

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 QPSK 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.8575	11.7	V	0.98	8.04	18.75	33.0	-14.2									
1.8575	13.1	H	0.98	8.04	20.19	33.0	-12.8									
Mid Ch																
1.8825	11.7	V	0.98	8.03	18.72	33.0	-14.3									
1.8825	13.3	H	0.98	8.03	20.36	33.0	-12.6									
High Ch																
1.9075	12.0	V	0.98	8.04	19.06	33.0	-13.9									
1.9075	13.3	H	0.98	8.04	20.35	33.0	-12.6									
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 #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 16QAM 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.8575	10.7	V	0.98	8.04	17.75	33.0	-15.2									
1.8575	12.1	H	0.98	8.04	19.19	33.0	-13.8									
Mid Ch																
1.8825	10.3	V	0.98	8.03	17.32	33.0	-15.7									
1.8825	12.2	H	0.98	8.03	19.26	33.0	-13.7									
High Ch																
1.9075	10.6	V	0.98	8.04	17.66	33.0	-15.3									
1.9075	12.1	H	0.98	8.04	19.15	33.0	-13.8									
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 #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 QPSK 20MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.860	12.2	V	0.98	8.04	19.25	33.0	-13.7									
1.860	13.1	H	0.98	8.04	20.19	33.0	-12.8									
Mid Ch																
1.8825	12.2	V	0.98	8.03	19.22	33.0	-13.8									
1.8825	13.1	H	0.98	8.03	20.16	33.0	-12.8									
High Ch																
1.905	12.4	V	0.98	8.04	19.46	33.0	-13.5									
1.905	13.5	H	0.98	8.04	20.55	33.0	-12.5									
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 #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 16QAM 20MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.860	11.6	V	0.98	8.04	18.65	33.0	-14.3									
1.860	12.1	H	0.98	8.04	19.19	33.0	-13.8									
Mid Ch																
1.8825	11.4	V	0.98	8.03	18.42	33.0	-14.6									
1.8825	12.0	H	0.98	8.03	19.06	33.0	-13.9									
High Ch																
1.905	11.7	V	0.98	8.04	18.76	33.0	-14.2									
1.905	12.6	H	0.98	8.04	19.65	33.0	-13.4									
Rev. 10.24.13																

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20164																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 26 QPSK 1.4MHz BW																			
<u>Test Equipment:</u>																				
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	17.33	V	0.62	0.0	16.71	18.86	38.45	40.60	-21.7											
814.70	-5.97	H	0.62	0.0	-6.59	-4.44	38.45	40.60	-45.0											
Mid Ch																				
819.00	17.86	V	0.62	0.0	17.24	19.39	38.45	40.60	-21.2											
819.00	-5.77	H	0.62	0.0	-6.39	-4.24	38.45	40.60	-44.8											
High Ch																				
823.30	17.44	V	0.62	0.0	16.82	18.97	38.45	40.60	-21.6											
823.30	-5.62	H	0.62	0.0	-6.24	-4.09	38.45	40.60	-44.7											

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 #:	15U20164																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
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)		Limit (dBm)	Margin EIRP (dB)	Notes										
Low Ch																				
814.70	16.63	V	0.62	0.0	16.01	18.16		38.5	-20.3											
814.70	-6.77	H	0.62	0.0	-7.39	-5.24		38.5	-43.7											
Mid Ch																				
819.00	17.06	V	0.62	0.0	16.44	18.59		38.5	-19.9											
819.00	-6.77	H	0.62	0.0	-7.39	-5.24		38.5	-43.7											
High Ch																				
823.30	17.04	V	0.62	0.0	16.42	18.57		38.5	-19.9											
823.30	-6.12	H	0.62	0.0	-6.74	-4.59		38.5	-43.0											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20164																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
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	17.93	V	0.62	0.0	17.31	19.46	38.45	40.60	-21.1											
815.50	-5.87	H	0.62	0.0	-6.49	-4.34	38.45	40.60	-44.9											
Mid Ch																				
819.00	17.36	V	0.62	0.0	16.74	18.89	38.45	40.60	-21.7											
819.00	-5.77	H	0.62	0.0	-6.39	-4.24	38.45	40.60	-44.8											
High Ch																				
822.50	17.54	V	0.62	0.0	16.92	19.07	38.45	40.60	-21.5											
822.50	-5.82	H	0.62	0.0	-6.44	-4.29	38.45	40.60	-44.9											

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 #:	15U20164																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 26 QPSK 3MHz 16QAM																			
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)		Limit (dBm)	Margin EIRP (dB)	Notes										
Low Ch																				
815.50	16.28	V	0.62	0.0	15.66	17.81		38.5	-20.6											
815.50	-6.74	H	0.62	0.0	-7.36	-5.21		38.5	-43.7											
Mid Ch																				
819.00	16.58	V	0.62	0.0	15.96	18.11		38.5	-20.3											
819.00	-6.47	H	0.62	0.0	-7.09	-4.94		38.5	-43.4											
High Ch																				
822.50	16.63	V	0.62	0.0	16.01	18.16		38.5	-20.3											
822.50	-5.30	H	0.62	0.0	-5.92	-3.77		38.5	-42.2											

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 #:	15U20164																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 26 QPSK 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																				
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes										
Low Ch																				
816.50	17.83	V	0.62	0.0	17.21	19.36	38.45	40.60	-21.2											
816.50	-5.97	H	0.62	0.0	-6.59	-4.44	38.45	40.60	-45.0											
Mid Ch																				
819.00	17.46	V	0.62	0.0	16.84	18.99	38.45	40.60	-21.6											
819.00	-6.07	H	0.62	0.0	-6.69	-4.54	38.45	40.60	-45.1											
High Ch																				
821.50	17.84	V	0.62	0.0	17.22	19.37	38.45	40.60	-21.2											
821.50	-5.62	H	0.62	0.0	-6.24	-4.09	38.45	40.60	-44.7											
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 #:	15U20164																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
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	16.63	V	0.62	0.0	16.01	18.16	38.45	40.60	-22.4											
816.50	-6.37	H	0.62	0.0	-6.99	-4.84	38.45	40.60	-45.4											
Mid Ch																				
819.00	16.46	V	0.62	0.0	15.84	17.99	38.45	40.60	-22.6											
819.00	-6.37	H	0.62	0.0	-6.99	-4.84	38.45	40.60	-45.4											
High Ch																				
821.50	16.54	V	0.62	0.0	15.92	18.07	38.45	40.60	-22.5											
821.50	-5.62	H	0.62	0.0	-6.24	-4.09	38.45	40.60	-44.7											

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 #: 15U20164 Date: 6/13/2015 Test Engineer: E. Lee 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 Margin (dBm)	EIRP (dB)	Notes
Mid Ch										
819.00	17.11	V	0.62	0.0	16.49	18.64	38.45	40.60	-22.0	
819.00	4.34	H	0.62	0.0	4.96	-2.81	38.45	40.60	-43.4	

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 #:	15U20164									
Date:	6/13/2015									
Test Engineer:	E. Lee									
Configuration:	EUT only									
Mode:	LTE Band 26 16QAM 10MHz BW									
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole S/N: 00022117, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)										
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Mid Ch										
819.00	16.03	V	0.62	0.0	15.41	17.56	38.45	40.60	-23.0	
819.00	-5.57	H	0.62	0.0	.6.19	4.04	38.45	40.60	-44.6	
Rev. 10.24.13										

10.2.10. LTE BAND 30**QPSK EIRP POWER FOR LTE BAND 30 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20164 Date: 6/9/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 30 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.3075	10.4	V	1.15	9.37	18.64	24.0	-5.4	
2.3075	10.6	H	1.15	9.37	18.86	24.0	-5.1	
Mid Ch								
2.310	10.4	V	1.16	9.37	18.57	24.0	-5.4	
2.310	10.8	H	1.16	9.37	18.97	24.0	-5.0	
High Ch								
2.3125	10.2	V	1.17	9.37	18.40	24.0	-5.6	
2.3125	10.7	H	1.17	9.37	18.87	24.0	-5.1	
Rev. 04.24.15								

16QAM EIRP POWER FOR LTE BAND 30 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 30 16QAM 5MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.308	9.5	V	1.15	9.37	17.74	24.0	-6.3									
2.308	9.6	H	1.15	9.37	17.86	24.0	-6.1									
Mid Ch																
2.310	9.5	V	1.16	9.37	17.67	24.0	-6.3									
2.310	9.7	H	1.16	9.37	17.87	24.0	-6.1									
High Ch																
2.313	9.3	V	1.17	9.37	17.50	24.0	-6.5									
2.313	9.6	H	1.17	9.37	17.77	24.0	-6.2									
Rev. 04.24.15																

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 30 QPSK 10MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
2.310	10.6	V	1.15	9.37	18.78	24.0	-5.2									
2.310	10.8	H	1.15	9.37	18.98	24.0	-5.0									

Rev. 04.24.15

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 30 16QAM 10MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
2.310	9.6	V	1.15	9.37	17.78	24.0	-6.2									
2.310	9.8	H	1.15	9.37	17.98	24.0	-6.0									

Rev. 04.24.15

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
<u>Company:</u>								
Project #:	15U20164							
Date:	6/8/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 41 QPSK 5MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCCOFLEX 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	21.2	V	1.15	9.33	29.33	33.0	-3.7	
2.499	15.9	H	1.15	9.33	24.09	33.0	-8.9	
Mid Ch								
2.593	20.5	V	1.16	9.47	28.81	33.0	-4.2	
2.593	15.8	H	1.16	9.47	24.12	33.0	-8.9	
High Ch								
2.688	19.8	V	1.17	9.78	28.41	33.0	-4.6	
2.688	16.1	H	1.17	9.78	24.75	33.0	-8.2	
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 #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 16QAM 5MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.499	20.2	V	1.15	9.33	28.33	33.0	4.7									
2.499	14.9	H	1.15	9.33	23.09	33.0	9.9									
Mid Ch																
2.593	19.6	V	1.16	9.47	27.91	33.0	-5.1									
2.593	14.7	H	1.16	9.47	23.02	33.0	-10.0									
High Ch																
2.688	18.8	V	1.17	9.78	27.41	33.0	-5.6									
2.688	15.0	H	1.17	9.78	23.65	33.0	-9.3									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/8/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 QPSK 10MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.501	21.4	V	1.15	9.33	29.53	33.0	-3.5									
2.501	15.5	H	1.15	9.33	23.69	33.0	9.3									
Mid Ch																
2.593	20.6	V	1.16	9.47	28.91	33.0	-4.1									
2.593	16.3	H	1.16	9.47	24.62	33.0	8.4									
High Ch																
2.685	19.7	V	1.17	9.77	28.30	33.0	-4.7									
2.685	14.5	H	1.17	9.77	23.14	33.0	9.9									

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 #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 16QAM 10MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.501	20.5	V	1.15	9.33	28.63	33.0	-4.4									
2.501	14.5	H	1.15	9.33	22.69	33.0	-10.3									
Mid Ch																
2.593	19.7	V	1.16	9.47	28.01	33.0	-5.0									
2.593	15.4	H	1.16	9.47	23.72	33.0	-9.3									
High Ch																
2.685	19.1	V	1.17	9.77	27.70	33.0	-5.3									
2.685	13.8	H	1.17	9.77	22.44	33.0	-10.6									
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 #: 15U20164 Date: 6/8/2015 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 T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	22.0	V	1.15	9.34	30.14	33.0	-2.9	
2.504	15.8	H	1.15	9.34	24.00	33.0	-9.0	
Mid Ch								
2.593	21.3	V	1.16	9.47	29.61	33.0	-3.4	
2.593	14.9	H	1.16	9.47	23.22	33.0	-9.8	
High Ch								
2.683	20.1	V	1.17	9.76	28.69	33.0	-4.3	
2.683	14.5	H	1.17	9.76	23.13	33.0	-9.9	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 16QAM 15MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.504	20.9	V	1.15	9.34	29.04	33.0	-4.0									
2.504	14.8	H	1.15	9.34	23.00	33.0	-10.0									
Mid Ch																
2.593	20.4	V	1.16	9.47	28.71	33.0	-4.3									
2.593	14.2	H	1.16	9.47	22.52	33.0	-10.5									
High Ch																
2.683	19.2	V	1.17	9.76	27.79	33.0	-5.2									
2.683	13.8	H	1.17	9.76	22.43	33.0	-10.6									
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 #: 15U20164								
Date: 6/9/2015								
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 T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.506	22.1	V	1.15	9.34	30.24	33.0	-2.8	
2.506	16.4	H	1.15	9.34	24.60	33.0	-8.4	
Mid Ch								
2.593	21.8	V	1.16	9.47	30.11	33.0	-2.9	
2.593	16.5	H	1.16	9.47	24.82	33.0	-8.2	
High Ch								
2.680	19.9	V	1.17	9.76	28.49	33.0	-4.5	
2.680	15.4	H	1.17	9.76	24.03	33.0	-9.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20164															
Date:	6/9/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 16QAM 20MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.506	21.2	V	1.15	9.34	29.34	33.0	-3.7									
2.506	15.6	H	1.15	9.34	23.80	33.0	9.2									
Mid Ch																
2.593	21.0	V	1.16	9.47	29.31	33.0	-3.7									
2.593	15.7	H	1.16	9.47	24.02	33.0	9.0									
High Ch																
2.680	19.0	V	1.17	9.76	27.59	33.0	-5.4									
2.680	14.6	H	1.17	9.76	23.23	33.0	9.8									

Rev. 10.24.13

10.3. RADIATED POWER (ERP & EIRP), MODEL: A1688 (LAT)

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	25.36	343.56
		1880.0	25.49	354.00
		1909.3	25.44	349.95
1.4MHz Band 16QAM	1/0	1850.7	24.36	272.90
		1880.0	24.49	281.19
		1909.3	24.54	284.45

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	25.36	343.56
		1880.0	25.59	362.24
		1908.5	25.44	349.95
3.0MHz Band 16QAM	1/0	1851.5	24.26	266.69
		1880.0	24.79	301.30
		1908.5	24.54	284.45

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	25.46	351.56
		1880.0	25.69	370.68
		1907.5	25.43	349.14
5.0MHz Band 16QAM	1/0	1852.5	24.61	289.07
		1880.0	24.69	294.44
		1907.5	24.43	277.33

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	25.16	328.10
		1880.0	25.67	368.98
		1905.0	25.63	365.59
10.0MHz Band 16QAM	1/0	1855.0	24.16	260.62
		1880.0	24.68	293.76
		1905.0	24.63	290.40

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	25.35	342.77
		1880.0	25.68	369.83
		1902.5	25.62	364.75
15MHz Band 16QAM	1/0	1857.5	24.35	272.27
		1880.0	24.69	294.44
		1902.5	24.62	289.73

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	25.75	375.84
		1880.0	25.82	381.94
		1900.0	25.81	381.07
20MHz Band 16QAM	1/0	1860.0	24.75	298.54
		1880.0	25.09	322.85
		1900.0	24.71	295.80

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	22.75	188.36
		1732.5	23.13	205.59
		1754.3	23.46	221.82
1.4 MHZ BAND 16QAM	1/0	1710.7	22.15	164.06
		1732.5	22.23	167.11
		1754.3	22.96	197.70

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	23.25	211.35
		1732.5	22.93	196.34
		1753.5	23.96	248.89
3.0 MHZ BAND 16QAM	1/0	1711.5	22.15	164.06
		1732.5	22.03	159.59
		1753.5	22.86	193.20

