

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20163										
Date: 7/11/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 26 16QAM 3MHz BW										
Test Equipment:										
Receiving: Sunoi T899, and Chamber G 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 Limi (dBm)	Margin (dB)	Notes
Low Ch										
815.50	13.24	V	0.62	0.0	12.62	14.77	38.45	40.60	-25.8	
815.50	-5.52	H	0.62	0.0	-6.14	-3.99	38.45	40.60	-44.6	
Mid Ch										
819.00	12.81	V	0.62	0.0	12.19	14.34	38.45	40.60	-26.3	
819.00	-5.42	H	0.62	0.0	-6.04	-3.89	38.45	40.60	-44.5	
High Ch										
822.50	13.29	V	0.62	0.0	12.67	14.82	38.45	40.60	-25.8	
822.50	-4.87	H	0.62	0.0	-5.49	-3.34	38.45	40.60	-43.9	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20163										
Date: 7/11/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 26 QPSK 5MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G 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	14.12	V	0.62	0.0	13.50	15.65	38.45	40.60	-24.9	
816.50	-4.61	H	0.62	0.0	-5.23	-3.08	38.45	40.60	-43.7	
Mid Ch										
819.00	13.68	V	0.62	0.0	13.06	15.21	38.45	40.60	-25.4	
819.00	-4.82	H	0.62	0.0	-5.44	-3.29	38.45	40.60	-43.9	
High Ch										
821.50	14.21	V	0.62	0.0	13.59	15.74	38.45	40.60	-24.9	
821.50	-4.07	H	0.62	0.0	-4.69	-2.54	38.45	40.60	-43.1	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20163										
Date: 7/11/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 26 16QAM 5MHz BW										
Test Equipment:										
Receiving: Sunoi T899, and Chamber G 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	13.18	V	0.62	0.0	12.56	14.71	38.45	40.60	-25.9	
816.50	-5.52	H	0.62	0.0	-6.14	-3.99	38.45	40.60	-44.6	
Mid Ch										
819.00	12.71	V	0.62	0.0	12.09	14.24	38.45	40.60	-26.4	
819.00	-5.82	H	0.62	0.0	-6.44	-4.29	38.45	40.60	-44.9	
High Ch										
821.50	13.29	V	0.62	0.0	12.67	14.82	38.45	40.60	-25.8	
821.50	-5.07	H	0.62	0.0	-5.69	-3.54	38.45	40.60	-44.1	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G											
Company:											
Project #: 15U20163											
Date: 7/11/2015											
Test Engineer: E. Lee											
Configuration: EUT only											
Mode: LTE Band 26 QPSK 10MHz BW											
Test Equipment:											
Receiving: Sunoi T899, and Chamber G 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)	EIRP (dB)	Notes
Mid Ch											
819.00	14.35	V	0.62	0.0	13.73	15.88	38.45	40.60	-24.7		
819.00	-5.02	H	0.62	0.0	-5.64	-3.49	38.45	40.60	-44.1		
Rev. 10.24.13											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #: 15U20163										
Date: 7/11/2015										
Test Engineer: E. Lee										
Configuration: EUT only										
Mode: LTE Band 26 16QAM 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G 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	13.41	V	0.62	0.0	12.79	14.94	38.45	40.60	-25.7	
819.00	-6.02	H	0.62	0.0	-6.64	-4.49	38.45	40.60	-45.1	
Rev. 10.24.13										

10.4.10. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20163								
Date: 6/27/2015								
Test Engineer: E. Lee								
Configuration: EUT only								
Mode: LTE Band 41 QPSK 5MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.499	10.0	V	1.15	9.33	18.20	33.0	-14.8	
2.499	9.0	H	1.15	9.33	17.19	33.0	-15.8	
Mid Ch								
2.593	9.9	V	1.16	9.47	18.18	33.0	-14.8	
2.593	7.9	H	1.16	9.47	16.18	33.0	-16.8	
High Ch								
2.688	8.4	V	1.17	9.78	17.02	33.0	-16.0	
2.688	7.5	H	1.17	9.78	16.10	33.0	-16.9	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20163							
Date:	6/27/2015							
Test Engineer:	E. Lee							
Configuration:	EUT only							
Mode:	LTE Band 41 16QAM 5MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.499	8.9	V	1.15	9.33	17.08	33.0	-15.9	
2.499	8.0	H	1.15	9.33	16.19	33.0	-16.8	
Mid Ch								
2.593	8.8	V	1.16	9.47	17.10	33.0	-15.9	
2.593	7.0	H	1.16	9.47	15.32	33.0	-17.7	
High Ch								
2.688	7.3	V	1.17	9.78	15.94	33.0	-17.1	
2.688	6.5	H	1.17	9.78	15.15	33.0	-17.8	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20163							
Date:	6/27/2015							
Test Engineer:	E. Lee							
Configuration:	EUT only							
Mode:	LTE Band 41 QPSK 10MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.501	9.9	V	1.15	9.33	18.11	33.0	-14.9	
2.501	9.8	H	1.15	9.33	17.94	33.0	-15.1	
Mid Ch								
2.593	9.6	V	1.16	9.47	17.88	33.0	-15.1	
2.593	9.6	H	1.16	9.47	17.95	33.0	-15.1	
High Ch								
2.685	9.0	V	1.17	9.77	17.56	33.0	-15.4	
2.685	7.3	H	1.17	9.77	15.94	33.0	-17.1	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20163							
Date:	6/27/2015							
Test Engineer:	E. Lee							
Configuration:	EUT only							
Mode:	LTE Band 41 16QAM 10MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.501	8.9	V	1.15	9.33	17.11	33.0	-15.9	
2.501	8.8	H	1.15	9.33	16.99	33.0	-16.0	
Mid Ch								
2.593	8.8	V	1.16	9.47	17.06	33.0	-15.9	
2.593	8.7	H	1.16	9.47	17.02	33.0	-16.0	
High Ch								
2.685	8.1	V	1.17	9.77	16.70	33.0	-16.3	
2.685	6.3	H	1.17	9.77	14.94	33.0	-18.1	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20163								
Date: 6/27/2015								
Test Engineer: E. Lee								
Configuration: EUT only								
Mode: LTE Band 41 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.504	10.1	V	1.15	9.34	18.30	33.0	-14.7	
2.504	8.9	H	1.15	9.34	17.10	33.0	-15.9	
Mid Ch								
2.593	9.8	V	1.16	9.47	18.15	33.0	-14.9	
2.593	9.4	H	1.16	9.47	17.72	33.0	-15.3	
High Ch								
2.683	9.8	V	1.17	9.76	18.34	33.0	-14.7	
2.683	8.9	H	1.17	9.76	17.51	33.0	-15.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20163							
Date:	6/27/2015							
Test Engineer:	E. Lee							
Configuration:	EUT only							
Mode:	LTE Band 41 16QAM 15MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.504	9.3	V	1.15	9.34	17.48	33.0	-15.5	
2.504	7.9	H	1.15	9.34	16.10	33.0	-16.9	
Mid Ch								
2.593	9.0	V	1.16	9.47	17.31	33.0	-15.7	
2.593	8.4	H	1.16	9.47	16.72	33.0	-16.3	
High Ch								
2.683	8.9	V	1.17	9.76	17.46	33.0	-15.5	
2.683	7.9	H	1.17	9.76	16.53	33.0	-16.5	
Rev. 10.24.13								

QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20163							
Date:	6/27/2015							
Test Engineer:	E. Lee							
Configuration:	EUT only							
Mode:	LTE Band 41 QPSK 20MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.506	10.2	V	1.15	9.34	18.39	33.0	-14.6	
2.506	9.3	H	1.15	9.34	17.50	33.0	-15.5	
Mid Ch								
2.593	10.0	V	1.16	9.47	18.35	33.0	-14.7	
2.593	9.3	H	1.16	9.47	17.59	33.0	-15.4	
High Ch								
2.680	9.5	V	1.17	9.76	18.07	33.0	-14.9	
2.680	8.9	H	1.17	9.76	17.50	33.0	-15.5	
Rev. 10.24.13								

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20163							
Date:	6/27/2015							
Test Engineer:	E. Lee							
Configuration:	EUT only							
Mode:	LTE Band 41 16QAM 20MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 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								
2.506	9.4	V	1.15	9.34	17.54	33.0	-15.5	
2.506	8.4	H	1.15	9.34	16.60	33.0	-16.4	
Mid Ch								
2.593	9.2	V	1.16	9.47	17.51	33.0	-15.5	
2.593	8.4	H	1.16	9.47	16.72	33.0	-16.3	
High Ch								
2.680	8.6	V	1.17	9.76	17.19	33.0	-15.8	
2.680	7.9	H	1.17	9.76	16.53	33.0	-16.5	
Rev. 10.24.13								

10.5. PEAK-TO-AVERAGE RATIO (MODEL: A1634)

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

10.5.1. 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	27.36	23.99	3.37
			16QAM	29.05	23.27	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 2 RB1-0	3.0	1880.0	QPSK	27.38	23.63	3.75
			16QAM	27.44	22.86	4.58
*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	27.63	23.80	3.83
			16QAM	27.66	23.08	4.58
*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	27.65	23.9	3.75
			16QAM	28.68	23.35	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 2 RB1-0	15.0	1880.0	QPSK	27.96	23.68	4.28
			16QAM	28.07	23.12	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 2 RB1-0	20.0	1880.0	QPSK	27.13	23.68	3.45
			16QAM	28.24	22.99	5.25
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.2. 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	28.22	23.94	4.28
			16QAM	28.28	22.81	5.47
*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	28.23	23.81	4.42
			16QAM	28.2	22.95	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 4 RB1-0	5.0	1732.5	QPSK	28.26	23.91	4.35
			16QAM	28.3	23.2	5.1
*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	28.24	23.96	4.28
			16QAM	28.27	23.24	5.03
*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	28.15	23.65	4.5
			16QAM	28.3	23.05	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 4 RB1-0	20.0	1732.5	QPSK	28.12	23.77	4.35
			16QAM	28.16	23.13	5.03
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.3. 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	28.5	24	4.5
			16QAM	28.55	23.15	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	3.0	836.5	QPSK	28.44	23.94	4.5
			16QAM	28.48	23.15	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 5 RB1-0	5.0	836.5	QPSK	28.41	23.99	4.42
			16QAM	28.47	23.22	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 5 RB1-0	10.0	836.5	QPSK	28.24	23.89	4.35
			16QAM	28.25	23.30	4.95
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.4. 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	28.92	23.97	4.95
			16QAM	28.72	22.94	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	27.41	23.81	3.6
			16QAM	27.43	23.01	4.42
*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	27.42	23.82	3.6
			16QAM	28.51	23.04	5.47
*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	27.32	23.65	3.67
			16QAM	28.51	23.11	5.40
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.5. 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	27.8	23.97	3.83
			16QAM	28.84	23.29	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 13 RB1-0	10.0	782.0	QPSK	28.59	23.64	4.95
			16QAM	28.63	23.01	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.6. 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	28.23	23.95	4.28
			16QAM	28.93	23.23	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 17 RB1-0	10.0	710.0	QPSK	27.54	23.94	3.60
			16QAM	29.03	23.41	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.7. 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	1880.0	QPSK	27.84	23.94	3.90
			16QAM	27.83	23.11	4.72
*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	1880.0	QPSK	27.78	23.88	3.90
			16QAM	27.91	23.11	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 25 RB1-0	5.0	1880.0	QPSK	27.73	23.98	3.75
			16QAM	27.76	23.26	4.50
*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	1880.0	QPSK	27.59	23.92	3.67
			16QAM	29.1	23.48	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	1880.0	QPSK	27.48	23.81	3.67
			16QAM	29.04	23.42	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	1880.0	QPSK	27.64	23.81	3.83
			16QAM	27.76	23.04	4.72
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.5.8. 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	27.75	24.00	3.75
			16QAM	27.87	23.22	4.65
*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	27.81	23.91	3.90
			16QAM	27.85	23.13	4.72
*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	27.8	23.82	3.98
			16QAM	27.82	23.17	4.65
*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	28.65	23.85	4.80
			16QAM	28.87	23.17	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

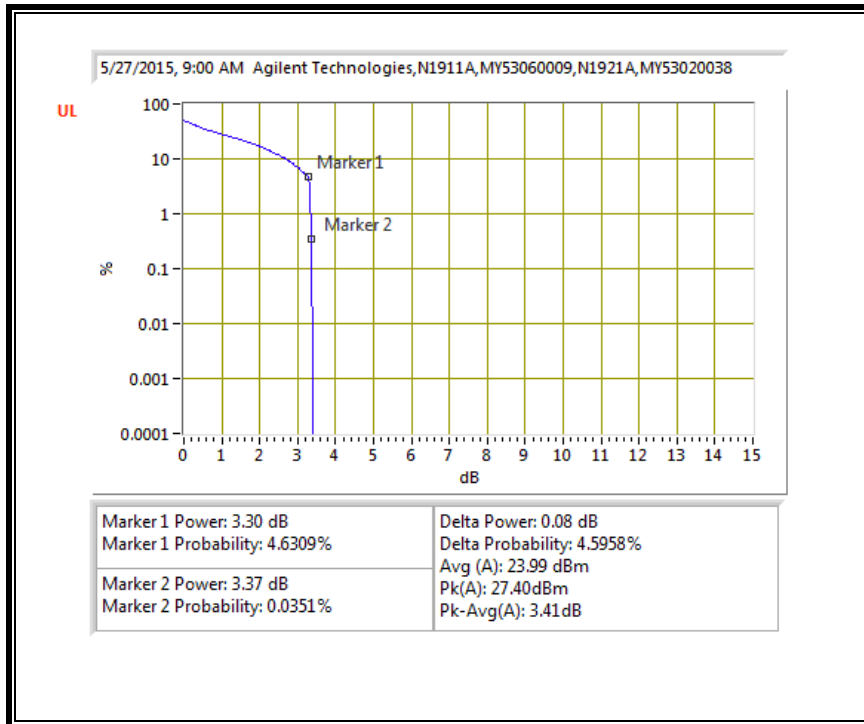
10.5.9. LTE BAND 30

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 30 RB1-0	5.0	2310.0	QPSK	27.55	22.75	4.80
			16QAM	27.63	22.08	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

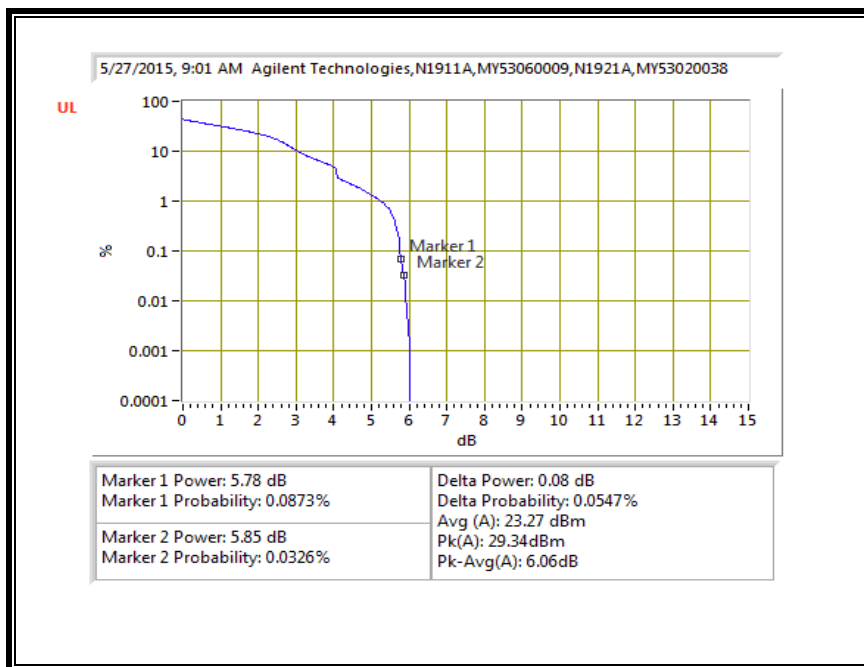
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 30 RB1-0	10.0	2310.0	QPSK	27.58	22.93	4.65
			16QAM	27.87	22.32	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

LTE BAND 2

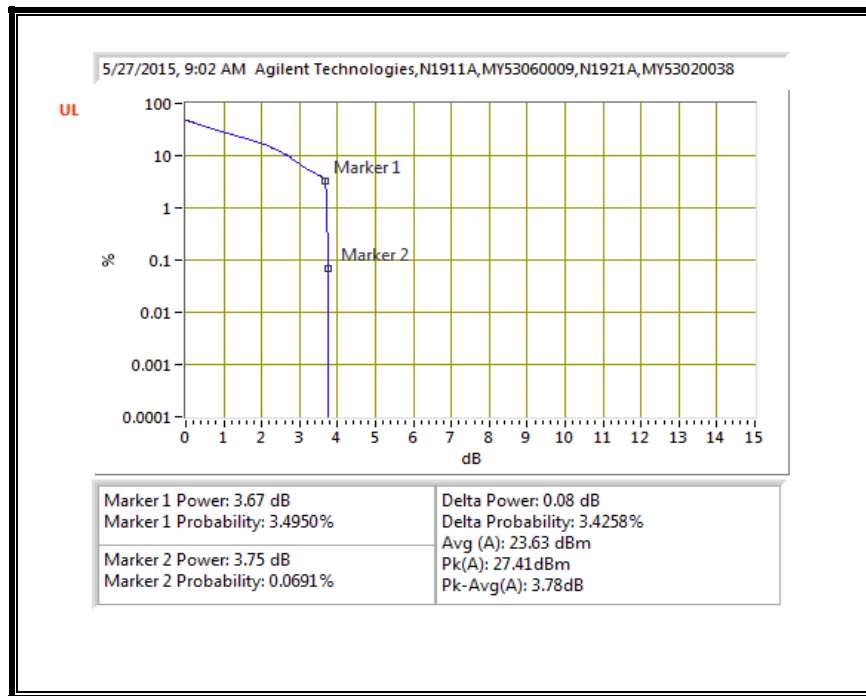
QPSK, (1.4 MHz BAND WIDTH)



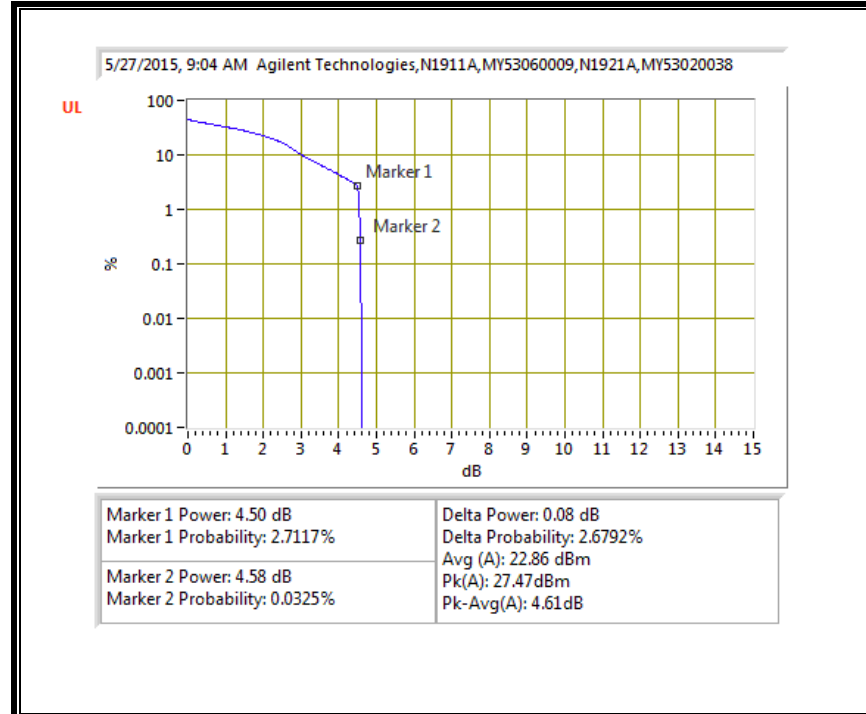
16QAM, (1.4 MHz BAND WIDTH)



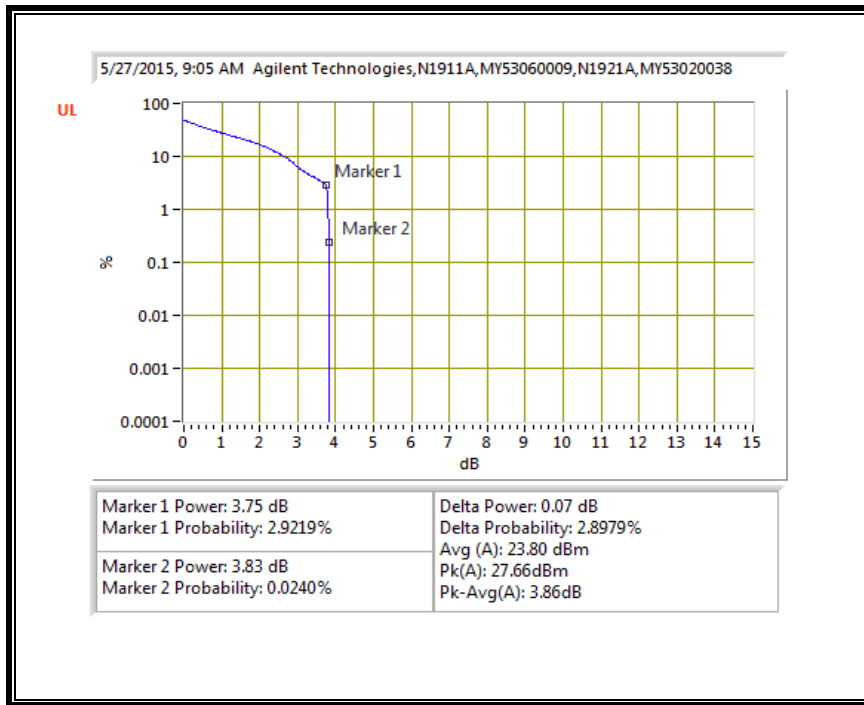
QPSK, (3.0 MHz BAND WIDTH)



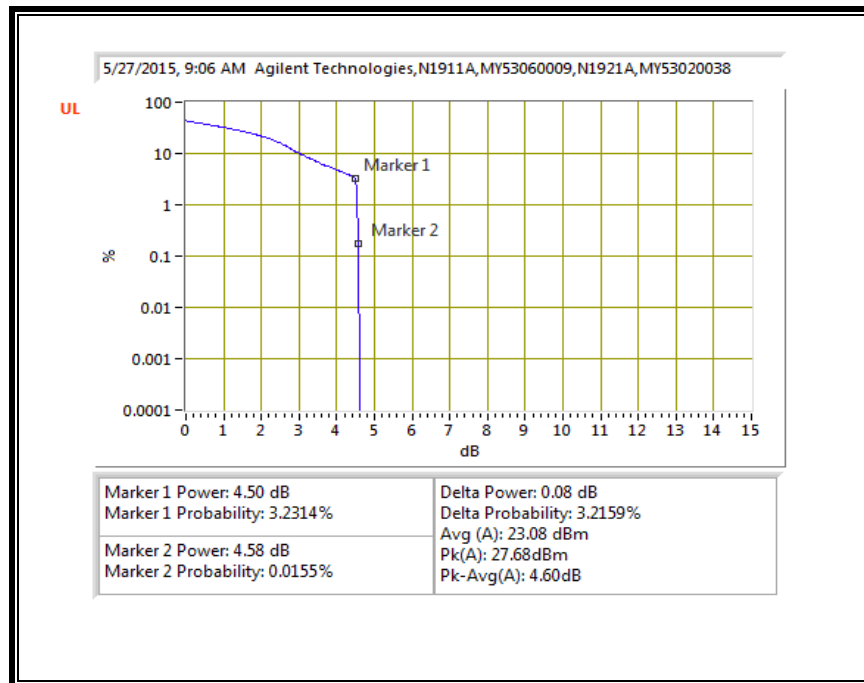
16QAM, (3.0 MHz BAND WIDTH)



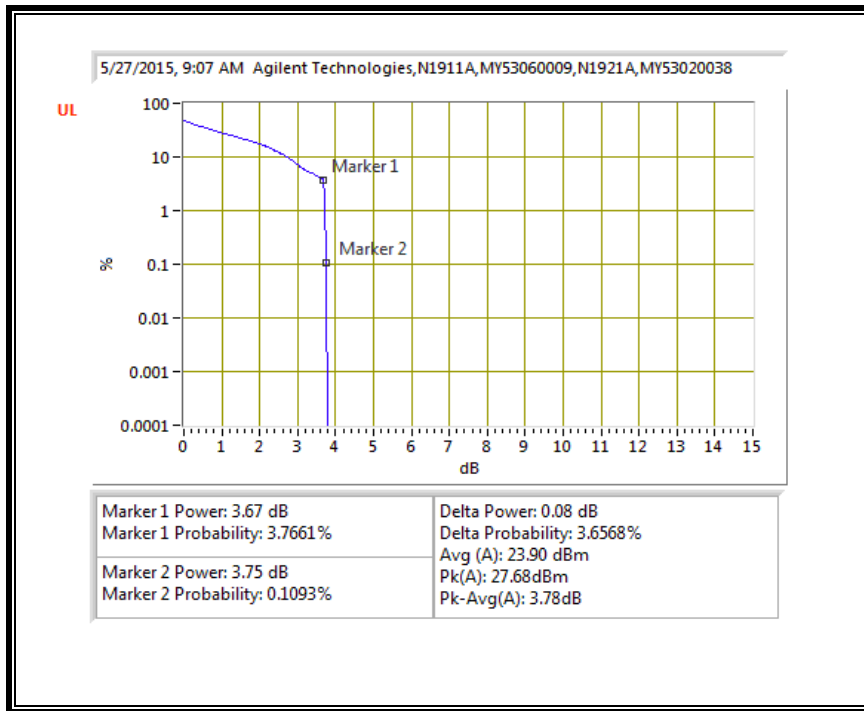
QPSK, (5.0 MHz BAND WIDTH)



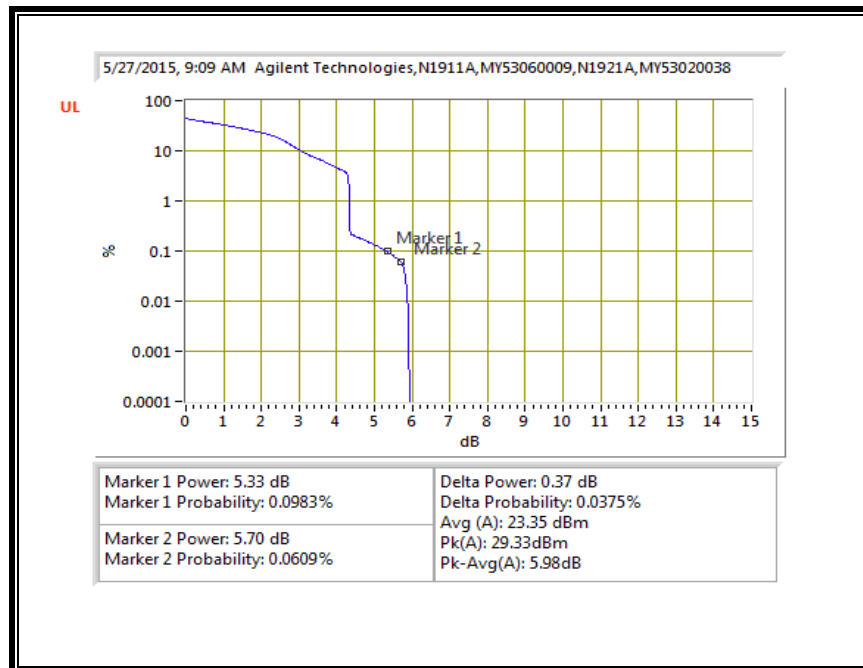
16QAM, (5.0 MHz BAND WIDTH)



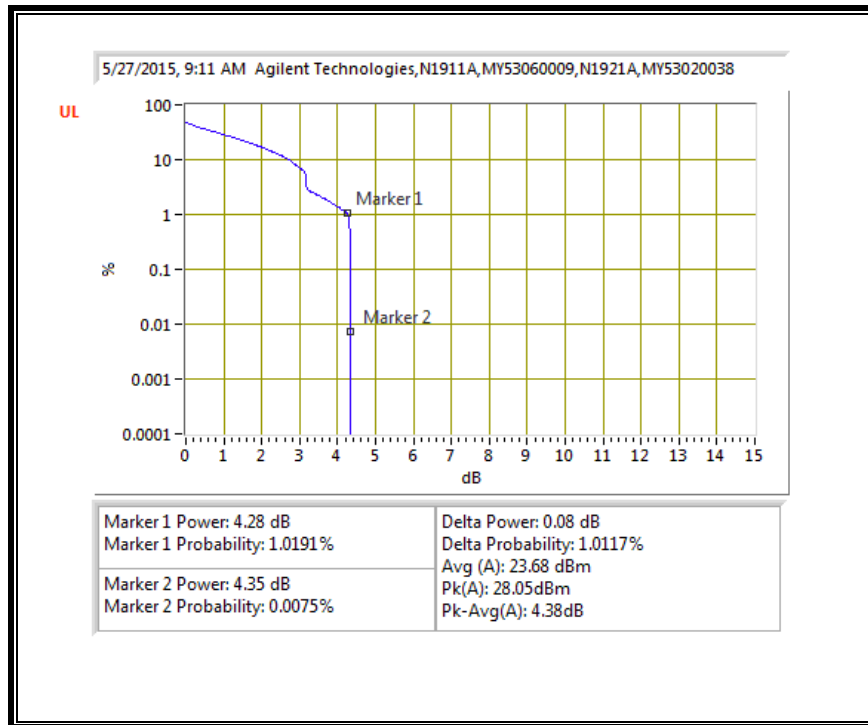
QPSK, (10.0 MHz BAND WIDTH)



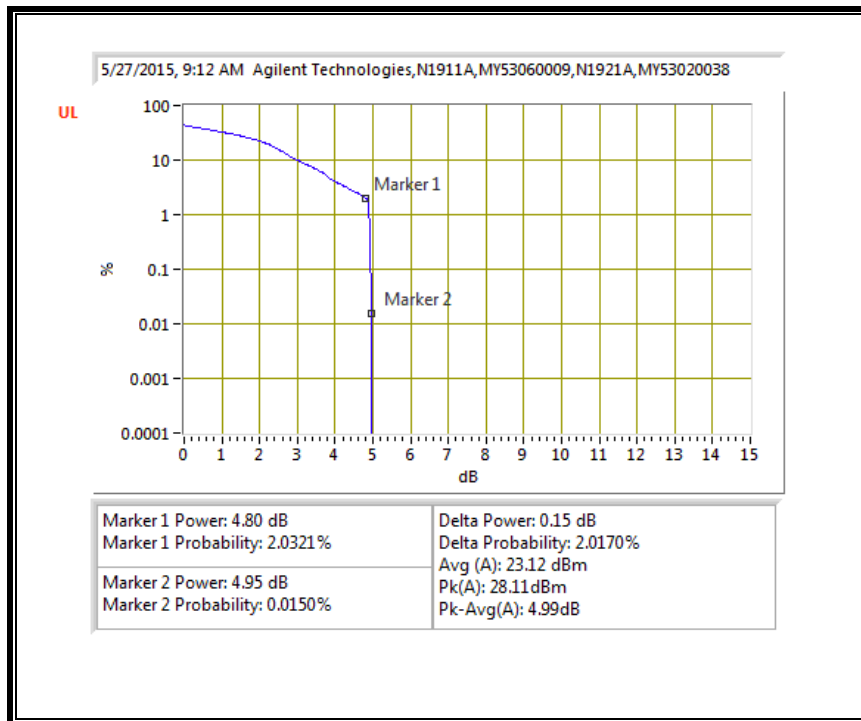
16QAM, (10.0 MHz BAND WIDTH)



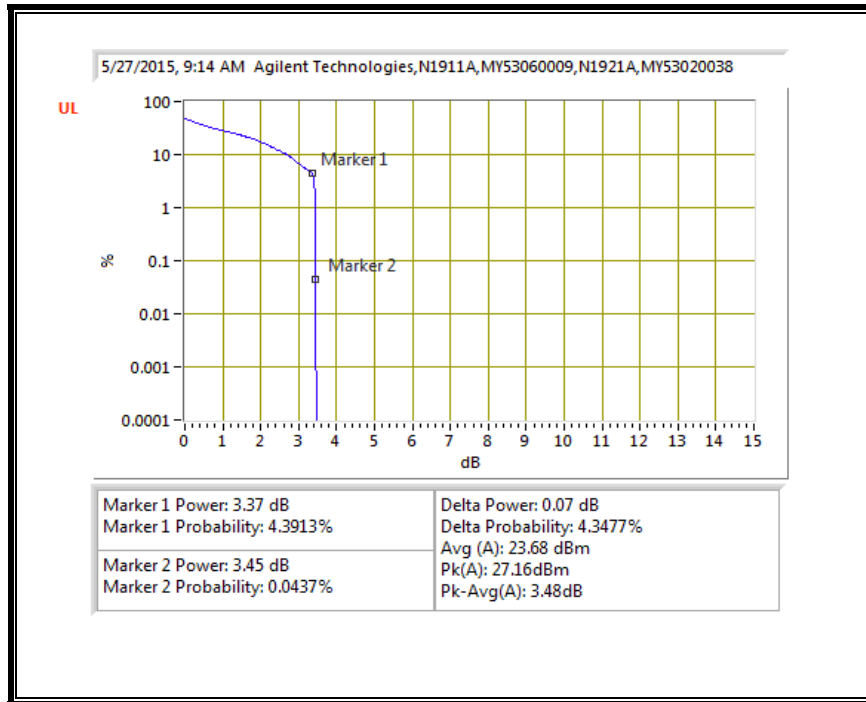
QPSK, (15.0 MHz BAND WIDTH)



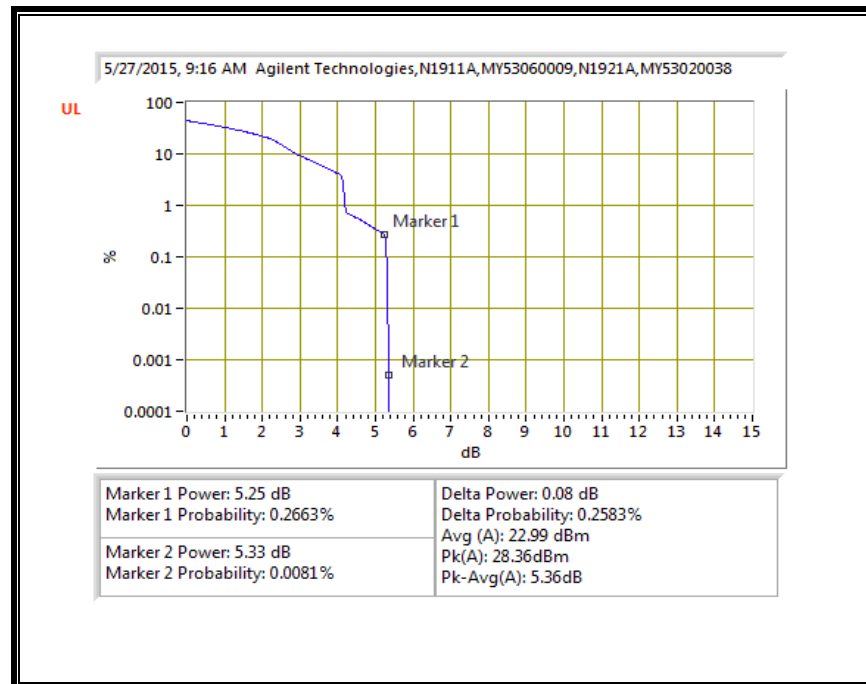
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

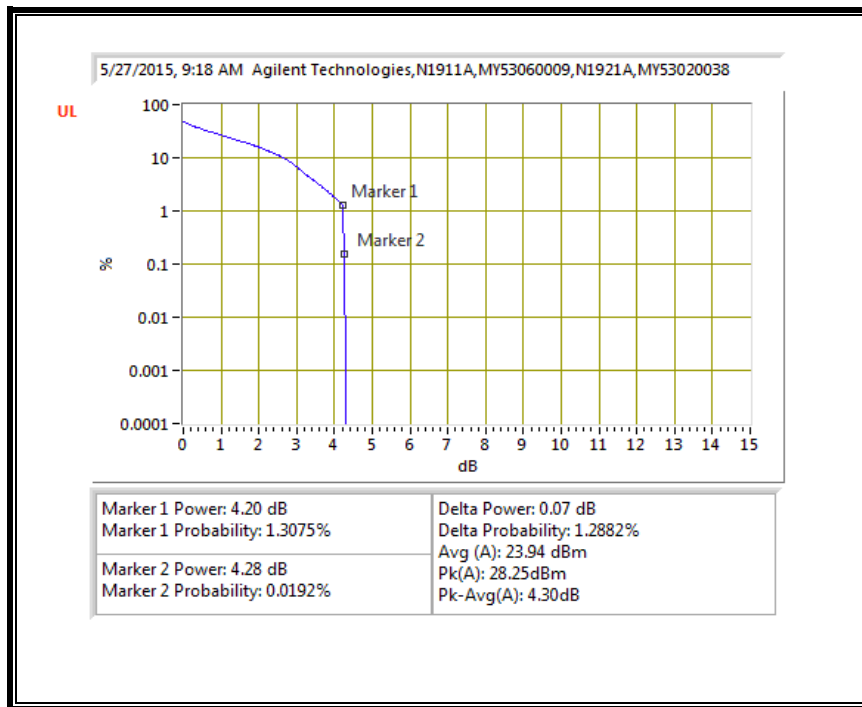


16QAM, (20.0 MHz BAND WIDTH)

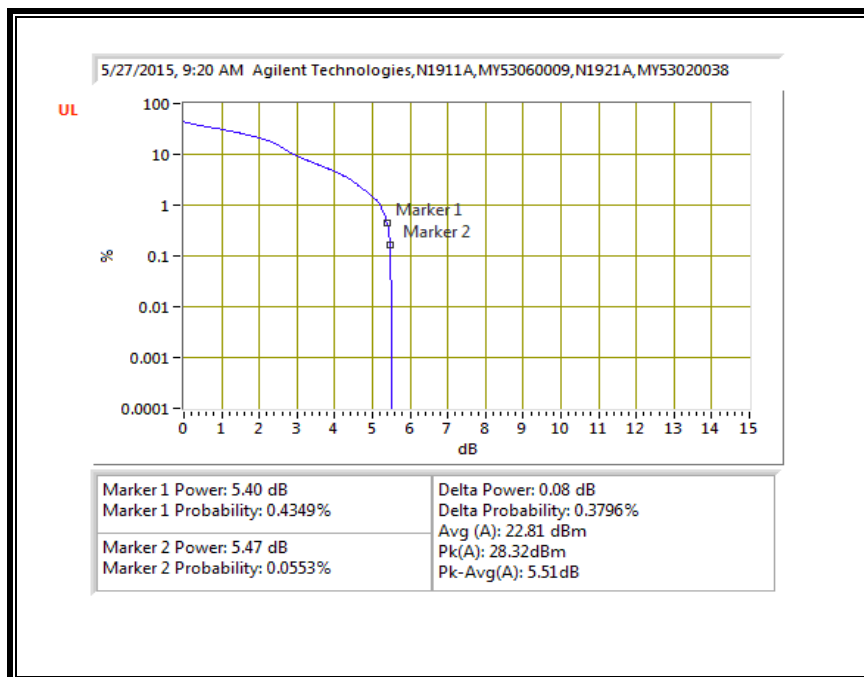


LTE BAND 4

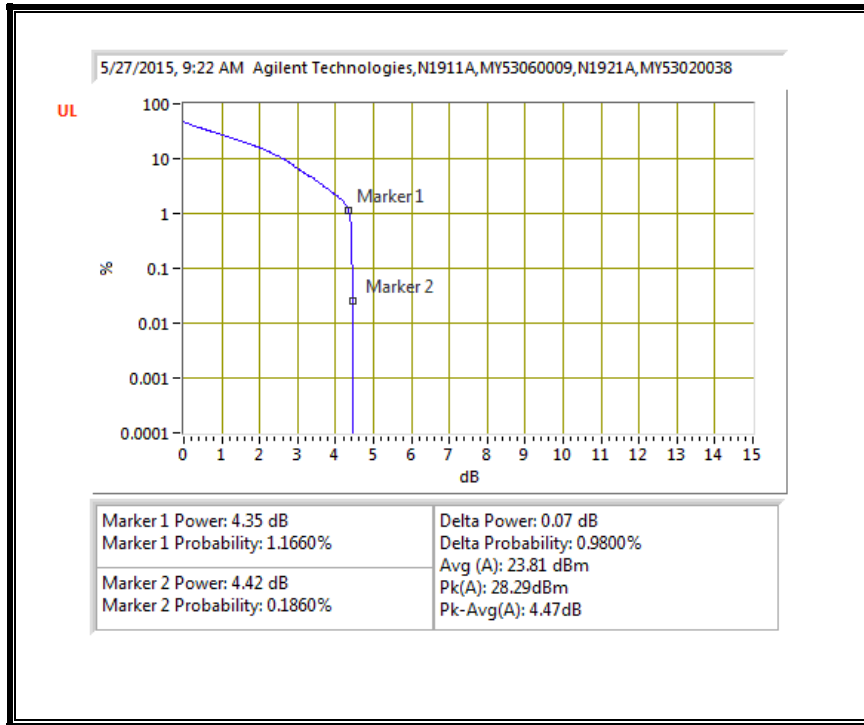
QPSK, (1.4 MHz BAND WIDTH)



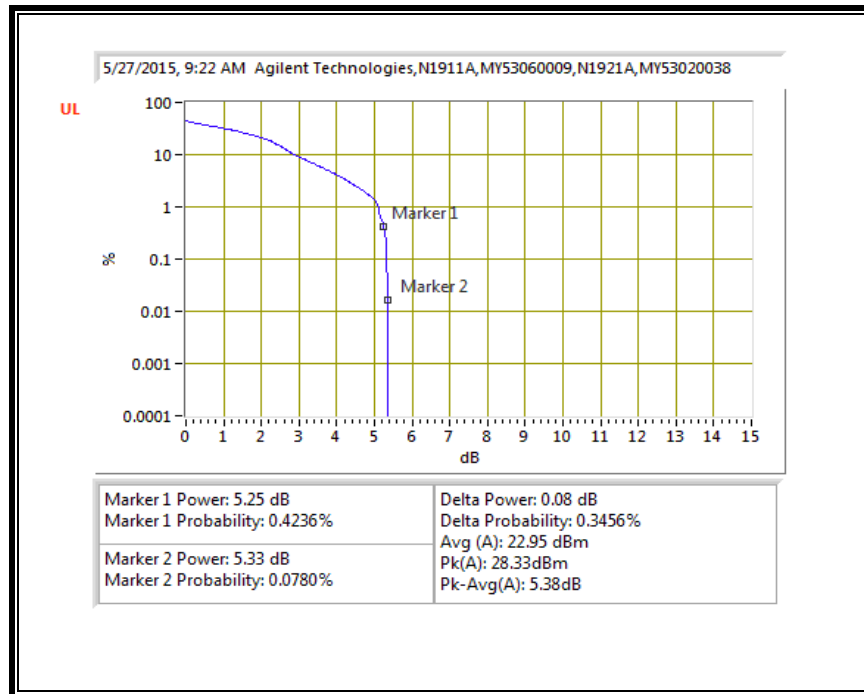
16QAM, (1.4 MHz BAND WIDTH)



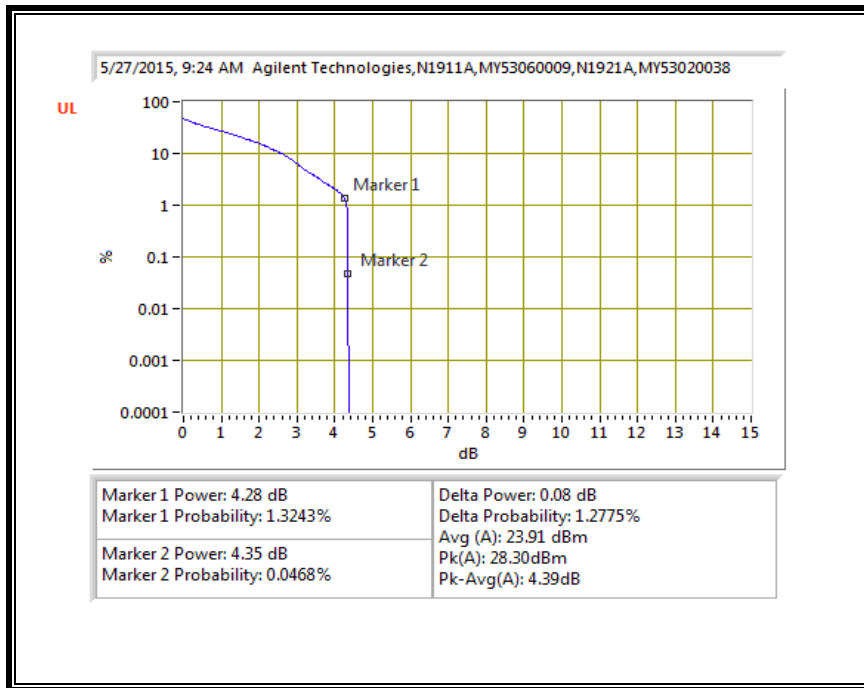
QPSK, (3.0 MHz BAND WIDTH)



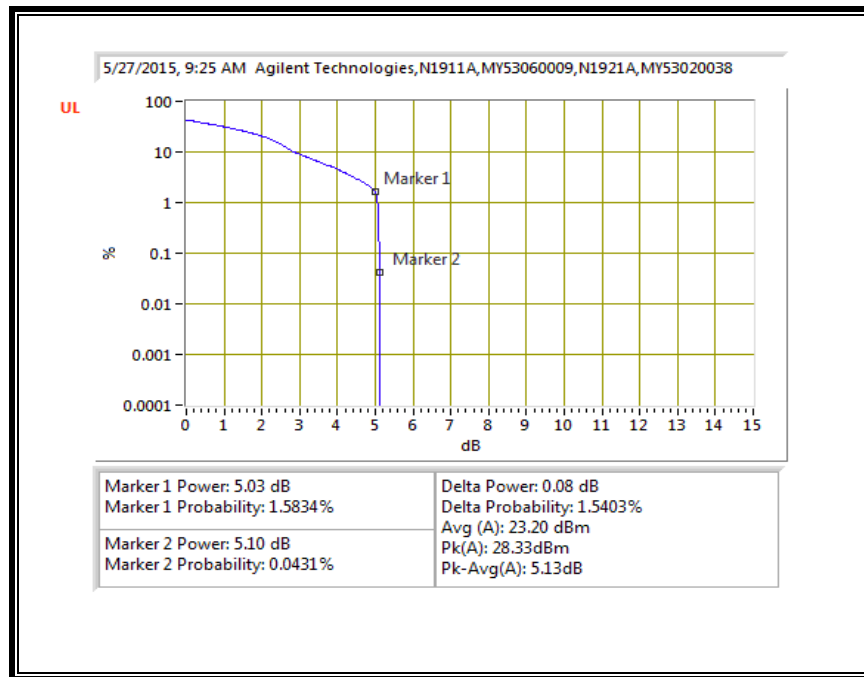
16QAM, (3.0 MHz BAND WIDTH)



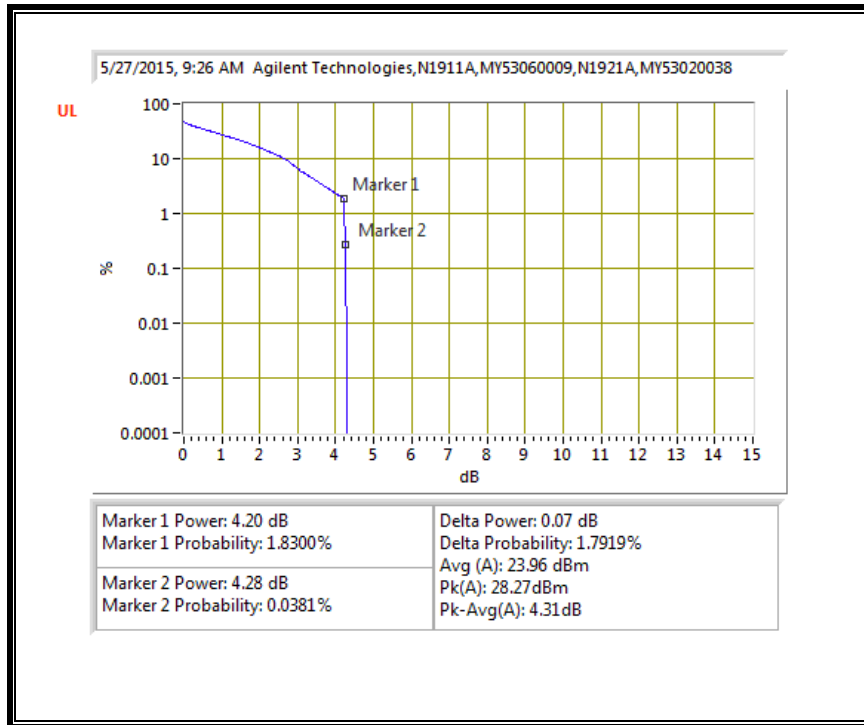
QPSK, (5.0 MHz BAND WIDTH)



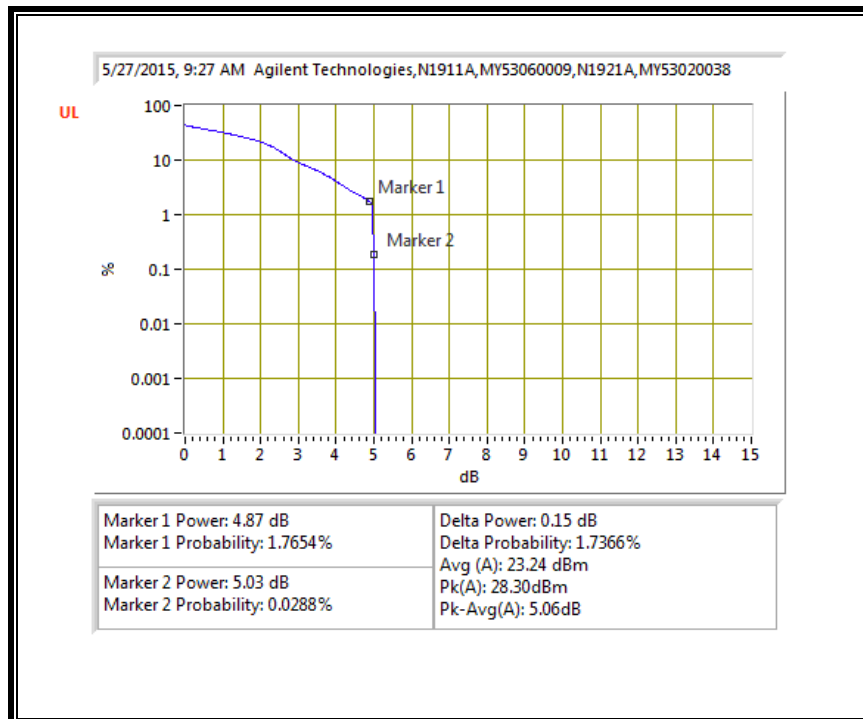
16QAM, (5.0 MHz BAND WIDTH)



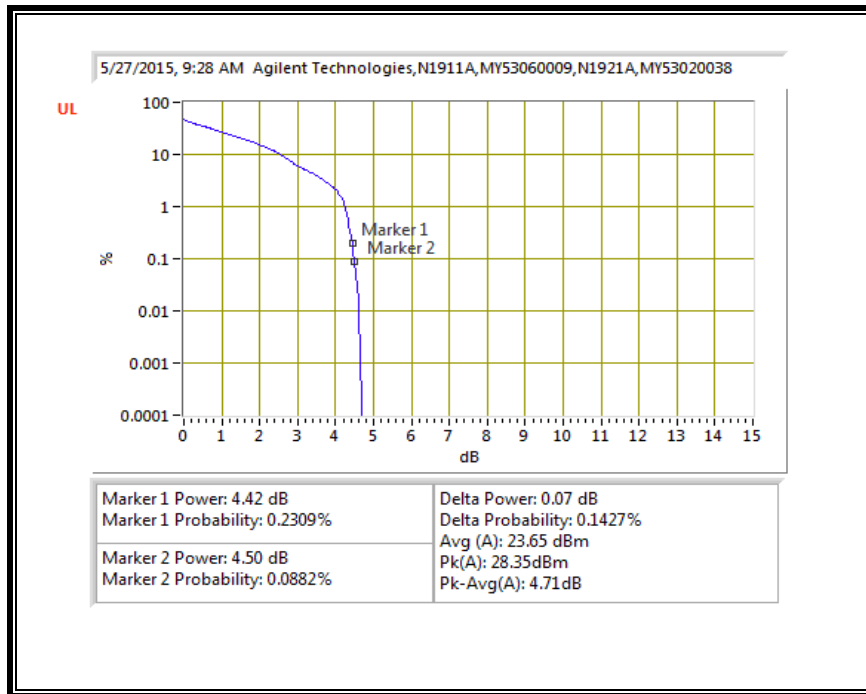
QPSK, (10.0 MHz BAND WIDTH)



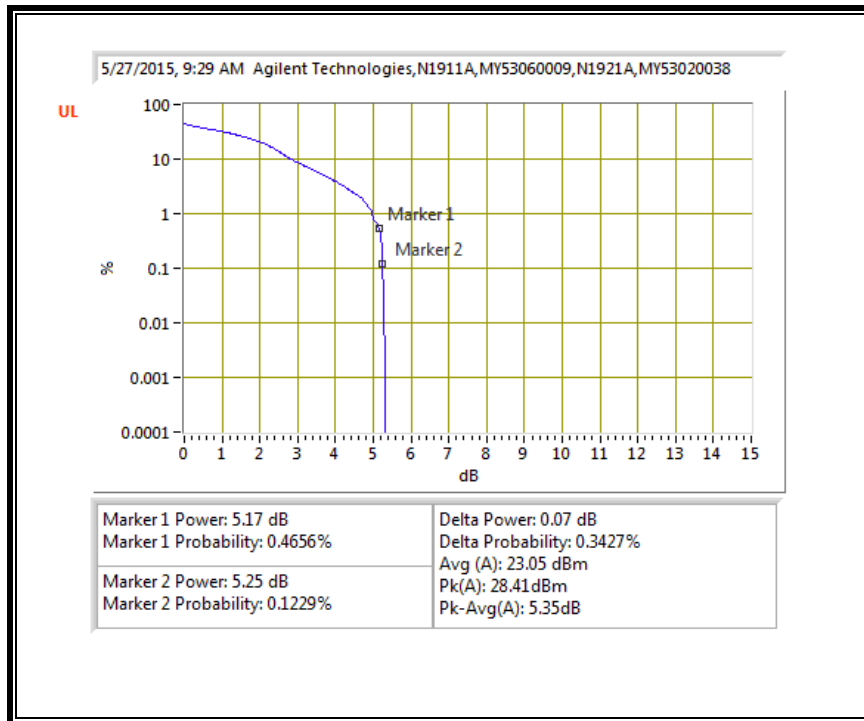
16QAM, (10.0 MHz BAND WIDTH)



