

## Partial FCC Test Report

### (PART 27)

**Report No.:** RF200319C26-3

**FCC ID:** QYLEM7455Z

**Test Model:** EM7455Z

**Received Date:** Nov. 11, 2019

**Test Date:** Jan. 06 ~ Jan. 09, 2020

**Issued Date:** Mar. 25, 2020

**Applicant:** Getac Technology Corporation.

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**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 /**  
**Designation Number:** 427177 / TW0011



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### Release Control Record

| Issue No.     | Description      | Date Issued   |
|---------------|------------------|---------------|
| RF200319C26-3 | Original Release | Mar. 25, 2020 |

## 1 Certificate of Conformity

**Product:** Radio module

**Brand:** Getac

**Test Model:** EM7455Z

**Sample Status:** Identical Prototype

**Applicant:** Getac Technology Corporation.

**Test Date:** Jan. 06 ~ Jan. 09, 2020

**Standards:** FCC Part 27, Subpart C, M

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 :** Gina Liu, **Date:** Mar. 25, 2020  
Gina Liu / Specialist

**Approved by :** Dylan Chiou, **Date:** Mar. 25, 2020  
Dylan Chiou / Senior Project Engineer

## 2 Summary of Test Results

| Applied Standard: FCC Part 27 & Part 2 |                                     |        |                                                                                  |
|----------------------------------------|-------------------------------------|--------|----------------------------------------------------------------------------------|
| FCC Clause                             | Test Item                           | Result | Remarks                                                                          |
| 2.1046<br>27.50(h)(2)                  | Equivalent Isotropic Radiated Power | Pass   | Meet the requirement.                                                            |
| 2.1047                                 | Modulation Characteristics          | N/A    | Refer to Note                                                                    |
| 2.1055<br>27.54                        | Frequency Stability                 | N/A    | Refer to Note                                                                    |
| 2.1049<br>27.53(m)(6)                  | Occupied Bandwidth                  | N/A    | Refer to Note                                                                    |
| --                                     | Peak to Average Ratio               | N/A    | Refer to Note                                                                    |
| 27.53(m)(4)(6)                         | Out-of-Band Emissions Measurements  | N/A    | Refer to Note                                                                    |
| 2.1051<br>27.53(m)(4)(6)               | Conducted Spurious Emissions        | N/A    | Refer to Note                                                                    |
| 2.1053<br>27.53(m)(4)(6)               | Radiated Spurious Emissions         | Pass   | Meet the requirement of limit. Minimum passing margin is -8.24 dB at 200.91 MHz. |

Note:

1. This report is a Class II change partial report and change WWAN main antenna. Therefore, only test item of Radiated Spurious Emissions tests and Effective Isotropic Radiated Power were performed for this report. Other testing data please refer to TTL report no.: B15W50341-FCC-RF and B15W50341-FCC-RF\_Rev1 for module (Brand: Sierra wireless Inc., Model: EM7455).
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                      |

## 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           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ           | FSW26           | 102023                                                            | Oct. 08, 2019       | Oct. 07, 2020           |
| BILOG Antenna<br>SCHWARZBECK                   | VULB9168        | 9168-616                                                          | Nov. 12, 2019       | Nov. 11, 2020           |
| HORN Antenna<br>ETS-Lindgren                   | 3117            | 00143293                                                          | Nov. 24, 2019       | Nov. 23, 2020           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9120D      | 9120D-969                                                         | Nov. 24, 2019       | Nov. 23, 2020           |
| HORN Antenna<br>SCHWARZBECK                    | BBHA 9170       | 9170-480                                                          | Nov. 24, 2019       | Nov. 23, 2020           |
| 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. 25, 2019       | Nov. 24, 2020           |
| Preamplifier<br>Agilent                        | 310N            | 187226                                                            | Jun. 18, 2019       | Jun. 17, 2020           |
| Preamplifier<br>Agilent                        | 83017A          | MY39501357                                                        | Jun. 18, 2019       | Jun. 17, 2020           |
| Preamplifier<br>EMCI                           | EMC 184045      | 980116                                                            | Oct. 12, 2018       | Oct. 11, 2019           |
| RF signal cable<br>ETS-LINDGREN                | 5D-FB           | Cable-CH1-01(RFC<br>-SMS-100-SMS-12<br>0+RFC-SMS-100-S<br>MS-400) | Jun. 18, 2019       | Jun. 17, 2020           |
| RF signal cable<br>ETS-LINDGREN                | 8D-FB           | Cable-CH1-02(RFC<br>-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                      |
| Radio Communication<br>Analyzer<br>Anritsu     | MT8820C         | 6201300640                                                        | Aug. 19, 2019       | Aug. 18, 2021           |
| Spectrum Analyzer<br>ROHDE & SCHWARZ           | FSW43           | 101582                                                            | Mar. 31, 2020       | Mar. 30, 2021           |

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>             | Radio module                            |                     |
| <b>Brand</b>               | Getac                                   |                     |
| <b>Test Model</b>          | EM7455Z                                 |                     |
| <b>Status of EUT</b>       | Identical Prototype                     |                     |
| <b>Power Supply Rating</b> | 3.3 Vdc (Host equipment)                |                     |
| <b>Modulation Type</b>     | QPSK, 16QAM                             |                     |
| <b>Frequency Range</b>     | LTE Band 7 (Channel Bandwidth: 5 MHz)   | 2502.5 ~ 2567.5 MHz |
|                            | LTE Band 7 (Channel Bandwidth: 10 MHz)  | 2505 ~ 2565 MHz     |
|                            | LTE Band 7 (Channel Bandwidth: 15 MHz)  | 2507.5 ~ 2562.5 MHz |
|                            | LTE Band 7 (Channel Bandwidth: 20 MHz)  | 2510 ~ 2560 MHz     |
|                            | LTE Band 41 (Channel Bandwidth: 5 MHz)  | 2498.5 ~ 2687.5 MHz |
|                            | LTE Band 41 (Channel Bandwidth: 10 MHz) | 2501.0 ~ 2685.0 MHz |
|                            | LTE Band 41 (Channel Bandwidth: 15 MHz) | 2503.5 ~ 2682.5 MHz |
|                            | LTE Band 41 (Channel Bandwidth: 20 MHz) | 2506.0 ~ 2680.0 MHz |
| <b>Max. EIRP Power</b>     | LTE Band 7 (Channel Bandwidth: 5 MHz)   | 120.14 mW           |
|                            | LTE Band 7 (Channel Bandwidth: 10 MHz)  | 121.26 mW           |
|                            | LTE Band 7 (Channel Bandwidth: 15 MHz)  | 128.74 mW           |
|                            | LTE Band 7 (Channel Bandwidth: 20 MHz)  | 135.43 mW           |
|                            | LTE Band 41 (Channel Bandwidth: 5 MHz)  | 137.94 mW           |
|                            | LTE Band 41 (Channel Bandwidth: 10 MHz) | 139.22 mW           |
|                            | LTE Band 41 (Channel Bandwidth: 15 MHz) | 148.15 mW           |
|                            | LTE Band 41 (Channel Bandwidth: 20 MHz) | 159.85 mW           |
| <b>Antenna Type</b>        | Refer to Note as below                  |                     |
| <b>Accessory Device</b>    | Refer to Note as below                  |                     |
| <b>Data Cable Supplied</b> | Refer to Note as below                  |                     |

Note:

1. The EUT is authorized for use in specific End-product.

| <b>Product</b> | <b>Brand</b> | <b>Model</b> |
|----------------|--------------|--------------|
| Tablet         | Getac        | ZX70         |

2. The antenna information is listed as below.

| <b>Antenna Type</b> | <b>Brand</b> | <b>Model</b>                 | <b>Antenna Gain</b> |                |
|---------------------|--------------|------------------------------|---------------------|----------------|
|                     |              |                              | <b>LTE B7</b>       | <b>LTE B41</b> |
| PIFA                | Pulse        | Main: 422144300001           | 1.84                | 1.84           |
|                     | SINBON       | Aux.: 340879100003 (Rx only) | 1.29                | 1.29           |

3. The End-product contains following accessory devices.

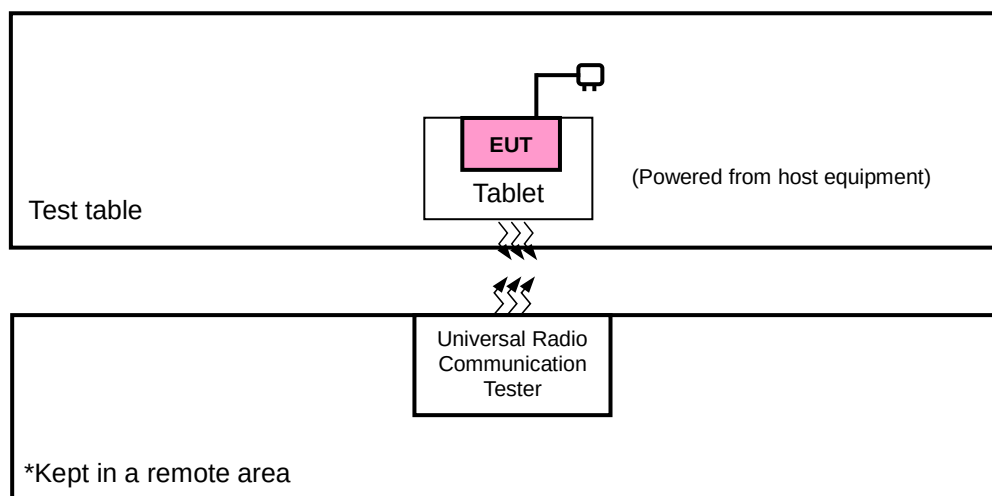
| Part                  | Brand     | Model            | Specification                                         |
|-----------------------|-----------|------------------|-------------------------------------------------------|
| Adapter               | FSP       | FSP025-DHAN3     | I/P: 100-240Vac, 1.0A, 50-60Hz<br>O/P: 12Vdc, Max.25W |
| CPU                   | Qualcomm  | SDA660           | 692 PIN                                               |
| Storage               | Samsung   | KMDH6001DA-B422  | 64GB                                                  |
| WWAN Module           | Getac     | EM7455Z          | ID: QYLEM7455Z                                        |
| WiFi/BT Chip on board | Qualcomm  | WCN3990          | 802.11 ac/ BT5.0 2x2 support<br>ID: QYLWCN3990Z       |
| Front Camera          | Truly     | COD865-B8BF-E    | 8 MP, Fix Focus                                       |
| Rear Camera           | Truly     | COD898-B12BA-E   | 12 MP, Auto focus                                     |
| GPS                   | Locosys   | MC-1010G         | --                                                    |
| LCD                   | Truly     | TDO-HD0698K61701 | 7" HD 720 x 1280                                      |
| Barcode Reader        | Honeywell | N6603            | --                                                    |
| HF RFID Module        | NXP       | NQ310            | ID: QYLNQ310Z                                         |

4. 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.

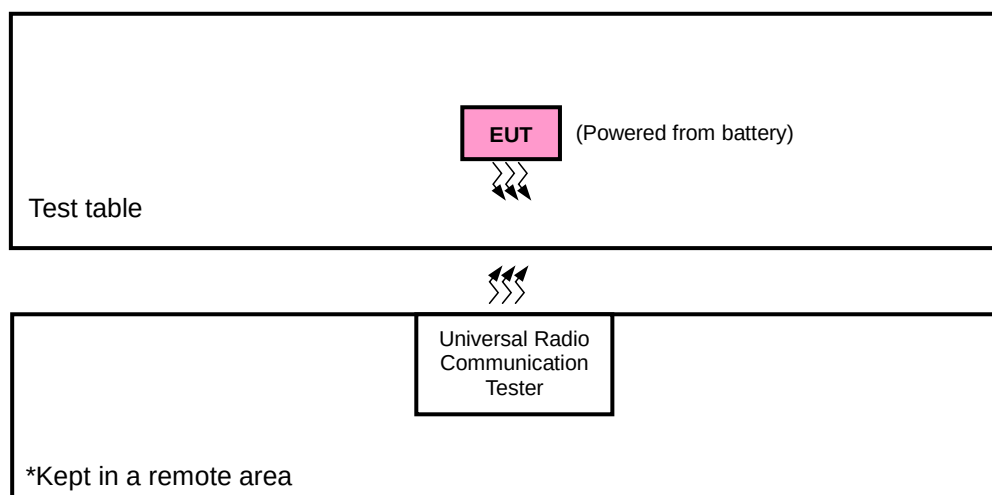


## 3.2 Configuration of System under Test

### <Radiated Emission Test>



### <E.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. The following support units or accessories were used to form a representative test configuration during the tests.

| No. | Product                              | Brand   | Model No. | Serial No. | FCC ID |
|-----|--------------------------------------|---------|-----------|------------|--------|
| 1.  | Tablet                               | Getac   | ZX70      | N/A        | N/A    |
| 2.  | Universal Radio Communication Tester | Anritsu | MT8820C   | 6201300640 | N/A    |

| No. | Signal Cable Description Of The Above Support Units |
|-----|-----------------------------------------------------|
| 1.  | N/A                                                 |

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item 1 was provided by client.

