
**Applicant** : Garmin International, Inc.  
**Address** : 1200 E. 151st Street Olathe, KS 66062 United States  
**Standard** : 47 CFR FCC Part 15.249  
**Received Date** : May 29, 2019  
**Tested Date** : Jul. 17 ~ Jul. 22, 2019

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:



Along Chen / Assistant Manager

Approved by:



Gary Chang / Manager



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## Release Record

| Report No. | Version | Description   | Issued Date   |
|------------|---------|---------------|---------------|
| FR952803   | Rev. 01 | Initial issue | Aug. 05, 2019 |

## Summary of Test Results

| FCC Rules    | Test Items                                                                                        | Measured                                         | Result |
|--------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------|--------|
| 15.207       | AC Power Line Conducted Emissions                                                                 | [dBuV]: 0.788MHz<br>25.92 (Margin -20.08dB) - AV | Pass   |
| 15.249(a)    | Field Strength of Fundamental                                                                     | Meet the requirement of limit                    | Pass   |
| 15.249(a)(d) | Field Strength of Harmonics and Emissions<br>Radiated outside of the Specified Frequency<br>Bands | Meet the requirement of limit                    | Pass   |
| 15.215(c)    | 20dB bandwidth                                                                                    | Meet the requirement of limit                    | Pass   |
| 15.203       | Antenna Requirement                                                                               | Meet the requirement of limit                    | Pass   |

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

# 1 General Description

## 1.1 Information

### 1.1.1 Specification of the Equipment under Test (EUT)

| RF General Information |            |                 |                |           |
|------------------------|------------|-----------------|----------------|-----------|
| Frequency Range (MHz)  | Modulation | Ch. Freq. (MHz) | Channel Number | Data Rate |
| 2402-2479              | GFSK       | 2402-2479       | 1-78 [78]      | 1 Mbps    |

### 1.1.2 Antenna Details

| Ant. No. | Type | Gain (dBi) | Connector | Remark |
|----------|------|------------|-----------|--------|
| 1        | Slot | 0.92       | N/A       | ---    |

### 1.1.3 Power Supply Type of Equipment under Test (EUT)

|                   |                                       |
|-------------------|---------------------------------------|
| Power Supply Type | 5Vdc from host<br>3.8Vdc from battery |
|-------------------|---------------------------------------|

### 1.1.4 Accessories

| No. | Equipment | Description                                                         |
|-----|-----------|---------------------------------------------------------------------|
| 1   | Battery   | Brand: Garmin<br>Model: 361-00129-00<br>Power Rating: 3.8Vdc, 72mAh |
| 2   | USB cable | 0.52m shielded without core                                         |

### 1.1.5 Channel List

| Frequency band (MHz) |                 |         |                 | 2400~2483.5 |                 |         |                 |
|----------------------|-----------------|---------|-----------------|-------------|-----------------|---------|-----------------|
| Channel              | Frequency (MHz) | Channel | Frequency (MHz) | Channel     | Frequency (MHz) | Channel | Frequency (MHz) |
| 1                    | 2402            | 21      | 2422            | 41          | 2442            | 61      | 2462            |
| 2                    | 2403            | 22      | 2423            | 42          | 2443            | 62      | 2463            |
| 3                    | 2404            | 23      | 2424            | 43          | 2444            | 63      | 2464            |
| 4                    | 2405            | 24      | 2425            | 44          | 2445            | 64      | 2465            |
| 5                    | 2406            | 25      | 2426            | 45          | 2446            | 65      | 2466            |
| 6                    | 2407            | 26      | 2427            | 46          | 2447            | 66      | 2467            |
| 7                    | 2408            | 27      | 2428            | 47          | 2448            | 67      | 2468            |
| 8                    | 2409            | 28      | 2429            | 48          | 2449            | 68      | 2469            |
| 9                    | 2410            | 29      | 2430            | 49          | 2450            | 69      | 2470            |
| 10                   | 2411            | 30      | 2431            | 50          | 2451            | 70      | 2471            |
| 11                   | 2412            | 31      | 2432            | 51          | 2452            | 71      | 2472            |
| 12                   | 2413            | 32      | 2433            | 52          | 2453            | 72      | 2473            |
| 13                   | 2414            | 33      | 2434            | 53          | 2454            | 73      | 2474            |
| 14                   | 2415            | 34      | 2435            | 54          | 2455            | 74      | 2475            |
| 15                   | 2416            | 35      | 2436            | 55          | 2456            | 75      | 2476            |
| 16                   | 2417            | 36      | 2437            | 56          | 2457            | 76      | 2477            |
| 17                   | 2418            | 37      | 2438            | 57          | 2458            | 77      | 2478            |
| 18                   | 2419            | 38      | 2439            | 58          | 2459            | 78      | 2479            |
| 19                   | 2420            | 39      | 2440            | 59          | 2460            | ---     | ---             |
| 20                   | 2421            | 40      | 2441            | 60          | 2461            | ---     | ---             |

### 1.1.6 Test Tool and Duty Cycle

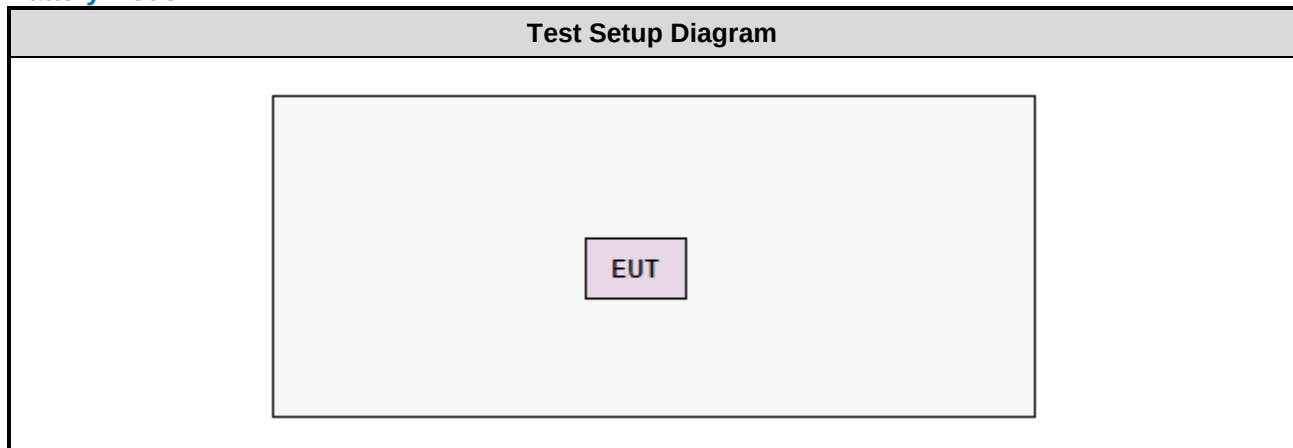
|                            |                                   |                  |
|----------------------------|-----------------------------------|------------------|
| Test Tool                  | Hardware control, Version: 1750-3 |                  |
| Duty Cycle and Duty Factor | Duty Cycle (%)                    | Duty Factor (dB) |
|                            | 6.42                              | 11.92            |

## 1.2 Local Support Equipment List

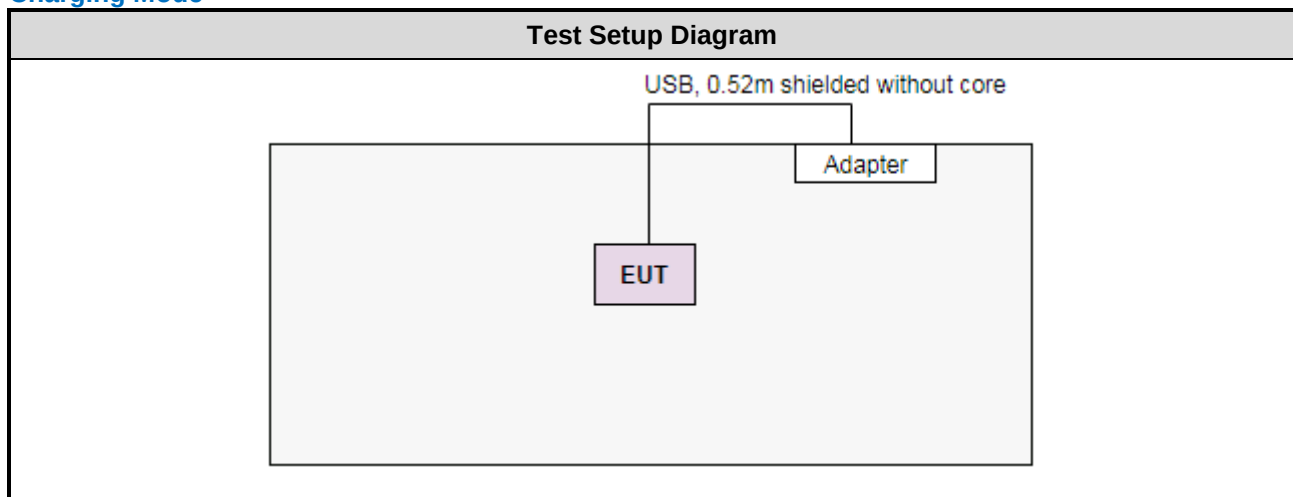
| Support Equipment List |           |       |       |        |         |
|------------------------|-----------|-------|-------|--------|---------|
| No.                    | Equipment | Brand | Model | FCC ID | Remarks |
| 1                      | Adapter   | Apple | A1385 | ---    | ---     |

