

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

# **C2PC CERTIFICATION TEST REPORT**

# **FOR**

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

MODEL NUMBER: LG-VS876, VS876, LGVS876, LG-AS876, AS876 and LGAS876

FCC ID: ZNFVS876 REPORT NUMBER: 14U16955-1

ISSUE DATE: March 10, 2014

Prepared for

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Prepared by

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# **Revision History**

Issue		
Date	Revisions	Revised By
3/10/14	Initial Issue	P. Kim
I	Date	Date Revisions

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UL VERIFICATION SERVICES INC.

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10. SETUP PHOTOS ......57 REPORT NO: 14U16955-1 DATE: March 10, 2014 FCC ID: ZNFVS876

# 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-VS876, LGVS876, VS876, LG-AS876, AS876 and LGAS876

SERIAL NUMBER: 1801187-VS

DATE TESTED: FEBRUARY 3 – MARCH 10, 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

Michi

For UL Verification Services Inc. By: Tested By:

PHILIP KIM

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UL Verification Services Inc.

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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.

# 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

#### MEASURING INSTRUMENT CALIBRATION 4.1.

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:

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

ERP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) - cable loss( between the SG and substitution antenna)

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

### 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	Modulation Conducted			Radiated		
	Range(MHz)	Peak	Peak (dBm)	Peak (mW)	Peak (dBm)	Peak (mW)	
	824~849	1xRTT	24.9	309	22.57	180.72	
BC0	824~849	EVDO REL. 0	24.9	309	24.90	309.03	
	824~849	EVDO REV. A	24.9	309			
	1850~1910	1xRTT	25.0	316	25.09	322.85	
BC1	1850~1910	EVDO REL. 0	25.0	316	24.64	291.07	
	1850~1910	EVDO REV. A	25.0	316			

# 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	BandWidth	Modulation	Cond	ucted	Radi	ated	
	Range(MHz)	(MHz)	Peak	Peak (dBm)	Peak (mW)	Peak (dBm)	Peak (mW)	
LTE13	777~787	10MHz	QPSK	24.1	257	16.40	43.65	
			16QAM	23.2	209	16.00	39.81	

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	FCC Part 27							
Band	Frequency	BandWidth Modulation		Cond	Conducted		Radiated	
	Range(MHz)	(MHz)	Peak	Peak (dBm)	Peak (mW)	Peak (dBm)	Peak (mW)	
LTE4	1710~1755	20MHz	QPSK	24.0	251	22.21	166.34	
			16QAM	23.0	200	21.31	135.21	

FCC Part 27								
Band	Frequency Range(MHz)	· · · · ·		Cond	Conducted		Radiated	
	Range(IVID2)	(MHz)	Peak	Peak (dBm)	Peak (mW)	Peak (dBm)	Peak (mW)	
LTE4	1710~1755	15MHz	QPSK	24.0	251	22.67	184.93	
			16QAM	22.8	190.55	21.73	148.94	

	FCC Part 27							
Band					Conducted		Radiated	
	Range(MHz)	(MHz)	Peak	Peak (dBm)	Peak (mW)	Peak (dBm)	Peak (mW)	
LTE4	1710~1755	10MHz	QPSK	24.0	251	23.26	211.84	
			16QAM	22.8	190.55	21.97	157.40	

	FCC Part 27								
Band	Frequency	BandWidth	Modulation	Cond	ucted	Radi	ated		
	Range(MHz)	(MHz)	Peak	Peak (dBm)	Peak (mW)	Peak (dBm)	Peak (mW)		
LTE4	1710~1755	5MHz	QPSK	24.0	251	22.71	186.64		
			16QAM	23.0	200	21.66	146.55		

# 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	-3.46
BC1, 1850~1910MHz	-0.6
LTE4, 1710~1755MHz	-3.08
LTE13, 777~787MHz	-1.91

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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-02WD	DA3Y0035121	N/A				
Earphone	LG	EAB62209201	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

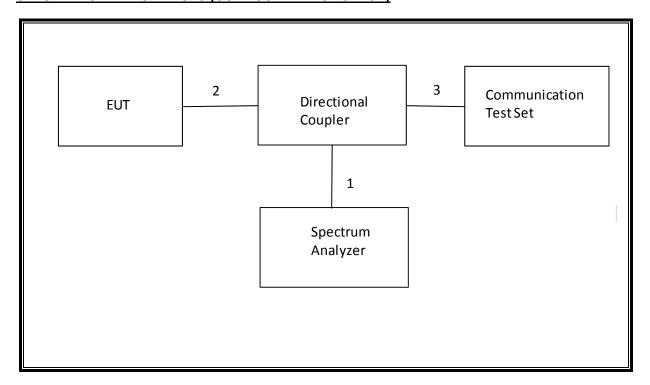
# I/O CABLES (RADIATED SETUP)

			I/O CABLE LIST			
Cable	Port	# of	Connector	Cable	Cable	Remarks
No.		Identical	Туре	Type	Length	
		Ports				
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**

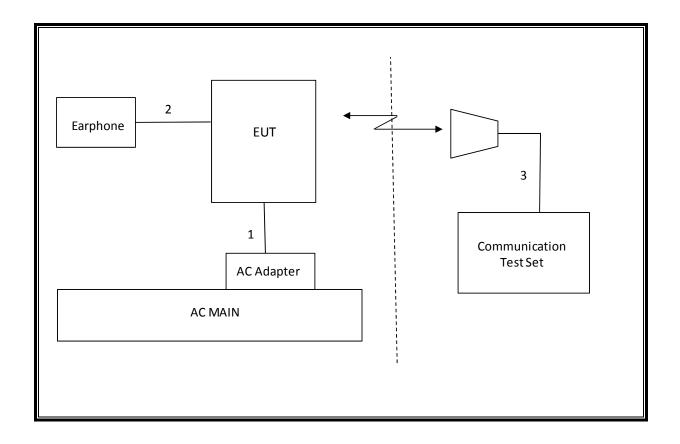
The EUT is continuously communicated to the call box during the tests.

# SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



# **SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)**

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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 EQUIPMI	ENT 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	02/26/14
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

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# 7. Summary Table

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case	Note
2.1049	N/A	Occupied Band width (99%)	N/A		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	Conducted	Pass	See original	
2.1046	N/A	Conducted output power	N/A	Conducted	Pass	25.0dBm	
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		Pass	24.90dBm	Band 5
27.50(b)(10)	N/A	Ellective Radiated Fower	34.77 dBm		Pass	24.90dbiii	Band 13
24.232(c)	RSS-133(6.4)	Equivalent Isotropic Radiated	33dBm		Pass		Band 2
27.50(d)(4)	RSS-139(6.4)	Power	30dBm	Radiated	Pass	25.09dBm	Band 4
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	-27.1dBm	

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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
  - o Rvs Power Ctrl > All Up bits (Maximum TxPout)

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# 8.1.2. CDMA2000 OUTPUT POWER RESULT

1xRTT Full Power

			1 dil 1 Owei		
Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)	
		25	1851.25	25.0	
	RC1 SO55 (Loopback)	600	1880.00	24.9	
	(======================================	1175	1908.75	24.9	
		25	1851.25	25.0	
BC 1	RC3 SO55 (Loopback)	600	1880.00	25.0	
	(======================================	1175	1908.75	25.0	
		25	1851.25	25.0	
	RC3 SO32 (+F-SCH)	600	1880.00	24.9	
	(11 2011)	1175	1908.75	24.9	

1xRTT Full Power

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)	
		1013	824.70	24.9	
	RC1, SO55 (Loopback)	384	836.52	24.8	
	(2006200.1)	777	848.31	24.8	
	RC3, SO55 (Loopback)	1013	824.70	24.8	
BC 0		384	836.52	24.8	
	(Loopsdon)	777	848.31	24.8	
		1013	824.70	24.8	
	RC3, SO32 (+F-SCH)	384	836.52	24.8	
	(11 001.)	777	848.31	24.8	

