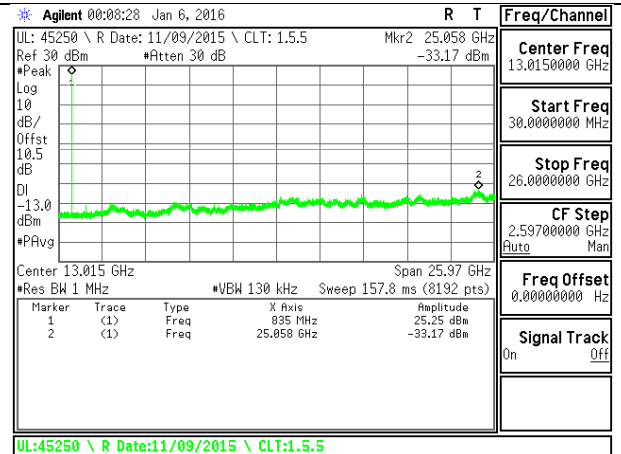
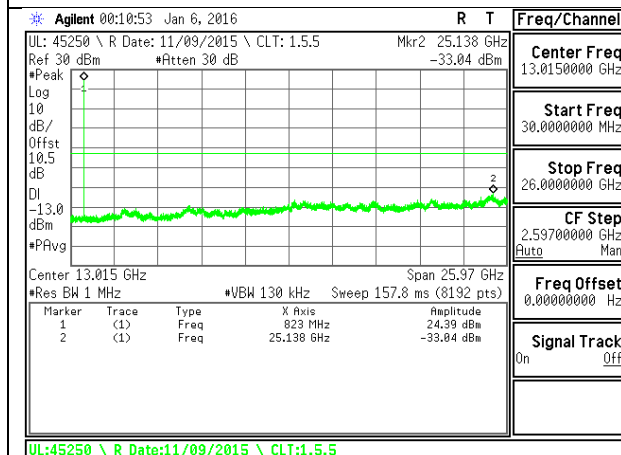


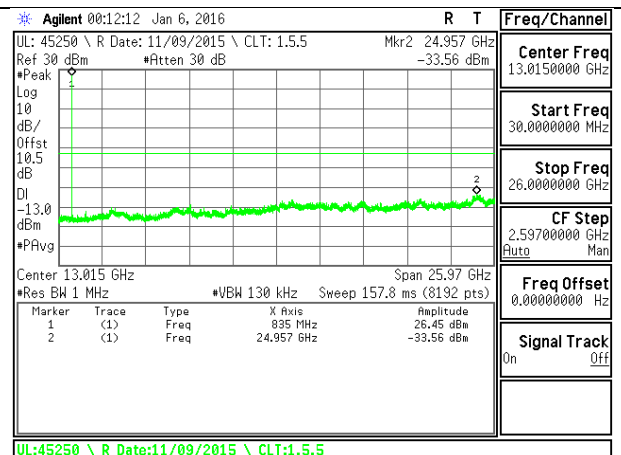
LTE B5 1.4MHz QPSK Middle Channel



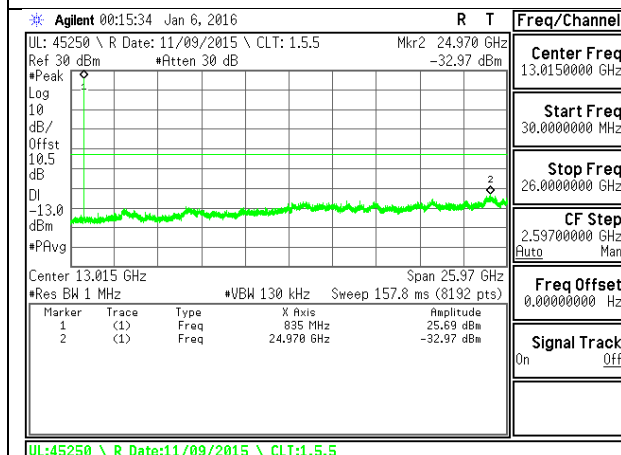
LTE B5 1.4MHz 16QAM Middle Channel



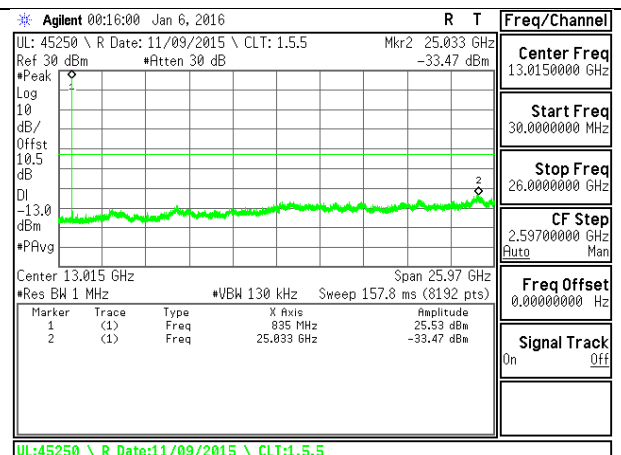
LTE B5 3MHz QPSK Middle Channel



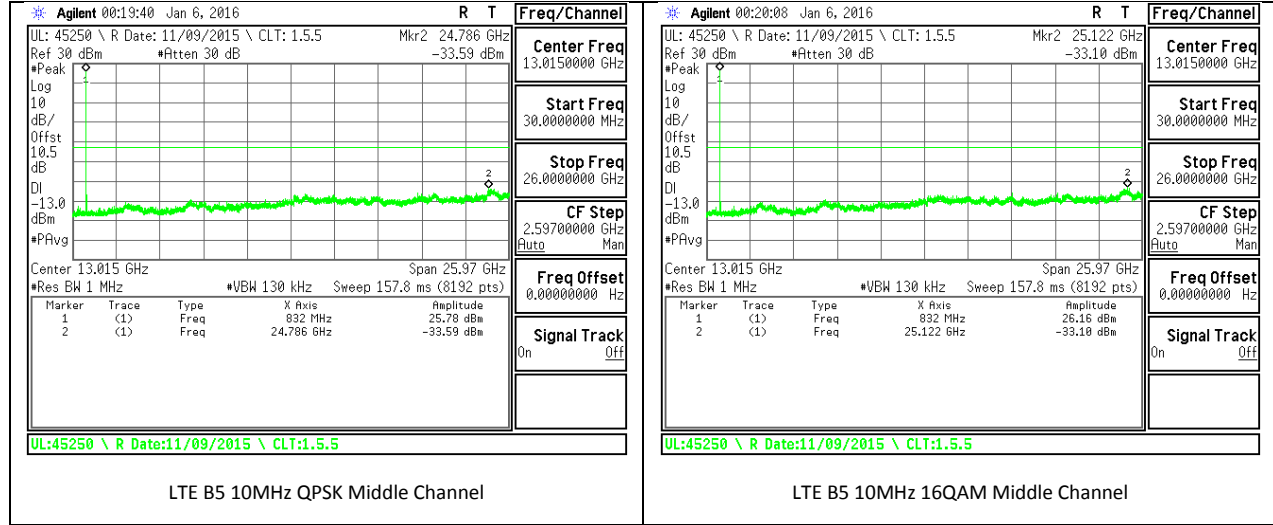
LTE B5 3MHz 16QAM Middle Channel



LTE B5 5MHz QPSK Middle Channel

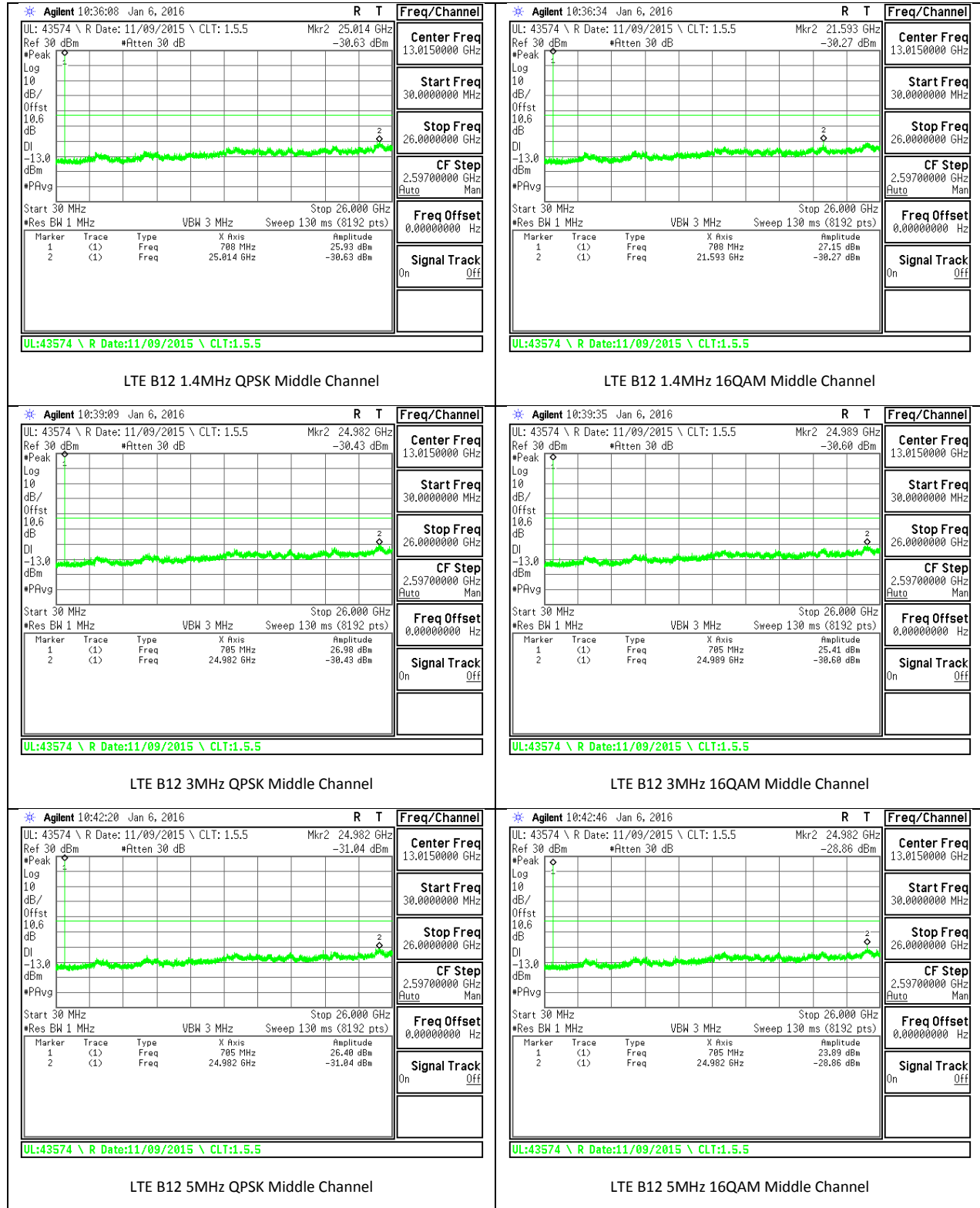


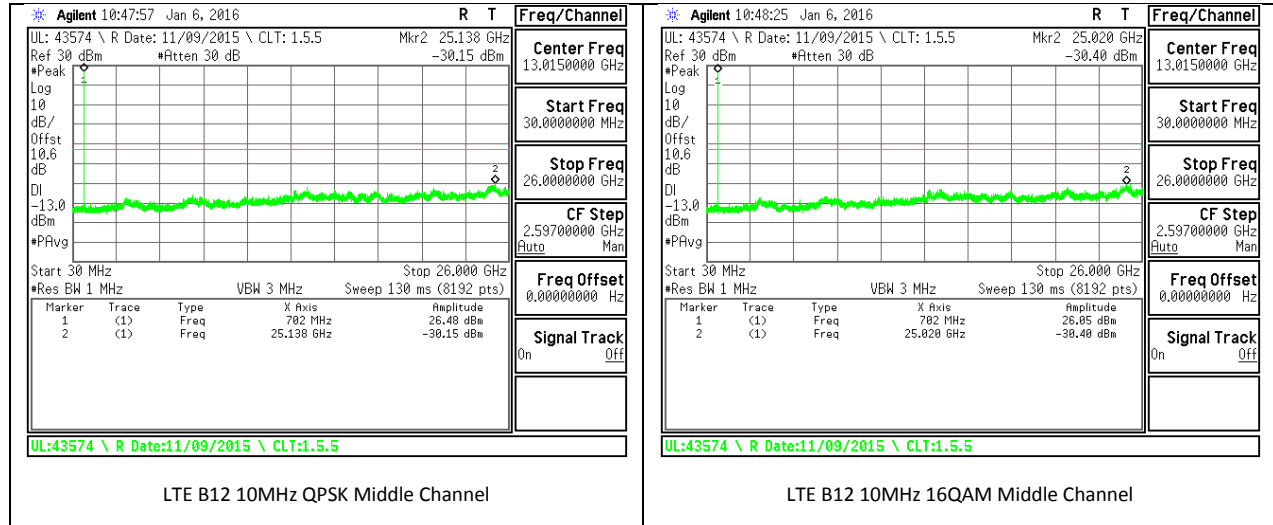
LTE B5 5MHz 16QAM Middle Channel



LTE Band 12

BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
1.4	QPSK	699.7	-30.558	-13	-17.55
		707.5	-30.63	-13	-17.63
		715.3	-30.606	-13	-17.60
	16QAM	699.7	-30.504	-13	-17.50
		707.5	-30.272	-13	-17.27
		715.3	-30.475	-13	-17.47
3	QPSK	700.5	-31.034	-13	-18.03
		707.5	-30.434	-13	-17.43
		714.5	-29.798	-13	-16.79
	16QAM	700.5	-30.31	-13	-17.31
		707.5	-30.599	-13	-17.59
		714.5	-30.511	-13	-17.51
5	QPSK	701.5	-31.07	-13	-18.07
		707.5	-31.036	-13	-18.03
		713.5	-30.113	-13	-17.11
	16QAM	701.5	-30.938	-13	-17.93
		707.5	-28.857	-13	-15.85
		713.5	-29.98	-13	-16.98
10	QPSK	704	-30.18	-13	-17.18
		707.5	-30.15	-13	-17.15
		711	-30.90	-13	-17.90
	16QAM	704	-30.94	-13	-17.94
		707.5	-30.40	-13	-17.40
		711	-30.66	-13	-17.66





13. 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

13.1. FREQUENCY STABILITY RESULTS

GSM 850

Reference Frequency: Cell Mid Channel		836.6	MHz @ 20°C	
Limit: to stay +- 2.5 ppm =		2091.500	Hz	
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	836.600017	0.008	2.5
3.80	40	836.600018	0.007	2.5
3.80	30	836.600017	0.008	2.5
3.80	20	836.600024	0	2.5
3.80	10	836.600023	0.002	2.5
3.80	0	836.600025	-0.001	2.5
3.80	-10	836.600028	-0.004	2.5
3.80	-20	836.600021	0.003	2.5
3.80	-30	836.600022	0.002	2.5

Reference Frequency: PCS Mid Channel		836.6	MHz @ 20°C	
Limit: to stay +- 2.5 ppm =		2091.500	Hz	
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	836.600024	0	2.5
4.37	20	836.6000204	0.004	2.5
3.23(End of volt)	20	836.600021	0.003	2.5

GSM 1900

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 Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1880.000016	-0.006	2.5
3.80	40	1879.999989	0.009	2.5
3.80	30	1880.000015	-0.005	2.5
3.80	20	1880.000006	0	2.5
3.80	10	1880.000007	-0.001	2.5
3.80	0	1880.000013	-0.004	2.5
3.80	-10	1880.000026	-0.011	2.5
3.80	-20	1880.000025	-0.010	2.5
3.80	-30	1880.000031	-0.014	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 Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1880.000006	0	2.5
4.37	20	1880.000002	-0.008	2.5
3.23(End of volt)	20	1880.000016	-0.005	2.5

LTE Band 4

Reference Frequency: PCS Mid Channel 707.5 MHz @ 20°C Limit: to stay +/- 2.5 ppm = 1768.750 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	707.499996	0.002	2.5
3.80	40	707.499997	0.001	2.5
3.80	30	707.499997	0.001	2.5
3.80	20	707.499997	0	2.5
3.80	10	707.499999	-0.002	2.5
3.80	0	707.500003	-0.008	2.5
3.80	-10	707.499997	0.000	2.5
3.80	-20	707.499993	0.006	2.5
3.80	-30	707.499996	0.001	2.5

Reference Frequency: PCS Mid Channel 707.5 MHz @ 20°C Limit: to stay +/- 2.5 ppm = 1768.750 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	707.499997	0	2.5
4.37	20	707.4999976	0.000	2.5
3.23(End of volt)	20	707.4999977	-0.001	2.5

LTE Band 12

Reference Frequency: Cell Mid Channel 710 MHz @ 20°C				
Limit: to stay +- 2.5 ppm = 1775.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	710.000001	-0.005	2.5
3.80	40	709.999998	0.000	2.5
3.80	30	709.999997	0.001	2.5
3.80	20	709.999998	0	2.5
3.80	10	710.000002	-0.006	2.5
3.80	0	710.000002	-0.006	2.5
3.80	-10	709.999997	0.001	2.5
3.80	-20	709.999995	0.004	2.5
3.80	-30	709.999998	-0.001	2.5

Reference Frequency: PCS Mid Channel 710 MHz @ 20°C				
Limit: to stay +- 2.5 ppm = 1775.000 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	709.999998	0	2.5
4.37	20	710.0000009	-0.004	2.5
3.23(End of volt)	20	709.9999988	-0.001	2.5

14. RADIATED TEST RESULTS

14.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §22.913, §24.232, §27

LIMITS

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

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

27.50 (b) - (10) Portable stations (handheld 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 (handheld devices) are limited to 3 watts ERP; (LTE B17)

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

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

TEST PROCEDURE

ANSI / TIA / EIA 603D Clause 2.2.17; PSA setting reference to 971168 D01 v02r02

For peak power measurement with a PSA:

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

For average power measurement with a PSA:

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

14.1.1. ERP/EIRP RESULTS AND TABLE

GSM

Band	Mode	Channel	f(MHz)	ERP/EIRP	
				dBm	mW
GSM850	GPRS	128	824.2	30.55	1135.01
		190	836.6	29.10	812.83
		251	848.8	29.47	885.12
	EGPRS	128	824.2	24.98	314.77
		190	836.6	23.90	245.47
		251	848.8	23.40	218.78
GSM1900	GPRS	512	1850.2	30.86	1218.99
		661	1880	31.65	1462.18
		810	1909.8	31.46	1399.59
	EGPRS	512	1850.2	25.36	343.56
		661	1880.0	25.86	385.48
		810	1909.8	27.22	527.23

