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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 12 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
704.00	9.10	V	0.55	0.0	8.55	10.70	34.77	36.99	-26.3	
704.00	17.85	H	0.55	0.0	17.30	19.45	34.77	36.99	-17.5	
Mid Ch										
707.50	8.95	V	0.55	0.0	8.40	10.55	34.77	36.99	-26.4	
707.50	17.73	H	0.55	0.0	17.18	19.33	34.77	36.99	-17.7	
High Ch										
711.00	9.17	V	0.55	0.0	8.62	10.77	34.77	36.99	-26.2	
711.00	17.95	H	0.55	0.0	17.40	19.55	34.77	36.99	-17.4	

Rev. 10.24.13

9.1.6. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 17 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	10.09	V	0.55	0.0	9.54	11.69	34.77	36.99	-25.3	
706.50	18.75	H	0.55	0.0	18.20	20.35	34.77	36.99	-16.6	
Mid Ch										
710.00	10.24	V	0.55	0.0	9.69	11.84	34.77	36.99	-25.2	
710.00	18.95	H	0.55	0.0	18.40	20.55	34.77	36.99	-16.4	
High Ch										
713.50	10.35	V	0.55	0.0	9.80	11.95	34.77	36.99	-25.0	
713.50	18.77	H	0.55	0.0	18.22	20.37	34.77	36.99	-16.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 17 16QAM 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	9.19	V	0.55	0.0	8.64	10.79	34.77	36.99	-26.2	
706.50	17.79	H	0.55	0.0	17.24	19.39	34.77	36.99	-17.6	
Mid Ch										
710.00	9.14	V	0.55	0.0	8.59	10.74	34.77	36.99	-26.3	
710.00	18.05	H	0.55	0.0	17.50	19.65	34.77	36.99	-17.3	
High Ch										
713.50	9.35	V	0.55	0.0	8.80	10.95	34.77	36.99	-26.0	
713.50	17.87	H	0.55	0.0	17.32	19.47	34.77	36.99	-17.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 17 QPSK 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	10.04	V	0.55	0.0	9.49	11.64	34.77	36.99	-25.4	
710.00	19.02	H	0.55	0.0	18.47	20.62	34.77	36.99	-16.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 17 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	9.14	V	0.55	0.0	8.59	10.74	34.77	36.99	-26.3	
710.00	18.15	H	0.55	0.0	17.60	19.75	34.77	36.99	-17.2	

Rev. 10.24.13

9.1.7. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	16.3	V	0.98	8.05	23.39	33.0	-9.6	
1.851	16.9	H	0.98	8.05	23.93	33.0	-9.1	
Mid Ch								
1.883	16.6	V	0.98	8.03	23.66	33.0	-9.3	
1.883	17.4	H	0.98	8.03	24.48	33.0	-8.5	
High Ch								
1.914	16.6	V	0.98	8.07	23.65	33.0	-9.4	
1.914	17.1	H	0.98	8.07	24.18	33.0	-8.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	15.5	V	0.98	8.05	22.59	33.0	-10.4	
1.851	15.9	H	0.98	8.05	23.01	33.0	-10.0	
Mid Ch								
1.883	15.5	V	0.98	8.03	22.56	33.0	-10.4	
1.883	16.5	H	0.98	8.03	23.52	33.0	-9.5	
High Ch								
1.914	15.2	V	0.98	8.07	22.25	33.0	-10.8	
1.914	16.2	H	0.98	8.07	23.26	33.0	-9.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	16.4	V	0.98	8.05	23.49	33.0	-9.5	
1.852	17.0	H	0.98	8.05	24.03	33.0	-9.0	
Mid Ch								
1.883	16.5	V	0.98	8.03	23.56	33.0	-9.4	
1.883	17.4	H	0.98	8.03	24.42	33.0	-8.6	
High Ch								
1.914	16.7	V	0.98	8.07	23.75	33.0	-9.3	
1.914	17.0	H	0.98	8.07	24.13	33.0	-8.9	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	15.4	V	0.98	8.05	22.49	33.0	-10.5	
1.852	16.0	H	0.98	8.05	23.03	33.0	-10.0	
Mid Ch								
1.883	15.7	V	0.98	8.03	22.76	33.0	-10.2	
1.883	16.3	H	0.98	8.03	23.32	33.0	-9.7	
High Ch								
1.914	15.7	V	0.98	8.07	22.75	33.0	-10.3	
1.914	16.1	H	0.98	8.07	23.23	33.0	-9.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	16.6	V	0.98	8.05	23.69	33.0	-9.3	
1.853	17.4	H	0.98	8.05	24.46	33.0	-8.5	
Mid Ch								
1.883	16.3	V	0.98	8.03	23.36	33.0	-9.6	
1.883	17.1	H	0.98	8.03	24.12	33.0	-8.9	
High Ch								
1.913	16.6	V	0.98	8.06	23.64	33.0	-9.4	
1.913	17.3	H	0.98	8.06	24.37	33.0	-8.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	15.7	V	0.98	8.05	22.79	33.0	-10.2	
1.853	16.3	H	0.98	8.05	23.33	33.0	-9.7	
Mid Ch								
1.883	15.4	V	0.98	8.03	22.46	33.0	-10.5	
1.883	16.3	H	0.98	8.03	23.30	33.0	-9.7	
High Ch								
1.913	15.6	V	0.98	8.06	22.64	33.0	-10.4	
1.913	16.2	H	0.98	8.06	23.27	33.0	-9.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	16.5	V	0.98	8.05	23.59	33.0	-9.4	
1.855	17.0	H	0.98	8.05	24.03	33.0	-9.0	
Mid Ch								
1.883	16.6	V	0.98	8.03	23.66	33.0	-9.3	
1.883	17.2	H	0.98	8.03	24.22	33.0	-8.8	
High Ch								
1.910	16.6	V	0.98	8.05	23.63	33.0	-9.4	
1.910	17.5	H	0.98	8.05	24.54	33.0	-8.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	15.5	V	0.98	8.05	22.59	33.0	-10.4	
1.855	16.1	H	0.98	8.05	23.13	33.0	-9.9	
Mid Ch								
1.883	15.5	V	0.98	8.03	22.56	33.0	-10.4	
1.883	16.2	H	0.98	8.03	23.22	33.0	-9.8	
High Ch								
1.910	15.5	V	0.98	8.05	22.53	33.0	-10.5	
1.910	16.4	H	0.98	8.05	23.46	33.0	-9.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	16.3	V	0.98	8.04	23.38	33.0	-9.6	
1.858	17.2	H	0.98	8.04	24.22	33.0	-8.8	
Mid Ch								
1.883	16.4	V	0.98	8.03	23.46	33.0	-9.5	
1.883	17.1	H	0.98	8.03	24.12	33.0	-8.9	
High Ch								
1.908	16.6	V	0.98	8.04	23.62	33.0	-9.4	
1.908	17.4	H	0.98	8.04	24.48	33.0	-8.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	15.4	V	0.98	8.04	22.48	33.0	-10.5	
1.858	16.1	H	0.98	8.04	23.12	33.0	-9.9	
Mid Ch								
1.883	16.5	V	0.98	8.03	23.56	33.0	-9.4	
1.883	16.2	H	0.98	8.03	23.22	33.0	-9.8	
High Ch								
1.908	15.5	V	0.98	8.04	22.52	33.0	-10.5	
1.908	16.3	H	0.98	8.04	23.35	33.0	-9.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	16.1	V	0.98	8.04	23.18	33.0	-9.8	
1.860	17.0	H	0.98	8.04	24.04	33.0	-9.0	
Mid Ch								
1.883	16.3	V	0.98	8.03	23.36	33.0	-9.6	
1.883	17.4	H	0.98	8.03	24.44	33.0	-8.6	
High Ch								
1.905	16.4	V	0.98	8.04	23.42	33.0	-9.6	
1.905	17.2	H	0.98	8.04	24.27	33.0	-8.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber H

Company:
Project #: 15U21635
Date: 12/11/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T863, and Chamber H SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	15.3	V	0.98	8.04	22.38	33.0	-10.6	
1.860	16.0	H	0.98	8.04	23.02	33.0	-10.0	
Mid Ch								
1.883	15.5	V	0.98	8.03	22.56	33.0	-10.4	
1.883	16.3	H	0.98	8.03	23.32	33.0	-9.7	
High Ch								
1.905	15.4	V	0.98	8.04	22.42	33.0	-10.6	
1.905	16.1	H	0.98	8.04	23.20	33.0	-9.8	

Rev. 10.24.13

9.1.8. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 26 QPSK 1.4MHz 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										
814.70	14.55	V	0.62	0.0	13.93	16.08	38.45	40.60	-24.5	
814.70	20.06	H	0.62	0.0	19.44	21.59	38.45	40.60	-19.0	
Mid Ch										
819.00	14.80	V	0.62	0.0	14.18	16.33	38.45	40.60	-24.3	
819.00	20.85	H	0.62	0.0	20.23	22.38	38.45	40.60	-18.2	
High Ch										
823.30	14.96	V	0.62	0.0	14.34	16.49	38.45	40.60	-24.1	
823.30	20.62	H	0.62	0.0	20.00	22.15	38.45	40.60	-18.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 26 16QAM 1.4MHz 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										
814.70	13.65	V	0.62	0.0	13.03	15.18	38.45	40.60	-25.4	
814.70	19.26	H	0.62	0.0	18.64	20.79	38.45	40.60	-19.8	
Mid Ch										
819.00	13.90	V	0.62	0.0	13.28	15.43	38.45	40.60	-25.2	
819.00	20.00	H	0.62	0.0	19.38	21.53	38.45	40.60	-19.1	
High Ch										
823.30	13.96	V	0.62	0.0	13.34	15.49	38.45	40.60	-25.1	
823.30	19.82	H	0.62	0.0	19.20	21.35	38.45	40.60	-19.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 26 QPSK 3MHz 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										
815.50	14.55	V	0.62	0.0	13.93	16.08	38.45	40.60	-24.5	
815.50	20.36	H	0.62	0.0	19.74	21.89	38.45	40.60	-18.7	
Mid Ch										
819.00	15.00	V	0.62	0.0	14.38	16.53	38.45	40.60	-24.1	
819.00	20.83	H	0.62	0.0	20.21	22.36	38.45	40.60	-18.2	
High Ch										
822.50	14.76	V	0.62	0.0	14.14	16.29	38.45	40.60	-24.3	
822.50	20.87	H	0.62	0.0	20.25	22.40	38.45	40.60	-18.2	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 26 16QAM 3MHz 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										
815.50	13.65	V	0.62	0.0	13.03	15.18	38.45	40.60	-25.4	
815.50	19.66	H	0.62	0.0	19.04	21.19	38.45	40.60	-19.4	
Mid Ch										
819.00	14.10	V	0.62	0.0	13.48	15.63	38.45	40.60	-25.0	
819.00	19.86	H	0.62	0.0	19.24	21.39	38.45	40.60	-19.2	
High Ch										
822.50	13.96	V	0.62	0.0	13.34	15.49	38.45	40.60	-25.1	
822.50	20.04	H	0.62	0.0	19.42	21.57	38.45	40.60	-19.0	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
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	14.95	V	0.62	0.0	14.33	16.48	38.45	40.60	-24.1	
816.50	20.56	H	0.62	0.0	19.94	22.09	38.45	40.60	-18.5	
Mid Ch										
819.00	14.90	V	0.62	0.0	14.28	16.43	38.45	40.60	-24.2	
819.00	20.86	H	0.62	0.0	20.24	22.39	38.45	40.60	-18.2	
High Ch										
821.50	14.86	V	0.62	0.0	14.24	16.39	38.45	40.60	-24.2	
821.50	20.72	H	0.62	0.0	20.10	22.25	38.45	40.60	-18.4	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 26 16QAM 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	14.05	V	0.62	0.0	13.43	15.58	38.45	40.60	-25.0	
816.50	19.59	H	0.62	0.0	18.97	21.12	38.45	40.60	-19.5	
Mid Ch										
819.00	14.00	V	0.62	0.0	13.38	15.53	38.45	40.60	-25.1	
819.00	19.85	H	0.62	0.0	19.23	21.38	38.45	40.60	-19.2	
High Ch										
821.50	13.86	V	0.62	0.0	13.24	15.39	38.45	40.60	-25.2	
821.50	19.83	H	0.62	0.0	19.21	21.36	38.45	40.60	-19.2	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
Configuration: EUT only
Mode: LTE Band 26 QPSK 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 EIRP (dB)	Notes
Mid Ch										
819.00	15.10	V	0.62	0.0	14.48	16.63	38.45	40.60	-24.0	
819.00	20.88	H	0.62	0.0	20.26	22.41	38.45	40.60	-18.2	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T wang
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	14.30	V	0.62	0.0	13.68	15.83	38.45	40.60	-24.8	
819.00	19.91	H	0.62	0.0	19.29	21.44	38.45	40.60	-19.2	

Rev. 10.24.13

9.1.9. LTE BAND 41

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	20.5	V	1.15	9.33	28.63	33.0	-4.4	
2.499	18.9	H	1.15	9.33	27.08	33.0	-5.9	
Mid Ch								
2.593	21.0	V	1.16	9.47	29.34	33.0	-3.7	
2.593	19.4	H	1.16	9.47	27.73	33.0	-5.3	
High Ch								
2.688	19.8	V	1.17	9.78	28.39	33.0	-4.6	
2.688	18.6	H	1.17	9.78	27.18	33.0	-5.8	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	19.5	V	1.15	9.33	27.68	33.0	-5.3	
2.499	18.0	H	1.15	9.33	26.14	33.0	-6.9	
Mid Ch								
2.593	20.0	V	1.16	9.47	28.32	33.0	-4.7	
2.593	18.4	H	1.16	9.47	26.72	33.0	-6.3	
High Ch								
2.688	18.8	V	1.17	9.78	27.42	33.0	-5.6	
2.688	17.6	H	1.17	9.78	26.22	33.0	-6.8	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 10MHz BW

Test Equipment:
UL Fremont Radiated Chamber G
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	20.8	V	1.15	9.33	28.99	33.0	-4.0	
2.501	18.4	H	1.15	9.33	26.58	33.0	-6.4	
Mid Ch								
2.593	20.8	V	1.16	9.47	29.14	33.0	-3.9	
2.593	18.9	H	1.16	9.47	27.23	33.0	-5.8	
High Ch								
2.685	19.7	V	1.17	9.77	28.28	33.0	-4.7	
2.685	18.1	H	1.17	9.77	26.67	33.0	-6.3	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	19.8	V	1.15	9.33	28.01	33.0	-5.0	
2.501	17.4	H	1.15	9.33	25.60	33.0	-7.4	
Mid Ch								
2.593	19.8	V	1.16	9.47	28.13	33.0	-4.9	
2.593	18.0	H	1.16	9.47	26.29	33.0	-6.7	
High Ch								
2.685	18.8	V	1.17	9.77	27.39	33.0	-5.6	
2.685	17.1	H	1.17	9.77	25.73	33.0	-7.3	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	20.7	V	1.15	9.34	28.91	33.0	-4.1	
2.504	19.3	H	1.15	9.34	27.49	33.0	-5.5	
Mid Ch								
2.593	20.9	V	1.16	9.47	29.24	33.0	-3.8	
2.593	20.0	H	1.16	9.47	28.29	33.0	-4.7	
High Ch								
2.683	20.3	V	1.17	9.76	28.87	33.0	-4.1	
2.683	19.2	H	1.17	9.76	27.76	33.0	-5.2	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	19.8	V	1.15	9.34	28.00	33.0	-5.0	
2.504	18.4	H	1.15	9.34	26.59	33.0	-6.4	
Mid Ch								
2.593	20.0	V	1.16	9.47	28.30	33.0	-4.7	
2.593	19.1	H	1.16	9.47	27.39	33.0	-5.6	
High Ch								
2.683	19.3	V	1.17	9.76	27.87	33.0	-5.1	
2.683	18.2	H	1.17	9.76	26.83	33.0	-6.2	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	21.2	V	1.15	9.34	29.40	33.0	-3.6	
2.506	19.7	H	1.15	9.34	27.89	33.0	-5.1	
Mid Ch								
2.593	21.2	V	1.16	9.47	29.50	33.0	-3.5	
2.593	19.9	H	1.16	9.47	28.23	33.0	-4.8	
High Ch								
2.680	20.0	V	1.17	9.76	28.57	33.0	-4.4	
2.680	18.8	H	1.17	9.76	27.36	33.0	-5.6	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	20.3	V	1.15	9.34	28.44	33.0	-4.6	
2.506	18.8	H	1.15	9.34	26.99	33.0	-6.0	
Mid Ch								
2.593	20.3	V	1.16	9.47	28.57	33.0	-4.4	
2.593	19.0	H	1.16	9.47	27.29	33.0	-5.7	
High Ch								
2.680	19.1	V	1.17	9.76	27.65	33.0	-5.4	
2.680	17.8	H	1.17	9.76	26.39	33.0	-6.6	

Rev. 10.24.13

9.2. RADIATED POWER (ERP & EIRP), UAT

EIRP POWER FOR LTE BAND 2 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	1850.7	19.30	85.11
		1880.0	19.50	89.13
		1909.3	**19.67**	92.68
1.4MHz Band 16QAM	1/0	1850.7	18.57	71.94
		1880.0	18.70	74.13
		1909.3	**18.74**	74.82

EIRP POWER FOR LTE BAND 2 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0MHz Band QPSK	1/0	1851.5	19.69	93.11
		1880.0	**19.76**	94.62
		1908.5	19.73	93.97
3.0MHz Band 16QAM	1/0	1851.5	18.74	74.82
		1880.0	**18.89**	77.45
		1908.5	18.88	77.27

EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0MHz Band QPSK	1/0	1852.5	19.13	81.85
		1880.0	**19.30**	85.11
		1907.5	19.15	82.22
5.0MHz Band 16QAM	1/0	1852.5	**18.44**	69.82
		1880.0	18.39	69.02
		1907.5	18.32	67.92

EIRP POWER FOR LTE BAND 2 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0MHz Band QPSK	1/0	1855.0	**19.37**	86.50
		1880.0	19.19	82.99
		1905.0	19.24	83.95
10.0MHz Band 16QAM	1/0	1855.0	**18.34**	68.23
		1880.0	18.26	66.99
		1905.0	18.32	67.92

EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15MHz Band QPSK	1/0	1857.5	**19.28**	84.72
		1880.0	19.14	82.04
		1902.5	19.11	81.47
15MHz Band 16QAM	1/0	1857.5	**18.33**	68.08
		1880.0	18.29	67.45
		1902.5	18.19	65.92

EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0MHz Band QPSK	1/0	1860.0	**19.25**	84.14
		1880.0	19.07	80.72
		1900.0	19.05	80.35
20MHz Band 16QAM	1/0	1860.0	**18.31**	67.76
		1880.0	18.14	65.16
		1900.0	18.08	64.27

EIRP POWER FOR LTE BAND 4 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1710.7	17.92	61.94
		1732.5	18.06	63.97
		1754.3	**18.22**	66.37
1.4 MHZ BAND 16QAM	1/0	1710.7	16.97	49.77
		1732.5	**17.20**	52.48
		1754.3	17.17	52.12

EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1711.5	17.62	57.81
		1732.5	17.92	61.94
		1753.5	**18.32**	67.92
3.0 MHZ BAND 16QAM	1/0	1711.5	16.90	48.98
		1732.5	16.97	49.77
		1753.5	**17.38**	54.70

EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1712.5	17.81	60.39
		1732.5	18.15	65.31
		1752.5	**18.43**	69.66
5.0 MHZ BAND 16QAM	1/0	1712.5	16.88	48.75
		1732.5	17.10	51.29
		1752.5	**17.53**	56.62

EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1715.0	17.66	58.34
		1732.5	18.00	63.10
		1750.0	**18.28**	67.30
10.0 MHZ BAND 16QAM	1/0	1715.0	16.80	47.86
		1732.5	17.10	51.29
		1750.0	**17.34**	54.20

EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1717.5	16.76	47.42
		1732.5	17.62	57.81
		1747.5	**18.48**	70.47
15.0 MHZ BAND 16QAM	1/0	1717.5	16.11	40.83
		1732.5	16.72	46.99
		1747.5	**17.54**	56.75

EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1720.0	17.40	54.95
		1732.5	17.70	58.88
		1745.0	**18.59**	72.28
20.0 MHZ BAND 16QAM	1/0	1720.0	16.50	44.67
		1732.5	16.70	46.77
		1745.0	**17.64**	58.08

ERP POWER FOR LTE BAND 5 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	824.7	**16.66**	46.34
		836.5	15.71	37.24
		848.3	16.46	44.26
1.4MHz Band 16QAM	1/0	824.7	**15.95**	39.36
		836.5	15.30	33.88
		848.3	15.86	38.55

ERP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	825.5	**16.84**	48.31
		836.5	16.32	42.85
		847.5	16.36	43.25
3.0 MHZ BAND 16QAM	1/0	825.5	**16.23**	41.98
		836.5	15.46	35.16
		847.5	15.81	38.11

ERP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	826.5	**16.61**	45.81
		836.5	15.69	37.07
		846.5	16.08	40.55
5MHz Band 16QAM	1/0	826.5	**15.73**	37.41
		836.5	14.84	30.48
		846.5	15.68	36.98

ERP POWER FOR LTE BAND 5 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	829.0	**16.56**	45.29
		836.5	16.45	44.16
		844.0	16.13	41.02
10.0 MHZ BAND 16QAM	1/0	829.0	**16.08**	40.55
		836.5	15.30	33.88
		844.0	15.55	35.89

EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2502.5	24.13	258.82
		2535.0	24.45	278.61
		2567.5	**24.51**	282.49
5.0 MHZ BAND 16QAM	25/0	2502.5	22.96	197.70
		2535.0	23.12	205.12
		2567.5	**23.14**	206.06

EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2505.0	24.16	260.62
		2535.0	24.38	274.16
		2565.0	**24.71**	295.80
10.0 MHZ BAND 16QAM	50/0	2505.0	23.42	219.79
		2535.0	23.64	231.21
		2565.0	**24.13**	258.82

EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2507.5	23.83	241.55
		2535.0	24.70	295.12
		2562.5	**24.80**	302.00
15.0 MHZ BAND 16QAM	75/0	2507.5	22.76	188.80
		2535.0	23.68	233.35
		2562.5	**23.88**	244.34

EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2510.0	24.73	297.17
		2535.0	24.75	298.54
		2560.0	**24.77**	299.92
20.0 MHZ BAND 16QAM	100/0	2510.0	23.72	235.50
		2535.0	23.75	237.14
		2560.0	**23.80**	239.88

ERP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
1.4MHz Band QPSK	1/0	699.7	15.24	33.42
		707.5	15.70	37.15
		715.3	**16.09**	40.64
1.4MHz Band 16QAM	1/0	699.7	14.44	27.80
		707.5	14.74	29.79
		715.3	**15.12**	32.51

ERP POWER FOR LTE BAND 12 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	700.5	15.38	34.51
		707.5	15.95	39.36
		714.5	**16.40**	43.65
3.0 MHZ BAND 16QAM	1/0	700.5	14.31	26.98
		707.5	15.04	31.92
		714.5	**15.47**	35.24

ERP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
5MHz Band QPSK	1/0	701.5	15.27	33.65
		707.5	15.77	37.76
		713.5	**16.04**	40.18
5MHz Band 16QAM	1/0	701.5	14.27	26.73
		707.5	14.75	29.85
		713.5	**14.97**	31.41

ERP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP (Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	704.0	15.53	35.73
		707.5	15.63	36.56
		711.0	**16.09**	40.64
10.0 MHZ BAND 16QAM	1/0	704.0	14.45	27.86
		707.5	14.36	27.29
		711.0	**15.20**	33.11

ERP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5MHz Band QPSK	1/0	706.5	16.30	42.66
		710.0	**16.80**	47.86
		713.5	16.59	45.60
5MHz Band 16QAM	1/0	706.5	14.92	31.05
		710.0	**15.40**	34.67
		713.5	15.22	33.27

EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	710.0	**16.68**	46.56
10.0 MHZ BAND 16QAM		710.0	**15.66**	36.81

EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	1850.7	19.73	100.69
		1882.5	**20.03**	90.78
		1914.3	19.58	90.78
1.4 MHZ BAND 16QAM	1/0	1850.7	19.13	81.85
		1882.5	**19.30**	85.11
		1914.3	18.64	73.11

EIRP POWER FOR LTE BAND 25 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	1851.5	19.89	97.50
		1882.5	**20.13**	103.04
		1913.5	19.86	96.83
3.0 MHZ BAND 16QAM	1/0	1851.5	19.36	86.30
		1882.5	**19.45**	88.10
		1913.5	19.43	87.70

EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	1852.5	19.03	79.98
		1882.5	**20.07**	101.62
		1912.5	19.65	92.26
5.0 MHZ BAND 16QAM	1/0	1852.5	18.85	76.74
		1882.5	18.88	77.27
		1912.5	**19.16**	82.41

EIRP POWER FOR LTE BAND 25 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	1855.0	**19.66**	92.47
		1882.5	19.56	90.36
		1910.0	19.35	86.10
10.0 MHZ BAND 16QAM	1/0	1855.0	**19.13**	81.85
		1882.5	18.65	73.28
		1910.0	18.55	71.61

EIRP POWER FOR LTE BAND 25 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15.0 MHZ BAND QPSK	1/0	1857.5	19.28	84.72
		1882.5	**19.70**	93.33
		1907.5	19.65	92.26
15.0 MHZ BAND 16QAM	1/0	1857.5	19.09	81.10
		1882.5	18.84	76.56
		1907.5	**19.20**	83.18

EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1860.0	19.49	88.92
		1882.5	19.04	80.17
		1905.0	**20.00**	100.00
20.0 MHZ BAND 16QAM	1/0	1860.0	**19.10**	81.28
		1882.5	18.37	68.71
		1905.0	19.09	81.10

ERP POWER FOR LTE BAND 26 (1.4MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
1.4 MHZ BAND QPSK	1/0	814.7	16.33	42.95
		819.0	**17.36**	54.45
		823.3	17.08	51.05
1.4 MHZ BAND 16QAM	1/0	814.7	15.48	35.32
		819.0	**16.54**	45.08
		823.3	16.04	40.18

ERP POWER FOR LTE BAND 26 (3.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
3.0 MHZ BAND QPSK	1/0	815.5	16.72	46.99
		819.0	**17.34**	54.20
		822.5	17.19	52.36
3.0 MHZ BAND 16QAM	1/0	815.5	15.92	39.08
		819.0	**16.45**	44.16
		822.5	16.20	41.69

ERP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	816.5	16.68	46.56
		819.0	**17.36**	54.45
		821.5	17.14	51.76
5.0 MHZ BAND 16QAM	1/0	816.5	15.88	38.73
		819.0	**16.42**	43.85
		821.5	16.29	42.56

ERP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	819.0	**17.19**	52.36
10.0 MHZ BAND 16QAM	1/0	819.0	**16.33**	42.95

EIRP POWER FOR LTE BAND 41 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
5.0 MHZ BAND QPSK	25/0	2498.5	**25.58**	361.41
		2593.0	25.03	318.42
		2687.5	24.68	293.76
5.0 MHZ BAND 16QAM	25/0	2498.5	**24.64**	291.07
		2593.0	24.14	259.42
		2687.5	23.54	225.94

EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
10.0 MHZ BAND QPSK	50/0	2501.0	**25.86**	385.48
		2593.0	25.39	345.94
		2685.0	25.08	322.11
10.0 MHZ BAND 16QAM	50/0	2501.0	**24.71**	295.80
		2593.0	24.49	281.19
		2685.0	24.34	271.64

EIRP POWER FOR LTE BAND 41(15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
15.0 MHZ BAND QPSK	75/0	2503.5	25.29	338.06
		2593.0	**25.43**	349.14
		2682.5	24.96	313.33
15.0 MHZ BAND 16QAM	75/0	2503.5	24.27	267.30
		2593.0	**24.42**	276.69
		2682.5	24.13	258.82

EIRP POWER FOR LTE BAND 41 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Peak)	
			dBm	mW
20.0 MHZ BAND QPSK	100/0	2506.0	**25.75**	375.84
		2593.0	25.13	325.84
		2680.0	23.86	243.22
20.0 MHZ BAND 16QAM	100/0	2506.0	**24.85**	305.49
		2593.0	24.19	262.42
		2680.0	22.03	159.59

9.2.1. LTE BAND 2

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

High Frequency Fundamental Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.8507	12.2	V	0.98	8.05	19.30	33.0	-13.7	
1.8507	12.2	H	0.98	8.05	19.24	33.0	-13.8	
Mid Ch								
1.8800	12.5	V	0.98	8.03	19.50	33.0	-13.5	
1.8800	12.4	H	0.98	8.03	19.42	33.0	-13.6	
High Ch								
1.9093	12.6	V	0.98	8.05	19.67	33.0	-13.3	
1.9093	11.8	H	0.98	8.05	18.85	33.0	-14.1	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	11.5	V	0.98	8.05	18.57	33.0	-14.4	
1.851	11.0	H	0.98	8.05	18.04	33.0	-15.0	
Mid Ch								
1.880	11.7	V	0.98	8.03	18.70	33.0	-14.3	
1.880	11.3	H	0.98	8.03	18.36	33.0	-14.6	
High Ch								
1.909	11.7	V	0.98	8.05	18.74	33.0	-14.3	
1.909	11.2	H	0.98	8.05	18.23	33.0	-14.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	11.7	V	0.98	8.05	18.81	33.0	-14.2	
1.852	12.6	H	0.98	8.05	19.69	33.0	-13.3	
Mid Ch								
1.880	12.2	V	0.98	8.03	19.27	33.0	-13.7	
1.880	12.7	H	0.98	8.03	19.76	33.0	-13.2	
High Ch								
1.909	11.6	V	0.98	8.05	18.66	33.0	-14.3	
1.909	12.7	H	0.98	8.05	19.73	33.0	-13.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	11.2	V	0.98	8.05	18.28	33.0	-14.7	
1.852	11.7	H	0.98	8.05	18.74	33.0	-14.3	
Mid Ch								
1.880	11.0	V	0.98	8.03	18.02	33.0	-15.0	
1.880	11.8	H	0.98	8.03	18.89	33.0	-14.1	
High Ch								
1.909	11.4	V	0.98	8.05	18.47	33.0	-14.5	
1.909	11.8	H	0.98	8.05	18.88	33.0	-14.1	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	12.0	V	0.98	8.05	19.09	33.0	-13.9	
1.853	12.1	H	0.98	8.05	19.13	33.0	-13.9	
Mid Ch								
1.880	11.9	V	0.98	8.03	18.91	33.0	-14.1	
1.880	12.3	H	0.98	8.03	19.30	33.0	-13.7	
High Ch								
1.908	11.7	V	0.98	8.04	18.79	33.0	-14.2	
1.908	12.1	H	0.98	8.04	19.15	33.0	-13.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	10.6	V	0.98	8.05	17.67	33.0	-15.3	
1.853	11.4	H	0.98	8.05	18.44	33.0	-14.6	
Mid Ch								
1.880	10.4	V	0.98	8.03	17.41	33.0	-15.6	
1.880	11.3	H	0.98	8.03	18.39	33.0	-14.6	
High Ch								
1.908	10.2	V	0.98	8.04	17.27	33.0	-15.7	
1.908	11.3	H	0.98	8.04	18.32	33.0	-14.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	10.7	V	0.98	8.05	17.77	33.0	-15.2	
1.855	12.3	H	0.98	8.05	19.37	33.0	-13.6	
Mid Ch								
1.880	11.1	V	0.98	8.03	18.17	33.0	-14.8	
1.880	12.1	H	0.98	8.03	19.19	33.0	-13.8	
High Ch								
1.905	11.4	V	0.98	8.04	18.44	33.0	-14.6	
1.905	12.2	H	0.98	8.04	19.24	33.0	-13.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	10.3	V	0.98	8.05	17.33	33.0	-15.7	
1.855	11.3	H	0.98	8.05	18.34	33.0	-14.7	
Mid Ch								
1.880	10.2	V	0.98	8.03	17.21	33.0	-15.8	
1.880	11.2	H	0.98	8.03	18.26	33.0	-14.7	
High Ch								
1.905	10.0	V	0.98	8.04	17.06	33.0	-15.9	
1.905	11.3	H	0.98	8.04	18.32	33.0	-14.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	11.8	V	0.98	8.04	18.81	33.0	-14.2	
1.858	12.2	H	0.98	8.04	19.28	33.0	-13.7	
Mid Ch								
1.880	11.3	V	0.98	8.03	18.32	33.0	-14.7	
1.880	12.1	H	0.98	8.03	19.14	33.0	-13.9	
High Ch								
1.903	11.3	V	0.98	8.03	18.37	33.0	-14.6	
1.903	12.1	H	0.98	8.03	19.11	33.0	-13.9	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	9.6	V	0.98	8.04	16.68	33.0	-16.3	
1.858	11.3	H	0.98	8.04	18.33	33.0	-14.7	
Mid Ch								
1.880	10.0	V	0.98	8.03	17.01	33.0	-16.0	
1.880	11.2	H	0.98	8.03	18.29	33.0	-14.7	
High Ch								
1.903	10.2	V	0.98	8.03	17.24	33.0	-15.8	
1.903	11.1	H	0.98	8.03	18.19	33.0	-14.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	11.5	V	0.98	8.04	18.53	33.0	-14.5	
1.860	12.2	H	0.98	8.04	19.25	33.0	-13.7	
Mid Ch								
1.880	11.9	V	0.98	8.03	18.94	33.0	-14.1	
1.880	12.0	H	0.98	8.03	19.07	33.0	-13.9	
High Ch								
1.900	11.5	V	0.98	8.02	18.56	33.0	-14.4	
1.900	12.0	H	0.98	8.02	19.05	33.0	-14.0	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 2 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	10.4	V	0.98	8.04	17.46	33.0	-15.5	
1.860	11.3	H	0.98	8.04	18.31	33.0	-14.7	
Mid Ch								
1.880	10.2	V	0.98	8.03	17.20	33.0	-15.8	
1.880	11.1	H	0.98	8.03	18.14	33.0	-14.9	
High Ch								
1.900	10.1	V	0.98	8.02	17.13	33.0	-15.9	
1.900	11.0	H	0.98	8.02	18.08	33.0	-14.9	

