



Test Report No.: SA180615W005



RF EXPOSURE REPORT

Product: Industry Wireless Router

Model Name: GR500

FCC ID: 2APNR-GR500

Applicant: Gosuncn Technology Group Co., Ltd.

Address: 6F, 2819 KaiChuang Blvd., Science Town, Huangpu District, Guangzhou City, Guangdong, China.

Manufacturer: Gosuncn Technology Group Co., Ltd.

Address: 6F, 2819 KaiChuang Blvd., Science Town, Huangpu District, Guangzhou City, Guangdong, China.

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Report No.: SA180615W005

Received Date: Jun. 15, 2018

Test Date: Jun. 16, 2018 ~ Jul. 06, 2018

Issued Date: Jul. 11, 2018

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TABLE OF CONTENTS

| | |
|---|----|
| RF EXPOSURE REPORT..... | 1 |
| RELEASE CONTROL RECORD | 3 |
| 1 CERTIFICATION | 4 |
| 2 GENERAL INFORMATION | 5 |
| 2.1 GENERAL DESCRIPTION OF EUT | 5 |
| 3 RF EXPOSURE | 7 |
| 3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE) | 7 |
| 3.2 MPE CALCULATION FORMULA | 7 |
| 3.3 CLASSIFICATION | 7 |
| 3.4 CONDUCTED POWER | 8 |
| 3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER..... | 20 |



Test Report No.: SA180615W005

RELEASE CONTROL RECORD


| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|--------------|-------------------|---------------|
| SA180615W005 | Original release | Jul. 11, 2018 |



1 CERTIFICATION

PRODUCT: Industry Wireless Router
BRAND NAME: GOSUNCN
MODEL NAME: GR500
APPLICANT: Gosuncn Technology Group Co., Ltd.
TESTED: Jun. 16, 2018 ~ Jul. 06, 2018
TEST SAMPLE: Identical Prototype
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1

The above equipment has been tested by **BV 7Layers Communications Technology (Shenzhen) Co. Ltd** 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 EMC characteristics under the conditions specified in this report.

PREPARED BY : , **DATE:** Jul. 11, 2018
(Roger Li / Engineer)

APPROVED BY : , **DATE:** Jul. 11, 2018
(Sam Tung / Manager)



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

| | | |
|------------------------------------|------------------------------------|---|
| PRODUCT | Industry Wireless Router | |
| MODEL NAME | GR500 | |
| NOMINAL VOLTAGE | 12Vdc (adapter or host equipment) | |
| OPERATING TEMPERATURE RANGE | -20 ~ 60°C | |
| MODULATION TYPE | GSM | GMSK, 8PSK |
| | WCDMA | BPSK/QPSK |
| | LTE | QPSK/16QAM |
| OPERATING FREQUENCY | GSM | 824.2MHz ~ 848.8MHz (GSM 850) 1850.2MHz ~ 1909.8MHz (FOR GSM 1900) |
| | WCDMA | 1852.4MHz ~ 1907.6MHz (FOR WCDMA Band 2) 826.4MHz ~ 846.6MHz (FOR WCDMA Band 5) |
| | LTE | 1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 699.7MHz ~ 715.3MHz (FOR LTE Band12) |
| ANTENNA GAIN | GSM850 | External antenna with 4.446dBi gain |
| | GSM1900 | External antenna with 2.29dBi gain |
| | WCDMA 850 | External antenna with 4.446dBi gain |
| | WCDMA 1900 | External antenna with 2.29dBi gain |
| | LTE Band 2 | External antenna with 2.29dBi gain |
| | LTE Band 4 | External antenna with 2.66dBi gain |
| | LTE Band 5 | External antenna with 4.446dBi gain |
| LTE Band 12 | External antenna with 2.01dBi gain | |
| HW VERSION | GR500-V1.1 | |
| SW VERSION | V1.10.0 | |
| I/O PORTS | Refer to user's manual | |
| CABLE SUPPLIED | N/A | |

NOTE:

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



2. The EUT was powered by the following adapter:

| | |
|----------------|--|
| ADAPTER | |
| BRAND: | Dongguan Mentech Optical & Magnetic Co.,Ltd. |
| MODEL: | MAU-120100X-D-16 |
| INPUT: | AC 100-240V, 700mA |
| OUTPUT: | DC 12V, 1000mA |

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3 RF EXPOSURE

3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| FREQUENCY RANGE (MHz) | ELECTRIC FIELD STRENGTH (V/m) | MAGNETIC FIELD STRENGTH (A/m) | POWER DENSITY (mW/cm ²) | AVERAGE TIME (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|------------------------|
| LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE | | | | |
| 300-1500 | ... | ... | F/1500 | 30 |
| 1500-100,000 | ... | ... | 1.0 | 30 |