GSM850 GPRS										GSM850 EGPRS									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #: 1622596					Company: LG Electronics					Project #: 1622596				
Date: 1/14/2016					Test Engineer: RZ					Date: 1/15/2016					Test Engineer: A. Escamilla				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: GPRS 850 MHz Fundamentals					Test Equipment:					Mode: EGPRS 850 MHz Fundamentals					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables										Receiving: Hybrid T185, and Chamber C SMA Cables									
Substitution: Dipole T416, 6ft SMA Cable (SN # SERIALNUMBER) Warehouse										Substitution: Dipole T416, 6ft N-type Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
824.20	22.70	V	0.5	0.0	22.20	38.5	-16.3			824.20	18.97	V	0.9	0.0	18.07	38.5	-20.4		
824.20	31.89	H	0.5	0.0	30.55	38.5	-8.0			824.20	25.88	H	0.9	0.0	24.98	38.5	-13.5		
Mid Ch										Mid Ch									
836.60	20.78	V	0.5	0.0	20.28	38.5	-18.2			836.60	17.89	V	0.9	0.0	16.99	38.5	-21.5		
836.60	29.60	H	0.5	0.0	29.10	38.5	-9.4			836.60	24.80	H	0.9	0.0	23.90	38.5	-14.6		
High Ch										High Ch									
848.80	19.70	V	0.5	0.0	19.20	38.5	-19.3			848.80	17.79	V	0.9	0.0	16.89	38.5	-21.6		
848.80	29.97	H	0.5	0.0	29.47	38.5	-9.0			848.80	24.30	H	0.9	0.0	23.40	38.5	-15.1		
GSM1900 GPRS										GSM1900 EGPRS									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #: 16122596					Company: LG Electronics					Project #: 16122596				
Date: 1/11/2016					Test Engineer: O. Steeking					Date: 1/11/2016					Test Engineer: O. Steeking				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: GPRS 1900 MHz Fundamentals					Test Equipment:					Mode: EGPRS 1900 MHz Fundamentals					Test Equipment:				
Receiving: Horn T119, and Chamber C SMA Cables										Receiving: Horn T119, and Chamber C SMA Cables									
Substitution: Horn T72, 6ft N-type Cable Warehouse										Substitution: Horn T72, 6ft N-type Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
1850.20	21.35	V	0.9	8.5	28.98	33.0	-4.0			1850.20	13.06	V	0.9	8.5	20.69	33.0	-12.3		
1850.20	23.23	H	0.9	8.5	30.86	33.0	-2.1			1850.20	17.73	H	0.9	8.5	25.36	33.0	-7.6		
Mid Ch										Mid Ch									
1880.00	22.38	V	0.9	8.5	29.97	33.0	-3.0			1880.00	13.13	V	0.9	8.5	20.72	33.0	-12.3		
1880.00	24.06	H	0.9	8.5	31.65	33.0	-1.4			1880.00	18.27	H	0.9	8.5	25.86	33.0	-7.1		
High Ch										High Ch									
1909.80	19.13	V	0.9	8.5	26.71	33.0	-6.3			1909.80	13.57	V	0.9	8.5	21.15	33.0	-11.8		
1909.80	23.88	H	0.9	8.5	31.46	33.0	-1.5			1909.80	19.64	H	0.9	8.5	27.22	33.0	-5.8		

WCDMA

Band	Mode	Channel	f(MHz)	ERP/EIRP	
				dBm	mW
Band 2	REL99	9262	1852.4	23.96	248.89
		9400	1880	24.70	295.12
		9538	1907.6	24.97	314.05
	HSDPA	9262	1852.4	23.50	223.87
		9400	1880.0	24.40	275.42
		9538	1907.6	24.55	285.10
Band 4	REL99	1312	1712.4	21.90	154.88
		1413	1732.6	21.07	127.94
		1513	1752.6	21.98	157.76
	HSDPA	1312	1712.4	21.50	141.25
		1413	1732.6	21.23	132.74
		1513	1752.6	22.19	165.58
Band 5	REL99	4132	826.4	22.08	161.44
		4183	836.6	22.03	159.59
		4233	846.6	22.16	164.44
	HSDPA	4132	826.4	22.06	160.69
		4183	836.6	21.38	137.40
		4233	846.6	22.13	163.31

B2 REL99										B2 HSDPA										
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.										
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					
Project #: 8105/16					Project #: 8105/16					Project #: 8105/16					Project #: 8105/16					
Date: John Ly					Date: John Ly + Jude J.					Date: John Ly + Jude J.					Date: John Ly + Jude J.					
Test Engineer: John Ly					Test Engineer: John Ly + Jude J.					Test Engineer: John Ly + Jude J.					Test Engineer: John Ly + Jude J.					
Configuration: EUT only					Configuration: EUT only					Configuration: EUT only					Configuration: EUT only					
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C					
Mode: Rel99 B2					Mode: HSDPA B2					Mode: HSDPA B2					Mode: HSDPA B2					
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963 Substitution, 4ft SMA Cable Warehouse										Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963 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		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes		
Low Ch										Low Ch										
1852.40	12.45	V	0.9	7.9	19.45	33.0	-13.6			1852.40	12.15	V	0.9	7.9	19.15	33.0	-13.9			
1852.40	16.96	H	0.9	7.9	23.96	33.0	-9.0			1852.40	16.50	H	0.9	7.9	23.50	33.0	-9.5			
Mid Ch										Mid Ch										
1880.00	13.00	V	0.9	7.9	20.00	33.0	-13.0			1880.00	12.61	V	0.9	7.9	19.61	33.0	-13.4			
1880.00	17.70	H	0.9	7.9	24.70	33.0	-8.3			1880.00	17.40	H	0.9	7.9	24.40	33.0	-8.6			
High Ch										High Ch										
1907.60	13.13	V	0.9	7.9	20.13	33.0	-12.9			1907.60	12.63	V	0.9	7.9	19.63	33.0	-13.4			
1907.60	17.97	H	0.9	7.9	24.97	33.0	-8.0			1907.60	17.55	H	0.9	7.9	24.55	33.0	-8.5			
Rev. 3 17 11 Note: For Band 4 EIRP limit is 30dBm										Rev. 3 17 11 Note: For Band 4 EIRP limit is 30dBm										
B4 REL99										B4 HSDPA										
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.										
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					
Project #: 1/13/2016					Project #: 1/13/2016					Project #: 1/13/2016					Project #: 1/13/2016					
Date: O. Steelling					Date: O. Steelling					Date: O. Steelling					Date: O. Steelling					
Test Engineer: O. Steelling					Test Engineer: O. Steelling					Test Engineer: O. Steelling					Test Engineer: O. Steelling					
Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C					
Mode: Rel99 Band 4 Fundamentals					Mode: HSDPA Band 4 Fundamentals					Mode: HSDPA Band 4 Fundamentals					Mode: HSDPA Band 4 Fundamentals					
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T99, 6ft SMA Cable Warehouse										Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T99, 6ft SMA Cable Warehouse										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch										Low Ch										
1712.40	7.54	V	0.9	8.7	15.39	30.0	-14.6			1712.40	7.69	V	0.9	8.7	15.54	30.0	-14.5			
1712.40	13.34	H	0.9	8.7	21.19	30.0	-8.8			1712.40	13.65	H	0.9	8.7	21.50	30.0	-8.5			
Mid Ch										Mid Ch										
1732.60	10.40	V	0.9	8.7	18.21	30.0	-11.8			1732.60	10.75	V	0.9	8.7	18.56	30.0	-11.4			
1732.60	13.26	H	0.9	8.7	21.07	30.0	-8.9			1732.60	13.42	H	0.9	8.7	21.23	30.0	-8.8			
High Ch										High Ch										
1752.60	7.17	V	0.9	8.7	14.94	30.0	-15.1			1752.60	7.36	V	0.9	8.7	15.13	30.0	-14.9			
1752.60	14.21	H	0.9	8.7	21.98	30.0	-8.0			1752.60	14.42	H	0.9	8.7	22.19	30.0	-7.8			
Rev. 3 17 11 Note: For Band 4 EIRP limit is 30dBm										Rev. 3 17 11 Note: For Band 4 EIRP limit is 30dBm										
B5 REL99										B5 HSDPA										
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.										
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					
Project #: 1/8/2016					Project #: 1/8/2016					Project #: 1/8/2016					Project #: 1/8/2016					
Date: O. Steelling					Date: O. Steelling					Date: O. Steelling					Date: O. Steelling					
Test Engineer: O. Steelling					Test Engineer: O. Steelling					Test Engineer: O. Steelling					Test Engineer: O. Steelling					
Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C					
Mode: Rel99 Band 5 Fundamentals					Mode: HSDPA Band 5 Fundamentals					Mode: HSDPA Band 5 Fundamentals					Mode: HSDPA Band 5 Fundamentals					
Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch										Low Ch										
826.40	15.46	V	0.9	0.0	14.56	38.5	-23.9			826.40	15.42	V	0.9	0.0	14.53	38.5	-24.0			
826.40	22.98	H	0.9	0.0	22.08	38.5	-16.4			826.40	22.96	H	0.9	0.0	22.06	38.5	-16.4			
Mid Ch										Mid Ch										
836.60	17.32	V	0.9	0.0	16.42	38.5	-22.1			836.60	17.13	V	0.9	0.0	16.23	38.5	-22.3			
836.60	22.93	H	0.9	0.0	22.03	38.5	-16.5			836.60	22.28	H	0.9	0.0	21.38	38.5	-17.1			
High Ch										High Ch										
846.60	16.66	V	0.9	0.0	15.76	38.5	-22.7			846.60	16.31	V	0.9	0.0	15.41	38.5	-23.1			
846.60	23.06	H	0.9	0.0	22.16	38.5	-16.3			846.60	23.03	H	0.9	0.0	22.13	38.5	-16.4			

LTE Band 2

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
1.4	QPSK	1/0	1850.7	24.18	261.82
		1/0	1880	25.04	319.15
		1/0	1909.3	24.61	289.07
	16QAM	1/0	1850.7	23.71	234.96
		1/0	1880	24.51	282.49
		1/0	1909.3	24.14	259.42
3	QPSK	1/0	1851.5	24.11	257.63
		1/0	1880	25.17	328.85
		1/0	1908.5	24.71	295.80
	16QAM	1/0	1851.5	23.51	224.39
		1/0	1880	24.71	295.80
		1/0	1908.5	24.21	263.63
5	QPSK	1/0	1852.5	24.61	289.07
		1/0	1880	24.91	309.74
		1/0	1907.5	24.11	257.63
	16QAM	1/0	1852.5	24.11	257.63
		1/0	1880	24.51	282.49
		1/0	1907.5	23.61	229.61
10	QPSK	1/0	1855	24.31	269.77
		1/0	1880	25.01	316.96
		1/0	1905	24.51	282.49
	16QAM	1/0	1855	23.81	240.44
		1/0	1880	24.51	282.49
		1/0	1905	24.11	257.63
15	QPSK	1/0	1857.5	24.61	289.07
		1/0	1880	25.41	347.54
		1/0	1902.5	24.81	302.69
	16QAM	1/0	1857.5	24.01	251.77
		1/0	1880	24.81	302.69
		1/0	1902.5	24.31	269.77
20	QPSK	1/0	1860	25.01	316.96
		1/0	1880	26.19	415.91
		1/0	1900	25.11	324.34
	16QAM	1/0	1860	24.41	276.06
		1/0	1880	25.71	372.39
		1/0	1900	24.61	289.07

1.4MHz QPSK										1.4MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/11/2016					Test Engineer: Jude Semana					Date: 1/11/2016					Test Engineer: Jude Semana				
Configuration: EUT Only					Location: Chamber C					Configuration: EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 2 Fundamentals, 1.4MHz Bandwidth					Mode: LTE_16QAM Band 2 Fundamentals, 1.4MHz Bandwidth					Test Equipment:					Test Equipment:				
Receiving: Horn T119, and Chamber C SMA Cables										Receiving: Horn T119, and Chamber C SMA Cables									
Substitution: Horn T963, 4ft SMA Cable Warehouse										Substitution: Horn T963, 4ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
1850.70	11.88	V	0.9	8.0	18.99	33.0	-14.0			1850.70	11.70	V	0.9	8.0	18.81	33.0	-14.2		
1859.70	17.07	H	0.9	8.0	24.18	33.0	-8.8			1859.70	16.60	H	0.9	8.0	23.71	33.0	-9.3		
Mid Ch										Mid Ch									
1880.00	12.60	V	0.9	8.0	19.71	33.0	-13.3			1880.00	11.90	V	0.9	8.0	19.01	33.0	-14.0		
1880.00	17.93	H	0.9	8.0	25.04	33.0	-8.0			1880.00	17.40	H	0.9	8.0	24.51	33.0	-8.5		
High Ch										High Ch									
1909.30	11.90	V	0.9	8.0	19.01	33.0	-14.0			1909.30	11.60	V	0.9	8.0	18.71	33.0	-14.3		
1909.30	17.50	H	0.9	8.0	24.61	33.0	-8.4			1909.30	17.03	H	0.9	8.0	24.14	33.0	-8.9		
3MHz QPSK										3MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/11/2016					Test Engineer: Jude Semana					Date: 1/11/2016					Test Engineer: Jude Semana				
Configuration: EUT Only					Location: Chamber C					Configuration: EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 2 Fundamentals, 3MHz Bandwidth					Mode: LTE_16QAM Band 2 Fundamentals, 3MHz Bandwidth					Test Equipment:					Test Equipment:				
Receiving: Horn T119, and Chamber C SMA Cables										Receiving: Horn T119, and Chamber C SMA Cables									
Substitution: Horn T963, 4ft SMA Cable Warehouse										Substitution: Horn T963, 4ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
1851.50	12.20	V	0.9	8.0	19.31	33.0	-13.7			1851.50	11.10	V	0.9	8.0	18.21	33.0	-14.8		
1851.50	17.09	H	0.9	8.0	24.11	33.0	-8.9			1851.50	16.40	H	0.9	8.0	23.51	33.0	-9.5		
Mid Ch										Mid Ch									
1880.00	12.80	V	0.9	8.0	19.91	33.0	-13.1			1880.00	11.90	V	0.9	8.0	19.01	33.0	-14.0		
1880.00	18.06	H	0.9	8.0	25.17	33.0	-7.8			1880.00	17.60	H	0.9	8.0	24.71	33.0	-8.3		
High Ch										High Ch									
1908.50	12.60	V	0.9	8.0	19.11	33.0	-13.9			1908.50	11.50	V	0.9	8.0	18.61	33.0	-14.4		
1908.50	17.60	H	0.9	8.0	24.71	33.0	-8.3			1908.50	17.10	H	0.9	8.0	24.21	33.0	-8.8		
5MHz QPSK										5MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/11/2016					Test Engineer: Jude Semana					Date: 1/11/2016					Test Engineer: Jude Semana				
Configuration: EUT Only					Location: Chamber C					Configuration: EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 2 Fundamentals, 5MHz Bandwidth					Mode: LTE_16QAM Band 2 Fundamentals, 5MHz Bandwidth					Test Equipment:					Test Equipment:				
Receiving: Horn T119, and Chamber C SMA Cables										Receiving: Horn T119, and Chamber C SMA Cables									
Substitution: Horn T963, 4ft SMA Cable Warehouse										Substitution: Horn T963, 4ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
1852.50	13.40	V	0.9	8.0	20.51	33.0	-12.5			1852.50	23.10	V	0.9	8.0	30.21	33.0	-2.8		
1852.50	17.50	H	0.9	8.0	24.61	33.0	-8.4			1852.50	17.00	H	0.9	8.0	24.11	33.0	-8.9		
Mid Ch										Mid Ch									
1880.00	12.20	V	0.9	8.0	19.31	33.0	-13.7			1880.00	12.00	V	0.9	8.0	19.11	33.0	-13.9		
1880.00	17.80	H	0.9	8.0	24.91	33.0	-8.1			1880.00	17.40	H	0.9	8.0	24.51	33.0	-8.5		
High Ch										High Ch									
1907.50	11.60	V	0.9	8.0	18.71	33.0	-14.3			1907.50	11.10	V	0.9	8.0	18.21	33.0	-14.8		
1907.50	17.00	H	0.9	8.0	24.11	33.0	-8.9			1907.50	16.50	H	0.9	8.0	23.61	33.0	-9.4		

10MHz QPSK									10MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics Project #: Date: 1/11/2016 Test Engineer: Jude Semana Configuration: EUT Only Location: Chamber C Mode: LTE_QPSK Band 2 Fundamentals, 10MHz Bandwidth									Company: LG Electronics Project #: Date: 1/11/2016 Test Engineer: Jude Semana Configuration: EUT Only Location: Chamber C Mode: LTE_16QAM Band 2 Fundamentals, 10MHz Bandwidth								
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse									Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch 1855.00 12.00 V 0.9 8.0 19.11 33.0 -13.9 1855.00 17.20 H 0.9 8.0 24.31 33.0 -8.7 Mid Ch 1890.00 12.40 V 0.9 8.0 19.51 33.0 -13.5 1890.00 17.90 H 0.9 8.0 25.01 33.0 -3.0 High Ch 1905.00 11.80 V 0.9 8.0 18.91 33.0 -14.1 1905.00 17.40 H 0.9 8.0 24.51 33.0 -8.5									Low Ch 1855.00 11.70 V 0.9 8.0 18.81 33.0 -14.2 1855.00 16.70 H 0.9 8.0 23.81 33.0 -9.2 Mid Ch 1880.00 11.80 V 0.9 8.0 18.91 33.0 -14.1 1880.00 17.40 H 0.9 8.0 24.51 33.0 -8.5 High Ch 1905.00 11.00 V 0.9 8.0 18.11 33.0 -14.8 1905.00 17.00 H 0.9 8.0 24.11 33.0 -8.9								
15MHz QPSK									15MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics Project #: Date: 1/11/2016 Test Engineer: Jude Semana Configuration: EUT Only Location: Chamber C Mode: LTE_QPSK Band 2 Fundamentals, 15MHz Bandwidth									Company: LG Electronics Project #: Date: 1/11/2016 Test Engineer: Jude Semana Configuration: EUT Only Location: Chamber C Mode: LTE_16QAM Band 2 Fundamentals, 15MHz Bandwidth								
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse									Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch 1857.50 13.40 V 0.9 8.0 20.51 33.0 -12.5 1857.50 17.50 H 0.9 8.0 24.61 33.0 -8.4 Mid Ch 1880.00 12.00 V 0.9 8.0 19.11 33.0 -13.9 1880.00 18.30 H 0.9 8.0 25.41 33.0 -7.6 High Ch 1902.50 12.50 V 0.9 8.0 19.61 33.0 -13.4 1902.50 17.70 H 0.9 8.0 24.81 33.0 -8.2									Low Ch 1857.50 12.70 V 0.9 8.0 19.81 33.0 -13.2 1857.50 16.90 H 0.9 8.0 24.01 33.0 -9.0 Mid Ch 1880.00 11.60 V 0.9 8.0 18.71 33.0 -14.3 1880.00 17.70 H 0.9 8.0 24.81 33.0 -8.2 High Ch 1902.50 11.70 V 0.9 8.0 18.81 33.0 -14.2 1902.50 17.20 H 0.9 8.0 24.31 33.0 -8.7								
20MHz QPSK									20MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics Project #: Date: 1/11/2016 Test Engineer: Jude Semana Configuration: EUT Only Location: Chamber C Mode: LTE_QPSK Band 2 Fundamentals, 20MHz Bandwidth									Company: LG Electronics Project #: Date: 1/11/2016 Test Engineer: Jude Semana Configuration: EUT Only Location: Chamber C Mode: LTE_16QAM Band 2 Fundamentals, 20MHz Bandwidth								
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse									Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch 1860.00 12.70 V 0.9 8.0 19.81 33.0 -13.2 1860.00 17.90 H 0.9 8.0 25.01 33.0 -8.6 Mid Ch 1880.00 12.80 V 0.9 8.0 19.91 33.0 -13.1 1880.00 19.00 H 0.9 8.0 26.19 33.0 -6.8 High Ch 1900.00 12.70 V 0.9 8.0 19.81 33.0 -13.2 1900.00 18.00 H 0.9 8.0 25.11 33.0 -7.9									Low Ch 1860.00 12.00 V 0.9 8.0 19.11 33.0 -13.9 1860.00 17.30 H 0.9 8.0 24.41 33.0 -8.6 Mid Ch 1880.00 12.10 V 0.9 8.0 19.21 33.0 -13.8 1880.00 18.60 H 0.9 8.0 25.71 33.0 -7.3 High Ch 1900.00 12.00 V 0.9 8.0 19.11 33.0 -13.9 1900.00 17.50 H 0.9 8.0 24.61 33.0 -8.4								

