

# TEST REPORT

## CERTIFICATE OF CONFORMITY

**Standard:** 47 CFR FCC Part 96  
47 CFR FCC Part 2

**Report No.:** RFBCMA-WTW-P23030799B-5

**FCC ID:** RAXTMOG4AR

**Product:** 5G Gateway

**Brand:** T-Mobile

**Model No.:** TMO-G4AR

**Received Date:** 2023/5/12

**Test Date:** 2023/5/23 ~ 2023/5/24

**Issued Date:** 2023/6/15

**Applicant:** Arcadyan Technology Corporation

**Address:** No.8, Sec.2, Guangfu Rd., Hsinchu City 30071, Taiwan, R.O.C.

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
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**FCC Registration /** 788550 / TW0003

**Designation Number:**

Approved by: \_\_\_\_\_

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Jeremy Lin / Project Engineer

, Date: \_\_\_\_\_

2023/6/15

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## Release Control Record

| Issue No.               | Description       | Date Issued |
|-------------------------|-------------------|-------------|
| RFBCMA-WTW-P23030799B-5 | Original release. | 2023/6/15   |

## 1 Certificate

**Product:** 5G Gateway

**Brand:** T-Mobile

**Test Model:** TMO-G4AR

**Sample Status:** Engineering sample

**Applicant:** Arcadyan Technology Corporation

**Test Date:** 2023/5/23 ~ 2023/5/24

**Standard:** 47 CFR FCC Part 96  
47 CFR FCC Part 2

**Measurement procedure:** ANSI/TIA/EIA-603-E 2016  
ANSI C63.26-2015  
KDB 971168 D01 Power Meas License Digital Systems v03r01  
KDB 940660 D01 Part 96 CBRS Eqpt v03

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.

## 2 Summary of Test Results

| 47 CFR FCC Part 96 & Part 2                        |                                        |        |                                                   |
|----------------------------------------------------|----------------------------------------|--------|---------------------------------------------------|
| Standard / Clause                                  | Test Item                              | Result | Remark                                            |
| FCC 47 CFR Part 2.1046<br>FCC 47 CFR Part 96.41(b) | Maximum EIRP                           | N/A    | Refer to Note 1                                   |
| FCC 47 CFR Part 2.1047                             | Modulation Characteristics             | N/A    | Refer to Note 1                                   |
| FCC 47 CFR Part 2.1046<br>FCC 47 CFR Part 96.41(b) | Maximum Power Spectral Density         | N/A    | Refer to Note 1                                   |
| FCC 47 CFR Part 96.41(g)                           | Peak to Average Ratio                  | N/A    | Refer to Note 1                                   |
| FCC 47 CFR Part 2.1049                             | Bandwidth                              | N/A    | Refer to Note 1                                   |
| FCC 47 CFR Part 2.1051<br>FCC 47 CFR Part 96.41(e) | Conducted Spurious Emissions           | N/A    | Refer to Note 1                                   |
| FCC 47 CFR Part 2.1053<br>FCC 47 CFR Part 96.41(e) | Radiated Spurious Emissions below 1GHz | Pass   | Minimum passing margin is -2.52 dB at 95.96 MHz   |
| FCC 47 CFR Part 2.1053<br>FCC 47 CFR Part 96.41(e) | Radiated Spurious Emissions above 1GHz | Pass   | Minimum passing margin is -1.66 dB at 7359.96 MHz |
| FCC 47 CFR Part 2.1055                             | Frequency Stability                    | N/A    | Refer to Note 1                                   |

Note:

1. The only test item of Radiated Spurious Emissions tests was performed for this report. Other testing data please refer to SGS-CSRC Standards Technical Services (Suzhou) Co., Ltd. Report No.: KSCR221000187201 (LTE Module, Brand: Fibocom, Model: FG360-NA, FCC ID: ZMOFG360NA08).
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:

| Parameter                              | Specification   | Uncertainty (±) |
|----------------------------------------|-----------------|-----------------|
| Radiated Spurious Emissions below 1GHz | 9 kHz ~ 30 MHz  | 2.44 dB         |
|                                        | 30 MHz ~ 1 GHz  | 2.95 dB         |
| Radiated Spurious Emissions above 1GHz | 1 GHz ~ 18 GHz  | 2.26 dB         |
|                                        | 18 GHz ~ 40 GHz | 1.94 dB         |

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

### 2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

|                     |                                                        |
|---------------------|--------------------------------------------------------|
| Product             | 5G Gateway                                             |
| Brand               | T-Mobile                                               |
| Test Model          | TMO-G4AR                                               |
| Status of EUT       | Engineering sample                                     |
| Power Supply Rating | 20Vdc or 15Vdc or 12Vdc or 9Vdc or 5Vdc (From adapter) |

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the original report (BV CPS report no.: RFBCMA-WTW-P23030799-8) is adding external antenna.
2. Base on the conducted power and all conducted result no change, the device WWAN conducted data leverage 5G module (Fibocom FG360-NA), and record EIRP in the report with external antenna to prove it not over the limit.
3. The EUT supports the following ENDC configuration.

| 5GNR | FCC 5G FR1 |       |                                  | ENDC        |
|------|------------|-------|----------------------------------|-------------|
|      | Band       | SCS   | Bandwidth (MHz)                  |             |
|      | n25        | 15kHz | 5/10/15/20/25/30/40              | Band 12, 66 |
|      | n41        | 30kHz | 10/1520/30/40/50/60/70/80/90/100 | Band 2, 66  |
|      | n48        | 30kHz | 10/15/20/40                      | Band 2, 66  |
|      | n66        | 15kHz | 5/10/15/20/25/30/40              | Band 2, 12  |
|      | n71        | 15kHz | 5/10/15/20                       | Band 2, 66  |

\*The ENDC configuration only selected the worst case for testing according to original module report. The test configuration is as follows: NR n25 + LTE B12, NR n41 + LTE B66, NR n48 + LTE B66, NR n66 + LTE B12, n71 + LTE B2.

4. The EUT uses following accessories.

| AC Adapter 1 |                |                                                                                                                                                                                                                                        |
|--------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brand        | Model          | Specification                                                                                                                                                                                                                          |
| LUCENT TRANS | 1A78           | AC Input : 100~240V, 1.2A, 50-60Hz<br>DC Output : 5.0V, 3.0A, 15W or 9.0V, 3.0A, 27W or<br>12.0V, 3.0A, 36W or 15.0V, 3.0A, 45W or<br>20.0V, 2.25A, 45W<br>DC Output Cable : 1.85 m, non-shielded cable, W/O ferrite core<br>Plug : US |
| AC Adapter 2 |                |                                                                                                                                                                                                                                        |
| Brand        | Model          | Specification                                                                                                                                                                                                                          |
| MASS POWER   | PD045E-C1C0AVU | AC Input : 100~240V, 1.0A, 50-60Hz<br>DC Output : 5.0V, 3.0A or 9.0V, 3.0A or 12.0V, 3.0A or 15.0V, 3.0A or<br>20.0V, 2.25A, 45W<br>DC Output Cable : 1.8 m, non-shielded cable, W/O ferrite core<br>Plug : US                         |

\*The adapter 1 was chosen for final test.

