

Report No: JYTSZB-R12-2102949

# FCC REPORT (GSM)

| Applicant:              | INFINIX MOBILITY LIMITED  |
|-------------------------|---|
| Address of Applicant:   | FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-<br>35 SHAN MEI STREET FOTAN NT                    |
| Equipment Under Test (E | EUT)  |
| Product Name:           | Mobile Phone  |
| Model No.:              | X6817   |
| Trade mark:             | Infinix   |
| FCC ID:                 | 2AIZN-X6817   |
| Applicable standards:   | FCC CFR Title 47 Part 2<br>FCC CFR Title 47 Part 22 Subpart H<br>FCC CFR Title 47 Part 24 Subpart E |
| Date of sample receipt: | 22 Dec., 2021   |
| Date of Test:           | 23 Dec., 2021 to 16 Feb., 2022  |
| Date of report issued:  | 17 Feb., 2022   |
| Test Result:            | PASS*   |

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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## 2. Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | 17 Feb., 2022 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

Tested by:

Janet Wei Test Engineer

Date: 17 Feb., 2022

**Reviewed by:** 

Winner Thang

**Project Engineer** 

Date: 17 Feb., 2022



## 3. Contents

|                  |   | Page |
|------------------|---|------|
| 1. COVER PAGE    |   | 1    |
| 2. VERSION       |   | 2    |
| 3. CONTENTS      |   | 3    |
|                  |   |      |
|                  | MATION                                      |      |
| 5. GENERAL INFOR | MATION                                      | 5    |
| 5.1 CLIENT INFOR | MATION                                      | 5    |
| 5.2 GENERAL DES  | CRIPTION OF E.U.T.                          | 5    |
| 5.3 TEST ENVIRON | IMENT AND MODE, AND TEST SAMPLES PLANS      |      |
| 5.4 DESCRIPTION  | OF TEST AUXILIARY EQUIPMENT                 | 6    |
|                  | IT UNCERTAINTY                              |      |
|                  | , DEVIATIONS, OR EXCLUSIONS FROM THE METHOD |      |
|                  | FACILITY                                    |      |
|                  | LOCATION                                    |      |
| 5.9 TEST INSTRUM | IENTS LIST                                  | 7    |
| 6. TEST RESULTS  |   | 8    |
| 6.1 CONDUCTED (  | DUTPUT POWER, ERP AND EIRP                  | 8    |
| 6.2 PEAK-TO-AVE  | RAGE POWER RATIO                            | 9    |
| 6.3 OCCUPY BANK  | DWIDTH                                      |      |
| 6.4 MODULATION   | CHARACTERISTIC                              |      |
|                  | EMISSION AT ANTENNA TERMINALS               |      |
|                  | TH OF SPURIOUS RADIATION MEASUREMENT        |      |
|                  | TABILITY V.S. TEMPERATURE MEASUREMENT       |      |
| 6.8 FREQUENCY S  | TABILITY V.S. VOLTAGE MEASUREMENT           | 16   |
| 7 TEST SETUP PHO | DTO   | 17   |
| 8 EUT CONSTRUCT  | FIONAL DETAILS                              |      |



## 4. Test Summary

| Test Item   | Section in CFR 47                                    | Result                                  |  |
|---|--|---|--|
| RF Exposure (SAR)   | Part 1.1307<br>Part 2.1093                           | Pass<br>(Please refer to<br>SAR Report) |  |
| RF Output Power   | Part 2.1046<br>Part 22.913 (a)(5)<br>Part 24.232 (c) | Appendix A – GSM                        |  |
| Peak-to-Average Power Ratio   | Part 24.232 (d)                                      | Appendix B – GSM                        |  |
| Modulation Characteristics  | Part 2.1047  | Pass                                    |  |
| 99% & -26 dB Occupied Bandwidth   | Part 2.1049<br>Part 22.917(b)<br>Part 24.238(b)      | Appendix C – GSM                        |  |
| Out of band emission at antenna terminals   | Part 2.1053<br>Part 22.917 (a)<br>Part 24.238 (a)    | Appendix D – GSM<br>Appendix E – GSM    |  |
| Field strength of spurious radiation  | Part 22.917 (a)<br>Part 24.238 (a)                   | Pass                                    |  |
| Frequency stability vs. temperature   | Part 22.355<br>Part 24.235<br>Part 2.1055(a)(1)(b)   | Appendix F – GSM                        |  |
| Frequency stability vs. voltage   | Part 22.355<br>Part 24.235<br>Part 2.1055(d)(2)      | Appendix F – GSM                        |  |
| Remark:<br>1. Pass: The EUT complies with the essential re<br>2. The cable insertion loss used by "RF Output H<br>Frequency below 1GHz)/1.0dB(Fundamental | Power" and other conduction measurer                 | •                                       |  |