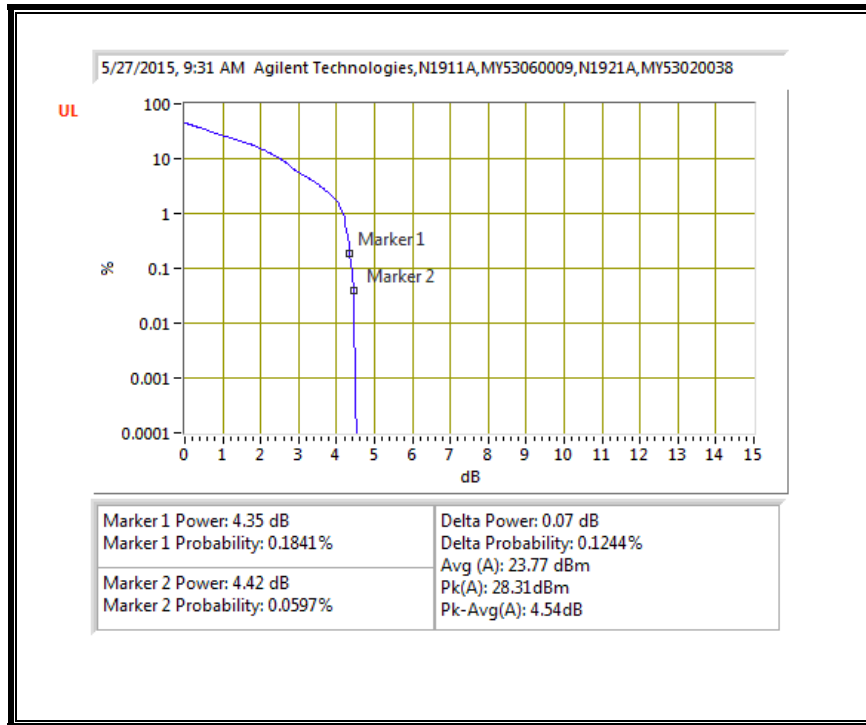
QPSK, (15.0 MHz BAND WIDTH)



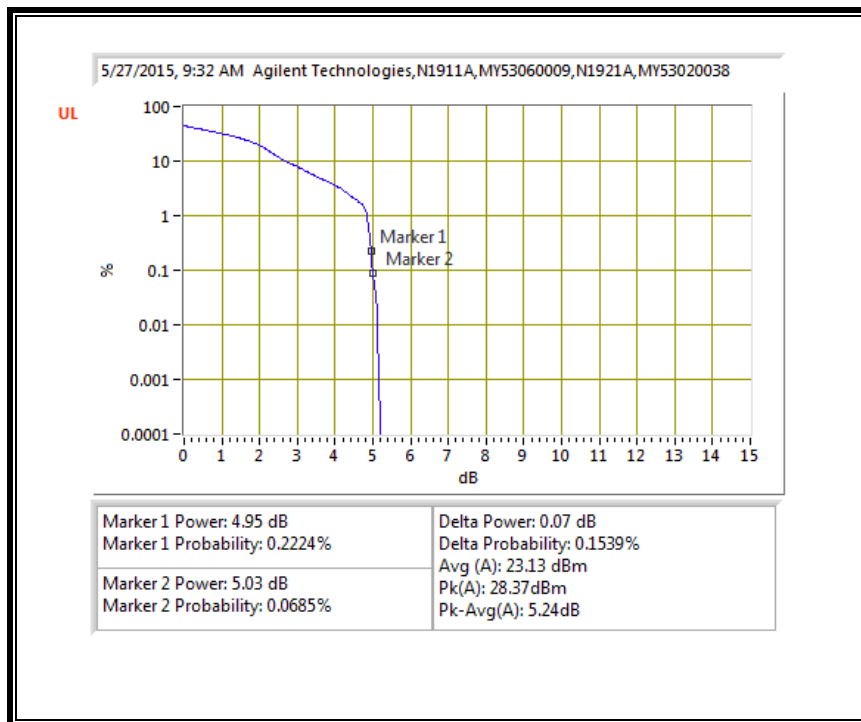
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

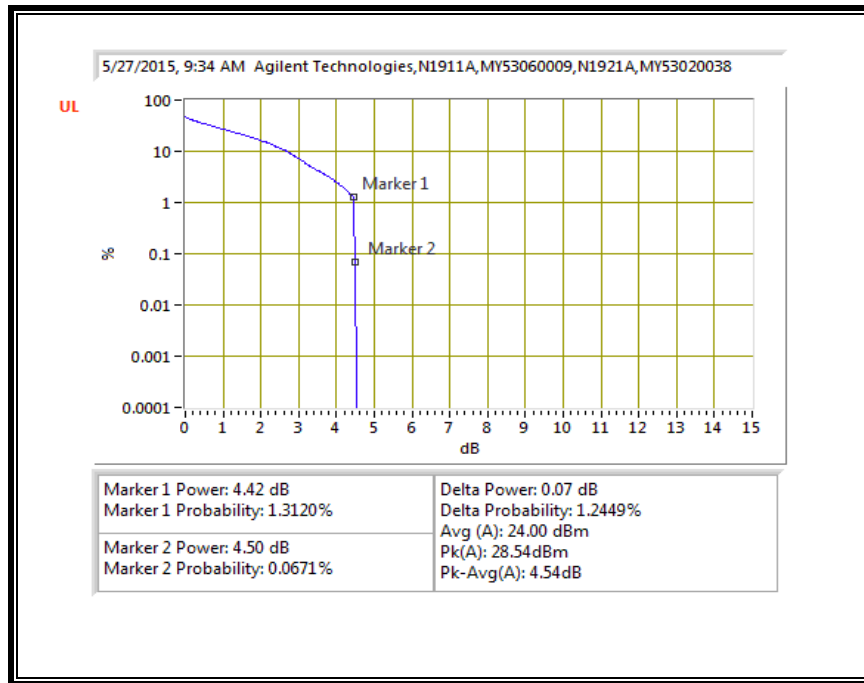


16QAM, (20.0 MHz BAND WIDTH)

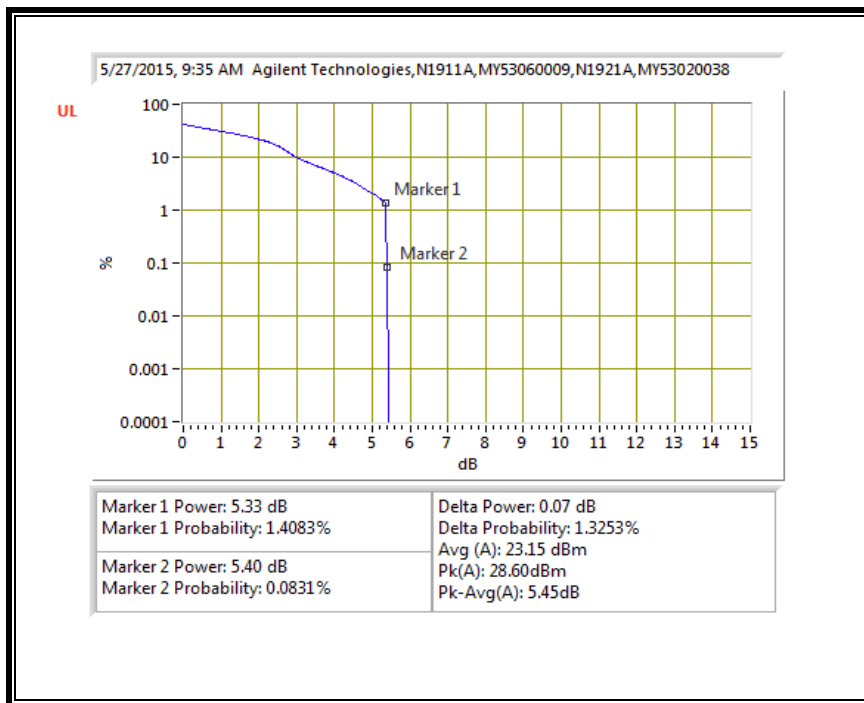


LTE BAND 5

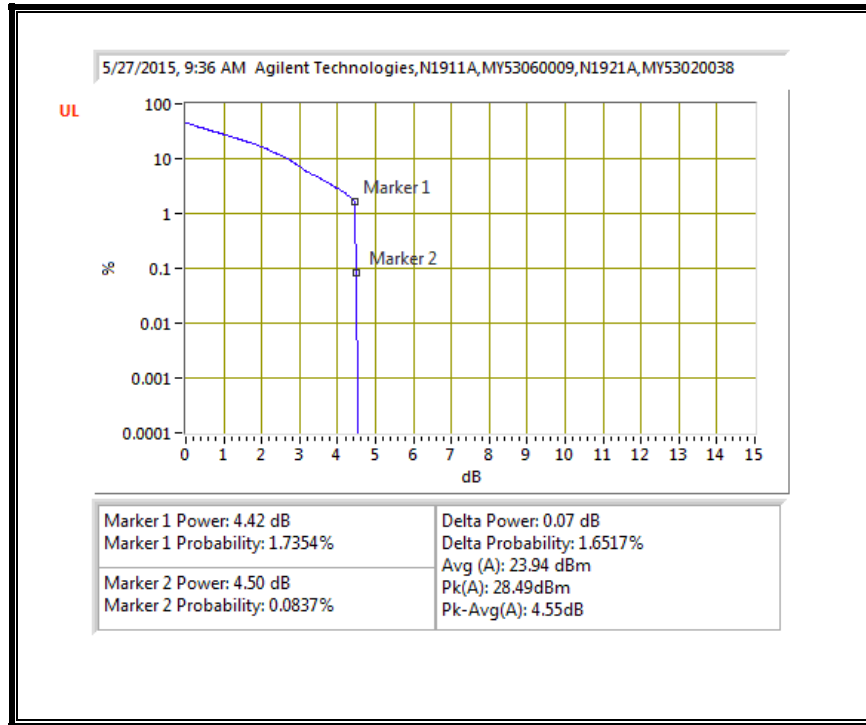
QPSK, (1.4 MHz BAND WIDTH)



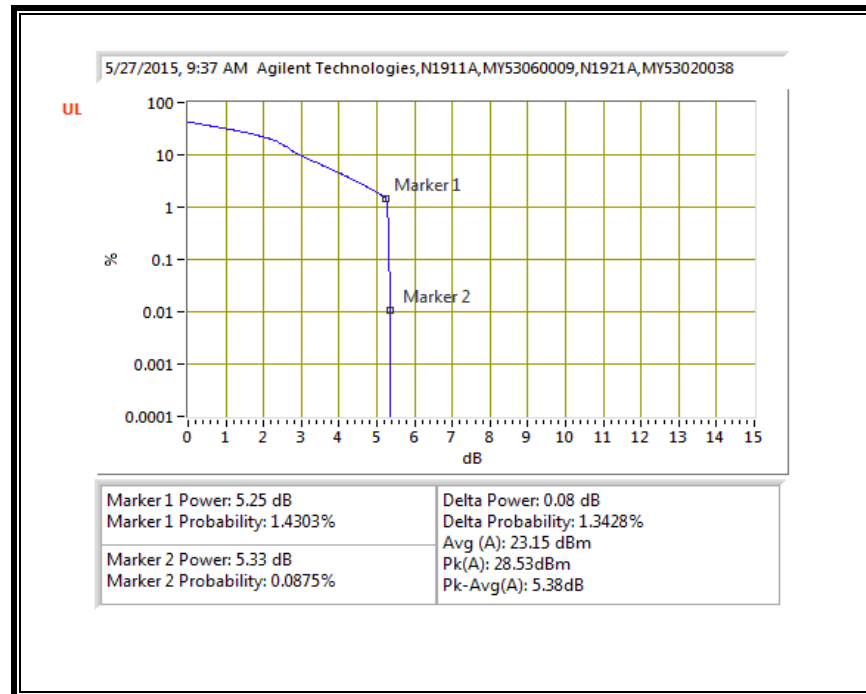
16QAM, (1.4 MHz BAND WIDTH)



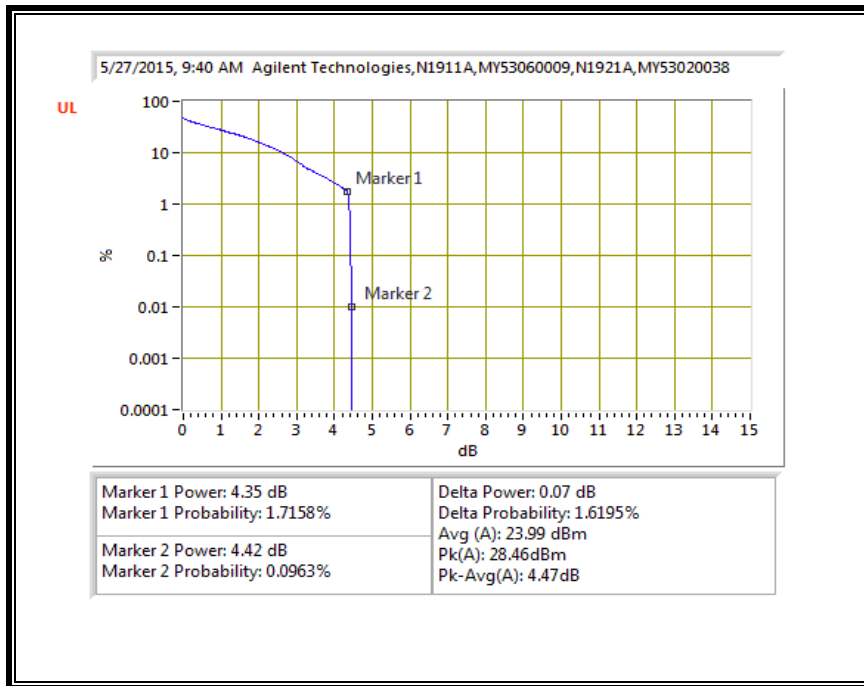
QPSK, (3.0 MHz BAND WIDTH)



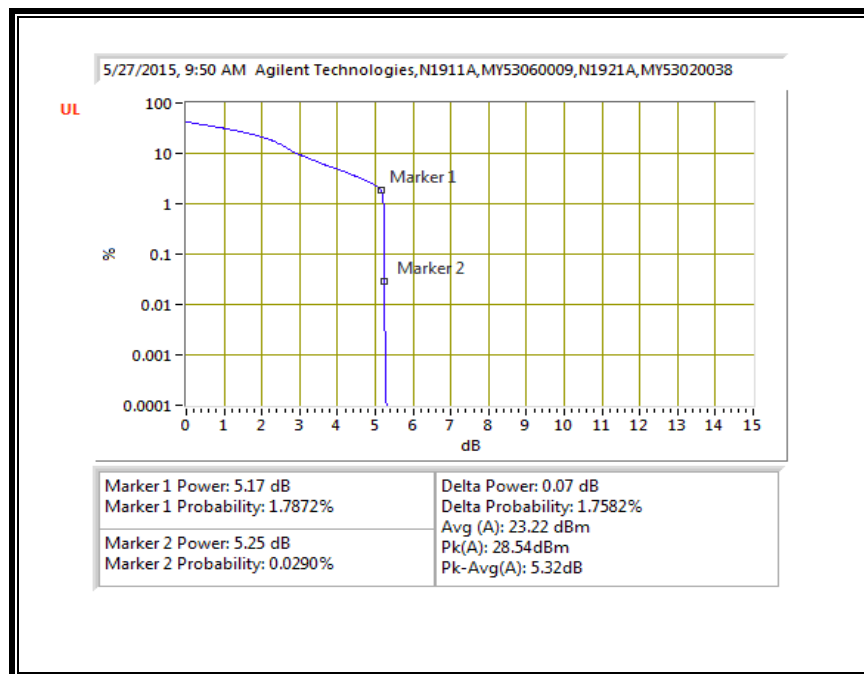
16QAM, (3.0 MHz BAND WIDTH)



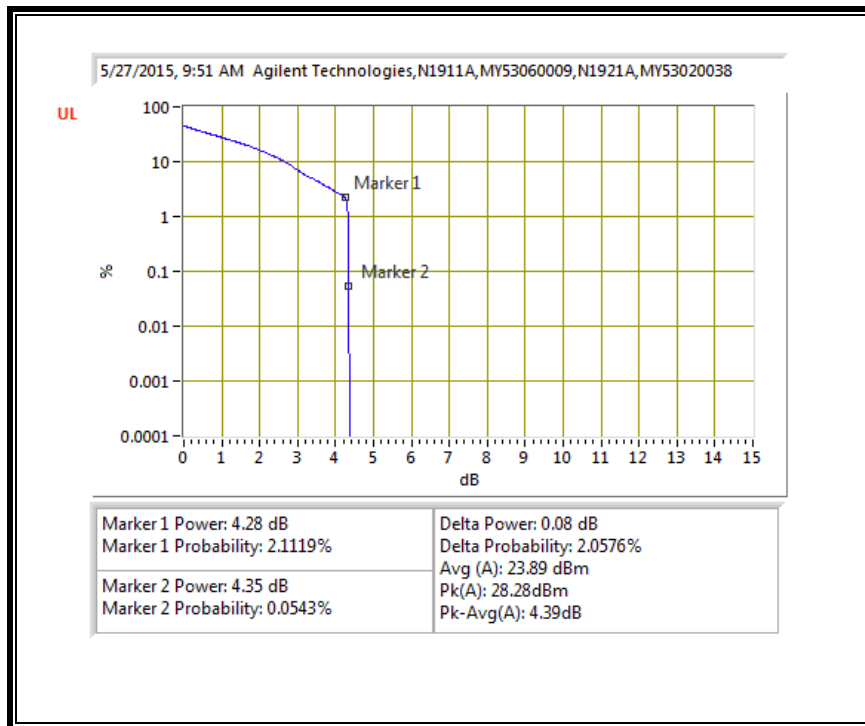
QPSK, (5.0 MHz BAND WIDTH)



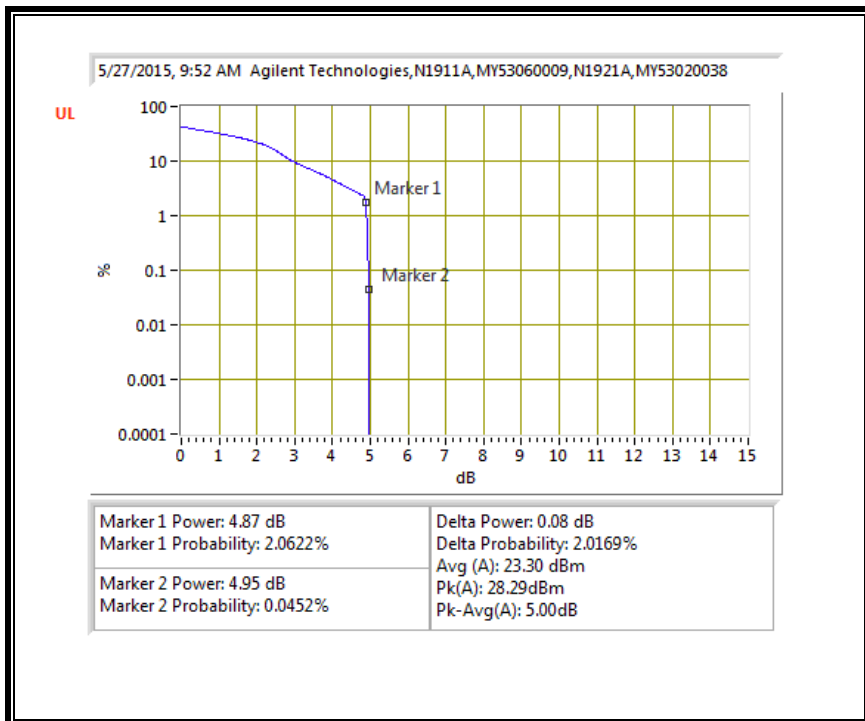
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

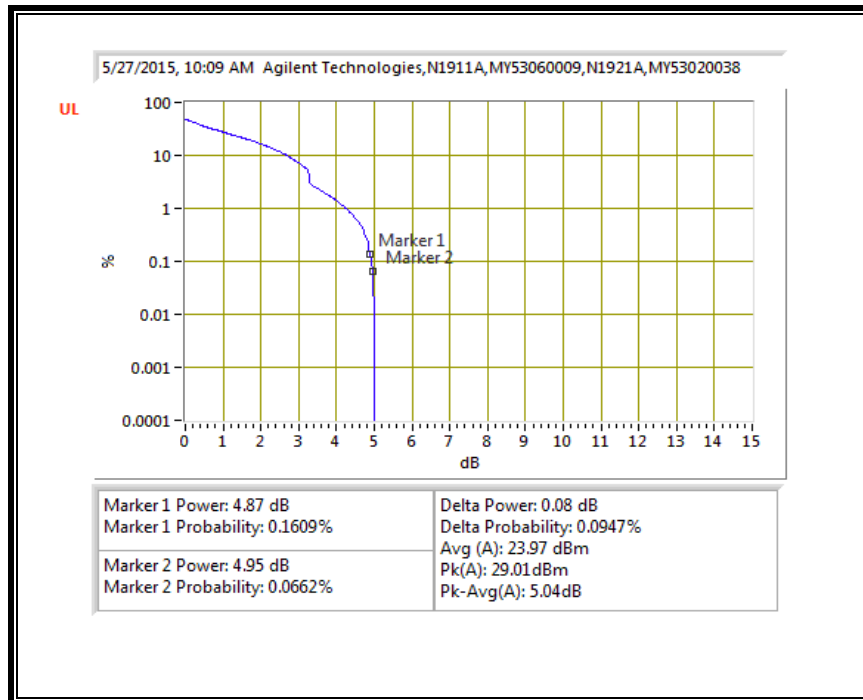


16QAM, (10.0 MHz BAND WIDTH)

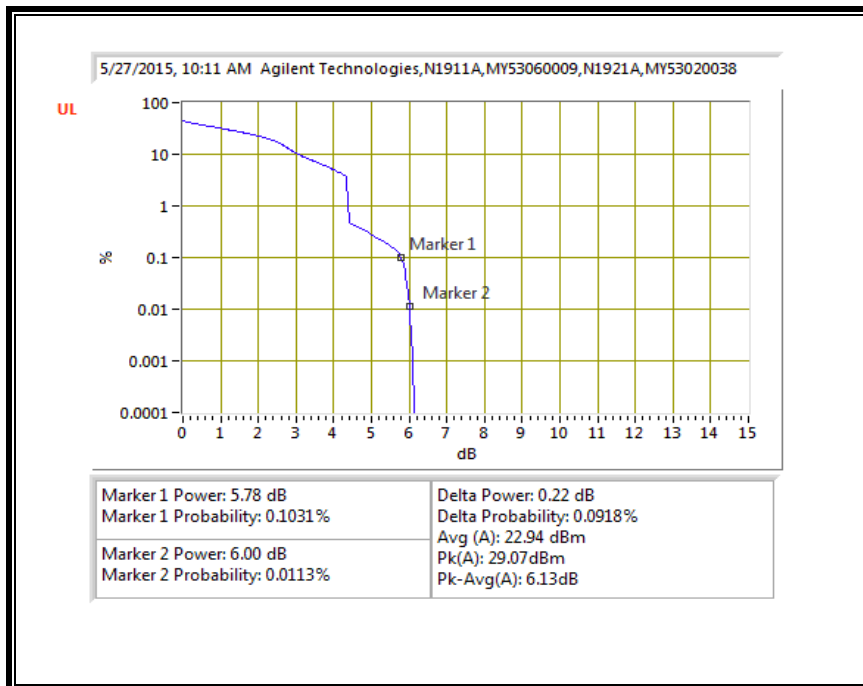


LTE BAND 12

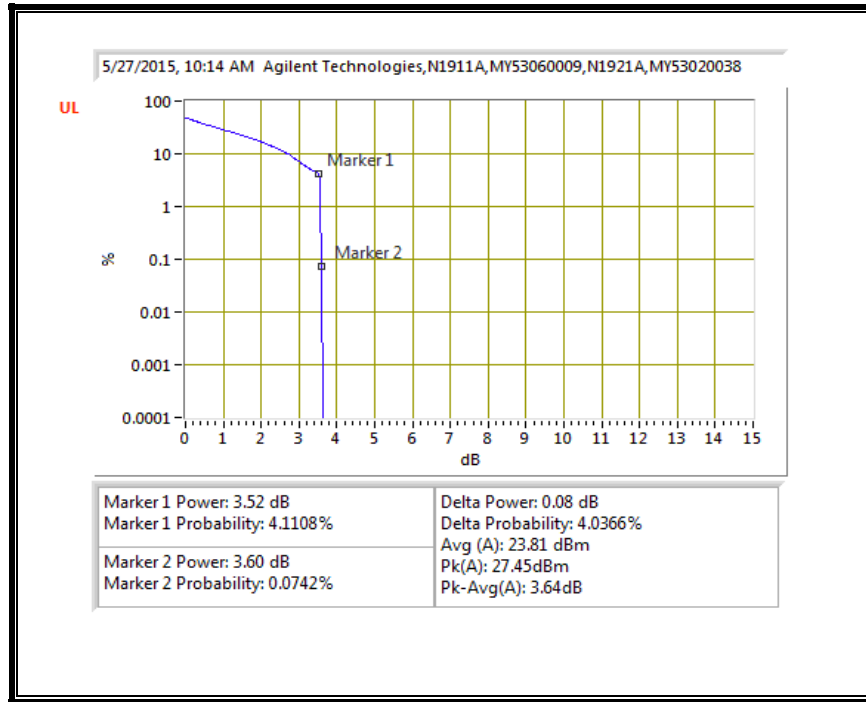
QPSK, (1.4 MHz BAND WIDTH)



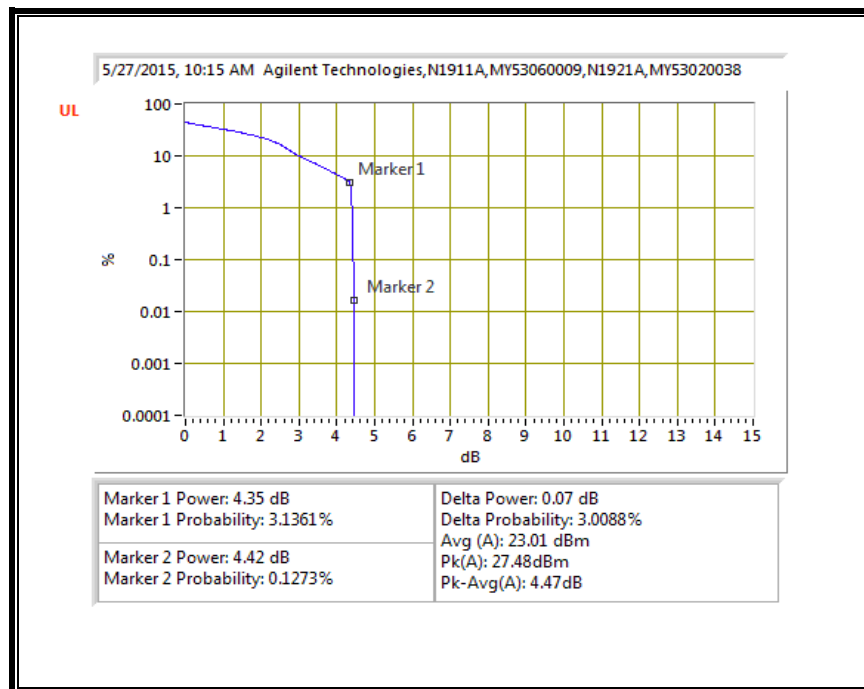
16QAM, (1.4 MHz BAND WIDTH)



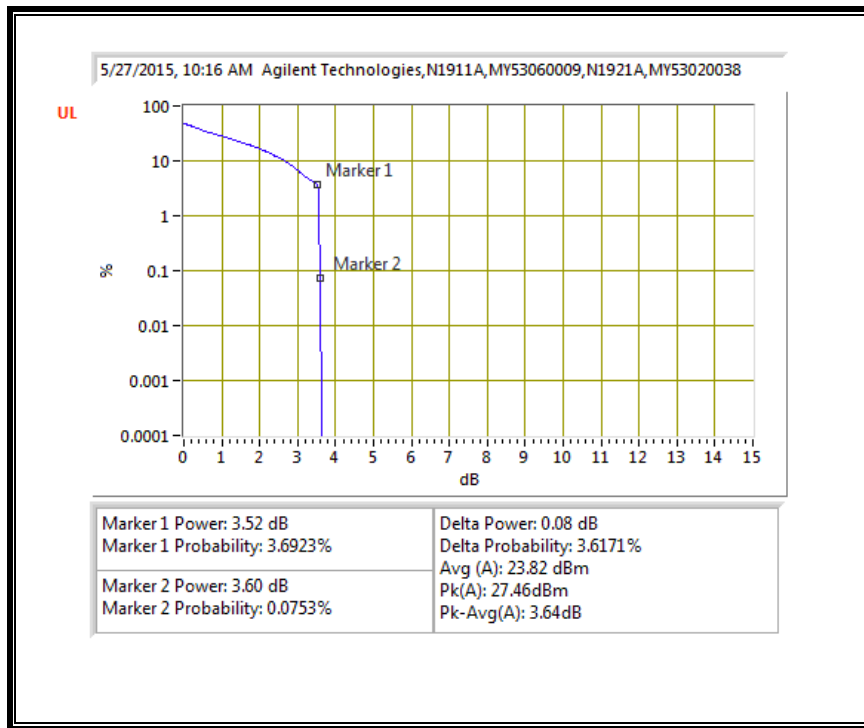
QPSK, (3.0 MHz BAND WIDTH)



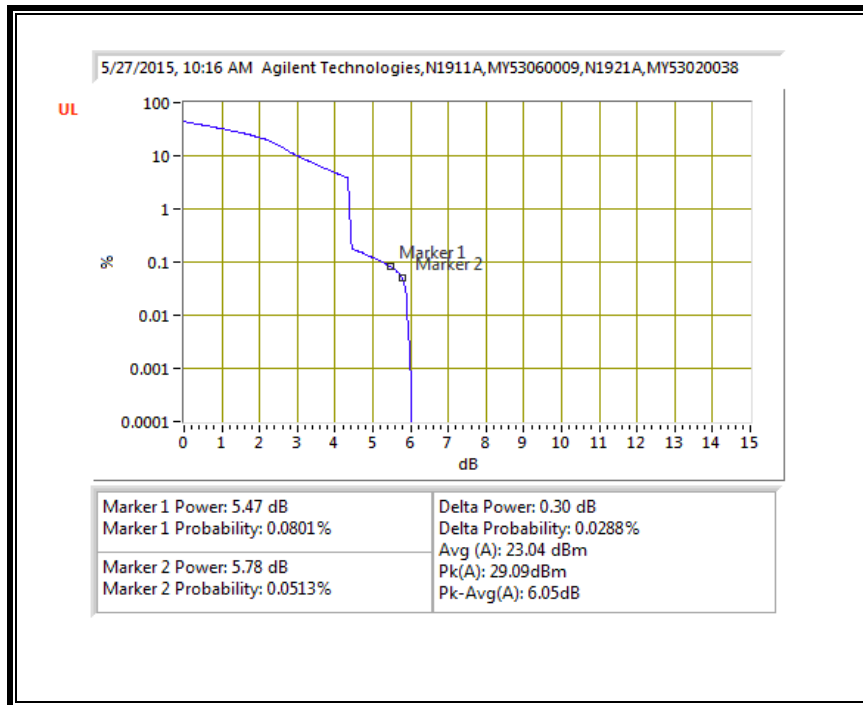
16QAM, (3.0 MHz BAND WIDTH)



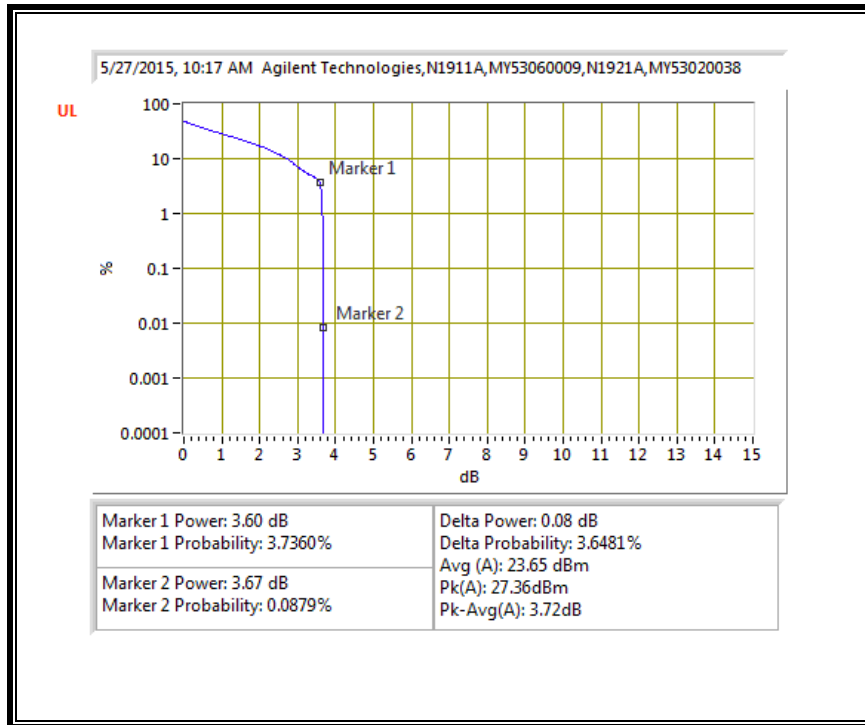
QPSK, (5.0 MHz BAND WIDTH)



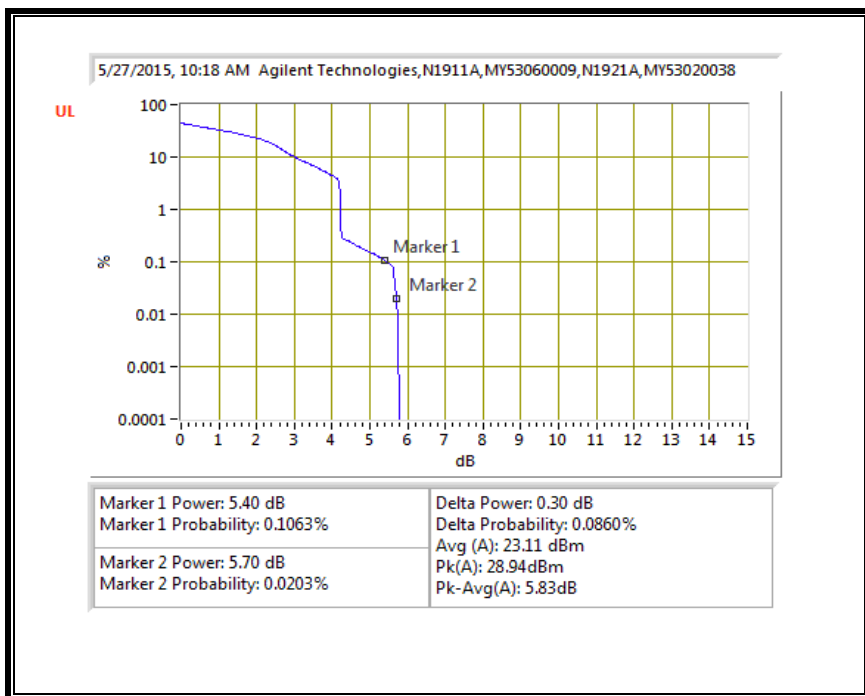
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

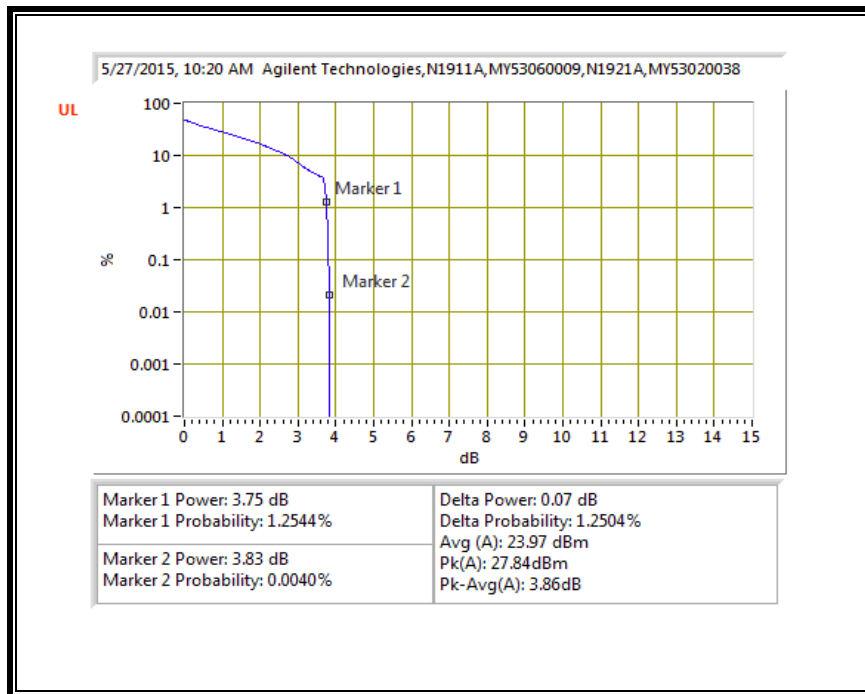


16QAM, (10.0 MHz BAND WIDTH)

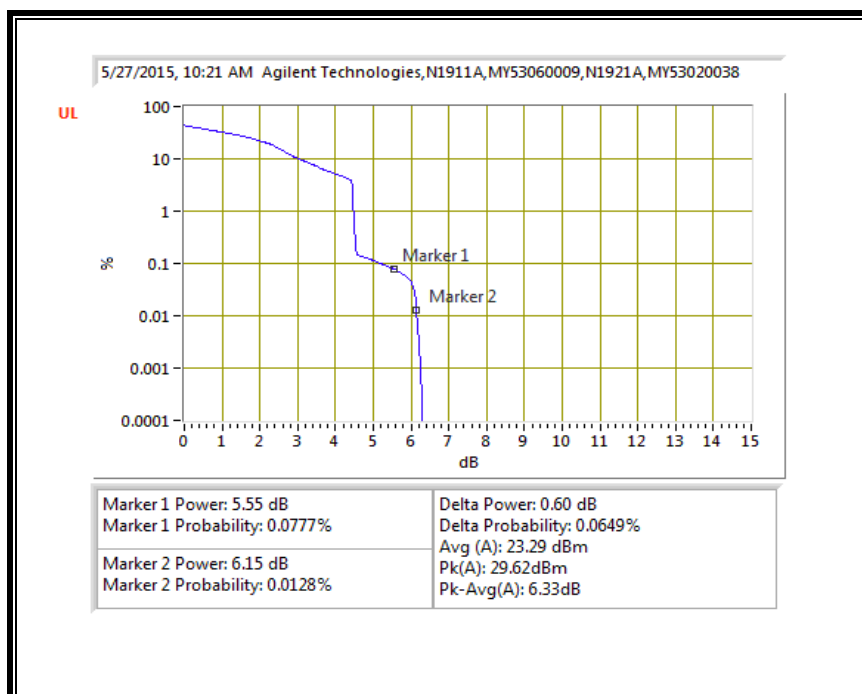


LTE BAND 13

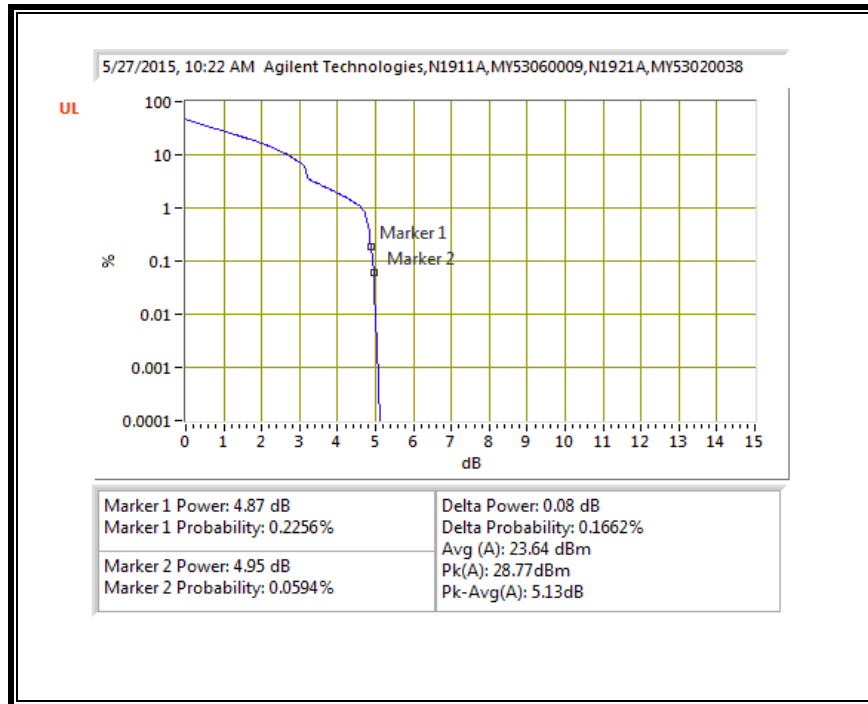
QPSK, (5.0 MHz BAND WIDTH)



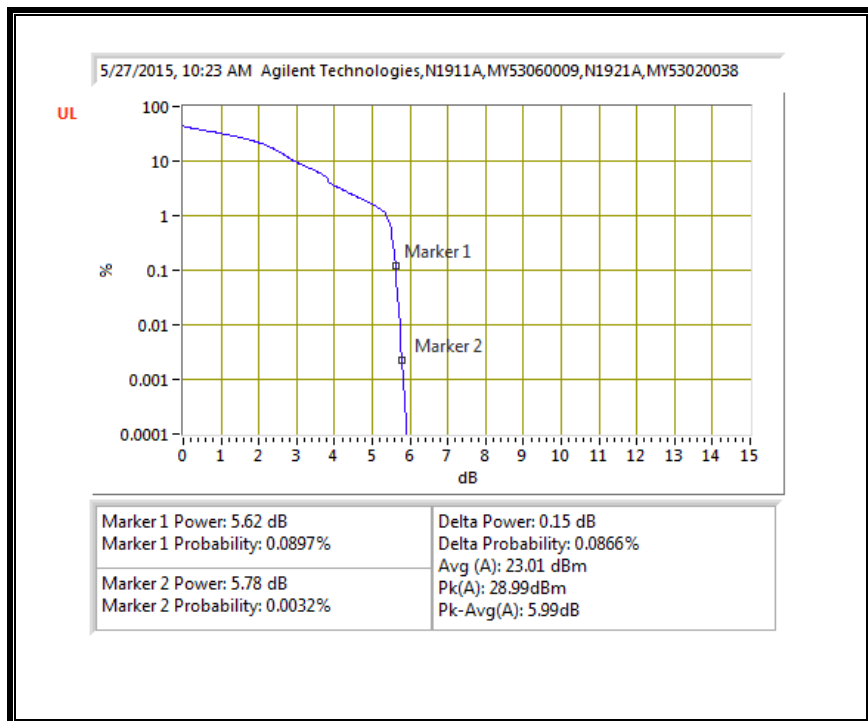
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

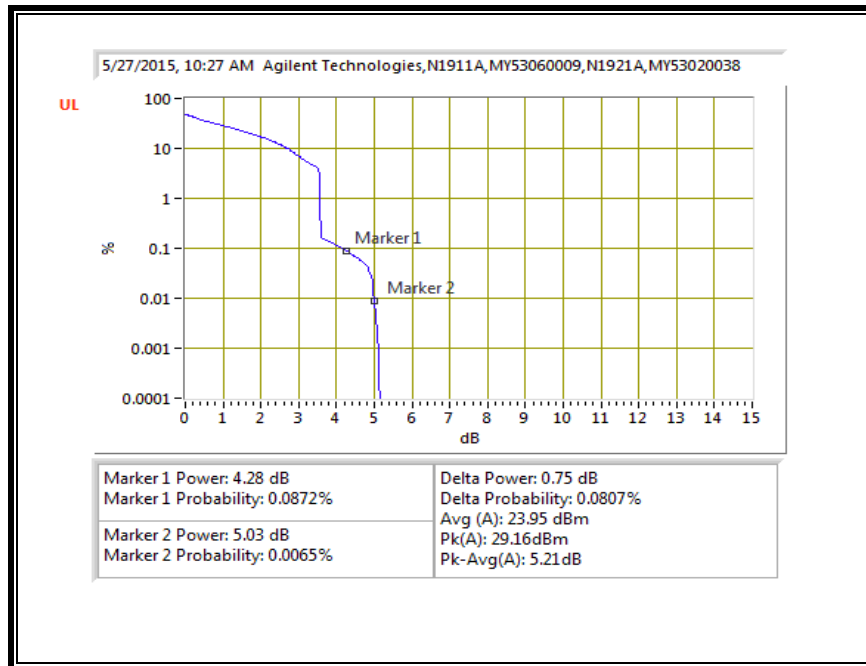


16QAM, (10.0 MHz BAND WIDTH)

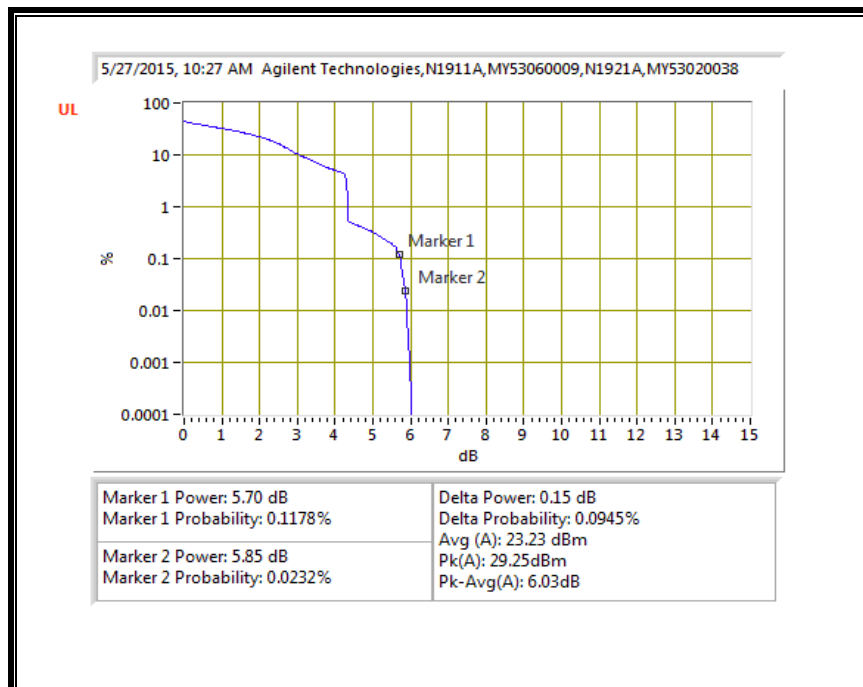


LTE BAND 17

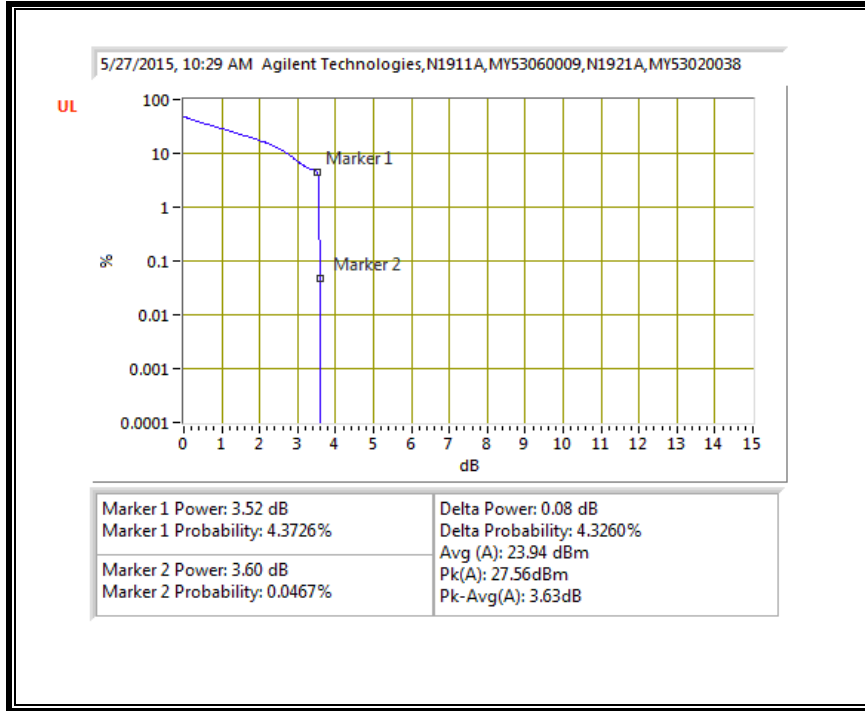
QPSK, (5.0 MHz BAND WIDTH)



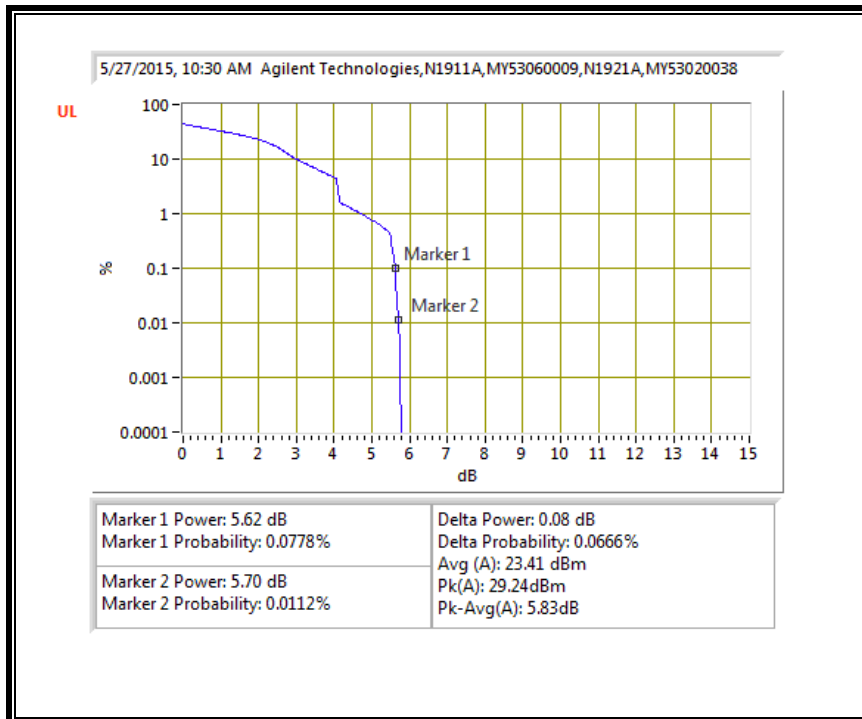
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

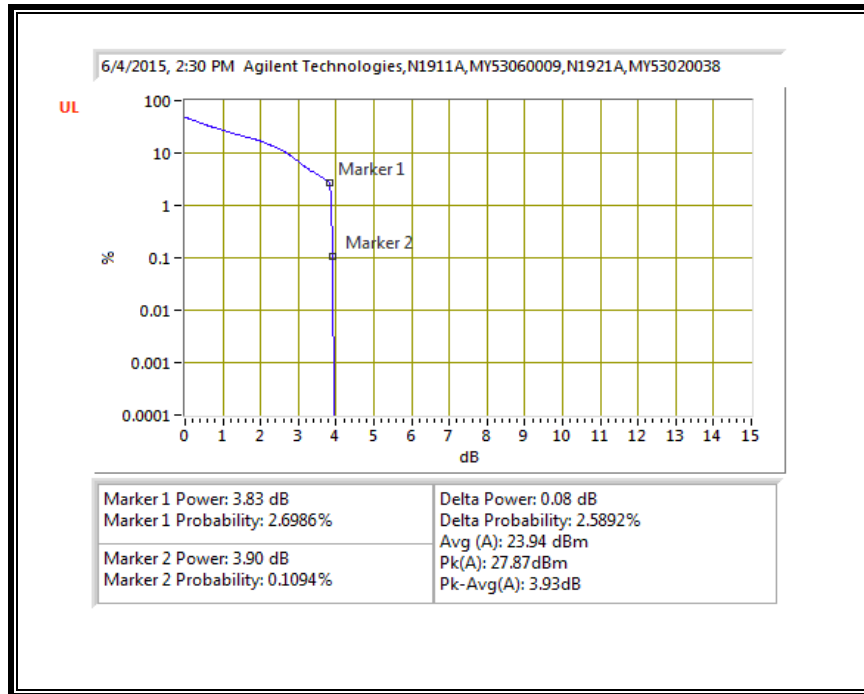


16QAM, (10.0 MHz BAND WIDTH)