LTE Band 4

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
1.4	QPSK	1/0	1710.7	22.71	186.64
		1/0	1732.5	23.07	202.77
		1/0	1754.3	24.86	306.20
	16QAM	1/0	1710.7	22.11	162.55
		1/0	1732.5	22.44	175.39
		1/0	1754.3	24.06	254.68
3	QPSK	1/0	1711.5	22.69	185.78
		1/0	1732.5	24.32	270.40
		1/0	1753.5	25.12	325.09
	16QAM	1/0	1711.5	21.89	154.53
		1/0	1732.5	23.72	235.50
		1/0	1753.5	24.46	279.25
5	QPSK	1/0	1712.5	22.88	194.09
		1/0	1732.5	24.62	289.73
		1/0	1752.5	24.67	293.09
	16QAM	1/0	1712.5	22.38	172.98
		1/0	1732.5	22.92	195.88
		1/0	1752.5	24.47	279.90
10	QPSK	1/0	1715	22.91	195.43
		1/0	1732.5	24.12	258.23
		1/0	1750	25.11	324.34
	16QAM	1/0	1715	22.21	166.34
		1/0	1732.5	23.42	219.79
		1/0	1750	24.56	285.76
15	QPSK	1/0	1717.5	22.79	190.11
		1/0	1732.5	23.92	246.60
		1/0	1747.5	24.34	271.64
	16QAM	1/0	1717.5	23.09	203.70
		1/0	1732.5	23.12	205.12
		1/0	1747.5	23.76	237.68
20	QPSK	1/0	1720	23.30	213.80
		1/0	1732.5	24.82	303.39
		1/0	1745	24.87	306.90
	16QAM	1/0	1720	22.68	185.35
		1/0	1732.5	24.12	258.23
		1/0	1745	24.27	267.30

1.4MHz QPSK									1.4MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics			Project #: 1/11/2016			Date: 1/11/2016			Company: LG Electronics			Project #: 1/11/2016			Date: 1/11/2016		
Test Engineer: Jude Semana			Configuration: EUT Only			Location: Chamber C			Test Engineer: Jude Semana			Configuration: EUT Only			Location: Chamber C		
Mode: LTE_QPSK Band 4 Fundamentals, 1.4MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 1.4MHz Bandwidth			Mode: LTE_QPSK Band 4 Fundamentals, 1.4MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 1.4MHz Bandwidth			Mode: LTE_QPSK Band 4 Fundamentals, 1.4MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 1.4MHz Bandwidth		
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse									Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch									Low Ch								
1710.70	2.27	V	0.9	8.2	9.54	30.0	-20.5		1710.70	1.67	V	0.9	8.2	8.94	30.0	-21.1	
1710.70	15.44	H	0.9	8.2	22.71	30.0	-7.3		1710.70	14.84	H	0.9	8.2	22.11	30.0	-7.9	
Mid Ch									Mid Ch								
1732.50	2.69	V	0.9	8.2	9.96	30.0	-20.0		1732.50	2.09	V	0.9	8.2	9.36	30.0	-20.6	
1732.50	15.80	H	0.9	8.2	23.07	30.0	-6.9		1732.50	15.17	H	0.9	8.2	22.44	30.0	-7.6	
High Ch									High Ch								
1754.30	5.14	V	0.9	8.1	12.33	30.0	-17.7		1754.30	4.94	V	0.9	8.1	12.13	30.0	-17.9	
1754.30	17.67	H	0.9	8.1	24.86	30.0	-5.1		1754.30	16.87	H	0.9	8.1	24.06	30.0	-5.9	
3MHz QPSK									3MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics			Project #: 1/11/2016			Date: 1/11/2016			Company: LG Electronics			Project #: 1/11/2016			Date: 1/11/2016		
Test Engineer: Jude Semana			Configuration: EUT Only			Location: Chamber C			Test Engineer: Jude Semana			Configuration: EUT Only			Location: Chamber C		
Mode: LTE_QPSK Band 4 Fundamentals, 3MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 3MHz Bandwidth			Mode: LTE_QPSK Band 4 Fundamentals, 3MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 3MHz Bandwidth			Mode: LTE_QPSK Band 4 Fundamentals, 3MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 3MHz Bandwidth		
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse									Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch									Low Ch								
1711.50	2.07	V	0.9	8.2	9.42	30.0	-20.6		1711.50	0.37	V	0.9	8.2	7.72	30.0	-22.3	
1711.50	15.34	H	0.9	8.2	22.69	30.0	-7.3		1711.50	14.54	H	0.9	8.2	21.89	30.0	-8.1	
Mid Ch									Mid Ch								
1732.50	3.89	V	0.9	8.2	10.76	30.0	-19.2		1732.50	2.99	V	0.9	8.2	10.26	30.0	-19.7	
1732.50	17.05	H	0.9	8.2	24.32	30.0	-5.7		1732.50	16.45	H	0.9	8.2	23.72	30.0	-6.3	
High Ch									High Ch								
1753.50	5.14	V	0.9	8.1	12.33	30.0	-17.7		1753.50	4.34	V	0.9	8.1	11.53	30.0	-18.5	
1753.50	17.53	H	0.9	8.1	25.12	30.0	-4.9		1753.50	17.27	H	0.9	8.1	24.46	30.0	-5.5	
5MHz QPSK									5MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics			Project #: 1/11/2016			Date: 1/11/2016			Company: LG Electronics			Project #: 1/11/2016			Date: 1/11/2016		
Test Engineer: Jude Semana			Configuration: EUT Only			Location: Chamber C			Test Engineer: Jude Semana			Configuration: EUT Only			Location: Chamber C		
Mode: LTE_QPSK Band 4 Fundamentals, 5MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 5MHz Bandwidth			Mode: LTE_QPSK Band 4 Fundamentals, 5MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 5MHz Bandwidth			Mode: LTE_QPSK Band 4 Fundamentals, 5MHz Bandwidth			Mode: LTE_16QAM Band 4 Fundamentals, 5MHz Bandwidth		
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse									Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch									Low Ch								
1712.50	2.27	V	0.9	8.2	9.61	30.0	-20.4		1712.50	1.67	V	0.9	8.2	9.01	30.0	-21.0	
1712.50	15.54	H	0.9	8.2	22.88	30.0	-7.1		1712.50	15.04	H	0.9	8.2	22.38	30.0	-7.6	
Mid Ch									Mid Ch								
1732.50	3.89	V	0.9	8.2	11.16	30.0	-18.8		1732.50	3.29	V	0.9	8.2	10.56	30.0	-19.4	
1732.50	17.35	H	0.9	8.2	24.62	30.0	-5.4		1732.50	16.65	H	0.9	8.2	23.92	30.0	-6.1	
High Ch									High Ch								
1752.50	4.84	V	0.9	8.1	12.04	30.0	-18.0		1752.50	4.64	V	0.9	8.1	11.84	30.0	-18.2	
1752.50	17.77	H	0.9	8.1	24.97	30.0	-5.0		1752.50	17.27	H	0.9	8.1	24.47	30.0	-5.5	

10MHz QPSK										10MHz 16QAM										
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.										
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					
Project #: 1/11/2016					Project #: 1/11/2016					Project #: 1/11/2016					Project #: 1/11/2016					
Date: Jude Semana					Date: Jude Semana					Date: Jude Semana					Date: Jude Semana					
Test Engineer: EUT Only					Test Engineer: EUT Only					Test Engineer: EUT Only					Test Engineer: EUT Only					
Configuration: Chamber C					Configuration: Chamber C					Configuration: Chamber C					Configuration: Chamber C					
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C					
Mode: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth					
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse										Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch										Low Ch										
1715.00	2.77	V	0.9	8.2	10.84	30.0	-20.0			1715.00	1.57	V	0.9	8.2	8.84	30.0	-21.2			
1715.00	15.64	H	0.9	8.2	22.91	30.0	-7.1			1715.00	14.94	H	0.9	8.2	22.21	30.0	-7.8			
Mid Ch										Mid Ch										
1732.50	3.39	V	0.9	8.2	10.66	30.0	-19.3			1732.50	2.59	V	0.9	8.2	9.86	30.0	-20.1			
1732.50	16.85	H	0.9	8.2	24.12	30.0	-5.9			1732.50	16.15	H	0.9	8.2	23.42	30.0	-6.6			
High Ch										High Ch										
1750.00	5.84	V	0.9	8.1	12.23	30.0	-17.8			1750.00	4.44	V	0.9	8.1	11.63	30.0	-18.4			
1750.00	17.92	H	0.9	8.1	25.11	30.0	-4.9			1750.00	17.37	H	0.9	8.1	24.56	30.0	-5.4			

15MHz QPSK										15MHz 16QAM										
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.										
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					
Project #: 1/11/2016					Project #: 1/11/2016					Project #: 1/11/2016					Project #: 1/11/2016					
Date: Jude Semana					Date: Jude Semana					Date: Jude Semana					Date: Jude Semana					
Test Engineer: EUT only					Test Engineer: EUT only					Test Engineer: EUT only					Test Engineer: EUT only					
Configuration: Chamber C					Configuration: Chamber C					Configuration: Chamber C					Configuration: Chamber C					
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C					
Mode: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth					
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse										Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch										Low Ch										
1717.50	3.07	V	0.9	8.2	10.42	30.0	-19.6			1717.50	2.47	V	0.9	8.2	9.82	30.0	-20.2			
1717.50	15.44	H	0.9	8.2	22.79	30.0	-7.2			1717.50	15.74	H	0.9	8.2	23.09	30.0	-6.9			
Mid Ch										Mid Ch										
1732.50	4.29	V	0.9	8.2	11.56	30.0	-18.4			1732.50	2.69	V	0.9	8.2	9.96	30.0	-20.0			
1732.50	15.55	H	0.9	8.2	23.92	30.0	-6.1			1732.50	15.85	H	0.9	8.2	23.12	30.0	-6.9			
High Ch										High Ch										
1747.50	4.24	V	0.9	8.1	11.43	30.0	-18.6			1747.50	3.54	V	0.9	8.1	10.73	30.0	-19.3			
1747.50	17.15	H	0.9	8.1	24.34	30.0	-5.7			1747.50	16.57	H	0.9	8.1	23.76	30.0	-6.2			

20MHz QPSK										20MHz 16QAM										
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.										
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					
Project #: 11/1/2016					Project #: 11/1/2016					Project #: 11/1/2016					Project #: 11/1/2016					
Date: Jude Semana					Date: Jude Semana					Date: Jude Semana					Date: Jude Semana					
Test Engineer: EUT only					Test Engineer: EUT only					Test Engineer: EUT only					Test Engineer: EUT only					
Configuration: Chamber C					Configuration: Chamber C					Configuration: Chamber C					Configuration: Chamber C					
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C					
Mode: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth					Mode: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth					
Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse										Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T963, 4ft SMA Cable Warehouse										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch										Low Ch										
1720.00	3.07	V	0.9	8.2	10.41	30.0	-19.6			1720.00	1.17	V	0.9	8.2	8.51	30.0	-21.5			
1720.00	15.96	H	0.9	8.2	23.30	30.0	-6.7			1720.00	15.34	H	0.9	8.2	22.68	30.0	-7.3			
Mid Ch										Mid Ch										
1732.50	4.89	V	0.9	8.2	11.76	30.0	-18.2			1732.50	3.49	V	0.9	8.2	10.76	30.0	-19.2			
1732.50	17.55	H	0.9	8.2	24.82	30.0	-5.2			1732.50	16.85	H	0.9	8.2	24.12	30.0	-5.9			
High Ch										High Ch										
1745.00	5.24	V	0.9	8.1	12.44	30.0	-17.6			1745.00	4.24	V	0.9	8.1	11.44	30.0	-18.6			
1745.00	17.67	H	0.9	8.1	24.87	30.0	-5.1			1745.00	17.07	H	0.9	8.1	24.27	30.0	-5.7			

LTE Band 5

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	mW
1.4	QPSK	1/0	824.7	22.46	176.20
		1/0	836.5	21.93	155.96
		1/0	848.3	22.12	162.93
	16QAM	1/0	824.7	21.80	151.36
		1/0	836.5	21.54	142.56
		1/0	848.3	21.11	129.12
3	QPSK	1/0	825.5	22.53	179.06
		1/0	836.5	22.03	159.59
		1/0	847.5	22.09	161.81
	16QAM	1/0	825.5	21.94	156.31
		1/0	836.5	21.18	131.22
		1/0	847.5	21.24	133.05
5	QPSK	1/0	826.5	22.18	165.20
		1/0	836.5	22.36	172.19
		1/0	846.5	21.98	157.76
	16QAM	1/0	826.5	20.93	123.88
		1/0	836.5	21.36	136.77
		1/0	846.5	21.22	132.43
10	QPSK	1/0	829	22.32	170.61
		1/0	836.5	23.02	200.45
		1/0	844	22.06	160.69
	16QAM	1/0	829	21.89	154.53
		1/0	836.5	22.36	172.19
		1/0	844	21.13	129.72

1.4MHz QPSK										1.4MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/8/2016					Test Engineer: O. Stoelting					Date: 1/8/2016					Test Engineer: O. Stoelting				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 5 Fundamentals, 1.4MHz Bandwidth					Mode: LTE_16QAM Band 5 Fundamentals, 1.4MHz Bandwidth					Test Equipment:					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes		f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes	
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)			MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)		
Low Ch										Low Ch									
824.70	15.87	V	0.9	0.0	14.97	38.5	-23.5			824.70	15.02	V	0.9	0.0	14.12	38.5	-24.4		
824.70	23.36	H	0.9	0.0	22.46	38.5	-16.0			824.70	22.70	H	0.9	0.0	21.80	38.5	-16.7		
Mid Ch										Mid Ch									
836.50	17.40	V	0.9	0.0	16.50	38.5	-22.0			836.50	17.04	V	0.9	0.0	16.14	38.5	-22.4		
836.50	22.83	H	0.9	0.0	21.93	38.5	-16.6			836.50	22.84	H	0.9	0.0	21.54	38.5	-17.0		
High Ch										High Ch									
848.30	15.81	V	0.9	0.0	14.91	38.5	-23.6			848.30	14.99	V	0.9	0.0	13.69	38.5	-24.8		
848.30	23.02	H	0.9	0.0	22.12	38.5	-16.4			848.30	22.01	H	0.9	0.0	21.11	38.5	-17.4		
3MHz QPSK										3MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/8/2016					Test Engineer: O. Stoelting					Date: 1/8/2016					Test Engineer: O. Stoelting				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 5 Fundamentals, 3MHz Bandwidth					Mode: LTE_16QAM Band 5 Fundamentals, 3MHz Bandwidth					Test Equipment:					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes		f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes	
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)			MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)		
Low Ch										Low Ch									
825.50	15.40	V	0.9	0.0	14.50	38.5	-24.0			825.50	14.72	V	0.9	0.0	13.82	38.5	-24.7		
825.50	23.43	H	0.9	0.0	22.53	38.5	-16.0			825.50	22.84	H	0.9	0.0	21.94	38.5	-16.6		
Mid Ch										Mid Ch									
836.50	17.11	V	0.9	0.0	16.21	38.5	-22.3			836.50	16.32	V	0.9	0.0	15.42	38.5	-23.1		
836.50	22.93	H	0.9	0.0	22.03	38.5	-16.5			836.50	22.08	H	0.9	0.0	21.18	38.5	-17.3		
High Ch										High Ch									
847.50	16.34	V	0.9	0.0	15.44	38.5	-23.1			847.50	15.17	V	0.9	0.0	14.27	38.5	-24.2		
847.50	22.99	H	0.9	0.0	22.09	38.5	-16.4			847.50	22.14	H	0.9	0.0	21.24	38.5	-17.3		
5MHz QPSK										5MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/8/2016					Test Engineer: O. Stoelting					Date: 1/8/2016					Test Engineer: O. Stoelting				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 5 Fundamentals, 5MHz Bandwidth					Mode: LTE_16QAM Band 5 Fundamentals, 5MHz Bandwidth					Test Equipment:					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes		f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes	
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)			MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)		
Low Ch										Low Ch									
826.50	15.43	V	0.9	0.0	14.53	38.5	-24.0			826.50	13.97	V	0.9	0.0	13.07	38.5	-25.4		
826.50	23.08	H	0.9	0.0	22.18	38.5	-16.3			826.50	21.83	H	0.9	0.0	20.93	38.5	-17.6		
Mid Ch										Mid Ch									
836.50	16.92	V	0.9	0.0	16.02	38.5	-22.5			836.50	15.98	V	0.9	0.0	15.08	38.5	-23.4		
836.50	23.26	H	0.9	0.0	22.36	38.5	-16.1			836.50	22.26	H	0.9	0.0	21.36	38.5	-17.1		
High Ch										High Ch									
846.50	15.92	V	0.9	0.0	15.02	38.5	-23.5			846.50	15.28	V	0.9	0.0	14.38	38.5	-24.1		
846.50	22.88	H	0.9	0.0	21.98	38.5	-16.5			846.50	22.12	H	0.9	0.0	21.22	38.5	-17.3		

10MHz QPSK										10MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics				
Project #:					Project #:					Project #:					Project #:				
Date: 1/8/2016					Date: 1/8/2016					Date: 1/8/2016					Date: 1/8/2016				
Test Engineer: O. Steetling					Test Engineer: O. Steetling					Test Engineer: O. Steetling					Test Engineer: O. Steetling				
Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					Configuration: X-pos EUT Only					Configuration: X-pos EUT Only				
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C				
Mode: LTE_QPSK Band 5 Fundamentals. 10MHz Bandwidth					Mode: LTE_QPSK Band 5 Fundamentals. 10MHz Bandwidth					Mode: LTE_16QAM Band 5 Fundamentals. 10MHz Bandwidth					Mode: LTE_16QAM Band 5 Fundamentals. 10MHz Bandwidth				
Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
829.00	15.79	V	0.9	0.0	14.89	38.5	-23.6			829.00	14.77	V	0.9	0.0	13.87	38.5	-24.6		
829.00	23.22	H	0.9	0.0	22.32	38.5	-16.2			829.00	22.79	H	0.9	0.0	21.89	38.5	-16.6		
Mid Ch										Mid Ch									
836.50	16.92	V	0.9	0.0	16.02	38.5	-22.5			836.50	15.91	V	0.9	0.0	15.01	38.5	-23.5		
836.50	23.92	H	0.9	0.0	23.02	38.5	-15.5			836.50	23.26	H	0.9	0.0	22.36	38.5	-16.1		
High Ch										High Ch									
844.00	16.67	V	0.9	0.0	15.77	38.5	-22.7			844.00	15.79	V	0.9	0.0	14.89	38.5	-23.6		
844.00	22.96	H	0.9	0.0	22.06	38.5	-16.4			844.00	22.03	H	0.9	0.0	21.13	38.5	-17.4		

