

## Partial FCC Test Report

### (PART 27)

**Report No.:** RF190918C14-2

**FCC ID:** 2ATM8EC25A

**Test Model:** EC25-A

**Received Date:** Sep. 18, 2019

**Test Date:** Oct. 15, 2019

**Issued Date:** Dec. 13, 2019

**Applicant:** Hawkeye Tech Co., Ltd.

**Address:** 13F. No.736, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**Test Location:** B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231,  
Taiwan

**FCC Registration /** 427177 / TW0011

**Designation Number:**



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### Release Control Record

| Issue No.     | Description      | Date Issued   |
|---------------|------------------|---------------|
| RF190918C14-2 | Original Release | Dec. 13, 2019 |

## 1 Certificate of Conformity

**Product:** LTE Module

**Brand:** Quectel

**Test Model:** EC25-A

**Sample Status:** Engineering Sample

**Applicant:** Hawkeye Tech Co., Ltd.

**Test Date:** Oct. 15, 2019

**Standards:** FCC Part 27, Subpart C, H, L

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Pettie Chen, **Date:** Dec. 13, 2019  
Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen, **Date:** Dec. 13, 2019  
Bruce Chen / Senior Project Engineer

## 2 Summary of Test Results

| Applied Standard: FCC Part 27 & Part 2 (WCDMA) |                                     |        |   |
|--|-------------------------------------|--------|---|
| FCC Clause                                     | Test Item                           | Result | Remarks   |
| 2.1046<br>27.50(d)(4)                          | Equivalent Isotropic Radiated Power | Pass   | Meet the requirement of limit.  |
| 2.1047   | Modulation Characteristics          | N/A    | Refer to Note   |
| 2.1055<br>27.54                                | Frequency Stability                 | N/A    | Refer to Note   |
| 2.1049   | Occupied Bandwidth                  | N/A    | Refer to Note   |
| 27.50(d)(5)                                    | Peak to Average Ratio               | N/A    | Refer to Note   |
| 27.53(h)                                       | Band Edge Measurements              | N/A    | Refer to Note   |
| 2.1051<br>27.53(h)                             | Conducted Spurious Emissions        | N/A    | Refer to Note   |
| 2.1053<br>27.53(h)                             | Radiated Spurious Emissions         | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -29.17 dB at 5197.80 MHz. |

| Applied Standard: FCC Part 27 & Part 2 (LTE B4) |                              |        |   |
|---|------------------------------|--------|---|
| FCC Clause                                      | Test Item                    | Result | Remarks   |
| 2.1046<br>27.50(d)(4)                           | Maximum Peak Output Power    | Pass   | Meet the requirement of limit.  |
| 2.1047  | Modulation Characteristics   | N/A    | Refer to Note   |
| 2.1055<br>27.54                                 | Frequency Stability          | N/A    | Refer to Note   |
| 2.1049  | Occupied Bandwidth           | N/A    | Refer to Note   |
| 27.50(d)(5)                                     | Peak to Average Ratio        | N/A    | Refer to Note   |
| 27.53(h)  | Band Edge Measurements       | N/A    | Refer to Note   |
| 2.1051<br>27.53(h)                              | Conducted Spurious Emissions | N/A    | Refer to Note   |
| 2.1053<br>27.53(h)                              | Radiated Spurious Emissions  | Pass   | Meet the requirement of limit.<br>Minimum passing margin is -26.94 dB at 5235.00 MHz. |

| Applied Standard: FCC Part 27 & Part 2 (LTE B12) |                              |        |  |
|--|------------------------------|--------|--|
| FCC Clause                                       | Test Item                    | Result | Remarks  |
| 2.1046<br>27.50(c)(10)                           | Maximum Peak Output Power    | Pass   | Meet the requirement of limit.   |
| 2.1047   | Modulation Characteristics   | N/A    | Refer to Note  |
| 2.1055<br>27.54                                  | Frequency Stability          | N/A    | Refer to Note  |
| 2.1049   | Occupied Bandwidth           | N/A    | Refer to Note  |
| ---  | Peak to Average Ratio        | N/A    | Refer to Note  |
| 27.53(g)   | Band Edge Measurements       | N/A    | Refer to Note  |
| 2.1051<br>27.53(g)                               | Conducted Spurious Emissions | N/A    | Refer to Note  |
| 2.1053<br>27.53(g)                               | Radiated Spurious Emissions  | Pass   | Meet the requirement of limit.<br>Minimum passing margin is<br>-35.00 dB at 275.70MHz. |

Note:

1. This report is a partial report. Therefore, only test item of Effective Radiated Power / Effective Isotropic Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to Bay Area Compliance Laboratories Corp.(Taiwan) report no.: RTWK160705001-00、RKS160908001-00A for module (Brand: Quectel, Model: EC25-A)
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

## 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement                    | Frequency          | Expanded Uncertainty (k=2) (±) |
|--------------------------------|--------------------|--------------------------------|
| Radiated Emissions up to 1 GHz | 9 kHz ~ 30 MHz     | 3.0400 dB                      |
|                                | 30 MHz ~ 200 MHz   | 2.0153 dB                      |
|                                | 200 MHz ~ 1000 MHz | 2.0224 dB                      |
| Radiated Emissions above 1 GHz | 1 GHz ~ 18 GHz     | 1.0121 dB                      |
|                                | 18 GHz ~ 40 GHz    | 1.1508 dB                      |

## 2.2 Test Site and Instruments

| Description & Manufacturer                     | Model No.       | Serial No.  | Date of Calibration | Due Date of Calibration |
|--|-----------------|---|---------------------|-------------------------|
| Test Receiver<br>Agilent Technologies          | N9038A          | MY52260177  | Aug. 26, 2019       | Aug. 25, 2020           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ           | FSU43           | 101261  | Apr. 15, 2019       | Apr. 14, 2020           |
| BILOG Antenna<br>SCHWARZBECK                   | VULB 9168       | 9168-616  | Nov. 27, 2018       | Nov. 26, 2019           |
| HORN Antenna<br>ETS-Lindgren                   | 3117            | 00143293  | Nov. 25, 2018       | Nov. 24, 2019           |
| BILOG Antenna<br>SCHWARZBECK                   | VULB9168        | 9168-631  | Nov. 26, 2018       | Nov. 25, 2019           |
| HORN Antenna<br>ETS                            | 3117            | 00155510  | Nov. 25, 2018       | Nov. 24, 2019           |
| Fixed Attenuator<br>Mini-Circuits              | MDCS18N-10      | MDCS18N-10-01   | Apr. 15, 2019       | Apr. 14, 2020           |
| MXG Vector signal<br>generator<br>Agilent      | N5182B          | MY53050430  | Nov. 19, 2018       | Nov. 18, 2019           |
| Preamplifier<br>Agilent                        | 310N            | 187226  | Jun. 18, 2019       | Jun. 17, 2020           |
| Preamplifier<br>Agilent                        | 83017A          | MY39501357  | Jun. 18, 2019       | Jun. 17, 2020           |
| RF signal cable<br>ETS-LINDGREN                | 5D-FB           | Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400) | Jun. 18, 2019       | Jun. 17, 2020           |
| RF signal cable<br>ETS-LINDGREN                | 8D-FB           | Cable-CH1-02(RFC-SMS-100-SMS-24)                      | Jun. 18, 2019       | Jun. 17, 2020           |
| Boresight Antenna Fixture                      | FBA-01          | FBA-SIP01   | NA                  | NA                      |
| Software<br>BV ADT                             | E3<br>8.130425b | NA  | NA                  | NA                      |
| Antenna Tower<br>MF                            | NA              | NA  | NA                  | NA                      |
| Turn Table<br>MF                               | NA              | NA  | NA                  | NA                      |
| Antenna Tower & Turn<br>Table Controller<br>MF | MF-7802         | NA  | NA                  | NA                      |
| Communications Tester-<br>Wireless<br>Agilent  | 8960 Series 10  | MY53201073  | Jul. 01, 2019       | Jun. 30, 2020           |
| Radio Communication<br>Analyzer<br>Anritsu     | MT8820C         | 6201300640  | Aug. 19, 2019       | Aug. 18, 2020           |

Note: 1. The calibration interval of the above test instruments is 12 / 24 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HsinTien Chamber 1.


### 3 General Information

#### 3.1 General Description of EUT

|   |  |  |
|---|--|--|
| <b>Product</b>                          | LTE Module                               |  |
| <b>Brand</b>                            | Quectel                                  |  |
| <b>Test Model</b>                       | EC25-A                                   |  |
| <b>Status of EUT</b>                    | Engineering Sample                       |  |
| <b>Power Supply Rating</b>              | 3.8 Vdc (Host equipment)                 |  |
| <b>Modulation Type</b>                  | WCDMA                                    | QPSK                                     |
|   | LTE                                      | QPSK, 16QAM                              |
| <b>Frequency Range</b>                  | WCDMA                                    | 1712.4 ~ 1752.6 MHz                      |
|   | LTE Band 4 (Channel Bandwidth: 1.4 MHz)  | 1710.7 ~ 1754.3 MHz                      |
|   | LTE Band 4 (Channel Bandwidth: 3 MHz)    | 1711.5 ~ 1753.5 MHz                      |
|   | LTE Band 4 (Channel Bandwidth: 5 MHz)    | 1712.5 ~ 1752.5 MHz                      |
|   | LTE Band 4 (Channel Bandwidth: 10 MHz)   | 1715.0 ~ 1750.0 MHz                      |
|   | LTE Band 4 (Channel Bandwidth: 15 MHz)   | 1717.5 ~ 1747.5 MHz                      |
|   | LTE Band 4 (Channel Bandwidth: 20 MHz)   | 1720.0 ~ 1745.0 MHz                      |
|   | LTE Band 12 (Channel Bandwidth: 1.4 MHz) | 699.7 ~ 715.3 MHz                        |
|   | LTE Band 12 (Channel Bandwidth: 3 MHz)   | 700.5 ~ 714.5 MHz                        |
|   | LTE Band 12 (Channel Bandwidth: 5 MHz)   | 701.5 ~ 713.5 MHz                        |
|   | LTE Band 12 (Channel Bandwidth: 10 MHz)  | 704.0 ~ 711.0 MHz                        |
|   | <b>Max. ERP Power</b>                    | LTE Band 12 (Channel Bandwidth: 1.4 MHz) |
| LTE Band 12 (Channel Bandwidth: 3 MHz)  |  | 141.29 mW                                |
| LTE Band 12 (Channel Bandwidth: 5 MHz)  |  | 142.59 mW                                |
| LTE Band 12 (Channel Bandwidth: 10 MHz) |  | 143.81 mW                                |
| <b>Max. EIRP Power</b>                  | WCDMA                                    | 368.55 mW                                |
|   | LTE Band 4 (Channel Bandwidth: 1.4 MHz)  | 368.55 mW                                |
|   | LTE Band 4 (Channel Bandwidth: 3 MHz)    | 371.96 mW                                |
|   | LTE Band 4 (Channel Bandwidth: 5 MHz)    | 375.40 mW                                |
|   | LTE Band 4 (Channel Bandwidth: 10 MHz)   | 378.01 mW                                |
|   | LTE Band 4 (Channel Bandwidth: 15 MHz)   | 381.50 mW                                |
|   | LTE Band 4 (Channel Bandwidth: 20 MHz)   | 385.03 mW                                |
| <b>Antenna Type</b>                     | Dipole Antenna                           |  |
| <b>Antenna Gain</b>                     | WCDMA                                    | 1.7 dBi                                  |
|   | LTE Band 4                               | 1.7 dBi                                  |
|   | LTE Band 12                              | 0.3 dBi                                  |
| <b>Accessory Device</b>                 | N/A                                      |  |
| <b>Data Cable Supplied</b>              | N/A                                      |  |

Note:

1. The EUT was installed in a specific End-product.

| Product | Brand   | Model                               | FCC ID     |
|---------|---|-------------------------------------|------------|
| veeaHub |  | VHH10XXX (X=A-Z, 0-9, blank or "-") | 2ARXKVHH10 |



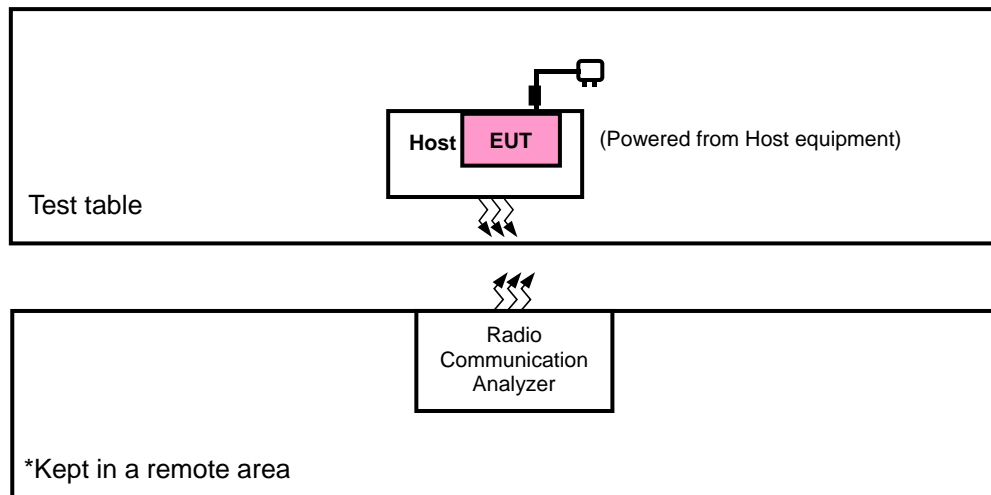
2. The End-product uses following adapter and PoE (Support unit).

| Product | Brand           | Model         | Description  |
|---------|-----------------|---------------|--|
| Adapter | EDACPOWER ELEC. | EA1062SGR-480 | I/P: 100-240 Vac, 50/60 Hz, 2.5A<br>O/P: 48 Vdc, 1.35 A<br>1.2m DC cable with 1 core |
| PoE     | -               | APOE02-WM     | O/P: 48 Vdc  |

3. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

### 3.2 Configuration of System under Test

<Radiated Emission Test> & <E.R.P. / E.I.R.P. Test>



#### 3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

### 3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, antenna degree 90° and 180°, and antenna ports

The worst case was found when positioned as the table below. Following channel(s) was (were) selected for the final test as listed below:

| Band        | ERP / EIRP | Radiated Emission |
|-------------|------------|-------------------|
| WCDMA       | 90°        | 90°               |
| LTE Band 4  | 90°        | 90°               |
| LTE Band 12 | 90°        | 90°               |

#### WCDMA

| EUT Configure Mode | Test Item         | Available Channel | Tested Channel   | Mode  |
|--------------------|-------------------|-------------------|------------------|-------|
| -                  | EIRP              | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| -                  | Radiated Emission | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |

#### LTE Band 4

| EUT Configure Mode | Test Item         | Available Channel | Tested Channel      | Channel Bandwidth | Modulation  | Mode                |
|--------------------|-------------------|-------------------|---------------------|-------------------|-------------|---------------------|
| -                  | EIRP              | 19957 to 20393    | 19957, 20175, 20393 | 1.4 MHz           | QPSK, 16QAM | 1 RB / 3 RB Offset  |
|                    |                   | 19965 to 20385    | 19965, 20175, 20385 | 3 MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset  |
|                    |                   | 19975 to 20375    | 19975, 20175, 20375 | 5 MHz             | QPSK, 16QAM | 1 RB / 24 RB Offset |
|                    |                   | 20000 to 20350    | 20000, 20175, 20350 | 10 MHz            | QPSK, 16QAM | 1 RB / 49 RB Offset |
|                    |                   | 20025 to 20325    | 20025, 20175, 20325 | 15 MHz            | QPSK, 16QAM | 1 RB / 37 RB Offset |
|                    |                   | 20050 to 20300    | 20050, 20175, 20300 | 20 MHz            | QPSK, 16QAM | 1 RB / 49 RB Offset |
| -                  | Radiated Emission | 19957 to 20393    | 19957, 20175, 20393 | 1.4 MHz           | QPSK        | 1 RB / 3 RB Offset  |
|                    |                   | 19975 to 20375    | 19975, 20175, 20375 | 5 MHz             | QPSK        | 1 RB / 24 RB Offset |
|                    |                   | 20050 to 20300    | 20050, 20175, 20300 | 20 MHz            | QPSK        | 1 RB / 49 RB Offset |

#### Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation and RB configurations according to Module report worst maximum output power.
2. For radiated emission, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.

## LTE Band 12

| EUT Configure Mode | Test Item         | Available Channel | Tested Channel      | Channel Bandwidth | Modulation  | Mode                |
|--------------------|-------------------|-------------------|---------------------|-------------------|-------------|---------------------|
| -                  | ERP               | 23017 to 23173    | 23017, 23095, 23173 | 1.4 MHz           | QPSK, 16QAM | 1 RB / 5 RB Offset  |
|                    |                   | 23025 to 23165    | 23025, 23095, 23165 | 3 MHz             | QPSK, 16QAM | 1 RB / 7 RB Offset  |
|                    |                   | 23035 to 23155    | 23035, 23095, 23155 | 5 MHz             | QPSK, 16QAM | 1 RB / 12 RB Offset |
|                    |                   | 23060 to 23130    | 23060, 23095, 23130 | 10 MHz            | QPSK, 16QAM | 1 RB / 49 RB Offset |
| -                  | Radiated Emission | 23017 to 23173    | 23017, 23095, 23173 | 1.4 MHz           | QPSK        | 1 RB / 5 RB Offset  |
|                    |                   | 23035 to 23155    | 23035, 23095, 23155 | 5 MHz             | QPSK        | 1 RB / 12 RB Offset |
|                    |                   | 23060 to 23130    | 23060, 23095, 23130 | 10 MHz            | QPSK        | 1 RB / 49 RB Offset |

### Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation and RB configurations according to Module report worst maximum output power.
2. For radiated emission according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5 MHz & highest channel bandwidth for final test.