Rev. 10.24.13

9.2.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	8.3	V	0.95	8.27	15.61	30.0	-14.4	
1.711	10.6	H	0.95	8.27	17.92	30.0	-12.1	
Mid Ch								
1.733	7.8	V	0.95	8.23	15.09	30.0	-14.9	
1.733	10.8	H	0.95	8.23	18.06	30.0	-11.9	
High Ch								
1.754	8.2	V	0.95	8.18	15.41	30.0	-14.6	
1.754	11.0	H	0.95	8.18	18.22	30.0	-11.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	7.2	V	0.95	8.27	14.55	30.0	-15.4	
1.711	9.7	H	0.95	8.27	16.97	30.0	-13.0	
Mid Ch								
1.733	6.9	V	0.95	8.23	14.21	30.0	-15.8	
1.733	9.9	H	0.95	8.23	17.20	30.0	-12.8	
High Ch								
1.754	7.1	V	0.95	8.18	14.33	30.0	-15.7	
1.754	9.9	H	0.95	8.18	17.17	30.0	-12.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	8.2	V	0.95	8.27	15.54	30.0	-14.5	
1.712	10.3	H	0.95	8.27	17.62	30.0	-12.4	
Mid Ch								
1.733	7.9	V	0.95	8.23	15.19	30.0	-14.8	
1.733	10.6	H	0.95	8.23	17.92	30.0	-12.1	
High Ch								
1.754	7.8	V	0.95	8.18	15.07	30.0	-14.9	
1.754	11.1	H	0.95	8.18	18.32	30.0	-11.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	7.2	V	0.95	8.27	14.56	30.0	-15.4	
1.712	9.6	H	0.95	8.27	16.90	30.0	-13.1	
Mid Ch								
1.733	7.0	V	0.95	8.23	14.27	30.0	-15.7	
1.733	9.7	H	0.95	8.23	16.97	30.0	-13.0	
High Ch								
1.754	6.9	V	0.95	8.18	14.17	30.0	-15.8	
1.754	10.2	H	0.95	8.18	17.38	30.0	-12.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	8.1	V	0.95	8.27	15.39	30.0	-14.6	
1.713	10.5	H	0.95	8.27	17.81	30.0	-12.2	
Mid Ch								
1.733	8.0	V	0.95	8.23	15.25	30.0	-14.8	
1.733	10.9	H	0.95	8.23	18.15	30.0	-11.9	
High Ch								
1.753	8.1	V	0.95	8.18	15.37	30.0	-14.6	
1.753	11.2	H	0.95	8.18	18.43	30.0	-11.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	7.3	V	0.95	8.27	14.59	30.0	-15.4	
1.713	9.6	H	0.95	8.27	16.88	30.0	-13.1	
Mid Ch								
1.733	6.9	V	0.95	8.23	14.15	30.0	-15.9	
1.733	9.8	H	0.95	8.23	17.10	30.0	-12.9	
High Ch								
1.753	6.7	V	0.95	8.18	13.96	30.0	-16.0	
1.753	10.3	H	0.95	8.18	17.53	30.0	-12.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	7.4	V	0.95	8.26	14.69	30.0	-15.3	
1.715	10.4	H	0.95	8.26	17.66	30.0	-12.3	
Mid Ch								
1.733	8.4	V	0.95	8.23	15.70	30.0	-14.3	
1.733	10.7	H	0.95	8.23	18.00	30.0	-12.0	
High Ch								
1.750	8.4	V	0.95	8.19	15.66	30.0	-14.3	
1.750	11.0	H	0.95	8.19	18.28	30.0	-11.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	6.3	V	0.95	8.26	13.59	30.0	-16.4	
1.715	9.5	H	0.95	8.26	16.80	30.0	-13.2	
Mid Ch								
1.733	7.6	V	0.95	8.23	14.84	30.0	-15.2	
1.733	9.8	H	0.95	8.23	17.10	30.0	-12.9	
High Ch								
1.750	7.4	V	0.95	8.19	14.67	30.0	-15.3	
1.750	10.1	H	0.95	8.19	17.34	30.0	-12.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	7.6	V	0.95	8.26	14.86	30.0	-15.1	
1.718	9.5	H	0.95	8.26	16.76	30.0	-13.2	
Mid Ch								
1.733	8.6	V	0.95	8.23	15.84	30.0	-14.2	
1.733	10.3	H	0.95	8.23	17.62	30.0	-12.4	
High Ch								
1.748	8.4	V	0.95	8.19	15.59	30.0	-14.4	
1.748	11.2	H	0.95	8.19	18.48	30.0	-11.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	6.4	V	0.95	8.26	13.73	30.0	-16.3	
1.718	8.8	H	0.95	8.26	16.11	30.0	-13.9	
Mid Ch								
1.733	7.7	V	0.95	8.23	14.97	30.0	-15.0	
1.733	9.4	H	0.95	8.23	16.72	30.0	-13.3	
High Ch								
1.748	7.5	V	0.95	8.19	14.72	30.0	-15.3	
1.748	10.3	H	0.95	8.19	17.54	30.0	-12.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	7.7	V	0.95	8.25	15.03	30.0	-15.0	
1.720	10.1	H	0.95	8.25	17.40	30.0	-12.6	
Mid Ch								
1.733	8.3	V	0.95	8.23	15.61	30.0	-14.4	
1.733	10.4	H	0.95	8.23	17.70	30.0	-12.3	
High Ch								
1.745	8.8	V	0.95	8.20	16.03	30.0	-14.0	
1.745	11.3	H	0.95	8.20	18.59	30.0	-11.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 4 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	6.7	V	0.95	8.25	13.99	30.0	-16.0	
1.720	9.2	H	0.95	8.25	16.50	30.0	-13.5	
Mid Ch								
1.733	7.4	V	0.95	8.23	14.66	30.0	-15.3	
1.733	9.4	H	0.95	8.23	16.70	30.0	-13.3	
High Ch								
1.745	7.9	V	0.95	8.20	15.10	30.0	-14.9	
1.745	10.4	H	0.95	8.20	17.64	30.0	-12.4	

Rev. 10.24.13

9.2.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT Only
Mode: LTE Band 5 QPSK 1.4MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	10.01	V	0.6	0.0	9.39	11.54	38.45	40.60	-29.1	
824.70	17.28	H	0.6	0.0	16.66	18.81	38.45	40.60	-21.8	
Mid Ch										
836.50	10.11	V	0.6	0.0	9.49	11.64	38.45	40.60	-29.0	
836.50	16.33	H	0.6	0.0	15.71	17.86	38.45	40.60	-22.7	
High Ch										
848.30	10.67	V	0.6	0.0	10.05	12.20	38.45	40.60	-28.4	
848.30	17.08	H	0.6	0.0	16.46	18.61	38.45	40.60	-22.0	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT Only
Mode: LTE Band 5 16QAM 1.4MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
824.70	9.26	V	0.6	0.0	8.64	10.79	38.45	40.60	-29.8	
824.70	16.57	H	0.6	0.0	15.95	18.10	38.45	40.60	-22.5	
Mid Ch										
836.50	9.16	V	0.6	0.0	8.54	10.69	38.45	40.60	-29.9	
836.50	15.92	H	0.6	0.0	15.30	17.45	38.45	40.60	-23.1	
High Ch										
848.30	10.20	V	0.6	0.0	9.58	11.73	38.45	40.60	-28.9	
848.30	16.48	H	0.6	0.0	15.86	18.01	38.45	40.60	-22.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT Only
Mode: LTE Band 5 QPSK 3MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	10.05	V	0.6	0.0	9.43	11.58	38.45	40.60	-29.0	
825.50	17.46	H	0.6	0.0	16.84	18.99	38.45	40.60	-21.6	
Mid Ch										
836.50	9.68	V	0.6	0.0	9.06	11.21	38.45	40.60	-29.4	
836.50	16.94	H	0.6	0.0	16.32	18.47	38.45	40.60	-22.1	
High Ch										
847.50	10.48	V	0.6	0.0	9.86	12.01	38.45	40.60	-28.6	
847.50	16.98	H	0.6	0.0	16.36	18.51	38.45	40.60	-22.1	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT Only
Mode: LTE Band 5 16QAM 3MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
825.50	9.32	V	0.6	0.0	8.70	10.85	38.45	40.60	-29.7	
825.50	16.85	H	0.6	0.0	16.23	18.38	38.45	40.60	-22.2	
Mid Ch										
836.50	9.24	V	0.6	0.0	8.62	10.77	38.45	40.60	-29.8	
836.50	16.08	H	0.6	0.0	15.46	17.61	38.45	40.60	-23.0	
High Ch										
847.50	9.92	V	0.6	0.0	9.30	11.45	38.45	40.60	-29.1	
847.50	16.43	H	0.6	0.0	15.81	17.96	38.45	40.60	-22.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 5 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	9.91	V	0.6	0.0	9.29	11.44	38.45	40.60	-29.2	
826.50	17.23	H	0.6	0.0	16.61	18.76	38.45	40.60	-21.8	
Mid Ch										
836.50	9.72	V	0.6	0.0	9.10	11.25	38.45	40.60	-29.3	
836.50	16.31	H	0.6	0.0	15.69	17.84	38.45	40.60	-22.8	
High Ch										
846.50	10.29	V	0.6	0.0	9.67	11.82	38.45	40.60	-28.8	
846.50	16.70	H	0.6	0.0	16.08	18.23	38.45	40.60	-22.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 5 16QAM 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
826.50	9.18	V	0.6	0.0	8.56	10.71	38.45	40.60	-29.9	
826.50	16.35	H	0.6	0.0	15.73	17.88	38.45	40.60	-22.7	
Mid Ch										
836.50	8.23	V	0.6	0.0	7.61	9.76	38.45	40.60	-30.8	
836.50	15.46	H	0.6	0.0	14.84	16.99	38.45	40.60	-23.6	
High Ch										
846.50	9.33	V	0.6	0.0	8.71	10.86	38.45	40.60	-29.7	
846.50	16.30	H	0.6	0.0	15.68	17.83	38.45	40.60	-22.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 5 QPSK 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	9.70	V	0.6	0.0	9.08	11.23	38.45	40.60	-29.4	
829.00	17.18	H	0.6	0.0	16.56	18.71	38.45	40.60	-21.9	
Mid Ch										
836.50	9.77	V	0.6	0.0	9.15	11.30	38.45	40.60	-29.3	
836.50	17.07	H	0.6	0.0	16.45	18.60	38.45	40.60	-22.0	
High Ch										
844.00	9.28	V	0.6	0.0	8.66	10.81	38.45	40.60	-29.8	
844.00	16.75	H	0.6	0.0	16.13	18.28	38.45	40.60	-22.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/17/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 5 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
829.00	9.10	V	0.6	0.0	8.48	10.63	38.45	40.60	-30.0	
829.00	16.70	H	0.6	0.0	16.08	18.23	38.45	40.60	-22.4	
Mid Ch										
836.50	9.44	V	0.6	0.0	8.82	10.97	38.45	40.60	-29.6	
836.50	15.92	H	0.6	0.0	15.30	17.45	38.45	40.60	-23.1	
High Ch										
844.00	8.86	V	0.6	0.0	8.24	10.39	38.45	40.60	-30.2	
844.00	16.17	H	0.6	0.0	15.55	17.70	38.45	40.60	-22.9	

Rev. 10.24.13

9.2.4. LTE BAND 7

QPSK EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	14.0	V	1.15	9.34	22.16	33.0	-10.8	
2.503	15.9	H	1.15	9.34	24.13	33.0	-8.9	
Mid Ch								
2.535	14.6	V	1.16	9.38	22.85	33.0	-10.1	
2.535	16.2	H	1.16	9.38	24.45	33.0	-8.5	
High Ch								
2.568	15.2	V	1.17	9.43	23.49	33.0	-9.5	
2.568	16.3	H	1.17	9.43	24.51	33.0	-8.5	

Rev. 10.24.13

16QAM EIRP POWER FOR LTE BAND 7 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	13.3	V	1.15	9.34	21.50	33.0	-11.5	
2.503	14.8	H	1.15	9.34	22.96	33.0	-10.0	
Mid Ch								
2.535	13.8	V	1.16	9.38	22.04	33.0	-11.0	
2.535	14.9	H	1.16	9.38	23.12	33.0	-9.9	
High Ch								
2.568	14.5	V	1.17	9.43	22.80	33.0	-10.2	
2.568	14.9	H	1.17	9.43	23.14	33.0	-9.9	

Rev. 10.24.13

QPSK EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	14.1	V	1.15	9.34	22.24	33.0	-10.8	
2.505	16.0	H	1.15	9.34	24.16	33.0	-8.8	
Mid Ch								
2.535	14.6	V	1.16	9.38	22.84	33.0	-10.2	
2.535	16.2	H	1.16	9.38	24.38	33.0	-8.6	
High Ch								
2.565	15.7	V	1.17	9.43	23.97	33.0	-9.0	
2.565	16.5	H	1.17	9.43	24.71	33.0	-8.3	

Rev. 10.24.13

16QAM EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	13.0	V	1.15	9.34	21.18	33.0	-11.8	
2.505	15.2	H	1.15	9.34	23.42	33.0	-9.6	
Mid Ch								
2.535	13.9	V	1.16	9.38	22.10	33.0	-10.9	
2.535	15.4	H	1.16	9.38	23.64	33.0	-9.4	
High Ch								
2.565	14.9	V	1.17	9.43	23.11	33.0	-9.9	
2.565	15.9	H	1.17	9.43	24.13	33.0	-8.9	

Rev. 10.24.13

QPSK EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	14.6	V	1.15	9.34	22.81	33.0	-10.2	
2.508	15.6	H	1.15	9.34	23.83	33.0	-9.2	
Mid Ch								
2.535	15.6	V	1.16	9.38	23.79	33.0	-9.2	
2.535	16.5	H	1.16	9.38	24.70	33.0	-8.3	
High Ch								
2.563	15.3	V	1.17	9.42	23.53	33.0	-9.5	
2.563	16.6	H	1.17	9.42	24.80	33.0	-8.2	

Rev. 10.24.13

16QAM EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	13.7	V	1.15	9.34	21.91	33.0	-11.1	
2.508	14.6	H	1.15	9.34	22.76	33.0	-10.2	
Mid Ch								
2.535	14.8	V	1.16	9.38	23.00	33.0	-10.0	
2.535	15.5	H	1.16	9.38	23.68	33.0	-9.3	
High Ch								
2.563	14.2	V	1.17	9.42	22.47	33.0	-10.5	
2.563	15.6	H	1.17	9.42	23.88	33.0	-9.1	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	15.0	V	1.15	9.35	23.23	33.0	-9.8	
2.510	16.5	H	1.15	9.35	24.73	33.0	-8.3	
Mid Ch								
2.535	16.1	V	1.16	9.38	24.31	33.0	-8.7	
2.535	16.5	H	1.16	9.38	24.75	33.0	-8.2	
High Ch								
2.560	15.7	V	1.17	9.42	23.93	33.0	-9.1	
2.560	16.5	H	1.17	9.42	24.77	33.0	-8.2	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 7 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.510	14.2	V	1.15	9.35	22.41	33.0	-10.6	
2.510	15.5	H	1.15	9.35	23.72	33.0	-9.3	
Mid Ch								
2.535	15.3	V	1.16	9.38	23.47	33.0	-9.5	
2.535	15.5	H	1.16	9.38	23.75	33.0	-9.2	
High Ch								
2.560	14.8	V	1.17	9.42	23.08	33.0	-9.9	
2.560	15.6	H	1.17	9.42	23.80	33.0	-9.2	

Rev. 10.24.13

9.2.5. LTE BAND 12

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 QPSK 1.4MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
699.70	6.58	V	0.55	0.0	6.03	8.18	34.77	36.99	-28.8	
699.70	15.79	H	0.55	0.0	15.24	17.39	34.77	36.99	-19.6	
Mid Ch										
707.50	6.92	V	0.55	0.0	6.37	8.52	34.77	36.99	-28.5	
707.50	16.25	H	0.55	0.0	15.70	17.85	34.77	36.99	-19.1	
High Ch										
715.30	7.06	V	0.55	0.0	6.51	8.66	34.77	36.99	-28.3	
715.30	16.64	H	0.55	0.0	16.09	18.24	34.77	36.99	-18.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 16QAM 1.4MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
699.70	5.40	V	0.55	0.0	4.85	7.00	34.77	36.99	-30.0	
699.70	14.99	H	0.55	0.0	14.44	16.59	34.77	36.99	-20.4	
Mid Ch										
707.50	5.94	V	0.55	0.0	5.39	7.54	34.77	36.99	-29.5	
707.50	15.29	H	0.55	0.0	14.74	16.89	34.77	36.99	-20.1	
High Ch										
715.30	6.21	V	0.55	0.0	5.66	7.81	34.77	36.99	-29.2	
715.30	15.67	H	0.55	0.0	15.12	17.27	34.77	36.99	-19.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 QPSK 3MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
700.50	6.62	V	0.55	0.0	6.07	8.22	34.77	36.99	-28.8	
700.50	15.93	H	0.55	0.0	15.38	17.53	34.77	36.99	-19.5	
Mid Ch										
707.50	6.98	V	0.55	0.0	6.43	8.58	34.77	36.99	-28.4	
707.50	16.50	H	0.55	0.0	15.95	18.10	34.77	36.99	-18.9	
High Ch										
714.50	7.33	V	0.55	0.0	6.78	8.93	34.77	36.99	-28.1	
714.50	16.95	H	0.55	0.0	16.40	18.55	34.77	36.99	-18.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 16QAM 3MHz 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
700.50	5.43	V	0.55	0.0	4.88	7.03	34.77	36.99	-30.0	
700.50	14.86	H	0.55	0.0	14.31	16.46	34.77	36.99	-20.5	
Mid Ch										
707.50	6.18	V	0.55	0.0	5.63	7.78	34.77	36.99	-29.2	
707.50	15.59	H	0.55	0.0	15.04	17.19	34.77	36.99	-19.8	
High Ch										
714.50	6.41	V	0.55	0.0	5.86	8.01	34.77	36.99	-29.0	
714.50	16.02	H	0.55	0.0	15.47	17.62	34.77	36.99	-19.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	6.57	V	0.55	0.0	6.02	8.17	34.77	36.99	-28.8	
701.50	15.82	H	0.55	0.0	15.27	17.42	34.77	36.99	-19.6	
Mid Ch										
707.50	6.70	V	0.55	0.0	6.15	8.30	34.77	36.99	-28.7	
707.50	16.32	H	0.55	0.0	15.77	17.92	34.77	36.99	-19.1	
High Ch										
713.50	6.91	V	0.55	0.0	6.36	8.51	34.77	36.99	-28.5	
713.50	16.59	H	0.55	0.0	16.04	18.19	34.77	36.99	-18.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 16QAM 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
701.50	5.52	V	0.55	0.0	4.97	7.12	34.77	36.99	-29.9	
701.50	14.82	H	0.55	0.0	14.27	16.42	34.77	36.99	-20.6	
Mid Ch										
707.50	5.63	V	0.55	0.0	5.08	7.23	34.77	36.99	-29.8	
707.50	15.30	H	0.55	0.0	14.75	16.90	34.77	36.99	-20.1	
High Ch										
713.50	6.27	V	0.55	0.0	5.72	7.87	34.77	36.99	-29.1	
713.50	15.52	H	0.55	0.0	14.97	17.12	34.77	36.99	-19.9	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 QPSK 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
704.00	6.63	V	0.55	0.0	6.08	8.23	34.77	36.99	-28.8	
704.00	16.08	H	0.55	0.0	15.53	17.68	34.77	36.99	-19.3	
Mid Ch										
707.50	6.45	V	0.55	0.0	5.90	8.05	34.77	36.99	-28.9	
707.50	16.18	H	0.55	0.0	15.63	17.78	34.77	36.99	-19.2	
High Ch										
711.00	6.91	V	0.55	0.0	6.36	8.51	34.77	36.99	-28.5	
711.00	16.64	H	0.55	0.0	16.09	18.24	34.77	36.99	-18.8	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 12 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
704.00	5.54	V	0.55	0.0	4.99	7.14	34.77	36.99	-29.9	
704.00	15.00	H	0.55	0.0	14.45	16.60	34.77	36.99	-20.4	
Mid Ch										
707.50	5.52	V	0.55	0.0	4.97	7.12	34.77	36.99	-29.9	
707.50	14.91	H	0.55	0.0	14.36	16.51	34.77	36.99	-20.5	
High Ch										
711.00	5.97	V	0.55	0.0	5.42	7.57	34.77	36.99	-29.4	
711.00	15.75	H	0.55	0.0	15.20	17.35	34.77	36.99	-19.6	

Rev. 10.24.13

9.2.6. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 17 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	6.90	V	0.55	0.0	6.35	8.50	34.77	36.99	-28.5	
706.50	16.85	H	0.55	0.0	16.30	18.45	34.77	36.99	-18.5	
Mid Ch										
710.00	7.02	V	0.55	0.0	6.47	8.62	34.77	36.99	-28.4	
710.00	17.35	H	0.55	0.0	16.80	18.95	34.77	36.99	-18.0	
High Ch										
713.50	7.21	V	0.55	0.0	6.66	8.81	34.77	36.99	-28.2	
713.50	17.14	H	0.55	0.0	16.59	18.74	34.77	36.99	-18.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 17 16QAM 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
706.50	6.21	V	0.55	0.0	5.66	7.81	34.77	36.99	-29.2	
706.50	15.47	H	0.55	0.0	14.92	17.07	34.77	36.99	-19.9	
Mid Ch										
710.00	6.27	V	0.55	0.0	5.72	7.87	34.77	36.99	-29.1	
710.00	15.95	H	0.55	0.0	15.40	17.55	34.77	36.99	-19.4	
High Ch										
713.50	6.43	V	0.55	0.0	5.88	8.03	34.77	36.99	-29.0	
713.50	15.77	H	0.55	0.0	15.22	17.37	34.77	36.99	-19.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 17 QPSK 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	7.37	V	0.55	0.0	6.82	8.97	34.77	36.99	-28.0	
710.00	17.23	H	0.55	0.0	16.68	18.83	34.77	36.99	-18.2	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 17 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 MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	6.43	V	0.55	0.0	5.88	8.03	34.77	36.99	-29.0	
710.00	16.21	H	0.55	0.0	15.66	17.81	34.77	36.99	-19.2	

Rev. 10.24.13

9.2.7. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 QPSK 1.4MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	12.7	V	0.98	8.05	19.73	33.0	-13.3	
1.851	12.2	H	0.98	8.05	19.27	33.0	-13.7	
Mid Ch								
1.883	13.0	V	0.98	8.03	20.03	33.0	-13.0	
1.883	12.8	H	0.98	8.03	19.80	33.0	-13.2	
High Ch								
1.914	12.5	V	0.98	8.07	19.58	33.0	-13.4	
1.914	12.3	H	0.98	8.07	19.36	33.0	-13.6	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 16QAM 1.4MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	12.1	V	0.98	8.05	19.13	33.0	-13.9	
1.851	11.9	H	0.98	8.05	19.00	33.0	-14.0	
Mid Ch								
1.883	12.3	V	0.98	8.03	19.30	33.0	-13.7	
1.883	12.2	H	0.98	8.03	19.26	33.0	-13.7	
High Ch								
1.914	11.6	V	0.98	8.07	18.64	33.0	-14.4	
1.914	11.4	H	0.98	8.07	18.50	33.0	-14.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 QPSK 3MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	12.8	V	0.98	8.05	19.89	33.0	-13.1	
1.852	12.4	H	0.98	8.05	19.48	33.0	-13.5	
Mid Ch								
1.883	13.1	V	0.98	8.03	20.13	33.0	-12.9	
1.883	12.9	H	0.98	8.03	19.90	33.0	-13.1	
High Ch								
1.914	12.8	V	0.98	8.07	19.86	33.0	-13.1	
1.914	12.6	H	0.98	8.07	19.66	33.0	-13.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 16QAM 3MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	12.3	V	0.98	8.05	19.36	33.0	-13.6	
1.852	11.7	H	0.98	8.05	18.78	33.0	-14.2	
Mid Ch								
1.883	12.4	V	0.98	8.03	19.45	33.0	-13.6	
1.883	12.3	H	0.98	8.03	19.38	33.0	-13.6	
High Ch								
1.914	12.3	V	0.98	8.07	19.43	33.0	-13.6	
1.914	11.8	H	0.98	8.07	18.87	33.0	-14.1	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	12.0	V	0.98	8.05	19.03	33.0	-14.0	
1.853	11.8	H	0.98	8.05	18.84	33.0	-14.2	
Mid Ch								
1.883	13.0	V	0.98	8.03	20.07	33.0	-12.9	
1.883	12.0	H	0.98	8.03	19.03	33.0	-14.0	
High Ch								
1.913	12.6	V	0.98	8.06	19.65	33.0	-13.3	
1.913	11.8	H	0.98	8.06	18.90	33.0	-14.1	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	11.8	V	0.98	8.05	18.85	33.0	-14.2	
1.853	11.5	H	0.98	8.05	18.56	33.0	-14.4	
Mid Ch								
1.883	11.8	V	0.98	8.03	18.88	33.0	-14.1	
1.883	11.3	H	0.98	8.03	18.31	33.0	-14.7	
High Ch								
1.913	12.1	V	0.98	8.06	19.16	33.0	-13.8	
1.913	11.5	H	0.98	8.06	18.54	33.0	-14.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 QPSK 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	12.6	V	0.98	8.05	19.66	33.0	-13.3	
1.855	10.9	H	0.98	8.05	18.00	33.0	-15.0	
Mid Ch								
1.883	12.5	V	0.98	8.03	19.56	33.0	-13.4	
1.883	11.8	H	0.98	8.03	18.87	33.0	-14.1	
High Ch								
1.910	12.3	V	0.98	8.05	19.35	33.0	-13.6	
1.910	11.6	H	0.98	8.05	18.70	33.0	-14.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	12.1	V	0.98	8.05	19.13	33.0	-13.9	
1.855	10.4	H	0.98	8.05	17.48	33.0	-15.5	
Mid Ch								
1.883	11.6	V	0.98	8.03	18.65	33.0	-14.4	
1.883	10.9	H	0.98	8.03	17.91	33.0	-15.1	
High Ch								
1.910	11.5	V	0.98	8.05	18.55	33.0	-14.4	
1.910	11.2	H	0.98	8.05	18.28	33.0	-14.7	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	12.2	V	0.98	8.04	19.28	33.0	-13.7	
1.858	11.8	H	0.98	8.04	18.90	33.0	-14.1	
Mid Ch								
1.883	12.7	V	0.98	8.03	19.70	33.0	-13.3	
1.883	11.9	H	0.98	8.03	18.95	33.0	-14.1	
High Ch								
1.908	12.6	V	0.98	8.04	19.65	33.0	-13.3	
1.908	12.0	H	0.98	8.04	19.09	33.0	-13.9	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	12.0	V	0.98	8.04	19.09	33.0	-13.9	
1.858	11.4	H	0.98	8.04	18.48	33.0	-14.5	
Mid Ch								
1.883	11.8	V	0.98	8.03	18.84	33.0	-14.2	
1.883	11.6	H	0.98	8.03	18.62	33.0	-14.4	
High Ch								
1.908	12.1	V	0.98	8.04	19.20	33.0	-13.8	
1.908	11.5	H	0.98	8.04	18.53	33.0	-14.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	12.4	V	0.98	8.04	19.49	33.0	-13.5	
1.860	11.3	H	0.98	8.04	18.32	33.0	-14.7	
Mid Ch								
1.883	12.0	V	0.98	8.03	19.04	33.0	-14.0	
1.883	11.9	H	0.98	8.03	18.90	33.0	-14.1	
High Ch								
1.905	12.9	V	0.98	8.04	20.00	33.0	-13.0	
1.905	12.4	H	0.98	8.04	19.48	33.0	-13.5	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/18/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 25 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	12.0	V	0.98	8.04	19.10	33.0	-13.9	
1.860	10.9	H	0.98	8.04	17.91	33.0	-15.1	
Mid Ch								
1.883	11.3	V	0.98	8.03	18.37	33.0	-14.6	
1.883	11.0	H	0.98	8.03	18.02	33.0	-15.0	
High Ch								
1.905	12.0	V	0.98	8.04	19.09	33.0	-13.9	
1.905	12.0	H	0.98	8.04	19.04	33.0	-14.0	

Rev. 10.24.13

9.2.8. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 26 QPSK 1.4MHz 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										
814.70	10.24	V	0.62	0.0	9.62	11.77	38.45	40.60	-28.8	
814.70	16.95	H	0.62	0.0	16.33	18.48	38.45	40.60	-22.1	
Mid Ch										
819.00	10.11	V	0.62	0.0	9.49	11.64	38.45	40.60	-29.0	
819.00	17.98	H	0.62	0.0	17.36	19.51	38.45	40.60	-21.1	
High Ch										
823.30	9.92	V	0.62	0.0	9.30	11.45	38.45	40.60	-29.2	
823.30	17.70	H	0.62	0.0	17.08	19.23	38.45	40.60	-21.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 26 16QAM 1.4MHz 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										
814.70	9.37	V	0.62	0.0	8.75	10.90	38.45	40.60	-29.7	
814.70	16.10	H	0.62	0.0	15.48	17.63	38.45	40.60	-23.0	
Mid Ch										
819.00	9.23	V	0.62	0.0	8.61	10.76	38.45	40.60	-29.8	
819.00	17.16	H	0.62	0.0	16.54	18.69	38.45	40.60	-21.9	
High Ch										
823.30	9.05	V	0.62	0.0	8.43	10.58	38.45	40.60	-30.0	
823.30	16.66	H	0.62	0.0	16.04	18.19	38.45	40.60	-22.4	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 26 QPSK 3MHz 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										
815.50	10.68	V	0.62	0.0	10.06	12.21	38.45	40.60	-28.4	
815.50	17.34	H	0.62	0.0	16.72	18.87	38.45	40.60	-21.7	
Mid Ch										
819.00	10.62	V	0.62	0.0	10.00	12.15	38.45	40.60	-28.5	
819.00	17.96	H	0.62	0.0	17.34	19.49	38.45	40.60	-21.1	
High Ch										
822.50	10.26	V	0.62	0.0	9.64	11.79	38.45	40.60	-28.8	
822.50	17.81	H	0.62	0.0	17.19	19.34	38.45	40.60	-21.3	

Rev. 10.24.13

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 26 16QAM 3MHz 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										
815.50	9.93	V	0.62	0.0	9.31	11.46	38.45	40.60	-29.1	
815.50	16.54	H	0.62	0.0	15.92	18.07	38.45	40.60	-22.5	
Mid Ch										
819.00	9.68	V	0.62	0.0	9.06	11.21	38.45	40.60	-29.4	
819.00	17.07	H	0.62	0.0	16.45	18.60	38.45	40.60	-22.0	
High Ch										
822.50	9.35	V	0.62	0.0	8.73	10.88	38.45	40.60	-29.7	
822.50	16.82	H	0.62	0.0	16.20	18.35	38.45	40.60	-22.3	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
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	10.46	V	0.62	0.0	9.84	11.99	38.45	40.60	-28.6	
816.50	17.30	H	0.62	0.0	16.68	18.83	38.45	40.60	-21.8	
Mid Ch										
819.00	10.69	V	0.62	0.0	10.07	12.22	38.45	40.60	-28.4	
819.00	17.98	H	0.62	0.0	17.36	19.51	38.45	40.60	-21.1	
High Ch										
821.50	10.02	V	0.62	0.0	9.40	11.55	38.45	40.60	-29.1	
821.50	17.76	H	0.62	0.0	17.14	19.29	38.45	40.60	-21.3	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 26 16QAM 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	9.60	V	0.62	0.0	8.98	11.13	38.45	40.60	-29.5	
816.50	16.50	H	0.62	0.0	15.88	18.03	38.45	40.60	-22.6	
Mid Ch										
819.00	9.46	V	0.62	0.0	8.84	10.99	38.45	40.60	-29.6	
819.00	17.04	H	0.62	0.0	16.42	18.57	38.45	40.60	-22.0	
High Ch										
821.50	9.16	V	0.62	0.0	8.54	10.69	38.45	40.60	-29.9	
821.50	16.91	H	0.62	0.0	16.29	18.44	38.45	40.60	-22.2	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
Configuration: EUT only
Mode: LTE Band 26 QPSK 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 EIRP (dB)	Notes
Mid Ch										
819.00	10.91	V	0.62	0.0	10.29	12.44	38.45	40.60	-28.2	
819.00	17.81	H	0.62	0.0	17.19	19.34	38.45	40.60	-21.3	