#### 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:
- o 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
- o RTAP Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
- o 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
- o 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

#### 1xEv-Do Rel. 0

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
		1013	824.70	24.9
BC0	307.2 kbps (2 slot, QPSK)	384	836.52	24.9
	(= 5.51, \(\pi\). (5.1)	777	848.31	24.9

#### 1xEv-Do Rel. 0

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
		25	1851.25	25.0
BC 1	307.2 kbps (2 slot, QPSK)	600	1880.00	25.0
	(= 5.51, \(\pi\).	1175	1908.75	25.0

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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

#### 1xEv-Do Rev. A

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
	307.2k, QPSK/	1013	824.70	24.9
BC0	ACK channel is transmitted at	384	836.52	24.9
	all the slots	777	848.31	24.9

#### 1xEv-Do Rev. A

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
	307.2k, QPSK/	25	1851.25	25.0
BC 1	ACK channel is transmitted at	600	1880	25.0
	all the slots	1175	1908.75	25.0

# 8.2. LTE OUTPUT VERIFICATION

# 8.2.1. LTE OUTPUT RESULT

# Full Power

							Avg Pwr (dBm	)
Band	BW	Mode	RB	RB	Target	20050	20175	20300
	(MHz)		Allocation	Size	MPR	1720 MHz	1732.5 MHz	1745 MHz
			1	0	0	23.9	23.9	24.0
			1	49	0	23.9	24.0	24.0
			1	99	0	23.7	23.9	24.0
		QPSK	50	0	1	22.9	23.0	22.9
			50	25	1	22.9	22.9	22.9
			50	50	1	23.0	22.9	22.8
LTE	20		100	0	1	23.0	22.9	22.8
Band 4	20		1	0	1	23.0	23.0	22.8
			1	49	1	22.7	23.0	22.8
			1	99	1	22.9	23.0	22.9
		16QAM	50	0	2	22.0	21.9	21.9
			50	25	2	22.0	21.8	21.8
			50	50	2	22.0	21.8	21.9
			100	0	2	22.0	21.8	21.8
						Avg Pwr (dBm)		
Band	BW	Mode	RB	RB C:	Target	20025	20175	20325
	(IVITZ)	(MHz) Allocation	Allocation	Allocation Size M	MPR	1717.5 MHz	1732.5 MHz	1747.5 MHz
			1	0	0	24.0		
		-			I U		1 24.0	23.9
							24.0 24.0	23.9
			1	36 74	0 0	24.0	24.0	23.9
		QPSK	1	36	0	24.0 24.0	24.0 24.0	23.9 23.9
		QPSK	1	36 74	0	24.0	24.0	23.9
		QPSK	1 1 36 36	36 74 0 18	0 0 1	24.0 24.0 23.0 23.0	24.0 24.0 22.9	23.9 23.9 22.9 22.9
LTF		QPSK	1 1 36	36 74 0	0 0 1 1	24.0 24.0 23.0	24.0 24.0 22.9 22.9	23.9 23.9 22.9
LTE Band 4	15	QPSK	1 1 36 36 36	36 74 0 18 37	0 0 1 1	24.0 24.0 23.0 23.0 23.0	24.0 24.0 22.9 22.9 22.9	23.9 23.9 22.9 22.9 22.9
	15	QPSK	1 1 36 36 36 36 75	36 74 0 18 37	0 0 1 1 1	24.0 24.0 23.0 23.0 23.0 23.0	24.0 24.0 22.9 22.9 22.9 22.9	23.9 23.9 22.9 22.9 22.9 22.9
	15	QPSK	1 1 36 36 36 36 75	36 74 0 18 37 0	0 0 1 1 1 1	24.0 24.0 23.0 23.0 23.0 23.0 23.0 22.8	24.0 24.0 22.9 22.9 22.9 22.9 22.9 22.7	23.9 23.9 22.9 22.9 22.9 22.9 22.5
	15	QPSK 16QAM	1 1 36 36 36 36 75 1	36 74 0 18 37 0 0	0 0 1 1 1 1 1	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7	24.0 24.0 22.9 22.9 22.9 22.9 22.7 22.7	23.9 23.9 22.9 22.9 22.9 22.9 22.5 22.6
	15		1 1 36 36 36 75 1 1	36 74 0 18 37 0 0 36 74	0 0 1 1 1 1 1 1	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7	24.0 24.0 22.9 22.9 22.9 22.9 22.7 22.7 22.7	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6
	15		1 36 36 36 75 1 1 1 36	36 74 0 18 37 0 0 36 74	0 0 1 1 1 1 1 1 1 2	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7 21.9	24.0 24.0 22.9 22.9 22.9 22.7 22.7 22.7 21.9	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6 22.0
	15		1 1 36 36 36 75 1 1 1 36 36	36 74 0 18 37 0 0 36 74 0 18	0 0 1 1 1 1 1 1 1 2	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7 21.9 21.9	24.0 24.0 22.9 22.9 22.9 22.7 22.7 22.7 21.9 21.9	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6 22.0 22.0
	15		1 1 36 36 36 75 1 1 1 36 36 36	36 74 0 18 37 0 0 36 74 0 18 37	0 0 1 1 1 1 1 1 1 2 2	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7 21.9 21.9 21.9 22.0	24.0 24.0 22.9 22.9 22.9 22.9 22.7 22.7 22.7 21.9 21.9 22.0	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6 22.0 22.0 21.9 21.9
Band 4	BW	16QAM	1 1 36 36 36 75 1 1 1 36 36 36 36 75	36 74 0 18 37 0 0 36 74 0 18 37 0	0 0 1 1 1 1 1 1 2 2 2 Target	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7 21.9 21.9 21.9 22.0	24.0 24.0 22.9 22.9 22.9 22.7 22.7 22.7 21.9 21.9 22.0 21.9	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6 22.0 22.0 21.9 21.9
			1 1 36 36 36 75 1 1 1 36 36 36 36	36 74 0 18 37 0 0 36 74 0 18 37	0 0 1 1 1 1 1 1 2 2 2 2	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7 21.9 21.9 22.0	24.0 24.0 22.9 22.9 22.9 22.7 22.7 22.7 21.9 21.9 22.0 21.9 Avg Pwr (dBm	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6 22.0 21.9 21.9
Band 4	BW	16QAM	1 1 36 36 36 75 1 1 1 36 36 36 36 75	36 74 0 18 37 0 0 36 74 0 18 37 0	0 0 1 1 1 1 1 1 2 2 2 Target	24.0 24.0 23.0 23.0 23.0 23.0 22.8 22.7 22.7 21.9 21.9 21.9 22.0	24.0 24.0 22.9 22.9 22.9 22.7 22.7 22.7 21.9 21.9 22.0 21.9 Avg Pwr (dBm 20175 1732.5	23.9 23.9 22.9 22.9 22.9 22.5 22.6 22.6 22.0 21.9 21.9 20350

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UL VERIFICATION SERVICES INC.

