# FCC PART 15.247

# TEST REPORT

For

## Chengdu Vantron Technology, Ltd.

No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China 610045

**FCC ID: 2AAGEVTTAB-5081N**

| **Report Type:** | **Equipment Name:** |
|---|---|
| Original Report | Tablet Computer |

| | |
|---|---|
| **Report Number:** | RSC181119003-0F |
| **Report Date:** | 2019-01-15 |
| **Reviewed By:** | Sula Huang<br>EMC Director |
| **Prepared By:** | Bay Area Compliance Laboratories Corp. (Chengdu)<br>No.5040, Huilongwan Plaza, No. 1, Shawan Road,<br>Jinniu District, Chengdu, Sichuan, China<br>Tel: +86-28-65525123<br>Fax: +86-28-65525125<br>www.baclcorp.com |

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# GENERAL INFORMATION

## Product Description for Equipment under Test (EUT)

The **Chengdu Vantron Technology, Ltd.**, model number: **VT-TABLET-5081-N (FCC ID: 2AAGEVTTAB-5081N)** or the "EUT" as referred to in this report was the **Tablet Computer**.

## Mechanical Description of EUT

The EUT was measured approximately: 235 mm (L) x 153 mm (W) x 21 mm (H).
Rated input voltage: DC 3.8V rechargeable Li-ion battery or DC 5V from adapter

Adapter Information
Manufacturer: Anthin
Model: APS318-0530
Input: AC 100-220V; 50/60Hz
Output: DC 5V, 3A

*Note: The products, test model: VT-TABLET-5081-N, multiple model: ETAB-8-VAN-02-B. Their differences only in model number. So we selected model VT-TABLET-5081-N to test.*

**All measurement and test data in this report was gathered from final production sample, serial number: 181119003/01 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2018-11-19, and EUT conformed to test requirement.*

## Objective

This report is prepared on behalf of ***Chengdu Vantron Technology, Ltd.*** in accordance with Part 2, Subpart J, Part 15, Subparts A and C of the Federal Communications Commission's rules.

The tests were performed in order to determine the Bluetooth BDR and EDR mode of EUT compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

## Related Submittal(s)/Grant(s)

FCC Part 15B JBP submissions with FCC ID: 2AAGEVTTAB-5081N
FCC Part 15C DTS submissions with FCC ID: 2AAGEVTTAB-5081N
FCC Part 15E NII submissions with FCC ID: 2AAGEVTTAB-5081N

## Measurement Uncertainty

| Item | | | Uncertainty |
|---|---|---|---|
| AC power line conducted emission | | | 2.93 dB |
| Radiated Emission(Field Strength) | 30MHz-200MHz | H | 4.63 dB |
| | | V | 4.88 dB |
| | 200MHz-1GHz | H | 5.02 dB |
| | | V | 6.06 dB |
| | 1GHz-6GHz | | 4.51 dB |
| | 6GHz-18GHz | | 4.49 dB |
| | 18GHz-40GHz | | 5.48 dB |

## Test Methodology

All measurements contained in this report were conducted with:

ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Chengdu) to collect test data is located on the No. 5040, Huilongwan Plaza No. 1 Shawan Road Jinniu District Chengdu, Sichuan, China

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 910975 ,the FCC Designation No. : CN1186.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0005.

# SYSTEM TEST CONFIGURATION

## Description of Test Configuration

The system was configured for testing in engineering mode.

## Equipment Modifications

No modification was made to the EUT.

## EUT Exercise Software

Test software: “RF test tool” installed in device was used during test, the setting was configured as below:

| Test Software Version | | RF test tool | | |
|---|---|---|---|---|
| Test Frequency | | 2402MHz | 2441MHz | 2480MHz |
| GFSK | Power Level | 0 | 0 | 0 |
| π/4-DQPSK | Power Level | 0 | 0 | 0 |
| 8PSK | Power Level | 0 | 0 | 0 |

## Support Equipment List and Details

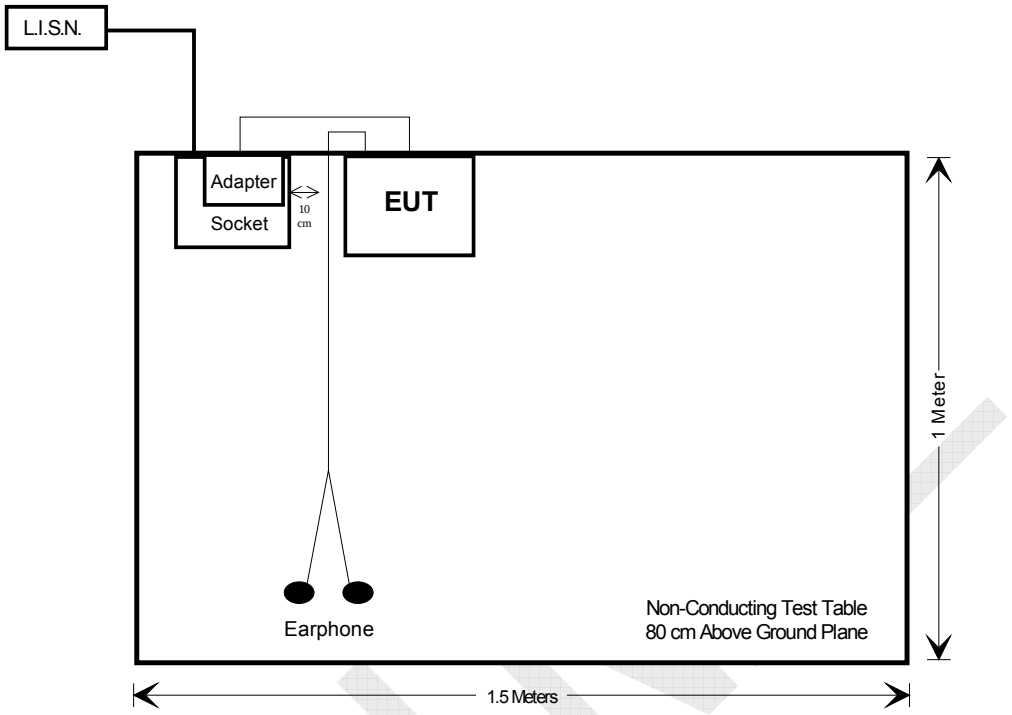
| Manufacturer | Description | Model | Serial Number |
|---|---|---|---|
| HUAWEI | Earphone | P9 | None |