LTE Band 12

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	mW
1.4	QPSK	1/0	699.7	18.72	74.47
		1/0	707.5	18.56	71.78
		1/0	715.3	19.68	92.90
	16QAM	1/0	699.7	17.86	61.09
		1/0	707.5	17.78	59.98
		1/0	715.3	19.02	79.80
3	QPSK	1/0	700.5	19.09	81.10
		1/0	707.5	19.82	95.94
		1/0	714.5	19.82	95.94
	16QAM	1/0	700.5	18.18	65.77
		1/0	707.5	18.99	79.25
		1/0	714.5	19.93	98.40
5	QPSK	1/0	701.5	18.93	78.16
		1/0	707.5	19.70	93.33
		1/0	713.5	19.72	93.76
	16QAM	1/0	701.5	17.35	54.33
		1/0	707.5	18.36	68.55
		1/0	713.5	19.10	81.28
10	QPSK	1/0	704	18.96	78.70
		1/0	707.5	19.89	97.50
		1/0	711	20.17	103.99
	16QAM	1/0	704	18.19	65.92
		1/0	707.5	18.89	77.45
		1/0	711	19.14	82.04

1.4MHz QPSK										1.4MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/8/2016					Test Engineer: O. Steeltng					Date: 1/8/2016					Test Engineer: O. Steeltng				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 12 Fundamentals, 1.4MHz Bandwidth					Test Equipment:					Mode: LTE_16QAM Band 12 Fundamentals, 1.4MHz Bandwidth					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
699.70	11.58	V	0.9	0.0	10.68	34.8	-24.1			699.70	10.90	V	0.9	0.0	10.00	34.8	-24.8		
699.70	19.62	H	0.9	0.0	18.72	34.8	-16.1			699.70	18.76	H	0.9	0.0	17.86	34.8	-16.9		
Mid Ch										Mid Ch									
707.50	12.01	V	0.9	0.0	11.11	34.8	-23.7			707.50	11.16	V	0.9	0.0	10.26	34.8	-24.5		
707.50	19.46	H	0.9	0.0	18.56	34.8	-16.2			707.50	18.68	H	0.9	0.0	17.78	34.8	-17.0		
High Ch										High Ch									
715.30	12.17	V	0.9	0.0	11.27	34.8	-23.5			715.30	11.13	V	0.9	0.0	10.23	34.8	-24.6		
715.30	20.58	H	0.9	0.0	19.68	34.8	-15.1			715.30	19.92	H	0.9	0.0	19.02	34.8	-15.8		
3MHz QPSK										3MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/8/2016					Test Engineer: O. Steeltng					Date: 1/8/2016					Test Engineer: O. Steeltng				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 12 Fundamentals, 3MHz Bandwidth					Test Equipment:					Mode: LTE_16QAM Band 12 Fundamentals, 3MHz Bandwidth					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
700.50	11.09	V	0.9	0.0	10.19	34.8	-24.6			700.50	10.53	V	0.9	0.0	9.63	34.8	-25.2		
700.50	19.99	H	0.9	0.0	19.09	34.8	-15.7			700.50	19.08	H	0.9	0.0	18.18	34.8	-16.6		
Mid Ch										Mid Ch									
707.50	12.57	V	0.9	0.0	11.67	34.8	-23.1			707.50	11.92	V	0.9	0.0	11.02	34.8	-23.8		
707.50	20.72	H	0.9	0.0	19.82	34.8	-15.0			707.50	19.89	H	0.9	0.0	18.99	34.8	-15.8		
High Ch										High Ch									
714.50	12.25	V	0.9	0.0	11.35	34.8	-23.5			714.50	11.35	V	0.9	0.0	10.45	34.8	-24.4		
714.50	20.72	H	0.9	0.0	19.82	34.8	-15.0			714.50	19.83	H	0.9	0.0	18.93	34.8	-15.9		
5MHz QPSK										5MHz 16QAM									
High Frequency Substitution Measurement UL Verification Services, Inc.										High Frequency Substitution Measurement UL Verification Services, Inc.									
Company: LG Electronics					Project #:					Company: LG Electronics					Project #:				
Date: 1/8/2016					Test Engineer: O. Steeltng					Date: 1/8/2016					Test Engineer: O. Steeltng				
Configuration: X-pos EUT Only					Location: Chamber C					Configuration: X-pos EUT Only					Location: Chamber C				
Mode: LTE_QPSK Band 12 Fundamentals, 5MHz Bandwidth					Test Equipment:					Mode: LTE_16QAM Band 12 Fundamentals, 5MHz Bandwidth					Test Equipment:				
Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse										Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
701.50	12.00	V	0.9	0.0	11.10	34.8	-23.7			701.50	10.51	V	0.9	0.0	9.61	34.8	-25.2		
701.50	19.83	H	0.9	0.0	18.93	34.8	-15.9			701.50	18.25	H	0.9	0.0	17.35	34.8	-17.5		
Mid Ch										Mid Ch									
707.50	11.76	V	0.9	0.0	10.86	34.8	-23.9			707.50	10.64	V	0.9	0.0	9.74	34.8	-25.1		
707.50	20.60	H	0.9	0.0	19.70	34.8	-15.1			707.50	19.26	H	0.9	0.0	18.36	34.8	-16.4		
High Ch										High Ch									
713.50	12.08	V	0.9	0.0	11.18	34.8	-23.6			713.50	11.17	V	0.9	0.0	10.27	34.8	-24.5		
713.50	20.62	H	0.9	0.0	19.72	34.8	-15.1			713.50	20.00	H	0.9	0.0	19.10	34.8	-15.7		

10MHz QPSK									10MHz 16QAM								
High Frequency Substitution Measurement UL Verification Services, Inc.									High Frequency Substitution Measurement UL Verification Services, Inc.								
Company: LG Electronics Project #: Date: 1/8/2016 Test Engineer: O. Steetling Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 12 Fundamentals, 10MHz Bandwidth									Company: LG Electronics Project #: Date: 1/8/2016 Test Engineer: O. Steetling Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_16QAM Band 12 Fundamentals, 10MHz Bandwidth								
Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse									Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft SMA Cable Warehouse								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch									Low Ch								
704.00	11.86	V	0.9	0.0	10.96	34.8	-23.8		704.00	11.13	V	0.9	0.0	10.23	34.8	-24.6	
704.00	19.86	H	0.9	0.0	18.96	34.8	-15.8		704.00	19.09	H	0.9	0.0	18.19	34.8	-16.6	
Mid Ch									Mid Ch								
707.50	12.27	V	0.9	0.0	11.37	34.8	-23.4		707.50	11.62	V	0.9	0.0	10.72	34.8	-24.1	
707.50	20.79	H	0.9	0.0	19.89	34.8	-14.9		707.50	19.79	H	0.9	0.0	18.89	34.8	-15.9	
High Ch									High Ch								
711.00	12.10	V	0.9	0.0	11.20	34.8	-23.6		711.00	11.48	V	0.9	0.0	10.58	34.8	-24.2	
711.00	21.07	H	0.9	0.0	20.17	34.8	-14.6		711.00	20.04	H	0.9	0.0	19.14	34.8	-15.7	

14.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

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.

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.

14.2.1. SPURIOUS EMISSION TEST DATA

GSM

GSM850 GPRS											GSM850 EGPRS										
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics									Company:		LG Electronics								
Project #:											Project #:										
Date:		1/13/2016									Date:		1/13/2016								
Test Engineer:		O. Stoelting									Test Engineer:		O. Stoelting								
Configuration:		X-pos EUT, HS, Charger Chamber C									Configuration:		X-pos EUT, HS, Charger Chamber C								
Location:											Location:										
Mode:		GPRS 850 MHz Harmonics									Mode:		EGPRS 850 MHz Harmonics								
F (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		F (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch. 824.2																					
1648.40	-18.5	V	3.0	36.4	1.0	53.8	-13.0	-40.8			1648.40	22.2	V	3.0	36.4	1.0	57.6	-13.0	-44.6		
2472.60	-8.9	V	3.0	35.0	1.0	42.9	-13.0	-29.9			2472.60	15.6	V	3.0	35.0	1.0	49.6	-13.0	-36.6		
3296.80	-26.7	V	3.0	34.3	1.0	60.0	-13.0	-47.0			3296.80	-24.4	V	3.0	34.3	1.0	57.7	-13.0	-44.7		
1648.40	-25.0	H	3.0	36.4	1.0	60.4	-13.0	-47.4			1648.40	26.0	H	3.0	36.4	1.0	61.3	-13.0	-48.3		
2472.60	-11.8	H	3.0	35.0	1.0	45.6	-13.0	-32.8			2472.60	18.1	H	3.0	35.0	1.0	52.1	-13.0	-39.1		
3296.80	-27.3	H	3.0	34.3	1.0	60.6	-13.0	-47.6			3296.80	27.9	H	3.0	34.3	1.0	61.2	-13.0	-48.2		
Mid Ch. 836.6																					
1673.20	-27.3	V	3.0	36.3	1.0	62.6	-13.0	-49.6			1673.20	18.2	V	3.0	36.3	1.0	53.5	-13.0	-40.5		
2509.80	-8.2	V	3.0	34.9	1.0	42.1	-13.0	-29.1			2509.80	19.6	V	3.0	34.9	1.0	53.6	-13.0	-40.6		
3346.40	-26.8	V	3.0	34.2	1.0	60.0	-13.0	-47.0			3346.40	23.9	V	3.0	34.2	1.0	57.2	-13.0	-44.2		
1673.20	-28.7	H	3.0	36.3	1.0	64.1	-13.0	-51.1			1673.20	27.6	H	3.0	36.3	1.0	62.9	-13.0	-49.9		
2509.80	-9.0	H	3.0	34.9	1.0	42.9	-13.0	-29.9			2509.80	18.8	H	3.0	34.9	1.0	52.7	-13.0	-39.7		
3346.40	-26.8	H	3.0	34.2	1.0	60.0	-13.0	-47.0			3346.40	25.8	H	3.0	34.2	1.0	59.1	-13.0	-46.1		
High Ch. 848.8																					
1697.60	-18.5	V	3.0	36.3	1.0	53.8	-13.0	-40.8			1697.60	16.5	V	3.0	36.3	1.0	51.8	-13.0	-38.8		
2546.40	-8.7	V	3.0	34.9	1.0	42.6	-13.0	-29.6			2546.40	18.1	V	3.0	34.9	1.0	52.0	-13.0	-39.0		
3395.20	-27.0	V	3.0	34.2	1.0	60.2	-13.0	-47.2			3395.20	25.2	V	3.0	34.2	1.0	58.3	-13.0	-45.3		
1697.60	-29.4	H	3.0	36.3	1.0	64.7	-13.0	-51.7			1697.60	23.5	H	3.0	36.3	1.0	58.8	-13.0	-45.8		
2546.40	-13.5	H	3.0	34.9	1.0	43.4	-13.0	-30.4			2546.40	18.1	H	3.0	34.9	1.0	52.0	-13.0	-39.0		
3395.20	-27.6	H	3.0	34.2	1.0	60.7	-13.0	-47.7			3395.20	25.2	H	3.0	34.2	1.0	58.4	-13.0	-45.4		
GSM1900 GPRS																					
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics									Company:		LG Electronics								
Project #:											Project #:										
Date:		1/11/2016									Date:		1/11/2016								
Test Engineer:		O. Stoelting									Test Engineer:		O. Stoelting								
Configuration:		X-pos EUT Only Chamber C									Configuration:		X-pos EUT Only Chamber C								
Location:											Location:										
Mode:		GPRS 1900 MHz Harmonics									Mode:		EGPRS 1900 MHz Harmonics								
F (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		F (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch. 1850.2																					
3700.40	-28.7	V	3.0	33.9	1.0	61.5	-13.0	-48.5			3700.40	-28.6	V	3.0	33.9	1.0	61.4	-13.0	-48.4		
5550.60	-27.8	V	3.0	33.1	1.0	59.9	-13.0	-46.9			5550.60	27.7	V	3.0	33.1	1.0	59.8	-13.0	-46.8		
7400.80	-24.3	V	3.0	32.9	1.0	56.1	-13.0	-43.1			7400.80	24.4	V	3.0	32.9	1.0	56.3	-13.0	-43.3		
3700.40	-28.3	H	3.0	33.9	1.0	61.2	-13.0	-48.2			3700.40	29.0	H	3.0	33.9	1.0	61.9	-13.0	-48.9		
5550.60	-27.8	H	3.0	33.1	1.0	59.9	-13.0	-46.9			5550.60	27.7	H	3.0	33.1	1.0	59.8	-13.0	-46.8		
7400.80	-24.5	H	3.0	32.9	1.0	56.3	-13.0	-43.3			7400.80	24.4	H	3.0	32.9	1.0	56.3	-13.0	-43.3		
Mid Ch. 1880																					
3760.00	-28.4	V	3.0	33.8	1.0	61.2	-13.0	-48.2			3760.00	-28.2	V	3.0	33.8	1.0	61.0	-13.0	-48.0		
5640.00	-27.7	V	3.0	33.1	1.0	59.8	-13.0	-46.8			5640.00	-27.3	V	3.0	33.1	1.0	59.4	-13.0	-46.4		
7520.00	-24.2	V	3.0	32.8	1.0	56.0	-13.0	-43.0			7520.00	-24.3	V	3.0	32.8	1.0	56.2	-13.0	-43.2		
3760.00	-28.4	H	3.0	33.8	1.0	61.2	-13.0	-48.2			3760.00	-28.4	H	3.0	33.8	1.0	61.2	-13.0	-48.2		
5640.00	-27.5	H	3.0	33.1	1.0	59.6	-13.0	-46.6			5640.00	-27.5	H	3.0	33.1	1.0	59.6	-13.0	-46.6		
7520.00	-24.4	H	3.0	32.8	1.0	56.3	-13.0	-43.3			7520.00	-24.2	H	3.0	32.8	1.0	56.1	-13.0	-43.1		
High Ch. 1909.8																					
3819.60	-26.9	V	3.0	33.7	1.0	59.6	-13.0	-46.6			3819.60	-28.3	V	3.0	33.7	1.0	61.0	-13.0	-48.0		
5729.40	-26.9	V	3.0	33.1	1.0	59.0	-13.0	-46.0			5729.40	-26.7	V	3.0	33.1	1.0	58.8	-13.0	-45.8		
7639.20	-23.8	V	3.0	32.8	1.0	55.7	-13.0	-42.7			7639.20	-23.8	V	3.0	32.8	1.0	55.7	-13.0	-42.7		
3819.60	-26.1	H	3.0	33.7	1.0	60.8	-13.0	-47.8			3819.60	-28.1	H	3.0	33.7	1.0	60.9	-13.0	-47.9		
5729.40	-26.4	H	3.0	33.1	1.0	58.9	-13.0	-45.9			5729.40	-26.8	H	3.0	33.1	1.0	58.9	-13.0	-45.9		
7639.20	-24.2	H	3.0	32.8	1.0	56.0	-13.0	-43.0			7639.20	-23.9	H	3.0	32.8	1.0	55.8	-13.0	-42.8		

WCDMA

B2 REL99
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #:
Date: 1/6/2016
Test Engineer: O. Stuebli
Configuration: X-pos EUT Only
Location: Chamber C
Mode: Rel99 Band 2 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4									
3704.80	-23.5	V	3.0	33.9	1.0	-56.3	-13.0	-43.3	
5557.20	-24.2	V	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7409.60	-21.0	V	3.0	32.9	1.0	-52.8	-13.0	-39.8	
3704.80	-20.7	H	3.0	33.9	1.0	-53.5	-13.0	-40.5	
5557.20	-24.7	H	3.0	33.1	1.0	-56.8	-13.0	-43.8	
7409.60	-20.9	H	3.0	32.9	1.0	-52.7	-13.0	-39.7	
Mid Ch, 1880									
3760.00	-23.6	V	3.0	33.8	1.0	-56.4	-13.0	-43.4	
5640.00	-24.1	V	3.0	33.1	1.0	-56.2	-13.0	-43.2	
7520.00	-20.4	V	3.0	32.8	1.0	-52.7	-13.0	-39.2	
3760.00	-22.9	H	3.0	33.8	1.0	-56.7	-13.0	-42.7	
5640.00	-24.0	H	3.0	33.1	1.0	-56.1	-13.0	-43.1	
7520.00	-20.7	H	3.0	32.8	1.0	-52.5	-13.0	-39.5	
High Ch, 1907.6									
3815.20	-24.2	V	3.0	33.7	1.0	-57.0	-13.0	-44.0	
5722.80	-23.7	V	3.0	33.1	1.0	-55.8	-13.0	-42.8	
7630.40	-20.7	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3815.20	-23.3	H	3.0	33.7	1.0	-56.1	-13.0	-43.1	
5722.80	-23.2	H	3.0	33.1	1.0	-56.5	-13.0	-42.3	
7630.40	-19.9	H	3.0	32.8	1.0	-51.7	-13.0	-38.7	

B2 HSDPA
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #:
Date: 1/6/2016
Test Engineer: O. Stuebli
Configuration: X-pos EUT Only
Location: Chamber C
Mode: HSDPA Band 2 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4									
3704.80	-22.0	V	3.0	33.9	1.0	-54.8	-13.0	-41.8	
5557.20	-24.7	V	3.0	33.1	1.0	-56.8	-13.0	-43.8	
7409.60	-21.2	V	3.0	32.9	1.0	-53.1	-13.0	-40.1	
3704.80	-21.9	H	3.0	33.9	1.0	-54.7	-13.0	-41.7	
5557.20	-24.2	H	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7409.60	-20.8	H	3.0	32.9	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1880									
3760.00	-23.4	V	3.0	33.8	1.0	-56.2	-13.0	-43.2	
5640.00	-24.3	V	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7520.00	-20.9	V	3.0	32.8	1.0	-52.7	-13.0	-39.7	
3760.00	-23.7	H	3.0	33.8	1.0	-56.5	-13.0	-42.5	
5640.00	-23.5	H	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7520.00	-20.6	H	3.0	32.8	1.0	-52.5	-13.0	-39.5	
High Ch, 1907.6									
3815.20	-24.4	V	3.0	33.7	1.0	-57.1	-13.0	-44.1	
5722.80	-23.2	V	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7630.40	-20.3	V	3.0	32.8	1.0	-52.1	-13.0	-39.1	
3815.20	-22.5	H	3.0	33.7	1.0	-55.3	-13.0	-42.3	
5722.80	-22.7	H	3.0	33.1	1.0	-54.8	-13.0	-41.8	
7630.40	-20.2	H	3.0	32.8	1.0	-52.1	-13.0	-39.1	

B4 REL99
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/16/2016
Test Engineer: R. Alegre
Configuration: EUT with AC Adapter and HS
Location: Chamber C
Mode: Rel99 Band 4 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.4									
3424.80	-11.4	V	3.0	34.1	1.0	-44.6	-13.0	-31.6	
5137.20	-21.1	V	3.0	33.2	1.0	-53.3	-13.0	-40.3	
6849.60	-17.5	V	3.0	32.9	1.0	-49.3	-13.0	-36.3	
3424.80	-7.9	H	3.0	34.1	1.0	-41.1	-13.0	-28.1	
5137.20	-21.3	H	3.0	33.2	1.0	-53.5	-13.0	-40.5	
6849.60	-16.8	H	3.0	32.9	1.0	-48.7	-13.0	-35.7	
Mid Ch, 1732.6									
3485.20	-13.1	V	3.0	34.1	1.0	-46.2	-13.0	-33.2	
5197.60	-21.3	V	3.0	33.2	1.0	-53.5	-13.0	-40.5	
6930.40	-17.5	V	3.0	32.9	1.0	-49.4	-13.0	-36.4	
3485.20	-8.1	H	3.0	34.1	1.0	-41.2	-13.0	-28.2	
5197.60	-20.6	H	3.0	33.2	1.0	-52.7	-13.0	-39.7	
6930.40	-17.4	H	3.0	32.9	1.0	-49.3	-13.0	-36.3	
High Ch, 1752.6									
3505.20	-8.7	V	3.0	34.1	1.0	-42.7	-13.0	-29.7	
5257.60	-18.8	V	3.0	33.2	1.0	-50.9	-13.0	-37.9	
7010.40	-16.2	V	3.0	32.9	1.0	-48.0	-13.0	-35.0	
3505.20	-7.3	H	3.0	34.1	1.0	-40.4	-13.0	-27.4	
5257.60	-19.8	H	3.0	33.2	1.0	-52.0	-13.0	-39.0	
7010.40	-16.4	H	3.0	32.9	1.0	-48.3	-13.0	-35.3	

