FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
FCC CFR47 PART 90 SUBPART S
FCC CFR47 PART 27 SUBPART M

C2PC CERTIFICATION TEST REPORT

FOR

CDMA/LTE PHONE + BLUETOOTH & WLAN 2.4GHZ AND NFC

MODEL NUMBER: LG-LS740, LGLS740, LS740

FCC ID: ZNFLS740

REPORT NUMBER: 14U16944-1 REV A
ISSUE DATE: February 25, 2014

Prepared for

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1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS,
NEW JERSEY, 07632, U.S.A.

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	1/24/14	Initial Issue	P. Kim
A	2/25/14	Updated LTE power verification table	P. Kim

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	**LG ELECTRONICS MOBILECOMM U.S.A., INC. 1000 SYLVAN AVENUE ENGLEWOOD CLIFFS, NEW JERSEY 07632 U.S.A.**
EUT DESCRIPTION:	**CDMA/LTE Phone + Bluetooth & WLAN 2.4GHz and NFC**
MODEL:	**LG-LS740, LGLS740, LS740**
Serial Number:	**1801185**
DATE TESTED:	**JANUARY 21-24, 2014**

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H, 24E , 27M and 90S	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:

PHILIP KIM
WiSE OPERATIONS MANAGER
UL VERIFICATION SERVICES INC.

Tested By:

STEVEN TRAN
WiSE LAB TECHNICIAN
UL VERIFICATION SERVICES INC.

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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, and FCC CFR 47 Part 90.

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.ccsemc.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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a CDMA/LTE Phone + Bluetooth and WLAN (2.4 GHz) + NFC.

5.2. MAXIMUM OUTPUT POWER

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

FCC Part 22/2 4/27						
Band	Frequency Range(MHz)	Modulation	Conducted		Radiated	
		Peak	dBm	mW	dBm	mW
BC10	816~824	1xRTT	25.2	331.13	23.16	207.0
	816~824	EVDO REV A	25.02	317.69	24.67	293.1
BC0	824~849	1xRTT	25.1	323.59	22.74	187.9
	824~849	EVDO REV A	25.08	322.11	23.92	246.6
BC1	1850~1910	1xRTT	25.18	329.61	24.07	255.3
	1850~1910	EVDO REV A	25.03	318.42	24.97	314.1

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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	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE41	2496~2690	20MHz	QPSK	27.67	584.79	27.79	601.2
			16QAM	27.77	598.41	27.20	524.8

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE41	2496~2690	15MHz	QPSK	27.81	603.95	27.52	564.9
			16QAM	27.58	572.80	26.90	489.8

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE41	2496~2690	10MHz	QPSK	27.74	594.29	27.72	591.6
			16QAM	27.5	562.34	27.20	524.8

FCC Part 22/90							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE26	814~849	10MHz	QPSK	29.29	849.18	24.73	297.2
			16QAM	29.48	887.16	24.09	256.4

FCC Part 22/90							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE26	814~849	5MHz	QPSK	29.16	824.14	25.09	322.8
			16QAM	29.19	829.85	24.39	274.8

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FCC Part 22/90							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE26	814~849	3MHz	QPSK	29.06	805.38	24.95	312.6
			16QAM	28.91	778.04	24.49	281.2

FCC Part 22/90							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE26	814~849	1.4MHz	QPSK	28.97	788.86	24.74	297.9
			16QAM	28.5	707.95	24.59	287.7

FCC Part 2 4							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE25	1850~1915	10MHz	QPSK	28.95	785.24	26.74	472.1
			16QAM	28.79	756.83	26.75	473.2

FCC Part 2 4							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE25	1850~1915	5MHz	QPSK	28.75	749.89	24.97	314.1
			16QAM	28.99	792.50	25.56	359.7

FCC Part 2 4							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
			Peak	dBm	mW	dBm	mW
LTE25	1850~1915	3MHz	QPSK	28.86	769.13	25.32	340.4
			16QAM	28.68	737.90	24.63	290.4

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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)
BC10, 816~824MHz	-2.6
BC0, 824~849MHz	-2.3
BC1, 1850~1910MHz	-1.2
LTE25, 1850~1915MHz	-1.2
LTE26, 814~849MHz	-2.3
LTE41, 2496~2690MHz	-2.4

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5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-01WD	DB83Y00000030	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.

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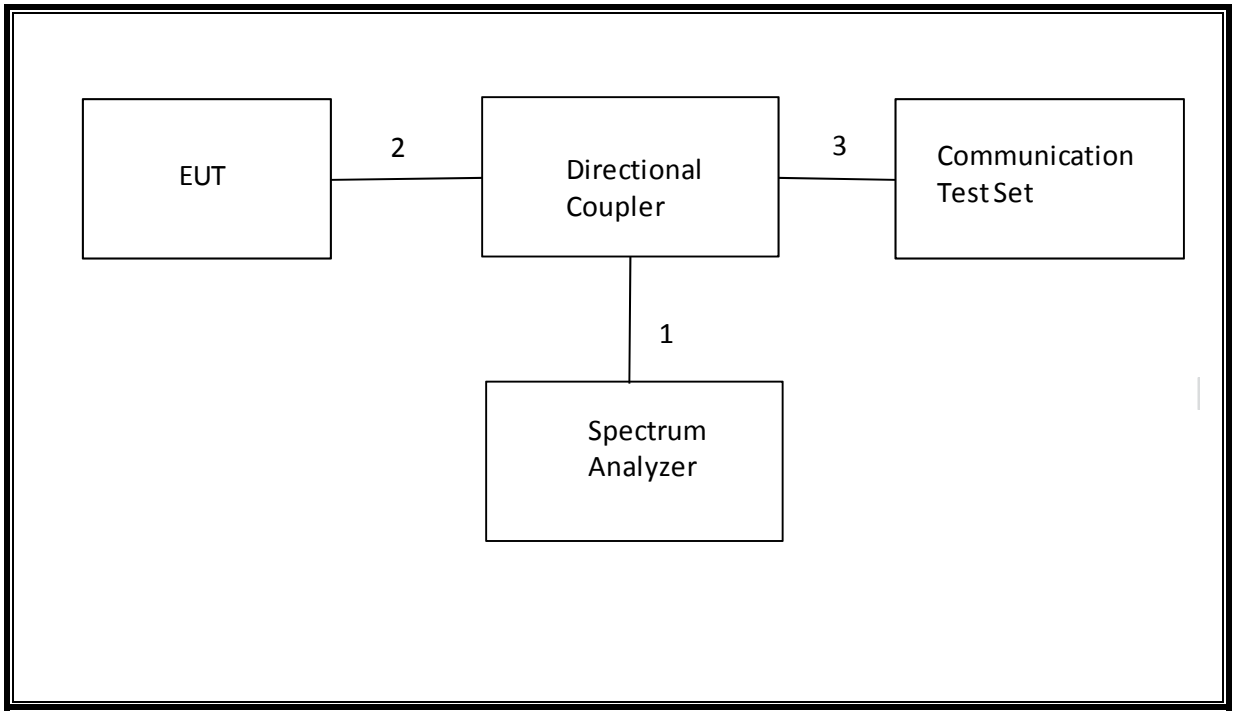
SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