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	23.35	216.27
		1732.5	23.33	215.28
		1752.5	23.56	226.99
5.0 MHZ BAND 16QAM	1/0	1712.5	21.95	156.68
		1732.5	22.43	174.98
		1752.5	22.28	169.04

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	23.24	210.86
		1732.5	23.23	210.38
		1750.0	23.77	238.23
10.0 MHZ BAND 16QAM	1/0	1715.0	22.34	171.40
		1732.5	22.23	167.11
		1750.0	22.77	189.23

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	23.14	206.06
		1732.5	23.23	210.38
		1747.5	23.47	222.33
15.0 MHZ BAND 16QAM	1/0	1717.5	22.24	167.49
		1732.5	22.23	167.11
		1747.5	22.57	180.72

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	23.13	205.59
		1732.5	23.13	205.59
		1745.0	23.58	228.03
20.0 MHZ BAND 16QAM	1/0	1720.0	22.23	167.11
		1732.5	22.13	163.31
		1745.0	22.60	181.97

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	20.23	105.44
		836.5	21.52	141.91
		848.3	21.55	142.89
1.4MHz Band 16QAM	1/0	824.7	18.43	69.66
		836.5	20.72	118.03
		848.3	20.79	119.95

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	20.46	111.17
		836.5	21.31	135.21
		847.5	21.35	136.46
3.0 MHZ BAND 16QAM	1/0	825.5	19.60	91.20
		836.5	20.73	118.30
		847.5	20.65	116.14

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	20.28	106.66
		836.5	21.37	137.09
		846.5	21.35	136.46
5MHz Band 16QAM	1/0	826.5	19.41	87.30
		836.5	20.47	111.43
		846.5	20.31	107.40

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	20.53	112.98
		836.5	20.91	123.31
		844.0	20.35	108.39
10.0 MHZ BAND 16QAM	1/0	829.0	19.83	96.16
		836.5	20.01	100.23
		844.0	19.55	90.16

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	31.35	1364.58
		2535.0	31.51	1415.79
		2567.5	30.93	1238.80
5.0 MHZ BAND 16QAM	25/0	2502.5	30.25	1059.25
		2535.0	30.51	1124.60
		2567.5	30.13	1030.39

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	31.09	1285.29
		2535.0	31.61	1448.77
		2565.0	30.93	1238.80
10.0 MHZ BAND 16QAM	50/0	2505.0	30.05	1011.58
		2535.0	30.61	1150.80
		2565.0	29.83	961.61

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	31.25	1333.52
		2535.0	31.71	1482.52
		2562.5	30.92	1235.95
15.0 MHZ BAND 16QAM	75/0	2507.5	30.25	1059.25
		2535.0	30.81	1205.04
		2562.5	29.82	959.40

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	31.96	1570.36
		2535.0	32.11	1625.55
		2560.0	31.72	1485.94
20.0 MHZ BAND 16QAM	100/0	2510.0	30.56	1137.63
		2535.0	30.71	1177.61
		2560.0	30.02	1004.62

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	18.97	78.89
		707.5	18.92	77.98
		715.3	19.02	79.80
1.4MHz Band 16QAM	1/0	699.7	18.20	66.07
		707.5	18.10	64.57
		715.3	18.30	67.61

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	18.72	74.47
		707.5	18.62	72.78
		714.5	18.77	75.34
3.0 MHZ BAND 16QAM	1/0	700.5	17.77	59.84
		707.5	17.90	61.66
		714.5	17.78	59.98

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	18.76	75.16
		707.5	18.58	72.11
		713.5	18.62	72.78
5MHz Band 16QAM	1/0	701.5	17.47	55.85
		707.5	17.79	60.12
		713.5	17.72	59.16

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	18.67	73.62
		707.5	18.72	74.47
		711.0	18.52	71.12
10.0 MHZ BAND 16QAM	1/0	704.0	17.97	62.66
		707.5	18.02	63.39
		711.0	18.00	63.10

ERP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	18.18	65.77
		782.0	18.65	73.28
		784.5	18.62	72.78
5.0 MHZ BAND 16QAM	1/0	779.5	17.68	58.61
		782.0	17.88	61.38
		784.5	17.81	60.39

ERP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	18.74	74.82
			17.94	62.23

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	18.56	71.78
		710.0	18.87	77.09
		713.5	18.80	75.86
5MHz Band 16QAM	1/0	706.5	17.84	60.81
		710.0	17.64	58.08
		713.5	18.10	64.57

ERP 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	18.67	73.62
		710.0	17.87	61.24

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	25.50	354.81
		1880.0	25.06	320.63
		1914.3	25.78	378.44
1.4 MHZ BAND 16QAM	1/0	1850.7	24.50	281.84
		1880.0	24.06	254.68
		1914.3	24.68	293.76

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	25.20	331.13
		1880.0	25.46	351.56
		1913.5	25.68	369.83
3.0 MHZ BAND 16QAM	1/0	1851.5	24.20	263.03
		1880.0	24.56	285.76
		1913.5	24.78	300.61

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	25.30	338.84
		1880.0	25.36	343.56
		1912.5	25.55	358.92
5.0 MHZ BAND 16QAM	1/0	1852.5	24.30	269.15
		1880.0	24.56	285.76
		1912.5	24.57	286.42

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	25.10	323.59
		1880.0	25.46	351.56
		1910.0	25.46	351.56
10.0 MHZ BAND 16QAM	1/0	1855.0	24.10	257.04
		1880.0	24.56	285.76
		1910.0	24.46	279.25

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	25.29	338.06
		1880.0	25.36	343.56
		1907.5	25.45	350.75
15.0 MHZ BAND 16QAM	1/0	1857.5	24.29	268.53
		1880.0	24.36	272.90
		1907.5	24.45	278.61

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	25.29	338.06
		1880.0	25.26	335.74
		1905.0	25.83	382.82
20.0 MHZ BAND 16QAM	1/0	1860.0	24.19	262.42
		1880.0	24.36	272.90
		1905.0	24.85	305.49

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	20.11	102.57
		819.0	20.14	103.28
		823.3	20.52	112.72
1.4 MHZ BAND 16QAM	1/0	814.7	19.31	85.31
		819.0	19.54	89.95
		823.3	19.72	93.76

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	20.31	107.40
		819.0	20.54	113.24
		822.5	20.62	115.35
3.0 MHZ BAND 16QAM	1/0	815.5	19.71	93.54
		819.0	19.54	89.95
		822.5	19.79	95.28

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	20.41	109.90
		819.0	20.24	105.68
		821.5	20.62	115.35
5.0 MHZ BAND 16QAM	1/0	816.5	19.61	91.41
		819.0	19.34	85.90
		821.5	19.72	93.76

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	20.41	109.90
10.0 MHZ BAND 16QAM	1/0	819.0	19.64	92.04

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	31.03	1267.65
		2593.0	31.21	1321.30
		2687.5	29.13	818.46
5.0 MHZ BAND 16QAM	25/0	24.98.5	30.03	1006.93
		2593.0	30.11	1025.65
		2687.5	28.31	677.64

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	31.03	1267.65
		2593.0	31.30	1348.96
		2685.0	29.10	812.83
10.0 MHZ BAND 16QAM	50/0	2501.0	29.62	916.22
		2593.0	30.46	1111.73
		2685.0	28.45	699.84

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	30.39	1093.96
		2593.0	30.66	1164.13
		2682.5	28.09	644.17
15.0 MHZ BAND 16QAM	75/0	2503.5	29.44	879.02
		2593.0	29.61	914.11
		2682.5	27.12	515.23

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	31.44	1393.16
		2593.0	31.60	1445.44
		2680.0	29.19	829.85
20.0 MHZ BAND 16QAM	100/0	2506.0	30.54	1132.40
		2593.0	30.91	1233.10
		2680.0	28.89	774.46

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

High Frequency Fundamental Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 2 QPSK 1.4MHz BW								
<u>Test Equipment:</u> Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	18.1	V	0.98	8.05	25.21	33.0	-7.8	
1.851	18.3	H	0.98	8.05	25.36	33.0	-7.6	
Mid Ch								
1.880	17.8	V	0.98	8.03	24.87	33.0	-8.1	
1.880	18.4	H	0.98	8.03	25.49	33.0	-7.5	
High Ch								
1.909	18.3	V	0.98	8.05	25.37	33.0	-7.6	
1.909	18.4	H	0.98	8.05	25.44	33.0	-7.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 16QAM 1.4MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.851	17.1	V	0.98	8.05	24.21	33.0	-8.8									
1.851	17.3	H	0.98	8.05	24.36	33.0	-8.6									
Mid Ch																
1.880	16.9	V	0.98	8.03	23.97	33.0	-9.0									
1.880	17.4	H	0.98	8.03	24.49	33.0	-8.5									
High Ch																
1.909	17.4	V	0.98	8.05	24.47	33.0	-8.5									
1.909	17.5	H	0.98	8.05	24.54	33.0	-8.5									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/10/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 QPSK 3MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	17.8	V	0.98	8.05	24.91	33.0	-8.1	
1.852	18.3	H	0.98	8.05	25.36	33.0	-7.6	
Mid Ch								
1.880	17.7	V	0.98	8.03	24.77	33.0	-8.2	
1.880	18.5	H	0.98	8.03	25.59	33.0	-7.4	
High Ch								
1.909	18.1	V	0.98	8.05	25.17	33.0	-7.8	
1.909	18.4	H	0.98	8.05	25.44	33.0	-7.6	
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 #: 15U20165
Date: 6/4/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 2 16QAM 3MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	16.8	V	0.98	8.05	23.91	33.0	-9.1	
1.852	17.2	H	0.98	8.05	24.26	33.0	-8.7	
Mid Ch								
1.880	16.7	V	0.98	8.03	23.77	33.0	-9.2	
1.880	17.7	H	0.98	8.03	24.79	33.0	-8.2	
High Ch								
1.909	17.2	V	0.98	8.05	24.27	33.0	-8.7	
1.909	17.5	H	0.98	8.05	24.54	33.0	-8.5	

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QPSK EIRP POWER FOR LTE BAND 2 (5.0MHZ BANDWIDTH)**High Frequency Substitution Measurement
UL Fremont Radiated Chamber G**

Company:
Project #: 15U20165
Date: 6/10/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 2 QPSK 5MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	18.2	V	0.98	8.05	25.31	33.0	-7.7	
1.853	18.4	H	0.98	8.05	25.46	33.0	-7.5	
Mid Ch								
1.880	18.2	V	0.98	8.03	25.27	33.0	-7.7	
1.880	18.6	H	0.98	8.03	25.69	33.0	-7.3	
High Ch								
1.908	18.2	V	0.98	8.04	25.26	33.0	-7.7	
1.908	18.4	H	0.98	8.04	25.43	33.0	-7.6	

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 #:	15U20165							
Date:	6/4/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 5MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	17.5	V	0.98	8.05	24.61	33.0	-8.4	
1.853	17.4	H	0.98	8.05	24.46	33.0	-8.5	
Mid Ch								
1.880	17.3	V	0.98	8.03	24.37	33.0	-8.6	
1.880	17.6	H	0.98	8.03	24.69	33.0	-8.3	
High Ch								
1.908	17.3	V	0.98	8.04	24.36	33.0	-8.6	
1.908	17.4	H	0.98	8.04	24.43	33.0	-8.6	
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 #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 QPSK 10MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.855	17.8	V	0.98	8.05	24.91	33.0	-8.1									
1.855	18.1	H	0.98	8.05	25.16	33.0	-7.8									
Mid Ch																
1.880	17.9	V	0.98	8.03	24.97	33.0	-8.0									
1.880	18.6	H	0.98	8.03	25.67	33.0	-7.3									
High Ch																
1.905	18.5	V	0.98	8.04	25.56	33.0	-7.4									
1.905	18.6	H	0.98	8.04	25.63	33.0	-7.4									
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 #:	15U20165							
Date:	6/10/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 10MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	16.8	V	0.98	8.05	23.91	33.0	-9.1	
1.855	17.1	H	0.98	8.05	24.16	33.0	-8.8	
Mid Ch								
1.880	16.5	V	0.98	8.03	23.57	33.0	-9.4	
1.880	17.6	H	0.98	8.03	24.68	33.0	-8.3	
High Ch								
1.905	17.4	V	0.98	8.04	24.46	33.0	-8.5	
1.905	17.6	H	0.98	8.04	24.63	33.0	-8.4	
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 #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 QPSK 15MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.858	18.1	V	0.98	8.04	25.20	33.0	-7.8									
1.858	18.3	H	0.98	8.04	25.35	33.0	-7.6									
Mid Ch																
1.880	18.1	V	0.98	8.03	25.17	33.0	-7.8									
1.880	18.6	H	0.98	8.03	25.68	33.0	-7.3									
High Ch																
1.903	18.5	V	0.98	8.03	25.55	33.0	-7.5									
1.903	18.6	H	0.98	8.03	25.62	33.0	-7.4									
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 #:	15U20165							
Date:	6/10/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 15MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	17.1	V	0.98	8.04	24.20	33.0	-8.8	
1.858	17.3	H	0.98	8.04	24.35	33.0	-8.6	
Mid Ch								
1.880	17.1	V	0.98	8.03	24.17	33.0	-8.8	
1.880	17.6	H	0.98	8.03	24.69	33.0	-8.3	
High Ch								
1.903	17.5	V	0.98	8.03	24.55	33.0	-8.5	
1.903	17.6	H	0.98	8.03	24.62	33.0	-8.4	
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 #:	15U20165							
Date:	6/10/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 QPSK 20MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	18.4	V	0.98	8.04	25.50	33.0	-7.5	
1.860	18.7	H	0.98	8.04	25.75	33.0	-7.2	
Mid Ch								
1.880	18.5	V	0.98	8.03	25.57	33.0	-7.4	
1.880	18.8	H	0.98	8.03	25.82	33.0	-7.2	
High Ch								
1.900	18.7	V	0.98	8.02	25.74	33.0	-7.3	
1.900	18.8	H	0.98	8.02	25.81	33.0	-7.2	
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 #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 16QAM 20MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.860	17.6	V	0.98	8.04	24.70	33.0	-8.3									
1.860	17.7	H	0.98	8.04	24.75	33.0	-8.2									
Mid Ch																
1.880	17.5	V	0.98	8.03	24.57	33.0	-8.4									
1.880	18.0	H	0.98	8.03	25.09	33.0	-7.9									
High Ch																
1.900	17.6	V	0.98	8.02	24.64	33.0	-8.4									
1.900	17.7	H	0.98	8.02	24.71	33.0	-8.3									
Rev. 10.24.13																

