

# FCC EMC Test Report

## FCC ID: QISME919BS-567AB

**Project No.** : 1907C127  
**Equipment** : LTE Module  
**Test Model** : ME919Bs-567ab  
**Series Model** : N/A  
**Applicant** : Huawei Technologies Co., Ltd.  
**Address** : Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, China

**Date of Receipt** : Jul. 16, 2019  
**Date of Test** : Jul. 17, 2019 ~ Jul. 23, 2019  
**Issued Date** : Jul. 25, 2019  
**Tested by** : BTL Inc.

**Testing Engineer** : Simon Ling  
(Simon Ling)

**Technical Manager** : Bill Zhang  
(Bill Zhang)

**Authorized Signatory** : Kevin Li  
(Kevin Li)

# **B T L I N C .**

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Certificate #5123.02

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The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

**Table of Contents****Page**

|  |           |
|--|-----------|
| <b>REPORT ISSUED HISTORY</b>                                 | <b>4</b>  |
| <b>1 . GENERAL SUMMARY</b>                                   | <b>5</b>  |
| <b>2 . SUMMARY OF TEST RESULTS</b>                           | <b>6</b>  |
| 2.1 TEST FACILITY  | 7         |
| 2.2 MEASUREMENT UNCERTAINTY                                  | 7         |
| <b>3 . GENERAL INFORMATION</b>                               | <b>8</b>  |
| 3.1 GENERAL DESCRIPTION OF EUT                               | 8         |
| 3.2 DESCRIPTION OF TEST MODES                                | 9         |
| 3.3 EUT OPERATING CONDITIONS                                 | 9         |
| 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED | 10        |
| 3.5 DESCRIPTION OF SUPPORT UNITS                             | 10        |
| <b>4 . EMC EMISSION TEST</b>                                 | <b>11</b> |
| 4.1 CONDUCTED EMISSION MEASUREMENT                           | 11        |
| 4.1.1 POWER LINE CONDUCTED EMISSION                          | 11        |
| 4.1.2 MEASUREMENT INSTRUMENTS LIST                           | 11        |
| 4.1.3 TEST PROCEDURE   | 12        |
| 4.1.4 DEVIATION FROM TEST STANDARD                           | 12        |
| 4.1.5 TEST SETUP   | 12        |
| 4.1.6 TEST RESULTS   | 12        |
| 4.2 RADIATED EMISSION MEASUREMENT                            | 15        |
| 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT                | 15        |
| 4.2.2 MEASUREMENT INSTRUMENTS LIST                           | 16        |
| 4.2.3 TEST PROCEDURE   | 16        |
| 4.2.4 DEVIATION FROM TEST STANDARD                           | 16        |
| 4.2.5 TEST SETUP   | 17        |
| 4.2.6 TEST RESULTS-BELOW 1 GHZ                               | 17        |
| 4.2.7 TEST RESULTS-ABOVE 1 GHZ                               | 20        |

### REPORT ISSUED HISTORY

| Report Version | Description     | Issued Date   |
|----------------|-----------------|---------------|
| R00            | Original Issue. | Jul. 25, 2019 |

## 1. GENERAL SUMMARY

Equipment : LTE Module  
Brand Name : HUAWEI  
Test Model : ME919Bs-567ab  
Series Model : N/A  
Applicant : Huawei Technologies Co., Ltd.  
Manufacturer : Huawei Technologies Co., Ltd.  
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,  
Bantian, Longgang District, Shenzhen, 518129, China  
Factory : Huawei Technologies Co., Ltd.  
Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,  
Bantian, Longgang District, Shenzhen, 518129, China  
Date of Test : Jul. 17, 2019 ~ Jul. 23, 2019  
Test Sample : Engineering Sample No.: DG19071641  
Standard(s) : FCC Part 15, Subpart B  
ANSI C63.4-2014

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCE-1-1907C127) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

| EMC Emission                             |                                  |         |          |         |
|--|----------------------------------|---------|----------|---------|
| Standard(s)                              | Test Item                        | Limit   | Judgment | Remark  |
| FCC Part15, Subpart B<br>ANSI C63.4-2014 | Conducted Emission               | Class B | PASS     |         |
|  | Radiated emission<br>Below 1 GHz | Class B | PASS     |         |
|  | Radiated emission<br>Above 1 GHz | Class B | PASS     | NOTE(1) |

NOTE:

(1) The EUT's max operating frequency is exceeds 108 MHz, so the test will be performed.

## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

## 2.2 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. The BTL measurement uncertainty is less than the CISPR 16-4-2  $U_{\text{CISPR}}$  requirement.

The reported uncertainty of measurement  $y \pm U$ , where expanded uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

### A. Conducted Measurement :

| Test Site | Method | Measurement Frequency Range | U, (dB) |
|-----------|--------|-----------------------------|---------|
| DG-C02    | CISPR  | 150 kHz ~ 30MHz             | 2.32    |

### B. Radiated Measurement

| Test Site       | Method | Measurement Frequency Range | Ant. H / V | U, (dB) |
|-----------------|--------|-----------------------------|------------|---------|
| DG-CB02<br>(3m) | CISPR  | 30MHz ~ 200MHz              | V          | 4.56    |
|                 |        | 30MHz ~ 200MHz              | H          | 3.60    |
|                 |        | 200MHz ~ 1,000MHz           | V          | 4.16    |
|                 |        | 200MHz ~ 1,000MHz           | H          | 4.00    |

| Test Site       | Method | Measurement Frequency Range | U, (dB) |
|-----------------|--------|-----------------------------|---------|
| DG-CB02<br>(3m) | CISPR  | 1GHz ~ 6GHz                 | 4.38    |
|                 |        | 6GHz ~ 18GHz                | 5.36    |

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                     |  |
|---------------------|--|
| Equipment           | LTE Module   |
| Brand Name          | HUAWEI   |
| Test Model          | ME919Bs-567ab  |
| Series Model        | N/A  |
| Model Difference(s) | N/A  |
| Work Frequency      | Please refer to Note 2.  |
| Hardware Version    | RM3ME919BSM31  |
| Software Version    | 11.790.01.05.1419  |
| Power Source        | DC Voltage supplied from AC/DC adapter (support unit).                   |
| Power Rating        | I/P: 100-240V ~50/60Hz    O/P: 12V <b>===</b> 1.5A<br>EUT: 4V <b>===</b> |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2.

| Mode               |               | Work Frequency           |                        |
|--------------------|---------------|--------------------------|------------------------|
|                    |               | Transmitt Frequency(MHz) | Receive Frequency(MHz) |
| GSM/GPRS/EDGE      | GSM 850       | 824-849                  | 869-894                |
|                    | GSM 1900(PCS) | 1850-1910                | 1930-1990              |
| WCDMA/HSDPA/HS UPA | UMTS Band II  | 1850-1910                | 1930-1990              |
|                    | UMTS Band IV  | 1710-1755                | 2110-2155              |
|                    | UMTS Band V   | 824-849                  | 869-894                |
| LTE                | LTE Band 2    | 1850-1910                | 1930-1990              |
|                    | LTE Band 4    | 1710-1755                | 2110-2155              |
|                    | LTE Band 5    | 824-849                  | 869-894                |
|                    | LTE Band 7    | 2500-2570                | 2620-2690              |
|                    | LTE Band 12   | 699-716                  | 729-746                |
|                    | LTE Band 13   | 777-787                  | 746-756                |
|                    | LTE Band 29   | /                        | 717-728                |

\*The above work frequency is exemption frequency.



