# TEST REPORT

Dt&C Co., Ltd.
42, Yurim-ro, 154Beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 17042
Tel : 031-321-2664, Fax : 031-321-1664

1. Report No : DRTFCC2412-0133

2. Customer

- Name : DASAN Networks, Inc.
- Address : DASAN Tower, 49, Daewangpangyo-ro644Beon-gil, Bundang-gu, Seongnam-si, South Korea 13493

3. Use of Report : FCC Certification

4. Product Name / Model Name : RC-TGU / RC-TGU (300611-02665)

   FCC ID : 2AXDMTGU5GWIFI6

5. FCC Regulation(s): Part 96

   Test Method Used : KDB971168 D01v03r01, ANSI C63.26-2015, ANSI/TIA-603-E-2016

6. Date of Test : 2024.10.10 ~ 2024.11.26

7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing

8. Testing Environment : See appended test report.

9. Test Result : Refer to the attached test result.

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test report is not related to KOLAS accreditation.

| | | |
|---|---|---|
| Affirmation | Tested by<br>Name : SeungMin Gil (Signature) | Technical Manager<br>Name : JaeJin Lee (Signature) |

**2024 . 12 . 11 .**

**Dt&C Co., Ltd.**

# Test Report Version

| Test Report No. | Date | Description | Revised by | Reviewed by |
|---|---|---|---|---|
| DRTFCC2412-0133 | Dec. 11, 2024 | Initial issue | SeungMin Gil | JaeJin Lee |
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# Table of Contents

# 1. GENERAL INFORMATION

| | |
|---|---|
| **FCC Classification** | Citizens Band End User Devices (CBE) |
| **FCC ID** | 2AXDMTGU5GWIFI6 |
| **Product Name** | RC-TGU |
| **Model Name** | RC-TGU (300611-02665) |
| **Add Model Name** | - |
| **FVIN(Firmware Version Identification Number)** | V0.10 |
| **EUT Serial Number** | No specified |
| **Supplying power** | DC 12 , 24 V |

**Antenna Information** (LTE)

| Band | Internal Chip Antenna 2 (dBi) | External Antenna 2 (dBi) |
|---|---|---|
| 48 | 0.6 | **3.9** |

Note: The antenna gain was corrected for path loss from the conducted feed point to the antenna terminal.

| Mode | TX Frequency (MHz) | Modulation | Conducted Output Power | | EIRP | |
|---|---|---|---|---|---|---|
| | | | Max power (dBm) | Max power (W) | Max power (dBm) | Max power (W) |
| LTE Band 48 | 3 560 ~ 3 690 | QPSK | 18.39 | 0.069 | 22.29 | 0.169 |
| LTE Band 48 | 3 560 ~ 3 690 | 16QAM | 17.60 | 0.058 | 21.50 | 0.141 |
| LTE Band 48 | 3 560 ~ 3 690 | 64QAM | 16.71 | 0.047 | 20.61 | 0.115 |
| LTE Band 48 | 3 560 ~ 3 690 | 256QAM | 13.70 | 0.023 | 17.60 | 0.058 |
| LTE Band 48 | 3 557.5 ~ 3 692.5 | QPSK | 17.97 | 0.063 | 21.87 | 0.154 |
| LTE Band 48 | 3 557.5 ~ 3 692.5 | 16QAM | 17.25 | 0.053 | 21.15 | 0.130 |
| LTE Band 48 | 3 557.5 ~ 3 692.5 | 64QAM | 16.17 | 0.041 | 20.07 | 0.102 |
| LTE Band 48 | 3 557.5 ~ 3 692.5 | 256QAM | 13.70 | 0.023 | 17.60 | 0.058 |
| LTE Band 48 | 3 555 ~ 3 695 | QPSK | 18.06 | 0.064 | 21.96 | 0.157 |
| LTE Band 48 | 3 555 ~ 3 695 | 16QAM | 17.56 | 0.057 | 21.46 | 0.140 |
| LTE Band 48 | 3 555 ~ 3 695 | 64QAM | 16.43 | 0.044 | 20.33 | 0.108 |
| LTE Band 48 | 3 555 ~ 3 695 | 256QAM | 13.69 | 0.023 | 17.59 | 0.057 |
| LTE Band 48 | 3 552.5 ~ 3 697.5 | QPSK | 18.20 | 0.066 | 22.10 | 0.162 |
| LTE Band 48 | 3 552.5 ~ 3 697.5 | 16QAM | 17.45 | 0.056 | 21.35 | 0.136 |
| LTE Band 48 | 3 552.5 ~ 3 697.5 | 64QAM | 16.87 | 0.049 | 20.77 | 0.119 |
| LTE Band 48 | 3 552.5 ~ 3 697.5 | 256QAM | 13.62 | 0.023 | 17.52 | 0.056 |
| LTE Band 48(20+20) | 3 560 ~ 3 690 | QPSK | 16.23 | 0.042 | 20.13 | 0.103 |
| LTE Band 48(20+20) | 3 560 ~ 3 690 | 16QAM | 15.53 | 0.036 | 19.43 | 0.088 |
| LTE Band 48(20+15) | 3 560 ~ 3 690 | 16QAM | 15.49 | 0.035 | 19.39 | 0.087 |