B4 HSDPA
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 4/23/15
Test Engineer: R. Alegre
Configuration: EUT with AC Adapter and HS
Location: Chamber C
Mode: HSDPA Band 4 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.4									
3424.80	-11.5	V	3.0	34.1	1.0	-44.7	-13.0	-31.7	
5137.20	-20.8	V	3.0	33.2	1.0	-53.0	-13.0	-40.0	
6849.60	-17.5	V	3.0	32.9	1.0	-49.4	-13.0	-36.4	
3424.80	-8.7	H	3.0	34.1	1.0	-41.9	-13.0	-28.9	
5137.20	-21.0	H	3.0	33.2	1.0	-53.2	-13.0	-40.2	
6849.60	-15.4	H	3.0	32.9	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1732.6									
3485.20	-12.9	V	3.0	34.1	1.0	-46.0	-13.0	-33.0	
5197.60	-21.2	V	3.0	33.2	1.0	-53.4	-13.0	-40.4	
6930.40	-17.3	V	3.0	32.9	1.0	-49.2	-13.0	-36.2	
3485.20	-7.9	H	3.0	34.1	1.0	-41.0	-13.0	-28.0	
5197.60	-21.3	H	3.0	33.2	1.0	-53.5	-13.0	-40.5	
6930.40	-19.1	H	3.0	32.9	1.0	-51.0	-13.0	-38.0	
High Ch, 1752.6									
3505.20	-8.0	V	3.0	34.1	1.0	-41.1	-13.0	-28.1	
5257.60	-19.3	V	3.0	33.2	1.0	-51.4	-13.0	-38.4	
7010.40	-15.9	V	3.0	32.9	1.0	-47.8	-13.0	-34.8	
3505.20	-7.6	H	3.0	34.1	1.0	-40.7	-13.0	-27.7	
5257.60	-19.9	H	3.0	33.2	1.0	-52.1	-13.0	-39.1	
7010.40	-17.1	H	3.0	32.9	1.0	-49.0	-13.0	-36.0	

B5 REL99
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #:
Date: 1/8/2016
Test Engineer: A. Escamilla
Configuration: EUT + AC Adapter + HS
Location: Chamber B
Mode: Rel99 Band 5 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4									
1652.80	-25.6	V	3.0	37.0	1.0	-61.6	-13.0	-48.6	
2479.20	-22.3	V	3.0	36.4	1.0	-57.7	-13.0	-44.7	
3305.60	-20.9	V	3.0	36.1	1.0	-56.0	-13.0	-43.0	
1652.80	-19.0	H	3.0	37.0	1.0	-55.0	-13.0	-42.0	
2479.20	-24.4	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3305.60	-21.7	H	3.0	36.1	1.0	-56.9	-13.0	-43.9	
Mid Ch, 836.6									
1673.20	99.3	V	3.0	37.0	1.0	63.3	-13.0	76.3	
2509.60	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3346.40	-20.8	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1673.20	-17.4	H	3.0	37.0	1.0	-53.4	-13.0	-40.4	
2509.60	-24.8	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3346.40	-21.8	H	3.0	36.1	1.0	-56.9	-13.0	-43.9	
High Ch, 846.6									
1693.20	-24.9	V	3.0	37.0	1.0	-60.9	-13.0	-47.9	
2539.80	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3386.40	-20.9	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1693.20	-18.4	H	3.0	37.0	1.0	-54.2	-13.0	-41.2	
2539.80	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3386.40	-21.7	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	

B5 HSDPA
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #:
Date: 1/8/2016
Test Engineer: A. Escamilla
Configuration: EUT + AC Adapter + HS
Location: Chamber B
Mode: HSDPA Band 5 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamplifier (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4									
1652.80	-26.1	V	3.0	37.0	1.0	-62.1	-13.0	-49.1	
2479.20	-23.2	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3305.60	-21.7	V	3.0	36.1	1.0	-56.8	-13.0	-43.8	
1652.80	-18.9	H	3.0	37.0	1.0	-54.9	-13.0	-41.9	
2479.20	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3305.60	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	
Mid Ch, 836.6									
1673.20	25.9	V	3.0	37.0	1.0	61.9	-13.0	48.9	
2509.60	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3346.40	-21.1	V	3.0	36.1	1.0	-56.2	-13.0	-43.2	
1673.20	-17.3	H	3.0	37.0	1.0	-53.3	-13.0	-40.3	
2509.60	-24.5	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3346.40	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
High Ch, 846.6									
1693.20	-24.7	V	3.0	37.0	1.0	-60.7	-13.0	-47.7	
2539.80	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3386.40	-21.0	V	3.0	36.1	1.0	-56.0	-13.0	-43.0	
1693.20	-18.5	H	3.0	37.0	1.0	-54.5	-13.0	-41.5	
2539.80	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3386.40	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE Band 2

1.4MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:									
Date:		1/6/2016							
Test Engineer:		O. Stoelting							
Configuration:		X-pos EUT Only							
Location:		Chamber C							
Mode:		LTE_QPSK Band 2 Harmonics, 1.4MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.7									
3701.40	-19.5	V	3.0	33.9	1.0	-52.4	-13.0	-39.4	
5552.10	-24.1	V	3.0	33.1	1.0	-56.2	-13.0	-43.2	
7402.80	-20.4	V	3.0	32.9	1.0	-52.3	-13.0	-39.3	
3701.40	-16.8	H	3.0	33.9	1.0	-49.7	-13.0	-36.7	
5552.10	-24.3	H	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7402.80	-20.5	H	3.0	32.9	1.0	-52.4	-13.0	-39.4	
Mid Ch, 1880									
3760.00	-17.6	V	3.0	33.8	1.0	-50.4	-13.0	-37.4	
5640.00	-23.9	V	3.0	33.1	1.0	-56.0	-13.0	-43.0	
7520.00	-20.9	V	3.0	32.8	1.0	-52.8	-13.0	-39.8	
3760.00	-15.8	H	3.0	33.8	1.0	-48.6	-13.0	-35.6	
5640.00	-23.6	H	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7520.00	-20.4	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	
High Ch, 1909.5									
3818.00	-20.5	V	3.0	33.7	1.0	-53.2	-13.0	-40.2	
5727.90	-23.7	V	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7637.20	-20.0	V	3.0	32.8	1.0	-51.9	-13.0	-38.9	
3818.00	-20.4	H	3.0	33.7	1.0	-53.1	-13.0	-40.1	
5727.90	-22.7	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7637.20	-20.1	H	3.0	32.8	1.0	-51.9	-13.0	-38.9	

1.4MHz 16QAM									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:									
Date:		1/6/2016							
Test Engineer:		O. Stoelting							
Configuration:		X-pos EUT Only							
Location:		Chamber C							
Mode:		LTE_16QAM Band 2 Harmonics, 1.4MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.7									
3701.40	-17.7	V	3.0	33.9	1.0	-50.5	-13.0	-37.5	
5552.10	-24.1	V	3.0	33.1	1.0	-56.2	-13.0	-43.2	
7402.80	-20.9	V	3.0	32.9	1.0	-52.8	-13.0	-39.8	
3701.40	-16.0	H	3.0	33.9	1.0	-48.9	-13.0	-35.9	
5552.10	-23.8	H	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7402.80	-20.8	H	3.0	32.9	1.0	-52.7	-13.0	-39.7	
Mid Ch, 1880									
3760.00	-17.3	V	3.0	33.8	1.0	-50.1	-13.0	-37.1	
5640.00	-23.5	V	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7520.00	-20.4	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3760.00	-15.8	H	3.0	33.8	1.0	-48.6	-13.0	-35.6	
5640.00	-23.2	H	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7520.00	-20.4	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	
High Ch, 1909.5									
3818.00	-20.7	V	3.0	33.7	1.0	-53.4	-13.0	-40.4	
5727.90	-23.6	V	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7637.20	-20.2	V	3.0	32.8	1.0	-52.0	-13.0	-39.0	
3818.00	-16.2	H	3.0	33.7	1.0	-50.9	-13.0	-37.9	
5727.90	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7637.20	-20.4	H	3.0	32.8	1.0	-52.3	-13.0	-39.3	

3MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:									
Date:		1/6/2016							
Test Engineer:		O. Stoelting							
Configuration:		X-pos EUT Only							
Location:		Chamber C							
Mode:		LTE_QPSK Band 2 Harmonics, 3MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.5									
3703.00	-22.9	V	3.0	33.9	1.0	-55.8	-13.0	-42.8	
5554.50	-24.3	V	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7406.00	-21.2	V	3.0	32.9	1.0	-53.0	-13.0	-40.0	
3703.00	-21.7	H	3.0	33.9	1.0	-54.5	-13.0	-41.5	
5554.50	-24.5	H	3.0	33.1	1.0	-56.6	-13.0	-43.6	
7406.00	-20.9	H	3.0	32.9	1.0	-52.8	-13.0	-39.8	
Mid Ch, 1880									
3760.00	-22.4	V	3.0	33.8	1.0	-55.2	-13.0	-42.2	
5640.00	-24.2	V	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7520.00	-20.4	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3760.00	-20.7	H	3.0	33.8	1.0	-53.5	-13.0	-40.5	
5640.00	-22.4	H	3.0	33.1	1.0	-55.5	-13.0	-42.5	
7520.00	-20.8	H	3.0	32.8	1.0	-52.5	-13.0	-39.5	
High Ch, 1908.5									
3817.00	-19.5	V	3.0	33.7	1.0	-52.2	-13.0	-39.2	
5725.50	-23.1	V	3.0	33.1	1.0	-55.1	-13.0	-42.1	
7634.00	-20.6	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3817.00	-18.2	H	3.0	33.7	1.0	-50.9	-13.0	-37.9	
5725.50	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7634.00	-20.1	H	3.0	32.8	1.0	-51.9	-13.0	-38.9	

3MHz 16QAM									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:									
Date:		1/6/2016							
Test Engineer:		O. Stoelting							
Configuration:		X-pos EUT Only							
Location:		Chamber C							
Mode:		LTE_16QAM Band 2 Harmonics, 3MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.5									
3703.00	-22.6	V	3.0	33.9	1.0	-55.5	-13.0	-42.5	
5554.50	-24.0	V	3.0	33.1	1.0	-56.1	-13.0	-43.1	
7406.00	-20.8	V	3.0	32.9	1.0	-52.6	-13.0	-39.6	
3703.00	-21.5	H	3.0	33.9	1.0	-54.4	-13.0	-41.4	
5554.50	-24.4	H	3.0	33.1	1.0	-56.5	-13.0	-43.5	
7406.00	-20.7	H	3.0	32.9	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1880									
3760.00	-22.3	V	3.0	33.8	1.0	-55.1	-13.0	-42.1	
5640.00	-23.7	V	3.0	33.1	1.0	-55.8	-13.0	-42.8	
7520.00	-20.8	V	3.0	32.8	1.0	-52.7	-13.0	-39.7	
3760.00	-20.4	H	3.0	33.8	1.0	-53.2	-13.0	-40.2	
5640.00	-23.3	H	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7520.00	-20.7	H	3.0	32.8	1.0	-52.5	-13.0	-39.5	
High Ch, 1908.5									
3817.00	-19.1	V	3.0	33.7	1.0	-51.9	-13.0	-38.9	
5725.50	-23.8	V	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7634.00	-20.1	V	3.0	32.8	1.0	-51.9	-13.0	-38.9	
3817.00	-18.2	H	3.0	33.7	1.0	-51.0	-13.0	-38.0	
5725.50	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7634.00	-20.1	H	3.0	32.8	1.0	-51.9	-13.0	-38.9	

5MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:									
Date:		1/6/2016							
Test Engineer:		O. Stoelting							
Configuration:		X-pos EUT Only							
Location:		Chamber C							
Mode:		LTE_QPSK Band 2 Harmonics, 5MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.5									
3705.00	-17.9	V	3.0	33.9	1.0	-50.7	-13.0	-37.7	
5557.50	-24.4	V	3.0	33.1	1.0	-56.5	-13.0	-43.5	
7410.00	-20.6	V	3.0	32.9	1.0	-52.5	-13.0	-39.5	
3705.00	-18.0	H	3.0	33.9	1.0	-50.9	-13.0	-37.9	
5557.50	-24.1	H	3.0	33.1	1.0	-56.2	-13.0	-43.2	
7410.00	-20.8	H	3.0	32.9	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1880									
3760.00	-22.3	V	3.0	33.8	1.0	-55.1	-13.0	-42.1	
5640.00	-23.2	V	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7520.00	-20.5	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3760.00	-18.0	H	3.0	33.8	1.0	-50.8	-13.0	-37.8	
5640.00	-23.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7520.00	-20.5	H	3.0	32.8	1.0	-52.3	-13.0	-39.3	
High Ch, 1907.5									
3815.00	-21.7	V	3.0	33.7	1.0	-54.5	-13.0	-41.5	
5722.50	-23.8	V	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7636.00	-20.7	V	3.0	32.8	1.0	-52.6	-13.0	-39.6	
3815.00	-19.7	H	3.0	33.7	1.0	-52.5	-13.0	-39.5	
5722.50	-23.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7636.00	-20.5	H	3.0	32.8	1.0	-52.3	-13.0	-39.3	

5MHz 16QAM									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:									
Date:		1/6/2016							
Test Engineer:		O. Stoelting							
Configuration:		X-pos EUT Only							
Location:		Chamber C							
Mode:		LTE_QPSK Band 2 Harmonics, 5MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.5									
3705.00	-17.9	V	3.0	33.9	1.0	-50.7	-13.0	-37.7	
5557.50	-24.4	V	3.0	33.1	1.0	-56.5	-13.0	-43.5	
7410.00	-20.6	V	3.0	32.9	1.0	-52.5	-1		

10MHz QPSK									
UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics									
Project #: 1/6/2016									
Date: 1/6/2016									
Test Engineer: O. Stoelting									
Configuration: X-pos EUT Only									
Location: Chamber C									
Mode: LTE_QPSK Band 2 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1855									
3710.00	-16.6	V	3.0	33.9	1.0	49.5	-13.0	-36.5	
5955.00	-24.3	V	3.0	33.1	1.0	56.4	-13.0	-43.4	
7420.00	-20.8	V	3.0	32.9	1.0	52.6	-13.0	-39.6	
3710.00	-14.5	H	3.0	33.9	1.0	47.4	-13.0	-34.4	
5955.00	-23.4	H	3.0	33.1	1.0	55.5	-13.0	-42.5	
7420.00	-20.4	H	3.0	32.9	1.0	52.3	-13.0	-38.3	
Mid Ch, 1880									
3760.00	-23.3	V	3.0	33.8	1.0	56.1	-13.0	-43.1	
5640.00	-24.0	V	3.0	33.1	1.0	56.1	-13.0	-43.1	
7520.00	-21.1	V	3.0	32.8	1.0	52.9	-13.0	-39.9	
3760.00	-20.5	H	3.0	33.8	1.0	53.3	-13.0	-40.3	
5640.00	-23.5	H	3.0	33.1	1.0	55.6	-13.0	-42.6	
7520.00	-20.2	H	3.0	32.8	1.0	52.1	-13.0	-39.1	
High Ch, 1905									
3810.00	-22.6	V	3.0	33.8	1.0	55.4	-13.0	-42.4	
5715.00	-23.2	V	3.0	33.1	1.0	55.3	-13.0	-42.3	
7620.00	-20.5	V	3.0	32.8	1.0	52.4	-13.0	-39.4	
3810.00	-20.1	H	3.0	33.8	1.0	52.8	-13.0	-39.8	
5715.00	-22.5	H	3.0	33.1	1.0	54.5	-13.0	-41.5	
7620.00	-20.6	H	3.0	32.8	1.0	52.5	-13.0	-39.5	

10MHz 16QAM									
UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics									
Project #: 1/6/2016									
Date: 1/6/2016									
Test Engineer: O. Stoelting									
Configuration: X-pos EUT Only									
Location: Chamber C									
Mode: LTE_16QAM Band 2 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1855									
3710.00	-16.7	V	3.0	33.9	1.0	49.5	-13.0	-36.5	
5955.00	-24.5	V	3.0	33.1	1.0	56.6	-13.0	-43.6	
7420.00	-20.9	V	3.0	32.9	1.0	52.8	-13.0	-39.8	
3710.00	-15.0	H	3.0	33.9	1.0	47.8	-13.0	-34.8	
5955.00	-23.6	H	3.0	33.1	1.0	55.7	-13.0	-42.7	
7420.00	-20.4	H	3.0	32.9	1.0	52.3	-13.0	-38.3	
Mid Ch, 1880									
3760.00	-23.3	V	3.0	33.8	1.0	56.1	-13.0	-43.1	
5640.00	-24.4	V	3.0	33.1	1.0	56.5	-13.0	-43.5	
7520.00	-21.0	V	3.0	32.8	1.0	52.9	-13.0	-39.9	
3760.00	-21.9	H	3.0	33.8	1.0	54.7	-13.0	-41.7	
5640.00	-21.7	H	3.0	33.1	1.0	53.8	-13.0	-40.8	
7520.00	-20.5	H	3.0	32.8	1.0	52.4	-13.0	-39.4	
High Ch, 1905									
3810.00	-22.2	V	3.0	33.8	1.0	55.0	-13.0	-42.0	
5715.00	-23.4	V	3.0	33.1	1.0	55.5	-13.0	-42.5	
7620.00	-20.5	V	3.0	32.8	1.0	52.3	-13.0	-39.3	
3810.00	-19.2	H	3.0	33.8	1.0	51.9	-13.0	-38.9	
5715.00	-22.7	H	3.0	33.1	1.0	54.7	-13.0	-41.7	
7620.00	-20.2	H	3.0	32.8	1.0	52.1	-13.0	-39.1	

15MHz QPSK									
UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics									
Project #: 1/6/2016									
Date: 1/6/2016									
Test Engineer: O. Stoelting									
Configuration: X-pos EUT Only									
Location: Chamber C									
Mode: LTE_QPSK Band 2 Harmonics, 15MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1857.5									
3715.00	-19.0	V	3.0	33.9	1.0	51.8	-13.0	-38.8	
5972.50	-24.6	V	3.0	33.1	1.0	56.7	-13.0	-43.7	
7430.00	-20.5	V	3.0	32.9	1.0	52.4	-13.0	-39.4	
3715.00	-15.5	H	3.0	33.9	1.0	48.4	-13.0	-35.4	
5972.50	-24.4	H	3.0	33.1	1.0	56.5	-13.0	-43.5	
7430.00	-21.0	H	3.0	32.9	1.0	52.9	-13.0	-39.9	
Mid Ch, 1880									
3760.00	-20.7	V	3.0	33.8	1.0	53.5	-13.0	-40.5	
5640.00	-23.9	V	3.0	33.1	1.0	56.0	-13.0	-43.0	
7520.00	-21.6	V	3.0	32.8	1.0	53.4	-13.0	-40.4	
3760.00	-18.4	H	3.0	33.8	1.0	52.2	-13.0	-39.2	
5640.00	-23.9	H	3.0	33.1	1.0	56.0	-13.0	-43.0	
7520.00	-20.2	H	3.0	32.8	1.0	52.0	-13.0	-39.0	
High Ch, 1902.5									
3805.00	-21.5	V	3.0	33.8	1.0	54.3	-13.0	-41.3	
5707.50	-23.2	V	3.0	33.1	1.0	55.3	-13.0	-42.3	
7610.00	-20.8	V	3.0	32.8	1.0	52.6	-13.0	-39.6	
3805.00	-17.5	H	3.0	33.8	1.0	50.2	-13.0	-37.2	
5707.50	-23.4	H	3.0	33.1	1.0	55.4	-13.0	-42.4	
7610.00	-20.7	H	3.0	32.8	1.0	52.5	-13.0	-39.5	

