

**16QAM EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b>	15U21634									
<b>Date:</b>	12/23/2015									
<b>Test Engineer:</b>	M. Hua									
<b>Configuration:</b>	EUT Only									
<b>Mode:</b>	LTE Band 5 16QAM 10MHz BW									
<b>Test Equipment:</b>										
Receiving: Sunol T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	14.81	V	0.6	0.0	14.19	16.34	38.45	40.60	-24.3	
829.00	19.87	H	0.6	0.0	19.25	21.40	38.45	40.60	-19.2	
Mid Ch										
836.50	14.80	V	0.6	0.0	14.18	16.33	38.45	40.60	-24.3	
836.50	20.02	H	0.6	0.0	19.40	21.55	38.45	40.60	-19.0	
High Ch										
844.00	14.25	V	0.6	0.0	13.63	15.78	38.45	40.60	-24.8	
844.00	19.94	H	0.6	0.0	19.32	21.47	38.45	40.60	-19.1	
Rev. 12.14.15										

9.1.4. LTE BAND 12

**QPSK EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 QPSK 1.4MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunoi T408, and Chamber E Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
<b>Low Ch</b>										
699.70	10.02	V	0.55	0.0	9.47	11.62	34.77	36.99	-25.4	
699.70	18.55	H	0.55	0.0	18.00	20.15	34.77	36.99	-16.8	
<b>Mid Ch</b>										
707.50	10.26	V	0.55	0.0	9.71	11.86	34.77	36.99	-25.1	
707.50	18.71	H	0.55	0.0	18.16	20.31	34.77	36.99	-16.7	
<b>High Ch</b>										
715.30	10.66	V	0.55	0.0	10.11	12.26	34.77	36.99	-24.7	
715.30	18.74	H	0.55	0.0	18.19	20.34	34.77	36.99	-16.6	
Rev. 12.14.15										

**16QAM EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/23/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 16QAM 1.4MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber E Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
699.70	9.09	V	0.55	0.0	8.54	10.69	34.77	36.99	-26.3		
699.70	17.95	H	0.55	0.0	17.40	19.55	34.77	36.99	-17.4		
Mid Ch											
707.50	9.53	V	0.55	0.0	8.98	11.13	34.77	36.99	-25.9		
707.50	17.88	H	0.55	0.0	17.33	19.48	34.77	36.99	-17.5		
High Ch											
715.30	9.67	V	0.55	0.0	9.12	11.27	34.77	36.99	-25.7		
715.30	18.00	H	0.55	0.0	17.45	19.60	34.77	36.99	-17.4		
Rev. 12.14.15											

**QPSK EIRP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/23/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 QPSK 3MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber E Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
700.50	9.93	V	0.55	0.0	9.38	11.53	34.77	36.99	-25.5		
700.50	18.12	H	0.55	0.0	17.57	19.72	34.77	36.99	-17.3		
Mid Ch											
707.50	10.28	V	0.55	0.0	9.73	11.88	34.77	36.99	-25.1		
707.50	18.20	H	0.55	0.0	17.65	19.80	34.77	36.99	-17.2		
High Ch											
714.50	10.51	V	0.55	0.0	9.96	12.11	34.77	36.99	-24.9		
714.50	18.24	H	0.55	0.0	17.69	19.84	34.77	36.99	-17.1		
Rev. 12.14.15											

**16QAM EIRP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/23/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 16QAM 3MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber E Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
700.50	8.97	V	0.55	0.0	8.42	10.57	34.77	36.99	-26.4		
700.50	17.35	H	0.55	0.0	16.80	18.95	34.77	36.99	-18.0		
Mid Ch											
707.50	9.41	V	0.55	0.0	8.86	11.01	34.77	36.99	-26.0		
707.50	17.50	H	0.55	0.0	16.95	19.10	34.77	36.99	-17.9		
High Ch											
714.50	9.54	V	0.55	0.0	8.99	11.14	34.77	36.99	-25.9		
714.50	17.44	H	0.55	0.0	16.89	19.04	34.77	36.99	-17.9		
Rev. 12.14.15											

**QPSK EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	9.88	V	0.55	0.0	9.33	11.48	34.77	36.99	-25.5	
701.50	18.25	H	0.55	0.0	17.70	19.85	34.77	36.99	-17.1	
Mid Ch										
707.50	9.87	V	0.55	0.0	9.32	11.47	34.77	36.99	-25.5	
707.50	18.10	H	0.55	0.0	17.55	19.70	34.77	36.99	-17.3	
High Ch										
713.50	10.38	V	0.55	0.0	9.83	11.98	34.77	36.99	-25.0	
713.50	18.29	H	0.55	0.0	17.74	19.89	34.77	36.99	-17.1	
Rev. 12.14.15										

**16QAM EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 16QAM 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	8.96	V	0.55	0.0	8.41	10.56	34.77	36.99	-26.4	
701.50	17.31	H	0.55	0.0	16.76	18.91	34.77	36.99	-18.1	
Mid Ch										
707.50	8.86	V	0.55	0.0	8.31	10.46	34.77	36.99	-26.5	
707.50	17.40	H	0.55	0.0	16.85	19.00	34.77	36.99	-18.0	
High Ch										
713.50	9.36	V	0.55	0.0	8.81	10.96	34.77	36.99	-26.0	
713.50	17.44	H	0.55	0.0	16.89	19.04	34.77	36.99	-17.9	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/23/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 QPSK 10MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T122, and Chamber F Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
704.00	9.88	V	0.55	0.0	9.33	11.48	34.77	36.99	-25.5		
704.00	18.05	H	0.55	0.0	17.50	19.65	34.77	36.99	-17.3		
Mid Ch											
707.50	9.98	V	0.55	0.0	9.43	11.58	34.77	36.99	-25.4		
707.50	17.95	H	0.55	0.0	17.40	19.55	34.77	36.99	-17.4		
High Ch											
711.00	10.12	V	0.55	0.0	9.57	11.72	34.77	36.99	-25.3		
711.00	17.92	H	0.55	0.0	17.37	19.52	34.77	36.99	-17.5		
Rev. 12.14.15											



**16QAM EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/23/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 16QAM 10MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T122, and Chamber F Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
704.00	8.97	V	0.55	0.0	8.42	10.57	34.77	36.99	-26.4		
704.00	17.25	H	0.55	0.0	16.70	18.85	34.77	36.99	-18.1		
Mid Ch											
707.50	9.09	V	0.55	0.0	8.54	10.69	34.77	36.99	-26.3		
707.50	17.20	H	0.55	0.0	16.65	18.80	34.77	36.99	-18.2		
High Ch											
711.00	9.06	V	0.55	0.0	8.51	10.66	34.77	36.99	-26.3		
711.00	17.04	H	0.55	0.0	16.49	18.64	34.77	36.99	-18.3		
Rev. 12.14.15											

9.1.5. LTE BAND 13

**QPSK EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunoi T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	15.64	V	0.55	0.0	15.09	17.24	34.77	36.99	-19.8	
779.50	18.77	H	0.55	0.0	18.22	20.37	34.77	36.99	-16.6	
Mid Ch										
782.00	15.94	V	0.55	0.0	15.39	17.54	34.77	36.99	-19.5	
782.00	18.95	H	0.55	0.0	18.40	20.55	34.77	36.99	-16.4	
High Ch										
784.50	15.88	V	0.55	0.0	15.33	17.48	34.77	36.99	-19.5	
784.50	18.65	H	0.55	0.0	18.10	20.25	34.77	36.99	-16.7	
Rev. 12.14.15										

**16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 16QAM5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	14.60	V	0.55	0.0	14.05	16.20	34.77	36.99	-20.8	
779.50	18.12	H	0.55	0.0	17.57	19.72	34.77	36.99	-17.3	
Mid Ch										
782.00	14.93	V	0.55	0.0	14.38	16.53	34.77	36.99	-20.5	
782.00	18.10	H	0.55	0.0	17.55	19.70	34.77	36.99	-17.3	
High Ch										
784.50	14.90	V	0.55	0.0	14.35	16.50	34.77	36.99	-20.5	
784.50	18.05	H	0.55	0.0	17.50	19.65	34.77	36.99	-17.3	
Rev. 10.24.13										

**QPSK EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 QPSK 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	15.97	V	0.55	0.0	15.42	17.57	34.77	36.99	-19.4	
782.00	18.81	H	0.55	0.0	18.26	20.41	34.77	36.99	-16.6	
Rev. 12.14.15										

**16QAM EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber F										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/23/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 16QAM 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T122, and Chamber F Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	14.98	V	0.55	0.0	14.43	16.58	34.77	36.99	-20.4	
782.00	18.00	H	0.55	0.0	17.45	19.60	34.77	36.99	-17.4	
Rev. 10.24.13										

9.1.6. LTE BAND 17

**QPSK EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	9.84	V	0.55	0.0	9.29	11.44	34.77	36.99	-25.6	
706.50	18.45	H	0.55	0.0	17.90	20.05	34.77	36.99	-16.9	
Mid Ch										
710.00	11.13	V	0.55	0.0	10.58	12.73	34.77	36.99	-24.3	
710.00	18.64	H	0.55	0.0	18.09	20.24	34.77	36.99	-16.8	
High Ch										
713.50	10.48	V	0.55	0.0	9.93	12.08	34.77	36.99	-24.9	
713.50	18.65	H	0.55	0.0	18.10	20.25	34.77	36.99	-16.7	
Rev. 11.25.15										

**16QAM EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 16QAM 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	9.29	V	0.55	0.0	8.74	10.89	34.77	36.99	-26.1	
706.50	17.61	H	0.55	0.0	17.06	19.21	34.77	36.99	-17.8	
Mid Ch										
710.00	10.11	V	0.55	0.0	9.56	11.71	34.77	36.99	-25.3	
710.00	17.60	H	0.55	0.0	17.05	19.20	34.77	36.99	-17.8	
High Ch										
713.50	10.30	V	0.55	0.0	9.75	11.90	34.77	36.99	-25.1	
713.50	17.68	H	0.55	0.0	17.13	19.28	34.77	36.99	-17.7	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 QPSK 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	10.84	V	0.55	0.0	10.29	12.44	34.77	36.99	-24.5	
710.00	18.70	H	0.55	0.0	18.15	20.30	34.77	36.99	-16.7	
Rev. 11.24.15										



**16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> F. Guarero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 16QAM 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	10.21	V	0.55	0.0	9.66	11.81	34.77	36.99	-25.2	
710.00	17.80	H	0.55	0.0	17.25	19.40	34.77	36.99	-17.6	
Rev. 11.24.15										

### 9.1.7. LTE BAND 25

#### QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 QPSK 1.4MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.851	10.3	V	0.98	8.05	17.40	33.0	-15.6		
1.851	17.9	H	0.98	8.05	25.02	33.0	-8.0		
Mid Ch									
1.883	8.8	V	0.98	8.03	15.87	33.0	-17.1		
1.883	17.8	H	0.98	8.03	24.85	33.0	-8.1		
High Ch									
1.914	10.5	V	0.98	8.07	17.61	33.0	-15.4		
1.914	17.7	H	0.98	8.07	24.74	33.0	-8.3		
Rev. 12.14.15									

**16QAM EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
Company:									
Project #: 15U21634									
Date: 12/28/2015									
Test Engineer: M. Hua									
Configuration: EUT Only									
Mode: LTE Band 25 16QAM 1.4MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.851	9.2	V	0.98	8.05	16.26	33.0	-16.7		
1.851	17.0	H	0.98	8.05	24.12	33.0	-8.9		
Mid Ch									
1.883	7.8	V	0.98	8.03	14.86	33.0	-18.1		
1.883	16.8	H	0.98	8.03	23.80	33.0	-9.2		
High Ch									
1.914	9.8	V	0.98	8.07	16.86	33.0	-16.1		
1.914	16.6	H	0.98	8.07	23.67	33.0	-9.3		
Rev. 12.14.15									

**QPSK EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
Company:									
Project #: 15U21634									
Date: 12/28/2015									
Test Engineer: M. Hua									
Configuration: EUT Only									
Mode: LTE Band 25 QPSK 3MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.852	10.1	V	0.98	8.05	17.20	33.0	-15.8		
1.852	18.1	H	0.98	8.05	25.17	33.0	-7.8		
Mid Ch									
1.883	8.8	V	0.98	8.03	15.82	33.0	-17.2		
1.883	17.7	H	0.98	8.03	24.75	33.0	-8.2		
High Ch									
1.914	11.2	V	0.98	8.07	18.28	33.0	-14.7		
1.914	17.6	H	0.98	8.07	24.64	33.0	-8.4		
Rev. 12.14.15									

**16QAM EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 16QAM 3MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
<b>Low Ch</b>									
1.852	9.1	V	0.98	8.05	16.13	33.0	-16.9		
1.852	17.3	H	0.98	8.05	24.36	33.0	-8.6		
<b>Mid Ch</b>									
1.883	7.7	V	0.98	8.03	14.78	33.0	-18.2		
1.883	16.4	H	0.98	8.03	23.48	33.0	-9.5		
<b>High Ch</b>									
1.914	10.1	V	0.98	8.07	17.19	33.0	-15.8		
1.914	16.4	H	0.98	8.07	23.52	33.0	-9.5		
Rev. 12.14.15									

**QPSK EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
Company:									
Project #: 15U21634									
Date: 12/28/2015									
Test Engineer: M. Hua									
Configuration: EUT Only									
Mode: LTE Band 25 QPSK 5MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.853	10.2	V	0.98	8.05	17.25	33.0	-15.8		
1.853	17.9	H	0.98	8.05	25.01	33.0	-8.0		
Mid Ch									
1.883	8.8	V	0.98	8.03	15.85	33.0	-17.2		
1.883	17.8	H	0.98	8.03	24.82	33.0	-8.2		
High Ch									
1.913	11.0	V	0.98	8.06	18.05	33.0	-14.9		
1.913	17.6	H	0.98	8.06	24.69	33.0	-8.3		
Rev. 12.14.15									

**16QAM EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
Company:									
Project #: 15U21634									
Date: 12/28/2015									
Test Engineer: M. Hua									
Configuration: EUT Only									
Mode: LTE Band 25 16QAM 5MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.853	9.4	V	0.98	8.05	16.42	33.0	-16.6		
1.853	17.0	H	0.98	8.05	24.11	33.0	-8.9		
Mid Ch									
1.883	7.6	V	0.98	8.03	14.60	33.0	-18.4		
1.883	16.3	H	0.98	8.03	23.36	33.0	-9.6		
High Ch									
1.913	10.1	V	0.98	8.06	17.14	33.0	-15.9		
1.913	16.4	H	0.98	8.06	23.48	33.0	-9.5		
Rev. 12.14.15									

**QPSK EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 QPSK 10MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
<b>Low Ch</b>									
1.855	10.4	V	0.98	8.05	17.51	33.0	-15.5		
1.855	18.2	H	0.98	8.05	25.26	33.0	-7.7		
<b>Mid Ch</b>									
1.883	9.2	V	0.98	8.03	16.20	33.0	-16.8		
1.883	17.6	H	0.98	8.03	24.66	33.0	-8.3		
<b>High Ch</b>									
1.910	11.7	V	0.98	8.05	18.78	33.0	-14.2		
1.910	18.0	H	0.98	8.05	25.03	33.0	-8.0		
Rev. 12.14.15									



**16QAM EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 16QAM 10MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
<b>Low Ch</b>									
1.855	9.3	V	0.98	8.05	16.41	33.0	-16.6		
1.855	17.2	H	0.98	8.05	24.27	33.0	-8.7		
<b>Mid Ch</b>									
1.883	8.0	V	0.98	8.03	15.07	33.0	-17.9		
1.883	16.7	H	0.98	8.03	23.78	33.0	-9.2		
<b>High Ch</b>									
1.910	10.5	V	0.98	8.05	17.60	33.0	-15.4		
1.910	16.9	H	0.98	8.05	24.00	33.0	-9.0		
Rev. 12.14.15									

**QPSK EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
Company:									
Project #: 15U21634									
Date: 12/28/2015									
Test Engineer: M. Hua									
Configuration: EUT Only									
Mode: LTE Band 25 QPSK 15MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.858	10.5	V	0.98	8.04	17.53	33.0	-15.5		
1.858	18.2	H	0.98	8.04	25.31	33.0	-7.7		
Mid Ch									
1.883	9.3	V	0.98	8.03	16.38	33.0	-16.6		
1.883	17.5	H	0.98	8.03	24.56	33.0	-8.4		
High Ch									
1.908	11.9	V	0.98	8.04	19.00	33.0	-14.0		
1.908	18.2	H	0.98	8.04	25.28	33.0	-7.7		
Rev. 12.14.15									

**16QAM EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 16QAM 15MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.858	9.5	V	0.98	8.04	16.54	33.0	-16.5		
1.858	17.3	H	0.98	8.04	24.41	33.0	-8.6		
Mid Ch									
1.883	8.3	V	0.98	8.03	15.39	33.0	-17.6		
1.883	16.5	H	0.98	8.03	23.54	33.0	-9.5		
High Ch									
1.908	11.0	V	0.98	8.04	18.01	33.0	-15.0		
1.908	17.3	H	0.98	8.04	24.37	33.0	-8.6		
Rev. 12.14.15									

**QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 QPSK 20MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.860	10.4	V	0.98	8.04	17.45	33.0	-15.5		
1.860	18.5	H	0.98	8.04	25.61	33.0	-7.4		
Mid Ch									
1.883	9.2	V	0.98	8.03	16.21	33.0	-16.8		
1.883	17.3	H	0.98	8.03	24.30	33.0	-8.7		
High Ch									
1.905	12.2	V	0.98	8.04	19.27	33.0	-13.7		
1.905	18.5	H	0.98	8.04	25.60	33.0	-7.4		
Rev. 12.14.15									

**16QAM EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
Company:									
Project #: 15U21634									
Date: 12/28/2015									
Test Engineer: M. Hua									
Configuration: EUT Only									
Mode: LTE Band 25 16QAM 20MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.860	9.5	V	0.98	8.04	16.58	33.0	-16.4		
1.860	17.2	H	0.98	8.04	24.31	33.0	-8.7		
Mid Ch									
1.883	8.1	V	0.98	8.03	15.16	33.0	-17.8		
1.883	16.3	H	0.98	8.03	23.37	33.0	-9.6		
High Ch									
1.905	11.0	V	0.98	8.04	18.09	33.0	-14.9		
1.905	17.1	H	0.98	8.04	24.14	33.0	-8.9		
Rev. 12.14.15									

9.1.8. LTE BAND 26

**QPSK EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/28/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 26 QPSK 1.4MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
814.70	14.81	V	0.62	0.0	14.19	16.34	38.45	40.60	-24.3		
814.70	22.50	H	0.62	0.0	21.88	24.03	38.45	40.60	-16.6		
Mid Ch											
819.00	15.42	V	0.62	0.0	14.80	16.95	38.45	40.60	-23.7		
819.00	22.38	H	0.62	0.0	21.76	23.91	38.45	40.60	-16.7		
High Ch											
823.30	15.68	V	0.62	0.0	15.06	17.21	38.45	40.60	-23.4		
823.30	22.58	H	0.62	0.0	21.96	24.11	38.45	40.60	-16.5		
Rev. 10.24.13											

**16QAM EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 1.4MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
814.70	14.11	V	0.62	0.0	13.49	15.64	38.45	40.60	-25.0	
814.70	21.50	H	0.62	0.0	20.88	23.03	38.45	40.60	-17.6	
Mid Ch										
819.00	14.67	V	0.62	0.0	14.05	16.20	38.45	40.60	-24.4	
819.00	21.38	H	0.62	0.0	20.76	22.91	38.45	40.60	-17.7	
High Ch										
823.30	14.69	V	0.62	0.0	14.07	16.22	38.45	40.60	-24.4	
823.30	21.44	H	0.62	0.0	20.82	22.97	38.45	40.60	-17.6	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 QPSK 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	14.92	V	0.62	0.0	14.30	16.45	38.45	40.60	-24.2	
815.50	22.53	H	0.62	0.0	21.91	24.06	38.45	40.60	-16.5	
Mid Ch										
819.00	15.68	V	0.62	0.0	15.06	17.21	38.45	40.60	-23.4	
819.00	22.75	H	0.62	0.0	22.13	24.28	38.45	40.60	-16.3	
High Ch										
822.50	15.63	V	0.62	0.0	15.01	17.16	38.45	40.60	-23.4	
822.50	22.52	H	0.62	0.0	21.90	24.05	38.45	40.60	-16.6	
Rev. 10.24.13										



**16QAM EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	14.13	V	0.62	0.0	13.51	15.66	38.45	40.60	-24.9	
815.50	21.83	H	0.62	0.0	21.21	23.36	38.45	40.60	-17.2	
Mid Ch										
819.00	14.70	V	0.62	0.0	14.08	16.23	38.45	40.60	-24.4	
819.00	21.94	H	0.62	0.0	21.32	23.47	38.45	40.60	-17.1	
High Ch										
822.50	14.60	V	0.62	0.0	13.98	16.13	38.45	40.60	-24.5	
822.50	21.56	H	0.62	0.0	20.94	23.09	38.45	40.60	-17.5	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	14.86	V	0.62	0.0	14.24	16.39	38.45	40.60	-24.2	
816.50	22.32	H	0.62	0.0	21.70	23.85	38.45	40.60	-16.8	
Mid Ch										
819.00	15.33	V	0.62	0.0	14.71	16.86	38.45	40.60	-23.7	
819.00	22.28	H	0.62	0.0	21.66	23.81	38.45	40.60	-16.8	
High Ch										
821.50	15.33	V	0.62	0.0	14.71	16.86	38.45	40.60	-23.7	
821.50	22.07	H	0.62	0.0	21.45	23.60	38.45	40.60	-17.0	
Rev. 12.14.15										

**16QAM EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	13.97	V	0.62	0.0	13.35	15.50	38.45	40.60	-25.1	
816.50	21.12	H	0.62	0.0	20.50	22.65	38.45	40.60	-18.0	
Mid Ch										
819.00	14.20	V	0.62	0.0	13.58	15.73	38.45	40.60	-24.9	
819.00	21.08	H	0.62	0.0	20.46	22.61	38.45	40.60	-18.0	
High Ch										
821.50	14.48	V	0.62	0.0	13.86	16.01	38.45	40.60	-24.6	
821.50	21.17	H	0.62	0.0	20.55	22.70	38.45	40.60	-17.9	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 QPSK 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunoi T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin EIRP (dB)	Notes
Mid Ch										
819.00	15.00	V	0.62	0.0	14.38	16.53	38.45	40.60	-24.1	
819.00	21.98	H	0.62	0.0	21.36	23.51	38.45	40.60	-17.1	
Rev. 10.24.13										

**16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Mid Ch										
819.00	14.27	V	0.62	0.0	13.65	15.80	38.45	40.60	-24.8	
819.00	21.18	H	0.62	0.0	20.56	22.71	38.45	40.60	-17.9	
Rev. 12.14.15										

## 9.2. RADIATED POWER (ERP & EIRP), UAT

### EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	1850.7	<b>21.58</b>	143.88
		1880.0	21.26	133.66
		1909.3	21.01	126.18
1.4MHz Band 16QAM	1/0	1850.7	<b>20.69</b>	117.22
		1880.0	20.46	111.17
		1909.3	20.04	100.93

### EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0MHz Band QPSK	1/0	1851.5	<b>21.36</b>	136.77
		1880.0	21.34	136.14
		1908.5	21.25	133.35
3.0MHz Band 16QAM	1/0	1851.5	20.38	109.14
		1880.0	<b>20.42</b>	110.15
		1908.5	20.17	103.99

### EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0MHz Band QPSK	1/0	1852.5	<b>21.40</b>	138.04
		1880.0	21.00	125.89
		1907.5	21.15	130.32
5.0MHz Band 16QAM	1/0	1852.5	<b>20.62</b>	115.35
		1880.0	19.93	98.40
		1907.5	20.18	104.23

### EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0MHz Band QPSK	1/0	1855.0	<b>21.64</b>	145.88
		1880.0	21.25	133.35
		1905.0	21.51	141.58
10.0MHz Band 16QAM	1/0	1855.0	<b>20.66</b>	116.41
		1880.0	20.31	107.40
		1905.0	20.44	110.66

**EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15MHz Band QPSK	1/0	1857.5	21.24	133.05
		1880.0	21.37	137.09
		1902.5	<b>21.78</b>	150.66
15MHz Band 16QAM	1/0	1857.5	20.46	111.17
		1880.0	20.36	108.64
		1902.5	<b>20.85</b>	121.62

**EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0MHz Band QPSK	1/0	1860.0	21.51	141.58
		1880.0	20.91	123.31
		1900.0	<b>21.68</b>	147.23
20MHz Band 16QAM	1/0	1860.0	<b>20.63</b>	115.61
		1880.0	19.96	99.08
		1900.0	20.49	111.94

**EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1710.7	18.07	64.12
		1732.5	18.11	64.71
		1754.3	<b>18.21</b>	66.22
1.4 MHZ BAND 16QAM	1/0	1710.7	16.85	48.42
		1732.5	<b>17.11</b>	51.40
		1754.3	16.97	49.77

**EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1711.5	18.11	64.71
		1732.5	<b>18.16</b>	65.46
		1753.5	18.12	64.86
3.0 MHZ BAND 16QAM	1/0	1711.5	16.75	47.32
		1732.5	<b>17.02</b>	50.35
		1753.5	17.00	50.12

**EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1712.5	17.97	62.66
		1732.5	<b>18.12</b>	64.86
		1752.5	18.01	63.24
5.0 MHZ BAND 16QAM	1/0	1712.5	16.77	47.53
		1732.5	16.92	49.20
		1752.5	<b>16.93</b>	49.32

**EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1715.0	17.84	60.81
		1732.5	<b>18.14</b>	65.16
		1750.0	17.95	62.37
10.0 MHZ BAND 16QAM	1/0	1715.0	16.67	46.45
		1732.5	<b>17.11</b>	51.40
		1750.0	17.02	50.35



**EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1717.5	17.75	59.57
		1732.5	<b>18.03</b>	63.53
		1747.5	17.88	61.38
15.0 MHZ BAND 16QAM	1/0	1717.5	16.60	45.71
		1732.5	<b>17.02</b>	50.35
		1747.5	16.95	49.55

**EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1720.0	17.65	58.21
		1732.5	<b>18.12</b>	64.86
		1745.0	17.81	60.39
20.0 MHZ BAND 16QAM	1/0	1720.0	16.46	44.26
		1732.5	<b>16.93</b>	49.32
		1745.0	16.89	48.87

**ERP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	<b>15.71</b>	37.24
		836.5	15.50	35.48
		848.3	15.33	34.12
1.4MHz Band 16QAM	1/0	824.7	<b>14.91</b>	30.97
		836.5	14.53	28.38
		848.3	14.57	28.64

**ERP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	<b>15.75</b>	37.58
		836.5	15.70	37.15
		847.5	15.24	33.42
3.0 MHZ BAND 16QAM	1/0	825.5	<b>15.01</b>	31.70
		836.5	14.72	29.65
		847.5	14.60	28.84

**ERP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	<b>16.01</b>	39.90
		836.5	15.31	33.96
		846.5	15.34	34.20
5MHz Band 16QAM	1/0	826.5	<b>14.95</b>	31.26
		836.5	14.42	27.67
		846.5	14.56	28.58

**ERP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	<b>15.99</b>	39.72
		836.5	15.60	36.31
		844.0	15.44	34.99
10.0 MHZ BAND 16QAM	1/0	829.0	<b>15.00</b>	31.62
		836.5	14.77	29.99
		844.0	14.54	28.44

**ERP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	699.7	15.18	32.96
		707.5	<b>15.19</b>	33.04
		715.3	14.97	31.41
1.4MHz Band 16QAM	1/0	699.7	14.19	26.24
		707.5	<b>14.40</b>	27.54
		715.3	14.10	25.70

**ERP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	700.5	15.14	32.66
		707.5	<b>15.31</b>	33.96
		714.5	14.93	31.12
3.0 MHZ BAND 16QAM	1/0	700.5	14.14	25.94
		707.5	<b>14.28</b>	26.79
		714.5	14.00	25.12

**ERP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	701.5	14.96	31.33
		707.5	15.03	31.84
		713.5	<b>15.08</b>	32.21
5MHz Band 16QAM	1/0	701.5	14.02	25.23
		707.5	14.01	25.18
		713.5	<b>14.04</b>	25.35

**ERP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	704.0	14.94	31.19
		707.5	14.91	30.97
		711.0	<b>15.04</b>	31.92
10.0 MHZ BAND 16QAM	1/0	704.0	14.01	25.18
		707.5	<b>14.13</b>	25.88
		711.0	14.01	25.18

**ERP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	<b>15.70</b>	37.15
		782.0	15.61	36.39
		784.5	15.29	33.81
5.0 MHZ BAND 16QAM	1/0	779.5	<b>14.88</b>	30.76
		782.0	14.77	29.99
		784.5	14.59	28.77

**ERP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	<b>15.65</b>	36.73
10 MHZ BAND 16QAM	1/0		<b>14.82</b>	30.34

**ERP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	14.63	29.04
		710.0	14.98	31.48
		713.5	<b>15.03</b>	31.84
5MHz Band 16QAM	1/0	706.5	13.76	23.77
		710.0	13.82	24.10
		713.5	<b>14.20</b>	26.30

**EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	710.0	<b>14.76</b>	29.92
10.0 MHZ BAND 16QAM		710.0	<b>13.71</b>	23.50

**EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1850.7	<b>20.03</b>	100.69
		1882.5	19.83	96.16
		1914.3	19.45	88.10
1.4 MHZ BAND 16QAM	1/0	1850.7	<b>19.17</b>	82.60
		1882.5	19.01	79.62
		1914.3	18.49	70.63

**EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1851.5	<b>20.07</b>	101.62
		1882.5	19.80	95.50
		1913.5	19.70	93.33
3.0 MHZ BAND 16QAM	1/0	1851.5	<b>19.16</b>	82.41
		1882.5	18.75	74.99
		1913.5	18.51	70.96

**EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1852.5	<b>19.95</b>	98.86
		1882.5	19.55	90.16
		1912.5	19.70	93.33
5.0 MHZ BAND 16QAM	1/0	1852.5	<b>19.20</b>	83.18
		1882.5	18.67	73.62
		1912.5	18.72	74.47

**EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1855.0	<b>19.96</b>	99.08
		1882.5	19.55	90.16
		1910.0	19.67	92.68
10.0 MHZ BAND 16QAM	1/0	1855.0	<b>19.07</b>	80.72
		1882.5	18.69	73.96
		1910.0	18.68	73.79

**EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1857.5	<b>20.06</b>	101.39
		1882.5	19.38	86.70
		1907.5	19.87	97.05
15.0 MHZ BAND 16QAM	1/0	1857.5	<b>19.19</b>	82.99
		1882.5	18.44	69.82
		1907.5	19.14	82.04

**EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1860.0	20.00	100.00
		1882.5	19.41	87.30
		1905.0	<b>20.02</b>	100.46
20.0 MHZ BAND 16QAM	1/0	1860.0	18.87	77.09
		1882.5	18.47	70.31
		1905.0	<b>19.18</b>	82.79

**ERP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	814.7	<b>16.32</b>	42.85
		819.0	16.14	41.11
		823.3	15.80	38.02
1.4 MHZ BAND 16QAM	1/0	814.7	<b>15.49</b>	35.40
		819.0	15.07	32.14
		823.3	14.68	29.38

**ERP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	815.5	<b>16.38</b>	43.45
		819.0	16.29	42.56
		822.5	15.66	36.81
3.0 MHZ BAND 16QAM	1/0	815.5	15.37	34.43
		819.0	<b>15.54</b>	35.81
		822.5	14.50	28.18

**ERP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	816.5	16.04	40.18
		819.0	<b>16.31</b>	42.76
		821.5	15.74	37.50
5.0 MHZ BAND 16QAM	1/0	816.5	<b>15.30</b>	33.88
		819.0	15.22	33.27
		821.5	14.77	29.99

**ERP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	<b>16.31</b>	42.76
10.0 MHZ BAND 16QAM	1/0	819.0	<b>15.39</b>	34.59

### 9.2.1. LTE BAND 2

#### QPSK EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

High Frequency Fundamental Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 QPSK 1.4MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	14.5	V	0.98	8.05	21.58	33.0	-11.4	
1.851	14.0	H	0.98	8.05	21.06	33.0	-11.9	
Mid Ch								
1.880	14.0	V	0.98	8.03	21.07	33.0	-11.9	
1.880	14.2	H	0.98	8.03	21.26	33.0	-11.7	
High Ch								
1.909	13.9	V	0.98	8.05	21.01	33.0	-12.0	
1.909	13.7	H	0.98	8.05	20.79	33.0	-12.2	
Rev. 11.20.15								



**16QAM EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 16QAM 1.4MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	13.6	V	0.98	8.05	20.69	33.0	-12.3	
1.851	12.9	H	0.98	8.05	19.99	33.0	-13.0	
Mid Ch								
1.880	13.1	V	0.98	8.03	20.10	33.0	-12.9	
1.880	13.4	H	0.98	8.03	20.46	33.0	-12.5	
High Ch								
1.909	13.0	V	0.98	8.05	20.04	33.0	-13.0	
1.909	12.8	H	0.98	8.05	19.82	33.0	-13.2	
Rev. 11.20.15								

**QPSK EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 QPSK 3MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	14.3	V	0.98	8.05	21.36	33.0	-11.6	
1.852	13.9	H	0.98	8.05	20.94	33.0	-12.1	
Mid Ch								
1.880	14.3	V	0.98	8.03	21.31	33.0	-11.7	
1.880	14.3	H	0.98	8.03	21.34	33.0	-11.7	
High Ch								
1.909	14.2	V	0.98	8.05	21.25	33.0	-11.8	
1.909	13.8	H	0.98	8.05	20.87	33.0	-12.1	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 16QAM 3MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	13.3	V	0.98	8.05	20.38	33.0	-12.6	
1.852	12.9	H	0.98	8.05	19.95	33.0	-13.1	
Mid Ch								
1.880	13.2	V	0.98	8.03	20.21	33.0	-12.8	
1.880	13.4	H	0.98	8.03	20.42	33.0	-12.6	
High Ch								
1.909	13.1	V	0.98	8.05	20.17	33.0	-12.8	
1.909	12.8	H	0.98	8.05	19.90	33.0	-13.1	
Rev. 11.20.15								

**QPSK EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 QPSK 5MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	14.3	V	0.98	8.05	21.40	33.0	-11.6	
1.853	13.7	H	0.98	8.05	20.75	33.0	-12.2	
Mid Ch								
1.880	14.0	V	0.98	8.03	21.00	33.0	-12.0	
1.880	13.9	H	0.98	8.03	20.98	33.0	-12.0	
High Ch								
1.908	14.0	V	0.98	8.04	21.07	33.0	-11.9	
1.908	14.1	H	0.98	8.04	21.15	33.0	-11.9	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 16QAM 5MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	13.6	V	0.98	8.05	20.62	33.0	-12.4	
1.853	12.7	H	0.98	8.05	19.77	33.0	-13.2	
Mid Ch								
1.880	12.9	V	0.98	8.03	19.93	33.0	-13.1	
1.880	12.7	H	0.98	8.03	19.79	33.0	-13.2	
High Ch								
1.908	13.1	V	0.98	8.04	20.18	33.0	-12.8	
1.908	13.0	H	0.98	8.04	20.02	33.0	-13.0	
Rev. 11.20.15								

**QPSK EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 QPSK 10MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	14.6	V	0.98	8.05	21.64	33.0	-11.4	
1.855	13.9	H	0.98	8.05	20.97	33.0	-12.0	
Mid Ch								
1.880	14.2	V	0.98	8.03	21.25	33.0	-11.7	
1.880	14.1	H	0.98	8.03	21.14	33.0	-11.9	
High Ch								
1.905	14.5	V	0.98	8.04	21.51	33.0	-11.5	
1.905	14.1	H	0.98	8.04	21.20	33.0	-11.8	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 16QAM 10MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	13.6	V	0.98	8.05	20.66	33.0	-12.3	
1.855	12.8	H	0.98	8.05	19.88	33.0	-13.1	
Mid Ch								
1.880	13.3	V	0.98	8.03	20.31	33.0	-12.7	
1.880	13.0	H	0.98	8.03	20.01	33.0	-13.0	
High Ch								
1.905	13.4	V	0.98	8.04	20.44	33.0	-12.6	
1.905	12.9	H	0.98	8.04	19.98	33.0	-13.0	
Rev. 11.20.15								

**QPSK EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 QPSK 15MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	14.2	V	0.98	8.04	21.24	33.0	-11.8	
1.858	13.8	H	0.98	8.04	20.82	33.0	-12.2	
Mid Ch								
1.880	14.3	V	0.98	8.03	21.37	33.0	-11.6	
1.880	13.8	H	0.98	8.03	20.83	33.0	-12.2	
High Ch								
1.903	14.7	V	0.98	8.03	21.78	33.0	-11.2	
1.903	14.3	H	0.98	8.03	21.33	33.0	-11.7	
Rev. 11.20.15								



**16QAM EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 16QAM 15MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	13.4	V	0.98	8.04	20.46	33.0	-12.5	
1.858	13.1	H	0.98	8.04	20.13	33.0	-12.9	
Mid Ch								
1.880	13.3	V	0.98	8.03	20.36	33.0	-12.6	
1.880	12.7	H	0.98	8.03	19.73	33.0	-13.3	
High Ch								
1.903	13.8	V	0.98	8.03	20.85	33.0	-12.2	
1.903	13.3	H	0.98	8.03	20.38	33.0	-12.6	
Rev. 11.20.15								

**QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 QPSK 20MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	14.5	V	0.98	8.04	21.51	33.0	-11.5	
1.860	13.7	H	0.98	8.04	20.72	33.0	-12.3	
Mid Ch								
1.880	13.9	V	0.98	8.03	20.91	33.0	-12.1	
1.880	13.5	H	0.98	8.03	20.53	33.0	-12.5	
High Ch								
1.900	14.6	V	0.98	8.02	21.67	33.0	-11.3	
1.900	14.6	H	0.98	8.02	21.68	33.0	-11.3	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 2 16QAM 20MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	13.6	V	0.98	8.04	20.63	33.0	-12.4	
1.860	12.9	H	0.98	8.04	19.94	33.0	-13.1	
Mid Ch								
1.880	12.9	V	0.98	8.03	19.96	33.0	-13.0	
1.880	12.5	H	0.98	8.03	19.53	33.0	-13.5	
High Ch								
1.900	13.5	V	0.98	8.02	20.49	33.0	-12.5	
1.900	13.4	H	0.98	8.02	20.45	33.0	-12.6	
Rev. 11.20.15								

9.2.2. LTE BAND 4

**QPSK EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/29/2015									
<b>Test Engineer:</b> F. Guamero									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 4 QPSK 1.4MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.711	9.3	V	0.95	8.27	16.67	30.0	-13.3		
1.711	10.7	H	0.95	8.27	18.07	30.0	-11.9		
Mid Ch									
1.733	9.5	V	0.95	8.23	16.77	30.0	-13.2		
1.733	10.8	H	0.95	8.23	18.11	30.0	-11.9		
High Ch									
1.754	9.3	V	0.95	8.18	16.49	30.0	-13.5		
1.754	11.0	H	0.95	8.18	18.21	30.0	-11.8		
Rev. 11.20.15									

**16QAM EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/29/2015								
<b>Test Engineer:</b> F. Guamero								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 4 16QAM 1.4MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	8.3	V	0.95	8.27	15.66	30.0	-14.3	
1.711	9.5	H	0.95	8.27	16.85	30.0	-13.2	
Mid Ch								
1.733	8.5	V	0.95	8.23	15.78	30.0	-14.2	
1.733	9.8	H	0.95	8.23	17.11	30.0	-12.9	
High Ch								
1.754	8.1	V	0.95	8.18	15.32	30.0	-14.7	
1.754	9.7	H	0.95	8.18	16.97	30.0	-13.0	
Rev. 11.20.15								

**QPSK EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/29/2015								
<b>Test Engineer:</b> F. Guamero								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 4 QPSK 3MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	9.3	V	0.95	8.27	16.62	30.0	-13.4	
1.712	10.8	H	0.95	8.27	18.11	30.0	-11.9	
Mid Ch								
1.733	9.5	V	0.95	8.23	16.79	30.0	-13.2	
1.733	10.9	H	0.95	8.23	18.16	30.0	-11.8	
High Ch								
1.754	9.1	V	0.95	8.18	16.37	30.0	-13.6	
1.754	10.9	H	0.95	8.18	18.12	30.0	-11.9	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/29/2015									
<b>Test Engineer:</b> F. Guamero									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 4 16QAM 3MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.712	8.3	V	0.95	8.27	15.62	30.0	-14.4		
1.712	9.4	H	0.95	8.27	16.75	30.0	-13.3		
Mid Ch									
1.733	8.5	V	0.95	8.23	15.77	30.0	-14.2		
1.733	9.7	H	0.95	8.23	17.02	30.0	-13.0		
High Ch									
1.754	8.1	V	0.95	8.18	15.31	30.0	-14.7		
1.754	9.8	H	0.95	8.18	17.00	30.0	-13.0		
Rev. 11.20.15									

**QPSK EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/29/2015								
<b>Test Engineer:</b> F. Guamero								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 4 QPSK 5MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	9.3	V	0.95	8.27	16.66	30.0	-13.3	
1.713	10.7	H	0.95	8.27	17.97	30.0	-12.0	
Mid Ch								
1.733	9.5	V	0.95	8.23	16.73	30.0	-13.3	
1.733	10.8	H	0.95	8.23	18.12	30.0	-11.9	
High Ch								
1.753	9.0	V	0.95	8.18	16.21	30.0	-13.8	
1.753	10.8	H	0.95	8.18	18.01	30.0	-12.0	
Rev. 11.20.15								



**16QAM EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/29/2015									
<b>Test Engineer:</b> F. Guamero									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 4 16QAM 5MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.713	8.3	V	0.95	8.27	15.67	30.0	-14.3		
1.713	9.5	H	0.95	8.27	16.77	30.0	-13.2		
Mid Ch									
1.733	8.4	V	0.95	8.23	15.67	30.0	-14.3		
1.733	9.6	H	0.95	8.23	16.92	30.0	-13.1		
High Ch									
1.753	7.9	V	0.95	8.18	15.16	30.0	-14.8		
1.753	9.7	H	0.95	8.18	16.93	30.0	-13.1		
Rev. 11.20.15									

**QPSK EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/29/2015								
<b>Test Engineer:</b> F. Guarnero								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 4 QPSK 10MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	9.3	V	0.95	8.26	16.61	30.0	-13.4	
1.715	10.5	H	0.95	8.26	17.84	30.0	-12.2	
Mid Ch								
1.733	9.5	V	0.95	8.23	16.74	30.0	-13.3	
1.733	10.9	H	0.95	8.23	18.14	30.0	-11.9	
High Ch								
1.750	9.1	V	0.95	8.19	16.30	30.0	-13.7	
1.750	10.7	H	0.95	8.19	17.95	30.0	-12.1	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/29/2015									
<b>Test Engineer:</b> F. Guamero									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 4 16QAM 10MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.715	8.2	V	0.95	8.26	15.51	30.0	-14.5		
1.715	9.4	H	0.95	8.26	16.67	30.0	-13.3		
Mid Ch									
1.733	8.5	V	0.95	8.23	15.79	30.0	-14.2		
1.733	9.8	H	0.95	8.23	17.11	30.0	-12.9		
High Ch									
1.750	7.9	V	0.95	8.19	15.13	30.0	-14.9		
1.750	9.8	H	0.95	8.19	17.02	30.0	-13.0		
Rev. 11.20.15									

**QPSK EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/29/2015								
<b>Test Engineer:</b> F. Guamero								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 4 QPSK 15MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	9.2	V	0.95	8.26	16.54	30.0	-13.5	
1.718	10.4	H	0.95	8.26	17.75	30.0	-12.2	
Mid Ch								
1.733	9.3	V	0.95	8.23	16.61	30.0	-13.4	
1.733	10.8	H	0.95	8.23	18.03	30.0	-12.0	
High Ch								
1.748	9.0	V	0.95	8.19	16.22	30.0	-13.8	
1.748	10.6	H	0.95	8.19	17.88	30.0	-12.1	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/29/2015									
<b>Test Engineer:</b> F. Guamero									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 4 16QAM 15MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.718	8.1	V	0.95	8.26	15.45	30.0	-14.6		
1.718	9.3	H	0.95	8.26	16.60	30.0	-13.4		
Mid Ch									
1.733	8.3	V	0.95	8.23	15.55	30.0	-14.4		
1.733	9.7	H	0.95	8.23	17.02	30.0	-13.0		
High Ch									
1.748	7.9	V	0.95	8.19	15.11	30.0	-14.9		
1.748	9.7	H	0.95	8.19	16.95	30.0	-13.0		
Rev. 11.20.15									

**QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/29/2015								
<b>Test Engineer:</b> F. Guamero								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 4 QPSK 20MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	9.1	V	0.95	8.25	16.44	30.0	-13.6	
1.720	10.3	H	0.95	8.25	17.65	30.0	-12.4	
Mid Ch								
1.733	9.3	V	0.95	8.23	16.57	30.0	-13.4	
1.733	10.8	H	0.95	8.23	18.12	30.0	-11.9	
High Ch								
1.745	8.9	V	0.95	8.20	16.19	30.0	-13.8	
1.745	10.6	H	0.95	8.20	17.81	30.0	-12.2	
Rev. 11.20.15								

**16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/29/2015									
<b>Test Engineer:</b> F. Guamero									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 4 16QAM 20MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.720	7.9	V	0.95	8.25	15.25	30.0	-14.7		
1.720	9.2	H	0.95	8.25	16.46	30.0	-13.5		
Mid Ch									
1.733	8.1	V	0.95	8.23	15.34	30.0	-14.7		
1.733	9.7	H	0.95	8.23	16.93	30.0	-13.1		
High Ch									
1.745	7.8	V	0.95	8.20	15.03	30.0	-15.0		
1.745	9.6	H	0.95	8.20	16.89	30.0	-13.1		
Rev. 11.20.15									

### 9.2.3. LTE BAND 5

#### QPSK EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/29/2015											
<b>Test Engineer:</b> F. Guamero											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 5 QPSK 1.4MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
<b>Low Ch</b>											
824.70	8.75	V	0.6	0.0	8.13	10.28	38.45	40.60	-30.3		
824.70	16.33	H	0.6	0.0	15.71	17.86	38.45	40.60	-22.7		
<b>Mid Ch</b>											
836.50	7.33	V	0.6	0.0	6.72	8.87	38.45	40.60	-31.7		
836.50	16.12	H	0.6	0.0	15.50	17.65	38.45	40.60	-23.0		
<b>High Ch</b>											
848.30	7.73	V	0.6	0.0	7.11	9.26	38.45	40.60	-31.3		
848.30	15.95	H	0.6	0.0	15.33	17.48	38.45	40.60	-23.1		
Rev. 11.24.15											



**16QAM EIRP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 5 16QAM 1.4MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	8.18	V	0.6	0.0	7.56	9.71	38.45	40.60	-30.9	
824.70	15.53	H	0.6	0.0	14.91	17.06	38.45	40.60	-23.5	
Mid Ch										
836.50	6.43	V	0.6	0.0	5.82	7.97	38.45	40.60	-32.6	
836.50	15.15	H	0.6	0.0	14.53	16.68	38.45	40.60	-23.9	
High Ch										
848.30	6.91	V	0.6	0.0	6.29	8.44	38.45	40.60	-32.2	
848.30	15.19	H	0.6	0.0	14.57	16.72	38.45	40.60	-23.9	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 5 QPSK 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	8.71	V	0.6	0.0	8.09	10.24	38.45	40.60	-30.4	
825.50	16.37	H	0.6	0.0	15.75	17.90	38.45	40.60	-22.7	
Mid Ch										
836.50	7.53	V	0.6	0.0	6.92	9.07	38.45	40.60	-31.5	
836.50	16.32	H	0.6	0.0	15.70	17.85	38.45	40.60	-22.8	
High Ch										
847.50	7.77	V	0.6	0.0	7.15	9.30	38.45	40.60	-31.3	
847.50	15.86	H	0.6	0.0	15.24	17.39	38.45	40.60	-23.2	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
Project #: 15U21634										
Date: 12/29/2015										
Test Engineer: F. Guarnero										
Configuration: EUT Only										
Mode: LTE Band 5 16QAM 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	8.14	V	0.6	0.0	7.52	9.67	38.45	40.60	-30.9	
825.50	15.63	H	0.6	0.0	15.01	17.16	38.45	40.60	-23.4	
Mid Ch										
836.50	6.69	V	0.6	0.0	6.08	8.23	38.45	40.60	-32.4	
836.50	15.34	H	0.6	0.0	14.72	16.87	38.45	40.60	-23.7	
High Ch										
847.50	6.90	V	0.6	0.0	6.28	8.43	38.45	40.60	-32.2	
847.50	15.22	H	0.6	0.0	14.60	16.75	38.45	40.60	-23.9	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 5 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	8.78	V	0.6	0.0	8.16	10.31	38.45	40.60	-30.3	
826.50	16.63	H	0.6	0.0	16.01	18.16	38.45	40.60	-22.4	
Mid Ch										
836.50	7.76	V	0.6	0.0	7.15	9.30	38.45	40.60	-31.3	
836.50	15.93	H	0.6	0.0	15.31	17.46	38.45	40.60	-23.1	
High Ch										
846.50	7.80	V	0.6	0.0	7.18	9.33	38.45	40.60	-31.3	
846.50	15.96	H	0.6	0.0	15.34	17.49	38.45	40.60	-23.1	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b>	15U21634									
<b>Date:</b>	12/29/2015									
<b>Test Engineer:</b>	F. Guamero									
<b>Configuration:</b>	EUT Only									
<b>Mode:</b>	LTE Band 5 16QAM 5MHz BW									
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	8.19	V	0.6	0.0	7.57	9.72	38.45	40.60	-30.9	
826.50	15.57	H	0.6	0.0	14.95	17.10	38.45	40.60	-23.5	
Mid Ch										
836.50	6.69	V	0.6	0.0	6.08	8.23	38.45	40.60	-32.4	
836.50	15.04	H	0.6	0.0	14.42	16.57	38.45	40.60	-24.0	
High Ch										
846.50	6.81	V	0.6	0.0	6.19	8.34	38.45	40.60	-32.3	
846.50	15.18	H	0.6	0.0	14.56	16.71	38.45	40.60	-23.9	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b>	15U21634									
<b>Date:</b>	12/29/2015									
<b>Test Engineer:</b>	F. Guarnero									
<b>Configuration:</b>	EUT Only									
<b>Mode:</b>	LTE Band 5 QPSK 10MHz BW									
<b>Test Equipment:</b>										
Receiving: Sunoi T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	8.62	V	0.6	0.0	8.00	10.15	38.45	40.60	-30.4	
829.00	16.61	H	0.6	0.0	15.99	18.14	38.45	40.60	-22.5	
Mid Ch										
836.50	7.64	V	0.6	0.0	7.03	9.18	38.45	40.60	-31.4	
836.50	16.22	H	0.6	0.0	15.60	17.75	38.45	40.60	-22.9	
High Ch										
844.00	7.71	V	0.6	0.0	7.09	9.24	38.45	40.60	-31.4	
844.00	16.06	H	0.6	0.0	15.44	17.59	38.45	40.60	-23.0	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b>	15U21634									
<b>Date:</b>	12/29/2015									
<b>Test Engineer:</b>	F. Guarnero									
<b>Configuration:</b>	EUT Only									
<b>Mode:</b>	LTE Band 5 16QAM 10MHz BW									
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	8.16	V	0.6	0.0	7.54	9.69	38.45	40.60	-30.9	
829.00	15.62	H	0.6	0.0	15.00	17.15	38.45	40.60	-23.4	
Mid Ch										
836.50	7.29	V	0.6	0.0	6.68	8.83	38.45	40.60	-31.8	
836.50	15.39	H	0.6	0.0	14.77	16.92	38.45	40.60	-23.7	
High Ch										
844.00	6.80	V	0.6	0.0	6.18	8.33	38.45	40.60	-32.3	
844.00	15.16	H	0.6	0.0	14.54	16.69	38.45	40.60	-23.9	
Rev. 11.24.15										

9.2.4. LTE BAND 12

**QPSK EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 QPSK 1.4MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunoi T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
699.70	6.42	V	0.55	0.0	5.87	8.02	34.77	36.99	-29.0	
699.70	15.73	H	0.55	0.0	15.18	17.33	34.77	36.99	-19.7	
Mid Ch										
707.50	6.60	V	0.55	0.0	6.05	8.20	34.77	36.99	-28.8	
707.50	15.74	H	0.55	0.0	15.19	17.34	34.77	36.99	-19.7	
High Ch										
715.30	6.64	V	0.55	0.0	6.09	8.24	34.77	36.99	-28.8	
715.30	15.52	H	0.55	0.0	14.97	17.12	34.77	36.99	-19.9	
Rev. 11.24.15										



**16QAM EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/29/2015											
<b>Test Engineer:</b> F. Guarnero											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 16QAM 1.4MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
699.70	5.79	V	0.55	0.0	5.24	7.39	34.77	36.99	-29.6		
699.70	14.74	H	0.55	0.0	14.19	16.34	34.77	36.99	-20.7		
Mid Ch											
707.50	5.88	V	0.55	0.0	5.33	7.48	34.77	36.99	-29.5		
707.50	14.95	H	0.55	0.0	14.40	16.55	34.77	36.99	-20.4		
High Ch											
715.30	5.77	V	0.55	0.0	5.22	7.37	34.77	36.99	-29.6		
715.30	14.65	H	0.55	0.0	14.10	16.25	34.77	36.99	-20.7		
Rev. 11.24.15											

**QPSK EIRP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 QPSK 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
700.50	6.35	V	0.55	0.0	5.80	7.95	34.77	36.99	-29.0	
700.50	15.69	H	0.55	0.0	15.14	17.29	34.77	36.99	-19.7	
Mid Ch										
707.50	6.83	V	0.55	0.0	6.28	8.43	34.77	36.99	-28.6	
707.50	15.86	H	0.55	0.0	15.31	17.46	34.77	36.99	-19.5	
High Ch										
714.50	6.72	V	0.55	0.0	6.17	8.32	34.77	36.99	-28.7	
714.50	15.48	H	0.55	0.0	14.93	17.08	34.77	36.99	-19.9	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/29/2015											
<b>Test Engineer:</b> F. Guarnero											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 16QAM 3MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
<b>Low Ch</b>											
700.50	5.59	V	0.55	0.0	5.04	7.19	34.77	36.99	-29.8		
700.50	14.69	H	0.55	0.0	14.14	16.29	34.77	36.99	-20.7		
<b>Mid Ch</b>											
707.50	5.93	V	0.55	0.0	5.38	7.53	34.77	36.99	-29.5		
707.50	14.83	H	0.55	0.0	14.28	16.43	34.77	36.99	-20.6		
<b>High Ch</b>											
714.50	5.81	V	0.55	0.0	5.26	7.41	34.77	36.99	-29.6		
714.50	14.55	H	0.55	0.0	14.00	16.15	34.77	36.99	-20.8		
Rev. 11.24.15											

**QPSK EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guarnero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	6.46	V	0.55	0.0	5.91	8.06	34.77	36.99	-28.9	
701.50	15.51	H	0.55	0.0	14.96	17.11	34.77	36.99	-19.9	
Mid Ch										
707.50	6.70	V	0.55	0.0	6.15	8.30	34.77	36.99	-28.7	
707.50	15.58	H	0.55	0.0	15.03	17.18	34.77	36.99	-19.8	
High Ch										
713.50	6.77	V	0.55	0.0	6.22	8.37	34.77	36.99	-28.6	
713.50	15.63	H	0.55	0.0	15.08	17.23	34.77	36.99	-19.8	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 12 16QAM 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	5.65	V	0.55	0.0	5.10	7.25	34.77	36.99	-29.7	
701.50	14.57	H	0.55	0.0	14.02	16.17	34.77	36.99	-20.8	
Mid Ch										
707.50	5.71	V	0.55	0.0	5.16	7.31	34.77	36.99	-29.7	
707.50	14.56	H	0.55	0.0	14.01	16.16	34.77	36.99	-20.8	
High Ch										
713.50	5.77	V	0.55	0.0	5.22	7.37	34.77	36.99	-29.6	
713.50	14.59	H	0.55	0.0	14.04	16.19	34.77	36.99	-20.8	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/29/2015											
<b>Test Engineer:</b> F. Guarnero											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 QPSK 10MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
704.00	6.41	V	0.55	0.0	5.86	8.01	34.77	36.99	-29.0		
704.00	15.49	H	0.55	0.0	14.94	17.09	34.77	36.99	-19.9		
Mid Ch											
707.50	6.55	V	0.55	0.0	6.00	8.15	34.77	36.99	-28.8		
707.50	15.46	H	0.55	0.0	14.91	17.06	34.77	36.99	-19.9		
High Ch											
711.00	6.70	V	0.55	0.0	6.15	8.30	34.77	36.99	-28.7		
711.00	15.59	H	0.55	0.0	15.04	17.19	34.77	36.99	-19.8		
Rev. 11.24.15											

**16QAM EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/29/2015											
<b>Test Engineer:</b> F. Guamero											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 12 16QAM 10MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
704.00	5.58	V	0.55	0.0	5.03	7.18	34.77	36.99	-29.8		
704.00	14.56	H	0.55	0.0	14.01	16.16	34.77	36.99	-20.8		
Mid Ch											
707.50	5.60	V	0.55	0.0	5.05	7.20	34.77	36.99	-29.8		
707.50	14.68	H	0.55	0.0	14.13	16.28	34.77	36.99	-20.7		
High Ch											
711.00	5.85	V	0.55	0.0	5.30	7.45	34.77	36.99	-29.5		
711.00	14.56	H	0.55	0.0	14.01	16.16	34.77	36.99	-20.8		
Rev. 11.24.15											

9.2.5. LTE BAND 13

**QPSK EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/19/2015										
<b>Test Engineer:</b> F. Guarnero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunoi T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	9.32	V	0.55	0.0	8.77	10.92	34.77	36.99	-26.1	
779.50	16.25	H	0.55	0.0	15.70	17.85	34.77	36.99	-19.1	
Mid Ch										
782.00	9.63	V	0.55	0.0	9.08	11.23	34.77	36.99	-25.8	
782.00	16.16	H	0.55	0.0	15.61	17.76	34.77	36.99	-19.2	
High Ch										
784.50	9.75	V	0.55	0.0	9.20	11.35	34.77	36.99	-25.6	
784.50	15.84	H	0.55	0.0	15.29	17.44	34.77	36.99	-19.6	
Rev. 11.24.15										