### 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, XYZ axis, 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        | EIRP    | Radiated Emission |
|-------------|---------|-------------------|
| LTE Band 7  | Z-plane | Z-plane           |
| LTE Band 41 | Z-plane | Z-plane           |

#### LTE Band 7

| EUT Configure Mode | Test Item         | Available Channel | Tested Channel      | Channel Bandwidth | Modulation  | Mode               |
|--------------------|-------------------|-------------------|---------------------|-------------------|-------------|--------------------|
| -                  | EIRP              | 20775 to 21425    | 20775, 21100, 21425 | 5 MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset |
|                    |                   | 20800 to 21400    | 20800, 21100, 21400 | 10 MHz            | QPSK, 16QAM | 1 RB / 0 RB Offset |
|                    |                   | 20825 to 21375    | 20825, 21100, 21375 | 15 MHz            | QPSK, 16QAM | 1 RB / 0 RB Offset |
|                    |                   | 20850 to 21350    | 20850, 21100, 21350 | 20 MHz            | QPSK, 16QAM | 1 RB / 0 RB Offset |
| -                  | Radiated Emission | 20775 to 21425    | 20775, 21100, 21425 | 5 MHz             | QPSK        | 1 RB / 0 RB Offset |
|                    |                   | 20850 to 21350    | 20850, 21100, 21350 | 20 MHz            | QPSK        | 1 RB / 0 RB Offset |

#### Note:

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

#### LTE Band 41

| EUT Configure Mode | Test Item         | Available Channel | Tested Channel      | Channel Bandwidth | Modulation  | Mode               |
|--------------------|-------------------|-------------------|---------------------|-------------------|-------------|--------------------|
| -                  | EIRP              | 39675 to 41565    | 39675, 40620, 41565 | 5 MHz             | QPSK, 16QAM | 1 RB / 0 RB Offset |
|                    |                   | 39700 to 41540    | 39700, 40620, 41540 | 10 MHz            | QPSK, 16QAM | 1 RB / 0 RB Offset |
|                    |                   | 39725 to 41515    | 39725, 40620, 41515 | 15 MHz            | QPSK, 16QAM | 1 RB / 0 RB Offset |
|                    |                   | 39750 to 41490    | 39750, 40620, 41490 | 20 MHz            | QPSK, 16QAM | 1 RB / 0 RB Offset |
| -                  | Radiated Emission | 39675 to 41565    | 39675, 40620, 41565 | 5 MHz             | QPSK        | 1 RB / 0 RB Offset |
|                    |                   | 39750 to 41490    | 39750, 40620, 41490 | 20 MHz            | QPSK        | 1 RB / 0 RB Offset |

#### Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. For radiated emission above 1 GHz, 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     |
|-------------------|--------------------------|----------------|---------------|
| EIRP              | 25 deg. C, 65 % RH       | 3.3 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 and references**

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

**Test Standard:**

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 27**

**ANSI 63.26-2015**

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

**References Test Guidance:**

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

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

**Note:** All test items have been performed as a reference to the above KDB test guidance.

## 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2 watts transmitter output power” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

#### 4.1.2 Test Procedures

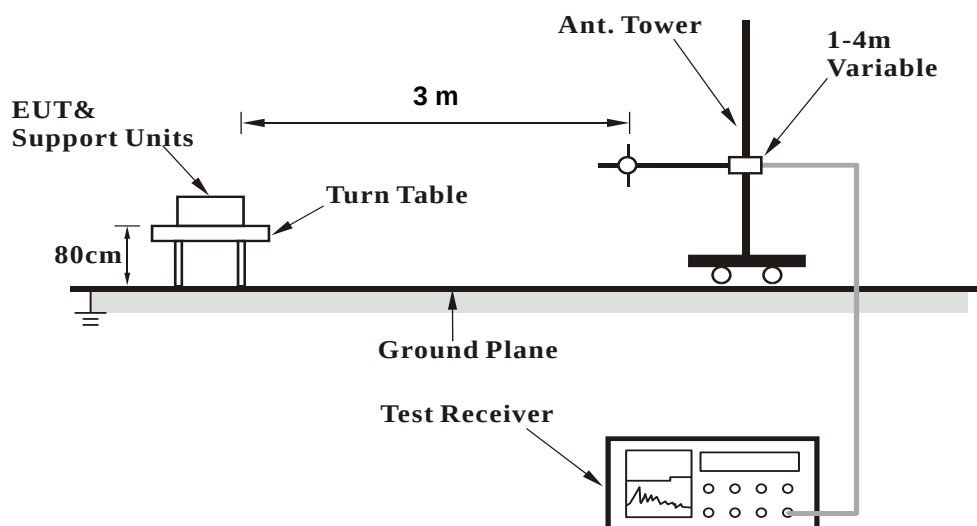
##### **EIRP Measurement:**

- a. All measurements were done at low, middle and high operational frequency range. RBW is 5 MHz 、 10 MHz 、 15 MHz 、 20 MHz for LTE mode, VBW  $\geq 3 \times$  RBW.
- 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.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$

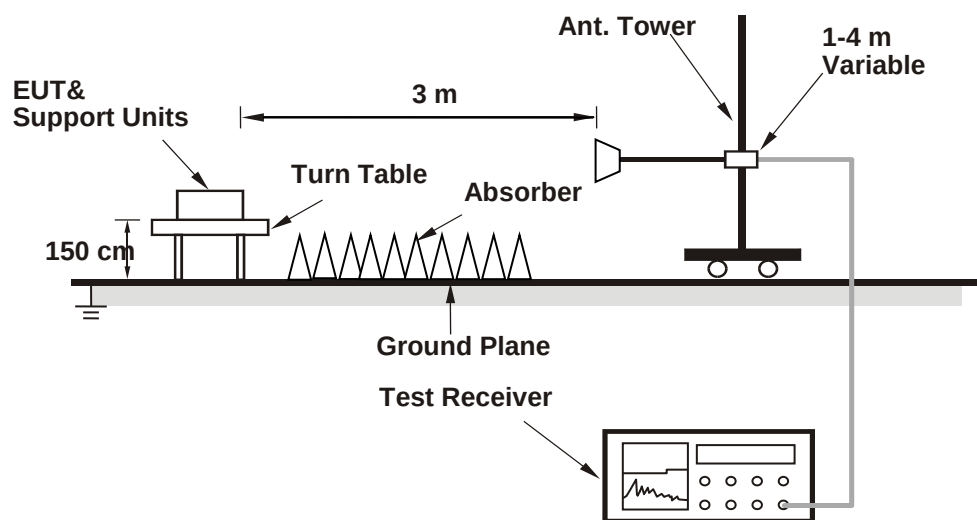
#### 4.1.3 Test Setup

##### 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).

# EIRP Power (dBm)

| LTE Band 7                       |         |                 |               |                        |            |           |                    |
|----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 5 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                            | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                | 20775   | 2502.5          | -23.49        | 44.24                  | 20.75      | 118.80    | H                  |
|                                  | 21100   | 2535.0          | -23.40        | 44.20                  | 20.80      | 120.14    |                    |
|                                  | 21425   | 2567.5          | -24.03        | 44.80                  | 20.77      | 119.43    |                    |
|                                  | 20775   | 2502.5          | -26.49        | 44.19                  | 17.70      | 58.90     | V                  |
|                                  | 21100   | 2535.0          | -26.36        | 44.09                  | 17.73      | 59.27     |                    |
|                                  | 21425   | 2567.5          | -26.90        | 44.50                  | 17.60      | 57.53     |                    |
| Channel Bandwidth: 5 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                | 20775   | 2502.5          | -24.50        | 44.24                  | 19.74      | 94.15     | H                  |
|                                  | 21100   | 2535.0          | -24.41        | 44.20                  | 19.79      | 95.21     |                    |
|                                  | 21425   | 2567.5          | -25.03        | 44.80                  | 19.77      | 94.86     |                    |
|                                  | 20775   | 2502.5          | -27.49        | 44.19                  | 16.70      | 46.78     | V                  |
|                                  | 21100   | 2535.0          | -27.36        | 44.09                  | 16.73      | 47.08     |                    |
|                                  | 21425   | 2567.5          | -27.91        | 44.50                  | 16.59      | 45.59     |                    |

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

| LTE Band 7                        |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 10 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                 | 20800   | 2505.0          | -23.55        | 44.34                  | 20.79      | 119.98    | H                  |
|                                   | 21100   | 2535.0          | -23.36        | 44.20                  | 20.84      | 121.26    |                    |
|                                   | 21400   | 2565.0          | -23.99        | 44.72                  | 20.73      | 118.39    |                    |
|                                   | 20800   | 2505.0          | -26.49        | 44.23                  | 17.74      | 59.37     | V                  |
|                                   | 21100   | 2535.0          | -26.32        | 44.09                  | 17.77      | 59.81     |                    |
|                                   | 21400   | 2565.0          | -26.77        | 44.41                  | 17.64      | 58.02     |                    |
| Channel Bandwidth: 10 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                 | 20800   | 2505.0          | -24.55        | 44.34                  | 19.79      | 95.30     | H                  |
|                                   | 21100   | 2535.0          | -24.37        | 44.20                  | 19.83      | 96.09     |                    |
|                                   | 21400   | 2565.0          | -25.00        | 44.72                  | 19.72      | 93.82     |                    |
|                                   | 20800   | 2505.0          | -27.53        | 44.23                  | 16.70      | 46.73     | V                  |
|                                   | 21100   | 2535.0          | -27.33        | 44.09                  | 16.76      | 47.40     |                    |
|                                   | 21400   | 2565.0          | -27.78        | 44.41                  | 16.63      | 45.98     |                    |

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

| LTE Band 7                        |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 15 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                 | 20825   | 2507.5          | -23.23        | 44.32                  | 21.09      | 128.47    | H                  |
|                                   | 21100   | 2535.0          | -23.10        | 44.20                  | 21.10      | 128.74    |                    |
|                                   | 21375   | 2562.5          | -23.77        | 44.85                  | 21.08      | 128.17    |                    |
|                                   | 20825   | 2507.5          | -25.89        | 43.99                  | 18.10      | 64.60     | V                  |
|                                   | 21100   | 2535.0          | -26.02        | 44.09                  | 18.07      | 64.09     |                    |
|                                   | 21375   | 2562.5          | -26.58        | 44.51                  | 17.93      | 62.09     |                    |
| Channel Bandwidth: 15 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                 | 20825   | 2507.5          | -24.16        | 44.32                  | 20.16      | 103.71    | H                  |
|                                   | 21100   | 2535.0          | -24.05        | 44.20                  | 20.15      | 103.44    |                    |
|                                   | 21375   | 2562.5          | -24.74        | 44.85                  | 20.11      | 102.52    |                    |
|                                   | 20825   | 2507.5          | -26.98        | 43.99                  | 17.01      | 50.26     | V                  |
|                                   | 21100   | 2535.0          | -26.97        | 44.09                  | 17.12      | 51.50     |                    |
|                                   | 21375   | 2562.5          | -27.54        | 44.51                  | 16.97      | 49.77     |                    |

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

| LTE Band 7                        |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 20 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                 | 20850   | 2510.0          | -22.87        | 44.16                  | 21.29      | 134.59    | H                  |
|                                   | 21100   | 2535.0          | -22.88        | 44.20                  | 21.32      | 135.43    |                    |
|                                   | 21350   | 2560.0          | -23.67        | 44.81                  | 21.14      | 129.93    |                    |
|                                   | 20850   | 2510.0          | -26.57        | 44.78                  | 18.21      | 66.22     | V                  |
|                                   | 21100   | 2535.0          | -25.73        | 44.09                  | 18.36      | 68.52     |                    |
|                                   | 21350   | 2560.0          | -26.53        | 44.72                  | 18.19      | 65.92     |                    |
| Channel Bandwidth: 20 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                 | 20850   | 2510.0          | -23.90        | 44.16                  | 20.26      | 106.17    | H                  |
|                                   | 21100   | 2535.0          | -23.80        | 44.20                  | 20.40      | 109.57    |                    |
|                                   | 21350   | 2560.0          | -24.70        | 44.81                  | 20.11      | 102.49    |                    |
|                                   | 20850   | 2510.0          | -27.48        | 44.78                  | 17.30      | 53.70     | V                  |
|                                   | 21100   | 2535.0          | -26.83        | 44.09                  | 17.26      | 53.19     |                    |
|                                   | 21350   | 2560.0          | -27.64        | 44.72                  | 17.08      | 51.05     |                    |

