



FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
FCC CFR47 PART 27 SUBPART L
FCC CFR47 PART 27 SUBPART E

CERTIFICATION TEST REPORT

FOR

CDMA/LTE Phone + Bluetooth & DTS/UNII a/b/g/n + NFC

**MODEL NUMBER: LG-VS880, VS880, LGVS880
FCC ID: ZNFVS880**

REPORT NUMBER: 14U17222-1

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Prepared for

**LG ELECTRONICS MOBILECOMM U.S.A., INC
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS, NEW JERSEY, 07632, U.S.A.**

Prepared by

**UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: LG ELECTRONICS MOBILECOMM U.S.A., INC
EUT DESCRIPTION: CDMA/LTE Phone + Bluetooth & DTS/UNII a/b/g/n + NFC
MODEL: LG-VS880, VS880, LGVS880
SERIAL NUMBER: 1838501 (Conducted), 1838500 (Radiated)
DATE TESTED: MARCH 21- APRIL 11, 2014

| APPLICABLE STANDARDS | |
|--------------------------------|--------------|
| STANDARD | TEST RESULTS |
| FCC PART 22H, 24E, 27E and 27L | PASS |

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released

For UL Verification Services Inc. By:

Tested By:



PHILIP KIM

CHARLES VERGONIO

CONSUMER TECHNOLOGY DIVISION
PROGRAM MANAGER
UL Verification Services Inc.

CONSUMER TECHNOLOGY DIVISION
LAB TECHNICIAN
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 22, FCC CFR Part 24, FCC CFR 47 Part 27

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ul.com>

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\text{EIRP} = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)} + \text{Substitution Antenna Factor (dBi)}$$
$$\text{ERP} = \text{PSA reading with EUT worst orientation (dBm)} + \text{Path loss (dB)} - \text{cable loss (between the SG and substitution antenna)}$$

(Path loss = Signal generator output – PSA reading with substitution antenna)

4.3. MEASUREMENT UNCERTAINTY

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

| PARAMETER | UNCERTAINTY |
|---------------------------------------|-------------|
| Conducted Disturbance, 0.15 to 30 MHz | 3.52 dB |
| Radiated Disturbance, 30 to 18000 MHz | 4.94 dB |

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a CDMA/LTE Phone + Bluetooth & DTS/UNII a/b/g/n + NFC.

5.2. MAXIMUM OUTPUT POWER

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

| FCC Part 22/24 | | | | | | |
|----------------|----------------------|--------------------|-----------|----------|-----------|----------|
| Band | Frequency Range(MHz) | Modulation Peak | Conducted | | Radiated | |
| | | | Avg (dBm) | Avg (mW) | Avg (dBm) | Avg (mW) |
| BC0 | 824~849 | 1xRTT | 25.3 | 338.84 | 22.131 | 163.34 |
| | 824~849 | EVDO REL. 0 | 25.3 | 338.84 | 22.10 | 162.18 |
| | 824~849 | EVDO REV. A | 25.3 | 338.84 | | |
| BC1 | 1850~1910 | 1xRTT | 24.5 | 281.84 | 25.11 | 324.34 |
| | 1850~1910 | EVDO REL. 0 | 24.5 | 281.84 | 24.65 | 291.74 |
| | 1850~1910 | EVDO REV. A | 24.5 | 281.84 | | |

5.3. MAXIMUM OUTPUT POWER (LTE)

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

| FCC Part 27 | | | | | | | |
|-------------|----------------------|-----------------|-----------------|-----------|----------|-----------|----------|
| Band | Frequency Range(MHz) | BandWidth (MHz) | Modulation Peak | Conducted | | Radiated | |
| | | | | Avg (dBm) | Avg (mW) | Avg (dBm) | Avg (mW) |
| LTE13 | 777~787 | 10MHz | QPSK | 24.7 | 295.12 | 21.58 | 143.88 |
| | 777~787 | 10MHz | 16QAM | 23.5 | 223.87 | 20.76 | 119.12 |

| FCC Part 27 | | | | | | | |
|-------------|----------------------|-----------------|-----------------|-----------|----------|-----------|----------|
| Band | Frequency Range(MHz) | BandWidth (MHz) | Modulation Peak | Conducted | | Radiated | |
| | | | | Avg (dBm) | Avg (mW) | Avg (dBm) | Avg (mW) |
| LTE4 | 1710~1755 | 20MHz | QPSK | 24.6 | 288.40 | 24.53 | 283.79 |
| | 1710~1755 | 20MHz | 16QAM | 23.7 | 234.42 | 23.57 | 227.51 |

| FCC Part 27 | | | | | | | |
|-------------|----------------------|-----------------|-----------------|-----------|----------|-----------|----------|
| Band | Frequency Range(MHz) | BandWidth (MHz) | Modulation Peak | Conducted | | Radiated | |
| | | | | Avg (dBm) | Avg (mW) | Avg (dBm) | Avg (mW) |
| LTE4 | 1710~1755 | 15MHz | QPSK | 24.7 | 295.12 | 24.32 | 270.40 |
| | 1710~1755 | 15MHz | 16QAM | 23.6 | 229.09 | 24.24 | 265.46 |

| FCC Part 27 | | | | | | | |
|-------------|----------------------|-----------------|-----------------|-----------|----------|-----------|----------|
| Band | Frequency Range(MHz) | BandWidth (MHz) | Modulation Peak | Conducted | | Radiated | |
| | | | | Avg (dBm) | Avg (mW) | Avg (dBm) | Avg (mW) |
| LTE4 | 1710~1755 | 10MHz | QPSK | 24.6 | 288.40 | 24.12 | 258.23 |
| | 1710~1755 | 10MHz | 16QAM | 23.5 | 223.87 | 23.11 | 204.64 |

| FCC Part 27 | | | | | | | |
|-------------|----------------------|-----------------|-----------------|-----------|----------|-----------|----------|
| Band | Frequency Range(MHz) | BandWidth (MHz) | Modulation Peak | Conducted | | Radiated | |
| | | | | Avg (dBm) | Avg (mW) | Avg (dBm) | Avg (mW) |
| LTE4 | 1710~1755 | 5MHz | QPSK | 24.6 | 288.40 | 24.86 | 306.2 |
| | 1710~1755 | 5MHz | 16QAM | 23.4 | 218.78 | 24.01 | 251.77 |

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna for the [List the bands supported] with a maximum peak gain as follow:

| Frequency (MHz) | Peak Gain (dBi) |
|--------------------|-----------------|
| BC0, 824~849MHz | -5.78 |
| BC1, 1850~1910MHz | -0.08 |
| LTE4, 1710~1755MHz | -1.03 |
| LTE13, 777~787MHz | -3.94 |

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

| Support Equipment List | | | | |
|------------------------|--------------|----------|---------------|--------|
| Description | Manufacturer | Model | Serial Number | FCC ID |
| AC Adapter | LG | MCS-01WD | DB390078751 | N/A |
| Headset | LG | N/A | N/A | N/A |

I/O CABLES (CONDUCTED SETUP)

| I/O Cable List | | | | | | |
|----------------|--------------|----------------------|------------------------|------------|------------------|---------|
| Cable No | Port | # of identical ports | Connector Type | Cable Type | Cable Length (m) | Remarks |
| 1 | RF Out | 1 | Spectrum Analyzer | Shielded | None | NA |
| 2 | Antenna Port | 1 | EUT | Shielded | 0.1m | NA |
| 3 | RF In/Out | 1 | Communication Test Set | Shielded | 1m | NA |

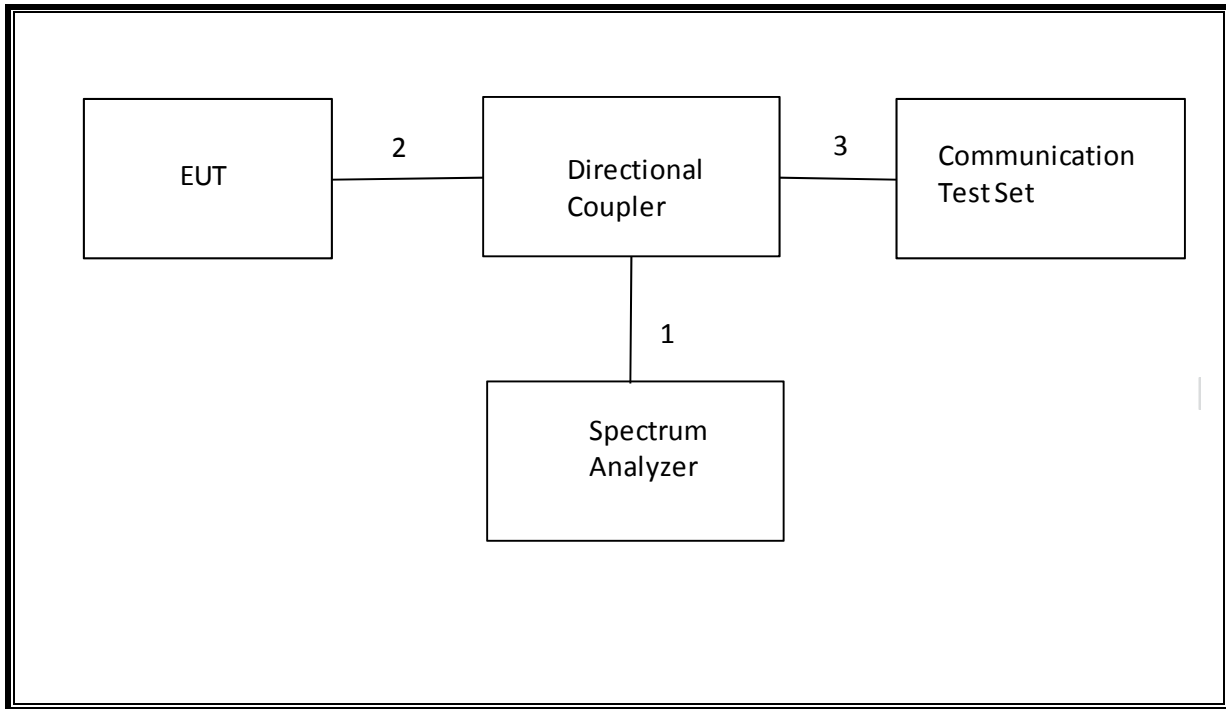
I/O CABLES (RADIATED SETUP)

| I/O CABLE LIST | | | | | | |
|----------------|-----------|----------------------|------------------------|-------------|--------------|---------|
| Cable No. | Port | # of Identical Ports | Connector Type | Cable Type | Cable Length | Remarks |
| 1 | USB | 1 | AC Adapter | Un-shielded | 1.2m | No |
| 2 | Jack | 1 | Headset | Shielded | 1m | No |
| 3 | RF In/out | 1 | Communication Test Set | Un-shielded | 2m | Yes |

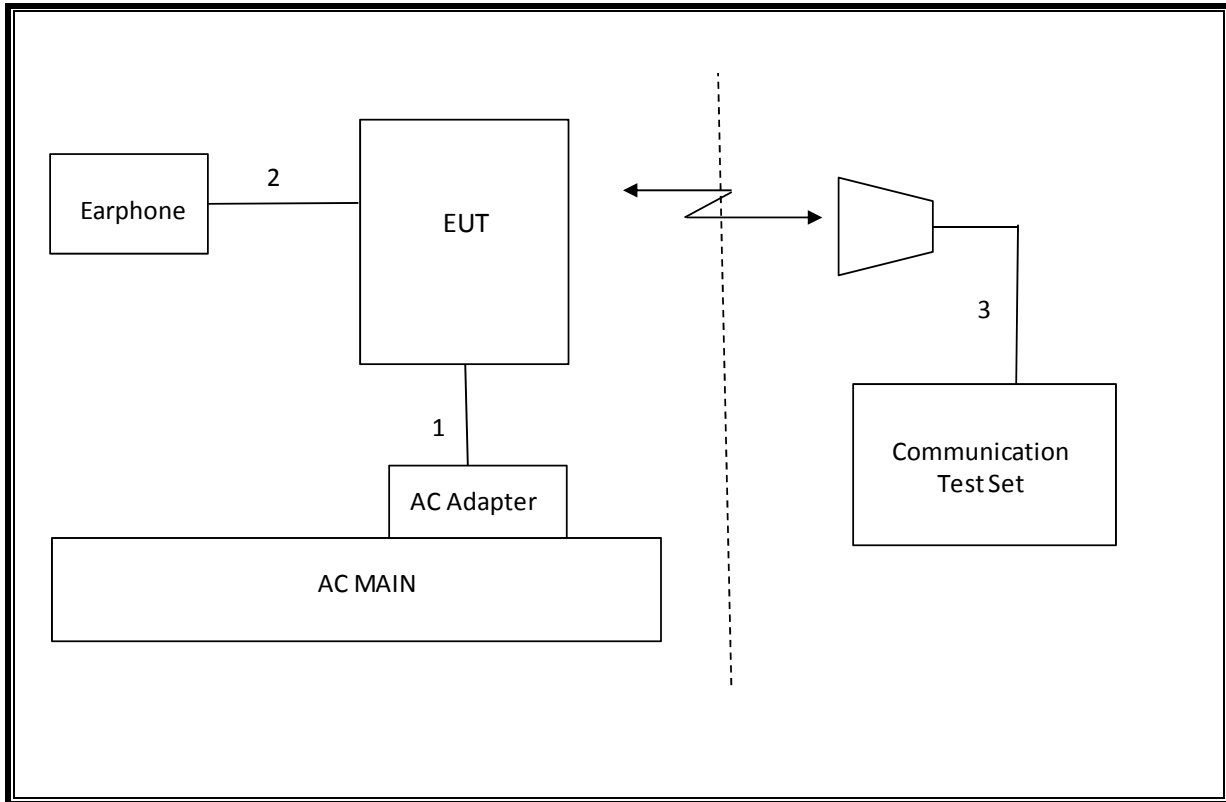
TEST SETUP

The EUT is continuously communicated to the call box during the tests.

SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST | | | | |
|---------------------------------|----------------|--------------|--------|----------|
| Description | Manufacturer | Model | Asset | Cal Due |
| Antenna, Horn, 18 GHz | EMCO | 3115 | C00872 | 10/25/14 |
| Antenna, Horn, 18 GHz | EMCO | 3115 | C00783 | 10/25/14 |
| Preamplifier, 1300 MHz | Agilent / HP | 8447D | C00885 | 12/11/14 |
| Spectrum Analyzer, 44 GHz | Agilent / HP | E4446A | C01179 | 02/26/15 |
| Preamplifier, 26.5 GHz | Agilent / HP | 8449B | C01063 | 10/22/14 |
| Communication Test Set | Agilent / HP | E5515C | C01086 | 06/20/14 |
| Temperature / Humidity Chamber | Thermotron | SE 600-10-10 | C00930 | 01/09/15 |
| Highpass Filter, 1.5 GHz | Micro-Tronics | HPM13193 | N02689 | CNR |
| Highpass Filter, 2.7 GHz | Micro-Tronics | HPM13194 | N02687 | CNR |
| Antenna, Biconolog, 30MHz-1 GHz | Sunol Sciences | JB1 | C01016 | 08/14/14 |
| Vector signal generator, 6 GHz | Agilent / HP | E4438C | None | 07/06/14 |

7. Summary Table

| FCC Part Section | RSS Section(s) | Test Description | Test Limit | Test Condition | Test Result | Worst Case |
|--|--|---|------------|----------------|-------------|------------|
| 2.1049 | N/A | Occupied Band width (99%) | N/A | Conducted | Pass | 17.86MHz |
| 22.917(a) 24.238(a) 27.53(g) 90.691 | RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1) | Band Edge / Conducted Spurious Emission | -13dBm | | Pass | -13.33dBm |
| 2.1046 | N/A | Conducted output power | N/A | | Pass | 25.3dBm |
| 22.355 24.235 27.54 90.213 | RSS-132(4.3) RSS-133(6.3) RSS-139(6.3) RSS-199(4.3) | Frequency Stability | 2.5PPM | | Pass | 0.056PPM |
| 22.913(a)(2) | RSS-132(4.4) | Effective Radiated Power | 38 dBm | Radiated | Pass | 22.131dBm |
| 27.50(b)(10) | N/A | | 34.77 dBm | | Pass | |
| 24.232(c) | RSS-133(6.4) | Equivalent Isotropic Radiated Power | 33dBm | | Pass | 25.11dBm |
| 27.50(d)(4) | RSS-139(6.4) | | 30dBm | | Pass | |
| 22.917(a) 24.238(a) 27.53(g) | RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1) | Radiated Spurious Emission | -13dBm | | Pass | -30.4dBm |

8.1. CDMA2000

8.1.1. 1xRTT

TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

| <u>Application</u> | <u>Rev, License</u> |
|----------------------|---------------------|
| CDMA2000 Mobile Test | B.13.08, L |

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) > 7
 > Network ID (NID) > 1
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
 > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
 - Rvs Power Ctrl > All Up bits (Maximum TxPout)

8.1.2. CDMA2000 OUTPUT POWER RESULT

1xRTT

Full Power

| Band | Mode | Ch | Freq. (MHz) | Avg Pwr (dBm) |
|------|----------------------|------|-------------|---------------|
| BC 0 | RC1, SO55 (Loopback) | 1013 | 824.70 | 25.3 |
| | | 384 | 836.52 | 25.3 |
| | | 777 | 848.31 | 25.2 |
| | RC3, SO55 (Loopback) | 1013 | 824.70 | 25.3 |
| | | 384 | 836.52 | 25.2 |
| | | 777 | 848.31 | 25.2 |
| | RC3, SO32 (+F-SCH) | 1013 | 824.70 | 25.2 |
| | | 384 | 836.52 | 25.2 |
| | | 777 | 848.31 | 25.2 |

1xRTT

Full Power

| Band | Mode | Ch | Freq. (MHz) | Avg Pwr (dBm) |
|------|---------------------|------|-------------|---------------|
| BC 1 | RC1 SO55 (Loopback) | 25 | 1851.25 | 24.4 |
| | | 600 | 1880.00 | 24.4 |
| | | 1175 | 1908.75 | 24.4 |
| | RC3 SO55 (Loopback) | 25 | 1851.25 | 24.4 |
| | | 600 | 1880.00 | 24.4 |
| | | 1175 | 1908.75 | 24.4 |
| | RC3 SO32 (+F-SCH) | 25 | 1851.25 | 24.5 |
| | | 600 | 1880.00 | 24.4 |
| | | 1175 | 1908.75 | 24.4 |

8.1.3. 1xEV-DO Release 0

TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

| <u>Application</u> | <u>Rev, License</u> |
|-----------------------|---------------------|
| 1xEV-DO Terminal Test | A.09.13 |

EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -105.5 dBm/1.23 MHz
 - Cell Band > (Select US Cellular or US PCS)
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > RTAP
 - RTAP Rate > 153.6 kbps
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -105.5 dBm/1.23 MHz
 - Cell Band > (Select US Cellular or US PCS)
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > FTAP (default)
 - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

8.1.4. 1xEVDO REL 0 OUTPUT POWER RESULT

1xEv-Do Rel. 0

| Band | FTAP Rate | Channel | f (MHz) | Avg Pwr (dBm) |
|------|------------------------------|---------|---------|---------------|
| BC0 | 307.2 kbps (2 slot, QPSK) | 1013 | 824.70 | 25.3 |
| | | 384 | 836.52 | 25.3 |
| | | 777 | 848.31 | 25.2 |

1xEv-Do Rel. 0

| Band | FTAP Rate | Channel | f (MHz) | Avg Pwr (dBm) |
|------|------------------------------|---------|---------|---------------|
| BC 1 | 307.2 kbps (2 slot, QPSK) | 25 | 1851.25 | 24.4 |
| | | 600 | 1880.00 | 24.5 |
| | | 1175 | 1908.75 | 24.5 |

8.1.5. 1xEV-DO Rev. A

TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

| <u>Application</u> | <u>Rev, License</u> |
|-----------------------|---------------------|
| 1xEV-DO Terminal Test | A.09.13 |

EVDO Release A – RETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Release A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

8.1.6. 1xEVDO REV A OUTPUT RESULT

1xEv-Do Rev. A

| Band | FETAP Traffic Format | Channel | f (MHz) | Avg Pwr (dBm) |
|------|--|---------|---------|---------------|
| BC0 | 307.2k, QPSK/ ACK channel is transmitted at all the slots | 1013 | 824.70 | 25.3 |
| | | 384 | 836.52 | 25.3 |
| | | 777 | 848.31 | 25.3 |

1xEv-Do Rev. A

| Band | FETAP Traffic Format | Channel | f (MHz) | Avg Pwr (dBm) |
|------|--|---------|---------|---------------|
| BC 1 | 307.2k, QPSK/ ACK channel is transmitted at all the slots | 25 | 1851.25 | 24.4 |
| | | 600 | 1880 | 24.5 |
| | | 1175 | 1908.75 | 24.5 |

8.2. LTE OUTPUT VERIFICATION

8.2.1. LTE OUTPUT RESULT

| Band | BW (MHz) | Mode | RB Allocation | RB Size | Target MPR | Avg Pwr (dBm) | | |
|------------|----------|-------|---------------|---------|------------|---------------|------------|------------|
| | | | | | | 20050 | 20175 | 20300 |
| | | | | | | 1720 MHz | 1732.5 MHz | 1745 MHz |
| LTE Band 4 | 20 | QPSK | 1 | 0 | 0 | 24.4 | 24.4 | 24.5 |
| | | | 1 | 49 | 0 | 24.4 | 24.5 | 24.5 |
| | | | 1 | 99 | 0 | 24.4 | 24.6 | 24.3 |
| | | | 50 | 0 | 1 | 23.5 | 23.6 | 23.7 |
| | | | 50 | 25 | 1 | 23.6 | 23.5 | 23.6 |
| | | | 50 | 50 | 1 | 23.5 | 23.6 | 23.6 |
| | | | 100 | 0 | 1 | 23.5 | 23.5 | 23.6 |
| | | 16QAM | 1 | 0 | 1 | 23.7 | 23.7 | 23.6 |
| | | | 1 | 49 | 1 | 23.6 | 23.7 | 23.7 |
| | | | 1 | 99 | 1 | 23.6 | 23.7 | 23.6 |
| | | | 50 | 0 | 2 | 22.6 | 22.6 | 22.6 |
| | | | 50 | 25 | 2 | 22.5 | 22.6 | 22.6 |
| | | | 50 | 50 | 2 | 22.5 | 22.5 | 22.6 |
| | | | 100 | 0 | 2 | 22.6 | 22.6 | 22.6 |
| Band | BW (MHz) | Mode | RB Allocation | RB Size | Target MPR | Avg Pwr (dBm) | | |
| | | | | | | 20025 | 20175 | 20325 |
| | | | | | | 1717.5 MHz | 1732.5 MHz | 1747.5 MHz |
| LTE Band 4 | 15 | QPSK | 1 | 0 | 0 | 24.5 | 24.6 | 24.7 |
| | | | 1 | 36 | 0 | 24.5 | 24.6 | 24.6 |
| | | | 1 | 74 | 0 | 24.5 | 24.6 | 24.4 |
| | | | 36 | 0 | 1 | 23.5 | 23.6 | 23.7 |
| | | | 36 | 18 | 1 | 23.4 | 23.5 | 23.6 |
| | | | 36 | 37 | 1 | 23.5 | 23.6 | 23.6 |
| | | | 75 | 0 | 1 | 23.5 | 23.6 | 23.6 |
| | | 16QAM | 1 | 0 | 1 | 23.4 | 23.4 | 23.6 |
| | | | 1 | 36 | 1 | 23.3 | 23.4 | 23.4 |
| | | | 1 | 74 | 1 | 23.3 | 23.5 | 23.3 |
| | | | 36 | 0 | 2 | 22.4 | 22.6 | 22.6 |
| | | | 36 | 18 | 2 | 22.4 | 22.5 | 22.6 |
| | | | 36 | 37 | 2 | 22.5 | 22.6 | 22.6 |
| | | | 75 | 0 | 2 | 22.5 | 22.5 | 22.6 |
| Band | BW (MHz) | Mode | RB Allocation | RB Size | Target MPR | Avg Pwr (dBm) | | |
| | | | | | | 20000 | 20175 | 20350 |
| | | | | | | 1715 MHz | 1732.5 MHz | 1750 MHz |
| LTE Band 4 | 10 | QPSK | 1 | 0 | 0 | 24.5 | 24.5 | 24.6 |
| | | | 1 | 25 | 0 | 24.5 | 24.6 | 24.5 |

| | | | 1 | 49 | 0 | 24.5 | 24.6 | 24.5 |
|------------|----------|-------|---------------|---------|------------|---------------|------------|------------|
| | | | 25 | 0 | 1 | 23.5 | 23.6 | 23.5 |
| | | | 25 | 12 | 1 | 23.4 | 23.5 | 23.5 |
| | | | 25 | 25 | 1 | 23.4 | 23.5 | 23.5 |
| | | | 50 | 0 | 1 | 23.4 | 23.5 | 23.5 |
| | | 16QAM | 1 | 0 | 1 | 23.3 | 23.4 | 23.5 |
| | | | 1 | 25 | 1 | 23.2 | 23.4 | 23.4 |
| | | | 1 | 49 | 1 | 23.3 | 23.4 | 23.3 |
| | | | 25 | 0 | 2 | 22.5 | 22.5 | 22.5 |
| | | | 25 | 12 | 2 | 22.5 | 22.5 | 22.5 |
| | | | 25 | 25 | 2 | 22.4 | 22.5 | 22.5 |
| | | | 50 | 0 | 2 | 22.5 | 22.5 | 22.5 |
| Band | BW (MHz) | Mode | RB Allocation | RB Size | Target MPR | Avg Pwr (dBm) | | |
| | | | | | | 19975 | 20175 | 20375 |
| | | | | | | 1712.5 MHz | 1732.5 MHz | 1752.5 MHz |
| LTE Band 4 | 5 | QPSK | 1 | 0 | 0 | 24.6 | 24.5 | 24.4 |
| | | | 1 | 12 | 0 | 24.5 | 24.5 | 24.4 |
| | | | 1 | 24 | 0 | 24.6 | 24.5 | 24.4 |
| | | | 12 | 0 | 1 | 23.5 | 23.5 | 23.6 |
| | | | 12 | 6 | 1 | 23.5 | 23.5 | 23.5 |
| | | | 12 | 13 | 1 | 23.5 | 23.5 | 23.5 |
| | | | 25 | 0 | 1 | 23.4 | 23.6 | 23.5 |
| | | 16QAM | 1 | 0 | 1 | 23.3 | 23.3 | 23.3 |
| | | | 1 | 12 | 1 | 23.3 | 23.4 | 23.3 |
| | | | 1 | 24 | 1 | 23.3 | 23.4 | 23.3 |
| | | | 12 | 0 | 2 | 22.5 | 22.6 | 22.6 |
| | | | 12 | 6 | 2 | 22.5 | 22.6 | 22.5 |
| | | | 12 | 13 | 2 | 22.4 | 22.6 | 22.6 |
| | | | 25 | 0 | 2 | 22.5 | 22.6 | 22.5 |

| Band | BW (MHz) | Mode | RB Allocation | RB Size | Target MPR | Avg Pwr (dBm) |
|-------------|----------|-------|---------------|---------|------------|---------------|
| | | | | | | 23230 |
| | | | | | | 782 MHz |
| LTE Band 13 | 10 | QPSK | 1 | 0 | 0 | 24.7 |
| | | | 1 | 25 | 0 | 24.6 |
| | | | 1 | 49 | 0 | 24.6 |
| | | | 25 | 0 | 1 | 23.5 |
| | | | 25 | 12 | 1 | 23.6 |
| | | | 25 | 25 | 1 | 23.5 |
| | | | 50 | 0 | 1 | 23.5 |
| | | 16QAM | 1 | 0 | 1 | 23.4 |
| | | | 1 | 25 | 1 | 23.5 |
| | | | 1 | 49 | 1 | 23.4 |
| | | | 25 | 0 | 2 | 22.6 |
| | | | 25 | 12 | 2 | 22.5 |
| | | | 25 | 25 | 2 | 22.4 |
| | | | 50 | 0 | 2 | 22.5 |