## External I/O Cable

| Cable Description | Length (m) | From | To |
|---|---|---|---|
| Unshielded Power Cable | 1.2 | Adapter | EUT |
| Unshielded Earphone Cable | 1.0 | EUT | Earphone |

## Block Diagram of Test Setup

Conducted Emissions



# SUMMARY OF TEST RESULTS

| FCC Rules | Description of Test | Result |
|---|---|---|
| FCC §15.247 & §1.1310 & §2.1093 | RF Exposure | Compliance |
| §15.203 | Antenna Requirement | Compliance |
| §15.207 (a) | Conducted Emissions | Compliance |
| §15.205, §15.209, §15.247(d) | Spurious Emissions | Compliance |
| §15.247 (a)(1) | 20 dB Bandwidth | Compliance* |
| §15.247(a)(1) | Channel Separation Test | Compliance* |
| §15.247(a)(1)(iii) | Time of Occupancy (Dwell Time) | Compliance* |
| §15.247(a)(1)(iii) | Quantity of hopping channel Test | Compliance* |
| §15.247(b)(1) | Peak Output Power Measurement | Compliance* |
| §15.247(d) | Band Edges | Compliance* |

Compliance*: The tablet computer, model number: VT-TABLET-5081-N, ETAB-8-VAN-02-B are identical to the granted product, model number: VT-TABLET-5081, ETAB-8-VAN-01-FNQ (FCC ID: 2AAGEVTTABLET-5081).

They are identical (such as external enclosure material, main board, layout of PCB, schematics, board layout, and internal structures etc.), except for the following differences:

1. Based on the original, these functions (NFC, GPS, Wireless charging and Fingerprint identification) and their corresponding major hardware were removed.

2. Replaced the original battery (UTG PL5758105-2P 3.7V 10000mAh 37Wh) with UTC PL528292 3.8V 6200mAh.

Based on the above changes, there is no influence on RF conducted. Therefore, the RF conducted was not tested and the test data were referred to the granted product, FCC ID: 2AAGEVTTABLET-5081, Report No.: RSC181119002-0F.

# TEST EQUIPMENTS LIST

| Manufacturer | Description | Model | Serial Number | Calibration Date | Calibration Due Date |
|---|---|---|---|---|---|
| Conducted Emission | | | | | |
| Rohde & Schwarz | EMI Test Receiver | ESCS 30 | 836858/0016 | 2018-04-18 | 2019-04-19 |
| Rohde & Schwarz | L.I.S.N. | ENV216 | 100018 | 2018-04-18 | 2019-04-19 |
| HP | RF Limiter | 11947A | 3107A01270 | 2018-08-13 | 2019-08-12 |
| Unknown | Conducted Cable | L-E003 | 000003 | 2018-11-02 | 2019-11-01 |
| Rohde & Schwarz | EMC32 | EMC32 | V 8.52.0 | N/A | N/A |
| Radiated Emission | | | | | |
| EMCT | Semi-Anechoic Chamber | 966 | 001 | 2017-05-18 | 2020-05-17 |
| Sonoma | Pre-Amplifier | 310N | 186684 | 2018-08-24 | 2019-08-23 |
| Rohde & Schwarz | Spectrum Analyzer | FSU26 | 20083 | 2018-05-09 | 2019-05-08 |
| Rohde & Schwarz | EMI Test Receiver | ESCI | 100028 | 2018-04-18 | 2019-04-17 |
| A.H. Systems, Inc | Amplifier | PAM-0118P | 467 | 2018-10-19 | 2019-10-18 |
| EM Electronics | RF Pre-Amplifier | EM18G40 | 060725 | 2018-03-28 | 2019-03-27 |
| SUNOL SCIENCES | Broadband Antenna | JB3 | A121808 | 2017-05-19 | 2020-05-18 |
| ETS | Horn Antenna | 3115 | 003-6076 | 2017-05-19 | 2020-05-18 |
| A.H. Systems, Inc | Horn Antenna | SAS-574 | 510 | 2017-05-19 | 2020-05-18 |
| INMET | Attenuator | 18N-6dB | 64671 | 2018-10-27 | 2019-10-26 |
| Sinoscite.,Co Ltd | Reject Band Filter | BSF 2402-2480MN | 0898-005 | 2018-11-10 | 2019-11-09 |
| Unknown | RF Cable (below 1GHz) | L-E005 | 000005 | 2018-10-27 | 2019-10-26 |
| Unknown | RF Cable (below 1GHz) | T-E128 | 000128 | 2018-11-10 | 2019-11-09 |
| Unknown | RF Cable (below 1GHz) | T-E129 | 000129 | 2018-11-10 | 2019-11-09 |
| Unknown | RF Cable (above 1GHz) | T-E069 | 000069 | 2018-11-10 | 2019-11-09 |
| Micro-coax | RF Cable (above 1GHz) | T-E209 | MFR 64639 2310 | 2018-03-14 | 2019-03-13 |
| Rohde & Schwarz | EMC32 | EMC32 | V 8.52.0 | N/A | N/A |

*** Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

# FCC §15.247 (I) & §1.1310 & §2.1093- RF EXPOSURE

## Applicable Standard

According to§15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

**Measurement Result**

The max conducted power including tune-up tolerance is 5.0 dBm (3.16mW).
[(max. power of channel, mW)/(min. test separation distance, mm)][√f(GHz)]
= 3.16/5*(√2.48) = 1.0 < 3.0

**So the stand-alone SAR evaluation is not necessary.**

# FCC §15.203 - ANTENNA REQUIREMENT

## Applicable Standard

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## Antenna Connector Construction

The EUT has one WIFI/BT antenna, which are permanently attached and fulfill the requirement of this section. Please refer to the EUT photos.

| RF Module | Manufacturer | Antenna Model | Antenna Gain | Antenna Type |
|---|---|---|---|---|
| 2.4G WLAN | shenzhen bogesi communication technology co.,ltd | WCC-005A | 3dBi | FPC Antenna |
| 5G WLAN | | | | |
| Bluetooth | | | | |

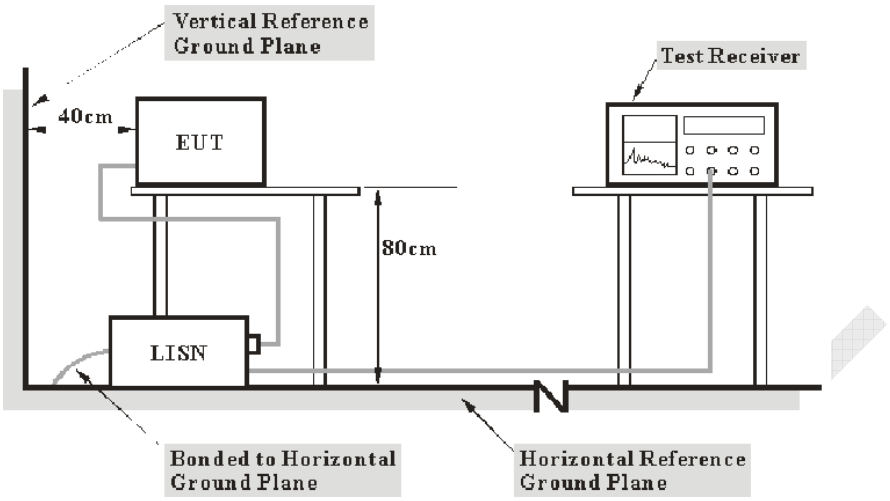
**Result:** Compliance.

# FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

## Applicable Standard

FCC§15.207

## EUT Setup




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

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter was connected to an AC 120 V/60 Hz power source.

## EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

| Frequency Range | IF B/W |
|---|---|
| 150 kHz – 30 MHz | 9 kHz |

## Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

## Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$V_C = V_R + A_C + VDF$

Herein,
$V_C$: corrected voltage amplitude
$V_R$: reading voltage amplitude
$A_c$: attenuation caused by cable loss
VDF: voltage division factor of AMN or ISN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

## Test Data

### Test Environment Conditions

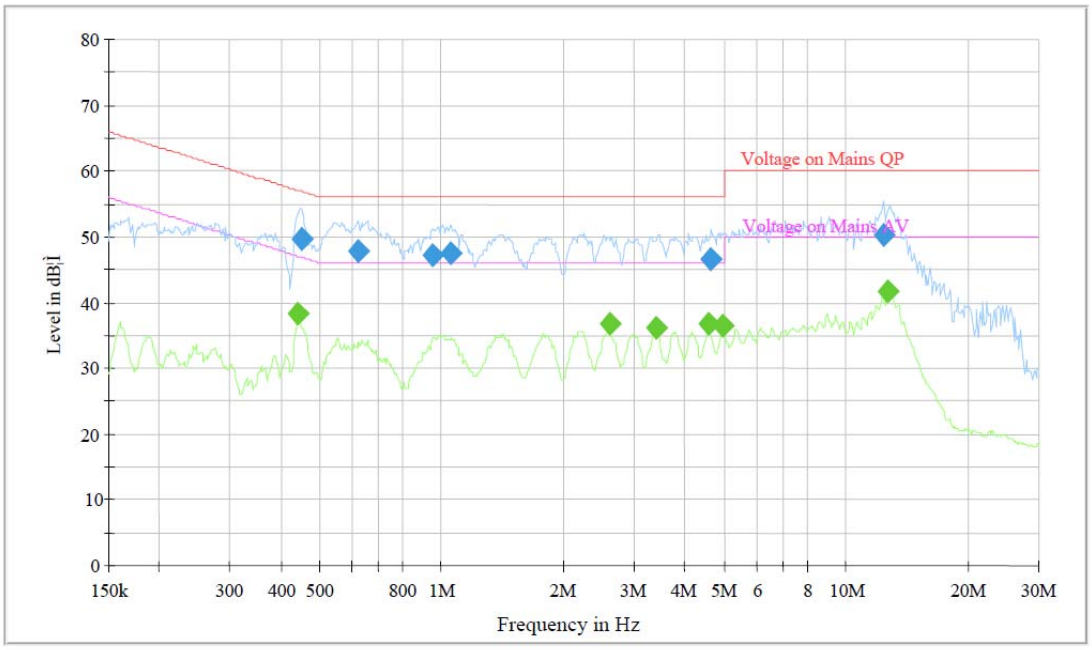
| | |
|---|---|
| Temperature: | 21 °C |
| Relative Humidity: | 56 % |
| ATM Pressure: | 95.7 kPa |