# 2. INTRODUCTION

## 2.1. EUT DESCRIPTION

This device supports the following capabilities:
Bluetooth LE, 2.4/5GHz WLAN, WCDMA, LTE/LTE up-link carrier aggregation, 5G NR(FR1)/5G NR up-link carrier aggregation and ENDC
5G NR supports SCS 15 kHz for FDD Band and SCS 30 kHz for TDD Band.

## 2.2. TESTING ENVIRONMENT

| Ambient Condition | |
|---|---|
| ▪ Temperature | +22 ℃ ~ +24 ℃ |
| ▪ Relative Humidity | 44 % ~ 50 % |

## 2.3. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

## 2.4. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with requirements of ANSI C 63.4-2014. All measurement uncertainty values are shown with a coverage factor of $k$ = 2 to indicate a 95 % level of confidence.

| Parameter | Measurement uncertainty |
|---|---|
| Antenna-port conducted emission | 1.0 dB (The confidence level is about 95 %, k = 2) |
| Radiated Disturbance (Below 1 GHz) | 5.0 dB (The confidence level is about 95 %, k = 2) |
| Radiated Disturbance (1 GHz ~ 18 GHz) | 4.8 dB (The confidence level is about 95 %, k = 2) |
| Radiated Disturbance (Above 18 GHz) | 5.0 dB (The confidence level is about 95 %, k = 2) |

## 2.5. TEST FACILITY

**Dt&C Co., Ltd.**

The 3 m test site and conducted measurement facility used to collect the radiated data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042.
The test site complies with the requirements of Part 2.948 according to ANSI C63.4-2014.

**- FCC & IC MRA Designation No. : KR0034**

**- ISED#: 5740A**

www.dtnc.net

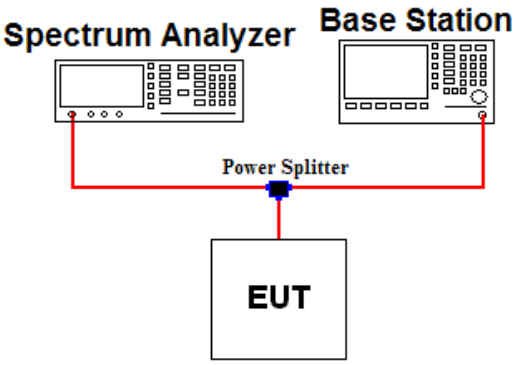
| | | |
|---|---|---|
| Telephone | : | + 82-31-321-2664 |
| FAX | : | + 82-31-321-1664 |

# 3. DESCRIPTION OF TESTS

## 3.1. MAXIMUM OUTPUT POWER

### Conducted Output Power

***Test Set-up***




***Test Procedure***

- **KDB971168 D01v03r01 - Section 5.4**
- **ANSI C63.26-2015 – Section 5.2.4.5, 5.2.4.4.2**

