10.4.9. LTE BAND 26

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

Company:										
roject #:		15U20165								
ate:		6/13/2015								
est Engir		E. Lee								
onfigura		EUT only								
/lode:		LTE Band 26 QI	PSK 1.4MHz BW							
abstitutit	on. Dipole on.	00022111,41	tonix ousie (si	n 245182-003; SUC						
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	EIRP	1	EIRP Limit	Margin	Notes
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
GHz Low Ch	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	Notes
GHz Low Ch 814.70	(dBm)	(H/V) V	(dB) 0.62	(dBi) 0.0	(dBm) 16.51	(dBm) 18.66	(dBm) 38.45	(dBm) 40.60	(dB) -21.9	Notes
GHz Low Ch	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	Notes
GHz Low Ch 814.70	(dBm)	(H/V) V	(dB) 0.62	(dBi) 0.0	(dBm) 16.51	(dBm) 18.66	(dBm) 38.45	(dBm) 40.60	(dB) -21.9	Notes
GHz Low Ch 814.70 814.70 Mid Ch 819.00	(dBm) 17.13 -5.88 17.86	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 16.51 -6.50 17.24	(dBm) 18.66 4.35 19.39	(dBm) 38.45 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -21.9 -45.0 -21.2	Notes
GHz Low Ch 814.70 814.70 Mid Ch	(dBm) 17.13 -5.88	(H/V) V H	(dB) 0.62 0.62	(dBi) 0.0 0.0	(dBm) 16.51 -6.50	(dBm) 18.66 -4.35	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -21.9 -45.0	Notes
GHz Low Ch 814.70 814.70 Mid Ch 819.00 819.00	(dBm) 17.13 -5.88 17.86	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 16.51 -6.50 17.24	(dBm) 18.66 4.35 19.39	(dBm) 38.45 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -21.9 -45.0 -21.2	Notes
GHz Low Ch 814.70 814.70 Mid Ch 819.00	(dBm) 17.13 -5.88 17.86	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 16.51 -6.50 17.24	(dBm) 18.66 4.35 19.39	(dBm) 38.45 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -21.9 -45.0 -21.2	Notes

Page 1801 of 1995

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

Company										
Project #:		15U20165								
Project #: Date:		6/13/2015								
Test Engi		E. Lee								
Configura		EUT only								
/lode:	I	LIE Band 26 16	6QAM 1.4MHz BW							
est Equi	ipment:									
	g: Sunol T899, a	and Chamber	G Cable							
				n 245182-003; SUCO		(A)				
Jupsuluu	ion. Dipole ana.	00022117,41	L SIMA Cable (SI	1240102-000, 3000		.~)				
4	SC reading	Ant Pol	Cable Lose	Antenna Cain	EDD	EIDD	EDD imit	EIDD imit	Margin	Notes
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	EIRP			Margin	Notes
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
GHz Low Ch	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	Notes
GHz Low Ch 814.70	(dBm) 16.48	(H/V) V	(dB) 0.62	(dBi) 0.0	(dBm) 15.86	(dBm) 18.01	(dBm) 38.45	(dBm) 40.60	(dB) -22.6	Notes
GHz Low Ch	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	Notes
GHz Low Ch 814.70 814.70	(dBm) 16.48	(H/V) V	(dB) 0.62	(dBi) 0.0	(dBm) 15.86	(dBm) 18.01	(dBm) 38.45	(dBm) 40.60	(dB) -22.6	Notes
GHz Low Ch 814.70	(dBm) 16.48	(H/V) V	(dB) 0.62	(dBi) 0.0	(dBm) 15.86	(dBm) 18.01	(dBm) 38.45	(dBm) 40.60	(dB) -22.6	Notes
GHz Low Ch 814.70 814.70 Mid Ch	(dBm) 16.48 -6.67	(H/V) V H	(dB) 0.62 0.62	(dBi) 0.0 0.0	(dBm) 15.86 -7.29	(dBm) 18.01 -5.14	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -22.6 -45.7	Notes
GHz Low Ch 814.70 814.70 Mid Ch 819.00 819.00	(dBm) 16.48 -6.67 16.96 -6.67	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 15.86 -7.29 16.34	(dBm) 18.01 -5.14 18.49	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.6 -45.7 -22.1	Notes
GHz Low Ch 814.70 814.70 Mid Ch 819.00 819.00 High Ch	(dBm) 16.48 -6.67 16.96 -6.67	(H/V) V H V H	(dB) 0.62 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0 0.0	(dBm) 15.86 -7.29 16.34 -7.29	(dBm) 18.01 -5.14 18.49 -5.14	(dBm) 38.45 38.45 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60 40.60	(dB) -22.6 -45.7 -22.1 -22.1 -45.7	Notes
GHz Low Ch 814.70 814.70 Mid Ch 819.00 819.00	(dBm) 16.48 -6.67 16.96 -6.67	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 15.86 -7.29 16.34	(dBm) 18.01 -5.14 18.49	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.6 -45.7 -22.1	Notes

Page 1802 of 1995

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

company: roject #: late: est Engineer	(15U20165 5/13/2015								
est Engineer		\$/13/2016								
	er: i	E. Lee								
onfiguration:	n: I	EUT only								
lode:	I	TE Band 26 Q	PSK 3MHz BW							
f SG				n 245182-003; SUCC Antenna Gain (dBi)	FLEX 104PEA) ERP (dBm)	EIRP (dBm)	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
Low Ch										
	17.92	V	0.62	0.0	17.30	19.45	38.45	40.60	-21.1	
815.50	-5.67	Н	0.62	0.0	-6.29	-4.14	38.45	40.60	-44.7	
Mid Ch										
	17.36	V	0.62	0.0	16.74	18.89	38.45	40.60	-21.7	
819.00	-5.57	Н	0.62	0.0	-6.19	-4.04	38.45	40.60	-44.6	
II-L CL								ļ		
High Ch 822.50	17.52	V	0.62	0.0	16.90	19.05	38.45	40.60	-21.5	
822.50	-5.62	H	0.62	0.0	-6.24	-4.09	38.45	40.60	-44.7	

Page 1803 of 1995

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

ompany:										
oject #:		15U20165								
ate:		6/13/2015								
est Engi	neer:	E. Lee								
onfigura	tion:	EUT only								
ode:		LTE Band 26 16	iqam 3MHz BW							
	g: Sunol T899, a			n 245182-003; SUCC		٨				
upstituti	on. Dipole 3/14.									
		Aut Dal	· · ·	· · · · · ·		·	EDD Limit		Manada	Netes
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	EIRP		EIRP Limit	Margin	Notes
GHz	SG reading (dBm)	Ant. Pol. (H/V)	· · ·	· · · · · ·		·	ERP Limit (dBm)	EIRP Limit (dBm)	Margin (dB)	Notes
GHz Low Ch	(dBm)	(H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	(dBm)	(dBm)	(dB)	Notes
GHz Low Ch 815.50	(dBm) 16.19	(H/V) V	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm) 15.57	EIRP (dBm)	(dBm) 38.45	(dBm) 40.60	(dB) -22.9	Notes
GHz Low Ch	(dBm)	(H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	(dBm)	(dBm)	(dB)	Notes
GHz Low Ch 815.50 815.50 Mid Ch	(dBm) 16.19 -6.54	(Н/V) V H	Cable Loss (dB) 0.62 0.62	Antenna Gain (dBi) 0.0 0.0	ERP (dBm) 15.57 -7.16	EIRP (dBm) 17.72 -5.01	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -22.9 -45.6	Notes
GHz Low Ch 815.50 815.50 Mid Ch 819.00	(dBm) 16.19 -6.54 16.54	(H/V) V H	Cable Loss (dB) 0.62 0.62 0.62	Antenna Gain (dBi) 0.0 0.0 0.0	ERP (dBm) 15.57 -7.16 15.92	EIRP (dBm) 17.72 -5.01 18.07	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.9 -45.6 -22.5	Notes
GHz Low Ch 815.50 815.50 Mid Ch	(dBm) 16.19 -6.54	(Н/V) V H	Cable Loss (dB) 0.62 0.62	Antenna Gain (dBi) 0.0 0.0	ERP (dBm) 15.57 -7.16	EIRP (dBm) 17.72 -5.01	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -22.9 -45.6	Notes
GHz Low Ch 815.50 815.50 Mid Ch 819.00 819.00	(dBm) 16.19 -6.54 16.54	(H/V) V H	Cable Loss (dB) 0.62 0.62 0.62	Antenna Gain (dBi) 0.0 0.0 0.0	ERP (dBm) 15.57 -7.16 15.92	EIRP (dBm) 17.72 -5.01 18.07	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.9 -45.6 -22.5	Notes
GHz Low Ch 815.50 815.50 Mid Ch 819.00	(dBm) 16.19 -6.54 16.54	(H/V) V H	Cable Loss (dB) 0.62 0.62 0.62	Antenna Gain (dBi) 0.0 0.0 0.0	ERP (dBm) 15.57 -7.16 15.92	EIRP (dBm) 17.72 -5.01 18.07	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.9 -45.6 -22.5	Notes

Page 1804 of 1995

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

company:										
roject #:		15U20165								
ate:		6/13/2015								
est Engi		E. Lee								
onfigura		EUT only								
lode:		LTE Band 26 Q	PSK 5MHz BW							
est Equi	ipment:									
	g: Sunol T899, a	and Chamber	G Cable							
				n 245182-003; SUC		۵)				
uhstituti	ion [.] Dinole S/N									
ubstituti	ion: Dipole S/N	00022117, 41	t SMA Gable (SA	1 240102-000, 3000	JILLA 104FL	~)				
ubstituti f	ion: Dipole S/N	Ant. Pol.	Cable Loss	Antenna Gain	ERP	EIRP	ERP Limit	EIRP Limit	Margin	Notes
		Ant. Pol.	Cable Loss		ERP	EIRP	ERP Limit (dBm)		-	Notes
f GHz	SG reading (dBm)		· · · ·	Antenna Gain				EIRP Limit (dBm)	Margin (dB)	Notes
f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss	Antenna Gain	ERP	EIRP			-	Notes
f GHz Low Ch	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	(dBm)	(dBm)	(dB)	Notes
f GHz Low Ch 816.50 816.50	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm) 17.09	EIRP (dBm)	(dBm) 38.45	(dBm) 40.60	(dB) -21.4	Notes
f GHz Low Ch 816.50 816.50 Mid Ch	SG reading (dBm) 17.71 -5.88	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.62 0.62	Antenna Gain (dBi) 0.0 0.0	ERP (dBm) 17.09 -6.50	EIRP (dBm) 19.24 -4.35	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -21.4 -45.0	Notes
f GHz Low Ch 816.50 816.50 Mid Ch 819.00	SG reading (dBm) 17.71 -5.88 17.22	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.62 0.62 0.62	Antenna Gain (dBi) 0.0 0.0 0.0	ERP (dBm) 17.09 -6.50 16.60	EIRP (dBm) 19.24 4.35 18.75	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -21.4 -45.0 -21.9	Notes
f GHz Low Ch 816.50 816.50 Mid Ch	SG reading (dBm) 17.71 -5.88	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.62 0.62	Antenna Gain (dBi) 0.0 0.0	ERP (dBm) 17.09 -6.50	EIRP (dBm) 19.24 -4.35	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -21.4 -45.0	Notes
f GHz Low Ch 816.50 816.50 Mid Ch 819.00 819.00	SG reading (dBm) 17.71 -5.88 17.22	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.62 0.62 0.62	Antenna Gain (dBi) 0.0 0.0 0.0	ERP (dBm) 17.09 -6.50 16.60	EIRP (dBm) 19.24 4.35 18.75	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -21.4 -45.0 -21.9	Notes
f GHz Low Ch 816.50 816.50 Mid Ch 819.00	SG reading (dBm) 17.71 -5.88 17.22	Ant. Pol. (H/V) V H	Cable Loss (dB) 0.62 0.62 0.62	Antenna Gain (dBi) 0.0 0.0 0.0	ERP (dBm) 17.09 -6.50 16.60	EIRP (dBm) 19.24 4.35 18.75	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -21.4 -45.0 -21.9	Notes

Page 1805 of 1995

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

ompany:										
roject #:		15U20165								
ate:		6/13/2015								
est Engi		E. Lee								
onfigura		EUT only								
lode:		LTE Band 26 16	6QAM 5MHz BW							
	g: Sunol T899, a									
ubetituti	on: Dipole S/N:	: 00022117, 4f	t SMA Cable (s/i	n 245182-003; SUC	OFLEX 104PE	A)				
ubstituti	-									
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	ERP	EIRP	ERP Limit	EIRP Limit	Margin	Notes
	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
f	-								-	Notes
f GHz Low Ch 816.50	(dBm) 16.61	(H/V) V	(dB)	(dBi) 0.0	(dBm) 15.99	(dBm) 18.14	(dBm) 38.45	(dBm) 40.60	(dB) -22.5	Notes
f GHz Low Ch	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	Notes
f GHz Low Ch 816.50 816.50	(dBm) 16.61	(H/V) V	(dB)	(dBi) 0.0	(dBm) 15.99	(dBm) 18.14	(dBm) 38.45	(dBm) 40.60	(dB) -22.5	Notes
f GHz Low Ch 816.50 816.50 Mid Ch	(dBm) 16.61 -6.27	(H/V) V H	(dB) 0.62 0.62	(dBi) 0.0 0.0	(dBm) 15.99 -6.89	(dBm) 18.14 -4.74	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -22.5 -45.3	Notes
f GHz Low Ch 816.50 816.50 Mid Ch 819.00	(dBm) 16.61 -6.27 16.35	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 15.99 -6.89 15.73	(dBm) 18.14 4.74 17.88	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.5 -45.3 -22.7	Notes
f GHz Low Ch 816.50 816.50 Mid Ch	(dBm) 16.61 -6.27	(H/V) V H	(dB) 0.62 0.62	(dBi) 0.0 0.0	(dBm) 15.99 -6.89	(dBm) 18.14 -4.74	(dBm) 38.45 38.45	(dBm) 40.60 40.60	(dB) -22.5 -45.3	Notes
f GHz Low Ch 816.50 816.50 Mid Ch 819.00	(dBm) 16.61 -6.27 16.35	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 15.99 -6.89 15.73	(dBm) 18.14 4.74 17.88	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.5 -45.3 -22.7	Notes
f GHz Low Ch 816.50 816.50 Mid Ch 819.00 819.00	(dBm) 16.61 -6.27 16.35	(H/V) V H	(dB) 0.62 0.62 0.62	(dBi) 0.0 0.0 0.0	(dBm) 15.99 -6.89 15.73	(dBm) 18.14 4.74 17.88	(dBm) 38.45 38.45 38.45	(dBm) 40.60 40.60 40.60	(dB) -22.5 -45.3 -22.7	Notes

Page 1806 of 1995

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

		UL Frei	mont Radiated	Chamber G						
ompany:										
roject #:		15U20165								
ate:		6/13/2015								
est Engine		E. Lee								
onfiguratio		EUT only								
lode:	L	TE Band 26 QF	PSK 10MHz BW							
f	SG reading	Ant. Pol.	Cable Loss	n 245182-003; SUC	ERP	EIRP	ERP Limit	EIRP Limit	Margin EIRP	Notes
GHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	
Mid Ch										
819.00	17.08	<u>v</u>	0.62	0.0	16.46	18.61	38.45	40.60	-22.0	
819.00	-4.24	Н	0.62	0.0	-4.8 6	-2.71	38.45	40.60	-43.3	
ev. 10.24.13										

Page 1807 of 1995

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

			emont Radiated	tion Measurement I Chamber G						
company:	:									
Project #:	4	15U20165								
Date:		6/13/2015								
Test Engi		E. Lee								
Configura	ation:	EUT only								
Node:	1	LTE Band 26 16	6QAM 10MHz BW							
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	15.98	V	0.62	0.0	15.36	17.51	38.45	40.60	-23.1	
819.00	-3.13	Π	0.62	0.0	-6.33	-4.20	30.43	40.60	-44.8	
819.00 Rev. 10.24.1	-5.73	Н	0.62	0.0	-6.35	4.20	38.45	40.60	-44.8	

Page 1808 of 1995

10.4.10. LTE BAND 41

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

Company								
Project #:		15U20165						
)ate:		6/13/2015						
lest Engi	ineer:	T Wang						
Configura	ation:	EUT only						
/lode:		LTE Band 41 Q	PSK 5MHz BW					
Substituti		Substitution, 4	4ft SMA Cable (s	s/n 245182-003; SUC			Margin EIRP	Notes
	-				OFLEX 104PE EIRP (dBm)	A) Limit (dBm)	Margin EIRP (dB)	Notes
Gubstituti	ion: Horn T60 S	Ant. Pol.	4ft SMA Cable (s Cable Loss	Antenna Gain	EIRP	Limit	-	Notes
f GHz	ion: Horn T60 S SG reading (dBm) 21.1	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.33	EIRP	Limit (dBm) 33.0	(dB) -3.7	Notes
f GHz Low Ch	ion: Horn T60 S SG reading (dBm)	ubstitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
f GHz Low Ch 2.499 2.499	ion: Horn T60 S SG reading (dBm) 21.1	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.33	EIRP (dBm) 29.26	Limit (dBm) 33.0	(dB) -3.7	Notes
f GHz Low Ch 2.499 2.499 Mid Ch	SG reading (dBm) 21.1 15.0	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.33 9.33	EIRP (dBm) 29.26 23.19	Limit (dBm) 33.0 33.0	(dB) -3.7 -9.8	Notes
f GHz Low Ch 2.499 2.499	ion: Horn T60 S SG reading (dBm) 21.1	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.33	EIRP (dBm) 29.26	Limit (dBm) 33.0	(dB) -3.7	Notes
f GHz Low Ch 2.499 2.499 Mid Ch 2.593 2.593	ion: Horn T60 S SG reading (dBm) 21.1 15.0 20.3	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.33 9.33 9.47	EIRP (dBm) 29.26 23.19 28.61	Limit (dBm) 33.0 33.0 33.0	(dB) -3.7 -9.8 -4.4	Notes
f GHz Low Ch 2.499 2.499 Mid Ch 2.593	ion: Horn T60 S SG reading (dBm) 21.1 15.0 20.3	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.33 9.33 9.47	EIRP (dBm) 29.26 23.19 28.61	Limit (dBm) 33.0 33.0 33.0	(dB) -3.7 -9.8 -4.4	Notes

Page 1809 of 1995

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

Company:								
Project #:		15U20165						
Date:		6/13/2015						
Test Engi	neer:	T Wang						
Configura		EUT only						
Mode:			6QAM 5MHz BW					
Receiving	: Horn T862, a			/n 245182-003; SUC	OFLEX 104PE	A)		
Substitutio	: Horn T862, a on: Horn T60 S SG reading	Ant. Pol.	4ft SMA Cable (s	Antenna Gain	EIRP	Limit	Margin EIRP	Notes
Receiving Substitutio f GHz	: Horn T862, a on: Horn T60 S	ubstitution, 4	4ft SMA Cable (s				Margin EIRP (dB)	Notes
Receiving Substitutio	: Horn T862, a on: Horn T60 S SG reading	Ant. Pol.	4ft SMA Cable (s	Antenna Gain	EIRP	Limit	-	Notes
Receiving Substitutio f GHz Low Ch	: Horn T862, a on: Horn T60 S SG reading (dBm)	ubstitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
Receiving Substitution f GHz Low Ch 2.499 2.499	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.1	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.33	EIRP (dBm) 28.23	Limit (dBm) 33.0	(dB) -4.8	Notes
Receiving Substitution f GHz Low Ch 2.499 2.499 Mid Ch	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.1 14.1	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.33 9.33	EIRP (dBm) 28.23 22.29	Limit (dBm) 33.0 33.0	(dB) 	Notes
Receiving Substitution f GHz Low Ch 2.499 2.499	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.1	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.33	EIRP (dBm) 28.23	Limit (dBm) 33.0	(dB) -4.8	Notes
Receiving Substitution GHz Low Ch 2.499 2.499 Mid Ch 2.593 2.593	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.1 14.1 19.5	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.33 9.33 9.47	EIRP (dBm) 28.23 22.29 27.79	Limit (dBm) 33.0 33.0 33.0	(dB) -4.8 -10.7 -5.2	Notes
Receiving Substitution f GHz Low Ch 2.499 2.499 2.499 Mid Ch 2.593	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.1 14.1 19.5	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.33 9.33 9.47	EIRP (dBm) 28.23 22.29 27.79	Limit (dBm) 33.0 33.0 33.0	(dB) -4.8 -10.7 -5.2	Notes

Page 1810 of 1995

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

Company:								
Project #:		15U20165						
Date:		6/13/2015						
Test Engi		T Wang						
Configura		EUT only						
Node:			PSK 10MHz BW					
			G SMA Cables 4ft SMA Cable (s	/n 245182-003: SUC	OFLEX 104PE	A)		
Substituti	on: Horn T60 S	Substitution, 4 Ant. Pol.	4ft SMA Cable (s	i/n 245182-003; SUC Antenna Gain (dBi)	EIRP	Limit	Margin EIRP	Notes
Substituti f GHz	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s				Margin EIRP (dB)	Notes
Substituti f GHz Low Ch	on: Horn T60 S SG reading (dBm)	Substitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
Substituti f GHz	on: Horn T60 S	Substitution, 4 Ant. Pol.	4ft SMA Cable (s	Antenna Gain	EIRP	Limit		Notes
Substituti f GHz Low Ch 2.450 2.450	on: Horn T60 S SG reading (dBm) 21.3	Substitution, 4 Ant. Pol. (H/V) V	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.32	EIRP (dBm) 29.42	Limit (dBm) 33.0	(dB) -3.6	Notes
Substituti f GHz Low Ch 2.450 2.450 Mid Ch	on: Horn T60 S SG reading (dBm) 21.3 15.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.32 9.32	EIRP (dBm) 29.42 23.88	Limit (dBm) 33.0 33.0	(dB) -3.6 -9.1	Notes
f GHz Low Ch 2.450 2.450 Mid Ch 2.593	on: Horn T60 \$ SG reading (dBm) 21.3 15.7 20.4	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.32 9.32 9.47	EIRP (dBm) 29.42 23.88 28.70	Limit (dBm) 33.0 33.0 33.0	(dB) -3.6 -9.1 -4.3	Notes
f GHz Low Ch 2.450 2.450 Mid Ch	on: Horn T60 S SG reading (dBm) 21.3 15.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.32 9.32	EIRP (dBm) 29.42 23.88	Limit (dBm) 33.0 33.0	(dB) -3.6 -9.1	Notes
f GHz Low Ch 2.450 2.450 Mid Ch 2.593 2.593	on: Horn T60 \$ SG reading (dBm) 21.3 15.7 20.4	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.32 9.32 9.47	EIRP (dBm) 29.42 23.88 28.70	Limit (dBm) 33.0 33.0 33.0	(dB) -3.6 -9.1 -4.3	Notes
f GHz Low Ch 2.450 2.450 Mid Ch 2.593	on: Horn T60 \$ SG reading (dBm) 21.3 15.7 20.4	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.32 9.32 9.47	EIRP (dBm) 29.42 23.88 28.70	Limit (dBm) 33.0 33.0 33.0	(dB) -3.6 -9.1 -4.3	Notes

Page 1811 of 1995

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

Company:								
Project #:		15U20165						
Date:		6/13/2015						
Test Engi	neer:	T Wang						
Configura	tion:	EUT only						
Mode:		LTE Band 41 16	6QAM 10MHz BW					
Test Faui	pment:							
Lesi Lyui								
		nd Chamber	G SMA Cables					
Receiving	g: Horn T862, a			s/n 245182-003; SUC	OFLEX 104PE	A)		
Receiving	g: Horn T862, a			s/n 245182-003; SUC	OFLEX 104PE	A)		
Receiving	g: Horn T862, a			s/n 245182-003; SUC Antenna Gain	OFLEX 104PE	A)	Margin EIRP	Notes
Receiving Substituti	g: Horn T862, a on: Horn T60 §	Substitution, 4	4ft SMA Cable (s				Margin EIRP (dB)	Notes
Receiving Substituti f	g: Horn T862, a on: Horn T60 S SG reading	Substitution, 4	4ft SMA Cable (s Cable Loss	Antenna Gain	EIRP	Limit	-	Notes
Receiving Substituti f GHz	g: Horn T862, a on: Horn T60 S SG reading	Substitution, 4	4ft SMA Cable (s Cable Loss	Antenna Gain	EIRP	Limit	-	Notes
Receiving Substituti f GHz Low Ch	y: Horn T862, a on: Horn T60 S SG reading (dBm)	Substitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
Receiving Substituti GHz Low Ch 2.451 2.451	:: Horn T862, a on: Horn T60 \$ SG reading (dBm) 20.4	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.32	EIRP (dBm) 28.52	Limit (dBm) 33.0	(dB) -4.5	Notes
Receiving Substituti f GHz Low Ch 2.451 2.451 Mid Ch	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.4 14.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.32 9.32	EIRP (dBm) 28.52 22.88	Limit (dBm) 33.0 33.0	(dB) -4.5 -10.1	Notes
Receiving Substituti f GHz Low Ch 2.451 2.451 2.451 Mid Ch 2.593	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.4 14.7 19.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.32 9.32 9.47	EIRP (dBm) 28.52 22.88 28.00	Limit (dBm) 33.0 33.0 33.0	(dB) -4.5 -10.1 -5.0	Notes
Receiving Substituti f GHz Low Ch 2.451 2.451 Mid Ch	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.4 14.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.32 9.32	EIRP (dBm) 28.52 22.88	Limit (dBm) 33.0 33.0	(dB) -4.5 -10.1	Notes
Receiving Substituti GHz Low Ch 2.451 2.451 Mid Ch 2.593 2.593	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.4 14.7 19.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.32 9.32 9.47	EIRP (dBm) 28.52 22.88 28.00	Limit (dBm) 33.0 33.0 33.0	(dB) -4.5 -10.1 -5.0	Notes
Receiving Substituti f GHz Low Ch 2.451 2.451 Mid Ch 2.593	: Horn T862, a on: Horn T60 S SG reading (dBm) 20.4 14.7 19.7	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.32 9.32 9.47	EIRP (dBm) 28.52 22.88 28.00	Limit (dBm) 33.0 33.0 33.0	(dB) -4.5 -10.1 -5.0	Notes

Page 1812 of 1995

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

Company:								
Project #:		15U20165						
)ate:		6/13/2015						
Test Engineer: T Wang Configuration: EUT only								
Johngura Aode:		EUT only	PSK 15MHz BW					
est Equi	pment:							
		nd Chamber						
-			G SMA Cables	m 245182 002: SLIC		(A)		
-				/n 245182-003; SUC	OFLEX 104PE	A)		
Substituti	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s				Margin FIRP	Notes
-	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s	Antenna Gain	EIRP	Limit	Margin EIRP (dB)	Notes
Gubstituti	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s				Margin EIRP (dB)	Notes
Substituti f GHz	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s	Antenna Gain	EIRP	Limit	-	Notes
f GHz Low Ch	on: Horn T60 S SG reading (dBm)	ubstitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
f GHz Low Ch 2.504 2.504	on: Horn T60 S SG reading (dBm) 22.0	Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.34	EIRP (dBm) 30.14	Limit (dBm) 33.0	(dB) -2.9	Notes
f GHz Low Ch 2.504 2.504 Mid Ch	on: Horn T60 S SG reading (dBm) 22.0 15.9	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.34 9.34	EIRP (dBm) 30.14 24.10	Limit (dBm) 33.0 33.0	(dB) -2.9 -8.9	Notes
f GHz Low Ch 2.504 2.504 Mid Ch 2.593	on: Horn T60 S SG reading (dBm) 22.0 15.9 21.3	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 30.14 24.10 29.58	Limit (dBm) 33.0 33.0 33.0	(dB) -2.9 -8.9 	Notes
f GHz Low Ch 2.504 2.504 Mid Ch	on: Horn T60 S SG reading (dBm) 22.0 15.9	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.34 9.34	EIRP (dBm) 30.14 24.10	Limit (dBm) 33.0 33.0	(dB) -2.9 -8.9	Notes
f GHz Low Ch 2.504 2.504 Mid Ch 2.593 2.593	on: Horn T60 S SG reading (dBm) 22.0 15.9 21.3	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 30.14 24.10 29.58	Limit (dBm) 33.0 33.0 33.0	(dB) -2.9 -8.9 	Notes
f GHz Low Ch 2.504 2.504 Mid Ch 2.593	on: Horn T60 S SG reading (dBm) 22.0 15.9 21.3	Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 30.14 24.10 29.58	Limit (dBm) 33.0 33.0 33.0	(dB) -2.9 -8.9 	Notes

Page 1813 of 1995

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

Company:								
Project #:		15U20165						
Date:		6/13/2015						
Test Engi	neer:	T Wang						
Configura		EUT only						
Mode:			6QAM 15MHz BW					
-): Horn T862, a on: Horn T60 §			/n 245182-003: SUC	OFLEX 104PE	A)		
Substituti	on: Horn T60 S	Substitution, 4 Ant. Pol.	4ft SMA Cable (s	/n 245182-003; SUC Antenna Gain	EIRP	Limit	Margin EIRP	Notes
Substituti f GHz	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s				Margin EIRP (dB)	Notes
Substitution f GHz Low Ch	on: Horn T60 S SG reading (dBm)	Substitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
f GHz Low Ch 2.504	on: Horn T60 S SG reading (dBm) 20.9	Substitution, 4 Ant. Pol. (H/V) V	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.34	EIRP (dBm) 29.04	Limit (dBm) 33.0	(dB) -4.0	Notes
Substitution f GHz Low Ch	on: Horn T60 S SG reading (dBm)	Substitution, 4 Ant. Pol. (H/V)	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
f GHz Low Ch 2.504	on: Horn T60 S SG reading (dBm) 20.9	Substitution, 4 Ant. Pol. (H/V) V	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.34	EIRP (dBm) 29.04	Limit (dBm) 33.0	(dB) -4.0	Notes
f GHz Low Ch 2.504 2.504	on: Horn T60 S SG reading (dBm) 20.9	Substitution, 4 Ant. Pol. (H/V) V	4ft SMA Cable (s Cable Loss (dB)	Antenna Gain (dBi) 9.34	EIRP (dBm) 29.04	Limit (dBm) 33.0	(dB) -4.0	Notes
f GHz Low Ch 2.504 2.504 Mid Ch	SG reading (dBm) 20.9 15.1	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.34 9.34	EIRP (dBm) 29.04 23.30	Limit (dBm) 33.0 33.0	(dB) 4.0 9.7	Notes
f GHz Low Ch 2.504 2.504 Mid Ch 2.593 2.593	on: Horn T60 S SG reading (dBm) 20.9 15.1 20.2	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 29.04 23.30 28.51	Limit (dBm) 33.0 33.0 33.0	(dB) -4.0 -9.7 -4.5	Notes
Substituti f GHz Low Ch 2.504 2.504 2.504 Mid Ch 2.593	on: Horn T60 S SG reading (dBm) 20.9 15.1 20.2	Substitution, 4 Ant. Pol. (H/V) V H	4ft SMA Cable (s Cable Loss (dB) 1.15 1.15 1.16	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 29.04 23.30 28.51	Limit (dBm) 33.0 33.0 33.0	(dB) -4.0 -9.7 -4.5	Notes

Page 1814 of 1995

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

Company	:							
Project #:		15U20165						
Date:		6/13/2015						
		T Wang						
Test Engineer: T Wang Configuration: EUT only								
Node:			PSK 20MHz BW					
www.unuu	ion: Horn T60 S	aboutation, -						
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP (dBm)	Limit	Margin EIRP	Notes
f GHz			Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin EIRP (dB)	Notes
f GHz Low Ch	SG reading (dBm)	Ant. Pol. (H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	Notes
f GHz	SG reading	Ant. Pol.						Notes
f GHz Low Ch 2.506 2.506	SG reading (dBm) 22.1	Ant. Pol. (H/V)	(dB) 1.15	(dBi) 9.34	(dBm) 30.24	(dBm) 33.0	(dB) -2.8	Notes
f GHz 2.506 2.506 Mid Ch	SG reading (dBm) 22.1 16.2	Ant. Pol. (H/V) V H	(dB) 1.15 1.15	(dBi) 9.34 9.34	(dBm) 30.24 24.40	(dBm) 33.0 33.0	(dB) -2.8 -8.6	Notes
f GHz Low Ch 2.506 2.506 Mid Ch 2.593	SG reading (dBm) 22.1 16.2 21.6	Ant. Pol. (H/V) V H	(dB) 1.15 1.15 1.15	(dBi) 9.34 9.34 9.47	(dBm) 30.24 24.40 29.90	(dBm) 33.0 33.0 33.0 33.0	(dB) -2.8 -8.6 	Notes
f GHz 2.506 2.506 Mid Ch	SG reading (dBm) 22.1 16.2	Ant. Pol. (H/V) V H	(dB) 1.15 1.15	(dBi) 9.34 9.34	(dBm) 30.24 24.40	(dBm) 33.0 33.0	(dB) -2.8 -8.6	Notes
f GHz Low Ch 2.506 2.506 Mid Ch 2.593	SG reading (dBm) 22.1 16.2 21.6	Ant. Pol. (H/V) V H	(dB) 1.15 1.15 1.15	(dBi) 9.34 9.34 9.47	(dBm) 30.24 24.40 29.90	(dBm) 33.0 33.0 33.0 33.0	(dB) -2.8 -8.6 	Notes
f GHz Low Ch 2.506 2.506 Mid Ch 2.593 2.593	SG reading (dBm) 22.1 16.2 21.6	Ant. Pol. (H/V) V H	(dB) 1.15 1.15 1.15	(dBi) 9.34 9.34 9.47	(dBm) 30.24 24.40 29.90	(dBm) 33.0 33.0 33.0 33.0	(dB) -2.8 -8.6 	Notes

Page 1815 of 1995

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

Company:								
Project #:		15U20165						
Date:		6/13/2015						
Test Engi		T Wang						
Configura		EUT only						
Node:			6QAM 20MHz BW					
ubstituti	on: Horn T60 S	Substitution, 4	4ft SMA Cable (s	/n 245182-003; SUC	OFLEX 104PE	A)		
f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Margin EIRP	Notes
f GHz							Margin EIRP (dB)	Notes
f GHz Low Ch	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	Notes
f GHz	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit		Notes
f GHz Low Ch 2.506 2.506	SG reading (dBm) 21.4	Ant. Pol. (H/V) V	Cable Loss (dB)	Antenna Gain (dBi) 9.34	EIRP (dBm) 29.54	Limit (dBm) 33.0	(dB) -3.5	Notes
f GHz 2.506 2.506 Mid Ch	SG reading (dBm) 21.4 15.3	Ant. Pol. (H/V) V H	Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.34 9.34	EIRP (dBm) 29.54 23.50	Limit (dBm) 33.0 33.0	(dB) -3.5 -9.5	Notes
f GHz Low Ch 2.506 2.506 Mid Ch 2.593	SG reading (dBm) 21.4 15.3 21.0	Ant. Pol. (H/V) V H	Cable Loss (dB) 1.15 1.15 1.15	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 29.54 23.50 29.31	Limit (dBm) 33.0 33.0 33.0	(dB) -3.5 -9.5 	Notes
f GHz 2.506 2.506 Mid Ch	SG reading (dBm) 21.4 15.3	Ant. Pol. (H/V) V H	Cable Loss (dB) 1.15 1.15	Antenna Gain (dBi) 9.34 9.34	EIRP (dBm) 29.54 23.50	Limit (dBm) 33.0 33.0	(dB) -3.5 -9.5	Notes
f GHz Low Ch 2.506 2.506 Mid Ch 2.593 2.593	SG reading (dBm) 21.4 15.3 21.0	Ant. Pol. (H/V) V H	Cable Loss (dB) 1.15 1.15 1.15	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 29.54 23.50 29.31	Limit (dBm) 33.0 33.0 33.0	(dB) -3.5 -9.5 	Notes
f GHz Low Ch 2.506 2.506 Mid Ch 2.593	SG reading (dBm) 21.4 15.3 21.0	Ant. Pol. (H/V) V H	Cable Loss (dB) 1.15 1.15 1.15	Antenna Gain (dBi) 9.34 9.34 9.47	EIRP (dBm) 29.54 23.50 29.31	Limit (dBm) 33.0 33.0 33.0	(dB) -3.5 -9.5 	Notes

Page 1816 of 1995

10.5. PEAK-TO-AVERAGE RATIO (MODEL: A1633)

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

10.5.1. LTE BAND 2

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	1.4	1880.0	QPSK	28.97	23.97	5.00
RB1-0	1.4	1880.0	16QAM	28.9	23.15	5.75

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	3.0	1880.0	QPSK	28.95	23.95	5.00
RB1-0	3.0	1880.0	16QAM	28.35	23.10	5.25
*Peak Reading	g = Average Ro	eading + Pe	eak-to-Average	Ratio		

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	5.0	1880.0	QPSK	28.69	23.94	4.75
RB1-0	5.0	1880.0	16QAM	28.73	23.23	5.50
*Peak Readin	g = Average Re	eading + Pe	eak-to-Average	e Ratio		

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	10.0	1880.0	QPSK	28.71	23.96	4.75
RB1-0	10.0	1880.0	16QAM	28.71	23.21	5.50
*Peak Readin	g = Average Re	eading + Pe	eak-to-Average	e Ratio		

Page 1817 of 1995

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	15.0	1880.0	QPSK	27.47	23.97	3.50
RB1-0	15.0	1880.0	16QAM	28.93	23.43	5.50
*Peak Readin	g = Average Re	eading + Pe	eak-to-Average	e Ratio		<u>.</u>

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	20.0	1880.0	QPSK	27.53	23.93	3.60
RB1-0	20.0	1880.0	16QAM	27.59	23.39	4.20
*Peak Reading	g = Average Re	eading + Pe	eak-to-Average	e Ratio		

10.5.2. LTE BAND 4

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted *Peak	Power (dBm) Average	Peak-to- Average Ratio (PAR)
LTE Band 4	1 4	1700 5	QPSK	27.7	23.95	3.75
RB1-0	1.4	1732.5	16QAM	27.9	22.90	5.00

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 4	3.0	1732.5	QPSK	27.87	23.87	4.00
RB1-0	3.0	1732.5	16QAM	28.08	23.08	5.00
*Peak Readin	g = Average Re	eading + Pe	eak-to-Average	e Ratio		

Page 1818 of 1995

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4	LTE Band 4	1732.5	QPSK	27.94	23.94	4.00		
RB1-0 5.0	5.0		16QAM	27.91	23.16	4.75		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Channel Peak-to-Conducted Power (dBm) Band-width Average Ratio (MHZ) *Peak Average (PAR) f (MHz) Modulation Mode QPSK 28.42 23.92 4.50 LTE Band 4 10.0 1732.5 RB1-0 16QAM 28.73 23.23 5.50 *Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4	Band 4	1732.5	QPSK	27.96	23.96	4.00		
RB1-0 15.0	15.0		16QAM	28.03	23.53	4.50		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4 20.0 RB1-0	1732.5	QPSK	27.96	23.96	4.00			
	20.0	1732.5	16QAM	28.01	23.26	4.75		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1819 of 1995

10.5.3. LTE BAND 5

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 5	5 14	836.5	QPSK	28.00	24.00	4.00		
RB1-0 1.4	1.4		16QAM	27.97	23.22	4.75		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 5 RB1-0 3.0	926 F	QPSK	27.99	23.99	4.00			
	3.0	836.5	16QAM	27.94	23.19	4.75		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Mode(MHZ)f (MHz)Modulation*PeakAverage(PAR)LTE Band 55.0836.5QPSK27.9024.003.90		Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
LTE Band 5 5.0 836.5	Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	-
RB1-0 3.0 838.3	LTE Band 5	5.0	936 F	QPSK	27.90	24.00	3.90
16QAM 27.97 23.27 4.70	RB1-0	5.0	836.5	16QAM	27.97	23.27	4.70

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 5 RB1-0 10.0	000 5	QPSK	27.67	24.00	3.67			
	10.0	836.5	16QAM	29.22	23.32	5.90		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1820 of 1995

10.5.4. LTE BAND 12

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 12 RB1-0 1.4		QPSK	28.63	23.88	4.75				
	1.4	707.5	16QAM	28.60	23.10	5.50			
*Peak Reading	*Peak Reading = Average Reading + Peak-to-Average Ratio								

Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width				Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 12 RB1-0 3.0	707.5	QPSK	27.48	23.78	3.70			
	3.0	707.5	16QAM	27.55	23.05	4.50		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 12 5.0	707.5	QPSK	27.56	23.76	3.80	
RB1-0	5.0	707.5	16QAM	27.63	23.13	4.50

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 12 RB1-0 10.0	707 5	QPSK	27.62	23.82	3.80			
	10.0	.0 707.5	16QAM	28.95	23.25	5.70		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1821 of 1995

Peak-to-

Average Ratio

(PAR)

10.5.5. LTE BAND 13

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 13	13 5.0	782.0	QPSK	27.83	23.83	4.00		
RB1-0 5.0	5.0		16QAM	27.84	23.24	4.60		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

*Peak Reading = Average Reading + Peak-to-Average Ratio

Channel Band-width Conducted Power (dBm) Peak-to- Average Rat									
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 13 10.0 782.0 QPSK 28.89 23.89 5.00									
RB1-0	10.0	782.0	16QAM	28.88	23.28	5.60			
*Peak Reading	*Peak Reading = Average Reading + Peak-to-Average Ratio								

10.5.6. LTE BAND 17

Channel Band-width Conducted Power (dBm) Peak-to- Average Rat								
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 17	5.0	710.0	QPSK	28.69	23.94	4.75		
RB1-0	5.0	710.0	16QAM	28.82	23.32	5.50		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

 Channel
 Conducted Power (dBm)

 Band-width
 f (MHz)
 Modulation
 *Peak
 Average

LTE Band 17	10.0		28.73	23.98	4.75				
RB1-0	10.0	710.0	16QAM	28.92	23.42	5.50			
*Peak Reading	*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1822 of 1995

10.5.7. LTE BAND 25

Mode (MHZ) f (MHz) Modulation *Peak Average (PAR) LTE Band 25 RB1-0 1.4 1880.0 QPSK 28.73 23.93 4.80 LTE Band 25 RB1-0 1.4 1880.0 16QAM 28.91 23.21 5.70			Channel Band-width			Conducted	Power (dBm)	Peak-to-
LTE Band 25 RB1-0 1.4 1880.0	Mode			f (MHz)	Modulation	*Peak	Average	Average Ratio (PAR) 4.80
RB1-0	LTE Band	25	1.4	1990.0	QPSK	28.73	23.93	4.80
	RB1-0	1.4	1880.0	16QAM	28.91	23.21	5.70	

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 25	3.0	1000.0	QPSK	28.73	23.93	4.80	
RB1-0	3.0	1880.0	16QAM	28.72	23.12	5.60	

*Peak Reading = Average Reading + Peak-to-Average Ratio

Channel Band-width Conducted Power (dBm) Peak-to- Average Rati									
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 25	5.0	1880.0	QPSK	28.77	23.97	4.80			
RB1-0	5.0	1660.0	16QAM	28.81	23.21	5.60			
*Peak Reading = Average Reading + Peak-to-Average Ratio									

Channel Peak-to-Conducted Power (dBm) Band-width Average Ratio *Peak (PAR) Mode (MHZ) f (MHz) Modulation Average QPSK 28.80 24.00 4.80 LTE Band 25 10.0 1880.0 RB1-0 28.80 23.30 5.50 16QAM

*Peak Reading = Average Reading + Peak-to-Average Ratio

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 25	15.0	1000.0	QPSK	28.68	23.88	4.80		
RB1-0	15.0	1880.0	16QAM	28.83	23.33	5.50		
*Poak Poading	*Peak Reading – Average Reading + Peak-to-Average Ratio							

Peak Reading = Average Reading + Peak-to-Average Ratio

Channel Band-width Conducted Power (dBm) Peak- Average								
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 25 20.0 1880.0 QPSK 27.46 23.96 3.50								
RB1-0	20.0	1880.0	16QAM	27.61	23.21	4.40		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1824 of 1995

10.5.8. LTE BAND 26

Channel Band-width Conducted Power (dBm) Peak-to- Average Rat								
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 26 1.4 819.0 QPSK 28.02 23.92 4.10								
RB1-0	1.4	619.0	16QAM	28.05	23.15	4.90		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

	(PAR)
OPSK 28.09 23.89	· /
LTE Band 26 3.0 819.0	4.20
RB1-0 RB1-0	5.00

*Peak Reading = Average Reading + Peak-to-Average Ratio

Channel Band-width Conducted Power (dBm)							
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	Average Ratio (PAR)	
LTE Band 26	5.0	819.0	QPSK	28.06	23.86	4.20	
RB1-0 5.0	5.0	819.0	16QAM	28.02	23.12	4.90	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

*Peak Reading = Average Reading + Peak-to-Average Ratio

Channel Band-width Conducted Power (dBm) Peak-to- Average Ra								
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 26 10.0 819.0 QPSK 28.94 23.94 5.00								
RB1-0	10.0	819.0	16QAM	29.00	23.30	5.70		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

10.5.9. LTE BAND 30

	Channel Band-width		Modulation	Conducted Power (dBm)		Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)		*Peak	Average	(PAR)			
LTE Band 30 RB1-0	5.0	2310.0	QPSK	27.71	22.91	4.80			
			16QAM	27.80	22.20	5.60			
*Peak Reading - Average Reading + Peak-to-Average Ratio									

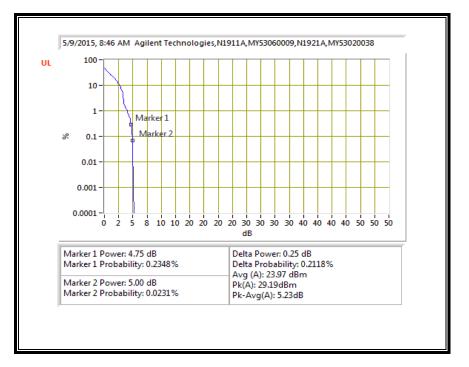
Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 30 RB1-0	10.0	2310.0	QPSK	27.50	22.90	4.60			
			16QAM	27.74	22.24	5.50			
*Peak Reading = Average Reading + Peak-to-Average Ratio									

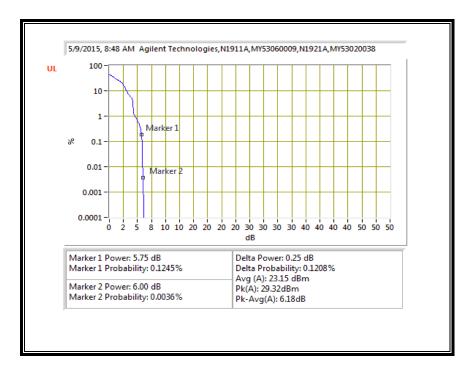
Page 1826 of 1995

LTE BAND 2

QPSK, (1.4 MHz BAND WIDTH)

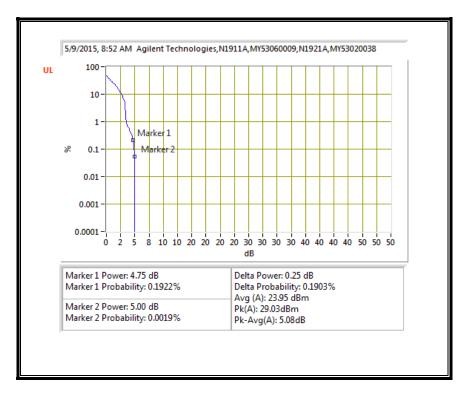


16QAM, (1.4 MHz BAND WIDTH)

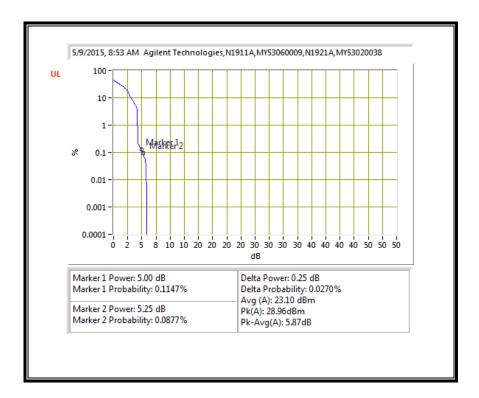


Page 1827 of 1995

QPSK, (3.0 MHz BAND WIDTH)

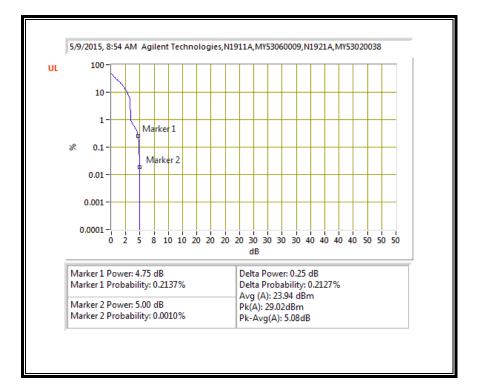


16QAM, (3.0 MHz BAND WIDTH)

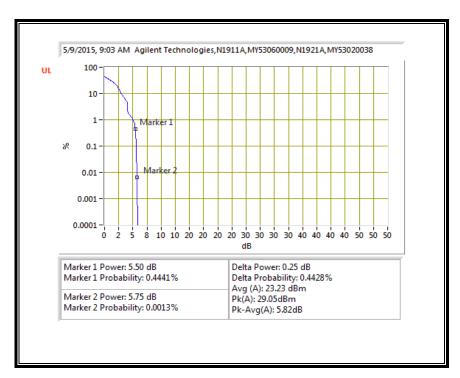


Page 1828 of 1995

QPSK, (5.0 MHz BAND WIDTH)

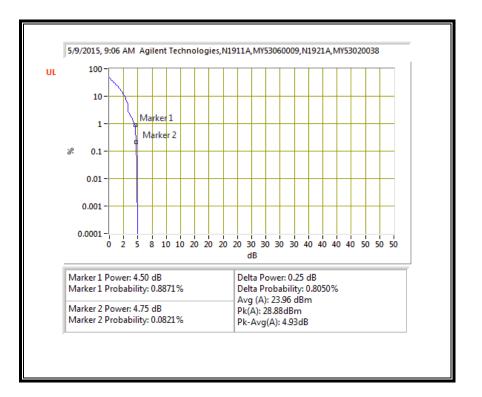


16QAM, (5.0 MHz BAND WIDTH)

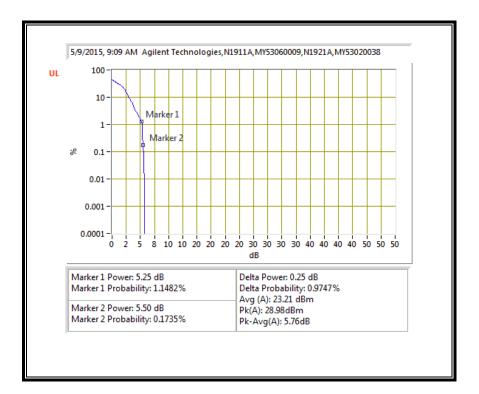


Page 1829 of 1995

QPSK, (10.0 MHz BAND WIDTH)



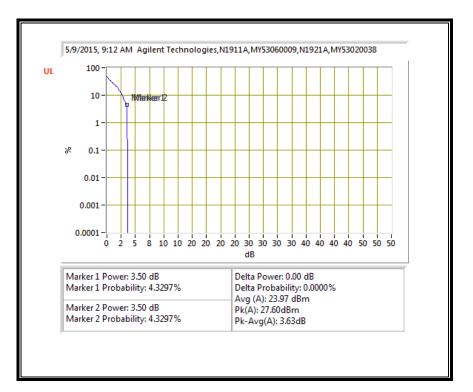
16QAM, (10.0 MHz BAND WIDTH)



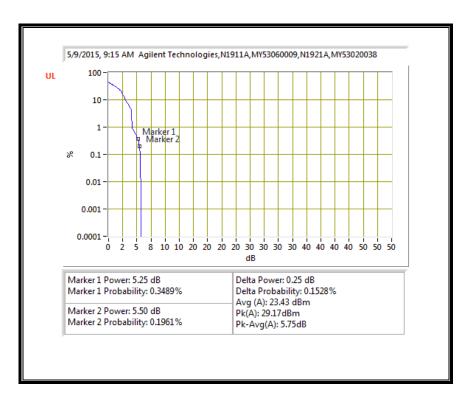
Page 1830 of 1995

UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

QPSK, (15.0 MHz BAND WIDTH)