5. 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 Antenna Description of EUT

1. The antenna information is listed as below.

| Antenna NO.             | RF Chain NO.                  | Brand | Model                | Antenna Net Gain(dBi) | Frequency range | Antenna Type | Connector Type |
|-------------------------|-------------------------------|-------|----------------------|-----------------------|-----------------|--------------|----------------|
| WWAN Antenna (Internal) | B71 (TRx) (M2 )               | PSA   | RFPCA811609IMMB403_B | 3.17                  | 663-698 MHz     | Monopole     | ipex(MHF1)     |
|                         | B71 (Rx)(M1)                  |       | RFPCA811609IMMB402_A | 3.10                  | 663-698 MHz     | Monopole     | ipex(MHF1)     |
|                         | B71 (Rx) (D1)                 |       | RFPCA652018IMMB401_A | 2.09                  | 663-698 MHz     | Monopole     | ipex(MHF1)     |
|                         | B71 (Rx)(D2)                  |       | RFFPA656320IMMB401_B | 2.01                  | 663-698 MHz     | Monopole     | ipex(MHF1)     |
|                         | B12 (TRx)(M2 )                | PSA   | RFPCA811609IMMB403_B | 3.34                  | 698-716 MHz     | Monopole     | ipex(MHF1)     |
|                         | B12 (Rx)(D2)                  |       | RFFPA656320IMMB401_B | 2.05                  | 698-716 MHz     | Monopole     | ipex(MHF1)     |
|                         | B5 (TRx)(M2 )                 | PSA   | RFPCA811609IMMB403_B | 1.68                  | 824-849 MHz     | Monopole     | ipex(MHF1)     |
|                         | B5 (Rx) (D2)                  |       | RFFPA656320IMMB401_B | 0.63                  | 824-849 MHz     | Monopole     | ipex(MHF1)     |
|                         | B4/B66 (TRx) (M2 )            | PSA   | RFPCA811609IMMB403_B | 3.69                  | 1710-1780 MHz   | Monopole     | ipex(MHF1)     |
|                         | B4/B66 (TRx) ( M1)            |       | RFPCA811609IMMB402_A | 5.13                  | 1710-1780 MHz   | Monopole     | ipex(MHF1)     |
|                         | B4/B66 (Rx) (D1)              |       | RFPCA652018IMMB401_A | 4.26                  | 1710-1780 MHz   | Monopole     | ipex(MHF1)     |
|                         | B4/B66 (Rx) (D2)              |       | RFFPA656320IMMB401_B | 4.10                  | 1710-1780 MHz   | Monopole     | ipex(MHF1)     |
|                         | B2/B25 (TRx) (M2 )            | PSA   | RFPCA811609IMMB403_B | 3.33                  | 1850-1915 MHz   | Monopole     | ipex(MHF1)     |
|                         | B2/B25 (TRx) (M1)             |       | RFPCA811609IMMB402_A | 4.78                  | 1850-1915 MHz   | Monopole     | ipex(MHF1)     |
|                         | B2/B25 (Rx) (D1)              |       | RFPCA652018IMMB401_A | 3.79                  | 1850-1915 MHz   | Monopole     | ipex(MHF1)     |
|                         | B2/B25 (Rx) (D2)              |       | RFFPA656320IMMB401_B | 4.11                  | 1850-1915 MHz   | Monopole     | ipex(MHF1)     |
|                         | B41 (TRx) (M2 )               | PSA   | RFPCA811609IMMB403_B | 2.78                  | 2496-2690 MHz   | Monopole     | ipex(MHF1)     |
|                         | B41 (TRx) (M1)                |       | RFPCA811609IMMB402_A | 3.02                  | 2496-2690 MHz   | Monopole     | ipex(MHF1)     |
|                         | B41 (Rx) (Omni-Antenna HC1O ) |       | RFPCA380906IMMB401_A | 4.45                  | 2496-2690 MHz   | Dipole       | ipex(MHF1)     |
|                         | B41 (Rx) (Omni-Antenna HC2O)  |       | RFPCA380912IMMB401_A | 3.67                  | 2496-2690 MHz   | Dipole       | ipex(MHF1)     |
|                         | B41 (Rx) (Semi-Antenna HC1S)  |       | RFPCA474709IMMB401_A | 7.59                  | 2496-2690 MHz   | Dipole       | ipex(MHF1)     |
|                         | B41 (Rx) (Semi-Antenna HC2S ) |       | RFPCA474709IMMB401_A | 7.76                  | 2496-2690 MHz   | Dipole       | ipex(MHF1)     |
|                         | B48 (TRx) (M2 )               | PSA   | RFPCA811609IMMB403_B | 0.94                  | 3550-3700 MHz   | Monopole     | ipex(MHF1)     |
|                         | B48 (TRx) (M1)                |       | RFPCA811609IMMB402_A | 1.02                  | 3550-3700 MHz   | Monopole     | ipex(MHF1)     |
|                         | B48 (Rx) (Omni-Antenna HC1O ) |       | RFPCA380906IMMB401_A | 4.64                  | 3550-3700 MHz   | Dipole       | ipex(MHF1)     |
|                         | B48 (Rx) (Omni-Antenna HC2O)  |       | RFPCA380912IMMB401_A | 4.03                  | 3550-3700 MHz   | Dipole       | ipex(MHF1)     |
|                         | B48 (Rx) (Semi-Antenna HC1S)  |       | RFPCA474709IMMB401_A | 7.67                  | 3550-3700 MHz   | Dipole       | ipex(MHF1)     |
|                         | B48 (Rx) (Semi-Antenna HC2S)  |       | RFPCA474709IMMB401_A | 8.01                  | 3550-3700 MHz   | Dipole       | ipex(MHF1)     |
|                         | B77 (TRx) (M2 )               | PSA   | RFPCA811609IMMB403_B | 0.84                  | 3300-4200 MHz   | Monopole     | ipex(MHF1)     |
|                         | B77(TRx) (M1)                 |       | RFPCA811609IMMB402_A | 0.91                  | 3300-4200 MHz   | Monopole     | ipex(MHF1)     |
|                         | B77 (Rx) (Omni-Antenna HC1O ) |       | RFPCA380906IMMB401_A | 4.73                  | 3300-4200 MHz   | Dipole       | ipex(MHF1)     |
|                         | B77 (Rx) (Omni-Antenna HC2O)  |       | RFPCA380912IMMB401_A | 4.14                  | 3300-4200 MHz   | Dipole       | ipex(MHF1)     |
|                         | B77 (Rx) (Semi-Antenna HC1S ) |       | RFPCA474709IMMB401_A | 7.98                  | 3300-4200 MHz   | Dipole       | ipex(MHF1)     |
|                         | B77 (Rx) (Semi-Antenna HC2S)  |       | RFPCA474709IMMB401_A | 8.13                  | 3300-4200 MHz   | Dipole       | ipex(MHF1)     |