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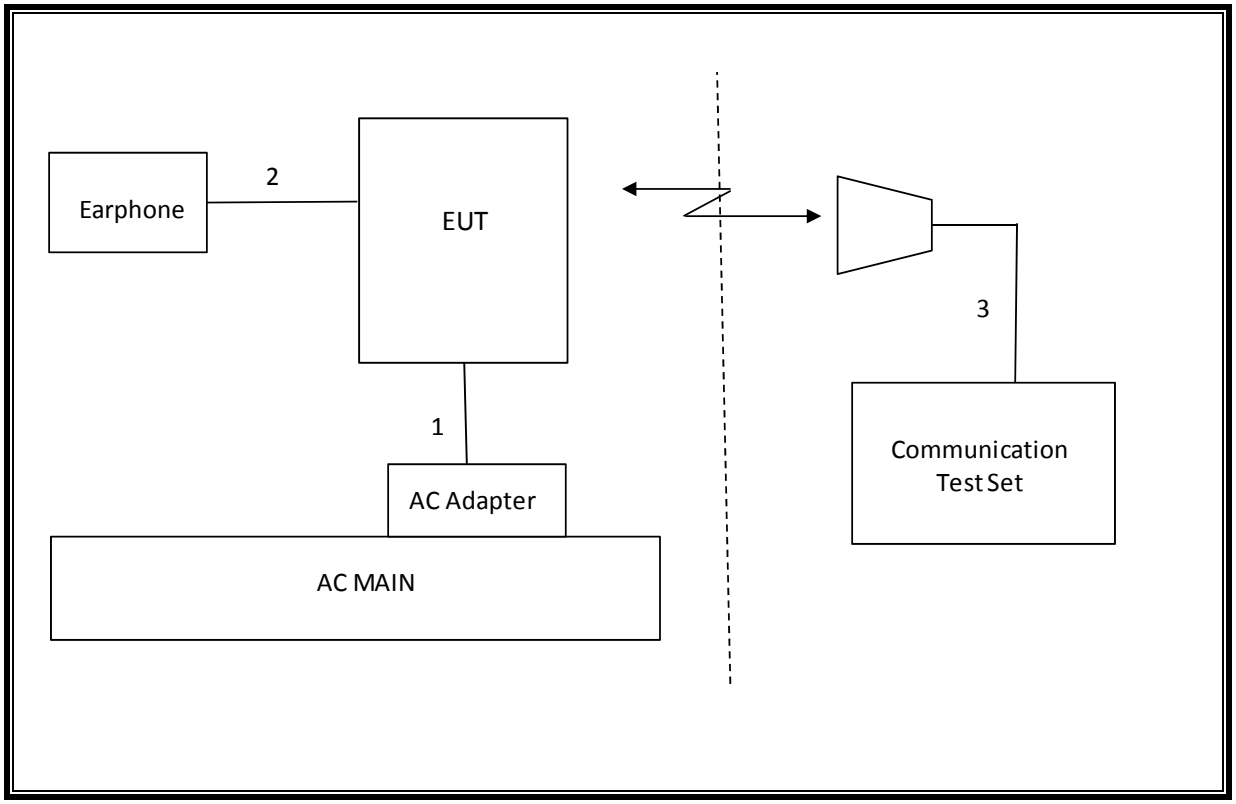
SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



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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	C00735	10/25/14
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00885	12/11/14
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01179	02/26/14
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	10/22/14
8960 Communication Test Set	Agilent / HP	E5515C	C01086	11/10/14
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	C00930	01/09/14
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	C01011	03/28/14
Vector signal generator, 6 GHz	Agilent / HP	E4438C	F00037	08/06/14
Antenna, Tuned Dipole 400~1000 MHz	ETS	3121C DB4	C00993	02/14/14

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7. Summary Table

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1049	RSS Gen	Occupied Band width (99%)	N/A	Conducted	Pass	See original
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	See original
27.53(m)	RSS-199(4.5)		-25dBm		Pass	See original
2.1046	N/A	Conducted output power	N/A		Pass	29.48 dBm
27.53(m) 90.691	RSS-199(4.5)	Emission Mask			Pass	
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	See original
22.913(a)(2)	RSS-132(4.4)	Effective Radiated Power	38 dBm	Radiated	Pass	25.09dBm
90.635	N/A		50dBm		Pass	
24.232(c) 27.50(h)(2)	RSS-133(6.4) RSS-199(4.4)	Equivalent Isotropic Radiated Power	33dBm		Pass	27.79dBm
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	-33.9 dBm
27.53(m)	RSS-199(4.5)		-25dBm		Pass	-28.3 dBm

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8.1. CDMA2000

8.1.1. 1xRTT

TEST PROCEDURE

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

Application	Rev, License
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)

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8.1.2. CDMA2000 OUTPUT POWER RESULT

	Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)		
			25/1851.25MHz	600/1880MHz	1175/1908.75MHz
			Average	Average	Average
BC1	RC1	2 (Loopback)	25.14	25.06	25.13
		55 (Loopback)	25.13	25.03	25.17
	RC2	9 (Loopback)	25.12	25.01	25.10
		55 (Loopback)	25.14	24.98	25.11
	RC3	2 (Loopback)	25.10	24.96	25.07
		55 (Loopback)	25.11	24.95	25.06
		32 (+ F-SCH)	25.09	24.98	25.16
		32 (+ SCH)	25.10	24.98	25.08
	RC4	2 (Loopback)	25.12	24.97	25.06
		55 (Loopback)	25.11	24.96	25.13
		32 (+ F-SCH)	25.08	24.97	25.14
		32 (+ SCH)	25.09	24.95	25.18
	RC5	9 (Loopback)	25.10	24.95	25.06
		55 (Loopback)	25.11	24.95	25.05
	RC11	2 (Loopback)	25.16	25.07	25.11
		75 (Loopback)	25.16	25.01	25.10
		32 (+ F-SCH)	25.17	25.04	25.13
		32 (+ SCH)	25.16	25.02	25.17

	Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)		
			1013/824.7MHz	1013/824.7MHz	1013/824.7MHz
			Average	Average	Average
BC0	RC1	2 (Loopback)	24.98	25.02	25.03
		55 (Loopback)	25.01	25.10	25.06
	RC2	9 (Loopback)	24.98	25.07	24.98
		55 (Loopback)	24.98	25.07	24.98
	RC3	2 (Loopback)	24.97	25.06	25.04
		55 (Loopback)	24.98	25.05	25.01
		32 (+ F-SCH)	24.96	25.07	24.98
		32 (+ SCH)	24.98	25.05	25.04
	RC4	2 (Loopback)	24.98	25.06	25.02
		55 (Loopback)	24.96	25.04	24.98
		32 (+ F-SCH)	24.97	25.05	24.98
		32 (+ SCH)	24.97	25.05	25.03

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	RC5	9 (Loopback)	24.97	25.06	24.96
		55 (Loopback)	24.98	25.05	24.95
	RC11	2 (Loopback)	25.01	25.09	25.01
		75 (Loopback)	25.03	25.07	24.97
		32 (+ F-SCH)	24.98	25.08	24.98
		32 (+ SCH)	25.01	25.08	25.03

	Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)		
			476/817.9MHz	476/817.9MHz	476/817.9MHz
			Average	Average	Average
BC10	RC1	2 (Loopback)	25.09	25.20	25.17
		55 (Loopback)	25.06	25.19	25.19
	RC2	9 (Loopback)	25.17	25.18	25.16
		55 (Loopback)	25.15	25.19	25.14
	RC3	2 (Loopback)	25.12	25.17	25.15
		55 (Loopback)	25.09	25.19	25.16
		32 (+ F-SCH)	25.08	25.16	25.12
		32 (+ SCH)	25.10	25.16	25.13
	RC4	2 (Loopback)	25.05	25.16	25.12
		55 (Loopback)	25.10	25.15	25.15
		32 (+ F-SCH)	25.11	25.18	25.14
		32 (+ SCH)	25.11	25.17	25.13
	RC5	9 (Loopback)	25.08	25.15	25.13
		55 (Loopback)	25.10	25.17	25.14
	RC11	2 (Loopback)	25.15	25.20	25.15
		75 (Loopback)	25.14	25.18	25.17
		32 (+ F-SCH)	25.11	25.20	25.18
		32 (+ SCH)	25.14	25.19	25.16

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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.

Application	Rev, License
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 Parms:
  - 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 Parms:
  - 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)

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8.1.4. 1XEVDO REL 0 OUTPUT POWER RESULT

Radio Configuration	FTAP Rate	RTAP Rate	Channel	f(MHz)	Conducted Power (dBm)
					Average
BC10	307.2 kbps(2 slot, QPSK)	153.6 kbps	476	817.9	25.02
			580	820.5	25.01
			684	823.1	24.98
BC0			1013	824.7	25.03
			384	836.52	25.08
			777	848.31	25.02
BC1			25	1851.25	25.07
			600	1880	24.98
			1175	1908.75	25.05

Radio Configuration	Service Option	Channel	f (MHz)	Conducted Power (dBm)
				Average
BC10	EVDO REL. 0	476	817.9	25.02
		580	820.5	25.05
		684	823.1	24.98
BC0	EVDO REL. 0	1013	824.7	25.01
		384	836.52	25.03
		777	848.31	24.98
BC1	EVDO REL. 0	25	1851.25	25.08
		600	1880	24.98
		1175	1908.75	25.08

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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.