Test Method:

ANSI/TIA-603-E-2016 ANSI C63.26-2015



## **5. General Information**

### 5.1 Client Information

| Applicant:    | INFINIX MOBILITY LIMITED   |
|---------------|--|
| Address:      | FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN<br>MEI STREET FOTAN NT  |
| Manufacturer: | SHENZHEN TECNO TECHNOLOGY CO., LTD.  |
| Address:      | 101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China |

### 5.2 General Description of E.U.T.

| Product Name:              | Mobile Phone  |  |  |  |
|----------------------------|---|--|--|--|
| Model No.:                 | X6817   |  |  |  |
| Operation Frequency range: | GSM 850: 824.20MHz-848.80MHz<br>PCS1900: 1850.20MHz-1909.80MHz                        |  |  |  |
| Modulation type:           | 2G 🛛 Voice(GMSK) 🖾 GPRS(GMSK) 🖾 EGPRS(GMSK, 8PSK)                                     |  |  |  |
| Antenna type:              | Internal Antenna  |  |  |  |
| Antenna gain:              | GSM 850:-3.8 dBi(declare by Applicant)PCS 1900:0.1 dBi(declare by Applicant)          |  |  |  |
| Power supply:              | Rechargeable Li-ion Ploymer Battery DC3.87V, 4900mAh                                  |  |  |  |
| AC adapter:                | Model: U180XSA<br>Input: AC100-240V, 50/60Hz, 0.6A<br>Output: DC 5.0V/2.4A, 7.5V/2.4A |  |  |  |
| Remark:                    | The EUT has two kinds of memory, one is 64+4 memory and the other is 128+6 memory.    |  |  |  |
| Test Sample Condition:     | The test samples were provided in good working order with no visible defects.         |  |  |  |

#### **Operation Frequency List:**

| GSM 850 |                 | PCS1900 |                 |  |
|---------|-----------------|---------|-----------------|--|
| Channel | Frequency (MHz) | Channel | Frequency (MHz) |  |
| 128     | 824.20          | 512     | 1850.20         |  |
| 129     | 824.40          | 513     | 1850.40         |  |
|         |                 |         |                 |  |
| 189     | 836.40          | 660     | 1879.80         |  |
| 190     | 836.60          | 661     | 1880.00         |  |
| 191     | 836.80          | 662     | 1880.20         |  |
|         |                 |         |                 |  |
| 250     | 848.60          | 809     | 1909.60         |  |
| 251     | 251 848.80      |         | 1909.80         |  |

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| GSM850                 |  |         | PCS1900 |                |         |  |
|------------------------|--|---------|---------|----------------|---------|--|
| Channel Frequency(MHz) |  | Channel |         | Frequency(MHz) |         |  |
| Lowest 128             |  | 824.20  | Lowest  | 512            | 1850.20 |  |
| Middle 190             |  | 836.60  | Middle  | 661            | 1880.00 |  |
| Highest 251            |  | 848.80  | Highest | 810            | 1909.80 |  |



#### 5.3 Test environment and mode, and test samples plans

| Operating Environmer                           | it:   |  |  |  |
|--|---|--|--|--|
| Temperature:                                   | Normal: 15℃ ~ 35℃, Extreme: -30℃ ~ +50℃   |  |  |  |
| Humidity:                                      | 20 % ~ 75 % RH  |  |  |  |
| Atmospheric<br>Pressure:                       | 1008 mbar   |  |  |  |
| Voltage:                                       | Nominal: 3.87Vdc, Extreme: Low 3.50 Vdc, High 4.45 Vdc  |  |  |  |
| Test mode:                                     |   |  |  |  |
| GSM mode                                       | Keep the EUT communication with simulated station in GSM mode   |  |  |  |
| GPRS mode                                      | Keep the EUT communication with simulated station in GPRS mode  |  |  |  |
| EGPRS mode                                     | Keep the EUT communication with simulated station in EGPRS mode   |  |  |  |
| for each type band with radiation emission was | been tested under continuous transmitting mode. Channel Low, Mid and High<br>rated data rate were chosen for full testing. The field strength of spurious<br>measured as EUT stand-up position (H mode) and lie down position (E1, E2<br>Just the worst case position (H mode) shown in report. |  |  |  |
| Test Samples Plans:                            |   |  |  |  |
| Samples Number                                 | Used for Test Items   |  |  |  |
| 2#   | Conducted measurements test method  |  |  |  |
| 1#   | Radiated measurements test method   |  |  |  |
| 1# EUT constructional details                  |   |  |  |  |

