Band	BW (MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
LTE4	3	QPSK	1711.5	-18.473	-13	-5.473
			1732.5	-27.119	-13	-14.119
			1753.5	-27.091	-13	-14.091
		16QAM	1711.5	-27.308	-13	-14.308
			1732.5	-27.127	-13	-14.127
			1753.5	-27.217	-13	-14.217
	1.4	QPSK	1710.7	-26.669	-13	-13.669
			1732.5	-27.693	-13	-14.693
			1754.3	-26.507	-13	-13.507
		16QAM	1710.7	-27.523	-13	-14.523
			1732.5	-28.03	-13	-15.03
			1754.3	-27.415	-13	-14.415

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LTE Band 5

Band	BW (MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
LTE5	10	QPSK	829	-21.997	-13	-8.997
			836.5	-20.871	-13	-7.871
			844	-20.36	-13	-7.36
		16QAM	829	-24.995	-13	-11.995
			836.5	-25.545	-13	-12.545
			844	-19.359	-13	-6.359
	5	QPSK	826.5	-23.301	-13	-10.301
			836.5	-21.069	-13	-8.069
			846.5	-25.888	-13	-12.888
		16QAM	826.5	-26.024	-13	-13.024
			836.5	-25.929	-13	-12.929
			846.5	-21.103	-13	-8.103
	3	QPSK	825.5	-26.662	-13	-13.662
			836.5	-27.054	-13	-14.054
			847.5	-28.06	-13	-15.06
		16QAM	825.5	-27.124	-13	-14.124
			836.5	-27.543	-13	-14.543
			847.5	-27.65	-13	-14.65
	1.4	QPSK	824.7	-27.199	-13	-14.199
			836.5	-26.906	-13	-13.906
			848.3	-27.6	-13	-14.6
		16QAM	824.7	-26.945	-13	-13.945
			836.5	-27.228	-13	-14.228
			848.3	-26.873	-13	-13.873

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LTE Band 13

Band	BW (MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
LTE13	10	QPSK	782	-24.379	-13	-11.379
		16QAM	782	-27.71	-13	-14.71
	5	QPSK	779.5	-27.692	-13	-14.692
			782	-26.199	-13	-13.199
			784.5	-27.906	-13	-14.906
		16QAM	779.5	-27.603	-13	-14.603
			782	-27.71	-13	-14.71
			784.5	-27.312	-13	-14.312

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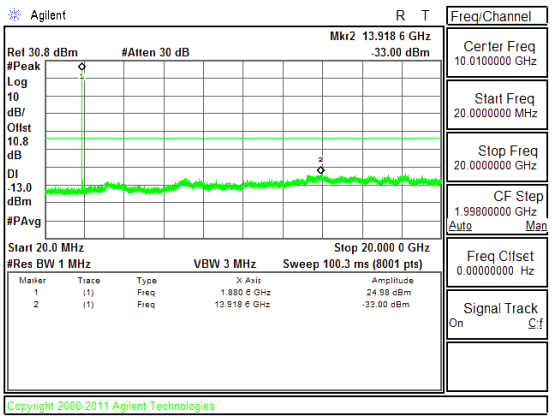
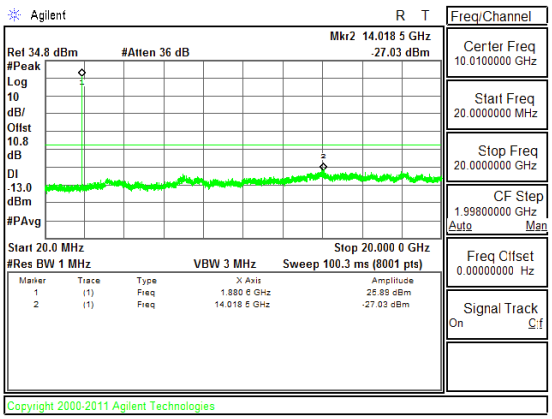
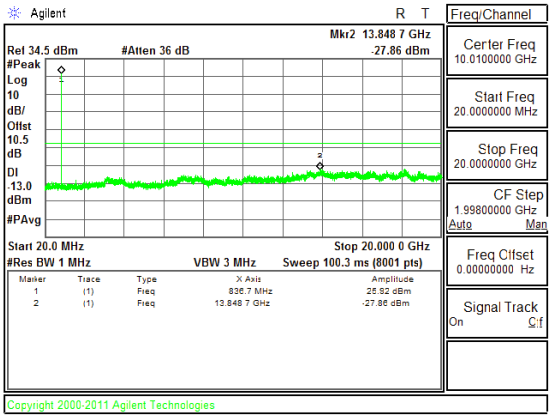
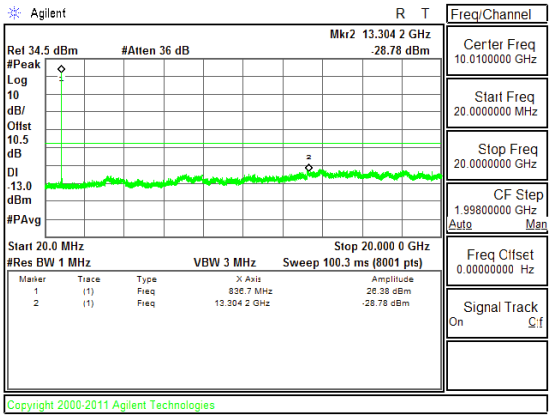
11.3.2. OUT OF BAND EMISSIONS PLOTS

CDMA

Band BC1	 Band BC1 CSE Mid channel	 Band BC1 1xRTT CSE Mid channel

Band BC0	 Band BC0 CSE Mid channel	 Band BC0 1xRTT CSE Mid channel

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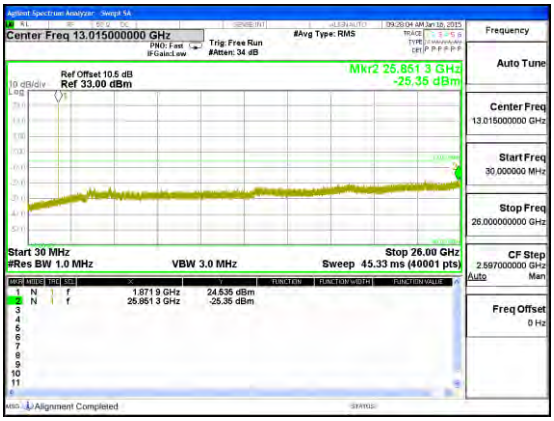
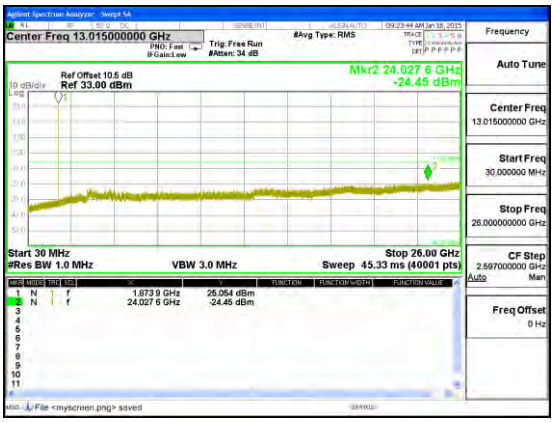
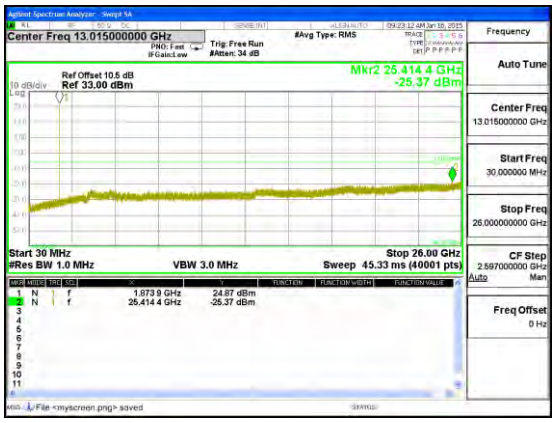
LTE Band 2

Band LTE2 20MHz 16QAM	 Band LTE2 20MHz CSE 16QAM Mid channel	 Band LTE2 20MHz CSE QPSK Mid channel
Band LTE2 15MHz 16QAM	 Band LTE2 15MHz CSE 16QAM Mid channel	 Band LTE2 15MHz CSE QPSK Mid channel

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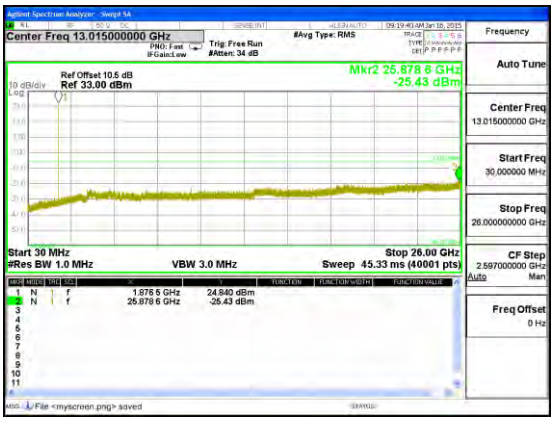
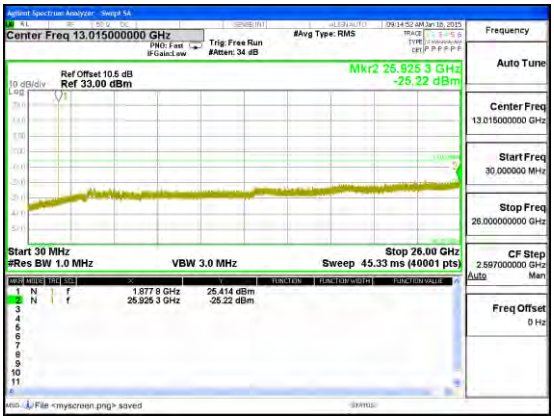
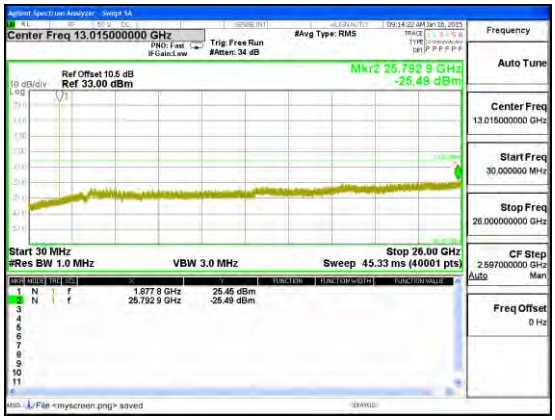
Band LTE2 10MHz 16QAM	 Band LTE2 10MHz CSE 16QAM Mid channel	 Band LTE2 10MHz CSE QPSK Mid channel
Band LTE2 5MHz 16QAM	 Band LTE2 5MHz CSE 16QAM Mid channel	 Band LTE2 5MHz CSE QPSK Mid channel

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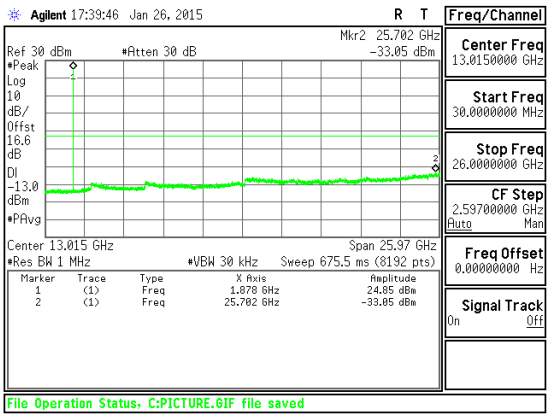
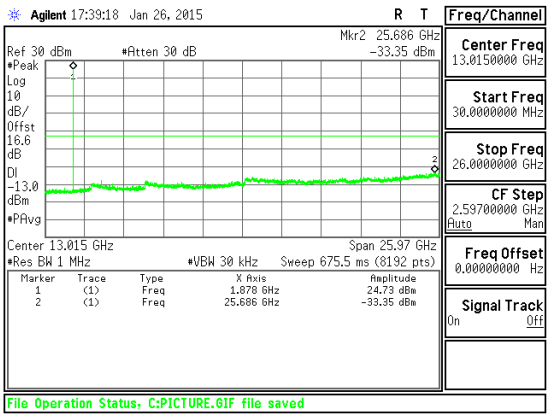
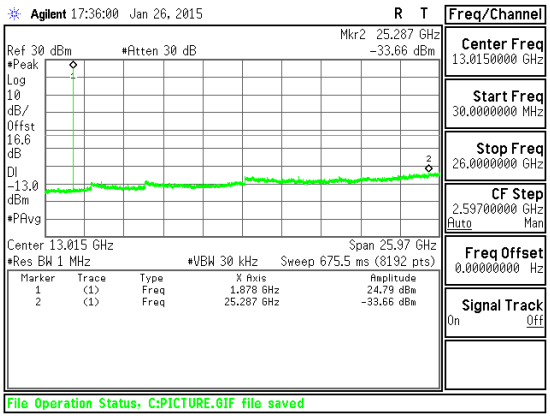
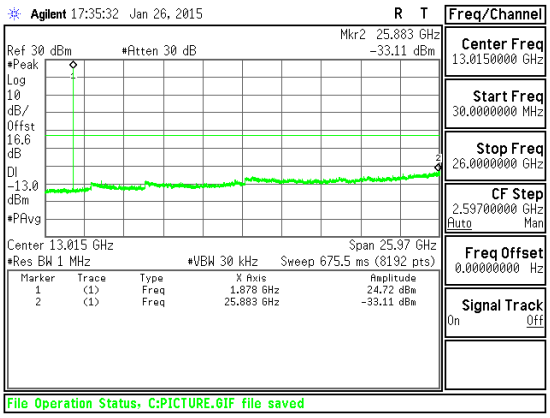
Band LTE2 3MHz 16QAM	 Band LTE2 3MHz 16QAM Mid channel	 Band LTE2 3MHz QPSK Mid channel
Band LTE2 1.4MHz 16QAM	 Band LTE2 1.4MHz 16QAM Mid channel	 Band LTE2 1.4MHz QPSK Mid channel

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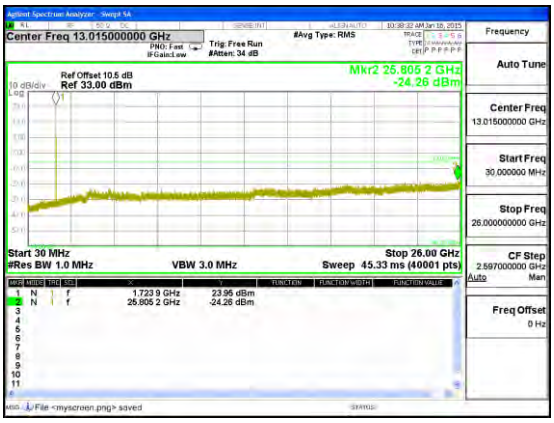
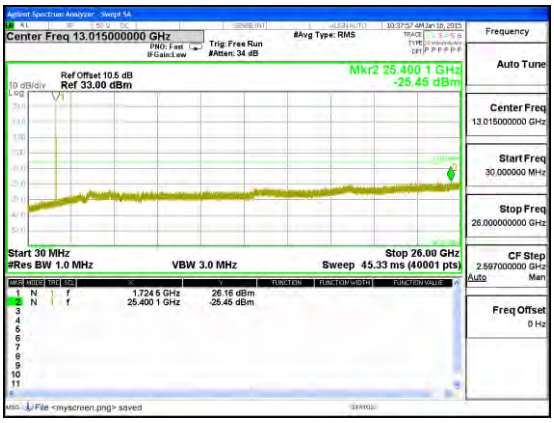
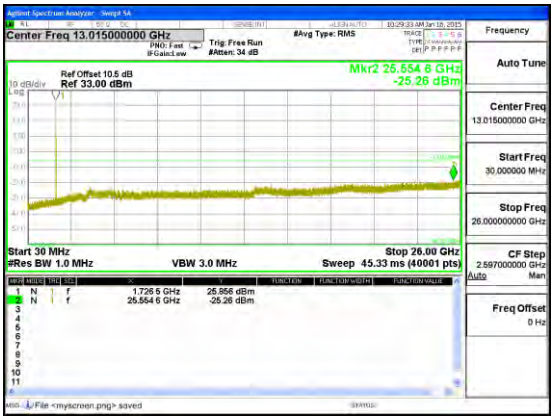
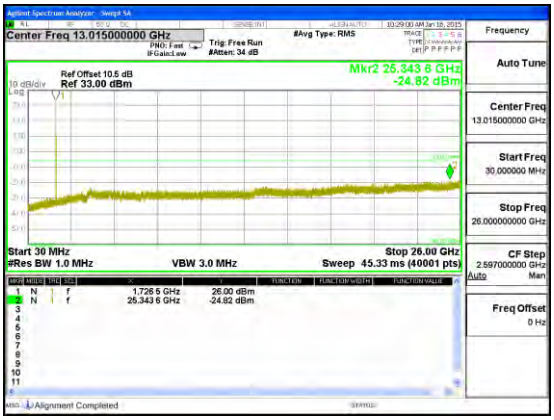
LTE Band 4

Band LTE4 20MHz 16QAM	 Band LTE4 20MHz CSE 16QAM Mid channel	 Band LTE4 20MHz CSE QPSK Mid channel
Band LTE4 15MHz 16QAM	 Band LTE4 15MHz CSE 16QAM Mid channel	 Band LTE4 15MHz CSE QPSK Mid channel