9. PEAK TO AVERAGE RATIO

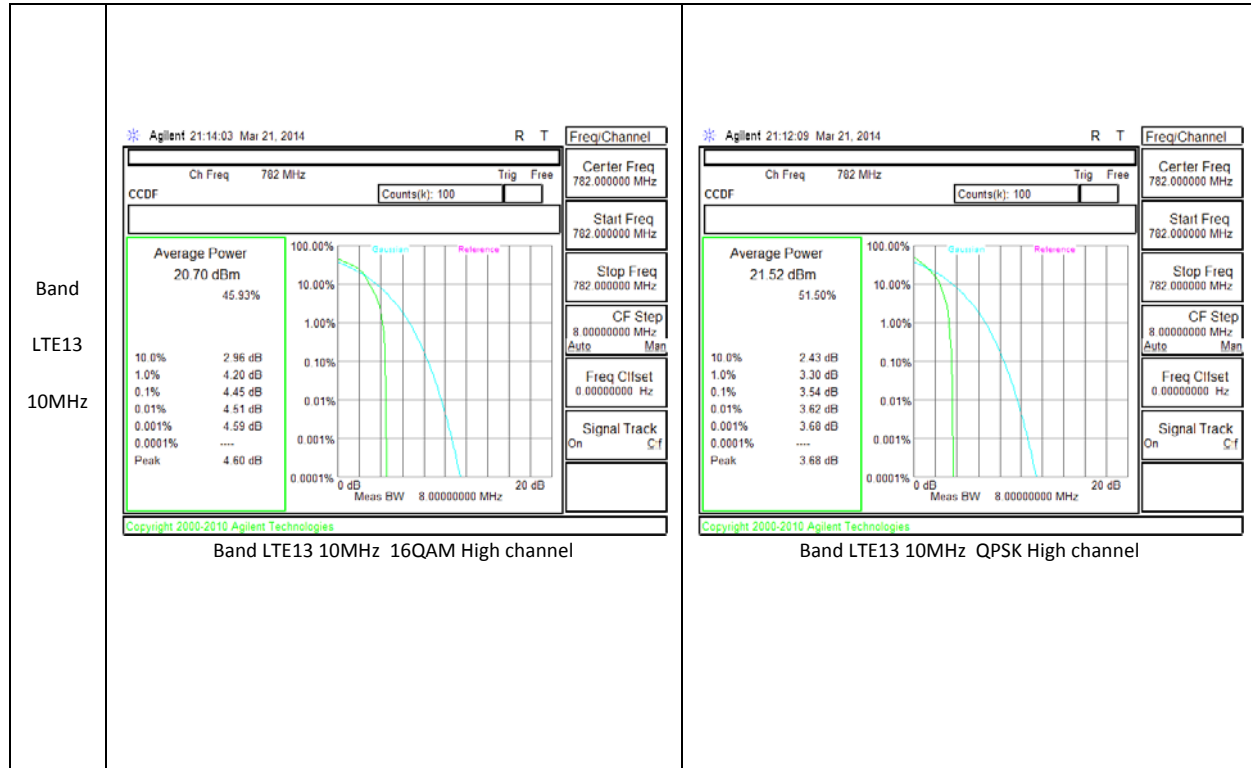
Test Procedure

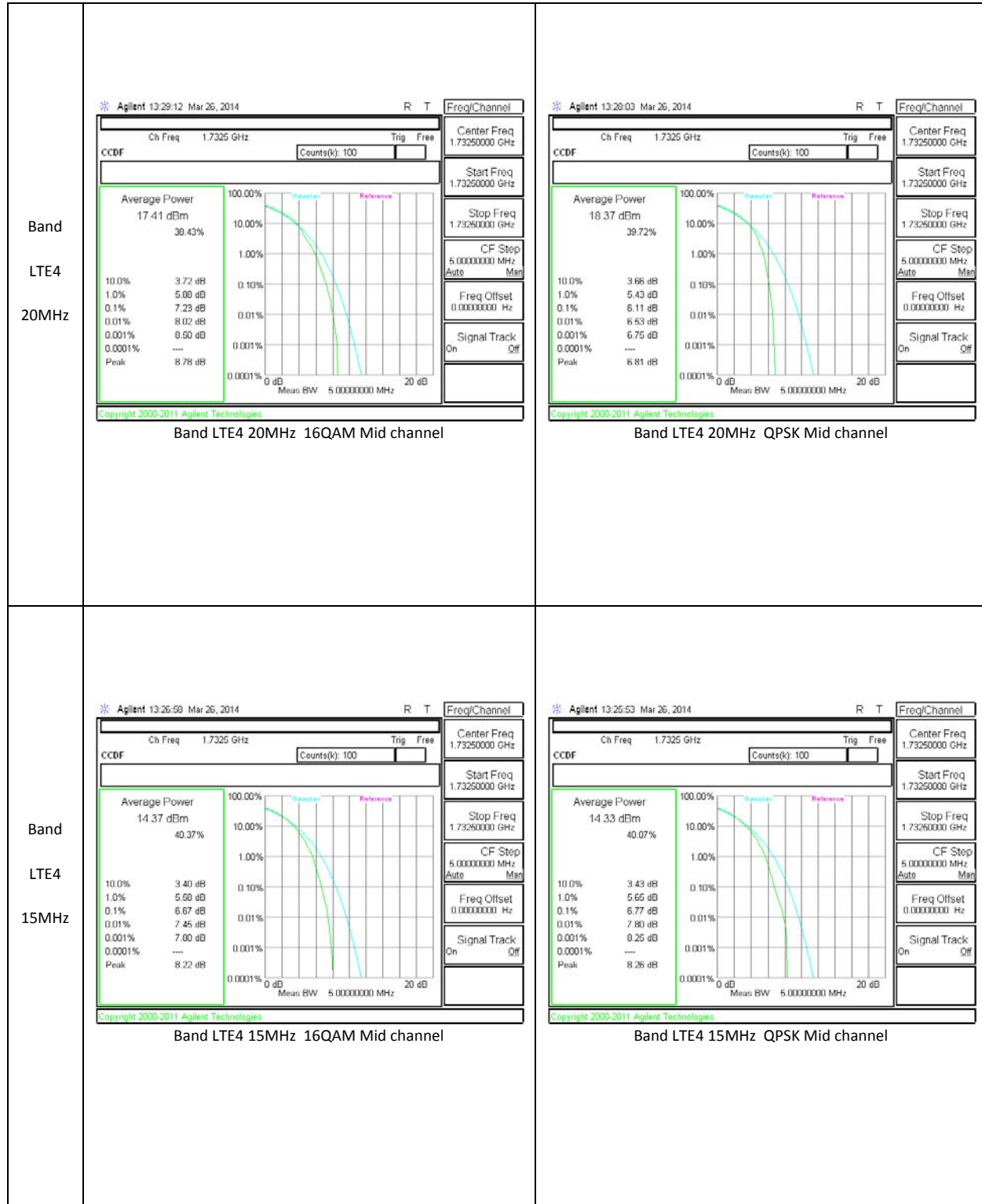
Per KDB 971168 D01 Power Meas License Digital Systems v02r01

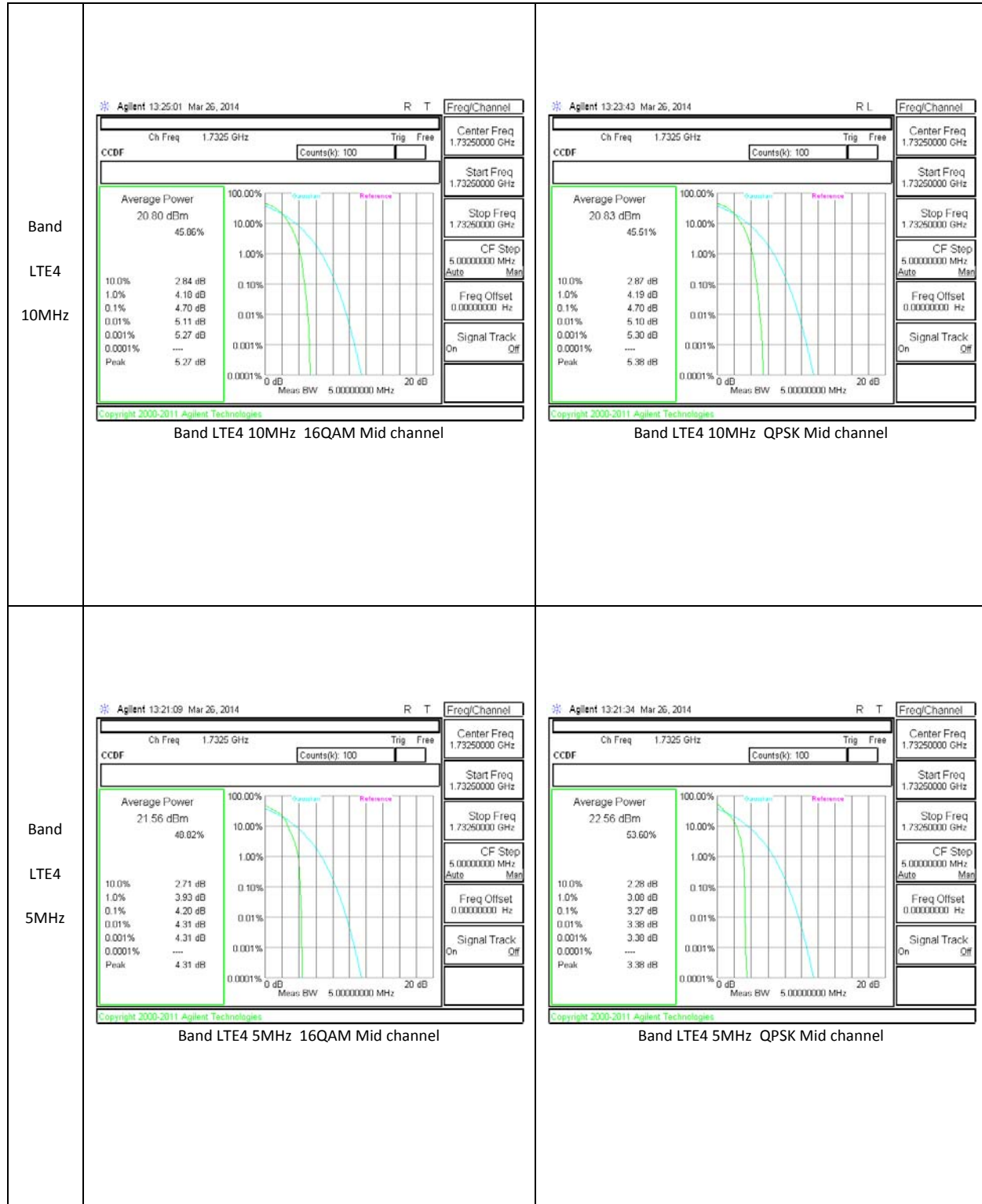
Test Spec

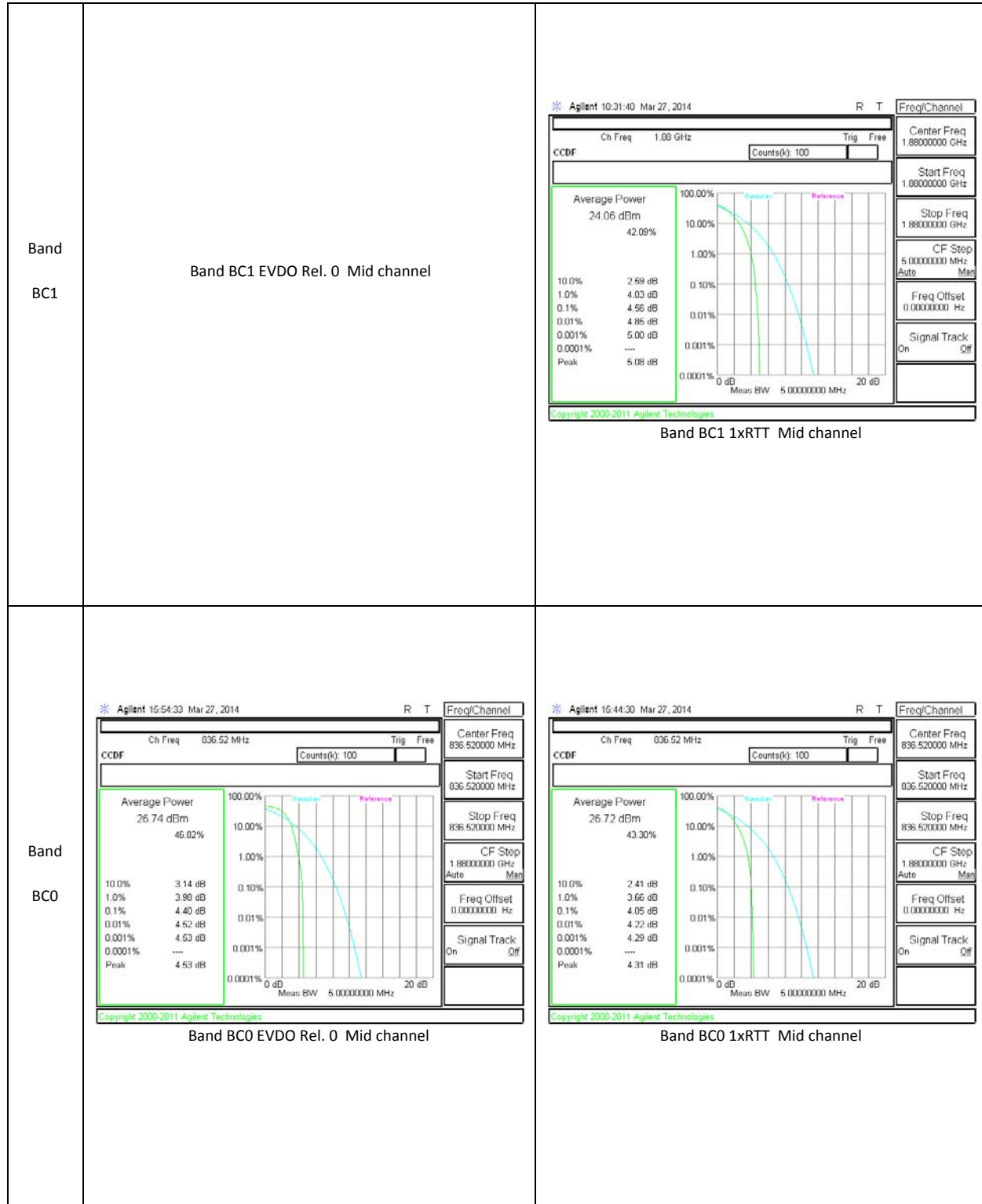
In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

9.1. CONDUCTED PEAK TO AVERAGE RESULT









10. LIMITS AND CONDUCTED RESULTS

10.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

IC: RSS-132, 4.5; RSS-133, 6.5

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

(KDB 971168 D01 Power Meas License Digital Systems v02r01 - 06/07/2013)

MODES TESTED

CDMA2000 BC0/BC1; LTE B4/B13

10.1.1. OCCUPIED BANDWIDTH RESULTS

| Band | Mode | Channel | f (MHz) | 99% BW (KHz) | -26dB BW (KHz) |
|------|-------------|---------|---------|--------------|----------------|
| BC0 | 1xRTT | 1013 | 824.7 | 1269 | 1411 |
| | | 384 | 836.52 | 1279 | 1390 |
| | | 777 | 848.31 | 1276 | 1421 |
| | EVDO REL. 0 | 1013 | 824.7 | 1281 | 1435 |
| | | 384 | 836.52 | 1274 | 1433 |
| | | 777 | 848.31 | 1278 | 1446 |
| BC1 | 1xRTT | 25 | 1851.25 | 1350 | 2114 |
| | | 600 | 1880 | 1265 | 1427 |
| | | 1175 | 1908.75 | 1245 | 1401 |
| | EVDO REL. 0 | 25 | 1851.2 | 1311 | 1953 |
| | | 600 | 1880 | 1278 | 1453 |
| | | 1175 | 1908.75 | 1279 | 1456 |

10.1.2. LTE OCCUPIED BANDWIDTH RESULTS

| Band | BW(MHz) | Mode | RB/RB Size | f (MHz) | 99% BW (KHz) | -26dB BW |
|-------|---------|-------|------------|---------|--------------|----------|
| LTE13 | 10 | QPSK | 50/0 | 782 | 8937 | 9763 |
| | | 16QAM | 50/0 | 782 | 8908 | 9590 |

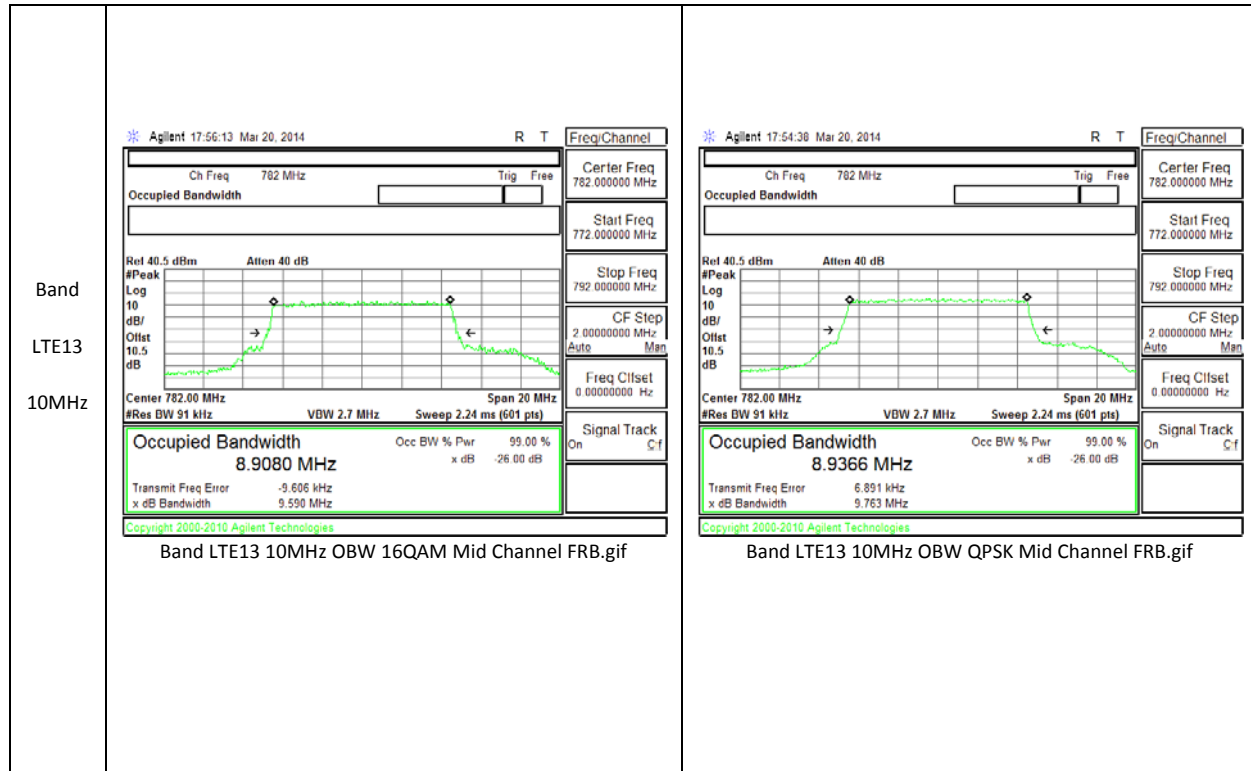
| Band | BW(MHz) | Mode | RB/RB Size | f (MHz) | 99% BW (KHz) | -26dB BW |
|------|---------|-------|------------|---------|--------------|----------|
| LTE4 | 20 | QPSK | 100/0 | 1720 | 17860 | 18901 |
| | | | 100/0 | 1732.5 | 17797 | 18767 |
| | | | 100/0 | 1745 | 17825 | 18919 |
| | | 16QAM | 100/0 | 1720 | 17858 | 18904 |
| | | | 100/0 | 1732.5 | 17831 | 18903 |
| | | | 100/0 | 1745 | 17835 | 19110 |

| Band | BW(MHz) | Mode | RB/RB Size | f (MHz) | 99% BW (KHz) | -26dB BW |
|------|---------|-------|------------|---------|--------------|----------|
| LTE4 | 15 | QPSK | 75/0 | 1717.5 | 13399 | 14516 |
| | | | 75/0 | 1732.5 | 13394 | 16347 |
| | | | 75/0 | 1747.5 | 13390 | 14394 |
| | | 16QAM | 75/0 | 1717.5 | 13377 | 14304 |
| | | | 75/0 | 1732.5 | 13382 | 14393 |
| | | | 75/0 | 1747.5 | 13425 | 14359 |

| Band | BW(MHz) | Mode | RB/RB Size | f (MHz) | 99% BW (KHz) | -26dB BW |
|------|---------|-------|------------|---------|--------------|----------|
| LTE4 | 10 | QPSK | 50/0 | 1715 | 8935 | 9686 |
| | | | 50/0 | 1732.5 | 8945 | 9928 |
| | | | 50/0 | 1750 | 8953 | 9686 |
| | | 16QAM | 50/0 | 1715 | 8952 | 9578 |
| | | | 50/0 | 1732.5 | 8948 | 9881 |
| | | | 50/0 | 1750 | 8934 | 9587 |