\*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

\*Only B2/B4/B25 bands support 1TX diversity.

| Antenna No.             | RF Chain No. | Brand   | Model | Antenna Net Gain (dBi) | Frequency range | Antenna Type | Connector Type |
|-------------------------|--------------|---------|-------|------------------------|-----------------|--------------|----------------|
| WWAN Antenna (External) | B71          | TAOGLAS | ANT1  | 0.80                   | 663-698 MHz     | PIFA         | ipex(MHF)      |
|                         | B71          |         | ANT2  | 1.50                   | 663-698 MHz     | PIFA         | ipex(MHF)      |
|                         | B71          |         | ANT3  | 1.90                   | 663-698 MHz     | PIFA         | ipex(MHF)      |
|                         | B71          |         | ANT4  | 1.40                   | 663-698 MHz     | PIFA         | ipex(MHF)      |
|                         | B12          | TAOGLAS | ANT1  | 1.20                   | 698-716 MHz     | PIFA         | ipex(MHF)      |
|                         | B12          |         | ANT2  | 1.40                   | 698-716 MHz     | PIFA         | ipex(MHF)      |
|                         | B12          |         | ANT3  | 0.80                   | 698-716 MHz     | PIFA         | ipex(MHF)      |
|                         | B12          |         | ANT4  | 0.80                   | 698-716 MHz     | PIFA         | ipex(MHF)      |
|                         | B5           | TAOGLAS | ANT1  | -1.00                  | 824-849 MHz     | PIFA         | ipex(MHF)      |
|                         | B5           |         | ANT2  | -1.80                  | 824-849 MHz     | PIFA         | ipex(MHF)      |
|                         | B5           |         | ANT3  | 1.50                   | 824-849 MHz     | PIFA         | ipex(MHF)      |
|                         | B5           |         | ANT4  | -1.70                  | 824-849 MHz     | PIFA         | ipex(MHF)      |
|                         | B4/B66       | TAOGLAS | ANT1  | 4.40                   | 1710-1780 MHz   | PIFA         | ipex(MHF)      |
|                         | B4/B66       |         | ANT2  | 3.70                   | 1710-1780 MHz   | PIFA         | ipex(MHF)      |
|                         | B4/B66       |         | ANT3  | 4.60                   | 1710-1780 MHz   | PIFA         | ipex(MHF)      |
|                         | B4/B66       |         | ANT4  | 3.80                   | 1710-1780 MHz   | PIFA         | ipex(MHF)      |
|                         | B2/B25       | TAOGLAS | ANT1  | 4.00                   | 1850-1915 MHz   | PIFA         | ipex(MHF)      |
|                         | B2/B25       |         | ANT2  | 3.50                   | 1850-1915 MHz   | PIFA         | ipex(MHF)      |
|                         | B2/B25       |         | ANT3  | 4.60                   | 1850-1915 MHz   | PIFA         | ipex(MHF)      |
|                         | B2/B25       |         | ANT4  | 3.60                   | 1850-1915 MHz   | PIFA         | ipex(MHF)      |
|                         | B41          | TAOGLAS | ANT1  | 3.90                   | 2496-2690 MHz   | PIFA         | ipex(MHF)      |
|                         | B41          |         | ANT2  | 3.80                   | 2496-2690 MHz   | PIFA         | ipex(MHF)      |
|                         | B41          |         | ANT3  | 2.90                   | 2496-2690 MHz   | PIFA         | ipex(MHF)      |
|                         | B41          |         | ANT4  | 4.00                   | 2496-2690 MHz   | PIFA         | ipex(MHF)      |
|                         | B48          | TAOGLAS | ANT1  | 2.60                   | 3550-3700 MHz   | PIFA         | ipex(MHF)      |
|                         | B48          |         | ANT2  | 2.30                   | 3550-3700 MHz   | PIFA         | ipex(MHF)      |
|                         | B48          |         | ANT3  | 1.70                   | 3550-3700 MHz   | PIFA         | ipex(MHF)      |
|                         | B48          |         | ANT4  | 2.40                   | 3550-3700 MHz   | PIFA         | ipex(MHF)      |
|                         | B77          | TAOGLAS | ANT1  | 3.20                   | 3300-4200 MHz   | PIFA         | ipex(MHF)      |
|                         | B77          |         | ANT2  | 2.80                   | 3300-4200 MHz   | PIFA         | ipex(MHF)      |
|                         | B77          |         | ANT3  | 3.80                   | 3300-4200 MHz   | PIFA         | ipex(MHF)      |
|                         | B77          |         | ANT4  | 2.90                   | 3300-4200 MHz   | PIFA         | ipex(MHF)      |

\* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

\* Only B2/B4/B25 bands support 1TX diversity.

### 3.3 Test Mode Applicability and Tested Channel Detail

|             |                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-Scan:   | EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. |
| Worst Case: | X-axis/ Y-axis/ Z-axis Worst Condition: Z-axis                                                                                                 |

#### For NR n48+LTE Band 66

##### NR n48

| Test Item     | Tested Channel       | Channel Bandwidth | Modulation | Mode |
|---------------|----------------------|-------------------|------------|------|
| RE Below 1GHz | 645332 (3679.98 MHz) | 40 MHz            | QPSK       | 1 RB |
| RE Above 1GHz | 637000 (3555.00 MHz) | 10 MHz            | QPSK       | 1 RB |
|               | 641666 (3624.99 MHz) |                   |            |      |
|               | 646332 (3694.98 MHz) |                   |            |      |
|               | 637334 (3560.01 MHz) | 20 MHz            | QPSK       | 1 RB |
|               | 641666 (3624.99 MHz) |                   |            |      |
|               | 646000 (3690.00 MHz) |                   |            |      |
|               | 638000 (3570.00 MHz) | 40 MHz            | QPSK       | 1 RB |
|               | 641666 (3624.99 MHz) |                   |            |      |
|               | 645332 (3679.98 MHz) |                   |            |      |

