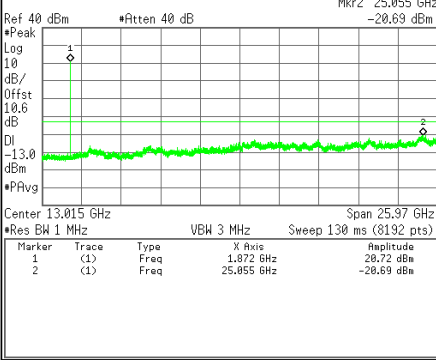
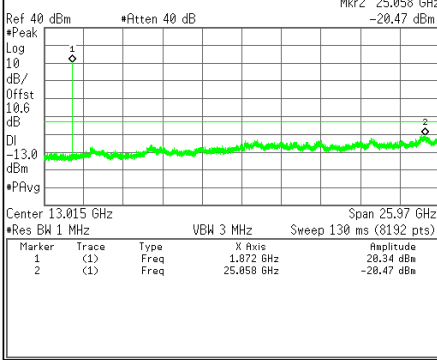
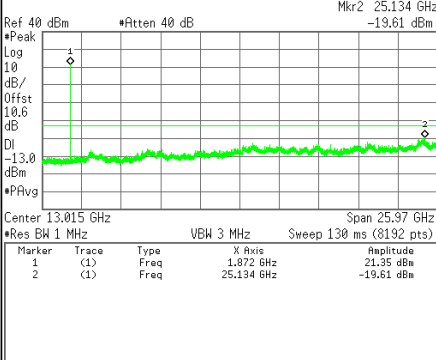
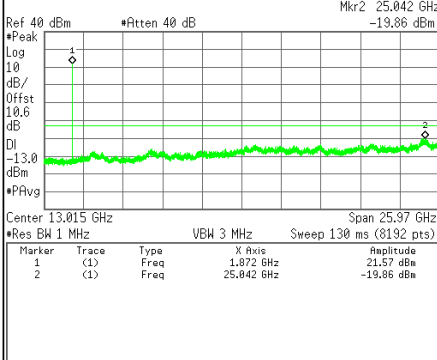
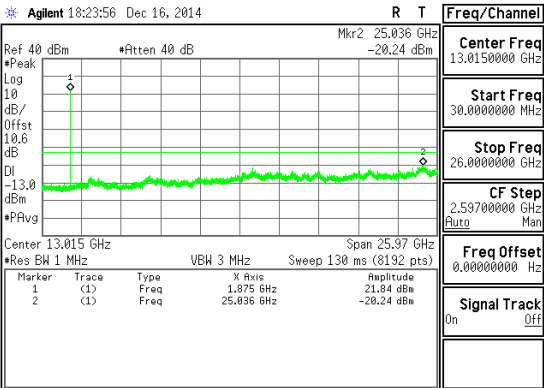
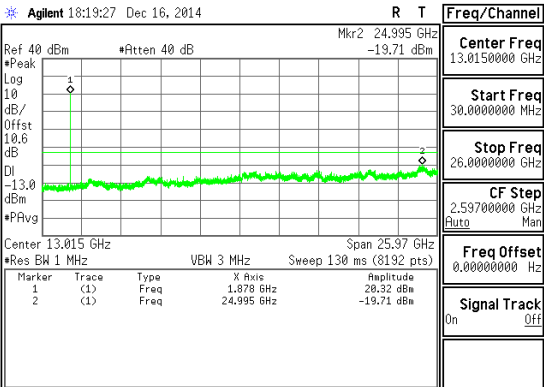
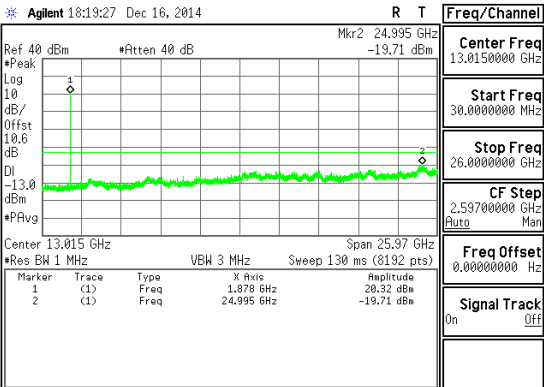
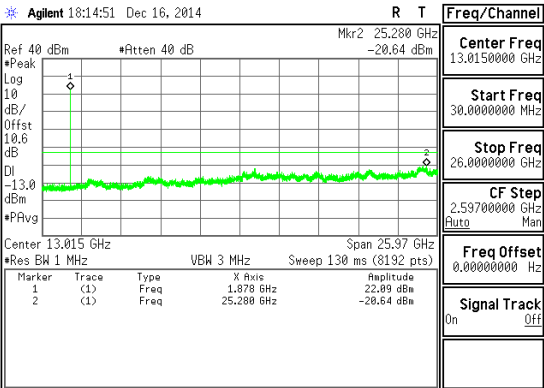
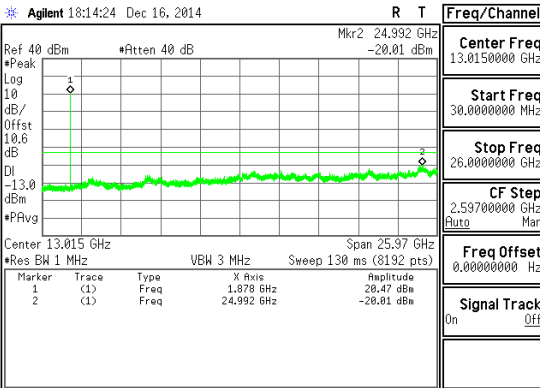
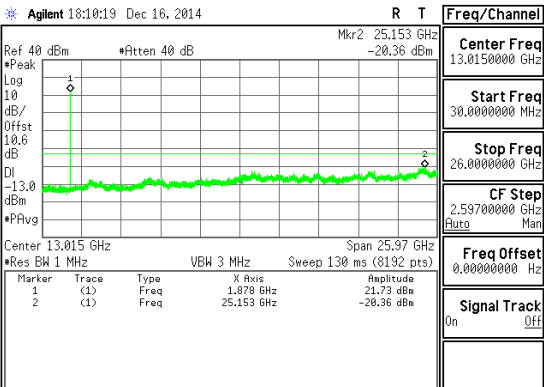
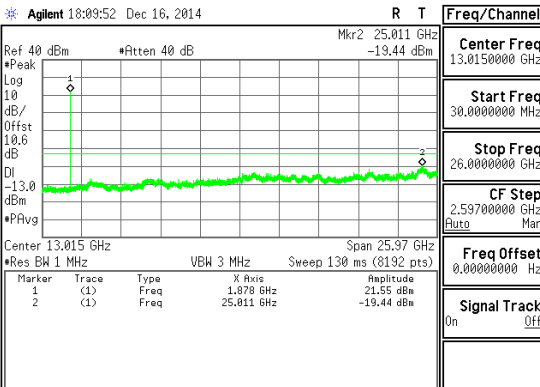


LTE Band 2

Band LTE2 20MHz 16QAM	Agilent 18:40:27 Dec 16, 2014 R T  Center Freq 13.0150000 GHz Start Freq 30.0000000 MHz Stop Freq 26.0000000 GHz CF Step 2.5970000 GHz Freq Offset 0.0000000 Hz Signal Track On Off File Operation Status, C:PICTURE.GIF file saved Band LTE2 20MHz CSE 16QAM Mid channel	Agilent 18:39:59 Dec 16, 2014 R T  Center Freq 13.0150000 GHz Start Freq 30.0000000 MHz Stop Freq 26.0000000 GHz CF Step 2.5970000 GHz Freq Offset 0.0000000 Hz Signal Track On Off File Operation Status, C:PICTURE.GIF file saved Band LTE2 20MHz CSE QPSK Mid channel
Band LTE2 15MHz 16QAM	Agilent 18:31:25 Dec 16, 2014 R T  Center Freq 13.0150000 GHz Start Freq 30.0000000 MHz Stop Freq 26.0000000 GHz CF Step 2.5970000 GHz Freq Offset 0.0000000 Hz Signal Track On Off File Operation Status, C:PICTURE.GIF file saved Band LTE2 15MHz CSE 16QAM Mid channel	Agilent 18:30:57 Dec 16, 2014 R T  Center Freq 13.0150000 GHz Start Freq 30.0000000 MHz Stop Freq 26.0000000 GHz CF Step 2.5970000 GHz Freq Offset 0.0000000 Hz Signal Track On Off File Operation Status, C:PICTURE.GIF file saved Band LTE2 15MHz CSE QPSK Mid channel

Band LTE2 10MHz 16QAM	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 10MHz CSE 16QAM Mid channel
Band LTE2 5MHz 16QAM	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 5MHz CSE 16QAM Mid channel
	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 5MHz CSE QPSK Mid channel

Band LTE2 3MHz 16QAM	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 3MHz CSE 16QAM Mid channel	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 3MHz CSE QPSK Mid channel
Band LTE2 1.4MHz 16QAM	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 1.4MHz CSE 16QAM Mid channel	 File Operation Status, C:PICTURE.GIF file saved Band LTE2 1.4MHz CSE QPSK Mid channel

1.4. FREQUENCY STABILITY

RULE PART(S)

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

LIMITS

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

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

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

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r01

MODES TESTED

LTE Band 25, 12, 5, 4, and 2.

RESULTS

See the following pages.

1.4.1. FREQUENCY STABILITY RESULTS

LTE BAND 2 – MID CHANNEL (1880.0 MHz)

Reference Frequency: Cellular Mid Channel 1879.999998MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1879.999971	0.002	2.5
3.80	40	1879.999973	0.001	2.5
3.80	30	1879.999975	0.000	2.5
3.80	20	1879.999975	0	2.5
3.80	10	1879.999989	-0.007	2.5
3.80	0	1879.999991	-0.008	2.5
3.80	-10	1879.999985	-0.005	2.5
3.80	-20	1879.999977	-0.001	2.5
3.80	-30	1879.999978	-0.001	2.5
Reference Frequency: Cellular Mid Channel 1879.999998MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1879.999998	0	2.5
3.23	20	1879.999992	0.003	2.5
4.37	20	1879.999994	0.002	2.5

LTE BAND 4 – MID CHANNEL (1732.5 MHz)

Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1732.500016	0.003	2.5
3.80	40	1732.500018	0.002	2.5
3.80	30	1732.500018	0.002	2.5
3.80	20	1732.500021	0	2.5
3.80	10	1732.500016	0.003	2.5
3.80	0	1732.500016	0.003	2.5
3.80	-10	1732.500014	0.004	2.5
3.80	-20	1732.500015	0.003	2.5
3.80	-30	1732.500015	0.003	2.5
Reference Frequency: Cellular Mid Channel 1732.500021MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4331.250 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1732.500021	0	2.5
3.23	20	1732.500011	0.006	2.5
4.37	20	1732.500014	0.004	2.5

LTE BAND 12 – MID CHANNEL (707.5 MHz)

Reference Frequency: Cellular Mid Channel 707.499994MHz @ 20°C Limit: to stay +/- 2.5 ppm = 1768.749 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	707.499463	0.164	2.5
3.80	40	707.499421	0.223	2.5
3.80	30	707.499474	0.148	2.5
3.80	20	707.499579	0	2.5
3.80	10	707.499638	-0.083	2.5
3.80	0	707.499555	0.034	2.5
3.80	-10	707.499568	0.016	2.5
3.80	-20	707.499502	0.109	2.5
3.80	-30	707.499587	-0.011	2.5
Reference Frequency: Cellular Mid Channel 707.499994MHz @ 20°C Limit: to stay +/- 2.5 ppm = 1768.749 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	707.499579	0	2.5
3.23	20	707.499461	0.167	2.5
4.37	20	707.499446	0.188	2.5

LTE BAND 25 – MID CHANNEL (1882.5MHz)

Reference Frequency: Cellular Mid Channel 1882.500027MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4706.250 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1882.500019	0.004	2.5
3.80	40	1882.500021	0.003	2.5
3.80	30	1882.500022	0.003	2.5
3.80	20	1882.500027	0	2.5
3.80	10	1882.500026	0.001	2.5
3.80	0	1882.500030	-0.002	2.5
3.80	-10	1882.500032	-0.003	2.5
3.80	-20	1882.500032	-0.003	2.5
3.80	-30	1882.500035	-0.004	2.5
Reference Frequency: Cellular Mid Channel 1882.500027MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4706.250 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1882.500027	0	2.5
3.23	20	1882.500018	0.005	2.5
4.37	20	1882.500016	0.006	2.5

LTE BAND 5 – MID CHANNEL (836.5 MHz) 12/14/2014

Reference Frequency: Cellular Mid Channel 836.500007MHz @ 20°C Limit: to stay +/- 2.5 ppm = 2091.249 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	836.499300	0.178	2.5
3.80	40	836.499309	0.167	2.5
3.80	30	836.499474	-0.030	2.5
3.80	20	836.499449	0	2.5
3.80	10	836.499629	-0.215	2.5
3.80	0	836.499496	-0.056	2.5
3.80	-10	836.499562	-0.135	2.5
3.80	-20	836.499478	-0.035	2.5
3.80	-30	836.499632	-0.219	2.5
Reference Frequency: Cellular Mid Channel 836.500007MHz @ 20°C Limit: to stay +/- 2.5 ppm = 2091.249 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	836.499449	0	2.5
3.23	20	836.499268	0.216	2.5
4.37	20	836.499565	-0.139	2.5

2. RADIATED TEST RESULTS

10.2. RADIATED POWER (ERP & EIRP)

RULE PART(S)

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

LIMITS

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

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

27.50(b) - (10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP. (LTE B13)

27.50(c) - (10) Portable stations (hand-held devices) are limited to 3 watts ERP; (LTE B17)

27.50(d) - (4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.(Band 4)

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; PSA setting reference to 971168 D01 v02r01

For peak power measurement with a PSA:

a) Set the RBW $\geq$ OBW; b) Set VBW $\geq 3 \times$ RBW; c) Set span $\geq 2 \times$ RBW; d) Sweep time = auto couple; e) Detector = peak; f) Ensure that the number of measurement points $\geq$ span/RBW; g) Trace mode = max hold;

For average power measurement with a PSA:

a) Set span to at least 1.5 times the OBW; b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz; c) Set VBW $\geq 3 \times$ RBW; d) Set number of points in sweep $\geq 2 \times$ span / RBW; e) Sweep time = auto-couple; f) Detector = RMS (power averaging); g) Use free run trigger If burst duty cycle ≥ 98 ; h) Use trigger to capture bursts If burst duty cycle < 98 ; i) Trace average at least 100 traces in power averaging (i.e., RMS) mode. j) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function.