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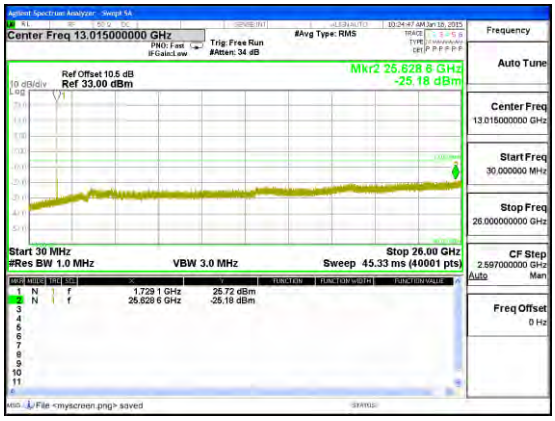
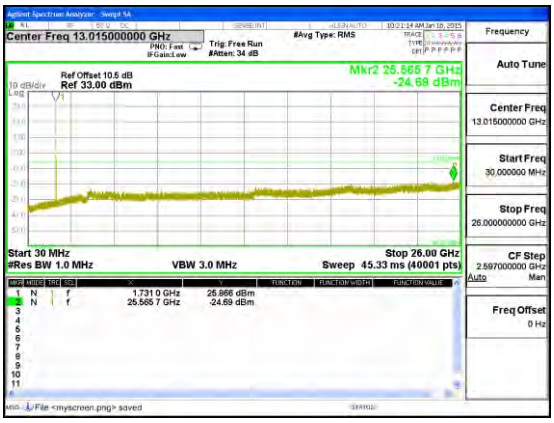
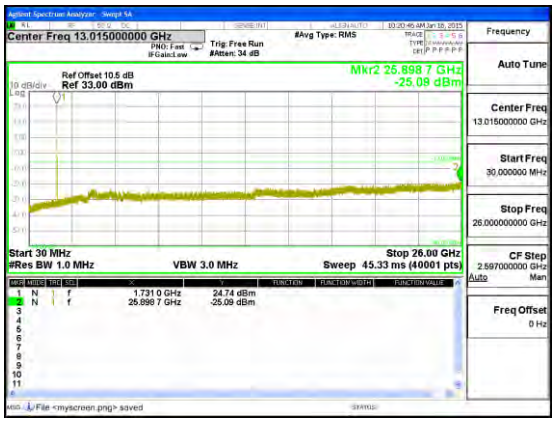
Band LTE4 10MHz 16QAM	 Band LTE4 10MHz CSE 16QAM Mid channel	 Band LTE4 10MHz CSE QPSK Mid channel
Band LTE4 5MHz 16QAM	 Band LTE4 5MHz CSE 16QAM Mid channel	 Band LTE4 5MHz CSE QPSK Mid channel

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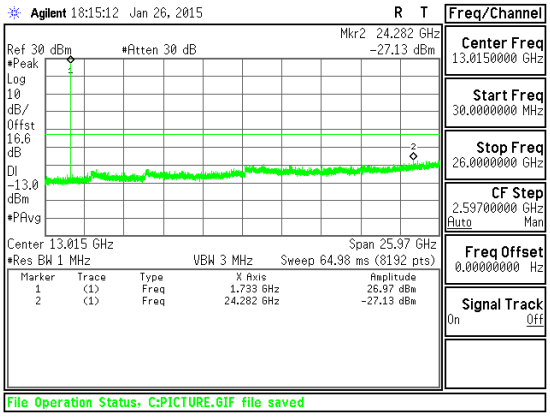
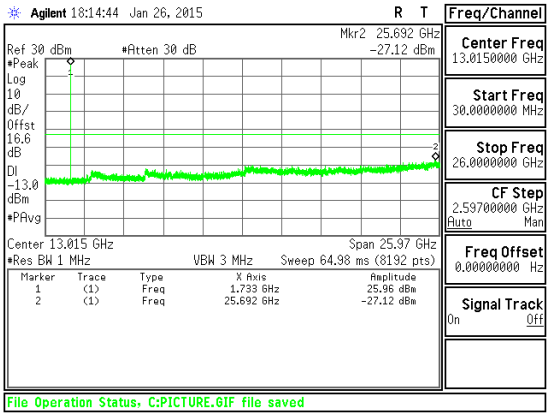
Band LTE4 3MHz 16QAM

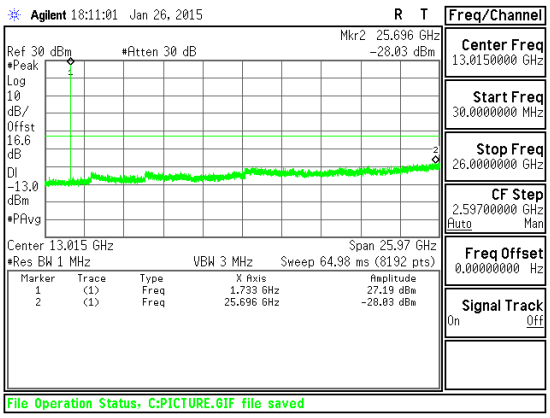


Band LTE4 3MHz 16QAM Mid channel

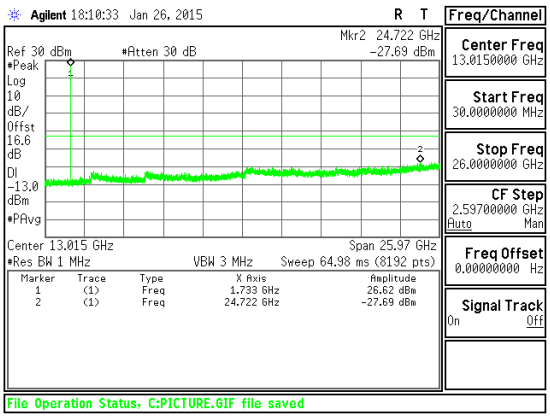


Band LTE4 3MHz QPSK Mid channel

Band LTE4 1.4MHz 16QAM



Band LTE4 1.4MHz 16QAM Mid channel



Band LTE4 1.4MHz QPSK Mid channel

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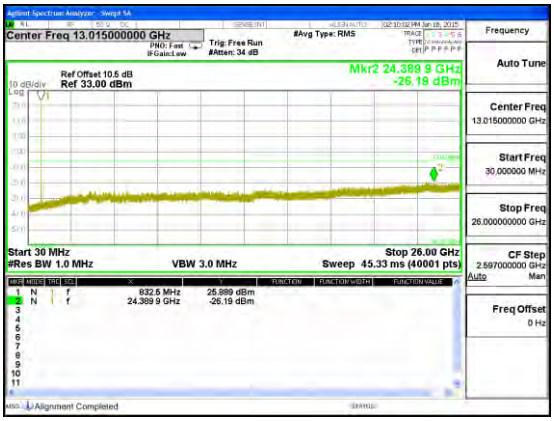
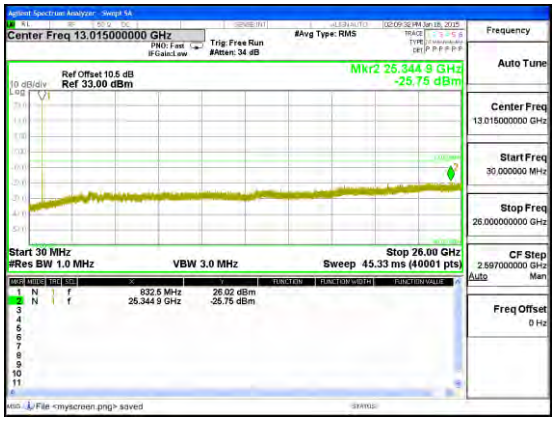
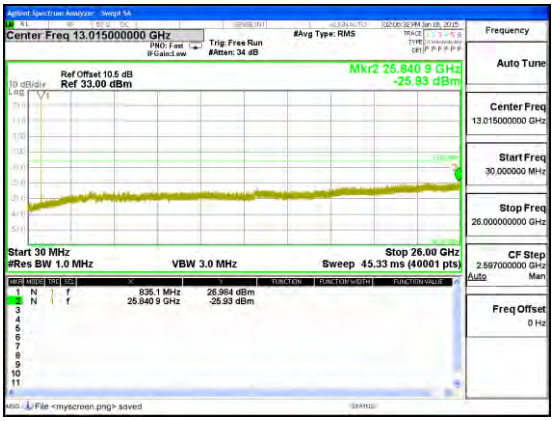
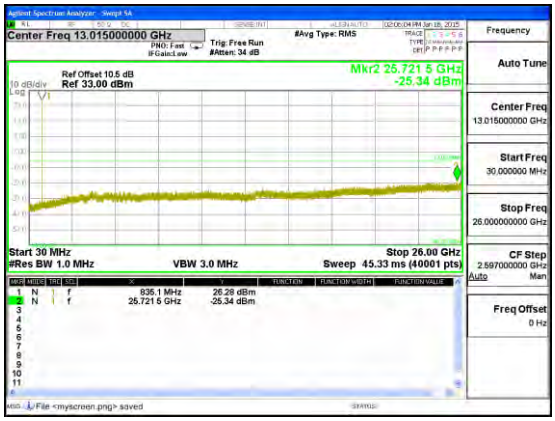
LTE Band 5

Band LTE5 10MHz 16QAM	 Band LTE5 10MHz CSE 16QAM Mid channel	 Band LTE5 10MHz CSE QPSK Mid channel
Band LTE5 5MHz 16QAM	 Band LTE5 5MHz CSE 16QAM Mid channel	 Band LTE5 5MHz CSE QPSK Mid channel

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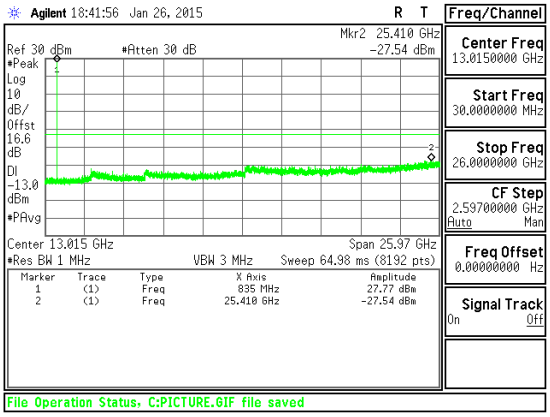
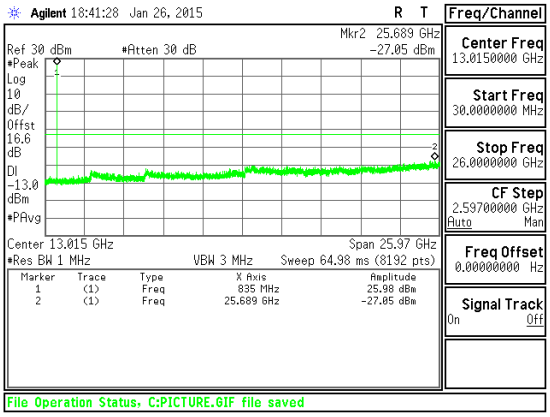
Band LTE5 3MHz 16QAM

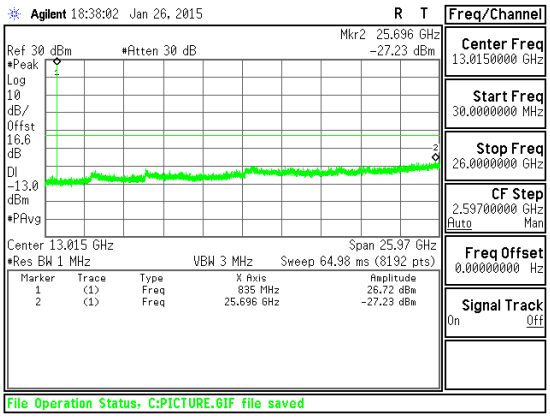


Band LTE5 3MHz CSE 16QAM Mid channel

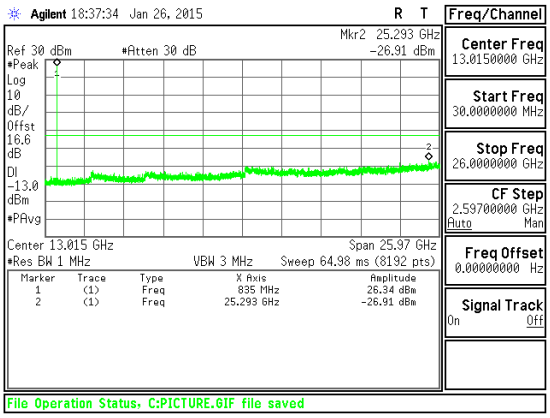


Band LTE5 3MHz CSE QPSK Mid channel

Band LTE5 1.4MHz 16QAM



Band LTE5 1.4MHz CSE 16QAM Mid channel



Band LTE5 1.4MHz CSE QPSK Mid channel

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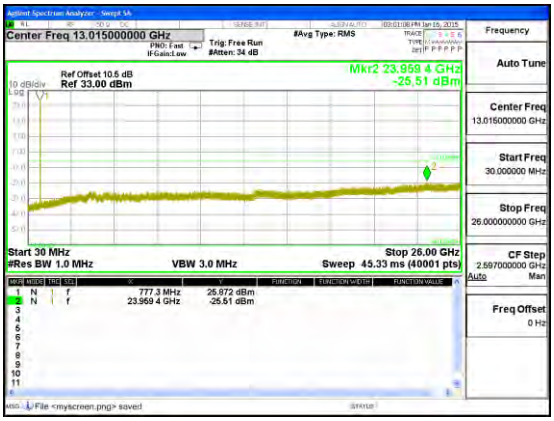
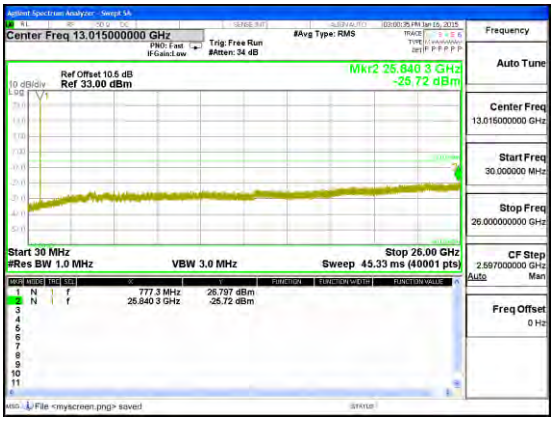
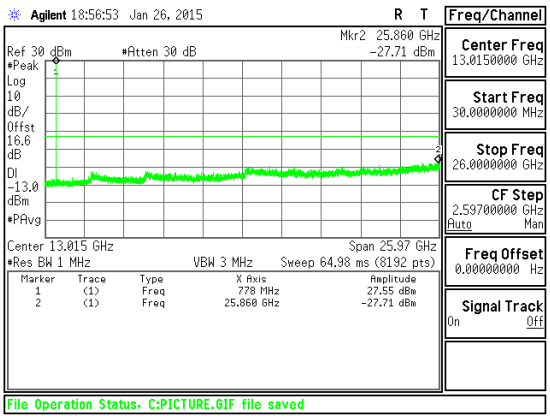
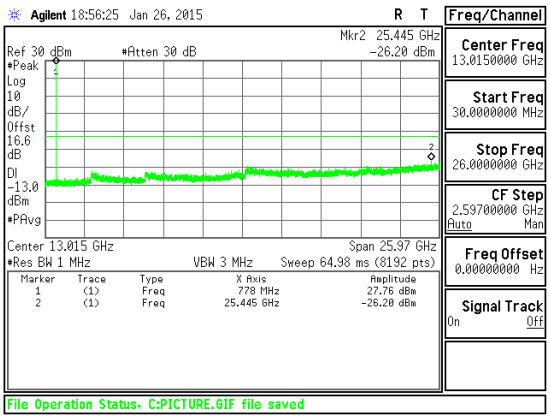
LTE Band 13

Band LTE13 10MHz 16QAM	 Band LTE13 10MHz CSE 16QAM Mid channel	 Band LTE13 10MHz CSE QPSK Mid channel
Band LTE13 5MHz 16QAM	 Band LTE13 5MHz CSE 16QAM Mid channel	 Band LTE13 5MHz CSE QPSK Mid channel

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12. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §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 v02r02

MODES TESTED

CDMA, LTE

RESULTS

See the following pages.