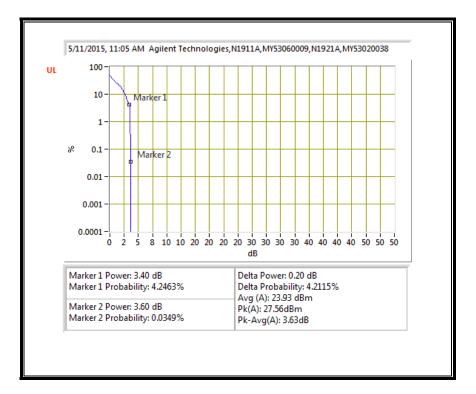


16QAM, (15.0 MHz BAND WIDTH)

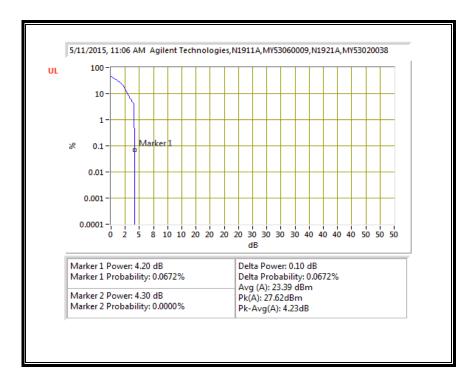


Page 1831 of 1995

QPSK, (20.0 MHz BAND WIDTH)



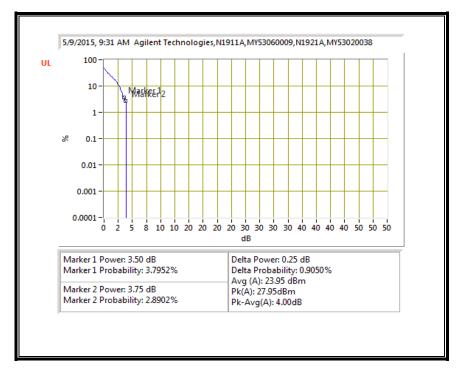
16QAM, (20.0 MHz BAND WIDTH)



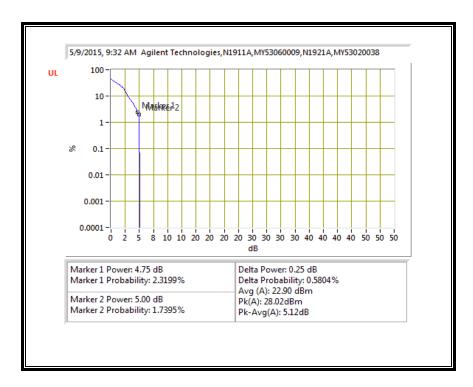
Page 1832 of 1995

LTE BAND 4

QPSK, (1.4 MHz BAND WIDTH)

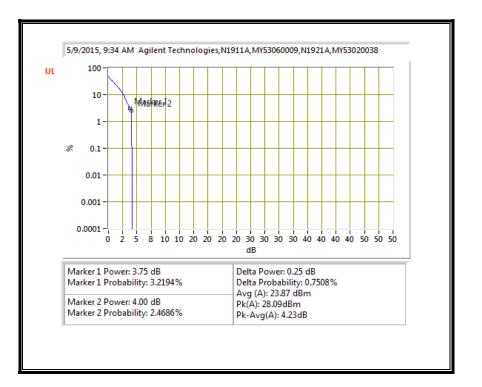


16QAM, (1.4 MHz BAND WIDTH)

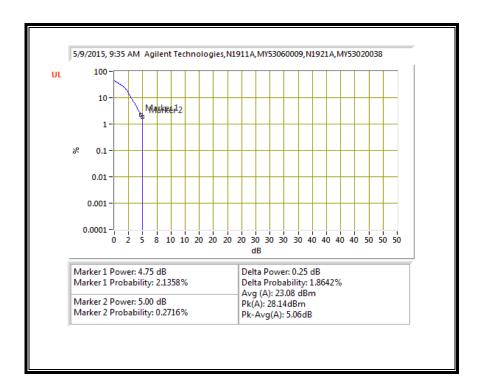


Page 1833 of 1995

QPSK, (3.0 MHz BAND WIDTH)

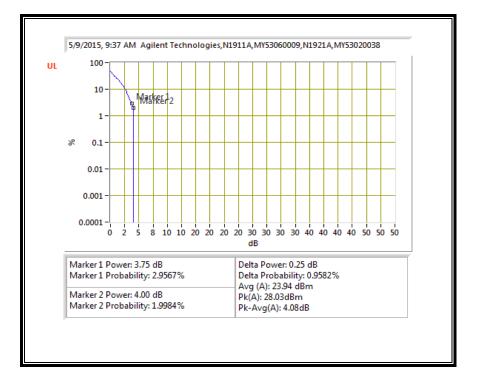


16QAM, (3.0 MHz BAND WIDTH)

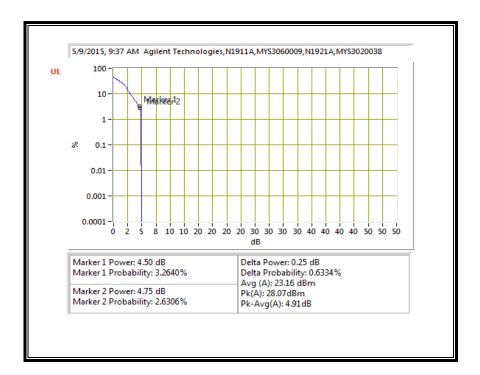


Page 1834 of 1995

QPSK, (5.0 MHz BAND WIDTH)

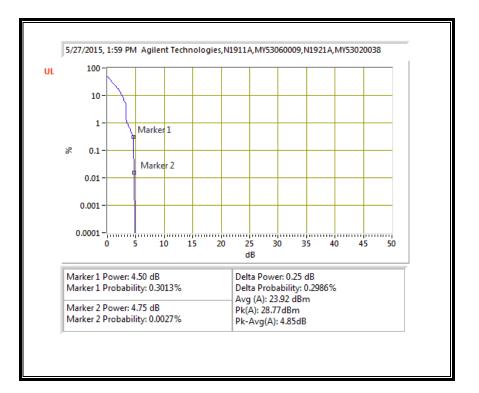


16QAM, (5.0 MHz BAND WIDTH)

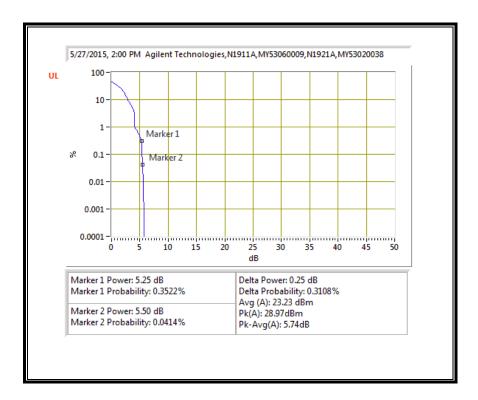


Page 1835 of 1995

QPSK, (10.0 MHz BAND WIDTH)

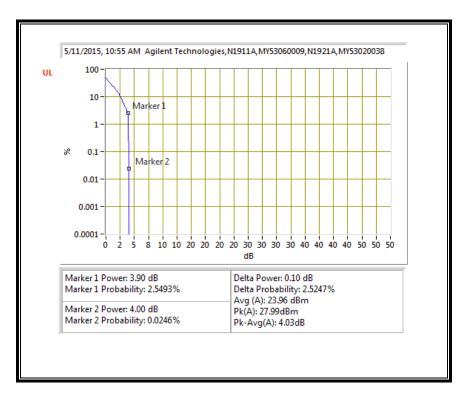


16QAM, (10.0 MHz BAND WIDTH)

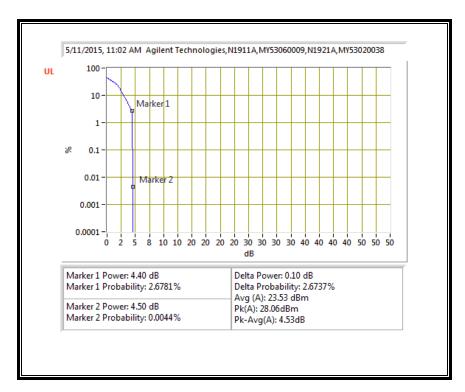


Page 1836 of 1995

QPSK, (15.0 MHz BAND WIDTH)

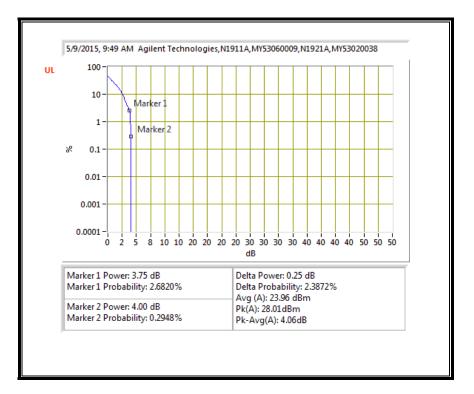


16QAM, (15.0 MHz BAND WIDTH)

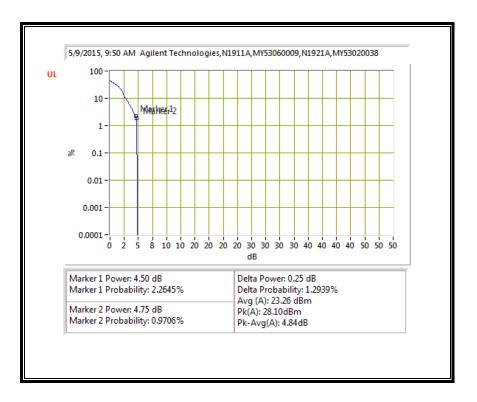


Page 1837 of 1995

QPSK, (20.0 MHz BAND WIDTH)



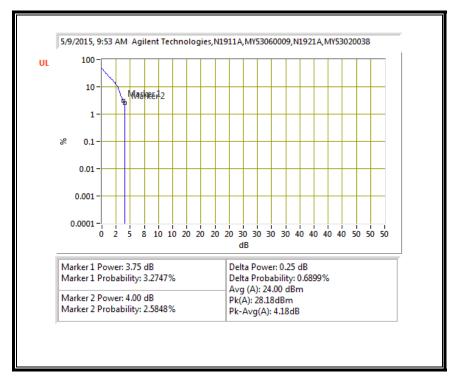
16QAM, (20.0 MHz BAND WIDTH)



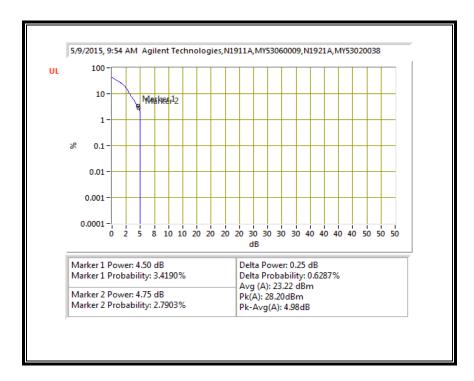
Page 1838 of 1995

LTE BAND 5

QPSK, (1.4 MHz BAND WIDTH)

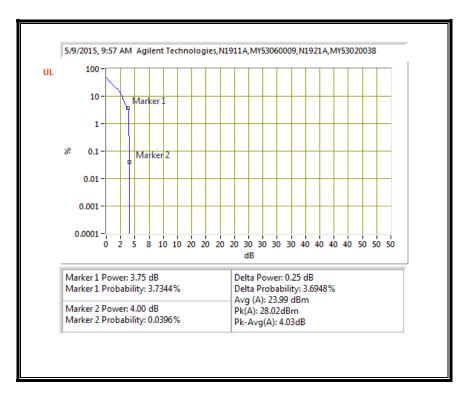


16QAM, (1.4 MHz BAND WIDTH)

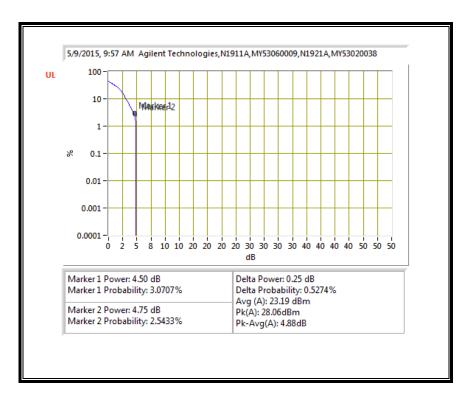


Page 1839 of 1995

QPSK, (3.0 MHz BAND WIDTH)

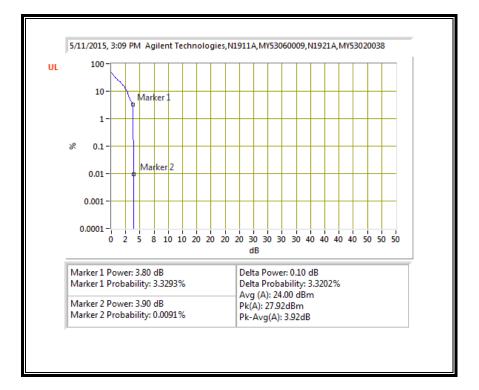


16QAM, (3.0 MHz BAND WIDTH)

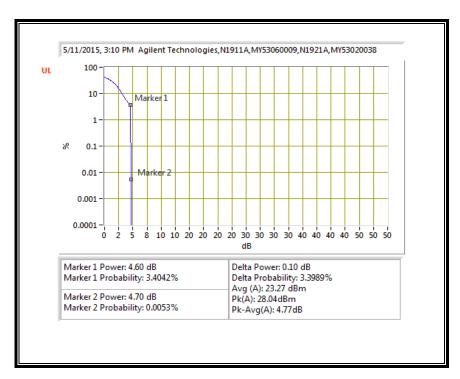


Page 1840 of 1995

QPSK, (5.0 MHz BAND WIDTH)

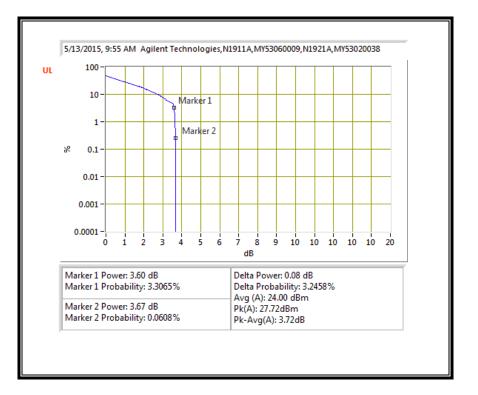


16QAM, (5.0 MHz BAND WIDTH)

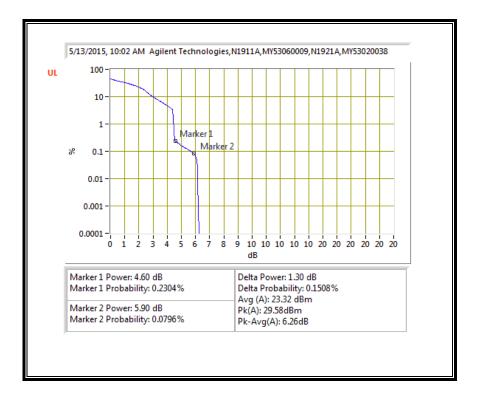


Page 1841 of 1995

QPSK, (10.0 MHz BAND WIDTH)



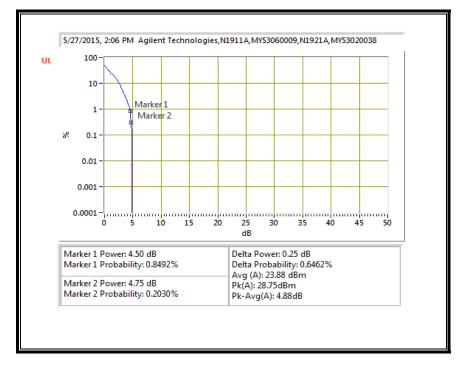
16QAM, (10.0 MHz BAND WIDTH)



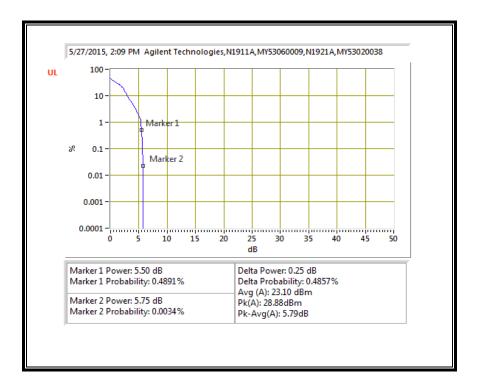
Page 1842 of 1995

LTE BAND 12

QPSK, (1.4 MHz BAND WIDTH)

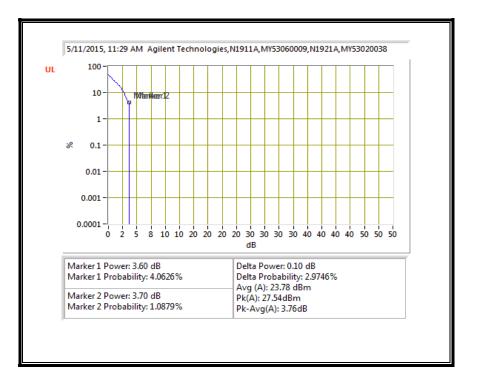


16QAM, (1.4 MHz BAND WIDTH)

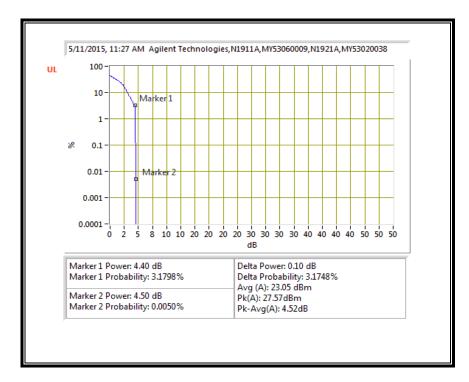


Page 1843 of 1995

QPSK, (3.0 MHz BAND WIDTH)

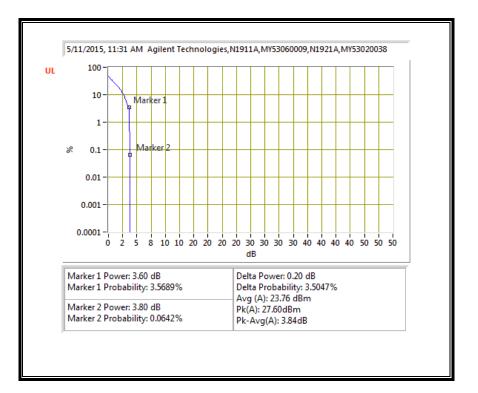


16QAM, (3.0 MHz BAND WIDTH)

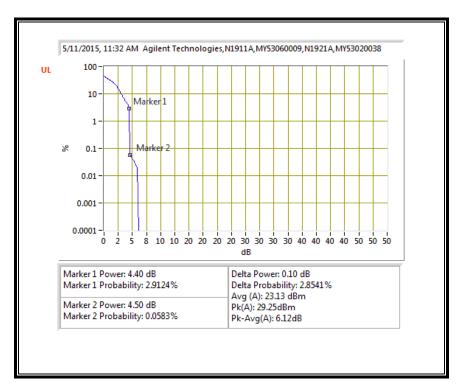


Page 1844 of 1995

QPSK, (5.0 MHz BAND WIDTH)

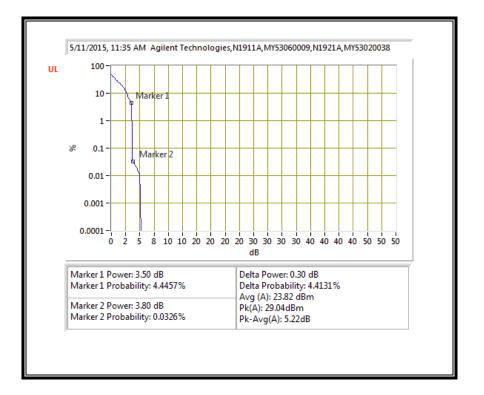


16QAM, (5.0 MHz BAND WIDTH)

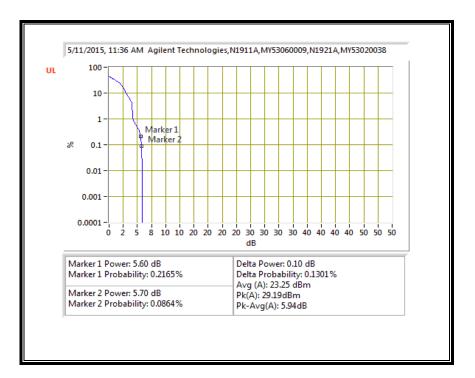


Page 1845 of 1995

QPSK, (10.0 MHz BAND WIDTH)



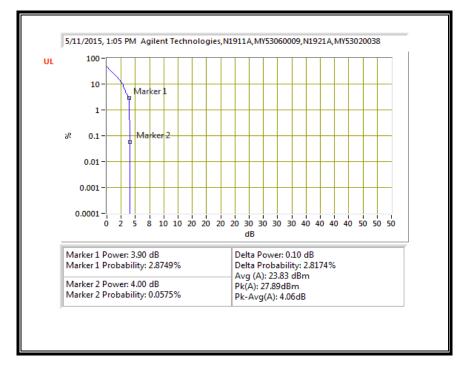
16QAM, (10.0 MHz BAND WIDTH)



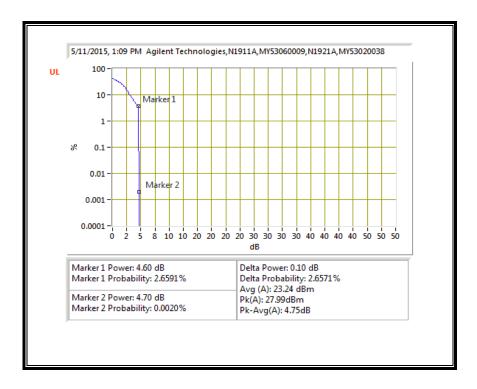
Page 1846 of 1995

LTE BAND 13

QPSK, (5.0 MHz BAND WIDTH)

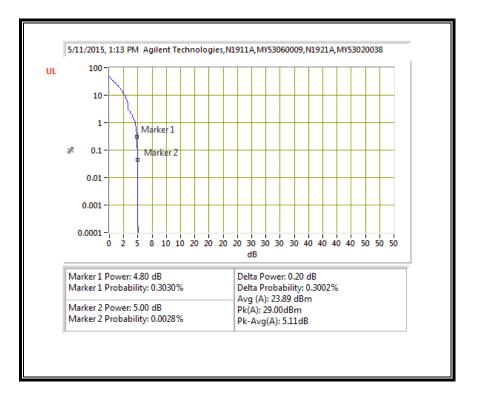


16QAM, (5.0 MHz BAND WIDTH)

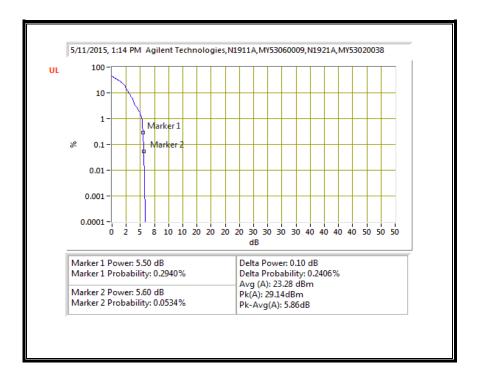


Page 1847 of 1995

QPSK, (10.0 MHz BAND WIDTH)



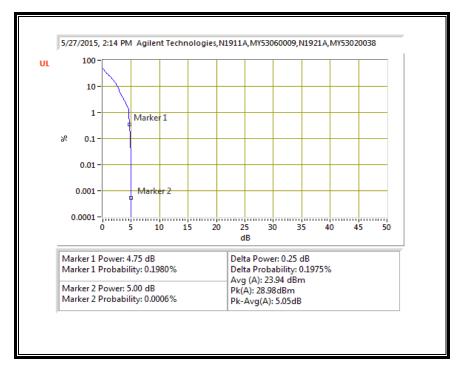
16QAM, (10.0 MHz BAND WIDTH)



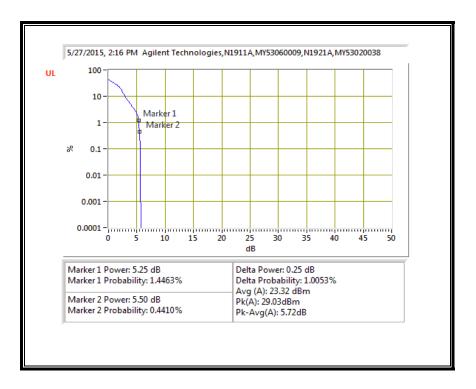
Page 1848 of 1995

LTE BAND 17

QPSK, (5.0 MHz BAND WIDTH)

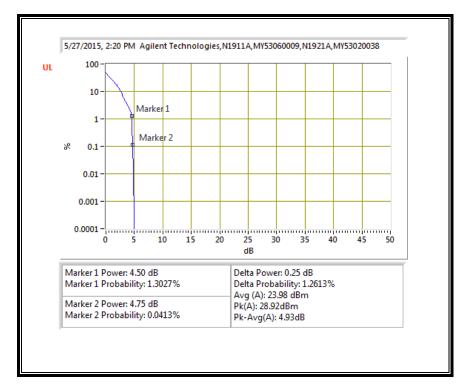


16QAM, (5.0 MHz BAND WIDTH)

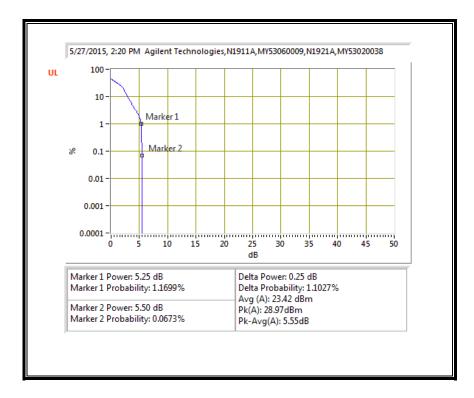


Page 1849 of 1995

QPSK, (10.0 MHz BAND WIDTH)



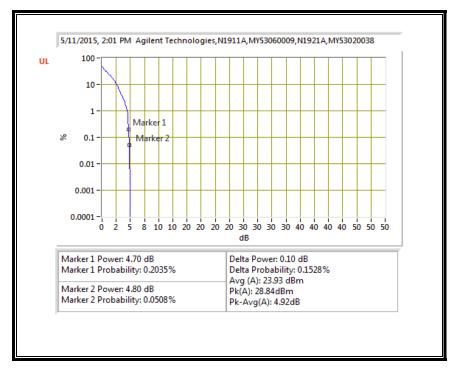
16QAM, (10.0 MHz BAND WIDTH)



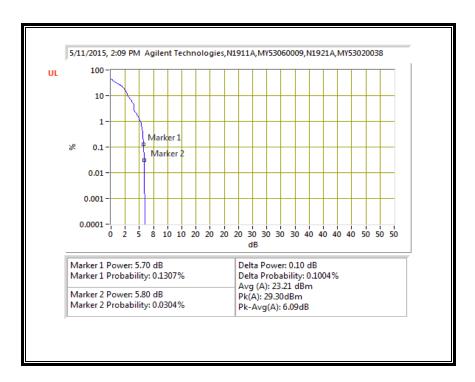
Page 1850 of 1995

LTE BAND 25

QPSK, (1.4 MHz BAND WIDTH)

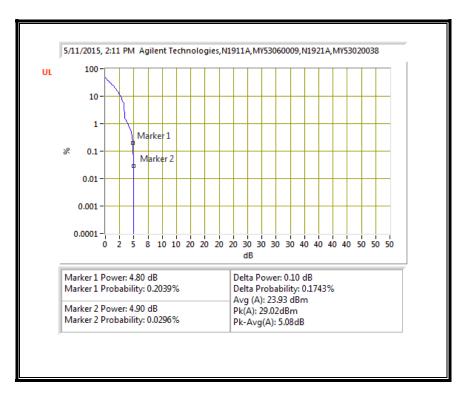


16QAM, (1.4 MHz BAND WIDTH)

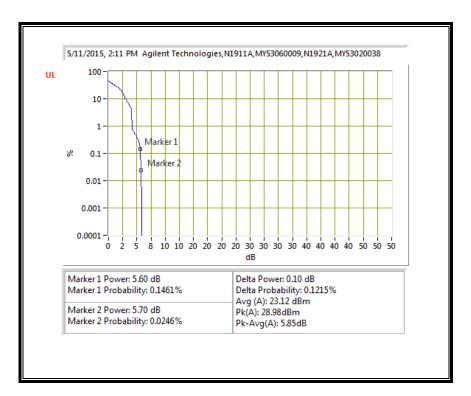


Page 1851 of 1995

QPSK, (3.0 MHz BAND WIDTH)

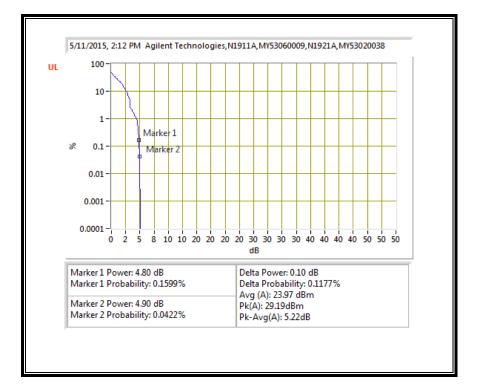


16QAM, (3.0 MHz BAND WIDTH)

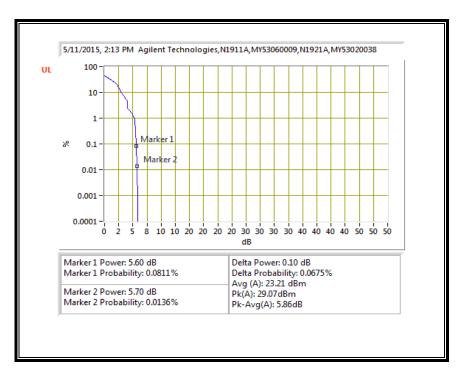


Page 1852 of 1995

QPSK, (5.0 MHz BAND WIDTH)

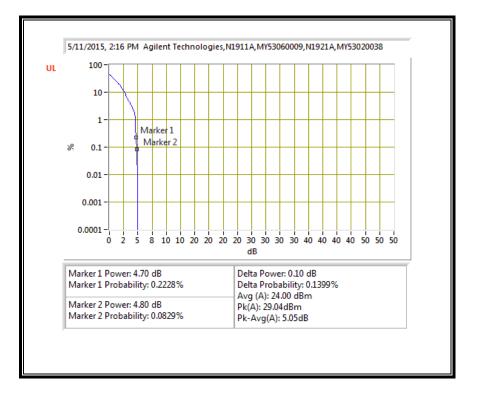


16QAM, (5.0 MHz BAND WIDTH)

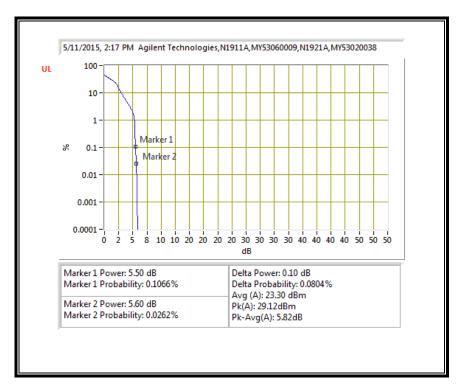


Page 1853 of 1995

QPSK, (10.0 MHz BAND WIDTH)

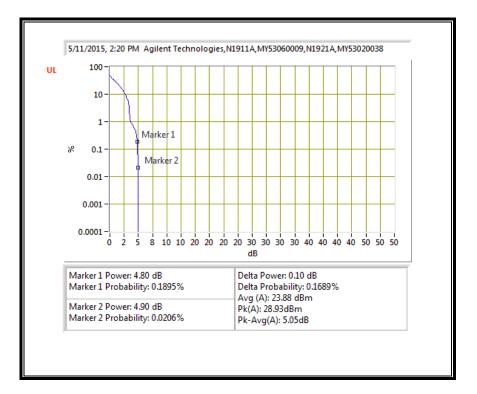


16QAM, (10.0 MHz BAND WIDTH)

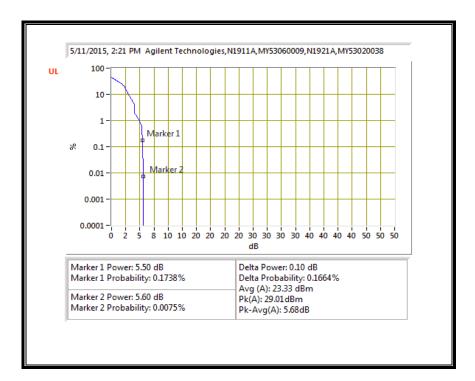


Page 1854 of 1995

QPSK, (15.0 MHz BAND WIDTH)

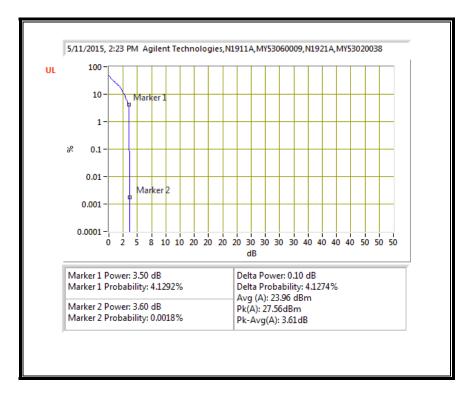


16QAM, (15.0 MHz BAND WIDTH)

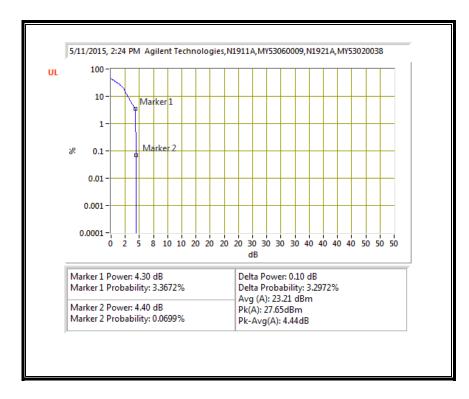


Page 1855 of 1995

QPSK, (20.0 MHz BAND WIDTH)



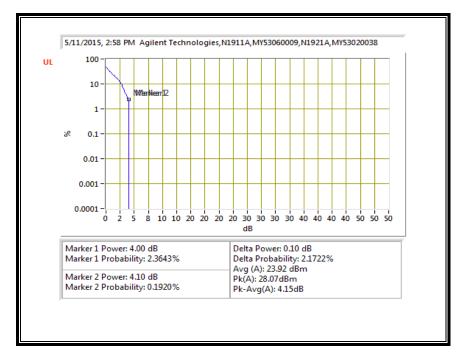
16QAM, (20.0 MHz BAND WIDTH)



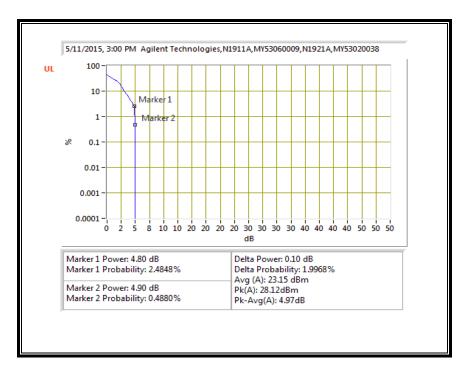
Page 1856 of 1995

LTE BAND 26

QPSK, (1.4 MHz BAND WIDTH)



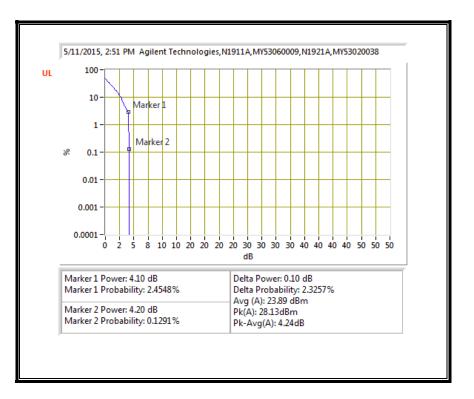
16QAM, (1.4 MHz BAND WIDTH)



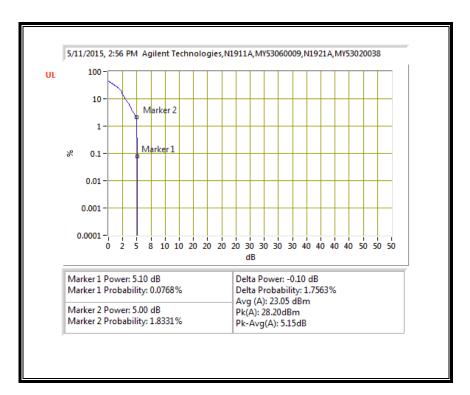
Page 1857 of 1995

UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc.

QPSK, (3.0 MHz BAND WIDTH)

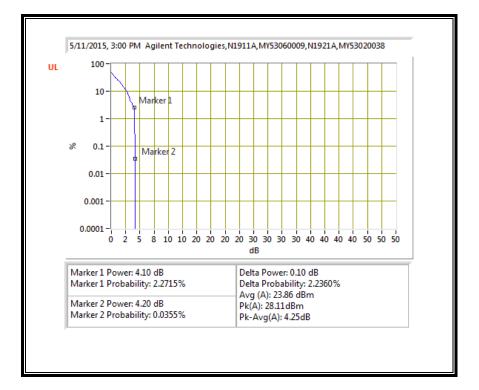


16QAM, (3.0 MHz BAND WIDTH)

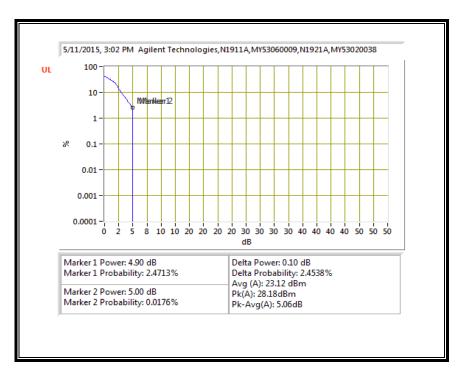


Page 1858 of 1995

QPSK, (5.0 MHz BAND WIDTH)

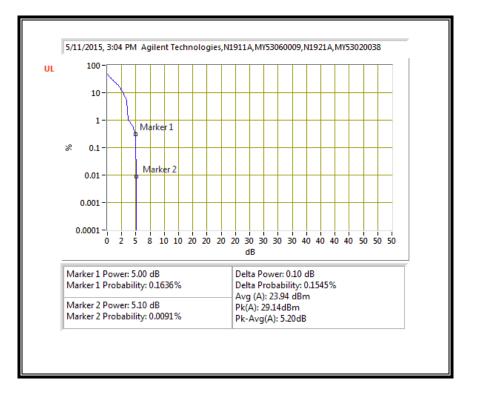


16QAM, (5.0 MHz BAND WIDTH)

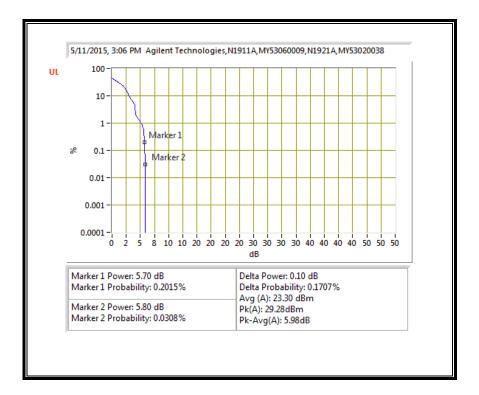


Page 1859 of 1995

QPSK, (10.0 MHz BAND WIDTH)



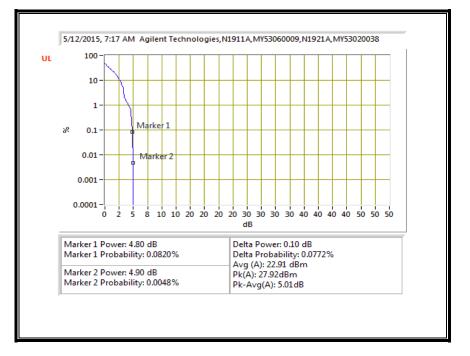
16QAM, (10.0 MHz BAND WIDTH)



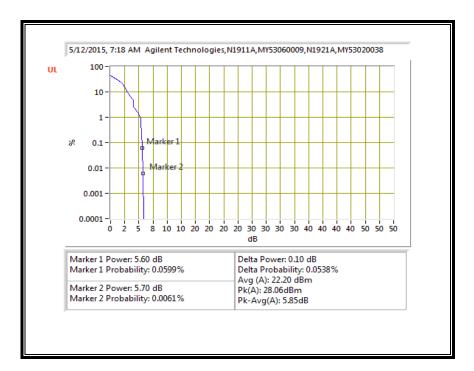
Page 1860 of 1995

LTE BAND 30

QPSK, (5.0 MHz BAND WIDTH)

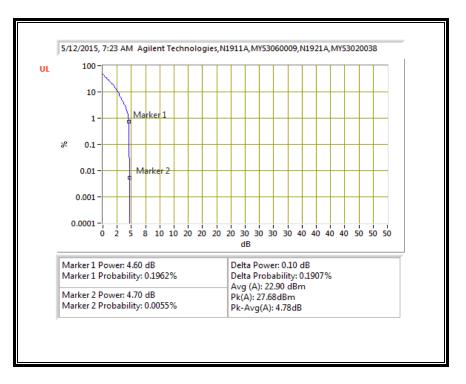


16QAM, (5.0 MHz BAND WIDTH)

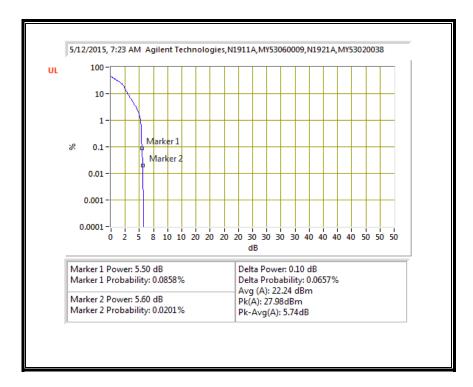


Page 1861 of 1995

QPSK, (10.0 MHz BAND WIDTH)



16QAM, (10.0 MHz BAND WIDTH)



Page 1862 of 1995

10.6. PEAK-TO-AVERAGE RATIO (MODEL: A1688)

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

10.6.1. LTE BAND 2

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted *Peak	Power (dBm) Average	Peak-to- Average Ratio (PAR)
LTE Band 2	1.4	1880.0	QPSK	28.81	23.86	4.95
RB1-0	1.4	1880.0	16QAM	29.15	23.3	5.85
						-

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 2	3.0	1880.0	QPSK	28.86	23.99	4.87
RB1-0	3.0	1880.0	16QAM	28.96	23.26	5.70
						•

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 2	5.0	1880.0	QPSK	28.76	23.96	4.80	
RB1-0	5.0	1880.0	16QAM	28.93	23.23	5.70	

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 2 RB1-0	10.0	1880.0	QPSK	28.55	23.9	4.65			
			16QAM	28.9	23.28	5.62			
*Peak Readin	*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1863 of 1995

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 2 RB1-0 15.0	1990.0	QPSK	28.52	23.72	4.80			
	15.0	1880.0	16QAM	28.75	23.13	5.62		
*Peak Readin	*Peak Reading = Average Reading + Peak-to-Average Ratio							

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 2	20.0	1880.0	QPSK	27.58	23.98	3.60		
RB1-0	20.0	1880.0	16QAM	29	23.38	5.62		
*Peak Readin	*Peak Reading = Average Reading + Peak-to-Average Ratio							

10.6.2. LTE BAND 4

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4 RB1-0	1.4	1732.5	QPSK	28.55	23.90	4.65		
	1.4		16QAM	28.54	23.14	5.40		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4 RB1-0 3.0	2.0	1732.5	QPSK	28.53	23.95	4.58		
	3.0	1732.5	16QAM	28.54	23.14	5.40		
*Peak Readin	*Peak Reading = Average Reading + Peak-to-Average Ratio							

Page 1864 of 1995

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 4 5.0 RB1-0 5.0	1732.5	QPSK	28.57	23.92	4.65				
	5.0	1732.5	16QAM	28.66	23.26	5.40			
*Peak Readin	*Peak Reading = Average Reading + Peak-to-Average Ratio								

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4 RB1-0 10.0	4700 5	QPSK	28.3	23.95	4.35			
	10.0	1732.5	16QAM	28.34	23.39	4.95		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4 RB1-0 15. ¹	15.0	1732.5	QPSK	28.4	23.82	4.58		
	15.0	1732.5	16QAM	28.44	23.27	5.17		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 4 20.0 RB1-0	1732.5	QPSK	28.38	23.88	4.50			
	20.0	1732.5	16QAM	28.31	23.14	5.17		
*Peak Reading	*Peak Reading = Average Reading + Peak-to-Average Ratio							

Page 1865 of 1995

10.6.3. LTE BAND 5

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 5	4.4	936 F	QPSK	28.55	23.83	4.72
RB1-0	1.4	836.5	16QAM	27.43	22.71	4.72
*Peak Reading = Average Reading + Peak-to-Average Ratio						

Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 5 3.0	836.5	QPSK	27.82	23.92	3.90		
RB1-0	3.0	836.5	16QAM	27.85	23.13	4.72	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

Band-width Conducted Power (dBm) Mode (MHZ) f (MHz) Modulation *Peak Average	
	Average Ratio (PAR)
LTE Band 5 5.0 836.5 QPSK 27.72 23.97	3.75
RB1-0 5.0 636.5 16QAM 29.2 23.42	5.78

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 5	10.0	836.5	QPSK	28.75	23.95	4.80	
RB1-0	10.0	836.5	16QAM	28.73	23.11	5.62	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

Page 1866 of 1995

10.6.4. LTE BAND 7

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 7	5.0	2525.0	QPSK	28.01	23.36	4.65	
RB1-0	5.0	2535.0	16QAM	28.24	22.69	5.55	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 7	10.0	10.0 2535.0	QPSK	27.92	23.34	4.58	
RB1-0	10.0	2535.0	16QAM	28.04	22.64	5.40	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 7	15.0	2535.0	QPSK	27.81	23.39	4.42
RB1-0	15.0	2535.0	16QAM	28.24	22.77	5.47

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 7	20.0		QPSK	26.73	23.28	3.45	
RB1-0	20.0	2535.0	16QAM	28.15	22.60	5.55	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

Page 1867 of 1995

10.6.5. LTE BAND 12

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 12	1.4	707.5	QPSK	28.79	23.99	4.80	
RB1-0	1.4	707.5	16QAM	27.49	22.77	4.72	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

Channel Peak-to-Conducted Power (dBm) Band-width Average Ratio (MHZ) *Peak Mode f (MHz) Modulation Average (PAR) QPSK 27.83 23.93 3.90 LTE Band 12 3.0 707.5 RB1-0 16QAM 27.91 23.11 4.80

*Peak Reading = Average Reading + Peak-to-Average Ratio

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted *Peak	Power (dBm) Average	Peak-to- Average Ratio (PAR)
LTE Band 12	5.0	707.5	QPSK	27.8	23.97	3.83
RB1-0	5.0	707.5	16QAM	27.79	23.21	4.58

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 12	nd 12 10.0	10.0 707.5	QPSK	27.98	23.86	4.12	
RB1-0	10.0	707.5	16QAM	28.01	23.21	4.80	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

Page 1868 of 1995

10.6.6. LTE BAND 13

	Channel Band-width			Conducted	Power (dBm)	Peak-to- Average Ratio
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)
LTE Band 13	5.0	700.0	QPSK	28.88	23.93	4.95
RB1-0	5.0	782.0	16QAM	28.96	23.18	5.78
*Peak Reading = Average Reading + Peak-to-Average Ratio						

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)			
LTE Band 13 RB1-0 10.0	792.0	QPSK	28.28	23.86	4.42				
	10.0	782.0	16QAM	28.24	23.07	5.17			
*Peak Reading	*Peak Reading = Average Reading + Peak-to-Average Ratio								

10.6.7. LTE BAND 17

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted *Peak	Power (dBm) Average	Peak-to- Average Ratio (PAR)	
	. (QPSK	27.93	23.95	3.98		
LTE Band 17 RB1-0	5.0	710.0		21.00	20.00	0.00	
KBI-U			16QAM	28.99	23.29	5.70	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 17 RB1-0 10.0	710.0	QPSK	27.8	23.97	3.83			
	10.0	710.0	16QAM	27.79	23.29	4.50		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1869 of 1995

10.6.8. LTE BAND 25

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 25 RB1-0 1.4	4000.0	QPSK	28.89	23.94	4.95		
	1880.0	16QAM	29.02	23.10	5.92		

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 25	2.0	1000.0	QPSK	28.48	23.83	4.65	
RB1-0	3.0	1880.0	16QAM	28.78	23.08	5.70	
*Deck Bending - Average Bending - Deck to Average Betic							

*Peak Reading = Average Reading + Peak-to-Average Ratio

Mode	Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted *Peak	Power (dBm) Average	Peak-to- Average Ratio (PAR)
LTE Band 25	5.0	1880.0	QPSK	28.72	23.85	4.87
RB1-0	5.0	1880.0	16QAM	28.91	23.21	5.70

*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Peak-to- Average Ratio			
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 25 RB1-0 10.0	1990.0	QPSK	28.75	23.95	4.80			
	10.0	1880.0	16QAM	29.09	23.39	5.70		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Page 1870 of 1995

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 25 RB1-0 15.0	1880.0	QPSK	28.5	23.85	4.65		
		16QAM	28.76	23.29	5.47		
*Peak Reading - Average Reading + Peak-to-Average Ratio							

Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted	Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 25 RB1-0 20.0	20.0	20.0 1880.0 -	QPSK	28.65	24.00	4.65	
	20.0		16QAM	28.51	23.18	5.33	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

Page 1871 of 1995

10.6.9. LTE BAND 26

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio		
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)		
LTE Band 26 RB1-0 1.4		QPSK	29.11	23.94	5.17			
	1.4	819.0	16QAM	29.45	23.30	6.15		
*Peak Reading = Average Reading + Peak-to-Average Ratio								

Channel Band-width (MHZ)	f (MHz)	Modulation	Conducted *Peak	Power (dBm) Average	Peak-to- Average Ratio (PAR)
		QPSK	29	23.90	5.10
3.0	819.0	16QAM	12.85	7.00	5.85
	Band-width	Band-width (MHZ) f (MHz)	Band-width (MHZ)f (MHz)Modulation3.0819.0	Band-width (MHZ) f (MHz) Modulation *Peak 3.0 819.0	Band-width (MHZ)f (MHz)ModulationConducted Power (dBm)3.0f (MHz)Modulation*PeakAverage3.0819.0

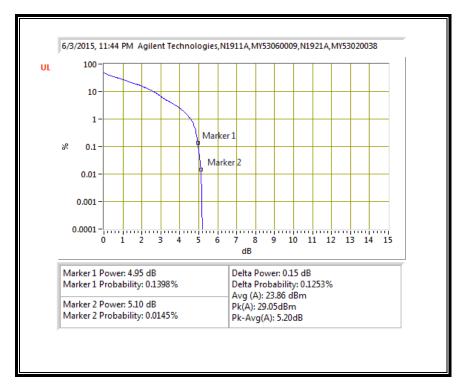
*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width			Conducted Power (dBm)		Peak-to- Average Ratio	
Mode	(MHZ)	f (MHz)	Modulation	*Peak	Average	(PAR)	
LTE Band 26	010.0	QPSK	29.01	23.91	5.10		
RB1-0	5.0	819.0	16QAM	29.02	23.17	5.85	
*Peak Reading = Average Reading + Peak-to-Average Ratio							

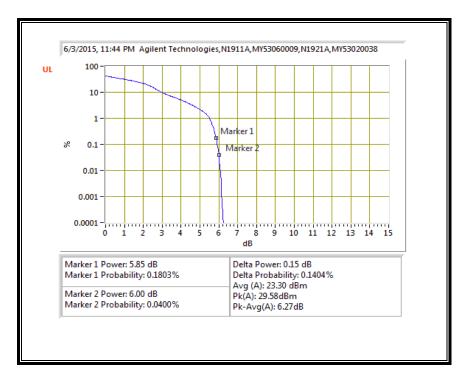
*Peak Reading = Average Reading + Peak-to-Average Ratio

