**CFR 47 FCC PART 22 H**
**CFR 47 FCC PART 24 E**
**CFR 47 FCC PART 27**

# TEST REPORT

*For*

**LTE MODULE**

**MODEL NUMBER: EG25-G**

**REPORT NUMBER: 4791353869-RF-2**

**ISSUE DATE: September 27, 2024**

**FCC ID: 2A46G-EG25-G**

*Prepared for*

**Guangzhou Xaircraft Technology CO., LTD**
**Block C, No.115, Gaopu Road, Tianhe District, GuangzhouCity, Guangdong, P.R. 510663 China**

*Prepared by*

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Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V0 | September 27, 2024 | Initial Issue | |

Note:
1.This test report is only published to and used by the applicant, and it is not for evidence purpose in China.
2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 22 H >< CFR 47 FCC PART 24 E> > < CFR 47 FCC PART 27 > < when < Simple Acceptance > decision rule is applied.
3. This test report includes radiated test results and conducted power test results due to the change of GSM/WCDMA/LTE antenna from the original model (FCC ID: 2A46G-EG25-G).

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# 1. ATTESTATION OF TEST RESULTS

**Applicant Information**

| | |
|---|---|
| Company Name: | Guangzhou Xaircraft Technology CO., LTD |
| Address: | Block C, No.115, Gaopu Road, Tianhe District, GuangzhouCity, Guangdong, P.R. 510663 China |

**Manufacturer Information**

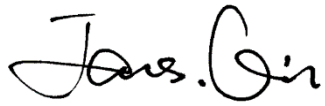
| | |
|---|---|
| Company Name: | Guangzhou Xaircraft Technology CO., LTD |
| Address: | Block C, No.115, Gaopu Road, Tianhe District, GuangzhouCity, Guangdong, P.R. 510663 China |

**EUT Information**

| | |
|---|---|
| EUT Name: | LTE MODULE |
| Model: | EG25-G |
| Sample Received Date: | Jun. 13, 2024 |
| Sample Status: | Normal |
| Sample ID: | 7284012 |
| Date of Tested: | Jun. 17, 2024 to September 27, 2024 |

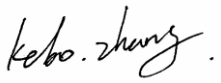
| APPLICABLE STANDARDS | |
|---|---|
| **STANDARD** | **TEST RESULTS** |
| CFR 47 FCC PART 22 H | PASS |
| CFR 47 FCC PART 24 E | PASS |
| CFR 47 FCC PART 27 | PASS |

Prepared By:



James Qin
Project Engineer

Checked By:



Kebo Zhang
Senior Project Engineer

Approved By:

Stephen Guo
Operations Manager

# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.26-2015, 971168 D01 Power Meas License Digital Systems v03r01, 971168 D02 Misc Rev Approv License Devices v02r01, 412172 D01 v01r01 Determining ERP and EIRP, CFR 47 FCC Part 2, Part 22 H, Part 24 E, Part 27.

# 3. FACILITIES AND ACCREDITATION

| | |
|---|---|
| Accreditation Certificate | **A2LA (Certificate No.: 4102.01)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.<br>**FCC (FCC Designation No.: CN1187)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules<br>**ISED (Company No.: 21320)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED.<br>The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046.<br>**VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793.<br>Facility Name:<br>Chamber D, the VCCI registration No. is G-20192 and R-20202<br>Shielding Room B, the VCCI registration No. is C-20153 and T-20155 |

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.

# 4. CALIBRATION AND UNCERTAINTY

## 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

## 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Test Item | Uncertainty |
|---|---|
| Conduction emission | 3.62 dB |
| Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz) | 2.2 dB |
| Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz) | 4.00 dB |
| Radiated Emission (Included Fundamental Emission) (1 GHz to 40 GHz) | 5.78 dB (1 GHz-18 GHz) |
| | 5.23dB (18 GHz-26 GHz) |
| | 5.64 dB (26 GHz-40 GHz) |
| Bandwidth | 1.1 % |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2. | |

# 5. EQUIPMENT UNDER TEST

## 5.1. DESCRIPTION OF EUT

| | |
|---|---|
| EUT Name | LTE MODULE |
| Model | EG25-G |

## 5.2. TEST CHANNEL CONFIGURATION

| Band | Mode | Low | Middle | High |
|---|---|---|---|---|
| GSM850 | GRPS/EGPRS | 128 | 190 | 251 |
| | | 824.2 MHz | 836.6 MHz | 848.8 MHz |
| GSM1900 | GRPS/EGPRS | 512 | 661 | 810 |
| | | 1850.2 MHz | 1880.0 MHz | 1909.8 MHz |
| WCDMA Band 2 | HSDPA/HSUPA | 9262 | 9400 | 9538 |
| | | 1852.4 MHz | 1880.0 MHz | 1907.6 MHz |
| WCDMA Band 4 | HSDPA/HSUPA | 1312 | 1413 | 1513 |
| | | 1712.4 MHz | 1732.6 MHz | 1752.6 MHz |

## 5.3. MAXIMUM AVERAGE OUTPUT POWER

| GSM 850 | |
|---|---|
| Part 22 | |
| ERP Limit(W) | 7 |
| Antenna Gain (dBi) | 4.01 |

| Mode | Frequency Range (MHz) | Conducted Average Power (dBm) | ERP (W) | 99% OBW (MHz) | Emission Designator |
|---|---|---|---|---|---|
| GPRS/EGPRS (GMSK) | 824.2 ~ 848.8 | 29.80 | 1.466 | 0.245 | 245KGXW |
| EGPRS (8PSK) | 824.2 ~ 848.8 | 26.30 | 0.655 | 0.245 | 245KG7W |

| GSM 1900 | |
|---|---|
| Part 24 | |
| EIRP Limit(W) | 2 |
| Antenna Gain (dBi) | 3.94 |

| Mode | Frequency Range (MHz) | Conducted Average Power (dBm) | EIRP (W) | 99% OBW (MHz) | Emission Designator |
|---|---|---|---|---|---|
| GPRS/EGPRS (GMSK) | 1850.2 ~ 1909.8 | 25.78 | 0.938 | 0.243 | 243KGXW |
| EGPRS (8PSK) | 1850.2 ~ 1909.8 | 24.33 | 0.671 | 0.246 | 246KG7W |

| WCDMA Band2 | |
|---|---|
| Part 24 / RSS-133 | |
| EIRP Limit(W) | 2 |
| Antenna Gain (dBi) | 3.94 |

| Mode | Frequency Range (MHz) | Conducted Average power (dBm) | EIRP (W) | 99% OBW (MHz) | Emission Designator |
|---|---|---|---|---|---|
| REL. 99 | 1852.4 ~ 1907.6 | 21.15 | 0.323 | 4.137 | 4M14F9W |
| HSDPA | | 21.04 | 0.315 | 4.144 | 4M14F9W |
| HSUPA | | 20.33 | 0.267 | 4.132 | 4M13F9W |

| WCDMA Band4 | |
|---|---|
| Part 27 / RSS-139 | |
| EIRP Limit(W) | 1 |
| Antenna Gain (dBi) | 3.26 |

| Mode | Frequency Range (MHz) | Conducted Average power (dBm) | EIRP (W) | 99% OBW (MHz) | Emission Designator |
|---|---|---|---|---|---|
| REL. 99 | 1712.4 ~ 1752.6 | 21.70 | 0.313 | 4.131 | 4M13F9W |
| HSDPA | | 21.72 | 0.315 | 4.140 | 4M14F9W |
| HSUPA | | 20.89 | 0.260 | 4.130 | 4M13F9W |

## 5.4. WORST-CASE CONFIGURATION AND MODE

The radiated spurious emissions measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT was investigated in three orthogonal orientations X, Y and Z. It was determined that X orientation was the worst-case orientation.

Radiated spurious emissions were investigated below 30 MHz, 30 MHz - 1 GHz and above 1 GHz. There were no emissions found on below 1GHz and above 18 GHz, the emissions between 1 GHz – 18 GHz were tested the highest transmitting power channel and the worse configuration.