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12.1.1. FREQUENCY STABILITY RESULTS

LTE Band 2, Freq: 1880MHz– MID CHANNEL

Reference Frequency: PCS Mid Channel 1880 MHz @ 20°C Limit: to stay +- 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1879.999992	0.000	2.5
3.80	40	1879.999992	0.000	2.5
3.80	30	1879.999992	0.000	2.5
3.80	***20***	**1879.999992**	**0**	***2.5***
3.80	10	1879.999994	-0.001	2.5
3.80	0	1879.999992	0.000	2.5
3.80	-10	1879.999994	-0.001	2.5
3.80	-20	1879.999990	0.001	2.5
3.80	-30	1879.999993	0.000	2.5

Reference Frequency: PCS Mid Channel 1880 MHz @ 20°C Limit: to stay +- 2.5 ppm = 4700.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
3.80	***20***	***1879.999992***	***0***	***2.5***
4.37	20	1879.999991	*0.001*	2.5
3.23(End of volt)	20	1879.999992	*0.000*	2.5

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LTE Band 4, Freq: 1732.5 MHz– MID CHANNEL

Reference Frequency: PCS Mid Channel 1732.5 MHz @ 20°C Limit: to stay +- 2.5 ppm = 4331.250 Hz				
Power Supply (Vdc)	**Environment Temperature (°C)**	**Frequency Deviation Measureed with Time Elapse**		
		(MHz)	**Delta (ppm)**	**Limit (ppm)**
3.80	50	1732.500004	-0.006	2.5
3.80	40	1732.499994	0.000	2.5
3.80	30	1732.499994	-0.001	2.5
3.80	***20***	**1732.499993**	**0**	***2.5***
3.80	10	1732.499994	-0.001	2.5
3.80	0	1732.500006	-0.008	2.5
3.80	-10	1732.499993	0.000	2.5
3.80	-20	1732.499995	-0.001	2.5
3.80	-30	1732.499993	0.000	2.5

Reference Frequency: PCS Mid Channel 1732.5 MHz @ 20°C Limit: to stay +- 2.5 ppm = 4331.250 Hz				
Power Supply (Vdc)	**Environment Temperature (°C)**	**Frequency Deviation Measureed with Time Elapse**		
		(MHz)	**Delta (ppm)**	**Limit (ppm)**
3.80	***20***	***1732.499993***	***0***	***2.5***
4.37	20	1732.499994	*0.000*	2.5
3.23(End of volt)	20	1732.500005	*-0.007*	2.5

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LTE Band 5, Freq: 836.5 MHz– MID CHANNEL

Reference Frequency: PCS Mid Channel		836.5	MHz @ 20°C	
Limit: to stay +- 2.5 ppm =		2091.250	Hz	
Power Supply (Vdc)	**Environment Temperature (°C)**	**Frequency Deviation Measureed with Time Elapse**		
		(MHz)	**Delta (ppm)**	**Limit (ppm)**
3.80	50	836.499996	0.010	2.5
3.80	40	836.499996	0.010	2.5
3.80	30	836.499995	0.011	2.5
3.80	***20***	**836.500004**	**0**	***2.5***
3.80	10	836.499997	0.009	2.5
3.80	0	836.499996	0.009	2.5
3.80	-10	836.499996	0.010	2.5
3.80	-20	836.500003	0.002	2.5
3.80	-30	836.499996	0.010	2.5

Reference Frequency: PCS Mid Channel		836.5	MHz @ 20°C	
Limit: to stay +- 2.5 ppm =		2091.250	Hz	
Power Supply (Vdc)	**Environment Temperature (°C)**	**Frequency Deviation Measureed with Time Elapse**		
		(MHz)	**Delta (ppm)**	**Limit (ppm)**
3.80	***20***	***836.500004***	***0***	***2.5***
4.37	20	836.5000032	*0.001*	2.5
3.23(End of volt)	20	836.4999963	*0.009*	2.5

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LTE Band 13, Freq: 782 MHz– MID CHANNEL

Reference Frequency: PCS Mid Channel 782 MHz @ 20°C Limit: to stay +- 2.5 ppm = 1955.000 Hz				
Power Supply (Vdc)	**Environment Temperature (°C)**	**Frequency Deviation Measureed with Time Elapse**		
		(MHz)	**Delta (ppm)**	**Limit (ppm)**
3.80	50	781.999996	0.000	2.5
3.80	40	781.999997	-0.001	2.5
3.80	30	781.999997	-0.002	2.5
3.80	***20***	**781.999996**	**0**	***2.5***
3.80	10	782.000005	-0.011	2.5
3.80	0	781.999996	-0.001	2.5
3.80	-10	782.000003	-0.009	2.5
3.80	-20	781.999996	-0.001	2.5
3.80	-30	781.999997	-0.001	2.5

Reference Frequency: PCS Mid Channel 782 MHz @ 20°C Limit: to stay +- 2.5 ppm = 1955.000 Hz				
Power Supply (Vdc)	**Environment Temperature (°C)**	**Frequency Deviation Measureed with Time Elapse**		
		(MHz)	**Delta (ppm)**	**Limit (ppm)**
3.80	***20***	***781.999996***	***0***	***2.5***
4.37	20	782.0000028	*-0.009*	2.5
3.23(End of volt)	20	782.0000029	*-0.009*	2.5

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13. RADIATED TEST RESULTS

13.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27 and § 90.635.

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
24.232(c) - Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.
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)
27.50(h) - (2) Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.(LTE B41 & 7)
90.635(b) - The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw). (LTE B26)
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 v02r02

For peak power measurement with a PSA:

a) Set the RBW ≥ OBW; b) Set VBW ≥ 3 × RBW; c) Set span ≥ 2 x RBW; d) Sweep time = auto couple; e) Detector = peak; f) Ensure that the number of measurement points ≥ 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 ≥ 3 x RBW; d) Set number of points in sweep ≥ 2 × 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

TEST RESULTS

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13.1.1. ERP/EIRP Results

CDMA

Band	Mode	Channel	f(MHz)	EIRP	
				dBm	mW
BC1	1xRTT	25	1851.25	25.51	355.63
		600	1880	25.71	372.39
		1175	1908.75	25.486	353.67
	EVDO REL. 0	25	1851.25	25.05	319.89
		600	1880	25.33	341.19
		1175	1908.75	25.29	338.06

Band	Mode	Channel	f(MHz)	ERP	
				dBm	mW
BC0	1xRTT	1013	824.7	20.361	108.67
		384	836.52	20.701	117.52
		777	848.31	20.761	119.15
	EVDO REL. 0	1013	824.7	20.04	100.93
		384	836.52	20.28	106.66
		777	848.31	20.70	117.49

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13.1.1. LTE ERP/EIRP Results

LTE Band 2

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE2	20	QPSK	1/0	1860	25.02	317.69
			1/0	1880	25.14	326.59
			1/0	1900	24.976	314.49
		16QAM	1/0	1860	24.01	251.77
			1/0	1880	24.09	256.45
			1/0	1900	23.956	248.66
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE2	15	QPSK	1/0	1857.5	24.9	309.03
			1/0	1880	25.16	328.1
			1/0	1902.5	24.936	311.6
		16QAM	1/0	1857.5	23.91	246.04
			1/0	1880	24.08	255.86
			1/0	1902.5	23.98	250.03
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE2	10	QPSK	1/0	1855	24.96	313.33
			1/0	1880	24.89	308.32
			1/0	1905	25.136	326.29
		16QAM	1/0	1855	24.02	252.35
			1/0	1880	23.9	245.47
			1/0	1905	24.146	259.78

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Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE2	5	QPSK	1/0	1852.5	24.69	294.44
			1/0	1880	24.99	315.5
			1/0	1907.5	24.866	306.62
		16QAM	1/0	1852.5	23.8	239.88
			1/0	1880	24.04	253.51
			1/0	1907.5	23.936	247.51
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE2	3	QPSK	1/0	1851.5	25.35	342.77
			1/0	1880	23.81	240.44
			1/0	1908.5	25.28	337.29
		16QAM	1/0	1851.5	24.22	264.24
			1/0	1880	22.81	190.99
			1/0	1908.5	24.04	253.51
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE2	1.4	QPSK	1/0	1850.7	24.81	302.69
			1/0	1880	25.4	346.74
			1/0	1909.3	24.73	297.17
		16QAM	1/0	1850.7	24.13	258.82
			1/0	1880	24.33	271.02
			1/0	1909.3	23.51	224.39

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LTE Band 4

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE4	20	QPSK	1/0	1720	24.71	295.8
			1/0	1732.5	25.19	330.37
			1/0	1745	24.62	289.73
		16QAM	1/0	1720	23.75	237.14
			1/0	1732.5	24.16	260.62
			1/0	1745	23.61	229.61
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE4	15	QPSK	1/0	1717.5	24.75	298.54
			1/0	1732.5	25.54	358.1
			1/0	1747.5	24.71	295.8
		16QAM	1/0	1717.5	23.8	239.88
			1/0	1732.5	24.2	263.03
			1/0	1747.5	23.56	226.99
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE4	10	QPSK	1/0	1715	24.62	289.73
			1/0	1732.5	25.1	323.59
			1/0	1750	24.52	283.14
		16QAM	1/0	1715	23.62	230.14
			1/0	1732.5	24.13	258.82
			1/0	1750	24.38	274.16

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Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE4	5	QPSK	1/0	1712.5	24.66	292.42
			1/0	1732.5	25.11	324.34
			1/0	1752.5	24.42	276.69
		16QAM	1/0	1712.5	23.66	232.27
			1/0	1732.5	24.13	258.82
			1/0	1752.5	23.39	218.27
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE4	3	QPSK	1/0	1711.5	24.11	257.63
			1/0	1732.5	25.79	379.31
			1/0	1753.5	24.76	299.23
		16QAM	1/0	1711.5	22.94	196.79
			1/0	1732.5	24.57	286.42
			1/0	1753.5	23.85	242.66
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	EIRP	
					dBm	mW
LTE4	1.4	QPSK	1/0	1710.7	24.70	295.12
			1/0	1732.5	25.58	361.41
			1/0	1754.3	26.03	400.87
		16QAM	1/0	1710.7	23.67	232.81
			1/0	1732.5	24.29	268.53
			1/0	1754.3	24.84	304.79

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LTE Band 5

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP	
					dBm	mW
LTE5	10	QPSK	1/0	829	20.691	117.25
			1/0	836.5	20.901	123.06
			1/0	844	20.911	123.34
		16QAM	1/0	829	19.651	92.28
			1/0	836.5	19.951	98.88
			1/0	844	19.971	99.33
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP	
					dBm	mW
LTE5	5	QPSK	1/0	826.5	20.691	117.25
			1/0	836.5	20.691	117.25
			1/0	846.5	20.871	122.21
		16QAM	1/0	826.5	19.511	89.35
			1/0	836.5	19.761	94.65
			1/0	846.5	19.871	97.07
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP	
					dBm	mW
LTE5	3	QPSK	1/0	825.5	21.11	129.12
			1/0	836.5	20.57	114.02
			1/0	847.5	21.46	139.96
		16QAM	1/0	825.5	20.18	104.23
			1/0	836.5	19.51	89.33
			1/0	847.5	20.23	105.44
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP	
					dBm	mW
LTE5	1.4	QPSK	1/0	824.7	21.38	137.40
			1/0	836.5	20.55	113.50
			1/0	848.3	21.27	133.97
		16QAM	1/0	824.7	20.11	102.57
			1/0	836.5	19.96	99.08
			1/0	848.3	20.24	105.68

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LTE Band 13

Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP	
					dBm	mW
LTE13	10	QPSK	1/0	782.00	21.49	140.93
		16QAM	1/0	782.00	20.62	115.35
Band	BW (MHz)	Mode	RB/RB Size	f (MHz)	ERP	
					dBm	mW
LTE13	5	QPSK	1/0	779.5	20.32	107.65
			1/0	782	20.39	109.40
			1/0	784.5	20.51	112.46
		16QAM	1/0	779.5	18.69	73.96
			1/0	782	19.56	90.36
			1/0	784.5	19.43	87.70

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13.1.2. ERP/EIRP PLOTS

CDMA

Band	
BC1 EVDO	

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: CDMA EVDO BC1

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable 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								
1.85125	11.4	V	0.85	8.01	18.53	33.0	-14.5	
1.85125	17.9	H	0.85	8.01	25.05	33.0	-8.0	
Mid Ch								
1.880	10.9	V	0.85	8.01	18.05	33.0	-14.9	
1.880	18.2	H	0.85	8.01	25.33	33.0	-7.7	
High Ch								
1.90875	11.4	V	0.85	8.01	18.52	33.0	-14.5	
1.90875	18.1	H	0.85	8.01	25.29	33.0	-7.7	

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Band

BC1

1xRTT

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT only X-position (SN: 2031611)
Mode: CDMA RTT BC1

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable 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								
1.85125	11.5	V	0.85	8.01	18.63	33.0	-14.4	
1.85125	18.4	H	0.85	8.01	25.51	33.0	-7.5	
Mid Ch								
1.880	11.1	V	0.85	8.01	18.28	33.0	-14.7	
1.880	18.6	H	0.85	8.01	25.71	33.0	-7.3	
High Ch								
1.90875	11.6	V	0.85	8.01	18.71	33.0	-14.3	
1.90875	18.3	H	0.85	8.01	25.49	33.0	-7.5	

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Band

BC0

EVDO

High Frequency Substitution Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: CDMA EVDO BC0

Test Equipment:
Receiving: T243, and Chamber B 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								
824.70	12.46	V	0.9	0.0	11.56	38.5	-26.9	
824.70	20.94	H	0.9	0.0	20.04	38.5	-18.4	
Mid Ch								
836.52	12.04	V	0.9	0.0	11.14	38.5	-27.3	
836.52	21.18	H	0.9	0.0	20.28	38.5	-18.2	
High Ch								
848.31	12.40	V	0.9	0.0	11.50	38.5	-26.9	
848.31	21.60	H	0.9	0.0	20.70	38.5	-17.7	

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Band

BC0

1xRTT

High Frequency Substitution Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT only X-position (SN: 2031611)
Mode: CDMA RTT BC0

Test Equipment:
Receiving: T243, and Chamber B 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								
824.70	12.70	V	0.9	0.0	11.80	38.5	-26.6	
824.70	21.26	H	0.9	0.0	20.36	38.5	-18.1	
Mid Ch								
836.52	12.65	V	0.9	0.0	11.75	38.5	-26.7	
836.52	21.60	H	0.9	0.0	20.70	38.5	-17.7	
High Ch								
848.31	12.80	V	0.9	0.0	11.90	38.5	-26.5	
848.31	21.66	H	0.9	0.0	20.76	38.5	-17.7	

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LTE Band 2

Band

LTE2

20MHz

16QAM

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	9.3	V	0.85	8.01	16.50	33.0	-16.5	
1.860	16.9	H	0.85	8.01	24.01	33.0	-9.0	
Mid Ch								
1.880	9.3	V	0.85	8.01	16.48	33.0	-16.5	
1.880	16.9	H	0.85	8.01	24.09	33.0	-8.9	
High Ch								
1.900	9.6	V	0.85	8.01	16.79	33.0	-16.2	
1.900	16.8	H	0.85	8.01	23.96	33.0	-9.0	

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Band

LTE2

20MHz

QPSK

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	10.2	V	0.85	8.01	17.39	33.0	-15.6	
1.860	17.9	H	0.85	8.01	25.02	33.0	-8.0	
Mid Ch								
1.880	10.0	V	0.85	8.01	17.19	33.0	-15.8	
1.880	18.0	H	0.85	8.01	25.14	33.0	-7.9	
High Ch								
1.900	10.4	V	0.85	8.01	17.54	33.0	-15.5	
1.900	17.8	H	0.85	8.01	24.98	33.0	-8.0	

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Band

LTE2

15MHz

16QAM

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	9.3	V	0.85	8.01	16.50	33.0	-16.5	
1.858	16.8	H	0.85	8.01	23.91	33.0	-9.1	
Mid Ch								
1.880	9.1	V	0.85	8.01	16.25	33.0	-16.7	
1.880	16.9	H	0.85	8.01	24.08	33.0	-8.9	
High Ch								
1.903	9.4	V	0.85	8.01	16.55	33.0	-16.4	
1.903	16.8	H	0.85	8.01	23.98	33.0	-9.0	

Rev. 3.17.11

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Band

LTE2

15MHz

QPSK

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	10.4	V	0.85	8.01	17.55	33.0	-15.5	
1.858	17.7	H	0.85	8.01	24.90	33.0	-8.1	
Mid Ch								
1.880	9.9	V	0.85	8.01	17.10	33.0	-15.9	
1.880	18.0	H	0.85	8.01	25.16	33.0	-7.8	
High Ch								
1.903	10.5	V	0.85	8.01	17.67	33.0	-15.3	
1.903	17.8	H	0.85	8.01	24.94	33.0	-8.1	

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Band

LTE2

10MHz

16QAM

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	9.2	V	0.85	8.01	16.34	33.0	-16.7	
1.855	16.9	H	0.85	8.01	24.02	33.0	-9.0	
Mid Ch								
1.880	8.9	V	0.85	8.01	16.06	33.0	-16.9	
1.880	16.7	H	0.85	8.01	23.90	33.0	-9.1	
High Ch								
1.905	9.4	V	0.85	8.01	16.59	33.0	-16.4	
1.905	17.0	H	0.85	8.01	24.15	33.0	-8.9	

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Band

LTE2

10MHz

QPSK

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	10.3	V	0.85	8.01	17.46	33.0	-15.5	
1.855	17.8	H	0.85	8.01	24.96	33.0	-8.0	
Mid Ch								
1.880	10.1	V	0.85	8.01	17.27	33.0	-15.7	
1.880	17.7	H	0.85	8.01	24.89	33.0	-8.1	
High Ch								
1.905	10.7	V	0.85	8.01	17.86	33.0	-15.1	
1.905	18.0	H	0.85	8.01	25.14	33.0	-7.9	

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Band

LTE2

5MHz

16QAM

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	9.5	V	0.85	8.01	16.64	33.0	-16.4	
1.853	16.6	H	0.85	8.01	23.80	33.0	-9.2	
Mid Ch								
1.880	9.5	V	0.85	8.01	16.63	33.0	-16.4	
1.880	16.9	H	0.85	8.01	24.04	33.0	-9.0	
High Ch								
1.908	9.4	V	0.85	8.01	16.55	33.0	-16.4	
1.908	16.8	H	0.85	8.01	23.94	33.0	-9.1	

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Band

LTE2

5MHz

QPSK

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only X-position
Mode: 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	10.6	V	0.85	8.01	17.78	33.0	-15.2	
1.853	17.5	H	0.85	8.01	24.69	33.0	-8.3	
Mid Ch								
1.880	10.3	V	0.85	8.01	17.49	33.0	-15.5	
1.880	17.8	H	0.85	8.01	24.99	33.0	-8.0	
High Ch								
1.908	10.5	V	0.85	8.01	17.63	33.0	-15.4	
1.908	17.7	H	0.85	8.01	24.87	33.0	-8.1	