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/11/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 QPSK 1.4MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	12.4	V	0.95	8.27	19.72	30.0	-10.3	
1.711	15.4	H	0.95	8.27	22.75	30.0	-7.2	
Mid Ch								
1.733	12.2	V	0.95	8.23	19.43	30.0	-10.6	
1.733	15.9	H	0.95	8.23	23.13	30.0	-6.9	
High Ch								
1.754	12.7	V	0.95	8.18	19.91	30.0	-10.1	
1.754	16.2	H	0.95	8.18	23.46	30.0	-6.5	
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 #: 15U20165
Date: 6/11/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 4 16QAM 1.4MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	11.5	V	0.95	8.27	18.82	30.0	-11.2	
1.711	14.8	H	0.95	8.27	22.15	30.0	-7.8	
Mid Ch								
1.733	11.4	V	0.95	8.23	18.63	30.0	-11.4	
1.733	15.0	H	0.95	8.23	22.23	30.0	-7.8	
High Ch								
1.754	11.8	V	0.95	8.18	19.01	30.0	-11.0	
1.754	15.7	H	0.95	8.18	22.96	30.0	-7.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G									
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 QPSK 3MHz BW									
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.712	12.8	V	0.95	8.27	20.12	30.0	-9.9		
1.712	15.9	H	0.95	8.27	23.25	30.0	-6.7		
Mid Ch									
1.733	12.5	V	0.95	8.23	19.73	30.0	-10.3		
1.733	15.7	H	0.95	8.23	22.93	30.0	-7.1		
High Ch									
1.754	12.9	V	0.95	8.18	20.11	30.0	-9.9		
1.754	16.7	H	0.95	8.18	23.96	30.0	-6.0		
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16QAM EIRP POWER FOR LTE BAND 4 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 16QAM 3MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	11.7	V	0.95	8.27	19.02	30.0	-11.0	
1.712	14.8	H	0.95	8.27	22.15	30.0	-7.8	
Mid Ch								
1.733	12.6	V	0.95	8.23	19.83	30.0	-10.2	
1.733	14.8	H	0.95	8.23	22.03	30.0	-8.0	
High Ch								
1.754	12.1	V	0.95	8.18	19.31	30.0	-10.7	
1.754	15.6	H	0.95	8.18	22.86	30.0	-7.1	

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QPSK EIRP POWER FOR LTE BAND 4 (5.0MHZ BANDWIDTH)**High Frequency Substitution Measurement
UL Fremont Radiated Chamber G**

Company:
Project #: 15U20164
Date: 6/11/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 4 QPSK 5MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	12.9	V	0.95	8.27	20.22	30.0	9.8	
1.713	16.0	H	0.95	8.27	23.35	30.0	-6.7	
Mid Ch								
1.733	13.0	V	0.95	8.23	20.23	30.0	9.8	
1.733	16.1	H	0.95	8.23	23.33	30.0	-6.7	
High Ch								
1.753	13.4	V	0.95	8.18	20.61	30.0	9.4	
1.753	16.3	H	0.95	8.18	23.56	30.0	-6.4	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/11/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 16QAM 5MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	12.0	V	0.95	8.27	19.32	30.0	-10.7	
1.713	14.6	H	0.95	8.27	21.95	30.0	-8.1	
Mid Ch								
1.733	12.2	V	0.95	8.23	19.43	30.0	-10.6	
1.733	15.2	H	0.95	8.23	22.43	30.0	-7.6	
High Ch								
1.753	12.5	V	0.95	8.18	19.71	30.0	-10.3	
1.753	15.1	H	0.95	8.18	22.28	30.0	-7.7	
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QPSK EIRP POWER FOR LTE BAND 4 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/11/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 4 QPSK 10MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.715	13.1	V	0.95	8.26	20.41	30.0	-9.6									
1.715	15.9	H	0.95	8.26	23.24	30.0	-6.8									
Mid Ch																
1.7325	13.0	V	0.95	8.23	20.23	30.0	-9.8									
1.7325	16.0	H	0.95	8.23	23.23	30.0	-6.8									
High Ch																
1.750	13.5	V	0.95	8.19	20.72	30.0	-9.3									
1.750	16.5	H	0.95	8.19	23.77	30.0	-6.2									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/11/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 16QAM 10MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.715	12.1	V	0.95	8.26	19.41	30.0	-10.6	
1.715	15.0	H	0.95	8.26	22.34	30.0	-7.7	
Mid Ch								
1.733	12.1	V	0.95	8.23	19.33	30.0	-10.7	
1.733	15.0	H	0.95	8.23	22.23	30.0	-7.8	
High Ch								
1.750	12.6	V	0.95	8.19	19.82	30.0	-10.2	
1.750	15.5	H	0.95	8.19	22.77	30.0	-7.2	
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QPSK EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/11/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 4 QPSK 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.718	13.0	V	0.95	8.26	20.31	30.0	-9.7									
1.718	15.8	H	0.95	8.26	23.14	30.0	-6.9									
Mid Ch																
1.733	12.8	V	0.95	8.23	20.03	30.0	-10.0									
1.733	16.0	H	0.95	8.23	23.23	30.0	-6.8									
High Ch																
1.748	13.1	V	0.95	8.19	20.32	30.0	-9.7									
1.748	16.2	H	0.95	8.19	23.47	30.0	-6.5									
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16QAM EIRP POWER FOR LTE BAND 4 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/11/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 QPSK 15MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	11.9	V	0.95	8.26	19.21	30.0	-10.8	
1.718	14.9	H	0.95	8.26	22.24	30.0	-7.8	
Mid Ch								
1.733	12.0	V	0.95	8.23	19.23	30.0	-10.8	
1.733	15.0	H	0.95	8.23	22.23	30.0	-7.8	
High Ch								
1.748	12.1	V	0.95	8.19	19.32	30.0	-10.7	
1.748	15.3	H	0.95	8.19	22.57	30.0	-7.4	
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QPSK EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20164 Date: 6/11/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 QPSK 20MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	12.9	V	0.95	8.25	20.20	30.0	-9.8	
1.720	15.8	H	0.95	8.25	23.13	30.0	-6.9	
Mid Ch								
1.733	12.9	V	0.95	8.23	20.13	30.0	-9.9	
1.733	15.9	H	0.95	8.23	23.13	30.0	-6.9	
High Ch								
1.745	12.8	V	0.95	8.20	20.03	30.0	-10.0	
1.745	16.3	H	0.95	8.20	23.58	30.0	-6.4	
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16QAM EIRP POWER FOR LTE BAND 4 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/11/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 16QAM 20MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	12.1	V	0.95	8.25	19.40	30.0	-10.6	
1.720	14.9	H	0.95	8.25	22.23	30.0	-7.8	
Mid Ch								
1.733	12.0	V	0.95	8.23	19.23	30.0	-10.8	
1.733	14.9	H	0.95	8.23	22.13	30.0	-7.9	
High Ch								
1.745	12.0	V	0.95	8.20	19.23	30.0	-10.8	
1.745	15.4	H	0.95	8.20	22.60	30.0	-7.4	
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10.3.3. LTE BAND 5

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	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										
824.70	20.85	V	0.6	0.0	20.23	22.38	38.45	40.60	-18.2	
824.70	10.95	H	0.6	0.0	10.33	12.48	38.45	40.60	-28.1	
Mid Ch										
836.50	22.13	V	0.6	0.0	21.52	23.67	38.45	40.60	-16.9	
836.50	10.78	H	0.6	0.0	10.16	12.31	38.45	40.60	-28.3	
High Ch										
848.30	22.17	V	0.6	0.0	21.55	23.70	38.45	40.60	-16.9	
848.30	11.65	H	0.6	0.0	11.03	13.18	38.45	40.60	-27.4	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
f MHz	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										
824.70	19.05	V	0.6	0.0	18.43	20.58	38.45	40.60	-20.0	
824.70	10.15	H	0.6	0.0	9.53	11.68	38.45	40.60	-28.9	
Mid Ch										
836.50	21.33	V	0.6	0.0	20.72	22.87	38.45	40.60	-17.7	
836.50	9.98	H	0.6	0.0	9.36	11.51	38.45	40.60	-29.1	
High Ch										
848.30	21.41	V	0.6	0.0	20.79	22.94	38.45	40.60	-17.7	
848.30	9.85	H	0.6	0.0	9.23	11.38	38.45	40.60	-29.2	
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QPSK EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	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										
825.50	21.08	V	0.6	0.0	20.46	22.61	38.45	40.60	-18.0	
825.50	10.18	H	0.6	0.0	9.56	11.71	38.45	40.60	-28.9	
Mid Ch										
836.50	21.92	V	0.6	0.0	21.31	23.46	38.45	40.60	-17.1	
836.50	10.01	H	0.6	0.0	9.39	11.54	38.45	40.60	-29.1	
High Ch										
847.50	21.97	V	0.6	0.0	21.35	23.50	38.45	40.60	-17.1	
847.50	9.88	H	0.6	0.0	9.26	11.41	38.45	40.60	-29.2	
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16QAM EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 5 16QAM 3MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	20.22	V	0.6	0.0	19.60	21.75	38.45	40.60	-18.9											
825.50	10.32	H	0.6	0.0	9.70	11.85	38.45	40.60	-28.8											
Mid Ch																				
836.50	21.34	V	0.6	0.0	20.73	22.88	38.45	40.60	-17.7											
836.50	10.15	H	0.6	0.0	9.53	11.68	38.45	40.60	-28.9											
High Ch																				
847.50	21.27	V	0.6	0.0	20.65	22.80	38.45	40.60	-17.8											
847.50	10.02	H	0.6	0.0	9.40	11.55	38.45	40.60	-29.0											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	20.90	V	0.6	0.0	20.28	22.43	38.45	40.60	-18.2	
826.50	10.00	H	0.6	0.0	9.38	11.53	38.45	40.60	-29.1	
Mid Ch										
836.50	21.98	V	0.6	0.0	21.37	23.52	38.45	40.60	-17.1	
836.50	9.83	H	0.6	0.0	9.21	11.36	38.45	40.60	-29.2	
High Ch										
846.50	21.97	V	0.6	0.0	21.35	23.50	38.45	40.60	-17.1	
846.50	10.70	H	0.6	0.0	10.08	12.23	38.45	40.60	-28.4	
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16QAM EIRP POWER FOR LTE BAND 5 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	20.03	V	0.6	0.0	19.41	21.56	38.45	40.60	-19.0	
826.50	10.13	H	0.6	0.0	9.51	11.66	38.45	40.60	-28.9	
Mid Ch										
836.50	21.08	V	0.6	0.0	20.47	22.62	38.45	40.60	-18.0	
836.50	9.96	H	0.6	0.0	9.34	11.49	38.45	40.60	-29.1	
High Ch										
846.50	20.93	V	0.6	0.0	20.31	22.46	38.45	40.60	-18.1	
846.50	9.83	H	0.6	0.0	9.21	11.36	38.45	40.60	-29.2	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 5 QPSK 10MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: DipoleT416, 4ft SMA Cable																				
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	21.15	V	0.6	0.0	20.53	22.68	38.45	40.60	-17.9											
829.00	10.90	H	0.6	0.0	10.29	12.44	38.45	40.60	-28.2											
Mid Ch																				
836.50	21.52	V	0.6	0.0	20.91	23.06	38.45	40.60	-17.5											
836.50	11.38	H	0.6	0.0	10.76	12.91	38.45	40.60	-27.7											
High Ch																				
844.00	20.97	V	0.6	0.0	20.35	22.50	38.45	40.60	-18.1											
844.00	11.70	H	0.6	0.0	11.08	13.23	38.45	40.60	-27.4											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	20.45	V	0.6	0.0	19.83	21.98	38.45	40.60	-18.6	
829.00	10.10	H	0.6	0.0	9.49	11.64	38.45	40.60	-29.0	
Mid Ch										
836.50	20.62	V	0.6	0.0	20.01	22.16	38.45	40.60	-18.4	
836.50	9.58	H	0.6	0.0	8.96	11.11	38.45	40.60	-29.5	
High Ch										
844.00	20.17	V	0.6	0.0	19.55	21.70	38.45	40.60	-18.9	
844.00	11.27	H	0.6	0.0	10.65	12.80	38.45	40.60	-27.8	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 7 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	23.2	V	1.15	9.34	31.35	33.0	-1.7	
2.503	19.4	H	1.15	9.34	27.54	33.0	-5.5	
Mid Ch								
2.535	23.3	V	1.16	9.38	31.51	33.0	-1.5	
2.535	18.7	H	1.16	9.38	26.90	33.0	-6.1	
High Ch								
2.568	22.7	V	1.17	9.43	30.93	33.0	-2.1	
2.568	18.3	H	1.17	9.43	26.58	33.0	-6.4	
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 #:	15U20165															
Date:	6/11/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 7 16QAM 5MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.503	22.1	V	1.15	9.34	30.25	33.0	-2.8									
2.503	18.3	H	1.15	9.34	26.44	33.0	-6.6									
Mid Ch																
2.535	22.3	V	1.16	9.38	30.51	33.0	-2.5									
2.535	17.8	H	1.16	9.38	26.00	33.0	-7.0									
High Ch																
2.568	21.9	V	1.17	9.43	30.13	33.0	-2.9									
2.568	17.4	H	1.17	9.43	25.68	33.0	-7.3									
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 #: 15U20165
Date: 6/11/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 7 QPSK 10MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	22.9	V	1.15	9.34	31.09	33.0	-1.9	
2.505	19.2	H	1.15	9.34	27.34	33.0	-5.7	
Mid Ch								
2.535	23.4	V	1.16	9.38	31.61	33.0	-1.4	
2.535	19.1	H	1.16	9.38	27.30	33.0	-5.7	
High Ch								
2.565	22.7	V	1.17	9.43	30.93	33.0	-2.1	
2.565	18.7	H	1.17	9.43	26.98	33.0	-6.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/11/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 7 16QAM 10MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.505	21.9	V	1.15	9.34	30.05	33.0	-2.9									
2.505	18.2	H	1.15	9.34	26.34	33.0	-6.7									
Mid Ch																
2.535	22.4	V	1.16	9.38	30.61	33.0	-2.4									
2.535	18.0	H	1.16	9.38	26.20	33.0	-6.8									
High Ch																
2.565	21.6	V	1.17	9.43	29.83	33.0	-3.2									
2.565	17.7	H	1.17	9.43	25.98	33.0	-7.0									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #: 15U20165								
Date: 6/11/2015								
Test Engineer: Ali.P								
Configuration: EUT Only								
Mode: LTE Band 7 QPSK 15MHz BW								
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.508	23.1	V	1.15	9.34	31.25	33.0	-1.7	
2.508	19.7	H	1.15	9.34	27.84	33.0	-5.2	
Mid Ch								
2.535	23.5	V	1.16	9.38	31.71	33.0	-1.3	
2.535	20.0	H	1.16	9.38	28.20	33.0	-4.8	
High Ch								
2.563	22.7	V	1.17	9.42	30.92	33.0	-2.1	
2.563	19.3	H	1.17	9.42	27.57	33.0	-5.4	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/11/2015															
Test Engineer:	Ali.P															
Configuration:	EUT Only															
Mode:	LTE Band 7 16QAM 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.508	22.1	V	1.15	9.34	30.25	33.0	-2.7									
2.508	18.7	H	1.15	9.34	26.84	33.0	-6.2									
Mid Ch																
2.535	22.6	V	1.16	9.38	30.81	33.0	-2.2									
2.535	18.9	H	1.16	9.38	27.10	33.0	-5.9									
High Ch																
2.563	21.6	V	1.17	9.42	29.82	33.0	-3.2									
2.563	18.2	H	1.17	9.42	26.47	33.0	-6.5									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/11/2015															
Test Engineer:	Ali.P															
Configuration:	EUT Only															
Mode:	LTE Band 7 QPSK 20MHz BW IC															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.510	23.8	V	1.15	9.35	31.96	33.0	-1.0									
2.510	19.8	H	1.15	9.35	27.95	33.0	-5.1									
Mid Ch																
2.535	23.9	V	1.16	9.38	32.11	33.0	-0.9									
2.535	19.8	H	1.16	9.38	28.00	33.0	-5.0									
High Ch																
2.560	23.5	V	1.17	9.42	31.72	33.0	-1.3									
2.560	19.6	H	1.17	9.42	27.87	33.0	-5.1									
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16QAM EIRP POWER FOR LTE BAND 7 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/11/2015															
Test Engineer:	Ali.P															
Configuration:	EUT Only															
Mode:	LTE Band 7 16QAM 20MHz BW IC															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.510	22.4	V	1.15	9.35	30.56	33.0	-2.4									
2.510	18.7	H	1.15	9.35	26.85	33.0	-6.2									
Mid Ch																
2.535	22.5	V	1.16	9.38	30.71	33.0	-2.3									
2.535	18.7	H	1.16	9.38	26.90	33.0	-6.1									
High Ch																
2.560	21.8	V	1.17	9.42	30.02	33.0	-3.0									
2.560	18.6	H	1.17	9.42	26.87	33.0	-6.1									