**16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/19/2015										
<b>Test Engineer:</b> F. Guarnero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 16QAM5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	8.80	V	0.55	0.0	8.25	10.40	34.77	36.99	-26.6	
779.50	15.43	H	0.55	0.0	14.88	17.03	34.77	36.99	-20.0	
Mid Ch										
782.00	9.18	V	0.55	0.0	8.63	10.78	34.77	36.99	-26.2	
782.00	15.32	H	0.55	0.0	14.77	16.92	34.77	36.99	-20.1	
High Ch										
784.50	8.87	V	0.55	0.0	8.32	10.47	34.77	36.99	-26.5	
784.50	15.14	H	0.55	0.0	14.59	16.74	34.77	36.99	-20.3	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/19/2015										
<b>Test Engineer:</b> F. Guarnero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 QPSK 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	9.69	V	0.55	0.0	9.14	11.29	34.77	36.99	-25.7	
782.00	16.20	H	0.55	0.0	15.65	17.80	34.77	36.99	-19.2	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/19/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 13 16QAM 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	8.54	V	0.55	0.0	7.99	10.14	34.77	36.99	-26.9	
782.00	15.37	H	0.55	0.0	14.82	16.97	34.77	36.99	-20.0	
Rev. 11.24.15										

9.2.6. LTE BAND 17

**QPSK EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	6.51	V	0.55	0.0	5.96	8.11	34.77	36.99	-28.9	
706.50	15.18	H	0.55	0.0	14.63	16.78	34.77	36.99	-20.2	
Mid Ch										
710.00	6.92	V	0.55	0.0	6.37	8.52	34.77	36.99	-28.5	
710.00	15.53	H	0.55	0.0	14.98	17.13	34.77	36.99	-19.9	
High Ch										
713.50	7.03	V	0.55	0.0	6.48	8.63	34.77	36.99	-28.4	
713.50	15.58	H	0.55	0.0	15.03	17.18	34.77	36.99	-19.8	
Rev. 11.25.15										

**16QAM EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 16QAM 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	5.61	V	0.55	0.0	5.06	7.21	34.77	36.99	-29.8	
706.50	14.31	H	0.55	0.0	13.76	15.91	34.77	36.99	-21.1	
Mid Ch										
710.00	5.77	V	0.55	0.0	5.22	7.37	34.77	36.99	-29.6	
710.00	14.37	H	0.55	0.0	13.82	15.97	34.77	36.99	-21.0	
High Ch										
713.50	6.14	V	0.55	0.0	5.59	7.74	34.77	36.99	-29.3	
713.50	14.75	H	0.55	0.0	14.20	16.35	34.77	36.99	-20.6	
Rev. 11.24.15										

**QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guamero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 QPSK 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	6.83	V	0.55	0.0	6.28	8.43	34.77	36.99	-28.6	
710.00	15.31	H	0.55	0.0	14.76	16.91	34.77	36.99	-20.1	
Rev. 11.24.15										

**16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/29/2015										
<b>Test Engineer:</b> F. Guarero										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 17 16QAM 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	6.01	V	0.55	0.0	5.46	7.61	34.77	36.99	-29.4	
710.00	14.26	H	0.55	0.0	13.71	15.86	34.77	36.99	-21.1	
Rev. 11.24.15										

### 9.2.7. LTE BAND 25

#### QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber D									
<b>Company:</b>									
<b>Project #:</b> 15U21634									
<b>Date:</b> 12/28/2015									
<b>Test Engineer:</b> M. Hua									
<b>Configuration:</b> EUT Only									
<b>Mode:</b> LTE Band 25 QPSK 1.4MHz BW									
<b>Test Equipment:</b>									
Receiving: Horn T344 and Chamber D SMA Cables									
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.851	13.0	V	0.98	8.05	20.03	33.0	-13.0		
1.851	12.6	H	0.98	8.05	19.66	33.0	-13.3		
Mid Ch									
1.883	12.6	V	0.98	8.03	19.64	33.0	-13.4		
1.883	12.8	H	0.98	8.03	19.83	33.0	-13.2		
High Ch									
1.914	12.0	V	0.98	8.07	19.07	33.0	-13.9		
1.914	12.4	H	0.98	8.07	19.45	33.0	-13.5		
Rev. 12.14.15									



**16QAM EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 16QAM 1.4MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
<b>Low Ch</b>								
1.851	12.1	V	0.98	8.05	19.17	33.0	-13.8	
1.851	11.5	H	0.98	8.05	18.59	33.0	-14.4	
<b>Mid Ch</b>								
1.883	11.7	V	0.98	8.03	18.73	33.0	-14.3	
1.883	12.0	H	0.98	8.03	19.01	33.0	-14.0	
<b>High Ch</b>								
1.914	11.1	V	0.98	8.07	18.20	33.0	-14.8	
1.914	11.4	H	0.98	8.07	18.49	33.0	-14.5	
Rev. 12.14.15								

**QPSK EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 QPSK 3MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	13.0	V	0.98	8.05	20.07	33.0	-12.9	
1.852	12.6	H	0.98	8.05	19.69	33.0	-13.3	
Mid Ch								
1.883	12.8	V	0.98	8.03	19.80	33.0	-13.2	
1.883	12.6	H	0.98	8.03	19.64	33.0	-13.4	
High Ch								
1.914	12.3	V	0.98	8.07	19.39	33.0	-13.6	
1.914	12.6	H	0.98	8.07	19.70	33.0	-13.3	
Rev. 12.14.15								

**16QAM EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 16QAM 3MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	12.1	V	0.98	8.05	19.16	33.0	-13.8	
1.852	11.6	H	0.98	8.05	18.69	33.0	-14.3	
Mid Ch								
1.883	11.7	V	0.98	8.03	18.73	33.0	-14.3	
1.883	11.7	H	0.98	8.03	18.75	33.0	-14.2	
High Ch								
1.914	11.3	V	0.98	8.07	18.42	33.0	-14.6	
1.914	11.4	H	0.98	8.07	18.51	33.0	-14.5	
Rev. 12.14.15								

**QPSK EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 QPSK 5MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	12.9	V	0.98	8.05	19.95	33.0	-13.1	
1.853	12.3	H	0.98	8.05	19.38	33.0	-13.6	
Mid Ch								
1.883	12.5	V	0.98	8.03	19.55	33.0	-13.5	
1.883	12.4	H	0.98	8.03	19.48	33.0	-13.5	
High Ch								
1.913	12.6	V	0.98	8.06	19.65	33.0	-13.3	
1.913	12.6	H	0.98	8.06	19.70	33.0	-13.3	
Rev. 12.14.15								

**16QAM EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 16QAM 5MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
<b>Low Ch</b>								
1.853	12.1	V	0.98	8.05	19.20	33.0	-13.8	
1.853	11.6	H	0.98	8.05	18.70	33.0	-14.3	
<b>Mid Ch</b>								
1.883	11.6	V	0.98	8.03	18.67	33.0	-14.3	
1.883	11.3	H	0.98	8.03	18.34	33.0	-14.7	
<b>High Ch</b>								
1.913	11.6	V	0.98	8.06	18.72	33.0	-14.3	
1.913	11.6	H	0.98	8.06	18.63	33.0	-14.4	
Rev. 12.14.15								

**QPSK EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 QPSK 10MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	12.9	V	0.98	8.05	19.96	33.0	-13.0	
1.855	12.5	H	0.98	8.05	19.59	33.0	-13.4	
Mid Ch								
1.883	12.5	V	0.98	8.03	19.55	33.0	-13.5	
1.883	12.1	H	0.98	8.03	19.17	33.0	-13.8	
High Ch								
1.910	12.6	V	0.98	8.05	19.67	33.0	-13.3	
1.910	12.2	H	0.98	8.05	19.28	33.0	-13.7	
Rev. 12.14.15								

**16QAM EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 16QAM 10MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	12.0	V	0.98	8.05	19.07	33.0	-13.9	
1.855	11.5	H	0.98	8.05	18.52	33.0	-14.5	
Mid Ch								
1.883	11.6	V	0.98	8.03	18.69	33.0	-14.3	
1.883	11.2	H	0.98	8.03	18.24	33.0	-14.8	
High Ch								
1.910	11.6	V	0.98	8.05	18.68	33.0	-14.3	
1.910	11.2	H	0.98	8.05	18.24	33.0	-14.8	
Rev. 12.14.15								

**QPSK EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 QPSK 15MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	13.0	V	0.98	8.04	20.06	33.0	-12.9	
1.858	12.4	H	0.98	8.04	19.50	33.0	-13.5	
Mid Ch								
1.883	12.3	V	0.98	8.03	19.38	33.0	-13.6	
1.883	11.9	H	0.98	8.03	18.92	33.0	-14.1	
High Ch								
1.908	12.8	V	0.98	8.04	19.87	33.0	-13.1	
1.908	12.7	H	0.98	8.04	19.79	33.0	-13.2	
Rev. 12.14.15								



**16QAM EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 16QAM 15MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	12.1	V	0.98	8.04	19.19	33.0	-13.8	
1.858	11.5	H	0.98	8.04	18.57	33.0	-14.4	
Mid Ch								
1.883	11.4	V	0.98	8.03	18.44	33.0	-14.6	
1.883	10.9	H	0.98	8.03	17.95	33.0	-15.0	
High Ch								
1.908	12.1	V	0.98	8.04	19.14	33.0	-13.9	
1.908	12.0	H	0.98	8.04	19.02	33.0	-14.0	
Rev. 12.14.15								

**QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 QPSK 20MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	12.9	V	0.98	8.04	20.00	33.0	-13.0	
1.860	12.5	H	0.98	8.04	19.57	33.0	-13.4	
Mid Ch								
1.883	12.4	V	0.98	8.03	19.41	33.0	-13.6	
1.883	11.7	H	0.98	8.03	18.74	33.0	-14.3	
High Ch								
1.905	13.0	V	0.98	8.04	20.02	33.0	-13.0	
1.905	13.0	H	0.98	8.04	20.01	33.0	-13.0	
Rev. 12.14.15								

**16QAM EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D								
<b>Company:</b>								
<b>Project #:</b> 15U21634								
<b>Date:</b> 12/28/2015								
<b>Test Engineer:</b> M. Hua								
<b>Configuration:</b> EUT Only								
<b>Mode:</b> LTE Band 25 16QAM 20MHz BW								
<b>Test Equipment:</b>								
Receiving: Horn T344 and Chamber D SMA Cables								
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	11.8	V	0.98	8.04	18.87	33.0	-14.1	
1.860	11.4	H	0.98	8.04	18.42	33.0	-14.6	
Mid Ch								
1.883	11.4	V	0.98	8.03	18.47	33.0	-14.5	
1.883	10.9	H	0.98	8.03	17.90	33.0	-15.1	
High Ch								
1.905	12.1	V	0.98	8.04	19.17	33.0	-13.8	
1.905	12.1	H	0.98	8.04	19.18	33.0	-13.8	
Rev. 12.14.15								

### 9.2.8. LTE BAND 26

#### QPSK EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber D											
<b>Company:</b>											
<b>Project #:</b> 15U21634											
<b>Date:</b> 12/28/2015											
<b>Test Engineer:</b> M. Hua											
<b>Configuration:</b> EUT Only											
<b>Mode:</b> LTE Band 26 QPSK 1.4MHz BW											
<b>Test Equipment:</b>											
Receiving: Sunol T408, and Chamber D Cable											
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)											
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes	
Low Ch											
814.70	9.03	V	0.62	0.0	8.41	10.56	38.45	40.60	-30.0		
814.70	16.94	H	0.62	0.0	16.32	18.47	38.45	40.60	-22.1		
Mid Ch											
819.00	9.35	V	0.62	0.0	8.73	10.88	38.45	40.60	-29.7		
819.00	16.76	H	0.62	0.0	16.14	18.29	38.45	40.60	-22.3		
High Ch											
823.30	8.89	V	0.62	0.0	8.27	10.42	38.45	40.60	-30.2		
823.30	16.42	H	0.62	0.0	15.80	17.95	38.45	40.60	-22.7		
Rev. 10.24.13											

**16QAM EIRP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 1.4MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
814.70	8.21	V	0.62	0.0	7.59	9.74	38.45	40.60	-30.9	
814.70	16.11	H	0.62	0.0	15.49	17.64	38.45	40.60	-23.0	
Mid Ch										
819.00	8.19	V	0.62	0.0	7.57	9.72	38.45	40.60	-30.9	
819.00	15.69	H	0.62	0.0	15.07	17.22	38.45	40.60	-23.4	
High Ch										
823.30	7.95	V	0.62	0.0	7.33	9.48	38.45	40.60	-31.1	
823.30	15.30	H	0.62	0.0	14.68	16.83	38.45	40.60	-23.8	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 QPSK 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	9.11	V	0.62	0.0	8.49	10.64	38.45	40.60	-30.0	
815.50	17.00	H	0.62	0.0	16.38	18.53	38.45	40.60	-22.1	
Mid Ch										
819.00	9.31	V	0.62	0.0	8.69	10.84	38.45	40.60	-29.8	
819.00	16.91	H	0.62	0.0	16.29	18.44	38.45	40.60	-22.2	
High Ch										
822.50	8.88	V	0.62	0.0	8.26	10.41	38.45	40.60	-30.2	
822.50	16.28	H	0.62	0.0	15.66	17.81	38.45	40.60	-22.8	
Rev. 10.24.13										

**16QAM EIRP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 3MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
815.50	8.24	V	0.62	0.0	7.62	9.77	38.45	40.60	-30.8	
815.50	15.99	H	0.62	0.0	15.37	17.52	38.45	40.60	-23.1	
Mid Ch										
819.00	8.18	V	0.62	0.0	7.56	9.71	38.45	40.60	-30.9	
819.00	16.16	H	0.62	0.0	15.54	17.69	38.45	40.60	-22.9	
High Ch										
822.50	7.81	V	0.62	0.0	7.19	9.34	38.45	40.60	-31.3	
822.50	15.12	H	0.62	0.0	14.50	16.65	38.45	40.60	-24.0	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 QPSK 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	8.91	V	0.62	0.0	8.29	10.44	38.45	40.60	-30.2	
816.50	16.66	H	0.62	0.0	16.04	18.19	38.45	40.60	-22.4	
Mid Ch										
819.00	9.19	V	0.62	0.0	8.57	10.72	38.45	40.60	-29.9	
819.00	16.93	H	0.62	0.0	16.31	18.46	38.45	40.60	-22.1	
High Ch										
821.50	8.71	V	0.62	0.0	8.09	10.24	38.45	40.60	-30.4	
821.50	16.36	H	0.62	0.0	15.74	17.89	38.45	40.60	-22.7	
Rev. 12.14.15										



**16QAM EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 5MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
816.50	8.30	V	0.62	0.0	7.68	9.83	38.45	40.60	-30.8	
816.50	15.92	H	0.62	0.0	15.30	17.45	38.45	40.60	-23.2	
Mid Ch										
819.00	7.92	V	0.62	0.0	7.30	9.45	38.45	40.60	-31.2	
819.00	15.84	H	0.62	0.0	15.22	17.37	38.45	40.60	-23.2	
High Ch										
821.50	7.85	V	0.62	0.0	7.23	9.38	38.45	40.60	-31.2	
821.50	15.39	H	0.62	0.0	14.77	16.92	38.45	40.60	-23.7	
Rev. 12.14.15										

**QPSK EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 QPSK 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunoi T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin EIRP (dB)	Notes
Mid Ch										
819.00	9.13	V	0.62	0.0	8.51	10.66	38.45	40.60	-29.9	
819.00	16.93	H	0.62	0.0	16.31	18.46	38.45	40.60	-22.1	
Rev. 10.24.13										

**16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber D										
<b>Company:</b>										
<b>Project #:</b> 15U21634										
<b>Date:</b> 12/28/2015										
<b>Test Engineer:</b> M. Hua										
<b>Configuration:</b> EUT Only										
<b>Mode:</b> LTE Band 26 16QAM 10MHz BW										
<b>Test Equipment:</b>										
Receiving: Sunol T408, and Chamber D Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Mid Ch										
819.00	8.21	V	0.62	0.0	7.59	9.74	38.45	40.60	-30.9	
819.00	16.01	H	0.62	0.0	15.39	17.54	38.45	40.60	-23.1	
Rev. 12.14.15										

### 9.3. PEAK-TO-AVERAGE RATIO

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

#### 9.3.1. LTE BAND 2

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	1.4	1880.0	QPSK	27.5	22.55	4.95
			16QAM	27.57	21.65	5.92
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	3.0	1880.0	QPSK	27.65	22.70	4.95
			16QAM	27.42	21.72	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	5.0	1880.0	QPSK	27.32	22.45	4.87
			16QAM	27.04	21.34	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	10.0	1880.0	QPSK	27.44	22.64	4.8
			16QAM	27.27	21.65	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	15.0	1880.0	QPSK	27.26	22.54	4.72
			16QAM	27.21	21.66	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	20.0	1880.0	QPSK	27.22	22.42	4.8
			16QAM	26.93	21.38	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

### 9.3.2. LTE BAND 4

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	1.4	1732.5	QPSK	27.71	22.91	4.80
			16QAM	27.75	21.97	5.78
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	3.0	1732.5	QPSK	27.86	22.99	4.87
			16QAM	27.59	21.97	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	5.0	1732.5	QPSK	27.7	22.9	4.8
			16QAM	27.28	21.66	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	10.0	1732.5	QPSK	27.8	23.00	4.80
			16QAM	27.65	22.10	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	15.0	1732.5	QPSK	27.81	23.09	4.72
			16QAM	27.71	22.09	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	20.0	1732.5	QPSK	27.51	22.93	4.58
			16QAM	27.51	21.96	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

### 9.3.3. LTE BAND 5

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	1.4	836.5	QPSK	28.56	23.98	4.58
			16QAM	28.89	23.11	5.78
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	3.0	836.5	QPSK	28.92	23.97	4.95
			16QAM	28.4	23	5.4
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	5.0	836.5	QPSK	28.82	23.87	4.95
			16QAM	28.29	22.67	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	10.0	836.5	QPSK	28.7	23.98	4.72
			16QAM	28.6	23.05	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

### 9.3.4. LTE BAND 12

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	1.4	707.5	QPSK	28.93	23.98	4.95
			16QAM	28.73	22.95	5.78
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	3.0	707.5	QPSK	28.83	23.96	4.87
			16QAM	28.69	22.91	5.78
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	5.0	707.5	QPSK	28.89	23.94	4.95
			16QAM	28.47	22.77	5.7
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	10.0	707.5	QPSK	28.64	23.92	4.72
			16QAM	28.54	22.99	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						



**9.3.5. LTE BAND 13**

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 13 RB1-0	5.0	782.0	QPSK	27.61	23.94	3.67
			16QAM	27.7	22.75	4.95
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 13 RB1-0	10.0	782.0	QPSK	28.07	23.95	4.12
			16QAM	28.07	23.04	5.03
*Peak Reading = Average Reading + Peak-to-Average Ratio						

**9.3.6. LTE BAND 17**

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 17 RB1-0	5.0	710.0	QPSK	27.59	23.92	3.67
			16QAM	27.56	22.76	4.80
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 17 RB1-0	10.0	710.0	QPSK	27.8	23.90	3.90
			16QAM	27.85	22.90	4.95
*Peak Reading = Average Reading + Peak-to-Average Ratio						

**9.3.7. LTE BAND 25**

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	1.4	1882.5	QPSK	26.79	21.84	4.95
			16QAM	26.84	20.99	5.85
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	3.0	1882.5	QPSK	26.93	21.98	4.95
			16QAM	26.68	20.98	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	5.0	1882.5	QPSK	26.64	21.84	4.80
			16QAM	26.27	20.65	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	10.0	1882.5	QPSK	26.74	21.94	4.80
			16QAM	26.59	20.97	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	15.0	1882.5	QPSK	26.69	21.89	4.80
			16QAM	26.59	20.97	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	20.0	1882.5	QPSK	26.76	21.96	4.80
			16QAM	26.80	21.10	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

**9.3.8. LTE BAND 26**

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	1.4	819.0	QPSK	28.34	23.92	4.42
			16QAM	28.36	23.11	5.25
*Peak Reading = Average Reading + Peak-to-Average Ratio						

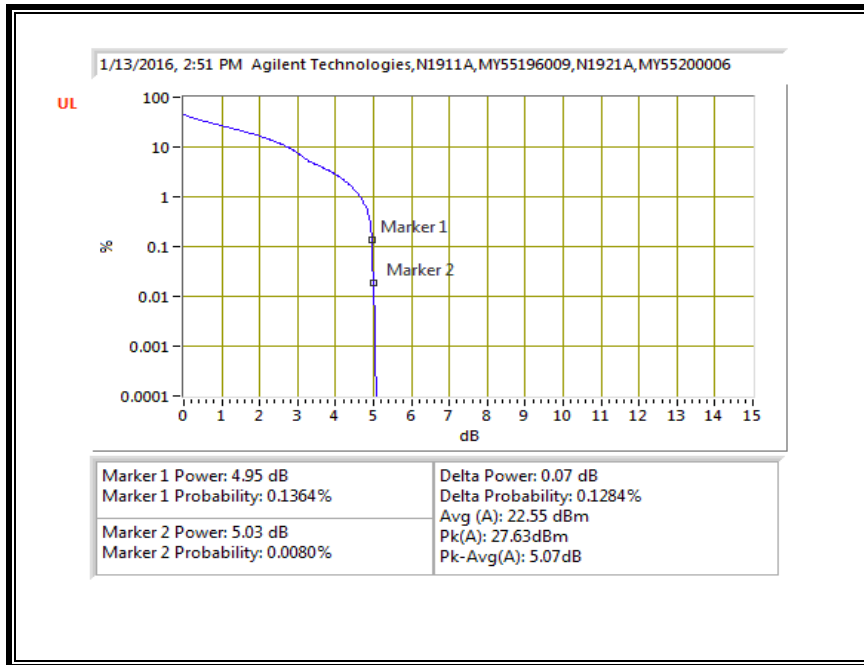
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	3.0	819.0	QPSK	28.33	23.91	4.42
			16QAM	28.38	23.13	5.25
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	5.0	819.0	QPSK	28.45	23.95	4.50
			16QAM	28.47	23.14	5.33
*Peak Reading = Average Reading + Peak-to-Average Ratio						

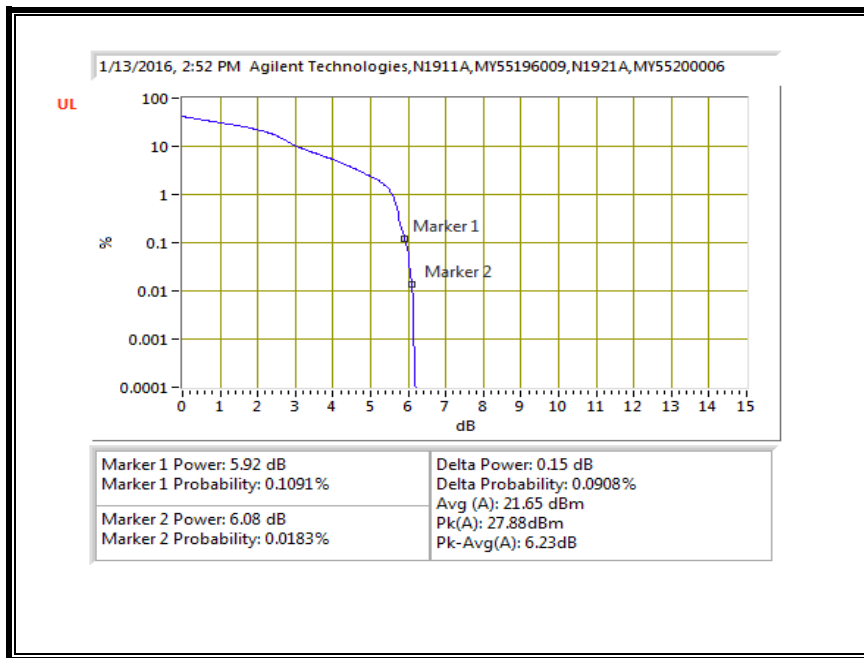
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	10.0	819.0	QPSK	28.25	23.97	4.28
			16QAM	28.25	23.22	5.03
*Peak Reading = Average Reading + Peak-to-Average Ratio						

