

FCC

RF

TEST REPORT

ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**handset**

ISSUED TO  
HIPAD INTELLIGENT TECHNOLOGY COMPANY LIMITED

NO.2366 ChangXi Avenue Economic -Technological Development Area  
NanChang Jiangxi



Tested by:

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(Engineer)

Date *Sep. 28, 2015*

Approved by:

*Wei Yanquan*  
Wei Yanquan  
(Chief Engineer)

Date *Sep. 28, 2015*

Report No.: BL-SZ1590048-602

EUT Type: handset

Model Name: E3240

Brand Name: movilnet

Test Standard: 47 CFR Part 2  
47 CFR Part 22 Subpart H

FCC ID: 2AFSPE3240

Test conclusion: Pass

Test Date: Sep. 10, 2015 ~ Sep. 21, 2015

Date of Issue: Sep. 28, 2015

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**Revision History**

| <u>Version</u> | <u>Issue Date</u>    | <u>Revisions</u>     |
|----------------|----------------------|----------------------|
| <u>Rev. 01</u> | <u>Sep. 28, 2015</u> | <u>Initial Issue</u> |

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## 1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

### 1.1 Identification of the Testing Laboratory

|              |                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------|
| Company Name | Shenzhen BALUN Technology Co., Ltd.                                                                                             |
| Address      | Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China |
| Phone Number | +86 755 6683 0100                                                                                                               |
| Fax Number   | +86 755 6182 4271                                                                                                               |

### 1.2 Identification of the Responsible Testing Location

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Location             | Shenzhen BALUN Technology Co., Ltd.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Address                   | Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Accreditation Certificate | <p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.</p> <p>The laboratory has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is TL-588.</p> <p>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.</p> |
| Description               | All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

### 1.3 Laboratory Condition

|                           |                   |
|---------------------------|-------------------|
| Ambient Temperature       | 20 to 25°C        |
| Ambient Relative Humidity | 45% - 55%         |
| Ambient Pressure          | 100 kPa - 102 kPa |

### 1.4 Announce

- (1) The test report reference to the report template version v1.0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.

- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| Applicant | HIPAD INTELLIGENT TECHNOLOGY COMPANY LIMITED                                        |
| Address   | NO.2366 ChangXi Avenue Economic -Technological Development Area<br>NanChang Jiangxi |

### 2.2 Manufacturer Information

|              |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|
| Manufacturer | HIPAD INTELLIGENT TECHNOLOGY COMPANY LIMITED                                        |
| Address      | NO.2366 ChangXi Avenue Economic -Technological Development Area<br>NanChang Jiangxi |

### 2.3 Factory Information

|         |                                                                                     |
|---------|-------------------------------------------------------------------------------------|
| Factory | HIPAD INTELLIGENT TECHNOLOGY COMPANY LIMITED                                        |
| Address | NO.2366 ChangXi Avenue Economic -Technological Development Area<br>NanChang Jiangxi |

### 2.4 General Description for Equipment under Test (EUT)

|                                           |                         |
|-------------------------------------------|-------------------------|
| EUT Type                                  | handset                 |
| Model Name Under Test                     | E3240                   |
| Series Model Name                         | N/A                     |
| Description of Model name differentiation | N/A                     |
| Hardware Version                          | SP                      |
| Software Version                          | E3240-S052              |
| Dimensions (Approx.)                      | 112 × 60 × 11 mm        |
| Weight (Approx.)                          | 92.4 g (with battery)   |
| Network and Wireless connectivity         | Bluetooth 3.0, CDMA2000 |

### 2.5 Ancillary Equipment

|                       |                      |                              |
|-----------------------|----------------------|------------------------------|
| Ancillary Equipment 1 | Battery              |                              |
|                       | Brand Name           | movilnet                     |
|                       | Model No.            | BL-5C                        |
|                       | Serial No.           | N/A                          |
|                       | Capacitance          | 1000 mAh                     |
|                       | Rated Voltage        | 3.7 V                        |
|                       | Limit Charge Voltage | 4.2 V                        |
| Ancillary Equipment 2 | Charger              |                              |
|                       | Brand Name           | movilnet                     |
|                       | Model No.            | NBT-005A-173C                |
|                       | Serial No.           | N/A                          |
|                       | Rated Input          | 100-300 V~, 0.15 A, 50/60 Hz |
|                       | Rated Output         | 5 V~, 0.5 A                  |

|                       |                 |       |
|-----------------------|-----------------|-------|
| Ancillary Equipment 3 | Earphone        |       |
|                       | Length (Approx) | 1.2 m |
| Ancillary Equipment 4 | USB Data Cable  |       |
|                       | Length (Approx) | 1.0 m |

## 2.6 Technical Information

The requirement for the following technical information of the EUT was tested in this report:

|                    |                                                                                    |
|--------------------|------------------------------------------------------------------------------------|
| Frequency Bands    | CDMA BC0<br>EVDO Rev.A                                                             |
| Modulation Type    | QPSK, 16QAM, 64QAM                                                                 |
| TX Frequency Range | CDMA/EVDO: 824 MHz ~ 849 MHz                                                       |
| Rx Frequency Range | CDMA/EVDO: 869 MHz ~ 894 MHz                                                       |
| Power Class        | CDMA/EVDO: 3                                                                       |
| Multislot Class    | EVDO Rev: 12                                                                       |
| Antenna Type       | PIFA Antenna                                                                       |
| Antenna Gain       | 0 dBi                                                                              |
| About the Product  | The equipment is handset, intended for used with information technology equipment. |

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

| No. | Identity                            | Document Title                                                                      |
|-----|-------------------------------------|-------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 2<br>(10–1–14 Edition)  | Frequency Allocations and Radio Treaty Matters; General Rules and Regulations       |
| 2   | 47 CFR Part 22<br>(10–1–14 Edition) | Public Mobile Services                                                              |
| 3   | TIA/EIA 603.D-2010                  | Land Mobile FM or PM Communications Equipment Measurement and Performance Standards |
| 4   | KDB 971168<br>D01 v02r02            | Measurement Guidance For Certification of Licensed Digital Transmitters             |

#### 3.2 Verdict

| No. | Description                            | FCC Part No.     | Test Result                           | Verdict |
|-----|----------------------------------------|------------------|---------------------------------------|---------|
| 1   | Conducted RF Output Power              | 2.1046           | Reporting only<br>(Show in ANNEX A.1) | Pass    |
| 2   | Effective (Isotropic) Radiated Power   | 2.1046<br>22.913 | ANNEX A.1                             | Pass    |
| 3   | Occupied Bandwidth                     | 2.1049<br>22.917 | ANNEX A.3                             | Pass    |
| 4   | Frequency Stability                    | 2.1055<br>22.355 | ANNEX A.4                             | Pass    |
| 5   | Spurious Emission at Antenna Terminals | 2.1051<br>22.917 | ANNEX A.5                             | Pass    |
| 6   | Band Edge                              | 2.1051<br>22.917 | ANNEX A.6                             | Pass    |
| 7   | Field Strength of Spurious Radiation   | 2.1053<br>22.917 | ANNEX A.7                             | Pass    |

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

|                            |                         |              |
|----------------------------|-------------------------|--------------|
| Relative Humidity          | 45% - 55%               |              |
| Atmospheric Pressure       | 100 kPa -102 kPa        |              |
| Temperature                | NT (Normal Temperature) | +22 to +25°C |
| Working Voltage of the EUT | NV (Normal Voltage)     | 3.7 V        |
|                            | LV (Low Voltage)        | 3.6 V        |
|                            | HV (High Voltage)       | 4.2 V        |

### 4.2 Test Equipment List

| Description                          | Manufacturer         | Model      | Serial No. | Cal. Date  | Cal. Due   |
|--------------------------------------|----------------------|------------|------------|------------|------------|
| Spectrum Analyzer                    | ROHDE&SCHWARZ        | FSV-30     | 103118     | 2015.07.16 | 2016.07.15 |
| Vector Signal Generator              | ROHDE&SCHWARZ        | SMBV100A   | 177746     | 2015.07.16 | 2016.07.15 |
| Signal Generator                     | ROHDE&SCHWARZ        | SMB100A    | 260592     | 2015.07.01 | 2016.06.30 |
| Switch Unit with OSP-B157            | ROHDE&SCHWARZ        | OSP120     | 101270     | 2015.07.16 | 2016.07.15 |
| Spectrum Analyzer                    | AGILENT              | E4440A     | MY45304434 | 2014.10.18 | 2015.10.17 |
| Universal Radio Communication Tester | ROHDE&SCHWARZ        | CMU 200    | 123666     | 2015.07.01 | 2016.06.30 |
| Wireless Communications Test Set     | ROHDE&SCHWARZ        | CMW 500    | 138884     | 2015.07.01 | 2016.06.30 |
| EMI Receiver                         | ROHDE&SCHWARZ        | ESRP       | 101036     | 2015.07.14 | 2016.07.13 |
| LISN                                 | SCHWARZBECK          | NSLK 8127  | 8127-687   | 2015.07.14 | 2016.07.13 |
| Bluetooth Tester                     | ROHDE&SCHWARZ        | CBT        | 101005     | 2015.07.16 | 2016.07.15 |
| Power Splitter                       | KMW                  | DCPD-LDC   | 1305003215 | 2015.07.01 | 2016.06.30 |
| Power Sensor                         | ROHDE&SCHWARZ        | NRP-Z21    | 103971     | 2015.07.21 | 2016.07.20 |
| Attenuator (20 dB)                   | KMW                  | ZA-S1-201  | 110617091  | --         | --         |
| Attenuator (6 dB)                    | KMW                  | ZA-S1-61   | 1305003189 | --         | --         |
| DC Power Supply                      | ROHDE&SCHWARZ        | HMP2020    | 18141664   | 2015.07.17 | 2016.07.16 |
| Temperature Chamber                  | ANGELANTIONI SCIENCE | NTH64-40A  | 1310       | 2015.08.07 | 2016.08.06 |
| Test Antenna-Loop(9 kHz-30 MHz)      | SCHWARZBECK          | FMZB 1519  | 1519-037   | 2015.07.22 | 2017.07.21 |
| Test Antenna-Bi-Log(30 MHz-3 GHz)    | SCHWARZBECK          | VULB 9163  | 9163-624   | 2015.07.22 | 2017.07.21 |
| Test Antenna-Horn(1-18 GHz)          | SCHWARZBECK          | BBHA 9120D | 9120D-1148 | 2015.07.22 | 2017.07.21 |
| Test Antenna-Horn(15-26.5 GHz)       | SCHWARZBECK          | BBHA 9170  | 9170-305   | 2015.07.22 | 2017.07.21 |
| Anechoic Chamber                     | RAINFORD             | 9m*6m*6m   | N/A        | 2014.10.07 | 2015.10.06 |

| Description        | Manufacturer | Model     | Serial No. | Cal. Date | Cal. Due |
|--------------------|--------------|-----------|------------|-----------|----------|
| Shielded Enclosure | ChangNing    | CN-130701 | 130703     | --        | --       |

### 4.3 Test Configurations

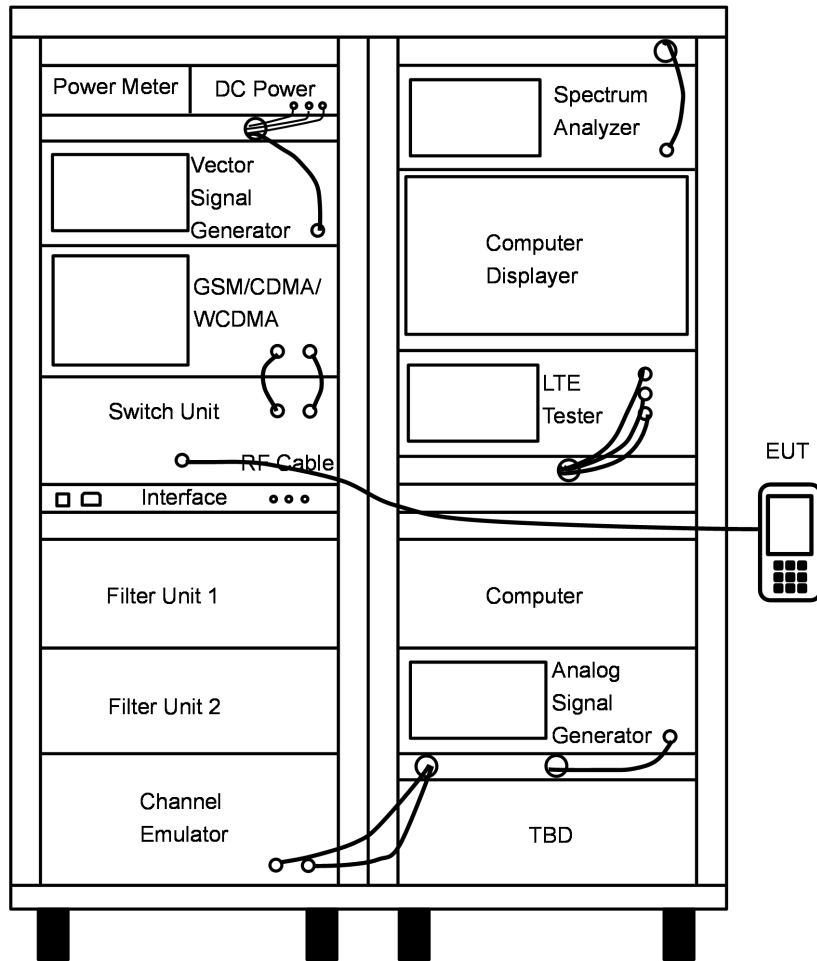
| Test Items                             | Test Mode     | Test Channel |     |     |
|----------------------------------------|---------------|--------------|-----|-----|
|                                        |               | LCH          | MCH | HCH |
| Conducted RF Output Power              | CDMA2000 BCO  | v            | v   | v   |
|                                        | EVDO Rev.A    | v            | v   | v   |
| Occupied Bandwidth                     | CDMA 2000 BCO | v            | v   | v   |
|                                        | EVDO Rev.A    | v            | v   | v   |
| Frequency Stability                    | CDMA 2000 BCO | v            | v   | v   |
| Spurious Emission at Antenna Terminals | CDMA2000 BCO  | v            | v   | v   |
| Band Edge                              | CDMA2000 BCO  | v            | --  | v   |
|                                        | EVDO Rev.A    | v            | --  | v   |
| Field Strength of Spurious Radiation   | CDMA2000 BCO  | v            | v   | v   |
|                                        | EVDO Rev.A    | v            | v   | v   |