### 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description        |
|--------------|--------------------|
| Mode 1       | LTE transmission   |
| Mode 2       | WCDMA transmission |
| Mode 3       | GSM transmission   |

| For Conducted Test |                  |
|--------------------|------------------|
| Final Test Mode    | Description      |
| Mode 1             | LTE transmission |

| For Radiated Test |                  |
|-------------------|------------------|
| Final Test Mode   | Description      |
| Mode 1            | LTE transmission |

Evaluation description:

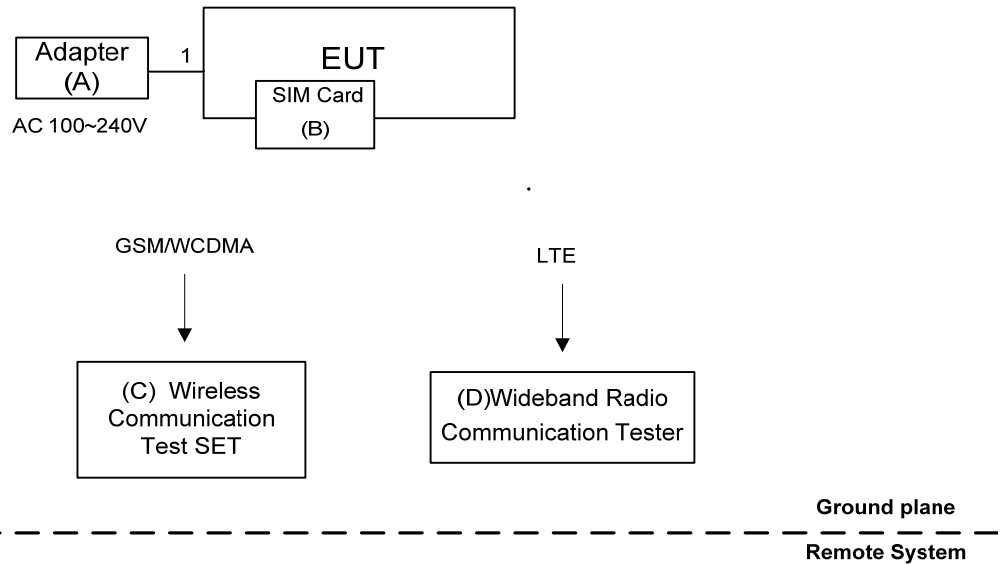
1. The worst case is recorded in this report.

### 3.3 EUT OPERATING CONDITIONS

The EUT exercise program used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use. The standard test signals and output signal as following:

1. EUT connected to adapter via DC cable for power supply.
2. EUT connected to Notebook(F&G&H&I) via RJ45 cable.
3. EUT connected to Notebook(D&E) via 2.4G&5G WIFI function.
4. EUT connected to wireless communication test SET via radio signal.
5. EUT connected to wideband radio communication tester via radio signal.
6. The SIM card and USB Flash Disk are plugged into the EUT.

### 3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.5 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.

| Item | Equipment                           | Mfr/Brand | Model/Type No.       | Series No. |
|------|-------------------------------------|-----------|----------------------|------------|
| A    | Adapter                             | HUAWEI    | HW-120200C1W         | N/A        |
| B    | SIM Card                            | RS        | N/A                  | N/A        |
| C    | Wireless Communication Test SET     | Agilent   | (8960 Series) E5515C | MY48364183 |
| D    | Wideband Radio Communication Tester | RS        | CMW500               | 122125     |

| Item | Cable Type | Shielded Type | Ferrite Core | Length |
|------|------------|---------------|--------------|--------|
| 1    | DC Cable   | NO            | NO           | 1.2m   |

## 4. EMC EMISSION TEST

### 4.1 CONDUCTED EMISSION MEASUREMENT

#### 4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)

| FREQUENCY (MHz) | Class B (dBuV) |           |
|-----------------|----------------|-----------|
|                 | Quasi-peak     | Average   |
| 0.15 - 0.5      | 66 - 56 *      | 56 - 46 * |
| 0.5 - 5.0       | 56.00          | 46.00     |
| 5.0 - 30.0      | 60.00          | 50.00     |

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:  
 Measurement Value = Reading Level + Correct Factor  
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)  
 Margin Level = Measurement Value - Limit Value

#### 4.1.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment    | Manufacturer | Type No.               | Serial No. | Calibrated until |
|------|----------------------|--------------|------------------------|------------|------------------|
| 1    | EMI Test Receiver    | R&S          | ESCI                   | 100382     | Mar. 10, 2020    |
| 2    | LISN                 | EMCO         | 3816/2                 | 52765      | Mar. 10, 2020    |
| 3    | TWO-LINE V-NETWORK   | R&S          | ENV216                 | 101447     | May. 19, 2020    |
| 4    | 50Ω Terminator       | SHX          | TF5-3                  | 15041305   | Mar. 10, 2020    |
| 5    | Measurement Software | Farad        | EZ-EMC Ver.NB-03A 1-01 | N/A        | N/A              |
| 6    | Cable                | N/A          | RG223                  | 12m        | Mar. 12, 2020    |

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.

All calibration period of equipment list is one year.

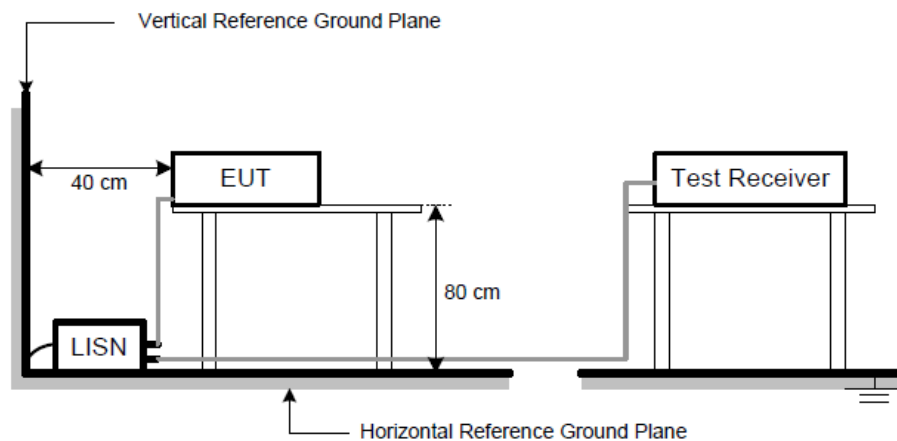
### 4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- f. First the whole spectrum of emission caused by equipment under test(EUT) is recorded with Detector set to peak. Peak value recorded in table if the margin from QP Limit is larger than 2dB, otherwise, QP value is recorded, Measuring frequency range from 150KHz to 30MHz.

### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

### 4.1.5 TEST SETUP

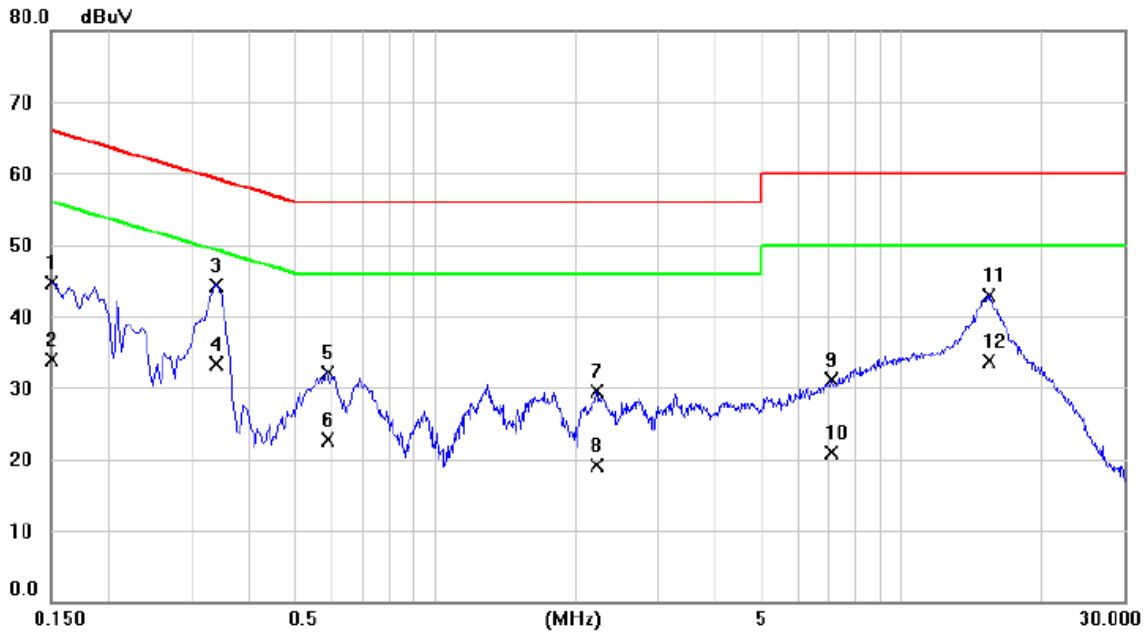


### 4.1.6 TEST RESULTS

Remark

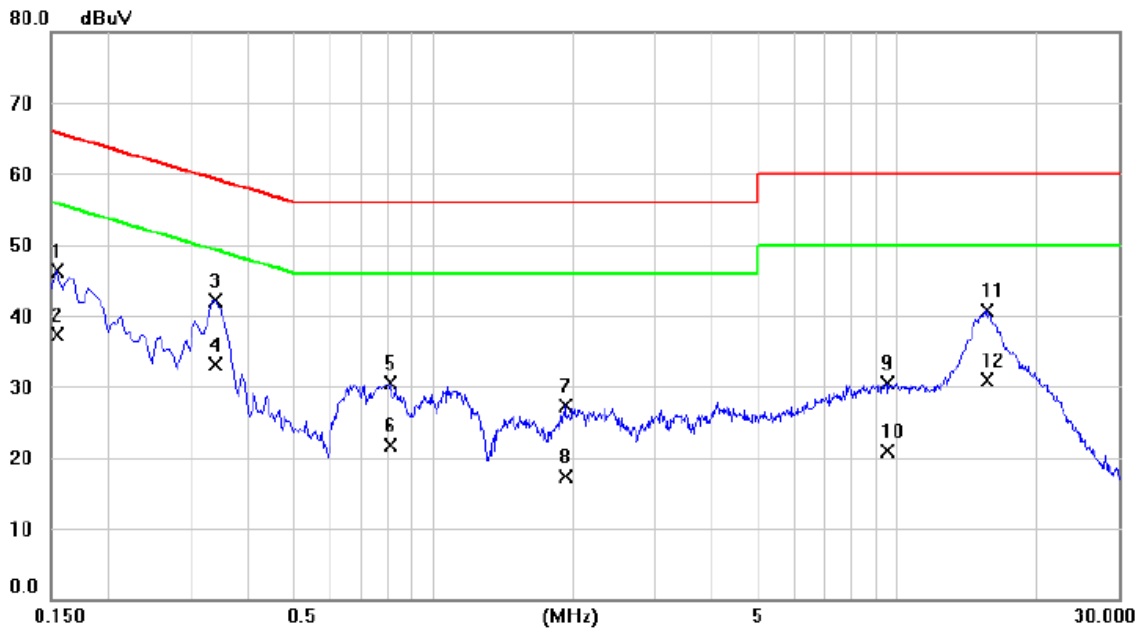
- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9 kHz; SPA setting in RBW=10 kHz, VBW =10 kHz, Swp. Time = 0.3 sec./MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10 kHz, VBW=10 kHz, Swp. Time =0.3 sec./MHz.
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a “ \* ” marked in AVG Mode column of Interference Voltage Measured.

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 53%           |
| Test Voltage  | AC 120V/60Hz | Phase             | Line          |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|---------|
| 1   |     | 0.1500       | 34.82                    | 9.82                    | 44.64                    | 66.00         | -21.36       | QP       |         |
| 2   |     | 0.1500       | 24.15                    | 9.82                    | 33.97                    | 56.00         | -22.03       | AVG      |         |
| 3   | *   | 0.3390       | 34.55                    | 9.85                    | 44.40                    | 59.23         | -14.83       | QP       |         |
| 4   |     | 0.3390       | 23.48                    | 9.85                    | 33.33                    | 49.23         | -15.90       | AVG      |         |
| 5   |     | 0.5865       | 22.19                    | 9.89                    | 32.08                    | 56.00         | -23.92       | QP       |         |
| 6   |     | 0.5865       | 12.79                    | 9.89                    | 22.68                    | 46.00         | -23.32       | AVG      |         |
| 7   |     | 2.2200       | 19.43                    | 10.01                   | 29.44                    | 56.00         | -26.56       | QP       |         |
| 8   |     | 2.2200       | 9.18                     | 10.01                   | 19.19                    | 46.00         | -26.81       | AVG      |         |
| 9   |     | 7.0845       | 20.75                    | 10.33                   | 31.08                    | 60.00         | -28.92       | QP       |         |
| 10  |     | 7.0845       | 10.49                    | 10.33                   | 20.82                    | 50.00         | -29.18       | AVG      |         |
| 11  |     | 15.3600      | 32.14                    | 10.77                   | 42.91                    | 60.00         | -17.09       | QP       |         |
| 12  |     | 15.3600      | 22.87                    | 10.77                   | 33.64                    | 50.00         | -16.36       | AVG      |         |