**LTE BAND 2**

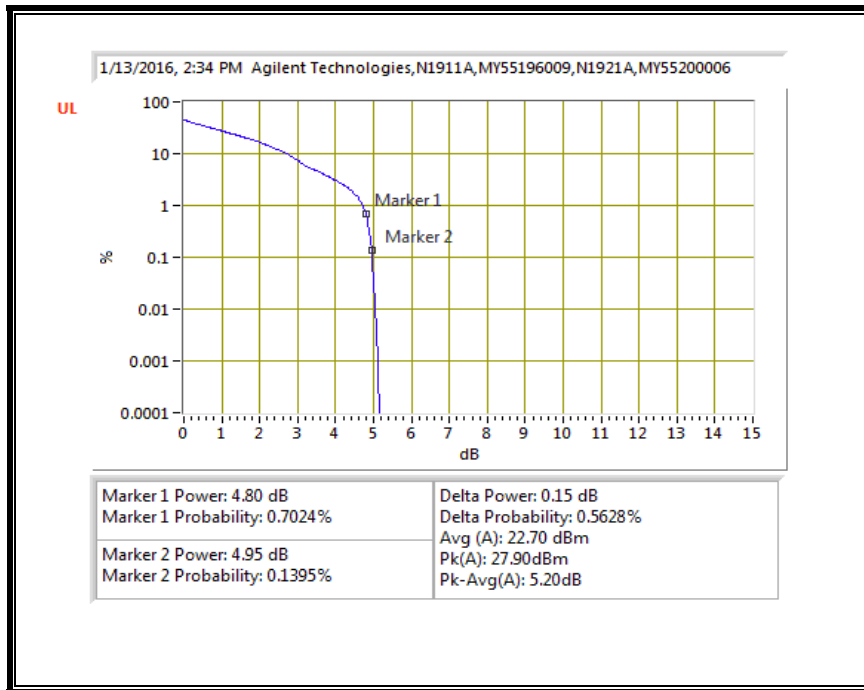
**QPSK, (1.4 MHz BAND WIDTH)**



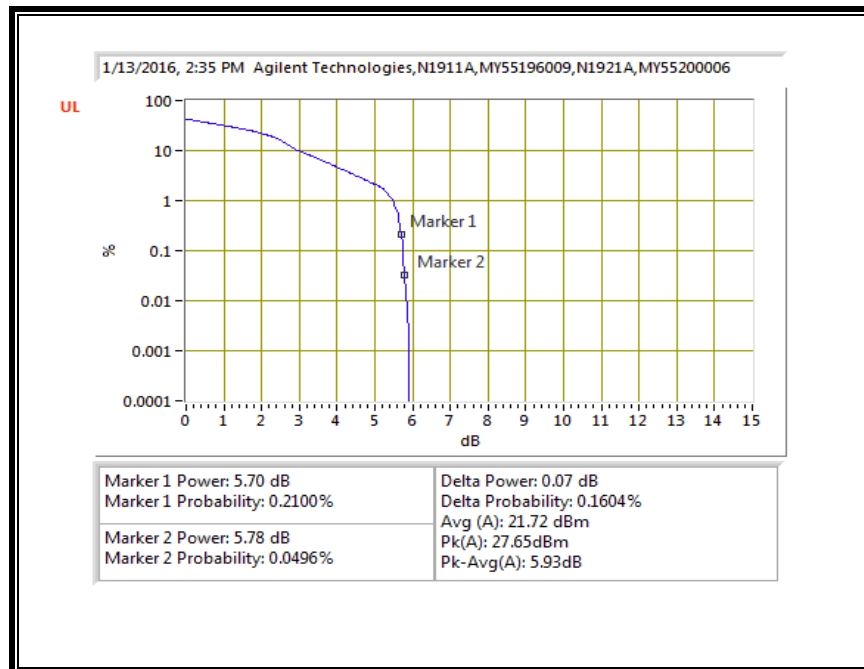
**16QAM, (1.4 MHz BAND WIDTH)**



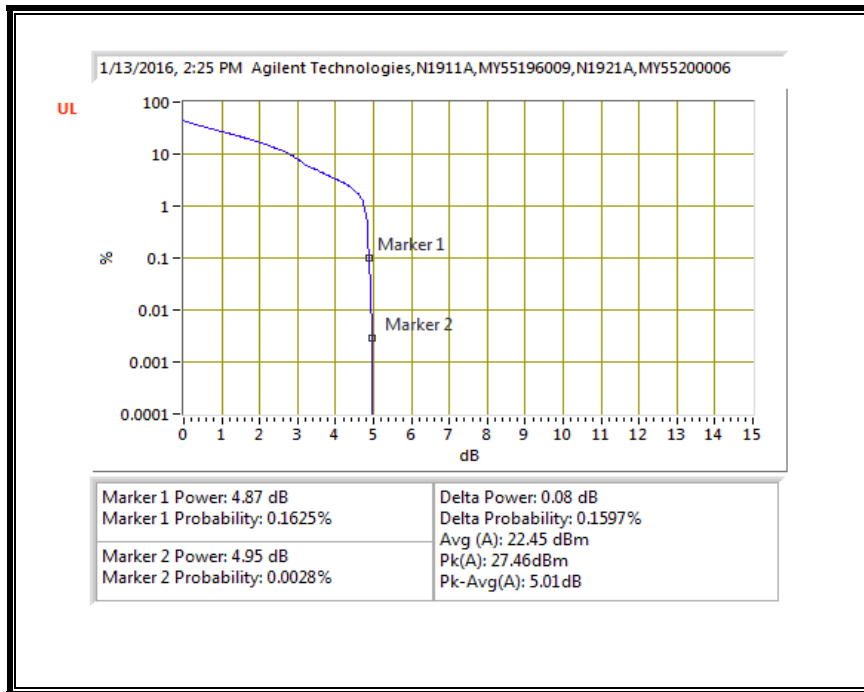
**QPSK, (3.0 MHz BAND WIDTH)**



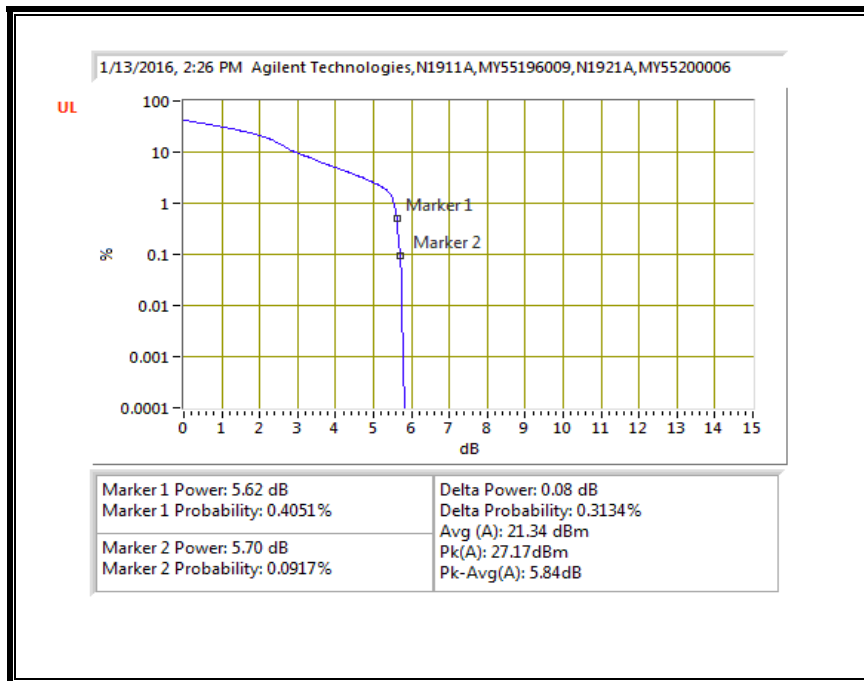
**16QAM, (3.0 MHz BAND WIDTH)**



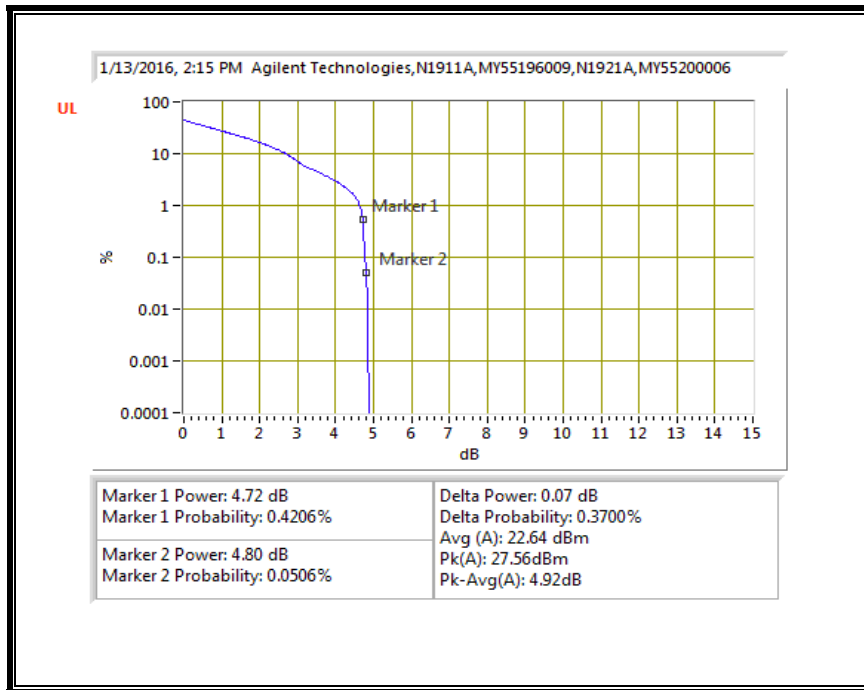
**QPSK, (5.0 MHz BAND WIDTH)**



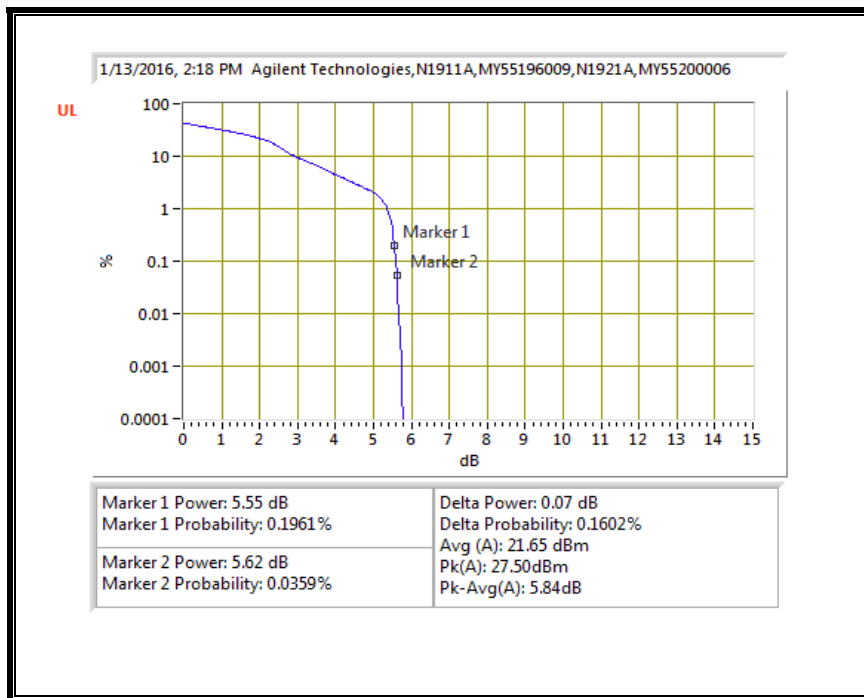
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**