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Band

LTE2

3MHz

16QAM

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE Band_2_3MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft SMA Cable Warehouse

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1.852	16.5	V	0.85	8.01	23.63	33.0	-9.4	
1.852	17.1	H	0.85	8.01	24.22	33.0	-8.8	
Mid Ch								
1.880	15.4	V	0.85	8.01	22.60	33.0	-10.4	
1.880	15.7	H	0.85	8.01	22.81	33.0	-10.2	
High Ch								
1.909	15.2	V	0.85	8.01	22.40	33.0	-10.6	
1.909	16.9	H	0.85	8.01	24.04	33.0	-9.0	

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Band

LTE2

3MHz

QPSK

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE Band_2_3MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft SMA Cable 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	17.6	V	0.85	8.01	24.75	33.0	-8.3	
1.852	18.2	H	0.85	8.01	25.35	33.0	-7.7	
Mid Ch								
1.880	16.5	V	0.85	8.01	23.63	33.0	-9.4	
1.880	16.7	H	0.85	8.01	23.81	33.0	-9.2	
High Ch								
1.909	16.6	V	0.85	8.01	23.71	33.0	-9.3	
1.909	18.1	H	0.85	8.01	25.28	33.0	-7.7	

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Band

LTE2

1.4MHz

16QAM

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE Band 2_1.4MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft SMA Cable 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	16.7	V	0.85	8.01	23.87	33.0	-9.1	
1.851	17.0	H	0.85	8.01	24.13	33.0	-8.9	
Mid Ch								
1.880	14.9	V	0.85	8.01	22.06	33.0	-10.9	
1.880	17.2	H	0.85	8.01	24.33	33.0	-8.7	
High Ch								
1.909	13.6	V	0.85	8.01	20.80	33.0	-12.2	
1.909	16.3	H	0.85	8.01	23.51	33.0	-9.5	

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Band

LTE2

1.4MHz

QPSK

High Frequency Fundamental Measurement
UL Verification Services Chamber B

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE Band 2_1.4MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft SMA Cable 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	17.6	V	0.85	8.01	24.75	33.0	-8.3	
1.851	17.7	H	0.85	8.01	24.81	33.0	-8.2	
Mid Ch								
1.880	15.8	V	0.85	8.01	22.97	33.0	-10.0	
1.880	18.2	H	0.85	8.01	25.40	33.0	-7.6	
High Ch								
1.909	15.0	V	0.85	8.01	22.17	33.0	-10.8	
1.909	17.6	H	0.85	8.01	24.73	33.0	-8.3	

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LTE Band 4

Band

LTE4

20MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_20MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1720.00	15.75	V	0.90	8.30	23.15	30.0	-6.9	
1720.00	16.35	H	0.90	8.30	23.75	30.0	-6.3	
Mid Ch								
1732.50	14.22	V	0.90	8.20	21.52	30.0	-8.5	
1732.50	16.86	H	0.90	8.20	24.16	30.0	-5.8	
High Ch								
1745.00	14.36	V	0.90	8.20	21.66	30.0	-8.3	
1745.00	16.31	H	0.90	8.20	23.61	30.0	-6.4	

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Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

20MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_20MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1720.00	16.79	V	0.90	8.30	24.19	30.0	-5.8	
1720.00	17.31	H	0.90	8.30	24.71	30.0	-5.3	
Mid Ch								
1732.50	15.59	V	0.90	8.20	22.89	30.0	-7.1	
1732.50	17.89	H	0.90	8.20	25.19	30.0	-4.8	
High Ch								
1745.00	15.50	V	0.90	8.20	22.80	30.0	-7.2	
1745.00	17.32	H	0.90	8.20	24.62	30.0	-5.4	

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Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

15MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_15MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1717.50	7.64	V	0.90	8.30	15.04	30.0	-15.0	
1717.50	16.40	H	0.90	8.30	23.80	30.0	-6.2	
Mid Ch								
1732.50	6.92	V	0.90	8.20	14.22	30.0	-15.8	
1732.50	16.90	H	0.90	8.20	24.20	30.0	-5.8	
High Ch								
1747.50	7.42	V	0.90	8.20	14.72	30.0	-15.3	
1747.50	16.26	H	0.90	8.20	23.56	30.0	-6.4	

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Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

15MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_15MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1717.50	8.49	V	0.90	8.30	15.89	30.0	-14.1	
1717.50	17.35	H	0.90	8.30	24.75	30.0	-5.3	
Mid Ch								
1732.50	8.59	V	0.90	8.20	15.89	30.0	-14.1	
1732.50	18.24	H	0.90	8.20	25.54	30.0	-4.5	
High Ch								
1747.50	8.55	V	0.90	8.20	15.85	30.0	-14.2	
1747.50	17.41	H	0.90	8.20	24.71	30.0	-5.3	

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Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

10MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_10MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B 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	7.51	V	0.90	8.30	14.91	30.0	-15.1	
1715.00	16.22	H	0.90	8.30	23.62	30.0	-6.4	
Mid Ch								
1732.50	7.42	V	0.90	8.20	14.72	30.0	-15.3	
1732.50	16.83	H	0.90	8.20	24.13	30.0	-5.9	
High Ch								
1750.00	7.06	V	0.90	8.20	14.36	30.0	-15.6	
1750.00	17.08	H	0.90	8.20	24.38	30.0	-5.6	

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Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

10MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_10MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B 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	8.57	V	0.90	8.30	15.97	30.0	-14.0	
1715.00	17.22	H	0.90	8.30	24.62	30.0	-5.4	
Mid Ch								
1732.50	8.29	V	0.90	8.20	15.59	30.0	-14.4	
1732.50	17.80	H	0.90	8.20	25.10	30.0	-4.9	
High Ch								
1750.00	8.47	V	0.90	8.20	15.77	30.0	-14.2	
1750.00	17.22	H	0.90	8.20	24.52	30.0	-5.5	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

5MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_5MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B 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								
1712.50	7.55	V	0.90	8.30	14.95	30.0	-15.1	
1712.50	16.26	H	0.90	8.30	23.66	30.0	-6.3	
Mid Ch								
1732.50	7.39	V	0.90	8.20	14.69	30.0	-15.3	
1732.50	16.83	H	0.90	8.20	24.13	30.0	-5.9	
High Ch								
1752.50	7.25	V	0.90	8.20	14.55	30.0	-15.5	
1752.50	16.09	H	0.90	8.20	23.39	30.0	-6.6	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

5MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: LTE_B4_5MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B 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								
1712.50	8.54	V	0.90	8.30	15.94	30.0	-14.1	
1712.50	17.26	H	0.90	8.30	24.66	30.0	-5.3	
Mid Ch								
1732.50	8.34	V	0.90	8.20	15.64	30.0	-14.4	
1732.50	17.81	H	0.90	8.20	25.11	30.0	-4.9	
High Ch								
1752.50	8.17	V	0.90	8.20	15.47	30.0	-14.5	
1752.50	17.12	H	0.90	8.20	24.42	30.0	-5.6	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

3MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE_B4_3MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft 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								
1711.50	15.36	V	0.90	8.30	22.76	30.0	-7.2	
1711.50	15.54	H	0.90	8.30	22.94	30.0	-7.1	
Mid Ch								
1732.50	14.93	V	0.90	8.20	22.23	30.0	-7.8	
1732.50	17.27	H	0.90	8.20	24.57	30.0	-5.4	
High Ch								
1753.50	14.88	V	0.90	8.20	22.18	30.0	-7.8	
1753.50	16.55	H	0.90	8.20	23.85	30.0	-6.2	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

3MHz

QPSK

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE_B4_3MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft 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								
1711.50	16.62	V	0.90	8.30	24.02	30.0	-6.0	
1711.50	16.71	H	0.90	8.30	24.11	30.0	-5.9	
Mid Ch								
1732.50	15.98	V	0.90	8.20	23.28	30.0	-6.7	
1732.50	18.49	H	0.90	8.20	25.79	30.0	-4.2	
High Ch								
1753.50	15.81	V	0.90	8.20	23.11	30.0	-6.9	
1753.50	17.46	H	0.90	8.20	24.76	30.0	-5.2	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

1.4MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE_B4_1.4MHz_16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft 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								
1710.70	15.60	V	0.90	8.30	23.00	30.0	-7.0	
1710.70	16.27	H	0.90	8.30	23.67	30.0	-6.3	
Mid Ch								
1732.50	14.29	V	0.90	8.20	21.59	30.0	-8.4	
1732.50	16.99	H	0.90	8.20	24.29	30.0	-5.7	
High Ch								
1754.30	15.46	V	0.90	8.20	22.76	30.0	-7.2	
1754.30	17.54	H	0.90	8.20	24.84	30.0	-5.2	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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Band

LTE4

1.4MHz

QPSK

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE_B4_1.4MHz_QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 6ft 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								
1710.70	17.03	V	0.90	8.30	24.43	30.0	-5.6	
1710.70	17.30	H	0.90	8.30	24.70	30.0	-5.3	
Mid Ch								
1732.50	15.71	V	0.90	8.20	23.01	30.0	-7.0	
1732.50	18.28	H	0.90	8.20	25.58	30.0	-4.4	
High Ch								
1754.30	16.22	V	0.90	8.20	23.52	30.0	-6.5	
1754.30	18.73	H	0.90	8.20	26.03	30.0	-4.0	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

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LTE Band 5

Band

LTE5

10MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE5 16QAM 10M

Test Equipment:
Receiving: Sunol T243, and 5m Chamber B N-type Cable
Substitution: Dipole T276, 4ft SMA Cable (SN: 244639 002) 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	11.59	V	0.9	0.0	10.69	38.5	-27.8	
829.00	20.55	H	0.9	0.0	19.65	38.5	-18.8	
Mid Ch								
836.50	11.32	V	0.9	0.0	10.42	38.5	-28.0	
836.50	20.85	H	0.9	0.0	19.95	38.5	-18.5	
High Ch								
844.00	11.65	V	0.9	0.0	10.75	38.5	-27.7	
844.00	20.87	H	0.9	0.0	19.97	38.5	-18.5	

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

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Band

LTE5

10MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE5 QPSK 10M

Test Equipment:
Receiving: Sunol T243, and 5m Chamber B N-type Cable
Substitution: Dipole T276, 4ft SMA Cable (SN: 244639 002) 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	12.57	V	0.9	0.0	11.67	38.5	-26.8	
829.00	21.59	H	0.9	0.0	20.69	38.5	-17.8	
Mid Ch								
836.50	12.25	V	0.9	0.0	11.35	38.5	-27.1	
836.50	21.80	H	0.9	0.0	20.90	38.5	-17.5	
High Ch								
844.00	12.66	V	0.9	0.0	11.76	38.5	-26.7	
844.00	21.81	H	0.9	0.0	20.91	38.5	-17.5	

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

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Band

LTE5

5MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE5 16QAM 5M

Test Equipment:
Receiving: Sunol T243, and 5m Chamber B N-type Cable
Substitution: Dipole T276, 4ft SMA Cable (SN: 244639 002) 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	11.44	V	0.9	0.0	10.54	38.5	-27.9	
826.50	20.41	H	0.9	0.0	19.51	38.5	-18.9	
Mid Ch								
836.50	11.52	V	0.9	0.0	10.62	38.5	-27.8	
836.50	20.66	H	0.9	0.0	19.76	38.5	-18.7	
High Ch								
846.50	11.44	V	0.9	0.0	10.54	38.5	-27.9	
846.50	20.77	H	0.9	0.0	19.87	38.5	-18.6	

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

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Band

LTE5

5MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/13/15
Test Engineer: R. Alegre
Configuration: EUT only
Mode: LTE5 QPSK 5M

Test Equipment:
Receiving: Sunol T243, and 5m Chamber B N-type Cable
Substitution: Dipole T276, 4ft SMA Cable (SN: 244639 002) 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	12.75	V	0.9	0.0	11.85	38.5	-26.6	
826.50	21.59	H	0.9	0.0	20.69	38.5	-17.8	
Mid Ch								
836.50	12.11	V	0.9	0.0	11.21	38.5	-27.2	
836.50	21.59	H	0.9	0.0	20.69	38.5	-17.8	
High Ch								
846.50	12.35	V	0.9	0.0	11.45	38.5	-27.0	
846.50	21.77	H	0.9	0.0	20.87	38.5	-17.6	

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

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Band

LTE5

3MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE5 3MHz 16QAM

Test Equipment:
Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT)
Substitution: Dipole T273, 6ft 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								
825.50	11.98	V	0.9	0.0	11.08	38.5	-27.4	
825.50	21.08	H	0.9	0.0	20.18	38.5	-18.3	
Mid Ch								
836.50	11.22	V	0.9	0.0	10.32	38.5	-28.1	
836.50	20.41	H	0.9	0.0	19.51	38.5	-18.9	
High Ch								
847.50	11.88	V	0.9	0.0	10.98	38.5	-27.5	
847.50	21.13	H	0.9	0.0	20.23	38.5	-18.2	

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

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Band

LTE5

3MHz

QPSK

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE5 3MHz QPSK

Test Equipment:
Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT)
Substitution: Dipole T273, 6ft 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								
825.50	12.92	V	0.9	0.0	12.02	38.5	-26.4	
825.50	22.01	H	0.9	0.0	21.11	38.5	-17.3	
Mid Ch								
836.50	11.81	V	0.9	0.0	10.91	38.5	-27.5	
836.50	21.47	H	0.9	0.0	20.57	38.5	-17.9	
High Ch								
847.50	12.92	V	0.9	0.0	12.02	38.5	-26.4	
847.50	22.36	H	0.9	0.0	21.46	38.5	-17.0	

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

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Band

LTE5

1.4MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE5 1.4MHz 16QAM

Test Equipment:
Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT)
Substitution: Dipole T273, 6ft 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								
824.70	12.02	V	0.9	0.0	11.12	38.5	-27.3	
824.70	21.01	H	0.9	0.0	20.11	38.5	-18.3	
Mid Ch								
836.50	10.77	V	0.9	0.0	9.87	38.5	-28.6	
836.50	20.86	H	0.9	0.0	19.96	38.5	-18.5	
High Ch								
848.30	11.92	V	0.9	0.0	11.02	38.5	-27.4	
848.30	21.14	H	0.9	0.0	20.24	38.5	-18.2	

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

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Band

LTE5

1.4MHz

QPSK

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE5 1.4MHz QPSK

Test Equipment:
Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT)
Substitution: Dipole T273, 6ft 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								
824.70	13.06	V	0.9	0.0	12.16	38.5	-26.3	
824.70	22.28	H	0.9	0.0	21.38	38.5	-17.1	
Mid Ch								
836.50	11.99	V	0.9	0.0	11.09	38.5	-27.4	
836.50	21.45	H	0.9	0.0	20.55	38.5	-17.9	
High Ch								
848.30	12.99	V	0.9	0.0	12.09	38.5	-26.4	
848.30	22.17	H	0.9	0.0	21.27	38.5	-17.2	

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

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LTE Band 13

Band

LTE13

10MHz

16QAM

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

Company: LG
Project #: 15I19783
Date: 01/14/15
Test Engineer: O. Stoelting
Configuration: X-Pos EUT
Mode: LTE13 10MHz 16QAM

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
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								
		V	0.9	0.0		38.5		
		H	0.9	0.0		38.5		
Mid Ch								
782.00	13.59	V	0.9	0.0	12.74	38.5	-25.7	
782.00	21.47	H	0.9	0.0	20.62	38.5	-17.8	
High Ch								
		V	0.9	0.0		38.5		
		H	0.9	0.0		38.5		

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

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Band

LTE13

10MHz

QPSK

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

Company: LG
Project #: 15I19783
Date: 01/14/15
Test Engineer: O. Stoelting
Configuration: X-Pos EUT
Mode: LTE13 10MHz QPSK

Test Equipment:
Receiving: Horn T345, and Chamber B SMA Cables
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								
N/A		V	0.9	0.0		38.5		
		H	0.9	0.0		38.5		
Mid Ch								
782.00	14.44	V	0.9	0.0	13.59	38.5	-24.9	
782.00	22.34	H	0.9	0.0	21.49	38.5	-17.0	
High Ch								
N/A		V	0.9	0.0		38.5		
N/A		H	0.9	0.0		38.5		

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

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Band

LTE13

5MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE_B13_5MHz_16QAM

Test Equipment:
Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT)
Substitution: Dipole T273, 6ft 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								
779.500	11.43	V	0.9	0.0	10.53	33.0	-22.5	
779.500	19.59	H	0.9	0.0	18.69	33.0	-14.3	
Mid Ch								
782.000	12.09	V	0.9	0.0	11.19	33.0	-21.8	
782.000	20.46	H	0.9	0.0	19.56	33.0	-13.4	
High Ch								
784.500	11.37	V	0.9	0.0	10.47	33.0	-22.5	
784.500	20.33	H	0.9	0.0	19.43	33.0	-13.6	

Rev. 3.17.11

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888

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Band

LTE13

5MHz

QPSK

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

Company: LG Electronics
Project #: 15I19783
Date: 01/23/15
Test Engineer: O. Stoelting
Configuration: EUT only X-position
Mode: LTE_B13_5MHz_QPSK