*The testing was performed by Tom Tang on 2018-12-20.*

*Test Mode: Transmitting*

*Low channel of EDR (8DPSK) mode - Worst Case*

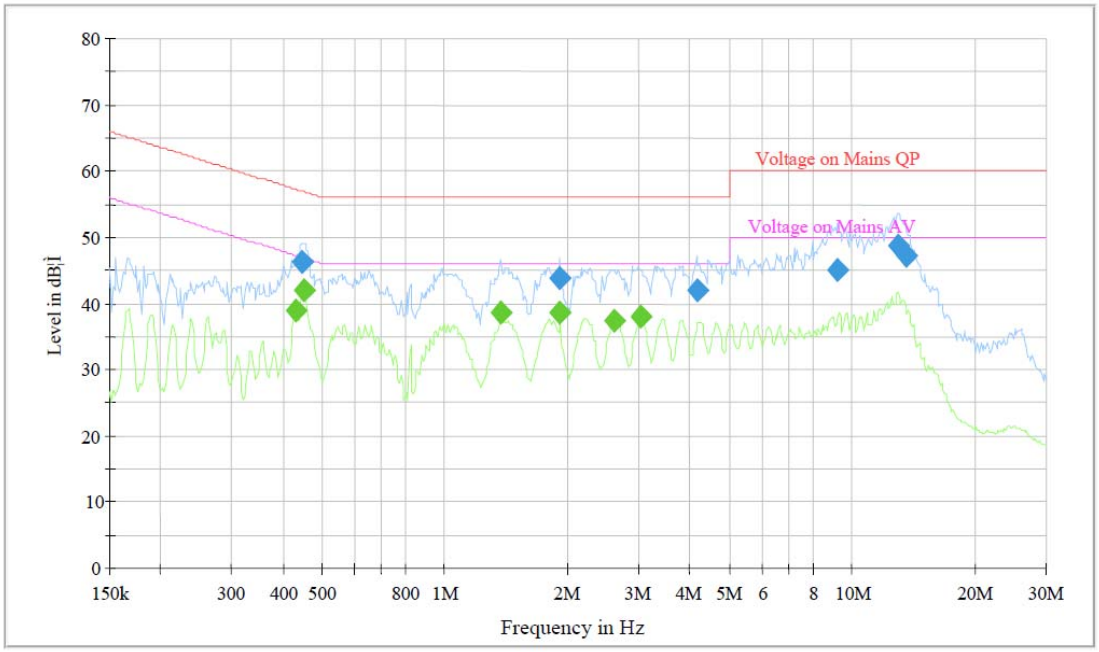
**AC120 V, 60 Hz, Line:**




| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.450448 | 49.5 | 9.000 | L1 | 19.7 | 7.4 | 56.9 |
| 0.624492 | 47.7 | 9.000 | L1 | 19.7 | 8.3 | 56.0 |
| 0.952654 | 47.1 | 9.000 | L1 | 19.7 | 8.9 | 56.0 |
| 1.056628 | 47.5 | 9.000 | L1 | 19.7 | 8.5 | 56.0 |
| 4.651370 | 46.5 | 9.000 | L1 | 19.7 | 9.5 | 56.0 |
| 12.394424 | 50.3 | 9.000 | L1 | 20.0 | 9.7 | 60.0 |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.443327 | 38.3 | 9.000 | L1 | 19.7 | 8.7 | 47.0 |
| 2.599932 | 36.6 | 9.000 | L1 | 19.7 | 9.4 | 46.0 |
| 3.381891 | 36.3 | 9.000 | L1 | 19.7 | 9.7 | 46.0 |
| 4.577832 | 36.8 | 9.000 | L1 | 19.7 | 9.2 | 46.0 |
| 4.957528 | 36.5 | 9.000 | L1 | 19.7 | 9.5 | 46.0 |
| 12.694276 | 41.7 | 9.000 | L1 | 20.0 | 8.3 | 50.0 |

**AC120 V, 60 Hz, Neutral:**




| Frequency (MHz) | QuasiPeak (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.446873 | 46.2 | 9.000 | N | 19.8 | 10.7 | 56.9 |
| 1.920710 | 43.8 | 9.000 | N | 19.8 | 12.2 | 56.0 |
| 4.160384 | 42.0 | 9.000 | N | 19.9 | 14.0 | 56.0 |
| 9.229680 | 45.1 | 9.000 | N | 20.0 | 14.9 | 60.0 |
| 13.001382 | 48.7 | 9.000 | N | 20.1 | 11.3 | 60.0 |
| 13.638064 | 47.1 | 9.000 | N | 20.1 | 12.9 | 60.0 |

| Frequency (MHz) | Average (dBµV) | Bandwidth (kHz) | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.429420 | 38.9 | 9.000 | N | 19.8 | 8.4 | 47.3 |
| 0.450448 | 42.1 | 9.000 | N | 19.8 | 4.8 | 46.9 |
| 1.374420 | 38.5 | 9.000 | N | 19.8 | 7.5 | 46.0 |
| 1.920710 | 38.7 | 9.000 | N | 19.8 | 7.3 | 46.0 |
| 2.599932 | 37.5 | 9.000 | N | 19.9 | 8.5 | 46.0 |
| 3.024908 | 38.0 | 9.000 | N | 19.9 | 8.0 | 46.0 |

Note:
1) Corrected Amplitude = Reading + Correction Factor
2) Correction Factor =LISN VDF (Voltage Division Factor) + Cable Loss + Transient Limiter
3) Margin = Limit – Corrected Amplitude

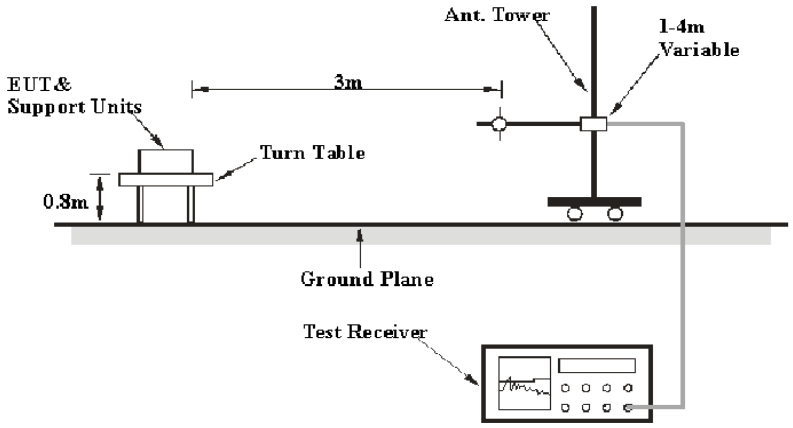
# FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

## Applicable Standard

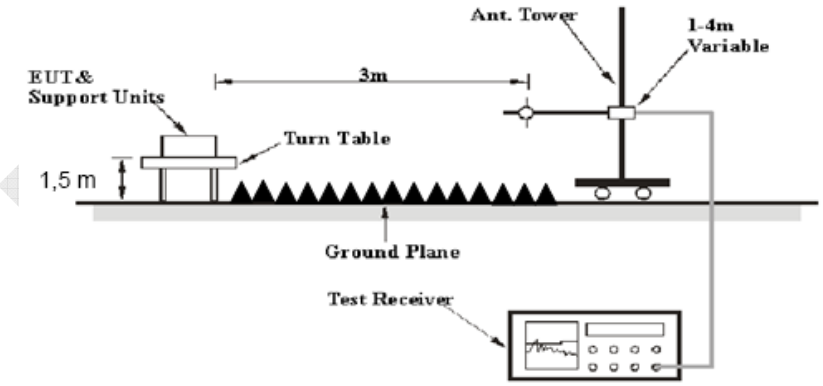
FCC §15.247 (d); §15.209; §15.205;

## EUT Setup

**Below 1GHz:**




**Above 1GHz:**




The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The adapter was connected to one AC 120 V/60 Hz power source.

## EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver setup was set with the following configurations:

| Frequency Range | RBW | Video B/W | IF B/W | Measurement |
|---|---|---|---|---|
| 30 MHz – 1000 MHz | 120 kHz | 300 kHz | 120 kHz | QP |
| Above 1GHz | 1MHz | 3 MHz | / | PK |
| | 1MHz | 3 MHz | / | AV |

## Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz - 1 GHz, peak and average detection modes for frequencies above 1 GHz.

## Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

## Test Data

### Test Environment Conditions

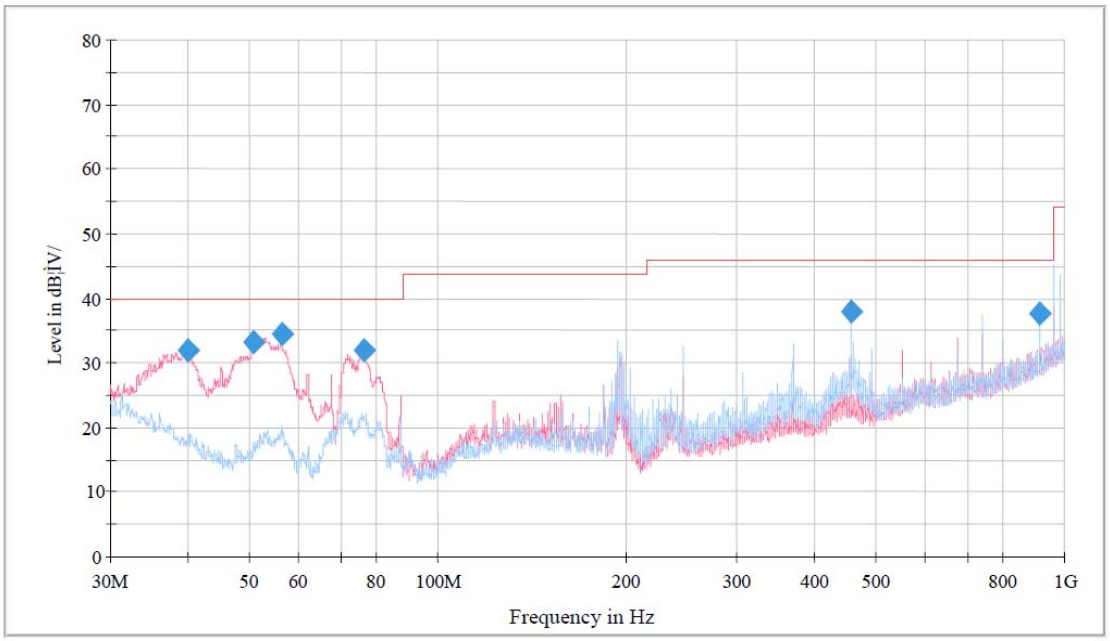
| | |
|---|---|
| Temperature: | 21°C |
| Relative Humidity: | 61 % |
| ATM Pressure: | 94.0 kPa |

*The testing was performed by Tom Tang on 2018-12-18*

*Test Mode: Transmitting*

*Low channel of EDR mode(8DPSK)-Worst Case*

**30 MHz to 1 GHz:**




| Frequency (MHz) | QuasicPeak (dBµV/m) | Height (cm) | Polarization | Azimuth (deg) | Corr. (dB) | Margin (dB) | Limit (dBµV/m) |
|---|---|---|---|---|---|---|---|
| 39.894000 | 31.8 | 100.0 | V | 6.0 | -10.8 | 8.2 | 40.0 |
| 50.758000 | 33.0 | 100.0 | V | 301.0 | -16.7 | 7.0 | 40.0 |
| 56.481000 | 34.5 | 100.0 | V | 55.0 | -17.1 | 5.5 | 40.0 |
| 76.269000 | 31.9 | 100.0 | V | 167.0 | -16.4 | 8.1 | 40.0 |
| 456.121000 | 38.1 | 100.0 | H | 110.0 | -7.7 | 7.9 | 46.0 |
| 912.312000 | 37.5 | 100.0 | H | 309.0 | 1.0 | 8.5 | 46.0 |

**1GHz-25GHz:**

*BDR Mode (GFSK):*

| Frequency | Receiver | | Rx Antenna | | Cable loss | Amplifier Gain | Corrected Amplitude | Limit | Margin |
|---|---|---|---|---|---|---|---|---|---|
| | Reading | Measurement | Polar | Factor | | | | | |
| MHz | dBµV | PK/AV | H/V | dB(1/m) | dB | dB | dBµV/m | dBµV/m | dB |
| **Frequency:2402 MHz** | | | | | | | | | |
| 2402 | 59.68 | PK | H | 28.71 | 3.06 | 0.00 | 91.45 | N/A | N/A |
| 2402 | 48.76 | AV | H | 28.71 | 3.06 | 0.00 | 80.53 | N/A | N/A |
| 2402 | 67.72 | PK | V | 28.71 | 3.06 | 0.00 | 99.49 | N/A | N/A |
| 2402 | 56.47 | AV | V | 28.71 | 3.06 | 0.00 | 88.24 | N/A | N/A |
| 2390 | 29.46 | PK | V | 28.67 | 3.06 | 0.00 | 61.19 | 74.00 | 12.81 |
| 2390 | 16.15 | AV | V | 28.67 | 3.06 | 0.00 | 47.88 | 54.00 | 6.12 |
| 4804 | 52.83 | PK | V | 33.85 | 4.35 | 44.73 | 46.30 | 74.00 | 27.70 |
| 4804 | 39.09 | AV | V | 33.85 | 4.35 | 44.73 | 32.56 | 54.00 | 21.44 |
| 7206 | 47.89 | PK | V | 36.39 | 5.41 | 43.92 | 45.77 | 74.00 | 28.23 |
| 7206 | 34.94 | AV | V | 36.39 | 5.41 | 43.92 | 32.82 | 54.00 | 21.18 |
| **Frequency: 2441MHz** | | | | | | | | | |
| 2441 | 60.56 | PK | H | 28.82 | 3.09 | 0.00 | 92.47 | N/A | N/A |
| 2441 | 49.13 | AV | H | 28.82 | 3.09 | 0.00 | 81.04 | N/A | N/A |
| 2441 | 69.07 | PK | V | 28.82 | 3.09 | 0.00 | 100.98 | N/A | N/A |
| 2441 | 57.92 | AV | V | 28.82 | 3.09 | 0.00 | 89.83 | N/A | N/A |
| 4882 | 52.95 | PK | V | 34.07 | 4.40 | 44.72 | 46.70 | 74.00 | 27.30 |
| 4882 | 39.88 | AV | V | 34.07 | 4.40 | 44.72 | 33.63 | 54.00 | 20.37 |
| 7323 | 47.43 | PK | V | 36.55 | 5.44 | 44.23 | 45.19 | 74.00 | 28.81 |
| 7323 | 34.17 | AV | V | 36.55 | 5.44 | 44.23 | 31.93 | 54.00 | 22.07 |
| **Frequency:2480MHz** | | | | | | | | | |
| 2480 | 61.98 | PK | H | 28.94 | 3.12 | 0.00 | 94.04 | N/A | N/A |
| 2480 | 50.22 | AV | H | 28.94 | 3.12 | 0.00 | 82.28 | N/A | N/A |
| 2480 | 71.03 | PK | V | 28.94 | 3.12 | 0.00 | 103.09 | N/A | N/A |
| 2480 | 60.31 | AV | V | 28.94 | 3.12 | 0.00 | 92.37 | N/A | N/A |
| 2483.5 | 31.73 | PK | V | 28.95 | 3.12 | 0.00 | 63.80 | 74.00 | 10.20 |
| 2483.5 | 20.32 | AV | V | 28.95 | 3.12 | 0.00 | 52.39 | 54.00 | *1.61 |
| 4960 | 54.08 | PK | V | 34.29 | 4.44 | 44.71 | 48.10 | 74.00 | 25.90 |
| 4960 | 41.20 | AV | V | 34.29 | 4.44 | 44.71 | 35.22 | 54.00 | 18.78 |
| 7440 | 47.55 | PK | V | 36.72 | 5.48 | 44.54 | 45.21 | 74.00 | 28.79 |
| 7440 | 33.88 | AV | V | 36.72 | 5.48 | 44.54 | 31.54 | 54.00 | 22.46 |