	Channel Band-width	f (MHz)	Modulation	Conducted Power (dBm)		Peak-to- Average Ratio
Mode	(MHZ)			*Peak	Average	(PAR)
LTE Band 26 RB1-0	10.0	819.0	QPSK	28.95	23.92	5.03
			16QAM	29.11	23.26	5.85
*Peak Reading = Average Reading + Peak-to-Average Ratio						

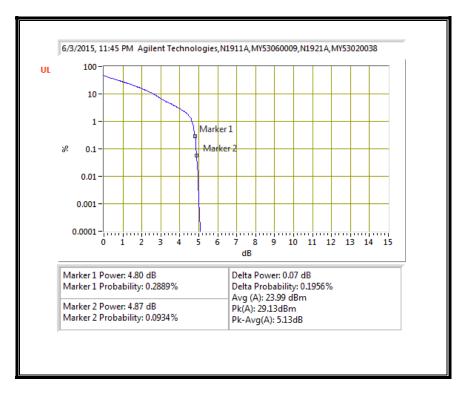
QPSK, (1.4 MHz BAND WIDTH)



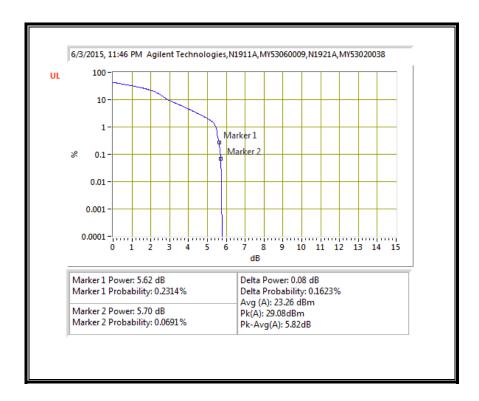
16QAM, (1.4 MHz BAND WIDTH)



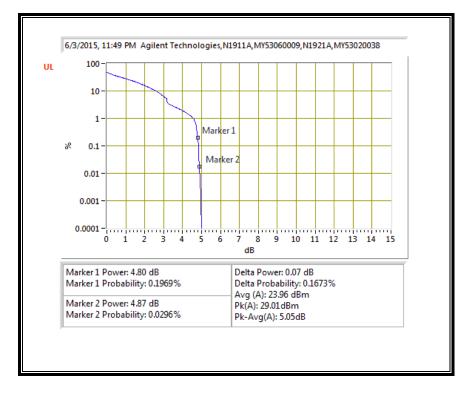
Page 1873 of 1995



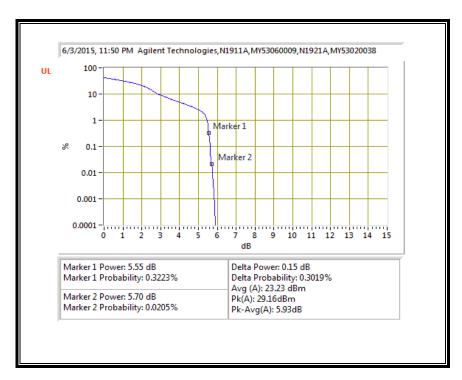
16QAM, (3.0 MHz BAND WIDTH)



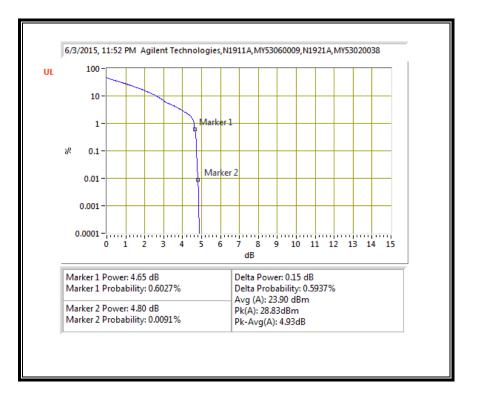
Page 1874 of 1995



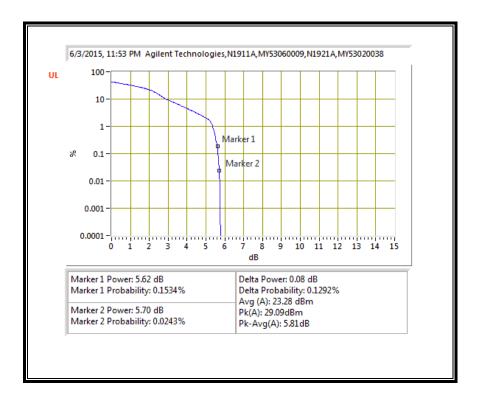
16QAM, (5.0 MHz BAND WIDTH)



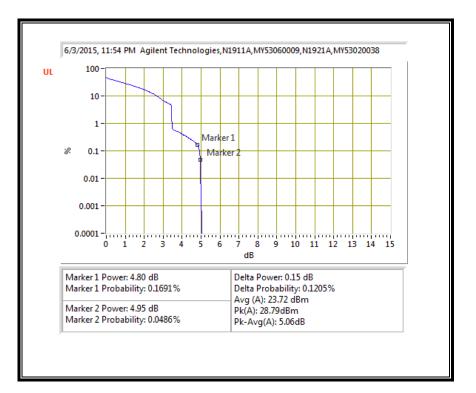
Page 1875 of 1995



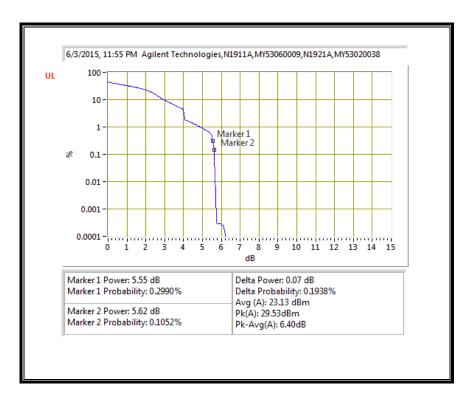
16QAM, (10.0 MHz BAND WIDTH)



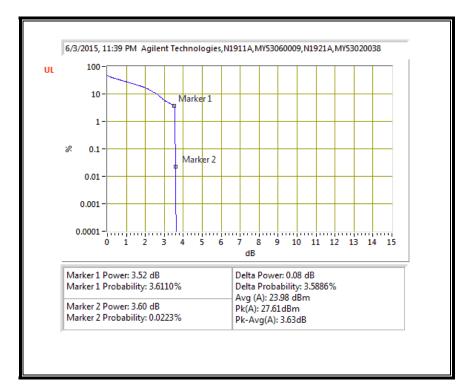
Page 1876 of 1995



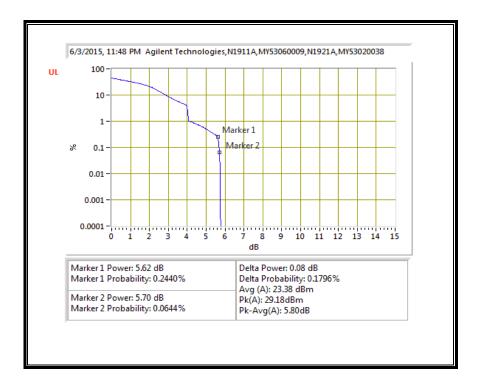
16QAM, (15.0 MHz BAND WIDTH)



Page 1877 of 1995

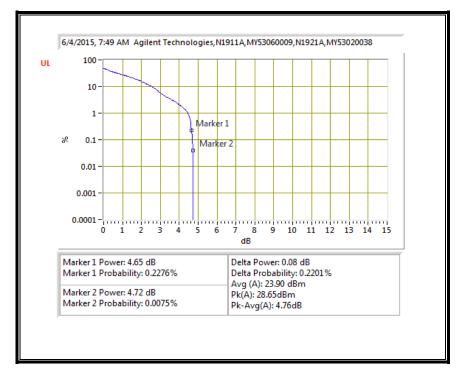


16QAM, (20.0 MHz BAND WIDTH)

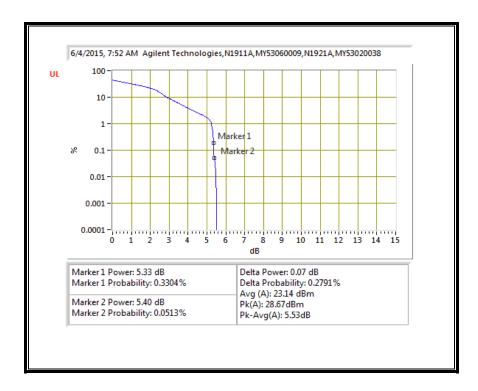


Page 1878 of 1995

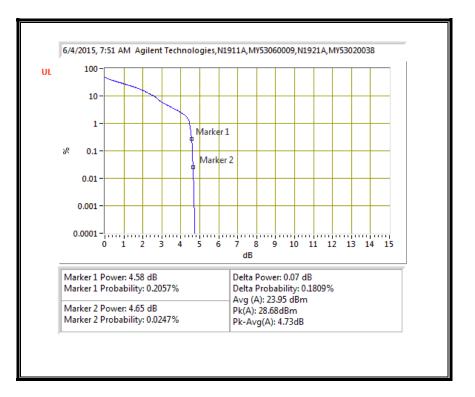
QPSK, (1.4 MHz BAND WIDTH)



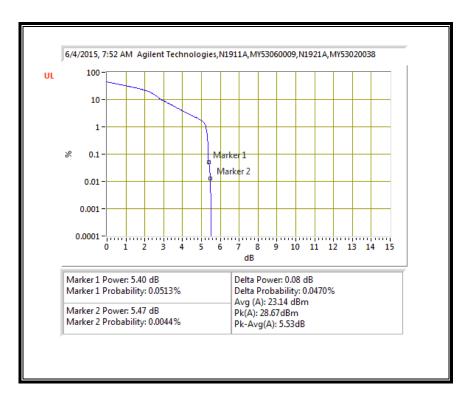
16QAM, (1.4 MHz BAND WIDTH)



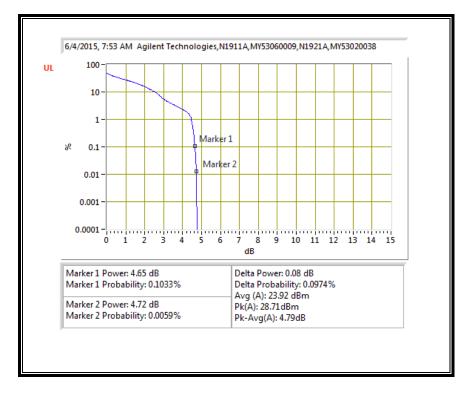
Page 1879 of 1995



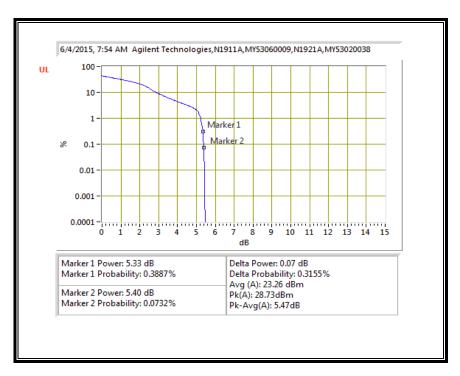
16QAM, (3.0 MHz BAND WIDTH)



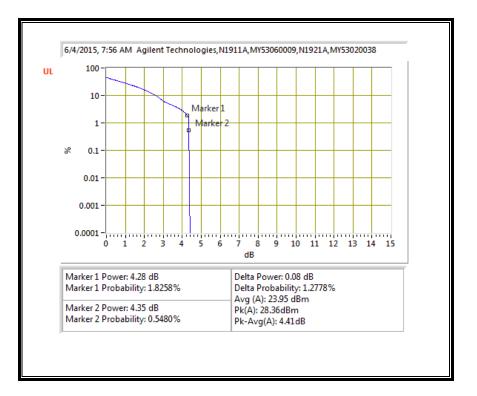
Page 1880 of 1995



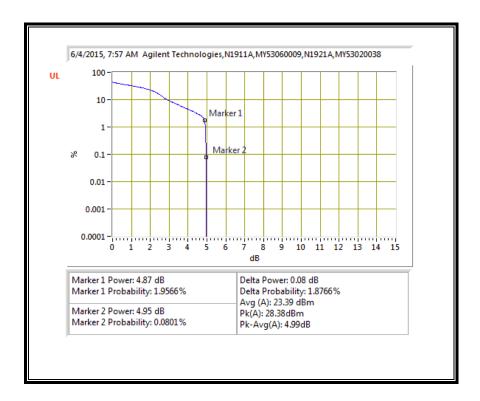
16QAM, (5.0 MHz BAND WIDTH)



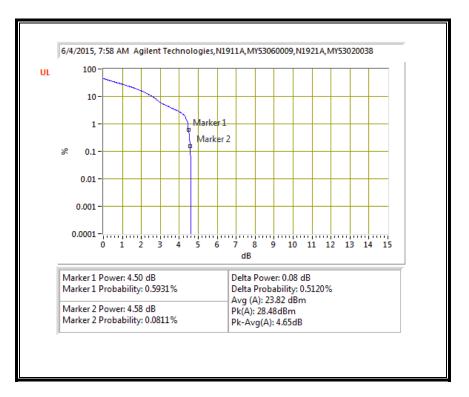
Page 1881 of 1995



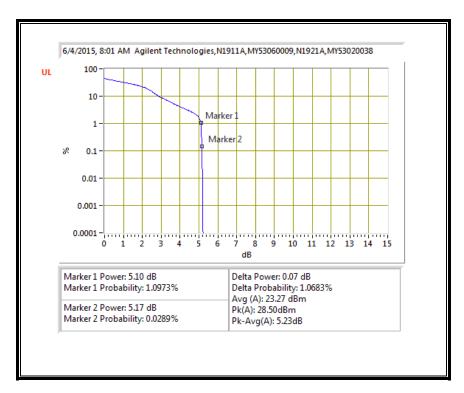
16QAM, (10.0 MHz BAND WIDTH)



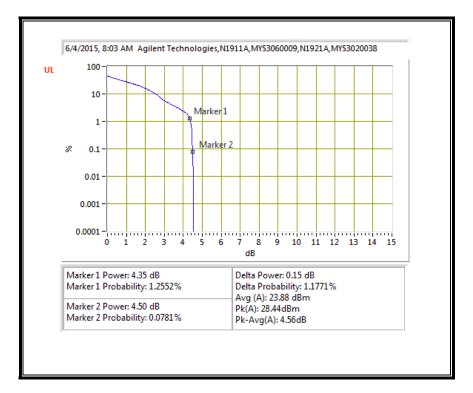
Page 1882 of 1995



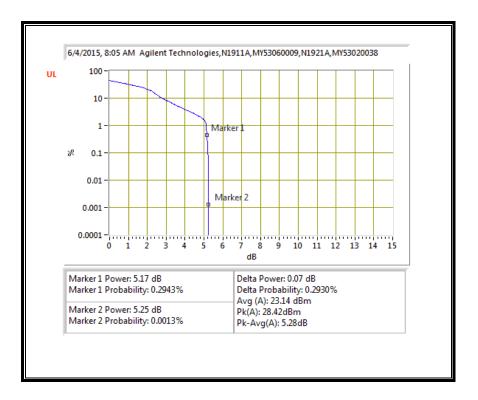
16QAM, (15.0 MHz BAND WIDTH)



Page 1883 of 1995

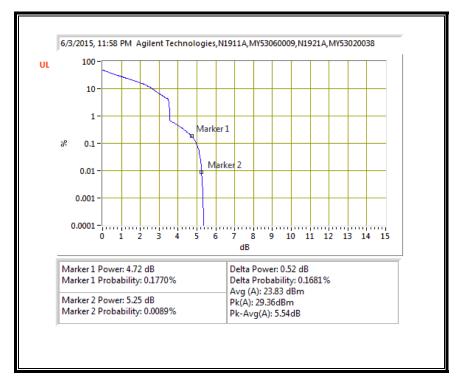


16QAM, (20.0 MHz BAND WIDTH)

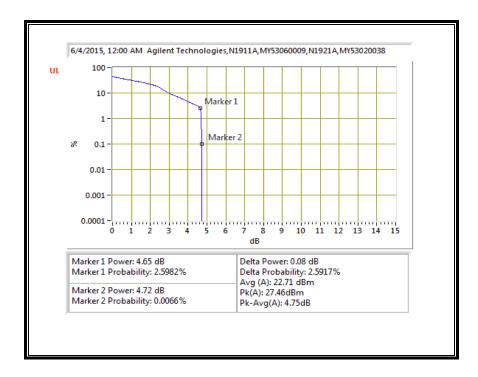


Page 1884 of 1995

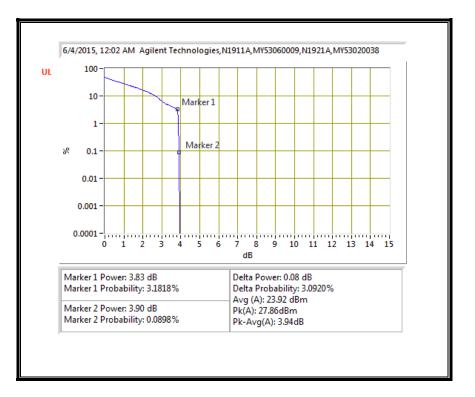
QPSK, (1.4 MHz BAND WIDTH)



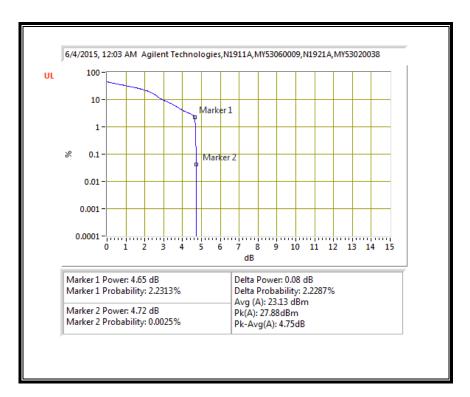
16QAM, (1.4 MHz BAND WIDTH)



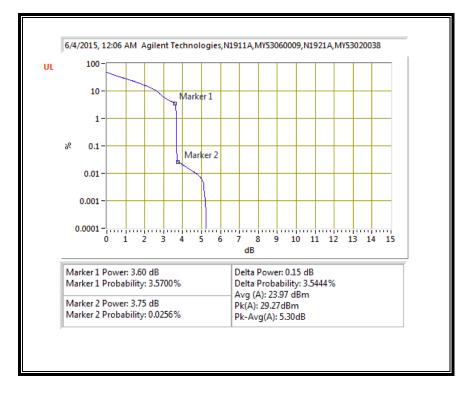
Page 1885 of 1995



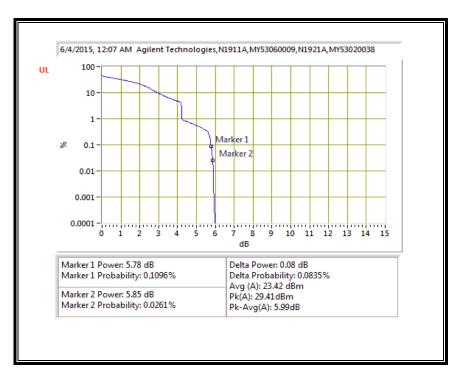
16QAM, (3.0 MHz BAND WIDTH)



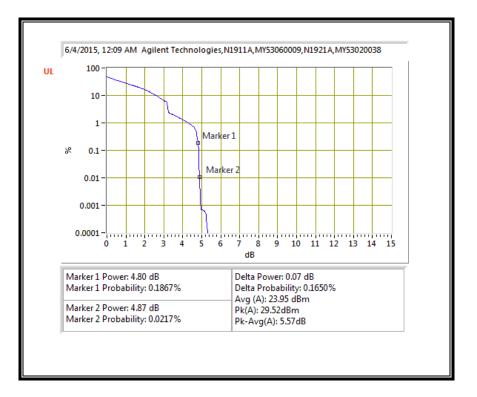
Page 1886 of 1995



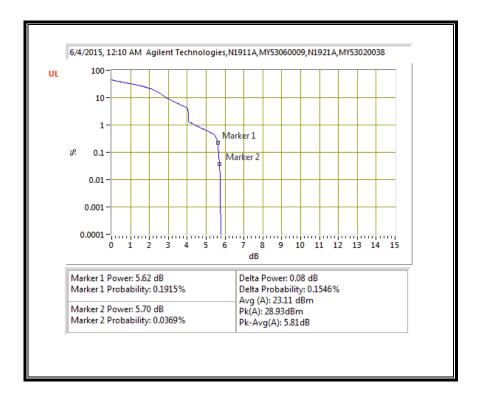
16QAM, (5.0 MHz BAND WIDTH)



Page 1887 of 1995

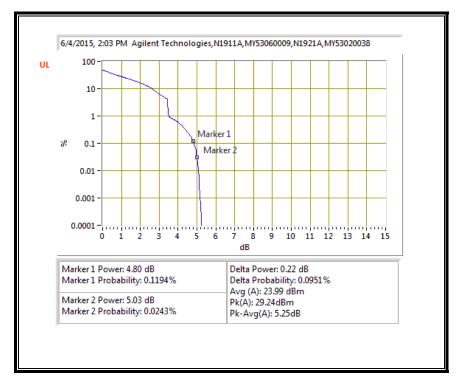


16QAM, (10.0 MHz BAND WIDTH)

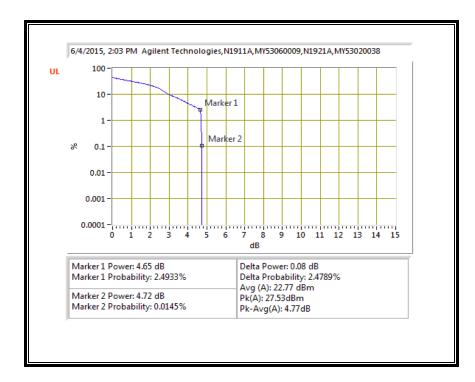


Page 1888 of 1995

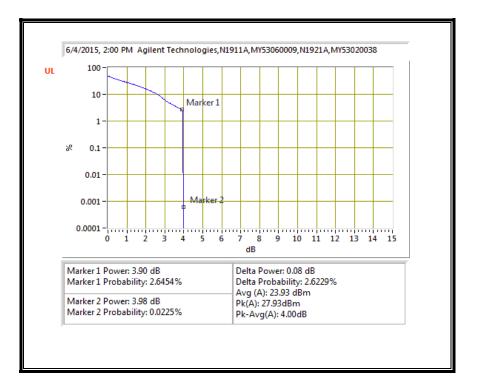
QPSK, (1.4 MHz BAND WIDTH)



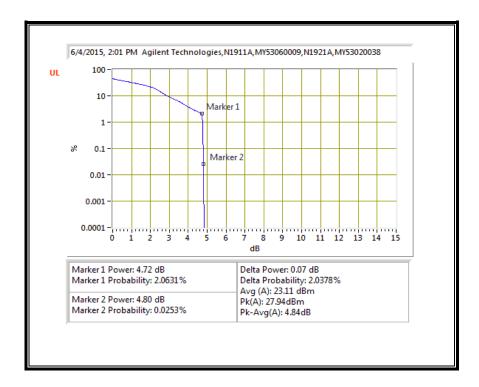
16QAM, (1.4 MHz BAND WIDTH)



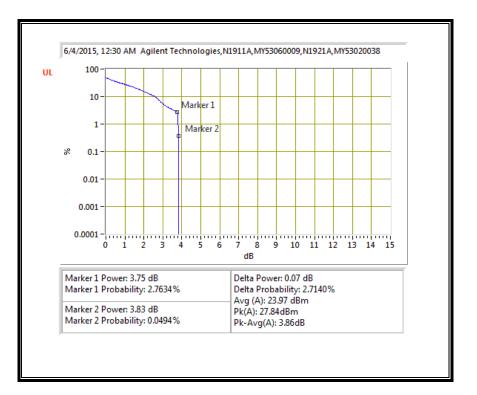
Page 1889 of 1995



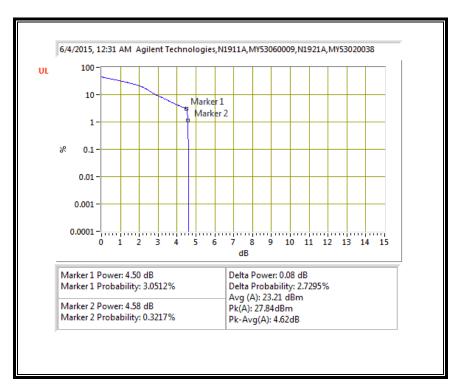
16QAM, (3.0 MHz BAND WIDTH)



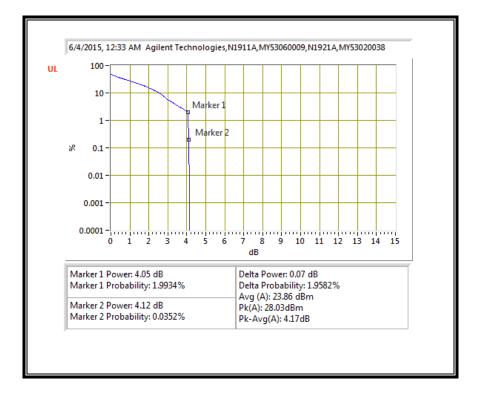
Page 1890 of 1995



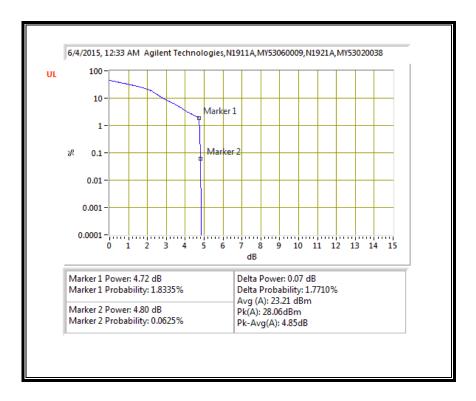
16QAM, (5.0 MHz BAND WIDTH)



Page 1891 of 1995

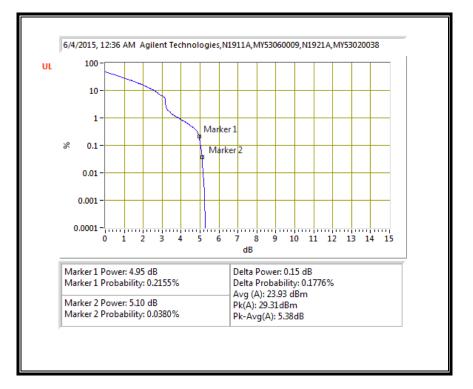


16QAM, (10.0 MHz BAND WIDTH)

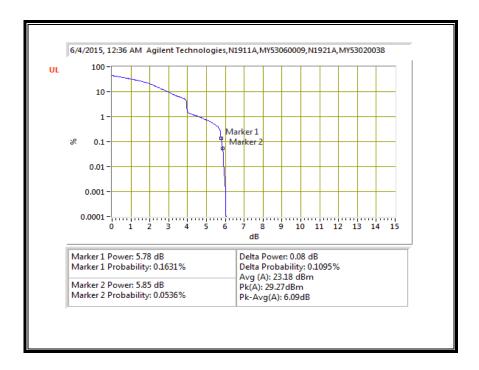


Page 1892 of 1995

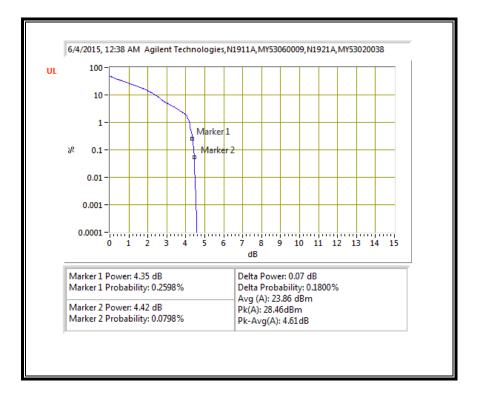
QPSK, (5.0 MHz BAND WIDTH)



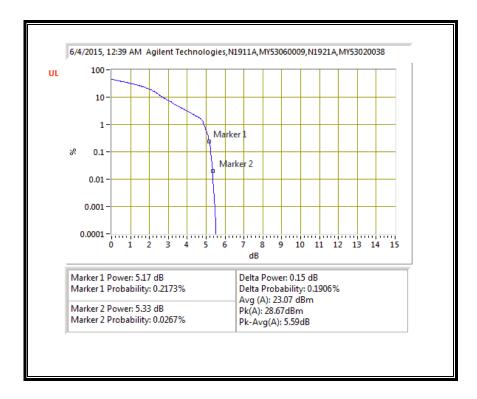
16QAM, (5.0 MHz BAND WIDTH)



Page 1893 of 1995

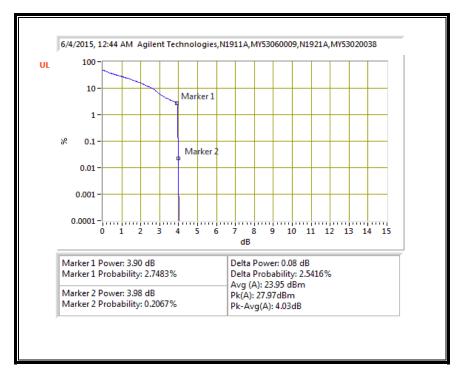


16QAM, (10.0 MHz BAND WIDTH)

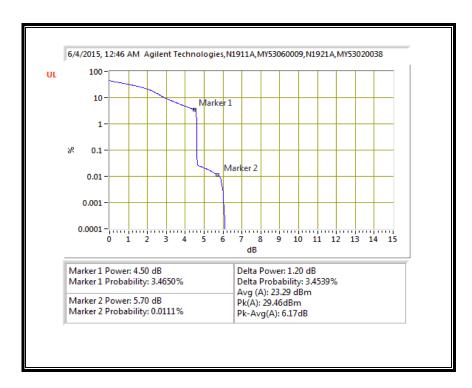


Page 1894 of 1995

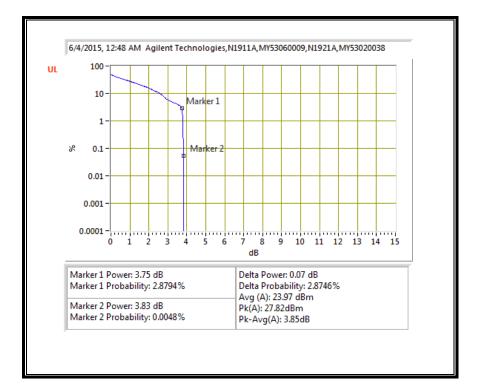
QPSK, (5.0 MHz BAND WIDTH)



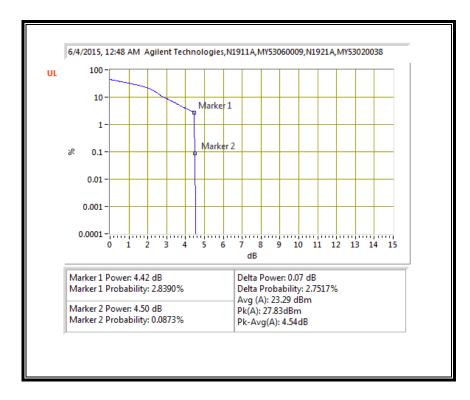
16QAM, (5.0 MHz BAND WIDTH)



Page 1895 of 1995

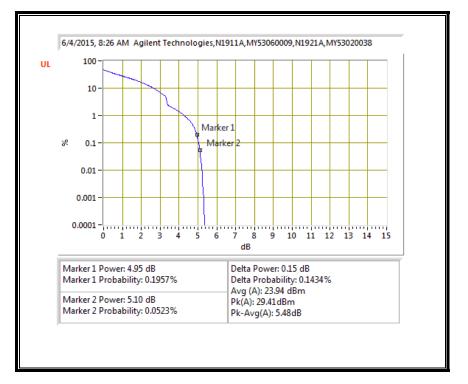


16QAM, (10.0 MHz BAND WIDTH)

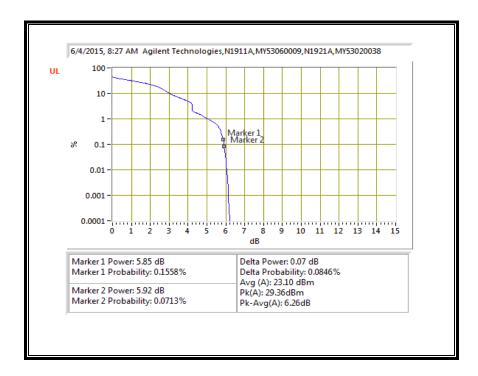


Page 1896 of 1995

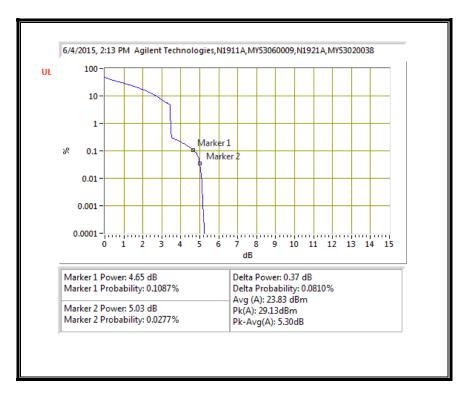
QPSK, (1.4 MHz BAND WIDTH)



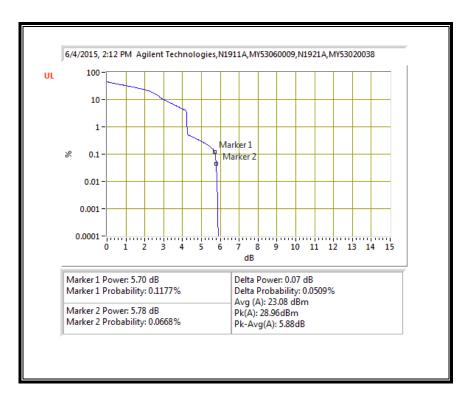
16QAM, (1.4 MHz BAND WIDTH)



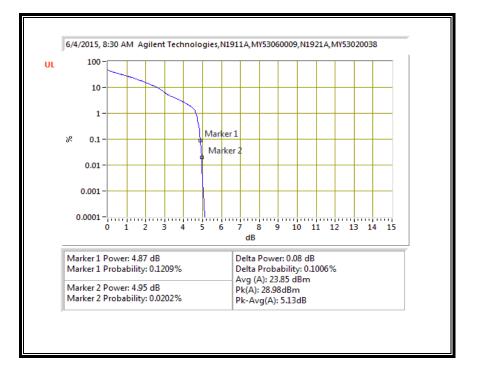
Page 1897 of 1995



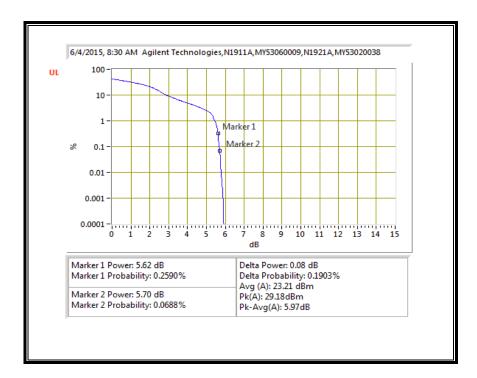
16QAM, (3.0 MHz BAND WIDTH)



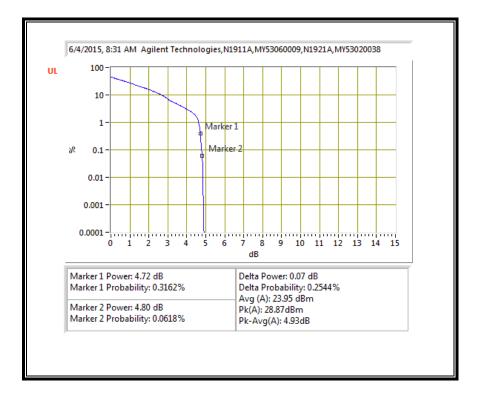
Page 1898 of 1995



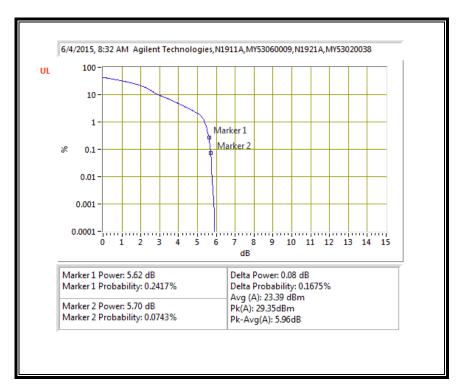
16QAM, (5.0 MHz BAND WIDTH)



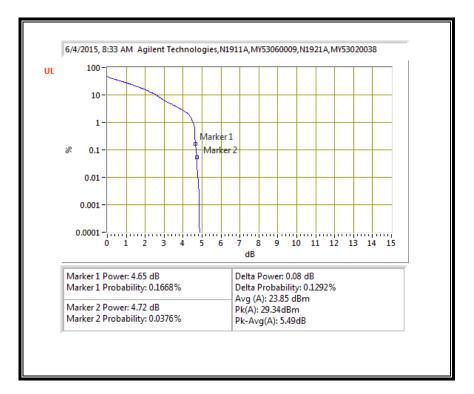
Page 1899 of 1995



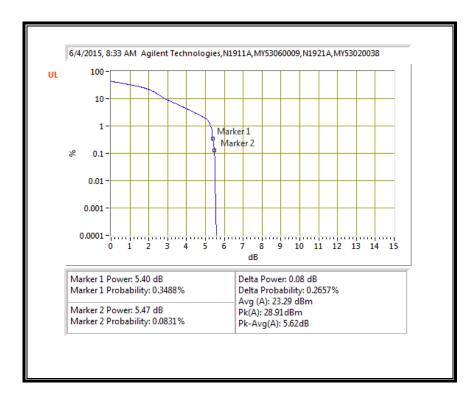
16QAM, (10.0 MHz BAND WIDTH)



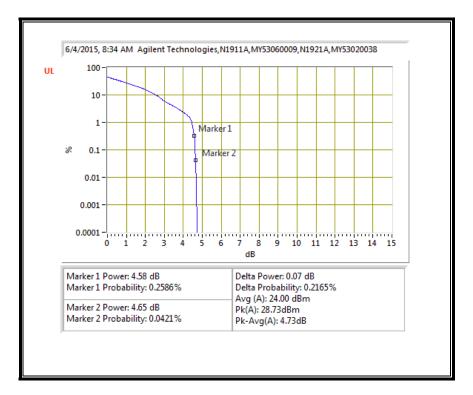
Page 1900 of 1995



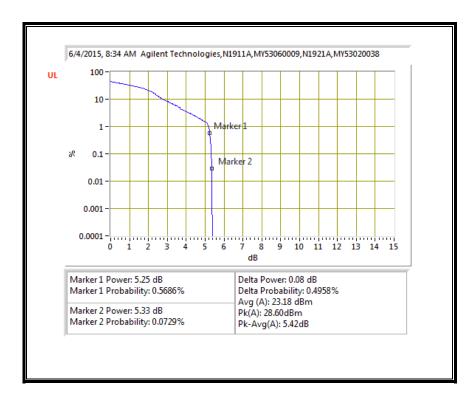
16QAM, (15.0 MHz BAND WIDTH)



Page 1901 of 1995

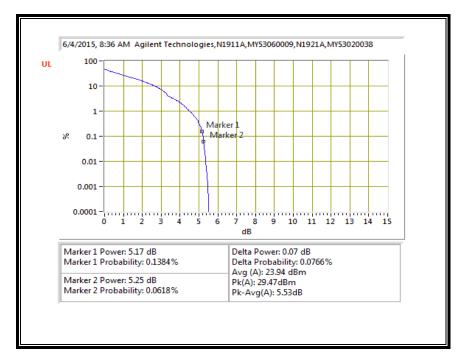


16QAM, (20.0 MHz BAND WIDTH)

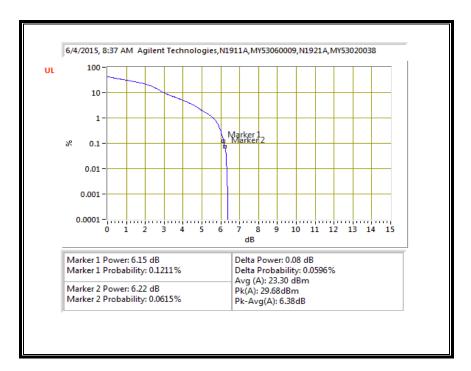


Page 1902 of 1995

QPSK, (1.4 MHz BAND WIDTH)

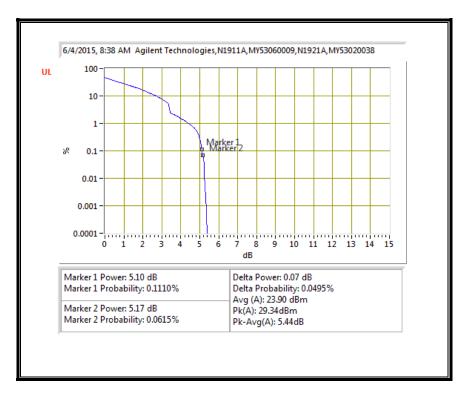


16QAM, (1.4 MHz BAND WIDTH)

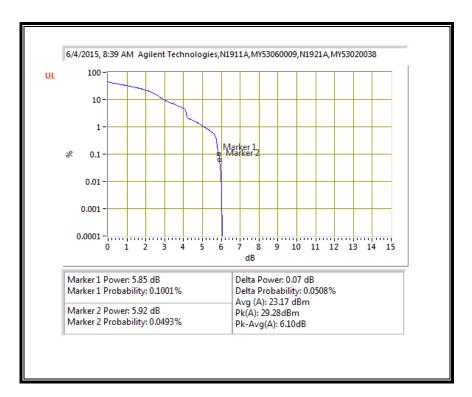


Page 1903 of 1995

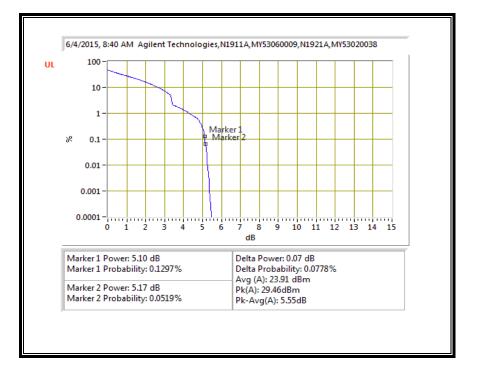
UL VERIFICATION SERVICES INC. 47173 BENICIA STREET, FREMONT, CA 94538, USA This report shall not be reproduced except in full, without the written approval of UL Verification Services Inc. FORM NO: CCSUP4031B



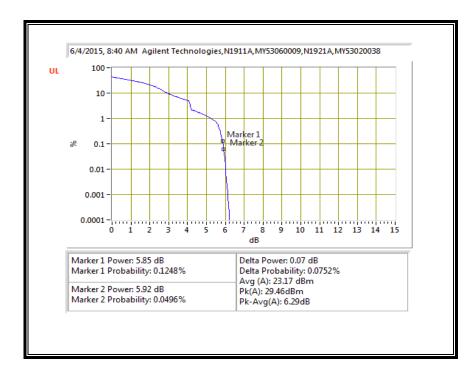
16QAM, (3.0 MHz BAND WIDTH)



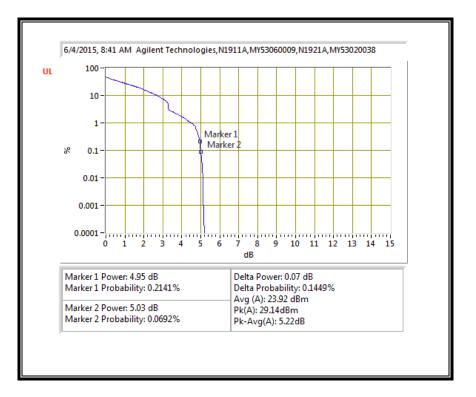
Page 1904 of 1995



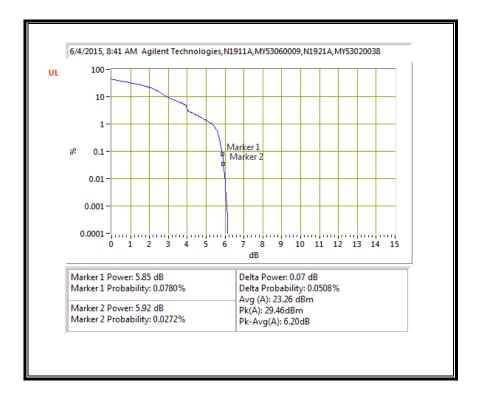
16QAM, (5.0 MHz BAND WIDTH)



Page 1905 of 1995



16QAM, (10.0 MHz BAND WIDTH)



Page 1906 of 1995

10.7. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1633 (LAT)

RULE PART(S)

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

LIMIT

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

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

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

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Page 1907 of 1995

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

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

a. for base station and subscriber equipment, other than mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB; and

b. for mobile subscriber equipment, the attenuation shall not be less than 43 + 10 Log10 (p), dB at the channel edges and 55 + 10 Log10 (p) at 5.5 MHz away and beyond the channel edges where p in (a) and (b) is the transmitter power measured in watts.