### Test Condition:

| Test Item         | Environmental Conditions | Input Power    | Tested By     |
|-------------------|--------------------------|----------------|---------------|
| ERP / EIRP        | 25 deg. C, 65 % RH       | 3.8 Vdc        | Charles Hsiao |
| Radiated Emission | 25 deg. C, 65 % RH       | 120 Vac, 60 Hz | Charles Hsiao |

### 3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

### 3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 27**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**ANSI/TIA/EIA-603-E 2016**

**ANSI 63.26-2015**

**Note:** All test items have been performed and recorded as per the above standards.

## 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

Portable stations (hand-held device) operating in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

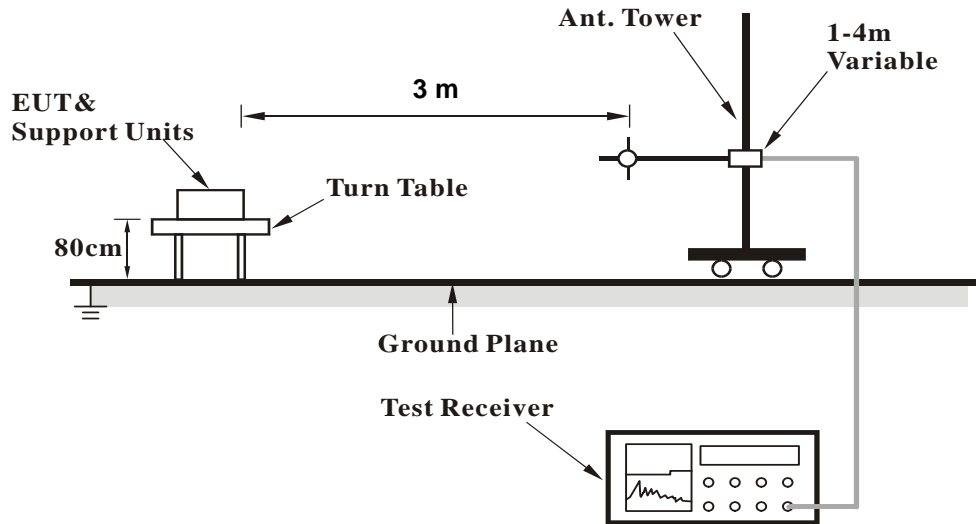
#### 4.1.2 Test Procedures

##### **EIRP / ERP Measurement:**

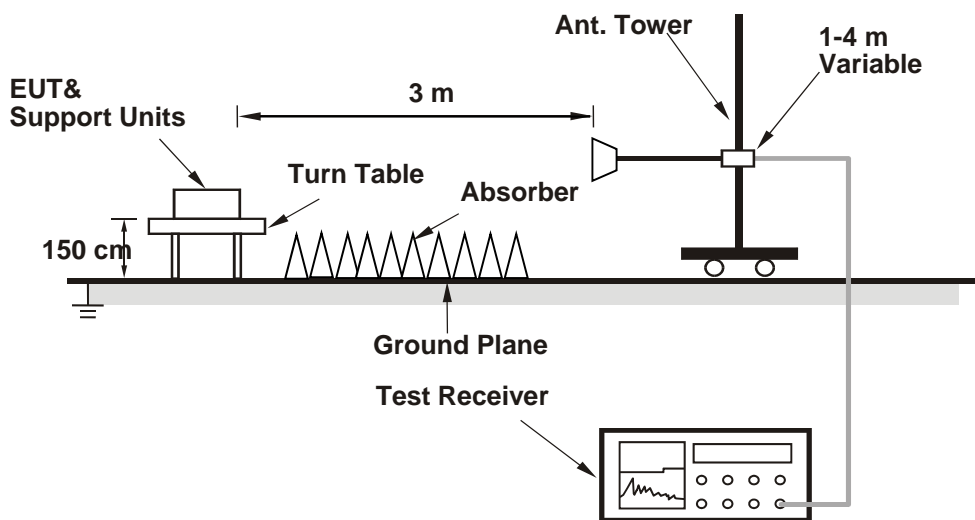
- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5 MHz for WCDMA and 10 MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G.
- d.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ . E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}$ .

4.1.3 Test Setup

**EIRP / ERP Measurement:  
<Radiated Emission below or equal 1 GHz>**



**<Radiated Emission above 1 GHz>**



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 Test Results

ERP Power (dBm)

| LTE Band 12                        |         |                 |               |                        |           |          |                    |
|------------------------------------|---------|-----------------|---------------|------------------------|-----------|----------|--------------------|
| Channel Bandwidth: 1.4 MHz / QPSK  |         |                 |               |                        |           |          |                    |
| Plane                              | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (mW) | Polarization (H/V) |
| 90°                                | 23017   | 699.7           | -9.21         | 32.719                 | 21.36     | 136.74   | H                  |
|                                    | 23095   | 707.5           | -9.19         | 32.736                 | 21.40     | 137.91   |                    |
|                                    | 23173   | 715.3           | -8.98         | 32.591                 | 21.46     | 139.99   |                    |
|                                    | 23017   | 699.7           | -14.24        | 32.69                  | 16.30     | 42.66    | V                  |
|                                    | 23095   | 707.5           | -14.26        | 32.81                  | 16.40     | 43.65    |                    |
|                                    | 23173   | 715.3           | -14.15        | 32.74                  | 16.44     | 44.06    |                    |
| Channel Bandwidth: 1.4 MHz / 16QAM |         |                 |               |                        |           |          |                    |
| 90°                                | 23017   | 699.7           | -10.21        | 32.719                 | 20.36     | 108.62   | H                  |
|                                    | 23095   | 707.5           | -10.19        | 32.736                 | 20.40     | 109.55   |                    |
|                                    | 23173   | 715.3           | -9.98         | 32.591                 | 20.46     | 111.20   |                    |
|                                    | 23017   | 699.7           | -15.24        | 32.69                  | 15.30     | 33.88    | V                  |
|                                    | 23095   | 707.5           | -15.26        | 32.81                  | 15.40     | 34.67    |                    |
|                                    | 23173   | 715.3           | -15.16        | 32.74                  | 15.43     | 34.91    |                    |

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

| LTE Band 12                      |         |                 |               |                        |           |          |                    |
|----------------------------------|---------|-----------------|---------------|------------------------|-----------|----------|--------------------|
| Channel Bandwidth: 3 MHz / QPSK  |         |                 |               |                        |           |          |                    |
| Plane                            | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (mW) | Polarization (H/V) |
| 90°                              | 23025   | 700.5           | -9.18         | 32.719                 | 21.39     | 137.69   | H                  |
|                                  | 23095   | 707.5           | -9.15         | 32.736                 | 21.44     | 139.19   |                    |
|                                  | 23165   | 714.5           | -8.94         | 32.591                 | 21.50     | 141.29   |                    |
|                                  | 23025   | 700.5           | -14.20        | 32.69                  | 16.34     | 43.05    | V                  |
|                                  | 23095   | 707.5           | -14.23        | 32.81                  | 16.43     | 43.95    |                    |
|                                  | 23165   | 714.5           | -14.11        | 32.74                  | 16.48     | 44.46    |                    |
| Channel Bandwidth: 3 MHz / 16QAM |         |                 |               |                        |           |          |                    |
| 90°                              | 23025   | 700.5           | -10.18        | 32.719                 | 20.39     | 109.37   | H                  |
|                                  | 23095   | 707.5           | -10.15        | 32.736                 | 20.44     | 110.56   |                    |
|                                  | 23165   | 714.5           | -9.94         | 32.591                 | 20.50     | 112.23   |                    |
|                                  | 23025   | 700.5           | -15.20        | 32.69                  | 15.34     | 34.20    | V                  |
|                                  | 23095   | 707.5           | -15.24        | 32.81                  | 15.42     | 34.83    |                    |
|                                  | 23165   | 714.5           | -15.12        | 32.74                  | 15.47     | 35.24    |                    |

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

| LTE Band 12                      |         |                 |               |                        |           |          |                    |
|----------------------------------|---------|-----------------|---------------|------------------------|-----------|----------|--------------------|
| Channel Bandwidth: 5 MHz / QPSK  |         |                 |               |                        |           |          |                    |
| Plane                            | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (mW) | Polarization (H/V) |
| 90°                              | 23035   | 701.5           | -9.14         | 32.719                 | 21.43     | 138.96   | H                  |
|                                  | 23095   | 707.5           | -9.11         | 32.736                 | 21.48     | 140.48   |                    |
|                                  | 23155   | 713.5           | -8.90         | 32.591                 | 21.54     | 142.59   |                    |
|                                  | 23035   | 701.5           | -14.16        | 32.69                  | 16.38     | 43.45    | V                  |
|                                  | 23095   | 707.5           | -14.19        | 32.81                  | 16.47     | 44.36    |                    |
|                                  | 23155   | 713.5           | -14.07        | 32.74                  | 16.52     | 44.87    |                    |
| Channel Bandwidth: 5 MHz / 16QAM |         |                 |               |                        |           |          |                    |
| 90°                              | 23035   | 701.5           | -10.14        | 32.719                 | 20.43     | 110.38   | H                  |
|                                  | 23095   | 707.5           | -10.12        | 32.736                 | 20.47     | 111.33   |                    |
|                                  | 23155   | 713.5           | -9.90         | 32.591                 | 20.54     | 113.27   |                    |
|                                  | 23035   | 701.5           | -15.16        | 32.69                  | 15.38     | 34.51    | V                  |
|                                  | 23095   | 707.5           | -15.20        | 32.81                  | 15.46     | 35.16    |                    |
|                                  | 23155   | 713.5           | -15.07        | 32.74                  | 15.52     | 35.65    |                    |

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

| LTE Band 12                       |         |                 |               |                        |           |          |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|-----------|----------|--------------------|
| Channel Bandwidth: 10 MHz / QPSK  |         |                 |               |                        |           |          |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | ERP (dBm) | ERP (mW) | Polarization (H/V) |
| 90°                               | 23060   | 704.0           | -9.10         | 32.727                 | 21.48     | 140.51   | H                  |
|                                   | 23095   | 707.5           | -9.07         | 32.739                 | 21.52     | 141.87   |                    |
|                                   | 23130   | 711.0           | -9.00         | 32.728                 | 21.58     | 143.81   |                    |
|                                   | 23060   | 704.0           | -14.16        | 32.75                  | 16.44     | 44.06    | V                  |
|                                   | 23095   | 707.5           | -14.15        | 32.81                  | 16.51     | 44.77    |                    |
|                                   | 23130   | 711.0           | -14.13        | 32.84                  | 16.56     | 45.29    |                    |
| Channel Bandwidth: 10 MHz / 16QAM |         |                 |               |                        |           |          |                    |
| 90°                               | 23060   | 704.0           | -10.10        | 32.727                 | 20.48     | 111.61   | H                  |
|                                   | 23095   | 707.5           | -10.08        | 32.739                 | 20.51     | 112.43   |                    |
|                                   | 23130   | 711.0           | -10.01        | 32.728                 | 20.57     | 113.97   |                    |
|                                   | 23060   | 704.0           | -15.17        | 32.75                  | 15.43     | 34.91    | V                  |
|                                   | 23095   | 707.5           | -15.15        | 32.81                  | 15.51     | 35.56    |                    |
|                                   | 23130   | 711.0           | -15.14        | 32.84                  | 15.55     | 35.89    |                    |

Note: ERP (dBm) = Reading (dBm) + Correction Factor (dB) – 2.15

**EIRP Power (dBm)**

| WCDMA |         |                 |               |                        |            |           |                    |
|-------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Plane | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°   | 1312    | 1712.4          | -16.82        | 42.49                  | 25.67      | 368.55    | H                  |
|       | 1413    | 1732.6          | -16.81        | 42.33                  | 25.52      | 356.20    |                    |
|       | 1513    | 1752.6          | -16.54        | 42.10                  | 25.56      | 359.75    |                    |
|       | 1312    | 1712.4          | -23.21        | 42.99                  | 19.78      | 95.06     | V                  |
|       | 1413    | 1732.6          | -23.09        | 42.74                  | 19.65      | 92.26     |                    |
|       | 1513    | 1752.6          | -22.55        | 42.21                  | 19.66      | 92.47     |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

| LTE Band 4                         |         |                 |               |                        |            |           |                    |
|------------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 1.4 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                              | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°                                | 19957   | 1710.7          | -16.82        | 42.49                  | 25.67      | 368.55    | H                  |
|                                    | 20175   | 1732.5          | -16.80        | 42.33                  | 25.53      | 357.03    |                    |
|                                    | 20393   | 1754.3          | -16.64        | 42.10                  | 25.46      | 351.56    |                    |
|                                    | 19957   | 1710.7          | -21.31        | 42.99                  | 21.68      | 147.23    | V                  |
|                                    | 20175   | 1732.5          | -21.18        | 42.74                  | 21.56      | 143.22    |                    |
|                                    | 20393   | 1754.3          | -20.71        | 42.21                  | 21.50      | 141.25    |                    |
| Channel Bandwidth: 1.4 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| 90°                                | 19957   | 1710.7          | -17.82        | 42.49                  | 24.67      | 292.75    | H                  |
|                                    | 20175   | 1732.5          | -17.81        | 42.33                  | 24.52      | 282.94    |                    |
|                                    | 20393   | 1754.3          | -17.64        | 42.10                  | 24.46      | 279.25    |                    |
|                                    | 19957   | 1710.7          | -22.31        | 42.99                  | 20.68      | 116.95    | V                  |
|                                    | 20175   | 1732.5          | -22.18        | 42.74                  | 20.56      | 113.76    |                    |
|                                    | 20393   | 1754.3          | -21.71        | 42.21                  | 20.50      | 112.20    |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)



| LTE Band 4                       |         |                 |               |                        |            |           |                    |
|----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 3 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                            | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°                              | 19965   | 1711.5          | -16.78        | 42.49                  | 25.71      | 371.96    | H                  |
|                                  | 20175   | 1732.5          | -16.76        | 42.33                  | 25.57      | 360.33    |                    |
|                                  | 20385   | 1753.5          | -16.60        | 42.10                  | 25.50      | 354.81    |                    |
|                                  | 19965   | 1711.5          | -21.28        | 42.99                  | 21.71      | 148.25    | V                  |
|                                  | 20175   | 1732.5          | -21.14        | 42.74                  | 21.60      | 144.54    |                    |
|                                  | 20385   | 1753.5          | -20.67        | 42.21                  | 21.54      | 142.56    |                    |
| Channel Bandwidth: 3 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| 90°                              | 19965   | 1711.5          | -17.78        | 42.49                  | 24.71      | 295.46    | H                  |
|                                  | 20175   | 1732.5          | -17.76        | 42.33                  | 24.57      | 286.22    |                    |
|                                  | 20385   | 1753.5          | -17.61        | 42.10                  | 24.49      | 281.19    |                    |
|                                  | 19965   | 1711.5          | -22.29        | 42.99                  | 20.70      | 117.49    | V                  |
|                                  | 20175   | 1732.5          | -22.14        | 42.74                  | 20.60      | 114.82    |                    |
|                                  | 20385   | 1753.5          | -21.67        | 42.21                  | 20.54      | 113.24    |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

| LTE Band 4                       |         |                 |               |                        |            |           |                    |
|----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 5 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                            | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°                              | 19975   | 1712.5          | -16.74        | 42.49                  | 25.75      | 375.40    | H                  |
|                                  | 20175   | 1732.5          | -16.72        | 42.33                  | 25.61      | 363.66    |                    |
|                                  | 20375   | 1752.5          | -16.56        | 42.10                  | 25.54      | 358.10    |                    |
|                                  | 19975   | 1712.5          | -21.24        | 42.99                  | 21.75      | 149.62    | V                  |
|                                  | 20175   | 1732.5          | -21.10        | 42.74                  | 21.64      | 145.88    |                    |
|                                  | 20375   | 1752.5          | -20.63        | 42.21                  | 21.58      | 143.88    |                    |
| Channel Bandwidth: 5 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| 90°                              | 19975   | 1712.5          | -17.74        | 42.49                  | 24.75      | 298.19    | H                  |
|                                  | 20175   | 1732.5          | -17.72        | 42.33                  | 24.61      | 288.87    |                    |
|                                  | 20375   | 1752.5          | -17.56        | 42.10                  | 24.54      | 284.45    |                    |
|                                  | 19975   | 1712.5          | -22.25        | 42.99                  | 20.74      | 118.58    | V                  |
|                                  | 20175   | 1732.5          | -22.10        | 42.74                  | 20.64      | 115.88    |                    |
|                                  | 20375   | 1752.5          | -21.63        | 42.21                  | 20.58      | 114.29    |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

| LTE Band 4                        |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 10 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°                               | 20000   | 1715.0          | -16.71        | 42.49                  | 25.78      | 378.01    | H                  |
|                                   | 20175   | 1732.5          | -16.68        | 42.33                  | 25.65      | 367.03    |                    |
|                                   | 20350   | 1750.0          | -16.52        | 42.10                  | 25.58      | 361.41    |                    |
|                                   | 20000   | 1715.0          | -21.20        | 42.99                  | 21.79      | 151.01    | V                  |
|                                   | 20175   | 1732.5          | -21.06        | 42.74                  | 21.68      | 147.23    |                    |
|                                   | 20350   | 1750.0          | -20.59        | 42.21                  | 21.62      | 145.21    |                    |
| Channel Bandwidth: 10 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| 90°                               | 20000   | 1715.0          | -17.71        | 42.49                  | 24.78      | 300.26    | H                  |
|                                   | 20175   | 1732.5          | -17.68        | 42.33                  | 24.65      | 291.54    |                    |
|                                   | 20350   | 1750.0          | -17.52        | 42.10                  | 24.58      | 287.08    |                    |
|                                   | 20000   | 1715.0          | -22.21        | 42.99                  | 20.78      | 119.67    | V                  |
|                                   | 20175   | 1732.5          | -22.06        | 42.74                  | 20.68      | 116.95    |                    |
|                                   | 20350   | 1750.0          | -21.59        | 42.21                  | 20.62      | 115.35    |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

| LTE Band 4                        |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 15 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°                               | 20025   | 1717.5          | -16.67        | 42.49                  | 25.82      | 381.50    | H                  |
|                                   | 20175   | 1732.5          | -16.64        | 42.33                  | 25.69      | 370.42    |                    |
|                                   | 20325   | 1747.5          | -16.48        | 42.10                  | 25.62      | 364.75    |                    |
|                                   | 20025   | 1717.5          | -21.16        | 42.99                  | 21.83      | 152.41    | V                  |
|                                   | 20175   | 1732.5          | -21.02        | 42.74                  | 21.72      | 148.59    |                    |
|                                   | 20325   | 1747.5          | -20.56        | 42.21                  | 21.65      | 146.22    |                    |
| Channel Bandwidth: 15 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| 90°                               | 20025   | 1717.5          | -17.67        | 42.49                  | 24.82      | 303.04    | H                  |
|                                   | 20175   | 1732.5          | -17.65        | 42.33                  | 24.68      | 293.56    |                    |
|                                   | 20325   | 1747.5          | -17.49        | 42.10                  | 24.61      | 289.07    |                    |
|                                   | 20025   | 1717.5          | -22.16        | 42.99                  | 20.83      | 121.06    | V                  |
|                                   | 20175   | 1732.5          | -22.02        | 42.74                  | 20.72      | 118.03    |                    |
|                                   | 20325   | 1747.5          | -21.56        | 42.21                  | 20.65      | 116.14    |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

| LTE Band 4                        |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 20 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| 90°                               | 20050   | 1720.0          | -16.63        | 42.49                  | 25.86      | 385.03    | H                  |
|                                   | 20175   | 1732.5          | -16.60        | 42.33                  | 25.73      | 373.85    |                    |
|                                   | 20300   | 1745.0          | -16.44        | 42.10                  | 25.66      | 368.13    |                    |
|                                   | 20050   | 1720.0          | -21.12        | 42.99                  | 21.87      | 153.82    | V                  |
|                                   | 20175   | 1732.5          | -20.98        | 42.74                  | 21.76      | 149.97    |                    |
|                                   | 20300   | 1745.0          | -20.52        | 42.21                  | 21.69      | 147.57    |                    |
| Channel Bandwidth: 20 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| 90°                               | 20050   | 1720.0          | -17.63        | 42.49                  | 24.86      | 305.84    | H                  |
|                                   | 20175   | 1732.5          | -17.61        | 42.33                  | 24.72      | 296.28    |                    |
|                                   | 20300   | 1745.0          | -17.45        | 42.10                  | 24.65      | 291.74    |                    |
|                                   | 20050   | 1720.0          | -22.12        | 42.99                  | 20.87      | 122.18    | V                  |
|                                   | 20175   | 1732.5          | -21.98        | 42.74                  | 20.76      | 119.12    |                    |
|                                   | 20300   | 1745.0          | -21.53        | 42.21                  | 20.68      | 116.95    |                    |

Note: EIRP (dBm) = Reading (dBm) + Correction Factor (dB)

## 4.2 Radiated Emission Measurement

### 4.2.1 Limits of Radiated Emission Measurement

- a. The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB. The limit of emission is equal to -13 dBm.