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 #: 15U21635
Date: 12/16/2015
Test Engineer: G. Chan
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	10.12	V	0.62	0.0	9.50	11.65	38.45	40.60	-29.0	
819.00	16.95	H	0.62	0.0	16.33	18.48	38.45	40.60	-22.1	

Rev. 10.24.13

9.2.9. LTE BAND 41

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	16.6	V	1.15	9.33	24.73	33.0	-8.3	
2.499	17.4	H	1.15	9.33	25.58	33.0	-7.4	
Mid Ch								
2.593	16.6	V	1.16	9.47	24.94	33.0	-8.1	
2.593	16.7	H	1.16	9.47	25.03	33.0	-8.0	
High Ch								
2.688	11.9	V	1.17	9.78	20.49	33.0	-12.5	
2.688	16.1	H	1.17	9.78	24.68	33.0	-8.3	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 5MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.499	15.6	V	1.15	9.33	23.81	33.0	-9.2	
2.499	16.5	H	1.15	9.33	24.64	33.0	-8.4	
Mid Ch								
2.593	15.8	V	1.16	9.47	24.14	33.0	-8.9	
2.593	15.8	H	1.16	9.47	24.11	33.0	-8.9	
High Ch								
2.688	11.1	V	1.17	9.78	19.69	33.0	-13.3	
2.688	14.9	H	1.17	9.78	23.54	33.0	-9.5	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 10MHz BW IC

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	16.4	V	1.15	9.34	24.60	33.0	-8.4	
2.505	17.7	H	1.15	9.34	25.86	33.0	-7.1	
Mid Ch								
2.595	17.0	V	1.16	9.47	25.35	33.0	-7.6	
2.595	17.1	H	1.16	9.47	25.39	33.0	-7.6	
High Ch								
2.685	12.1	V	1.17	9.77	20.68	33.0	-12.3	
2.685	16.5	H	1.17	9.77	25.08	33.0	-7.9	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 10MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	15.7	V	1.15	9.33	23.90	33.0	-9.1	
2.501	16.5	H	1.15	9.33	24.71	33.0	-8.3	
Mid Ch								
2.593	16.0	V	1.16	9.47	24.34	33.0	-8.7	
2.593	16.2	H	1.16	9.47	24.49	33.0	-8.5	
High Ch								
2.685	11.4	V	1.17	9.77	19.98	33.0	-13.0	
2.685	15.7	H	1.17	9.77	24.34	33.0	-8.7	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	16.8	V	1.15	9.34	25.00	33.0	-8.0	
2.504	17.1	H	1.15	9.34	25.29	33.0	-7.7	
Mid Ch								
2.593	16.7	V	1.16	9.47	25.04	33.0	-8.0	
2.593	17.1	H	1.16	9.47	25.43	33.0	-7.6	
High Ch								
2.683	12.9	V	1.17	9.76	21.47	33.0	-11.5	
2.683	16.4	H	1.17	9.76	24.96	33.0	-8.0	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 15MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	16.0	V	1.15	9.34	24.14	33.0	-8.9	
2.504	16.1	H	1.15	9.34	24.27	33.0	-8.7	
Mid Ch								
2.593	15.8	V	1.16	9.47	24.10	33.0	-8.9	
2.593	16.1	H	1.16	9.47	24.42	33.0	-8.6	
High Ch								
2.683	12.0	V	1.17	9.76	20.57	33.0	-12.4	
2.683	15.5	H	1.17	9.76	24.13	33.0	-8.9	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	16.7	V	1.15	9.34	24.90	33.0	-8.1	
2.506	17.6	H	1.15	9.34	25.75	33.0	-7.2	
Mid Ch								
2.593	16.7	V	1.16	9.47	25.02	33.0	-8.0	
2.593	16.8	H	1.16	9.47	25.13	33.0	-7.9	
High Ch								
2.680	12.7	V	1.17	9.76	21.24	33.0	-11.8	
2.680	15.3	H	1.17	9.76	23.86	33.0	-9.1	

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 #: 15U21635
Date: 12/21/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 16QAM 20MHz BW

Test Equipment:
Receiving: Horn T862, and Chamber G SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	15.7	V	1.15	9.34	23.84	33.0	-9.2	
2.506	16.7	H	1.15	9.34	24.85	33.0	-8.1	
Mid Ch								
2.593	15.8	V	1.16	9.47	24.14	33.0	-8.9	
2.593	15.9	H	1.16	9.47	24.19	33.0	-8.8	
High Ch								
2.680	11.9	V	1.17	9.76	20.47	33.0	-12.5	
2.680	13.4	H	1.17	9.76	22.03	33.0	-11.0	

Rev. 10.24.13

9.3. PEAK-TO-AVERAGE RATIO

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

9.3.1. LTE BAND 2

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	1.4	1880.0	QPSK	26.71	21.91	4.80
			16QAM	26.92	21.14	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	26.79	21.99	4.80
			16QAM	26.74	21.12	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	5.0	1880.0	QPSK	26.64	21.84	4.80
			16QAM	26.32	20.77	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 2 RB1-0	10.0	1880.0	QPSK	26.65	22	4.65
			16QAM	26.48	21.01	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 2 RB1-0	15.0	1880.0	QPSK	26.6	21.95	4.65
			16QAM	26.53	21.06	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 2 RB1-0	20.0	1880.0	QPSK	26.79	21.99	4.8
			16QAM	26.69	21.07	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

9.3.2. LTE BAND 4

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	1.4	1732.5	QPSK	27.71	22.84	4.87
			16QAM	27.69	21.99	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 4 RB1-0	3.0	1732.5	QPSK	27.78	22.98	4.8
			16QAM	26.84	21.97	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 4 RB1-0	5.0	1732.5	QPSK	27.67	22.87	4.8
			16QAM	26.35	21.7	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 4 RB1-0	10.0	1732.5	QPSK	27.71	22.99	4.72
			16QAM	27.79	22.24	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	15.0	1732.5	QPSK	27.68	22.96	4.72
			16QAM	27.83	22.28	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 4 RB1-0	20.0	1732.5	QPSK	27.72	23	4.72
			16QAM	27.78	22.16	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

9.3.3. LTE BAND 5

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	1.4	836.5	QPSK	28.86	23.99	4.87
			16QAM	28.87	23.09	5.78
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	3.0	836.5	QPSK	28.87	24	4.87
			16QAM	28.63	23.01	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	5.0	836.5	QPSK	28.76	23.89	4.87
			16QAM	28.33	22.71	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 5 RB1-0	10.0	836.5	QPSK	28.68	23.96	4.72
			16QAM	28.5	23.03	5.47
*Peak Reading = Average Reading + Peak-to-Average Ratio						

9.3.4. LTE BAND 12

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	1.4	707.5	QPSK	28.98	23.95	5.03
			16QAM	29.22	23.14	6.08
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	3.0	707.5	QPSK	28.99	23.96	5.03
			16QAM	28.86	23.01	5.85
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 12 RB1-0	5.0	707.5	QPSK	28.89	23.86	5.03
			16QAM	28.51	22.73	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	10.0	707.5	QPSK	28.79	23.99	4.80
			16QAM	28.77	23.07	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

9.3.5. 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	28.54	23.96	4.58
			16QAM	28.53	23.06	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 17 RB1-0	10.0	710.0	QPSK	28.65	23.93	4.72
			16QAM	28.67	22.97	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

9.3.6. LTE BAND 25

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	1.4	1882.5	QPSK	26.87	21.92	4.95
			16QAM	26.7	20.92	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 25 RB1-0	3.0	1882.5	QPSK	26.83	21.96	4.87
			16QAM	26.75	21.05	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 25 RB1-0	5.0	1882.5	QPSK	26.67	21.80	4.87
			16QAM	26.41	20.71	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	10.0	1882.5	QPSK	26.6	21.88	4.72
			16QAM	26.53	20.98	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	15.0	1882.5	QPSK	26.52	21.80	4.72
			16QAM	26.48	21.01	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 25 RB1-0	20.0	1882.5	QPSK	26.44	21.64	4.80
			16QAM	26.29	20.74	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

9.3.7. 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	28.71	23.84	4.87
			16QAM	28.7	23.00	5.70
*Peak Reading = Average Reading + Peak-to-Average Ratio						

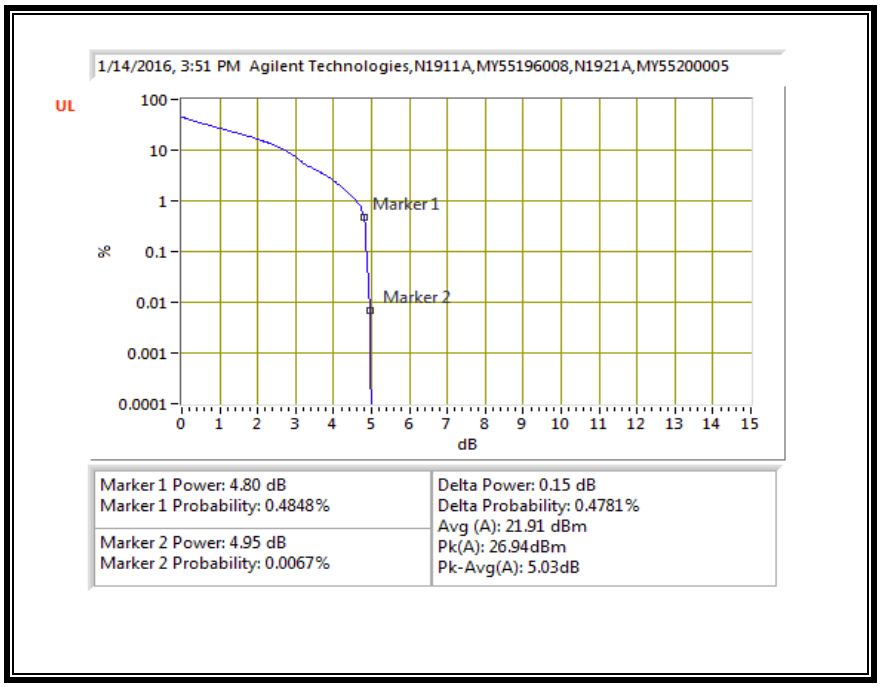
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	3.0	819.0	QPSK	28.82	23.95	4.87
			16QAM	28.62	23.00	5.62
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	5.0	819.0	QPSK	28.67	23.87	4.80
			16QAM	28.24	22.69	5.55
*Peak Reading = Average Reading + Peak-to-Average Ratio						

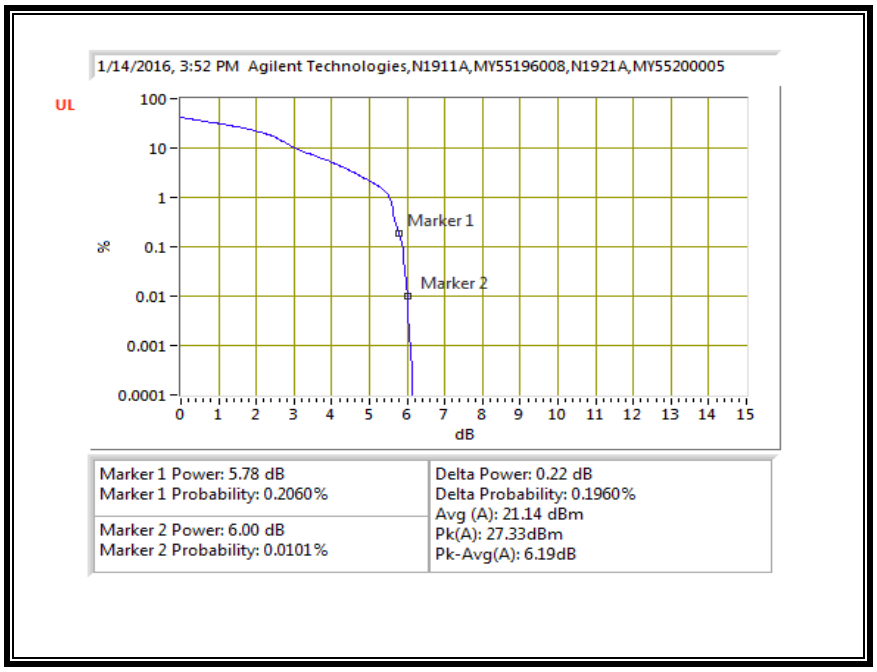
Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to-Average Ratio (PAR)
				*Peak	Average	
LTE Band 26 RB1-0	10.0	819.0	QPSK	28.63	23.98	4.65
			16QAM	28.42	23.02	5.40
*Peak Reading = Average Reading + Peak-to-Average Ratio						

LTE BAND 2

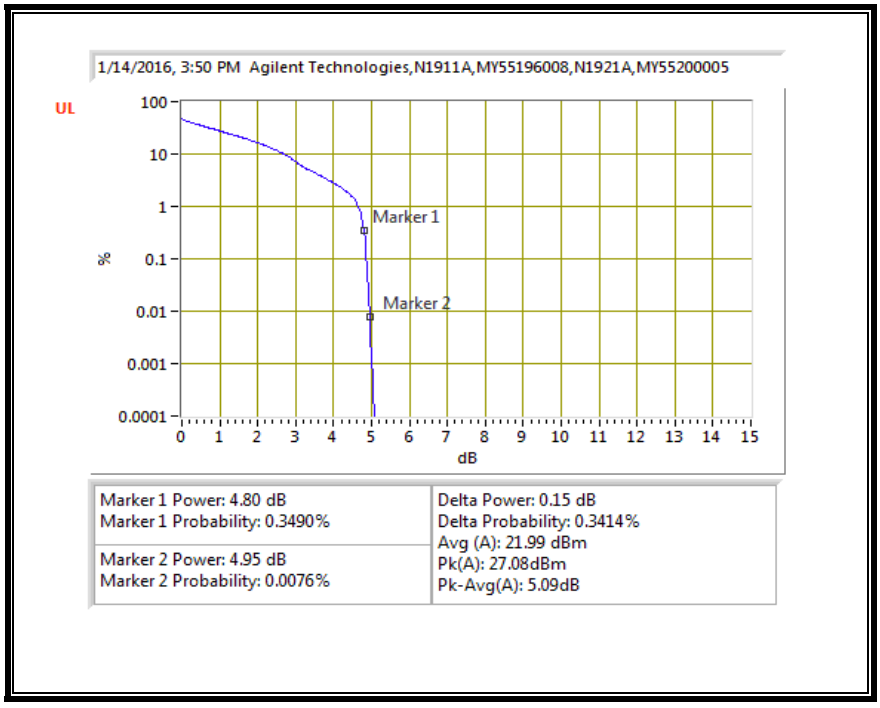
QPSK, (1.4 MHz BAND WIDTH)



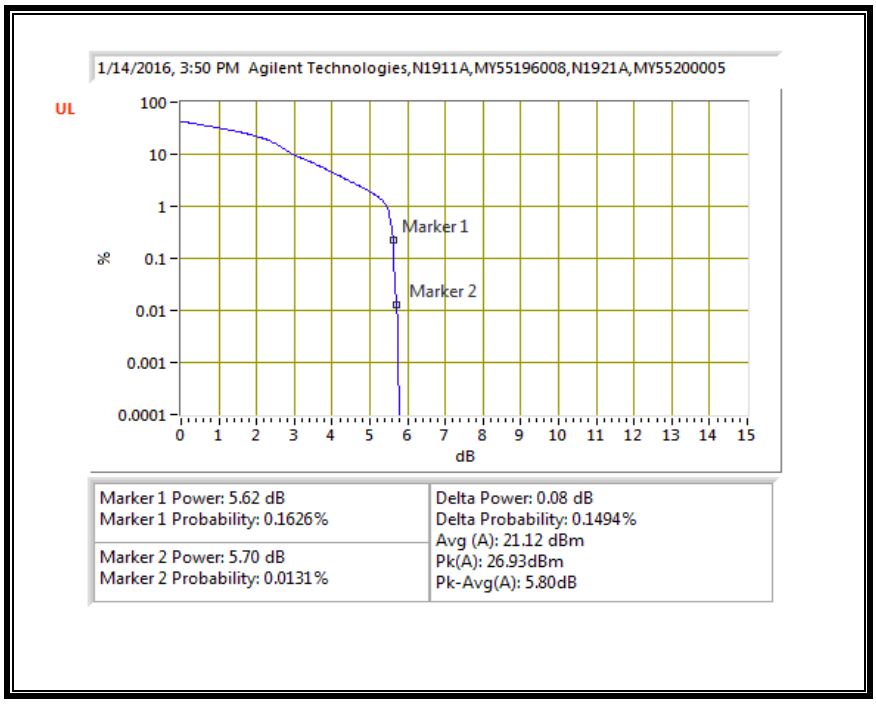
16QAM, (1.4 MHz BAND WIDTH)



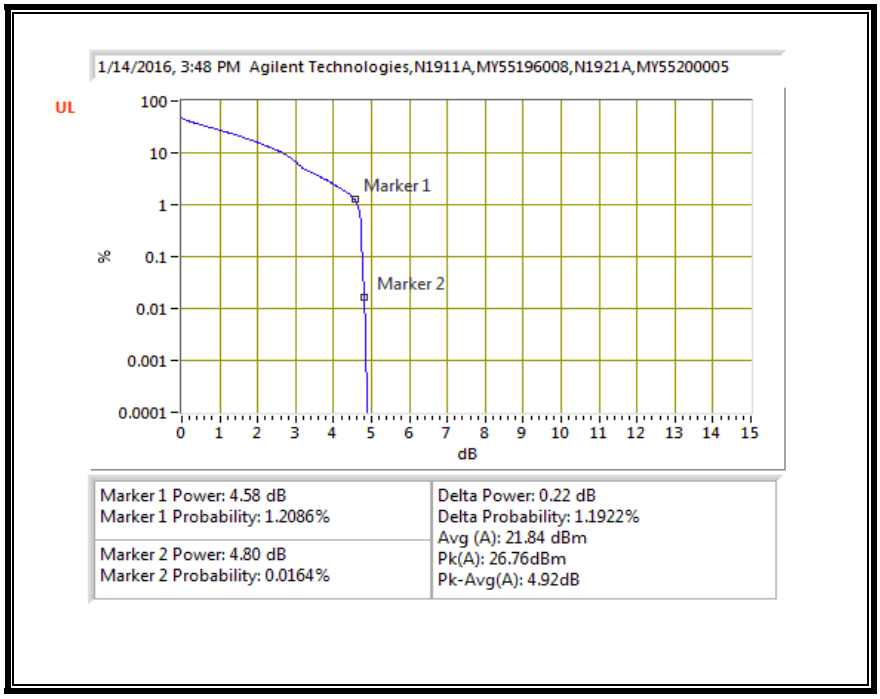
QPSK, (3.0 MHz BAND WIDTH)



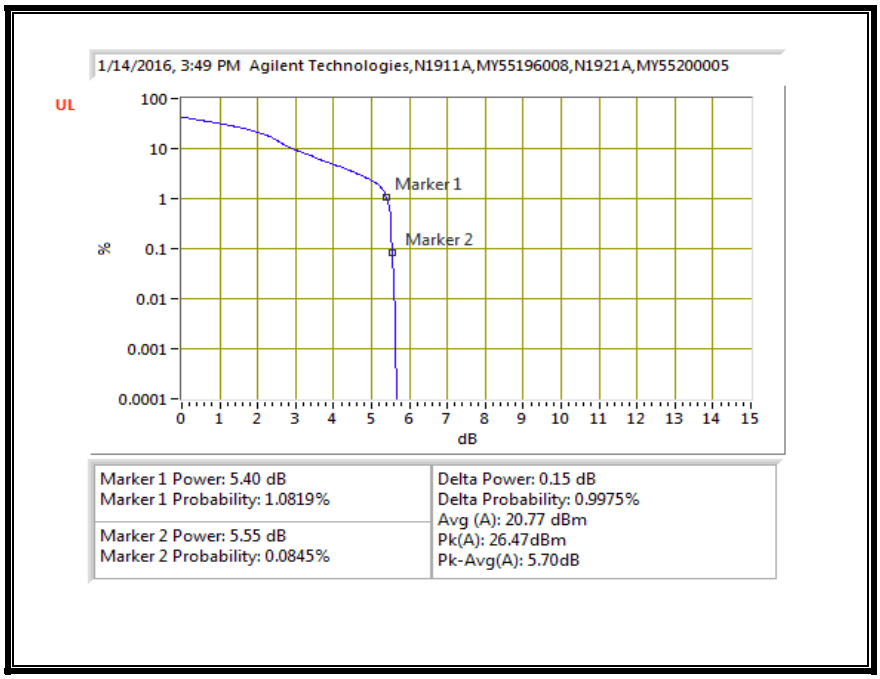
16QAM, (3.0 MHz BAND WIDTH)



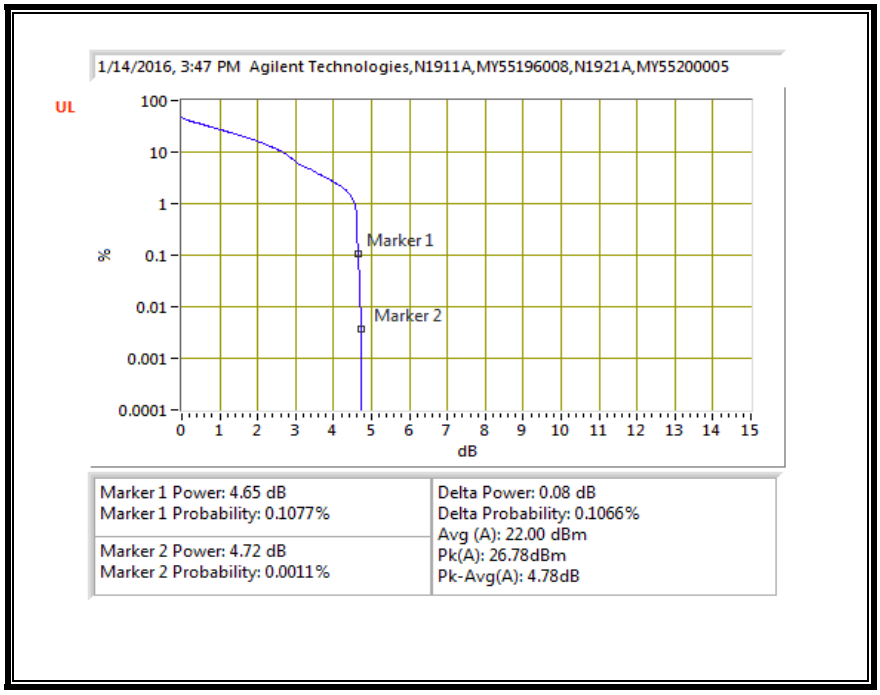
QPSK, (5.0 MHz BAND WIDTH)



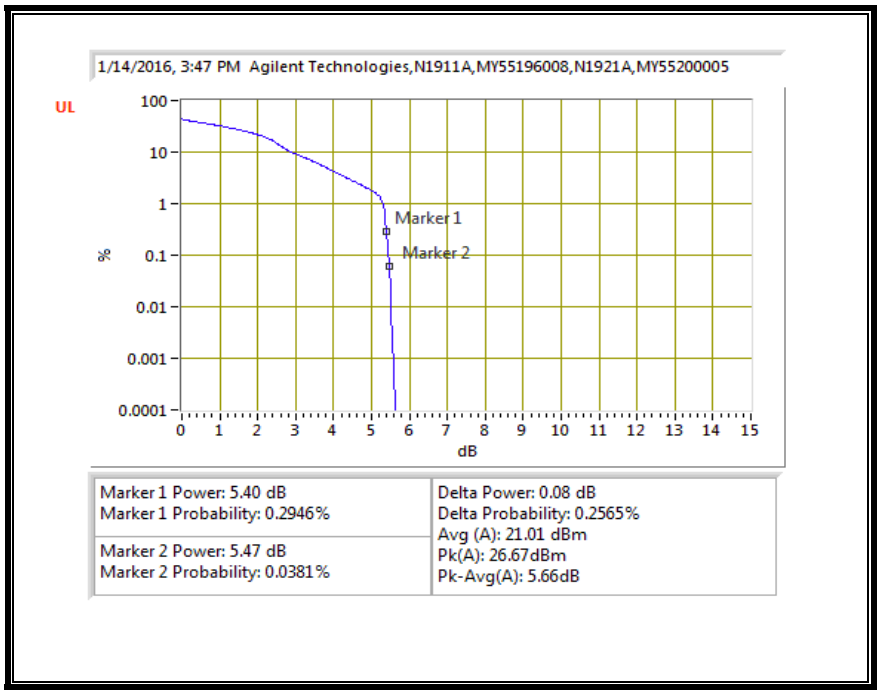
16QAM, (5.0 MHz BAND WIDTH)



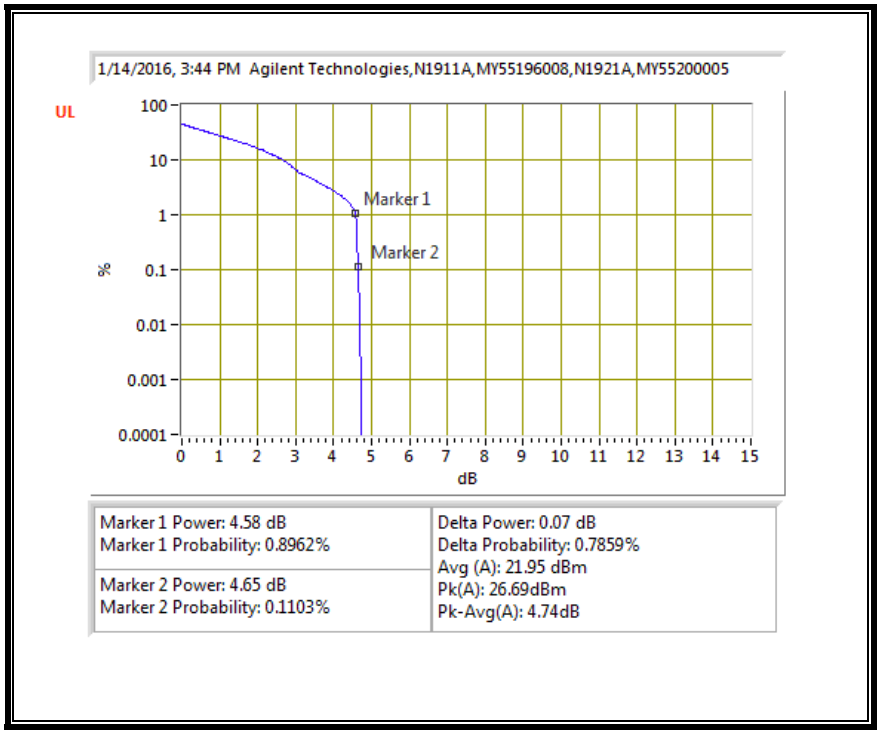
QPSK, (10.0 MHz BAND WIDTH)



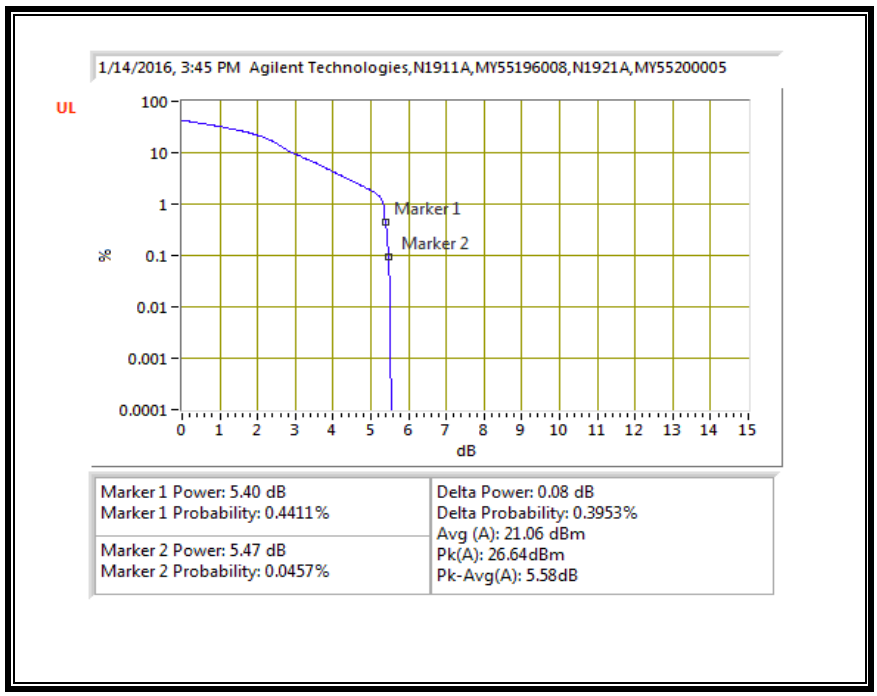
16QAM, (10.0 MHz BAND WIDTH)



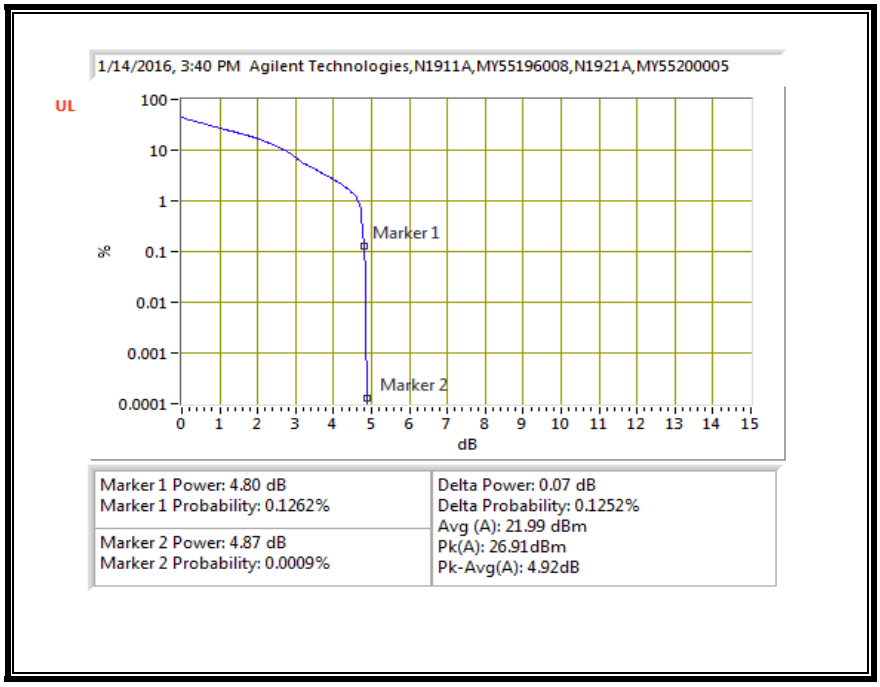
QPSK, (15.0 MHz BAND WIDTH)



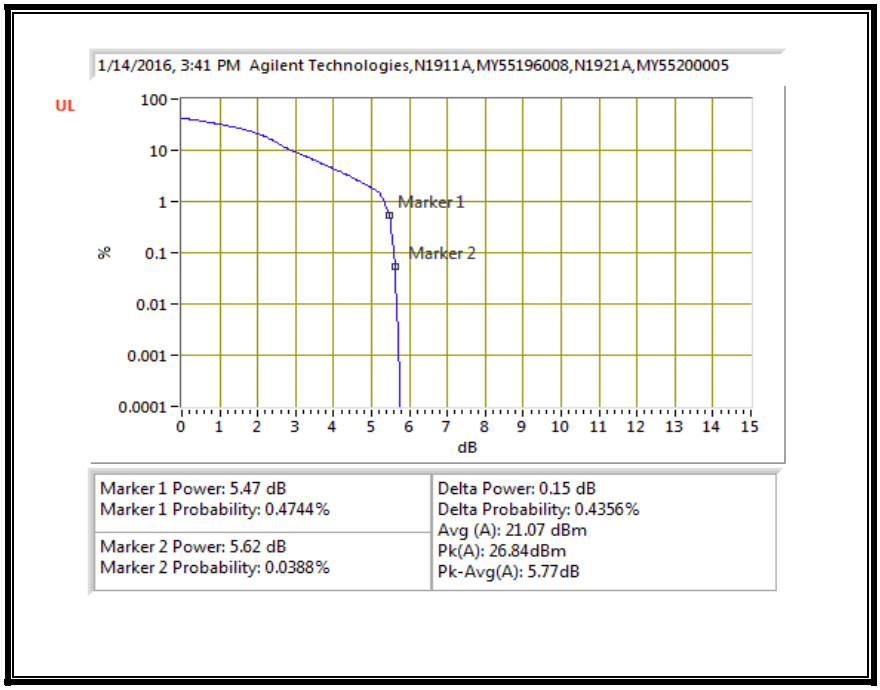
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