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

| LTE Band 41                      |         |                 |               |                        |            |           |                    |
|----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 5 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                            | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                | 39675   | 2498.5          | -22.89        | 44.24                  | 21.35      | 136.40    | H                  |
|                                  | 40620   | 2593.0          | -22.80        | 44.20                  | 21.40      | 137.94    |                    |
|                                  | 41565   | 2687.5          | -23.51        | 44.80                  | 21.29      | 134.62    |                    |
|                                  | 39675   | 2498.5          | -25.82        | 44.19                  | 18.37      | 68.72     | V                  |
|                                  | 40620   | 2593.0          | -25.68        | 44.09                  | 18.41      | 69.31     |                    |
|                                  | 41565   | 2687.5          | -26.19        | 44.50                  | 18.31      | 67.75     |                    |
| Channel Bandwidth: 5 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                | 39675   | 2498.5          | -23.89        | 44.24                  | 20.35      | 108.34    | H                  |
|                                  | 40620   | 2593.0          | -23.80        | 44.20                  | 20.40      | 109.57    |                    |
|                                  | 41565   | 2687.5          | -24.51        | 44.80                  | 20.29      | 106.93    |                    |
|                                  | 39675   | 2498.5          | -26.82        | 44.19                  | 17.37      | 54.59     | V                  |
|                                  | 40620   | 2593.0          | -26.69        | 44.09                  | 17.40      | 54.93     |                    |
|                                  | 41565   | 2687.5          | -27.19        | 44.50                  | 17.31      | 53.81     |                    |

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

| LTE Band 41                       |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 10 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                 | 39700   | 2501.0          | -22.95        | 44.34                  | 21.39      | 137.75    | H                  |
|                                   | 40620   | 2593.0          | -22.76        | 44.20                  | 21.44      | 139.22    |                    |
|                                   | 41540   | 2685.0          | -23.39        | 44.72                  | 21.33      | 135.93    |                    |
|                                   | 39700   | 2501.0          | -25.82        | 44.23                  | 18.41      | 69.28     | V                  |
|                                   | 40620   | 2593.0          | -25.64        | 44.09                  | 18.45      | 69.95     |                    |
|                                   | 41540   | 2685.0          | -26.06        | 44.41                  | 18.35      | 68.33     |                    |
| Channel Bandwidth: 10 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                 | 39700   | 2501.0          | -23.95        | 44.34                  | 20.39      | 109.42    | H                  |
|                                   | 40620   | 2593.0          | -23.76        | 44.20                  | 20.44      | 110.59    |                    |
|                                   | 41540   | 2685.0          | -24.39        | 44.72                  | 20.33      | 107.97    |                    |
|                                   | 39700   | 2501.0          | -26.83        | 44.23                  | 17.40      | 54.90     | V                  |
|                                   | 40620   | 2593.0          | -26.64        | 44.09                  | 17.45      | 55.56     |                    |
|                                   | 41540   | 2685.0          | -27.06        | 44.41                  | 17.35      | 54.28     |                    |

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



| LTE Band 41                       |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 15 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                 | 39725   | 2503.5          | -22.72        | 44.32                  | 21.60      | 144.48    | H                  |
|                                   | 40620   | 2593.0          | -22.49        | 44.20                  | 21.71      | 148.15    |                    |
|                                   | 41515   | 2682.5          | -23.24        | 44.85                  | 21.61      | 144.81    |                    |
|                                   | 39725   | 2503.5          | -25.35        | 43.99                  | 18.64      | 73.15     | V                  |
|                                   | 40620   | 2593.0          | -25.27        | 44.09                  | 18.82      | 76.17     |                    |
|                                   | 41515   | 2682.5          | -25.87        | 44.51                  | 18.64      | 73.11     |                    |
| Channel Bandwidth: 15 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                 | 39725   | 2503.5          | -23.70        | 44.32                  | 20.62      | 115.29    | H                  |
|                                   | 40620   | 2593.0          | -23.47        | 44.20                  | 20.73      | 118.22    |                    |
|                                   | 41515   | 2682.5          | -24.25        | 44.85                  | 20.60      | 114.76    |                    |
|                                   | 39725   | 2503.5          | -26.32        | 43.99                  | 17.67      | 58.51     | V                  |
|                                   | 40620   | 2593.0          | -26.29        | 44.09                  | 17.80      | 60.23     |                    |
|                                   | 41515   | 2682.5          | -26.87        | 44.51                  | 17.64      | 58.08     |                    |

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

| LTE Band 41                       |         |                 |               |                        |            |           |                    |
|-----------------------------------|---------|-----------------|---------------|------------------------|------------|-----------|--------------------|
| Channel Bandwidth: 20 MHz / QPSK  |         |                 |               |                        |            |           |                    |
| Plane                             | Channel | Frequency (MHz) | Reading (dBm) | Correction Factor (dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) |
| Z                                 | 39750   | 2506.0          | -22.33        | 44.16                  | 21.83      | 152.41    | H                  |
|                                   | 40620   | 2593.0          | -22.16        | 44.20                  | 22.04      | 159.85    |                    |
|                                   | 41490   | 2680.0          | -23.09        | 44.81                  | 21.72      | 148.49    |                    |
|                                   | 39750   | 2506.0          | -25.89        | 44.78                  | 18.89      | 77.45     | V                  |
|                                   | 40620   | 2593.0          | -25.24        | 44.09                  | 18.85      | 76.70     |                    |
|                                   | 41490   | 2680.0          | -25.91        | 44.72                  | 18.81      | 76.03     |                    |
| Channel Bandwidth: 20 MHz / 16QAM |         |                 |               |                        |            |           |                    |
| Z                                 | 39750   | 2506.0          | -23.29        | 44.16                  | 20.87      | 122.18    | H                  |
|                                   | 40620   | 2593.0          | -23.13        | 44.20                  | 21.07      | 127.85    |                    |
|                                   | 41490   | 2680.0          | -24.01        | 44.81                  | 20.80      | 120.14    |                    |
|                                   | 39750   | 2506.0          | -26.87        | 44.78                  | 17.91      | 61.80     | V                  |
|                                   | 40620   | 2593.0          | -26.04        | 44.09                  | 18.05      | 63.80     |                    |
|                                   | 41490   | 2680.0          | -26.76        | 44.72                  | 17.96      | 62.52     |                    |

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

## 4.2 Radiated Emission Measurement

### 4.2.1 Limits of Radiated Emission Measurement

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log (P)$  dB. The limit of emission is equal to -25 dBm.

### 4.2.2 Test Procedure

- 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.
- 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.
- $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$
- E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15 \text{ dB}.$

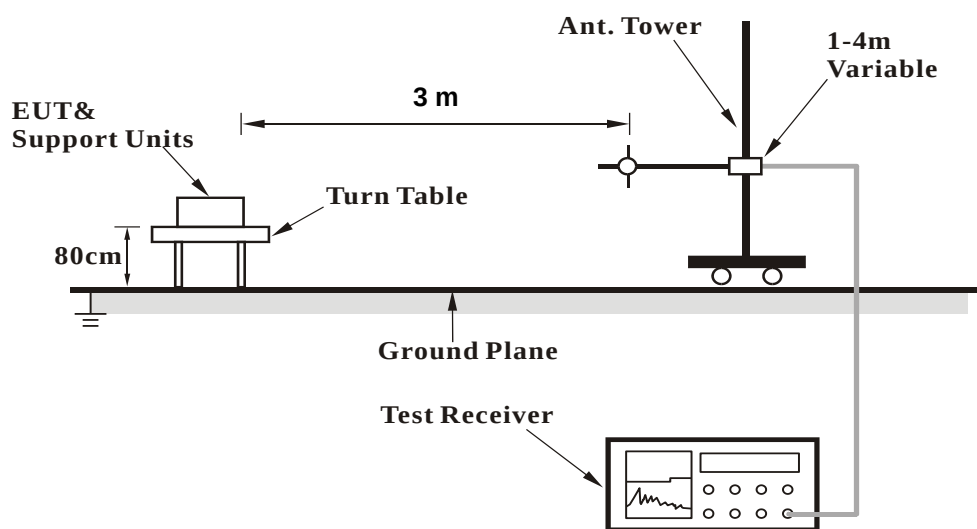
**NOTE:** The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

### 4.2.3 Deviation from Test Standard

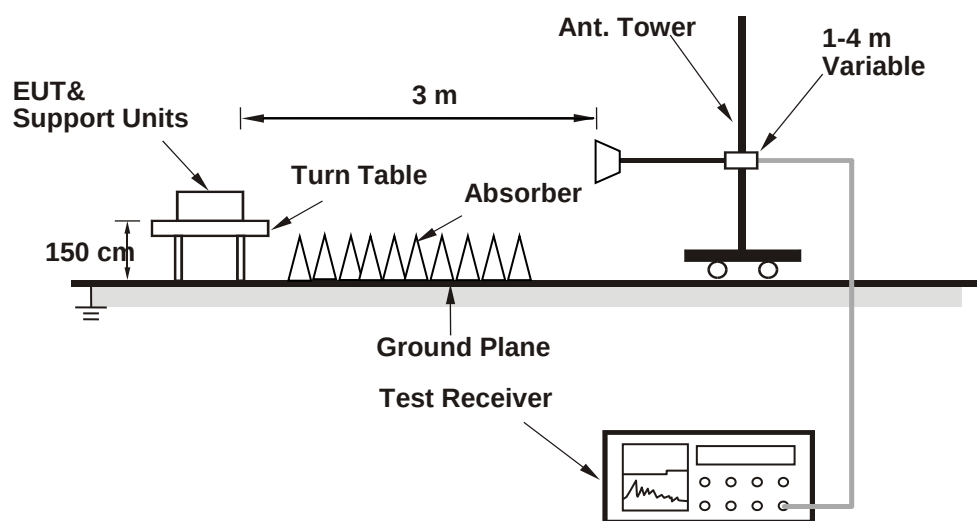
No deviation.

#### 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

##### LTE Band 7

Channel Bandwidth: 5 MHz / QPSK

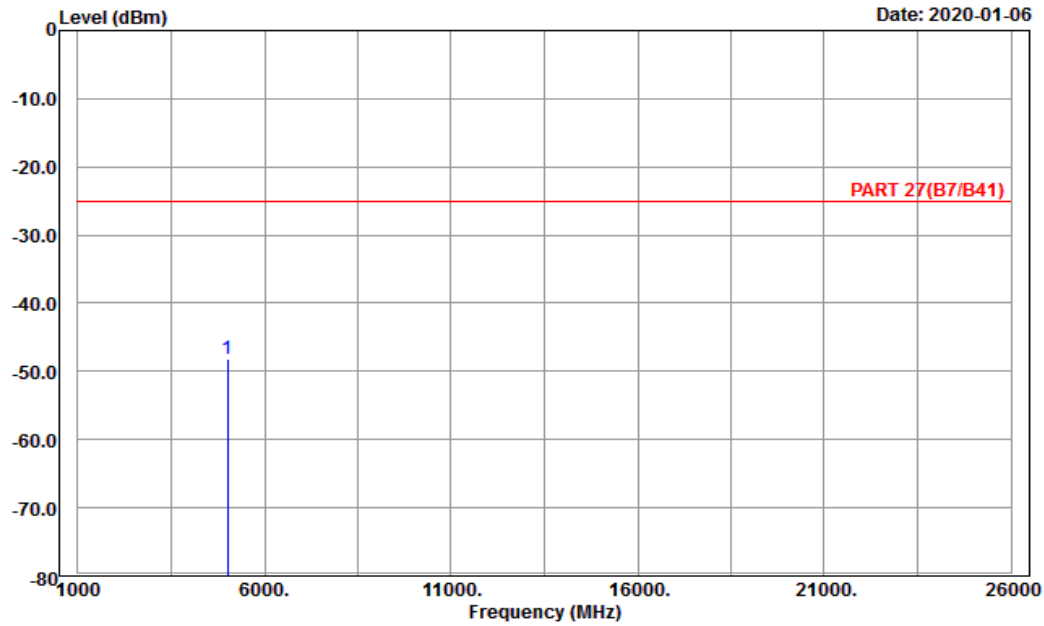
##### Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B7/B41) Horizontal  
 Remark : LTE\_Band 7\_Link\_L-Ch  
 Tested by: Charles Hsiao

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5005.00 | -48.10 | -67.68        | 19.58  | -25.00        | -23.10        | Peak   |