### 4.2.2 Test Procedure

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G.
- c.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}$ .

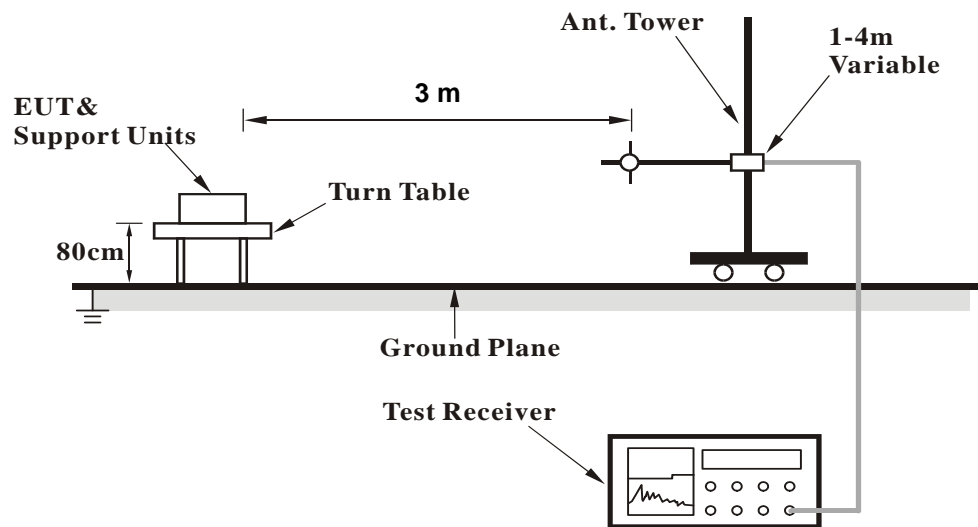
**Note:** The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

### 4.2.3 Deviation from Test Standard

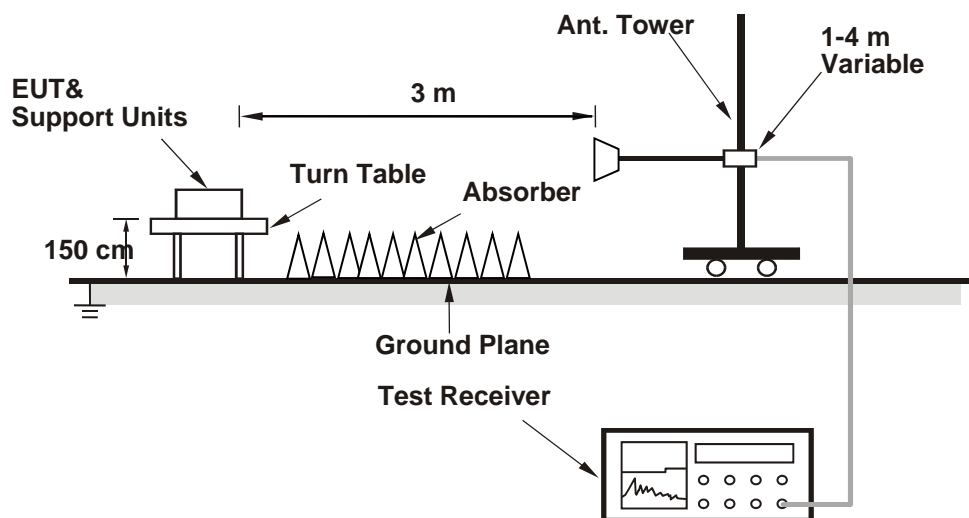
No deviation.

#### 4.2.4 Test Setup

##### <Radiated Emission below or equal 1 GHz>



##### <Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.5 Test Results

WCDMA:  
Low Channel

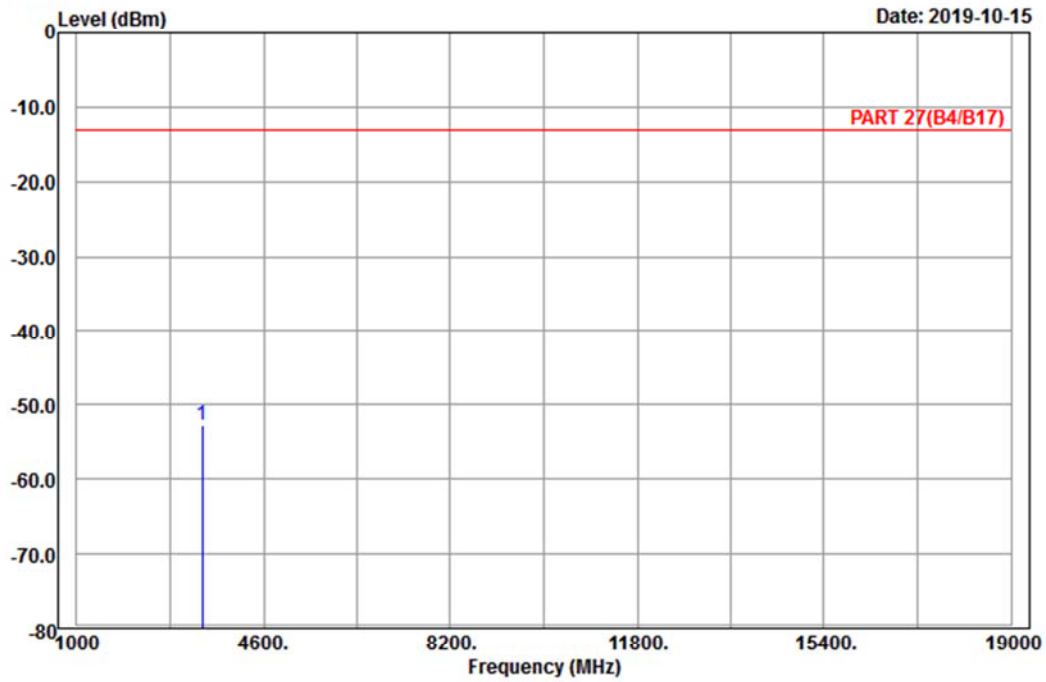


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : Band IV\_Link\_L-Ch  
 Tested by: Harry Hsueh

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 3424.80 | -52.66 | -67.03     | 14.37  | -13.00     | -39.66     | Peak   |

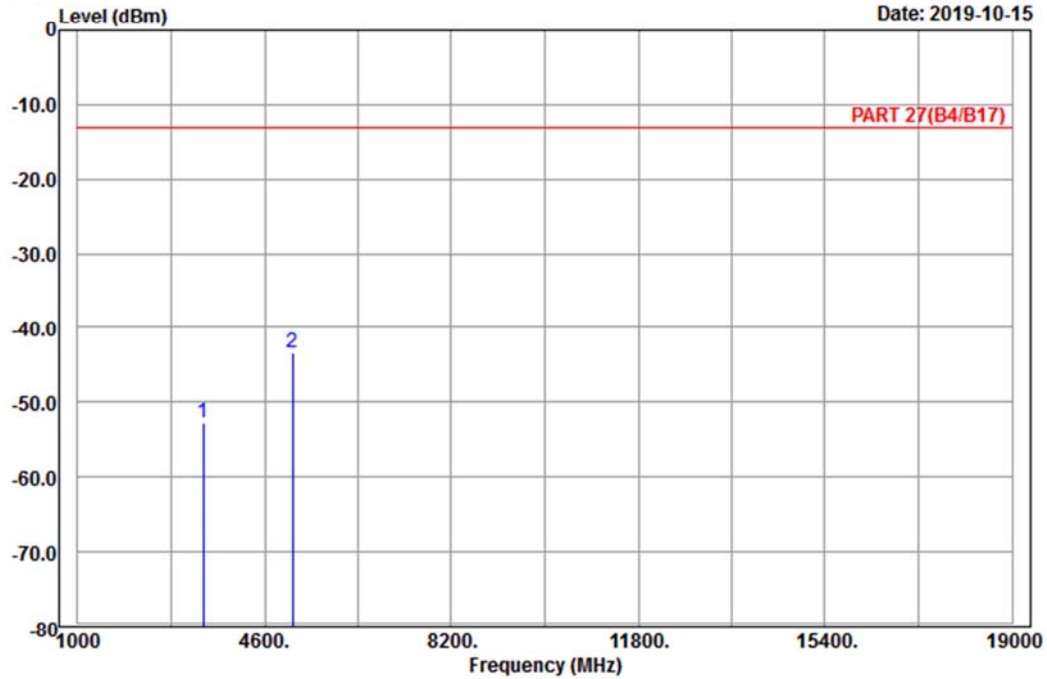


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A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : Band IV\_Link\_L-Ch  
 Tested by: Harry Hsueh

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3424.80 | -52.68 | -67.05     | 14.37  | -13.00     | -39.68     | Peak   |
| 2 pp | 5137.20 | -43.35 | -63.16     | 19.81  | -13.00     | -30.35     | Peak   |

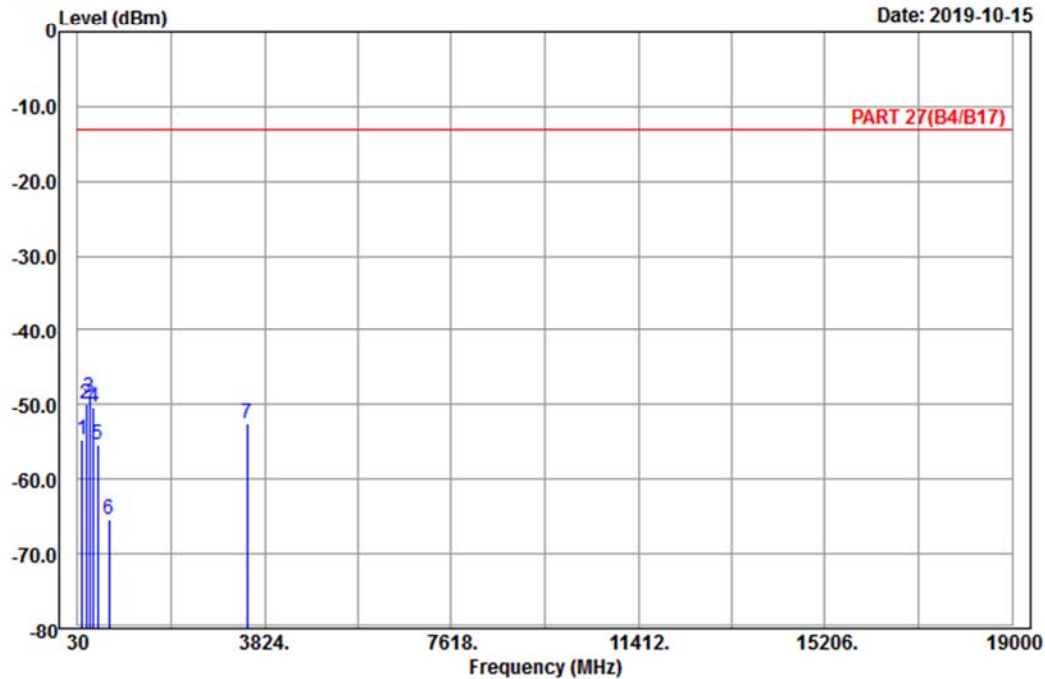
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 13



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : Band IV\_Link\_M-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 126.66  | -54.62 | -46.79     | -7.83  | -13.00     | -41.62     | Peak   |
| 2    | 196.86  | -49.94 | -43.89     | -6.05  | -13.00     | -36.94     | Peak   |
| 3 pp | 273.00  | -49.06 | -43.34     | -5.72  | -13.00     | -36.06     | Peak   |
| 4    | 351.80  | -50.39 | -45.12     | -5.27  | -13.00     | -37.39     | Peak   |
| 5    | 435.10  | -55.39 | -51.86     | -3.53  | -13.00     | -42.39     | Peak   |
| 6    | 659.80  | -65.35 | -65.17     | -0.18  | -13.00     | -52.35     | Peak   |
| 7    | 3465.20 | -52.61 | -66.95     | 14.34  | -13.00     | -39.61     | Peak   |



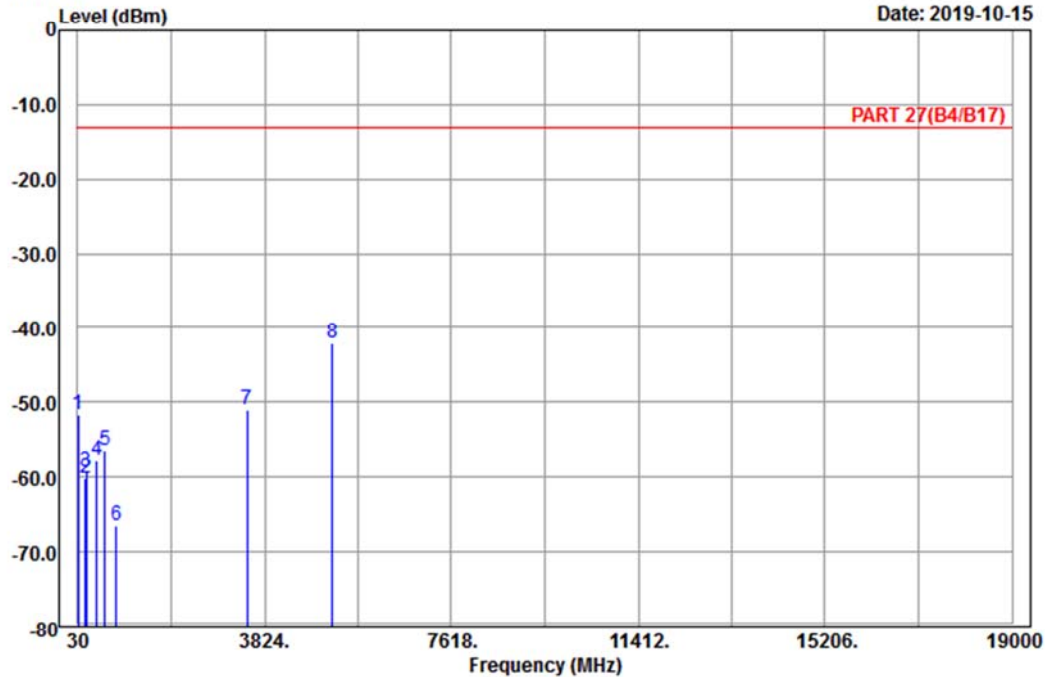


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 14

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : Band IV\_Link\_M-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 33.78   | -51.70 | -40.72     | -10.98 | -13.00     | -38.70     | Peak   |
| 2    | 192.00  | -60.19 | -54.37     | -5.82  | -13.00     | -47.19     | Peak   |
| 3    | 202.26  | -59.38 | -53.24     | -6.14  | -13.00     | -46.38     | Peak   |
| 4    | 412.00  | -57.72 | -54.70     | -3.02  | -13.00     | -44.72     | Peak   |
| 5    | 576.50  | -56.37 | -55.79     | -0.58  | -13.00     | -43.37     | Peak   |
| 6    | 814.50  | -66.41 | -68.26     | 1.85   | -13.00     | -53.41     | Peak   |
| 7    | 3465.20 | -50.99 | -65.33     | 14.34  | -13.00     | -37.99     | Peak   |
| 8 pp | 5197.80 | -42.17 | -62.29     | 20.12  | -13.00     | -29.17     | Peak   |

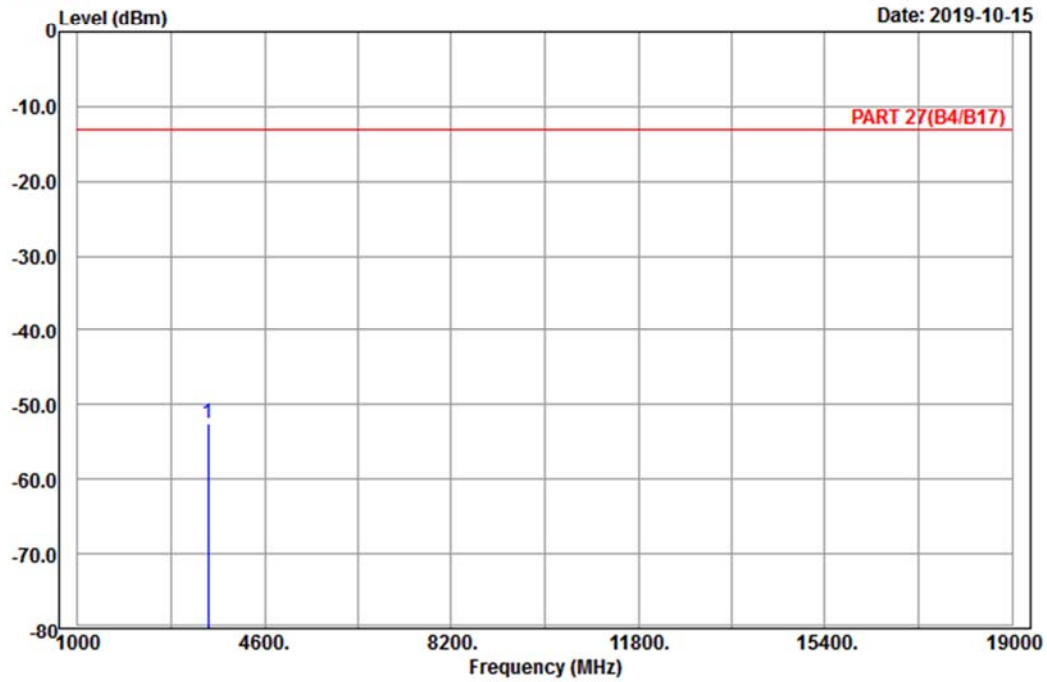
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : Band IV\_Link\_H-Ch  
 Tested by: Harry Hsueh

|              | Read   | Limit  | Over   |             |
|--------------|--------|--------|--------|-------------|
| Freq         | Level  | Level  | Factor | Line        |
| MHz          | dBm    | dBm    | dB     | dBm         |
| 1 pp 3505.20 | -52.47 | -66.75 | 14.28  | -13.00      |
|              |        |        |        | -39.47 Peak |

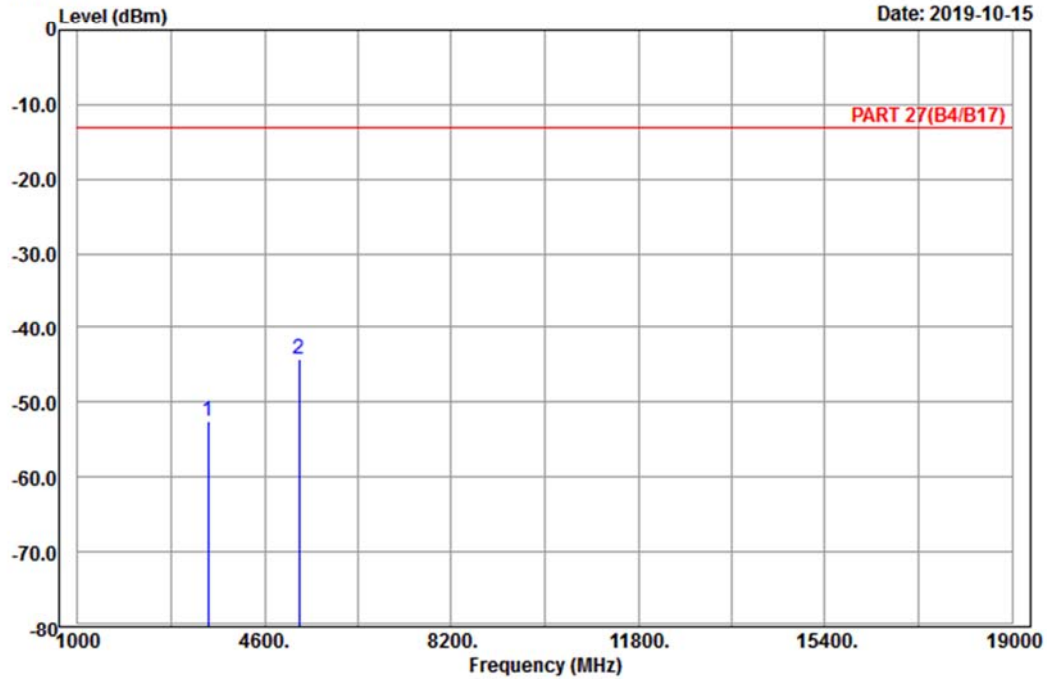


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : Band IV\_Link\_H-Ch  
 Tested by: Harry Hsueh