For GSM850/1900, GPRS worst results are shown in test report. For WCDMA, HSDPA worst results are shown in test report.

The EUT have three kinds of antenna and have the same antenna type, only the worst-case antenna data record in this report.

## 5.5. DESCRIPTION OF AVAILABLE ANTENNAS

| Antenna | Antenna Type | Remark |
|---|---|---|
| Main | FPC | MAIN Antenna |
| Div. | FPC | DIV Antenna |

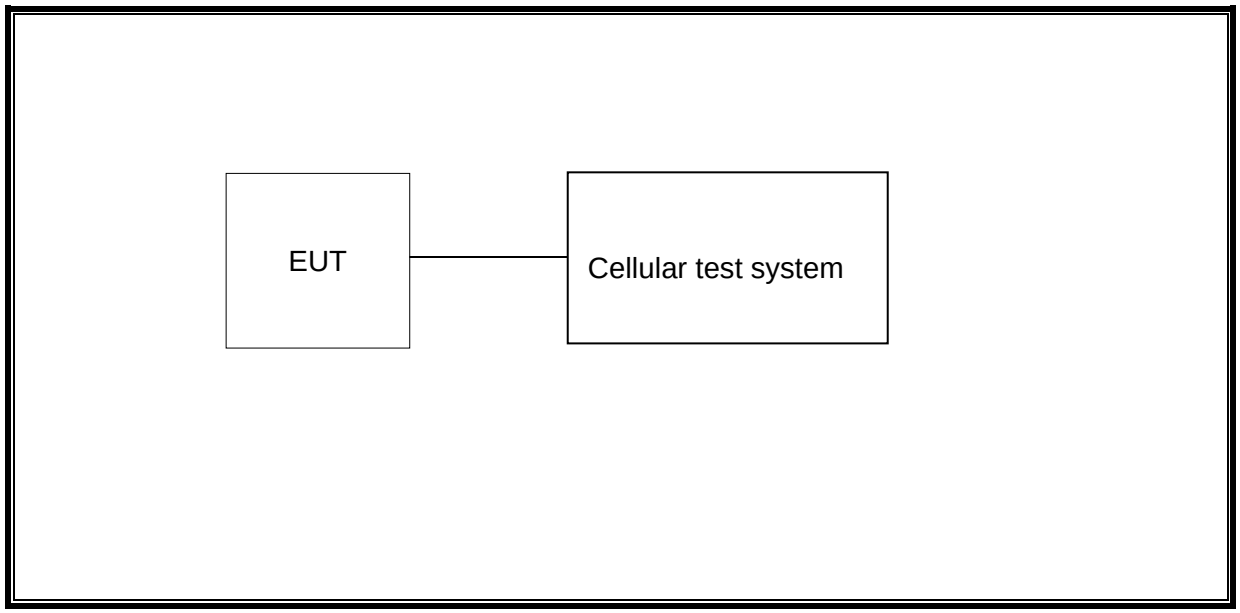
| Antenna | Band | Antenna Type | MAX Antenna Gain (dBi) Model: AN0827-FPC73BFK | MAX Antenna Gain (dBi) Model: K011 |
|---|---|---|---|---|
| Main | GSM850 | FPC | 2.74 | 4.01 |
| | GSM1900 | FPC | 3.26 | 3.94 |
| | WCDMA Band 2 | FPC | 3.26 | 3.94 |
| | WCDMA Band 4 | FPC | 3.26 | 2.49 |

Note:
1. The value of the antenna gain was declared by customer.
2. There are two antenna manufacturers, the antenna model are different, only a pair of one of the two model is used at a time.

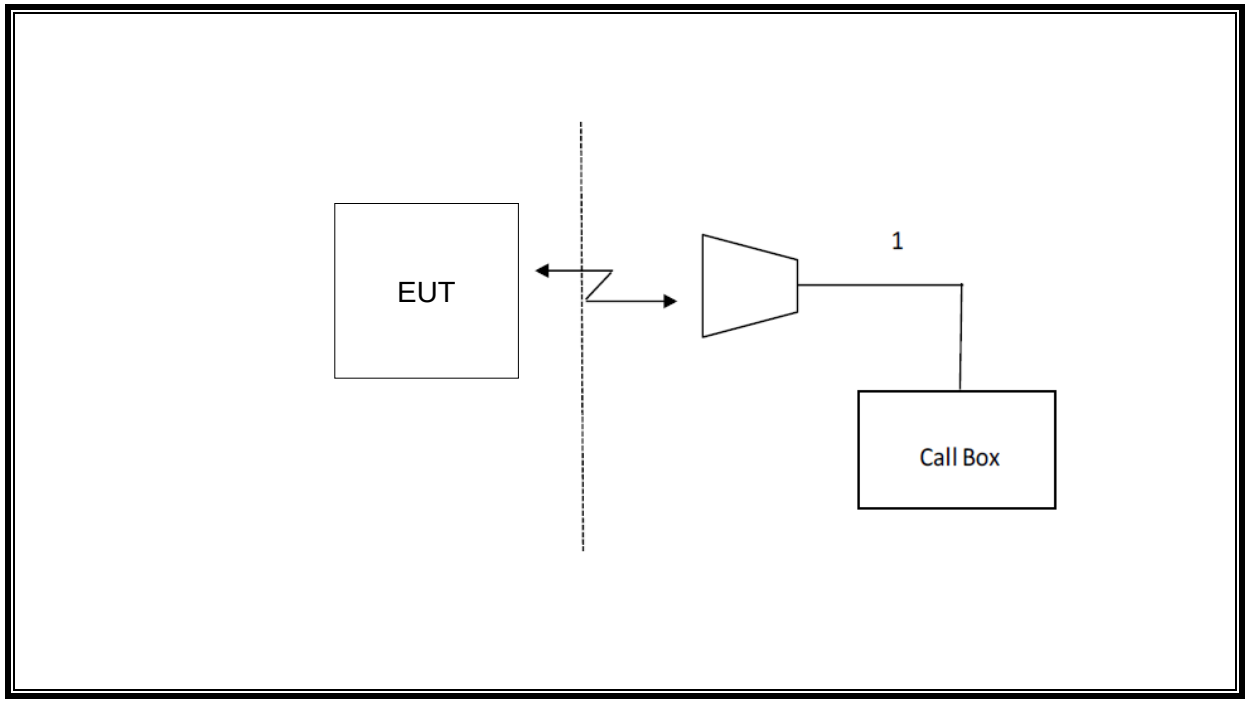
| Band | Transmit and Receive Mode | Description |
|---|---|---|
| GSM850 | ☒1TX, 2RX | Main antenna can be used as transmitting/receiving antenna, Div. antenna can be used as receiving antenna. |
| GSM1900 | ☒1TX, 2RX | Main antenna can be used as transmitting/receiving antenna, Div. antenna can be used as receiving antenna. |
| WCDMA Band 2 | ☒1TX, 2RX | Main antenna can be used as transmitting/receiving antenna, Div. antenna can be used as receiving antenna. |
| WCDMA Band 4 | ☒1TX, 2RX | Main antenna can be used as transmitting/receiving antenna, Div. antenna can be used as receiving antenna. |