## 1.3 Test Setup Chart

### Battery Mode



### Charging Mode



## 1.4 The Equipment List

|                                                                     |                               |                  |                   |                         |                          |
|---------------------------------------------------------------------|-------------------------------|------------------|-------------------|-------------------------|--------------------------|
| <b>Test Item</b>                                                    | Conducted Emission            |                  |                   |                         |                          |
| <b>Test Site</b>                                                    | Conduction room 1 / (CO01-WS) |                  |                   |                         |                          |
| <b>Tested Date</b>                                                  | Jul. 22, 2019                 |                  |                   |                         |                          |
| <b>Instrument</b>                                                   | <b>Manufacturer</b>           | <b>Model No.</b> | <b>Serial No.</b> | <b>Calibration Date</b> | <b>Calibration Until</b> |
| Receiver                                                            | R&S                           | ESR3             | 101657            | Jan. 08, 2019           | Jan. 07, 2020            |
| LISN                                                                | SCHWARZBECK                   | Schwarzbeck 8127 | 8127-667          | Nov. 05, 2018           | Nov. 04, 2019            |
| RF Cable-CON                                                        | Woken                         | CFD200-NL        | CFD200-NL-001     | Oct. 23, 2018           | Oct. 23, 2019            |
| Measurement Software                                                | AUDIX                         | e3               | 6.120210k         | NA                      | NA                       |
| Note: Calibration Interval of instruments listed above is one year. |                               |                  |                   |                         |                          |

|                                                                     |                             |                   |                     |                         |                          |
|---------------------------------------------------------------------|-----------------------------|-------------------|---------------------|-------------------------|--------------------------|
| <b>Test Item</b>                                                    | Radiated Emission           |                   |                     |                         |                          |
| <b>Test Site</b>                                                    | 966 chamber 3 / (03CH03-WS) |                   |                     |                         |                          |
| <b>Tested Date</b>                                                  | Jul. 15 ~ Jul. 17, 2019     |                   |                     |                         |                          |
| <b>Instrument</b>                                                   | <b>Manufacturer</b>         | <b>Model No.</b>  | <b>Serial No.</b>   | <b>Calibration Date</b> | <b>Calibration Until</b> |
| Spectrum Analyzer                                                   | R&S                         | FSV40             | 101499              | Jan. 07, 2019           | Jan. 06, 2020            |
| Receiver                                                            | R&S                         | ESR3              | 101658              | Dec. 11, 2018           | Dec. 10, 2019            |
| Bilog Antenna                                                       | SCHWARZBECK                 | VULB9168          | VULB9168-685        | Apr. 17, 2019           | Apr. 16, 2020            |
| Horn Antenna 1G-18G                                                 | SCHWARZBECK                 | BBHA 9120 D       | BBHA 9120 D 1206    | Jan. 07, 2019           | Jan. 06, 2020            |
| Horn Antenna 18G-40G                                                | SCHWARZBECK                 | BBHA 9170         | BBHA 9170517        | Nov. 15, 2018           | Nov. 14, 2019            |
| Loop Antenna                                                        | R&S                         | HFH2-Z2           | 100330              | Nov. 09, 2018           | Nov. 08, 2019            |
| Loop Antenna Cable                                                  | KOAX KABEL                  | 101354-BW         | 101354-BW           | Oct. 08, 2018           | Oct. 07, 2019            |
| Preamplifier                                                        | EMC                         | EMC02325          | 980187              | Aug. 24, 2018           | Aug. 23, 2019            |
| Preamplifier                                                        | Agilent                     | 83017A            | MY53270014          | Aug. 09, 2018           | Aug. 08, 2019            |
| Preamplifier                                                        | EMC                         | EMC184045B        | 980192              | Aug. 09, 2018           | Aug. 08, 2019            |
| RF cable-3M                                                         | HUBER+SUHNER                | SUCOFLEX104       | MY22620/4           | Oct. 01, 2018           | Sep. 30, 2019            |
| RF cable-8M                                                         | EMC                         | EMC104-SM-SM-8000 | 181107              | Oct. 01, 2018           | Sep. 30, 2019            |
| RF cable-1M                                                         | HUBER+SUHNER                | SUCOFLEX104       | MY22624/4           | Oct. 01, 2018           | Sep. 30, 2019            |
| LF cable-0.8M                                                       | EMC                         | EMC8D-NM-NM-800   | EMC8D-NM-NM-800-001 | Oct. 01, 2018           | Sep. 30, 2019            |
| LF cable-3M                                                         | EMC                         | EMC8D-NM-NM-3000  | 131103              | Oct. 01, 2018           | Sep. 30, 2019            |
| LF cable-13M                                                        | EMC                         | EMC8D-NM-NM-13000 | 131104              | Oct. 01, 2018           | Sep. 30, 2019            |
| Measurement Software                                                | AUDIX                       | e3                | 6.120210g           | NA                      | NA                       |
| Note: Calibration Interval of instruments listed above is one year. |                             |                   |                     |                         |                          |



## 1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.249

ANSI C63.10-2013

## 1.6 Deviation from Test Standard and Measurement Procedure

None

## 1.7 Measurement Uncertainty

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

| Measurement Uncertainty        |                 |
|--------------------------------|-----------------|
| Parameters                     | Uncertainty     |
| Bandwidth                      | $\pm 34.130$ Hz |
| AC conducted emission          | $\pm 2.92$ dB   |
| Radiated emission $\leq 1$ GHz | $\pm 3.96$ dB   |
| Radiated emission $> 1$ GHz    | $\pm 4.51$ dB   |

## 2 Test Configuration

### 2.1 Testing Condition

| Test Item          | Test Site | Ambient Condition | Tested By  |
|--------------------|-----------|-------------------|------------|
| AC Conduction      | CO01-WS   | 24°C / 60%        | Alex Tsai  |
| Radiated Emissions | 03CH03-WS | 25°C / 65%        | Aska Huang |

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISSED#: 10807C-1
- CAB identifier: TW0009

### 2.2 The Worst Test Modes and Channel Details

| Test item                                                                                                                                                                                                                                                                                                                                                    | Mode     | Test Frequency (MHz) | Data Rate | Test Configuration |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|-----------|--------------------|
| AC Power Line Conducted Emissions                                                                                                                                                                                                                                                                                                                            | Charging | ---                  | ---       | 2                  |
| Field Strength of Fundamental                                                                                                                                                                                                                                                                                                                                | GFSK     | 2402, 2441, 2479     | 1 Mbps    | 1                  |
| Radiated Emissions ≤ 1GHz                                                                                                                                                                                                                                                                                                                                    | GFSK     | 2479                 | 1 Mbps    | 1, 2               |
|                                                                                                                                                                                                                                                                                                                                                              | Charging | ---                  | ---       | 2                  |
| Radiated Emissions > 1GHz                                                                                                                                                                                                                                                                                                                                    | GFSK     | 2402, 2441, 2479     | 1 Mbps    | 1                  |
| 20dB bandwidth                                                                                                                                                                                                                                                                                                                                               | GFSK     | 2402, 2441, 2479     | 1 Mbps    | 1                  |
| <b>NOTE:</b><br>1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The <b>Z-plane</b> results were found as the worst case and were shown in this report.<br>2. The test configurations are listed as follows:<br>Configuration 1 : Battery mode<br>Configuration 2 : Charging mode |          |                      |           |                    |

### 3 Transmitter Test Results

#### 3.1 Conducted Emissions

##### 3.1.1 Limit of Conducted Emissions

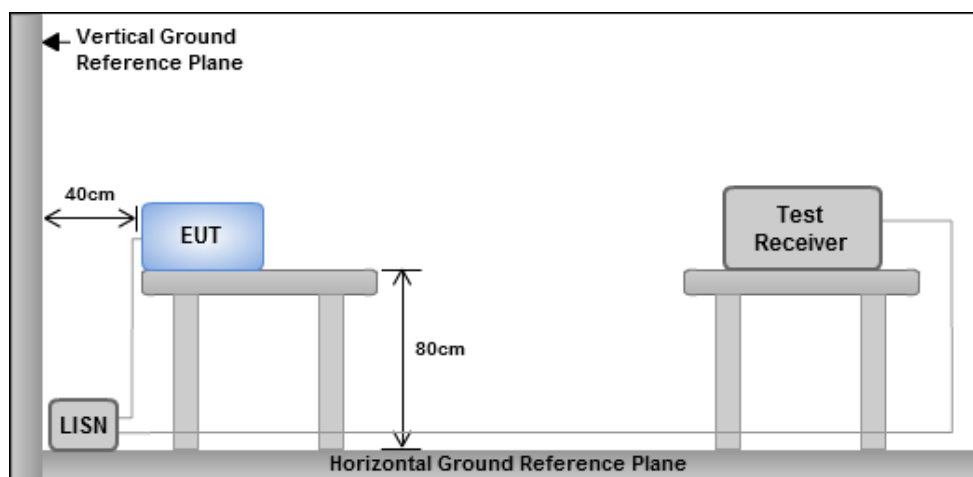
| Conducted Emissions Limit |            |           |
|---------------------------|------------|-----------|
| Frequency Emission (MHz)  | Quasi-Peak | Average   |
| 0.15-0.5                  | 66 - 56 *  | 56 - 46 * |
| 0.5-5                     | 56         | 46        |
| 5-30                      | 60         | 50        |

Note 1: \* Decreases with the logarithm of the frequency.