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3505.20 | -52.54 | -66.82     | 14.28  | -13.00     | -39.54     | Peak   |
| 2 pp | 5257.80 | -44.18 | -64.38     | 20.20  | -13.00     | -31.18     | Peak   |

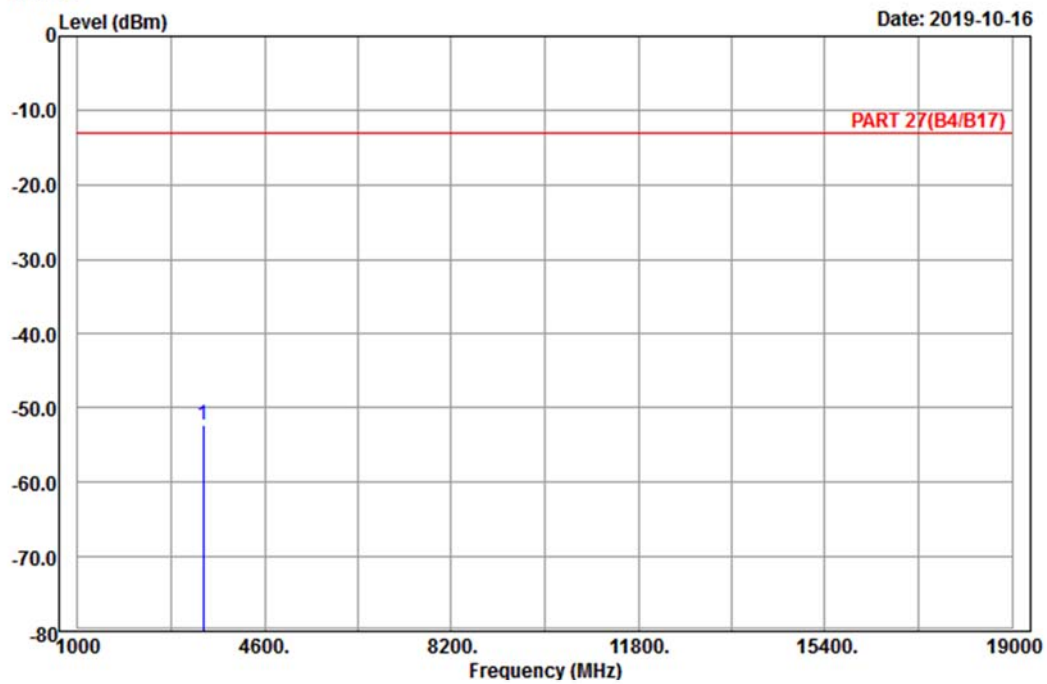
LTE Band 4  
 Channel Bandwidth: 1.4 MHz / QPSK  
 Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_L-Ch  
 Tested by: Karl Lee

|              | Read   | Limit  | Over   |             |
|--------------|--------|--------|--------|-------------|
| Freq         | Level  | Level  | Factor | Line        |
| MHz          | dBm    | dBm    | dB     | dBm         |
| 1 pp 3421.40 | -52.40 | -66.77 | 14.37  | -13.00      |
|              |        |        |        | -39.40 Peak |

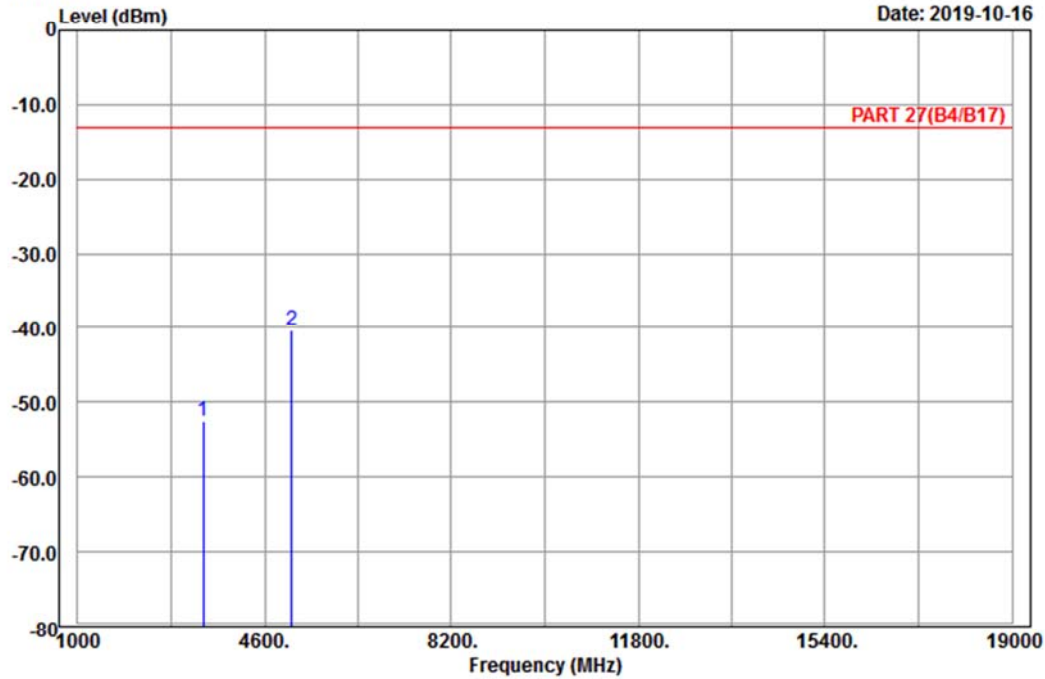


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2019-10-16



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_L-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3421.40 | -52.48 | -66.85     | 14.37  | -13.00     | -39.48     | Peak   |
| 2 pp | 5132.10 | -40.35 | -60.16     | 19.81  | -13.00     | -27.35     | Peak   |

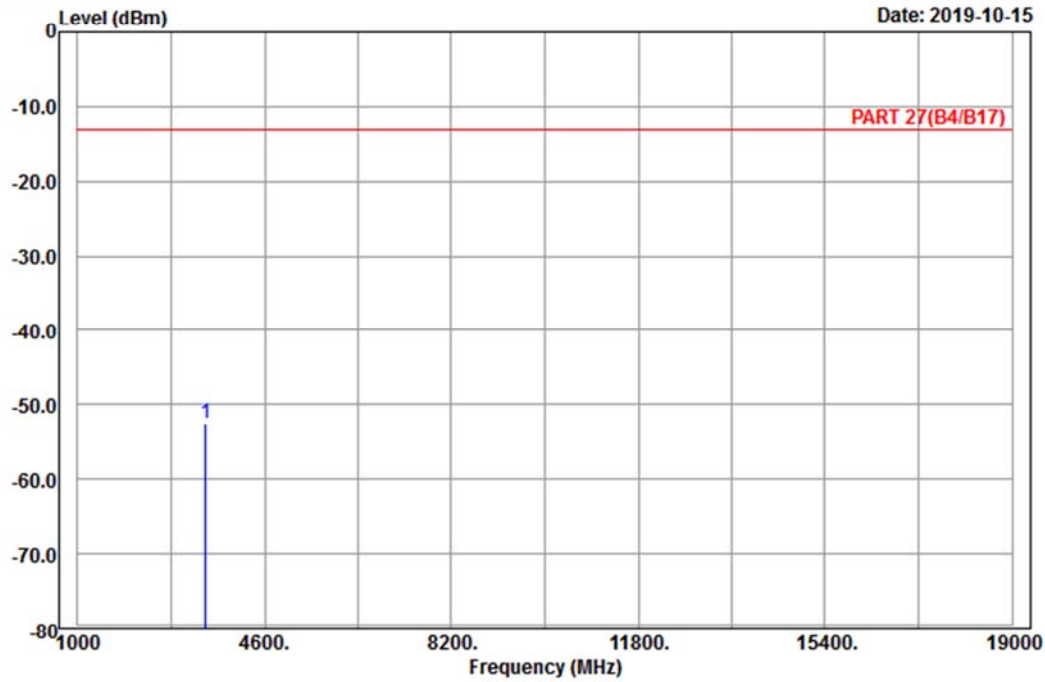
### Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_M-Ch  
 Tested by: Karl Lee

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 3465.00 | -52.57 | -66.91     | 14.34  | -13.00     | -39.57     | Peak   |

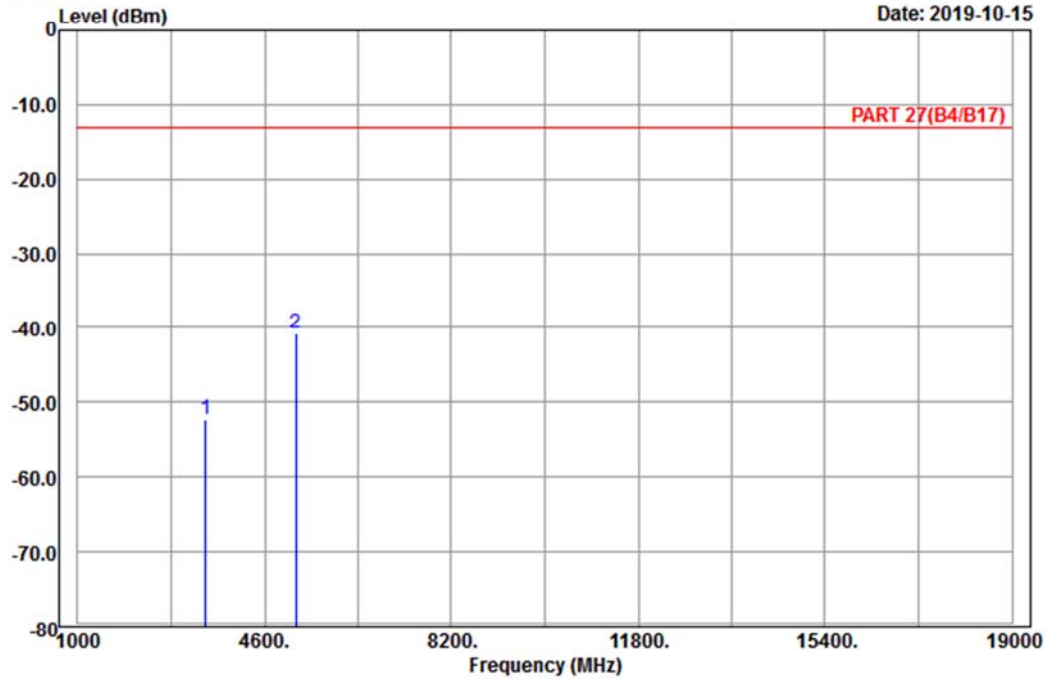


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_M-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3465.00 | -52.42 | -66.76     | 14.34  | -13.00     | -39.42     | Peak   |
| 2 pp | 5197.50 | -40.76 | -60.88     | 20.12  | -13.00     | -27.76     | Peak   |

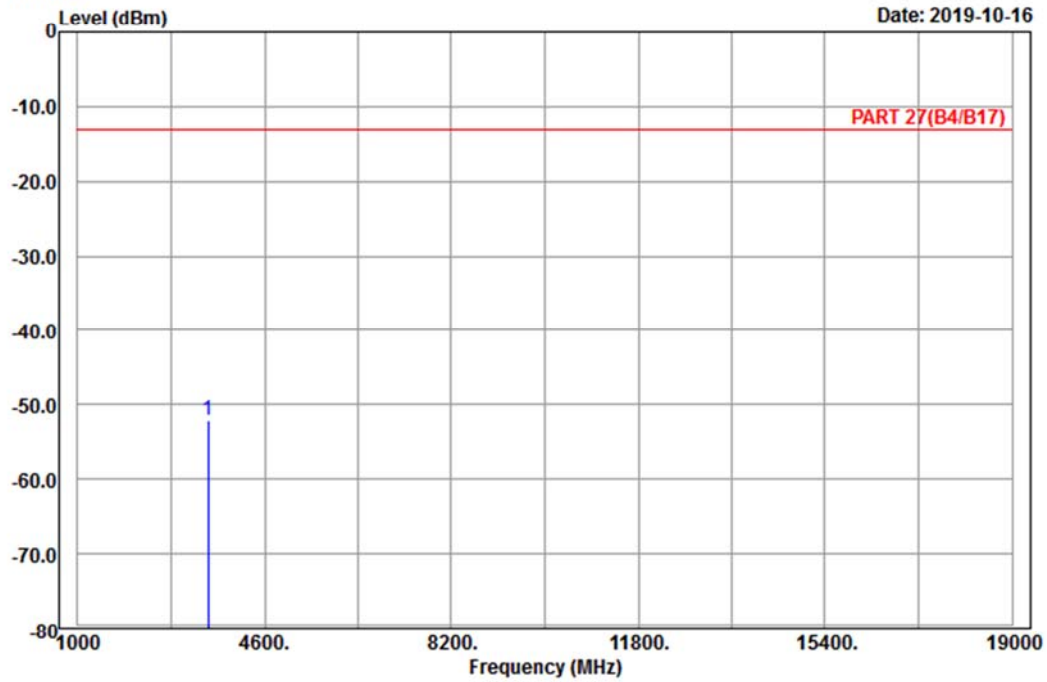
# High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 3



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_H-Ch  
 Tested by: Karl Lee

| Freq         | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|--------------|--------|------------|--------|------------|------------|--------|
| MHz          | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp 3508.60 | -52.01 | -66.29     | 14.28  | -13.00     | -39.01     | Peak   |



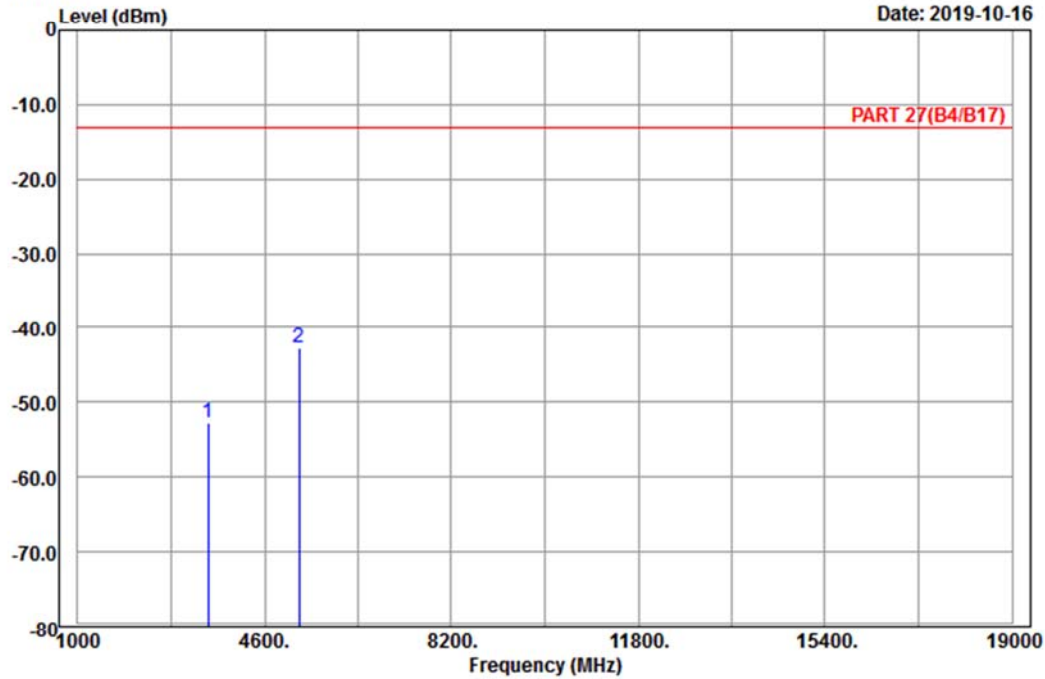


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 4

Date: 2019-10-16



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_H-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3508.60 | -52.74 | -67.02     | 14.28  | -13.00     | -39.74     | Peak   |
| 2 pp | 5262.90 | -42.70 | -62.90     | 20.20  | -13.00     | -29.70     | Peak   |

Channel Bandwidth: 5 MHz / QPSK  
Low Channel

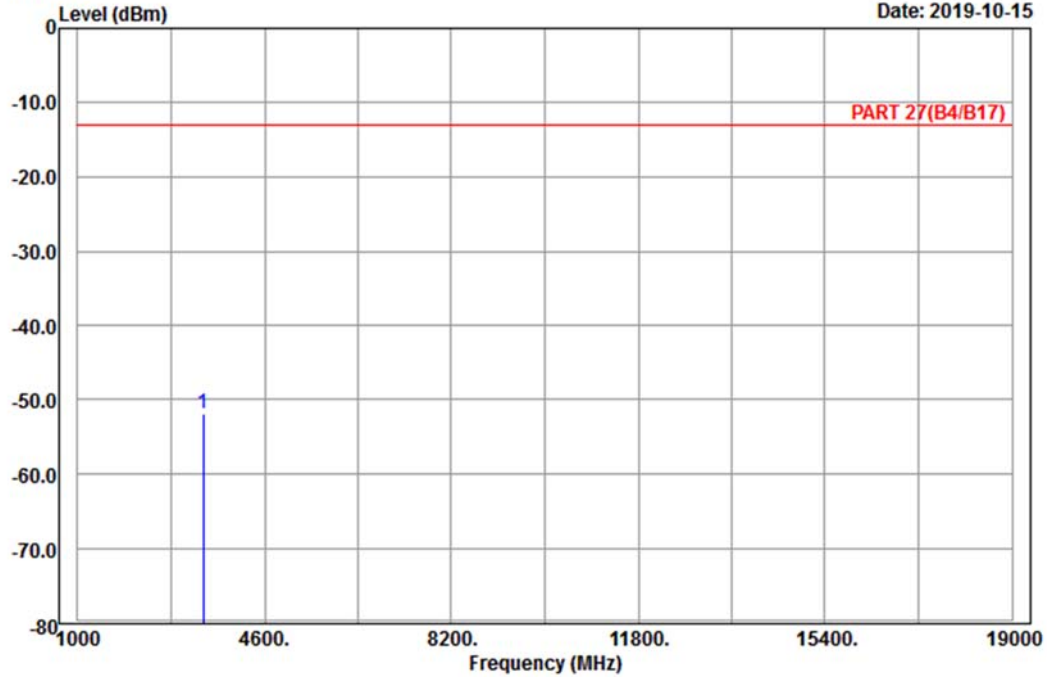


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9

Date: 2019-10-15



Site : 966 chamber 1  
Condition: PART 27(B4/B17) Horizontal  
Remark : LTE\_Band 4\_Link\_L-Ch  
Tested by: Karl Lee