MODES TESTED

CDMA, LTE Band 25, 17, 12, 5,4, and 2

TEST RESULTS

2.1.1. ERP/EIRP Results

CDMA

3. Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
BC1	1xRTT	25	1851.25	25.23	333.43
		600	1880	25.07	321.37
		1175	1908.75	24.2	263.03
	EVDO REL. 0	25	1851.25	23.81	240.44
		600	1880	23.9	245.47
		1175	1908.75	23.11	204.64

Band	Mode	Channel	f(MHz)	ERP / EIRP	
				dBm	mW
BC0	1xRTT	1013	824.7	21.65	146.25
		384	836.52	21.59	144.24
		777	848.31	21.67	146.93
	EVDO REL. 0	1013	824.7	21.4	138.04
		384	836.52	21.59	144.21
		777	848.31	21.26	133.66

3.1.1. LTE ERP/EIRP Results

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE25	5	QPSK	1/0	1852.5	25.04	319.15
			1/0	1882.5	25.04	319.15
			1/0	1912.5	25.39	345.94
		16QAM	1/0	1852.5	24.01	251.77
			1/0	1882.5	24.07	255.27
			1/0	1912.5	24.62	289.73

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE17	10	QPSK	1/0	709	15.47	35.24
			1/0	710	15.56	35.97
			1/0	711	15.48	35.32
		16QAM	1/0	709	14.29	26.85
			1/0	710	14.48	28.05
			1/0	711	14.86	30.62

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE17	5	QPSK	1/0	706.5	15.37	34.43
			1/0	710	15.44	34.99
			1/0	713.5	15.6	36.31
		16QAM	1/0	706.5	14.28	26.79
			1/0	710	14.45	27.86
			1/0	713.5	14.66	29.24

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE12	10	QPSK	1/0	704	15.49	35.4
			1/0	707.5	15.59	36.22
			1/0	711	15.74	37.5
		16QAM	1/0	704	14.42	27.67
			1/0	707.5	14.46	27.93
			1/0	711	14.97	31.41
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE12	5	QPSK	1/0	701.5	15.58	36.14
			1/0	707.5	15.56	35.97
			1/0	713.5	15.77	37.76
		16QAM	1/0	701.5	14.59	28.77
			1/0	707.5	14.58	28.71
			1/0	713.5	14.95	31.26

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE5	10	QPSK	1/0	829	20.351	108.42
			1/0	836.5	20.381	109.17
			1/0	844	20.351	108.42
		16QAM	1/0	829	19.411	87.32
			1/0	836.5	19.381	86.72
			1/0	844	19.281	84.74
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE5	5	QPSK	1/0	826.5	20.001	100.02
			1/0	836.5	20.021	100.48
			1/0	846.5	20.051	101.18
		16QAM	1/0	826.5	19.641	92.07
			1/0	836.5	19.041	80.19
			1/0	846.5	19.641	92.07

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE5	3	QPSK	1/0	825.5	20.441	110.69
			1/0	836.5	20.411	109.93
			1/0	847.5	20.081	101.88
		16QAM	1/0	825.5	19.791	95.3
			1/0	836.5	19.421	87.52
			1/0	847.5	19.021	79.82
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE5	1.4	QPSK	1/0	824.7	19.841	96.41
			1/0	836.5	20.081	101.88
			1/0	848.3	20.011	100.25
		16QAM	1/0	824.7	19.481	88.74
			1/0	836.5	19.501	89.15
			1/0	848.3	19.281	84.74

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE4	20	QPSK	1/0	1720	25.41	347.54
			1/0	1732.5	26.29	425.6
			1/0	1745	25.95	393.55
		16QAM	1/0	1720	24.08	255.86
			1/0	1732.5	25.22	332.66
			1/0	1745	24.59	287.74
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE4	15	QPSK	1/0	1717.5	25.27	336.51
			1/0	1732.5	24.27	267.3
			1/0	1747.5	24.94	311.89
		16QAM	1/0	1717.5	24.3	269.15
			1/0	1732.5	23.41	219.28
			1/0	1747.5	24.22	264.24

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE4	10	QPSK	1/0	1715	24.27	267.3
			1/0	1732.5	25	316.23
			1/0	1750	25	316.23
		16QAM	1/0	1715	23.21	209.41
			1/0	1732.5	23.85	242.66
			1/0	1750	23.97	249.46
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE4	5	QPSK	1/0	1712.5	24.24	265.46
			1/0	1732.5	24.96	313.33
			1/0	1752.5	24.96	313.33
		16QAM	1/0	1712.5	23.32	214.78
			1/0	1732.5	24.03	252.93
			1/0	1752.5	23.93	247.17

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE2	20	QPSK	1/0	1860	24.732	297.3
			1/0	1880	25.02	317.69
			1/0	1900	24.966	313.76
		16QAM	1/0	1860	23.682	233.45
			1/0	1880	24.25	266.07
			1/0	1900	24.216	264
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE2	15	QPSK	1/0	1857.5	24.552	285.23
			1/0	1880	24.8	302
			1/0	1902.5	24.556	285.5
		16QAM	1/0	1857.5	23.912	246.15
			1/0	1880	23.88	244.34
			1/0	1902.5	23.48	222.84

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE2	10	QPSK	1/0	1855	24.532	283.92
			1/0	1880	24.74	297.85
			1/0	1905	24.706	295.53
		16QAM	1/0	1855	23.782	238.89
			1/0	1880	23.65	231.74
			1/0	1905	23.776	238.56
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE2	5	QPSK	1/0	1852.5	24.452	278.74
			1/0	1880	24.05	254.1
			1/0	1907.5	24.306	269.53
		16QAM	1/0	1852.5	23.472	222.43
			1/0	1880	23.36	216.77
			1/0	1907.5	23.376	217.57
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE2	3	QPSK	1/0	1851.5	24.232	264.97
			1/0	1880	24.97	314.05
			1/0	1908.5	24.176	261.58
		16QAM	1/0	1851.5	23.442	220.9
			1/0	1880	23.91	246.04
			1/0	1908.5	23.576	227.82
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP / EIRP	
					dBm	mW
LTE2	1.4	QPSK	1/0	1850.7	24.692	294.58
			1/0	1880	24.7	295.12
			1/0	1909.3	24.026	252.7
		16QAM	1/0	1850.7	23.922	246.72
			1/0	1880	23.51	224.39
			1/0	1909.3	22.906	195.25

Band BC1 1xRTT	High Frequency Fundamental Measurement UL Verification Services Chamber C Company: LG Electronics Project #: 14I19592 Date: 12/17/14 Test Engineer: L. Lara Configuration: EUT only X-position (SN: 2014280) Mode: CDMA RTT BC1 Test Equipment: Receiving: T119, and Chamber C SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse							
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	GHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
	Low Ch							
	1.85125	15.3	V	0.85	8.01	22.41	33.0	-10.6
	1.85125	18.1	H	0.85	8.01	25.23	33.0	-7.8
	Mid Ch							
	1.880	16.1	V	0.85	8.01	23.27	33.0	-9.7
	1.880	17.9	H	0.85	8.01	25.07	33.0	-7.9
	High Ch							
	1.90875	17.0	V	0.85	8.01	24.20	33.0	-8.8
	1.90875	16.6	H	0.85	8.01	23.75	33.0	-9.3
Rev. 3.17.11								

LTE Band 25

Band LTE25 5MHz 16QAM	High Frequency Fundamental Measurement UL Verification Services Chamber C								
	Company: LG Electronics Project #: 14I19592 Date: 12/17/14 Test Engineer: R. Alegre Configuration: EUT only X-position Mode: LTE Band 25_5MHz_16QAM								
	Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse								
	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1.853	15.1	V	0.85	8.01	22.22	33.0	-10.8	
	1.853	16.9	H	0.85	8.01	24.01	33.0	-9.0	
	Mid Ch								
	1.883	14.0	V	0.85	8.01	21.18	33.0	-11.8	
	1.883	16.9	H	0.85	8.01	24.07	33.0	-8.9	
High Ch									
1.913	15.1	V	0.85	8.01	22.23	33.0	-10.8		
1.913	17.5	H	0.85	8.01	24.62	33.0	-8.4		
Rev. 3.17.11									

Band LTE25 5MHz QPSK	High Frequency Fundamental Measurement UL Verification Services Chamber C Company: LG Electronics Project #: 14I19592 Date: 12/17/14 Test Engineer: R. Alegre Configuration: EUT only X-position Mode: LTE Band 25_5MHz_QPSK Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse							
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta
	GHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
	Low Ch							
	1.853	15.1	V	0.85	8.01	22.23	33.0	-10.8
	1.853	17.9	H	0.85	8.01	25.04	33.0	-8.0
	Mid Ch							
	1.883	15.0	V	0.85	8.01	22.11	33.0	-10.9
	1.883	17.9	H	0.85	8.01	25.04	33.0	-8.0
	High Ch							
	1.913	15.5	V	0.85	8.01	22.68	33.0	-10.3
	1.913	18.2	H	0.85	8.01	25.39	33.0	-7.6
Rev. 3.17.11								

Band

LTE17

5MHz

QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc. Chamber C

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

14I19592

12/17/2014

R. Alegre

EUT only

Chamber C

LTE_QPSK Band 17 Fundamentals, 5MHz Bandwidth

Test Equipment:

Receiving: Sunol T185, and 3m Chamber C N-type Cable

Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
706.50	10.07	V	0.9	0.0	9.17	34.8	-25.6	
706.50	16.27	H	0.9	0.0	15.37	34.8	-19.4	
Mid Ch								
710.00	10.42	V	0.9	0.0	9.52	34.8	-25.3	
710.00	16.34	H	0.9	0.0	15.44	34.8	-19.3	
High Ch								
713.50	10.02	V	0.9	0.0	9.12	34.8	-25.7	
713.50	16.50	H	0.9	0.0	15.60	34.8	-19.2	

Rev. 3.17.11

Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

Band

LTE12

10MHz

QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc. Chamber C

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

14I19592

12/16/14

R. Alegre

EUT Only

Chamber C

LTE_QPSK Band 12 Fundamentals, 10MHz Bandwidth

Test Equipment:

Receiving: Sunol T185, and 3m Chamber C N-type Cable

Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
704.00	11.08	V	0.9	0.0	10.18	34.8	-24.6	
704.00	16.39	H	0.9	0.0	15.49	34.8	-19.3	
Mid Ch								
707.50	11.04	V	0.9	0.0	10.14	34.8	-24.6	
707.50	16.49	H	0.9	0.0	15.59	34.8	-19.2	
High Ch								
711.00	11.12	V	0.9	0.0	10.22	34.8	-24.6	
711.00	16.64	H	0.9	0.0	15.74	34.8	-19.0	

Rev. 3.17.11

Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

Band LTE12 5MHz QPSK	High Frequency Substitution Measurement UL Verification Services, Inc. Chamber C Company: LG Electronics Project #: 14I19592 Date: 12/16/14 Test Engineer: R. Alegre Configuration: EUT Only Location: Chamber C Mode: LTE_QPSK Band 12 Fundamentals, 5MHz Bandwidth Test Equipment: Receiving: Sunol T185, and 3m Chamber C N-type Cable Substitution: Dipole T273, 4ft SMA Cable Warehouse.							
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta
	MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)
	Low Ch							
	701.50	11.15	V	0.9	0.0	10.25	34.8	-24.5
	701.50	16.48	H	0.9	0.0	15.58	34.8	-19.2
	Mid Ch							
	707.50	11.08	V	0.9	0.0	10.18	34.8	-24.6
	707.50	16.46	H	0.9	0.0	15.56	34.8	-19.2
	High Ch							
	713.50	11.13	V	0.9	0.0	10.23	34.8	-24.5
	713.50	16.67	H	0.9	0.0	15.77	34.8	-19.0
Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm								