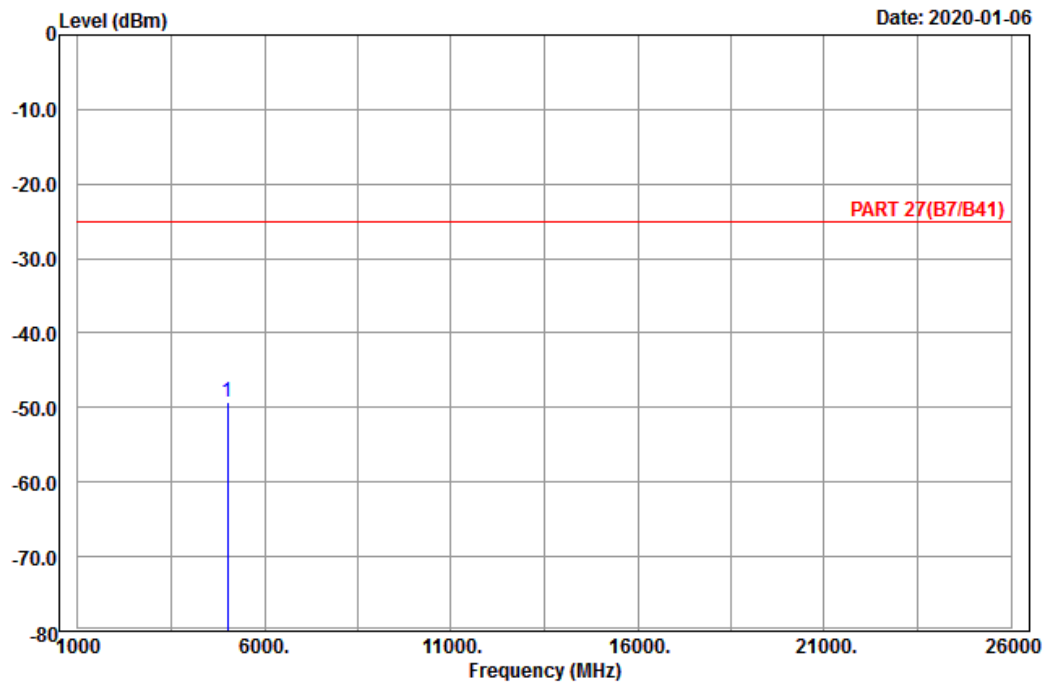


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 7\_Link\_L-Ch  
Tested by: Charles Hsiao

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5005.00 | -49.23 | -68.81        | 19.58  | -25.00        | -24.23        | Peak   |

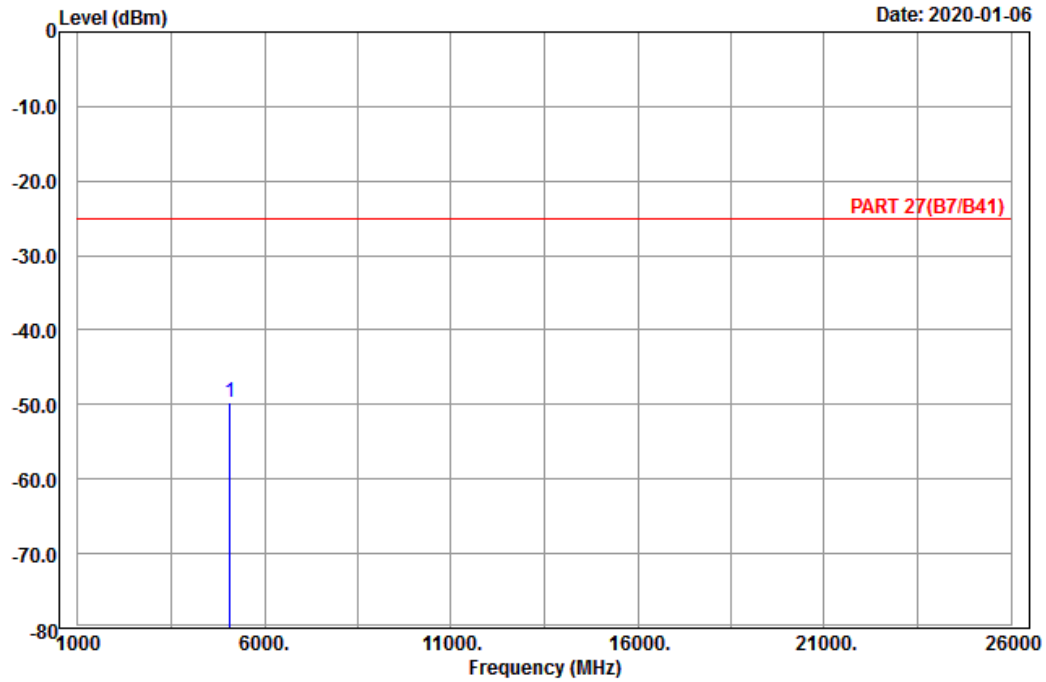
# Middle Channel



Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 7 \_Link\_M-Ch  
Tested by: Harry Hsueh

|              |        | Read   | Limit  | Over   |              |
|--------------|--------|--------|--------|--------|--------------|
| Freq         | Level  | Level  | Factor | Line   | Limit Remark |
| MHz          | dBm    | dBm    | dB     | dBm    | dB           |
| 1 pp 5070.00 | -49.78 | -69.17 | 19.39  | -25.00 | -24.78 Peak  |

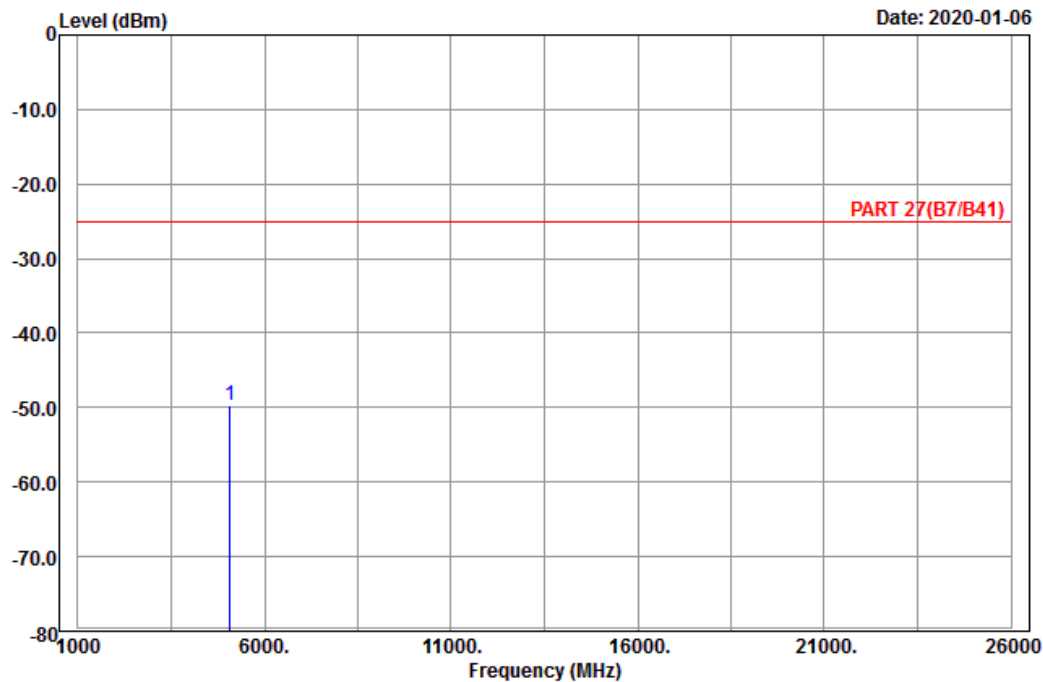


# Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 10

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 7 \_Link\_M-Ch  
Tested by: Harry Hsueh

|              |        | Read   |        | Limit  | Over   |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Factor | Line   | Limit  | Remark |
| MHz          | dBm    | dBm    | dB     | dBm    | dB     |        |
| 1 pp 5070.00 | -49.74 | -69.13 | 19.39  | -25.00 | -24.74 | Peak   |

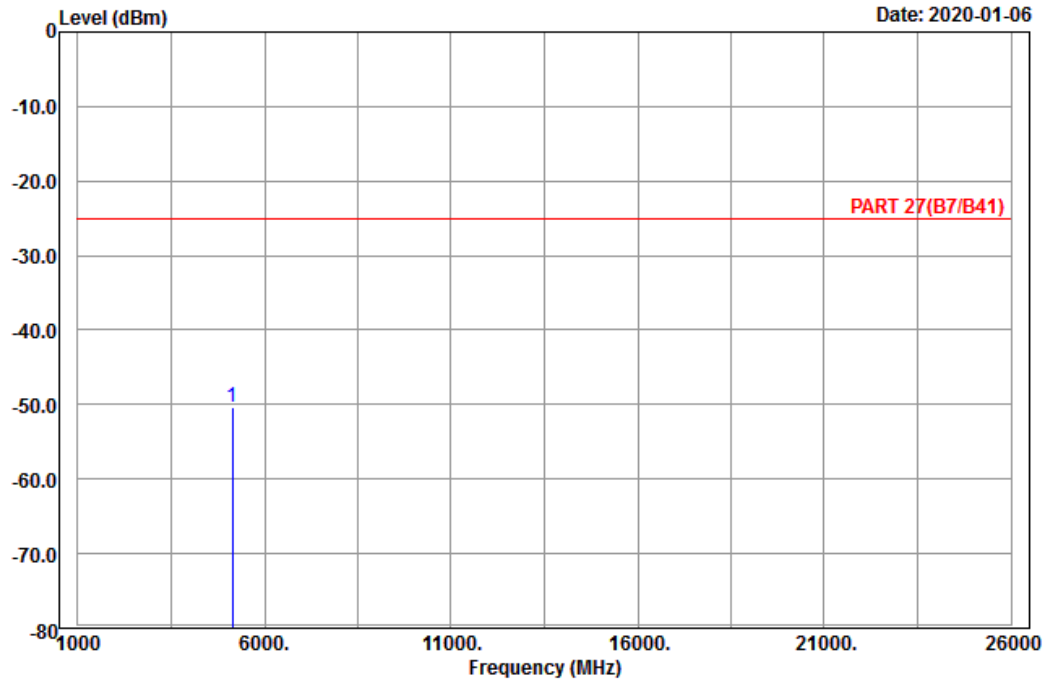
## High Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
 Condition: PART 27(B7/B41) Horizontal  
 Remark : LTE\_Band\_Link\_H-Ch  
 Tested by: Charles Hsiao

| Freq         | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|--------------|--------|------------|--------|------------|------------|--------|
| MHz          | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp 5135.00 | -50.46 | -70.27     | 19.81  | -25.00     | -25.46     | Peak   |



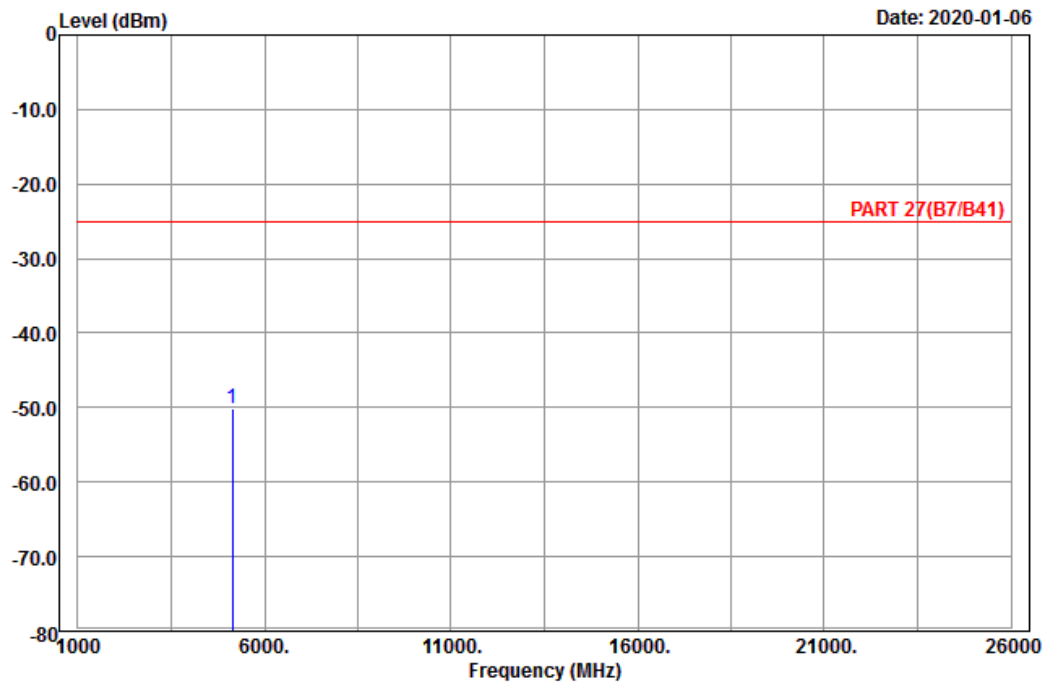


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band \_Link\_H-Ch  
Tested by: Charles Hsiao