Test setting

1. Set span to 2 x to 3 x the OBW.
2. Set RBW = 10 MHz
3. Set VBW ≥ 3 x RBW.
4. Set number of points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   1) Set = auto-couple, or
   2) Set ≥ [10 × (number of points in sweep) × (transmission symbol period)] for single sweep (automation-compatible) measurement.
6. Detector = power averaging (rms).
7. Set sweep trigger to “free run”
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.
9. By using the marker function to identify the maximum PSD instead of summing the power across the OBW.
10. Add 10 log (1/duty cycle) to the measured power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25 %.

**EUT duty cycle**

| Band | $T_{on}$(ms) | $T_{on+off}$ (ms) | Duty cycle = $T_{on}$ / ($T_{on+off}$) | 10 log (1/duty cycle) |
|---|---|---|---|---|
| 48 | 1.998 | 4.998 | 0.399 7 | 3.98 dB |

## - ERP & EIRP (Effective Radiated Power & Equivalent Isotropic Radiated Power)

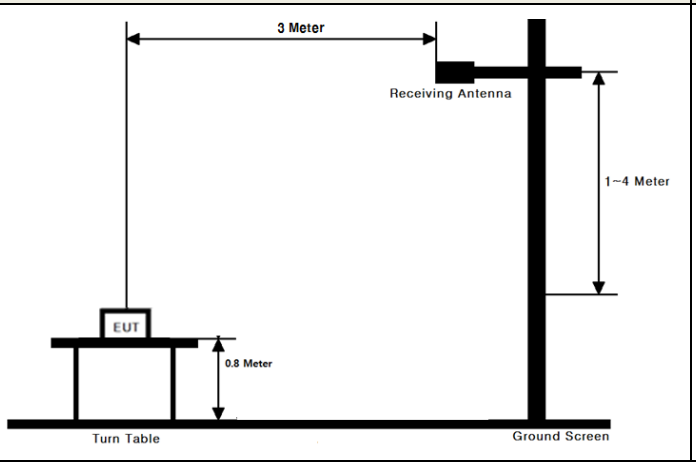
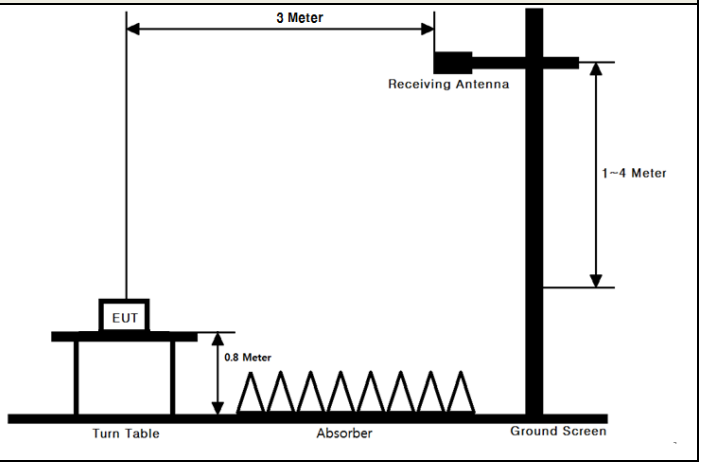
### Test Procedure

- **KDB971168 D01v03r01 - Section 5.6**
- **ANSI C63.26-2015 – Section 5.2.5.5**

**Determining ERP and EIRP from conducted RF output power measurement results**
ERP or EIRP = $P_{Meas} + G_T - L_C$
where:
ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as $P_{Meas}$, typically dBW or dBm);
$P_{Meas}$ = measured transmitter output power or PSD, in dBm or dBW;
$G_T$ = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
$L_C$ = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

## 3.2. UNDESIRABLE EMISSIONS

### *Test Set-up*

| Below 1GHz | Above 1GHz |
|---|---|
|  |  |





These measurements were performed at 3 test site. The equipment under test is placed on a non-conductive table 0.8 or 1.5 meters above a turntable which is flush with the ground plane and 3 meters from the receive antenna. For measurements above 1GHz absorbers are placed on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1 GHz, the absorbers are removed.