LTE Band 5

Band LTE5 10MHz 16QAM	High Frequency Substitution Measurement UL Verification Services, Inc. Chamber C								
	Company:		LG						
	Project #:		14I19592						
	Date:		12/16/14						
	Test Engineer:		R. Alegre						
	Configuration:		EUT Only						
	Mode:		LTE5 10MHz 16QAM						
	Test Equipment:								
	Receiving: Sunol T185, and 3m Chamber C N-type Cable								
	Substitution: Dipole T273, 4ft SMA Cable 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								
	829.00	10.40	V	0.9	0.0	9.50	38.5	-28.9	
	829.00	20.31	H	0.9	0.0	19.41	38.5	-19.0	
	Mid Ch								
	836.50	10.66	V	0.9	0.0	9.76	38.5	-28.7	
	836.50	20.28	H	0.9	0.0	19.38	38.5	-19.1	
	High Ch								
	844.00	10.65	V	0.9	0.0	9.75	38.5	-28.7	
	844.00	20.18	H	0.9	0.0	19.28	38.5	-19.2	
Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm									

Band

LTE5

5MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 14I19592
Date: 12/16/14
Test Engineer: R. Alegre
Configuration: EUT Only
Mode: LTE5 5MHz 16QAM

Test Equipment:
Receiving: Sunol T185, and 3m Chamber C N-type Cable
Substitution: Dipole T273, 4ft SMA Cable 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								
826.50	10.12	V	0.9	0.0	9.22	38.5	-29.2	
826.50	20.54	H	0.9	0.0	19.64	38.5	-18.8	
Mid Ch								
836.50	10.55	V	0.9	0.0	9.65	38.5	-28.8	
836.50	19.94	H	0.9	0.0	19.04	38.5	-19.4	
High Ch								
846.50	10.31	V	0.9	0.0	9.41	38.5	-29.0	
846.50	20.54	H	0.9	0.0	19.64	38.5	-18.8	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

LTE Band 4

Band

LTE4

10MHz

16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc. Chamber C

Company: LG

Project #: 14I19592

Date: 12/17/14

Test Engineer: R. Alegre

Configuration: EUT Only

Mode: LTE B4 10MHz 16QAM

Test Equipment:

Receiving: Horn T119, and Chamber C SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1715.00	4.14	V	0.9	8.3	11.58	30.0	-18.4	
1715.00	15.77	H	0.9	8.3	23.21	30.0	-6.8	
Mid Ch								
1732.50	3.37	V	0.9	8.2	10.72	30.0	-19.3	
1732.50	16.50	H	0.9	8.2	23.85	30.0	-6.2	
High Ch								
1750.00	4.28	V	0.9	8.2	11.63	30.0	-18.4	
1750.00	16.62	H	0.9	8.2	23.97	30.0	-6.0	

Rev. 3.17.11

Note: For Band 4 EIRP limit is 30dBm

Band

LTE4

10MHz

QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc. Chamber C

Company: LG

Project #: 14I19592

Date: 12/17/14

Test Engineer: R. Alegre

Configuration: EUT Only

Mode: LTE B4 10MHz QPSK

Test Equipment:

Receiving: Horn T119, and Chamber C SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1715.00	5.42	V	0.9	8.3	12.86	30.0	-17.1	
1715.00	16.83	H	0.9	8.3	24.27	30.0	-5.7	
Mid Ch								
1732.50	4.34	V	0.9	8.2	11.69	30.0	-18.3	
1732.50	17.65	H	0.9	8.2	25.00	30.0	-5.0	
High Ch								
1750.00	5.34	V	0.9	8.2	12.69	30.0	-17.3	
1750.00	17.65	H	0.9	8.2	25.00	30.0	-5.0	

Rev. 3.17.11

Note: For Band 4 EIRP limit is 30dBm

LTE Band 2

Band

LTE2

20MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_20MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.860	15.4	V	0.85	8.01	22.61	33.0	-10.4	
1.860	16.5	H	0.85	8.01	23.68	33.0	-9.3	
Mid Ch								
1.880	15.3	V	0.85	8.01	22.48	33.0	-10.5	
1.880	17.1	H	0.85	8.01	24.25	33.0	-8.8	
High Ch								
1.900	15.9	V	0.85	8.01	23.07	33.0	-9.9	
1.900	17.1	H	0.85	8.01	24.22	33.0	-8.8	

Rev. 3.17.11

Band

LTE2

20MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_20MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.860	16.3	V	0.85	8.01	23.46	33.0	-9.5	
1.860	17.6	H	0.85	8.01	24.73	33.0	-8.3	
Mid Ch								
1.880	15.9	V	0.85	8.01	23.05	33.0	-9.9	
1.880	17.9	H	0.85	8.01	25.02	33.0	-8.0	
High Ch								
1.900	16.5	V	0.85	8.01	23.62	33.0	-9.4	
1.900	17.8	H	0.85	8.01	24.97	33.0	-8.0	

Rev. 3.17.11

Band

LTE2

15MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_15MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.858	13.6	V	0.85	8.01	20.81	33.0	-12.2	
1.858	16.8	H	0.85	8.01	23.91	33.0	-9.1	
Mid Ch								
1.880	12.9	V	0.85	8.01	20.08	33.0	-12.9	
1.880	16.7	H	0.85	8.01	23.88	33.0	-9.1	
High Ch								
1.903	13.1	V	0.85	8.01	20.30	33.0	-12.7	
1.903	16.3	H	0.85	8.01	23.48	33.0	-9.5	

Rev. 3.17.11

Band

LTE2

15MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_15MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.858	14.4	V	0.85	8.01	21.54	33.0	-11.5	
1.858	17.4	H	0.85	8.01	24.55	33.0	-8.4	
Mid Ch								
1.880	13.9	V	0.85	8.01	21.09	33.0	-11.9	
1.880	17.6	H	0.85	8.01	24.80	33.0	-8.2	
High Ch								
1.903	14.3	V	0.85	8.01	21.47	33.0	-11.5	
1.903	17.4	H	0.85	8.01	24.56	33.0	-8.4	

Rev. 3.17.11

Band

LTE2

10MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_10MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.855	15.0	V	0.85	8.01	22.12	33.0	-10.9	
1.855	16.6	H	0.85	8.01	23.78	33.0	-9.2	
Mid Ch								
1.880	14.1	V	0.85	8.01	21.29	33.0	-11.7	
1.880	16.5	H	0.85	8.01	23.65	33.0	-9.4	
High Ch								
1.905	14.9	V	0.85	8.01	22.04	33.0	-11.0	
1.905	16.6	H	0.85	8.01	23.78	33.0	-9.2	

Rev. 3.17.11

Band

LTE2

10MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_10MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.855	15.8	V	0.85	8.01	22.98	33.0	-10.0	
1.855	17.4	H	0.85	8.01	24.53	33.0	-8.5	
Mid Ch								
1.880	15.3	V	0.85	8.01	22.49	33.0	-10.5	
1.880	17.6	H	0.85	8.01	24.74	33.0	-8.3	
High Ch								
1.905	15.9	V	0.85	8.01	23.08	33.0	-9.9	
1.905	17.5	H	0.85	8.01	24.71	33.0	-8.3	

Rev. 3.17.11

Band

LTE2

5MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_5MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.853	14.6	V	0.85	8.01	21.72	33.0	-11.3	
1.853	16.3	H	0.85	8.01	23.47	33.0	-9.5	
Mid Ch								
1.880	13.8	V	0.85	8.01	20.91	33.0	-12.1	
1.880	16.2	H	0.85	8.01	23.36	33.0	-9.6	
High Ch								
1.908	14.4	V	0.85	8.01	21.55	33.0	-11.4	
1.908	16.2	H	0.85	8.01	23.38	33.0	-9.6	

Rev. 3.17.11

Band

LTE2

5MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_5MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.853	15.6	V	0.85	8.01	22.79	33.0	-10.2	
1.853	17.3	H	0.85	8.01	24.45	33.0	-8.5	
Mid Ch								
1.880	14.5	V	0.85	8.01	21.69	33.0	-11.3	
1.880	16.9	H	0.85	8.01	24.05	33.0	-9.0	
High Ch								
1.908	15.4	V	0.85	8.01	22.57	33.0	-10.4	
1.908	17.1	H	0.85	8.01	24.31	33.0	-8.7	

Rev. 3.17.11

Band

LTE2

3MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	13.9	V	0.85	8.01	21.09	33.0	-11.9	
1.852	16.3	H	0.85	8.01	23.44	33.0	-9.6	
Mid Ch								
1.880	13.7	V	0.85	8.01	20.86	33.0	-12.1	
1.880	16.8	H	0.85	8.01	23.91	33.0	-9.1	
High Ch								
1.909	14.0	V	0.85	8.01	21.15	33.0	-11.8	
1.909	16.4	H	0.85	8.01	23.58	33.0	-9.4	

Rev. 3.17.11

Band

LTE2

3MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	15.9	V	0.85	8.01	23.07	33.0	-9.9	
1.852	17.1	H	0.85	8.01	24.23	33.0	-8.8	
Mid Ch								
1.880	15.1	V	0.85	8.01	22.22	33.0	-10.8	
1.880	17.8	H	0.85	8.01	24.97	33.0	-8.0	
High Ch								
1.909	14.9	V	0.85	8.01	22.07	33.0	-10.9	
1.909	17.0	H	0.85	8.01	24.18	33.0	-8.8	

Rev. 3.17.11

Band

LTE2

3MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	13.9	V	0.85	8.01	21.09	33.0	-11.9	
1.852	16.3	H	0.85	8.01	23.44	33.0	-9.6	
Mid Ch								
1.880	13.7	V	0.85	8.01	20.86	33.0	-12.1	
1.880	16.8	H	0.85	8.01	23.91	33.0	-9.1	
High Ch								
1.909	14.0	V	0.85	8.01	21.15	33.0	-11.8	
1.909	16.4	H	0.85	8.01	23.58	33.0	-9.4	

Rev. 3.17.11

Band

LTE2

3MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	15.9	V	0.85	8.01	23.07	33.0	-9.9	
1.852	17.1	H	0.85	8.01	24.23	33.0	-8.8	
Mid Ch								
1.880	15.1	V	0.85	8.01	22.22	33.0	-10.8	
1.880	17.8	H	0.85	8.01	24.97	33.0	-8.0	
High Ch								
1.909	14.9	V	0.85	8.01	22.07	33.0	-10.9	
1.909	17.0	H	0.85	8.01	24.18	33.0	-8.8	

Rev. 3.17.11

Band

LTE2

3MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	13.9	V	0.85	8.01	21.09	33.0	-11.9	
1.852	16.3	H	0.85	8.01	23.44	33.0	-9.6	
Mid Ch								
1.880	13.7	V	0.85	8.01	20.86	33.0	-12.1	
1.880	16.8	H	0.85	8.01	23.91	33.0	-9.1	
High Ch								
1.909	14.0	V	0.85	8.01	21.15	33.0	-11.8	
1.909	16.4	H	0.85	8.01	23.58	33.0	-9.4	

Rev. 3.17.11

Band

LTE2

3MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	15.9	V	0.85	8.01	23.07	33.0	-9.9	
1.852	17.1	H	0.85	8.01	24.23	33.0	-8.8	
Mid Ch								
1.880	15.1	V	0.85	8.01	22.22	33.0	-10.8	
1.880	17.8	H	0.85	8.01	24.97	33.0	-8.0	
High Ch								
1.909	14.9	V	0.85	8.01	22.07	33.0	-10.9	
1.909	17.0	H	0.85	8.01	24.18	33.0	-8.8	

Rev. 3.17.11

Band

LTE2

3MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	13.9	V	0.85	8.01	21.09	33.0	-11.9	
1.852	16.3	H	0.85	8.01	23.44	33.0	-9.6	
Mid Ch								
1.880	13.7	V	0.85	8.01	20.86	33.0	-12.1	
1.880	16.8	H	0.85	8.01	23.91	33.0	-9.1	
High Ch								
1.909	14.0	V	0.85	8.01	21.15	33.0	-11.8	
1.909	16.4	H	0.85	8.01	23.58	33.0	-9.4	

Rev. 3.17.11

Band

LTE2

3MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	15.9	V	0.85	8.01	23.07	33.0	-9.9	
1.852	17.1	H	0.85	8.01	24.23	33.0	-8.8	
Mid Ch								
1.880	15.1	V	0.85	8.01	22.22	33.0	-10.8	
1.880	17.8	H	0.85	8.01	24.97	33.0	-8.0	
High Ch								
1.909	14.9	V	0.85	8.01	22.07	33.0	-10.9	
1.909	17.0	H	0.85	8.01	24.18	33.0	-8.8	

Rev. 3.17.11

Band

LTE2

3MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band_2_3MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	13.9	V	0.85	8.01	21.09	33.0	-11.9	
1.852	16.3	H	0.85	8.01	23.44	33.0	-9.6	
Mid Ch								
1.880	13.7	V	0.85	8.01	20.86	33.0	-12.1	
1.880	16.8	H	0.85	8.01	23.91	33.0	-9.1	
High Ch								
1.909	14.0	V	0.85	8.01	21.15	33.0	-11.8	
1.909	16.4	H	0.85	8.01	23.58	33.0	-9.4	