Application	Rev, License
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)

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8.1.6. 1xEVDO REV A OUTPUT RESULT

Radio Configuration	FETAP-Traffic Format	RETAP-Data Payload Size	Channel	f(MHz)	Conducted Power (dBm)
					Average
BC10	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	476	817.9	24.98
			580	820.5	25.03
			684	823.1	25.02
BC0			1013	824.7	25.05
			384	836.52	25.13
			777	848.31	25.08
BC1			25	1851.25	25.10
			600	1880	24.98
			1175	1908.75	25.08

Radio Configuration	Service Option	Channel	f (MHz)	Conducted Power (dBm)
				Average
BC10	EVDO REV. A	476	817.9	24.95
		580	820.5	25.02
		684	823.1	24.95
BC0	EVDO REV. A	1013	824.7	25.03
		384	836.52	25.08
		777	848.31	25.08
BC1	EVDO REV. A	25	1851.25	25.03
		600	1880	24.87
		1175	1908.75	25.01

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8.2. LTE OUTPUT VERIFICATION

8.2.1. LTE OUTPUT RESULT

Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE41	2506	QPSK	20	1	0	22.60	26.89
				1	49	22.57	27.16
				1	99	22.53	27.09
				50	0	21.51	27.33
				50	24	21.50	27.51
				50	49	21.55	27.67
				100	0	21.50	27.59
	2506	16QAM		1	0	21.34	27.00
				1	49	21.28	27.30
				1	99	21.28	27.27
				50	0	20.57	27.46
				50	24	20.58	27.50
				50	49	20.62	27.59
				100	0	20.58	27.77
	2593	QPSK		1	0	22.66	26.95
				1	49	22.57	26.99
				1	99	22.62	27.15
				50	0	21.35	27.21
				50	24	21.29	27.17
				50	49	21.33	27.28
				100	0	21.32	27.38
	2593	16QAM		1	0	21.48	26.68
				1	49	21.35	26.70
				1	99	21.45	26.85
				50	0	20.49	27.38
				50	24	20.44	27.30
				50	49	20.42	27.29
				100	0	20.39	27.39
	2680	QPSK		1	0	22.63	27.38
				1	49	22.66	27.09
				1	99	22.64	26.21
				50	0	21.27	27.27
				50	24	21.24	27.13
				50	49	21.40	26.89
				100	0	21.32	27.28
	2680	16QAM		1	0	21.66	27.06
				1	49	21.64	26.82
				1	99	21.73	26.05
				50	0	20.33	27.53
				50	24	20.34	27.22
				50	49	20.56	27.06
				100	0	20.32	27.13

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE41	2503.5	QPSK	15	1	0	22.67	27.33
				1	37	22.70	27.67
				1	74	22.70	27.81
				37	0	21.52	27.58
				37	17	21.51	27.65
				37	36	21.52	27.75
				75	0	21.59	27.69
	2503.5	16QAM		1	0	21.54	27.01
				1	37	21.50	27.28
				1	74	21.55	27.42
				37	0	20.52	27.34
				37	17	20.50	27.35
				37	36	20.55	27.58
				75	0	20.69	27.76
	2593	QPSK		1	0	22.70	27.07
				1	37	22.70	27.12
				1	74	22.60	27.20
				37	0	21.37	27.08
				37	17	21.28	27.01
				37	36	21.30	27.14
				75	0	21.29	27.49
	2593	16QAM		1	0	21.16	26.65
				1	37	21.09	26.66
				1	74	21.12	26.71
				37	0	20.51	26.74
				37	17	20.39	26.66
				37	36	20.41	26.72
				75	0	20.41	27.47
	2682.5	QPSK		1	0	22.52	27.29
				1	37	22.45	26.83
				1	74	22.28	26.04
				37	0	21.31	27.41
				37	17	21.38	27.20
				37	36	21.40	26.93
				75	0	21.31	27.34
	2682.5	16QAM		1	0	21.17	26.78
				1	37	21.13	26.42
				1	74	21.11	25.78
				37	0	20.24	27.19
				37	17	20.35	27.00
				37	36	20.52	26.80
				75	0	20.39	27.44

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE41	2501	QPSK	10	1	0	22.68	27.30
				1	24	22.63	27.53
				1	49	22.68	27.74
				25	0	21.65	27.23
				25	11	21.49	27.18
				25	24	21.63	27.40
				50	0	21.57	27.44
	2501	16QAM		1	0	21.51	26.99
				1	24	21.43	27.14
				1	49	21.48	27.36
				25	0	20.69	27.26
				25	11	20.58	27.23
				25	24	20.74	27.50
				50	0	20.60	27.39
	2593	QPSK		1	0	22.70	27.12
				1	24	22.70	27.12
				1	49	22.73	27.18
				25	0	21.31	27.04
				25	11	21.30	27.05
				25	24	21.33	27.08
				50	0	21.32	27.34
	2593	16QAM		1	0	21.15	26.64
				1	24	21.11	26.68
				1	49	21.12	26.70
				25	0	20.35	26.77
				25	11	20.33	26.70
				25	24	20.36	26.78
				50	0	20.44	26.96
	2685	QPSK		1	0	22.35	27.08
				1	24	22.42	26.66
				1	49	22.38	26.12
				25	0	21.37	26.95
				25	11	21.39	26.72
				25	24	21.34	26.57
				50	0	21.43	27.18
	2685	16QAM		1	0	21.55	26.86
				1	24	21.62	26.50
				1	49	21.57	25.97
				25	0	20.33	26.82
				25	11	20.44	26.64
				25	24	20.50	26.52
				50	0	20.62	27.16

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE26	819	QPSK	10	1	0	23.88	28.40
				1	24	23.82	28.70
				1	49	23.89	28.85
				25	0	22.81	29.05
				25	11	22.72	29.06
				25	24	22.81	29.24
				50	0	22.85	29.29
	819	16QAM		1	0	22.30	28.37
				1	24	22.21	28.66
				1	49	22.41	28.89
				25	0	21.69	29.25
				25	11	21.67	29.31
				25	24	21.75	29.48
				50	0	21.80	29.43
	831.5	QPSK		1	0	23.90	28.92
				1	24	23.78	28.64
				1	49	23.85	28.89
				25	0	22.55	28.71
				25	11	22.49	28.57
				25	24	22.49	28.60
				50	0	22.47	28.99
	831.5	16QAM		1	0	22.69	28.69
				1	24	22.46	28.33
				1	49	22.59	28.59
				25	0	21.43	28.52
				25	11	21.39	28.47
				25	24	21.46	28.56
				50	0	21.41	28.89
	844	QPSK		1	0	23.90	28.86
				1	24	23.77	28.69
				1	49	23.72	28.15
				25	0	22.72	29.37
				25	11	22.60	29.16
				25	24	22.60	28.90
				50	0	22.72	28.87
	844	16QAM		1	0	22.42	28.67
				1	24	22.19	28.47
				1	49	22.16	28.03
				25	0	21.80	29.48
				25	11	21.66	29.32
				25	24	21.68	28.99
				50	0	21.66	29.05

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE26	816.5	QPSK	5	1	0	23.85	28.33
				1	11	23.78	28.50
				1	24	23.86	28.74
				12	0	22.77	28.82
				12	5	22.90	29.11
				12	11	22.78	29.16
				25	0	22.87	29.09
	816.5	16QAM		1	0	22.32	28.20
				1	11	22.29	28.26
				1	24	22.38	28.53
				12	0	21.83	28.62
				12	5	21.91	28.73
				12	11	21.79	28.70
				25	0	21.89	29.19
	831.5	QPSK		1	0	23.54	28.44
				1	11	23.67	28.36
				1	24	23.81	28.49
				12	0	22.58	28.84
				12	5	22.55	28.83
				12	11	22.56	28.85
				25	0	22.54	28.91
	831.5	16QAM		1	0	22.06	28.21
				1	11	22.08	28.00
				1	24	22.24	28.25
				12	0	21.58	28.46
				12	5	21.55	28.33
				12	11	21.50	28.34
				25	0	21.59	29.02
	846.5	QPSK		1	0	23.65	28.76
				1	11	23.81	28.45
				1	24	23.82	28.13
				12	0	22.79	28.95
				12	5	22.78	28.80
				12	11	22.75	28.57
				25	0	22.68	28.85
	846.5	16QAM		1	0	22.39	28.94
				1	11	22.52	28.53
				1	24	22.29	28.27
				12	0	21.83	28.57
				12	5	21.80	28.44
				12	11	21.81	28.31
				25	0	21.69	28.84