##### 3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50  $\Omega$  LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

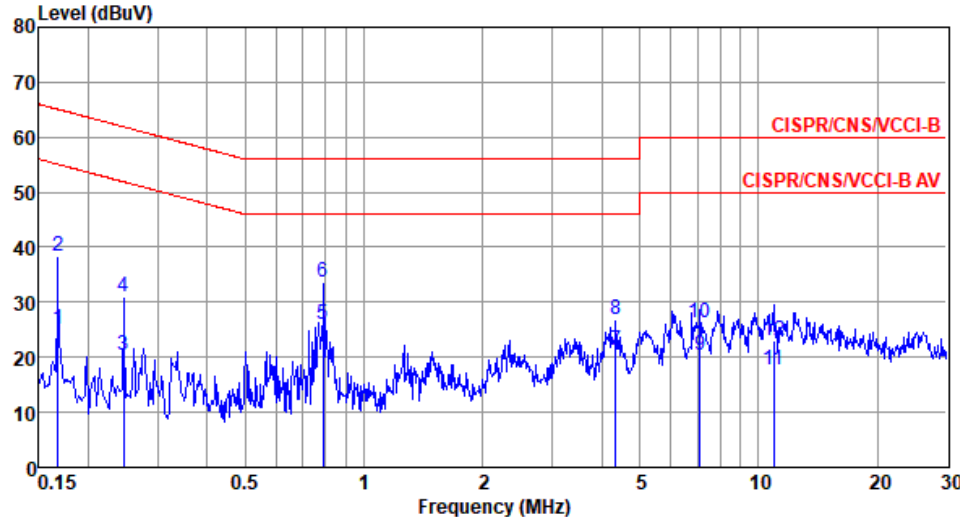
##### 3.1.3 Test Setup



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

### 3.1.4 Test Result of Conducted Emissions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Charging | Test Freq. (MHz) | --- |
| Power Phase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            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| <div><div><div>Level (dBuV)</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div><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| Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Charging | Test Freq. (MHz) | ---   |        |       |        |       |         |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------|-------|--------|-------|--------|-------|---------|------|------|-------|--|--|-----|------|------|-------|-------|--------|------|--------|--|--|--|------|----|------|----|----|--|---|-------|-------|-------|--------|-------|------|------|---------|---|-------|-------|-------|--------|-------|------|------|----|---|-------|-------|-------|--------|-------|------|------|---------|---|-------|-------|-------|--------|-------|------|------|----|----|-------|-------|-------|--------|-------|------|------|---------|---|-------|-------|-------|--------|-------|------|------|----|---|-------|-------|-------|--------|-------|------|------|---------|---|-------|-------|-------|--------|-------|------|------|----|---|-------|-------|-------|--------|-------|------|------|---------|----|-------|-------|-------|--------|-------|------|------|----|----|--------|-------|-------|--------|------|------|------|---------|----|--------|-------|-------|--------|-------|------|------|----|
| Power Phase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Neutral  |                  |       |        |       |        |       |         |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| <div><div><div>Level (dBUV)</div><div></div><div><table><tr><th></th><th>Freq</th><th>Level</th><th>Limit</th><th>Over</th><th>Read</th><th>LISN</th><th>cable</th><th></th></tr><tr><th></th><th>MHz</th><th>dBuV</th><th>Line</th><th>Limit</th><th>Level</th><th>factor</th><th>loss</th><th>Remark</th></tr><tr><th></th><th></th><th></th><th>dBuV</th><th>dB</th><th>dBuV</th><th>dB</th><th>dB</th><th></th></tr><tr><td>1</td><td>0.168</td><td>25.01</td><td>55.08</td><td>-30.07</td><td>15.26</td><td>9.57</td><td>0.06</td><td>Average</td></tr><tr><td>2</td><td>0.168</td><td>38.49</td><td>65.08</td><td>-26.59</td><td>28.74</td><td>9.57</td><td>0.06</td><td>QP</td></tr><tr><td>3</td><td>0.246</td><td>20.33</td><td>51.91</td><td>-31.58</td><td>10.54</td><td>9.59</td><td>0.07</td><td>Average</td></tr><tr><td>4</td><td>0.246</td><td>31.13</td><td>61.91</td><td>-30.78</td><td>21.34</td><td>9.59</td><td>0.07</td><td>QP</td></tr><tr><td>5*</td><td>0.788</td><td>25.92</td><td>46.00</td><td>-20.08</td><td>16.00</td><td>9.63</td><td>0.09</td><td>Average</td></tr><tr><td>6</td><td>0.788</td><td>33.56</td><td>56.00</td><td>-22.44</td><td>23.64</td><td>9.63</td><td>0.09</td><td>QP</td></tr><tr><td>7</td><td>4.338</td><td>21.13</td><td>46.00</td><td>-24.87</td><td>10.92</td><td>9.66</td><td>0.29</td><td>Average</td></tr><tr><td>8</td><td>4.338</td><td>26.96</td><td>56.00</td><td>-29.04</td><td>16.75</td><td>9.66</td><td>0.29</td><td>QP</td></tr><tr><td>9</td><td>7.100</td><td>20.42</td><td>50.00</td><td>-29.58</td><td>10.07</td><td>9.69</td><td>0.38</td><td>Average</td></tr><tr><td>10</td><td>7.100</td><td>26.40</td><td>60.00</td><td>-33.60</td><td>16.05</td><td>9.69</td><td>0.38</td><td>QP</td></tr><tr><td>11</td><td>10.905</td><td>17.59</td><td>50.00</td><td>-32.41</td><td>7.10</td><td>9.72</td><td>0.46</td><td>Average</td></tr><tr><td>12</td><td>10.905</td><td>23.06</td><td>60.00</td><td>-36.94</td><td>12.57</td><td>9.72</td><td>0.46</td><td>QP</td></tr></table></div></div></div> |          |                  |       |        | Freq  | Level  | Limit | Over    | Read | LISN | cable |  |  | MHz | dBuV | Line | Limit | Level | factor | loss | Remark |  |  |  | dBuV | dB | dBuV | dB | dB |  | 1 | 0.168 | 25.01 | 55.08 | -30.07 | 15.26 | 9.57 | 0.06 | Average | 2 | 0.168 | 38.49 | 65.08 | -26.59 | 28.74 | 9.57 | 0.06 | QP | 3 | 0.246 | 20.33 | 51.91 | -31.58 | 10.54 | 9.59 | 0.07 | Average | 4 | 0.246 | 31.13 | 61.91 | -30.78 | 21.34 | 9.59 | 0.07 | QP | 5* | 0.788 | 25.92 | 46.00 | -20.08 | 16.00 | 9.63 | 0.09 | Average | 6 | 0.788 | 33.56 | 56.00 | -22.44 | 23.64 | 9.63 | 0.09 | QP | 7 | 4.338 | 21.13 | 46.00 | -24.87 | 10.92 | 9.66 | 0.29 | Average | 8 | 4.338 | 26.96 | 56.00 | -29.04 | 16.75 | 9.66 | 0.29 | QP | 9 | 7.100 | 20.42 | 50.00 | -29.58 | 10.07 | 9.69 | 0.38 | Average | 10 | 7.100 | 26.40 | 60.00 | -33.60 | 16.05 | 9.69 | 0.38 | QP | 11 | 10.905 | 17.59 | 50.00 | -32.41 | 7.10 | 9.72 | 0.46 | Average | 12 | 10.905 | 23.06 | 60.00 | -36.94 | 12.57 | 9.72 | 0.46 | QP |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Freq     | Level            | Limit | Over   | Read  | LISN   | cable |         |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | MHz      | dBuV             | Line  | Limit  | Level | factor | loss  | Remark  |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |                  | dBuV  | dB     | dBuV  | dB     | dB    |         |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.168    | 25.01            | 55.08 | -30.07 | 15.26 | 9.57   | 0.06  | Average |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.168    | 38.49            | 65.08 | -26.59 | 28.74 | 9.57   | 0.06  | QP      |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.246    | 20.33            | 51.91 | -31.58 | 10.54 | 9.59   | 0.07  | Average |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.246    | 31.13            | 61.91 | -30.78 | 21.34 | 9.59   | 0.07  | QP      |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 5*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0.788    | 25.92            | 46.00 | -20.08 | 16.00 | 9.63   | 0.09  | Average |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.788    | 33.56            | 56.00 | -22.44 | 23.64 | 9.63   | 0.09  | QP      |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4.338    | 21.13            | 46.00 | -24.87 | 10.92 | 9.66   | 0.29  | Average |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4.338    | 26.96            | 56.00 | -29.04 | 16.75 | 9.66   | 0.29  | QP      |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 7.100    | 20.42            | 50.00 | -29.58 | 10.07 | 9.69   | 0.38  | Average |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7.100    | 26.40            | 60.00 | -33.60 | 16.05 | 9.69   | 0.38  | QP      |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10.905   | 17.59            | 50.00 | -32.41 | 7.10  | 9.72   | 0.46  | Average |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| 12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 10.905   | 23.06            | 60.00 | -36.94 | 12.57 | 9.72   | 0.46  | QP      |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |
| Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB).<br>2: Over Limit (dB) = Level (dBUV) – Limit Line (dBUV).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |          |                  |       |        |       |        |       |         |      |      |       |  |  |     |      |      |       |       |        |      |        |  |  |  |      |    |      |    |    |  |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |    |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |   |       |       |       |        |       |      |      |    |   |       |       |       |        |       |      |      |         |    |       |       |       |        |       |      |      |    |    |        |       |       |        |      |      |      |         |    |        |       |       |        |       |      |      |    |

## 3.2 Radiated Emission

This section includes field strength of fundamental, field strength of harmonics and emissions radiated outside of the operating frequency bands.