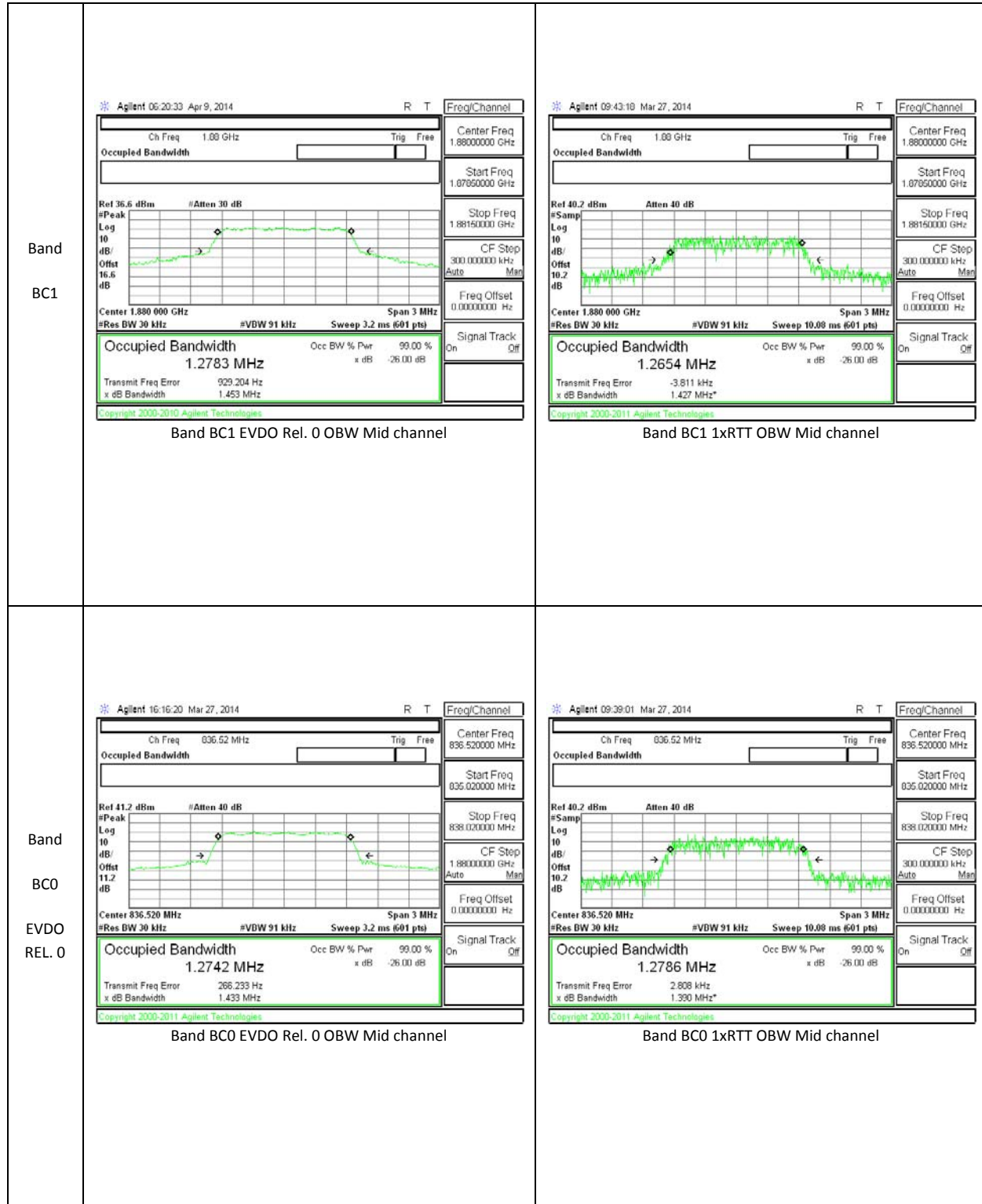
| Band | BW(MHz) | Mode | RB/RB Size | f (MHz) | 99% BW (KHz) | -26dB BW |
|------|---------|-------|------------|---------|--------------|----------|
| LTE4 | 5 | QPSK | 25/0 | 1712.5 | 4457 | 4852 |
| | | | 25/0 | 1732.5 | 4478 | 5605 |
| | | | 25/0 | 1752.5 | 4454 | 4891 |
| | | 16QAM | 25/0 | 1712.5 | 4462 | 4865 |
| | | | 25/0 | 1732.5 | 4462 | 4858 |
| | | | 25/0 | 1752.5 | 4479 | 4897 |

10.1.1. OCCUPIED BANDWIDTH PLOTS



| | | |
|--------------------------------|--|---|
| <p>Band LTE4 20MHz</p> | <p>Agilent 21:40:38 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.71750000 GHz</p> <p>Stop Freq 1.74750000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Rel 40.5 dBm</p> <p>Atten 40 dB</p> <p>#Peak Log 10 dB/ Offst 10.5 dB</p> <p>Center 1.732 50 GHz</p> <p>Span 30 MHz</p> <p>#Res BW 180 kHz</p> <p>VBW 560 kHz</p> <p>Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.8306 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error 20.138 kHz</p> <p>y dB Bandwidth 18.903 MHz</p> <p>Copyright 2000-2010 Agilent Technologies</p> <p>Band LTE4 20MHz OBW 16QAM Mid Channel FRB.gif</p> | <p>Agilent 21:42:00 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.71750000 GHz</p> <p>Stop Freq 1.74750000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Rel 40.5 dBm</p> <p>Atten 40 dB</p> <p>#Peak Log 10 dB/ Offst 10.5 dB</p> <p>Center 1.732 50 GHz</p> <p>Span 30 MHz</p> <p>#Res BW 180 kHz</p> <p>VBW 560 kHz</p> <p>Sweep 1 ms (601 pts)</p> <p>Occupied Bandwidth 17.7965 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error 15.863 kHz</p> <p>y dB Bandwidth 18.767 MHz</p> <p>Copyright 2000-2010 Agilent Technologies</p> <p>Band LTE4 20MHz OBW QPSK Mid Channel FRB.gif</p> |
| <p>Band LTE4 15MHz</p> | <p>Agilent 21:14:50 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.72000000 GHz</p> <p>Stop Freq 1.74500000 GHz</p> <p>CF Step 2.50000000 MHz</p> <p>Rel 40.5 dBm</p> <p>Atten 40 dB</p> <p>#Peak Log 10 dB/ Offst 10.5 dB</p> <p>Center 1.732 50 GHz</p> <p>Span 25 MHz</p> <p>#Res BW 150 kHz</p> <p>VBW 430 kHz</p> <p>Sweep 1.08 ms (601 pts)</p> <p>Occupied Bandwidth 13.3821 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error 1.930 kHz</p> <p>y dB Bandwidth 14.393 MHz</p> <p>Copyright 2000-2010 Agilent Technologies</p> <p>Band LTE4 15MHz OBW 16QAM Mid Channel FRB.gif</p> | <p>Agilent 21:16:03 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.72000000 GHz</p> <p>Stop Freq 1.74500000 GHz</p> <p>CF Step 2.50000000 MHz</p> <p>Rel 40.5 dBm</p> <p>Atten 40 dB</p> <p>#Peak Log 10 dB/ Offst 10.5 dB</p> <p>Center 1.732 50 GHz</p> <p>Span 25 MHz</p> <p>#Res BW 150 kHz</p> <p>VBW 430 kHz</p> <p>Sweep 1.08 ms (601 pts)</p> <p>Occupied Bandwidth 13.3939 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Transmit Freq Error 4.967 kHz</p> <p>y dB Bandwidth 16.347 MHz</p> <p>Copyright 2000-2010 Agilent Technologies</p> <p>Band LTE4 15MHz OBW QPSK Mid Channel FRB.gif</p> |

| | | |
|--------------------------------|--|--|
| <p>Band LTE4 10MHz</p> | <p>Agilent 20:59:12 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.72250000 GHz</p> <p>Stop Freq 1.74250000 GHz</p> <p>CF Step 2.00000000 MHz</p> <p>Freq Cllset 0.00000000 Hz</p> <p>Occupied Bandwidth 8.9476 MHz</p> <p>Transmit Freq Error 12.962 kHz</p> <p>x dB Bandwidth 9.881 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Band LTE4 10MHz OBW 16QAM Mid Channel FRB.gif</p> | <p>Agilent 20:56:51 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.72250000 GHz</p> <p>Stop Freq 1.74250000 GHz</p> <p>CF Step 2.00000000 MHz</p> <p>Freq Cllset 0.00000000 Hz</p> <p>Occupied Bandwidth 8.9448 MHz</p> <p>Transmit Freq Error 4.846 kHz</p> <p>x dB Bandwidth 9.928 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Band LTE4 10MHz OBW QPSK Mid Channel FRB.gif</p> |
| <p>Band LTE4 5MHz</p> | <p>Agilent 20:42:00 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.72750000 GHz</p> <p>Stop Freq 1.73750000 GHz</p> <p>CF Step 1.00000000 MHz</p> <p>Freq Cllset 0.00000000 Hz</p> <p>Occupied Bandwidth 4.4616 MHz</p> <p>Transmit Freq Error 3.134 kHz</p> <p>x dB Bandwidth 4.858 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Band LTE4 5MHz OBW 16QAM Mid Channel FRB.gif</p> | <p>Agilent 20:43:15 Mar 20, 2014</p> <p>Ch Freq 1.7325 GHz</p> <p>Center Freq 1.73250000 GHz</p> <p>Start Freq 1.72750000 GHz</p> <p>Stop Freq 1.73750000 GHz</p> <p>CF Step 1.00000000 MHz</p> <p>Freq Cllset 0.00000000 Hz</p> <p>Occupied Bandwidth 4.4776 MHz</p> <p>Transmit Freq Error -8.275 kHz</p> <p>x dB Bandwidth 5.605 MHz</p> <p>Occ BW % Par 99.00 %</p> <p>x dB -26.00 dB</p> <p>Band LTE4 5MHz OBW QPSK Mid Channel FRB.gif</p> |



10.2. BAND EDGE EMISSIONS

RULE PART(S)

FCC: §22.359, §24.238 and § 27

LIMITS

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

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r01

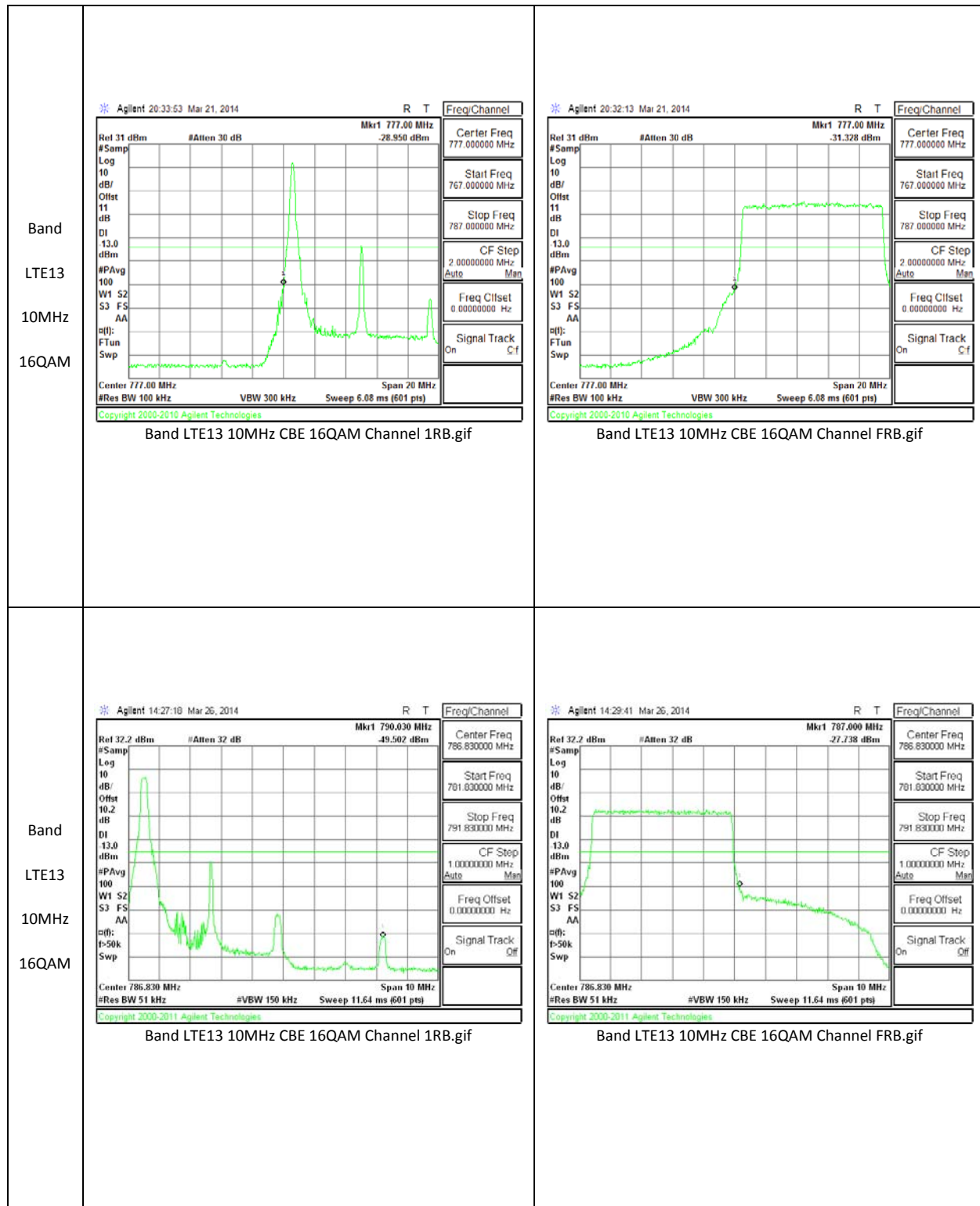
The transmitter output was connected to an Agilent 8960 or a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