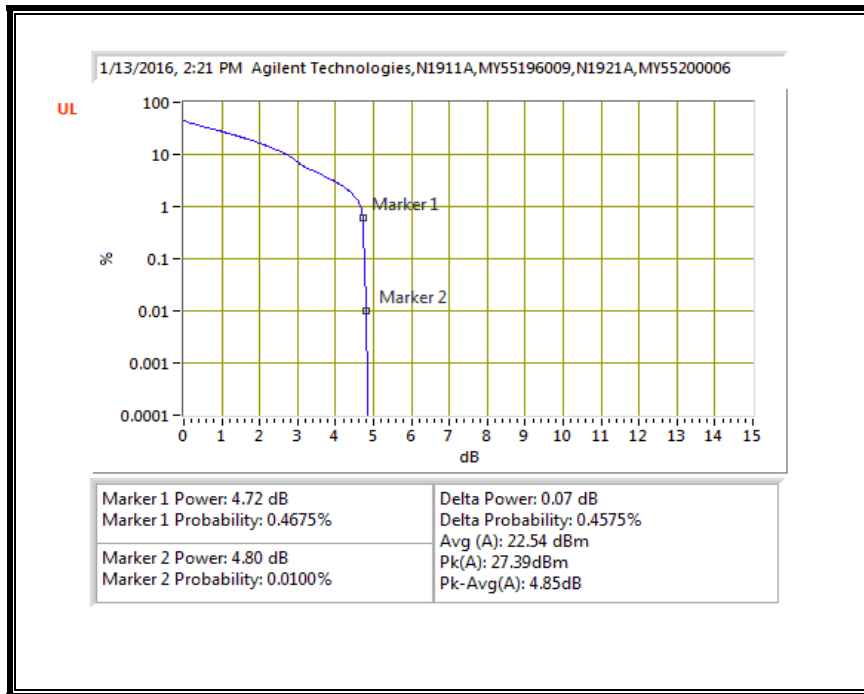


**16QAM, (10.0 MHz BAND WIDTH)**

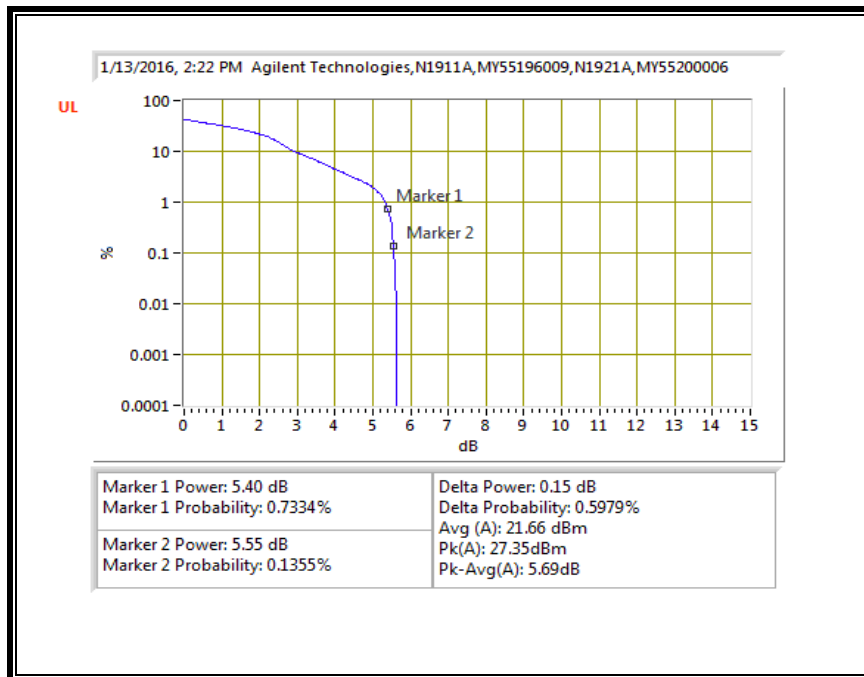




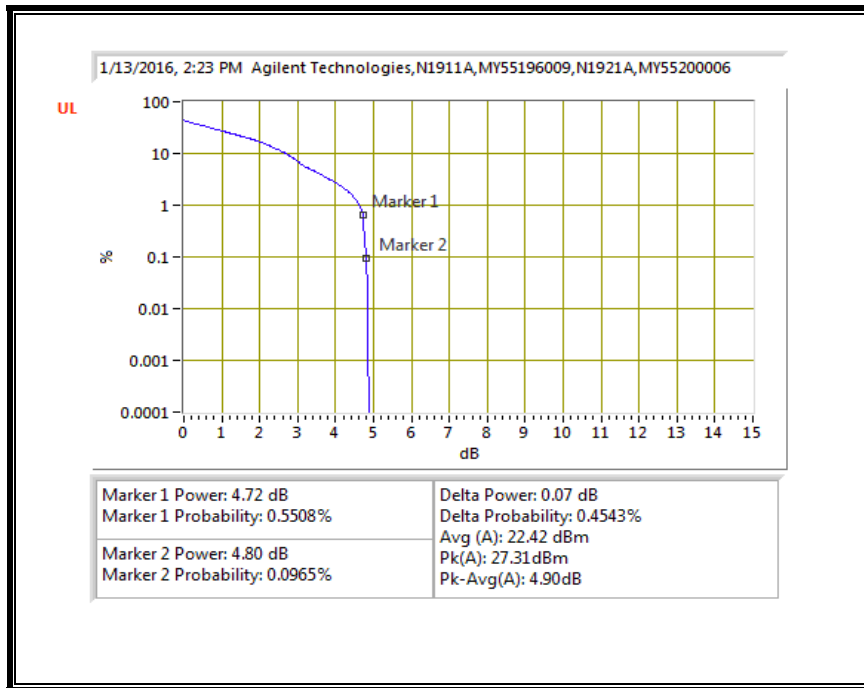
**QPSK, (15.0 MHz BAND WIDTH)**



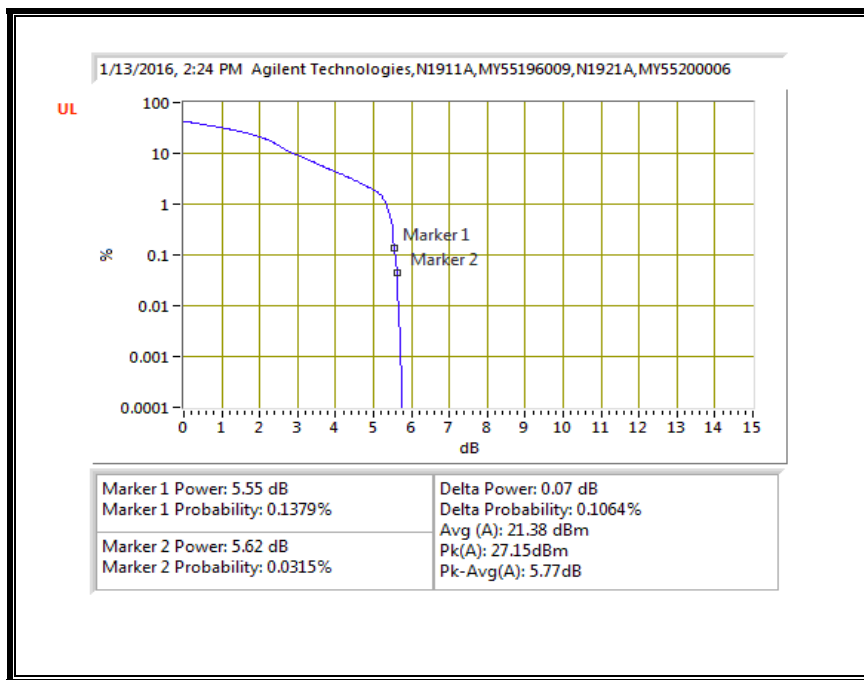
**16QAM, (15.0 MHz BAND WIDTH)**



**QPSK, (20.0 MHz BAND WIDTH)**

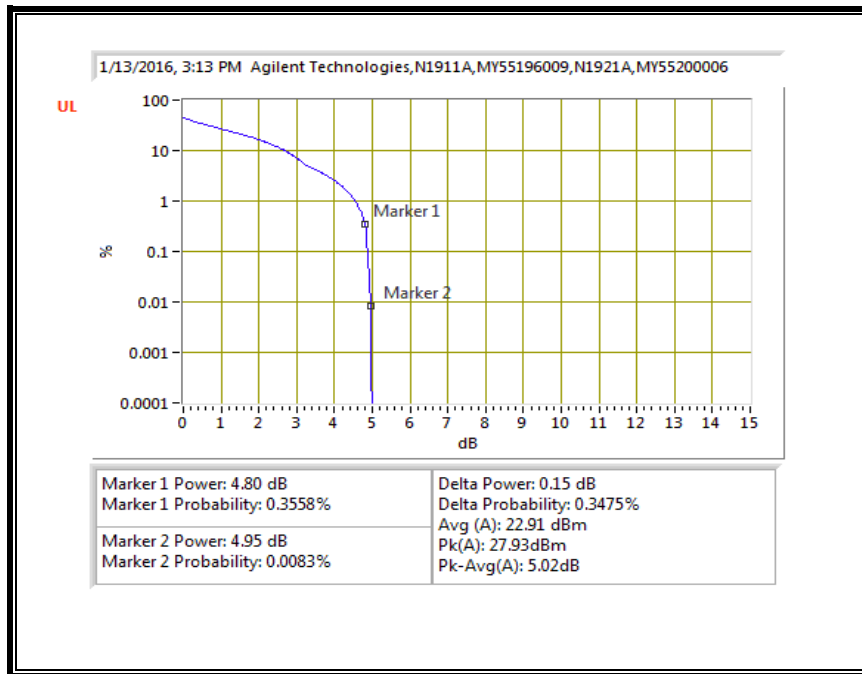


**16QAM, (20.0 MHz BAND WIDTH)**

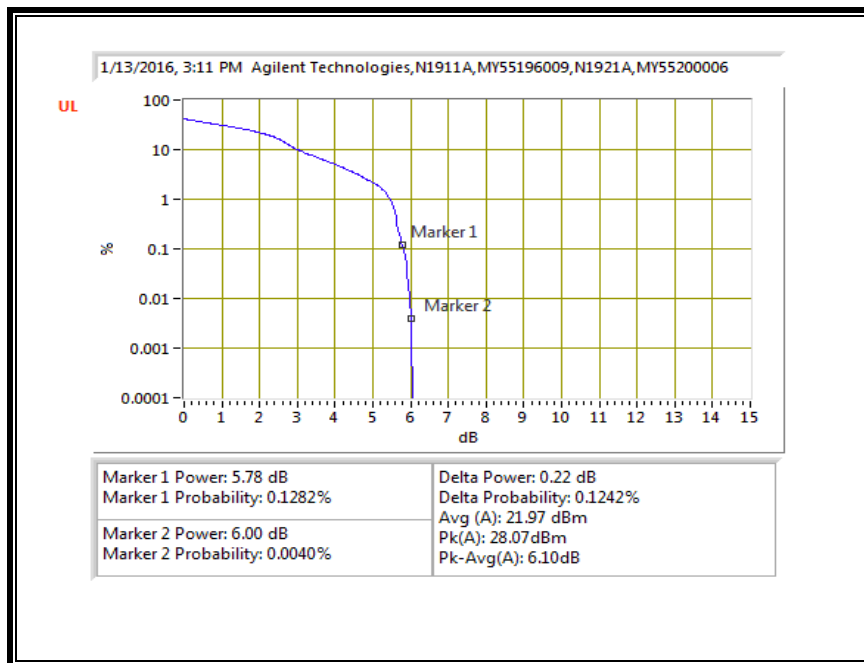


**LTE BAND 4**

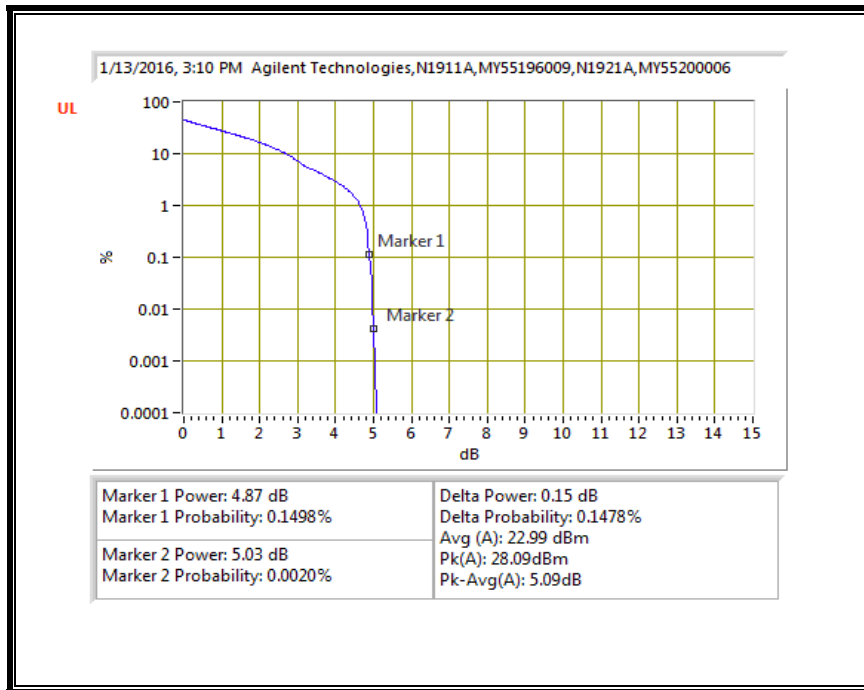
**QPSK, (1.4 MHz BAND WIDTH)**



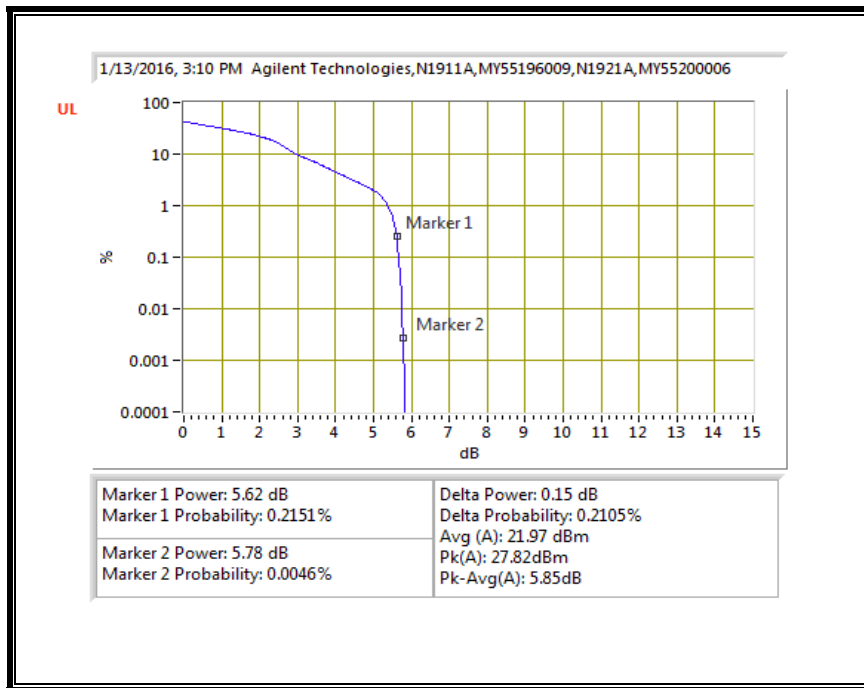
**16QAM, (1.4 MHz BAND WIDTH)**



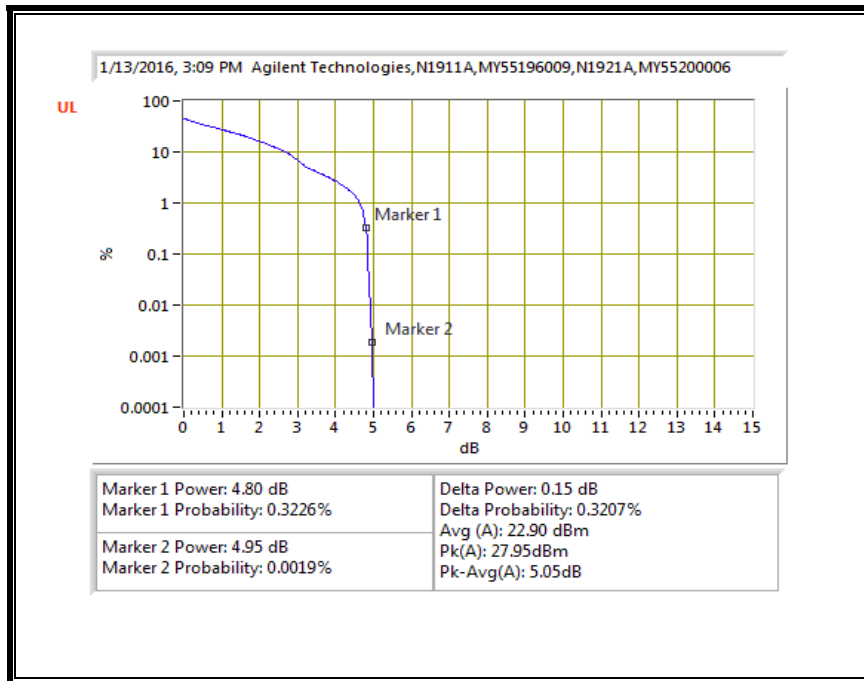
**QPSK, (3.0 MHz BAND WIDTH)**



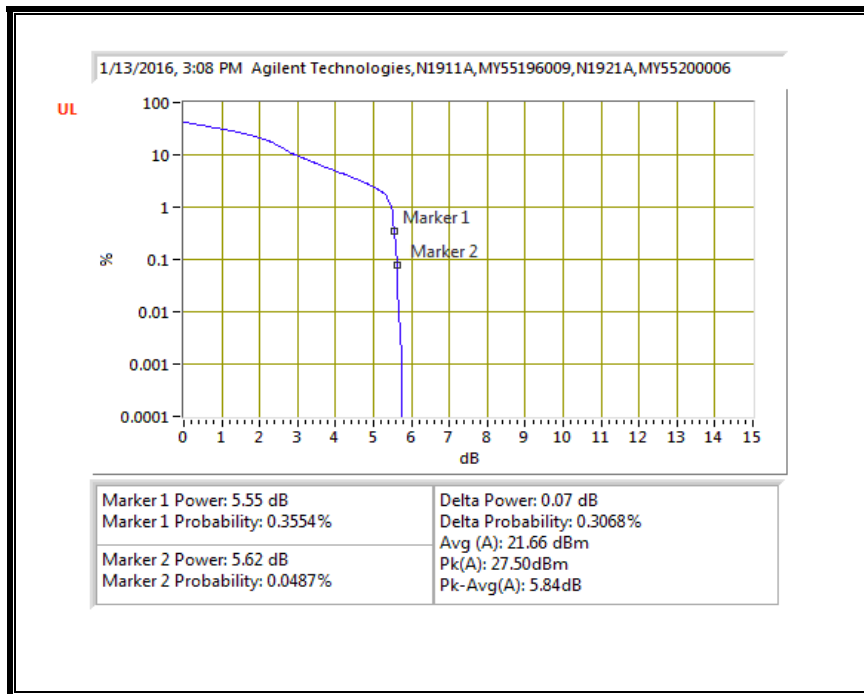
**16QAM, (3.0 MHz BAND WIDTH)**



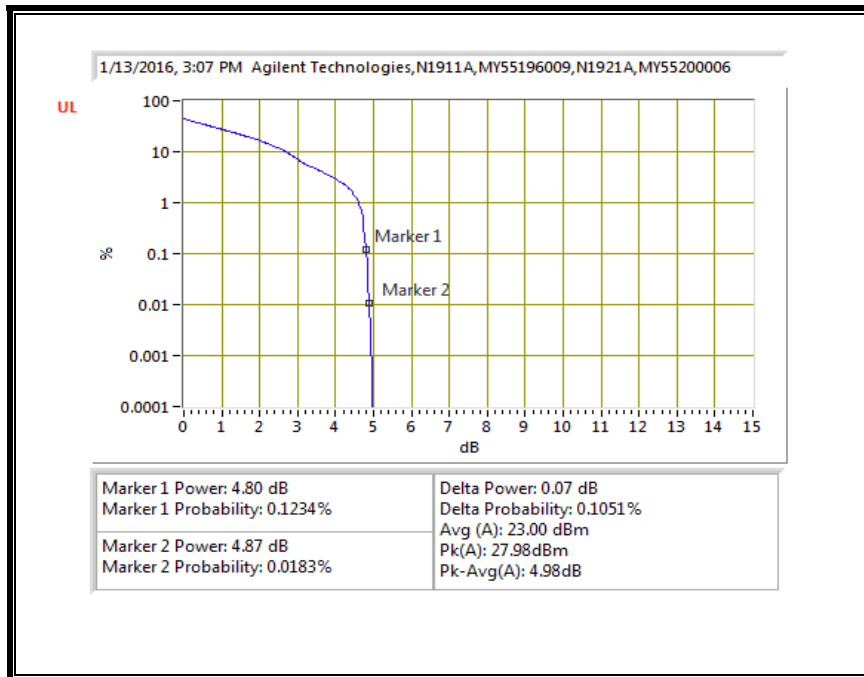
**QPSK, (5.0 MHz BAND WIDTH)**



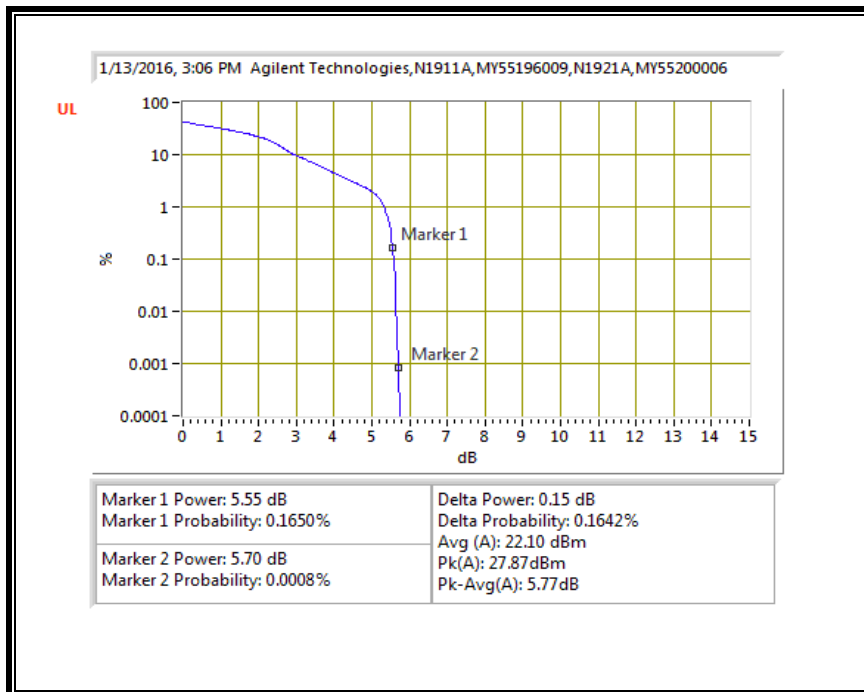
**16QAM, (5.0 MHz BAND WIDTH)**



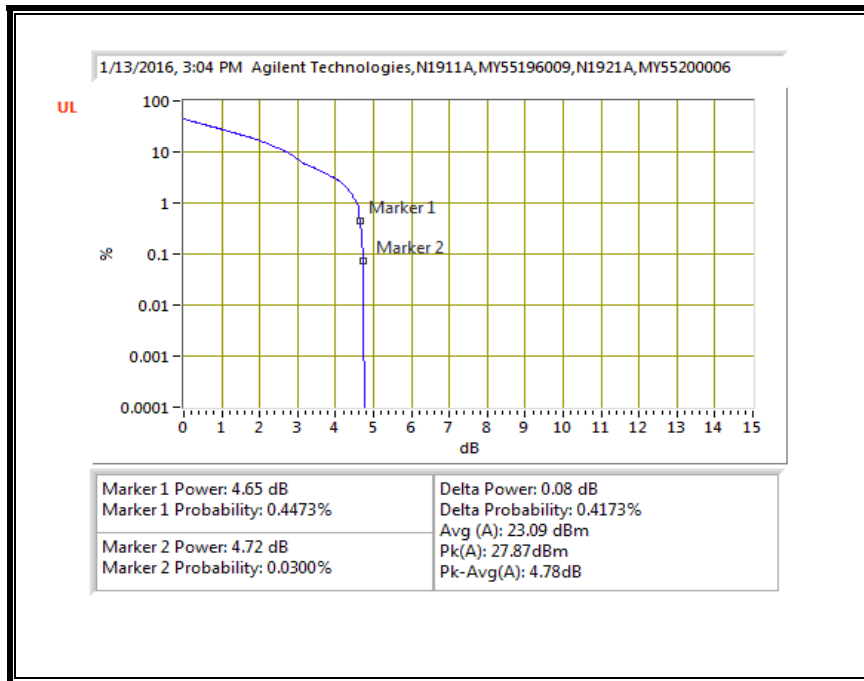
**QPSK, (10.0 MHz BAND WIDTH)**



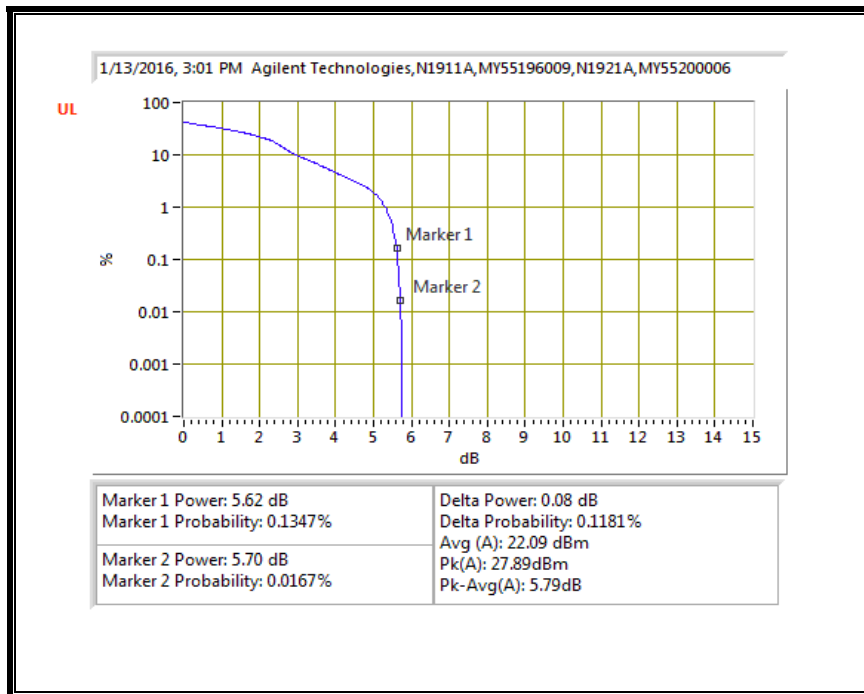
**16QAM, (10.0 MHz BAND WIDTH)**



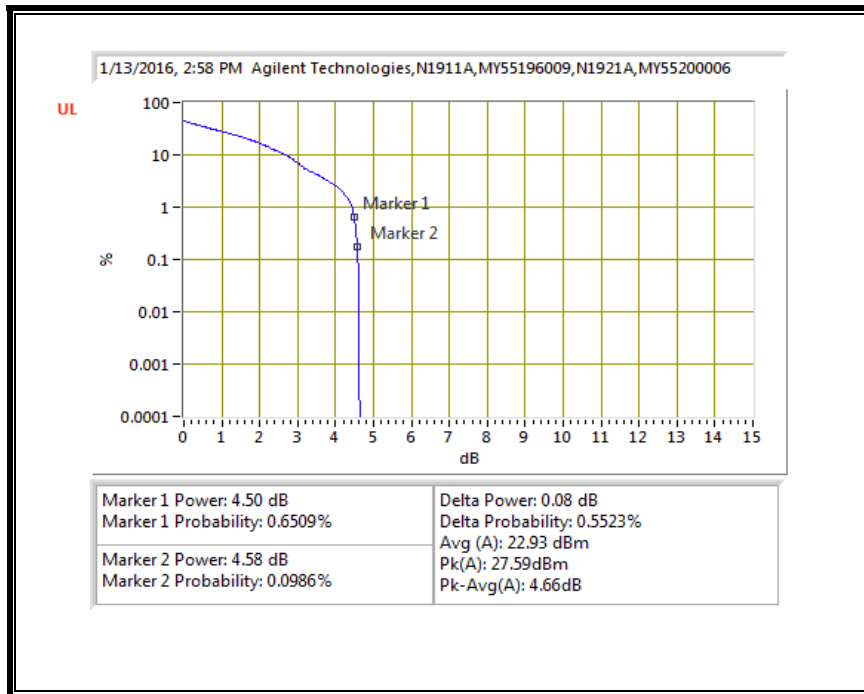
**QPSK, (15.0 MHz BAND WIDTH)**



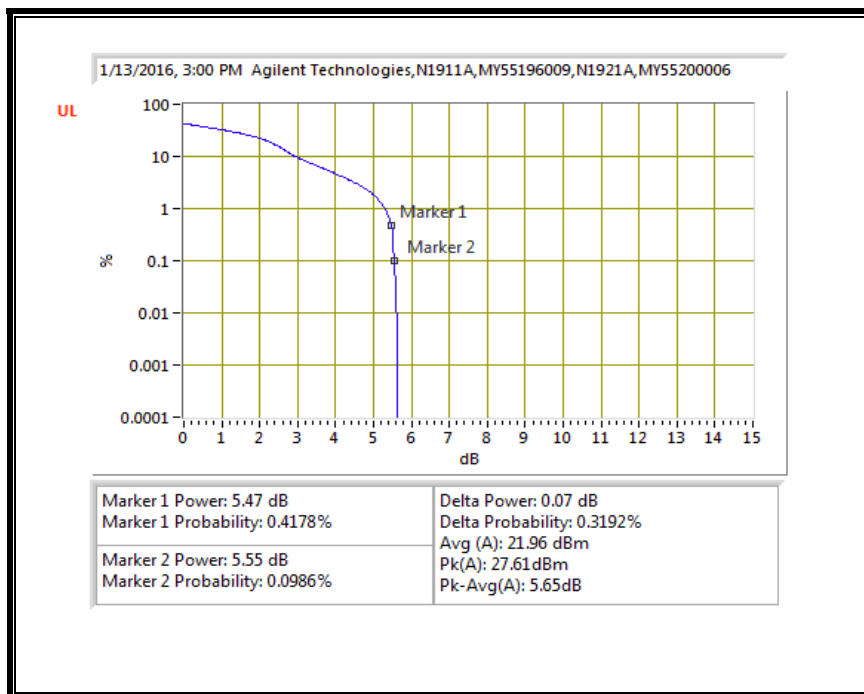
**16QAM, (15.0 MHz BAND WIDTH)**



**QPSK, (20.0 MHz BAND WIDTH)**



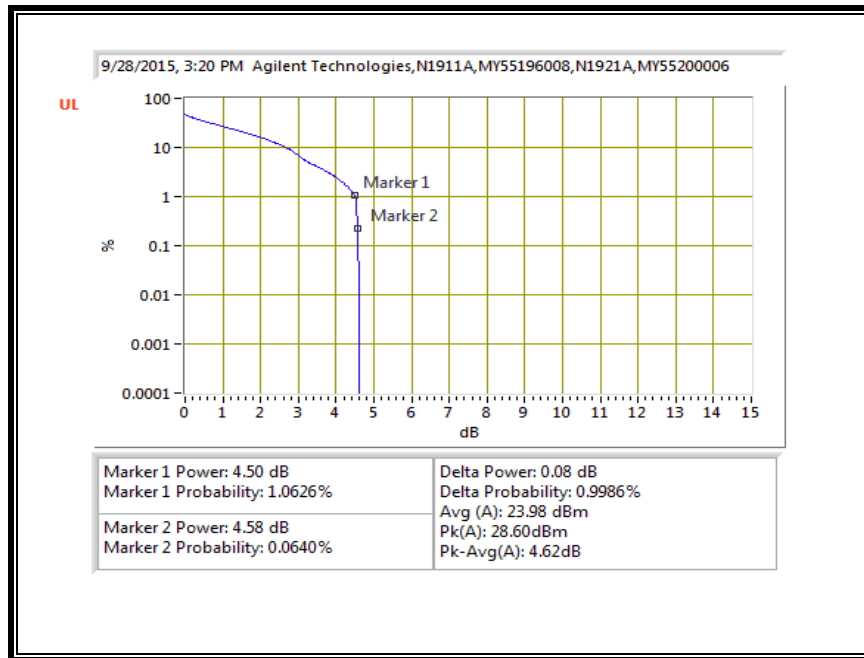
**16QAM, (20.0 MHz BAND WIDTH)**



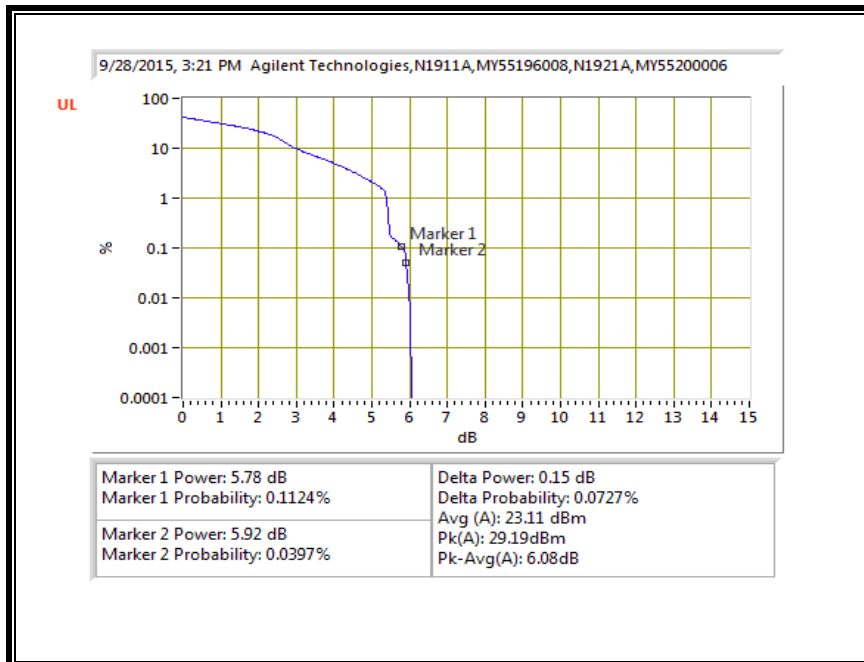


**LTE BAND 5**

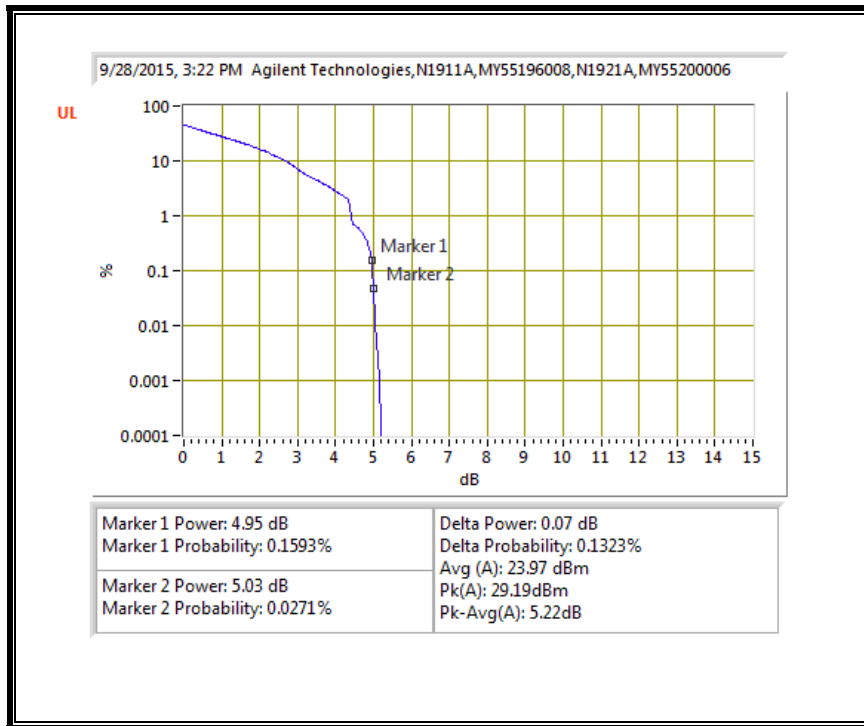
**QPSK, (1.4 MHz BAND WIDTH)**



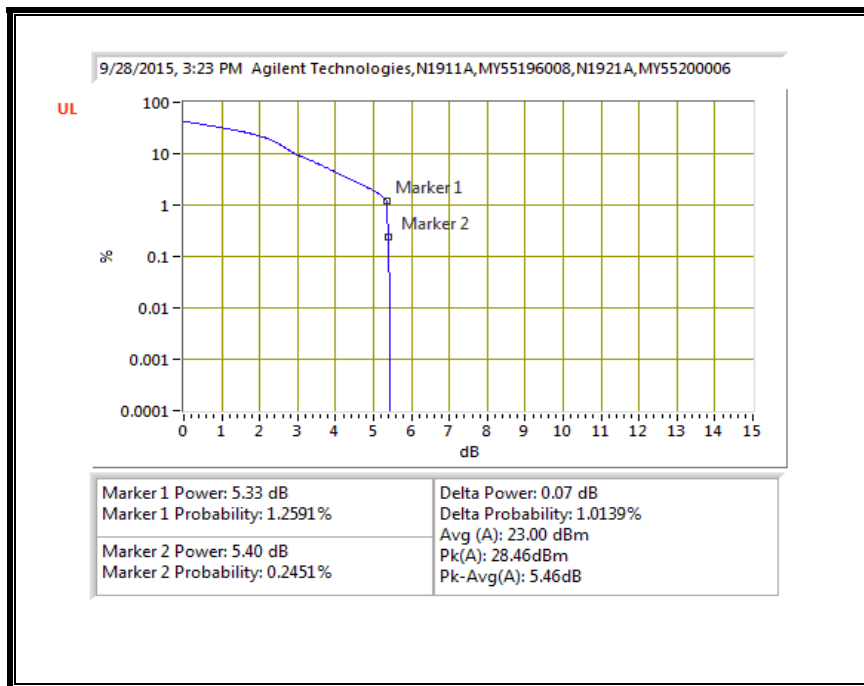
**16QAM, (1.4 MHz BAND WIDTH)**



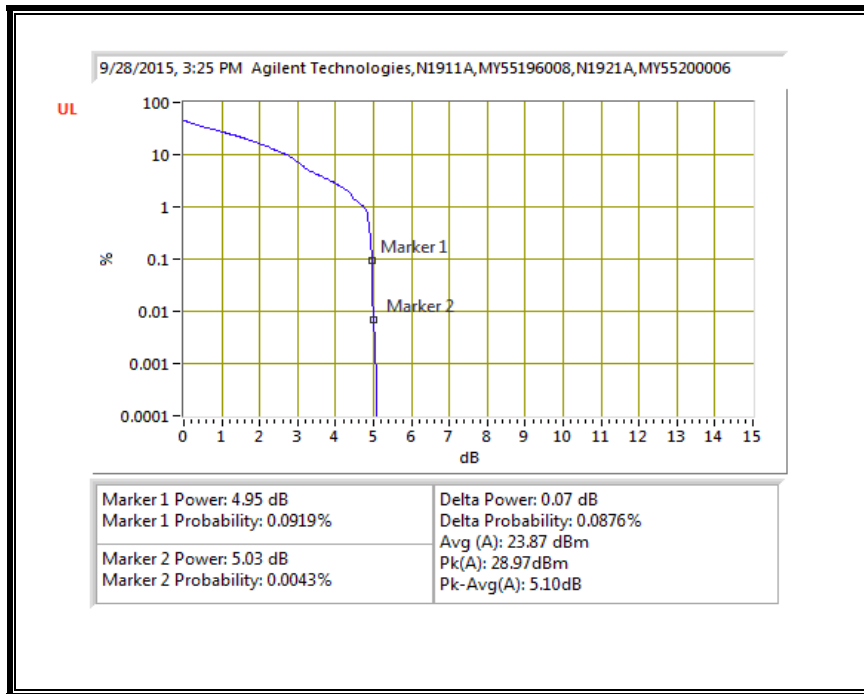
**QPSK, (3.0 MHz BAND WIDTH)**



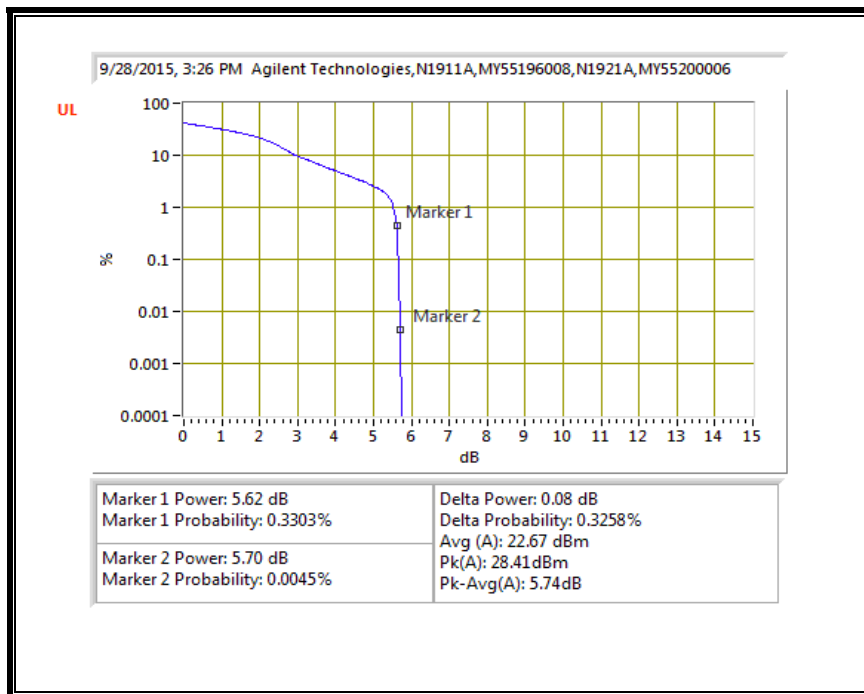
**16QAM, (3.0 MHz BAND WIDTH)**



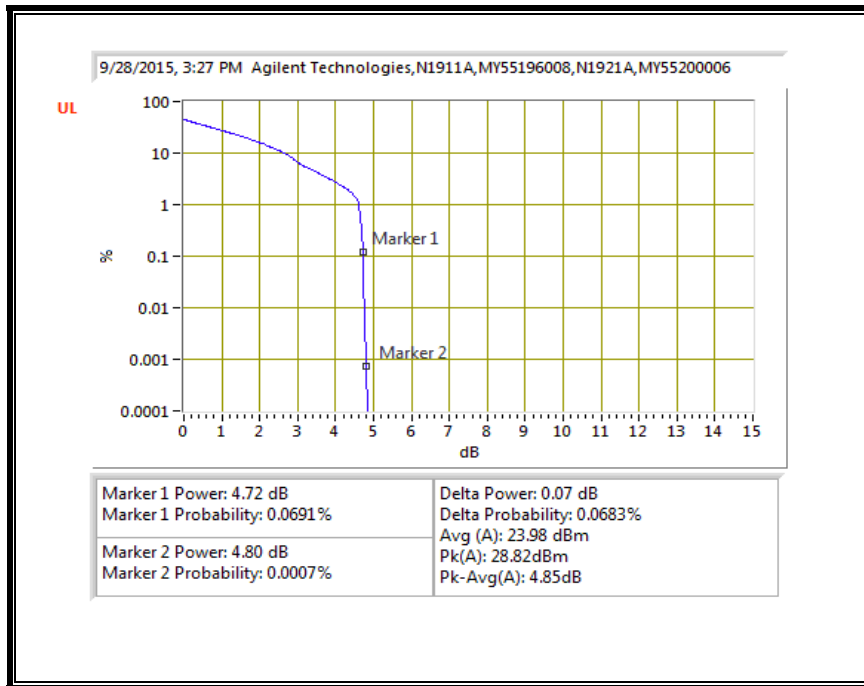
**QPSK, (5.0 MHz BAND WIDTH)**



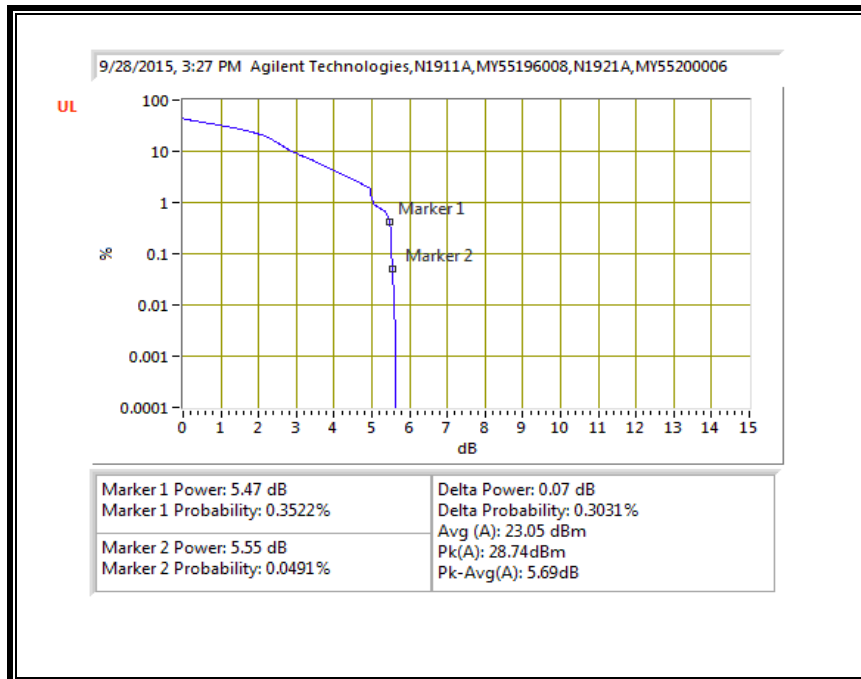
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**

