



FCC TEST REPORT (PART 22)

REPORT NO.: RF111215C07

MODEL NO.: C525

FCC ID: UZI-C525

RECEIVED: Dec. 15, 2011

TESTED: Dec. 16, 2011 ~ Jan. 04, 2012

ISSUED: Jan. 11, 2012

APPLICANT: BandRich Inc.

ADDRESS: 6F., No. 71, Zhouzi St., Neihu Dist., Taipei City
11493, Taiwan (R.O.C.)

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist.,
New Taipei City, Taiwan (R.O.C)

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|------------------|-------------------|---------------|
| Original release | N/A | Jan. 11, 2012 |



1 CERTIFICATION

PRODUCT: LTE/EVDO Rev. A USB Modem
MODEL NO.: C525
BRAND: BandLuxe
APPLICANT: BandRich Inc.
TEST SAMPLE: ENGINEERING SAMPLE
TESTED: Dec. 16, 2011 ~ Jan. 04, 2012
STANDARDS: **FCC Part 22, Subpart H**
ANSI C63.4-2003

The above equipment (model: C525) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY :  , DATE : Jan. 11, 2012
Pettie Chen / Specialist

APPROVED BY :  , DATE : Jan. 11, 2012
Gary Chang / Technical Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 22 & Part 2 | | | |
|--|--|--------|---|
| STANDARD SECTION | TEST TYPE AND LIMIT | RESULT | REMARK |
| 2.1046 22.913 (a) | Maximum Peak Output Power Limit: max. 7 watts e.r.p peak power | PASS | Meet the requirement of limit. Max. e.r.p is 23.1dBm at 836.52MHz. |
| 2.1055 | Frequency Stability AFC Freq. Error vs. Voltage AFC Freq. Error vs. Temperature Limit: max. ± 2.5 ppm | PASS | Meet the requirement of limit. |
| 2.1049 (h) | Occupied Bandwidth | PASS | Meet the requirement of limit. |
| 22.917 | Band Edge Measurements | PASS | Meet the requirement of limit. |
| 2.1051 22.917 | Conducted Spurious Emissions | PASS | Meet the requirement of limit. |
| 2.1053 22.917 | Radiated Spurious Emissions | PASS | Meet the requirement of limit. Minimum passing margin is -6.3.3dB at 1673.0MHz. |

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT | FREQUENCY | UNCERTAINTY |
|---------------------|-----------------|-------------|
| Conducted emissions | 9kHz~30MHz | 2.44 dB |
| Radiated emissions | 30MHz ~ 200MHz | 2.93 dB |
| | 200MHz ~1000MHz | 2.95 dB |
| | 1GHz ~ 18GHz | 2.26 dB |
| | 18GHz ~ 40GHz | 1.94 dB |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



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3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

| | |
|--------------------------|---|
| EUT | LTE/EVDO Rev. A USB Modem |
| MODEL NO. | C525 |
| FCC ID | UZI-C525 |
| POWER SUPPLY | 5.0Vdc (host equipment) |
| MODULATION TYPE | QPSK, OQPSK, HPSK |
| FREQUENCY RANGE | 824.7MHz ~ 848.31MHz |
| MAX. ERP POWER | 23.1dBm (0.2042Watts) |
| ANTENNA TYPE | Internal monopole antenna with -2dBi gain |
| DATA CABLE | 0.5m non-shielded USB cable without core |
| I/O PORTS | Refer to user's manual |
| ACCESSORY DEVICES | NA |

NOTE:

1. IMEI: 35185905*****.
2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

FOR CDMA:

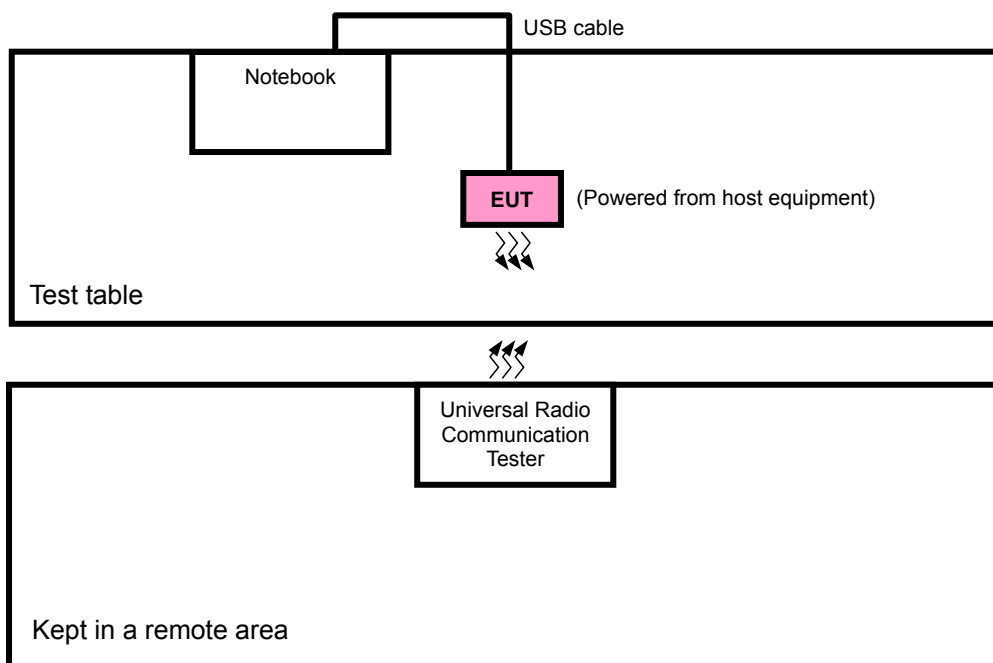
788 channels are provided to this EUT in the CDMA BC 0 band. Therefore, the low, middle and high channels are chosen for testing.

| | CHANNEL | FREQUENCY | TX MODE |
|--------|---------|------------|---------------|
| LOW | 1013 | 824.70 MHz | 1xEVDO Rev. A |
| MIDDLE | 384 | 836.52 MHz | 1xEVDO Rev. A |
| HIGH | 777 | 848.31 MHz | 1xEVDO Rev. A |

NOTE:

1. Below 1 GHz, the channel 1013, 384 and 777 were pre-tested in chamber. The channel 384 was the worst case and chosen for final test.
2. Above 1 GHz, the channel 1013, 384 and 777 were tested individually.
3. The channel space is 0.03MHz.
4. After pretest of output power and spurious emission under 1xEVDO Rev. A, 1xEVDO Rev. 0, CDMA mode, find the worst mode is 1xEVDO Rev. A. Therefore, select 1xEVDO Rev. A mode to do final test

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST





3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

FOR CDMA:

| EUT CONFIGURE MODE | APPLICABLE TO | | | | | | | DESCRIPTION |
|--------------------|---------------|----|----|----|----|-------|-------|-------------|
| | OP | FS | OB | BE | CE | RE<1G | RE≥1G | |
| - | √ | √ | √ | √ | √ | √ | √ | - |

Where **OP**: Output power
OB: Occupied bandwidth
CE: Conducted spurious emissions
RE≥1G: Radiated emission above 1GHz
FS: Frequency stability
BE: Band edge
RE<1G: Radiated emission below 1GHz

NOTE: Speed mode worst enable during the test

OUTPUT POWER MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | AXIS |
|-------------------|----------------|------------------------------------|------|
| 1013 to 777 | 1013, 384, 777 | CDMA, 1xEVDO Rev. A, 1xEVDO Rev. 0 | Y |

FREQUENCY STABILITY MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY |
|-------------------|----------------|-----------------------|
| 1013 to 777 | 384 | CDMA |

OCCUPIED BANDWIDTH MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY |
|-------------------|----------------|------------------------------------|
| 1013 to 777 | 1013, 384, 777 | CDMA, 1xEVDO Rev. A, 1xEVDO Rev. 0 |

BAND EDGE MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY |
|-------------------|----------------|------------------------------------|
| 1013 to 777 | 1013, 777 | CDMA, 1xEVDO Rev. A, 1xEVDO Rev. 0 |

CONDUCTED SPURIOUS EMISSIONS MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY |
|-------------------|----------------|-----------------------|
| 1013 to 777 | 1013, 384, 777 | 1xEVDO Rev. A |

RADIATED EMISSION MEASUREMENT (BELOW 1 GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | AXIS |
|-------------------|----------------|-----------------------|------|
| 1013 to 777 | 384 | 1xEVDO Rev. A | Y |

RADIATED EMISSION MEASUREMENT (ABOVE 1 GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

| AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | AXIS |
|-------------------|----------------|-----------------------|------|
| 1013 to 777 | 1013, 384, 777 | 1xEVDO Rev. A | Y |



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TEST CONDITION:

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER (SYSTEM) | TESTED BY |
|---------------|--------------------------|----------------------|-----------|
| OP | 25deg. C, 65%RH | 120Vac, 60Hz | Mark Liao |
| FS | 25deg. C, 65%RH | 120Vac, 60Hz | Mark Liao |
| OB | 25deg. C, 65%RH | 120Vac, 60Hz | Mark Liao |
| EM | 25deg. C, 65%RH | 120Vac, 60Hz | Mark Liao |
| BE | 25deg. C, 65%RH | 120Vac, 60Hz | Mark Liao |
| CE | 25deg. C, 65%RH | 120Vac, 60Hz | Mark Liao |
| RE < 1G | 25deg. C, 65%RH | 120Vac, 60Hz | Kay Wu |
| RE ≥ 1G | 25deg. C, 65%RH | 120Vac, 60Hz | Kay Wu |

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 22

ANSI C63.4-2003

ANSI/TIA/EIA-603-C 2004

NOTE: All test items have been performed and recorded as per the above standards.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT | BRAND | MODEL NO. | SERIAL NO. | FCC ID |
|-----|--------------------------------------|-------|-----------|------------|------------------|
| 1 | NOTEBOOK | DELL | E5410 | 1HC2XM1 | FCC DoC Approved |
| 2 | UNIVERSAL RADIO COMMUNICATION TESTER | R&S | CMU200 | 104484 | NA |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|---|
| 1 | NA |
| 2 | NA |

NOTE 1: All power cords of the above support units are non shielded (1.8m).

NOTE 2: Item 2 acted as a communication partner to transfer data.