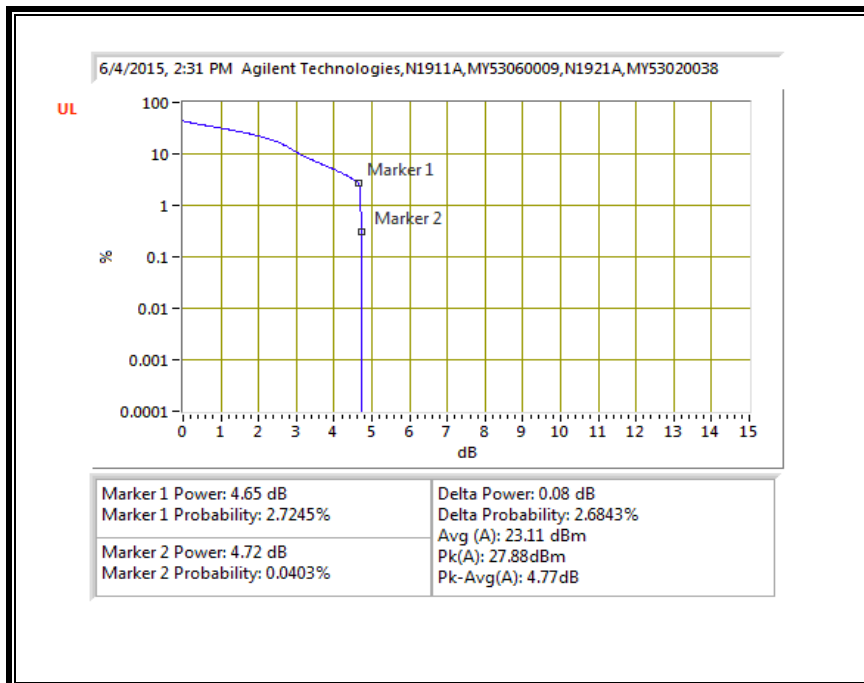


LTE BAND 25

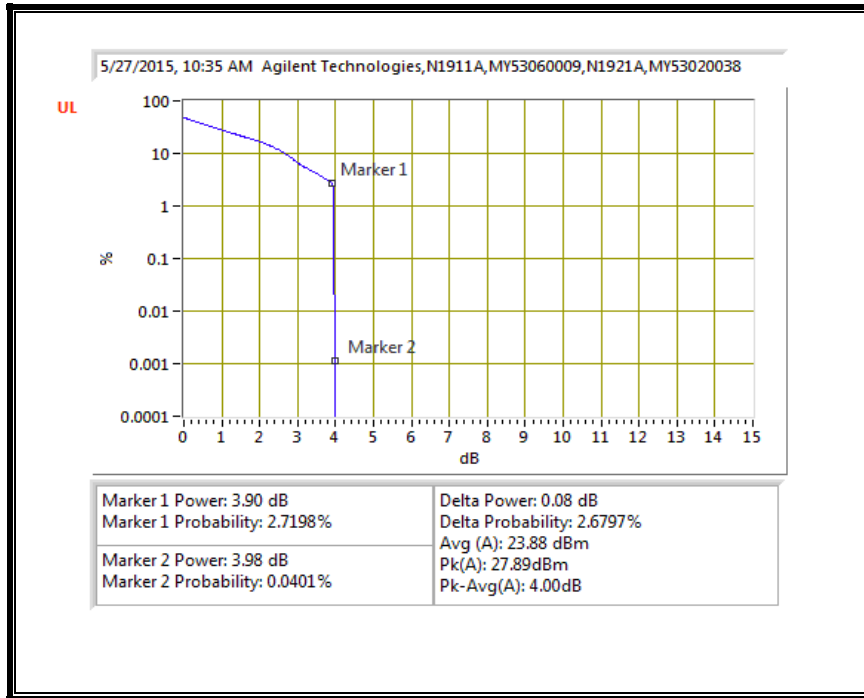
QPSK, (1.4 MHz BAND WIDTH)



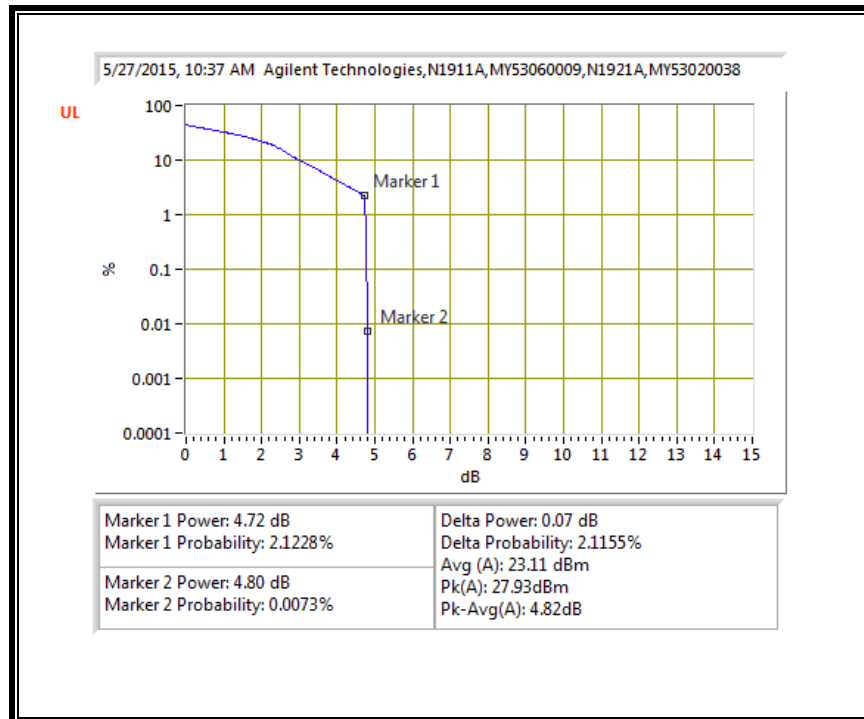
16QAM, (1.4 MHz BAND WIDTH)



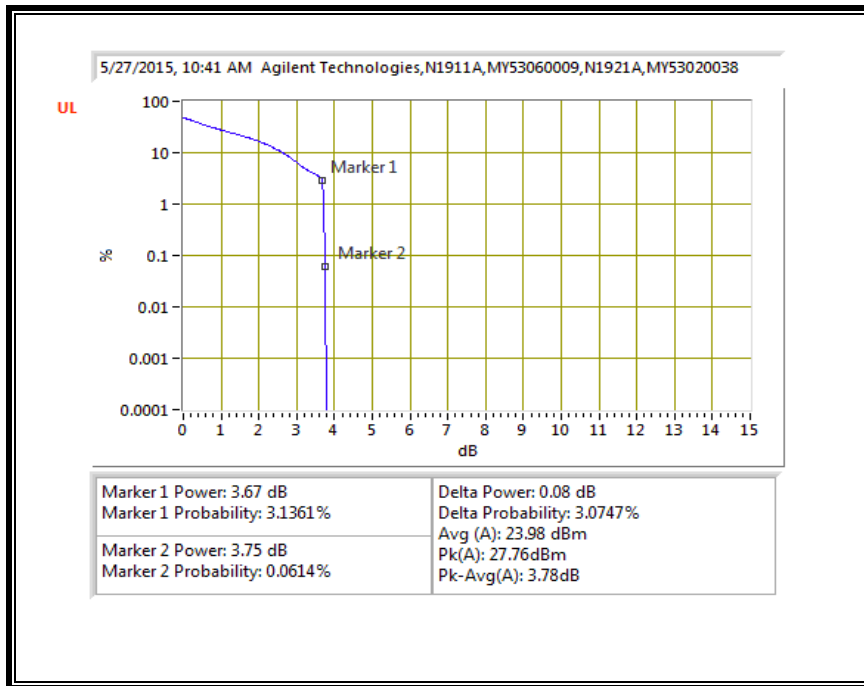
QPSK, (3.0 MHz BAND WIDTH)



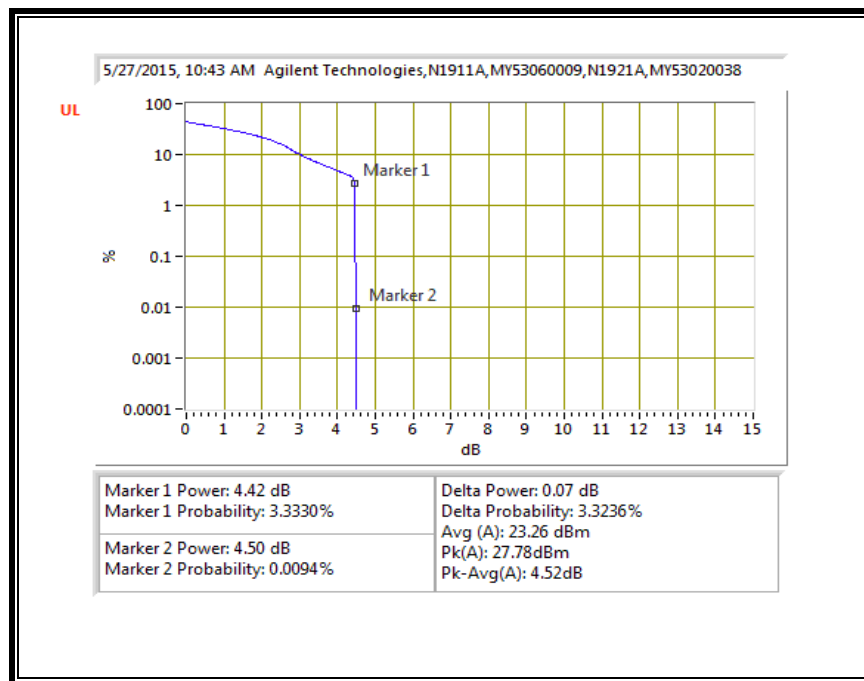
16QAM, (3.0 MHz BAND WIDTH)



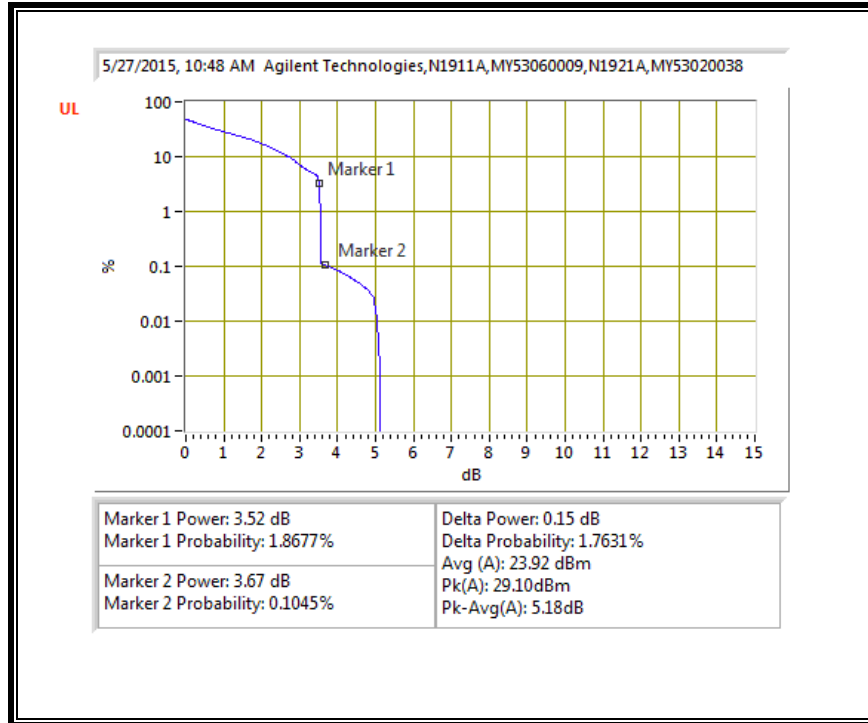
QPSK, (5.0 MHz BAND WIDTH)



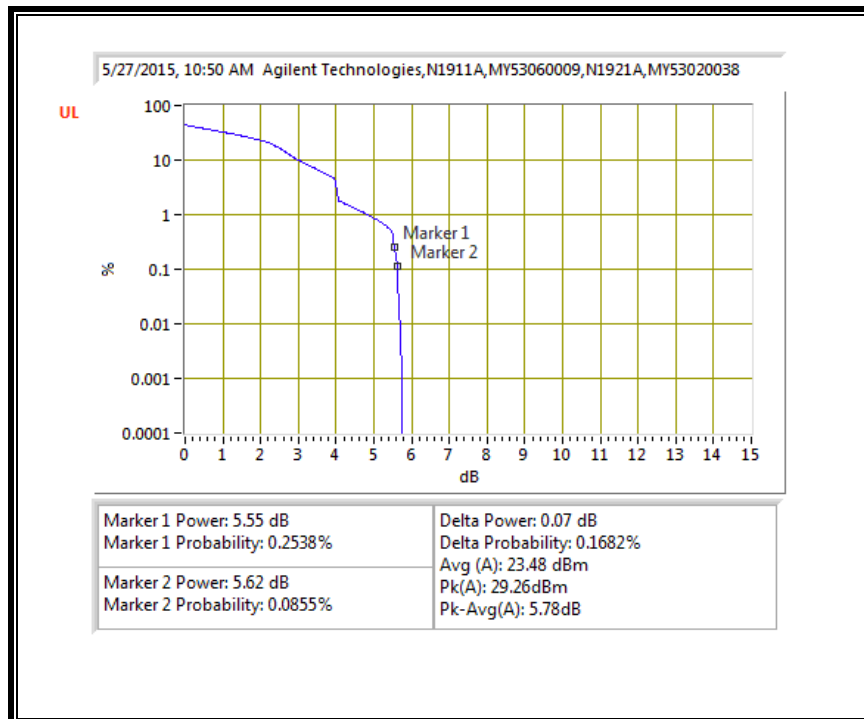
16QAM, (5.0 MHz BAND WIDTH)



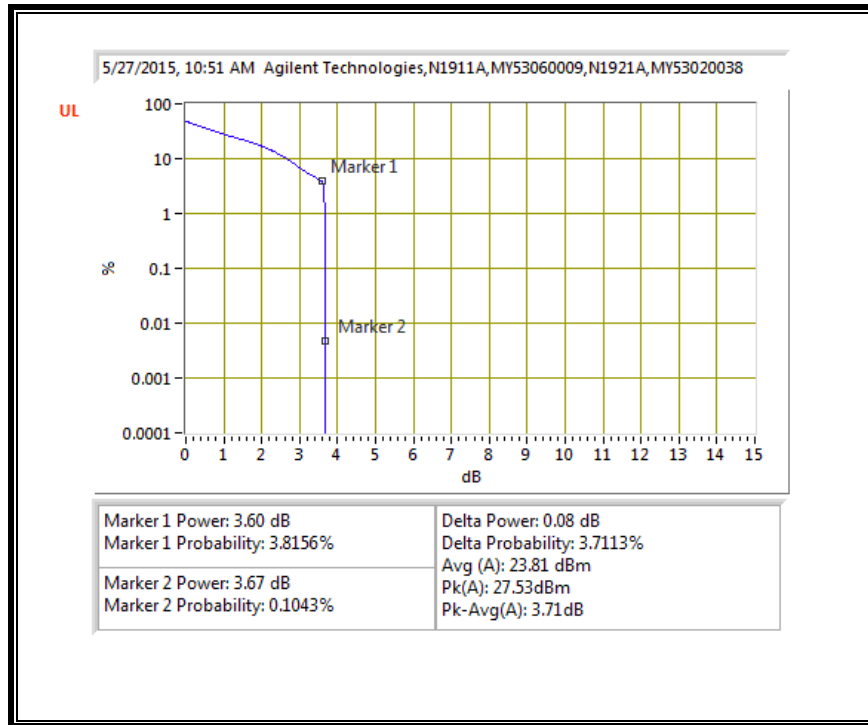
QPSK, (10.0 MHz BAND WIDTH)



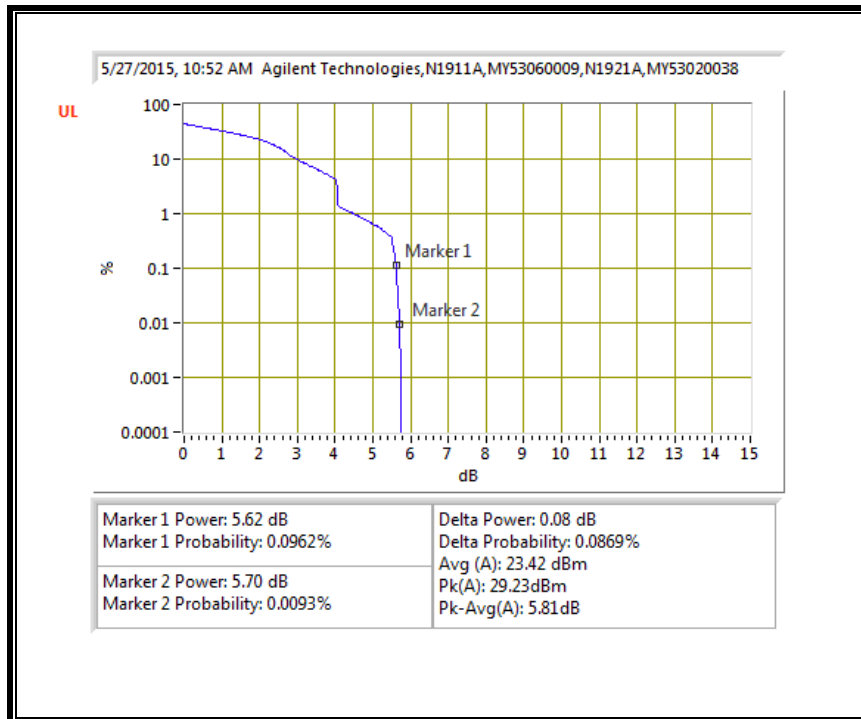
16QAM, (10.0 MHz BAND WIDTH)



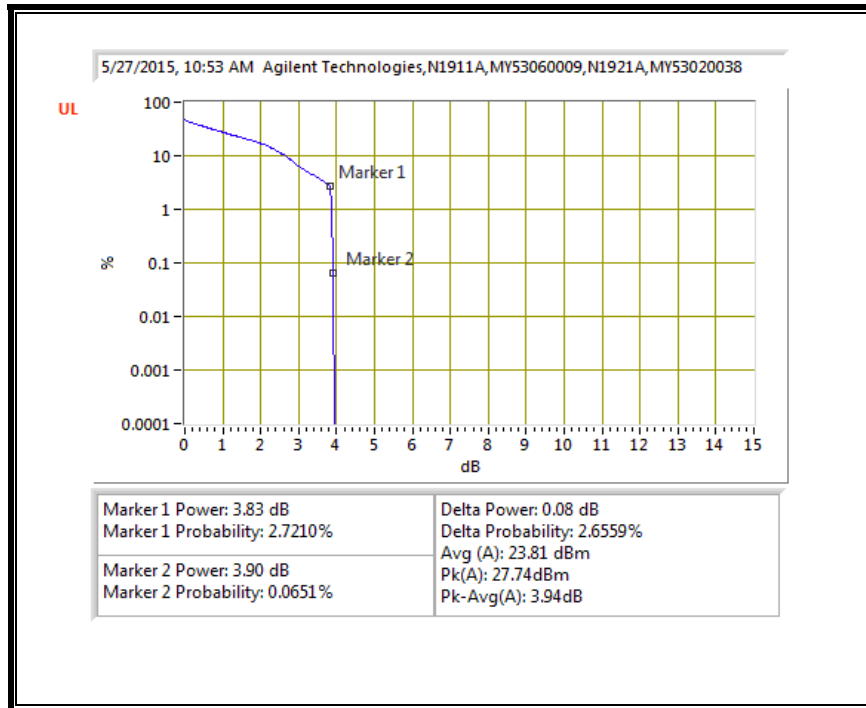
QPSK, (15.0 MHz BAND WIDTH)



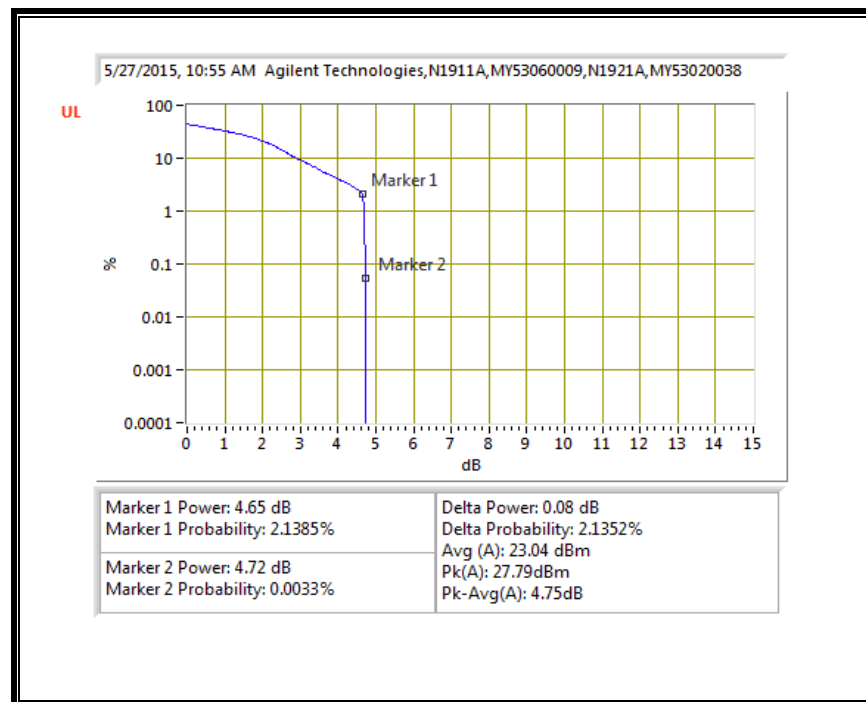
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

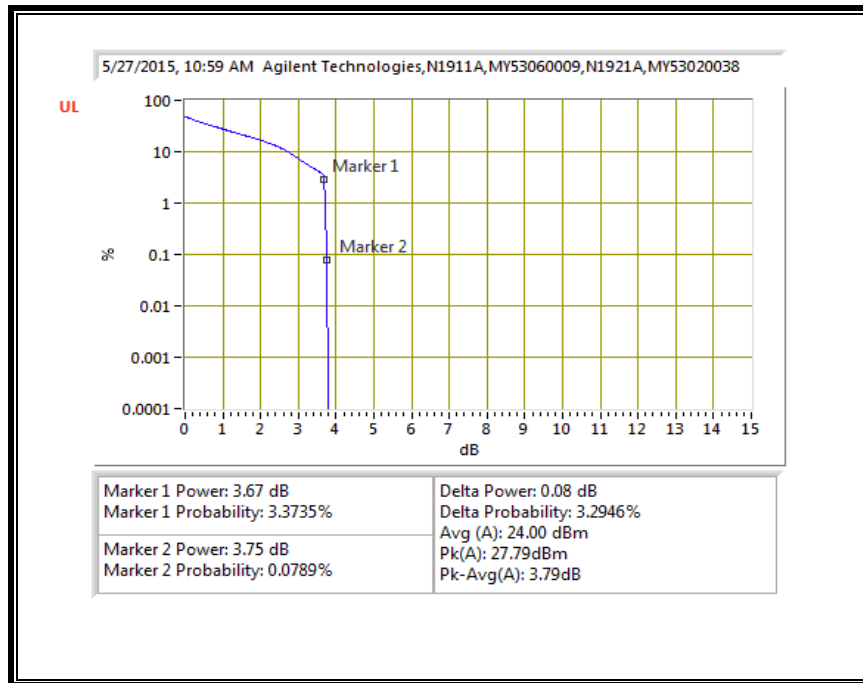


16QAM, (20.0 MHz BAND WIDTH)

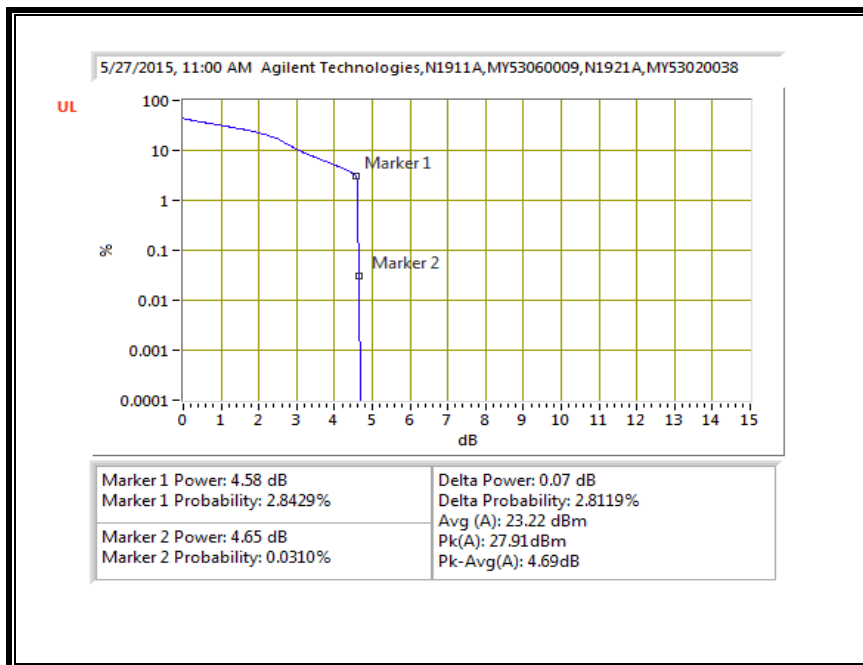


LTE BAND 26

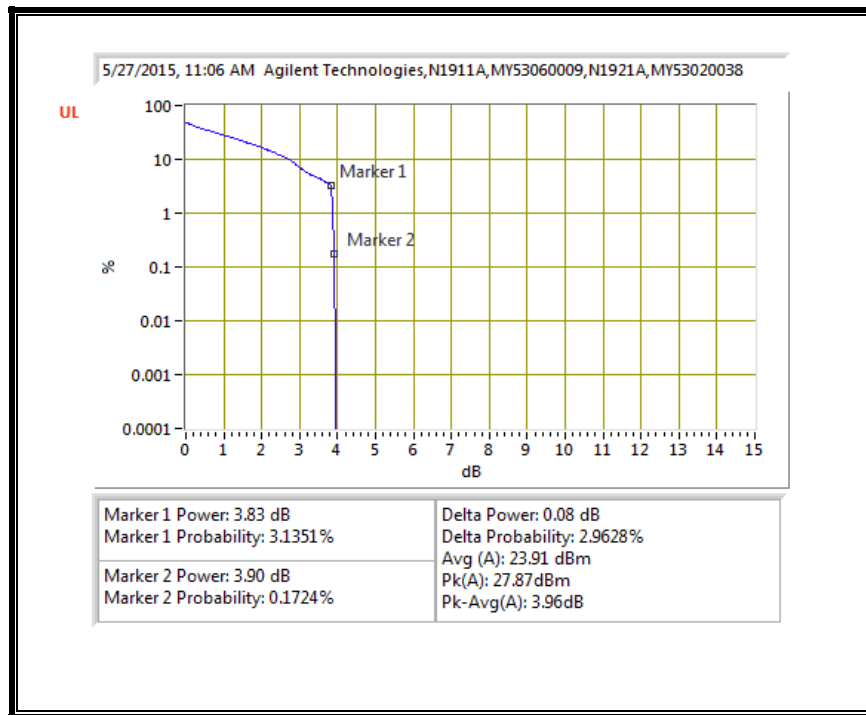
QPSK, (1.4 MHz BAND WIDTH)



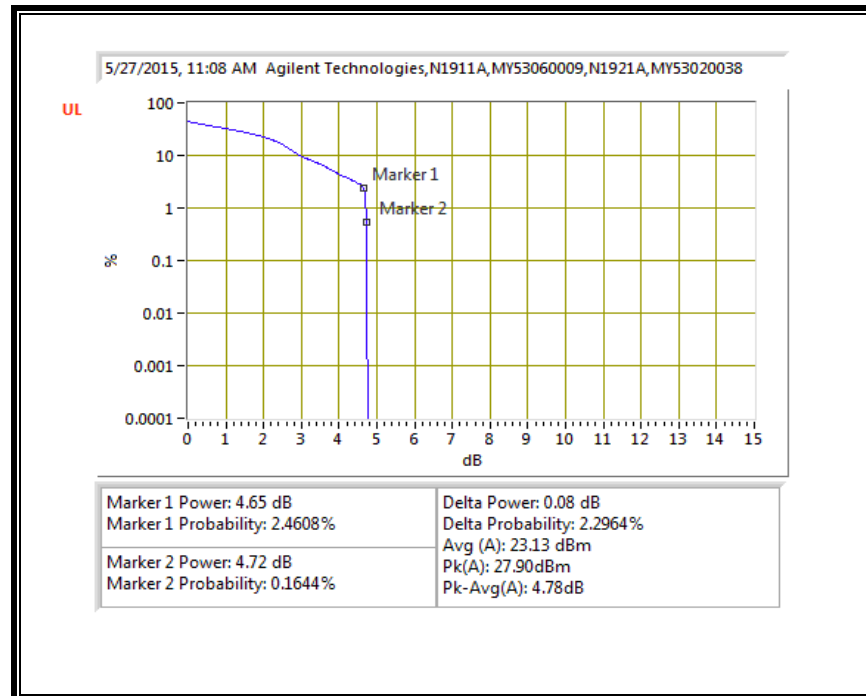
16QAM, (1.4 MHz BAND WIDTH)



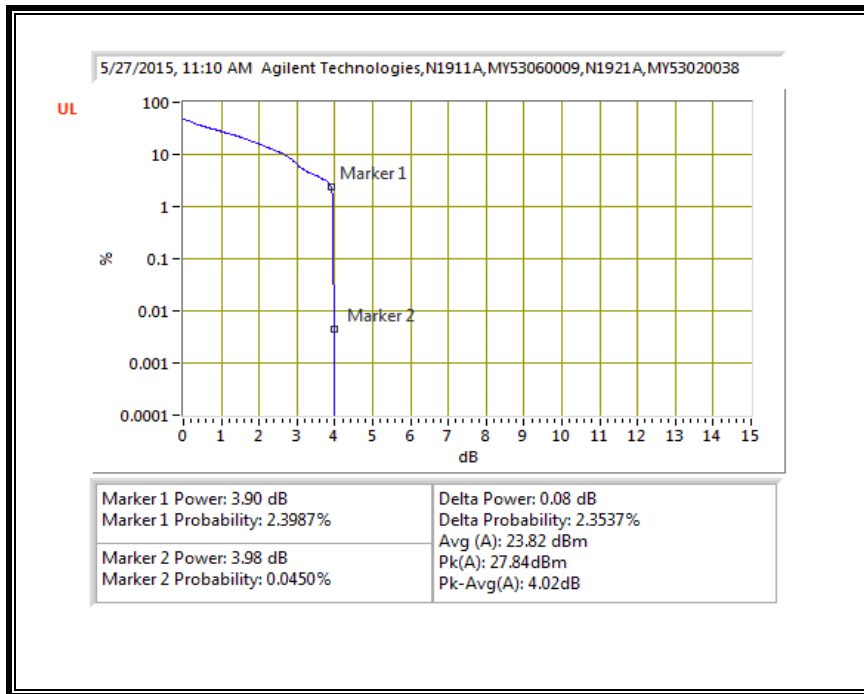
QPSK, (3.0 MHz BAND WIDTH)



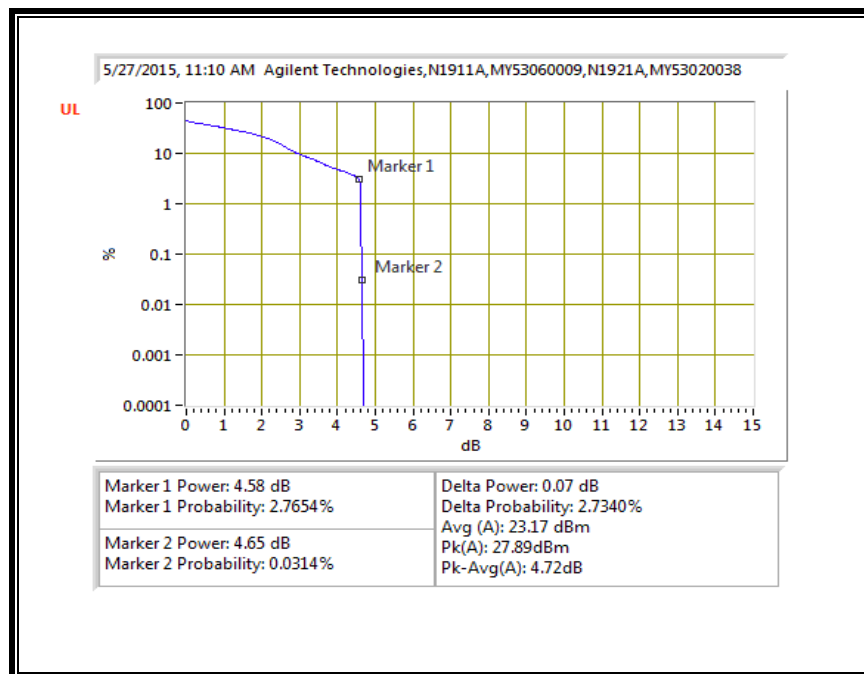
16QAM, (3.0 MHz BAND WIDTH)



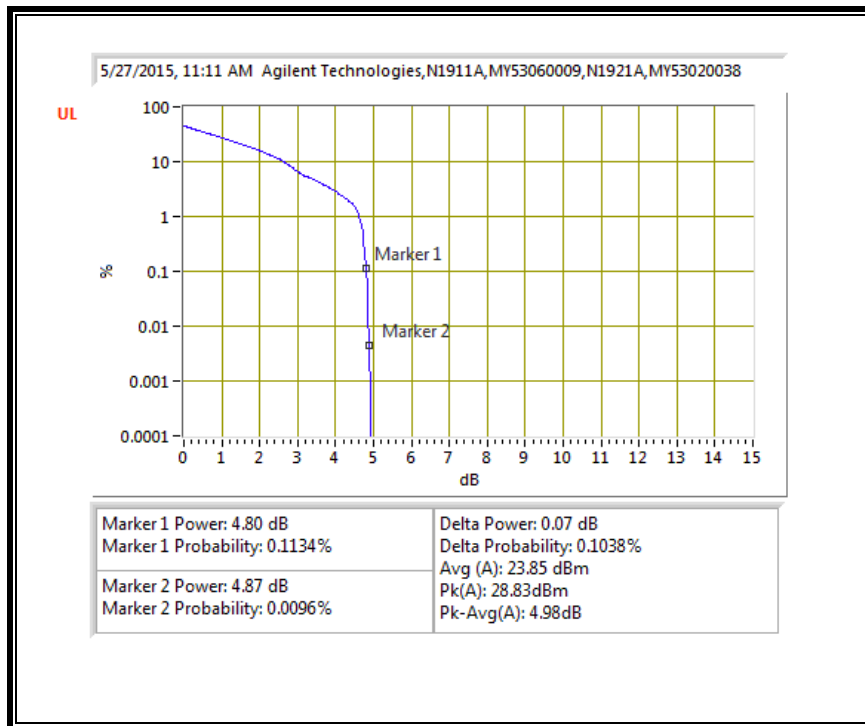
QPSK, (5.0 MHz BAND WIDTH)



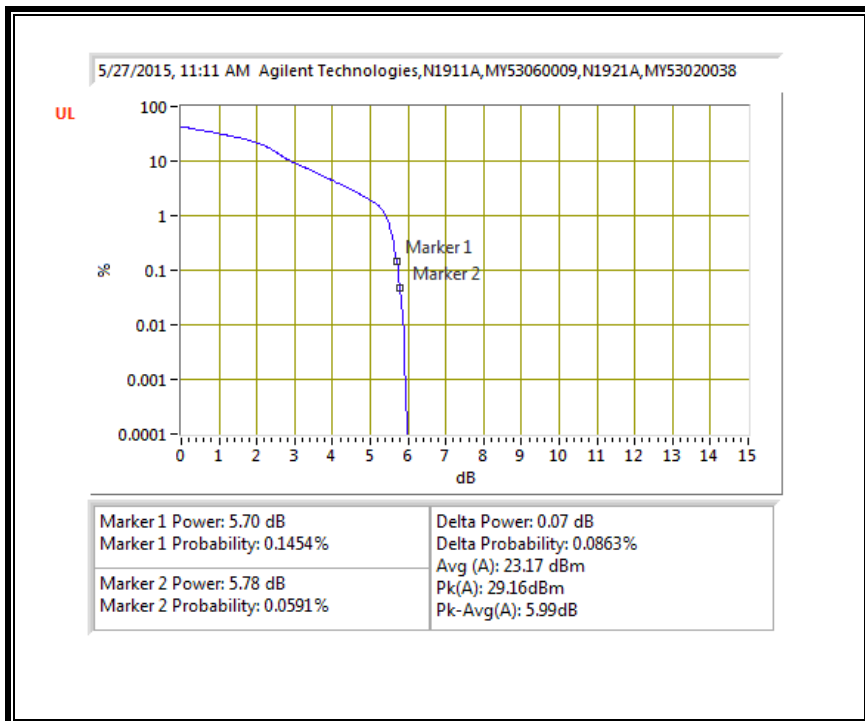
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

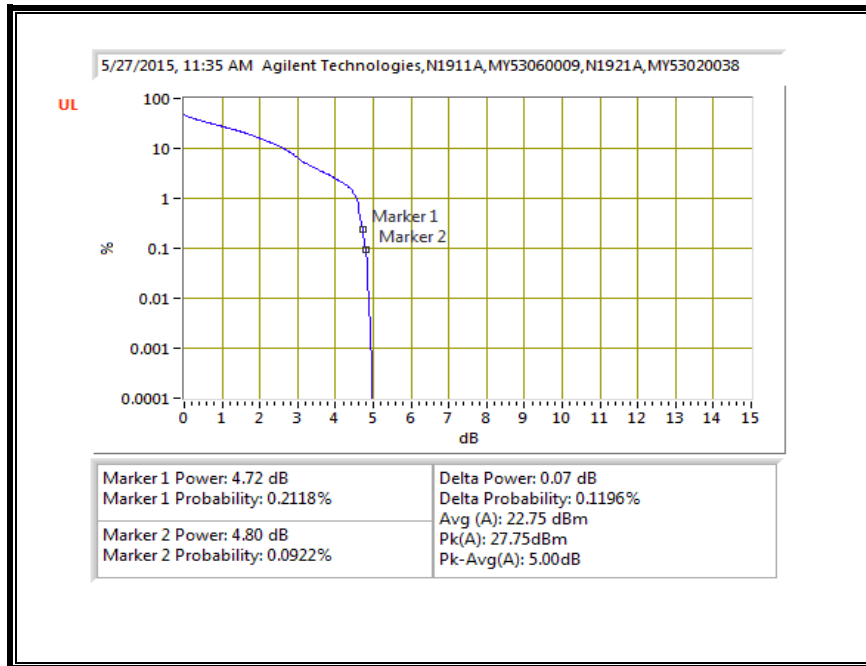


16QAM, (10.0 MHz BAND WIDTH)

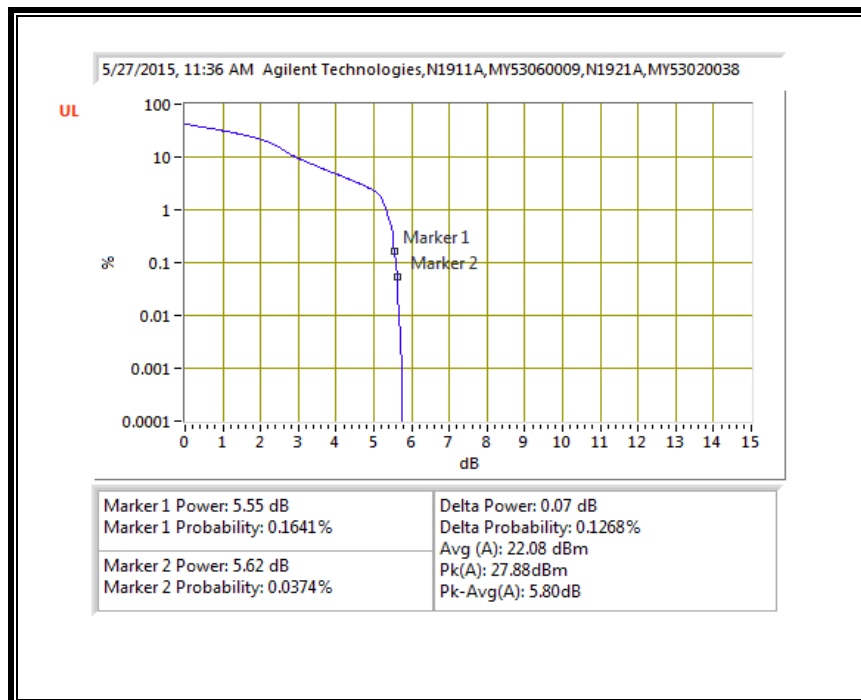


LTE BAND 30

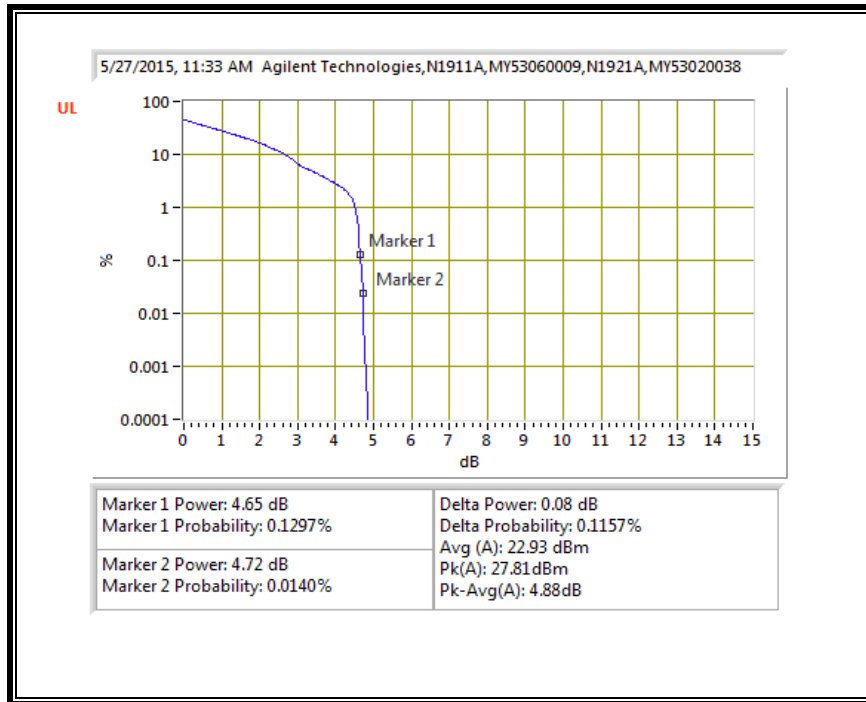
QPSK, (5.0 MHz BAND WIDTH)



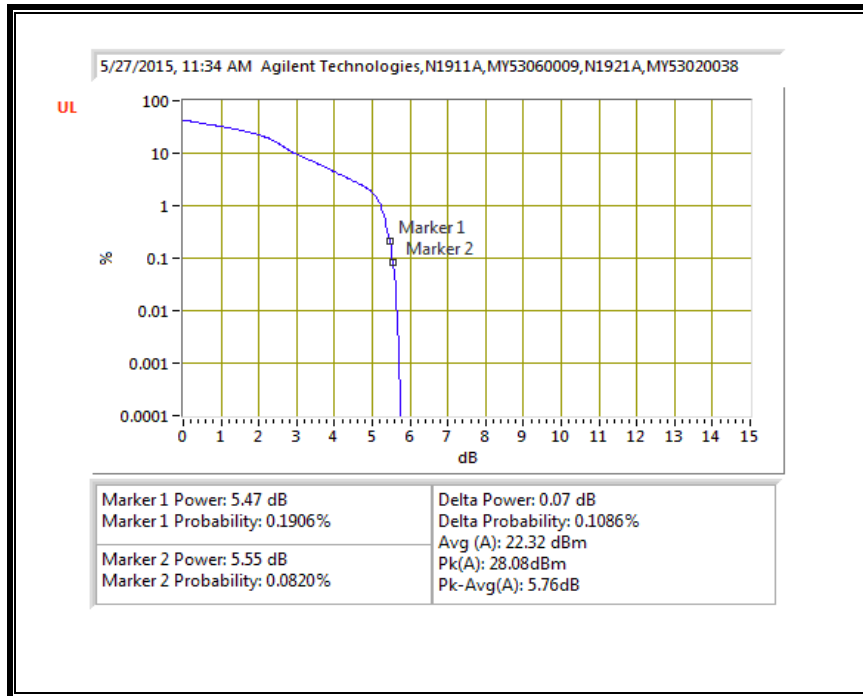
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



10.6. PEAK-TO-AVERAGE RATIO (MODEL: A1687)

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

10.6.1. 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	27.79	23.96	3.83
			16QAM	27.87	23.22	4.65
*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	27.72	23.97	3.75
			16QAM	27.78	23.06	4.72
*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	27.87	23.97	3.90
			16QAM	27.92	23.20	4.72
*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	27.75	24	3.75
			16QAM	27.81	23.31	4.5
*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	28.04	23.84	4.2
			16QAM	28.1	23.3	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 2 RB1-0	20.0	1880.0	QPSK	28.34	23.99	4.35
			16QAM	28.34	23.24	5.10
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.2. 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	28.45	23.95	4.50
			16QAM	27.44	22.94	4.50
*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	27.37	23.7	3.67
			16QAM	27.45	22.95	4.5
*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	27.41	23.81	3.6
			16QAM	27.46	23.11	4.35
*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	28.65	23.85	4.80
			16QAM	28.88	23.26	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	15.0	1732.5	QPSK	27.39	23.79	3.6
			16QAM	28.71	23.24	5.47
*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	27.39	23.87	3.52
			16QAM	27.96	23.09	4.87
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.3. 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	28.23	23.88	4.35
			16QAM	28.28	22.88	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	3.0	836.5	QPSK	28.24	23.82	4.42
			16QAM	28.27	23.1	5.17
*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	28.09	23.97	4.12
			16QAM	28.08	23.21	4.87
*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	27.68	23.85	3.83
			16QAM	29.19	23.34	5.85
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.4. 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	28.62	23.97	4.65
			16QAM	28.65	23.18	5.47
*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	27.54	23.87	3.67
			16QAM	27.57	23.07	4.5
*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	27.53	23.86	3.67
			16QAM	27.57	23.22	4.35
*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	28.34	23.92	4.42
			16QAM	28.38	23.21	5.17
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.5. 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	28.69	23.97	4.72
			16QAM	28.81	23.34	5.47
*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	28.69	23.97	4.72
			16QAM	28.66	23.19	5.47
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.6. 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	27.41	23.89	3.52
			16QAM	28.61	23.21	5.40
*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	27.53	23.86	3.67
			16QAM	27.57	23.22	4.35
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.7. 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	1880.0	QPSK	27.54	23.87	3.67
			16QAM	27.64	22.99	4.65
*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	1880.0	QPSK	27.85	23.80	4.05
			16QAM	27.81	23.01	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 25 RB1-0	5.0	1880.0	QPSK	27.55	23.80	3.75
			16QAM	28.79	23.17	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	1880.0	QPSK	28.77	23.97	4.80
			16QAM	29	23.30	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	15.0	1880.0	QPSK	27.64	23.97	3.67
			16QAM	29.08	23.53	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 25 RB1-0	20.0	1880.0	QPSK	27.82	23.99	3.83
			16QAM	27.87	23.37	4.50
*Peak Reading = Average Reading + Peak-to-Average Ratio						

10.6.8. 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	28.05	23.93	4.12
			16QAM	27.92	23.20	4.72
*Peak Reading = Average Reading + Peak-to-Average Ratio						

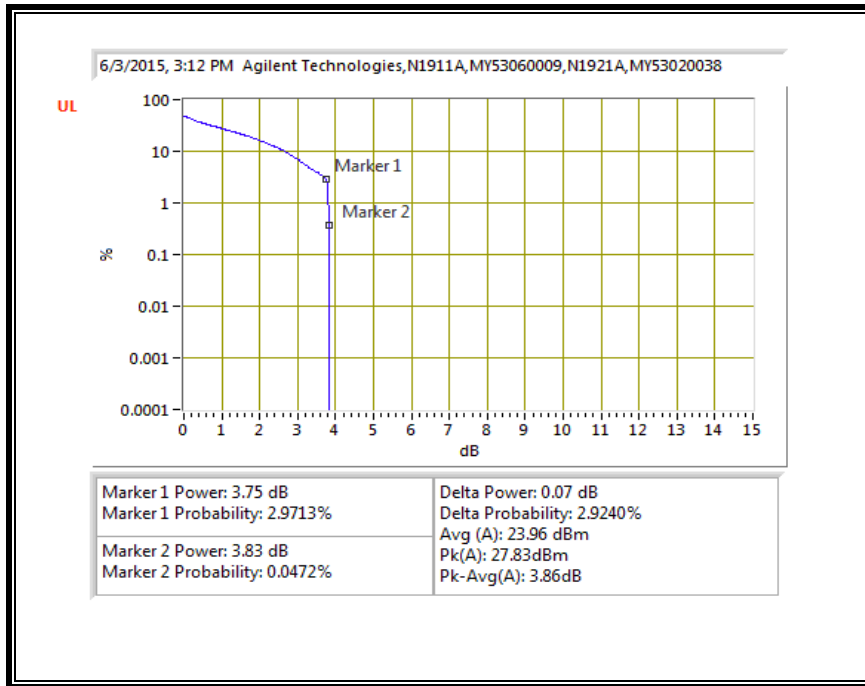
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	3.0	819.0	QPSK	27.85	23.95	3.90
			16QAM	27.84	23.19	4.65
*Peak Reading = Average Reading + Peak-to-Average Ratio						

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	28.77	23.97	4.80
			16QAM	28.99	23.29	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

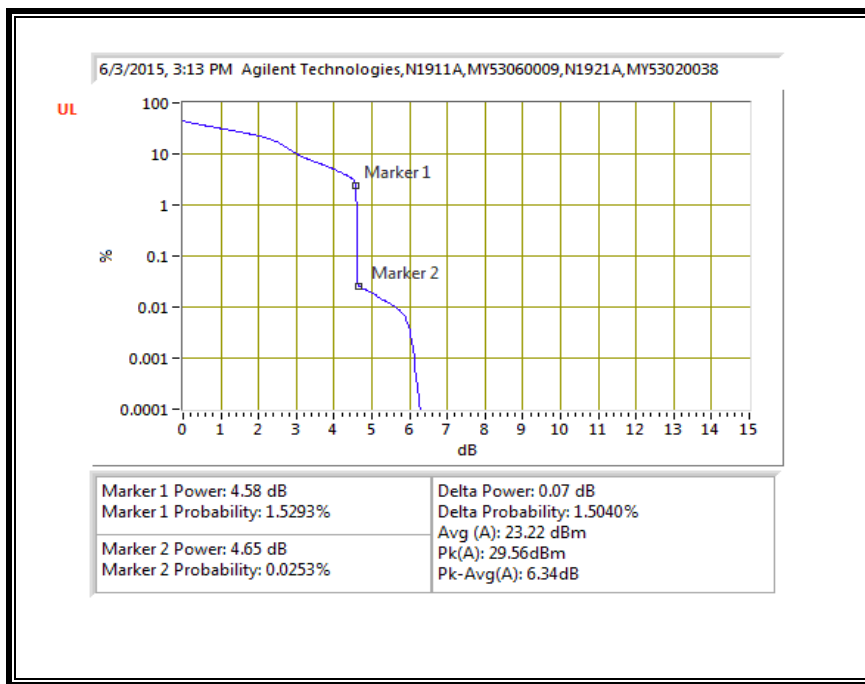
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	10.0	819.0	QPSK	28.78	23.98	4.80
			16QAM	29.27	23.35	5.92
*Peak Reading = Average Reading + Peak-to-Average Ratio						

LTE BAND 2

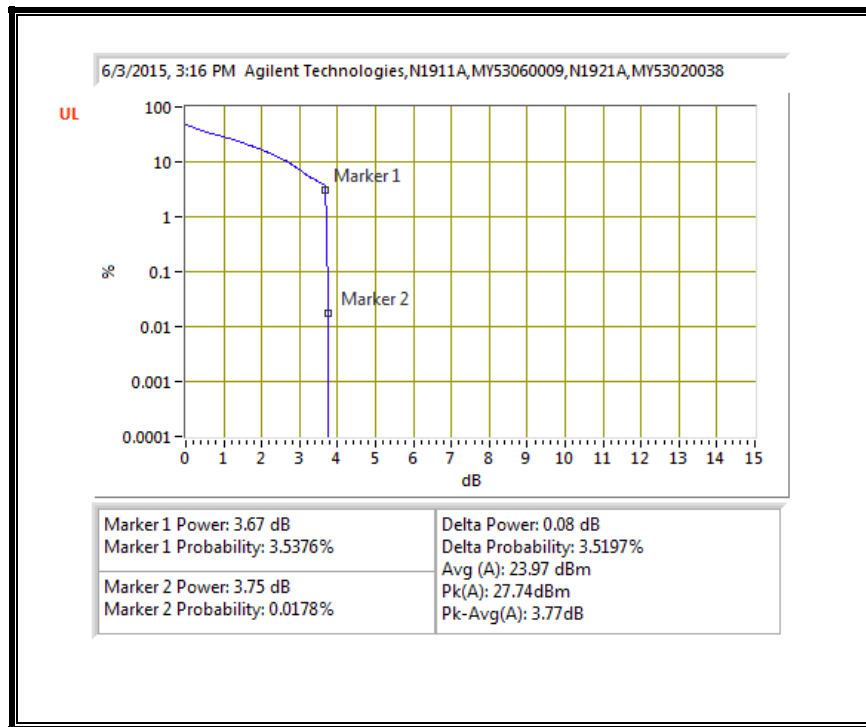
QPSK, (1.4 MHz BAND WIDTH)



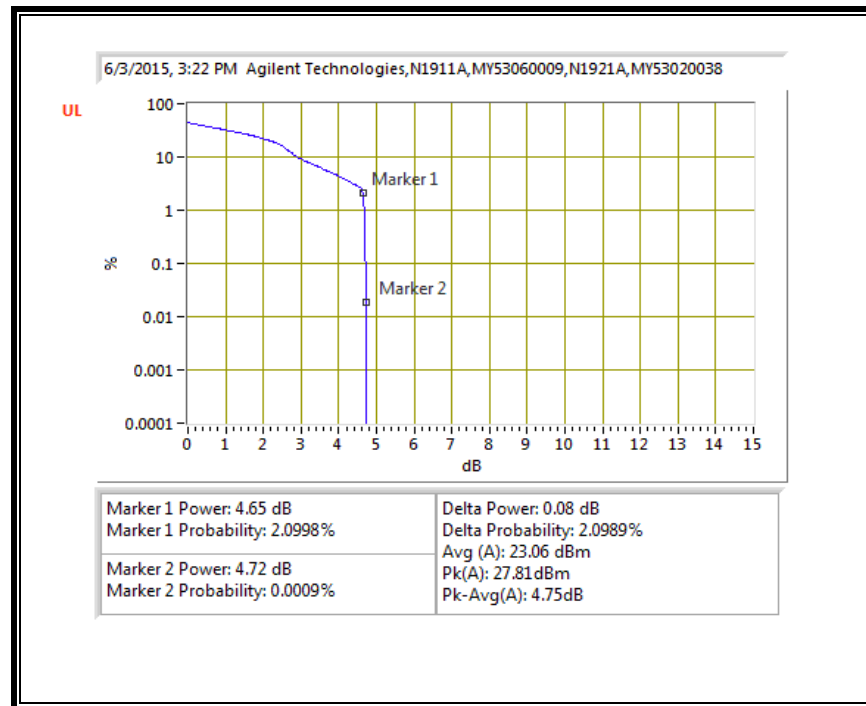
16QAM, (1.4 MHz BAND WIDTH)