47173 BENICIA STREET, FREMONT, CA 94538, USA

TEL: (510) 771-1000

FORM NO: CCSUP4701I FAX: (510) 661-0888

1 00 10. 21	11 10070								
			1	49	0	23.9	23.9	23.9	
			25	0	1	22.9	22.9	22.9	
			25	12	1	23.0	22.8	22.8	
			25	25	1	23.0	22.8	22.8	
			50	0	1	23.0	22.9	22.8	
			1	0	1	22.8	22.7	22.7	
			1	25	1	22.7	22.8	22.7	
			1	49	1	22.8	22.7	22.6	
		16QAM	25	0	2	21.9	22.0	21.9	
			25	12	2	21.9	22.0	21.8	
			25	25	2	21.9	22.0	21.8	
			50	0	2	21.9	21.9	21.9	
						Avg Pwr (dBm)			
Band	BW (MHz)	Mode	RB Allocation	RB Size	Target MPR	19975	20175	20375	
	(IVII IZ)		Allocation	Size	IVIFIX	1712.5 MHz	1732.5 MHz	1752.5 MHz	
		QPSK	1	0	0	23.7	23.8	24.0	
			1	12	0	23.7	23.8	24.0	
			1	24	0	23.7	23.8	24.0	
			12	0	1	22.9	22.9	22.9	
			12	6	1	22.9	22.9	22.8	
			12	13	1	23.0	22.9	22.8	
LTE	_		25	0	1	22.9	22.8	22.9	
Band 4	5		1	0	1	23.0	22.7	23.0	
			1	12	1	23.0	23.0	23.0	
			1	24	1	22.8	23.0	22.9	
		16QAM	12	0	2	21.9	21.9	21.8	
			12	6	2	21.8	22.0	21.7	
			12	13	2	21.9	21.9	21.8	
1									

DATE: March 10, 2014

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						Avg Pwr (dBm)
Band	BW (MHz)	Mode	RB Allocation	RB Size	Target MPR	23230
	(14.11.12)		7 11100011011	0.20		782 MHz
			1	0	0	24.1
			1	25	0	24.1
			1	49	0	24.2
		QPSK	25	0	1	23.1
			25	12	1	23.1
			25	25	1	23.0
LTE	10		50	0	1	23.1
Band 13			1	0	1	23.0
			1	25	1	23.0
			1	49	1	23.0
		16QAM	25	0	2	22.0
			25	12	2	22.0
			25	25	2	22.0
			50	0	2	22.1

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# 9. RADIATED TEST RESULTS

# 9.1. RADIATED POWER (ERP & EIRP)

#### **RULE PART(S)**

FCC: §2.1046, §22.913, §24.232, §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**

CDMA BC0/BC1 & LTE B4/B13

#### **TEST RESULTS**

FORM NO: CCSUP4701I

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# 9.1.1. ERP/EIRP Results

Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
		25	1851.25	24.88	307.61
	1xRTT	600	1880	24.93	311.17
BC1		1175	1908.75	25.09	322.85
		25	1851.25	24.33	271.02
	EVDO REL. 0	600	1880	24.24	265.46
		1175	1908.75	24.64	291.07

Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
		1013	824.7	21.83	152.41
	1xRTT	384	836.52	22.57	180.72
BC0		777	848.31	22.31	170.22
		1013	824.7	24.02	252.35
	EVDO REL. 0	384	836.52	24.90	309.03
		777	848.31	23.54	225.94

FCC ID: ZNFVS876

# 9.1.2. LTE ERP/EIRP Results

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE13	10	QPSK	1/0	782	16.40	43.65
		16QAM	1/0	782	16.00	39.81

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP /	EIRP
					dBm	mW
			1/0	1720	21.01	126.18
		QPSK	1/0	1732.5	21.80	151.36
LTE4	20		1/0	1745	22.21	166.34
		16QAM	1/0	1720	19.99	99.77
			1/0	1732.5	21.15	130.32
			1/0	1745	21.31	135.21

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP		
			·		dBm	mW	
			1/0	1717.5	21.56	143.22	
		QPSK	1/0	1732.5	22.67	184.93	
LTE4	15		1/0	1747.5	22.09	161.81	
		16QAM	1/0	1717.5	21.10	128.82	
			1/0	1732.5	21.73	148.94	
			1/0	1747.5	20.97	125.03	

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP		
					dBm	mW	
			1/0	1715	21.82	152.05	
		QPSK	1/0	1732.5	23.26	211.84	
LTE4	10		1/0	1750	21.99	158.12	
			1/0	1715	20.40	109.65	
		16QAM	1/0	1732.5	21.97	157.40	
			1/0	1750	20.66	116.41	

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Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP		
	, ,			, ,	dBm	mW	
			1/0	1712.5	22.71	186.64	
		QPSK	1/0	1732.5	22.53	179.06	
LTE4	5		1/0	1752.5	21.69	147.57	
		16QAM	1/0	1712.5	21.22	132.43	
			1/0	1732.5	21.66	146.55	
			1/0	1752.5	21.11	129.12	

REPORT NO: 14U16955-1 DATE: March 10, 2014 FCC ID: ZNFVS876

# 9.1.3. ERP/EIRP DATA

High Frequency Substitution Measurement

Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/04/14

 Test Engineer:
 K.Kedida

 Configuration:
 X position

Mode: LTE\_B13\_10MHz\_16QAM

Band

LTE13

**Test Equipment:** 

Receiving: Sunol T1243, and Chamber B Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

10MHz 16QAM

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	10.55	V	0.9	0.0	9.65	34.8	-25.1	
782.000	16.90	Н	0.9	0.0	16.00	34.8	-18.8	
Mid Ch								
NEW								

FORM NO: CCSUP4701I

DATE: March 10, 2014

**High Frequency Substitution Measurement** Compliance Certification Services Chamber C

Company: LG Project #: 14U16955 Date: 03/04/14 Test Engineer: K.Kedida Configuration: X position

Mode: LTE\_B13\_10MHz\_QPSK

Band LTE13

**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.

10MHz QPSK

SG reading Ant. Pol. Cable Loss Antenna Gain NAM MALIT (dDm) (JD)

WHZ	(aBm)	(H/V)	(aB)	(aBa)	(aBm)	(aBm)	(aB)	
Low Ch	,							
<u> </u>	,							
Mid Ch								
782.000	11.75	V	0.9	0.0	10.85	34.8	-23.9	
782.000	17.30	Н	0.9	0.0	16.40	34.8	-18.4	***************************************
Mid Ch								
NFW								

(-ID-I)

ERP

Limit

(dDm) (dDm)

Margin

(AD)

Notes

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High Frequency Fundamental Measurement

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

Company: Project #: Date: LG 14U16955 03/03/14 S.Tran

Test Engineer: Configuration: Mode:

Y position, EUT only LTE\_B4\_20MHz\_16QAM

Band

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

LTE4

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

20MHz 16QAM

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
GHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								
1.720	15.3	V	0.85	5.58	19.99	30.0	-10.0	
1.720	10.9	Н	0.85	5.58	15.66	30.0	-14.3	
Mid Ch								
1.732	16.4	V	0.85	5.60	21.15	30.0	-8.9	
1.732	11.8	Н	0.85	5.60	16.55	30.0	-13.5	
High Ch								
1.745	16.5	V	0.85	5.63	21.31	30.0	-8.7	
1.745	11.8	Н	0.85	5.63	16.55	30.0	-13.5	
	1					1	1	

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DATE: March 10, 2014

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_20MHz\_QPSK

Band Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

20MHz QPSK

LTE4

(dBm)	(H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
							-
16.3	V	0.85	5.58	21.01	30.0	-9.0	
12.3	Н	0.85	5.58	17.01	30.0	-13.0	
17.1	V	0.85	5.60	21.80	30.0	-8.2	
12.8	Н	0.85	5.60	17.59	30.0	-12.4	
17.4	V	0.85	5.63	22.21	30.0	-7.8	
13.1	Н	0.85	5.63	17.88	30.0	-12.1	
	16.3 12.3 17.1 12.8	16.3 V 12.3 H 17.1 V 12.8 H	16.3 V 0.85 12.3 H 0.85 17.1 V 0.85 12.8 H 0.85 17.4 V 0.85	16.3 V 0.85 5.58 12.3 H 0.85 5.58 17.1 V 0.85 5.60 12.8 H 0.85 5.60 17.4 V 0.85 5.63	16.3     V     0.85     5.58     21.01       12.3     H     0.85     5.58     17.01       17.1     V     0.85     5.60     21.80       12.8     H     0.85     5.60     17.59       17.4     V     0.85     5.63     22.21	16.3     V     0.85     5.58     21.01     30.0       12.3     H     0.85     5.58     17.01     30.0       17.1     V     0.85     5.60     21.80     30.0       12.8     H     0.85     5.60     17.59     30.0       17.4     V     0.85     5.63     22.21     30.0	16.3     V     0.85     5.58     21.01     30.0     -9.0       12.3     H     0.85     5.58     17.01     30.0     -13.0       17.1     V     0.85     5.60     21.80     30.0     -8.2       12.8     H     0.85     5.60     17.59     30.0     -12.4       17.4     V     0.85     5.63     22.21     30.0     -7.8