#### and will keep the above samples for a month.

#### 5.4 Description of Test Auxiliary Equipment

| Test Equipment Manufacturer |         | Model No. | Serial No. |            |
|-----------------------------|---------|-----------|------------|------------|
| Simulated S                 | station | Anritsu   | MT8820C    | 6201026545 |

### 5.5 Measurement Uncertainty

| Parameter  | Expanded Uncertainty<br>(Confidence of 95%) |
|--|---|
| Radiated Emission (9kHz ~ 30MHz electric field) for 3m SAC | 3.13 dB                                     |
| Radiated Emission (9kHz ~ 30MHz magnetic field) for 3m SAC | 3.13 dB                                     |
| Radiated Emission (30MHz ~ 1GHz) for 3m SAC                | 4.45 dB                                     |
| Radiated Emission (1GHz ~ 18GHz) for 3m SAC                | 5.34 dB                                     |
| Radiated Emission (18GHz ~ 40GHz) for 3m SAC               | 5.34 dB                                     |

### 5.6 Additions to, deviations, or exclusions from the method

No

### 5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

#### • FCC - Designation No.: CN1211

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

#### • ISED – CAB identifier.: CN0021

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

#### • CNAS - Registration No.: CNAS L15527

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

#### • A2LA - Registration No.: 4346.01

Project No.: JYTSZE2112074



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <u>https://portal.a2la.org/scopepdf/4346-01.pdf</u>

### 5.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd. Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info-JYTee@lets.com, Website: <u>http://jyt.lets.com</u>

### 5.9 Test Instruments list

| Radiated Emission:         |                 |                 |             |                        |                            |
|----------------------------|-----------------|-----------------|-------------|------------------------|----------------------------|
| Test Equipment             | Manufacturer    | Model No.       | Serial No.  | Cal.Date<br>(mm-dd-yy) | Cal.Due date<br>(mm-dd-yy) |
| 3m SAC                     | ETS             | RFD-100         | Q1984       | 04-14-2021             | 04-13-2024                 |
| Loop Antenna               | SCHWARZBECK     | FMZB 1519 B     | 1519B-044   | 03-07-2021             | 03-06-2022                 |
| BiConiLog Antenna          | SCHWARZBECK     | VULB9163        | 9163-1246   | 03-07-2021             | 03-06-2022                 |
| <b>Biconical Antenna</b>   | SCHWARZBECK     | VUBA 9117       | 9117#359    | 06-17-2021             | 06-17-2022                 |
| Horn Antenna               | SCHWARZBECK     | BBHA9120D       | 912D-916    | 03-07-2021             | 03-06-2022                 |
| Broad-Band Horn<br>Antenna | SCHWARZBECK     | BBHA9170        | 1067        | 04-02-2021             | 04-01-2022                 |
| Broad-Band Horn<br>Antenna | SCHWARZBECK     | BBHA9170        | 1068        | 04-02-2021             | 04-01-2022                 |
| EMI Test Receiver          | Rohde & Schwarz | ESRP7           | 101070      | 03-03-2021             | 03-02-2022                 |
| Spectrum analyzer          | Rohde & Schwarz | FSP30           | 101454      | 03-03-2021             | 03-02-2022                 |
| Spectrum analyzer          | Keysight        | N9010B          | MY60240202  | 10-27-2021             | 10-26-2022                 |
| Simulated Station          | Anritsu         | MT8820C         | 6201026545  | 03-03-2021             | 03-02-2022                 |
| Low Pre-amplifier          | SCHWARZBECK     | BBV9743B        | 00305       | 03-07-2021             | 03-06-2022                 |
| High Pre-amplifier         | SKET            | LNPA_0118G-50   | MF280208233 | 03-07-2021             | 03-06-2022                 |
| Cable                      | Qualwave        | JYT3M-1G-NN-8M  | JYT3M-1     | 03-07-2021             | 03-06-2022                 |
| Cable                      | Qualwave        | JYT3M-18G-NN-8M | JYT3M-2     | 03-07-2021             | 03-06-2022                 |
| Cable                      | Qualwave        | JYT3M-1G-BB-5M  | JYT3M-3     | 03-07-2021             | 03-06-2022                 |
| Cable                      | Bost            | JYT3M-40G-SS-8M | JYT3M-4     | 04-02-2021             | 04-01-2022                 |
| EMI Test Software          | Tonscend        | TS+             |             | Version:3.0.0.1        |                            |