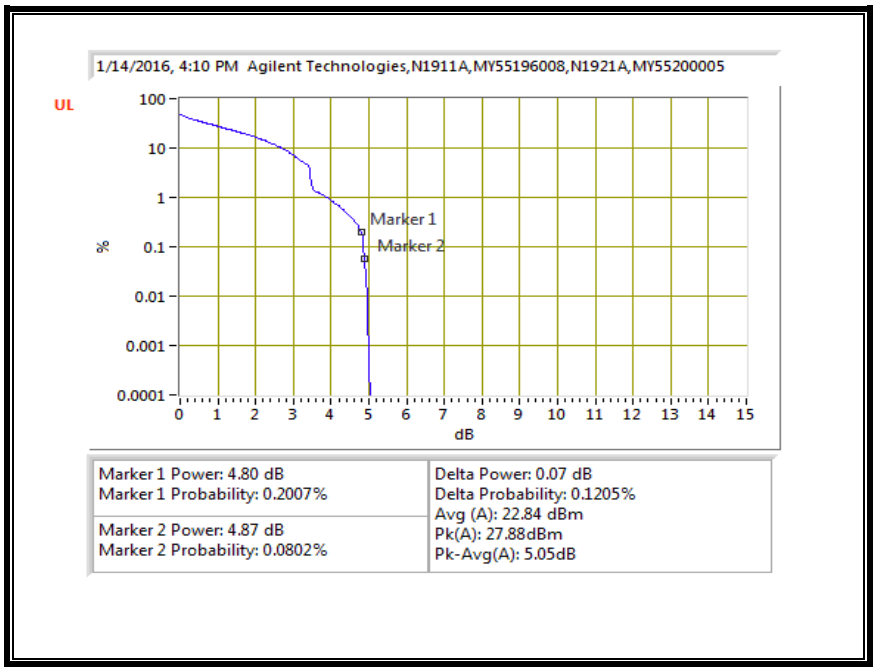


16QAM, (20.0 MHz BAND WIDTH)

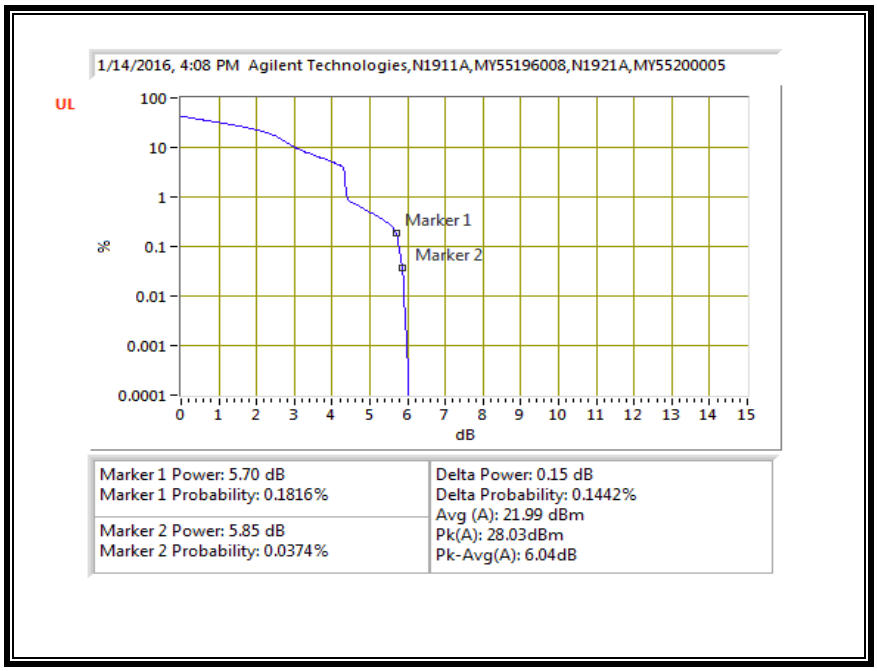


LTE BAND 4

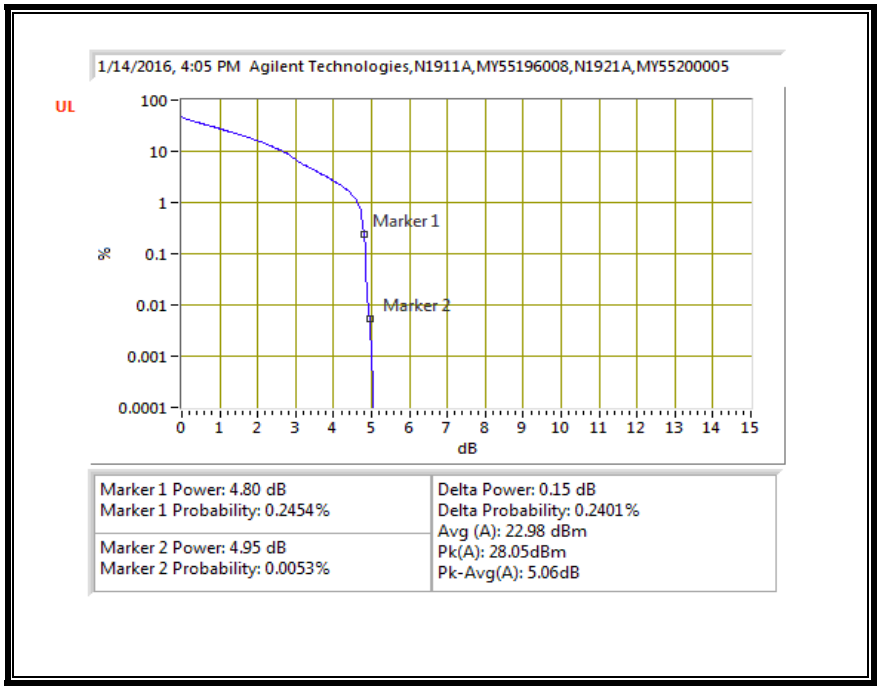
QPSK, (1.4 MHz BAND WIDTH)



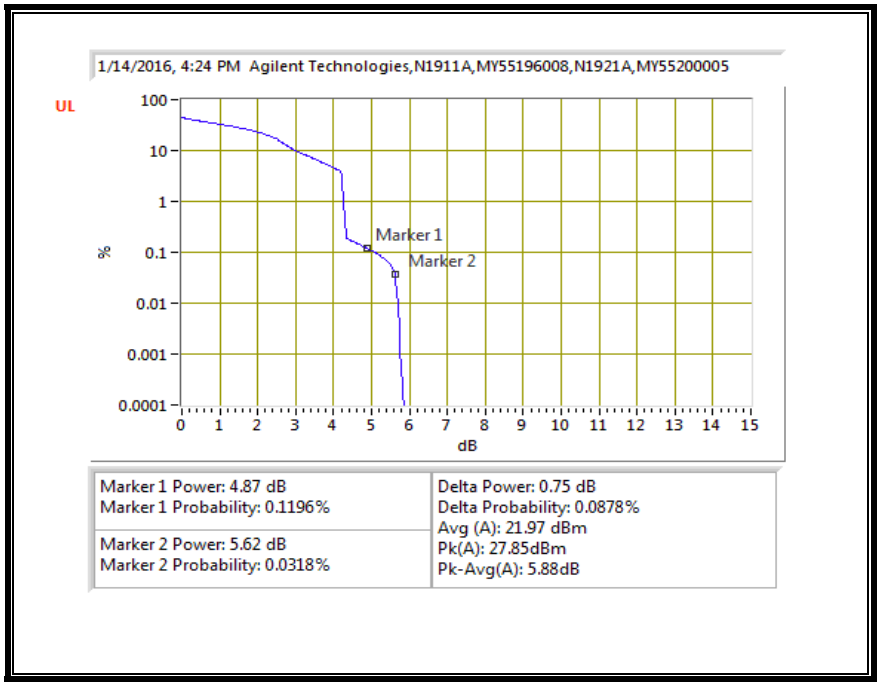
16QAM, (1.4 MHz BAND WIDTH)



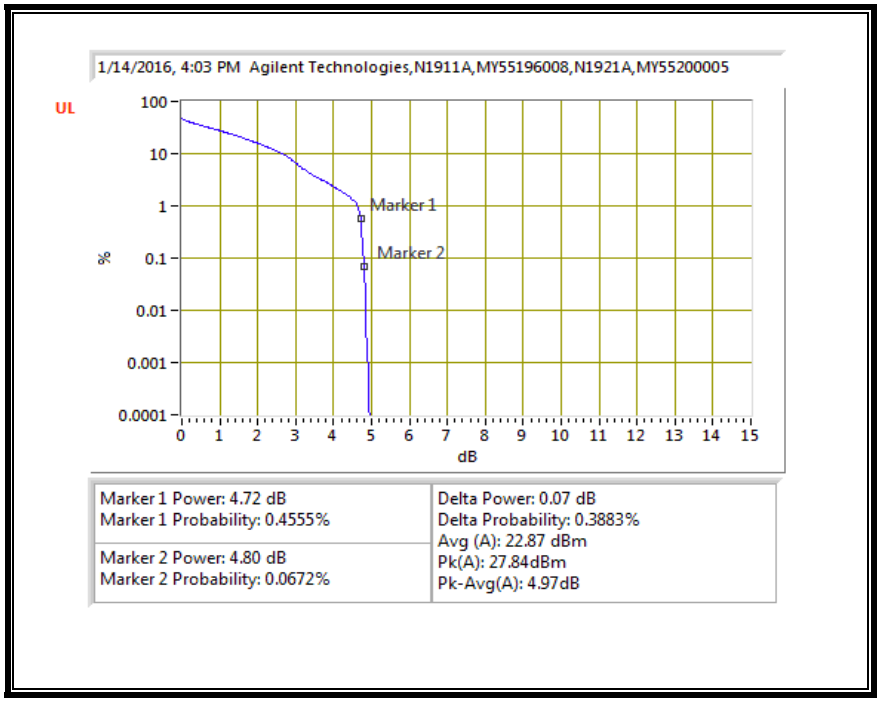
QPSK, (3.0 MHz BAND WIDTH)



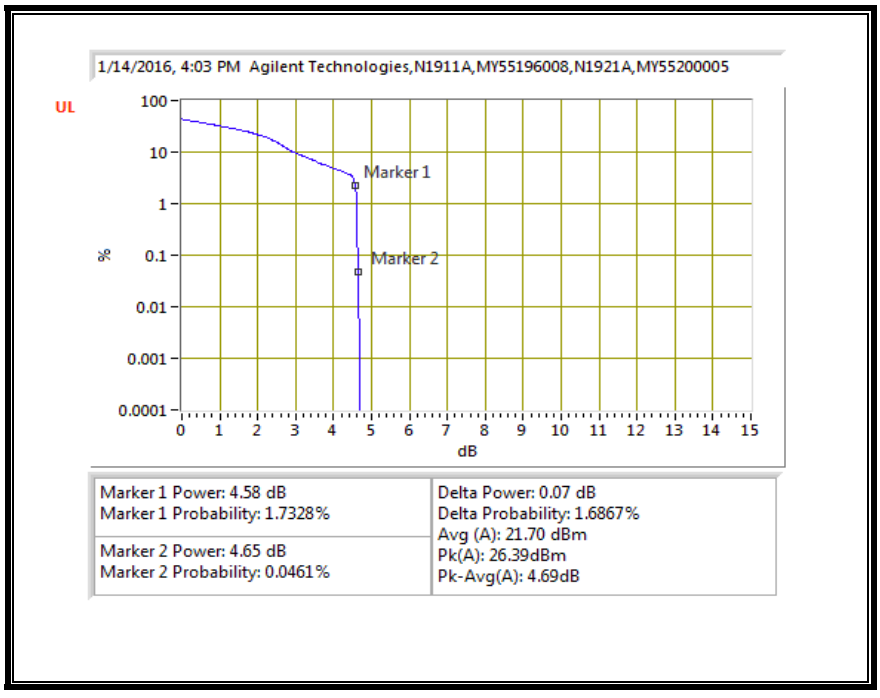
16QAM, (3.0 MHz BAND WIDTH)



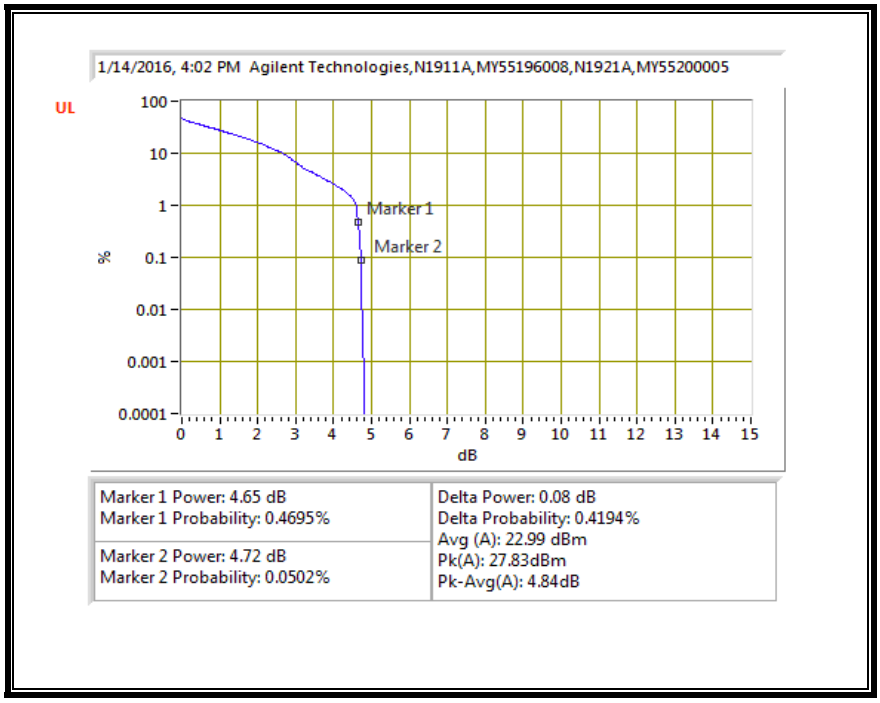
QPSK, (5.0 MHz BAND WIDTH)



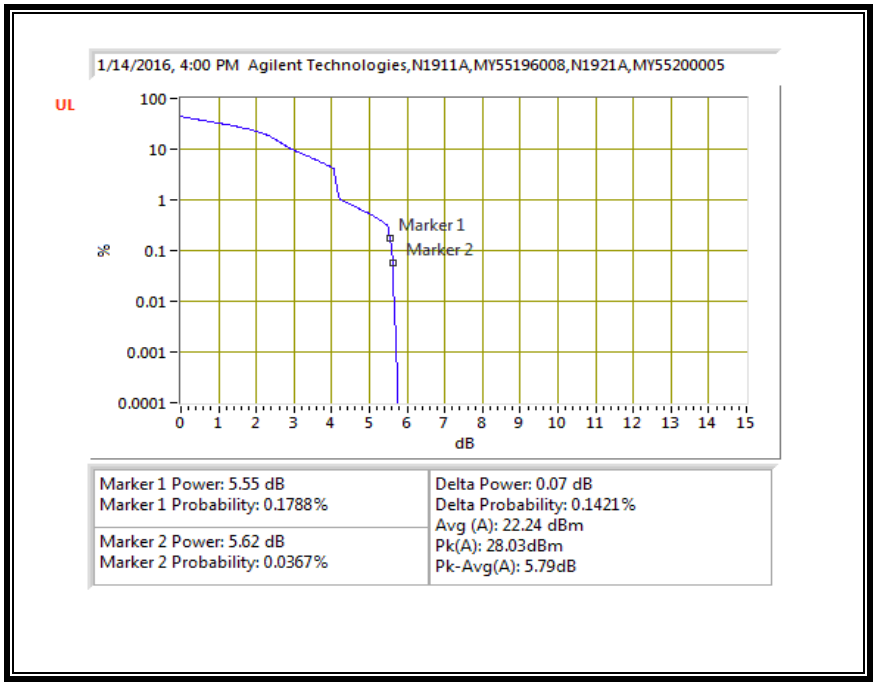
16QAM, (5.0 MHz BAND WIDTH)



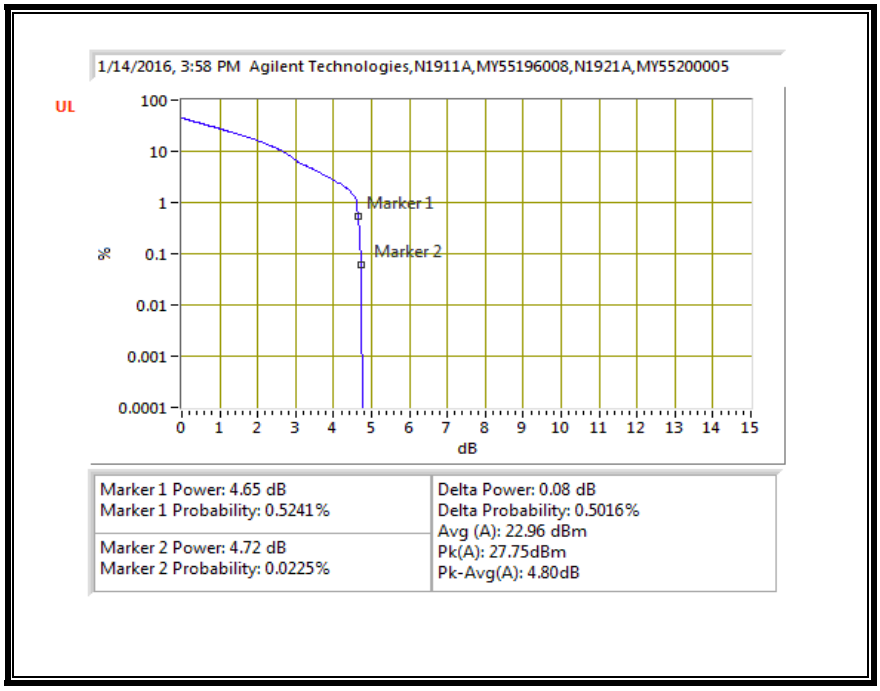
QPSK, (10.0 MHz BAND WIDTH)



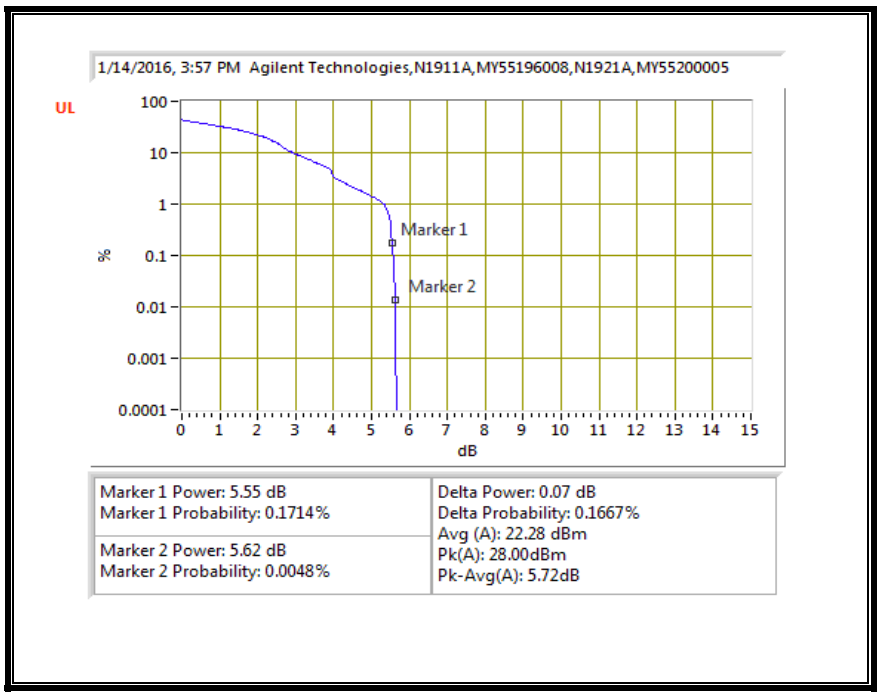
16QAM, (10.0 MHz BAND WIDTH)



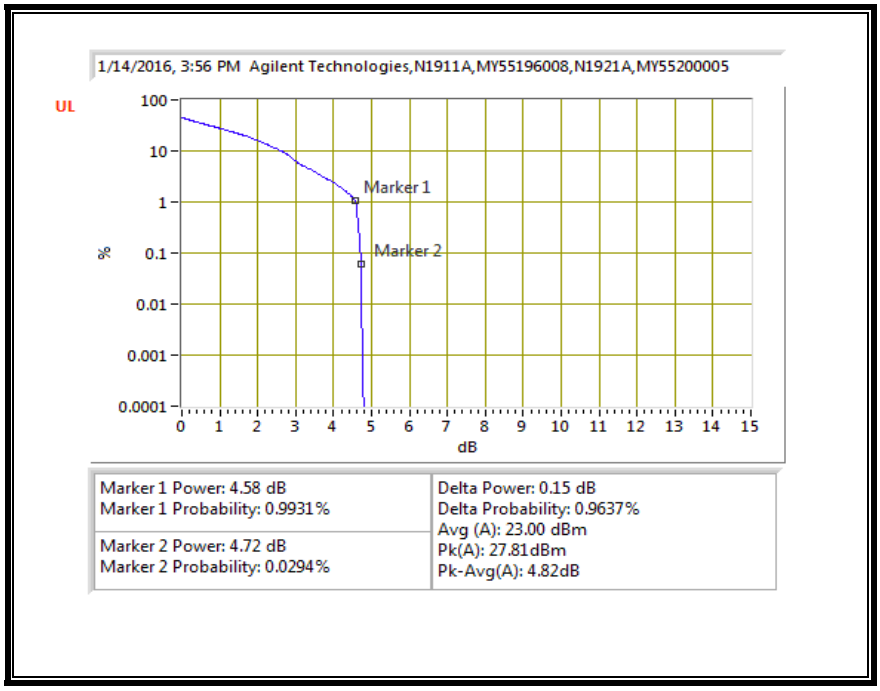
QPSK, (15.0 MHz BAND WIDTH)



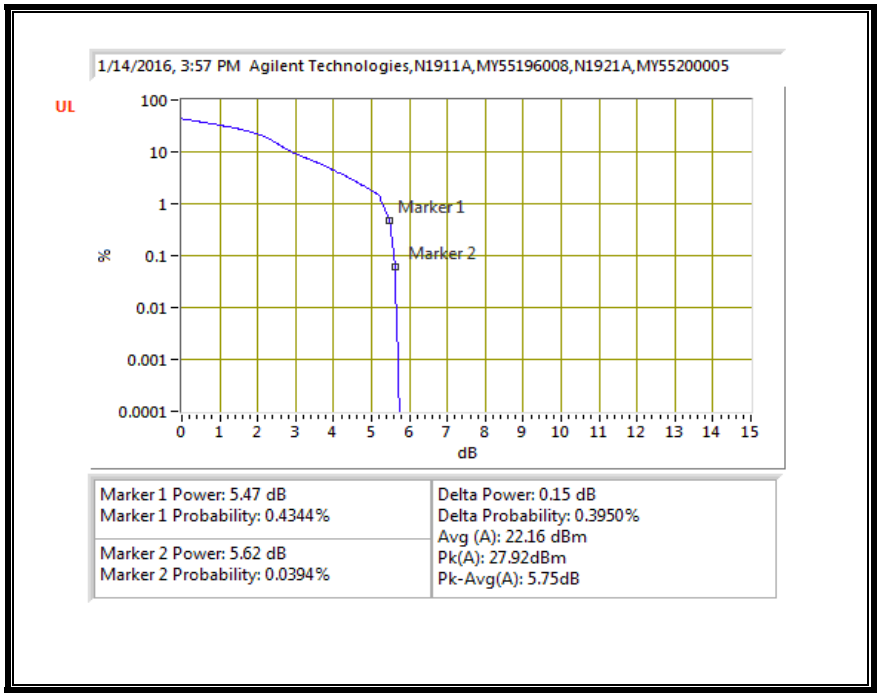
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

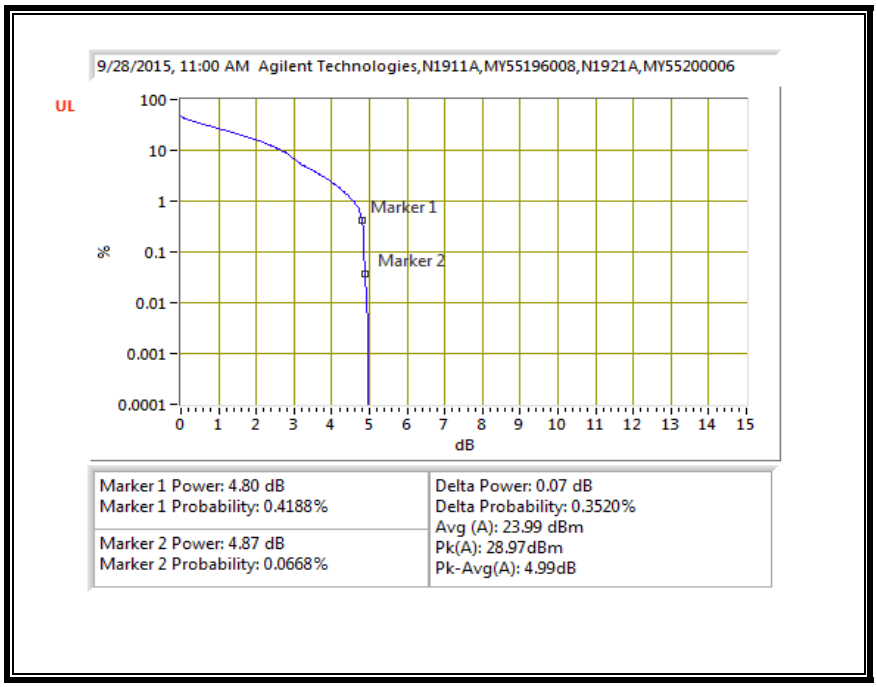


16QAM, (20.0 MHz BAND WIDTH)

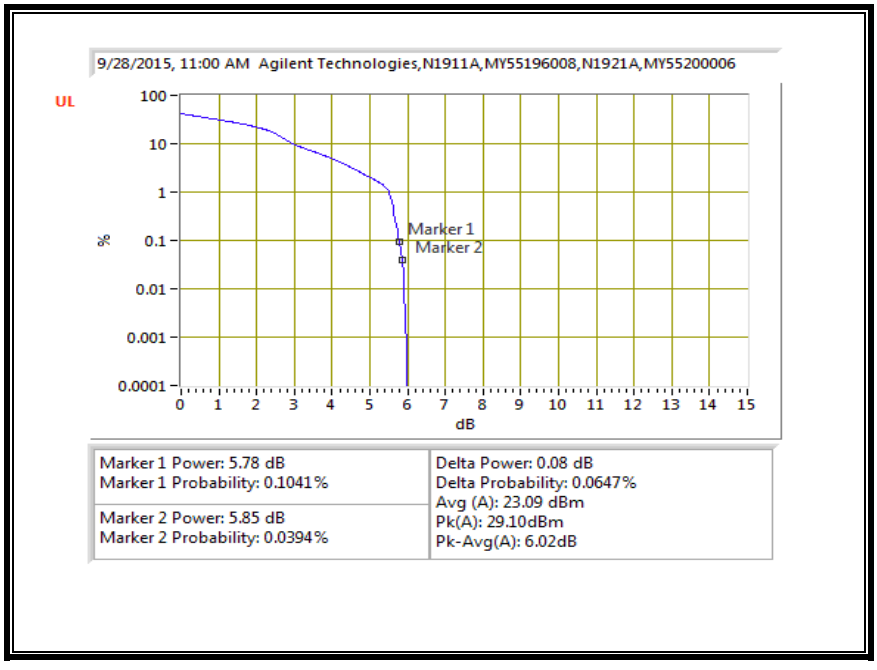


LTE BAND 5

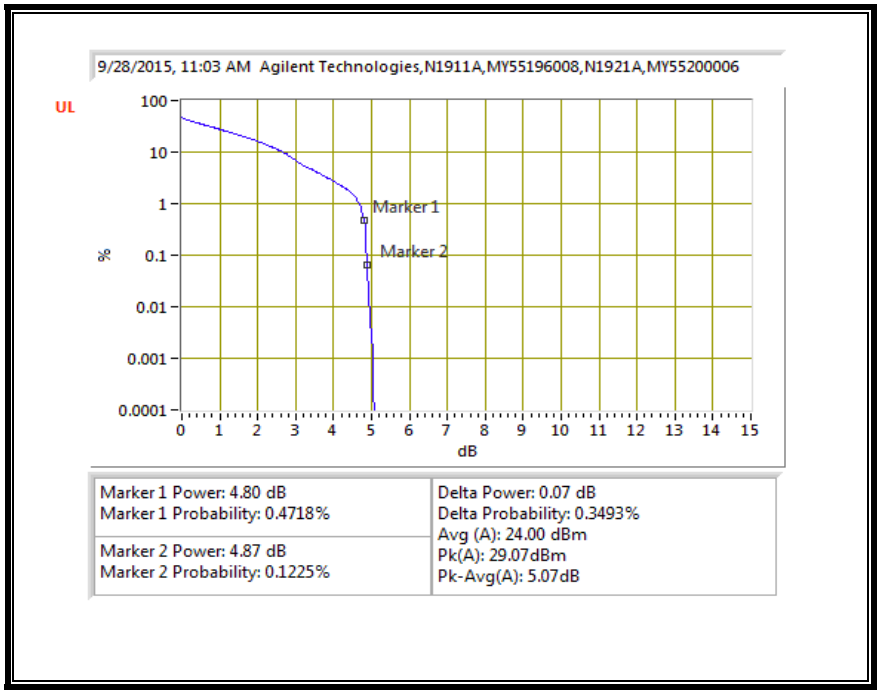
QPSK, (1.4 MHz BAND WIDTH)



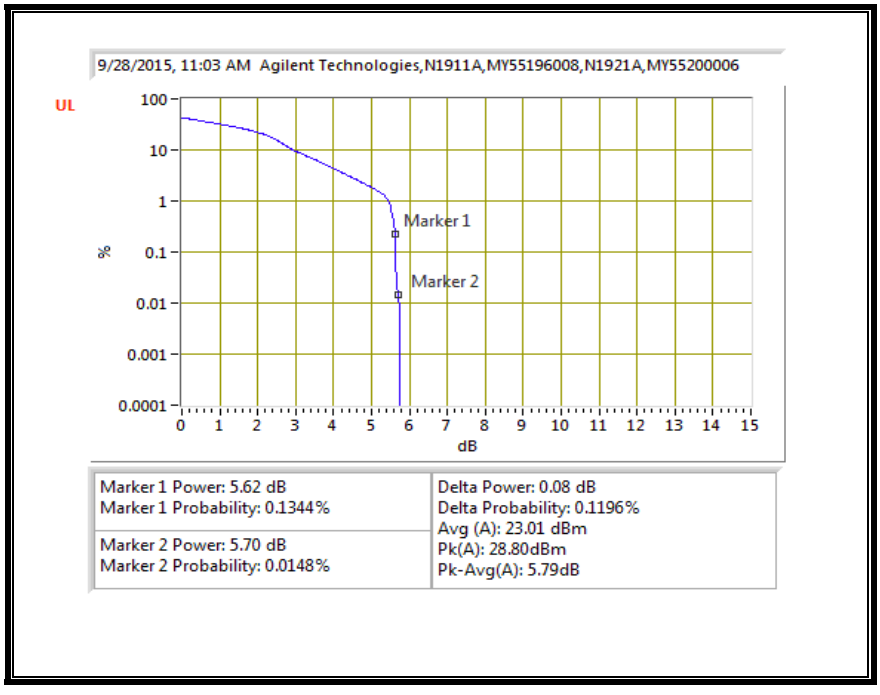
16QAM, (1.4 MHz BAND WIDTH)



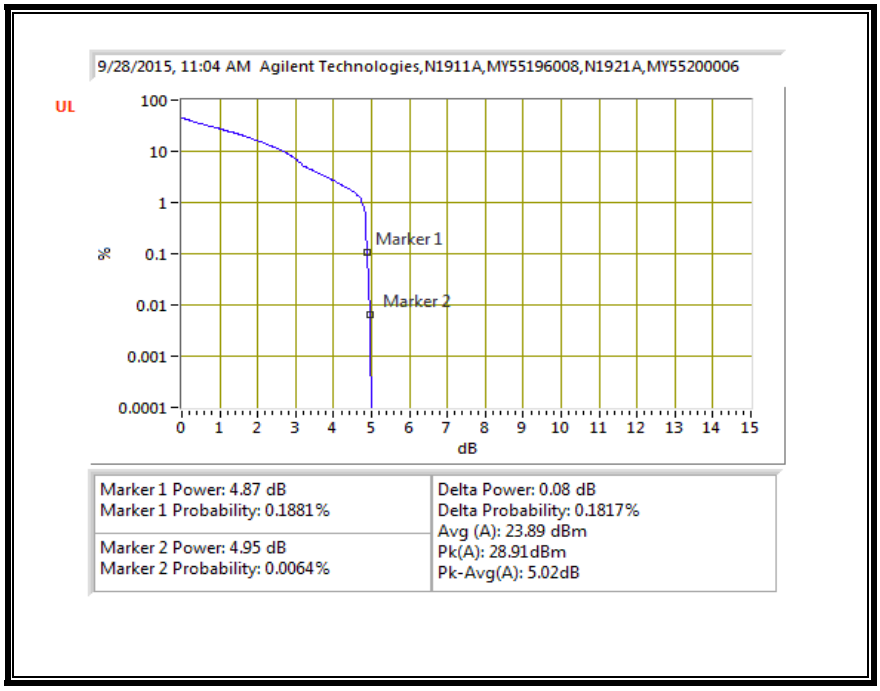
QPSK, (3.0 MHz BAND WIDTH)