**Within measurement uncertainty!*

*EDR Mode (π/4-DQPSK):*

| Frequency | Receiver | | Rx Antenna | | Cable loss | Amplifier Gain | Corrected Amplitude | Limit | Margin |
|---|---|---|---|---|---|---|---|---|---|
| | Reading | Measurement | Polar | Factor | | | | | |
| MHz | dBμV | PK/AV | H/V | (dB/m) | dB | dB | dBμV/m | dBμV/m | dB |
| **Frequency:2402 MHz** | | | | | | | | | |
| 2402 | 59.75 | PK | H | 28.71 | 3.06 | 0.00 | 91.52 | N/A | N/A |
| 2402 | 48.13 | AV | H | 28.71 | 3.06 | 0.00 | 79.90 | N/A | N/A |
| 2402 | 67.14 | PK | V | 28.71 | 3.06 | 0.00 | 98.91 | N/A | N/A |
| 2402 | 55.40 | AV | V | 28.71 | 3.06 | 0.00 | 87.17 | N/A | N/A |
| 2390 | 27.58 | PK | V | 28.67 | 3.06 | 0.00 | 59.31 | 74.00 | 14.69 |
| 2390 | 15.94 | AV | V | 28.67 | 3.06 | 0.00 | 47.67 | 54.00 | 6.33 |
| 4804 | 52.40 | PK | V | 33.85 | 4.35 | 44.73 | 45.87 | 74.00 | 28.13 |
| 4804 | 38.31 | AV | V | 33.85 | 4.35 | 44.73 | 31.78 | 54.00 | 22.22 |
| 7206 | 46.98 | PK | V | 36.39 | 5.41 | 43.92 | 44.86 | 74.00 | 29.14 |
| 7206 | 33.79 | AV | V | 36.39 | 5.41 | 43.92 | 31.67 | 54.00 | 22.33 |
| **Frequency:2441 MHz** | | | | | | | | | |
| 2441 | 58.49 | PK | H | 28.82 | 3.09 | 0.00 | 90.40 | N/A | N/A |
| 2441 | 46.28 | AV | H | 28.82 | 3.09 | 0.00 | 78.19 | N/A | N/A |
| 2441 | 66.57 | PK | V | 28.82 | 3.09 | 0.00 | 98.48 | N/A | N/A |
| 2441 | 54.46 | AV | V | 28.82 | 3.09 | 0.00 | 86.37 | N/A | N/A |
| 4882 | 51.30 | PK | V | 34.07 | 4.40 | 44.72 | 45.05 | 74.00 | 28.95 |
| 4882 | 38.27 | AV | V | 34.07 | 4.40 | 44.72 | 32.02 | 54.00 | 21.98 |
| 7323 | 45.36 | PK | V | 36.55 | 5.44 | 44.23 | 43.12 | 74.00 | 30.88 |
| 7323 | 33.59 | AV | V | 36.55 | 5.44 | 44.23 | 31.35 | 54.00 | 22.65 |
| **Frequency:2480 MHz** | | | | | | | | | |
| 2480 | 57.11 | PK | H | 28.94 | 3.12 | 0.00 | 89.17 | N/A | N/A |
| 2480 | 44.20 | AV | H | 28.94 | 3.12 | 0.00 | 76.26 | N/A | N/A |
| 2480 | 66.47 | PK | V | 28.94 | 3.12 | 0.00 | 98.53 | N/A | N/A |
| 2480 | 53.50 | AV | V | 28.94 | 3.12 | 0.00 | 85.56 | N/A | N/A |
| 2483.5 | 30.14 | PK | V | 28.95 | 3.12 | 0.00 | 62.21 | 74.00 | 11.79 |
| 2483.5 | 19.27 | AV | V | 28.95 | 3.12 | 0.00 | 51.34 | 54.00 | *2.66 |
| 4960 | 50.43 | PK | V | 34.29 | 4.44 | 44.71 | 44.45 | 74.00 | 29.55 |
| 4960 | 38.61 | AV | V | 34.29 | 4.44 | 44.71 | 32.63 | 54.00 | 21.37 |
| 7440 | 44.22 | PK | V | 36.72 | 5.48 | 44.54 | 41.88 | 74.00 | 32.12 |
| 7440 | 33.22 | AV | V | 36.72 | 5.48 | 44.54 | 30.88 | 54.00 | 23.12 |