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 3425.00 | -51.82 | -66.19     | 14.37  | -13.00     | -38.82     | Peak   |

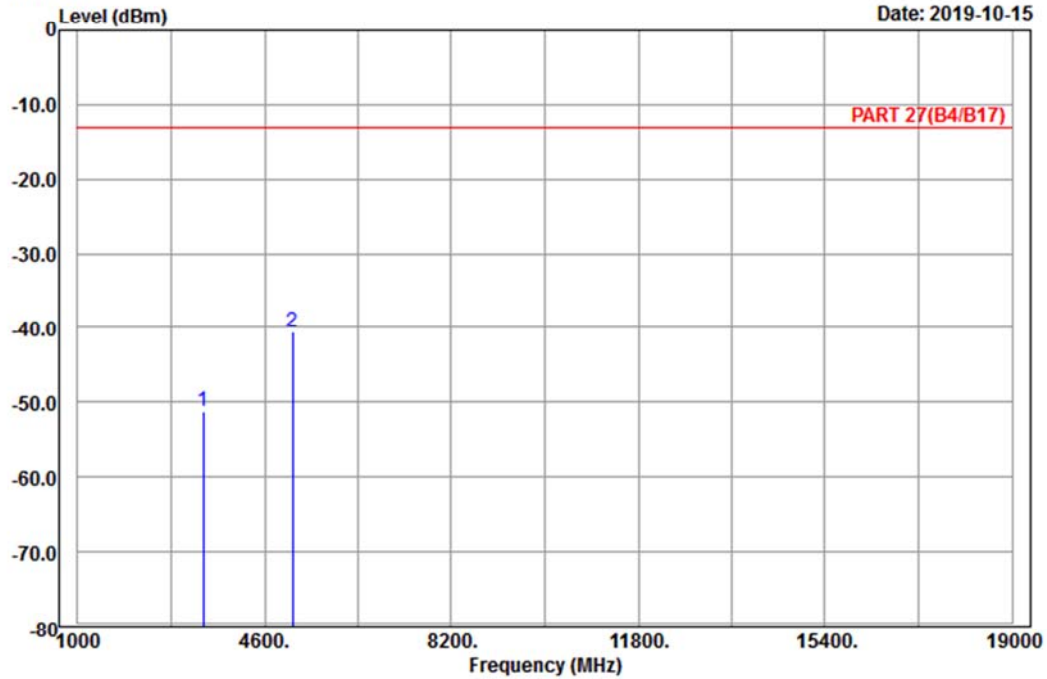


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_L-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3425.00 | -51.14 | -65.51     | 14.37  | -13.00     | -38.14     | Peak   |
| 2 pp | 5137.50 | -40.64 | -60.45     | 19.81  | -13.00     | -27.64     | Peak   |

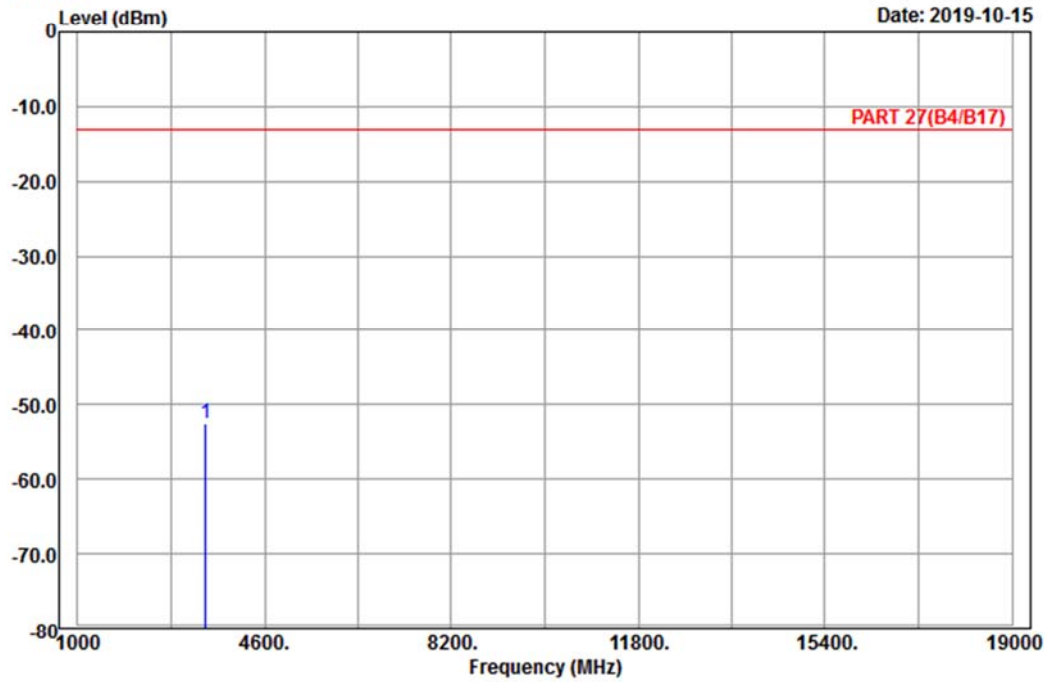
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_M-Ch  
 Tested by: Karl Lee

| Freq         | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|--------------|--------|------------|--------|------------|------------|--------|
| MHz          | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp 3465.00 | -52.58 | -66.92     | 14.34  | -13.00     | -39.58     | Peak   |

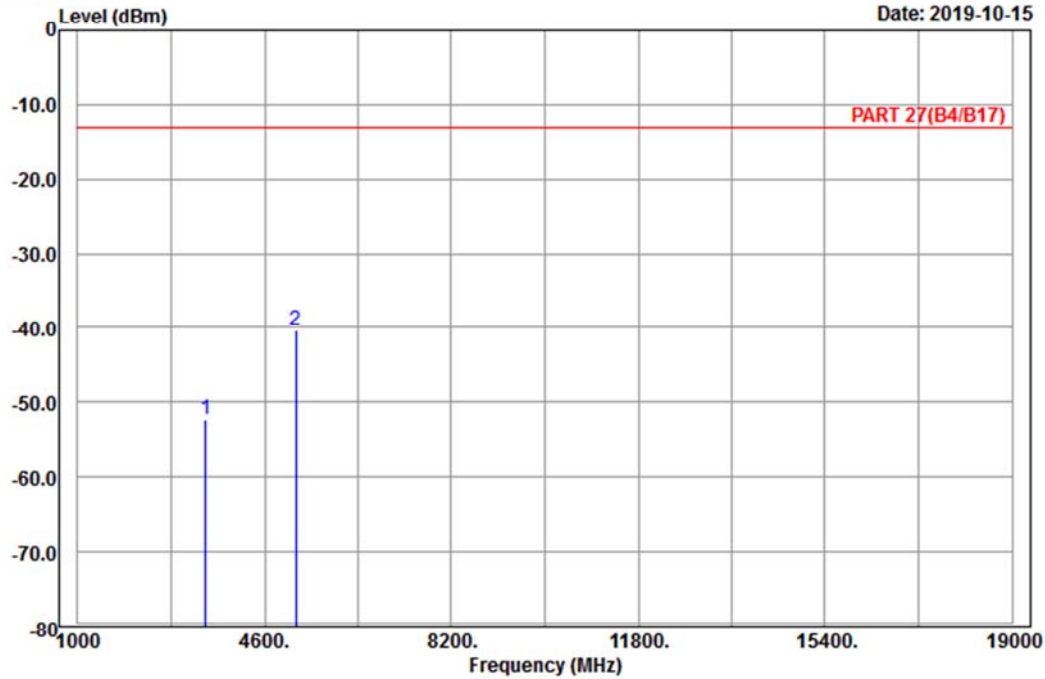


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_M-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3465.00 | -52.25 | -66.59     | 14.34  | -13.00     | -39.25     | Peak   |
| 2 pp | 5197.50 | -40.38 | -60.50     | 20.12  | -13.00     | -27.38     | Peak   |

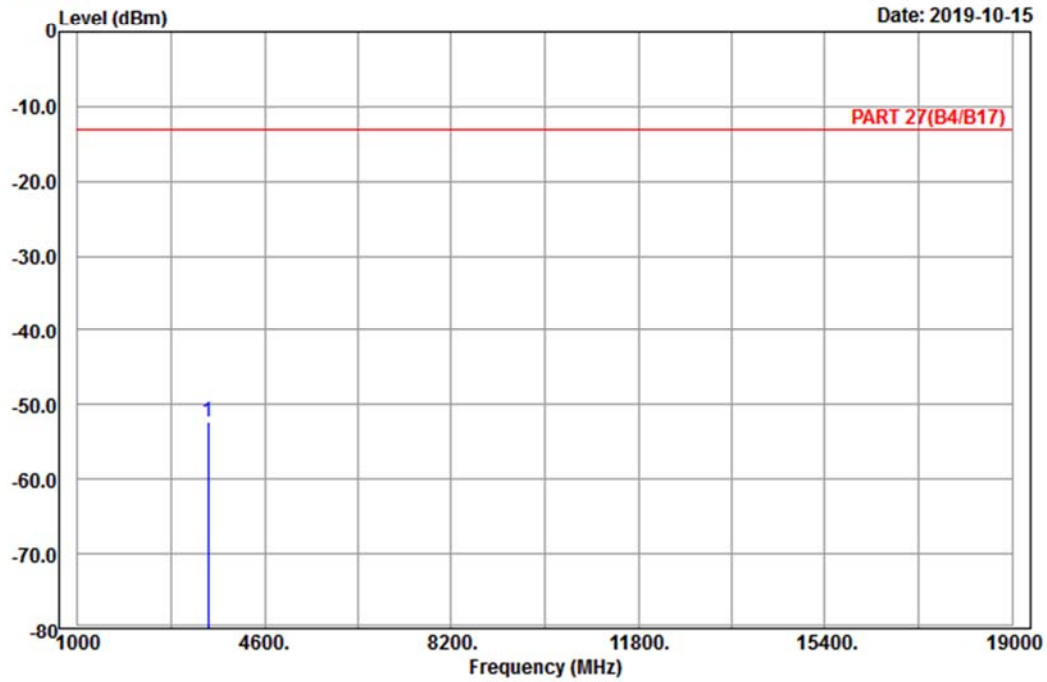
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_H-Ch  
 Tested by: Karl Lee

|              | Read   | Limit  | Over   |        |
|--------------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Factor | Line   |
| MHz          | dBm    | dBm    | dB     | dBm    |
| 1 pp 3505.00 | -52.23 | -66.51 | 14.28  | -13.00 |
|              |        |        |        | -39.23 |
|              |        |        |        | Peak   |

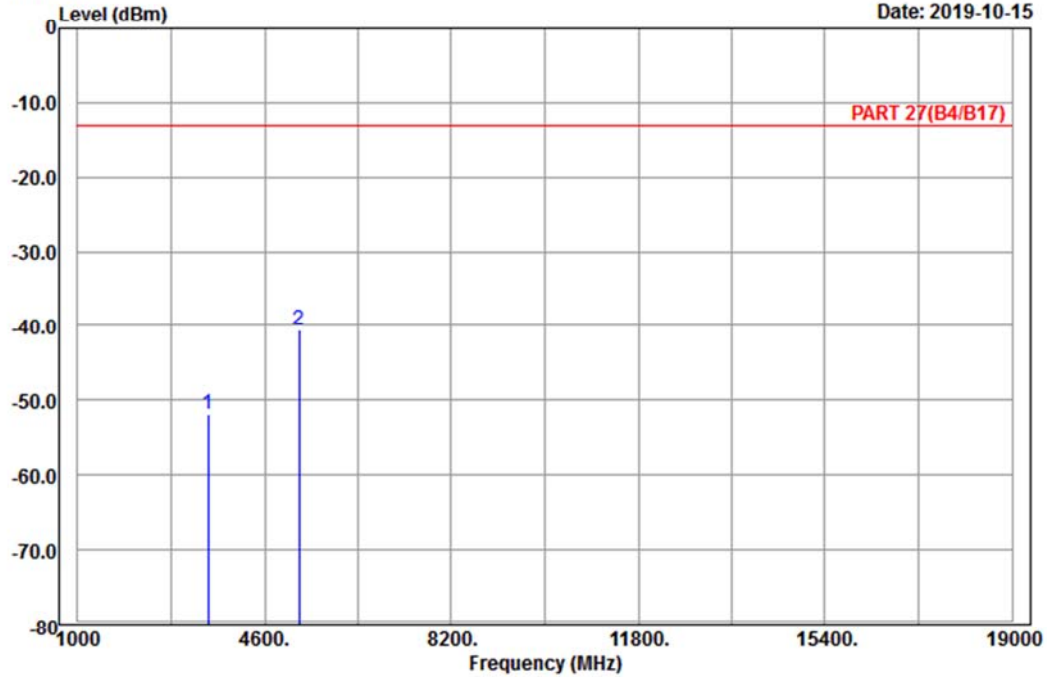


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_H-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3505.00 | -51.78 | -66.06     | 14.28  | -13.00     | -38.78     | Peak   |
| 2 pp | 5257.50 | -40.61 | -60.81     | 20.20  | -13.00     | -27.61     | Peak   |

Channel Bandwidth: 20 MHz / QPSK  
 Low Channel

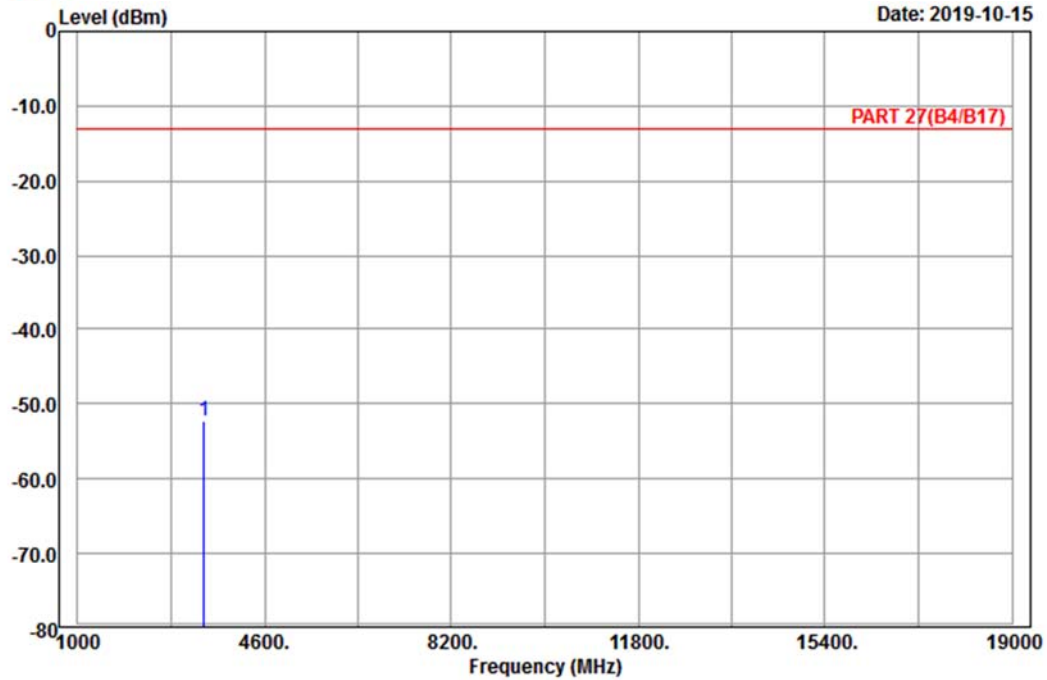


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_L-Ch  
 Tested by: Karl Lee

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 3440.00 | -52.38 | -66.73     | 14.35  | -13.00     | -39.38     | Peak   |



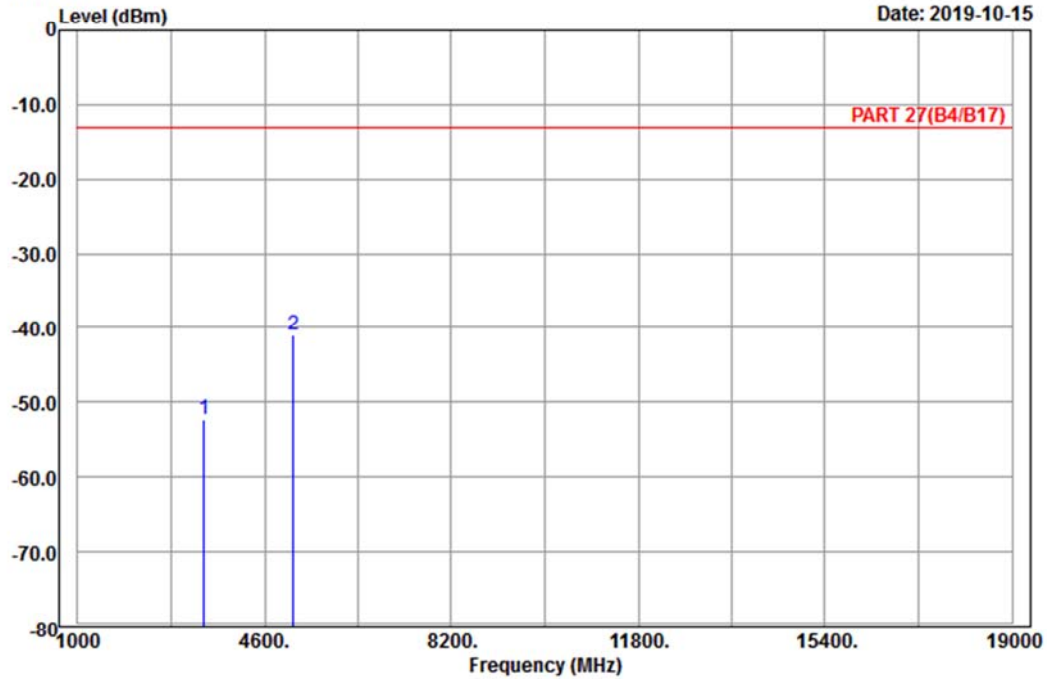


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_L-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3440.00 | -52.32 | -66.67     | 14.35  | -13.00     | -39.32     | Peak   |
| 2 pp | 5160.00 | -41.09 | -61.01     | 19.92  | -13.00     | -28.09     | Peak   |

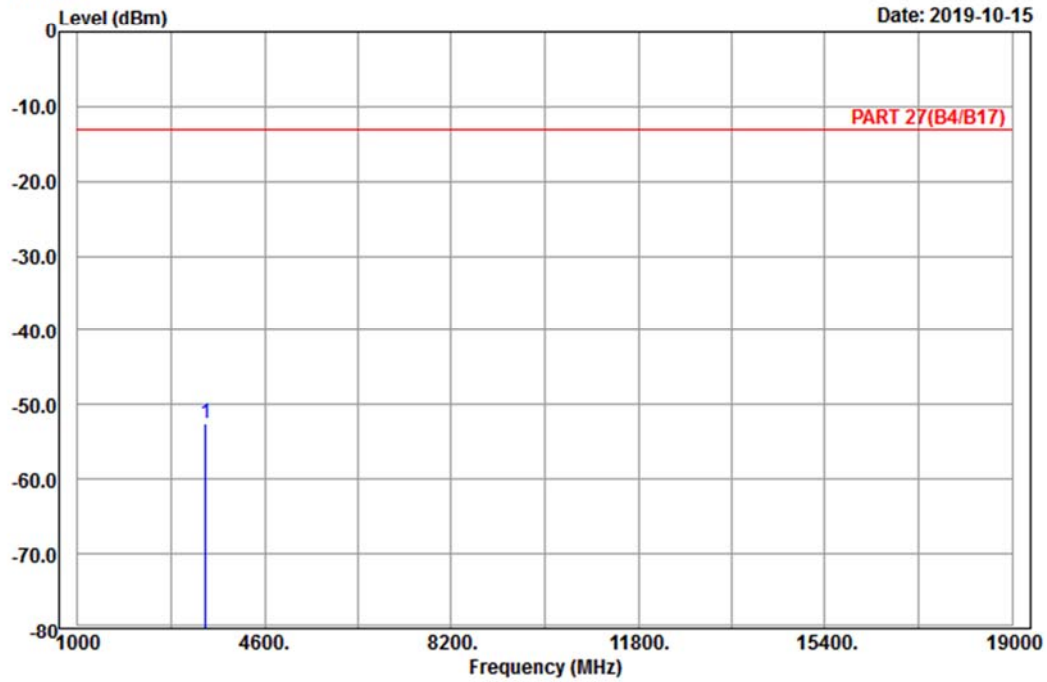
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_M-Ch  
 Tested by: Karl Lee