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE26	815.5	QPSK	3	1	0	23.90	28.41
				1	7	23.90	28.61
				1	14	23.84	28.91
				7	0	22.87	28.71
				7	2	22.80	28.71
				7	6	22.93	28.83
				15	0	22.93	29.06
	815.5	16QAM		1	0	22.69	28.48
				1	7	22.72	28.75
				1	14	22.76	28.91
				7	0	21.56	28.38
				7	2	21.56	28.51
				7	6	21.68	28.70
				15	0	21.77	28.68
	831.5	QPSK		1	0	23.63	28.67
				1	7	23.61	28.55
				1	14	23.85	28.68
				7	0	22.55	28.44
				7	2	22.48	28.66
				7	6	22.46	28.55
				15	0	22.53	28.75
	831.5	16QAM		1	0	22.31	28.81
				1	7	22.37	28.72
				1	14	22.49	28.83
				7	0	21.25	28.38
				7	2	21.43	28.13
				7	6	21.24	28.42
				15	0	21.33	28.35
	847.5	QPSK		1	0	23.88	28.70
				1	7	23.87	28.36
				1	14	23.66	28.25
				7	0	22.71	28.73
				7	2	22.71	28.60
				7	6	22.67	28.41
				15	0	22.73	28.60
	847.5	16QAM		1	0	22.59	28.80
				1	7	22.61	28.47
				1	14	22.40	28.34
				7	0	21.44	28.37
				7	2	21.58	28.47
				7	6	21.49	28.33
				15	0	21.69	28.70

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE26	814.7	QPSK	1.4	1	0	23.90	28.44
				1	2	23.57	28.44
				1	5	23.55	28.69
				3	0	23.60	28.61
				3	0	23.60	28.61
				3	2	23.61	28.57
				6	0	22.81	28.60
	814.7	16QAM		1	0	22.71	28.36
				1	2	22.65	28.34
				1	5	22.39	28.38
				3	0	22.51	28.48
				3	0	22.31	28.40
				3	2	22.38	28.43
				6	0	21.55	28.13
	831.5	QPSK		1	0	23.79	28.84
				1	2	23.87	28.61
				1	5	23.72	28.77
				3	0	23.84	28.73
				3	0	23.83	28.97
				3	2	23.81	28.94
				6	0	22.58	28.50
	831.5	16QAM		1	0	22.43	28.41
				1	2	22.48	28.33
				1	5	22.50	28.44
				3	0	22.16	28.50
				3	0	22.14	28.49
				3	2	22.14	28.37
				6	0	21.33	28.42
	848.3	QPSK		1	0	23.79	28.45
				1	2	23.85	28.24
				1	5	23.76	28.30
				3	0	23.89	28.42
				3	0	23.89	28.42
				3	2	23.85	28.34
				6	0	22.66	28.41
	848.3	16QAM		1	0	22.64	28.24
				1	2	22.63	28.14
				1	5	22.48	28.16
				3	0	22.30	28.31
				3	0	22.27	28.30
				3	2	22.24	28.20
				6	0	21.49	28.37

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE25	1855	QPSK	10	1	0	23.71	28.12
				1	24	23.80	27.88
				1	49	23.85	28.18
				25	0	22.52	28.17
				25	11	22.62	28.14
				25	24	22.78	28.39
				50	0	22.64	28.41
	1855	16QAM		1	0	22.19	28.18
				1	24	22.31	27.90
				1	49	22.33	28.23
				25	0	21.54	28.37
				25	11	21.61	28.20
				25	24	21.72	28.34
				50	0	21.63	28.79
	1882.5	QPSK		1	0	23.90	28.80
				1	24	23.86	28.54
				1	49	23.88	28.56
				25	0	22.62	28.60
				25	11	22.62	28.50
				25	24	22.68	28.41
				50	0	22.62	28.95
	1882.5	16QAM		1	0	22.55	28.56
				1	24	22.71	28.28
				1	49	22.61	28.37
				25	0	21.57	28.44
				25	11	21.60	28.47
				25	24	21.60	28.38
				50	0	21.59	28.91
	1910	QPSK		1	0	23.80	27.95
				1	24	23.75	27.84
				1	49	23.70	28.08
				25	0	22.56	28.09
				25	11	22.51	28.11
				25	24	22.55	28.45
				50	0	22.57	28.45
	1910	16QAM		1	0	22.27	27.86
				1	24	22.24	27.68
				1	49	22.20	28.04
				25	0	21.67	28.15
				25	11	21.61	28.18
				25	24	21.56	28.43
				50	0	21.63	28.51

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE25	1852.5	QPSK	5	1	0	23.79	28.16
				1	11	23.77	27.90
				1	24	23.85	28.08
				12	0	22.41	28.24
				12	5	22.54	28.15
				12	11	22.64	28.25
				25	0	22.54	28.47
	1852.5	16QAM		1	0	22.24	27.98
				1	11	22.26	27.77
				1	24	22.34	27.91
				12	0	21.46	27.94
				12	5	21.55	27.91
				12	11	21.64	28.00
				25	0	21.63	28.77
	1882.5	QPSK		1	0	23.80	28.55
				1	11	23.84	28.36
				1	24	23.88	28.44
				12	0	22.62	28.69
				12	5	22.64	28.58
				12	11	22.61	28.61
				25	0	22.65	28.83
	1882.5	16QAM		1	0	22.27	28.42
				1	11	22.29	28.17
				1	24	22.37	28.30
				12	0	21.59	28.30
				12	5	21.60	28.20
				12	11	21.60	28.20
				25	0	21.67	28.88
	1912.5	QPSK		1	0	23.70	28.04
				1	11	23.74	28.08
				1	24	23.74	28.04
				12	0	22.50	28.39
				12	5	22.62	28.43
				12	11	22.57	28.44
				25	0	22.57	28.75
	1912.5	16QAM		1	0	22.15	27.95
				1	11	22.21	27.99
				1	24	22.20	27.94
				12	0	21.48	28.20
				12	5	21.56	28.25
				12	11	21.57	28.31
				25	0	21.60	28.99

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Band	Frequency	Modulation	BW (MHz)	RB Size	RB Offset	Average	Max Peak
LTE25	1851.5	QPSK	3	1	0	23.87	28.12
				1	7	23.72	28.05
				1	14	23.92	28.25
				7	0	22.57	28.43
				7	2	22.43	28.19
				7	6	22.48	28.15
				15	0	22.50	28.30
	1851.5	16QAM		1	0	22.54	28.31
				1	7	22.41	28.10
				1	14	22.64	28.24
				7	0	21.46	27.86
				7	2	21.39	27.81
				7	6	21.48	27.68
				15	0	21.47	28.11
	1882.5	QPSK		1	0	23.90	28.80
				1	7	23.64	28.39
				1	14	23.90	28.63
				7	0	22.70	28.86
				7	2	22.65	28.71
				7	6	22.63	28.67
				15	0	22.66	28.53
	1882.5	16QAM		1	0	22.56	28.65
				1	7	22.63	28.65
				1	14	22.69	28.68
				7	0	21.62	28.32
				7	2	21.63	28.30
				7	6	21.63	28.15
				15	0	21.62	28.43
	1913.5	QPSK		1	0	23.87	28.41
				1	7	23.90	28.11
				1	14	23.74	28.09
				7	0	22.70	28.68
				7	2	22.60	28.49
				7	6	22.49	28.42
				15	0	22.56	28.47
	1913.5	16QAM		1	0	22.58	28.43
				1	7	22.52	28.31
				1	14	22.28	28.06
				7	0	21.61	28.25
				7	2	21.56	28.23
				7	6	21.49	28.04
				15	0	21.54	28.46