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 53%           |
| Test Voltage  | AC 120V/60Hz | Phase             | Neutral       |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV | Limit<br>dBuV | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|--------------|----------|---------|
| 1   |     | 0.1545       | 36.39                    | 9.91                    | 46.30                    | 65.75         | -19.45       | QP       |         |
| 2   |     | 0.1545       | 27.48                    | 9.91                    | 37.39                    | 55.75         | -18.36       | AVG      |         |
| 3   |     | 0.3390       | 32.14                    | 9.98                    | 42.12                    | 59.23         | -17.11       | QP       |         |
| 4   | *   | 0.3390       | 23.15                    | 9.98                    | 33.13                    | 49.23         | -16.10       | AVG      |         |
| 5   |     | 0.8115       | 20.42                    | 10.09                   | 30.51                    | 56.00         | -25.49       | QP       |         |
| 6   |     | 0.8115       | 11.56                    | 10.09                   | 21.65                    | 46.00         | -24.35       | AVG      |         |
| 7   |     | 1.9275       | 17.15                    | 10.18                   | 27.33                    | 56.00         | -28.67       | QP       |         |
| 8   |     | 1.9275       | 7.15                     | 10.18                   | 17.33                    | 46.00         | -28.67       | AVG      |         |
| 9   |     | 9.4965       | 19.75                    | 10.72                   | 30.47                    | 60.00         | -29.53       | QP       |         |
| 10  |     | 9.4965       | 10.15                    | 10.72                   | 20.87                    | 50.00         | -29.13       | AVG      |         |
| 11  |     | 15.5535      | 29.57                    | 11.12                   | 40.69                    | 60.00         | -19.31       | QP       |         |
| 12  |     | 15.5535      | 19.79                    | 11.12                   | 30.91                    | 50.00         | -19.09       | AVG      |         |

## 4.2 RADIATED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

#### Below 1 GHz

##### Measurement Method and Applied Limits:

##### ANSI C63.4:

| Frequency (MHz) | Class B (at 3m)          |                            |
|-----------------|--------------------------|----------------------------|
|                 | (uV/m)<br>Field strength | (dBuV/m)<br>Field strength |
| 30 - 88         | 100                      | 40                         |
| 88 - 216        | 150                      | 43.5                       |
| 216 - 960       | 200                      | 46                         |
| Above 960       | 500                      | 54                         |

#### Above 1 GHz

##### Measurement Method and Applied Limits:

##### ANSI C63.4:

| Frequency (MHz) | Class B          |         |
|-----------------|------------------|---------|
|                 | (dBuV/m) (at 3m) |         |
|                 | Peak             | Average |
| Above 1000      | 74               | 54      |

### FREQUENCY RANGE OF RADIATED MEASUREMENT (FOR UNINTENTIONAL RADIATORS)

| Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz) | Range (MHz)   |
|---|---|
| Below 1.705   | 30  |
| 1.705 - 108   | 1000  |
| 108 - 500   | 2000  |
| 500 - 1000  | 5000  |
| Above 1000  | 5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower |

#### NOTE:

- (1) The limit for radiated test was performed according to as following:  
FCC Part 15, Subpart B
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).  
3m Emission level = 10m Emission level + 20log(10m/3m).
- (4) The test result calculated as following:  
Measurement Value = Reading Level + Correct Factor  
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)  
Margin Level = Measurement Value - Limit Value

#### 4.2.2 MEASUREMENT INSTRUMENTS LIST

**Below 1GHz & Above 1 GHz:**

| Item | Kind of Equipment          | Manufacturer | Type No.                          | Serial No. | Calibrated until |
|------|----------------------------|--------------|-----------------------------------|------------|------------------|
| 1    | Antenna                    | Schwarzbeck  | VULB9160                          | 9160-3232  | Mar. 09, 2020    |
| 2    | Double Ridged Horn Antenna | ARA          | DRG-118A                          | 16554      | Mar. 09, 2020    |
| 3    | Amplifier                  | Agilent      | 8449B                             | 3008A02274 | Mar. 10, 2020    |
| 4    | Amplifier                  | HP           | 8447D                             | 1937A02847 | Mar. 10, 2020    |
| 5    | Cable                      | emci         | LMR-400(30MHz-1GHz)<br>(10m+2.5m) | N/A        | Jun. 19, 2020    |
| 6    | Cable                      | mitron       | B10-01-01-12M                     | 18072743   | Jul. 30, 2019    |
| 7    | Controller                 | MF           | MF-7802BS                         | N/A        | N/A              |
| 8    | Measurement Software       | Farad        | EZ-EMC<br>Ver.NB-03A1-01          | N/A        | N/A              |
| 9    | EMI Test Receiver          | Keysight     | N9038A                            | MY56400060 | Mar. 10, 2020    |

Remark: "N/A" denotes no model name, no serial no. or no calibration specified.

All calibration period of equipment list is one year.

#### 4.2.3 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1 GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- i. For the actual test configuration, please refer to the related Item - Block Diagram of system tested (please refer to 3.4).

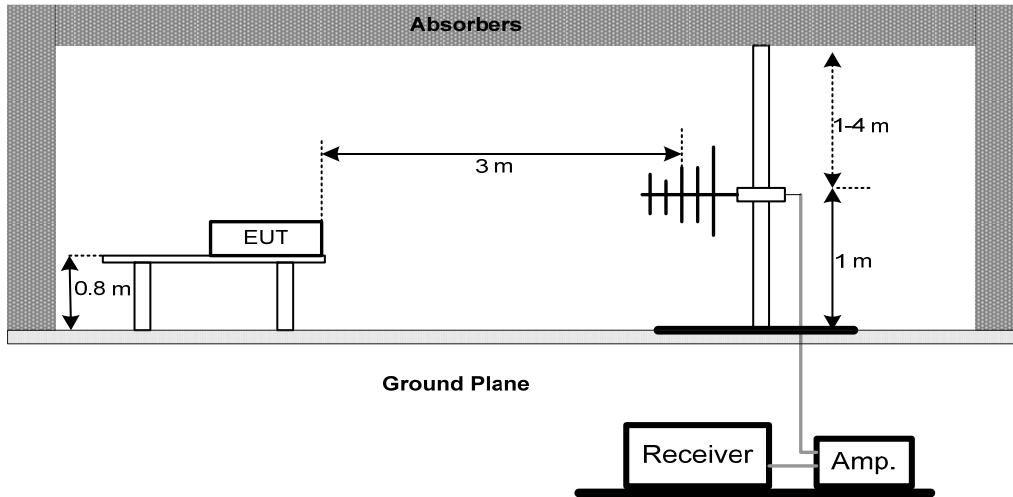
#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation

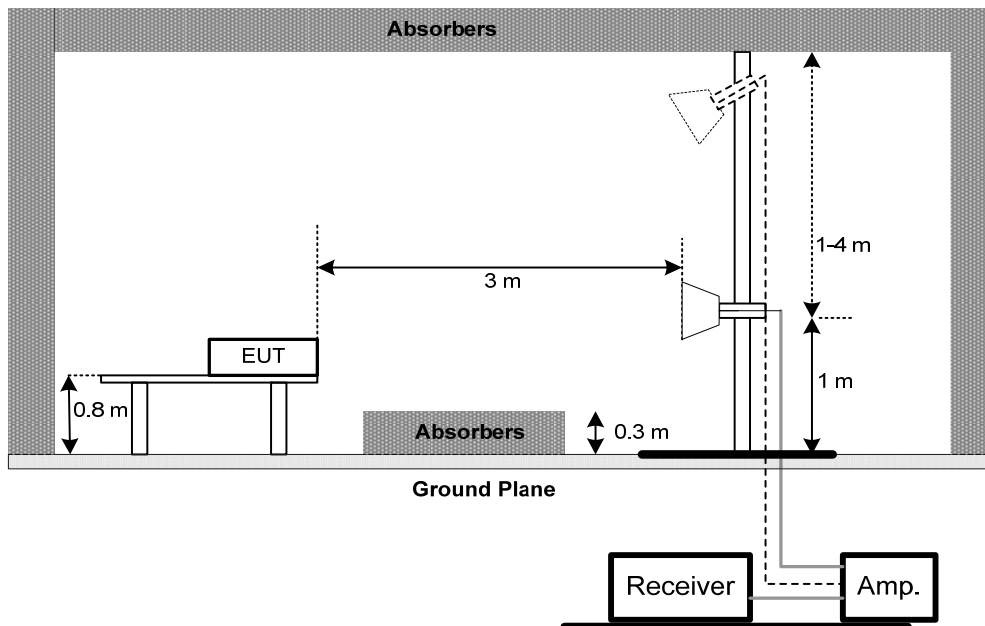


### 4.2.5 TEST SETUP

#### (A) Radiated Emission Test Set-Up Frequency Below 1 GHz



#### (B) Radiated Emission Test Set-Up Frequency Above 1 GHz

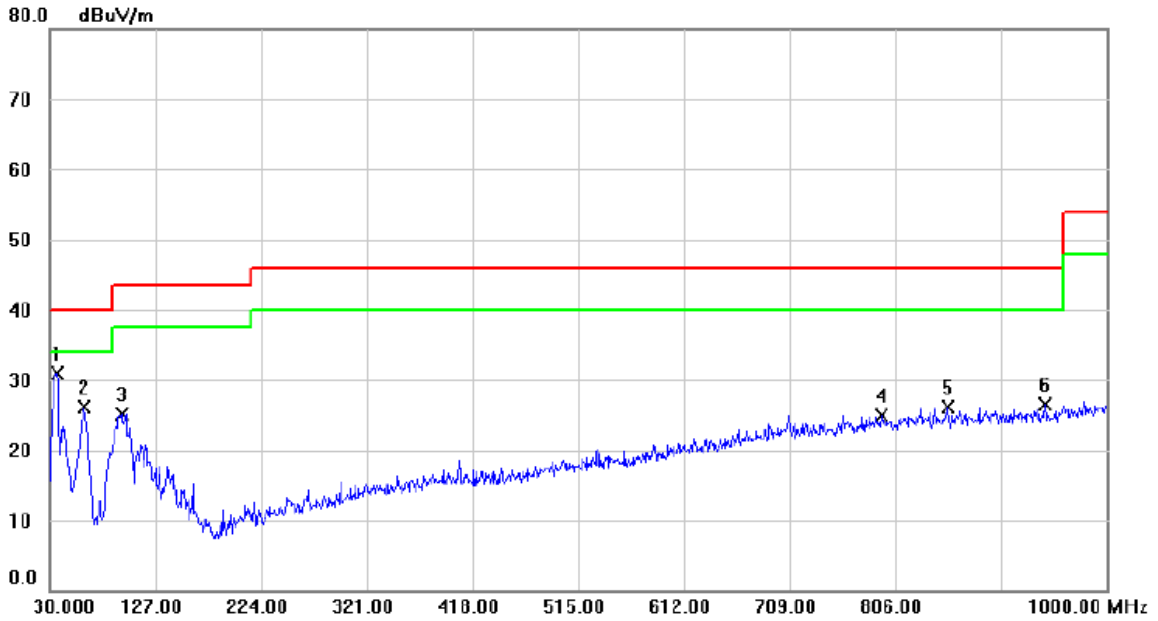


### 4.2.6 TEST RESULTS-BELOW 1 GHZ

Remark :

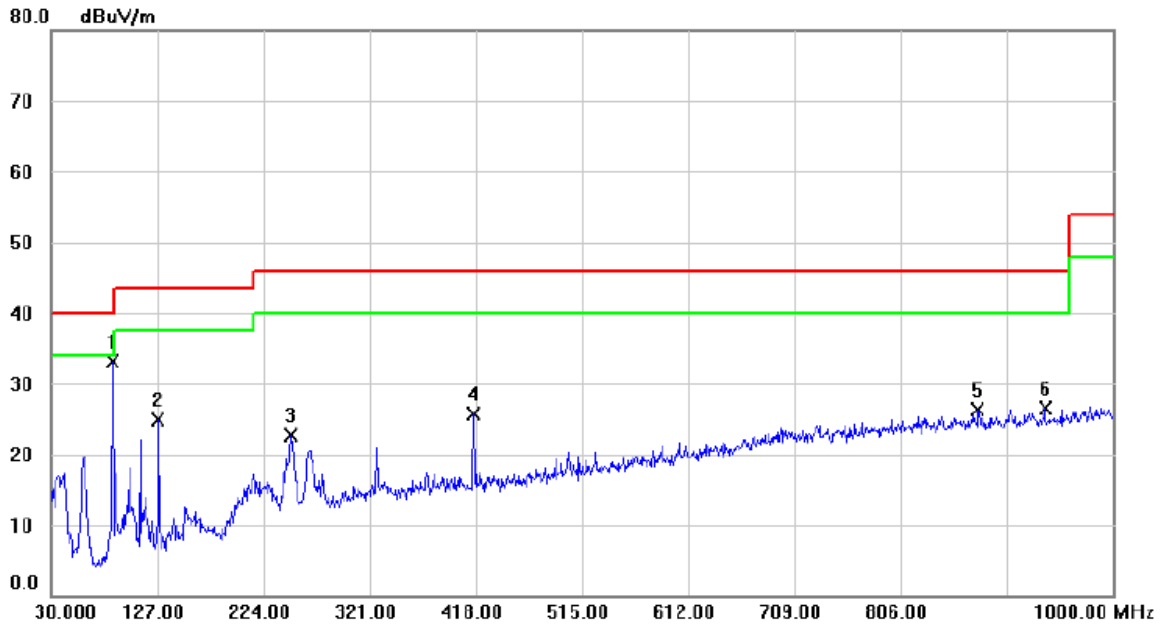
- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Measuring frequency range from 30 MHz to 1000 MHz
- (3) If the peak scan value lower limit more than 20 dB, then this signal data does not show in table.