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

$$Pd = (Pout * G) / (4 * pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

3.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



3.4 CONDUCTED POWER

| Band | GSM850 | | |
|-----------------|--------------|--------------|--------------|
| Channel | 128 | 189 | 251 |
| Frequency (MHz) | 824.2 | 836.4 | 848.8 |
| GPRS 8 | 33.65 | 33.54 | 32.94 |
| GPRS 10 | 33.33 | 33.22 | 32.62 |
| GPRS 11 | 33.00 | 32.89 | 32.29 |
| GPRS 12 | 32.61 | 32.50 | 31.90 |
| EDGE 8 (MCS9) | 26.50 | 26.39 | 25.79 |
| EDGE 10 (MCS9) | 26.28 | 26.17 | 25.57 |
| EDGE 11 (MCS9) | 25.97 | 25.86 | 25.26 |
| EDGE 12 (MCS9) | 25.65 | 25.54 | 24.94 |

| Band | GSM1900 | | |
|-----------------|---------------|---------------|---------------|
| Channel | 512 | 661 | 810 |
| Frequency (MHz) | 1850.2 | 1880.0 | 1909.8 |
| GPRS 8 | 29.73 | 29.57 | 29.50 |
| GPRS 10 | 29.65 | 29.49 | 29.42 |
| GPRS 11 | 29.59 | 29.43 | 29.36 |
| GPRS 12 | 29.46 | 29.30 | 29.23 |
| EDGE 8 (MCS9) | 25.74 | 25.58 | 25.51 |
| EDGE 10 (MCS9) | 25.60 | 25.44 | 25.37 |
| EDGE 11 (MCS9) | 25.48 | 25.32 | 25.25 |
| EDGE 12 (MCS9) | 25.31 | 25.15 | 25.08 |



| Band | WCDMA II | | |
|-----------------|----------|--------|--------|
| Channel | 9262 | 9400 | 9538 |
| Frequency (MHz) | 1852.4 | 1880.0 | 1907.6 |
| RMC 12.2K | 22.75 | 23.01 | 22.94 |
| HSPA | | | |
| HSDPA Subtest-1 | 21.86 | 22.12 | 22.05 |
| HSDPA Subtest-2 | 21.83 | 22.09 | 22.02 |
| HSDPA Subtest-3 | 21.42 | 21.68 | 21.61 |
| HSDPA Subtest-4 | 21.37 | 21.63 | 21.56 |
| HSUPA Subtest-1 | 21.80 | 22.06 | 21.99 |
| HSUPA Subtest-2 | 19.95 | 20.21 | 20.14 |
| HSUPA Subtest-3 | 20.92 | 21.18 | 21.11 |
| HSUPA Subtest-4 | 19.92 | 20.18 | 20.11 |
| HSUPA Subtest-5 | 21.92 | 22.18 | 22.11 |

| Band | WCDMA V | | |
|-----------------|---------|-------|-------|
| Channel | 4132 | 4182 | 4233 |
| Frequency (MHz) | 826.4 | 836.4 | 846.6 |
| RMC 12.2K | 23.98 | 22.62 | 23.74 |
| HSPA | | | |
| HSDPA Subtest-1 | 23.07 | 21.71 | 22.83 |
| HSDPA Subtest-2 | 23.04 | 21.68 | 22.80 |
| HSDPA Subtest-3 | 22.65 | 21.29 | 22.41 |
| HSDPA Subtest-4 | 22.60 | 21.24 | 22.36 |
| HSUPA Subtest-1 | 23.01 | 21.65 | 22.77 |
| HSUPA Subtest-2 | 21.14 | 19.78 | 20.90 |
| HSUPA Subtest-3 | 22.08 | 20.72 | 21.84 |
| HSUPA Subtest-4 | 21.10 | 19.74 | 20.86 |
| HSUPA Subtest-5 | 23.25 | 21.89 | 23.01 |



LTE BAND 2

| LTE Band 2 | | | | | | | |
|------------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 18607 | Mid CH 18900 | High CH 19193 | 3GPP MPR (dB) |
| | | | | Frequency 1850.7 MHz | Frequency 1880 MHz | Frequency 1909.3 MHz | |
| 1.4MHz | QPSK | 1 | 0 | 22.17 | 22.56 | 22.60 | 0 |
| | | 1 | 2 | 22.07 | 22.46 | 22.50 | 0 |
| | | 1 | 5 | 22.04 | 22.43 | 22.47 | 0 |
| | | 3 | 0 | 22.16 | 22.55 | 22.59 | 0 |
| | | 3 | 1 | 22.06 | 22.45 | 22.49 | 0 |
| | | 3 | 3 | 22.03 | 22.42 | 22.46 | 0 |
| | | 6 | 0 | 21.01 | 21.40 | 21.44 | 1 |
| | 16QAM | 1 | 0 | 20.93 | 21.32 | 21.36 | 1 |
| | | 1 | 2 | 20.91 | 21.30 | 21.34 | 1 |
| | | 1 | 5 | 20.82 | 21.21 | 21.25 | 1 |
| | | 3 | 0 | 20.91 | 21.30 | 21.34 | 1 |
| | | 3 | 1 | 20.89 | 21.28 | 21.32 | 1 |
| | | 3 | 3 | 20.80 | 21.19 | 21.23 | 1 |
| | | 6 | 0 | 20.06 | 20.45 | 20.49 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 18615 | Mid CH 18900 | High CH 19185 | 3GPP MPR (dB) |
| | | | | Frequency 1851.5 MHz | Frequency 1880 MHz | Frequency 1908.5 MHz | |
| 3 MHz | QPSK | 1 | 0 | 22.20 | 22.59 | 22.63 | 0 |
| | | 1 | 7 | 22.10 | 22.49 | 22.53 | 0 |
| | | 1 | 14 | 22.07 | 22.46 | 22.50 | 0 |
| | | 8 | 0 | 21.20 | 21.59 | 21.63 | 1 |
| | | 8 | 3 | 21.16 | 21.55 | 21.59 | 1 |
| | | 8 | 7 | 21.14 | 21.53 | 21.57 | 1 |
| | | 15 | 0 | 21.04 | 21.43 | 21.47 | 1 |
| | 16QAM | 1 | 0 | 20.96 | 21.35 | 21.39 | 1 |
| | | 1 | 7 | 20.94 | 21.33 | 21.37 | 1 |
| | | 1 | 14 | 20.85 | 21.24 | 21.28 | 1 |
| | | 8 | 0 | 20.33 | 20.72 | 20.76 | 2 |
| | | 8 | 3 | 20.29 | 20.68 | 20.72 | 2 |
| | | 8 | 7 | 20.26 | 20.65 | 20.69 | 2 |
| | | 15 | 0 | 20.09 | 20.48 | 20.52 | 2 |