Rev. 3.17.11

Band LTE2 3MHz QPSK	High Frequency Fundamental Measurement UL Verification Services Chamber B Company: LG Electronics Project #: 14I19592 Date: 12/16/14 Test Engineer: L. Lara Configuration: EUT only X-position (SN: 2014284) Mode: LTE Band_2_3MHz_QPSK Test Equipment: Receiving: Horn T345, and Chamber B SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.852</td> <td>15.9</td> <td>V</td> <td>0.85</td> <td>8.01</td> <td>23.07</td> <td>33.0</td> <td>-9.9</td> <td></td> </tr> <tr> <td>1.852</td> <td>17.1</td> <td>H</td> <td>0.85</td> <td>8.01</td> <td>24.23</td> <td>33.0</td> <td>-8.8</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.880</td> <td>15.1</td> <td>V</td> <td>0.85</td> <td>8.01</td> <td>22.22</td> <td>33.0</td> <td>-10.8</td> <td></td> </tr> <tr> <td>1.880</td> <td>17.8</td> <td>H</td> <td>0.85</td> <td>8.01</td> <td>24.97</td> <td>33.0</td> <td>-8.0</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.909</td> <td>14.9</td> <td>V</td> <td>0.85</td> <td>8.01</td> <td>22.07</td> <td>33.0</td> <td>-10.9</td> <td></td> </tr> <tr> <td>1.909</td> <td>17.0</td> <td>H</td> <td>0.85</td> <td>8.01</td> <td>24.18</td> <td>33.0</td> <td>-8.8</td> <td></td> </tr> </tbody> </table> Rev. 3.17.11	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	15.9	V	0.85	8.01	23.07	33.0	-9.9		1.852	17.1	H	0.85	8.01	24.23	33.0	-8.8		Mid Ch									1.880	15.1	V	0.85	8.01	22.22	33.0	-10.8		1.880	17.8	H	0.85	8.01	24.97	33.0	-8.0		High Ch									1.909	14.9	V	0.85	8.01	22.07	33.0	-10.9		1.909	17.0	H	0.85	8.01	24.18	33.0	-8.8	
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	15.9	V	0.85	8.01	23.07	33.0	-9.9																																																																																				
1.852	17.1	H	0.85	8.01	24.23	33.0	-8.8																																																																																				
Mid Ch																																																																																											
1.880	15.1	V	0.85	8.01	22.22	33.0	-10.8																																																																																				
1.880	17.8	H	0.85	8.01	24.97	33.0	-8.0																																																																																				
High Ch																																																																																											
1.909	14.9	V	0.85	8.01	22.07	33.0	-10.9																																																																																				
1.909	17.0	H	0.85	8.01	24.18	33.0	-8.8																																																																																				

Band

LTE2

1.4MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	15.2	V	0.85	8.01	22.38	33.0	-10.6	
1.851	16.8	H	0.85	8.01	23.92	33.0	-9.1	
Mid Ch								
1.880	14.1	V	0.85	8.01	21.27	33.0	-11.7	
1.880	16.4	H	0.85	8.01	23.51	33.0	-9.5	
High Ch								
1.909	14.1	V	0.85	8.01	21.29	33.0	-11.7	
1.909	15.7	H	0.85	8.01	22.91	33.0	-10.1	

Rev. 3.17.11

Band

LTE2

1.4MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	16.1	V	0.85	8.01	23.29	33.0	-9.7	
1.851	17.5	H	0.85	8.01	24.69	33.0	-8.3	
Mid Ch								
1.880	15.4	V	0.85	8.01	22.60	33.0	-10.4	
1.880	17.5	H	0.85	8.01	24.70	33.0	-8.3	
High Ch								
1.909	15.4	V	0.85	8.01	22.55	33.0	-10.4	
1.909	16.9	H	0.85	8.01	24.03	33.0	-9.0	

Rev. 3.17.11

Band

LTE2

1.4MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	15.2	V	0.85	8.01	22.38	33.0	-10.6	
1.851	16.8	H	0.85	8.01	23.92	33.0	-9.1	
Mid Ch								
1.880	14.1	V	0.85	8.01	21.27	33.0	-11.7	
1.880	16.4	H	0.85	8.01	23.51	33.0	-9.5	
High Ch								
1.909	14.1	V	0.85	8.01	21.29	33.0	-11.7	
1.909	15.7	H	0.85	8.01	22.91	33.0	-10.1	

Rev. 3.17.11

Band

LTE2

1.4MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	16.1	V	0.85	8.01	23.29	33.0	-9.7	
1.851	17.5	H	0.85	8.01	24.69	33.0	-8.3	
Mid Ch								
1.880	15.4	V	0.85	8.01	22.60	33.0	-10.4	
1.880	17.5	H	0.85	8.01	24.70	33.0	-8.3	
High Ch								
1.909	15.4	V	0.85	8.01	22.55	33.0	-10.4	
1.909	16.9	H	0.85	8.01	24.03	33.0	-9.0	

Rev. 3.17.11

Band

LTE2

1.4MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	15.2	V	0.85	8.01	22.38	33.0	-10.6	
1.851	16.8	H	0.85	8.01	23.92	33.0	-9.1	
Mid Ch								
1.880	14.1	V	0.85	8.01	21.27	33.0	-11.7	
1.880	16.4	H	0.85	8.01	23.51	33.0	-9.5	
High Ch								
1.909	14.1	V	0.85	8.01	21.29	33.0	-11.7	
1.909	15.7	H	0.85	8.01	22.91	33.0	-10.1	

Rev. 3.17.11

Band

LTE2

1.4MHz

QPSK

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_QPSK

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	16.1	V	0.85	8.01	23.29	33.0	-9.7	
1.851	17.5	H	0.85	8.01	24.69	33.0	-8.3	
Mid Ch								
1.880	15.4	V	0.85	8.01	22.60	33.0	-10.4	
1.880	17.5	H	0.85	8.01	24.70	33.0	-8.3	
High Ch								
1.909	15.4	V	0.85	8.01	22.55	33.0	-10.4	
1.909	16.9	H	0.85	8.01	24.03	33.0	-9.0	

Rev. 3.17.11

Band

LTE2

1.4MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	15.2	V	0.85	8.01	22.38	33.0	-10.6	
1.851	16.8	H	0.85	8.01	23.92	33.0	-9.1	
Mid Ch								
1.880	14.1	V	0.85	8.01	21.27	33.0	-11.7	
1.880	16.4	H	0.85	8.01	23.51	33.0	-9.5	
High Ch								
1.909	14.1	V	0.85	8.01	21.29	33.0	-11.7	
1.909	15.7	H	0.85	8.01	22.91	33.0	-10.1	

Rev. 3.17.11

Band LTE2 1.4MHz QPSK	High Frequency Fundamental Measurement UL Verification Services Chamber B Company: LG Electronics Project #: 14I19592 Date: 12/16/14 Test Engineer: L. Lara Configuration: EUT only X-position (SN: 2014284) Mode: LTE Band 2_1.4MHz_QPSK Test Equipment: Receiving: Horn T345, and Chamber B SMA Cables Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th>f GHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1.851</td> <td>16.1</td> <td>V</td> <td>0.85</td> <td>8.01</td> <td>23.29</td> <td>33.0</td> <td>-9.7</td> <td></td> </tr> <tr> <td>1.851</td> <td>17.5</td> <td>H</td> <td>0.85</td> <td>8.01</td> <td>24.69</td> <td>33.0</td> <td>-8.3</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1.880</td> <td>15.4</td> <td>V</td> <td>0.85</td> <td>8.01</td> <td>22.60</td> <td>33.0</td> <td>-10.4</td> <td></td> </tr> <tr> <td>1.880</td> <td>17.5</td> <td>H</td> <td>0.85</td> <td>8.01</td> <td>24.70</td> <td>33.0</td> <td>-8.3</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1.909</td> <td>15.4</td> <td>V</td> <td>0.85</td> <td>8.01</td> <td>22.55</td> <td>33.0</td> <td>-10.4</td> <td></td> </tr> <tr> <td>1.909</td> <td>16.9</td> <td>H</td> <td>0.85</td> <td>8.01</td> <td>24.03</td> <td>33.0</td> <td>-9.0</td> <td></td> </tr> </tbody> </table> Rev. 3.17.11	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	Low Ch									1.851	16.1	V	0.85	8.01	23.29	33.0	-9.7		1.851	17.5	H	0.85	8.01	24.69	33.0	-8.3		Mid Ch									1.880	15.4	V	0.85	8.01	22.60	33.0	-10.4		1.880	17.5	H	0.85	8.01	24.70	33.0	-8.3		High Ch									1.909	15.4	V	0.85	8.01	22.55	33.0	-10.4		1.909	16.9	H	0.85	8.01	24.03	33.0	-9.0	
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes																																																																																			
Low Ch																																																																																											
1.851	16.1	V	0.85	8.01	23.29	33.0	-9.7																																																																																				
1.851	17.5	H	0.85	8.01	24.69	33.0	-8.3																																																																																				
Mid Ch																																																																																											
1.880	15.4	V	0.85	8.01	22.60	33.0	-10.4																																																																																				
1.880	17.5	H	0.85	8.01	24.70	33.0	-8.3																																																																																				
High Ch																																																																																											
1.909	15.4	V	0.85	8.01	22.55	33.0	-10.4																																																																																				
1.909	16.9	H	0.85	8.01	24.03	33.0	-9.0																																																																																				

Band

LTE2

1.4MHz

16QAM

High Frequency Fundamental Measurement

UL Verification Services Chamber B

Company:

Project #:

Date:

Test Engineer:

Configuration:

Mode:

LG Electronics

14I19592

12/16/14

L. Lara

EUT only X-position (SN: 2014284)

LTE Band 2_1.4MHz_16QAM

Test Equipment:

Receiving: Horn T345, and Chamber B SMA Cables

Substitution: Horn T59 Substitution, 4ft SMA Cable (244639001) Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.851	15.2	V	0.85	8.01	22.38	33.0	-10.6	
1.851	16.8	H	0.85	8.01	23.92	33.0	-9.1	
Mid Ch								
1.880	14.1	V	0.85	8.01	21.27	33.0	-11.7	
1.880	16.4	H	0.85	8.01	23.51	33.0	-9.5	
High Ch								
1.909	14.1	V	0.85	8.01	21.29	33.0	-11.7	
1.909	15.7	H	0.85	8.01	22.91	33.0	-10.1	

Rev. 3.17.11

3.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, and §27.53

LIMIT

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.

Part 27: (m)(4) For mobile station, the attenuation factor shall be not less than $43+10\log(P)$ dB at the channel edge and $(55+10\log(P))$ dB at 5.5MHz from the channel edges.

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

RESULTS

3.2.1. SPURIOUS RADIATION PLOTS

CDMA

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		14I19592							
Date:		12/17/14							
Test Engineer:		L. Lara							
Configuration:		EUT w/ AC Adapter + HS, X-position (SN: 2014280)							
Mode:		CDMA EVDO BC1							
Chamber		Pre-amplifier		Filter		Limit			
3m Chamber		T343 8449B		Filter 1		Part 24			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25MHz									
3.703	-10.6	V	3.0	35.4	1.0	-45.0	-13.0	-32.0	
5.554	-13.3	V	3.0	34.7	1.0	-47.1	-13.0	-34.1	
7.405	-8.7	V	3.0	34.9	1.0	-42.6	-13.0	-29.6	
3.703	-7.3	H	3.0	35.4	1.0	-41.7	-13.0	-28.7	
5.554	-15.9	H	3.0	34.7	1.0	-49.6	-13.0	-36.6	
7.405	-11.1	H	3.0	34.9	1.0	-45.0	-13.0	-32.0	
Mid Ch, 1880.0MHz									
3.760	-10.8	V	3.0	35.3	1.0	-45.2	-13.0	-32.2	
5.640	-8.8	V	3.0	34.7	1.0	-42.5	-13.0	-29.5	
7.520	-11.8	V	3.0	34.9	1.0	-45.7	-13.0	-32.7	
3.760	-7.9	H	3.0	35.3	1.0	-42.2	-13.0	-29.2	
5.640	-15.9	H	3.0	34.7	1.0	-49.6	-13.0	-36.6	
7.520	-10.9	H	3.0	34.9	1.0	-44.8	-13.0	-31.8	
High Ch, 1908.75 MHz									
3.818	-10.7	V	3.0	35.3	1.0	-45.0	-13.0	-32.0	
5.726	-6.0	V	3.0	34.7	1.0	-39.8	-13.0	-26.8	
7.635	-12.1	V	3.0	34.9	1.0	-46.1	-13.0	-33.1	
3.818	-8.9	H	3.0	35.3	1.0	-43.2	-13.0	-30.2	
5.726	-14.3	H	3.0	34.7	1.0	-48.1	-13.0	-35.1	
7.635	-9.3	H	3.0	34.9	1.0	-43.2	-13.0	-30.2	
Rev. 03.03.09									
Note: No other emissions were detected above the system noise floor.									