**Within measurement uncertainty!*

*EDR Mode (8-DPSK):*

| Frequency | Receiver | | Rx Antenna | | Cable loss | Amplifier Gain | Corrected Amplitude | Limit | Margin |
|---|---|---|---|---|---|---|---|---|---|
| | Reading | Measurement | Polar | Factor | | | | | |
| MHz | dBµV | PK/AV | H/V | (dB/m) | dB | dB | dBµV/m | dBµV/m | dB |
| **Frequency:2402 MHz** | | | | | | | | | |
| 2402 | 60.00 | PK | H | 28.71 | 3.06 | 0.00 | 91.77 | N/A | N/A |
| 2402 | 49.73 | AV | H | 28.71 | 3.06 | 0.00 | 81.50 | N/A | N/A |
| 2402 | 67.46 | PK | V | 28.71 | 3.06 | 0.00 | 99.23 | N/A | N/A |
| 2402 | 57.35 | AV | V | 28.71 | 3.06 | 0.00 | 89.12 | N/A | N/A |
| 2390 | 27.21 | PK | V | 28.67 | 3.06 | 0.00 | 58.94 | 74.00 | 15.06 |
| 2390 | 15.85 | AV | V | 28.67 | 3.06 | 0.00 | 47.58 | 54.00 | 6.42 |
| 4804 | 52.08 | PK | V | 33.85 | 4.35 | 44.73 | 45.55 | 74.00 | 28.45 |
| 4804 | 38.10 | AV | V | 33.85 | 4.35 | 44.73 | 31.57 | 54.00 | 22.43 |
| 7206 | 47.43 | PK | V | 36.39 | 5.41 | 43.92 | 45.31 | 74.00 | 28.69 |
| 7206 | 34.24 | AV | V | 36.39 | 5.41 | 43.92 | 32.12 | 54.00 | 21.88 |
| **Frequency: 2441 MHz** | | | | | | | | | |
| 2441 | 58.79 | PK | H | 28.82 | 3.09 | 0.00 | 90.70 | N/A | N/A |
| 2441 | 46.80 | AV | H | 28.82 | 3.09 | 0.00 | 78.71 | N/A | N/A |
| 2441 | 67.01 | PK | V | 28.82 | 3.09 | 0.00 | 98.92 | N/A | N/A |
| 2441 | 55.22 | AV | V | 28.82 | 3.09 | 0.00 | 87.13 | N/A | N/A |
| 4882 | 51.55 | PK | V | 34.07 | 4.40 | 44.72 | 45.30 | 74.00 | 28.70 |
| 4882 | 38.45 | AV | V | 34.07 | 4.40 | 44.72 | 32.20 | 54.00 | 21.80 |
| 7323 | 45.87 | PK | V | 36.55 | 5.44 | 44.23 | 43.63 | 74.00 | 30.37 |
| 7323 | 33.40 | AV | V | 36.55 | 5.44 | 44.23 | 31.16 | 54.00 | 22.84 |
| **Frequency: 2480 MHz** | | | | | | | | | |
| 2480 | 58.02 | PK | H | 28.94 | 3.12 | 0.00 | 90.08 | N/A | N/A |
| 2480 | 44.02 | AV | H | 28.94 | 3.12 | 0.00 | 76.08 | N/A | N/A |
| 2480 | 66.77 | PK | V | 28.94 | 3.12 | 0.00 | 98.83 | N/A | N/A |
| 2480 | 53.53 | AV | V | 28.94 | 3.12 | 0.00 | 85.59 | N/A | N/A |
| 2483.5 | 29.06 | PK | V | 28.95 | 3.12 | 0.00 | 61.13 | 74.00 | 12.87 |
| 2483.5 | 18.31 | AV | V | 28.95 | 3.12 | 0.00 | 50.38 | 54.00 | *3.62 |
| 4960 | 51.34 | PK | V | 34.29 | 4.44 | 44.71 | 45.36 | 74.00 | 28.64 |
| 4960 | 38.97 | AV | V | 34.29 | 4.44 | 44.71 | 32.99 | 54.00 | 21.01 |
| 7440 | 44.50 | PK | V | 36.72 | 5.48 | 44.54 | 42.16 | 74.00 | 31.84 |
| 7440 | 33.14 | AV | V | 36.72 | 5.48 | 44.54 | 30.80 | 54.00 | 23.20 |

**Within measurement uncertainty!*

Other non-harmonic spurious Emission-worst case (EDR Mode (π/4-DQPSK): Low Channel)

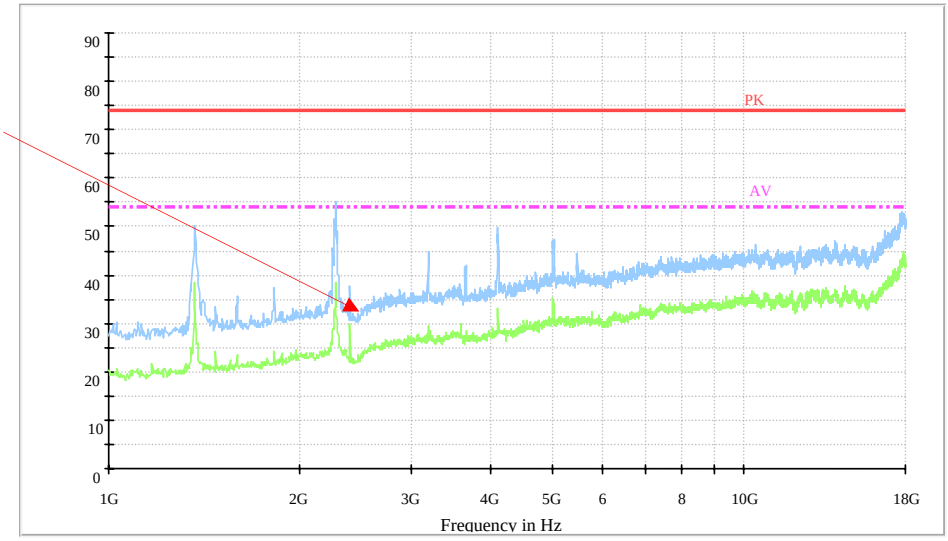
| Frequency | Receiver | | Rx Antenna | | Cable loss | Amplifier Gain | Corrected Amplitude | Limit | Margin |
|---|---|---|---|---|---|---|---|---|---|
| | Reading | Measurement | Polar | Factor | | | | | |
| MHz | dBμV | PK/AV | H/V | dB(1/m) | dB | dB | dBμV/m | dBμV/m | dB |
| 1367 | 70.75 | PK | V | 24.68 | 2.31 | 43.51 | 54.23 | 74.00 | 19.77 |
| 1367 | 59.49 | AV | V | 24.68 | 2.31 | 43.51 | 42.97 | 54.00 | 11.03 |
| 2281 | 68.79 | PK | V | 28.34 | 2.98 | 43.87 | 56.24 | 74.00 | 17.76 |
| 2281 | 58.53 | AV | V | 28.34 | 2.98 | 43.87 | 45.98 | 54.00 | 8.02 |
| 3193 | 63.57 | PK | V | 31.06 | 3.52 | 44.32 | 53.83 | 74.00 | 20.17 |
| 3193 | 47.65 | AV | V | 31.06 | 3.52 | 44.32 | 37.91 | 54.00 | 16.09 |
| 4101 | 60.02 | PK | V | 32.76 | 4.00 | 44.61 | 52.17 | 74.00 | 21.83 |
| 4101 | 45.36 | AV | V | 32.76 | 4.00 | 44.61 | 37.51 | 54.00 | 16.49 |
| 1367 | 67.93 | PK | H | 24.68 | 2.31 | 43.51 | 51.41 | 74.00 | 22.59 |
| 1367 | 55.95 | AV | H | 24.68 | 2.31 | 43.51 | 39.43 | 54.00 | 14.57 |
| 2281 | 68.38 | PK | H | 28.34 | 2.98 | 43.87 | 55.83 | 74.00 | 18.17 |
| 2281 | 54.02 | AV | H | 28.34 | 2.98 | 43.87 | 41.47 | 54.00 | 12.53 |
| 3193 | 55.71 | PK | H | 31.06 | 3.52 | 44.32 | 45.97 | 74.00 | 28.03 |
| 3193 | 41.88 | AV | H | 31.06 | 3.52 | 44.32 | 32.14 | 54.00 | 21.86 |
| 4101 | 59.61 | PK | H | 32.76 | 4.00 | 44.61 | 51.76 | 74.00 | 22.24 |
| 4101 | 43.96 | AV | H | 32.76 | 4.00 | 44.61 | 36.11 | 54.00 | 17.89 |

Note:
Corrected Amplitude = Corrected Factor + Reading
Corrected Factor=Antenna factor (RX) + Cable Loss – Amplifier Factor
Margin = Limit- Corr. Amplitude
Spurious emissions more than 20 dB below the limit were not reported.