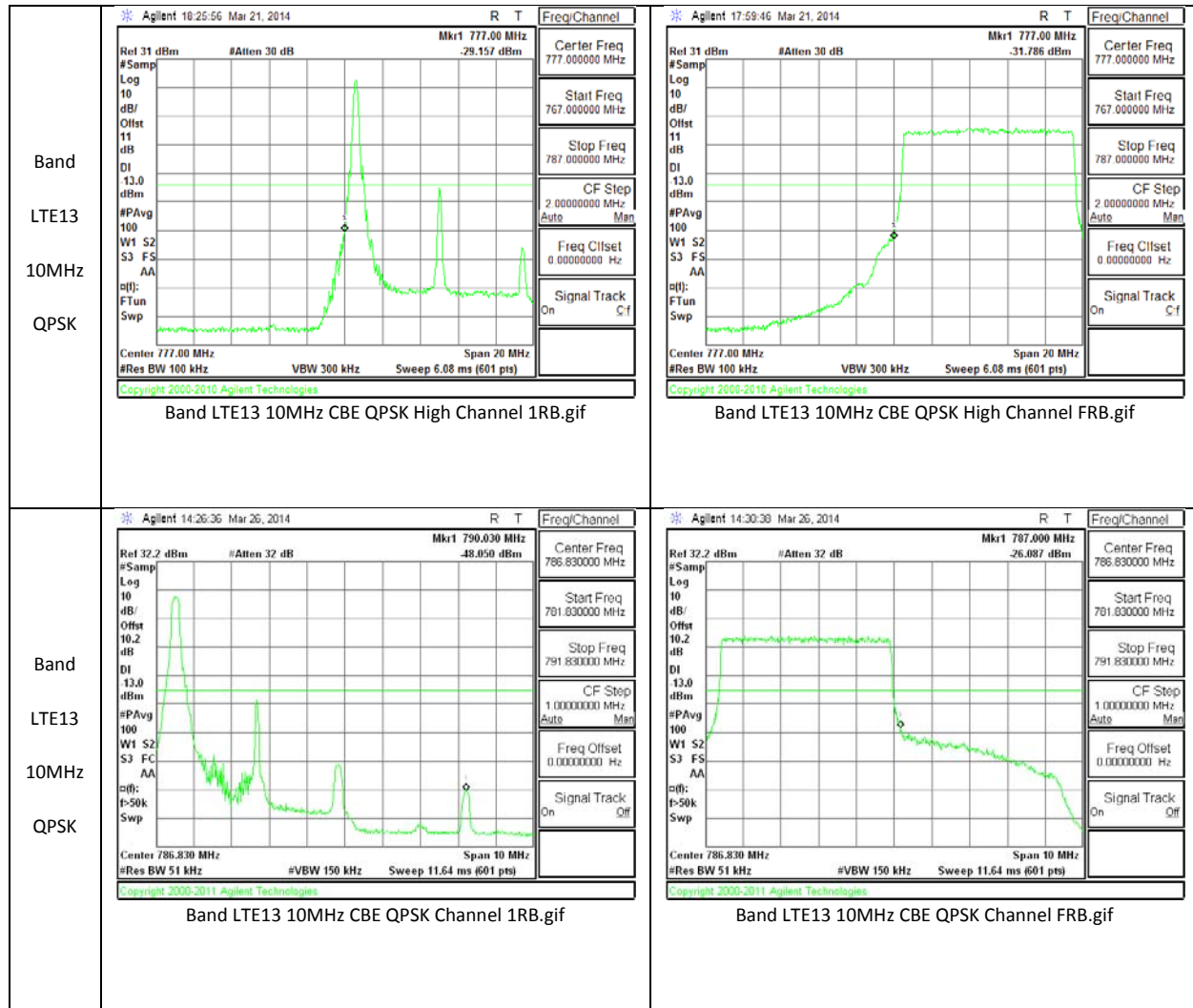
MODES TESTED

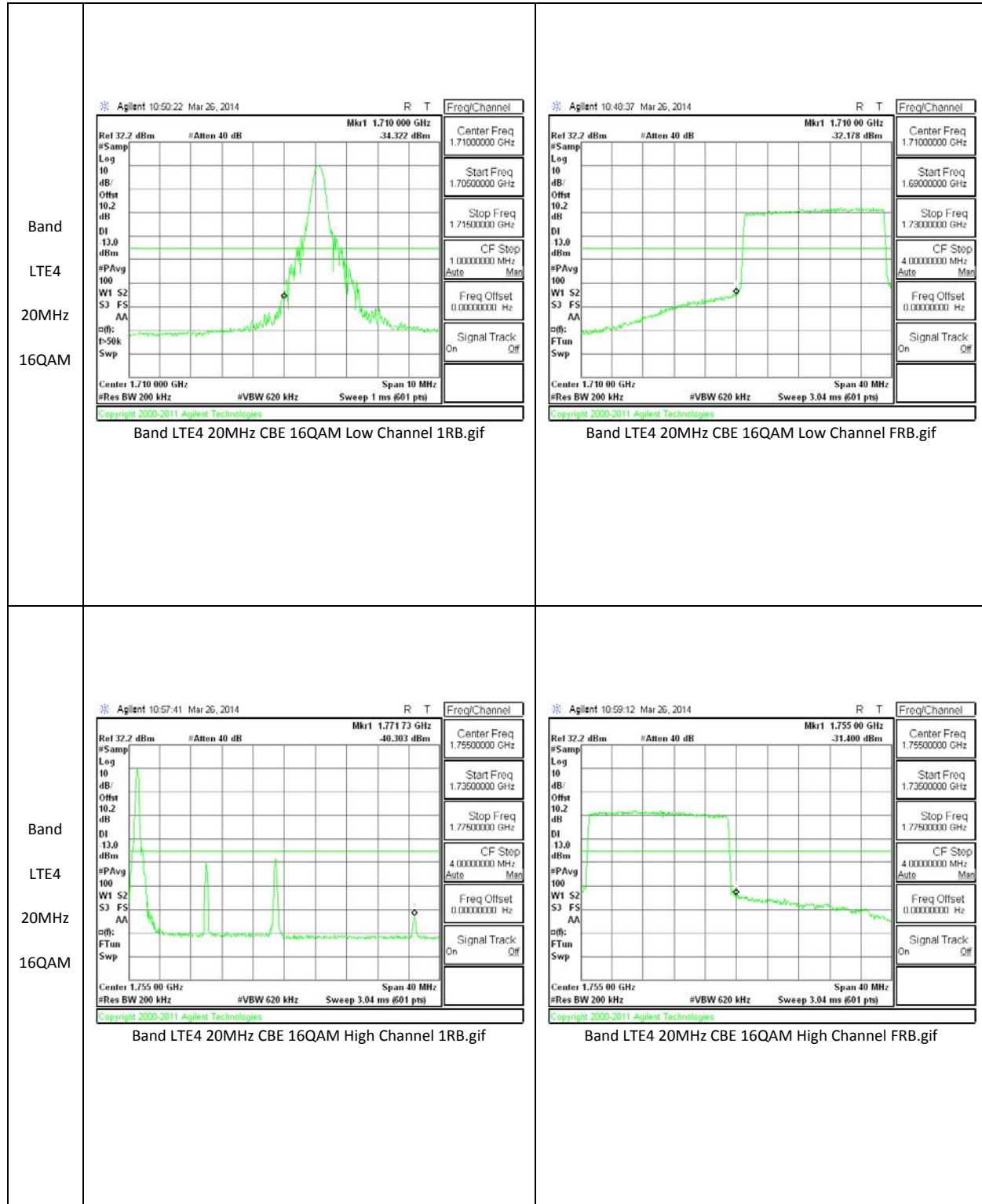
CDMA2000 BC0/BC1; LTE B4/B13

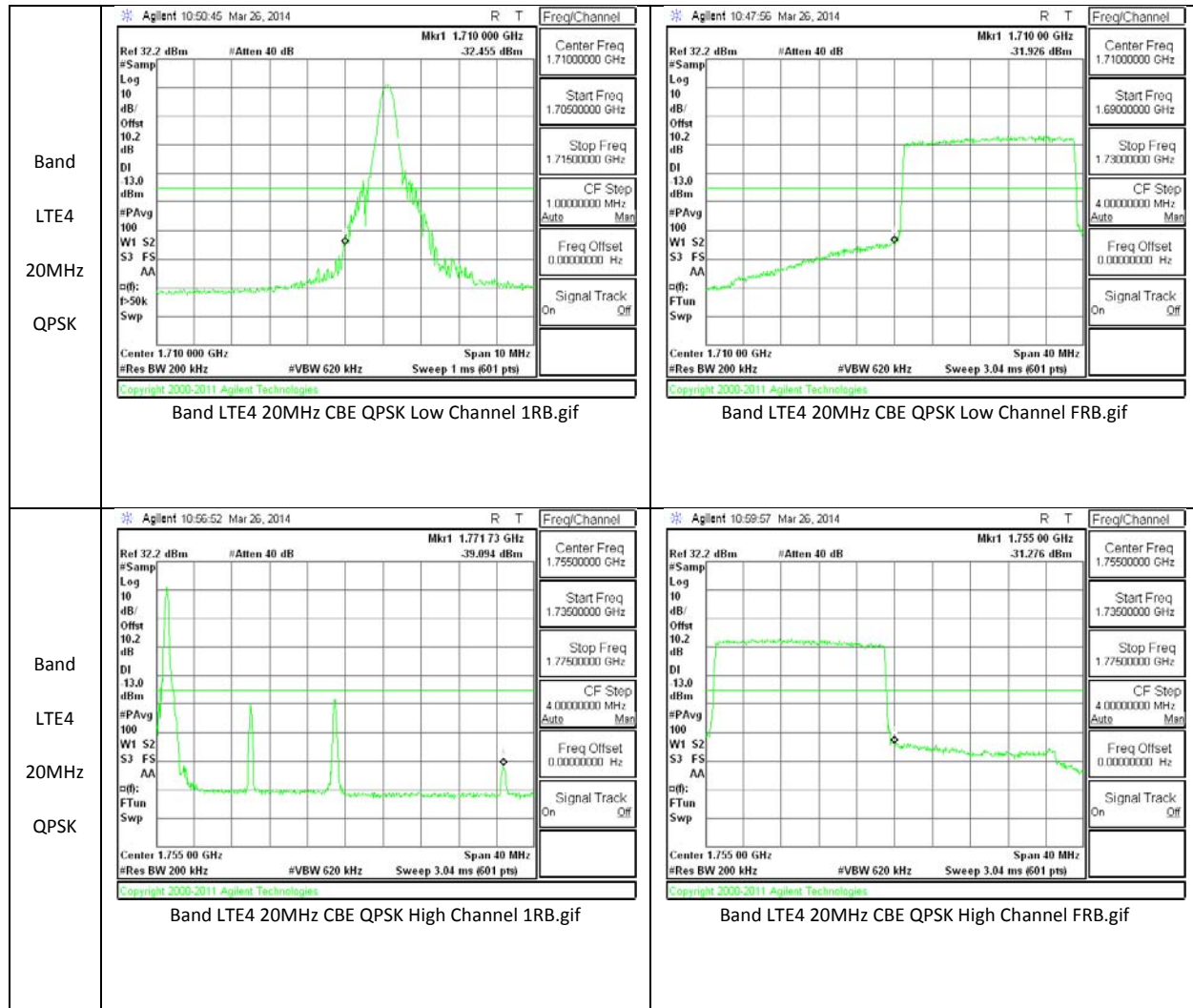
RESULTS

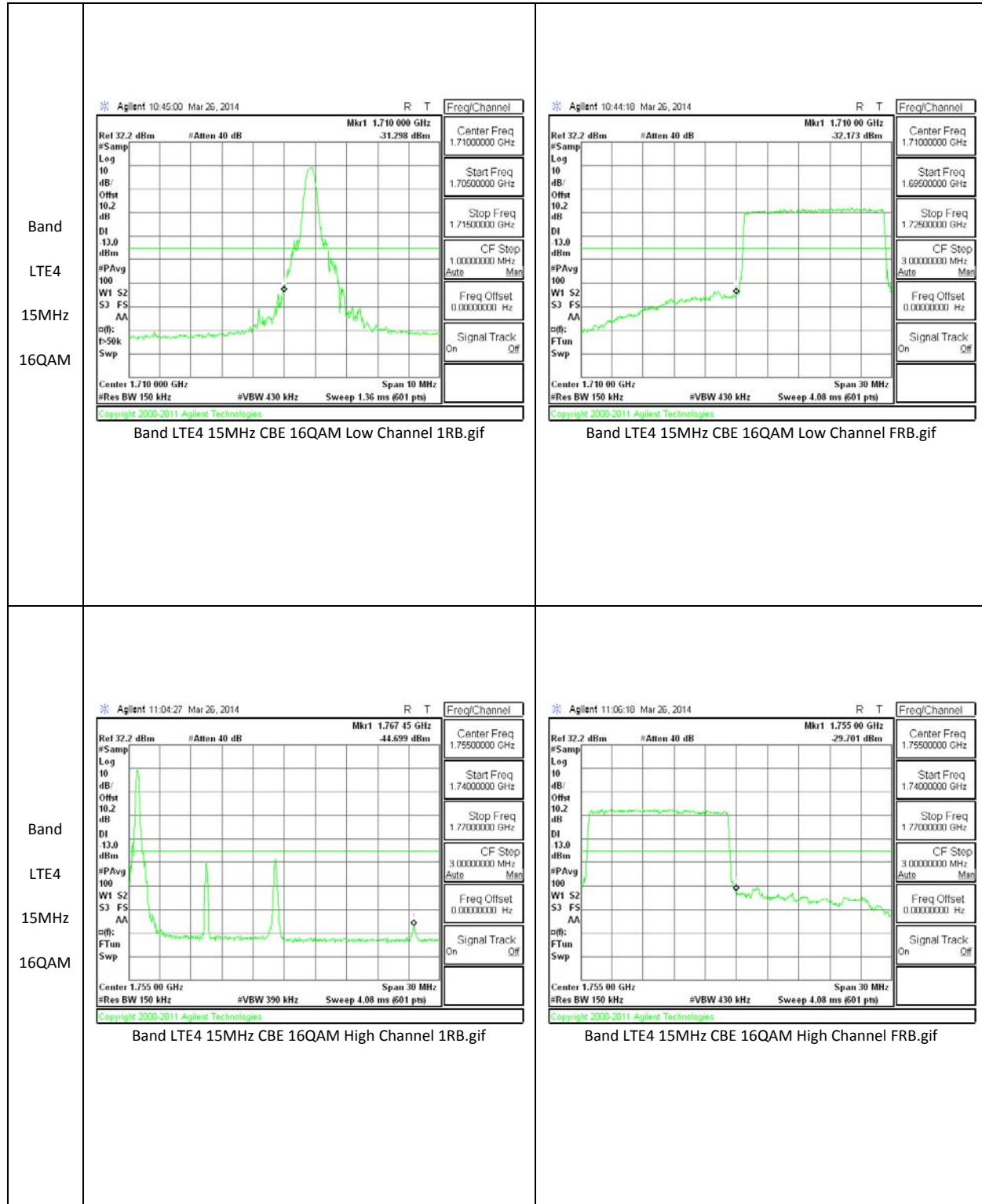
10.2.1. BAND EDGE PLOTS

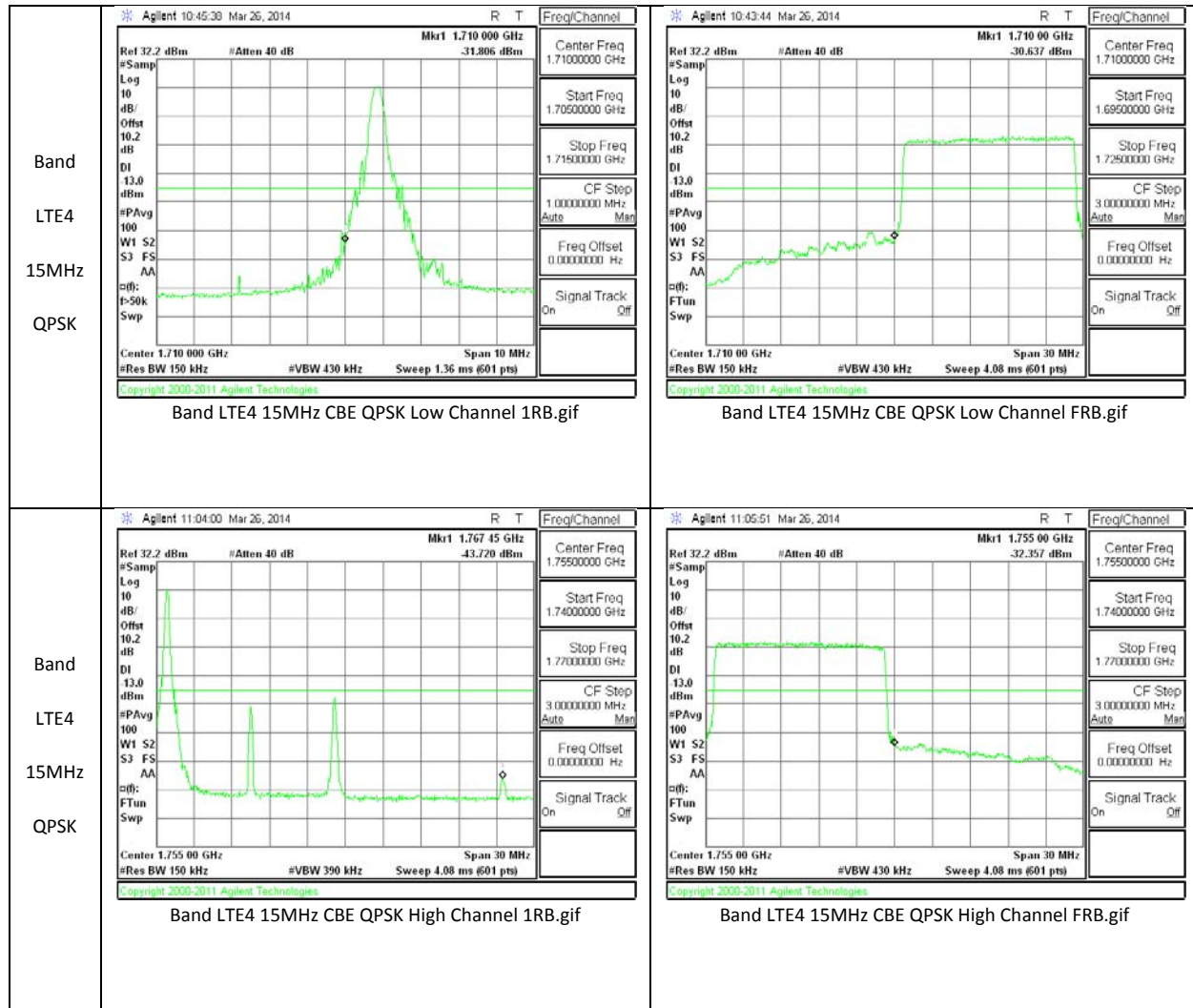


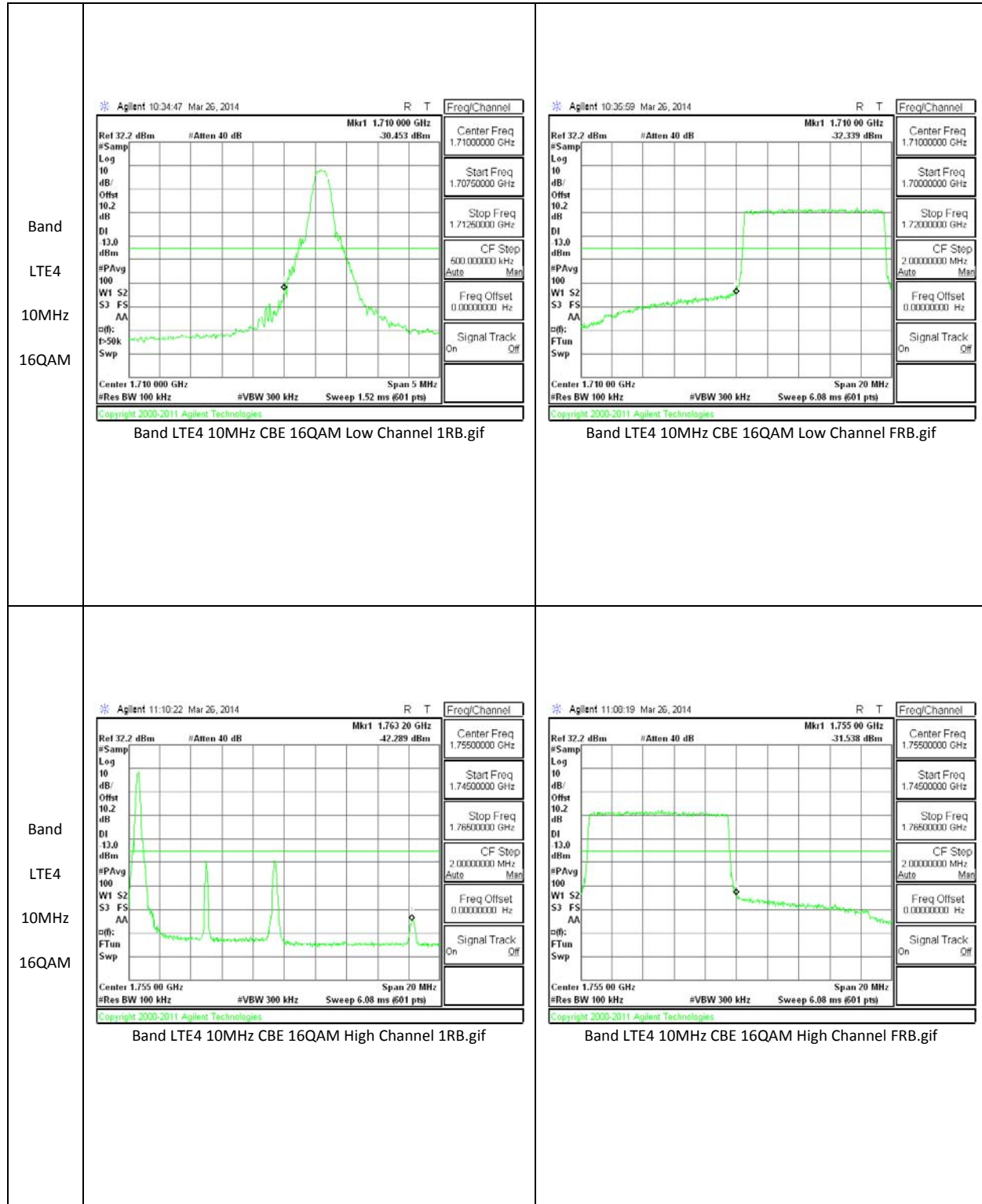


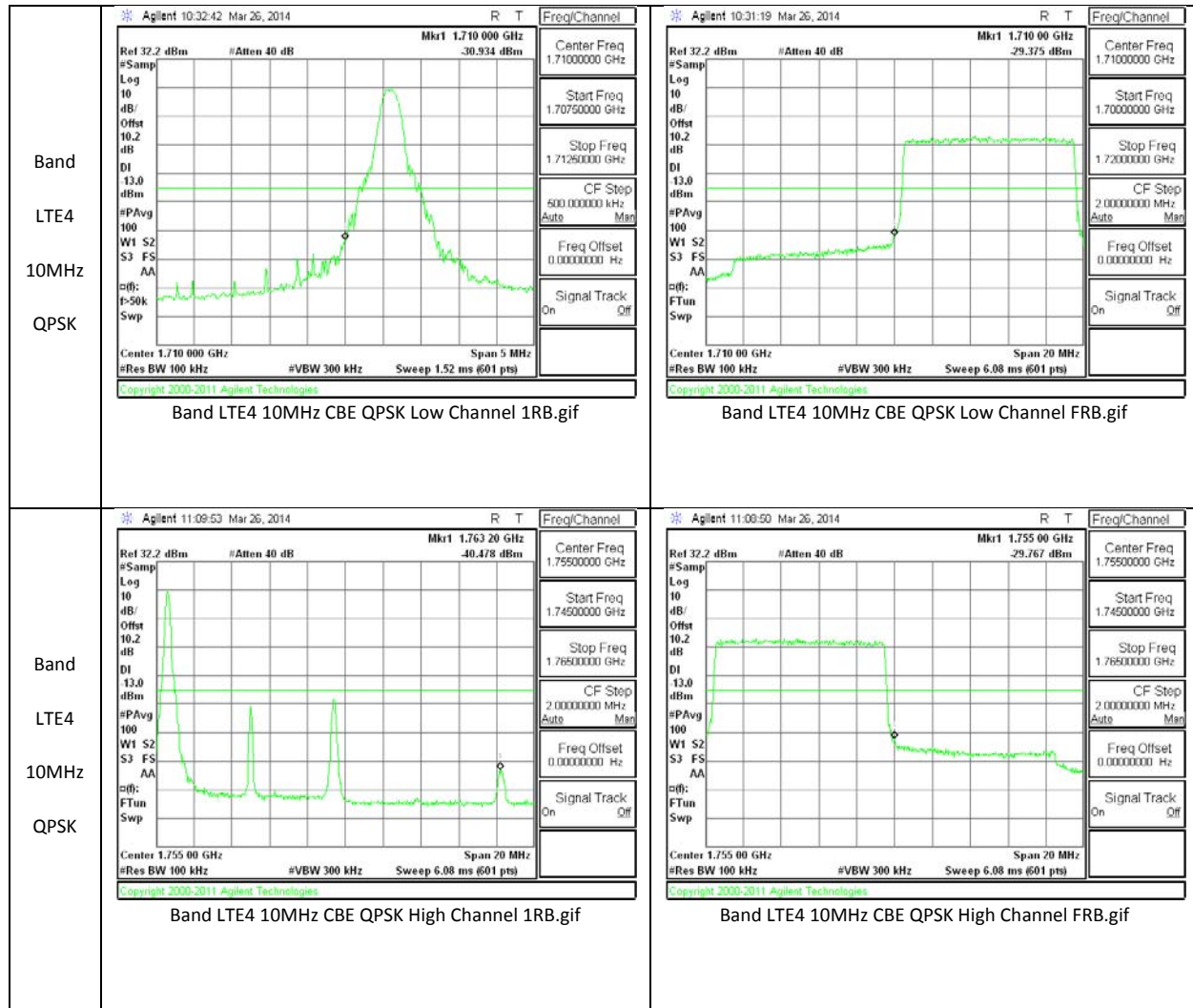


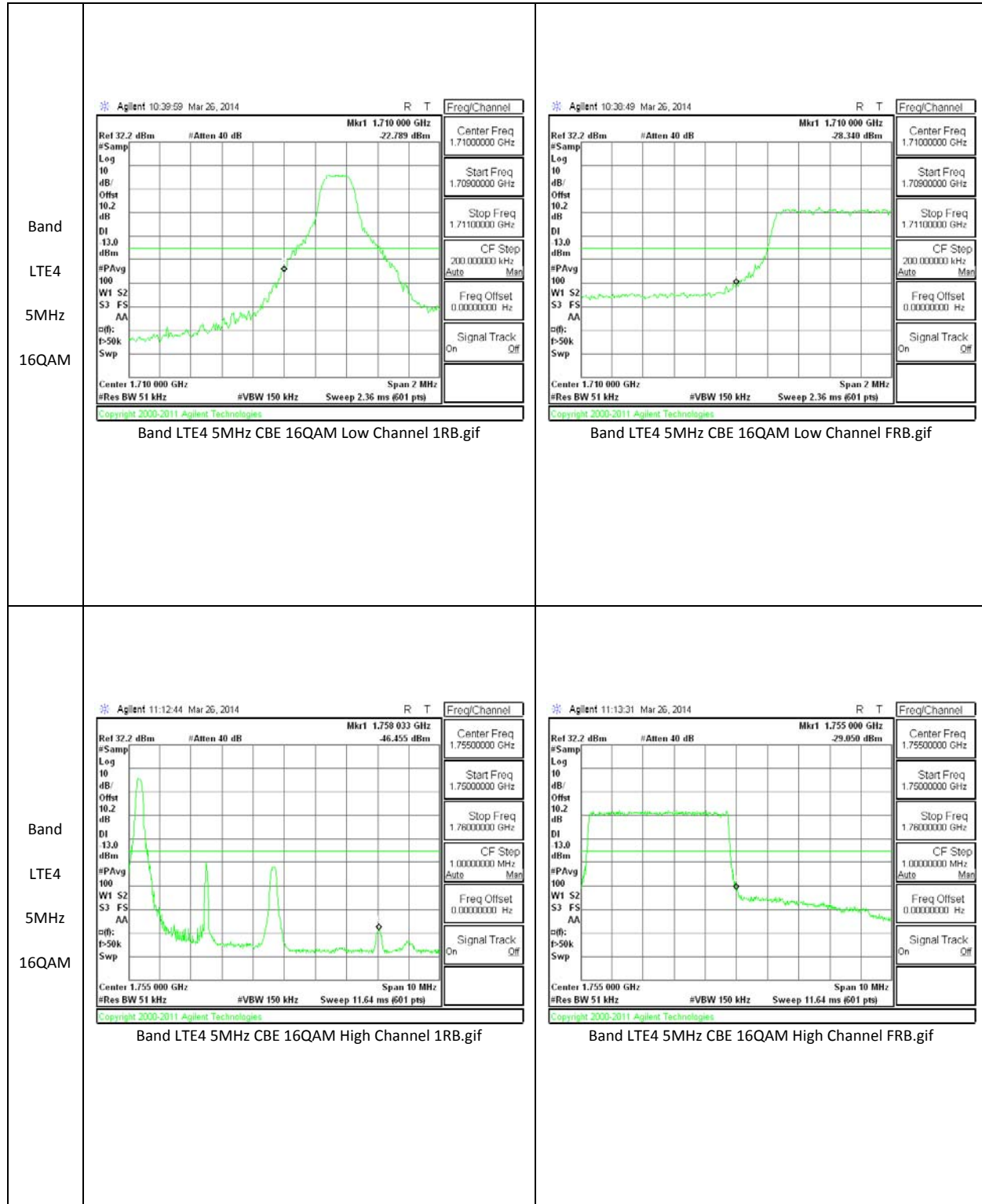


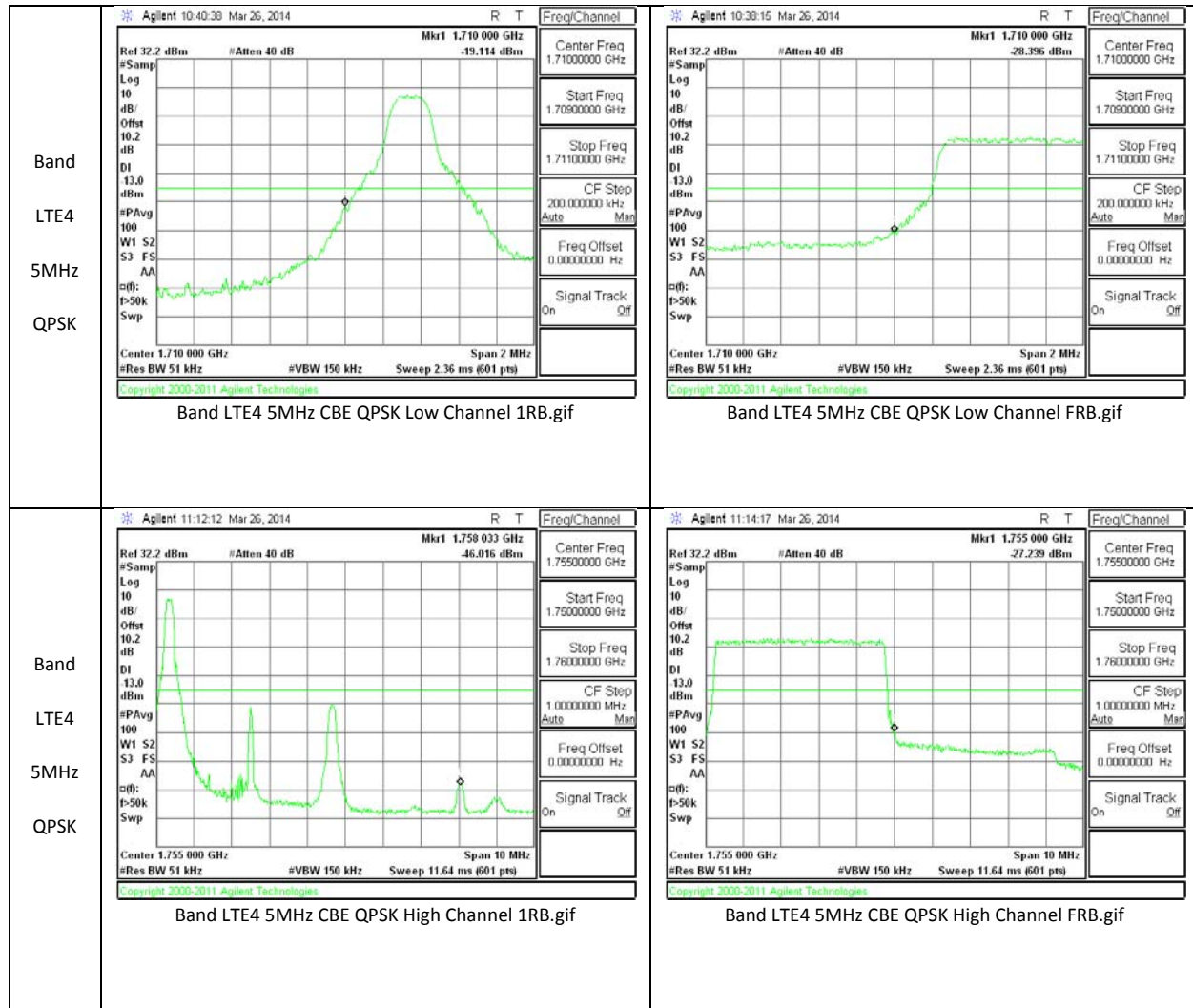


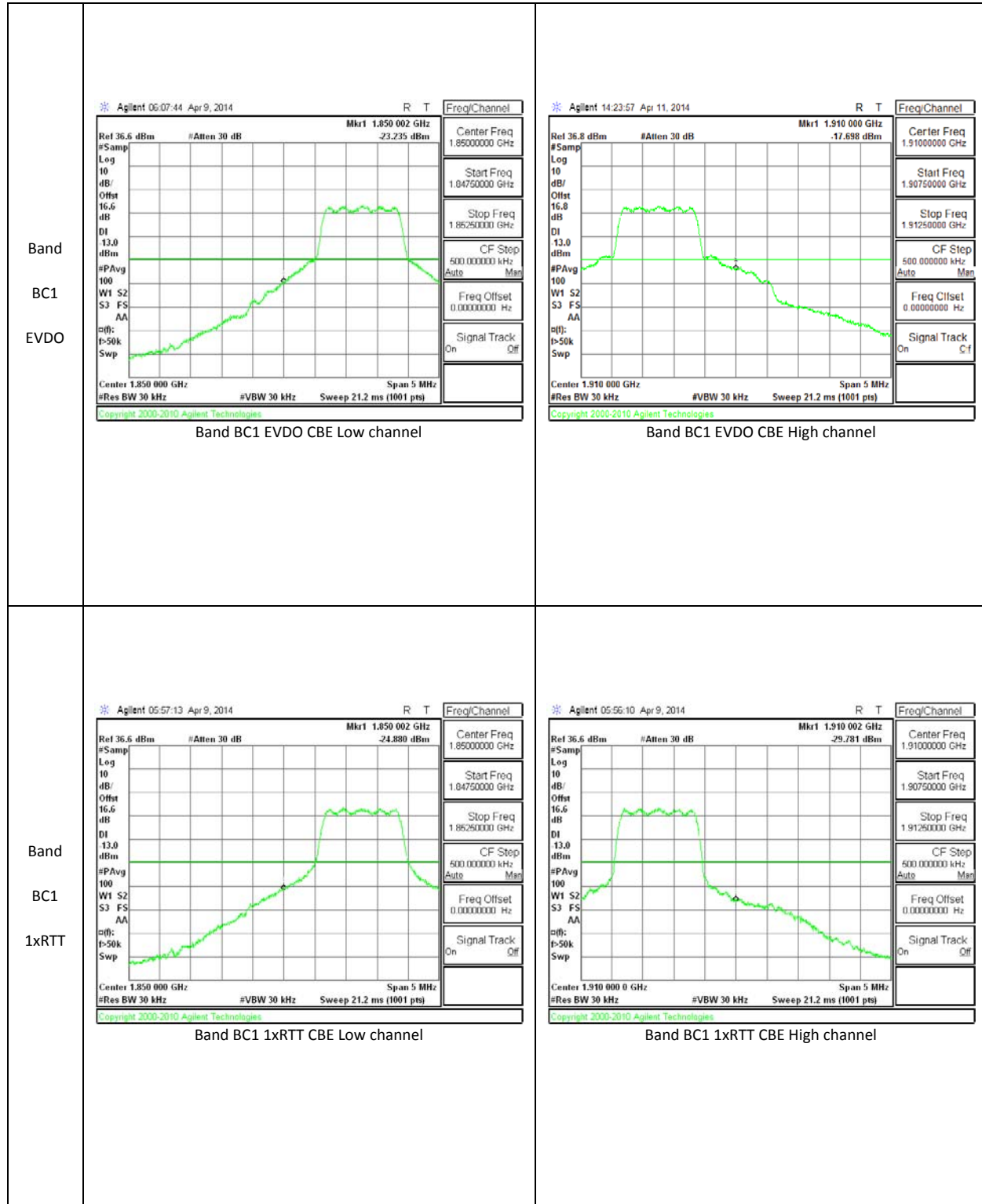


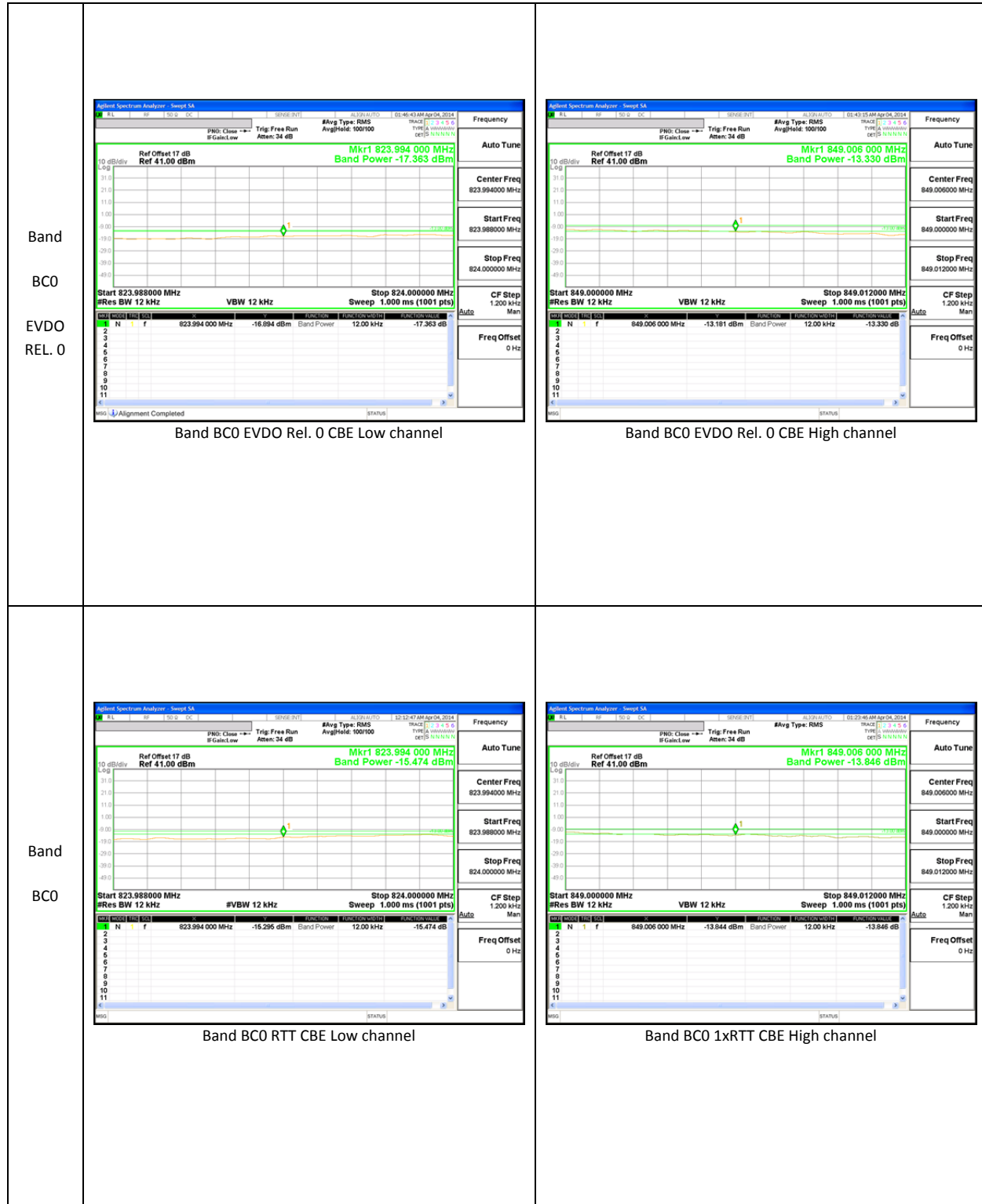












10.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238 and §27

LIMITS

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

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r01

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

SOP

For each out of band emissions measurement:

- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

MODES TESTED

CDMA2000 BC0/BC1; LTE B4/B13

RESULTS

10.3.1. OUT OF BAND EMISSIONS RESULT

| Band | BW (MHz) | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|-------|----------|-------|---------|------------|------------|------------|
| LTE13 | 10 | QPSK | 782 | -36.67 | -13 | -23.67 |
| | | 16QAM | 782 | -38.51 | -13 | -25.51 |

| Band | BW (MHz) | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|------|----------|-------|---------|------------|------------|------------|
| LTE4 | 20 | QPSK | 1720 | -23.27 | -13 | -10.27 |
| | | | 1732.5 | -24.47 | -13 | -11.47 |
| | | | 1745 | -24.30 | -13 | -11.3 |
| | | 16QAM | 1720 | -23.43 | -13 | -10.43 |
| | | | 1732.5 | -24.74 | -13 | -11.74 |
| | | | 1745 | -24.43 | -13 | -11.43 |

| Band | BW (MHz) | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|------|----------|-------|---------|------------|------------|------------|
| LTE4 | 15 | QPSK | 1717.5 | -24.36 | -13 | -11.36 |
| | | | 1732.5 | -23.05 | -13 | -10.05 |
| | | | 1747.5 | -23.25 | -13 | -10.25 |
| | | 16QAM | 1717.5 | -23.45 | -13 | -10.45 |
| | | | 1732.5 | -24.67 | -13 | -11.67 |
| | | | 1747.5 | -24.44 | -13 | -11.44 |

| Band | BW (MHz) | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|------|----------|-------|---------|------------|------------|------------|
| LTE4 | 10 | QPSK | 1715 | -24.20 | -13 | -11.2 |
| | | | 1732.5 | -22.10 | -13 | -9.1 |
| | | | 1750 | -24.23 | -13 | -11.23 |
| | | 16QAM | 1715 | -24.25 | -13 | -11.25 |
| | | | 1732.5 | -24.70 | -13 | -11.7 |
| | | | 1750 | -24.70 | -13 | -11.7 |

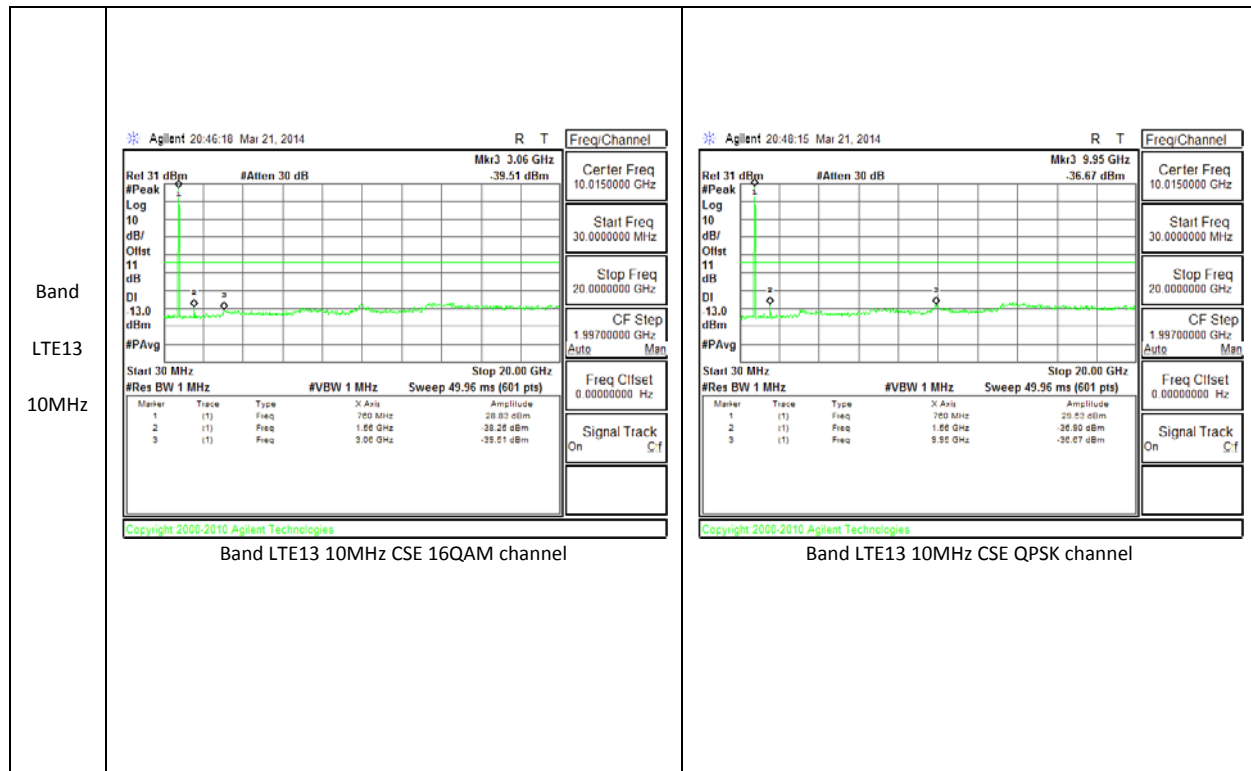
| Band | BW (MHz) | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|------|----------|------|---------|------------|------------|------------|
| LTE4 | 5 | QPSK | 1712.5 | -23.31 | -13 | -10.31 |

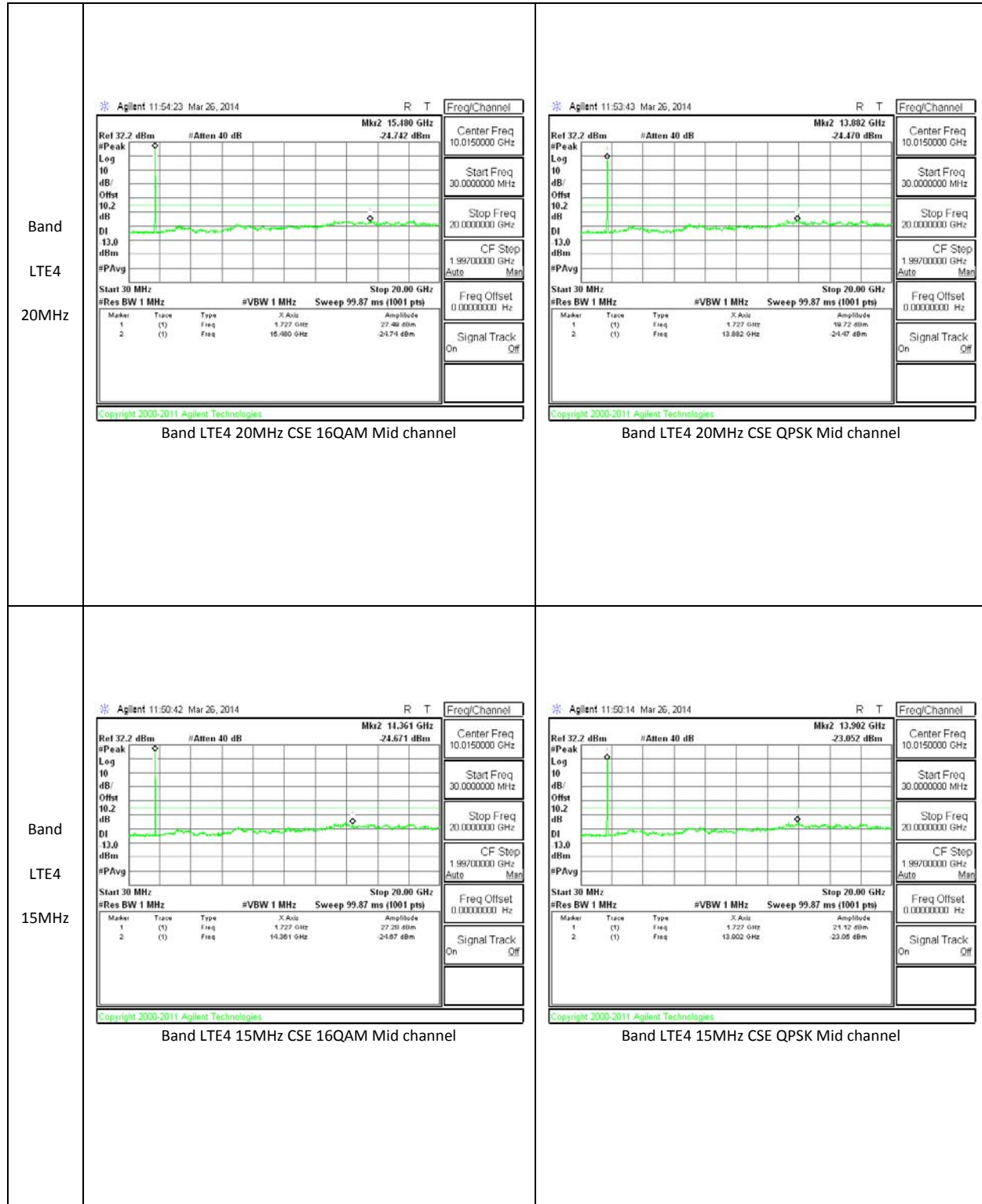
| | | | | | | |
|--|--|-------|--------|--------|-----|--------|
| | | | 1732.5 | -23.17 | -13 | -10.17 |
| | | | 1752.5 | -23.38 | -13 | -10.38 |
| | | 16QAM | 1712.5 | -23.68 | -13 | -10.68 |
| | | | 1732.5 | -24.53 | -13 | -11.53 |
| | | | 1752.5 | -22.88 | -13 | -9.88 |

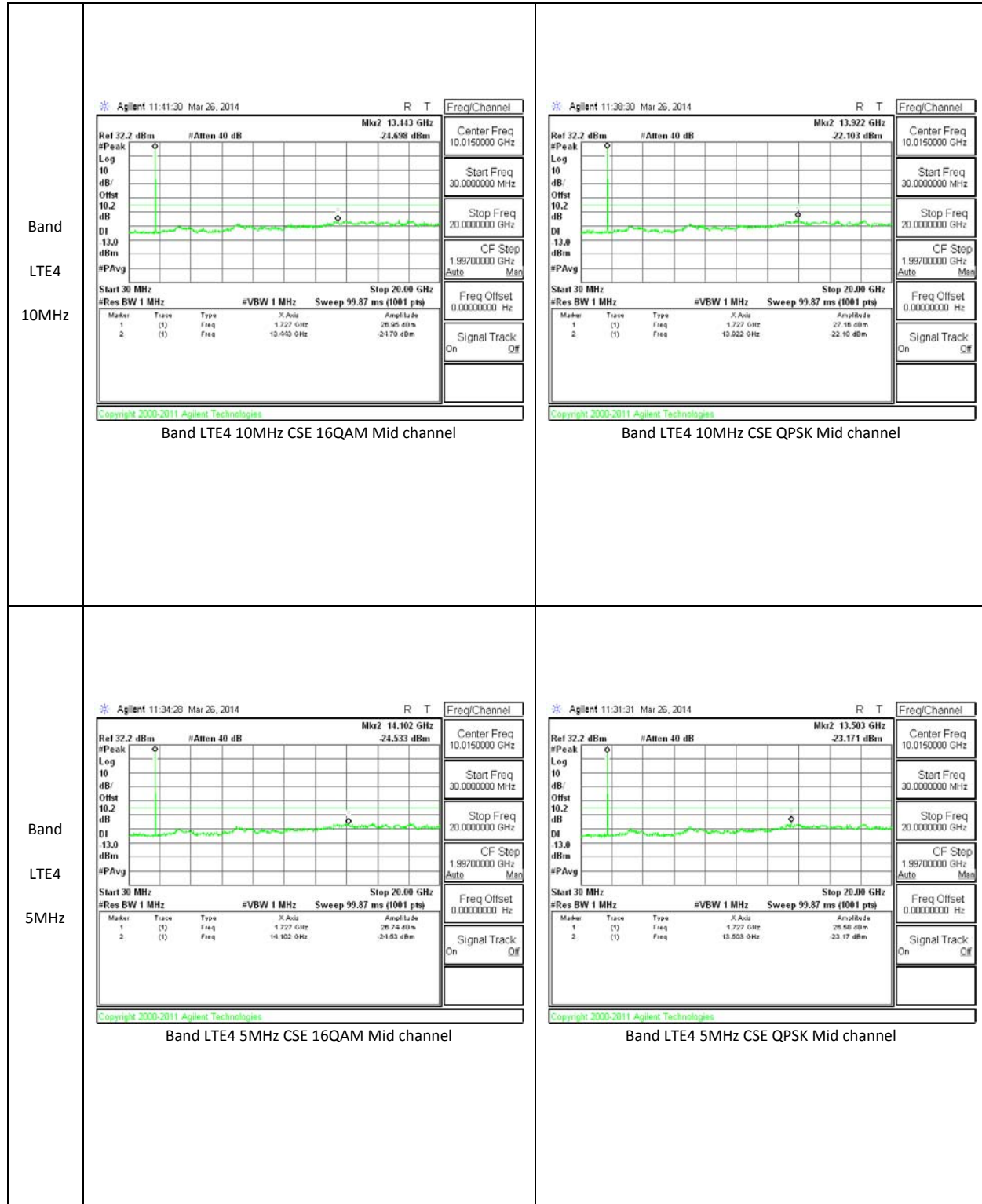
| Band | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|------|-------|---------|------------|------------|------------|
| BC0 | 1xRTT | 824.7 | -28.81 | -13 | -15.81 |
| | | 836.52 | -30.49 | -13 | -17.49 |
| | | 848.31 | -29.46 | -13 | -16.46 |
| BC0 | EVDO | 824.7 | -23.62 | -13 | -10.62 |
| | | 836.52 | -23.63 | -13 | -10.63 |
| | | 848.31 | -25.25 | -13 | -12.25 |

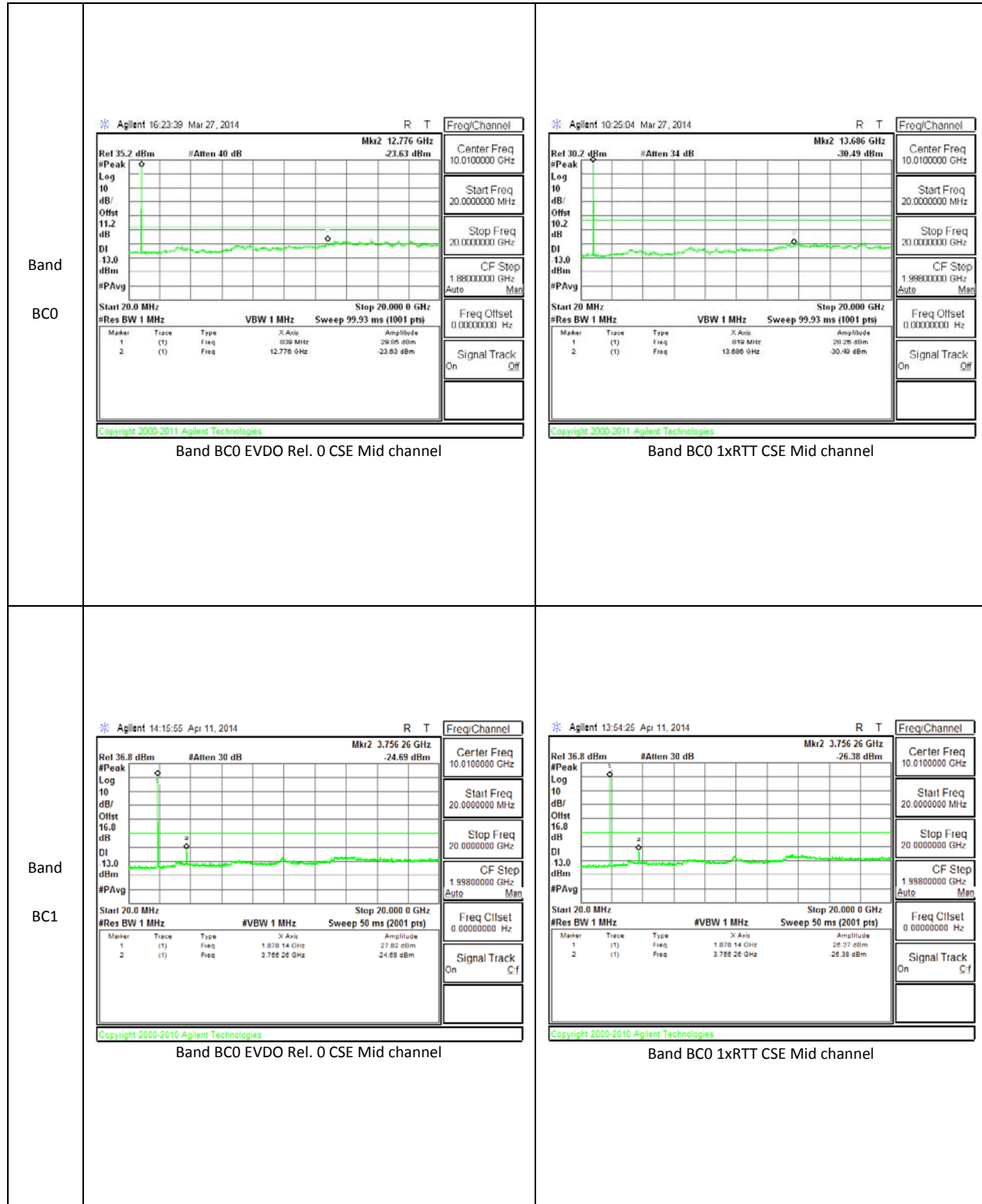
| Band | Mode | f (MHz) | Spur (dBm) | Spec (dBm) | Delta (dB) |
|------|-------|---------|------------|------------|------------|
| BC1 | 1xRTT | 824.7 | -27.14 | -13 | -14.14 |
| | | 836.52 | -26.83 | -13 | -13.83 |
| | | 848.31 | -26.49 | -13 | -13.49 |
| BC1 | EVDO | 1851.25 | -26.69 | -13 | -13.69 |
| | | 1880 | -24.69 | -13 | -11.69 |
| | | 1908.75 | -24.56 | -13 | -11.56 |

10.3.2. OUT OF BAND EMISSIONS PLOTS









10.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

§27.54 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r01

SOP

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached. Reference power supply voltage for these tests is 3.7Vdc.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case). The test voltage ranges from 3.50 to 4.26 VDC.

MODES TESTED

CDMA2000 BC0/BC1; LTE B4/B13

RESULTS

See the following pages.

10.4.1. FREQUENCY STABILITY RESULTS

BC 0 Cell BAND – 836.52MHz

| Reference Frequency: CDMA2000_Mid Channe 836.520002 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: to stay +/- 2.5 ppm = 2091.300 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (°C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 50 | 836.520004 | -0.002 | 2.5 |
| 3.80 | 40 | 836.520003 | -0.001 | 2.5 |
| 3.80 | 30 | 836.520001 | 0.001 | 2.5 |
| 3.80 | 20 | 836.520002 | 0 | 2.5 |
| 3.80 | 10 | 836.520005 | -0.004 | 2.5 |
| 3.80 | 0 | 836.520006 | -0.005 | 2.5 |
| 3.80 | -10 | 836.520003 | -0.001 | 2.5 |
| 3.80 | -20 | 836.520002 | 0.000 | 2.5 |
| 3.80 | -30 | 836.520001 | 0.001 | 2.5 |

| Reference Frequency: CDMA2000_Mid channel 836.520001 MHz @ 20°C | | | | |
|---|------------------------------|---|-------------|-------------|
| Limit: to stay +/- 2.5 ppm = 2091.300 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (°C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 20 | 836.520002 | 0 | 2.5 |
| 4.30 | 20 | 836.520004 | -0.002 | 2.5 |
| 3.5(end volt) | 20 | 836.520001 | 0.001 | 2.5 |

BC 1 PCS BAND 1880.00 MHz

| Reference Frequency: CDMA2000_Mid Channel 1880.000002 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: to stay +/- 2.5 ppm = 4700.000 Hz | | | | |
| Power Supply (Vac) | Environment Temperature (°C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 50 | 1880.000008 | -0.003 | 2.5 |
| 3.80 | 40 | 1880.000003 | -0.001 | 2.5 |
| 3.80 | 30 | 1880.000006 | -0.002 | 2.5 |
| 3.80 | 20 | 1880.000002 | 0 | 2.5 |
| 3.80 | 10 | 1880.000003 | -0.001 | 2.5 |
| 3.80 | 0 | 1880.000002 | 0.000 | 2.5 |
| 3.80 | -10 | 1880.000001 | 0.001 | 2.5 |
| 3.80 | -20 | 1880.000005 | -0.002 | 2.5 |
| 3.80 | -30 | 1880.000007 | -0.003 | 2.5 |

| Reference Frequency: CDMA2000_Mid Channel 1880.000002 MHz @ 20°C | | | | |
|--|------------------------------|---|-------------|-------------|
| Limit: to stay +/- 2.5 ppm = 4700.000 Hz | | | | |
| Power Supply (Vac) | Environment Temperature (°C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 20 | 1880.000002 | 0 | 2.5 |
| 4.30 | 20 | 1880.000007 | -0.003 | 2.5 |
| 3.5(end volt) | 20 | 1880.000003 | -0.001 | 2.5 |

LTE BAND 13 – MID CHANNEL

| Reference Frequency: Mid Channel 782.000031 MHz @ 20°C | | | | |
|---|------------------------------|---|-------------|-------------|
| Limit: within the authorized block or +/- 2.5 ppm = 1955.000 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 50 | 782.000011 | 0.026 | 2.5 |
| 3.80 | 40 | 782.000014 | 0.022 | 2.5 |
| 3.80 | 30 | 782.000021 | 0.013 | 2.5 |
| 3.80 | 20 | 782.000031 | 0 | 2.5 |
| 3.80 | 10 | 782.000024 | 0.009 | 2.5 |
| 3.80 | 0 | 781.999988 | 0.055 | 2.5 |
| 3.80 | -10 | 781.999987 | 0.056 | 2.5 |
| 3.80 | -20 | 781.999991 | 0.051 | 2.5 |
| 3.80 | -30 | 781.999992 | 0.050 | 2.5 |

| Reference Frequency: Mid Channel 782.000031 MHz @ 20°C | | | | |
|---|------------------------------|---|----------------|-------------|
| Limit: within the authorized block or +/- 2.5 ppm = 1955.000 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 20 | 782.000031 | 0.00000 | 2.5 |
| 4.30 | 20 | 782.000028 | 0.00384 | 2.5 |
| End Volt(3.5) | 20 | 782.000013 | 0.02302 | 2.5 |

LTE BAND 4 – MID CHANNEL

| Reference Frequency: PCS Mid Channel 1732.500012MHz @ 20°C | | | | |
|---|------------------------------|---|-------------|-------------|
| Limit: within the authorized block or +/- 2.5 ppm = 4331.250 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 50 | 1732.500018 | -0.003 | 2.5 |
| 3.80 | 40 | 1732.500015 | -0.002 | 2.5 |
| 3.80 | 30 | 1732.500019 | -0.004 | 2.5 |
| 3.80 | 20 | 1732.500012 | 0 | 2.5 |
| 3.80 | 10 | 1732.500015 | -0.002 | 2.5 |
| 3.80 | 0 | 1732.500014 | -0.001 | 2.5 |
| 3.80 | -10 | 1732.500012 | 0.000 | 2.5 |
| 3.80 | -20 | 1732.500010 | 0.001 | 2.5 |
| 3.80 | -30 | 1732.500011 | 0.001 | 2.5 |

| Reference Frequency: PCS Mid Channel 1732.500012 MHz @ 20°C | | | | |
|---|------------------------------|---|----------------|-------------|
| Limit: within the authorized block or +/- 2.5 ppm = 4331.250 Hz | | | | |
| Power Supply (Vdc) | Environment Temperature (*C) | Frequency Deviation Measured with Time Elapse | | |
| | | (MHz) | Delta (ppm) | Limit (ppm) |
| 3.80 | 20 | 1732.500012 | 0.00000 | 2.5 |
| 4.30 | 20 | 1732.500017 | -0.00289 | 2.5 |
| End Volt(3.5) | 20 | 1732.500010 | 0.00115 | 2.5 |

11. RADIATED TEST RESULTS

11.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, and § 27.