### 3.2.1 Limit of field strength of fundamental and field strength of harmonics

| Fundamental Frequency | Field strength of fundamental (millivolts/meter) | Field strength of harmonics (microvolts/meter) |
|-----------------------|--------------------------------------------------|------------------------------------------------|
| 2400–2483.5 MHz       | 50                                               | 500                                            |

### 3.2.2 Limit of Unwanted Emissions

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in below table, whichever is the lesser attenuation.

| Radiated emission limits |                       |                         |                      |
|--------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz)    | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490              | 2400/F(kHz)           | 48.5 - 13.8             | 300                  |
| 0.490~1.705              | 24000/F(kHz)          | 33.8 - 23               | 30                   |
| 1.705~30.0               | 30                    | 29                      | 30                   |
| 30~88                    | 100                   | 40                      | 3                    |
| 88~216                   | 150                   | 43.5                    | 3                    |
| 216~960                  | 200                   | 46                      | 3                    |
| Above 960                | 500                   | 54                      | 3                    |

**Note 1:**  
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

**Note 2:**  
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

### 3.2.3 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

1. Radiated emission below 1GHz  
120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission
2. Radiated emission above 1GHz / Peak value except fundamental  
RBW=1MHz, VBW=3MHz and Peak detector
3. Radiated emission above 1GHz / Average value for field strength of fundamental and harmonics  
The average value is: Average = Peak value + 20log(Duty cycle) Where the duty factor is calculated from following formula:

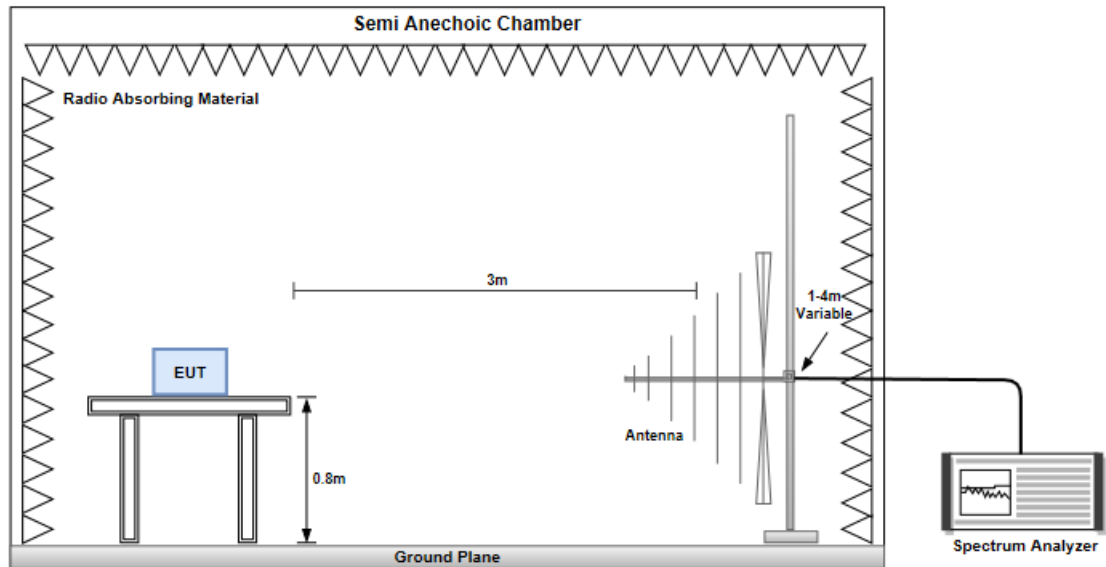
$$20\log (\text{Duty cycle}) = 20\log \frac{0.17101 \times 2 \text{ ms}}{100 \text{ ms}} = -49.32\text{dB}$$

Please see page 27 for plotted duty

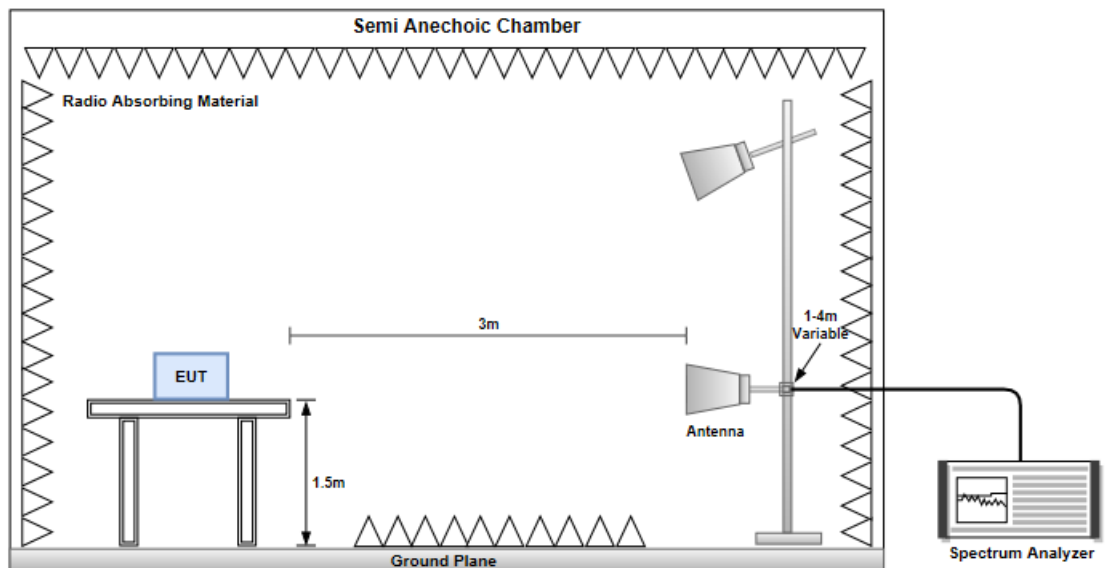
4. Radiated emission above 1GHz / Average value for other emissions  
RBW=1MHz, VBW=10Hz and Peak detector
5. Radiated emission Peak value for fundamental  
RBW=3MHz, VBW=10MHz and Peak detector

### 3.2.4 Test Setup

#### Radiated Emissions below 1 GHz



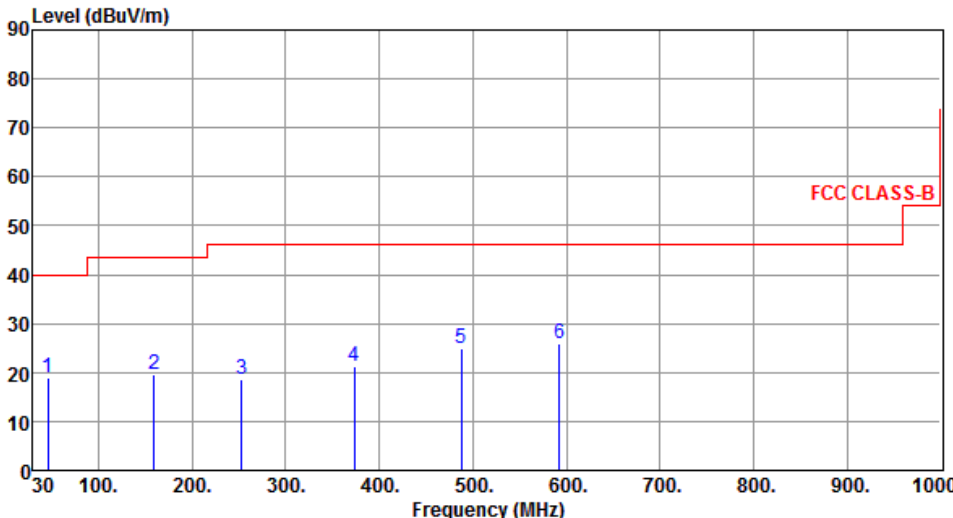
#### Radiated Emissions above 1 GHz





### 3.2.5 Transmitter Radiated Unwanted Emissions (Below 1GHz)

|              |            |                    |      |
|--------------|------------|--------------------|------|
| Modulation   | GFSK       | Test Freq. (MHz)   | 2479 |
| Polarization | Horizontal | Test Configuration | 1    |