### *Test Procedure*

- **ANSI/TIA-603-E-2016 - Section 2.2.12**
- **KDB971168 D01v03r01 - Section 5.8**
- **ANSI C63.26-2015 – Section 5.5**

Test setting

1. RBW = 100 kHz for below 1 GHz and 1 MHz for above 1 GHz / VBW ≥ 3 X RBW
2. Detector = RMS & Trace mode = Average
3. Sweep time = Auto couple
4. Number of sweep point ≥ 2 X span / RBW
5. The trace was allowed to stabilize

If the device cannot be configured to transmit continuously (duty cycle < 98%) and a free- running sweep must be used, set the sweep time so that the averaging is performed over multiple on/off cycles by setting the sweep time > (number of points in sweep) × (transmitter period) (i.e., the transmit on-time + the off-time). The spectrum analyzer readings shall subsequently be corrected by [10 log (1/duty cycle)]. This assumes that the transmission period and duty cycle is relatively constant (duty cycle variation ≤ ±2%).

The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer.

For radiated power measurements below 1 GHz, a half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading.

For radiated power measurements above 1 GHz, a Horn antenna was substituted in place of the EUT. This Horn antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. The difference between the gain of the horn and an isotropic antenna are taken into consideration.

# 4. LIST OF TEST EQUIPMENT

| Type | Manufacturer | Model | Cal.Date (yy/mm/dd) | Next.Cal. Date (yy/mm/dd) | S/N |
|---|---|---|---|---|---|
| Spectrum Analyzer | Agilent Technologies | N9020A | 23/12/15 | 24/12/15 | MY48010133 |
| Spectrum Analyzer | KEYSIGHT | N9030B | 23/12/15 | 24/12/15 | MY55480168 |
| DC power supply | DIGITAL | DPR-303D | 24/06/05 | 25/06/05 | 0120044 |
| Multimeter | FLUKE | 17B+ | 23/12/15 | 24/12/15 | 36390701WS |
| Radio Communication Analyzer | Anritsu | MT8820C | 23/12/15 | 24/12/15 | 6201274516 |
| Radio Communication Analyzer | KEYSIGHT | E7515B | 24/06/05 | 25/06/05 | MY60192461 |
| Thermohygrometer | BODYCOM | BJ5478 | 23/12/15 | 24/12/15 | 120612-1 |
| Thermohygrometer | BODYCOM | BJ5478 | 23/12/15 | 24/12/15 | 090205-4 |
| Resistive Divider | Clear Microwave | D240 | 24/06/10 | 25/06/10 | 2 |
| Signal Generator | Rohde Schwarz | SMBV100A | 23/12/15 | 24/12/15 | 255571 |
| Signal Generator | ANRITSU | MG3695C | 23/12/15 | 24/12/15 | 173501 |
| Loop Antenna | ETS-Lindgren | 6502 | 24/11/08 | 26/11/08 | 00060496 |
| Bilog Antenna | Schwarzbeck | VULB 9160 | 23/12/15 | 24/12/15 | 3362 |
| HORN ANT | ETS | 3117 | 23/12/15 | 24/12/15 | 00140394 |
| HORN ANT | A.H.Systems | SAS-574 | 24/06/11 | 25/06/11 | 155 |
| PreAmplifier | H.P | 8447D | 23/12/15 | 24/12/15 | 2944A07774 |
| PreAmplifier | Agilent | 8449B | 23/12/15 | 24/12/15 | 3008A02108 |
| PreAmplifier | A.H.Systems Inc. | PAM-1840VH | 24/06/05 | 25/06/05 | 163 |
| High-pass filter | Wainwright | WHKX12-935-1000-15000-40SS | 23/12/15 | 24/12/15 | 7 |
| High-pass filter | Wainwright | WHNX5.0/26.5G-6SS | 24/06/24 | 25/06/24 | 8 |
| High-pass filter | Wainwright | WHKX6-6320-8000-26500-40CC | 23/12/15 | 24/12/15 | 2 |
| Cable | HUBER+SUHNER | SUCOFLEX100 | 24/01/03 | 25/01/03 | M-1 |
| Cable | HUBER+SUHNER | SUCOFLEX100 | 24/01/03 | 25/01/03 | M-2 |
| Cable | JUNKOSHA | MWX241/B | 24/01/03 | 25/01/03 | M-3 |
| Cable | JUNKOSHA | MWX221 | 24/01/03 | 25/01/03 | M-4 |
| Cable | JUNKOSHA | MWX221 | 24/01/03 | 25/01/03 | M-5 |
| Cable | JUNFLON | J12J101757-00 | 24/01/03 | 25/01/03 | M-7 |
| Cable | HUBER+SUHNER | SUCOFLEX104 | 24/01/03 | 25/01/03 | M-8 |
| Cable | HUBER+SUHNER | SUCOFLEX106 | 24/01/03 | 25/01/03 | M-9 |
| Cable | JUNKOSHA | MWX315 | 24/01/03 | 25/01/03 | M-10 |
| Cable | Radiall | TESTPRO3 | 24/01/03 | 25/01/03 | RFC-44 |
| Cable | JUNKOSHA | MWX241 | 24/01/03 | 25/01/03 | mmW-1 |
| Cable | JUNKOSHA | MWX241 | 24/01/03 | 25/01/03 | mmW-4 |