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High Frequency Fundamental Measurement

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_15MHz\_16QAM

Band Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

15MHz 16QAM

LTE4

f GHz	SG reading (dBm)	G reading Ant. Pol.		EIRP	Limit	Delta	Notes	
		(H/V)		(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								-
1.718	16.4	V	0.85	5.58	21.10	30.0	-8.9	
1.718	12.4	Н	0.85	5.58	17.16	30.0	-12.8	
Mid Ch								
1.732	17.0	V	0.85	5.60	21.73	30.0	-8.3	
1.732	12.8	Н	0.85	5.60	17.57	30.0	-12.4	
High Ch								
1.748	16.2	V	0.85	5.63	20.97	30.0	-9.0	
1.748	11.8	Н	0.85	5.63	16.56	30.0	-13.4	

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DATE: March 10, 2014

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_15MHz\_QPSK

Band Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

15MHz QPSK

LTE4

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
GHz	(dBm)	(dBm) (H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								
1.718	16.8	V	0.85	5.58	21.56	30.0	-8.4	
1.718	12.8	Н	0.85	5.58	17.56	30.0	-12.4	
Mid Ch								
1.732	17.9	V	0.85	5.60	22.67	30.0	-7.3	
1.732	13.8	Н	0.85	5.60	18.53	30.0	-11.5	
High Ch								
1.748	17.3	V	0.85	5.63	22.09	30.0	-7.9	
1.748	12.9	Н	0.85	5.63	17.71	30.0	-12.3	
	- 1							

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DATE: March 10, 2014

DATE: March 10, 2014

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_10MHz\_16QAM

Band Test Equipment:

LTE4

10MHz

16QAM

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T711 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								
1.715	15.7	V	0.85	5.58	20.40	30.0	-9.6	
1.715	10.7	Н	0.85	5.58	15.46	30.0	-14.5	
Mid Ch								
1.732	17.2	V	0.85	5.60	21.97	30.0	-8.0	
1.732	12.1	Н	0.85	5.60	16.85	30.0	-13.2	
High Ch								
1.750	15.9	V	0.85	5.63	20.66	30.0	-9.3	
1.750	10.9	Н	0.85	5.63	15.71	30.0	-14.3	

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High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_10MHz\_QPSK

Band Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

10MHz QPSK

LTE4

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	17.1	V	0.85	5.58	21.82	30.0	-8.2	
1.715	11.4	Н	0.85	5.58	16.10	30.0	-13.9	
Mid Ch								
1.732	18.5	V	0.85	5.60	23.26	30.0	-6.7	
1.732	13.1	Н	0.85	5.60	17.82	30.0	-12.2	
High Ch								
1.750	17.2	V	0.85	5.63	21.99	30.0	-8.0	
1.750	11.8	Н	0.85	5.63	16.56	30.0	-13.4	

Rev. 3.17.11

DATE: March 10, 2014

High Frequency Fundamental Measurement

High Frequency Fundamental Measurement Compliance Certification Services Chamber C

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_5MHz\_16QAM

Band Test Equipment:

LTE4

5MHz

16QAM

Receiving: Horn T345, and Chamber C SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

SG reading Ant. Pol. Cable Loss Antenna Gain **EIRP** Limit Delta Notes GHz (dBm) (H/V) (dB) (dBi) (dBm) (dBm) (dB) Low Ch 1.712.5 0.85 5.58 21.22 30.0 16.5 -8.8 1.712.5 11.4 0.85 5.58 -13.9 Н 16.08 30.0 Mid Ch 16.9 0.85 5.60 21.66 30.0 -8.3 1.732.5 1.732.5 12.1 H 0.85 5.60 16.85 30.0 -13.2 High Ch 1.752.5 16.3 0.85 5.63 21.11 30.0 -8.9 30.0 1.752.5 10.8 H 0.85 5.63 15.53 -14.5

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FORM NO: CCSUP4701I

FCC ID: ZNFVS876

High Frequency Fundamental Measurement Compliance Certification Services Chamber C

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/03/14

 Test Engineer:
 S.Tran

Configuration: Y position, EUT only
Mode: LTE\_B4\_5MHz\_QPSK

Band Test Equipment:

LTE4

5MHz

**QPSK** 

Receiving: Horn T119, and Chamber C SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

SG reading Ant. Pol. Cable Loss Antenna Gain **EIRP** Limit Delta Notes GHz (dBm) (H/V) (dB) (dBi) (dBm) (dBm) (dB) Low Ch 1.712.5 0.85 5.58 22.71 30.0 -7.3 18.0 1.712.5 11.5 0.85 5.58 -13.8 H 16.21 30.0 Mid Ch -7.5 17.8 0.85 5.60 22.53 30.0 1.732.5 1.732.5 12.4 H 0.85 5.60 17.14 30.0 -12.9 High Ch 1.752.5 16.9 0.85 5.63 21.69 30.0 -8.3 30.0 1.752.5 11.5 H 0.85 5.63 16.27 -13.7

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FCC ID: ZNFVS876

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 02/05/14

 Test Engineer:
 S.Tran

 Configuration:
 EUT, X Position

Test Equipment:

Mode: CDMA EVDOR0 1900MHz

Band

Receiving: T345, and Chamber B SMA Cables

Substitution: Horn T712 Substitution, 4ft SMA Cable (244639001) Warehouse

BC1 EVDO REL. 0

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	19.1	V	0.85	5.10	23.33	33.0	-9.7	
1.851	20.1	Н	0.85	5.10	24.33	33.0	-8.7	
Mid Ch								
1.880	19.0	V	0.85	5.10	23.24	33.0	-9.8	
1.880	20.0	Н	0.85	5.10	24.24	33.0	-8.8	
High Ch								
1.909	18.3	V	0.85	5.10	22.57	33.0	-10.4	
1.909	20.4	Н	0.85	5.10	24.67	33.0	-8.3	

Rev. 3.17.11

High Frequency Fundamental Measurement Compliance Certification Services Chamber B

 Company:
 LG

 Project #:
 14U16955

 Date:
 02/05/14

 Test Engineer:
 S. Tran

 Configuration:
 EUT, X Position

 Mode:
 CDMA 1900MHz

Test Equipment:

Band

Receiving: T345, and Chamber C SMA Cables

Substitution: Horn T711 Substitution, 4ft SMA Cable (244639001) Warehouse

BC1
1xRTT

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	17.1	V	0.85	4.90	21.18	33.0	-11.8	
1.851	20.8	Н	0.85	4.90	24.88	33.0	-8.1	
Mid Ch								
1.880	17.1	V	0.85	4.90	21.13	33.0	-11.9	
1.880	20.9	Н	0.85	4.90	24.93	33.0	-8.1	
High Ch								
1.909	16.1	V	0.85	4.90	20.15	33.0	-12.9	
1.909	21.0	Н	0.85	4.90	25.09	33.0	-7.9	

Rev. 3.17.11

FCC ID: ZNFVS876

**High Frequency Substitution Measurement** Compliance Certification Services Chamber C

Company: LG Project #: 14U16955 Date: 02/05/14 Test Engineer: K.Kedida Configuration:

EUT, Z POSITION Mode: CDMA EVDO R0 BC0

Band

BC0

Test Equipment:

Receiving: Sunol T477, and Chamber C Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

**EVDO** REL. 0

Notes	Margin	Limit	ERP	Antenna Gain	Cable Loss	Ant. Pol.	SG reading	f
	(dB)	(dBm)	(dBm)	(dBd)	(dB)	(H/V)	(dBm)	MHz
								Low Ch
	-14.4	38.5	24.02	0.0	0.9	V	24.92	824.70
	-27.3	38.5	11.16	0.0	0.9	Н	12.06	824.70
								Mid Ch
	-13.5	38.5	24.90	0.0	0.9	V	25.80	836.52
	-25.7	38.5	12.75	0.0	0.9	Н	13.65	836.52
								High Ch
	-14.9	38.5	23.54	0.0	0.9	V	24.44	848.31
	-25.2	38.5	13.22	0.0	0.9	Н	14.12	848.31

Rev. 3.17.11

DATE: March 10, 2014

High Frequency Substitution Measurement Compliance Certification Services Chamber C

 Company:
 LG

 Project #:
 14U16955

 Date:
 02/05/14

 Test Engineer:
 K.Kedida

 Configuration:
 EUT, Z POSITION

 Mode:
 CDMA RTT BC0

Band

Test Equipment:

Receiving: Sunol T477, and Chamber C Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 8ft SMA Cable (SN # 208955002) Warehouse.