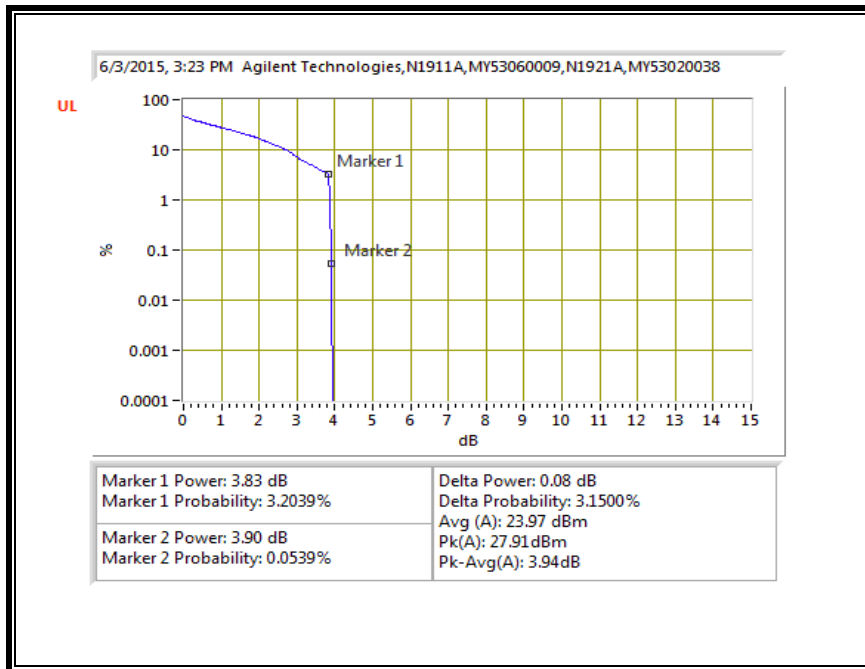
QPSK, (3.0 MHz BAND WIDTH)



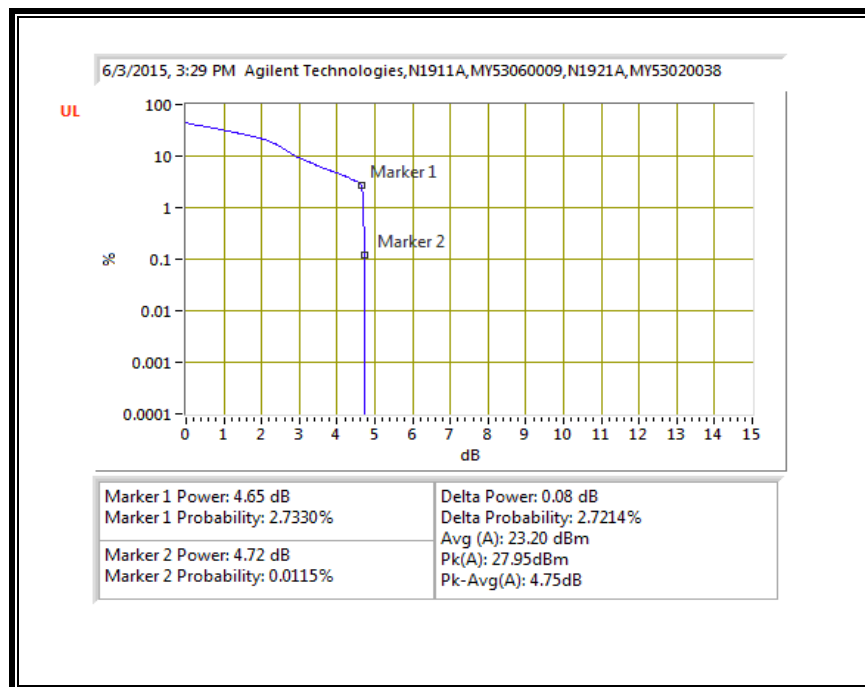
16QAM, (3.0 MHz BAND WIDTH)



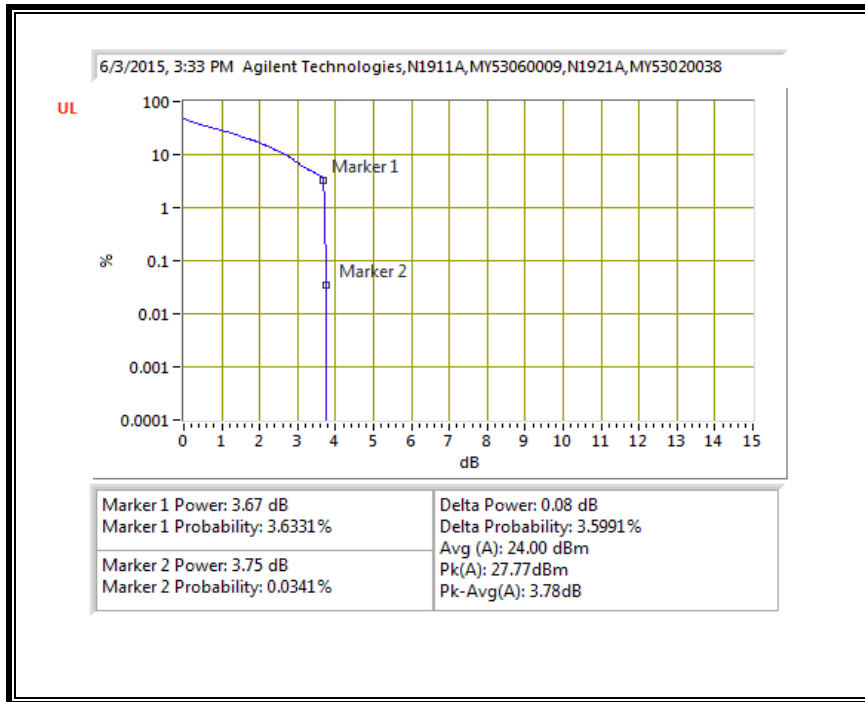
QPSK, (5.0 MHz BAND WIDTH)



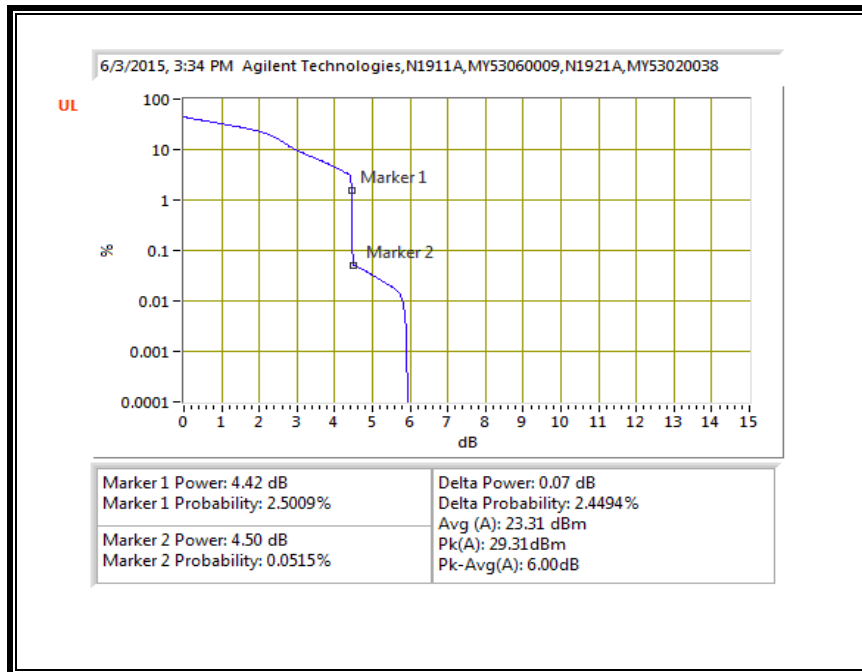
16QAM, (5.0 MHz BAND WIDTH)



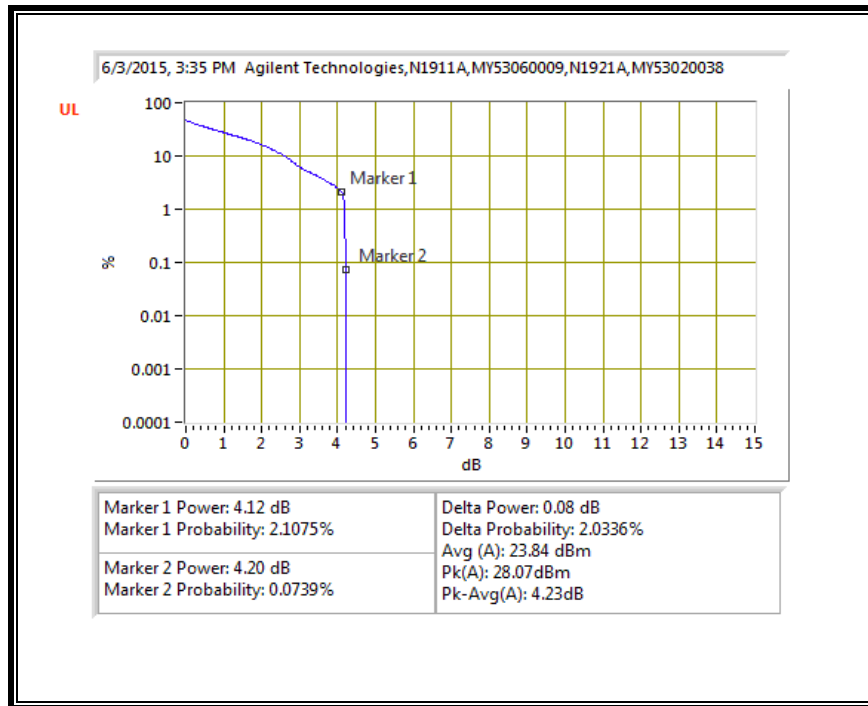
QPSK, (10.0 MHz BAND WIDTH)



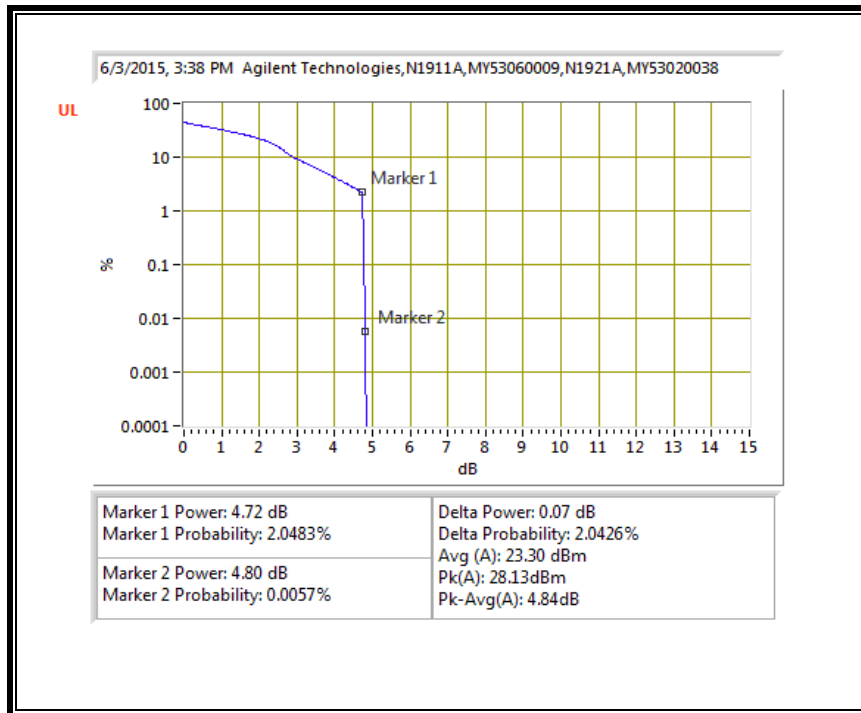
16QAM, (10.0 MHz BAND WIDTH)



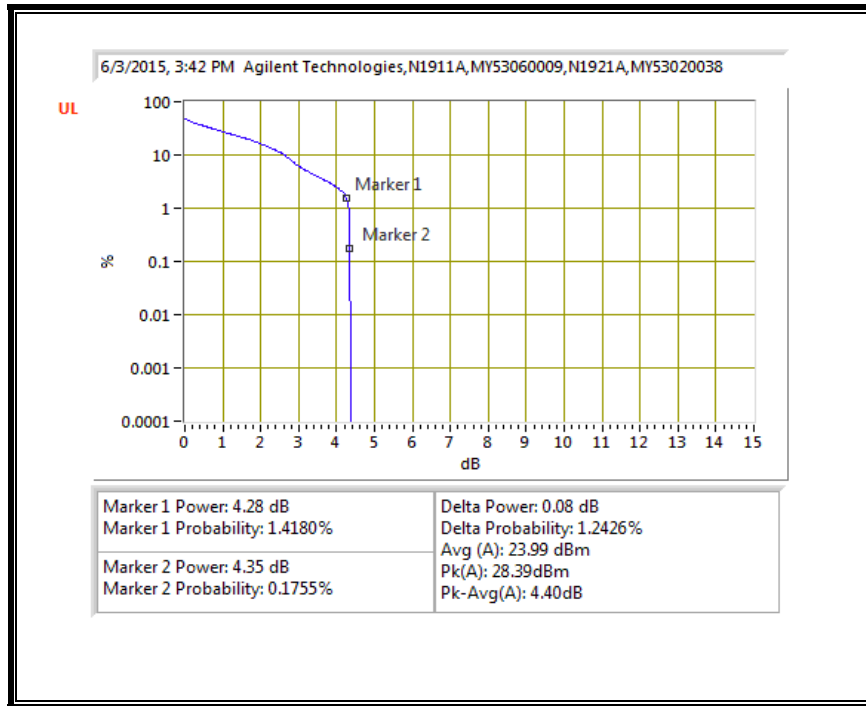
QPSK, (15.0 MHz BAND WIDTH)



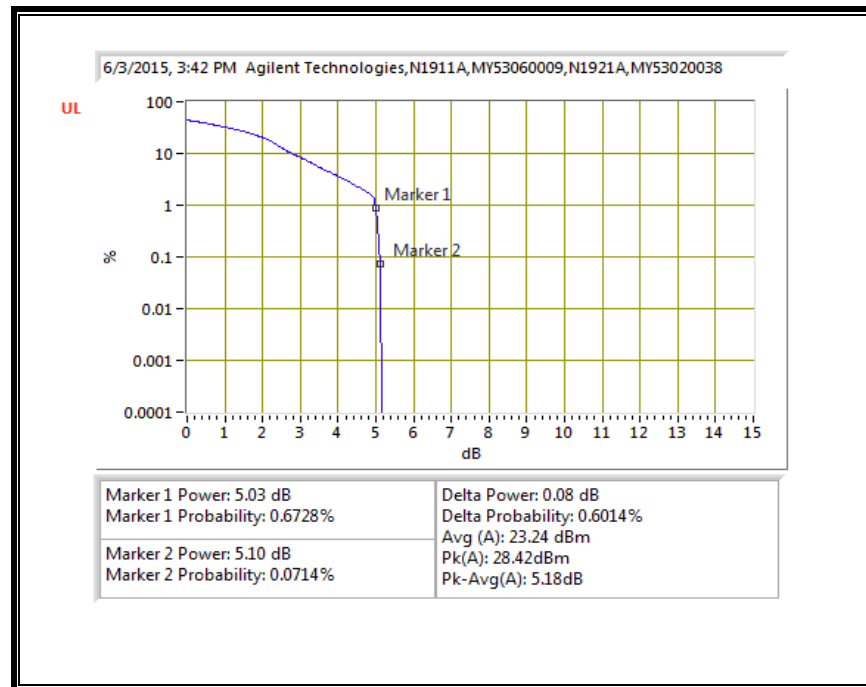
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

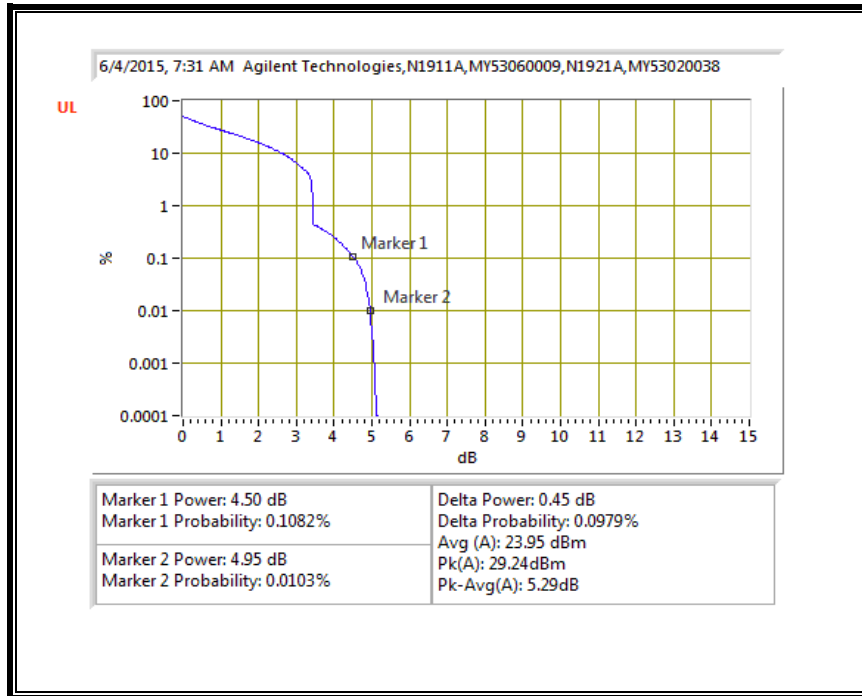


16QAM, (20.0 MHz BAND WIDTH)

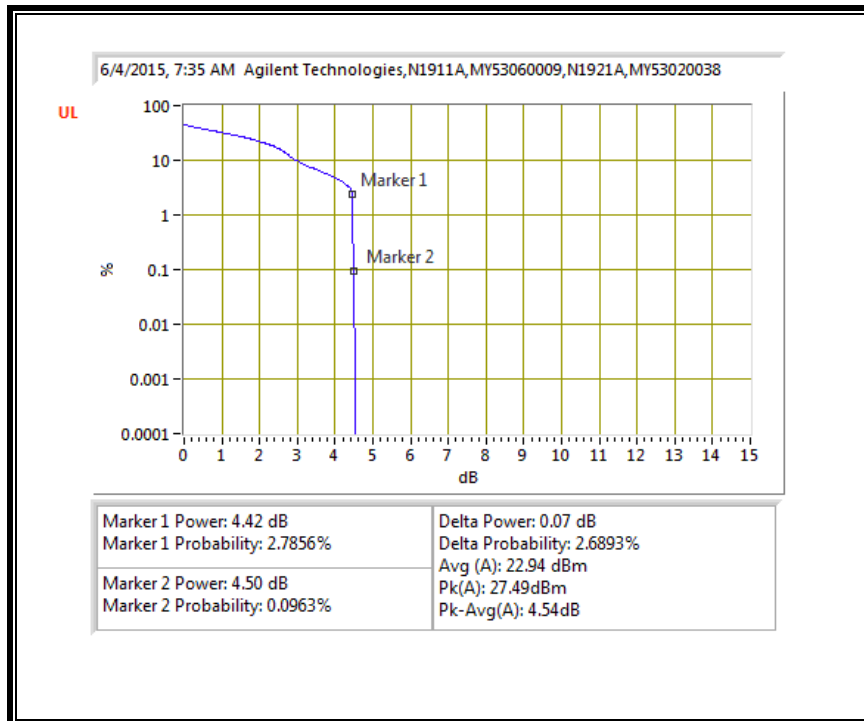


LTE BAND 4

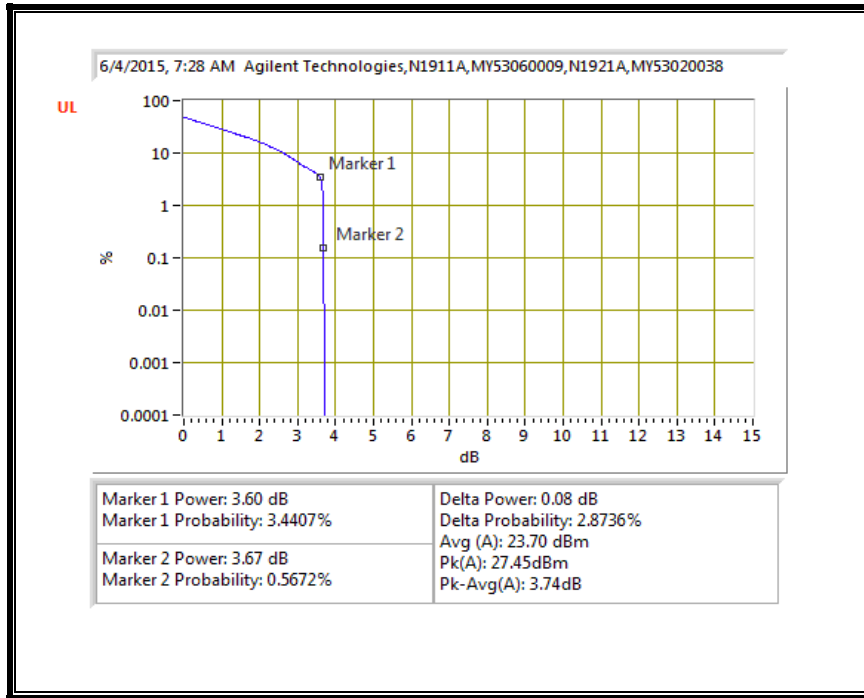
QPSK, (1.4 MHz BAND WIDTH)



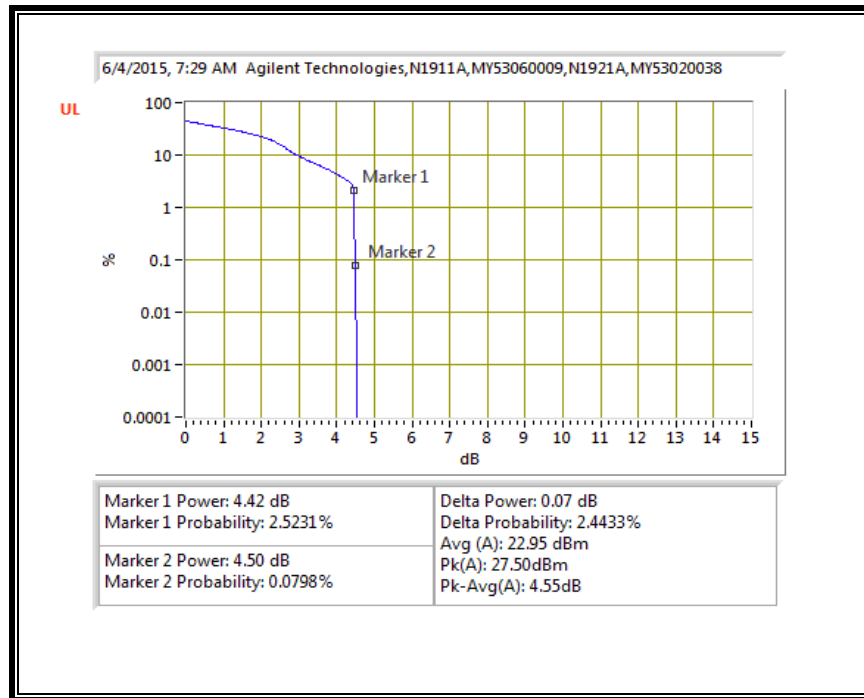
16QAM, (1.4 MHz BAND WIDTH)



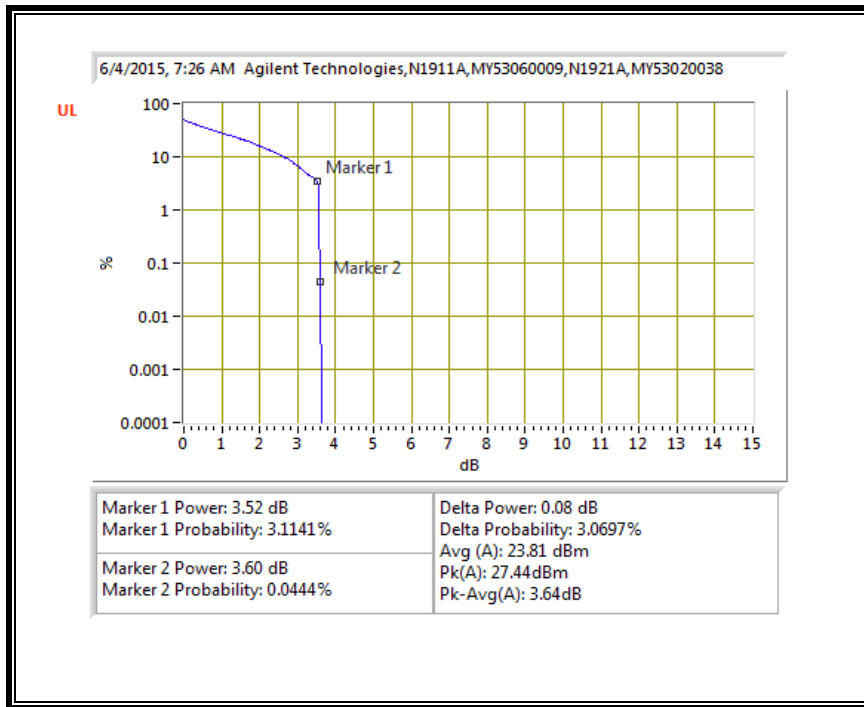
QPSK, (3.0 MHz BAND WIDTH)



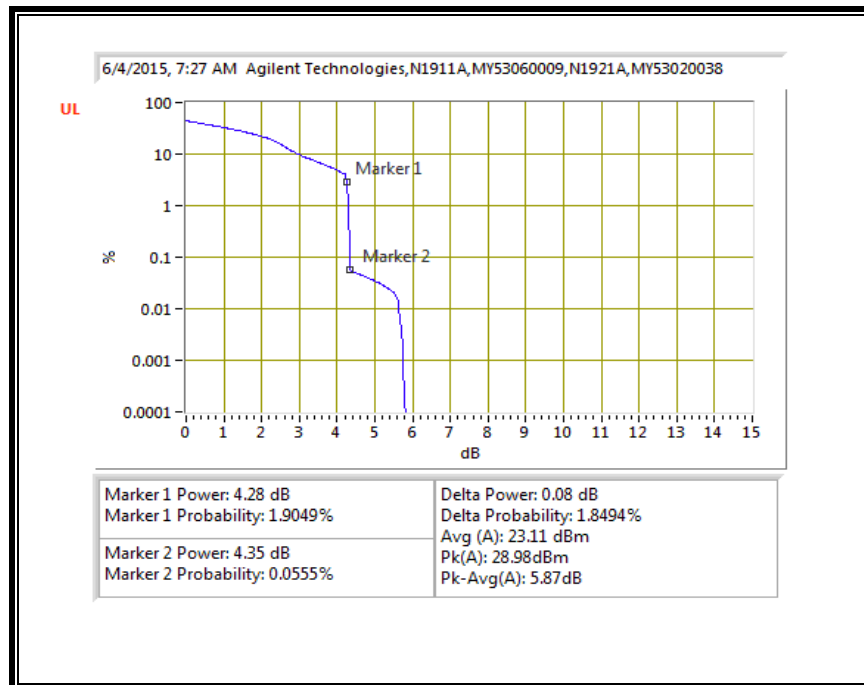
16QAM, (3.0 MHz BAND WIDTH)



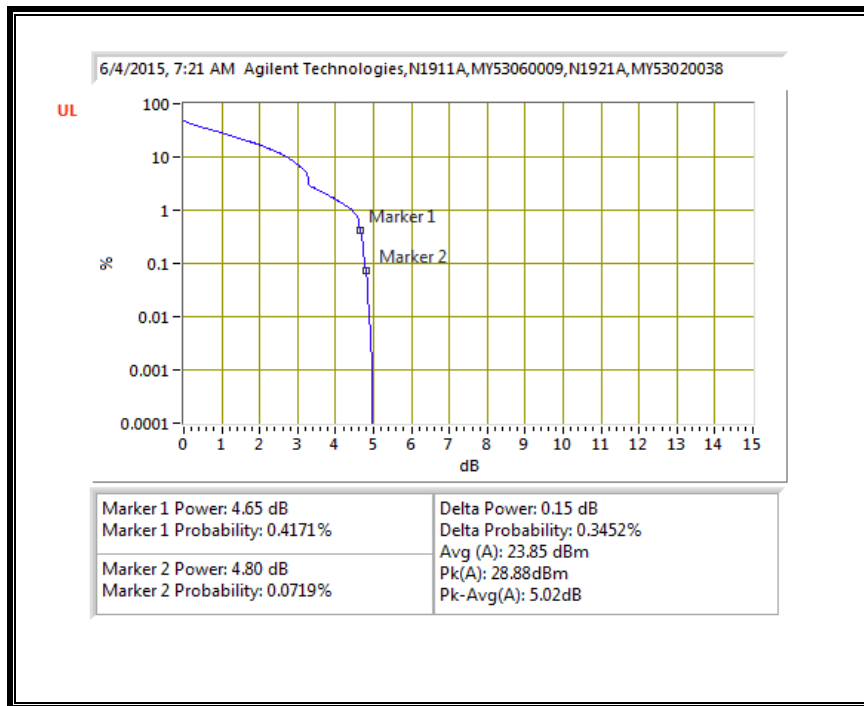
QPSK, (5.0 MHz BAND WIDTH)



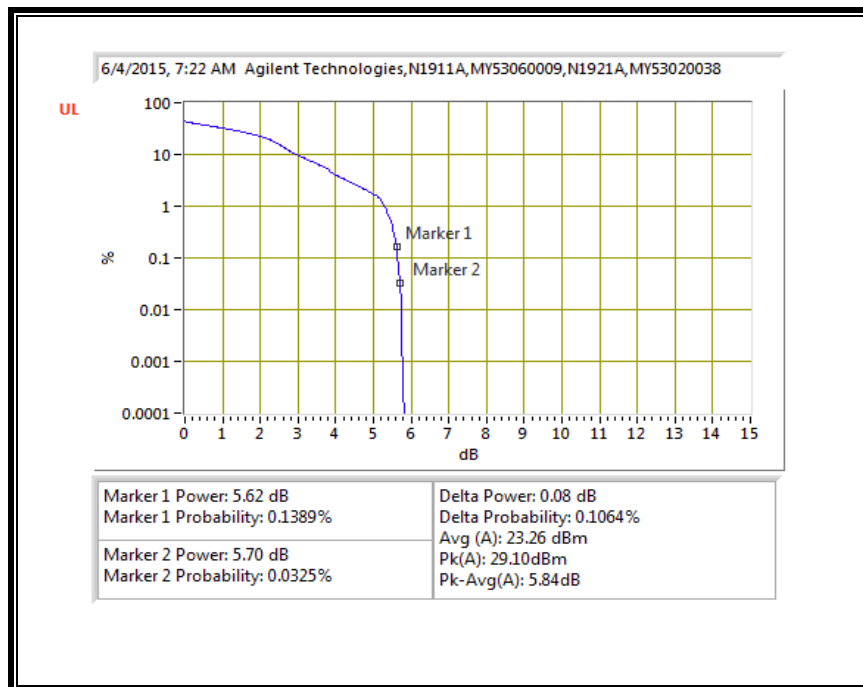
16QAM, (5.0 MHz BAND WIDTH)



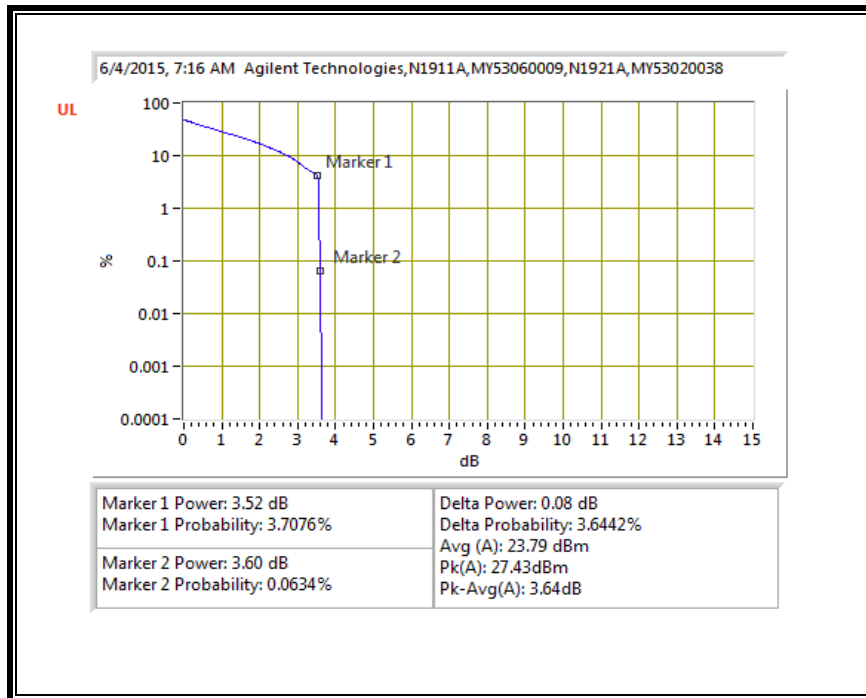
QPSK, (10.0 MHz BAND WIDTH)



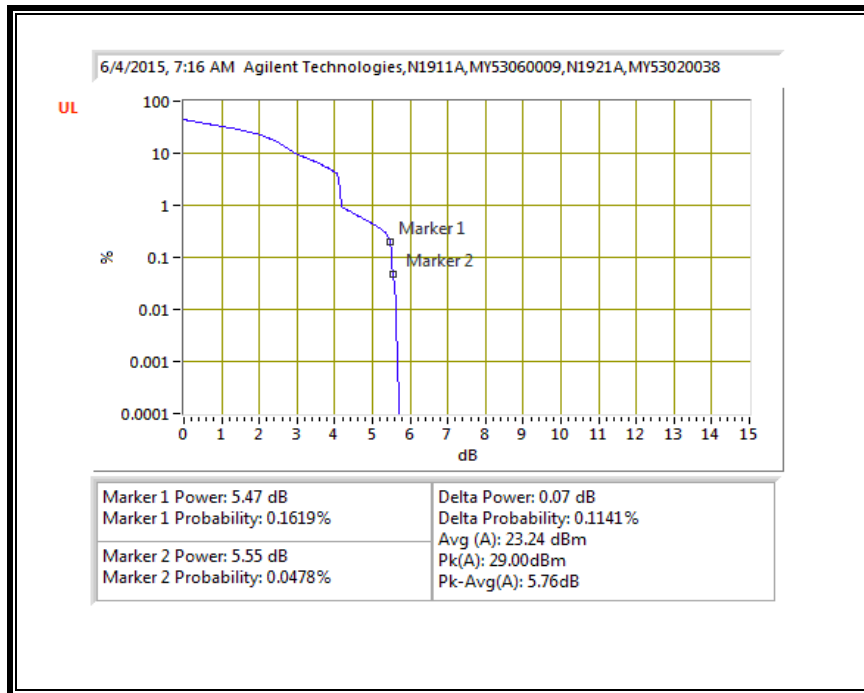
16QAM, (10.0 MHz BAND WIDTH)



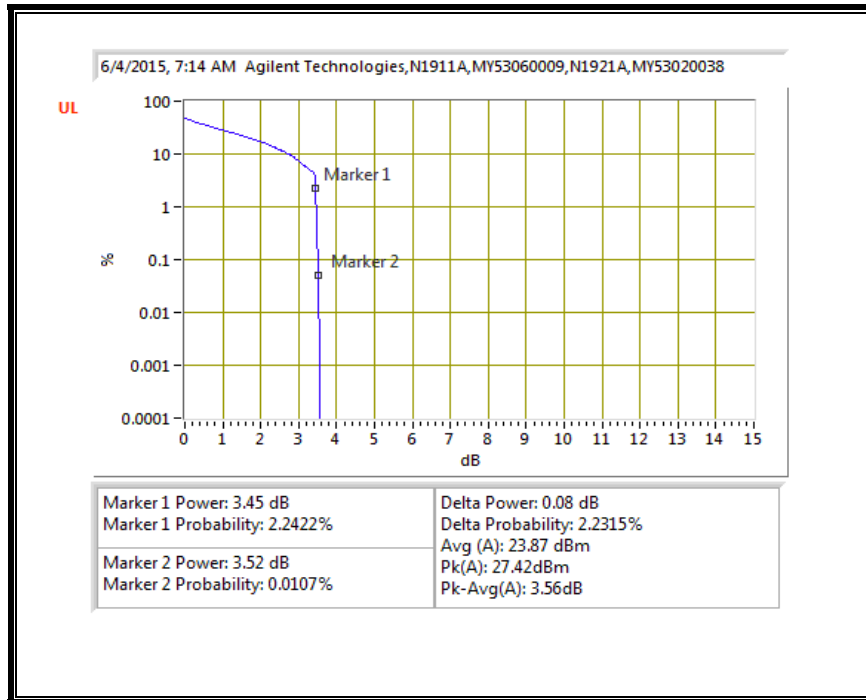
QPSK, (15.0 MHz BAND WIDTH)



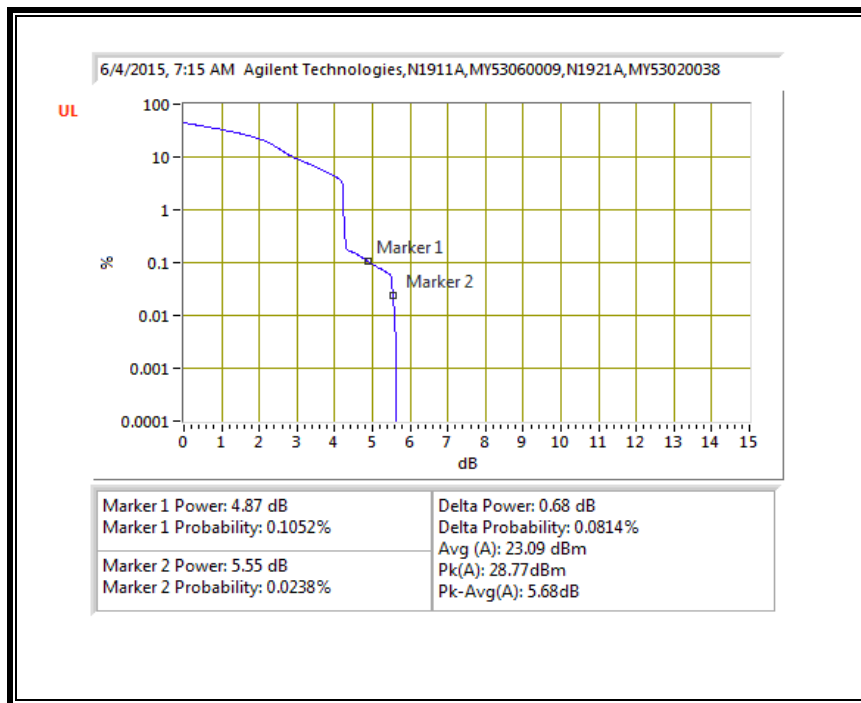
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

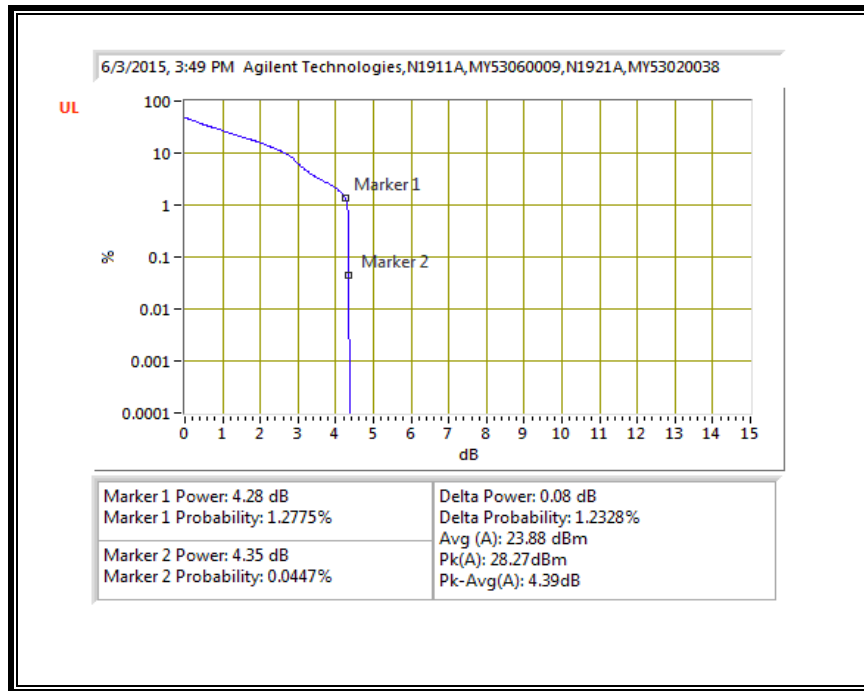


16QAM, (20.0 MHz BAND WIDTH)

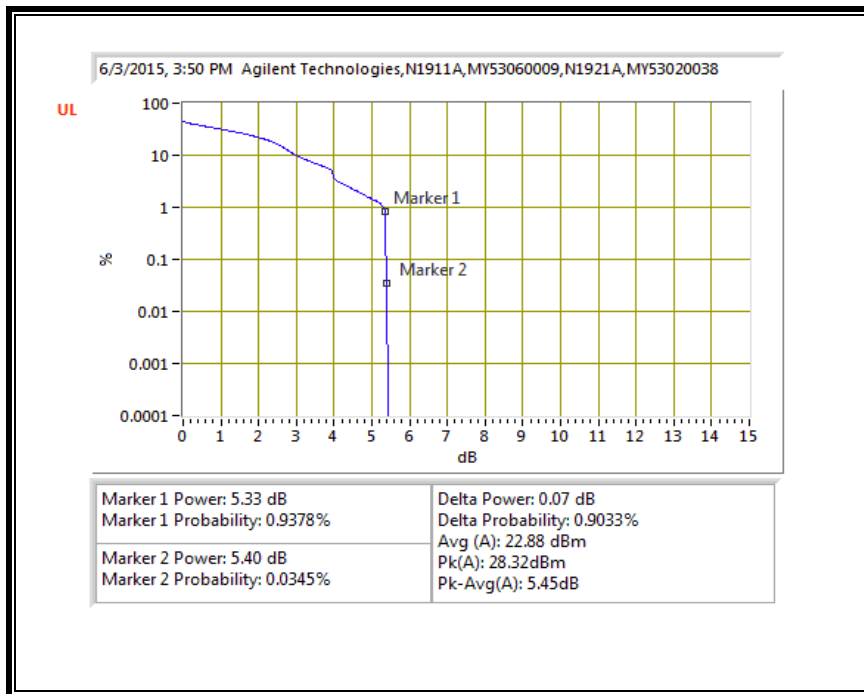


LTE BAND 5

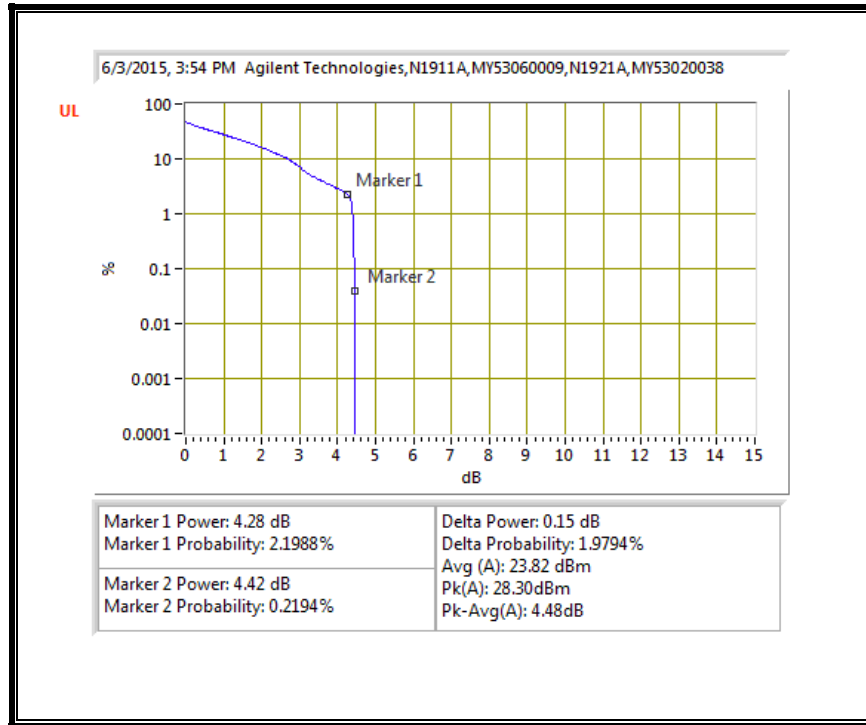
QPSK, (1.4 MHz BAND WIDTH)



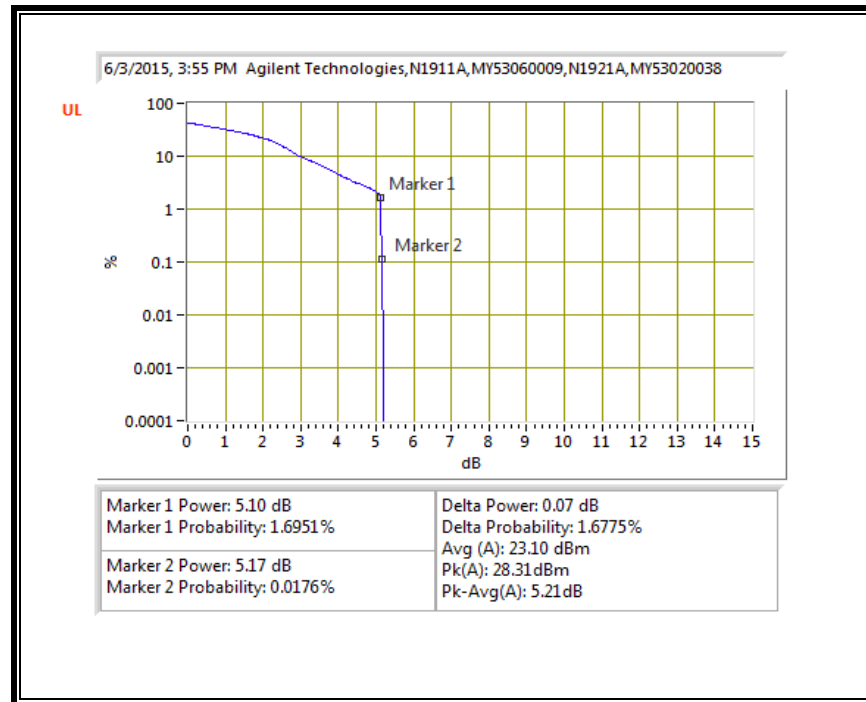
16QAM, (1.4 MHz BAND WIDTH)



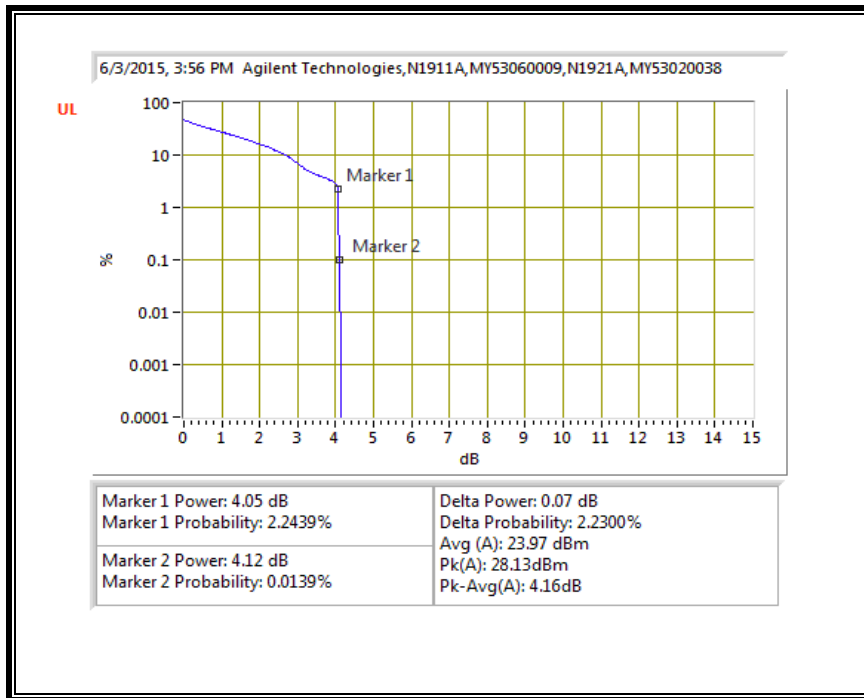
QPSK, (3.0 MHz BAND WIDTH)



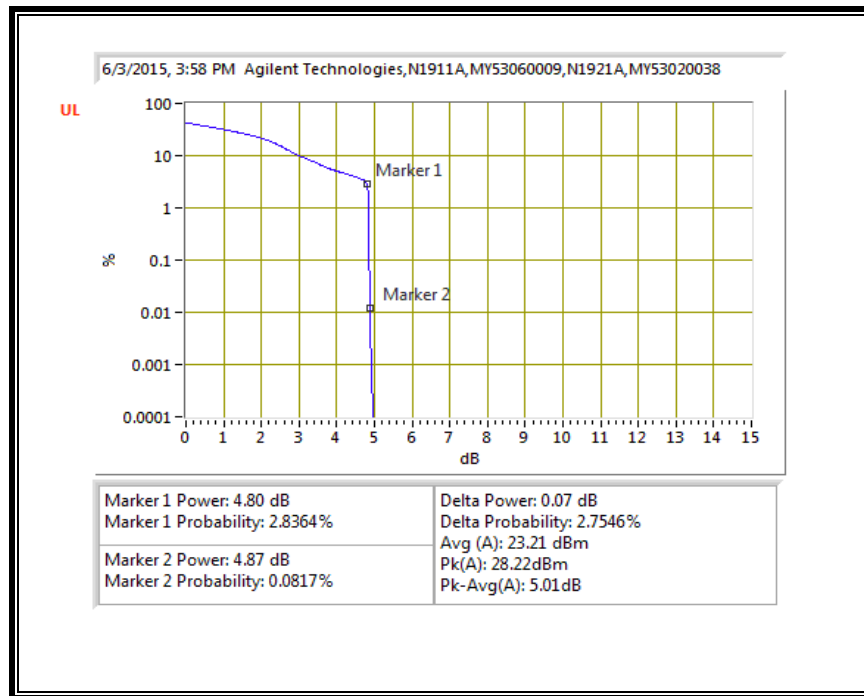
16QAM, (3.0 MHz BAND WIDTH)



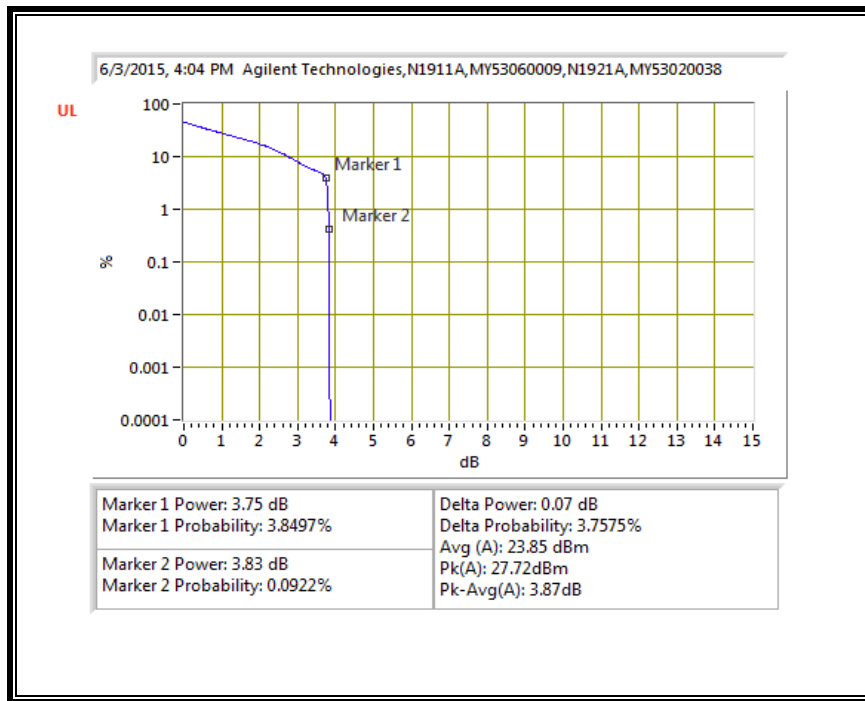
QPSK, (5.0 MHz BAND WIDTH)



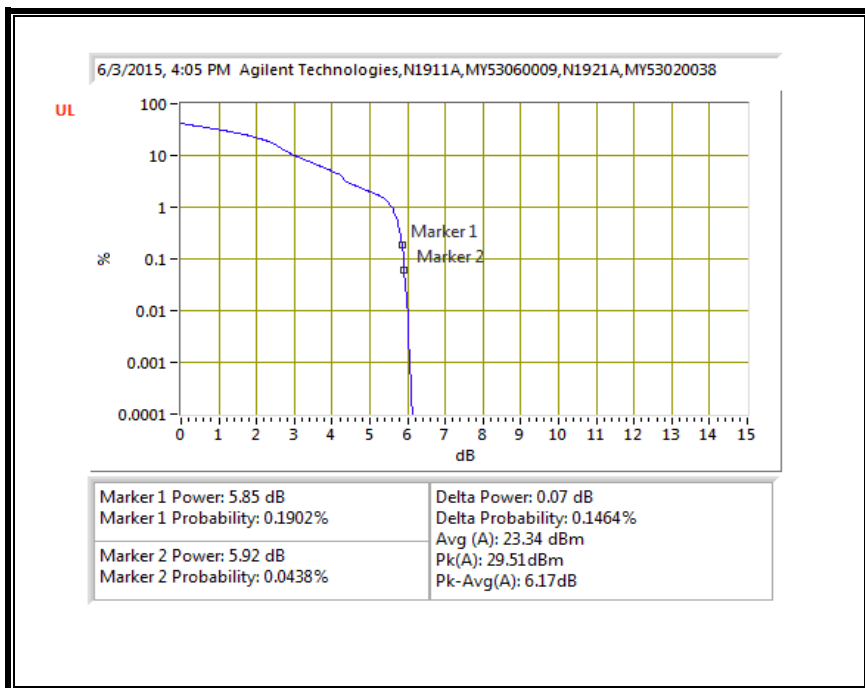
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