Note1: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017.
Note2: The cable is not a regular calibration item, so it has been calibrated by Dt&C itself.

# 5. SUMMARY OF TEST RESULTS

| FCC Part Section(s) | Test Description | Test Limit | Status Note 1 |
|---|---|---|---|
| 96.41(b) | Maximum EIRP | < 23 dBm / 10MHz (End user device) | C |
| 2.1053<br>96.41 | Undesirable Emissions | < -40 dBm / MHz | C |

Note 1: **C**=Comply **NC**=Not Comply **NT**=Not Tested **NA**=Not Applicable
Note 2: This device uses the certified module and the power configuration was reduced by software.
The output power and radiated test items were measured and spot-check testing were performed on other FCC requirements.(OBW, Conducted band edge, Conducted spurious emission) Spot-check test results do not exceed the module results.
Please refer to the module test report for conducted signal test items. (FCC ID: XMR2022RM520NGL)
Note 3: Radiated test items were performed in three orthogonal EUT positions and the worst case data was reported.

# 6. EMISSION DESIGNATOR AND SAMPLE CALCULATION

## A. For substitution method

**Unwanted emissions**

1) The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1 GHz respectively above ground.
2) The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3) Vary the measurement antenna height through 1 m to 4 m and the rotate EUT through 360° in order to determine the maximum emission level.
4) Record the measured emission level and frequency using the available test method.
If required by the test method, add 10 log(1/duty cycle) to measured emission level.
5) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
6) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude. And adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the previously emission level[Measured level + 10 log(1/duty cycle)].
7) The conducted power at the terminal of the substitute antenna is measured.
8) Record the level at substituted antenna terminal.
9) The result is calculated as below;

**EIRP(dBm) = LEVLE@ANTENNA TERMINAL + TX Antenna Gain (dBi)**
**ERP(dBm) = LEVLE@ANTENNA TERMINAL + TX Antenna Gain (dBd)**
**Where, TX Antenna Gain (dBd) = TX Antenna Gain (dBi) - 2.15 dB**

# 7. TEST DATA

## 7.1. ERP & EIRP

**- Test Notes**

1) EIRP(dBm/10MHz) = Conducted Output power(dBm/10MHz) + EUT Antenna Gain(dBi)
2) LTE Intra band ULCA power was measured based on worst-case configuration(BW, Channel and modulation) of certified module.

