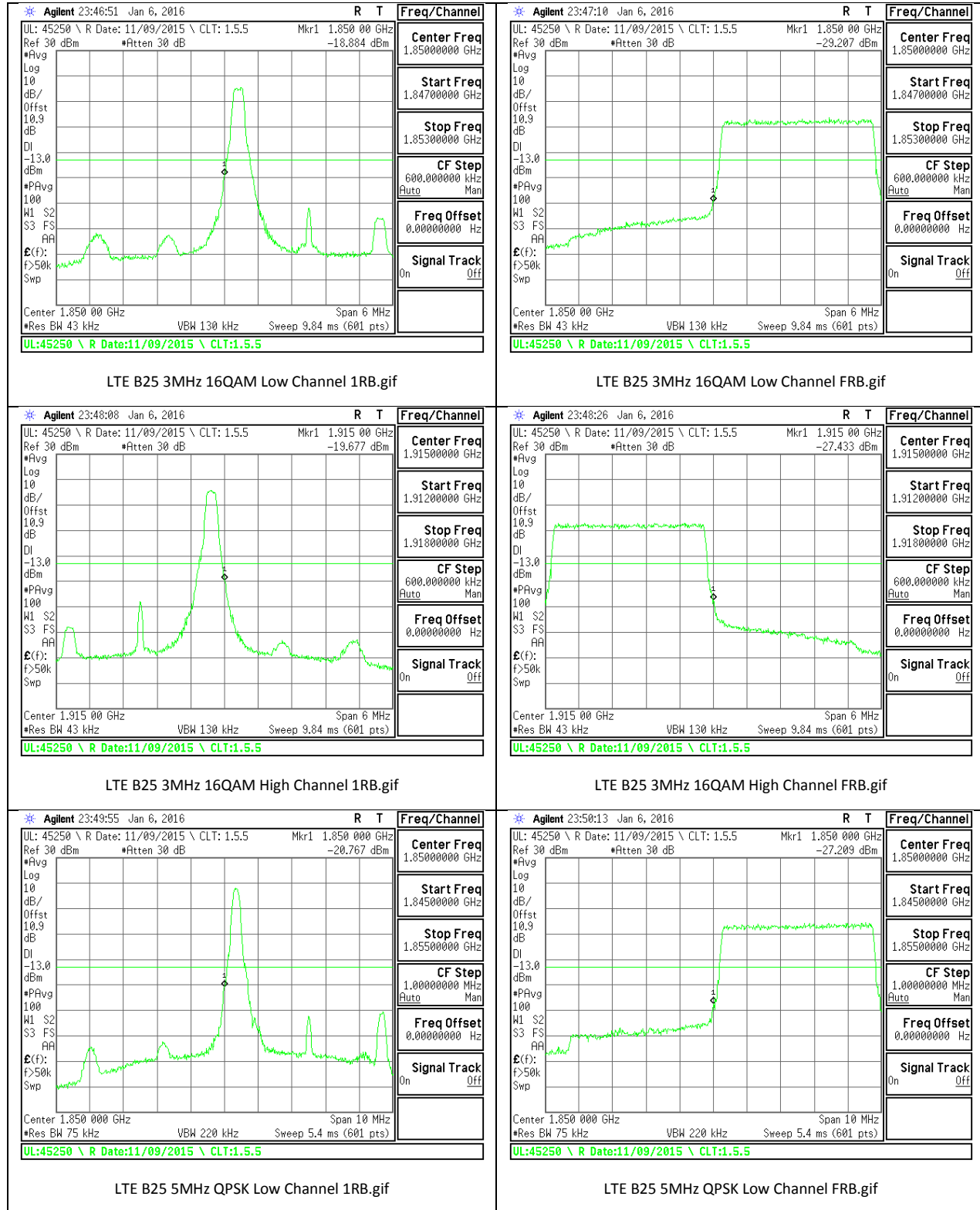
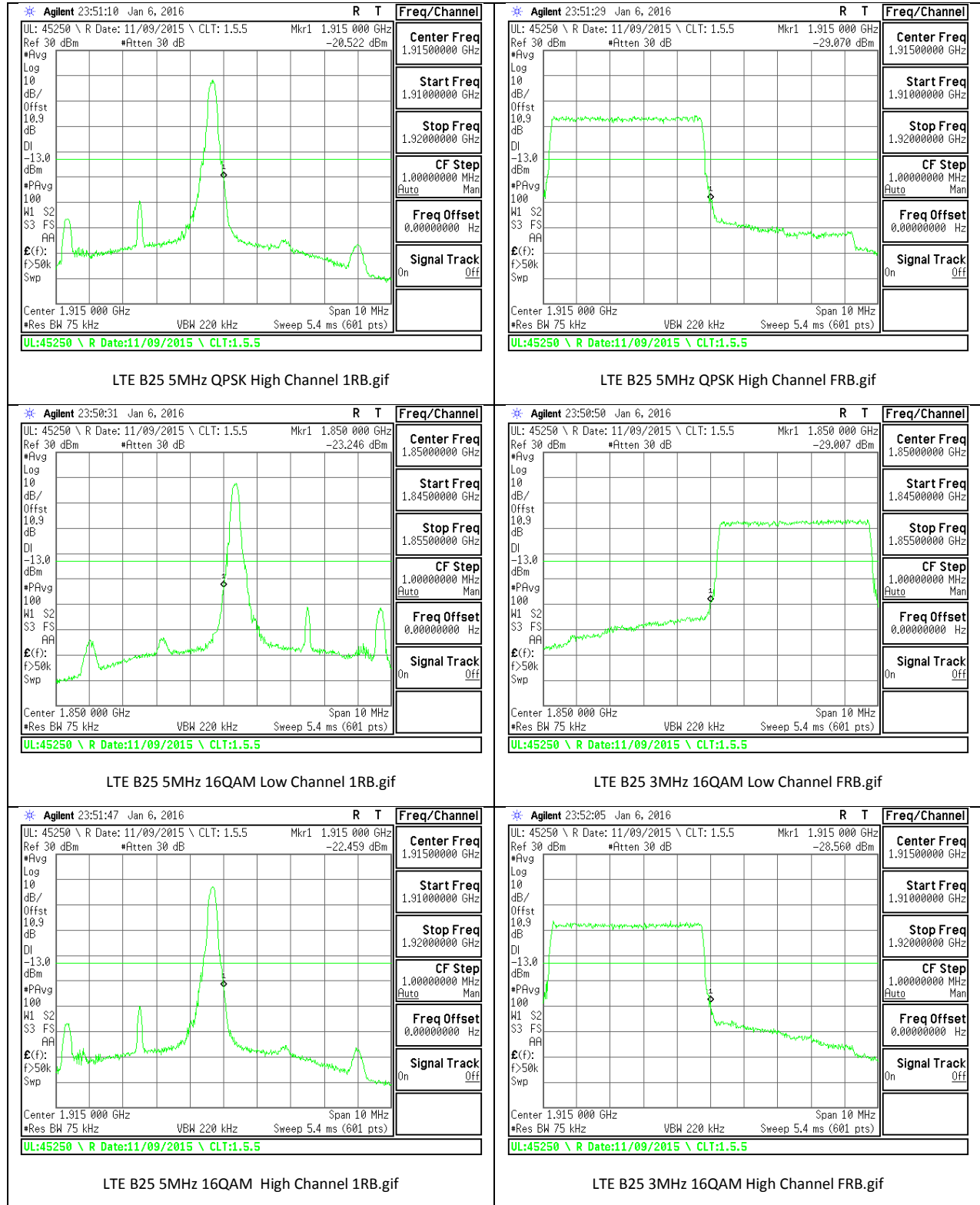
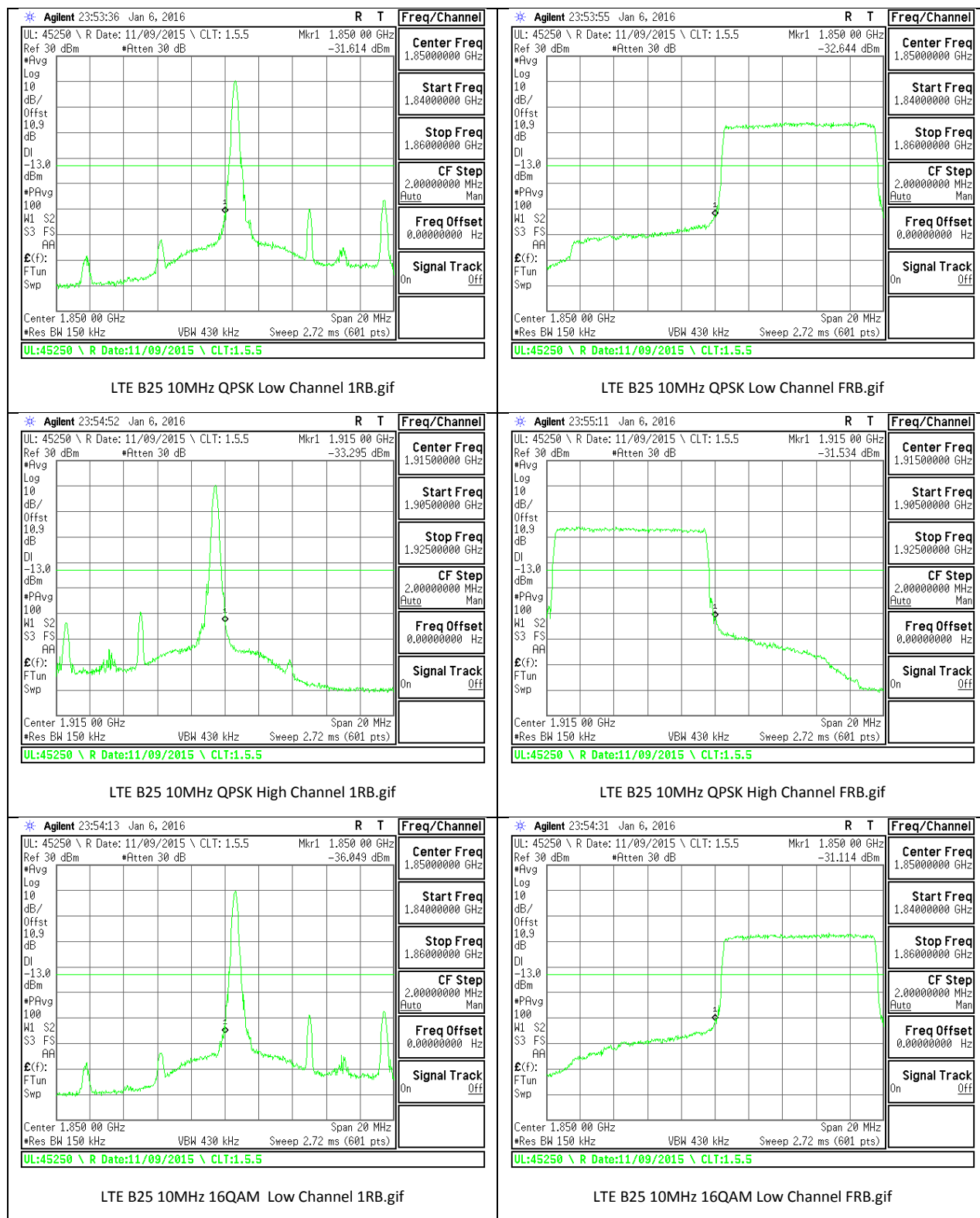
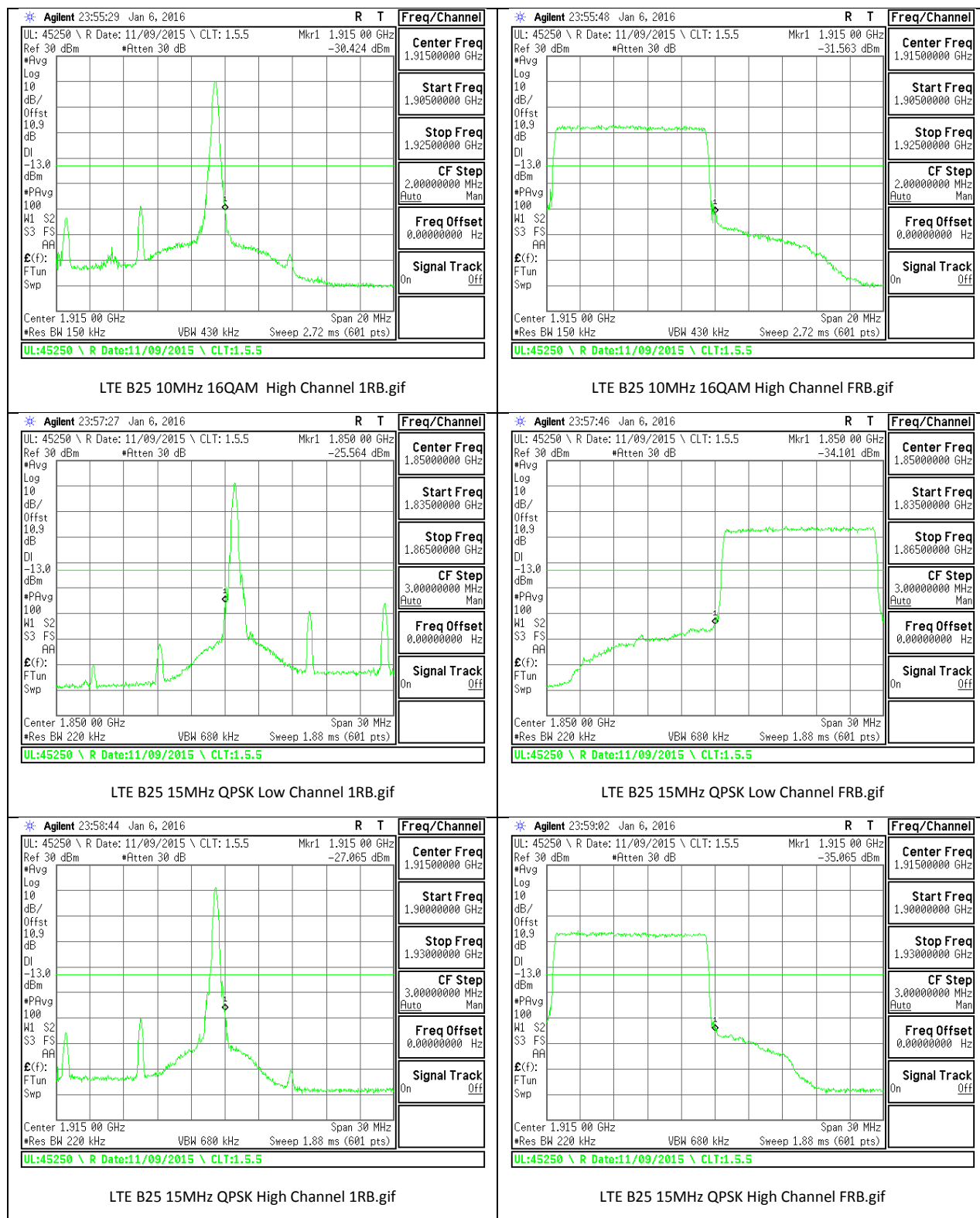
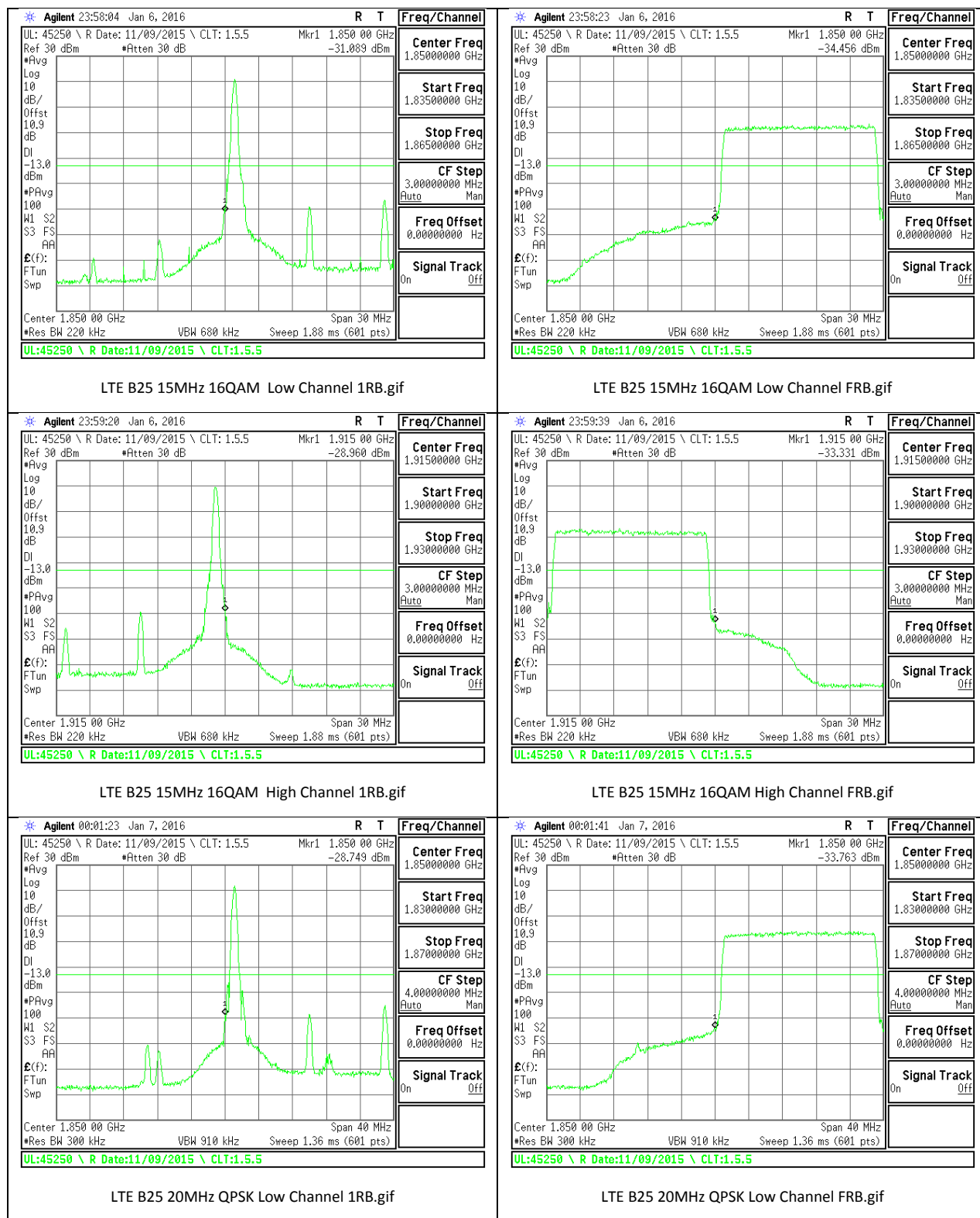