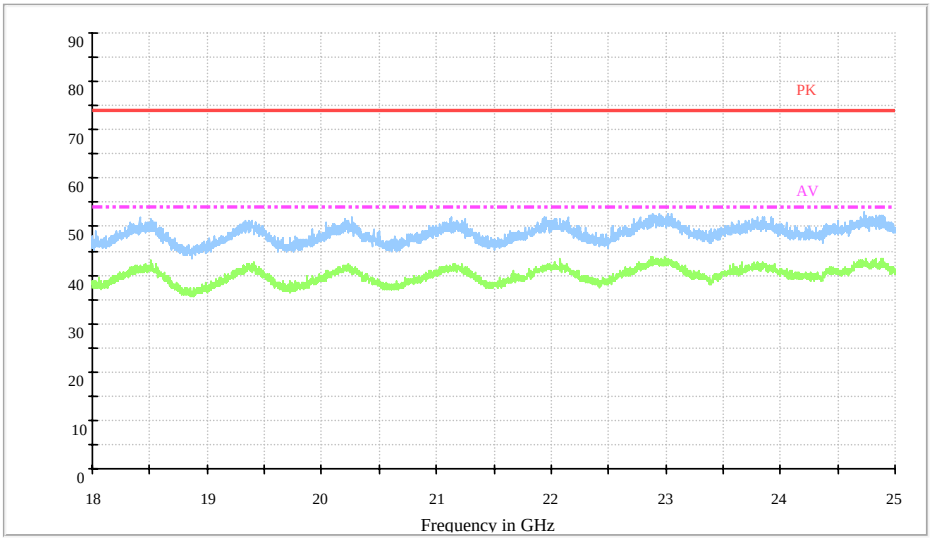
**Please refer to the below pre-scan plot of worst case:**

**EDR Mode (π/4-DQPSK): Low Channel_Horizontal_1GHz-18GHz**

Fundamental with Reject Band Filter

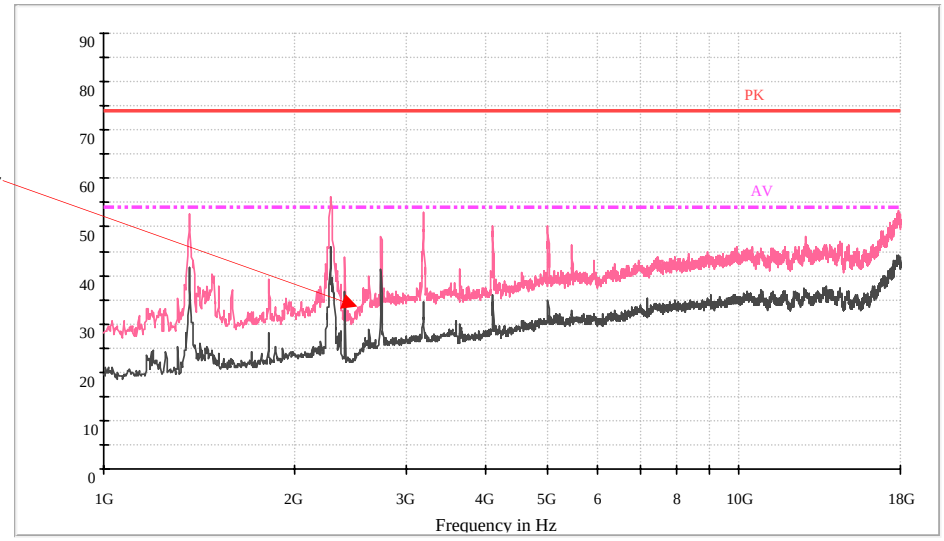



**EDR Mode (π/4-DQPSK): Low Channel_Horizontal_18GHz-25GHz**

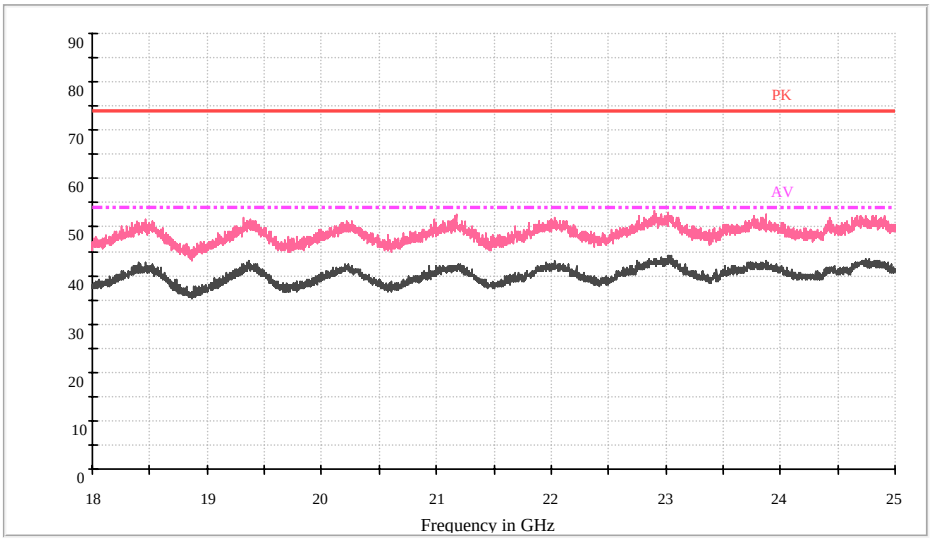


**EDR Mode (π/4-DQPSK): Low Channel_Vertical_1GHz-18GHz**

Fundamental with Reject Band Filter




**EDR Mode (π/4-DQPSK): Low Channel_Vertical_18GHz-25GHz**




******END OF REPORT******