Note 1: The mark "v" means that this configuration is chosen for testing.

| Test Mode    | Channel | ARFCN | Frequency (MHz) |
|--------------|---------|-------|-----------------|
| CDMA2000 BCO | LCH     | 1013  | 824.7           |
|              | MCH     | 384   | 836.52          |
|              | HCH     | 777   | 848.31          |
| EVDO Rev.A   | LCH     | 1013  | 824.7           |
|              | MCH     | 384   | 836.52          |
|              | HCH     | 777   | 848.31          |

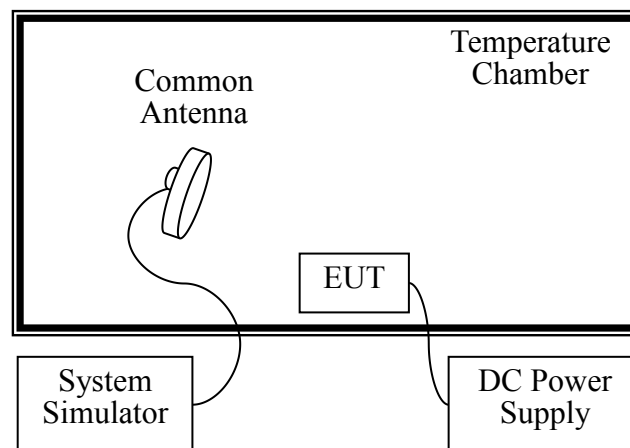
## 4.4 Description of Test Setup

### 4.4.1 For Antenna Port Test



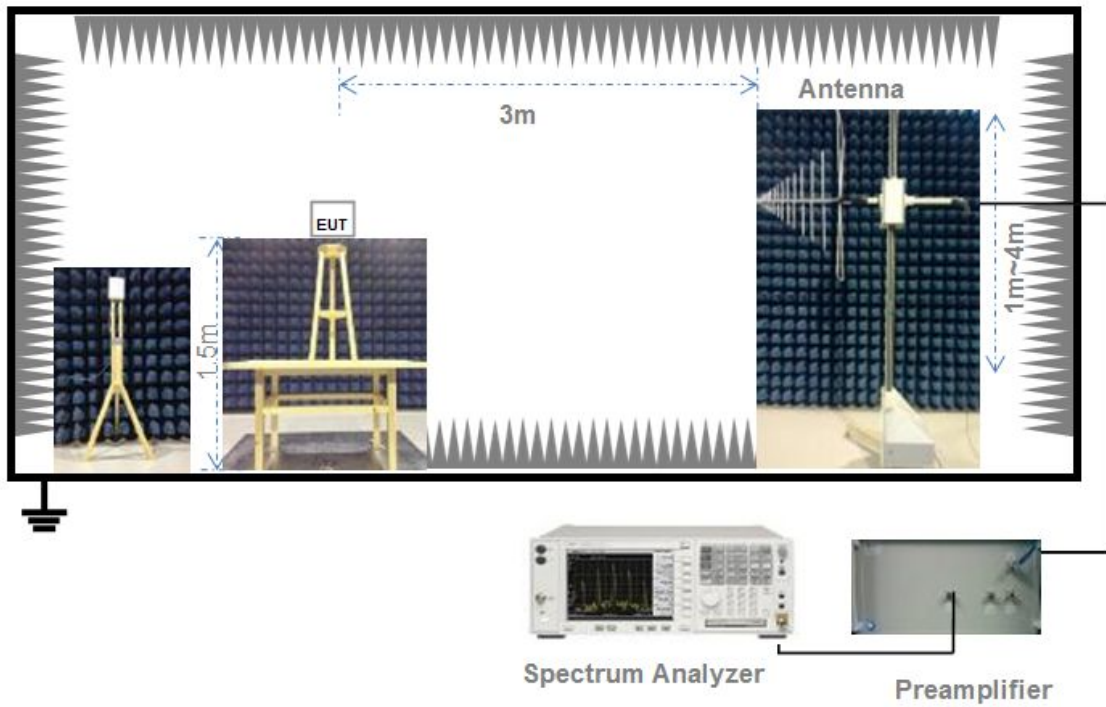
(Diagram 1)

### 4.4.2 For Frequency Stability Test



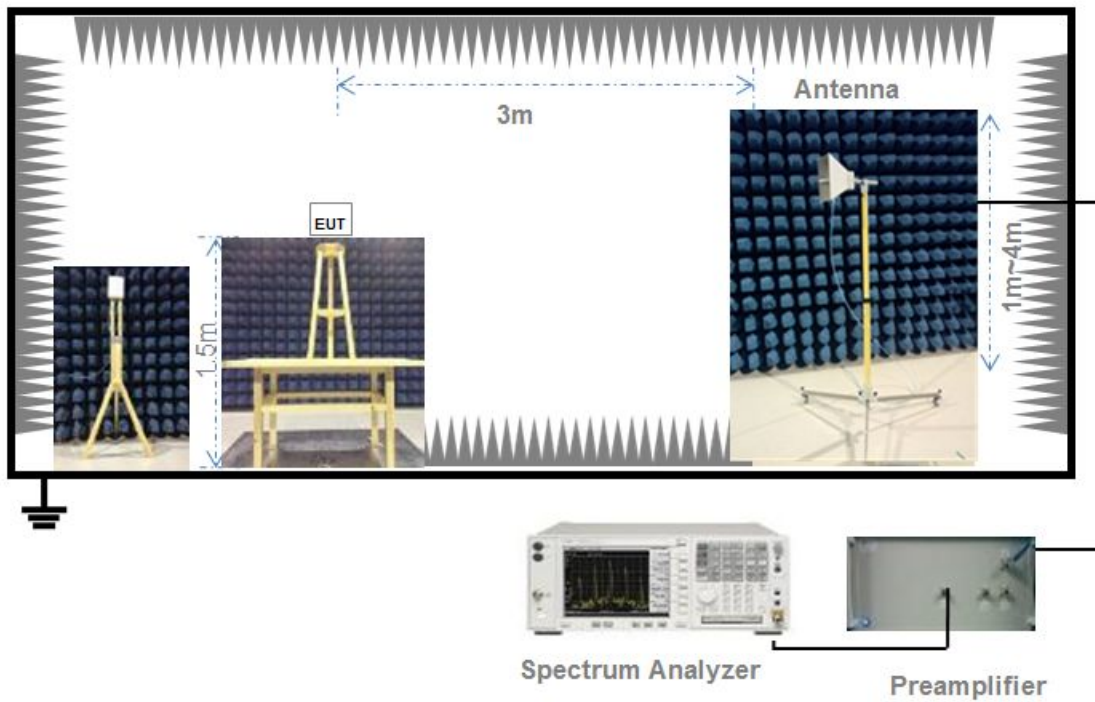
(Diagram 2)

#### 4.4.3 For Radiated Test (30 MHz-1 GHz)



(Diagram 3)

#### 4.4.4 For Radiated Test (Above 1 GHz)



(Diagram 4)

## 5 TEST ITEMS

### 5.1 Transmitter Radiated Power (EIRP/ERP)

#### 5.1.1 Limit

FCC §2.1046(a) & 22.913

According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts, FCC section 24.232, Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

FCC section 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 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications, and FCC section 27.50(h) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

#### 5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

#### 5.1.3 Test Procedure

##### Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT, Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

Note: Reference test setup 4.4.1 (Diagram 1)

##### Description of the Transmitter Radiated Power Measurement

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP/EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

where:

ERP/EIRP = effective or equivalent 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);

$\text{dBd (ERP)} = \text{dBi} - 2.15$

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

Note: Reference test setup 4.4.3 and 4.4.4 (Diagram 3, 4)

#### 5.1.4 Test Result

Please refer to ANNEX A.1.

## 5.2 Occupied Bandwidth

### 5.2.1 Limit

FCC § 2.1049

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth

### 5.2.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.2.3 Test Procedure

The following procedure shall be used for measuring (99 %) power bandwidth

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least  $10\log(\text{OBW} / \text{RBW})$  below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) Set the detection mode to peak, and the trace mode to max hold..
- f) Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.
- h) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Note: Reference test setup 4.4.1 (Diagram 1).

### 5.2.4 Test Result

Please refer to ANNEX A.2.

## 5.3 Frequency Stability

### 5.3.1 Limit

FCC § 2.1055 & 22.355

§ 22.355

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

**Table C-1—Frequency Tolerance for Transmitters in the Public Mobile Services**

| Frequency range (MHz) | Base, fixed (ppm) | Mobile > 3 watts (ppm) | Mobile ≤ 3 watts (ppm) |
|-----------------------|-------------------|------------------------|------------------------|
| 25 to 50              | 20.0              | 20.0                   | 50.0                   |
| 50 to 450             | 5.0               | 5.0                    | 50.0                   |
| 450 to 512            | 2.5               | 5.0                    | 5.0                    |
| 821 to 896            | 1.5               | 2.5                    | 2.5                    |
| 928 to 929            | 5.0               | n/a                    | n/a                    |
| 929 to 960            | 1.5               | n/a                    | n/a                    |
| 2110 to 2220          | 10.0              | n/a                    | n/a                    |

### 5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.3.3 Test Procedure

1. The test is performed in a Temperature Chamber.
2. The EUT is configured as MS + DC Power Supply.

Note: Reference test setup 4.4.2 (Diagram 2).

### 5.3.4 Test Result

Please refer to ANNEX A.3.

## 5.4 Spurious Emission at Antenna Terminals

### 5.4.1 Limit

FCC §2.1051 & 22.917(a)

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  $43 + 10 \cdot \log(P)$  dB. This calculated to be -13 dBm.

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB.

### 5.4.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.4.3 Test Procedure

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

### 5.4.4 Test Result

Please refer to ANNEX A.4.

## 5.5 Band Edge

### 5.5.1 Limit

FCC § 2.1051 & 22.917(b)

The power of any emission outside of the authorized operating frequency must be attenuated below the transmitting (P) by a factor of at least  $43 + 10 \log(P)$  dB.

In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26 dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log(P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log(P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log(P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log(P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log(P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

### 5.5.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.5.3 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

1. The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.
2. The center of the spectrum analyzer was set to block edge frequency.

Note: Reference test setup 4.4.1 (Diagram 1).

### 5.5.4 Test Result

Please refer to ANNEX A.5.

## 5.6 Field Strength of Spurious Radiation

### 5.6.1 Limit

FCC § 2.1053 & 22.917

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. This calculated to be -13 dBm.

### 5.6.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.6.3 Test Procedure

1. On a test site, the EUT shall be placed at 80cm height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. During the measurement of the EUT, the resolution bandwidth was to 1 MHz and the average bandwidth was set to 1 MHz.
5. The transmitter shall be switched on; the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. The EUT was replaced by half-wave dipole (824 ~ 849 MHz) or horn antenna (1 850 ~ 1 910 MHz) connected to a signal generator.
11. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
12. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
13. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, which is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
14. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

Note: Reference test setup 4.4.3 and 4.4.4 (Diagram 3, 4)

#### 5.6.4 Test Result

Please refer to ANNEX A.6.