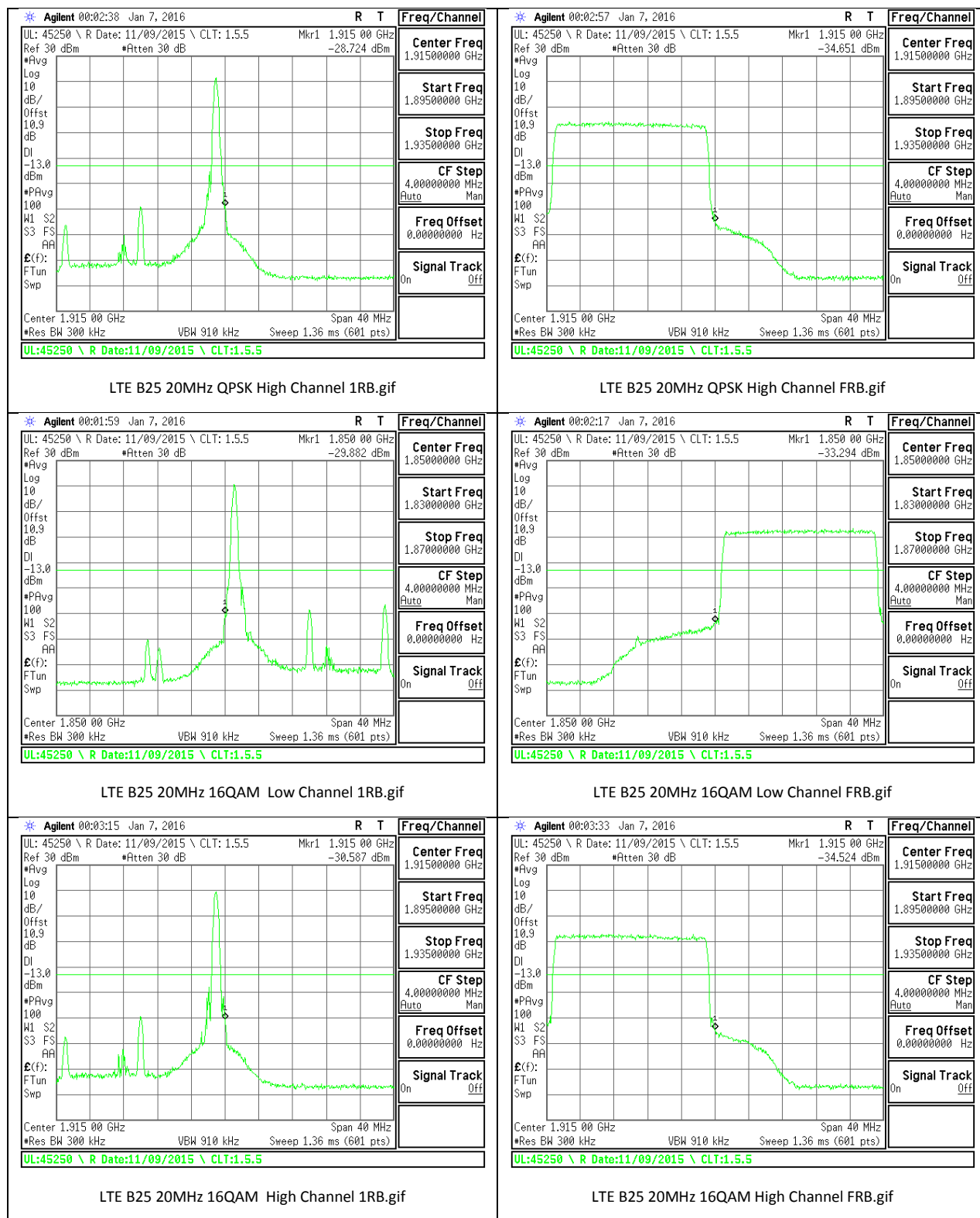












12. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238

LIMITS

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

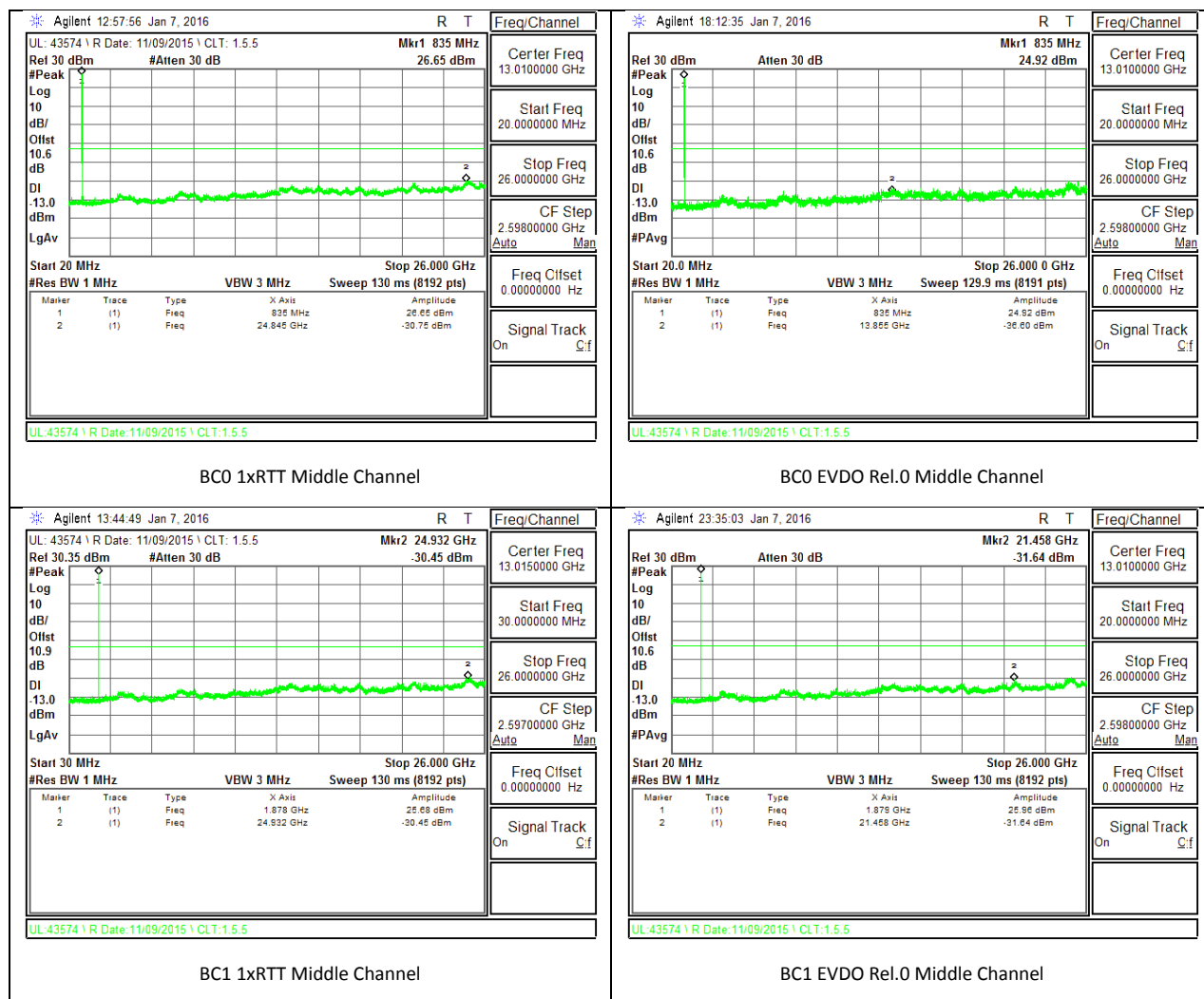
Per KDB 971168 D01 Power Meas License Digital Systems v02r02

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

12.1. OUT OF BAND EMISSIONS RESULT AND PLOTS

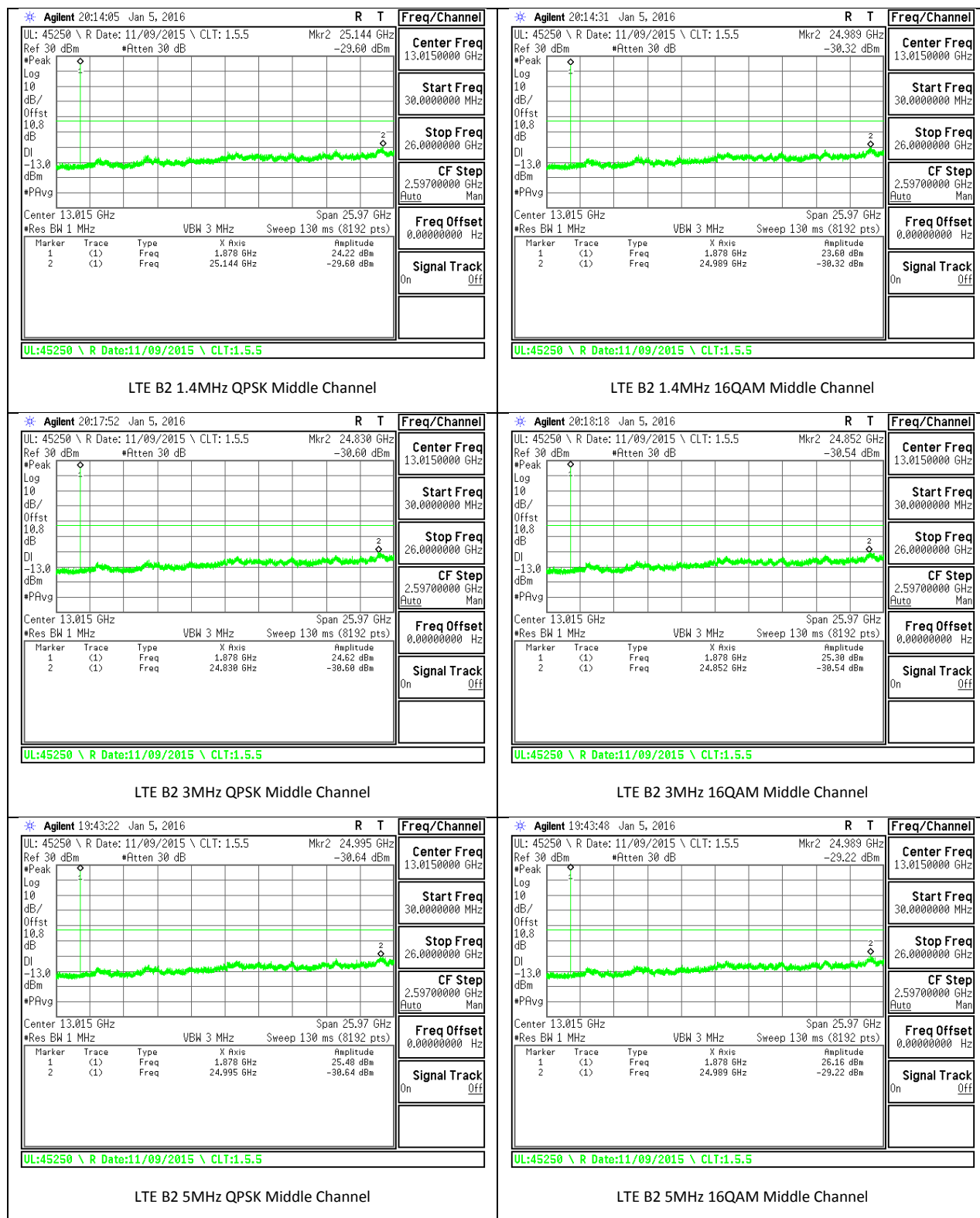
CDMA

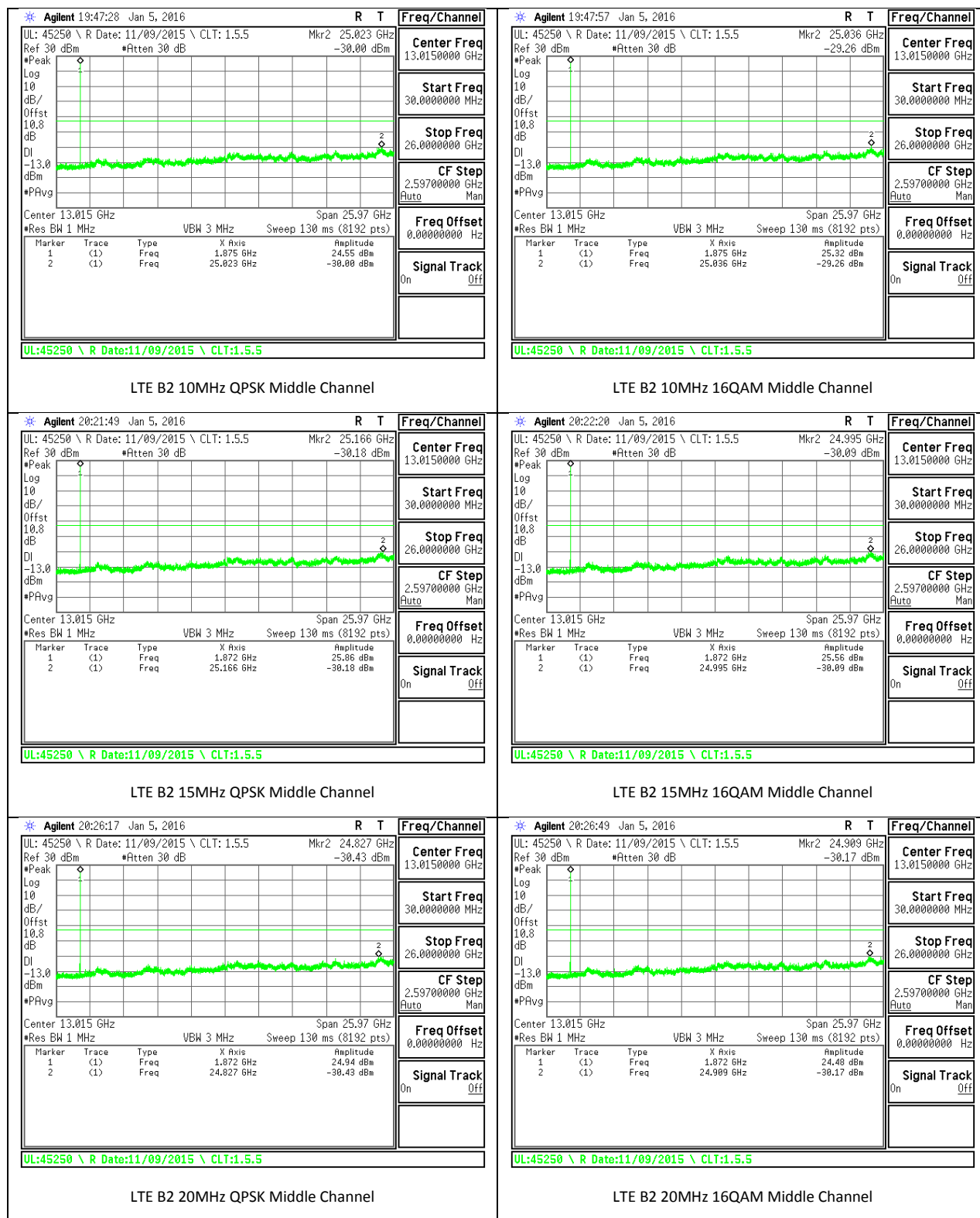
Band	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
BC0	1xRTT	824.7	-30.15	-13	-17.15
		836.52	-30.75	-13	-17.75
		848.31	-29.69	-13	-16.69
	EVDO REL. 0	824.7	-35.93	-13	-22.93
		836.52	-36.60	-13	-23.6
		848.31	-30.28	-13	-17.28
BC1	1xRTT	1851.25	-30.44	-13	-17.44
		1880	-30.45	-13	-17.45
		1908.75	-28.74	-13	-15.74
	EVDO REL. 0	1851.25	-30.33	-13	-17.33
		1880	-31.64	-13	-18.64
		1908.75	-29.37	-13	-16.37



LTE Band 2

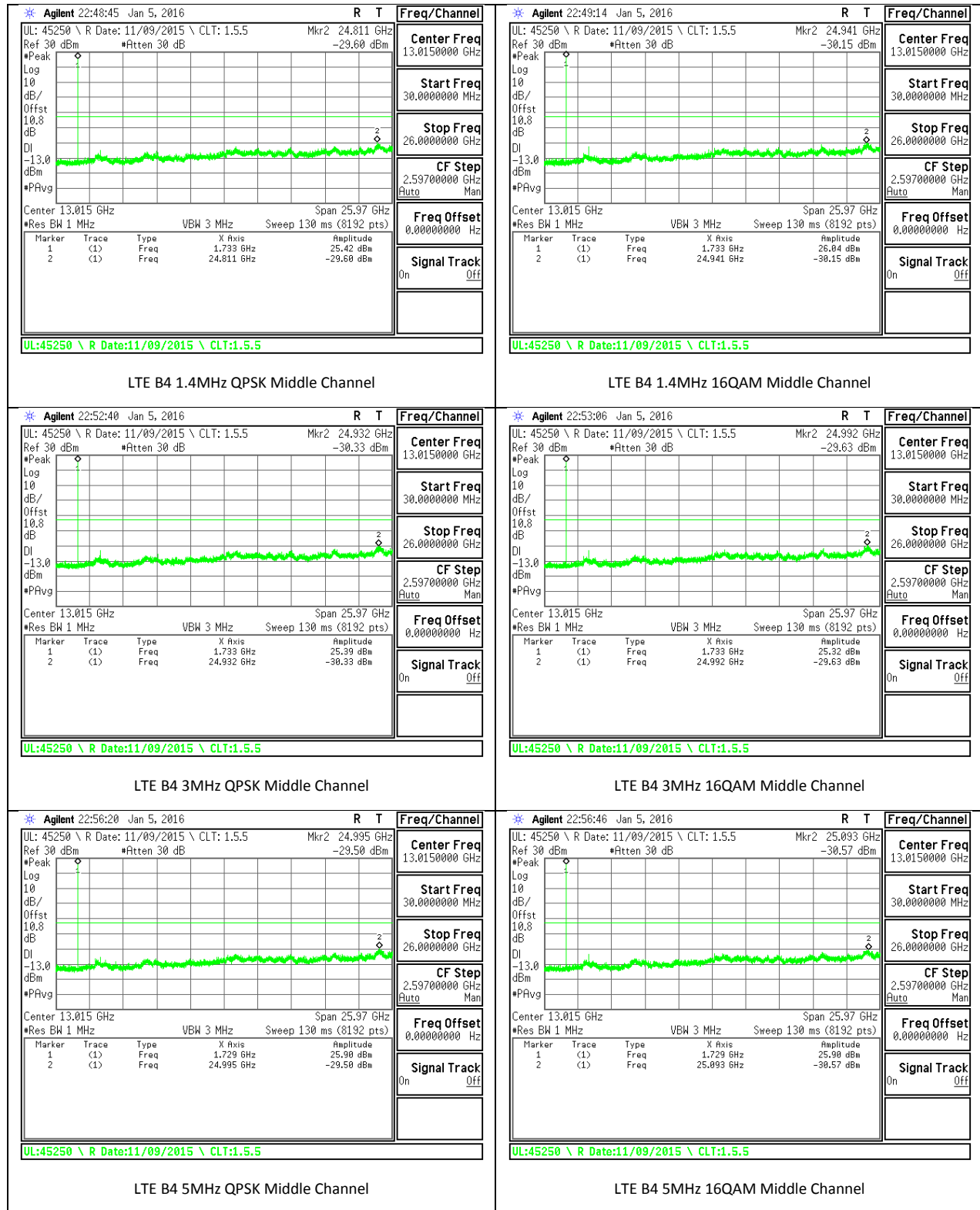
BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
1.4	QPSK	1850.7	-30.00	-13	-17.00
		1880	-29.59	-13	-16.59
		1909.3	-29.98	-13	-16.98
	16QAM	1850.7	-30.02	-13	-17.02
		1880	-30.31	-13	-17.31
		1909.3	-30.43	-13	-17.43
3	QPSK	1851.5	-29.80	-13	-16.80
		1880	-30.60	-13	-17.60
		1908.5	-30.58	-13	-17.58
	16QAM	1851.5	-30.55	-13	-17.55
		1880	-30.53	-13	-17.53
		1908.5	-29.68	-13	-16.68
5	QPSK	1852.5	-30.62	-13	-17.62
		1880	-30.63	-13	-17.63
		1907.5	-30.75	-13	-17.75
	16QAM	1852.5	-30.23	-13	-17.23
		1880	-29.22	-13	-16.22
		1907.5	-29.62	-13	-16.62
10	QPSK	1855	-30.69	-13	-17.69
		1880	-30.00	-13	-17.00
		1905	-30.32	-13	-17.23
	16QAM	1855	-30.26	-13	-17.26
		1880	-29.62	-13	-16.62
		1905	-30.08	-13	-17.08
15	QPSK	1857.5	-29.73	-13	-16.73
		1880	-30.18	-13	-17.18
		1902.5	-30.26	-13	-17.26
	16QAM	1857.5	-30.55	-13	-17.55
		1880	-30.09	-13	-17.09
		1902.5	-30.33	-13	-17.33
20	QPSK	1860	-30.20	-13	-17.20
		1880	-30.43	-13	-17.43
		1900	-28.15	-13	-15.15
	16QAM	1860	-29.92	-13	-16.92
		1880	-30.17	-13	-17.17
		1900	-29.87	-13	-16.87