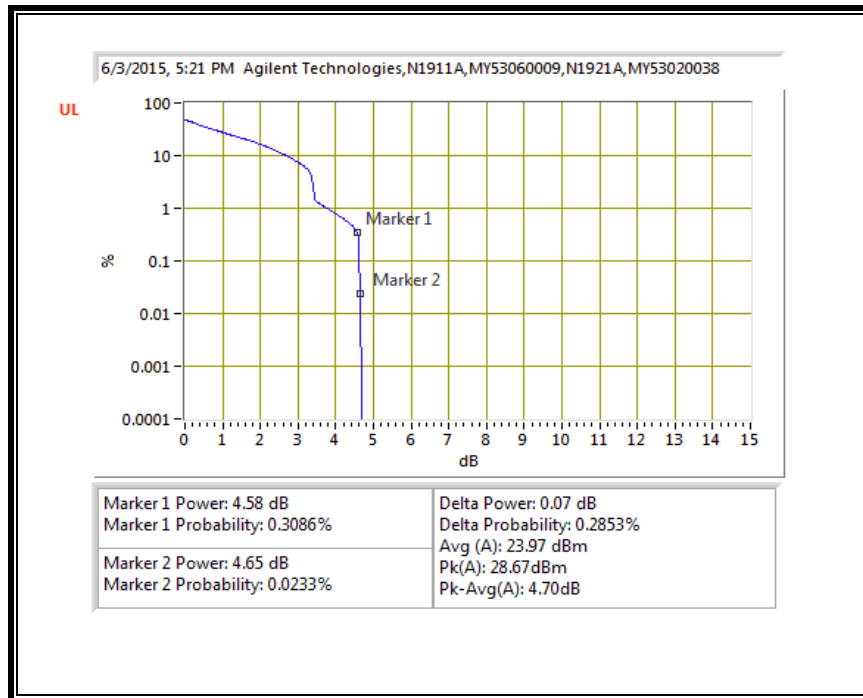


16QAM, (10.0 MHz BAND WIDTH)

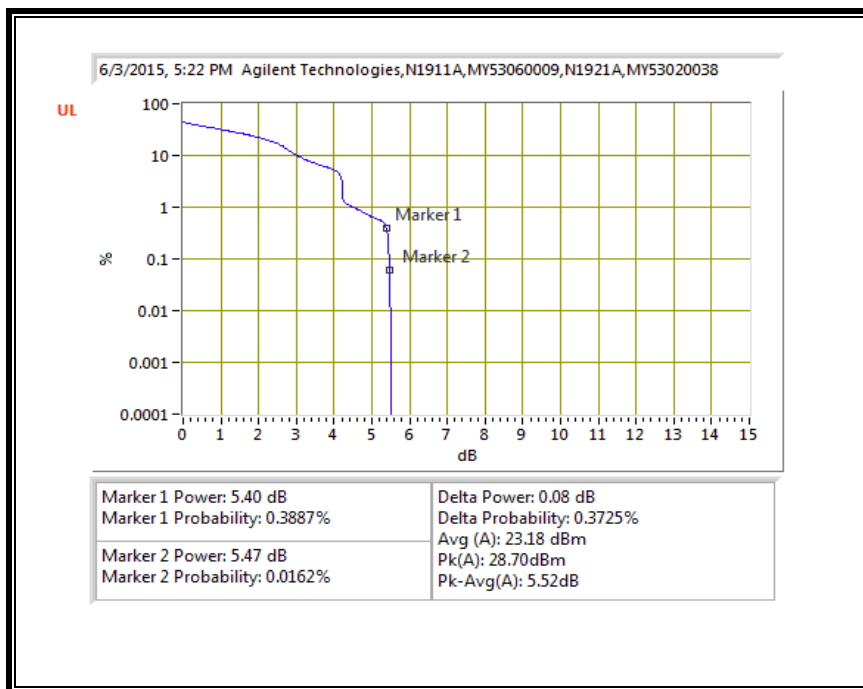


LTE BAND 12

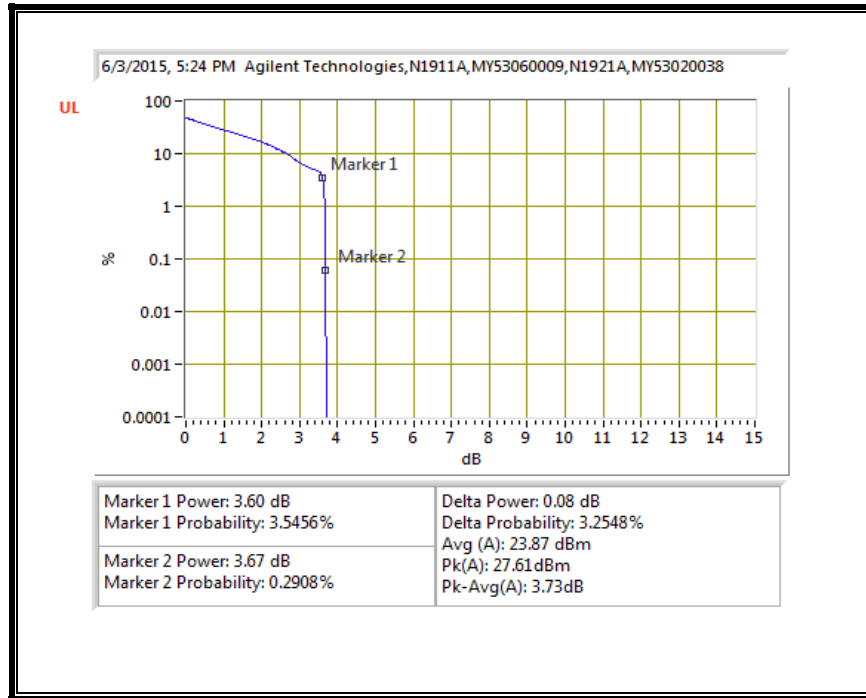
QPSK, (1.4 MHz BAND WIDTH)



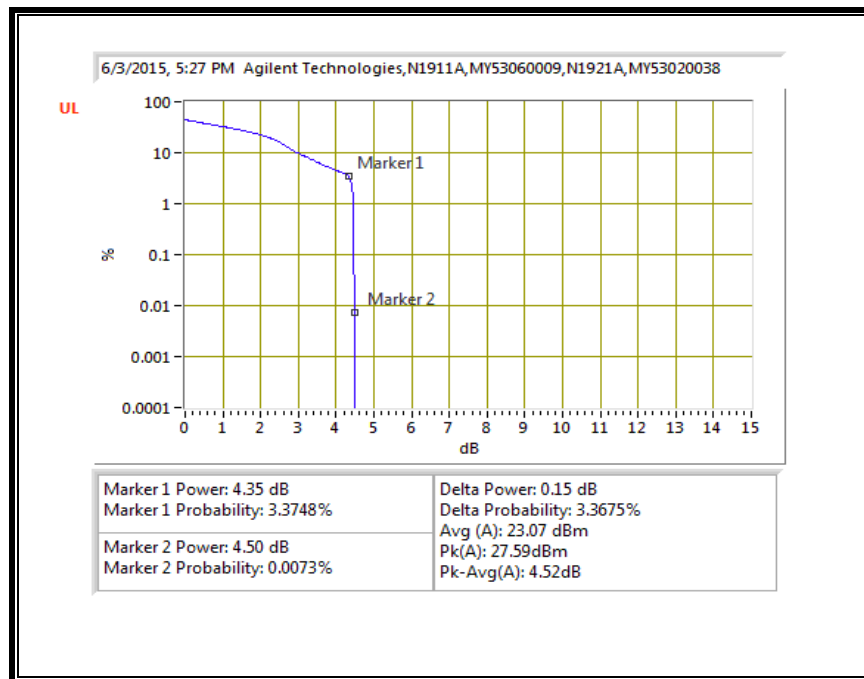
16QAM, (1.4 MHz BAND WIDTH)



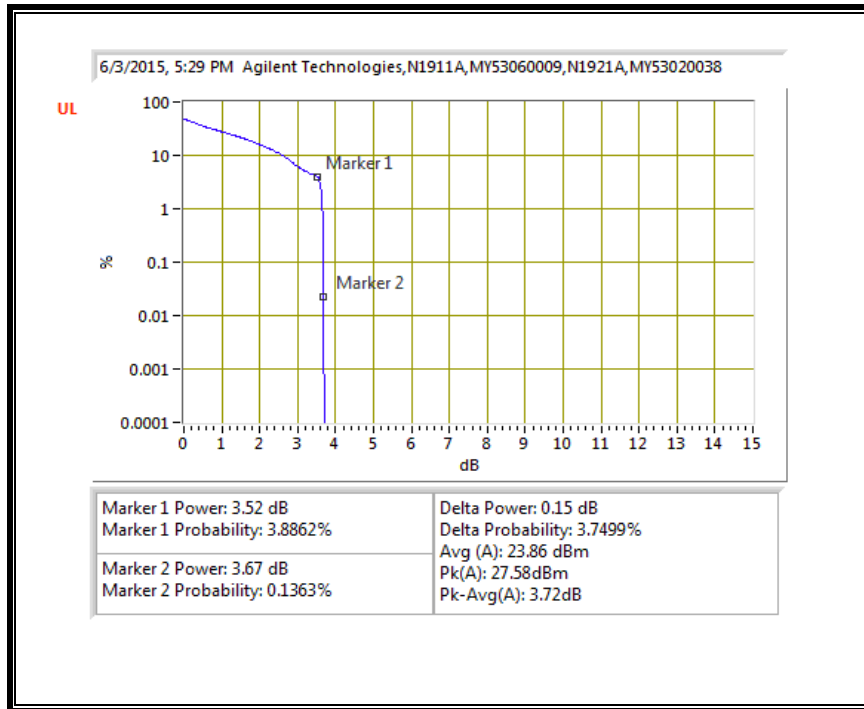
QPSK, (3.0 MHz BAND WIDTH)



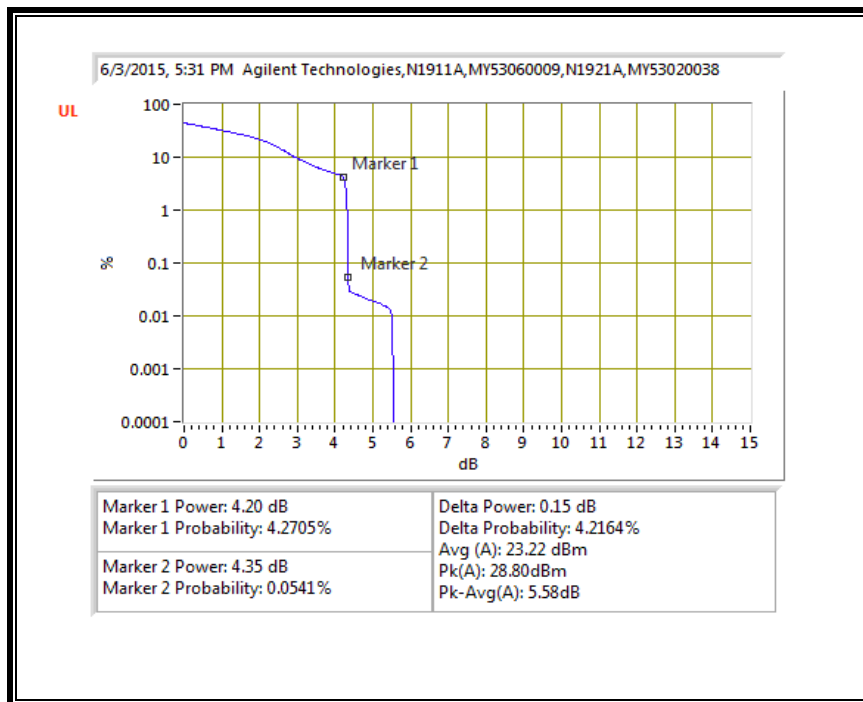
16QAM, (3.0 MHz BAND WIDTH)



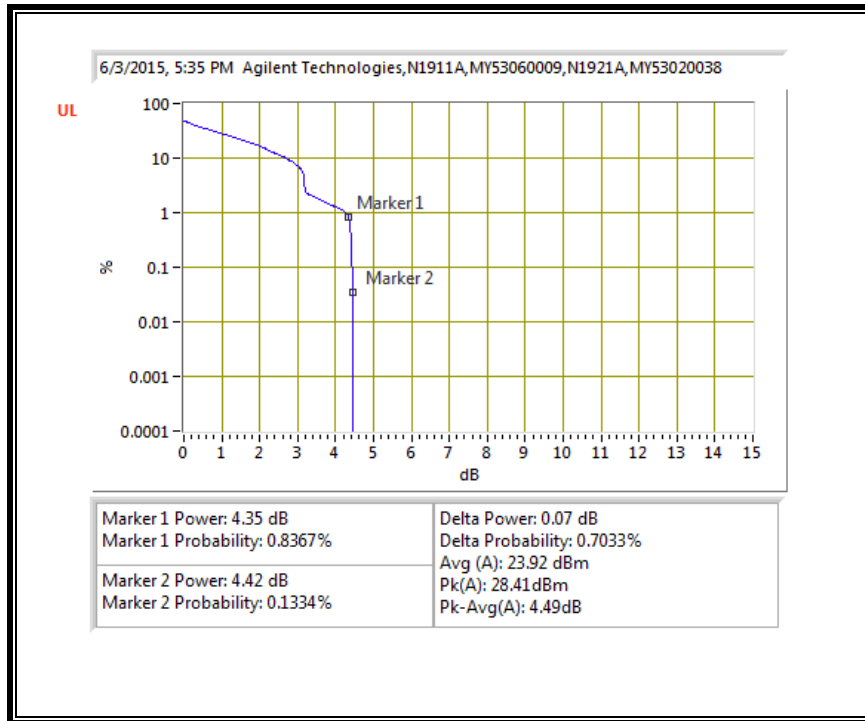
QPSK, (5.0 MHz BAND WIDTH)



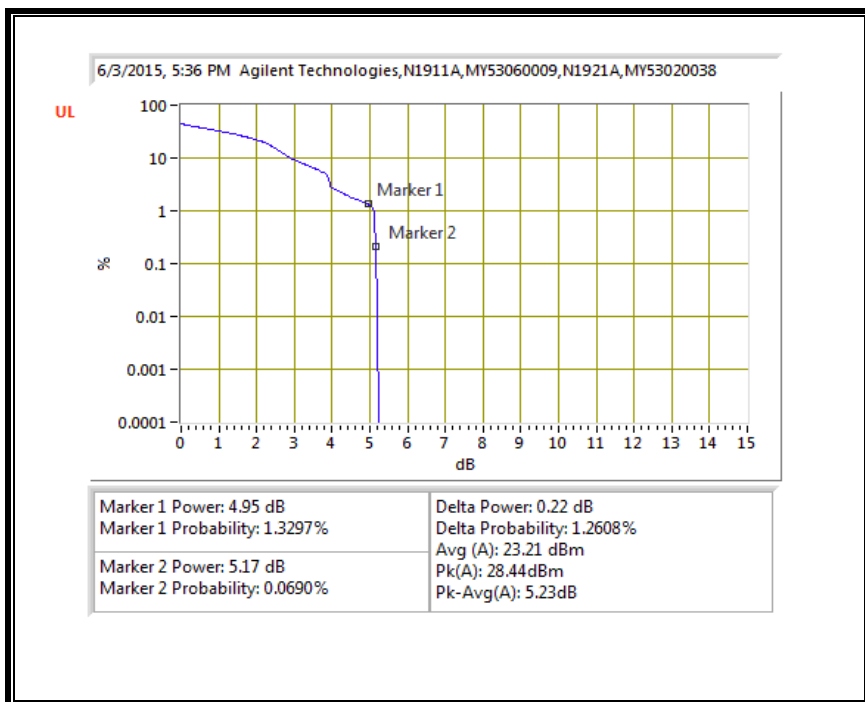
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

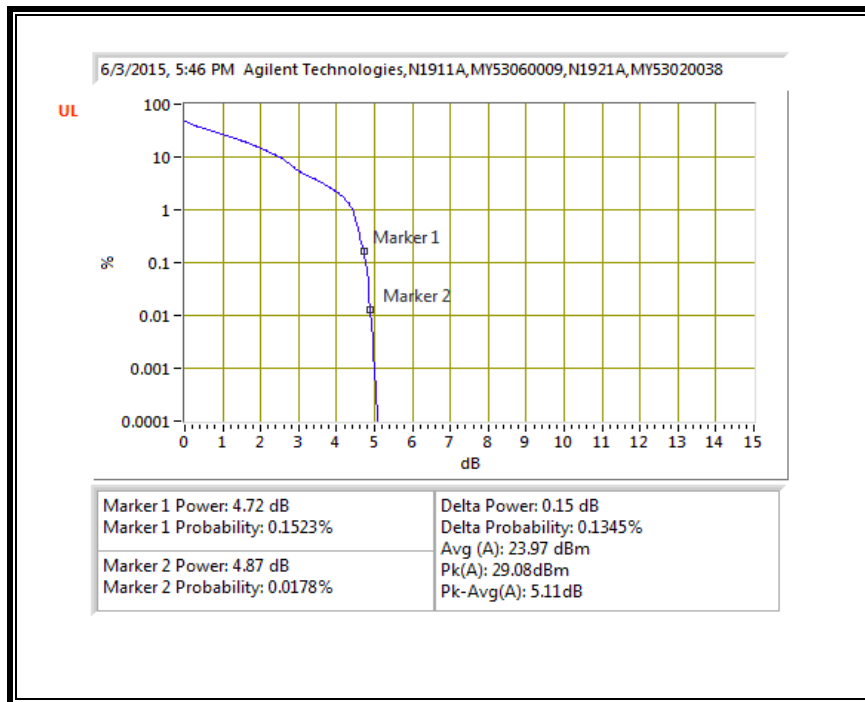


16QAM, (10.0 MHz BAND WIDTH)

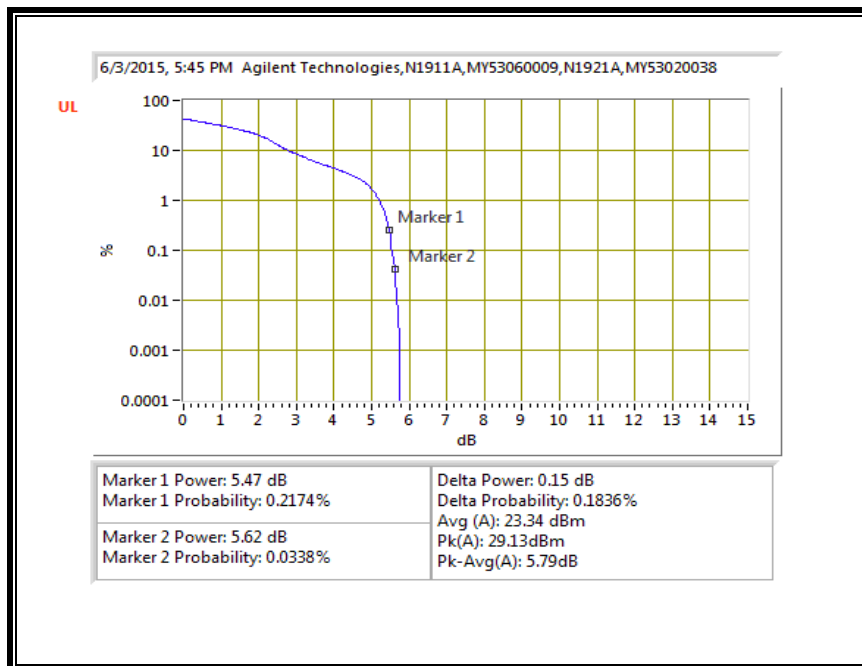


LTE BAND 13

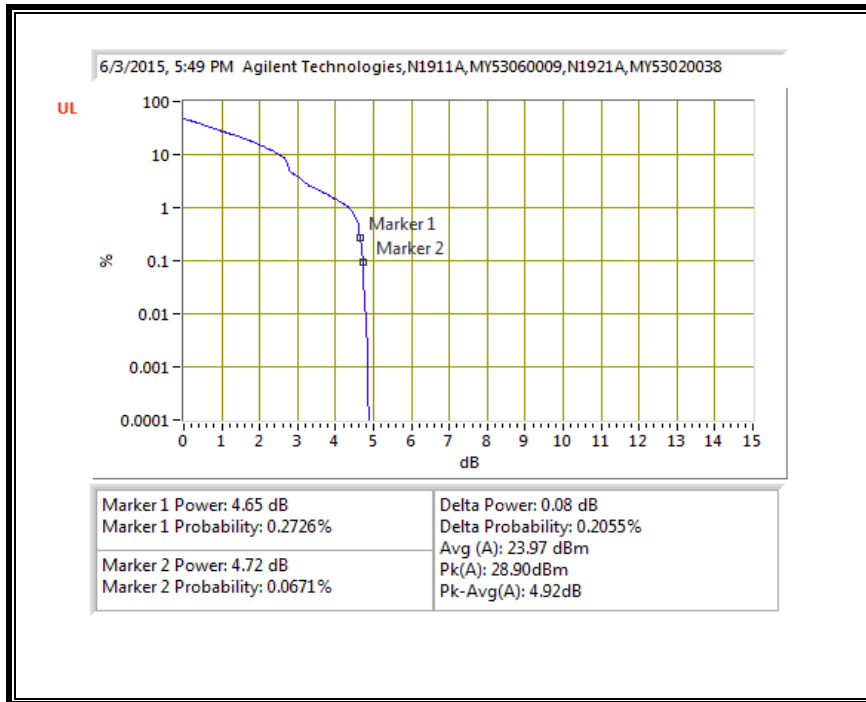
QPSK, (5.0 MHz BAND WIDTH)



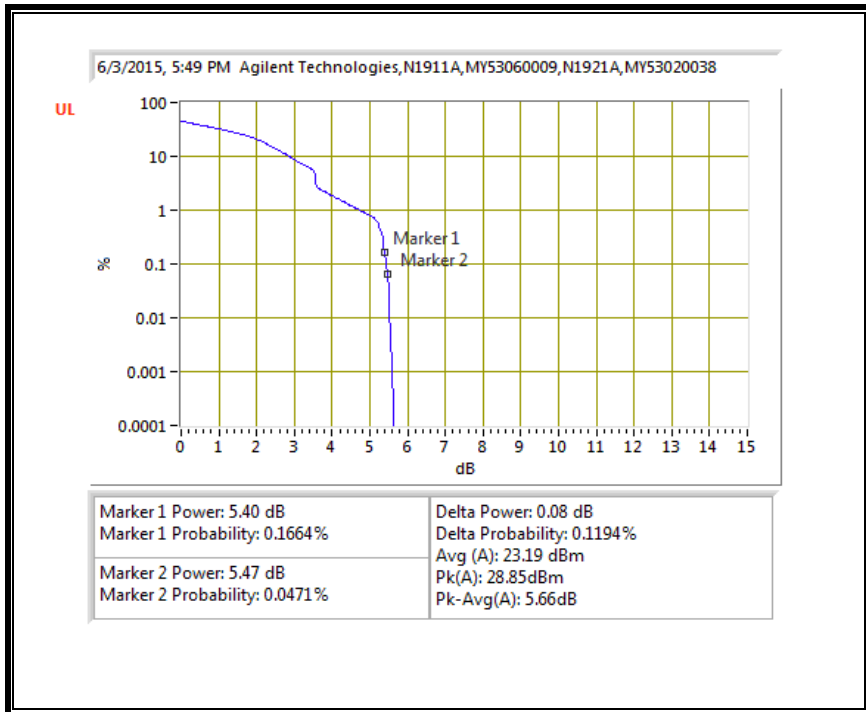
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

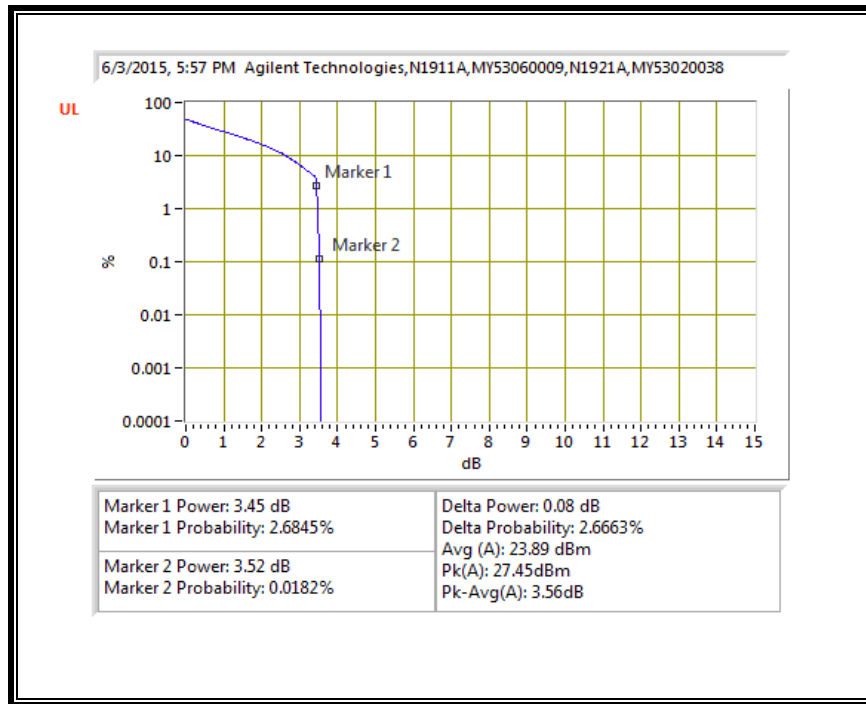


16QAM, (10.0 MHz BAND WIDTH)

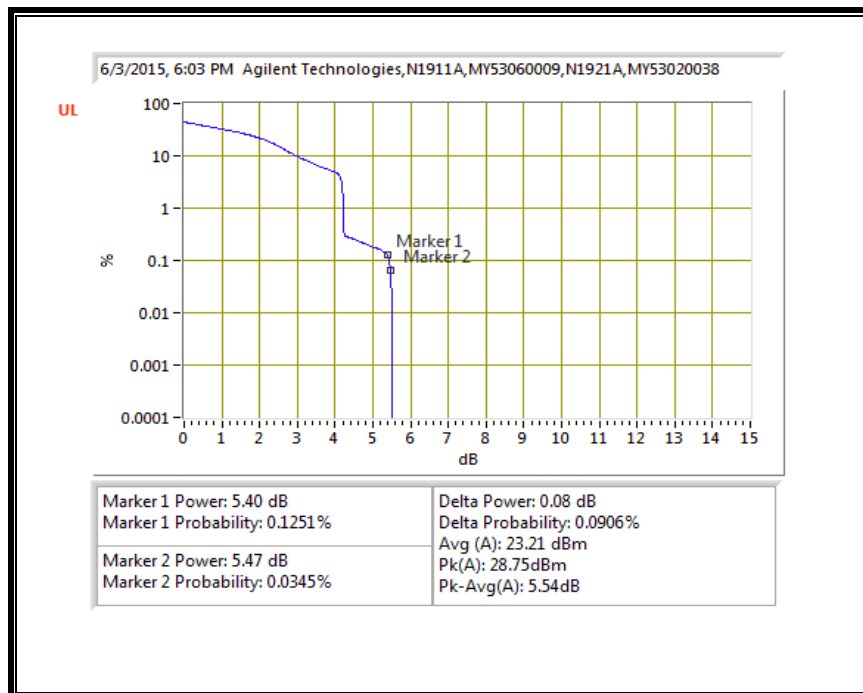


LTE BAND 17

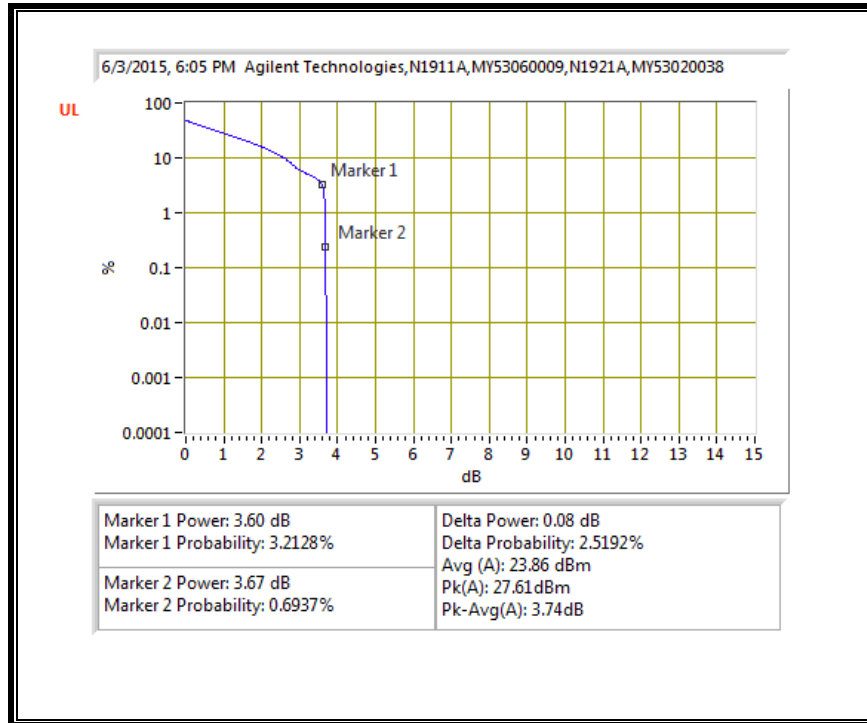
QPSK, (5.0 MHz BAND WIDTH)



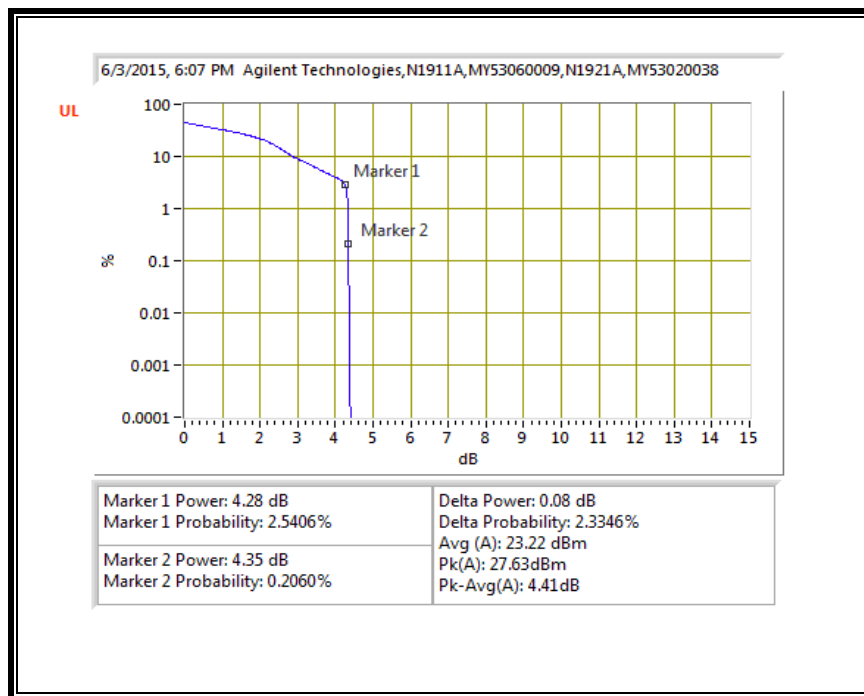
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

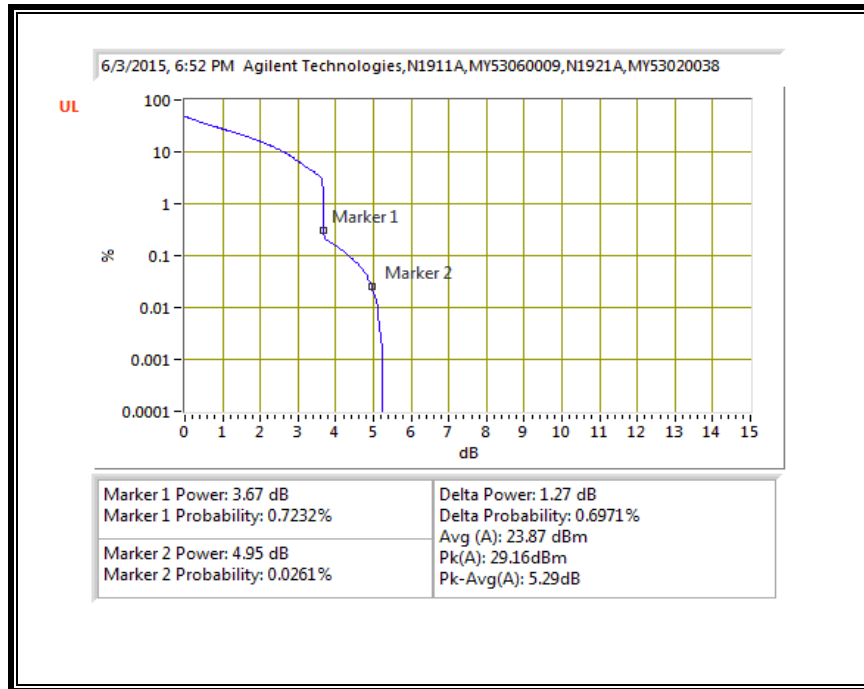


16QAM, (10.0 MHz BAND WIDTH)

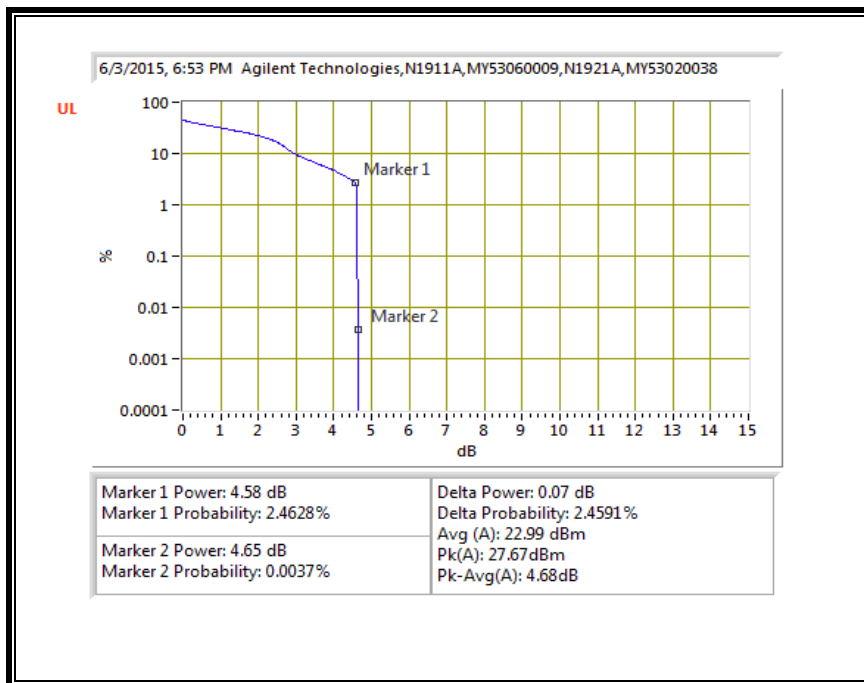


LTE BAND 25

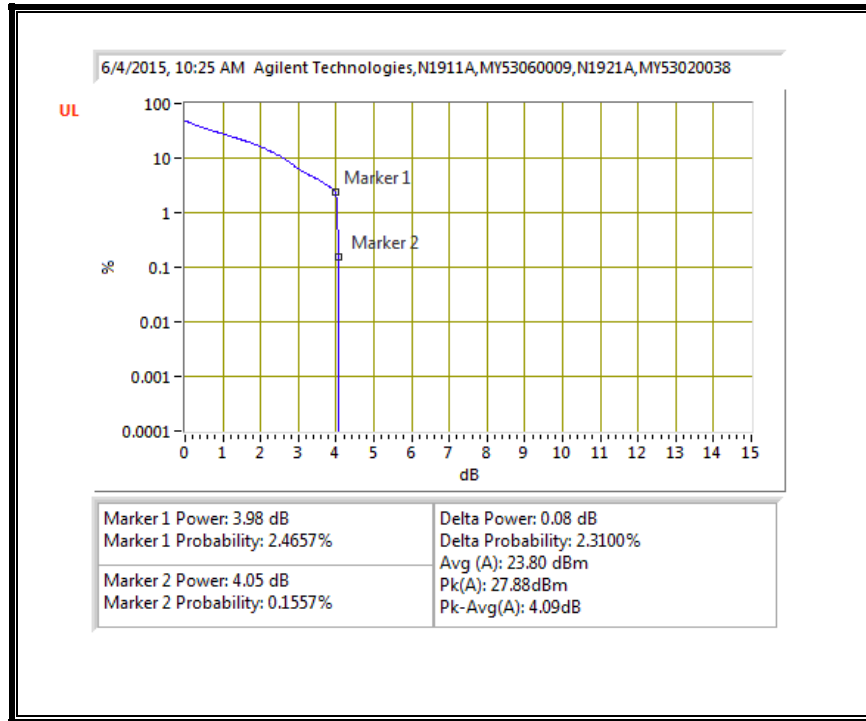
QPSK, (1.4 MHz BAND WIDTH)



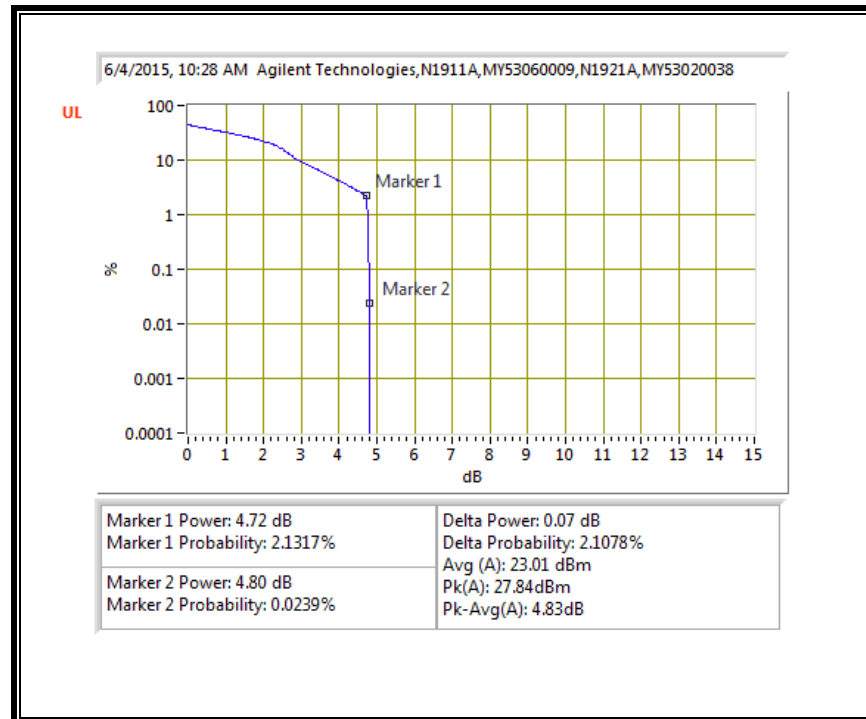
16QAM, (1.4 MHz BAND WIDTH)



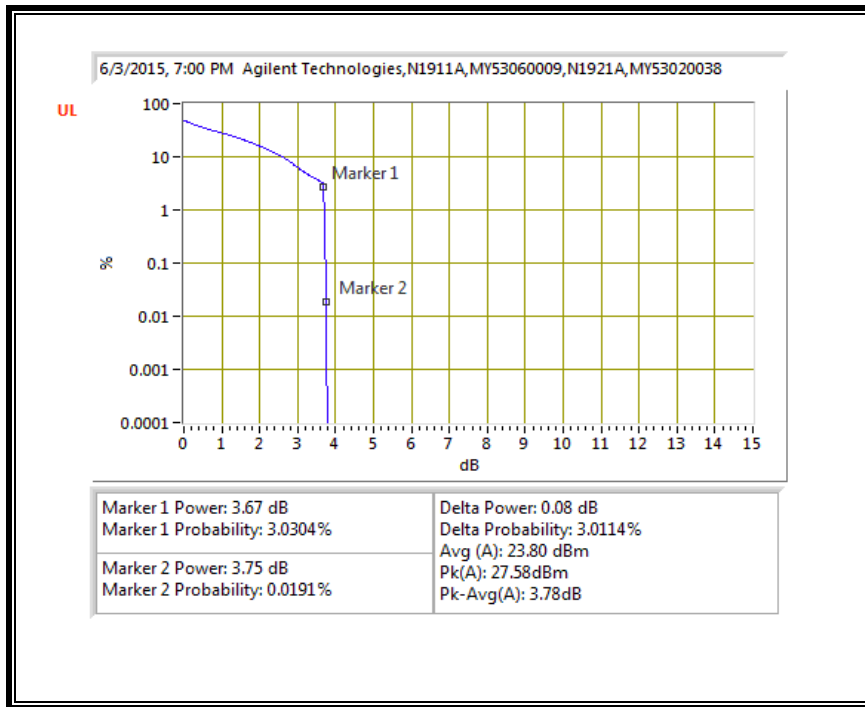
QPSK, (3.0 MHz BAND WIDTH)



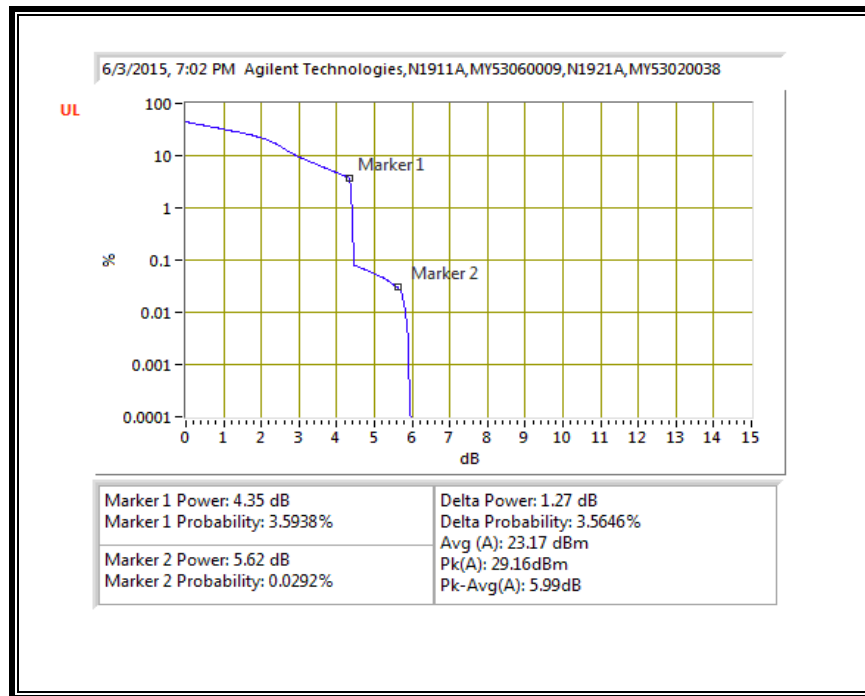
16QAM, (3.0 MHz BAND WIDTH)



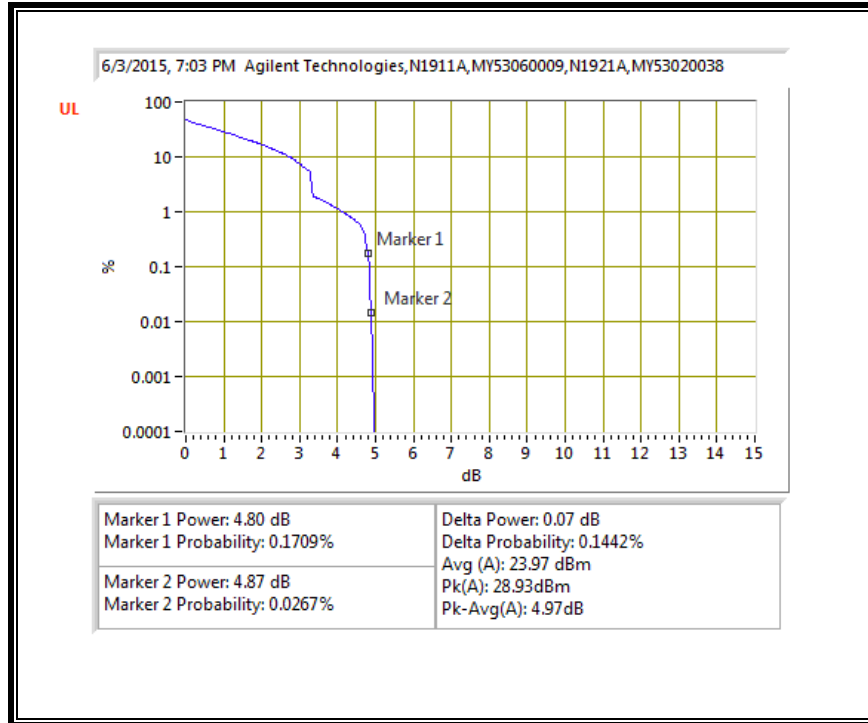
QPSK, (5.0 MHz BAND WIDTH)



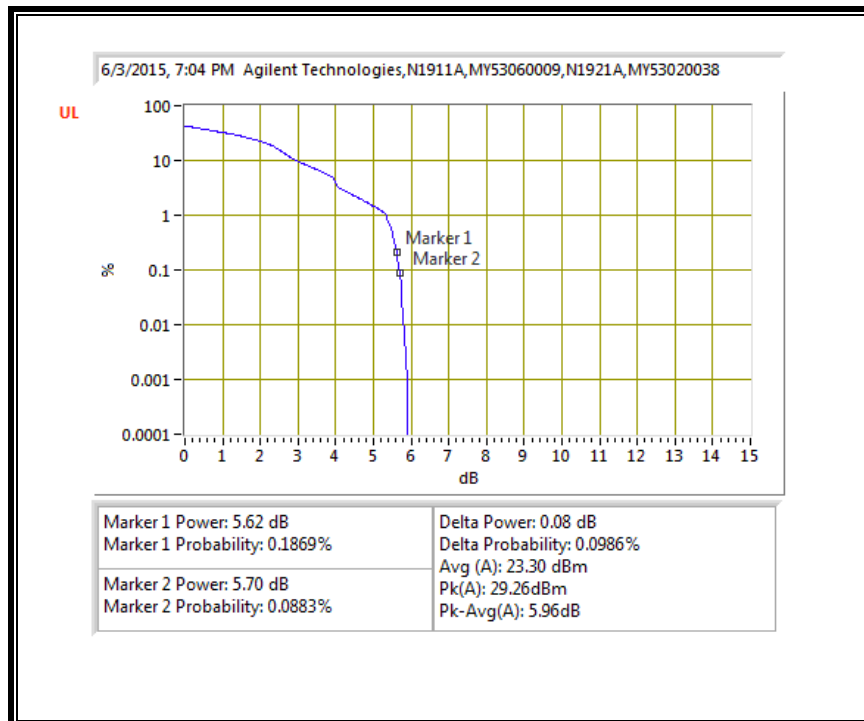
16QAM, (5.0 MHz BAND WIDTH)



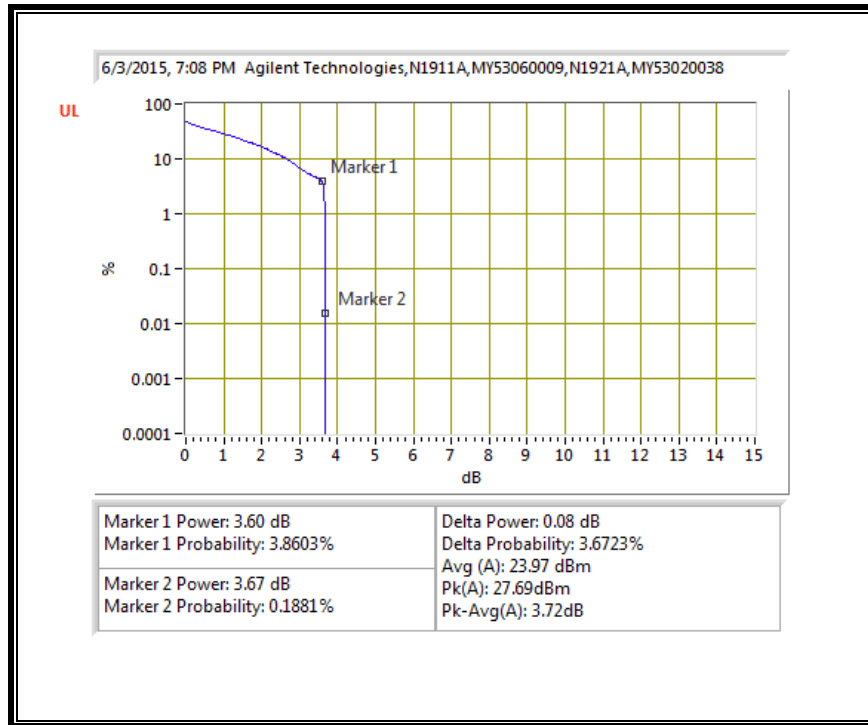
QPSK, (10.0 MHz BAND WIDTH)



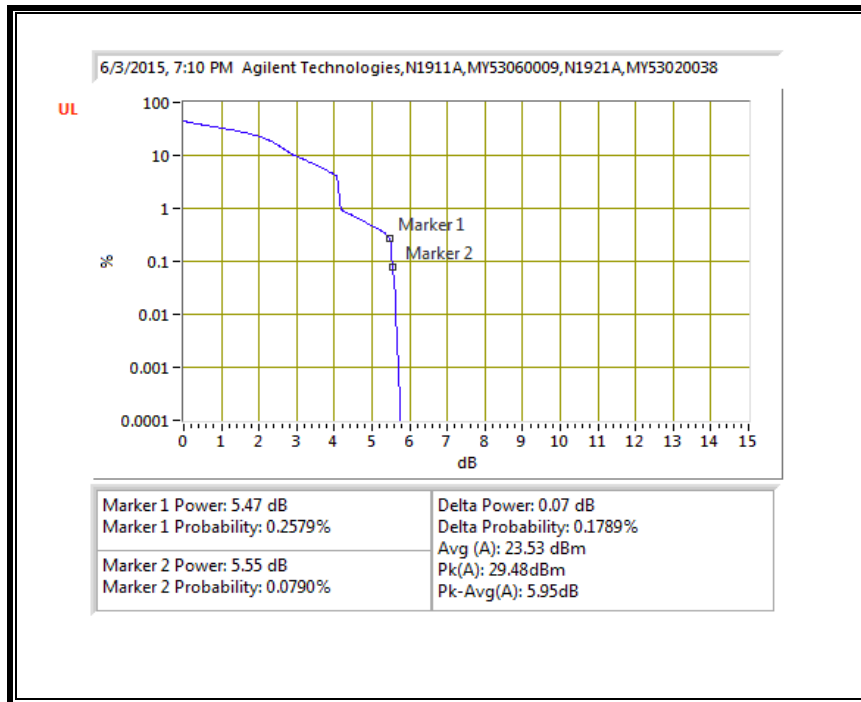
16QAM, (10.0 MHz BAND WIDTH)



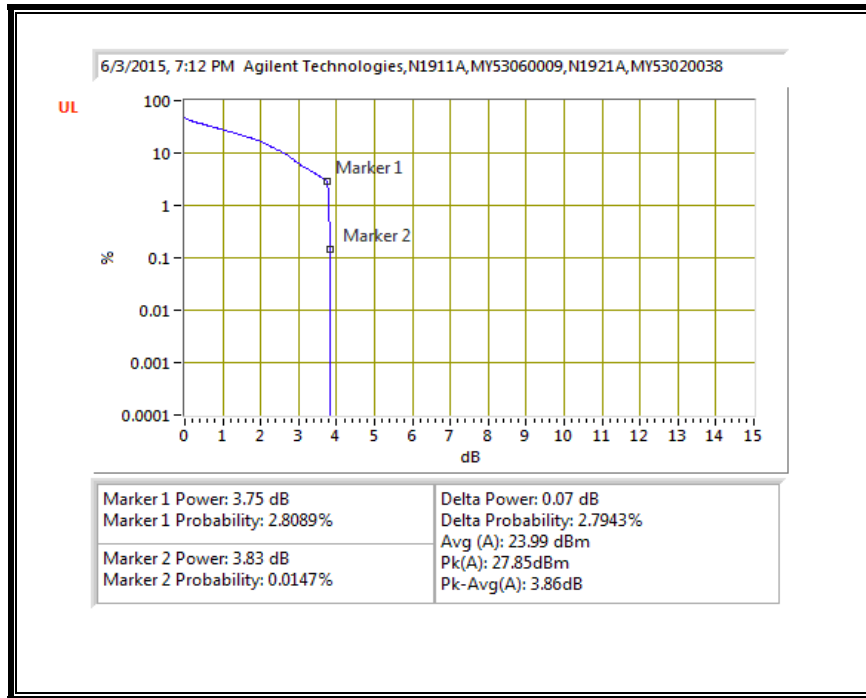
QPSK, (15.0 MHz BAND WIDTH)



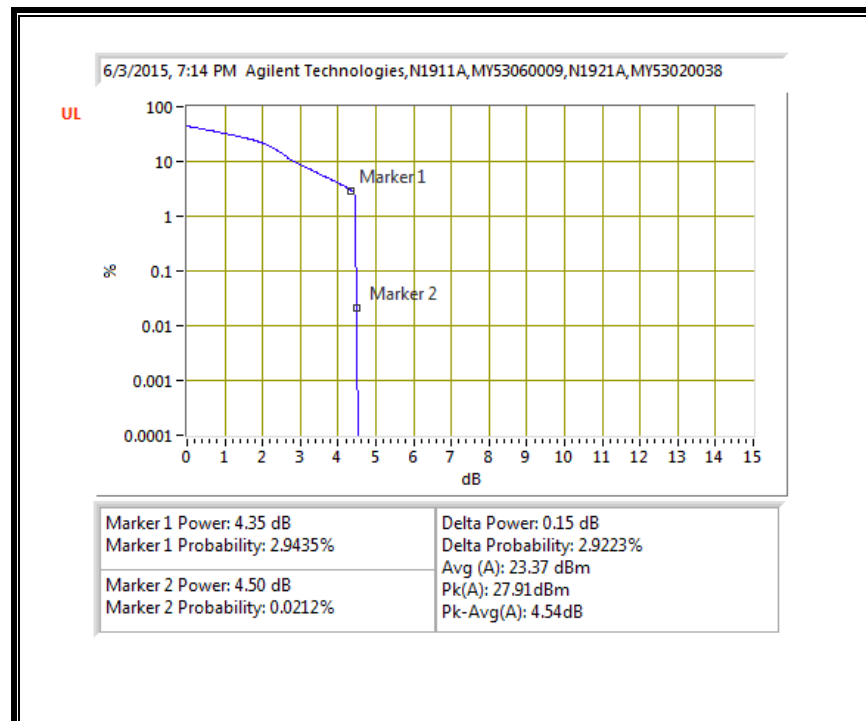
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