**External Antenna 2**

| Channel Bandwidth (MHz) | Tx Freq. (MHz) | Test Mode | RB Size/ Offset | Conducted Output Power (dBm/10MHz) | EUT Antenna Gain(dBi) | EIRP (dBm/10MHz) | Limit (dBm/10MHz) |
|---|---|---|---|---|---|---|---|
| 20 | 3 560 | QPSK | 1/0 | 18.12 | 3.9 | 22.02 | 23.0 |
| | | 16QAM | 1/0 | 17.35 | 3.9 | 21.25 | 23.0 |
| | | 64QAM | 1/0 | 16.10 | 3.9 | 20.00 | 23.0 |
| | | 256QAM | 1/99 | 13.70 | 3.9 | 17.60 | 23.0 |
| | 3 625 | QPSK | 1/99 | 18.19 | 3.9 | 22.09 | 23.0 |
| | | 16QAM | 1/50 | 17.25 | 3.9 | 21.15 | 23.0 |
| | | 64QAM | 1/99 | 16.35 | 3.9 | 20.25 | 23.0 |
| | | 256QAM | 1/0 | 13.55 | 3.9 | 17.45 | 23.0 |
| | 3 690 | QPSK | 1/99 | 18.39 | 3.9 | 22.29 | 23.0 |
| | | 16QAM | 1/50 | 17.60 | 3.9 | 21.50 | 23.0 |
| | | 64QAM | 1/99 | 16.71 | 3.9 | 20.61 | 23.0 |
| | | 256QAM | 1/50 | 13.60 | 3.9 | 17.50 | 23.0 |
| 15 | 3 557.5 | QPSK | 1/36 | 17.32 | 3.9 | 21.22 | 23.0 |
| | | 16QAM | 1/0 | 16.54 | 3.9 | 20.44 | 23.0 |
| | | 64QAM | 1/36 | 16.13 | 3.9 | 20.03 | 23.0 |
| | | 256QAM | 1/0 | 13.70 | 3.9 | 17.60 | 23.0 |
| | 3 625 | QPSK | 1/74 | 17.23 | 3.9 | 21.13 | 23.0 |
| | | 16QAM | 1/74 | 16.76 | 3.9 | 20.66 | 23.0 |
| | | 64QAM | 1/74 | 15.30 | 3.9 | 19.20 | 23.0 |
| | | 256QAM | 1/0 | 13.52 | 3.9 | 17.42 | 23.0 |
| | 3 692.5 | QPSK | 1/74 | 17.97 | 3.9 | 21.87 | 23.0 |
| | | 16QAM | 1/36 | 17.25 | 3.9 | 21.15 | 23.0 |
| | | 64QAM | 1/36 | 16.17 | 3.9 | 20.07 | 23.0 |
| | | 256QAM | 1/36 | 13.64 | 3.9 | 17.54 | 23.0 |
| 10 | 3 555 | QPSK | 1/49 | 18.06 | 3.9 | 21.96 | 23.0 |
| | | 16QAM | 1/49 | 17.56 | 3.9 | 21.46 | 23.0 |
| | | 64QAM | 1/49 | 16.43 | 3.9 | 20.33 | 23.0 |
| | | 256QAM | 1/49 | 13.61 | 3.9 | 17.51 | 23.0 |
| | 3 625 | QPSK | 1/0 | 17.66 | 3.9 | 21.56 | 23.0 |
| | | 16QAM | 1/0 | 16.88 | 3.9 | 20.78 | 23.0 |
| | | 64QAM | 1/0 | 15.60 | 3.9 | 19.50 | 23.0 |
| | | 256QAM | 1/0 | 13.69 | 3.9 | 17.59 | 23.0 |
| | 3 695 | QPSK | 1/49 | 17.73 | 3.9 | 21.63 | 23.0 |
| | | 16QAM | 1/49 | 17.21 | 3.9 | 21.11 | 23.0 |
| | | 64QAM | 1/49 | 16.16 | 3.9 | 20.06 | 23.0 |
| | | 256QAM | 1/49 | 13.50 | 3.9 | 17.40 | 23.0 |