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement									
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) RTT BC1							
Chamber		Pre-amplifier		Filter		Limit			
3m Chamber		T34 8449B		Filter 1		Part 24			
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25 MHz									
3.703	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
5.554	-14.6	V	3.0	34.7	1.0	-48.3	-13.0	-35.3	
7.405	-13.0	V	3.0	34.9	1.0	-46.9	-13.0	-33.9	
3.703	-10.8	H	3.0	35.4	1.0	-45.2	-13.0	-32.2	
5.554	-15.3	H	3.0	34.7	1.0	-49.0	-13.0	-36.0	
7.405	-11.0	H	3.0	34.9	1.0	-44.9	-13.0	-31.9	
Mid Ch, 1880 MHz									
3.760	-12.7	V	3.0	35.3	1.0	-47.0	-13.0	-34.0	
5.640	-12.2	V	3.0	34.7	1.0	-46.0	-13.0	-33.0	
7.520	-12.1	V	3.0	34.9	1.0	-46.1	-13.0	-33.1	
3.760	-11.3	H	3.0	35.3	1.0	-45.7	-13.0	-32.7	
5.640	-15.5	H	3.0	34.7	1.0	-49.3	-13.0	-36.3	
7.520	-10.1	H	3.0	34.9	1.0	-44.0	-13.0	-31.0	
High Ch, 1908.75 MHz									
3.818	-10.3	V	3.0	35.3	1.0	-44.5	-13.0	-31.5	
5.726	-9.1	V	3.0	34.7	1.0	-42.9	-13.0	-29.9	
7.635	-11.8	V	3.0	34.9	1.0	-45.7	-13.0	-32.7	
3.818	-9.8	H	3.0	35.3	1.0	-44.1	-13.0	-31.1	
5.726	-13.8	H	3.0	34.7	1.0	-47.5	-13.0	-34.5	
7.635	-10.6	H	3.0	34.9	1.0	-44.6	-13.0	-31.6	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement											
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/23/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014276) CDMA EVDO BC0									
		Chamber	Pre-amplifier	Filter	Limit						
		3m Chamber	T343 8449B	Filter 1	Part 22						
Band	BC0	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz											
		1.650	-19.7	V	3.0	37.4	1.0	-56.1	-13.0	-43.1	
		2.474	-22.7	V	3.0	36.4	1.0	-58.1	-13.0	-45.1	
		3.298	-20.5	V	3.0	35.8	1.0	-55.3	-13.0	-42.3	
		1.650	-16.6	H	3.0	37.4	1.0	-53.0	-13.0	-40.0	
		2.474	-23.6	H	3.0	36.4	1.0	-59.0	-13.0	-46.0	
		3.298	-20.1	H	3.0	35.8	1.0	-54.9	-13.0	-41.9	
Mid Ch, 836.52MHz											
		1.673	-18.4	V	3.0	37.3	1.0	-54.7	-13.0	-41.7	
		2.509	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
		3.346	-20.8	V	3.0	35.8	1.0	-55.6	-13.0	-42.6	
		1.673	-15.9	H	3.0	37.3	1.0	-52.2	-13.0	-39.2	
		2.509	-24.3	H	3.0	36.4	1.0	-59.7	-13.0	-46.7	
		3.346	-20.6	H	3.0	35.8	1.0	-55.4	-13.0	-42.4	
High Ch, 848.31 MHz											
		1.696	-16.9	V	3.0	37.3	1.0	-53.2	-13.0	-40.2	
		2.544	-23.6	V	3.0	36.3	1.0	-58.9	-13.0	-45.9	
		3.393	-20.2	V	3.0	35.7	1.0	-54.9	-13.0	-41.9	
		1.696	-15.7	H	3.0	37.3	1.0	-52.0	-13.0	-39.0	
		2.544	-24.1	H	3.0	36.3	1.0	-59.5	-13.0	-46.5	
		3.393	-21.3	H	3.0	35.7	1.0	-56.0	-13.0	-43.0	
Rev. 03.03.09											
Note: No other emissions were detected above the system noise floor.											

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/23/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014276) RTT BC0								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T34 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
BC0 1xRTT	Low Ch, 824.2MHz									
	1.648	-21.5	V	3.0	37.4	1.0	-57.9	-13.0	-44.9	
	2.473	-22.8	V	3.0	36.4	1.0	-58.2	-13.0	-45.2	
	3.297	-20.8	V	3.0	35.8	1.0	-55.6	-13.0	-42.6	
	1.648	-19.0	H	3.0	37.4	1.0	-55.4	-13.0	-42.4	
	2.473	-24.3	H	3.0	36.4	1.0	-59.6	-13.0	-46.6	
	3.297	-20.9	H	3.0	35.8	1.0	-55.7	-13.0	-42.7	
	Mid Ch, 836.52MHz									
	1.673	-20.1	V	3.0	37.3	1.0	-56.4	-13.0	-43.4	
	2.510	-23.2	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
	3.346	-21.1	V	3.0	35.8	1.0	-55.8	-13.0	-42.8	
	1.673	-17.4	H	3.0	37.3	1.0	-53.7	-13.0	-40.7	
	2.510	-24.2	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
	3.346	-20.9	H	3.0	35.8	1.0	-55.6	-13.0	-42.6	
	High Ch, 848.31MHz									
	1.697	-18.9	V	3.0	37.3	1.0	-55.2	-13.0	-42.2	
	2.545	-22.9	V	3.0	36.3	1.0	-58.2	-13.0	-45.2	
	3.393	-21.0	V	3.0	35.7	1.0	-55.7	-13.0	-42.7	
1.697	-16.7	H	3.0	37.3	1.0	-53.0	-13.0	-40.0		
2.545	-24.8	H	3.0	36.3	1.0	-60.1	-13.0	-47.1		
3.393	-21.4	H	3.0	35.7	1.0	-56.1	-13.0	-43.1		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber B
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 14I19592
Date: 12/18/14
Test Engineer: Jude Semana
Configuration: EUT , AC Adapter
Mode: TX, LTE band 25, 5MHz, 16QAM

Chamber
 5m Chamber B

Preamplifier
 T145 8449B

Filter
 Filter 1

Limit
 Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch. (1852.5 MHz)									
LTE25	3.705	-16.0	V	3.0	30.2	1.0	-45.2	-13.0	-32.2
	5.558	-14.2	V	3.0	28.4	1.0	-41.6	-13.0	-28.6
5MHz	7.410	-14.1	V	3.0	26.5	1.0	-39.6	-13.0	-26.6
	3.705	-15.9	H	3.0	30.2	1.0	-45.1	-13.0	-32.1
	5.558	-13.9	H	3.0	28.4	1.0	-41.2	-13.0	-28.2
16QAM	7.410	-13.2	H	3.0	26.5	1.0	-38.7	-13.0	-25.7
Mid Ch. (1882.5 MHz)									
	3.765	-17.7	V	3.0	30.1	1.0	-46.8	-13.0	-33.8
	5.648	-14.5	V	3.0	28.3	1.0	-41.8	-13.0	-28.8
	7.530	-15.2	V	3.0	26.3	1.0	-40.5	-13.0	-27.5
	3.765	-17.1	H	3.0	30.1	1.0	-46.3	-13.0	-33.3
	5.648	-14.7	H	3.0	28.3	1.0	-42.0	-13.0	-29.0
	7.530	-13.7	H	3.0	26.3	1.0	-39.0	-13.0	-26.0
High Ch. (1912.5 MHz)									
	3.825	-17.4	V	3.0	30.1	1.0	-46.5	-13.0	-33.5
	5.738	-14.0	V	3.0	28.2	1.0	-41.2	-13.0	-28.2
	7.650	-13.8	V	3.0	26.2	1.0	-38.9	-13.0	-25.9
	3.825	-16.5	H	3.0	30.1	1.0	-45.6	-13.0	-32.6
	5.738	-14.0	H	3.0	28.2	1.0	-41.2	-13.0	-28.2
	7.650	-13.0	H	3.0	26.2	1.0	-38.1	-13.0	-25.1

Rev. 03.03.09

UL Verification Services Chamber B Above 1GHz High Frequency Substitution Measurement										
Company: LG Electronics Project #: 14I19592 Date: 12/18/14 Test Engineer: Jude Semana Configuration: EUT , AC Adapter Mode: TX, LTE band 25, 5MHz, QPSK										
		Chamber	Pre-amplifier		Filter	Limit				
		5m Chamber B	T145 8449B		Filter 1	Part 24				
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE25 5MHz QPSK	Low Ch, (1852.5 MHz)									
	3.705	-16.5	V	3.0	30.2	1.0	-45.7	-13.0	-32.7	
	5.558	-14.4	V	3.0	28.4	1.0	-41.8	-13.0	-28.8	
	7.410	-14.9	V	3.0	26.5	1.0	-40.4	-13.0	-27.4	
	3.705	-16.1	H	3.0	30.2	1.0	-45.3	-13.0	-32.3	
	5.558	-13.4	H	3.0	28.4	1.0	-40.7	-13.0	-27.7	
	7.410	-13.2	H	3.0	26.5	1.0	-38.7	-13.0	-25.7	
	Mid Ch, (1882.5 MHz)									
	3.765	-17.0	V	3.0	30.1	1.0	-46.2	-13.0	-33.2	
	5.648	-13.7	V	3.0	28.3	1.0	-41.0	-13.0	-28.0	
	7.530	-15.4	V	3.0	26.3	1.0	-40.7	-13.0	-27.7	
	3.765	-17.7	H	3.0	30.1	1.0	-46.8	-13.0	-33.8	
	5.648	-14.3	H	3.0	28.3	1.0	-41.5	-13.0	-28.5	
	7.530	-13.7	H	3.0	26.3	1.0	-39.0	-13.0	-26.0	
	High Ch, (1912.5 MHz)									
	3.825	-17.6	V	3.0	30.1	1.0	-46.7	-13.0	-33.7	
	5.738	-14.5	V	3.0	28.2	1.0	-41.7	-13.0	-28.7	
	7.650	-14.3	V	3.0	26.2	1.0	-39.5	-13.0	-26.5	
3.825	-16.0	H	3.0	30.1	1.0	-45.1	-13.0	-32.1		
5.738	-11.9	H	3.0	28.2	1.0	-39.1	-13.0	-26.1		
7.650	-13.5	H	3.0	26.2	1.0	-38.6	-13.0	-25.6		
Rev. 03.03.09										

LTE Band 17

UL Verification Services Chamber B Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics Project #: 14I19592 Date: 12/18/14 Test Engineer: Jude Semana Configuration: EUT , AC Adapter Location: Chamber B Mode: LTE_16QAM Band 17 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 706.5									
1413.00	-24.6	V	3.0	37.4	1.0	-61.0	-13.0	-48.0	
2119.50	-18.2	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
2826.00	-18.1	V	3.0	36.4	1.0	-53.5	-13.0	-40.5	
1413.00	-23.3	H	3.0	37.4	1.0	-59.7	-13.0	-46.7	
2119.50	-19.4	H	3.0	36.6	1.0	-55.0	-13.0	-42.0	
2826.00	-18.8	H	3.0	36.4	1.0	-54.2	-13.0	-41.2	
Mid Ch, 710									
1420.00	-24.6	V	3.0	37.3	1.0	-60.9	-13.0	-47.9	
2130.00	-18.1	V	3.0	36.6	1.0	-53.6	-13.0	-40.6	
2840.00	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
1420.00	-23.2	H	3.0	37.3	1.0	-59.5	-13.0	-46.5	
2130.00	-19.5	H	3.0	36.6	1.0	-55.0	-13.0	-42.0	
2840.00	-18.6	H	3.0	36.4	1.0	-54.0	-13.0	-41.0	
High Ch, 713.5									
1427.00	-24.4	V	3.0	37.3	1.0	-60.8	-13.0	-47.8	
2140.50	-18.2	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
2854.00	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
1427.00	-23.9	H	3.0	37.3	1.0	-60.2	-13.0	-47.2	
2140.50	-19.8	H	3.0	36.6	1.0	-55.3	-13.0	-42.3	
2854.00	-18.6	H	3.0	36.4	1.0	-54.0	-13.0	-41.0	

UL Verification Services Chamber B										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		14I19592								
Date:		12/18/14								
Test Engineer:		Jude Semana								
Configuration:		EUT , AC Adapter								
Location:		Chamber B								
Mode:		LTE_QPSK Band 17 Harmonics, 10MHz Bandwidth								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Band	Low Ch, 706.5									
LTE17	1413.00	-24.6	V	3.0	37.4	1.0	-61.0	-13.0	-48.0	
	2119.50	-17.6	V	3.0	36.6	1.0	-53.2	-13.0	-40.2	
	2826.00	-17.8	V	3.0	36.4	1.0	-53.1	-13.0	-40.1	
10MHz	1413.00	-23.4	H	3.0	37.4	1.0	-59.7	-13.0	-46.7	
	2119.50	-19.5	H	3.0	36.6	1.0	-55.0	-13.0	-42.0	
	2826.00	-19.2	H	3.0	36.4	1.0	-54.6	-13.0	-41.6	
QPSK	Mid Ch, 710									
	1420.00	-24.3	V	3.0	37.3	1.0	-60.7	-13.0	-47.7	
	2130.00	-18.3	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
	2840.00	-17.9	V	3.0	36.4	1.0	-53.3	-13.0	-40.3	
	1420.00	-22.9	H	3.0	37.3	1.0	-59.3	-13.0	-46.3	
	2130.00	-19.4	H	3.0	36.6	1.0	-55.0	-13.0	-42.0	
	2840.00	-18.8	H	3.0	36.4	1.0	-54.2	-13.0	-41.2	
	High Ch, 713.5									
	1427.00	-24.8	V	3.0	37.3	1.0	-61.1	-13.0	-48.1	
	2140.50	-18.5	V	3.0	36.6	1.0	-54.0	-13.0	-41.0	
	2854.00	-17.7	V	3.0	36.4	1.0	-53.1	-13.0	-40.1	
	1427.00	-22.7	H	3.0	37.3	1.0	-59.1	-13.0	-46.1	
	2140.50	-19.8	H	3.0	36.6	1.0	-55.3	-13.0	-42.3	
	2854.00	-18.8	H	3.0	36.4	1.0	-54.2	-13.0	-41.2	