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 60%           |
| Test Voltage  | AC 120V/60Hz | Polarization      | Vertical      |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 36.7900      | 46.95                    | -15.97                  | 30.98                      | 40.00           | -9.02        | QP       |         |
| 2   |     | 62.0100      | 48.83                    | -22.78                  | 26.05                      | 40.00           | -13.95       | QP       |         |
| 3   |     | 95.9600      | 47.03                    | -21.89                  | 25.14                      | 43.50           | -18.36       | QP       |         |
| 4   |     | 793.3900     | 29.69                    | -4.80                   | 24.89                      | 46.00           | -21.11       | QP       |         |
| 5   |     | 854.5000     | 30.14                    | -4.11                   | 26.03                      | 46.00           | -19.97       | QP       |         |
| 6   |     | 943.7400     | 29.96                    | -3.41                   | 26.55                      | 46.00           | -19.45       | QP       |         |

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 60%           |
| Test Voltage  | AC 120V/60Hz | Polarization      | Horizontal    |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



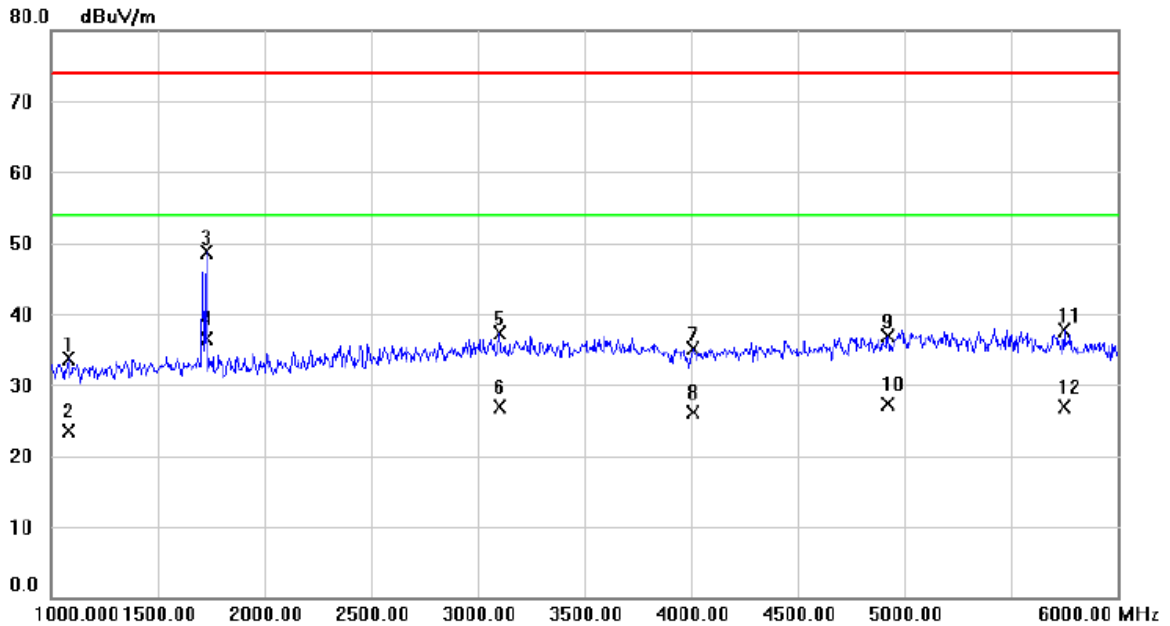
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   | *   | 86.2600      | 55.71                    | -22.62                  | 33.09                      | 40.00           | -6.91        | QP       |         |
| 2   |     | 127.9700     | 47.13                    | -22.27                  | 24.86                      | 43.50           | -18.64       | QP       |         |
| 3   |     | 249.2200     | 39.27                    | -16.64                  | 22.63                      | 46.00           | -23.37       | QP       |         |
| 4   |     | 416.0600     | 38.03                    | -12.27                  | 25.76                      | 46.00           | -20.24       | QP       |         |
| 5   |     | 876.8100     | 30.10                    | -3.88                   | 26.22                      | 46.00           | -19.78       | QP       |         |
| 6   |     | 937.9200     | 29.97                    | -3.44                   | 26.53                      | 46.00           | -19.47       | QP       |         |

#### 4.2.7 TEST RESULTS-ABOVE 1 GHZ

Remark :