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5135.00 | -50.24 | -70.05        | 19.81  | -25.00        | -25.24        | Peak   |

Channel Bandwidth: 20 MHz / QPSK  
Low Channel

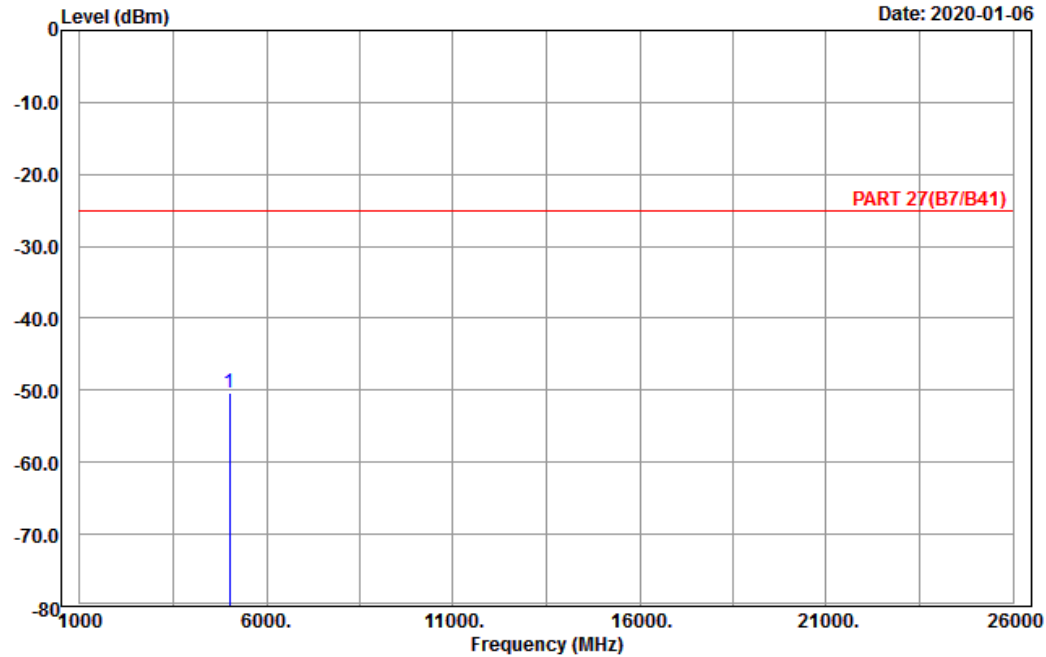


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 7\_Link\_L-Ch  
Tested by: Charles Hsiao

| Freq         | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|--------------|--------|------------|--------|------------|------------|--------|
| MHz          | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1 pp 5020.00 | -50.40 | -69.48     | 19.08  | -25.00     | -25.40     | Peak   |

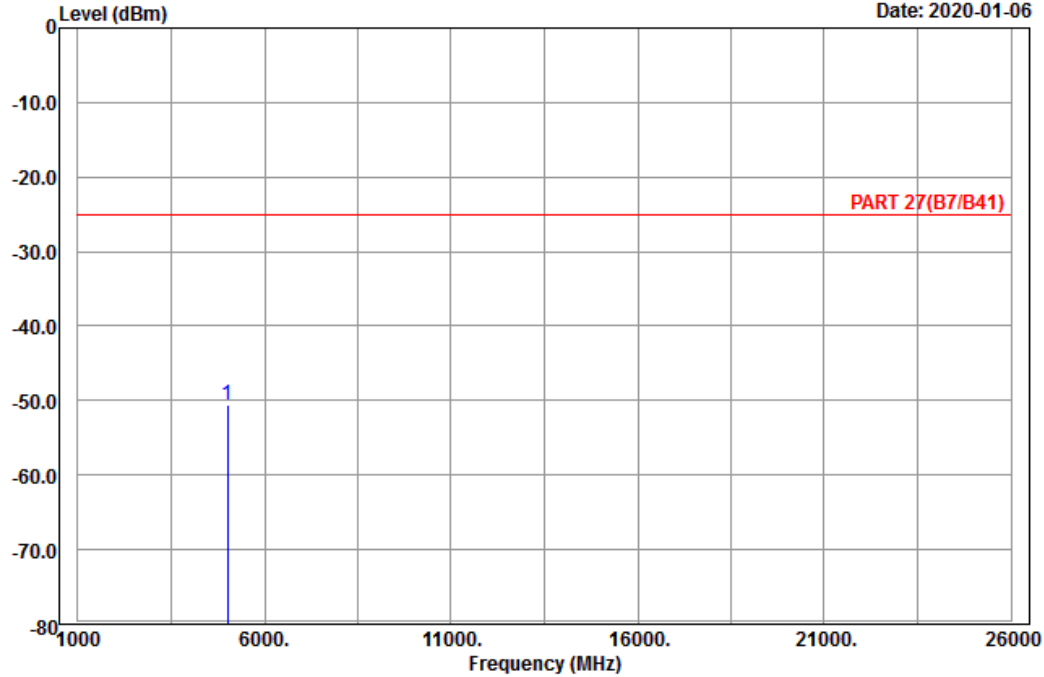


# Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 10

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 7\_Link\_L-Ch  
Tested by: Charles Hsiao

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5020.00 | -50.56 | -69.64        | 19.08  | -25.00        | -25.56        | Peak   |

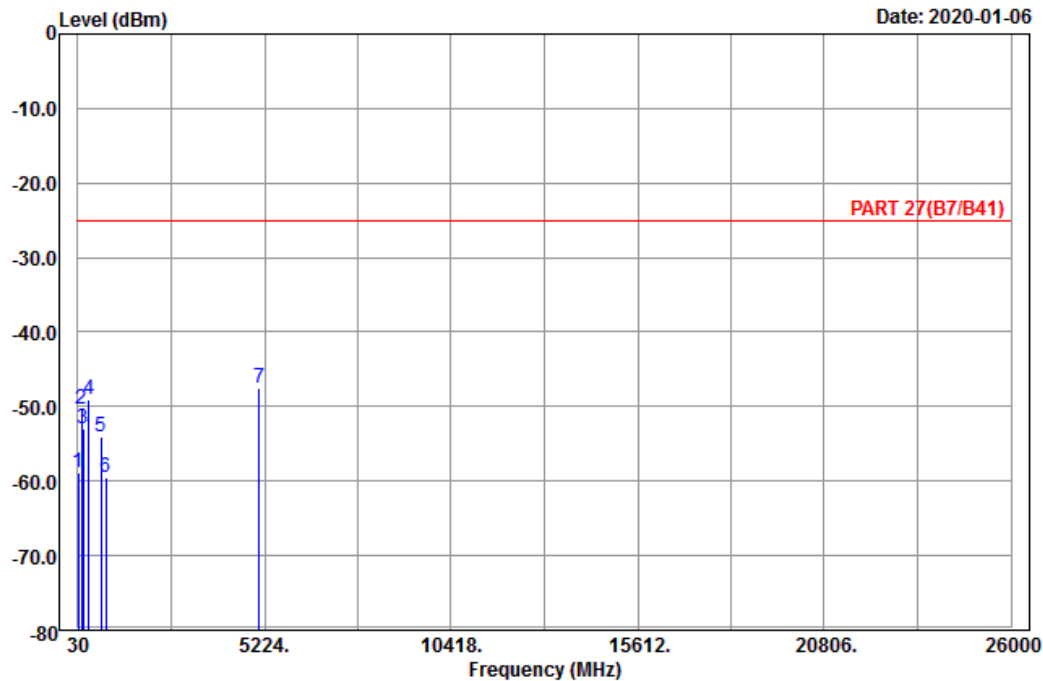
# Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 13



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 7\_Link\_M-Ch  
Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 48.36   | -58.89 | -45.46     | -13.43 | -25.00     | -33.89     | Peak   |
| 2    | 142.05  | -50.45 | -42.69     | -7.76  | -25.00     | -25.45     | Peak   |
| 3    | 183.36  | -53.07 | -47.45     | -5.62  | -25.00     | -28.07     | Peak   |
| 4    | 328.70  | -49.08 | -43.46     | -5.62  | -25.00     | -24.08     | Peak   |
| 5    | 668.90  | -54.13 | -53.90     | -0.23  | -25.00     | -29.13     | Peak   |
| 6    | 811.70  | -59.56 | -61.44     | 1.88   | -25.00     | -34.56     | Peak   |
| 7 pp | 5070.00 | -47.53 | -66.92     | 19.39  | -25.00     | -22.53     | Peak   |

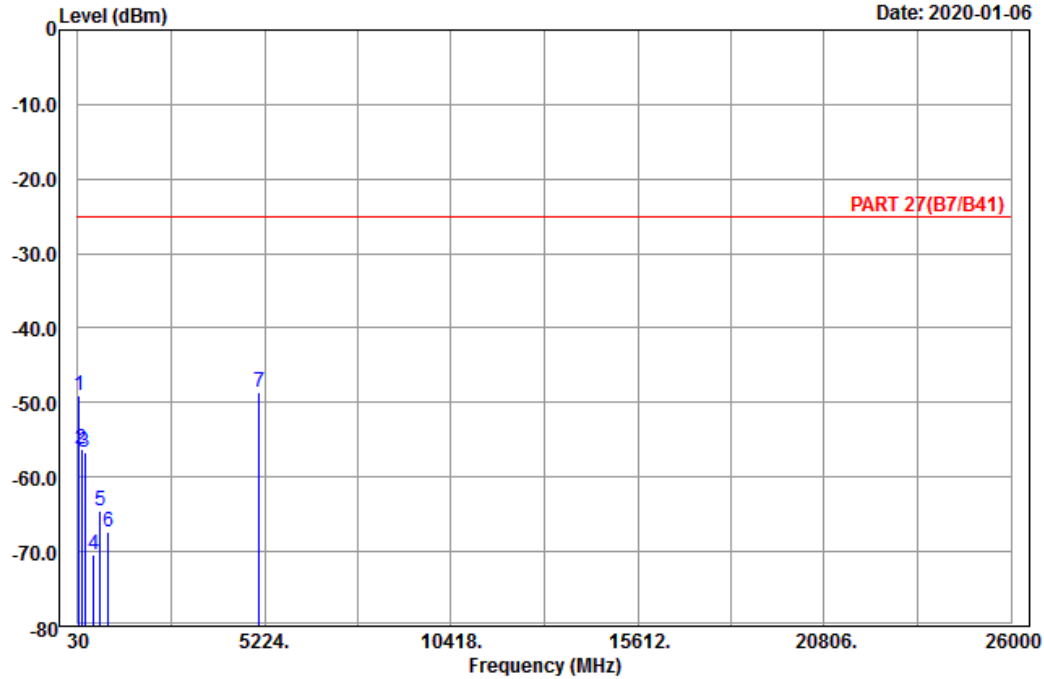


# Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 14

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 7 \_Link\_M-Ch  
Tested by: Charles Hsiao

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 52.68   | -49.08 | -35.02     | -14.06 | -25.00     | -24.08     | Peak   |
| 2    | 125.85  | -56.19 | -48.30     | -7.89  | -25.00     | -31.19     | Peak   |
| 3    | 227.91  | -56.69 | -50.88     | -5.81  | -25.00     | -31.69     | Peak   |
| 4    | 481.30  | -70.33 | -65.60     | -4.73  | -25.00     | -45.33     | Peak   |
| 5    | 647.20  | -64.59 | -64.49     | -0.10  | -25.00     | -39.59     | Peak   |
| 6    | 882.40  | -67.36 | -69.75     | 2.39   | -25.00     | -42.36     | Peak   |
| 7 pp | 5070.00 | -48.69 | -68.08     | 19.39  | -25.00     | -23.69     | Peak   |