Test Equipment:
Receiving: Sunol T243, and Chamber B Cable (Setup this one for testing EUT)
Substitution: Dipole T273, 6ft 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								
779.500	12.65	V	0.9	0.0	11.75	33.0	-21.2	
779.500	21.22	H	0.9	0.0	20.32	33.0	-12.7	
Mid Ch								
782.000	12.76	V	0.9	0.0	11.86	33.0	-21.1	
782.000	21.29	H	0.9	0.0	20.39	33.0	-12.6	
High Ch								
784.500	12.68	V	0.9	0.0	11.78	33.0	-21.2	
784.500	21.41	H	0.9	0.0	20.51	33.0	-12.5	

Rev. 3.17.11

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
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13.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §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+10Log(P)dB at the channel edge and (55+10Log(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

CDMA and LTE

RESULTS

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888

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13.2.1. SPURIOUS RADIATION PLOTS

CDMA

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

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: CDMA EVDO BC1

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band BC1

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	-18.2	H	3.0	35.4	1.0	-52.6	-13.0	-39.6	
5.554	-13.8	H	3.0	34.7	1.0	-47.5	-13.0	-34.5	
7.405	-12.3	H	3.0	34.9	1.0	-46.2	-13.0	-33.2	
3.703	-17.0	V	3.0	35.4	1.0	-51.4	-13.0	-38.4	
5.554	-15.2	V	3.0	34.7	1.0	-48.9	-13.0	-35.9	
7.405	-15.0	V	3.0	34.9	1.0	-48.9	-13.0	-35.9	
Mid Ch, 1880.0MHz									
3.760	-16.5	H	3.0	35.3	1.0	-50.8	-13.0	-37.8	
5.640	-14.0	H	3.0	34.7	1.0	-47.8	-13.0	-34.8	
7.520	-13.4	H	3.0	34.9	1.0	-47.4	-13.0	-34.4	
3.760	-17.4	V	3.0	35.3	1.0	-51.8	-13.0	-38.8	
5.640	-15.6	V	3.0	34.7	1.0	-49.4	-13.0	-36.4	
7.520	-15.0	V	3.0	34.9	1.0	-48.9	-13.0	-35.9	
High Ch, 1908.75 MHz									
3.818	-15.8	H	3.0	35.3	1.0	-50.1	-13.0	-37.1	
5.726	-14.6	H	3.0	34.7	1.0	-48.4	-13.0	-35.4	
7.635	-13.0	H	3.0	34.9	1.0	-46.9	-13.0	-33.9	
3.818	-15.2	V	3.0	35.3	1.0	-49.5	-13.0	-36.5	
5.726	-15.2	V	3.0	34.7	1.0	-49.0	-13.0	-36.0	
7.635	-13.7	V	3.0	34.9	1.0	-47.6	-13.0	-34.6	

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

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

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: RTT BC1

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T34 8449B	Filter 1	Part 24

Band

BC1

1xRTT

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	-18.1	H	3.0	35.4	1.0	-52.5	-13.0	-39.5	
5.554	-13.7	H	3.0	34.7	1.0	-47.4	-13.0	-34.4	
7.405	-12.8	H	3.0	34.9	1.0	-46.7	-13.0	-33.7	
3.703	-17.3	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
5.554	-15.0	V	3.0	34.7	1.0	-48.8	-13.0	-35.8	
7.405	-13.9	V	3.0	34.9	1.0	-47.8	-13.0	-34.8	
Mid Ch, 1880 MHz									
3.760	-16.7	H	3.0	35.3	1.0	-51.1	-13.0	-38.1	
5.640	-14.3	H	3.0	34.7	1.0	-48.0	-13.0	-35.0	
7.520	-12.6	H	3.0	34.9	1.0	-46.5	-13.0	-33.5	
3.760	-18.4	V	3.0	35.3	1.0	-52.8	-13.0	-39.8	
5.640	-16.3	V	3.0	34.7	1.0	-50.0	-13.0	-37.0	
7.520	-16.3	V	3.0	34.9	1.0	-50.2	-13.0	-37.2	
High Ch, 1908.75 MHz									
3.818	-16.9	H	3.0	35.3	1.0	-51.2	-13.0	-38.2	
5.726	-13.9	H	3.0	34.7	1.0	-47.7	-13.0	-34.7	
7.635	-12.3	H	3.0	34.9	1.0	-46.3	-13.0	-33.3	
3.818	-17.9	V	3.0	35.3	1.0	-52.1	-13.0	-39.1	
5.726	-14.5	V	3.0	34.7	1.0	-48.2	-13.0	-35.2	
7.635	-12.7	V	3.0	34.9	1.0	-46.6	-13.0	-33.6	

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

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

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: CDMA EVDO BC0

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 22

Band

BC0

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.650	-26.6	H	3.0	37.4	1.0	-63.0	-13.0	-50.0	
2.474	-24.1	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3.298	-21.3	H	3.0	35.8	1.0	-56.1	-13.0	-43.1	
1.650	-26.8	V	3.0	37.4	1.0	-63.2	-13.0	-50.2	
2.474	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3.298	-20.3	V	3.0	35.8	1.0	-55.1	-13.0	-42.1	
Mid Ch, 836.52MHz									
1.673	-24.9	H	3.0	37.3	1.0	-61.3	-13.0	-48.3	
2.509	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3.346	-20.6	H	3.0	35.8	1.0	-55.3	-13.0	-42.3	
1.673	-25.1	V	3.0	37.3	1.0	-61.4	-13.0	-48.4	
2.509	-21.8	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3.346	-20.3	V	3.0	35.8	1.0	-55.0	-13.0	-42.0	
High Ch, 848.31 MHz									
1.697	-24.6	H	3.0	37.3	1.0	-60.9	-13.0	-47.9	
2.545	-24.5	H	3.0	36.3	1.0	-59.8	-13.0	-46.8	
3.393	-19.9	H	3.0	35.7	1.0	-54.6	-13.0	-41.6	
1.697	-24.6	V	3.0	37.3	1.0	-60.9	-13.0	-47.9	
2.545	-23.4	V	3.0	36.3	1.0	-58.7	-13.0	-45.7	
3.393	-20.1	V	3.0	35.7	1.0	-54.8	-13.0	-41.8	

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

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

Company: LG Electronics
Project #: 15I19783
Date: 01/20/15
Test Engineer: R. Alegre
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: RTT BC0

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T34 8449B	Filter 1	Part 22

Band

BC0

1xRTT

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									
1.649	-26.7	H	3.0	37.4	1.0	-63.1	-13.0	-50.1	
2.474	-24.5	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3.299	-21.2	H	3.0	35.8	1.0	-56.0	-13.0	-43.0	
1.649	-26.8	V	3.0	37.4	1.0	-63.1	-13.0	-50.1	
2.474	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3.299	-20.3	V	3.0	35.8	1.0	-55.1	-13.0	-42.1	
Mid Ch, 836.52MHz									
1.673	-25.1	H	3.0	37.3	1.0	-61.4	-13.0	-48.4	
2.510	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3.346	-20.6	H	3.0	35.8	1.0	-55.3	-13.0	-42.3	
1.673	-24.9	V	3.0	37.3	1.0	-61.2	-13.0	-48.2	
2.510	-22.1	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3.346	-19.6	V	3.0	35.8	1.0	-54.4	-13.0	-41.4	
High Ch, 848.31MHz									
1.697	-24.7	H	3.0	37.3	1.0	-61.0	-13.0	-48.0	
2.545	-24.4	H	3.0	36.3	1.0	-59.7	-13.0	-46.7	
3.393	-19.8	H	3.0	35.7	1.0	-54.5	-13.0	-41.5	
1.697	-25.4	V	3.0	37.3	1.0	-61.7	-13.0	-48.7	
2.545	-23.3	V	3.0	36.3	1.0	-58.6	-13.0	-45.6	
3.393	-20.4	V	3.0	35.7	1.0	-55.1	-13.0	-42.1	

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

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LTE Band 2

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

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_20M_16QAM

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

Band

LTE2

20MHz

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, 1860MHz									
3.720	-15.2	V	3.0	35.4	1.0	-49.6	-13.0	-36.6	
5.580	-12.1	V	3.0	34.7	1.0	-45.8	-13.0	-32.8	
7.440	-8.6	V	3.0	34.9	1.0	-42.5	-13.0	-29.5	
3.720	-15.4	H	3.0	35.4	1.0	-49.8	-13.0	-36.8	
5.580	-11.6	H	3.0	34.7	1.0	-45.4	-13.0	-32.4	
7.440	-8.7	H	3.0	34.9	1.0	-42.6	-13.0	-29.6	
Mid Ch, 1880.0MHz									
3.760	-14.5	V	3.0	35.3	1.0	-48.8	-13.0	-35.8	
5.640	-11.3	V	3.0	34.7	1.0	-45.0	-13.0	-32.0	
7.520	-8.5	V	3.0	34.9	1.0	-42.5	-13.0	-29.5	
3.760	-14.7	H	3.0	35.3	1.0	-49.0	-13.0	-36.0	
5.640	-10.8	H	3.0	34.7	1.0	-44.5	-13.0	-31.5	
7.520	-8.8	H	3.0	34.9	1.0	-42.7	-13.0	-29.7	
High Ch, 1900 MHz									
3.800	-11.9	V	3.0	35.3	1.0	-46.2	-13.0	-33.2	
5.700	-11.5	V	3.0	34.7	1.0	-45.2	-13.0	-32.2	
7.600	-10.0	V	3.0	34.9	1.0	-43.9	-13.0	-30.9	
3.800	-15.3	H	3.0	35.3	1.0	-49.6	-13.0	-36.6	
5.700	-12.3	H	3.0	34.7	1.0	-46.0	-13.0	-33.0	
7.600	-10.9	H	3.0	34.9	1.0	-44.9	-13.0	-31.9	

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

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

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_20M_QPSK

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

Band LTE2 20MHz 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, 1860MHz									
3.720	-15.1	V	3.0	35.4	1.0	-49.5	-13.0	-36.5	
5.580	-11.7	V	3.0	34.7	1.0	-45.4	-13.0	-32.4	
7.440	-9.0	V	3.0	34.9	1.0	-42.9	-13.0	-29.9	
3.720	-14.9	H	3.0	35.4	1.0	-49.2	-13.0	-36.2	
5.580	-11.9	H	3.0	34.7	1.0	-45.6	-13.0	-32.6	
7.440	-7.3	H	3.0	34.9	1.0	-41.2	-13.0	-28.2	
Mid Ch, 1880.0MHz									
3.760	-14.2	V	3.0	35.3	1.0	-48.5	-13.0	-35.5	
5.640	-11.4	V	3.0	34.7	1.0	-45.2	-13.0	-32.2	
7.520	-9.4	V	3.0	34.9	1.0	-43.3	-13.0	-30.3	
3.760	-14.2	H	3.0	35.3	1.0	-48.5	-13.0	-35.5	
5.640	-11.1	H	3.0	34.7	1.0	-44.9	-13.0	-31.9	
7.520	-7.8	H	3.0	34.9	1.0	-41.8	-13.0	-28.8	
High Ch, 1900 MHz									
3.800	-11.8	V	3.0	35.3	1.0	-46.1	-13.0	-33.1	
5.700	-11.5	V	3.0	34.7	1.0	-45.3	-13.0	-32.3	
7.600	-9.4	V	3.0	34.9	1.0	-43.4	-13.0	-30.4	
3.800	-12.9	H	3.0	35.3	1.0	-47.2	-13.0	-34.2	
5.700	-10.1	H	3.0	34.7	1.0	-43.9	-13.0	-30.9	
7.600	-8.5	H	3.0	34.9	1.0	-42.4	-13.0	-29.4	

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

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

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_15M_16QAM

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

Band
LTE2
15MHz
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, 1857.5MHz									
3.715	-15.2	V	3.0	35.4	1.0	-49.6	-13.0	-36.6	
5.572	-12.8	V	3.0	34.7	1.0	-46.5	-13.0	-33.5	
7.424	-9.7	V	3.0	34.9	1.0	-43.6	-13.0	-30.6	
3.715	-15.2	H	3.0	35.4	1.0	-49.6	-13.0	-36.6	
5.572	-11.8	H	3.0	34.7	1.0	-45.5	-13.0	-32.5	
7.430	-8.3	H	3.0	34.9	1.0	-42.3	-13.0	-29.3	
Mid Ch, 1880.0MHz									
3.760	-14.6	V	3.0	35.3	1.0	-48.9	-13.0	-35.9	
5.640	-11.3	V	3.0	34.7	1.0	-45.1	-13.0	-32.1	
7.520	-8.8	V	3.0	34.9	1.0	-42.8	-13.0	-29.8	
3.760	-13.5	H	3.0	35.3	1.0	-47.8	-13.0	-34.8	
5.640	-10.5	H	3.0	34.7	1.0	-44.2	-13.0	-31.2	
7.520	-8.5	H	3.0	34.9	1.0	-42.4	-13.0	-29.4	
High Ch, 1902.5 MHz									
3.805	-13.3	V	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.707	-11.4	V	3.0	34.7	1.0	-45.1	-13.0	-32.1	
7.610	-9.9	V	3.0	34.9	1.0	-43.9	-13.0	-30.9	
3.805	-12.7	H	3.0	35.3	1.0	-47.0	-13.0	-34.0	
5.707	-9.5	H	3.0	34.7	1.0	-43.3	-13.0	-30.3	
7.610	-8.7	H	3.0	34.9	1.0	-42.6	-13.0	-29.6	

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

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
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UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_15M_QPSK

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

Band
LTE2
15MHz
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, 1857.5MHz									
3.715	-14.9	V	3.0	35.4	1.0	-49.3	-13.0	-36.3	
5.572	-12.6	V	3.0	34.7	1.0	-46.3	-13.0	-33.3	
7.424	-9.9	V	3.0	34.9	1.0	-43.8	-13.0	-30.8	
3.715	-15.3	H	3.0	35.4	1.0	-49.7	-13.0	-36.7	
5.572	-11.9	H	3.0	34.7	1.0	-45.6	-13.0	-32.6	
7.430	-8.7	H	3.0	34.9	1.0	-42.6	-13.0	-29.6	
Mid Ch, 1880.0MHz									
3.760	-14.5	V	3.0	35.3	1.0	-48.8	-13.0	-35.8	
5.640	-11.3	V	3.0	34.7	1.0	-45.0	-13.0	-32.0	
7.520	-9.5	V	3.0	34.9	1.0	-43.5	-13.0	-30.5	
3.760	-14.1	H	3.0	35.3	1.0	-48.4	-13.0	-35.4	
5.640	-10.1	H	3.0	34.7	1.0	-43.8	-13.0	-30.8	
7.520	-8.4	H	3.0	34.9	1.0	-42.3	-13.0	-29.3	
High Ch, 1902.5 MHz									
3.805	-13.7	V	3.0	35.3	1.0	-48.0	-13.0	-35.0	
5.707	-10.5	V	3.0	34.7	1.0	-44.3	-13.0	-31.3	
7.610	-9.5	V	3.0	34.9	1.0	-43.4	-13.0	-30.4	
3.805	-12.0	H	3.0	35.3	1.0	-46.3	-13.0	-33.3	
5.707	-10.8	H	3.0	34.7	1.0	-44.6	-13.0	-31.6	
7.610	-9.2	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.

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE2 16QAM 10MHz Harm

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

Band

LTE2

10MHz

16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Not
Low Ch, 1855MHz									
3.710	-15.5	V	3.0	35.4	1.0	-49.9	-13.0	-36.9	
5.565	-11.4	V	3.0	34.7	1.0	-45.1	-13.0	-32.1	
7.420	-9.2	V	3.0	34.9	1.0	-43.1	-13.0	-30.1	
3.710	-15.9	H	3.0	35.4	1.0	-50.3	-13.0	-37.3	
5.565	-10.0	H	3.0	34.7	1.0	-43.7	-13.0	-30.7	
7.420	-8.8	H	3.0	34.9	1.0	-42.7	-13.0	-29.7	
Mid Ch,1880MHz									
3.760	-12.7	V	3.0	35.3	1.0	-47.1	-13.0	-34.1	
5.640	-11.6	V	3.0	34.7	1.0	-45.3	-13.0	-32.3	
7.520	-9.2	V	3.0	34.9	1.0	-43.1	-13.0	-30.1	
3.760	-15.0	H	3.0	35.3	1.0	-49.3	-13.0	-36.3	
5.640	-10.6	H	3.0	34.7	1.0	-44.4	-13.0	-31.4	
7.520	-8.7	H	3.0	34.9	1.0	-42.7	-13.0	-29.7	
High Ch, 1905MHz									
3.810	-13.3	V	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.715	-10.5	V	3.0	34.7	1.0	-44.2	-13.0	-31.2	
7.620	-9.8	V	3.0	34.9	1.0	-43.7	-13.0	-30.7	
3.810	-12.2	H	3.0	35.3	1.0	-46.5	-13.0	-33.5	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE2 QPSK 10MHz Harm

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

Band
LTE2
10MHz
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, 1855MHz									
3.710	-15.5	V	3.0	35.4	1.0	-49.8	-13.0	-36.8	
5.565	-12.5	V	3.0	34.7	1.0	-46.2	-13.0	-33.2	
7.420	-9.9	V	3.0	34.9	1.0	-43.9	-13.0	-30.9	
3.710	-14.6	H	3.0	35.4	1.0	-49.0	-13.0	-36.0	
5.565	-12.0	H	3.0	34.7	1.0	-45.7	-13.0	-32.7	
7.420	-8.5	H	3.0	34.9	1.0	-42.4	-13.0	-29.4	
Mid Ch,1880MHz									
3.760	-13.2	V	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.640	-11.3	V	3.0	34.7	1.0	-45.0	-13.0	-32.0	
7.520	-9.9	V	3.0	34.9	1.0	-43.9	-13.0	-30.9	
3.760	-14.3	H	3.0	35.3	1.0	-48.7	-13.0	-35.7	
5.640	-10.1	H	3.0	34.7	1.0	-43.8	-13.0	-30.8	
7.520	-8.5	H	3.0	34.9	1.0	-42.4	-13.0	-29.4	
High Ch, 1905MHz									
3.810	-13.2	V	3.0	35.3	1.0	-47.5	-13.0	-34.5	
5.715	-10.6	V	3.0	34.7	1.0	-44.3	-13.0	-31.3	
7.620	-10.1	V	3.0	34.9	1.0	-44.0	-13.0	-31.0	
3.810	-12.3	H	3.0	35.3	1.0	-46.6	-13.0	-33.6	
5.715	-9.9	H	3.0	34.7	1.0	-43.7	-13.0	-30.7	
7.620	-8.9	H	3.0	34.9	1.0	-42.9	-13.0	-29.9	