MODES TESTED

- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41

RESULTS

Page 1908 of 1995

10.7.1. LTE BAND 2

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

Company:										
Project #:		15U20164								
Date:		04/30/15								
Test Engine		T Wang								
Configurati Node:		EUT only LTE Band 2, 2								
viode:		LIE Dand 2, 2	JIVINZ QPSK							
Fest Equip										
substitution	n: Horn T59 Sub	stitution, an	d 8ft SMA Ca	ble						
_	Chamb	er		e-amplifer		Filter	4		Limit	
	3m Chamber G	-	3m C	hamber G 🚽	Filte	er	•	EIRP		•
			1			1				
				Path Loss						
Frequency	/ SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)			<u> </u>			
ow Channe	l (1860MHz)									
3.720	-62.8	Н	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
5.580	-64.0	Н	3.0	-14.0	35.3	1.0	-48.3	-13.0	-35.3	
7.440	-64.0	H	3.0	-11.9	34.5	1.0	-45.4	-13.0	-32.4	
3.720	-62.3	V	3.0	-13.9	36.2	1.0	-49.1	-13.0	-36.1	
5.580 7.440	-63.9 -65.0	V V	3.0 3.0	-13.4 -12.7	35.3 34.5	1.0 1.0	-47.7 -46.2	-13.0 -13.0	-34.7 -33.2	
1.440	-03.0	V	J.U	-12.1	34.3	1.0	-40.2	-13.0	-၁၁.८	
Aid Channel	(1880MHz)									
3.760	-62.4	Н	3.0	-14.3	36.2	1.0	-49.5	-13.0	-36.5	
5.640	-64.2	Н	3.0	-14.1	35.3	1.0	-48.4	-13.0	-35.4	
7.520	-64.7	Н	3.0	-12.5	34.5	1.0	-46.0	-13.0	-33.0	
3.760	-63.3	V	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
5.640	-64.1	V	3.0	-13.6	35.3	1.0	-47.8	-13.0	-34.8	
7.520	-64.6	V	3.0	-12.2	34.5	1.0	-45.7	-13.0	-32.7	
ligh Channe	(1900MHz)									
3.800	-62.6	Н	3.0	-14.5	36.2	1.0	-49.7	-13.0	-36.7	
5.700	-63.0	Н	3.0	-12.8	35.3	1.0	-47.1	-13.0	-34.1	
7.600	-64.5	H	3.0	-12.2	34.4	1.0	-45.6	-13.0	-32.6	
3.800 5.700	-62.0 -64.2	v v	3.0 3.0	-13.4 -13.6	36.2 35.3	1.0 1.0	-48.6 -47.9	-13.0 -13.0	-35.6 -34.9	
7.600	-64.6	V	3.0 3.0	-13.0 -12.1	30.3 34.4	1.0	-47.9 -45.6	-13.0	-34.9 -32.6	
			v.v		<u>v 67</u>					

Page 1909 of 1995

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

Company Project # Date: Test Eng Configur: Mode:	ineer:	15U20164 04/30/15 T Wang EUT only LTE Band 2, 3	20MHz 16QAM							
<u>Fest Equ</u> Substitut	i <u>pment:</u> ion: Horn T59 :	Substitution, a	nd 8ft SMA Ca	ble						
	Cham	ber	Pre	-amplifer		Filter		1	Limit	
Г	3m Chamber (з .	3m Cl	namber G 🖵	Filter	•		EIRP		•
L			I		I		I	1		
Frequen (GHz)	•	ng Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<u> </u>	nel (1860MHz)	()		()						
3.720	-63.1	н	3.0	-15.1	36.2	1.0	-50.3	-13.0	-37.3	
5.580	-64.2	H	3.0	-14.2	35.3	1.0	-48.5	-13.0	-35.5	
7.440	-64.1	Н	3.0	-12.0	34.5	1.0	-45.5	-13.0	-32.5	
3.720	-63.0	V	3.0	-14.6	36.2	1.0	-49.8	-13.0	-36.8	
5.580	-64.3	V	3.0	-13.8	35.3	1.0	-48.1	-13.0	-35.1	
7.440	-65.0	v	3.0	-12.7	34.5	1.0	-46.2	-13.0	-33.2	
Aid Chanr	nel (1880MHz)	<u> </u>								
3.760	-62.8	Н	3.0	-14.7	36.2	1.0	-49.9	-13.0	-36.9	
5.640	-62.0	H	3.0	-14.7	35.3	1.0	-49.9 -48.7	-13.0	-36.5	
7.520	-65.0	H	3.0	-12.8	34.5	1.0	-46.3	-13.0	-33.3	
3.760	-63.7	v	3.0	-15.2	36.2	1.0	-50.4	-13.0	-37.4	
5.640	-64.5	v	3.0	-14.0	35.3	1.0	-48.2	-13.0	-35.2	
7.520	-65.1	V	3.0	-12.7	34.5	1.0	-46.2	-13.0	-33.2	
liah Char	nel (1900MHz)	I								
11gn Chan 3.800	-63.0	Н	3.0	-14.9	36.2	1.0	-50.1	-13.0	-37.1	
5.700	-63.5	H	3.0	-13.3	35.3	1.0	-47.6	-13.0	-34.6	
7.600	-64.8	H	3.0	-12.5	34.4	1.0	-45.9	-13.0	-32.9	
3.800	-62.6	V	3.0	-14.0	36.2	1.0	-49.2	-13.0	-36.2	
5.700	-64.4	V	3.0	-13.8	35.3	1.0	-48.1	-13.0	-35.1	
7.600	-65.1	V	3.0	-12.6	34.4	1.0	-46.1	-13.0	-33.1	

Page 1910 of 1995

10.7.2. LTE BAND 4

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

		ULFI	emont Rad	iated Chamb	er					
Company:										
Project #:		15U20164								
Date:		04/30/15								
Test Engin	eer:	R.Z								
Configurat	ion:	EUT only								
Mode:		LTE Band 4, 20	0MHz QPSK							
T										
<u>Test Equip</u> Substitutio	ment: n: Horn T59 Sub	estitution an	d 8ft SMA C	ble						
300501000	1. 110111 105 300	Sutution, an	u on SMA G	ible						
	Chamb	ber	P	re-amplifer		Filter			Limit	
Í	3m Chamber G	i 🚽	3m	Chamber G	- Filt	er	-	EIRF	2	•
I										
				B -41 I						
F			Distance	Path Loss	D	Atta		1	Dalta	Nataa
Frequenc		Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channe	el (1720MHz)									
3.440	-57.9	Н	3.0	-10.1	36.4	1.0	-45.5	-13.0	-32.5	
5.160	-62.9	Н	3.0	-13.4	35.5	1.0	-47.8	-13.0	-34.8	
6.880	-63.7	Н	3.0	-12.2	34.7	1.0	-46.0	-13.0	-33.0	
3.440	-55.4	V	3.0	-7.5	36.4	1.0	-42.9	-13.0	-29.9	
5.160	-62.3	V	3.0	-12.2	35.5	1.0	-46.7	-13.0	-33.7	
6.880	-63.6	V	3.0	-11.8	34.7	1.0	-45.6	-13.0	-32.6	
		L								
	I (1732.5MHz)									
3.465	-52.6	H	3.0	-4.7	36.4	1.0	-40.1	-13.0	-27.1	
5.176	-62.8	H	3.0	-13.2	35.5	1.0	-47.7	-13.0	-34.7	
	-65.3	H	3.0	-13.8	34.7	1.0	-47.5	-13.0	-34.5	
6.930	-51.5	V V	3.0	-3.5	36.4	1.0	-38.9	-13.0	-25.9	
3.465	C4 4		3.0	-11.3	35.5	1.0 1.0	-45.8 -45.3	-13.0 -13.0	-32.8 -32.3	
3.465 5.176	-61.4		2 0	44 C			-40.0	-13.0	-32.3	
3.465	-61.4 -63.4	V	3.0	-11.6	34.7	1.0		ĺ	ĺ	1
3.465 5.176 6.930	-63.4		3.0	-11.6	34.7	1.0				
3.465 5.176 6.930 High Chann	-63.4 el (1745MHz)	V	3.0 3.0	-11.6 -8.6	34.7	1.0	-44.0	-13.0	-31.0	
3.465 5.176 6.930	-63.4							-13.0 -13.0	-31.0 -35.2	
3.465 5.176 6.930 High Chann 3.490	-63.4 el (1745MHz) -56.5 -63.4 -65.0	V H H H	3.0	-8.6	36.4	1.0	-44.0 -48.2 -47.1			
3.465 5.176 6.930 High Chann 3.490 5.235 6.980 3.490	-63.4 el (1745MHz) -56.5 -63.4 -65.0 -59.9	V H H H V	3.0 3.0 3.0 3.0 3.0	-8.6 -13.8 -13.4 -11.9	36.4 35.5 34.7 36.4	1.0 1.0 1.0 1.0	44.0 48.2 47.1 47.3	-13.0 -13.0 -13.0	-35.2 -34.1 -34.3	
3.465 5.176 6.930 High Chann 3.490 5.235 6.980 3.490 5.235	-63.4 el (1745MHz) -56.5 -63.4 -65.0 -59.9 -63.2	V H H V V	3.0 3.0 3.0 3.0 3.0 3.0	-8.6 -13.8 -13.4 -11.9 -13.0	36.4 35.5 34.7 36.4 35.5	1.0 1.0 1.0 1.0 1.0	44.0 48.2 47.1 47.3 47.5	-13.0 -13.0 -13.0 -13.0	-35.2 -34.1 -34.3 -34.5	
3.465 5.176 6.930 High Chann 3.490 5.235 6.980 3.490	-63.4 el (1745MHz) -56.5 -63.4 -65.0 -59.9	V H H H V	3.0 3.0 3.0 3.0 3.0	-8.6 -13.8 -13.4 -11.9	36.4 35.5 34.7 36.4	1.0 1.0 1.0 1.0	44.0 48.2 47.1 47.3	-13.0 -13.0 -13.0	-35.2 -34.1 -34.3	

Page 1911 of 1995

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

Company:										
Project #:		15U20164								
Date:		04/30/15								
Test Engin		R.Z								
Configurati		EUT only								
Mode:		LTE Band 4, 2	0MHz 16QAM							
Test Equip Substitutio	<u>ment:</u> n: Horn T59 Sub	stitution, an	ıd 8ft SMA Ca	ble			1			4
	Chambo	er	Pr	e-amplifer		Filter			Limit	
Г	3m Chamber G	-	3m C	hamber G 🚽	Filter	r +		EIRP		•
		<u> </u>			I		1			
Frequency		Ant. Pol.	Distance	Path Loss @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channe	el (1720MHz)									
3.440	-56.3	Н	3.0	-8.5	36.4	1.0	-43.9	-13.0	-30.9	
5.160	-63.1	H	3.0	-13.6	35.5	1.0	-48.1	-13.0	-35.1	
6.880	-63.9	Н	3.0	-12.4	34.7	1.0	-46.1	-13.0	-33.1	
3.440	-54.9	V	3.0	-6.9	36.4	1.0	-42.4	-13.0	-29.4	
5.160	-62.4	V	3.0	-12.3	35.5	1.0	-46.8	-13.0	-33.8	
6.880	-64.4	V	3.0	-12.6	34.7	1.0	-46.4	-13.0	-33.4	
Mid Channe	I (1732.5MHz)									
3.465	-52.2	Н	3.0	-4.4	36.4	1.0	-39.8	-13.0	-26.8	
5.198	-64.6	Н	3.0	-15.0	35.5	1.0	-49.5	-13.0	-36.5	
6.930	-64.5	Н	3.0	-13.0	34.7	1.0	-46.7	-13.0	-33.7	
3.465	-52.3	V	3.0	-4.3	36.4	1.0	-39.7	-13.0	-26.7	
5.198	-62.5	V	3.0	-12.4	35.5	1.0	-46.9	-13.0	-33.9	
6.930	-64.5	V	3.0	-12.7	34.7	1.0	-46.4	-13.0	-33.4	
High Channe	el (1745MHz)									
3.490	-60.9	Н	3.0	-13.0	36.4	1.0	-48.4	-13.0	-35.4	
5.235	-64.5	Н	3.0	-14.9	35.5	1.0	-49.3	-13.0	-36.3	
6.980	-65.2	Н	3.0	-13.6	34.7	1.0	-47.3	-13.0	-34.3	
3.490	-60.0	V	3.0	-12.0	36.4	1.0	-47.4	-13.0	-34.4	
	-62.4 -64.5	V V	3.0 3.0	-12.2 -12.7	35.5 34.7	1.0 1.0	-46.7	-13.0	-33.7	
5.235 6.980			5-0	-12.1	.34./	1.0	-46.3	-13.0	-33.3	

Page 1912 of 1995

10.7.3. LTE BAND 5

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

Company:										
Project #:		15U20164								
Date:		05/04/15								
Test Engir	neer:	T Wang								
Configura	tion:	EUT only								
Mode:		LTE Band 5, 1	0MHz QPSK							
Test Equip	pment:									
Substitutio	on: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	ıble						
	Chamb	er	Pr	e-amplifer		Filter			Limit	
Ī	3m Chamber G	•	3m C	hamber G	Filt	er	-	EIRP		•
		1	1							
Frequence	cy SA reading	Ant. Pol.	Distance	Path Loss @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequence (GHz)	(dBm)	(H/V)	Distance	(dBm)	Freamp	Allenuator	CIRF	Limit	Della	Notes
<u> </u>	(doni) iel (829MHz)	(((((((((((((((((((((abm)						
1.658	-63.1	Н	3.0	-19.0	37.8	1.0	-55.9	-13.0	-42.9	
2.487	-63.3	Н	3.0	-16.9	36.4	1.0	-52.3	-13.0	-39.3	
3.816	-61.1	Н	3.0	-13.0	36.1	1.0	-48.1	-13.0	-35.1	
4.960	-61.5	Н	3.0	-11.8	36.2	1.0	-47.0	-13.0	-34.0	
1.658	-63.2	V	3.0	-18.8	37.8	1.0	-55.7	-13.0	-42.7	
2.487	-62.5	V	3.0	-15.0	36.4	1.0	-50.4	-13.0	-37.4	
3.805	-62.0	V	3.0	-13.4	36.1	1.0	-48.6	-13.0	-35.6	
4.971	-62.6	v	3.0	-12.9	36.2	1.0	-48.2	-13.0	-35.2	
Mid Channe	el (836.5MHz)									
1.673	-60.1	Н	3.0	-16.0	37.8	1.0	-52.8	-13.0	-39.8	
2.510	-64.0	Н	3.0	-17.5	36.4	1.0	-52.9	-13.0	-39.9	
3.346	-63.5	H	3.0	-15.8	36.5	1.0	-51.2	-13.0	-38.2	
1.673	-58.5	v	3.0	-14.1	37.8	1.0	-50.9	-13.0	-37.9	
2.510	-61.2	V	3.0	-13.7	36.4	1.0	-49.1	-13.0	-36.1	
3.346	-63.3	V	3.0	-15.5	36.5	1.0	-51.0	-13.0	-38.0	
High Chopr	nel (844MHz)	ļ								
1.688	-63.3	Н	3.0	-19.1	37.8	1.0	-55.9	-13.0	-42.9	
2.532	-62.5	H	3.0	-16.0	36.4	1.0	-51.4	-13.0	-38.4	
	-62.1	Н	3.0	-14.0	36.1	1.0	-49.1	-13.0	-36.1	
3.805	-62.5	V	3.0	-18.0	37.8	1.0	-54.9	-13.0	-41.9	
1.688	-63.1	V	3.0	-15.6	36.4	1.0	-51.0	-13.0	-38.0	
	-61.2	V	3.0	-12.7	36.2	1.0	-47.8	-13.0	-34.8	

Page 1913 of 1995

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

Company:											
Project #:		15U20164									
Date:		05/04/15									
Jate. Test Engine		T Wang									
Configuratio											
Configuratio Mode:		EUT only	101414- 16	·							
vioae:		LTE Band 5, 1	10101112 10	QAW							
Test Equipm	ent:										
	Horn T59 Sub	ostitution, ar	nd 8ft SI	MA Ca	ble						
	Chambe	or		Pre	e-amplifer		Filter	1		Limit	
		-	_		-			4		Linit	
31	m Chamber G	•		3m C	hamber G 🚽	Filt	er _	·	EIRP	•	•
	1				1		1	1		I I	_
					Path Loss						
Frequency	SA reading	Ant. Pol.	Dista	ance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)			(dBm)						
ow Channel	(829MHz)										
1.658	-63.7	Н	3.	0	-19.6	37.8	1.0	-56.5	-13.0	-43.5	
2.487	-63.5	Н	3.	0	-17.1	36.4	1.0	-52.5	-13.0	-39.5	
3.772	-61.8	Н	3.		-13.7	36.2	1.0	-48.9	-13.0	-35.9	
4.553	-62.6	Н	3.	0	-13.5	36.1	1.0	-48.6	-13.0	-35.6	
1.658	-63.8	V	3.		-19.4	37.8	1.0	-56.3	-13.0	-43.3	
2.769	-62.2	V	3.		-14.9	36.6	1.0	-50.5	-13.0	-37.5	
3.717	-61.8	V	3.		-13.4	36.2	1.0	-48.6	-13.0	-35.6	
4.454	-62.1	V	3.	0	-12.8	36.1	1.0	-47.9	-13.0	-34.9	
Mid Channel (836.5MHz)	L									
1.673	-64.0	Н	3.	0	-19.9	37.8	1.0	-56.7	-13.0	-43.7	
2.510	-63.5	Н	3.		-17.0	36.4	1.0	-52.4	-13.0	-39.4	
3.805	-62.1	H	3.		-14.0	36.1	1.0	-49.1	-13.0	-36.1	
5.884	-62.4	H	3.		-11.6	35.9	1.0	-46.5	-13.0	-33.5	
1.453	-63.1	٧	3.	•••••••••	-19.4	37.7	1.0	-56.1	-13.0	-43.1	
2.168	-63.2	V	3.		-17.0	37.3	1.0	-53.3	-13.0	-40.3	
3.794	-61.7	V	3.	0	-13.1	36.2	1.0	-48.3	-13.0	-35.3	
	(844MHz)	L			1					•	
High Channel	-63.0	H	3.	0	-18.8	37.8	1.0	-55.6	-13.0	-42.6	
High Channel 1.688	-62.6	Н	3.	0	-16.1	36.4	1.0	-51.5	-13.0	-38.5	
	-62.5	Н	3.		-14.4	36.1	1.0	-49.5	-13.0	-36.5	
1.688 2.532 3.805		V	3.		-18.2	37.8	1.0	-55.1	-13.0	-42.1	
2.532 3.805 1.688	-62.7			0	-15.9	36.4	1.0	-51.3	-13.0	-38.3	
1.688 2.532 3.805	-62.7 -63.4 -62.1	V V	3.		-13.6	36.2	1.0	-48.7	-13.0	-35.7	

Page 1914 of 1995

10.7.4. LTE BAND 7

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

		UL1	remonentau	iated Chambe						
Company:										
Project #:		15U20164								
Date:		05/01/15								
Test Engine	er:	T Wang								
Configuratio	n:	EUT only								
Mode:		LTE Band 7, 2	0MHz QPSK							
Test Equipm	ent:									
Substitution	Horn T59 Sub	stitution, an	nd 8ft SMA C	able						
							1			
	Chambe	r	Pre	e-amplifer		Filter			Limit	
30	1 Chamber G		3m C	hamber G 🚽	Filter	_	1	EIRP		
		•								•
				Path Loss						
F		Ant Dal	Distance	@ SG End	Dreenen	Attenueter		Limit	Delta	Notes
Frequency	-	Ant. Pol.	Distance		Preamp	Attenuator	EIRP	Limit	Deita	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channel	·•••									
2.638	-60.7	H	3.0	-14.0	36.5	1.0	-49.4	-25.0	-24.4	
5.020	-62.8	Н	3.0	-13.4	35.6	1.0	-48.0	-25.0	-23.0	
7.530	-63.9	Н	3.0	-11.7	34.5	1.0	-45.2	-25.0	-20.2	
E 000	-62.4	V	3.0	-12.5	35.6	1.0	-47.0	-25.0	-22.0	
5.020								26.0		1
7.530	-64.3	V	3.0	-11.9	34.5	1.0	-45.4	-25.0	-20.4	
	-64.3 -65.4	V V	3.0 3.0	-11.9 -10.6	34.5 33.3	1.0 1.0	-45.4 -43.0	-25.0 -25.0	-20.4 -18.0	
7.530 10.040	-65.4					\$				
7.530 10.040 Mid Channel (-65.4 2535MHz)	V	3.0	-10.6	33.3	1.0	-43.0	-25.0	-18.0	
7.530 10.040 Mid Channel (2.660	-65.4 2535MHz) -57.3	V	3.0 3.0	-10.6 -10.5	33.3 36.5	1.0 1.0	-43.0 -46.0	-25.0 -25.0	-18.0 -21.0	
7.530 10.040 Mid Channel (2.660 5.507	-65.4 2535MHz) -57.3 -63.8	V H H	3.0 3.0 3.0	-10.6 -10.5 -13.9	33.3 36.5 35.3	1.0 1.0 1.0	-43.0 -46.0 -48.2	-25.0 -25.0 -25.0	-18.0 -21.0 -23.2	
7.530 10.040 Mid Channel (2.660 5.507 7.605	-65.4 2535MHz) -57.3 -63.8 -65.1	V H H H	3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8	33.3 36.5 35.3 34.4	1.0 1.0 1.0 1.0	-43.0 -46.0 -48.2 -46.2	-25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7	V H H H V	3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3	33.3 36.5 35.3 34.4 36.5	1.0 1.0 1.0 1.0 1.0	-43.0 -46.0 -48.2 -46.2 -45.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660 5.507	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5	V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1	33.3 36.5 35.3 34.4 36.5 35.3	1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7	V H H H V	3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3	33.3 36.5 35.3 34.4 36.5	1.0 1.0 1.0 1.0 1.0	-43.0 -46.0 -48.2 -46.2 -45.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8	
7.530 10.040 <u>2.660</u> 5.507 7.605 2.660 5.507 7.605	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5 -63.3	V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1	33.3 36.5 35.3 34.4 36.5 35.3	1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4	
7.530 10.040 <u>2.660</u> 5.507 7.605 2.660 5.507 7.605	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5 -63.3	V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1	33.3 36.5 35.3 34.4 36.5 35.3	1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660 5.507 7.605 High Channel	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5 -63.3 (2560MHz)	V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1 -10.8	33.3 36.5 35.3 34.4 36.5 35.3 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4 44.3	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4 -19.3	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120 7.680	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5 -63.3 (2560MHz) -54.5 -62.8 -64.3	H H H V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1 -10.8 	33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 35.5 35.5 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4 44.3 47.4 44.3 43.2 47.8 45.3	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4 -19.3 -18.2 -22.8 -20.3	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120 7.680 2.682	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5 -63.3 (2560MHz) -54.5 -62.8 -64.3 -55.0	V H H V V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1 -10.8 -7.7 -13.3 -11.9 -7.6	33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 35.5 35.5 35.5 34.4 36.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4 44.3 44.3 44.3 45.3 43.2 47.8 45.3 43.1	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4 -19.3 -18.2 -22.8 -20.3 -18.1	
7.530 10.040 Mid Channel (2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120 7.680	-65.4 2535MHz) -57.3 -63.8 -65.1 -57.7 -63.5 -63.3 (2560MHz) -54.5 -62.8 -64.3	H H H V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -10.5 -13.9 -12.8 -10.3 -13.1 -10.8 -7.7 -13.3 -11.9	33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 35.5 35.5 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	43.0 46.0 48.2 46.2 45.8 47.4 44.3 47.4 44.3 43.2 47.8 45.3	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-18.0 -21.0 -23.2 -21.2 -20.8 -22.4 -19.3 -18.2 -22.8 -20.3	

Page 1915 of 1995

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

Company: Project #: Date: Test Engine Configuratio Mode:	n:	15U20164 05/01/15 T Wang EUT only LTE Band 7, 2	0MHz 16QAM							
<u>Test Equipm</u> Substitution	<u>ient:</u> : Horn T59 Sub	ostitution, an					1			1
	Chambe	er	Pro	e-amplifer		Filter			Limit	
31	m Chamber G	-	3m C	hamber G 🖵	Filte	r -	·]	EIRP	-]
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel		(1)		(upm)						
2.638	-61.5	Н	3.0	-14.8	36.5	1.0	-50.2	-25.0	-25.2	
5.020	-63.4	H	3.0	-14.0	35.6	1.0	-48.6	-25.0	-23.6	
7.530	-64.6	H	3.0	-12.4	34.5	1.0	-45.9	-25.0	-20.9	
5.020	-63.1	V	3.0	-13.2	35.6	1.0	-47.7	-25.0	-22.7	
7.530	-64.9	٧	3.0	-12.5	34.5	1.0	-46.0	-25.0	-21.0	
10.040	-65.7	V	3.0	-10.9	33.3	1.0	-43.3	-25.0	-18.3	
	ļ									
	·				00 F					
	-57.9 -64.5	H	3.0	-11.1	36.5	1.0	-46.6	-25.0	-21.6	
Mid Channel (2.660		H	3.0	-14.6 12.0	35.3	1.0	-48.9	-25.0	-23.9	
2.660 5.507		Н	3.0	-13.0	34.4	1.0	-46.4	-25.0 -25.0	-21.4	
2.660 5.507 7.605	-65.3		2 0		20 5	4 0			-21.6	
2.660 5.507 7.605 2.660	-65.3 -58.5	V	3.0	-11.1 13.6	36.5	1.0	-46.6		22 a	
2.660 5.507 7.605 2.660 5.507	-65.3 -58.5 -64.0		3.0	-13.6	35.3	1.0	-47.9	-25.0	-22.9 -20.1	
2.660 5.507 7.605 2.660	-65.3 -58.5	V V							-22.9 -20.1	
2.660 5.507 7.605 2.660 5.507 7.605 High Channel	-65.3 -58.5 -64.0 -64.1 (2560MHz)	V V V	3.0 3.0	-13.6 -11.6	35.3 34.4	1.0 1.0	-47.9 -45.1	-25.0 -25.0	-20.1	
2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682	-65.3 -58.5 -64.0 -64.1 (2560MHz) -55.2	V V V	3.0 3.0 3.0	-13.6 -11.6 -8.4	35.3 34.4 36.5	1.0 1.0 1.0	47.9 45.1 43.9	-25.0 -25.0 -25.0	-20.1 -18.9	
2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120	-65.3 -58.5 -64.0 -64.1 (2560MHz) -55.2 -63.6	V V V H	3.0 3.0 3.0 3.0 3.0	-13.6 -11.6 -8.4 -14.1	35.3 34.4 36.5 35.5	1.0 1.0 1.0 1.0	47.9 45.1 43.9 48.6	-25.0 -25.0 -25.0 -25.0	-20.1 -18.9 -23.6	
2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120 7.680	-65.3 -58.5 -64.0 -64.1 (2560MHz) -55.2 -63.6 -65.0	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0	-13.6 -11.6 -8.4 -14.1 -12.6	35.3 34.4 36.5 35.5 34.4	1.0 1.0 1.0 1.0 1.0 1.0	47.9 45.1 43.9 48.6 46.0	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.1 -18.9 -23.6 -21.0	
2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120	-65.3 -58.5 -64.0 -64.1 (2560MHz) -55.2 -63.6	V V V H	3.0 3.0 3.0 3.0 3.0	-13.6 -11.6 -8.4 -14.1	35.3 34.4 36.5 35.5	1.0 1.0 1.0 1.0	47.9 45.1 43.9 48.6	-25.0 -25.0 -25.0 -25.0	-20.1 -18.9 -23.6	

Page 1916 of 1995

10.7.5. LTE BAND 12

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

Company: Project #: Date:		15U20164 05/01/15								
Test Engin	eer:	R.Z								
Configurat	ion:	EUT only								
Mode:		LTE Band 12,	10MHz QPSK							
<u>Fest Equip</u> Substitutio	o <u>ment:</u> on: Horn T59 Sub Chambe			ble e-amplifer		Filter			Limit	
	3m Chamber G	-	3m C	hamber G 🖵	Filte	r	-	EIRP		•
				Path Loss						
Frequenc	y SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Distance	(dBm)	rreamp	Altenuator	LINF	Linin	Deila	NOICS
Low Channe		(1114)		(ubiii)					<u> </u>	
_ow Channe 1.4080	-64.7	Н	3.0	-21.6	37.5	1.0	-58.2	-13.0	-45.2	
2.1120	-64.7 -65.1	H	3.0 3.0	-21.6 -19.3	37.5	1.0 1.0	-58.2 -55.8	-13.0 -13.0	-45.2 -42.8	
2.1120	-63.1	Н	3.0	-19.5 -18.1	36.2	1.0	-55.8	-13.0 -13.0	-42.0 -40.3	
1.4080	-65.0	V	3.0	-10.1	37.5	1.0	-57.9	-13.0	-40.5	
2.1120	-65.6	v	3.0	-21.4	37.6	1.0	-56.2	-13.0	-43.2	
2.8160	-65.4	v	3.0	-17.6	36.2	1.0	-52.8	-13.0	-39.8	
	l (707.5MHz)								ļ	
1.4150	-64.8	H	3.0	-21.7	37.6	1.0	-58.3	-13.0	-45.3	
2.1225	-65.0	H	3.0	-19.1	37.6	1.0	-55.7	-13.0	-42.7	
2.8300	-65.2	H	3.0	-18.4	36.2	1.0	-53.6	-13.0	-40.6	
1.4150 2.1225	-64.8 -65.8	v	3.0 3.0	-21.2 -19.8	37.6 37.6	1.0 1.0	-57.7 -56.4	-13.0 -13.0	-44.7 -43.4	
	-65.6	V	3.0	-19.8 -17.8	37.6	1.0 1.0	-56.4 -53.0	-13.0 -13.0	-43.4 -40.0	
	-03.0	V	J.U	-17.0	JUIL	1.0	-33.0	-13.0		
2.8300	el (711MHz)								•	
		Η	3.0	-21.5	37.6	1.0	-58.1	-13.0	-45.1	
ligh Chann 1.4220	-64.6	н	3.0	-19.0	37.5	1.0	-55.6	-13.0	-42.6	
ligh Chann 1.4220 2.1330	-64.9		3.0	-18.5	36.2 37.6	1.0 1.0	-53.7 -57.7	-13.0 -13.0	-40.7 -44.7	
High Chann 1.4220 2.1330 2.8440	-64.9 -65.3	H	2 A		3(h	1.0	-31.1	-13.0	44./	
ligh Chann 1.4220 2.1330	-64.9	H V V	3.0 3.0	-21.1 -19.6	37.5	1.0	-56.1	-13.0	-43.1	

Page 1917 of 1995

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

Company:										
Project #:		15U20164								
Date:		05/01/15								
Test Engi		R.Z								
Configura	ation:	EUT only								
Mode:		LTE Band 12,	10MHz 16QAN	I						
Test Equi	inment:									
	ion: Horn T59 Sub	stitution, ar	d 8ft SMA C	able						
	Chambe	er	Pr	e-amplifer		Filter			Limit	
T					Filte		4	EIDD.	Linix	-
	3m Chamber G	-	3m C	hamber G	Filte	r -	•	EIRP	•	-
				Path Loss						
Frequen	cy SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)		(H/V)		(dBm)	•					
<u> </u>	nel 704MHz)	()		(4211)						
1.4080	-64.8	Н	3.0	-21.7	37.5	1.0	-58.3	-13.0	-45.3	
2.1120		H	3.0	-19.4	37.6	1.0	-55.9	-13.0	-42.9	
2.8160	-65.4	H	3.0	-18.6	36.2	1.0	-53.8	-13.0	-40.8	
1.4080	-65.1	v	3.0	-21.5	37.5	1.0	-58.0	-13.0	-45.0	
2.1120		v	3.0	-19.5	37.6	1.0	-56.1	-13.0	-43.1	
2.8160		v	3.0	-17.6	36.2	1.0	-52.8	-13.0	-39.8	
Mid Chann	el (707.5MHz)								1	
1.4150	-65.0	Н	3.0	-21.9	37.6	1.0	-58.5	-13.0	-45.5	
2.1225	-65.2	H	3.0	-19.3	37.6	1.0	-55.9	-13.0	-42.9	
2.8300	-65.4	Н	3.0	-18.6	36.2	1.0	-53.8	-13.0	-40.8	
1.4150	-64.9	V	3.0	-21.3	37.6	1.0	-57.8	-13.0	-44.8	
2.1225	-65.6	V	3.0	-19.6	37.6	1.0	-56.2	-13.0	-43.2	
2.8300	-65.7	V	3.0	-17.9	36.2	1.0	-53.1	-13.0	-40.1	
High Chani 1.4220	nel (711MHz) -64.8	Н	3.0	-21.7	37.6	1.0	-58.3	-13.0	-45.3	
2.1330		H	3.0	-21.7 -19.2	37.5	1.0 1.0	-58.3 -55.8	-13.0 -13.0	-45.3 -42.8	
2.1330	-65.4	п Н	3.0	-19.2 -18.6	36.2	1.0	-53.8	-13.0	-42.0	
	-65.0	v	3.0	-10.0	37.6	1.0	-58.0	-13.0	-45.0	
2.8440	-65.7	V	3.0	-19.7	37.5	1.0	-56.2	-13.0	-43.2	
2.8440 1.4220		v	3.0	-17.9	36.2	1.0	-53.1	-13.0	-40.1	
2.8440	-65.7									

Page 1918 of 1995

10.7.6. LTE BAND 13

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

Company Project # Date: Test Eng Configur: Mode:	: ineer: ation:	15U20164 05/01/15 T Wang EUT only LTE Band 13,	10MHz QPSK							
Test Equ Substitut	<u>ipment:</u> ion: Horn T59 Sul Chamb			ble e-amplifer		Filter			Limit	
	3m Chamber G	r Ţ		hamber G 🖵	Filte		-	EIRP	Limit	•
		A-4 D-1	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequer (GHz)	-	Ant. Pol. (H/V)								
(GHz)	-			()				-40.0	-17.8	1559-1610MHz
(GHz) Mid Chanr 1.564	(dBm) nel (782MHz) _64.6	(H/V) н	3.0	-21.0	37.9	1.0	-57.8		φφ.	
(GHz) Mid Chanr 1.564 2.346	(dBm) nel (782MHz) -64.6 -65.2	(H/V) H H	3.0	-21.0 -18.8	37.2	1.0	-55.0	-13.0	-42.0	
(GHz) Mid Chanr 1.564 2.346 3.128	(dBm) nel (782MHz) -64.6 -65.2 -64.4	(H/V) H H H	3.0 3.0	-21.0 -18.8 -16.8	37.2 36.6	1.0 1.0	-55.0 -52.5	-13.0 -13.0	-42.0 -39.5	
Mid Chanr 1.564 2.346	(dBm) nel (782MHz) -64.6 -65.2	(H/V) H H	3.0	-21.0 -18.8	37.2	1.0	-55.0	-13.0	-42.0	1559-1610MHz
(GHz) Mid Chanr	(dBm)	(H/V)	3.0		37.9	1.0	-57.8	-40.0	-11.0	

Page 1919 of 1995

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

				titution Meas ated Chambe						
Company: Project #: Date: Test Engine Configuratio Mode: Test Equipm	er: n:	15U20164 05/01/15 T Wang EUT only LTE Band 13,	10MHz 16QAM							
Substitution	Horn T59 Sub: Chambe		Pre	e-amplifer		Filter			Limit	
31	n Chamber G	-	3m C	hamber G 🗸	Filte	r _	•	EIRP		•
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)		Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)		Distance 3.0	@ SG End	Preamp	Attenuator	EIRP -58.1	Limit -40.0	Delta -18.1	Notes
(GHz) Mid Channel 1.564 2.346	(dBm) 782MHz) -64.9 -65.3	(H/V) Н Н	3.0 3.0	@ SG End (dBm) -21.3 -19.3	37.8 36.6	1.0 1.0	-58.1 -54.9	-40.0 -13.0	-18.1 -41.9	
(GHz) Mid Channel 1.564 2.346 3.128	(dBm) 782MHz) -64.9 -65.3 -64.6	(H/V) Н Н Н	3.0 3.0 3.0	@ SG End (dBm) -21.3 -19.3 -17.0	37.8 36.6 36.6	1.0 1.0 1.0	-58.1 -54.9 -52.7	-40.0 -13.0 -13.0	-18.1 -41.9 -39.7	1559-1610MHz
(GHz) Mid Channel (1.564 2.346	(dBm) 782MHz) -64.9 -65.3	(H/V) Н Н	3.0 3.0	@ SG End (dBm) -21.3 -19.3	37.8 36.6	1.0 1.0	-58.1 -54.9	-40.0 -13.0	-18.1 -41.9	

Page 1920 of 1995

10.7.7. LTE BAND 17

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

				titution Meas ated Chambe						
Company: Project #: Date: Test Engin Configurati Mode:	eer: ion:	15U20164 05/08/15 T Wang EUT only LTE Band 17,	10MHz QPSK							
<u>Fest Equip</u> Substitutio	<u>ment:</u> n: Horn T59 Sub	ostitution, an	id 8ft SMA Ca	ble						
	Chamb	er	Pr	e-amplifer		Filter			Limit	
Г	3m Chamber G	•	3m C	hamber G 🖵	Filte	ər	-	EIRP		•
1			1			1			-	
Frequenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
ow Channe	el (709MHz)									
1.418	-63.8	H	3.0	-20.7	37.6	1.0	-57.3	-13.0	-44.3	
2.113	-60.0 -61.8	H	3.0 3.0	-14.7 -19.7	36.9 36.5	1.0 1.0	-50.7 -55.2	-13.0 -13.0	-37.7 -42.2	
1.385	-63.6	v	3.0	-20.0	37.5	1.0	-55.2	-13.0	-43.5	
2.113	-56.5	V	3.0	-10.4	36.9	1.0	-46.4	-13.0	-33.4	
4.948	-63.2	V	3.0	-13.3	35.6	1.0	-47.9	-13.0	-34.9	
	-62.7	Н	3.0	-19.6	37.6	1.0	-56.2	-13.0	-43.2	
Mid Channe	-62.7	н Н	3.0	-19.6	36.9	1.0	-36.2 -48.3	-13.0 -13.0	-43.2 -35.3	
1.427		••		-13.7	35.6	1.0	-40.5	-13.0	-35.3	
	-57.6	н	3.0					-13.0	-43.6	
1.427 2.120 4.962 1.420	-63.0 -63.6	V	3.0	-20.0	37.6	1.0	-56.6			
1.427 2.120 4.962 1.420 2.120	-63.0 -63.6 -55.1	V V	3.0 3.0	-20.0 -9.0	37.6 36.9	1.0	-44.9	-13.0	-31.9	
1.427 2.120 4.962 1.420	-63.0 -63.6	V	3.0	-20.0	37.6					
1.427 2.120 4.962 1.420 2.120 3.744	-63.0 -63.6 -55.1 -62.9	V V	3.0 3.0	-20.0 -9.0	37.6 36.9	1.0	-44.9	-13.0	-31.9	
1.427 2.120 4.962 1.420 2.120 3.744 tigh Channe 1.427	-63.0 -63.6 -55.1 -62.9 el (711MHz) -62.8	V V V	3.0 3.0 3.0 3.0	-20.0 -9.0 -14.4 -19.7	37.6 36.9 36.2 37.6	1.0 1.0 1.0	-44.9 -49.6 -56.3	-13.0 -13.0 -13.0	-31.9 -36.6 -43.3	
1.427 2.120 4.962 1.420 2.120 3.744 tigh Channe 1.427 2.120	-63.0 -63.6 -55.1 -62.9 el (711MHz) -62.8 -58.4	V V V H	3.0 3.0 3.0 3.0 3.0 3.0	-20.0 -9.0 -14.4 	37.6 36.9 36.2 37.6 36.9	1.0 1.0 1.0 1.0	<u>44.9</u> <u>49.6</u> <u>-56.3</u> <u>49.1</u>	-13.0 -13.0 -13.0 -13.0 -13.0	-31.9 -36.6 -43.3 -36.1	
1.427 2.120 4.962 1.420 2.120 3.744 tigh Channe 1.427 2.120 3.828	63.0 -63.6 -55.1 -62.9 -62.9 -62.8 -58.4 -63.0	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-20.0 -9.0 -14.4 -19.7 -13.1 -14.9	37.6 36.9 36.2 37.6 36.9 36.1	1.0 1.0 1.0 1.0 1.0 1.0		-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-31.9 -36.6 -43.3 -36.1 -37.0	
1.427 2.120 4.962 1.420 2.120 3.744 tigh Channe 1.427 2.120	-63.0 -63.6 -55.1 -62.9 el (711MHz) -62.8 -58.4	V V V H	3.0 3.0 3.0 3.0 3.0 3.0	-20.0 -9.0 -14.4 	37.6 36.9 36.2 37.6 36.9	1.0 1.0 1.0 1.0	<u>44.9</u> <u>49.6</u> <u>-56.3</u> <u>49.1</u>	-13.0 -13.0 -13.0 -13.0 -13.0	-31.9 -36.6 -43.3 -36.1	

Page 1921 of 1995

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

	15U20164								
	05/08/15								
		101417 160							
	LIE Danu Ir,		AIVI						
nent:									
	ostitution, ar	nd 8ft SMA	Cable						
Chamb	er		Pre-amplifer		Filter			Limit	
				, Filt		•	EIRP		•
		I							
			Path Loss						
SA reading	Ant. Pol.	Distanc	e @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(dBm)	(H/V)		(dBm)	i					
(709MHz)		T			T				
-64.2	Н	3.0	-21.1	37.6	1.0	-57.7	-13.0	-44.7	
-60.5	Н	3.0	-15.2	36.9	1.0	-51.2	-13.0	-38.2	
-62.4	Н	3.0	-20.3	36.5	1.0	-55.8	-13.0	-42.8	
-64.0	V	3.0	-20.4	37.5	1.0	-56.9	-13.0	-43.9	
		····•						фф	
-63.7	V	3.0	-13.8	35.6	1.0	-48.4	-13.0	-35.4	
(710MU-)	L			[
.X.y	н	3.0	20.1	37.6	1.0	56 7	13.0	13.7	
····	ф			\$		·			
	v							••••••••••••••••••••••••••••••••••••••	
-55.8	V	3.0	-9.7	36.9	1.0	-45.6	-13.0	-32.6	
-63.4	V	3.0	-14.9	36.2	1.0	-50.1	-13.0	-37.1	
	L								
		2.0	20.2	27.6	10	50 0	42.0	42.0	
-60.5	V	3.0	-15.7	37.5	1.0	-52.2	-13.0	-39.2	
-55.9	V	3.0	-9.8	36.9	1.0	-45.7	-13.0	-32.7	
-63.8	V	3.0	-14.0	35.6	1.0	-48.6	-13.0	-35.6	
	eer: on: hent: hent: Horn T59 Sub Chamber m Chamber G m Chamber G m Chamber G m Chamber G (dBm) (709MHz) -64.2 -60.5 -62.4 -64.0 -57.1 -63.7 (710MHz) -63.2 -58.1 -63.6 -64.1 -55.8 -63.4 -63.6 -63.6 -60.0 -63.6	SA reading (dBm) Ant. Pol. (H/V) (709MHz) - -64.2 H -64.2 H -64.2 H -65.5 H -64.2 H -64.3 H -64.4 V -57.1 V -63.7 V -700MHz) - -711 V -63.7 V -711 V -63.4 V -63.4 H -63.6 H -63.6 H -63.6 H	SA reading (dBm) Ant. Pol. (H/V) Distanc Distance (Chamber G) - - SA reading (dBm) Ant. Pol. (H/V) Distance (romHz) - -	SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) (romHz) - - - - st. Horn T59 Substitution, and 8ft SMA Cable Pre-amplifer 3m Chamber G - ment: tr. Horn T59 Substitution, and 8ft SMA Cable Pre-amplifer 3m Chamber G - m Chamber G - Distance Path Loss @ SG End (dBm) - (romHz) - - - - -64.2 H 3.0 -21.1 - -64.2 H 3.0 -20.4 - -64.2 H 3.0 -20.4 - -63.7 V 3.0 -11.0 - -63.7 V 3.0 -11.0 - -57.1 V 3.0 -12.8 - -63.2 H 3.0 -20.5 - -63.4 V 3.0 -14.3 - -63.4 V 3.0 -20.2 - -60.0 H	Aper: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Pre-amplifer thorn T59 Substitution, and 8ft SMA Cable Pre-amplifer SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp (roughtz) - - - - - - -64.2 H 3.0 -21.1 37.6 - - -65.5 H 3.0 -20.4 37.5 - - -64.0 V 3.0 -20.4 37.5 - - -63.7 V 3.0 -11.0 36.9 - - -63.7 V 3.0 -13.8 35.6 - - (710MHz) - - - - - - -63.4 H 3.0 -14.3 35.6 - - - (710MHz) - - - - - - - <td>Aper: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter i: Horn T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator (dBm) (H/V) Distance @ SG End (dBm) Preamp Attenuator (64.2 H 3.0 21.1 37.6 1.0 662.4 H 3.0 20.4 37.5 1.0 63.7 V 3.0 -11.0 36.9 1.0 63.7 V 3.0 -13.8 35.6 1.0 63.7 V 3.0 -13.8 35.6 1.0 63.4 H 3.0 -20.1 37.6 1.0 63.4 H 3.0 -20.5 37.6 1.0 63.4 H 3.0 -20.5 37.6 1.0 63.4.1 H<td>there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Pre-amplifer Filter throw T59 Substitution, and 8ft SMA Cable Pre-amplifer Filter Mark Pre-amplifer Filter Filter Mark Mark Pre-amplifer Filter Mark Distance Path Loss Pre-amplifer Mark Distance Path Loss Pre-amplifer GBM Distance Path Loss Pre-amplifer Attenuator EIRP (709MHz) U Jon -20.3 36.5 1.0 -57.7 60.5 H 3.0 -20.3<td>there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: TE Band 17, 10MHz 16QAM nent: Thom T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter EIRP M Chamber G Tom Chamber G Pre-amplifer Filter EIRP SA reading (dBm) Ant. Pol. Distance Path Loss Pre-amplifer Filter EIRP (709MHz) Image: SG End (dBm) Pre-amplifer SG SG End (dBm) Pre-amplifer Filter Limit 64.2 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -66.5 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -62.4 H 3.0 -12.2 36.5 1.0 -56.9 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -48.4 -13.0 -63.7 V 3.0 -12.8 36.9 1.0 48.4 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -56.7 -13.0 -63.7<td>ther: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter Limit chamber Pre-amplifer Filter Limit m Chamber G V Pre-amplifer Filter Limit SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator EIRP Limit Delta 64.2 H 3.0 15.2 36.9 1.0 57.7 -13.0 44.7 66.5 H 3.0 15.2 36.9 1.0 57.1 -13.0 38.2 62.4 H 3.0 20.3 36.5 1.0 57.4 -13.0 43.9 57.1 V 3.0 11.0 36.9 1.0 47.0 13.0 43.9 57.1 V 3.0 11.0 36.5 1.0 47.0 13.0 43.8 64.0 V 3.0 12.8 35.6 1.0 47.0 13.0 35.4 (710MHz) - - - -<</td></td></td></td>	Aper: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter i: Horn T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator (dBm) (H/V) Distance @ SG End (dBm) Preamp Attenuator (64.2 H 3.0 21.1 37.6 1.0 662.4 H 3.0 20.4 37.5 1.0 63.7 V 3.0 -11.0 36.9 1.0 63.7 V 3.0 -13.8 35.6 1.0 63.7 V 3.0 -13.8 35.6 1.0 63.4 H 3.0 -20.1 37.6 1.0 63.4 H 3.0 -20.5 37.6 1.0 63.4 H 3.0 -20.5 37.6 1.0 63.4.1 H <td>there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Pre-amplifer Filter throw T59 Substitution, and 8ft SMA Cable Pre-amplifer Filter Mark Pre-amplifer Filter Filter Mark Mark Pre-amplifer Filter Mark Distance Path Loss Pre-amplifer Mark Distance Path Loss Pre-amplifer GBM Distance Path Loss Pre-amplifer Attenuator EIRP (709MHz) U Jon -20.3 36.5 1.0 -57.7 60.5 H 3.0 -20.3<td>there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: TE Band 17, 10MHz 16QAM nent: Thom T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter EIRP M Chamber G Tom Chamber G Pre-amplifer Filter EIRP SA reading (dBm) Ant. Pol. Distance Path Loss Pre-amplifer Filter EIRP (709MHz) Image: SG End (dBm) Pre-amplifer SG SG End (dBm) Pre-amplifer Filter Limit 64.2 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -66.5 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -62.4 H 3.0 -12.2 36.5 1.0 -56.9 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -48.4 -13.0 -63.7 V 3.0 -12.8 36.9 1.0 48.4 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -56.7 -13.0 -63.7<td>ther: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter Limit chamber Pre-amplifer Filter Limit m Chamber G V Pre-amplifer Filter Limit SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator EIRP Limit Delta 64.2 H 3.0 15.2 36.9 1.0 57.7 -13.0 44.7 66.5 H 3.0 15.2 36.9 1.0 57.1 -13.0 38.2 62.4 H 3.0 20.3 36.5 1.0 57.4 -13.0 43.9 57.1 V 3.0 11.0 36.9 1.0 47.0 13.0 43.9 57.1 V 3.0 11.0 36.5 1.0 47.0 13.0 43.8 64.0 V 3.0 12.8 35.6 1.0 47.0 13.0 35.4 (710MHz) - - - -<</td></td></td>	there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Pre-amplifer Filter throw T59 Substitution, and 8ft SMA Cable Pre-amplifer Filter Mark Pre-amplifer Filter Filter Mark Mark Pre-amplifer Filter Mark Distance Path Loss Pre-amplifer Mark Distance Path Loss Pre-amplifer GBM Distance Path Loss Pre-amplifer Attenuator EIRP (709MHz) U Jon -20.3 36.5 1.0 -57.7 60.5 H 3.0 -20.3 <td>there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: TE Band 17, 10MHz 16QAM nent: Thom T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter EIRP M Chamber G Tom Chamber G Pre-amplifer Filter EIRP SA reading (dBm) Ant. Pol. Distance Path Loss Pre-amplifer Filter EIRP (709MHz) Image: SG End (dBm) Pre-amplifer SG SG End (dBm) Pre-amplifer Filter Limit 64.2 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -66.5 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -62.4 H 3.0 -12.2 36.5 1.0 -56.9 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -48.4 -13.0 -63.7 V 3.0 -12.8 36.9 1.0 48.4 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -56.7 -13.0 -63.7<td>ther: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter Limit chamber Pre-amplifer Filter Limit m Chamber G V Pre-amplifer Filter Limit SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator EIRP Limit Delta 64.2 H 3.0 15.2 36.9 1.0 57.7 -13.0 44.7 66.5 H 3.0 15.2 36.9 1.0 57.1 -13.0 38.2 62.4 H 3.0 20.3 36.5 1.0 57.4 -13.0 43.9 57.1 V 3.0 11.0 36.9 1.0 47.0 13.0 43.9 57.1 V 3.0 11.0 36.5 1.0 47.0 13.0 43.8 64.0 V 3.0 12.8 35.6 1.0 47.0 13.0 35.4 (710MHz) - - - -<</td></td>	there: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: TE Band 17, 10MHz 16QAM nent: Thom T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter EIRP M Chamber G Tom Chamber G Pre-amplifer Filter EIRP SA reading (dBm) Ant. Pol. Distance Path Loss Pre-amplifer Filter EIRP (709MHz) Image: SG End (dBm) Pre-amplifer SG SG End (dBm) Pre-amplifer Filter Limit 64.2 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -66.5 H 3.0 -15.2 36.9 1.0 -51.2 -13.0 -62.4 H 3.0 -12.2 36.5 1.0 -56.9 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -48.4 -13.0 -63.7 V 3.0 -12.8 36.9 1.0 48.4 -13.0 -63.7 V 3.0 -13.8 35.6 1.0 -56.7 -13.0 -63.7 <td>ther: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter Limit chamber Pre-amplifer Filter Limit m Chamber G V Pre-amplifer Filter Limit SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator EIRP Limit Delta 64.2 H 3.0 15.2 36.9 1.0 57.7 -13.0 44.7 66.5 H 3.0 15.2 36.9 1.0 57.1 -13.0 38.2 62.4 H 3.0 20.3 36.5 1.0 57.4 -13.0 43.9 57.1 V 3.0 11.0 36.9 1.0 47.0 13.0 43.9 57.1 V 3.0 11.0 36.5 1.0 47.0 13.0 43.8 64.0 V 3.0 12.8 35.6 1.0 47.0 13.0 35.4 (710MHz) - - - -<</td>	ther: T Wang EUT only LTE Band 17, 10MHz 16QAM nent: EUT only LTE Band 17, 10MHz 16QAM nent: Filter Limit chamber Pre-amplifer Filter Limit m Chamber G V Pre-amplifer Filter Limit SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator EIRP Limit Delta 64.2 H 3.0 15.2 36.9 1.0 57.7 -13.0 44.7 66.5 H 3.0 15.2 36.9 1.0 57.1 -13.0 38.2 62.4 H 3.0 20.3 36.5 1.0 57.4 -13.0 43.9 57.1 V 3.0 11.0 36.9 1.0 47.0 13.0 43.9 57.1 V 3.0 11.0 36.5 1.0 47.0 13.0 43.8 64.0 V 3.0 12.8 35.6 1.0 47.0 13.0 35.4 (710MHz) - - - -<

Page 1922 of 1995

10.7.8. LTE BAND 25

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

Company	:										
Project #	:		15U20164								
Date:			04/30/15								
lest Eng			R.Z								
Configura	ation:		EUT only								
/lode:			LTE Band 25,	20MHz QPSK							
<u>Fest Equ</u> Substitut		lorn T59 Sub		nd 8ft SMA Ca	able e-amplifer		Filter				
		Chamber	r	Pre	e-ampliter		Filter			Limit	
	3m C	hamber G	•	3m Cl	hamber G 🚽	Filter		•	EIRP		•
					Path Loss						
Frequen		SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)		(dBm)	(H/V)	Distance	(dBm)	. reamp	/		E	Donu	110103
ow Chan		• • •	(100)		(abiii)						
3.720		-64.9	Н	3.0	-16.8	36.2	1.0	-52.0	-13.0	-39.0	
5.580		-65.5	н Н	3.0	-15.5	35.3	1.0	-49.8	-13.0	-36.8	
7.440		-64.9	H	3.0	-12.8	34.5	1.0	-46.3	-13.0	-33.3	
3.720		-65.0	V	3.0	-16.6	36.2	1.0	-51.8	-13.0	-38.8	
5.580		-65.5	V	3.0	-15.0	35.3	1.0	-49.3	-13.0	-36.3	
7.440		-65.0	V	3.0	-12.7	34.5	1.0	-46.2	-13.0	-33.2	
Aid Chanr	nel (18	82.5MHz)									
3.765		-63.7	Н	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
5.648		-65.4	Н	3.0	-15.3	35.3	1.0	-49.6	-13.0	-36.6	
7.530		-66.3	Н	3.0	-14.1	34.5	1.0	-47.6	-13.0	-34.6	
3.765		-64.1	V	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
5.648 7.530		-65.6 -66.2	V V	3.0 3.0	-15.0 -13.8	35.3 34.5	1.0 1.0	-49.3 -47.3	-13.0 -13.0	-36.3 -34.3	
7.530		-00.2	V	3.0	-13.0	34.3	1.0	-41.3	-13.0	-34.3	
ligh Chan	inel (19	905MHz)		1			-				
3.810		-63.4	Н	3.0	-15.3	36.1	1.0	-50.4	-13.0	-37.4	
5.715		-65.2	H	3.0	-15.0	35.3	1.0	-49.3	-13.0	-36.3	
7.620 3.810		-65.1 -63.0	H V	3.0 3.0	-12.8 -14.4	34.4 36.1	1.0 1.0	-46.2 -49.5	-13.0 -13.0	-33.2 -36.5	
5.715		-63.0	v	3.0	-14.4 -15.7	36.1 35.3	1.0	-49.5 -49.9	-13.0 -13.0	-36.9 -36.9	
7.620		-66.6	V	3.0	-13.7	34.4	1.0	-43.5	-13.0	-30.5	
		-00.0	•			• • • •			-1010	0110	

Page 1923 of 1995

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

		UL F	remont Rad	ated Chambe	r					
Company:										
Project #:		15U20164								
Date:		04/30/15								
Test Engine	er:	R.Z								
Configuratio		EUT only								
Mode:		-	20MHz 16QAN							
		,								
<u>Fest Equipm</u> Substitution	<u>ent:</u> : Horn T59 Sub	ostitution, ar	d 8ft SMA Ca	ble						
	Chambe	er	P	e-amplifer		Filter			Limit	
3n	n Chamber G	-	3m (hamber G 🖵	Filte	r	-	EIRP		-
		•	<u> </u>							
				Path Loss						
Frequency	SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)	•					
_ow Channel				(,						
3.720	-63.5	Н	3.0	-15.5	36.2	1.0	-50.7	-13.0	-37.7	
5.580	-65.5	H	3.0	-15.5	35.3	1.0	-30.7	-13.0	-36.8	
7.440	-65.8	H	3.0	-13.7	34.5	1.0	-45.0 -47.2	-13.0	-34.2	
3.720	-64.8	 V	3.0	-16.4	36.2	1.0	-47.2	-13.0	-34.2	
5.580	-65.7	v	3.0	-10.4	35.3	1.0	-49.5	-13.0	-36.5	
7.440	-66.0	v	3.0	-13.2	34.5	1.0	-47.2	-13.0	-34.2	
		-								
lid Channel (1882.5MHz)			1						
3.765	-63.6	Н	3.0	-15.5	36.2	1.0	-50.7	-13.0	-37.7	
5.648	-65.1	H	3.0	-15.0	35.3	1.0	-49.3	-13.0	-36.3	
7.530	-64.8	H	3.0	-12.6	34.5	1.0	-46.1	-13.0	-33.1	
3.765	-63.3	V	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
5.648	-66.0	v	3.0	-15.4	35.3	1.0	-49.7	-13.0	-36.7	
7.530	-64.3	V	3.0	-11.9	34.5	1.0	-45.4	-13.0	-32.4	
				ļ						
	-63.0	H	3.0	-14.9	36.1	1.0	-50.0	-13.0	-37.0	
3.810	05.0	Н	3.0 3.0	-14.8 -13.8	35.3 34.4	1.0 1.0	-49.1	-13.0	-36.1 -34.2	
3.810 5.715	-65.0		: 3.0		34.4 36.1	1.0	-47.2 -50.1	-13.0 -13.0	-34.2 -37.1	
3.810 5.715 7.620	-66.1	H	20		30.1					
3.810 5.715 7.620 3.810	-66.1 -63.6	V	3.0 3.0	-15.0 -14.7		1.0	-48.9	-13.0	.35.9	
5.715 7.620 3.810 5.715	-66.1 -63.6 -65.3		3.0	-14.7	35.3	1.0 1.0	-48.9 -47.0	-13.0 -13.0	-35.9 -34.0	
3.810 5.715 7.620 3.810	-66.1 -63.6	v v				1.0 1.0	_48.9 _47.0	-13.0 -13.0	-35.9 -34.0	