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10.3.5. LTE BAND 12

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 QPSK 1.4MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	19.52	V	0.55	0.0	18.97	21.12	34.77	36.99	-15.9											
699.70	11.78	H	0.55	0.0	11.23	13.38	34.77	36.99	-23.6											
Mid Ch																				
707.50	19.47	V	0.55	0.0	18.92	21.07	34.77	36.99	-15.9											
707.50	12.03	H	0.55	0.0	11.48	13.63	34.77	36.99	-23.4											
High Ch																				
715.30	19.57	V	0.55	0.0	19.02	21.17	34.77	36.99	-15.8											
715.30	12.64	H	0.55	0.0	12.09	14.24	34.77	36.99	-22.8											
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16QAM EIRP POWER FOR LTE BAND 12 (1.4MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	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
Low Ch										
699.70	18.7	V	0.55	0.0	18.2	20.32	34.77	36.99	-16.7	
699.70	10.6	H	0.55	0.0	10.0	12.18	34.77	36.99	-24.8	
Mid Ch										
707.50	18.7	V	0.55	0.0	18.1	20.30	34.77	36.99	-16.7	
707.50	11.2	H	0.55	0.0	10.7	12.81	34.77	36.99	-24.2	
High Ch										
715.30	18.8	V	0.55	0.0	18.3	20.41	34.77	36.99	-16.6	
715.30	11.5	H	0.55	0.0	11.0	13.14	34.77	36.99	-23.9	
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 #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 QPSK 3MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	19.27	V	0.55	0.0	18.72	20.87	34.77	36.99	-16.1											
700.50	10.72	H	0.55	0.0	10.17	12.32	34.77	36.99	-24.7											
Mid Ch																				
707.50	19.17	V	0.55	0.0	18.62	20.77	34.77	36.99	-16.2											
707.50	12.43	H	0.55	0.0	11.88	14.03	34.77	36.99	-23.0											
High Ch																				
714.50	19.32	V	0.55	0.0	18.77	20.92	34.77	36.99	-16.1											
714.50	11.84	H	0.55	0.0	11.29	13.44	34.77	36.99	-23.6											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 16QAM 3MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	18.32	V	0.55	0.0	17.77	19.92	34.77	36.99	-17.1											
700.50	10.08	H	0.55	0.0	9.53	11.68	34.77	36.99	-25.3											
Mid Ch																				
707.50	18.45	V	0.55	0.0	17.90	20.05	34.77	36.99	-16.9											
707.50	10.99	H	0.55	0.0	10.44	12.59	34.77	36.99	-24.4											
High Ch																				
714.50	18.33	V	0.55	0.0	17.78	19.93	34.77	36.99	-17.1											
714.50	11.04	H	0.55	0.0	10.49	12.64	34.77	36.99	-24.4											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 QPSK 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	19.31	V	0.55	0.0	18.76	20.91	34.77	36.99	-16.1											
701.50	10.68	H	0.55	0.0	10.13	12.28	34.77	36.99	-24.7											
Mid Ch																				
707.50	19.13	V	0.55	0.0	18.58	20.73	34.77	36.99	-16.3											
707.50	11.23	H	0.55	0.0	10.68	12.83	34.77	36.99	-24.2											
High Ch																				
713.50	19.17	V	0.55	0.0	18.62	20.77	34.77	36.99	-16.2											
713.50	11.14	H	0.55	0.0	10.59	12.74	34.77	36.99	-24.3											
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16QAM EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 16QAM 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
f MHz	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																				
701.50	18.02	V	0.55	0.0	17.47	19.62	34.77	36.99	-17.4											
701.50	9.88	H	0.55	0.0	9.33	11.48	34.77	36.99	-25.5											
Mid Ch																				
707.50	18.34	V	0.55	0.0	17.79	19.94	34.77	36.99	-17.1											
707.50	10.63	H	0.55	0.0	10.08	12.23	34.77	36.99	-24.8											
High Ch																				
713.50	18.27	V	0.55	0.0	17.72	19.87	34.77	36.99	-17.1											
713.50	10.63	H	0.55	0.0	10.08	12.23	34.77	36.99	-24.8											
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QPSK EIRP POWER FOR LTE BAND 12 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	19.22	V	0.55	0.0	18.67	20.82	34.77	36.99	-16.2	
704.00	10.88	H	0.55	0.0	10.33	12.48	34.77	36.99	-24.5	
Mid Ch										
707.50	19.27	V	0.55	0.0	18.72	20.87	34.77	36.99	-16.1	
707.50	10.93	H	0.55	0.0	10.38	12.53	34.77	36.99	-24.5	
High Ch										
711.00	19.07	V	0.55	0.0	18.52	20.67	34.77	36.99	-16.3	
711.00	11.14	H	0.55	0.0	10.59	12.74	34.77	36.99	-24.3	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	18.52	V	0.55	0.0	17.97	20.12	34.77	36.99	-16.9	
704.00	10.08	H	0.55	0.0	9.53	11.68	34.77	36.99	-25.3	
Mid Ch										
707.50	18.57	V	0.55	0.0	18.02	20.17	34.77	36.99	-16.8	
707.50	10.54	H	0.55	0.0	9.98	12.14	34.77	36.99	-24.8	
High Ch										
711.00	18.55	V	0.55	0.0	18.00	20.15	34.77	36.99	-16.8	
711.00	10.34	H	0.55	0.0	9.79	11.94	34.77	36.99	-25.1	
Rev. 10.24.13										

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 13 QPSK 5MHz BW																			
<u>Test Equipment:</u>																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes										
Low Ch																				
779.50	18.73	V	0.55	0.0	18.18	20.33	34.77	36.99	-16.7											
779.50	11.15	H	0.55	0.0	10.60	12.75	34.77	36.99	-24.2											
Mid Ch																				
782.00	19.20	V	0.55	0.0	18.65	20.80	34.77	36.99	-16.2											
782.00	11.22	H	0.55	0.0	10.67	12.82	34.77	36.99	-24.2											
High Ch																				
784.50	19.17	V	0.55	0.0	18.62	20.77	34.77	36.99	-16.2											
784.50	11.23	H	0.55	0.0	10.68	12.83	34.77	36.99	-24.2											
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16QAM EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 16QAM 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
779.50	18.23	V	0.55	0.0	17.68	19.83	34.77	36.99	-17.2	
779.50	9.96	H	0.55	0.0	9.41	11.56	34.77	36.99	-25.4	
Mid Ch										
782.00	18.43	V	0.55	0.0	17.88	20.03	34.77	36.99	-17.0	
782.00	10.42	H	0.55	0.0	9.87	12.02	34.77	36.99	-25.0	
High Ch										
784.50	18.36	V	0.55	0.0	17.81	19.96	34.77	36.99	-17.0	
784.50	10.43	H	0.55	0.0	9.88	12.03	34.77	36.99	-25.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	19.29	V	0.55	0.0	18.74	20.89	34.77	36.99	-16.1	
782.00	11.07	H	0.55	0.0	10.52	12.67	34.77	36.99	-24.3	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	18.49	V	0.55	0.0	17.94	20.09	34.77	36.99	-16.9	
782.00	10.07	H	0.55	0.0	9.52	11.67	34.77	36.99	-25.3	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 17 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	19.11	V	0.55	0.0	18.56	20.71	34.77	36.99	-16.3	
706.50	10.42	H	0.55	0.0	9.87	12.02	34.77	36.99	-25.0	
Mid Ch										
710.00	19.42	V	0.55	0.0	18.87	21.02	34.77	36.99	-16.0	
710.00	10.56	H	0.55	0.0	10.01	12.16	34.77	36.99	-24.8	
High Ch										
713.50	19.35	V	0.55	0.0	18.80	20.95	34.77	36.99	-16.0	
713.50	11.12	H	0.55	0.0	10.57	12.72	34.77	36.99	-24.3	
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16QAM EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/11/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 17 16QAM 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	18.39	V	0.55	0.0	17.84	19.99	34.77	36.99	-17.0											
706.50	9.65	H	0.55	0.0	9.10	11.25	34.77	36.99	-25.7											
Mid Ch																				
710.00	18.19	V	0.55	0.0	17.64	19.79	34.77	36.99	-17.2											
710.00	9.84	H	0.55	0.0	9.29	11.44	34.77	36.99	-25.5											
High Ch																				
713.50	18.65	V	0.55	0.0	18.10	20.25	34.77	36.99	-16.7											
713.50	9.88	H	0.55	0.0	9.33	11.48	34.77	36.99	-25.5											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #:	15U20165									
Date:	6/11/2015									
Test Engineer:	E. Lee									
Configuration:	EUT only									
Mode:	LTE Band 17 QPSK 10MHz BW									
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft SMA Cable										
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	19.22	V	0.55	0.0	18.67	20.82	34.77	36.99	-16.2	
710.00	10.76	H	0.55	0.0	10.21	12.36	34.77	36.99	-24.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/11/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 17 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	18.42	V	0.55	0.0	17.87	20.02	34.77	36.99	-17.0	
710.00	10.13	H	0.55	0.0	9.58	11.73	34.77	36.99	-25.3	
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10.3.8. LTE BAND 25**QPSK EIRP POWER FOR LTE BAND 25 (1.4MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 QPSK 1.4MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.851	18.2	V	0.98	8.05	25.26	33.0	-7.7									
1.851	18.4	H	0.98	8.05	25.50	33.0	-7.5									
Mid Ch																
1.883	17.7	V	0.98	8.03	24.72	33.0	-8.3									
1.883	18.0	H	0.98	8.03	25.06	33.0	-7.9									
High Ch																
1.914	18.3	V	0.98	8.07	25.39	33.0	-7.6									
1.914	18.7	H	0.98	8.07	25.78	33.0	-7.2									

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

High Frequency Substitution Measurement
UL Fremont Radiated Chamber G

Company:
Project #: 15U20165
Date: 6/10/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 25 16QAM 1.4MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	17.2	V	0.98	8.05	24.26	33.0	-8.7	
1.851	17.4	H	0.98	8.05	24.50	33.0	-8.5	
Mid Ch								
1.883	16.7	V	0.98	8.03	23.72	33.0	-9.3	
1.883	17.0	H	0.98	8.03	24.06	33.0	-8.9	
High Ch								
1.914	17.3	V	0.98	8.07	24.39	33.0	-8.6	
1.914	17.6	H	0.98	8.07	24.68	33.0	-8.3	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 3MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	18.0	V	0.98	8.05	25.06	33.0	-7.9	
1.852	18.1	H	0.98	8.05	25.20	33.0	-7.8	
Mid Ch								
1.883	17.6	V	0.98	8.03	24.62	33.0	-8.4	
1.883	18.4	H	0.98	8.03	25.46	33.0	-7.5	
High Ch								
1.914	18.0	V	0.98	8.07	25.09	33.0	-7.9	
1.914	18.6	H	0.98	8.07	25.68	33.0	-7.3	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/10/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 25 16QAM 3MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	17.0	V	0.98	8.05	24.06	33.0	-8.9	
1.852	17.1	H	0.98	8.05	24.20	33.0	-8.8	
Mid Ch								
1.883	16.7	V	0.98	8.03	23.72	33.0	-9.3	
1.883	17.5	H	0.98	8.03	24.56	33.0	-8.4	
High Ch								
1.914	17.1	V	0.98	8.07	24.19	33.0	-8.8	
1.914	17.7	H	0.98	8.07	24.78	33.0	-8.2	
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QPSK EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/10/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 25 QPSK 5MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	17.9	V	0.98	8.05	24.96	33.0	-8.0	
1.853	18.2	H	0.98	8.05	25.30	33.0	-7.7	
Mid Ch								
1.883	17.4	V	0.98	8.03	24.42	33.0	-8.6	
1.883	18.3	H	0.98	8.03	25.36	33.0	-7.6	
High Ch								
1.913	17.7	V	0.98	8.06	24.78	33.0	-8.2	
1.913	18.5	H	0.98	8.06	25.55	33.0	-7.4	
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16QAM EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	17.0	V	0.98	8.05	24.06	33.0	-8.9	
1.853	17.2	H	0.98	8.05	24.30	33.0	-8.7	
Mid Ch								
1.883	16.6	V	0.98	8.03	23.62	33.0	-9.4	
1.883	17.5	H	0.98	8.03	24.56	33.0	-8.4	
High Ch								
1.913	16.7	V	0.98	8.06	23.78	33.0	-9.2	
1.913	17.5	H	0.98	8.06	24.57	33.0	-8.4	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	18.0	V	0.98	8.05	25.06	33.0	-7.9	
1.855	18.0	H	0.98	8.05	25.10	33.0	-7.9	
Mid Ch								
1.883	18.1	V	0.98	8.03	25.12	33.0	-7.9	
1.883	18.4	H	0.98	8.03	25.46	33.0	-7.5	
High Ch								
1.910	17.9	V	0.98	8.05	24.97	33.0	-8.0	
1.910	18.4	H	0.98	8.05	25.46	33.0	-7.5	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	17.0	V	0.98	8.05	24.06	33.0	-8.9	
1.855	17.0	H	0.98	8.05	24.10	33.0	-8.9	
Mid Ch								
1.883	17.0	V	0.98	8.03	24.02	33.0	-9.0	
1.883	17.5	H	0.98	8.03	24.56	33.0	-8.4	
High Ch								
1.910	17.0	V	0.98	8.05	24.07	33.0	-8.9	
1.910	17.4	H	0.98	8.05	24.46	33.0	-8.5	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 15MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	18.0	V	0.98	8.04	25.05	33.0	-7.9	
1.858	18.2	H	0.98	8.04	25.29	33.0	-7.7	
Mid Ch								
1.883	18.2	V	0.98	8.03	25.22	33.0	-7.8	
1.883	18.3	H	0.98	8.03	25.36	33.0	-7.6	
High Ch								
1.908	18.2	V	0.98	8.04	25.26	33.0	-7.7	
1.908	18.4	H	0.98	8.04	25.45	33.0	-7.5	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 15MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	17.2	V	0.98	8.04	24.25	33.0	-8.7	
1.858	17.2	H	0.98	8.04	24.29	33.0	-8.7	
Mid Ch								
1.883	17.3	V	0.98	8.03	24.32	33.0	-8.7	
1.883	17.3	H	0.98	8.03	24.36	33.0	-8.6	
High Ch								
1.908	17.3	V	0.98	8.04	24.36	33.0	-8.6	
1.908	17.4	H	0.98	8.04	24.45	33.0	-8.5	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 20MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	18.2	V	0.98	8.04	25.25	33.0	-7.7	
1.860	18.2	H	0.98	8.04	25.29	33.0	-7.7	
Mid Ch								
1.883	18.1	V	0.98	8.03	25.12	33.0	-7.9	
1.883	18.2	H	0.98	8.03	25.26	33.0	-7.7	
High Ch								
1.905	18.2	V	0.98	8.04	25.26	33.0	-7.7	
1.905	18.8	H	0.98	8.04	25.83	33.0	-7.2	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 20MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	17.1	V	0.98	8.04	24.15	33.0	-8.8	
1.860	17.1	H	0.98	8.04	24.19	33.0	-8.8	
Mid Ch								
1.883	17.2	V	0.98	8.03	24.22	33.0	-8.8	
1.883	17.3	H	0.98	8.03	24.36	33.0	-8.6	
High Ch								
1.905	17.3	V	0.98	8.04	24.36	33.0	-8.6	
1.905	17.8	H	0.98	8.04	24.85	33.0	-8.2	