## ANNEX A TEST RESULT

### A.1 Conducted RF Output Power and Effective (Isotropic) Radiated power

CDMA2000 Mode Test data:

| Test Band    | Test Channel | Frequency (MHz) | Conducted Output Peak Power (dBm) | Antenna Gain (dBi) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Verdict |
|--------------|--------------|-----------------|-----------------------------------|--------------------|--------------------|-----------|-------------|---------|
| CDMA2000 BC0 | 1013         | 824.7           | 27.64                             | 0                  | -2.15              | 29.79     | 38.5        | Pass    |
|              | 384          | 836.52          | 27.66                             | 0                  | -2.15              | 29.81     | 38.5        | Pass    |
|              | 777          | 848.31          | 26.82                             | 0                  | -2.15              | 28.97     | 38.5        | Pass    |
| EVDO Rev.A   | 1013         | 824.7           | 27.56                             | 0                  | -2.15              | 29.71     | 38.5        | Pass    |
|              | 384          | 836.52          | 27.71                             | 0                  | -2.15              | 29.86     | 38.5        | Pass    |
|              | 777          | 848.31          | 27.08                             | 0                  | -2.15              | 29.23     | 38.5        | Pass    |

Note :  $ERP/EIRP = P_{Meas} + GT - LC$

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as  $P_{Meas}$ , typically dBW or dBm);

$P_{Meas}$  = measured transmitter output power or PSD, in dBm or dBW;

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.

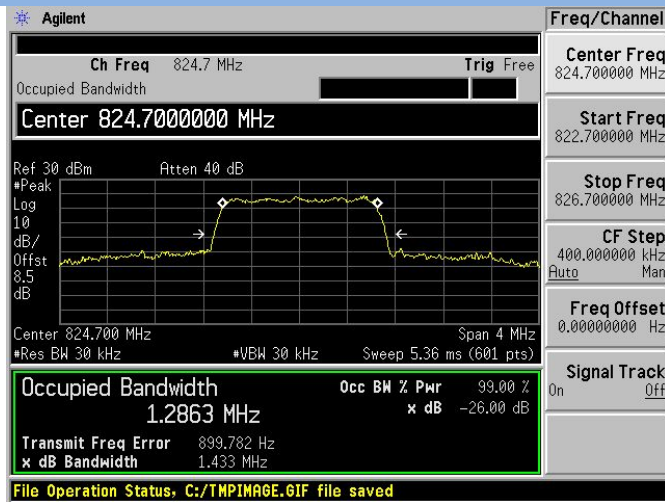
$ERP = EIRP - 2.15$ ; where ERP and EIRP are expressed in consistent units.

## A.2 Occupied Bandwidth

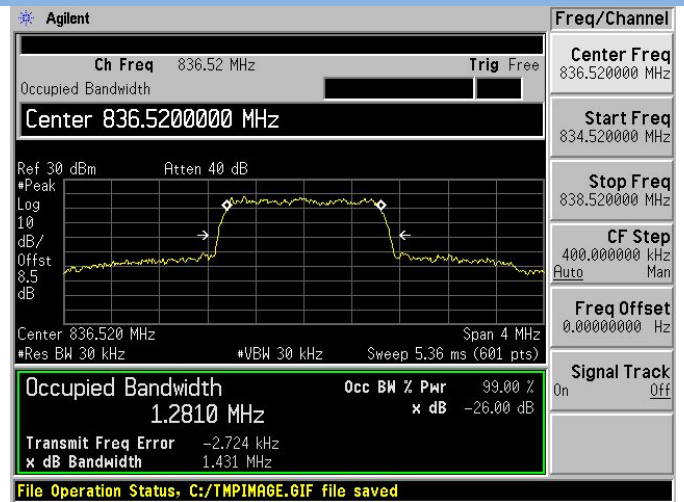
## CDMA Mode Test Data

| Test Band    | Test Channel | Measured 99% Occupied Bandwidth (MHz) | Measured -26 dB Occupied Bandwidth (MHz) |
|--------------|--------------|---------------------------------------|------------------------------------------|
| CDMA2000 BC0 | LCH          | 1.2863                                | 1.433                                    |
|              | MCH          | 1.2810                                | 1.431                                    |
|              | HCH          | 1.2847                                | 1.436                                    |
| EVDO Rev.A   | LCH          | 1.2788                                | 1.431                                    |
|              | MCH          | 1.2754                                | 1.434                                    |
|              | HCH          | 1.2807                                | 1.431                                    |

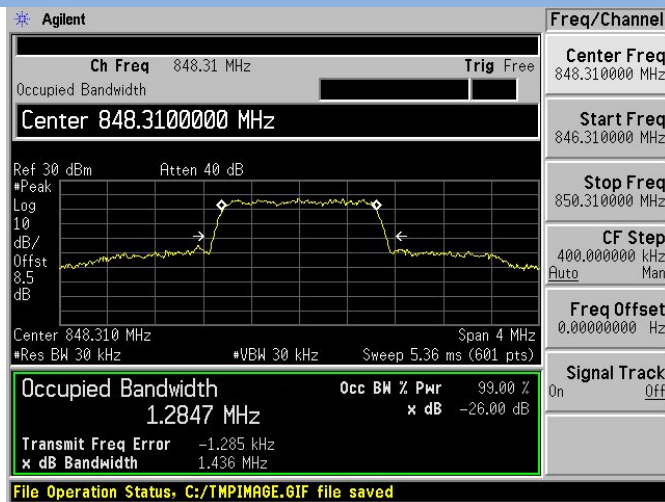
## CDMA2000 BC0 MHz LCH



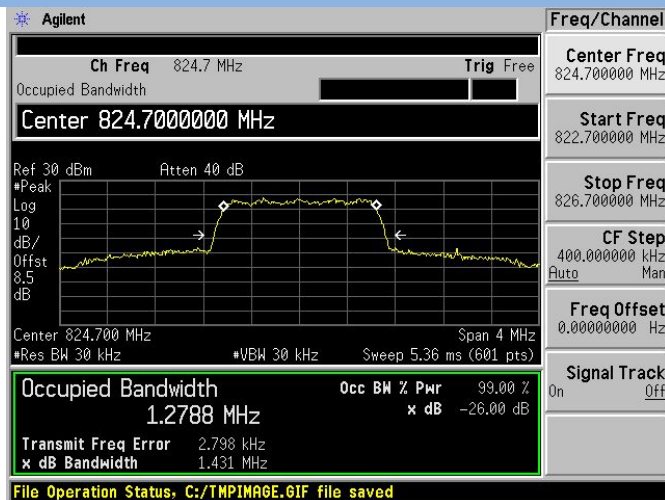
## CDMA2000 BC0 MHz MCH



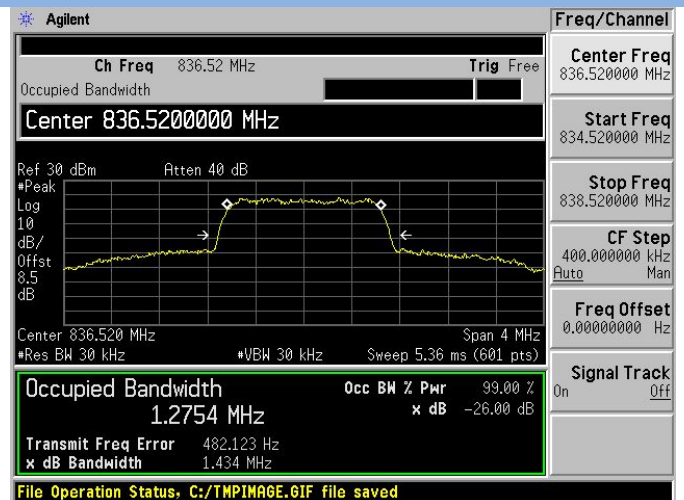
## CDMA2000 BC0 MHz HCH



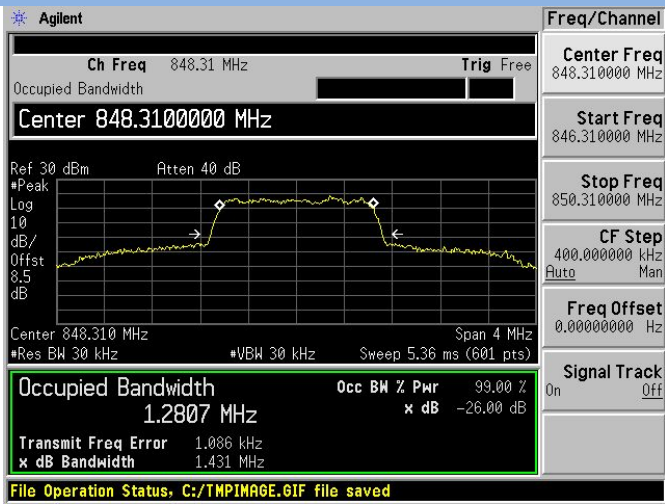
## EVDO Rev.A MHz LCH



## EVDO Rev.A MHz MCH



## EVDO Rev.A MHz HCH



### A.3 Frequency Stability

#### CDMA2000 BC0

| Test Conditions |                     | Frequency Deviation |                |                   |                |                   |                | Verdict |
|-----------------|---------------------|---------------------|----------------|-------------------|----------------|-------------------|----------------|---------|
| Power<br>(VDC)  | Temperature<br>(°C) | LCH<br>824.7 MHz    |                | MCH<br>836.52 MHz |                | HCH<br>848.31 MHz |                |         |
|                 |                     | Value<br>(Hz)       | Limits<br>(Hz) | Value<br>(Hz)     | Limits<br>(Hz) | Value<br>(Hz)     | Limits<br>(Hz) |         |
| 3.8             | -30                 | -28.69              | ±2061.75       | 4.54              | ±2091.3        | -8.33             | ±212.775       | Pass    |
|                 | -20                 | -18.25              |                | 12.54             |                | -12.54            |                |         |
|                 | -10                 | -27.27              |                | -8.43             |                | -5.54             |                |         |
|                 | 0                   | -25.08              |                | 11.57             |                | 1.24              |                |         |
|                 | +10                 | 1.37                |                | -17.51            |                | 17.52             |                |         |
|                 | +20                 | -15.78              |                | -3.58             |                | -18.54            |                |         |
|                 | +30                 | -12.74              |                | -7.65             |                | -4.57             |                |         |
|                 | +40                 | 11.57               |                | 4.45              |                | 14.54             |                |         |
|                 | +50                 | -0.54               |                | 2.40              |                | -2.74             |                |         |
| 4.35            | +25                 | -17.58              |                | -28.37            |                | -0.40             |                |         |
| 3.6             | +25                 | -14.87              |                | -21.45            |                | -28.26            |                |         |

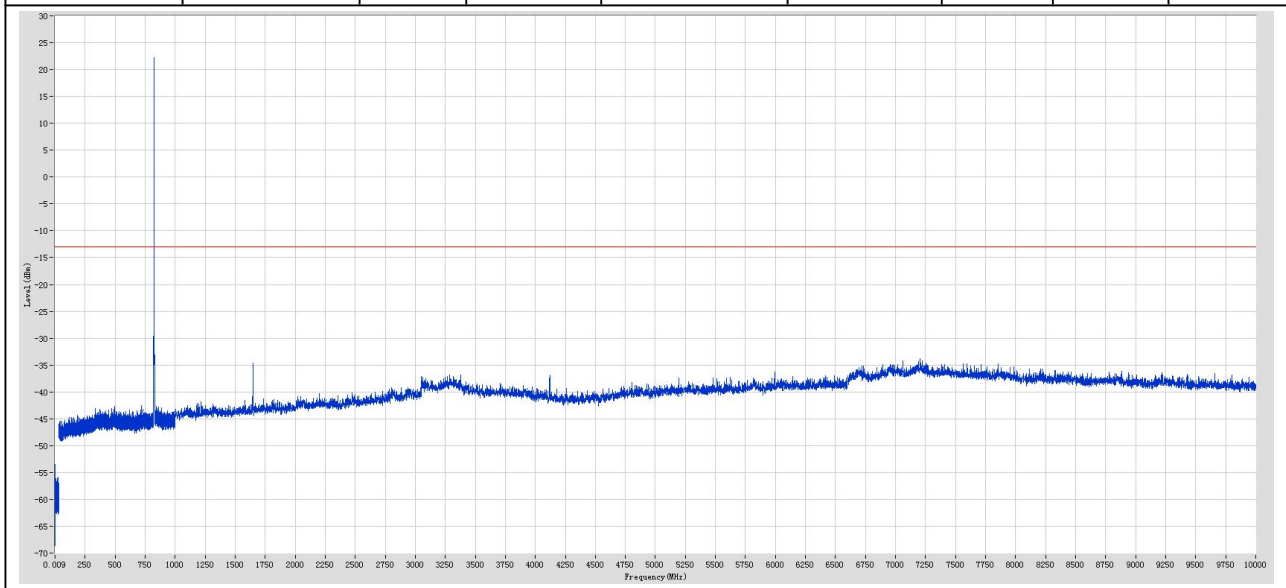
## A.4 Spurious Emission at Antenna Terminals

Note 1: The frequency of verdict which mark by "N/A" should be ignored because they are MS carrier frequency.