Page 1924 of 1995

10.7.9. LTE BAND 26

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

				titution Measu ated Chambe						
Company:										
Project #:		15U20164								
Date:		05/02/15								
Test Enginee		T Wang								
Configuratio		EUT only								
Mode:		LTE Band 26,	10MHz QPSK							
	Ob such a	-	Pre	a.amplifer		Filter				
3m	Chambe Chamber G	r •		e-amplifer hamber G 🖵	Filter	Filter	-	EIRP	Limit	•
Frequency	Chamber G SA reading	• Ant. Pol.		hamber G ↓ Path Loss @ SG End	Filter	-	EIRP	EIRP	Limit	• Notes
Frequency (GHz)	Chamber G SA reading (dBm)	·	3m Cl	hamber G 🖵 Path Loss						Votes
Frequency (GHz) Mid Channel (8	SA reading (dBm) 819MHz)	Ant. Pol. (H/V)	3m Cl	hamber G ↓ Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	v
Frequency (GHz) Mid Channel (8 1.638	SA reading (dBm) 819MHz) -53.4	Ant. Pol. (H/V)	3m Cl Distance	hamber G ↓ Path Loss @ SG End (dBm)	Preamp 37.8	Attenuator	EIRP -46.3	Limit	Delta -33.3	• Notes
Frequency (GHz) Mid Channel (8	SA reading (dBm) 819MHz)	Ant. Pol. (H/V)	3m Cl	hamber G ↓ Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	• Notes
Frequency (GHz) lid Channel (8 1.638 2.457	A reading (dBm) 819MHz) -53.4 -57.7	Ant. Pol. (H/V)	3m Cl Distance	Path Loss @ SG End (dBm) -9.4 -11.3	Preamp 37.8 36.7	Attenuator	EIRP _46.3 _47.0	Limit -13.0 -13.0	Deita 	• Notes
Frequency (GHz) Nid Channel (8 1.638 2.457 3.276	A Chamber G SA reading (dBm) 819MHz) -53.4 -57.7 -56.7	т Апt. Pol. (H/V) Н Н Н	3m Cl Distance	Path Loss @ SG End (dBm) -9.4 -11.3 -9.0	Preamp 37.8 36.7 36.5	Attenuator	EIRP -46.3 -47.0 -44.5	Limit -13.0 -13.0 -13.0	Deita -33.3 -34.0 -31.5	Notes
Frequency (GHz) Aid Channel (8 1.638 2.457 3.276 3.807	SA reading (dBm) 819MHz) -53.4 -57.7 -56.7 -53.2	Ant. Pol. (H/V) H H H H	3m Cl Distance 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -9.4 -11.3 -9.0 -5.1	Preamp 37.8 36.7 36.5 36.1	Attenuator 1.0 1.0 1.0 1.0	EIRP -46.3 -47.0 -44.5 -40.2	Limit -13.0 -13.0 -13.0 -13.0 -13.0	Delta 	• Notes
Frequency (GHz) Aid Channel (8 1.638 2.457 3.276 3.807 1.638	SA reading (dBm) 819MHz) -53.4 -57.7 -56.7 -56.7 -53.2 -43.6	Ant. Pol. (H/V) H H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -9.4 -11.3 -9.0 -5.1 0.7	Preamp 37.8 36.7 36.5 36.1 37.8	Attenuator 1.0 1.0 1.0 1.0 1.0	EIRP -46.3 -47.0 -44.5 -40.2 -36.1	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Deita 	Notes

Page 1925 of 1995

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

Company: Project #: 5U20164 Date: 05/02/15 Test Engineer: TWang Configuration: EUT only Mode: LTE Band 26, 10MHz 16QAM Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable					titution Measu ated Chambe						
Date: 05/02/15 Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 26, 10MHz 16QAM Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable Image: Chamber G Image: Given Substitution, and 8ft SMA Cable Image: Gramber G Image: Given Substitution G Image: Given Substitution: Frequency SA reading Ant. Pol. Distance Preamp Attenuator EIRP Limit Delta Notes											
Test Engineer: T Wang Configuration: EUT only Mode: LTE Band 26, 10MHz 16QAM Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable Chamber G Pre-amplifer Filter Limit 3m Chamber G Pre-amplifer G EIRP Constraints Frequency SA reading Ant. Pol. Distance @ SG End Preamp Attenuator EIRP Limit Delta Notes	•										
Configuration: EUT only Mode: LTE Band 26, 10MHz 16QAM Test Equipment: Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter Limit 3m Chamber G 3m Chamber G Pre-amplifer Filter Limit Frequency SA reading Ant. Pol. Distance Path Loss Preamp Attenuator EIRP Limit Delta Notes											
Mode: LTE Band 26, 10MHz 16QAM Test Equipment: Substitution: Horn T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter Limit 3m Chamber G 3m Chamber G Filter EIRP Filter Frequency SA reading Ant. Pol. Distance Path Loss Preamp Attenuator EIRP Limit Delta Notes											
Test Equipment: Substitution, and 8ft SMA Cable Chamber Fre-amplifer Filter Limit 3m Chamber G 3m Chamber G Filter EIRP Filter EIRP Filter EIRP Second			-								
Substitution: Horn T59 Substitution, and 8ft SMA Cable Pre-amplifer Filter Limit 3m Chamber G 3m Chamber G Filter EIRP Filter EIRP Filter Filter <t< th=""><td>Mode:</td><td></td><td>LTE Band 26, 1</td><td>10MHz 16QAM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Mode:		LTE Band 26, 1	10MHz 16QAM							
	Frequency (GHz)	n Chamber G SA reading (dBm)	- -	3m Cl	hamber G 🗸		r _	EIRP			Notes
1.638 -52.6 H 3.0 -8.6 37.8 1.0 -45.5 -13.0 -32.5	Frequency (GHz) Mid Channel (8	n Chamber G SA reading (dBm) 819MHz)	Ant. Pol. (H/V)	3m Cl Distance	hamber G ↓ Path Loss @ SG End (dBm)	Preamp	r <u> </u>		Limit	Delta	Notes
1.638 -52.6 H 3.0 -8.6 37.8 1.0 -45.5 -13.0 -32.5 2.457 -57.7 H 3.0 -11.2 36.7 1.0 -46.9 -13.0 -33.9	Frequency (GHz) Mid Channel (8 1.638	n Chamber G SA reading (dBm) 819MHz) -52.6	Ant. Pol. (H/V)	3m Cl Distance	hamber G ↓ Path Loss @ SG End (dBm) -8.6	Preamp 37.8	Attenuator	-45.5	Limit -13.0	Delta	Notes
······································	Frequency (GHz) Mid Channel (8 1.638 2.457	A reading (dBm) (dBm) -52.6 -57.7	Ant. Pol. (H/V) H	3m Cl Distance 3.0 3.0	Path Loss @ SG End (dBm) -8.6 -11.2	Preamp 37.8 36.7	Attenuator	-45.5 -46.9	Limit -13.0 -13.0	Delta -32.5 -33.9	Notes
2.457 <u>-57.7</u> H 3.0 <u>-11.2</u> 36.7 1.0 <u>-46.9</u> <u>-13.0</u> <u>-33.9</u>	Frequency (GHz) Mid Channel (8 1.638 2.457 3.276	A reading (dBm) (dBm) 319MHz) -52.6 -57.7 -57.3	Ant. Pol. (H/V) H H H	3m Cl Distance	Path Loss @ SG End (dBm) -8.6 -11.2 -9.6	Preamp 37.8 36.7 36.5	Attenuator	-45.5 -46.9 -45.1	Limit -13.0 -13.0 -13.0	Delta 32.5 33.9 32.1	Notes
2.457 .57.7 H 3.0 .11.2 36.7 1.0 .46.9 .13.0 .33.9 3.276 .57.3 H 3.0 .9.6 36.5 1.0 .45.1 .13.0 .32.1	Frequency (GHz) Mid Channel (8 1.638 2.457 3.276 1.638	SA reading (dBm) 819MHz) -52.6 -57.7 -57.3 -43.7	Ant. Pol. (H/V) H H H V	3m Cl Distance 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -8.6 -11.2 -9.6 0.6	Preamp 37.8 36.7 36.5 37.8	Attenuator 1.0	-45.5 -46.9 -45.1 -36.2	Limit -13.0 -13.0 -13.0 -13.0 -13.0	Delta 32.5 -33.9 -32.1 -23.2	Notes

Page 1926 of 1995

10.7.10. LTE BAND 30

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

Company: Project #: Date: Fest Engine Configuratio Node:	eer: on:	15U20164 05/01/15 T Wang EUT only LTE Band 30,	10MHz QPSK							
Test Equipn Substitutior	<u>nent:</u> n: Horn T59 Sub	estitution, ar	nd 8ft SMA Ca	ble						
	Chamber	•	Pre-	amplifer		Filter		1	_imit	
3r	n Chamber G		3m Ch	amber G 🚽	Filter	•		EIRP		
I			1		1	_			_	
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
· · ·	(0611) (2310MHz)	(Π /V)		(abiii)						
	-63.4	Н	3.0	-14.2	36.2	1.0	-49.3	-40.0	-9.3	
		H	3.0	-11.2	35.5	1.0	-45.8	-40.0	-5.8	
4.620 6.930	-63.8	••		-10.1	33.9	1.0	-43.0	-40.0	-3.0	
4.620 6.930 9.240	-64.5	Н	3.0		•					
4.620 6.930			3.0 3.0 3.0	-14.4 -11.1	36.2 35.5	1.0 1.0	-49.5 -45.6	-40.0 -40.0	_9.5 _5.6	

Page 1927 of 1995

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

				titution Measu ated Chambe						
Company: Project #: Date: Test Enginee Configuratio Mode: Test Equipm	er: n:	15U20164 05/01/15 T Wang EUT only LTE Band 30, 1	10MHz 16QAM							
	: Horn T59 Sub	stitution, and	d 8ft SMA Cal	ble						
	Chambe	er	Pre	e-amplifer		Filter			Limit	
	Chambe									
3n	m Chamber G	▼	3m Cl	hamber G 🗸	Filter	r -	·	EIRP		-
Frequency	m Chamber G SA reading	T Ant. Pol.	3m Cl Distance	Path Loss @ SG End	Filter	r -	EIRP	EIRP	Delta	Notes
Frequency (GHz)	n Chamber G SA reading (dBm)	▼		Path Loss						1
Frequency (GHz)	n Chamber G SA reading (dBm)	T Ant. Pol.		Path Loss @ SG End						1
Frequency (GHz) Mid Channel (;	m Chamber G SA reading (dBm) 2310MHz)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	_
Frequency (GHz) Mid Channel (4.620	m Chamber G SA reading (dBm) (2310MHz) -63.7	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP _49.6	Limit _40.0	Delta	_
Frequency (GHz) Mid Channel (4.620 6.930	m Chamber G SA reading (dBm) 2310MHz) -63.7 -64.0	Ant. Pol. (H/V) H	Distance	Path Loss @ SG End (dBm) -14.5 -11.4	Preamp 36.2 35.5	Attenuator	EIRP 	Limit _40.0 _40.0	Delta	
Frequency (GHz) Mid Channel (4.620 6.930 9.240	m Chamber G SA reading (dBm) 2310MHz) -63.7 -64.0 -64.8	Ant. Pol. (H/V) H H H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -14.5 -11.4 -10.4	Preamp 36.2 35.5 33.9	Attenuator	EIRP 	Limit _40.0 _40.0 _40.0	Delta 	1

Page 1928 of 1995

10.7.11. LTE BAND 41

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

		ULF	remont Rad	iated Chamb	er					
Company										
Project #:	:	15U20164								
Date:		05/01/15								
Test Eng	ineer:	R.Z								
Configura	ation:	EUT only								
Mode:		LTE Band 41,	20MHz QPSK							
Test Equ	inmont:									
	ion: Horn T59 Sul	stitution an	d 8ft SMA Ca	ble						
Substitut		ostrution, an								
	Chamb	or	Pr	e-amplifer		Filter			Limit	
				· · ·	<u> </u>		_		Linin	
	3m Chamber G	-	3m C	hamber G 🚽	Filte	er	•	EIRP	-	-
			1				_	1	-	-
				Path Loss						
Frequen	cy SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)		(H/V)	Distance	(dBm)	rioump	Attornution	L II (1		Donta	10000
				(ubiii)		 				
	nel (2506MHz)									
5.012	-65.6	H	3.0	-16.2	35.6	1.0	-50.8	-25.0	-25.8	
7.518	-64.6	H	3.0	-12.4	34.5	1.0	-45.9	-25.0	-20.9	
10.024		H	3.0	-11.9	33.3	1.0	-44.3	-25.0	-19.3	
5.012	-66.0	V	3.0	-16.1	35.6	1.0	-50.6	-25.0	-25.6	
7.518	-65.6	V	3.0	-13.2	34.5	1.0	-46.7	-25.0	-21.7	
10.024	-66.8	V	3.0	-12.0	33.3	1.0	-44.3	-25.0	-19.3	
						<u> </u>				
Mid Chann	rel (2593MHz) -65.0		3.0	45.4	35.5	1.0	-49.9	-25.0	-24.9	
		H H	3.0	-15.4		1.0	·	-25.0 -25.0		
5.186				-13.6	34.3	1.0	-47.0		-22.0	
5.186 7.779	-66.1					÷	44.0			
5.186 7.779 10.372	-67.8	Н	3.0	-12.8	33.1	1.0	-44.9	-25.0	-19.9	
5.186 7.779 10.372 5.186	-67.8 -64.3	H V	3.0 3.0	-12.8 -14.2	33.1 35.5	1.0 1.0	-48.7	-25.0	-23.7	
5.186 7.779 10.372 5.186 7.779	-67.8 -64.3 -65.7	H V V	3.0 3.0 3.0	-12.8 -14.2 -13.1	33.1 35.5 34.3	1.0 1.0 1.0	-48.7 -46.4	-25.0 -25.0	-23.7 -21.4	
5.186 7.779 10.372 5.186	-67.8 -64.3 -65.7	H V	3.0 3.0	-12.8 -14.2	33.1 35.5	1.0 1.0	-48.7	-25.0	-23.7	
5.186 7.779 10.372 5.186 7.779 10.372	-67.8 -64.3 -65.7 -66.5	H V V	3.0 3.0 3.0	-12.8 -14.2 -13.1	33.1 35.5 34.3	1.0 1.0 1.0	-48.7 -46.4	-25.0 -25.0	-23.7 -21.4	
5.186 7.779 10.372 5.186 7.779 10.372 High Chan	-67.8 -64.3 -65.7	H V V	3.0 3.0 3.0	-12.8 -14.2 -13.1 -11.7	33.1 35.5 34.3	1.0 1.0 1.0	-48.7 -46.4	-25.0 -25.0 -25.0	-23.7 -21.4	
5.186 7.779 10.372 5.186 7.779 10.372	-67.8 -64.3 -65.7 -66.5 mel (2680MHz)	H V V V	3.0 3.0 3.0 3.0	-12.8 -14.2 -13.1	33.1 35.5 34.3 33.1	1.0 1.0 1.0 1.0	-48.7 -46.4 -43.8	-25.0 -25.0	-23.7 -21.4 -18.8	
5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360	-67.8 -64.3 -65.7 -66.5 nel (2680MHz) -66.4 -64.5	H V V V	3.0 3.0 3.0 3.0 3.0	-12.8 -14.2 -13.1 -11.7 -16.6	33.1 35.5 34.3 33.1 35.4	1.0 1.0 1.0 1.0	_48.7 _46.4 _43.8 51.0	-25.0 -25.0 -25.0 -25.0	-23.7 -21.4 -18.8 -26.0	
5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360 8.040	-67.8 -64.3 -65.7 -66.5 nel (2680MHz) -66.4 -64.5	H V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-12.8 -14.2 -13.1 -11.7 -16.6 -11.7	33.1 35.5 34.3 33.1 35.4 35.4 34.2	1.0 1.0 1.0 1.0 1.0 1.0	_48.7 _46.4 _43.8 	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.7 -21.4 -18.8 -26.0 -20.0	
5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360 8.040 10.720	-67.8 -64.3 -65.7 -66.5 mel (2680MHz) -66.4 -64.5 -67.2	H V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-12.8 -14.2 -13.1 -11.7 -16.6 -11.7 -12.1	33.1 35.5 34.3 33.1 35.4 35.4 34.2 32.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.7 46.4 43.8 -51.0 45.0 44.0	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.7 -21.4 -18.8 -26.0 -20.0 -19.0	
5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360 8.040 10.720 5.360	-67.8 -64.3 -65.7 -66.5 -66.5 -66.4 -66.4 -67.2 -64.4 -65.3	H V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-12.8 -14.2 -13.1 -11.7 -16.6 -11.7 -12.1 -14.1	33.1 35.5 34.3 33.1 35.4 34.2 32.9 35.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.7 46.4 43.8 -51.0 45.0 44.0 48.5	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.7 -21.4 -18.8 -26.0 -20.0 -19.0 -23.5	

Page 1929 of 1995

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

Company:										
Project #:		15U20164								
Date:		05/01/15								
Test Engine		R.Z								
Configuratio	n:	EUT only								
Node:		LTE Band 41,	20MHz 16QAM	l -						
Test Equipm	ent;									
	: Horn T59 Sub	ostitution, ar	nd 8ft SMA Ca	ble						
			Dur	and life an						1
	Chamber	r	Pre	-amplifer		Filter			Limit	
3m	Chamber G	•	3m Ch	namber G 🖵	Filter	-	1	EIRP 🗸		1
			I		1		1			i
	1			Beth Lana						
_				Path Loss	_					
Frequency		Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
ow Channel	(2506MHz)						ļ			
5.012	-64.7	Н	3.0	-15.3	35.6	1.0	-49.9	-25.0	-24.9	
7.518	-65.6	H	3.0	-13.4	34.5	1.0	-46.9	-25.0	-21.9	
10.024	-67.0	Н	3.0	-12.0	33.3	1.0	-44.4	-25.0	-19.4	
5.012	-64.8	V	3.0	-14.9	35.6	1.0	-49.4	-25.0	-24.4	
7.518	-64.7	V	3.0	-12.3	34.5	1.0	-45.8	-25.0	-20.8	
10.024	-64.9	v	3.0	-10.1	33.3	1.0	-42.5	-25.0	-17.5	
Mid Channel (2593MHz)									
5.186	-64.7	Н	3.0	-15.1	35.5	1.0	-49.6	-25.0	-24.6	
7.779	-65.5	Н	3.0	-13.0	34.3	1.0	-46.4	-25.0	-21.4	
10.372	-66.5	Н	3.0	-11.5	33.1	1.0	-43.6	-25.0	-18.6	
5.186	-64.6	v	3.0	-14.5	35.5	1.0	-49.0	-25.0	-24.0	
7.779	-66.0	V	3.0	-13.4	34.3	1.0	-46.7	-25.0	-21.7	
10.372	-66.8	V	3.0	-12.0	33.1	1.0	-44.1	-25.0	-19.1	
	(2680MHz)				1					
ligh Channel	-65.6	Н	3.0	-15.8	35.4	1.0	-50.2	-25.0	-25.2	
ligh Channel 5.360	-65.0	Н	3.0	-12.2	34.2	1.0	-45.5	-25.0	-20.5	
ligh Channel 5.360 8.040		Н	3.0	-11.7	32.9	1.0	-43.6	-25.0	-18.6	
5.360	-66.8			44.0	35.4	1.0	-48.6	-25.0	-23.6	
5.360 8.040 10.720 5.360	-64.5	V	3.0	-14.2						
5.360 8.040 10.720			3.0 3.0 3.0	-14.2 -11.7 -12.2	34.2 32.9	1.0 1.0	-44.9 -44.1	-25.0 -25.0	-19.9 -19.1	

Page 1930 of 1995

10.8. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1633 (UAT)

10.8.1. LTE BAND 2

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

Company: Project #: Date: Test Engin Configurati Mode:	neer: tion:	15U20164 05/08/15 R.Z EUT only LTE Band 2, 2	0MHz QPSK							
<u>Test Equip</u> Substitutio	o <u>ment:</u> on: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	ıble						
	Chamb	er	Pr	re-amplifer		Filter			Limit	
Γ	3m Chamber G	•	3m C	Chamber G 🚽	Filte	er -	•	EIRP		•
Frequency (GHz)	cy SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	el (1860MHz)	(רויע)		(ubiii)						
3.720	-63.0	Н	3.0	-15.0	36.2	1.0	-50.2	-13.0	-37.2	
5.580	-64.5	H	3.0	-13.0	35.3	1.0	-48.8	-13.0	-35.8	
7.440	-64.8	H	3.0	-12.7	34.5	1.0	-46.2	-13.0	-33.2	
3.720	-62.6	V	3.0	-14.2	36.2	1.0	-49.4	-13.0	-36.4	
5.580	-64.1	V	3.0	-13.6	35.3	1.0	-47.9	-13.0	-34.9	
7.440	-65.0	V	3.0	-12.7	34.5	1.0	-46.2	-13.0	-33.2	
Mid Channe 3.760	el (1880MHz) -63.1	Н	3.0	-15.0	36.2	1.0	-50.2	-13.0	-37.2	
5.640	-65.0	н Н	3.0	-13.0 -14.9	35.3	1.0	-30.2	-13.0 -13.0	-37.2 -36.2	
7.520	-65.6	п Н	3.0	-14.9	34.5	1.0	-49.2	-13.0	-30.2 -33.9	
3.760	-64.1	v	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
5.640	-65.0	v	3.0	-13.0	35.3	1.0	-48.7	-13.0	-31.0	
7.520	-65.4	v	3.0	-13.0	34.5	1.0	-46.5	-13.0	-33.5	
Web Che	-1 (400000000)									
High Channe 3.800	el (1900MHz) -64.0	Н	3.0	-15.9	36.2	1.0	-51.1	-13.0	-38.1	
5.700	-64.6	н	3.0	-13.9 -14.4	35.3	1.0	-31.1	-13.0	-36.1	
7.600	-65.0	H	3.0	-12.7	34.4	1.0	-46.1	-13.0	-33.1	
3.800	-63.4	V	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
5.700	-65.3	V	3.0	-14.7	35.3	1.0	-49.0	-13.0	-36.0	
7.600	-66.0	V	3.0	-13.5	34.4	1.0	-47.0	-13.0	-34.0	

Page 1931 of 1995

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

Company: Project #: Date: Test Enginee Configuratio Mode:	er: n:	15U20164 05/08/15 R.Z EUT only LTE Band 2, 2	20MHz 16QAM							
<u>Test Equipm</u> Substitution:	<u>ent:</u> Horn T59 Sub Chambe			ble -amplifer		Filter			Limit	
3m	Chamber G	•	3m Cł	namber G 🚽	Filter	-	[EIRP		•
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel		(רויע)	1	(ubiii)						
3.720	-63.5	Н	3.0	-15.5	36.2	1.0	-50.7	-13.0	-37.7	
5.580	-65.0	H	3.0	-15.5	35.3	1.0	-30.7	-13.0	-36.3	
7.440	-65.0	H	3.0	-13.0	34.5	1.0	-45.5 -46.5	-13.0	-30.5	
3.720	-63.5	v	3.0	-15.0	36.2	1.0	-40.5	-13.0	-33.3	
5.580	-65.4	v	3.0	-14.9	35.3	1.0	-30.5	-13.0	-36.2	
7.440	-65.1	v	3.0	-12.8	34.5	1.0	-46.3	-13.0	-30.2	
			010	-1210	0.00		1010	-1010		
Mid Channel (1880MHz)					•				
3.760	-63.0	Н	3.0	-14.9	36.2	1.0	-50.1	-13.0	-37.1	
5.640	-65.4	Н	3.0	-15.3	35.3	1.0	-49.6	-13.0	-36.6	
7.520	-65.5	Н	3.0	-13.3	34.5	1.0	-46.8	-13.0	-33.8	
3.760	-63.4	v	3.0	-14.9	36.2	1.0	-50.1	-13.0	-37.1	
5.640	-65.1	V	3.0	-14.6	35.3	1.0	-48.8	-13.0	-35.8	
7.520	-65.8	V	3.0	-13.4	34.5	1.0	-46.9	-13.0	-33.9	
High Channel	(1900MHz)	Ĺ								
3.800	-63.2	Н	3.0	-15.1	36.2	1.0	-50.3	-13.0	-37.3	
5.700	-64.6	H	3.0	-14.4	35.3	1.0	-48.7	-13.0	-35.7	
7.600	-64.8	H	3.0	-12.6	34.4	1.0	-46.0	-13.0	-33.0	
0.000	-63.4	V	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
3.800	-64.8	v v	3.0 3.0	-14.2	35.3	1.0	-48.5	-13.0	-35.5	
3.800 5.700 7.600	-65.1			-12.6	34.4	1.0	-46.1	-13.0	-33.1	

Page 1932 of 1995

10.8.2. LTE BAND 4

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

		ULF	remont Rad	iated Chamb	er					
Company:										
Project #:		15U20164								
Date:		05/08/15								
Test Engin		R.Z								
Configurat	ion:	EUT only								
Mode:		LTE Band 4, 20	0MHz QPSK							
Test Equin										
Test Equip	o <u>ment:</u> on: Horn T59 Sub	estitution an	4 8ft SMA C	abla						
Substitutio	n: Horn 109 Jul	Stitution, an		able						
										1
	Chamb	ber	P	re-amplifer		Filter			Limit	
ĺ	3m Chamber G	· •	3m	Chamber G	- Filt	er	-	EIRF	>	•
I			I							
F		Ant Dal	Distance	Path Loss	D	*********	FIDD	Lineld	Dalta	Neter
Frequenc		Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channe	el (1720MHz)									
3.440	-65.8	Н	3.0	-18.0	36.4	1.0	-53.4	-13.0	-40.4	
5.160	-64.8	Н	3.0	-15.3	35.5	1.0	-49.7	-13.0	-36.7	
6.880	-66.1	Н	3.0	-14.6	34.7	1.0	-48.4	-13.0	-35.4	
3.440	-62.7	V	3.0	-14.8	36.4	1.0	-50.2	-13.0	-37.2	
5.160	-63.3	V	3.0	-13.2	35.5	1.0	-47.7	-13.0	-34.7	
6.880	-66.3	V	3.0	-14.5	34.7	1.0	-48.3	-13.0	-35.3	
Mid Channe	I (1732.5MHz)									
3.465	-65.2	Н	3.0	-17.4	36.4	1.0	-52.8	-13.0	-39.8	
5.176	-65.0	Н	3.0	-15.4	35.5	1.0	-49.9	-13.0	-36.9	
6.930	-64.6	H	3.0	-13.4	34.7	1.0	-46.8	-13.0	-33.8	
	-61.2	v	3.0	-13.2	36.4	1.0	-48.6	-13.0	-35.6	
	-65.1	v	3.0	-15.0	35.5	1.0	-49.5	-13.0	-36.5	
3.465	-65.8	v	3.0	-14.0	34.7	1.0	-47.7	-13.0	-34.7	
5.465 5.176 6.930										
5.176 6.930						1.0	-50.7	40.0		
5.176 6.930 High Chann	el (1745MHz)			45.0			: .507	-13.0	-37.7	
5.176 6.930 High Chann 3.490	-63.2	H	3.0	-15.3	36.4	1.0		42.0	2C E	
5.176 6.930 High Chann 3.490 5.235	-63.2 -64.7	Н	3.0	-15.1	35.5	1.0	-49.5	-13.0	-36.5	
5.176 6.930 High Chann 3.490 5.235 6.980	-63.2 -64.7 -65.5	H H	3.0 3.0	-15.1 -13.9	35.5 34.7	1.0 1.0	-49.5 -47.6	-13.0	-34.6	
5.176 6.930 High Chann 3.490 5.235 6.980 3.490	-63.2 -64.7 -65.5 -62.9	H H V	3.0 3.0 3.0	-15.1 -13.9 -14.9	35.5 34.7 36.4	1.0 1.0 1.0	-49.5 -47.6 -50.3	-13.0 -13.0	-34.6 -37.3	
5.176 6.930 High Chann 3.490 5.235 6.980	-63.2 -64.7 -65.5	H H	3.0 3.0	-15.1 -13.9	35.5 34.7	1.0 1.0	-49.5 -47.6	-13.0	-34.6	

Page 1933 of 1995

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

Company: Project #:		15U20164								
Date:		05/08/15								
Test Engir		R.Z								
Configurat Mode:		EUT only								
Noae:		LTE Band 4, 2	UMHz 16QAW							
Test Equip Substitutio	<u>pment:</u> on: Horn T59 Sub	stitution, an	d 8ft SMA Ca	ble						
	Chambo	er	Pr	e-amplifer		Filter			Limit	
ī	3m Chamber G	-	3m C	hamber G 🚽	Filte	r 🗸		EIRP		•
L							1			
Frequence	cy SA reading	Ant. Pol.	Distance	Path Loss @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
	nel (1720MHz)	(121)		(
3.440	-65.2	Н	3.0	-17.4	36.4	1.0	-52.8	-13.0	-39.8	
5.160	-65.3	H	3.0	-15.8	35.5	1.0	-52.0	-13.0	-37.2	
6.880	-66.6	H	3.0	-15.0	34.7	1.0	-48.9	-13.0	-37.2	
3.440	-65.3	v	3.0	-17.4	36.4	1.0	-52.8	-13.0	-39.8	
5.160	-65.4	v	3.0	-15.3	35.5	1.0	-49.8	-13.0	-36.8	
6.880	-66.4	v	3.0	-14.6	34.7	1.0	-48.4	-13.0	-35.4	
0.000			0.0							
Mid Channe	el (1732.5MHz)		1							
3.465	-64.2	Н	3.0	-16.4	36.4	1.0	-51.8	-13.0	-38.8	
5.198	-64.5	Н	3.0	-14.9	35.5	1.0	-49.4	-13.0	-36.4	
6.930	-66.0	Н	3.0	-14.5	34.7	1.0	-48.2	-13.0	-35.2	
3.465	-62.5	v	3.0	-14.6	36.4	1.0	-50.0	-13.0	-37.0	
5.198	-65.3	V	3.0	-15.2	35.5	1.0	-49.7	-13.0	-36.7	
6.930	-66.8	V	3.0	-15.0	34.7	1.0	-48.7	-13.0	-35.7	
		L		ļ						
	nel (1745MHz)		2.0	15 C	26.4	1.0	-51.0	42.0	-38.0	
3.490 5.235	-63.5 -64.4	H	3.0 3.0	-15.6 -14.8	36.4 35.5	1.0 1.0	-51.0 -49.2	-13.0 -13.0	-36.2	
	-66.1	H	3.0	-14.0	33.5	1.0	-49.2	-13.0	-30.2	
6.980	-63.7	v	3.0	-14.5	36.4	1.0		-13.0	-33.2	
6.980 3.490		v	3.0	-14.4	35.5	1.0	-48.9	-13.0	-35.9	
6.980 3.490 5.235	-64.6		3.0	-13.4	34.7	1.0	-47.0	-13.0	-34.0	

Page 1934 of 1995

10.8.3. LTE BAND 5

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

Company: Project #:		15U20164								
ate:		05/08/15								
est Engin		T Wang								
onfigurat		EUT only								
lode:		LTE Band 5, 1	0MHz QPSK							
est Equip Jubstitutio	<u>ment:</u> n: Horn T59 Sub	stitution, an	d 8ft SMA Ca	ble						
	Chambo	er	Pr	e-amplifer		Filter			Limit	
Г	3m Chamber G		3m C	hamber G ,	. Filte	er	•	EIRP		•
			J	_						_
				Path Loss						
requenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	@ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<u> </u>	(829MHz)	(11/4)		(ubiii)						
1.525	-63.5	Н	3.0	-20.1	37.8	1.0	-56.9	-13.0	-43.9	
2.477	-59.6	H	3.0	-20.1	36.4	1.0	-30.5	-13.0	-45.5	
3.828	-63.4	H	3.0	-15.3	36.1	1.0	-50.4	-13.0	-37.4	
2.001	-64.0	V	3.0	-18.3	37.1	1.0	-54.5	-13.0	-41.5	
2.477	-51.1	V	3.0	-3.7	36.4	1.0	-39.1	-13.0	-26.1	
4.311	-63.2	V	3.0	-13.9	35.9	1.0	-48.8	-13.0	-35.8	
lid Channe	l (836.5MHz)									
1.493	-63.3	Н	3.0	-20.0	37.8	1.0	-56.8	-13.0	-43.8	
3.050	-64.0	Н	3.0	-16.5	36.7	1.0	-52.2	-13.0	-39.2	
3.922	-64.4	Н	3.0	-16.2	36.1	1.0	-51.3	-13.0	-38.3	
2.740	-63.7	V	3.0	-16.4	36.5	1.0	-51.9	-13.0	-38.9	
3.028 4.132	-64.0 -64.2	V V	3.0 3.0	-16.8 -15.1	36.7 35.9	1.0 1.0	-52.5 -50.1	-13.0 -13.0	-39.5 -37.1	
	el (844MHz)		2.0	9.0	20.4	10	44.0	42.0	24.0	
2.519 3.856	-55.1 -63.7	H	3.0 3.0	-8.6 -15.6	36.4 36.1	1.0 1.0	-44.0 -50.7	-13.0 -13.0	-31.0 -37.7	
4.423	-64.1	H	3.0	-15.4	35.8	1.0	-50.2	-13.0	-37.2	
2.524	-54.5	V	3.0	-7.0	36.4	1.0	-42.4	-13.0	-29.4	
4.696	-64.3	V	3.0	-14.7	35.7	1.0	-49.4	-13.0	-36.4	
7.228	-65.3	V	3.0	-13.2	34.6	1.0	-46.8	-13.0	-33.8	

Page 1935 of 1995

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

Company: Project #: Date: Test Engir Configurat Mode:	neer: tion:	15U20164 05/08/15 T Wang EUT only LTE Band 5, 1	0MHz 16QAM							
Test Equip Substitutio	oment: on: Horn T59 Sub	ostitution, ar	ıd 8ft SMA Ca	ble						
	Chambe	er	Pro	e-amplifer		Filter	1		Limit	
Γ	3m Chamber G	•	3m C	hamber G 🖵	Filte	r -	·	EIRP		•
Frequenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<u>, ,</u>	el (829MHz)	(100)		(ubiii)						
1.525	-63.8	Н	3.0	-20.4	37.8	1.0	-57.2	-13.0	-44.2	
2.477	-60.2	H	3.0	-13.8	36.4	1.0	-49.2	-13.0	-36.2	
3.828	-63.7	H	3.0	-15.6	36.1	1.0	-50.7	-13.0	-37.7	
2.001	-64.2	v	3.0	-18.5	37.1	1.0	-54.7	-13.0	-41.7	
2.477	-52.4	V	3.0	-5.0	36.4	1.0	-40.4	-13.0	-27.4	
4.311	-63.7	V	3.0	-14.4	35.9	1.0	-49.3	-13.0	-36.3	
	el (836.5MHz)									
1.493	-63.8	Η	3.0	-20.5	37.8	1.0	-57.3	-13.0	-44.3	
3.050	-64.2	H	3.0	-16.7	36.7	1.0	-52.4	-13.0	-39.4	
3.922	-64.4	H	3.0	-16.2	36.1	1.0	-51.3	-13.0	-38.3	
2.740	-64.1	V	3.0	-16.8	36.5	1.0	-52.3	-13.0	-39.3	
3.028 4.132	-64.2 -64.4	V V	3.0 3.0	-17.0 -15.3	36.7 35.9	1.0 1.0	-52.7 -50.3	-13.0 -13.0	-39.7 -37.3	
7.1JL	-04.4	V	J.U	- 13.3	33.3	·.v	-30.3	-13.0	-31.3	
High Chann	el (844MHz)									
2.519	-55.9	H	3.0	-9.4	36.4	1.0	-44.8	-13.0	-31.8	
3.856	-64.3	H	3.0	-16.2	36.1	1.0	-51.3	-13.0	-38.3	
4.423	-64.2	H	3.0	-15.5	35.8	1.0	-50.3	-13.0	-37.3	
2.524 4.696	-55.1 -64.5	V V	3.0 3.0	-7.6 -14.9	36.4 35.7	1.0 1.0	-43.0 -49.6	-13.0 -13.0	-30.0 -36.6	
	-64.5	V	3.0	-14.9	34.6	1.0	-49.0 -46.5	-13.0	-30.0	
7.228	-03.0	V	3.0	-12.9	J4.0	1.0	-40.3	-13.0	-33.3	

Page 1936 of 1995

10.8.4. LTE BAND 7

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

Company: Project #: Date: Test Engine Configuratic Mode:	er: n:	15U20164 05/01/15 T Wang EUT only LTE Band 7, 2	0MHz QPSK							
Test Equipm Substitution	<u>ient:</u> : Horn T59 Sub	ostitution, an					1			
	Chambe	r	Pre	-amplifer		Filter			Limit	
3n	1 Chamber G		3m C	hamber G 🚽	Filter	-	1	EIRP		•
		·	I		I		1			
Frequency	-	Ant. Pol.	Distance	Path Loss @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channel	·•••									
2.638	-65.6	H	3.0	-18.9	36.5	1.0	-54.3	-25.0	-29.3	
5.020	-67.5	Н	3.0	-18.1	35.6	1.0	-52.7	-25.0	-27.7	
		Н	3.0	-16.2	34.5	1.0	-49.7	-25.0	-24.7	
7.530	-68.4									
5.020	-65.8	V	3.0	-15.9	35.6	1.0	-50.4	-25.0	-25.4	
5.020 7.530	-65.8 -67.5	V	3.0	-15.1	34.5	1.0	-48.6	-25.0	-23.6	
5.020	-65.8		•							
5.020 7.530 10.040	-65.8 -67.5 -69.2	V	3.0	-15.1	34.5	1.0	-48.6	-25.0	-23.6	
5.020 7.530 10.040 Mid Channel	-65.8 -67.5 -69.2 2535MHz)	v v	3.0 3.0	-15.1 -14.4	34.5 33.3	1.0 1.0	-48.6 -46.8	-25.0 -25.0	-23.6 -21.8	
5.020 7.530 10.040 Mid Channel 2.660	-65.8 -67.5 -69.2 2535MHz) -66.3	V V H	3.0 3.0 3.0	-15.1 -14.4 -19.5	34.5 33.3 36.5	1.0 1.0 1.0	-48.6 -46.8 -55.0	-25.0 -25.0 -25.0	-23.6 -21.8 -30.0	
5.020 7.530 10.040 Mid Channel 2.660 5.507	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8	V V H H	3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9	34.5 33.3 36.5 35.3	1.0 1.0 1.0 1.0	-48.6 -46.8 -55.0 -53.2	-25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2	
5.020 7.530 10.040 Mid Channel 2.660 5.507 7.605	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0	V V H H H	3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7	34.5 33.3 36.5 35.3 34.4	1.0 1.0 1.0 1.0 1.0 1.0	-48.6 -46.8 -55.0 -53.2 -50.1	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1	
5.020 7.530 10.040 Mid Channel 2.660 5.507 7.605 2.660	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5	V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -19.5 -18.9 -16.7 -19.1	34.5 33.3 36.5 35.3 34.4 36.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0	_48.6 _46.8 _55.0 _53.2 _50.1 _54.6	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6	
5.020 7.530 10.040 Mid Channel 2.660 5.507 7.605 2.660 5.507	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0	V V H H H	3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7	34.5 33.3 36.5 35.3 34.4	1.0 1.0 1.0 1.0 1.0 1.0	-48.6 -46.8 -55.0 -53.2 -50.1	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1	
5.020 7.530 10.040 Mid Channel 2.660 5.507 7.605 2.660 5.507 7.605	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5 -67.2 -70.0	V V H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7 -19.1 -16.8	34.5 33.3 36.5 35.3 34.4 36.5 35.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0	_48.6 _46.8 _55.0 _53.2 _50.1 _54.6 _51.1	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6 -26.1	
5.020 7.530 10.040 Mid Channel 1 2.660 5.507 7.605 2.660 5.507 7.605 High Channel	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5 -67.2 -70.0 (2560MHz)	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7 -19.1 -16.8 -17.5	34.5 33.3 36.5 35.3 34.4 36.5 35.3 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.6 46.8 -55.0 -53.2 -50.1 -54.6 -51.1 -51.0	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6 -26.1 -26.0	
5.020 7.530 10.040 Mid Channel 2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5 -67.2 -70.0 (2560MHz) -67.0	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7 -19.1 -16.8 -17.5 -20.2	34.5 33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 35.3 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	_48.6 _46.8 _55.0 _53.2 _50.1 _54.6 _51.1 _51.0 _55.7	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6 -26.1 -26.0 -26.1 -26.0	
5.020 7.530 10.040 Mid Channel / 2.660 5.507 7.605 2.660 5.507 7.605 4igh Channel 2.682 5.120	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5 -67.2 -70.0 (2560MHz) -67.0 -65.6	V V H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7 -19.1 -16.8 -17.5 -20.2 -16.1	34.5 33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 35.3 36.5 35.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-48.6 -46.8 -55.0 -53.2 -50.1 -54.6 -51.1 -51.0 -55.7 -50.6	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6 -26.1 -26.0 -26.0 -25.6	
5.020 7.530 10.040 Mid Channel 2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120 7.680	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5 -67.2 -70.0 (2560MHz) -65.6 -67.8	V V H H V V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7 -19.1 -16.8 -17.5 	34.5 33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 36.5 36.5 36.5 34.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-48.6 -46.8 -55.0 -53.2 -50.1 -54.6 -51.1 -51.0 -55.7 -50.6 -48.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6 -26.1 -26.0 -26.0 -26.0 -25.6 -23.8	
5.020 7.530 10.040 Mid Channel / 2.660 5.507 7.605 2.660 5.507 7.605 High Channel 2.682 5.120	-65.8 -67.5 -69.2 2535MHz) -66.3 -68.8 -69.0 -66.5 -67.2 -70.0 (2560MHz) -67.0 -65.6	V V H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-15.1 -14.4 -19.5 -18.9 -16.7 -19.1 -16.8 -17.5 -20.2 -16.1	34.5 33.3 36.5 35.3 34.4 36.5 35.3 34.4 36.5 35.3 36.5 35.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-48.6 -46.8 -55.0 -53.2 -50.1 -54.6 -51.1 -51.0 -55.7 -50.6	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-23.6 -21.8 -30.0 -28.2 -25.1 -29.6 -26.1 -26.0 -26.0 -25.6	

Page 1937 of 1995

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

Company: Project #: Date: Test Enginee Configuration Mode:	er: n:	15U20164 05/01/15 T Wang EUT only LTE Band 7, 2	20MHz 16QAM							
<u>Test Equipm</u> Substitution:	: Horn T59 Sub			ble e-amplifer			1			1
31	Chambe n Chamber G	ŧr		hamber G	Filter	Filter		EIRP	Limit	
	l Ghamber C	<u> </u>				·				•
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel		(100)	1	(ubiii)						
2.638	-66.0	Н	3.0	-19.3	36.5	1.0	-54.7	-25.0	-29.7	
5.020	-67.4	H	3.0	-18.0	35.6	1.0	-52.6	-25.0	-27.6	
7.530	-68.5	Н	3.0	-16.3	34.5	1.0	-49.8	-25.0	-24.8	
5.020	-66.2	v	3.0	-16.3	35.6	1.0	-50.8	-25.0	-25.8	
7.530	-68.1	V	3.0	-15.7	34.5	1.0	-49.2	-25.0	-24.2	
10.040	-70.0	V	3.0	-15.2	33.3	1.0	-47.6	-25.0	-22.6	
Mid Channel (2535MHz)			·····						
2.660	-66.5	Н	3.0	-19.7	36.5	1.0	-55.2	-25.0	-30.2	
5.507	-69.0	Н	3.0	-19.1	35.3	1.0	-53.4	-25.0	-28.4	
7.605	-69.5	Н	3.0	-17.2	34.4	1.0	-50.6	-25.0	-25.6	
2.660	-66.5	v	3.0	-19.1	36.5	1.0	-54.6	-25.0	-29.6	
5.507	-68.2	V	3.0	-17.8	35.3	1.0	-52.1	-25.0	-27.1	
7.605	-69.6	V	3.0	-17.1	34.4	1.0	-50.5	-25.0	-25.5	
High Channel	(2560MHz)		-							
2.682	-66.8	Н	3.0	-20.0	36.5	1.0	-55.5	-25.0	-30.5	
5.120	-66.1	H	3.0	-16.6	35.5	1.0	-51.1	-25.0	-26.1	
7.680	-68.2	Н	3.0	-15.8	34.4	1.0	-49.2	-25.0	-24.2	
2.682	-67.0	V	3.0	-19.6	36.5	1.0	-55.1	-25.0	-30.1	
	-68.5 -70.4	V V	3.0 3.0	-18.5	35.5	1.0	-53.0	-25.0	-28.0	
5.120 7.680				-17.9	34.4	1.0	-51.3	-25.0	-26.3	

Page 1938 of 1995

10.8.5. LTE BAND 12

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

Company: Project #: Date: Fest Engin Configurat Mode:	eer: ion:	15U20164 05/11/15 R.Z EUT only LTE Band 12,	10MHz QPSK							
<u>Test Equip</u> Substitutio	<u>ment:</u> n: Horn T59 Sub Chambe			ble e-amplifer		Filter	1		Limit	
	3m Chamber G	•	3m C	hamber G 🚽	Filte	r	•	EIRP		•
Frequenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
ow Channe		(11/0)		(abiii)						
1.4080	-46.5	Н	3.0	-3.4	37.5	1.0	-40.0	-13.0	-27.0	
2.1120	-59.2	H	3.0	-3.4	37.6	1.0	-40.0	-13.0	-36.9	
2.8160	-65.0	H	3.0	-18.2	36.2	1.0	-53.4	-13.0	-40.4	
1.4080	-42.7	V	3.0	0.9	37.5	1.0	-35.6	-13.0	-22.6	
2.1120	-52.2	V	3.0	-6.2	37.6	1.0	-42.8	-13.0	-29.8	
2.8160	-63.4	V	3.0	-15.6	36.2	1.0	-50.8	-13.0	-37.8	
Aid Channa	L (707 5MH-)									
1.4150	I (707.5MHz) -44.8	Н	3.0	-1.8	37.6	1.0	-38.3	-13.0	-25.3	
2.1225	-44.0	H	3.0	-1.0	37.6	1.0	-30.5	-13.0	-25.5	
2.8300	-64.7	H	3.0	-17.9	36.2	1.0	-53.1	-13.0	-40.1	
1.4150	-42.6	V	3.0	1.0	37.6	1.0	-35.5	-13.0	-22.5	
2.1225	-53.8	V	3.0	-7.8	37.6	1.0	-44.4	-13.0	-31.4	
2.8300	-60.2	V	3.0	-12.4	36.2	1.0	-47.6	-13.0	-34.6	
liah Cha	el (711MHz)									
1.4220	-54.5	Н	3.0	-11.4	37.6	1.0	-48.0	-13.0	-35.0	
2.1330	-56.6	H	3.0	-10.8	37.5	1.0	-47.3	-13.0	-34.3	
2.8440	-65.0	Н	3.0	-18.2	36.2	1.0	-53.4	-13.0	-40.4	
1.4220	-44.6	V	3.0	-1.0	37.6	1.0	-37.6	-13.0	-24.6	
2.1330	-51.2	V	3.0	-5.2	37.5	1.0	-41.7 -48.6	-13.0	-28.7	
7.6440	-61.2	V	3.0	-13.4	36.2	1.0	-40.0	-13.0	-35.6	

Page 1939 of 1995

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

Company:										
Project #:		15U20164								
Date:		05/11/15								
Test Engi		R.Z								
Configura	ation:	EUT only								
Mode:		LTE Band 12,	10MHz 16QAM							
Test Equi	ipment:									
	ion: Horn T59 Sub	ostitution, ar	nd 8ft SMA Ca	able						
	Chambe		Pr	e-amplifer		Filter			Limit	
1	Chambe	er		•			4		Limit	
	3m Chamber G	-	3m C	hamber G 🚽	Filte	r -	•	EIRP	•	-
I	L		,			_		I	_	-
				Path Loss						
Frequen	cy SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)	-					
<u> </u>	nel 704MHz)			,,						
1.4080		Н	3.0	-8.9	37.5	1.0	-45.5	-13.0	-32.5	
2.1120		H	3.0	-0.5	37.6	1.0	-43.5	-13.0	-35.7	
2.8160		H	3.0	-18.3	36.2	1.0	-53.5	-13.0	-40.5	
1.4080		v	3.0	1.5	37.5	1.0	-35.1	-13.0	-22.1	
2.1120		v	3.0	-5.9	37.6	1.0	-42.5	-13.0	-29.5	
2.8160		v	3.0	-17.1	36.2	1.0	-52.3	-13.0	-39.3	
		•								
Mid Chann	nel (707.5MHz)								1	
1.4150		Н	3.0	-9.9	37.6	1.0	-46.5	-13.0	-33.5	
2.1225	-59.2	Н	3.0	-13.3	37.6	1.0	-49.9	-13.0	-36.9	
2.8300		Н	3.0	-19.0	36.2	1.0	-54.2	-13.0	-41.2	
1.4150		V	3.0	1.1	37.6	1.0	-35.5	-13.0	-22.5	
2.1225		V	3.0	-10.2	37.6	1.0	-46.8	-13.0	-33.8	
2.8300	¢¢	V	3.0	-13.1	36.2	1.0	-48.3	-13.0	-35.3	
	inel (711MHz)							40.0		
1.4220		H H	3.0	-11.1	37.6	1.0	-47.7	-13.0	-34.7	
		H	3.0 3.0	-11.6 -18.3	37.5 36.2	1.0 1.0	-48.1 -53.5	-13.0 -13.0	-35.1 -40.5	
2.1330		н V	3.0	-18.3	36.2	1.0	-03.0 -37.1	-13.0 -13.0	-40.5	
2.1330 2.8440		V	3.0	-0.5	37.5	1.0	-42.1	-13.0	-24.1	
2.1330 2.8440 1.4220	-51.6			-12.8	36.2	1.0	-48.0	-13.0	-35.0	
2.1330 2.8440		v	3.0	-12.0						

Page 1940 of 1995

10.8.6. LTE BAND 13

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

Company Project #: Date: Test Engi Configura Mode:	ineer: ation:	15U20164 05/08/15 T Wang EUT only LTE Band 13,	10MHz QPSK							
Test Equi Substitut	i <u>pment:</u> ion: Horn T59 Suł	ostitution, an					1			
	Chambe	er	Pro	e-amplifer		Filter			Limit	
l	3m Chamber G	•	3m C	hamber G 🖵	Filte	r	•	EIRP		•
	• • •	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequen (GHz)	(dBm)									
(GHz) Mid Chanr	iel (782MHz)			-21.3	37.8	1.0	-58.1	-40.0	-18.1	1559-1610MHz
(GHz) Mid Chann 1.564	el (782MHz) -64.9	Н	3.0			1.0	-55.1	-13.0	-42.1	
(GHz) Mid Chann 1.564 2.346	el (782MHz) -64.9 -65.5	Н	3.0	-19.5	36.6				-39.9	
(GHz) Mid Chann 1.564 2.346 3.128	el (782MHz) -64.9 -65.5 -64.8	H H	3.0 3.0	-17.2	36.6	1.0	-52.9	-13.0		4550 4040000
(GHz) Mid Chann 1.564 2.346 3.128 1.564	rel (782MHz) -64.9 -65.5 -64.8 -65.1	H H V	3.0 3.0 3.0	-17.2 -21.1	36.6 37.8	1.0 1.0	-57.8	-40.0	-17.8	1559-1610MHz
Mid Chann 1.564 2.346 3.128	el (782MHz) -64.9 -65.5 -64.8	H H	3.0 3.0	-17.2	36.6	1.0				1559-1610MHz