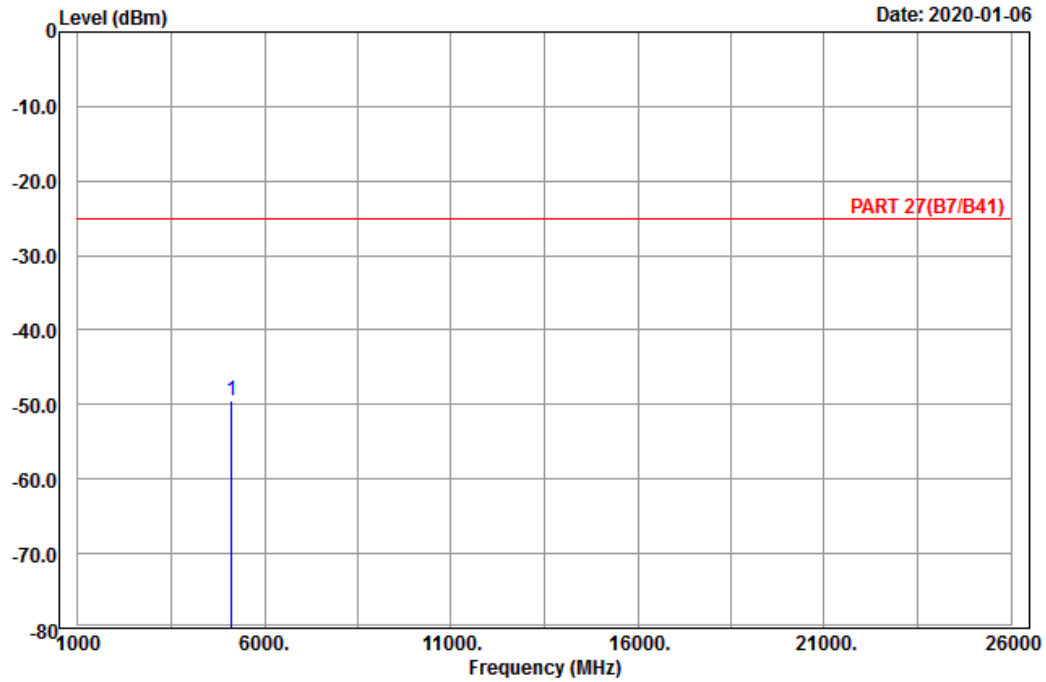
# High Channel



Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band\_Link\_H-Ch  
Tested by: Charles Hsiao

|              |        | Read   | Limit  | Over   |              |
|--------------|--------|--------|--------|--------|--------------|
| Freq         | Level  | Level  | Factor | Line   | Limit Remark |
| MHz          | dBm    | dBm    | dB     | dBm    | dB           |
| 1 pp 5120.00 | -49.59 | -69.30 | 19.71  | -25.00 | -24.59 Peak  |

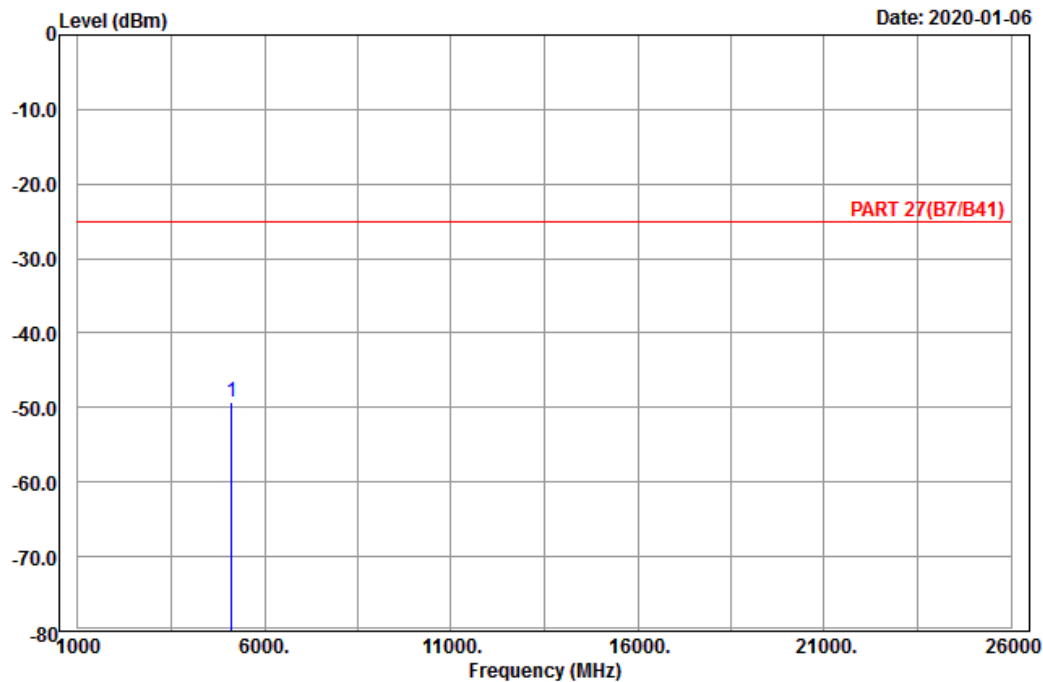


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-06



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band \_Link\_H-Ch  
Tested by: Charles Hsiao

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5120.00 | -49.27 | -68.98        | 19.71  | -25.00        | -24.27        | Peak   |

LTE Band 41  
Channel Bandwidth: 5 MHz / QPSK  
Low Channel

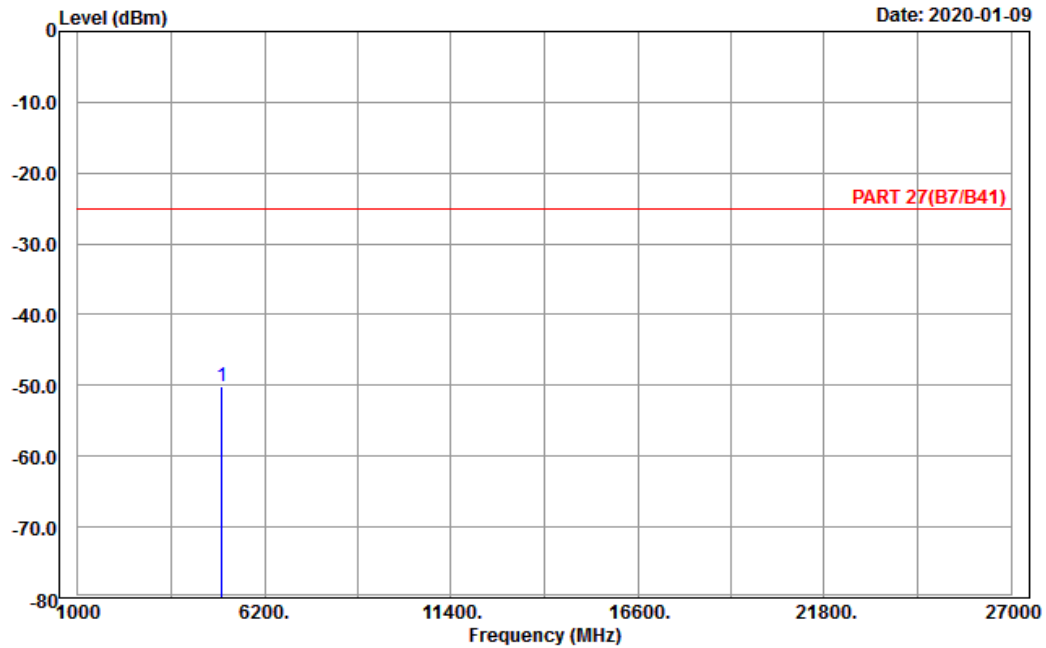


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9

Date: 2020-01-09



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 41 \_Link\_L-Ch  
Tested by: Karl Lee

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5005.00 | -50.21 | -69.79        | 19.58  | -25.00        | -25.21        | Peak   |



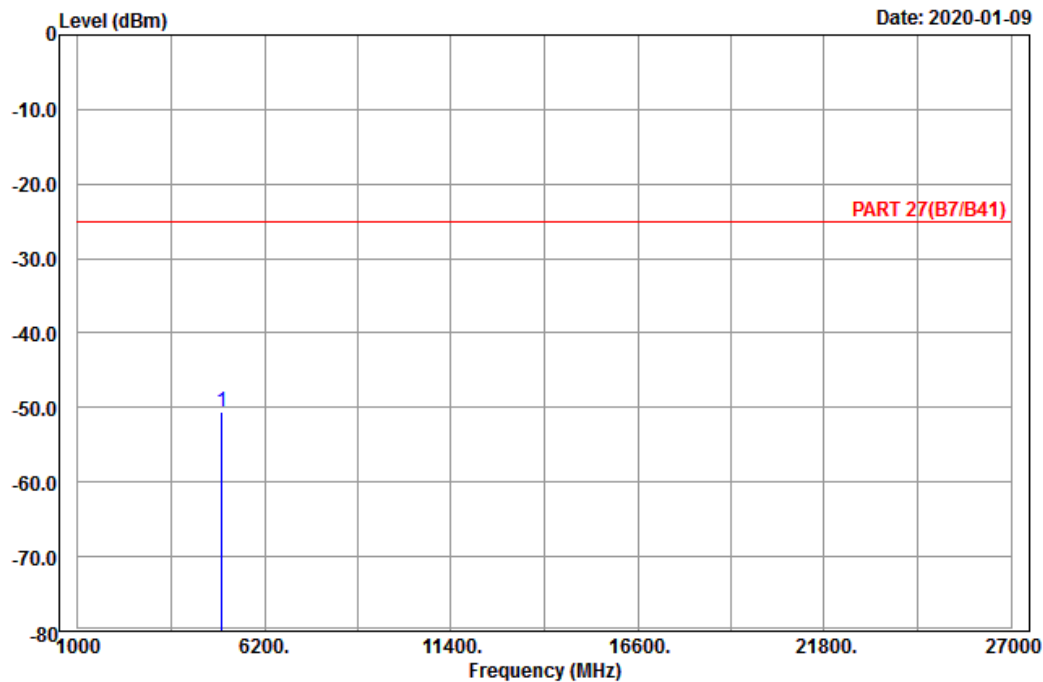


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-09



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 41 \_Link\_L-Ch  
Tested by: Karl Lee

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5005.00 | -50.49 | -70.07        | 19.58  | -25.00        | -25.49        | Peak   |

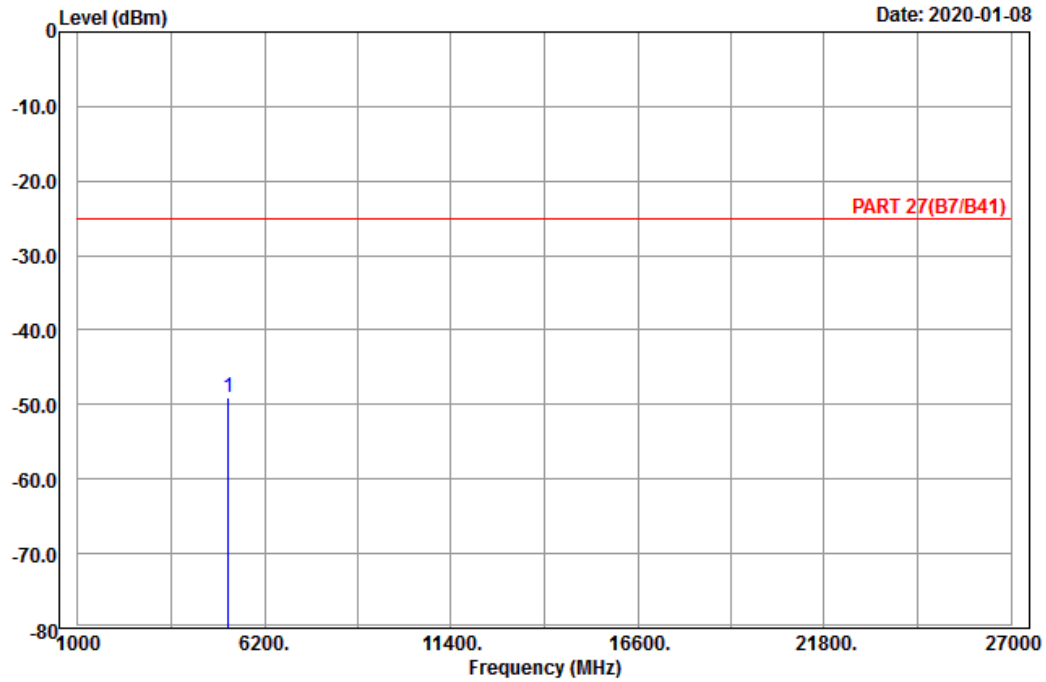
# Middle Channel



Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 41 \_Link\_M-Ch  
Tested by: Karl Lee

|              |        | Read   | Limit  | Over   |              |
|--------------|--------|--------|--------|--------|--------------|
| Freq         | Level  | Level  | Factor | Line   | Limit Remark |
| MHz          | dBm    | dBm    | dB     | dBm    | dB           |
| 1 pp 5186.00 | -49.04 | -69.16 | 20.12  | -25.00 | -24.04 Peak  |