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10.3.9. LTE BAND 26

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/12/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 26 QPSK 1.4MHz BW																			
<u>Test Equipment:</u>																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: DipoleT416, 4ft SMA Cable																				
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	20.73	V	0.62	0.0	20.11	22.26	38.45	40.60	-18.3											
814.70	11.83	H	0.62	0.0	11.21	13.36	38.45	40.60	-27.2											
Mid Ch																				
819.00	20.76	V	0.62	0.0	20.14	22.29	38.45	40.60	-18.3											
819.00	11.93	H	0.62	0.0	11.31	13.46	38.45	40.60	-27.1											
High Ch																				
823.30	21.14	V	0.62	0.0	20.52	22.67	38.45	40.60	-17.9											
823.30	12.18	H	0.62	0.0	11.56	13.71	38.45	40.60	-26.9											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/12/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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
Low Ch										
814.70	19.93	V	0.62	0.0	19.31	21.46	38.45	40.60	-19.1	
814.70	11.03	H	0.62	0.0	10.41	12.56	38.45	40.60	-28.0	
Mid Ch										
819.00	20.16	V	0.62	0.0	19.54	21.69	38.45	40.60	-18.9	
819.00	11.13	H	0.62	0.0	10.51	12.66	38.45	40.60	-27.9	
High Ch										
823.30	20.34	V	0.62	0.0	19.72	21.87	38.45	40.60	-18.7	
823.30	11.68	H	0.62	0.0	11.06	13.21	38.45	40.60	-27.4	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/12/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	20.93	V	0.62	0.0	20.31	22.46	38.45	40.60	-18.1	
815.50	11.83	H	0.62	0.0	11.21	13.36	38.45	40.60	-27.2	
Mid Ch										
819.00	21.16	V	0.62	0.0	20.54	22.69	38.45	40.60	-17.9	
819.00	9.43	H	0.62	0.0	8.81	10.96	38.45	40.60	-29.6	
High Ch										
822.50	21.24	V	0.62	0.0	20.62	22.77	38.45	40.60	-17.8	
822.50	9.58	H	0.62	0.0	8.96	11.11	38.45	40.60	-29.5	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/12/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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
Low Ch										
815.50	20.33	V	0.62	0.0	19.71	21.86	38.45	40.60	-18.7	
815.50	11.13	H	0.62	0.0	10.51	12.66	38.45	40.60	-27.9	
Mid Ch										
819.00	20.16	V	0.62	0.0	19.54	21.69	38.45	40.60	-18.9	
819.00	10.63	H	0.62	0.0	10.01	12.16	38.45	40.60	-28.4	
High Ch										
822.50	20.41	V	0.62	0.0	19.79	21.94	38.45	40.60	-18.7	
822.50	10.98	H	0.62	0.0	10.36	12.51	38.45	40.60	-28.1	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/12/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 26 QPSK 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	21.03	V	0.62	0.0	20.41	22.56	38.45	40.60	-18.0											
816.50	12.13	H	0.62	0.0	11.51	13.66	38.45	40.60	-26.9											
Mid Ch																				
819.00	20.86	V	0.62	0.0	20.24	22.39	38.45	40.60	-18.2											
819.00	11.63	H	0.62	0.0	11.01	13.16	38.45	40.60	-27.4											
High Ch																				
821.50	21.24	V	0.62	0.0	20.62	22.77	38.45	40.60	-17.8											
821.50	11.68	H	0.62	0.0	11.06	13.21	38.45	40.60	-27.4											
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16QAM EIRP POWER FOR LTE BAND 26 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/12/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 26 16QAM 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	20.23	V	0.62	0.0	19.61	21.76	38.45	40.60	-18.8											
816.50	11.03	H	0.62	0.0	10.41	12.56	38.45	40.60	-28.0											
Mid Ch																				
819.00	19.96	V	0.62	0.0	19.34	21.49	38.45	40.60	-19.1											
819.00	10.83	H	0.62	0.0	10.21	12.36	38.45	40.60	-28.2											
High Ch																				
821.50	20.34	V	0.62	0.0	19.72	21.87	38.45	40.60	-18.7											
821.50	10.68	H	0.62	0.0	10.06	12.21	38.45	40.60	-28.4											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/12/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	21.03	V	0.62	0.0	20.41	22.56	38.45	40.60	-18.0	
819.00	11.83	H	0.62	0.0	11.21	13.36	38.45	40.60	-27.2	
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16QAM EIRP POWER FOR LTE BAND 26 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/12/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 26 16QAM 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	20.26	V	0.62	0.0	19.64	21.79	38.45	40.60	-18.8	
819.00	9.85	H	0.62	0.0	9.23	11.38	38.45	40.60	-29.2	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 QPSK 5MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.499	22.9	V	1.15	9.33	31.03	33.0	-2.0									
2.499	18.2	H	1.15	9.33	26.39	33.0	-6.6									
Mid Ch																
2.593	22.9	V	1.16	9.47	31.21	33.0	-1.8									
2.593	17.7	H	1.16	9.47	26.02	33.0	-7.0									
High Ch																
2.688	20.5	V	1.17	9.78	29.13	33.0	-3.9									
2.688	17.4	H	1.17	9.78	26.05	33.0	-6.9									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
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 T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.499	21.9	V	1.15	9.33	30.03	33.0	-3.0									
2.499	17.2	H	1.15	9.33	25.39	33.0	-7.6									
Mid Ch																
2.593	21.8	V	1.16	9.47	30.11	33.0	-2.9									
2.593	16.8	H	1.16	9.47	25.12	33.0	-7.9									
High Ch																
2.688	19.7	V	1.17	9.78	28.31	33.0	-4.7									
2.688	16.5	H	1.17	9.78	25.15	33.0	-7.8									
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QPSK EIRP POWER FOR LTE BAND 41 (10.0MHZ BANDWIDTH)**High Frequency Substitution Measurement
UL Fremont Radiated Chamber G**

Company:
Project #: 15U20165
Date: 6/10/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 41 QPSK 10MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.501	22.9	V	1.15	9.33	31.03	33.0	-2.0	
2.501	18.2	H	1.15	9.33	26.39	33.0	-6.6	
Mid Ch								
2.593	23.0	V	1.16	9.47	31.30	33.0	-1.7	
2.593	18.3	H	1.16	9.47	26.62	33.0	-6.4	
High Ch								
2.685	20.5	V	1.17	9.77	29.10	33.0	-3.9	
2.685	17.8	H	1.17	9.77	26.44	33.0	-6.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
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 T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.501	21.4	V	1.15	9.33	29.62	33.0	-3.4									
2.501	17.2	H	1.15	9.33	25.39	33.0	-7.6									
Mid Ch																
2.593	22.2	V	1.16	9.47	30.46	33.0	-2.5									
2.593	16.9	H	1.16	9.47	25.22	33.0	-7.8									
High Ch																
2.685	19.9	V	1.17	9.77	28.45	33.0	-4.5									
2.685	16.9	H	1.17	9.77	25.54	33.0	-7.5									
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QPSK EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/10/2015 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 T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.504	22.2	V	1.15	9.34	30.39	33.0	-2.6	
2.504	18.2	H	1.15	9.34	26.40	33.0	-6.6	
Mid Ch								
2.593	22.4	V	1.16	9.47	30.66	33.0	-2.3	
2.593	17.2	H	1.16	9.47	25.52	33.0	-7.5	
High Ch								
2.683	19.5	V	1.17	9.76	28.09	33.0	-4.9	
2.683	17.1	H	1.17	9.76	25.73	33.0	-7.3	
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16QAM EIRP POWER FOR LTE BAND 41 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
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 T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.504	21.3	V	1.15	9.34	29.44	33.0	-3.6									
2.504	17.1	H	1.15	9.34	25.30	33.0	-7.7									
Mid Ch																
2.593	21.3	V	1.16	9.47	29.61	33.0	-3.4									
2.593	16.3	H	1.16	9.47	24.62	33.0	-8.4									
High Ch																
2.683	18.5	V	1.17	9.76	27.12	33.0	-5.9									
2.683	16.2	H	1.17	9.76	24.83	33.0	-8.2									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 QPSK 20MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.506	23.3	V	1.15	9.34	31.44	33.0	-1.6									
2.506	19.0	H	1.15	9.34	27.20	33.0	-5.8									
Mid Ch																
2.593	23.3	V	1.16	9.47	31.60	33.0	-1.4									
2.593	18.3	H	1.16	9.47	26.62	33.0	-6.4									
High Ch																
2.680	20.6	V	1.17	9.76	29.19	33.0	-3.8									
2.680	18.0	H	1.17	9.76	26.63	33.0	-6.4									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 41 16QAM 20MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.506	22.4	V	1.15	9.34	30.54	33.0	-2.5									
2.506	18.0	H	1.15	9.34	26.20	33.0	-6.8									
Mid Ch																
2.593	22.6	V	1.16	9.47	30.91	33.0	-2.1									
2.593	17.4	H	1.16	9.47	25.72	33.0	-7.3									
High Ch																
2.680	20.3	V	1.17	9.76	28.89	33.0	-4.1									
2.680	17.1	H	1.17	9.76	25.73	33.0	-7.3									
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10.4. RADIATED POWER (ERP & EIRP), MODEL: A1688 (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	20.96	124.74
		1880.0	20.99	125.60
		1909.3	21.04	127.06
1.4MHz Band 16QAM	1/0	1850.7	19.86	96.83
		1880.0	19.99	99.77
		1909.3	19.94	98.63

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	20.96	124.74
		1880.0	20.69	117.22
		1908.5	21.10	128.82
3.0MHz Band 16QAM	1/0	1851.5	20.06	101.39
		1880.0	19.59	90.99
		1908.5	20.14	103.28

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	21.06	127.64
		1880.0	21.19	131.52
		1907.5	21.23	132.74
5.0MHz Band 16QAM	1/0	1852.5	19.96	99.08
		1880.0	20.29	106.91
		1907.5	20.23	105.44

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	21.06	127.64
		1880.0	21.09	128.53
		1905.0	21.23	132.74
10.0MHz Band 16QAM	1/0	1855.0	19.96	99.08
		1880.0	20.09	102.09
		1905.0	20.13	103.04

EIRP POWER FOR LTE BAND 2 (15.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
15MHz Band QPSK	1/0	1857.5	21.15	130.32
		1880.0	21.09	128.53
		1902.5	21.22	132.43
15MHz Band 16QAM	1/0	1857.5	20.05	101.16
		1880.0	20.19	104.47
		1902.5	20.22	105.20

EIRP POWER FOR LTE BAND 2 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0MHz Band QPSK	1/0	1860.0	21.25	133.35
		1880.0	21.09	128.53
		1900.0	21.21	132.13
20MHz Band 16QAM	1/0	1860.0	20.15	103.51
		1880.0	20.09	102.09
		1900.0	20.11	102.57

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	21.25	133.35
		1732.5	21.03	126.77
		1754.3	21.36	136.77
1.4 MHZ BAND 16QAM	1/0	1710.7	20.25	105.93
		1732.5	20.03	100.69
		1754.3	20.28	106.66

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	21.25	133.35
		1732.5	21.23	132.74
		1753.5	21.36	136.77
3.0 MHZ BAND 16QAM	1/0	1711.5	19.65	92.26
		1732.5	19.53	89.74
		1753.5	20.06	101.39

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	21.25	133.35
		1732.5	21.23	132.74
		1752.5	21.28	134.28
5.0 MHZ BAND 16QAM	1/0	1712.5	20.05	101.16
		1732.5	20.21	104.95
		1752.5	20.32	107.65

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	21.32	135.52
		1732.5	21.23	132.74
		1750.0	21.27	133.97
10.0 MHZ BAND 16QAM	1/0	1715.0	19.82	95.94
		1732.5	18.84	76.56
		1750.0	19.55	90.16

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	21.37	137.09
		1732.5	20.61	115.08
		1747.5	21.21	132.13
15.0 MHZ BAND 16QAM	1/0	1717.5	19.59	90.99
		1732.5	19.13	81.85
		1747.5	19.10	81.28

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	21.46	139.96
		1732.5	20.99	125.60
		1745.0	21.18	131.22
20.0 MHZ BAND 16QAM	1/0	1720.0	20.36	108.64
		1732.5	20.19	104.47
		1745.0	20.46	111.17

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	16.33	42.95
		836.5	17.07	50.93
		848.3	19.23	83.75
1.4MHz Band 16QAM	1/0	824.7	15.51	35.56
		836.5	16.22	41.88
		848.3	18.69	73.96

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	16.21	41.78
		836.5	16.87	48.64
		847.5	19.13	81.85
3.0 MHZ BAND 16QAM	1/0	825.5	15.53	35.73
		836.5	16.23	41.98
		847.5	18.23	66.53

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	16.62	45.92
		836.5	16.77	47.53
		846.5	18.77	75.34
5MHz Band 16QAM	1/0	826.5	16.50	44.67
		836.5	16.41	43.75
		846.5	18.24	66.68

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	16.33	42.95
		836.5	16.35	43.15
		844.0	18.15	65.31
10.0 MHZ BAND 16QAM	1/0	829.0	15.72	37.33
		836.5	16.24	42.07
		844.0	17.37	54.58

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	27.85	609.54
		2535.0	28.51	709.58
		2567.5	28.23	665.27
5.0 MHZ BAND 16QAM	25/0	2502.5	26.51	447.71
		2535.0	27.61	576.77
		2567.5	27.11	514.04

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	27.85	609.54
		2535.0	28.41	693.43
		2565.0	28.03	635.33
10.0 MHZ BAND 16QAM	50/0	2505.0	26.85	484.17
		2535.0	27.41	550.81
		2565.0	27.03	504.66

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	28.05	638.26
		2535.0	28.71	743.02
		2562.5	28.12	648.63
15.0 MHZ BAND 16QAM	75/0	2507.5	27.15	518.80
		2535.0	27.61	576.77
		2562.5	27.22	527.23

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	28.16	654.64
		2535.0	28.51	709.58
		2560.0	28.32	679.20
20.0 MHZ BAND 16QAM	100/0	2510.0	27.16	520.00
		2535.0	27.51	563.64
		2560.0	27.22	527.23

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	17.75	59.57
		707.5	17.62	57.81
		715.3	17.72	59.16
1.4MHz Band 16QAM	1/0	699.7	16.87	48.64
		707.5	16.32	42.85
		715.3	16.72	46.99

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	18.57	71.94
		707.5	18.76	75.16
		714.5	18.32	67.92
3.0 MHZ BAND 16QAM	1/0	700.5	18.42	69.50
		707.5	18.52	71.12
		714.5	18.32	67.92