BC0 1xRTT

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Margin	Notes
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
Low Ch								
824.70	22.73	V	0.9	0.0	21.83	38.5	-16.6	
824.70	11.56	Н	0.9	0.0	10.66	38.5	-27.8	
Mid Ch								
836.52	23.47	V	0.9	0.0	22.57	38.5	-15.9	
836.52	12.70	Н	0.9	0.0	11.80	38.5	-26.6	
High Ch								
848.31	23.21	V	0.9	0.0	22.31	38.5	-16.1	
848.31	12.48	Н	0.9	0.0	11.58	38.5	-26.9	

Rev. 3.17.11

REPORT NO: 14U16955-1 DATE: March 10, 2014

FCC ID: ZNFVS876

#### 9.2. FIELD STRENGTH OF SPURIOUS RADIATION

#### **RULE PART(S)**

FCC: §2.1053, §22.917, §24.238, §27

#### 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.

#### **MODES TESTED**

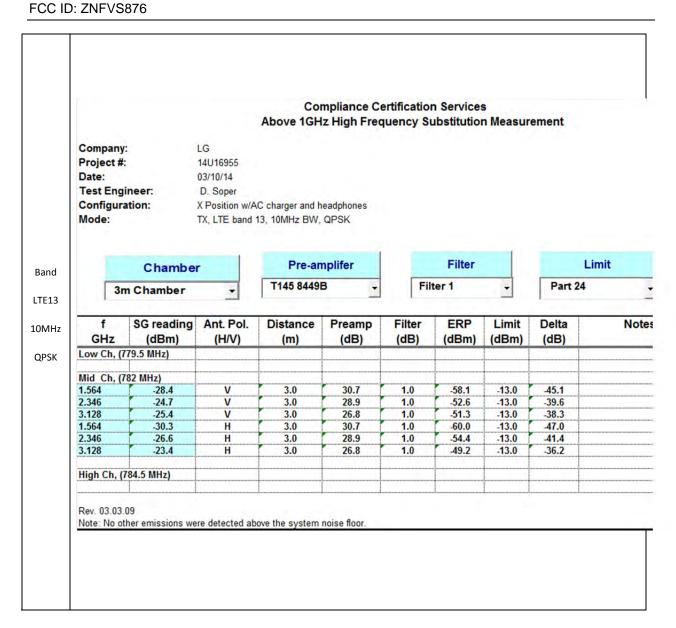
CDMA BC0/BC1 & LTE B4/B13

**RESULTS** 

### 9.2.1. SPURIOUS RADIATION PLOTS

				mpliance Ce Iz High Freq				ement	
			ABOVE TOTAL	iz mgm roq	deriey of	aboutatio	measar	Cilicin	
Compai	Z 1	LG							
Project	#:	14U16955							
Date:		03/10/14							
	gineer:	D. Soper							
Configu	ration:	X Position w/A	C charger and h	neadphones					
Chamber 3m Chamber			Pre-ar	nplifer		Filter		Lim	
-	3m Chamber	•	T145 8449	В 🕶	Fil	ter 1	•	Part 24	
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	
GHz		(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Cn,	(779.5 MHz)			<u> </u>					
Mid Ch,	(782 MHz)								
1.564	-27.9	V	3.0	30.7	1.0	-57.6	-13.0	-44.6	
2.346	-25.0	V	3.0	28.9	1.0	-52.9	-13.0	-39.9	
3.128	-23.7	V	3.0	26.8	1.0	-49.6	-13.0	-36.6	
1.564 2.346	-30.1	H	3.0	30.7	1.0	-59.8	-13.0	46.8	
3.128	-27.4 -23.9	H H	3.0 3.0	28.9 26.8	1.0 1.0	-55.3 -49.8	-13.0 -13.0	-42.3 -36.8	
	-23.3	**	7.0			75.0	-10.0		
	(784.5 MHz)		1	1					

DATE: March 10, 2014



 Company:
 LG

 Project #:
 14U16955

 Date:
 03/10/14

 Test Engineer:
 D. Soper

Configuration: X Position w/AC charger and headphones
Mode: TX, LTE band 4, 20MHz BW, 16QAM

Chamber
3m Chamber

Pre-amplifer
T145 8449B

Filter 1

Limit Part 24

DATE: March 10, 2014

Band
LTE4
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, (1	720 MHz)								
3.440	-23.0	V	3.0	26.4	1.0	-48.4	-13.0	-35.4	
5.160	-20.5	V	3.0	24.3	1.0	-43.8	-13.0	-30.8	
6.872	-18.5	V	3.0	23.2	1.0	-40.7	-13.0	-27.7	
3.440	-23.7	Н	3.0	26.4	1.0	-49.2	-13.0	-36.2	
5.160	-19.9	Н	3.0	24.3	1.0	-43.2	-13.0	-30.2	
6.872	-17.5	Н	3.0	23.2	1.0	-39.7	-13.0	-26.7	
Mid Ch, (1	1732 MHz)								
3.464	-23.8	V	3.0	26.4	1.0	-49.2	-13.0	-36.2	
5.196	-20.7	V	3.0	24.3	1.0	-44.0	-13.0	-31.0	
6.928	-17.9	V	3.0	23.1	1.0	-40.0	-13.0	-27.0	
3.464	-23.4	Н	3.0	26.4	1.0	-48.8	-13.0	-35.8	
5.196	-18.6	Н	3.0	24.3	1.0	-41.9	-13.0	-28.9	
6.928	-16.7	Н	3.0	23.1	1.0	-38.9	-13.0	-25.9	
High Ch, (	1748 MHz)								
3.496	-21.9	V	3.0	26.4	1.0	-47.2	-13.0	-34.2	
5.244	-20.7	V	3.0	24.3	1.0	-44.0	-13.0	-31.0	
6.992	-16.9	V	3.0	23.1	1.0	-39.0	-13.0	-26.0	
3.496	-24.8	Н	3.0	26.4	1.0	-50.2	-13.0	-37.2	
5.244	-20.1	Н	3.0	24.3	1.0	-43.4	-13.0	-30.4	
6.992	-16.3	Н	3.0	23.1	1.0	-38.4	-13.0	-25.4	