| LTE Band 2 | | | | | | | |
|------------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 18625 | Mid CH 18900 | High CH 19175 | 3GPP MPR (dB) |
| | | | | Frequency 1852.5 MHz | Frequency 1880 MHz | Frequency 1907.5 MHz | |
| 5 MHz | QPSK | 1 | 0 | 22.23 | 22.62 | 22.66 | 0 |
| | | 1 | 12 | 22.13 | 22.52 | 22.56 | 0 |
| | | 1 | 24 | 22.10 | 22.49 | 22.53 | 0 |
| | | 12 | 0 | 21.23 | 21.62 | 21.66 | 1 |
| | | 12 | 6 | 21.19 | 21.58 | 21.62 | 1 |
| | | 12 | 13 | 21.17 | 21.56 | 21.60 | 1 |
| | | 25 | 0 | 21.07 | 21.46 | 21.50 | 1 |
| | 16QAM | 1 | 0 | 20.99 | 21.38 | 21.42 | 1 |
| | | 1 | 12 | 20.97 | 21.36 | 21.40 | 1 |
| | | 1 | 24 | 20.88 | 21.27 | 21.31 | 1 |
| | | 12 | 0 | 20.36 | 20.75 | 20.79 | 2 |
| | | 12 | 6 | 20.32 | 20.71 | 20.75 | 2 |
| | | 12 | 13 | 20.29 | 20.68 | 20.72 | 2 |
| | | 25 | 0 | 20.12 | 20.51 | 20.55 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 18650 | Mid CH 18900 | High CH 19150 | 3GPP MPR (dB) |
| | | | | Frequency 1855 MHz | Frequency 1880 MHz | Frequency 1905 MHz | |
| 10 MHz | QPSK | 1 | 0 | 22.25 | 22.64 | 22.68 | 0 |
| | | 1 | 24 | 22.15 | 22.54 | 22.58 | 0 |
| | | 1 | 49 | 22.12 | 22.51 | 22.55 | 0 |
| | | 25 | 0 | 21.25 | 21.64 | 21.68 | 1 |
| | | 25 | 12 | 21.21 | 21.60 | 21.64 | 1 |
| | | 25 | 25 | 21.19 | 21.58 | 21.62 | 1 |
| | | 50 | 0 | 21.09 | 21.48 | 21.52 | 1 |
| | 16QAM | 1 | 0 | 21.01 | 21.40 | 21.44 | 1 |
| | | 1 | 24 | 20.99 | 21.38 | 21.42 | 1 |
| | | 1 | 49 | 20.90 | 21.29 | 21.33 | 1 |
| | | 25 | 0 | 20.38 | 20.77 | 20.81 | 2 |
| | | 25 | 12 | 20.34 | 20.73 | 20.77 | 2 |
| | | 25 | 25 | 20.31 | 20.70 | 20.74 | 2 |
| | | 50 | 0 | 20.14 | 20.53 | 20.57 | 2 |