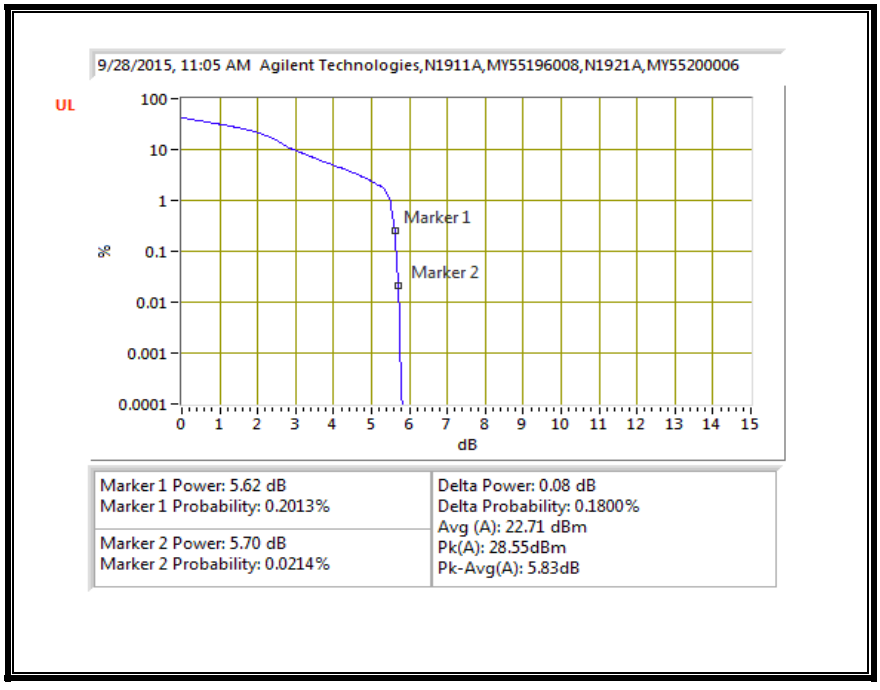
16QAM, (3.0 MHz BAND WIDTH)



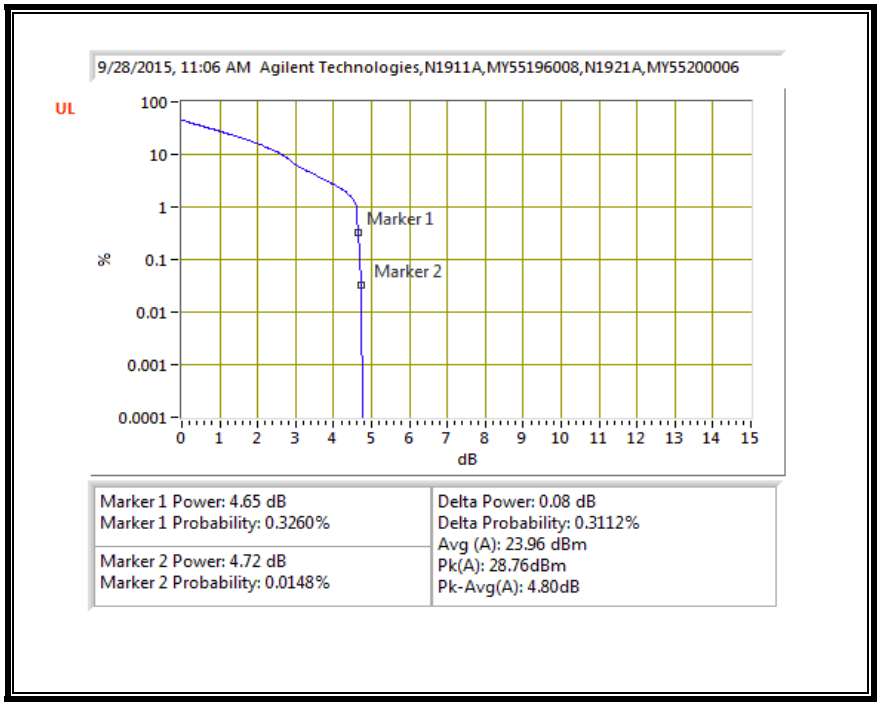
QPSK, (5.0 MHz BAND WIDTH)



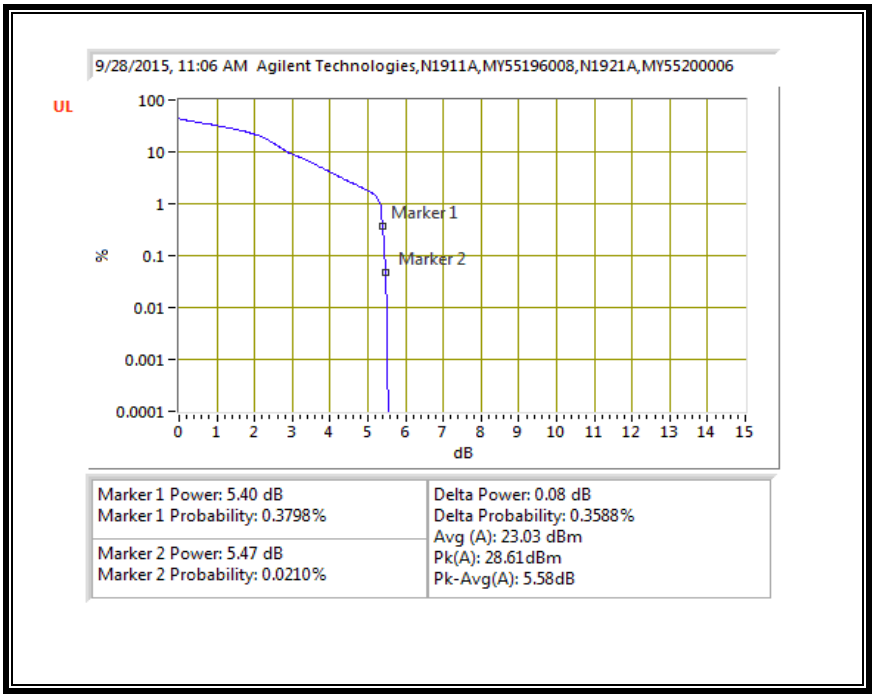
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

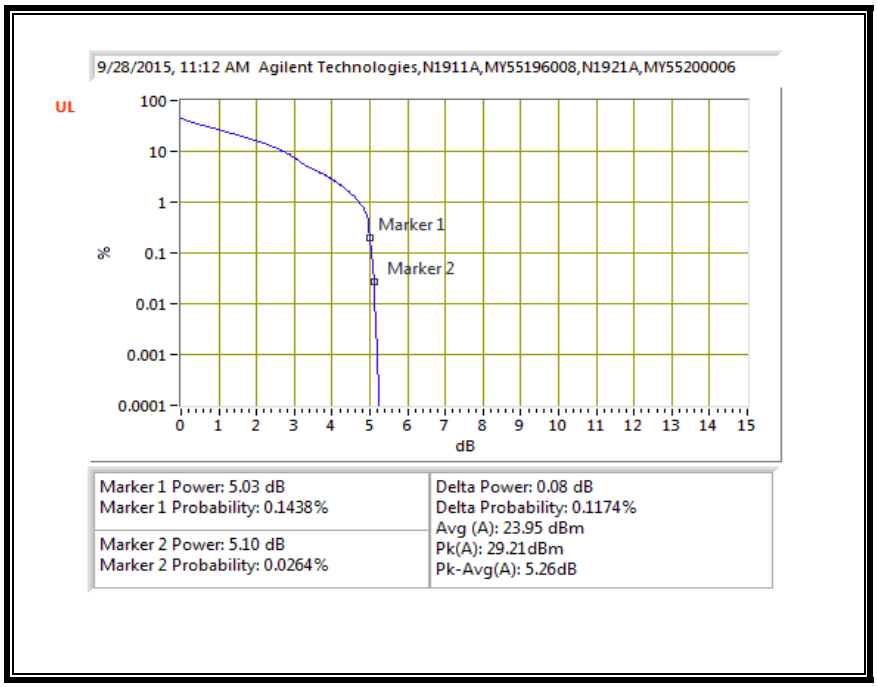


16QAM, (10.0 MHz BAND WIDTH)

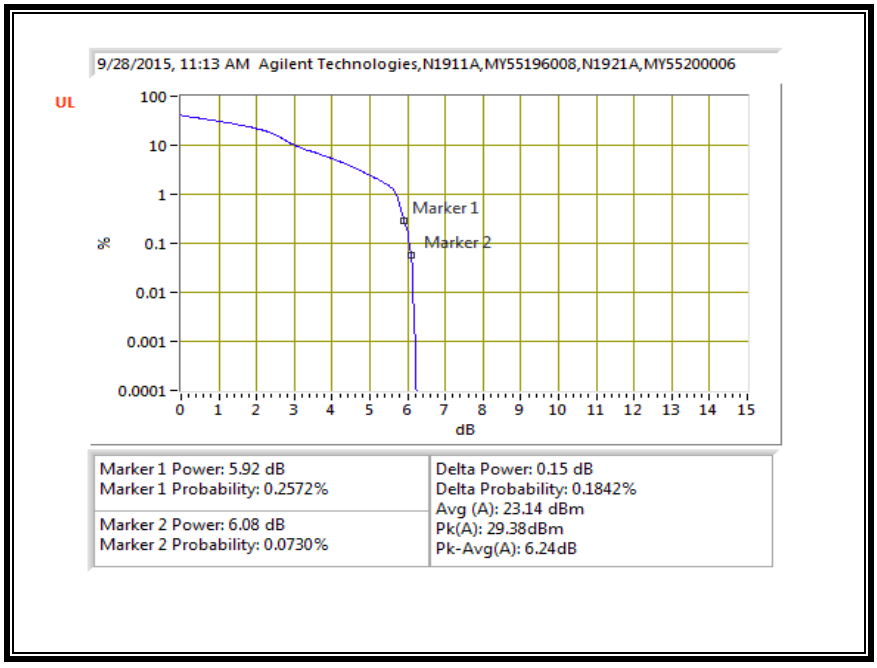


LTE BAND 12

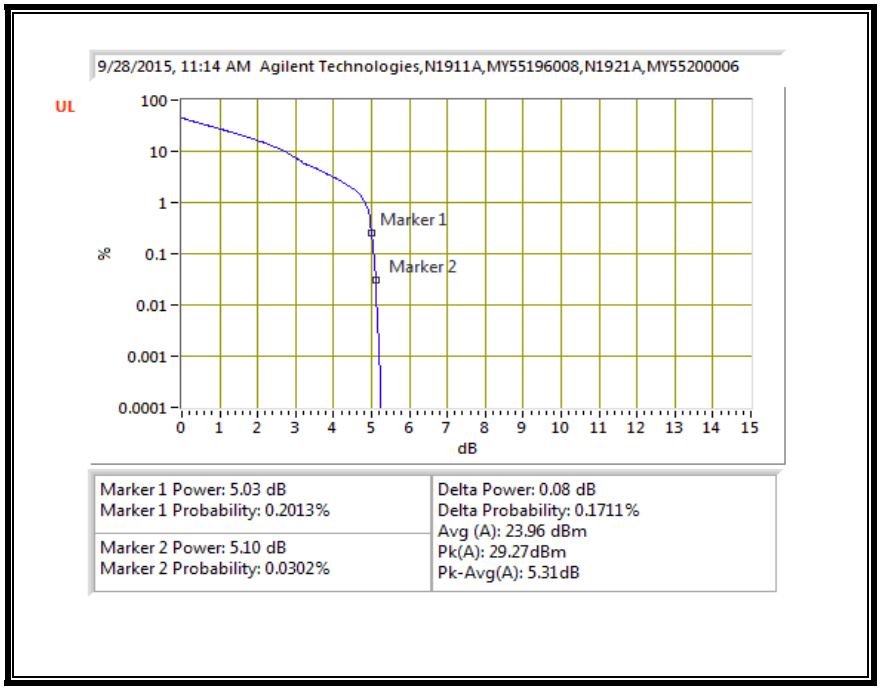
QPSK, (1.4 MHz BAND WIDTH)



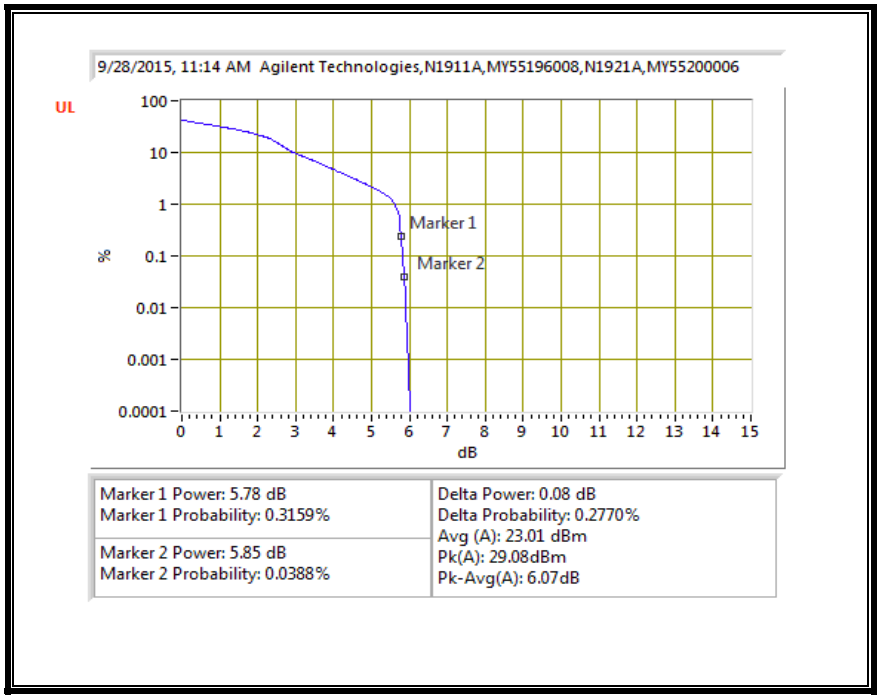
16QAM, (1.4 MHz BAND WIDTH)



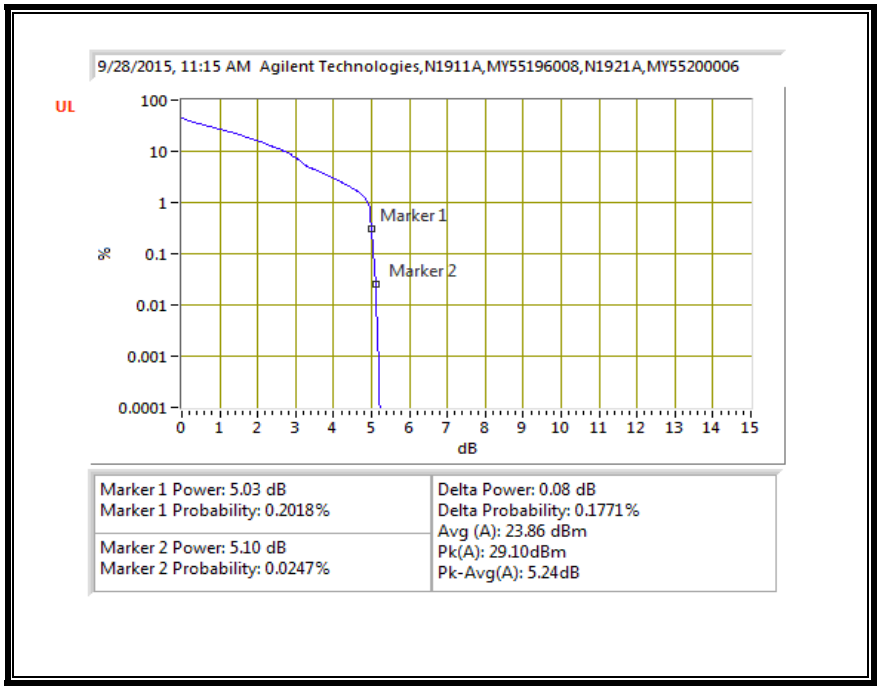
QPSK, (3.0 MHz BAND WIDTH)



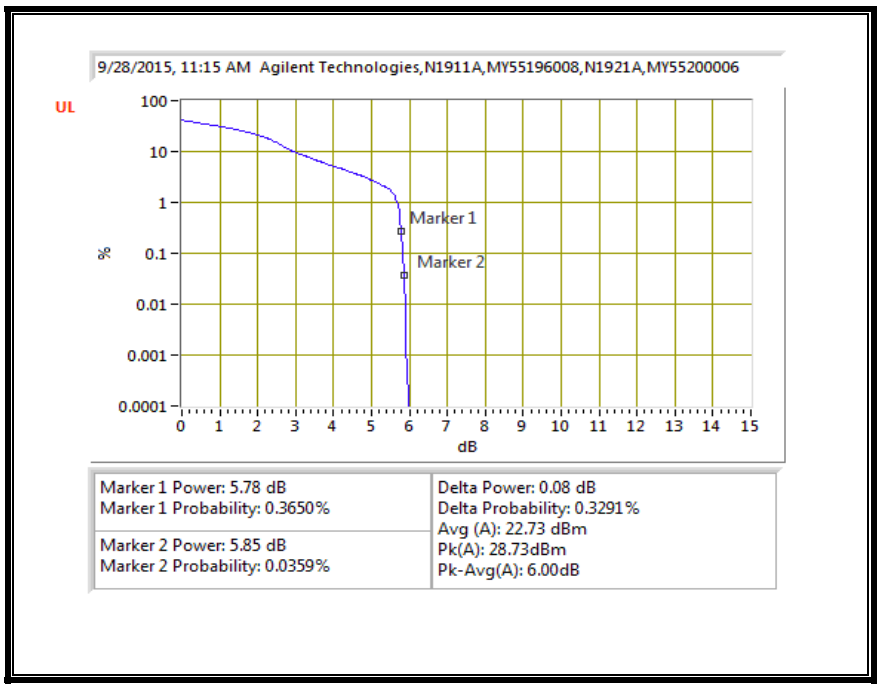
16QAM, (3.0 MHz BAND WIDTH)



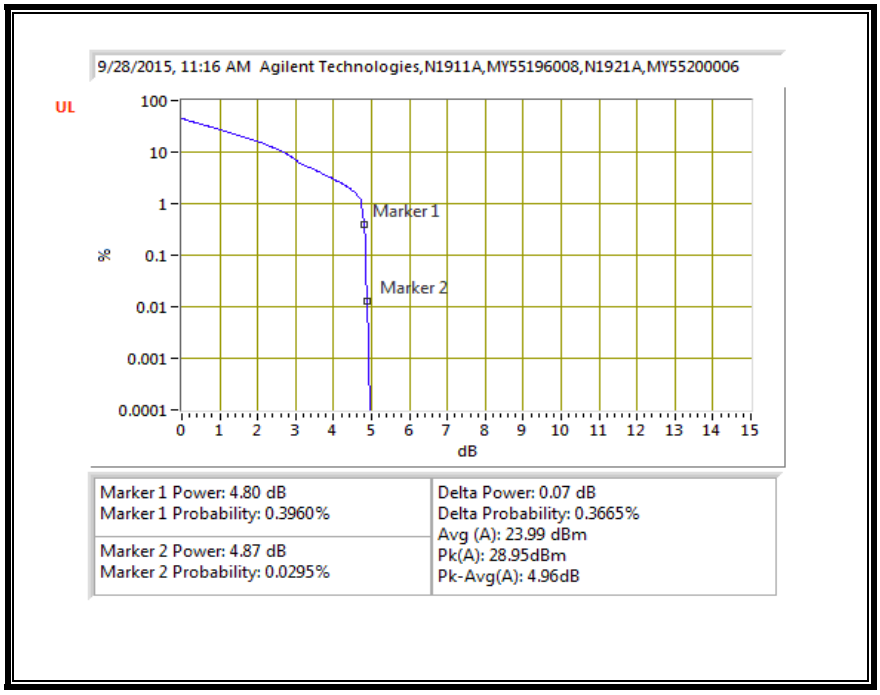
QPSK, (5.0 MHz BAND WIDTH)



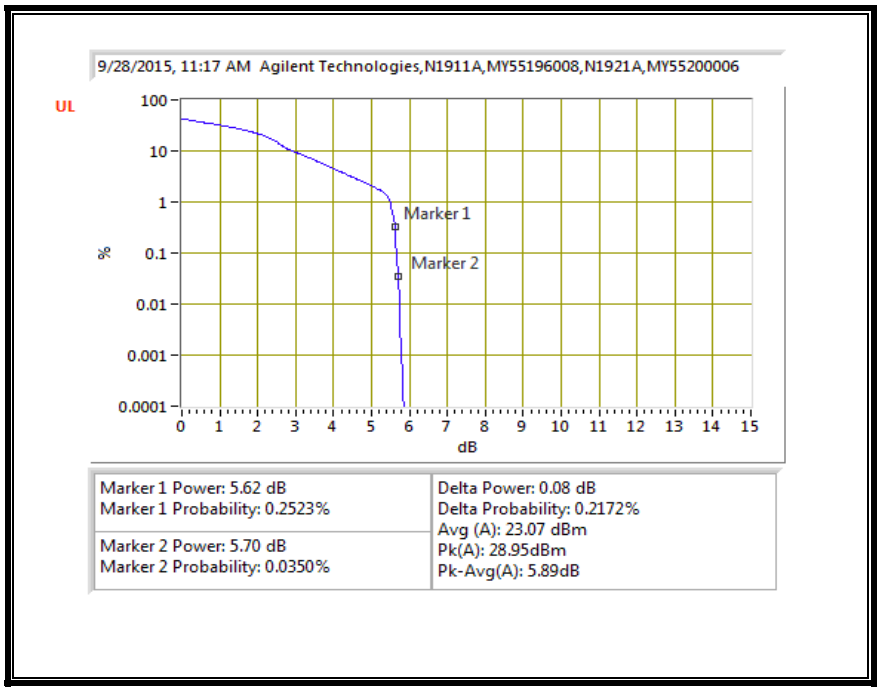
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

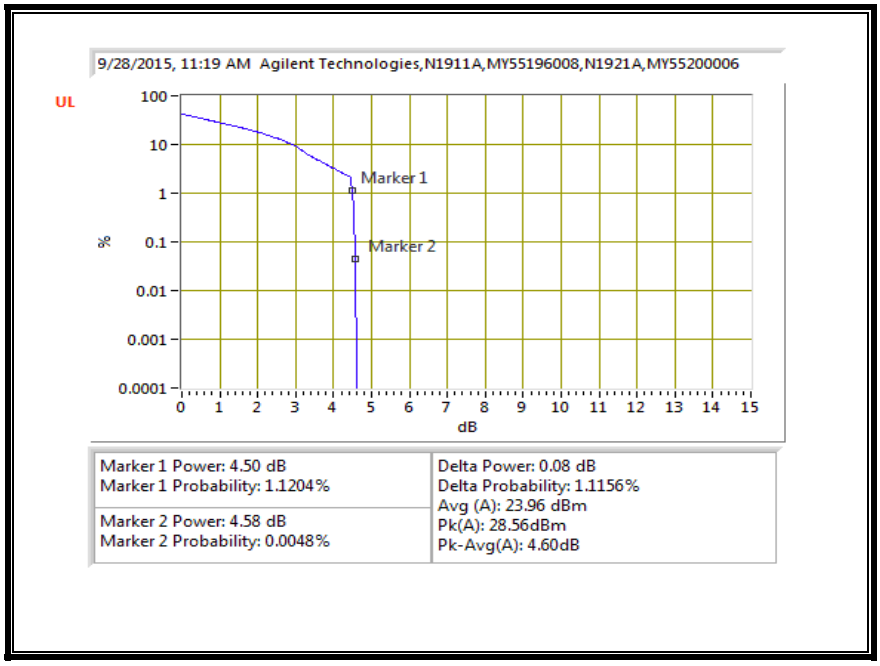


16QAM, (10.0 MHz BAND WIDTH)

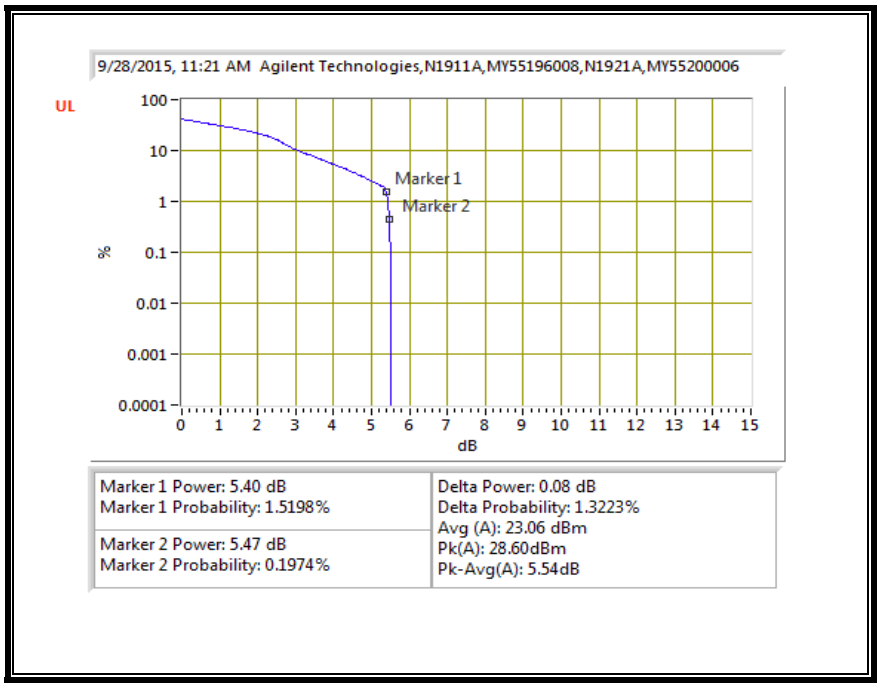


LTE BAND 17

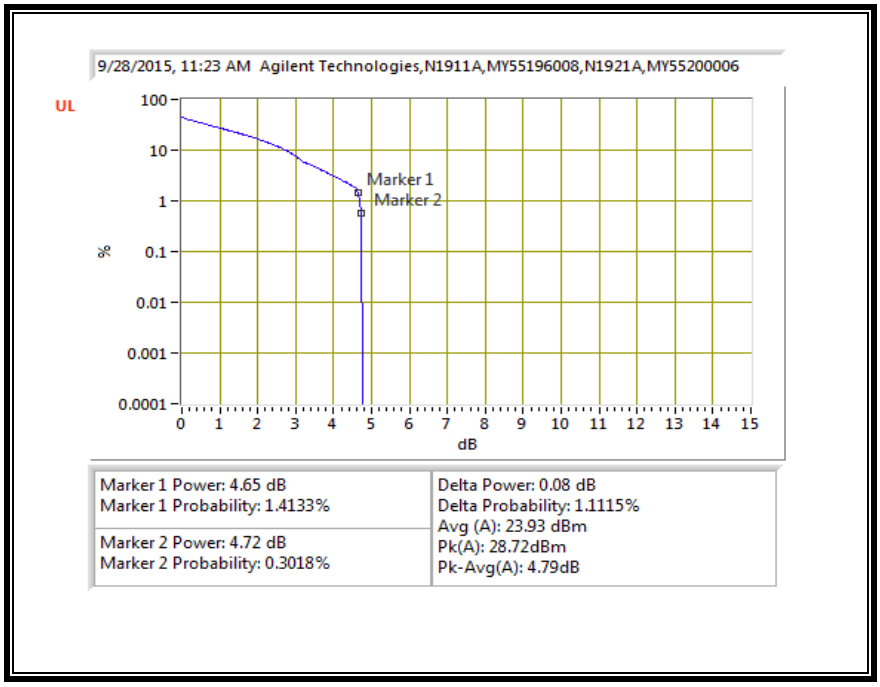
QPSK, (5.0 MHz BAND WIDTH)



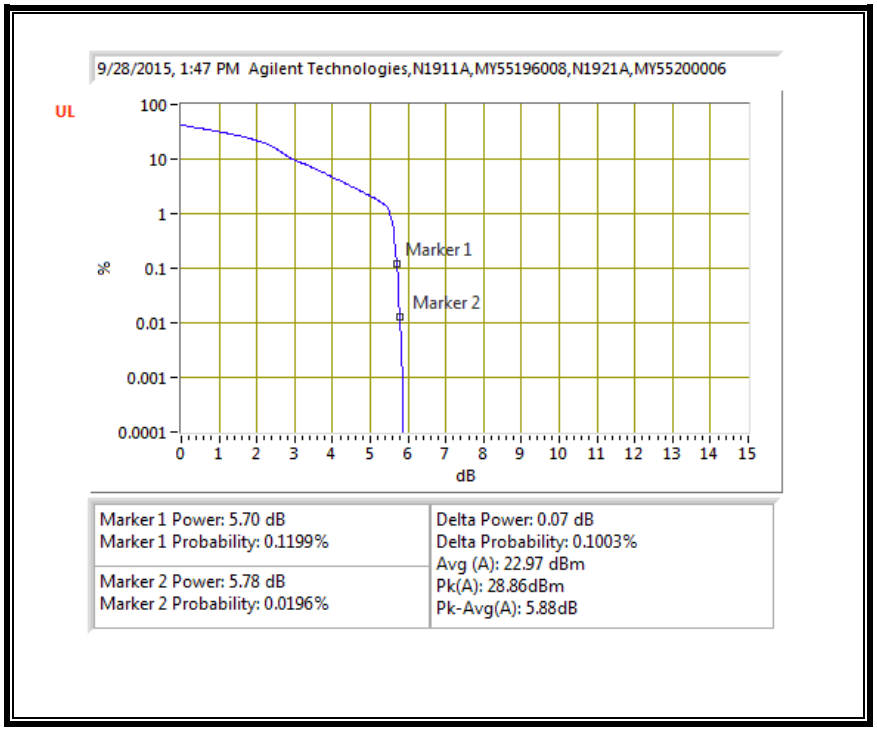
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)

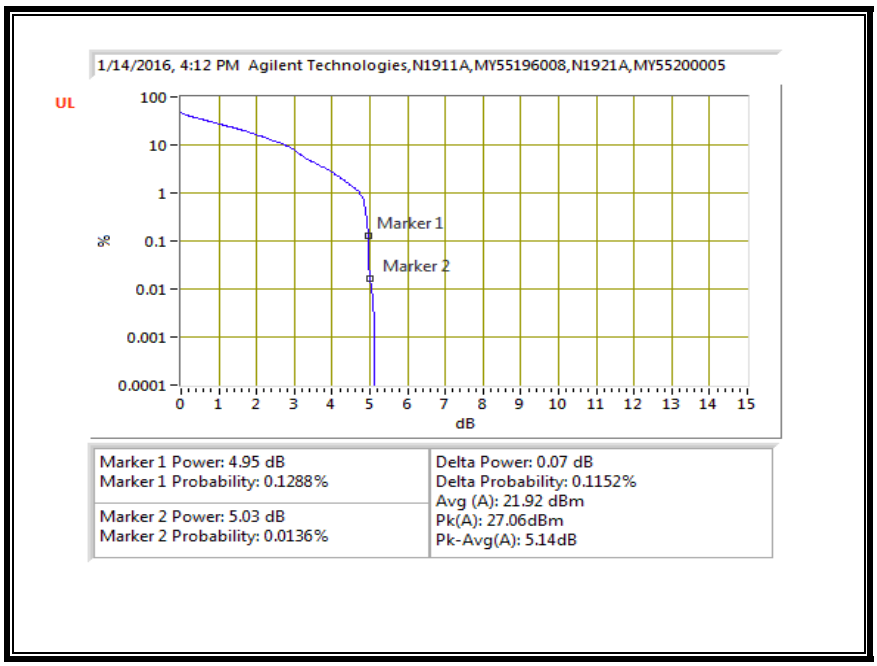


16QAM, (10.0 MHz BAND WIDTH)