| Conducted method:        |                 |           |                     |                         |                             |
|--------------------------|-----------------|-----------|---------------------|-------------------------|-----------------------------|
| Test Equipment           | Manufacturer    | Model No. | Serial No.          | Cal. Date<br>(mm-dd-yy) | Cal. Due date<br>(mm-dd-yy) |
| Spectrum Analyzer        | Keysight        | N9020B    | MY57431500          | 07-02-2021              | 07-01-2022                  |
| Simulated Station        | Rohde & Schwarz | CMW500    | 108209              | 07-02-2021              | 07-01-2022                  |
| RF Control Unit          | Tonscend        | JS0806-1  | N/A                 | N/A                     | N/A                         |
| Band Reject Filter Group | Tonscend        | JS0806-F  | 21A8060360          | N/A                     | N/A                         |
| Test Software            | Tonscend        | TS+       | Version: 2.6.9.0526 |                         |                             |



## 6. Test results

### 6.1 Conducted Output Power, ERP and EIRP

| Test Requirement: | FCC part 22.913(a)(5), FCC part 24.232(c)   |
|-------------------|---|
| Limit:            | GSM 850: 7W, PCS 1900: 2W   |
| Test setup:       | ATT EUT   |
| Test Procedure:   | The transmitter output was connected to a calibrated attenuator, the other<br>end of which was connected to the simulated station. Transmitter output<br>power was read off in dBm. |
| Test Instruments: | Refer to section 5.9 for details  |
| Test mode:        | Refer to section 5.3 for details  |
| Test results:     | Passed  |

Measurement Data: Refer to Appendix A – GSM



### 6.2 Peak-to-Average Power Ratio

| Test Requirement: | FCC part 24.232(d)   |
|-------------------|--|
| Limit:            | The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.  |
| Test setup:       | System simulator<br>Splitter ATT EUT<br>Spectrum Analyzer  |
| Test Procedure:   | <ol> <li>The RF output of the transceiver was connected to a spectrum<br/>analyzer through appropriate attenuation.</li> <li>Set the CCDF option in spectrum analyzer, RBW ≥ OBW,</li> <li>Set the EUT working in highest power level, measured and recorded<br/>the 0.1% as PAPR level.</li> <li>Repeat step 1~3 at other frequency and modulations.</li> </ol> |
| Test Instruments: | Refer to section 5.9 for details   |
| Test mode:        | Refer to section 5.3 for details   |
| Test results:     | Passed   |

Measurement Data: Refer to Appendix B - GSM



### 6.3 Occupy Bandwidth

| Test Requirement: | FCC part 22.917(b), FCC part 24.238(b)   |
|-------------------|--|
| Test setup:       | System simulator<br>Splitter ATT EUT   |
| Test Procedure:   | <ol> <li>Spectrum Analyzer</li> <li>The EUT's output RF connector was connected with a short cable to the spectrum analyzer</li> <li>RBW was set to about 1% of emission BW, VBW= 3 times RBW.</li> <li>-26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.</li> </ol> |
| Test Instruments: | Refer to section 5.9 for details   |
| Test mode:        | Refer to section 5.3 for details   |
| Test results:     | Passed   |

Measurement Data: Refer to Appendix C - GSM



### 6.4 Modulation Characteristic

According to FCC § 2.1047(d), Part 22H & 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