| LTE Band 2 | | | | | | | |
|------------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 18675 | Mid CH 18900 | High CH 19125 | 3GPP MPR (dB) |
| | | | | Frequency 1857.5 MHz | Frequency 1880 MHz | Frequency 1902.5 MHz | |
| 15 MHz | QPSK | 1 | 0 | 22.28 | 22.67 | 22.71 | 0 |
| | | 1 | 37 | 22.18 | 22.57 | 22.61 | 0 |
| | | 1 | 74 | 22.15 | 22.54 | 22.58 | 0 |
| | | 36 | 0 | 21.28 | 21.67 | 21.71 | 1 |
| | | 36 | 19 | 21.24 | 21.63 | 21.67 | 1 |
| | | 36 | 39 | 21.22 | 21.61 | 21.65 | 1 |
| | | 75 | 0 | 21.12 | 21.51 | 21.55 | 1 |
| | 16QAM | 1 | 0 | 21.04 | 21.43 | 21.47 | 1 |
| | | 1 | 37 | 21.02 | 21.41 | 21.45 | 1 |
| | | 1 | 74 | 20.93 | 21.32 | 21.36 | 1 |
| | | 36 | 0 | 20.41 | 20.80 | 20.84 | 2 |
| | | 36 | 19 | 20.37 | 20.76 | 20.80 | 2 |
| | | 36 | 39 | 20.34 | 20.73 | 20.77 | 2 |
| | | 75 | 0 | 20.17 | 20.56 | 20.60 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 18700 | Mid CH 18900 | High CH 19100 | 3GPP MPR (dB) |
| | | | | Frequency 1860 MHz | Frequency 1880 MHz | Frequency 1900 MHz | |
| 20MHz | QPSK | 1 | 0 | 22.33 | 22.72 | 22.76 | 0 |
| | | 1 | 50 | 22.23 | 22.62 | 22.66 | 0 |
| | | 1 | 99 | 22.20 | 22.59 | 22.63 | 0 |
| | | 50 | 0 | 21.33 | 21.72 | 21.76 | 1 |
| | | 50 | 25 | 21.29 | 21.68 | 21.72 | 1 |
| | | 50 | 50 | 21.27 | 21.66 | 21.70 | 1 |
| | | 100 | 0 | 21.17 | 21.56 | 21.60 | 1 |
| | 16QAM | 1 | 0 | 21.09 | 21.48 | 21.52 | 1 |
| | | 1 | 50 | 21.07 | 21.46 | 21.50 | 1 |
| | | 1 | 99 | 20.98 | 21.37 | 21.41 | 1 |
| | | 50 | 0 | 20.46 | 20.85 | 20.89 | 2 |
| | | 50 | 25 | 20.42 | 20.81 | 20.85 | 2 |
| | | 50 | 50 | 20.39 | 20.78 | 20.82 | 2 |
| | | 100 | 0 | 20.22 | 20.61 | 20.65 | 2 |



LTE BAND 4

| LTE Band 4 | | | | | | | |
|------------|------------|---------|-----------|-------------------------|-------------------------|-------------------------|-----|
| BW | Modulation | RB Size | RB Offset | Low CH 19957 | Mid CH 20175 | High CH 20393 | MPR |
| | | | | Frequency 1710.7 MHz | Frequency 1732.5 MHz | Frequency 1754.3 MHz | |
| 1.4MHz | QPSK | 1 | 0 | 21.85 | 22.13 | 22.42 | 0 |
| | | 1 | 2 | 21.83 | 22.11 | 22.40 | 0 |
| | | 1 | 5 | 21.80 | 22.08 | 22.37 | 0 |
| | | 3 | 0 | 21.83 | 22.11 | 22.40 | 0 |
| | | 3 | 1 | 21.81 | 22.09 | 22.38 | 0 |
| | | 3 | 3 | 21.78 | 22.06 | 22.35 | 0 |
| | | 6 | 0 | 20.68 | 20.96 | 21.25 | 1 |
| | 16QAM | 1 | 0 | 20.61 | 20.89 | 21.18 | 1 |
| | | 1 | 2 | 20.60 | 20.88 | 21.17 | 1 |
| | | 1 | 5 | 20.41 | 20.69 | 20.98 | 1 |
| | | 3 | 0 | 20.60 | 20.88 | 21.17 | 1 |
| | | 3 | 1 | 20.59 | 20.87 | 21.16 | 1 |
| | | 3 | 3 | 20.40 | 20.68 | 20.97 | 1 |
| | | 6 | 0 | 19.76 | 20.04 | 20.33 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 19965 | Mid CH 20175 | High CH 20385 | MPR |
| | | | | Frequency 1711.5 MHz | Frequency 1732.5 MHz | Frequency 1753.5 MHz | |
| 3 MHz | QPSK | 1 | 0 | 21.86 | 22.14 | 22.43 | 0 |
| | | 1 | 7 | 21.84 | 22.12 | 22.41 | 0 |
| | | 1 | 14 | 21.81 | 22.09 | 22.38 | 0 |
| | | 8 | 0 | 20.88 | 21.16 | 21.45 | 1 |
| | | 8 | 3 | 20.79 | 21.07 | 21.36 | 1 |
| | | 8 | 7 | 20.77 | 21.05 | 21.34 | 1 |
| | | 15 | 0 | 20.69 | 20.97 | 21.26 | 1 |
| | 16QAM | 1 | 0 | 20.62 | 20.90 | 21.19 | 1 |
| | | 1 | 7 | 20.61 | 20.89 | 21.18 | 1 |
| | | 1 | 14 | 20.42 | 20.70 | 20.99 | 1 |
| | | 8 | 0 | 19.91 | 20.19 | 20.48 | 2 |
| | | 8 | 3 | 19.85 | 20.13 | 20.42 | 2 |
| | | 8 | 7 | 19.82 | 20.10 | 20.39 | 2 |
| | | 15 | 0 | 19.77 | 20.05 | 20.34 | 2 |