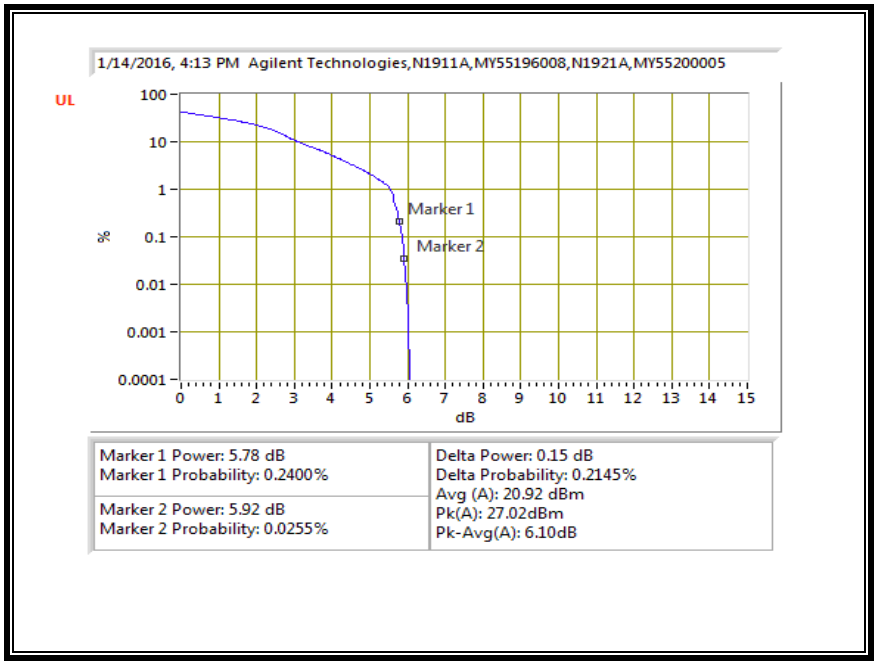


LTE BAND 25

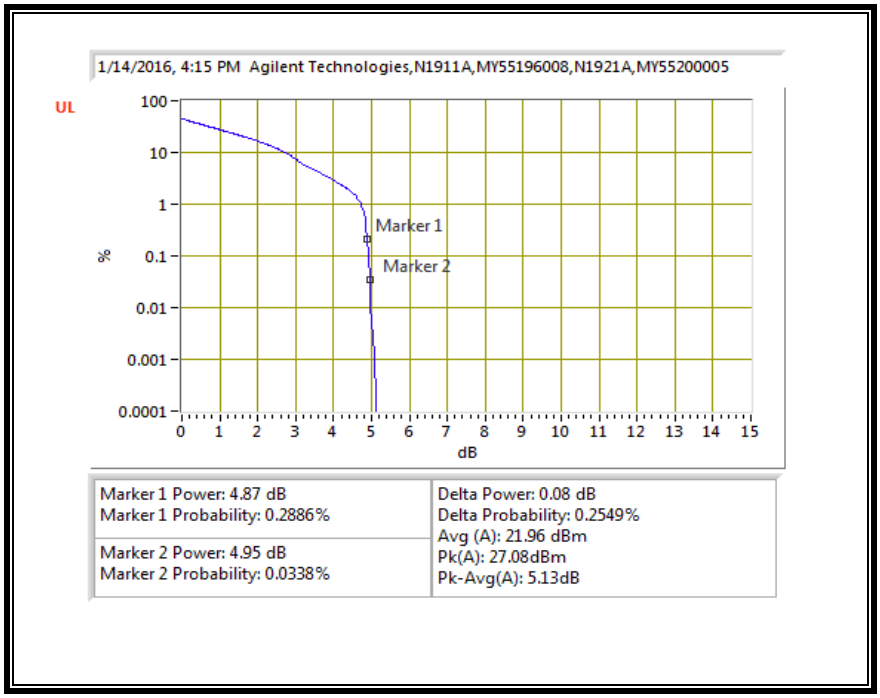
QPSK, (1.4 MHz BAND WIDTH)



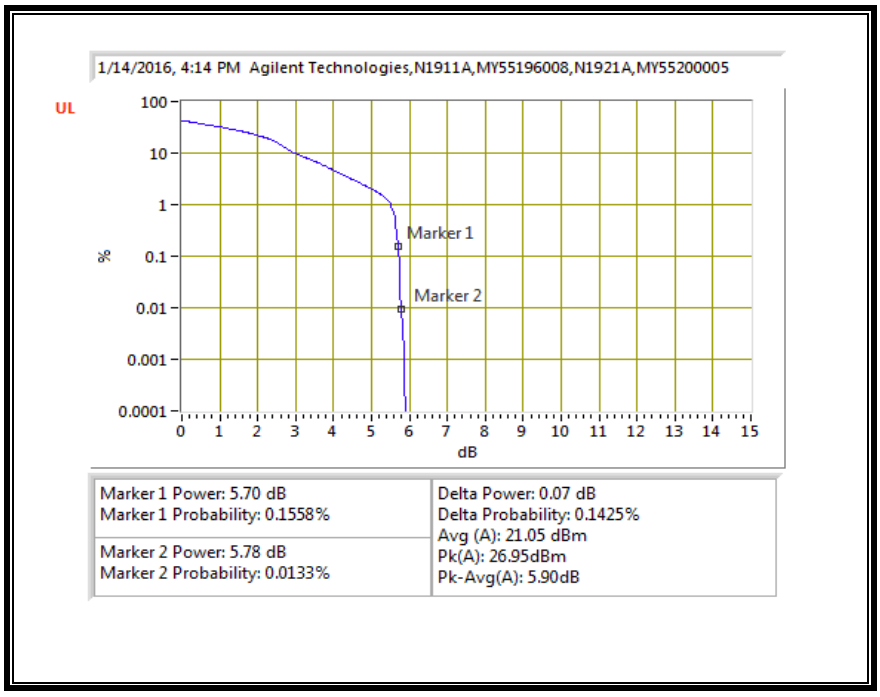
16QAM, (1.4 MHz BAND WIDTH)



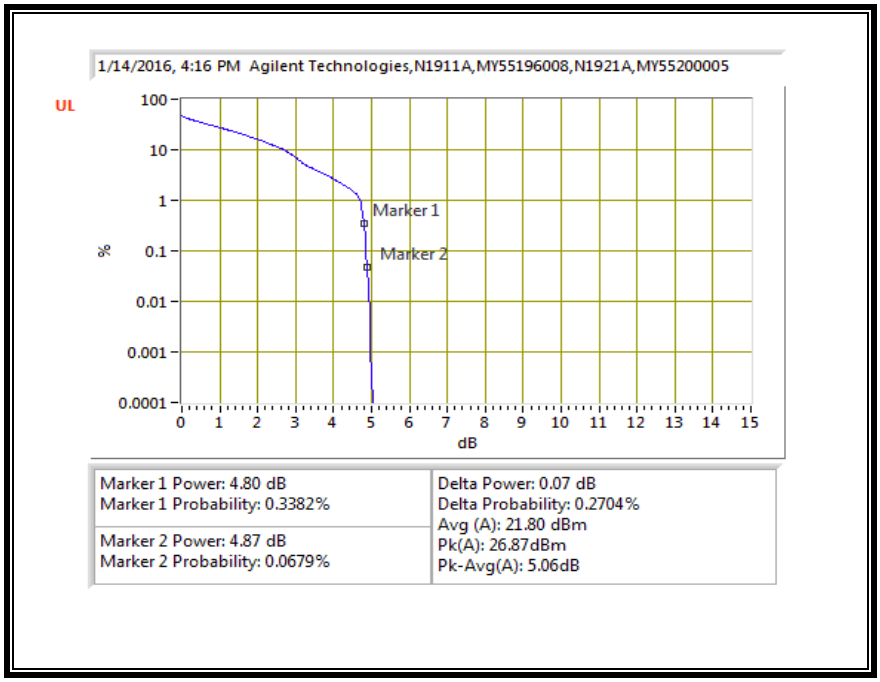
QPSK, (3.0 MHz BAND WIDTH)



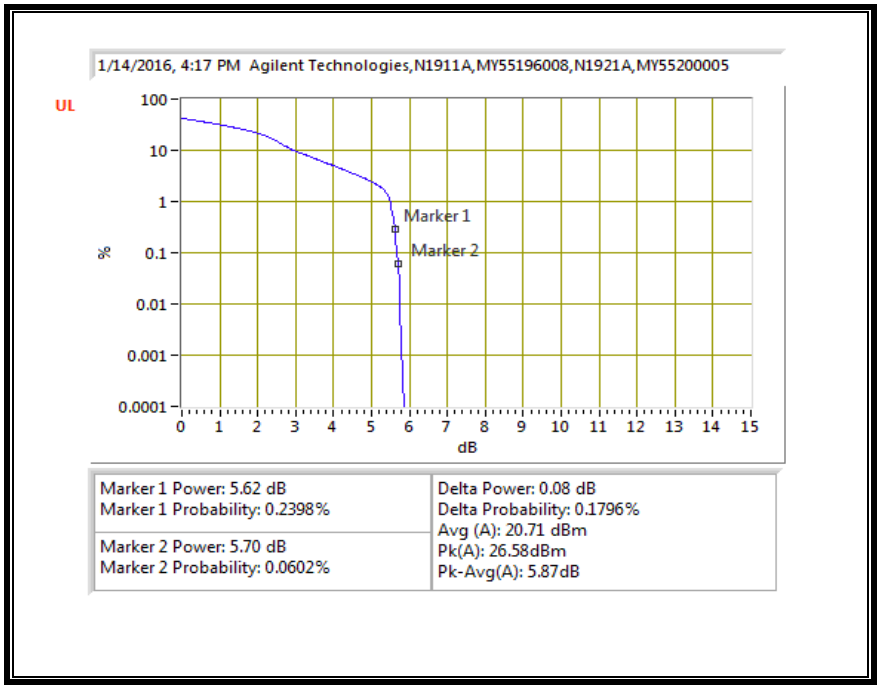
16QAM, (3.0 MHz BAND WIDTH)



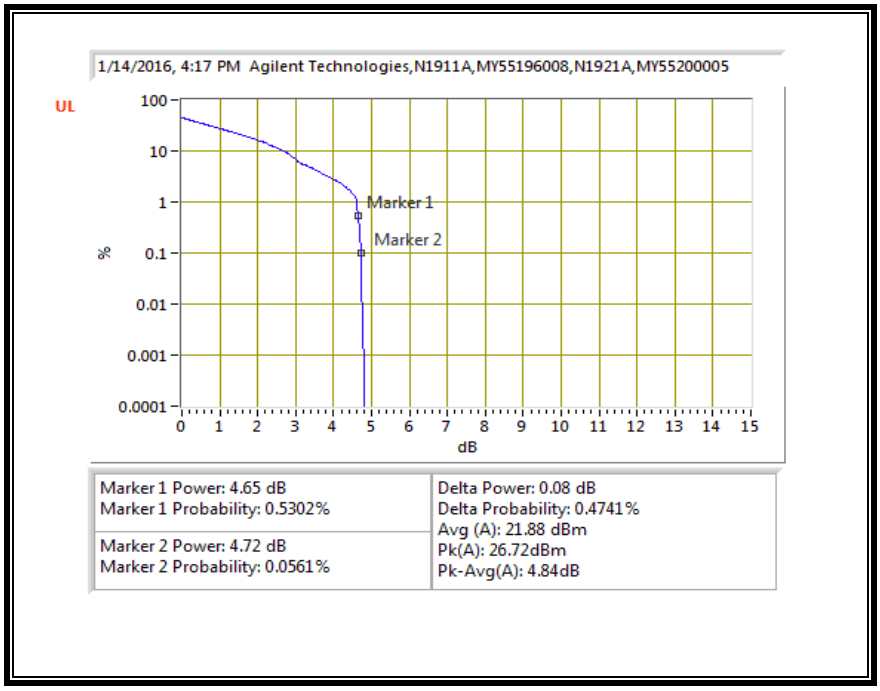
QPSK, (5.0 MHz BAND WIDTH)



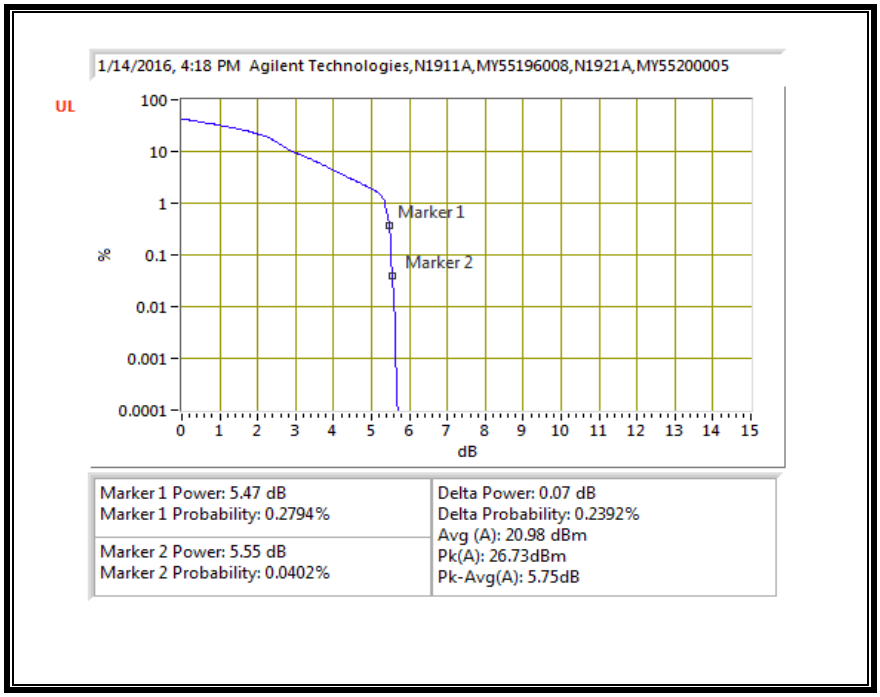
16QAM, (5.0 MHz BAND WIDTH)



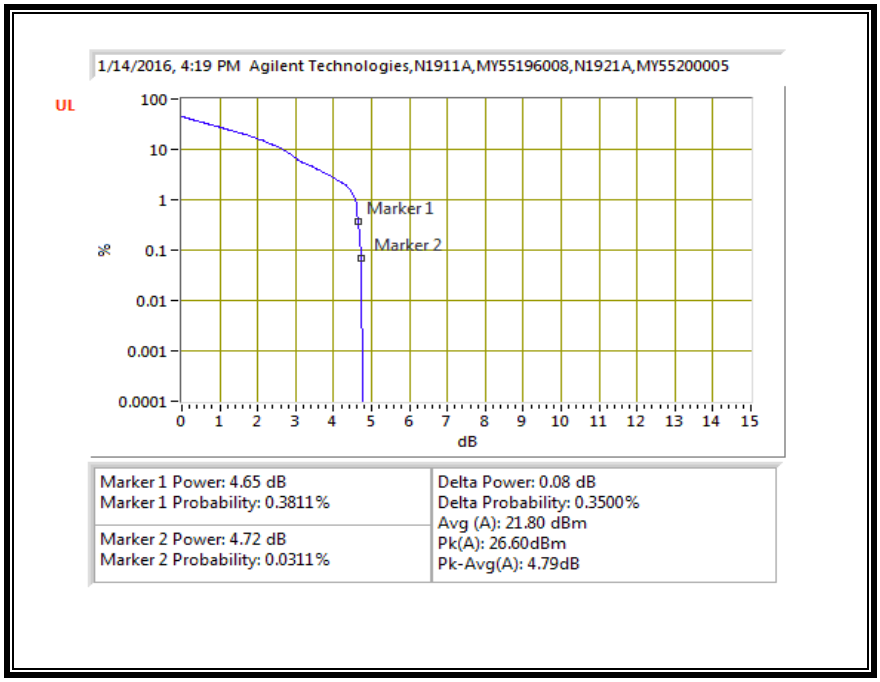
QPSK, (10.0 MHz BAND WIDTH)



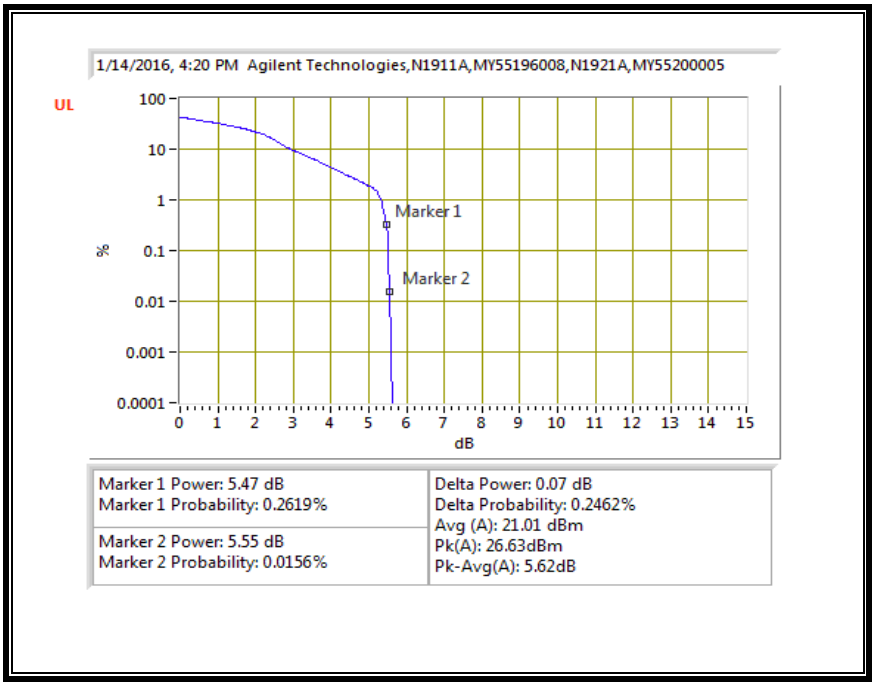
16QAM, (10.0 MHz BAND WIDTH)



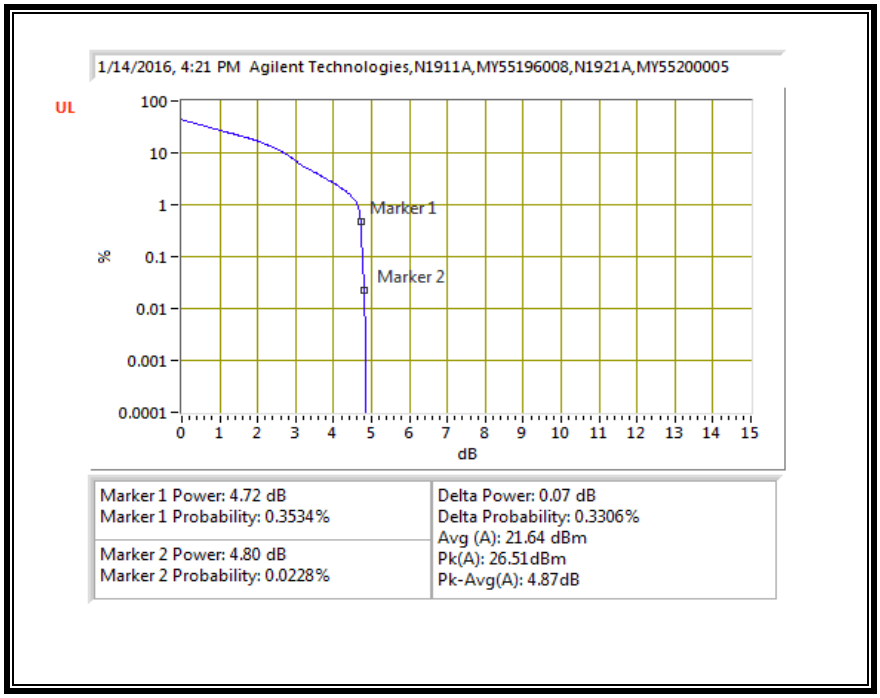
QPSK, (15.0 MHz BAND WIDTH)



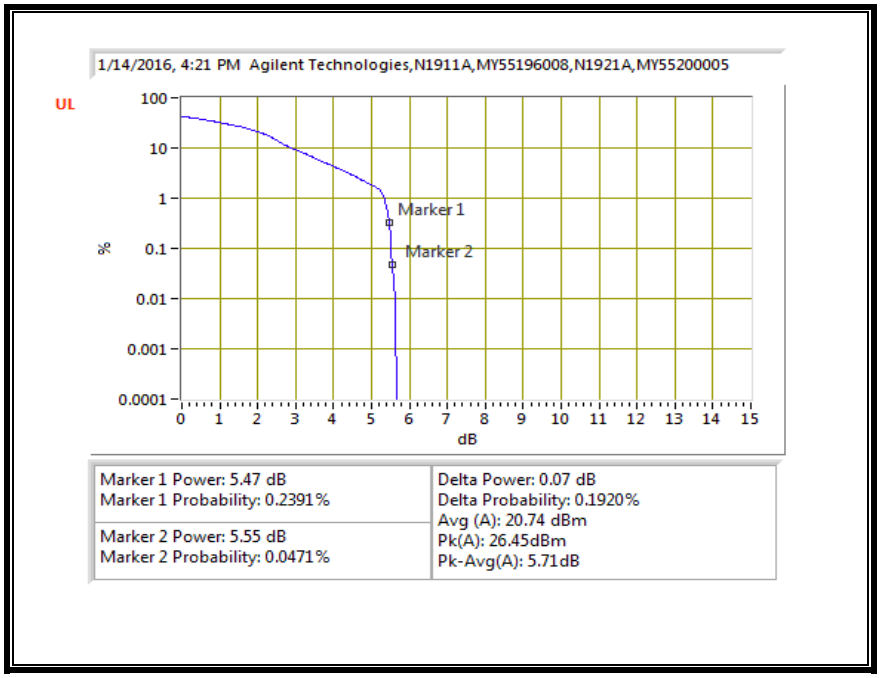
16QAM, (15.0 MHz BAND WIDTH)



QPSK, (20.0 MHz BAND WIDTH)

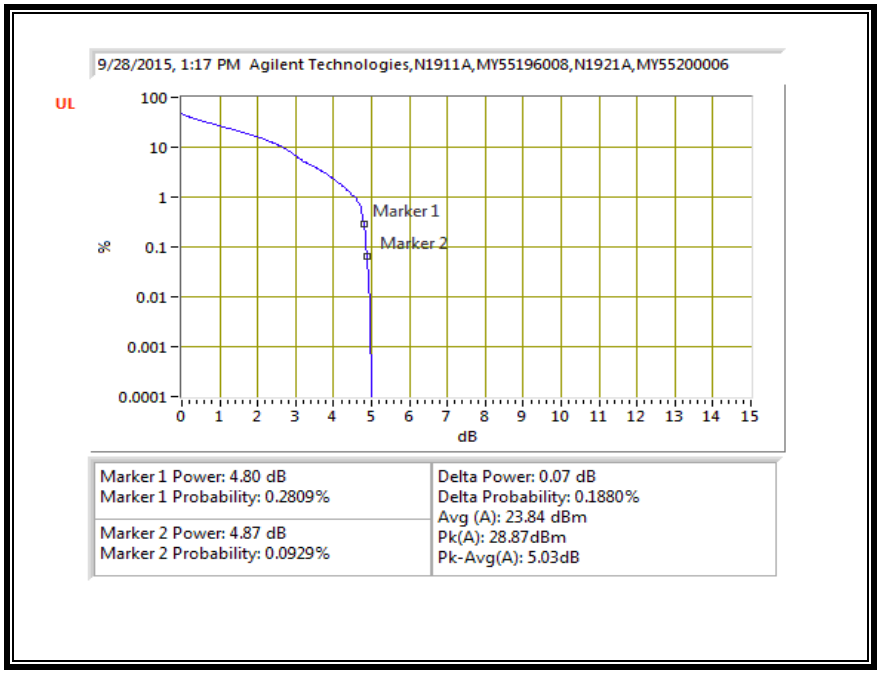


16QAM, (20.0 MHz BAND WIDTH)

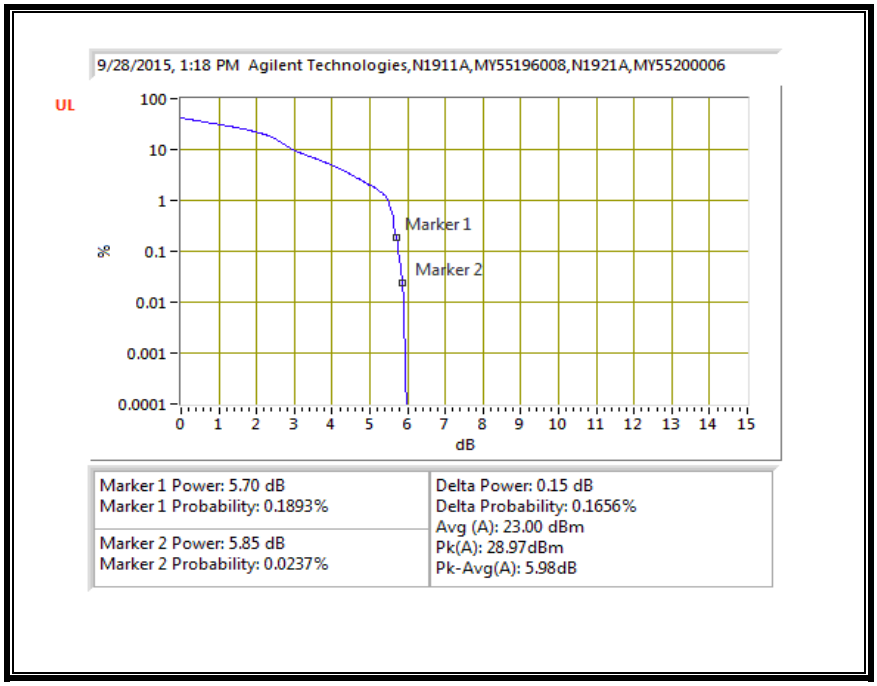


LTE BAND 26

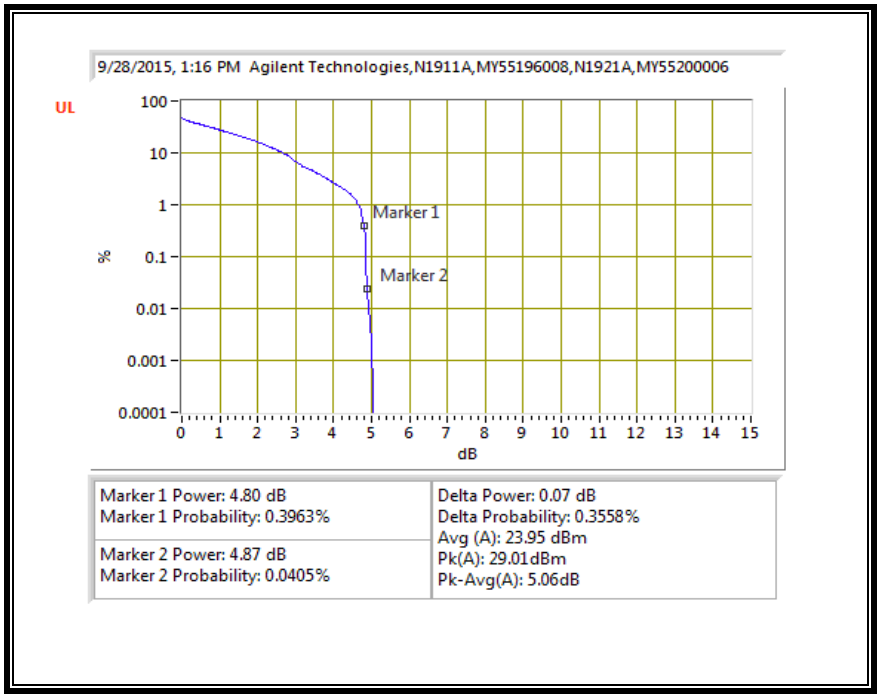
QPSK, (1.4 MHz BAND WIDTH)



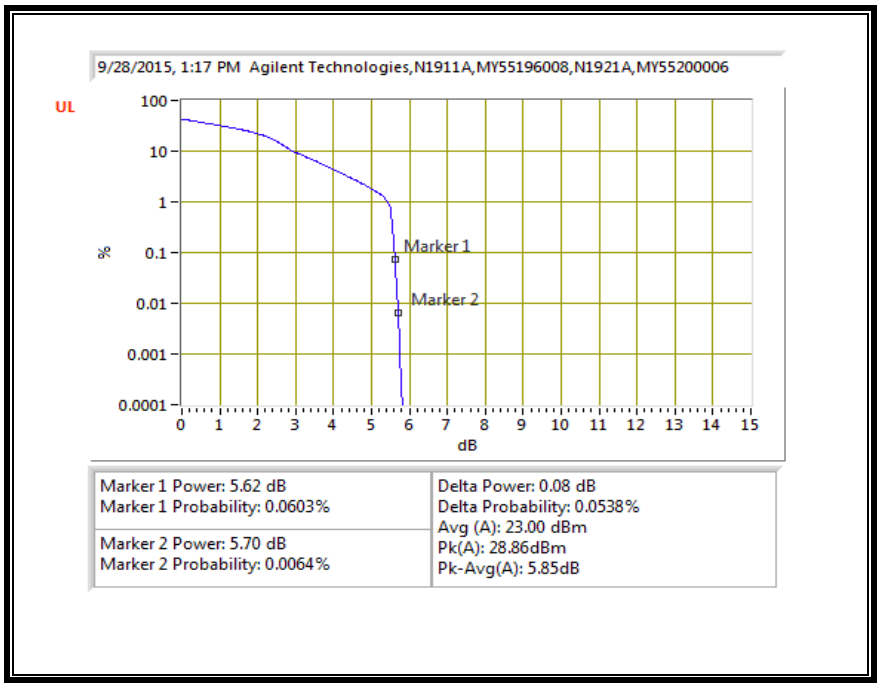
16QAM, (1.4 MHz BAND WIDTH)



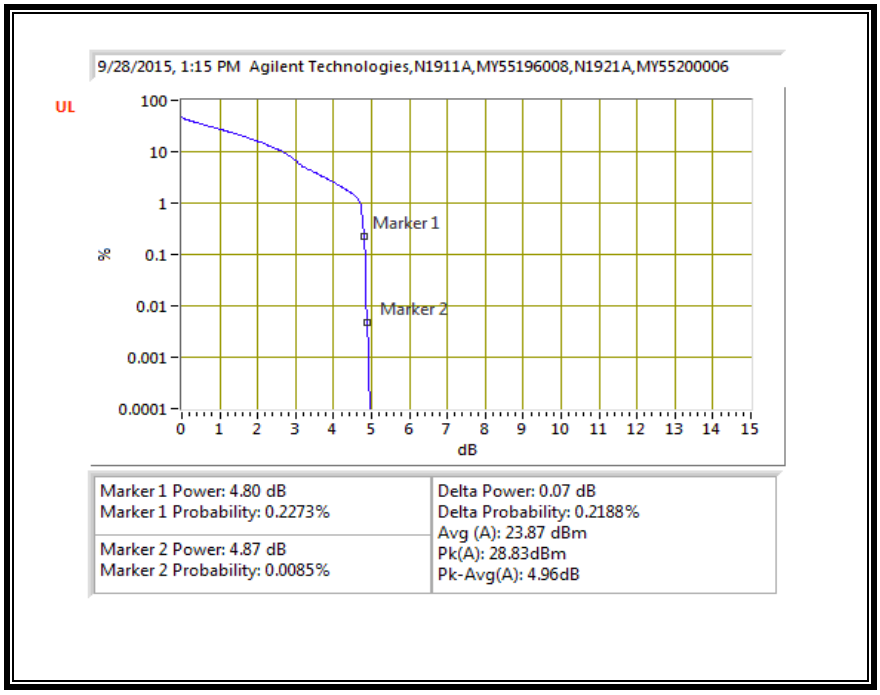
QPSK, (3.0 MHz BAND WIDTH)



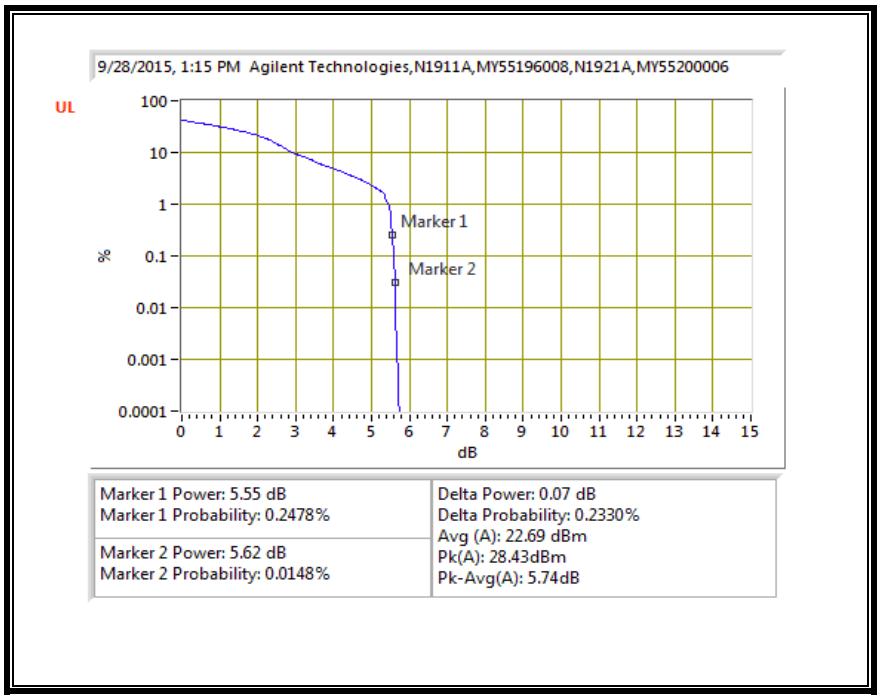
16QAM, (3.0 MHz BAND WIDTH)