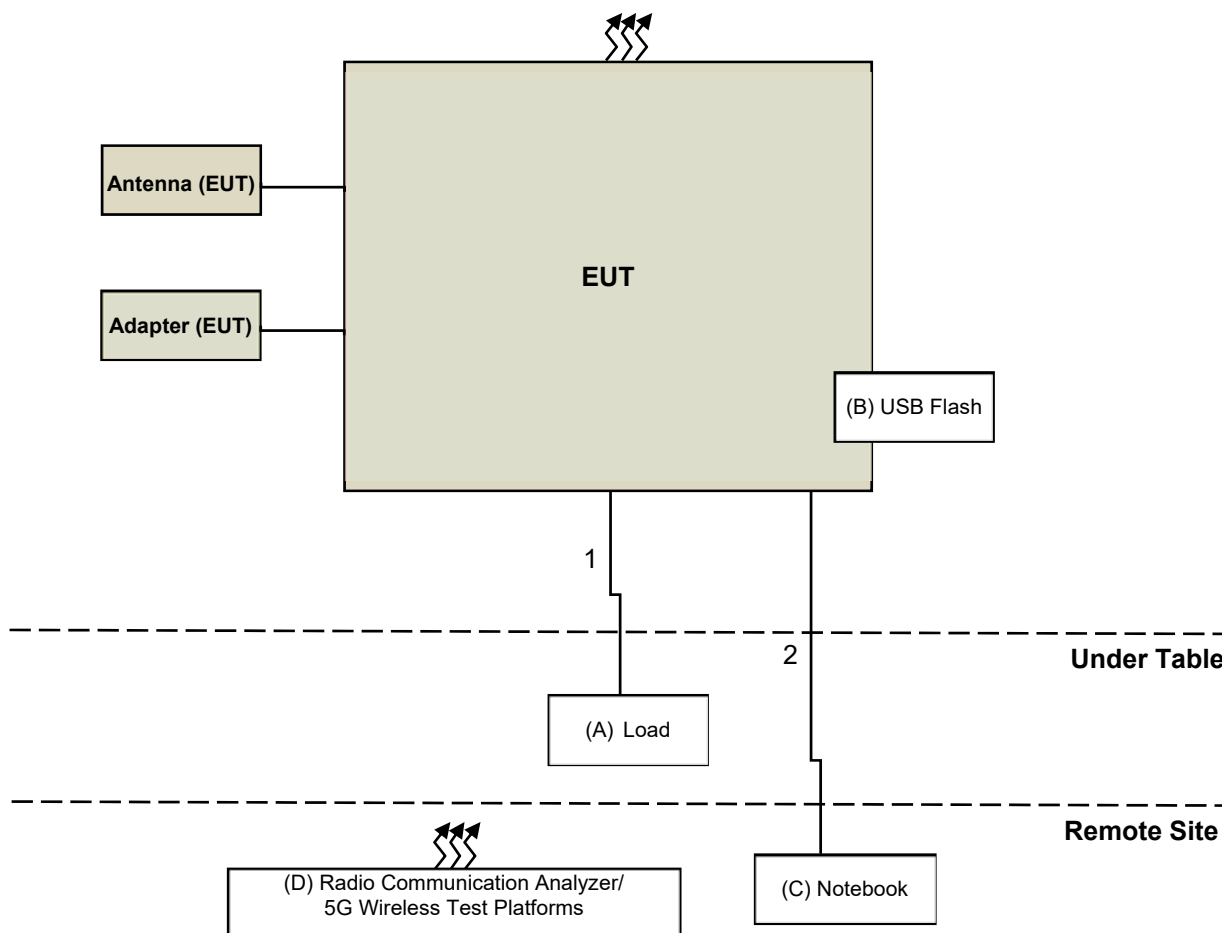
##### LTE Band 66

| Test Item     | Tested Channel       | Channel Bandwidth | Modulation | Mode |
|---------------|----------------------|-------------------|------------|------|
| RE Below 1GHz | 132647 (1777.50 MHz) | 5 MHz             | QPSK       | 1 RB |
| RE Above 1GHz | 131979 (1710.70 MHz) | 1.4 MHz           | QPSK       | 1 RB |
|               | 132322 (1745.00 MHz) |                   |            |      |
|               | 132665 (1779.30 MHz) |                   |            |      |
|               | 131997 (1712.50 MHz) | 5 MHz             | QPSK       | 1 RB |
|               | 132322 (1745.00 MHz) |                   |            |      |
|               | 132647 (1777.50 MHz) |                   |            |      |
|               | 132072 (1720.00 MHz) | 20 MHz            | QPSK       | 1 RB |
|               | 132322 (1745.00 MHz) |                   |            |      |
|               | 132572 (1770.00 MHz) |                   |            |      |

### 3.4 Test Program Used and Operation Descriptions

There is no need to controlling software during the test, and the EUT can be paired with the Radio Communication Analyzer//5G Wireless Test Platforms to test the connection when it is powered on.

### 3.5 Connection Diagram of EUT and Peripheral Devices



### 3.6 Configuration of Peripheral Devices and Cable Connections

| ID | Product                      | Brand     | Model No.  | Serial No. | FCC ID           | Remarks         |
|----|------------------------------|-----------|------------|------------|------------------|-----------------|
| A  | Load                         | NA        | NA         | NA         | NA               | Provided by Lab |
| B  | USB Flash                    | SanDisk G | SDDDC3-032 | NA         | NA               | Provided by Lab |
| C  | Notebook                     | Lenovo    | 80Q7       | PF0KUGU6   | FCC DoC Approved | Provided by Lab |
| D  | Radio Communication Analyzer | Anritsu   | MT8821C    | 6201462755 | NA               | Provided by Lab |
|    | 5G Wireless Test Platforms   | Keysight  | E7515B     | MY60102114 | N/A              | Provided by Lab |

| ID | Cable Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks         |
|----|--------------------|------|------------|--------------------|--------------|-----------------|
| 1  | RJ-45 Cable        | 1    | 1.5        | No                 | 0            | Provided by Lab |
| 2  | RJ-45 Cable        | 1    | 10         | No                 | 0            | Provided by Lab |

## 4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.1 Radiated Spurious Emissions below 1GHz

| Description<br>Manufacturer            | Model No.                    | Serial No.    | Calibrated<br>Date | Calibrated<br>Until |
|----------------------------------------|------------------------------|---------------|--------------------|---------------------|
| Antenna Tower & Turn<br>Max-Full       | MFA-440H                     | AT93021705    | N/A                | N/A                 |
| Bi_Log Antenna<br>Schwarzbeck          | VULB 9168                    | 9168-472      | 2022/10/21         | 2023/10/20          |
| EXA Signal Analyzer<br>Agilent         | N9010A                       | MY52220207    | 2023/1/3           | 2024/1/2            |
| Loop Antenna<br>Electro-Metrics        | EM-6879                      | 269           | 2022/9/19          | 2023/9/18           |
| Loop Antenna<br>TESEQ                  | HLA 6121                     | 45745         | 2022/7/27          | 2023/7/26           |
| MXE EMI Receiver<br>KEYSIGHT           | N9038A                       | MY55420137    | 2023/5/3           | 2024/5/2            |
| Preamplifier<br>EMCI                   | EMC 330H                     | 980112        | 2022/10/1          | 2023/9/30           |
|                                        | EMC001340                    | 980201        | 2022/9/23          | 2023/9/22           |
| RF Coaxial Cable<br>EMCI               | 5D-NM-BM                     | 140903+140902 | 2023/1/7           | 2024/1/6            |
| RF Coaxial Cable<br>WORKEN             | 8D-FB                        | Cable-Ch10-01 | 2022/10/1          | 2023/9/30           |
| Software<br>BV ADT                     | ADT_Radiated_<br>V7.6.15.9.5 | N/A           | N/A                | N/A                 |
| Turn Table<br>Max-Full                 | MFT-201SS                    | N/A           | N/A                | N/A                 |
| Turn Table Controller<br>Max-Full      | MG-7802                      | N/A           | N/A                | N/A                 |
| 5G Wireless Test Platforms<br>Keysight | E7515B                       | MY60102114    | 2023/5/18          | 2024/5/17           |