| LTE Band 4 | | | | | | | |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|-----|
| BW | Modulation | RB Size | RB Offset | Low CH 19975 | Mid CH 20175 | High CH 20375 | MPR |
| | | | | Frequency 1712.5 MHz | Frequency 1732.5 MHz | Frequency 1752.5 MHz | |
| 5 MHz | QPSK | 1 | 0 | 21.89 | 22.17 | 22.46 | 0 |
| | | 1 | 12 | 21.87 | 22.15 | 22.44 | 0 |
| | | 1 | 24 | 21.84 | 22.12 | 22.41 | 0 |
| | | 12 | 0 | 20.91 | 21.19 | 21.48 | 1 |
| | | 12 | 6 | 20.82 | 21.10 | 21.39 | 1 |
| | | 12 | 13 | 20.80 | 21.08 | 21.37 | 1 |
| | | 25 | 0 | 20.72 | 21.00 | 21.29 | 1 |
| | 16QAM | 1 | 0 | 20.65 | 20.93 | 21.22 | 1 |
| | | 1 | 12 | 20.64 | 20.92 | 21.21 | 1 |
| | | 1 | 24 | 20.45 | 20.73 | 21.02 | 1 |
| | | 12 | 0 | 19.94 | 20.22 | 20.51 | 2 |
| | | 12 | 6 | 19.88 | 20.16 | 20.45 | 2 |
| | | 12 | 13 | 19.85 | 20.13 | 20.42 | 2 |
| | | 25 | 0 | 19.80 | 20.08 | 20.37 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 20000 | Mid CH 20175 | High CH 20350 | MPR |
| | | | | Frequency 1715 MHz | Frequency 1732.5 MHz | Frequency 1750 MHz | |
| 10 MHz | QPSK | 1 | 0 | 21.93 | 22.21 | 22.50 | 0 |
| | | 1 | 24 | 21.91 | 22.19 | 22.48 | 0 |
| | | 1 | 49 | 21.88 | 22.16 | 22.45 | 0 |
| | | 25 | 0 | 20.95 | 21.23 | 21.52 | 1 |
| | | 25 | 12 | 20.86 | 21.14 | 21.43 | 1 |
| | | 25 | 25 | 20.84 | 21.12 | 21.41 | 1 |
| | | 50 | 0 | 20.76 | 21.04 | 21.33 | 1 |
| | 16QAM | 1 | 0 | 20.69 | 20.97 | 21.26 | 1 |
| | | 1 | 24 | 20.68 | 20.96 | 21.25 | 1 |
| | | 1 | 49 | 20.49 | 20.77 | 21.06 | 1 |
| | | 25 | 0 | 19.98 | 20.26 | 20.55 | 2 |
| | | 25 | 12 | 19.92 | 20.20 | 20.49 | 2 |
| | | 25 | 25 | 19.89 | 20.17 | 20.46 | 2 |
| | | 50 | 0 | 19.84 | 20.12 | 20.41 | 2 |



| LTE Band 4 | | | | | | | |
|------------|------------|---------|-----------|----------------------|----------------------|----------------------|-----|
| BW | Modulation | RB Size | RB Offset | Low CH 20025 | Mid CH 20175 | High CH 20325 | MPR |
| | | | | Frequency 1717.5 MHz | Frequency 1732.5 MHz | Frequency 1747.5 MHz | |
| 15 MHz | QPSK | 1 | 0 | 21.99 | 22.27 | 22.56 | 0 |
| | | 1 | 37 | 21.97 | 22.25 | 22.54 | 0 |
| | | 1 | 74 | 21.94 | 22.22 | 22.51 | 0 |
| | | 36 | 0 | 21.01 | 21.29 | 21.58 | 1 |
| | | 36 | 19 | 20.92 | 21.20 | 21.49 | 1 |
| | | 36 | 39 | 20.90 | 21.18 | 21.47 | 1 |
| | | 75 | 0 | 20.82 | 21.10 | 21.39 | 1 |
| | 16QAM | 1 | 0 | 20.75 | 21.03 | 21.32 | 1 |
| | | 1 | 37 | 20.74 | 21.02 | 21.31 | 1 |
| | | 1 | 74 | 20.55 | 20.83 | 21.12 | 1 |
| | | 36 | 0 | 20.04 | 20.32 | 20.61 | 2 |
| | | 36 | 19 | 19.98 | 20.26 | 20.55 | 2 |
| | | 36 | 39 | 19.95 | 20.23 | 20.52 | 2 |
| | | 75 | 0 | 19.90 | 20.18 | 20.47 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 20050 | Mid CH 20175 | High CH 20300 | MPR |
| | | | | Frequency 1720 MHz | Frequency 1732.5 MHz | Frequency 1745 MHz | |
| 20MHz | QPSK | 1 | 0 | 22.02 | 22.30 | 22.59 | 0 |
| | | 1 | 50 | 22.00 | 22.28 | 22.57 | 0 |
| | | 1 | 99 | 21.97 | 22.25 | 22.54 | 0 |
| | | 50 | 0 | 21.04 | 21.32 | 21.61 | 1 |
| | | 50 | 25 | 20.95 | 21.23 | 21.52 | 1 |
| | | 50 | 50 | 20.93 | 21.21 | 21.50 | 1 |
| | | 100 | 0 | 20.85 | 21.13 | 21.42 | 1 |
| | 16QAM | 1 | 0 | 20.78 | 21.06 | 21.35 | 1 |
| | | 1 | 50 | 20.77 | 21.05 | 21.34 | 1 |
| | | 1 | 99 | 20.58 | 20.86 | 21.15 | 1 |
| | | 50 | 0 | 20.07 | 20.35 | 20.64 | 2 |
| | | 50 | 25 | 20.01 | 20.29 | 20.58 | 2 |
| | | 50 | 50 | 19.98 | 20.26 | 20.55 | 2 |
| | | 100 | 0 | 19.93 | 20.21 | 20.50 | 2 |