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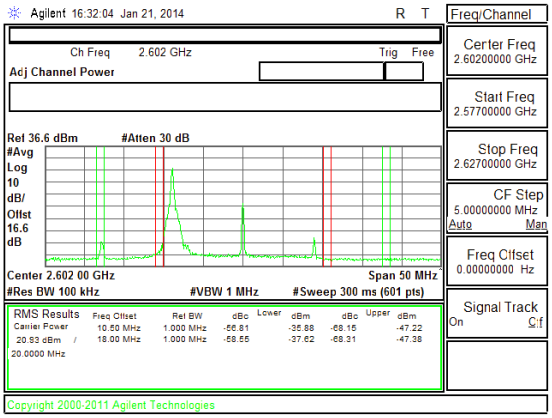
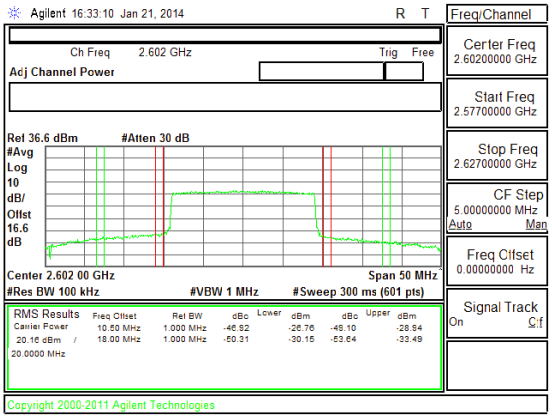
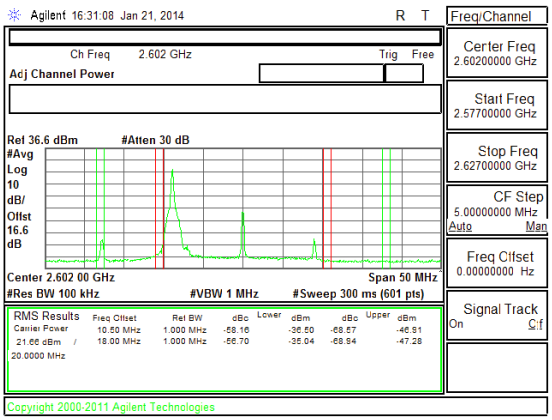
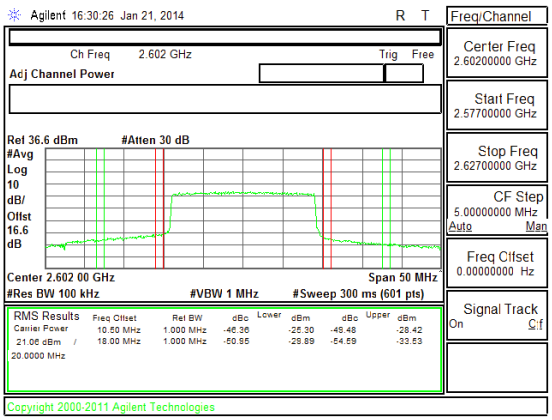
8.2.2. EMISSION MASK PLOTS

Band LTE41 20MHz 16QAM	 Band LTE41 20MHz EM 16QAM 1RB.gif	 Band LTE41 20MHz EM 16QAM FRB.gif
Band LTE41 20MHz QPSK	 Band LTE41 20MHz EM QPSK 1RB.gif	 Band LTE41 20MHz EM QPSK FRB.gif

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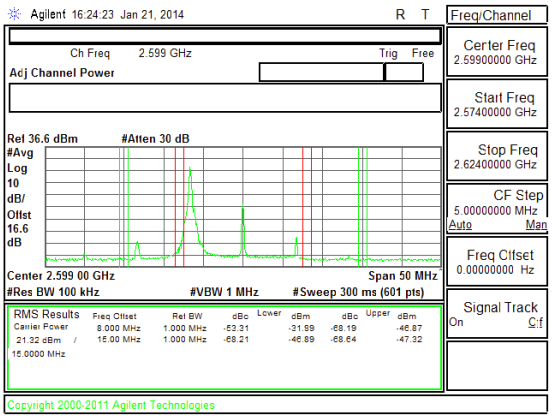
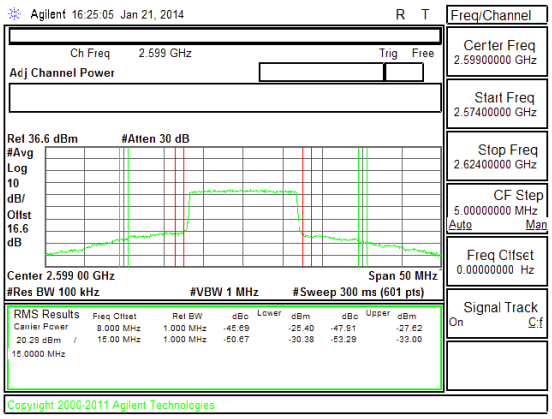
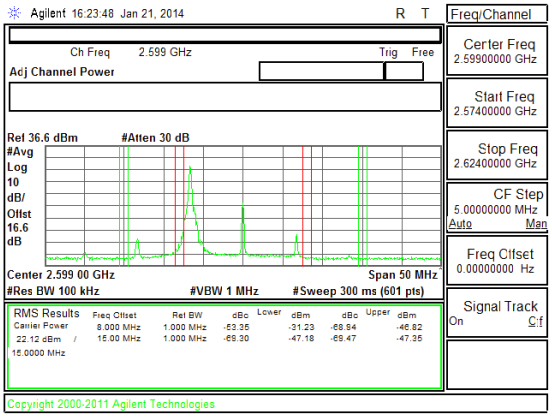
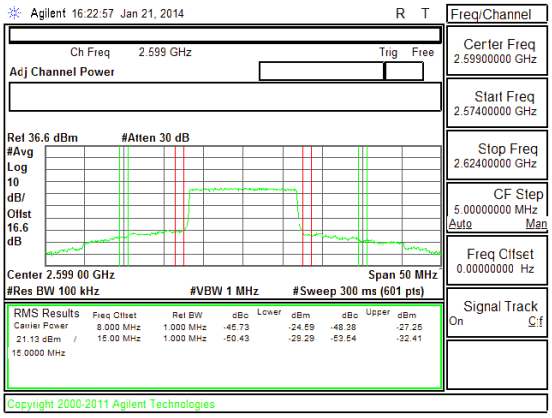
Band LTE41 15MHz 16QAM	 Band LTE41 15MHz EM 16QAM 1RB.gif	 Band LTE41 15MHz EM 16QAM FRB.gif
Band LTE41 15MHz QPSK	 Band LTE41 15MHz EM QPSK 1RB.gif	 Band LTE41 15MHz EM QPSK FRB.gif

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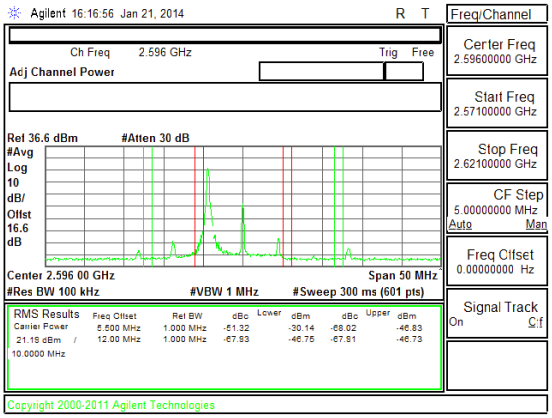
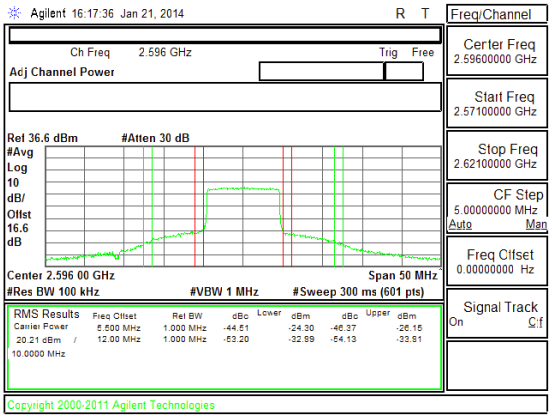
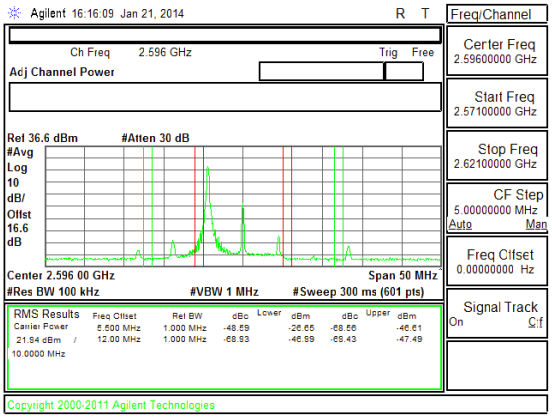
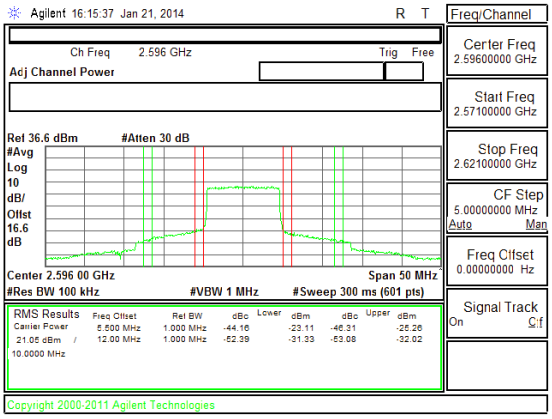
Band LTE41 10MHz 16QAM	 Band LTE41 10MHz EM 16QAM 1RB.gif	 Band LTE41 10MHz EM 16QAM FRB.gif
Band LTE41 10MHz QPSK	 Band LTE41 10MHz EM QPSK 1RB.gif	 Band LTE41 10MHz EM QPSK FRB.gif

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9. RADIATED TEST RESULTS

9.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, and § 90.635.