#### FCC part 22.917(a), FCC part 24.238(a) **Test Requirement:** Limit: -13dBm Test setup: 0 System simulator ATT Splitter EUT Spectrum Analyzer **Test Procedure:** The RF output of the transceiver was connected to a spectrum 1 analyzer through appropriate attenuation. For the out of band: For GSM850&WCDMA850 set the RBW=100 2 kHz, VBW=300 kHz and for PCS1900 & WCDMA1900 set the RBW=1MHz, VBW=3MHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic. 3 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. **Test Instruments:** Refer to section 5.9 for details Test mode: Refer to section 5.3 for details Test results: Passed

### 6.5 Out of band emission at antenna terminals

#### Measurement Data:

Band edge emission: Refer to Appendix D – GSM

Spurious emission: Refer to Appendix E - GSM



### 6.6 Field strength of spurious radiation measurement

| Test Requirement: | FCC part 22.917(a), FCC part 24.238(a)   |
|-------------------|--|
| Limit:            | -13dBm   |
| Test setup:       | Below 1GHz   |
|                   | Above 1GHz   |
| Test Procedure:   | <ol> <li>The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.</li> <li>The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)</li> </ol> |
| Test Instruments: | Refer to section 5.9 for details   |
| Test mode:        | Refer to section 5.3 for details.  |
| Test results:     | Passed   |



#### Measurement Data (worst case):

|                    | GSM850                          |                       |                                     |                     |                |              |
|--------------------|---------------------------------|-----------------------|-------------------------------------|---------------------|----------------|--------------|
|                    |                                 | Lowest                | channel                             |                     |                |              |
| Frequency<br>(MHz) | Spurous Emission<br>level (dBm) | Factor (dB)           | Level at antenna<br>terminals (dBm) | Limit Line<br>(dBm) | Margin<br>(dB) | Polarization |
| 1648.40            | -43.81                          | -11.10                | -54.91                              | -13.00              | 41.91          | Vertical     |
| 2472.60            | -32.95                          | -6.19                 | -39.14                              | -13.00              | 26.14          | Vertical     |
| 3296.80            | -40.36                          | -4.94                 | -45.30                              | -13.00              | 32.30          | Vertical     |
| 1648.40            | -44.28                          | -11.00                | -55.28                              | -13.00              | 42.28          | Horizontal   |
| 2472.60            | -36.02                          | -6.54                 | -42.56                              | -13.00              | 29.56          | Horizontal   |
| 3296.80            | -38.09                          | -5.21                 | -43.30                              | -13.00              | 30.30          | Horizontal   |
|                    |                                 | Middle                | channel                             |                     |                |              |
| Frequency<br>(MHz) | Spurous Emission<br>level (dBm) | Factor (dB)           | Level at antenna<br>terminals (dBm) | Limit Line<br>(dBm) | Margin<br>(dB) | Polarization |
| 1673.20            | -43.42                          | -11.13                | -54.55                              | -13.00              | 41.55          | Vertical     |
| 2509.80            | -33.16                          | -6.21                 | -39.37                              | -13.00              | 26.37          | Vertical     |
| 3346.40            | -40.58                          | -5.02                 | -45.60                              | -13.00              | 32.60          | Vertical     |
| 1673.20            | -43.99                          | -11.04                | -55.03                              | -13.00              | 42.03          | Horizontal   |
| 2509.80            | -36.12                          | -6.51                 | -42.63                              | -13.00              | 29.63          | Horizontal   |
| 3346.40            | -37.97                          | -5.23                 | -43.20                              | -13.00              | 30.20          | Horizontal   |
|                    |                                 | Highest               | channel                             |                     |                |              |
| Frequency<br>(MHz) | Spurous Emission<br>level (dBm) | Factor (dB)           | Level at antenna<br>terminals (dBm) | Limit Line<br>(dBm) | Margin<br>(dB) | Polarization |
| 1697.60            | -44.02                          | -11.09                | -55.11                              | -13.00              | 42.11          | Vertical     |
| 2546.40            | -32.79                          | -6.38                 | -39.17                              | -13.00              | 26.17          | Vertical     |
| 3395.20            | -40.11                          | -5.20                 | -45.31                              | -13.00              | 32.31          | Vertical     |
| 1697.60            | -44.24                          | -11.15                | -55.39                              | -13.00              | 42.39          | Horizontal   |
| 2546.40            | -36.49                          | -6.06                 | -42.55                              | -13.00              | 29.55          | Horizontal   |
| 3395.20            | -38.01                          | -5.09                 | -43.10                              | -13.00              | 30.10          | Horizontal   |
| Remark:            |                                 |                       |                                     |                     |                |              |
| 1. The emission    | on levels of below 1 GHz a      | are lower than the li | mit 20dB and not show               | w in test repor     | t.             |              |