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

MODES TESTED

CDMA2000 BC0/BC1; LTE B4/B13

TEST RESULTS

11.1.1. ERP/EIRP Results

| Band | Mode | Channel | f(MHz) | ERP / EIRP | |
|------|-------------|---------|---------|------------|--------|
| | | | | dBm | mW |
| BC1 | 1xRTT | 25 | 1851.25 | 23.95 | 248.31 |
| | | 600 | 1880 | 25.11 | 324.34 |
| | | 1175 | 1908.75 | 24.55 | 285.1 |
| | EVDO REL. 0 | 25 | 1851.25 | 23.78 | 238.78 |
| | | 600 | 1880 | 24.65 | 291.74 |
| | | 1175 | 1908.75 | 24.54 | 284.45 |

| Band | Mode | Channel | f(MHz) | ERP / EIRP | |
|------|-------------|---------|--------|------------|--------|
| | | | | dBm | mW |
| BC0 | 1xRTT | 1013 | 824.7 | 21.341 | 136.18 |
| | | 384 | 836.52 | 22.131 | 163.34 |
| | | 777 | 848.31 | 21.951 | 156.71 |
| | EVDO REL. 0 | 1013 | 824.7 | 21.98 | 157.76 |
| | | 384 | 836.52 | 22.10 | 162.18 |
| | | 777 | 848.31 | 21.46 | 139.96 |

11.1.2. LTE ERP/EIRP Results

| Band | BW (MHz) | Mode | RB/RB Size | f (MHz) | ERP / EIRP | |
|-------|----------|-------|------------|---------|------------|--------|
| | | | | | dBm | mW |
| LTE13 | 10 | QPSK | 1/0 | 782 | 21.58 | 143.88 |
| | | 16QAM | 1/0 | 782 | 20.76 | 119.12 |

| Band | BW (MHz) | Mode | RB/RB Size | f (MHz) | ERP / EIRP | |
|------|----------|-------|------------|---------|------------|--------|
| | | | | | dBm | mW |
| LTE4 | 20 | QPSK | 1/0 | 1720 | 23.16 | 207.01 |
| | | | 1/0 | 1732.5 | 23.95 | 248.31 |
| | | | 1/0 | 1745 | 24.53 | 283.79 |
| | | 16QAM | 1/0 | 1720 | 22.24 | 167.49 |
| | | | 1/0 | 1732.5 | 23.02 | 200.45 |
| | | | 1/0 | 1745 | 23.57 | 227.51 |

| Band | BW (MHz) | Mode | RB/RB Size | f (MHz) | ERP / EIRP | |
|------|----------|-------|------------|---------|------------|--------|
| | | | | | dBm | mW |
| LTE4 | 15 | QPSK | 1/0 | 1717.5 | 23.50 | 223.87 |
| | | | 1/0 | 1732.5 | 24.26 | 266.69 |
| | | | 1/0 | 1747.5 | 24.32 | 270.40 |
| | | 16QAM | 1/0 | 1717.5 | 23.20 | 208.93 |
| | | | 1/0 | 1732.5 | 24.22 | 264.24 |
| | | | 1/0 | 1747.5 | 24.24 | 265.46 |

| Band | BW (MHz) | Mode | RB/RB Size | f (MHz) | ERP / EIRP | |
|------|----------|-------|------------|---------|------------|--------|
| | | | | | dBm | mW |
| LTE4 | 10 | QPSK | 1/0 | 1715 | 23.72 | 235.5 |
| | | | 1/0 | 1732.5 | 23.84 | 242.1 |
| | | | 1/0 | 1750 | 24.12 | 258.23 |
| | | 16QAM | 1/0 | 1715 | 22.72 | 187.07 |
| | | | 1/0 | 1732.5 | 22.91 | 195.43 |

| | | | | | | |
|--|--|--|-----|------|-------|--------|
| | | | 1/0 | 1750 | 23.11 | 204.64 |
|--|--|--|-----|------|-------|--------|

| Band | BW (MHz) | Mode | RB/RB Size | f (MHz) | ERP / EIRP | |
|------|----------|-------|------------|---------|------------|--------|
| | | | | | dBm | mW |
| LTE4 | 5 | QPSK | 1/0 | 1712.5 | 24.02 | 252.35 |
| | | | 1/0 | 1732.5 | 24.86 | 306.2 |
| | | | 1/0 | 1752.5 | 24.45 | 278.61 |
| | | 16QAM | 1/0 | 1712.5 | 23.97 | 249.46 |
| | | | 1/0 | 1732.5 | 24.01 | 251.77 |
| | | | 1/0 | 1752.5 | 23.56 | 226.99 |

11.1.3. ERP/EIRP DATA

| | | | | | | | | | |
|-------------|--|-------------------|-------------------|-------------------|---------------------|--------------|--------------|--------------|--------------|
| Band BC1 | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | |
| | Company: | | LG | | | | | | |
| | Project #: | | 14U17222 | | | | | | |
| | Date: | | 03/26/14 | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | |
| | Configuration: | | EUT, X Position | | | | | | |
| | Mode: | | CDMA EVDO 1900MHz | | | | | | |
| | Test Equipment: | | | | | | | | |
| | Receiving: T345, and Chamber B SMA Cables | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | EIRP | Limit | Delta | Notes |
| | GHz | (dBm) | (H/V) | (dB) | (dBi) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 1.851 | 16.0 | V | 0.85 | 7.90 | 23.05 | 33.0 | -10.0 | |
| | 1.851 | 16.7 | H | 0.85 | 7.90 | 23.78 | 33.0 | -9.2 | |
| | Mid Ch | | | | | | | | |
| | 1.880 | 15.9 | V | 0.85 | 7.90 | 22.92 | 33.0 | -10.1 | |
| | 1.880 | 17.6 | H | 0.85 | 7.90 | 24.65 | 33.0 | -8.4 | |
| | High Ch | | | | | | | | |
| | 1.909 | 16.2 | V | 0.85 | 7.80 | 23.14 | 33.0 | -9.9 | |
| | 1.909 | 17.6 | H | 0.85 | 7.80 | 24.54 | 33.0 | -8.5 | |
| | Rev. 3.17.11 | | | | | | | | |

| Band BC1 1xRTT | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-----------------|-----------------|--------------------|------------|-------------|------------|-------|-------|------------------|-----------------|-----------------|--------------------|------------|-------------|------------|-------|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|-------|--|-------|------|---|------|------|-------|------|------|--|---------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|-------|--|-------|------|---|------|------|-------|------|------|--|
| | Company: | | LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: | | 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: | | 03/20/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: | | K.Kedida | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: | | EUT, X Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: | | CDMA 1900MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: T345, and Chamber B SMA Cables | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.851</td> <td>16.2</td> <td>V</td> <td>0.85</td> <td>7.90</td> <td>23.25</td> <td>33.0</td> <td>-9.8</td> <td></td> </tr> <tr> <td>1.851</td> <td>16.9</td> <td>H</td> <td>0.85</td> <td>7.90</td> <td>23.95</td> <td>33.0</td> <td>-9.1</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.880</td> <td>16.0</td> <td>V</td> <td>0.85</td> <td>7.90</td> <td>23.05</td> <td>33.0</td> <td>-10.0</td> <td></td> </tr> <tr> <td>1.880</td> <td>18.1</td> <td>H</td> <td>0.85</td> <td>7.90</td> <td>25.11</td> <td>33.0</td> <td>-7.9</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.909</td> <td>16.0</td> <td>V</td> <td>0.85</td> <td>7.80</td> <td>22.95</td> <td>33.0</td> <td>-10.1</td> <td></td> </tr> <tr> <td>1.909</td> <td>17.6</td> <td>H</td> <td>0.85</td> <td>7.80</td> <td>24.55</td> <td>33.0</td> <td>-8.5</td> <td></td> </tr> </tbody> </table> | | | | | | | | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1.851 | 16.2 | V | 0.85 | 7.90 | 23.25 | 33.0 | -9.8 | | 1.851 | 16.9 | H | 0.85 | 7.90 | 23.95 | 33.0 | -9.1 | | Mid Ch | | | | | | | | | 1.880 | 16.0 | V | 0.85 | 7.90 | 23.05 | 33.0 | -10.0 | | 1.880 | 18.1 | H | 0.85 | 7.90 | 25.11 | 33.0 | -7.9 | | High Ch | | | | | | | | | 1.909 | 16.0 | V | 0.85 | 7.80 | 22.95 | 33.0 | -10.1 | | 1.909 | 17.6 | H | 0.85 | 7.80 | 24.55 | 33.0 | -8.5 | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.851 | 16.2 | V | 0.85 | 7.90 | 23.25 | 33.0 | -9.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.851 | 16.9 | H | 0.85 | 7.90 | 23.95 | 33.0 | -9.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.880 | 16.0 | V | 0.85 | 7.90 | 23.05 | 33.0 | -10.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.880 | 18.1 | H | 0.85 | 7.90 | 25.11 | 33.0 | -7.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.909 | 16.0 | V | 0.85 | 7.80 | 22.95 | 33.0 | -10.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.909 | 17.6 | H | 0.85 | 7.80 | 24.55 | 33.0 | -8.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Band BC0 | High Frequency Substitution Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|--|----------|---------------------|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|-------|---|-----|-----|-------|------|-------|--|---------|--|--|--|--|--|--|--|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|-------|---|-----|-----|-------|------|-------|--|
| | Company: | | LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: | | 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: | | 03/26/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: | | EUT, X Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: | | CDMA EVDO BC0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">f MHz</th> <th style="width: 10%;">SG reading (dBm)</th> <th style="width: 10%;">Ant. Pol. (H/V)</th> <th style="width: 10%;">Cable Loss (dB)</th> <th style="width: 10%;">Antenna Gain (dBd)</th> <th style="width: 10%;">ERP (dBm)</th> <th style="width: 10%;">Limit (dBm)</th> <th style="width: 10%;">Margin (dB)</th> <th style="width: 10%;">Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>824.70</td> <td>15.42</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>14.52</td> <td>38.5</td> <td>-23.9</td> <td></td> </tr> <tr> <td>824.70</td> <td>22.88</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>21.98</td> <td>38.5</td> <td>-16.5</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.52</td> <td>16.61</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>15.71</td> <td>38.5</td> <td>-22.7</td> <td></td> </tr> <tr> <td>836.52</td> <td>23.00</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>22.10</td> <td>38.5</td> <td>-16.3</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>848.31</td> <td>16.29</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>15.39</td> <td>38.5</td> <td>-23.1</td> <td></td> </tr> <tr> <td>848.31</td> <td>22.36</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>21.46</td> <td>38.5</td> <td>-17.0</td> <td></td> </tr> </tbody> </table> | | | | | | | | | | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 824.70 | 15.42 | V | 0.9 | 0.0 | 14.52 | 38.5 | -23.9 | | 824.70 | 22.88 | H | 0.9 | 0.0 | 21.98 | 38.5 | -16.5 | | Mid Ch | | | | | | | | | 836.52 | 16.61 | V | 0.9 | 0.0 | 15.71 | 38.5 | -22.7 | | 836.52 | 23.00 | H | 0.9 | 0.0 | 22.10 | 38.5 | -16.3 | | High Ch | | | | | | | | | 848.31 | 16.29 | V | 0.9 | 0.0 | 15.39 | 38.5 | -23.1 | | 848.31 | 22.36 | H | 0.9 | 0.0 | 21.46 | 38.5 | -17.0 | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 824.70 | 15.42 | V | 0.9 | 0.0 | 14.52 | 38.5 | -23.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 824.70 | 22.88 | H | 0.9 | 0.0 | 21.98 | 38.5 | -16.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.52 | 16.61 | V | 0.9 | 0.0 | 15.71 | 38.5 | -22.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.52 | 23.00 | H | 0.9 | 0.0 | 22.10 | 38.5 | -16.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 848.31 | 16.29 | V | 0.9 | 0.0 | 15.39 | 38.5 | -23.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 848.31 | 22.36 | H | 0.9 | 0.0 | 21.46 | 38.5 | -17.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Band BC0 1xRTT | High Frequency Substitution Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|----------|---------------------|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|-------|---|-----|-----|-------|------|-------|--|---------|--|--|--|--|--|--|--|--|--------|-------|---|-----|-----|-------|------|-------|--|--------|-------|---|-----|-----|-------|------|-------|--|
| | Company: | | LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: | | 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: | | 03/20/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: | | K.Kedida | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: | | EUT, X Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: | | CDMA RTT BC0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>824.70</td> <td>15.11</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>14.21</td> <td>38.5</td> <td>-24.2</td> <td></td> </tr> <tr> <td>824.70</td> <td>22.24</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>21.34</td> <td>38.5</td> <td>-17.1</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>836.52</td> <td>16.61</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>15.71</td> <td>38.5</td> <td>-22.7</td> <td></td> </tr> <tr> <td>836.52</td> <td>23.03</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>22.13</td> <td>38.5</td> <td>-16.3</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>848.31</td> <td>16.18</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>15.28</td> <td>38.5</td> <td>-23.2</td> <td></td> </tr> <tr> <td>848.31</td> <td>22.85</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>21.95</td> <td>38.5</td> <td>-16.5</td> <td></td> </tr> </tbody> </table> | | | | | | | | | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | 824.70 | 15.11 | V | 0.9 | 0.0 | 14.21 | 38.5 | -24.2 | | 824.70 | 22.24 | H | 0.9 | 0.0 | 21.34 | 38.5 | -17.1 | | Mid Ch | | | | | | | | | 836.52 | 16.61 | V | 0.9 | 0.0 | 15.71 | 38.5 | -22.7 | | 836.52 | 23.03 | H | 0.9 | 0.0 | 22.13 | 38.5 | -16.3 | | High Ch | | | | | | | | | 848.31 | 16.18 | V | 0.9 | 0.0 | 15.28 | 38.5 | -23.2 | | 848.31 | 22.85 | H | 0.9 | 0.0 | 21.95 | 38.5 | -16.5 | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 824.70 | 15.11 | V | 0.9 | 0.0 | 14.21 | 38.5 | -24.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 824.70 | 22.24 | H | 0.9 | 0.0 | 21.34 | 38.5 | -17.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.52 | 16.61 | V | 0.9 | 0.0 | 15.71 | 38.5 | -22.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 836.52 | 23.03 | H | 0.9 | 0.0 | 22.13 | 38.5 | -16.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 848.31 | 16.18 | V | 0.9 | 0.0 | 15.28 | 38.5 | -23.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 848.31 | 22.85 | H | 0.9 | 0.0 | 21.95 | 38.5 | -16.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Band LTE13 10MHz 16QAM | High Frequency Substitution Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------|---------------------|-----------------------|--------------|----------------|----------------|-------|----------|---------------------|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--|--|--|--|--|--|--|--|---------|-------|---|-----|-----|-------|------|-------|--|---------|-------|---|-----|-----|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----|--|--|--|--|--|--|--|--|--------------|--|--|--|--|--|--|--|--|
| | Company: | | LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: | | 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: | | 03/26/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: | | Z position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: | | LTE_B13_10MHz_16QAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td colspan="9"> </td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>782.000</td> <td>21.61</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>20.76</td> <td>34.8</td> <td>-14.0</td> <td></td> </tr> <tr> <td>782.000</td> <td>13.94</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>13.04</td> <td>34.8</td> <td>-21.8</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td colspan="9"> </td> </tr> <tr> <td colspan="9">NEW</td> </tr> <tr> <td colspan="9">Rev. 3.17.11</td> </tr> </tbody> </table> | | | | | | | | | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | | | | | | | | | | Mid Ch | | | | | | | | | 782.000 | 21.61 | V | 0.9 | 0.0 | 20.76 | 34.8 | -14.0 | | 782.000 | 13.94 | H | 0.9 | 0.0 | 13.04 | 34.8 | -21.8 | | Mid Ch | | | | | | | | | | | | | | | | | | NEW | | | | | | | | | Rev. 3.17.11 | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 782.000 | 21.61 | V | 0.9 | 0.0 | 20.76 | 34.8 | -14.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 782.000 | 13.94 | H | 0.9 | 0.0 | 13.04 | 34.8 | -21.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| NEW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Band LTE13 10MHz QPSK | High Frequency Substitution Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|----------|---------------------|--------------------|--------------------|-----------------------|--------------|----------------|----------------|-------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------|--|--|--|--|--|--|--|--|---------|-------|---|-----|-----|-------|------|-------|--|---------|-------|---|-----|-----|-------|------|-------|--|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----|--|--|--|--|--|--|--|--|--------------|--|--|--|--|--|--|--|--|
| | Company: | | LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: | | 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: | | 03/26/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: | | Z position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: | | LTE_B13_10MHz_QPSK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Margin (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td colspan="9"> </td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>782.000</td> <td>22.48</td> <td>V</td> <td>0.9</td> <td>0.0</td> <td>21.58</td> <td>34.8</td> <td>-13.2</td> <td></td> </tr> <tr> <td>782.000</td> <td>14.94</td> <td>H</td> <td>0.9</td> <td>0.0</td> <td>14.04</td> <td>34.8</td> <td>-20.8</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td colspan="9"> </td> </tr> <tr> <td colspan="9">NEW</td> </tr> <tr> <td colspan="9">Rev. 3.17.11</td> </tr> </tbody> </table> | | | | | | | | | f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | Low Ch | | | | | | | | | | | | | | | | | | Mid Ch | | | | | | | | | 782.000 | 22.48 | V | 0.9 | 0.0 | 21.58 | 34.8 | -13.2 | | 782.000 | 14.94 | H | 0.9 | 0.0 | 14.04 | 34.8 | -20.8 | | Mid Ch | | | | | | | | | | | | | | | | | | NEW | | | | | | | | | Rev. 3.17.11 | | | | | | | | |
| f MHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Margin (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 782.000 | 22.48 | V | 0.9 | 0.0 | 21.58 | 34.8 | -13.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 782.000 | 14.94 | H | 0.9 | 0.0 | 14.04 | 34.8 | -20.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| NEW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--------------------------------|---|-----------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|------------------------|-----------------------|--------------|
| Band LTE4 20MHz 16QAM | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | |
| | Company: | | LG | | | | | | |
| | Project #: | | 14U17222 | | | | | | |
| | Date: | | 03/28/14 | | | | | | |
| | Test Engineer: | | R. Alegre | | | | | | |
| | Configuration: | | Z position | | | | | | |
| | Mode: | | LTE_B4_20MHz_16QAM | | | | | | |
| | Test Equipment: | | | | | | | | |
| | Receiving: Horn T345, and Chamber B SMA Cables | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | |
| | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| | Low Ch | | | | | | | | |
| | 1.720 | 12.7 | V | 0.85 | 8.29 | 20.15 | 30.0 | -9.9 | |
| | 1.720 | 14.8 | H | 0.85 | 8.29 | 22.24 | 30.0 | -7.8 | |
| | Mid Ch | | | | | | | | |
| | 1.732 | 13.2 | V | 0.85 | 8.29 | 20.60 | 30.0 | -9.4 | |
| | 1.732 | 15.6 | H | 0.85 | 8.29 | 23.02 | 30.0 | -7.0 | |
| | High Ch | | | | | | | | |
| | 1.745 | 13.4 | V | 0.85 | 8.29 | 20.87 | 30.0 | -9.1 | |
| | 1.745 | 16.1 | H | 0.85 | 8.29 | 23.57 | 30.0 | -6.4 | |
| | Rev. 3.17.11 | | | | | | | | |

| Band LTE4 20MHz QPSK | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|-----------------|-----------------|--------------------|------------|-------------|------------|-------|-------|------------------|-----------------|-----------------|--------------------|------------|-------------|------------|-------|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|---------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|
| | Company: LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: 03/28/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: R. Alegre | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: Z position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: LTE_B4_20MHz_QPSK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Horn T345, and Chamber B SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.720</td> <td>13.2</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>20.59</td> <td>30.0</td> <td>-9.4</td> <td></td> </tr> <tr> <td>1.720</td> <td>15.7</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>23.16</td> <td>30.0</td> <td>-6.8</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.732</td> <td>14.5</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>21.97</td> <td>30.0</td> <td>-8.0</td> <td></td> </tr> <tr> <td>1.732</td> <td>16.5</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>23.95</td> <td>30.0</td> <td>-6.1</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.745</td> <td>13.7</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>21.18</td> <td>30.0</td> <td>-8.8</td> <td></td> </tr> <tr> <td>1.745</td> <td>17.1</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>24.53</td> <td>30.0</td> <td>-5.5</td> <td></td> </tr> </tbody> </table> | | | | | | | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1.720 | 13.2 | V | 0.85 | 8.29 | 20.59 | 30.0 | -9.4 | | 1.720 | 15.7 | H | 0.85 | 8.29 | 23.16 | 30.0 | -6.8 | | Mid Ch | | | | | | | | | 1.732 | 14.5 | V | 0.85 | 8.29 | 21.97 | 30.0 | -8.0 | | 1.732 | 16.5 | H | 0.85 | 8.29 | 23.95 | 30.0 | -6.1 | | High Ch | | | | | | | | | 1.745 | 13.7 | V | 0.85 | 8.29 | 21.18 | 30.0 | -8.8 | | 1.745 | 17.1 | H | 0.85 | 8.29 | 24.53 | 30.0 | -5.5 |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.720 | 13.2 | V | 0.85 | 8.29 | 20.59 | 30.0 | -9.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.720 | 15.7 | H | 0.85 | 8.29 | 23.16 | 30.0 | -6.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.732 | 14.5 | V | 0.85 | 8.29 | 21.97 | 30.0 | -8.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.732 | 16.5 | H | 0.85 | 8.29 | 23.95 | 30.0 | -6.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.745 | 13.7 | V | 0.85 | 8.29 | 21.18 | 30.0 | -8.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.745 | 17.1 | H | 0.85 | 8.29 | 24.53 | 30.0 | -5.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|--------------------------------|---|-------------------|--------------------|-------------------|---------------------|--------------|--------------|--------------|--------------|
| Band LTE4 15MHz 16QAM | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | |
| | Company: | | LG | | | | | | |
| | Project #: | | 14U17222 | | | | | | |
| | Date: | | 03/28/14 | | | | | | |
| | Test Engineer: | | R. Alegre | | | | | | |
| | Configuration: | | Z position | | | | | | |
| | Mode: | | LTE_B4_15MHz_16QAM | | | | | | |
| | Test Equipment: | | | | | | | | |
| | Receiving: Horn T345, and Chamber B SMA Cables | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | EIRP | Limit | Delta | Notes |
| | GHz | (dBm) | (H/V) | (dB) | (dBi) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 1.718 | 13.1 | V | 0.85 | 8.29 | 20.56 | 30.0 | -9.4 | |
| | 1.718 | 15.8 | H | 0.85 | 8.29 | 23.20 | 30.0 | -6.8 | |
| | Mid Ch | | | | | | | | |
| | 1.732 | 12.3 | V | 0.85 | 8.29 | 19.74 | 30.0 | -10.3 | |
| | 1.732 | 16.8 | H | 0.85 | 8.29 | 24.22 | 30.0 | -5.8 | |
| | High Ch | | | | | | | | |
| | 1.748 | 13.3 | V | 0.85 | 8.29 | 20.78 | 30.0 | -9.2 | |
| | 1.748 | 16.8 | H | 0.85 | 8.29 | 24.24 | 30.0 | -5.8 | |
| | Rev. 3.17.11 | | | | | | | | |