UL Verification Services Chamber B Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		14I19592								
Date:		12/18/14								
Test Engineer:		Jude Semana								
Configuration:		EUT , AC Adapter								
Location:		Chamber B								
Mode:		LTE_16QAM Band 17 Harmonics, 5MHz Bandwidth								
Band	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 706.5									
	1413.00	-24.6	V	3.0	37.4	1.0	-60.9	-13.0	-47.9	
	2119.50	-18.4	V	3.0	36.6	1.0	-54.0	-13.0	-41.0	
	2826.00	-17.8	V	3.0	36.4	1.0	-53.1	-13.0	-40.1	
	1413.00	-23.4	H	3.0	37.4	1.0	-59.8	-13.0	-46.8	
	2119.50	-19.3	H	3.0	36.6	1.0	-54.9	-13.0	-41.9	
	2826.00	-18.6	H	3.0	36.4	1.0	-54.0	-13.0	-41.0	
	Mid Ch, 710									
	1420.00	-24.3	V	3.0	37.3	1.0	-60.7	-13.0	-47.7	
	2130.00	-18.7	V	3.0	36.6	1.0	-54.2	-13.0	-41.2	
	2840.00	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
	1420.00	-23.5	H	3.0	37.3	1.0	-59.9	-13.0	-46.9	
	2130.00	-19.8	H	3.0	36.6	1.0	-55.4	-13.0	-42.4	
	2840.00	-19.6	H	3.0	36.4	1.0	-55.0	-13.0	-42.0	
	High Ch, 713.5									
	1427.00	-24.4	V	3.0	37.3	1.0	-60.8	-13.0	-47.8	
	2140.50	-18.7	V	3.0	36.6	1.0	-54.3	-13.0	-41.3	
	2854.00	-17.5	V	3.0	36.4	1.0	-52.9	-13.0	-39.9	
	1427.00	-22.3	H	3.0	37.3	1.0	-58.7	-13.0	-45.7	
	2140.50	-19.6	H	3.0	36.6	1.0	-55.2	-13.0	-42.2	
	2854.00	-18.1	H	3.0	36.4	1.0	-53.5	-13.0	-40.5	

LTE Band 12

UL Verification Services Chamber B									
Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		14I19592							
Date:		12/18/14							
Test Engineer:		Jude Semana							
Configuration:		EUT , AC Adapter							
Location:		Chamber B							
Mode:		LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth							
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	EIRP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Band									
	Low Ch,704								
LTE12	1408.00	-24.2	V	3.0	37.4	1.0	-60.6	-13.0	-47.6
	2112.00	-18.6	V	3.0	36.6	1.0	-54.2	-13.0	-41.2
	2816.00	-18.6	V	3.0	36.4	1.0	-54.0	-13.0	-41.0
10MHz	1408.00	-23.1	H	3.0	37.4	1.0	-59.5	-13.0	-46.5
	2112.00	-19.4	H	3.0	36.6	1.0	-54.9	-13.0	-41.9
16QAM	2816.00	-19.2	H	3.0	36.4	1.0	-54.5	-13.0	-41.5
	Mid Ch,707.5								
	1415.00	-24.5	V	3.0	37.3	1.0	-60.8	-13.0	-47.8
	2122.50	-18.6	V	3.0	36.6	1.0	-54.2	-13.0	-41.2
	2830.00	-18.4	V	3.0	36.4	1.0	-53.8	-13.0	-40.8
	1415.00	-23.5	H	3.0	37.3	1.0	-59.8	-13.0	-46.8
	2122.50	-19.0	H	3.0	36.6	1.0	-54.6	-13.0	-41.6
	2830.00	-19.3	H	3.0	36.4	1.0	-54.7	-13.0	-41.7
	High Ch,711								
	1422.00	-24.4	V	3.0	37.3	1.0	-60.7	-13.0	-47.7
	2133.00	-18.1	V	3.0	36.6	1.0	-53.7	-13.0	-40.7
	2844.00	-17.7	V	3.0	36.4	1.0	-53.1	-13.0	-40.1
	1422.00	-23.0	H	3.0	37.3	1.0	-59.4	-13.0	-46.4
	2133.00	-19.9	H	3.0	36.6	1.0	-55.5	-13.0	-42.5
	2844.00	-19.1	H	3.0	36.4	1.0	-54.5	-13.0	-41.5

UL Verification Services Chamber B Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		14I19592								
Date:		12/18/14								
Test Engineer:		Jude Semana								
Configuration:		EUT , AC Adapter								
Location:		Chamber B								
Mode:		LTE_16QAM Band 12 Harmonics, 5MHz Bandwidth								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Band	Low Ch, 701.50									
	1403.00	-24.3	V	3.0	37.4	1.0	-60.6	-13.0	-47.6	
	2104.50	-19.3	V	3.0	36.6	1.0	-54.9	-13.0	-41.9	
LTE12	2806.00	-18.4	V	3.0	36.4	1.0	-53.7	-13.0	-40.7	
5MHz	1403.00	-23.5	H	3.0	37.4	1.0	-59.9	-13.0	-46.9	
	2104.50	-20.6	H	3.0	36.6	1.0	-56.1	-13.0	-43.1	
16QAM	2806.00	-19.5	H	3.0	36.4	1.0	-54.8	-13.0	-41.8	
	Mid Ch, 707.50									
	1415.00	-24.4	V	3.0	37.3	1.0	-60.8	-13.0	-47.8	
	2122.50	-18.6	V	3.0	36.6	1.0	-54.2	-13.0	-41.2	
	2830.00	-17.9	V	3.0	36.4	1.0	-53.3	-13.0	-40.3	
	1415.00	-23.7	H	3.0	37.3	1.0	-60.0	-13.0	-47.0	
	2122.50	-19.1	H	3.0	36.6	1.0	-54.6	-13.0	-41.6	
	2830.00	-19.1	H	3.0	36.4	1.0	-54.4	-13.0	-41.4	
	High Ch, 713.50									
	1427.00	-24.7	V	3.0	37.3	1.0	-61.0	-13.0	-48.0	
	2140.50	-18.6	V	3.0	36.6	1.0	-54.2	-13.0	-41.2	
	2854.00	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
	1427.00	-23.1	H	3.0	37.3	1.0	-59.4	-13.0	-46.4	
	2140.50	-19.7	H	3.0	36.6	1.0	-55.2	-13.0	-42.2	
	2854.00	-19.0	H	3.0	36.4	1.0	-54.4	-13.0	-41.4	

LTE Band 5

UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement Company: LG Electronics Project #: 14I19592 Date: 12/18/2014 Test Engineer: R. Alegre Configuration: EUT/AC Charger/HS Location: Chamber C Mode: LTE_16QAM Band 5 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829									
1658.00	-27.6	V	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2487.00	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3316.00	-20.6	V	3.0	36.1	1.0	-55.7	-13.0	-42.7	
1658.00	-27.7	H	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2487.00	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3316.00	-22.3	H	3.0	36.1	1.0	-57.4	-13.0	-44.4	
Mid Ch, 836.5									
1673.00	-27.8	V	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2509.50	-23.2	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3346.00	-20.5	V	3.0	36.1	1.0	-55.6	-13.0	-42.6	
1673.00	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.50	-24.6	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3346.00	-21.8	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	
High Ch, 844									
1688.00	-27.5	V	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2532.00	-22.8	V	3.0	36.4	1.0	-58.2	-13.0	-45.2	
3376.00	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1688.00	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2532.00	-25.2	H	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3376.00	-22.2	H	3.0	36.1	1.0	-57.3	-13.0	-44.3	

UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement Company: LG Electronics Project #: 14I19592 Date: 12/18/2014 Test Engineer: R. Alegre Configuration: EUT/AC Charger/HS Location: Chamber C Mode: LTE_QPSK Band 5 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829									
1658.00	-27.9	V	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2487.00	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3316.00	-21.1	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1658.00	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2487.00	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3316.00	-21.2	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	
Mid Ch, 836.5									
1673.00	-27.6	V	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.50	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
3346.00	-20.9	V	3.0	36.1	1.0	-56.0	-13.0	-43.0	
1673.00	-26.9	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2509.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3346.00	-21.1	H	3.0	36.1	1.0	-56.2	-13.0	-43.2	
High Ch, 844									
1688.00	-27.2	V	3.0	37.0	1.0	-63.2	-13.0	-50.2	
2532.00	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3376.00	-20.5	V	3.0	36.1	1.0	-55.6	-13.0	-42.6	
1688.00	-27.7	H	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2532.00	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3376.00	-21.1	H	3.0	36.1	1.0	-56.2	-13.0	-43.2	

UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement Company: LG Electronics Project #: 14I19592 Date: 12/18/2014 Test Engineer: R. Alegre Configuration: EUT/AC Charger/HS Location: Chamber C Mode: LTE_16QAM Band 5 Harmonics, 5MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5									
1653.00	-27.6	V	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2479.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3306.00	-20.8	V	3.0	36.1	1.0	-56.0	-13.0	-43.0	
1653.00	-28.2	H	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2479.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3306.00	-21.7	H	3.0	36.1	1.0	-56.9	-13.0	-43.9	
Mid Ch, 836.5									
1673.00	-27.7	V	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2509.50	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3346.00	-21.2	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1673.00	-28.0	H	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2509.50	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3346.00	-21.3	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	
High Ch, 846.5									
1693.00	-28.2	V	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2539.50	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3386.00	-20.3	V	3.0	36.1	1.0	-55.4	-13.0	-42.4	
1693.00	-27.9	H	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2539.50	-25.1	H	3.0	36.4	1.0	-60.5	-13.0	-47.5	
3386.00	-22.2	H	3.0	36.1	1.0	-57.2	-13.0	-44.2	

	UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement									
	Company:		LG Electronics							
	Project #:		14I19592							
	Date:		12.18.14							
	Test Engineer:		R. Alegre							
	Configuration:		EUT/AC Charger/HS							
	Location:		Chamber C							
	Mode: LTE_QPSK Band 5 Harmonics, 3MHz Bandwidth									
				</						

UL Verification Services, Inc										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		14I19592								
Date:		12.18.14								
Test Engineer:		R. Alegre								
Configuration:		EUT/AC Charger/HS								
Location:		Chamber C								
Mode:		LTE_QPSK Band 5 Harmonics, 3MHz Bandwidth								
	f MHz	G readin (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Band	Low Ch, 825.5									
	1651.00	-28.1	V	3.0	37.0	1.0	-64.1	-13.0	-51.1	
	2476.50	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
LTE5	3302.00	-21.2	V	3.0	36.2	1.0	-56.4	-13.0	-43.4	
	1651.00	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
	2476.50	-24.3	H	3.0	36.4	1.0	-59.7	-13.0	-46.7	
3MHz	3302.00	-21.5	H	3.0	36.2	1.0	-56.6	-13.0	-43.6	
	Mid Ch, 836.5									
	1673.00	-27.8	V	3.0	37.0	1.0	-63.8	-13.0	-50.8	
QPSK	2509.50	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
	3346.00	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
	1673.00	-27.3	H	3.0	37.0	1.0	-63.3	-13.0	-50.3	
	2509.50	-25.4	H	3.0	36.4	1.0	-60.8	-13.0	-47.8	
	3346.00	-20.8	H	3.0	36.1	1.0	-55.9	-13.0	-42.9	
	High Ch, 847.5									
	1695.00	-27.9	V	3.0	37.0	1.0	-63.9	-13.0	-50.9	
	2542.50	-22.3	V	3.0	36.4	1.0	-57.7	-13.0	-44.7	
	3390.00	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
	1695.00	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
	2542.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
	3390.00	-21.0	H	3.0	36.1	1.0	-56.1	-13.0	-43.1	

Band LTE5 1.4MHz QPSK	UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement									
	Company:		LG Electronics							
	Project #:		14I19592							
	Date:		12/18/2014							
	Test Engineer:		R. Alegre							
	Configuration:		EUT/AC Charger/HS							
	Location:		Chamber C							
	Mode: LTE_QPSK Band 5 Harmonics, 1.4MHz Bandwidth									

LTE Band 4

UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement Company: LG Electronics Project #: 14I19592 Date: 12/18/2014 Test Engineer: R. Alegre Configuration: EUT/AC Charger/HS Location: Chamber C Mode: LTE_16QAM Band 4 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1715									
3430.00	-21.8	V	3.0	36.1	1.0	-56.9	-13.0	-43.9	
5145.00	-17.2	V	3.0	35.4	1.0	-51.6	-13.0	-38.6	
6860.00	-14.1	V	3.0	35.7	1.0	-48.7	-13.0	-35.7	
3430.00	-21.3	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	
5145.00	-15.5	H	3.0	35.4	1.0	-49.9	-13.0	-36.9	
6860.00	-11.9	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
Mid Ch, 1732.5									
3465.00	-21.4	V	3.0	36.0	1.0	-56.4	-13.0	-43.4	
5197.50	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6930.00	-13.9	V	3.0	35.7	1.0	-48.6	-13.0	-35.6	
3465.00	-20.4	H	3.0	36.0	1.0	-55.4	-13.0	-42.4	
5197.50	-16.2	H	3.0	35.4	1.0	-50.6	-13.0	-37.6	
6930.00	-12.0	H	3.0	35.7	1.0	-46.7	-13.0	-33.7	
High Ch, 1750									
3500.00	-21.8	V	3.0	36.0	1.0	-56.8	-13.0	-43.8	
5250.00	-16.5	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
7000.00	-13.5	V	3.0	35.7	1.0	-48.2	-13.0	-35.2	
3500.00	-21.8	H	3.0	36.0	1.0	-56.8	-13.0	-43.8	
5250.00	-15.8	H	3.0	35.4	1.0	-50.2	-13.0	-37.2	
7000.00	-12.5	H	3.0	35.7	1.0	-47.2	-13.0	-34.2	