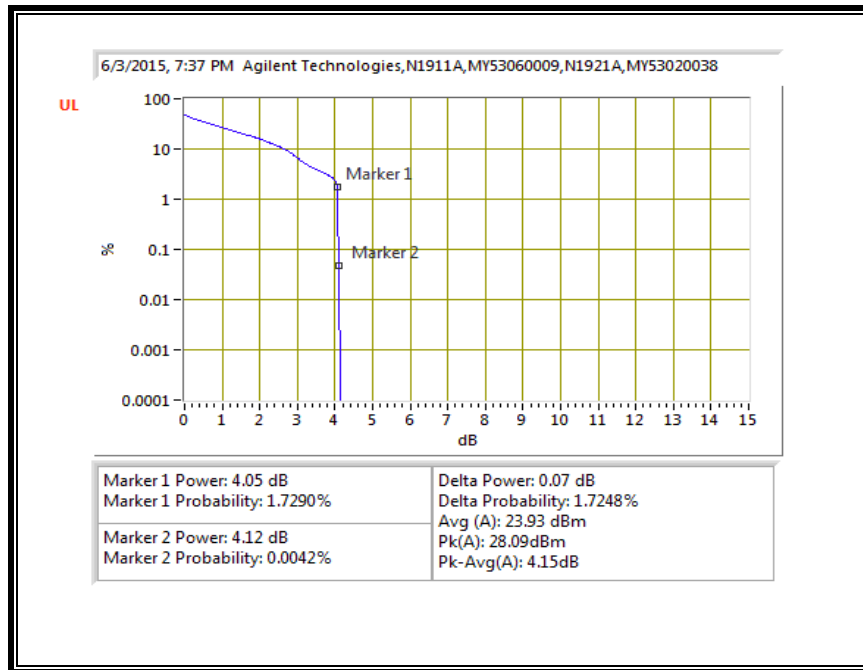


16QAM, (20.0 MHz BAND WIDTH)

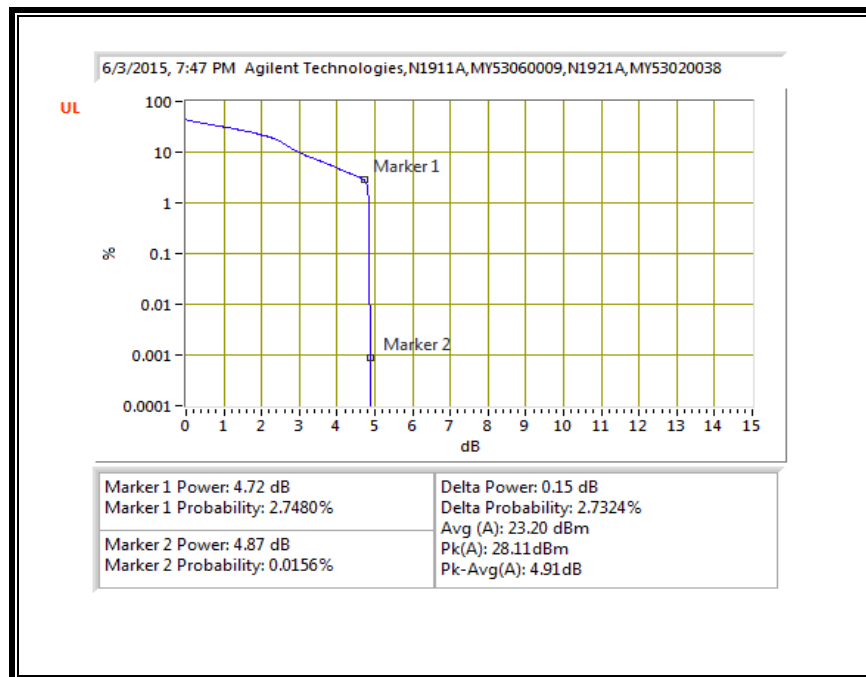


LTE BAND 26

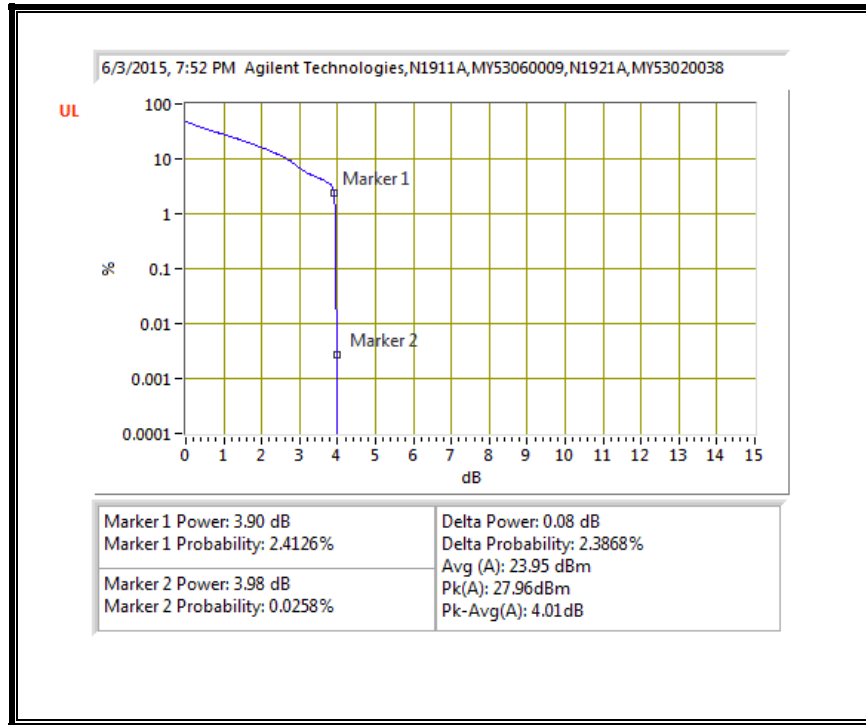
QPSK, (1.4 MHz BAND WIDTH)



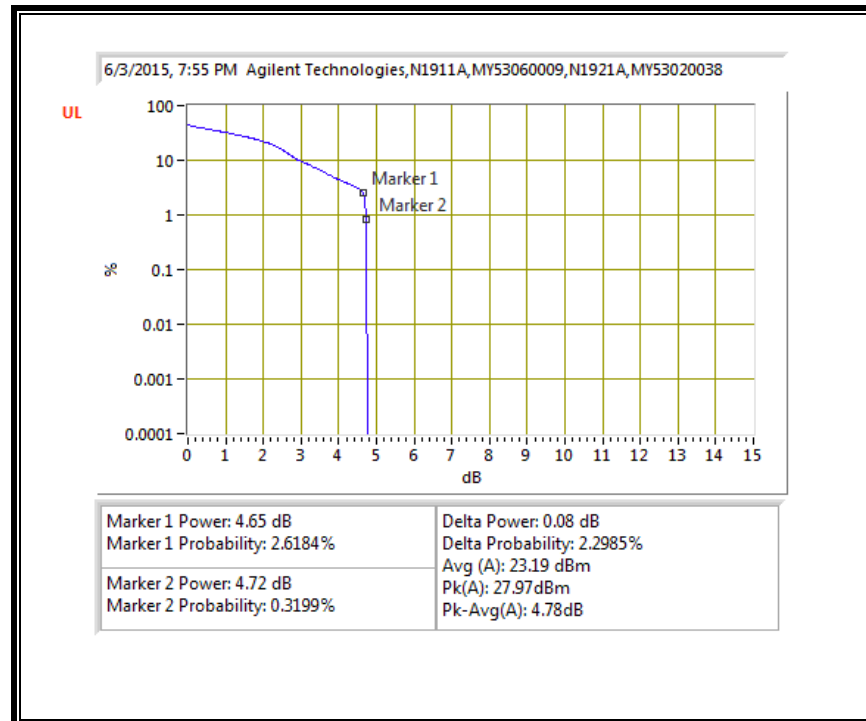
16QAM, (1.4 MHz BAND WIDTH)



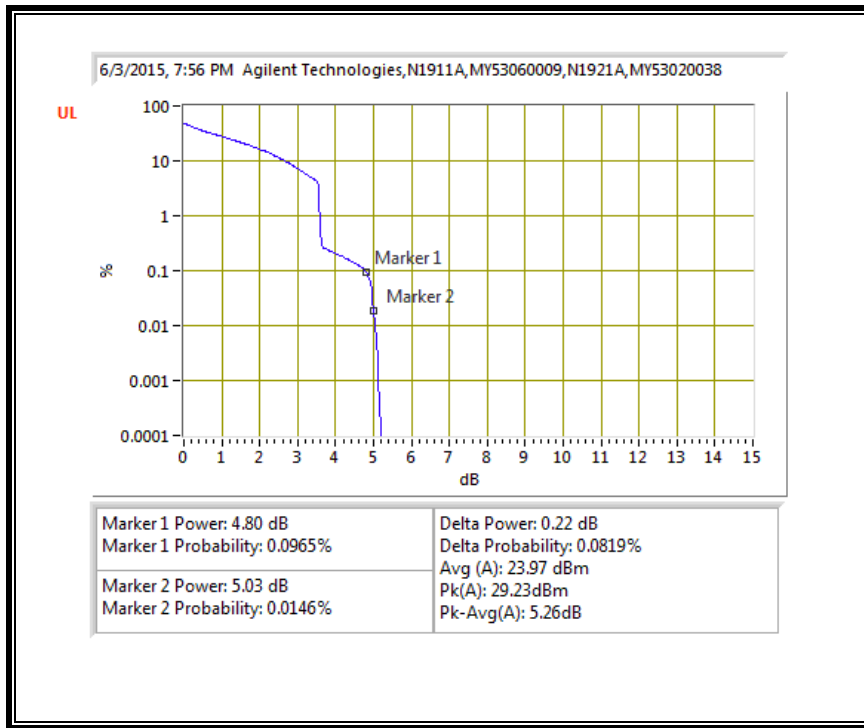
QPSK, (3.0 MHz BAND WIDTH)



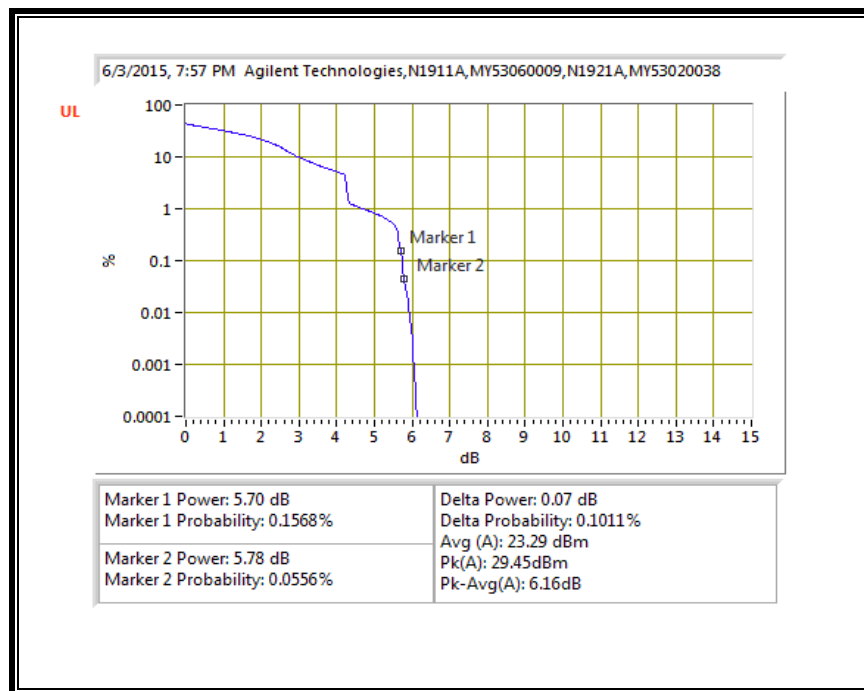
16QAM, (3.0 MHz BAND WIDTH)



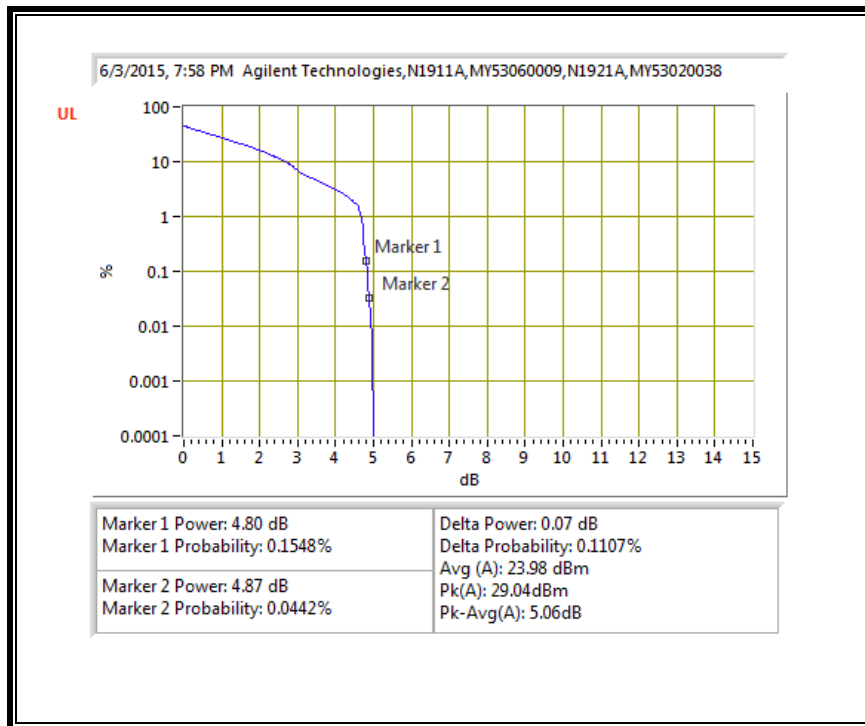
QPSK, (5.0 MHz BAND WIDTH)



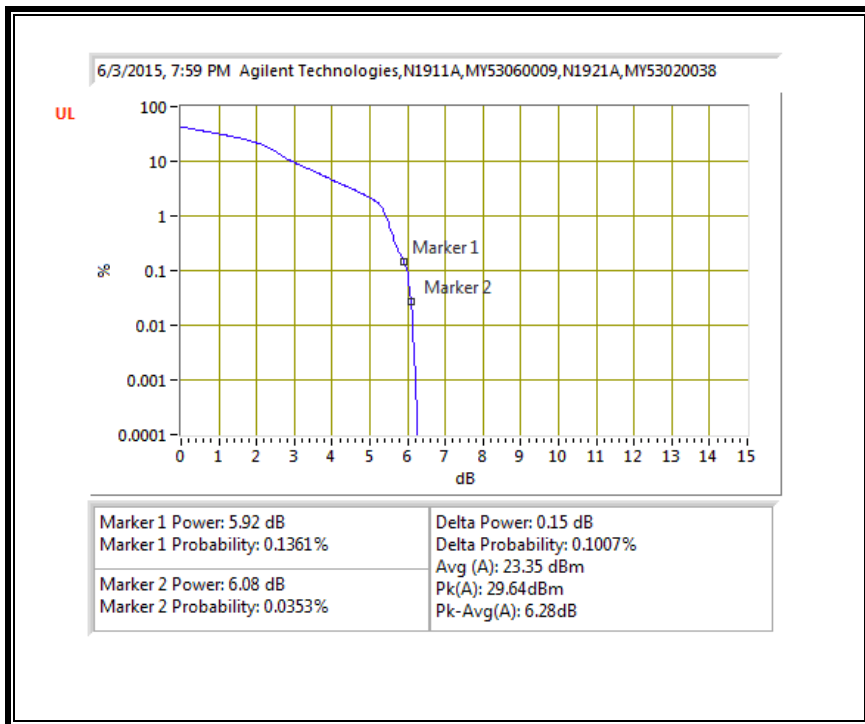
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



10.7. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1634 (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 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41

RESULTS

10.7.1. LTE BAND 2

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/27/15
Test Engineer: T Wang
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
Low Channel (1860MHz)										
3.720	-62.4	H	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
5.580	-58.8	H	3.0	-8.4	36.1	1.0	-43.5	-13.0	-30.5	
7.440	-64.1	H	3.0	-11.0	35.2	1.0	-45.2	-13.0	-32.2	
3.720	-62.7	V	3.0	-15.5	36.2	1.0	-50.7	-13.0	-37.7	
5.580	-63.1	V	3.0	-12.9	36.1	1.0	-48.1	-13.0	-35.1	
7.440	-65.0	V	3.0	-12.0	35.2	1.0	-46.1	-13.0	-33.1	
Mid Channel (1880MHz)										
3.760	-62.9	H	3.0	-16.0	36.2	1.0	-51.2	-13.0	-38.2	
5.640	-62.1	H	3.0	-11.6	36.1	1.0	-46.7	-13.0	-33.7	
7.520	-64.4	H	3.0	-11.2	35.1	1.0	-45.3	-13.0	-32.3	
3.760	-62.1	V	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
5.640	-64.2	V	3.0	-13.9	36.1	1.0	-49.0	-13.0	-36.0	
7.520	-65.0	V	3.0	-11.9	35.1	1.0	-46.0	-13.0	-33.0	
High Channel (1900MHz)										
3.800	-63.2	H	3.0	-16.2	36.2	1.0	-51.4	-13.0	-38.4	
5.700	-62.2	H	3.0	-11.6	36.1	1.0	-46.7	-13.0	-33.7	
7.600	-64.5	H	3.0	-11.2	35.1	1.0	-45.3	-13.0	-32.3	
3.800	-63.2	V	3.0	-15.8	36.2	1.0	-50.9	-13.0	-37.9	
5.700	-63.9	V	3.0	-13.5	36.1	1.0	-48.6	-13.0	-35.6	
7.600	-63.7	V	3.0	-10.5	35.1	1.0	-44.6	-13.0	-31.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 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
Low Channel (1860MHz)										
3.720	-63.3	H	3.0	-16.5	36.2	1.0	-51.7	-13.0	-38.7	
5.580	-59.6	H	3.0	-9.2	36.1	1.0	-44.3	-13.0	-31.3	
7.440	-64.7	H	3.0	-11.6	35.2	1.0	-45.8	-13.0	-32.8	
3.720	-63.5	V	3.0	-16.3	36.2	1.0	-51.5	-13.0	-38.5	
5.580	-64.0	V	3.0	-13.8	36.1	1.0	-49.0	-13.0	-36.0	
7.440	-65.4	V	3.0	-12.4	35.2	1.0	-46.5	-13.0	-33.5	
Mid Channel (1880MHz)										
3.760	-63.6	H	3.0	-16.7	36.2	1.0	-51.9	-13.0	-38.9	
5.640	-62.8	H	3.0	-12.3	36.1	1.0	-47.4	-13.0	-34.4	
7.520	-65.0	H	3.0	-11.8	35.1	1.0	-45.9	-13.0	-32.9	
3.760	-62.9	V	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
5.640	-64.8	V	3.0	-14.5	36.1	1.0	-49.6	-13.0	-36.6	
7.520	-65.4	V	3.0	-12.3	35.1	1.0	-46.4	-13.0	-33.4	
High Channel (1900MHz)										
3.800	-63.9	H	3.0	-16.9	36.2	1.0	-52.1	-13.0	-39.1	
5.700	-63.0	H	3.0	-12.4	36.1	1.0	-47.5	-13.0	-34.5	
7.600	-65.2	H	3.0	-11.9	35.1	1.0	-46.0	-13.0	-33.0	
3.800	-64.0	V	3.0	-16.6	36.2	1.0	-51.7	-13.0	-38.7	
5.700	-64.7	V	3.0	-14.3	36.1	1.0	-49.4	-13.0	-36.4	
7.600	-64.5	V	3.0	-11.3	35.1	1.0	-45.4	-13.0	-32.4	

Rev. 05.21.15

10.7.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 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
Low Channel (1720MHz)										
3.440	-64.5	H	3.0	-18.3	36.4	1.0	-53.7	-13.0	-40.7	
5.160	-63.1	H	3.0	-13.4	36.3	1.0	-48.7	-13.0	-35.7	
6.880	-65.0	H	3.0	-12.5	35.6	1.0	-47.1	-13.0	-34.1	
3.440	-64.8	V	3.0	-18.5	36.4	1.0	-53.9	-13.0	-40.9	
5.160	-64.3	V	3.0	-14.8	36.3	1.0	-50.1	-13.0	-37.1	
6.880	-65.0	V	3.0	-12.6	35.6	1.0	-47.1	-13.0	-34.1	
Mid Channel (1732.5MHz)										
3.465	-64.7	H	3.0	-18.4	36.4	1.0	-53.8	-13.0	-40.8	
5.176	-63.8	H	3.0	-14.1	36.3	1.0	-49.4	-13.0	-36.4	
6.930	-64.9	H	3.0	-12.3	35.5	1.0	-46.9	-13.0	-33.9	
3.465	-64.6	V	3.0	-18.2	36.4	1.0	-53.6	-13.0	-40.6	
5.176	-61.7	V	3.0	-12.2	36.3	1.0	-47.5	-13.0	-34.5	
6.930	-64.3	V	3.0	-11.8	35.5	1.0	-46.3	-13.0	-33.3	
High Channel (1745MHz)										
3.490	-65.2	H	3.0	-18.9	36.4	1.0	-54.3	-13.0	-41.3	
5.235	-64.5	H	3.0	-14.7	36.3	1.0	-50.0	-13.0	-37.0	
6.980	-64.7	H	3.0	-12.0	35.5	1.0	-46.5	-13.0	-33.5	
3.490	-64.5	V	3.0	-18.0	36.4	1.0	-53.4	-13.0	-40.4	
5.235	-61.2	V	3.0	-11.6	36.3	1.0	-46.9	-13.0	-33.9	
6.980	-64.2	V	3.0	-11.6	35.5	1.0	-46.1	-13.0	-33.1	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 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
Low Channel (1720MHz)										
3.440	-65.0	H	3.0	-18.8	36.4	1.0	-54.2	-13.0	-41.2	
5.160	-63.8	H	3.0	-14.1	36.3	1.0	-49.4	-13.0	-36.4	
6.880	-65.5	H	3.0	-13.0	35.6	1.0	-47.6	-13.0	-34.6	
3.440	-65.3	V	3.0	-19.0	36.4	1.0	-54.4	-13.0	-41.4	
5.160	-65.1	V	3.0	-15.6	36.3	1.0	-50.9	-13.0	-37.9	
6.880	-65.5	V	3.0	-13.1	35.6	1.0	-47.6	-13.0	-34.6	
Mid Channel (1732.5MHz)										
3.465	-65.4	H	3.0	-19.1	36.4	1.0	-54.5	-13.0	-41.5	
5.176	-64.5	H	3.0	-14.8	36.3	1.0	-50.1	-13.0	-37.1	
6.930	-65.4	H	3.0	-12.8	35.5	1.0	-47.4	-13.0	-34.4	
3.465	-65.1	V	3.0	-18.7	36.4	1.0	-54.1	-13.0	-41.1	
5.176	-62.5	V	3.0	-13.0	36.3	1.0	-48.3	-13.0	-35.3	
6.930	-65.0	V	3.0	-12.5	35.5	1.0	-47.0	-13.0	-34.0	
High Channel (1745MHz)										
3.490	-65.5	H	3.0	-19.2	36.4	1.0	-54.6	-13.0	-41.6	
5.235	-65.1	H	3.0	-15.3	36.3	1.0	-50.6	-13.0	-37.6	
6.980	-65.4	H	3.0	-12.7	35.5	1.0	-47.2	-13.0	-34.2	
3.490	-64.9	V	3.0	-18.4	36.4	1.0	-53.8	-13.0	-40.8	
5.235	-62.4	V	3.0	-12.8	36.3	1.0	-48.1	-13.0	-35.1	
6.980	-65.0	V	3.0	-12.4	35.5	1.0	-46.9	-13.0	-33.9	

Rev. 05.21.15

10.7.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/27/15
Test Engineer: T Wang
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
Low Channel (829MHz)										
1.658	-65.0	H	3.0	-23.5	37.8	1.0	-60.4	-13.0	-47.4	
2.487	-62.6	H	3.0	-19.4	36.5	1.0	-54.9	-13.0	-41.9	
3.316	-64.4	H	3.0	-18.4	36.5	1.0	-53.9	-13.0	-40.9	
1.658	-64.5	V	3.0	-22.7	37.8	1.0	-59.6	-13.0	-46.6	
2.487	-58.2	V	3.0	-14.1	36.5	1.0	-49.5	-13.0	-36.5	
3.316	-64.2	V	3.0	-18.2	36.5	1.0	-53.8	-13.0	-40.8	
Mid Channel (836.5MHz)										
1.673	-64.6	H	3.0	-23.1	37.8	1.0	-59.9	-13.0	-46.9	
2.510	-56.3	H	3.0	-13.1	36.4	1.0	-48.5	-13.0	-35.5	
3.346	-64.1	H	3.0	-18.1	36.5	1.0	-53.6	-13.0	-40.6	
1.673	-64.5	V	3.0	-22.7	37.8	1.0	-59.5	-13.0	-46.5	
2.510	-58.5	V	3.0	-14.3	36.4	1.0	-49.6	-13.0	-36.6	
3.346	-64.5	V	3.0	-18.5	36.5	1.0	-53.9	-13.0	-40.9	
High Channel (844MHz)										
1.688	-64.4	H	3.0	-22.9	37.8	1.0	-59.7	-13.0	-46.7	
2.532	-62.1	H	3.0	-18.8	36.4	1.0	-54.2	-13.0	-41.2	
3.376	-64.2	H	3.0	-18.1	36.5	1.0	-53.6	-13.0	-40.6	
1.688	-63.8	V	3.0	-22.0	37.8	1.0	-58.8	-13.0	-45.8	
2.532	-57.3	V	3.0	-13.0	36.4	1.0	-48.4	-13.0	-35.4	
3.376	-64.2	V	3.0	-18.1	36.5	1.0	-53.5	-13.0	-40.5	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 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
Low Channel (829MHz)										
1.658	-65.5	H	3.0	-24.0	37.8	1.0	-60.9	-13.0	-47.9	
2.487	-63.2	H	3.0	-20.0	36.5	1.0	-55.5	-13.0	-42.5	
3.316	-65.0	H	3.0	-19.0	36.5	1.0	-54.5	-13.0	-41.5	
1.658	-65.1	V	3.0	-23.3	37.8	1.0	-60.2	-13.0	-47.2	
2.487	-59.2	V	3.0	-15.1	36.5	1.0	-50.5	-13.0	-37.5	
3.316	-64.8	V	3.0	-18.8	36.5	1.0	-54.4	-13.0	-41.4	
Mid Channel (836.5MHz)										
1.673	-65.1	H	3.0	-23.6	37.8	1.0	-60.4	-13.0	-47.4	
2.510	-57.7	H	3.0	-14.5	36.4	1.0	-49.9	-13.0	-36.9	
3.346	-64.7	H	3.0	-18.7	36.5	1.0	-54.2	-13.0	-41.2	
1.673	-65.2	V	3.0	-23.4	37.8	1.0	-60.2	-13.0	-47.2	
2.510	-59.3	V	3.0	-15.1	36.4	1.0	-50.4	-13.0	-37.4	
3.346	-65.2	V	3.0	-19.2	36.5	1.0	-54.6	-13.0	-41.6	
High Channel (844MHz)										
1.688	-65.1	H	3.0	-23.6	37.8	1.0	-60.4	-13.0	-47.4	
2.532	-63.2	H	3.0	-19.9	36.4	1.0	-55.3	-13.0	-42.3	
3.376	-64.8	H	3.0	-18.7	36.5	1.0	-54.2	-13.0	-41.2	
1.688	-64.7	V	3.0	-22.9	37.8	1.0	-59.7	-13.0	-46.7	
2.532	-57.2	V	3.0	-12.9	36.4	1.0	-48.3	-13.0	-35.3	
3.376	-65.1	V	3.0	-19.0	36.5	1.0	-54.4	-13.0	-41.4	

Rev. 05.21.15

10.7.4. LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 7, 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
Low Channel (2510MHz)										
2.638	-64.0	H	3.0	-20.2	36.5	1.0	-55.7	-25.0	-30.7	
5.020	-63.5	H	3.0	-14.1	36.2	1.0	-49.4	-25.0	-24.4	
7.530	-64.2	H	3.0	-11.0	35.1	1.0	-45.1	-25.0	-20.1	
2.638	-64.1	V	3.0	-19.7	36.5	1.0	-55.1	-25.0	-30.1	
5.020	-63.3	V	3.0	-14.0	36.2	1.0	-49.3	-25.0	-24.3	
7.530	-63.7	V	3.0	-10.6	35.1	1.0	-44.7	-25.0	-19.7	
Mid Channel (2535MHz)										
2.660	-64.5	H	3.0	-20.6	36.5	1.0	-56.1	-25.0	-31.1	
5.507	-64.3	H	3.0	-14.0	36.2	1.0	-49.2	-25.0	-24.2	
7.605	-63.5	H	3.0	-10.2	35.1	1.0	-44.3	-25.0	-19.3	
2.660	-64.4	V	3.0	-19.9	36.5	1.0	-55.4	-25.0	-30.4	
5.507	-63.8	V	3.0	-13.8	36.2	1.0	-48.9	-25.0	-23.9	
7.605	-63.3	V	3.0	-10.1	35.1	1.0	-44.2	-25.0	-19.2	
High Channel (2560MHz)										
2.682	-63.3	H	3.0	-19.4	36.5	1.0	-54.8	-25.0	-29.8	
5.120	-63.5	H	3.0	-13.9	36.3	1.0	-49.2	-25.0	-24.2	
7.680	-64.4	H	3.0	-11.1	35.0	1.0	-45.1	-25.0	-20.1	
2.682	-62.6	V	3.0	-18.1	36.5	1.0	-53.6	-25.0	-28.6	
5.120	-63.3	V	3.0	-13.9	36.3	1.0	-49.2	-25.0	-24.2	
7.680	-63.5	V	3.0	-10.2	35.0	1.0	-44.3	-25.0	-19.3	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 7, 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
Low Channel (2510MHz)										
2.638	-64.5	H	3.0	-20.7	36.5	1.0	-56.2	-25.0	-31.2	
5.020	-64.1	H	3.0	-14.7	36.2	1.0	-50.0	-25.0	-25.0	
7.530	-65.0	H	3.0	-11.8	35.1	1.0	-45.9	-25.0	-20.9	
2.638	-64.8	V	3.0	-20.4	36.5	1.0	-55.8	-25.0	-30.8	
5.020	-64.1	V	3.0	-14.8	36.2	1.0	-50.1	-25.0	-25.1	
7.530	-64.5	V	3.0	-11.4	35.1	1.0	-45.5	-25.0	-20.5	
Mid Channel (2535MHz)										
2.660	-65.1	H	3.0	-21.2	36.5	1.0	-56.7	-25.0	-31.7	
5.507	-65.0	H	3.0	-14.7	36.2	1.0	-49.9	-25.0	-24.9	
7.605	-64.3	H	3.0	-11.0	35.1	1.0	-45.1	-25.0	-20.1	
2.660	-65.2	V	3.0	-20.7	36.5	1.0	-56.2	-25.0	-31.2	
5.507	-64.7	V	3.0	-14.7	36.2	1.0	-49.8	-25.0	-24.8	
7.605	-64.1	V	3.0	-10.9	35.1	1.0	-45.0	-25.0	-20.0	
High Channel (2560MHz)										
2.682	-64.2	H	3.0	-20.3	36.5	1.0	-55.7	-25.0	-30.7	
5.120	-64.3	H	3.0	-14.7	36.3	1.0	-50.0	-25.0	-25.0	
7.680	-65.0	H	3.0	-11.7	35.0	1.0	-45.7	-25.0	-20.7	
2.682	-63.5	V	3.0	-19.0	36.5	1.0	-54.5	-25.0	-29.5	
5.120	-64.1	V	3.0	-14.7	36.3	1.0	-50.0	-25.0	-25.0	
7.680	-64.3	V	3.0	-11.0	35.0	1.0	-45.1	-25.0	-20.1	

Rev. 05.21.15

10.7.5. LTE BAND 12

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber										
Company:										
Project #: 15U20162										
Date: 05/27/15										
Test Engineer: T Wang										
Configuration: EUT only										
Mode: LTE Band 12, 10MHz QPSK										
Test Equipment:										
Substitution: Horn T59 Substitution, and 8ft SMA Cable										
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (704MHz)										
1.408	-64.1	H	3.0	-23.5	37.5	1.0	-60.0	-13.0	-47.0	
2.112	-61.8	H	3.0	-19.5	37.6	1.0	-56.1	-13.0	-43.1	
2.816	-64.3	H	3.0	-19.8	36.6	1.0	-55.4	-13.0	-42.4	
1.408	-64.2	V	3.0	-23.0	37.5	1.0	-59.6	-13.0	-46.6	
2.112	-60.5	V	3.0	-18.1	37.6	1.0	-54.6	-13.0	-41.6	
2.816	-64.4	V	3.0	-19.7	36.6	1.0	-55.3	-13.0	-42.3	
Mid Channel (707.5MHz)										
1.415	-64.6	H	3.0	-23.9	37.6	1.0	-60.5	-13.0	-47.5	
2.123	-64.3	H	3.0	-22.0	37.6	1.0	-58.5	-13.0	-45.5	
2.830	-64.6	H	3.0	-20.0	36.6	1.0	-55.6	-13.0	-42.6	
1.415	-62.8	V	3.0	-21.6	37.6	1.0	-58.1	-13.0	-45.1	
2.123	-60.1	V	3.0	-17.6	37.6	1.0	-54.2	-13.0	-41.2	
2.830	-64.9	V	3.0	-20.2	36.6	1.0	-55.8	-13.0	-42.8	
High Channel (711MHz)										
1.422	-64.6	H	3.0	-23.9	37.6	1.0	-60.5	-13.0	-47.5	
2.133	-64.3	H	3.0	-21.9	37.5	1.0	-58.5	-13.0	-45.5	
2.844	-64.5	H	3.0	-19.9	36.6	1.0	-55.5	-13.0	-42.5	
1.422	-63.2	V	3.0	-21.9	37.6	1.0	-58.5	-13.0	-45.5	
2.133	-60.4	V	3.0	-17.9	37.5	1.0	-54.4	-13.0	-41.4	
2.844	-64.5	V	3.0	-19.8	36.6	1.0	-55.4	-13.0	-42.4	
Rev. 05.21.15										

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20162
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 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
Low Channel (704MHz)										
1.408	-64.5	H	3.0	-23.9	37.5	1.0	-60.4	-13.0	-47.4	
2.112	-62.4	H	3.0	-20.1	37.6	1.0	-56.7	-13.0	-43.7	
2.816	-64.7	H	3.0	-20.2	36.6	1.0	-55.8	-13.0	-42.8	
1.408	-64.6	V	3.0	-23.4	37.5	1.0	-60.0	-13.0	-47.0	
2.112	-61.4	V	3.0	-19.0	37.6	1.0	-55.5	-13.0	-42.5	
2.816	-65.0	V	3.0	-20.3	36.6	1.0	-55.9	-13.0	-42.9	
Mid Channel (707.5MHz)										
1.415	-65.0	H	3.0	-24.3	37.6	1.0	-60.9	-13.0	-47.9	
2.123	-64.7	H	3.0	-22.4	37.6	1.0	-58.9	-13.0	-45.9	
2.830	-65.1	H	3.0	-20.5	36.6	1.0	-56.1	-13.0	-43.1	
1.415	-63.5	V	3.0	-22.3	37.6	1.0	-58.8	-13.0	-45.8	
2.123	-61.5	V	3.0	-19.0	37.6	1.0	-55.6	-13.0	-42.6	
2.830	-65.5	V	3.0	-20.8	36.6	1.0	-56.4	-13.0	-43.4	
High Channel (711MHz)										
1.422	-65.0	H	3.0	-24.3	37.6	1.0	-60.9	-13.0	-47.9	
2.133	-64.9	H	3.0	-22.5	37.5	1.0	-59.1	-13.0	-46.1	
2.844	-65.2	H	3.0	-20.6	36.6	1.0	-56.2	-13.0	-43.2	
1.422	-64.3	V	3.0	-23.0	37.6	1.0	-59.6	-13.0	-46.6	
2.133	-61.4	V	3.0	-18.9	37.5	1.0	-55.4	-13.0	-42.4	
2.844	-65.1	V	3.0	-20.4	36.6	1.0	-56.0	-13.0	-43.0	

Rev. 05.21.15

10.7.6. LTE BAND 13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/26/15
Test Engineer: T Wang
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

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (782MHz)										
1.564	-64.3	H	3.0	-23.0	37.9	1.0	-59.8	-40.0	-19.8	1559-1610MHz
2.346	-63.7	H	3.0	-20.8	37.2	1.0	-57.0	-13.0	-44.0	
3.128	-63.9	H	3.0	-18.3	36.6	1.0	-54.0	-13.0	-41.0	
1.564	-63.9	V	3.0	-22.2	37.9	1.0	-59.0	-40.0	-19.0	1559-1610MHz
2.346	-64.0	V	3.0	-20.7	37.2	1.0	-56.9	-13.0	-43.9	
3.128	-63.6	V	3.0	-18.2	36.6	1.0	-53.9	-13.0	-40.9	

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: _____
 Project #: 15U20162
 Date: 05/26/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 13, 10MHz 16QAM

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

Chamber

3m Chamber G

Pre-amplifer

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
<i>Mid Channel (782MHz)</i>										
1.564	-64.8	H	3.0	-23.5	37.9	1.0	-60.3	-40.0	-20.3	1559-1610MHz
2.346	-64.2	H	3.0	-21.3	37.2	1.0	-57.5	-13.0	-44.5	
3.128	-64.5	H	3.0	-18.9	36.6	1.0	-54.6	-13.0	-41.6	
1.564	-64.6	V	3.0	-22.9	37.9	1.0	-59.7	-40.0	-19.7	1559-1610MHz
2.346	-64.3	V	3.0	-21.0	37.2	1.0	-57.2	-13.0	-44.2	
3.128	-64.5	V	3.0	-19.1	36.6	1.0	-54.8	-13.0	-41.8	

10.7.7. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/26/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 17, 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
Low Channel (709MHz)										
1.418	-65.0	H	3.0	-24.3	37.6	1.0	-60.9	-13.0	-47.9	
2.127	-64.6	H	3.0	-22.3	37.5	1.0	-58.8	-13.0	-45.8	
2.836	-65.1	H	3.0	-20.5	36.6	1.0	-56.1	-13.0	-43.1	
1.418	-64.5	V	3.0	-23.3	37.6	1.0	-59.8	-13.0	-46.8	
2.127	-64.8	V	3.0	-22.3	37.5	1.0	-58.9	-13.0	-45.9	
2.836	-64.2	V	3.0	-19.5	36.6	1.0	-55.1	-13.0	-42.1	
Mid Channel (710MHz)										
1.420	-65.1	H	3.0	-24.4	37.6	1.0	-61.0	-13.0	-48.0	
2.130	-65.7	H	3.0	-23.4	37.5	1.0	-59.9	-13.0	-46.9	
2.840	-65.0	H	3.0	-20.4	36.6	1.0	-56.0	-13.0	-43.0	
1.420	-64.6	V	3.0	-23.4	37.6	1.0	-59.9	-13.0	-46.9	
2.130	-64.7	V	3.0	-22.2	37.5	1.0	-58.7	-13.0	-45.7	
2.840	-64.8	V	3.0	-20.1	36.6	1.0	-55.7	-13.0	-42.7	
High Channel (711)										
1.422	-64.5	H	3.0	-23.8	37.6	1.0	-60.4	-13.0	-47.4	
2.133	-64.8	H	3.0	-22.4	37.5	1.0	-59.0	-13.0	-46.0	
2.844	-64.4	H	3.0	-19.8	36.6	1.0	-55.4	-13.0	-42.4	
1.422	-64.8	V	3.0	-23.5	37.6	1.0	-60.1	-13.0	-47.1	
2.133	-64.8	V	3.0	-22.3	37.5	1.0	-58.8	-13.0	-45.8	
2.844	-65.0	V	3.0	-20.3	36.6	1.0	-55.9	-13.0	-42.9	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/26/15
 Test Engineer: T Wang
 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
Low Channel (709MHz)										
1.418	-65.5	H	3.0	-24.8	37.6	1.0	-61.4	-13.0	-48.4	
2.127	-65.1	H	3.0	-22.8	37.5	1.0	-59.3	-13.0	-46.3	
2.836	-65.5	H	3.0	-20.9	36.6	1.0	-56.5	-13.0	-43.5	
1.418	-65.0	V	3.0	-23.8	37.6	1.0	-60.3	-13.0	-47.3	
2.127	-65.3	V	3.0	-22.8	37.5	1.0	-59.4	-13.0	-46.4	
2.836	-64.9	V	3.0	-20.2	36.6	1.0	-55.8	-13.0	-42.8	
Mid Channel (710MHz)										
1.420	-65.5	H	3.0	-24.8	37.6	1.0	-61.4	-13.0	-48.4	
2.130	-65.9	H	3.0	-23.6	37.5	1.0	-60.1	-13.0	-47.1	
2.840	-65.6	H	3.0	-21.0	36.6	1.0	-56.6	-13.0	-43.6	
1.420	-65.1	V	3.0	-23.9	37.6	1.0	-60.4	-13.0	-47.4	
2.130	-65.3	V	3.0	-22.8	37.5	1.0	-59.3	-13.0	-46.3	
2.840	-65.5	V	3.0	-20.8	36.6	1.0	-56.4	-13.0	-43.4	
High Channel (711)										
1.422	-65.3	H	3.0	-24.6	37.6	1.0	-61.2	-13.0	-48.2	
2.133	-64.8	H	3.0	-22.4	37.5	1.0	-59.0	-13.0	-46.0	
2.844	-65.1	H	3.0	-20.5	36.6	1.0	-56.1	-13.0	-43.1	
1.422	-65.4	V	3.0	-24.1	37.6	1.0	-60.7	-13.0	-47.7	
2.133	-65.5	V	3.0	-23.0	37.5	1.0	-59.5	-13.0	-46.5	
2.844	-65.6	V	3.0	-20.9	36.6	1.0	-56.5	-13.0	-43.5	

Rev. 05.21.15

10.7.8. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/27/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 25, 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
Low Channel (1860MHz)										
3.720	-63.0	H	3.0	-16.2	36.2	1.0	-51.4	-13.0	-38.4	
5.580	-62.7	H	3.0	-12.3	36.1	1.0	-47.4	-13.0	-34.4	
7.440	-65.0	H	3.0	-11.9	35.2	1.0	-46.1	-13.0	-33.1	
3.720	-63.5	V	3.0	-16.3	36.2	1.0	-51.5	-13.0	-38.5	
5.580	-64.4	V	3.0	-14.2	36.1	1.0	-49.4	-13.0	-36.4	
7.440	-65.0	V	3.0	-12.0	35.2	1.0	-46.1	-13.0	-33.1	
Mid Channel (1882.5MHz)										
3.765	-61.8	H	3.0	-14.9	36.2	1.0	-50.1	-13.0	-37.1	
5.648	-63.8	H	3.0	-13.3	36.1	1.0	-48.4	-13.0	-35.4	
7.530	-64.6	H	3.0	-11.4	35.1	1.0	-45.5	-13.0	-32.5	
3.765	-62.4	V	3.0	-15.1	36.2	1.0	-50.2	-13.0	-37.2	
5.648	-63.3	V	3.0	-13.0	36.1	1.0	-48.1	-13.0	-35.1	
7.530	-64.2	V	3.0	-11.1	35.1	1.0	-45.2	-13.0	-32.2	
High Channel (1905MHz)										
3.810	-62.7	H	3.0	-15.7	36.1	1.0	-50.9	-13.0	-37.9	
5.715	-64.8	H	3.0	-14.2	36.1	1.0	-49.3	-13.0	-36.3	
7.620	-64.7	H	3.0	-11.4	35.1	1.0	-45.5	-13.0	-32.5	
3.810	-62.0	V	3.0	-14.5	36.1	1.0	-49.7	-13.0	-36.7	
5.715	-64.4	V	3.0	-14.0	36.1	1.0	-49.1	-13.0	-36.1	
7.620	-64.2	V	3.0	-11.0	35.1	1.0	-45.1	-13.0	-32.1	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/27/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 25, 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
Low Channel (1860MHz)										
3.720	-63.7	H	3.0	-16.9	36.2	1.0	-52.1	-13.0	-39.1	
5.580	-63.6	H	3.0	-13.2	36.1	1.0	-48.3	-13.0	-35.3	
7.440	-65.4	H	3.0	-12.3	35.2	1.0	-46.5	-13.0	-33.5	
3.720	-64.2	V	3.0	-17.0	36.2	1.0	-52.2	-13.0	-39.2	
5.580	-64.9	V	3.0	-14.7	36.1	1.0	-49.9	-13.0	-36.9	
7.440	-65.5	V	3.0	-12.5	35.2	1.0	-46.6	-13.0	-33.6	
Mid Channel (1882.5MHz)										
3.765	-62.6	H	3.0	-15.7	36.2	1.0	-50.9	-13.0	-37.9	
5.648	-64.5	H	3.0	-14.0	36.1	1.0	-49.1	-13.0	-36.1	
7.530	-65.1	H	3.0	-11.9	35.1	1.0	-46.0	-13.0	-33.0	
3.765	-63.3	V	3.0	-16.0	36.2	1.0	-51.1	-13.0	-38.1	
5.648	-64.0	V	3.0	-13.7	36.1	1.0	-48.8	-13.0	-35.8	
7.530	-64.7	V	3.0	-11.6	35.1	1.0	-45.7	-13.0	-32.7	
High Channel (1905MHz)										
3.810	-63.5	H	3.0	-16.5	36.1	1.0	-51.7	-13.0	-38.7	
5.715	-65.4	H	3.0	-14.8	36.1	1.0	-49.9	-13.0	-36.9	
7.620	-65.3	H	3.0	-12.0	35.1	1.0	-46.1	-13.0	-33.1	
3.810	-62.7	V	3.0	-15.2	36.1	1.0	-50.4	-13.0	-37.4	
5.715	-65.0	V	3.0	-14.6	36.1	1.0	-49.7	-13.0	-36.7	
7.620	-64.9	V	3.0	-11.7	35.1	1.0	-45.8	-13.0	-32.8	

Rev. 05.21.15

10.7.9. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/26/15
Test Engineer: T Wang
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-amplifer

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)										
1.638	-64.7	H	3.0	-23.3	37.8	1.0	-60.1	-13.0	-47.1	
2.457	-64.3	H	3.0	-21.2	36.7	1.0	-56.9	-13.0	-43.9	
3.276	-64.4	H	3.0	-18.5	36.5	1.0	-54.0	-13.0	-41.0	
1.638	-64.6	V	3.0	-22.8	37.8	1.0	-59.7	-13.0	-46.7	
2.457	-64.7	V	3.0	-20.8	36.7	1.0	-56.5	-13.0	-43.5	
3.276	-64.2	V	3.0	-18.4	36.5	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 #: 15U20162											
Date: 05/26/15											
Test Engineer: T Wang											
Configuration: EUT only											
Mode: LTE Band 26 (90S), 10MHz 16QAM											
Test Equipment:											
Substitution: Horn T59 Substitution, and 8ft SMA Cable											
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes	
Mid Channel (819MHz)											
1.638	-65.0	H	3.0	-23.6	37.8	1.0	-60.4	-13.0	-47.4		
2.457	-64.9	H	3.0	-21.8	36.7	1.0	-57.5	-13.0	-44.5		
3.276	-65.1	H	3.0	-19.2	36.5	1.0	-54.7	-13.0	-41.7		
1.638	-65.2	V	3.0	-23.4	37.8	1.0	-60.3	-13.0	-47.3		
2.457	-65.3	V	3.0	-21.4	36.7	1.0	-57.1	-13.0	-44.1		
3.276	-65.0	V	3.0	-19.2	36.5	1.0	-54.7	-13.0	-41.7		
Rev. 05.21.15											

10.7.10. LTE BAND 30

QPSK EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/26/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 30, 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 (2310MHz)										
4.620	-70.2	H	3.0	-16.4	37.9	1.0	-53.3	-40.0	-13.3	
6.931	-72.1	H	3.0	-13.5	36.5	1.0	-48.9	-40.0	-8.9	
9.240	-71.2	H	3.0	-9.7	34.9	1.0	-43.5	-40.0	-3.5	
4.620	-69.9	V	3.0	-16.2	37.9	1.0	-53.1	-40.0	-13.1	
6.931	-71.4	V	3.0	-11.9	36.5	1.0	-47.4	-40.0	-7.4	
9.240	-70.9	V	3.0	-9.1	34.9	1.0	-43.0	-40.0	-3.0	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/26/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 30, 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 (2310MHz)										
4.620	-71.0	H	3.0	-17.2	37.9	1.0	-54.1	-40.0	-14.1	
6.931	-72.4	H	3.0	-13.8	36.5	1.0	-49.2	-40.0	-9.2	
9.240	-71.6	H	3.0	-10.1	34.9	1.0	-43.9	-40.0	-3.9	
4.620	-70.7	V	3.0	-17.0	37.9	1.0	-53.9	-40.0	-13.9	
6.931	-72.0	V	3.0	-12.5	36.5	1.0	-48.0	-40.0	-8.0	
9.240	-71.5	V	3.0	-9.7	34.9	1.0	-43.6	-40.0	-3.6	

Rev: 05.21.15

10.7.11. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 41, 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
Low Channel (2506MHz)										
5.012	-62.8	H	3.0	-13.4	36.2	1.0	48.7	-25.0	-23.7	
7.518	-64.1	H	3.0	-10.9	35.1	1.0	45.0	-25.0	-20.0	
10.024	-65.8	H	3.0	-10.3	33.3	1.0	42.6	-25.0	-17.6	
5.012	-63.3	V	3.0	-14.0	36.2	1.0	49.3	-25.0	-24.3	
7.518	-64.2	V	3.0	-11.1	35.1	1.0	45.2	-25.0	-20.2	
10.024	-65.2	V	3.0	-9.8	33.3	1.0	42.2	-25.0	-17.2	
Mid Channel (2593MHz)										
5.186	-63.6	H	3.0	-13.9	36.3	1.0	49.2	-25.0	-24.2	
7.779	-64.0	H	3.0	-10.6	34.9	1.0	44.5	-25.0	-19.5	
10.372	-65.5	H	3.0	-9.8	33.1	1.0	42.0	-25.0	-17.0	
5.186	-63.6	V	3.0	-14.1	36.3	1.0	49.4	-25.0	-24.4	
7.779	-64.5	V	3.0	-11.2	34.9	1.0	45.1	-25.0	-20.1	
10.372	-66.0	V	3.0	-10.5	33.1	1.0	42.7	-25.0	-17.7	
High Channel (2680MHz)										
5.360	-64.3	H	3.0	-14.3	36.2	1.0	49.5	-25.0	-24.5	
8.040	-63.5	H	3.0	-9.8	34.8	1.0	43.6	-25.0	-18.6	
10.720	-65.2	H	3.0	-9.4	32.9	1.0	41.3	-25.0	-16.3	
5.360	-64.1	V	3.0	-14.3	36.2	1.0	49.5	-25.0	-24.5	
8.040	-64.2	V	3.0	-10.6	34.8	1.0	44.4	-25.0	-19.4	
10.720	-65.3	V	3.0	-9.8	32.9	1.0	41.7	-25.0	-16.7	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/27/15
 Test Engineer: T Wang
 Configuration: EUT only
 Mode: LTE Band 41, 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
Low Channel (2506MHz)										
5.012	-63.5	H	3.0	-14.1	36.2	1.0	-49.4	-25.0	-24.4	
7.518	-64.6	H	3.0	-11.4	35.1	1.0	-45.5	-25.0	-20.5	
10.024	-66.2	H	3.0	-10.7	33.3	1.0	-43.0	-25.0	-18.0	
5.012	-64.0	V	3.0	-14.7	36.2	1.0	-50.0	-25.0	-25.0	
7.518	-64.8	V	3.0	-11.7	35.1	1.0	-45.8	-25.0	-20.8	
10.024	-65.6	V	3.0	-10.2	33.3	1.0	-42.6	-25.0	-17.6	
Mid Channel (2593MHz)										
5.186	-64.4	H	3.0	-14.7	36.3	1.0	-50.0	-25.0	-25.0	
7.779	-64.7	H	3.0	-11.3	34.9	1.0	-45.2	-25.0	-20.2	
10.372	-66.0	H	3.0	-10.3	33.1	1.0	-42.5	-25.0	-17.5	
5.186	-64.2	V	3.0	-14.7	36.3	1.0	-50.0	-25.0	-25.0	
7.779	-65.1	V	3.0	-11.8	34.9	1.0	-45.7	-25.0	-20.7	
10.372	-66.3	V	3.0	-10.8	33.1	1.0	-43.0	-25.0	-18.0	
High Channel (2680MHz)										
5.360	-65.0	H	3.0	-15.0	36.2	1.0	-50.2	-25.0	-25.2	
8.040	-64.5	H	3.0	-10.8	34.8	1.0	-44.6	-25.0	-19.6	
10.720	-65.8	H	3.0	-10.0	32.9	1.0	-41.9	-25.0	-16.9	
5.360	-64.7	V	3.0	-14.9	36.2	1.0	-50.1	-25.0	-25.1	
8.040	-64.9	V	3.0	-11.3	34.8	1.0	-45.1	-25.0	-20.1	
10.720	-65.7	V	3.0	-10.2	32.9	1.0	-42.1	-25.0	-17.1	

Rev. 05.21.15

10.8. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1634 (UAT)

10.8.1. LTE BAND 2

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
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
Low Channel (1860MHz)										
3.72	-67.5	H	3.0	-20.7	36.2	1.0	-55.9	-13.0	-42.9	
5.56	-70.8	H	3.0	-20.4	36.1	1.0	-55.6	-13.0	-42.6	
7.44	-69.6	H	3.0	-16.5	35.2	1.0	-50.7	-13.0	-37.7	
3.72	-66.9	V	3.0	-19.7	36.2	1.0	-54.9	-13.0	-41.9	
5.58	-67.1	V	3.0	-17.0	36.1	1.0	-52.1	-13.0	-39.1	
7.44	-69.3	V	3.0	-16.2	35.2	1.0	-50.4	-13.0	-37.4	
Mid Channel (1880MHz)										
3.76	-67.3	H	3.0	-20.5	36.2	1.0	-55.6	-13.0	-42.6	
5.58	-68.6	H	3.0	-18.3	36.1	1.0	-53.4	-13.0	-40.4	
7.44	-69.2	H	3.0	-16.1	35.2	1.0	-50.3	-13.0	-37.3	
3.76	-65.7	V	3.0	-18.4	36.2	1.0	-53.5	-13.0	-40.5	
5.58	-70.6	V	3.0	-20.5	36.1	1.0	-55.6	-13.0	-42.6	
7.44	-69.2	V	3.0	-16.1	35.2	1.0	-50.3	-13.0	-37.3	
High Channel (1900MHz)										
3.81	-65.9	H	3.0	-18.9	36.1	1.0	-54.1	-13.0	-41.1	
5.70	-69.5	H	3.0	-18.9	36.1	1.0	-54.0	-13.0	-41.0	
7.60	-70.6	H	3.0	-17.4	35.1	1.0	-51.4	-13.0	-38.4	
3.81	-66.9	V	3.0	-19.4	36.1	1.0	-54.6	-13.0	-41.6	
5.70	-68.0	V	3.0	-17.6	36.1	1.0	-52.7	-13.0	-39.7	
7.60	-70.6	V	3.0	-17.5	35.1	1.0	-51.5	-13.0	-38.5	