Rev. 03.03.09

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

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/10/14

 Test Engineer:
 D. Soper

Configuration: X Position w/AC charger and headphones
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)	Note
Low Ch, (1	1720 MHz)								
3.440	-22.2	V	3.0	26.4	1.0	47.6	-13.0	-34.6	
5.160	-20.2	V	3.0	24.3	1.0	-43.5	-13.0	-30.5	
6.872	-18.4	V	3.0	23.2	1.0	-40.6	-13.0	-27.6	
3.440	-22.6	Н	3.0	26.4	1.0	-48.1	-13.0	-35.1	
5.160	-19.9	Н	3.0	24.3	1.0	-43.3	-13.0	-30.3	
6.872	-17.7	Н	3.0	23.2	1.0	-39.8	-13.0	-26.8	
Mid Ch, (1	1732 MHz)								
3.464	-23.0	V	3.0	26.4	1.0	-48.4	-13.0	-35.4	
5.196	-20.7	V	3.0	24.3	1.0	-44.0	-13.0	-31.0	
6.928	-18.2	V	3.0	23.1	1.0	-40.3	-13.0	-27.3	
3.464	-22.3	Н	3.0	26.4	1.0	47.7	-13.0	-34.7	
5.196	-20.4	Н	3.0	24.3	1.0	-43.7	-13.0	-30.7	
6.928	-16.5	Н	3.0	23.1	1.0	-38.6	-13.0	-25.6	
High Ch, (	1748 MHz)								
3.496	-22.9	V	3.0	26.4	1.0	-48.2	-13.0	-35.2	
5.244	-19.0	V	3.0	24.3	1.0	-42.2	-13.0	-29.2	
6.992	-17.5	V	3.0	23.1	1.0	-39.6	-13.0	-26.6	
3.496	-22.4	Н	3.0	26.4	1.0	-47.8	-13.0	-34.8	
5.244	-19.8	Н	3.0	24.3	1.0	-43.1	-13.0	-30.1	
6.992	-16.0	Н	3.0	23.1	1.0	-38.1	-13.0	-25.1	

Rev. 03.03.09

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/10/14

 Test Engineer:
 D. Soper

Configuration: X Position w/AC charger and headphones
Mode: TX, LTE band 4, 15MHz BW, 16QAM

 Chamber
 Pre-amplifer
 Filter
 Limit

 3m Chamber
 ▼
 T145 8449B
 ▼
 Filter 1
 ▼
 Part 24

Band LTE4 15MHz

16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Note
Low Ch, (	1718 MHz)								
3.436	-22.6	V	3.0	26.5	1.0	-48.1	-13.0	-35.1	
5.154	-20.1	V	3.0	24.3	1.0	-43.4	-13.0	-30.4	
6.872	-18.0	V	3.0	23.2	1.0	-40.2	-13.0	-27.2	
3.436	-23.4	Н	3.0	26.5	1.0	-48.9	-13.0	-35.9	
5.154	-19.4	Н	3.0	24.3	1.0	-42.8	-13.0	-29.8	
6.872	-17.4	Н	3.0	23.2	1.0	-39.6	-13.0	-26.6	
Mid Ch, (	1732 MHz)								
3.464	-22.4	V	3.0	26.4	1.0	-47.8	-13.0	-34.8	
5.196	-19.1	V	3.0	24.3	1.0	-42.4	-13.0	-29.4	
6.928	-17.4	V	3.0	23.1	1.0	-39.6	-13.0	-26.6	
3.464	-22.8	Н	3.0	26.4	1.0	-48.2	-13.0	-35.2	
5.196	-19.5	Н	3.0	24.3	1.0	-42.8	-13.0	-29.8	
6.928	-15.8	Н	3.0	23.1	1.0	-37.9	-13.0	-24.9	
High Ch, (	1748 MHz)								
3.496	-23.0	V	3.0	26.4	1.0	-48.4	-13.0	-35.4	
5.244	-20.3	V	3.0	24.3	1.0	-43.5	-13.0	-30.5	
6.992	-17.0	V	3.0	23.1	1.0	-39.1	-13.0	-26.1	
3.496	-23.0	Н	3.0	26.4	1.0	-48.4	-13.0	-35.4	
5.244	-20.0	Н	3.0	24.3	1.0	-43.2	-13.0	-30.2	
6.992	-15.7	Н	3.0	23.1	1.0	-37.8	-13.0	-24.8	

Rev. 03.03.09

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

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/10/14

 Test Engineer:
 D. Soper

Configuration: X Position w/AC charger and headphones
Mode: TX, LTE band 4, 15MHz BW, QPSK

Chamber

3m Chamber 

▼

Pre-amplifer
T145 8449B

Filter 1

Limit Part 24

DATE: March 10, 2014

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)	Note
Low Ch, (	1718 MHz)								
3.436	-22.6	V	3.0	26.5	1.0	-48.0	-13.0	-35.0	
5.154	-20.1	V	3.0	24.3	1.0	-43.4	-13.0	-30.4	
6.872	-18.4	V	3.0	23.2	1.0	-40.6	-13.0	-27.6	
3.436	-22.7	Н	3.0	26.5	1.0	-48.2	-13.0	-35.2	
5.154	-19.5	Н	3.0	24.3	1.0	-42.8	-13.0	-29.8	
6.872	-16.9	Н	3.0	23.2	1.0	-39.1	-13.0	-26.1	
Mid Ch, (	1732 MHz)								
3.464	-23.2	V	3.0	26.4	1.0	-48.6	-13.0	-35.6	
5.196	-20.2	V	3.0	24.3	1.0	-43.5	-13.0	-30.5	
6.928	-17.3	V	3.0	23.1	1.0	-39.5	-13.0	-26.5	
3.464	-22.6	Н	3.0	26.4	1.0	-48.0	-13.0	-35.0	
5.196	-19.8	Н	3.0	24.3	1.0	-43.1	-13.0	-30.1	
6.928	-16.4	Н	3.0	23.1	1.0	-38.5	-13.0	-25.5	
High Ch, (	1748 MHz)								
3.496	-21.7	V	3.0	26.4	1.0	-47.1	-13.0	-34.1	
5.244	-18.1	V	3.0	24.3	1.0	-41.3	-13.0	-28.3	
6.992	-16.3	V	3.0	23.1	1.0	-38.4	-13.0	-25.4	
3.496	-23.5	Н	3.0	26.4	1.0	-48.8	-13.0	-35.8	
5.244	-19.3	Н	3.0	24.3	1.0	-42.5	-13.0	-29.5	
6.992	-15.3	Н	3.0	23.1	1.0	-37.4	-13.0	-24.4	

Rev. 03.03.09

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

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/05/14

Test Engineer: J.Jackson/ D. Soper

Configuration: X Position w/AC charger and headphones
Mode: TX, LTE band 4, 10MHz BW, 16QAM

 Chamber
 Pre-amplifer
 Filter
 Limit

 5m Chamber B
 ▼
 T145 8449B
 ▼
 Filter 1
 ▼
 Part 24

Band
LTE4
10MHz

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, (	1715 MHz)								
3.430	-20.6	V	3.0	30.4	1.0	-50.0	-13.0	-37.0	
5.145	-17.6	V	3.0	28.8	1.0	-45.4	-13.0	-32.4	
6.860	-15.2	V	3.0	27.1	1.0	-41.4	-13.0	-28.4	
3.430	-20.4	Н	3.0	30.4	1.0	-49.8	-13.0	-36.8	
5.145	-16.6	Н	3.0	28.8	1.0	-44.4	-13.0	-31.4	
6.860	-13.7	Н	3.0	27.1	1.0	-39.8	-13.0	-26.8	
Mid Ch, (	1732.5 MHz)								
3.465	-20.0	V	3.0	30.4	1.0	-49.4	-13.0	-36.4	
5.198	-18.1	V	3.0	28.7	1.0	-45.8	-13.0	-32.8	
6.930	-17.7	V	3.0	27.1	1.0	-43.8	-13.0	-30.8	
3.465	-21.6	Н	3.0	30.4	1.0	-51.0	-13.0	-38.0	
5.198	-15.7	Н	3.0	28.7	1.0	-43.4	-13.0	-30.4	
6.930	-16.6	Н	3.0	27.1	1.0	-42.7	-13.0	-29.7	
High Ch. (	1750 MHz)								
3.500	-22.7	V	3.0	30.4	1.0	-52.0	-13.0	-39.0	
5.250	-19.6	V	3.0	28.7	1.0	47.3	-13.0	-34.3	
7.000	-17.2	V	3.0	27.0	1.0	-43.2	-13.0	-30.2	
3.500	-22.7	Н	3.0	30.4	1.0	-52.0	-13.0	-39.0	
5.250	-18.8	Н	3.0	28.7	1.0	-46.4	-13.0	-33.4	
7.000	120.4	Н	3.0	27.0	1.0	94.4	-13.0	107.4	
			T					······································	