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 3465.00 | -52.51 | -66.85     | 14.34  | -13.00     | -39.51     | Peak   |

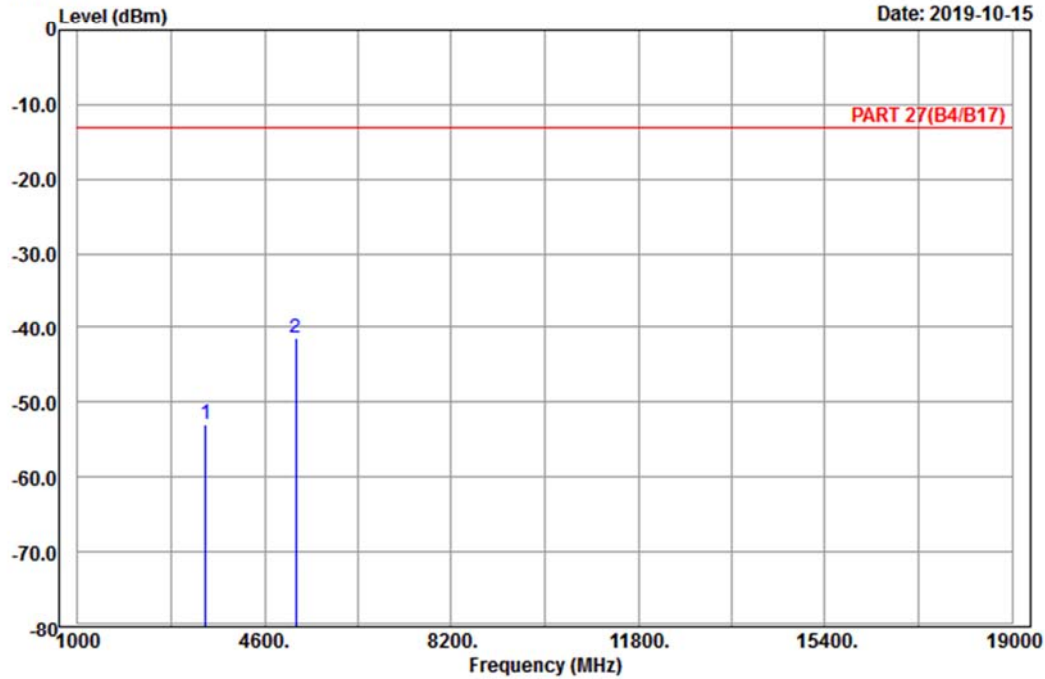


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_M-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 3465.00 | -52.96 | -67.30     | 14.34  | -13.00     | -39.96     | Peak   |
| 2 pp | 5197.50 | -41.39 | -61.51     | 20.12  | -13.00     | -28.39     | Peak   |

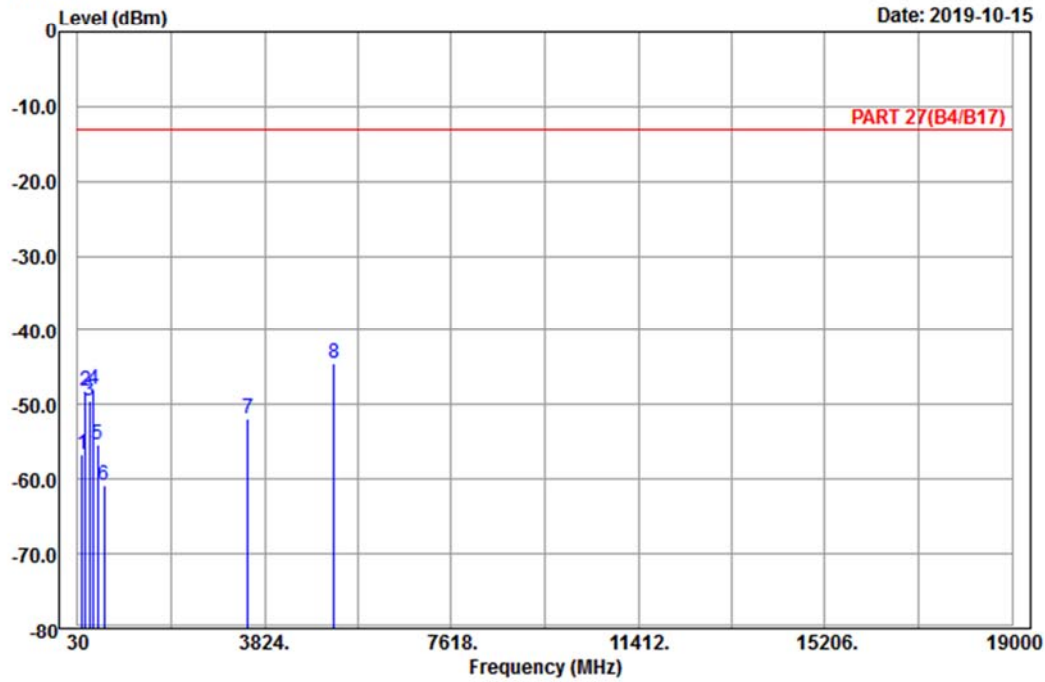
# High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 13



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Horizontal  
 Remark : LTE\_Band 4\_Link\_H-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 124.50  | -56.60 | -48.59     | -8.01  | -13.00     | -43.60     | Peak   |
| 2    | 193.89  | -48.18 | -42.27     | -5.91  | -13.00     | -35.18     | Peak   |
| 3    | 276.24  | -49.57 | -43.82     | -5.75  | -13.00     | -36.57     | Peak   |
| 4    | 344.10  | -48.03 | -42.58     | -5.45  | -13.00     | -35.03     | Peak   |
| 5    | 434.40  | -55.43 | -51.92     | -3.51  | -13.00     | -42.43     | Peak   |
| 6    | 570.90  | -60.80 | -60.02     | -0.78  | -13.00     | -47.80     | Peak   |
| 7    | 3490.00 | -51.88 | -66.19     | 14.31  | -13.00     | -38.88     | Peak   |
| 8 pp | 5235.00 | -44.48 | -64.64     | 20.16  | -13.00     | -31.48     | Peak   |

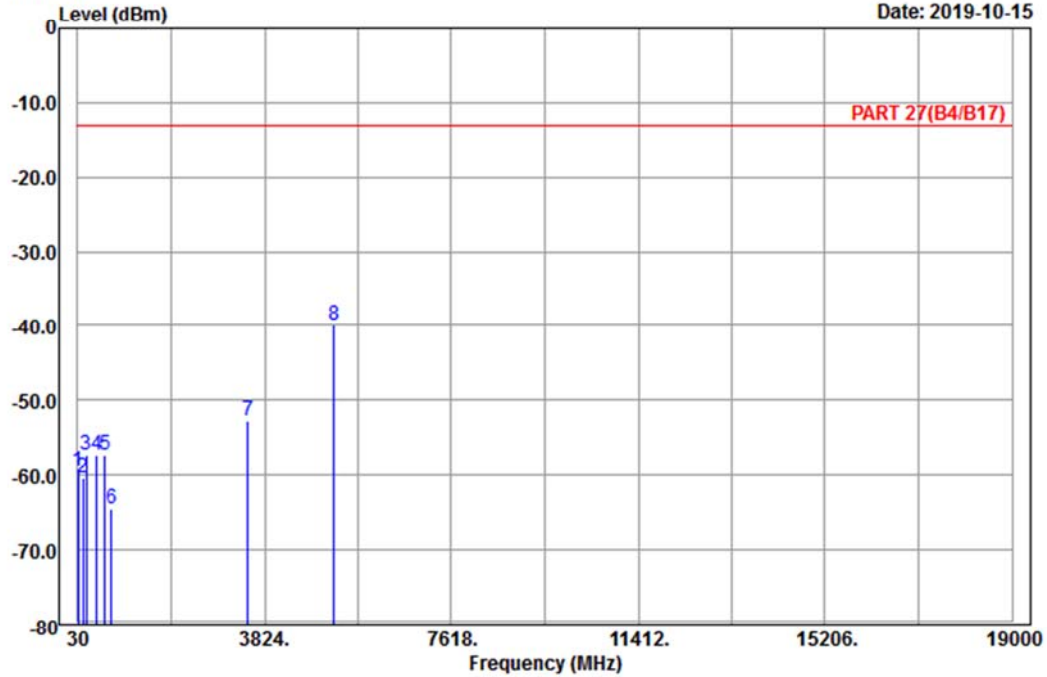


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 14

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B4/B17) Vertical  
 Remark : LTE\_Band 4\_Link\_H-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 37.83   | -59.60 | -49.63     | -9.97  | -13.00     | -46.60     | Peak   |
| 2    | 129.09  | -60.45 | -52.74     | -7.71  | -13.00     | -47.45     | Peak   |
| 3    | 194.97  | -57.30 | -51.34     | -5.96  | -13.00     | -44.30     | Peak   |
| 4    | 409.90  | -57.23 | -54.26     | -2.97  | -13.00     | -44.23     | Peak   |
| 5    | 579.30  | -57.35 | -56.89     | -0.46  | -13.00     | -44.35     | Peak   |
| 6    | 712.30  | -64.61 | -64.01     | -0.60  | -13.00     | -51.61     | Peak   |
| 7    | 3490.00 | -52.86 | -67.17     | 14.31  | -13.00     | -39.86     | Peak   |
| 8 pp | 5235.00 | -39.94 | -60.10     | 20.16  | -13.00     | -26.94     | Peak   |

LTE Band 12  
 Channel Bandwidth: 1.4 MHz / QPSK  
 Low Channel

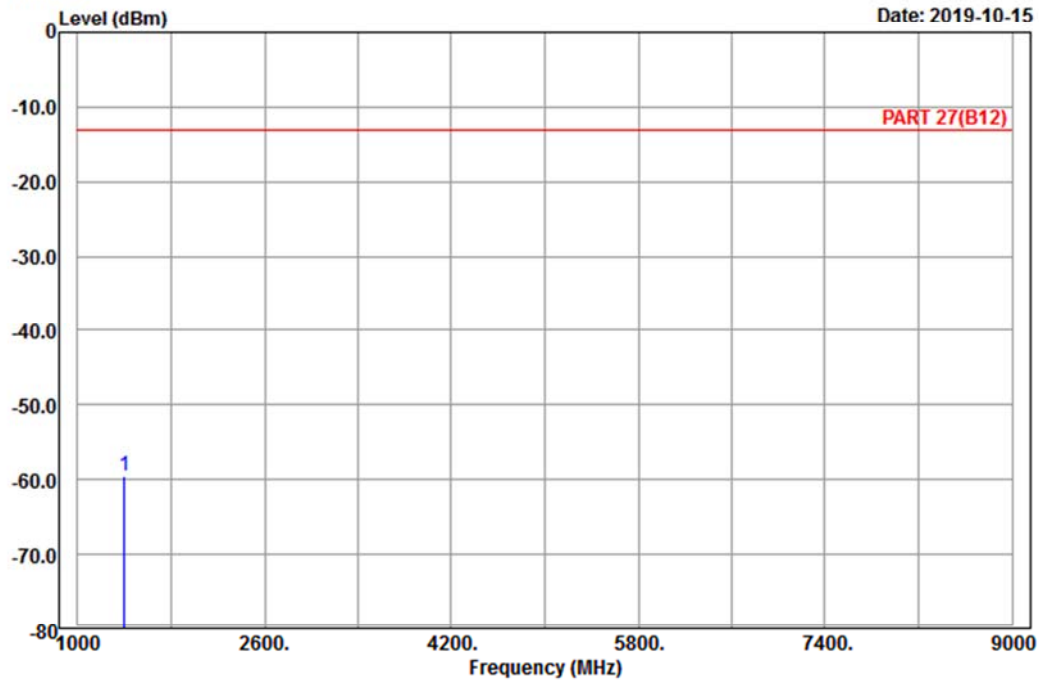


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_L-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |               |
|--------------|--------|--------|--------|--------|---------------|
| Freq         | Level  | Level  | Line   | Limit  | Factor Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB            |
| 1 pp 1399.40 | -59.46 | -65.56 | -13.00 | -46.46 | 6.10 Peak     |

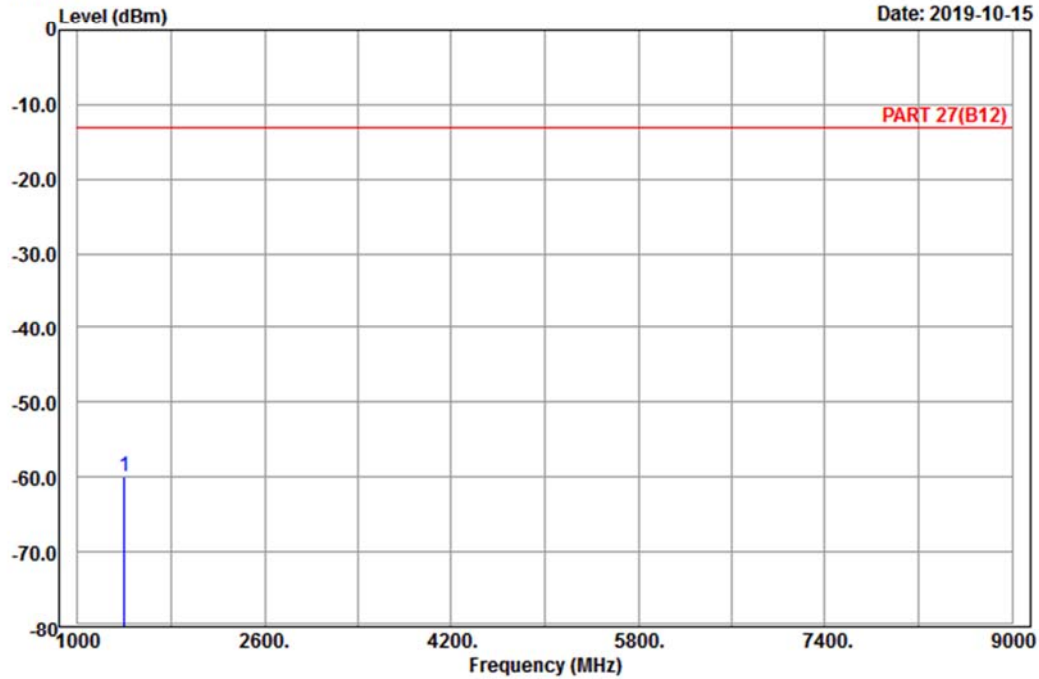


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_L-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor | Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1 pp 1399.40 | -59.84 | -65.94 | -13.00 | -46.84 | 6.10   | Peak   |

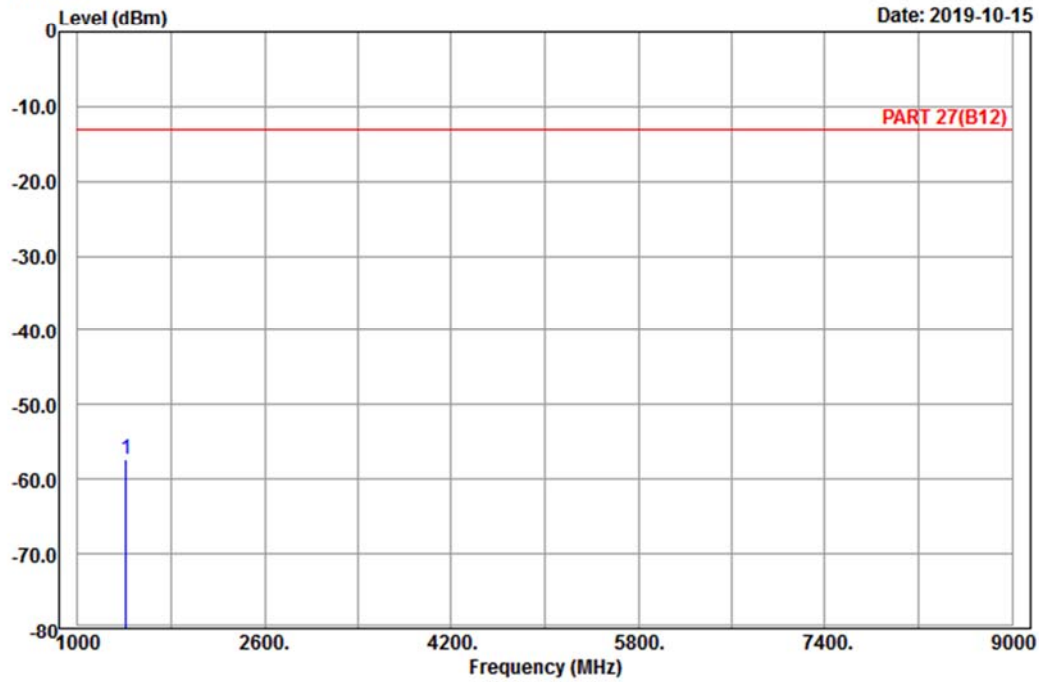
Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_M-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit  | Over Limit | Remark |
|------|---------|--------|------------|--------|--------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm    | dB         |        |
| 1 pp | 1415.00 | -57.41 | -63.77     | 6.36   | -13.00 | -44.41     | Peak   |



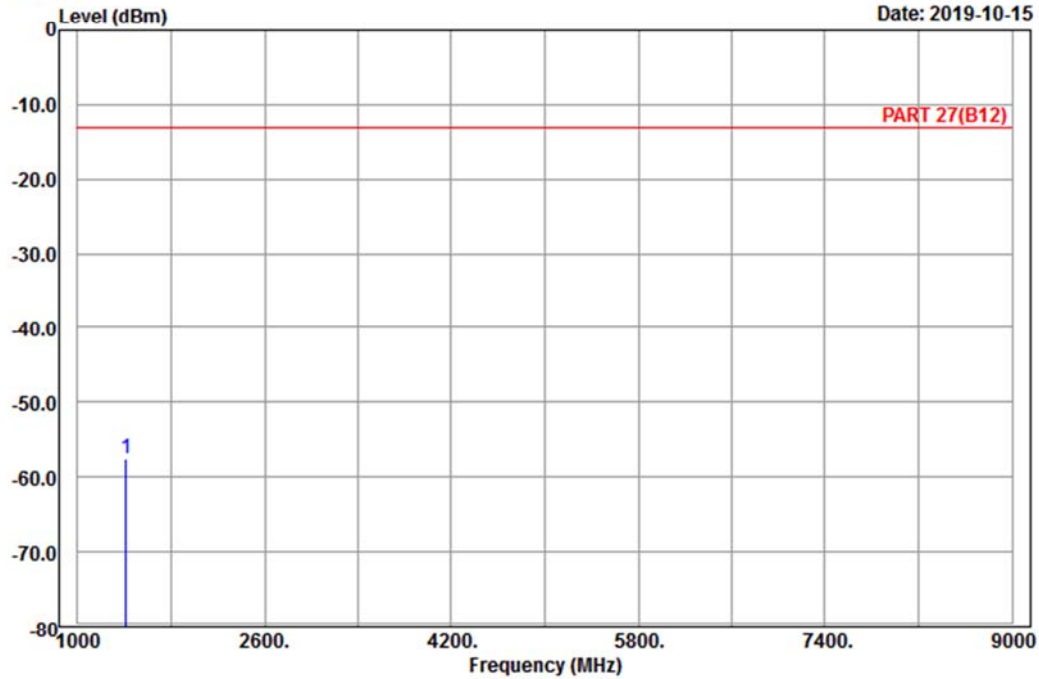


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_M-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp | 1415.00 | -57.60 | -63.96     | 6.36   | -13.00     | -44.60     | Peak   |