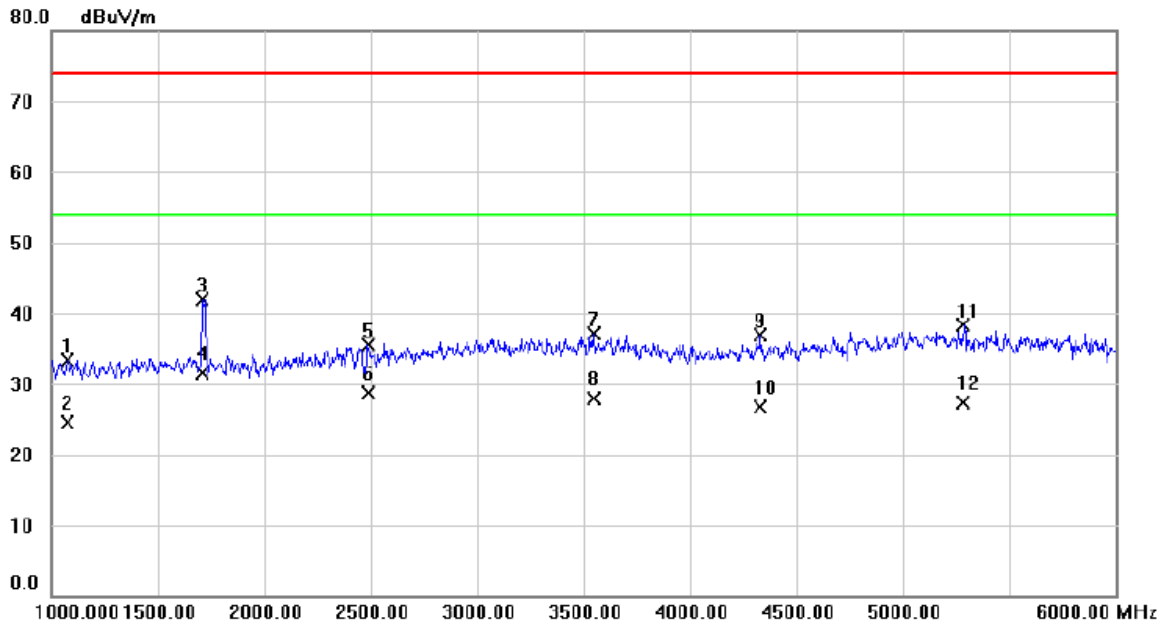
- (1) All readings are Peak unless otherwise stated QP in column of 『Note 』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Radiated emissions measured in frequency range above 1000 MHz were made with an instrument using Peak detector mode and AV detector mode of the emission.
- (3) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
- (4) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 60%           |
| Test Voltage  | AC 120V/60Hz | Polarization      | Vertical      |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



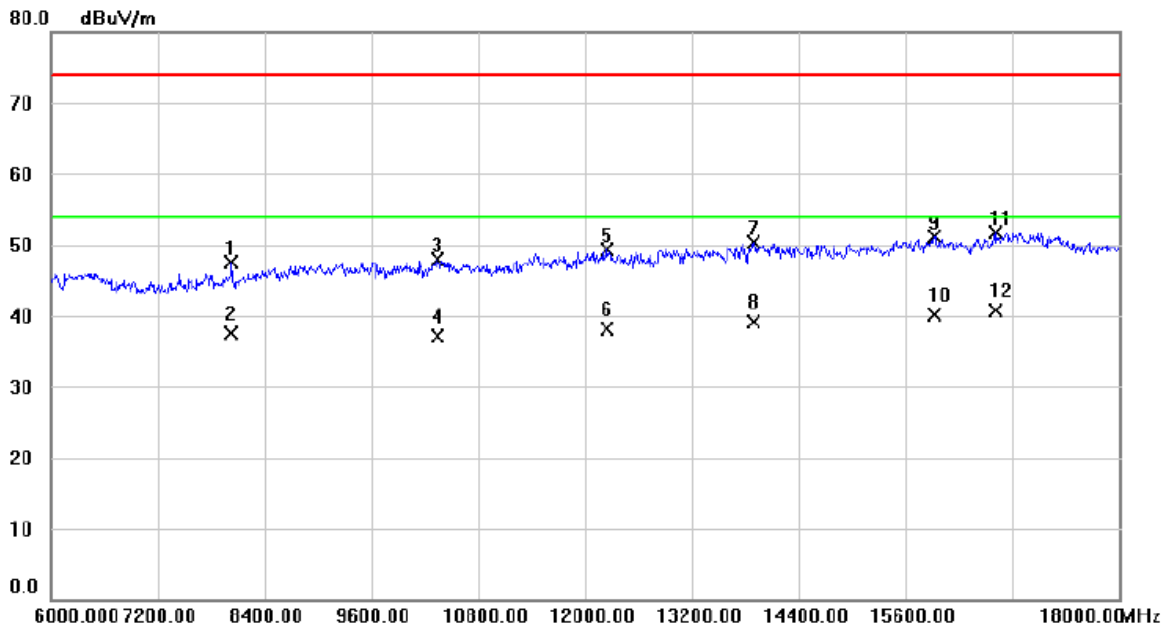
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 1082.500     | 40.47                    | -6.78                   | 33.69                      | 74.00           | -40.31       | peak     |         |
| 2   |     | 1082.500     | 30.23                    | -6.78                   | 23.45                      | 54.00           | -30.55       | AVG      |         |
| 3   |     | 1730.731     | 52.53                    | -3.91                   | 48.62                      | 74.00           | -25.38       | peak     |         |
| 4   | *   | 1730.731     | 40.38                    | -3.91                   | 36.47                      | 54.00           | -17.53       | AVG      |         |
| 5   |     | 3102.500     | 37.00                    | 0.30                    | 37.30                      | 74.00           | -36.70       | peak     |         |
| 6   |     | 3102.500     | 26.54                    | 0.30                    | 26.84                      | 54.00           | -27.16       | AVG      |         |
| 7   |     | 4007.500     | 33.46                    | 1.63                    | 35.09                      | 74.00           | -38.91       | peak     |         |
| 8   |     | 4007.500     | 24.56                    | 1.63                    | 26.19                      | 54.00           | -27.81       | AVG      |         |
| 9   |     | 4922.500     | 31.73                    | 5.23                    | 36.96                      | 74.00           | -37.04       | peak     |         |
| 10  |     | 4922.500     | 22.03                    | 5.23                    | 27.26                      | 54.00           | -26.74       | AVG      |         |
| 11  |     | 5750.000     | 31.65                    | 6.02                    | 37.67                      | 74.00           | -36.33       | peak     |         |
| 12  |     | 5750.000     | 20.89                    | 6.02                    | 26.91                      | 54.00           | -27.09       | AVG      |         |

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 60%           |
| Test Voltage  | AC 120V/60Hz | Polarization      | Horizontal    |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