15MHz 16QAM									
UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics									
Project #: 1/6/2016									
Date: 1/6/2016									
Test Engineer: O. Stoelting									
Configuration: X-pos EUT Only									
Location: Chamber C									
Mode: LTE_16QAM Band 2 Harmonics, 15MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1857.5									
3715.00	-17.9	V	3.0	33.9	1.0	50.7	-13.0	-37.7	
5972.50	-23.8	V	3.0	33.1	1.0	55.9	-13.0	-42.9	
7430.00	-21.0	V	3.0	32.9	1.0	52.8	-13.0	-39.8	
3715.00	-15.4	H	3.0	33.9	1.0	48.2	-13.0	-35.2	
5972.50	-23.9	H	3.0	33.1	1.0	56.0	-13.0	-43.0	
7430.00	-20.9	H	3.0	32.9	1.0	52.8	-13.0	-39.8	
Mid Ch, 1880									
3760.00	-21.2	V	3.0	33.8	1.0	54.0	-13.0	-41.0	
5640.00	-24.2	V	3.0	33.1	1.0	56.3	-13.0	-43.3	
7520.00	-21.2	V	3.0	32.8	1.0	53.1	-13.0	-40.1	
3760.00	-19.6	H	3.0	33.8	1.0	52.4	-13.0	-39.4	
5640.00	-23.5	H	3.0	33.1	1.0	55.6	-13.0	-42.6	
7520.00	-19.5	H	3.0	32.8	1.0	51.4	-13.0	-38.4	
High Ch, 1902.5									
3805.00	-20.8	V	3.0	33.8	1.0	53.5	-13.0	-40.5	
5707.50	-23.5	V	3.0	33.1	1.0	55.6	-13.0	-42.6	
7610.00	-20.7	V	3.0	32.8	1.0	52.5	-13.0	-39.5	
3805.00	-17.3	H	3.0	33.8	1.0	50.1	-13.0	-37.1	
5707.50	-23.0	H	3.0	33.1	1.0	55.1	-13.0	-42.1	
7610.00	-20.9	H	3.0	32.8	1.0	52.7	-13.0	-39.7	

20MHz QPSK									
UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics									
Project #: 1/6/2016									
Date: 1/6/2016									
Test Engineer: O. Stoelting									
Configuration: X-pos EUT Only									
Location: Chamber C									
Mode: LTE_QPSK Band 2 Harmonics, 20MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1860									
3720.00	-20.4	V	3.0	33.8	1.0	53.2	-13.0	-40.2	
5580.00	-24.2	V	3.0	33.1	1.0	56.3	-13.0	-43.3	
7440.00	-20.5	V	3.0	32.9	1.0	52.4	-13.0	-39.4	
3720.00	-17.1	H	3.0	33.8	1.0	50.0	-13.0	-37.0	
5580.00	-23.6	H	3.0	33.1	1.0	55.7	-13.0	-42.7	
7440.00	-20.7	H	3.0	32.9	1.0	52.6	-13.0	-39.6	
Mid Ch, 1880									
3760.00	-11.3	V	3.0	33.0	1.0	44.1	-13.0	-31.1	
5640.00	-24.4	V	3.0	33.1	1.0	56.5	-13.0	-43.5	
7520.00	-21.1	V	3.0	32.8	1.0	52.9	-13.0	-39.9	
3760.00	-18.3	H	3.0	33.8	1.0	51.2	-13.0	-38.2	
5640.00	-24.2	H	3.0	33.1	1.0	56.3	-13.0	-43.3	
7520.00	-21.5	H	3.0	32.8	1.0	53.4	-13.0	-40.4	
High Ch, 1900									
3800.00	-16.6	V	3.0	33.8	1.0	49.3	-13.0	-36.3	
5700.00	-23.1	V	3.0	33.1	1.0	55.2	-13.0	-42.2	
7600.00	-19.1	V	3.0	32.8	1.0	50.9	-13.0	-37.9	
3800.00	-18.7	H	3.0	33.8	1.0	51.5	-13.0	-38.5	
5700.00	-23.1	H	3.0	33.1	1.0	55.2	-13.0	-42.2	
7600.00	-20.1	H	3.0	32.8	1.0	52.0	-13.0	-39.0	

20MHz 16QAM									
UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics									
Project #: 1/6/2016									
Date: 1/6/2016									
Test Engineer: O. Stoelting									
Configuration: X-pos EUT Only									
Location: Chamber C									
Mode: LTE_16QAM Band 2 Harmonics, 20MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1860									
3720.00	-17.6	V	3.0	33.8	1.0	50.5	-13.0	-37.5	
5580.00	-24.0	V	3.0	33.1	1.0	56.1	-13.0	-43.1	
7440.00	-20.7	V	3.0	32.9	1.0	52.5	-13.0	-39.5	
3720.00	-16.3	H	3.0	33.8	1.0	49.1	-13.0	-36.1	
5580.00	-23.8	H	3.0	33.1	1.0	56.0	-13.0	-43.0	
7440.00	-20.5	H	3.0	32.9	1.0	52.4	-13.0	-39.4	
Mid Ch, 1880									
3760.00	-11.8	V	3.0	33.0	1.0	44.6	-13.0	-31.6	
5640.00	-24.2	V	3.0	33.1	1.0	56.3	-13.0	-43.3	
7520.00	-20.9	V	3.0	32.8	1.0	52.8	-13.0	-39.8	
3760.00	-18.7	H	3.0	33.8	1.0	51.6	-13.0	-38.6	
5640.00	-24.2	H	3.0	33.1	1.0	56.3	-13.0	-43.3	
7520.00	-21.1	H	3.0	32.8	1.0	53.0	-13.0	-40.0	
High Ch, 1900									
3800.00	-18.6	V	3.0	33.8	1.0	51.4	-13.0	-38.4	
5700.00	-23.6	V	3.0	33.1	1.0	55.7	-13.0	-42.7	
7600.00	-19.6	V	3.0	32.8	1.0	52.5	-13.0	-39.5	
3800.00	-19.8	H	3.0	33.8	1.0	52.5	-13.0	-39.5	
5700.00	-22.5	H	3.0	33.1	1.0	54.6	-13.0	-41.6	
7600.00	-19.8	H	3.0	32.8	1.0	51.7	-13.0	-38.7	

LTE Band 4

1.4MHz QPSK										1.4MHz 16QAM									
Compliance Certification Services Above 1GHz High Frequency Substitution Measurement										Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
Company: LG					Project #: 1/8/2016					Company: LG					Project #: 1/8/2016				
Date: 1/8/2016					Test Engineer: A. Escamilla					Date: 1/8/2016					Test Engineer: A. Escamilla				
Configuration: EUT + AC Adapter + HS					Location: Chamber B					Configuration: EUT + AC Adapter + HS					Location: Chamber B				
Mode: LTE_QPSK Band 4 Harmonics, 1.4MHz Bandwidth										Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz Bandwidth									
F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7										Low Ch, 1710.7									
3421.40	-7.3	V	3.0	36.1	1.0	42.3	-13.0	-29.3		3421.40	-7.4	V	3.0	36.1	1.0	42.5	-13.0	-29.5	
5132.10	-15.2	V	3.0	35.4	1.0	49.7	-13.0	-36.7		5132.10	-15.4	V	3.0	35.4	1.0	49.9	-13.0	-36.9	
6842.80	-14.3	V	3.0	35.7	1.0	49.0	-13.0	-36.0		6842.80	-14.3	V	3.0	35.7	1.0	48.9	-13.0	-35.9	
3421.40	-5.8	H	3.0	36.1	1.0	41.0	-13.0	-28.0		3421.40	-6.4	H	3.0	36.1	1.0	41.5	-13.0	-28.5	
5132.10	-14.2	H	3.0	35.4	1.0	48.6	-13.0	-35.6		5132.10	-14.2	H	3.0	35.4	1.0	48.6	-13.0	-35.6	
6842.80	-13.0	H	3.0	35.7	1.0	47.7	-13.0	-34.7		6842.80	-13.4	H	3.0	35.7	1.0	48.1	-13.0	-35.1	
Mid Ch, 1732.5										Mid Ch, 1732.5									
3465.00	-2.7	V	3.0	36.0	1.0	37.8	-13.0	-24.8		3465.00	-2.8	V	3.0	36.0	1.0	37.8	-13.0	-24.8	
5197.50	-14.1	V	3.0	35.4	1.0	48.5	-13.0	-35.5		5197.50	-14.2	V	3.0	35.4	1.0	48.6	-13.0	-35.6	
6930.00	-14.4	V	3.0	35.7	1.0	49.1	-13.0	-36.1		6930.00	-14.1	V	3.0	35.7	1.0	48.8	-13.0	-35.8	
3465.00	-3.7	H	3.0	36.0	1.0	48.0	-13.0	-25.0		3465.00	-3.9	H	3.0	36.0	1.0	48.9	-13.0	-25.9	
5197.50	-11.8	H	3.0	35.4	1.0	46.2	-13.0	-33.2		5197.50	-12.8	H	3.0	35.4	1.0	47.3	-13.0	-34.3	
6930.00	-13.1	H	3.0	35.7	1.0	47.8	-13.0	-34.8		6930.00	-13.5	H	3.0	35.7	1.0	48.2	-13.0	-35.2	
High Ch, 1754.3										High Ch, 1754.3									
3508.60	-3.0	V	3.0	36.0	1.0	38.0	-13.0	-25.0		3508.60	-3.0	V	3.0	36.0	1.0	38.0	-13.0	-25.0	
5262.90	-14.8	V	3.0	35.4	1.0	49.2	-13.0	-36.2		5262.90	-14.2	V	3.0	35.4	1.0	48.6	-13.0	-35.6	
7017.20	-14.3	V	3.0	35.7	1.0	49.0	-13.0	-36.0		7017.20	-13.9	V	3.0	35.7	1.0	48.6	-13.0	-35.6	
3508.60	-2.6	H	3.0	36.0	1.0	37.6	-13.0	-24.6		3508.60	-2.6	H	3.0	36.0	1.0	37.6	-13.0	-24.6	
5262.90	-14.7	H	3.0	35.4	1.0	49.2	-13.0	-36.2		5262.90	-15.0	H	3.0	35.4	1.0	49.4	-13.0	-36.4	
7017.20	-13.2	H	3.0	35.7	1.0	47.9	-13.0	-34.9		7017.20	-12.9	H	3.0	35.7	1.0	47.6	-13.0	-34.6	

3MHz QPSK										3MHz 16QAM									
Compliance Certification Services Above 1GHz High Frequency Substitution Measurement										Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
Company: LG					Project #: 1/8/2016					Company: LG					Project #: 1/8/2016				
Date: 1/8/2016					Test Engineer: A. Escamilla					Date: 1/8/2016					Test Engineer: A. Escamilla				
Configuration: EUT + AC Adapter + HS					Location: Chamber B					Configuration: EUT + AC Adapter + HS					Location: Chamber B				
Mode: LTE_QPSK Band 4 Harmonics, 3MHz Bandwidth										Mode: LTE_16QAM Band 4 Harmonics, 3MHz Bandwidth									
F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5										Low Ch, 1712.5									
3423.00	-6.7	V	3.0	36.1	1.0	41.7	-13.0	-28.7		3425.00	-6.6	V	3.0	36.1	1.0	41.7	-13.0	-28.7	
5134.50	-14.7	V	3.0	35.4	1.0	49.1	-13.0	-36.1		5137.50	-15.7	V	3.0	35.4	1.0	50.1	-13.0	-37.1	
6846.00	-14.4	V	3.0	35.7	1.0	49.1	-13.0	-36.1		6850.00	-0.3	V	3.0	35.7	1.0	34.9	-13.0	-21.9	
3423.00	-6.1	H	3.0	36.1	1.0	41.2	-13.0	-28.2		3425.00	-19.2	H	3.0	36.1	1.0	54.2	-13.0	-41.2	
5134.50	-13.7	H	3.0	35.4	1.0	48.1	-13.0	-35.1		5137.50	-15.5	H	3.0	35.4	1.0	49.9	-13.0	-36.9	
6846.00	-12.6	H	3.0	35.7	1.0	47.3	-13.0	-34.3		6850.00	0.0	H	3.0	35.7	1.0	34.7	-13.0	-21.7	
Mid Ch, 1732.5										Mid Ch, 1732.5									
3465.00	-2.8	V	3.0	36.0	1.0	37.8	-13.0	-24.8		3465.00	-3.1	V	3.0	36.0	1.0	38.1	-13.0	-25.1	
5197.50	-14.2	V	3.0	35.4	1.0	48.6	-13.0	-35.6		5197.50	-15.0	V	3.0	35.4	1.0	49.4	-13.0	-36.4	
6930.00	-14.0	V	3.0	35.7	1.0	48.6	-13.0	-35.6		6930.00	-14.6	V	3.0	35.7	1.0	49.3	-13.0	-36.3	
3465.00	-3.6	H	3.0	36.0	1.0	38.6	-13.0	-25.6		3465.00	-4.0	H	3.0	36.0	1.0	39.1	-13.0	-26.1	
5197.50	-13.8	H	3.0	35.4	1.0	48.2	-13.0	-35.2		5197.50	-14.1	H	3.0	35.4	1.0	48.5	-13.0	-35.5	
6930.00	-13.1	H	3.0	35.7	1.0	47.8	-13.0	-34.8		6930.00	-12.3	H	3.0	35.7	1.0	47.0	-13.0	-34.0	
High Ch, 1753.5										High Ch, 1752.5									
3507.00	-2.9	V	3.0	36.0	1.0	37.9	-13.0	-24.9		3505.00	-3.3	V	3.0	36.0	1.0	38.3	-13.0	-25.3	
5260.50	-14.4	V	3.0	35.4	1.0	48.8	-13.0	-35.8		5257.50	-15.5	V	3.0	35.4	1.0	50.0	-13.0	-37.0	
7014.00	-13.9	V	3.0	35.7	1.0	48.6	-13.0	-35.6		7010.00	-14.3	V	3.0	35.7	1.0	49.0	-13.0	-36.0	
3507.00	-3.5	H	3.0	36.0	1.0	38.5	-13.0	-25.5		3505.00	-3.7	H	3.0	36.0	1.0	38.7	-13.0	-25.7	
5260.50	-13.8	H	3.0	35.4	1.0	48.2	-13.0	-35.2		5257.50	-14.1	H	3.0	35.4	1.0	48.5	-13.0	-35.5	
7014.00	-12.8	H	3.0	35.7	1.0	47.5	-13.0	-34.5		7010.00	-12.6	H	3.0	35.7	1.0	47.3	-13.0	-34.3	

5MHz QPSK										5MHz 16QAM									
Compliance Certification Services Above 1GHz High Frequency Substitution Measurement										Compliance Certification Services Above 1GHz High Frequency Substitution Measurement									
Company: LG					Project #: 1/8/2016					Company: LG					Project #: 1/8/2016				
Date: 1/8/2016					Test Engineer: A. Escamilla					Date: 1/8/2016					Test Engineer: A. Escamilla				
Configuration: EUT + AC Adapter + HS					Location: Chamber B					Configuration: EUT + AC Adapter + HS					Location: Chamber B				
Mode: LTE_QPSK Band 4 Harmonics, 5MHz Bandwidth										Mode: LTE_16QAM Band 4 Harmonics, 5MHz Bandwidth									
F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5										Low Ch, 1712.5									
3425.00	-6.9	V	3.0	36.1	1.0	42.0	-13.0	-29.0		3425.00	-6.8	V	3.0	36.1	1.0	41.9	-13.0	-28.9	
5137.50	-15.7	V	3.0	35.4	1.0	50.1	-13.0	-37.1		5137.50	-16.1	V	3.0	35.4	1.0	50.5	-13.0	-37.5	
6850.00	-13.4	V	3.0	35.7	1.0	48.1	-13.0	-35.1		6850.00	-13.8	V	3.0	35.7	1.0	48.4	-13.0	-35.4	
3425.00	-5.8	H	3.0	36.1	1.0	40.9	-13.0	-27.9		3425.00	-6.0	H	3.0	36.1	1.0	41.1	-13.0	-28.1	
5137.50	-13.9	H	3.0	35.4	1.0	48.3	-13.0	-35.3		5137.50	-15.0	H	3.0	35.4	1.0	49.4	-13.0	-36.4	
6850.00	-12.1	H	3.0	35.7	1.0	46.8	-13.0	-33.8		6850.00	-12.5	H	3.0	35.7	1.0	47.1	-13.0	-34.1	
Mid Ch, 1732.5										Mid Ch, 1732.5									
3465.00	-3.3	V	3.0	36.0	1.0	38.3	-13.0	-25.3		3465.00	-3.3	V	3.0	36.0	1.0	38.4	-13.0	-25.4	
5197.50	-14.3	V	3.0	35.4	1.0	48.7	-13.0	-35.7		5197.50	-14.8	V	3.0	35.4	1.0	49.2	-13.0	-36.2	
6930.00	-13.8	V	3.0	35.7	1.0	48.5	-13.0	-35.5		6930.00	-14.5	V	3.0	35.7	1.0	49.3	-13.0	-36.3	
3465.00	-3.7	H	3.0	36.0	1.0	38.7	-13.0	-25.7		3465.00	-4.4	H	3.0	36.0	1.0	39.4	-13.0	-26.4	
5197.50	-14.2	H	3.0	35.4	1.0	48.6	-13.0	-35.6		5197.50	-14.4	H	3.0	35.4	1.0	48.8	-13.0	-35.8	
6930.00	-12.3	H	3.0	35.7	1.0	47.0	-13.0	-34.0		6930.00	-12.8	H	3.0	35.7	1.0	47.5	-13.0	-34.5	
High Ch, 1752.5										High Ch, 1752.5									
3505.00	-2.8	V	3.0	36.0	1.0	37.8	-13.0	-24.8		3505.00	-2.9	V	3.0	36.0	1.0	37.9	-13.0	-24.9	
5257.50	-14.3	V	3.0	35.4	1.0	48.7	-13.0	-35.7		5257.50	-14.6	V	3.0	35.4	1.0	49.1	-13.0	-36.1	
7010.00	-14.4	V	3.0	35.7	1.0	49.1	-13.0	-36.1		7010.00	-13.5	V	3.0	35.7	1.0	48.2	-13.0	-35.2	
3505.00	-3.7	H	3.0	36.0	1.0	38.7	-13.0	-25.7		3505.00	-4.0	H	3.0	36.0	1.0	39.0	-13.0	-26.0	
5257.50	-14.1	H	3.0	3															