Page 1941 of 1995

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

				titution Meas ated Chambe						
Company: Project #:		15U20164								
Date:		05/08/15								
Test Engine	er:	T Wang								
Configuratio	n:	EUT only								
Mode:		LTE Band 13,	10MHz 16QAM							
substitution.	Horn T59 Sub			e-amplifer		Filter	1		Limit	
						T IIICEI			LIIIIL	
		-					4			
3m	n Chamber G	•	3m C	hamber G 🖵	Filter	r .	•	EIRP		•
3m		•	3m C	hamber G 🖵	Filter	r	•	EIRP		• •
	n Chamber G			Path Loss						
Frequency	n Chamber G SA reading	Ant. Pol.	3m Cl	Path Loss @ SG End	Filter	Attenuator	EIRP	EIRP	Delta	• Notes
	n Chamber G			Path Loss					Delta	• Notes
Frequency (GHz) Mid Channel (n Chamber G SA reading (dBm) 782MHz)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit		
Frequency (GHz) Mid Channel (1.469	n Chamber G SA reading (dBm) 782MHz) -64.8	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp 37.8	Attenuator	EIRP -58.3	Limit _40.0	-18.3	Notes 1559-1610MHz
Frequency (GHz) Mid Channel (1.469 2.330	SA reading (dBm) 782MHz) -64.8 -65.3	Ant. Pol. (H/V) H	Distance 3.0 3.0	Path Loss @ SG End (dBm) -21.5 -19.4	Preamp 37.8 36.6	Attenuator	EIRP -58.3 -55.0	Limit -40.0 -13.0	-18.3 -42.0	
Frequency (GHz) Mid Channel (1.469 2.330 4.983	n Chamber G SA reading (dBm) 782MHz) -64.8 -65.3 -64.6	Ant. Pol. (H/V) H H H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.5 -19.4 -15.2	Preamp 37.8 36.6 35.6	Attenuator 1.0 1.0 1.0	EIRP -58.3 -55.0 -49.8	Limit -40.0 -13.0 -13.0	-18.3 -42.0 -36.8	1559-1610MHz
Frequency (GHz) Mid Channel (1.469 2.330 4.983 1.749	A reading (dBm) 782MHz) -64.8 -65.3 -64.6 -64.5	Ant. Pol. (H/V) H H H V	Distance	Path Loss @ SG End (dBm) -21.5 -19.4 -15.2 -19.8	Preamp 37.8 36.6 35.6 37.5	Attenuator 1.0 1.0 1.0 1.0	EIRP -58.3 -55.0 -49.8 -56.3	Limit -40.0 -13.0 -13.0 -40.0	-18.3 -42.0 -36.8 -16.3	
Frequency (GHz) Mid Channel (1.469 2.330 4.983	n Chamber G SA reading (dBm) 782MHz) -64.8 -65.3 -64.6	Ant. Pol. (H/V) H H H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -21.5 -19.4 -15.2	Preamp 37.8 36.6 35.6	Attenuator 1.0 1.0 1.0	EIRP -58.3 -55.0 -49.8	Limit -40.0 -13.0 -13.0	-18.3 -42.0 -36.8	1559-1610MHz

Page 1942 of 1995

10.8.7. LTE BAND 17

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

	15U20164								
	05/08/15								
aar									
	-	10MHz OPSK							
	LIL Danu II,								
oment: on: Horn T59 Sul	bstitution, ar	nd 8ft SMA Ca	able						
Chamb		P	re-amplifer	1	Siltor			1.30016	
3m Chamber G	•	3m C	hamber G	Filte	ər	•	EIRP		•
			1						
		_		_					
		Distance	-	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	(H/V)		(dBm)						
el (709MHz)	·•					ļ			
-64.1	Н	3.0	-21.0	37.6	1.0	-57.6	-13.0	-44.6	
-60.2	H	3.0	-14.4	37.6	1.0	-50.9	-13.0	-37.9	
······			•••\$•••••••••••••	¢	·····	¢		······	
							••	å	
	-\$				••••			ιφ	
-63.6	V	3.0	-13.9	3b.Z	1.0	-49.2	-13.0	-36.2	
1/710MHz)	L		+						
	н	3.0	20.1	37.6	1.0	56 7	13.0	13.7	
······	-ф		••••	•	····	¢		······	
		•••••					••••••••••	¢	
······	v		••••	\$		¢		······	
-55.4	v	3.0	-9.4	37.6	1.0	-46.0	-13.0		
-63.3	V	3.0	-14.8	36.2	1.0	-50.0	-13.0	-37.0	
			00.5	07.0			40.0		
-60.5	v	3.0	-15.8	37.8	1.0	-52.6	-13.0	-39.6	
	V	3.0	-9.7	37.6	1.0	-46.3	-13.0	-33.3	,
-55.7		3.0	-14.0	36.2	1.0	-49.2	-13.0	-36.2	
	tion: <u>oment:</u> on: Horn T59 Sub Chamb 3m Chamber G (dBm) el (709MHz) -64.1 -60.2 -64.1 -60.2 -64.0 -63.2 -63.6 el (710MHz) -63.2 -63.3 -64.0 -63.3 -64.0 -65.4	tion: EUT only LTE Band 17, Dement: Dr: Horn T59 Substitution, ar Chamber 3m Chamber G Chamber G 3m Chamber G Chamber G Sy SA reading (dBm) -64.1 H -64.1 H -64.2 H -64.2 H -64.0 V -55.8 V -63.6 V -63.3 H -63.3 H -64.0 V -63.3 H -63.3 H -63.3 V -63.3 V -63.3 V -63.3 V -63.6 H -63.6 H -63.6 H -63.6 H -63.6 H -63.6 H	tion: EUT only LTE Band 17, 10MHz QPSK oment: on: Horn T69 Substitution, and 8ft SMA Ca Chamber G 3m Chamber G y SA reading Ant. Pol. (dBm) (dBm) (H/V) el (709MHz) el (709MHz) - 64.1 H 3.0 - 60.2 H 3.0 - 60.2 H 3.0 - 66.2 H 3.0 - 66.8 V 3.0 - 66.8 V 3.0 - 66.8 V 3.0 - 66.8 V 3.0 - 66.2 H 3.0 - 66.2 H 3.0 - 66.3 H 3.0 - 66.3 H 3.0 - 66.3 V 3.0 - 66.3 H 3.0 - 66.3 C 1	tion: EUT only LTE Band 17, 10MHz QPSK prent: 3m Chamber G Sy SA reading Ant. Pol. (dBm) el (709MHz) 	LTE Band 17, 10MHz QPSK Diment: Pre-amplifer 3m Chamber G 3m Chamber G Filte 3m Chamber G Pre-amplifer Filte 3m Chamber G 3m Chamber G Filte 2y SA reading (dBm) Ant. Pol. (H/V) Distance @ SG End (dBm) Preamp el (709MHz) - - - - - 64.1 H 3.0 -21.0 37.6 - 64.1 H 3.0 -20.2 36.5 - 64.0 V 3.0 -14.4 37.6 - 63.6 V 3.0 -13.9 36.2 - el (710MHz) - - - - - 63.3 H 3.0 -13.6 36.2 - el (710MHz) - - - - - 63.3 H 3.0 -13.6 36.2 - el (711MHz) - - - -	LTE Band 17, 10MHz QPSK Diment: 3m Chamber G Pre-amplifer Filter 3m Chamber G 3m Chamber G Filter 3m Chamber G 3m Chamber G Filter 2y SA reading (dBm) Ant. Pol. (H/V) Distance Path Loss @ SG End (dBm) Preamp Attenuator el (709MHz) - - - - - - 64.1 H 3.0 -21.0 37.6 1.0 - 64.1 H 3.0 -20.2 36.5 1.0 - 65.8 V 3.0 -14.4 37.6 1.0 - 63.6 V 3.0 -13.9 36.2 1.0 64.0 V 3.0 -13.9 36.2 1.0 63.6 V 3.0 -13.9 36.2 1.0 63.1 H 3.0 -13.9 36.2 1.0 64.0 V 3.0 -14.8 36.2 1.0 63.3 H </td <td>tion: EUT only LTE Band 17, 10MHz QPSK sment: on: Horn T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter 3m Chamber G 3m Chamber G Filter 3m Chamber G Path Loss Preamplifer 2000 Ant. Pol. (dBm) Distance Path Loss Preamp 201 64.1 H 3.0 -21.0 37.6 1.0 -50.9 46.2.3 H 3.0 -21.0 37.6 1.0 -50.9 56.8 V 3.0 -10.8 37.6 1.0 -56.9 56.8 V 3.0 -10.8 37.6 1.0 -49.2 et (710MHz) </td> <td>tion: EUT only LTE Band 17, 10MHz QPSK</td> <td>tion: EUT only LTE Band 17, 10MHz QPSK</td>	tion: EUT only LTE Band 17, 10MHz QPSK sment: on: Horn T59 Substitution, and 8ft SMA Cable Chamber Pre-amplifer Filter 3m Chamber G 3m Chamber G Filter 3m Chamber G Path Loss Preamplifer 2000 Ant. Pol. (dBm) Distance Path Loss Preamp 201 64.1 H 3.0 -21.0 37.6 1.0 -50.9 46.2.3 H 3.0 -21.0 37.6 1.0 -50.9 56.8 V 3.0 -10.8 37.6 1.0 -56.9 56.8 V 3.0 -10.8 37.6 1.0 -49.2 et (710MHz)	tion: EUT only LTE Band 17, 10MHz QPSK	tion: EUT only LTE Band 17, 10MHz QPSK

Page 1943 of 1995

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

Company:										
Project #:		15U20164								
Date:		05/08/15								
lest Engi		T Wang								
Configura		EUT only								
/lode:		LTE Band 17,	10MHz 16Q/	M						
<u>Fest Equi</u> Substituti	<u>pment:</u> on: Horn T59 Sul	ostitution, ar	nd 8ft SMA (Cable						
				re-amplifer		Tiller				
	Chambe			-		Filter			Limit	_
Į	3m Chamber G	•	3m	Chamber G	Filt	er	-	EIRP		•
				1			1	1		
				Path Loss						
Frequen		Ant. Pol.	Distance	e @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
ow Chann	iel (709MHz)								Į	
1.147	-64.1	Н	3.0	-21.9	36.6	1.0	-57.5	-13.0	-44.5	
2.113	-59.1	Н	3.0	-13.3	37.6	1.0	-49.8	-13.0	-36.8	
2.687	-64.0	Н	3.0	-17.2	36.5	1.0	-52.7	-13.0	-39.7	
1.385	-64.1	V	3.0	-20.5	37.5	1.0	-57.0	-13.0	-44.0	
2.113	-56.4	V	3.0	-10.4	37.6	1.0	-47.0	-13.0	-34.0	
4.948	-64.1	V	3.0	-14.4	36.2	1.0	-49.7	-13.0	-36.7	
	-1 (740MUL-)	<u> </u>								
	el (710MHz)	u	2.0	20.7	27 E	10	57.2	12.0	44.2	
1.427 2.120	-63.8 -58.5	H	3.0 3.0	-20.7 -12.7	37.6 37.6	1.0 1.0	-57.3 -49.2	-13.0 -13.0	-44.3 -36.2	
4.962	-50.5 -63.7	н Н	3.0	-12.7 -14.0	36.2	1.0	-49.2 -49.2	-13.0 -13.0	-36.2	
4.962	-63.8	V	3.0	-14.0	30.2	1.0	-49.2	-13.0	-30.2 -43.8	
2.120	-63.6	V	3.0	-20.2	37.6	1.0	-36.6	-13.0	-43.0 -33.5	
	-63.6	v	3.0	-15.1	36.2	1.0	-50.3	-13.0	-37.3	
3.744		ĺ							Įİ.	
3.744	nel (711MHz)									
3.744 ligh Chanı	-64.0	H	3.0	-20.9	37.6	1.0	-57.5	-13.0	-44.5	
3.744 ligh Chanı 1.427		H	3.0 3.0	-13.1 -15.6	37.6 36.1	1.0 1.0	-49.6 -50.7	-13.0 -13.0	-36.6 -37.7	
3.744 ligh Chani 1.427 2.120	-58.9			-15.6	30.1	1.0	-50.7	-13.0	-37.7	
3.744 ligh Chani 1.427 2.120 3.828	-63.7	H V	30			1.0	-46.5	-13.0	-33.5	
3.744 ligh Chanı 1.427 2.120		н V V	3.0 3.0	-9.9	37.6					
3.744 ligh Chani 1.427 2.120 3.828 1.756	-63.7 -61.1	V			37.6 36.2	1.0	-49.4	-13.0	-36.4	

Page 1944 of 1995

10.8.8. LTE BAND 25

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

Company Project # Date: Test Eng Configur: Mode:	: ineer:	15U20164 05/09/15 Ali EUT only LTE Band 25	, 20MHz QPSK							
<u>Test Equ</u> Substitut	i <u>pment:</u> ion: Horn T59 :	Substitution, a	nd 8ft SMA Ca	ble						
	Cham	ber	Pre	-amplifer		Filter			Limit	
Γ	3m Chamber (3 .	3m Cł	namber G 🖵	Filter	· ·	•	EIRP		•
Frequer (GHz)		ng Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
<u> </u>	nel (1860MHz)	(100)		(ubiii)						
3.720	-64.3	Н	3.0	-16.2	36.2	1.0	-51.4	-13.0	-38.4	
5.580	-65.7	H	3.0	-15.1	36.1	1.0	-50.2	-13.0	-37.2	
7.440	-65.2	Н	3.0	-12.2	35.2	1.0	-46.4	-13.0	-33.4	
3.720	-64.8	V	3.0	-16.3	36.2	1.0	-51.5	-13.0	-38.5	
5.580 7.440	-65.8 -66.6	v v	3.0 3.0	-15.3 -13.7	36.1 35.2	1.0 1.0	-50.5 -47.9	-13.0 -13.0	-37.5 -34.9	
	nel (1882.5MHz)			47.7	20.0	4.0	50 0	40.0		
3.765 5.648	-65.7 -66.9	H	3.0 3.0	-17.7 -16.2	36.2 36.1	1.0 1.0	-52.8 -51.3	-13.0 -13.0	-39.8 -38.3	
7.530	-67.6	H	3.0	-10.2 -14.6	35.1	1.0	-31.3 -48.7	-13.0	-30.3 -35.7	
3.765	-64.6	v	3.0	-16.1	36.2	1.0	-51.2	-13.0	-38.2	
5.648	-67.0	V	3.0	-16.5	36.1	1.0	-51.6	-13.0	-38.6	
7.530	-67.9	V	3.0	-14.9	35.1	1.0	-49.1	-13.0	-36.1	
ligh Char	nel (1905MHz)									
3.810	-64.2	H	3.0	-16.1	36.1	1.0	-51.2	-13.0	-38.2	
5.715 7.620	-66.9 -67.1	H	3.0 3.0	-16.1 -13.9	36.1 35.1	1.0 1.0	-51.2 -48.0	-13.0 -13.0	-38.2 -35.0	
	-67.1	V	3.0	-13.9 -15.5	30.1	1.0	-48.0	-13.0	-30.0 -37.6	
		v	3.0	-15.7	36.1	1.0	-50.8	-13.0	-37.8	
3.810 5.715	-66.4			-14.1	35.1	1.0	-48.2	-13.0	-35.2	

Page 1945 of 1995

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

Company:										
Project #:		15U20164								
Date:		05/09/15								
Test Engine		Ali								
Configuratio		EUT only								
Node:		LTE Band 25,	20MHz 16QAM							
Test Equipm	ont									
	Horn T59 Sub	stitution ar	d 8ft SMA Ca	ble						
			D	a annulifa r						
	Chambe	er	Pr	e-amplifer		Filter			Limit	
3m	n Chamber G	•	3m C	hamber G 🛛 🗸	Filte	r	-	EIRP		•
I			1		I		_	I		_
				Path Loss						
Frequency	SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Distance	(dBm)	. roump			_	Dona	1000
ow Channel		()		(
3.720	-64.4	Н	3.0	-16.3	36.2	1.0	-51.6	-13.0	-38.6	
5.580	-66.1	H	3.0	-15.4	36.1	1.0	-50.5	-13.0	-37.5	
7.440	-67.9	H	3.0	-14.9	35.2	1.0	-49.1	-13.0	-36.1	
3.720	-64.8	V	3.0	-16.4	36.2	1.0	-51.6	-13.0	-38.6	
5.580	-66.8	V	3.0	-16.3	36.1	1.0	-51.5	-13.0	-38.5	
7.440	-67.6	V	3.0	-14.7	35.2	1.0	-48.9	-13.0	-35.9	
Aid Channel (2.0	45.2	20.2	10	E0 E	42.0	27.5	
3.765	-63.4	H	3.0	-15.3	36.2	1.0	-50.5	-13.0	-37.5	
5.648	-66.5	H	3.0	-15.8	36.1	1.0	-50.9	-13.0	-37.9	
7.530	-66.5 -64.6	H V	3.0 3.0	-13.5 -16.1	35.1	1.0 1.0	-47.6	-13.0 -13.0	-34.6 -38.3	
3.765 5.648	-64.6 -67.7	V V	3.0	-16.1 -17.1	36.2	1.0 1.0	-51.3 -52.2	-13.0 -13.0	-38.3 -39.2	
7.530	-66.9	V	3.0	-17.1	35.1	1.0	-JZ.Z -48.0	-13.0	-35.0	
		_								
ligh Channel										
3.810	-64.5	H	3.0	-16.4	36.1	1.0	-51.5	-13.0	-38.5	
5.715 7.620	-65.7 -66.2	H	3.0 3.0	-14.9 -13.0	36.1 35.1	1.0 1.0	-49.9 -47.1	-13.0 -13.0	-36.9 -34.1	
3.810	-65.8	н V	3.0	-13.0 -17.2	35.1	1.0	-47.1 -52.3	-13.0 -13.0	-34.1 -39.3	
	-65.8	V	3.0	-17.2	36.1	1.0	-52.5	-13.0	-38.3	
	-67.2	v	3.0	-10.2	35.1	1.0	-48.2	-13.0	-35.2	
5.715	-0112		010				1012	-1010		
	[]									

Page 1946 of 1995

10.8.9. LTE BAND 26

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

	15U20164 05/11/15								
	-								
	LTE Band 26,	10MHz QPSK							
Chambe 3m Chamber G	er •			Filte	Filter r	-	EIRP	Limit	r
ncy SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
nel (819MHz)									
		¢			òò				
			\$					ффф	
-57.1	H	3.0 3.0	-9.4 -5.9	36.5 36.1	1.0 1.0	-44.9 -41.0	-13.0 -13.0	-31.9 -28.0	
·····	V N	3.0	-3.9 -8.8	30.1	1.0	-41.0	-13.0	-20.0 -32.7	
_53.1		3.0	-0.0 -9.4	36.7	1.0	-45.1	-13.0	-32.1	
-53.1 -56.7	v					-44.9	-13.0	-31.9	
-53.1 -56.7 -57.0	V V	3.0	-9.4	36.5	1.0	-44.9	-13.0	-31.5	
	ineer: ation: ipment: ion: Horn T59 Sut Chamber 3m Chamber G cy SA reading (dBm)	ineer: T Wang ation: EUT only LTE Band 26, ipment: ion: Horn T59 Substitution, an Chamber 3m Chamber G ucy SA reading (dBm) (dBm) -58.8 H -57.5 H	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Ca Chamber 3m Chamber G am C 3m Chamber G (dBm) (H/V) iel (819MHz) -58.8 H 3.0	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Cable Chamber 3m Chamber G am Chamber G (dBm) (dBm) hel (819MHz) -58.8 H 5.8.8 H 3.0 -14.8 3.0 -11.0	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Cable Chamber 3m Chamber G at Chamber G Chamber G Ant. Pol. (dBm) Pre-amplifer 3m Chamber G Filter Pre-amplifer 3m Chamber G Filter Pre-amplifer 3m Chamber G Filter Filter Chamber G SG End (dBm) Pre-amplifer SG SG End (dBm) Pre-amplifer SG SG End (dBm) Filter Sa Sa Sa B H 3.0 -57.5 H 3.0 -11.0 36.7	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Cable Chamber G 3m Chamber G (dBm) rel (819MHz) - 58.8 H 3.0 -14.8 37.8 1.0 -57.5 H 3.0 -11.0 36.7 1.0	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Cable Chamber G 3m Chamber G m Chamber G SA reading (dBm) Ant. Pol. (H/V) bistance SS SG End (dBm) Preamp SG End (dBm) Preamp Attenuator EIRP (dBm) HZ SS SG End (dBm) SG End (dD) SG End (dD) (dD) (dD) (dD) (dD) (dD) (dD) (dD	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Cable Chamber G 3m Chamber G (dBm) Key SA reading (dBm) Ant. Pol. (dBm) (H/V) Distance Path Loss @ SG End (dBm) Pre-amplifer Filter Filter Filter Filter Filter Filter Filter EIRP Limit (dBm) Key SA reading (H/V) SA reading (H/V)	ineer: T Wang ation: EUT only LTE Band 26, 10MHz QPSK ipment: ion: Horn T59 Substitution, and 8ft SMA Cable Chamber G Pre-amplifer Tilter Limit 3m Chamber G Filter Limit EIRP Limit Delta vertication (dBm) Preamp Attenuator EIRP Limit Delta (dBm) Hore (dBm) Hore Compared to the second sec

Page 1947 of 1995

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

				titution Meas ated Chambe						
Company: Project #: Date: Test Engin Configurat Mode: <u>Test Equip</u> Substitutio	eer: ion:		10MHz 16QAM d 8ft SMA Ca							
	Chambe	er	Pro	e-amplifer		Filter			Limit	
	3m Chamber G		3m C	hamber G 🖕	Filte	r .		FIRP		
	3m Chamber G	·		hamber G	Filte		-	EIRP		•
Frequenc	y SA reading	Ant. Pol.	3m C Distance	Path Loss @ SG End	Preamp	r . Attenuator	EIRP	Limit	Delta	Notes
Frequenc (GHz)	y SA reading (dBm)			Path Loss					Delta	• Notes
Frequenc (GHz) Mid Channe	y SA reading (dBm) I (819MHz)	Ant. Pol.	Distance	Path Loss @ SG End			EIRP	Limit	Delta	• Notes
Frequenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)		Path Loss @ SG End (dBm)	Preamp	Attenuator		Limit		Notes
Frequenc (GHz) Mid Channe 1.638	y SA reading (dBm) I (819MHz) -59.1	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp 37.8	Attenuator	EIRP -52.0	Limit	-39.0	• Notes
Frequenc (GHz) Mid Channe 1.638 2.457 3.276	y SA reading (dBm) I (819MHz) -59.1 -58.0 -57.5	Ant. Pol. (H/V) H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -15.1 -11.5 -9.8	Preamp 37.8 36.7 36.5	Attenuator	EIRP -52.0 -47.2 -45.3	Limit -13.0 -13.0 -13.0	-39.0 -34.2	• Notes
Frequenc (GHz) Mid Channe 1.638 2.457 3.276 3.807	y SA reading (dBm) I (819MHz) -59.1 -58.0 -57.5 -54.4	Ant. Pol. (H/V) H H H	Distance 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -15.1 -11.5 -9.8 -6.3	Preamp 37.8 36.7 36.5 36.1	Attenuator 1.0 1.0 1.0	EIRP -52.0 -47.2 -45.3 -41.4	Limit -13.0 -13.0 -13.0 -13.0 -13.0	-39.0 -34.2 -32.3 -28.4	• Notes
Frequenc (GHz) Mid Channe 1.638 2.457 3.276 3.807 1.630	y SA reading (dBm) I (819MHz) -59.1 -58.0 -57.5 -54.4 -53.5	Ant. Pol. (H/V) H H H H	Distance 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) 15.1 11.5 9.8 6.3 9.2	Preamp 37.8 36.7 36.5 36.1 37.8	Attenuator 1.0 1.0 1.0 1.0	EIRP -52.0 -47.2 -45.3 -41.4 -46.1	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
Frequenc (GHz) Mid Channe 1.638 2.457 3.276 3.807	y SA reading (dBm) I (819MHz) -59.1 -58.0 -57.5 -54.4	Ant. Pol. (H/V) H H H H V	Distance 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -15.1 -11.5 -9.8 -6.3	Preamp 37.8 36.7 36.5 36.1	Attenuator 1.0 1.0 1.0 1.0 1.0	EIRP -52.0 -47.2 -45.3 -41.4	Limit -13.0 -13.0 -13.0 -13.0 -13.0	-39.0 -34.2 -32.3 -28.4	Notes

Page 1948 of 1995

10.8.10. LTE BAND 30

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

~										
Company:										
Project #: Date:		15U20164 05/11/15								
est Engir		T Wang								
Configurat		EUT only								
/lode:		-	10MHz QPSK							
est Equip										
Substitutio	on: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	ble						
	Chambe	r	Pre-	amplifer		Filter		I	_imit	
	Sm Chamber G	_	3m Ch	amber G 🚽	Filter	· •	1	EIRP		
			I				1			
				Path Loss						
Frequenc	y SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Distance	(dBm)	rioump	Attornuturor			Dona	
(0112)		(1,, 1)		(abiii)						
/id Channe	-64.6	н	3.0	-15.4	36.2	1.0	-50.5	-40.0	-10.5	
				-12.4	35.5	1.0	-47.0	-40.0	-7.0	
Aid Channe 4.620 6.930	-65.0	н	3.0							
4.620		H H	3.0	-12.0	33.9	1.0	-44.9	-40.0	-4.9	
4.620 6.930 9.240 4.620	-65.0 -66.4 -64.1	H V	3.0 3.0	-12.0 -14.7	36.2	1.0	-49.8	-40.0	-9.8	
6.930 9.240	-65.0 -66.4	Н	3.0	-12.0			\$ _	*****		

Page 1949 of 1995

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

Company:										
Project #:		15U20164								
Date:		05/11/15								
Test Engine		T Wang								
Configuratio		EUT only								
Mode:		LTE Band 30, 1	10MHz 16QAM							
	Chambe	51		e-amplifer		Filter			Limit	
31	n Chamber G	·	3m Cl	hamber G Path Loss	Filter	· · ·	•	EIRP		•
3r Frequency		• Ant. Pol.	3m Cl Distance		Filter	Attenuator	EIRP	EIRP	Delta	Notes
				Path Loss						
Frequency (GHz)	SA reading (dBm)	Ant. Pol.		Path Loss @ SG End						
Frequency (GHz)	SA reading (dBm) 2310MHz) -64.7	Ant. Pol.		Path Loss @ SG End						
Frequency (GHz) Mid Channel (4.620 6.930	SA reading (dBm) 2310MHz) -64.7 -65.1	Ant. Pol. (H/V) H	Distance 3.0 3.0	Path Loss @ SG End (dBm) -15.5 -12.5	Preamp 36.2 35.5	Attenuator	EIRP -50.6 -47.1	Limit -40.0 -40.0	Delta -10.6 -7.1	
Frequency (GHz) Mid Channel (4.620 6.930 9.240	SA reading (dBm) 2310MHz) -64.7 -65.1 -67.0	Ant. Pol. (H/V) H H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -15.5 -12.5 -12.6	Preamp 36.2 35.5 33.9	Attenuator 1.0 1.0 1.0	EIRP -50.6 -47.1 -45.5	Limit -40.0 -40.0 -40.0	Delta -10.6 -7.1 -5.5	
Frequency (GHz) Mid Channel (4.620 6.930 9.240 4.620	SA reading (dBm) 2310MHz) -64.7 -65.1 -67.0 -65.4	Ant. Pol. (H/V) H H H V	Distance 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -15.5 -12.5 -12.6 -16.0	Preamp 36.2 35.5 33.9 36.2	Attenuator 1.0 1.0 1.0 1.0	EIRP -50.6 -47.1 -45.5 -51.1	Limit -40.0 -40.0 -40.0 -40.0	Delta -10.6 -7.1 -5.5 -11.1	
Frequency (GHz) Mid Channel (4.620 6.930 9.240	SA reading (dBm) 2310MHz) -64.7 -65.1 -67.0	Ant. Pol. (H/V) H H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -15.5 -12.5 -12.6	Preamp 36.2 35.5 33.9	Attenuator 1.0 1.0 1.0	EIRP -50.6 -47.1 -45.5	Limit -40.0 -40.0 -40.0	Delta -10.6 -7.1 -5.5	

Page 1950 of 1995

10.8.11. LTE BAND 41

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

		UL F		stitution Meas liated Chamb						
Company										
Project #:		15U20164								
Date:		05/11/15								
Test Engi	neer:	R.Z								
Configura	ation:	EUT only								
Mode:		LTE Band 41,	20MHz QPSK	C C						
<u>Test Equi</u> Substituti		Substitution, a	nd 8ft SMA C	able						
	Char	nber	P	re-amplifer		Filter			Limit	
T	3m Chamber	G 🗣	3m (Chamber G 📮	Filte	er	•	EIRP		_
ļ				_						
				Path Loss						
Frequen	cv SA readii	na Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	-	(H/V)		(dBm)						
		(100)		(ubiii)		1				
	nel (2506MHz)			40.0				05.0		
5.012	-66.0	H	3.0	-16.2	36.2	1.0	-51.4	-25.0	-26.4	
7.518	-65.4	Н	3.0	-12.4	35.1	1.0	-46.5	-25.0	-21.5	
10.024		Н	3.0	-11.8	33.3	1.0	-44.2	-25.0	-19.2	
5.012	-66.4	V	3.0	-16.7	36.2	1.0	-51.9	-25.0	-26.9	
7.518	-66.1	V	3.0	-13.1	35.1	1.0	-47.3	-25.0	-22.3	
10.024	-67.0	v	3.0	-12.2	33.3	1.0	-44.6	-25.0	-19.6	
	el (2593MHz)									
5.186	-66.1	H	3.0	-16.0	36.3	1.0	-51.3	-25.0	-26.3	
7.779	-66.7	Н	3.0	-13.5	34.9	1.0	-47.4	-25.0	-22.4	
10.372		H	3.0	-13.3	33.1	1.0	-45.4	-25.0	-20.4	
5.186	-65.2	V	3.0	-15.4	36.3	1.0	-50.6	-25.0	-25.6	
7.779	-66.7	V	3.0	-13.5	34.9	1.0	-47.5	-25.0	-22.5	
10.372	-67.4	V	3.0	-12.6	33.1	1.0	-44.7	-25.0	-19.7	
Jah Ch	nel (2680MHz)	l								
1ign Chan 5.360	-66.8	Н	3.0	-16.5	36.2	1.0	-51.7	-25.0	-26.7	
5.360 8.040	-65.3	H	3.0	-16.5	36.2	1.0	-31.7	-25.0	-26.7	
10.720	-65.5	H	3.0	-11.9	34.0	1.0	-43.6	-25.0	-20.6	
5.360	-67.5	v	3.0	-12.0	36.2	1.0	-44.7	-25.0	-15.7	
8.040	-66.6	v	3.0	-13.7	34.8	1.0	-47.0	-25.0	-22.0	
10.720		v	3.0	-12.7	32.9	1.0	-44.6	-25.0	-19.6	
		-								

Page 1951 of 1995

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

		UL F	remont Radi	iated Chambe	ŧr					
ompany:										
Project #:		15U20164								
Date:		05/11/15								
Test Engine		R.Z								
Configuratio	n:	EUT only								
Mode:		LTE Band 41,	20MHz 16QAM	í.						
Test Equipm	ent:									
ubstitution	: Horn T59 Sub	stitution, ar	nd 8ft SMA Ca	ble						
							1			1
	Chamber	r	Pre	-amplifer		Filter			Limit	
3m	Chamber G	•	3m Cł	hamber G 🚽	Filter	•		EIRP	•	
Ι			1		1		1			l.
				Path Loss						
Frequency	SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channel						<u>†</u>				
5.012	-66.7	Н	3.0	-16.9	36.2	1.0	-52.1	-25.0	-27.1	
7.518	-65.6	H	3.0	-12.6	35.1	1.0	-46.7	-25.0	-21.7	
10.024	-67.2	Н	3.0	-12.2	33.3	1.0	-44.6	-25.0	-19.6	
5.012	-66.6	v	3.0	-16.9	36.2	1.0	-52.1	-25.0	-27.1	
7.518	-66.3	v	3.0	-13.3	35.1	1.0	-47.5	-25.0	-22.5	
10.024	-67.4	v	3.0	-12.6	33.3	1.0	-45.0	-25.0	-20.0	
Mid Channel (2593MHz)									
5.186	-66.8	Н	3.0	-16.7	36.3	1.0	-52.0	-25.0	-27.0	
7.779	-67.0	Н	3.0	-13.8	34.9	1.0	-47.7	-25.0	-22.7	
10.372	-68.6	Н	3.0	-13.6	33.1	1.0	-45.7	-25.0	-20.7	
5.186	-65.4	V	3.0	-15.6	36.3	1.0	-50.8	-25.0	-25.8	
7.779	-67.0	V	3.0	-13.8	34.9	1.0	-47.8	-25.0	-22.8	
10.372	-67.9	V	3.0	-13.1	33.1	1.0	-45.2	-25.0	-20.2	
	(20200000000)	<u>i</u>								
P. J. Channel	(2680MHz) -67.0	Н	3.0	-16.7	36.2	1.0	-51.9	-25.0	-26.9	
		H	3.0	-10.7	34.8	1.0	-31.9	-25.0	-20.9	
5.360			3.0	-12.0	32.9	1.0	-40.5	-25.0	-21.5	
5.360 8.040	-66.2 -68.0	· H		-12.0	36.2	1.0	-51.5	-25.0	-26.5	
5.360 8.040 10.720	-68.0	H V		-16.3						
5.360 8.040		H V V	3.0 3.0	-16.3 -13.4	34.8	1.0	-47.2	-25.0	-22.2	
8.040 10.720 5.360	-68.0 -66.4	V	3.0				-47.2 -45.3	-25.0 -25.0	-22.2 -20.3	

Page 1952 of 1995

10.9. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1688 (LAT)

10.9.1. LTE BAND 2

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

Company: Project #: Date:		15U20165 05/19/15								
Date: Test Engin		05/19/15 R.Z								
Test Engin Configurat		R.Z EUT only								
Configurat Mode:		LTE Band 2, 2	MMH7 OPSK							
Noue.		LIL Dans 1, _	Ulvin iz logi lotti							
Test Equip										
Substitutio	on: Horn T59 Sub	stitution, an	id 8ft SMA Ca	ible						
	Chamb	er	Pr	re-amplifer		Filter			Limit	
Ĩ	3m Chamber G		3m (Chamber G 💡	Filte	er	_	EIRP		-
L	on onumer -									<u> </u>
						1				
				Path Loss						
Frequenc	cy SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	<u> </u>	(dBm)						
	el (1860MHz)									
3.720	-65.2	Н	3.0	-17.2	36.2	1.0	-52.4	-13.0	-39.4	
5.580	-65.9	Н	3.0	-15.3	36.1	1.0	-50.4	-13.0	-37.4	
7.440	-66.5	H	3.0	-13.6	35.2	1.0	-47.7	-13.0	-34.7	
3.720	-65.3	V	3.0	-16.9	36.2	1.0	-52.1	-13.0	-39.1	
5.580	-66.9	V	3.0	-16.5	36.1	1.0	-51.6	-13.0	-38.6	
7.440	-66.1	V	3.0	-13.2	35.2	1.0	-47.4	-13.0	-34.4	
Mid Channe	el (1880MHz)									
3.760	-66.1	Н	3.0	-18.1	36.2	1.0	-53.2	-13.0	-40.2	
5.640	-65.9	H	3.0	-15.2	36.1	1.0	-50.3	-13.0	-37.3	
7.520	-66.3	Н	3.0	-13.3	35.1	1.0	-47.4	-13.0	-34.4	
3.760	-67.0	V	3.0	-18.5	36.2	1.0	-53.7	-13.0	-40.7	
5.640	-67.7	V	3.0	-17.2	36.1	1.0	-52.3	-13.0	-39.3	
7.520	-66.8	V	3.0	-13.8	35.1	1.0	-47.9	-13.0	-34.9	
Web Chann	nel (1900MHz)	<u>.</u>				+				
High Channel 3.800	-64.9	Н	3.0	-16.8	36.2	1.0	-52.0	-13.0	-39.0	
5.700	-64.9	п Н	3.0	-10.0	36.1	1.0	-52.0	-13.0	-39.0	
7.600	-67.7	H	3.0	-11.2	35.1	1.0	-32.3	-13.0	-35.7	
••••	-64.4	V	3.0	-15.8	36.2	1.0		-13.0	-38.0	
3.800	-66.9	V	3.0	-16.3	36.1	1.0	-51.4	-13.0	-38.4	
3.800 5.700 7.600	-67.3	V	3.0	-14.2	35.1	1.0	-48.3	-13.0	-35.3	

Page 1953 of 1995

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

Company:										
Project #:		15U20165								
Date:		05/19/15								
Test Engine		R.Z								
Configuratio		EUT only								
Mode:		LTE Band 2, 2	0MHz 16QAM							
Test Equipm										
Substitution:	: Horn T59 Sub	stitution, an	d 8ft SMA Ca	ble						
	Chambe	r	Pre	-amplifer		Filter			Limit	
3m	n Chamber G	-	3m Ch	namber G 🗸	Filter	· •	[EIRP		•
				Path Loss						
Frequency	-	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	1	(dBm)		1				
Low Channel				47.0			60 0	40.0	10.0	
3.720	-65.8 -67.8	H	3.0 3.0	-17.8 -17.2	36.2 36.1	1.0	-53.0 -52.3	-13.0 -13.0	-40.0 -39.3	
5.580	-67.8 -65.6	H	3.0	-17.2 -12.6	36.1	1.0	-52.3 -46.8	-13.0 -13.0	-39.3 -33.8	
3.720	-65.0	V	3.0	-12.0	36.2	1.0	-40.0	-13.0	-33.0	
5.580	-66.6	v	3.0	-16.2	36.1	1.0	-51.3	-13.0	-38.3	
7.440	-66.7	v	3.0	-13.8	35.2	1.0	-48.0	-13.0	-35.0	
1.440	-00.1		5.0	-13.0	55.2	1.0	-10.0	-13.0	-55.0	
Mid Channel (1880MHz)									
3.760	-65.0	Н	3.0	-16.9	36.2	1.0	-52.1	-13.0	-39.1	
5.640	-67.2	Н	3.0	-16.5	36.1	1.0	-51.6	-13.0	-38.6	
7.520	-66.5	Н	3.0	-13.4	35.1	1.0	-47.6	-13.0	-34.6	
3.760	-66.1	۷	3.0	-17.5	36.2	1.0	-52.7	-13.0	-39.7	
5.640	-67.1	V	3.0	-16.6	36.1	1.0	-51.7	-13.0	-38.7	
7.520	-67.8	V	3.0	-14.8	35.1	1.0	-48.9	-13.0	-35.9	
High Channel	(1900MHz)									
3.800	-65.5	Н	3.0	-17.4	36.2	1.0	-52.5	-13.0	-39.5	
5.700	-67.2	H	3.0	-16.4	36.1	1.0	-51.5	-13.0	-38.5	
	-67.7	Н	3.0	-14.6	35.1	1.0	-48.7	-13.0	-35.7	
7.600	-64.9	V	3.0	-16.3	36.2	1.0	-51.5	-13.0	-38.5	
3.800	-67.8	V	3.0 3.0	-17.2 -14.4	36.1 35.1	1.0 1.0	-52.3 -48.4	-13.0 -13.0	-39.3 -35.4	
	-67.4	V								

Page 1954 of 1995

10.9.2. LTE BAND 4

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

	er: h:		d 8ft SMA Ca	ble re-amplifer						
Pate: Test Enginee configuration lode: Test Equipme ubstitution:	er:	05/19/15 R.Z EUT only LTE Band 4, 20 stitution, an er	d 8ft SMA Ca							
est Enginee configuration lode: <u>est Equipme</u> ubstitution: l	er: I n: I e <u>ent:</u> Horn T59 Sub Chamb	R.Z EUT only LTE Band 4, 20 stitution, an er	d 8ft SMA Ca							
configuration lode: <u>est Equipme</u> ubstitution: l	n: ent: Horn T59 Sub Chamb	EUT only LTE Band 4, 20 stitution, an er	d 8ft SMA Ca							
lode: est Equipme ubstitution: I	ent: Horn T59 Sub Chamb	LTE Band 4, 20 stitution, an er	d 8ft SMA Ca							
est Equipme	ent: Horn T59 Sub Chamb	stitution, an er	d 8ft SMA Ca							
ubstitution: I	Horn T59 Sub Chamb	er								
	Chamb	er								
3r			P	e-amplifer						
3r	m Chamber G			e ampiror		Filter			Limit	
			3m (Chamber G	Fil	ter	•	EIRF)	-
			I							
requency	SA reading	Ant. Pol.	Distance	Path Loss @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Distance	(dBm)	Treamp	Allenualui		Linit	Delta	Notes
ow Channel (1		()		()						
3.440	-60.0	Н	3.0	-12.1	36.4	1.0	-47.6	-13.0	-34.6	
5.160	-65.7	H	3.0	-15.6	36.3	1.0	-50.9	-13.0	-37.9	
6.880	-67.4	H	3.0	-14.9	35.6	1.0	-49.5	-13.0	-36.5	
3.440	-58.0	V	3.0	-10.1	36.4	1.0	-45.5	-13.0	-32.5	
5.160	-66.5	V	3.0	-16.7	36.3	1.0	-52.0	-13.0	-39.0	
6.880	-67.6	V	3.0	-15.2	35.6	1.0	-49.8	-13.0	-36.8	
lid Channel (1	(732.5MHz)					-				
3.465	-58.1	Н	3.0	-10.2	36.4	1.0	-45.6	-13.0	-32.6	
5.176	-64.5	Н	3.0	-14.4	36.3	1.0	-49.7	-13.0	-36.7	
6.930	-66.8	Н	3.0	-14.2	35.5	1.0	-48.8	-13.0	-35.8	
3.465	-56.0	V	3.0	-8.0	36.4	1.0	-43.4	-13.0	-30.4	
5.176	-62.6	V	3.0	-12.8	36.3	1.0	-48.1	-13.0	-35.1	
6.930	-68.1	V	3.0	-15.6	35.5	1.0	-50.1	-13.0	-37.1	
igh Channel (
3.490	-62.8	Н	3.0	-14.9	36.4	1.0	-50.3	-13.0	-37.3	
5.235	-67.1	H	3.0	-16.9	36.3	1.0	-52.2	-13.0	-39.2	
6.980 3.490	-67.9 -59.9	H V	3.0 3.0	-15.3 -11.9	35.5 36.4	1.0 1.0	-49.8 -47.3	-13.0 -13.0	-36.8 -34.3	
3.490 5.235	-59.9 -63.2	V V	3.0 3.0	-11.9 -13.3	36.4	1.0	-47.3 -48.6	-13.0	-34.3 -35.6	
6.980	-65.1	V	3.0	-13.5	35.5	1.0	-40.0	-13.0	-33.0	
0.000		-		.2.0					~v	

Page 1955 of 1995

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

				titution Measu iated Chambe						
Company:										
Project #:	l	15U20165								
Date:		05/19/15								
Test Engi	neer:	R.Z								
Configura	ation:	EUT only								
Mode:		-	20MHz 16QAM							
<u>Test Equi</u> Substituti	i <u>pment:</u> ion: Horn T59 Sub	bstitution, ar	าd 8ft SMA Cส	ıble						
	Chamb	er	Pr	e-amplifer		Filter			Limit	
1	3m Chamber G		3m C	hamber G 🚽	Filte	er 🗸		EIRP		•
		•								
Frequen			Distance	Path Loss @ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)		(H/V)	<u> </u>	(dBm)	<u> </u>			<u> </u>		<u> </u>
Low Chanr	nel (1720MHz)									
3.440	-59.1	Н	3.0	-11.3	36.4	1.0	-46.7	-13.0	-33.7	
5.160	-65.9	Н	3.0	-15.9	36.3	1.0	-51.1	-13.0	-38.1	
6.880	-67.1	Н	3.0	-14.6	35.6	1.0	-49.2	-13.0	-36.2	
3.440	-58.8	v	3.0	-10.9	36.4	1.0	-46.3	-13.0	-33.3	
5.160	-64.5	V	3.0	-14.7	36.3	1.0	-50.0	-13.0	-37.0	
6.880	-66.3	V	3.0	-13.9	35.6	1.0	-48.4	-13.0	-35.4	
Mid Chann	nel (1732.5MHz)	<u>i</u>								
3.465	-57.7	Н	3.0	-9.8	36.4	1.0	-45.2	-13.0	-32.2	
5.198	-65.3	Н	3.0	-15.2	36.3	1.0	-50.5	-13.0	-37.5	
6.930	-66.5	Н	3.0	-13.9	35.5	1.0	-48.5	-13.0	-35.5	
3.465	-55.0	V	3.0	-7.0	36.4	1.0	-42.4	-13.0	-29.4	
5.198	-62.9	v	3.0	-13.1	36.3	1.0	-48.3	-13.0	-35.3	
6.930	-67.1	V	3.0	-14.6	35.5	1.0	-49.1	-13.0	-36.1	
High Chan	nel (1745MHz)	Ĺ				-	ļ			
3.490	-60.3	Н	3.0	-12.4	36.4	1.0	-47.8	-13.0	-34.8	
5.235	-65.9	H	3.0	-15.8	36.3	1.0	-51.0	-13.0	-38.0	
6.980	-65.6	H	3.0	-13.0	35.5	1.0	-47.5	-13.0	-34.5	
3.490	-61.4	V	3.0	-13.4	36.4	1.0	-48.8	-13.0	-35.8	
5.235	-65.0	V	3.0	-15.1	36.3	1.0	-50.4	-13.0	-37.4	
	-67.3	V	3.0	-14.7	35.5	1.0	-49.2	-13.0	-36.2	
6.980							1 1	(1
		L	1			Ji	L	L	.i	J

Page 1956 of 1995

10.9.3. LTE BAND 5

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

-										
Company:		451100405								
Project #: Date:		15U20165 06/02/15								
Date: Test Engin										
Configurati		T Wang EUT only								
Mode:		LTE Band 5, 1	0MHz QPSK							
Test Equip										
Substitutio	n: Horn T59 Sub	stitution, an	d 8ft SMA Ca	ble						
	Chambo	er	Pr	e-amplifer		Filter			Limit	
Г	3m Chamber G	•	3m C	hamber G	, Filt	er	•	EIRP		•
			J	_						
_				Path Loss	_					
Frequenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	@ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channe	el (829MHz)									
1.658	-63.0	Н	3.0	-18.9	37.8	1.0	-55.8	-13.0	-42.8	
2.487	-63.2	Н	3.0	-16.7	36.5	1.0	-52.2	-13.0	-39.2	
3.316	-61.3	Н	3.0	-13.6	36.5	1.0	-49.1	-13.0	-36.1	
1.658	-63.3	<u>v</u>	3.0	-18.9	37.8	1.0	-55.8	-13.0	-42.8	
2.487	-62.4 -62.5	V V	3.0 3.0	-15.0 -14.8	36.5 36.5	1.0 1.0	-50.4 -50.3	-13.0 -13.0	-37.4 -37.3	
3.316	-62.3	V	3.0	-14.8	30.3	1.0	-30.3	-13.0	-31.3	
Mid Channe	I (836.5MHz)									
1.673	-60.2	Н	3.0	-16.1	37.8	1.0	-52.9	-13.0	-39.9	
2.510	-64.2	Н	3.0	-17.7	36.4	1.0	-53.1	-13.0	-40.1	1
3.346	-63.4	Н	3.0	-15.7	36.5	1.0	-51.1	-13.0	-38.1	
1.673	-58.8	V	3.0	-14.4	37.8	1.0	-51.2	-13.0	-38.2	
2.510	-61.3	V	3.0	-13.8	36.4	1.0	-49.2	-13.0	-36.2	
3.346	-63.2	V	3.0	-15.4	36.5	1.0	-50.9	-13.0	-37.9	
High Channe	el (844MHz)									
1.688	-63.1	Н	3.0	-18.9	37.8	1.0	-55.7	-13.0	-42.7	
2.532	-62.6	H	3.0	-16.1	36.4	1.0	-51.5	-13.0	-38.5	
3.805	-62.3	H	3.0	-14.2	36.1	1.0	-49.3	-13.0	-36.3	
1.688 2.532	-62.3 -63.0	V V	3.0 3.0	-17.8 -15.5	37.8 36.4	1.0	-54.7 -50.9	-13.0 -13.0	-41.7 -37.9	
3.772	-63.0	V	3.0	-10.0	36.2	1.0	-30.9	-13.0	-37.9 -35.0	
		~		-12.5	30.2			-10.0	-00.0	

Page 1957 of 1995

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

Company:										
Project #:		15U20165								
Date:		06/02/15								
Test Engi		T Wang								
Configura		EUT only								
Mode:		LTE Band 5, 1	0MH- 160AM							
moue.		ETE Band 5, 1	0101112 1002/101							
Test Equi Substituti	<u>oment:</u> on: Horn T59 Sub	ostitution, an	id 8ft SMA Ca	ble						
	Chambe	er	Pr	e-amplifer		Filter			Limit	
r	3m Chamber G		3m (hamber G 🚽	Filte	-	4	EIRP		
	Sin Champer G	-			- ne	r -				-
Frequen (GHz)	cy SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	iel (829MHz)	(11/4)		(dbiii)						
1.658	-63.4	Н	3.0	-15.5	41.9	1.0	-56.3	-13.0	-43.3	
2.487	-63.7	H	3.0	-17.2	36.5	1.0	-50.5	-13.0	-43.5	
3.316	-61.8	Н	3.0	-14.1	36.5	1.0	-49.6	-13.0	-36.6	
1.658	-63.7	v	3.0	-15.3	41.9	1.0	-56.1	-13.0	-43.1	
2.487	-63.0	V	3.0	-15.6	36.5	1.0	-51.0	-13.0	-38.0	
3.316	-63.2	V	3.0	-15.5	36.5	1.0	-51.0	-13.0	-38.0	
	el (836.5MHz)									
1.673	-61.1	Н	3.0	-12.7	42.2	1.0	-54.0	-13.0	-41.0	
2.510	-62.7	H	3.0	-16.2	36.4	1.0	-51.6	-13.0	-38.6	
3.346	-63.9	H	3.0	-16.2	36.5	1.0	-51.6	-13.0	-38.6	
1.673	-59.4	V	3.0	-10.5	42.2	1.0	-51.8	-13.0	-38.8	
2.510	-61.8 -63.7	V V	3.0 3.0	-14.3 -15.9	36.4 36.5	1.0 1.0	-49.7 -51.4	-13.0 -13.0	-36.7 -38.4	
J.J4b	-03.1	V	3.0	-13.9	30.3	1.0	-31.4	-13.0	-30.4	
High Chanr	nel (844MHz)		•			1				
1.688	-63.7	Н	3.0	-14.9	42.6	1.0	-56.5	-13.0	-43.5	
2.532	-62.9	H	3.0	-16.4	36.4	1.0	-51.8	-13.0	-38.8	
3.805	-63.0	H	3.0	-14.9	36.1	1.0	-50.0	-13.0	-37.0	
	-63.2	V V	3.0	-13.9	42.6	1.0	-55.5	-13.0	-42.5	
1.688	-63.6 -62.4	V V	3.0 3.0	-16.1 -13.9	36.4 36.2	1.0 1.0	-51.5 -49.0	-13.0 -13.0	-38.5 -36.0	
2.532				-13.5	JU.Z	1.0	-43.0	-13.0	-30.0	