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/5/23

## 4.2 Radiated Spurious Emissions above 1GHz

| Description<br>Manufacturer            | Model No.                    | Serial No.                    | Calibrated<br>Date | Calibrated<br>Until |
|----------------------------------------|------------------------------|-------------------------------|--------------------|---------------------|
| Antenna Tower & Turn<br>Max-Full       | MFA-440H                     | AT93021705                    | N/A                | N/A                 |
| Boresight antenna tower fixture<br>BV  | BAF-02                       | 7                             | N/A                | N/A                 |
| Horn Antenna<br>Schwarzbeck            | BBHA 9120D                   | 9120D-969                     | 2022/11/13         | 2023/11/12          |
|                                        | BBHA 9170                    | 148                           | 2022/11/13         | 2023/11/12          |
| Pre-Amplifier<br>EMCI                  | EMC 184045                   | 980116                        | 2022/10/1          | 2023/9/30           |
| Pre-Amplifier<br>EMCI                  | EMC 012645                   | 980115                        | 2022/10/1          | 2023/9/30           |
| RF Coaxial Cable<br>EMCI               | EMC102-KM-KM-600             | 150928                        | 2022/7/9           | 2023/7/8            |
|                                        | EMC102-KM-KM-3000            | 150929                        | 2022/7/9           | 2023/7/8            |
|                                        | EMC104-SM-SM-<br>8000+3000   | 171005                        | 2022/10/1          | 2023/9/30           |
| RF Coaxial Cable<br>HUBER SUHNER       | SUCOFLEX 104                 | EMC104-SM-SM-<br>1000(140807) | 2022/10/1          | 2023/9/30           |
| RF FLITER<br>MICRO-TRONICS             | BRM17690                     | 004                           | 2023/1/11          | 2024/1/10           |
|                                        | BRM50716                     | 060                           | 2023/1/11          | 2024/1/10           |
| Signal Analyzer<br>Agilent             | N9010A                       | MY52220207                    | 2023/1/3           | 2024/1/2            |
| Software<br>BV ADT                     | ADT_Radiated_<br>V7.6.15.9.5 | N/A                           | N/A                | N/A                 |
| Test Receiver<br>KEYSIGHT              | N9038A                       | MY55420137                    | 2022/4/27          | 2023/4/26           |
|                                        |                              |                               | 2023/5/3           | 2024/5/2            |
| Turn Table<br>Max-Full                 | MFT-201SS                    | N/A                           | N/A                | N/A                 |
| Turn Table Controller<br>Max-Full      | MG-7802                      | N/A                           | N/A                | N/A                 |
| 5G Wireless Test Platforms<br>Keysight | E7515B                       | MY60102114                    | 2023/5/18          | 2024/5/17           |

### Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2023/5/24

## 5 Limits of Test Items

### 5.1 Radiated Spurious Emissions below 1GHz

For NR n48:

| Power of any emissions outside the Fundamental | Limit       |
|------------------------------------------------|-------------|
| Within 0-10 mHz above the Assigned Channel     | -13 dBm/MHz |
| Within 0-10 mHz below the Assigned Channel     |             |
| Greater than 10 mHz above the Assigned Channel | -25 dBm/MHz |
| Greater than 10 mHz below the Assigned Channel |             |
| Power of any emission below 3530 MHz           | -40 dBm/MHz |
| Power of any emission above 3720 MHz           |             |

For LTE Band 66:

According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log (P)$  dB. The limit of emission is equal to -13 dBm.

### 5.2 Radiated Spurious Emissions above 1GHz

For NR n48:

| Power of any emissions outside the Fundamental | Limit       |
|------------------------------------------------|-------------|
| Within 0-10 mHz above the Assigned Channel     | -13 dBm/MHz |
| Within 0-10 mHz below the Assigned Channel     |             |
| Greater than 10 mHz above the Assigned Channel | -25 dBm/MHz |
| Greater than 10 mHz below the Assigned Channel |             |
| Power of any emission below 3530 MHz           | -40 dBm/MHz |
| Power of any emission above 3720 MHz           |             |

For LTE Band 66:

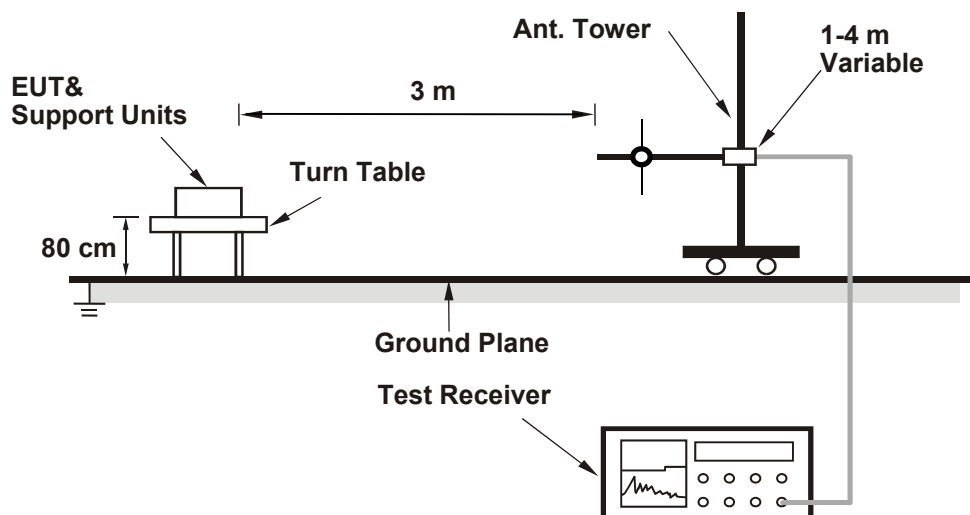
According to FCC 47 CFR part 27.53(h), for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log (P)$  dB. The limit of emission is equal to -13 dBm.

## 6 Test Arrangements

### 6.1 Radiated Spurious Emissions below 1GHz

#### 6.1.1 Test Setup

For radiated emission 30 MHz to 1 GHz



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

#### 6.1.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 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 height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$ ; where D is the measurement distance (in the far field region) in m.