4 TEST TYPES AND RESULTS

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 22.913 (a) that "Mobile / Portable station are limited to 7 watts e.r.p".

4.1.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|---|------------------------------|------------------|---------------------|-------------------------|
| Test Receiver ROHDE & SCHWARZ | ESIB7 | 100212 | Aug. 02, 2011 | Aug. 01, 2012 |
| Spectrum Analyzer ROHDE & SCHWARZ | FSP40 | 100041 | Jul. 21, 2011 | Jul. 20, 2012 |
| BILOG Antenna SCHWARZBECK | VULB9168 | 9168-160 | Apr. 13, 2011 | Apr. 12, 2012 |
| HORN Antenna SCHWARZBECK | 9120D | 209 | Aug. 25, 2011 | Aug. 24, 2012 |
| HORN Antenna SCHWARZBECK | BBHA 9170 | 148 | Jul. 20, 2011 | Jul. 19, 2012 |
| Preamplifier Agilent | 8447D | 2944A10633 | Oct. 29, 2011 | Oct. 28, 2012 |
| Preamplifier Agilent | 8449B | 3008A01964 | Oct. 29, 2011 | Oct. 28, 2012 |
| RF signal cable HUBER+SUHNNER | SUCOFLEX 104 | 250723/4 | Aug. 30, 2011 | Aug. 29, 2012 |
| RF signal cable HUBER+SUHNNER | SUCOFLEX 106 | 12738/6+309224/4 | Aug. 30, 2011 | Aug. 29, 2012 |
| Software ADT. | ADT_Radiated_ V7.6.15.9.2 | NA | NA | NA |
| Antenna Tower inn-co GmbH | MA 4000 | 013303 | NA | NA |
| Antenna Tower Controller inn-co GmbH | CO2000 | 017303 | NA | NA |
| Turn Table ADT. | TT100. | TT93021703 | NA | NA |
| Turn Table Controller ADT. | SC100. | SC93021703 | NA | NA |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Chamber 3.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 988962.
 5. The IC Site Registration No. is IC 7450F-3.

4.1.3 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

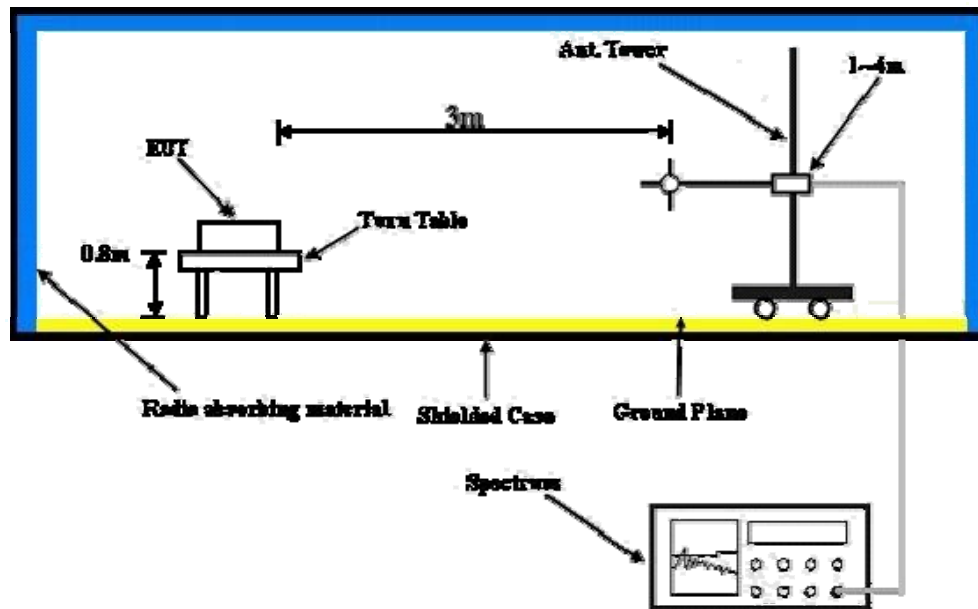
- a. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels, 1013, 384 and 777 (CDMA).
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step c. Record the power level of S.G
- d. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- e. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi}$.

CONDUCTED POWER MEASUREMENT:

- a. The EUT was set up for the maximum power with CDMA link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

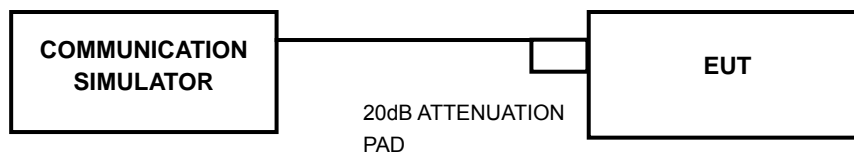
4.1.4 TEST SETUP

EIRP / ERP MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.5 EUT OPERATING CONDITIONS

- a. The EUT makes a call to the communication simulator.
- b. The communication simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency.

4.1.6 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

| Band | CDMA | | |
|------------------|--------|--------|--------|
| | 1013 | 384 | 777 |
| Channel | 824.70 | 836.52 | 848.31 |
| Frequency (MHz) | 824.70 | 836.52 | 848.31 |
| RC1+SO55 | 24.36 | 24.61 | 23.95 |
| RC3+SO55 | 24.28 | 24.59 | 23.86 |
| RC3+SO32(+F-SCH) | 24.28 | 24.58 | 23.89 |
| RC3+SO32(+SCH) | 23.02 | 22.97 | 22.93 |
| 1x EV-DO Rev. 0 | 24.40 | 24.69 | 23.92 |
| 1x EV-DO Rev. A | 24.38 | 24.66 | 23.94 |



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ERP POWER

FOR CDMA:

FOR CDMA MODE

| MODE | | TX channel 1013 | | | | | |
|---|-------------|-----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 824.7 | -9.7 | 23.6 | 0.0 | 21.5 | 38.5 | -17.0 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 824.7 | -14.7 | 16.8 | 0.0 | 14.7 | 38.5 | -23.9 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

| MODE | | TX channel 384 | | | | | |
|---|-------------|----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 836.52 | -8.7 | 23.7 | 0.3 | 21.9 | 38.5 | -16.6 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 836.52 | -14.5 | 17.5 | 0.3 | 15.7 | 38.5 | -22.9 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

| MODE | | TX channel 777 | | | | | |
|---|-------------|----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 848.31 | -9.6 | 22.8 | 0.5 | 21.2 | 38.5 | -17.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 848.31 | -17.1 | 15.8 | 0.5 | 14.2 | 38.5 | -24.4 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

FOR 1xEVDO Rev. A MODE

| MODE | | TX channel 1013 | | | | | |
|---|-------------|-----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 824.7 | -8.6 | 24.7 | 0.0 | 22.6 | 38.5 | -15.9 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 824.7 | -13.9 | 17.6 | 0.0 | 15.5 | 38.5 | -23.0 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

| MODE | | TX channel 384 | | | | | |
|---|-------------|----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 836.52 | -7.5 | 24.9 | 0.3 | 23.1 | 38.5 | -15.4 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 836.52 | -13.5 | 18.5 | 0.3 | 16.7 | 38.5 | -21.8 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

| MODE | | TX channel 777 | | | | | |
|---|-------------|----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 848.31 | -8.6 | 23.8 | 0.5 | 22.2 | 38.5 | -16.3 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 848.31 | -16.1 | 16.8 | 0.5 | 15.2 | 38.5 | -23.4 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

FOR 1xEVDO Rev. 0 MODE

| MODE | | TX channel 1013 | | | | | |
|---|-------------|-----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 824.7 | -9.3 | 24.0 | 0.0 | 21.9 | 38.5 | -16.6 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 824.7 | -14.1 | 17.4 | 0.0 | 15.2 | 38.5 | -23.2 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

| MODE | | TX channel 384 | | | | | |
|---|-------------|----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 836.52 | -8.3 | 24.1 | 0.3 | 22.2 | 38.5 | -16.2 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 836.52 | -13.9 | 18.1 | 0.3 | 16.2 | 38.5 | -22.2 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

| MODE | | TX channel 777 | | | | | |
|---|-------------|----------------|-----------------------|------------------------|-----------|-------------|-------------|
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 848.31 | -9.1 | 23.3 | 0.5 | 21.7 | 38.5 | -16.8 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 848.31 | -16.6 | 16.3 | 0.5 | 14.7 | 38.5 | -23.9 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

According to the FCC part 22.863 shall be tested the frequency stability. The rule is defined that "The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The frequency error rate is according to the JTC standard that the frequency error rate shall be accurate to within 2.5ppm of the received frequency from the base station. The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with the 2.1055(a)(1) $-30^{\circ}\text{C} \sim 55^{\circ}\text{C}$.

4.2.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|---|--------------|------------|---------------------|-------------------------|
| Spectrum Analyzer Agilent | E4446A | MY43360128 | Feb. 22, 2011 | Feb. 21, 2012 |
| Hewlett Packard RF cable | 8120-6192 | 01428251 | NA | NA |
| RF cable | SUCOFLEX 104 | 257029 | Sep. 11, 2011 | Sep. 10, 2012 |
| WIT Standard Temperature & Humidity Chamber | MHU-225AU | 920842 | Jun. 15, 2011 | Jun. 14, 2012 |

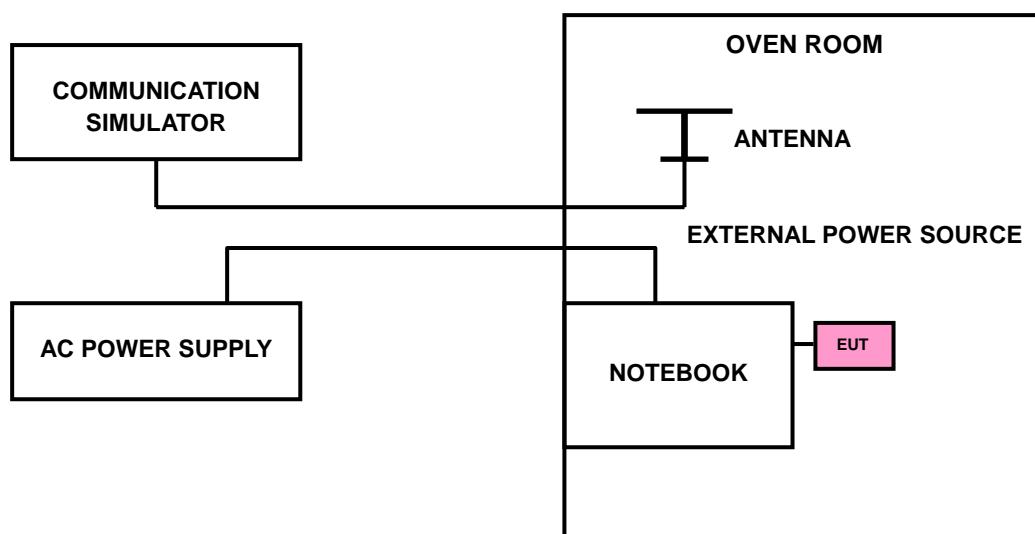
NOTE: The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.2.3 TEST PROCEDURE