10MHz QPSK										
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG								
Project #:										
Date:		1/8/2016								
Test Engineer:		A. Escamilla								
Configuration:		EUT + AC Adapter + HS								
Location:		Chamber B								
Mode:		LTE_QPSK Band 4 Harmonics, 10MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1715										
3430.00	-2.7	V	3.0	36.1	1.0	-37.8	-13.0	-24.8		
5145.00	-13.5	V	3.0	35.4	1.0	-48.1	-13.0	-35.1		
6860.00	-14.1	V	3.0	35.7	1.0	-48.8	-13.0	-35.8		
3430.00	-2.9	H	3.0	36.1	1.0	-38.0	-13.0	-25.0		
5145.00	-13.9	H	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6860.00	-12.8	H	3.0	35.7	1.0	-47.5	-13.0	-34.5		
Mid Ch, 1732.5										
3465.00	-2.2	V	3.0	36.0	1.0	-37.2	-13.0	-24.2		
5197.50	-14.1	V	3.0	35.4	1.0	-48.5	-13.0	-35.5		
6930.00	-13.5	V	3.0	35.7	1.0	-48.1	-13.0	-35.1		
3465.00	-2.9	H	3.0	36.0	1.0	-37.9	-13.0	-24.9		
5197.50	-12.9	H	3.0	35.4	1.0	-47.3	-13.0	-34.3		
6930.00	-12.4	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		
High Ch, 1750										
3500.00	-1.7	V	3.0	36.0	1.0	-36.7	-13.0	-23.7		
5250.00	-14.9	V	3.0	35.4	1.0	-49.5	-13.0	-36.5		
7000.00	-11.3	V	3.0	35.7	1.0	-48.0	-13.0	-35.0		
3500.00	-1.7	H	3.0	36.0	1.0	-36.7	-13.0	-23.7		
5250.00	-14.0	H	3.0	35.4	1.0	-48.4	-13.0	-35.4		
7000.00	-12.3	H	3.0	35.7	1.0	-47.0	-13.0	-34.0		

10MHz 16QAM										
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG								
Project #:										
Date:		1/8/2016								
Test Engineer:		A. Escamilla								
Configuration:		EUT + AC Adapter + HS								
Location:		Chamber B								
Mode:		LTE_16QAM Band 4 Harmonics, 10MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1715										
3430.00	-3.2	V	3.0	36.1	1.0	-38.3	-13.0	-25.3		
5145.00	-15.1	V	3.0	35.4	1.0	-49.5	-13.0	-36.5		
6860.00	-14.4	V	3.0	35.7	1.0	-49.0	-13.0	-36.0		
3430.00	-3.0	H	3.0	36.1	1.0	-38.1	-13.0	-25.1		
5145.00	-13.2	H	3.0	35.4	1.0	-47.7	-13.0	-34.7		
6860.00	-12.6	H	3.0	35.7	1.0	-47.3	-13.0	-34.3		
Mid Ch, 1732.5										
3465.00	-2.3	V	3.0	36.0	1.0	-37.4	-13.0	-24.4		
5197.50	-13.9	V	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6930.00	-14.0	V	3.0	35.7	1.0	-48.7	-13.0	-35.7		
3465.00	-3.4	H	3.0	36.0	1.0	-38.5	-13.0	-25.5		
5197.50	-14.0	H	3.0	35.4	1.0	-48.5	-13.0	-35.5		
6930.00	-12.2	H	3.0	35.7	1.0	-46.9	-13.0	-33.9		
High Ch, 1750										
3500.00	-2.0	V	3.0	36.0	1.0	-37.0	-13.0	-24.0		
5250.00	-14.0	V	3.0	35.4	1.0	-48.4	-13.0	-35.4		
7000.00	-12.6	V	3.0	35.7	1.0	-48.2	-13.0	-35.2		
3500.00	-2.3	H	3.0	36.0	1.0	-37.3	-13.0	-24.3		
5250.00	-14.3	H	3.0	35.4	1.0	-48.7	-13.0	-35.7		
7000.00	-12.6	H	3.0	35.7	1.0	-47.3	-13.0	-34.3		

15MHz QPSK										
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG								
Project #:										
Date:		1/8/2016								
Test Engineer:		A. Escamilla								
Configuration:		EUT + AC Adapter + HS								
Location:		Chamber B								
Mode:		LTE_QPSK Band 4 Harmonics, 15MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1717.5										
3435.00	-3.2	V	3.0	36.1	1.0	-38.2	-13.0	-25.2		
5152.50	-15.0	V	3.0	35.4	1.0	-49.4	-13.0	-36.4		
6870.00	-13.3	V	3.0	35.7	1.0	-48.0	-13.0	-35.0		
3435.00	-2.8	H	3.0	36.1	1.0	-37.9	-13.0	-24.9		
5152.50	-13.4	H	3.0	35.4	1.0	-47.8	-13.0	-34.8		
6870.00	-12.5	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		
Mid Ch, 1732.5										
3465.00	-2.0	V	3.0	36.0	1.0	-37.1	-13.0	-24.1		
5197.50	-13.9	V	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6930.00	-13.4	V	3.0	35.7	1.0	-48.1	-13.0	-35.1		
3465.00	-3.1	H	3.0	36.0	1.0	-38.2	-13.0	-25.2		
5197.50	-13.9	H	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6930.00	-11.7	H	3.0	35.7	1.0	-46.4	-13.0	-33.4		
High Ch, 1747.5										
3495.00	-1.8	V	3.0	36.0	1.0	-36.8	-13.0	-23.8		
5242.50	-13.8	V	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6990.00	-14.1	V	3.0	35.7	1.0	-48.8	-13.0	-35.8		
3495.00	-2.0	H	3.0	36.0	1.0	-37.0	-13.0	-24.0		
5242.50	-13.3	H	3.0	35.4	1.0	-47.8	-13.0	-34.8		
6990.00	-11.8	H	3.0	35.7	1.0	-46.5	-13.0	-33.5		

15MHz 16QAM										
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG								
Project #:										
Date:		1/8/2016								
Test Engineer:		A. Escamilla								
Configuration:		EUT + AC Adapter + HS								
Location:		Chamber B								
Mode:		LTE_16QAM Band 4 Harmonics, 15MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1717.5										
3435.00	-3.1	V	3.0	36.1	1.0	-38.2	-13.0	-25.2		
5152.50	-15.2	V	3.0	35.4	1.0	-49.7	-13.0	-36.7		
6870.00	-13.7	V	3.0	35.7	1.0	-48.4	-13.0	-35.4		
3435.00	-3.2	H	3.0	36.1	1.0	-38.3	-13.0	-25.3		
5152.50	-14.6	H	3.0	35.4	1.0	-49.0	-13.0	-36.0		
6870.00	-12.9	H	3.0	35.7	1.0	-47.5	-13.0	-34.5		
Mid Ch, 1732.5										
3465.00	-2.1	V	3.0	36.0	1.0	-37.1	-13.0	-24.1		
5197.50	-14.1	V	3.0	35.4	1.0	-48.5	-13.0	-35.5		
6930.00	-13.6	V	3.0	35.7	1.0	-48.3	-13.0	-35.3		
3465.00	-3.0	H	3.0	36.0	1.0	-38.1	-13.0	-25.1		
5197.50	-14.5	H	3.0	35.4	1.0	-49.0	-13.0	-36.0		
6930.00	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6		
High Ch, 1747.5										
3495.00	-2.0	V	3.0	36.0	1.0	-37.1	-13.0	-24.1		
5242.50	-13.9	V	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6990.00	-14.4	V	3.0	35.7	1.0	-49.1	-13.0	-36.1		
3495.00	-2.2	H	3.0	36.0	1.0	-37.2	-13.0	-24.2		
5242.50	-13.2	H	3.0	35.4	1.0	-47.6	-13.0	-34.6		
6990.00	-12.4	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		

20MHz QPSK										
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG								
Project #:										
Date:		1/8/2016								
Test Engineer:		A. Escamilla								
Configuration:		EUT + AC Adapter + HS								
Location:		Chamber B								
Mode:		LTE_QPSK Band 4 Harmonics, 20MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1720										
3440.00	-7.4	V	3.0	36.0	1.0	-42.5	-13.0	-29.5		
5160.00	-15.1	V	3.0	35.4	1.0	-49.5	-13.0	-36.5		
6880.00	-13.9	V	3.0	35.7	1.0	-48.6	-13.0	-35.6		
3440.00	-4.1	H	3.0	36.0	1.0	-39.2	-13.0	-26.2		
5160.00	-14.5	H	3.0	35.4	1.0	-48.9	-13.0	-35.9		
6880.00	-11.8	H	3.0	35.7	1.0	-46.4	-13.0	-33.4		
Mid Ch, 1732.5										
3465.00	-5.0	V	3.0	36.0	1.0	-40.0	-13.0	-27.0		
5197.50	-14.4	V	3.0	35.4	1.0	-48.8	-13.0	-35.8		
6930.00	-13.9	V	3.0	35.7	1.0	-48.5	-13.0	-35.5		
3465.00	-4.4	H	3.0	36.0	1.0	-39.5	-13.0	-26.5		
5197.50	-14.3	H	3.0	35.4	1.0	-48.7	-13.0	-35.7		
6930.00	-12.8	H	3.0	35.7	1.0	-47.5	-13.0	-34.5		
High Ch, 1745										
3490.00	-2.7	V	3.0	36.0	1.0	-37.7	-13.0	-24.7		
5235.00	-14.2	V	3.0	35.4	1.0	-48.6	-13.0	-35.6		
6980.00	-14.0	V	3.0	35.7	1.0	-48.7	-13.0	-35.7		
3490.00	-3.8	H	3.0	36.0	1.0	-38.8	-13.0	-25.8		
5235.00	-13.4	H	3.0	35.4	1.0	-47.8	-13.0	-34.8		
6980.00	-12.5	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		

20MHz 16QAM										
Compliance Certification Services										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG								
Project #:										
Date:		1/8/2016								
Test Engineer:		A. Escamilla								
Configuration:		EUT + AC Adapter + HS								
Location:		Chamber B								
Mode:		LTE_16QAM Band 4 Harmonics, 20MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	

LTE Band 5

1.4MHz QPSK
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/8/2016
Test Engineer: R Z
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber B
Mode: LTE_QPSK Band 5 Harmonics, 1.4MHz Bandwidth

F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
1649.40	-18.9	V	3.0	37.0	1.0	-54.9	-13.0	-41.9	
2474.10	-22.6	V	3.0	36.4	1.0	-58.1	-13.0	-45.1	
3298.80	-20.4	V	3.0	36.2	1.0	-55.5	-13.0	-42.5	
1649.40	-17.0	H	3.0	37.0	1.0	-53.0	-13.0	-40.0	
2474.10	-10.1	H	3.0	36.4	1.0	-45.5	-13.0	-32.5	
3298.80	-20.9	H	3.0	36.2	1.0	-56.1	-13.0	-43.1	
Mid Ch, 836.5									
1673.00	-18.3	V	3.0	37.0	1.0	-54.3	-13.0	-41.3	
2509.50	-19.1	V	3.0	36.4	1.0	-54.5	-13.0	-41.5	
3346.00	-20.3	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1673.00	-13.7	H	3.0	37.0	1.0	-49.7	-13.0	-36.7	
2509.50	-19.7	H	3.0	36.4	1.0	-55.1	-13.0	-42.1	
3346.00	-19.9	H	3.0	36.1	1.0	-55.0	-13.0	-42.0	
High Ch, 848.3									
1696.60	-17.3	V	3.0	37.0	1.0	-53.3	-13.0	-40.3	
2544.90	-15.0	V	3.0	36.4	1.0	-50.5	-13.0	-37.5	
3393.20	-20.0	V	3.0	36.1	1.0	-55.1	-13.0	-42.1	
1696.60	-12.7	H	3.0	37.0	1.0	-48.7	-13.0	-35.7	
2544.90	-19.8	H	3.0	36.4	1.0	-55.2	-13.0	-42.2	
3393.20	-19.4	H	3.0	36.1	1.0	-54.5	-13.0	-41.5	

1.4MHz 16QAM
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/8/2016
Test Engineer: R Z
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber B
Mode: LTE_16QAM Band 5 Harmonics, 1.4MHz Bandwidth

F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
1649.40	-18.3	V	3.0	37.0	1.0	-54.3	-13.0	-41.3	
2474.10	-22.8	V	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3298.80	-21.0	V	3.0	36.2	1.0	-56.1	-13.0	-43.1	
1649.40	-16.7	H	3.0	37.0	1.0	-52.7	-13.0	-39.7	
2474.10	-12.7	H	3.0	36.4	1.0	-48.1	-13.0	-35.1	
3298.80	-20.8	H	3.0	36.2	1.0	-56.0	-13.0	-43.0	
Mid Ch, 836.5									
1673.00	-17.2	V	3.0	37.0	1.0	-53.2	-13.0	-40.2	
2509.50	-22.8	V	3.0	36.4	1.0	-58.2	-13.0	-45.2	
3346.00	-19.6	V	3.0	36.1	1.0	-54.8	-13.0	-41.8	
1673.00	-14.7	H	3.0	37.0	1.0	-50.7	-13.0	-37.7	
2509.50	-24.6	H	3.0	36.4	1.0	-60.0	-13.0	-47.0	
3346.00	-20.9	H	3.0	36.1	1.0	-56.0	-13.0	-43.0	
High Ch, 848.3									
1696.60	-17.6	V	3.0	37.0	1.0	-53.5	-13.0	-40.5	
2544.90	-14.4	V	3.0	36.4	1.0	-49.9	-13.0	-36.9	
3393.20	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1696.60	-14.6	H	3.0	37.0	1.0	-50.6	-13.0	-37.6	
2544.90	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3393.20	-20.4	H	3.0	36.1	1.0	-55.5	-13.0	-42.5	

3MHz QPSK
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/8/2016
Test Engineer: R Z
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber B
Mode: LTE_QPSK Band 5 Harmonics, 3MHz Bandwidth

F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5									
1651.00	-20.8	V	3.0	37.0	1.0	-56.8	-13.0	-43.8	
2475.50	-19.3	V	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3302.00	-19.8	V	3.0	36.2	1.0	-55.0	-13.0	-42.0	
1651.00	-17.9	H	3.0	37.0	1.0	-54.0	-13.0	-41.0	
2475.50	-20.7	H	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3302.00	-21.1	H	3.0	36.2	1.0	-56.3	-13.0	-43.3	
Mid Ch, 836.5									
1673.00	-20.1	V	3.0	37.0	1.0	-56.1	-13.0	-43.1	
2509.50	-19.7	V	3.0	36.4	1.0	-55.1	-13.0	-42.1	
3346.00	-20.9	V	3.0	36.1	1.0	-56.1	-13.0	-43.1	
1673.00	-12.9	H	3.0	37.0	1.0	-48.9	-13.0	-35.9	
2509.50	-20.7	H	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3346.00	-20.7	H	3.0	36.1	1.0	-56.0	-13.0	-43.0	
High Ch, 847.5									
1695.00	-23.4	V	3.0	37.0	1.0	-59.4	-13.0	-46.4	
2542.50	-22.7	V	3.0	36.4	1.0	-58.1	-13.0	-45.1	
3390.00	-20.1	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
1695.00	-18.8	H	3.0	37.0	1.0	-54.8	-13.0	-41.8	
2542.50	-18.1	H	3.0	36.4	1.0	-53.5	-13.0	-40.5	
3390.00	-19.3	H	3.0	36.1	1.0	-54.4	-13.0	-41.4	

3MHz 16QAM
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/8/2016
Test Engineer: R Z
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber B
Mode: LTE_16QAM Band 5 Harmonics, 3MHz Bandwidth

F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5									
1651.00	-20.4	V	3.0	37.0	1.0	-56.4	-13.0	-43.4	
2475.50	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
3302.00	-20.5	V	3.0	36.2	1.0	-55.7	-13.0	-42.7	
1651.00	-17.4	H	3.0	37.0	1.0	-53.4	-13.0	-40.4	
2475.50	-18.2	H	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3302.00	-21.0	H	3.0	36.2	1.0	-56.2	-13.0	-43.2	
Mid Ch, 836.5									
1673.00	-18.0	V	3.0	37.0	1.0	-54.0	-13.0	-41.0	
2509.50	-21.2	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3346.00	-20.7	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1673.00	-15.4	H	3.0	37.0	1.0	-51.4	-13.0	-38.4	
2509.50	-17.1	H	3.0	36.4	1.0	-52.5	-13.0	-39.5	
3346.00	-20.8	H	3.0	36.1	1.0	-55.9	-13.0	-42.9	
High Ch, 847.5									
1695.00	-23.1	V	3.0	37.0	1.0	-59.1	-13.0	-46.1	
2542.50	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
3390.00	-20.7	V	3.0	36.1	1.0	-55.8	-13.0	-42.8	
1695.00	-19.5	H	3.0	37.0	1.0	-55.5	-13.0	-42.5	
2542.50	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	
3390.00	-19.9	H	3.0	36.1	1.0	-55.0	-13.0	-42.0	

5MHz QPSK
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/8/2016
Test Engineer: R Z
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber B
Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth

F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5									
1653.00	-23.1	V	3.0	37.0	1.0	-59.1	-13.0	-46.1	
2479.50	-20.3	V	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3386.00	-19.8	V	3.0	36.1	1.0	-55.0	-13.0	-42.0	
1653.00	-18.6	H	3.0	37.0	1.0	-54.7	-13.0	-41.7	
2479.50	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3386.00	-20.7	H	3.0	36.1	1.0	-55.9	-13.0	-42.9	
Mid Ch, 836.5									
1673.00	-17.9	V	3.0	37.0	1.0	-53.9	-13.0	-40.9	
2509.50	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3346.00	-20.9	V	3.0	36.1	1.0	-56.1	-13.0	-43.1	
1673.00	-15.5	H	3.0	37.0	1.0	-51.5	-13.0	-38.5	
2509.50	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3346.00	-20.2	H	3.0	36.1	1.0	-55.3	-13.0	-42.3	
High Ch, 846.5									
1693.00	-26.6	V	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2539.50	-11.3	V	3.0	36.4	1.0	-46.7	-13.0	-33.7	
3386.00	-20.4	V	3.0	36.1	1.0	-53.9	-13.0	-40.9	
1693.00	-22.4	H	3.0	37.0	1.0	-58.4	-13.0	-45.4	
2539.50	-16.9	H	3.0	36.4	1.0	-52.3	-13.0	-39.3	
3386.00	-20.2	H	3.0	36.1	1.0	-55.3	-13.0	-42.3	

5MHz 16QAM
 Compliance Certification Services
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16122596
Date: 1/8/2016
Test Engineer: R Z
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber B
Mode: LTE_16QAM Band 5 Harmonics, 5MHz Bandwidth

F MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5									
1653.00	-23.4	V	3.0	37.0	1.0	-59.4	-13.0	-46.4	
2479.50	-21.7	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3386.00	-20.5	V	3.0	36.1	1.0	-55.7	-13.0	-42.7	
1653.00	-19.7	H	3.0	37.0	1.0	-55.8	-13.0	-42.8	
2479.50	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3386.00	-20.5	H	3.0	36.1	1.0	-55.7	-13.0	-42.7	
Mid Ch, 836.5									
1673.00	-19.9	V	3.0	37.0	1.0	-55.9	-13.0	-42.9	
2509.50	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3346.00	-20.5	V	3.0	36.1	1.0	-55.7	-13.0	-42.7	
1673.00	-17.7	H	3.0	37.0	1.0	-53.7	-13.0	-40.7	
2509.50	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3346.00	-20.6	H	3.0	36.1	1.0	-55.8	-13.0	-42.8	
High Ch, 846.5									
1693.00	-27.1	V	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2539.50	-13.4	V	3.0	36.4	1.0	-48.8	-13.0	-35.8	
3386.00	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1693.00	-25.5	H	3.0	37.0	1.0	-61.5	-13.0	-48.5	
2539.50	-19.9	H	3.0	36.4	1.0	-55.3	-13.0	-42.3	
3386.00	-20.3	H	3.0	36.1	1.0	-55.4	-13.0	-42.4	