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	18.15	65.31
		707.5	18.32	67.92
		713.5	18.52	71.12
5MHz Band 16QAM	1/0	701.5	17.43	55.34
		707.5	17.77	59.84
		713.5	17.72	59.16

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	18.17	65.61
		707.5	18.34	68.23
		711.0	18.12	64.86
10.0 MHZ BAND 16QAM	1/0	704.0	17.37	54.58
		707.5	17.48	55.98
		711.0	17.32	53.95

ERP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
5.0 MHZ BAND QPSK	1/0	779.5	18.38	68.87
		782.0	18.60	72.44
		784.5	18.72	74.47
5.0 MHZ BAND 16QAM	1/0	779.5	17.48	55.98
		782.0	17.50	56.23
		784.5	18.32	67.92

ERP POWER FOR LTE BAND 13 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	ERP(Average)	
			dBm	mW
10 MHZ BAND QPSK	1/0	782.0	18.24	66.68
10 MHz BAND 16QAM	1/0		17.40	54.95

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	16.86	48.53
		710.0	16.67	46.45
		713.5	17.60	57.54
5MHz Band 16QAM	1/0	706.5	16.26	42.27
		710.0	16.17	41.40
		713.5	17.00	50.12

ERP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
10.0 MHZ BAND QPSK	1/0	710.0	17.27	53.33
10.0 MHZ BAND 16QAM		710.0	16.67	46.45

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	20.60	114.82
		1880.0	20.46	111.17
		1914.3	20.48	111.69
1.4 MHZ BAND 16QAM	1/0	1850.7	19.66	92.47
		1880.0	19.56	90.36
		1914.3	19.38	86.70

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	20.00	100.00
		1880.0	20.36	108.64
		1913.5	19.98	99.54
3.0 MHZ BAND 16QAM	1/0	1851.5	19.00	79.43
		1880.0	19.23	83.75
		1913.5	18.58	72.11

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	20.30	107.15
		1880.0	20.16	103.75
		1912.5	20.57	114.02
5.0 MHZ BAND 16QAM	1/0	1852.5	19.30	85.11
		1880.0	19.16	82.41
		1912.5	19.57	90.57

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	20.10	102.33
		1880.0	20.24	105.68
		1910.0	20.37	108.89
10.0 MHZ BAND 16QAM	1/0	1855.0	18.50	70.79
		1880.0	18.26	66.99
		1910.0	19.36	86.30

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	20.16	103.75
		1880.0	20.36	108.64
		1907.5	20.01	100.23
15.0 MHZ BAND 16QAM	1/0	1857.5	19.19	82.99
		1880.0	19.16	82.41
		1907.5	18.94	78.34

EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

Mode	RB/RB SIZE	f (MHz)	EIRP(Average)	
			dBm	mW
20.0 MHZ BAND QPSK	1/0	1860.0	20.09	102.09
		1880.0	20.36	108.64
		1905.0	20.45	110.92
20.0 MHZ BAND 16QAM	1/0	1860.0	18.99	79.25
		1880.0	19.26	84.33
		1905.0	19.55	90.16

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	16.51	44.77
		819.0	17.24	52.97
		823.3	16.81	47.97
1.4 MHZ BAND 16QAM	1/0	814.7	15.86	38.55
		819.0	16.34	43.05
		823.3	16.42	43.85

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	17.30	53.70
		819.0	16.74	47.21
		822.5	16.90	48.98
3.0 MHZ BAND 16QAM	1/0	815.5	15.57	36.06
		819.0	15.92	39.08
		822.5	15.99	39.72

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	17.09	51.17
		819.0	16.60	45.71
		821.5	17.10	51.29
5.0 MHZ BAND 16QAM	1/0	816.5	15.99	39.72
		819.0	15.73	37.41
		821.5	15.90	38.90

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	16.46	44.26
10.0 MHZ BAND 16QAM	1/0	819.0	15.36	34.36

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	29.26	843.33
		2593.0	28.61	726.11
		2687.5	28.11	647.14
5.0 MHZ BAND 16QAM	25/0	24.98.5	28.23	665.27
		2593.0	27.79	601.17
		2687.5	27.21	526.02

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	29.42	874.98
		2593.0	28.70	741.31
		2685.0	27.90	616.60
10.0 MHZ BAND 16QAM	50/0	2501.0	28.52	711.21
		2593.0	28.00	630.96
		2685.0	27.30	537.03

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	30.14	1032.76
		2593.0	29.58	907.82
		2682.5	28.39	690.24
15.0 MHZ BAND 16QAM	75/0	2503.5	29.04	801.68
		2593.0	28.51	709.58
		2682.5	27.39	548.28

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	30.24	1056.82
		2593.0	29.90	977.24
		2680.0	28.38	688.65
20.0 MHZ BAND 16QAM	100/0	2506.0	29.54	899.50
		2593.0	29.31	853.10
		2680.0	27.44	554.63

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

High Frequency Fundamental Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 QPSK 1.4MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.851	12.2	V	0.98	8.05	19.31	33.0	-13.7	
1.851	13.9	H	0.98	8.05	20.96	33.0	-12.0	
Mid Ch								
1.880	11.3	V	0.98	8.03	18.37	33.0	-14.6	
1.880	13.9	H	0.98	8.03	20.99	33.0	-12.0	
High Ch								
1.909	12.1	V	0.98	8.05	19.17	33.0	-13.8	
1.909	14.0	H	0.98	8.05	21.04	33.0	-12.0	
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 16QAM 1.4MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.851	10.8	V	0.98	8.05	17.91	33.0	-15.1									
1.851	12.8	H	0.98	8.05	19.86	33.0	-13.1									
Mid Ch																
1.880	9.9	V	0.98	8.03	16.97	33.0	-16.0									
1.880	12.9	H	0.98	8.03	19.99	33.0	-13.0									
High Ch																
1.909	10.5	V	0.98	8.05	17.57	33.0	-15.4									
1.909	12.9	H	0.98	8.05	19.94	33.0	-13.1									

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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 QPSK 3MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	12.0	V	0.98	8.05	19.11	33.0	-13.9	
1.852	13.9	H	0.98	8.05	20.96	33.0	-12.0	
Mid Ch								
1.880	11.9	V	0.98	8.03	18.97	33.0	-14.0	
1.880	13.6	H	0.98	8.03	20.69	33.0	-12.3	
High Ch								
1.909	12.0	V	0.98	8.05	19.07	33.0	-13.9	
1.909	14.0	H	0.98	8.05	21.10	33.0	-11.9	
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 #:	15U20165															
Date:	6/10/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 16QAM 3MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.852	10.9	V	0.98	8.05	18.01	33.0	-15.0									
1.852	13.0	H	0.98	8.05	20.06	33.0	-12.9									
Mid Ch																
1.880	10.9	V	0.98	8.03	17.97	33.0	-15.0									
1.880	12.5	H	0.98	8.03	19.59	33.0	-13.4									
High Ch																
1.909	10.9	V	0.98	8.05	17.97	33.0	-15.0									
1.909	13.1	H	0.98	8.05	20.14	33.0	-12.9									

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 #: 15U20165
Date: 6/13/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 2 QPSK 5MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	12.1	V	0.98	8.05	19.21	33.0	-13.8	
1.853	14.0	H	0.98	8.05	21.06	33.0	-11.9	
Mid Ch								
1.880	11.7	V	0.98	8.03	18.77	33.0	-14.2	
1.880	14.1	H	0.98	8.03	21.19	33.0	-11.8	
High Ch								
1.908	12.1	V	0.98	8.04	19.16	33.0	-13.8	
1.908	14.2	H	0.98	8.04	21.23	33.0	-11.8	

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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 5MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	11.1	V	0.98	8.05	18.21	33.0	-14.8	
1.853	12.9	H	0.98	8.05	19.96	33.0	-13.0	
Mid Ch								
1.880	10.7	V	0.98	8.03	17.77	33.0	-15.2	
1.880	13.2	H	0.98	8.03	20.29	33.0	-12.7	
High Ch								
1.908	11.0	V	0.98	8.04	18.06	33.0	-14.9	
1.908	13.2	H	0.98	8.04	20.23	33.0	-12.8	
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 QPSK 10MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.855	12.2	V	0.98	8.05	19.31	33.0	-13.7									
1.855	14.0	H	0.98	8.05	21.06	33.0	-11.9									
Mid Ch																
1.880	12.3	V	0.98	8.03	19.37	33.0	-13.6									
1.880	14.0	H	0.98	8.03	21.09	33.0	-11.9									
High Ch																
1.905	12.7	V	0.98	8.04	19.76	33.0	-13.2									
1.905	14.2	H	0.98	8.04	21.23	33.0	-11.8									
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 10MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	11.1	V	0.98	8.05	18.21	33.0	-14.8	
1.855	12.9	H	0.98	8.05	19.96	33.0	-13.0	
Mid Ch								
1.880	11.4	V	0.98	8.03	18.47	33.0	-14.5	
1.880	13.0	H	0.98	8.03	20.09	33.0	-12.9	
High Ch								
1.905	11.6	V	0.98	8.04	18.66	33.0	-14.3	
1.905	13.1	H	0.98	8.04	20.13	33.0	-12.9	
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 2 QPSK 15MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.858	12.4	V	0.98	8.04	19.50	33.0	-13.5									
1.858	14.1	H	0.98	8.04	21.15	33.0	-11.8									
Mid Ch																
1.880	12.1	V	0.98	8.03	19.17	33.0	-13.8									
1.880	14.0	H	0.98	8.03	21.09	33.0	-11.9									
High Ch																
1.903	12.6	V	0.98	8.03	19.65	33.0	-13.4									
1.903	14.2	H	0.98	8.03	21.22	33.0	-11.8									
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 15MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	11.4	V	0.98	8.04	18.50	33.0	-14.5	
1.858	13.0	H	0.98	8.04	20.05	33.0	-12.9	
Mid Ch								
1.880	11.1	V	0.98	8.03	18.17	33.0	-14.8	
1.880	13.1	H	0.98	8.03	20.19	33.0	-12.8	
High Ch								
1.903	11.5	V	0.98	8.03	18.55	33.0	-14.5	
1.903	13.2	H	0.98	8.03	20.22	33.0	-12.8	
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 QPSK 20MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	12.2	V	0.98	8.04	19.30	33.0	-13.7	
1.860	14.2	H	0.98	8.04	21.25	33.0	-11.7	
Mid Ch								
1.880	12.4	V	0.98	8.03	19.47	33.0	-13.5	
1.880	14.0	H	0.98	8.03	21.09	33.0	-11.9	
High Ch								
1.900	12.9	V	0.98	8.02	19.94	33.0	-13.1	
1.900	14.2	H	0.98	8.02	21.21	33.0	-11.8	
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 2 16QAM 20MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	11.1	V	0.98	8.04	18.20	33.0	-14.8	
1.860	13.1	H	0.98	8.04	20.15	33.0	-12.8	
Mid Ch								
1.880	11.5	V	0.98	8.03	18.57	33.0	-14.4	
1.880	13.0	H	0.98	8.03	20.09	33.0	-12.9	
High Ch								
1.900	11.7	V	0.98	8.02	18.74	33.0	-14.3	
1.900	13.1	H	0.98	8.02	20.11	33.0	-12.9	
Rev. 10.24.13								

10.4.2. LTE BAND 4

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 QPSK 1.4MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.711	10.0	V	0.95	8.27	17.32	30.0	-12.7	
1.711	13.9	H	0.95	8.27	21.25	30.0	-8.7	
Mid Ch								
1.733	9.1	V	0.95	8.23	16.33	30.0	-13.7	
1.733	13.8	H	0.95	8.23	21.03	30.0	-9.0	
High Ch								
1.754	9.3	V	0.95	8.18	16.51	30.0	-13.5	
1.754	14.1	H	0.95	8.18	21.36	30.0	-8.6	
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 4 16QAM 1.4MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.711	9.0	V	0.95	8.27	16.32	30.0	-13.7									
1.711	12.9	H	0.95	8.27	20.25	30.0	-9.7									
Mid Ch																
1.733	8.3	V	0.95	8.23	15.62	30.0	-14.4									
1.733	12.8	H	0.95	8.23	20.03	30.0	-10.0									
High Ch																
1.754	8.5	V	0.95	8.18	15.71	30.0	-14.3									
1.754	13.1	H	0.95	8.18	20.28	30.0	-9.7									
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 #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 QPSK 3MHz BW									
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)									
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes	
Low Ch									
1.712	9.7	V	0.95	8.27	17.02	30.0	-13.0		
1.712	13.9	H	0.95	8.27	21.25	30.0	-8.7		
Mid Ch									
1.733	9.5	V	0.95	8.23	16.73	30.0	-13.3		
1.733	14.0	H	0.95	8.23	21.23	30.0	-8.8		
High Ch									
1.754	9.6	V	0.95	8.18	16.81	30.0	-13.2		
1.754	14.1	H	0.95	8.18	21.36	30.0	-8.6		
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 #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 4 16QAM 3MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.712	8.6	V	0.95	8.27	15.92	30.0	-14.1	
1.712	12.3	H	0.95	8.27	19.65	30.0	-10.3	
Mid Ch								
1.733	8.6	V	0.95	8.23	15.83	30.0	-14.2	
1.733	12.3	H	0.95	8.23	19.53	30.0	-10.5	
High Ch								
1.754	8.6	V	0.95	8.18	15.81	30.0	-14.2	
1.754	12.8	H	0.95	8.18	20.06	30.0	-9.9	

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 #: 15U20165
Date: 6/13/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 4 QPSK 5MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	9.7	V	0.95	8.27	17.02	30.0	-13.0	
1.713	13.9	H	0.95	8.27	21.25	30.0	-8.8	
Mid Ch								
1.733	9.0	V	0.95	8.23	16.23	30.0	-13.8	
1.733	14.0	H	0.95	8.23	21.23	30.0	-8.8	
High Ch								
1.753	9.2	V	0.95	8.18	16.41	30.0	-13.6	
1.753	14.1	H	0.95	8.18	21.28	30.0	-8.7	

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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 16QAM 5MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.713	9.0	V	0.95	8.27	16.32	30.0	-13.7	
1.713	12.7	H	0.95	8.27	20.05	30.0	-10.0	
Mid Ch								
1.733	8.3	V	0.95	8.23	15.53	30.0	-14.5	
1.733	12.9	H	0.95	8.23	20.21	30.0	-9.8	
High Ch								
1.753	8.3	V	0.95	8.18	15.51	30.0	-14.5	
1.753	13.1	H	0.95	8.18	20.32	30.0	-9.7	
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 4 QPSK 10MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.715	9.8	V	0.95	8.26	17.11	30.0	-12.9									
1.715	14.0	H	0.95	8.26	21.32	30.0	-8.7									
Mid Ch																
1.733	10.1	V	0.95	8.23	17.33	30.0	-12.7									
1.733	14.0	H	0.95	8.23	21.23	30.0	-8.8									
High Ch																
1.750	9.5	V	0.95	8.19	16.72	30.0	-13.3									
1.750	14.0	H	0.95	8.19	21.27	30.0	-8.7									
Rev. 10.24.13																