LTE BAND 5

| Band/BW | Modulation | RB Size | RB Offset | Low CH 20407 | Mid CH 20525 | High CH 20643 | 3GPP MPR (dB) |
|---------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------|
| | | | | Frequency 824.7 MHz | Frequency 836.5 MHz | Frequency 848.3 MHz | |
| 5/1.4 | QPSK | 1 | 0 | 21.90 | 22.73 | 22.51 | 0 |
| | | 1 | 2 | 21.86 | 22.69 | 22.47 | 0 |
| | | 1 | 5 | 21.49 | 22.32 | 22.10 | 0 |
| | | 3 | 0 | 21.88 | 22.71 | 22.49 | 0 |
| | | 3 | 1 | 21.84 | 22.67 | 22.45 | 0 |
| | | 3 | 3 | 21.47 | 22.30 | 22.08 | 0 |
| | 16QAM | 6 | 0 | 20.97 | 21.80 | 21.58 | 1 |
| | | 1 | 0 | 20.40 | 21.23 | 21.01 | 1 |
| | | 1 | 2 | 20.36 | 21.19 | 20.97 | 1 |
| | | 1 | 5 | 19.39 | 20.22 | 20.00 | 1 |
| | | 3 | 0 | 20.39 | 21.22 | 21.00 | 1 |
| | | 3 | 1 | 20.35 | 21.18 | 20.96 | 1 |
| | | 3 | 3 | 19.38 | 20.21 | 19.99 | 1 |
| | | 6 | 0 | 20.07 | 20.90 | 20.68 | 2 |
| Band/BW | Modulation | RB Size | RB Offset | Low CH 20415 | Mid CH 20525 | High CH 20635 | 3GPP MPR (dB) |
| | | | | Frequency 825.5 MHz | Frequency 836.5 MHz | Frequency 847.5 MHz | |
| 5/3 | QPSK | 1 | 0 | 21.94 | 22.77 | 22.55 | 0 |
| | | 1 | 7 | 21.90 | 22.73 | 22.51 | 0 |
| | | 1 | 14 | 21.53 | 22.36 | 22.14 | 0 |
| | | 8 | 0 | 21.31 | 22.14 | 21.92 | 1 |
| | | 8 | 3 | 21.26 | 22.09 | 21.87 | 1 |
| | | 8 | 7 | 20.88 | 21.71 | 21.49 | 1 |
| | | 15 | 0 | 21.01 | 21.84 | 21.62 | 1 |
| | 16QAM | 1 | 0 | 20.44 | 21.27 | 21.05 | 1 |
| | | 1 | 7 | 20.40 | 21.23 | 21.01 | 1 |
| | | 1 | 14 | 19.43 | 20.26 | 20.04 | 1 |
| | | 8 | 0 | 20.38 | 21.21 | 20.99 | 2 |
| | | 8 | 3 | 20.37 | 21.20 | 20.98 | 2 |
| | | 8 | 7 | 19.76 | 20.59 | 20.37 | 2 |
| | | 15 | 0 | 20.11 | 20.94 | 20.72 | 2 |



| Band/BW | Modulation | RB Size | RB Offset | Low CH 20425 | Mid CH 20525 | High CH 20625 | 3GPP MPR (dB) |
|---------|------------|---------|-----------|------------------------|------------------------|------------------------|---------------------|
| | | | | Frequency 826.5 MHz | Frequency 836.5 MHz | Frequency 846.5 MHz | |
| 5/5 | QPSK | 1 | 0 | 22.00 | 22.83 | 22.61 | 0 |
| | | 1 | 12 | 21.96 | 22.79 | 22.57 | 0 |
| | | 1 | 24 | 21.59 | 22.42 | 22.20 | 0 |
| | | 12 | 0 | 21.37 | 22.20 | 21.98 | 1 |
| | | 12 | 6 | 21.32 | 22.15 | 21.93 | 1 |
| | | 12 | 13 | 20.94 | 21.77 | 21.55 | 1 |
| | | 25 | 0 | 21.07 | 21.90 | 21.68 | 1 |
| | 16QAM | 1 | 0 | 20.50 | 21.33 | 21.11 | 1 |
| | | 1 | 12 | 20.46 | 21.29 | 21.07 | 1 |
| | | 1 | 24 | 19.49 | 20.32 | 20.10 | 1 |
| | | 12 | 0 | 20.44 | 21.27 | 21.05 | 2 |
| | | 12 | 6 | 20.43 | 21.26 | 21.04 | 2 |
| | | 12 | 13 | 19.82 | 20.65 | 20.43 | 2 |
| | | 25 | 0 | 20.17 | 21.00 | 20.78 | 2 |
| Band/BW | Modulation | RB Size | RB Offset | Low CH 20450 | Mid CH 20525 | High CH 20600 | 3GPP MPR (dB) |
| | | | | Frequency 829 MHz | Frequency 836.5 MHz | Frequency 844 MHz | |
| 5/10 | QPSK | 1 | 0 | 22.03 | 22.86 | 22.64 | 0 |
| | | 1 | 24 | 21.99 | 22.82 | 22.60 | 0 |
| | | 1 | 49 | 21.62 | 22.45 | 22.23 | 0 |
| | | 25 | 0 | 21.40 | 22.23 | 22.01 | 1 |
| | | 25 | 12 | 21.35 | 22.18 | 21.96 | 1 |
| | | 25 | 25 | 20.97 | 21.80 | 21.58 | 1 |
| | | 50 | 0 | 21.10 | 21.93 | 21.71 | 1 |
| | 16QAM | 1 | 0 | 20.53 | 21.36 | 21.14 | 1 |
| | | 1 | 24 | 20.49 | 21.32 | 21.10 | 1 |
| | | 1 | 49 | 19.52 | 20.35 | 20.13 | 1 |
| | | 25 | 0 | 20.47 | 21.30 | 21.08 | 2 |
| | | 25 | 12 | 20.46 | 21.29 | 21.07 | 2 |
| | | 25 | 25 | 19.85 | 20.68 | 20.46 | 2 |
| | | 50 | 0 | 20.20 | 21.03 | 20.81 | 2 |