## 5.6. DESCRIPTION OF TEST SETUP

Conducted




Radiated



# 6. MEASURING INSTRUMENT AND SOFTWARE USED

| Antenna Terminal Test | | | | | | |
|---|---|---|---|---|---|---|
| Instrument | | | | | | |
| Used | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
| ☑ | Spectrum Analyzer | R&S | FSV40 | S422060001 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | Wideband Radio Communication Tester | R&S | CMW500 | 155523 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | DC Power Supply | Array | 3662A | A1512015 | Oct.12, 2023 | Oct.11, 2024 |
| Software | | | | | | |
| Used | Description | | Manufacturer | Name | | Version |
| ☑ | Tonsend Cellular Test System | | Tonsend | JS1120 RF Auto Test System | | 3.1.46 |
| **Radiated Test** | | | | | | |
| Instrument | | | | | | |
| Used | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
| ☑ | MXE EMI Receiver | KESIGHT | N9038A | MY56400036 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | Hybrid Log Periodic Antenna | TDK | HLP-3003C | 130959 | Aug.02, 2021 | Aug.01, 2024 |
| ☑ | Hybrid Log Periodic Antenna | TDK | HLP-3003C | 130960 | Jun. 28, 2024 | Jun. 27, 2027 |
| ☑ | Hybrid Log Periodic Antenna | TDK | HLP-3003C | 130960 | Jun. 28, 2024 | Jun. 27, 2027 |
| ☑ | Preamplifier | HP | 8447D | 2944A09099 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | EMI Measurement Receiver | R&S | ESR26 | 101377 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | Horn Antenna | TDK | HRN-0118 | 130939 | April 29, 2022 | April 30, 2025 |
| ☑ | Horn Antenna | Schwarzbeck | BBHA9170 | 856 | Feb 28, 2022 | Feb 28, 2025 |
| ☑ | Preamplifier | TDK | PA-02-0118 | TRS-305-00067 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | Preamplifier | TDK | PA-02-2 | TRS-307-00003 | Oct.12, 2023 | Oct.11, 2024 |
| ☑ | Loop antenna | Schwarzbeck | 1519B | 00008 | Dec.14, 2021 | Dec.13, 2024 |
| ☑ | High Pass Filter | Wi | WHKX10-2700-3000-18000-40SS | 23 | Oct.12, 2023 | Oct.11, 2024 |
| Software | | | | | | |
| Used | Description | | Manufacturer | Name | | Version |
| ☑ | Test Software for Radiated disturbance | | Farad | EZ-EMC | | Ver. UL-3A1 |

# 7. ANTENNA TERMINAL TEST RESULTS

## 7.1. EFFECTIVE (ISOTROPIC) RADIATED POWER OF TRANSMITTER

**RULE PART(S)**

FCC: §2.1046, §22.913, §24.232, §27.50

**LIMITS**

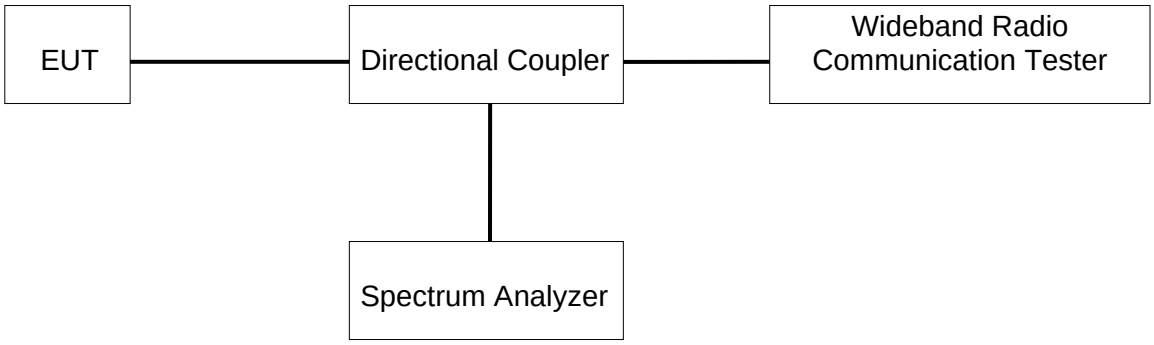
22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
24.232(c) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.
27.50(c) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.
27.50(d) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watts EIRP.
27.50(h) Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

**TEST PROCEDURE**

Refer to ANSI C63.26:2015 and KDB 971168 D01 Section 5.6
ERP/ EIRP = PMeas + GT − LC
where:
ERP or EIRP = effective or equivalent isotropically radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);
PMeas = measured transmitter output power or PSD, in dBm or dBW;
GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB

The transmitter has a maximum radiated ERP / EIRP output powers as follows:

**TEST SETUP**




**TEST ENVIRONMENT**

| | | | |
|---|---|---|---|
| Temperature | 23.1°C | Relative Humidity | 63.8% |
| Atmosphere Pressure | 101kPa | Test Voltage | DC 24 V |

**RESULTS**

## GSM 850

| GSM850 | | Channel No. | Channel No. | Channel No. |
|---|---|---|---|---|
| | | 128 | 190 | 251 |
| | | Fre. (MHz) | Fre. (MHz) | Fre. (MHz) |
| | | 824.2 | 836.6 | 848.8 |
| GPRS/EGPRS (GMSK) | 1 TimeSlot | 29.80 | 29.46 | 29.74 |
| | 2 TimeSlots | 28.86 | 28.53 | 28.45 |
| | 3 TimeSlots | 27.67 | 27.34 | 27.64 |
| | 4 TimeSlots | 26.98 | 26.34 | 26.12 |
| EGPRS (8PSK) | 1 TimeSlot | 25.90 | 26.04 | 26.30 |
| | 2 TimeSlots | 24.65 | 24.76 | 25.06 |
| | 3 TimeSlots | 23.10 | 23.18 | 23.42 |
| | 4 TimeSlots | 21.84 | 21.97 | 22.35 |

## GSM 1900

| GSM1900 | | Channel No. | Channel No. | Channel No. |
|---|---|---|---|---|
| | | 512 | 661 | 810 |
| | | Fre. (MHz) | Fre. (MHz) | Fre. (MHz) |
| | | 1850.2 | 1880 | 1909.8 |
| GPRS/EGPRS (GMSK) | 1 TimeSlot | 25.78 | 25.67 | 25.58 |
| | 2 TimeSlots | 24.67 | 24.54 | 24.36 |
| | 3 TimeSlots | 23.65 | 23.81 | 23.57 |
| | 4 TimeSlots | 22.38 | 22.21 | 22.18 |
| EGPRS (8PSK) | 1 TimeSlot | 24.33 | 24.28 | 24.16 |
| | 2 TimeSlots | 23.55 | 23.41 | 23.29 |
| | 3 TimeSlots | 21.94 | 21.96 | 21.86 |
| | 4 TimeSlots | 20.62 | 20.82 | 20.67 |

## WCDMA B2

| Band Ⅱ | | Channel No. | Channel No. | Channel No. |
|---|---|---|---|---|
| | | 9262 | 9400 | 9538 |
| | | Fre. (MHz) | Fre. (MHz) | Fre. (MHz) |
| | | 1852.4 | 1880 | 1907.6 |
| WCDMA | 12.2kbps RMC | 21.15 | 21.12 | 20.94 |
| HSDPA | Subtest 1 | 20.97 | 20.91 | 20.63 |
| | Subtest 2 | 21.04 | 20.99 | 20.70 |
| | Subtest 3 | 20.95 | 20.98 | 20.68 |
| | Subtest 4 | 20.05 | 20.21 | 19.97 |
| HSUPA | Subtest 1 | 19.93 | 20.25 | 19.95 |
| | Subtest 2 | 19.85 | 20.30 | 20.01 |
| | Subtest 3 | 20.12 | 20.33 | 20.19 |
| | Subtest 4 | 19.19 | 19.98 | 19.27 |
| | Subtest 5 | 19.42 | 19.87 | 19.16 |

## WCDMA B4

| Band IV | | Channel No. | Channel No. | Channel No. |
|---|---|---|---|---|
| | | 1312 | 1413 | 1513 |
| | | Fre. (MHz) | Fre. (MHz) | Fre. (MHz) |
| | | 1712.4 | 1732.6 | 1752.6 |
| WCDMA | 12.2kbps RMC | 21.70 | 21.63 | 21.68 |
| HSDPA | Subtest 1 | 21.46 | 21.46 | 21.50 |
| | Subtest 2 | 21.60 | 21.35 | 21.54 |
| | Subtest 3 | 21.57 | 21.36 | 21.72 |
| | Subtest 4 | 20.75 | 20.56 | 20.86 |
| HSUPA | Subtest 1 | 20.82 | 20.67 | 20.77 |
| | Subtest 2 | 20.66 | 20.57 | 20.89 |
| | Subtest 3 | 20.82 | 20.65 | 20.74 |
| | Subtest 4 | 19.90 | 20.11 | 20.11 |
| | Subtest 5 | 20.19 | 20.18 | 20.44 |

# 8. RADIATED SPURIOUS EMISSIONS

**RULE PART(S)**

FCC: §2.1053, §22.917, §24.238, §27.53.