| Band LTE4 15MHz QPSK | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|-----------------|-----------------|--------------------|------------|-------------|------------|-------|-------|------------------|-----------------|-----------------|--------------------|------------|-------------|------------|-------|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|---------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|
| | Company: LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: 03/28/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: R. Alegre | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: Z position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: LTE_B4_15MHz_QPSK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Horn T345, and Chamber B SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.718</td> <td>14.1</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>21.49</td> <td>30.0</td> <td>-8.5</td> <td></td> </tr> <tr> <td>1.718</td> <td>16.1</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>23.50</td> <td>30.0</td> <td>-6.5</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.732</td> <td>13.2</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>20.68</td> <td>30.0</td> <td>-9.3</td> <td></td> </tr> <tr> <td>1.732</td> <td>16.8</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>24.26</td> <td>30.0</td> <td>-5.7</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.748</td> <td>13.9</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>21.32</td> <td>30.0</td> <td>-8.7</td> <td></td> </tr> <tr> <td>1.748</td> <td>16.9</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>24.32</td> <td>30.0</td> <td>-5.7</td> <td></td> </tr> </tbody> </table> | | | | | | | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1.718 | 14.1 | V | 0.85 | 8.29 | 21.49 | 30.0 | -8.5 | | 1.718 | 16.1 | H | 0.85 | 8.29 | 23.50 | 30.0 | -6.5 | | Mid Ch | | | | | | | | | 1.732 | 13.2 | V | 0.85 | 8.29 | 20.68 | 30.0 | -9.3 | | 1.732 | 16.8 | H | 0.85 | 8.29 | 24.26 | 30.0 | -5.7 | | High Ch | | | | | | | | | 1.748 | 13.9 | V | 0.85 | 8.29 | 21.32 | 30.0 | -8.7 | | 1.748 | 16.9 | H | 0.85 | 8.29 | 24.32 | 30.0 | -5.7 |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.718 | 14.1 | V | 0.85 | 8.29 | 21.49 | 30.0 | -8.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.718 | 16.1 | H | 0.85 | 8.29 | 23.50 | 30.0 | -6.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.732 | 13.2 | V | 0.85 | 8.29 | 20.68 | 30.0 | -9.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.732 | 16.8 | H | 0.85 | 8.29 | 24.26 | 30.0 | -5.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.748 | 13.9 | V | 0.85 | 8.29 | 21.32 | 30.0 | -8.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.748 | 16.9 | H | 0.85 | 8.29 | 24.32 | 30.0 | -5.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|--|---|-------------------|--------------------|-------------------|---------------------|--------------|--------------|--------------|--------------|
| Band LTE4 10MHz 16QAM | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | |
| | Company: | | LG | | | | | | |
| | Project #: | | 14U17222 | | | | | | |
| | Date: | | 03/26/14 | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | |
| | Configuration: | | Z position | | | | | | |
| | Mode: | | LTE_B4_10MHz_16QAM | | | | | | |
| | Test Equipment: | | | | | | | | |
| | Receiving: Horn T345, and Chamber B SMA Cables | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | |
| | f | SG reading | Ant. Pol. | Cable Loss | Antenna Gain | EIRP | Limit | Delta | Notes |
| | GHz | (dBm) | (H/V) | (dB) | (dBi) | (dBm) | (dBm) | (dB) | |
| | Low Ch | | | | | | | | |
| | 1.715 | 10.7 | V | 0.85 | 8.29 | 18.18 | 30.0 | -11.8 | |
| | 1.715 | 15.3 | H | 0.85 | 8.29 | 22.72 | 30.0 | -7.3 | |
| | Mid Ch | | | | | | | | |
| | 1.733 | 12.0 | V | 0.85 | 8.29 | 19.48 | 30.0 | -10.5 | |
| | 1.733 | 15.5 | H | 0.85 | 8.29 | 22.91 | 30.0 | -7.1 | |
| | High Ch | | | | | | | | |
| | 1.750 | 12.1 | V | 0.85 | 7.92 | 19.13 | 30.0 | -10.9 | |
| | 1.750 | 16.0 | H | 0.85 | 7.92 | 23.11 | 30.0 | -6.9 | |
| | Rev. 3.17.11 | | | | | | | | |

| Band LTE4 10MHz QPSK | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--------------------|--------------------|-----------------------|---------------|----------------|---------------|----------|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------|-------|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|-------|--|-------|------|---|------|------|-------|------|------|--|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|---------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|-------|--|-------|------|---|------|------|-------|------|------|--|
| | Company: | | LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: | | 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: | | 03/26/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: | | Z position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: | | LTE_B4_10MHz_16QAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Horn T345, and Chamber C SMA Cables | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.715</td> <td>12.2</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>19.61</td> <td>30.0</td> <td>-10.4</td> <td></td> </tr> <tr> <td>1.715</td> <td>16.3</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>23.72</td> <td>30.0</td> <td>-6.3</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.733</td> <td>13.0</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>20.45</td> <td>30.0</td> <td>-9.6</td> <td></td> </tr> <tr> <td>1.733</td> <td>16.4</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>23.84</td> <td>30.0</td> <td>-6.2</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.750</td> <td>13.0</td> <td>V</td> <td>0.85</td> <td>7.92</td> <td>20.04</td> <td>30.0</td> <td>-10.0</td> <td></td> </tr> <tr> <td>1.750</td> <td>17.1</td> <td>H</td> <td>0.85</td> <td>7.92</td> <td>24.12</td> <td>30.0</td> <td>-5.9</td> <td></td> </tr> </tbody> </table> | | | | | | | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1.715 | 12.2 | V | 0.85 | 8.29 | 19.61 | 30.0 | -10.4 | | 1.715 | 16.3 | H | 0.85 | 8.29 | 23.72 | 30.0 | -6.3 | | Mid Ch | | | | | | | | | 1.733 | 13.0 | V | 0.85 | 8.29 | 20.45 | 30.0 | -9.6 | | 1.733 | 16.4 | H | 0.85 | 8.29 | 23.84 | 30.0 | -6.2 | | High Ch | | | | | | | | | 1.750 | 13.0 | V | 0.85 | 7.92 | 20.04 | 30.0 | -10.0 | | 1.750 | 17.1 | H | 0.85 | 7.92 | 24.12 | 30.0 | -5.9 | |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.715 | 12.2 | V | 0.85 | 8.29 | 19.61 | 30.0 | -10.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.715 | 16.3 | H | 0.85 | 8.29 | 23.72 | 30.0 | -6.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.733 | 13.0 | V | 0.85 | 8.29 | 20.45 | 30.0 | -9.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.733 | 16.4 | H | 0.85 | 8.29 | 23.84 | 30.0 | -6.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.750 | 13.0 | V | 0.85 | 7.92 | 20.04 | 30.0 | -10.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.750 | 17.1 | H | 0.85 | 7.92 | 24.12 | 30.0 | -5.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|---|---|-----------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|------------------------|-----------------------|--------------|
| Band LTE4 5MHz 16QAM | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | |
| | Company: | | LG | | | | | | |
| | Project #: | | 14U17222 | | | | | | |
| | Date: | | 03/26/14 | | | | | | |
| | Test Engineer: | | Charles Vergonio | | | | | | |
| | Configuration: | | Z position | | | | | | |
| | Mode: | | LTE_B4_5MHz_16QAM | | | | | | |
| | Test Equipment: | | | | | | | | |
| | Receiving: Horn T345, and Chamber B SMA Cables | | | | | | | | |
| | Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | |
| | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| | Low Ch | | | | | | | | |
| | 1.713 | 11.8 | V | 0.85 | 8.29 | 19.24 | 30.0 | -10.8 | |
| | 1.713 | 16.5 | H | 0.85 | 8.29 | 23.97 | 30.0 | -6.0 | |
| | Mid Ch | | | | | | | | |
| | 1.733 | 12.0 | V | 0.85 | 8.29 | 19.48 | 30.0 | -10.5 | |
| | 1.733 | 16.6 | H | 0.85 | 8.29 | 24.01 | 30.0 | -6.0 | |
| | High Ch | | | | | | | | |
| | 1.753 | 12.5 | V | 0.85 | 7.92 | 19.61 | 30.0 | -10.4 | |
| | 1.753 | 16.5 | H | 0.85 | 7.92 | 23.56 | 30.0 | -6.4 | |
| | Rev. 3.17.11 | | | | | | | | |

| Band LTE4 5MHz QPSK | High Frequency Fundamental Measurement Compliance Certification Services Chamber B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--------------------|--------------------|-----------------------|---------------|----------------|---------------|-------|----------|---------------------|--------------------|--------------------|-----------------------|---------------|----------------|---------------|-------|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|--------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|--|---------|--|--|--|--|--|--|--|--|-------|------|---|------|------|-------|------|------|--|-------|------|---|------|------|-------|------|------|
| | Company: LG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Project #: 14U17222 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date: 03/26/14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Engineer: Charles Vergonio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Configuration: Z position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Mode: LTE_B4_5MHz_QPSK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Test Equipment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Receiving: Horn T345, and Chamber C SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.713</td> <td>13.0</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>20.40</td> <td>30.0</td> <td>-9.6</td> <td></td> </tr> <tr> <td>1.713</td> <td>16.6</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>24.02</td> <td>30.0</td> <td>-6.0</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.733</td> <td>13.3</td> <td>V</td> <td>0.85</td> <td>8.29</td> <td>20.69</td> <td>30.0</td> <td>-9.3</td> <td></td> </tr> <tr> <td>1.733</td> <td>17.4</td> <td>H</td> <td>0.85</td> <td>8.29</td> <td>24.86</td> <td>30.0</td> <td>-5.1</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.753</td> <td>13.2</td> <td>V</td> <td>0.85</td> <td>7.92</td> <td>20.24</td> <td>30.0</td> <td>-9.8</td> <td></td> </tr> <tr> <td>1.753</td> <td>17.4</td> <td>H</td> <td>0.85</td> <td>7.92</td> <td>24.45</td> <td>30.0</td> <td>-5.6</td> <td></td> </tr> </tbody> </table> | | | | | | | | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | Low Ch | | | | | | | | | 1.713 | 13.0 | V | 0.85 | 8.29 | 20.40 | 30.0 | -9.6 | | 1.713 | 16.6 | H | 0.85 | 8.29 | 24.02 | 30.0 | -6.0 | | Mid Ch | | | | | | | | | 1.733 | 13.3 | V | 0.85 | 8.29 | 20.69 | 30.0 | -9.3 | | 1.733 | 17.4 | H | 0.85 | 8.29 | 24.86 | 30.0 | -5.1 | | High Ch | | | | | | | | | 1.753 | 13.2 | V | 0.85 | 7.92 | 20.24 | 30.0 | -9.8 | | 1.753 | 17.4 | H | 0.85 | 7.92 | 24.45 | 30.0 | -5.6 |
| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Cable Loss (dB) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.713 | 13.0 | V | 0.85 | 8.29 | 20.40 | 30.0 | -9.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.713 | 16.6 | H | 0.85 | 8.29 | 24.02 | 30.0 | -6.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mid Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.733 | 13.3 | V | 0.85 | 8.29 | 20.69 | 30.0 | -9.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.733 | 17.4 | H | 0.85 | 8.29 | 24.86 | 30.0 | -5.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High Ch | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.753 | 13.2 | V | 0.85 | 7.92 | 20.24 | 30.0 | -9.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.753 | 17.4 | H | 0.85 | 7.92 | 24.45 | 30.0 | -5.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rev. 3.17.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

11.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

LIMIT

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). 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 emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). 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 emissions are attenuated at least 26 dB below the transmitter power.

RESULTS

11.2.1. SPURIOUS RADIATION PLOTS

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 13, 10MHz BW, 16QAM

Chamber

3m Chamber

Pre-amplifier

T145 8449B

Filter

Filter 1

Limit

Part 24

| Band | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|-------|-----------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| | Low Ch, (779.5 MHz) | | | | | | | | | |
| LTE13 | Mid Ch, (782 MHz) | | | | | | | | | |
| 10MHz | 1.564 | -29.0 | V | 3.0 | 30.7 | 1.0 | -58.7 | -13.0 | -45.7 | |
| | 2.346 | -24.8 | V | 3.0 | 28.9 | 1.0 | -52.7 | -13.0 | -39.7 | |
| | 3.128 | -23.1 | V | 3.0 | 26.8 | 1.0 | -49.0 | -13.0 | -36.0 | |
| 16QAM | 1.564 | -30.1 | H | 3.0 | 30.7 | 1.0 | -59.8 | -13.0 | -46.8 | |
| | 2.346 | -27.1 | H | 3.0 | 28.9 | 1.0 | -55.0 | -13.0 | -42.0 | |
| | 3.128 | -23.5 | H | 3.0 | 26.8 | 1.0 | -49.3 | -13.0 | -36.3 | |
| | High Ch, (784.5 MHz) | | | | | | | | | |

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 13, 10MHz BW, QPSK

| | | | | |
|--|----------------|---------------------|---------------|--------------|
| | Chamber | Pre-amplifer | Filter | Limit |
| | 3m Chamber | T145 8449B | Filter 1 | Part 24 |

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|-----------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Low Ch, (779.5 MHz) | | | | | | | | | |
| Mid Ch, (782 MHz) | | | | | | | | | |
| 1.564 | -28.0 | V | 3.0 | 30.7 | 1.0 | -57.7 | -13.0 | -44.7 | |
| 2.346 | -25.0 | V | 3.0 | 28.9 | 1.0 | -52.9 | -13.0 | -39.9 | |
| 3.128 | -23.3 | V | 3.0 | 26.8 | 1.0 | -49.2 | -13.0 | -36.2 | |
| 1.564 | -29.2 | H | 3.0 | 30.7 | 1.0 | -58.9 | -13.0 | -45.9 | |
| 2.346 | -26.5 | H | 3.0 | 28.9 | 1.0 | -54.4 | -13.0 | -41.4 | |
| 3.128 | -23.3 | H | 3.0 | 26.8 | 1.0 | -49.2 | -13.0 | -36.2 | |
| High Ch, (784.5 MHz) | | | | | | | | | |

Rev. 03.03.09

| Compliance Certification Services Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|---|----------------------|---------------------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Company: | | LG | | | | | | | | |
| Project #: | | 14U17222 | | | | | | | | |
| Date: | | 03/29/14 | | | | | | | | |
| Test Engineer: | | R. Alegre | | | | | | | | |
| Configuration: | | EUT with AC adapter | | | | | | | | |
| Mode: | | TX, LTE band 4, 20MHz BW, 16QAM | | | | | | | | |
| Chamber | | Pre-amplifer | | | Filter | | Limit | | | |
| 3m Chamber | | T145 8449B | | | Filter 1 | | Part 24 | | | |
| Band | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| | Low Ch, (1720 MHz) | | | | | | | | | |
| LTE4 | 3.440 | -22.8 | V | 3.0 | 30.4 | 1.0 | -52.2 | -13.0 | -39.2 | |
| | 5.160 | -21.0 | V | 3.0 | 28.7 | 1.0 | -48.7 | -13.0 | -35.7 | |
| 20MHz | 6.880 | -17.2 | V | 3.0 | 27.1 | 1.0 | -43.3 | -13.0 | -30.3 | |
| | 3.440 | -23.4 | H | 3.0 | 30.4 | 1.0 | -52.8 | -13.0 | -39.8 | |
| 16QAM | 5.160 | -20.6 | H | 3.0 | 28.7 | 1.0 | -48.4 | -13.0 | -35.4 | |
| | 6.880 | -16.0 | H | 3.0 | 27.1 | 1.0 | -42.1 | -13.0 | -29.1 | |
| | Mid Ch, (1732.5 MHz) | | | | | | | | | |
| | 3.465 | -23.0 | V | 3.0 | 30.4 | 1.0 | -52.4 | -13.0 | -39.4 | |
| | 5.198 | -20.3 | V | 3.0 | 28.7 | 1.0 | -48.0 | -13.0 | -35.0 | |
| | 6.930 | -17.0 | V | 3.0 | 27.1 | 1.0 | -43.1 | -13.0 | -30.1 | |
| | 3.465 | -22.3 | H | 3.0 | 30.4 | 1.0 | -51.7 | -13.0 | -38.7 | |
| | 5.198 | -19.5 | H | 3.0 | 28.7 | 1.0 | -47.2 | -13.0 | -34.2 | |
| | 6.930 | -15.0 | H | 3.0 | 27.1 | 1.0 | -41.1 | -13.0 | -28.1 | |
| | High Ch, (1745 MHz) | | | | | | | | | |
| | 3.490 | -22.4 | V | 3.0 | 30.4 | 1.0 | -51.8 | -13.0 | -38.8 | |
| | 5.235 | -20.2 | V | 3.0 | 28.7 | 1.0 | -47.9 | -13.0 | -34.9 | |
| | 6.980 | -16.7 | V | 3.0 | 27.0 | 1.0 | -42.7 | -13.0 | -29.7 | |
| | 3.490 | -22.6 | H | 3.0 | 30.4 | 1.0 | -52.0 | -13.0 | -39.0 | |
| | 5.235 | -20.1 | H | 3.0 | 28.7 | 1.0 | -47.8 | -13.0 | -34.8 | |
| | 6.980 | -15.6 | H | 3.0 | 27.0 | 1.0 | -41.6 | -13.0 | -28.6 | |
| Rev. 03.03.09 | | | | | | | | | | |

**Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement**

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 4, 20MHz BW, QPSK

| | | | |
|----------------|---------------------|---------------|--------------|
| Chamber | Pre-amplifer | Filter | Limit |
| 3m Chamber | T145 8449B | Filter 1 | Part 24 |

Band
 LTE4
 20MHz
 QPSK

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|-----------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Low Ch, (1720 MHz) | | | | | | | | | |
| 3.440 | -22.6 | V | 3.0 | 30.4 | 1.0 | -52.0 | -13.0 | -39.0 | |
| 5.160 | -20.6 | V | 3.0 | 28.7 | 1.0 | -48.3 | -13.0 | -35.3 | |
| 6.880 | -17.1 | V | 3.0 | 27.1 | 1.0 | -43.2 | -13.0 | -30.2 | |
| 3.440 | -23.0 | H | 3.0 | 30.4 | 1.0 | -52.4 | -13.0 | -39.4 | |
| 5.160 | -20.3 | H | 3.0 | 28.7 | 1.0 | -48.1 | -13.0 | -35.1 | |
| 6.880 | -16.4 | H | 3.0 | 27.1 | 1.0 | -42.5 | -13.0 | -29.5 | |
| Mid Ch, (1732.5 MHz) | | | | | | | | | |
| 3.465 | -22.7 | V | 3.0 | 30.4 | 1.0 | -52.1 | -13.0 | -39.1 | |
| 5.198 | -20.1 | V | 3.0 | 28.7 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 6.930 | -16.7 | V | 3.0 | 27.1 | 1.0 | -42.7 | -13.0 | -29.7 | |
| 3.465 | -22.5 | H | 3.0 | 30.4 | 1.0 | -51.9 | -13.0 | -38.9 | |
| 5.198 | -19.4 | H | 3.0 | 28.7 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 6.930 | -14.9 | H | 3.0 | 27.1 | 1.0 | -41.0 | -13.0 | -28.0 | |
| High Ch, (1745 MHz) | | | | | | | | | |
| 3.490 | -22.2 | V | 3.0 | 30.4 | 1.0 | -51.6 | -13.0 | -38.6 | |
| 5.235 | -19.7 | V | 3.0 | 28.7 | 1.0 | -47.4 | -13.0 | -34.4 | |
| 6.980 | -16.2 | V | 3.0 | 27.0 | 1.0 | -42.2 | -13.0 | -29.2 | |
| 3.490 | -22.6 | H | 3.0 | 30.4 | 1.0 | -52.0 | -13.0 | -39.0 | |
| 5.235 | -20.1 | H | 3.0 | 28.7 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 6.980 | -15.5 | H | 3.0 | 27.0 | 1.0 | -41.5 | -13.0 | -28.5 | |

Rev. 03.03.09

| Compliance Certification Services Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|---|------------------------------|---------------------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Company: | | LG | | | | | | | | |
| Project #: | | 14U17222 | | | | | | | | |
| Date: | | 03/29/14 | | | | | | | | |
| Test Engineer: | | R. Alegre | | | | | | | | |
| Configuration: | | EUT with AC adapter | | | | | | | | |
| Mode: | | TX, LTE band 4, 15MHz BW, 16QAM | | | | | | | | |
| Chamber | | Pre-amplifer | | | Filter | | Limit | | | |
| 3m Chamber | | T145 8449B | | | Filter 1 | | Part 24 | | | |
| Band | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| | Low Ch, (1717.5 MHz) | | | | | | | | | |
| LTE4 | 3.435 | -24.6 | V | 3.0 | 30.4 | 1.0 | -54.0 | -13.0 | -41.0 | |
| | 5.153 | -20.1 | V | 3.0 | 28.7 | 1.0 | -47.9 | -13.0 | -34.9 | |
| 15MHz | 6.870 | -16.3 | V | 3.0 | 27.1 | 1.0 | -42.4 | -13.0 | -29.4 | |
| | 3.435 | -22.8 | H | 3.0 | 30.4 | 1.0 | -52.2 | -13.0 | -39.2 | |
| 16QAM | 5.153 | -18.2 | H | 3.0 | 28.7 | 1.0 | -46.0 | -13.0 | -33.0 | |
| | 6.870 | -15.8 | H | 3.0 | 27.1 | 1.0 | -41.9 | -13.0 | -28.9 | |
| | Mid Ch, (1732.5 MHz) | | | | | | | | | |
| | 3.465 | -22.3 | V | 3.0 | 30.4 | 1.0 | -51.7 | -13.0 | -38.7 | |
| | 5.198 | -19.8 | V | 3.0 | 28.7 | 1.0 | -47.5 | -13.0 | -34.5 | |
| | 6.930 | -16.3 | V | 3.0 | 27.1 | 1.0 | -42.4 | -13.0 | -29.4 | |
| | 3.465 | -22.8 | H | 3.0 | 30.4 | 1.0 | -52.2 | -13.0 | -39.2 | |
| | 5.198 | -20.2 | H | 3.0 | 28.7 | 1.0 | -47.9 | -13.0 | -34.9 | |
| | 6.930 | -15.6 | H | 3.0 | 27.1 | 1.0 | -41.6 | -13.0 | -28.6 | |
| | High Ch, (1747.5 MHz) | | | | | | | | | |
| | 3.495 | -23.2 | V | 3.0 | 30.4 | 1.0 | -52.5 | -13.0 | -39.5 | |
| | 5.243 | -20.1 | V | 3.0 | 28.7 | 1.0 | -47.7 | -13.0 | -34.7 | |
| | 6.990 | -16.7 | V | 3.0 | 27.0 | 1.0 | -42.7 | -13.0 | -29.7 | |
| | 3.495 | -22.5 | H | 3.0 | 30.4 | 1.0 | -51.9 | -13.0 | -38.9 | |
| | 5.243 | -19.3 | H | 3.0 | 28.7 | 1.0 | -47.0 | -13.0 | -34.0 | |
| | 6.990 | -15.1 | H | 3.0 | 27.0 | 1.0 | -41.2 | -13.0 | -28.2 | |
| Rev. 03.03.09 | | | | | | | | | | |

**Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement**

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 4, 15MHz BW, QPSK

| | | | |
|----------------|---------------------|---------------|--------------|
| Chamber | Pre-amplifer | Filter | Limit |
| 3m Chamber | T145 8449B | Filter 1 | Part 24 |