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

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE2 16QAM 5MHz Harm

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

Band

LTE2

5MHz

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, 1852.5MHz									
3.705	-15.5	V	3.0	35.4	1.0	-49.9	-13.0	-36.9	
5.558	-12.2	V	3.0	34.7	1.0	-45.9	-13.0	-32.9	
7.410	-10.2	V	3.0	34.9	1.0	-44.1	-13.0	-31.1	
3.705	-16.3	H	3.0	35.4	1.0	-50.7	-13.0	-37.7	
5.558	-11.6	H	3.0	34.7	1.0	-45.3	-13.0	-32.3	
7.410	-9.1	H	3.0	34.9	1.0	-43.1	-13.0	-30.1	
Mid Ch,1880MHz									
3.760	-13.9	V	3.0	35.3	1.0	-48.3	-13.0	-35.3	
5.640	-11.9	V	3.0	34.7	1.0	-45.6	-13.0	-32.6	
7.520	-9.7	V	3.0	34.9	1.0	-43.6	-13.0	-30.6	
3.760	-15.5	H	3.0	35.3	1.0	-49.9	-13.0	-36.9	
5.640	-11.3	H	3.0	34.7	1.0	-45.0	-13.0	-32.0	
7.520	-8.1	H	3.0	34.9	1.0	-42.0	-13.0	-29.0	
High Ch, 1907.5MHz									
3.815	-13.7	V	3.0	35.3	1.0	-47.9	-13.0	-34.9	
5.723	-10.6	V	3.0	34.7	1.0	-44.4	-13.0	-31.4	
7.630	-9.3	V	3.0	34.9	1.0	-43.3	-13.0	-30.3	
3.815	-13.2	H	3.0	35.3	1.0	-47.5	-13.0	-34.5	
5.723	-9.9	H	3.0	34.7	1.0	-43.7	-13.0	-30.7	
7.630	-8.7	H	3.0	34.9	1.0	-42.6	-13.0	-29.6	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE2 QPSK 5MHz Harm

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

Band

LTE2

5MHz

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, 1852.5MHz									
3.705	-15.2	V	3.0	35.4	1.0	-49.6	-13.0	-36.6	
5.558	-12.0	V	3.0	34.7	1.0	-45.7	-13.0	-32.7	
7.410	-9.4	V	3.0	34.9	1.0	-43.3	-13.0	-30.3	
3.705	-15.8	H	3.0	35.4	1.0	-50.2	-13.0	-37.2	
5.558	-12.1	H	3.0	34.7	1.0	-45.8	-13.0	-32.8	
7.410	-8.6	H	3.0	34.9	1.0	-42.5	-13.0	-29.5	
Mid Ch,1880MHz									
3.760	-13.1	V	3.0	35.3	1.0	-47.5	-13.0	-34.5	
5.640	-10.9	V	3.0	34.7	1.0	-44.7	-13.0	-31.7	
7.520	-9.4	V	3.0	34.9	1.0	-43.4	-13.0	-30.4	
3.760	-14.7	H	3.0	35.3	1.0	-49.1	-13.0	-36.1	
5.640	-10.8	H	3.0	34.7	1.0	-44.6	-13.0	-31.6	
7.520	-8.7	H	3.0	34.9	1.0	-42.6	-13.0	-29.6	
High Ch, 1907.5MHz									
3.815	-13.2	V	3.0	35.3	1.0	-47.5	-13.0	-34.5	
5.723	-11.1	V	3.0	34.7	1.0	-44.8	-13.0	-31.8	
7.630	-10.0	V	3.0	34.9	1.0	-44.0	-13.0	-31.0	
3.815	-12.4	H	3.0	35.3	1.0	-46.7	-13.0	-33.7	
5.723	-9.7	H	3.0	34.7	1.0	-43.4	-13.0	-30.4	
7.630	-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.

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Band

LTE2

3MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_3M_16QAM

Chamber	Pre-amplifer	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, 1851.5MHz									
3.703	-14.5	V	3.0	35.4	1.0	-48.9	-13.0	-35.9	
5.554	-11.7	V	3.0	34.7	1.0	-45.4	-13.0	-32.4	
7.406	-9.1	V	3.0	34.9	1.0	-43.0	-13.0	-30.0	
3.703	-14.4	H	3.0	35.4	1.0	-48.8	-13.0	-35.8	
5.554	-11.1	H	3.0	34.7	1.0	-44.9	-13.0	-31.9	
7.406	-8.7	H	3.0	34.9	1.0	-42.6	-13.0	-29.6	
Mid Ch, 1880.0MHz									
3.760	-13.8	V	3.0	35.3	1.0	-48.1	-13.0	-35.1	
5.640	-11.9	V	3.0	34.7	1.0	-45.6	-13.0	-32.6	
7.520	-9.7	V	3.0	34.9	1.0	-43.7	-13.0	-30.7	
3.760	-13.9	H	3.0	35.3	1.0	-48.2	-13.0	-35.2	
5.640	-10.4	H	3.0	34.7	1.0	-44.2	-13.0	-31.2	
7.520	-7.6	H	3.0	34.9	1.0	-41.6	-13.0	-28.6	
High Ch, 1908.5 MHz									
3.817	-14.1	V	3.0	35.3	1.0	-48.3	-13.0	-35.3	
5.725	-10.7	V	3.0	34.7	1.0	-44.4	-13.0	-31.4	
7.634	-9.4	V	3.0	34.9	1.0	-43.3	-13.0	-30.3	
3.817	-14.4	H	3.0	35.3	1.0	-48.7	-13.0	-35.7	
5.725	-10.3	H	3.0	34.7	1.0	-44.1	-13.0	-31.1	
7.634	-8.4	H	3.0	34.9	1.0	-42.3	-13.0	-29.3	

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

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

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_3M_QPSK

Chamber	Pre-amplifer	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	-14.1	V	3.0	35.4	1.0	-48.5	-13.0	-35.5	
5.554	-11.0	V	3.0	34.7	1.0	-44.7	-13.0	-31.7	
7.406	-8.4	V	3.0	34.9	1.0	-42.3	-13.0	-29.3	
3.703	-14.0	H	3.0	35.4	1.0	-48.4	-13.0	-35.4	
5.554	-10.4	H	3.0	34.7	1.0	-44.1	-13.0	-31.1	
7.406	-8.6	H	3.0	34.9	1.0	-42.5	-13.0	-29.5	
Mid Ch, 1880.0MHz									
3.760	-13.3	V	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.640	-10.8	V	3.0	34.7	1.0	-44.5	-13.0	-31.5	
7.520	-9.0	V	3.0	34.9	1.0	-42.9	-13.0	-29.9	
3.760	-12.9	H	3.0	35.3	1.0	-47.2	-13.0	-34.2	
5.640	-9.9	H	3.0	34.7	1.0	-43.6	-13.0	-30.6	
7.520	-6.2	H	3.0	34.9	1.0	-40.2	-13.0	-27.2	
High Ch, 1908.5 MHz									
3.817	-12.8	V	3.0	35.3	1.0	-47.1	-13.0	-34.1	
5.725	-10.2	V	3.0	34.7	1.0	-43.9	-13.0	-30.9	
7.634	-8.1	V	3.0	34.9	1.0	-42.1	-13.0	-29.1	
3.817	-13.8	H	3.0	35.3	1.0	-48.1	-13.0	-35.1	
5.725	-9.3	H	3.0	34.7	1.0	-43.1	-13.0	-30.1	
7.634	-8.0	H	3.0	34.9	1.0	-41.9	-13.0	-28.9	

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

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Band

LTE2

1.4MHz

16QAM

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

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_1.4M_16QAM

Chamber	Pre-amplifer	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, 1851.0MHz									
3.702	-14.3	V	3.0	35.4	1.0	-48.7	-13.0	-35.7	
5.553	-11.3	V	3.0	34.7	1.0	-45.0	-13.0	-32.0	
7.404	-9.1	V	3.0	34.9	1.0	-43.0	-13.0	-30.0	
3.702	-14.2	H	3.0	35.4	1.0	-48.6	-13.0	-35.6	
5.553	-10.4	H	3.0	34.7	1.0	-44.1	-13.0	-31.1	
7.404	-8.5	H	3.0	34.9	1.0	-42.4	-13.0	-29.4	
Mid Ch, 1880.0MHz									
3.760	-14.2	V	3.0	35.3	1.0	-48.6	-13.0	-35.6	
5.640	-11.7	V	3.0	34.7	1.0	-45.4	-13.0	-32.4	
7.520	-9.2	V	3.0	34.9	1.0	-43.1	-13.0	-30.1	
3.760	-13.3	H	3.0	35.3	1.0	-47.6	-13.0	-34.6	
5.640	-10.3	H	3.0	34.7	1.0	-44.1	-13.0	-31.1	
7.520	-8.0	H	3.0	34.9	1.0	-41.9	-13.0	-28.9	
High Ch, 1908 MHz									
3.816	-13.4	V	3.0	35.3	1.0	-47.7	-13.0	-34.7	
5.724	-10.8	V	3.0	34.7	1.0	-44.5	-13.0	-31.5	
7.632	-9.4	V	3.0	34.9	1.0	-43.3	-13.0	-30.3	
3.816	-14.7	H	3.0	35.3	1.0	-49.0	-13.0	-36.0	
5.724	-10.0	H	3.0	34.7	1.0	-43.8	-13.0	-30.8	
7.632	-8.4	H	3.0	34.9	1.0	-42.3	-13.0	-29.3	

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

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Band

LTE2

1.4MHz

QPSK

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

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_1.4M_QPSK

Chamber	Pre-amplifer	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, 1851.0MHz									
3.702	-14.5	V	3.0	35.4	1.0	-48.9	-13.0	-35.9	
5.553	-10.9	V	3.0	34.7	1.0	-44.6	-13.0	-31.6	
7.404	-8.8	V	3.0	34.9	1.0	-42.7	-13.0	-29.7	
3.702	-14.1	H	3.0	35.4	1.0	-48.5	-13.0	-35.5	
5.553	-10.3	H	3.0	34.7	1.0	-44.0	-13.0	-31.0	
7.404	-8.4	H	3.0	34.9	1.0	-42.3	-13.0	-29.3	
Mid Ch, 1880.0MHz									
3.760	-12.4	V	3.0	35.3	1.0	-46.8	-13.0	-33.8	
5.640	-10.4	V	3.0	34.7	1.0	-44.2	-13.0	-31.2	
7.520	-8.5	V	3.0	34.9	1.0	-42.4	-13.0	-29.4	
3.760	-13.0	H	3.0	35.3	1.0	-47.4	-13.0	-34.4	
5.640	-9.3	H	3.0	34.7	1.0	-43.1	-13.0	-30.1	
7.520	-8.1	H	3.0	34.9	1.0	-42.1	-13.0	-29.1	
High Ch, 1908 MHz									
3.816	-13.2	V	3.0	35.3	1.0	-47.5	-13.0	-34.5	
5.724	-9.6	V	3.0	34.7	1.0	-43.4	-13.0	-30.4	
7.632	-8.7	V	3.0	34.9	1.0	-42.7	-13.0	-29.7	
3.816	-13.5	H	3.0	35.3	1.0	-47.8	-13.0	-34.8	
5.724	-9.2	H	3.0	34.7	1.0	-42.9	-13.0	-29.9	
7.632	-7.6	H	3.0	34.9	1.0	-41.5	-13.0	-28.5	

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

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LTE Band 4

UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT/AC Charger/HS
Location: Chamber B
Mode: LTE_16QAM Band 4 Harmonics, 20MHz Bandwidth

Band LTE4 20MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720									
3440.00	-16.7	V	3.0	36.0	1.0	-51.7	-13.0	-38.7	
5160.00	-15.3	V	3.0	35.4	1.0	-49.7	-13.0	-36.7	
6880.00	-14.9	V	3.0	35.7	1.0	-49.6	-13.0	-36.6	
3440.00	-13.4	H	3.0	36.0	1.0	-48.5	-13.0	-35.5	
5160.00	-14.7	H	3.0	35.4	1.0	-49.2	-13.0	-36.2	
6880.00	-12.7	H	3.0	35.7	1.0	-47.4	-13.0	-34.4	
Mid Ch, 1732.5									
3465.00	-17.6	V	3.0	36.0	1.0	-52.6	-13.0	-39.6	
5197.50	-15.3	V	3.0	35.4	1.0	-49.7	-13.0	-36.7	
6930.00	-14.0	V	3.0	35.7	1.0	-48.7	-13.0	-35.7	
3465.00	-17.3	H	3.0	36.0	1.0	-52.3	-13.0	-39.3	
5197.50	-13.9	H	3.0	35.4	1.0	-48.3	-13.0	-35.3	
6930.00	-12.1	H	3.0	35.7	1.0	-46.8	-13.0	-33.8	
High Ch, 1745									
3490.00	-18.9	V	3.0	36.0	1.0	-53.9	-13.0	-40.9	
5235.00	-14.1	V	3.0	35.4	1.0	-48.5	-13.0	-35.5	
6980.00	-14.5	V	3.0	35.7	1.0	-49.2	-13.0	-36.2	
3490.00	-16.5	H	3.0	36.0	1.0	-51.5	-13.0	-38.5	
5235.00	-14.4	H	3.0	35.4	1.0	-48.8	-13.0	-35.8	
6980.00	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6	

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UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT/AC Charger/HS
Location: Chamber B
Mode: LTE_QPSK Band 4 Harmonics, 20MHz Bandwidth

Band LTE4 20MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720									
3440.00	-16.6	V	3.0	36.0	1.0	-51.6	-13.0	-38.6	
5160.00	-14.6	V	3.0	35.4	1.0	-49.0	-13.0	-36.0	
6880.00	-14.2	V	3.0	35.7	1.0	-48.9	-13.0	-35.9	
3440.00	-13.5	H	3.0	36.0	1.0	-48.5	-13.0	-35.5	
5160.00	-14.9	H	3.0	35.4	1.0	-49.4	-13.0	-36.4	
6880.00	-13.0	H	3.0	35.7	1.0	-47.6	-13.0	-34.6	
Mid Ch, 1732.5									
3465.00	-16.6	V	3.0	36.0	1.0	-51.6	-13.0	-38.6	
5197.50	-15.0	V	3.0	35.4	1.0	-49.5	-13.0	-36.5	
6930.00	-14.4	V	3.0	35.7	1.0	-49.1	-13.0	-36.1	
3465.00	-17.9	H	3.0	36.0	1.0	-52.9	-13.0	-39.9	
5197.50	-14.4	H	3.0	35.4	1.0	-48.8	-13.0	-35.8	
6930.00	-12.2	H	3.0	35.7	1.0	-46.9	-13.0	-33.9	
High Ch, 1745									
3490.00	-19.6	V	3.0	36.0	1.0	-54.6	-13.0	-41.6	
5235.00	-15.5	V	3.0	35.4	1.0	-50.0	-13.0	-37.0	
6980.00	-12.7	V	3.0	35.7	1.0	-47.4	-13.0	-34.4	
3490.00	-16.4	H	3.0	36.0	1.0	-51.4	-13.0	-38.4	
5235.00	-13.8	H	3.0	35.4	1.0	-48.3	-13.0	-35.3	
6980.00	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6	

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UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT/AC Charger/HS
Location: Chamber B
Mode: LTE_16QAM Band 4 Harmonics, 15MHz Bandwidth

Band LTE4 15MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5									
3435.00	-16.3	V	3.0	36.1	1.0	-51.4	-13.0	-38.4	
5152.50	-15.2	V	3.0	35.4	1.0	-49.6	-13.0	-36.6	
6870.00	-14.2	V	3.0	35.7	1.0	-48.9	-13.0	-35.9	
3435.00	-12.4	H	3.0	36.1	1.0	-47.4	-13.0	-34.4	
5152.50	-14.4	H	3.0	35.4	1.0	-48.8	-13.0	-35.8	
6870.00	-12.5	H	3.0	35.7	1.0	-47.1	-13.0	-34.1	
Mid Ch, 1732.5									
3465.00	-18.5	V	3.0	36.0	1.0	-53.5	-13.0	-40.5	
5197.50	-14.5	V	3.0	35.4	1.0	-48.9	-13.0	-35.9	
6930.00	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0	
3465.00	-17.7	H	3.0	36.0	1.0	-52.8	-13.0	-39.8	
5197.50	-13.8	H	3.0	35.4	1.0	-48.2	-13.0	-35.2	
6930.00	-12.7	H	3.0	35.7	1.0	-47.3	-13.0	-34.3	
High Ch, 1747.5									
3495.00	-18.7	V	3.0	36.0	1.0	-53.7	-13.0	-40.7	
5242.50	-15.6	V	3.0	35.4	1.0	-50.1	-13.0	-37.1	
6990.00	-14.0	V	3.0	35.7	1.0	-48.6	-13.0	-35.6	
3495.00	-15.9	H	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5242.50	-14.1	H	3.0	35.4	1.0	-48.5	-13.0	-35.5	
6990.00	-12.4	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	