### Test Data

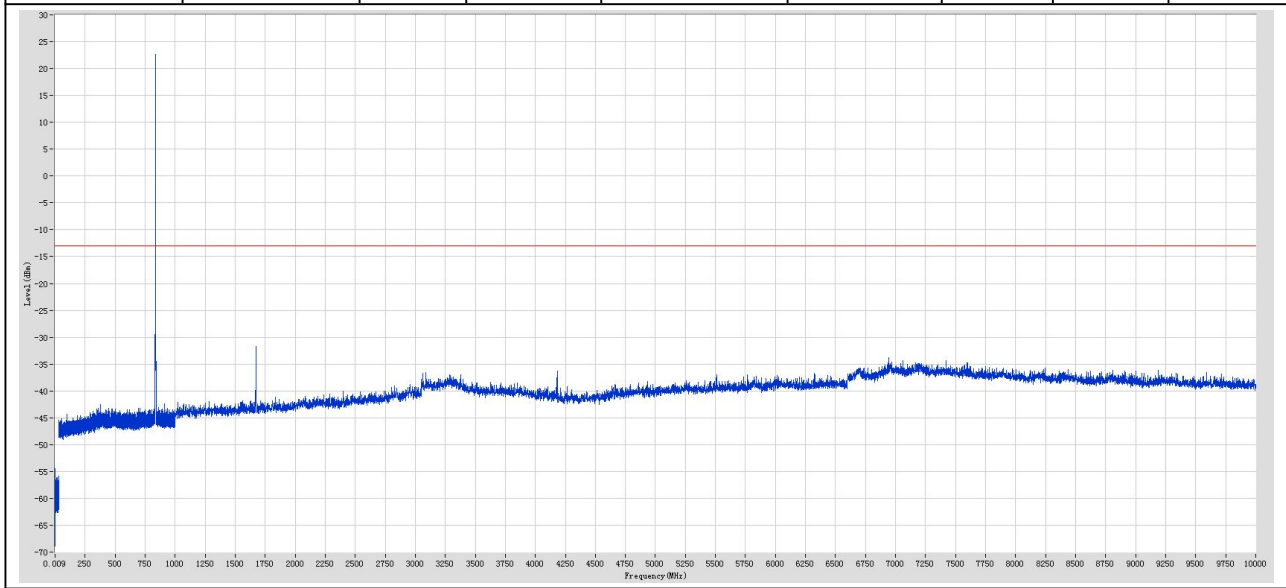
#### CDMA2000 BC0 LCH

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | Peak     | 9.235 k        | -57.39         | -13         | Pass    | 601         |
| 0.15                  | 30                   | 0.01      | Peak     | 160.003 k      | -53.45         | -13         | Pass    | 2985        |
| 30                    | 500                  | 0.1       | Peak     | 494.198766 M   | -42.67         | -13         | Pass    | 4700        |
| 500                   | 1000                 | 0.1       | Peak     | 824.364873 M   | 22.23          | -13         | N/A     | 5000        |
| 1000                  | 10000                | 1         | Peak     | 7206.75766 1 M | -33.87         | -13         | Pass    | 9000        |



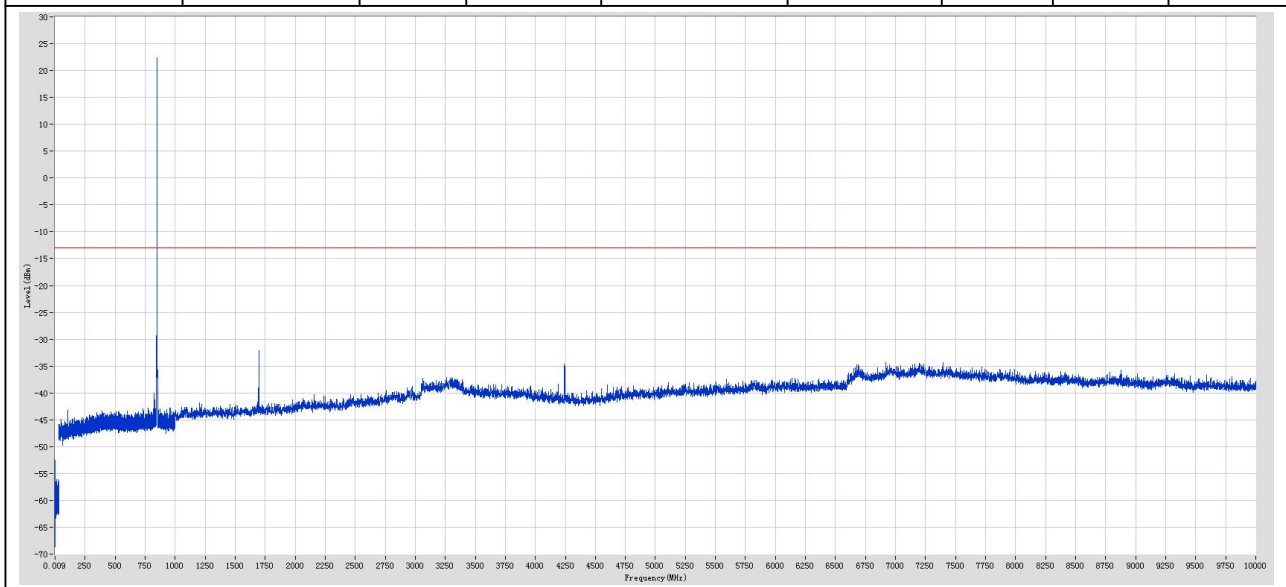
## CDMA2000 BC0 MCH

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | Peak     | 9 k            | -57.31         | -13         | Pass    | 601         |
| 0.15                  | 30                   | 0.01      | Peak     | 380.077 k      | -54.5          | -13         | Pass    | 2985        |
| 30                    | 500                  | 0.1       | Peak     | 378.274101 M   | -42.56         | -13         | Pass    | 4700        |
| 500                   | 1000                 | 0.1       | Peak     | 836.567313 M   | 22.69          | -13         | N/A     | 5000        |
| 1000                  | 10000                | 1         | Peak     | 1672.08204 1 M | -31.74         | -13         | Pass    | 9000        |



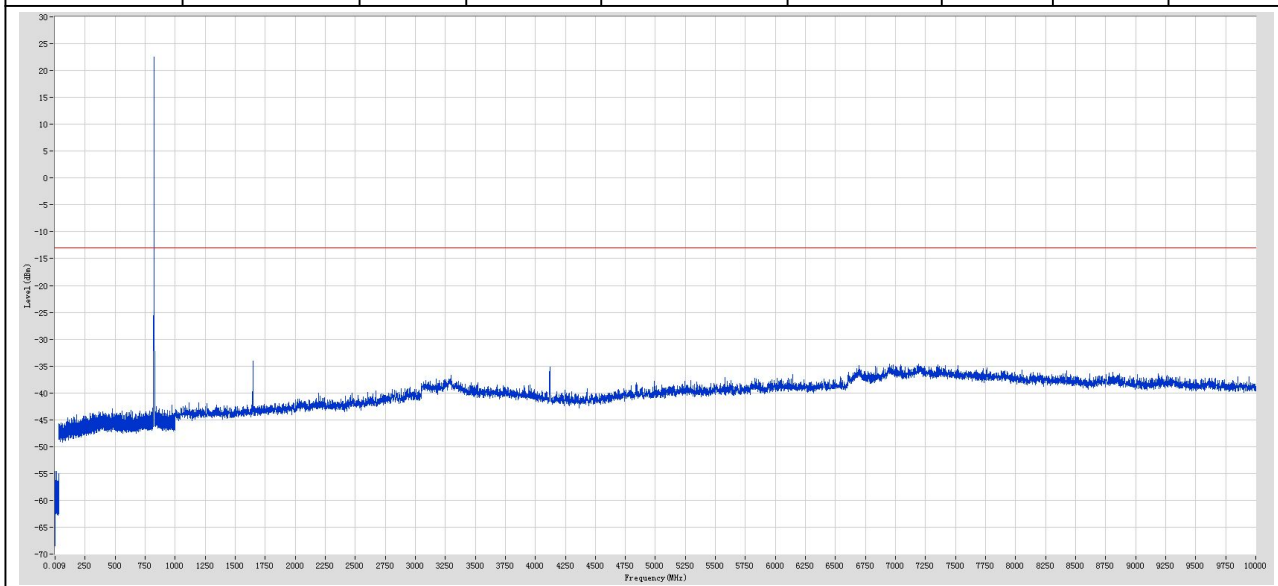
## CDMA2000 BC0 HCH

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | Peak     | 12.29 k        | -57.27         | -13         | Pass    | 601         |
| 0.15                  | 30                   | 0.01      | Peak     | 180.01 k       | -52.59         | -13         | Pass    | 2985        |
| 30                    | 500                  | 0.1       | Peak     | 103.815705 M   | -43.18         | -13         | Pass    | 4700        |
| 500                   | 1000                 | 0.1       | Peak     | 848.969794 M   | 22.38          | -13         | N/A     | 5000        |
| 1000                  | 10000                | 1         | Peak     | 1698.085215 M  | -32.14         | -13         | Pass    | 9000        |



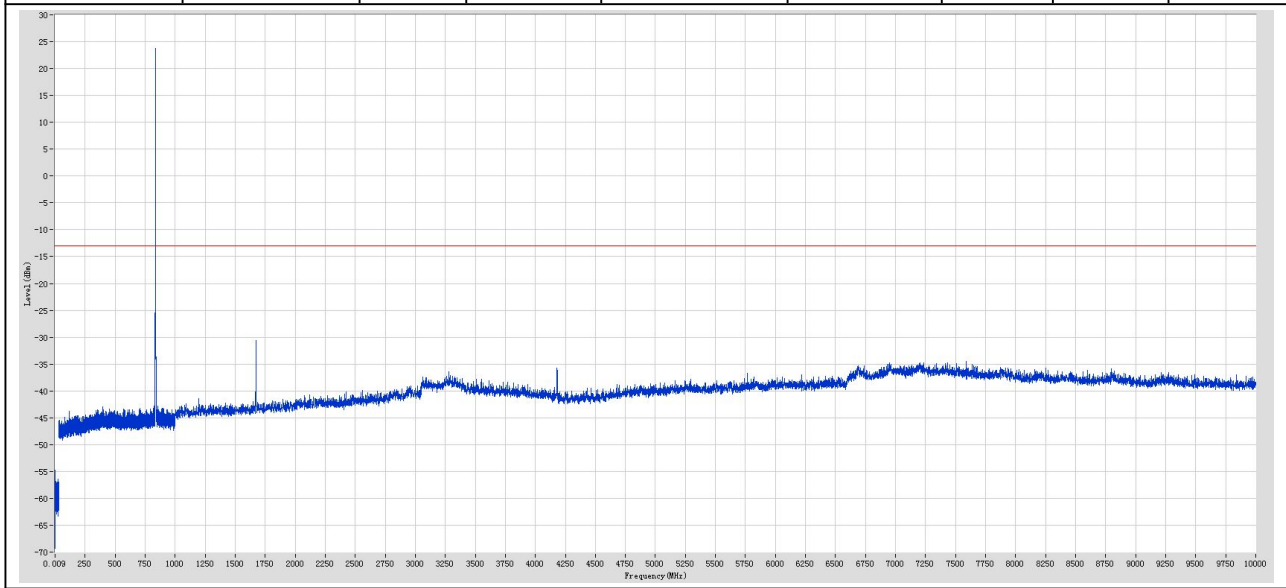
## EVDO Rev.A LCH

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | Peak     | 9 k            | -57.1          | -13         | Pass    | 601         |
| 0.15                  | 30                   | 0.01      | Peak     | 13.624514 M    | -54.54         | -13         | Pass    | 2985        |
| 30                    | 500                  | 0.1       | Peak     | 475.094701 M   | -42.99         | -13         | Pass    | 4700        |
| 500                   | 1000                 | 0.1       | Peak     | 824.364873 M   | 22.53          | -13         | N/A     | 5000        |
| 1000                  | 10000                | 1         | Peak     | 1647.078989 M  | -34.14         | -13         | Pass    | 9000        |