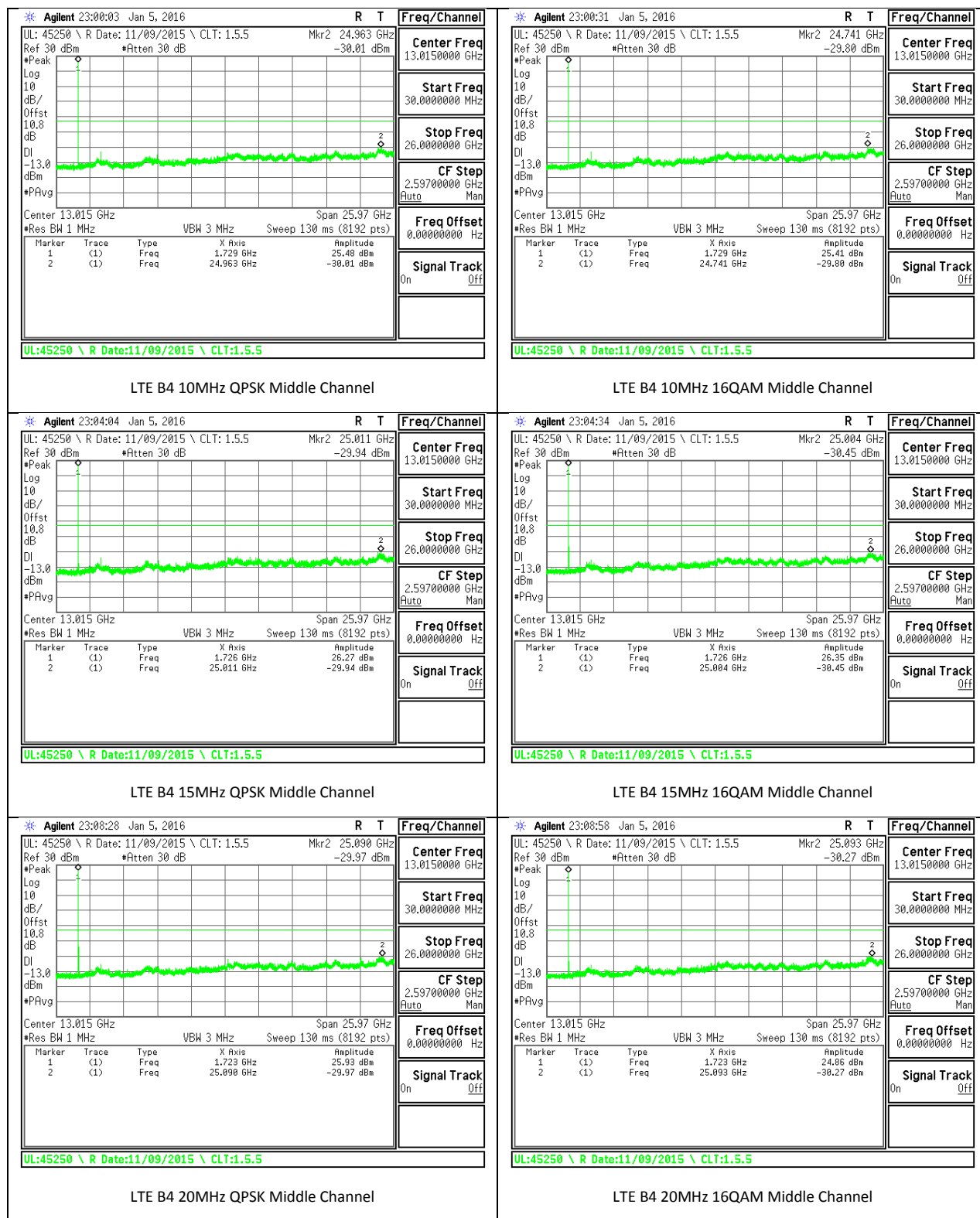




LTE Band 4

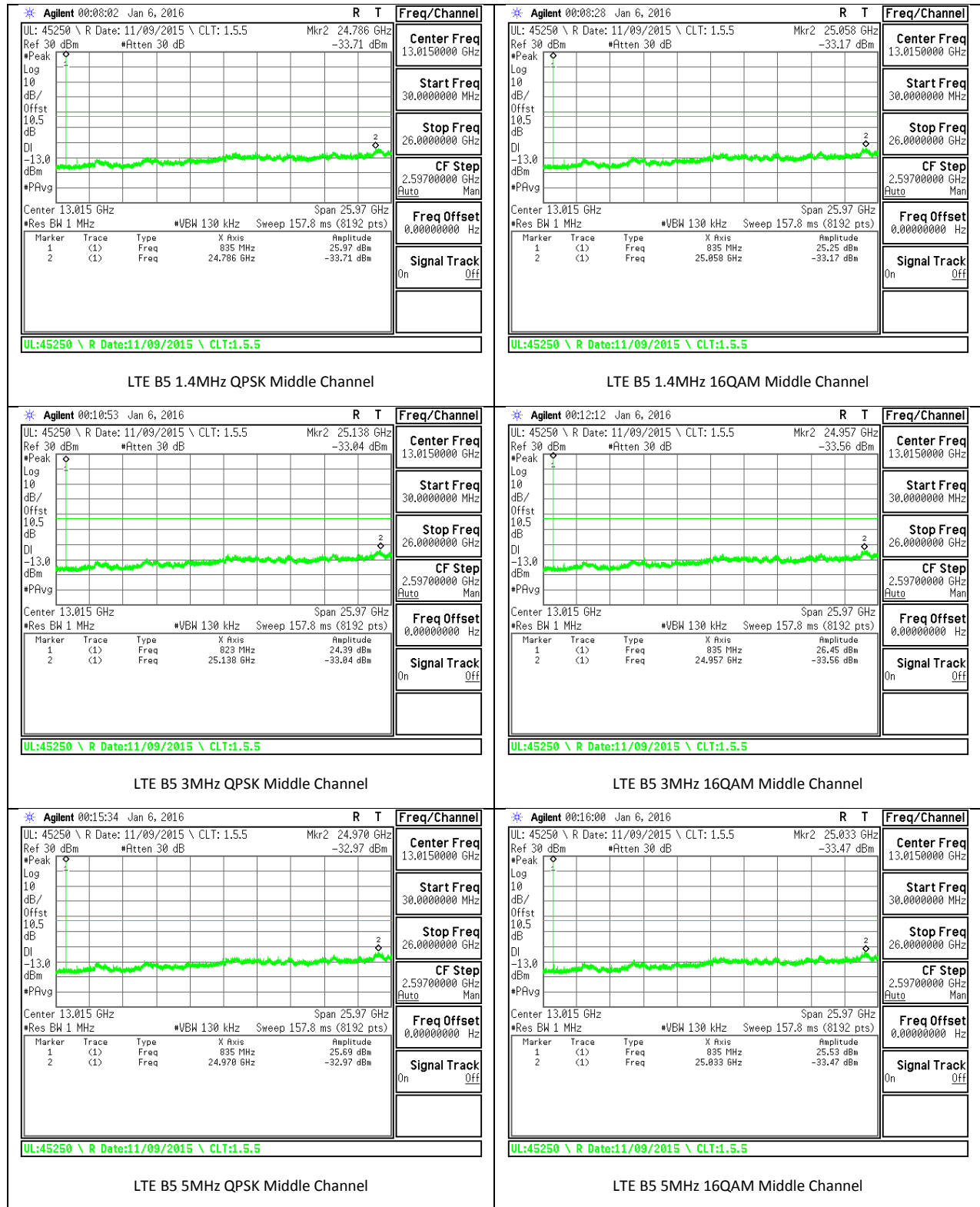
BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
1.4	QPSK	1710.7	-30.192	-13	-17.19
		1732.5	-29.596	-13	-16.59
		1754.3	-29.809	-13	-16.80
	16QAM	1710.7	-30.681	-13	-17.68
		1732.5	-28.488	-13	-15.48
		1754.3	-30.422	-13	-17.42
3	QPSK	1711.5	-30.407	-13	-17.40
		1732.5	-30.327	-13	-17.32
		1753.5	-30.313	-13	-17.31
	16QAM	1711.5	-30.761	-13	-17.76
		1732.5	-29.633	-13	-16.63
		1753.5	-30.537	-13	-17.53
5	QPSK	1712.5	-30.252	-13	-17.25
		1732.5	-29.498	-13	-16.49
		1752.5	-30.074	-13	-17.07
	16QAM	1712.5	-29.797	-13	-16.79
		1732.5	-30.567	-13	-17.56
		1752.5	-29.988	-13	-16.98
10	QPSK	1715	-30.32	-13	-17.32
		1732.5	-30.01	-13	-17.01
		1750	-30.1	-13	-17.10
	16QAM	1715	-30.37	-13	-17.37
		1732.5	-29.80	-13	-16.80
		1750	-30.46	-13	-17.46
15	QPSK	1717.5	-29.72	-13	-16.72
		1732.5	-29.94	-13	-16.94
		1747.5	-29.45	-13	-16.45
	16QAM	1717.5	-30.34	-13	-17.34
		1732.5	-30.45	-13	-17.45
		1747.5	-29.98	-13	-16.98
20	QPSK	1720	-30.08	-13	-17.08
		1732.5	-29.97	-13	-16.97
		1745	-30.07	-13	-17.07
	16QAM	1720	-29.88	-13	-17.32
		1732.5	-30.27	-13	-17.01
		1745	-30.66	-13	-17.10

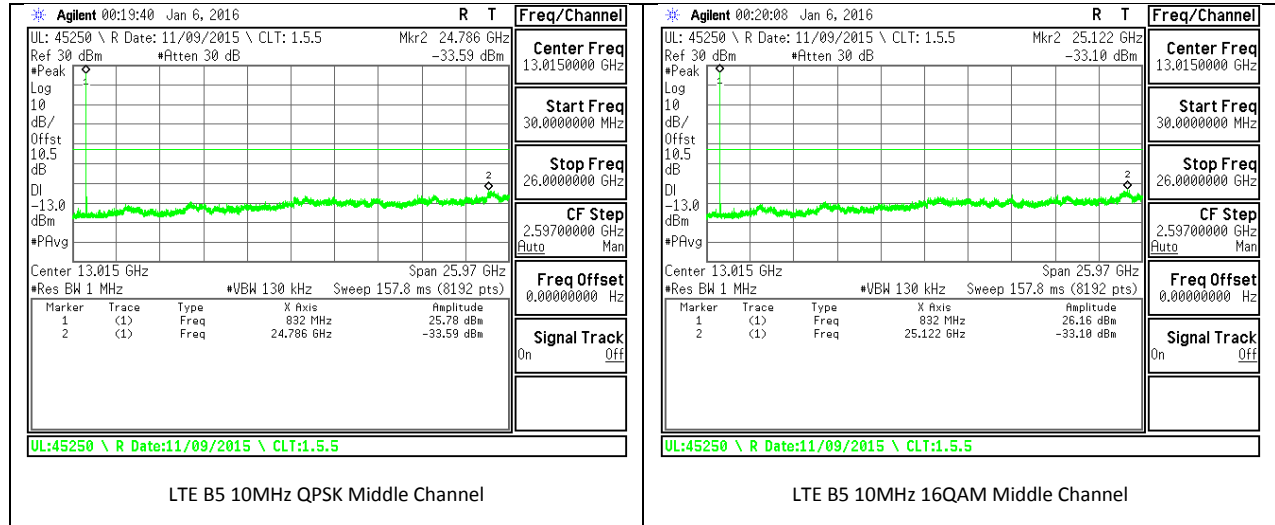




LTE Band 5

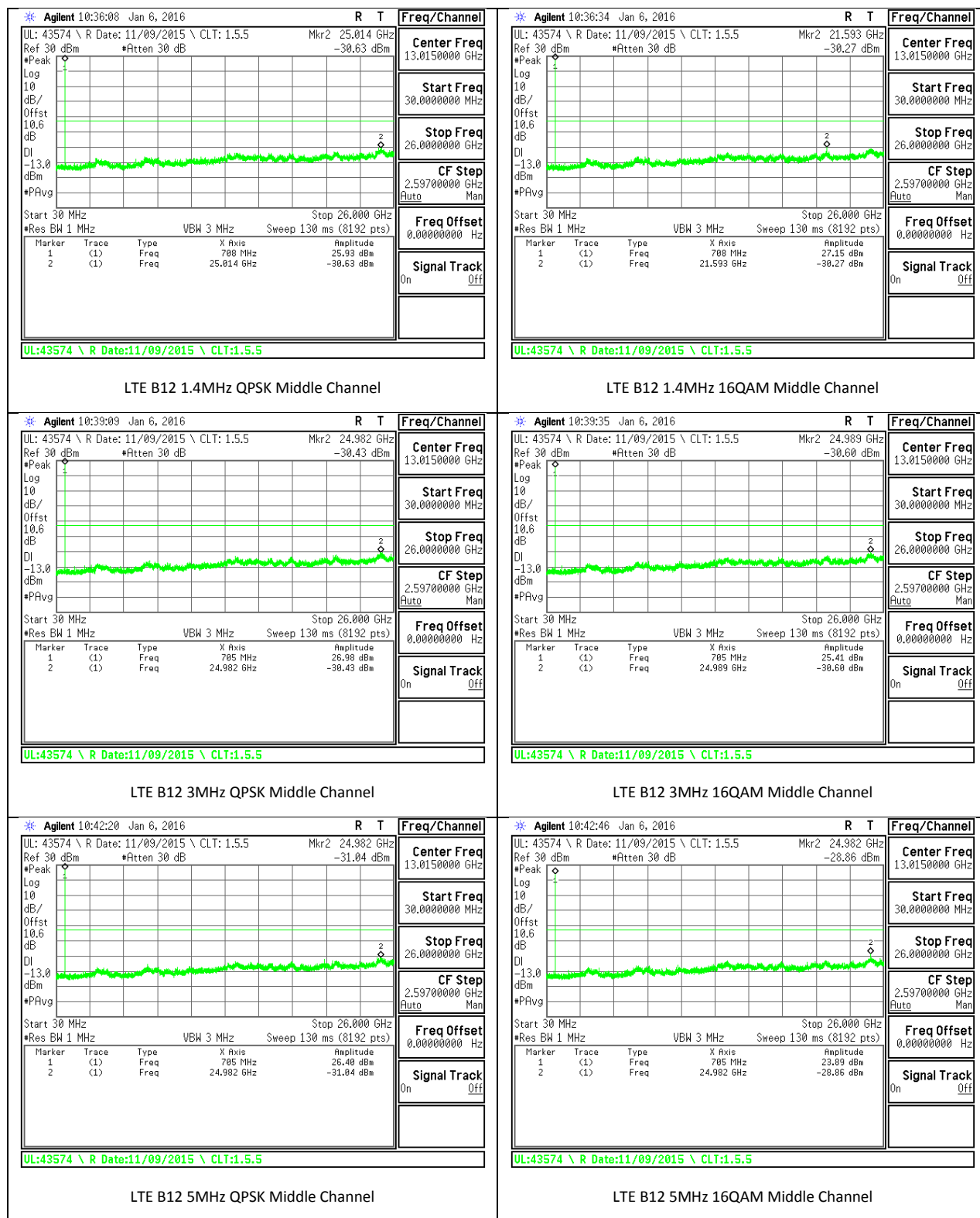
BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
1.4	QPSK	824.7	-33.723	-13	-20.72
		836.5	-33.711	-13	-20.71
		848.3	-33.52	-13	-20.52
	16QAM	824.7	-33.679	-13	-20.67
		836.5	-33.174	-13	-20.17
		848.3	-33.222	-13	-20.22
3	QPSK	825.5	-33.038	-13	-20.03
		836.5	-33.506	-13	-20.50
		847.5	-33.048	-13	-20.04
	16QAM	825.5	-33.449	-13	-20.44
		836.5	-33.561	-13	-20.56
		847.5	-33.362	-13	-20.36
5	QPSK	826.5	-33.849	-13	-20.84
		836.5	-32.974	-13	-19.97
		846.5	-33.961	-13	-20.96
	16QAM	826.5	-33.26	-13	-20.26
		836.5	-33.468	-13	-20.46
		846.5	-33.231	-13	-20.23
10	QPSK	829	-32.09	-13	-19.09
		836.5	-33.59	-13	-20.59
		844	-33.81	-13	-20.81
	16QAM	829	-32.97	-13	-19.97
		836.5	-33.10	-13	-20.10
		844	-33.63	-13	-20.63

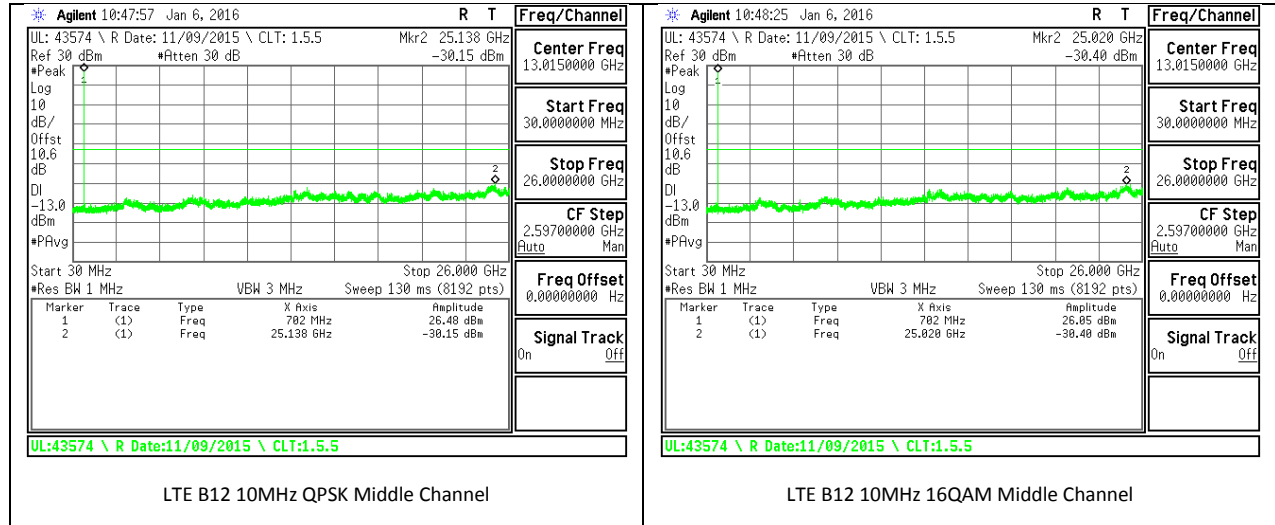




LTE Band 12

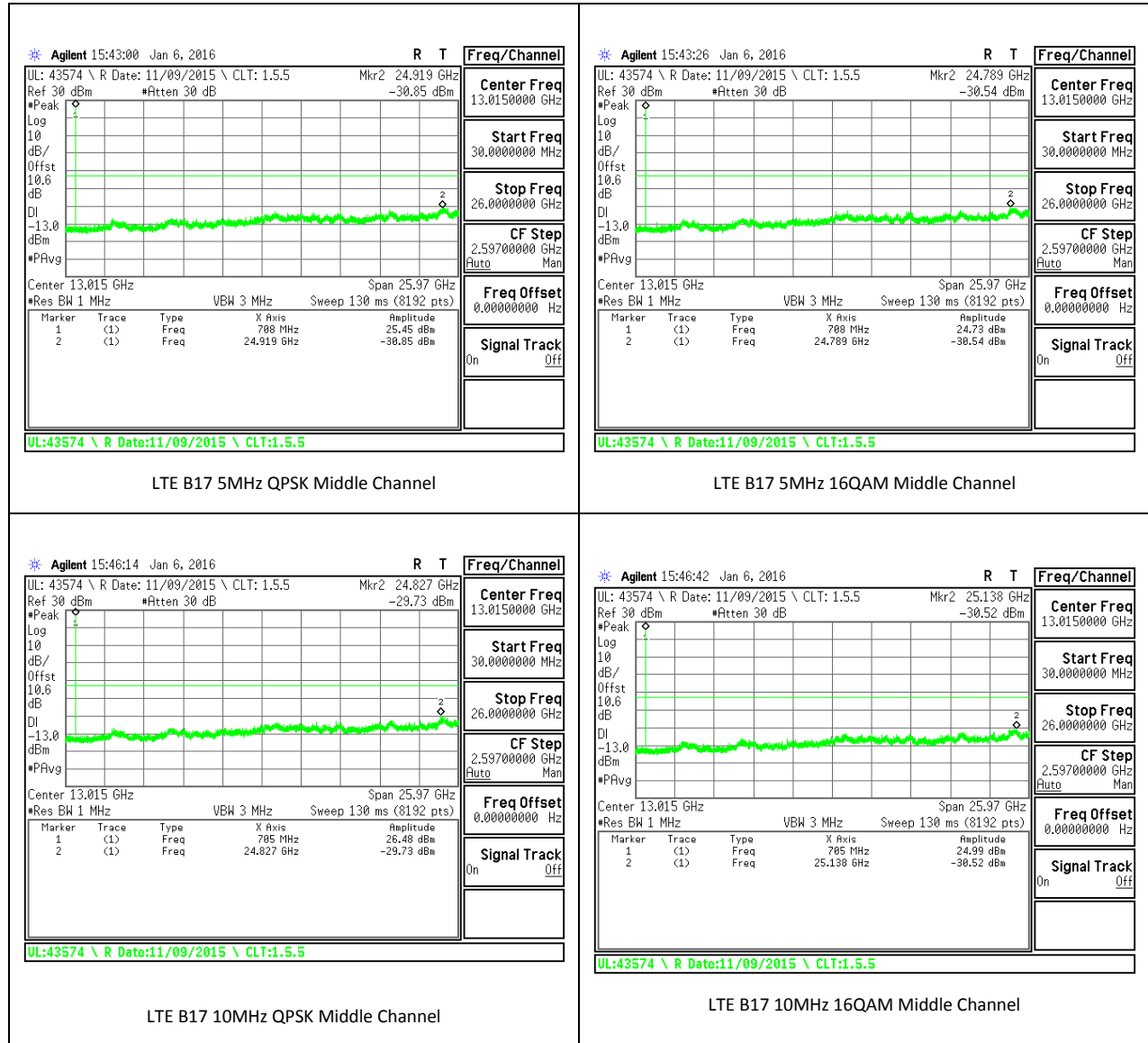
BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
1.4	QPSK	699.7	-30.558	-13	-17.55
		707.5	-30.63	-13	-17.63
		715.3	-30.606	-13	-17.60
	16QAM	699.7	-30.504	-13	-17.50
		707.5	-30.272	-13	-17.27
		715.3	-30.475	-13	-17.47
3	QPSK	700.5	-31.034	-13	-18.03
		707.5	-30.434	-13	-17.43
		714.5	-29.798	-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





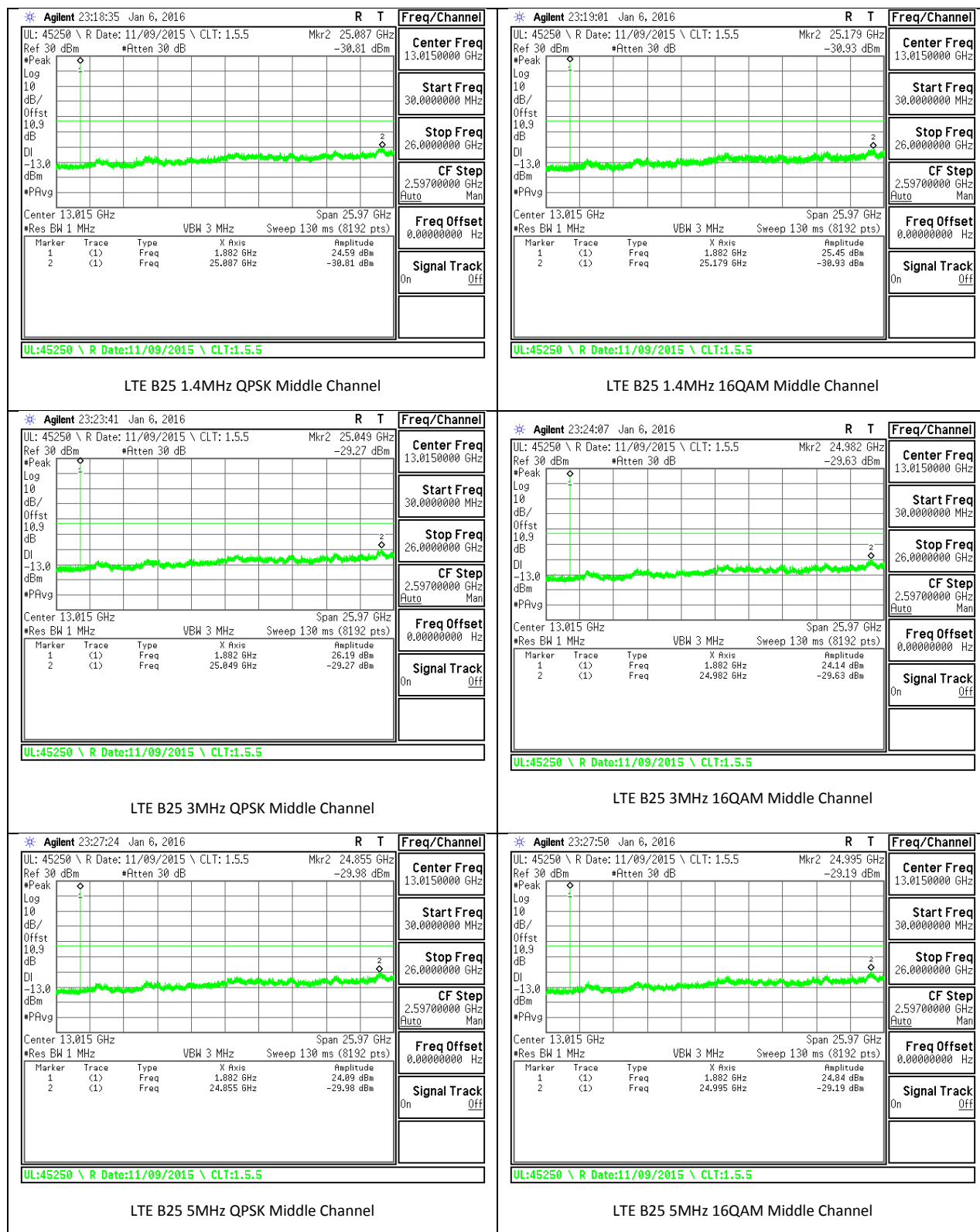
LTE Band 17

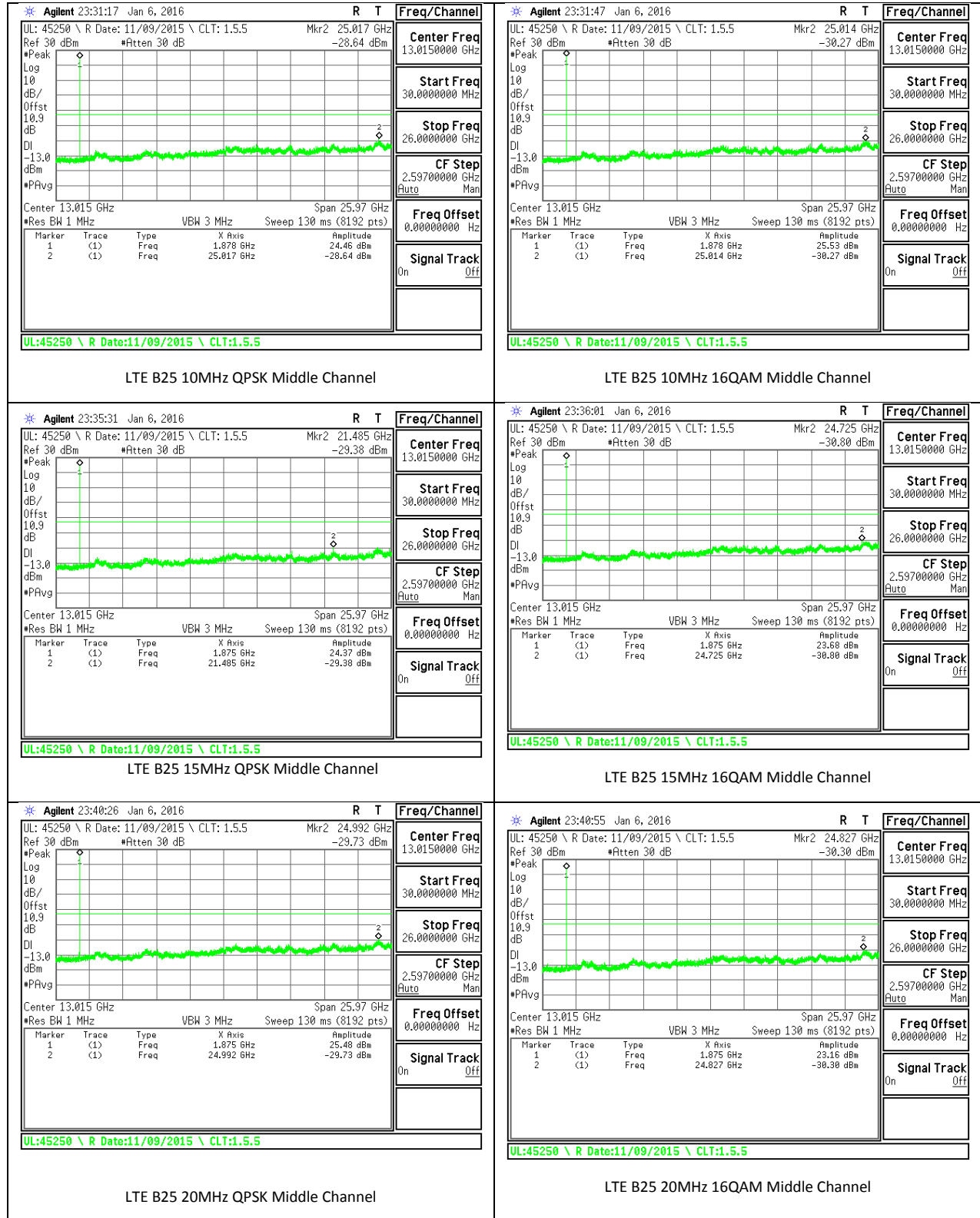
BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
5	QPSK	706.5	-29.851	-13	-16.85
		710	-30.85	-13	-17.85
		713.5	-30.604	-13	-17.60
	16QAM	706.5	-30.428	-13	-17.42
		710	-30.539	-13	-17.53
		713.5	-30.549	-13	-17.54
10	QPSK	709	-30.49	-13	-17.49
		710	-29.73	-13	-16.73
		711	-30.36	-13	-17.36
	16QAM	709	-29.64	-13	-16.64
		710	-30.52	-13	-17.52
		711	-30.58	-13	-17.58