LTE BAND 12

| LTE Band 12 | | | | | | | |
|-------------|------------|---------|-----------|------------------------|------------------------|------------------------|-----|
| BW | Modulation | RB Size | RB Offset | Low CH 23017 | Mid CH 23095 | High CH 23173 | MPR |
| | | | | Frequency 699.7 MHz | Frequency 707.5 MHz | Frequency 715.3 MHz | |
| 1.4 MHz | QPSK | 1 | 0 | 23.08 | 23.29 | 23.17 | 0 |
| | | 1 | 2 | 23.00 | 23.21 | 23.09 | 0 |
| | | 1 | 5 | 22.91 | 23.12 | 23.00 | 0 |
| | | 3 | 0 | 23.06 | 23.27 | 23.15 | 0 |
| | | 3 | 1 | 22.98 | 23.19 | 23.07 | 0 |
| | | 3 | 3 | 22.89 | 23.10 | 22.98 | 0 |
| | | 6 | 0 | 22.02 | 22.23 | 22.11 | 1 |
| | 16QAM | 1 | 0 | 21.70 | 21.91 | 21.79 | 1 |
| | | 1 | 2 | 21.68 | 21.89 | 21.77 | 1 |
| | | 1 | 5 | 21.28 | 21.49 | 21.37 | 1 |
| | | 3 | 0 | 21.69 | 21.90 | 21.78 | 1 |
| | | 3 | 1 | 21.67 | 21.88 | 21.76 | 1 |
| | | 3 | 3 | 21.27 | 21.48 | 21.36 | 1 |
| | | 6 | 0 | 21.03 | 21.24 | 21.12 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 23025 | Mid CH 23095 | High CH 23165 | MPR |
| | | | | Frequency 700.5 MHz | Frequency 707.5 MHz | Frequency 714.5 MHz | |
| 3 MHz | QPSK | 1 | 0 | 23.12 | 23.33 | 23.21 | 0 |
| | | 1 | 7 | 23.04 | 23.25 | 23.13 | 0 |
| | | 1 | 14 | 22.95 | 23.16 | 23.04 | 0 |
| | | 8 | 0 | 22.16 | 22.37 | 22.25 | 1 |
| | | 8 | 3 | 22.13 | 22.34 | 22.22 | 1 |
| | | 8 | 7 | 22.10 | 22.31 | 22.19 | 1 |
| | | 15 | 0 | 22.06 | 22.27 | 22.15 | 1 |
| | 16QAM | 1 | 0 | 21.74 | 21.95 | 21.83 | 1 |
| | | 1 | 7 | 21.72 | 21.93 | 21.81 | 1 |
| | | 1 | 14 | 21.32 | 21.53 | 21.41 | 1 |
| | | 8 | 0 | 21.20 | 21.41 | 21.29 | 2 |
| | | 8 | 3 | 21.17 | 21.38 | 21.26 | 2 |
| | | 8 | 7 | 21.12 | 21.33 | 21.21 | 2 |
| | | 15 | 0 | 21.07 | 21.28 | 21.16 | 2 |