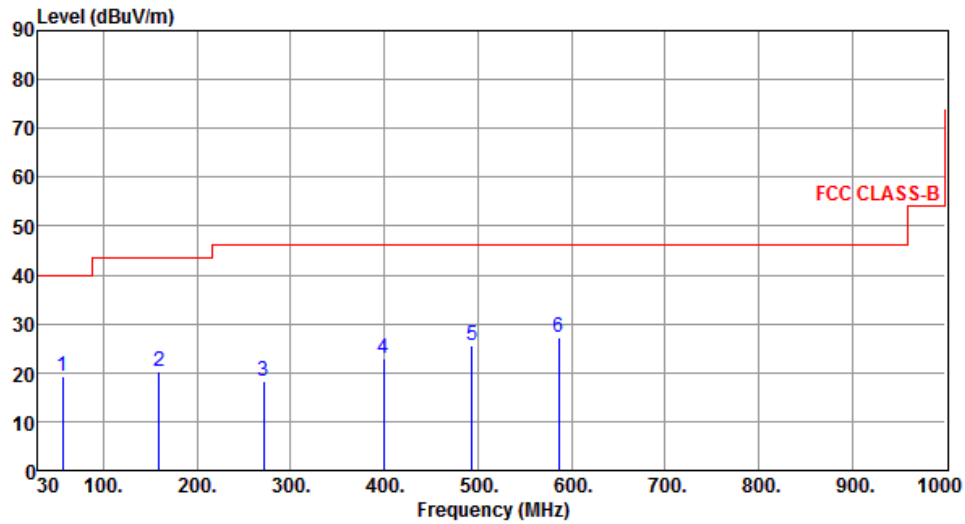
  


The graph displays the radiated unwanted emissions for a transmitter. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 1000 MHz, and 50 dBuV/m from 1000 to 10000 MHz. Six measured peaks are labeled with blue numbers 1 through 6, corresponding to the data in the table below.

|   | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|---|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|--------|-------------------|----------------------|
| 1 | 45.52        | 18.84                       | 40.00           | -21.16       | 27.55                 | -8.71        | Peak   | ---               | ---                  |
| 2 | 159.01       | 19.44                       | 43.50           | -24.06       | 28.05                 | -8.61        | Peak   | ---               | ---                  |
| 3 | 253.10       | 18.72                       | 46.00           | -27.28       | 28.78                 | -10.06       | Peak   | ---               | ---                  |
| 4 | 373.38       | 21.34                       | 46.00           | -24.66       | 27.83                 | -6.49        | Peak   | ---               | ---                  |
| 5 | 487.84       | 25.04                       | 46.00           | -20.96       | 28.63                 | -3.59        | Peak   | ---               | ---                  |
| 6 | 592.60       | 25.97                       | 46.00           | -20.03       | 27.20                 | -1.23        | Peak   | ---               | ---                  |

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)  
\*Factor includes antenna factor , cable loss and amplifier gain  
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).  
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

|              |          |                    |      |
|--------------|----------|--------------------|------|
| Modulation   | GFSK     | Test Freq. (MHz)   | 2479 |
| Polarization | Vertical | Test Configuration | 1    |



|   | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|---|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|--------|-------------------|----------------------|
| 1 | 56.19        | 19.22                       | 40.00           | -20.78       | 28.19                 | -8.97        | Peak   | ---               | ---                  |
| 2 | 159.01       | 20.25                       | 43.50           | -23.25       | 28.86                 | -8.61        | Peak   | ---               | ---                  |
| 3 | 271.53       | 18.31                       | 46.00           | -27.69       | 27.64                 | -9.33        | Peak   | ---               | ---                  |
| 4 | 399.57       | 22.84                       | 46.00           | -23.16       | 28.66                 | -5.82        | Peak   | ---               | ---                  |
| 5 | 493.66       | 25.47                       | 46.00           | -20.53       | 28.93                 | -3.46        | Peak   | ---               | ---                  |
| 6 | 586.78       | 27.21                       | 46.00           | -18.79       | 28.70                 | -1.49        | Peak   | ---               | ---                  |

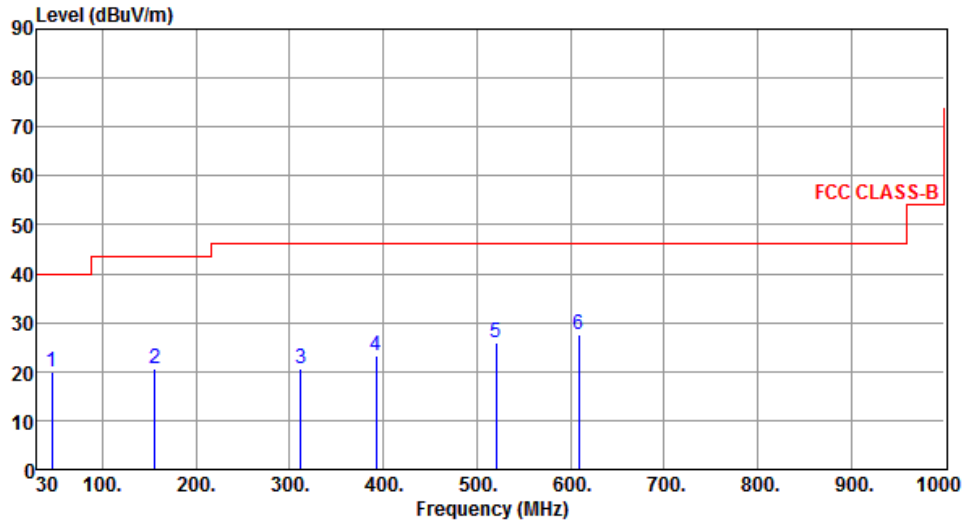
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

|              |            |                    |     |
|--------------|------------|--------------------|-----|
| Mode         | Charging   | Test Freq. (MHz)   | --- |
| Polarization | Horizontal | Test Configuration | 2   |



|   | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|---|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|--------|-------------------|----------------------|
| 1 | 45.52        | 19.84                       | 40.00           | -20.16       | 28.55                 | -8.71        | Peak   | ---               | ---                  |
| 2 | 156.10       | 20.56                       | 43.50           | -22.94       | 29.19                 | -8.63        | Peak   | ---               | ---                  |
| 3 | 312.27       | 20.73                       | 46.00           | -25.27       | 28.75                 | -8.02        | Peak   | ---               | ---                  |
| 4 | 392.78       | 23.12                       | 46.00           | -22.88       | 29.01                 | -5.89        | Peak   | ---               | ---                  |
| 5 | 520.82       | 25.90                       | 46.00           | -20.10       | 28.74                 | -2.84        | Peak   | ---               | ---                  |
| 6 | 609.09       | 27.67                       | 46.00           | -18.33       | 28.26                 | -0.59        | Peak   | ---               | ---                  |

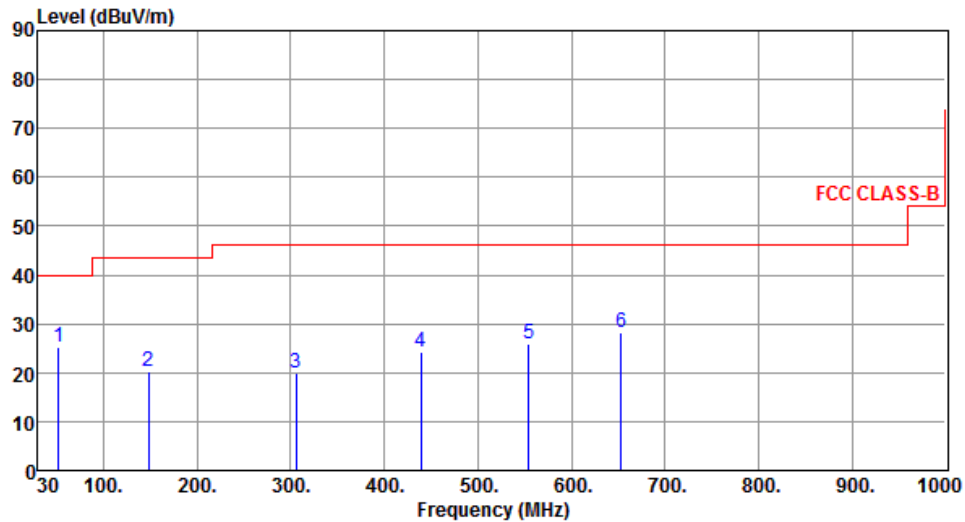
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

|              |          |                    |     |
|--------------|----------|--------------------|-----|
| Mode         | Charging | Test Freq. (MHz)   | --- |
| Polarization | Vertical | Test Configuration | 2   |



|   | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|---|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|--------|-------------------|----------------------|
| 1 | 52.31        | 25.24                       | 40.00           | -14.76       | 34.04                 | -8.80        | Peak   | ---               | ---                  |
| 2 | 148.34       | 20.14                       | 43.50           | -23.36       | 28.97                 | -8.83        | Peak   | ---               | ---                  |
| 3 | 305.48       | 19.88                       | 46.00           | -26.12       | 28.20                 | -8.32        | Peak   | ---               | ---                  |
| 4 | 439.34       | 24.28                       | 46.00           | -21.72       | 28.78                 | -4.50        | Peak   | ---               | ---                  |
| 5 | 554.77       | 26.04                       | 46.00           | -19.96       | 28.41                 | -2.37        | Peak   | ---               | ---                  |
| 6 | 652.74       | 28.07                       | 46.00           | -17.93       | 28.14                 | -0.07        | Peak   | ---               | ---                  |