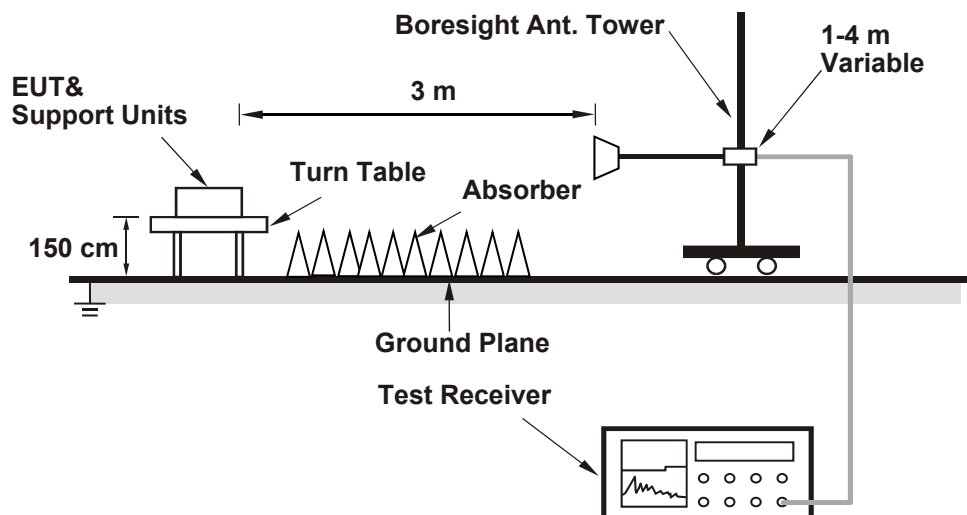
Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.
- The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:  
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

## 6.2 Radiated Spurious Emissions above 1GHz

### 6.2.1 Test Setup

For radiated emission above 1 GHz



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

### 6.2.2 Test Procedure

The EUT is configured by emulator to set data modulation and maximum power using WWAN technology.

- In the semi-anechoic chamber, EUT placed on the 1.5 m 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 height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- Following C63.26 section 5.5 and 5.2.7
- $EIRP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$ ; where D is the measurement distance (in the far field region) in m.
- $ERP (dBm) = E (dB\mu V/m) + 20\log(D) - 104.8 - 2.15$ ; where D is the measurement distance (in the far field region) in m.

Note:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz. Set detector = average.

## 7 Test Results of Test Item

### 7.1 Radiated Spurious Emissions below 1GHz

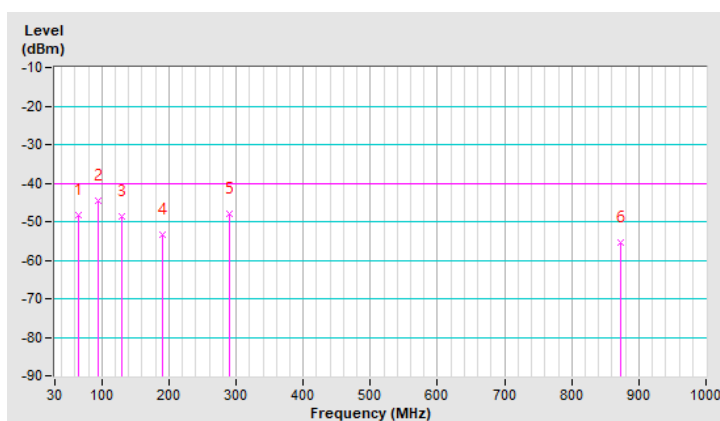
#### 7.1.1 NR n48 SCS 30 kHz+LTE Band 66

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 645332 : 3679.98 MHz |
| <b>Frequency Range</b> | 30 MHz ~ 1 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Thomas Cheng                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 65.89           | -48.18     | -40.00      | -8.18       | 2.00 H             | 80                   | 60.84            | -109.02                  |
| 2                                                    | 94.02           | -44.65     | -40.00      | -4.65       | 1.50 H             | 88                   | 68.28            | -112.93                  |
| 3                                                    | 129.91          | -48.74     | -40.00      | -8.74       | 1.50 H             | 125                  | 59.93            | -108.67                  |
| 4                                                    | 191.02          | -53.36     | -40.00      | -13.36      | 1.00 H             | 116                  | 57.07            | -110.43                  |
| 5                                                    | 290.93          | -47.86     | -40.00      | -7.86       | 1.00 H             | 19                   | 59.38            | -107.24                  |
| 6                                                    | 871.96          | -55.58     | -40.00      | -15.58      | 1.00 H             | 54                   | 41.09            | -96.67                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

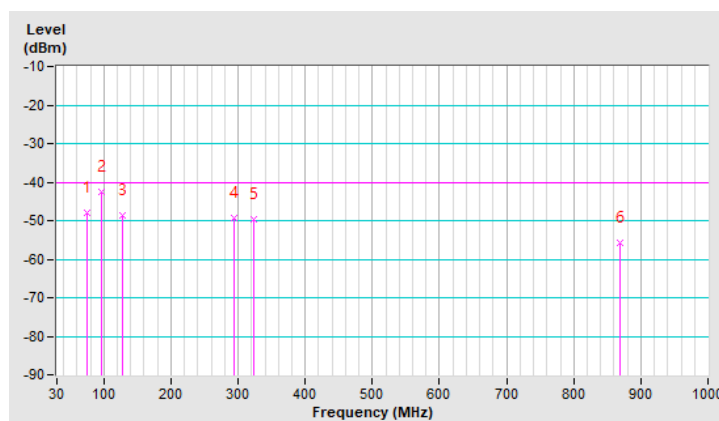


|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 645332 : 3679.98 MHz |
| <b>Frequency Range</b> | 30 MHz ~ 1 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Thomas Cheng                       |                                          |                         |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |            |             |             |                    |                      |                  |                          |
|----------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                 | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 75.59           | -48.09     | -40.00      | -8.09       | 1.50 V             | 190                  | 62.80            | -110.89                  |
| 2                                                  | 95.96           | -42.52     | -40.00      | -2.52       | 1.00 V             | 213                  | 70.17            | -112.69                  |
| 3                                                  | 127.97          | -48.68     | -40.00      | -8.68       | 2.00 V             | 214                  | 60.17            | -108.85                  |
| 4                                                  | 293.84          | -49.40     | -40.00      | -9.40       | 1.50 V             | 17                   | 57.77            | -107.17                  |
| 5                                                  | 323.91          | -49.66     | -40.00      | -9.66       | 2.00 V             | 138                  | 56.74            | -106.40                  |
| 6                                                  | 869.05          | -55.79     | -40.00      | -15.79      | 1.00 V             | 233                  | 40.93            | -96.72                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