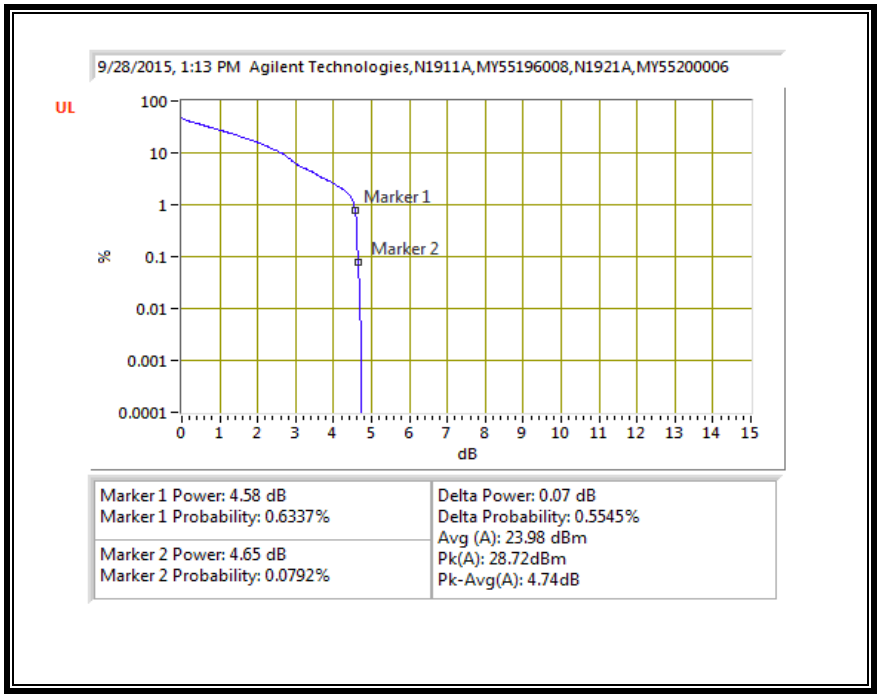
QPSK, (5.0 MHz BAND WIDTH)



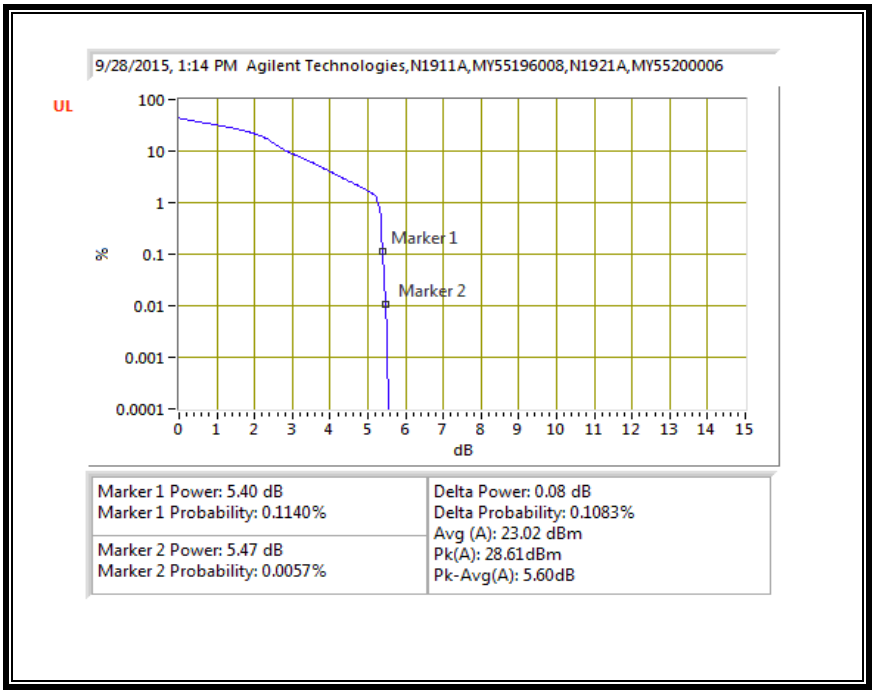
16QAM, (5.0 MHz BAND WIDTH)



QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



9.4. FIELD STRENGTH OF SPURIOUS RADIATION, LAT

RULE PART(S)

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

LIMIT

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

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

§27.53 (h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(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 Log10 (p), dB; and

b. for mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB at the channel edges and 55 + 10 Log10 (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 17
- LTE Band 25
- LTE Band 26
- LTE Band 41

RESULTS

9.4.1. LTE BAND 2

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/02/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 2, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
3.70	-64.8	H	3.0	-16.9	37.4	1.0	-53.3	-13.0	-40.3	
9.26	-69.4	H	3.0	-13.6	34.3	1.0	-47.0	-13.0	-34.0	
11.13	-70.1	H	3.0	-13.0	33.8	1.0	-45.8	-13.0	-32.8	
5.61	-66.1	V	3.0	-15.0	36.7	1.0	-50.7	-13.0	-37.7	
7.44	-68.3	V	3.0	-14.7	36.0	1.0	-49.7	-13.0	-36.7	
13.05	-70.6	V	3.0	-12.6	33.3	1.0	-44.9	-13.0	-31.9	
14.86	-70.8	V	3.0	-10.8	32.4	1.0	-42.3	-13.0	-29.3	
16.74	-72.2	V	3.0	-11.5	28.4	1.0	-39.0	-13.0	-26.0	
Mid Channel (1880MHz)										
3.74	-63.6	H	3.0	-15.6	37.4	1.0	-52.0	-13.0	-39.0	
9.43	-69.9	H	3.0	-14.0	34.2	1.0	-47.1	-13.0	-34.1	
5.62	-65.9	V	3.0	-14.8	36.7	1.0	-50.5	-13.0	-37.5	
7.55	-67.4	V	3.0	-13.8	35.9	1.0	-48.7	-13.0	-35.7	
11.30	-71.4	V	3.0	-14.7	33.8	1.0	-47.5	-13.0	-34.5	
13.19	-70.8	V	3.0	-12.6	33.3	1.0	-44.9	-13.0	-31.9	
15.01	-71.4	V	3.0	-11.3	32.4	1.0	-42.7	-13.0	-29.7	
16.91	-73.3	V	3.0	-12.5	28.0	1.0	-39.6	-13.0	-26.6	
High Channel (1900MHz)										
3.79	-61.0	H	3.0	-13.0	37.3	1.0	-49.3	-13.0	-36.3	
5.68	-65.5	H	3.0	-14.4	36.7	1.0	-50.1	-13.0	-37.1	
9.50	-69.9	H	3.0	-13.9	34.1	1.0	-47.1	-13.0	-34.1	
15.20	-71.3	H	3.0	-11.2	31.9	1.0	-42.2	-13.0	-29.2	
17.13	-72.8	H	3.0	-12.4	27.5	1.0	-38.9	-13.0	-25.9	
7.56	-67.0	V	3.0	-13.3	35.9	1.0	-48.2	-13.0	-35.2	
11.44	-71.7	V	3.0	-15.1	33.8	1.0	-47.9	-13.0	-34.9	
13.33	-71.0	V	3.0	-12.7	33.2	1.0	-44.9	-13.0	-31.9	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/02/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
7.44	-68.3	H	3.0	-14.6	36.0	1.0	-49.5	-13.0	-36.5	
11.15	-71.6	H	3.0	-14.5	33.8	1.0	-47.2	-13.0	-34.2	
13.05	-70.5	H	3.0	-12.0	33.3	1.0	-44.4	-13.0	-31.4	
16.73	-72.3	H	3.0	-12.0	28.5	1.0	-39.4	-13.0	-26.4	
3.74	-64.5	V	3.0	-16.8	37.4	1.0	-53.1	-13.0	-40.1	
5.56	-65.1	V	3.0	-14.1	36.7	1.0	-49.8	-13.0	-36.8	
9.30	-70.5	V	3.0	-14.1	34.3	1.0	-47.4	-13.0	-34.4	
14.87	-70.9	V	3.0	-11.0	32.4	1.0	-42.4	-13.0	-29.4	
Mid Channel (1880MHz)										
7.55	-67.3	H	3.0	-13.4	35.9	1.0	-48.3	-13.0	-35.3	
13.17	-70.6	H	3.0	-12.1	33.3	1.0	-44.4	-13.0	-31.4	
16.90	-72.4	H	3.0	-12.1	28.1	1.0	-39.2	-13.0	-26.2	
3.74	-63.7	V	3.0	-10.6	37.4	1.0	-47.0	-13.0	-34.0	
5.68	-66.1	V	3.0	-14.8	36.7	1.0	-50.6	-13.0	-37.6	
9.36	-70.6	V	3.0	-14.1	34.2	1.0	-47.3	-13.0	-34.3	
11.25	-71.9	V	3.0	-14.3	33.8	1.0	-47.1	-13.0	-34.1	
15.03	-71.2	V	3.0	-11.1	32.3	1.0	-42.4	-13.0	-29.4	
High Channel (1900MHz)										
3.79	-59.9	H	3.0	-11.9	37.3	1.0	-48.2	-13.0	-35.2	
9.50	-70.4	H	3.0	-14.4	34.1	1.0	-47.6	-13.0	-34.6	
17.12	-72.0	H	3.0	-11.7	27.6	1.0	-38.3	-13.0	-25.3	
5.68	-65.5	V	3.0	-14.3	36.7	1.0	-50.0	-13.0	-37.0	
7.56	-67.8	V	3.0	-13.8	35.9	1.0	-48.7	-13.0	-35.7	
11.40	-71.0	V	3.0	-13.9	33.8	1.0	-46.7	-13.0	-33.7	
13.29	-71.0	V	3.0	-12.7	33.2	1.0	-45.0	-13.0	-32.0	
15.21	-71.6	V	3.0	-11.4	31.9	1.0	-42.3	-13.0	-29.3	

Rev. 05.21.15

9.4.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
8.57	-69.8	H	3.0	-14.8	35.0	1.0	-48.8	-13.0	-35.8	
10.30	-70.3	H	3.0	-13.7	33.7	1.0	-46.4	-13.0	-33.4	
12.03	-72.0	H	3.0	-14.4	33.8	1.0	-47.2	-13.0	-34.2	
13.73	-71.2	H	3.0	-12.2	33.0	1.0	-44.2	-13.0	-31.2	
15.48	-71.1	H	3.0	-10.9	31.3	1.0	-41.2	-13.0	-28.2	
3.43	-66.2	V	3.0	-19.1	37.7	1.0	-55.8	-13.0	-42.8	
5.13	-55.3	V	3.0	-4.9	36.8	1.0	-40.8	-13.0	-27.8	
6.88	-67.1	V	3.0	-14.2	36.4	1.0	-49.6	-13.0	-36.6	
17.18	-72.7	V	3.0	-11.9	27.4	1.0	-38.3	-13.0	-25.3	
Mid Channel (1732.5MHz)										
3.47	-66.2	H	3.0	-18.4	37.7	1.0	-55.0	-13.0	-42.0	
6.95	-66.6	H	3.0	-13.4	36.4	1.0	-48.8	-13.0	-35.8	
8.63	-69.9	H	3.0	-14.8	34.9	1.0	-48.8	-13.0	-35.8	
15.57	-71.5	H	3.0	-11.4	31.1	1.0	-41.5	-13.0	-28.5	
5.17	-65.9	V	3.0	-15.4	36.8	1.0	-51.3	-13.0	-38.3	
10.38	-70.1	V	3.0	-14.3	33.7	1.0	-47.0	-13.0	-34.0	
12.12	-71.2	V	3.0	-14.1	33.8	1.0	-46.9	-13.0	-33.9	
13.89	-71.5	V	3.0	-12.6	32.9	1.0	-44.5	-13.0	-31.5	
17.30	-72.9	V	3.0	-12.0	27.2	1.0	-38.2	-13.0	-25.2	
High Channel (1745MHz)										
6.95	-67.9	H	3.0	-14.7	36.4	1.0	-50.1	-13.0	-37.1	
12.22	-72.3	H	3.0	-14.5	33.7	1.0	-47.3	-13.0	-34.3	
17.42	-72.7	H	3.0	-12.3	26.9	1.0	-38.2	-13.0	-25.2	
3.47	-66.3	V	3.0	-19.2	37.7	1.0	-55.8	-13.0	-42.8	
5.23	-66.8	V	3.0	-16.2	36.8	1.0	-52.0	-13.0	-39.0	
8.75	-70.1	V	3.0	-15.7	34.8	1.0	-49.6	-13.0	-36.6	
10.49	-70.8	V	3.0	-14.9	33.7	1.0	-47.6	-13.0	-34.6	
13.99	-71.1	V	3.0	-12.1	32.9	1.0	-44.0	-13.0	-31.0	
15.72	-72.1	V	3.0	-11.8	30.7	1.0	-41.5	-13.0	-28.5	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 4, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
6.85	-67.0	H	3.0	-14.0	36.4	1.0	-49.4	-13.0	-36.4	
8.58	-69.4	H	3.0	-14.4	35.0	1.0	-48.4	-13.0	-35.4	
3.43	-66.1	V	3.0	-19.0	37.7	1.0	-55.7	-13.0	-42.7	
5.13	-64.2	V	3.0	-13.8	36.8	1.0	-49.6	-13.0	-36.6	
10.32	-71.5	V	3.0	-15.7	33.7	1.0	-48.4	-13.0	-35.4	
12.05	-71.5	V	3.0	-14.6	33.8	1.0	-47.4	-13.0	-34.4	
13.77	-70.7	V	3.0	-11.9	33.0	1.0	-43.9	-13.0	-30.9	
15.48	-71.5	V	3.0	-11.2	31.3	1.0	-41.5	-13.0	-28.5	
Mid Channel (1732.5MHz)										
5.17	-66.0	H	3.0	-15.7	36.8	1.0	-51.6	-13.0	-38.6	
6.93	-67.4	H	3.0	-14.2	36.4	1.0	-49.6	-13.0	-36.6	
12.12	-71.5	H	3.0	-13.9	33.8	1.0	-46.7	-13.0	-33.7	
3.47	-66.1	V	3.0	-18.9	37.7	1.0	-55.6	-13.0	-42.6	
8.67	-69.8	V	3.0	-15.5	34.9	1.0	-49.4	-13.0	-36.4	
10.42	-71.4	V	3.0	-15.5	33.7	1.0	-48.2	-13.0	-35.2	
13.89	-70.5	V	3.0	-11.6	32.9	1.0	-43.5	-13.0	-30.5	
17.35	-72.7	V	3.0	-11.8	27.0	1.0	-37.8	-13.0	-24.8	
High Channel (1745MHz)										
3.52	-66.3	H	3.0	-18.4	37.6	1.0	-55.0	-13.0	-42.0	
17.42	-72.7	H	3.0	-12.3	26.9	1.0	-38.2	-13.0	-25.2	
5.23	-67.1	V	3.0	-16.5	36.8	1.0	-52.3	-13.0	-39.3	
6.97	-67.8	V	3.0	-14.7	36.4	1.0	-50.1	-13.0	-37.1	
8.74	-70.3	V	3.0	-16.0	34.8	1.0	-49.8	-13.0	-36.8	
10.45	-71.3	V	3.0	-15.6	33.7	1.0	-48.3	-13.0	-35.3	
12.24	-71.2	V	3.0	-14.1	33.7	1.0	-46.8	-13.0	-33.8	
13.97	-71.1	V	3.0	-12.1	32.9	1.0	-44.0	-13.0	-31.0	

Rev. 05.21.15

9.4.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 5, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (834MHz)										
1.63	-80.8	H	3.0	-40.6	37.7	1.0	-77.3	-13.0	-64.3	
4.15	-76.4	H	3.0	-28.1	37.1	1.0	-64.1	-13.0	-51.1	
5.01	-76.4	H	3.0	-26.4	36.9	1.0	-62.3	-13.0	-49.3	
5.83	-78.0	H	3.0	-26.6	36.7	1.0	-62.3	-13.0	-49.3	
7.49	-77.7	H	3.0	-23.9	35.9	1.0	-58.9	-13.0	-45.9	
8.26	-77.6	H	3.0	-23.0	35.3	1.0	-57.2	-13.0	-44.2	
2.51	-79.1	V	3.0	-34.9	37.1	1.0	-71.0	-13.0	-58.0	
3.30	-77.9	V	3.0	-31.1	37.9	1.0	-68.0	-13.0	-55.0	
6.64	-78.6	V	3.0	-26.0	36.5	1.0	-61.5	-13.0	-48.5	
Mid Channel (836.5MHz)										
2.50	-78.3	H	3.0	-34.2	37.1	1.0	-70.3	-13.0	-57.3	
3.31	-78.8	H	3.0	-31.0	37.8	1.0	-67.9	-13.0	-54.9	
4.20	-75.3	H	3.0	-26.9	37.0	1.0	-62.9	-13.0	-49.9	
5.86	-77.8	H	3.0	-26.4	36.7	1.0	-62.0	-13.0	-49.0	
7.56	-76.8	H	3.0	-22.9	35.9	1.0	-57.8	-13.0	-44.8	
8.36	-76.9	H	3.0	-22.2	35.2	1.0	-56.3	-13.0	-43.3	
1.66	-80.9	V	3.0	-40.2	37.7	1.0	-76.9	-13.0	-63.9	
5.05	-75.8	V	3.0	-25.5	36.9	1.0	-61.4	-13.0	-48.4	
6.73	-78.6	V	3.0	-25.9	36.5	1.0	-61.3	-13.0	-48.3	
High Channel (839MHz)										
1.70	-81.6	H	3.0	-40.8	37.8	1.0	-77.6	-13.0	-64.6	
4.25	-76.3	H	3.0	-27.7	37.0	1.0	-63.8	-13.0	-50.8	
6.78	-78.2	H	3.0	-25.3	36.4	1.0	-60.7	-13.0	-47.7	
7.58	-76.6	H	3.0	-22.7	35.9	1.0	-57.5	-13.0	-44.5	
2.51	-78.8	V	3.0	-34.6	37.1	1.0	-70.7	-13.0	-57.7	
3.40	-78.7	V	3.0	-31.7	37.8	1.0	-68.5	-13.0	-55.5	
5.03	-75.5	V	3.0	-25.3	36.9	1.0	-61.1	-13.0	-48.1	
5.90	-77.3	V	3.0	-25.7	36.7	1.0	-61.4	-13.0	-48.4	
8.43	-77.1	V	3.0	-22.5	35.1	1.0	-56.6	-13.0	-43.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 5, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (834MHz)										
3.33	-78.3	H	3.0	-30.5	37.8	1.0	-67.3	-13.0	-54.3	
4.18	-76.5	H	3.0	-28.1	37.0	1.0	-64.1	-13.0	-51.1	
5.79	-77.1	H	3.0	-25.8	36.7	1.0	-61.5	-13.0	-48.5	
8.26	-77.1	H	3.0	-22.4	35.3	1.0	-56.7	-13.0	-43.7	
1.66	-81.7	V	3.0	-41.0	37.7	1.0	-77.7	-13.0	-64.7	
2.48	-79.2	V	3.0	-35.1	37.1	1.0	-71.2	-13.0	-58.2	
5.01	-75.9	V	3.0	-25.7	36.9	1.0	-61.5	-13.0	-48.5	
6.66	-78.3	V	3.0	-25.6	36.5	1.0	-61.1	-13.0	-48.1	
7.48	-77.4	V	3.0	-23.8	36.0	1.0	-58.8	-13.0	-45.8	
Mid Channel (836.5MHz)										
3.31	-78.1	H	3.0	-30.3	37.8	1.0	-67.2	-13.0	-54.2	
4.21	-76.5	H	3.0	-28.0	37.0	1.0	-64.1	-13.0	-51.1	
5.00	-76.2	H	3.0	-26.2	36.9	1.0	-62.1	-13.0	-49.1	
5.86	-77.2	H	3.0	-25.7	36.7	1.0	-61.4	-13.0	-48.4	
6.73	-78.0	H	3.0	-25.2	36.5	1.0	-60.6	-13.0	-47.6	
1.65	-80.9	V	3.0	-40.3	37.7	1.0	-77.1	-13.0	-64.1	
2.51	-78.6	V	3.0	-34.4	37.1	1.0	-70.5	-13.0	-57.5	
7.51	-77.5	V	3.0	-23.9	35.9	1.0	-58.8	-13.0	-45.8	
8.36	-77.7	V	3.0	-23.2	35.2	1.0	-57.3	-13.0	-44.3	
High Channel (839MHz)										
2.51	-79.0	H	3.0	-34.8	37.1	1.0	-70.9	-13.0	-57.9	
3.35	-78.5	H	3.0	-30.7	37.8	1.0	-67.5	-13.0	-54.5	
4.21	-75.9	H	3.0	-27.5	37.0	1.0	-63.5	-13.0	-50.5	
5.06	-76.1	H	3.0	-26.0	36.9	1.0	-61.8	-13.0	-48.8	
6.78	-78.2	H	3.0	-25.3	36.4	1.0	-60.8	-13.0	-47.8	
8.41	-76.9	H	3.0	-22.1	35.1	1.0	-56.2	-13.0	-43.2	
1.66	-81.8	V	3.0	-41.0	37.7	1.0	-77.8	-13.0	-64.8	
5.90	-76.2	V	3.0	-24.7	36.7	1.0	-60.4	-13.0	-47.4	
7.60	-77.5	V	3.0	-23.8	35.9	1.0	-58.6	-13.0	-45.6	

Rev. 05.21.15

9.4.4. LTE BAND 7

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
7.51	-64.3	H	3.0	-10.5	35.9	1.0	-45.4	-25.0	-20.4	
5.00	-66.0	V	3.0	-15.9	36.9	1.0	-51.7	-25.0	-26.7	
7.51	-61.5	V	3.0	-5.5	35.9	1.0	-40.4	-25.0	-15.4	
10.04	-70.6	V	3.0	-14.4	33.7	1.0	-47.1	-25.0	-22.1	
12.56	-71.7	V	3.0	-14.2	33.6	1.0	-46.8	-25.0	-21.8	
15.08	-71.5	V	3.0	-11.4	32.2	1.0	-42.6	-25.0	-17.6	
Mid Channel (2535MHz)										
7.58	-62.5	H	3.0	-8.6	35.9	1.0	-43.5	-25.0	-18.5	
5.05	-64.9	V	3.0	-14.6	36.9	1.0	-50.5	-25.0	-25.5	
7.58	-61.7	V	3.0	-5.6	35.9	1.0	-40.5	-25.0	-15.5	
10.11	-69.3	V	3.0	-13.1	33.7	1.0	-45.8	-25.0	-20.8	
12.65	-71.2	V	3.0	-13.6	33.5	1.0	-46.1	-25.0	-21.1	
15.21	-70.8	V	3.0	-10.7	31.9	1.0	-41.6	-25.0	-16.6	
High Channel (2560MHz)										
7.65	-63.6	H	3.0	-9.6	35.8	1.0	-44.4	-25.0	-19.4	
5.10	-63.5	V	3.0	-13.1	36.9	1.0	-49.0	-25.0	-24.0	
7.65	-63.5	V	3.0	-7.2	35.8	1.0	-42.0	-25.0	-17.0	
10.21	-71.2	V	3.0	-15.0	33.7	1.0	-47.7	-25.0	-22.7	
12.76	-67.6	V	3.0	-9.9	33.5	1.0	-42.3	-25.0	-17.3	
15.33	-71.3	V	3.0	-11.1	31.6	1.0	-41.7	-25.0	-16.7	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
12.53	-70.8	H	3.0	-12.8	33.6	1.0	-45.4	-25.0	-20.4	
5.00	-65.4	V	3.0	-15.3	36.9	1.0	-51.1	-25.0	-26.1	
7.51	-62.7	V	3.0	-9.1	35.9	1.0	-44.0	-25.0	-19.0	
12.53	-70.8	V	3.0	-13.3	33.6	1.0	-45.9	-25.0	-20.9	
15.09	-71.4	V	3.0	-11.3	32.2	1.0	-42.4	-25.0	-17.4	
Mid Channel (2535MHz)										
15.21	-71.9	H	3.0	-11.8	31.9	1.0	-42.7	-25.0	-17.7	
5.05	-65.1	V	3.0	-14.8	36.9	1.0	-50.7	-25.0	-25.7	
7.58	-60.3	V	3.0	-6.6	35.9	1.0	-41.5	-25.0	-16.5	
10.13	-69.8	V	3.0	-13.5	33.7	1.0	-46.2	-25.0	-21.2	
12.66	-71.1	V	3.0	-13.5	33.5	1.0	-46.1	-25.0	-21.1	
High Channel (2560MHz)										
10.23	-70.8	H	3.0	-14.1	33.7	1.0	-46.8	-25.0	-21.8	
15.37	-71.4	H	3.0	-11.2	31.5	1.0	-41.8	-25.0	-16.8	
5.10	-64.5	V	3.0	-14.1	36.9	1.0	-49.9	-25.0	-24.9	
7.65	-62.1	V	3.0	-8.4	35.8	1.0	-43.2	-25.0	-18.2	
12.76	-67.0	V	3.0	-9.3	33.5	1.0	-41.7	-25.0	-16.7	

Rev. 05.21.15

9.4.5. LTE BAND 12

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 12, 10MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
1.39	-82.1	H	3.0	-43.3	37.3	1.0	-79.6	-13.0	-66.6	
3.50	-79.3	H	3.0	-31.5	37.6	1.0	-68.1	-13.0	-55.1	
4.94	-76.5	H	3.0	-26.6	36.9	1.0	-62.5	-13.0	-49.5	
5.61	-76.9	H	3.0	-25.9	36.7	1.0	-61.6	-13.0	-48.6	
6.32	-76.6	H	3.0	-24.4	36.6	1.0	-59.9	-13.0	-46.9	
7.07	-76.4	H	3.0	-23.0	36.3	1.0	-58.3	-13.0	-45.3	
2.11	-80.1	V	3.0	-37.1	37.7	1.0	-73.8	-13.0	-60.8	
2.80	-79.0	V	3.0	-33.6	37.7	1.0	-70.4	-13.0	-57.4	
4.23	-76.1	V	3.0	-27.4	37.0	1.0	-63.4	-13.0	-50.4	
Mid Channel (782MHz)										
1.39	-81.5	H	3.0	-42.6	37.3	1.0	-79.0	-13.0	-66.0	
2.16	-79.3	H	3.0	-36.1	37.6	1.0	-72.7	-13.0	-59.7	
3.57	-78.3	H	3.0	-30.4	37.6	1.0	-66.9	-13.0	-53.9	
4.25	-76.4	H	3.0	-27.9	37.0	1.0	-63.9	-13.0	-50.9	
4.98	-76.3	H	3.0	-26.3	36.9	1.0	-62.2	-13.0	-49.2	
5.68	-77.0	H	3.0	-25.9	36.7	1.0	-61.6	-13.0	-48.6	
6.34	-76.7	H	3.0	-24.5	36.6	1.0	-60.1	-13.0	-47.1	
2.82	-78.8	V	3.0	-33.3	37.8	1.0	-70.1	-13.0	-57.1	
7.07	-77.0	V	3.0	-25.4	36.3	1.0	-60.7	-13.0	-47.7	
High Channel (711MHz)										
1.41	-82.1	H	3.0	-43.1	37.4	1.0	-79.5	-13.0	-66.5	
2.11	-80.7	H	3.0	-37.6	37.7	1.0	-74.3	-13.0	-61.3	
3.55	-78.0	H	3.0	-30.1	37.6	1.0	-66.7	-13.0	-53.7	
4.23	-76.2	H	3.0	-27.7	37.0	1.0	-63.7	-13.0	-50.7	
4.96	-76.2	H	3.0	-26.3	36.9	1.0	-62.2	-13.0	-49.2	
5.66	-76.9	H	3.0	-25.8	36.7	1.0	-61.5	-13.0	-48.5	
2.87	-79.3	V	3.0	-33.7	37.9	1.0	-70.6	-13.0	-57.6	
6.41	-76.9	V	3.0	-24.7	36.5	1.0	-60.2	-13.0	-47.2	
7.10	-76.6	V	3.0	-25.7	36.3	1.0	-61.0	-13.0	-48.0	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
1.37	-81.8	H	3.0	-43.0	37.3	1.0	-79.3	-13.0	-66.3	
2.09	-80.7	H	3.0	-37.7	37.7	1.0	-74.4	-13.0	-61.4	
2.80	-78.9	H	3.0	-32.7	37.7	1.0	-69.4	-13.0	-56.4	
6.34	-76.2	H	3.0	-24.0	36.6	1.0	-59.6	-13.0	-46.6	
3.48	-79.1	V	3.0	-31.9	37.7	1.0	-68.6	-13.0	-55.6	
4.23	-75.6	V	3.0	-26.9	37.0	1.0	-62.9	-13.0	-49.9	
4.93	-75.9	V	3.0	-25.8	36.9	1.0	-61.7	-13.0	-48.7	
5.62	-77.2	V	3.0	-26.1	36.7	1.0	-61.8	-13.0	-48.8	
7.04	-77.7	V	3.0	-25.4	36.4	1.0	-60.8	-13.0	-47.8	
Mid Channel (782MHz)										
2.09	-80.3	H	3.0	-37.2	37.7	1.0	-74.0	-13.0	-61.0	
2.85	-79.5	H	3.0	-32.8	37.9	1.0	-69.7	-13.0	-56.7	
3.52	-77.9	H	3.0	-30.1	37.6	1.0	-66.7	-13.0	-53.7	
4.28	-76.5	H	3.0	-27.9	37.0	1.0	-63.9	-13.0	-50.9	
4.94	-76.5	H	3.0	-26.7	36.9	1.0	-62.5	-13.0	-49.5	
5.66	-77.1	H	3.0	-26.0	36.7	1.0	-61.7	-13.0	-48.7	
7.09	-77.2	H	3.0	-23.8	36.3	1.0	-59.1	-13.0	-46.1	
1.43	-82.3	V	3.0	-43.0	37.4	1.0	-79.4	-13.0	-66.4	
6.37	-76.5	V	3.0	-24.3	36.5	1.0	-59.8	-13.0	-46.8	
High Channel (711MHz)										
1.44	-82.1	H	3.0	-43.0	37.5	1.0	-79.5	-13.0	-66.5	
2.82	-79.2	H	3.0	-32.8	37.8	1.0	-69.6	-13.0	-56.6	
4.28	-75.9	H	3.0	-27.3	37.0	1.0	-63.3	-13.0	-50.3	
4.98	-76.1	H	3.0	-26.2	36.9	1.0	-62.0	-13.0	-49.0	
6.37	-76.6	H	3.0	-24.3	36.5	1.0	-59.8	-13.0	-46.8	
7.10	-76.7	H	3.0	-23.3	36.3	1.0	-58.6	-13.0	-45.6	
2.11	-80.2	V	3.0	-37.2	37.7	1.0	-73.9	-13.0	-60.9	
3.55	-77.9	V	3.0	-30.6	37.6	1.0	-67.2	-13.0	-54.2	
5.68	-77.7	V	3.0	-26.5	36.7	1.0	-62.2	-13.0	-49.2	

Rev. 05.21.15

9.4.6. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (710MHz)										
2.87	-78.6	H	3.0	-31.8	37.9	1.0	-68.7	-13.0	-55.7	
3.52	-77.8	H	3.0	-29.9	37.6	1.0	-66.5	-13.0	-53.5	
4.94	-76.5	H	3.0	-26.6	36.9	1.0	-62.5	-13.0	-49.5	
5.68	-77.7	H	3.0	-26.5	36.7	1.0	-62.2	-13.0	-49.2	
6.37	-76.5	H	3.0	-24.2	36.5	1.0	-59.8	-13.0	-46.8	
7.14	-76.7	H	3.0	-23.2	36.3	1.0	-58.5	-13.0	-45.5	
1.41	-81.5	V	3.0	-42.3	37.4	1.0	-78.6	-13.0	-65.6	
2.11	-80.5	V	3.0	-37.4	37.7	1.0	-74.1	-13.0	-61.1	
4.23	-76.3	V	3.0	-27.5	37.0	1.0	-63.6	-13.0	-50.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 17, 10MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (710MHz)										
2.12	-80.3	H	3.0	-37.2	37.7	1.0	-73.9	-13.0	-60.9	
2.84	-78.9	H	3.0	-32.4	37.8	1.0	-69.3	-13.0	-56.3	
4.96	-75.7	H	3.0	-25.8	36.9	1.0	-61.7	-13.0	-48.7	
5.71	-76.7	H	3.0	-25.5	36.7	1.0	-61.2	-13.0	-48.2	
7.07	-76.6	H	3.0	-23.3	36.3	1.0	-58.6	-13.0	-45.6	
1.41	-81.8	V	3.0	-42.5	37.4	1.0	-78.9	-13.0	-65.9	
3.58	-78.1	V	3.0	-30.7	37.5	1.0	-67.2	-13.0	-54.2	
4.25	-76.1	V	3.0	-27.3	37.0	1.0	-63.4	-13.0	-50.4	
6.37	-75.9	V	3.0	-23.7	36.5	1.0	-59.3	-13.0	-46.3	