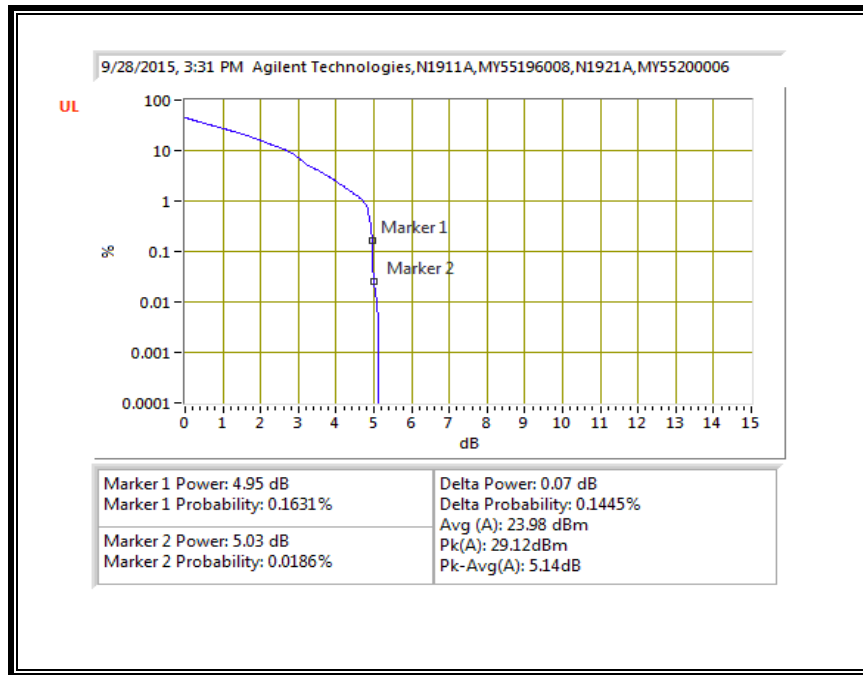


**16QAM, (10.0 MHz BAND WIDTH)**

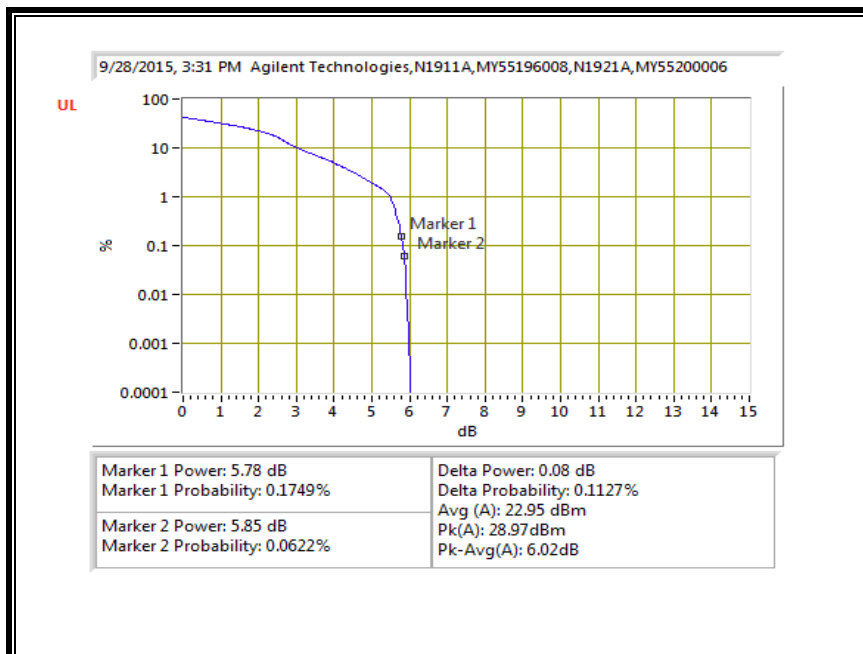


**LTE BAND 12**

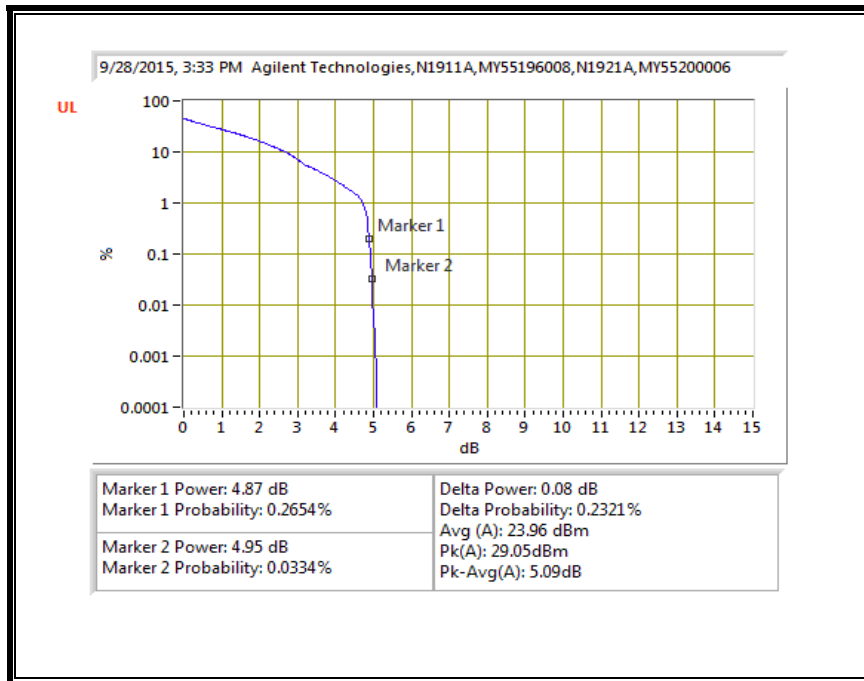
**QPSK, (1.4 MHz BAND WIDTH)**



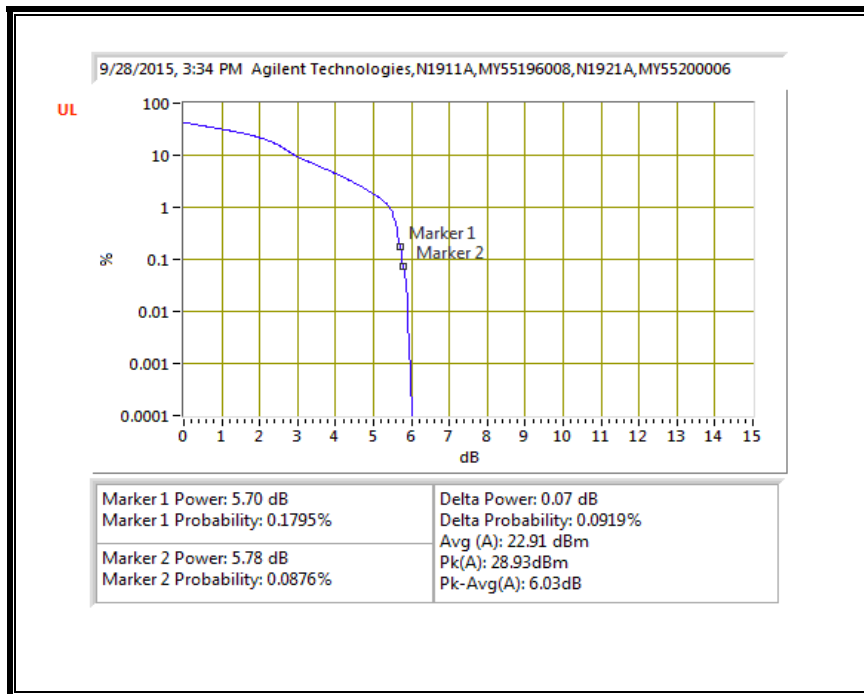
**16QAM, (1.4 MHz BAND WIDTH)**



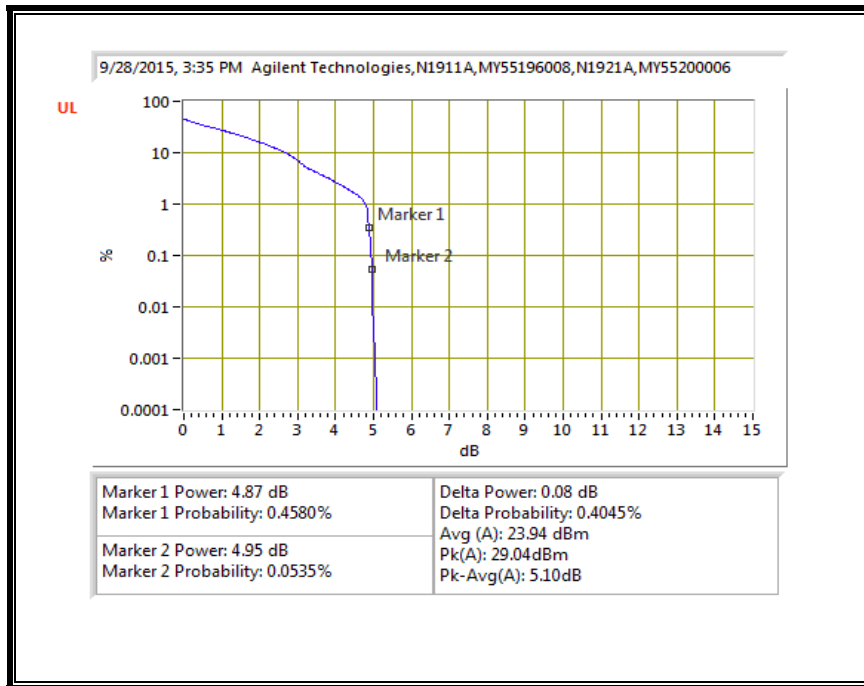
**QPSK, (3.0 MHz BAND WIDTH)**



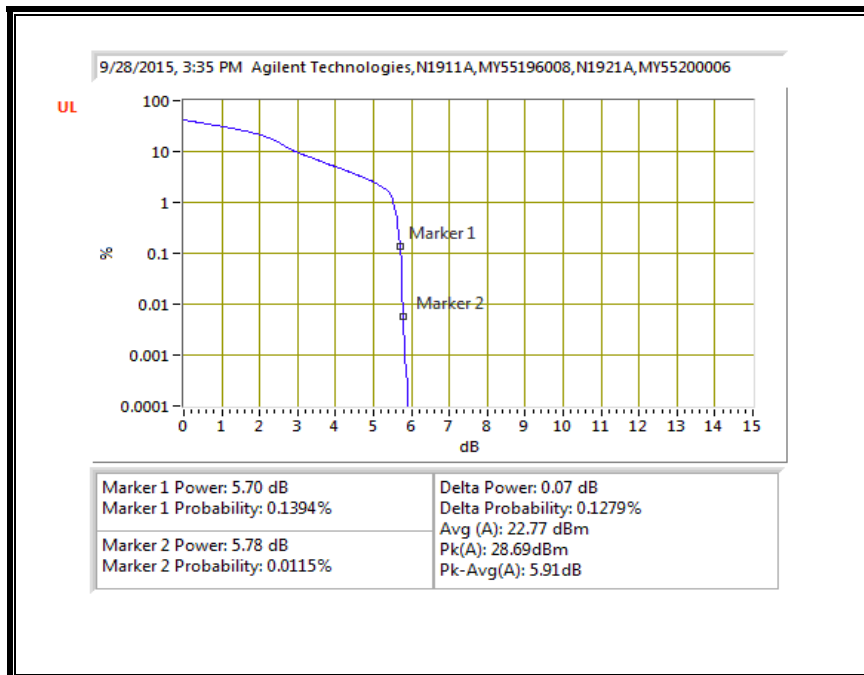
**16QAM, (3.0 MHz BAND WIDTH)**



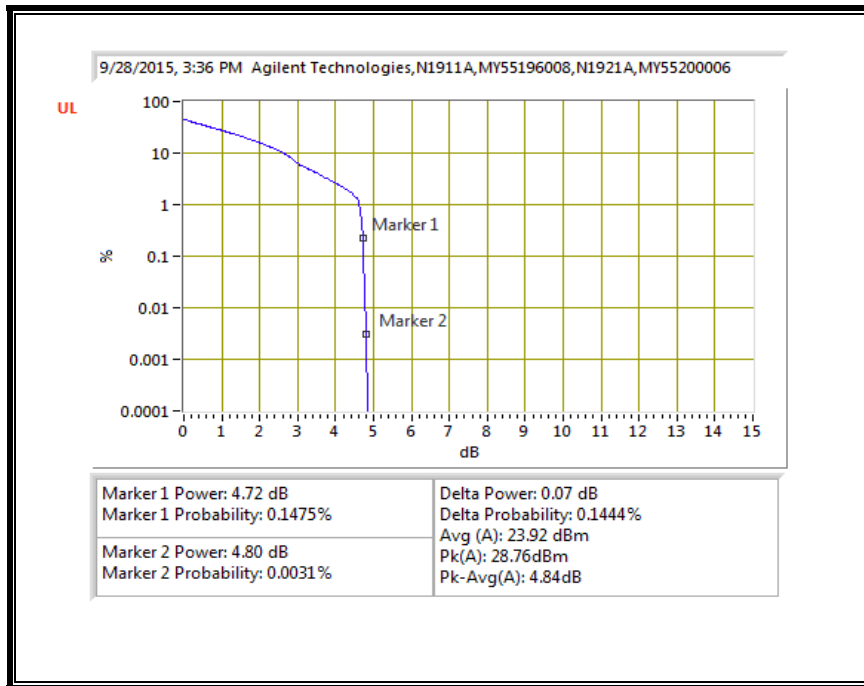
**QPSK, (5.0 MHz BAND WIDTH)**



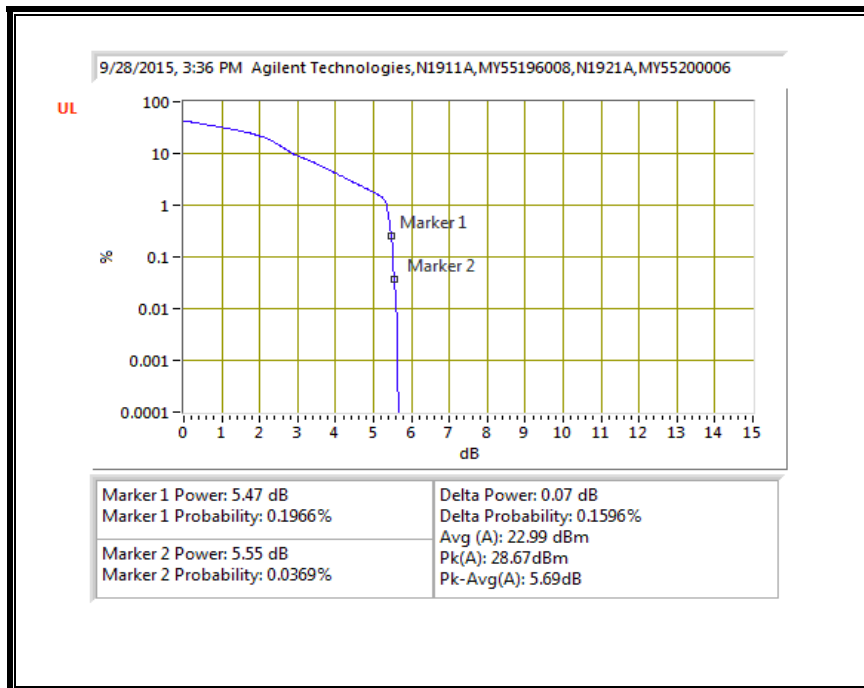
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**



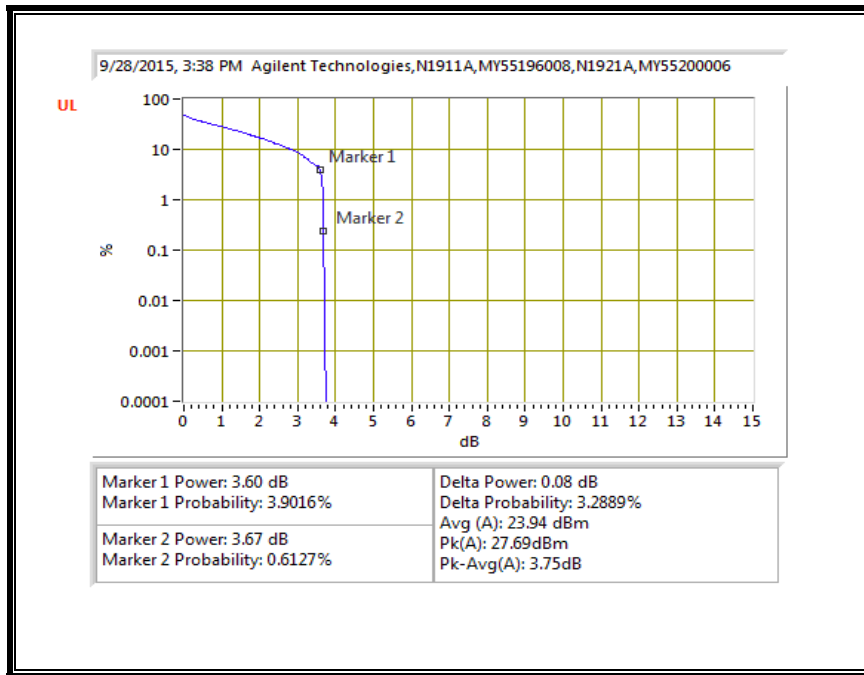
**16QAM, (10.0 MHz BAND WIDTH)**



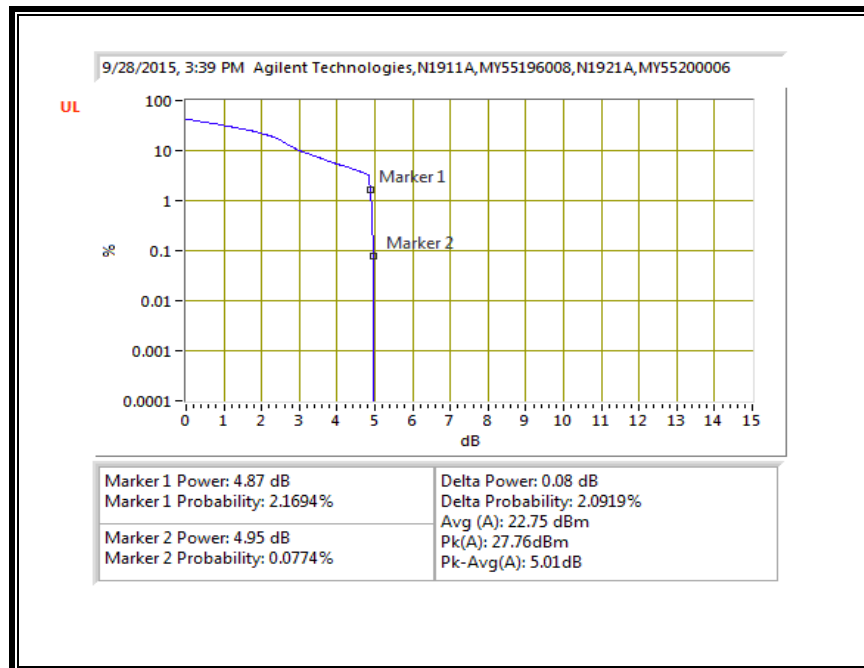


**LTE BAND 13**

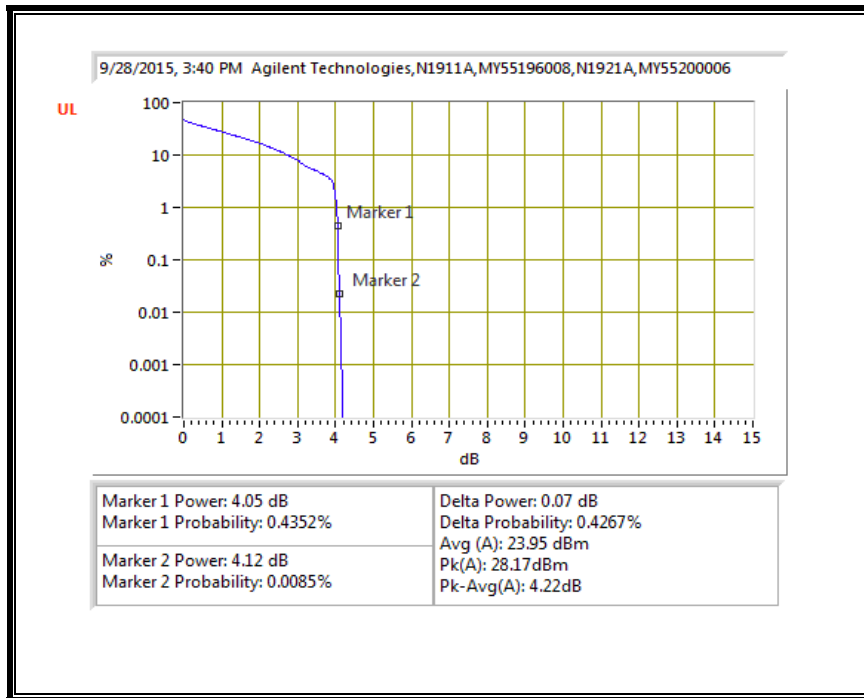
**QPSK, (5.0 MHz BAND WIDTH)**



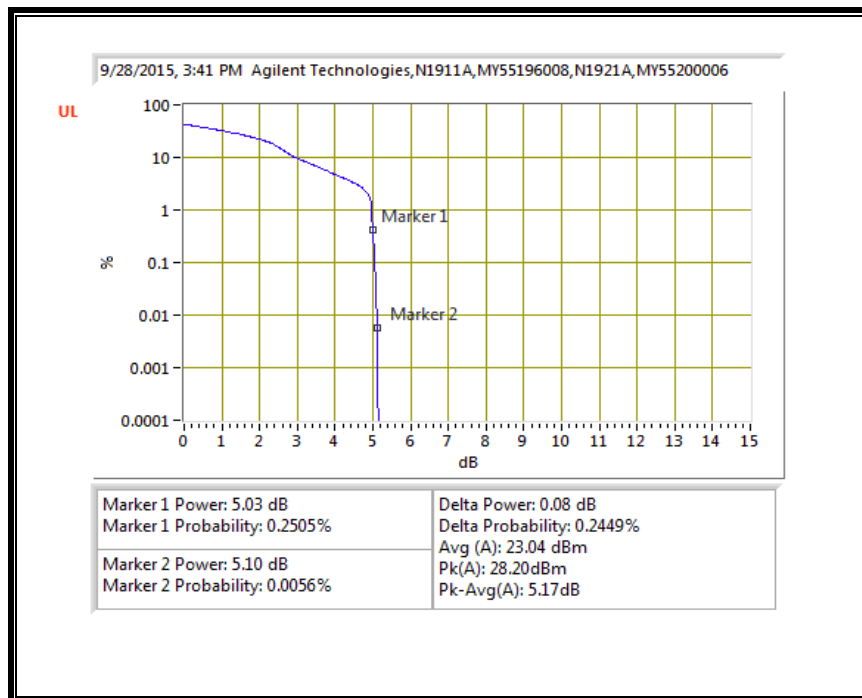
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**

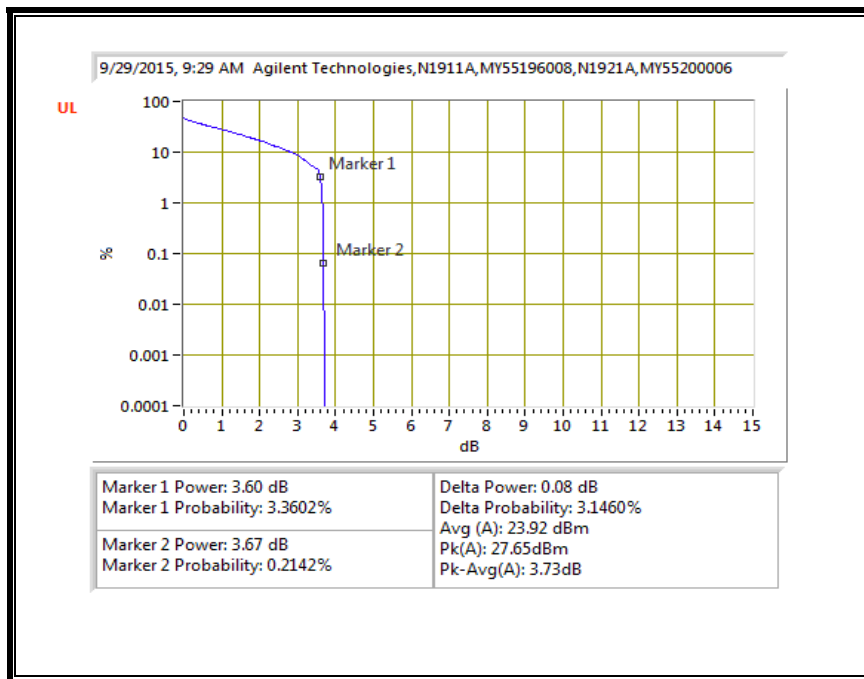


**16QAM, (10.0 MHz BAND WIDTH)**

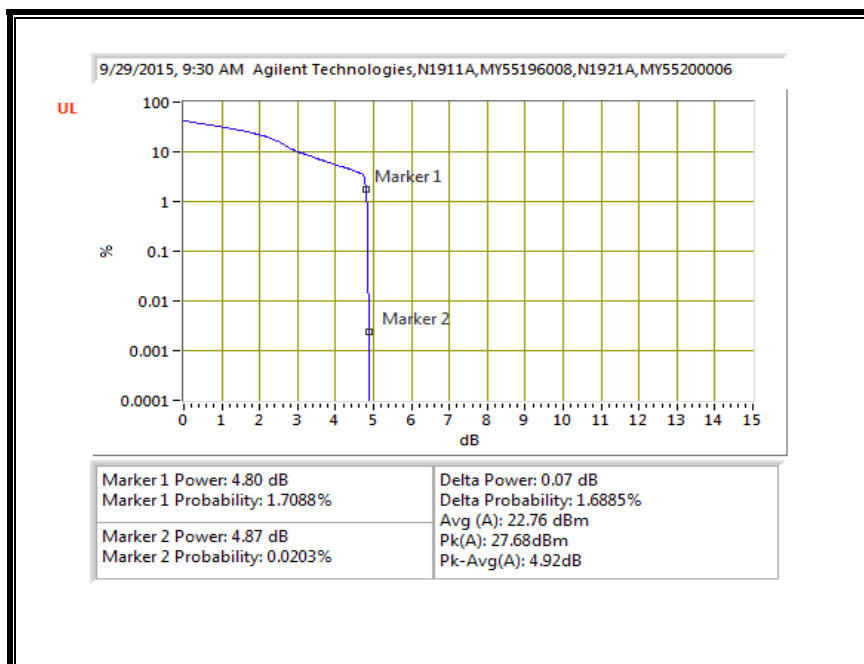


**LTE BAND 17**

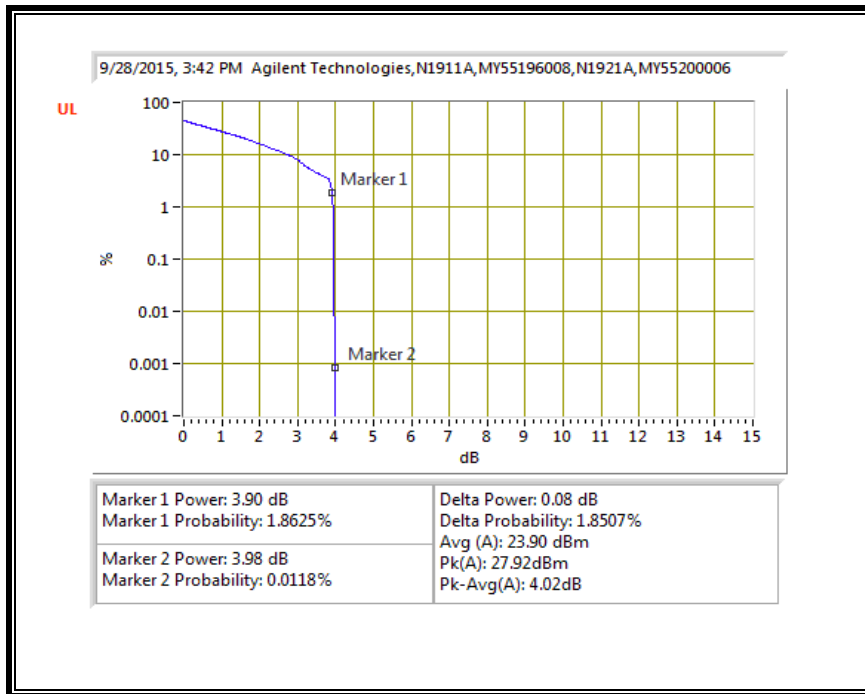
**QPSK, (5.0 MHz BAND WIDTH)**



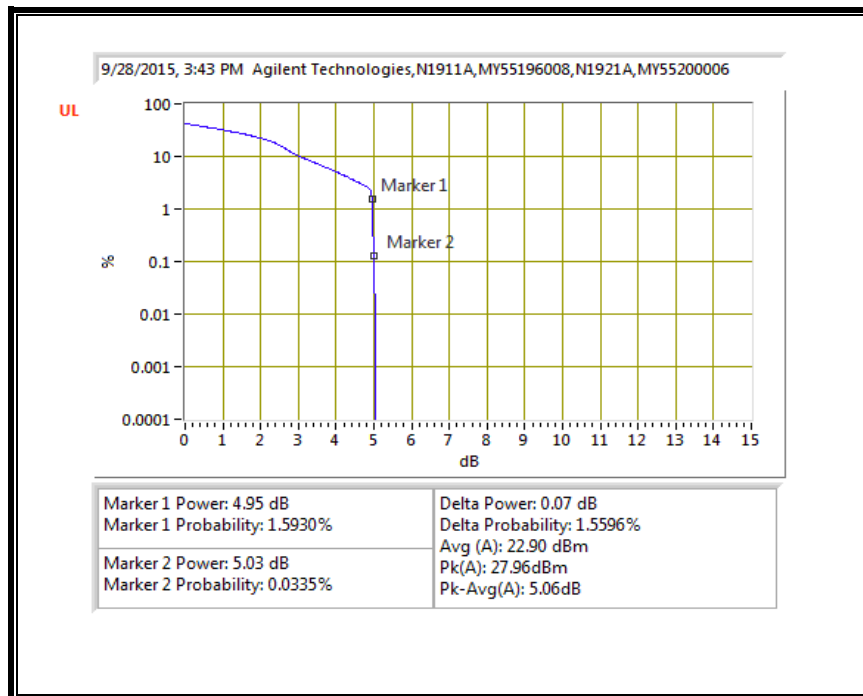
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**