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.

§ 90.635 Limitations on power and antenna height.

(b) The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw).

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

Please refer to the fundamental measurement template on completing the radiated power measurement:

MODES TESTED

LTE BAND 25, 26, 41 & CDMA BC0, 1, 10

TEST RESULTS

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9.1.1. ERP/EIRP Results

Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
BC1	1xRTT	25	1851.25	22.48	177.0
		600	1880	24.07	255.3
		1175	1908.75	23.92	246.6
	EVDO REV. A	25	1851.25	24.94	311.9
		600	1880	24.53	283.8
		1175	1908.75	24.97	314.1

Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
BC0	1xRTT	1013	824.7	21.75	149.6
		384	836.52	22.74	187.9
		777	848.31	22.60	182.0
	EVDO REV. A	1013	824.7	21.72	148.6
		384	836.52	22.18	165.2
		777	848.31	23.92	246.6

Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
BC10	1xRTT	476	817.9	23.16	207.0
		580	820.5	21.07	127.9
		684	823.1	22.44	175.4
	EVDO REV. A	476	817.9	24.67	293.1
		580	820.5	23.34	215.8
		684	823.1	24.30	269.2

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9.1.2. LTE ERP/EIRP Results

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE41	20	QPSK	1/0	2506	25.14	326.6
			1/0	2593	26.15	412.1
			1/0	2680	27.79	601.2
		16QAM	1/0	2506	24.66	292.4
			1/0	2593	25.50	354.8
			1/0	2680	27.20	524.8

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE41	15	QPSK	1/0	2503.5	25.12	325.1
			1/0	2593	26.53	449.8
			1/0	2682.5	27.52	564.9
		16QAM	1/0	2503.5	24.96	313.3
			1/0	2593	26.20	416.9
			1/0	2682.5	26.90	489.8

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE41	10	QPSK	1/0	2501	25.31	339.6
			1/0	2593	26.18	415.0
			1/0	2685	27.72	591.6
		16QAM	1/0	2501	24.76	299.2
			1/0	2593	25.70	371.5
			1/0	2685	27.20	524.8

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Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE26	10	QPSK	1/0	819	23.09	203.7
			1/0	831.5	24.73	297.2
			1/0	844	23.95	248.3
		16QAM	1/0	819	23.32	214.8
			1/0	831.5	23.04	201.4
			1/0	844	24.09	256.4

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE26	5	QPSK	1/0	816.5	22.80	190.5
			1/0	831.5	25.09	322.8
			1/0	846.5	24.70	295.1
		16QAM	1/0	816.5	22.30	169.8
			1/0	831.5	24.39	274.8
			1/0	846.5	23.60	229.1

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE26	3	QPSK	1/0	815.5	23.70	234.4
			1/0	831.5	24.09	256.4
			1/0	847.5	24.95	312.6
		16QAM	1/0	815.5	22.90	195.0
			1/0	831.5	24.49	281.2
			1/0	847.5	24.20	263.0

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Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE26	1.4	QPSK	1/0	814.7	23.40	218.8
			1/0	831.5	24.74	297.9
			1/0	848.3	24.70	295.1
		16QAM	1/0	814.7	22.50	177.8
			1/0	831.5	24.59	287.7
			1/0	848.3	24.10	257.0

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE25	10	QPSK	1/0	1855	25.19	330.4
			1/0	1882.5	25.90	389.0
			1/0	1910	26.74	472.1
		16QAM	1/0	1855	25.29	338.1
			1/0	1882.5	25.79	379.3
			1/0	1910	26.75	473.2

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE25	5	QPSK	1/0	1852.5	24.75	298.5
			1/0	1882.5	24.97	314.1
			1/0	1912.5	24.23	264.9
		16QAM	1/0	1852.5	24.80	302.0
			1/0	1882.5	25.56	359.7
			1/0	1912.5	24.61	289.1

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Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE25	3	QPSK	1/0	1851.5	24.33	271.0
			1/0	1882.5	25.32	340.4
			1/0	1913.5	23.78	238.8
		16QAM	1/0	1851.5	23.31	214.3
			1/0	1882.5	24.63	290.4
			1/0	1913.5	23.16	207.0

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9.1.3. ERP/EIRP PLOTS

Band

LTE41

20MHz

16QAM

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT Only
Mode: LTE Band 41, 20MHz, 16QAM

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T771 Substitution, 8ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	M
Low Ch								
2.506	19.0	V	1.07	6.10	24.04	33.0	-9.0	
2.506	19.6	H	1.07	6.10	24.66	33.0	-8.3	
Mid Ch								
2.593	18.9	V	1.10	6.60	24.35	33.0	-8.7	
2.593	20.0	H	1.10	6.60	25.50	33.0	-7.5	
High Ch								
2.680	17.6	V	1.20	7.20	23.57	33.0	-9.4	
2.680	21.2	H	1.20	7.20	27.20	33.0	-5.8	

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Band

LTE41

20MHz

QPSK

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT Only
Mode: LTE Band 41, 20MHz, QPSK

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T771 Substitution, 8ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	M
Low Ch								
2.506	19.3	V	1.07	6.10	24.32	33.0	-8.7	
2.506	20.1	H	1.07	6.10	25.14	33.0	-7.9	
Mid Ch								
2.593	19.2	V	1.10	6.60	24.72	33.0	-8.3	
2.593	20.7	H	1.10	6.60	26.15	33.0	-6.9	
High Ch								
2.680	18.4	V	1.20	7.20	24.35	33.0	-8.7	
2.680	21.8	H	1.20	7.20	27.79	33.0	-5.2	

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Band

LTE41

15MHz

16QAM

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT Only
Mode: LTE Band 41, 15MHz, 16QAM

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T771 Substitution, 8ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	M
Low Ch								
2.504	18.7	V	1.07	6.10	23.74	33.0	-9.3	
2.504	19.9	H	1.07	6.10	24.96	33.0	-8.0	
Mid Ch								
2.593	17.3	V	1.10	6.60	22.75	33.0	-10.3	
2.593	20.7	H	1.10	6.60	26.20	33.0	-6.8	
High Ch								
2.683	17.9	V	1.20	7.20	23.87	33.0	-9.1	
2.683	20.9	H	1.20	7.20	26.90	33.0	-6.1	

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Band

LTE41

15MHz

QPSK

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT Only
Mode: LTE Band 41, 15MHz, QPSK

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T771 Substitution, 8ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	M
Low Ch								
2.504	19.1	V	1.07	6.10	24.15	33.0	-8.9	
2.504	20.1	H	1.07	6.10	25.12	33.0	-7.9	
Mid Ch								
2.593	17.6	V	1.10	6.60	23.11	33.0	-9.9	
2.593	21.0	H	1.10	6.60	26.53	33.0	-6.5	
High Ch								
2.683	18.5	V	1.20	7.20	24.45	33.0	-8.6	
2.683	21.5	H	1.20	7.20	27.52	33.0	-5.5	

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Band

LTE41

10MHz

16QAM

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT Only
Mode: LTE Band 41, 10MHz, 16QAM

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 8ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	M
Low Ch								
2.501	17.7	V	1.07	6.10	22.74	33.0	-10.3	
2.501	19.7	H	1.07	6.10	24.76	33.0	-8.2	
Mid Ch								
2.593	17.0	V	1.10	6.60	22.45	33.0	-10.6	
2.593	20.2	H	1.10	6.60	25.70	33.0	-7.3	
High Ch								
2.685	16.6	V	1.20	7.20	22.57	33.0	-10.4	
2.685	21.2	H	1.20	7.20	27.20	33.0	-5.8	

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Band

LTE41

10MHz

QPSK

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT Only
Mode: LTE Band 41, 10MHz, QPSK