**LIMIT**

Part §22.917(a), §24.238(a), §27.53(h)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

**TEST PROCEDURE**

According to the C 63.26-2015 section 5.5.2.2.3

Below 1GHz test procedure as below:

For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80 cm above the reference ground plane. Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The measurement antenna shall be varied from 1 m to 4 m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level (i.e., field strength or received power). When orienting the measurement antenna in vertical polarization, the minimum height of the lowest element of the antenna shall clear the site reference ground plane by at least 25 cm.

Above 1GHz test procedure as below:
For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table or support at a nominal height of 1.5 m above the ground plane. Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The height scan of the measurement antenna shall be varied from 1 m to 4 m in a search for the relative positioning that produces the maximum radiated signal level (i.e., field strength or received power). When using the direct field strength method and the EUT is manipulated through three different orientations, then the scan height range of the measurement antenna is limited to 2.5 m, or 0.5 m above the top of the EUT, whichever is higher.

**Radiated Power Measurement Calculation According to ANSI C63.26-2015**

a) E (dBμV/m) = Measured amplitude level (dBμV) + Cable Loss (dB) + Antenna Factor (dB/m).
b) E (dBμV/m) = Measured amplitude level (dBm) + 107 + Cable Loss (dB) + Antenna Factor (dB/m).
c) E (dBμV/m) = EIRP (dBm) − 20log(D) + 104.8; where D is the measurement distance (in the far field region) in m.
d) EIRP (dBm) = E (dBμV/m) + 20log(D) − 104.8; where D is the measurement distance (in the far field region) in m.
So, from d)
The measuring distance is usually at 3m, then 20*Log(3)=9.5424
Then, EIRP (dBm) = E (dBμV/m) + 9.5424 − 104.8 = E (dBμV/m) – 95.2576

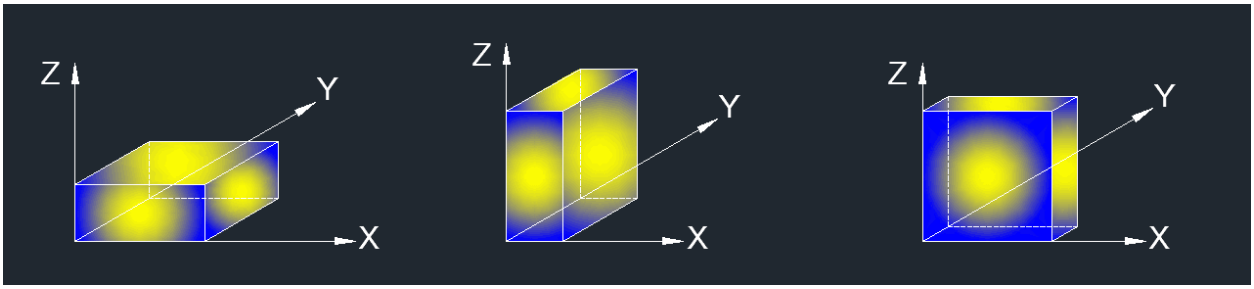
The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
= P(W)- [43 + 10log(P)] (dB)
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm.

EIRP[dBm] =E[dBμV/m] − 95.25
E[dBμV/m]= 95.25+ EIRP[dBm]
E[dBμV/m]= 82.25

NOTE 1: Radiated spurious emissions were investigated below 30 MHz, 30 MHz – 1 GHz and above 1 GHz. There were no emissions found on below 30 MHz and 30 MHz – 1 GHz.
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

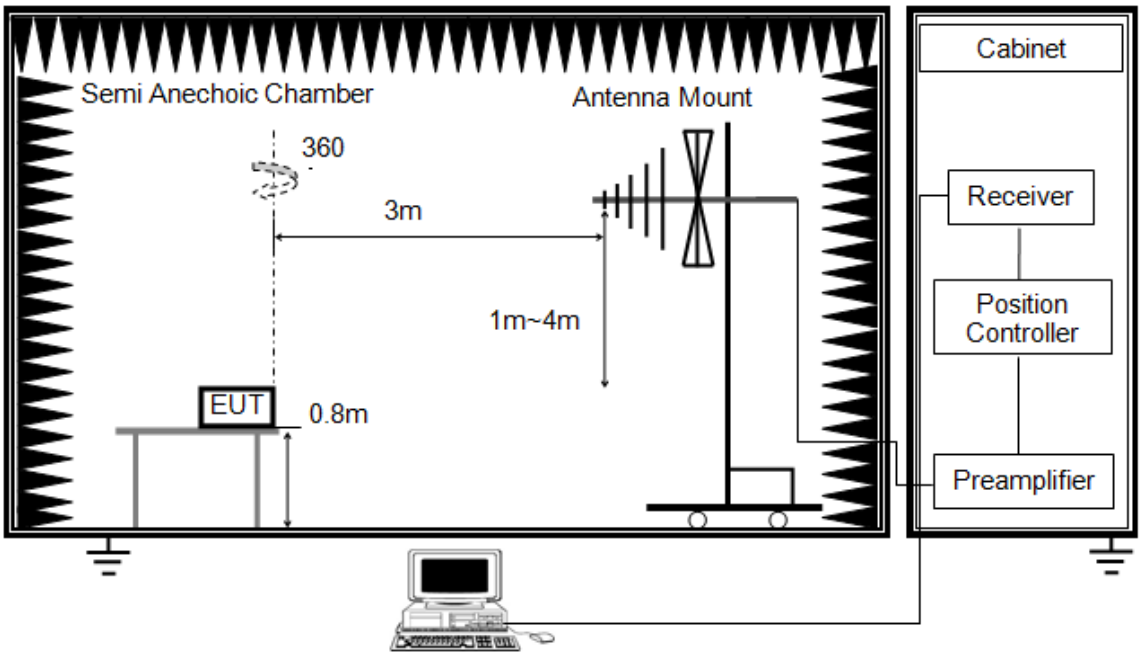
NOTE 2: Please refer to section 5.4 for bandwidth and RB setting about LTE bands.
NOTE 3: All the test modes have been tested, only the worst data record in the report.

Note 4: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.
X axis, Y axis, Z axis positions:

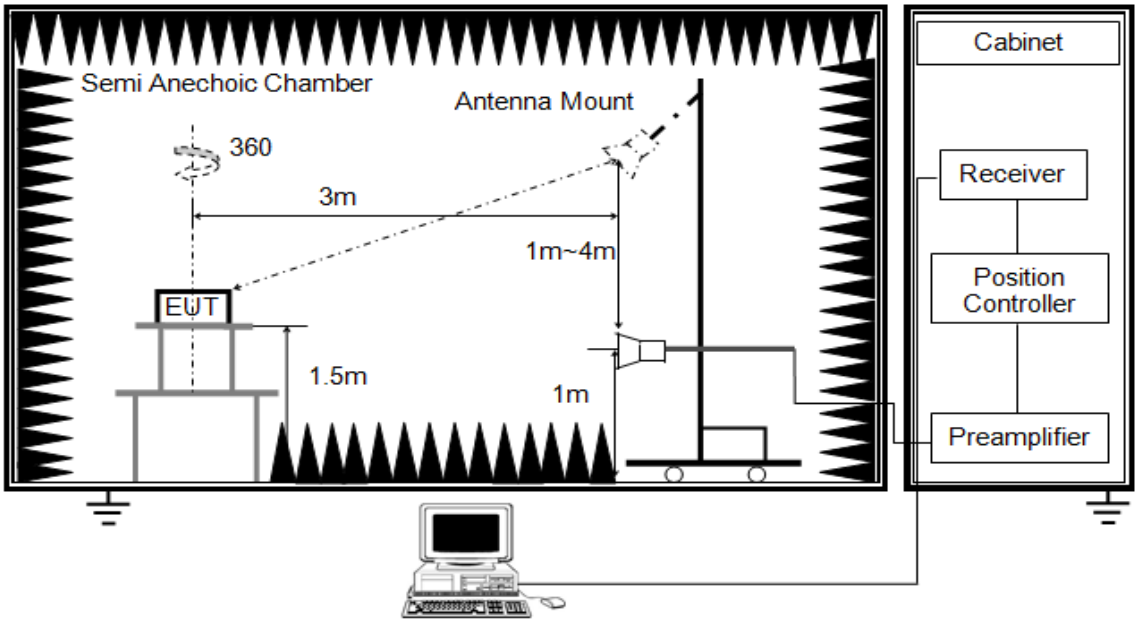



**TEST SETUP**

Test Setup for Below 1 GHz




Test Setup for Above 1 GHz




**TEST ENVIRONMENT**

| | | | |
|---|---|---|---|
| Temperature | 24.3°C | Relative Humidity | 61% |
| Atmosphere Pressure | 101kPa | Test Voltage | DC 24 V |

**RESULTS**

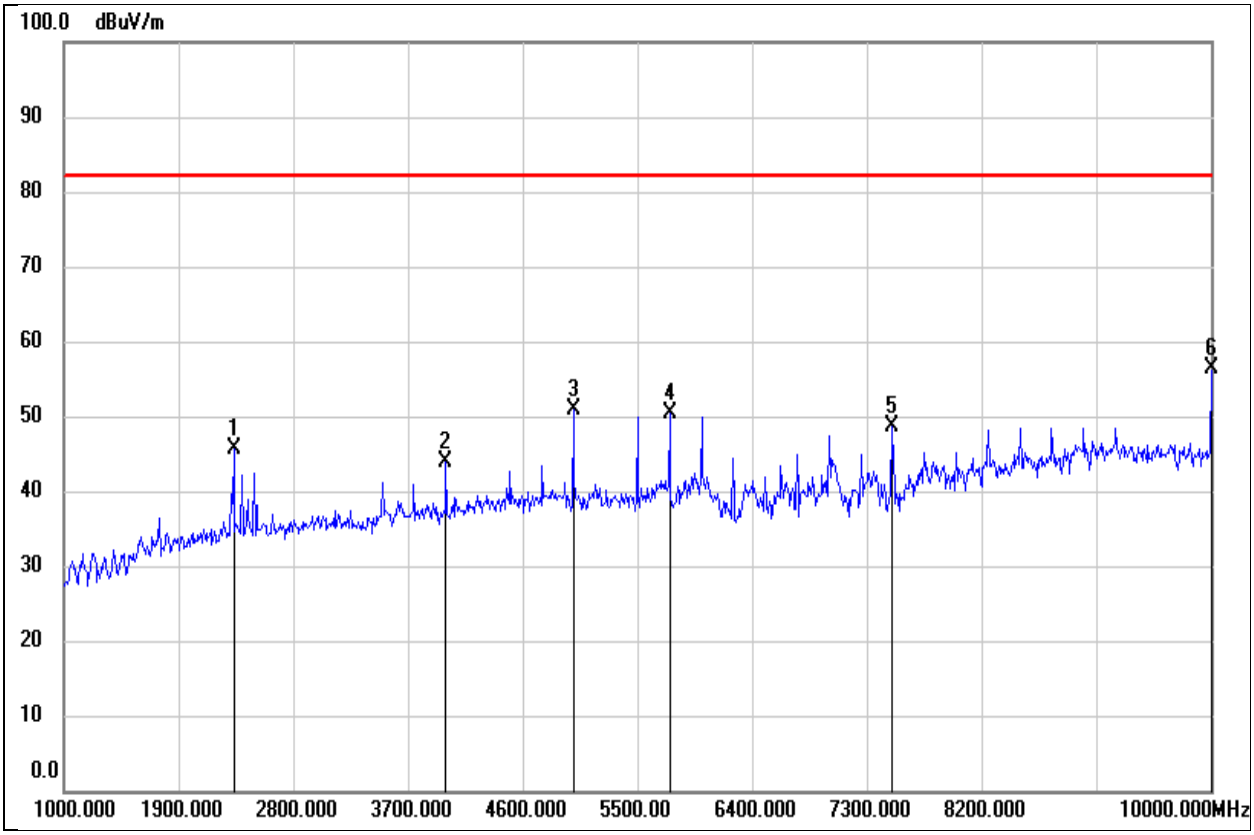
GSM 850
GPRS- Low Channel-Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2332.000 | 50.87 | -8.31 | 42.56 | 82.25 | -39.69 | peak |
| 2 | 4996.000 | 49.43 | 0.42 | 49.85 | 82.25 | -32.40 | peak |
| 3 | 6004.000 | 48.52 | 2.82 | 51.34 | 82.25 | -30.91 | peak |
| 4 | 7498.000 | 41.00 | 6.77 | 47.77 | 82.25 | -34.48 | peak |
| 5 | 8749.000 | 41.40 | 8.02 | 49.42 | 82.25 | -32.83 | peak |
| 6 | 10000.000 | 43.12 | 12.01 | 55.13 | 82.25 | -27.12 | peak |

GPRS- Low Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2494.000 | 53.12 | -7.88 | 45.24 | 82.25 | -37.01 | peak |
| 2 | 3997.000 | 51.58 | -3.45 | 48.13 | 82.25 | -34.12 | peak |
| 3 | 4996.000 | 53.03 | 0.42 | 53.45 | 82.25 | -28.80 | peak |
| 4 | 6004.000 | 51.95 | 2.82 | 54.77 | 82.25 | -27.48 | peak |
| 5 | 7498.000 | 43.73 | 6.77 | 50.50 | 82.25 | -31.75 | peak |
| 6 | 10000.000 | 39.93 | 12.01 | 51.94 | 82.25 | -30.31 | peak |

GPRS- Mid Channel- Horizontal




| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2332.000 | 54.06 | -8.31 | 45.75 | 82.25 | -36.50 | peak |
| 2 | 3997.000 | 47.22 | -3.45 | 43.77 | 82.25 | -38.48 | peak |
| 3 | 4996.000 | 50.34 | 0.42 | 50.76 | 82.25 | -31.49 | peak |
| 4 | 5752.000 | 48.41 | 1.99 | 50.40 | 82.25 | -31.85 | peak |
| 5 | 7498.000 | 41.86 | 6.77 | 48.63 | 82.25 | -33.62 | peak |
| 6 | 10000.000 | 44.44 | 12.01 | 56.45 | 82.25 | -25.80 | peak |

GPRS- Mid Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2494.000 | 54.22 | -7.88 | 46.34 | 82.25 | -35.91 | peak |
| 2 | 3997.000 | 51.39 | -3.45 | 47.94 | 82.25 | -34.31 | peak |
| 3 | 4996.000 | 53.46 | 0.42 | 53.88 | 82.25 | -28.37 | peak |
| 4 | 6004.000 | 51.81 | 2.82 | 54.63 | 82.25 | -27.62 | peak |
| 5 | 7003.000 | 42.95 | 6.79 | 49.74 | 82.25 | -32.51 | peak |
| 6 | 10000.000 | 40.16 | 12.01 | 52.17 | 82.25 | -30.08 | peak |

GPRS- High Channel- Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2530.000 | 53.89 | -7.90 | 45.99 | 82.25 | -36.26 | peak |
| 2 | 4996.000 | 52.54 | 0.42 | 52.96 | 82.25 | -29.29 | peak |
| 3 | 5500.000 | 48.20 | 1.72 | 49.92 | 82.25 | -32.33 | peak |
| 4 | 7498.000 | 41.82 | 6.77 | 48.59 | 82.25 | -33.66 | peak |
| 5 | 8254.000 | 41.71 | 8.11 | 49.82 | 82.25 | -32.43 | peak |