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

### 3.2.6 Transmitter Radiated Unwanted Emissions (Above 1GHz)

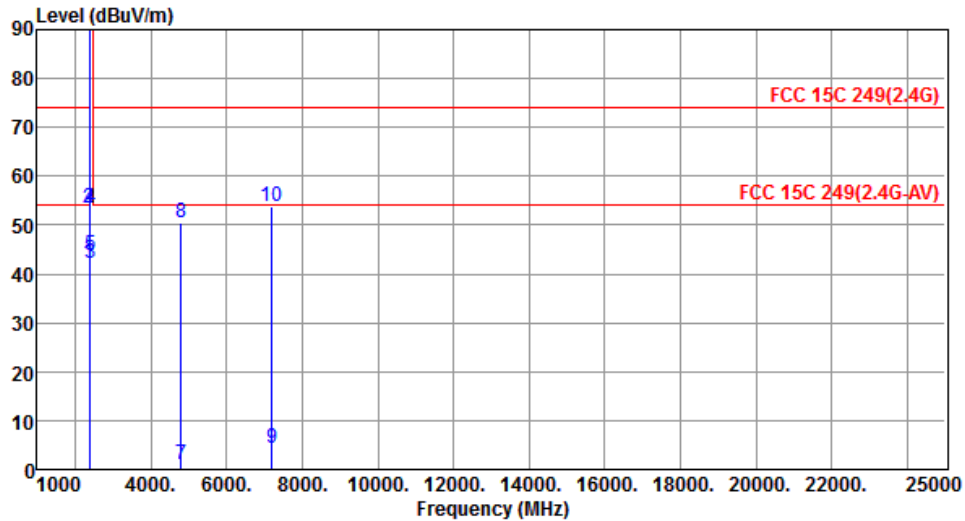
|              |            |                    |      |
|--------------|------------|--------------------|------|
| Modulation   | GFSK       | Test Freq. (MHz)   | 2402 |
| Polarization | Horizontal | Test Configuration | 1    |

|    | Freq.<br>MHz | Emission<br>level<br>dBUV/m | Limit<br>dBUV/m | Margin<br>dB | SA<br>reading<br>dBUV | Factor<br>dB | Remark  | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|----|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|---------|-------------------|----------------------|
| 1  | 2390.00      | 41.79                       | 54.00           | -12.21       | 42.75                 | -0.96        | Average | 222               | 112                  |
| 2  | 2390.00      | 52.82                       | 74.00           | -21.18       | 53.78                 | -0.96        | Peak    | 222               | 112                  |
| 3  | 2400.00      | 41.57                       | 54.00           | -12.43       | 42.56                 | -0.99        | Average | 222               | 112                  |
| 4  | 2400.00      | 53.04                       | 74.00           | -20.96       | 54.03                 | -0.99        | Peak    | 222               | 112                  |
| 5  | 2402.00      | 33.57                       | 94.00           | -60.43       | 34.56                 | -0.99        | Average | 222               | 112                  |
| 6  | 2402.00      | 82.89                       | 114.00          | -31.11       | 83.88                 | -0.99        | Peak    | 222               | 112                  |
| 7  | 4804.00      | 1.68                        | 54.00           | -52.32       | -3.12                 | 4.80         | Average | 232               | 142                  |
| 8  | 4804.00      | 51.00                       | 74.00           | -23.00       | 46.20                 | 4.80         | Peak    | 232               | 142                  |
| 9  | 7206.00      | 7.11                        | 54.00           | -46.89       | -3.14                 | 10.25        | Average | 342               | 20                   |
| 10 | 7206.00      | 56.43                       | 74.00           | -17.57       | 46.18                 | 10.25        | Peak    | 342               | 20                   |

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor\* (dB)  
\*Factor includes antenna factor , cable loss and amplifier gain  
Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

|              |          |                    |      |
|--------------|----------|--------------------|------|
| Modulation   | GFSK     | Test Freq. (MHz)   | 2402 |
| Polarization | Vertical | Test Configuration | 1    |



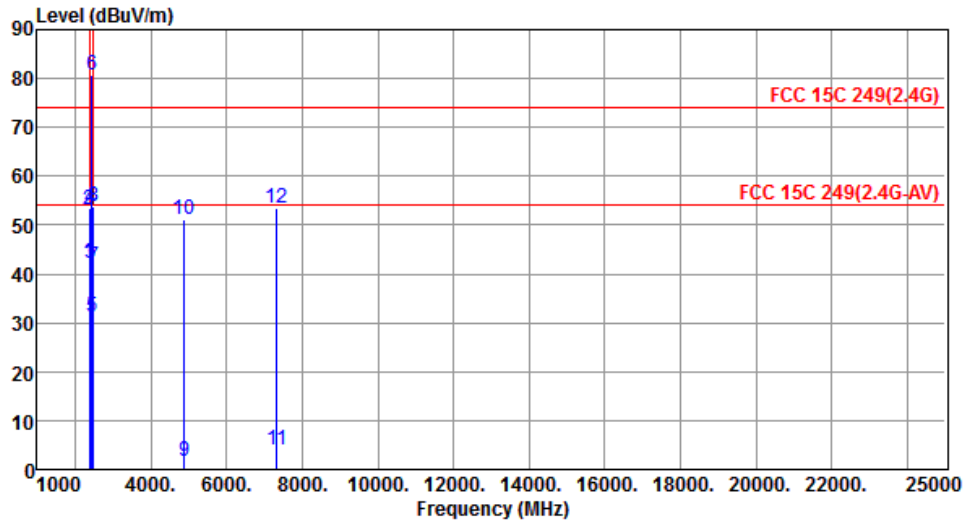
|    | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark  | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|----|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|---------|-------------------|----------------------|
| 1  | 2390.00      | 42.07                       | 54.00           | -11.93       | 43.03                 | -0.96        | Average | 276               | 191                  |
| 2  | 2390.00      | 53.35                       | 74.00           | -20.65       | 54.31                 | -0.96        | Peak    | 276               | 191                  |
| 3  | 2400.00      | 42.26                       | 54.00           | -11.74       | 43.25                 | -0.99        | Average | 276               | 191                  |
| 4  | 2400.00      | 53.51                       | 74.00           | -20.49       | 54.50                 | -0.99        | Peak    | 276               | 191                  |
| 5  | 2402.00      | 43.86                       | 94.00           | -50.14       | 44.85                 | -0.99        | Average | 276               | 191                  |
| 6  | 2402.00      | 93.18                       | 114.00          | -20.82       | 94.17                 | -0.99        | Peak    | 276               | 191                  |
| 7  | 4804.00      | 1.13                        | 54.00           | -52.87       | -3.67                 | 4.80         | Average | 163               | 70                   |
| 8  | 4804.00      | 50.45                       | 74.00           | -23.55       | 45.65                 | 4.80         | Peak    | 163               | 70                   |
| 9  | 7206.00      | 4.41                        | 54.00           | -49.59       | -5.84                 | 10.25        | Average | 100               | 63                   |
| 10 | 7206.00      | 53.73                       | 74.00           | -20.27       | 43.48                 | 10.25        | Peak    | 100               | 63                   |

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

|              |            |                    |      |
|--------------|------------|--------------------|------|
| Modulation   | GFSK       | Test Freq. (MHz)   | 2441 |
| Polarization | Horizontal | Test Configuration | 1    |



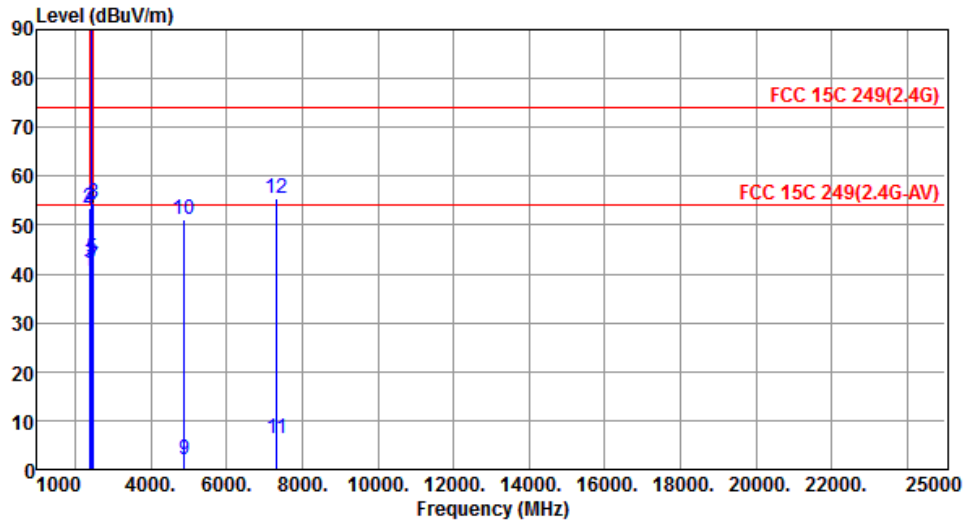
|    | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark  | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|----|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|---------|-------------------|----------------------|
| 1  | 2390.00      | 42.06                       | 54.00           | -11.94       | 43.02                 | -0.96        | Average | 100               | 113                  |
| 2  | 2390.00      | 53.27                       | 74.00           | -20.73       | 54.23                 | -0.96        | Peak    | 100               | 113                  |
| 3  | 2400.00      | 42.12                       | 54.00           | -11.88       | 43.11                 | -0.99        | Average | 100               | 113                  |
| 4  | 2400.00      | 53.52                       | 74.00           | -20.48       | 54.51                 | -0.99        | Peak    | 100               | 113                  |
| 5  | 2441.00      | 31.33                       | 94.00           | -62.67       | 32.35                 | -1.02        | Average | 100               | 113                  |
| 6  | 2441.00      | 80.65                       | 114.00          | -33.35       | 81.67                 | -1.02        | Peak    | 100               | 113                  |
| 7  | 2483.50      | 41.39                       | 54.00           | -12.61       | 42.51                 | -1.12        | Average | 100               | 113                  |
| 8  | 2483.50      | 53.69                       | 74.00           | -20.31       | 54.81                 | -1.12        | Peak    | 100               | 113                  |
| 9  | 4882.00      | 1.76                        | 54.00           | -52.24       | -3.15                 | 4.91         | Average | 178               | 181                  |
| 10 | 4882.00      | 51.08                       | 74.00           | -22.92       | 46.17                 | 4.91         | Peak    | 178               | 181                  |
| 11 | 7323.00      | 4.02                        | 54.00           | -49.98       | -6.29                 | 10.31        | Average | 100               | 63                   |
| 12 | 7323.00      | 53.34                       | 74.00           | -20.66       | 43.03                 | 10.31        | Peak    | 100               | 63                   |