Rev. 05.21.15

9.4.7. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 25, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
3.70	-63.8	H	3.0	-15.9	37.4	1.0	-52.3	-13.0	-39.3	
5.56	-66.3	H	3.0	-15.4	36.7	1.0	-51.1	-13.0	-38.1	
7.44	-68.5	H	3.0	-14.7	36.0	1.0	-49.7	-13.0	-36.7	
13.02	-71.3	H	3.0	-12.9	33.4	1.0	-45.3	-13.0	-32.3	
16.76	-72.5	H	3.0	-12.2	28.4	1.0	-39.6	-13.0	-26.6	
9.26	-69.9	V	3.0	-14.5	34.3	1.0	-47.8	-13.0	-34.8	
11.13	-70.8	V	3.0	-14.3	33.8	1.0	-47.0	-13.0	-34.0	
14.86	-70.4	V	3.0	-10.5	32.4	1.0	-41.9	-13.0	-28.9	
Mid Channel (1882.5MHz)										
3.75	-64.2	H	3.0	-16.3	37.4	1.0	-52.6	-13.0	-39.6	
5.68	-66.6	H	3.0	-15.5	36.7	1.0	-51.2	-13.0	-38.2	
9.45	-70.7	H	3.0	-14.7	34.2	1.0	-47.9	-13.0	-34.9	
11.32	-71.0	H	3.0	-13.8	33.8	1.0	-46.6	-13.0	-33.6	
15.06	-71.1	H	3.0	-11.0	32.2	1.0	-42.3	-13.0	-29.3	
16.98	-73.2	H	3.0	-12.9	27.9	1.0	-39.8	-13.0	-26.8	
7.53	-66.9	V	3.0	-13.3	35.9	1.0	-48.2	-13.0	-35.2	
13.17	-70.8	V	3.0	-12.6	33.3	1.0	-44.9	-13.0	-31.9	
High Channel (1905MHz)										
3.79	-60.6	H	3.0	-12.6	37.3	1.0	-48.9	-13.0	-35.9	
5.69	-66.9	H	3.0	-15.7	36.7	1.0	-51.4	-13.0	-38.4	
9.50	-69.8	H	3.0	-13.8	34.1	1.0	-46.9	-13.0	-33.9	
11.46	-71.4	H	3.0	-14.1	33.8	1.0	-46.9	-13.0	-33.9	
13.36	-70.8	H	3.0	-12.1	33.2	1.0	-44.3	-13.0	-31.3	
7.60	-68.8	V	3.0	-15.1	35.9	1.0	-50.0	-13.0	-37.0	
15.25	-70.7	V	3.0	-10.5	31.8	1.0	-41.3	-13.0	-28.3	
17.15	-72.9	V	3.0	-12.0	27.5	1.0	-38.5	-13.0	-25.5	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
3.70	-64.1	H	3.0	-16.1	37.4	1.0	-52.5	-13.0	-39.5	
5.59	-66.3	H	3.0	-15.3	36.7	1.0	-51.0	-13.0	-38.0	
14.86	-70.4	H	3.0	-10.5	32.4	1.0	-41.9	-13.0	-28.9	
7.44	-68.3	V	3.0	-14.8	36.0	1.0	-49.8	-13.0	-36.8	
9.31	-70.7	V	3.0	-15.2	34.3	1.0	-48.5	-13.0	-35.5	
11.15	-71.8	V	3.0	-15.2	33.8	1.0	-48.0	-13.0	-35.0	
13.02	-70.9	V	3.0	-12.9	33.4	1.0	-45.3	-13.0	-32.3	
16.71	-72.3	V	3.0	-11.6	28.5	1.0	-39.1	-13.0	-26.1	
Mid Channel (1882.5MHz)										
3.74	-63.5	H	3.0	-15.5	37.4	1.0	-51.9	-13.0	-38.9	
5.64	-65.2	H	3.0	-14.1	36.7	1.0	-49.8	-13.0	-36.8	
11.30	-72.2	H	3.0	-15.0	33.8	1.0	-47.8	-13.0	-34.8	
7.56	-67.4	V	3.0	-13.7	35.9	1.0	-48.6	-13.0	-35.6	
9.45	-70.4	V	3.0	-14.8	34.2	1.0	-48.0	-13.0	-35.0	
13.16	-71.3	V	3.0	-13.2	33.3	1.0	-45.4	-13.0	-32.4	
15.09	-70.9	V	3.0	-10.8	32.2	1.0	-42.0	-13.0	-29.0	
16.93	-73.0	V	3.0	-12.3	28.0	1.0	-39.3	-13.0	-26.3	
High Channel (1905MHz)										
7.60	-67.5	H	3.0	-13.5	35.9	1.0	-48.4	-13.0	-35.4	
17.15	-71.8	H	3.0	-11.4	27.5	1.0	-37.9	-13.0	-24.9	
3.79	-61.0	V	3.0	-13.1	37.3	1.0	-49.4	-13.0	-36.4	
5.69	-66.6	V	3.0	-15.4	36.7	1.0	-51.1	-13.0	-38.1	
9.50	-70.2	V	3.0	-14.6	34.1	1.0	-47.7	-13.0	-34.7	
11.46	-71.7	V	3.0	-15.0	33.8	1.0	-47.8	-13.0	-34.8	
13.36	-71.1	V	3.0	-12.7	33.2	1.0	-44.9	-13.0	-31.9	
15.25	-71.8	V	3.0	-11.6	31.8	1.0	-42.4	-13.0	-29.4	

Rev. 05.21.15

9.4.8. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
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	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
3.24	-78.4	H	3.0	-30.7	37.9	1.0	-67.6	-13.0	-54.6	
7.36	-77.1	H	3.0	-23.4	36.1	1.0	-58.5	-13.0	-45.5	
1.65	-81.5	V	3.0	-40.8	37.7	1.0	-77.6	-13.0	-64.6	
2.46	-79.0	V	3.0	-34.8	37.0	1.0	-70.9	-13.0	-57.9	
4.08	-76.9	V	3.0	-28.4	37.1	1.0	-64.5	-13.0	-51.5	
4.91	-76.5	V	3.0	-26.5	36.9	1.0	-62.4	-13.0	-49.4	
5.71	-77.4	V	3.0	-26.1	36.7	1.0	-61.8	-13.0	-48.8	
6.53	-78.4	V	3.0	-25.9	36.5	1.0	-61.4	-13.0	-48.4	
8.16	-77.3	V	3.0	-23.1	35.3	1.0	-57.4	-13.0	-44.4	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/03/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 26 (90S), 10MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
3.26	-77.6	H	3.0	-29.8	37.9	1.0	-66.7	-13.0	-53.7	
5.71	-77.5	H	3.0	-26.3	36.7	1.0	-62.0	-13.0	-49.0	
1.61	-81.4	V	3.0	-41.0	37.7	1.0	-77.7	-13.0	-64.7	
2.46	-79.0	V	3.0	-34.9	37.0	1.0	-71.0	-13.0	-58.0	
4.09	-76.9	V	3.0	-28.4	37.1	1.0	-64.4	-13.0	-51.4	
4.94	-76.3	V	3.0	-26.2	36.9	1.0	-62.1	-13.0	-49.1	
6.54	-78.3	V	3.0	-25.9	36.5	1.0	-61.4	-13.0	-48.4	
7.34	-76.3	V	3.0	-22.8	36.1	1.0	-57.9	-13.0	-44.9	
8.16	-77.5	V	3.0	-23.2	35.3	1.0	-57.5	-13.0	-44.5	

Rev. 05.21.15

9.4.9. LTE BAND 41

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/04/15
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-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2506MHz)										
3.85	-62.7	H	3.0	-14.7	37.3	1.0	-51.0	-25.0	-26.0	
5.28	-64.7	H	3.0	-14.2	36.8	1.0	-50.0	-25.0	-25.0	
5.00	-64.1	V	3.0	-14.0	36.9	1.0	-49.8	-25.0	-24.8	
7.49	-62.1	V	3.0	-8.5	35.9	1.0	-43.4	-25.0	-18.4	
9.99	-70.5	V	3.0	-14.3	33.7	1.0	-47.0	-25.0	-22.0	
12.56	-71.2	V	3.0	-13.7	33.6	1.0	-46.3	-25.0	-21.3	
Mid Channel (2593MHz)										
10.37	-71.5	H	3.0	-14.8	33.7	1.0	-47.5	-25.0	-22.5	
12.95	-71.6	H	3.0	-13.2	33.4	1.0	-45.6	-25.0	-20.6	
15.54	-71.8	H	3.0	-11.6	31.2	1.0	-41.8	-25.0	-16.8	
5.17	-61.7	V	3.0	-11.2	36.8	1.0	-47.0	-25.0	-22.0	
7.75	-61.4	V	3.0	-7.6	35.7	1.0	-42.3	-25.0	-17.3	
High Channel (2680MHz)										
3.71	-63.4	H	3.0	-15.5	37.4	1.0	-51.9	-25.0	-26.9	
5.51	-64.6	H	3.0	-13.7	36.8	1.0	-49.5	-25.0	-24.5	
3.86	-63.9	V	3.0	-15.9	37.2	1.0	-52.1	-25.0	-27.1	
5.35	-64.8	V	3.0	-14.0	36.8	1.0	-49.8	-25.0	-24.8	
8.02	-62.7	V	3.0	-8.6	35.5	1.0	-43.0	-25.0	-18.0	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/04/15
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2506MHz)										
3.69	-64.0	H	3.0	-16.1	37.4	1.0	-52.5	-25.0	-27.5	
4.60	-63.8	H	3.0	-14.6	37.0	1.0	-50.5	-25.0	-25.5	
6.47	-64.5	V	3.0	-12.2	36.5	1.0	-47.7	-25.0	-22.7	
5.00	-64.1	V	3.0	-13.9	36.9	1.0	-49.8	-25.0	-24.8	
7.49	-63.3	V	3.0	-9.7	35.9	1.0	-44.6	-25.0	-19.6	
9.99	-70.3	V	3.0	-14.2	33.7	1.0	-46.8	-25.0	-21.8	
Mid Channel (2593MHz)										
5.19	-62.3	H	3.0	-12.0	36.8	1.0	-47.8	-25.0	-22.8	
5.17	-60.8	V	3.0	-10.3	36.8	1.0	-46.1	-25.0	-21.1	
7.75	-62.5	V	3.0	-8.6	35.7	1.0	-43.4	-25.0	-18.4	
10.37	-71.1	V	3.0	-14.8	33.7	1.0	-47.5	-25.0	-22.5	
13.00	-70.5	V	3.0	-12.6	33.4	1.0	-44.9	-25.0	-19.9	
15.57	-71.8	V	3.0	-11.5	31.1	1.0	-41.6	-25.0	-16.6	
High Channel (2680MHz)										
3.72	-63.2	H	3.0	-15.2	37.4	1.0	-51.6	-25.0	-26.6	
6.31	-63.9	H	3.0	-11.7	36.6	1.0	-47.3	-25.0	-22.3	
3.69	-63.5	V	3.0	-15.8	37.4	1.0	-52.3	-25.0	-27.3	
5.35	-63.6	V	3.0	-12.8	36.8	1.0	-48.6	-25.0	-23.6	
8.02	-63.1	V	3.0	-9.0	35.5	1.0	-43.4	-25.0	-18.4	

Rev. 05.21.15

9.5. FIELD STRENGTH OF SPURIOUS RADIATION, UAT

9.5.1. LTE BAND 2

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 4, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 2, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
5.59	-65.2	H	3.0	-14.2	36.7	1.0	-49.9	-13.0	-36.9	
3.72	-64.8	V	3.0	-17.1	37.4	1.0	-53.5	-13.0	-40.5	
Mid Channel (1880MHz)										
5.68	-65.3	H	3.0	-14.2	36.7	1.0	-49.9	-13.0	-36.9	
3.77	-65.3	V	3.0	-17.5	37.3	1.0	-53.8	-13.0	-40.8	
High Channel (1900MHz)										
5.68	-64.2	H	3.0	-13.1	36.7	1.0	-48.8	-13.0	-35.8	
3.77	-65.3	V	3.0	-17.5	37.3	1.0	-53.8	-13.0	-40.8	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 4, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 2, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
5.59	-64.6	H	3.0	-13.6	36.7	1.0	-49.3	-13.0	-36.3	
3.69	-64.6	V	3.0	-16.9	37.4	1.0	-53.3	-13.0	-40.3	
Mid Channel (1880MHz)										
3.79	-64.9	H	3.0	-17.0	37.3	1.0	-53.3	-13.0	-40.3	
5.61	-64.6	V	3.0	-13.5	36.7	1.0	-49.2	-13.0	-36.2	
High Channel (1900MHz)										
3.77	-65.0	H	3.0	-17.1	37.3	1.0	-53.4	-13.0	-40.4	
5.68	-64.9	V	3.0	-13.7	36.7	1.0	-49.4	-13.0	-36.4	

Rev. 05.21.15

9.5.2. LTE BAND 4

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 4, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 4, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	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)										
3.47	-66.7	H	3.0	-18.8	36.4	1.0	-54.2	-13.0	-41.2	
5.13	-67.2	H	3.0	-17.0	36.3	1.0	-52.3	-13.0	-39.3	
3.47	-67.1	V	3.0	-19.9	36.4	1.0	-55.3	-13.0	-42.3	
5.13	-69.0	V	3.0	-18.6	36.3	1.0	-53.8	-13.0	-40.8	
Mid Channel (1732.5MHz)										
3.43	-66.1	H	3.0	-18.3	36.4	1.0	-53.7	-13.0	-40.7	
5.17	-66.9	H	3.0	-16.6	36.3	1.0	-51.9	-13.0	-38.9	
3.43	-65.3	V	3.0	-18.2	36.4	1.0	-53.6	-13.0	-40.6	
5.17	-66.6	V	3.0	-16.1	36.3	1.0	-51.4	-13.0	-38.4	
High Channel (1745MHz)										
3.52	-67.2	H	3.0	-19.3	36.4	1.0	-54.7	-13.0	-41.7	
5.25	-68.3	H	3.0	-17.8	36.3	1.0	-53.1	-13.0	-40.1	
3.50	-66.1	V	3.0	-18.9	36.4	1.0	-54.3	-13.0	-41.3	
5.22	-67.6	V	3.0	-17.0	36.3	1.0	-52.3	-13.0	-39.3	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 4, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 4, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
5.13	-67.4	H	3.0	-17.2	36.8	1.0	-53.0	-13.0	-40.0	
3.43	-66.2	V	3.0	-19.1	37.7	1.0	-55.9	-13.0	-42.9	
Mid Channel (1732.5MHz)										
5.17	-66.9	H	3.0	-16.6	36.8	1.0	-52.5	-13.0	-39.5	
3.43	-66.3	V	3.0	-19.2	37.7	1.0	-55.9	-13.0	-42.9	
High Channel (1745MHz)										
3.50	-66.8	H	3.0	-18.9	37.6	1.0	-55.6	-13.0	-42.6	
5.27	-67.2	H	3.0	-16.7	36.8	1.0	-52.5	-13.0	-39.5	
3.51	-68.2	V	3.0	-20.9	37.6	1.0	-57.6	-13.0	-44.6	
5.29	-68.5	V	3.0	-17.8	36.8	1.0	-53.6	-13.0	-40.6	
		V								
		V								
		V								

Rev. 05.21.15

9.5.3. LTE BAND 5

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/04/15
Test Engineer: W Chie
Configuration: EUT only
Mode: LTE Band 5, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (834MHz)										
1.63	-80.8	H	3.0	-40.6	37.7	1.0	-77.3	-13.0	-64.3	
4.15	-78.8	H	3.0	-30.5	37.1	1.0	-66.5	-13.0	-53.5	
5.01	-77.9	H	3.0	-27.9	36.9	1.0	-63.8	-13.0	-50.8	
5.83	-78.6	H	3.0	-27.2	36.7	1.0	-62.9	-13.0	-49.9	
7.49	-78.5	H	3.0	-24.7	35.9	1.0	-59.6	-13.0	-46.6	
8.26	-78.1	H	3.0	-23.5	35.3	1.0	-57.7	-13.0	-44.7	
2.51	-79.1	V	3.0	-34.9	37.1	1.0	-71.0	-13.0	-58.0	
3.30	-77.9	V	3.0	-31.1	37.9	1.0	-68.0	-13.0	-55.0	
6.64	-78.6	V	3.0	-26.0	36.5	1.0	-61.5	-13.0	-48.5	
Mid Channel (836.5MHz)										
2.50	-78.3	H	3.0	-34.2	37.1	1.0	-70.3	-13.0	-57.3	
3.31	-78.8	H	3.0	-31.0	37.8	1.0	-67.9	-13.0	-54.9	
4.20	-75.3	H	3.0	-26.9	37.0	1.0	-62.9	-13.0	-49.9	
5.86	-77.8	H	3.0	-26.4	36.7	1.0	-62.0	-13.0	-49.0	
7.56	-77.5	H	3.0	-23.6	35.9	1.0	-58.5	-13.0	-45.5	
8.36	-78.1	H	3.0	-23.3	35.2	1.0	-57.5	-13.0	-44.5	
1.66	-80.9	V	3.0	-40.2	37.7	1.0	-76.9	-13.0	-63.9	
5.05	-75.8	V	3.0	-25.5	36.9	1.0	-61.4	-13.0	-48.4	
6.73	-78.6	V	3.0	-25.9	36.5	1.0	-61.3	-13.0	-48.3	
High Channel (839MHz)										
1.70	-81.6	H	3.0	-40.8	37.8	1.0	-77.6	-13.0	-64.6	
4.25	-79.2	H	3.0	-30.7	37.0	1.0	-66.7	-13.0	-53.7	
6.78	-78.2	H	3.0	-25.3	36.4	1.0	-60.7	-13.0	-47.7	
7.58	-77.4	H	3.0	-23.5	35.9	1.0	-58.4	-13.0	-45.4	
2.51	-78.8	V	3.0	-34.6	37.1	1.0	-70.7	-13.0	-57.7	
3.40	-78.7	V	3.0	-31.7	37.8	1.0	-68.5	-13.0	-55.5	
5.03	-77.3	V	3.0	-27.1	36.9	1.0	-62.9	-13.0	-49.9	
5.90	-77.3	V	3.0	-25.7	36.7	1.0	-61.4	-13.0	-48.4	
8.43	-77.1	V	3.0	-22.5	35.1	1.0	-56.6	-13.0	-43.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/04/15
Test Engineer: W Chie
Configuration: EUT only
Mode: LTE Band 5, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (834MHz)										
3.33	-78.5	H	3.0	-30.7	37.8	1.0	-67.5	-13.0	-54.5	
4.18	-77.7	H	3.0	-29.3	37.0	1.0	-65.3	-13.0	-52.3	
5.79	-77.5	H	3.0	-26.2	36.7	1.0	-61.9	-13.0	-48.9	
8.26	-77.3	H	3.0	-22.7	35.3	1.0	-56.9	-13.0	-43.9	
1.66	-81.7	V	3.0	-41.0	37.7	1.0	-77.7	-13.0	-64.7	
2.48	-79.2	V	3.0	-35.1	37.1	1.0	-71.2	-13.0	-58.2	
5.01	-76.2	V	3.0	-26.0	36.9	1.0	-61.9	-13.0	-48.9	
6.66	-78.3	V	3.0	-25.6	36.5	1.0	-61.1	-13.0	-48.1	
7.48	-77.4	V	3.0	-23.8	36.0	1.0	-58.8	-13.0	-45.8	
Mid Channel (836.5MHz)										
3.31	-78.3	H	3.0	-30.5	37.8	1.0	-67.3	-13.0	-54.3	
4.21	-76.9	H	3.0	-28.4	37.0	1.0	-64.5	-13.0	-51.5	
5.00	-77.0	H	3.0	-27.0	36.9	1.0	-62.9	-13.0	-49.9	
5.86	-77.2	H	3.0	-25.7	36.7	1.0	-61.4	-13.0	-48.4	
6.73	-78.0	H	3.0	-25.2	36.5	1.0	-60.6	-13.0	-47.6	
1.65	-80.9	V	3.0	-40.3	37.7	1.0	-77.1	-13.0	-64.1	
2.51	-78.6	V	3.0	-34.4	37.1	1.0	-70.5	-13.0	-57.5	
7.51	-77.9	V	3.0	-24.3	35.9	1.0	-59.2	-13.0	-46.2	
8.36	-77.7	V	3.0	-23.2	35.2	1.0	-57.3	-13.0	-44.3	
High Channel (839MHz)										
2.51	-79.2	H	3.0	-35.0	37.1	1.0	-71.1	-13.0	-58.1	
3.35	-78.5	H	3.0	-30.7	37.8	1.0	-67.5	-13.0	-54.5	
4.21	-75.9	H	3.0	-27.5	37.0	1.0	-63.5	-13.0	-50.5	
5.06	-76.8	H	3.0	-26.7	36.9	1.0	-62.6	-13.0	-49.6	
6.78	-78.2	H	3.0	-25.3	36.4	1.0	-60.8	-13.0	-47.8	
8.41	-77.3	H	3.0	-22.5	35.1	1.0	-56.6	-13.0	-43.6	
1.66	-81.8	V	3.0	-41.0	37.7	1.0	-77.8	-13.0	-64.8	
5.90	-76.2	V	3.0	-24.7	36.7	1.0	-60.4	-13.0	-47.4	
7.60	-77.5	V	3.0	-23.8	35.9	1.0	-58.6	-13.0	-45.6	

Rev. 05.21.15

9.5.4. LTE BAND 7

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: 09/08/15
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 7, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
5.05	-67.8	H	3.0	-17.7	36.9	1.0	-53.6	-25.0	-28.6	
7.51	-65.3	H	3.0	-11.5	35.9	1.0	-46.4	-25.0	-21.4	
5.05	-67.0	V	3.0	-16.7	36.9	1.0	-52.6	-25.0	-27.6	
7.51	-64.1	V	3.0	-10.5	35.9	1.0	-45.5	-25.0	-20.5	
Mid Channel (2535MHz)										
5.08	-67.5	H	3.0	-17.4	36.9	1.0	-53.2	-25.0	-28.2	
7.58	-62.1	H	3.0	-8.2	35.9	1.0	-43.1	-25.0	-18.1	
5.08	-66.1	V	3.0	-15.7	36.9	1.0	-51.6	-25.0	-26.6	
7.58	-61.8	V	3.0	-8.1	35.9	1.0	-42.9	-25.0	-17.9	
High Channel (2560MHz)										
5.10	-67.8	H	3.0	-17.6	36.9	1.0	-53.5	-25.0	-28.5	
7.65	-65.3	H	3.0	-11.3	35.8	1.0	-46.1	-25.0	-21.1	
5.10	-66.9	V	3.0	-16.5	36.9	1.0	-52.4	-25.0	-27.4	
7.65	-64.8	V	3.0	-11.1	35.8	1.0	-45.9	-25.0	-20.9	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 7, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2510MHz)										
5.05	-67.3	H	3.0	-17.2	36.9	1.0	-53.1	-25.0	-28.1	
7.51	-65.9	H	3.0	-12.1	35.9	1.0	-47.0	-25.0	-22.0	
5.05	-66.2	V	3.0	-15.9	36.9	1.0	-51.8	-25.0	-26.8	
7.51	-65.4	V	3.0	-11.8	35.9	1.0	-46.7	-25.0	-21.7	
Mid Channel (2535MHz)										
5.05	-66.3	H	3.0	-16.2	36.9	1.0	-52.1	-25.0	-27.1	
7.58	-64.5	H	3.0	-10.6	35.9	1.0	-45.5	-25.0	-20.5	
5.05	-65.9	V	3.0	-15.6	36.9	1.0	-51.5	-25.0	-26.5	
7.58	-62.4	V	3.0	-8.7	35.9	1.0	-43.6	-25.0	-18.6	
High Channel (2560MHz)										
5.11	-67.1	H	3.0	-16.9	36.8	1.0	-52.7	-25.0	-27.7	
7.65	-66.9	H	3.0	-12.9	35.8	1.0	-47.7	-25.0	-22.7	
5.11	-66.6	V	3.0	-16.2	36.8	1.0	-52.1	-25.0	-27.1	
7.65	-66.3	V	3.0	-12.6	35.8	1.0	-47.4	-25.0	-22.4	

Rev. 05.21.15

9.5.5. LTE BAND 12

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 12, 10MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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	-82.1	H	3.0	-43.2	37.4	1.0	-79.5	-13.0	-66.5	
2.14	-80.9	H	3.0	-37.7	37.6	1.0	-74.3	-13.0	-61.3	
1.41	-81.6	V	3.0	-42.3	37.4	1.0	-78.7	-13.0	-65.7	
2.14	-80.3	V	3.0	-37.2	37.6	1.0	-73.8	-13.0	-60.8	
Mid Channel (782MHz)										
2.09	-80.3	H	3.0	-37.3	37.7	1.0	-74.0	-13.0	-61.0	
1.39	-82.2	V	3.0	-43.0	37.3	1.0	-79.3	-13.0	-66.3	
High Channel (711MHz)										
1.46	-82.5	H	3.0	-43.3	37.5	1.0	-79.9	-13.0	-66.9	
2.14	-81.3	H	3.0	-38.1	37.6	1.0	-74.7	-13.0	-61.7	
1.46	-81.9	V	3.0	-42.3	37.5	1.0	-78.8	-13.0	-65.8	
2.14	-80.0	V	3.0	-36.9	37.6	1.0	-73.5	-13.0	-60.5	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 12, 10MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
1.43	-82.3	H	3.0	-43.3	37.4	1.0	-79.7	-13.0	-66.7	
2.14	-80.6	H	3.0	-37.4	37.6	1.0	-74.0	-13.0	-61.0	
1.43	-81.9	V	3.0	-42.6	37.4	1.0	-79.0	-13.0	-66.0	
2.14	-80.1	V	3.0	-37.0	37.6	1.0	-73.6	-13.0	-60.6	
Mid Channel (782MHz)										
1.39	-82.1	H	3.0	-43.3	37.3	1.0	-79.6	-13.0	-66.6	
2.14	-80.6	V	3.0	-37.4	37.6	1.0	-74.1	-13.0	-61.1	
High Channel (711MHz)										
2.16	-79.6	H	3.0	-36.4	37.6	1.0	-73.0	-13.0	-60.0	
1.43	-82.2	V	3.0	-42.8	37.4	1.0	-79.3	-13.0	-66.3	

Rev. 05.21.15

9.5.6. LTE BAND 17

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 17, 10MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (710MHz)										
1.43	-82.3	H	3.0	-43.3	37.4	1.0	-79.7	-13.0	-66.7	
2.11	-81.0	H	3.0	-37.9	37.7	1.0	-74.6	-13.0	-61.6	
1.43	-81.2	V	3.0	-41.8	37.4	1.0	-78.3	-13.0	-65.3	
2.11	-79.9	V	3.0	-36.9	37.7	1.0	-73.6	-13.0	-60.6	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 17, 10MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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 (710MHz)										
2.14	-80.1	H	3.0	-36.9	37.6	1.0	-73.6	-13.0	-60.6	
1.39	-82.1	V	3.0	-43.0	37.3	1.0	-79.3	-13.0	-66.3	

Rev. 05.21.15

9.5.7. LTE BAND 25

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 25, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
3.69	-65.0	H	3.0	-17.0	37.4	1.0	-53.4	-13.0	-40.4	
5.61	-65.7	H	3.0	-14.7	36.7	1.0	-50.4	-13.0	-37.4	
3.69	-65.3	V	3.0	-17.6	37.4	1.0	-54.1	-13.0	-41.1	
5.61	-66.8	V	3.0	-15.7	36.7	1.0	-51.4	-13.0	-38.4	
Mid Channel (1882.5MHz)										
3.79	-65.1	H	3.0	-17.1	37.3	1.0	-53.4	-13.0	-40.4	
5.62	-66.4	H	3.0	-15.3	36.7	1.0	-51.1	-13.0	-38.1	
3.79	-66.5	V	3.0	-18.6	37.3	1.0	-54.9	-13.0	-41.9	
5.62	-66.1	V	3.0	-15.0	36.7	1.0	-50.7	-13.0	-37.7	
High Channel (1905MHz)										
5.69	-65.9	H	3.0	-14.8	36.7	1.0	-50.5	-13.0	-37.5	
3.81	-64.9	V	3.0	-17.0	37.3	1.0	-53.3	-13.0	-40.3	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
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 H	3m Chamber H	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	-64.4	H	3.0	-16.5	37.4	1.0	-52.9	-13.0	-39.9	
5.61	-66.2	H	3.0	-15.2	36.7	1.0	-50.9	-13.0	-37.9	
3.72	-65.2	V	3.0	-17.5	37.4	1.0	-53.9	-13.0	-40.9	
5.61	-66.9	V	3.0	-15.8	36.7	1.0	-51.5	-13.0	-38.5	
Mid Channel (1882.5MHz)										
3.75	-64.8	H	3.0	-16.8	37.4	1.0	-53.2	-13.0	-40.2	
5.66	-66.0	H	3.0	-14.9	36.7	1.0	-50.6	-13.0	-37.6	
3.75	-65.2	V	3.0	-17.4	37.4	1.0	-53.8	-13.0	-40.8	
5.66	-66.9	V	3.0	-15.7	36.7	1.0	-51.4	-13.0	-38.4	
High Channel (1905MHz)										
3.84	-65.1	H	3.0	-17.1	37.3	1.0	-53.4	-13.0	-40.4	
5.66	-66.8	H	3.0	-15.7	36.7	1.0	-51.4	-13.0	-38.4	
5.71	-66.5	V	3.0	-15.2	36.7	1.0	-50.9	-13.0	-37.9	
3.84	-64.5	V	3.0	-16.5	37.3	1.0	-52.8	-13.0	-39.8	

Rev. 05.21.15

9.5.8. LTE BAND 26

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 26 (90S), 10MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
1.65	-81.6	H	3.0	-41.2	37.7	1.0	-77.9	-13.0	-64.9	
2.46	-78.8	V	3.0	-34.7	37.0	1.0	-70.7	-13.0	-57.7	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 8, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 26 (90S), 10MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	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)										
1.63	-81.6	H	3.0	-41.3	37.7	1.0	-78.1	-13.0	-65.1	
2.45	-75.0	H	3.0	-31.1	37.0	1.0	-67.1	-13.0	-54.1	
1.63	-81.4	V	3.0	-40.9	37.7	1.0	-77.6	-13.0	-64.6	
2.45	-74.5	V	3.0	-30.4	37.0	1.0	-66.4	-13.0	-53.4	

Rev. 05.21.15

9.5.9. LTE BAND 41

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 9, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 41, 20MHz QPSK

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2506MHz)										
5.05	-68.2	H	3.0	-18.1	36.9	1.0	-54.0	-25.0	-29.0	
7.49	-64.2	H	3.0	-10.4	35.9	1.0	-45.3	-25.0	-20.3	
5.05	-67.1	V	3.0	-16.9	36.9	1.0	-52.7	-25.0	-27.7	
7.49	-63.8	V	3.0	-10.2	35.9	1.0	-45.2	-25.0	-20.2	
Mid Channel (2593MHz)										
5.17	-64.2	H	3.0	-13.9	36.8	1.0	-49.7	-25.0	-24.7	
7.75	-63.9	H	3.0	-9.8	35.7	1.0	-44.5	-25.0	-19.5	
5.17	-63.6	V	3.0	-13.1	36.8	1.0	-49.0	-25.0	-24.0	
7.75	-63.4	V	3.0	-9.5	35.7	1.0	-44.3	-25.0	-19.3	
High Channel (2680MHz)										
5.34	-64.9	H	3.0	-14.3	36.8	1.0	-50.1	-25.0	-25.1	
8.02	-61.2	H	3.0	-6.8	35.5	1.0	-41.3	-25.0	-16.3	
5.34	-64.5	V	3.0	-13.8	36.8	1.0	-49.6	-25.0	-24.6	
8.02	-60.9	V	3.0	-6.8	35.5	1.0	-41.3	-25.0	-16.3	

Rev. 05.21.15

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber

Company:
Project #: 15U21635
Date: Sept. 9, 2015
Test Engineer: W. Chie
Configuration: EUT Only
Mode: LTE Band 41, 20MHz 16QAM

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

Chamber	Pre-amplifer	Filter	Limit
3m Chamber H	3m Chamber H	Filter	LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel (2506MHz)										
5.00	-66.1	H	3.0	-16.1	36.9	1.0	-52.0	-25.0	-27.0	
7.46	-66.2	H	3.0	-12.4	36.0	1.0	-47.4	-25.0	-22.4	
5.00	-65.7	V	3.0	-15.5	36.9	1.0	-51.4	-25.0	-26.4	
7.46	-65.6	V	3.0	-12.1	36.0	1.0	-47.0	-25.0	-22.0	
Mid Channel (2593MHz)										
5.17	-63.5	H	3.0	-13.2	36.8	1.0	-49.0	-25.0	-24.0	
7.75	-62.1	H	3.0	-8.0	35.7	1.0	-42.7	-25.0	-17.7	
5.17	-63.0	V	3.0	-12.5	36.8	1.0	-48.4	-25.0	-23.4	
7.75	-61.7	V	3.0	-7.9	35.7	1.0	-42.6	-25.0	-17.6	
High Channel (2680MHz)										
5.34	-66.9	H	3.0	-16.3	36.8	1.0	-52.1	-25.0	-27.1	
8.02	-60.5	H	3.0	-6.1	35.5	1.0	-40.6	-25.0	-15.6	
5.34	-66.1	V	3.0	-15.3	36.8	1.0	-51.1	-25.0	-26.1	
8.02	-59.4	V	3.0	-5.3	35.5	1.0	-39.7	-25.0	-14.7	

Rev. 05.21.15