10MHz QPSK										10MHz 16QAM									
Compliance Certification Services										Compliance Certification Services									
Above 1GHz High Frequency Substitution Measurement										Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics					Company: LG Electronics					Company: LG Electronics					Company: LG Electronics				
Project #: 16122596					Project #: 16122596					Project #: 16122596					Project #: 16122596				
Date: 1/8/2016					Date: 1/8/2016					Date: 1/8/2016					Date: 1/8/2016				
Test Engineer: R.Z					Test Engineer: R.Z					Test Engineer: R.Z					Test Engineer: R.Z				
Configuration: X-pos EUT w/ AC Adapter + Headset					Configuration: X-pos EUT w/ AC Adapter + Headset					Configuration: X-pos EUT w/ AC Adapter + Headset					Configuration: X-pos EUT w/ AC Adapter + Headset				
Location: Chamber B					Location: Chamber B					Location: Chamber B					Location: Chamber B				
Mode: LTE_QPSK Band 5 Harmonics, 10MHz Bandwidth					Mode: LTE_QPSK Band 5 Harmonics, 10MHz Bandwidth					Mode: LTE_16QAM Band 5 Harmonics, 10MHz Bandwidth					Mode: LTE_16QAM Band 5 Harmonics, 10MHz Bandwidth				
f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829										Low Ch, 829									
1658.00	-18.2	V	3.0	37.0	1.0	-54.2	-13.0	-41.2		1658.00	-19.1	V	3.0	37.0	1.0	-55.1	-13.0	-42.1	
2487.00	-16.4	V	3.0	36.4	1.0	-51.9	-13.0	-38.9		2487.00	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3316.00	-20.1	V	3.0	36.1	1.0	-55.3	-13.0	-42.3		3316.00	-19.5	V	3.0	36.1	1.0	-54.7	-13.0	-41.7	
1658.00	-16.2	H	3.0	37.0	1.0	-52.2	-13.0	-39.2		1658.00	-17.7	H	3.0	37.0	1.0	-53.7	-13.0	-40.7	
2487.00	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3		2487.00	-24.5	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3316.00	-20.2	H	3.0	36.1	1.0	-55.3	-13.0	-42.3		3316.00	-20.7	H	3.0	36.1	1.0	-55.8	-13.0	-42.8	
Mid Ch, 836.5										Mid Ch, 836.5									
1673.00	-17.0	V	3.0	37.0	1.0	-53.0	-13.0	-40.0		1673.00	-18.1	V	3.0	37.0	1.0	-54.1	-13.0	-41.1	
2509.50	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9		2509.50	-20.7	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3346.00	-19.9	V	3.0	36.1	1.0	-55.1	-13.0	-42.1		3346.00	-20.4	V	3.0	36.1	1.0	-55.6	-13.0	-42.6	
1673.00	-11.7	H	3.0	37.0	1.0	-47.7	-13.0	-34.7		1673.00	-13.8	H	3.0	37.0	1.0	-49.8	-13.0	-36.8	
2509.50	-24.2	H	3.0	36.4	1.0	-59.6	-13.0	-46.6		2509.50	-24.3	H	3.0	36.4	1.0	-59.7	-13.0	-46.7	
3346.00	-20.7	H	3.0	36.1	1.0	-55.8	-13.0	-42.8		3346.00	-20.4	H	3.0	36.1	1.0	-55.5	-13.0	-42.5	
High Ch, 844										High Ch, 844									
1688.00	-17.4	V	3.0	37.0	1.0	-53.4	-13.0	-40.4		1688.00	-17.9	V	3.0	37.0	1.0	-53.9	-13.0	-40.9	
2532.00	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0		2532.00	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3376.00	-20.7	V	3.0	36.1	1.0	-55.8	-13.0	-42.8		3376.00	-20.5	V	3.0	36.1	1.0	-55.6	-13.0	-42.6	
1688.00	-15.9	H	3.0	37.0	1.0	-51.9	-13.0	-38.9		1688.00	-16.6	H	3.0	37.0	1.0	-52.6	-13.0	-39.6	
2532.00	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1		2532.00	-24.5	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3376.00	-20.6	H	3.0	36.1	1.0	-55.7	-13.0	-42.7		3376.00	-20.4	H	3.0	36.1	1.0	-55.5	-13.0	-42.5	

LTE Band 12

1.4MHz QPSK											1.4MHz 16QAM										
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company: LG Project #: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_QPSK Band 12 Harmonics, 1.4MHz Bandwidth											Company: LG Project #: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_16QAM Band 12 Harmonics, 1.4MHz Bandwidth										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 699.7 1399.40 -27.4 V 3.0 37.4 1.0 63.7 -13.0 50.7 2099.10 -22.1 V 3.0 36.6 1.0 57.7 -13.0 44.7 2798.80 -21.0 V 3.0 36.4 1.0 56.4 -13.0 43.4 1399.40 -19.6 H 3.0 37.4 1.0 55.9 -13.0 42.9 2099.10 -23.9 H 3.0 36.6 1.0 59.5 -13.0 46.5 2798.80 -21.7 H 3.0 36.4 1.0 57.1 -13.0 44.1											Low Ch, 699.7 1399.40 -27.5 V 3.0 37.4 1.0 63.9 -13.0 50.9 2099.10 -22.5 V 3.0 36.6 1.0 58.0 -13.0 45.0 2798.80 -20.8 V 3.0 36.4 1.0 56.2 -13.0 43.2 1399.40 -19.2 H 3.0 37.4 1.0 55.5 -13.0 42.5 2099.10 -23.6 H 3.0 36.6 1.0 59.1 -13.0 46.1 2798.80 -22.3 H 3.0 36.4 1.0 57.7 -13.0 44.7										
Mid Ch, 707.50 1415.00 -25.5 V 3.0 37.3 1.0 61.8 -13.0 48.8 2122.00 -21.0 V 3.0 36.6 1.0 56.6 -13.0 43.6 2830.00 -20.2 V 3.0 36.4 1.0 55.6 -13.0 42.6 1415.00 -21.4 H 3.0 37.3 1.0 57.7 -13.0 44.7 2122.00 -21.6 H 3.0 36.6 1.0 57.2 -13.0 44.2 2830.00 -21.2 H 3.0 36.4 1.0 56.6 -13.0 43.6											Mid Ch, 707.50 1415.00 -26.7 V 3.0 37.3 1.0 63.0 -13.0 50.0 2122.00 -21.5 V 3.0 36.6 1.0 57.1 -13.0 44.1 2830.00 -21.0 V 3.0 36.4 1.0 56.3 -13.0 43.3 1415.00 -21.5 H 3.0 37.3 1.0 57.9 -13.0 44.9 2122.00 -22.0 H 3.0 36.6 1.0 57.6 -13.0 44.6 2830.00 -21.3 H 3.0 36.4 1.0 56.7 -13.0 43.7										
High Ch, 715.3 1430.60 -26.0 V 3.0 37.3 1.0 62.3 -13.0 49.3 2145.90 -22.1 V 3.0 36.6 1.0 57.7 -13.0 44.7 2861.20 -21.0 V 3.0 36.4 1.0 56.4 -13.0 43.4 1430.60 -21.0 H 3.0 37.3 1.0 57.3 -13.0 44.3 2145.90 -22.3 H 3.0 36.6 1.0 57.8 -13.0 44.8 2861.20 -20.0 H 3.0 36.4 1.0 55.4 -13.0 42.4											High Ch, 715.3 1430.60 -26.1 V 3.0 37.3 1.0 62.4 -13.0 49.4 2145.90 -22.6 V 3.0 36.6 1.0 58.2 -13.0 45.2 2861.20 -21.3 V 3.0 36.4 1.0 56.6 -13.0 43.6 1430.60 -22.3 H 3.0 37.3 1.0 57.9 -13.0 44.9 2145.90 -22.6 H 3.0 36.6 1.0 58.2 -13.0 45.2 2861.20 -20.9 H 3.0 36.4 1.0 56.3 -13.0 43.3										
3MHz QPSK											3MHz 16QAM										
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company: LG Project #: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth											Company: LG Project #: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_16QAM Band 12 Harmonics, 3MHz Bandwidth										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 700.5 1401.00 -26.3 V 3.0 37.4 1.0 62.7 -13.0 49.7 2101.50 -22.3 V 3.0 36.6 1.0 57.8 -13.0 44.8 2802.00 -21.3 V 3.0 36.4 1.0 56.7 -13.0 43.7 1401.00 -19.5 H 3.0 37.4 1.0 55.9 -13.0 42.9 2101.50 -23.9 H 3.0 36.6 1.0 59.5 -13.0 46.5 2802.00 -20.9 H 3.0 36.4 1.0 56.3 -13.0 43.3											Low Ch, 700.5 1401.00 -27.8 V 3.0 37.4 1.0 64.2 -13.0 51.2 2101.50 -22.6 V 3.0 36.6 1.0 58.2 -13.0 45.2 2802.00 -21.1 V 3.0 36.4 1.0 56.5 -13.0 43.5 1401.00 -19.1 H 3.0 37.4 1.0 55.5 -13.0 42.5 2101.50 -24.4 H 3.0 36.6 1.0 60.0 -13.0 47.0 2802.00 -21.5 H 3.0 36.4 1.0 56.9 -13.0 43.9										
Mid Ch, 707.50 1415.00 -27.4 V 3.0 37.3 1.0 63.7 -13.0 50.7 2122.00 -22.0 V 3.0 36.6 1.0 57.6 -13.0 44.6 2830.00 -21.4 V 3.0 36.4 1.0 56.8 -13.0 43.8 1415.00 -21.5 H 3.0 37.3 1.0 58.9 -13.0 45.9 2122.00 -20.1 H 3.0 36.6 1.0 55.6 -13.0 42.6 2830.00 -21.9 H 3.0 36.4 1.0 57.3 -13.0 44.3											Mid Ch, 707.50 1415.00 -28.2 V 3.0 37.3 1.0 64.6 -13.0 51.6 2122.00 -22.1 V 3.0 36.6 1.0 57.7 -13.0 44.7 2830.00 -21.7 V 3.0 36.4 1.0 57.1 -13.0 44.1 1415.00 -22.3 H 3.0 37.3 1.0 58.9 -13.0 45.9 2122.00 -20.5 H 3.0 36.6 1.0 56.0 -13.0 43.0 2830.00 -21.7 H 3.0 36.4 1.0 57.1 -13.0 44.1										
High Ch, 714.5 1429.00 -26.9 V 3.0 37.3 1.0 63.2 -13.0 50.2 2143.50 -21.9 V 3.0 36.6 1.0 57.5 -13.0 44.5 2858.00 -21.2 V 3.0 36.4 1.0 56.5 -13.0 43.5 1429.00 -22.7 H 3.0 37.3 1.0 58.9 -13.0 45.9 2143.50 -21.3 H 3.0 36.6 1.0 56.9 -13.0 43.9 2858.00 -21.5 H 3.0 36.4 1.0 56.9 -13.0 43.9											High Ch, 714.5 1429.00 -27.5 V 3.0 37.3 1.0 63.9 -13.0 50.9 2143.50 -22.2 V 3.0 36.6 1.0 57.8 -13.0 44.8 2858.00 -21.3 V 3.0 36.4 1.0 56.7 -13.0 43.7 1429.00 -22.7 H 3.0 37.3 1.0 58.9 -13.0 45.9 2143.50 -21.9 H 3.0 36.6 1.0 57.4 -13.0 44.4 2858.00 -22.1 H 3.0 36.4 1.0 57.5 -13.0 44.5										
5MHz QPSK											5MHz 16QAM										
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company: LG Project #: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_QPSK Band 12 Harmonics, 5MHz Bandwidth											Company: LG Project #: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_16QAM Band 12 Harmonics, 5MHz Bandwidth										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 701.50 1403.00 -25.2 V 3.0 37.4 1.0 61.6 -13.0 48.6 2104.50 -22.2 V 3.0 36.6 1.0 57.8 -13.0 44.8 2806.00 -21.4 V 3.0 36.4 1.0 56.8 -13.0 43.8 1403.00 -17.6 H 3.0 37.4 1.0 54.0 -13.0 41.0 2104.50 -22.3 H 3.0 36.6 1.0 57.9 -13.0 44.9 2806.00 -21.5 H 3.0 36.4 1.0 56.8 -13.0 43.8											Low Ch, 701.50 1403.00 -25.8 V 3.0 37.4 1.0 62.1 -13.0 49.1 2104.50 -22.4 V 3.0 36.6 1.0 58.0 -13.0 45.0 2806.00 -21.5 V 3.0 36.4 1.0 56.9 -13.0 43.9 1403.00 -18.9 H 3.0 37.4 1.0 55.3 -13.0 42.3 2104.50 -22.4 H 3.0 36.6 1.0 58.0 -13.0 45.0 2806.00 -21.8 H 3.0 36.4 1.0 57.2 -13.0 44.2										
Mid Ch, 707.50 1415.00 -27.0 V 3.0 37.3 1.0 63.4 -13.0 50.4 2122.50 -21.5 V 3.0 36.6 1.0 57.1 -13.0 44.1 2830.00 -21.2 V 3.0 36.4 1.0 56.6 -13.0 43.6 1415.00 -21.5 H 3.0 37.3 1.0 57.8 -13.0 44.8 2122.50 -21.8 H 3.0 36.6 1.0 57.4 -13.0 44.4 2830.00 -21.9 H 3.0 36.4 1.0 57.3 -13.0 44.3											Mid Ch, 707.50 1415.00 -27.4 V 3.0 37.3 1.0 63.8 -13.0 50.8 2122.50 -22.0 V 3.0 36.6 1.0 57.5 -13.0 44.5 2830.00 -21.3 V 3.0 36.4 1.0 56.7 -13.0 43.7 1415.00 -21.6 H 3.0 37.3 1.0 57.9 -13.0 44.9 2122.50 -22.3 H 3.0 36.6 1.0 57.9 -13.0 44.9 2830.00 -22.2 H 3.0 36.4 1.0 57.6 -13.0 44.6										
High Ch, 713.50 1427.00 -25.4 V 3.0 37.3 1.0 61.7 -13.0 48.7 2140.50 -19.9 V 3.0 36.6 1.0 55.5 -13.0 42.5 2854.00 -21.9 V 3.0 36.4 1.0 57.3 -13.0 44.3 1427.00 -20.1 H 3.0 37.3 1.0 56.5 -13.0 43.5 2140.50 -22.1 H 3.0 36.6 1.0 57.7 -13.0 44.7 2854.00 -21.2 H 3.0 36.4 1.0 56.6 -13.0 43.6											High Ch, 713.50 1427.00 -25.5 V 3.0 37.3 1.0 61.8 -13.0 48.8 2140.50 -20.8 V 3.0 36.6 1.0 56.4 -13.0 43.4 2854.00 -22.1 V 3.0 36.4 1.0 57.4 -13.0 44.4 1427.00 -20.3 H 3.0 37.3 1.0 56.6 -13.0 43.6 2140.50 -22.2 H 3.0 36.6 1.0 57.8 -13.0 44.8 2854.00 -21.7 H 3.0 36.4 1.0 57.1 -13.0 44.1										

10MHz QPSK										10MHz 16QAM									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LG					Company: LG					Company: LG					Company: LG				
Project #:					Project #:					Project #:					Project #:				
Date: 1/8/2016					Date: 1/8/2016					Date: 1/8/2016					Date: 1/8/2016				
Test Engineer: A. Escamilla					Test Engineer: A. Escamilla					Test Engineer: A. Escamilla					Test Engineer: A. Escamilla				
Configuration: EUT + AC Adapter + HS					Configuration: EUT + AC Adapter + HS					Configuration: EUT + AC Adapter + HS					Configuration: EUT + AC Adapter + HS				
Location: Chamber B					Location: Chamber B					Location: Chamber B					Location: Chamber B				
Mode: LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth					Mode: LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth					Mode: LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth					Mode: LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth				
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch,704										Low Ch,704									
1408.00	-25.2	V	3.0	37.4	1.0	61.6	-13.0	-48.6		1408.00	-25.4	V	3.0	37.4	1.0	61.8	-13.0	-48.8	
2112.00	-22.1	V	3.0	36.6	1.0	57.7	-13.0	-44.7		2112.00	-23.0	V	3.0	36.6	1.0	58.5	-13.0	-45.5	
2816.00	-21.4	V	3.0	36.4	1.0	56.8	-13.0	-43.8		2816.00	-21.8	V	3.0	36.4	1.0	57.2	-13.0	-44.2	
1408.00	-18.3	H	3.0	37.4	1.0	54.6	-13.0	-41.6		1408.00	-18.1	H	3.0	37.4	1.0	54.5	-13.0	-41.5	
2112.00	-21.8	H	3.0	36.6	1.0	57.4	-13.0	-44.4		2112.00	-21.5	H	3.0	36.6	1.0	57.1	-13.0	-44.1	
2816.00	-21.6	H	3.0	36.4	1.0	57.0	-13.0	-44.0		2816.00	-21.8	H	3.0	36.4	1.0	57.2	-13.0	-44.2	
Mid Ch,707.5										Mid Ch,707.5									
1415.00	-25.3	V	3.0	37.3	1.0	61.6	-13.0	-48.6		1415.00	-25.6	V	3.0	37.3	1.0	61.9	-13.0	-48.9	
2122.50	-21.9	V	3.0	36.6	1.0	57.4	-13.0	-44.4		2122.50	-22.4	V	3.0	36.6	1.0	57.9	-13.0	-44.9	
2830.00	-21.4	V	3.0	36.4	1.0	56.8	-13.0	-43.8		2830.00	-21.6	V	3.0	36.4	1.0	57.0	-13.0	-44.0	
1415.00	-20.5	H	3.0	37.3	1.0	56.9	-13.0	-43.9		1415.00	-20.8	H	3.0	37.3	1.0	57.2	-13.0	-44.2	
2122.50	-21.8	H	3.0	36.6	1.0	57.4	-13.0	-44.4		2122.50	-23.2	H	3.0	36.6	1.0	58.8	-13.0	-45.8	
2830.00	-21.9	H	3.0	36.4	1.0	57.3	-13.0	-44.3		2830.00	-22.2	H	3.0	36.4	1.0	57.6	-13.0	-44.6	
High Ch,711										High Ch,711									
1422.00	-27.6	V	3.0	37.3	1.0	63.9	-13.0	-50.9		1422.00	-27.7	V	3.0	37.3	1.0	64.0	-13.0	-51.0	
2133.00	-22.2	V	3.0	36.6	1.0	57.8	-13.0	-44.8		2133.00	-22.5	V	3.0	36.6	1.0	58.1	-13.0	-45.1	
2844.00	-21.6	V	3.0	36.4	1.0	57.2	-13.0	-44.2		2844.00	-21.7	V	3.0	36.4	1.0	57.1	-13.0	-44.1	
1422.00	-20.8	H	3.0	37.3	1.0	57.1	-13.0	-44.1		1422.00	-21.1	H	3.0	37.3	1.0	57.4	-13.0	-44.4	
2133.00	-22.1	H	3.0	36.6	1.0	57.7	-13.0	-44.7		2133.00	-22.6	H	3.0	36.6	1.0	58.2	-13.0	-45.2	
2844.00	-21.7	H	3.0	36.4	1.0	57.1	-13.0	-44.1		2844.00	-21.6	H	3.0	36.4	1.0	57.0	-13.0	-44.0	