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

|              |          |                    |      |
|--------------|----------|--------------------|------|
| Modulation   | GFSK     | Test Freq. (MHz)   | 2441 |
| Polarization | Vertical | Test Configuration | 1    |



|    | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark  | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|----|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|---------|-------------------|----------------------|
| 1  | 2390.00      | 40.63                       | 54.00           | -13.37       | 41.59                 | -0.96        | Average | 240               | 190                  |
| 2  | 2390.00      | 53.40                       | 74.00           | -20.60       | 54.36                 | -0.96        | Peak    | 240               | 190                  |
| 3  | 2400.00      | 42.08                       | 54.00           | -11.92       | 43.07                 | -0.99        | Average | 240               | 190                  |
| 4  | 2400.00      | 53.54                       | 74.00           | -20.46       | 54.53                 | -0.99        | Peak    | 240               | 190                  |
| 5  | 2441.00      | 43.30                       | 94.00           | -50.70       | 44.32                 | -1.02        | Average | 240               | 190                  |
| 6  | 2441.00      | 92.62                       | 114.00          | -21.38       | 93.64                 | -1.02        | Peak    | 240               | 190                  |
| 7  | 2483.50      | 41.44                       | 54.00           | -12.56       | 42.56                 | -1.12        | Average | 240               | 190                  |
| 8  | 2483.50      | 54.53                       | 74.00           | -19.47       | 55.65                 | -1.12        | Peak    | 240               | 190                  |
| 9  | 4882.00      | 1.86                        | 54.00           | -52.14       | -3.05                 | 4.91         | Average | 213               | 133                  |
| 10 | 4882.00      | 51.18                       | 74.00           | -22.82       | 46.27                 | 4.91         | Peak    | 213               | 133                  |
| 11 | 7323.00      | 6.15                        | 54.00           | -47.85       | -4.16                 | 10.31        | Average | 346               | 22                   |
| 12 | 7323.00      | 55.47                       | 74.00           | -18.53       | 45.16                 | 10.31        | Peak    | 346               | 22                   |

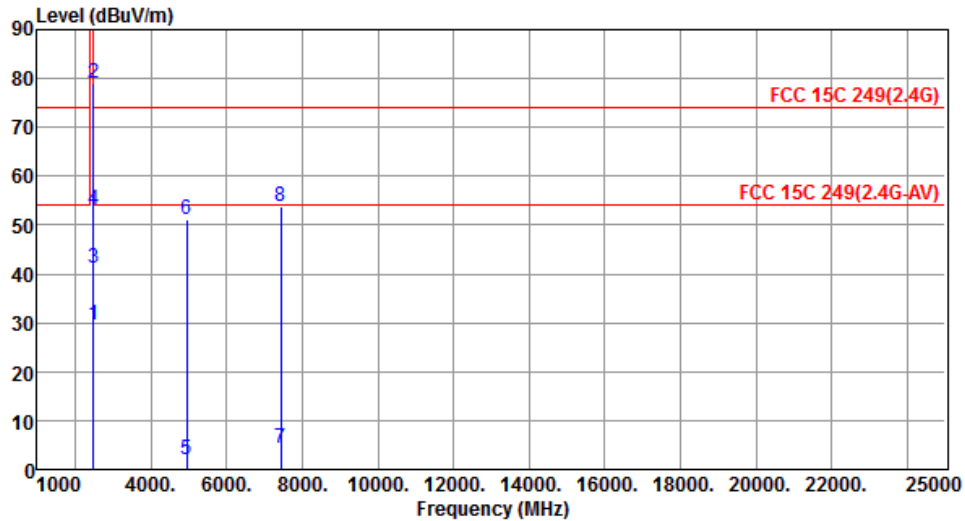
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



|              |            |                    |      |
|--------------|------------|--------------------|------|
| Modulation   | GFSK       | Test Freq. (MHz)   | 2479 |
| Polarization | Horizontal | Test Configuration | 1    |



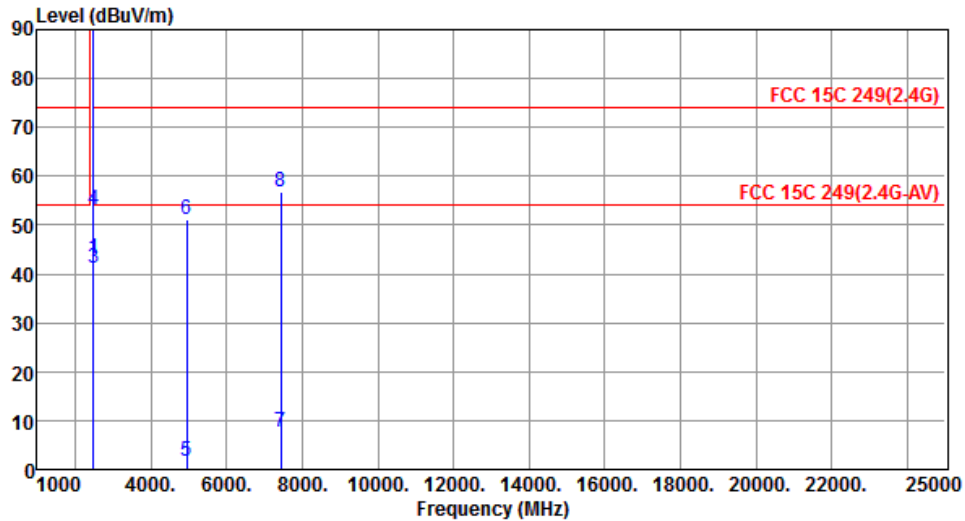
|   | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark  | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|---|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|---------|-------------------|----------------------|
| 1 | 2479.00      | 29.69                       | 94.00           | -64.31       | 30.80                 | -1.11        | Average | 113               | 113                  |
| 2 | 2479.00      | 79.01                       | 114.00          | -34.99       | 80.12                 | -1.11        | Peak    | 113               | 113                  |
| 3 | 2483.50      | 41.20                       | 54.00           | -12.80       | 42.32                 | -1.12        | Average | 113               | 113                  |
| 4 | 2483.50      | 53.08                       | 74.00           | -20.92       | 54.20                 | -1.12        | Peak    | 113               | 113                  |
| 5 | 4958.00      | 1.87                        | 54.00           | -52.13       | -3.30                 | 5.17         | Average | 100               | 172                  |
| 6 | 4958.00      | 51.19                       | 74.00           | -22.81       | 46.02                 | 5.17         | Peak    | 100               | 172                  |
| 7 | 7437.00      | 4.40                        | 54.00           | -49.60       | -5.94                 | 10.34        | Average | 100               | 63                   |
| 8 | 7437.00      | 53.72                       | 74.00           | -20.28       | 43.38                 | 10.34        | Peak    | 100               | 63                   |

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

|              |          |                    |      |
|--------------|----------|--------------------|------|
| Modulation   | GFSK     | Test Freq. (MHz)   | 2479 |
| Polarization | Vertical | Test Configuration | 1    |