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UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT/AC Charger/HS
Location: Chamber B
Mode: LTE_QPSK Band 4 Harmonics, 15MHz Bandwidth

Band LTE4 15MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5									
3435.00	-15.9	V	3.0	36.1	1.0	-50.9	-13.0	-37.9	
5152.50	-15.7	V	3.0	35.4	1.0	-50.1	-13.0	-37.1	
6870.00	-13.7	V	3.0	35.7	1.0	-48.4	-13.0	-35.4	
3435.00	-12.2	H	3.0	36.1	1.0	-47.3	-13.0	-34.3	
5152.50	-14.8	H	3.0	35.4	1.0	-49.2	-13.0	-36.2	
6870.00	-12.7	H	3.0	35.7	1.0	-47.4	-13.0	-34.4	
Mid Ch, 1732.5									
3465.00	-19.4	V	3.0	36.0	1.0	-54.5	-13.0	-41.5	
5197.50	-15.1	V	3.0	35.4	1.0	-49.5	-13.0	-36.5	
6930.00	-14.2	V	3.0	35.7	1.0	-48.9	-13.0	-35.9	
3465.00	-16.8	H	3.0	36.0	1.0	-51.8	-13.0	-38.8	
5197.50	-14.3	H	3.0	35.4	1.0	-48.8	-13.0	-35.8	
6930.00	-12.5	H	3.0	35.7	1.0	-47.2	-13.0	-34.2	
High Ch, 1747.5									
3495.00	-19.7	V	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5242.50	-15.3	V	3.0	35.4	1.0	-49.7	-13.0	-36.7	
6990.00	-14.4	V	3.0	35.7	1.0	-49.1	-13.0	-36.1	
3495.00	-15.0	H	3.0	36.0	1.0	-50.0	-13.0	-37.0	
5242.50	-14.9	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
6990.00	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6	

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 10MHz BW, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
10MHz
16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1715 MHz)									
3.430	-16.0	V	3.0	30.4	1.0	-45.4	-13.0	-32.4	
5.145	-15.1	V	3.0	28.8	1.0	-42.9	-13.0	-29.9	
6.860	-14.4	V	3.0	27.1	1.0	-40.5	-13.0	-27.5	
3.430	-13.1	H	3.0	30.4	1.0	-42.6	-13.0	-29.6	
5.145	-13.9	H	3.0	28.8	1.0	-41.7	-13.0	-28.7	
6.860	-13.2	H	3.0	27.1	1.0	-39.4	-13.0	-26.4	
Mid Ch, (1732.5 MHz)									
3.465	-20.0	V	3.0	30.4	1.0	-49.4	-13.0	-36.4	
5.198	-15.1	V	3.0	28.7	1.0	-42.8	-13.0	-29.8	
6.930	-14.0	V	3.0	27.1	1.0	-40.0	-13.0	-27.0	
3.465	-20.3	H	3.0	30.4	1.0	-49.7	-13.0	-36.7	
5.198	-12.5	H	3.0	28.7	1.0	-40.2	-13.0	-27.2	
6.930	-12.8	H	3.0	27.1	1.0	-38.8	-13.0	-25.8	
High Ch, (1750 MHz)									
3.500	-16.6	V	3.0	30.4	1.0	-45.9	-13.0	-32.9	
5.250	-14.9	V	3.0	28.7	1.0	-42.5	-13.0	-29.5	
7.000	-14.8	V	3.0	27.0	1.0	-40.8	-13.0	-27.8	
3.500	-15.0	H	3.0	30.4	1.0	-44.4	-13.0	-31.4	
5.250	-13.5	H	3.0	28.7	1.0	-41.2	-13.0	-28.2	
7.000	-12.5	H	3.0	27.0	1.0	-38.5	-13.0	-25.5	

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 10MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
10MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1715 MHz)									
3.430	-15.8	V	3.0	30.4	1.0	-45.2	-13.0	-32.2	
5.145	-14.9	V	3.0	28.8	1.0	-42.7	-13.0	-29.7	
6.860	-14.3	V	3.0	27.1	1.0	-40.4	-13.0	-27.4	
3.430	-13.0	H	3.0	30.4	1.0	-42.5	-13.0	-29.5	
5.145	-13.6	H	3.0	28.8	1.0	-41.4	-13.0	-28.4	
6.860	-12.1	H	3.0	27.1	1.0	-38.2	-13.0	-25.2	
Mid Ch, (1732.5 MHz)									
3.465	-19.7	V	3.0	30.4	1.0	-49.1	-13.0	-36.1	
5.198	-14.8	V	3.0	28.7	1.0	-42.5	-13.0	-29.5	
6.930	-14.4	V	3.0	27.1	1.0	-40.5	-13.0	-27.5	
3.465	-19.1	H	3.0	30.4	1.0	-48.5	-13.0	-35.5	
5.198	-12.1	H	3.0	28.7	1.0	-39.8	-13.0	-26.8	
6.930	-11.7	H	3.0	27.1	1.0	-37.7	-13.0	-24.7	
High Ch, (1750 MHz)									
3.500	-16.5	V	3.0	30.4	1.0	-45.8	-13.0	-32.8	
5.250	-15.2	V	3.0	28.7	1.0	-42.8	-13.0	-29.8	
7.000	-13.2	V	3.0	27.0	1.0	-39.2	-13.0	-26.2	
3.500	-14.4	H	3.0	30.4	1.0	-43.7	-13.0	-30.7	
5.250	-13.4	H	3.0	28.7	1.0	-41.1	-13.0	-28.1	
7.000	-13.0	H	3.0	27.0	1.0	-39.0	-13.0	-26.0	

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 5MHz BW, 16 QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
5MHz
16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.5 MHz)									
3.425	-16.9	V	3.0	30.4	1.0	-46.3	-13.0	-33.3	
5.138	-15.2	V	3.0	28.8	1.0	-43.0	-13.0	-30.0	
6.850	-15.1	V	3.0	27.1	1.0	-41.2	-13.0	-28.2	
3.425	-11.7	H	3.0	30.4	1.0	-41.1	-13.0	-28.1	
5.138	-15.1	H	3.0	28.8	1.0	-42.9	-13.0	-29.9	
6.850	-12.6	H	3.0	27.1	1.0	-38.8	-13.0	-25.8	
Mid Ch, (1732.5 MHz)									
3.465	-19.2	V	3.0	30.4	1.0	-48.6	-13.0	-35.6	
5.198	-15.4	V	3.0	28.7	1.0	-43.1	-13.0	-30.1	
6.930	-14.7	V	3.0	27.1	1.0	-40.7	-13.0	-27.7	
3.465	-19.6	H	3.0	30.4	1.0	-49.0	-13.0	-36.0	
5.198	-15.0	H	3.0	28.7	1.0	-42.7	-13.0	-29.7	
6.930	-12.3	H	3.0	27.1	1.0	-38.4	-13.0	-25.4	
High Ch, (1752.5 MHz)									
3.505	-16.7	V	3.0	30.4	1.0	-46.1	-13.0	-33.1	
5.258	-14.8	V	3.0	28.6	1.0	-42.5	-13.0	-29.5	
7.010	-13.9	V	3.0	27.0	1.0	-39.9	-13.0	-26.9	
3.505	-16.2	H	3.0	30.4	1.0	-45.5	-13.0	-32.5	
5.258	-14.9	H	3.0	28.6	1.0	-42.5	-13.0	-29.5	
7.010	-12.9	H	3.0	27.0	1.0	-38.9	-13.0	-25.9	

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: O. Stoelting
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 5MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
5MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.5 MHz)									
3.425	-16.3	V	3.0	30.4	1.0	-45.7	-13.0	-32.7	
5.138	-14.9	V	3.0	28.8	1.0	-42.6	-13.0	-29.6	
6.850	-14.6	V	3.0	27.1	1.0	-40.7	-13.0	-27.7	
3.425	-12.2	H	3.0	30.4	1.0	-41.7	-13.0	-28.7	
5.138	-15.2	H	3.0	28.8	1.0	-43.0	-13.0	-30.0	
6.850	-12.9	H	3.0	27.1	1.0	-39.1	-13.0	-26.1	
Mid Ch, (1732.5 MHz)									
3.465	-20.0	V	3.0	30.4	1.0	-49.4	-13.0	-36.4	
5.198	-15.0	V	3.0	28.7	1.0	-42.7	-13.0	-29.7	
6.930	-14.2	V	3.0	27.1	1.0	-40.2	-13.0	-27.2	
3.465	-18.8	H	3.0	30.4	1.0	-48.2	-13.0	-35.2	
5.198	-14.6	H	3.0	28.7	1.0	-42.3	-13.0	-29.3	
6.930	-12.6	H	3.0	27.1	1.0	-38.7	-13.0	-25.7	
High Ch, (1752.5 MHz)									
3.505	-16.8	V	3.0	30.4	1.0	-46.2	-13.0	-33.2	
5.258	-15.6	V	3.0	28.6	1.0	-43.2	-13.0	-30.2	
7.010	-14.0	V	3.0	27.0	1.0	-40.0	-13.0	-27.0	
3.505	-14.9	H	3.0	30.4	1.0	-44.2	-13.0	-31.2	
5.258	-13.9	H	3.0	28.6	1.0	-41.6	-13.0	-28.6	
7.010	-13.0	H	3.0	27.0	1.0	-38.9	-13.0	-25.9	

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 3MHz BW, 16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
3MHz
16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1715 MHz)									
3.430	-16.0	V	3.0	30.4	1.0	-45.4	-13.0	-32.4	
5.145	-13.2	V	3.0	28.8	1.0	-41.0	-13.0	-28.0	
6.860	-12.2	V	3.0	27.1	1.0	-38.4	-13.0	-25.4	
3.430	-16.0	H	3.0	30.4	1.0	-45.4	-13.0	-32.4	
5.145	-12.2	H	3.0	28.8	1.0	-40.0	-13.0	-27.0	
6.860	-10.4	H	3.0	27.1	1.0	-36.5	-13.0	-23.5	
Mid Ch, (1732.5 MHz)									
3.465	-16.3	V	3.0	30.4	1.0	-45.7	-13.0	-32.7	
5.198	-13.4	V	3.0	28.7	1.0	-41.1	-13.0	-28.1	
6.930	-12.4	V	3.0	27.1	1.0	-38.4	-13.0	-25.4	
3.465	-16.7	H	3.0	30.4	1.0	-46.1	-13.0	-33.1	
5.198	-13.0	H	3.0	28.7	1.0	-40.7	-13.0	-27.7	
6.930	-10.4	H	3.0	27.1	1.0	-36.5	-13.0	-23.5	
High Ch, (1750 MHz)									
3.500	-15.6	V	3.0	30.4	1.0	-45.0	-13.0	-32.0	
5.250	-13.5	V	3.0	28.7	1.0	-41.2	-13.0	-28.2	
7.000	-11.9	V	3.0	27.0	1.0	-37.9	-13.0	-24.9	
3.500	-16.6	H	3.0	30.4	1.0	-46.0	-13.0	-33.0	
5.250	-12.3	H	3.0	28.7	1.0	-39.9	-13.0	-26.9	
7.000	-10.0	H	3.0	27.0	1.0	-36.0	-13.0	-23.0	

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

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 3MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
3MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1711.5 MHz)									
3.430	-16.4	V	3.0	30.4	1.0	-45.8	-13.0	-32.8	
5.145	-12.8	V	3.0	28.8	1.0	-40.6	-13.0	-27.6	
6.860	-12.0	V	3.0	27.1	1.0	-38.1	-13.0	-25.1	
3.430	-15.2	H	3.0	30.4	1.0	-44.7	-13.0	-31.7	
5.145	-12.8	H	3.0	28.8	1.0	-40.5	-13.0	-27.5	
6.860	-9.6	H	3.0	27.1	1.0	-35.8	-13.0	-22.8	
Mid Ch, (1732.5 MHz)									
3.465	-15.1	V	3.0	30.4	1.0	-44.5	-13.0	-31.5	
5.198	-12.7	V	3.0	28.7	1.0	-40.4	-13.0	-27.4	
6.930	-11.6	V	3.0	27.1	1.0	-37.7	-13.0	-24.7	
3.465	-16.0	H	3.0	30.4	1.0	-45.4	-13.0	-32.4	
5.198	-11.7	H	3.0	28.7	1.0	-39.4	-13.0	-26.4	
6.930	-10.5	H	3.0	27.1	1.0	-36.6	-13.0	-23.6	
High Ch, (1753.5 MHz)									
3.500	-16.4	V	3.0	30.4	1.0	-45.7	-13.0	-32.7	
5.250	-12.3	V	3.0	28.7	1.0	-39.9	-13.0	-26.9	
7.000	-10.8	V	3.0	27.0	1.0	-36.8	-13.0	-23.8	
3.500	-16.2	H	3.0	30.4	1.0	-45.6	-13.0	-32.6	
5.250	-11.8	H	3.0	28.7	1.0	-39.5	-13.0	-26.5	
7.000	-9.1	H	3.0	27.0	1.0	-35.1	-13.0	-22.1	

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

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 1.4MHz BW, 16 QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
1.4MHz
16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1710.7 MHz)									
3.421	-15.4	V	3.0	30.4	1.0	-44.8	-13.0	-31.8	
5.132	-11.6	V	3.0	28.8	1.0	-39.4	-13.0	-26.4	
6.843	-11.8	V	3.0	27.1	1.0	-38.0	-13.0	-25.0	
3.421	-16.1	H	3.0	30.4	1.0	-45.5	-13.0	-32.5	
5.132	-12.6	H	3.0	28.8	1.0	-40.3	-13.0	-27.3	
6.843	-10.6	H	3.0	27.1	1.0	-36.8	-13.0	-23.8	
Mid Ch, (1732.5 MHz)									
3.465	-16.3	V	3.0	30.4	1.0	-45.7	-13.0	-32.7	
5.198	-12.5	V	3.0	28.7	1.0	-40.2	-13.0	-27.2	
6.930	-12.0	V	3.0	27.1	1.0	-38.0	-13.0	-25.0	
3.465	-16.7	H	3.0	30.4	1.0	-46.1	-13.0	-33.1	
5.198	-12.3	H	3.0	28.7	1.0	-40.0	-13.0	-27.0	
6.930	-9.9	H	3.0	27.1	1.0	-36.0	-13.0	-23.0	
High Ch, (1754.3 MHz)									
3.509	-16.6	V	3.0	30.4	1.0	-45.9	-13.0	-32.9	
5.263	-12.7	V	3.0	28.6	1.0	-40.4	-13.0	-27.4	
7.012	-11.3	V	3.0	27.0	1.0	-37.3	-13.0	-24.3	
3.509	-16.8	H	3.0	30.4	1.0	-46.2	-13.0	-33.2	
5.263	-12.8	H	3.0	28.6	1.0	-40.5	-13.0	-27.5	
7.012	-10.2	H	3.0	27.0	1.0	-36.2	-13.0	-23.2	

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

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: TX, LTE band 4, 1.4MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 27

Band
LTE4
1.4MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (1712.5 MHz)									
3.421	-15.1	V	3.0	30.4	1.0	-44.5	-13.0	-31.5	
5.132	-10.7	V	3.0	28.8	1.0	-38.5	-13.0	-25.5	
6.843	-11.7	V	3.0	27.1	1.0	-37.8	-13.0	-24.8	
3.421	-15.2	H	3.0	30.4	1.0	-44.6	-13.0	-31.6	
5.132	-12.1	H	3.0	28.8	1.0	-39.8	-13.0	-26.8	
6.843	-9.7	H	3.0	27.1	1.0	-35.9	-13.0	-22.9	
Mid Ch, (1732.5 MHz)									
3.465	-15.6	V	3.0	30.4	1.0	-45.0	-13.0	-32.0	
5.198	-11.7	V	3.0	28.7	1.0	-39.4	-13.0	-26.4	
6.930	-11.1	V	3.0	27.1	1.0	-37.1	-13.0	-24.1	
3.465	-16.4	H	3.0	30.4	1.0	-45.8	-13.0	-32.8	
5.198	-12.0	H	3.0	28.7	1.0	-39.7	-13.0	-26.7	
6.930	-8.9	H	3.0	27.1	1.0	-34.9	-13.0	-21.9	
High Ch, (1752.5 MHz)									
3.509	-16.3	V	3.0	30.4	1.0	-45.6	-13.0	-32.6	
5.263	-11.6	V	3.0	28.6	1.0	-39.2	-13.0	-26.2	
7.012	-9.6	V	3.0	27.0	1.0	-35.6	-13.0	-22.6	
3.509	-15.1	H	3.0	30.4	1.0	-44.5	-13.0	-31.5	
5.263	-11.6	H	3.0	28.6	1.0	-39.3	-13.0	-26.3	
7.012	-8.4	H	3.0	27.0	1.0	-34.3	-13.0	-21.3	