| Channel Bandwidth (MHz) | Tx Freq. (MHz) | Test Mode | RB Size/ Offset | Conducted Output Power (dBm/10MHz) | Antenna Gain(dBi) | EIRP (dBm/10MHz) | Limit (dBm/10MHz) |
|---|---|---|---|---|---|---|---|
| 5 | 3 552.5 | QPSK | 1/12 | 18.06 | 3.9 | 21.96 | 23.0 |
| | | 16QAM | 1/12 | 17.39 | 3.9 | 21.29 | 23.0 |
| | | 64QAM | 1/0 | 16.57 | 3.9 | 20.47 | 23.0 |
| | | 256QAM | 1/0 | 13.59 | 3.9 | 17.49 | 23.0 |
| | 3 625 | QPSK | 1/0 | 17.58 | 3.9 | 21.48 | 23.0 |
| | | 16QAM | 1/0 | 17.07 | 3.9 | 20.97 | 23.0 |
| | | 64QAM | 1/12 | 16.23 | 3.9 | 20.13 | 23.0 |
| | | 256QAM | 1/0 | 13.59 | 3.9 | 17.49 | 23.0 |
| | 3 697.5 | QPSK | 1/24 | 18.20 | 3.9 | 22.10 | 23.0 |
| | | 16QAM | 1/12 | 17.45 | 3.9 | 21.35 | 23.0 |
| | | 64QAM | 1/24 | 16.87 | 3.9 | 20.77 | 23.0 |
| | | 256QAM | 1/12 | 13.62 | 3.9 | 17.52 | 23.0 |

**LTE ULCA(48C)**

**External Antenna 2**

| PCC/ SCC | Channel Bandwidth (MHz) | Tx Freq. (MHz) | Test Mode | RB Size/ Offset | Conducted Output Power (dBm/10MHz) | EUT Antenna Gain(dBi) | EIRP (dBm/10MHz) | Limit (dBm/10MHz) |
|---|---|---|---|---|---|---|---|---|
| PCC | 20 | 3 560 | QPSK | 1/99 | 16.23 | 3.9 | 20.13 | 23.0 |
| SCC | 20 | 3 579.8 | QPSK | 1/0 | | | | |
| PCC | 20 | 3 670.2 | 16QAM | 1/99 | 15.53 | 3.9 | 19.43 | 23.0 |
| SCC | 20 | 3 690 | 16QAM | 1/0 | | | | |
| PCC | 20 | 3 560 | 16QAM | 1/99 | 15.49 | 3.9 | 19.39 | 23.0 |
| SCC | 15 | 3 577.1 | 16QAM | 1/0 | | | | |

## 7.2. UNDESIRABLE EMISSIONS (Radiated)

**- Test Notes**

1. Limit = -40 dBm/MHz
2. Result(dBm) = Level at Substitute antenna terminal(dBm) + Substitute Antenna Gain (dBi)
3. The frequency spectrum is examined from 9 kHz to the 10th harmonic of the fundamental frequency of the transmitter. No other spurious and harmonic emissions were reported greater than listed emissions above table.

### Internal Chip Antenna 2

| Channel Bandwidth (MHz) | Test Freq. (MHz) | RB Size/ Offset | Test Mode | Freq.(MHz) | Ant Pol (H/V) | Level at Antenna Terminal(dBm) | Substitute Antenna Gain(dBi) | Result (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 3 560 | 1/99 | QPSK | 7 138.06 | H | -63.56 | 11.42 | -52.14 | -40.00 | 12.14 |
| | 3 625 | 1/50 | | 7 249.82 | H | -62.91 | 11.67 | -51.24 | -40.00 | 11.24 |
| | 3 690 | 1/99 | | 7 397.40 | H | -63.05 | 11.99 | -51.06 | -40.00 | 11.06 |

### External Antenna 2

| Channel Bandwidth (MHz) | Test Freq. (MHz) | RB Size/ Offset | Test Mode | Freq.(MHz) | Ant Pol (H/V) | Level at Antenna Terminal(dBm) | Substitute Antenna Gain(dBi) | Result (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 3 690 | 1/99 | QPSK | 7 397.36 | H | -63.13 | 11.99 | -51.14 | -40.00 | 11.14 |