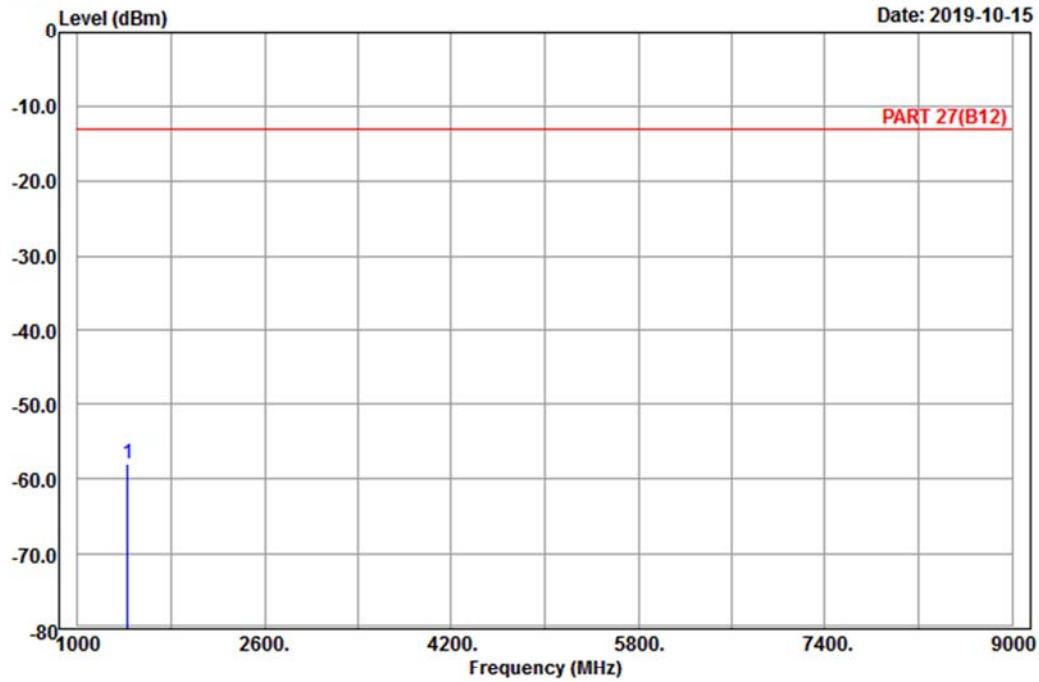
High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_H-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |           |
|--------------|--------|--------|--------|--------|-----------|
| Freq         | Level  | Level  | Line   | Limit  | Factor    |
| MHz          | dBm    | dBm    | dBm    | dB     | dB        |
| 1 pp 1430.60 | -58.01 | -64.25 | -13.00 | -45.01 | 6.24 Peak |

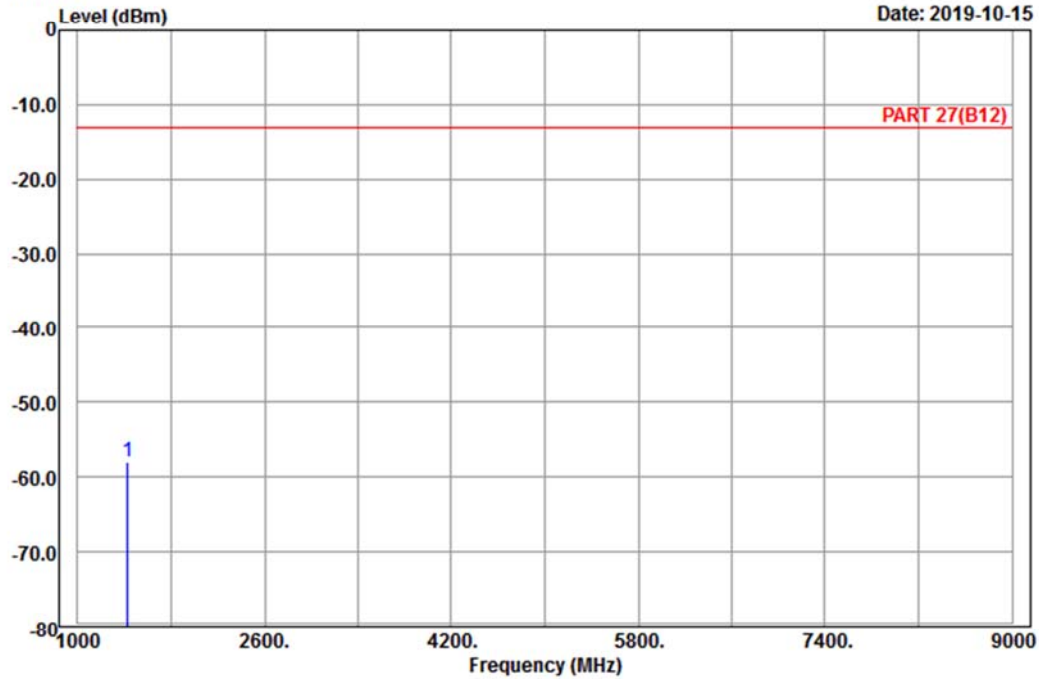


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_H-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor | Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1 pp 1430.60 | -58.04 | -64.28 | -13.00 | -45.04 | 6.24   | Peak   |

Channel Bandwidth: 5 MHz / QPSK  
Low Channel

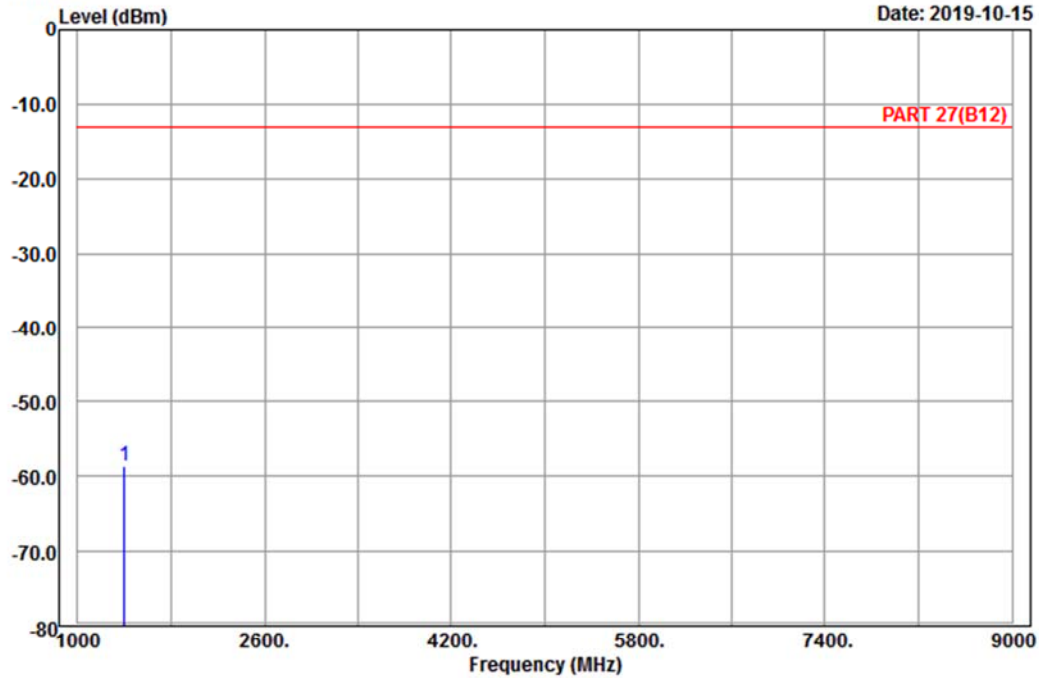


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2019-10-15



Site : 966 chamber 1  
Condition: PART 27(B12) Horizontal  
Remark : LTE\_Band 12\_Link\_L-Ch  
Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor | Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1 pp 1403.00 | -58.68 | -64.78 | -13.00 | -45.68 | 6.10   | Peak   |

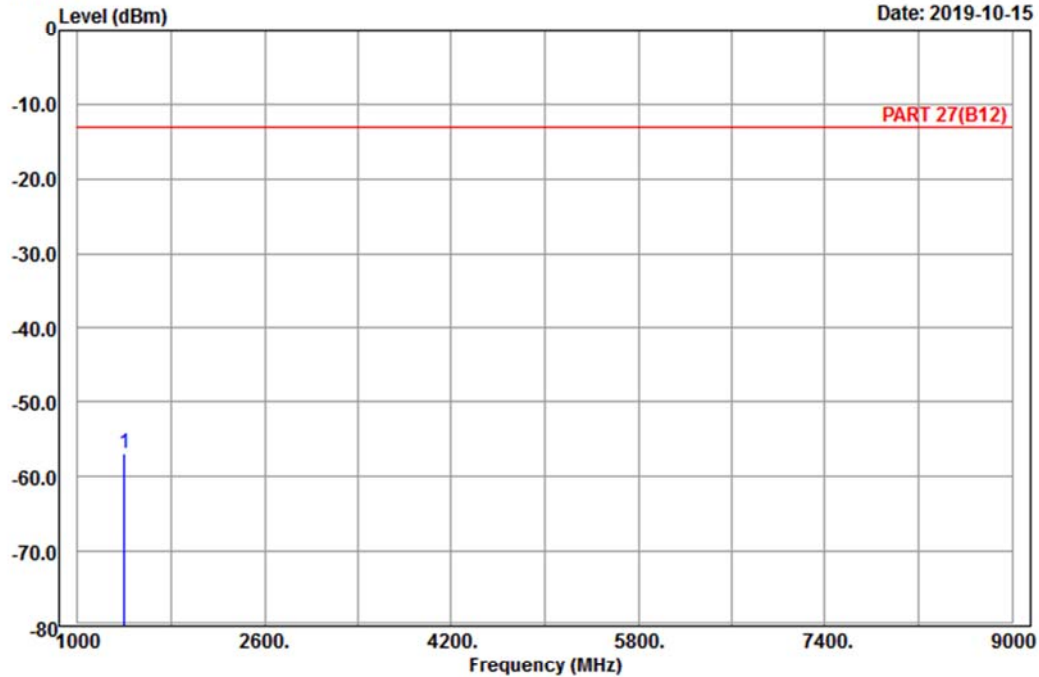


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_L-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor | Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1 pp 1403.00 | -56.84 | -62.94 | -13.00 | -43.84 | 6.10   | Peak   |

Middle Channel

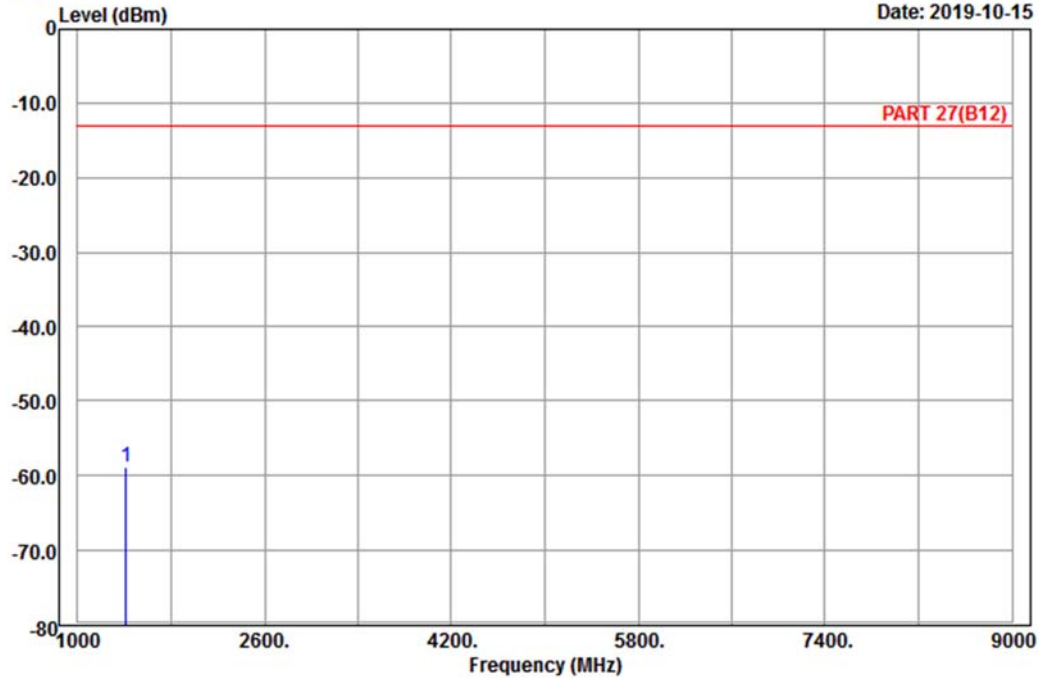


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_M-Ch  
 Tested by: Charles Hsiao

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 1415.00 | -58.90 | -65.26     | 6.36   | -13.00     | -45.90     | Peak   |

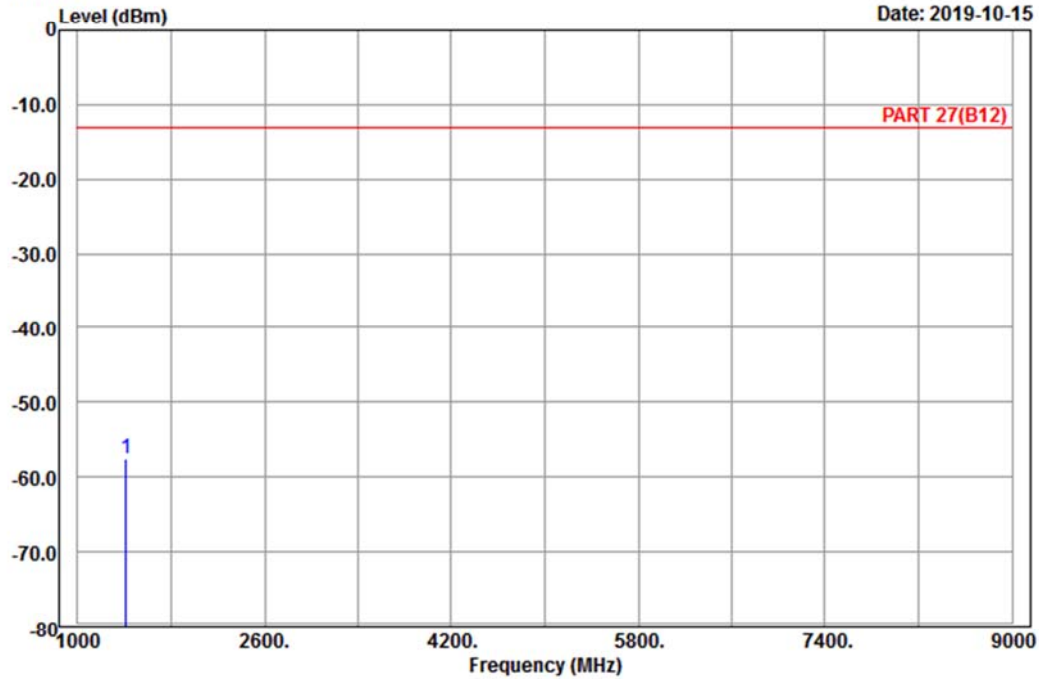


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_M-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp | 1415.00 | -57.46 | -63.82     | 6.36   | -13.00     | -44.46     | Peak   |

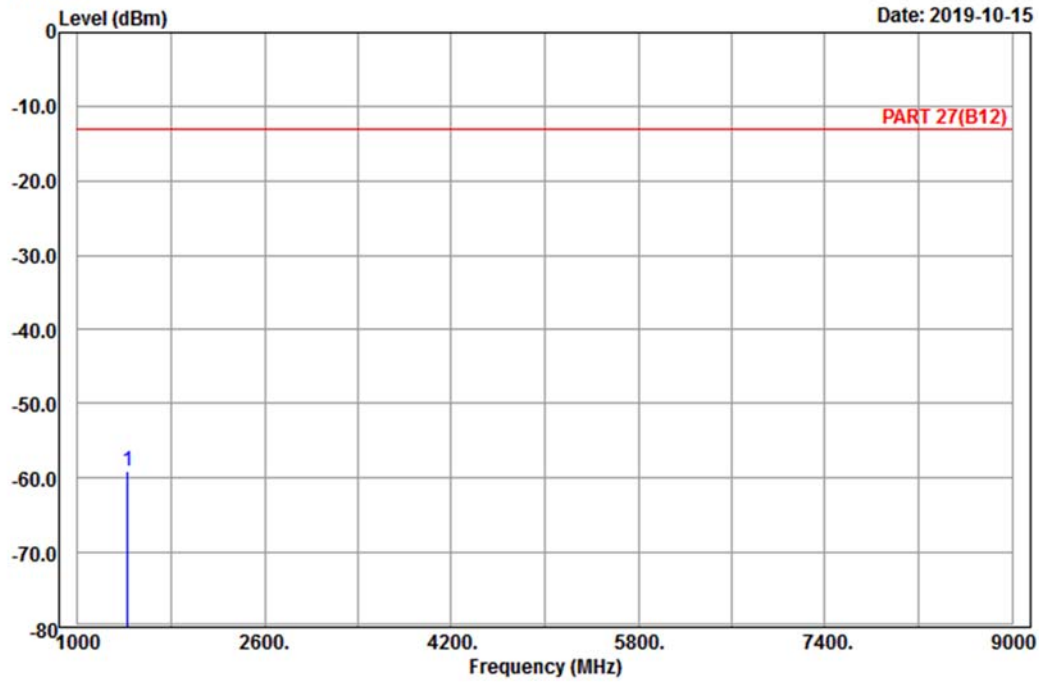
# High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_H-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |
|--------------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |
| 1 pp 1427.00 | -59.01 | -65.25 | -13.00 | -46.01 | 6.24   |
|              |        |        |        |        | Peak   |