Band
 LTE4
 15MHz
 QPSK

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|------------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Low Ch, (1717.5 MHz) | | | | | | | | | |
| 3.435 | -24.1 | V | 3.0 | 30.4 | 1.0 | -53.6 | -13.0 | -40.6 | |
| 5.153 | -20.1 | V | 3.0 | 28.7 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 6.870 | -16.3 | V | 3.0 | 27.1 | 1.0 | -42.4 | -13.0 | -29.4 | |
| 3.435 | -22.5 | H | 3.0 | 30.4 | 1.0 | -51.9 | -13.0 | -38.9 | |
| 5.153 | -18.2 | H | 3.0 | 28.7 | 1.0 | -46.0 | -13.0 | -33.0 | |
| 6.870 | -15.7 | H | 3.0 | 27.1 | 1.0 | -41.9 | -13.0 | -28.9 | |
| Mid Ch, (1732.5 MHz) | | | | | | | | | |
| 3.465 | -22.2 | V | 3.0 | 30.4 | 1.0 | -51.6 | -13.0 | -38.6 | |
| 5.198 | -19.5 | V | 3.0 | 28.7 | 1.0 | -47.3 | -13.0 | -34.3 | |
| 6.930 | -15.9 | V | 3.0 | 27.1 | 1.0 | -42.0 | -13.0 | -29.0 | |
| 3.465 | -22.7 | H | 3.0 | 30.4 | 1.0 | -52.1 | -13.0 | -39.1 | |
| 5.198 | -20.0 | H | 3.0 | 28.7 | 1.0 | -47.7 | -13.0 | -34.7 | |
| 6.930 | -15.3 | H | 3.0 | 27.1 | 1.0 | -41.4 | -13.0 | -28.4 | |
| High Ch, (1747.5 MHz) | | | | | | | | | |
| 3.495 | -22.6 | V | 3.0 | 30.4 | 1.0 | -52.0 | -13.0 | -39.0 | |
| 5.243 | -19.8 | V | 3.0 | 28.7 | 1.0 | -47.4 | -13.0 | -34.4 | |
| 6.990 | -16.5 | V | 3.0 | 27.0 | 1.0 | -42.5 | -13.0 | -29.5 | |
| 3.495 | -22.2 | H | 3.0 | 30.4 | 1.0 | -51.6 | -13.0 | -38.6 | |
| 5.243 | -19.0 | H | 3.0 | 28.7 | 1.0 | -46.6 | -13.0 | -33.6 | |
| 6.990 | -14.8 | H | 3.0 | 27.0 | 1.0 | -40.9 | -13.0 | -27.9 | |

Rev. 03.03.09

| Compliance Certification Services Above 1GHz High Frequency Substitution Measurement | | | | | | | | | | |
|---|----------|---------------------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Company: | | LG | | | | | | | | |
| Project #: | | 14U17222 | | | | | | | | |
| Date: | | 03/29/14 | | | | | | | | |
| Test Engineer: | | R. Alegre | | | | | | | | |
| Configuration: | | EUT with AC adapter | | | | | | | | |
| Mode: | | TX, LTE band 4, 10MHz BW, 16QAM | | | | | | | | |
| Chamber | | Pre-amplifer | | | Filter | | Limit | | | |
| 3m Chamber | | T145 8449B | | | Filter 1 | | Part 24 | | | |
| Band | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
| Low Ch, (1715 MHz) | | | | | | | | | | |
| LTE4 | 3.430 | -22.6 | V | 3.0 | 30.4 | 1.0 | -52.1 | -13.0 | -39.1 | |
| | 5.145 | -19.1 | V | 3.0 | 28.8 | 1.0 | -46.9 | -13.0 | -33.9 | |
| 10MHz | 6.860 | -17.2 | V | 3.0 | 27.1 | 1.0 | -43.4 | -13.0 | -30.4 | |
| | 3.430 | -23.4 | H | 3.0 | 30.4 | 1.0 | -52.8 | -13.0 | -39.8 | |
| 16QAM | 5.145 | -20.1 | H | 3.0 | 28.8 | 1.0 | -47.9 | -13.0 | -34.9 | |
| | 6.860 | -16.4 | H | 3.0 | 27.1 | 1.0 | -42.5 | -13.0 | -29.5 | |
| Mid Ch, (1732.5 MHz) | | | | | | | | | | |
| | 3.465 | -22.6 | V | 3.0 | 30.4 | 1.0 | -52.0 | -13.0 | -39.0 | |
| | 5.198 | -19.8 | V | 3.0 | 28.7 | 1.0 | -47.5 | -13.0 | -34.5 | |
| | 6.930 | -16.7 | V | 3.0 | 27.1 | 1.0 | -42.8 | -13.0 | -29.8 | |
| | 3.465 | -23.2 | H | 3.0 | 30.4 | 1.0 | -52.6 | -13.0 | -39.6 | |
| | 5.198 | -19.2 | H | 3.0 | 28.7 | 1.0 | -46.9 | -13.0 | -33.9 | |
| | 6.930 | -15.6 | H | 3.0 | 27.1 | 1.0 | -41.7 | -13.0 | -28.7 | |
| High Ch, (1750 MHz) | | | | | | | | | | |
| | 3.500 | -22.6 | V | 3.0 | 30.4 | 1.0 | -52.0 | -13.0 | -39.0 | |
| | 5.250 | -20.7 | V | 3.0 | 28.7 | 1.0 | -48.4 | -13.0 | -35.4 | |
| | 7.000 | -14.9 | V | 3.0 | 27.0 | 1.0 | -40.9 | -13.0 | -27.9 | |
| | 3.500 | -24.2 | H | 3.0 | 30.4 | 1.0 | -53.6 | -13.0 | -40.6 | |
| | 5.250 | -18.6 | H | 3.0 | 28.7 | 1.0 | -46.2 | -13.0 | -33.2 | |
| | 7.000 | -15.2 | H | 3.0 | 27.0 | 1.0 | -41.2 | -13.0 | -28.2 | |
| Rev. 03.03.09 | | | | | | | | | | |

**Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement**

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 4, 10MHz BW, QPSK

| | | | |
|----------------|---------------------|---------------|--------------|
| Chamber | Pre-amplifer | Filter | Limit |
| 3m Chamber | T145 8449B | Filter 1 | Part 24 |

Band
 LTE4
 10MHz
 QPSK

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|-----------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Low Ch, (1715 MHz) | | | | | | | | | |
| 3.430 | -22.2 | V | 3.0 | 30.4 | 1.0 | -51.7 | -13.0 | -38.7 | |
| 5.145 | -19.3 | V | 3.0 | 28.8 | 1.0 | -47.1 | -13.0 | -34.1 | |
| 6.860 | -16.8 | V | 3.0 | 27.1 | 1.0 | -42.9 | -13.0 | -29.9 | |
| 3.430 | -23.3 | H | 3.0 | 30.4 | 1.0 | -52.7 | -13.0 | -39.7 | |
| 5.145 | -20.3 | H | 3.0 | 28.8 | 1.0 | -48.0 | -13.0 | -35.0 | |
| 6.860 | -16.1 | H | 3.0 | 27.1 | 1.0 | -42.2 | -13.0 | -29.2 | |
| Mid Ch, (1732.5 MHz) | | | | | | | | | |
| 3.465 | -22.4 | V | 3.0 | 30.4 | 1.0 | -51.8 | -13.0 | -38.8 | |
| 5.198 | -19.8 | V | 3.0 | 28.7 | 1.0 | -47.5 | -13.0 | -34.5 | |
| 6.930 | -16.5 | V | 3.0 | 27.1 | 1.0 | -42.6 | -13.0 | -29.6 | |
| 3.465 | -23.0 | H | 3.0 | 30.4 | 1.0 | -52.4 | -13.0 | -39.4 | |
| 5.198 | -19.9 | H | 3.0 | 28.7 | 1.0 | -47.6 | -13.0 | -34.6 | |
| 6.930 | -15.6 | H | 3.0 | 27.1 | 1.0 | -41.6 | -13.0 | -28.6 | |
| High Ch, (1750 MHz) | | | | | | | | | |
| 3.500 | -22.2 | V | 3.0 | 30.4 | 1.0 | -51.6 | -13.0 | -38.6 | |
| 5.250 | -20.6 | V | 3.0 | 28.7 | 1.0 | -48.2 | -13.0 | -35.2 | |
| 7.000 | -15.7 | V | 3.0 | 27.0 | 1.0 | -41.7 | -13.0 | -28.7 | |
| 3.500 | -24.1 | H | 3.0 | 30.4 | 1.0 | -53.5 | -13.0 | -40.5 | |
| 5.250 | -19.8 | H | 3.0 | 28.7 | 1.0 | -47.4 | -13.0 | -34.4 | |
| 7.000 | -14.9 | H | 3.0 | 27.0 | 1.0 | -40.9 | -13.0 | -27.9 | |

Rev. 03.03.09

**Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement**

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 4, 5MHz BW, 16 QAM

| | | | |
|----------------|---------------------|---------------|--------------|
| Chamber | Pre-amplifer | Filter | Limit |
| 3m Chamber | T145 8449B | Filter 1 | Part 24 |

Band
 LTE4
 5MHz
 16QAM

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|------------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Low Ch, (1712.5 MHz) | | | | | | | | | |
| 3.425 | -21.6 | V | 3.0 | 30.4 | 1.0 | -51.0 | -13.0 | -38.0 | |
| 5.138 | -20.0 | V | 3.0 | 28.8 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 5MHz | | | | | | | | | |
| 6.850 | -16.9 | V | 3.0 | 27.1 | 1.0 | -43.0 | -13.0 | -30.0 | |
| 3.425 | -22.2 | H | 3.0 | 30.4 | 1.0 | -51.7 | -13.0 | -38.7 | |
| 16QAM | | | | | | | | | |
| 5.138 | -19.5 | H | 3.0 | 28.8 | 1.0 | -47.2 | -13.0 | -34.2 | |
| 6.850 | -14.9 | H | 3.0 | 27.1 | 1.0 | -41.0 | -13.0 | -28.0 | |
| Mid Ch, (1732.5 MHz) | | | | | | | | | |
| 3.465 | -21.0 | V | 3.0 | 30.4 | 1.0 | -50.4 | -13.0 | -37.4 | |
| 5.198 | -20.1 | V | 3.0 | 28.7 | 1.0 | -47.8 | -13.0 | -34.8 | |
| 6.930 | -16.0 | V | 3.0 | 27.1 | 1.0 | -42.1 | -13.0 | -29.1 | |
| 3.465 | -22.9 | H | 3.0 | 30.4 | 1.0 | -52.3 | -13.0 | -39.3 | |
| 5.198 | -18.3 | H | 3.0 | 28.7 | 1.0 | -46.0 | -13.0 | -33.0 | |
| 6.930 | -15.3 | H | 3.0 | 27.1 | 1.0 | -41.4 | -13.0 | -28.4 | |
| High Ch, (1752.5 MHz) | | | | | | | | | |
| 3.505 | -22.1 | V | 3.0 | 30.4 | 1.0 | -51.4 | -13.0 | -38.4 | |
| 5.258 | -19.6 | V | 3.0 | 28.6 | 1.0 | -47.2 | -13.0 | -34.2 | |
| 7.010 | -15.3 | V | 3.0 | 27.0 | 1.0 | -41.3 | -13.0 | -28.3 | |
| 3.505 | -20.6 | H | 3.0 | 30.4 | 1.0 | -50.0 | -13.0 | -37.0 | |
| 5.258 | -19.5 | H | 3.0 | 28.6 | 1.0 | -47.2 | -13.0 | -34.2 | |
| 7.010 | -14.7 | H | 3.0 | 27.0 | 1.0 | -40.7 | -13.0 | -27.7 | |

Rev. 03.03.09

**Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement**

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: TX, LTE band 4, 5MHz BW, QPSK

| | | | |
|----------------|---------------------|---------------|--------------|
| Chamber | Pre-amplifer | Filter | Limit |
| 3m Chamber | T145 8449B | Filter 1 | Part 24 |

Band

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | ERP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|------------------------------|---------------------|--------------------|-----------------|----------------|----------------|--------------|----------------|---------------|-------|
| Low Ch, (1712.5 MHz) | | | | | | | | | |
| LTE4 | 3.425 | -21.7 | V | 3.0 | 30.4 | 1.0 | -51.2 | -13.0 | -38.2 |
| | 5.138 | -19.5 | V | 3.0 | 28.8 | 1.0 | -47.3 | -13.0 | -34.3 |
| 5MHz | 6.850 | -16.3 | V | 3.0 | 27.1 | 1.0 | -42.5 | -13.0 | -29.5 |
| | 3.425 | -20.4 | H | 3.0 | 30.4 | 1.0 | -49.8 | -13.0 | -36.8 |
| QPSK | 5.138 | -17.6 | H | 3.0 | 28.8 | 1.0 | -45.3 | -13.0 | -32.3 |
| | 6.850 | -14.9 | H | 3.0 | 27.1 | 1.0 | -41.0 | -13.0 | -28.0 |
| Mid Ch, (1732.5 MHz) | | | | | | | | | |
| | 3.465 | -20.2 | V | 3.0 | 30.4 | 1.0 | -49.6 | -13.0 | -36.6 |
| | 5.198 | -19.7 | V | 3.0 | 28.7 | 1.0 | -47.4 | -13.0 | -34.4 |
| | 6.930 | -15.6 | V | 3.0 | 27.1 | 1.0 | -41.6 | -13.0 | -28.6 |
| | 3.465 | -22.4 | H | 3.0 | 30.4 | 1.0 | -51.8 | -13.0 | -38.8 |
| | 5.198 | -17.5 | H | 3.0 | 28.7 | 1.0 | -45.2 | -13.0 | -32.2 |
| | 6.930 | -15.2 | H | 3.0 | 27.1 | 1.0 | -41.2 | -13.0 | -28.2 |
| High Ch, (1752.5 MHz) | | | | | | | | | |
| | 3.505 | -22.0 | V | 3.0 | 30.4 | 1.0 | -51.4 | -13.0 | -38.4 |
| | 5.258 | -19.3 | V | 3.0 | 28.6 | 1.0 | -47.0 | -13.0 | -34.0 |
| | 7.010 | -15.5 | V | 3.0 | 27.0 | 1.0 | -41.5 | -13.0 | -28.5 |
| | 3.505 | -20.9 | H | 3.0 | 30.4 | 1.0 | -50.3 | -13.0 | -37.3 |
| | 5.258 | -19.7 | H | 3.0 | 28.6 | 1.0 | -47.3 | -13.0 | -34.3 |
| | 7.010 | -14.4 | H | 3.0 | 27.0 | 1.0 | -40.4 | -13.0 | -27.4 |

Rev. 03.03.09

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: EVDO

Chamber

3m Chamber

Pre-amplifier

T343 8449B

Filter

Filter 1

Limit

Part 24

| Band | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|------|-----------------------------|------------------|-----------------|--------------|-------------|-------------|------------|-------------|------------|-------|
| | Low Ch, 1851.25MHz | | | | | | | | | |
| BC1 | 3.703 | 3.4 | V | 3.0 | 35.4 | 1.0 | -31.0 | -13.0 | -18.0 | |
| | 5.554 | -14.0 | V | 3.0 | 34.7 | 1.0 | -47.7 | -13.0 | -34.7 | |
| | 7.405 | -16.0 | V | 3.0 | 34.9 | 1.0 | -49.9 | -13.0 | -36.9 | |
| | 3.703 | 4.0 | H | 3.0 | 35.4 | 1.0 | -30.4 | -13.0 | -17.4 | |
| | 5.554 | -18.9 | H | 3.0 | 34.7 | 1.0 | -52.7 | -13.0 | -39.7 | |
| | 7.405 | -15.7 | H | 3.0 | 34.9 | 1.0 | -49.6 | -13.0 | -36.6 | |
| | Mid Ch, 1880.0MHz | | | | | | | | | |
| | 3.760 | -0.1 | V | 3.0 | 35.3 | 1.0 | -34.4 | -13.0 | -21.4 | |
| | 5.640 | -20.2 | V | 3.0 | 34.7 | 1.0 | -53.9 | -13.0 | -40.9 | |
| | 7.520 | -15.7 | V | 3.0 | 34.9 | 1.0 | -49.6 | -13.0 | -36.6 | |
| | 3.760 | 0.3 | H | 3.0 | 35.3 | 1.0 | -34.0 | -13.0 | -21.0 | |
| | 5.640 | -18.3 | H | 3.0 | 34.7 | 1.0 | -52.0 | -13.0 | -39.0 | |
| | 7.520 | -15.5 | H | 3.0 | 34.9 | 1.0 | -49.4 | -13.0 | -36.4 | |
| | High Ch, 1908.75 MHz | | | | | | | | | |
| | 3.818 | -2.8 | V | 3.0 | 35.3 | 1.0 | -37.1 | -13.0 | -24.1 | |
| | 5.726 | -14.7 | V | 3.0 | 34.7 | 1.0 | -48.5 | -13.0 | -35.5 | |
| | 7.635 | -15.8 | V | 3.0 | 34.9 | 1.0 | -49.7 | -13.0 | -36.7 | |
| | 3.818 | -1.9 | H | 3.0 | 35.3 | 1.0 | -36.2 | -13.0 | -23.2 | |
| | 5.726 | -17.3 | H | 3.0 | 34.7 | 1.0 | -51.1 | -13.0 | -38.1 | |
| | 7.635 | -15.2 | H | 3.0 | 34.9 | 1.0 | -49.2 | -13.0 | -36.2 | |

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: CDMA

| | | | |
|----------------|----------------------|---------------|--------------|
| Chamber | Pre-amplifier | Filter | Limit |
| 3m Chamber | T343 8449B | Filter 1 | Part 24 |

| | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes | |
|------------------------------|---------------------------|-----------------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|--|
| Band BC1 1xRTT | Low Ch, 1851.25MHz | | | | | | | | | | |
| | | 3.703 | 3.7 | V | 3.0 | 35.4 | 1.0 | -30.7 | -13.0 | -17.7 | |
| | | 5.554 | -17.2 | V | 3.0 | 34.7 | 1.0 | -50.9 | -13.0 | -37.9 | |
| | | 7.405 | -15.2 | V | 3.0 | 34.9 | 1.0 | -49.1 | -13.0 | -36.1 | |
| | | 3.703 | 4.1 | H | 3.0 | 35.4 | 1.0 | -30.3 | -13.0 | -17.3 | |
| | | 5.554 | -16.7 | H | 3.0 | 34.7 | 1.0 | -50.4 | -13.0 | -37.4 | |
| | | 7.405 | -15.0 | H | 3.0 | 34.9 | 1.0 | -48.9 | -13.0 | -35.9 | |
| | | Mid Ch, 1880.0MHz | | | | | | | | | |
| | | 3.760 | 2.1 | V | 3.0 | 35.3 | 1.0 | -32.3 | -13.0 | -19.3 | |
| | | 5.640 | -15.5 | V | 3.0 | 34.7 | 1.0 | -49.2 | -13.0 | -36.2 | |
| | | 7.520 | -15.9 | V | 3.0 | 34.9 | 1.0 | -49.8 | -13.0 | -36.8 | |
| | | 3.760 | 1.9 | H | 3.0 | 35.3 | 1.0 | -32.5 | -13.0 | -19.5 | |
| | | 5.640 | -14.9 | H | 3.0 | 34.7 | 1.0 | -48.7 | -13.0 | -35.7 | |
| | | 7.520 | -14.7 | H | 3.0 | 34.9 | 1.0 | -48.6 | -13.0 | -35.6 | |
| | | High Ch, 1908.75 MHz | | | | | | | | | |
| | | 3.818 | -2.5 | V | 3.0 | 35.3 | 1.0 | -36.8 | -13.0 | -23.8 | |
| | | 5.726 | -13.9 | V | 3.0 | 34.7 | 1.0 | -47.6 | -13.0 | -34.6 | |
| | | 7.635 | -14.9 | V | 3.0 | 34.9 | 1.0 | -48.9 | -13.0 | -35.9 | |
| | 3.818 | -1.7 | H | 3.0 | 35.3 | 1.0 | -35.9 | -13.0 | -22.9 | | |
| | 5.726 | -17.3 | H | 3.0 | 34.7 | 1.0 | -51.0 | -13.0 | -38.0 | | |
| | 7.635 | -14.7 | H | 3.0 | 34.9 | 1.0 | -48.7 | -13.0 | -35.7 | | |

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.

**Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement**

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: EVDORA BC0 HARM

| | | | |
|----------------|---------------------|---------------|--------------|
| Chamber | Pre-amplifer | Filter | Limit |
| 3m Chamber C | T343 8449B | Filter 1 | Part 22 |

Band
 BC0

| f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|----------------------------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| Low Ch, 824.7MHz | | | | | | | | | |
| 1.650 | -26.3 | V | 3.0 | 37.4 | 1.0 | -62.7 | -13.0 | -49.7 | |
| 2.474 | -24.6 | V | 3.0 | 36.4 | 1.0 | -60.0 | -13.0 | -47.0 | |
| 3.298 | -23.0 | V | 3.0 | 35.8 | 1.0 | -57.8 | -13.0 | -44.8 | |
| 1.650 | -25.6 | H | 3.0 | 37.4 | 1.0 | -62.0 | -13.0 | -49.0 | |
| 2.474 | -25.2 | H | 3.0 | 36.4 | 1.0 | -60.6 | -13.0 | -47.6 | |
| 3.298 | -23.4 | H | 3.0 | 35.8 | 1.0 | -58.2 | -13.0 | -45.2 | |
| Mid Ch, 836.52MHz | | | | | | | | | |
| 1.673 | -25.2 | V | 3.0 | 37.3 | 1.0 | -61.5 | -13.0 | -48.5 | |
| 2.509 | -24.5 | V | 3.0 | 36.4 | 1.0 | -59.9 | -13.0 | -46.9 | |
| 3.346 | -23.1 | V | 3.0 | 35.8 | 1.0 | -57.8 | -13.0 | -44.8 | |
| 1.673 | -27.3 | H | 3.0 | 37.3 | 1.0 | -63.6 | -13.0 | -50.6 | |
| 2.509 | -26.2 | H | 3.0 | 36.4 | 1.0 | -61.6 | -13.0 | -48.6 | |
| 3.346 | -23.4 | H | 3.0 | 35.8 | 1.0 | -58.1 | -13.0 | -45.1 | |
| High Ch, 848.31 MHz | | | | | | | | | |
| 1.696 | -26.3 | V | 3.0 | 37.3 | 1.0 | -62.6 | -13.0 | -49.6 | |
| 2.544 | -23.4 | V | 3.0 | 36.3 | 1.0 | -58.7 | -13.0 | -45.7 | |
| 3.393 | -23.7 | V | 3.0 | 35.7 | 1.0 | -58.4 | -13.0 | -45.4 | |
| 1.696 | -27.1 | H | 3.0 | 37.3 | 1.0 | -63.4 | -13.0 | -50.4 | |
| 2.544 | -24.9 | H | 3.0 | 36.3 | 1.0 | -60.2 | -13.0 | -47.2 | |
| 3.393 | -22.8 | H | 3.0 | 35.7 | 1.0 | -57.5 | -13.0 | -44.5 | |

Rev. 03.03.09

Note: No other emissions were detected above the system noise floor.

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 14U17222
Date: 03/29/14
Test Engineer: R. Alegre
Configuration: EUT with AC adapter
Mode: RTT BC0 HARM

| | | | |
|----------------|----------------------|---------------|--------------|
| Chamber | Pre-amplifier | Filter | Limit |
| 3m Chamber C | T343 8449B | Filter 1 | Part 22 |

| Band | f GHz | SG reading (dBm) | Ant. Pol. (H/V) | Distance (m) | Preamp (dB) | Filter (dB) | EIRP (dBm) | Limit (dBm) | Delta (dB) | Notes |
|------------------|----------------------------|---------------------|--------------------|-----------------|----------------|----------------|---------------|----------------|---------------|-------|
| | Low Ch, 824.7MHz | | | | | | | | | |
| BC0 1xRTT | 1.649 | -26.4 | V | 3.0 | 37.4 | 1.0 | -62.8 | -13.0 | -49.8 | |
| | 2.474 | -24.5 | V | 3.0 | 36.4 | 1.0 | -59.9 | -13.0 | -46.9 | |
| | 3.298 | -22.7 | V | 3.0 | 35.8 | 1.0 | -57.5 | -13.0 | -44.5 | |
| | 1.649 | -25.7 | H | 3.0 | 37.4 | 1.0 | -62.1 | -13.0 | -49.1 | |
| | 2.474 | -25.2 | H | 3.0 | 36.4 | 1.0 | -60.6 | -13.0 | -47.6 | |
| | 3.298 | -23.4 | H | 3.0 | 35.8 | 1.0 | -58.2 | -13.0 | -45.2 | |
| | Mid Ch, 836.52MHz | | | | | | | | | |
| | 1.673 | -24.9 | V | 3.0 | 37.3 | 1.0 | -61.3 | -13.0 | -48.3 | |
| | 2.509 | -24.3 | V | 3.0 | 36.4 | 1.0 | -59.7 | -13.0 | -46.7 | |
| | 3.346 | -23.3 | V | 3.0 | 35.8 | 1.0 | -58.0 | -13.0 | -45.0 | |
| | 1.673 | -27.3 | H | 3.0 | 37.3 | 1.0 | -63.6 | -13.0 | -50.6 | |
| | 2.509 | -26.2 | H | 3.0 | 36.4 | 1.0 | -61.5 | -13.0 | -48.5 | |
| | 3.346 | -23.5 | H | 3.0 | 35.8 | 1.0 | -58.2 | -13.0 | -45.2 | |
| | High Ch, 848.31 MHz | | | | | | | | | |
| | 1.696 | -26.2 | V | 3.0 | 37.3 | 1.0 | -62.5 | -13.0 | -49.5 | |
| | 2.544 | -23.3 | V | 3.0 | 36.3 | 1.0 | -58.6 | -13.0 | -45.6 | |
| | 3.393 | -22.7 | V | 3.0 | 35.7 | 1.0 | -57.4 | -13.0 | -44.4 | |
| | 1.696 | -26.8 | H | 3.0 | 37.3 | 1.0 | -63.1 | -13.0 | -50.1 | |
| | 2.544 | -25.0 | H | 3.0 | 36.3 | 1.0 | -60.3 | -13.0 | -47.3 | |
| | 3.393 | -22.8 | H | 3.0 | 35.7 | 1.0 | -57.5 | -13.0 | -44.5 | |

Rev. 03.03.09
 Note: No other emissions were detected above the system noise floor.