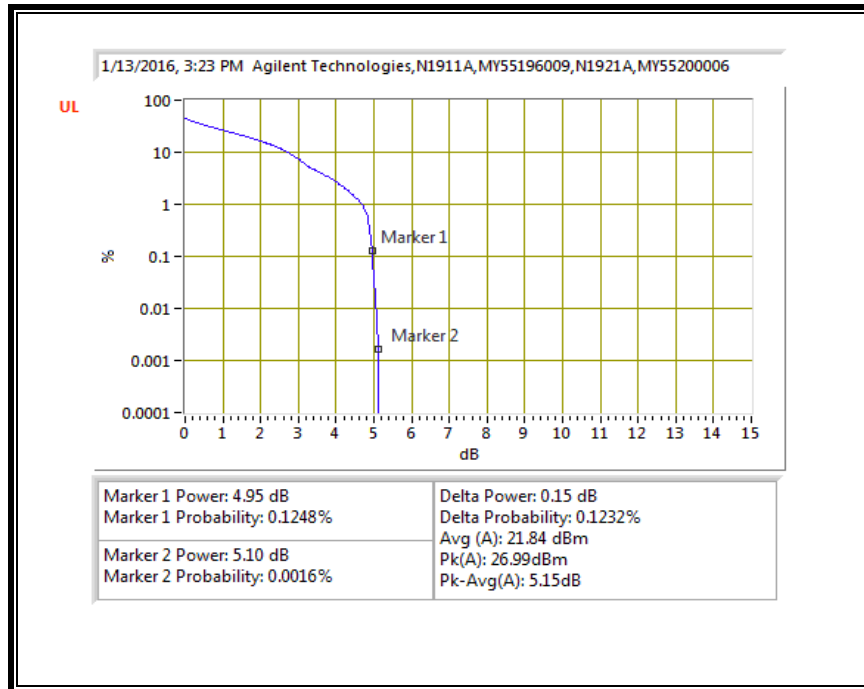


**16QAM, (10.0 MHz BAND WIDTH)**

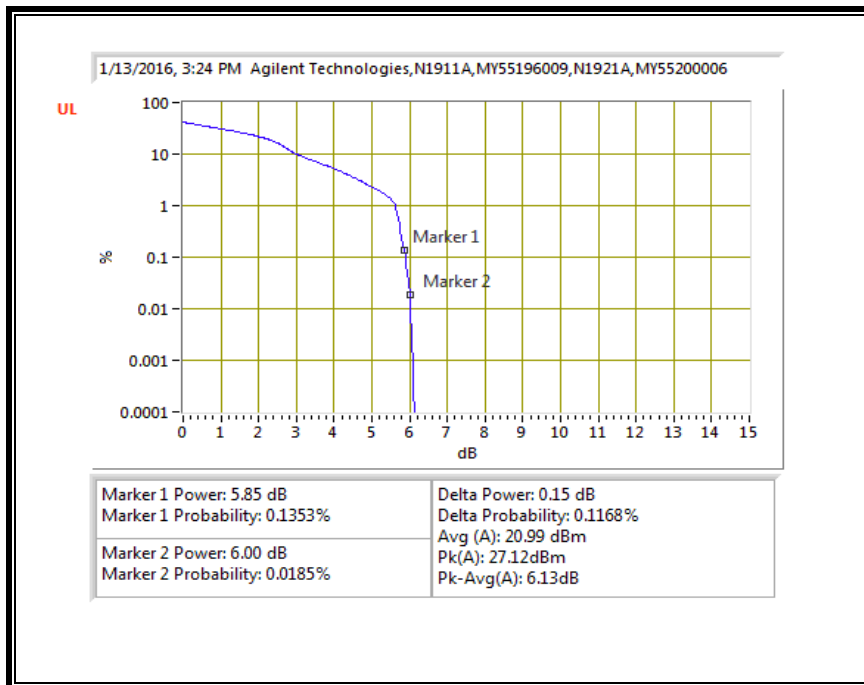


**LTE BAND 25**

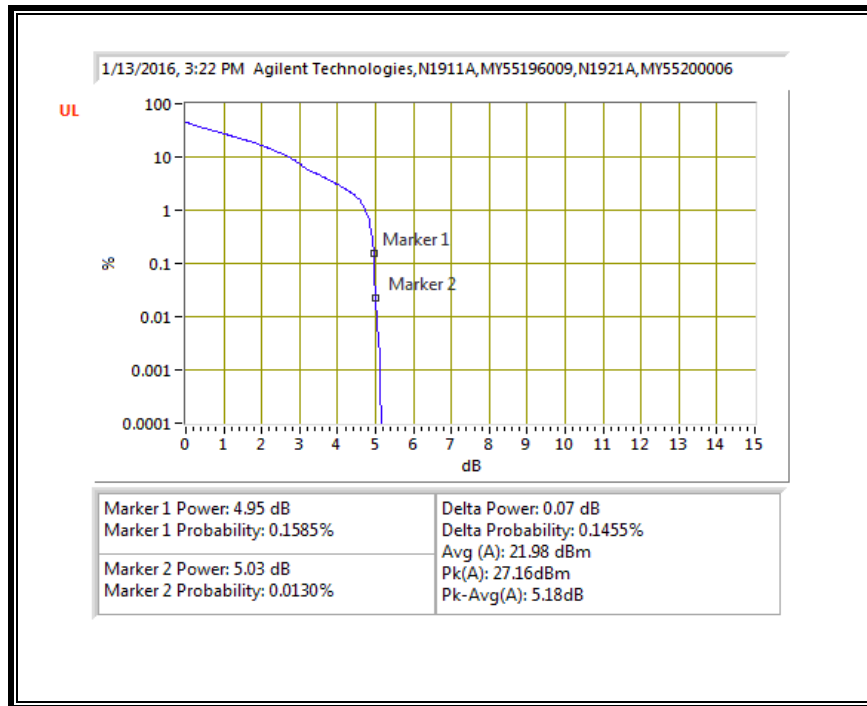
**QPSK, (1.4 MHz BAND WIDTH)**



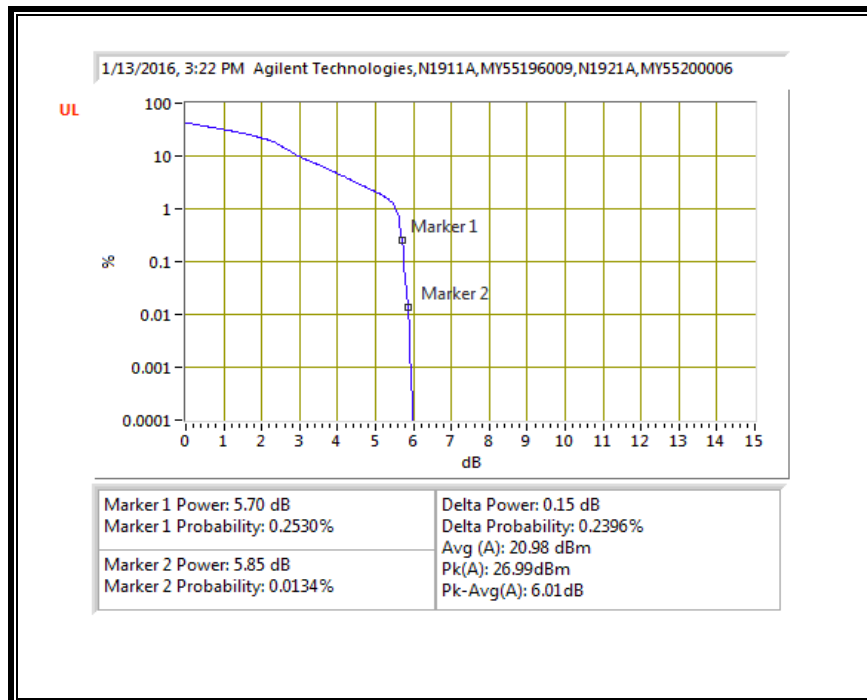
**16QAM, (1.4 MHz BAND WIDTH)**



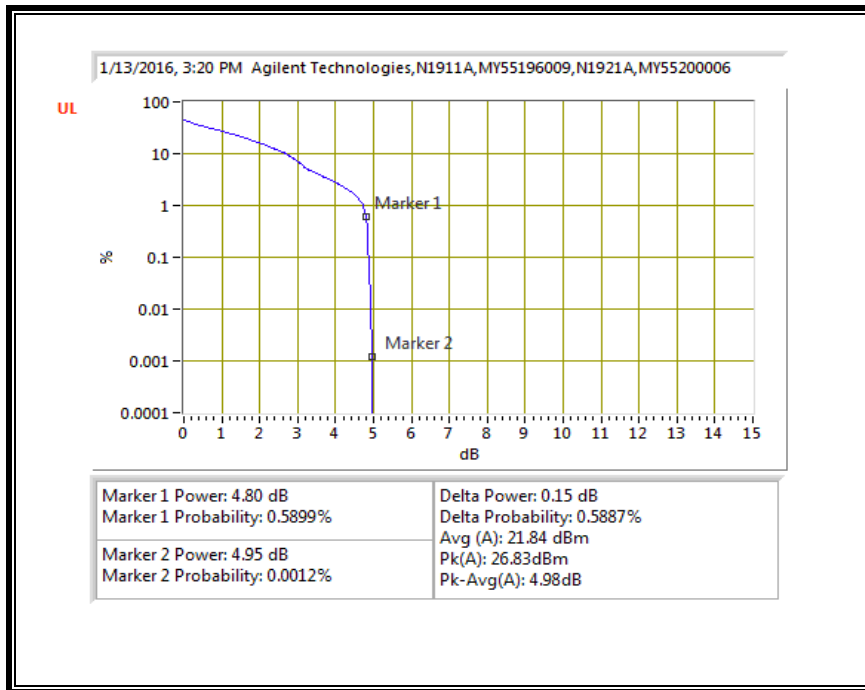
**QPSK, (3.0 MHz BAND WIDTH)**



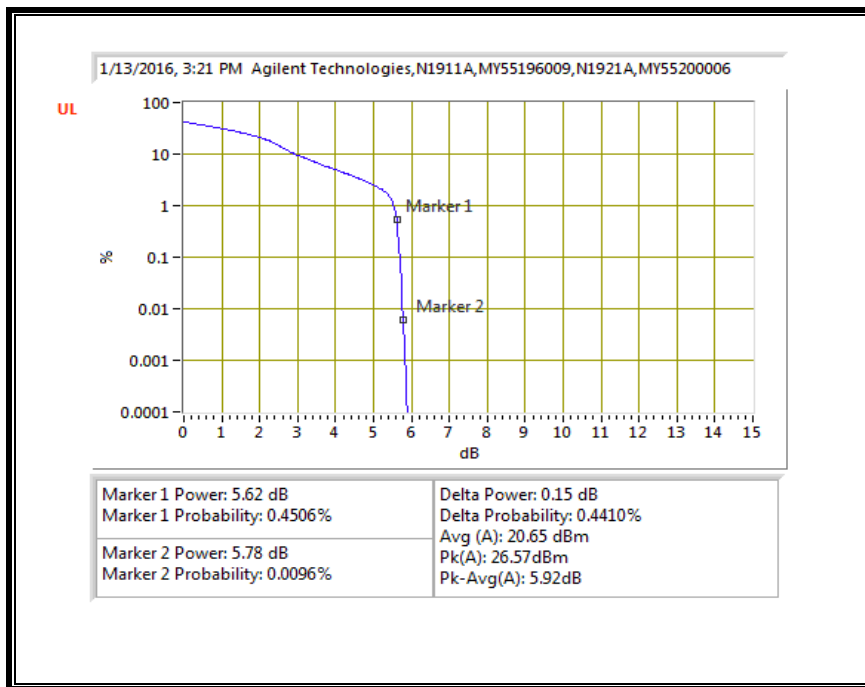
**16QAM, (3.0 MHz BAND WIDTH)**



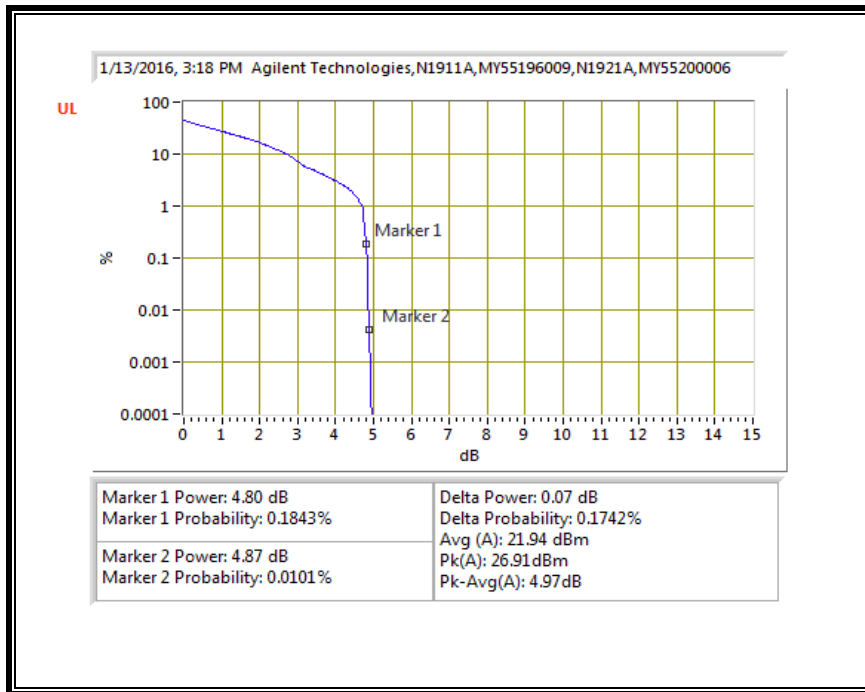
**QPSK, (5.0 MHz BAND WIDTH)**



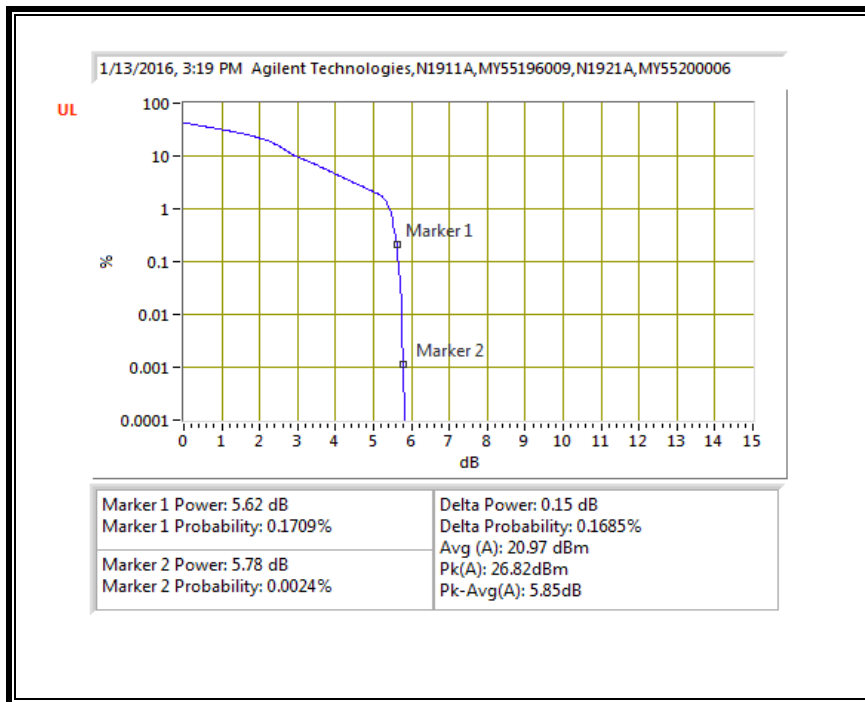
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**