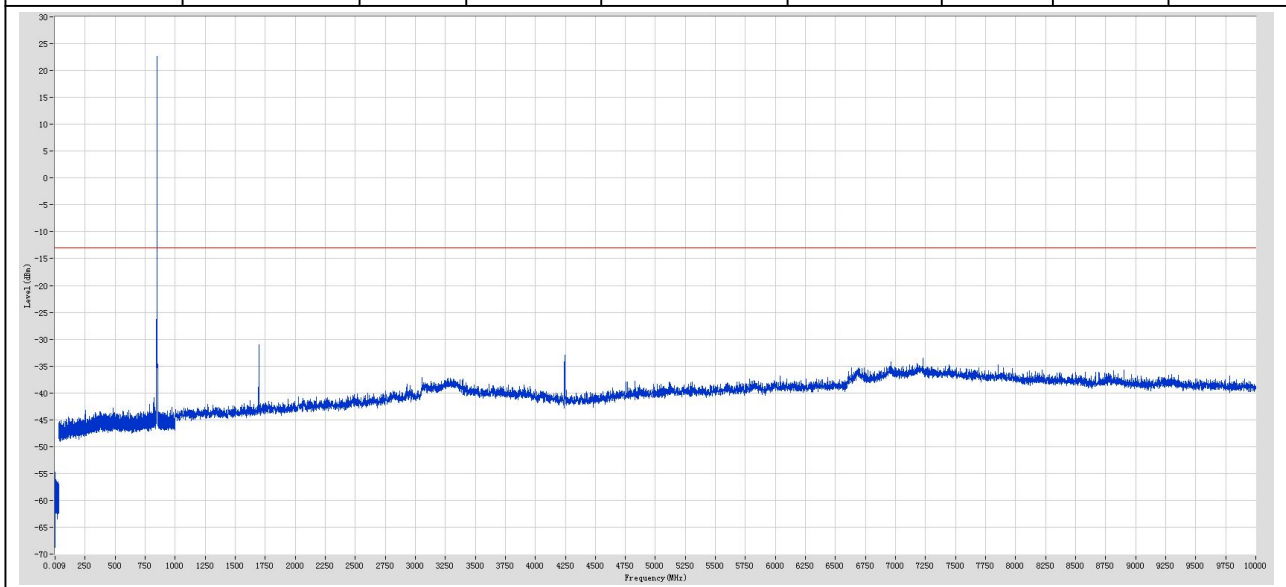
## EVDO Rev.A MCH

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | Peak     | 11.585 k       | -57.31         | -13         | Pass    | 601         |
| 0.15                  | 30                   | 0.01      | Peak     | 160.003 k      | -54.8          | -13         | Pass    | 2985        |
| 30                    | 500                  | 0.1       | Peak     | 395.677804 M   | -43.01         | -13         | Pass    | 4700        |
| 500                   | 1000                 | 0.1       | Peak     | 836.867373 M   | 23.8           | -13         | N/A     | 5000        |
| 1000                  | 10000                | 1         | Peak     | 1673.082163 M  | -30.67         | -13         | Pass    | 9000        |



## EVDO Rev.A HCH

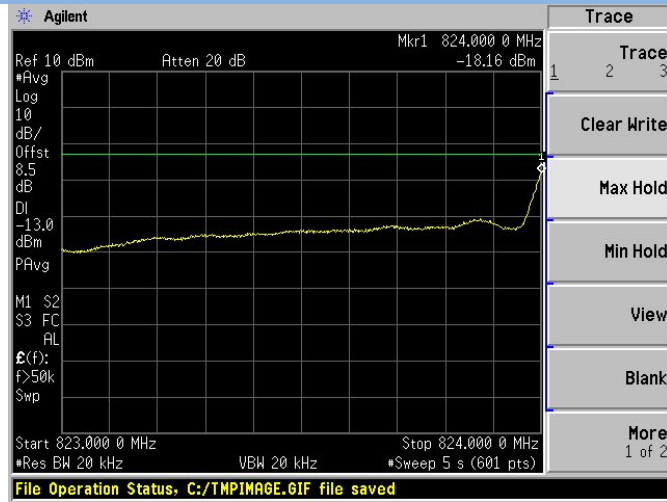
| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | Peak     | 11.82 k        | -57.44         | -13         | Pass    | 601         |
| 0.15                  | 30                   | 0.01      | Peak     | 710.188 k      | -54.75         | -13         | Pass    | 2985        |
| 30                    | 500                  | 0.1       | Peak     | 485.296872 M   | -42.88         | -13         | Pass    | 4700        |
| 500                   | 1000                 | 0.1       | Peak     | 848.569714 M   | 22.6           | -13         | N/A     | 5000        |
| 1000                  | 10000                | 1         | Peak     | 1698.085215 M  | -31.05         | -13         | Pass    | 9000        |



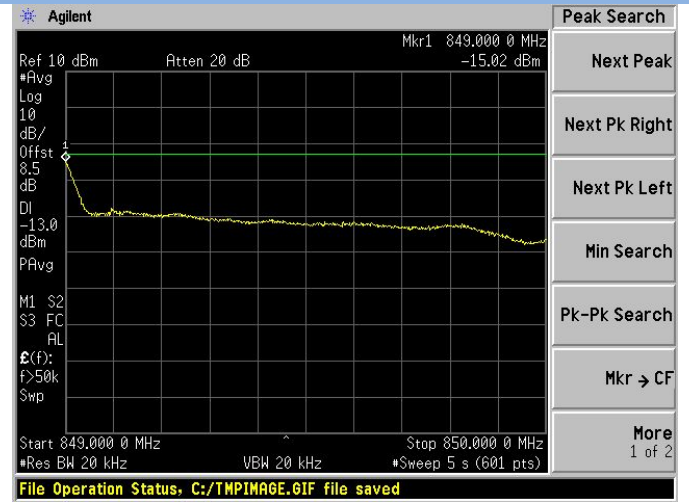
## A.5 Band Edge

### Test Result of Plots

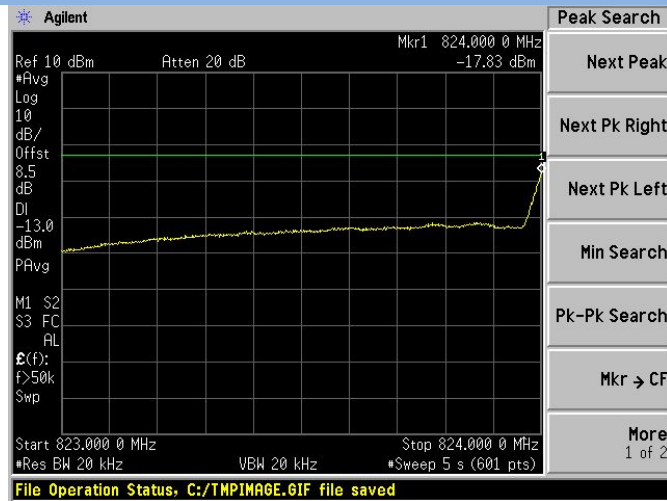
#### CDMA2000 BC0 LCH



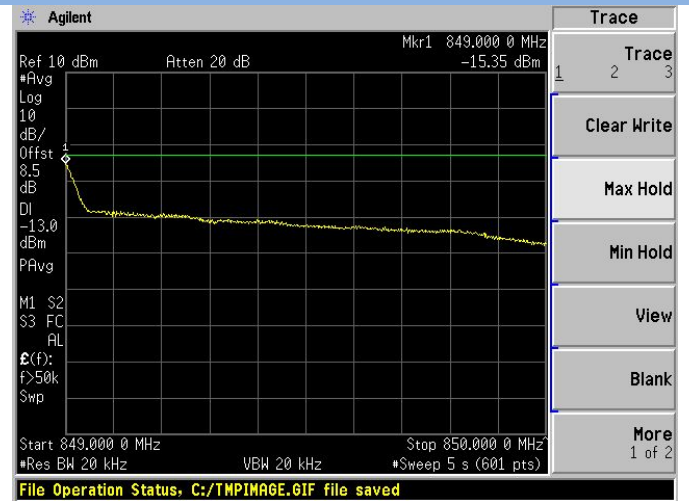
#### CDMA2000 BC0 HCH



#### EVDO Rev.A LCH



#### EVDO Rev.A HCH



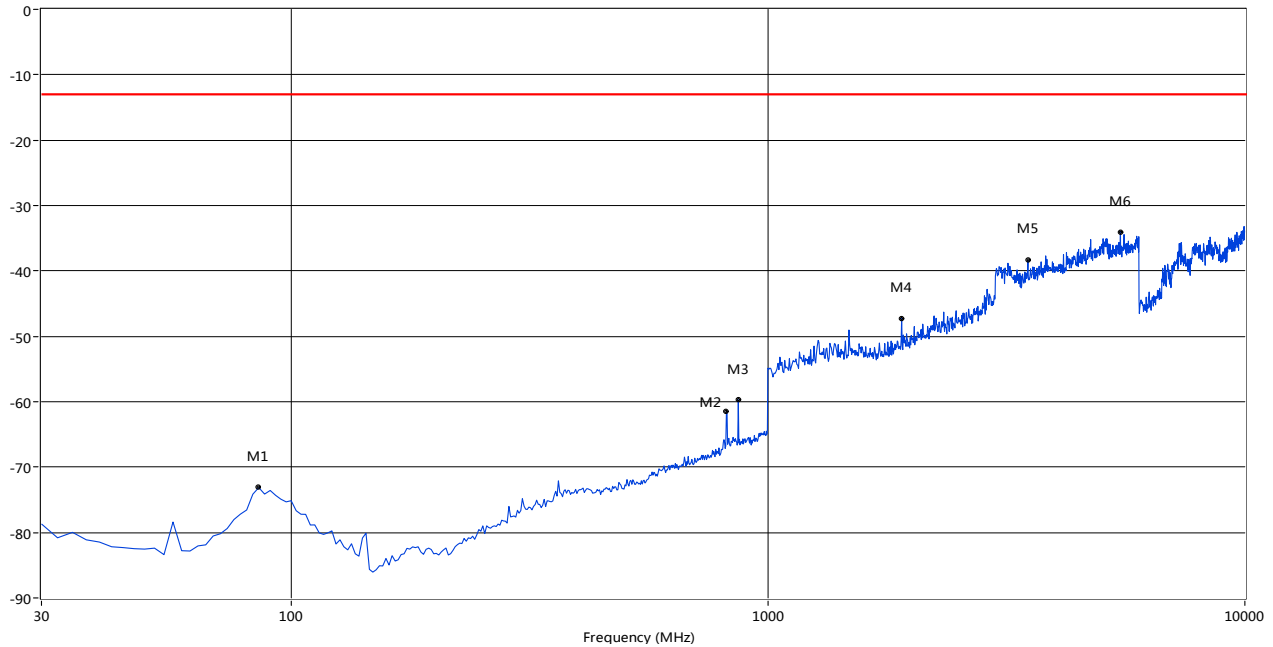
## A.6 Field Strength of Spurious Radiation

Note 1: The frequency of verdict which mark by "N/A" should be ignored because they are MS carrier frequency.