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T711 Substitution, 8ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	M
Low Ch								
2.501	18.5	V	1.07	6.10	23.50	33.0	-9.5	
2.501	20.3	H	1.07	6.10	25.31	33.0	-7.7	
Mid Ch								
2.593	17.5	V	1.10	6.60	23.04	33.0	-10.0	
2.593	20.7	H	1.10	6.60	26.18	33.0	-6.8	
High Ch								
2.685	17.2	V	1.20	7.20	23.17	33.0	-9.8	
2.685	21.7	H	1.20	7.20	27.72	33.0	-5.3	

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Band

LTE26

10MHz

16QAM

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 10MHz BW
16QAM, Average, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
819.00	15.83	V	0.9	0.0	14.93	38.5	-23.5	
819.00	24.22	H	0.9	0.0	23.32	38.5	-15.1	
Mid Ch								
831.50	15.83	V	0.9	0.0	14.93	38.5	-23.5	
831.50	23.94	H	0.9	0.0	23.04	38.5	-15.4	
High Ch								
844.00	16.46	V	0.9	0.0	15.56	38.5	-22.9	
844.00	24.99	H	0.9	0.0	24.09	38.5	-14.4	

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Band

LTE26

10MHz

QPSK

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 10MHz BW
QPSK, Average, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
819.00	15.18	V	0.9	0.0	14.28	38.5	-24.2	
819.00	23.99	H	0.9	0.0	23.09	38.5	-15.4	
Mid Ch								
831.50	17.23	V	0.9	0.0	16.33	38.5	-22.1	
831.50	25.63	H	0.9	0.0	24.73	38.5	-13.7	
High Ch								
844.00	14.95	V	0.9	0.0	14.05	38.5	-24.4	
844.00	24.85	H	0.9	0.0	23.95	38.5	-14.5	

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Band

LTE26

5MHz

16QAM

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 5MHz BW
16QAM, Average, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
816.50	10.07	V	0.9	0.0	9.17	38.5	-29.3	
816.50	23.20	H	0.9	0.0	22.30	38.5	-16.1	
Mid Ch								
831.50	12.42	V	0.9	0.0	11.52	38.5	-26.9	
831.50	25.29	H	0.9	0.0	24.39	38.5	-14.1	
High Ch								
846.50	11.55	V	0.9	0.0	10.65	38.5	-27.8	
846.50	24.50	H	0.9	0.0	23.60	38.5	-14.8	

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Band

LTE26

5MHz

QPSK

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 5MHz BW
QPSK, Average, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
816.50	10.77	V	0.9	0.0	9.87	38.5	-28.6	
816.50	23.70	H	0.9	0.0	22.80	38.5	-15.6	
Mid Ch								
831.50	13.92	V	0.9	0.0	13.02	38.5	-25.4	
831.50	25.99	H	0.9	0.0	25.09	38.5	-13.4	
High Ch								
846.50	11.55	V	0.9	0.0	10.65	38.5	-27.8	
846.50	25.60	H	0.9	0.0	24.70	38.5	-13.7	

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Band

LTE26

3MHz

16QAM

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 3MHz BW
16QAM, Peak, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
815.50	15.97	V	0.9	0.0	15.07	38.5	-23.4	
815.50	23.80	H	0.9	0.0	22.90	38.5	-15.5	
Mid Ch								
831.50	15.82	V	0.9	0.0	14.92	38.5	-23.5	
831.50	25.39	H	0.9	0.0	24.49	38.5	-14.0	
High Ch								
847.50	15.45	V	0.9	0.0	14.55	38.5	-23.9	
847.50	25.10	H	0.9	0.0	24.20	38.5	-14.2	

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Band

LTE26

3MHz

QPSK

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 3MHz BW
QPSK, Peak, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
815.50	16.87	V	0.9	0.0	15.97	38.5	-22.5	
815.50	24.60	H	0.9	0.0	23.70	38.5	-14.7	
Mid Ch								
831.50	16.92	V	0.9	0.0	16.02	38.5	-22.4	
831.50	24.99	H	0.9	0.0	24.09	38.5	-14.4	
High Ch								
847.50	16.25	V	0.9	0.0	15.35	38.5	-23.1	
847.50	25.85	H	0.9	0.0	24.95	38.5	-13.5	

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Band

LTE26

1.4MHz

16QAM

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 1.4MHz BW
16QAM, Average, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
814.70	15.28	V	0.9	0.0	14.38	38.5	-24.1	
814.70	23.40	H	0.9	0.0	22.50	38.5	-15.9	
Mid Ch								
831.50	15.32	V	0.9	0.0	14.42	38.5	-24.0	
831.50	25.49	H	0.9	0.0	24.59	38.5	-13.9	
High Ch								
848.30	15.66	V	0.9	0.0	14.76	38.5	-23.7	
848.30	25.00	H	0.9	0.0	24.10	38.5	-14.3	

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Band

LTE26

1.4MHz

QPSK

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: CHARLES VERGONIO
Configuration: EUT only
Mode: LTE band 26, 1.4MHz BW
QPSK, Average, RB1-0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
814.70	16.37	V	0.9	0.0	15.47	38.5	-23.0	
814.70	24.30	H	0.9	0.0	23.40	38.5	-15.0	
Mid Ch								
831.50	16.22	V	0.9	0.0	15.32	38.5	-23.1	
831.50	25.64	H	0.9	0.0	24.74	38.5	-13.7	
High Ch								
848.30	16.45	V	0.9	0.0	15.55	38.5	-22.9	
848.30	25.60	H	0.9	0.0	24.70	38.5	-13.7	

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Band

LTE25

10MHz

16QAM

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: J Jackson
Configuration: EUT only
Mode: LTE band 25, 10MHz BW
16QAM,Average, RB1-0

Test Equipment:
Receiving: Horn T120, and Chamber F SMA Cables
Substitution: Horn T59 Substitution, 8ft 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								
1.855	13.9	V	1.50	7.94	20.29	33.0	-12.7	
1.855	18.7	H	1.50	8.14	25.29	33.0	-7.7	
Mid Ch								
1.883	18.9	V	1.50	7.95	25.36	33.0	-7.6	
1.883	19.0	H	1.50	8.26	25.79	33.0	-7.2	
High Ch								
1.910	20.3	V	1.50	7.97	26.75	33.0	-6.3	
1.910	17.9	H	1.50	8.38	24.80	33.0	-8.2	

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Band

LTE25

10MHz

QPSK

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: J Jackson
Configuration: EUT only
Mode: LTE band 25, 5MHz BW
QPSK,Average, RB1-0

Test Equipment:
Receiving: Horn T120, and Chamber F SMA Cables
Substitution: Horn T59 Substitution, 8ft 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								
1.855	13.7	V	1.50	7.94	20.16	33.0	-12.8	
1.855	18.6	H	1.50	8.14	25.19	33.0	-7.8	
Mid Ch								
1.883	18.7	V	1.50	7.95	25.13	33.0	-7.9	
1.883	19.1	H	1.50	8.26	25.90	33.0	-7.1	
High Ch								
1.910	20.3	V	1.50	7.97	26.74	33.0	-6.3	
1.910	18.1	H	1.50	8.38	24.93	33.0	-8.1	

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Band

LTE25

5MHz

16QAM

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE band 25, 5MHz BW
16QAM,Average, RB1-0

Test Equipment:
Receiving: Horn T120, and Chamber F SMA Cables
Substitution: Horn T59 Substitution, 8ft 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								
1.853	14.3	V	1.50	7.94	20.74	33.0	-12.3	
1.853	18.2	H	1.50	8.14	24.80	33.0	-8.2	
Mid Ch								
1.883	17.3	V	1.50	7.95	23.79	33.0	-9.2	
1.883	18.8	H	1.50	8.26	25.56	33.0	-7.4	
High Ch								
1.913	13.9	V	1.50	7.97	20.35	33.0	-12.7	
1.913	17.7	H	1.50	8.38	24.61	33.0	-8.4	

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Band

LTE25

5MHz

QPSK

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE band 25, 5MHz BW
QPSK,Average, RB1-0

Test Equipment:
Receiving: Horn T120, and Chamber F SMA Cables
Substitution: Horn T59 Substitution, 8ft 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								
1.853	16.0	V	1.50	7.94	22.48	33.0	-10.5	
1.853	18.1	H	1.50	8.14	24.75	33.0	-8.3	
Mid Ch								
1.883	16.7	V	1.50	7.95	23.19	33.0	-9.8	
1.883	18.2	H	1.50	8.26	24.97	33.0	-8.0	
High Ch								
1.913	16.7	V	1.50	7.97	23.21	33.0	-9.8	
1.913	17.4	H	1.50	8.38	24.23	33.0	-8.8	