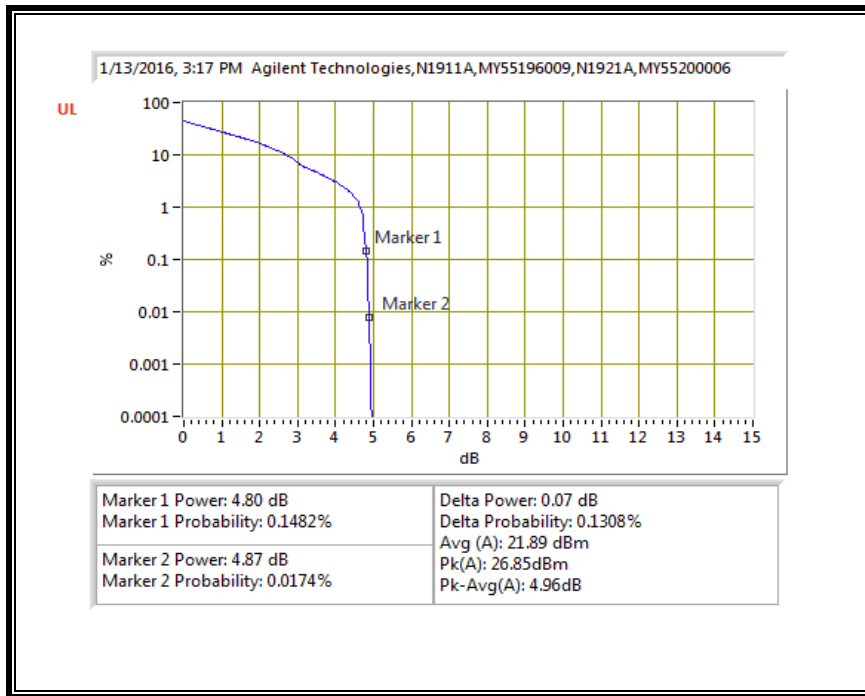


**16QAM, (10.0 MHz BAND WIDTH)**

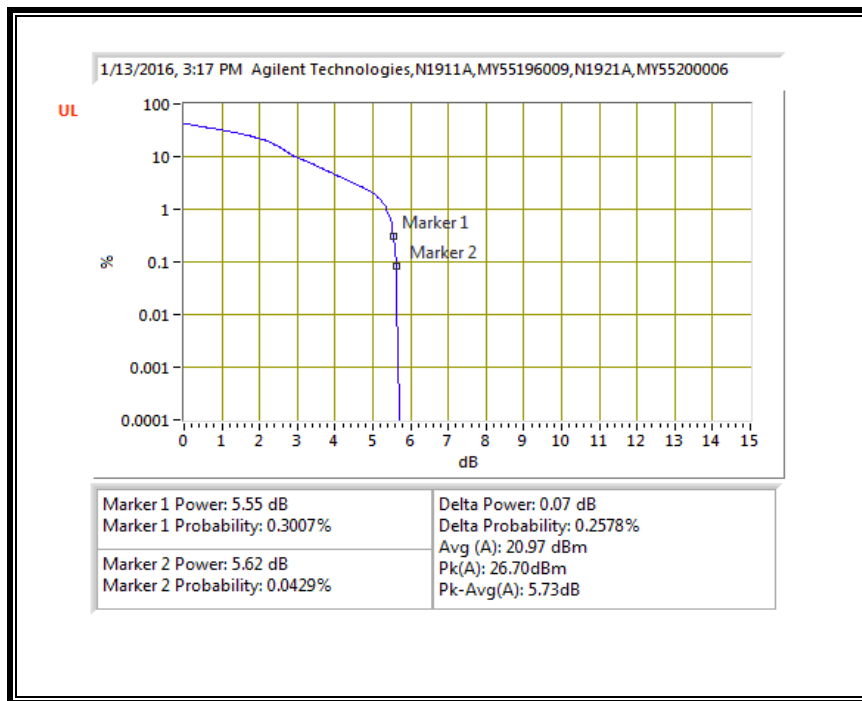




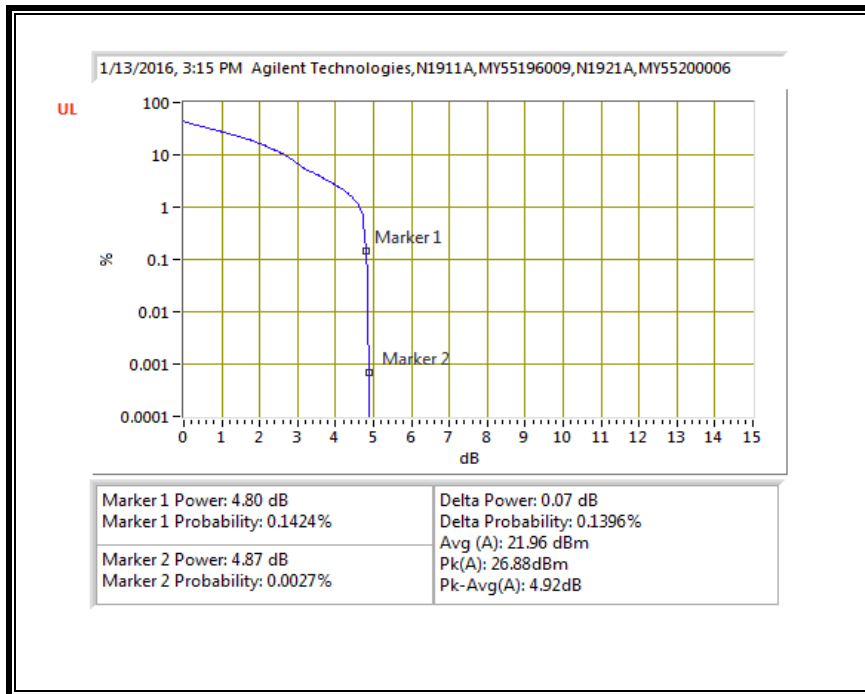
**QPSK, (15.0 MHz BAND WIDTH)**



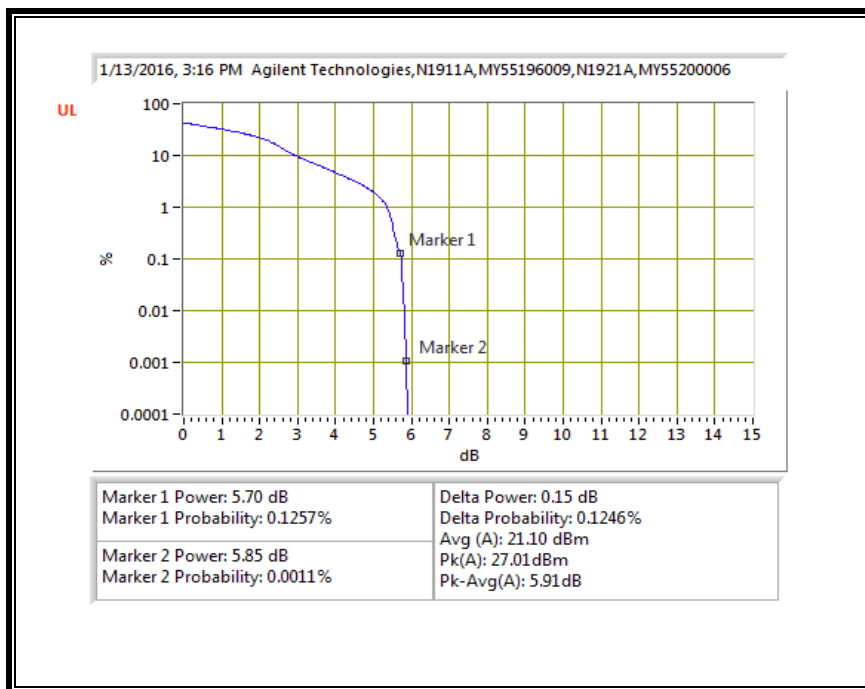
**16QAM, (15.0 MHz BAND WIDTH)**



**QPSK, (20.0 MHz BAND WIDTH)**

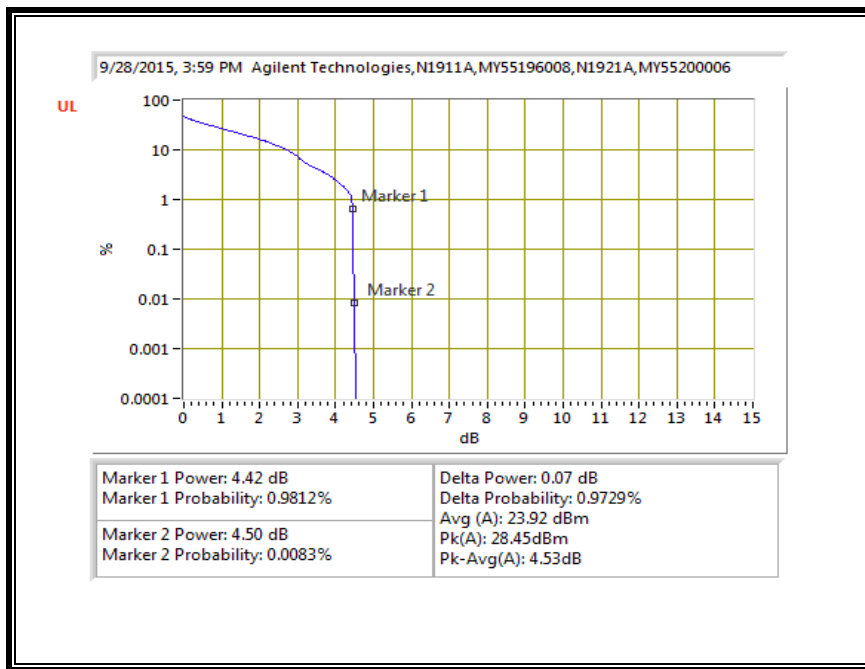


**16QAM, (20.0 MHz BAND WIDTH)**

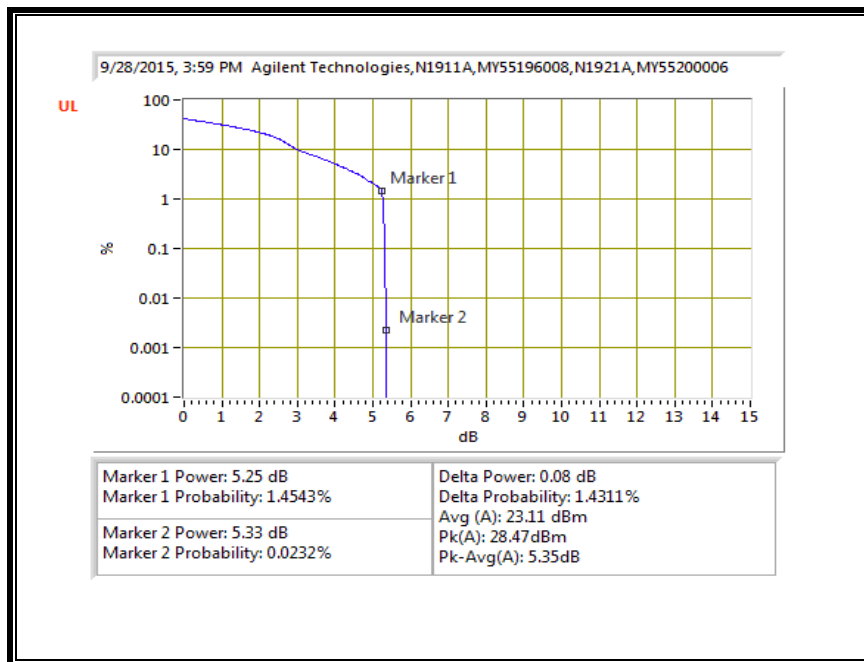


**LTE BAND 26**

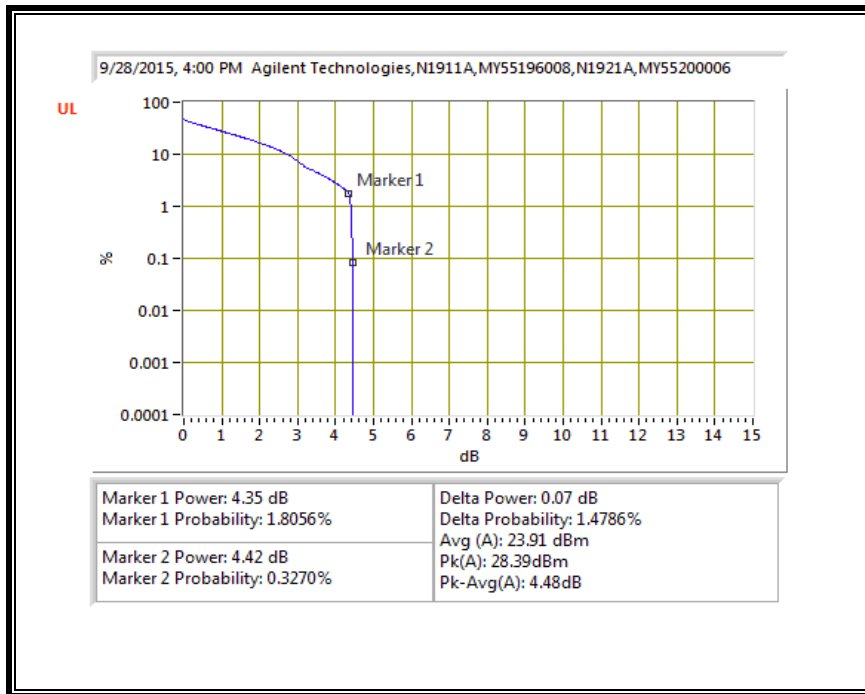
**QPSK, (1.4 MHz BAND WIDTH)**



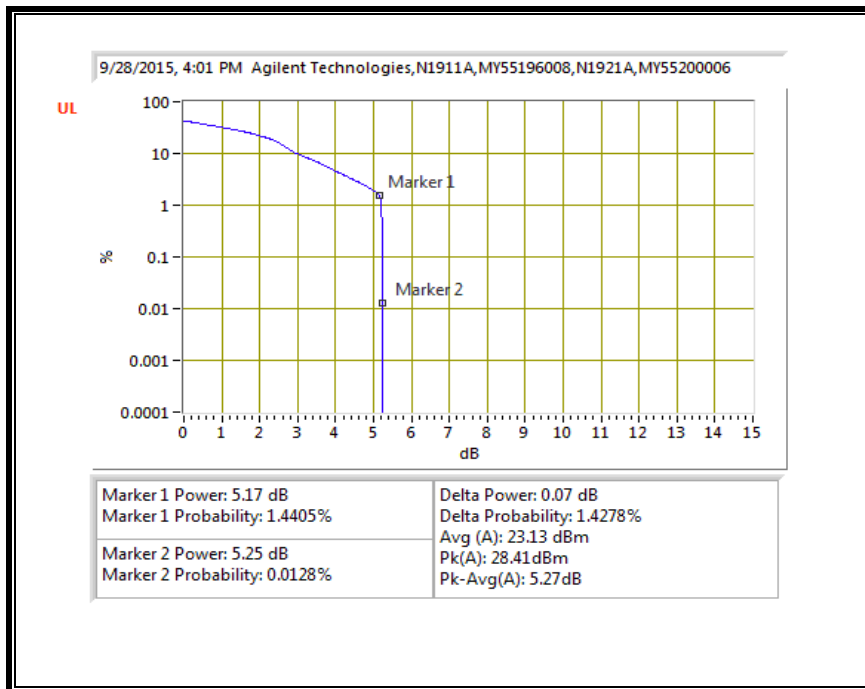
**16QAM, (1.4 MHz BAND WIDTH)**



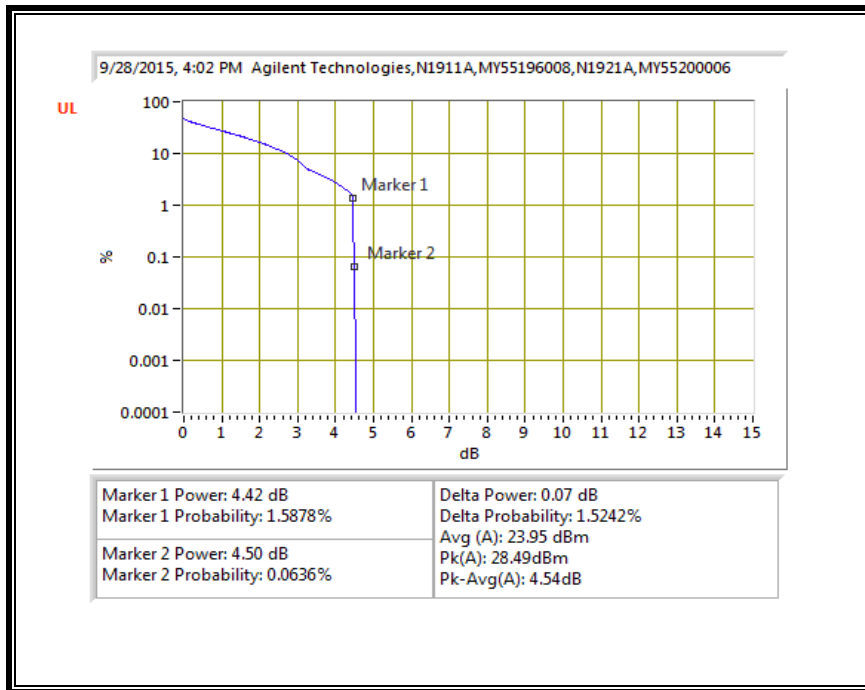
**QPSK, (3.0 MHz BAND WIDTH)**



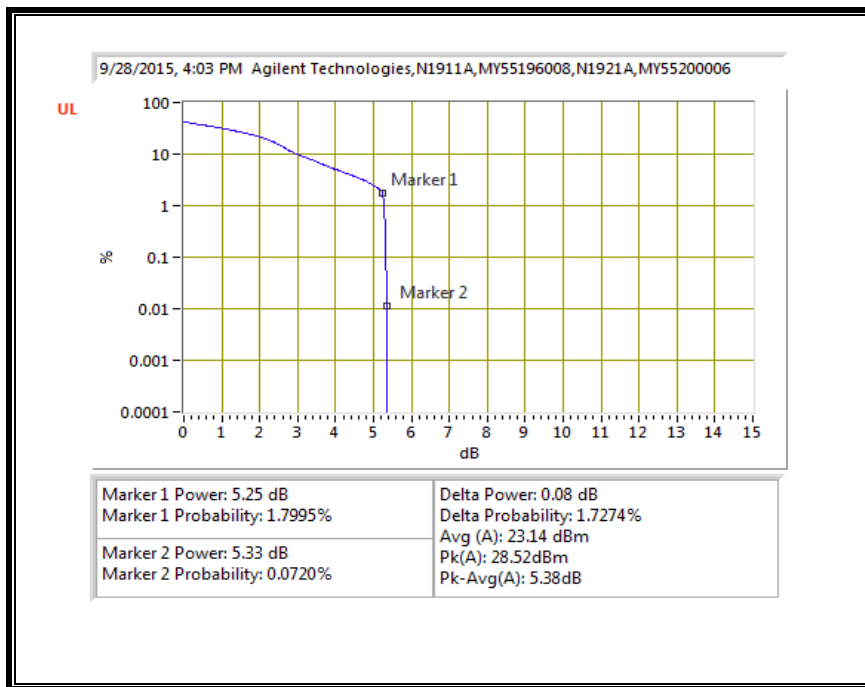
**16QAM, (3.0 MHz BAND WIDTH)**



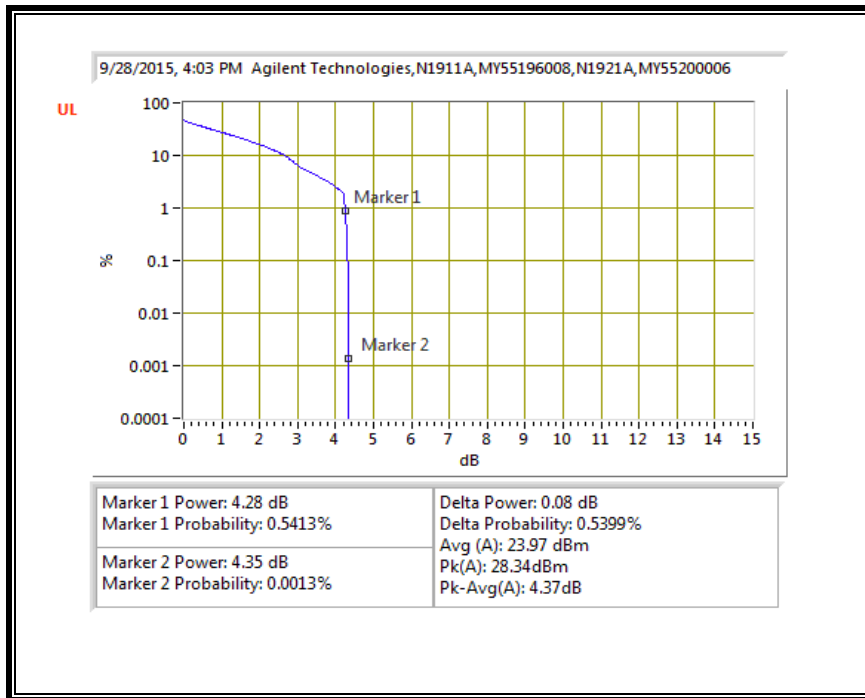
**QPSK, (5.0 MHz BAND WIDTH)**



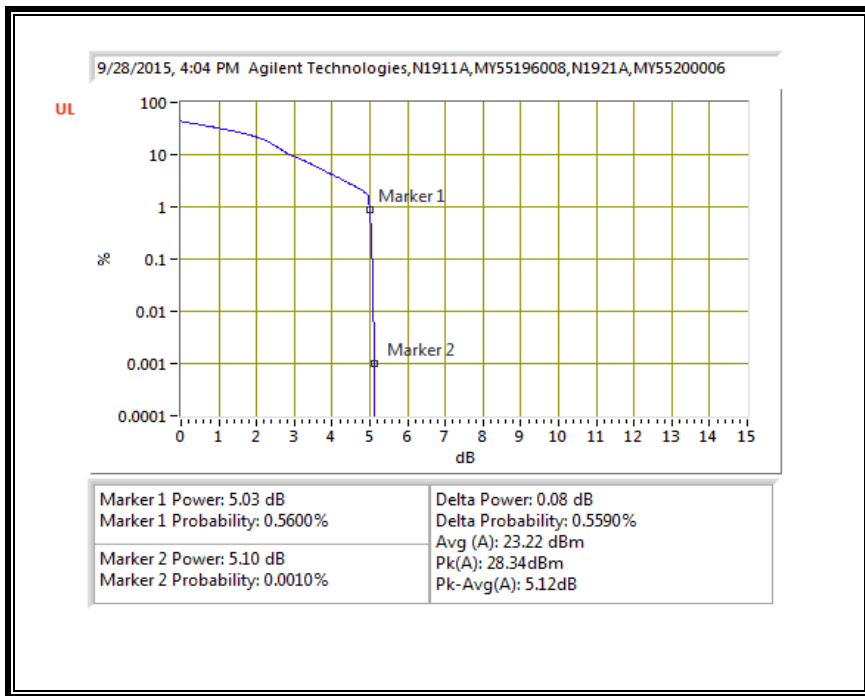
**16QAM, (5.0 MHz BAND WIDTH)**



**QPSK, (10.0 MHz BAND WIDTH)**



**16QAM, (10.0 MHz BAND WIDTH)**



## 9.4. FIELD STRENGTH OF SPURIOUS RADIATION (LAT)

### RULE PART(S)

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

### LIMIT

§22.917 (e) and §24.238 (a): Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

§27.53 (g) For operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB.

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log_{10}(P)$  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.

The unwanted emission power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth in the 1 MHz band immediately outside and adjacent to the channel edge of the equipment. Beyond the 1 MHz band immediately outside the channel edge of the equipment, a resolution bandwidth of 1 MHz shall be employed. A narrower resolution bandwidth is allowed to be used provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz or 1% of the occupied bandwidth as applicable.

The power of any unwanted emissions measured from the channel edge of the equipment shall be attenuated below the transmitter power, P (dBW), as follows:

- a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than  $43 + 10 \text{ Log}_{10}(p)$ , dB; and
- b. for mobile subscriber equipment, the attenuation shall not be less than  $43 + 10 \text{ Log}_{10}(p)$ , dB at the channel edges and  $55 + 10 \text{ Log}_{10}(p)$  at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

#### **MODES TESTED**

- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26

#### **RESULTS**



### 9.4.1. LTE BAND 2

#### QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

Company:  
 Project #: 15U21634  
 Date: 08.31.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 2, 20MHz QPSK

Test Equipment:  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.70	-66.3	H	3.0	-19.6	36.2	1.0	-54.8	-13.0	-41.8	
5.56	-60.6	V	3.0	-10.5	36.1	1.0	-45.6	-13.0	-32.6	
<b>Mid Channel (1880MHz)</b>										
3.74	-64.7	H	3.0	-17.9	36.2	1.0	-53.1	-13.0	-40.1	
5.61	-65.6	H	3.0	-15.1	36.1	1.0	-50.2	-13.0	-37.2	
<b>High Channel (1900MHz)</b>										
3.79	-62.5	V	3.0	-15.1	36.2	1.0	-50.3	-13.0	-37.3	
5.68	-64.6	V	3.0	-14.3	36.1	1.0	-49.4	-13.0	-36.4	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 08.31.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 2, 20MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.69	-65.5	V	3.0	-18.4	36.2	1.0	-53.6	-13.0	-40.6	
5.56	-65.5	V	3.0	-15.4	36.1	1.0	-50.5	-13.0	-37.5	
<b>Mid Channel (1880MHz)</b>										
3.77	-64.4	H	3.0	-17.5	36.2	1.0	-52.7	-13.0	-39.7	
5.64	-66.0	V	3.0	-15.7	36.1	1.0	-50.8	-13.0	-37.8	
<b>High Channel (1900MHz)</b>										
3.79	-62.8	H	3.0	-15.9	36.2	1.0	-51.1	-13.0	-38.1	
5.68	-64.5	V	3.0	-14.2	36.1	1.0	-49.2	-13.0	-36.2	

Rev. 05.21.15

### 9.4.2. LTE BAND 4

#### QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
 UL Fremont Radiated Chamber

**Company:**  
 Project #: 15U21634  
 Date: 08.31.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 4, 20MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber  
 3m Chamber G

Pre-amplifier  
 3m Chamber G

Filter  
 Filter

Limit  
 EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1720MHz)</b>										
3.41	-65.4	H	3.0	-19.3	36.4	1.0	-54.7	-13.0	-41.7	
5.13	-62.7	V	3.0	-13.3	36.3	1.0	-48.6	-13.0	-35.6	
<b>Mid Channel (1732.5MHz)</b>										
3.45	-66.2	H	3.0	-20.0	36.4	1.0	-55.4	-13.0	-42.4	
5.18	-65.6	H	3.0	-15.9	36.3	1.0	-51.2	-13.0	-38.2	
<b>High Channel (1745MHz)</b>										
3.52	-65.7	H	3.0	-19.4	36.4	1.0	-54.7	-13.0	-41.7	
5.27	-65.4	H	3.0	-15.5	36.3	1.0	-50.8	-13.0	-37.8	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 08.31.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 4, 20MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1720MHz)</b>										
3.41	-65.6	H	3.0	-19.5	36.4	1.0	-54.9	-13.0	-41.9	
5.13	-62.0	V	3.0	-12.6	36.3	1.0	-47.9	-13.0	-34.9	
<b>Mid Channel (1732.5MHz)</b>										
3.43	-65.0	H	3.0	-18.8	36.4	1.0	-54.2	-13.0	-41.2	
5.17	-66.2	V	3.0	-16.7	36.3	1.0	-52.0	-13.0	-39.0	
<b>High Channel (1745MHz)</b>										
3.52	-66.1	H	3.0	-19.7	36.4	1.0	-55.1	-13.0	-42.1	
5.25	-65.9	V	3.0	-16.3	36.3	1.0	-51.5	-13.0	-38.5	

Rev. 05.21.15

### 9.4.3. LTE BAND 5

#### QPSK EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09.04.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 5, 10MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (829MHz)</b>										
1.65	-58.8	V	3.0	-17.1	37.8	1.0	-53.9	-13.0	-40.9	
2.48	-62.4	V	3.0	-18.3	36.5	1.0	-53.8	-13.0	-40.8	
<b>Mid Channel (836.5MHz)</b>										
1.66	-57.9	V	3.0	-16.1	37.8	1.0	-52.9	-13.0	-39.9	
2.50	-62.1	V	3.0	-17.9	36.4	1.0	-53.3	-13.0	-40.3	
<b>High Channel (844MHz)</b>										
1.68	-60.6	V	3.0	-18.8	37.8	1.0	-55.6	-13.0	-42.6	
2.51	-64.3	V	3.0	-20.0	36.4	1.0	-55.4	-13.0	-42.4	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
 Project #: 15U21634  
 Date: 09.04.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 5, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (829MHz)</b>										
1.65	-58.4	V	3.0	-16.6	37.8	1.0	-53.5	-13.0	-40.5	
2.48	-63.3	V	3.0	-19.2	36.5	1.0	-54.7	-13.0	-41.7	
<b>Mid Channel (836.5MHz)</b>										
1.66	-56.9	V	3.0	-15.1	37.8	1.0	-51.9	-13.0	-38.9	
2.50	-65.5	V	3.0	-21.3	36.4	1.0	-56.7	-13.0	-43.7	
<b>High Channel (844MHz)</b>										
1.68	-63.2	V	3.0	-21.4	37.8	1.0	-58.2	-13.0	-45.2	
2.51	-63.3	V	3.0	-19.0	36.4	1.0	-54.4	-13.0	-41.4	

Rev. 05.21.15

### 9.4.4. LTE BAND 12

#### QPSK EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

Company:  
 Project #: 15U21634  
 Date: 09.04.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 12, 10MHz QPSK

Test Equipment:  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (704MHz)</b>										
1.37	-63.1	H	3.0	-22.6	37.4	1.0	-59.1	-13.0	-46.1	
2.11	-61.4	V	3.0	-19.0	37.6	1.0	-55.6	-13.0	-42.6	
<b>Mid Channel (707.5MHz)</b>										
1.41	-62.7	V	3.0	-21.5	37.5	1.0	-58.1	-13.0	-45.1	
2.11	-60.4	V	3.0	-18.0	37.6	1.0	-54.6	-13.0	-41.6	
<b>High Channel (711MHz)</b>										
1.41	-50.2	V	3.0	-9.0	37.5	1.0	-45.6	-13.0	-32.6	
2.12	-62.0	V	3.0	-19.5	37.6	1.0	-56.0	-13.0	-43.0	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09.04.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 12, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (704MHz)</b>										
1.41	-64.0	H	3.0	-23.4	37.5	1.0	-59.9	-13.0	-46.9	
2.11	-58.9	H	3.0	-16.7	37.6	1.0	-53.2	-13.0	-40.2	
<b>Mid Channel (707.5MHz)</b>										
1.41	-64.3	H	3.0	-23.7	37.5	1.0	-60.2	-13.0	-47.2	
2.09	-65.8	V	3.0	-23.5	37.6	1.0	-60.1	-13.0	-47.1	
<b>High Channel (711MHz)</b>										
1.41	-50.4	V	3.0	-9.2	37.5	1.0	-45.8	-13.0	-32.8	
2.14	-63.2	V	3.0	-20.6	37.5	1.0	-57.2	-13.0	-44.2	

Rev. 05.21.15



### 9.4.5. LTE BAND 13

#### QPSK EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09.04.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 13, 10MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

LTE B13

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (-)										
Mid Channel (782MHz)										
1.56	-64.0	V	3.0	-22.3	37.9	1.0	-59.1	-40.0	-19.1	
2.34	-62.9	H	3.0	-20.0	37.2	1.0	-56.2	-13.0	-43.2	
High Channel (-)										

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09.04.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 13, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

LTE B13

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (-)</b>										
<b>Mid Channel (782MHz)</b>										
1.56	-64.3	V	3.0	-22.6	37.9	1.0	-59.5	-40.0	-19.5	
2.33	-64.2	H	3.0	-21.4	37.2	1.0	-57.6	-13.0	-44.6	
<b>High Channel (-)</b>										

Rev. 05.21.15

9.4.6. LTE BAND 17

**QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

Company:  
 Project #: 15U21634  
 Date: 09.04.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 17, 10MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (710MHz)										
1.39	-64.0	H	3.0	-23.5	37.5	1.0	-60.0	-13.0	-47.0	
2.12	-66.1	H	3.0	-23.8	37.6	1.0	-60.4	-13.0	-47.4	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09.04.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 17, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

**Chamber**

3m Chamber G

**Pre-amplifier**

3m Chamber G

**Filter**

Filter

**Limit**

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Mid Channel (710MHz)</b>										
1.43	-61.7	H	3.0	-20.9	37.6	1.0	-57.5	-13.0	-44.5	
2.12	-65.8	V	3.0	-23.4	37.6	1.0	-59.9	-13.0	-46.9	

Rev. 05.21.15

### 9.4.7. LTE BAND 25

#### QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
 UL Fremont Radiated Chamber

**Company:**  
**Project #:** 15U21634  
**Date:** 09.01.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 25, 20MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.70	-65.9	V	3.0	-18.8	36.2	1.0	-54.0	-13.0	-41.0	
5.61	-65.8	H	3.0	-15.4	36.1	1.0	-50.5	-13.0	-37.5	
<b>Mid Channel (1882.5MHz)</b>										
3.79	-64.5	H	3.0	-17.5	36.2	1.0	-52.7	-13.0	-39.7	
5.62	-64.4	V	3.0	-14.2	36.1	1.0	-49.3	-13.0	-36.3	
<b>High Channel (1905MHz)</b>										
3.79	-63.4	H	3.0	-16.4	36.2	1.0	-51.6	-13.0	-38.6	
5.71	-66.3	V	3.0	-15.9	36.1	1.0	-51.0	-13.0	-38.0	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
 Project #: 15U21634  
 Date: 09.01.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 25, 20MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.70	-65.7	V	3.0	-18.6	36.2	1.0	-53.8	-13.0	-40.8	
5.56	-63.1	V	3.0	-12.9	36.1	1.0	-48.1	-13.0	-35.1	
<b>Mid Channel (1882.5MHz)</b>										
3.79	-65.1	H	3.0	-18.2	36.2	1.0	-53.4	-13.0	-40.4	
5.64	-66.1	H	3.0	-15.6	36.1	1.0	-50.7	-13.0	-37.7	
<b>High Channel (1905MHz)</b>										
3.79	-62.5	H	3.0	-15.5	36.2	1.0	-50.7	-13.0	-37.7	
5.73	-66.3	V	3.0	-15.9	36.1	1.0	-50.9	-13.0	-37.9	

Rev. 05.21.15

9.4.8. LTE BAND 26

**QPSK EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

Company:  
 Project #: 15U21634  
 Date: 09.04.2015  
 Test Engineer: R.Chen  
 Configuration: EUT Only  
 Mode: LTE Band 26 (90S), 10MHz QPSK

Test Equipment:  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Mid Channel (819MHz)</b>										
1.63	-58.7	V	3.0	-16.9	37.8	1.0	-53.7	-13.0	-40.7	
2.45	-62.0	V	3.0	-18.1	36.8	1.0	-53.9	-13.0	-40.9	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09.04.2015  
**Test Engineer:** R.Chen  
**Configuration:** EUT Only  
**Mode:** LTE Band 26 (90S), 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (819MHz)										
1.63	-58.5	V	3.0	-16.7	37.8	1.0	-53.6	-13.0	-40.6	
2.45	-64.5	V	3.0	-20.7	36.8	1.0	-56.4	-13.0	-43.4	

Rev. 05.21.15



## 9.5. FIELD STRENGTH OF SPURIOUS RADIATION (UAT)

### 9.5.1. LTE BAND 2

#### QPSK EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/02/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 2, 20MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

**Chamber**

3m Chamber G

**Pre-amplifier**

3m Chamber G

**Filter**

Filter

**Limit**

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.70	-65.9	H	3.0	-19.2	36.2	1.0	-54.4	-13.0	-41.4	
5.61	-65.8	H	3.0	-15.4	36.1	1.0	-50.5	-13.0	-37.5	
<b>Mid Channel (1880MHz)</b>										
3.77	-66.0	H	3.0	-19.1	36.2	1.0	-54.3	-13.0	-41.3	
5.61	-66.3	V	3.0	-16.1	36.1	1.0	-51.2	-13.0	-38.2	
<b>High Channel (1900MHz)</b>										
3.82	-65.4	V	3.0	-17.9	36.1	1.0	-53.0	-13.0	-40.0	
5.73	-66.5	H	3.0	-15.9	36.1	1.0	-51.0	-13.0	-38.0	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/02/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 2, 20MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.69	-66.5	V	3.0	-19.4	36.2	1.0	-54.6	-13.0	-41.6	
5.61	-65.2	V	3.0	-15.0	36.1	1.0	-50.1	-13.0	-37.1	
<b>Mid Channel (1880MHz)</b>										
3.77	-65.8	V	3.0	-18.5	36.2	1.0	-53.6	-13.0	-40.6	
5.66	-65.9	H	3.0	-15.4	36.1	1.0	-50.5	-13.0	-37.5	
<b>High Channel (1900MHz)</b>										
3.82	-66.0	H	3.0	-19.0	36.1	1.0	-54.1	-13.0	-41.1	
5.68	-65.7	V	3.0	-15.4	36.1	1.0	-50.4	-13.0	-37.4	

Rev. 05.21.15

### 9.5.2. LTE BAND 4

#### QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
 UL Fremont Radiated Chamber

**Company:**  
 Project #: 15U21634  
 Date: 09/02/15  
 Test Engineer: R.Chen  
 Configuration: EUT only  
 Mode: LTE Band 4, 20MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1720MHz)</b>										
3.43	-66.0	V	3.0	-19.7	36.4	1.0	-55.1	-13.0	-42.1	
5.18	-66.5	H	3.0	-16.8	36.3	1.0	-52.1	-13.0	-39.1	
<b>Mid Channel (1732.5MHz)</b>										
3.48	-66.5	H	3.0	-20.2	36.4	1.0	-55.6	-13.0	-42.6	
5.23	-65.2	V	3.0	-15.6	36.3	1.0	-50.9	-13.0	-37.9	
<b>High Channel (1745MHz)</b>										
3.50	-66.0	V	3.0	-19.4	36.4	1.0	-54.8	-13.0	-41.8	
5.22	-65.1	H	3.0	-15.3	36.3	1.0	-50.6	-13.0	-37.6	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/02/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 4, 20MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1720MHz)</b>										
3.43	-66.3	H	3.0	-20.1	36.4	1.0	-55.5	-13.0	-42.5	
5.15	-66.4	V	3.0	-16.9	36.3	1.0	-52.2	-13.0	-39.2	
<b>Mid Channel (1732.5MHz)</b>										
3.50	-65.6	V	3.0	-19.1	36.4	1.0	-54.4	-13.0	-41.4	
5.22	-66.1	H	3.0	-16.3	36.3	1.0	-51.6	-13.0	-38.6	
<b>High Channel (1745MHz)</b>										
3.48	-65.7	V	3.0	-19.3	36.4	1.0	-54.7	-13.0	-41.7	
5.25	-65.8	V	3.0	-16.2	36.3	1.0	-51.5	-13.0	-38.5	

Rev. 05.21.15

### 9.5.3. LTE BAND 5

#### QPSK EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
 UL Fremont Radiated Chamber

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 5, 10MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (829MHz)</b>										
1.65	-64.4	H	3.0	-23.0	37.8	1.0	-59.8	-13.0	-46.8	
2.48	-61.5	H	3.0	-18.3	36.5	1.0	-53.9	-13.0	-40.9	
<b>Mid Channel (836.5MHz)</b>										
1.68	-65.8	V	3.0	-24.0	37.8	1.0	-60.8	-13.0	-47.8	
2.50	-59.2	H	3.0	-16.0	36.4	1.0	-51.4	-13.0	-38.4	
<b>High Channel (844MHz)</b>										
1.68	-65.3	V	3.0	-23.5	37.8	1.0	-60.3	-13.0	-47.3	
2.51	-58.5	H	3.0	-15.3	36.4	1.0	-50.7	-13.0	-37.7	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
 Project #: 15U21634  
 Date: 09/04/15  
 Test Engineer: R.Chen  
 Configuration: EUT only  
 Mode: LTE Band 5, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (829MHz)</b>										
1.65	-65.8	H	3.0	-24.4	37.8	1.0	-61.2	-13.0	-48.2	
2.48	-60.1	H	3.0	-17.0	36.5	1.0	-52.5	-13.0	-39.5	
<b>Mid Channel (836.5MHz)</b>										
1.66	-65.4	V	3.0	-23.6	37.8	1.0	-60.5	-13.0	-47.5	
2.50	-57.9	H	3.0	-14.7	36.4	1.0	-50.1	-13.0	-37.1	
<b>High Channel (844MHz)</b>										
1.68	-65.4	H	3.0	-23.9	37.8	1.0	-60.7	-13.0	-47.7	
2.51	-61.9	V	3.0	-17.7	36.4	1.0	-53.1	-13.0	-40.1	

Rev. 05.21.15

### 9.5.4. LTE BAND 12

#### QPSK EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

Company:  
 Project #: 15U21634  
 Date: 09/04/15  
 Test Engineer: R.Chen  
 Configuration: EUT only  
 Mode: LTE Band 12, 10MHz QPSK

Test Equipment:  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (704MHz)</b>										
1.37	-64.7	V	3.0	-23.7	37.4	1.0	-60.2	-13.0	-47.2	
2.12	-65.4	V	3.0	-22.9	37.6	1.0	-59.4	-13.0	-46.4	
<b>Mid Channel (707.5MHz)</b>										
1.43	-64.3	H	3.0	-23.6	37.6	1.0	-60.2	-13.0	-47.2	
2.11	-59.9	H	3.0	-17.6	37.6	1.0	-54.2	-13.0	-41.2	
<b>High Channel (711MHz)</b>										
1.43	-64.7	H	3.0	-23.9	37.6	1.0	-60.5	-13.0	-47.5	
2.12	-60.9	H	3.0	-18.6	37.6	1.0	-55.1	-13.0	-42.1	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 12, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (704MHz)</b>										
1.37	-64.3	H	3.0	-23.9	37.4	1.0	-60.3	-13.0	-47.3	
2.12	-62.4	H	3.0	-20.1	37.6	1.0	-56.6	-13.0	-43.6	
<b>Mid Channel (707.5MHz)</b>										
1.44	-64.3	V	3.0	-23.0	37.7	1.0	-59.6	-13.0	-46.6	
2.11	-60.4	H	3.0	-18.1	37.6	1.0	-54.7	-13.0	-41.7	
<b>High Channel (711MHz)</b>										
1.43	-64.8	V	3.0	-23.5	37.6	1.0	-60.1	-13.0	-47.1	
2.12	-61.9	H	3.0	-19.6	37.6	1.0	-56.1	-13.0	-43.1	

Rev. 05.21.15



### 9.5.5. LTE BAND 13

#### QPSK EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 13, 10MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

**Chamber**

3m Chamber G

**Pre-amplifier**

3m Chamber G

**Filter**

Filter

**Limit**

LTE B13

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (-)										
Mid Channel (782MHz)										
1.60	-65.3	H	3.0	-24.0	37.8	1.0	-60.8	-40.0	-20.8	
2.33	-58.6	H	3.0	-15.7	37.2	1.0	-51.9	-13.0	-38.9	
High Channel (-)										

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 13, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

LTE B13

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (-)</b>										
<b>Mid Channel (782MHz)</b>										
1.60	-64.7	V	3.0	-23.0	37.8	1.0	-59.9	-40.0	-19.9	
2.33	-60.3	H	3.0	-17.4	37.2	1.0	-53.6	-13.0	-40.6	
<b>High Channel (-)</b>										

Rev. 05.21.15

### 9.5.6. LTE BAND 17

#### QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

Company:  
 Project #: 15U21634  
 Date: 09/04/15  
 Test Engineer: R.Chen  
 Configuration: EUT only  
 Mode: LTE Band 17, 10MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Mid Channel (710MHz)</b>										
1.39	-64.9	H	3.0	-24.4	37.5	1.0	-60.8	-13.0	-47.8	
2.12	-65.4	V	3.0	-23.0	37.6	1.0	-59.5	-13.0	-46.5	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
 Project #: 15U21634  
 Date: 09/04/15  
 Test Engineer: R.Chen  
 Configuration: EUT only  
 Mode: LTE Band 17, 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Mid Channel (710MHz)</b>										
1.43	-64.2	H	3.0	-23.5	37.6	1.0	-60.1	-13.0	-47.1	
2.11	-66.1	V	3.0	-23.7	37.6	1.0	-60.3	-13.0	-47.3	

Rev. 05.21.15

### 9.5.7. LTE BAND 25

#### QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
 UL Fremont Radiated Chamber

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 25, 20MHz QPSK

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

Pre-amplifier

Filter

Limit

3m Chamber G

3m Chamber G

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.69	-66.8	V	3.0	-19.7	36.2	1.0	-54.9	-13.0	-41.9	
5.56	-61.6	V	3.0	-11.4	36.1	1.0	-46.6	-13.0	-33.6	
<b>Mid Channel (1882.5MHz)</b>										
3.74	-66.3	H	3.0	-19.5	36.2	1.0	-54.7	-13.0	-41.7	
5.62	-57.2	V	3.0	-7.0	36.1	1.0	-42.1	-13.0	-29.1	
<b>High Channel (1905MHz)</b>										
3.84	-64.9	V	3.0	-17.4	36.1	1.0	-52.5	-13.0	-39.5	
5.69	-61.8	H	3.0	-11.3	36.1	1.0	-46.4	-13.0	-33.4	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 25, 20MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Low Channel (1860MHz)</b>										
3.69	-66.1	H	3.0	-19.4	36.2	1.0	-54.6	-13.0	-41.6	
5.56	-64.0	V	3.0	-13.9	36.1	1.0	-49.0	-13.0	-36.0	
<b>Mid Channel (1882.5MHz)</b>										
3.77	-66.3	H	3.0	-19.4	36.2	1.0	-54.6	-13.0	-41.6	
5.62	-64.7	V	3.0	-14.5	36.1	1.0	-49.6	-13.0	-36.6	
<b>High Channel (1905MHz)</b>										
3.84	-65.7	H	3.0	-18.6	36.1	1.0	-53.8	-13.0	-40.8	
5.69	-61.8	H	3.0	-11.3	36.1	1.0	-46.4	-13.0	-33.4	

Rev. 05.21.15

### 9.5.8. LTE BAND 26

#### QPSK EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 26 (90S), 10MHz QPSK

**Test Equipment:**  
**Substitution:** Horn T59 Substitution, and 8ft SMA Cable

**Chamber**  
 3m Chamber G

**Pre-amplifier**  
 3m Chamber G

**Filter**  
 Filter

**Limit**  
 EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<b>Mid Channel (819MHz)</b>										
1.65	-65.0	V	3.0	-23.3	37.8	1.0	-60.1	-13.0	-47.1	
2.46	-65.4	H	3.0	-22.2	36.6	1.0	-57.9	-13.0	-44.9	

Rev. 05.21.15

**16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)**

**High Frequency Substitution Measurement**  
**UL Fremont Radiated Chamber**

**Company:**  
**Project #:** 15U21634  
**Date:** 09/04/15  
**Test Engineer:** R.Chen  
**Configuration:** EUT only  
**Mode:** LTE Band 26 (90S), 10MHz 16QAM

**Test Equipment:**  
 Substitution: Horn T59 Substitution, and 8ft SMA Cable

Chamber

3m Chamber G

Pre-amplifier

3m Chamber G

Filter

Filter

Limit

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (819MHz)										
1.61	-65.5	V	3.0	-23.8	37.8	1.0	-60.6	-13.0	-47.6	
2.46	-66.0	V	3.0	-22.1	36.6	1.0	-57.7	-13.0	-44.7	

Rev. 05.21.15