Rev. 03.03.09

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

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/05/14

 Test Engineer:
 D. Soper

Configuration: X Position w/AC charger and headphones
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)	Note
Low Ch, (1	715 MHz)								
3.430	-22.9	V	3.0	26.5	1.0	-48.4	-13.0	-35.4	
5.145	-18.7	V	3.0	24.4	1.0	-42.0	-13.0	-29.0	
6.860	-17.5	V	3.0	23.2	1.0	-39.7	-13.0	-26.7	
3.430	-22.3	Н	3.0	26.5	1.0	-47.8	-13.0	-34.8	
5.145	-19.2	Н	3.0	24.4	1.0	-42.5	-13.0	-29.5	
6.860	-17.2	Н	3.0	23.2	1.0	-39.4	-13.0	-26.4	
Mid Ch, (	732.5 MHz)								
3.465	-23.1	V	3.0	26.4	1.0	-48.5	-13.0	-35.5	
5.198	-20.1	V	3.0	24.3	1.0	-43.4	-13.0	-30.4	
6.930	-17.4	V	3.0	23.1	1.0	-39.5	-13.0	-26.5	
3.465	-25.2	Н	3.0	26.4	1.0	-50.6	-13.0	-37.6	
5.198	-19.3	Н	3.0	24.3	1.0	-42.6	-13.0	-29.6	
6.930	-16.6	Н	3.0	23.1	1.0	-38.8	-13.0	-25.8	
High Ch, (	1750 MHz)								
3.500	-23.0	V	3.0	26.4	1.0	-48.4	-13.0	-35.4	
5.250	-17.9	V	3.0	24.3	1.0	-41.2	-13.0	-28.2	
7.000	-16.1	V	3.0	23.1	1.0	-38.2	-13.0	-25.2	
3.500	-22.2	Н	3.0	26.4	1.0	-47.6	-13.0	-34.6	
5.250	-17.0	Н	3.0	24.3	1.0	-40.3	-13.0	-27.3	
7.000	-15.4	Н	3.0	23.1	1.0	-37.5	-13.0	-24.5	

Rev. 03.03.09

Notes

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

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/05/14

 Test Engineer:
 J. Jackson

Configuration: X Position w/AC charger and headphones
Mode: TX, LTE band 4, 5MHz BW, 16QAM

SG reading Ant. Pol. Distance Preamp

 Chamber
 Pre-amplifer
 Filter
 Limit

 5m Chamber B
 ▼
 T145 8449B
 ▼
 Filter 1
 ▼
 Part 24

Filter

**ERP** 

-38.8

-13.0

-25.8

Limit

Band LTE4 5MHz

16QAM

GHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, (	1712.5 MHz)								
3.425	-20.6	V	3.0	30.4	1.0	-50.1	-13.0	-37.1	
5.139	-17.9	V	3.0	28.8	1.0	-45.7	-13.0	-32.7	
6.850	-15.8	V	3.0	27.1	1.0	-42.0	-13.0	-29.0	
3.427	-21.0	Н	3.0	30.4	1.0	-50.4	-13.0	-37.4	
5.134	-16.8	Н	3.0	28.8	1.0	-44.5	-13.0	-31.5	
6.849	-13.9	Н	3.0	27.1	1.0	-40.1	-13.0	-27.1	
Mid Ch, (	1732.5 MHz)								
3.460	-19.7	V	3.0	30.4	1.0	-49.1	-13.0	-36.1	
5.190	-17.0	V	3.0	28.7	1.0	-44.7	-13.0	-31.7	
6.921	-14.9	V	3.0	27.1	1.0	-41.0	-13.0	-28.0	
3.460	-20.4	Н	3.0	30.4	1.0	49.8	-13.0	-36.8	
5.191	-15.3	Н	3.0	28.7	1.0	-43.0	-13.0	-30.0	
6.921	-13.2	Н	3.0	27.1	1.0	-39.3	-13.0	-26.3	
High Ch, (	1752.5 MHz)								
3.500	-19.5	V	3.0	30.4	1.0	-48.9	-13.0	-35.9	
5.251	-17.1	V	3.0	28.7	1.0	-44.7	-13.0	-31.7	
7.001	-14.6	V	3.0	27.0	1.0	-40.6	-13.0	-27.6	
3.500	-20.1	Н	3.0	30.4	1.0	-49.5	-13.0	-36.5	
5 264	16.6	н	3.0	7286	10	1112	13.0	31 2	

27.0

Rev. 03.03.09

-12.8

7.000

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

3.0

 Company:
 LG

 Project #:
 14U16955

 Date:
 03/05/14

 Test Engineer:
 J. Jackson

Configuration: X Position w/AC charger and headphones
Mode: TX, LTE band 4, 5MHz BW, QPSK

Chamber
5m Chamber B

Pre-amplifer
T145 8449B 

•

Filter
Filter 1

Limit Part 24

LTE4 5MHz

**QPSK** 

Band

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Note
Low Ch, (	1712.5 MHz)								
3.425	-19.9	V	3.0	30.4	1.0	-49.4	-13.0	-36.4	
5.139	-17.9	V	3.0	28.8	1.0	-45.7	-13.0	-32.7	
6.850	-14.2	V	3.0	27.1	1.0	-40.4	-13.0	-27.4	
3.427	-20.4	Н	3.0	30.4	1.0	-49.9	-13.0	-36.9	
5.134	-16.5	Н	3.0	28.8	1.0	-44.3	-13.0	-31.3	
6.849	-13.5	Н	3.0	27.1	1.0	-39.7	-13.0	-26.7	
Mid Ch, (	1732.5 MHz)			_					
3.460	-20.8	V	3.0	30.4	1.0	-50.2	-13.0	-37.2	
5.190	-16.5	V	3.0	28.7	1.0	-44.2	-13.0	-31.2	
6.921	-15.5	V	3.0	27.1	1.0	-41.6	-13.0	-28.6	
3.460	-20.4	Н	3.0	30.4	1.0	49.8	-13.0	-36.8	
5.191	-15.8	Н	3.0	28.7	1.0	-43.5	-13.0	-30.5	
6.921	-13.3	Н	3.0	27.1	1.0	-39.3	-13.0	-26.3	
High Ch, (	1752.5 MHz)								
3.500	-20.2	V	3.0	30.4	1.0	-49.6	-13.0	-36.6	
5.251	-17.4	V	3.0	28.7	1.0	-45.0	-13.0	-32.0	
7.001	-15.1	V	3.0	27.0	1.0	-41.1	-13.0	-28.1	
3.500	-20.1	Н	3.0	30.4	1.0	-49.5	-13.0	-36.5	
5.264	-16.2	Н	3.0	28.6	1.0	-43.8	-13.0	-30.8	
7.000	-12.9	Н	3.0	27.0	1.0	-38.9	-13.0	-25.9	