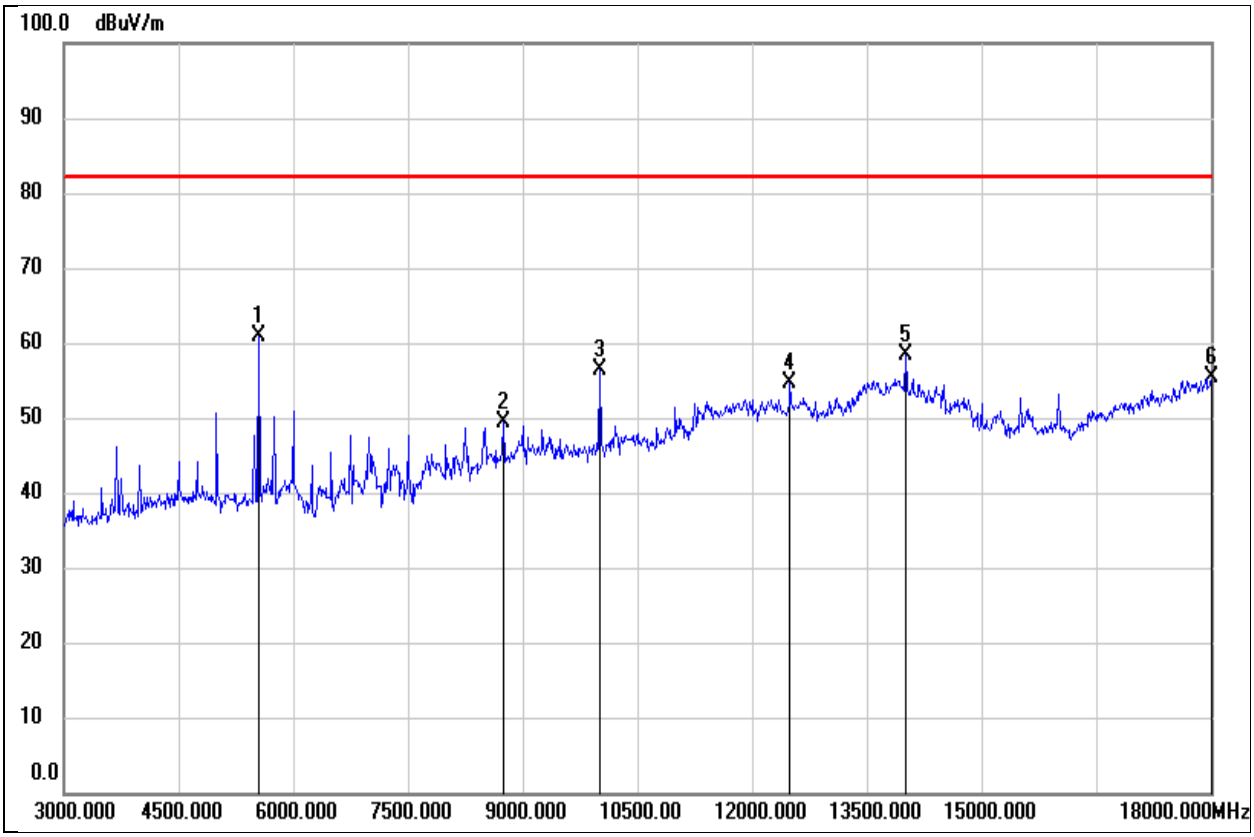
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | 10000.000 | 43.48 | 12.01 | 55.49 | 82.25 | -26.76 | peak |

GPRS- High Channel- Vertical

| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 2512.000 | 53.55 | -7.88 | 45.67 | 82.25 | -36.58 | peak |
| 2 | 3997.000 | 52.08 | -3.45 | 48.63 | 82.25 | -33.62 | peak |
| 3 | 4996.000 | 53.75 | 0.42 | 54.17 | 82.25 | -28.08 | peak |
| 4 | 6004.000 | 52.32 | 2.82 | 55.14 | 82.25 | -27.11 | peak |
| 5 | 7498.000 | 42.36 | 6.77 | 49.13 | 82.25 | -33.12 | peak |
| 6 | 10000.000 | 40.78 | 12.01 | 52.79 | 82.25 | -29.46 | peak |

**GSM 1900**

GPRS- Low Channel- Horizontal




| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5550.000 | 58.31 | 2.58 | 60.89 | 82.25 | -21.36 | peak |
| 2 | 8745.000 | 40.92 | 8.51 | 49.43 | 82.25 | -32.82 | peak |
| 3 | 10005.000 | 43.85 | 12.48 | 56.33 | 82.25 | -25.92 | peak |
| 4 | 12495.000 | 35.95 | 18.56 | 54.51 | 82.25 | -27.74 | peak |
| 5 | 14010.000 | 35.57 | 22.73 | 58.30 | 82.25 | -23.95 | peak |
| 6 | 18000.000 | 28.51 | 26.83 | 55.34 | 82.25 | -26.91 | peak |

GPRS- Low Channel- Vertical(worst case)

| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5550.000 | 54.94 | 2.58 | 57.52 | 82.25 | -24.73 | peak |
| 2 | 6000.000 | 50.16 | 3.11 | 53.27 | 82.25 | -28.98 | peak |
| 3 | 7500.000 | 43.02 | 7.18 | 50.20 | 82.25 | -32.05 | peak |
| 4 | 10005.000 | 40.01 | 12.48 | 52.49 | 82.25 | -29.76 | peak |
| 5 | 13500.000 | 34.10 | 21.69 | 55.79 | 82.25 | -26.46 | peak |
| 6 | 17535.000 | 31.16 | 23.90 | 55.06 | 82.25 | -27.19 | peak |

GPRS- Mid Channel- Horizontal

| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5640.000 | 58.06 | 2.70 | 60.76 | 82.25 | -21.49 | peak |
| 2 | 8745.000 | 40.46 | 8.51 | 48.97 | 82.25 | -33.28 | peak |
| 3 | 10005.000 | 45.01 | 12.48 | 57.49 | 82.25 | -24.76 | peak |
| 4 | 12495.000 | 36.74 | 18.56 | 55.30 | 82.25 | -26.95 | peak |
| 5 | 14010.000 | 35.54 | 22.73 | 58.27 | 82.25 | -23.98 | peak |
| 6 | 17760.000 | 29.81 | 25.72 | 55.53 | 82.25 | -26.72 | peak |

GPRS- Mid Channel- Vertical

| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 4995.000 | 52.00 | 0.83 | 52.83 | 82.25 | -29.42 | peak |
| 2 | 6000.000 | 50.58 | 3.11 | 53.69 | 82.25 | -28.56 | peak |
| 3 | 7500.000 | 43.16 | 7.18 | 50.34 | 82.25 | -31.91 | peak |
| 4 | 10005.000 | 40.93 | 12.48 | 53.41 | 82.25 | -28.84 | peak |
| 5 | 14010.000 | 34.22 | 22.73 | 56.95 | 82.25 | -25.30 | peak |
| 6 | 17985.000 | 28.65 | 26.77 | 55.42 | 82.25 | -26.83 | peak |