- a. Because of the measure the carrier frequency under the condition of the AFC lock, it shall be used the mobile station in the CDMA link mode. This is accomplished with the use of the R&S CMU200 simulator station. The oven room could control the temperatures and humidity. The CDMA link channel is the 384.
- b. Power must be removed when changing from one temperature to another or one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- c. EUT is connected the external power supply to control the DC input power. The various Volts from the minimum 93.5Volts to 126.5Volts. Each step shall be record the frequency error rate.
- d. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing.
- e. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.4 TEST SETUP



4.2.5 TEST RESULTS

FOR CDMA:

| AFC FREQUENCY ERROR vs. VOLTAGE | | | |
|---------------------------------|----------------------|-----------------------|-------------|
| VOLTAGE (Volts) | FREQUENCY ERROR (Hz) | FREQUENCY ERROR (ppm) | LIMIT (ppm) |
| 126.5 | -12 | -0.014 | 2.5 |
| 93.5 | -7 | -0.008 | 2.5 |

NOTE: The applicant defined the normal working voltage of the host equipment is from 93.5Vac to 126.5Vac.

| AFC FREQUENCY ERROR vs. TEMP. | | | |
|-------------------------------|----------------------|-----------------------|-------------|
| TEMP. (°C) | FREQUENCY ERROR (Hz) | FREQUENCY ERROR (ppm) | LIMIT (ppm) |
| 55 | -13 | -0.016 | 2.5 |
| 50 | -11 | -0.013 | 2.5 |
| 40 | -9 | -0.011 | 2.5 |
| 30 | -7 | -0.008 | 2.5 |
| 20 | -8 | -0.010 | 2.5 |
| 10 | -6 | -0.007 | 2.5 |
| 0 | -5 | -0.006 | 2.5 |
| -10 | -3 | -0.004 | 2.5 |
| -20 | -4 | -0.005 | 2.5 |
| -30 | -6 | -0.007 | 2.5 |

4.3 OCCUPIED BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

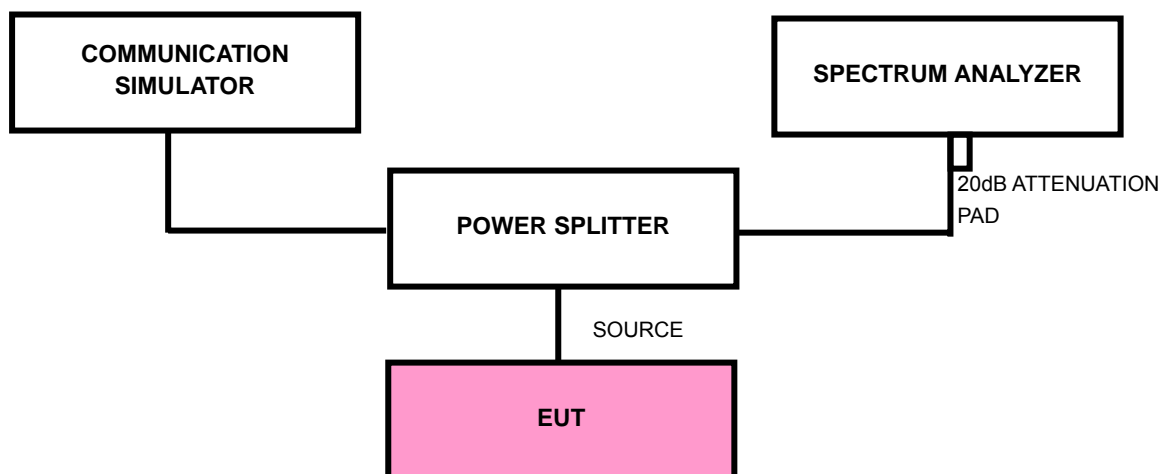
The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.3.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|------------------------------|--------------|------------|---------------------|-------------------------|
| SPECTRUM ANALYZER R&S | FSP40 | 100039 | Jan. 11, 2011 | Jan. 10, 2012 |
| Mini-Circuits Power Splitter | ZN2PD-9G | NA | May 25, 2011 | May 24, 2012 |
| RF cable | SUCOFLEX 104 | 274403/4 | Aug. 20, 2011 | Aug. 19, 2012 |
| RF cable | SUCOFLEX 104 | 250729/4 | Aug. 19, 2011 | Aug. 18, 2012 |
| RF cable | SUCOFLEX 104 | 214377/4 | Aug. 19, 2011 | Aug. 18, 2012 |
| JFW 20dB attenuation | 50HF-020-SMA | NA | NA | NA |

NOTE: The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST SETUP



4.3.4 TEST PROCEDURES

- a. The EUT makes a call to the communication simulator. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels, 1013, 384 and 777 (CDMA) (low, middle and high operational frequency range.)
- b. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer. This splitter loss and cable loss is the worst loss 24dB in the transmitted path track.
- c. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.3.5 EUT OPERATING CONDITION

- a. The EUT makes a call to the communication simulator.
- b. The communication simulator station system controlled a EUT to export maximum and minimum output power under transmission mode and specific channel frequency.

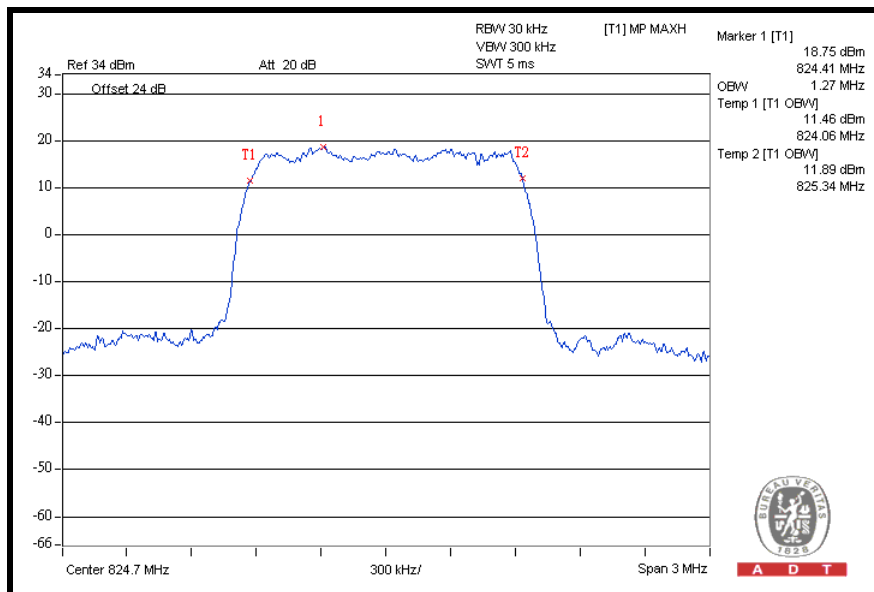
4.3.6 TEST RESULTS

FOR CDMA

FOR SO32:

| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) |
|---------|-----------------|------------------------------|
| 1013 | 824.70 | 1.27 |
| 384 | 836.52 | 1.27 |
| 777 | 848.31 | 1.27 |

CH 1013



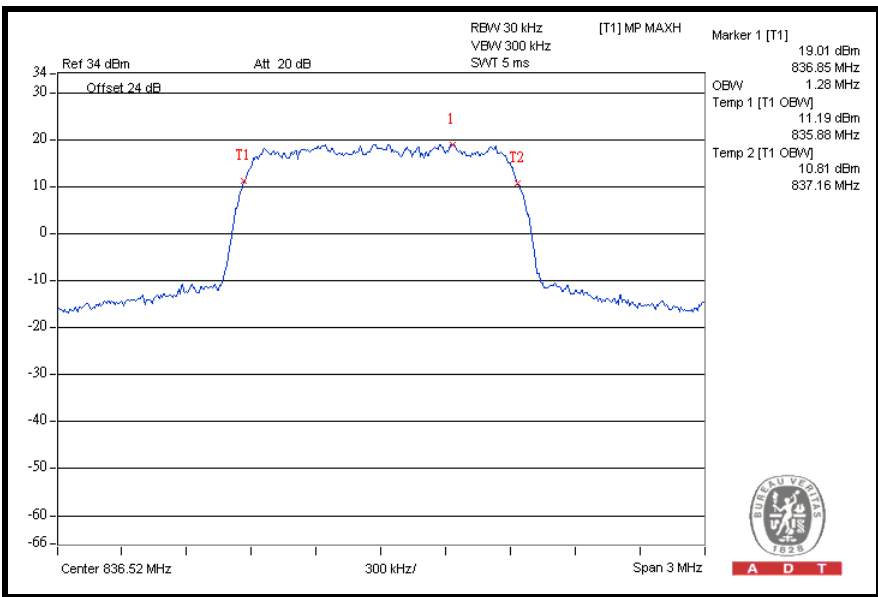


A D T

FOR 1xEV-DO Rev. 0

| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) |
|---------|-----------------|------------------------------|
| 1013 | 824.70 | 1.27 |
| 384 | 836.52 | 1.28 |
| 777 | 848.31 | 1.27 |