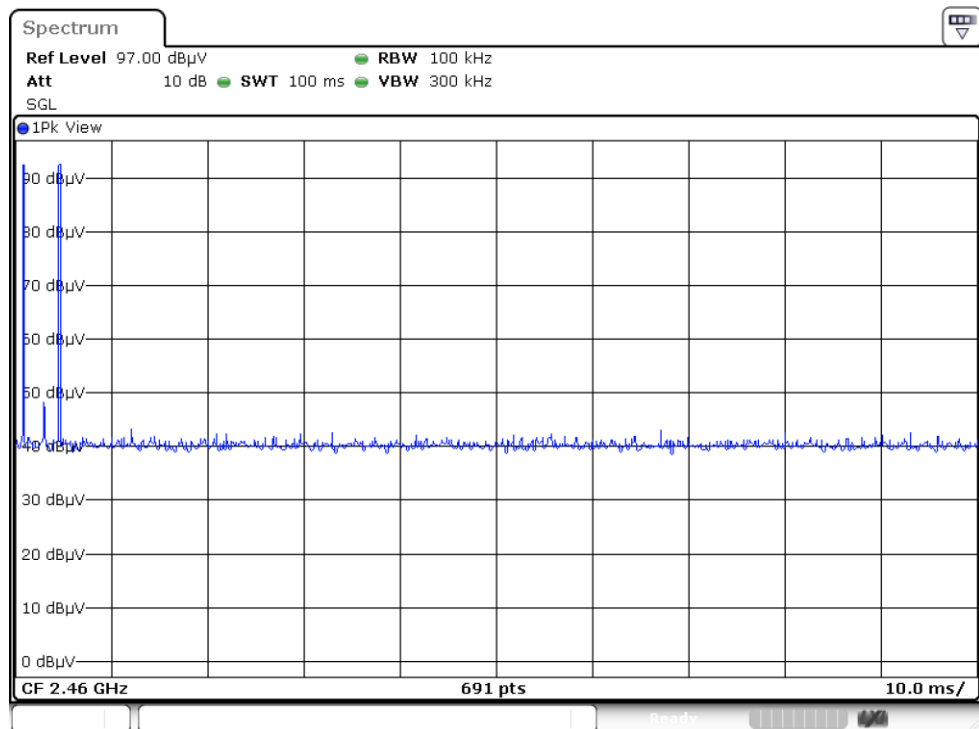
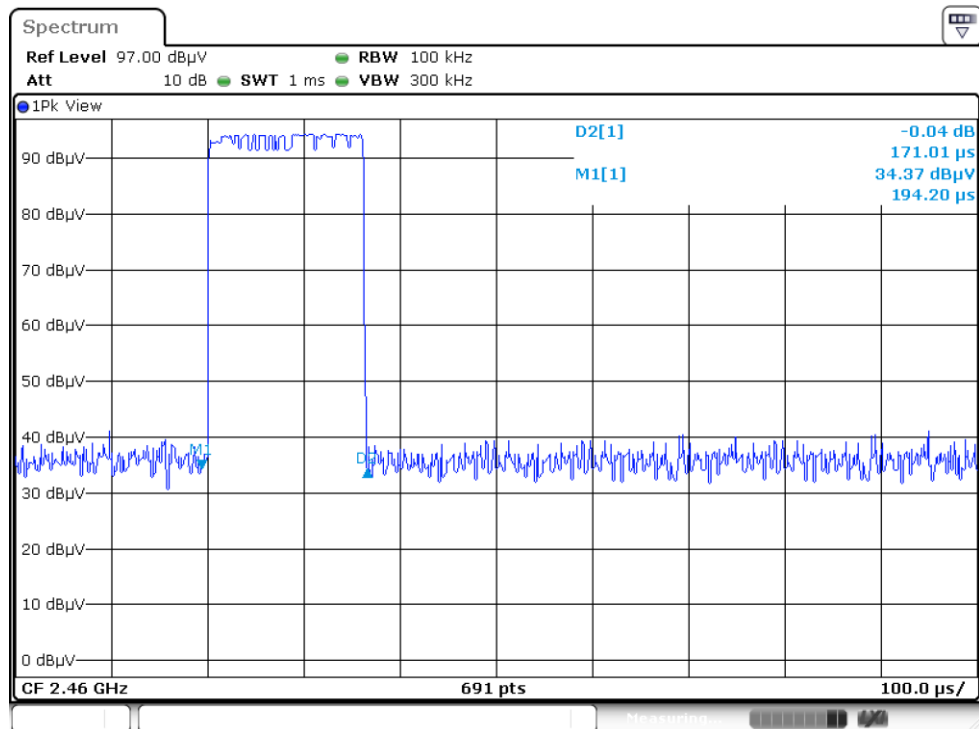


|   | Freq.<br>MHz | Emission<br>level<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | SA<br>reading<br>dBuV | Factor<br>dB | Remark  | ANT<br>High<br>cm | Turn<br>Table<br>deg |
|---|--------------|-----------------------------|-----------------|--------------|-----------------------|--------------|---------|-------------------|----------------------|
| 1 | 2479.00      | 43.06                       | 94.00           | -50.94       | 44.17                 | -1.11        | Average | 230               | 181                  |
| 2 | 2479.00      | 92.38                       | 114.00          | -21.62       | 93.49                 | -1.11        | Peak    | 230               | 181                  |
| 3 | 2483.50      | 41.29                       | 54.00           | -12.71       | 42.41                 | -1.12        | Average | 230               | 181                  |
| 4 | 2483.50      | 53.25                       | 74.00           | -20.75       | 54.37                 | -1.12        | Peak    | 230               | 181                  |
| 5 | 4958.00      | 1.73                        | 54.00           | -52.27       | -3.44                 | 5.17         | Average | 213               | 131                  |
| 6 | 4958.00      | 51.05                       | 74.00           | -22.95       | 45.88                 | 5.17         | Peak    | 213               | 131                  |
| 7 | 7437.00      | 7.64                        | 54.00           | -46.36       | -2.70                 | 10.34        | Average | 347               | 19                   |
| 8 | 7437.00      | 56.96                       | 74.00           | -17.04       | 46.62                 | 10.34        | Peak    | 347               | 19                   |

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor\* (dB)

\*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



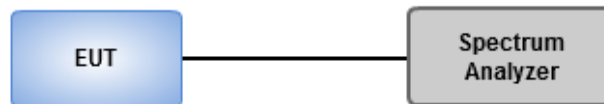
$$20\log(\text{Duty cycle}) = 20\log \frac{0.17101 \times 2 \text{ ms}}{100 \text{ ms}} = -49.32\text{dB}$$

### 3.3 20dB and Occupied Bandwidth

#### 3.3.1 Test Procedures

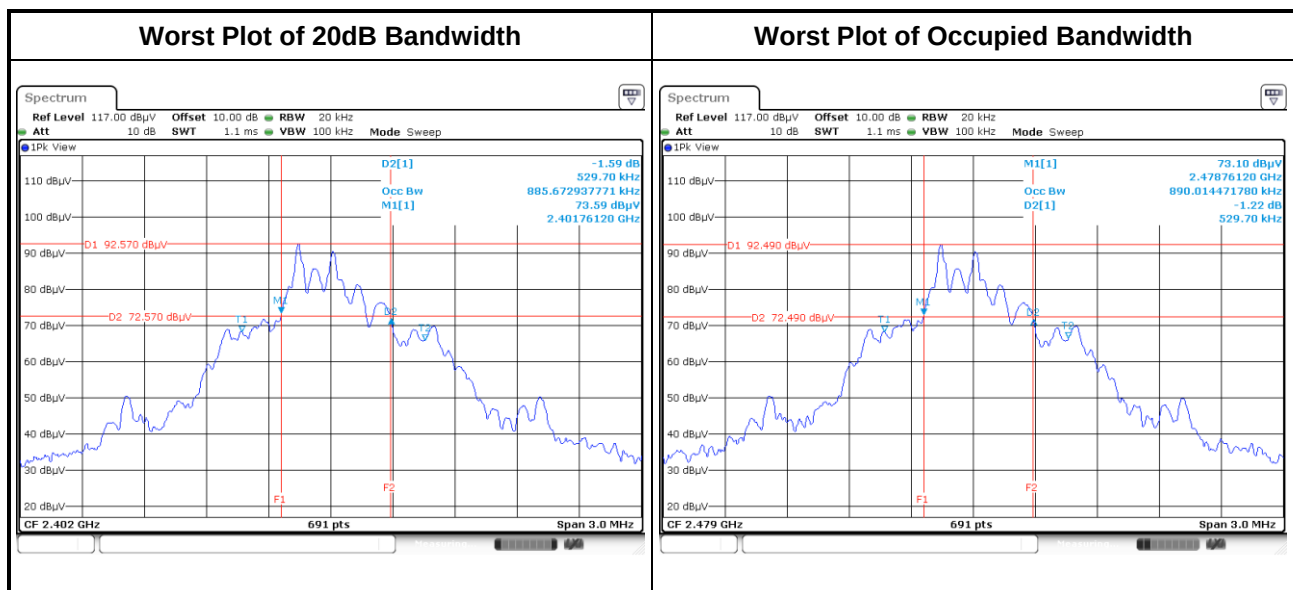
1. Set resolution bandwidth (RBW) = 20 kHz, Video bandwidth = 100 kHz.
2. Detector = Peak, Trace mode = max hold
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 20dB relative to the maximum level measured in the fundamental emission.
5. Use the occupied measurement function of spectrum analyzer to measure 99% occupied bandwidth.

#### 3.3.2 Test Setup



#### 3.3.3 20dB and Occupied Bandwidth

| Freq. (MHz) | 20dB Bandwidth (MHz) | Occupied Bandwidth (MHz) |
|-------------|----------------------|--------------------------|
| 2402        | 0.530                | 0.886                    |
| 2441        | 0.530                | 0.899                    |
| 2479        | 0.530                | 0.890                    |



## 4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

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Kwei Shan District, Tao Yuan City  
333, Taiwan, R.O.C.

### **Kwei Shan Site II**

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd  
St., Kwei Shan District, Tao Yuan  
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

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==END==