LTE Band 25

BW(MHz)	Mode	f (MHz)	Spur (dBm)	Spec (dBm)	Delta (dB)
1.4	QPSK	1850.7	-30.716	-13	-17.71
		1882.5	-30.812	-13	-17.81
		1914.3	-30.348	-13	-17.34
	16QAM	1850.7	-30.381	-13	-17.38
		1882.5	-30.933	-13	-17.93
		1914.3	-29.658	-13	-16.65
3	QPSK	1851.5	-29.727	-13	-16.72
		1882.5	-29.27	-13	-16.27
		1913.5	-30.359	-13	-17.35
	16QAM	1851.5	-30.489	-13	-17.48
		1882.5	-29.629	-13	-16.62
		1913.5	-30.336	-13	-17.33
5	QPSK	1852.5	-30.453	-13	-17.45
		1882.5	-29.978	-13	-16.97
		1912.5	-29.662	-13	-16.66
	16QAM	1852.5	-30.065	-13	-17.06
		1882.5	-29.19	-13	-16.19
		1912.5	-29.323	-13	-16.32
10	QPSK	1855	-30.51	-13	-17.51
		1882.5	-28.64	-13	-15.64
		1910	-30.16	-13	-17.16
	16QAM	1855	-29.92	-13	-16.92
		1882.5	-30.27	-13	-17.27
		1910	-29.92	-13	-16.92
15	QPSK	1857.5	-29.91	-13	-16.91
		1882.5	-29.38	-13	-16.38
		1907.5	-29.35	-13	-16.35
	16QAM	1857.5	-30.12	-13	-17.12
		1882.5	-30.80	-13	-17.80
		1907.5	-29.78	-13	-16.78
20	QPSK	1860	-30.14	-13	-17.14
		1882.5	-29.73	-13	-16.73
		1905	-30.16	-13	-17.16
	16QAM	1860	-30.30	-13	-17.51
		1882.5	-30.30	-13	-15.64
		1905	-29.64	-13	-17.16





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

LTE Band 2

Reference Frequency: PCS Mid Channel Limit: to stay +/- 2.5 ppm =			1880 4700.000	MHz @ 20°C Hz
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measureed 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 1732.5 MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4331.250 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	50	1732.499996	0.001	2.5
3.80	40	1732.499997	0.000	2.5
3.80	30	1732.499997	0.000	2.5
3.80	20	1732.499997	0	2.5
3.80	10	1732.499999	-0.001	2.5
3.80	0	1732.500003	-0.003	2.5
3.80	-10	1732.499997	0.000	2.5
3.80	-20	1732.499993	0.002	2.5
3.80	-30	1732.499996	0.000	2.5

Reference Frequency: PCS Mid Channel 1732.5 MHz @ 20°C Limit: to stay +/- 2.5 ppm = 4331.250 Hz				
Power Supply (Vdc)	Environment Temperature (°C)	Frequency Deviation Measured with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.80	20	1732.499997	0	2.5
4.37	20	1732.499998	0.000	2.5
3.23(End of volt)	20	1732.499998	0.000	2.5

LTE Band 5

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

LTE Band 17

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

CDMA

Band	Mode	Channel	f(MHz)	ERP/EIRP	
				dBm	mW
BC0	1xRTT	1013	824.7	24.61	289.07
		384	836.52	23.82	240.99
		777	848.31	24.50	281.84
	EVDO REL. 0	1013	824.7	25.66	368.13
		384	836.52	23.76	237.68
		777	848.31	24.28	267.92
BC1	1xRTT	25	1851.25	27.63	579.43
		600	1880.0	27.48	559.76
		1175	1908.75	27.32	539.51
	EVDO REL. 0	25	1851.25	26.97	497.74
		600	1880.0	27.50	562.34
		1175	1908.75	26.99	500.03

BC0 1xRTT										BC0 EVDO Rel.0									
High Frequency Substitution Measurement UL Verification Services, Inc. Company: LG Electronics Project #: Date: 1/20/2016 Test Engineer: A. Escamilla Configuration: X-pos EUT Only Location: Chamber C Mode: RTT BC0 Fundamentals Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft N-type Cable Warehouse										High Frequency Substitution Measurement UL Verification Services, Inc. Company: LG Electronics Project #: Date: 1/15/2016 Test Engineer: A. Escamilla Configuration: X-pos EUT Only Location: Chamber C Mode: EVDO BC0 Fundamentals Test Equipment: Receiving: Hybrid T185, and Chamber C SMA Cables Substitution: Dipole T416, 6ft N-type Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
824.70	18.85	V	0.9	0.0	17.95	38.5	-20.5			824.70	19.12	V	0.9	0.0	18.22	38.5	-20.3		
824.70	25.51	H	0.9	0.0	24.61	38.5	-13.9			824.70	25.56	H	0.9	0.0	25.66	38.5	-12.8		
Mid Ch										Mid Ch									
836.52	17.62	V	0.9	0.0	16.72	38.5	-21.8			836.52	19.37	V	0.9	0.0	18.47	38.5	-20.0		
836.52	24.72	H	0.9	0.0	23.82	38.5	-14.7			836.52	24.66	H	0.9	0.0	23.76	38.5	-14.7		
High Ch										High Ch									
848.31	18.98	V	0.9	0.0	18.08	38.5	-20.4			848.31	17.91	V	0.9	0.0	17.01	38.5	-21.5		
848.31	25.40	H	0.9	0.0	24.50	38.5	-14.0			848.31	25.18	H	0.9	0.0	24.28	38.5	-14.2		

BC1 1xRTT										BC1 EVDO Rel.0									
High Frequency Substitution Measurement UL Verification Services, Inc. Company: LG Electronics Project #: Date: 1/20/2016 Test Engineer: A. Escamilla Configuration: X-pos EUT Only Location: Chamber C Mode: RTT BC1 Fundamentals Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Dipole T416, 6ft N-type Cable Warehouse										High Frequency Substitution Measurement UL Verification Services, Inc. Company: LG Electronics Project #: Date: 1/20/2016 Test Engineer: A. Escamilla Configuration: X-pos EUT Only Location: Chamber C Mode: EVDO BC1 Fundamentals Test Equipment: Receiving: Horn T119, and Chamber C SMA Cables Substitution: Horn T59, 6ft N-type Cable Warehouse									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch										Low Ch									
1851.25	17.17	V	0.9	8.6	24.87	33.0	-8.1			1851.25	17.37	V	0.9	8.6	25.07	33.0	-7.9		
1851.25	19.93	H	0.9	8.6	27.63	33.0	-5.4			1851.25	19.27	H	0.9	8.6	26.97	33.0	-6.0		
Mid Ch										Mid Ch									
1880.00	18.37	V	0.9	8.6	26.08	33.0	-6.9			1880.00	17.87	V	0.9	8.6	25.98	33.0	-7.4		
1880.00	19.77	H	0.9	8.6	27.48	33.0	-5.5			1880.00	19.79	H	0.9	8.6	27.50	33.0	-5.5		
High Ch										High Ch									
1908.75	16.45	V	0.9	8.6	24.17	33.0	-8.8			1908.75	17.65	V	0.9	8.6	25.37	33.0	-7.6		
1908.75	19.60	H	0.9	8.6	27.32	33.0	-5.7			1908.75	19.27	H	0.9	8.6	26.99	33.0	-6.0		

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

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_QPSK Band 2 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
1850.70	11.88	V	0.9	8.0	18.99	33.0	-14.0	
1850.70	17.07	H	0.9	8.0	24.18	33.0	-8.8	
Mid Ch								
1880.00	12.60	V	0.9	8.0	19.71	33.0	-13.3	
1880.00	17.93	H	0.9	8.0	25.04	33.0	-8.0	
High Ch								
1909.30	11.90	V	0.9	8.0	19.01	33.0	-14.0	
1909.30	17.50	H	0.9	8.0	24.61	33.0	-8.4	

3MHz QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_QPSK Band 2 Fundamentals, 3MHz Bandwidth

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
Low Ch								
1851.50	12.20	V	0.9	8.0	19.31	33.0	-13.7	
1851.50	17.00	H	0.9	8.0	24.11	33.0	-8.9	
Mid Ch								
1880.00	12.80	V	0.9	8.0	19.91	33.0	-13.1	
1880.00	18.06	H	0.9	8.0	25.17	33.0	-7.8	
High Ch								
1908.50	12.00	V	0.9	8.0	19.11	33.0	-13.9	
1908.50	17.60	H	0.9	8.0	24.71	33.0	-8.3	

5MHz QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_QPSK Band 2 Fundamentals, 5MHz Bandwidth

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
Low Ch								
1852.50	13.40	V	0.9	8.0	20.51	33.0	-12.5	
1852.50	17.50	H	0.9	8.0	24.61	33.0	-8.4	
Mid Ch								
1880.00	12.20	V	0.9	8.0	19.31	33.0	-13.7	
1880.00	17.80	H	0.9	8.0	24.91	33.0	-8.1	
High Ch								
1907.50	11.60	V	0.9	8.0	18.71	33.0	-14.3	
1907.50	17.00	H	0.9	8.0	24.11	33.0	-8.9	

1.4MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_16QAM Band 2 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
1850.70	11.70	V	0.9	8.0	18.81	33.0	-14.2	
1850.70	16.60	H	0.9	8.0	23.71	33.0	-9.3	
Mid Ch								
1880.00	11.90	V	0.9	8.0	19.01	33.0	-14.0	
1880.00	17.40	H	0.9	8.0	24.51	33.0	-8.5	
High Ch								
1909.30	11.60	V	0.9	8.0	18.71	33.0	-14.3	
1909.30	17.03	H	0.9	8.0	24.14	33.0	-8.9	

3MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_16QAM Band 2 Fundamentals, 3MHz Bandwidth

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
Low Ch								
1851.50	11.10	V	0.9	8.0	18.21	33.0	-14.8	
1851.50	16.40	H	0.9	8.0	23.51	33.0	-9.5	
Mid Ch								
1880.00	11.90	V	0.9	8.0	19.01	33.0	-14.0	
1880.00	17.60	H	0.9	8.0	24.71	33.0	-8.3	
High Ch								
1908.50	11.50	V	0.9	8.0	18.61	33.0	-14.4	
1908.50	17.10	H	0.9	8.0	24.21	33.0	-8.8	

5MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_16QAM Band 2 Fundamentals, 5MHz Bandwidth

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
Low Ch								
1852.50	23.10	V	0.9	8.0	30.21	33.0	-2.8	
1852.50	17.00	H	0.9	8.0	24.11	33.0	-8.9	
Mid Ch								
1880.00	12.00	V	0.9	8.0	19.11	33.0	-13.9	
1880.00	17.40	H	0.9	8.0	24.51	33.0	-8.5	
High Ch								
1907.50	11.10	V	0.9	8.0	18.21	33.0	-14.8	
1907.50	16.50	H	0.9	8.0	23.61	33.0	-9.4	

10MHz QPSK

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

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
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								
1880.00	12.40	V	0.9	8.0	19.51	33.0	-13.5	
1880.00	17.50	H	0.9	8.0	25.01	33.0	-8.0	
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	

15MHz QPSK

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

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
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	18.50	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	

20MHz QPSK

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

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
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	-8.0	
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	

10MHz 16QAM

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_16QAM Band 2 Fundamentals, 10MHz Bandwidth

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
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	-14.9	
1905.00	17.00	H	0.9	8.0	24.11	33.0	-8.9	

15MHz 16QAM

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_16QAM Band 2 Fundamentals, 15MHz Bandwidth

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
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 16QAM

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_16QAM Band 2 Fundamentals, 20MHz Bandwidth

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
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	24.97	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

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 4 Fundamentals. 1.4MHz Bandwidth

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
Low Ch								
1710.70	2.27	V	0.9	8.2	9.54	30.0	-20.5	
1710.70	15.44	H	0.9	8.2	22.71	30.0	-7.3	
Mid Ch								
1732.50	2.69	V	0.9	8.2	9.96	30.0	-20.0	
1732.50	15.80	H	0.9	8.2	23.07	30.0	-6.9	
High Ch								
1754.30	5.14	V	0.9	8.1	12.33	30.0	-17.7	
1754.30	17.67	H	0.9	8.1	24.86	30.0	-5.1	

1.4MHz 16QAM

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_16QAM Band 4 Fundamentals. 1.4MHz Bandwidth

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
Low Ch								
1710.70	1.67	V	0.9	8.2	8.94	30.0	-21.1	
1710.70	14.84	H	0.9	8.2	22.11	30.0	-7.9	
Mid Ch								
1732.50	2.09	V	0.9	8.2	9.36	30.0	-20.6	
1732.50	15.17	H	0.9	8.2	22.44	30.0	-7.6	
High Ch								
1754.30	4.94	V	0.9	8.1	12.13	30.0	-17.9	
1754.30	16.87	H	0.9	8.1	24.06	30.0	-5.9	

3MHz QPSK

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 4 Fundamentals. 3MHz Bandwidth

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
Low Ch								
1711.50	2.07	V	0.9	8.2	9.42	30.0	-20.6	
1711.50	15.34	H	0.9	8.2	22.69	30.0	-7.3	
Mid Ch								
1732.50	3.49	V	0.9	8.2	10.76	30.0	-19.2	
1732.50	17.05	H	0.9	8.2	24.32	30.0	-5.7	
High Ch								
1753.50	5.14	V	0.9	8.1	12.33	30.0	-17.7	
1753.50	17.93	H	0.9	8.1	25.12	30.0	-4.9	

3MHz 16QAM

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_16QAM Band 4 Fundamentals. 3MHz Bandwidth

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
Low Ch								
1711.50	0.37	V	0.9	8.2	7.72	30.0	-22.3	
1711.50	14.54	H	0.9	8.2	21.89	30.0	-8.1	
Mid Ch								
1732.50	2.99	V	0.9	8.2	10.26	30.0	-19.7	
1732.50	16.45	H	0.9	8.2	23.72	30.0	-6.3	
High Ch								
1753.50	4.34	V	0.9	8.1	11.53	30.0	-18.5	
1753.50	17.27	H	0.9	8.1	24.46	30.0	-5.5	

5MHz QPSK

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 4 Fundamentals. 5MHz Bandwidth

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
Low Ch								
1712.50	2.27	V	0.9	8.2	9.61	30.0	-20.4	
1712.50	15.54	H	0.9	8.2	22.88	30.0	-7.1	
Mid Ch								
1732.50	3.89	V	0.9	8.2	11.16	30.0	-18.8	
1732.50	17.35	H	0.9	8.2	24.62	30.0	-5.4	
High Ch								
1752.50	4.84	V	0.9	8.1	12.04	30.0	-18.0	
1752.50	17.77	H	0.9	8.1	24.97	30.0	-5.0	

5MHz 16QAM

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_16QAM Band 4 Fundamentals. 5MHz Bandwidth

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
Low Ch								
1712.50	1.67	V	0.9	8.2	9.01	30.0	-21.0	
1712.50	15.04	H	0.9	8.2	22.38	30.0	-7.6	
Mid Ch								
1732.50	3.29	V	0.9	8.2	10.56	30.0	-19.4	
1732.50	16.55	H	0.9	8.2	23.92	30.0	-6.1	
High Ch								
1752.50	4.64	V	0.9	8.1	11.84	30.0	-18.2	
1752.50	17.27	H	0.9	8.1	24.47	30.0	-5.5	

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: Jude Semana
Test Engineer: EUT Only
Configuration: Chamber C
Location: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth
Mode:

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
Low Ch								
1715.00	2.77	V	0.9	8.2	10.04	30.0	-20.0	
1715.00	15.64	H	0.9	8.2	22.91	30.0	-7.1	
Mid Ch								
1732.50	3.39	V	0.9	8.2	10.66	30.0	-19.3	
1732.50	16.85	H	0.9	8.2	24.12	30.0	-5.9	
High Ch								
1750.00	5.04	V	0.9	8.1	12.23	30.0	-17.8	
1750.00	17.92	H	0.9	8.1	25.11	30.0	-4.9	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: Jude Semana
Test Engineer: EUT Only
Configuration: Chamber C
Location: LTE_16QAM Band 4 Fundamentals, 10MHz Bandwidth
Mode:

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
Low Ch								
1715.00	1.57	V	0.9	8.2	8.84	30.0	-21.2	
1715.00	14.94	H	0.9	8.2	22.21	30.0	-7.8	
Mid Ch								
1732.50	2.59	V	0.9	8.2	9.86	30.0	-20.1	
1732.50	16.15	H	0.9	8.2	23.42	30.0	-6.6	
High Ch								
1750.00	4.44	V	0.9	8.1	11.63	30.0	-18.4	
1750.00	17.37	H	0.9	8.1	24.56	30.0	-5.4	

15MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: Jude Semana
Test Engineer: EUT only
Configuration: Chamber C
Location: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth
Mode:

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
Low Ch								
1717.50	3.07	V	0.9	8.2	10.42	30.0	-19.6	
1717.50	15.44	H	0.9	8.2	22.79	30.0	-7.2	
Mid Ch								
1732.50	4.29	V	0.9	8.2	11.56	30.0	-18.4	
1732.50	16.65	H	0.9	8.2	23.92	30.0	-6.1	
High Ch								
1747.50	4.24	V	0.9	8.1	11.43	30.0	-18.6	
1747.50	17.15	H	0.9	8.1	24.34	30.0	-5.7	

15MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: Jude Semana
Test Engineer: EUT only
Configuration: Chamber C
Location: LTE_16QAM Band 4 Fundamentals, 15MHz Bandwidth
Mode:

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
Low Ch								
1717.50	2.47	V	0.9	8.2	9.82	30.0	-20.2	
1717.50	15.74	H	0.9	8.2	23.09	30.0	-6.9	
Mid Ch								
1732.50	2.69	V	0.9	8.2	9.96	30.0	-20.0	
1732.50	15.85	H	0.9	8.2	23.12	30.0	-6.9	
High Ch								
1747.50	3.54	V	0.9	8.1	10.73	30.0	-19.3	
1747.50	16.57	H	0.9	8.1	23.76	30.0	-6.2	

20MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: Jude Semana
Test Engineer: EUT only
Configuration: Chamber C
Location: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth
Mode:

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
Low Ch								
1720.00	3.07	V	0.9	8.2	10.41	30.0	-19.6	
1720.00	15.96	H	0.9	8.2	23.30	30.0	-6.7	
Mid Ch								
1732.50	4.49	V	0.9	8.2	11.76	30.0	-18.2	
1732.50	17.55	H	0.9	8.2	24.82	30.0	-5.2	
High Ch								
1745.00	5.24	V	0.9	8.1	12.44	30.0	-17.6	
1745.00	17.67	H	0.9	8.1	24.87	30.0	-5.1	

20MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: Jude Semana
Test Engineer: EUT only
Configuration: Chamber C
Location: LTE_16QAM Band 4 Fundamentals, 20MHz Bandwidth
Mode:

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
Low Ch								
1720.00	1.17	V	0.9	8.2	9.51	30.0	-21.5	
1720.00	15.34	H	0.9	8.2	22.68	30.0	-7.3	
Mid Ch								
1732.50	3.49	V	0.9	8.2	10.76	30.0	-19.2	
1732.50	16.85	H	0.9	8.2	24.12	30.0	-5.9	
High Ch								
1745.00	4.24	V	0.9	8.1	11.44	30.0	-18.6	
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)	EIRP	
				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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 5 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
824.70	15.87	V	0.9	0.0	14.97	38.5	-23.5	
824.70	23.36	H	0.9	0.0	22.46	38.5	-16.0	
Mid Ch								
836.50	17.40	V	0.9	0.0	16.50	38.5	-22.0	
836.50	22.83	H	0.9	0.0	21.93	38.5	-16.5	
High Ch								
848.30	15.81	V	0.9	0.0	14.91	38.5	-23.6	
848.30	23.02	H	0.9	0.0	22.12	38.5	-16.4	

1.4MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 5 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
824.70	15.02	V	0.9	0.0	14.12	38.5	-24.4	
824.70	22.70	H	0.9	0.0	21.80	38.5	-16.7	
Mid Ch								
836.50	17.04	V	0.9	0.0	16.14	38.5	-22.4	
836.50	22.44	H	0.9	0.0	21.54	38.5	-17.0	
High Ch								
848.30	14.59	V	0.9	0.0	13.69	38.5	-24.8	
848.30	22.01	H	0.9	0.0	21.11	38.5	-17.4	

3MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 5 Fundamentals, 3MHz Bandwidth