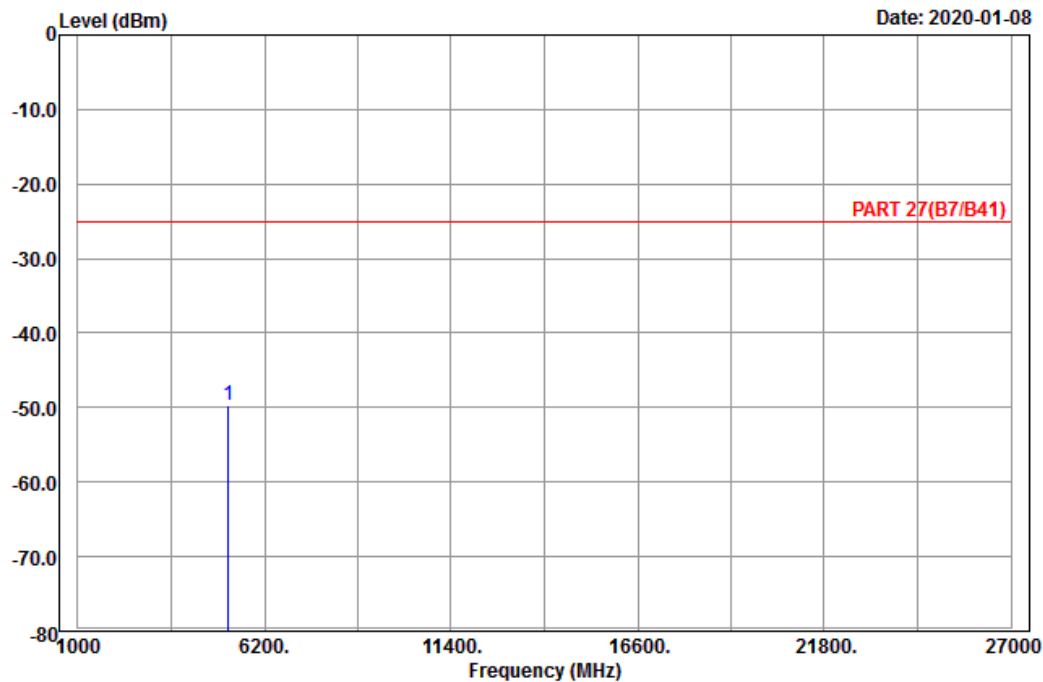


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-08



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 41 \_Link\_M-Ch  
Tested by: Karl Lee

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5186.00 | -49.68 | -69.80        | 20.12  | -25.00        | -24.68        | Peak   |

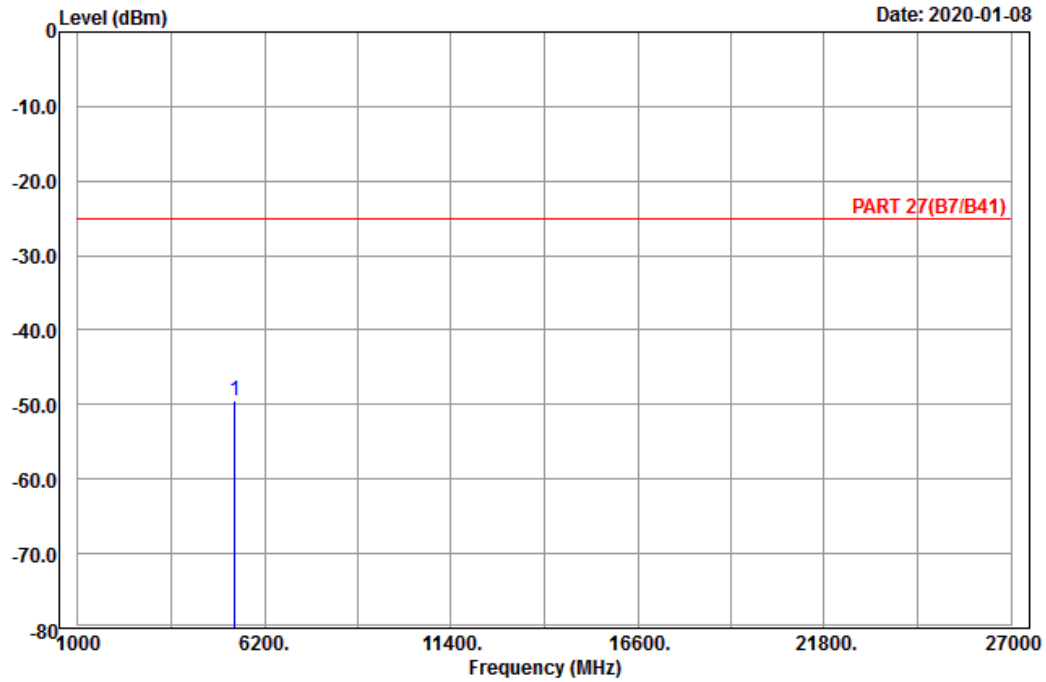
# High Channel



Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 41 \_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 5375.00 | -49.40 | -69.72     | 20.32  | -25.00     | -24.40     | Peak   |

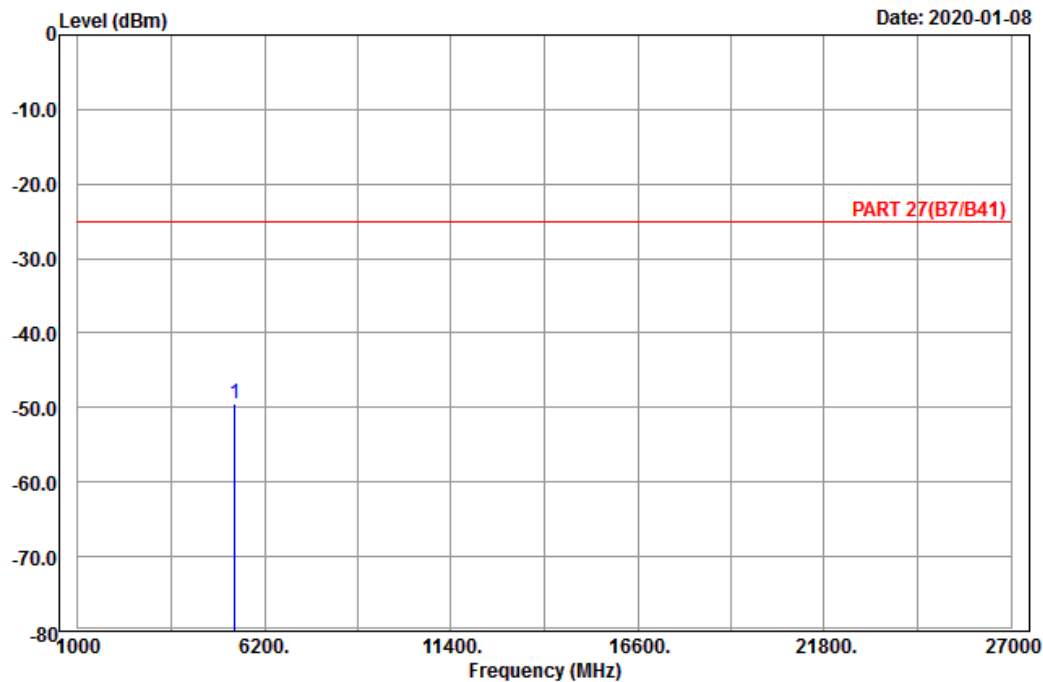


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-08



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 41 \_Link\_H-Ch  
Tested by: Karl Lee

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5375.00 | -49.51 | -69.83        | 20.32  | -25.00        | -24.51        | Peak   |

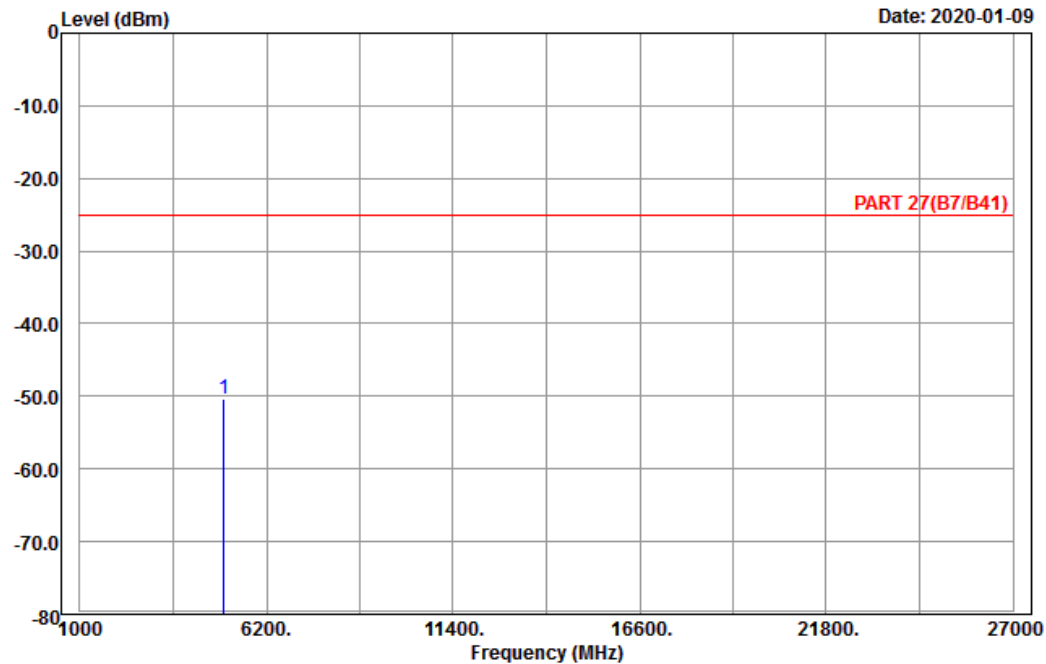
Channel Bandwidth: 20 MHz / QPSK  
Low Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 41 \_Link\_L-Ch  
Tested by: Karl Lee

|              |        | Read   |        | Limit  | Over   |        |
|--------------|--------|--------|--------|--------|--------|--------|
| Freq         | Level  | Level  | Factor | Line   | Limit  | Remark |
| MHz          | dBm    | dBm    | dB     | dBm    | dB     |        |
| 1 pp 5020.00 | -50.32 | -69.40 | 19.08  | -25.00 | -25.32 | Peak   |

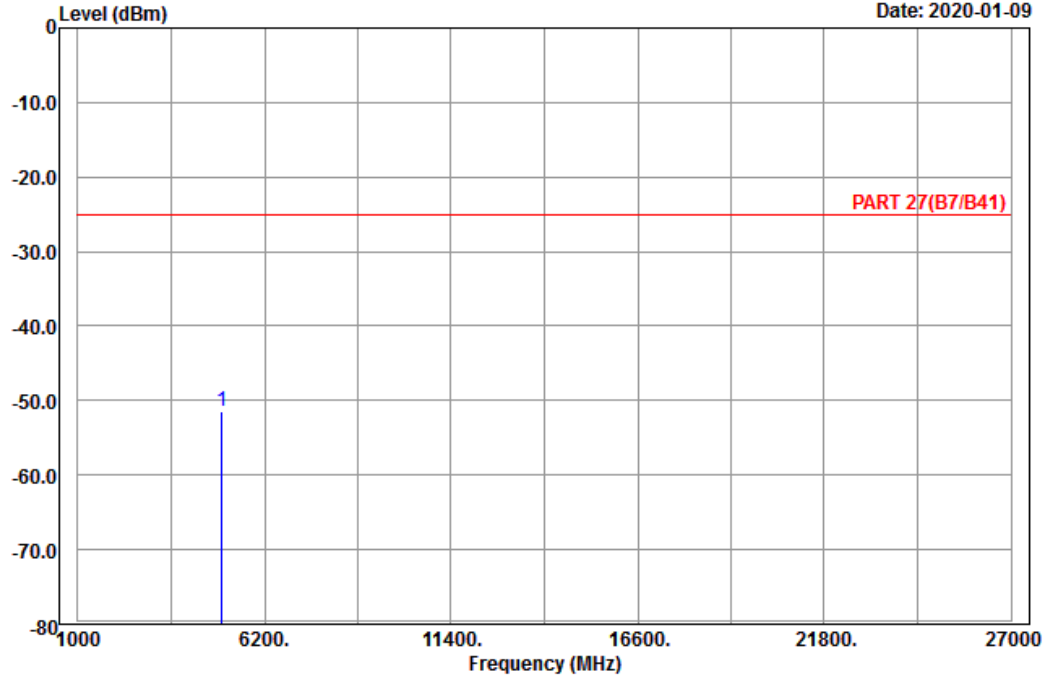


Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-09



Site : 966 chamber 1  
 Condition: PART 27(B7/B41) Vertical  
 Remark : LTE\_Band 41 \_Link\_L-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5020.00 | -51.43 | -70.51        | 19.08  | -25.00        | -26.43        | Peak   |