|                    |                                 | PCS         | 61900                               |                     |                |             |
|--------------------|---------------------------------|-------------|-------------------------------------|---------------------|----------------|-------------|
|                    |                                 | Lowest      | channel                             |                     |                |             |
| Frequency<br>(MHz) | Spurous Emission<br>level (dBm) | Factor (dB) | Level at antenna<br>terminals (dBm) | Limit Line<br>(dBm) | Margin<br>(dB) | Polarizatio |
| 3700.40            | -47.39                          | -1.61       | -49.00                              | -13.00              | 36.00          | Vertical    |
| 5550.60            | -44.44                          | 5.40        | -39.04                              | -13.00              | 26.04          | Vertical    |
| 3700.40            | -42.12                          | -2.10       | -44.22                              | -13.00              | 31.22          | Horizonta   |
| 5550.60            | -43.31                          | 3.80        | -39.51                              | -13.00              | 26.51          | Horizonta   |
|                    |                                 | Middle      | channel                             |                     |                |             |
| Frequency<br>(MHz) | Spurous Emission<br>level (dBm) | Factor (dB) | Level at antenna<br>terminals (dBm) | Limit Line<br>(dBm) | Margin<br>(dB) | Polarizatio |
| 3760.00            | -46.92                          | -1.31       | -48.23                              | -13.00              | 35.23          | Vertical    |
| 5640.00            | -44.67                          | 6.96        | -37.71                              | -13.00              | 24.71          | Vertical    |
| 3760.00            | -41.77                          | -1.81       | -43.58                              | -13.00              | 30.58          | Horizonta   |
| 5640.00            | -43.24                          | 4.29        | -38.95                              | -13.00              | 25.95          | Horizonta   |
|                    | · ·                             | Highest     | channel                             |                     |                |             |
| Frequency<br>(MHz) | Spurous Emission<br>level (dBm) | Factor (dB) | Level at antenna<br>terminals (dBm) | Limit Line<br>(dBm) | Margin<br>(dB) | Polarizatio |
| 3819.60            | -47.19                          | -1.02       | -48.21                              | -13.00              | 35.21          | Vertical    |
| 5729.40            | -44.88                          | 8.20        | -36.68                              | -13.00              | 23.68          | Vertical    |
| 3819.60            | -41.87                          | -1.49       | -43.36                              | -13.00              | 30.36          | Horizonta   |
| 5729.40            | -43.18                          | 5.72        | -37.46                              | -13.00              | 24.46          | Horizont    |



| Test Requirement: | FCC Part 22.355, FCC Part 24.235, FCC Part 2.1055(a)(1)(b)  |  |  |  |
|-------------------|---|--|--|--|
| Limit:            | ±2.5 ppm for GSM 850<br>Within authorized band for PCS 1900   |  |  |  |
| Test setup:       | SA<br>Divider<br>Divider<br>Divider<br>Temperature & Humidity Chamber<br>Power Source   |  |  |  |
| Test procedure:   | <ol> <li>The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>The EUT was placed inside the temperature chamber.</li> <li>Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol> |  |  |  |
| Test Instruments: | Refer to section 5.9 for details  |  |  |  |
| Test mode:        | Refer to section 5.3 for details  |  |  |  |
| Test results:     | Passed  |  |  |  |

### 6.7 Frequency stability V.S. Temperature measurement

Measurement Data: Refer to Appendix F - GSM



#### **Test Requirement:** FCC Part 22.355, FCC Part 24.235, FCC Part 2.1055(d)(2) ±2.5 ppm for GSM 850 Limit: Within authorized band for PCS 1900 Test setup: SS EUT Divider SA Temperature & Humidity Chamber Power Source Test procedure: 1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired 2. frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation (+/- 15%) 3. and endpoint, record the maximum frequency change. **Test Instruments:** Refer to section 5.9 for details Test mode: Refer to section 5.3 for details Test results: Passed

#### 6.8 Frequency stability V.S. Voltage measurement

#### Measurement Data: Refer to Appendix F - GSM