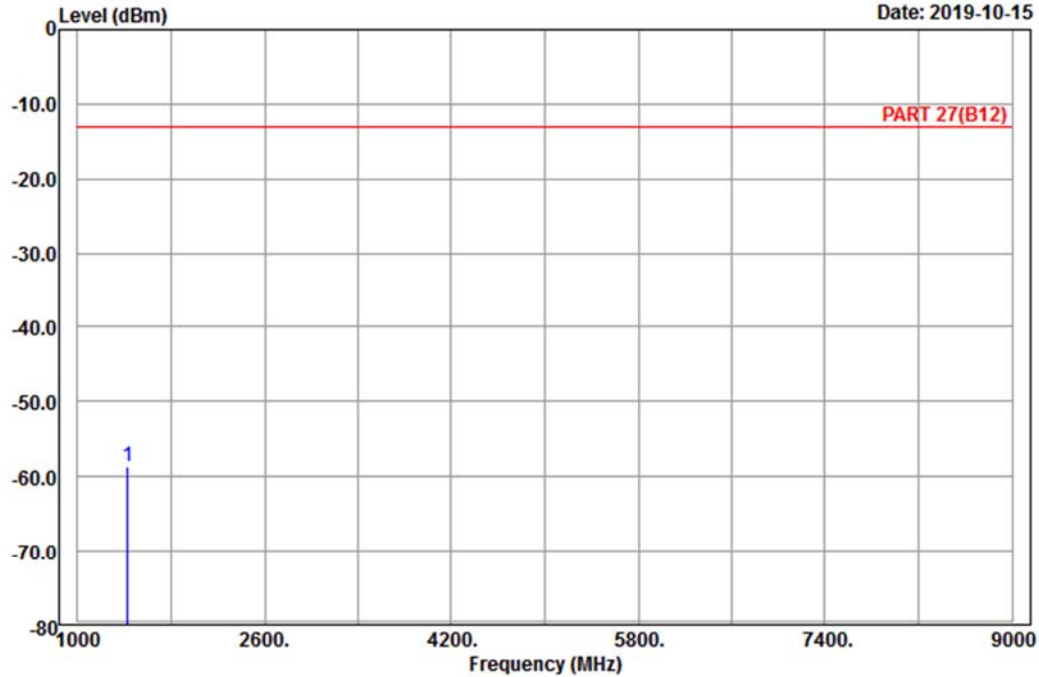


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_H-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor | Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1 pp 1427.00 | -58.55 | -64.79 | -13.00 | -45.55 | 6.24   | Peak   |

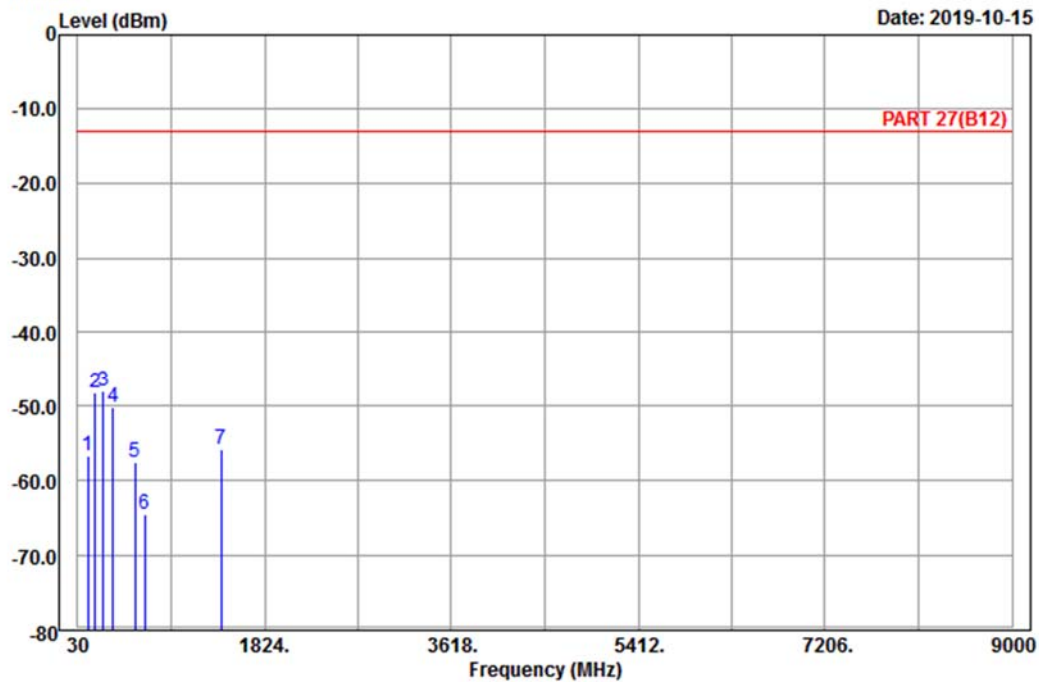
Channel Bandwidth: 10 MHz / QPSK  
 Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_L-Ch  
 Tested by: Charles Hsiao

|      | Read    | Limit  | Over   |        |        |            |
|------|---------|--------|--------|--------|--------|------------|
| Freq | Level   | Level  | Line   | Limit  | Factor | Remark     |
| MHz  | dBm     | dBm    | dBm    | dB     | dB     |            |
| 1    | 130.17  | -56.65 | -49.00 | -13.00 | -43.65 | -7.65 Peak |
| 2    | 194.97  | -48.25 | -42.29 | -13.00 | -35.25 | -5.96 Peak |
| 3 pp | 275.70  | -48.00 | -42.26 | -13.00 | -35.00 | -5.74 Peak |
| 4    | 365.80  | -50.15 | -45.60 | -13.00 | -37.15 | -4.55 Peak |
| 5    | 583.50  | -57.62 | -57.36 | -13.00 | -44.62 | -0.26 Peak |
| 6    | 676.60  | -64.51 | -64.24 | -13.00 | -51.51 | -0.27 Peak |
| 7    | 1408.00 | -55.75 | -62.11 | -13.00 | -42.75 | 6.36 Peak  |

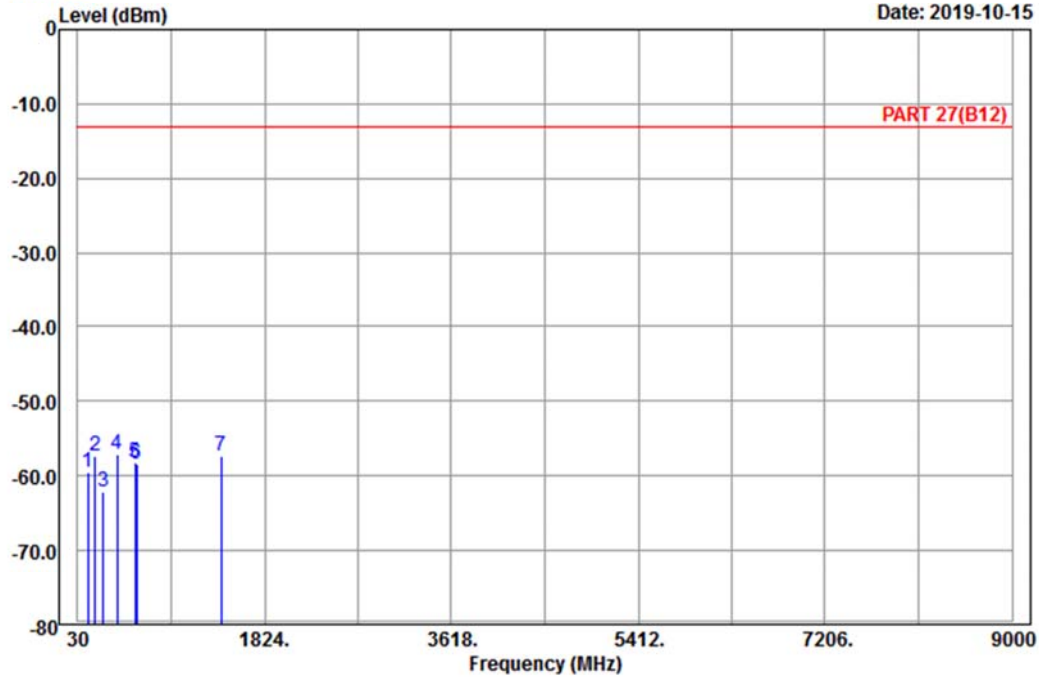


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_L-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Limit Line | Over Limit | Factor | Remark |
|------|---------|--------|------------|------------|------------|--------|--------|
|      | MHz     | dBm    | dBm        | dBm        | dB         | dB     |        |
| 1    | 123.96  | -59.60 | -51.59     | -13.00     | -46.60     | -8.01  | Peak   |
| 2    | 194.97  | -57.34 | -51.38     | -13.00     | -44.34     | -5.96  | Peak   |
| 3    | 275.70  | -62.11 | -56.37     | -13.00     | -49.11     | -5.74  | Peak   |
| 4 pp | 409.90  | -57.05 | -54.08     | -13.00     | -44.05     | -2.97  | Peak   |
| 5    | 583.50  | -58.11 | -57.85     | -13.00     | -45.11     | -0.26  | Peak   |
| 6    | 595.40  | -58.43 | -58.66     | -13.00     | -45.43     | 0.23   | Peak   |
| 7    | 1408.00 | -57.38 | -63.74     | -13.00     | -44.38     | 6.36   | Peak   |

Middle Channel

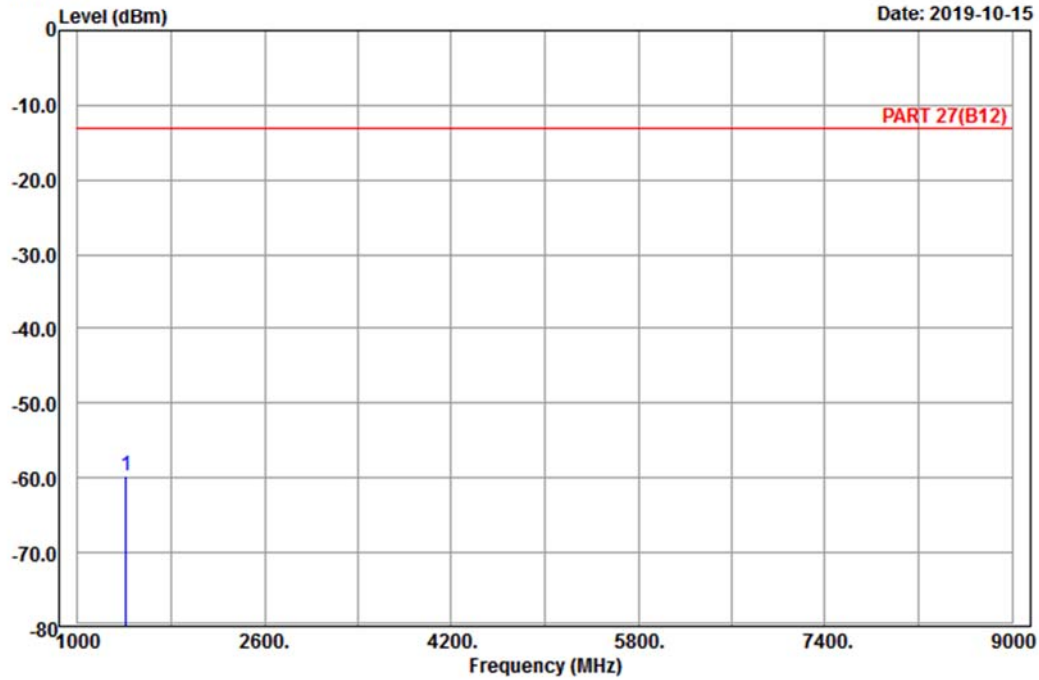


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_M-Ch  
 Tested by: Charles Hsiao

|   | Freq       | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|---|------------|--------|------------|--------|------------|------------|--------|
|   | MHz        | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 | pp 1415.00 | -59.74 | -66.10     | 6.36   | -13.00     | -46.74     | Peak   |

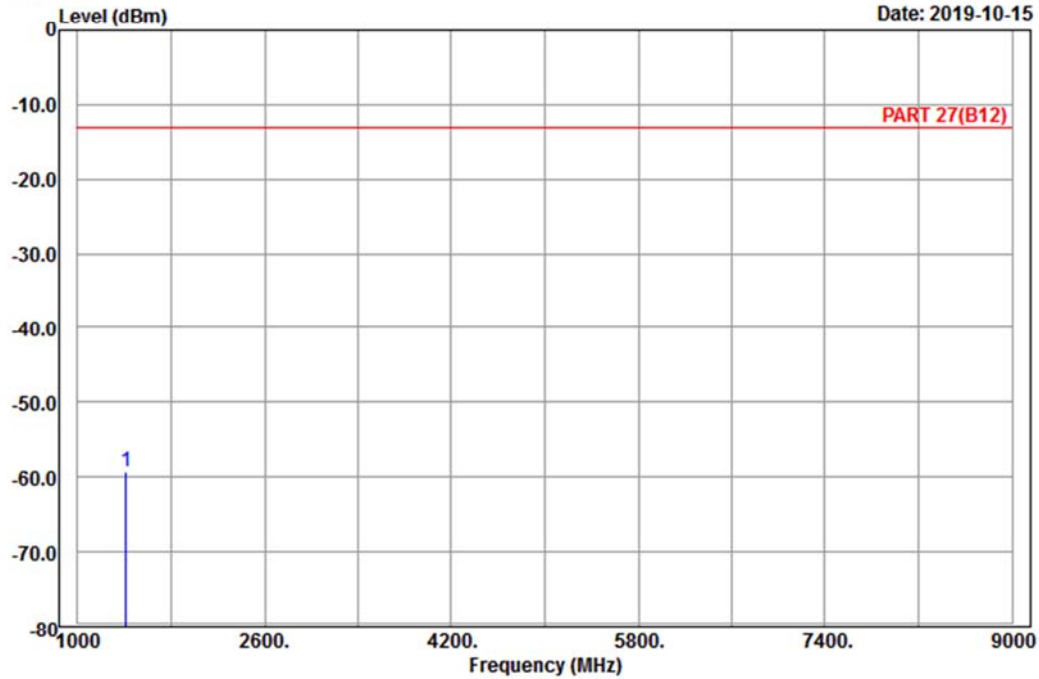


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_M-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp | 1415.00 | -59.26 | -65.62     | 6.36   | -13.00     | -46.26     | Peak   |

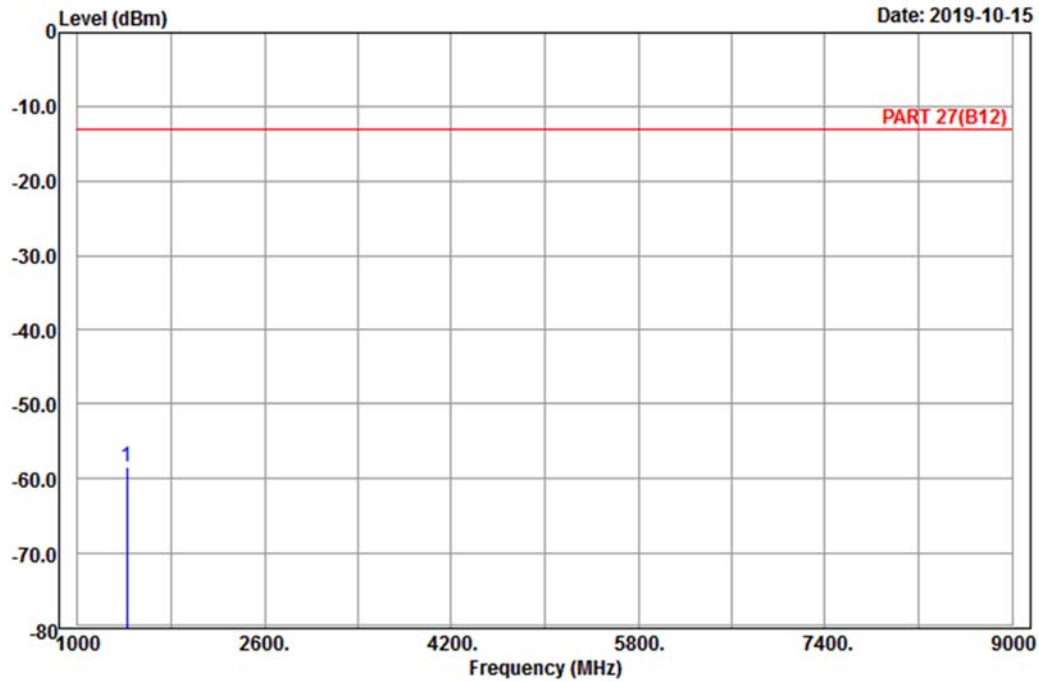
## High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 5



Site : 966 chamber 1  
 Condition: PART 27(B12) Horizontal  
 Remark : LTE\_Band 12\_Link\_H-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |               |
|--------------|--------|--------|--------|--------|---------------|
| Freq         | Level  | Level  | Line   | Limit  | Factor Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB            |
| 1 pp 1422.00 | -58.46 | -64.82 | -13.00 | -45.46 | 6.36 Peak     |

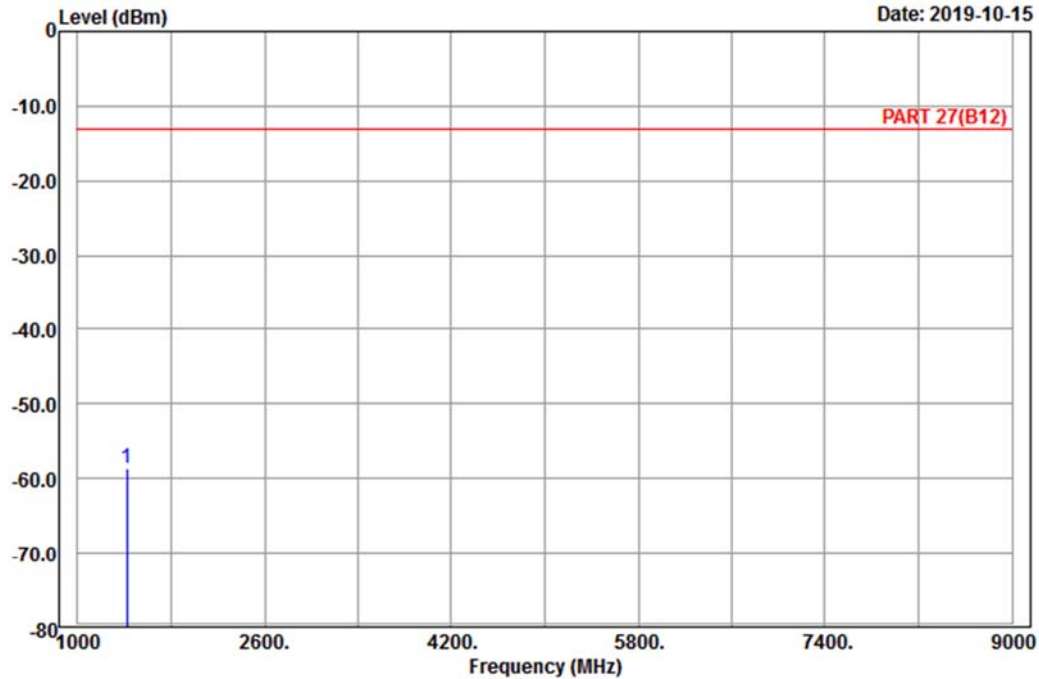


## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 6

Date: 2019-10-15



Site : 966 chamber 1  
 Condition: PART 27(B12) Vertical  
 Remark : LTE\_Band 12\_Link\_H-Ch  
 Tested by: Charles Hsiao

|              | Read   | Limit  | Over   |        |        |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Line   | Limit  | Factor | Remark |
| MHz          | dBm    | dBm    | dBm    | dB     | dB     |        |
| 1 pp 1422.00 | -58.74 | -65.10 | -13.00 | -45.74 | 6.36   | Peak   |

## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).



## Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Lin Kou EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

--- END ---