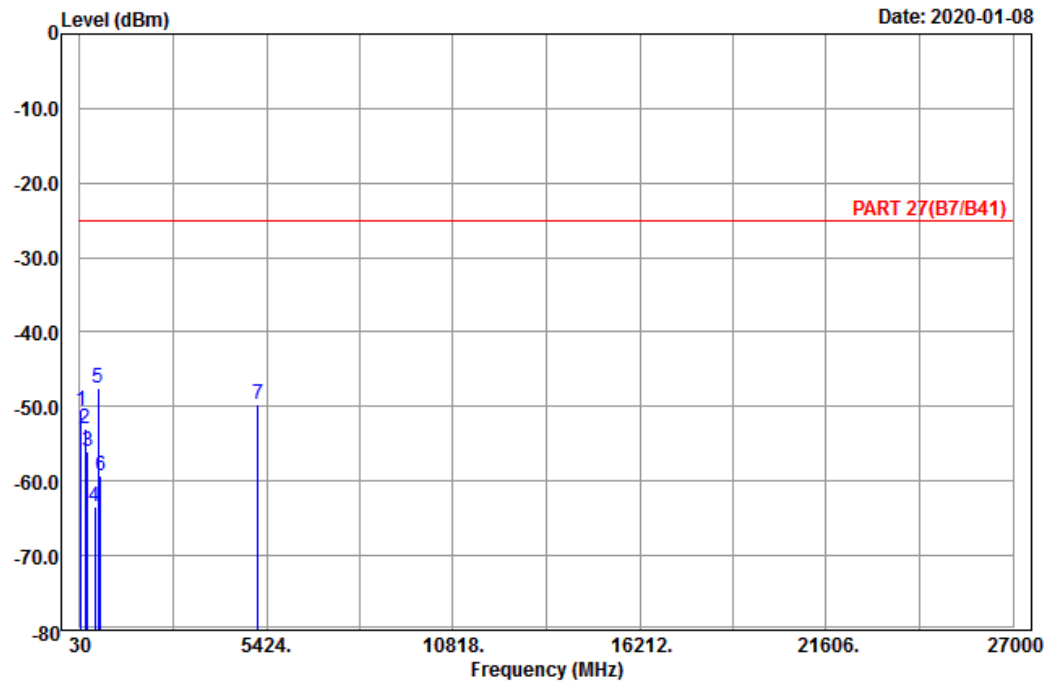
## Middle Channel



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 13



Site : 966 chamber 1  
 Condition: PART 27(B7/B41) Horizontal  
 Remark : LTE\_Band 41\_Link\_M-Ch  
 Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 57.00   | -50.63 | -36.57     | -14.06 | -25.00     | -25.63     | Peak   |
| 2    | 183.36  | -53.07 | -47.45     | -5.62  | -25.00     | -28.07     | Peak   |
| 3    | 247.62  | -56.02 | -50.47     | -5.55  | -25.00     | -31.02     | Peak   |
| 4    | 463.80  | -63.42 | -59.19     | -4.23  | -25.00     | -38.42     | Peak   |
| 5 pp | 547.80  | -47.59 | -45.79     | -1.80  | -25.00     | -22.59     | Peak   |
| 6    | 623.40  | -59.26 | -59.42     | 0.16   | -25.00     | -34.26     | Peak   |
| 7    | 5186.00 | -49.62 | -69.74     | 20.12  | -25.00     | -24.62     | Peak   |



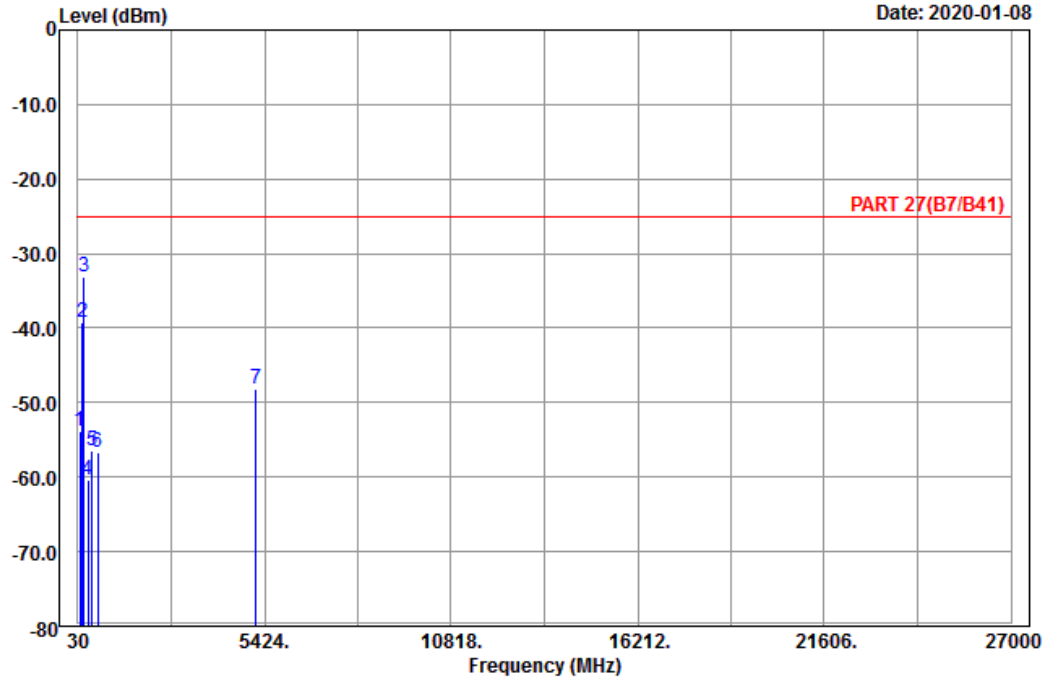


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 14

Date: 2020-01-08



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 41\_Link\_M-Ch  
Tested by: Karl Lee

|      | Freq    | Level  | Read Level | Factor | Limit Line | Over Limit | Remark |
|------|---------|--------|------------|--------|------------|------------|--------|
|      | MHz     | dBm    | dBm        | dB     | dBm        | dB         |        |
| 1    | 90.21   | -53.75 | -43.08     | -10.67 | -25.00     | -28.75     | Peak   |
| 2    | 154.74  | -39.14 | -31.33     | -7.81  | -25.00     | -14.14     | Peak   |
| 3 pp | 200.91  | -33.24 | -27.07     | -6.17  | -25.00     | -8.24      | Peak   |
| 4    | 321.00  | -60.33 | -54.62     | -5.71  | -25.00     | -35.33     | Peak   |
| 5    | 433.00  | -56.54 | -53.08     | -3.46  | -25.00     | -31.54     | Peak   |
| 6    | 613.60  | -56.71 | -56.98     | 0.27   | -25.00     | -31.71     | Peak   |
| 7    | 5186.00 | -48.26 | -68.38     | 20.12  | -25.00     | -23.26     | Peak   |

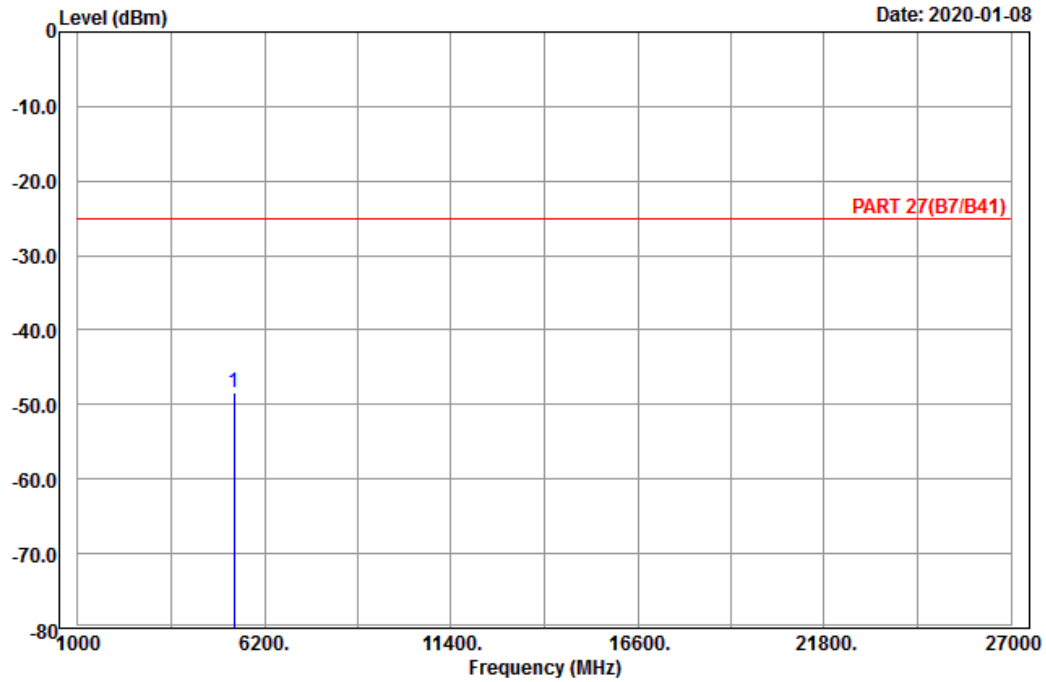
# High Channel



Bureau Veritas Consumer Products Services Ltd.,Taoyuan Branch

A D T

Data: 9



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Horizontal  
Remark : LTE\_Band 41 \_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 5360.00 | -48.40 | -68.70     | 20.30  | -25.00     | -23.40     | Peak   |

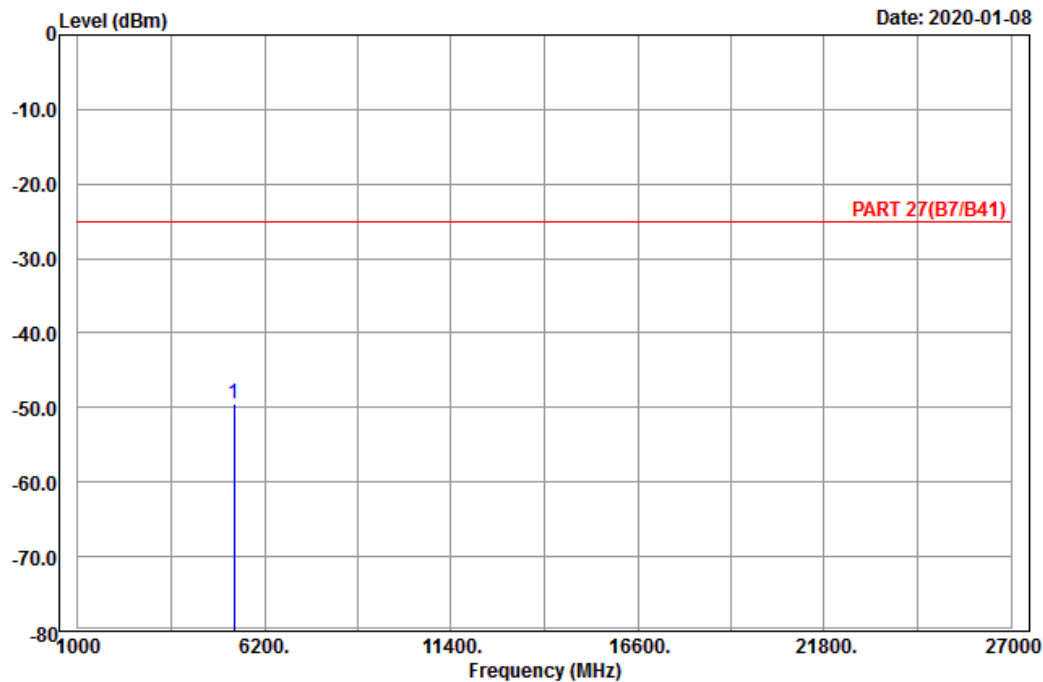


# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch

A D T

Data: 10

Date: 2020-01-08



Site : 966 chamber 1  
Condition: PART 27(B7/B41) Vertical  
Remark : LTE\_Band 41 \_Link\_H-Ch  
Tested by: Karl Lee

|      | Freq    | Level  | Read<br>Level | Factor | Limit<br>Line | Over<br>Limit | Remark |
|------|---------|--------|---------------|--------|---------------|---------------|--------|
|      | MHz     | dBm    | dBm           | dB     | dBm           | dB            |        |
| 1 pp | 5360.00 | -49.54 | -69.84        | 20.30  | -25.00        | -24.54        | 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:

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**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 ---