CH 384



4.4 BAND EDGE MEASUREMENT

4.4.1 LIMITS OF BAND EDGE MEASUREMENT

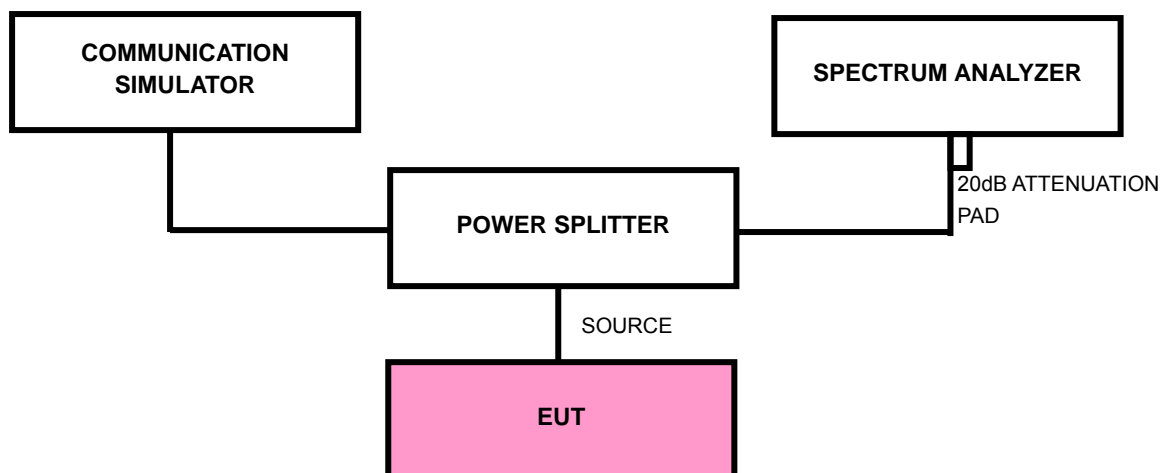
According to FCC 22.917 specified that power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.4.2 TEST INSTRUMENTS

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|------------------------------|--------------|------------|---------------------|-------------------------|
| SPECTRUM ANALYZER R&S | FSP40 | 100039 | Jan. 11, 2011 | Jan. 10, 2012 |
| Mini-Circuits Power Splitter | ZN2PD-9G | NA | May 25, 2011 | May 24, 2012 |
| RF cable | SUCOFLEX 104 | 274403/4 | Aug. 20, 2011 | Aug. 19, 2012 |
| RF cable | SUCOFLEX 104 | 250729/4 | Aug. 19, 2011 | Aug. 18, 2012 |
| RF cable | SUCOFLEX 104 | 214377/4 | Aug. 19, 2011 | Aug. 18, 2012 |
| JFW 20dB attenuation | 50HF-020-SMA | NA | NA | NA |

NOTE: The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.4.3 TEST SETUP



4.4.4 TEST PROCEDURES

- a. The EUT makes a call to the communication simulator. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels, 1013 and 777 (CDMA) (low and high operational frequency range.)
- b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The center frequency of spectrum is the band edge frequency and span is 3MHz. RB of the spectrum is 15kHz and VB of the spectrum is 15kHz (CDMA).
- d. Record the max trace plot into the test report.

4.4.5 EUT OPERATING CONDITION

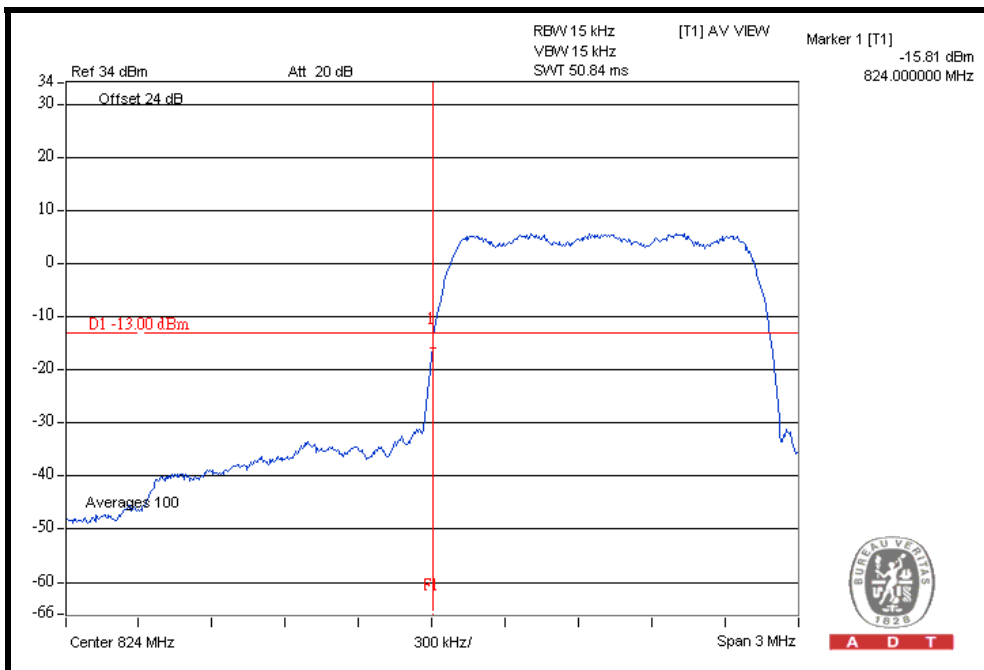
- a. The EUT makes a phone call to the communication simulator.
- b. The communication simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency.

4.4.6 TEST RESULTS

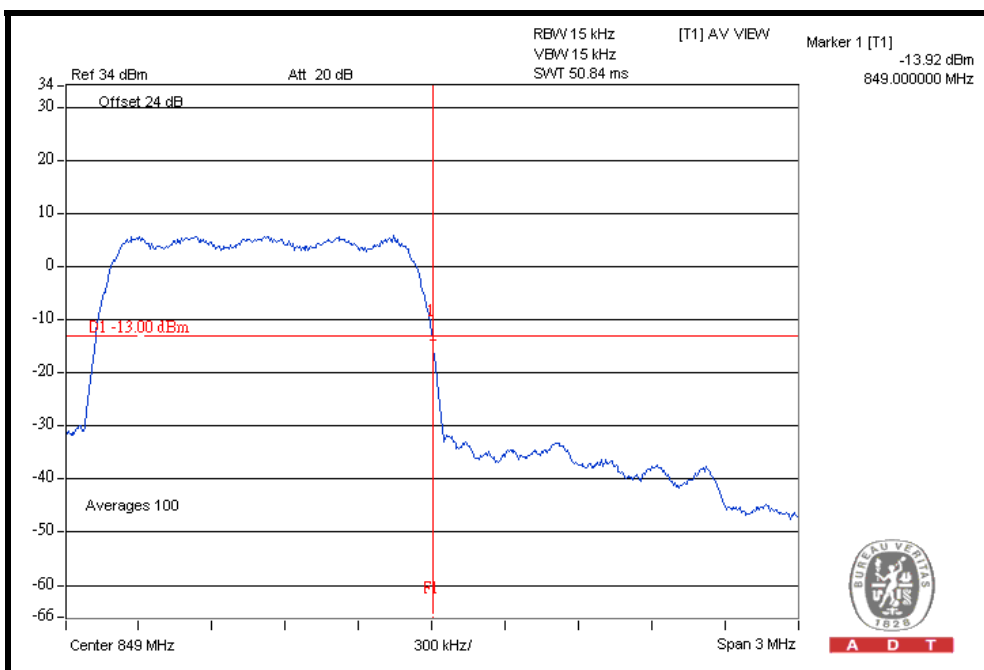
FOR CDMA:

FOR SO32:

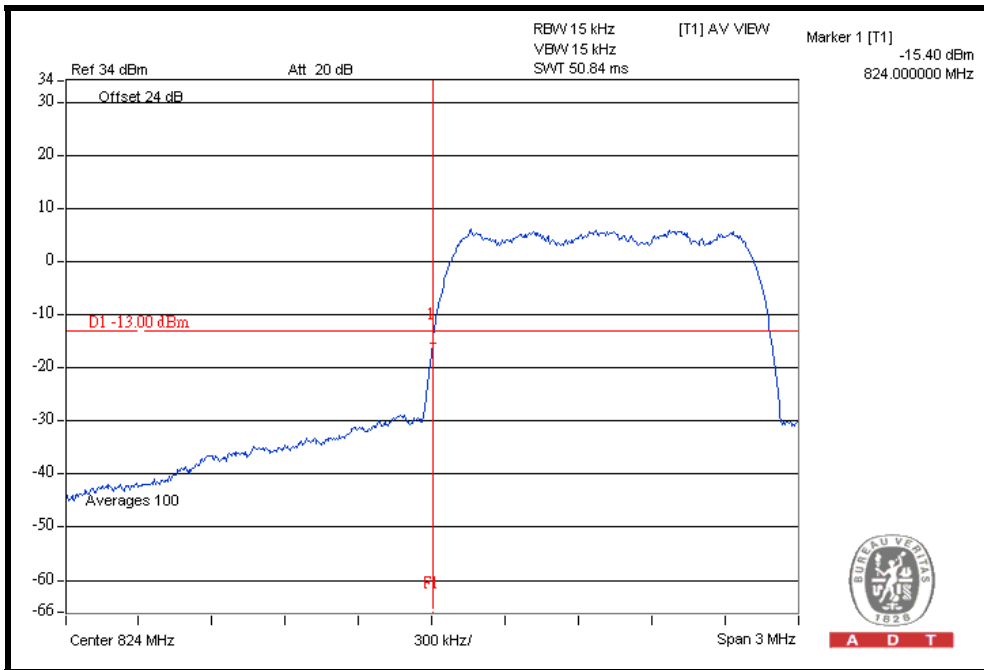
LOWER BAND EDGE



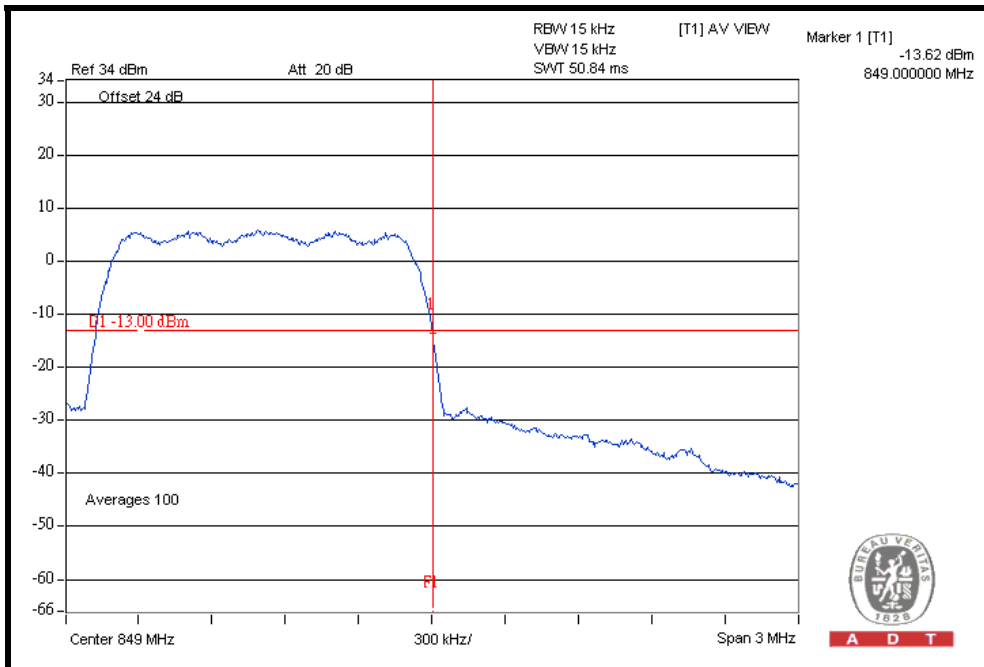
HIGHER BAND EDGE



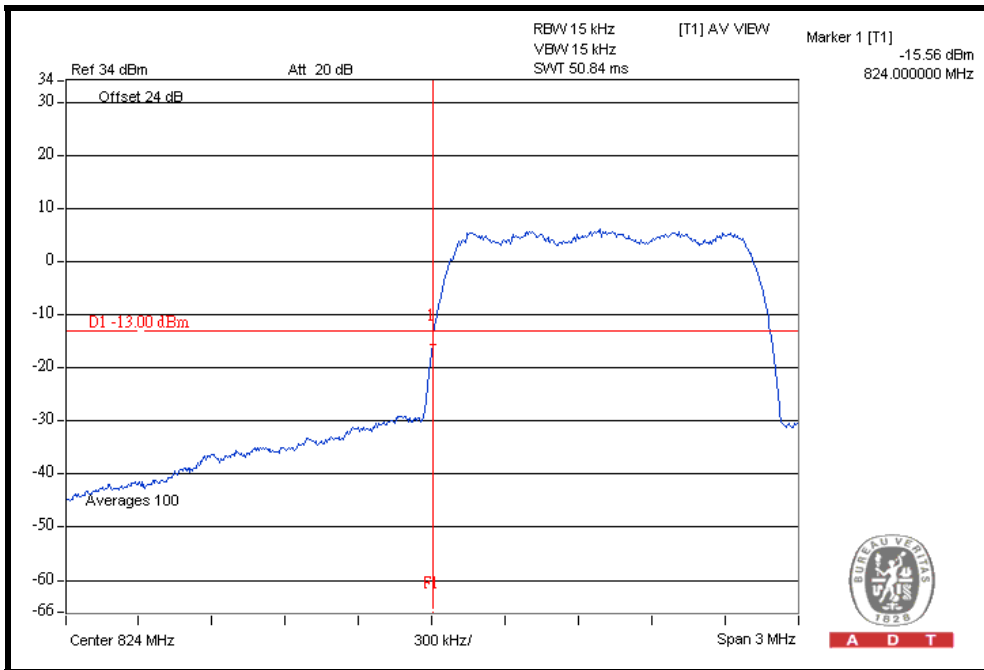
**FOR 1xEV-DO Rev. A:
LOWER BAND EDGE**



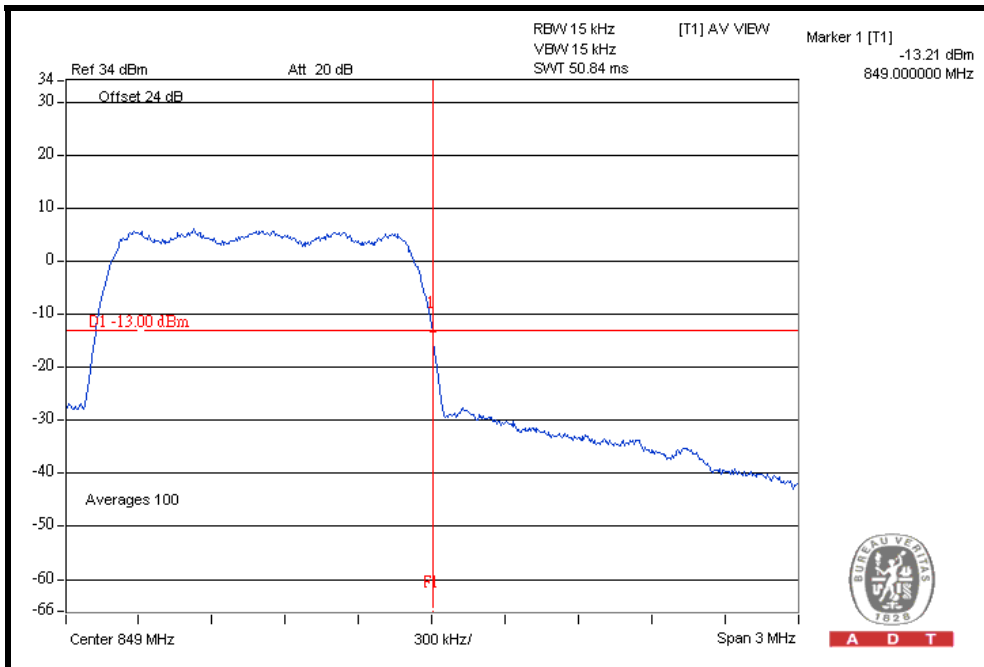
HIGHER BAND EDGE



**FOR 1xEV-DO Rev. 0:
LOWER BAND EDGE**



HIGHER BAND EDGE



4.5 CONDUCTED SPURIOUS EMISSIONS

4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

In the FCC 22.917, On any frequency outside a licensee's frequency block within GPRS spectrum, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The emission limit equal to -13dBm .

4.5.2 TEST INSTRUMENTS

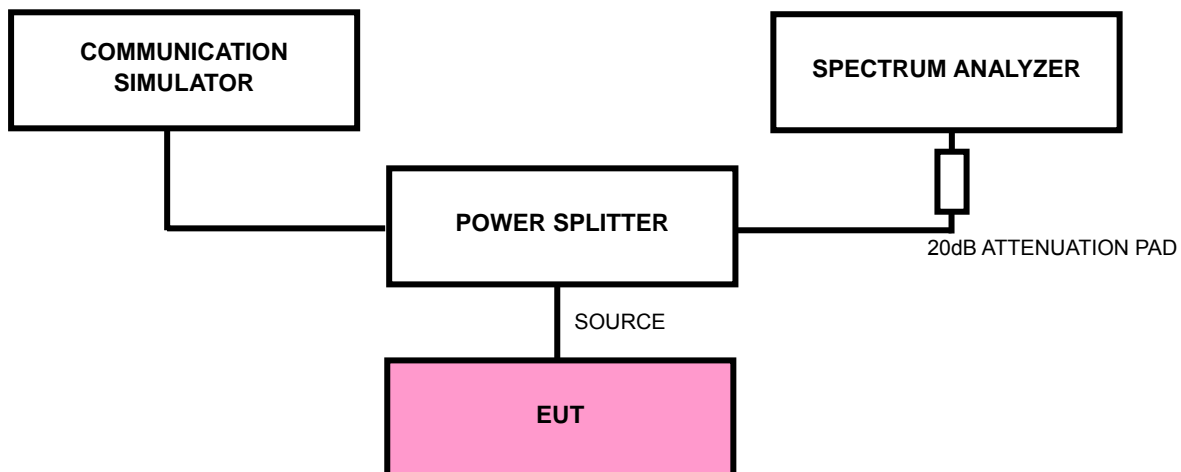
| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | DATE OF CALIBRATION | DUE DATE OF CALIBRATION |
|------------------------------|--------------|------------|---------------------|-------------------------|
| SPECTRUM ANALYZER R&S | FSP40 | 100039 | Feb. 23, 2011 | Feb. 22, 2012 |
| Mini-Circuits Power Splitter | ZN2PD-9G | NA | May 25, 2011 | May 24, 2012 |
| RF cable | SUCOFLEX 104 | 274403/4 | Aug. 20, 2011 | Aug. 19, 2012 |
| RF cable | SUCOFLEX 104 | 250729/4 | Aug. 19, 2011 | Aug. 18, 2012 |
| RF cable | SUCOFLEX 104 | 214377/4 | Aug. 19, 2011 | Aug. 18, 2012 |
| JFW 20dB attenuation | 50HF-020-SMA | NA | NA | NA |

NOTE: The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

4.5.3 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels, 1013, 384 and 777 (CDMA) (low, middle and high operational frequency range.)
- b. The conducted spurious emission used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. When the spectrum scanned from 9kHz to 9GHz, it shall be connected to spectrum analyzer with a 20dB attenuation pad. The spectrum set RB=1MHz, VB=3MHz.

4.5.4 TEST SETUP



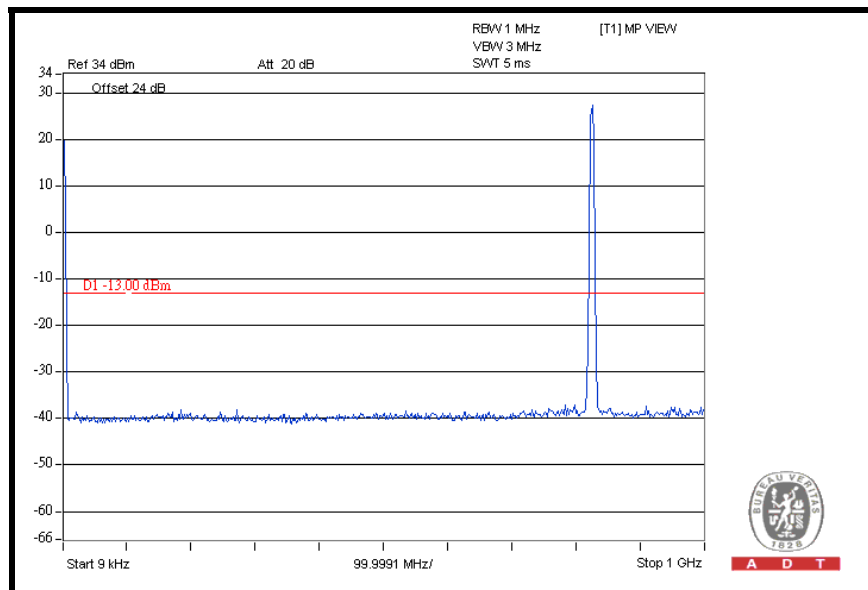
4.5.5 EUT OPERATING CONDITIONS

- a. The EUT makes a call to the communication simulator.
- b. The communication simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency.