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Band

LTE25

3MHz

16QAM

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE band 25, 3MHz BW
16QAM, Average, RB1-0

Test Equipment:
Receiving: Horn T120, and Chamber F SMA Cables
Substitution: Horn T59 Substitution, 8ft 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								
1.852	14.0	V	1.50	7.94	20.46	33.0	-12.5	
1.852	16.7	H	1.50	8.14	23.31	33.0	-9.7	
Mid Ch								
1.883	15.1	V	1.50	7.95	21.56	33.0	-11.4	
1.883	17.9	H	1.50	8.26	24.63	33.0	-8.4	
High Ch								
1.914	14.0	V	1.50	7.97	20.46	33.0	-12.5	
1.914	16.3	H	1.50	8.38	23.16	33.0	-9.8	

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Band

LTE25

3MHz

QPSK

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE band 25, 3MHz BW
QPSK, Average, RB1-0

Test Equipment:
Receiving: Horn T120, and Chamber F SMA Cables
Substitution: Horn T59 Substitution, 8ft 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								
1.852	16.2	V	1.50	7.94	22.63	33.0	-10.4	
1.852	17.7	H	1.50	8.14	24.33	33.0	-8.7	
Mid Ch								
1.883	18.2	V	1.50	7.95	24.60	33.0	-8.4	
1.883	18.6	H	1.50	8.26	25.32	33.0	-7.7	
High Ch								
1.914	16.2	V	1.50	7.97	22.70	33.0	-10.3	
1.914	16.9	H	1.50	8.38	23.78	33.0	-9.2	

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Band

BC1

EVDO REV. A

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/21/14
Test Engineer: Kiya
Configuration: EUT, X Position
Mode: EVDORA BC1 1900MHz

Test Equipment:
Receiving: T120, and Chamber C SMA Cables
Substitution: Horn T60 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								
1.851	14.0	V	0.85	4.40	17.50	33.0	-15.5	
1.851	21.4	H	0.85	4.40	24.94	33.0	-8.1	
Mid Ch								
1.880	18.0	V	0.85	4.40	21.54	33.0	-11.5	
1.880	21.0	H	0.85	4.40	24.53	33.0	-8.5	
High Ch								
1.909	15.1	V	0.85	4.40	18.60	33.0	-14.4	
1.909	21.4	H	0.85	4.40	24.97	33.0	-8.0	

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Band

BC1

1xRTT

High Frequency Fundamental Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/21/14
Test Engineer: Kiya
Configuration: EUT, Y Position
Mode: CDMA 1900MHz

Test Equipment:
Receiving: T120, and Chamber D SMA Cables
Substitution: Horn T60 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								
1.851	14.1	V	0.85	4.40	17.66	33.0	-15.3	
1.851	18.9	H	0.85	4.40	22.48	33.0	-10.5	
Mid Ch								
1.880	15.2	V	0.85	4.40	18.75	33.0	-14.3	
1.880	20.5	H	0.85	4.40	24.07	33.0	-8.9	
High Ch								
1.909	15.0	V	0.85	4.40	18.58	33.0	-14.4	
1.909	20.4	H	0.85	4.40	23.92	33.0	-9.1	

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Band

BC0

EVDO REV. A

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/23/14
Test Engineer: Steven
Configuration: EUT, Y POSITION
Mode: CDMA EVDORA BC0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

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	19.63	V	0.9	0.0	18.73	38.5	-19.7	
824.70	22.62	H	0.9	0.0	21.72	38.5	-16.7	
Mid Ch								
836.52	19.42	V	0.9	0.0	18.52	38.5	-19.9	
836.52	23.08	H	0.9	0.0	22.18	38.5	-16.3	
High Ch								
848.31	18.79	V	0.9	0.0	17.89	38.5	-20.6	
848.31	24.82	H	0.9	0.0	23.92	38.5	-14.5	

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Band

BC0

1xRTT

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/23/14
Test Engineer: Steven
Configuration: EUT, Y POSITION
Mode: CDMA RTT BC0

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

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	17.94	V	0.9	0.0	17.04	38.5	-21.4	
824.70	22.65	H	0.9	0.0	21.75	38.5	-16.7	
Mid Ch								
836.52	17.70	V	0.9	0.0	16.80	38.5	-21.6	
836.52	23.64	H	0.9	0.0	22.74	38.5	-15.7	
High Ch								
848.31	17.05	V	0.9	0.0	16.15	38.5	-22.3	
848.31	23.50	H	0.9	0.0	22.60	38.5	-15.8	

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Band

BC10

EVDO REV. A

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/21/14
Test Engineer: Kiya
Configuration: EUT, Y POSITION
Mode: CDMA EVDORA BC10

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
817.90	19.79	V	0.9	0.0	18.89	38.5	-19.6	
817.90	25.57	H	0.9	0.0	24.67	38.5	-13.8	
Mid Ch								
820.50	19.76	V	0.9	0.0	18.86	38.5	-19.6	
820.50	24.24	H	0.9	0.0	23.34	38.5	-15.1	
High Ch								
823.10	19.28	V	0.9	0.0	18.38	38.5	-20.1	
823.10	25.20	H	0.9	0.0	24.30	38.5	-14.1	

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Band

BC10

1xRTT

High Frequency Substitution Measurement
Compliance Certification Services Chamber C

Company: LG
Project #: 14U16944
Date: 01/21/14
Test Engineer: Kiya
Configuration: EUT, Y POSITION
Mode: CDMA RTT BC10

Test Equipment:
Receiving: Sunol T185, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
817.90	17.42	V	0.9	0.0	16.52	38.5	-21.9	
817.90	24.06	H	0.9	0.0	23.16	38.5	-15.3	
Mid Ch								
820.50	17.67	V	0.9	0.0	16.77	38.5	-21.7	
820.50	21.97	H	0.9	0.0	21.07	38.5	-17.4	
High Ch								
823.10	17.06	V	0.9	0.0	16.16	38.5	-22.3	
823.10	23.34	H	0.9	0.0	22.44	38.5	-16.0	

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9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §90.691

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

§ 90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10 (f/6.1) decibels or 50 + 10 Log10 (P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10 (P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

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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.

MODES TESTED

LTE BAND 25, 26, 41 & CDMA BC0, 1, 10

RESULTS

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9.2.1. SPURIOUS RADIATION PLOTS

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 14U16944
Date: 01/22/14
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter
Mode: TX, LTE B41 20MHZ 16QAM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber C	T145 8449B	Filter 1	Part 22

Band

LTE41

20MHz

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, (2506 MHz)									
5.012	-17.0	V	3.0	28.9	1.0	-44.8	-25.0	-19.8	
7.518	-10.5	V	3.0	26.3	1.0	-35.8	-25.0	-10.8	
10.553	-8.4	V	3.0	22.9	1.0	-30.3	-25.0	-5.3	
5.012	-16.8	H	3.0	28.9	1.0	-44.7	-25.0	-19.7	
7.518	-8.5	H	3.0	26.3	1.0	-33.9	-25.0	-8.9	
10.553	-7.2	H	3.0	22.9	1.0	-29.1	-25.0	-4.1	
Mid Ch, (2593 MHz)									
5.186	-16.8	V	3.0	28.7	1.0	-44.5	-25.0	-19.5	
7.779	-9.8	V	3.0	26.0	1.0	-34.8	-25.0	-9.8	
10.372	-8.1	V	3.0	23.0	1.0	-30.1	-25.0	-5.1	
5.186	-15.5	H	3.0	28.7	1.0	-43.2	-25.0	-18.2	
7.779	-8.4	H	3.0	26.0	1.0	-33.4	-25.0	-8.4	
10.372	-6.9	H	3.0	23.0	1.0	-28.9	-25.0	-3.9	
High Ch, (2680 MHz)									
5.360	-16.5	V	3.0	28.5	1.0	-44.0	-25.0	-19.0	
8.040	-10.2	V	3.0	25.6	1.0	-34.8	-25.0	-9.8	
10.720	-6.9	V	3.0	22.9	1.0	-28.8	-25.0	-3.8	
5.360	-15.1	H	3.0	28.5	1.0	-42.6	-25.0	-17.6	
8.040	-9.3	H	3.0	25.6	1.0	-34.0	-25.0	-9.0	
10.720	-7.7	H	3.0	22.9	1.0	-29.6	-25.0	-4.6	

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

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