### Test Data

CDMA2000 BC0 LCH, ANT V

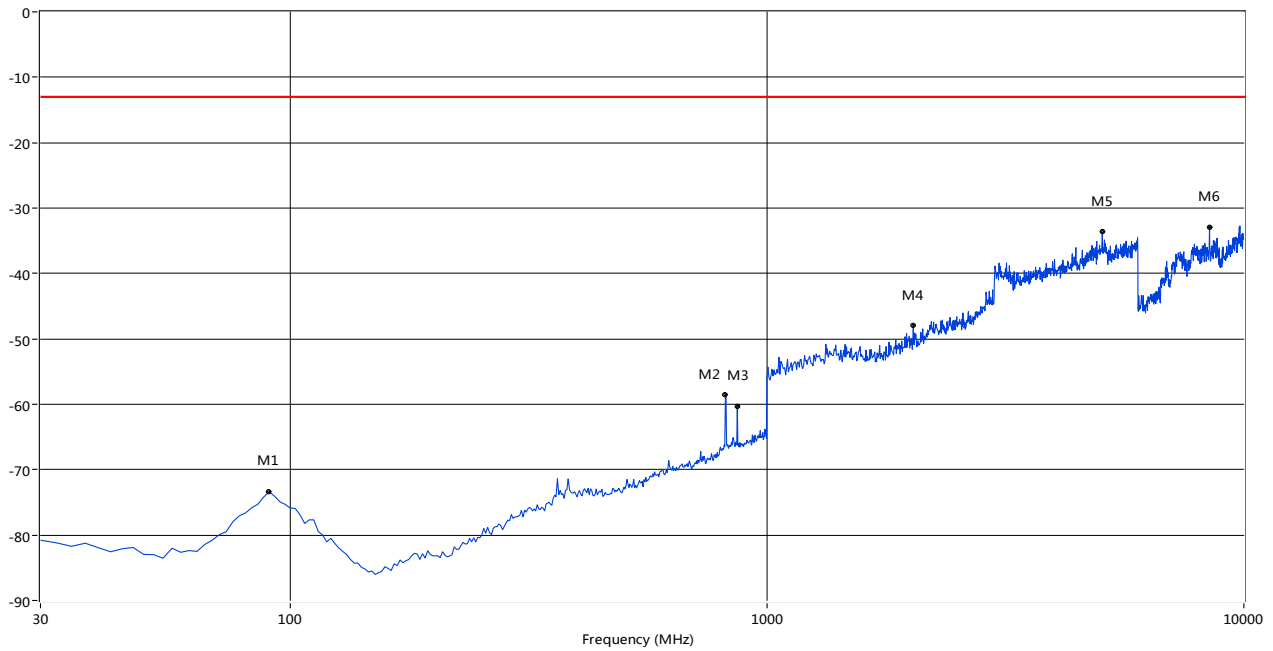
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT      | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|----------|---------|
| 85.64           | -73.12       | -3.55       | -13.0          | 60.12       | 21.70     | Vertical | Pass    |
| 818.58          | -61.39       | 5.15        | -13.0          | 48.39       | 246.00    | Vertical | Pass    |
| 866.96          | -59.70       | 5.27        | -13.0          | 46.70       | 199.40    | Vertical | Pass    |
| 1907.73         | -47.25       | 10.35       | -13.0          | 34.25       | 158.30    | Vertical | Pass    |
| 3508.73         | -38.38       | 22.39       | -13.0          | 25.38       | 321.20    | Vertical | Pass    |
| 5483.79         | -34.00       | 27.76       | -13.0          | 21.00       | 30.40     | Vertical | Pass    |

## CDMA2000 BC0 LCH, ANT H

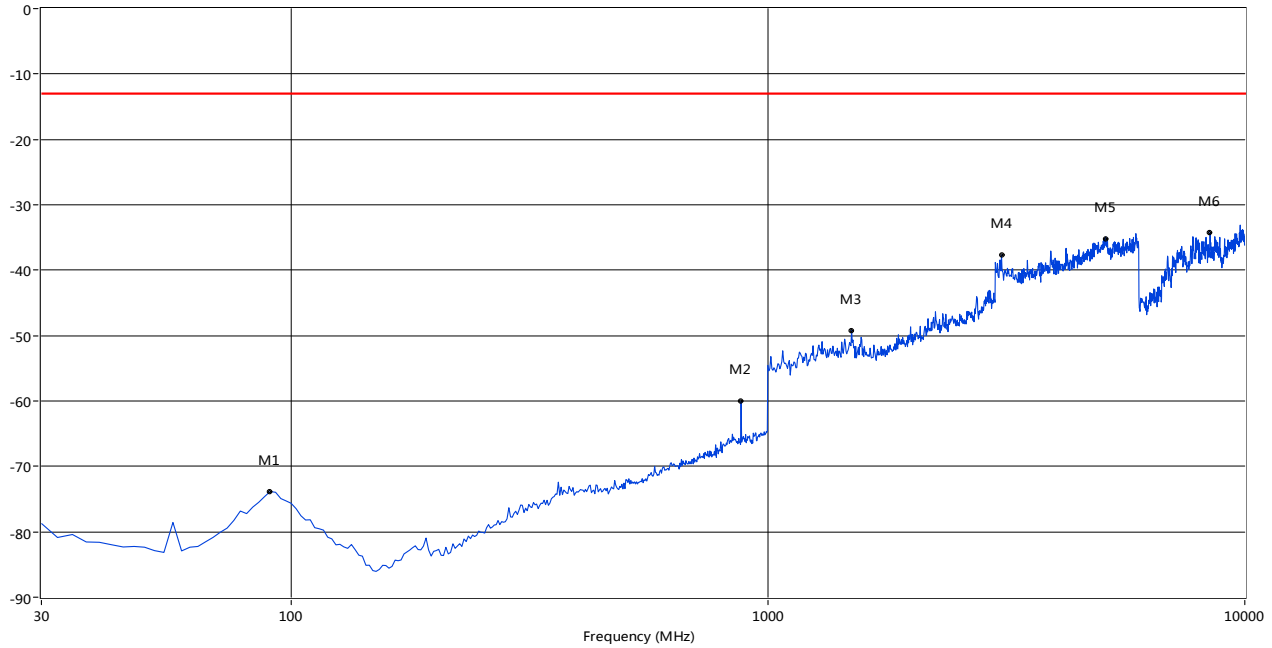
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT        | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|------------|---------|
| 90.47           | -73.39       | -2.10       | -13.0          | 60.39       | 179.30    | Horizontal | Pass    |
| 818.58          | -58.60       | 5.15        | -13.0          | 45.60       | 219.70    | Horizontal | Pass    |
| 866.96          | -60.30       | 5.27        | -13.0          | 47.30       | 100.10    | Horizontal | Pass    |
| 2027.43         | -47.97       | 11.15       | -13.0          | 34.97       | 173.40    | Horizontal | Pass    |
| 5049.88         | -33.67       | 27.86       | -13.0          | 20.67       | 43.50     | Horizontal | Pass    |
| 8473.82         | -32.90       | 35.47       | -13.0          | 19.90       | 354.40    | Horizontal | Pass    |

## CDMA2000 BC0 MCH, ANT V

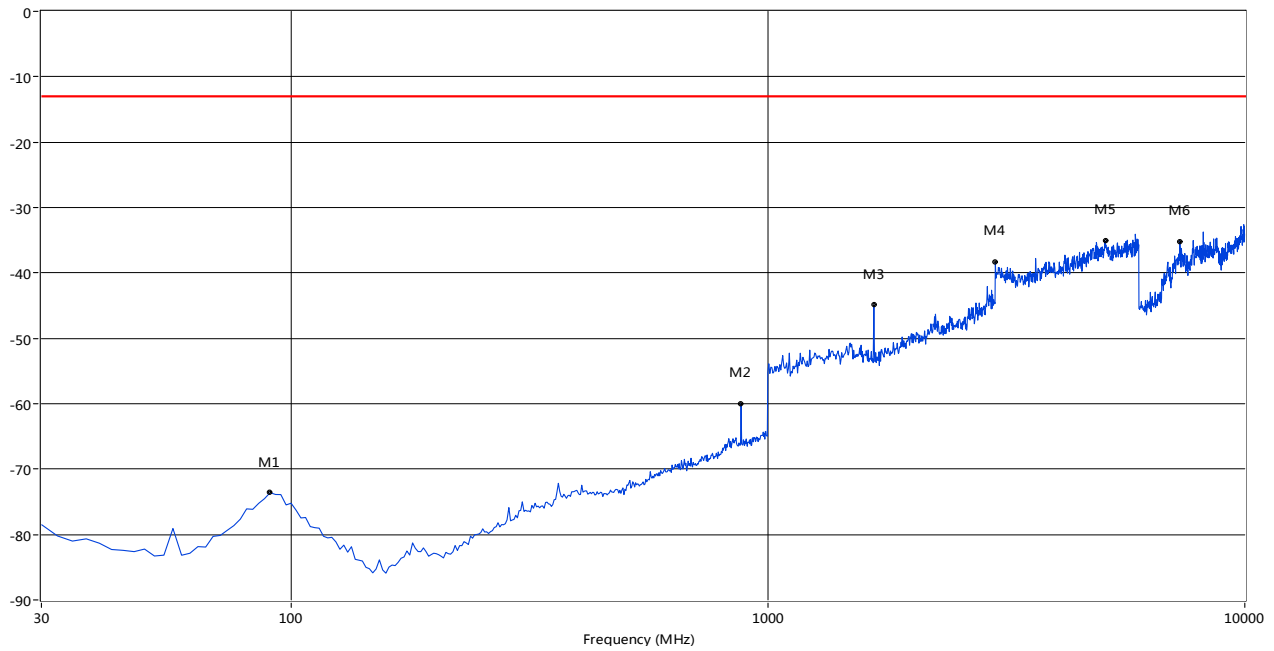
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT      | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|----------|---------|
| 90.47           | -73.85       | -2.10       | -13.0          | 60.85       | 327.50    | Vertical | Pass    |
| 879.05          | -60.02       | 5.43        | -13.0          | 47.02       | 190.50    | Vertical | Pass    |
| 1498.75         | -49.24       | 9.64        | -13.0          | 36.24       | 65.20     | Vertical | Pass    |
| 3089.78         | -37.67       | 21.82       | -13.0          | 24.67       | 343.40    | Vertical | Pass    |
| 5102.24         | -35.15       | 28.38       | -13.0          | 22.15       | 179.70    | Vertical | Pass    |
| 8453.87         | -34.23       | 35.49       | -13.0          | 21.23       | 299.60    | Vertical | Pass    |

## CDMA2000 BC0 MCH, ANT H

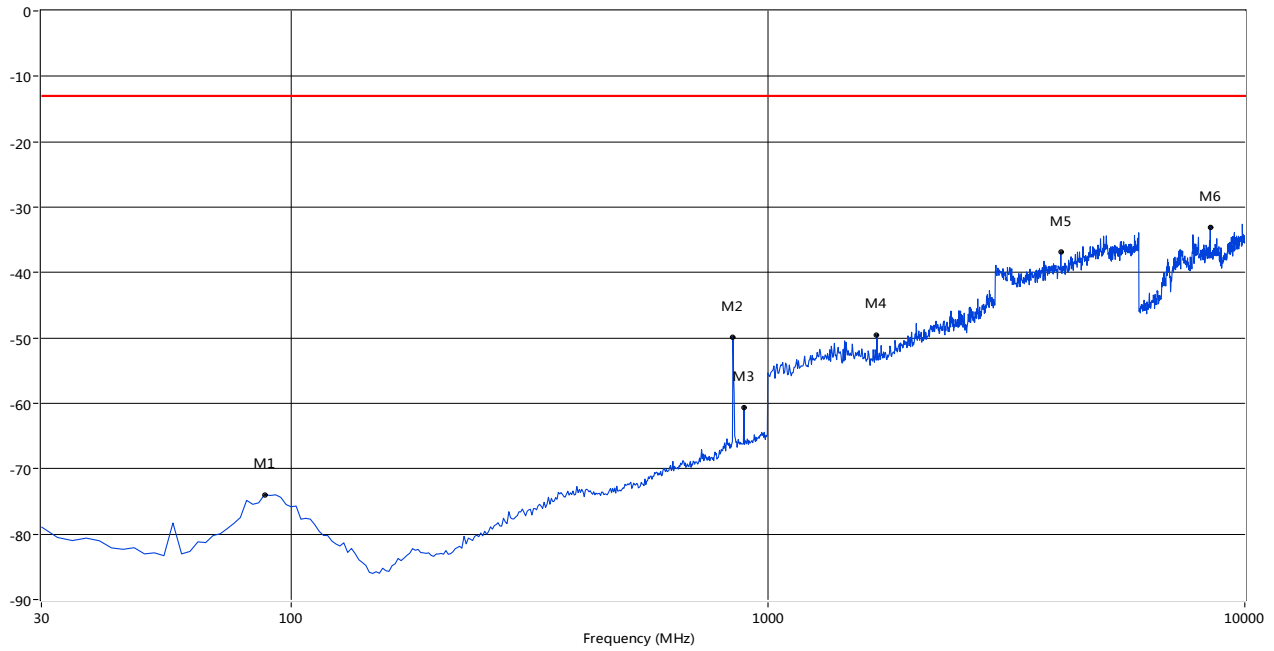
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT        | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|------------|---------|
| 90.47           | -73.60       | -2.10       | -13.0          | 60.60       | 154.50    | Horizontal | Pass    |
| 879.05          | -59.98       | 5.43        | -13.0          | 46.98       | 166.00    | Horizontal | Pass    |
| 1668.33         | -44.91       | 8.80        | -13.0          | 31.91       | 347.60    | Horizontal | Pass    |
| 3000.00         | -38.38       | 21.87       | -13.0          | 25.38       | 299.60    | Horizontal | Pass    |
| 5094.76         | -35.09       | 28.31       | -13.0          | 22.09       | 86.50     | Horizontal | Pass    |
| 7306.73         | -35.17       | 33.71       | -13.0          | 22.17       | 1.20      | Horizontal | Pass    |