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
Low Ch								
825.50	15.40	V	0.9	0.0	14.50	38.5	-24.0	
825.50	23.43	H	0.9	0.0	22.53	38.5	-16.0	
Mid Ch								
836.50	17.11	V	0.9	0.0	16.21	38.5	-22.3	
836.50	22.53	H	0.9	0.0	22.03	38.5	-16.5	
High Ch								
847.50	16.34	V	0.9	0.0	15.44	38.5	-23.1	
847.50	22.99	H	0.9	0.0	22.09	38.5	-16.4	

3MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 5 Fundamentals, 3MHz Bandwidth

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
Low Ch								
825.50	14.72	V	0.9	0.0	13.82	38.5	-24.7	
825.50	22.84	H	0.9	0.0	21.94	38.5	-16.6	
Mid Ch								
836.50	16.32	V	0.9	0.0	15.42	38.5	-23.1	
836.50	22.08	H	0.9	0.0	21.18	38.5	-17.3	
High Ch								
847.50	15.17	V	0.9	0.0	14.27	38.5	-24.2	
847.50	22.14	H	0.9	0.0	21.24	38.5	-17.3	

5MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 5 Fundamentals, 5MHz Bandwidth

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
Low Ch								
826.50	15.43	V	0.9	0.0	14.53	38.5	-24.0	
826.50	23.08	H	0.9	0.0	22.18	38.5	-16.3	
Mid Ch								
836.50	16.92	V	0.9	0.0	16.02	38.5	-22.5	
836.50	23.26	H	0.9	0.0	22.36	38.5	-16.1	
High Ch								
846.50	15.92	V	0.9	0.0	15.02	38.5	-23.5	
846.50	22.88	H	0.9	0.0	21.98	38.5	-16.5	

5MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 5 Fundamentals, 5MHz Bandwidth

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
Low Ch								
826.50	13.97	V	0.9	0.0	13.07	38.5	-25.4	
826.50	21.83	H	0.9	0.0	20.93	38.5	-17.6	
Mid Ch								
836.50	15.96	V	0.9	0.0	15.06	38.5	-23.4	
836.50	22.26	H	0.9	0.0	21.36	38.5	-17.1	
High Ch								
846.50	15.28	V	0.9	0.0	14.38	38.5	-24.1	
846.50	22.12	H	0.9	0.0	21.22	38.5	-17.3	

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/8/2016

O. Stoelling

X-pas EUT Only

Chamber C

LTE_QPSK Band 5 Fundamentals, 10MHz Bandwidth

Test Equipment:

Receiving: Hybrid T185, and Chamber C SMA Cables

Substitution: Dipole T416, 8ft SMA Cable Warehouse

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
Low Ch								
829.00	15.79	V	0.9	0.0	14.89	38.5	-23.6	
829.00	23.22	H	0.9	0.0	22.32	38.5	-16.2	
Mid Ch								
836.50	16.82	V	0.9	0.0	16.02	38.5	-22.5	
836.50	23.92	H	0.9	0.0	23.02	38.5	-15.5	
High Ch								
844.00	16.67	V	0.9	0.0	15.77	38.5	-22.7	
844.00	22.96	H	0.9	0.0	22.06	38.5	-16.4	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/8/2016

O. Stoelling

X-pas EUT Only

Chamber C

LTE_16QAM Band 5 Fundamentals, 10MHz Bandwidth

Test Equipment:

Receiving: Hybrid T185, and Chamber C SMA Cables

Substitution: Dipole T416, 8ft SMA Cable Warehouse

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
Low Ch								
829.00	14.77	V	0.9	0.0	13.87	38.5	-24.6	
829.00	22.19	H	0.9	0.0	21.89	38.5	-16.6	
Mid Ch								
836.50	15.91	V	0.9	0.0	15.01	38.5	-23.5	
836.50	23.26	H	0.9	0.0	22.36	38.5	-16.1	
High Ch								
844.00	15.79	V	0.9	0.0	14.89	38.5	-23.6	
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	18.93	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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 12 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
699.70	11.58	V	0.9	0.0	10.68	34.8	-24.1	
699.70	19.62	H	0.9	0.0	18.72	34.8	-16.1	
Mid Ch								
707.50	12.01	V	0.9	0.0	11.11	34.8	-23.7	
707.50	19.46	H	0.9	0.0	18.56	34.8	-16.2	
High Ch								
715.30	12.17	V	0.9	0.0	11.27	34.8	-23.5	
715.30	20.58	H	0.9	0.0	19.68	34.8	-15.1	

1.4MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
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

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
699.70	10.90	V	0.9	0.0	10.00	34.8	-24.8	
699.70	18.76	H	0.9	0.0	17.86	34.8	-16.9	
Mid Ch								
707.50	11.16	V	0.9	0.0	10.26	34.8	-24.5	
707.50	18.68	H	0.9	0.0	17.78	34.8	-17.0	
High Ch								
715.30	11.13	V	0.9	0.0	10.23	34.8	-24.6	
715.30	19.92	H	0.9	0.0	19.02	34.8	-15.8	

3MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 12 Fundamentals, 3MHz Bandwidth

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
Low Ch								
700.50	11.09	V	0.9	0.0	10.19	34.8	-24.6	
700.50	19.99	H	0.9	0.0	19.09	34.8	-15.7	
Mid Ch								
707.50	12.57	V	0.9	0.0	11.67	34.8	-23.1	
707.50	20.72	H	0.9	0.0	19.82	34.8	-15.0	
High Ch								
714.50	12.25	V	0.9	0.0	11.35	34.8	-23.5	
714.50	20.72	H	0.9	0.0	19.82	34.8	-15.0	

3MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
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

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
700.50	10.53	V	0.9	0.0	9.63	34.8	-25.2	
700.50	19.08	H	0.9	0.0	18.18	34.8	-16.6	
Mid Ch								
707.50	11.92	V	0.9	0.0	11.02	34.8	-23.8	
707.50	19.89	H	0.9	0.0	18.99	34.8	-15.8	
High Ch								
714.50	11.35	V	0.9	0.0	10.45	34.8	-24.4	
714.50	19.83	H	0.9	0.0	18.93	34.8	-15.9	

5MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 12 Fundamentals, 5MHz Bandwidth

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
Low Ch								
701.50	12.00	V	0.9	0.0	11.10	34.8	-23.7	
701.50	19.83	H	0.9	0.0	18.93	34.8	-15.9	
Mid Ch								
707.50	11.76	V	0.9	0.0	10.86	34.8	-23.9	
707.50	20.60	H	0.9	0.0	19.70	34.8	-15.1	
High Ch								
713.50	12.08	V	0.9	0.0	11.18	34.8	-23.6	
713.50	20.62	H	0.9	0.0	19.72	34.8	-15.1	

5MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #:
Date: 1/8/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT Only
Location: Chamber C
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

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
701.50	10.51	V	0.9	0.0	9.61	34.8	-25.2	
701.50	18.25	H	0.9	0.0	17.35	34.8	-17.5	
Mid Ch								
707.50	10.54	V	0.9	0.0	9.74	34.8	-25.1	
707.50	19.26	H	0.9	0.0	18.36	34.8	-16.4	
High Ch								
713.50	11.17	V	0.9	0.0	10.27	34.8	-24.5	
713.50	20.00	H	0.9	0.0	19.10	34.8	-15.7	

10MHz QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/8/2016

O. Stoelling

X-pas EUT Only

Chamber C

LTE_QPSK Band 12 Fundamentals, 10MHz Bandwidth

Test Equipment:

Receiving: Hybrid T185, and Chamber C SMA Cables

Substitution: Dipole T416, 8ft SMA Cable Warehouse

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
Low Ch								
704.00	11.86	V	0.9	0.0	10.96	34.8	-23.8	
704.00	19.86	H	0.9	0.0	18.96	34.8	-15.8	
Mid Ch								
707.50	12.27	V	0.9	0.0	11.37	34.8	-23.4	
707.50	20.79	H	0.9	0.0	19.89	34.8	-14.9	
High Ch								
711.00	12.10	V	0.9	0.0	11.20	34.8	-23.6	
711.00	21.07	H	0.9	0.0	20.17	34.8	-14.6	

10MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/8/2016

O. Stoelling

X-pas EUT Only

Chamber C

LTE_16QAM Band 12 Fundamentals, 10MHz Bandwidth

Test Equipment:

Receiving: Hybrid T185, and Chamber C SMA Cables

Substitution: Dipole T416, 8ft SMA Cable Warehouse

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
Low Ch								
704.00	11.13	V	0.9	0.0	10.23	34.8	-24.6	
704.00	19.09	H	0.9	0.0	18.19	34.8	-16.6	
Mid Ch								
707.50	11.62	V	0.9	0.0	10.72	34.8	-24.1	
707.50	19.79	H	0.9	0.0	18.89	34.8	-15.9	
High Ch								
711.00	11.48	V	0.9	0.0	10.58	34.8	-24.2	
711.00	20.04	H	0.9	0.0	19.14	34.8	-15.7	

LTE Band 17

BW (MHz)	Mode	RB/RB Size	f(MHz)	ERP	
				dBm	mW
5	QPSK	1/0	706.5	19.48	88.72
		1/0	710	19.58	90.78
		1/0	713.5	19.87	97.05
	16QAM	1/0	706.5	18.24	66.68
		1/0	710	18.68	73.79
		1/0	713.5	18.79	75.68
10	QPSK	1/0	709	19.55	90.16
		1/0	710	19.72	93.76
		1/0	711	19.76	94.62
	16QAM	1/0	709	18.77	75.34
		1/0	710	18.88	77.27
		1/0	711	18.89	77.45

5MHz QPSK

High Frequency Substitution Measurement UL Verification Services, Inc.															
Company:		LG													
Project #:															
Date:		1/22/2016													
Test Engineer:		Angel Escamilla													
Configuration:		EUT Only (X-Position)													
Location:		Chamber C													
Mode:		LTE_QPSK Band 17 Fundamentals, 5MHz Bandwidth													
Test Equipment:															
Receiving: Hybrid T185, and Chamber C SMA Cables															
Substitution: Dipole T416, 4ft N-type Cable (SN # 506392) Warehouse															
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes							
Low Ch															
706.50	10.95	V	0.9	0.0	10.05	34.8	-24.7								
706.50	20.38	H	0.9	0.0	19.48	34.8	-15.3								
Mid Ch															
710.00	11.35	V	0.9	0.0	10.45	34.8	-24.3								
710.00	20.48	H	0.9	0.0	19.58	34.8	-15.2								
High Ch															
713.50	11.13	V	0.9	0.0	10.23	34.8	-24.5								
713.50	20.77	H	0.9	0.0	19.87	34.8	-14.9								

10MHz QPSK

High Frequency Substitution Measurement UL Verification Services, Inc.															
Company:		LG													
Project #:															
Date:		1/22/2016													
Test Engineer:		Angel Escamilla													
Configuration:		EUT Only (X-Position)													
Location:		Chamber C													
Mode:		LTE_QPSK Band 17 Fundamentals, 10MHz Bandwidth													
Test Equipment:															
Receiving: Hybrid T185, and Chamber C SMA Cables															
Substitution: Dipole T416, 4ft N-type Cable (SN # 506392) Warehouse															
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes							
Low Ch															
709.00	12.15	V	0.9	0.0	11.25	34.8	-23.5								
709.00	20.45	H	0.9	0.0	19.55	34.8	-15.2								
Mid Ch															
710.00	12.41	V	0.9	0.0	11.51	34.8	-23.3								
710.00	20.62	H	0.9	0.0	19.72	34.8	-15.1								
High Ch															
711.00	12.20	V	0.9	0.0	11.30	34.8	-23.5								
711.00	20.66	H	0.9	0.0	19.76	34.8	-15.0								

5MHz 16QAM

High Frequency Substitution Measurement UL Verification Services, Inc.															
Company:		LG													
Project #:															
Date:		1/22/2016													
Test Engineer:		Angel Escamilla													
Configuration:		EUT Only (X-Position)													
Location:		Chamber C													
Mode:		LTE_16QAM Band 17 Fundamentals, 5MHz Bandwidth													
Test Equipment:															
Receiving: Hybrid T185, and Chamber C SMA Cables															
Substitution: Dipole T416, 4ft N-type Cable (SN # 506392) Warehouse															
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes							
Low Ch															
706.50	10.11	V	0.9	0.0	9.21	34.8	-25.6								
706.50	19.14	H	0.9	0.0	18.24	34.8	-16.5								
Mid Ch															
710.00	10.45	V	0.9	0.0	9.55	34.8	-25.2								
710.00	19.58	H	0.9	0.0	18.68	34.8	-16.1								
High Ch															
713.50	10.19	V	0.9	0.0	9.29	34.8	-25.5								
713.50	19.69	H	0.9	0.0	18.79	34.8	-16.0								

10MHz 16QAM

High Frequency Substitution Measurement UL Verification Services, Inc.															
Company:		LG													
Project #:															
Date:		1/22/2016													
Test Engineer:		Angel Escamilla													
Configuration:		EUT Only (X-Position)													
Location:		Chamber C													
Mode:		LTE_16QAM Band 17 Fundamentals, 10MHz Bandwidth													
Test Equipment:															
Receiving: Hybrid T185, and Chamber C SMA Cables															
Substitution: Dipole T416, 4ft N-type Cable (SN # 506392) Warehouse															
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes							
Low Ch															
709.00	11.25	V	0.9	0.0	10.35	34.8	-24.4								
709.00	19.67	H	0.9	0.0	18.77	34.8	-16.0								
Mid Ch															
710.00	11.66	V	0.9	0.0	10.76	34.8	-24.0								
710.00	19.78	H	0.9	0.0	18.88	34.8	-15.9								
High Ch															
711.00	11.37	V	0.9	0.0	10.47	34.8	-24.3								
711.00	19.79	H	0.9	0.0	18.89	34.8	-15.9								

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG
Project #:
Date: 1/22/2016
Test Engineer: Angel Escamilla
Configuration: EUT Only (X-Position)
Location: Chamber C
Mode: LTE_QPSK Band 17 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Hybrid T185, and Chamber C SMA Cables
Substitution: Dipole T416, 4ft N-type Cable (SN # 506392) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
709.00	12.15	V	0.9	0.0	11.25	34.8	-23.5	
709.00	20.45	H	0.9	0.0	19.55	34.8	-15.2	
Mid Ch								
710.00	12.41	V	0.9	0.0	11.51	34.8	-23.3	
710.00	20.62	H	0.9	0.0	19.72	34.8	-15.1	
High Ch								
711.00	12.20	V	0.9	0.0	11.30	34.8	-23.5	
711.00	20.66	H	0.9	0.0	19.76	34.8	-15.0	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG
Project #:
Date: 1/22/2016
Test Engineer: Angel Escamilla
Configuration: EUT Only (X-Position)
Location: Chamber C
Mode: LTE_16QAM Band 17 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Hybrid T185, and Chamber C SMA Cables
Substitution: Dipole T416, 4ft N-type Cable (SN # 506392) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
709.00	11.25	V	0.9	0.0	10.35	34.8	-24.4	
709.00	19.67	H	0.9	0.0	18.77	34.8	-16.0	
Mid Ch								
710.00	11.66	V	0.9	0.0	10.76	34.8	-24.0	
710.00	19.78	H	0.9	0.0	18.88	34.8	-15.9	
High Ch								
711.00	11.37	V	0.9	0.0	10.47	34.8	-24.3	
711.00	19.79	H	0.9	0.0	18.89	34.8	-15.9	

LTE Band 25

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
1.4	QPSK	1/0	1850.7	24.18	261.82
		1/0	1882.5	25.04	319.15
		1/0	1914.3	24.61	289.07
	16QAM	1/0	1850.7	23.71	234.96
		1/0	1882.5	24.51	282.49
		1/0	1914.3	24.14	326.59
3	QPSK	1/0	1851.5	24.11	257.63
		1/0	1882.5	25.17	328.85
		1/0	1913.5	24.71	295.80
	16QAM	1/0	1851.5	23.51	224.39
		1/0	1882.5	24.71	295.80
		1/0	1913.5	24.21	263.63
5	QPSK	1/0	1852.5	24.61	289.07
		1/0	1882.5	24.91	309.74
		1/0	1912.5	24.11	257.63
	16QAM	1/0	1852.5	24.11	257.63
		1/0	1882.5	24.51	282.49
		1/0	1912.5	23.61	229.61
10	QPSK	1/0	1855	24.31	269.77
		1/0	1882.5	25.01	316.96
		1/0	1910	24.51	282.49
	16QAM	1/0	1855	23.81	240.44
		1/0	1882.5	24.51	282.49
		1/0	1910	24.11	257.63
15	QPSK	1/0	1857.5	24.61	289.07
		1/0	1882.5	25.41	347.54
		1/0	1907.5	24.81	302.69
	16QAM	1/0	1857.5	24.01	251.77
		1/0	1882.5	24.81	302.69
		1/0	1907.5	24.31	269.77
20	QPSK	1/0	1860	25.01	316.96
		1/0	1882.5	26.19	415.91
		1/0	1905	25.11	324.34
	16QAM	1/0	1860	24.41	276.06
		1/0	1882.5	25.71	372.39
		1/0	1905	24.61	289.07

1.4MHz QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_QPSK Band 25 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
1850.70	11.88	V	0.9	8.0	18.99	33.0	-14.0	
1850.70	17.07	H	0.9	8.0	24.18	33.0	-8.8	
Mid Ch								
1882.50	12.60	V	0.9	8.0	19.71	33.0	-13.3	
1882.50	17.93	H	0.9	8.0	25.04	33.0	-8.0	
High Ch								
1914.30	11.90	V	0.9	8.0	19.01	33.0	-14.0	
1914.30	17.50	H	0.9	8.0	24.61	33.0	-8.4	

1.4MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_16QAM Band 25 Fundamentals, 1.4MHz Bandwidth

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
Low Ch								
1850.70	11.70	V	0.9	8.0	18.81	33.0	-14.2	
1850.70	16.60	H	0.9	8.0	23.71	33.0	-9.3	
Mid Ch								
1882.50	11.90	V	0.9	8.0	19.01	33.0	-14.0	
1882.50	17.40	H	0.9	8.0	24.51	33.0	-8.5	
High Ch								
1914.30	11.60	V	0.9	8.0	18.71	33.0	-14.3	
1914.30	17.03	H	0.9	8.0	24.14	33.0	-8.9	

3MHz QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_QPSK Band 25 Fundamentals, 3MHz Bandwidth

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
Low Ch								
1851.50	12.20	V	0.9	8.0	19.31	33.0	-13.7	
1851.50	17.00	H	0.9	8.0	24.11	33.0	-8.9	
Mid Ch								
1882.50	12.80	V	0.9	8.0	19.51	33.0	-13.1	
1882.50	18.06	H	0.9	8.0	25.17	33.0	-7.8	
High Ch								
1913.50	12.00	V	0.9	8.0	19.11	33.0	-13.9	
1913.50	17.60	H	0.9	8.0	24.71	33.0	-8.3	

3MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_16QAM Band 25 Fundamentals, 3MHz Bandwidth

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
Low Ch								
1851.50	11.10	V	0.9	8.0	18.21	33.0	-14.8	
1851.50	16.40	H	0.9	8.0	23.51	33.0	-9.5	
Mid Ch								
1882.50	11.50	V	0.9	8.0	19.01	33.0	-14.0	
1882.50	17.60	H	0.9	8.0	24.71	33.0	-8.3	
High Ch								
1913.50	11.50	V	0.9	8.0	18.61	33.0	-14.4	
1913.50	17.10	H	0.9	8.0	24.21	33.0	-8.8	

5MHz QPSK

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_QPSK Band 25 Fundamentals, 5MHz Bandwidth

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
Low Ch								
1852.50	13.40	V	0.9	8.0	20.51	33.0	-12.5	
1852.50	17.50	H	0.9	8.0	24.61	33.0	-8.4	
Mid Ch								
1882.50	12.20	V	0.9	8.0	19.31	33.0	-13.7	
1882.50	17.80	H	0.9	8.0	24.91	33.0	-8.1	
High Ch								
1912.50	11.60	V	0.9	8.0	18.71	33.0	-14.3	
1912.50	17.00	H	0.9	8.0	24.11	33.0	-8.9	

5MHz 16QAM

High Frequency Substitution Measurement

UL Verification Services, Inc.