| LTE Band 12 | | | | | | | |
|-------------|------------|---------|-----------|------------------------|------------------------|------------------------|-----|
| BW | Modulation | RB Size | RB Offset | Low CH 23035 | Mid CH 23095 | High CH 23155 | MPR |
| | | | | Frequency 701.5 MHz | Frequency 707.5 MHz | Frequency 713.5 MHz | |
| 5 MHz | QPSK | 1 | 0 | 23.18 | 23.39 | 23.27 | 0 |
| | | 1 | 12 | 23.10 | 23.31 | 23.19 | 0 |
| | | 1 | 24 | 23.01 | 23.22 | 23.10 | 0 |
| | | 12 | 0 | 22.22 | 22.43 | 22.31 | 1 |
| | | 12 | 6 | 22.19 | 22.40 | 22.28 | 1 |
| | | 12 | 13 | 22.16 | 22.37 | 22.25 | 1 |
| | | 25 | 0 | 22.12 | 22.33 | 22.21 | 1 |
| | 16QAM | 1 | 0 | 21.80 | 22.01 | 21.89 | 1 |
| | | 1 | 12 | 21.78 | 21.99 | 21.87 | 1 |
| | | 1 | 24 | 21.38 | 21.59 | 21.47 | 1 |
| | | 12 | 0 | 21.26 | 21.47 | 21.35 | 2 |
| | | 12 | 6 | 21.23 | 21.44 | 21.32 | 2 |
| | | 12 | 13 | 21.18 | 21.39 | 21.27 | 2 |
| | | 25 | 0 | 21.13 | 21.34 | 21.22 | 2 |
| BW | Modulation | RB Size | RB Offset | Low CH 23060 | Mid CH 23095 | High CH 23130 | MPR |
| | | | | Frequency 704 MHz | Frequency 707.5 MHz | Frequency 711 MHz | |
| 10 MHz | QPSK | 1 | 0 | 23.21 | 23.42 | 23.30 | 0 |
| | | 1 | 24 | 23.13 | 23.34 | 23.22 | 0 |
| | | 1 | 49 | 23.04 | 23.25 | 23.13 | 0 |
| | | 25 | 0 | 22.25 | 22.46 | 22.34 | 1 |
| | | 25 | 12 | 22.22 | 22.43 | 22.31 | 1 |
| | | 25 | 25 | 22.19 | 22.40 | 22.28 | 1 |
| | | 50 | 0 | 22.15 | 22.36 | 22.24 | 1 |
| | 16QAM | 1 | 0 | 21.83 | 22.04 | 21.92 | 1 |
| | | 1 | 24 | 21.81 | 22.02 | 21.90 | 1 |
| | | 1 | 49 | 21.41 | 21.62 | 21.50 | 1 |
| | | 25 | 0 | 21.29 | 21.50 | 21.38 | 2 |
| | | 25 | 12 | 21.26 | 21.47 | 21.35 | 2 |
| | | 25 | 25 | 21.21 | 21.42 | 21.30 | 2 |
| | | 50 | 0 | 21.16 | 21.37 | 21.25 | 2 |

3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

TUNE-UP POWER TABLE

| Band | Frequency (MHz) | Operating Mode | Tune-Up Power And Tolerance (dBm) |
|---------------|-----------------|----------------|-----------------------------------|
| GSM850 | 824.2 | GPRS12 | 33.0± 1.0 |
| GSM1900 | 1850.2 | GPRS12 | 29.0± 1.0 |
| WCDMA Band II | 1880 | RMC12.2K | 23.5 ± 1.0 |
| WCDMA Band V | 826.4 | RMC12.2K | 22.5 ± 1.0 |
| LTE Band 2 | 1900 | QPSK | 22.0 ± 1.0 |
| LTE Band 4 | 1745 | QPSK | 22.0 ± 1.0 |
| LTE Band 5 | 836.5 | QPSK | 22.5 ± 1.0 |
| LTE Band 12 | 707.5 | QPSK | 23.0 ± 1.0 |

GSM

| Band | Frequency (MHz) | Operating Mode | Antenna Gain (dBi) | Tune-up Power (dBm) | E.I.R.P Power (mW)/8 | Power Density (mW/cm ²) | limit (mW/cm ²) | PASS / FAIL |
|---------|-----------------|----------------|--------------------|---------------------|----------------------|-------------------------------------|-----------------------------|-------------|
| GSM850 | 824.2 | GPRS12 | 4.446 | 34.0 | 873.997 | 0.174 | 0.55 | PASS |
| GSM1900 | 1850.2 | GPRS12 | 2.29 | 30.0 | 211.792 | 0.042 | 1.00 | PASS |

WCDMA

| Band | Frequency (MHz) | Operating Mode | Antenna Gain (dBi) | Tune-up Power (dBm) | E.I.R.P Power (mW) | Power Density (mW/cm ²) | limit (mW/cm ²) | PASS / FAIL |
|----------|-----------------|----------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------|-------------|
| WCDMA II | 1880 | RMC12.2K | 2.29 | 24.5 | 477.529 | 0.095 | 1.00 | PASS |
| WCDMA V | 826.4 | RMC12.2K | 4.446 | 23.5 | 623.161 | 0.124 | 0.55 | PASS |



BUREAU
VERITAS

Test Report No.: SA180615W005

LTE

| Band | Frequency (MHz) | Operating Mode | Antenna Gain (dBi) | Tune-up Power (dBm) | E.I.R.P Power (mW) | Power Density (mW/cm ²) | limit (mW/cm ²) | PASS / FAIL |
|--------|-----------------|----------------|--------------------|---------------------|--------------------|-------------------------------------|-----------------------------|-------------|
| Band2 | 1900 | QPSK | 2.29 | 23.0 | 338.065 | 0.067 | 1.00 | PASS |
| Band4 | 1745 | QPSK | 2.66 | 23.0 | 368.129 | 0.073 | 1.00 | PASS |
| Band5 | 836.5 | QPSK | 4.446 | 23.5 | 623.161 | 0.124 | 0.56 | PASS |
| Band12 | 707.5 | QPSK | 2.01 | 24.0 | 399.025 | 0.079 | 0.47 | PASS |

--END--