## CDMA2000 BC0 HCH, ANT V

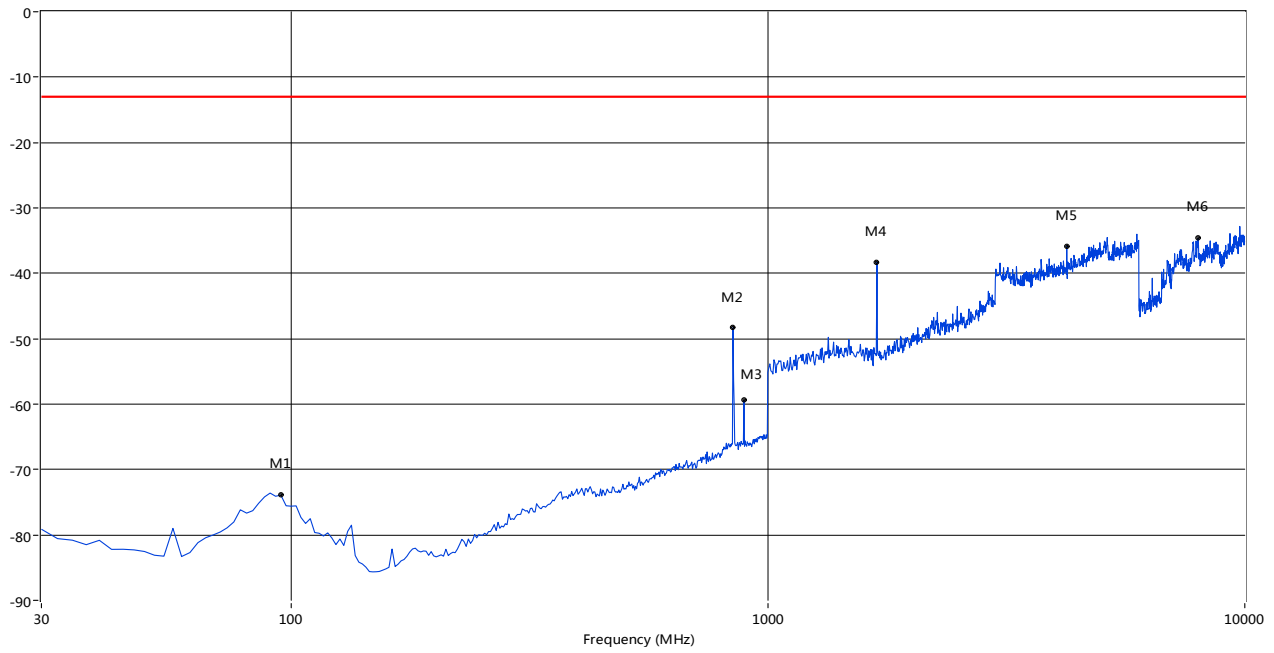
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT      | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|----------|---------|
| 88.06           | -73.95       | -2.64       | -13.0          | 60.95       | 219.40    | Vertical | Pass    |
| 845.19          | -49.91       | 5.58        | -13.0          | 36.91       | 334.90    | Vertical | Pass    |
| 891.15          | -60.57       | 5.60        | -13.0          | 47.57       | 188.70    | Vertical | Pass    |
| 1693.27         | -49.56       | 8.77        | -13.0          | 36.56       | 191.80    | Vertical | Pass    |
| 4114.71         | -36.88       | 24.19       | -13.0          | 23.88       | 205.10    | Vertical | Pass    |
| 8463.84         | -33.05       | 35.97       | -13.0          | 20.05       | 109.90    | Vertical | Pass    |

## CDMA2000 BC0 HCH, ANT H

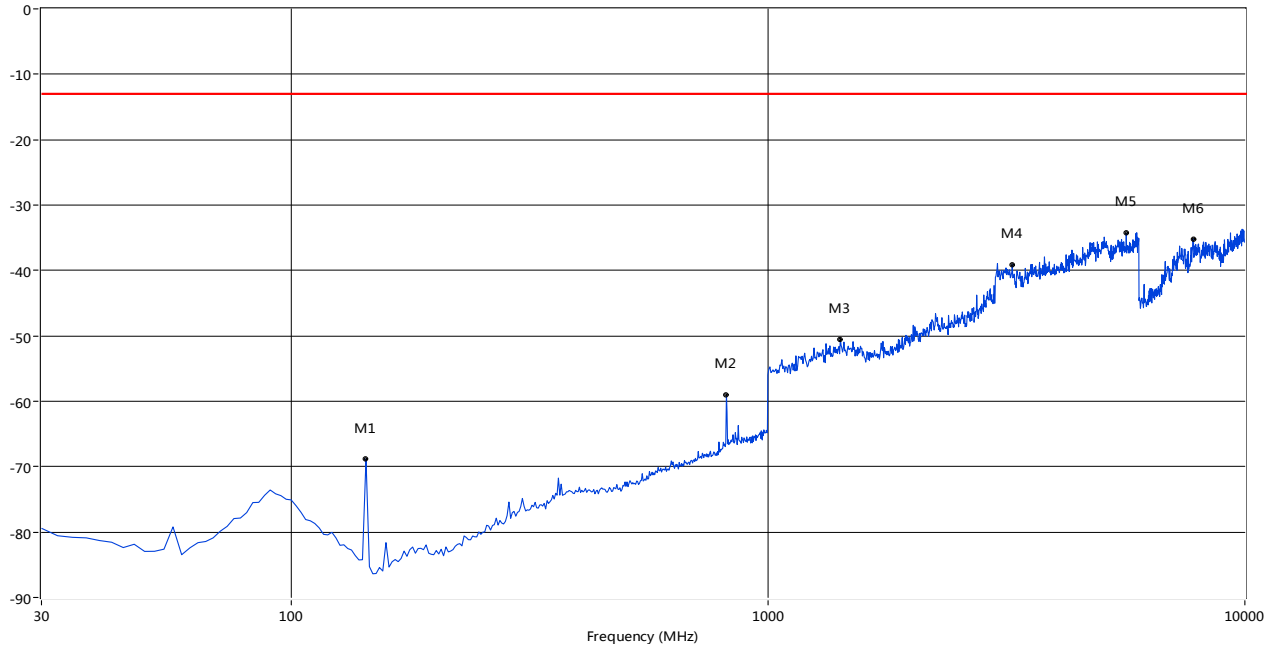
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT        | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|------------|---------|
| 95.31           | -73.90       | -3.33       | -13.0          | 60.90       | 269.00    | Horizontal | Pass    |
| 845.19          | -48.32       | 5.58        | -13.0          | 35.32       | 341.60    | Horizontal | Pass    |
| 891.15          | -59.41       | 5.60        | -13.0          | 46.41       | 160.10    | Horizontal | Pass    |
| 1693.27         | -38.29       | 8.77        | -13.0          | 25.29       | 247.50    | Horizontal | Pass    |
| 4234.41         | -35.88       | 24.76       | -13.0          | 22.88       | 14.90     | Horizontal | Pass    |
| 7985.04         | -34.65       | 35.01       | -13.0          | 21.65       | 217.30    | Horizontal | Pass    |

## EVDO Rev.A LCH, ANT V

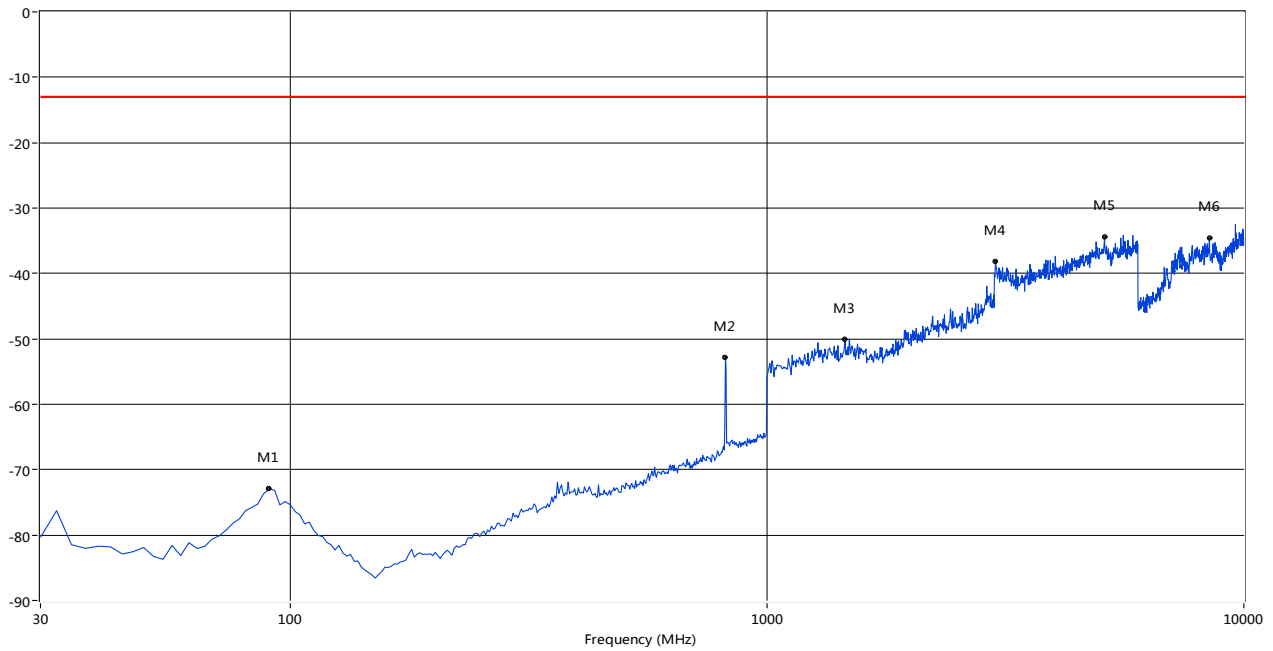
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT      | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|----------|---------|
| 143.69          | -68.79       | -13.84      | -13.0          | 55.79       | 8.00      | Vertical | Pass    |
| 818.58          | -58.99       | 5.15        | -13.0          | 45.99       | 243.40    | Vertical | Pass    |
| 1418.95         | -50.49       | 9.26        | -13.0          | 37.49       | 268.80    | Vertical | Pass    |
| 3254.36         | -39.11       | 21.75       | -13.0          | 26.11       | 71.30     | Vertical | Pass    |
| 5640.90         | -34.32       | 27.85       | -13.0          | 21.32       | -0.00     | Vertical | Pass    |
| 7785.54         | -35.15       | 34.92       | -13.0          | 22.15       | 169.20    | Vertical | Pass    |

## EVDO Rev.A LCH, ANT H

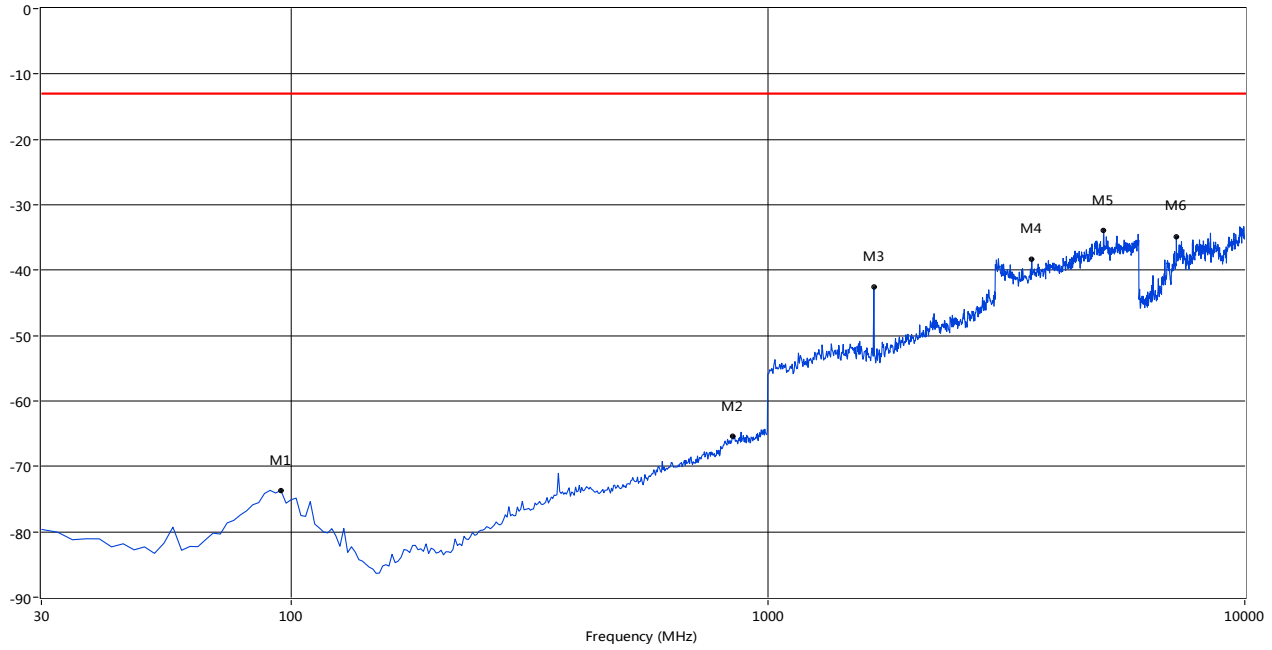
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT        | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|------------|---------|
| 90.47           | -72.90       | -2.10       | -13.0          | 59.90       | 75.00     | Horizontal | Pass    |
| 818.58          | -52.76       | 5.15        | -13.0          | 39.76       | 1.00      | Horizontal | Pass    |
| 1458.85         | -49.99       | 9.20        | -13.0          | 36.99       | 43.80     | Horizontal | Pass    |
| 3014.96         | -38.08       | 21.89       | -13.0          | 25.08       | 360.60    | Horizontal | Pass    |
| 5102.24         | -34.41       | 28.38       | -13.0          | 21.41       | 358.10    | Horizontal | Pass    |
| 8463.84         | -34.62       | 35.97       | -13.0          | 21.62       | 310.90    | Horizontal | Pass    |