Company: LG Electronics

Project #: 1/11/2016

Date: 1/11/2016

Test Engineer: Jude Semana

Configuration: EUT Only

Location: Chamber C

Mode: LTE_16QAM Band 25 Fundamentals, 5MHz Bandwidth

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
Low Ch								
1852.50	23.10	V	0.9	8.0	30.21	33.0	-2.8	
1852.50	17.00	H	0.9	8.0	24.11	33.0	-8.9	
Mid Ch								
1882.50	12.00	V	0.9	8.0	19.11	33.0	-13.9	
1882.50	17.40	H	0.9	8.0	24.51	33.0	-8.5	
High Ch								
1912.50	11.10	V	0.9	8.0	18.21	33.0	-14.8	
1912.50	16.50	H	0.9	8.0	23.61	33.0	-9.4	

10MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: 1/11/2016
Test Engineer: Jude Semana
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 25 Fundamentals, 10MHz Bandwidth

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
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								
1882.50	12.40	V	0.9	8.0	19.51	33.0	-13.5	
1882.50	17.90	H	0.9	8.0	25.01	33.0	-8.0	
High Ch								
1910.00	11.80	V	0.9	8.0	18.91	33.0	-14.1	
1910.00	17.40	H	0.9	8.0	24.51	33.0	-8.5	

10MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: 1/11/2016
Test Engineer: Jude Semana
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 25 Fundamentals, 10MHz Bandwidth

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
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								
1882.50	11.80	V	0.9	8.0	18.91	33.0	-14.1	
1882.50	17.40	H	0.9	8.0	24.51	33.0	-8.5	
High Ch								
1910.00	11.00	V	0.9	8.0	18.11	33.0	-14.9	
1910.00	17.00	H	0.9	8.0	24.11	33.0	-8.9	

15MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: 1/11/2016
Test Engineer: Jude Semana
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 25 Fundamentals, 15MHz Bandwidth

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
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								
1882.50	12.60	V	0.9	8.0	19.11	33.0	-13.9	
1882.50	18.30	H	0.9	8.0	25.41	33.0	-7.6	
High Ch								
1907.50	12.50	V	0.9	8.0	19.61	33.0	-13.4	
1907.50	17.70	H	0.9	8.0	24.81	33.0	-8.2	

15MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: 1/11/2016
Test Engineer: Jude Semana
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 25 Fundamentals, 15MHz Bandwidth

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
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								
1882.50	11.60	V	0.9	8.0	18.71	33.0	-14.3	
1882.50	17.70	H	0.9	8.0	24.81	33.0	-8.2	
High Ch								
1907.50	11.70	V	0.9	8.0	18.81	33.0	-14.2	
1907.50	17.20	H	0.9	8.0	24.31	33.0	-8.7	

20MHz QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: 1/11/2016
Test Engineer: Jude Semana
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 25 Fundamentals, 20MHz Bandwidth

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
Low Ch								
1860.00	12.70	V	0.9	8.0	19.81	33.0	-13.2	
1860.00	17.50	H	0.9	8.0	25.01	33.0	-8.0	
Mid Ch								
1882.50	12.80	V	0.9	8.0	19.91	33.0	-13.1	
1882.50	19.00	H	0.9	8.0	26.19	33.0	-6.8	
High Ch								
1905.00	12.70	V	0.9	8.0	19.81	33.0	-13.2	
1905.00	18.00	H	0.9	8.0	25.11	33.0	-7.9	

20MHz 16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG Electronics
Project #: 1/11/2016
Date: 1/11/2016
Test Engineer: Jude Semana
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 25 Fundamentals, 20MHz Bandwidth

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
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								
1882.50	12.10	V	0.9	8.0	19.21	33.0	-13.8	
1882.50	18.60	H	0.9	8.0	25.71	33.0	-7.3	
High Ch								
1905.00	12.00	V	0.9	8.0	19.11	33.0	-13.9	
1905.00	17.50	H	0.9	8.0	24.61	33.0	-8.4	

14.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

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

LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

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

CDMA

BC0 1xRTT										BC0 EVDO Rel.0									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics Project #: 1/19/2016 Date: O. Stoelting Test Engineer: X-pos EUT Only Configuration: Chamber A Location: RTT BC0 Harmonics Mode:										Company: LG Electronics Project #: 1/26/2016 Date: RZ Test Engineer: X-pos EUT, AC Charger, HS Configuration: Chamber C Location: EVDO BC0 Harmonics Mode:									
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, 824.7										Low Ch, 824.7									
1649.40	0.0	V	3.0	39.3	1.0	-38.3	-13.0	-25.3		1649.40	-16.7	V	3.0	36.4	1.0	-52.1	-13.0	-39.1	
2474.10	0.0	V	3.0	38.6	1.0	-37.6	-13.0	-24.6		2474.10	-24.1	V	3.0	35.0	1.0	-58.1	-13.0	-45.1	
3298.80	0.0	V	3.0	38.1	1.0	-37.1	-13.0	-24.1		3298.80	-22.7	V	3.0	34.3	1.0	-56.0	-13.0	-43.0	
1649.40	0.0	H	3.0	39.3	1.0	-38.3	-13.0	-25.3		1649.40	-14.0	H	3.0	36.4	1.0	-49.4	-13.0	-36.4	
2474.10	0.0	H	3.0	38.6	1.0	-37.6	-13.0	-24.6		2474.10	-22.7	H	3.0	35.0	1.0	-56.7	-13.0	-43.7	
3298.80	0.0	H	3.0	38.1	1.0	-37.1	-13.0	-24.1		3298.80	-22.3	H	3.0	34.3	1.0	-55.6	-13.0	-42.6	
Mid Ch, 836.52										Mid Ch, 836.52									
1673.04	0.0	V	3.0	39.2	1.0	-38.2	-13.0	-25.2		1673.04	-14.5	V	3.0	36.3	1.0	-49.8	-13.0	-36.8	
2509.56	0.0	V	3.0	38.5	1.0	-37.5	-13.0	-24.5		2509.56	-24.4	V	3.0	34.9	1.0	-58.3	-13.0	-45.3	
3346.08	0.0	V	3.0	38.1	1.0	-37.1	-13.0	-24.1		3346.08	-21.3	V	3.0	34.2	1.0	-54.5	-13.0	-41.5	
1673.04	0.0	H	3.0	39.2	1.0	-38.2	-13.0	-25.2		1673.04	-10.7	H	3.0	36.3	1.0	-46.1	-13.0	-33.1	
2509.56	0.0	H	3.0	38.5	1.0	-37.5	-13.0	-24.5		2509.56	-24.9	H	3.0	34.9	1.0	-58.8	-13.0	-45.8	
3346.08	0.0	H	3.0	38.1	1.0	-37.1	-13.0	-24.1		3346.08	-23.6	H	3.0	34.2	1.0	-56.8	-13.0	-43.8	
High Ch, 848.31										High Ch, 848.31									
1696.62	0.0	V	3.0	39.1	1.0	-38.1	-13.0	-25.1		1696.62	-14.0	V	3.0	36.3	1.0	-49.3	-13.0	-36.3	
2544.93	0.0	V	3.0	38.5	1.0	-37.5	-13.0	-24.5		2544.93	-19.5	V	3.0	34.9	1.0	-53.4	-13.0	-40.4	
3393.24	0.0	V	3.0	38.0	1.0	-37.0	-13.0	-24.0		3393.24	-22.1	V	3.0	34.2	1.0	-55.3	-13.0	-42.3	
1696.62	0.0	H	3.0	39.1	1.0	-38.1	-13.0	-25.1		1696.62	-14.1	H	3.0	36.3	1.0	-49.4	-13.0	-36.4	
2544.93	0.0	H	3.0	38.5	1.0	-37.5	-13.0	-24.5		2544.93	-23.4	H	3.0	34.9	1.0	-57.3	-13.0	-44.3	
3393.24	0.0	H	3.0	38.0	1.0	-37.0	-13.0	-24.0		3393.24	-23.0	H	3.0	34.2	1.0	-56.2	-13.0	-43.2	

BC1 1xRTT										BC1 EVDO Rel.0									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics Project #: 1/11/2016 Date: O. Stoelting Test Engineer: X-pos EUT Only Configuration: Chamber C Location: RTT BC1 Harmonics Mode:										Company: LG Electronics Project #: 1/11/2016 Date: O. Stoelting Test Engineer: X-pos EUT Only Configuration: Chamber A Location: EVDO BC1 Harmonics Mode:									
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, 1851.25										Low Ch, 1851.25									
3702.50	-8.8	V	3.0	33.9	1.0	-42.7	-13.0	-29.7		3702.50	0.0	V	3.0	37.7	1.0	-36.7	-13.0	-23.7	
5553.75	-24.2	V	3.0	33.1	1.0	-46.3	-13.0	-43.3		5553.75	0.0	V	3.0	38.1	1.0	-37.1	-13.0	-24.1	
7405.00	-20.4	V	3.0	32.9	1.0	-52.3	-13.0	-39.3		7405.00	0.0	V	3.0	36.9	1.0	-35.9	-13.0	-22.9	
3702.50	-8.7	H	3.0	33.9	1.0	-41.5	-13.0	-28.5		3702.50	0.0	H	3.0	37.7	1.0	-36.7	-13.0	-23.7	
5553.75	-24.4	H	3.0	33.1	1.0	-46.6	-13.0	-43.6		5553.75	0.0	H	3.0	38.1	1.0	-37.1	-13.0	-24.1	
7405.00	-20.2	H	3.0	32.9	1.0	-52.0	-13.0	-39.0		7405.00	0.0	H	3.0	36.9	1.0	-35.9	-13.0	-22.9	
Mid Ch, 1880										Mid Ch, 1880									
3760.00	-14.5	V	3.0	33.8	1.0	-47.3	-13.0	-34.3		3760.00	0.0	V	3.0	37.7	1.0	-36.7	-13.0	-23.7	
5640.00	-23.8	V	3.0	33.1	1.0	-55.9	-13.0	-42.9		5640.00	0.0	V	3.0	38.0	1.0	-37.0	-13.0	-24.0	
7520.00	-20.6	V	3.0	32.8	1.0	-52.5	-13.0	-39.5		7520.00	0.0	V	3.0	36.8	1.0	-35.8	-13.0	-22.8	
3760.00	-14.1	H	3.0	33.8	1.0	-46.9	-13.0	-33.9		3760.00	0.0	H	3.0	37.7	1.0	-36.7	-13.0	-23.7	
5640.00	-23.9	H	3.0	33.1	1.0	-55.7	-13.0	-42.7		5640.00	0.0	H	3.0	38.0	1.0	-37.0	-13.0	-24.0	
7520.00	-20.8	H	3.0	32.8	1.0	-52.6	-13.0	-39.6		7520.00	0.0	H	3.0	36.8	1.0	-35.8	-13.0	-22.8	
High Ch, 1908.75										High Ch, 1908.75									
3817.50	-15.2	V	3.0	33.7	1.0	-48.0	-13.0	-35.0		3817.50	0.0	V	3.0	37.6	1.0	-36.6	-13.0	-23.6	
5726.25	-22.8	V	3.0	33.1	1.0	-54.9	-13.0	-41.9		5726.25	0.0	V	3.0	38.0	1.0	-37.0	-13.0	-24.0	
7635.00	-20.3	V	3.0	32.8	1.0	-52.1	-13.0	-39.1		7635.00	0.0	V	3.0	36.7	1.0	-35.7	-13.0	-22.7	
3817.50	-15.3	H	3.0	33.7	1.0	-48.0	-13.0	-35.0		3817.50	0.0	H	3.0	37.6	1.0	-36.6	-13.0	-23.6	
5726.25	-23.4	H	3.0	33.1	1.0	-55.5	-13.0	-42.5		5726.25	0.0	H	3.0	38.0	1.0	-37.0	-13.0	-24.0	
7635.00	-20.7	H	3.0	32.8	1.0	-52.5	-13.0	-39.5		7635.00	0.0	H	3.0	36.7	1.0	-35.7	-13.0	-22.7	

LTE Band 2

1.4MHz QPSK

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

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/6/2016

O. Steeking

X-pos EUT Only

Chamber C

LTE_QPSK Band 2 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
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	-26.9	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	-26.4	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	
High Ch, 1909.3									
3818.60	-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	-26.0	V	3.0	32.8	1.0	-51.9	-13.0	-38.9	
3818.60	-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:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/6/2016

O. Steeking

X-pos EUT Only

Chamber C

LTE_16QAM Band 2 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
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	-26.4	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	-26.4	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	
High Ch, 1909.3									
3818.60	-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	-26.2	V	3.0	32.8	1.0	-52.0	-13.0	-39.0	
3818.60	-18.2	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:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/6/2016

O. Steeking

X-pos EUT Only

Chamber C

LTE_QPSK Band 2 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
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	-24.3	V	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7520.00	-26.4	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	-26.8	H	3.0	32.8	1.0	-52.6	-13.0	-39.6	
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:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/6/2016

O. Steeking

X-pos EUT Only

Chamber C

LTE_16QAM Band 2 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
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	-26.8	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	-21.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7520.00	-26.7	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:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/6/2016

O. Steeking

X-pos EUT Only

Chamber C

LTE_QPSK Band 2 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
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	-26.5	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	-21.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7520.00	-26.5	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	
7630.00	-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	
7630.00	-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:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

LG Electronics

1/6/2016

O. Steeking

X-pos EUT Only

Chamber C

LTE_QPSK Band 2 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
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	-26.5	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	-21.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7520.00	-26.5	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	
7630.00	-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	
7630.00	-20.5	H	3.0	32.8	1.0	-52.3	-13.0	-39.3	

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: LQ Electronics Project #: 16/2016 Date: 1/6/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 2 Harmonics, 10MHz Bandwidth										Company: LQ Electronics Project #: 16/2016 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)	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, 1855										Low Ch, 1855									
3710.00	-16.6	V	3.0	33.9	1.0	-49.5	-13.0	-36.5		3710.00	-16.7	V	3.0	33.9	1.0	-49.5	-13.0	-36.5	
5565.00	-24.3	V	3.0	33.1	1.0	-56.4	-13.0	-43.4		5565.00	-24.5	V	3.0	33.1	1.0	-56.6	-13.0	-43.6	
7420.00	-20.8	V	3.0	32.9	1.0	-52.6	-13.0	-39.6		7420.00	-20.9	V	3.0	32.9	1.0	-52.8	-13.0	-39.8	
3710.00	-14.5	H	3.0	33.9	1.0	-47.4	-13.0	-34.4		3710.00	-15.0	H	3.0	33.9	1.0	-47.8	-13.0	-34.8	
5565.00	-23.4	H	3.0	33.1	1.0	-55.5	-13.0	-42.6		5565.00	-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	-39.3		7420.00	-20.4	H	3.0	32.9	1.0	-52.3	-13.0	-39.3	
Mid Ch, 1880										Mid Ch, 1880									
3760.00	-23.3	V	3.0	33.8	1.0	-56.1	-13.0	-43.1		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		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		7520.00	-21.0	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		3760.00	-21.9	H	3.0	33.8	1.0	-54.7	-13.0	-41.7	
5640.00	-23.5	H	3.0	33.1	1.0	-55.6	-13.0	-42.6		5640.00	-21.7	H	3.0	33.1	1.0	-53.8	-13.0	-40.8	
7520.00	-20.2	H	3.0	32.8	1.0	-52.1	-13.0	-39.1		7520.00	-20.5	H	3.0	32.8	1.0	-52.4	-13.0	-39.4	
High Ch, 1905										High Ch, 1905									
3810.00	-22.6	V	3.0	33.8	1.0	-55.4	-13.0	-42.4		3810.00	-22.2	V	3.0	33.8	1.0	-55.0	-13.0	-42.0	
5715.00	-23.2	V	3.0	33.1	1.0	-55.3	-13.0	-42.3		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	-52.4	-13.0	-39.4		7620.00	-20.5	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3810.00	-20.1	H	3.0	33.8	1.0	-52.8	-13.0	-39.8		3810.00	-19.2	H	3.0	33.8	1.0	-51.9	-13.0	-38.9	
5715.00	-22.5	H	3.0	33.1	1.0	-54.5	-13.0	-41.5		5715.00	-22.7	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7620.00	-20.6	H	3.0	32.8	1.0	-52.5	-13.0	-39.5		7620.00	-20.2	H	3.0	32.8	1.0	-52.1	-13.0	-39.1	

15MHz QPSK										15MHz 16QAM									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LQ Electronics Project #: 16/2016 Date: 1/6/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 2 Harmonics, 15MHz Bandwidth										Company: LQ Electronics Project #: 16/2016 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)	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, 1857.5										Low Ch, 1857.5									
3715.00	-19.0	V	3.0	33.9	1.0	-51.8	-13.0	-38.8		3715.00	-17.9	V	3.0	33.9	1.0	-50.7	-13.0	-37.7	
5572.50	-24.6	V	3.0	33.1	1.0	-56.7	-13.0	-43.7		5572.50	-23.8	V	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7430.00	-20.5	V	3.0	32.9	1.0	-52.4	-13.0	-39.4		7430.00	-21.0	V	3.0	32.9	1.0	-52.8	-13.0	-39.8	
3715.00	-15.5	H	3.0	33.9	1.0	-48.4	-13.0	-35.4		3715.00	-15.4	H	3.0	33.9	1.0	-48.2	-13.0	-35.2	
5572.50	-24.4	H	3.0	33.1	1.0	-56.5	-13.0	-43.5		5572.50	-23.9	H	3.0	33.1	1.0	-56.0	-13.0	-43.0	
7430.00	-21.0	H	3.0	32.9	1.0	-52.9	-13.0	-39.9		7430.00	-20.9	H	3.0	32.9	1.0	-52.8	-13.0	-39.8	
Mid Ch, 1880										Mid Ch, 1880									
3760.00	-20.7	V	3.0	33.8	1.0	-53.5	-13.0	-40.5		3760.00	-21.2	V	3.0	33.8	1.0	-54.0	-13.0	-41.0	
5640.00	-23.9	V	3.0	33.1	1.0	-56.0	-13.0	-43.0		5640.00	-24.2	V	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7520.00	-21.6	V	3.0	32.8	1.0	-53.4	-13.0	-40.4		7520.00	-21.2	V	3.0	32.8	1.0	-53.1	-13.0	-40.1	
3760.00	-19.4	H	3.0	33.8	1.0	-52.2	-13.0	-39.2		3760.00	-19.6	H	3.0	33.8	1.0	-52.4	-13.0	-39.4	
5640.00	-23.9	H	3.0	33.1	1.0	-56.0	-13.0	-43.0		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	-52.0	-13.0	-39.0		7520.00	-19.5	H	3.0	32.8	1.0	-51.4	-13.0	-38.4	
High Ch, 1902.5										High Ch, 1902.5									
3805.00	-21.5	V	3.0	33.8	1.0	-54.3	-13.0	-41.3		3805.00	-20.8	V	3.0	33.8	1.0	-53.5	-13.0	-40.5	
5707.50	-23.2	V	3.0	33.1	1.0	-55.3	-13.0	-42.3		5707.50	-23.5	V	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7610.00	-20.8	V	3.0	32.8	1.0	-52.6	-13.0	-39.6		7610.00	-20.7	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3805.00	-17.5	H	3.0	33.8	1.0	-50.2	-13.0	-37.2		3805.00	-17.3	H	3.0	33.8	1.0	-50.1	-13.0	-37.1	
5707.50	-23.4	H	3.0	33.1	1.0	-55.4	-13.0	-42.4		5707.50	-23.0	H	3.0	33.1	1.0	-55.1	-13.0	-42.1	
7610.00	-20.7	H	3.0	32.8	1.0	-52.5	-13.0	-39.5		7610.00	-20.9	H	3.0	32.8	1.0	-52.7	-13.0	-39.7	

20MHz QPSK										20MHz 16QAM									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LQ Electronics Project #: 16/2016 Date: 1/6/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 2 Harmonics, 20MHz Bandwidth										Company: LQ Electronics Project #: 16/2016 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)	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, 1860										Low Ch, 1860									
3720.00	-20.4	V	3.0	33.8	1.0	-53.2	-13.0	-40.2		3720.00	-17.8	V	3.0	33.8	1.0	-50.5	-13.0	-37.5	
5580.00	-24.2	V	3.0	33.1	1.0	-56.3	-13.0	-43.3		5580.00	-24.0	V	3.0	33.1	1.0	-56.1	-13.0	-43.1	
7440.00	-20.5	V	3.0	32.9	1.0	-52.4	-13.0	-39.4		7440.00	-20.7	V	3.0	32.9	1.0	-52.5	-13.0	-39.5	
3720.00	-17.1	H	3.0	33.8	1.0	-50.0	-13.0	-37.0		3720.00	-16.3	H	3.0	33.8	1.0	-49.1	-13.0	-36.1	
5580.00	-23.6	H	3.0	33.1	1.0	-55.7	-13.0	-42.7		5580.00	-23.8	H	3.0	33.1	1.0	-56.0	-13.0	-43.0	
7440.00	-20.7	H	3.0	32.9	1.0	-52.6	-13.0	-39.6		7440.00	-20.5	H	3.0	32.9	1.0	-52.4	-13.0	-39.4	
Mid Ch, 1880										Mid Ch, 1880									
3760.00	-11.3	V	3.0	33.8	1.0	-44.1	-13.0	-31.1		3760.00	-11.8	V	3.0	33.8	1.0	-44.6	-13.0	-31.6	
5640.00	-24.4	V	3.0	33.1	1.0	-56.5	-13.0	-43.5		5640.00	-24.2	V	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7520.00	-21.1	V	3.0	32.8	1.0	-52.9	-13.0	-39.9		7520.00	-20.9	V	3.0	32.8	1.0	-52.8	-13.0	-39.8	
3760.00	-18.3	H	3.0	33.8	1.0	-51.2	-13.0	-38.2		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		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		7520.00	-21.1	H	3.0	32.8	1.0	-53.0	-13.0	-40.0	
High Ch, 1900										High Ch, 1900									
3800.00	-16.6	V	3.0	33.8	1.0	-49.3	-13.0	-36.3		3800.00	-18.6	V	3.0	33.8	1.0	-51.4	-13.0	-38.4	
5700.00	-23.1	V	3.0	33.1	1.0	-55.2	-13.0	-42.2		5700.00	-23.6	V	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7600.00	-19.1	V	3.0	32.8	1.0	-50.9	-13.0	-37.9		7600.00	-20.6	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3800.00	-18.7	H	3.0	33.8	1.0	-51.5	-13.0	-38.5		3800.00	-19.8	H	3.0	33.8	1.0	-52.5	-13.0	-39.5	
5700.00	-23.1	H	3.0	33.1	1.0	-55.2	-13.0	-42.2		5700.00	-22.5	H	3.0	33.1	1.0	-54.6	-13.0	-41.6	
7600.00	-20.1	H	3.0	32.8	1.0	-52.0	-13.0	-39.0		7600.00	-19.8	H	3.0	32.8	1.0	-51.7	-13.0	-38.7	

LTE Band 4

1.4MHz QPSK										
UL Verification Services, Inc.										
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, 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	
Low Ch, 1710.7										
3421.40	-7.3	V	3.0	36.1	1.0	-42.3	-13.0	-29.3		
5132.10	-15.2	V	3.0	35.4	1.0	-49.7	-13.0	-36.7		
6842.80	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0		
3421.40	-5.9	H	3.0	36.1	1.0	-41.0	-13.0	-28.0		
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		
Mid Ch, 1732.5										
3465.00	-2.7	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		
6930.00	-14.4	V	3.0	35.7	1.0	-49.1	-13.0	-36.1		
3465.00	-3.7	H	3.0	36.0	1.0	-38.8	-13.0	-25.8		
5197.50	-11.8	H	3.0	35.4	1.0	-46.2	-13.0	-33.2		
6930.00	-13.1	H	3.0	35.7	1.0	-47.8	-13.0	-34.8		
High Ch, 1754.3										
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		
7017.20	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0		
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		
7017.20	-13.2	H	3.0	35.7	1.0	-47.9	-13.0	-34.9		

1.4MHz 16QAM										
UL Verification Services, Inc.										
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, 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	
Low Ch, 1710.7										
3421.40	-7.4	V	3.0	36.1	1.0	-42.5	-13.0	-29.5		
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	-48.9	-13.0	-35.9		
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		
6842.80	-13.4	H	3.0	35.7	1.0	-48.1	-13.0	-35.1		
Mid Ch, 1732.5										
3465.00	-2.8	V	3.0	36.0	1.0	-37.8	-13.0	-24.8		
5197.50	-14.2	V	3.0	35.4	1.0	-49.6	-13.0	-35.6		
6930.00	-14.1	V	3.0	35.7	1.0	-48.8	-13.0	-35.8		
3465.00	-3.9	H	3.0	36.0	1.0	-38.9	-13.0	-25.9		
5197.50	-12.8	H	3.0	35.4	1.0	-47.3	-13.0	-34.3		
6930.00	-13.5	H	3.0	35.7	1.0	-48.2	-13.0	-35.2		
High Ch, 1754.3										
3508.60	-3.0	V	3.0	36.0	1.0	-38.0	-13.0	-25.0		
5262.90	-14.2	V	3.0	35.4	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		
5262.90	-15.0	H	3.0	35.4	1.0	-49.4	-13.0	-36.4		
7017.20	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6		