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

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LTE Band 5

UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE5 10MHz 16QAM HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band
LTE5
10MHz
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, 829MHz									
1.658	-24.5	V	3.0	37.4	1.0	-60.9	-13.0	-47.9	
2.487	-17.3	V	3.0	36.4	1.0	-52.7	-13.0	-39.7	
3.316	-18.6	V	3.0	35.8	1.0	-53.4	-13.0	-40.4	
1.658	-23.4	H	3.0	37.4	1.0	-59.8	-13.0	-46.8	
2.487	-19.4	H	3.0	36.4	1.0	-54.8	-13.0	-41.8	
3.316	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
Mid Ch, 836.5MHz									
1.673	-24.2	V	3.0	37.3	1.0	-60.5	-13.0	-47.5	
2.510	-18.6	V	3.0	36.4	1.0	-54.0	-13.0	-41.0	
3.346	-19.2	V	3.0	35.8	1.0	-54.0	-13.0	-41.0	
1.673	-24.5	H	3.0	37.3	1.0	-60.8	-13.0	-47.8	
2.510	-19.9	H	3.0	36.4	1.0	-55.3	-13.0	-42.3	
3.346	-19.5	H	3.0	35.8	1.0	-54.3	-13.0	-41.3	
High Ch, 844MHz									
1.688	-23.9	V	3.0	37.3	1.0	-60.2	-13.0	-47.2	
2.532	-18.7	V	3.0	36.3	1.0	-54.1	-13.0	-41.1	
3.376	-17.9	V	3.0	35.7	1.0	-52.6	-13.0	-39.6	
1.688	-24.2	H	3.0	37.3	1.0	-60.5	-13.0	-47.5	
2.532	-20.0	H	3.0	36.3	1.0	-55.3	-13.0	-42.3	
3.376	-18.9	H	3.0	35.7	1.0	-53.7	-13.0	-40.7	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE5 10MHz QPSK HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

LTE5

10MHz

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, 829MHz									
1.658	-24.4	V	3.0	37.4	1.0	-60.8	-13.0	-47.8	
2.487	-17.5	V	3.0	36.4	1.0	-52.9	-13.0	-39.9	
3.316	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
1.658	-24.4	H	3.0	37.4	1.0	-60.7	-13.0	-47.7	
2.487	-19.7	H	3.0	36.4	1.0	-55.1	-13.0	-42.1	
3.316	-19.2	H	3.0	35.8	1.0	-54.0	-13.0	-41.0	
Mid Ch, 836.5MHz									
1.673	-24.1	V	3.0	37.3	1.0	-60.4	-13.0	-47.4	
2.510	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3.346	-19.2	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
1.673	-22.8	H	3.0	37.3	1.0	-59.1	-13.0	-46.1	
2.510	-21.0	H	3.0	36.4	1.0	-56.4	-13.0	-43.4	
3.346	-16.4	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
High Ch, 844 MHz									
1.688	-24.3	V	3.0	37.3	1.0	-60.6	-13.0	-47.6	
2.532	-18.6	V	3.0	36.3	1.0	-53.9	-13.0	-40.9	
3.376	-18.8	V	3.0	35.7	1.0	-53.5	-13.0	-40.5	
1.688	-24.1	H	3.0	37.3	1.0	-60.4	-13.0	-47.4	
2.532	-20.6	H	3.0	36.3	1.0	-56.0	-13.0	-43.0	
3.376	-18.0	H	3.0	35.7	1.0	-52.7	-13.0	-39.7	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE5 5M 16QAM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

LTE5

5MHz

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, 826.5MHz									
1.653	-24.3	V	3.0	37.4	1.0	-60.7	-13.0	-47.7	
2.480	-17.9	V	3.0	36.4	1.0	-53.3	-13.0	-40.3	
3.306	-19.1	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
1.653	-24.6	H	3.0	37.4	1.0	-60.9	-13.0	-47.9	
2.480	-20.0	H	3.0	36.4	1.0	-55.4	-13.0	-42.4	
3.306	-18.9	H	3.0	35.8	1.0	-53.7	-13.0	-40.7	
Mid Ch, 836.5MHz									
1.673	-24.3	V	3.0	37.3	1.0	-60.7	-13.0	-47.7	
2.510	-18.5	V	3.0	36.4	1.0	-53.8	-13.0	-40.8	
3.346	-19.2	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
1.673	-24.9	H	3.0	37.3	1.0	-61.2	-13.0	-48.2	
2.510	-19.6	H	3.0	36.4	1.0	-54.9	-13.0	-41.9	
3.346	-19.5	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
High Ch, 846.5MHz									
1.693	-23.8	V	3.0	37.3	1.0	-60.1	-13.0	-47.1	
2.540	-18.2	V	3.0	36.3	1.0	-53.5	-13.0	-40.5	
3.386	-19.0	V	3.0	35.7	1.0	-53.7	-13.0	-40.7	
1.693	-23.2	H	3.0	37.3	1.0	-59.5	-13.0	-46.5	
2.540	-19.3	H	3.0	36.3	1.0	-54.6	-13.0	-41.6	
3.386	-18.9	H	3.0	35.7	1.0	-53.6	-13.0	-40.6	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/15/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE5 5M QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

LTE5

5MHz

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, 826.5MHz									
1.653	-24.6	V	3.0	37.4	1.0	-61.0	-13.0	-48.0	
2.480	-18.5	V	3.0	36.4	1.0	-53.8	-13.0	-40.8	
3.306	-18.7	V	3.0	35.8	1.0	-53.5	-13.0	-40.5	
1.653	-23.6	H	3.0	37.4	1.0	-60.0	-13.0	-47.0	
2.480	-20.0	H	3.0	36.4	1.0	-55.4	-13.0	-42.4	
3.306	-18.7	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
Mid Ch, 836.5MHz									
1.673	-24.1	V	3.0	37.3	1.0	-60.4	-13.0	-47.4	
2.510	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3.346	-19.3	V	3.0	35.8	1.0	-54.1	-13.0	-41.1	
1.673	-24.1	H	3.0	37.3	1.0	-60.4	-13.0	-47.4	
2.510	-20.4	H	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3.346	-19.3	H	3.0	35.8	1.0	-54.0	-13.0	-41.0	
High Ch, 846.5MHz									
1.693	-23.8	V	3.0	37.3	1.0	-60.1	-13.0	-47.1	
2.540	-18.7	V	3.0	36.3	1.0	-54.1	-13.0	-41.1	
3.386	-18.6	V	3.0	35.7	1.0	-53.3	-13.0	-40.3	
1.693	-24.4	H	3.0	37.3	1.0	-60.7	-13.0	-47.7	
2.540	-20.4	H	3.0	36.3	1.0	-55.7	-13.0	-42.7	
3.386	-19.7	H	3.0	35.7	1.0	-54.4	-13.0	-41.4	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_3M_16QAM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band
LTE5
3MHz
16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5MHz									
1.65	-22.3	V	3.0	37.4	1.0	-58.7	-13.0	-45.7	
2.48	-19.6	V	3.0	36.4	1.0	-55.0	-13.0	-42.0	
3.30	-18.8	V	3.0	35.8	1.0	-53.6	-13.0	-40.6	
1.65	-24.1	H	3.0	37.4	1.0	-60.5	-13.0	-47.5	
2.48	-21.4	H	3.0	36.4	1.0	-56.8	-13.0	-43.8	
3.30	-19.4	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
Mid Ch, 836.5MHz									
1.673	-24.1	V	3.0	37.3	1.0	-60.4	-13.0	-47.4	
2.510	-20.6	V	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3.346	-19.1	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
1.673	-23.9	H	3.0	37.3	1.0	-60.2	-13.0	-47.2	
2.510	-22.2	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	
3.346	-19.6	H	3.0	35.8	1.0	-54.3	-13.0	-41.3	
High Ch, 847.5 MHz									
1.70	-22.5	V	3.0	37.3	1.0	-58.8	-13.0	-45.8	
2.54	-19.6	V	3.0	36.3	1.0	-55.0	-13.0	-42.0	
3.39	-17.8	V	3.0	35.7	1.0	-52.5	-13.0	-39.5	
1.70	-23.2	H	3.0	37.3	1.0	-59.5	-13.0	-46.5	
2.54	-20.1	H	3.0	36.3	1.0	-55.5	-13.0	-42.5	
3.39	-18.6	H	3.0	35.7	1.0	-53.4	-13.0	-40.4	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE2_3M_QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band
LTE5
3MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5MHz									
1.65	-21.9	V	3.0	37.4	1.0	-58.3	-13.0	-45.3	
2.48	-19.3	V	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3.30	-18.1	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
1.65	-23.0	H	3.0	37.4	1.0	-59.4	-13.0	-46.4	
2.48	-20.3	H	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3.30	-17.7	H	3.0	35.8	1.0	-52.5	-13.0	-39.5	
Mid Ch, 836.5MHz									
1.673	-22.0	V	3.0	37.3	1.0	-58.3	-13.0	-45.3	
2.510	-18.3	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3.346	-18.1	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
1.673	-24.0	H	3.0	37.3	1.0	-60.3	-13.0	-47.3	
2.510	-21.0	H	3.0	36.4	1.0	-56.4	-13.0	-43.4	
3.346	-18.5	H	3.0	35.8	1.0	-53.2	-13.0	-40.2	
High Ch, 847.5 MHz									
1.70	-21.1	V	3.0	37.3	1.0	-57.4	-13.0	-44.4	
2.54	-18.9	V	3.0	36.3	1.0	-54.3	-13.0	-41.3	
3.39	-17.6	V	3.0	35.7	1.0	-52.3	-13.0	-39.3	
1.70	-22.8	H	3.0	37.3	1.0	-59.1	-13.0	-46.1	
2.54	-20.2	H	3.0	36.3	1.0	-55.6	-13.0	-42.6	
3.39	-17.5	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE5 1.4MHz 16QAM HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band
LTE5
1.4MHz
16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.65	-22.7	V	3.0	37.4	1.0	-59.0	-13.0	-46.0	
2.47	-20.1	V	3.0	36.4	1.0	-55.5	-13.0	-42.5	
3.30	-19.3	V	3.0	35.8	1.0	-54.1	-13.0	-41.1	
1.65	-23.6	H	3.0	37.4	1.0	-60.0	-13.0	-47.0	
2.47	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3.30	-20.3	H	3.0	35.8	1.0	-55.1	-13.0	-42.1	
Mid Ch, 836.5MHz									
1.673	-23.7	V	3.0	37.3	1.0	-60.1	-13.0	-47.1	
2.510	-19.4	V	3.0	36.4	1.0	-54.8	-13.0	-41.8	
3.346	-19.1	V	3.0	35.8	1.0	-53.8	-13.0	-40.8	
1.673	-23.6	H	3.0	37.3	1.0	-59.9	-13.0	-46.9	
2.510	-21.3	H	3.0	36.4	1.0	-56.6	-13.0	-43.6	
3.346	-19.3	H	3.0	35.8	1.0	-54.1	-13.0	-41.1	
High Ch, 848.3 MHz									
1.70	-22.3	V	3.0	37.3	1.0	-58.6	-13.0	-45.6	
2.54	-20.4	V	3.0	36.3	1.0	-55.7	-13.0	-42.7	
3.39	-19.5	V	3.0	35.7	1.0	-54.2	-13.0	-41.2	
1.70	-23.9	H	3.0	37.3	1.0	-60.2	-13.0	-47.2	
2.54	-22.0	H	3.0	36.3	1.0	-57.3	-13.0	-44.3	
3.39	-19.1	H	3.0	35.7	1.0	-53.8	-13.0	-40.8	

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

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UL Verification Services, Inc. Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 01/26/15
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE5_1.4M_QPSK

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band
LTE5
1.4MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1.65	-22.1	V	3.0	37.4	1.0	-58.5	-13.0	-45.5	
2.47	-19.6	V	3.0	36.4	1.0	-55.0	-13.0	-42.0	
3.30	-19.6	V	3.0	35.8	1.0	-54.4	-13.0	-41.4	
1.65	-23.1	H	3.0	37.4	1.0	-59.5	-13.0	-46.5	
2.47	-21.7	H	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3.30	-19.8	H	3.0	35.8	1.0	-54.6	-13.0	-41.6	
Mid Ch, 836.5MHz									
1.673	-22.8	V	3.0	37.3	1.0	-59.1	-13.0	-46.1	
2.510	-19.2	V	3.0	36.4	1.0	-54.5	-13.0	-41.5	
3.346	-17.5	V	3.0	35.8	1.0	-52.2	-13.0	-39.2	
1.673	-23.0	H	3.0	37.3	1.0	-59.3	-13.0	-46.3	
2.510	-20.5	H	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3.346	-18.3	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
High Ch, 844 MHz									
1.70	-21.5	V	3.0	37.3	1.0	-57.8	-13.0	-44.8	
2.54	-19.3	V	3.0	36.3	1.0	-54.7	-13.0	-41.7	
3.39	-17.6	V	3.0	35.7	1.0	-52.3	-13.0	-39.3	
1.70	-22.5	H	3.0	37.3	1.0	-58.8	-13.0	-45.8	
2.54	-21.3	H	3.0	36.3	1.0	-56.7	-13.0	-43.7	
3.39	-19.0	H	3.0	35.7	1.0	-53.7	-13.0	-40.7	

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

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LTE Band 13

UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: R. Alegre
Configuration: EUT/AC Charger/HS
Location: Chamber B
Mode: LTE_16QAM Band 13 Harmonics, 10MHz Bandwidth

Band
LTE13
10MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	
Mid Ch, 782									
1564.00	-27.9	V	3.0	37.1	1.0	-64.1	-13.0	-51.1	
2346.00	-22.8	V	3.0	36.5	1.0	-58.3	-13.0	-45.3	
3128.00	-20.0	V	3.0	36.3	1.0	-55.2	-13.0	-42.2	
1564.00	-27.5	H	3.0	37.1	1.0	-63.7	-13.0	-50.7	
2346.00	-24.6	H	3.0	36.5	1.0	-60.1	-13.0	-47.1	
3128.00	-21.2	H	3.0	36.3	1.0	-56.5	-13.0	-43.5	
High Ch, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	

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UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I19783
Date: 01/16/15
Test Engineer: R. Alegre
Configuration: EUT/AC Charger/HS
Location: Chamber B
Mode: LTE_QPSK Band 13 Harmonics, 10MHz Bandwidth

Band
LTE13
10MHz
QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	
Mid Ch, 782									
1564.00	-27.9	V	3.0	37.1	1.0	-64.1	-13.0	-51.1	
2346.00	-23.4	V	3.0	36.5	1.0	-58.9	-13.0	-45.9	
3128.00	-20.5	V	3.0	36.3	1.0	-55.8	-13.0	-42.8	
1564.00	-26.3	H	3.0	37.1	1.0	-62.4	-13.0	-49.4	
2346.00	-23.8	H	3.0	36.5	1.0	-59.3	-13.0	-46.3	
3128.00	-20.1	H	3.0	36.3	1.0	-55.3	-13.0	-42.3	
High Ch, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	

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UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 1/26/2015
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE13_5M_16QAM

Band LTE13 5MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 779.5									
1559.00	-22.5	V	3.0	37.0	1.0	-58.5	-13.0	-45.5	
2338.50	-19.6	V	3.0	36.4	1.0	-55.0	-13.0	-42.0	
3118.00	-18.2	V	3.0	36.2	1.0	-53.4	-13.0	-40.4	
1559.00	-23.0	H	3.0	37.0	1.0	-59.0	-13.0	-46.0	
2338.50	-21.6	H	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3118.00	-18.4	H	3.0	36.2	1.0	-53.5	-13.0	-40.5	
Mid Ch, 782									
1564.00	-23.1	V	3.0	37.0	1.0	-59.1	-13.0	-46.1	
2346.00	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3128.00	-18.1	V	3.0	36.1	1.0	-53.2	-13.0	-40.2	
1564.00	-23.8	H	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2346.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3128.00	-18.4	H	3.0	36.1	1.0	-53.5	-13.0	-40.5	
High Ch, 784.5									
1569.00	-23.3	V	3.0	37.0	1.0	-59.3	-13.0	-46.3	
2353.50	-20.4	V	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3138.00	-18.9	V	3.0	36.1	1.0	-53.9	-13.0	-40.9	
1569.00	-23.6	H	3.0	37.0	1.0	-59.5	-13.0	-46.5	
2353.50	-21.7	H	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3138.00	-20.0	H	3.0	36.1	1.0	-55.1	-13.0	-42.1	

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UL Verification Services, Inc
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I19783
Date: 1/26/2015
Test Engineer: Kiya Kedida
Configuration: EUT w/ AC Adapter + HS, X-position
Mode: LTE13_5M_QPSK

Band
LTE13
5MHz
QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 779.5									
1559.00	-21.5	V	3.0	37.0	1.0	-57.5	-13.0	-44.5	
2338.50	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3118.00	-17.1	V	3.0	36.2	1.0	-52.2	-13.0	-39.2	
1559.00	-22.6	H	3.0	37.0	1.0	-58.6	-13.0	-45.6	
2338.50	-21.1	H	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3118.00	-17.2	H	3.0	36.2	1.0	-52.4	-13.0	-39.4	
Mid Ch, 782									
1564.00	-22.0	V	3.0	37.0	1.0	-58.0	-13.0	-45.0	
2346.00	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3128.00	-17.3	V	3.0	36.1	1.0	-52.4	-13.0	-39.4	
1564.00	-22.4	H	3.0	37.0	1.0	-58.4	-13.0	-45.4	
2346.00	-20.6	H	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3128.00	-17.1	H	3.0	36.1	1.0	-52.3	-13.0	-39.3	
High Ch, 784.5									
1569.00	-22.0	V	3.0	37.0	1.0	-58.0	-13.0	-45.0	
2353.50	-19.3	V	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3138.00	-17.5	V	3.0	36.1	1.0	-52.6	-13.0	-39.6	
1569.00	-21.6	H	3.0	37.0	1.0	-57.5	-13.0	-44.5	
2353.50	-21.5	H	3.0	36.4	1.0	-56.9	-13.0	-43.9	
3138.00	-17.9	H	3.0	36.1	1.0	-52.9	-13.0	-39.9	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701I
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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