GPRS- High Channel- Horizontal

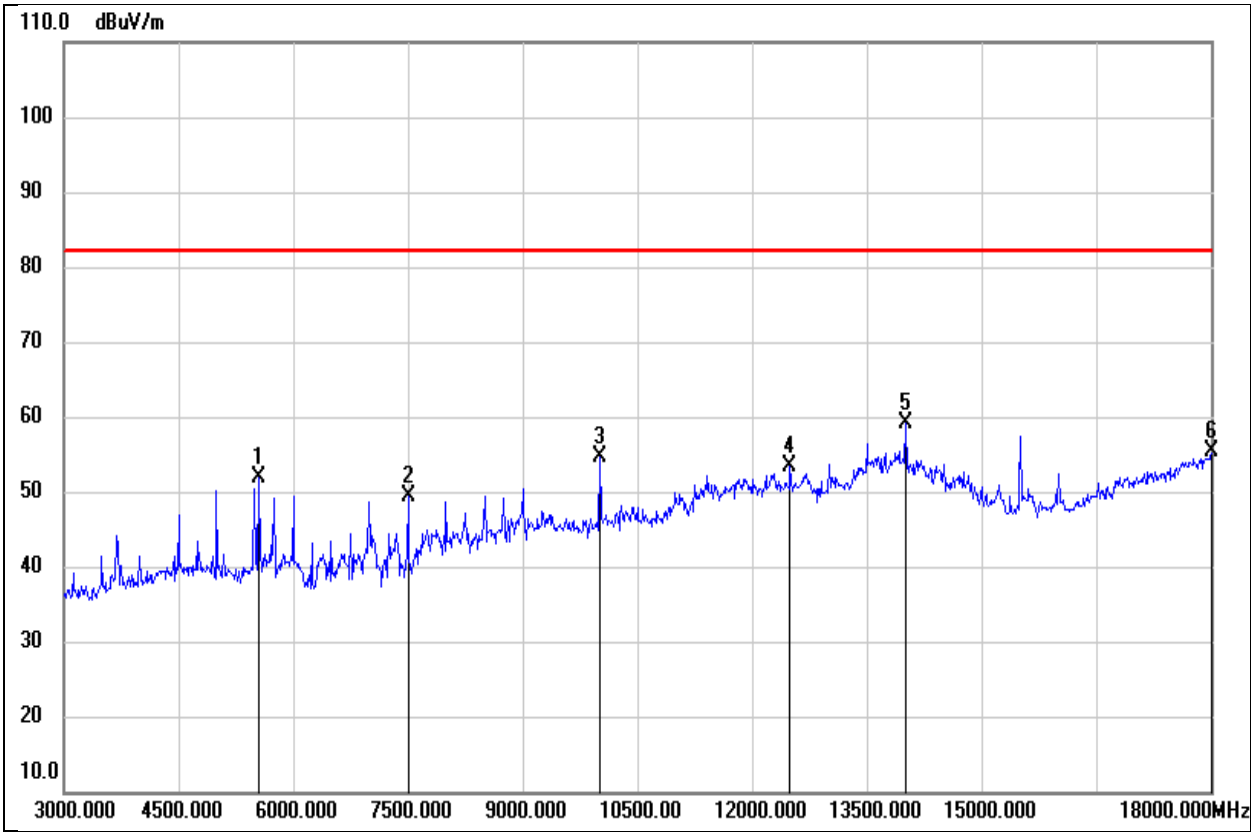
| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5730.000 | 52.65 | 2.46 | 55.11 | 82.25 | -27.14 | peak |
| 2 | 8505.000 | 41.12 | 8.24 | 49.36 | 82.25 | -32.89 | peak |
| 3 | 10005.000 | 44.50 | 12.48 | 56.98 | 82.25 | -25.27 | peak |
| 4 | 12000.000 | 35.46 | 18.50 | 53.96 | 82.25 | -28.29 | peak |
| 5 | 14010.000 | 34.77 | 22.73 | 57.50 | 82.25 | -24.75 | peak |
| 6 | 17970.000 | 28.96 | 26.72 | 55.68 | 82.25 | -26.57 | peak |

GPRS- High Channel- Vertical

| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 4995.000 | 51.08 | 0.83 | 51.91 | 82.25 | -30.34 | peak |
| 2 | 5730.000 | 55.81 | 2.46 | 58.27 | 82.25 | -23.98 | peak |
| 3 | 8745.000 | 40.76 | 8.51 | 49.27 | 82.25 | -32.98 | peak |
| 4 | 10005.000 | 41.23 | 12.48 | 53.71 | 82.25 | -28.54 | peak |
| 5 | 13500.000 | 35.76 | 21.69 | 57.45 | 82.25 | -24.80 | peak |
| 6 | 17985.000 | 28.27 | 26.77 | 55.04 | 82.25 | -27.21 | peak |

## WCDMA Band 2

HSDPA- Low Channel- Horizontal




| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 5550.000 | 49.41 | 2.58 | 51.99 | 82.25 | -30.26 | peak |
| 2 | 7500.000 | 42.32 | 7.18 | 49.50 | 82.25 | -32.75 | peak |
| 3 | 10005.000 | 42.12 | 12.48 | 54.60 | 82.25 | -27.65 | peak |
| 4 | 12495.000 | 34.76 | 18.56 | 53.32 | 82.25 | -28.93 | peak |
| 5 | 14010.000 | 36.36 | 22.73 | 59.09 | 82.25 | -23.16 | peak |
| 6 | 18000.000 | 28.54 | 26.83 | 55.37 | 82.25 | -26.88 | peak |

HSDPA- Low Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4995.000 | 51.74 | 0.83 | 52.57 | 82.25 | -29.68 | peak |
| 2 | 6000.000 | 50.21 | 3.11 | 53.32 | 82.25 | -28.93 | peak |
| 3 | 10005.000 | 40.81 | 12.48 | 53.29 | 82.25 | -28.96 | peak |
| 4 | 12630.000 | 34.84 | 18.39 | 53.23 | 82.25 | -29.02 | peak |
| 5 | 13860.000 | 32.89 | 22.68 | 55.57 | 82.25 | -26.68 | peak |
| 6 | 17985.000 | 27.99 | 26.77 | 54.76 | 82.25 | -27.49 | peak |

HSDPA- Mid Channel- Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4995.000 | 50.55 | 0.83 | 51.38 | 82.25 | -30.87 | peak |
| 2 | 7500.000 | 42.55 | 7.18 | 49.73 | 82.25 | -32.52 | peak |
| 3 | 10005.000 | 43.43 | 12.48 | 55.91 | 82.25 | -26.34 | peak |
| 4 | 12495.000 | 37.14 | 18.56 | 55.70 | 82.25 | -26.55 | peak |
| 5 | 14010.000 | 35.50 | 22.73 | 58.23 | 82.25 | -24.02 | peak |
| 6 | 17940.000 | 28.98 | 26.61 | 55.59 | 82.25 | -26.66 | peak |

HSDPA- Mid Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 5745.000 | 50.59 | 2.42 | 53.01 | 82.25 | -29.24 | peak |
| 2 | 6990.000 | 42.84 | 7.37 | 50.21 | 82.25 | -32.04 | peak |
| 3 | 10005.000 | 40.14 | 12.48 | 52.62 | 82.25 | -29.63 | peak |
| 4 | 12660.000 | 35.30 | 18.49 | 53.79 | 82.25 | -28.46 | peak |
| 5 | 14010.000 | 33.20 | 22.73 | 55.93 | 82.25 | -26.32 | peak |
| 6 | 17970.000 | 29.07 | 26.72 | 55.79 | 82.25 | -26.46 | peak |

HSDPA- High Channel- Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 5490.000 | 48.47 | 2.28 | 50.75 | 82.25 | -31.50 | peak |
| 2 | 9000.000 | 38.97 | 11.17 | 50.14 | 82.25 | -32.11 | peak |
| 3 | 10005.000 | 42.71 | 12.48 | 55.19 | 82.25 | -27.06 | peak |
| 4 | 12495.000 | 35.42 | 18.56 | 53.98 | 82.25 | -28.27 | peak |
| 5 | 14010.000 | 33.76 | 22.73 | 56.49 | 82.25 | -25.76 | peak |
| 6 | 17745.000 | 30.57 | 25.58 | 56.15 | 82.25 | -26.10 | peak |

HSDPA- High Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 6000.000 | 50.20 | 3.11 | 53.31 | 82.25 | -28.94 | peak |
| 2 | 8505.000 | 42.50 | 8.24 | 50.74 | 82.25 | -31.51 | peak |
| 3 | 10005.000 | 39.55 | 12.48 | 52.03 | 82.25 | -30.22 | peak |
| 4 | 12720.000 | 35.06 | 18.71 | 53.77 | 82.25 | -28.48 | peak |
| 5 | 13935.000 | 33.48 | 22.72 | 56.20 | 82.25 | -26.05 | peak |
| 6 | 17940.000 | 28.57 | 26.61 | 55.18 | 82.25 | -27.07 | peak |