Page 1958 of 1995

10.9.4. LTE BAND 7

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

company Project #: Date: Cest Engi Configura Node:	ineer:	15U20165 06/02/15 T Wang EUT only LTE Band 7, 1	20MHz QPSK							
est Equi Substituti	i <u>pment:</u> ion: Horn T59 S	ubstitution, a	nd 8ft SMA C	able			1			
	Cham	ber	Pre	e-amplifer		Filter			Limit	
Г	3m Chamber G		3m C	hamber G 💡	Filter		1	EIRP		
		•								•
				Path Loss						
Frequen	cy SA readin	g Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)		(H/V)		(dBm)						
ow Chan	nel (2510MHz)									
2.638	-66.4	Н	3.0	-19.7	36.5	1.0	-55.1	-25.0	-30.1	
5.020	-68.5	Н	3.0	-19.1	35.6	1.0	-53.7	-25.0	-28.7	
7.530	-68.6	H	3.0	-16.4	34.5	1.0	-49.9	-25.0	-24.9	
2.638	-66.2	V	3.0	-18.8	36.5	1.0	-54.3	-25.0	-29.3	
5.020	-68.4	V	3.0	-18.5	35.6	1.0	-53.0	-25.0	-28.0	
7.530	-68.8	V	3.0	-16.4	34.5	1.0	-49.9	-25.0	-24.9	
						-				
	el (2535MHz)		2.0	20.0	20 5	10		25.0	20 5	
2.660	-66.8	H	3.0 3.0	-20.0	36.5 35.5	1.0 1.0	-55.5 -52.2	-25.0 -25.0	-30.5 -27.2	
5.070	-67.1			-17.7		-\$i			•••••••••••••••••••••••••••••••••••	
7.605	-69.3	H V	3.0	-17.0	34.4	1.0	-50.4	-25.0	-25.4	
2.660	-66.3 -66.8	V	3.0 3.0	-18.9 -16.8	36.5	1.0 1.0	-54.4 -51.3	-25.0	-29.4 -26.3	
5.070 7.605	-66.8	V	3.0	-16.8	35.5 34.4	1.0	-51.3 -48.1	-25.0 -25.0	-26.3 -23.1	
1.005		, v	5.0	-14.0		1.0		-2.3.9	-2.57.1	
	nel (2560MHz)	·····							•	
igh Chan	-66.1	H	3.0	-19.3	36.5	1.0	-54.8	-25.0	-29.8	
2.682	-67.6	H	3.0	-18.1	35.5	1.0	-52.6	-25.0	-27.6	
2.682 5.120	-68.4	H	3.0	-16.0	34.4	1.0	-49.4	-25.0	-24.4	
2.682 5.120 7.680	-66.6	v v	3.0	-19.2	36.5	1.0	-54.7	-25.0	-29.7	
2.682 5.120 7.680 2.682	C7 0		3.0	-17.2 -16.4	35.5 34.4	1.0 1.0	-51.7 -49.8	-25.0 -25.0	-26.7 -24.8	
2.682 5.120 7.680	-67.2 -68.9	V	3.0							

Page 1959 of 1995

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

Company: Project #: Date: Test Enginee Configuration Mode:	er: n:	15U20165 06/02/15 T Wang EUT only LTE Band 7, 2	20MHz 16QAM							
Test Equipm Substitution:	<u>ent:</u> Horn T59 Sub	ostitution, an	ıd 8ft SMA Ca	ble						
	Chambe	er	Pre	-amplifer		Filter			Limit	
3r	n Chamber G	•	3m Cl	hamber G 🖵	Filter	r -	- -	EIRP		•
	1		1	1		-		,	-	
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel		(1.1.1)		(+				
2.638	-66.2	Н	3.0	-19.5	36.5	1.0	-54.9	-25.0	-29.9	
5.020	-67.7	Н	3.0	-18.3	35.6	1.0	-52.9	-25.0	-27.9	
7.530	-68.8	Н	3.0	-16.6	34.5	1.0	-50.1	-25.0	-25.1	
5.020	-66.6	V	3.0	-16.7	35.6	1.0	-51.2	-25.0	-26.2	
7.530	-68.0	V	3.0	-15.6	34.5	1.0	-49.1	-25.0	-24.1	
10.040	-68.6	V	3.0	-13.8	33.3	1.0	-46.2	-25.0	-21.2	
Mid Channel (2535MHz)					-				
2.660	-66.2	Н	3.0	-19.4	36.5	1.0	-54.9	-25.0	-29.9	
5.507	-67.5	Н	3.0	-17.6	35.3	1.0	-51.9	-25.0	-26.9	
7.605	-68.7	Н	3.0	-16.4	34.4	1.0	-49.8	-25.0	-24.8	
2.660	-66.8	V	3.0	-19.4	36.5	1.0	-54.9	-25.0	-29.9	
5.507	-67.1	V	3.0	-16.7	35.3	1.0	-51.0	-25.0	-26.0	
7.605	-68.5	V	3.0	-16.0	34.4	1.0	-49.5	-25.0	-24.5	
High Channel	(2560MHz)		-			-				
2.682	-66.5	Н	3.0	-19.7	36.5	1.0	-55.2	-25.0	-30.2	
5.120	-67.2	H	3.0	-17.7	35.5	1.0	-52.2	-25.0	-27.2	
7.680	-70.8	Н	3.0	-18.4	34.4	1.0	-51.8	-25.0	-26.8	
2.682	-66.6	V	3.0	-19.2	36.5	1.0	-54.7	-25.0	-29.7	
5.120	-67.4 -69.2	V V	3.0 3.0	-17.4 -16.7	35.5 34.4	1.0	-51.9 -50.1	-25.0	-26.9 -25.1	
7.680					34.4	1.0	-50.1	-25.0	251	

Page 1960 of 1995

10.9.5. LTE BAND 12

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

Company:										
Project #:		15U20165								
Date:		06/02/15								
Test Engi	neer:	R.Z								
Configura	tion:	EUT only								
/lode:		LTE Band 12,	10MHz QPSK							
lest Equi										
ubstituti	on: Horn T59 Sul	ostitution, ar	nd 8ft SMA Ca	ble						
	Chambe	er	Pro	e-amplifer		Filter			Limit	
Г	3m Chamber G		3m C	hamber G 🗸	Filte	er	•	EIRP		-
		•								·
				Path Loss						
Frequen	y SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Diotanio	(dBm)	i reality	/			Dona	
	el 704MHz)	(100)	1	(ubiii)		1				
			2.0	-21.4	37.5	4.0	50.0	42.0	45.0	
1.4080 2.1120	-64.5 -65.0	H	3.0 3.0	-21.4 -19.2	37.5	1.0 1.0	-58.0 -55.7	-13.0 -13.0	-45.0 -42.7	
2.8160	-64.8	H	3.0	-15.2 -17.7	36.6	1.0	-53.3	-13.0	-42.7	
1.4080	-64.8	v	3.0	-21.2	37.5	1.0	-55.5	-13.0	-40.3	
2.1120	-65.3	v	3.0	-19.3	37.6	1.0	-55.9	-13.0	-42.9	
2.8160	-65.2	v	3.0	-17.9	36.6	1.0	-53.5	-13.0	-40.5	
Aid Chann	el (707.5MHz)							•	·····	
1.4150	-64.6	Н	3.0	-21.5	37.6	1.0	-58.1	-13.0	-45.1	
2.1225	-64.8	Н	3.0	-18.9	37.6	1.0	-55.5	-13.0	-42.5	
2.8300	-65.2	Н	3.0	-18.1	36.6	1.0	-53.7	-13.0	-40.7	
1.4150	-64.6	V	3.0	-21.0	37.6	1.0	-57.5	-13.0	-44.5	
2.1225	-65.5	V	3.0	-19.5	37.6	1.0	-56.1	-13.0	-43.1	
2.8300	-65.2	V	3.0	-17.9	36.6	1.0	-53.5	-13.0	-40.5	
	-1/744801->									
1.4220	el (711MHz) -64.5	Н	3.0	-21.4	37.6	1.0	-58.0	-13.0	-45.0	
2.1330	-65.0	п Н	3.0	-21.4 -19.1	37.5	1.0	-56.0	-13.0	-43.0 -42.7	
2.8440	-65.1	H	3.0	-17.9	36.6	1.0	-53.6	-13.0	-40.6	
1.4220	-64.5	V	3.0	-20.9	37.6	1.0	-57.5	-13.0	-44.5	
	-65.3 -65.5	V	3.0	-19.3	37.5	1.0	-55.8	-13.0	-42.8	
2.1330 2.8440		V	3.0	-18.3	36.6	1.0	-53.9	-13.0	-40.9	

Page 1961 of 1995

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

		ULI	remontrat	liated Chambe	21					
Company:										
Project #:		15U20165								
Date:		06/02/15								
Test Engir	eer:	R.Z								
Configurat	ion:	EUT only								
Mode:		LTE Band 12,	10MHz 16QAM	Л						
Test Equip	ment									
	on: Horn T59 Sub	ostitution, ar	nd 8ft SMA C	able						
	Chamb	er	Р	re-amplifer		Filter			Limit	
_		51					4		Linit	
	3m Chamber G	-	3m (Chamber G 🗸	Filter	r .	-	EIRP		•
								,		_
				Path Loss						
Frequenc	y SA reading	Ant. Pol.	Distance		Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Diotanoo	(dBm)	, roump	/ thomastor			Donta	110100
	,	(п/v)		(ubiii)		<u> </u>				
Low Channe										
1.4080	-64.9	H	3.0	-21.8	37.5	1.0	-58.4	-13.0	-45.4	
2.1120	-65.3	H	3.0	-19.5	37.6	1.0	-56.0	-13.0	-43.0	
2.8160	-65.1	H	3.0	-18.0	36.6	1.0	-53.6	-13.0	-40.6	
1.4080	-65.0	V	3.0	-21.4	37.5	1.0	-57.9	-13.0	-44.9	
2.1120	-65.6	V	3.0	-19.6	37.6	1.0	-56.2	-13.0	-43.2	
2.8160	-65.5	v	3.0	-18.2	36.6	1.0	-53.8	-13.0	-40.8	
NUL Channe	L (707 EMIL_)	l								
	el (707.5MHz) -64.9	Н	3.0	-21.8	37.6	1.0	-58.4	-13.0	-45.4	
	-64.9	H H	3.0	-21.8 -19.3	37.6	1.0	-58.4 -55.9	-13.0 -13.0	-43.4 -42.9	
1.4150	-65.4					· · · · · · · · · · · · · · · · · · ·			÷÷	
1.4150 2.1225		H V	3.0	-18.3 -21.4	36.6	1.0	-53.9	-13.0	-40.9	
1.4150 2.1225 2.8300	¢		3.0	./14	37.6	1.0	-57.9	-13.0 -13.0	-44.9 -43.4	
1.4150 2.1225 2.8300 1.4150	-65.0		2.0		27 C	4 0	EC 4			
1.4150 2.1225 2.8300 1.4150 2.1225	-65.0 -65.8	V	3.0	-19.8	37.6	1.0	-56.4		¢¢	
1.4150 2.1225 2.8300 1.4150	-65.0		3.0 3.0		37.6 36.6	1.0 1.0	-56.4 -53.9	-13.0	-40.9	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300	-65.0 -65.8 -65.6	V		-19.8					¢¢	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300 High Chann	-65.0 -65.8 -65.6 el (711MHz)	V V	3.0	-19.8 -18.3	36.6	1.0	-53.9	-13.0	-40.9	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300 High Chann 1.4220	-65.0 -65.8 -65.6 el (711MHz) -64.8	V V H	3.0	-19.8 -18.3 -21.7	36.6 37.6	1.0 1.0	-53.9 -58.3	-13.0 -13.0	_40.9 _45.3	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300 High Chann	-65.0 -65.8 -65.6 el (711MHz)	V V	3.0	-19.8 -18.3	36.6	1.0	-53.9	-13.0	-40.9	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300 High Chann 1.4220 2.1330	-65.0 -65.8 -65.6 el (711MHz) -64.8 -65.3	V V H H	3.0 3.0 3.0	-19.8 -18.3 -21.7 -19.4	36.6 37.6 37.5	1.0 1.0 1.0	-53.9 -58.3 -56.0	-13.0 -13.0 -13.0	_40.9 _45.3 _43.0	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300 High Chann 1.4220 2.1330 2.8440 1.4220 2.1330	-65.0 -65.8 -65.6 el (711MHz) -64.8 -65.3 -65.4 -65.0 -65.5	V V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	19.8 18.3 21.7 19.4 18.2 21.4 19.5	36.6 37.6 37.5 36.6 37.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-53.9 -58.3 -56.0 -53.9 -58.0 -56.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	40.9 45.3 43.0 40.9 45.0 43.0	
1.4150 2.1225 2.8300 1.4150 2.1225 2.8300 High Chann 1.4220 2.1330 2.8440 1.4220	-65.0 -65.8 -65.6 el (711MHz) -64.8 -65.3 -65.4 -65.4	V V H H V	3.0 3.0 3.0 3.0 3.0 3.0	-19.8 -18.3 -21.7 -19.4 -18.2 -21.4	36.6 37.6 37.5 36.6 37.6	1.0 1.0 1.0 1.0 1.0	-53.9 -58.3 -56.0 -53.9 -58.0	-13.0 -13.0 -13.0 -13.0 -13.0	-40.9 -45.3 -43.0 -40.9 -45.0	

Page 1962 of 1995

10.9.6. LTE BAND 13

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

Company: Project #: Date: Test Engine Configuratio Mode:	er: n:	15U20165 05/28/15 T Wang EUT only LTE Band 13.								
	Horn T59 Sub		Pro	ble e-amplifer hamber G 🖵	Filte	Filter		EIRP	Limit	
3r	n Chamber G	•	Smit		Fiite	r	•	EIRP		•
		Ant. Pol.	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	Ant. Pol. (H/V)	Distance	I I	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz) Mid Channel (1.564	(dBm) 782MHz) -64.1	(H/V) Н	3.0	@ SG End (dBm) -20.5	37.9	1.0	-57.3	-40.0	-17.3	Notes
(GHz) Mid Channel (1.564 2.346	(dBm) 782MHz) -64.1 -64.8	(H/V) H H	3.0 3.0	@ SG End (dBm) -20.5 -18.4	37.9 37.2	1.0 1.0	-57.3 -54.6	-40.0 -13.0	-17.3 -41.6	Notes
(GHz) Mid Channel (1.564 2.346 3.128	(dBm) 782MHz) -64.1 -64.8 -63.4	(H/V) H H H	3.0 3.0 3.0	@ SG End (dBm) -20.5 -18.4 -15.8	37.9 37.2 36.6	1.0 1.0 1.0	-57.3 -54.6 -51.5	_40.0 _13.0 _13.0	-17.3 -41.6 -38.5	Notes
(GHz) Mid Channel (1.564 2.346	(dBm) 782MHz) -64.1 -64.8	(H/V) H H	3.0 3.0	@ SG End (dBm) -20.5 -18.4	37.9 37.2	1.0 1.0	-57.3 -54.6	-40.0 -13.0	-17.3 -41.6	Notes
Mid Channel (1.564 2.346 3.128	(dBm) 782MHz) -64.1 -64.8 -63.4	(H/V) H H H	3.0 3.0 3.0	@ SG End (dBm) -20.5 -18.4 -15.8	37.9 37.2 36.6	1.0 1.0 1.0	-57.3 -54.6 -51.5	_40.0 _13.0 _13.0	-17.3 -41.6 -38.5	Note

Page 1963 of 1995

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

				titution Measu ated Chambe						
Company:										
Project #:		15U20165								
Date:		05/28/15								
Test Enginee		T Wang								
Configuration		EUT only								
Mode:		LTE Band 13, 1	10MHz 16QAM							
	Chamba		Pre	amplifer		Eller.			1.1	1
Frequency	-	• Ant. Pol.		Path Loss @ SG End (dBm)	Filter	Filter	EIRP	EIRP	Limit - Delta	Notes
Frequency (GHz)	n Chamber G SA reading (dBm)	·	3m Cł	hamber G 🖵 Path Loss		r _				1
Frequency (GHz) Mid Channel (i	n Chamber G SA reading (dBm) 782MHz)	Ant. Pol. (H/V)	3m Ch Distance	hamber G ↓ Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	1
Frequency (GHz) Mid Channel (7 1.564	n Chamber G SA reading (dBm) 782MHz) -64.5	T Ant. Pol. (H/V)	3m Ch Distance	Path Loss @ SG End (dBm) -20.9	Preamp 37.9	Attenuator	EIRP -57.7	Limit -40.0	Delta	1
Frequency (GHz) Mid Channel (i	n Chamber G SA reading (dBm) 782MHz)	Ant. Pol. (H/V)	3m Ch Distance	hamber G ↓ Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	1
Frequency (GHz) Mid Channel (7 1.564 2.346	SA reading (dBm) -64.5 -65.3	Ant. Pol. (H/V) H	3m CP Distance 3.0 3.0	Path Loss @ SG End (dBm) -20.9 -18.9	Preamp 37.9 37.2	Attenuator	EIRP -57.7 -55.1	Limit _40.0 _13.0	Delta -17.7 -42.1	1
Frequency (GHz) Mid Channel (7 1.564 2.346 3.128	A reading (dBm) 782MHz) 64.5 65.3 64.1	Ant. Pol. (H/V) H H	3m Ct Distance	Path Loss @ SG End (dBm) -20.9 -18.9 -16.5	Preamp 37.9 37.2 36.6	Attenuator	EIRP -57.7 -55.1 -52.2	Limit -40.0 -13.0 -13.0	Deita	1

Page 1964 of 1995

10.9.7. LTE BAND 17

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

Company:										
Project #:		15U20165								
Date:		06/02/15								
Test Engin		R.Z								
Configurati		EUT only								
Node:		LTE Band 17,	10MHz QPSK							
Test Equip	ment:									
Substitutio	n: Horn T59 Sub	ostitution, an	id 8ft SMA Ca	ble						
	Chamb	ər	Pr	e-amplifer		Filter			Limit	
	3m Chamber G			hamber G 🗸	Filte			EIRP		
	om Champer G	•	Sinc			-	•			~
				Path Loss						
Frequency	y SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
		(H/V)	Distance	-	Freamp	Allenuator	LIKE	LIIIII	Deita	Notes
(GHz)	(dBm)	(n/v)		(dBm)						
_ow Channe				20.7	07.0	4.0	67 0	42.0		
1.418	-63.8 -61.2	H	3.0	-20.7	37.6	1.0	-57.3 -51.9	-13.0 -13.0	-44.3 -38.9	
2.127 2.836	-61.2	n H	3.0 3.0	-15.3 -14.9	36.6	1.0 1.0	-51.9	-13.0 -13.0	-30.9 -37.5	
1.418	-62.0	V	3.0	-14.5	37.6	1.0	-56.4	-13.0	-37.5	
2.127	-64.0	v	3.0	-18.0	37.5	1.0	-54.5	-13.0	-41.5	
2.836	-64.2	v	3.0	-16.9	36.6	1.0	-52.6	-13.0	-39.6	
Aid Channel	l (710MHz)									
1.420	-63.4	Н	3.0	-20.3	37.6	1.0	-56.9	-13.0	-43.9	
2.130	-63.5	Н	3.0	-17.6	37.5	1.0	-54.2	-13.0	-41.2	
2.840	-64.2	Н	3.0	-17.1	36.6	1.0	-52.7	-13.0	-39.7	
1.420	-62.6	V	3.0	-19.0	37.6	1.0	-55.6	-13.0	-42.6	
2.130	-62.5	V	3.0	-16.5	37.5	1.0	-53.0	-13.0	-40.0	
2.840	-63.1	V	3.0	-15.8	36.6	1.0	-51.5	-13.0	-38.5	
ligh Channe	el (711MHz)					-				
1.422	-62.7	Н	3.0	-19.6	37.6	1.0	-56.2	-13.0	-43.2	
2.133	-60.5	Н	3.0	-14.6	37.5	1.0	-51.2	-13.0	-38.2	
2.844	-63.8	H	3.0	-16.6	36.6	1.0	-52.3	-13.0	-39.3	
1.422 2.133	-61.1 -60.1	V V	3.0 3.0	-17.5 -14.1	37.6 37.5	1.0 1.0	-54.1 -50.6	-13.0 -13.0	-41.1 -37.6	
2.133	-60.1	V	3.0	-14.1 -16.0	36.6	1.0	-50.6	-13.0	-37.6	
2.0.1.1		•			0010		-9119	- 1010		

Page 1965 of 1995

REPORT NO: 15U20164-E9V5 EUT: CELLULAR PHONE WITH BLUETOOTH AND WLAN RADIOS

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

				stitution Meas iated Chamb						
Company:	:									
Project #:		15U20165								
Date:		06/02/15								
Test Engi	neer:	R.Z								
Configura		EUT only								
Mode:			10MHz 16QAN	4						
		ETE Build IT,	Total I							
<u>Test Equi</u> Substituti	<u>pment:</u> on: Horn T59 Sul	bstitution, an					1			
	Chamb	er	Pre	e-amplifer		Filter			Limit	
r										
	3m Chamber G	-	3m C	hamber G 🗸	- Filte	er	-	EIRP		•
L					_ ,		_	1		
				Path Loss						
F ree		Ant. Pol.	Distance	@ SG End	Dreams	Attenuator	EIRP	Limit	Delta	Notes
Frequen			Distance	-	Preamp	Attenuator	EIKP	Limit	Deita	Notes
(GHz)		(H/V)		(dBm)		-			· · · · ·	
Low Chanr	nel (709MHz)									
1.418	-64.5	Н	3.0	-21.4	37.6	1.0	-58.0	-13.0	-45.0	
2.127	-61.5	Н	3.0	-15.6	37.5	1.0	-52.2	-13.0	-39.2	
2 020	-62.5	Н	3.0	-15.4	36.6	1.0	-51.0	-13.0	-38.0	
2.836	-02.0				37.6	1.0	-58.6	-13.0	-45.6	
1.418	-65.7	V	3.0	-22.1			-30.0			
			3.0 3.0	-22.1 -14.2	37.5	1.0	-50.0	-13.0	-37.7	
1.418	-65.7	V				· •			÷÷-	
1.418 2.127	-65.7 -60.2	V V	3.0	-14.2	37.5	1.0	-50.7	-13.0	-37.7	
1.418 2.127 2.836	-65.7 -60.2	V V	3.0	-14.2	37.5	1.0	-50.7	-13.0	-37.7	
1.418 2.127 2.836	-65.7 -60.2 -64.5	V V	3.0	-14.2	37.5	1.0	-50.7	-13.0	-37.7	
1.418 2.127 2.836 Mid Chann	-65.7 -60.2 -64.5 el (710MHz)	V V V	3.0 3.0	-14.2 -17.2	37.5 36.6	1.0 1.0	-50.7 -52.9	-13.0 -13.0	-37.7 -39.9	
1.418 2.127 2.836 Mid Chann 1.420	-65.7 -60.2 -64.5 el (710MHz) -63.5	V V V	3.0 3.0 3.0	-14.2 -17.2 -20.4	37.5 36.6 37.6	1.0 1.0 1.0	-50.7 -52.9 -57.0	-13.0 -13.0 -13.0	-37.7 -39.9 -44.0	
1.418 2.127 2.836 Mid Chann 1.420 2.130	-65.7 -60.2 -64.5 el (710MHz) -63.5 -60.1	V V V H	3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2	37.5 36.6 37.6 37.5	1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8	-13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840	-65.7 -60.2 -64.5 el (710MHz) -63.5 -60.1 -63.5	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4	37.5 36.6 37.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420	el (710Hz) -63.5 -64.5 -63.5 -60.1 -63.5 -64.5	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9	37.5 36.6 37.6 37.5 36.6 37.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.130 2.840	-65.7 -60.2 -64.5 -63.5 -60.1 -63.5 -60.1 -63.5 -64.5 -62.5 -60.4	V V V H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5	37.5 36.6 37.6 37.5 36.6 37.6 37.5 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5 -53.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.840 2.130 2.840 High Chann	-65.7 -60.2 -64.5 -63.5 -60.1 -63.5 -64.5 -62.5 -60.4 -61.5 -62.5 -60.4	V V V H H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5 -13.1	37.5 36.6 37.6 37.5 36.6 37.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5 -53.0 -48.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0 -35.8	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.840 High Chann 1.422	el (710MHz) -63.5 -64.5 -63.5 -60.1 -63.5 -64.5 -64.5 -62.5 -60.4 nel (711MHz) -63.8	V V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5 -13.1 -20.7	37.5 36.6 37.6 37.5 36.6 37.6 37.5 36.6 37.5 36.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5 -53.0 -48.8 -57.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0 -35.8 -44.3	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.840 High Cham 1.422 2.133	.65.7 .60.2 .64.5 el (710MHz) .63.5 .60.1 .63.5 .62.5 .62.5 .60.4 .60.2	V V V H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5 -16.5 -13.1 -20.7 -14.3	37.5 36.6 37.6 37.5 36.6 37.5 36.6 37.5 37.5 37.5 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5 -53.0 -48.8 -57.3 -50.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0 -35.8 	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.840 High Chann 1.422 2.133 2.844	el (710MHz) el (710MHz) -63.5 -60.1 -63.5 -64.5 -62.5 -60.4 -63.8 -63.8	V V V H H V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5 -13.1 -20.7 -14.3 -16.6	37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5 -53.0 -48.8 -57.3 -57.3 -50.9 -52.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0 -35.8 -39.0 -44.3 -37.9 -39.3	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.840 High Chann 1.422 2.133 2.844 High Chann	el (710MHz) -63.5 -60.1 -63.5 -60.1 -63.5 -64.5 -64.5 -60.4 -63.8 -60.2 -63.8 -61.0	V V V H H H V V V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5 -13.1 -20.7 -14.3 -16.6 -17.4	37.5 36.6 37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -57.0 -57.5 -57.0 -57.5 -53.0 -48.8 -57.3 -50.9 -52.3 -54.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0 -35.8 	
1.418 2.127 2.836 Mid Chann 1.420 2.130 2.840 1.420 2.130 2.840 High Chann 1.422 2.133 2.844	el (710MHz) el (710MHz) -63.5 -60.1 -63.5 -64.5 -62.5 -60.4 -63.8 -63.8	V V V H H V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -17.2 -20.4 -14.2 -16.4 -20.9 -16.5 -13.1 -20.7 -14.3 -16.6	37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-50.7 -52.9 -57.0 -50.8 -52.0 -57.5 -53.0 -48.8 -57.3 -57.3 -50.9 -52.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-37.7 -39.9 -44.0 -37.8 -39.0 -44.5 -40.0 -35.8 -39.0 -44.3 -37.9 -39.3	

Page 1966 of 1995

10.9.8. LTE BAND 25

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

Company: Project #: Date: Test Engine Configuratio Mode:	er: on:	15U20165 05/19/15 R.Z EUT only LTE Band 25,	20MHz QPSK							
<u>Test Equipm</u> Substitution:	<u>ient:</u> : Horn T59 Sub Chambe			able e-amplifer		Filter			Limit	
3m	1 Chamber G	- -		hamber G 🖵	Filter		•	EIRP		•
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel		(100)		(abiii)						
3.720	-67.0	Н	3.0	-19.0	36.2	1.0	-54.2	-13.0	-41.2	
5.580	-67.4	H	3.0	-17.4	35.3	1.0	-54.2	-13.0	-38.7	
7.440	-67.5	H	3.0	-15.4	34.5	1.0	-48.9	-13.0	-35.9	
3.720	-66.3	v	3.0	-17.9	36.2	1.0	-53.1	-13.0	-33.5	
5.580	-67.8	v	3.0	-17.3	35.3	1.0	-51.6	-13.0	-38.6	
7.440	-67.3	v	3.0	-15.0	34.5	1.0	-48.5	-13.0	-35.5	
Mid Channel (1882.5MHz)									
3.765	-65.5	Н	3.0	-17.4	36.2	1.0	-52.6	-13.0	-39.6	
5.648	-67.5	Н	3.0	-17.4	35.3	1.0	-51.7	-13.0	-38.7	
7.530	-68.8	Н	3.0	-16.6	34.5	1.0	-50.0	-13.0	-37.0	
3.765	-64.8	V	3.0	-16.3	36.2	1.0	-51.5	-13.0	-38.5	
5.648	-67.8	V	3.0	-17.2	35.3	1.0	-51.5	-13.0	-38.5	
7.530	-68.5	V	3.0	-16.1	34.5	1.0	-49.6	-13.0	-36.6	
High Channel	(1905MHz)			-						
3.810	-65.4	Н	3.0	-17.3	36.1	1.0	-52.4	-13.0	-39.4	
5.715	-67.5	H	3.0	-17.3	35.3	1.0	-51.6	-13.0	-38.6	
7.620	-67.9	Н	3.0	-15.6	34.4	1.0	-49.0	-13.0	-36.0	
	-65.4	V	3.0	-16.8	36.1	1.0	-51.9	-13.0	-38.9	
3.810	-67.5	V V	3.0 3.0	-16.9	35.3	1.0	-51.1	-13.0	-38.1	
	-67.9			-15.4	34.4	1.0	-48.8	-13.0	-35.8	

Page 1967 of 1995

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

Company:										
Project #:		15U20165								
Date:		05/19/15								
Test Engine		R.Z								
Configuratio		EUT only	0011U- 400 AM							
Mode:		LTE Band 25, 3	20MHz 16QAM							
Test Equipm	ent:									
Substitution:	Horn T59 Sub	ostitution, an	d 8ft SMA Ca	ble						
	Chambe	ər	Pro	e-amplifer		Filter			Limit	
3m	n Chamber G	•	3m C	hamber G 🖵	Filte	r	+	EIRP		•
I			Ι					I		_
				Path Loss		1				
Frequency	SA reading	Ant. Pol.	Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)	Diotanes	(dBm)	Troump	Allonaute.	L	E	Dona	
Low Channel		(10.07		(abiii)						
3.720	-65.8	Н	3.0	-17.8	36.2	1.0	-53.0	-13.0	-40.0	
5.580	-66.7	H	3.0	-16.7	35.3	1.0	-51.0	-13.0	-38.0	
7.440	-68.6	Н	3.0	-16.5	34.5	1.0	-50.0	-13.0	-37.0	
3.720	-66.5	V	3.0	-18.1	36.2	1.0	-53.3	-13.0	-40.3	
5.580	-67.5	V	3.0	-17.0	35.3	1.0	-51.3	-13.0	-38.3	
7.440	-66.8	V	3.0	-14.5	34.5	1.0	-48.0	-13.0	-35.0	
Mid Channel (1882.5MHz)									
3.765	-66.0	Н	3.0	-17.9	36.2	1.0	-53.1	-13.0	-40.1	
5.648	-68.0	Н	3.0	-17.9	35.3	1.0	-52.2	-13.0	-39.2	
7.530	-68.2	H	3.0	-16.0	34.5	1.0	-49.5	-13.0	-36.5	
3.765	-65.7	V	3.0	-17.2	36.2	1.0	-52.4	-13.0	-39.4	
5.648	-66.5	V	3.0	-15.9	35.3	1.0	-50.2	-13.0	-37.2	
7.530	-68.3	V	3.0	-15.9	34.5	1.0	-49.4	-13.0	-36.4	
High Channel	(1905MHz)									
3.810	-66.3	Н	3.0	-18.2	36.1	1.0	-53.3	-13.0	-40.3	
5.715	-68.3	H	3.0	-18.1	35.3	1.0	-52.4	-13.0	-39.4	
7.620	-68.3	H	3.0	-16.0	34.4	1.0	-49.4	-13.0	-36.4	
	-65.8 -67.8	V V	3.0 3.0	-17.2 -17.2	36.1 35.3	1.0 1.0	-52.3 -51.4	-13.0 -13.0	-39.3 -38.4	
3.810		V	3.0	-17.2 -15.5	33.3	1.0	-31.4	-13.0	-36.4 -35.9	
3.810 5.715 7.620	-68.0									

Page 1968 of 1995

10.9.9. LTE BAND 26

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

				titution Measu ated Chambe						
Company:										
Project #:		15U20165								
Date:		06/02/15								
Test Engine		T Wang								
Configuratio		EUT only								
Node:		LTE Band 26,	10MHz QPSK							
3	m Chamber G		3m C	hamber G 🗸	Filter	r .	-	EIRP		•
	SA reading	Ant Pol	Distance	Path Loss	Preamn	Attenuator	EIPP	Limit	Delta	Notes
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequency	(dBm)		Distance	@ SG End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequency (GHz) Mid Channel 1.638	(dBm) (819MHz) -63.4	(H/V) н	3.0	@ SG End (dBm) -19.4	37.8	1.0	-56.3	-13.0	43.3	Notes
Frequency (GHz) Mid Channel 1.638 2.457	(dBm) (819MHz) -63.4 -66.3	(H/V) H H	3.0 3.0	@ SG End (dBm) -19.4 -19.9	37.8 36.5	1.0 1.0	-56.3 -55.4	-13.0 -13.0	_43.3 _42.4	Notes
Frequency (GHz) Mid Channel 1.638 2.457 3.276	(dBm) (819MHz) -63.4 -66.3 -66.5	(H/V) H H H	3.0 3.0 3.0	@ SG End (dBm) -19.4 -19.9 -18.8	37.8 36.5 36.5	1.0 1.0 1.0	-56.3 -55.4 -54.3	-13.0 -13.0 -13.0	-43.3 -42.4 -41.3	Notes
Frequency (GHz) lid Channel 1.638 2.457 3.276 3.807	(dBm) (819MHz) -63.4 -66.3 -66.5 -65.4	(H/V) H H H H	3.0 3.0 3.0 3.0 3.0	@ SG End (dBm) -19.4 -19.9 -18.8 -17.3	37.8 36.5 36.5 36.1	1.0 1.0 1.0 1.0	-56.3 -55.4 -54.3 -52.4	-13.0 -13.0 -13.0 -13.0	-43.3 -42.4 -41.3 -39.4	Notes
Frequency (GHz) Mid Channel 1.638 2.457 3.276 3.807 1.638	(dBm) (819MHz) -63.4 -66.3 -66.5 -65.4 -63.2	(H/V) H H H H V	3.0 3.0 3.0 3.0 3.0 3.0	@ SG End (dBm) -19.4 -19.9 -18.8 -17.3 -18.9	37.8 36.5 36.5 36.1 37.8	1.0 1.0 1.0 1.0 1.0	-56.3 -55.4 -54.3 -52.4 -55.7	-13.0 -13.0 -13.0 -13.0 -13.0	43.3 42.4 41.3 -39.4 42.7	Notes
Frequency (GHz) lid Channel 1.638 2.457 3.276 3.807 1.638 2.457	(dBm) (819MHz) 66.3 66.5 65.4 63.2 66.1	(H/V) H H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	@ SG End (dBm) -19.4 -19.9 -18.8 -17.3 -18.9 -18.8	37.8 36.5 36.5 36.1 37.8 36.5	1.0 1.0 1.0 1.0 1.0 1.0	-56.3 -55.4 -54.3 -52.4 -55.7 -54.2	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	43.3 42.4 41.3 -39.4 42.7 41.2	Notes
Frequency (GHz) Mid Channel 1.638 2.457 3.276 3.807 1.638	(dBm) (819MHz) -63.4 -66.3 -66.5 -65.4 -63.2	(H/V) H H H H V	3.0 3.0 3.0 3.0 3.0 3.0	@ SG End (dBm) -19.4 -19.9 -18.8 -17.3 -18.9	37.8 36.5 36.5 36.1 37.8	1.0 1.0 1.0 1.0 1.0	-56.3 -55.4 -54.3 -52.4 -55.7	-13.0 -13.0 -13.0 -13.0 -13.0	43.3 42.4 41.3 -39.4 42.7	Notes

Page 1969 of 1995

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

				titution Meas ated Chambe						
Company:										
Project #:		15U20165								
Date:		65/2/2015								
Test Enginee		T Wang								
Configuration		EUT only								
Mode:		LTE Band 26,	10MHz 16QAM							
Test Faulan										
Test Equipm	<u>ent:</u> Horn T59 Sub		4 944 CMA C-	hla						
substitution.	Horn 159 Suc	ostitution, an	u oit Sivia Ca	bie						
	Chambe	er	Pre	e-amplifer		Filter			Limit	
3m	n Chamber G		3m C	hamber G 🚽	Filte	er .	-	EIRP	_	
3n	n Chamber G	•	3m C	hamber G 🚽	Filte	er -	•	EIRP	•	r
3n	n Chamber G	•	3m C	hamber G 🚽	Filte	er 🛛	•	EIRP	-	r
3n	n Chamber G	•	3m C	hamber G 🖵 Path Loss	Filte	er 🔤	•	EIRP		•
		▼ Ant. Pol.	3m C Distance		Filte	Attenuator	• EIRP	EIRP	Delta	Notes
				Path Loss						1
Frequency (GHz)	SA reading (dBm)	Ant. Pol.		Path Loss @ SG End						1
Frequency (GHz)	SA reading (dBm)	Ant. Pol.		Path Loss @ SG End						1
Frequency (GHz) Mid Channel (8	SA reading (dBm) ^{819MHz)}	Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	1
Frequency (GHz) Mid Channel (8 1.638	SA reading (dBm) 819MHz) -64.1	Ant. Pol. (H/V)	Distance 3.0	Path Loss @ SG End (dBm) -20.1	Preamp 37.8	Attenuator	EIRP -57.0	Limit	Delta -44.0	1
Frequency (GHz) Mid Channel (1.638 2.457	SA reading (dBm) 819MHz) -64.1 -67.0	Ant. Pol. (H/V) H	Distance 3.0 3.0	Path Loss @ SG End (dBm) -20.1 -20.5	Preamp 37.8 36.7	Attenuator	EIRP -57.0 -56.2	Limit -13.0 -13.0	Delta -44.0 -43.2	1
Frequency (GHz) Mid Channel (1 1.638 2.457 3.276	SA reading (dBm) 819MHz) -64.1 -67.0 -66.9	Ant. Pol. (H/V) H H H	Distance 3.0 3.0 3.0	Path Loss @ SG End (dBm) -20.1 -20.5 -19.2	Preamp 37.8 36.7 36.5	Attenuator	EIRP -57.0 -56.2 -54.7	Limit -13.0 -13.0 -13.0	Delta -44.0 -43.2 -41.7	1
Frequency (GHz) Mid Channel (1 1.638 2.457 3.276 3.807	SA reading (dBm) 819MHz) -64.1 -67.0 -66.9 -66.2	Ant. Pol. (H/V) H H H H	3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -20.1 -20.5 -19.2 -18.1	Preamp 37.8 36.7 36.5 36.1	Attenuator 1.0 1.0 1.0 1.0	EIRP -57.0 -56.2 -54.7 -53.2	Limit -13.0 -13.0 -13.0 -13.0 -13.0	Delta 44.0 43.2 41.7 -40.2	1
Frequency (GHz) Mid Channel (1.638 2.457 3.276 3.807 1.638	SA reading (dBm) 819MHz) -64.1 -67.0 -66.9 -66.2 -64.5	Ant. Pol. (H/V) H H H H	3.0 3.0 3.0 3.0 3.0 3.0	Path Loss @ SG End (dBm) -20.1 -20.5 -19.2 -18.1 -20.5	Preamp 37.8 36.7 36.5 36.1 37.8	Attenuator 1.0 1.0 1.0 1.0 1.0	EIRP -57.0 -56.2 -54.7 -53.2 -57.4	Limit -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	Delta 44.0 43.2 41.7 40.2 44.4	1

Page 1970 of 1995

10.9.10. LTE BAND 41

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

ompany roject # ate: est Eng onfigura lode:	ineer: ation:	15U20165 06/02/15 T Wang EUT only LTE Band 41,	20MHz QPSK							
<u>Test Equ</u> Substitut	ion: Horn T59 Sub			ble e-amplifer	1	Filter			1 1 14	
	Chambo	er		· · ·			4		Limit	
	3m Chamber G	-	3m C	hamber G	Filte	er	•	EIRP		•
Frequen (GHz)		Ant. Pol. (H/V)	Distance	Path Loss @ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	nel (2506MHz)	(1)		(ubiii)						
5.012	-63.9	Н	3.0	-14.1	36.2	1.0	-49.3	-25.0	-24.3	
	-63.9 -64.2	H H	3.0 3.0	-14.1 -11.2	36.2 35.1	1.0 1.0	-49.3 -45.3	-25.0 -25.0	-24.3 -20.3	
5.012 7.518 10.024	-64.2 -64.7	H H	3.0 3.0	-11.2 -9.7	35.1 33.3	1.0 1.0	-45.3 -42.1	-25.0 -25.0	-20.3 -17.1	
5.012 7.518 10.024 5.012	-64.2 -64.7 -64.0	H H V	3.0 3.0 3.0	-11.2 -9.7 -14.3	35.1 33.3 36.2	1.0 1.0 1.0	-45.3 -42.1 -49.5	-25.0 -25.0 -25.0	-20.3 -17.1 -24.5	
5.012 7.518 10.024 5.012 7.518	-64.2 -64.7 -64.0 -64.2	H H V V	3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2	35.1 33.3 36.2 35.1	1.0 1.0 1.0 1.0	-45.3 -42.1 -49.5 -45.4	-25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4	
5.012 7.518 10.024 5.012	-64.2 -64.7 -64.0 -64.2	H H V	3.0 3.0 3.0	-11.2 -9.7 -14.3	35.1 33.3 36.2	1.0 1.0 1.0	-45.3 -42.1 -49.5	-25.0 -25.0 -25.0	-20.3 -17.1 -24.5	
5.012 7.518 10.024 5.012 7.518 10.024	-64.2 -64.7 -64.0 -64.2	H H V V	3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2	35.1 33.3 36.2 35.1	1.0 1.0 1.0 1.0	-45.3 -42.1 -49.5 -45.4	-25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chanr 5.186	-64.2 -64.7 -64.0 -64.2 -64.6	H H V V V H	3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2 -9.8 -13.9	35.1 33.3 36.2 35.1	1.0 1.0 1.0 1.0	-45.3 -42.1 -49.5 -45.4	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	20.3 -17.1 -24.5 -20.4 -17.2 -24.2	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chanr 5.186 7.779	-64.2 -64.7 -64.0 -64.2 -64.6 rel (2593MHz) -64.0 -64.1	H H V V V H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2 -9.8 -13.9 -10.9	35.1 33.3 36.2 35.1 33.3 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	20.3 17.1 24.5 20.4 17.2 -24.2 -24.2 -19.8	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chann 5.186 7.779 10.372	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.0 -64.1 -64.6	H H V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2 -9.8 -13.9 -10.9 -9.6	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chanr 5.186 7.779 10.372 5.186	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.0 -64.1 -64.6 -64.4	H H V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2 -9.8 -13.9 -13.9 -10.9 -9.6 -14.6	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chann 5.186 7.779 10.372 5.186 7.779	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.0 -64.1 -64.6 -64.4 -64.4 -63.9	H H V V H H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 9.7 -14.3 -11.2 -9.8 -13.9 -10.9 -9.6 -14.6 -10.7	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.8 44.7	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8 -19.7	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chann 5.186 7.779 10.372 5.186	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.0 -64.1 -64.6 -64.4 -64.4 -63.9	H H V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2 -9.8 -13.9 -13.9 -10.9 -9.6 -14.6	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chann 5.186 7.779 10.372 5.186 7.779 10.372	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.0 -64.1 -64.6 -64.4 -64.4 -63.9	H H V V H H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 9.7 -14.3 -11.2 -9.8 -13.9 -10.9 -9.6 -14.6 -10.7	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.8 44.7	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8 -19.7	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chanr 5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.1 -64.1 -64.6 -64.4 -63.9 -64.6 -64.4 -63.9 -64.6 -64.3	H H V V V H H H V V V V H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 9.7 -14.3 -11.2 9.8 -13.9 -10.9 -9.6 -14.6 -10.7 -9.8 -14.0	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.8 44.7 41.9 49.2	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8 -19.7 -16.9 -24.2 -24.2	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chann 5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360 8.040	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.1 -64.6 -64.4 -63.9 -64.6 -64.6 -64.6 -64.6 -64.6 -64.5	H H V V V H H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 9.7 -14.3 -11.2 9.8 -13.9 -10.9 9.6 -14.6 -10.7 -9.8 	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.2 34.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.2 44.8 44.7 41.9 49.2 44.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8 -19.7 -16.9 	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chanr 5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360 8.040 8.040	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.1 -64.6 -64.4 -64.4 -64.4 -64.6 -64.4 -64.6 -64.6 -64.6 -64.5 -64.5 -64.6	H H V V H H H V V V V H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 -9.7 -14.3 -11.2 -9.8 -9.8 -13.9 -10.9 -9.6 -14.6 -10.7 -9.8 -14.0 -11.1 -9.5	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.3 32.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 44.7 49.8 44.7 41.9 49.2 49.2 44.8 44.7 41.9	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8 -19.7 -16.9 -24.8 -19.7 -16.9 -24.2 -19.8 -16.4	
5.012 7.518 10.024 5.012 7.518 10.024 Mid Chan 5.186 7.779 10.372 5.186 7.779 10.372 High Chan 5.360 8.040	-64.2 -64.7 -64.0 -64.2 -64.6 -64.6 -64.1 -64.6 -64.4 -63.9 -64.6 -64.6 -64.6 -64.6 -64.6 -64.5	H H V V V H H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-11.2 9.7 -14.3 -11.2 9.8 -13.9 -10.9 9.6 -14.6 -10.7 -9.8 	35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.2 34.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	45.3 42.1 49.5 45.4 42.2 49.2 49.2 44.8 41.7 49.2 44.8 44.7 41.9 49.2 44.8	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-20.3 -17.1 -24.5 -20.4 -17.2 -24.2 -19.8 -16.7 -24.8 -19.7 -16.9 	

Page 1971 of 1995

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

Company: Project #:		15U20165								
Date:		06/02/15								
Test Enginee	er:	T Wang								
Configuratio	n:	EUT only								
Mode:		LTE Band 41,	20MHz 16QAM	l						
T										
Test Equipm Substitution:	ent: Horn T59 Sub	stitution, an	d 8ft SMA Ca	ble						
	Chamber	r	Pre	-amplifer		Filter			Limit	
3m	Chamber G	•	3m Ch	namber G 🚽	Filter	•		EIRP	-	
			1		1		I			1
				Path Loss						
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	@ SG End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Low Channel ((100)		(abiii)						
5.012	-64.0	Н	3.0	-14.2	36.2	1.0	-49.4	-25.0	-24.4	
7.518	-64.5	H	3.0	-11.5	35.1	1.0	-45.6	-25.0	-20.6	
10.024	-64.9	H	3.0	-9.9	33.3	1.0	-42.3	-25.0	-17.3	
5.012	-64.2	V	3.0	-14.5	36.2	1.0	-49.7	-25.0	-24.7	
7.518	-64.0	V	3.0	-11.0	35.1	1.0	-45.2	-25.0	-20.2	
10.024	-64.7	V	3.0	-9.9	33.3	1.0	-42.3	-25.0	-17.3	
Mid Channel (2	2593MHz)									
5.186	-64.3	Н	3.0	-14.2	36.3	1.0	-49.5	-25.0	-24.5	
7.779	-64.4	H	3.0	-11.2	34.9	1.0	-45.1	-25.0	-20.1	
10.372	-64.6	Н	3.0	-9.6	33.1	1.0	-41.7	-25.0	-16.7	
5.186	-64.4	V	3.0	-14.6	36.3	1.0	-49.8	-25.0	-24.8	
7.779	-64.8	V	3.0	-11.6	34.9	1.0	-45.6	-25.0	-20.6	
10.372	-64.7	V	3.0	-9.9	33.1	1.0	-42.0	-25.0	-17.0	
High Channel	(2680MHz)									
5.360	-64.4	Н	3.0	-14.1	36.2	1.0	-49.3	-25.0	-24.3	
8.040	-64.7	H	3.0	-11.3	34.8	1.0	-45.0	-25.0	-20.0	
10.720	-65.0	Н	3.0	-9.9	32.9	1.0	-41.8	-25.0	-16.8	
5.360	-64.5	V	3.0	-14.4	36.2	1.0	-49.6	-25.0	-24.6	
	-64.6	V	3.0	-11.2	34.8	1.0	-45.0	-25.0	-20.0	
8.040 10.720	-65.6	V	3.0	-10.8	32.9	1.0	-42.7	-25.0	-17.7	

Page 1972 of 1995

10.10. FIELD STRENGTH OF SPURIOUS RADIATION, MODEL: A1688 (UAT)

10.10.1. LTE BAND 2

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

				titution Meas						
		UL Fr	remont Radi	ated Chambe	r					
Company:										
Project #:		15U20165								
Date:		06/01/15								
Test Engin		Ali.P								
Configurati		EUT only								
Mode:		LTE Band 2, 2	0MHz QPSK							
Test Eaula	n e n tr									
Test Equip	<u>ment:</u> n: Horn T59 Sub	sctitution	4 8# SMA C-	blo						
Substitutio	n. nom 109 Sub	vsolution, an	u ort SIVIA Ca	bie						
							-			
	Chamb	er	Pr	e-amplifer		Filter			Limit	
T T	3m Chamber G		3m (Chamber G 🖵	Filte	er	-	EIRP		
	on onumber o	•					•			•
				EIRP @ TX						
Frequenc	SA reading	Ant. Pol.	Distance	Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
Low Channe										
3.72	-67.2	Н	3.0	-20.4	36.2	1.0	-55.6	-13.0	-42.6	
	-65.9	H	3.0	-15.5	36.1	1.0	-50.6	-13.0	-37.6	
5.58		Н	3.0 3.0	-13.8 -20.4	35.2 36.2	1.0 1.0	-48.0 -55.7	-13.0 -13.0	-35.0 -42.7	
7.44	-67.0	V			36.1		-55.7			
7.44 3.72	-67.6	V V	3.0	-15.6	30.1	1.0	-30.7	-13.0	-31.1	
7.44			3.0 3.0	-15.6 -14.2	35.2	1.0 1.0	-30.7 -48.3	-13.0 -13.0	-37.7 -35.3	
7.44 3.72 5.58 7.44	-67.6 -65.8 -67.2	V								
7.44 3.72 5.58 7.44 Mid Channe	-67.6 -65.8 -67.2 (1880MHz)	V V	3.0	-14.2	35.2	1.0	-48.3	-13.0	-35.3	
7.44 3.72 5.58 7.44 Mid Channe 3.76	-67.6 -65.8 -67.2 (1880MHz) -66.9	V V H	3.0 3.0	-14.2 -20.0	35.2 36.2	1.0	_48.3 _55.2	-13.0 -13.0	-35.3 -42.2	
7.44 3.72 5.58 7.44 Mid Channe	-67.6 -65.8 -67.2 (1880MHz)	V V H H	3.0	-14.2 -20.0 -15.9 -13.5	35.2	1.0	-48.3 -55.2 -51.0 -47.6	-13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6	
7.44 3.72 5.58 7.44 Mid Channel 3.76 5.64 7.52 3.76	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6	V V H H V	3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3	35.2 36.2 36.1 35.1 36.2	1.0 1.0 1.0 1.0 1.0		-13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4	
7.44 3.72 5.58 7.44 Mid Channe 3.76 5.64 7.52 3.76 5.64	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6 -66.3	V V H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0	35.2 36.2 36.1 35.1 36.2 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-48.3 -55.2 -51.0 -47.6 -54.4 -51.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	35.3 42.2 38.0 34.6 41.4 38.1	
7.44 3.72 5.58 7.44 Mid Channel 3.76 5.64 7.52 3.76	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6	V V H H V	3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3	35.2 36.2 36.1 35.1 36.2	1.0 1.0 1.0 1.0 1.0		-13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4	
7.44 3.72 5.58 7.44 Mid Channee 3.76 5.64 7.52 3.76 5.64	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6 -66.3 -66.3 -66.4	V V H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0	35.2 36.2 36.1 35.1 36.2 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.3 -55.2 -51.0 47.6 -54.4 -51.1 47.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4 -38.1 -34.4	
7.44 3.72 5.58 7.44 Mid Channe 3.76 5.64 7.52 3.76 5.64 7.52 High Channe 3.80	-67.6 -65.8 -67.2 -66.9 -66.4 -66.7 -66.6 -66.3 -66.3 -66.4 -66.3 -66.4 -66.3 -66.4	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0 -13.3 -18.9	35.2 36.2 36.1 35.1 36.2 36.1 35.1 35.1 35.1 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	_48.3 	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.3 42.2 -38.0 -34.6 -41.4 -38.1 -34.4 -34.4 -41.0	
7.44 3.72 5.58 7.44 Mid Channe 3.76 5.64 7.52 3.76 5.64 7.52 3.76 5.64 7.52 High Channe 3.80 5.70	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6 -66.3 -66.3 -66.4 -66.3 -66.4 -65.8 -65.8 -66.7	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0 -13.3 -18.9 -18.9 -16.1	35.2 36.2 36.1 35.1 36.2 36.1 35.1 35.1 35.1 36.2 36.2 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.3 -55.2 -51.0 47.6 -54.4 -51.1 47.4 -54.0 -51.2	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4 -38.1 -34.4 -34.4 -38.2	
7.44 3.72 5.58 7.44 Mid Channel 3.76 5.64 7.52 3.76 5.64 7.52 High Channel 3.80 5.70 7.60	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6 -66.3 -66.3 -66.4 -66.3 -66.4 -66.3 -66.4 -65.8 -66.7 -67.8	V V H H V V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0 -13.3 -16.0 -18.9 -16.1 -14.6	35.2 36.2 36.1 35.1 36.2 36.1 35.1 36.2 36.1 35.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.3 -55.2 -51.0 47.6 -54.4 -51.1 47.4 -54.0 -51.2 -48.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4 -38.1 -34.4 	
7.44 3.72 5.58 7.44 Mid Channe 3.76 5.64 7.52 3.76 5.64 7.52 3.76 5.64 7.52 High Channe 3.80 5.70	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6 -66.3 -66.3 -66.4 -66.3 -66.4 -65.8 -65.8 -66.7	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0 -13.3 -18.9 -18.9 -16.1	35.2 36.2 36.1 35.1 36.2 36.1 35.1 35.1 35.1 36.2 36.2 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.3 -55.2 -51.0 47.6 -54.4 -54.4 -51.1 47.4 -54.0 -51.2 -48.6 -53.2	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4 -38.1 -34.4 -34.4 -38.2	
7.44 3.72 5.58 7.44 Mid Channel 3.76 5.64 7.52 3.76 5.64 7.52 High Channel 3.80 5.70 7.60 3.80	-67.6 -65.8 -67.2 (1880MHz) -66.9 -66.4 -66.7 -66.6 -66.3 -66.4 -66.3 -66.4 -66.4 -65.8 -66.7 -67.8 -65.5	V V H H H V V V V V V V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-14.2 -20.0 -15.9 -13.5 -19.3 -16.0 -13.3 -16.0 -13.3 -16.1 -14.6 -18.0	35.2 36.2 36.1 35.1 36.2 36.1 35.1 36.2 36.1 35.1 36.2 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	48.3 -55.2 -51.0 47.6 -54.4 -51.1 47.4 -54.0 -51.2 -48.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.3 -42.2 -38.0 -34.6 -41.4 -38.1 -34.4 -38.1 -34.4 -41.0 -38.2 -35.6 -40.2	