Rev. 03.03.09

 Company:
 LG

 Project #:
 14U16955

 Date:
 02/10/14

 Test Engineer:
 R.Alegre

Configuration: X position W/ AC adapter
Mode: EVDO BC01 HARM

 Chamber
 Pre-amplifer
 Filter
 Limit

 5m Chamber C
 ▼
 T343 8449B
 ▼
 Filter 1
 ▼
 Part 24

Band BC1

**EVDO** 

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Note
Low Ch, 1	851.25MHz								
3.700	1.8	V	3.0	35.4	1.0	-32.6	-13.0	-19.6	
5.550	-10.7	V	3.0	34.7	1.0	-44.4	-13.0	-31.4	
7.400	-11.2	V	3.0	34.9	1.0	-45.1	-13.0	-32.1	
3.700	4.8	Н	3.0	35.4	1.0	-29.6	-13.0	-16.6	
5.550	-8.0	Н	3.0	34.7	1.0	-41.7	-13.0	-28.7	
7.400	-9.3	Н	3.0	34.9	1.0	-43.2	-13.0	-30.2	
Mid Ch, 1	880.0MHz								
3.760	-1.9	V	3.0	35.3	1.0	-36.3	-13.0	-23.3	
5.640	-7.5	V	3.0	34.7	1.0	-41.2	-13.0	-28.2	
7.520	-10.9	V	3.0	34.9	1.0	-44.8	-13.0	-31.8	***************************************
3.760	-4.0	Н	3.0	35.3	1.0	-38.3	-13.0	-25.3	
5.640	-7.8	Н	3.0	34.7	1.0	-41.5	-13.0	-28.5	
7.520	-7.6	Н	3.0	34.9	1.0	-41.5	-13.0	-28.5	
High Ch, 1	908.75 MHz								
3.820	-2.6	V	3.0	35.3	1.0	-36.9	-13.0	-23.9	
5.729	-7.1	V	3.0	34.7	1.0	-40.8	-13.0	-27.8	
7.640	-8.8	V	3.0	35.0	1.0	-42.7	-13.0	-29.7	
3.820	0.1	Н	3.0	35.3	1.0	-34.2	-13.0	-21.2	
5.729	-8.9	Н	3.0	34.7	1.0	-42.7	-13.0	-29.7	
7.640	-7.7	Н	3.0	35.0	1.0	-41.6	-13.0	-28.6	

Company: LG Project #: 14U16955 Date: 02/06/14 Test Engineer: K.Kedida

Configuration: X Position w/AC charger and headphones

Mode: CDMA BC01 HARM

> Chamber 5m Chamber C

Pre-amplifer T343 8449B

Filter Filter 1

Limit Part 24

Band BC1

1xRTT

f	SG reading	Ant. Pol.	Distance	Preamp	Filter	EIRP	Limit	Delta	Notes
GHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 1	850MHz								
3.700	3.5	V	3.0	35.4	1.0	-30.9	-13.0	-17.9	
5.550	-9.1	V	3.0	34.7	1.0	-42.8	-13.0	-29.8	
7.400	-8.9	V	3.0	34.9	1.0	-42.8	-13.0	-29.8	
3.700	7.3	Н	3.0	35.4	1.0	-27.1	-13.0	-14.1	
5.550	-7.9	Н	3.0	34.7	1.0	-41.7	-13.0	-28.7	
7.400	-7.7	Н	3.0	34.9	1.0	-41.6	-13.0	-28.6	
Mid Ch, 1	880.0MHz								
3.760	-1.8	V	3.0	35.3	1.0	-36.1	-13.0	-23.1	
5.640	-5.5	V	3.0	34.7	1.0	-39.2	-13.0	-26.2	
7.520	-8.9	V	3.0	34.9	1.0	-42.9	-13.0	-29.9	
3.760	-1.0	Н	3.0	35.3	1.0	-35.3	-13.0	-22.3	
5.640	-7.6	Н	3.0	34.7	1.0	-41.3	-13.0	-28.3	
7.520	-7.0	Н	3.0	34.9	1.0	-41.0	-13.0	-28.0	
High Ch, 1	909.8 MHz								
3.820	-2.6	V	3.0	35.3	1.0	-36.8	-13.0	-23.8	
5.729	-4.7	V	3.0	34.7	1.0	-38.4	-13.0	-25.4	
7.640	-8.8	V	3.0	35.0	1.0	-42.7	-13.0	-29.7	
3.820	4.1	Н	3.0	35.3	1.0	-30.2	-13.0	-17.2	
5.729	-7.5	Н	3.0	34.7	1.0	-41.2	-13.0	-28.2	
7.640	-6.7	Н	3.0	35.0	1.0	-40.7	-13.0	-27.7	

Rev. 03.03.09

Company: LG Project #: 14U16955 Date: 02/06/14 Test Engineer: K.Kedida

Configuration: X Position w/AC charger and headphones

Mode: EVDOR0 BC0 HARM

> Chamber 3m Chamber B

Pre-amplifer T343 8449B

Filter Filter 1

Limit Part 24

DATE: March 10, 2014

Band BC0

**EVDO** REL. 0

f	SG reading	Ant. Pol.	Distance	Preamp	Filter	EIRP	Limit	Delta	Notes
GHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 82	24.7MHz								
1.650	-28.2	V	3.0	37.4	1.0	-64.5	-13.0	-51.5	
2.474	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3.298	-19.3	V	3.0	35.8	1.0	-54.1	-13.0	-41.1	
1.650	-28.0	Н	3.0	37.4	1.0	-64.3	-13.0	-51.3	
2.474	-24.6	Н	3.0	36.4	1.0	-60.0	-13.0	-47.0	
3.298	-19.5	Н	3.0	35.8	1.0	-54.3	-13.0	-41.3	
Mid Ch, 83	6.52MHz								
1.673	-28.9	V	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2.509	-22.9	V	3.0	36.4	1.0	-58.2	-13.0	-45.2	
3.346	-19.0	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
1.673	-29.3	Н	3.0	37.3	1.0	-65.6	-13.0	-52.6	
2.509	-25.4	Н	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3.346	-19.6	Н	3.0	35.8	1.0	-54.4	-13.0	-41.4	
High Ch, 8	48.31 MHz								
1.696	-29.2	V	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2.544	-23.5	V	3.0	36.3	1.0	-58.8	-13.0	-45.8	
3.393	-17.7	V	3.0	35.7	1.0	-52.4	-13.0	-39.4	
1.696	-28.9	Н	3.0	37.3	1.0	-65.2	-13.0	-52.2	
2.544	-24.3	Н	3.0	36.3	1.0	-59.6	-13.0	-46.6	
3.393	-18.9	Н	3.0	35.7	1.0	-53.6	-13.0	-40.6	

Rev. 03.03.09

 Company:
 LG

 Project #:
 14U16955

 Date:
 02/06/14

 Test Engineer:
 K.Kedida

Configuration: X Position w/AC charger and headphones

Mode: RTT BC0 HARM

Chamber
3m Chamber B ▼

Pre-amplifer
T343 8449B

Filter 1

Limit Part 24

Band BC0

1xRTT

f	SG reading	Ant. Pol.	Distance	Preamp	Filter	EIRP	Limit	Delta	Notes
GHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 82	24.7MHz								
1.650	-28.7	V	3.0	37.4	1.0	-65.1	-13.0	-52.1	
2.474	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
3.298	-20.0	V	3.0	35.8	1.0	-54.8	-13.0	-41.8	
1.650	-29.4	Н	3.0	37.4	1.0	-65.8	-13.0	-52.8	
2.474	-25.2	Н	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3.298	-19.4	Н	3.0	35.8	1.0	-54.2	-13.0	-41.2	
Mid Ch, 83	36.52MHz								
1.673	-29.0	V	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2.509	-23.2	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3.346	-19.6	V	3.0	35.8	1.0	-54.4	-13.0	-41.4	
1.673	-29.2	Н	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2.509	-25.0	Н	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3.346	-19.3	Н	3.0	35.8	1.0	-54.0	-13.0	-41.0	
High Ch, 8	48.31 MHz								
1.696	-28.8	V	3.0	37.3	1.0	-65.1	-13.0	-52.1	
2.544	-23.6	V	3.0	36.3	1.0	-58.9	-13.0	-45.9	
3.393	-18.6	V	3.0	35.7	1.0	-53.3	-13.0	-40.3	
1.696	-28.8	Н	3.0	37.3	1.0	-65.1	-13.0	-52.1	
2.544	-25.1	Н	3.0	36.3	1.0	-60.4	-13.0	-47.4	
3.393	-18.8	Н	3.0	35.7	1.0	-53.5	-13.0	-40.5	

Rev. 03.03.09