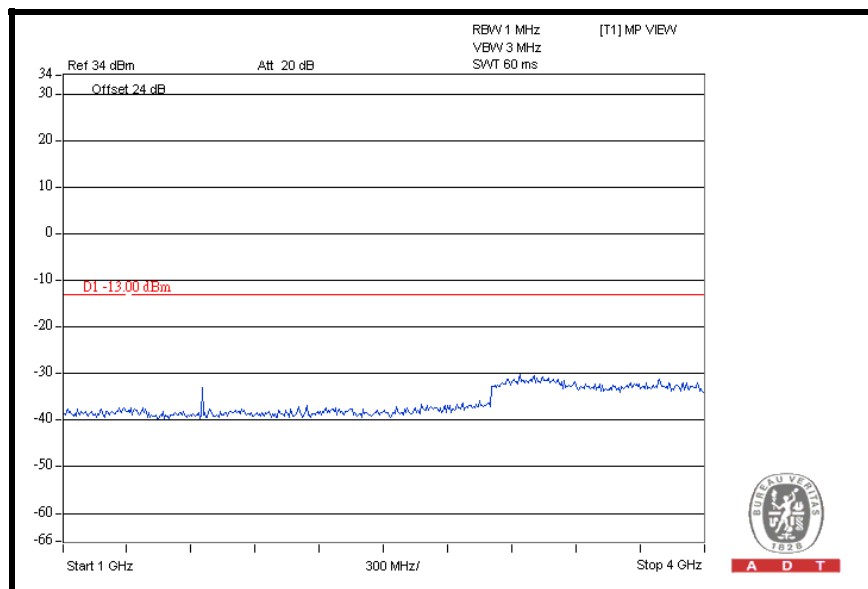
4.5.6 TEST RESULTS

FOR 1xEV-DO Rev. A:

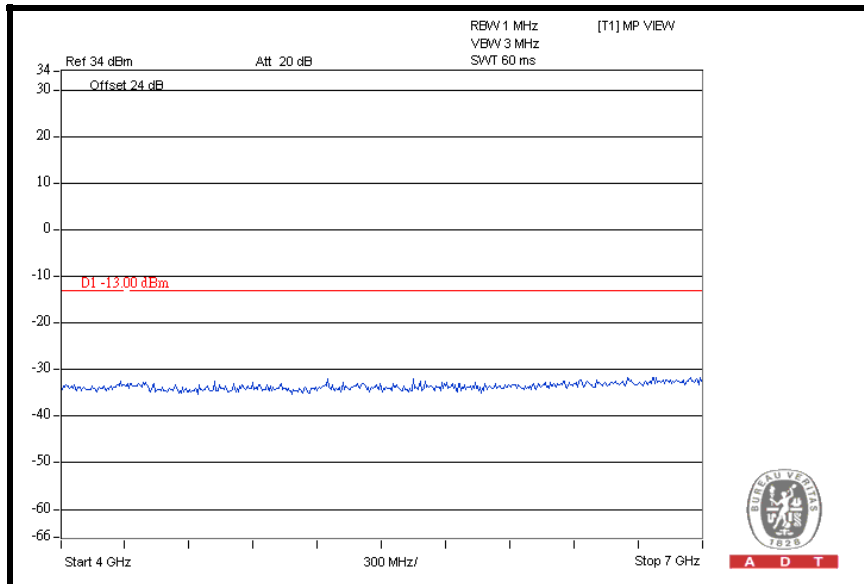
CH 1013: 9kHz ~ 1GHz



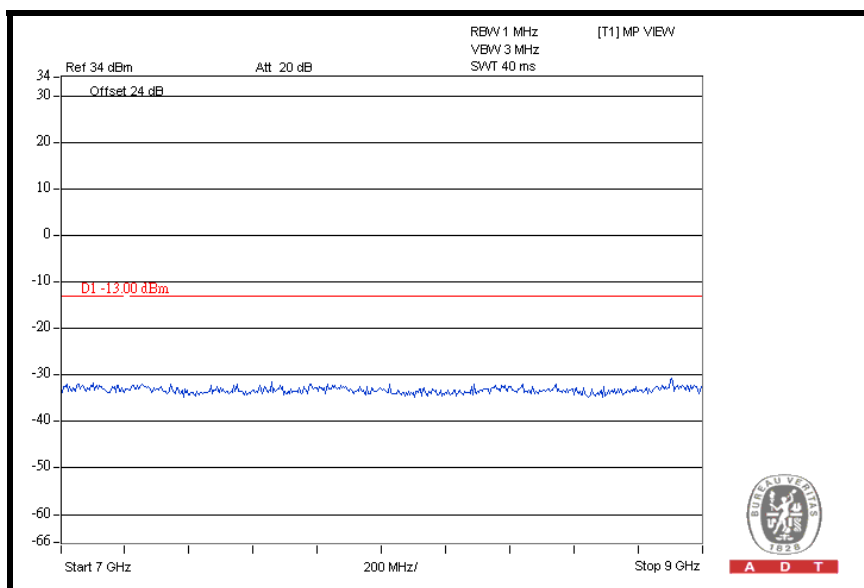
1GHz ~ 4GHz



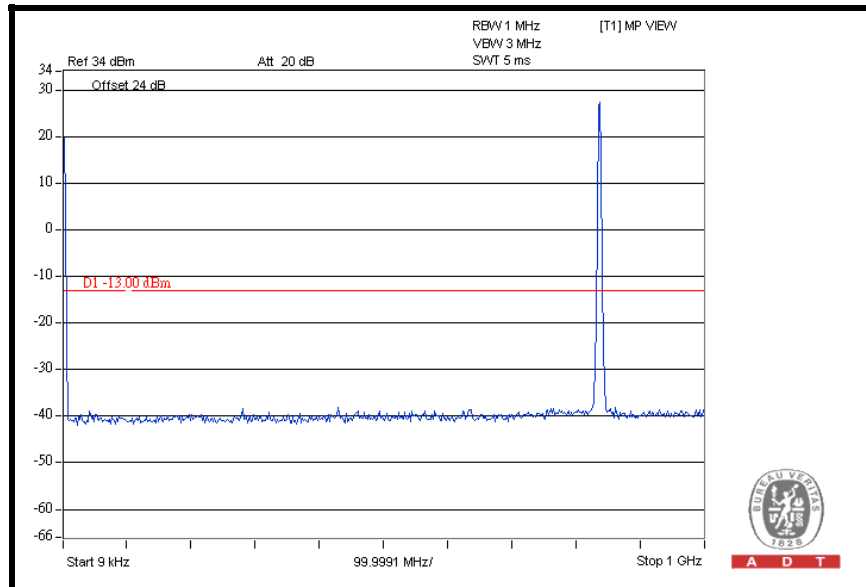
4GHz ~ 7GHz



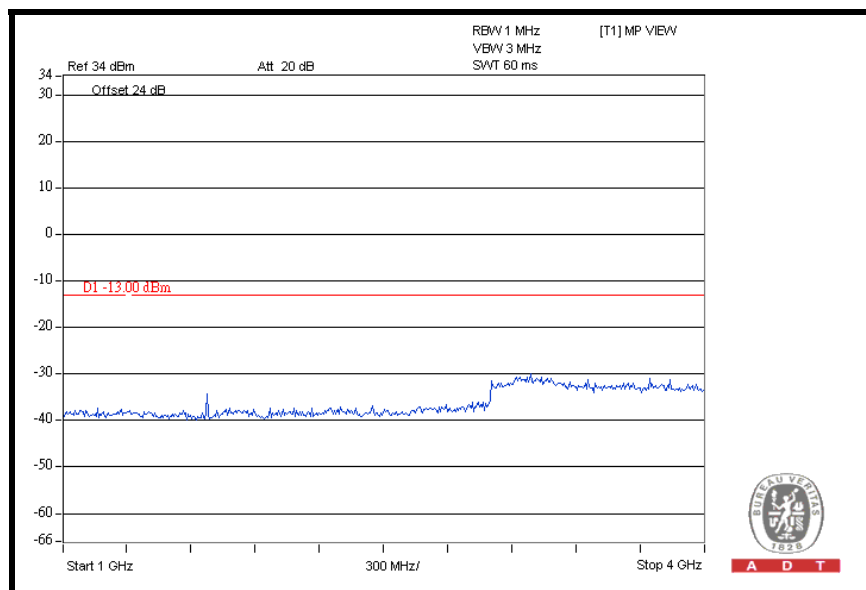
7GHz ~ 9GHz



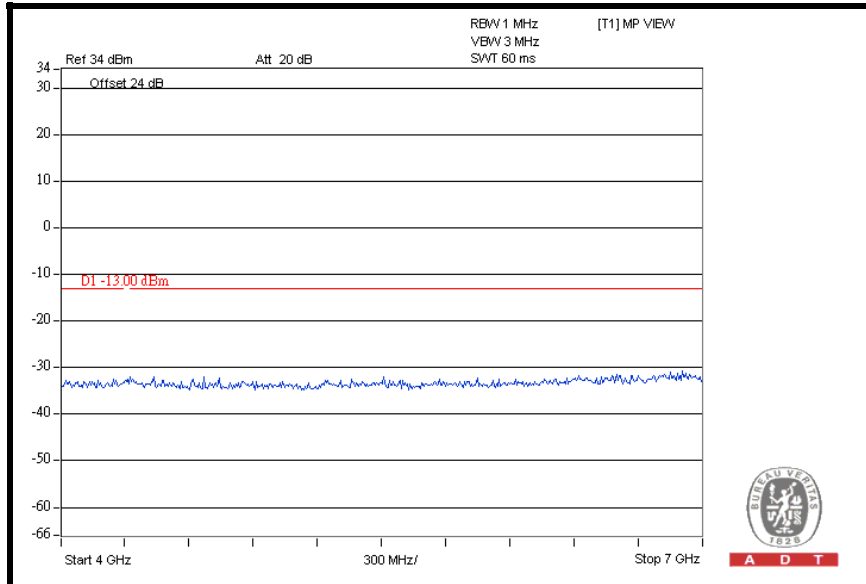
CH 384: 9kHz ~ 1GHz



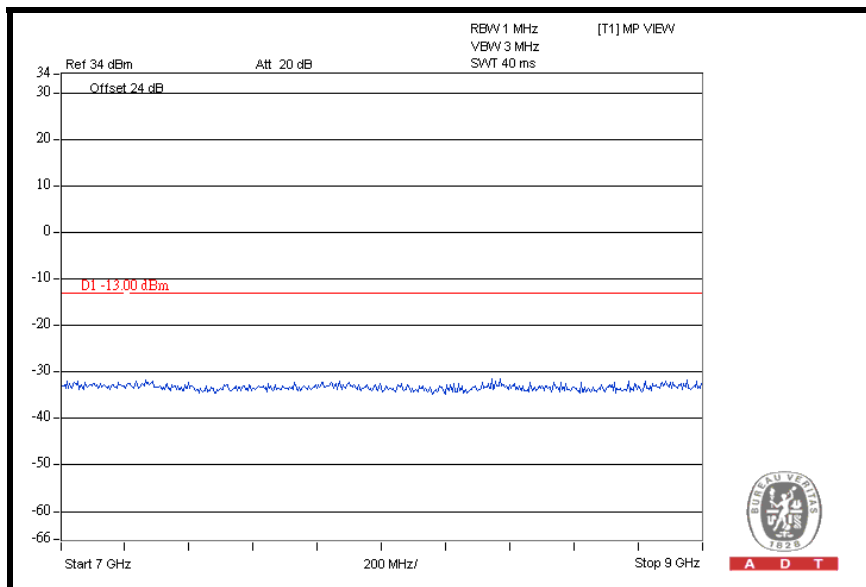
1GHz ~ 4GHz



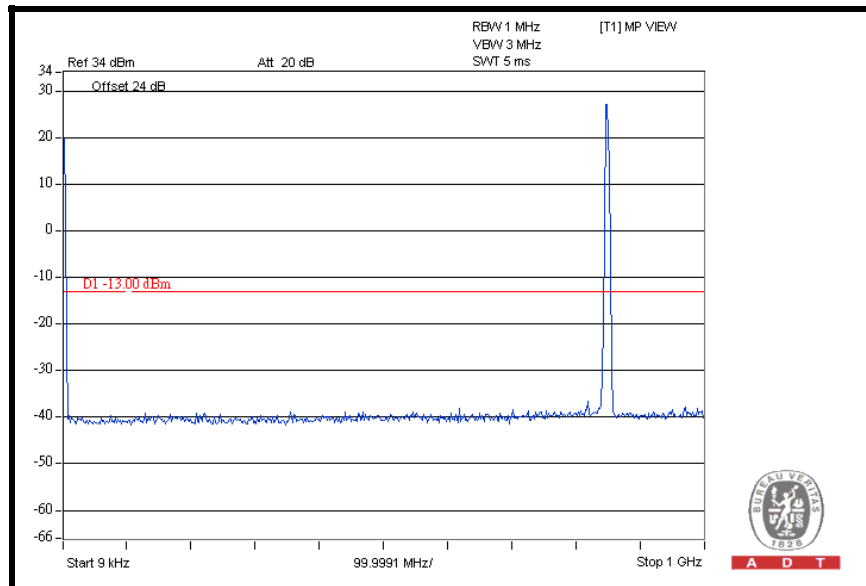
4GHz ~ 7GHz



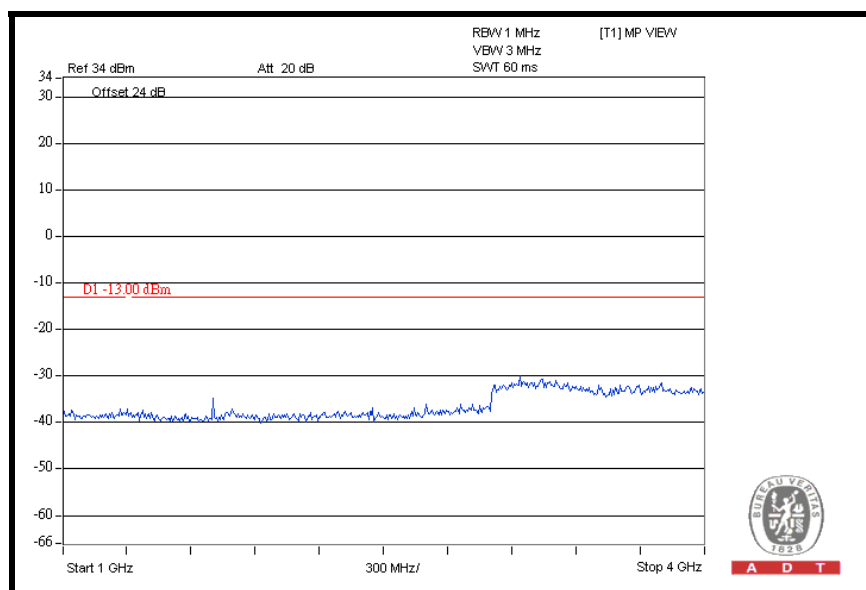
7GHz ~ 9GHz



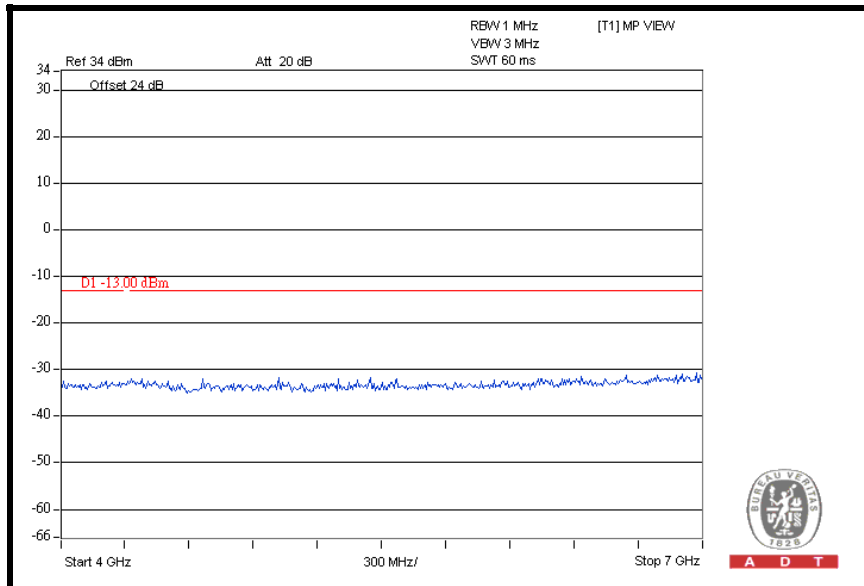
CH 777: 9kHz ~ 1GHz



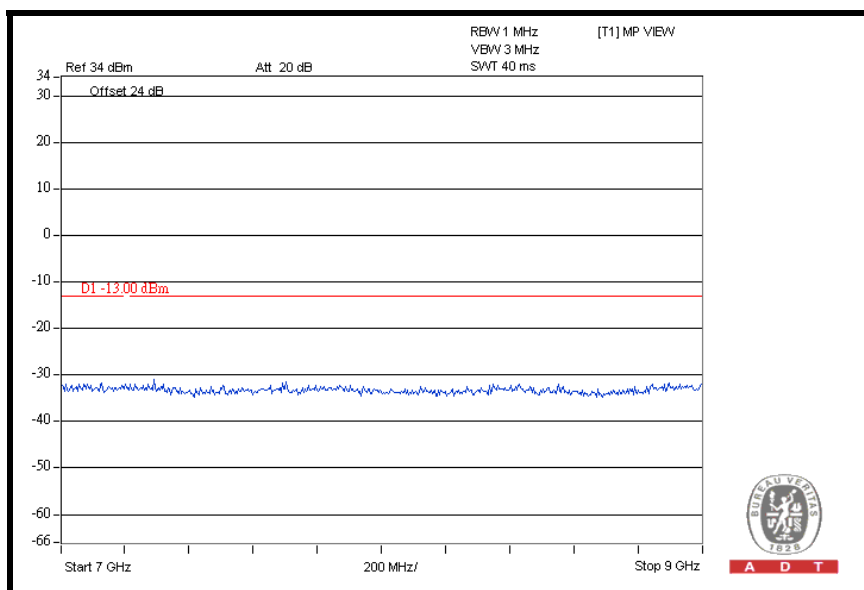
1GHz ~ 4GHz



4GHz ~ 7GHz



7GHz ~ 9GHz



4.6 RADIATED EMISSION MEASUREMENT (BELOW 1GHz)

4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

In the FCC 24.238(a), On any frequency outside a licensee's frequency block within USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The emission limit equal to -13 dBm. So the limit of emission is the same absolute specified line.

| LIMIT (dBm) | EQUIVALENT FIELD STRENGTH AT 3m (dBuV/m) (NOTE) |
|-------------|---|
| -13 | 82.2 |

NOTE: The following formula is used to convert the equipment radiated power to field strength.

$$E = [1000000\sqrt{(30P)}] / 3 \text{ uV/m, where P is Watts.}$$

4.6.2 TEST INSTRUMENTS

Same as 4.1.2.