UL Verification Services, Inc Above 1GHz High Frequency Substitution Measurement Company: LG Electronics Project #: 14I19592 Date: 12/18/2014 Test Engineer: R. Alegre Configuration: EUT/AC Charger/HS Location: Chamber C Mode: LTE_16QAM Band 4 Harmonics, 5MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-20.6	V	3.0	36.1	1.0	-55.7	-13.0	-42.7	
5137.50	-17.3	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
6850.00	-13.9	V	3.0	35.7	1.0	-48.5	-13.0	-35.5	
3425.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
5137.50	-17.2	H	3.0	35.4	1.0	-51.6	-13.0	-38.6	
6850.00	-12.5	H	3.0	35.7	1.0	-47.2	-13.0	-34.2	
Mid Ch, 1732.5									
3465.00	-21.7	V	3.0	36.0	1.0	-56.8	-13.0	-43.8	
5197.50	-16.7	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6930.00	-13.4	V	3.0	35.7	1.0	-48.1	-13.0	-35.1	
3465.00	-21.0	H	3.0	36.0	1.0	-56.0	-13.0	-43.0	
5197.50	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6930.00	-11.9	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
High Ch, 1752.5									
3505.00	-21.1	V	3.0	36.0	1.0	-56.1	-13.0	-43.1	
5257.50	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
7010.00	-13.3	V	3.0	35.7	1.0	-48.0	-13.0	-35.0	
3505.00	-21.7	H	3.0	36.0	1.0	-56.7	-13.0	-43.7	
5257.50	-15.8	H	3.0	35.4	1.0	-50.2	-13.0	-37.2	
7010.00	-11.8	H	3.0	35.7	1.0	-46.5	-13.0	-33.5	

LTE Band 2

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company:	LG Electronics									
Project #:	14I19592									
Date:	12/17/14									
Test Engineer:	L. Lara									
Configuration:	EUT w/ AC Adapter + HS, X-position (SN: 2014280)									
Mode:	LTE2_20M_16QAM									
Chamber Pre-amplifier Filter Limit 3m Chamber T343 8449B Filter 1 Part 24										
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2	Low Ch, 1860MHz									
	3.720	-17.3	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
	5.580	-16.6	V	3.0	34.7	1.0	-50.4	-13.0	-37.4	
20MHz	7.440	-10.5	V	3.0	34.9	1.0	-44.4	-13.0	-31.4	
	3.720	-10.1	H	3.0	35.4	1.0	-44.5	-13.0	-31.5	
16QAM	5.580	-14.3	H	3.0	34.7	1.0	-48.1	-13.0	-35.1	
	7.440	-11.7	H	3.0	34.9	1.0	-45.7	-13.0	-32.7	
	Mid Ch, 1880.0MHz									
	3.760	-18.8	V	3.0	35.3	1.0	-53.1	-13.0	-40.1	
	5.640	-14.2	V	3.0	34.7	1.0	-48.0	-13.0	-35.0	
	7.520	-12.4	V	3.0	34.9	1.0	-46.4	-13.0	-33.4	
	3.760	-15.5	H	3.0	35.3	1.0	-49.8	-13.0	-36.8	
	5.640	-13.7	H	3.0	34.7	1.0	-47.4	-13.0	-34.4	
	7.520	-12.0	H	3.0	34.9	1.0	-45.9	-13.0	-32.9	
	High Ch, 1900 MHz									
	3.800	-15.5	V	3.0	35.3	1.0	-49.8	-13.0	-36.8	
	5.700	-14.4	V	3.0	34.7	1.0	-48.1	-13.0	-35.1	
	7.600	-12.2	V	3.0	34.9	1.0	-46.2	-13.0	-33.2	
	3.800	-9.3	H	3.0	35.3	1.0	-43.6	-13.0	-30.6	
	5.700	-14.5	H	3.0	34.7	1.0	-48.2	-13.0	-35.2	
	7.600	-11.8	H	3.0	34.9	1.0	-45.7	-13.0	-32.7	
Rev. 03.03.09										
Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company:	LG Electronics									
Project #:	14I19592									
Date:	12/17/14									
Test Engineer:	L. Lara									
Configuration:	EUT w/ AC Adapter + HS, X-position (SN: 2014280)									
Mode:	LTE2_20M_QPSK									
Chamber Pre-amplifier Filter Limit 3m Chamber T343 8449B Filter 1 Part 24										
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2	Low Ch, 1860MHz									
	3.720	-17.4	V	3.0	35.4	1.0	-51.8	-13.0	-38.8	
	5.580	-16.1	V	3.0	34.7	1.0	-49.8	-13.0	-36.8	
20MHz	7.440	-9.0	V	3.0	34.9	1.0	-42.9	-13.0	-29.9	
	3.720	-9.0	H	3.0	35.4	1.0	-43.4	-13.0	-30.4	
	5.580	-13.7	H	3.0	34.7	1.0	-47.5	-13.0	-34.5	
QPSK	7.440	-11.2	H	3.0	34.9	1.0	-45.1	-13.0	-32.1	
	Mid Ch, 1880.0MHz									
	3.760	-19.3	V	3.0	35.3	1.0	-53.7	-13.0	-40.7	
	5.640	-14.3	V	3.0	34.7	1.0	-48.1	-13.0	-35.1	
	7.520	-13.0	V	3.0	34.9	1.0	-46.9	-13.0	-33.9	
	3.760	-14.8	H	3.0	35.3	1.0	-49.1	-13.0	-36.1	
	5.640	-14.7	H	3.0	34.7	1.0	-48.5	-13.0	-35.5	
	7.520	-11.8	H	3.0	34.9	1.0	-45.7	-13.0	-32.7	
	High Ch, 1900 MHz									
	3.800	-15.2	V	3.0	35.3	1.0	-49.5	-13.0	-36.5	
	5.700	-14.0	V	3.0	34.7	1.0	-47.7	-13.0	-34.7	
	7.600	-12.7	V	3.0	34.9	1.0	-46.6	-13.0	-33.6	
	3.800	-9.3	H	3.0	35.3	1.0	-43.6	-13.0	-30.6	
	5.700	-13.9	H	3.0	34.7	1.0	-47.6	-13.0	-34.6	
	7.600	-11.9	H	3.0	34.9	1.0	-45.8	-13.0	-32.8	
Rev. 03.03.09										
Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_15M_16QAM								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 15MHz 16QAM	Low Ch, 1857.5MHz									
	3.715	-17.7	V	3.0	35.4	1.0	-52.1	-13.0	-39.1	
	5.572	-16.6	V	3.0	34.7	1.0	-50.3	-13.0	-37.3	
	7.424	-13.0	V	3.0	34.9	1.0	-46.9	-13.0	-33.9	
	3.715	-14.4	H	3.0	35.4	1.0	-48.8	-13.0	-35.8	
	5.572	-14.8	H	3.0	34.7	1.0	-48.5	-13.0	-35.5	
	7.424	-12.0	H	3.0	34.9	1.0	-46.0	-13.0	-33.0	
	Mid Ch, 1880.0MHz									
	3.760	-18.5	V	3.0	35.3	1.0	-52.8	-13.0	-39.8	
	5.640	-13.7	V	3.0	34.7	1.0	-47.4	-13.0	-34.4	
	7.520	-12.7	V	3.0	34.9	1.0	-46.6	-13.0	-33.6	
	3.760	-13.3	H	3.0	35.3	1.0	-47.6	-13.0	-34.6	
	5.640	-14.0	H	3.0	34.7	1.0	-47.7	-13.0	-34.7	
	7.520	-11.6	H	3.0	34.9	1.0	-45.5	-13.0	-32.5	
	High Ch, 1902.5 MHz									
	3.805	-14.7	V	3.0	35.3	1.0	-49.0	-13.0	-36.0	
	5.707	-13.2	V	3.0	34.7	1.0	-46.9	-13.0	-33.9	
	7.610	-12.4	V	3.0	34.9	1.0	-46.4	-13.0	-33.4	
3.805	-13.1	H	3.0	35.3	1.0	-47.4	-13.0	-34.4		
5.707	-12.5	H	3.0	34.7	1.0	-46.2	-13.0	-33.2		
7.610	-11.3	H	3.0	34.9	1.0	-45.3	-13.0	-32.3		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_15M_QPSK								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 15MHz QPSK	Low Ch, 1857.5MHz									
	3.715	-18.0	V	3.0	35.4	1.0	-52.4	-13.0	-39.4	
	5.572	-16.1	V	3.0	34.7	1.0	-49.8	-13.0	-36.8	
	7.424	-12.9	V	3.0	34.9	1.0	-46.9	-13.0	-33.9	
	3.715	-15.0	H	3.0	35.4	1.0	-49.4	-13.0	-36.4	
	5.572	-15.3	H	3.0	34.7	1.0	-49.0	-13.0	-36.0	
	7.424	-11.9	H	3.0	34.9	1.0	-45.8	-13.0	-32.8	
	Mid Ch, 1880.0MHz									
	3.760	-18.1	V	3.0	35.3	1.0	-52.4	-13.0	-39.4	
	5.640	-14.2	V	3.0	34.7	1.0	-47.9	-13.0	-34.9	
	7.520	-12.9	V	3.0	34.9	1.0	-46.8	-13.0	-33.8	
	3.760	-13.5	H	3.0	35.3	1.0	-47.9	-13.0	-34.9	
	5.640	-13.8	H	3.0	34.7	1.0	-47.5	-13.0	-34.5	
	7.520	-11.2	H	3.0	34.9	1.0	-45.1	-13.0	-32.1	
	High Ch, 1902.5 MHz									
	3.805	-14.7	V	3.0	35.3	1.0	-49.0	-13.0	-36.0	
	5.707	-11.7	V	3.0	34.7	1.0	-45.5	-13.0	-32.5	
	7.610	-11.9	V	3.0	34.9	1.0	-45.8	-13.0	-32.8	
3.805	-13.2	H	3.0	35.3	1.0	-47.5	-13.0	-34.5		
5.707	-12.5	H	3.0	34.7	1.0	-46.2	-13.0	-33.2		
7.610	-11.4	H	3.0	34.9	1.0	-45.4	-13.0	-32.4		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

	UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement									
	Company: LG Electronics Project #: 14I19592 Date: 12/17/14 Test Engineer: L. Lara Configuration: EUT w/ AC Adapter + HS, X-position (SN: 2014280) Mode: LTE2_10M_16QAM									
	Chamber	Pre-amplifier	Filter	Limit						
	3m Chamber	T343 8449B	Filter 1	Part 24						
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2	Low Ch, 1855.0MHz									
	3.735	-10.0	V	3.0	35.4	1.0	-44.3	-13.0	-31.3	
	5.615	-14.5	V	3.0	34.7	1.0	-48.2	-13.0	-35.2	
10MHz	7.495	-10.2	V	3.0	34.9	1.0	-44.1	-13.0	-31.1	
	3.735	-9.2	H	3.0	35.4	1.0	-43.6	-13.0	-30.6	
16QAM	5.615	-15.2	H	3.0	34.7	1.0	-48.9	-13.0	-35.9	
	7.495	-11.8	H	3.0	34.9	1.0	-45.8	-13.0	-32.8	
	Mid Ch, 1880.0MHz									
	3.760	-16.0	V	3.0	35.3	1.0	-50.4	-13.0	-37.4	
	5.640	-15.7	V	3.0	34.7	1.0	-49.4	-13.0	-36.4	
	7.520	-12.4	V	3.0	34.9	1.0	-46.3	-13.0	-33.3	
	3.760	-15.5	H	3.0	35.3	1.0	-49.9	-13.0	-36.9	
	5.640	-13.2	H	3.0	34.7	1.0	-46.9	-13.0	-33.9	
	7.520	-11.6	H	3.0	34.9	1.0	-45.6	-13.0	-32.6	
	High Ch, 1908 MHz									
	3.816	-13.0	V	3.0	35.3	1.0	-47.3	-13.0	-34.3	
	5.724	-9.9	V	3.0	34.7	1.0	-43.6	-13.0	-30.6	
	7.632	-12.7	V	3.0	34.9	1.0	-46.7	-13.0	-33.7	
	3.816	-13.2	H	3.0	35.3	1.0	-47.4	-13.0	-34.4	
	5.724	-12.2	H	3.0	34.7	1.0	-46.0	-13.0	-33.0	
	7.632	-11.3	H	3.0	34.9	1.0	-45.2	-13.0	-32.2	
	Rev. 03.03.09									
	Note: No other emissions were detected above the system noise floor.									