Rev. 05.21.15

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

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

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
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
Low Channel (1860MHz)										
3.72	-66.6	H	3.0	-19.8	36.2	1.0	-55.0	-13.0	-42.0	
5.56	-68.8	H	3.0	-18.4	36.1	1.0	-53.6	-13.0	-40.6	
7.44	-69.6	H	3.0	-16.5	35.2	1.0	-50.7	-13.0	-37.7	
3.72	-66.9	H	3.0	-20.1	36.2	1.0	-55.3	-13.0	-42.3	
5.58	-66.5	H	3.0	-16.1	36.1	1.0	-51.2	-13.0	-38.2	
7.44	-69.3	V	3.0	-16.2	35.2	1.0	-50.4	-13.0	-37.4	
Mid Channel (1880MHz)										
3.76	-66.3	H	3.0	-19.5	36.2	1.0	-54.6	-13.0	-41.6	
5.58	-68.6	H	3.0	-18.3	36.1	1.0	-53.4	-13.0	-40.4	
7.44	-69.2	H	3.0	-16.1	35.2	1.0	-50.3	-13.0	-37.3	
3.76	-65.7	H	3.0	-18.8	36.2	1.0	-54.0	-13.0	-41.0	
5.58	-68.6	H	3.0	-18.2	36.1	1.0	-53.4	-13.0	-40.4	
7.44	-69.2	V	3.0	-16.1	35.2	1.0	-50.3	-13.0	-37.3	
High Channel (1900MHz)										
3.81	-66.1	H	3.0	-19.1	36.1	1.0	-54.3	-13.0	-41.3	
5.70	-69.0	H	3.0	-18.4	36.1	1.0	-53.5	-13.0	-40.5	
7.60	-70.6	H	3.0	-17.4	35.1	1.0	-51.4	-13.0	-38.4	
3.81	-63.9	H	3.0	-16.9	36.1	1.0	-52.1	-13.0	-39.1	
5.70	-67.0	H	3.0	-16.4	36.1	1.0	-51.5	-13.0	-38.5	
7.60	-70.1	V	3.0	-16.9	35.1	1.0	-51.0	-13.0	-38.0	

Rev. 05.21.15

10.8.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali.P
 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
Low Channel (1720MHz)										
3.44	-63.7	H	3.0	-17.5	36.4	1.0	-52.9	-13.0	-39.9	
5.16	-61.7	H	3.0	-12.0	36.3	1.0	-47.3	-13.0	-34.3	
6.88	-63.0	H	3.0	-10.5	35.6	1.0	-45.1	-13.0	-32.1	
3.44	-63.5	V	3.0	-17.2	36.4	1.0	-52.6	-13.0	-39.6	
5.16	-62.5	V	3.0	-13.0	36.3	1.0	-48.3	-13.0	-35.3	
6.88	-64.1	V	3.0	-11.7	35.6	1.0	-46.2	-13.0	-33.2	
Mid Channel (1732.5MHz)										
3.46	-64.1	H	3.0	-17.8	36.4	1.0	-53.2	-13.0	-40.2	
5.20	-62.8	H	3.0	-13.1	36.3	1.0	-48.3	-13.0	-35.3	
6.93	-63.9	H	3.0	-11.3	35.5	1.0	-45.9	-13.0	-32.9	
3.46	-64.1	V	3.0	-17.7	36.4	1.0	-53.1	-13.0	-40.1	
5.20	-60.8	V	3.0	-11.3	36.3	1.0	-46.6	-13.0	-33.6	
6.93	-62.0	V	3.0	-9.5	35.5	1.0	-44.0	-13.0	-31.0	
High Channel (1745MHz)										
3.49	-63.6	H	3.0	-17.3	36.4	1.0	-52.7	-13.0	-39.7	
5.24	-63.5	H	3.0	-13.7	36.3	1.0	-49.0	-13.0	-36.0	
6.98	-63.5	H	3.0	-10.8	35.5	1.0	-45.3	-13.0	-32.3	
3.49	-62.0	V	3.0	-15.5	36.4	1.0	-50.9	-13.0	-37.9	
5.24	-60.1	V	3.0	-10.5	36.3	1.0	-45.8	-13.0	-32.8	
6.98	-62.0	V	3.0	-9.4	35.5	1.0	-43.9	-13.0	-30.9	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20162
 Project #: 05/30/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 4, 20MHz 16QAM
 Mode:

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
Low Channel (1720MHz)										
3.44	-64.0	H	3.0	-17.8	36.4	1.0	-53.2	-13.0	-40.2	
5.16	-63.2	H	3.0	-13.5	36.3	1.0	-48.8	-13.0	-35.8	
6.88	-63.5	H	3.0	-11.0	35.6	1.0	-45.6	-13.0	-32.6	
3.44	-64.3	V	3.0	-18.0	36.4	1.0	-53.4	-13.0	-40.4	
5.16	-64.5	V	3.0	-15.0	36.3	1.0	-50.3	-13.0	-37.3	
6.88	-68.3	V	3.0	-15.9	35.6	1.0	-50.4	-13.0	-37.4	
Mid Channel (1732.5MHz)										
3.47	-64.4	H	3.0	-18.1	36.4	1.0	-53.5	-13.0	-40.5	
5.20	-64.2	H	3.0	-14.5	36.3	1.0	-49.7	-13.0	-36.7	
6.93	-64.2	H	3.0	-11.6	35.5	1.0	-46.2	-13.0	-33.2	
3.47	-64.5	V	3.0	-18.1	36.4	1.0	-53.5	-13.0	-40.5	
5.20	-62.0	V	3.0	-12.5	36.3	1.0	-47.8	-13.0	-34.8	
6.93	-64.6	V	3.0	-12.1	35.5	1.0	-46.6	-13.0	-33.6	
High Channel (1745MHz)										
3.49	-64.5	H	3.0	-18.2	36.4	1.0	-53.6	-13.0	-40.6	
5.24	-63.5	H	3.0	-13.7	36.3	1.0	-49.0	-13.0	-36.0	
6.98	-63.8	H	3.0	-11.1	35.5	1.0	-45.6	-13.0	-32.6	
3.49	-64.6	V	3.0	-18.1	36.4	1.0	-53.5	-13.0	-40.5	
5.24	-62.2	V	3.0	-12.6	36.3	1.0	-47.9	-13.0	-34.9	
6.98	-63.3	V	3.0	-10.7	35.5	1.0	-45.2	-13.0	-32.2	

Rev. 05.21.15

10.8.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 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
Low Channel (829MHz)										
1.66	-65.7	H	3.0	-24.2	37.8	1.0	-61.0	-13.0	-48.0	
5.81	-66.7	H	3.0	-15.9	36.0	1.0	-51.0	-13.0	-38.0	
7.49	-67.9	H	3.0	-14.7	35.1	1.0	-48.9	-13.0	-35.9	
2.51	-65.7	V	3.0	-21.5	36.4	1.0	-56.9	-13.0	-43.9	
3.27	-66.0	V	3.0	-20.2	36.5	1.0	-55.7	-13.0	-42.7	
6.62	-67.0	V	3.0	-15.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Channel (836.5MHz)										
4.14	-67.0	H	3.0	-19.3	36.0	1.0	-54.4	-13.0	-41.4	
5.84	-66.0	H	3.0	-15.2	36.0	1.0	-50.2	-13.0	-37.2	
7.49	-67.7	H	3.0	-14.5	35.1	1.0	-48.7	-13.0	-35.7	
1.66	-65.2	V	3.0	-23.4	37.8	1.0	-60.3	-13.0	-47.3	
3.32	-66.1	V	3.0	-20.1	36.5	1.0	-55.6	-13.0	-42.6	
5.02	-66.0	V	3.0	-16.7	36.2	1.0	-51.9	-13.0	-38.9	
High Channel (844MHz)										
2.53	-66.0	H	3.0	-22.7	36.4	1.0	-58.0	-13.0	-45.0	
4.24	-66.8	H	3.0	-19.0	36.1	1.0	-54.0	-13.0	-41.0	
6.78	-66.3	H	3.0	-14.0	35.6	1.0	-48.6	-13.0	-35.6	
1.66	-64.3	V	3.0	-22.5	37.8	1.0	-59.3	-13.0	-46.3	
3.41	-65.5	V	3.0	-19.3	36.4	1.0	-54.7	-13.0	-41.7	
5.91	-65.3	V	3.0	-14.6	36.0	1.0	-49.6	-13.0	-36.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 5, 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
Low Channel (829MHz)										
1.66	-65.2	H	3.0	-23.8	37.8	1.0	-60.6	-13.0	-47.6	
4.82	-66.6	H	3.0	-15.9	36.2	1.0	-51.1	-13.0	-38.1	
8.31	-67.2	H	3.0	-14.1	34.6	1.0	-47.6	-13.0	-34.6	
2.51	-65.5	V	3.0	-21.3	36.4	1.0	-56.7	-13.0	-43.7	
4.94	-66.4	V	3.0	-20.6	36.2	1.0	-55.8	-13.0	-42.8	
7.47	-67.6	V	3.0	-15.6	35.2	1.0	-49.8	-13.0	-36.8	
Mid Channel (836.5MHz)										
2.51	-65.6	H	3.0	-18.0	36.4	1.0	-53.3	-13.0	-40.3	
4.19	-66.5	H	3.0	-15.7	36.1	1.0	-50.8	-13.0	-37.8	
6.67	-67.0	H	3.0	-13.8	35.6	1.0	-48.4	-13.0	-35.4	
1.66	-65.6	V	3.0	-23.8	37.8	1.0	-60.6	-13.0	-47.6	
3.31	-66.8	V	3.0	-20.8	36.5	1.0	-56.3	-13.0	-43.3	
8.36	-68.0	V	3.0	-18.7	34.5	1.0	-52.2	-13.0	-39.2	
High Channel (844MHz)										
1.68	-65.9	H	3.0	-22.6	37.8	1.0	-59.4	-13.0	-46.4	
2.53	-65.4	H	3.0	-17.6	36.4	1.0	-52.9	-13.0	-39.9	
8.46	-67.7	H	3.0	-15.4	34.5	1.0	-48.8	-13.0	-35.8	
3.34	-66.5	V	3.0	-24.7	36.5	1.0	-60.2	-13.0	-47.2	
5.91	-65.6	V	3.0	-19.3	36.0	1.0	-54.3	-13.0	-41.3	
8.41	-67.6	V	3.0	-16.8	34.5	1.0	-50.3	-13.0	-37.3	

Rev. 05.21.15

10.8.4. LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 7, 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
Low Channel (2510MHz)										
5.02	-69.5	H	3.0	-20.1	36.2	1.0	-55.4	-25.0	-30.4	
12.54	-70.2	H	3.0	-13.9	32.1	1.0	-45.0	-25.0	-20.0	
15.09	-69.3	H	3.0	-13.0	31.8	1.0	-43.8	-25.0	-18.8	
5.01	-66.6	V	3.0	-17.3	36.2	1.0	-52.6	-25.0	-27.6	
7.51	-66.6	V	3.0	-13.5	35.1	1.0	-47.6	-25.0	-22.6	
17.54	-73.2	V	3.0	-17.2	25.1	1.0	-41.3	-25.0	-16.3	
Mid Channel (2535MHz)										
10.12	-70.1	H	3.0	-14.6	33.3	1.0	-46.8	-25.0	-21.8	
12.71	-71.7	H	3.0	-15.5	32.1	1.0	-46.5	-25.0	-21.5	
17.72	-72.7	H	3.0	-16.1	24.6	1.0	-39.7	-25.0	-14.7	
5.09	-67.2	V	3.0	-17.8	36.3	1.0	-53.1	-25.0	-28.1	
7.61	-68.4	V	3.0	-15.2	35.1	1.0	-49.3	-25.0	-24.3	
15.24	-70.1	V	3.0	-14.0	31.4	1.0	-44.4	-25.0	-19.4	
High Channel (2560MHz)										
12.83	-71.1	H	3.0	-14.8	32.1	1.0	-45.9	-25.0	-20.9	
15.36	-70.8	H	3.0	-14.5	31.0	1.0	-44.5	-25.0	-19.5	
17.94	-73.3	H	3.0	-16.7	24.0	1.0	-39.7	-25.0	-14.7	
5.09	-68.4	V	3.0	-19.0	36.3	1.0	-54.3	-25.0	-29.3	
7.64	-65.4	V	3.0	-12.1	35.0	1.0	-46.2	-25.0	-21.2	
10.24	-70.7	V	3.0	-15.3	33.2	1.0	-47.5	-25.0	-22.5	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 7, 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
Low Channel (2510MHz)										
5.09	-68.0	H	3.0	-18.5	36.3	1.0	-53.7	-25.0	-28.7	
12.76	-70.8	H	3.0	-14.5	32.1	1.0	-45.6	-25.0	-20.6	
17.94	-73.4	H	3.0	-16.9	24.0	1.0	-39.9	-25.0	-14.9	
7.64	-65.1	V	3.0	-11.8	35.0	1.0	-45.9	-25.0	-20.9	
10.26	-70.2	V	3.0	-14.8	33.2	1.0	-47.0	-25.0	-22.0	
15.36	-70.7	V	3.0	-14.6	31.0	1.0	-44.7	-25.0	-19.7	
Mid Channel (2535MHz)										
5.07	-67.8	H	3.0	-18.3	36.3	1.0	-53.5	-25.0	-28.5	
10.11	-70.0	H	3.0	-14.4	33.3	1.0	-46.7	-25.0	-21.7	
12.71	-71.4	H	3.0	-15.1	32.1	1.0	-46.2	-25.0	-21.2	
5.07	-66.4	V	3.0	-17.0	36.3	1.0	-52.3	-25.0	-27.3	
7.63	-66.2	V	3.0	-13.0	35.1	1.0	-47.0	-25.0	-22.0	
10.14	-69.4	V	3.0	-14.0	33.3	1.0	-46.3	-25.0	-21.3	
High Channel (2560MHz)										
5.12	-70.7	H	3.0	-21.1	36.3	1.0	-56.4	-25.0	-31.4	
10.07	-70.0	H	3.0	-14.5	33.3	1.0	-46.8	-25.0	-21.8	
15.02	-71.5	H	3.0	-15.2	32.0	1.0	-46.2	-25.0	-21.2	
5.12	-66.4	V	3.0	-17.0	36.3	1.0	-52.3	-25.0	-27.3	
7.68	-66.9	V	3.0	-13.7	35.0	1.0	-47.7	-25.0	-22.7	
17.59	-73.3	V	3.0	-17.3	24.9	1.0	-41.2	-25.0	-16.2	

Rev. 05.21.15

10.8.5. LTE BAND 12

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
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
Low Channel (704MHz)										
2.78	-65.4	H	3.0	-21.0	36.6	1.0	-56.6	-13.0	-43.6	
3.55	-66.5	H	3.0	-20.1	36.3	1.0	-55.4	-13.0	-42.4	
4.96	-66.1	H	3.0	-16.8	36.2	1.0	-52.0	-13.0	-39.0	
1.37	-64.3	V	3.0	-23.4	37.4	1.0	-59.8	-13.0	-46.8	
2.14	-64.8	V	3.0	-22.2	37.5	1.0	-58.8	-13.0	-45.8	
5.64	-66.8	V	3.0	-16.5	36.1	1.0	-51.6	-13.0	-38.6	
Mid Channel (782MHz)										
2.12	-65.1	H	3.0	-22.8	37.6	1.0	-59.4	-13.0	-46.4	
2.80	-66.3	H	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	
4.93	-65.9	H	3.0	-16.7	36.2	1.0	-51.9	-13.0	-38.9	
1.39	-65.1	V	3.0	-24.0	37.5	1.0	-60.5	-13.0	-47.5	
3.51	-66.1	V	3.0	-19.5	36.4	1.0	-54.9	-13.0	-41.9	
6.37	-66.3	V	3.0	-14.7	35.8	1.0	-49.5	-13.0	-36.5	
High Channel (711MHz)										
2.11	-66.1	H	3.0	-23.8	37.6	1.0	-60.4	-13.0	-47.4	
4.24	-67.2	H	3.0	-19.4	36.1	1.0	-54.4	-13.0	-41.4	
7.14	-66.7	H	3.0	-13.9	35.4	1.0	-48.3	-13.0	-35.3	
1.43	-64.7	V	3.0	-23.4	37.6	1.0	-60.0	-13.0	-47.0	
3.53	-66.6	V	3.0	-20.0	36.3	1.0	-55.4	-13.0	-42.4	
5.66	-66.6	V	3.0	-16.3	36.1	1.0	-51.4	-13.0	-38.4	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20162
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 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
Low Channel (704MHz)										
1.37	-65.0	H	3.0	-24.6	37.4	1.0	-61.0	-13.0	-48.0	
4.25	-66.7	H	3.0	-18.8	36.1	1.0	-53.9	-13.0	-40.9	
7.03	-67.4	H	3.0	-14.7	35.5	1.0	-49.2	-13.0	-36.2	
2.81	-65.7	V	3.0	-21.1	36.6	1.0	-56.6	-13.0	-43.6	
3.48	-65.9	V	3.0	-19.4	36.4	1.0	-54.8	-13.0	-41.8	
6.35	-66.3	V	3.0	-14.8	35.8	1.0	-49.6	-13.0	-36.6	
Mid Channel (782MHz)										
1.43	-64.9	H	3.0	-24.1	37.6	1.0	-60.7	-13.0	-47.7	
6.37	-66.7	H	3.0	-15.1	35.8	1.0	-49.8	-13.0	-36.8	
7.10	-66.5	H	3.0	-13.7	35.4	1.0	-48.1	-13.0	-35.1	
2.10	-66.6	V	3.0	-24.2	37.6	1.0	-60.8	-13.0	-47.8	
3.51	-66.3	V	3.0	-19.7	36.4	1.0	-55.1	-13.0	-42.1	
5.62	-66.2	V	3.0	-15.9	36.1	1.0	-51.0	-13.0	-38.0	
High Channel (711MHz)										
1.42	-63.8	H	3.0	-23.1	37.6	1.0	-59.7	-13.0	-46.7	
3.53	-66.3	H	3.0	-19.8	36.3	1.0	-55.2	-13.0	-42.2	
5.73	-66.3	H	3.0	-15.7	36.1	1.0	-50.7	-13.0	-37.7	
2.12	-66.3	V	3.0	-23.8	37.6	1.0	-60.4	-13.0	-47.4	
2.81	-66.2	V	3.0	-21.5	36.6	1.0	-57.1	-13.0	-44.1	
6.37	-66.4	V	3.0	-14.8	35.8	1.0	-49.6	-13.0	-36.6	

Rev. 05.21.15

10.8.6. LTE BAND 13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
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

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (782MHz)										
1.56	-65.2	H	3.0	-23.9	37.9	1.0	-60.8	-40.0	-20.8	
3.11	-66.6	H	3.0	-21.1	36.7	1.0	-56.7	-13.0	-43.7	
7.78	-68.3	H	3.0	-14.9	34.9	1.0	-48.8	-13.0	-35.8	
1.56	-66.4	V	3.0	-24.7	37.9	1.0	-61.6	-40.0	-21.6	
3.87	-66.6	V	3.0	-19.0	36.1	1.0	-54.1	-13.0	-41.1	
5.47	-66.8	V	3.0	-16.8	36.2	1.0	-52.0	-13.0	-39.0	

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

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

Company: 15U20162
 Project #: 05/30/15
 Date: Ali P
 Test Engineer: EUT only
 Configuration: LTE Band 13, 10MHz 16QAM
 Mode:

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

Chamber

Pre-amplifer

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
Mid Channel (782MHz)										
1.56	-64.7	H	3.0	-23.4	37.9	1.0	-60.3	-40.0	-20.3	
3.16	-66.1	H	3.0	-20.4	36.6	1.0	-56.1	-13.0	-43.1	
7.07	-67.3	H	3.0	-14.5	35.4	1.0	-49.0	-13.0	-36.0	
1.56	-64.9	V	3.0	-23.2	37.9	1.0	-60.1	-40.0	-20.1	
2.31	-66.0	V	3.0	-22.8	37.2	1.0	-59.0	-13.0	-46.0	
3.87	-67.8	V	3.0	-20.2	36.1	1.0	-55.3	-13.0	-42.3	

10.8.7. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
Configuration: EUT only
Mode: LTE Band 17, 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
Low Channel (709MHz)										
1.53	-65.2	H	3.0	-23.9	37.9	1.0	-60.8	-13.0	-47.8	
3.11	-66.6	H	3.0	-21.1	36.7	1.0	-56.7	-13.0	-43.7	
7.78	-68.3	H	3.0	-14.9	34.9	1.0	-48.8	-13.0	-35.8	
3.87	-66.4	V	3.0	-18.7	36.1	1.0	-53.8	-13.0	-40.8	
5.47	-66.6	V	3.0	-16.7	36.2	1.0	-51.8	-13.0	-38.8	
6.25	-66.8	V	3.0	-15.4	35.8	1.0	-50.2	-13.0	-37.2	
Mid Channel (710MHz)										
1.43	-65.6	H	3.0	-24.8	37.6	1.0	-61.4	-13.0	-48.4	
2.12	-66.2	H	3.0	-23.9	37.6	1.0	-60.4	-13.0	-47.4	
4.25	-67.2	H	3.0	-19.3	36.1	1.0	-54.4	-13.0	-41.4	
1.39	-65.1	V	3.0	-24.1	37.5	1.0	-60.5	-13.0	-47.5	
2.87	-66.4	V	3.0	-21.7	36.6	1.0	-57.3	-13.0	-44.3	
7.10	-67.1	V	3.0	-14.4	35.4	1.0	-48.8	-13.0	-35.8	
High Channel (711MHz)										
2.16	-66.9	H	3.0	-24.5	37.5	1.0	-61.0	-13.0	-48.0	
3.57	-66.8	H	3.0	-20.3	36.3	1.0	-55.6	-13.0	-42.6	
7.14	-67.4	H	3.0	-14.6	35.4	1.0	-49.0	-13.0	-36.0	
1.43	-65.1	V	3.0	-23.8	37.6	1.0	-60.4	-13.0	-47.4	
4.23	-66.3	V	3.0	-17.9	36.1	1.0	-53.0	-13.0	-40.0	
6.37	-66.6	V	3.0	-15.1	35.8	1.0	-49.9	-13.0	-36.9	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
Configuration: EUT only
Mode: LTE Band 17, 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
Low Channel (709MHz)										
3.55	-66.2	H	3.0	-19.7	36.3	1.0	-55.0	-13.0	-42.0	
5.69	-66.4	H	3.0	-15.9	36.1	1.0	-51.0	-13.0	-38.0	
7.10	-67.1	H	3.0	-14.3	35.4	1.0	-48.8	-13.0	-35.8	
1.44	-65.1	V	3.0	-23.7	37.7	1.0	-60.4	-13.0	-47.4	
2.85	-66.1	V	3.0	-21.4	36.6	1.0	-57.0	-13.0	-44.0	
6.36	-66.3	V	3.0	-14.7	35.8	1.0	-49.5	-13.0	-36.5	
Mid Channel (710MHz)										
2.11	-66.0	H	3.0	-23.7	37.6	1.0	-60.3	-13.0	-47.3	
5.71	-66.9	H	3.0	-16.3	36.1	1.0	-51.4	-13.0	-38.4	
7.09	-67.1	H	3.0	-14.3	35.4	1.0	-48.7	-13.0	-35.7	
1.39	-64.8	V	3.0	-23.7	37.5	1.0	-60.2	-13.0	-47.2	
3.53	-66.5	V	3.0	-19.9	36.3	1.0	-55.2	-13.0	-42.2	
6.41	-66.1	V	3.0	-14.5	35.8	1.0	-49.3	-13.0	-36.3	
High Channel (711MHz)										
2.11	-66.0	H	3.0	-23.7	37.6	1.0	-60.3	-13.0	-47.3	
5.71	-66.9	H	3.0	-16.3	36.1	1.0	-51.4	-13.0	-38.4	
7.08	-67.1	H	3.0	-14.3	35.4	1.0	-48.8	-13.0	-35.8	
1.39	-64.8	V	3.0	-23.7	37.5	1.0	-60.2	-13.0	-47.2	
4.25	-66.9	V	3.0	-18.6	36.1	1.0	-53.6	-13.0	-40.6	
6.41	-66.1	V	3.0	-14.5	35.8	1.0	-49.3	-13.0	-36.3	

Rev. 05.21.15

10.8.8. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 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
Low Channel (1860MHz)										
3.72	-62.4	H	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
5.59	-62.4	H	3.0	-12.0	36.1	1.0	-47.1	-13.0	-34.1	
7.44	-64.4	H	3.0	-11.3	35.2	1.0	-45.5	-13.0	-32.5	
3.72	-62.5	V	3.0	-15.3	36.2	1.0	-50.5	-13.0	-37.5	
5.58	-62.6	V	3.0	-12.4	36.1	1.0	-47.6	-13.0	-34.6	
7.44	-64.5	V	3.0	-11.5	35.2	1.0	-45.6	-13.0	-32.6	
Mid Channel (1882.5MHz)										
3.77	-63.5	H	3.0	-16.6	36.2	1.0	-51.8	-13.0	-38.8	
5.62	-64.6	H	3.0	-14.2	36.1	1.0	-49.3	-13.0	-36.3	
7.53	-62.5	H	3.0	-9.3	35.1	1.0	-43.4	-13.0	-30.4	
3.77	-63.6	V	3.0	-16.3	36.2	1.0	-51.4	-13.0	-38.4	
5.62	-63.6	V	3.0	-13.3	36.1	1.0	-48.4	-13.0	-35.4	
7.53	-64.1	V	3.0	-11.0	35.1	1.0	-45.1	-13.0	-32.1	
High Channel (1905MHz)										
3.81	-62.0	H	3.0	-15.0	36.1	1.0	-50.2	-13.0	-37.2	
5.72	-62.8	H	3.0	-12.2	36.1	1.0	-47.3	-13.0	-34.3	
7.62	-62.3	H	3.0	-9.0	35.1	1.0	-43.1	-13.0	-30.1	
3.81	-61.6	V	3.0	-14.1	36.1	1.0	-49.3	-13.0	-36.3	
5.72	-63.4	V	3.0	-13.0	36.1	1.0	-48.1	-13.0	-35.1	
7.62	-62.3	V	3.0	-9.1	35.1	1.0	-43.2	-13.0	-30.2	

Rev. 05.21.15

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

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

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 25, 20MHz 16QAM

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

Chamber

Pre-amplifer

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
Low Channel (1860MHz)										
3.72	-62.1	H	3.0	-15.3	36.2	1.0	-50.5	-13.0	-37.5	
5.59	-62.5	H	3.0	-12.1	36.1	1.0	-47.2	-13.0	-34.2	
7.44	-63.9	H	3.0	-10.8	35.2	1.0	-44.9	-13.0	-31.9	
3.72	-63.3	V	3.0	-16.1	36.2	1.0	-51.3	-13.0	-38.3	
5.58	-64.2	V	3.0	-14.0	36.1	1.0	-49.1	-13.0	-36.1	
7.44	-63.8	V	3.0	-10.7	35.2	1.0	-44.9	-13.0	-31.9	
Mid Channel (1882.5MHz)										
3.77	-62.1	H	3.0	-15.2	36.2	1.0	-50.4	-13.0	-37.4	
5.62	-64.5	H	3.0	-14.0	36.1	1.0	-49.1	-13.0	-36.1	
7.53	-63.7	H	3.0	-10.5	35.1	1.0	-44.6	-13.0	-31.6	
3.77	-62.5	V	3.0	-15.1	36.2	1.0	-50.3	-13.0	-37.3	
5.62	-62.9	V	3.0	-12.6	36.1	1.0	-47.7	-13.0	-34.7	
7.53	-64.7	V	3.0	-11.6	35.1	1.0	-45.7	-13.0	-32.7	
High Channel (1905MHz)										
3.81	-61.0	H	3.0	-14.0	36.1	1.0	-49.1	-13.0	-36.1	
5.72	-64.7	H	3.0	-14.1	36.1	1.0	-49.2	-13.0	-36.2	
7.62	-65.9	H	3.0	-12.6	35.1	1.0	-46.7	-13.0	-33.7	
3.81	-62.9	V	3.0	-15.5	36.1	1.0	-50.6	-13.0	-37.6	
5.72	-63.8	V	3.0	-13.4	36.1	1.0	-48.5	-13.0	-35.5	
7.62	-63.3	V	3.0	-10.1	35.1	1.0	-44.2	-13.0	-31.2	

Rev. 05.21.15

10.8.9. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
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
Mid Channel (819MHz)										
2.46	-66.3	H	3.0	-23.2	36.7	1.0	-58.8	-13.0	-45.8	
3.26	-65.7	H	3.0	-19.9	36.5	1.0	-55.4	-13.0	-42.4	
7.35	-67.1	H	3.0	-14.1	35.2	1.0	-48.4	-13.0	-35.4	
1.66	-65.5	V	3.0	-23.7	37.8	1.0	-60.6	-13.0	-47.6	
4.09	-66.7	V	3.0	-18.5	36.0	1.0	-53.5	-13.0	-40.5	
8.19	-68.1	V	3.0	-14.3	34.7	1.0	-48.0	-13.0	-35.0	

Rev. 05.21.15

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

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

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
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	-65.4	H	3.0	-24.0	37.8	1.0	-60.9	-13.0	-47.9	
3.29	-65.9	H	3.0	-20.0	36.5	1.0	-55.5	-13.0	-42.5	
7.35	-67.5	H	3.0	-14.5	35.2	1.0	-48.7	-13.0	-35.7	
2.47	-66.0	V	3.0	-21.9	36.6	1.0	-57.5	-13.0	-44.5	
5.74	-66.6	V	3.0	-16.1	36.0	1.0	-51.2	-13.0	-38.2	
8.19	-68.5	V	3.0	-14.8	34.7	1.0	-48.4	-13.0	-35.4	

Rev. 05.21.15

10.8.10. LTE BAND 30

QPSK EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 30, 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 (2310MHz)										
4.63	-66.0	H	3.0	-12.2	37.9	1.0	-49.1	-40.0	-9.1	
6.93	-68.9	H	3.0	-10.3	36.5	1.0	-45.8	-40.0	-5.8	
9.24	-69.9	H	3.0	-8.4	34.9	1.0	-42.2	-40.0	-2.2	
4.43	-66.3	V	3.0	-11.9	37.8	1.0	-48.7	-40.0	-8.7	
6.93	-68.2	V	3.0	-8.7	36.5	1.0	-44.2	-40.0	-4.2	
9.31	-69.9	V	3.0	-8.0	34.8	1.0	-41.9	-40.0	-1.9	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 30 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 30, 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 (2310MHz)										
4.63	-66.2	H	3.0	-12.9	37.9	1.0	-49.9	-40.0	-9.9	
6.93	-69.2	H	3.0	-10.6	34.9	1.0	-44.4	-40.0	-4.4	
9.24	-69.9	H	3.0	-7.4	36.0	1.0	-42.5	-40.0	-2.5	
4.58	-66.3	V	3.0	-12.9	37.8	1.0	-49.7	-40.0	-9.7	
6.96	-68.6	V	3.0	-10.0	34.8	1.0	-43.8	-40.0	-3.8	
9.24	-69.8	V	3.0	-8.7	34.5	1.0	-42.2	-40.0	-2.2	

Rev. 05.21.15

10.8.11. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20162
 Date: 05/30/15
 Test Engineer: Ali P
 Configuration: EUT only
 Mode: LTE Band 41, 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
Low Channel (2506MHz)										
1.44	-64.6	H	3.0	-23.8	37.7	1.0	-60.4	-25.0	-35.4	
2.12	-66.3	H	3.0	-24.0	37.6	1.0	-60.6	-25.0	-35.6	
4.23	-66.6	H	3.0	-18.7	36.1	1.0	-53.8	-25.0	-28.8	
2.81	-66.1	V	3.0	-21.4	36.6	1.0	-57.0	-25.0	-32.0	
3.53	-66.2	V	3.0	-19.6	36.3	1.0	-55.0	-25.0	-30.0	
4.96	-65.8	V	3.0	-16.6	36.2	1.0	-51.8	-25.0	-26.8	
Mid Channel (2593MHz)										
1.39	-64.5	H	3.0	-24.0	37.5	1.0	-60.5	-25.0	-35.5	
2.12	-65.7	H	3.0	-23.4	37.6	1.0	-60.0	-25.0	-35.0	
2.85	-65.9	H	3.0	-21.3	36.6	1.0	-56.9	-25.0	-31.9	
3.53	-66.2	V	3.0	-19.6	36.3	1.0	-54.9	-25.0	-29.9	
4.94	-66.5	V	3.0	-17.3	36.2	1.0	-52.5	-25.0	-27.5	
5.69	-66.8	V	3.0	-16.4	36.1	1.0	-51.5	-25.0	-26.5	
High Channel (2680MHz)										
2.12	-66.3	H	3.0	-24.0	37.6	1.0	-60.6	-25.0	-35.6	
3.56	-66.3	H	3.0	-19.9	36.3	1.0	-55.2	-25.0	-30.2	
10.72	-67.5	H	3.0	-11.7	32.9	1.0	-43.6	-25.0	-18.6	
1.39	-64.0	V	3.0	-22.9	37.5	1.0	-59.4	-25.0	-34.4	
2.81	-66.4	V	3.0	-21.7	36.6	1.0	-57.3	-25.0	-32.3	
10.72	-67.9	V	3.0	-12.4	32.9	1.0	-44.3	-25.0	-19.3	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20162
Date: 05/30/15
Test Engineer: Ali P
Configuration: EUT only
Mode: LTE Band 41, 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
Low Channel (2506MHz)										
2.83	-66.8	H	3.0	-22.2	36.6	1.0	-57.8	-25.0	-32.8	
6.38	-66.2	H	3.0	-14.5	35.8	1.0	-49.3	-25.0	-24.3	
10.02	-66.7	H	3.0	-11.2	33.3	1.0	-43.5	-25.0	-18.5	
1.42	-63.8	V	3.0	-22.6	37.6	1.0	-59.1	-25.0	-34.1	
3.58	-66.3	V	3.0	-19.5	36.3	1.0	-54.9	-25.0	-29.9	
5.70	-66.4	V	3.0	-16.1	36.1	1.0	-51.1	-25.0	-26.1	
Mid Channel (2593MHz)										
2.15	-65.8	H	3.0	-23.4	37.5	1.0	-59.9	-25.0	-34.9	
2.85	-66.1	H	3.0	-21.4	36.6	1.0	-57.0	-25.0	-32.0	
4.96	-66.4	H	3.0	-17.2	36.2	1.0	-52.4	-25.0	-27.4	
1.42	-64.7	V	3.0	-23.4	37.6	1.0	-60.0	-25.0	-35.0	
3.55	-66.1	V	3.0	-19.4	36.3	1.0	-54.7	-25.0	-29.7	
4.26	-66.9	V	3.0	-18.5	36.1	1.0	-53.6	-25.0	-28.6	
High Channel (2680MHz)										
5.36	-65.9	H	3.0	-15.9	36.2	1.0	-51.1	-25.0	-26.1	
8.04	-66.3	H	3.0	-12.6	34.8	1.0	-46.4	-25.0	-21.4	
10.72	-66.4	H	3.0	-10.6	32.9	1.0	-42.5	-25.0	-17.5	
5.36	-65.2	V	3.0	-15.4	36.2	1.0	-50.6	-25.0	-25.6	
8.04	-66.5	V	3.0	-12.9	34.8	1.0	-46.7	-25.0	-21.7	
10.72	-67.0	V	3.0	-11.5	32.9	1.0	-43.4	-25.0	-18.4	

Rev. 05.21.15

10.9. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1687 (LAT)

10.9.1. LTE BAND 2

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/27/15
 Test Engineer: Ali.P
 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
Low Channel (1860MHz)										
3.72	-62.5	H	3.0	-15.7	36.2	1.0	-50.9	-13.0	-37.9	
5.58	-59.0	H	3.0	-8.6	36.1	1.0	-43.7	-13.0	-30.7	
7.44	-64.3	H	3.0	-11.2	35.2	1.0	-45.4	-13.0	-32.4	
3.72	-62.8	V	3.0	-15.6	36.2	1.0	-50.9	-13.0	-37.9	
5.58	-63.2	V	3.0	-13.0	36.1	1.0	-48.2	-13.0	-35.2	
7.44	-65.2	V	3.0	-12.2	35.2	1.0	-46.3	-13.0	-33.3	
Mid Channel (1880MHz)										
3.76	-63.2	H	3.0	-16.3	36.2	1.0	-51.5	-13.0	-38.5	
5.64	-62.4	H	3.0	-11.9	36.1	1.0	-47.0	-13.0	-34.0	
7.52	-64.6	H	3.0	-11.4	35.1	1.0	-45.5	-13.0	-32.5	
3.76	-62.3	V	3.0	-15.0	36.2	1.0	-50.2	-13.0	-37.2	
5.64	-64.4	V	3.0	-14.2	36.1	1.0	-49.3	-13.0	-36.3	
7.52	-65.2	V	3.0	-12.1	35.1	1.0	-46.2	-13.0	-33.2	
High Channel (1900MHz)										
3.80	-63.5	H	3.0	-16.5	36.2	1.0	-51.7	-13.0	-38.7	
5.70	-62.5	H	3.0	-11.9	36.1	1.0	-47.0	-13.0	-34.0	
7.60	-64.7	H	3.0	-11.5	35.1	1.0	-45.5	-13.0	-32.5	
3.80	-63.4	V	3.0	-16.0	36.2	1.0	-51.1	-13.0	-38.1	
5.70	-64.2	V	3.0	-13.8	36.1	1.0	-48.9	-13.0	-35.9	
7.60	-63.9	V	3.0	-10.7	35.1	1.0	-44.8	-13.0	-31.8	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/27/15
 Test Engineer: Ali.P
 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
Low Channel (1860MHz)										
3.72	-63.5	H	3.0	-16.7	36.2	1.0	-51.9	-13.0	-38.9	
5.58	-60.1	H	3.0	-9.7	36.1	1.0	-44.8	-13.0	-31.8	
7.44	-64.9	H	3.0	-11.8	35.2	1.0	-46.0	-13.0	-33.0	
3.72	-63.8	V	3.0	-16.6	36.2	1.0	-51.8	-13.0	-36.8	
5.58	-64.2	V	3.0	-14.1	36.1	1.0	-49.2	-13.0	-36.2	
7.44	-65.7	V	3.0	-12.7	35.2	1.0	-46.8	-13.0	-33.8	
Mid Channel (1880MHz)										
3.76	-64.0	H	3.0	-17.1	36.2	1.0	-52.3	-13.0	-39.3	
5.64	-63.1	H	3.0	-12.6	36.1	1.0	-47.7	-13.0	-34.7	
7.52	-65.2	H	3.0	-12.0	35.1	1.0	-46.1	-13.0	-33.1	
3.76	-63.2	V	3.0	-15.9	36.2	1.0	-51.1	-13.0	-38.1	
5.64	-65.0	V	3.0	-14.7	36.1	1.0	-49.8	-13.0	-36.8	
7.52	-65.6	V	3.0	-12.5	35.1	1.0	-46.6	-13.0	-33.6	
High Channel (1900MHz)										
3.80	-64.2	H	3.0	-17.2	36.2	1.0	-52.4	-13.0	-39.4	
5.70	-63.2	H	3.0	-12.6	36.1	1.0	-47.7	-13.0	-34.7	
7.60	-65.3	H	3.0	-12.1	35.1	1.0	-46.1	-13.0	-33.1	
3.80	-64.2	V	3.0	-16.8	36.2	1.0	-51.9	-13.0	-38.9	
5.70	-64.9	V	3.0	-14.5	36.1	1.0	-49.6	-13.0	-36.6	
7.60	-64.8	V	3.0	-11.6	35.1	1.0	-45.7	-13.0	-32.7	

Rev. 05.21.15

10.9.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/27/15
Test Engineer: Ali.P
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
Low Channel (1720MHz)										
3.44	-64.7	H	3.0	-18.5	36.4	1.0	-53.9	-13.0	-40.9	
5.16	-63.3	H	3.0	-13.6	36.3	1.0	-48.9	-13.0	-35.9	
6.88	-65.2	H	3.0	-12.7	35.6	1.0	-47.3	-13.0	-34.3	
3.44	-65.0	V	3.0	-18.7	36.4	1.0	-54.1	-13.0	-41.1	
5.16	-64.5	V	3.0	-15.1	36.3	1.0	-50.3	-13.0	-37.3	
6.88	-65.2	V	3.0	-12.8	35.6	1.0	-47.3	-13.0	-34.3	
Mid Channel (1732.5MHz)										
3.45	-64.9	H	3.0	-18.7	36.4	1.0	-54.1	-13.0	-41.1	
5.20	-64.0	H	3.0	-14.3	36.3	1.0	-49.5	-13.0	-36.5	
6.93	-65.1	H	3.0	-12.5	35.5	1.0	-47.1	-13.0	-34.1	
3.45	-65.2	V	3.0	-18.8	36.4	1.0	-54.2	-13.0	-41.2	
5.20	-62.0	V	3.0	-12.5	36.3	1.0	-47.8	-13.0	-34.8	
6.93	-64.5	V	3.0	-12.0	35.5	1.0	-46.5	-13.0	-33.5	
High Channel (1745MHz)										
3.49	-65.4	H	3.0	-19.1	36.4	1.0	-54.5	-13.0	-41.5	
5.24	-64.8	H	3.0	-15.0	36.3	1.0	-50.3	-13.0	-37.3	
6.98	-64.8	H	3.0	-12.1	35.5	1.0	-46.6	-13.0	-33.6	
3.49	-64.7	V	3.0	-18.2	36.4	1.0	-53.5	-13.0	-40.5	
5.24	-61.4	V	3.0	-11.8	36.3	1.0	-47.1	-13.0	-34.1	
6.98	-64.2	V	3.0	-11.6	35.5	1.0	-46.1	-13.0	-33.1	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/27/15
Test Engineer: Ali.P
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
Low Channel (1720MHz)										
3.44	-65.2	H	3.0	-19.0	36.4	1.0	-54.4	-13.0	-41.4	
5.16	-64.0	H	3.0	-14.3	36.3	1.0	-49.6	-13.0	-36.6	
6.88	-65.7	H	3.0	-13.2	35.6	1.0	-47.8	-13.0	-34.8	
3.44	-65.4	V	3.0	-19.1	36.4	1.0	-54.5	-13.0	-41.5	
5.16	-65.2	V	3.0	-15.8	36.3	1.0	-51.0	-13.0	-38.0	
6.88	-65.7	V	3.0	-13.3	35.6	1.0	-47.8	-13.0	-34.8	
Mid Channel (1732.5MHz)										
3.45	-65.6	H	3.0	-19.4	36.4	1.0	-54.8	-13.0	-41.8	
5.20	-64.9	H	3.0	-15.2	36.3	1.0	-50.4	-13.0	-37.4	
6.93	-65.6	H	3.0	-13.0	35.5	1.0	-47.6	-13.0	-34.6	
3.45	-65.3	V	3.0	-18.9	36.4	1.0	-54.3	-13.0	-41.3	
5.20	-62.8	V	3.0	-13.3	36.3	1.0	-48.6	-13.0	-35.6	
6.93	-65.2	V	3.0	-12.7	35.5	1.0	-47.2	-13.0	-34.2	
High Channel (1745MHz)										
3.49	-65.8	H	3.0	-19.5	36.4	1.0	-54.8	-13.0	-41.8	
5.24	-65.4	H	3.0	-15.6	36.3	1.0	-50.9	-13.0	-37.9	
6.98	-65.8	H	3.0	-13.1	35.5	1.0	-47.6	-13.0	-34.6	
3.49	-65.2	V	3.0	-18.7	36.4	1.0	-54.1	-13.0	-41.1	
5.24	-62.8	V	3.0	-13.2	36.3	1.0	-48.5	-13.0	-35.5	
6.98	-65.3	V	3.0	-12.7	35.5	1.0	-47.2	-13.0	-34.2	

Rev. 05.21.15

10.9.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/26/15
 Test Engineer: Ali.P
 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
Low Channel (829MHz)										
1.66	-65.4	H	3.0	-23.9	37.8	1.0	-60.8	-13.0	-47.8	
2.49	-63.0	H	3.0	-19.8	36.5	1.0	-55.3	-13.0	-42.3	
3.32	-65.4	H	3.0	-19.4	36.5	1.0	-54.9	-13.0	-41.9	
1.66	-65.7	V	3.0	-23.9	37.8	1.0	-60.8	-13.0	-47.8	
2.49	-60.4	V	3.0	-16.3	36.5	1.0	-51.7	-13.0	-38.7	
3.32	-65.6	V	3.0	-19.6	36.5	1.0	-55.2	-13.0	-42.2	
Mid Channel (836.5MHz)										
1.67	-65.7	H	3.0	-24.2	37.8	1.0	-61.0	-13.0	-48.0	
2.51	-60.4	H	3.0	-17.2	36.4	1.0	-52.6	-13.0	-39.6	
3.35	-65.2	H	3.0	-19.2	36.5	1.0	-54.7	-13.0	-41.7	
1.67	-65.5	V	3.0	-23.7	37.8	1.0	-60.5	-13.0	-47.5	
2.51	-60.5	V	3.0	-16.3	36.4	1.0	-51.6	-13.0	-38.6	
3.35	-65.4	V	3.0	-19.4	36.5	1.0	-54.8	-13.0	-41.8	
High Channel (844MHz)										
1.69	-65.5	H	3.0	-24.0	37.8	1.0	-60.8	-13.0	-47.8	
2.53	-63.4	H	3.0	-20.1	36.4	1.0	-55.5	-13.0	-42.5	
3.38	-65.2	H	3.0	-19.1	36.5	1.0	-54.6	-13.0	-41.6	
1.69	-64.8	V	3.0	-23.0	37.8	1.0	-59.8	-13.0	-46.8	
2.53	-60.1	V	3.0	-15.8	36.4	1.0	-51.2	-13.0	-38.2	
3.38	-65.2	V	3.0	-19.1	36.5	1.0	-54.5	-13.0	-41.5	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
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
Low Channel (829MHz)										
1.66	-66.1	H	3.0	-24.6	37.8	1.0	-61.5	-13.0	-48.5	
2.49	-65.4	H	3.0	-22.2	36.5	1.0	-57.7	-13.0	-44.7	
3.32	-66.4	H	3.0	-20.4	36.5	1.0	-55.9	-13.0	-42.9	
1.66	-66.7	V	3.0	-24.9	37.8	1.0	-61.8	-13.0	-48.8	
2.49	-65.1	V	3.0	-21.0	36.5	1.0	-56.4	-13.0	-43.4	
3.32	-65.8	V	3.0	-19.8	36.5	1.0	-55.4	-13.0	-42.4	
Mid Channel (836.5MHz)										
1.67	-66.3	H	3.0	-24.8	37.8	1.0	-61.6	-13.0	-48.6	
2.51	-60.4	H	3.0	-17.2	36.4	1.0	-52.6	-13.0	-39.6	
3.35	-65.7	H	3.0	-19.7	36.5	1.0	-55.2	-13.0	-42.2	
1.67	-65.6	V	3.0	-23.8	37.8	1.0	-60.6	-13.0	-47.6	
2.51	-61.2	V	3.0	-17.0	36.4	1.0	-52.3	-13.0	-39.3	
3.35	-66.2	V	3.0	-20.2	36.5	1.0	-55.6	-13.0	-42.6	
High Channel (844MHz)										
1.69	-66.2	H	3.0	-24.7	37.8	1.0	-61.5	-13.0	-48.5	
2.53	-64.2	H	3.0	-20.9	36.4	1.0	-56.3	-13.0	-43.3	
3.38	-65.8	H	3.0	-19.7	36.5	1.0	-55.2	-13.0	-42.2	
1.69	-65.4	V	3.0	-23.6	37.8	1.0	-60.4	-13.0	-47.4	
2.53	-58.7	V	3.0	-14.4	36.4	1.0	-49.8	-13.0	-36.8	
3.38	-66.1	V	3.0	-20.0	36.5	1.0	-55.4	-13.0	-42.4	

Rev. 05.21.15

10.9.4. LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/27/15
 Test Engineer: Ali.P
 Configuration: EUT only
 Mode: LTE Band 7, 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
Low Channel (2510MHz)										
2.64	-65.2	H	3.0	-21.4	36.5	1.0	-56.9	-25.0	-31.9	
5.02	-64.6	H	3.0	-15.2	36.2	1.0	-50.5	-25.0	-25.5	
7.53	-65.6	H	3.0	-12.4	35.1	1.0	-46.5	-25.0	-21.5	
2.64	-65.2	V	3.0	-20.8	36.5	1.0	-56.2	-25.0	-31.2	
5.02	-64.3	V	3.0	-15.0	36.2	1.0	-50.3	-25.0	-25.3	
7.53	-64.8	V	3.0	-11.7	35.1	1.0	-45.8	-25.0	-20.8	
Mid Channel (2535MHz)										
2.66	-65.3	H	3.0	-21.4	36.5	1.0	-56.9	-25.0	-31.9	
5.51	-65.2	H	3.0	-14.9	36.2	1.0	-50.1	-25.0	-25.1	
7.61	-64.7	H	3.0	-11.4	35.1	1.0	-45.5	-25.0	-20.5	
2.66	-65.2	V	3.0	-20.7	36.5	1.0	-56.2	-25.0	-31.2	
5.51	-64.7	V	3.0	-14.7	36.2	1.0	-49.8	-25.0	-24.8	
7.61	-64.2	V	3.0	-11.0	35.1	1.0	-45.1	-25.0	-20.1	
High Channel (2560MHz)										
2.68	-64.3	H	3.0	-20.4	36.5	1.0	-55.8	-25.0	-30.8	
5.12	-64.5	H	3.0	-14.9	36.3	1.0	-50.2	-25.0	-25.2	
7.68	-65.8	H	3.0	-12.5	35.0	1.0	-46.5	-25.0	-21.5	
2.68	-63.7	V	3.0	-19.2	36.5	1.0	-54.7	-25.0	-29.7	
5.12	-63.9	V	3.0	-14.5	36.3	1.0	-49.8	-25.0	-24.8	
7.68	-63.9	V	3.0	-10.6	35.0	1.0	-44.7	-25.0	-19.7	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20163
 Project #: 05/27/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 7, 20MHz 16QAM
 Mode:

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
Low Channel (2510MHz)										
2.64	-66.3	H	3.0	-22.5	36.5	1.0	-58.0	-25.0	-33.0	
5.02	-66.2	H	3.0	-16.8	36.2	1.0	-52.1	-25.0	-27.1	
7.53	-66.9	H	3.0	-13.7	35.1	1.0	-47.8	-25.0	-22.8	
2.64	-65.8	V	3.0	-21.4	36.5	1.0	-56.8	-25.0	-31.8	
5.02	-65.3	V	3.0	-16.0	36.2	1.0	-51.3	-25.0	-26.3	
7.53	-65.7	V	3.0	-12.6	35.1	1.0	-46.7	-25.0	-21.7	
Mid Channel (2535MHz)										
2.66	-66.3	H	3.0	-22.4	36.5	1.0	-57.9	-25.0	-32.9	
5.51	-66.4	H	3.0	-16.1	36.2	1.0	-51.3	-25.0	-26.3	
7.61	-65.7	H	3.0	-12.4	35.1	1.0	-46.5	-25.0	-21.5	
2.66	-65.9	V	3.0	-21.4	36.5	1.0	-56.9	-25.0	-31.9	
5.51	-65.2	V	3.0	-15.2	36.2	1.0	-50.3	-25.0	-25.3	
7.61	-65.5	V	3.0	-12.3	35.1	1.0	-46.4	-25.0	-21.4	
High Channel (2560MHz)										
2.68	-65.4	H	3.0	-21.5	36.5	1.0	-56.9	-25.0	-31.9	
5.12	-65.3	H	3.0	-15.7	36.3	1.0	-51.0	-25.0	-26.0	
7.68	-66.0	H	3.0	-12.7	35.0	1.0	-46.7	-25.0	-21.7	
2.68	-64.5	V	3.0	-20.0	36.5	1.0	-55.5	-25.0	-30.5	
5.12	-64.9	V	3.0	-15.5	36.3	1.0	-50.8	-25.0	-25.8	
7.68	-64.7	V	3.0	-11.4	35.0	1.0	-45.5	-25.0	-20.5	

Rev. 05.21.15

10.9.5. LTE BAND 12

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 12, 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
Low Channel (704MHz)										
1.408	-65.4	H	3.0	-24.8	37.5	1.0	-61.3	-13.0	-48.3	
2.112	-62.8	H	3.0	-20.5	37.6	1.0	-57.1	-13.0	-44.1	
2.816	-65.4	H	3.0	-20.9	36.6	1.0	-56.5	-13.0	-43.5	
1.408	-65.4	V	3.0	-24.2	37.5	1.0	-60.8	-13.0	-47.8	
2.112	-61.2	V	3.0	-18.8	37.6	1.0	-55.3	-13.0	-42.3	
2.816	-65.4	V	3.0	-20.7	36.6	1.0	-56.3	-13.0	-43.3	
Mid Channel (707.5MHz)										
1.415	-65.5	H	3.0	-24.8	37.6	1.0	-61.4	-13.0	-48.4	
2.123	-65.3	H	3.0	-23.0	37.6	1.0	-59.5	-13.0	-46.5	
2.830	-65.7	H	3.0	-21.1	36.6	1.0	-56.7	-13.0	-43.7	
1.415	-66.5	V	3.0	-25.3	37.6	1.0	-61.8	-13.0	-48.8	
2.123	-61.2	V	3.0	-18.7	37.6	1.0	-55.3	-13.0	-42.3	
2.830	-65.8	V	3.0	-21.1	36.6	1.0	-56.7	-13.0	-43.7	
High Channel (711MHz)										
1.422	-65.6	H	3.0	-24.9	37.6	1.0	-61.5	-13.0	-48.5	
2.133	-65.3	H	3.0	-22.9	37.5	1.0	-59.5	-13.0	-46.5	
2.844	-65.5	H	3.0	-20.9	36.6	1.0	-56.5	-13.0	-43.5	
1.422	-64.9	V	3.0	-23.6	37.6	1.0	-60.2	-13.0	-47.2	
2.133	-61.2	V	3.0	-18.7	37.5	1.0	-55.2	-13.0	-42.2	
2.844	-66.5	V	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	

Rev. 05.21.15

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

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

Company: 15U20163
 Project #: 05/26/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 12, 10MHz 16QAM
 Mode:

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
Low Channel (704MHz)										
1.41	-65.3	H	3.0	-24.7	37.5	1.0	-61.2	-13.0	-48.2	
2.11	-63.9	H	3.0	-21.6	37.6	1.0	-58.2	-13.0	-45.2	
2.82	-65.7	H	3.0	-21.2	36.6	1.0	-56.8	-13.0	-43.8	
1.41	-65.6	V	3.0	-24.4	37.5	1.0	-61.0	-13.0	-48.0	
2.11	-63.3	V	3.0	-20.9	37.6	1.0	-57.4	-13.0	-44.4	
2.82	-66.2	V	3.0	-21.5	36.6	1.0	-57.1	-13.0	-44.1	
Mid Channel (707.5MHz)										
1.42	-66.4	H	3.0	-25.7	37.6	1.0	-62.3	-13.0	-49.3	
2.12	-65.7	H	3.0	-23.4	37.6	1.0	-59.9	-13.0	-46.9	
2.83	-65.9	H	3.0	-21.3	36.6	1.0	-56.9	-13.0	-43.9	
1.42	-64.6	V	3.0	-23.4	37.6	1.0	-59.9	-13.0	-46.9	
2.12	-63.3	V	3.0	-20.8	37.6	1.0	-57.4	-13.0	-44.4	
2.83	-66.8	V	3.0	-22.1	36.6	1.0	-57.7	-13.0	-44.7	
High Channel (711MHz)										
1.42	-66.1	H	3.0	-25.4	37.6	1.0	-62.0	-13.0	-49.0	
2.13	-65.9	H	3.0	-23.5	37.5	1.0	-60.1	-13.0	-47.1	
2.84	-66.7	H	3.0	-22.1	36.6	1.0	-57.7	-13.0	-44.7	
1.42	-66.4	V	3.0	-25.1	37.6	1.0	-61.7	-13.0	-48.7	
2.13	-65.5	V	3.0	-23.0	37.5	1.0	-59.5	-13.0	-46.5	
2.84	-66.3	V	3.0	-21.6	36.6	1.0	-57.2	-13.0	-44.2	

Rev. 05.21.15

10.9.6. LTE BAND 13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
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

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (782MHz)										
1.564	-65.3	H	3.0	-24.0	37.9	1.0	-60.8	-40.0	-20.8	1559-1610MHz
2.346	-64.8	H	3.0	-21.9	37.2	1.0	-58.1	-13.0	-45.1	
3.128	-64.9	H	3.0	-19.3	36.6	1.0	-55.0	-13.0	-42.0	
1.564	-64.5	V	3.0	-22.8	37.9	1.0	-59.6	-40.0	-19.6	1559-1610MHz
2.346	-65.4	V	3.0	-22.1	37.2	1.0	-58.3	-13.0	-45.3	
3.128	-64.3	V	3.0	-18.9	36.6	1.0	-54.6	-13.0	-41.6	
Rev. 05.21.15										

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

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

Company: 15U20163
 Project #: 05/26/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 13, 10MHz 16QAM
 Mode:

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 (782MHz)										
1.564	-65.4	H	3.0	-24.1	37.9	1.0	-60.9	-40.0	-20.9	1559-1610MHz
2.346	-65.2	H	3.0	-22.3	37.2	1.0	-58.5	-13.0	-45.5	
3.128	-65.9	H	3.0	-20.3	36.6	1.0	-56.0	-13.0	-43.0	
1.564	-65.7	V	3.0	-24.0	37.9	1.0	-60.8	-40.0	-20.8	1559-1610MHz
2.346	-65.9	V	3.0	-22.6	37.2	1.0	-58.8	-13.0	-45.8	
3.128	-66.1	V	3.0	-20.7	36.6	1.0	-56.4	-13.0	-43.4	

Rev. 05.21.15

10.9.7. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 17, 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
Low Channel (709MHz)										
1.418	-66.1	H	3.0	-25.4	37.6	1.0	-62.0	-13.0	-49.0	
2.127	-66.4	H	3.0	-24.1	37.5	1.0	-60.6	-13.0	-47.6	
2.836	-66.7	H	3.0	-22.1	36.6	1.0	-57.7	-13.0	-44.7	
1.418	-65.9	V	3.0	-24.7	37.6	1.0	-61.2	-13.0	-48.2	
2.127	-65.7	V	3.0	-23.2	37.5	1.0	-59.8	-13.0	-46.8	
2.836	-66.3	V	3.0	-21.6	36.6	1.0	-57.2	-13.0	-44.2	
Mid Channel (710MHz)										
1.420	-66.7	H	3.0	-26.0	37.6	1.0	-62.6	-13.0	-49.6	
2.130	-66.2	H	3.0	-23.9	37.5	1.0	-60.4	-13.0	-47.4	
2.840	-66.2	H	3.0	-21.6	36.6	1.0	-57.2	-13.0	-44.2	
1.420	-65.6	V	3.0	-24.4	37.6	1.0	-60.9	-13.0	-47.9	
2.130	-65.7	V	3.0	-23.2	37.5	1.0	-59.7	-13.0	-46.7	
2.840	-65.9	V	3.0	-21.2	36.6	1.0	-56.8	-13.0	-43.8	
High Channel (711)										
1.422	-65.9	H	3.0	-25.2	37.6	1.0	-61.8	-13.0	-48.8	
2.133	-65.8	H	3.0	-23.4	37.5	1.0	-60.0	-13.0	-47.0	
2.844	-65.7	H	3.0	-21.1	36.6	1.0	-56.7	-13.0	-43.7	
1.422	-65.9	V	3.0	-24.6	37.6	1.0	-61.2	-13.0	-48.2	
2.133	-66.4	V	3.0	-23.9	37.5	1.0	-60.4	-13.0	-47.4	
2.844	-66.5	V	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 17, 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
Low Channel (709MHz)										
1.418	-66.6	H	3.0	-25.9	37.6	1.0	-62.5	-13.0	-49.5	
2.127	-66.1	H	3.0	-23.8	37.5	1.0	-60.3	-13.0	-47.3	
2.836	-66.4	H	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	
1.418	-66.2	V	3.0	-25.0	37.6	1.0	-61.5	-13.0	-48.5	
2.127	-66.3	V	3.0	-23.8	37.5	1.0	-60.4	-13.0	-47.4	
2.836	-65.9	V	3.0	-21.2	36.6	1.0	-56.8	-13.0	-43.8	
Mid Channel (710MHz)										
1.420	-66.7	H	3.0	-26.0	37.6	1.0	-62.6	-13.0	-49.6	
2.130	-66.8	H	3.0	-24.5	37.5	1.0	-61.0	-13.0	-48.0	
2.840	-66.6	H	3.0	-22.0	36.6	1.0	-57.6	-13.0	-44.6	
1.420	-66.7	V	3.0	-25.5	37.6	1.0	-62.0	-13.0	-49.0	
2.130	-66.4	V	3.0	-23.9	37.5	1.0	-60.4	-13.0	-47.4	
2.840	-66.4	V	3.0	-21.7	36.6	1.0	-57.3	-13.0	-44.3	
High Channel (711)										
1.422	-66.3	H	3.0	-25.6	37.6	1.0	-62.2	-13.0	-49.2	
2.133	-65.9	H	3.0	-23.5	37.5	1.0	-60.1	-13.0	-47.1	
2.844	-66.2	H	3.0	-21.6	36.6	1.0	-57.2	-13.0	-44.2	
1.422	-66.4	V	3.0	-25.1	37.6	1.0	-61.7	-13.0	-48.7	
2.133	-66.2	V	3.0	-23.7	37.5	1.0	-60.2	-13.0	-47.2	
2.844	-66.7	V	3.0	-22.0	36.6	1.0	-57.6	-13.0	-44.6	

Rev. 05.21.15

10.9.8. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20163
 Project #: 05/27/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 25, 20MHz QPSK
 Mode:

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
Low Channel (1860MHz)										
3.72	-63.9	H	3.0	-17.1	36.2	1.0	-52.3	-13.0	-39.3	
5.58	-63.7	H	3.0	-13.3	36.1	1.0	-48.4	-13.0	-35.4	
7.44	-66.0	H	3.0	-12.9	35.2	1.0	-47.1	-13.0	-34.1	
3.72	-64.5	V	3.0	-17.3	36.2	1.0	-52.5	-13.0	-39.5	
5.58	-65.6	V	3.0	-15.4	36.1	1.0	-50.6	-13.0	-37.6	
7.44	-66.7	V	3.0	-13.7	35.2	1.0	-47.8	-13.0	-34.8	
Mid Channel (1882.5MHz)										
3.77	-64.9	H	3.0	-18.0	36.2	1.0	-53.2	-13.0	-40.2	
5.65	-65.8	H	3.0	-15.3	36.1	1.0	-50.4	-13.0	-37.4	
7.53	-66.4	H	3.0	-13.2	35.1	1.0	-47.3	-13.0	-34.3	
3.77	-65.4	V	3.0	-18.1	36.2	1.0	-53.2	-13.0	-40.2	
5.65	-65.7	V	3.0	-15.4	36.1	1.0	-50.5	-13.0	-37.5	
7.53	-66.3	V	3.0	-13.2	35.1	1.0	-47.3	-13.0	-34.3	
High Channel (1905MHz)										
3.81	-63.7	H	3.0	-16.7	36.1	1.0	-51.9	-13.0	-38.9	
5.72	-65.9	H	3.0	-15.3	36.1	1.0	-50.4	-13.0	-37.4	
7.62	-65.9	H	3.0	-12.6	35.1	1.0	-46.7	-13.0	-33.7	
3.81	-63.3	V	3.0	-15.8	36.1	1.0	-51.0	-13.0	-38.0	
5.72	-65.5	V	3.0	-15.1	36.1	1.0	-50.2	-13.0	-37.2	
7.62	-65.8	V	3.0	-12.6	35.1	1.0	-46.7	-13.0	-33.7	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20163
 Project #: 05/27/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 25, 20MHz 16QAM
 Mode:

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
Low Channel (1860MHz)										
3.72	-64.5	H	3.0	-17.7	36.2	1.0	-52.9	-13.0	-39.9	
5.58	-64.6	H	3.0	-14.2	36.1	1.0	-49.3	-13.0	-36.3	
7.44	-65.9	H	3.0	-12.8	35.2	1.0	-47.0	-13.0	-34.0	
3.72	-65.3	V	3.0	-18.1	36.2	1.0	-53.3	-13.0	-40.3	
5.58	-65.9	V	3.0	-15.7	36.1	1.0	-50.9	-13.0	-37.9	
7.44	-66.3	V	3.0	-13.3	35.2	1.0	-47.4	-13.0	-34.4	
Mid Channel (1882.5MHz)										
3.77	-63.7	H	3.0	-16.8	36.2	1.0	-52.0	-13.0	-39.0	
5.65	-65.5	H	3.0	-15.0	36.1	1.0	-50.1	-13.0	-37.1	
7.53	-66.1	H	3.0	-12.9	35.1	1.0	-47.0	-13.0	-34.0	
3.77	-64.5	V	3.0	-17.2	36.2	1.0	-52.3	-13.0	-39.3	
5.65	-65.2	V	3.0	-14.9	36.1	1.0	-50.0	-13.0	-37.0	
7.53	-65.9	V	3.0	-12.8	35.1	1.0	-46.9	-13.0	-33.9	
High Channel (1905MHz)										
3.81	-64.6	H	3.0	-17.6	36.1	1.0	-52.8	-13.0	-39.8	
5.72	-66.3	H	3.0	-15.7	36.1	1.0	-50.8	-13.0	-37.8	
7.62	-66.7	H	3.0	-13.4	35.1	1.0	-47.5	-13.0	-34.5	
3.81	-63.8	V	3.0	-16.3	36.1	1.0	-51.5	-13.0	-38.5	
5.72	-66.1	V	3.0	-15.7	36.1	1.0	-50.8	-13.0	-37.8	
7.62	-65.5	V	3.0	-12.3	35.1	1.0	-46.4	-13.0	-33.4	

Rev. 05.21.15

10.9.9. LTE BAND 26

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

High Frequency Substitution Measurement
 UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 26 (90S), 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
Mid Channel (819MHz)										
1.638	-65.5	H	3.0	-24.1	37.8	1.0	-60.9	-13.0	-47.9	
2.457	-65.9	H	3.0	-22.8	36.7	1.0	-58.5	-13.0	-45.5	
3.276	-65.4	H	3.0	-19.5	36.5	1.0	-55.0	-13.0	-42.0	
1.638	-65.9	V	3.0	-24.1	37.8	1.0	-61.0	-13.0	-48.0	
2.457	-65.8	V	3.0	-21.9	36.7	1.0	-57.6	-13.0	-44.6	
3.276	-65.7	V	3.0	-19.9	36.5	1.0	-55.4	-13.0	-42.4	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/26/15
Test Engineer: Ali.P
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)										
1.638	-65.9	H	3.0	-24.5	37.8	1.0	-61.3	-13.0	-48.3	
2.457	-65.7	H	3.0	-22.6	36.7	1.0	-58.3	-13.0	-45.3	
3.276	-66.7	H	3.0	-20.8	36.5	1.0	-56.3	-13.0	-43.3	
1.638	-66.3	V	3.0	-24.5	37.8	1.0	-61.4	-13.0	-48.4	
2.457	-66.4	V	3.0	-22.5	36.7	1.0	-58.2	-13.0	-45.2	
3.276	-66.2	V	3.0	-20.4	36.5	1.0	-55.9	-13.0	-42.9	

Rev. 05.21.15

10.9.10. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/30/15
 Test Engineer: Ali.P
 Configuration: EUT only
 Mode: LTE Band 41, 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
Low Channel (2506MHz)										
5.01	-66.6	H	3.0	-17.2	36.2	1.0	-52.4	-25.0	-27.4	
7.52	-67.8	H	3.0	-14.6	35.1	1.0	-48.8	-25.0	-23.8	
10.02	-70.1	H	3.0	-14.6	33.3	1.0	-47.0	-25.0	-22.0	
5.01	-66.4	V	3.0	-17.1	36.2	1.0	-52.4	-25.0	-27.4	
7.52	-67.7	V	3.0	-14.6	35.1	1.0	-48.7	-25.0	-23.7	
10.02	-70.3	V	3.0	-14.9	33.3	1.0	-47.3	-25.0	-22.3	
Mid Channel (2593MHz)										
5.19	-64.5	H	3.0	-14.8	36.3	1.0	-50.1	-25.0	-25.1	
7.78	-65.1	H	3.0	-11.7	34.9	1.0	-45.6	-25.0	-20.6	
10.37	-65.9	H	3.0	-10.2	33.1	1.0	-42.4	-25.0	-17.4	
5.19	-64.9	V	3.0	-15.4	36.3	1.0	-50.7	-25.0	-25.7	
7.78	-65.2	V	3.0	-11.9	34.9	1.0	-45.8	-25.0	-20.8	
10.37	-66.8	V	3.0	-11.3	33.1	1.0	-43.5	-25.0	-18.5	
High Channel (2680MHz)										
5.36	-65.4	H	3.0	-15.4	36.2	1.0	-50.6	-25.0	-25.6	
8.04	-64.5	H	3.0	-10.8	34.8	1.0	-44.6	-25.0	-19.6	
10.72	-66.3	H	3.0	-10.5	32.9	1.0	-42.4	-25.0	-17.4	
5.36	-64.8	V	3.0	-15.0	36.2	1.0	-50.2	-25.0	-25.2	
8.04	-65.2	V	3.0	-11.6	34.8	1.0	-45.4	-25.0	-20.4	
10.72	-66.3	V	3.0	-10.8	32.9	1.0	-42.7	-25.0	-17.7	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

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

Company: 15U20163
 Project #: 05/30/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 41, 20MHz 16QAM
 Mode:

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
Low Channel (2506MHz)										
5.01	-64.1	H	3.0	-14.7	36.2	1.0	-50.0	-25.0	-25.0	
7.52	-64.9	H	3.0	-11.7	35.1	1.0	-45.8	-25.0	-20.8	
10.02	-66.8	H	3.0	-11.3	33.3	1.0	-43.6	-25.0	-18.6	
5.01	-64.6	V	3.0	-15.3	36.2	1.0	-50.6	-25.0	-25.6	
7.52	-65.2	V	3.0	-12.1	35.1	1.0	-46.2	-25.0	-21.2	
10.02	-65.9	V	3.0	-10.5	33.3	1.0	-42.9	-25.0	-17.9	
Mid Channel (2593MHz)										
5.19	-64.8	H	3.0	-15.1	36.3	1.0	-50.4	-25.0	-25.4	
7.78	-64.9	H	3.0	-11.5	34.9	1.0	-45.4	-25.0	-20.4	
10.37	-66.5	H	3.0	-10.8	33.1	1.0	-43.0	-25.0	-18.0	
5.19	-64.8	V	3.0	-15.3	36.3	1.0	-50.6	-25.0	-25.6	
7.78	-65.5	V	3.0	-12.2	34.9	1.0	-46.1	-25.0	-21.1	
10.37	-66.8	V	3.0	-11.3	33.1	1.0	-43.5	-25.0	-18.5	
High Channel (2680MHz)										
5.36	-65.4	H	3.0	-15.4	36.2	1.0	-50.6	-25.0	-25.6	
8.04	-64.7	H	3.0	-11.0	34.8	1.0	-44.8	-25.0	-19.8	
10.72	-66.1	H	3.0	-10.3	32.9	1.0	-42.2	-25.0	-17.2	
5.36	-65.2	V	3.0	-15.4	36.2	1.0	-50.6	-25.0	-25.6	
8.04	-65.4	V	3.0	-11.8	34.8	1.0	-45.6	-25.0	-20.6	
10.72	-66.5	V	3.0	-11.0	32.9	1.0	-42.9	-25.0	-17.9	

Rev. 05.21.15

10.10. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1687 (UAT)

10.10.1. LTE BAND 2

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/30/15
Test Engineer: Ali.P
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
Low Channel (1860MHz)										
3.72	-67.9	H	3.0	-21.1	36.2	1.0	-56.3	-13.0	-43.3	
5.58	-71.0	H	3.0	-20.6	36.1	1.0	-55.7	-13.0	-42.7	
7.44	-70.5	H	3.0	-17.4	35.2	1.0	-51.6	-13.0	-38.6	
3.72	-67.5	V	3.0	-20.3	36.2	1.0	-55.5	-13.0	-42.5	
5.58	-67.4	V	3.0	-17.2	36.1	1.0	-52.4	-13.0	-39.4	
7.44	-69.9	V	3.0	-16.9	35.2	1.0	-51.0	-13.0	-38.0	
Mid Channel (1880MHz)										
3.76	-67.8	H	3.0	-20.9	36.2	1.0	-56.1	-13.0	-43.1	
5.64	-69.1	H	3.0	-18.6	36.1	1.0	-53.7	-13.0	-40.7	
7.52	-69.5	H	3.0	-16.3	35.1	1.0	-50.4	-13.0	-37.4	
3.76	-65.8	V	3.0	-18.5	36.2	1.0	-53.7	-13.0	-40.7	
5.64	-70.9	V	3.0	-20.6	36.1	1.0	-55.7	-13.0	-42.7	
7.52	-69.6	V	3.0	-16.5	35.1	1.0	-50.6	-13.0	-37.6	
High Channel (1900MHz)										
3.80	-66.2	H	3.0	-19.2	36.2	1.0	-54.4	-13.0	-41.4	
5.70	-69.7	H	3.0	-19.1	36.1	1.0	-54.2	-13.0	-41.2	
7.60	-70.9	H	3.0	-17.6	35.1	1.0	-51.7	-13.0	-38.7	
3.80	-70.5	V	3.0	-23.1	36.2	1.0	-58.2	-13.0	-45.2	
5.70	-68.5	V	3.0	-18.1	36.1	1.0	-53.2	-13.0	-40.2	
7.60	-71.1	V	3.0	-17.9	35.1	1.0	-52.0	-13.0	-39.0	

Rev. 05.21.15

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

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

Company:
 Project #: 15U20163
 Date: 05/30/15
 Test Engineer: Ali.P
 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
Low Channel (1860MHz)										
3.72	-67.3	H	3.0	-20.5	36.2	1.0	-55.7	-13.0	-42.7	
5.58	-69.9	H	3.0	-19.5	36.1	1.0	-54.6	-13.0	-41.6	
7.44	-70.5	H	3.0	-17.4	35.2	1.0	-51.6	-13.0	-38.6	
3.72	-67.5	V	3.0	-20.3	36.2	1.0	-55.5	-13.0	-42.5	
5.58	-66.9	V	3.0	-16.7	36.1	1.0	-51.9	-13.0	-38.9	
7.44	-70.8	V	3.0	-17.8	35.2	1.0	-51.9	-13.0	-38.9	
Mid Channel (1880MHz)										
3.76	-66.9	H	3.0	-20.0	36.2	1.0	-55.2	-13.0	-42.2	
5.64	-71.1	H	3.0	-20.6	36.1	1.0	-55.7	-13.0	-42.7	
7.52	-69.8	H	3.0	-16.6	35.1	1.0	-50.7	-13.0	-37.7	
3.76	-66.7	V	3.0	-19.4	36.2	1.0	-54.6	-13.0	-41.6	
5.64	-68.9	V	3.0	-18.6	36.1	1.0	-53.7	-13.0	-40.7	
7.52	-71.4	V	3.0	-18.3	35.1	1.0	-52.4	-13.0	-39.4	
High Channel (1900MHz)										
3.80	-67.8	H	3.0	-20.8	36.2	1.0	-56.0	-13.0	-43.0	
5.70	-69.5	H	3.0	-18.9	36.1	1.0	-54.0	-13.0	-41.0	
7.60	-71.6	H	3.0	-18.3	35.1	1.0	-52.4	-13.0	-39.4	
3.80	-65.9	V	3.0	-18.5	36.2	1.0	-53.6	-13.0	-40.6	
5.70	-67.8	V	3.0	-17.4	36.1	1.0	-52.5	-13.0	-39.5	
7.60	-71.6	V	3.0	-18.4	35.1	1.0	-52.5	-13.0	-39.5	

Rev. 05.21.15

10.10.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/30/15
 Test Engineer: Ali.P
 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
Low Channel (1720MHz)										
3.44	-68.4	H	3.0	-22.2	36.4	1.0	-57.6	-13.0	-44.6	
5.16	-68.9	H	3.0	-19.2	36.3	1.0	-54.5	-13.0	-41.5	
6.88	-70.4	H	3.0	-17.9	35.6	1.0	-52.5	-13.0	-39.5	
3.44	-68.2	V	3.0	-21.9	36.4	1.0	-57.3	-13.0	-44.3	
5.16	-67.8	V	3.0	-18.3	36.3	1.0	-53.6	-13.0	-40.6	
6.88	-70.8	V	3.0	-18.4	35.6	1.0	-52.9	-13.0	-39.9	
Mid Channel (1732.5MHz)										
3.46	-68.8	H	3.0	-22.5	36.4	1.0	-57.9	-13.0	-44.9	
5.20	-69.2	H	3.0	-19.5	36.3	1.0	-54.7	-13.0	-41.7	
6.93	-70.1	H	3.0	-17.5	35.5	1.0	-52.1	-13.0	-39.1	
3.46	-69.8	V	3.0	-23.4	36.4	1.0	-58.8	-13.0	-45.8	
5.20	-68.9	V	3.0	-19.4	36.3	1.0	-54.7	-13.0	-41.7	
6.93	-71.3	V	3.0	-18.8	35.5	1.0	-53.3	-13.0	-40.3	
High Channel (1745MHz)										
3.49	-70.1	H	3.0	-23.8	36.4	1.0	-59.2	-13.0	-46.2	
5.24	-70.6	H	3.0	-20.8	36.3	1.0	-56.1	-13.0	-43.1	
6.98	-71.4	H	3.0	-18.7	35.5	1.0	-53.2	-13.0	-40.2	
3.49	-69.1	V	3.0	-22.6	36.4	1.0	-58.0	-13.0	-45.0	
5.24	-69.9	V	3.0	-20.3	36.3	1.0	-55.6	-13.0	-42.6	
6.98	-69.7	V	3.0	-17.1	35.5	1.0	-51.6	-13.0	-38.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/30/15
 Test Engineer: Ali.P
 Configuration: EUT only
 Mode: LTE Band 4, 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
Low Channel (1720MHz)										
3.44	-66.0	H	3.0	-19.8	36.4	1.0	-55.2	-13.0	-42.2	
5.16	-67.6	H	3.0	-17.9	36.3	1.0	-53.2	-13.0	-40.2	
6.88	-70.8	H	3.0	-18.3	35.6	1.0	-52.9	-13.0	-39.9	
3.44	-67.9	V	3.0	-21.6	36.4	1.0	-57.0	-13.0	-44.0	
5.16	-71.1	V	3.0	-21.6	36.3	1.0	-56.9	-13.0	-43.9	
6.88	-71.6	V	3.0	-19.2	35.6	1.0	-53.7	-13.0	-40.7	
Mid Channel (1732.5MHz)										
1.73	-69.8	H	3.0	-28.2	37.8	1.0	-65.0	-13.0	-52.0	
5.20	-71.1	H	3.0	-21.4	36.3	1.0	-56.6	-13.0	-43.6	
6.93	-71.2	H	3.0	-18.6	35.5	1.0	-53.2	-13.0	-40.2	
1.73	-67.1	V	3.0	-25.3	37.8	1.0	-62.1	-13.0	-49.1	
5.20	-67.2	V	3.0	-17.7	36.3	1.0	-53.0	-13.0	-40.0	
6.93	-70.5	V	3.0	-18.0	35.5	1.0	-52.5	-13.0	-39.5	
High Channel (1745MHz)										
3.49	-66.8	H	3.0	-20.5	36.4	1.0	-55.9	-13.0	-42.9	
5.24	-70.1	H	3.0	-20.3	36.3	1.0	-55.6	-13.0	-42.6	
6.98	-71.2	H	3.0	-18.5	35.5	1.0	-53.0	-13.0	-40.0	
3.49	-66.9	V	3.0	-20.4	36.4	1.0	-55.8	-13.0	-42.8	
5.24	-68.9	V	3.0	-19.3	36.3	1.0	-54.6	-13.0	-41.6	
6.98	-71.8	V	3.0	-19.2	35.5	1.0	-53.7	-13.0	-40.7	

Rev. 05.21.15

10.10.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/30/15
 Test Engineer: Ali.P
 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
Low Channel (829MHz)										
1.66	-66.1	H	3.0	-24.6	37.8	1.0	-61.5	-13.0	-48.5	
2.49	-66.9	H	3.0	-23.7	36.5	1.0	-59.2	-13.0	-46.2	
3.32	-68.4	H	3.0	-22.4	36.5	1.0	-57.9	-13.0	-44.9	
1.66	-66.3	V	3.0	-24.5	37.8	1.0	-61.4	-13.0	-48.4	
2.49	-66.1	V	3.0	-22.0	36.5	1.0	-57.4	-13.0	-44.4	
3.32	-67.5	V	3.0	-21.5	36.5	1.0	-57.1	-13.0	-44.1	
Mid Channel (836.5MHz)										
1.67	-67.4	H	3.0	-25.9	37.8	1.0	-62.7	-13.0	-49.7	
2.51	-66.3	H	3.0	-23.1	36.4	1.0	-58.5	-13.0	-45.5	
3.35	-67.9	H	3.0	-21.9	36.5	1.0	-57.4	-13.0	-44.4	
1.67	-66.4	V	3.0	-24.6	37.8	1.0	-61.4	-13.0	-48.4	
2.51	-66.3	V	3.0	-22.1	36.4	1.0	-57.4	-13.0	-44.4	
3.35	-66.7	V	3.0	-20.7	36.5	1.0	-56.1	-13.0	-43.1	
High Channel (844MHz)										
1.69	-66.4	H	3.0	-24.9	37.8	1.0	-61.7	-13.0	-48.7	
2.53	-66.9	H	3.0	-23.6	36.4	1.0	-59.0	-13.0	-46.0	
3.38	-66.9	H	3.0	-20.8	36.5	1.0	-56.3	-13.0	-43.3	
1.69	-68.8	V	3.0	-27.0	37.8	1.0	-63.8	-13.0	-50.8	
2.53	-67.4	V	3.0	-23.1	36.4	1.0	-58.5	-13.0	-45.5	
3.38	-67.1	V	3.0	-21.0	36.5	1.0	-56.4	-13.0	-43.4	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/30/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 5, 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
Low Channel (829MHz)										
1.66	-65.6	H	3.0	-24.1	37.8	1.0	-61.0	-13.0	-48.0	
2.49	-70.1	H	3.0	-26.9	36.5	1.0	-62.4	-13.0	-49.4	
3.32	-69.9	H	3.0	-23.9	36.5	1.0	-59.4	-13.0	-46.4	
1.66	-66.9	V	3.0	-25.1	37.8	1.0	-62.0	-13.0	-49.0	
2.49	-69.5	V	3.0	-25.4	36.5	1.0	-60.8	-13.0	-47.8	
3.32	-68.9	V	3.0	-22.9	36.5	1.0	-58.5	-13.0	-45.5	
Mid Channel (836.5MHz)										
1.67	-66.8	H	3.0	-25.3	37.8	1.0	-62.1	-13.0	-49.1	
2.51	-66.7	H	3.0	-23.5	36.4	1.0	-58.9	-13.0	-45.9	
3.35	-67.1	H	3.0	-21.1	36.5	1.0	-56.6	-13.0	-43.6	
1.67	-66.2	V	3.0	-24.4	37.8	1.0	-61.2	-13.0	-48.2	
2.51	-69.6	V	3.0	-25.4	36.4	1.0	-60.7	-13.0	-47.7	
3.35	-69.2	V	3.0	-23.2	36.5	1.0	-58.6	-13.0	-45.6	
High Channel (844MHz)										
1.69	-66.2	H	3.0	-24.7	37.8	1.0	-61.5	-13.0	-48.5	
2.53	-65.7	H	3.0	-22.4	36.4	1.0	-57.8	-13.0	-44.8	
3.38	-67.9	H	3.0	-21.8	36.5	1.0	-57.3	-13.0	-44.3	
1.69	-67.2	V	3.0	-25.4	37.8	1.0	-62.2	-13.0	-49.2	
2.53	-66.5	V	3.0	-22.2	36.4	1.0	-57.6	-13.0	-44.6	
3.38	-67.9	V	3.0	-21.8	36.5	1.0	-57.2	-13.0	-44.2	

Rev. 05.21.15

10.10.4. LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 06/27/15
 Test Engineer: J. Li
 Configuration: EUT only
 Mode: LTE Band 7, 20MHz QPSK

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

Chamber

Pre-amplifier

Filter

Limit

3m Chamber D

3m Chamber D

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
3.81	-72.3	H	3.0	-24.1	33.6	1.0	-56.6	-25.0	-31.6	
5.10	-70.4	H	3.0	-19.9	32.9	1.0	-51.8	-25.0	-26.8	
7.15	-70.3	H	3.0	-16.3	30.7	1.0	-46.0	-25.0	-21.0	
3.77	-72.2	V	3.0	-24.1	33.5	1.0	-56.6	-25.0	-31.6	
4.89	-70.2	V	3.0	-20.3	33.1	1.0	-52.4	-25.0	-27.4	
7.17	-73.5	V	3.0	-19.2	30.7	1.0	-48.9	-25.0	-23.9	
Mid Channel (2535MHz)										
3.77	-71.2	H	3.0	-23.1	33.5	1.0	-55.6	-25.0	-30.6	
5.05	-72.3	H	3.0	-21.9	33.0	1.0	-53.8	-25.0	-28.8	
7.43	-72.5	H	3.0	-18.1	30.4	1.0	-47.5	-25.0	-22.5	
3.65	-72.2	V	3.0	-24.4	33.5	1.0	-56.9	-25.0	-31.9	
5.00	-71.3	V	3.0	-21.3	33.0	1.0	-53.3	-25.0	-28.3	
7.36	-70.8	V	3.0	-16.3	30.5	1.0	-45.7	-25.0	-20.7	
High Channel (2560MHz)										
3.75	-70.1	H	3.0	-22.0	33.5	1.0	-54.5	-25.0	-29.5	
5.05	-69.8	H	3.0	-19.4	33.0	1.0	-51.3	-25.0	-26.3	
7.22	-70.7	H	3.0	-16.6	30.6	1.0	-46.2	-25.0	-21.2	
3.67	-71.5	V	3.0	-23.6	33.5	1.0	-56.1	-25.0	-31.1	
5.05	-72.4	V	3.0	-22.3	33.0	1.0	-54.3	-25.0	-29.3	
7.15	-72.1	V	3.0	-17.8	30.7	1.0	-47.5	-25.0	-22.5	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: 15U20163
 Project #: 06/27/15
 Date: J. Li
 Test Engineer: EUT only
 Configuration: LTE Band 7, 20MHz 16QAM
 Mode:

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

Chamber

Pre-amplifier

Filter

Limit

3m Chamber D

3m Chamber D

Filter

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
3.79	-70.1	H	3.0	-21.9	33.6	1.0	-54.5	-25.0	-29.5	
5.06	-71.2	H	3.0	-20.7	33.0	1.0	-52.7	-25.0	-27.7	
7.12	-71.4	H	3.0	-17.4	30.7	1.0	-47.1	-25.0	-22.1	
3.77	-70.6	V	3.0	-22.5	33.5	1.0	-55.0	-25.0	-30.0	
5.01	-70.8	V	3.0	-20.8	33.0	1.0	-52.8	-25.0	-27.8	
7.19	-71.8	V	3.0	-17.5	30.7	1.0	-47.1	-25.0	-22.1	
Mid Channel (2535MHz)										
3.77	-70.5	H	3.0	-22.4	33.5	1.0	-54.9	-25.0	-29.9	
4.98	-70.4	H	3.0	-20.1	33.0	1.0	-52.1	-25.0	-27.1	
7.24	-70.6	H	3.0	-16.5	30.6	1.0	-46.1	-25.0	-21.1	
3.81	-69.7	V	3.0	-21.5	33.6	1.0	-54.1	-25.0	-29.1	
5.05	-70.4	V	3.0	-20.3	33.0	1.0	-52.3	-25.0	-27.3	
7.17	-70.8	V	3.0	-16.5	30.7	1.0	-46.2	-25.0	-21.2	
High Channel (2560MHz)										
3.74	-71.5	H	3.0	-23.5	33.5	1.0	-56.0	-25.0	-31.0	
5.03	-71.1	H	3.0	-20.7	33.0	1.0	-52.7	-25.0	-27.7	
7.17	-72.3	H	3.0	-18.2	30.7	1.0	-47.9	-25.0	-22.9	
3.77	-69.4	V	3.0	-21.3	33.5	1.0	-53.8	-25.0	-28.8	
5.06	-70.2	V	3.0	-20.1	33.0	1.0	-52.1	-25.0	-27.1	
7.05	-71.0	V	3.0	-16.8	30.8	1.0	-46.6	-25.0	-21.6	

Rev. 05.21.15

10.10.5. LTE BAND 12

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/28/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 12, 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
Low Channel (704MHz)										
1.408	-66.2	H	3.0	-25.6	37.5	1.0	-62.1	-13.0	-49.1	
2.112	-66.8	H	3.0	-24.5	37.6	1.0	-61.1	-13.0	-48.1	
2.816	-70.1	H	3.0	-25.6	36.6	1.0	-61.2	-13.0	-48.2	
1.408	-66.8	V	3.0	-25.6	37.5	1.0	-62.2	-13.0	-49.2	
2.112	-66.4	V	3.0	-24.0	37.6	1.0	-60.5	-13.0	-47.5	
2.816	-66.9	V	3.0	-22.2	36.6	1.0	-57.8	-13.0	-44.8	
Mid Channel (707.5MHz)										
1.415	-66.1	H	3.0	-25.4	37.6	1.0	-62.0	-13.0	-49.0	
2.123	-67.1	H	3.0	-24.8	37.6	1.0	-61.3	-13.0	-48.3	
2.830	-66.3	H	3.0	-21.7	36.6	1.0	-57.3	-13.0	-44.3	
1.415	-66.4	V	3.0	-25.2	37.6	1.0	-61.7	-13.0	-48.7	
2.123	-67.1	V	3.0	-24.6	37.6	1.0	-61.2	-13.0	-48.2	
2.830	-66.7	V	3.0	-22.0	36.6	1.0	-57.6	-13.0	-44.6	
High Channel (711MHz)										
1.422	-66.9	H	3.0	-26.2	37.6	1.0	-62.8	-13.0	-49.8	
2.133	-67.5	H	3.0	-25.1	37.5	1.0	-61.7	-13.0	-48.7	
2.844	-66.9	H	3.0	-22.3	36.6	1.0	-57.9	-13.0	-44.9	
1.422	-66.8	V	3.0	-25.5	37.6	1.0	-62.1	-13.0	-49.1	
2.133	-70.2	V	3.0	-27.7	37.5	1.0	-64.2	-13.0	-51.2	
2.844	-70.5	V	3.0	-25.8	36.6	1.0	-61.4	-13.0	-48.4	

Rev. 05.21.15

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

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

Company: 15U20163
 Project #: 05/28/15
 Date: Ali.P
 Test Engineer: EUT only
 Configuration: LTE Band 12, 10MHz 16QAM
 Mode:

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
Low Channel (704MHz)										
1.41	-65.9	H	3.0	-25.3	37.5	1.0	-61.8	-13.0	-48.8	
2.11	-66.2	H	3.0	-23.9	37.6	1.0	-60.5	-13.0	-47.5	
2.82	-66.7	H	3.0	-22.2	36.6	1.0	-57.8	-13.0	-44.8	
1.41	-66.8	V	3.0	-25.6	37.5	1.0	-62.2	-13.0	-49.2	
2.11	-67.2	V	3.0	-24.8	37.6	1.0	-61.3	-13.0	-48.3	
2.82	-66.5	V	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	
Mid Channel (707.5MHz)										
1.42	-66.4	H	3.0	-25.7	37.6	1.0	-62.3	-13.0	-49.3	
2.12	-67.2	H	3.0	-24.9	37.6	1.0	-61.4	-13.0	-48.4	
2.83	-66.9	H	3.0	-22.3	36.6	1.0	-57.9	-13.0	-44.9	
1.42	-66.8	V	3.0	-25.6	37.6	1.0	-62.1	-13.0	-49.1	
2.12	-66.7	V	3.0	-24.2	37.6	1.0	-60.8	-13.0	-47.8	
2.83	-66.5	V	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	
High Channel (711MHz)										
1.42	-66.4	H	3.0	-25.7	37.6	1.0	-62.3	-13.0	-49.3	
2.13	-66.8	H	3.0	-24.4	37.5	1.0	-61.0	-13.0	-48.0	
2.84	-67.2	H	3.0	-22.6	36.6	1.0	-58.2	-13.0	-45.2	
1.42	-67.5	V	3.0	-26.2	37.6	1.0	-62.8	-13.0	-49.8	
2.13	-66.7	V	3.0	-24.2	37.5	1.0	-60.7	-13.0	-47.7	
2.84	-66.9	V	3.0	-22.2	36.6	1.0	-57.8	-13.0	-44.8	

Rev. 05.21.15

10.10.6. LTE BAND 13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/28/15
Test Engineer: Ali.P
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

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Mid Channel (782MHz)										
1.564	-66.1	H	3.0	-24.8	37.9	1.0	-61.6	-40.0	-21.6	1559-1610MHz
2.346	-67.2	H	3.0	-24.3	37.2	1.0	-60.5	-13.0	-47.5	
3.128	-68.5	H	3.0	-22.9	36.6	1.0	-58.6	-13.0	-45.6	
1.564	-66.8	V	3.0	-25.1	37.9	1.0	-61.9	-40.0	-21.9	1559-1610MHz
2.346	-67.3	V	3.0	-24.0	37.2	1.0	-60.2	-13.0	-47.2	
3.128	-67.1	V	3.0	-21.7	36.6	1.0	-57.4	-13.0	-44.4	
Rev. 05.21.15										

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company: _____
 Project #: 15U20163
 Date: 05/28/15
 Test Engineer: Ali.P
 Configuration: EUT only
 Mode: LTE Band 13, 10MHz 16QAM

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

Chamber

Pre-amplifer

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
Mid Channel (782MHz)										
1.564	-65.6	H	3.0	-24.3	37.9	1.0	-61.1	-40.0	-21.1	1559-1610MHz
2.346	-66.8	H	3.0	-23.9	37.2	1.0	-60.1	-13.0	-47.1	
3.128	-67.9	H	3.0	-22.3	36.6	1.0	-58.0	-13.0	-45.0	
1.564	-65.6	V	3.0	-23.9	37.9	1.0	-60.7	-40.0	-20.7	1559-1610MHz
2.346	-66.4	V	3.0	-23.1	37.2	1.0	-59.3	-13.0	-46.3	
3.128	-68.4	V	3.0	-23.0	36.6	1.0	-58.7	-13.0	-45.7	

Rev. 05.21.15

10.10.7. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/28/15
Test Engineer: Ali.P
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
Low Channel (709MHz)										
1.418	-66.3	H	3.0	-25.6	37.6	1.0	-62.2	-13.0	-49.2	
2.127	-67.2	H	3.0	-24.9	37.5	1.0	-61.4	-13.0	-48.4	
2.836	-69.4	H	3.0	-24.8	36.6	1.0	-60.4	-13.0	-47.4	
1.418	-66.7	V	3.0	-25.5	37.6	1.0	-62.0	-13.0	-49.0	
2.127	-66.8	V	3.0	-24.3	37.5	1.0	-60.9	-13.0	-47.9	
2.836	-67.8	V	3.0	-23.1	36.6	1.0	-58.7	-13.0	-45.7	
Mid Channel (710MHz)										
1.420	-66.5	H	3.0	-25.8	37.6	1.0	-62.4	-13.0	-49.4	
2.130	-66.4	H	3.0	-24.1	37.5	1.0	-60.6	-13.0	-47.6	
2.840	-67.8	H	3.0	-23.2	36.6	1.0	-58.8	-13.0	-45.8	
1.420	-66.2	V	3.0	-25.0	37.6	1.0	-61.5	-13.0	-48.5	
2.130	-66.7	V	3.0	-24.2	37.5	1.0	-60.7	-13.0	-47.7	
2.840	-67.5	V	3.0	-22.8	36.6	1.0	-58.4	-13.0	-45.4	
High Channel (711)										
1.422	-67.4	H	3.0	-26.7	37.6	1.0	-63.3	-13.0	-50.3	
2.133	-67.3	H	3.0	-24.9	37.5	1.0	-61.5	-13.0	-48.5	
2.844	-67.6	H	3.0	-23.0	36.6	1.0	-58.6	-13.0	-45.6	
1.422	-66.4	V	3.0	-25.1	37.6	1.0	-61.7	-13.0	-48.7	
2.133	-66.8	V	3.0	-24.3	37.5	1.0	-60.8	-13.0	-47.8	
2.844	-66.9	V	3.0	-22.2	36.6	1.0	-57.8	-13.0	-44.8	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/28/15
 Test Engineer: Ali.P
 Configuration: EUT only
 Mode: LTE Band 17, 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
Low Channel (709MHz)										
1.418	-66.7	H	3.0	-26.0	37.6	1.0	-62.6	-13.0	-49.6	
2.127	-66.8	H	3.0	-24.5	37.5	1.0	-61.0	-13.0	-48.0	
2.836	-67.4	H	3.0	-22.8	36.6	1.0	-58.4	-13.0	-45.4	
1.418	-65.3	V	3.0	-24.1	37.6	1.0	-60.6	-13.0	-47.6	
2.127	-67.1	V	3.0	-24.6	37.5	1.0	-61.2	-13.0	-48.2	
2.836	-67.3	V	3.0	-22.6	36.6	1.0	-58.2	-13.0	-45.2	
Mid Channel (710MHz)										
1.420	-66.8	H	3.0	-26.1	37.6	1.0	-62.7	-13.0	-49.7	
2.130	-67.5	H	3.0	-25.2	37.5	1.0	-61.7	-13.0	-48.7	
2.840	-67.2	H	3.0	-22.6	36.6	1.0	-58.2	-13.0	-45.2	
1.420	-67.8	V	3.0	-26.6	37.6	1.0	-63.1	-13.0	-50.1	
2.130	-66.8	V	3.0	-24.3	37.5	1.0	-60.8	-13.0	-47.8	
2.840	-66.4	V	3.0	-21.7	36.6	1.0	-57.3	-13.0	-44.3	
High Channel (711)										
1.422	-66.6	H	3.0	-25.9	37.6	1.0	-62.5	-13.0	-49.5	
2.133	-66.7	H	3.0	-24.3	37.5	1.0	-60.9	-13.0	-47.9	
2.844	-67.1	H	3.0	-22.5	36.6	1.0	-58.1	-13.0	-45.1	
1.422	-67.2	V	3.0	-25.9	37.6	1.0	-62.5	-13.0	-49.5	
2.133	-67.4	V	3.0	-24.9	37.5	1.0	-61.4	-13.0	-48.4	
2.844	-66.9	V	3.0	-22.2	36.6	1.0	-57.8	-13.0	-44.8	

Rev. 05.21.15

10.10.8. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/29/15
 Test Engineer: Ali.P
 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
Low Channel (1860MHz)										
3.72	-69.9	H	3.0	-23.1	36.2	1.0	-58.3	-13.0	-45.3	
5.58	-69.7	H	3.0	-19.3	36.1	1.0	-54.4	-13.0	-41.4	
7.44	-71.6	H	3.0	-18.5	35.2	1.0	-52.7	-13.0	-39.7	
3.72	-69.7	V	3.0	-22.5	36.2	1.0	-57.7	-13.0	-44.7	
5.58	-69.8	V	3.0	-19.6	36.1	1.0	-54.8	-13.0	-41.8	
7.44	-71.2	V	3.0	-18.2	35.2	1.0	-52.3	-13.0	-39.3	
Mid Channel (1882.5MHz)										
3.77	-69.4	H	3.0	-22.5	36.2	1.0	-57.7	-13.0	-44.7	
5.65	-69.5	H	3.0	-19.0	36.1	1.0	-54.1	-13.0	-41.1	
7.53	-71.9	H	3.0	-18.7	35.1	1.0	-52.8	-13.0	-39.8	
3.77	-70.1	V	3.0	-22.8	36.2	1.0	-57.9	-13.0	-44.9	
5.65	-70.2	V	3.0	-19.9	36.1	1.0	-55.0	-13.0	-42.0	
7.53	-71.6	V	3.0	-18.5	35.1	1.0	-52.6	-13.0	-39.6	
High Channel (1905MHz)										
3.81	-71.5	H	3.0	-24.5	36.1	1.0	-59.7	-13.0	-46.7	
5.72	-71.2	H	3.0	-20.6	36.1	1.0	-55.7	-13.0	-42.7	
7.62	-72.0	H	3.0	-18.7	35.1	1.0	-52.8	-13.0	-39.8	
3.81	-69.8	V	3.0	-22.3	36.1	1.0	-57.5	-13.0	-44.5	
5.72	-68.9	V	3.0	-18.5	36.1	1.0	-53.6	-13.0	-40.6	
7.62	-71.1	V	3.0	-17.9	35.1	1.0	-52.0	-13.0	-39.0	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 05/29/15
 Test Engineer: Ali.P
 Configuration: EUT only
 Mode: LTE Band 25, 20MHz 16QAM

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

Chamber

Pre-amplifer

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
Low Channel (1860MHz)										
3.72	-68.1	H	3.0	-21.3	36.2	1.0	-56.5	-13.0	-43.5	
5.58	-70.2	H	3.0	-19.8	36.1	1.0	-54.9	-13.0	-41.9	
7.44	-69.9	H	3.0	-16.8	35.2	1.0	-51.0	-13.0	-38.0	
3.72	-68.9	V	3.0	-21.7	36.2	1.0	-56.9	-13.0	-43.9	
5.58	-70.2	V	3.0	-20.0	36.1	1.0	-55.2	-13.0	-42.2	
7.44	-70.4	V	3.0	-17.4	35.2	1.0	-51.5	-13.0	-38.5	
Mid Channel (1882.5MHz)										
3.77	-69.9	H	3.0	-23.0	36.2	1.0	-58.2	-13.0	-45.2	
5.65	-68.9	H	3.0	-18.4	36.1	1.0	-53.5	-13.0	-40.5	
7.53	-72.2	H	3.0	-19.0	35.1	1.0	-53.1	-13.0	-40.1	
3.77	-69.7	V	3.0	-22.4	36.2	1.0	-57.5	-13.0	-44.5	
5.65	-70.1	V	3.0	-19.8	36.1	1.0	-54.9	-13.0	-41.9	
7.53	-71.2	V	3.0	-18.1	35.1	1.0	-52.2	-13.0	-39.2	
High Channel (1905MHz)										
3.81	-69.7	H	3.0	-22.7	36.1	1.0	-57.9	-13.0	-44.9	
5.72	-70.9	H	3.0	-20.3	36.1	1.0	-55.4	-13.0	-42.4	
7.62	-72.5	H	3.0	-19.2	35.1	1.0	-53.3	-13.0	-40.3	
3.81	-71.1	V	3.0	-23.6	36.1	1.0	-58.8	-13.0	-45.8	
5.72	-71.4	V	3.0	-21.0	36.1	1.0	-56.1	-13.0	-43.1	
7.62	-72.6	V	3.0	-19.4	35.1	1.0	-53.5	-13.0	-40.5	

Rev. 05.21.15

10.10.9. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/29/15
Test Engineer: Ali.P
Configuration: EUT only
Mode: LTE Band 26 (90S), 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
Mid Channel (819MHz)										
1.638	-68.9	H	3.0	-27.5	37.8	1.0	-64.3	-13.0	-51.3	
2.457	-69.1	H	3.0	-26.0	36.7	1.0	-61.7	-13.0	-48.7	
3.276	-68.8	H	3.0	-22.9	36.5	1.0	-58.4	-13.0	-45.4	
1.638	-70.2	V	3.0	-28.4	37.8	1.0	-65.3	-13.0	-52.3	
2.457	-69.9	V	3.0	-26.0	36.7	1.0	-61.7	-13.0	-48.7	
3.276	-70.5	V	3.0	-24.7	36.5	1.0	-60.2	-13.0	-47.2	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U20163
Date: 05/29/15
Test Engineer: Ali.P
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)										
1.638	-67.8	H	3.0	-26.4	37.8	1.0	-63.2	-13.0	-50.2	
2.457	-68.5	H	3.0	-25.4	36.7	1.0	-61.1	-13.0	-48.1	
3.276	-68.6	H	3.0	-22.7	36.5	1.0	-58.2	-13.0	-45.2	
1.638	-66.8	V	3.0	-25.0	37.8	1.0	-61.9	-13.0	-48.9	
2.457	-67.5	V	3.0	-23.6	36.7	1.0	-59.3	-13.0	-46.3	
3.276	-68.9	V	3.0	-23.1	36.5	1.0	-58.6	-13.0	-45.6	

Rev. 05.21.15

10.10.10. LTE BAND 41

QPSK EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

UL Fremont Radiated Chamber

Company:
 Project #: 15U20163
 Date: 06/27/15
 Test Engineer: J. Li
 Configuration: EUT only
 Mode: LTE Band 41, 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
Low Channel (2506MHz)										
1.44	-66.1	H	3.0	-25.3	37.7	1.0	-61.9	-25.0	-36.9	
2.12	-66.9	H	3.0	-24.6	37.6	1.0	-61.1	-25.0	-36.1	
4.23	-70.1	H	3.0	-22.3	36.1	1.0	-57.3	-25.0	-32.3	
2.81	-66.8	V	3.0	-22.1	36.6	1.0	-57.7	-25.0	-32.7	
3.53	-66.9	V	3.0	-20.3	36.3	1.0	-55.6	-25.0	-30.6	
4.96	-67.8	V	3.0	-18.6	36.2	1.0	-53.8	-25.0	-28.8	
Mid Channel (2593MHz)										
1.39	-65.6	H	3.0	-25.1	37.5	1.0	-61.5	-25.0	-36.5	
2.12	-66.7	H	3.0	-24.4	37.6	1.0	-60.9	-25.0	-35.9	
2.85	-66.9	H	3.0	-22.2	36.6	1.0	-57.8	-25.0	-32.8	
3.53	-66.8	V	3.0	-20.2	36.3	1.0	-55.5	-25.0	-30.5	
4.94	-66.7	V	3.0	-17.5	36.2	1.0	-52.7	-25.0	-27.7	
5.69	-67.7	V	3.0	-17.3	36.1	1.0	-52.4	-25.0	-27.4	
High Channel (2680MHz)										
2.12	-66.8	H	3.0	-24.5	37.6	1.0	-61.0	-25.0	-36.0	
3.56	-66.9	H	3.0	-20.4	36.3	1.0	-55.8	-25.0	-30.8	
10.72	-70.1	H	3.0	-14.3	32.9	1.0	-46.2	-25.0	-21.2	
1.39	-66.7	V	3.0	-25.6	37.5	1.0	-62.1	-25.0	-37.1	
2.81	-66.9	V	3.0	-22.2	36.6	1.0	-57.8	-25.0	-32.8	
10.72	-70.2	V	3.0	-14.7	32.9	1.0	-46.6	-25.0	-21.6	

Rev. 05.21.15

16QAM EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

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

Company: 15U20163
 Project #: 15U20163
 Date: 06/29/15
 Test Engineer: K. Huynh
 Configuration: EUT only
 Mode: LTE Band 41, 20MHz 16QAM

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

Chamber
3m Chamber E

Pre-amplifier
3m Chamber E

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
Low Channel (2506MHz)										
1.44	-67.0	H	3.0	-25.2	38.0	1.0	-62.2	-25.0	-37.2	
2.12	-68.9	H	3.0	-25.3	38.0	1.0	-62.3	-25.0	-37.3	
4.23	-68.8	H	3.0	-17.6	38.7	1.0	-55.3	-25.0	-30.3	
2.81	-68.6	V	3.0	-21.7	38.5	1.0	-59.2	-25.0	-34.2	
3.53	-67.5	V	3.0	-18.1	38.6	1.0	-55.7	-25.0	-30.7	
4.96	-67.4	V	3.0	-14.9	38.7	1.0	-52.6	-25.0	-27.6	
Mid Channel (2593MHz)										
1.39	-66.7	H	3.0	-25.2	38.1	1.0	-62.3	-25.0	-37.3	
2.12	-67.1	H	3.0	-23.5	38.0	1.0	-60.5	-25.0	-35.5	
2.85	-66.8	H	3.0	-19.5	38.4	1.0	-56.9	-25.0	-31.9	
3.53	-72.0	V	3.0	-22.6	38.6	1.0	-60.2	-25.0	-35.2	
4.94	-69.9	V	3.0	-17.4	38.7	1.0	-55.1	-25.0	-30.1	
5.69	-70.2	V	3.0	-16.2	38.5	1.0	-53.7	-25.0	-28.7	
High Channel (2680MHz)										
2.12	-67.3	H	3.0	-23.7	38.0	1.0	-60.7	-25.0	-35.7	
3.56	-67.8	H	3.0	-18.2	38.6	1.0	-55.8	-25.0	-30.8	
10.72	-69.6	H	3.0	-8.2	36.6	1.0	-43.8	-25.0	-18.8	
1.39	-66.2	V	3.0	-25.3	38.1	1.0	-62.5	-25.0	-37.5	
2.81	-66.9	V	3.0	-20.0	38.5	1.0	-57.5	-25.0	-32.5	
10.72	-70.5	V	3.0	-8.9	36.6	1.0	-44.5	-25.0	-19.5	

Rev. 05.21.15