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

UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 4 16QAM 10MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.715	8.9	V	0.95	8.26	16.21	30.0	-13.8									
1.715	12.5	H	0.95	8.26	19.82	30.0	-10.2									
Mid Ch																
1.733	9.0	V	0.95	8.23	16.23	30.0	-13.8									
1.733	11.6	H	0.95	8.23	18.84	30.0	-11.2									
High Ch																
1.750	8.5	V	0.95	8.19	15.72	30.0	-14.3									
1.750	12.3	H	0.95	8.19	19.55	30.0	-10.5									
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 4 QPSK 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.718	10.0	V	0.95	8.26	17.31	30.0	-12.7									
1.718	14.1	H	0.95	8.26	21.37	30.0	-8.6									
Mid Ch																
1.733	9.8	V	0.95	8.23	17.03	30.0	-13.0									
1.733	13.3	H	0.95	8.23	20.61	30.0	-9.4									
High Ch																
1.748	9.2	V	0.95	8.19	16.42	30.0	-13.6									
1.748	14.0	H	0.95	8.19	21.21	30.0	-8.8									
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 16QAM 15MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.718	9.0	V	0.95	8.26	16.31	30.0	-13.7	
1.718	12.3	H	0.95	8.26	19.59	30.0	-10.4	
Mid Ch								
1.733	8.6	V	0.95	8.23	15.83	30.0	-14.2	
1.733	11.9	H	0.95	8.23	19.13	30.0	-10.9	
High Ch								
1.748	8.2	V	0.95	8.19	15.42	30.0	-14.6	
1.748	11.9	H	0.95	8.19	19.10	30.0	-10.9	
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 QPSK 20MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	9.7	V	0.95	8.25	17.00	30.0	-13.0	
1.720	14.2	H	0.95	8.25	21.46	30.0	-8.5	
Mid Ch								
1.733	9.8	V	0.95	8.23	17.03	30.0	-13.0	
1.733	13.7	H	0.95	8.23	20.99	30.0	-9.0	
High Ch								
1.745	9.5	V	0.95	8.20	16.73	30.0	-13.3	
1.745	13.9	H	0.95	8.20	21.18	30.0	-8.8	
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 #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 4 16QAM 20MHz BW							
<u>Test Equipment:</u>								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.720	8.8	V	0.95	8.25	16.10	30.0	-13.9	
1.720	13.1	H	0.95	8.25	20.36	30.0	-9.6	
Mid Ch								
1.733	8.7	V	0.95	8.23	15.93	30.0	-14.1	
1.733	12.9	H	0.95	8.23	20.19	30.0	-9.8	
High Ch								
1.745	8.6	V	0.95	8.20	15.83	30.0	-14.2	
1.745	13.2	H	0.95	8.20	20.46	30.0	-9.5	
Rev. 10.24.13								

10.4.3. LTE BAND 5

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 5 QPSK 1.4MHz BW																			
<u>Test Equipment:</u>																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
f MHz	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																				
824.70	16.95	V	0.6	0.0	16.33	18.48	38.45	40.60	-22.1											
824.70	-5.63	H	0.6	0.0	-6.25	4.10	38.45	40.60	-44.7											
Mid Ch																				
836.50	17.68	V	0.6	0.0	17.07	19.22	38.45	40.60	-21.4											
836.50	-3.62	H	0.6	0.0	4.24	-2.09	38.45	40.60	-42.7											
High Ch																				
848.30	19.85	V	0.6	0.0	19.23	21.38	38.45	40.60	-19.2											
848.30	-3.30	H	0.6	0.0	-3.92	-1.77	38.45	40.60	-42.4											
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 #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 1.4MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	16.13	V	0.6	0.0	15.51	17.66	38.45	40.60	-22.9	
824.70	-5.63	H	0.6	0.0	-6.25	-4.10	38.45	40.60	-44.7	
Mid Ch										
836.50	16.83	V	0.6	0.0	16.22	18.37	38.45	40.60	-22.2	
836.50	4.12	H	0.6	0.0	-4.74	-2.59	38.45	40.60	-43.2	
High Ch										
848.30	19.31	V	0.6	0.0	18.69	20.84	38.45	40.60	-19.8	
848.30	-3.50	H	0.6	0.0	-4.12	-1.97	38.45	40.60	-42.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	16.83	V	0.6	0.0	16.21	18.36	38.45	40.60	-22.2	
825.50	-5.63	H	0.6	0.0	6.25	4.10	38.45	40.60	-44.7	
Mid Ch										
836.50	17.48	V	0.6	0.0	16.87	19.02	38.45	40.60	-21.6	
836.50	-5.22	H	0.6	0.0	5.84	-3.69	38.45	40.60	-44.3	
High Ch										
847.50	19.75	V	0.6	0.0	19.13	21.28	38.45	40.60	-19.3	
847.50	-4.80	H	0.6	0.0	5.42	-3.27	38.45	40.60	-43.9	
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16QAM EIRP POWER FOR LTE BAND 5 (3.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	16.15	V	0.6	0.0	15.53	17.68	38.45	40.60	-22.9	
825.50	-7.13	H	0.6	0.0	7.75	5.60	38.45	40.60	-46.2	
Mid Ch										
836.50	16.84	V	0.6	0.0	16.23	18.38	38.45	40.60	-22.2	
836.50	-5.92	H	0.6	0.0	6.54	4.39	38.45	40.60	-45.0	
High Ch										
847.50	18.85	V	0.6	0.0	18.23	20.38	38.45	40.60	-20.2	
847.50	-5.84	H	0.6	0.0	6.46	4.31	38.45	40.60	-44.9	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 5MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	17.24	V	0.6	0.0	16.62	18.77	38.45	40.60	-21.8	
826.50	-8.63	H	0.6	0.0	-9.25	-7.10	38.45	40.60	-47.7	
Mid Ch										
836.50	17.38	V	0.6	0.0	16.77	18.92	38.45	40.60	-21.7	
836.50	-8.12	H	0.6	0.0	-8.74	-6.59	38.45	40.60	-47.2	
High Ch										
846.50	19.39	V	0.6	0.0	18.77	20.92	38.45	40.60	-19.7	
846.50	-7.90	H	0.6	0.0	-8.52	-6.37	38.45	40.60	-47.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 5 16QAM 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	17.12	V	0.6	0.0	16.50	18.65	38.45	40.60	-22.0											
826.50	-7.73	H	0.6	0.0	8.35	6.20	38.45	40.60	-46.8											
Mid Ch																				
836.50	17.02	V	0.6	0.0	16.41	18.56	38.45	40.60	-22.0											
836.50	-7.12	H	0.6	0.0	-7.74	-5.59	38.45	40.60	-46.2											
High Ch																				
846.50	18.86	V	0.6	0.0	18.24	20.39	38.45	40.60	-20.2											
846.50	-4.90	H	0.6	0.0	-5.52	-3.37	38.45	40.60	-44.0											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 5 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
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	16.95	V	0.6	0.0	16.33	18.48	38.45	40.60	-22.1	
829.00	-7.63	H	0.6	0.0	-8.25	-6.10	38.45	40.60	-46.7	
Mid Ch										
836.50	16.96	V	0.6	0.0	16.35	18.50	38.45	40.60	-22.1	
836.50	-6.50	H	0.6	0.0	-7.12	-4.97	38.45	40.60	-45.6	
High Ch										
844.00	18.77	V	0.6	0.0	18.15	20.30	38.45	40.60	-20.3	
844.00	-6.10	H	0.6	0.0	-6.72	-4.57	38.45	40.60	-45.2	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 5 16QAM 10MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: DipoleT416, 4ft SMA Cable																				
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	16.34	V	0.6	0.0	15.72	17.87	38.45	40.60	-22.7											
829.00	-5.96	H	0.6	0.0	-6.58	-4.43	38.45	40.60	-45.0											
Mid Ch																				
836.50	16.85	V	0.6	0.0	16.24	18.39	38.45	40.60	-22.2											
836.50	-4.84	H	0.6	0.0	-5.46	-3.31	38.45	40.60	-43.9											
High Ch																				
844.00	17.99	V	0.6	0.0	17.37	19.52	38.45	40.60	-21.1											
844.00	-4.30	H	0.6	0.0	-4.92	-2.77	38.45	40.60	-43.4											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 7 QPSK 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.503	19.7	V	1.15	9.34	27.85	33.0	-5.2	
2.503	15.8	H	1.15	9.34	23.94	33.0	-9.1	
Mid Ch								
2.535	20.3	V	1.16	9.38	28.51	33.0	-4.5	
2.535	16.7	H	1.16	9.38	24.90	33.0	-8.1	
High Ch								
2.568	20.0	V	1.17	9.43	28.23	33.0	-4.8	
2.568	16.4	H	1.17	9.43	24.68	33.0	-8.3	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 7 16QAM 5MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.503	18.3	V	1.15	9.34	26.51	33.0	-6.5									
2.503	14.8	H	1.15	9.34	23.03	33.0	-10.0									
Mid Ch																
2.535	19.4	V	1.16	9.38	27.61	33.0	-5.4									
2.535	15.6	H	1.16	9.38	23.78	33.0	-9.2									
High Ch																
2.568	18.9	V	1.17	9.43	27.11	33.0	-5.9									
2.568	15.5	H	1.17	9.43	23.76	33.0	-9.2									
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QPSK EIRP POWER FOR LTE BAND 7 (10.0MHZ BANDWIDTH)**High Frequency Substitution Measurement
UL Fremont Radiated Chamber G**

Company:
Project #: 15U20165
Date: 6/13/2015
Test Engineer: T Wang
Configuration: EUT only
Mode: LTE Band 7 QPSK 10MHz BW

Test Equipment:

Receiving: Horn T862, and Chamber G SMA Cables

Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
2.505	19.7	V	1.15	9.34	27.85	33.0	-5.1	
2.505	15.9	H	1.15	9.34	24.04	33.0	-9.0	
Mid Ch								
2.535	20.2	V	1.16	9.38	28.41	33.0	-4.6	
2.535	16.4	H	1.16	9.38	24.60	33.0	-8.4	
High Ch								
2.565	19.8	V	1.17	9.43	28.03	33.0	-5.0	
2.565	15.6	H	1.17	9.43	23.88	33.0	-9.1	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 7 16QAM 10MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.505	18.7	V	1.15	9.34	26.85	33.0	-6.1									
2.505	15.0	H	1.15	9.34	23.14	33.0	-9.9									
Mid Ch																
2.535	19.2	V	1.16	9.38	27.41	33.0	-5.6									
2.535	15.3	H	1.16	9.38	23.50	33.0	-9.5									
High Ch																
2.565	18.8	V	1.17	9.43	27.03	33.0	-6.0									
2.565	14.7	H	1.17	9.43	22.98	33.0	-10.0									
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QPSK EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT Only															
Mode:	LTE Band 7 QPSK 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.508	19.9	V	1.15	9.34	28.05	33.0	-4.9									
2.508	16.4	H	1.15	9.34	24.54	33.0	-8.5									
Mid Ch																
2.535	20.5	V	1.16	9.38	28.71	33.0	-4.3									
2.535	16.8	H	1.16	9.38	25.00	33.0	-8.0									
High Ch																
2.563	19.9	V	1.17	9.42	28.12	33.0	-4.9									
2.563	15.9	H	1.17	9.42	24.17	33.0	-8.8									
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16QAM EIRP POWER FOR LTE BAND 7 (15.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT Only															
Mode:	LTE Band 7 16QAM 15MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.508	19.0	V	1.15	9.34	27.15	33.0	-5.8									
2.508	15.4	H	1.15	9.34	23.54	33.0	-9.5									
Mid Ch																
2.535	19.4	V	1.16	9.38	27.61	33.0	-5.4									
2.535	15.8	H	1.16	9.38	24.00	33.0	-9.0									
High Ch																
2.563	19.0	V	1.17	9.42	27.22	33.0	-5.8									
2.563	14.8	H	1.17	9.42	23.07	33.0	-9.9									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT Only															
Mode:	LTE Band 7 QPSK 20MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.510	20.0	V	1.15	9.35	28.16	33.0	-4.8									
2.510	16.6	H	1.15	9.35	24.75	33.0	-8.3									
Mid Ch																
2.535	20.3	V	1.16	9.38	28.51	33.0	-4.5									
2.535	16.9	H	1.16	9.38	25.10	33.0	-7.9									
High Ch																
2.560	20.1	V	1.17	9.42	28.32	33.0	-4.7									
2.560	16.1	H	1.17	9.42	24.37	33.0	-8.6									

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT Only															
Mode:	LTE Band 7 16QAM 20MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
2.510	19.0	V	1.15	9.35	27.16	33.0	-5.8									
2.510	15.5	H	1.15	9.35	23.65	33.0	-9.4									
Mid Ch																
2.535	19.3	V	1.16	9.38	27.51	33.0	-5.5									
2.535	15.8	H	1.16	9.38	24.00	33.0	-9.0									
High Ch																
2.560	19.0	V	1.17	9.42	27.22	33.0	-5.8									
2.560	15.2	H	1.17	9.42	23.47	33.0	-9.5									