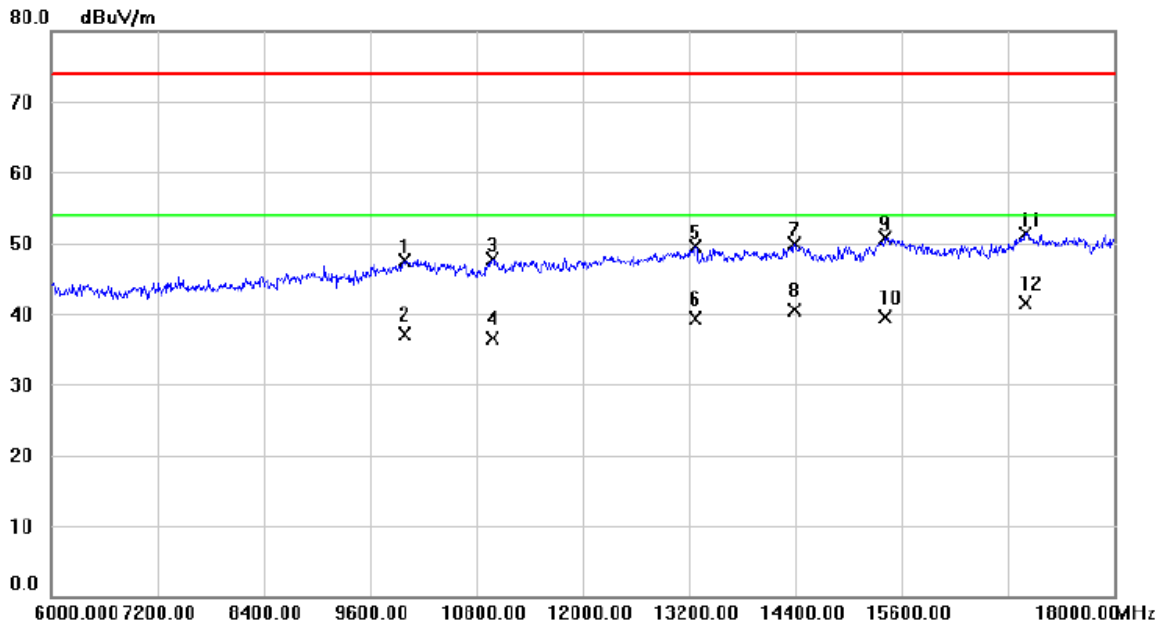
| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 1075.000     | 40.19                    | -6.81                   | 33.38                      | 74.00           | -40.62       | peak     |         |
| 2   |     | 1075.000     | 31.24                    | -6.81                   | 24.43                      | 54.00           | -29.57       | AVG      |         |
| 3   |     | 1712.500     | 45.94                    | -3.95                   | 41.99                      | 74.00           | -32.01       | peak     |         |
| 4   | *   | 1712.500     | 35.42                    | -3.95                   | 31.47                      | 54.00           | -22.53       | AVG      |         |
| 5   |     | 2487.500     | 37.09                    | -1.60                   | 35.49                      | 74.00           | -38.51       | peak     |         |
| 6   |     | 2487.500     | 30.24                    | -1.60                   | 28.64                      | 54.00           | -25.36       | AVG      |         |
| 7   |     | 3547.500     | 35.80                    | 1.33                    | 37.13                      | 74.00           | -36.87       | peak     |         |
| 8   |     | 3547.500     | 26.54                    | 1.33                    | 27.87                      | 54.00           | -26.13       | AVG      |         |
| 9   |     | 4330.000     | 34.22                    | 2.62                    | 36.84                      | 74.00           | -37.16       | peak     |         |
| 10  |     | 4330.000     | 24.01                    | 2.62                    | 26.63                      | 54.00           | -27.37       | AVG      |         |
| 11  |     | 5285.000     | 32.65                    | 5.75                    | 38.40                      | 74.00           | -35.60       | peak     |         |
| 12  |     | 5285.000     | 21.47                    | 5.75                    | 27.22                      | 54.00           | -26.78       | AVG      |         |

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 60%           |
| Test Voltage  | AC 120V/60Hz | Polarization      | Vertical      |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 8028.000     | 36.63                    | 10.89                   | 47.52                      | 74.00           | -26.48       | peak     |         |
| 2   |     | 8028.000     | 26.54                    | 10.89                   | 37.43                      | 54.00           | -16.57       | AVG      |         |
| 3   |     | 10344.00     | 33.32                    | 14.56                   | 47.88                      | 74.00           | -26.12       | peak     |         |
| 4   |     | 10344.00     | 22.52                    | 14.56                   | 37.08                      | 54.00           | -16.92       | AVG      |         |
| 5   |     | 12252.00     | 31.71                    | 17.69                   | 49.40                      | 74.00           | -24.60       | peak     |         |
| 6   |     | 12252.00     | 20.35                    | 17.69                   | 38.04                      | 54.00           | -15.96       | AVG      |         |
| 7   |     | 13896.00     | 30.14                    | 20.11                   | 50.25                      | 74.00           | -23.75       | peak     |         |
| 8   |     | 13896.00     | 18.98                    | 20.11                   | 39.09                      | 54.00           | -14.91       | AVG      |         |
| 9   |     | 15924.00     | 33.35                    | 17.71                   | 51.06                      | 74.00           | -22.94       | peak     |         |
| 10  |     | 15924.00     | 22.46                    | 17.71                   | 40.17                      | 54.00           | -13.83       | AVG      |         |
| 11  |     | 16608.00     | 33.02                    | 18.74                   | 51.76                      | 74.00           | -22.24       | peak     |         |
| 12  | *   | 16608.00     | 21.89                    | 18.74                   | 40.63                      | 54.00           | -13.37       | AVG      |         |

|               |              |                   |               |
|---------------|--------------|-------------------|---------------|
| EUT           | LTE Module   | Model Name        | ME919Bs-567ab |
| Temperature   | 25°C         | Relative Humidity | 60%           |
| Test Voltage  | AC 120V/60Hz | Polarization      | Horizontal    |
| Test Mode     | Mode 1       |                   |               |
| Test Engineer | Simon Ling   |                   |               |



| No. | Mk. | Freq.<br>MHz | Reading<br>Level<br>dBuV | Correct<br>Factor<br>dB | Measure-<br>ment<br>dBuV/m | Limit<br>dBuV/m | Margin<br>dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|--------------|----------|---------|
| 1   |     | 9984.000     | 33.46                    | 14.03                   | 47.49                      | 74.00           | -26.51       | peak     |         |
| 2   |     | 9984.000     | 22.98                    | 14.03                   | 37.01                      | 54.00           | -16.99       | AVG      |         |
| 3   |     | 10980.00     | 31.93                    | 15.80                   | 47.73                      | 74.00           | -26.27       | peak     |         |
| 4   |     | 10980.00     | 20.64                    | 15.80                   | 36.44                      | 54.00           | -17.56       | AVG      |         |
| 5   |     | 13272.00     | 30.69                    | 18.75                   | 49.44                      | 74.00           | -24.56       | peak     |         |
| 6   |     | 13272.00     | 20.46                    | 18.75                   | 39.21                      | 54.00           | -14.79       | AVG      |         |
| 7   |     | 14388.00     | 28.99                    | 20.84                   | 49.83                      | 74.00           | -24.17       | peak     |         |
| 8   |     | 14388.00     | 19.68                    | 20.84                   | 40.52                      | 54.00           | -13.48       | AVG      |         |
| 9   |     | 15420.00     | 32.79                    | 17.89                   | 50.68                      | 74.00           | -23.32       | peak     |         |
| 10  |     | 15420.00     | 21.57                    | 17.89                   | 39.46                      | 54.00           | -14.54       | AVG      |         |
| 11  |     | 16992.00     | 31.54                    | 19.82                   | 51.36                      | 74.00           | -22.64       | peak     |         |
| 12  | *   | 16992.00     | 21.64                    | 19.82                   | 41.46                      | 54.00           | -12.54       | AVG      |         |

End of Test Report