3MHz QPSK										
UL Verification Services, Inc.										
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, 3MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1711.5										
3423.00	-6.7	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		
6846.00	-14.4	V	3.0	35.7	1.0	-49.1	-13.0	-36.1		
3423.00	-6.1	H	3.0	36.1	1.0	-41.2	-13.0	-28.2		
5134.50	-13.7	H	3.0	35.4	1.0	-48.1	-13.0	-35.1		
6846.00	-12.6	H	3.0	35.7	1.0	-47.3	-13.0	-34.3		
Mid Ch, 1732.5										
3465.00	-2.8	V	3.0	36.0	1.0	-37.8	-13.0	-24.8		
5197.50	-14.2	V	3.0	35.4	1.0	-49.6	-13.0	-35.6		
6930.00	-14.0	V	3.0	35.7	1.0	-49.6	-13.0	-35.6		
3465.00	-3.6	H	3.0	36.0	1.0	-38.6	-13.0	-25.6		
5197.50	-13.8	H	3.0	35.4	1.0	-48.2	-13.0	-35.2		
6930.00	-13.1	H	3.0	35.7	1.0	-47.8	-13.0	-34.8		
High Ch, 1753.5										
3507.00	-2.9	V	3.0	36.0	1.0	-37.9	-13.0	-24.9		
5260.50	-14.4	V	3.0	35.4	1.0	-49.8	-13.0	-35.8		
7014.00	-13.9	V	3.0	35.7	1.0	-48.6	-13.0	-35.6		
3507.00	-3.5	H	3.0	36.0	1.0	-38.5	-13.0	-25.5		
5260.50	-13.8	H	3.0	35.4	1.0	-48.2	-13.0	-35.2		
7014.00	-12.8	H	3.0	35.7	1.0	-47.5	-13.0	-34.5		

3MHz 16QAM										
UL Verification Services, Inc.										
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, 3MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1712.5										
3425.00	-6.6	V	3.0	36.1	1.0	-41.7	-13.0	-28.7		
5137.50	-15.7	V	3.0	35.4	1.0	-50.1	-13.0	-37.1		
6850.00	-0.3	V	3.0	35.7	1.0	-34.9	-13.0	-21.9		
3425.00	-19.2	H	3.0	36.1	1.0	-54.2	-13.0	-41.2		
5137.50	-15.5	H	3.0	35.4	1.0	-49.9	-13.0	-36.9		
6850.00	0.0	H	3.0	35.7	1.0	-34.7	-13.0	-21.7		
Mid Ch, 1732.5										
3465.00	-3.1	V	3.0	36.0	1.0	-38.1	-13.0	-25.1		
5197.50	-15.0	V	3.0	35.4	1.0	-49.4	-13.0	-36.4		
6930.00	-14.6	V	3.0	35.7	1.0	-49.3	-13.0	-36.3		
3465.00	-4.0	H	3.0	36.0	1.0	-39.1	-13.0	-26.1		
5197.50	-14.1	H	3.0	35.4	1.0	-48.5	-13.0	-35.5		
6930.00	-12.3	H	3.0	35.7	1.0	-47.0	-13.0	-34.0		
High Ch, 1752.5										
3505.00	-3.3	V	3.0	36.0	1.0	-38.3	-13.0	-25.3		
5257.50	-15.5	V	3.0	35.4	1.0	-50.0	-13.0	-37.0		
7010.00	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0		
3505.00	-3.7	H	3.0	36.0	1.0	-38.7	-13.0	-25.7		
5257.50	-14.1	H	3.0	35.4	1.0	-48.4	-13.0	-35.4		
7010.00	-12.6	H	3.0	35.7	1.0	-47.3	-13.0	-34.3		

5MHz QPSK										
UL Verification Services, Inc.										
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, 5MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1712.5										
3425.00	-6.9	V	3.0	36.1	1.0	-42.0	-13.0	-29.0		
5137.50	-15.7	V	3.0	35.4	1.0	-50.1	-13.0	-37.1		
6850.00	-13.4	V	3.0	35.7	1.0	-48.1	-13.0	-35.1		
3425.00	-5.8	H	3.0	36.1	1.0	-40.9	-13.0	-27.9		
5137.50	-13.9	H	3.0	35.4	1.0	-48.3	-13.0	-35.3		
6850.00	-12.1	H	3.0	35.7	1.0	-46.8	-13.0	-33.8		
Mid Ch, 1732.5										
3465.00	-3.3	V	3.0	36.0	1.0	-38.3	-13.0	-25.3		
5197.50	-14.3	V	3.0	35.4	1.0	-48.7	-13.0	-35.7		
6930.00	-13.8	V	3.0	35.7	1.0	-48.5	-13.0	-35.5		
3465.00	-3.7	H	3.0	36.0	1.0	-38.7	-13.0	-25.7		
5197.50	-14.2	H	3.0	35.4	1.0	-48.6	-13.0	-35.6		
6930.00	-12.9	H	3.0	35.7	1.0	-47.0	-13.0	-34.0		
High Ch, 1752.5										
3505.00	-2.8	V	3.0	36.0	1.0	-37.8	-13.0	-24.8		
5257.50	-14.2	V	3.0	35.4	1.0	-48.7	-13.0	-35.7		
7010.00	-14.4	V	3.0	35.7	1.0	-49.1	-13.0	-36.1		
3505.00	-3.7	H	3.0	36.0	1.0	-38.7	-13.0	-25.7		
5257.50	-14.1	H	3.0	35.4	1.0	-48.6	-13.0	-35.6		
7010.00	-12.3	H	3.0	35.7	1.0	-47.0	-13.0	-34.0		

5MHz 16QAM										
UL Verification Services, Inc.										
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, 5MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1712.5										
3425.00	-6.8	V	3.0	36.1	1.0	-41.9	-13.0	-28.9		
5137.50	-15.1	V	3.0	35.4	1.0	-50.5	-13.0	-37.5		
6850.00	-13.8	V	3.0	35.7	1.0	-48.4	-13.0	-35.4		
3425.00	-6.0	H	3.0	36.1	1.0	-41.1	-13.0	-28.1		
5137.50	-15.0	H	3.0	35.4	1.0	-49.4	-13.0	-36.4		
6850.00	-12.5	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		
Mid Ch, 1732.5										
3465.00	-3.3	V	3.0	36.0	1.0	-38.4	-13.0	-25.4		
5197.50	-14.8	V	3.0	35.4	1.0	-49.1	-13.0	-36.1		
6930.00	-14.6	V	3.0	35.7	1.0	-49.3	-13.0	-36.3		
3465.00	-4.4	H	3.0	36.0	1.0	-39.4	-13.0	-26.4		
5197.50	-14.4	H	3.0	35.4	1.0	-48.8	-13.0	-35.8		
6930.00	-12.8	H	3.0	35.7	1.0	-47.5	-13.0	-34.5		
High Ch, 1752.5										
3505.00	-2.9	V	3.0	36.0	1.0	-37.9	-13.0	-24.9		
5257.50	-14.6	V	3.0	35.4	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	-4.0	H	3.0	36.0	1.0	-39.0	-13.0	-26.0		
5257.50	-14.2	H	3.0	35.4	1.0	-48.6	-13.0	-35.6		
7010.00	-12.8	H	3.0	35.7	1.0	-47.4	-13.0	-34.4		

10MHz QPSK										
UL Verification Services, Inc.										
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)	ERP (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	-13.6	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	-49.3	-13.0	-36.3		
7000.00	-13.3	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										
UL Verification Services, Inc.										
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)	ERP (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	-13.6	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										
UL Verification Services, Inc.										
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)	ERP (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	-2.9	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										
UL Verification Services, Inc.										
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)	ERP (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	-47.8	-13.0	-34.8		
6990.00	-12.4	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		

20MHz QPSK										
UL Verification Services, Inc.										
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)	ERP (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	-49.9	-13.0	-36.9		
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	-48.9	-13.0	-35.9		
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	-47.4	-13.0	-34.8		
6980.00	-12.5	H	3.0	35.7	1.0	-47.1	-13.0	-34.1		

20MHz 16QAM										
UL Verification Services, Inc.										
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)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1720										
3440.00	-7.6	V	3.0	36.0	1.0	-42.7	-13.0	-29.7		
5160.00	-15.2	V	3.0	35.4	1.0	-49.6	-13.0	-36.6		
6880.00	-14.6	V	3.0	35.7	1.0	-49.2	-13.0	-36.2		
3440.00	-4.2	H	3.0	36.0	1.0	-39.2	-13.0	-26.2		
5160.00	-14.4	H	3.0	35.4	1.0	-49.8	-13.0	-35.8		
6880.00	-12.1	H	3.0	35.7	1.0	-46.7	-13.0	-33.7		
Mid Ch, 1732.5										
3465.00	-5.5	V	3.0	36.0	1.0	-40.6	-13.0	-27.6		
5197.50	-15.1	V	3.0	35.4	1.0	-49.5	-13.0	-36.5		
6930.00	-13.9	V	3.0	35.7	1.0	-48.6	-13.0	-35.6		
3465.00	-4.6	H	3.0	36.0	1.0	-39.7	-13.0	-26.7		
5197.50	-14.1	H	3.0	35.4	1.0	-48.5	-13.0	-35.5		
6930.00	-13.0	H	3.0	35.7	1.0	-47.7	-13.0	-34.7		
High Ch, 1745										
3490.00	-2.9	V	3.0	36.0	1.0	-37.9	-13.0	-24.9		
5235.00	-14.4	V	3.0	35.4	1.0	-48.9	-13.0	-35.9		
6980.00	-14.6	V	3.0	35.7	1.0	-49.3	-13.0	-36.3		
3490.00	-4.0	H	3.0	36.0	1.0	-39.0	-13.0	-26.0		
5235.00	-13.5	H	3.0	35.4	1.0	-48.0	-13.0	-35.0		
6980.00	-12.6	H	3.0	35.7	1.0	-47.3	-13.0	-34.3		

LTE Band 5

1.4MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		1/8/2016							
Date:		R.Z							
Test Engineer:		Xpos EUT w/ AC Adapter + Headset							
Configuration:		Chamber B							
Location:		LTE_QPSK Band 5 Harmonics, 1.4MHz Bandwidth							
Mode:									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
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	-48.7	-13.0	-35.7	
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	-18.8	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									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		1/8/2016							
Date:		R.Z							
Test Engineer:		Xpos EUT w/ AC Adapter + Headset							
Configuration:		Chamber B							
Location:		LTE_16QAM Band 5 Harmonics, 1.4MHz Bandwidth							
Mode:									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
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									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		1/8/2016							
Date:		R.Z							
Test Engineer:		Xpos EUT w/ AC Adapter + Headset							
Configuration:		Chamber B							
Location:		LTE_QPSK Band 5 Harmonics, 3MHz Bandwidth							
Mode:									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	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	
2476.50	-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	
2476.50	-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	-55.8	-13.0	-42.8	
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									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		1/8/2016							
Date:		R.Z							
Test Engineer:		Xpos EUT w/ AC Adapter + Headset							
Configuration:		Chamber B							
Location:		LTE_16QAM Band 5 Harmonics, 3MHz Bandwidth							
Mode:									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	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	
2476.50	-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	
2476.50	-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	-56.6	-13.0	-43.6	
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									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		1/8/2016							
Date:		R.Z							
Test Engineer:		Xpos EUT w/ AC Adapter + Headset							
Configuration:		Chamber B							
Location:		LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth							
Mode:									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	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	
2478.50	-20.3	V	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3306.00	-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	
2478.50	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3306.00	-20.7	H	3.0	36.1	1.0	-55.8	-13.0	-42.8	
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	-58.1	-13.0	-45.1	
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	-55.1	-13.0	-42.1	
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	-19.8	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									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG Electronics							
Project #:		1/8/2016							
Date:		R.Z							
Test Engineer:		Xpos EUT w/ AC Adapter + Headset							
Configuration:		Chamber B							
Location:		LTE_16QAM Band 5 Harmonics, 5MHz Bandwidth							
Mode:									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	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	
2478.50	-21.7	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3306.00	-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	
2478.50	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3306.00	-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	-57.4	-13.0	-44.4	
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	-61.1	-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	-55.1	-13.0	-42.1	
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									
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:		1/8/2016								Date:		1/8/2016							
Test Engineer:		R.Z.								Test Engineer:		R.Z.							
Configuration:		Xpos EUT w/ AC Adapter + Headset								Configuration:		Xpos EUT w/ AC Adapter + Headset							
Location:		Chamber B								Location:		Chamber B							
Mode:		LTE_QPSK Band 5 Harmonics, 10MHz Bandwidth								Mode:		LTE_16QAM Band 5 Harmonics, 10MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829										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 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_QPSK Band 12 Harmonics, 1.4MHz Bandwidth Mode:										Company: LG Project #: 1/8/2016 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_16QAM Band 12 Harmonics, 1.4MHz Bandwidth Mode:									
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										Low Ch, 699.7									
1399.40	-27.4	V	3.0	37.4	1.0	-63.7	-13.0	-50.7		1399.40	-27.5	V	3.0	37.4	1.0	-63.9	-13.0	-50.9	
2099.10	-22.1	V	3.0	36.6	1.0	-57.7	-13.0	-44.7		2099.10	-22.5	V	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2798.80	-21.0	V	3.0	36.4	1.0	-56.4	-13.0	-43.4		2798.80	-20.8	V	3.0	36.4	1.0	-56.2	-13.0	-43.2	
1399.40	-19.6	H	3.0	37.4	1.0	-55.9	-13.0	-42.9		1399.40	-19.2	H	3.0	37.4	1.0	-55.5	-13.0	-42.5	
2099.10	-23.9	H	3.0	36.6	1.0	-59.5	-13.0	-46.5		2099.10	-23.6	H	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2798.80	-21.7	H	3.0	36.4	1.0	-57.1	-13.0	-44.1		2798.80	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
Mid Ch, 707.50										Mid Ch, 707.50									
1415.00	-25.5	V	3.0	37.3	1.0	-61.8	-13.0	-48.8		1415.00	-26.7	V	3.0	37.3	1.0	-63.0	-13.0	-50.0	
2122.00	-21.0	V	3.0	36.6	1.0	-56.6	-13.0	-43.6		2122.00	-21.5	V	3.0	36.6	1.0	-57.1	-13.0	-44.1	
2830.00	-20.2	V	3.0	36.4	1.0	-55.6	-13.0	-42.6		2830.00	-21.0	V	3.0	36.4	1.0	-56.3	-13.0	-43.3	
1415.00	-21.4	H	3.0	37.3	1.0	-57.7	-13.0	-44.7		1415.00	-22.3	H	3.0	37.3	1.0	-58.6	-13.0	-45.6	
2122.00	-21.6	H	3.0	36.6	1.0	-57.2	-13.0	-44.2		2122.00	-22.0	H	3.0	36.6	1.0	-57.6	-13.0	-44.6	
2830.00	-21.2	H	3.0	36.4	1.0	-56.6	-13.0	-43.6		2830.00	-21.3	H	3.0	36.4	1.0	-56.7	-13.0	-43.7	
High Ch, 715.3										High Ch, 715.3									
1430.60	-26.0	V	3.0	37.3	1.0	-62.3	-13.0	-49.3		1430.60	-26.1	V	3.0	37.3	1.0	-62.4	-13.0	-49.4	
2145.90	-22.1	V	3.0	36.6	1.0	-57.7	-13.0	-44.7		2145.90	-22.6	V	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2861.20	-21.0	V	3.0	36.4	1.0	-56.4	-13.0	-43.4		2861.20	-21.3	V	3.0	36.4	1.0	-56.6	-13.0	-43.6	
1430.60	-21.0	H	3.0	37.3	1.0	-57.3	-13.0	-44.3		1430.60	-22.3	H	3.0	37.3	1.0	-58.6	-13.0	-45.6	
2145.90	-22.3	H	3.0	36.6	1.0	-57.8	-13.0	-44.8		2145.90	-22.6	H	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2861.20	-20.0	H	3.0	36.4	1.0	-55.4	-13.0	-42.4		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 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth Mode:										Company: LG Project #: 1/8/2016 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_16QAM Band 12 Harmonics, 3MHz Bandwidth Mode:									
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										Low Ch, 700.5									
1401.00	-26.3	V	3.0	37.4	1.0	-62.7	-13.0	-49.7		1401.00	-27.8	V	3.0	37.4	1.0	-64.2	-13.0	-51.2	
2101.50	-22.3	V	3.0	36.6	1.0	-57.8	-13.0	-44.8		2101.50	-22.6	V	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2802.00	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7		2802.00	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
1401.00	-19.5	H	3.0	37.4	1.0	-55.9	-13.0	-42.9		1401.00	-19.1	H	3.0	37.4	1.0	-55.5	-13.0	-42.5	
2101.50	-23.9	H	3.0	36.6	1.0	-59.5	-13.0	-46.5		2101.50	-24.4	H	3.0	36.6	1.0	-60.0	-13.0	-47.0	
2802.00	-20.9	H	3.0	36.4	1.0	-56.3	-13.0	-43.3		2802.00	-21.5	H	3.0	36.4	1.0	-56.9	-13.0	-43.9	
Mid Ch, 707.50										Mid Ch, 707.50									
1415.00	-27.4	V	3.0	37.3	1.0	-63.7	-13.0	-50.7		1415.00	-28.2	V	3.0	37.3	1.0	-64.6	-13.0	-51.6	
2122.00	-22.0	V	3.0	36.6	1.0	-57.6	-13.0	-44.6		2122.00	-22.1	V	3.0	36.6	1.0	-57.7	-13.0	-44.7	
2830.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8		2830.00	-21.7	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
1415.00	-22.5	H	3.0	37.3	1.0	-58.9	-13.0	-45.9		1415.00	-22.5	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		2122.00	-20.5	H	3.0	36.6	1.0	-56.0	-13.0	-43.0	
2830.00	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3		2830.00	-21.7	H	3.0	36.4	1.0	-57.1	-13.0	-44.1	
High Ch, 714.5										High Ch, 714.5									
1429.00	-26.9	V	3.0	37.3	1.0	-63.2	-13.0	-50.2		1429.00	-27.5	V	3.0	37.3	1.0	-63.9	-13.0	-50.9	
2143.50	-21.9	V	3.0	36.6	1.0	-57.5	-13.0	-44.5		2143.50	-22.2	V	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2858.00	-21.2	V	3.0	36.4	1.0	-56.5	-13.0	-43.5		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	-59.0	-13.0	-46.0		1429.00	-22.7	H	3.0	37.3	1.0	-59.0	-13.0	-46.0	
2143.50	-21.3	H	3.0	36.6	1.0	-56.9	-13.0	-43.9		2143.50	-21.9	H	3.0	36.6	1.0	-57.4	-13.0	-44.4	
2858.00	-21.5	H	3.0	36.4	1.0	-56.9	-13.0	-43.9		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 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_QPSK Band 12 Harmonics, 5MHz Bandwidth Mode:										Company: LG Project #: 1/8/2016 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_16QAM Band 12 Harmonics, 5MHz Bandwidth Mode:									
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										Low Ch, 701.50									
1403.00	-25.2	V	3.0	37.4	1.0	-61.6	-13.0	-48.6		1403.00	-25.8	V	3.0	37.4	1.0	-62.1	-13.0	-49.1	
2104.50	-22.2	V	3.0	36.6	1.0	-57.8	-13.0	-44.8		2104.50	-22.4	V	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2806.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8		2806.00	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1403.00	-17.6	H	3.0	37.4	1.0	-54.0	-13.0	-41.0		1403.00	-18.9	H	3.0	37.4	1.0	-55.3	-13.0	-42.3	
2104.50	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9		2104.50	-22.4	H	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2806.00	-21.5	H	3.0	36.4	1.0	-56.8	-13.0	-43.8		2806.00	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
Mid Ch, 707.50										Mid Ch, 707.50									
1415.00	-27.0	V	3.0	37.3	1.0	-63.4	-13.0	-50.4		1415.00	-27.4	V	3.0	37.3	1.0	-63.8	-13.0	-50.8	
2122.00	-21.5	V	3.0	36.6	1.0	-57.1	-13.0	-44.1		2122.00	-22.0	V	3.0	36.6	1.0	-57.5	-13.0	-44.5	
2830.00	-21.2	V	3.0	36.4	1.0	-56.6	-13.0	-43.6		2830.00	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
1415.00	-21.5	H	3.0	37.3	1.0	-57.8	-13.0	-44.8		1415.00	-21.6	H	3.0	37.3	1.0	-57.9	-13.0	-44.9	
2122.00	-21.8	H	3.0	36.6	1.0	-57.4	-13.0	-44.4		2122.00	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9	
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, 713.50										High Ch, 713.50									
1427.00	-25.4	V	3.0	37.3	1.0	-61.7	-13.0	-48.7		1427.00	-25.5	V	3.0	37.3	1.0	-61.8	-13.0	-48.8	
2140.50	-19.9	V	3.0	36.6	1.0	-55.5	-13.0	-42.5		2140.50	-20.8	V	3.0	36.6	1.0	-56.4	-13.0	-43.4	
2854.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3		2854.00	-22.7	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1427.00	-20.1	H	3.0	37.3	1.0	-56.5	-13.0	-43.5		1427.00	-20.3	H	3.0	37.3	1.0	-56.6	-13.0	-43.6	
2140.50	-22.1	H	3.0	36.6	1.0	-57.7	-13.0	-44.7		2140.50	-22.2	H	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2854.00	-21.2	H	3.0	36.4	1.0	-56.6	-13.0	-43.6		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 Project #: 1/8/2016 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_QPSK Band 12 Harmonics, 5MHz Bandwidth Mode:										Company: LG Project #: 1/8/2016 Date: A. Escamilla Test Engineer: EUT + AC Adapter + HS Configuration: Chamber B Location: LTE_16QAM Band 12 Harmonics, 5MHz Bandwidth Mode:									
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										Low Ch, 701.50									
1403.00	-25.2	V	3.0	37.4	1.0	-61.6	-13.0	-48.6		1403.00	-25.8	V	3.0	37.4	1.0	-62.1	-13.0	-49.1	
2104.50	-22.2	V	3.0	36.6	1.0	-57.8	-13.0	-44.8		2104.50	-22.4	V	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2806.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8		2806.00	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1403.00	-17.6	H	3.0	37.4	1.0	-54.0	-13.0	-41.0		1403.00	-18.9	H	3.0	37.4	1.0	-55.3	-13.0	-42.3	
2104.50	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9		2104.50	-22.4	H	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2806.00	-21.5	H	3.0	36.4	1.0	-56.8	-13.0	-43.8		2806.00	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
Mid Ch, 707.50										Mid Ch, 707.50									