## WCDMA Band 4

HSDPA- Low Channel- Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 6000.000 | 48.33 | 3.11 | 51.44 | 82.25 | -30.81 | peak |
| 2 | 8745.000 | 40.99 | 8.51 | 49.50 | 82.25 | -32.75 | peak |
| 3 | 10005.000 | 43.00 | 12.48 | 55.48 | 82.25 | -26.77 | peak |
| 4 | 12255.000 | 36.17 | 18.50 | 54.67 | 82.25 | -27.58 | peak |
| 5 | 14010.000 | 36.07 | 22.73 | 58.80 | 82.25 | -23.45 | peak |
| 6 | 18000.000 | 29.01 | 26.83 | 55.84 | 82.25 | -26.41 | peak |

HSDPA- Low Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4995.000 | 51.98 | 0.83 | 52.81 | 82.25 | -29.44 | peak |
| 2 | 6000.000 | 49.61 | 3.11 | 52.72 | 82.25 | -29.53 | peak |
| 3 | 6990.000 | 43.50 | 7.37 | 50.87 | 82.25 | -31.38 | peak |
| 4 | 10005.000 | 41.36 | 12.48 | 53.84 | 82.25 | -28.41 | peak |
| 5 | 13500.000 | 34.69 | 21.69 | 56.38 | 82.25 | -25.87 | peak |
| 6 | 17865.000 | 29.20 | 26.33 | 55.53 | 82.25 | -26.72 | peak |

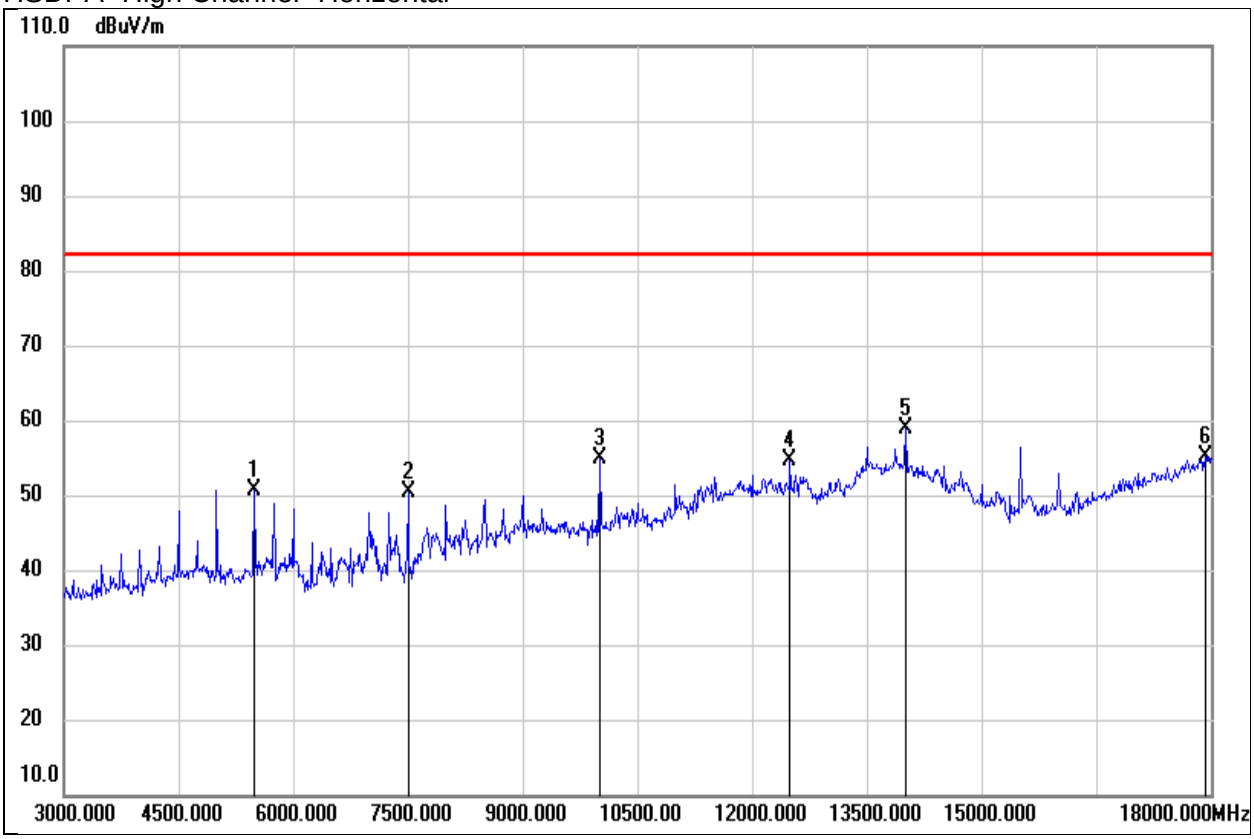
HSDPA- Mid Channel- Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4995.000 | 51.38 | 0.83 | 52.21 | 82.25 | -30.04 | peak |
| 2 | 7500.000 | 42.74 | 7.18 | 49.92 | 82.25 | -32.33 | peak |
| 3 | 10005.000 | 42.90 | 12.48 | 55.38 | 82.25 | -26.87 | peak |
| 4 | 12495.000 | 36.29 | 18.56 | 54.85 | 82.25 | -27.40 | peak |
| 5 | 14010.000 | 34.86 | 22.73 | 57.59 | 82.25 | -24.66 | peak |
| 6 | 18000.000 | 28.55 | 26.83 | 55.38 | 82.25 | -26.87 | peak |

HSDPA- Mid Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4995.000 | 52.83 | 0.83 | 53.66 | 82.25 | -28.59 | peak |
| 2 | 8505.000 | 42.89 | 8.24 | 51.13 | 82.25 | -31.12 | peak |
| 3 | 10005.000 | 40.87 | 12.48 | 53.35 | 82.25 | -28.90 | peak |
| 4 | 12495.000 | 35.83 | 18.56 | 54.39 | 82.25 | -27.86 | peak |
| 5 | 14505.000 | 34.71 | 20.56 | 55.27 | 82.25 | -26.98 | peak |
| 6 | 18000.000 | 28.52 | 26.83 | 55.35 | 82.25 | -26.90 | peak |

HSDPA- High Channel- Horizontal




| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 5490.000 | 48.29 | 2.28 | 50.57 | 82.25 | -31.68 | peak |
| 2 | 7500.000 | 43.15 | 7.18 | 50.33 | 82.25 | -31.92 | peak |
| 3 | 10005.000 | 42.40 | 12.48 | 54.88 | 82.25 | -27.37 | peak |
| 4 | 12495.000 | 35.97 | 18.56 | 54.53 | 82.25 | -27.72 | peak |
| 5 | 14010.000 | 36.15 | 22.73 | 58.88 | 82.25 | -23.37 | peak |
| 6 | 17925.000 | 28.67 | 26.55 | 55.22 | 82.25 | -27.03 | peak |

HSDPA- High Channel- Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4995.000 | 52.62 | 0.83 | 53.45 | 82.25 | -28.80 | peak |
| 2 | 6990.000 | 42.01 | 7.37 | 49.38 | 82.25 | -32.87 | peak |
| 3 | 10005.000 | 40.90 | 12.48 | 53.38 | 82.25 | -28.87 | peak |
| 4 | 12495.000 | 35.91 | 18.56 | 54.47 | 82.25 | -27.78 | peak |
| 5 | 13500.000 | 34.53 | 21.69 | 56.22 | 82.25 | -26.03 | peak |
| 6 | 17925.000 | 28.67 | 26.55 | 55.22 | 82.25 | -27.03 | peak |

**END OF REPORT**