## EVDO Rev.A MCH, ANT V

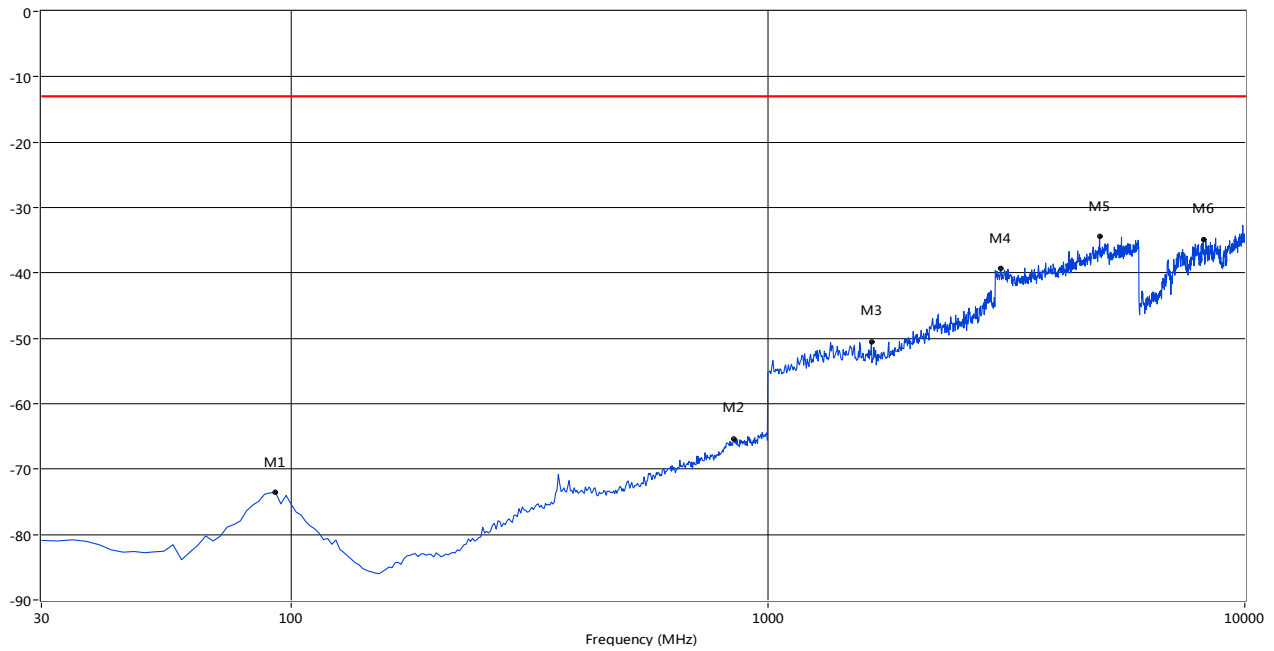
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT      | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|----------|---------|
| 95.31           | -73.66       | -3.33       | -13.0          | 60.66       | 359.10    | Vertical | Pass    |
| 842.77          | -65.37       | 5.54        | -13.0          | 52.37       | 302.70    | Vertical | Pass    |
| 1668.33         | -46.22       | 8.80        | -13.0          | 33.22       | 11.40     | Vertical | Pass    |
| 3576.06         | -38.39       | 22.65       | -13.0          | 25.39       | 348.90    | Vertical | Pass    |
| 5057.36         | -33.95       | 28.02       | -13.0          | 20.95       | 79.10     | Vertical | Pass    |
| 7187.03         | -34.81       | 33.09       | -13.0          | 21.81       | 82.80     | Vertical | Pass    |

## EVDO Rev.A MCH, ANT H

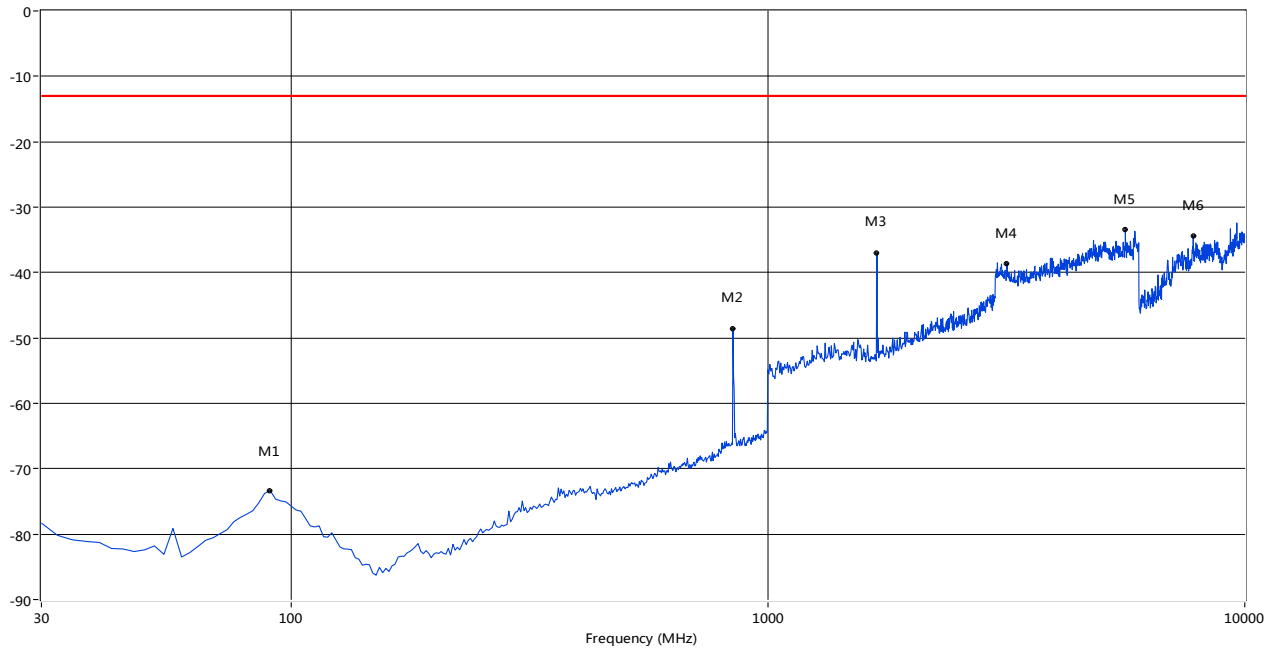
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT        | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|------------|---------|
| 92.89           | -73.59       | -2.67       | -13.0          | 60.59       | 66.90     | Horizontal | Pass    |
| 847.61          | -65.43       | 5.62        | -13.0          | 52.43       | 153.10    | Horizontal | Pass    |
| 1648.38         | -50.55       | 8.87        | -13.0          | 37.55       | -0.10     | Horizontal | Pass    |
| 3082.29         | -39.34       | 21.88       | -13.0          | 26.34       | 359.30    | Horizontal | Pass    |
| 4960.10         | -34.47       | 27.39       | -13.0          | 21.47       | 171.30    | Horizontal | Pass    |
| 8184.54         | -34.86       | 35.53       | -13.0          | 21.86       | 7.80      | Horizontal | Pass    |

## EVDO Rev.A HCH, ANT V

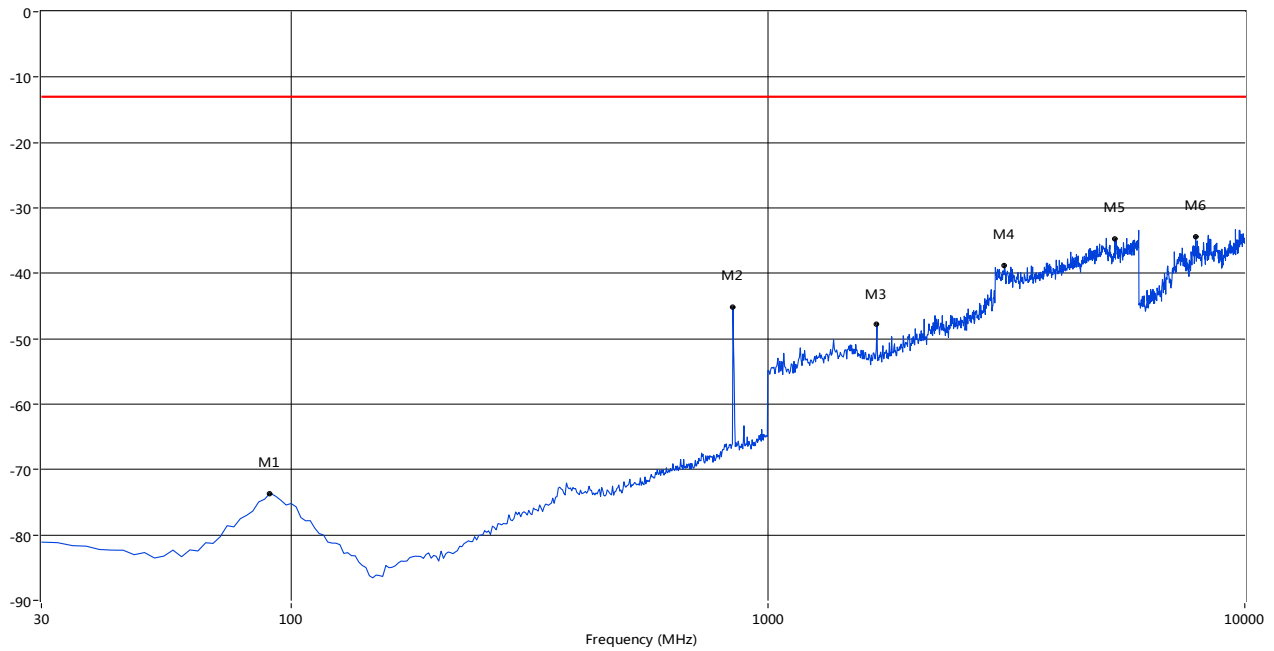
RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT      | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|----------|---------|
| 90.47           | -73.31       | -2.10       | -13.0          | 60.31       | 244.90    | Vertical | Pass    |
| 845.19          | -48.53       | 5.58        | -13.0          | 35.53       | 233.10    | Vertical | Pass    |
| 1693.27         | -36.99       | 8.77        | -13.0          | 23.99       | 253.90    | Vertical | Pass    |
| 3172.07         | -38.60       | 21.94       | -13.0          | 25.60       | 316.00    | Vertical | Pass    |
| 5618.45         | -33.50       | 27.80       | -13.0          | 20.50       | 219.60    | Vertical | Pass    |
| 7795.51         | -34.45       | 35.21       | -13.0          | 21.45       | 195.60    | Vertical | Pass    |

## EVDO Rev.A HCH, ANT H

RSE Test case\_FCC PART 22



| Frequency (MHz) | Result (dBm) | Factor (dB) | PK Limit (dBm) | Margin (dB) | Table (o) | ANT        | Verdict |
|-----------------|--------------|-------------|----------------|-------------|-----------|------------|---------|
| 90.47           | -73.62       | -2.10       | -13.0          | 60.62       | 326.70    | Horizontal | Pass    |
| 845.19          | -45.16       | 5.58        | -13.0          | 32.16       | 357.20    | Horizontal | Pass    |
| 1693.27         | -47.85       | 8.77        | -13.0          | 34.85       | 297.20    | Horizontal | Pass    |
| 3134.66         | -38.81       | 21.88       | -13.0          | 25.81       | 51.60     | Horizontal | Pass    |
| 5341.65         | -34.70       | 27.70       | -13.0          | 21.70       | 170.80    | Horizontal | Pass    |
| 7885.29         | -34.35       | 35.38       | -13.0          | 21.35       | 253.90    | Horizontal | Pass    |

## **ANNEX B TEST SETUP PHOTO**

Please refer the document “BL-SZ1590048-AR.pdf”.

## **ANNEX C EUT EXTERNAL PHOTO**

Please refer the document “BL-SZ1590048-AW.pdf”.

## **ANNEX D EUT INTERNAL PHOTO**

Please refer the document “BL-SZ1590048-AI.pdf”.

--END OF REPORT--