4.6.3 TEST PROCEDURES

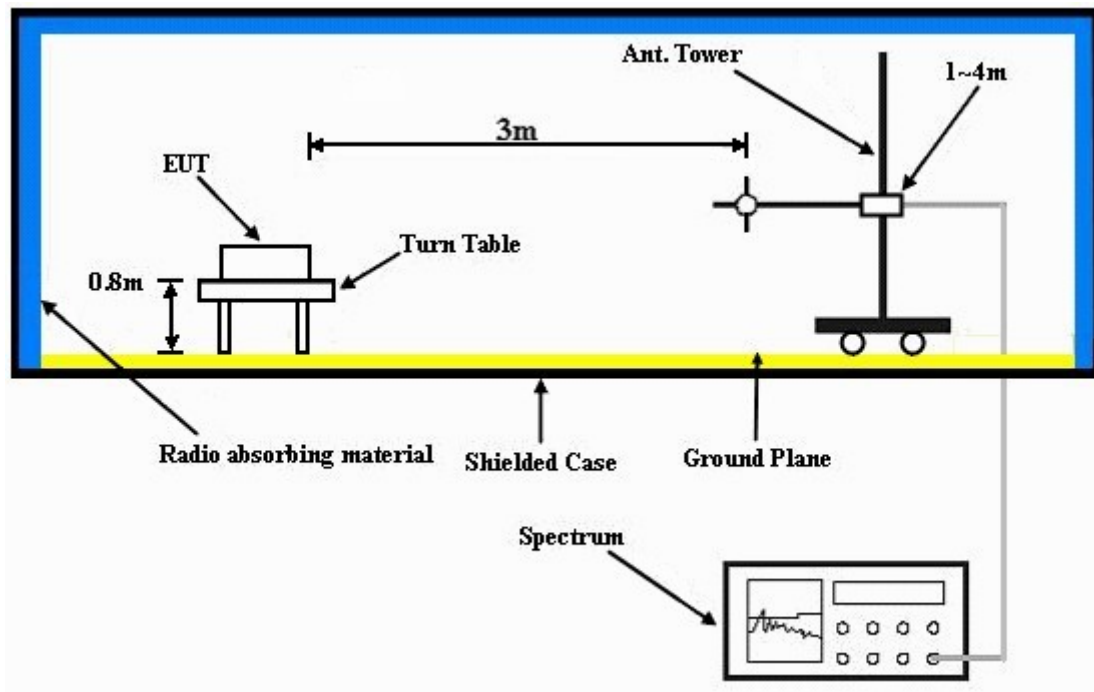
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.6.6 EUT OPERATING CONDITIONS

- a. The EUT makes a call to the communication simulator.
- b. The communication simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency.

4.6.7 TEST RESULTS

FOR 1xEV-DO Rev. A:

| | | | |
|---------------------------------|-----------------|------------------------|---------------|
| MODE | TX channel 384 | FREQUENCY RANGE | Below 1000MHz |
| ENVIRONMENTAL CONDITIONS | 24deg. C, 75%RH | INPUT POWER | 120Vac, 60 Hz |
| TESTED BY | Anderson Hong | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 127.19 | -54.2 | -60.4 | -0.1 | -62.6 | -13.0 | -49.6 |
| 2 | 342.97 | -66.2 | -72.9 | 5.2 | -69.9 | -13.0 | -56.9 |
| 3 | 480.98 | -56.1 | -61.0 | 5.0 | -58.1 | -13.0 | -45.1 |
| 4 | 698.70 | -61.4 | -63.3 | 5.2 | -60.2 | -13.0 | -47.2 |
| 5 | 722.02 | -60.3 | -60.8 | 5.0 | -57.9 | -13.0 | -44.9 |
| 6 | 786.17 | -61.1 | -59.6 | 4.2 | -57.5 | -13.0 | -44.5 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 101.92 | -58.4 | -54.4 | 0.8 | -55.8 | -13.0 | -42.8 |
| 2 | 199.12 | -59.2 | -57.1 | 5.4 | -53.9 | -13.0 | -40.9 |
| 3 | 276.87 | -60.1 | -58.8 | 5.2 | -55.8 | -13.0 | -42.8 |
| 4 | 344.91 | -60.1 | -60.0 | 5.2 | -56.9 | -13.0 | -43.9 |
| 5 | 479.04 | -60.5 | -63.0 | 5.0 | -60.1 | -13.0 | -47.1 |
| 6 | 558.74 | -55.8 | -59.8 | 4.6 | -57.4 | -13.0 | -44.4 |

NOTE:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. The other emission levels were very low against the limit.
3. Margin value = ERP value – Limit value.
4. This is valid for all 3 channels.

4.7 RADIATED EMISSION MEASUREMENT (ABOVE 1GHz)

4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

In the FCC 22.917 (a), On any frequency outside a licensee's frequency block within GPRS spectrum, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log (P)$ dB. The emission limit equal to -13dBm .

4.7.2 TEST INSTRUMENTS

Same as 4.1.2.

4.7.3 TEST PROCEDURES

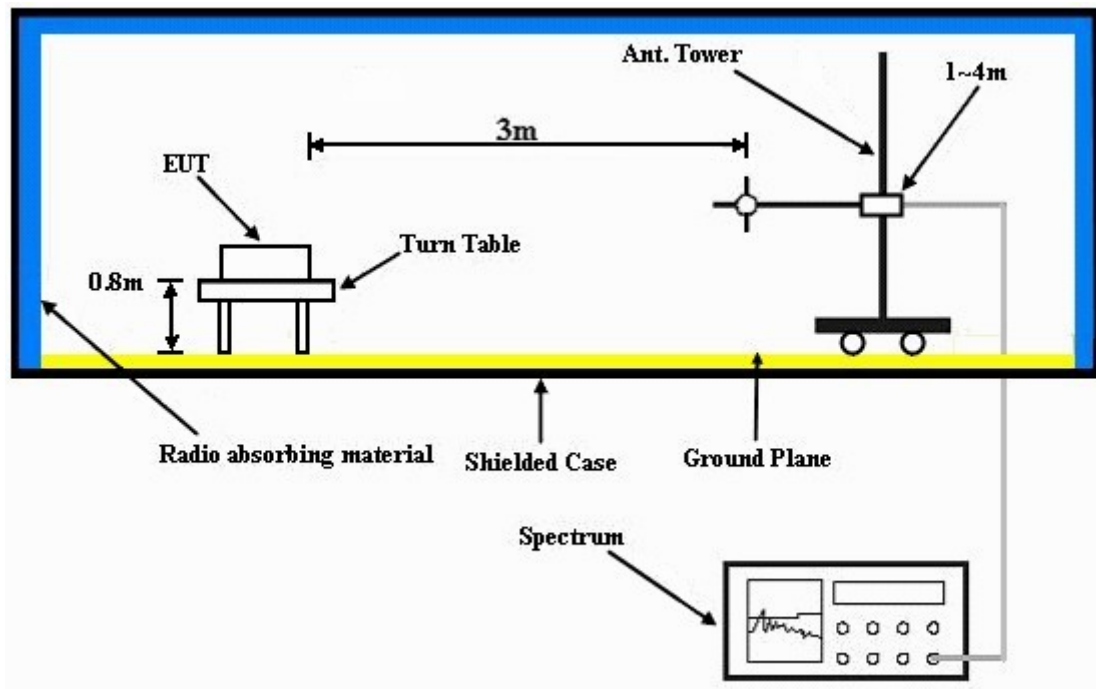
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi}$.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.7.4 DEVIATION FROM TEST STANDARD

No deviation

4.7.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.7.6 EUT OPERATING CONDITIONS

- The EUT makes a call to the communication simulator.
- The communication simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency.

4.7.7 TEST RESULTS

FOR 1xEV-DO Rev. A:

| | | | |
|--------------------|---------------|---------------------------------|-----------------|
| MODE | Channel 1013 | FREQUENCY RANGE | Above 1000MHz |
| INPUT POWER | 120Vac, 60 Hz | ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH |
| TESTED BY | Kay Wu | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
|---|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 1649.4 | -25.6 | -26.2 | 5.5 | -22.8 | -13.0 | -9.8 |
| 2 | 2474.1 | -29.9 | -27.7 | 6.4 | -23.4 | -13.0 | -10.4 |
| 3 | 3298.8 | -45.5 | -41.8 | 6.9 | -37.0 | -13.0 | -24.0 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 1649.4 | -24.6 | -27.1 | 5.5 | -23.8 | -13.0 | -10.8 |
| 2 | 2474.1 | -33.5 | -31.1 | 6.4 | -26.8 | -13.0 | -13.8 |
| 3 | 3298.8 | -48.0 | -44.7 | 6.9 | -39.9 | -13.0 | -26.9 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).



| | | | |
|--------------------|---------------|---------------------------------|-----------------|
| MODE | Channel 384 | FREQUENCY RANGE | Above 1000MHz |
| INPUT POWER | 120Vac, 60 Hz | ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH |
| TESTED BY | Kay Wu | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
|--|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 1673.0 | -22.1 | -22.7 | 5.5 | -19.3 | -13.0 | -6.3 |
| 2 | 2509.6 | -29.3 | -26.9 | 6.4 | -22.6 | -13.0 | -9.6 |
| 3 | 3346.1 | -46.7 | -43.0 | 6.9 | -38.2 | -13.0 | -25.2 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 1673.0 | -23.8 | -26.2 | 5.5 | -22.8 | -13.0 | -9.8 |
| 2 | 2509.6 | -34.4 | -32.0 | 6.4 | -27.8 | -13.0 | -14.8 |
| 3 | 3346.1 | -49.5 | -46.0 | 6.9 | -41.2 | -13.0 | -28.2 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).



| | | | |
|--------------------|---------------|---------------------------------|-----------------|
| MODE | Channel 777 | FREQUENCY RANGE | Above 1000MHz |
| INPUT POWER | 120Vac, 60 Hz | ENVIRONMENTAL CONDITIONS | 25deg. C, 65%RH |
| TESTED BY | Kay Wu | | |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | | |
|--|-------------|---------------|-----------------------|------------------------|-----------|-------------|-------------|
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 1696.62 | -26.7 | -27.5 | 5.6 | -24.0 | -13.0 | -11.0 |
| 2 | 2544.93 | -27.6 | -25.0 | 6.4 | -20.8 | -13.0 | -7.8 |
| 3 | 3393.24 | -44.8 | -41.0 | 7.0 | -36.4 | -13.0 | -23.4 |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | | | |
| No. | Freq. (MHz) | Reading (dBm) | S.G Power Value (dBm) | Correction Factor (dB) | ERP (dBm) | Limit (dBm) | Margin (dB) |
| 1 | 1696.62 | -29.1 | -31.6 | 5.6 | -28.1 | -13.0 | -15.1 |
| 2 | 2544.93 | -29.2 | -26.9 | 6.4 | -22.6 | -13.0 | -9.6 |
| 3 | 3393.24 | -44.6 | -41.1 | 7.0 | -36.2 | -13.0 | -23.2 |

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

www.adt.com.tw/index.5.phtml. If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

---END---