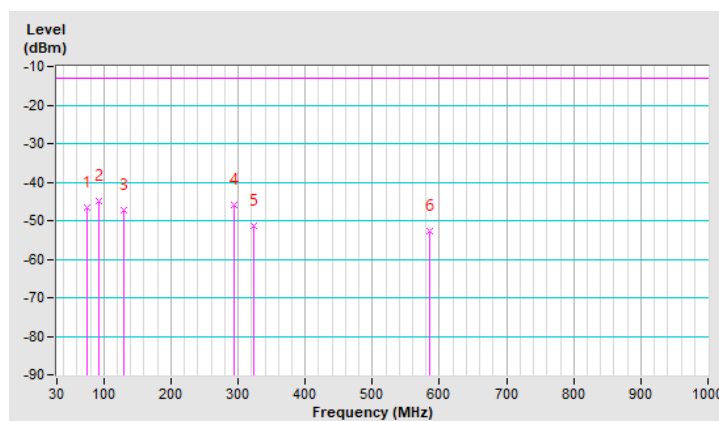


|                        |                                        |                                          |                        |
|------------------------|----------------------------------------|------------------------------------------|------------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 5MHz | <b>Channel</b>                           | CH 132647 : 1777.5 MHz |
| <b>Frequency Range</b> | 30 MHz ~ 1 GHz                         | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)      |
| <b>Input Power</b>     | 120 Vac, 60 Hz                         | <b>Environmental Conditions</b>          | 23°C, 70% RH           |
| <b>Tested By</b>       | Thomas Cheng                           |                                          |                        |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 75.59           | -46.76     | -13.00      | -33.76      | 2.50 H             | 84                   | 64.13            | -110.89                  |
| 2                                                    | 92.08           | -44.90     | -13.00      | -31.90      | 2.00 H             | 99                   | 68.14            | -113.04                  |
| 3                                                    | 129.91          | -47.19     | -13.00      | -34.19      | 1.00 H             | 254                  | 61.48            | -108.67                  |
| 4                                                    | 293.84          | -45.77     | -13.00      | -32.77      | 1.00 H             | 104                  | 61.40            | -107.17                  |
| 5                                                    | 323.91          | -51.31     | -13.00      | -38.31      | 1.00 H             | 21                   | 55.09            | -106.40                  |
| 6                                                    | 584.84          | -52.67     | -13.00      | -39.67      | 2.00 H             | 2                    | 48.27            | -100.94                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

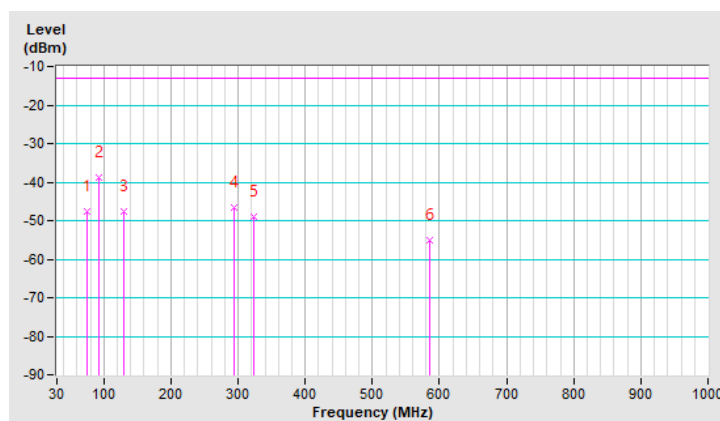


|                        |                                        |                                          |                        |
|------------------------|----------------------------------------|------------------------------------------|------------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 5MHz | <b>Channel</b>                           | CH 132647 : 1777.5 MHz |
| <b>Frequency Range</b> | 30 MHz ~ 1 GHz                         | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)      |
| <b>Input Power</b>     | 120 Vac, 60 Hz                         | <b>Environmental Conditions</b>          | 23°C, 70% RH           |
| <b>Tested By</b>       | Thomas Cheng                           |                                          |                        |

| Antenna Polarity & Test Distance : Vertical at 3 m |                 |            |             |             |                    |                      |                  |                          |
|----------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                 | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                  | 75.59           | -47.74     | -13.00      | -34.74      | 3.00 V             | 230                  | 63.15            | -110.89                  |
| 2                                                  | 92.08           | -38.76     | -13.00      | -25.76      | 1.00 V             | 182                  | 74.28            | -113.04                  |
| 3                                                  | 129.91          | -47.73     | -13.00      | -34.73      | 2.50 V             | 123                  | 60.94            | -108.67                  |
| 4                                                  | 293.84          | -46.51     | -13.00      | -33.51      | 1.00 V             | 54                   | 60.66            | -107.17                  |
| 5                                                  | 323.91          | -48.96     | -13.00      | -35.96      | 1.50 V             | 2                    | 57.44            | -106.40                  |
| 6                                                  | 585.81          | -55.22     | -13.00      | -42.22      | 2.00 V             | 103                  | 45.72            | -100.94                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



## 7.2 Radiated Spurious Emissions above 1GHz

### 7.2.1 NR n48 SCS 30 kHz+LTE Band 66

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 10MHz | <b>Channel</b>                           | CH 637000 : 3555.00 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7110.00         | -43.13     | -40.00      | -3.13       | 2.42 H             | 165                  | 55.12            | -98.25                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7110.00         | -42.01     | -40.00      | -2.01       | 1.63 V             | 205                  | 56.24            | -98.25                   |