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG							
Project #:		1/8/2016							
Date:		A. Escamilla							
Test Engineer:		EUT + AC Adapter + HS							
Configuration:		Chamber B							
Location:		LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth							
Mode:									
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									
1408.00	-25.2	V	3.0	37.4	1.0	-61.6	-13.0	-48.6	
2112.00	-22.1	V	3.0	36.6	1.0	-57.7	-13.0	-44.7	
2816.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1408.00	-18.3	H	3.0	37.4	1.0	-54.6	-13.0	-41.6	
2112.00	-21.8	H	3.0	36.6	1.0	-57.4	-13.0	-44.4	
2816.00	-21.6	H	3.0	36.4	1.0	-57.0	-13.0	-44.0	
Mid Ch, 707.5									
1415.00	-25.3	V	3.0	37.3	1.0	-61.6	-13.0	-48.6	
2122.50	-21.9	V	3.0	36.6	1.0	-57.4	-13.0	-44.4	
2830.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1415.00	-20.5	H	3.0	37.3	1.0	-56.9	-13.0	-43.9	
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	
High Ch, 711									
1422.00	-27.6	V	3.0	37.3	1.0	-63.9	-13.0	-50.9	
2133.00	-22.2	V	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2844.00	-21.8	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1422.00	-20.8	H	3.0	37.3	1.0	-57.1	-13.0	-44.1	
2133.00	-22.1	H	3.0	36.6	1.0	-57.7	-13.0	-44.7	
2844.00	-21.7	H	3.0	36.4	1.0	-57.1	-13.0	-44.1	

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LG							
Project #:		1/8/2016							
Date:		A. Escamilla							
Test Engineer:		EUT + AC Adapter + HS							
Configuration:		Chamber B							
Location:		LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth							
Mode:									
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									
1408.00	-25.4	V	3.0	37.4	1.0	-61.8	-13.0	-48.8	
2112.00	-23.0	V	3.0	36.6	1.0	-58.5	-13.0	-45.5	
2816.00	-21.8	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1408.00	-18.1	H	3.0	37.4	1.0	-54.5	-13.0	-41.5	
2112.00	-21.5	H	3.0	36.6	1.0	-57.1	-13.0	-44.1	
2816.00	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
Mid Ch, 707.5									
1415.00	-25.6	V	3.0	37.3	1.0	-61.9	-13.0	-48.9	
2122.50	-22.4	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2830.00	-21.6	V	3.0	36.4	1.0	-57.0	-13.0	-44.0	
1415.00	-20.8	H	3.0	37.3	1.0	-57.2	-13.0	-44.2	
2122.50	-23.2	H	3.0	36.6	1.0	-58.8	-13.0	-45.8	
2830.00	-22.2	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
High Ch, 711									
1422.00	-27.7	V	3.0	37.3	1.0	-64.0	-13.0	-51.0	
2133.00	-22.5	V	3.0	36.6	1.0	-58.1	-13.0	-45.1	
2844.00	-21.7	V	3.0	36.4	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	-22.6	H	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2844.00	-21.6	H	3.0	36.4	1.0	-57.0	-13.0	-44.0	

LTE Band 17

5MHz QPSK										5MHz 16QAM									
UL Verification Services, Inc. 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 17 Harmonics, 5MHz Bandwidth										UL Verification Services, Inc. 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 17 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	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 706.50										Low Ch, 706.50									
1413.00	-25.2	V	3.0	37.4	1.0	-61.6	-13.0	-48.6		1413.00	-25.8	V	3.0	37.4	1.0	-62.1	-13.0	-49.1	
2119.50	-22.2	V	3.0	36.6	1.0	-57.8	-13.0	-44.8		2119.50	-22.4	V	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2826.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8		2826.00	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1413.00	-17.6	H	3.0	37.4	1.0	-54.0	-13.0	-41.0		1413.00	-18.9	H	3.0	37.4	1.0	-55.3	-13.0	-42.3	
2119.50	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9		2119.50	-22.4	H	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2826.00	-21.5	H	3.0	36.4	1.0	-56.8	-13.0	-43.8		2826.00	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
Mid Ch, 710.00										Mid Ch, 710.00									
1420.00	-27.0	V	3.0	37.3	1.0	-63.4	-13.0	-50.4		1420.00	-27.4	V	3.0	37.3	1.0	-63.8	-13.0	-50.8	
2130.00	-21.5	V	3.0	36.6	1.0	-57.1	-13.0	-44.1		2130.00	-22.0	V	3.0	36.6	1.0	-57.5	-13.0	-44.5	
2840.00	-21.2	V	3.0	36.4	1.0	-56.6	-13.0	-43.6		2840.00	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
1420.00	-21.5	H	3.0	37.3	1.0	-57.8	-13.0	-44.8		1420.00	-21.6	H	3.0	37.3	1.0	-57.9	-13.0	-44.9	
2130.00	-21.8	H	3.0	36.6	1.0	-57.4	-13.0	-44.4		2130.00	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2840.00	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3		2840.00	-22.2	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
High Ch, 713.50										High Ch, 713.50									
1427.00	-25.4	V	3.0	37.3	1.0	-61.7	-13.0	-48.7		1427.00	-25.5	V	3.0	37.3	1.0	-61.8	-13.0	-48.8	
2140.50	-19.9	V	3.0	36.6	1.0	-55.5	-13.0	-42.5		2140.50	-20.8	V	3.0	36.6	1.0	-56.4	-13.0	-43.4	
2854.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3		2854.00	-22.1	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1427.00	-20.1	H	3.0	37.3	1.0	-56.5	-13.0	-43.5		1427.00	-20.3	H	3.0	37.3	1.0	-56.6	-13.0	-43.6	
2140.50	-22.1	H	3.0	36.6	1.0	-57.7	-13.0	-44.7		2140.50	-22.2	H	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2854.00	-21.2	H	3.0	36.4	1.0	-56.6	-13.0	-43.6		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 Company: LG Project #: Date: 1/8/2016 Test Engineer: A. Escamilla Configuration: EUT + AC Adapter + HS Location: Chamber B Mode: LTE_QPSK Band 17 Harmonics, 10MHz Bandwidth										UL Verification Services, Inc. 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 17 Harmonics, 10MHz Bandwidth									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 709										Low Ch, 709									
1418.00	-25.2	V	3.0	37.4	1.0	-61.6	-13.0	-48.6		1418.00	-25.4	V	3.0	37.4	1.0	-61.8	-13.0	-48.8	
2127.00	-22.1	V	3.0	36.6	1.0	-57.7	-13.0	-44.7		2127.00	-23.0	V	3.0	36.6	1.0	-58.5	-13.0	-45.5	
2836.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8		2836.00	-21.8	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1418.00	-18.3	H	3.0	37.4	1.0	-54.6	-13.0	-41.6		1418.00	-18.1	H	3.0	37.4	1.0	-54.5	-13.0	-41.5	
2127.00	-21.8	H	3.0	36.6	1.0	-57.4	-13.0	-44.4		2127.00	-21.5	H	3.0	36.6	1.0	-57.1	-13.0	-44.1	
2836.00	-21.6	H	3.0	36.4	1.0	-57.0	-13.0	-44.0		2836.00	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
Mid Ch, 710										Mid Ch, 710									
1420.00	-25.3	V	3.0	37.3	1.0	-61.6	-13.0	-48.6		1420.00	-25.6	V	3.0	37.3	1.0	-61.9	-13.0	-48.9	
2130.00	-21.9	V	3.0	36.6	1.0	-57.4	-13.0	-44.4		2130.00	-22.4	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2840.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8		2840.00	-21.6	V	3.0	36.4	1.0	-57.0	-13.0	-44.0	
1420.00	-20.5	H	3.0	37.3	1.0	-56.9	-13.0	-43.9		1420.00	-20.8	H	3.0	37.3	1.0	-57.2	-13.0	-44.2	
2130.00	-21.8	H	3.0	36.6	1.0	-57.4	-13.0	-44.4		2130.00	-23.2	H	3.0	36.6	1.0	-58.8	-13.0	-45.8	
2840.00	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3		2840.00	-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	-21.8	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	

LTE Band 25

1.4MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics Project #: 1/5/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 25 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
Low Ch, 1850.7									
3705.40	-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	-48.7	-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, 1882.5									
3765.00	-17.6	V	3.0	33.8	1.0	-56.4	-13.0	-37.4	
5647.50	-22.9	V	3.0	33.1	1.0	-56.0	-13.0	-43.0	
7530.00	-20.9	V	3.0	32.8	1.0	-52.8	-13.0	-39.8	
3765.00	-15.8	H	3.0	33.8	1.0	-48.6	-13.0	-35.6	
5647.50	-23.6	H	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7530.00	-20.3	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	
High Ch, 1914.3									
3828.60	-20.5	V	3.0	33.7	1.0	-53.2	-13.0	-40.2	
5742.90	-23.6	V	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7657.20	-20.0	V	3.0	32.8	1.0	-51.8	-13.0	-38.8	
3828.60	-20.3	H	3.0	33.7	1.0	-53.1	-13.0	-40.1	
5742.90	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7657.20	-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 #: 1/5/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_16QAM Band 25 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
Low Ch, 1850.7									
3705.40	-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, 1882.5									
3765.00	-17.3	V	3.0	33.8	1.0	-50.1	-13.0	-37.1	
5647.50	-22.5	V	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7530.00	-20.4	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3765.00	-15.8	H	3.0	33.8	1.0	-48.6	-13.0	-35.6	
5647.50	-23.2	H	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7530.00	-20.4	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	
High Ch, 1914.3									
3828.60	-20.7	V	3.0	33.7	1.0	-53.4	-13.0	-40.4	
5742.90	-23.6	V	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7657.20	-20.2	V	3.0	32.8	1.0	-52.0	-13.0	-39.0	
3828.60	-18.1	H	3.0	33.7	1.0	-50.9	-13.0	-37.9	
5742.90	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7657.20	-20.4	H	3.0	32.8	1.0	-52.2	-13.0	-39.2	

3MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company: LG Electronics Project #: 1/5/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 25 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
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, 1882.5									
3765.00	-22.4	V	3.0	33.8	1.0	-55.2	-13.0	-42.2	
5647.50	-24.3	V	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7530.00	-20.4	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3765.00	-20.7	H	3.0	33.8	1.0	-53.5	-13.0	-40.5	
5647.50	-23.4	H	3.0	33.1	1.0	-55.5	-13.0	-42.5	
7530.00	-20.7	H	3.0	32.8	1.0	-52.6	-13.0	-39.6	
High Ch, 1913.5									
3827.00	-19.5	V	3.0	33.7	1.0	-52.2	-13.0	-39.2	
5740.50	-23.0	V	3.0	33.1	1.0	-55.1	-13.0	-42.1	
7654.00	-20.6	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3827.00	-18.2	H	3.0	33.7	1.0	-50.9	-13.0	-37.9	
5740.50	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7654.00	-20.0	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 #: 1/5/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_16QAM Band 25 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
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, 1882.5									
3765.00	-22.3	V	3.0	33.8	1.0	-55.1	-13.0	-42.1	
5647.50	-23.7	V	3.0	33.1	1.0	-55.8	-13.0	-42.8	
7530.00	-20.8	V	3.0	32.8	1.0	-52.6	-13.0	-39.6	
3765.00	-20.4	H	3.0	33.8	1.0	-53.2	-13.0	-40.2	
5647.50	-23.1	H	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7530.00	-20.6	H	3.0	32.8	1.0	-52.5	-13.0	-39.5	
High Ch, 1913.5									
3827.00	-19.1	V	3.0	33.7	1.0	-51.9	-13.0	-38.9	
5740.50	-23.8	V	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7654.00	-20.0	V	3.0	32.8	1.0	-51.9	-13.0	-38.9	
3827.00	-18.2	H	3.0	33.7	1.0	-50.9	-13.0	-37.9	
5740.50	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7654.00	-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 #: 1/5/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_QPSK Band 25 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
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, 1882.5									
3765.00	-22.3	V	3.0	33.8	1.0	-55.1	-13.0	-42.1	
5647.50	-23.2	V	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7530.00	-20.5	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3765.00	-18.0	H	3.0	33.8	1.0	-50.8	-13.0	-37.8	
5647.50	-23.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7530.00	-20.5	H	3.0	32.8	1.0	-52.3	-13.0	-39.3	
High Ch, 1912.5									
3825.00	-21.7	V	3.0	33.7	1.0	-54.5	-13.0	-41.5	
5737.50	-23.8	V	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7650.00	-20.7	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3825.00	-19.7	H	3.0	33.7	1.0	-52.4	-13.0	-39.4	
5737.50	-23.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7650.00	-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 #: 1/5/2016 Test Engineer: O. Stoelting Configuration: X-pos EUT Only Location: Chamber C Mode: LTE_16QAM Band 25 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
Low Ch, 1852.5									
3705.00	-17.9	V	3.0	33.9	1.0	-50.8	-13.0	-37.8	
5557.50	-24.8	V	3.0	33.1	1.0	-56.9	-13.0	-43.9	
7410.00	-20.7	V	3.0	32.9	1.0	-52.6	-13.0	-39.6	
3705.00	-16.9	H	3.0	33.9	1.0	-49.7	-13.0	-36.7	
5557.50	-24.6	H	3.0	33.1	1.0	-56.7	-13.0	-43.7	
7410.00	-20.5	H	3.0	32.9	1.0	-52.4	-13.0	-39.4	
Mid Ch, 1882.5									
3765.00	-22.8	V	3.0	33.8	1.0	-55.6	-13.0	-42.6	
5647.50	-23.6	V	3.0	33.1	1.0	-55.7	-13.0	-42.7	
7530.00	-20.7	V	3.0	32.8	1.0	-52.6	-13.0	-39.6	
3765.00	-20.2	H	3.0	33.8	1.0	-53.0	-13.0	-40.0	
5647.50	-23.9	H	3.0	33.1	1.0	-56.0	-13.0	-43.0	
7530.00	-20.3	H	3.0	32.8	1.0	-52.1	-13.0	-39.1	
High Ch, 1912.5									
3825.00	-22.2	V	3.0	33.7	1.0	-55.0	-13.0	-42.0	
5737.50	-23.9	V	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7650.00	-21.0	V	3.0	32.8	1.0	-52.8	-13.0	-39.8	
3825.00	-18.5	H	3.0	33.7	1.0	-51.2	-13.0	-38.2	
5737.50	-23.1	H	3.0	33.1	1.0	-55.2	-13.0	-42.2	
7650.00	-20.2	H	3.0	32.8	1.0	-52.1	-13.0	-39.1	

10MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LQ Electronics							
Project #:		1/6/2016							
Date:		O. Stoeling							
Test Engineer:		X-pos EUT Only							
Configuration:		Chamber C							
Location:		LTE_QPSK Band 25 Harmonics, 10MHz Bandwidth							
Mode:									
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 1855									
3710.00	-16.6	V	3.0	33.9	1.0	-49.5	-13.0	-36.5	
5565.00	-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	
5565.00	-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	-39.3	
Mid Ch, 1882.5									
3765.00	-23.3	V	3.0	33.8	1.0	-56.1	-13.0	-43.1	
5647.50	-24.0	V	3.0	33.1	1.0	-56.1	-13.0	-43.1	
7530.00	-21.1	V	3.0	32.8	1.0	-52.9	-13.0	-39.9	
3765.00	-20.5	H	3.0	33.8	1.0	-53.3	-13.0	-40.3	
5647.50	-23.5	H	3.0	33.1	1.0	-55.5	-13.0	-42.5	
7530.00	-20.2	H	3.0	32.8	1.0	-52.0	-13.0	-39.0	
High Ch, 1910									
3820.00	-22.6	V	3.0	33.7	1.0	-55.4	-13.0	-42.4	
5730.00	-23.2	V	3.0	33.1	1.0	-55.3	-13.0	-42.3	
7640.00	-20.5	V	3.0	32.8	1.0	-52.4	-13.0	-39.4	
3820.00	-20.1	H	3.0	33.7	1.0	-52.8	-13.0	-39.8	
5730.00	-22.4	H	3.0	33.1	1.0	-54.5	-13.0	-41.5	
7640.00	-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:		LQ Electronics							
Project #:		1/6/2016							
Date:		O. Stoeling							
Test Engineer:		X-pos EUT Only							
Configuration:		Chamber C							
Location:		LTE_16QAM Band 25 Harmonics, 10MHz Bandwidth							
Mode:									
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 1855									
3710.00	-16.7	V	3.0	33.9	1.0	-49.5	-13.0	-36.5	
5565.00	-24.5	V	3.0	33.1	1.0	-56.5	-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	
5565.00	-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	-39.3	
Mid Ch, 1882.5									
3765.00	-23.3	V	3.0	33.8	1.0	-56.1	-13.0	-43.1	
5647.50	-24.4	V	3.0	33.1	1.0	-56.5	-13.0	-43.5	
7530.00	-21.0	V	3.0	32.8	1.0	-52.9	-13.0	-39.9	
3765.00	-21.9	H	3.0	33.8	1.0	-54.7	-13.0	-41.7	
5647.50	-21.7	H	3.0	33.1	1.0	-53.8	-13.0	-40.8	
7530.00	-20.5	H	3.0	32.8	1.0	-52.4	-13.0	-39.4	
High Ch, 1910									
3820.00	-22.2	V	3.0	33.7	1.0	-55.0	-13.0	-42.0	
5730.00	-23.4	V	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7640.00	-20.5	V	3.0	32.8	1.0	-52.3	-13.0	-39.3	
3820.00	-19.2	H	3.0	33.7	1.0	-51.9	-13.0	-38.9	
5730.00	-22.6	H	3.0	33.1	1.0	-54.7	-13.0	-41.7	
7640.00	-20.2	H	3.0	32.8	1.0	-52.0	-13.0	-39.0	

15MHz QPSK									
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		LQ Electronics							
Project #:		1/6/2016							
Date:		O. Stoeling							
Test Engineer:		X-pos EUT Only							
Configuration:		Chamber C							
Location:		LTE_QPSK Band 25 Harmonics, 15MHz Bandwidth							
Mode:									
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 1857.5									
3715.00	-19.0	V	3.0	33.9	1.0	-51.8	-13.0	-38.8	
5572.50	-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	
5572.50	-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, 1882.5									
3765.00	-20.7	V	3.0	33.8	1.0	-53.5	-13.0	-40.5	
5647.50	-23.9	V	3.0	33.1	1.0	-56.0	-13.0	-43.0	
7530.00	-21.6	V	3.0	32.8	1.0	-53.4	-13.0	-40.4	
3765.00	-19.4	H	3.0	33.8	1.0	-52.2	-13.0	-39.2	
5647.50	-23.9	H	3.0	33.1	1.0	-55.9	-13.0	-42.9	
7530.00	-20.2	H	3.0	32.8	1.0	-52.0	-13.0	-39.0	
High Ch, 1907.5									
3815.00	-21.5	V	3.0	33.7	1.0	-54.2	-13.0	-41.2	
5722.50	-23.1	V	3.0	33.1	1.0	-55.2	-13.0	-42.2	
7630.00	-20.7	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3815.00	-17.4	H	3.0	33.7	1.0	-50.2	-13.0	-37.2	
5722.50	-23.3	H	3.0	33.1	1.0	-55.4	-13.0	-42.4	
7630.00	-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:		LQ Electronics							
Project #:		1/6/2016							
Date:		O. Stoeling							
Test Engineer:		X-pos EUT Only							
Configuration:		Chamber C							
Location:		LTE_16QAM Band 25 Harmonics, 15MHz Bandwidth							
Mode:									
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
Low Ch, 1857.5									
3715.00	-17.9	V	3.0	33.9	1.0	-50.7	-13.0	-37.7	
5572.50	-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	
5572.50	-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, 1882.5									
3765.00	-21.2	V	3.0	33.8	1.0	-54.0	-13.0	-41.0	
5647.50	-24.2	V	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7530.00	-21.2	V	3.0	32.8	1.0	-53.1	-13.0	-40.1	
3765.00	-19.6	H	3.0	33.8	1.0	-52.4	-13.0	-39.4	
5647.50	-23.5	H	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7530.00	-19.5	H	3.0	32.8	1.0	-51.4	-13.0	-38.4	
High Ch, 1907.5									
3815.00	-20.8	V	3.0	33.7	1.0	-53.5	-13.0	-40.5	
5722.50	-23.4	V	3.0	33.1	1.0	-55.5	-13.0	-42.5	
7630.00	-20.7	V	3.0	32.8	1.0	-52.5	-13.0	-39.5	
3815.00	-17.3	H	3.0	33.7	1.0	-50.1	-13.0	-37.1	
5722.50	-23.0	H	3.0	33.1	1.0	-55.1	-13.0	-42.1	
7630.00	-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:		LQ Electronics							
Project #:		1/6/2016							
Date:		O. Stoeling							
Test Engineer:		X-pos EUT Only							
Configuration:		Chamber C							
Location:		LTE_QPSK Band 25 Harmonics, 20MHz Bandwidth							
Mode:									
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
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, 1882.5									
3765.00	-21.3	V	3.0	33.8	1.0	-54.1	-13.0	-41.1	
5647.50	-24.3	V	3.0	33.1	1.0	-56.4	-13.0	-43.4	
7530.00	-21.1	V	3.0	32.8	1.0	-52.9	-13.0	-39.9	
3765.00	-18.3	H	3.0	33.8	1.0	-51.1	-13.0	-38.1	
5647.50	-24.2	H	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7530.00	-21.5	H	3.0	32.8	1.0	-53.4	-13.0	-40.4	
High Ch, 1905									
3810.00	-16.6	V	3.0	33.8	1.0	-49.3	-13.0	-36.3	
5715.00	-23.1	V	3.0	33.1	1.0	-55.2	-13.0	-42.2	
7620.00	-19.1	V	3.0	32.8	1.0	-50.5	-13.0	-37.5	
3810.00	-18.7	H	3.0	33.8	1.0	-51.4	-13.0	-38.4	
5715.00	-23.1	H	3.0	33.1	1.0	-55.2	-13.0	-42.2	
7620.00	-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:		LQ Electronics							
Project #:		1/6/2016							
Date:		O. Stoeling							
Test Engineer:		X-pos EUT Only							
Configuration:		Chamber C							
Location:		LTE_16QAM Band 25 Harmonics, 20MHz Bandwidth							
Mode:									
f	SG reading	Ant. Pol.	Distance	Preamp	Filter	ERP	Limit	Delta	Notes
MHz	(dBm)	(H/V)	(m)	(dB)	(dB)	(dBm)	(dBm)	(dB)	
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, 1882.5									
3765.00	-11.8	V	3.0	33.8	1.0	-44.6	-13.0	-31.6	
5647.50	-24.2	V	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7530.00	-20.9	V	3.0	32.8	1.0	-52.8	-13.0	-39.8	
3765.00	-18.7	H	3.0	33.8	1.0	-51.5	-13.0	-38.5	
5647.50	-24.2	H	3.0	33.1	1.0	-56.3	-13.0	-43.3	
7530.00	-21.1	H	3.0	32.8	1.0	-52.9	-13.0	-39.9	
High Ch, 1905									
3810.00	-18.6	V	3.0	33.8	1.0	-51.4	-13.0	-38.4	
5715.00	-23.5	V	3.0	33.1	1.0	-55.6	-13.0	-42.6	
7620.00	-20.6	V	3.0	32.8	1.0	-52.4	-13.0	-39.4	
3810.00	-19.8	H	3.0	33.8	1.0	-52.5	-13.0	-39.5	
5715.00	-22.5	H	3.0	33.1	1.0	-54.6	-13.0	-41.6	
7620.00	-19.8	H	3.0	32.8	1.0	-51.7	-13.0	-38.7	