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10.4.5. LTE BAND 12

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 QPSK 1.4MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
f MHz	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																				
699.70	18.30	V	0.55	0.0	17.75	19.90	34.77	36.99	-17.1											
699.70	-7.82	H	0.55	0.0	-8.37	-6.22	34.77	36.99	-43.2											
Mid Ch																				
707.50	18.17	V	0.55	0.0	17.62	19.77	34.77	36.99	-17.2											
707.50	-6.27	H	0.55	0.0	-6.82	-4.67	34.77	36.99	-41.7											
High Ch																				
715.30	18.27	V	0.55	0.0	17.72	19.87	34.77	36.99	-17.1											
715.30	-7.58	H	0.55	0.0	-8.13	-5.98	34.77	36.99	-43.0											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 16QAM 1.4MHz BW																			
<u>Test Equipment:</u>																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	17.42	V	0.55	0.0	16.87	19.02	34.77	36.99	-18.0											
699.70	-8.62	H	0.55	0.0	-9.17	-7.02	34.77	36.99	-44.0											
Mid Ch																				
707.50	16.87	V	0.55	0.0	16.32	18.47	34.77	36.99	-18.5											
707.50	-7.27	H	0.55	0.0	-7.82	-5.67	34.77	36.99	-42.7											
High Ch																				
715.30	17.27	V	0.55	0.0	16.72	18.87	34.77	36.99	-18.1											
715.30	-8.36	H	0.55	0.0	-8.91	-6.76	34.77	36.99	-43.8											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: DipoleT416, 4ft SMA Cable										
f MHz	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										
700.50	19.12	V	0.55	0.0	18.57	20.72	34.77	36.99	-16.3	
700.50	-6.72	H	0.55	0.0	-7.27	-5.12	34.77	36.99	-42.1	
Mid Ch										
707.50	19.31	V	0.55	0.0	18.76	20.91	34.77	36.99	-16.1	
707.50	-6.47	H	0.55	0.0	-7.02	-4.87	34.77	36.99	-41.9	
High Ch										
714.50	18.87	V	0.55	0.0	18.32	20.47	34.77	36.99	-16.5	
714.50	-7.36	H	0.55	0.0	-7.91	-5.76	34.77	36.99	-42.8	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 16QAM 3MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
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	18.97	V	0.55	0.0	18.42	20.57	34.77	36.99	-16.4	
700.50	-7.62	H	0.55	0.0	-8.17	-6.02	34.77	36.99	-43.0	
Mid Ch										
707.50	19.07	V	0.55	0.0	18.52	20.67	34.77	36.99	-16.3	
707.50	-7.47	H	0.55	0.0	-8.02	-5.87	34.77	36.99	-42.9	
High Ch										
714.50	18.87	V	0.55	0.0	18.32	20.47	34.77	36.99	-16.5	
714.50	-8.36	H	0.55	0.0	-8.91	-6.76	34.77	36.99	-43.8	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 QPSK 5MHz BW																			
<u>Test Equipment:</u>																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	18.70	V	0.55	0.0	18.15	20.30	34.77	36.99	-16.7											
701.50	-6.62	H	0.55	0.0	-7.17	-5.02	34.77	36.99	-42.0											
Mid Ch																				
707.50	18.87	V	0.55	0.0	18.32	20.47	34.77	36.99	-16.5											
707.50	-6.47	H	0.55	0.0	-7.02	-4.87	34.77	36.99	-41.9											
High Ch																				
713.50	19.07	V	0.55	0.0	18.52	20.67	34.77	36.99	-16.3											
713.50	-7.16	H	0.55	0.0	-7.71	-5.56	34.77	36.99	-42.6											
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16QAM EIRP POWER FOR LTE BAND 12 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 16QAM 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
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	17.98	V	0.55	0.0	17.43	19.58	34.77	36.99	-17.4											
701.50	-7.62	H	0.55	0.0	-8.17	-6.02	34.77	36.99	-43.0											
Mid Ch																				
707.50	18.32	V	0.55	0.0	17.77	19.92	34.77	36.99	-17.1											
707.50	-7.47	H	0.55	0.0	-8.02	-5.87	34.77	36.99	-42.9											
High Ch																				
713.50	18.27	V	0.55	0.0	17.72	19.87	34.77	36.99	-17.1											
713.50	-8.24	H	0.55	0.0	-8.79	-6.64	34.77	36.99	-43.6											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 12 QPSK 10MHz BW										
Test Equipment: Receiving: Sunol T899, and Chamber G Cable Substitution: Dipole T416, 4ft SMA Cable										
f MHz	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										
704.00	18.72	V	0.55	0.0	18.17	20.32	34.77	36.99	-16.7	
704.00	-5.62	H	0.55	0.0	-6.17	-4.02	34.77	36.99	-41.0	
Mid Ch										
707.50	18.89	V	0.55	0.0	18.34	20.49	34.77	36.99	-16.5	
707.50	4.97	H	0.55	0.0	-5.52	-3.37	34.77	36.99	-40.4	
High Ch										
711.00	18.67	V	0.55	0.0	18.12	20.27	34.77	36.99	-16.7	
711.00	-5.36	H	0.55	0.0	-5.91	-3.76	34.77	36.99	-40.8	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 12 16QAM 10MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: DipoleT416, 4ft SMA Cable																				
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	17.92	V	0.55	0.0	17.37	19.52	34.77	36.99	-17.5											
704.00	-7.32	H	0.55	0.0	-7.87	-5.72	34.77	36.99	-42.7											
Mid Ch																				
707.50	18.03	V	0.55	0.0	17.48	19.63	34.77	36.99	-17.4											
707.50	-6.67	H	0.55	0.0	-7.22	-5.07	34.77	36.99	-42.1											
High Ch																				
711.00	17.87	V	0.55	0.0	17.32	19.47	34.77	36.99	-17.5											
711.00	-6.86	H	0.55	0.0	-7.41	-5.26	34.77	36.99	-42.3											
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10.4.6. LTE BAND 13**QPSK EIRP POWER FOR LTE BAND 13 (5.0MHZ BANDWIDTH)**

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 13 QPSK 5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes										
Low Ch																				
779.50	18.93	V	0.55	0.0	18.38	20.53	34.77	36.99	-16.5											
779.50	-0.89	H	0.55	0.0	-1.44	0.71	34.77	36.99	-36.3											
Mid Ch																				
782.00	19.15	V	0.55	0.0	18.60	20.75	34.77	36.99	-16.2											
782.00	-0.83	H	0.55	0.0	-1.38	0.77	34.77	36.99	-36.2											
High Ch																				
784.50	19.27	V	0.55	0.0	18.72	20.87	34.77	36.99	-16.1											
784.50	-0.15	H	0.55	0.0	-0.70	1.45	34.77	36.99	-35.5											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/10/2015																			
Test Engineer:	E. Lee																			
Configuration:	EUT only																			
Mode:	LTE Band 13 16QAM5MHz BW																			
Test Equipment:																				
Receiving: Sunol T899, and Chamber G Cable																				
Substitution: Dipole T416, 4ft SMA Cable																				
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes										
Low Ch																				
779.50	18.03	V	0.55	0.0	17.48	19.63	34.77	36.99	-17.4											
779.50	-1.94	H	0.55	0.0	-2.49	-0.34	34.77	36.99	-37.3											
Mid Ch																				
782.00	18.05	V	0.55	0.0	17.50	19.65	34.77	36.99	-17.3											
782.00	-1.83	H	0.55	0.0	-2.38	-0.23	34.77	36.99	-37.2											
High Ch																				
784.50	18.87	V	0.55	0.0	18.32	20.47	34.77	36.99	-16.5											
784.50	-0.75	H	0.55	0.0	-1.30	0.85	34.77	36.99	-36.1											

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 QPSK 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft SMA Cable										
f MHz	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
782.00	18.79	V	0.55	0.0	18.24	20.39	34.77	36.99	-16.6	
782.00	-1.33	H	0.55	0.0	-1.88	0.27	34.77	36.99	-36.7	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/10/2015 Test Engineer: E. Lee Configuration: EUT only Mode: LTE Band 13 16QAM 10MHz BW										
Test Equipment:										
Receiving: Sunol T899, and Chamber G Cable										
Substitution: Dipole T416, 4ft SMA Cable										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
782.00	17.95	V	0.55	0.0	17.40	19.55	34.77	36.99	-17.4	
782.00	-1.83	H	0.55	0.0	-2.38	-0.23	34.77	36.99	-37.2	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
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	17.41	V	0.55	0.0	16.86	19.01	34.77	36.99	-18.0											
706.50	-1.78	H	0.55	0.0	-2.33	-0.18	34.77	36.99	-37.2											
Mid Ch																				
710.00	17.22	V	0.55	0.0	16.67	18.82	34.77	36.99	-18.2											
710.00	-2.07	H	0.55	0.0	-2.62	-0.47	34.77	36.99	-37.5											
High Ch																				
713.50	18.15	V	0.55	0.0	17.60	19.75	34.77	36.99	-17.2											
713.50	-1.46	H	0.55	0.0	-2.01	0.14	34.77	36.99	-36.8											
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16QAM EIRP POWER FOR LTE BAND 17 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																				
Company:																				
Project #:	15U20165																			
Date:	6/13/2015																			
Test Engineer:	E. Lee																			
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	16.81	V	0.55	0.0	16.26	18.41	34.77	36.99	-18.6											
706.50	-2.78	H	0.55	0.0	-3.33	-1.18	34.77	36.99	-38.2											
Mid Ch																				
710.00	16.72	V	0.55	0.0	16.17	18.32	34.77	36.99	-18.7											
710.00	-2.57	H	0.55	0.0	-3.12	-0.97	34.77	36.99	-38.0											
High Ch																				
713.50	17.55	V	0.55	0.0	17.00	19.15	34.77	36.99	-17.8											
713.50	-2.46	H	0.55	0.0	-3.01	-0.86	34.77	36.99	-37.8											
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QPSK EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company:										
Project #:	15U20165									
Date:	6/13/2015									
Test Engineer:	E. Lee									
Configuration:	EUT only									
Mode:	LTE Band 17 QPSK 10MHz BW									
<u>Test Equipment:</u>										
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 (dBi)	ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
710.00	17.82	V	0.55	0.0	17.27	19.42	34.77	36.99	-17.6	
710.00	-2.07	H	0.55	0.0	-2.62	-0.47	34.77	36.99	-37.5	
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16QAM EIRP POWER FOR LTE BAND 17 (10.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G										
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: E. Lee 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	17.22	V	0.55	0.0	16.67	18.82	34.77	36.99	-18.2	
710.00	-2.67	H	0.55	0.0	-3.22	-1.07	34.77	36.99	-38.1	

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10.4.8. LTE BAND 25

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 QPSK 1.4MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.851	12.7	V	0.98	8.05	19.76	33.0	-13.2									
1.851	13.5	H	0.98	8.05	20.60	33.0	-12.4									
Mid Ch																
1.883	12.4	V	0.98	8.03	19.42	33.0	-13.6									
1.883	13.4	H	0.98	8.03	20.46	33.0	-12.5									
High Ch																
1.914	12.5	V	0.98	8.07	19.59	33.0	-13.4									
1.914	13.4	H	0.98	8.07	20.48	33.0	-12.5									
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 #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 16QAM 1.4MHz BW															
<u>Test Equipment:</u>																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.851	12.6	V	0.98	8.05	19.66	33.0	-13.3									
1.851	12.5	H	0.98	8.05	19.60	33.0	-13.4									
Mid Ch																
1.883	11.5	V	0.98	8.03	18.52	33.0	-14.5									
1.883	12.5	H	0.98	8.03	19.56	33.0	-13.4									
High Ch																
1.914	11.6	V	0.98	8.07	18.69	33.0	-14.3									
1.914	12.3	H	0.98	8.07	19.38	33.0	-13.6									
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 #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 3MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	12.2	V	0.98	8.05	19.26	33.0	-13.7	
1.852	12.9	H	0.98	8.05	20.00	33.0	-13.0	
Mid Ch								
1.883	11.2	V	0.98	8.03	18.22	33.0	-14.8	
1.883	13.3	H	0.98	8.03	20.36	33.0	-12.6	
High Ch								
1.914	11.6	V	0.98	8.07	18.69	33.0	-14.3	
1.914	12.9	H	0.98	8.07	19.98	33.0	-13.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company:								
Project #:	15U20165							
Date:	6/13/2015							
Test Engineer:	T Wang							
Configuration:	EUT only							
Mode:	LTE Band 25 16QAM 3MHz BW							
Test Equipment:								
Receiving: Horn T862, and Chamber G SMA Cables								
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.852	11.1	V	0.98	8.05	18.16	33.0	-14.8	
1.852	11.9	H	0.98	8.05	19.00	33.0	-14.0	
Mid Ch								
1.883	10.5	V	0.98	8.03	17.52	33.0	-15.5	
1.883	12.2	H	0.98	8.03	19.23	33.0	-13.8	
High Ch								
1.914	10.7	V	0.98	8.07	17.81	33.0	-15.2	
1.914	11.5	H	0.98	8.07	18.58	33.0	-14.4	
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QPSK EIRP POWER FOR LTE BAND 25 (5.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G																
Company:																
Project #:	15U20165															
Date:	6/13/2015															
Test Engineer:	T Wang															
Configuration:	EUT only															
Mode:	LTE Band 25 QPSK 5MHz BW															
Test Equipment:																
Receiving: Horn T862, and Chamber G SMA Cables																
Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)																
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes								
Low Ch																
1.853	12.1	V	0.98	8.05	19.16	33.0	-13.8									
1.853	13.2	H	0.98	8.05	20.30	33.0	-12.7									
Mid Ch																
1.883	11.3	V	0.98	8.03	18.32	33.0	-14.7									
1.883	13.1	H	0.98	8.03	20.16	33.0	-12.8									
High Ch																
1.913	11.6	V	0.98	8.06	18.68	33.0	-14.3									
1.913	13.5	H	0.98	8.06	20.57	33.0	-12.4									
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 #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 5MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.853	11.2	V	0.98	8.05	18.26	33.0	-14.7	
1.853	12.2	H	0.98	8.05	19.30	33.0	-13.7	
Mid Ch								
1.883	10.4	V	0.98	8.03	17.42	33.0	-15.6	
1.883	12.1	H	0.98	8.03	19.16	33.0	-13.8	
High Ch								
1.913	10.7	V	0.98	8.06	17.76	33.0	-15.2	
1.913	12.5	H	0.98	8.06	19.57	33.0	-13.4	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 10MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	11.8	V	0.98	8.05	18.86	33.0	-14.1	
1.855	13.0	H	0.98	8.05	20.10	33.0	-12.9	
Mid Ch								
1.883	11.1	V	0.98	8.03	18.10	33.0	-14.9	
1.883	13.2	H	0.98	8.03	20.24	33.0	-12.8	
High Ch								
1.910	11.4	V	0.98	8.05	18.47	33.0	-14.5	
1.910	13.3	H	0.98	8.05	20.37	33.0	-12.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 10MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.855	10.9	V	0.98	8.05	17.96	33.0	-15.0	
1.855	11.4	H	0.98	8.05	18.50	33.0	-14.5	
Mid Ch								
1.883	10.2	V	0.98	8.03	17.22	33.0	-15.8	
1.883	11.2	H	0.98	8.03	18.26	33.0	-14.7	
High Ch								
1.910	10.7	V	0.98	8.05	17.77	33.0	-15.2	
1.910	12.3	H	0.98	8.05	19.36	33.0	-13.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 15MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	11.7	V	0.98	8.04	18.75	33.0	-14.2	
1.858	13.1	H	0.98	8.04	20.16	33.0	-12.8	
Mid Ch								
1.883	11.6	V	0.98	8.03	18.62	33.0	-14.4	
1.883	13.3	H	0.98	8.03	20.36	33.0	-12.6	
High Ch								
1.908	11.9	V	0.98	8.04	18.96	33.0	-14.0	
1.908	13.0	H	0.98	8.04	20.01	33.0	-13.0	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 15MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.858	10.7	V	0.98	8.04	17.75	33.0	-15.2	
1.858	12.1	H	0.98	8.04	19.19	33.0	-13.8	
Mid Ch								
1.883	10.2	V	0.98	8.03	17.28	33.0	-15.7	
1.883	12.1	H	0.98	8.03	19.16	33.0	-13.8	
High Ch								
1.908	10.6	V	0.98	8.04	17.66	33.0	-15.3	
1.908	11.9	H	0.98	8.04	18.94	33.0	-14.1	
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QPSK EIRP POWER FOR LTE BAND 25 (20.0MHZ BANDWIDTH)

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 QPSK 20MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	12.0	V	0.98	8.04	19.05	33.0	-13.9	
1.860	13.0	H	0.98	8.04	20.09	33.0	-12.9	
Mid Ch								
1.883	11.9	V	0.98	8.03	18.92	33.0	-14.1	
1.883	13.3	H	0.98	8.03	20.36	33.0	-12.6	
High Ch								
1.905	12.2	V	0.98	8.04	19.26	33.0	-13.7	
1.905	13.4	H	0.98	8.04	20.45	33.0	-12.6	

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

High Frequency Substitution Measurement UL Fremont Radiated Chamber G								
Company: Project #: 15U20165 Date: 6/13/2015 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 25 16QAM 20MHz BW								
Test Equipment: Receiving: Horn T862, and Chamber G SMA Cables Substitution: Horn T60 Substitution, 4ft SMA Cable (s/n 245182-003; SUCOFLEX 104PEA)								
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
Low Ch								
1.860	10.9	V	0.98	8.04	17.95	33.0	-15.0	
1.860	11.9	H	0.98	8.04	18.99	33.0	-14.0	
Mid Ch								
1.883	11.1	V	0.98	8.03	18.12	33.0	-14.9	
1.883	12.2	H	0.98	8.03	19.26	33.0	-13.7	
High Ch								
1.905	11.2	V	0.98	8.04	18.26	33.0	-14.7	
1.905	12.5	H	0.98	8.04	19.55	33.0	-13.5	

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