#### Remarks:

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 10MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -42.92     | -40.00      | -2.92       | 1.52 H             | 268                  | 55.14            | -98.06                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -42.04     | -40.00      | -2.04       | 2.24 V             | 158                  | 56.02            | -98.06                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 10MHz | <b>Channel</b>                           | CH 646332 : 3694.98 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7389.96         | -42.52     | -40.00      | -2.52       | 1.65 H             | 360                  | 55.24            | -97.76                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7389.96         | -43.50     | -40.00      | -3.50       | 2.87 V             | 165                  | 54.26            | -97.76                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 637334 : 3560.01 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7120.02         | -42.00     | -40.00      | -2.00       | 1.52 H             | 163                  | 56.24            | -98.24                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7120.02         | -43.96     | -40.00      | -3.96       | 2.52 V             | 169                  | 54.28            | -98.24                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 640000 : 3624.99 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.86     | -40.00      | -1.86       | 1.52 H             | 199                  | 56.20            | -98.06                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -43.35     | -40.00      | -3.35       | 1.77 V             | 56                   | 54.71            | -98.06                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                      |
|------------------------|------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 646000 : 3690 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7380.00         | -41.72     | -40.00      | -1.72       | 2.64 H             | 197                  | 56.04            | -97.76                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7380.00         | -43.38     | -40.00      | -3.38       | 1.15 V             | 20                   | 54.38            | -97.76                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                      |
|------------------------|------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 638000 : 3570 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7140.00         | -41.87     | -40.00      | -1.87       | 1.25 H             | 225                  | 56.38            | -98.25                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7140.00         | -43.86     | -40.00      | -3.86       | 2.63 V             | 174                  | 54.39            | -98.25                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 641666 : 3624.99 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -41.92     | -40.00      | -1.92       | 2.63 H             | 278                  | 56.14            | -98.06                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7249.98         | -43.73     | -40.00      | -3.73       | 1.63 V             | 207                  | 54.33            | -98.06                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                    |                                          |                         |
|------------------------|------------------------------------|------------------------------------------|-------------------------|
| <b>RF Mode</b>         | NR n48<br>Channel Bandwidth: 40MHz | <b>Channel</b>                           | CH 645332 : 3679.98 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 40 GHz                     | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)       |
| <b>Input Power</b>     | 120 Vac, 60 Hz                     | <b>Environmental Conditions</b>          | 23°C, 70% RH            |
| <b>Tested By</b>       | Vincent Chen                       |                                          |                         |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7359.96         | -41.66     | -40.00      | -1.66       | 1.52 H             | 203                  | 56.11            | -97.77                   |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 7359.96         | -43.49     | -40.00      | -3.49       | 2.67 V             | 111                  | 54.28            | -97.77                   |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                          |                                          |                        |
|------------------------|------------------------------------------|------------------------------------------|------------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 1.4MHz | <b>Channel</b>                           | CH 131979 : 1710.7 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                           | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)      |
| <b>Input Power</b>     | 120 Vac, 60 Hz                           | <b>Environmental Conditions</b>          | 23°C, 70% RH           |
| <b>Tested By</b>       | Vincent Chen                             |                                          |                        |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3421.40         | -46.35     | -13.00      | -33.35      | 1.87 H             | 205                  | 62.45            | -108.80                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3421.40         | -50.38     | -13.00      | -37.38      | 2.32 V             | 154                  | 58.42            | -108.80                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

|                        |                                          |                                          |                      |
|------------------------|------------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 1.4MHz | <b>Channel</b>                           | CH 132322 : 1745 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                           | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                           | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                             |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3490.00         | -45.39     | -13.00      | -32.39      | 2.21 H             | 157                  | 62.47            | -107.86                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3490.00         | -49.52     | -13.00      | -36.52      | 1.85 V             | 257                  | 58.34            | -107.86                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                          |                                          |                        |
|------------------------|------------------------------------------|------------------------------------------|------------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 1.4MHz | <b>Channel</b>                           | CH 132665 : 1779.3 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                           | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)      |
| <b>Input Power</b>     | 120 Vac, 60 Hz                           | <b>Environmental Conditions</b>          | 23°C, 70% RH           |
| <b>Tested By</b>       | Vincent Chen                             |                                          |                        |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3558.60         | -45.45     | -13.00      | -32.45      | 1.52 H             | 254                  | 62.32            | -107.77                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3558.60         | -49.36     | -13.00      | -36.36      | 2.64 V             | 188                  | 58.41            | -107.77                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                        |                                          |                        |
|------------------------|----------------------------------------|------------------------------------------|------------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 5MHz | <b>Channel</b>                           | CH 131997 : 1712.5 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                         | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)      |
| <b>Input Power</b>     | 120 Vac, 60 Hz                         | <b>Environmental Conditions</b>          | 23°C, 70% RH           |
| <b>Tested By</b>       | Vincent Chen                           |                                          |                        |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3425.00         | -46.64     | -13.00      | -33.64      | 2.53 H             | 245                  | 62.12            | -108.76                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3425.00         | -50.62     | -13.00      | -37.62      | 1.15 V             | 26                   | 58.14            | -108.76                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                        |                                          |                      |
|------------------------|----------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 5MHz | <b>Channel</b>                           | CH 132322 : 1745 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                         | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                         | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                           |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3490.00         | -45.63     | -13.00      | -32.63      | 2.52 H             | 178                  | 62.23            | -107.86                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3490.00         | -49.63     | -13.00      | -36.63      | 2.63 V             | 274                  | 58.23            | -107.86                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                        |                                          |                        |
|------------------------|----------------------------------------|------------------------------------------|------------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 5MHz | <b>Channel</b>                           | CH 132647 : 1777.5 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                         | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)      |
| <b>Input Power</b>     | 120 Vac, 60 Hz                         | <b>Environmental Conditions</b>          | 23°C, 70% RH           |
| <b>Tested By</b>       | Vincent Chen                           |                                          |                        |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3555.00         | -45.01     | -13.00      | -32.01      | 2.57 H             | 169                  | 62.74            | -107.75                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3555.00         | -48.82     | -13.00      | -35.82      | 1.52 V             | 288                  | 58.93            | -107.75                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                         |                                          |                      |
|------------------------|-----------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 132072 : 1720 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                          | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                          | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                            |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3440.00         | -46.45     | -13.00      | -33.45      | 2.52 H             | 77                   | 62.15            | -108.60                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3440.00         | -49.88     | -13.00      | -36.88      | 2.05 V             | 186                  | 58.72            | -108.60                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

|                        |                                         |                                          |                      |
|------------------------|-----------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 132322 : 1745 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                          | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                          | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                            |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3490.00         | -45.19     | -13.00      | -32.19      | 2.09 H             | 325                  | 62.67            | -107.86                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3490.00         | -48.99     | -13.00      | -35.99      | 1.67 V             | 204                  | 58.87            | -107.86                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3.  $Margin\ value = EIRP - Limit\ value$
4. The other EIRP levels were very low against the limit.

|                        |                                         |                                          |                      |
|------------------------|-----------------------------------------|------------------------------------------|----------------------|
| <b>RF Mode</b>         | LTE Band 66<br>Channel Bandwidth: 20MHz | <b>Channel</b>                           | CH 132572 : 1770 MHz |
| <b>Frequency Range</b> | 1 GHz ~ 18 GHz                          | <b>Detector Function &amp; Bandwidth</b> | 1 MHz/3 MHz (RMS)    |
| <b>Input Power</b>     | 120 Vac, 60 Hz                          | <b>Environmental Conditions</b>          | 23°C, 70% RH         |
| <b>Tested By</b>       | Vincent Chen                            |                                          |                      |

| Antenna Polarity & Test Distance : Horizontal at 3 m |                 |            |             |             |                    |                      |                  |                          |
|------------------------------------------------------|-----------------|------------|-------------|-------------|--------------------|----------------------|------------------|--------------------------|
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3540.00         | -45.32     | -13.00      | -32.32      | 1.58 H             | 33                   | 62.42            | -107.74                  |
| Antenna Polarity & Test Distance : Vertical at 3 m   |                 |            |             |             |                    |                      |                  |                          |
| No                                                   | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1                                                    | 3540.00         | -49.10     | -13.00      | -36.10      | 2.05 V             | 196                  | 58.64            | -107.74                  |

**Remarks:**

1.  $EIRP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8$
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

## 8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

## 9 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.

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

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