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_10M_QPSK								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 22					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 10MHz QPSK	Low Ch, 1855.0MHz									
	3.735	-10.0	V	3.0	35.4	1.0	-44.4	-13.0	-31.4	
	5.615	-15.1	V	3.0	34.7	1.0	-48.9	-13.0	-35.9	
	7.495	-11.2	V	3.0	34.9	1.0	-45.1	-13.0	-32.1	
	3.735	-9.0	H	3.0	35.4	1.0	-43.4	-13.0	-30.4	
	5.615	-14.3	H	3.0	34.7	1.0	-48.1	-13.0	-35.1	
	7.495	-11.7	H	3.0	34.9	1.0	-45.7	-13.0	-32.7	
	Mid Ch, 1880.0MHz									
	3.760	-17.3	V	3.0	35.3	1.0	-51.6	-13.0	-38.6	
	5.640	-15.0	V	3.0	34.7	1.0	-48.7	-13.0	-35.7	
	7.520	-12.9	V	3.0	34.9	1.0	-46.8	-13.0	-33.8	
	3.760	-17.7	H	3.0	35.3	1.0	-52.0	-13.0	-39.0	
	5.640	-14.2	H	3.0	34.7	1.0	-47.9	-13.0	-34.9	
	7.520	-11.9	H	3.0	34.9	1.0	-45.8	-13.0	-32.8	
	High Ch, 1908 MHz									
	3.816	-13.9	V	3.0	35.3	1.0	-48.2	-13.0	-35.2	
	5.724	-10.2	V	3.0	34.7	1.0	-43.9	-13.0	-30.9	
	7.632	-12.3	V	3.0	34.9	1.0	-46.3	-13.0	-33.3	
3.816	-14.5	H	3.0	35.3	1.0	-48.8	-13.0	-35.8		
5.724	-11.8	H	3.0	34.7	1.0	-45.5	-13.0	-32.5		
7.632	-11.1	H	3.0	34.9	1.0	-45.1	-13.0	-32.1		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_5M_16QAM								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 5MHz 16QAM	Low Ch, 1852.4MHz									
	3.705	-11.8	V	3.0	35.4	1.0	-46.2	-13.0	-33.2	
	5.557	-12.8	V	3.0	34.7	1.0	-46.5	-13.0	-33.5	
	7.409	-10.0	V	3.0	34.9	1.0	-43.9	-13.0	-30.9	
	3.705	-10.2	H	3.0	35.4	1.0	-44.6	-13.0	-31.6	
	5.557	-14.3	H	3.0	34.7	1.0	-48.0	-13.0	-35.0	
	7.409	-5.4	H	3.0	34.9	1.0	-39.3	-13.0	-26.3	
	Mid Ch, 1880.0MHz									
	3.760	-12.6	V	3.0	35.3	1.0	-46.9	-13.0	-33.9	
	5.640	-10.6	V	3.0	34.7	1.0	-44.4	-13.0	-31.4	
	7.520	-12.7	V	3.0	34.9	1.0	-46.6	-13.0	-33.6	
	3.760	-13.2	H	3.0	35.3	1.0	-47.6	-13.0	-34.6	
	5.640	-14.3	H	3.0	34.7	1.0	-48.0	-13.0	-35.0	
	7.520	-11.2	H	3.0	34.9	1.0	-45.1	-13.0	-32.1	
	High Ch, 1907.6 MHz									
	3.820	-12.7	V	3.0	35.3	1.0	-47.0	-13.0	-34.0	
	5.723	-12.5	V	3.0	34.7	1.0	-46.2	-13.0	-33.2	
	7.630	-11.7	V	3.0	34.9	1.0	-45.6	-13.0	-32.6	
3.820	-12.9	H	3.0	35.3	1.0	-47.2	-13.0	-34.2		
5.723	-12.1	H	3.0	34.7	1.0	-45.8	-13.0	-32.8		
7.630	-11.6	H	3.0	34.9	1.0	-45.5	-13.0	-32.5		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_5M_QPSK								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 5MHz QPSK	Low Ch, 1851.0MHz									
	3.702	-11.2	V	3.0	35.4	1.0	-45.6	-13.0	-32.6	
	5.553	-13.5	V	3.0	34.7	1.0	-47.2	-13.0	-34.2	
	7.404	-10.9	V	3.0	34.9	1.0	-44.9	-13.0	-31.9	
	3.702	-9.5	H	3.0	35.4	1.0	-43.9	-13.0	-30.9	
	5.553	-14.3	H	3.0	34.7	1.0	-48.1	-13.0	-35.1	
	7.404	-5.8	H	3.0	34.9	1.0	-39.7	-13.0	-26.7	
	Mid Ch, 1880.0MHz									
	3.760	-13.2	V	3.0	35.3	1.0	-47.5	-13.0	-34.5	
	5.640	-11.6	V	3.0	34.7	1.0	-45.3	-13.0	-32.3	
	7.520	-12.2	V	3.0	34.9	1.0	-46.1	-13.0	-33.1	
	3.760	-13.2	H	3.0	35.3	1.0	-47.5	-13.0	-34.5	
	5.640	-14.9	H	3.0	34.7	1.0	-48.6	-13.0	-35.6	
	7.520	-10.9	H	3.0	34.9	1.0	-44.9	-13.0	-31.9	
	High Ch, 1908 MHz									
	3.816	-13.1	V	3.0	35.3	1.0	-47.4	-13.0	-34.4	
	5.724	-12.5	V	3.0	34.7	1.0	-46.3	-13.0	-33.3	
	7.632	-11.9	V	3.0	34.9	1.0	-45.8	-13.0	-32.8	
3.816	-13.8	H	3.0	35.3	1.0	-48.1	-13.0	-35.1		
5.724	-11.6	H	3.0	34.7	1.0	-45.3	-13.0	-32.3		
7.632	-11.4	H	3.0	34.9	1.0	-45.4	-13.0	-32.4		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_5M_16QAM								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band LTE2 3MHz 16QAM	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 1851.5MHz									
	3.703	-11.8	V	3.0	35.4	1.0	-46.2	-13.0	-33.2	
	5.554	-13.3	V	3.0	34.7	1.0	-47.0	-13.0	-34.0	
	7.406	-11.5	V	3.0	34.9	1.0	-45.4	-13.0	-32.4	
	3.703	-10.4	H	3.0	35.4	1.0	-44.8	-13.0	-31.8	
	5.554	-14.7	H	3.0	34.7	1.0	-48.4	-13.0	-35.4	
	7.406	-5.3	H	3.0	34.9	1.0	-39.2	-13.0	-26.2	
	Mid Ch, 1880.0MHz									
	3.760	-14.2	V	3.0	35.3	1.0	-48.5	-13.0	-35.5	
	5.640	-15.9	V	3.0	34.7	1.0	-49.6	-13.0	-36.6	
	7.520	-12.7	V	3.0	34.9	1.0	-46.6	-13.0	-33.6	
	3.760	-15.2	H	3.0	35.3	1.0	-49.6	-13.0	-36.6	
	5.640	-14.6	H	3.0	34.7	1.0	-48.3	-13.0	-35.3	
	7.520	-11.7	H	3.0	34.9	1.0	-45.7	-13.0	-32.7	
	High Ch, 1908.5 MHz									
	3.817	-13.0	V	3.0	35.3	1.0	-47.3	-13.0	-34.3	
	5.725	-14.4	V	3.0	34.7	1.0	-48.2	-13.0	-35.2	
	7.634	-11.8	V	3.0	34.9	1.0	-45.7	-13.0	-32.7	
	3.817	-12.5	H	3.0	35.3	1.0	-46.8	-13.0	-33.8	
	5.725	-12.1	H	3.0	34.7	1.0	-45.9	-13.0	-32.9	
	7.634	-8.6	H	3.0	34.9	1.0	-42.5	-13.0	-29.5	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_5M_QPSK								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band LTE2 3MHz QPSK	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.5MHz										
	3.703	-12.1	V	3.0	35.4	1.0	-46.5	-13.0	-33.5	
	5.554	-13.5	V	3.0	34.7	1.0	-47.2	-13.0	-34.2	
	7.406	-11.5	V	3.0	34.9	1.0	-45.4	-13.0	-32.4	
	3.703	-10.4	H	3.0	35.4	1.0	-44.8	-13.0	-31.8	
	5.554	-14.3	H	3.0	34.7	1.0	-48.0	-13.0	-35.0	
	7.406	-5.9	H	3.0	34.9	1.0	-39.9	-13.0	-26.9	
Mid Ch, 1880.0MHz										
	3.760	-13.2	V	3.0	35.3	1.0	-47.5	-13.0	-34.5	
	5.640	-16.3	V	3.0	34.7	1.0	-50.0	-13.0	-37.0	
	7.520	-12.9	V	3.0	34.9	1.0	-46.9	-13.0	-33.9	
	3.760	-15.1	H	3.0	35.3	1.0	-49.5	-13.0	-36.5	
	5.640	-14.8	H	3.0	34.7	1.0	-48.6	-13.0	-35.6	
	7.520	-11.5	H	3.0	34.9	1.0	-45.4	-13.0	-32.4	
High Ch, 1908.5 MHz										
	3.817	-12.8	V	3.0	35.3	1.0	-47.1	-13.0	-34.1	
	5.725	-13.6	V	3.0	34.7	1.0	-47.4	-13.0	-34.4	
	7.634	-11.3	V	3.0	34.9	1.0	-45.3	-13.0	-32.3	
	3.817	-13.1	H	3.0	35.3	1.0	-47.4	-13.0	-34.4	
	5.725	-12.0	H	3.0	34.7	1.0	-45.7	-13.0	-32.7	
	7.634	-7.2	H	3.0	34.9	1.0	-41.2	-13.0	-28.2	
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_1.4M_QPSK								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 1.4MHz 16QAM	Low Ch, 1851.0MHz									
	3.702	-10.9	V	3.0	35.4	1.0	-45.3	-13.0	-32.3	
	5.553	-14.6	V	3.0	34.7	1.0	-48.4	-13.0	-35.4	
	7.404	-11.5	V	3.0	34.9	1.0	-45.4	-13.0	-32.4	
	3.702	-9.4	H	3.0	35.4	1.0	-43.8	-13.0	-30.8	
	5.553	-16.0	H	3.0	34.7	1.0	-49.7	-13.0	-36.7	
	7.404	-10.4	H	3.0	34.9	1.0	-44.3	-13.0	-31.3	
	Mid Ch, 1880.0MHz									
	3.760	-9.8	V	3.0	35.3	1.0	-44.2	-13.0	-31.2	
	5.640	-12.9	V	3.0	34.7	1.0	-46.7	-13.0	-33.7	
	7.520	-12.2	V	3.0	34.9	1.0	-46.1	-13.0	-33.1	
	3.760	-8.3	H	3.0	35.3	1.0	-42.6	-13.0	-29.6	
	5.640	-11.1	H	3.0	34.7	1.0	-44.8	-13.0	-31.8	
	7.520	-11.7	H	3.0	34.9	1.0	-45.7	-13.0	-32.7	
	High Ch, 1908 MHz									
	3.816	-9.0	V	3.0	35.3	1.0	-43.3	-13.0	-30.3	
	5.724	-8.9	V	3.0	34.7	1.0	-42.6	-13.0	-29.6	
	7.632	-12.3	V	3.0	34.9	1.0	-46.2	-13.0	-33.2	
3.816	-9.5	H	3.0	35.3	1.0	-43.8	-13.0	-30.8		
5.724	-13.7	H	3.0	34.7	1.0	-47.5	-13.0	-34.5		
7.632	-11.7	H	3.0	34.9	1.0	-45.7	-13.0	-32.7		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

UL Verification Services Chamber C Above 1GHz High Frequency Substitution Measurement										
Company: Project #: Date: Test Engineer: Configuration: Mode:		LG Electronics 14I19592 12/17/14 L. Lara EUT w/ AC Adapter + HS, X-position (SN: 2014280) LTE2_1.4M_QPSK								
		Chamber	Pre-amplifier	Filter	Limit					
		3m Chamber	T343 8449B	Filter 1	Part 24					
Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE2 1.4MHz QPSK	Low Ch, 1851.0MHz									
	3.702	-11.3	V	3.0	35.4	1.0	-45.7	-13.0	-32.7	
	5.553	-14.1	V	3.0	34.7	1.0	-47.8	-13.0	-34.8	
	7.404	-11.5	V	3.0	34.9	1.0	-45.4	-13.0	-32.4	
	3.702	-10.2	H	3.0	35.4	1.0	-44.6	-13.0	-31.6	
	5.553	-16.2	H	3.0	34.7	1.0	-49.9	-13.0	-36.9	
	7.404	-10.8	H	3.0	34.9	1.0	-44.7	-13.0	-31.7	
	Mid Ch, 1880.0MHz									
	3.760	-10.9	V	3.0	35.3	1.0	-45.2	-13.0	-32.2	
	5.640	-13.1	V	3.0	34.7	1.0	-46.8	-13.0	-33.8	
	7.520	-13.0	V	3.0	34.9	1.0	-46.9	-13.0	-33.9	
	3.760	-9.5	H	3.0	35.3	1.0	-43.8	-13.0	-30.8	
	5.640	-12.3	H	3.0	34.7	1.0	-46.0	-13.0	-33.0	
	7.520	-11.6	H	3.0	34.9	1.0	-45.5	-13.0	-32.5	
	High Ch, 1908 MHz									
	3.816	-9.0	V	3.0	35.3	1.0	-43.3	-13.0	-30.3	
	5.724	-8.9	V	3.0	34.7	1.0	-42.6	-13.0	-29.6	
	7.632	-12.5	V	3.0	34.9	1.0	-46.4	-13.0	-33.4	
3.816	-9.4	H	3.0	35.3	1.0	-43.6	-13.0	-30.6		
5.724	-13.8	H	3.0	34.7	1.0	-47.6	-13.0	-34.6		
7.632	-11.1	H	3.0	34.9	1.0	-45.1	-13.0	-32.1		
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										