Page 1973 of 1995

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

				titution Meas ated Chambe						
iompany: roject #: late: iest Engi ionfigura lode:	neer: ition:	15U20165 06/01/15 Ali.P EUT only LTE Band 2, 2	0MHz 16QAM							
<u>est Equi</u> ubstituti	<u>pment:</u> on: Horn T59 Sul	ostitution, an	id 8ft SMA Ca	ble						
	Chambe	r	Pre	-amplifer		Filter		1	Limit	
Γ	3m Chamber G	-	3m Cł	namber G 🗸	Filter	Ŧ]	EIRP	·	•
Frequen (GHz)	-	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	nel (1860MHz)			(ubiii)		1				
3.72	-67.3	Н	3.0	-20.5	36.2	1.0	-55.7	-13.0	-42.7	
5.58	-65.6	Н	3.0	-15.2	36.1	1.0	-50.3	-13.0	-37.3	
7.44	-67.4	Н	3.0	-14.3	35.2	1.0	-48.5	-13.0	-35.5	
3.72	-67.3	v v	3.0	-20.1	36.2	1.0	-55.3	-13.0	-42.3	
5.58 7.44	-65.9 -67.1	V	3.0 3.0	-15.7 -14.1	36.1 35.2	1.0 1.0	-50.8 -48.3	-13.0 -13.0	-37.8 -35.3	
	-07.1		5.0	-14,1	JJ. 2	1.0	-40.5	-13.0	-55.5	
	el (1880MHz)									
	-65.8	H	3.0	-18.9	36.2	1.0	-54.1	-13.0	-41.1	
3.76		H H	3.0 3.0	-15.8	36.1	1.0	-50.9	-13.0	-37.9	
3.76 5.64	-66.3		: .5.0	-14.3	35.1	1.0	-48.4 -53.3	-13.0 -13.0	-35.4 -40.3	
3.76 5.64 7.52	-67.5			18.2	36.2	10		-13.0		
3.76 5.64 7.52 3.76	-67.5 -65.5	V	3.0	-18.2 -16.0	36.2	1.0 1.0		-13.0	-38.1	
3.76 5.64 7.52	-67.5			-18.2 -16.0 -14.1	36.2 36.1 35.1	1.0 1.0 1.0	-51.1 -48.2	-13.0 -13.0	-38.1 -35.2	
3.76 5.64 7.52 3.76 5.64 7.52	-67.5 -65.5 -66.3 -67.2	v v	3.0 3.0	-16.0	36.1	1.0	-51.1			
3.76 5.64 7.52 3.76 5.64 7.52 High Chan	-67.5 -65.5 -66.3 -67.2 nel (1900MHz)	V V V	3.0 3.0 3.0	-16.0 -14.1	36.1 35.1	1.0 1.0	-51.1 -48.2	-13.0	-35.2	
3.76 5.64 7.52 3.76 5.64 7.52 ligh Chann 3.80	-67.5 -65.5 -66.3 -67.2 nel (1900MHz) -65.9	V V V H	3.0 3.0 3.0 3.0	-16.0 -14.1 -19.0	36.1 35.1 36.2	1.0 1.0 1.0	-51.1 -48.2 -54.1	-13.0 -13.0	-35.2 -41.1	
3.76 5.64 7.52 3.76 5.64 7.52 4igh Chan 3.80 5.70	-67.5 -65.5 -66.3 -67.2 nel (1900MHz) -65.9 -66.0	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0	-16.0 -14.1 -19.0 -15.5	36.1 35.1 36.2 36.1	1.0 1.0 1.0 1.0	-51.1 -48.2 -54.1 -50.5	-13.0 -13.0 -13.0	-35.2 -41.1 -37.5	
3.76 5.64 7.52 3.76 5.64 7.52 ligh Chan 3.80 5.70 7.60	-67.5 -65.5 -66.3 -67.2 -67.2 -65.9 -66.0 -67.6	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.0 -14.1 -19.0 -15.5 -14.4	36.1 35.1 36.2 36.1 35.1	1.0 1.0 1.0 1.0 1.0 1.0	-51.1 -48.2 -54.1 -50.5 -48.4	-13.0 -13.0 -13.0 -13.0	-35.2 -41.1 -37.5 -35.4	
3.76 5.64 7.52 3.76 5.64 7.52 High Chan 3.80 5.70	-67.5 -65.5 -66.3 -67.2 nel (1900MHz) -65.9 -66.0	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0	-16.0 -14.1 -19.0 -15.5	36.1 35.1 36.2 36.1	1.0 1.0 1.0 1.0	-51.1 -48.2 -54.1 -50.5	-13.0 -13.0 -13.0	-35.2 -41.1 -37.5	

Page 1974 of 1995

10.10.2. LTE BAND 4

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

			-	titution Measu ated Chamber						
Company:										
Project #:		15U20165								
)ate:		06/01/15								
Fest Engin		Ali.P								
Configurati		EUT only								
lode:		LTE Band 4, 2	UMHZ QPSK							
Test Equip	nent:									
	n: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	ble						
	Chaml	ber	P	re-amplifer		Filter			Limit	
Γ	3m Chamber G	• •	3m	Chamber G 🖵	Filte	er	•	EIRP		•
			-							
Frequency	-	Ant. Pol.	Distance	EIRP @ TX Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
ow Channe. 3.44	-66.3	Н	3.0	-20.1	36.4	1.0	-55.5	-13.0	-42.5	
	-66.6	п Н	3.0	-20.1	36.3	1.0	-55.5	-13.0	-42.5	
5.16		H	3.0	-13.3	35.6	1.0	-47.9	-13.0	-34.9	
5.16 6.88	-65.8					1.0		-13.0	-42.2	
6.88 3.44	-66.2	V	3.0	-19.8	36.4		-55.2			
6.88 3.44 5.16	-66.2 -66.9	V V	3.0	-17.4	36.3	1.0	-52.7	-13.0	-39.7	
6.88 3.44	-66.2	V							-39.7 -34.6	
6.88 3.44 5.16 6.88	-66.2 -66.9 -65.5	V V	3.0	-17.4	36.3	1.0	-52.7	-13.0		
6.88 3.44 5.16 6.88 Mid Channel 1.73	-66.2 -66.9 -65.5 (1732.5MHz) -66.3	V V V H	3.0 3.0 3.0	-17.4 -13.0 -24.7	36.3 35.6 37.8	1.0 1.0 1.0	-52.7 -47.6 -61.5	-13.0 -13.0 -13.0	-34.6 -48.5	
6.88 3.44 5.16 6.88 Aid Channel 1.73 5.20	-66.2 -66.9 -65.5 (1732.5MHz) -66.3 -65.9	V V V H H	3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2	36.3 35.6 37.8 36.3	1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4	-13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4	
6.88 3.44 5.16 6.88 Iid Channel 1.73 5.20 6.93	-66.2 -66.9 -65.5 (1732.5MHz) -66.3 -65.9 -66.5	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9	36.3 35.6 37.8 36.3 35.5	1.0 1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4 -48.5	-13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5	
6.88 3.44 5.16 6.88 1id Channel 1.73 5.20 6.93 1.73	-66.2 -66.9 -65.5 (1732.5MHz) -66.3 -65.9 -66.5 -66.4	V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6	36.3 35.6 37.8 36.3 35.5 37.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4 -48.5 -61.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5 -48.4	
6.88 3.44 5.16 6.88 Aid Channel 1.73 5.20 6.93	-66.2 -66.9 -65.5 (1732.5MHz) -66.3 -65.9 -66.5	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9	36.3 35.6 37.8 36.3 35.5	1.0 1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4 -48.5	-13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5	
6.88 3.44 5.16 6.88 Nid Channel 1.73 5.20 6.93 1.73 5.20 6.93	-66.2 -66.9 -65.5 (1732.5MHz) -66.3 -65.9 -66.5 -66.5 -66.4 -65.5 -66.8	V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6 -16.0	36.3 35.6 37.8 36.3 35.5 37.8 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4 -48.5 -61.4 -51.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5 -48.4 -38.3	
6.88 3.44 5.16 6.88 11d Channel 1.73 5.20 6.93 1.73 5.20 6.93 1.73 5.20 6.93	-66.2 -66.9 -65.5 (1732.5MHz) -66.3 -65.9 -66.5 -66.4 -65.5 -66.8 -66.8 -1(1745MHz)	V V V H H H V V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6 -16.0 -14.3	36.3 35.6 37.8 36.3 35.5 37.8 36.3 36.3 35.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 47.6 -61.5 -51.4 48.5 -61.4 -51.3 -48.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5 -48.4 -38.3 -35.8	
6.88 3.44 5.16 6.88 1id Channel 1.73 5.20 6.93 1.73 5.20 6.93 1.73 5.20 6.93	-66.2 -66.9 -65.5 -65.5 -66.3 -65.9 -66.5 -66.4 -65.5 -66.8 I (1745MHz) -64.9	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6 -16.0 -14.3 -18.5	36.3 35.6 37.8 36.3 35.5 37.8 36.3 35.5 37.8 36.3 35.5 36.3 35.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 47.6 -61.5 -51.4 48.5 -61.4 -51.3 48.8 -53.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 	
6.88 3.44 5.16 6.88 1d Channel 1.73 5.20 6.93 1.73 5.20 6.93 1.73 5.20 6.93	-66.2 -66.9 -65.5 -66.3 -65.9 -66.5 -66.4 -65.5 -66.8 -66.8 - (1745MHz) -64.9 -64.9	V V H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6 -16.0 -14.3 -18.5 -15.1	36.3 35.6 37.8 36.3 35.5 37.8 36.3 35.5 35.5 35.5 36.4 36.4 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4 -48.5 -61.4 -51.3 -48.8 -61.4 -51.3 -48.8 -53.9 -50.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5 -48.4 -35.8 -35.8 -35.8 -37.3	
6.88 3.44 5.16 6.88 11d Channel 1.73 5.20 6.93 1.73 5.20 6.93 1.73 5.20 6.93 1.73 5.20 6.93	-66.2 -66.9 -65.5 -66.3 -66.3 -65.9 -66.5 -66.4 -65.5 -66.8 I (1745MHz) -64.9 -64.9 -64.9 -64.9	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6 -16.0 -14.3 -18.5 -15.1 -15.1 -14.1	36.3 35.6 37.8 36.3 35.5 37.8 36.3 35.5 37.8 36.3 35.5 36.4 36.3 35.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 47.6 -61.5 -51.4 -85.5 -61.4 -51.3 -48.8 -51.3 -48.8 -53.9 -50.3 -48.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 	
6.88 3.44 5.16 6.88 1id Channel 1.73 5.20 6.93 1.73 5.20 6.93 1.73 5.20 6.93	-66.2 -66.9 -65.5 -66.3 -65.9 -66.5 -66.4 -65.5 -66.8 -66.8 - (1745MHz) -64.9 -64.9	V V V H H V V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-17.4 -13.0 -24.7 -16.2 -13.9 -24.6 -16.0 -14.3 -18.5 -15.1	36.3 35.6 37.8 36.3 35.5 37.8 36.3 35.5 35.5 35.5 36.4 36.4 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-52.7 -47.6 -61.5 -51.4 -48.5 -61.4 -51.3 -48.8 -61.4 -51.3 -48.8 -53.9 -50.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-34.6 -48.5 -38.4 -35.5 -48.4 -35.8 -35.8 -35.8 -37.3	

Page 1975 of 1995

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

			-	titution Meası ated Chambe						
Company:										
Project #:		15U201635								
)ate:		06/01/15								
est Engir		Ali.P								
Configurat		EUT only								
/lode:		LTE Band 4, 2	JIVIHZ 16QAIVI							
lest Equip										
ubstitutio	on: Horn T59 Sul	ostitution, an	d 8ft SMA Ca	ble						
	Chamb	or	Pr	e-amplifer		Filter	1		Limit	
_				-			4		Linne	
	3m Chamber G	-	3m C	hamber G 🚽	Filte	r -	·	EIRP		-
	1		1			:				
				EIRP @ TX						
Frequenc		Ant. Pol.	Distance	Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Note
(GHz)	(dBm)	(H/V)		(dBm)						
	el (1720MHz)									
3.44 5.16	-69.7 -65.6	H H	3.0 3.0	-23.5 -15.9	36.4 36.3	1.0 1.0	-58.9 -51.2	-13.0 -13.0	-45.9 -38.2	
6.88	-65.6	H	3.0	-13.5	35.6	1.0	-31.2	-13.0	-30.2	
3.44	-69.5	v	3.0	-23.1	36.4	1.0	-58.6	-13.0	-45.6	
5.16	-65.3	V	3.0	-15.8	36.3	1.0	-51.1	-13.0	-38.1	
6.88	-65.5	V	3.0	-13.0	35.6	1.0	-47.6	-13.0	-34.6	
lid Channe	el (1732.5MHz)								•••	
1.73	-65.8	Н	3.0	-24.2	37.8	1.0	-61.1	-13.0	-48.1	
5.20	-65.8	H	3.0	-16.1	36.3	1.0	-51.3	-13.0	-38.3	
	-67.4	H	3.0	-14.8	35.5	1.0	-49.3	-13.0	-36.3	
6.93	-65.5	V	3.0	-23.7	37.8	1.0	-60.5	-13.0	-47.5	
6.93 1.73	-65.3	V	3.0	-15.8	36.3	1.0	-51.1	-13.0	-38.1	
6.93 1.73 5.20	-67.9	V	3.0	-15.4	35.5	1.0	-49.9	-13.0	-36.9	
6.93 1.73										
6.93 1.73 5.20 6.93	el (1745MHz)		3.0	-17.6	36.4	1.0	-53.0	-13.0	-40.0	
6.93 1.73 5.20 6.93	el (1745MHz) -64.0	Н		-16.0	36.3	1.0	-51.3	-13.0	-38.3	
6.93 1.73 5.20 6.93 ligh Chann 3.49 5.24	-64.0 -65.9	Н	3.0				-49.5	-13.0	-36.5	
6.93 1.73 5.20 6.93 ligh Chann 3.49 5.24 6.98	-64.0 -65.9 -67.7	H H	3.0	-15.0	35.5	1.0			••••••••••••••••••••••••••••••••	
6.93 1.73 5.20 6.93 High Chann 3.49 5.24 6.98 3.49	-64.0 -65.9 -67.7 -64.2	H H V	3.0 3.0	-15.0 -17.7	36.4	1.0	-53.0	-13.0	-40.0	
6.93 1.73 5.20 6.93 High Chann 3.49 5.24 6.98	-64.0 -65.9 -67.7	H H	3.0	-15.0				-13.0 -13.0 -13.0	-40.0 -38.2 -36.2	

Page 1976 of 1995

10.10.3. LTE BAND 5

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

				titution Meas ated Chambe						
Company										
Project #:		15U20165								
Date:		06/01/15								
lest Engi		Ali.P								
Configura		EUT only								
Node:		LTE Band 5, 1	UMHz QPSK							
Test Equi Substituti	<u>pment:</u> on: Horn T59 Sut	stitution, an	id 8ft SMA Ca	ble						
	Chambe	r	Pre	-amplifer		Filter			Limit	
	3m Chamber G	•	3m Cl	namber G 🚽	Filter	-		EIRP	•	•
				EIRP @ TX						
Frequen (GHz)		Ant. Pol. (H/V)	Distance	Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	nel (834MHz)	(1114)		(abiii)		<u> </u>				
1.67	-66.3	Н	3.0	-24.8	37.8	1.0	-61.7	-13.0	-48.7	
2.50	-66.5	H	3.0	-23.4	36.4	1.0	-58.7	-13.0	-45.7	
3.34	-66.9	Н	3.0	-20.9	36.5	1.0	-56.4	-13.0	-43.4	
	-66.6	V	3.0	-24.8	37.8	1.0	-61.6	-13.0	-48.6	
1.67	0.00	V	3.0	-22.6	36.4	1.0	-58.0	-13.0	-45.0	
2.50	-66.9		3.0	-20.3	36.5	1.0	-55.8	-13.0	-42.8	
	-66.3	V								
2.50 3.34	-66.3	V								
2.50 3.34		V H	3.0	-24.5	37.8	1.0	-61.4	-13.0	-48.4	
2.50 3.34 Mid Chann 1.67 2.51	-66.3 el (836.5MHz) -66.0 -66.3	H H	3.0	-23.1	36.4	1.0	-58.5	-13.0	-45.5	
2.50 3.34 Mid Chann 1.67 2.51 3.35	-66.3 el (836.5MHz) -66.0 -66.3 -66.5	H H H	3.0 3.0	-23.1 -20.5	36.4 36.5	1.0 1.0	-58.5 -56.0	-13.0 -13.0	-45.5 -43.0	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67	-66.3 el (836.5MHz) -66.0 -66.3 -66.5 -66.3	H H H V	3.0 3.0 3.0	-23.1 -20.5 -24.5	36.4 36.5 37.8	1.0 1.0 1.0	-58.5 -56.0 -61.3	-13.0 -13.0 -13.0	_45.5 _43.0 _48.3	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67 2.51	-66.3 el (836.5MHz) -66.0 -66.3 -66.5 -66.3 -66.5	H H H V V	3.0 3.0 3.0 3.0 3.0	-23.1 -20.5 -24.5 -22.2	36.4 36.5 37.8 36.4	1.0 1.0 1.0 1.0	-58.5 -56.0 -61.3 -57.6	-13.0 -13.0 -13.0 -13.0	-45.5 -43.0 -48.3 -44.6	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67	-66.3 el (836.5MHz) -66.0 -66.3 -66.5 -66.3	H H H V	3.0 3.0 3.0	-23.1 -20.5 -24.5	36.4 36.5 37.8	1.0 1.0 1.0	-58.5 -56.0 -61.3	-13.0 -13.0 -13.0	_45.5 _43.0 _48.3	
2.50 3.34 Aid Chann 1.67 2.51 3.35 1.67 2.51 3.35	-66.3 el (836.5MHz) -66.0 -66.3 -66.5 -66.3 -66.5	H H H V V	3.0 3.0 3.0 3.0 3.0	-23.1 -20.5 -24.5 -22.2	36.4 36.5 37.8 36.4	1.0 1.0 1.0 1.0	-58.5 -56.0 -61.3 -57.6	-13.0 -13.0 -13.0 -13.0	-45.5 -43.0 -48.3 -44.6	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67 2.51 3.35 High Chan 1.68	-66.3 -66.0 -66.3 -66.5 -66.3 -66.5 -66.3 -66.5 -66.8 -66.8 -66.8 -65.5 -65.5 -65.5	H H V V V H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.1 -20.5 -24.5 -22.2 -20.7 -24.0	36.4 36.5 37.8 36.4 36.5 37.8	1.0 1.0 1.0 1.0 1.0	-58.5 -56.0 -61.3 -57.6 -56.2 -60.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	45.5 43.0 48.3 44.6 43.2 47.8	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67 2.51 3.35 High Chan 1.68 2.52	-66.3 -66.0 -66.3 -66.5 -66.3 -66.5 -66.5 -66.8 -66.5 -66.8 -65.5 -65.5 -65.5	H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.1 -20.5 -24.5 -22.2 -20.7 -24.0 -24.0 -22.4	36.4 36.5 37.8 36.4 36.5 37.8 37.8 36.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-58.5 -56.0 -61.3 -57.6 -56.2 -60.8 -57.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	45.5 43.0 48.3 44.6 43.2 47.8 44.8	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67 2.51 3.35 High Chan 1.68 2.52 3.36	-66.3 el (836.5MHz) -66.0 -66.3 -66.5 -66.3 -66.3 -66.3 -66.8 -66.8 -66.8 -65.5 -65.6 -65.6 -65.6	H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.1 -20.5 -24.5 -22.2 -20.7 -24.0 -22.4 -20.1	36.4 36.5 37.8 36.4 36.5 37.8 37.8 36.4 36.4 36.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-58.5 -56.0 -61.3 -57.6 -56.2 -60.8 -57.8 -55.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	45.5 43.0 48.3 44.6 43.2 47.8 44.8 42.6	
2.50 3.34 Mid Chann 1.67 2.51 3.35 1.67 2.51 3.35 High Chan 1.68 2.52	-66.3 -66.0 -66.3 -66.5 -66.3 -66.5 -66.5 -66.8 -66.5 -66.8 -65.5 -65.5 -65.5	H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.1 -20.5 -24.5 -22.2 -20.7 -24.0 -24.0 -22.4	36.4 36.5 37.8 36.4 36.5 37.8 37.8 36.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-58.5 -56.0 -61.3 -57.6 -56.2 -60.8 -57.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	45.5 43.0 48.3 44.6 43.2 47.8 44.8	

Page 1977 of 1995

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

				titution Meas ated Chambe						
Company: Project #: Date: Test Engine Configuratio Mode:	eer: on:	15U20165 06/01/15 Ali.P EUT only LTE Band 5, 10	0MHz 16QAM							
est Equipn ubstitutior	<u>nent:</u> n: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	ble						
	Chamb	er	Р	re-amplifer		Filter			Limit	1
:	3m Chamber G	•	3m (Chamber G	Filt	er	•	EIRP	•	•
Frequency		Ant. Pol.	Distance	EIRP @ TX Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz) ow Channel	(dBm)	(H/V)		(dBm)						
1.67	-65.8	Н	3.0	-24.3	37.8	1.0	-61.2	-13.0	-48.2	
	-66.1	H	3.0	-23.0	36.4	1.0	-58.3	-13.0	-45.3	
2.50			3.0	-20.0	36.5	1.0	-55.5	-13.0	-42.5	
2.50 3.34	-66.1	Н								
2.50 3.34 1.67	-66.1 -65.5	V	3.0	-23.7	37.8	1.0	-60.5	-13.0	-47.5	
2.50 3.34 1.67 2.50	-66.1 -65.5 -66.3	V V	3.0 3.0	-23.7 -22.0	36.4	1.0	-57.4	-13.0	-44.4	
2.50 3.34 1.67	-66.1 -65.5	V	3.0	-23.7						
2.50 3.34 1.67 2.50 3.34	-66.1 -65.5 -66.3 -66.8	V V	3.0 3.0	-23.7 -22.0	36.4	1.0	-57.4	-13.0	-44.4	
2.50 3.34 1.67 2.50 3.34 Aid Channel 1.67	-66.1 -65.5 -66.3 -66.8	V V V	3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7	36.4 36.5 37.8	1.0 1.0 1.0	-57.4 -56.3 -60.5	-13.0 -13.0 -13.0	-44.4 -43.3 -47.5	
2.50 3.34 1.67 2.50 3.34 Iid Channel 1.67 2.51	-66.1 -65.5 -66.3 -66.8 (836.5MHz) -65.2 -66.4	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2	36.4 36.5 37.8 36.4	1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5	-13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5	
2.50 3.34 1.67 2.50 3.34 Mid Channel 1.67 2.51 3.35	-66.1 -65.5 -66.3 -66.8 (836.5MHz) -65.2 -66.4 -66.8	V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2 -20.8	36.4 36.5 37.8 36.4 36.5	1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3	-13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3	
2.50 3.34 1.67 2.50 3.34 Mid Channel 1.67 2.51 3.35 1.67	-66.1 -65.5 -66.3 -66.8 (836.5MHz) -65.2 -66.4 -66.8 -65.2	V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2 -20.8 -23.4	36.4 36.5 37.8 36.4 36.5 37.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2	
2.50 3.34 1.67 2.50 3.34 Mid Channel 1.67 2.51 3.35 1.67 2.51	-66.1 -65.5 -66.3 -66.8 (836.5MHz) -65.2 -66.4 -66.8 -65.2 -66.2	V V V H H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2 -20.8 -23.4 -21.9	36.4 36.5 37.8 36.4 36.5 37.8 36.4 36.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2 -57.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2 44.3	
2.50 3.34 1.67 2.50 3.34 Iid Channel 1.67 2.51 3.35 1.67	-66.1 -65.5 -66.3 -66.8 (836.5MHz) -65.2 -66.4 -66.8 -65.2	V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2 -20.8 -23.4	36.4 36.5 37.8 36.4 36.5 37.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2	
2.50 3.34 1.67 2.50 3.34 lid Channel 1.67 2.51 3.35 1.67 2.51 3.35		V V V H H V V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2 -20.8 -23.4 -21.9 -20.4	36.4 36.5 37.8 36.4 36.5 37.8 36.4 36.5 36.4 36.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2 -57.3 -55.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2 44.3 42.9	
2.50 3.34 1.67 2.50 3.34 lid Channel 1.67 2.51 3.35 1.67 2.51 3.35 1.67 2.51 3.35		V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.7 -23.2 -20.8 -23.4 -21.9 -20.4 -24.3	36.4 36.5 37.8 36.4 36.5 37.8 36.4 36.5 37.8 37.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2 -57.3 -55.9 -61.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2 44.3 42.9 48.1	
2.50 3.34 1.67 2.50 3.34 lid Channel 1.67 2.51 3.35 1.67 2.51 3.35 igh Channe 1.68 2.52		V V H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -23.7 -23.2 -20.8 -23.7 -23.2 -20.8 -23.4 -21.9 -20.4 -24.3 -22.4	36.4 36.5 37.8 36.4 36.5 37.8 36.4 36.5 37.8 36.4 37.8 36.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2 -57.3 -55.9 -61.1 -57.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2 44.3 47.2 44.3 42.9 48.1 44.8	
2.50 3.34 1.67 2.50 3.34 lid Channel 1.67 2.51 3.35 1.67 2.51 3.35 ligh Channe 1.68 2.52 3.36		V V H H V V V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -20.8 -23.7 -23.2 -20.8 -23.4 -21.9 -20.4 -24.3 -22.4 -20.4	36.4 36.5 37.8 36.4 36.5 37.8 36.4 36.5 37.8 36.5 37.8 36.4 36.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2 -57.3 -55.9 -61.1 -57.8 -55.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2 44.3 42.9 48.1 44.8 42.9	
2.50 3.34 1.67 2.50 3.34 Aid Channel 1.67 2.51 3.35 1.67 2.51 3.35 1.67 1.68 2.52		V V H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-23.7 -22.0 -23.7 -23.2 -20.8 -23.7 -23.2 -20.8 -23.4 -21.9 -20.4 -24.3 -22.4	36.4 36.5 37.8 36.4 36.5 37.8 36.4 36.5 37.8 36.4 37.8 36.4	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-57.4 -56.3 -60.5 -58.5 -56.3 -60.2 -57.3 -55.9 -61.1 -57.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	44.4 43.3 47.5 45.5 43.3 47.2 44.3 47.2 44.3 42.9 48.1 44.8	

Page 1978 of 1995

10.10.4. LTE BAND 7

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

			-	titution Measu ated Chambe						
ompany										
roject #	t:	15U20165								
ate:		06/01/15								
est Eng		Ali.P								
Configura Node:	ation:	EUT only								
lode:		LTE Band 7, 2	UNHZ QPSK							
	<u>lipment:</u> tion: Horn T59 Sul Chambe			ble -amplifer		Filter			Limit	1
ſ	3m Chamber G	-	3m Ch	amber G 🖵	Filter	•	1	EIRP	•]
L			I		Ι		1	I	_	1
				EIRP @ TX						
requer (GHz)		Ant. Pol. (H/V)	Distance	Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	nel (2510MHz)	(100)		(abiii)						
5.02	-66.6	Н	3.0	-17.2	36.2	1.0	-52.4	-25.0	-27.4	
7.53	-62.2	H	3.0	-9.0	35.1	1.0	-43.2	-25.0	-18.2	
	-69.5	Н	3.0	-14.0	33.3	1.0	-46.3	-25.0	-21.3	
10.04		V	3.0	-17.2	36.2	1.0	-52.4	-25.0	-27.4	
10.04 5.02	-66.5			-9.2	35.1	1.0	-43.3 -46.1	-25.0 -25.0	-18.3 -21.1	
10.04 5.02 7.53	-62.4	V	3.0		22.2	10		-23.0	-21.1	
10.04 5.02	-62.4	v v	3.0 3.0	-13.8	33.3	1.0				
10.04 5.02 7.53 10.04 Iid Chanr	-62.4 -69.2 nel (2535MHz)	V	3.0	-13.8						
10.04 5.02 7.53 10.04 Iid Chanr 5.07	-62.4 -69.2 nel (2535MHz) -66.1	V H	3.0 3.0	-13.8 -16.6	36.3	1.0	-51.9	-25.0	-26.9	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61	-62.4 -69.2 nel (2535MHz) -66.1 -60.4	V H H	3.0 3.0 3.0	-13.8 -16.6 -7.1	36.3 35.1	1.0 1.0	-51.9 -41.2	-25.0	-16.2	
10.04 5.02 7.53 10.04 Iid Chan 5.07 7.61 10.14	-62.4 -69.2 nel (2535MHz) -66.1 -60.4 -68.9	V H H H	3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3	36.3 35.1 33.3	1.0 1.0 1.0	-51.9 -41.2 -45.6	-25.0 -25.0	-16.2 -20.6	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07	-62.4 -69.2 -66.1 -60.4 -68.9 -66.2	V H H V	3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8	36.3 35.1 33.3 36.3	1.0 1.0 1.0 1.0	-51.9 -41.2 -45.6 -52.1	-25.0 -25.0 -25.0	-16.2 -20.6 -27.1	
10.04 5.02 7.53 10.04 10.04 10.04 10.07 7.61 10.14 5.07 7.61	-62.4 -69.2 nel (2535MHz) -66.1 -60.4 -68.9 -66.2 -60.3	V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1	36.3 35.1 33.3 36.3 35.1	1.0 1.0 1.0 1.0 1.0 1.0	-51.9 -41.2 -45.6 -52.1 -41.2	-25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2	
10.04 5.02 7.53 10.04 Iid Chann 5.07 7.61 10.14 5.07	-62.4 -69.2 nel (2535MHz) -66.1 -60.4 -68.9 -66.2 -60.3	H H H V V	3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8	36.3 35.1 33.3 36.3	1.0 1.0 1.0 1.0	-51.9 -41.2 -45.6 -52.1	-25.0 -25.0 -25.0	-16.2 -20.6 -27.1	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07 7.61 10.14 10.14 10.14	-62.4 -69.2 -66.1 -60.4 -68.9 -66.2 -60.3 -60.3 -68.5 -68.5 -68.5 -68.5	V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1 -13.1	36.3 35.1 33.3 36.3 35.1 33.3	1.0 1.0 1.0 1.0 1.0 1.0	-51.9 41.2 45.6 -52.1 41.2 45.3	-25.0 -25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2 -20.3	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07 7.61 10.14 igh Chan 5.12	-62.4 -69.2 -66.1 -60.4 -68.9 -66.2 -60.3 -68.5 -68.5 -68.5 -68.5 -68.5 -68.5 -68.5 -68.5 -68.5 -68.5 -68.5	V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1 -13.1 -13.1	36.3 35.1 33.3 36.3 35.1 33.3 36.3 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.9 41.2 45.6 -52.1 41.2 45.3 -50.6	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2 -20.3 -25.6	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07 7.61 10.14 igh Chan 5.12 7.68	-62.4 -69.2 	V H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1 -13.1 -13.1 -15.4 -11.6	36.3 35.1 33.3 36.3 35.1 33.3 36.3 36.3 35.0	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.9 41.2 45.6 -52.1 41.2 45.3 -50.6 -50.6 45.7	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2 -20.3 -25.6 -20.7	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07 7.61 10.14 10.14 ligh Chan 5.12 7.68 10.24	62.4 .69.2 	V H H V V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1 -13.1 -13.1 -15.4 -11.6 -14.0	36.3 35.1 33.3 36.3 35.1 33.3 36.3 36.3 35.0 33.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.9 41.2 45.6 -52.1 41.2 45.3 -50.6 45.7 46.2	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2 -20.3 -25.6 -20.7 -21.2	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07 7.61 10.14 igh Chan 5.12 7.68	-62.4 -69.2 	V H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1 -13.1 -13.1 -15.4 -11.6	36.3 35.1 33.3 36.3 35.1 33.3 36.3 36.3 35.0	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.9 41.2 45.6 -52.1 41.2 45.3 -50.6 -50.6 45.7	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2 -20.3 -25.6 -20.7	
10.04 5.02 7.53 10.04 lid Chann 5.07 7.61 10.14 5.07 7.61 10.14 10.14 ligh Chan 5.12 7.68 10.24	62.4 .69.2 	V H H V V V V H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-13.8 -16.6 -7.1 -13.3 -16.8 -7.1 -13.1 -13.1 -15.4 -11.6 -14.0	36.3 35.1 33.3 36.3 35.1 33.3 36.3 36.3 35.0 33.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.9 41.2 45.6 -52.1 41.2 45.3 -50.6 45.7 46.2	-25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0 -25.0	-16.2 -20.6 -27.1 -16.2 -20.3 -25.6 -20.7 -21.2	

Page 1979 of 1995

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

				titution Meas iated Chambe						
Company: Project #: Pate: Test Engir Configurat Node:	eer: ion:	15U20165 06/01/15 Ali.P EUT only LTE Band 7, 20	0MHz 16QAM							
est Equip ubstitutio	<u>ment:</u> n: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	able						
	Chambe	er	Pre	e-amplifer		Filter	1		Limit	
	3m Chamber G	•	3m C	hamber G 🖵	Filter	r .	·	EIRP		•
Frequenc (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	el (2510MHz)									
5.02 7.53	-66.2 -61.3	H	3.0 3.0	-16.8 -8.1	36.2 35.1	1.0 1.0	-52.1 -42.2	-25.0 -25.0	-27.1 -17.2	
10.04	-61.5	H	3.0	-0.1	33.3	1.0	-42.2 -45.7	-25.0	-17.2	
5.02	-66.6	v	3.0	-17.4	36.2	1.0	-52.6	-25.0	-27.6	
7.53	-61.5	V	3.0	-8.4	35.1	1.0	-42.5	-25.0	-17.5	
10.04	-68.5	V	3.0	-13.1	33.3	1.0	-45.4	-25.0	-20.4	
lid Channe	I (2535MHz)									
5.07	-66.1	Н	3.0	-16.6	36.3	1.0	-51.8	-25.0	-26.8	
7.61	-62.0	Н	3.0	-8.7	35.1	1.0	-42.8	-25.0	-17.8	
10.14 5.07	-69.5 -66.2	H V	3.0 3.0	-13.9 -16.9	33.3 36.3	1.0 1.0	-46.2 -52.1	-25.0 -25.0	-21.2 -27.1	
5.07	-65.2	V	3.0	-16.9 -9.0	36.3	1.0 1.0	-52.1 -43.1	-25.0	-27.1 -18.1	
10.14	-69.4	v	3.0	-14.0	33.3	1.0	-46.2	-25.0	-21.2	
	el (2560MHz) -66.3	U	3.0	-16.7	36.3	1.0	-51.9	-25.0	-26.9	
5.12 7.68	-66.3	H	3.0	-16.7 -12.9	36.3	1.0	-51.9 -47.0	-25.0	-26.9 -22.0	
10.24	-69.6	H	3.0	-13.9	33.2	1.0	-46.2	-25.0	-21.2	
5.12	-66.6	V	3.0	-17.2	36.3	1.0	-52.5	-25.0	-27.5	
	-66.1	V	3.0	-12.9	35.0	1.0	-46.9	-25.0	-21.9	
7.68	-69.4	V	3.0	-14.0	33.2	1.0	-46.2	-25.0	-21.2	

Page 1980 of 1995

10.10.5. LTE BAND 12

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

			-	atitution Meas iated Chambe						
Company: Project #: Date: Test Engli Configura Mode:	neer: tion:	15U20165 06/02/15 Ali.P EUT only LTE Band 12,	10MHz QPSK							
l <mark>est Equi</mark> j Substituti	oment:_ on: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	able						
	Chambe	er	Pre	e-amplifer		Filter			Limit	
Ī	3m Chamber G	-	3m C	hamber G 🗸	Filte	er	-	EIRP		•
Frequence (GHz)	cy SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	el (704MHz)	()		()						
1.408	-65.3	Н	3.0	-24.6	37.5	1.0	-61.1	-13.0	-48.1	
2.112	-66.8	Н	3.0	-24.5	37.6	1.0	-61.1	-13.0	-48.1	
2.816	-66.3	H	3.0	-21.8	36.6	1.0	-57.4	-13.0	-44.4	
1.408	-64.6	V	3.0	-23.4	37.5	1.0	-59.9	-13.0	-46.9	
2.112 2.816	-64.7 -66.5	V V	3.0 3.0	-22.3 -21.8	37.6 36.6	1.0 1.0	-58.8 -57.4	-13.0 -13.0	-45.8 -44.4	
2.010	-00.3	v	J.U	-21.0	0.00	1.0	-37.4	-13.0	-44.4	
Aid Channe	el (707.5MHz)			1						
1.415	-65.3	Н	3.0	-24.6	37.6	1.0	-61.1	-13.0	-48.1	
2.123	-66.6	H	3.0	-24.3	37.6	1.0	-60.9	-13.0	-47.9	
0 000	-65.6 -66.0	H V	3.0 3.0	-21.0 -24.8	36.6 37.6	1.0	-56.6 -61.3	-13.0 -13.0	-43.6 -48.3	
2.830	-66.3	V	3.0	-24.8 -23.9	37.6	1.0 1.0	-61.3	-13.0 -13.0	-48.3 -47.4	
1.415	-66.5	V	3.0	-23.5	36.6	1.0	-57.3	-13.0	-44.3	
1.415 2.123 2.830										
1.415 2.123 2.830 High Chanr	nel (711MHz)		3.0	-25.5	37.6	1.0	-62.1	-13.0	-49.1	
1.415 2.123 2.830 High Chanr 1.422	-66.2	H			37.5	1.0	-61.5 -57.4	-13.0 -13.0	-48.5 -44.4	
1.415 2.123 2.830 High Chanr 1.422 2.133	-66.2 -67.3	Н	3.0	-25.0 21.8	36 6	10				
1.415 2.123 2.830 High Chanr 1.422 2.133 2.844	-66.2 -67.3 -66.5	H H	3.0 3.0	-21.8	36.6 37.6	1.0				
1.415 2.123 2.830 High Chanr 1.422 2.133	-66.2 -67.3	Н	3.0		36.6 37.6 37.5	1.0 1.0 1.0	-60.1 -60.4	-13.0 -13.0 -13.0	_44.4 _47.1 _47.4	

Page 1981 of 1995

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

			-	titution Meas iated Chambe						
Company: Project #: Date: Test Engin Configura Mode:	neer: tion:	15U20165 06/02/15 Ali.P EUT only LTE Band 12,	10MHz 16QAM							
<u>Test Equip</u> Substitutio	o <u>ment:</u> on: Horn T59 Sul	ostitution, an	d 8ft SMA Ca	able						
	Chamb	er	Pr	e-amplifer		Filter			Limit	
Ī	3m Chamber G	•	3m C	hamber G 🖵	Filte	r	-	EIRP		•
Frequenc (GHz)	cy SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
_ow Chann	el (704MHz)									
1.41	-65.4	Н	3.0	-24.7	37.5	1.0	-61.3	-13.0	-48.3	
2.11 2.82	-66.3 -67.3	H	3.0 3.0	-24.0 -22.8	37.6 36.6	1.0 1.0	-60.5 -58.4	-13.0 -13.0	-47.5 -45.4	
1.41	-67.5	V	3.0	-22.0	30.0	1.0	-30.4 -61.3	-13.0	-45.4 -48.3	
2.11	-65.3	v	3.0	-22.8	37.6	1.0	-59.4	-13.0	-46.4	
2.82	-66.2	V	3.0	-21.5	36.6	1.0	-57.1	-13.0	-44.1	
Mid Chan	1 (707 5MU-)									
	el (707.5MHz) -64.5	Н	3.0	-23.8	37.6	1.0	-60.4	-13.0	-47.4	
	-66.3	H	3.0	-23.9	37.6	1.0	-60.5	-13.0	-47.5	
1.42 2.12	-66.2	Н	3.0	-21.6	36.6	1.0	-57.2	-13.0	-44.2	
1.42 2.12 2.83	-66.5 -66.2	V V	3.0 3.0	-25.3 -23.7	37.6 37.6	1.0 1.0	-61.8 -60.3	-13.0 -13.0	-48.8 -47.3	
1.42 2.12 2.83 1.42		V	3.0	-23.7 -22.1	36.6	1.0	-60.3	-13.0	-41.5	
1.42 2.12 2.83 1.42 2.12	-00.2	-								
1.42 2.12 2.83 1.42 2.12 2.83	-66.8									
1.42 2.12 2.83 1.42 2.12 2.83 High Chann	-66.8 nel (711MHz)			++	37.6	1.0	-59.2 -60.4	-13.0 -13.0	-46.2 -47.4	
1.42 2.12 2.83 1.42 2.12 2.83 High Chann 1.42	-66.8 nel (711MHz) -63.4	H	3.0	-22.6		10		-13.0	-41.4	
1.42 2.12 2.83 1.42 2.12 2.83 High Chann 1.42 2.13	-66.8 nel (711MHz) -63.4 -66.3	Н	3.0	-23.9	37.5	1.0 1.0		-13.0	-44.4	
1.42 2.12 2.83 1.42 2.12 2.83 High Chann 1.42	-66.8 nel (711MHz) -63.4	H H V				1.0 1.0 1.0	-60.4 -57.4 -62.0	-13.0 -13.0	-44.4 -49.0	
1.42 2.12 2.83 1.42 2.83 High Chann 1.42 2.13 2.84	-66.8 nel (711MHz) -63.4 -66.3 -66.4	H H	3.0 3.0	-23.9 -21.8	37.5 36.6	1.0	-57.4			

Page 1982 of 1995

10.10.6. LTE BAND 13

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

			-	titution Meas ated Chambe						
Company:										
Project #:		15U20165								
Date:		06/01/15								
Test Engine	er:	Ali.P								
Configuratio		EUT only								
Mode:		LTE Band 13,	10MHz QPSK							
Test Equipn	nent:									
		ostitution, an				Filter			1.1	
2	Chambe	er	Pro	e-amplifer	Filte	Filter			Limit	
3			Pro		Filte		•	EIRP	Limit	•
Frequency	Chambe m Chamber G SA reading	er	Pro	e-amplifer	Filte		EIRP		Limit	v
Frequency (GHz)	Chamber m Chamber G SA reading (dBm)	er v Ant. Pol.	Pro 3m C	e-amplifer hamber G - EIRP @ TX Ant End		r		EIRP		• Notes
Frequency (GHz) Aid Channel 1.564	Chamber m Chamber G SA reading (dBm) (782MHz) -65.7	Ant. Pol. (H/V)	Pro 3m C Distance	e-amplifer hamber G v EIRP @ TX Ant End (dBm) -24.4	Preamp	Attenuator	EIRP -61.2	Limit -40.0	Delta	• Notes 1559-1610MHz
Frequency (GHz) Mid Channel 1.564 2.346	Chamber m Chamber G SA reading (dBm) (782MHz) -65.7 -66.8	Ant. Pol. (H/V)	Distance	e-amplifer hamber G v EIRP @ TX Ant End (dBm) -24.4 -23.9	Preamp 37.9 37.2	Attenuator	EIRP -61.2 -60.1	Limit 	Delta -21.2 -47.1	
Frequency (GHz) Aid Channel 1.564 2.346 3.128	Chamber m Chamber G SA reading (dBm) (782MHz) -65.7 -66.8 -65.7	Ant. Pol. (H/V) H H	200 3m C Distance 3.0 3.0 3.0	e-amplifer hamber G EIRP @ TX Ant End (dBm) -24.4 -23.9 -20.1	Preamp 37.9 37.2 36.6	Attenuator 1.0 1.0 1.0	EIRP -61.2 -60.1 -55.7	EIRP Limit -40.0 -13.0 -13.0	Delta -21.2 -47.1 -42.7	1559-1610MHz
Frequency (GHz) Mid Channel 1.564 2.346 3.128 1.564	Chamber m Chamber G SA reading (dBm) (782MHz) -65.7 -66.8 -65.7 -65.5	Ant. Pol. (H/V) H H H V	2.0 3.0 3.0 3.0 3.0 3.0	e-amplifer hamber G v EIRP @ TX Ant End (dBm) -24.4 -23.9 -20.1 -23.8	Preamp 37.9 37.2 36.6 37.9	Attenuator 1.0 1.0 1.0 1.0	EIRP -61.2 -60.1 -55.7 -60.6	EIRP Limit 40.0 -13.0 -13.0 -40.0	Delta -21.2 -47.1 -42.7 -20.6	
Frequency (GHz) Aid Channel 1.564 2.346 3.128	Chamber m Chamber G SA reading (dBm) (782MHz) -65.7 -66.8 -65.7	Ant. Pol. (H/V)	200 3m C Distance 3.0 3.0 3.0	e-amplifer hamber G EIRP @ TX Ant End (dBm) -24.4 -23.9 -20.1	Preamp 37.9 37.2 36.6	Attenuator 1.0 1.0 1.0	EIRP -61.2 -60.1 -55.7	EIRP Limit -40.0 -13.0 -13.0	Delta -21.2 -47.1 -42.7	1559-1610MHz

Page 1983 of 1995

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

				stitution Meas iated Chambe						
		ULF	emont Radi	lated Champe	.					
Company:										
Project #:		15U20165								
Date:		06/01/15								
Test Engin		Ali.P								
Configurat		EUT only								
Mode:		LTE Band 13, 1	10MHz 16QAM							
Test Equip										
oubstitutio	n: Horn T59 Sub	ostitution, an	d 8ft SMA Ca	able						
oubstitutio	n: Horn 159 Sub	ostitution, an	d 8ft SMA Ca	able						
oubsiltutio						5 16-2	1			
oussitutio	n: Horn 159 Sut Chambe			able e-amplifer		Filter			Limit	
			Pro		Filte		•	EIRP	Limit	•
	Chambe		Pro	e-amplifer	Filter		•	EIRP	Limit	•
	Chambe		Pro	e-amplifer	Filter		•	EIRP	Limit	•
	Chambe		Pro	e-amplifer hamber G 🖵	Filter		r	EIRP	Limit	•
:	Chambe Sm Chamber G		Pro	e-amplifer	Filte		EIRP	EIRP	Limit	• Notes
Frequenc	Chambe Sm Chamber G	er T	Pro 3m C	e-amplifer hamber G 🕌 EIRP @ TX Ant End		· ·	EIRP	I		• Notes
Frequenc (GHz)	Chamber Im Chamber G SA reading (dBm)	er T	Pro 3m C	e-amplifer hamber G 🕌 EIRP @ TX		· ·	EIRP	I		• Notes
Frequenc (GHz) Mid Channe 1.564	Chamber Im Chamber G Im Chamber	Ant. Pol. (H/V)	Pro 3m C Distance	EIRP @ TX Ant End (dBm)	Preamp 37.9	Attenuator	-61.1	Limit	Delta -21.1	Notes 1559-1610MHz
Frequenc (GHz) Mid Channe 1.564 2.346	Chamber Bm Chamber G y SA reading (dBm) (782MHz) -65.5 -65.1	Ant. Pol. (H/V)	200 3m C Distance	EIRP @ TX Ant End (dBm)	Preamp 37.9 37.2	Attenuator	-61.1 -58.4	Limit _40.0 _13.0	Delta -21.1 -45.4	
Frequenc (GHz) Mid Channe 1.564 2.346 3.128	Chamber im Chamber G SA reading (dBm) (782MHz) -65.5 -65.1 -66.6	Ant. Pol. (H/V)	200 3m C Distance	EIRP @ TX Ant End (dBm) -24.2 -22.2 -21.0	Preamp 37.9 37.2 36.6	Attenuator 1.0 1.0	-61.1 -58.4 -56.6	Limit 	Delta -21.1 -45.4 -43.6	1559-1610MHz
Frequenc (GHz) Mid Channe 1.564 2.346 3.128 1.564	Chamber Chamber G SA reading (dBm) (782MHz) -65.5 -65.1 -66.6 -65.2	Ant. Pol. (H/V) H H H V	Pro 3m C Distance 3.0 3.0 3.0 3.0	EIRP @ TX Ant End (dBm) -24.2 -22.2 -21.0 -23.4	Preamp 37.9 37.2 36.6 37.9	Attenuator 1.0 1.0 1.0 1.0	-61.1 -58.4 -56.6 -60.3	40.0 -13.0 -13.0 -40.0	Delta -21.1 -45.4 -43.6 -20.3	
Frequenc (GHz) Mid Channe 1.564 2.346 3.128	Chamber im Chamber G SA reading (dBm) (782MHz) -65.5 -65.1 -66.6	Ant. Pol. (H/V)	200 3m C Distance	EIRP @ TX Ant End (dBm) -24.2 -22.2 -21.0	Preamp 37.9 37.2 36.6	Attenuator 1.0 1.0	-61.1 -58.4 -56.6	Limit 	Delta -21.1 -45.4 -43.6	1559-1610MHz

Page 1984 of 1995

10.10.7. LTE BAND 17

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

			-	titution Meas ated Chambe						
Company:										
Project #:		15U20165								
Date: Test Engin		06/01/15 Ali.P								
Configurati		EUT only								
Mode:		-	10MHz QPSK							
Test Equip	nent:									
substitutio	n: Horn T59 Sub Chamb			e-amplifer		Filter			Limit	
Г	3m Chamber G			hamber G 🖵	Filte			EIRP		
		•					•			•
Frequency	/ SA reading	Ant. Pol.	Distance	EIRP @ TX Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	onrouanig	And I VI.		/	ricamp			- LIIIII	Donta	NULES
(GHz)	(dBm)	(H/V)		(dBm)	Treamp					Notes
Low Channe	(dBm)	(H/V)		(dBm)						NOLES
Low Channe 1.418	(dBm) I (709MHz) -65.1	(H/V) Н	3.0	(dBm) -24.4	37.6	1.0	-61.0	-13.0	-48.0	
Low Channe 1.418 2.127 2.836	(dBm) I (709MHz) -65.1 -60.5 -66.3	(H/V) H H H	3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7	37.6 37.5 36.6	1.0 1.0 1.0	-61.0 -54.7 -57.3	-13.0 -13.0 -13.0	-48.0 -41.7 -44.3	
Low Channe 1.418 2.127 2.836 1.418	(dBm) -65.1 -60.5 -66.3 -65.2	(H/V) H H V	3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9	37.6 37.5 36.6 37.6	1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5	-13.0 -13.0 -13.0 -13.0	-48.0 -41.7 -44.3 -47.5	
Low Channe 1.418 2.127 2.836 1.418 2.127	(dBm) I (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4	(H/V) H H V V	3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9	37.6 37.5 36.6 37.6 37.5	1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4	-13.0 -13.0 -13.0 -13.0 -13.0	-48.0 -41.7 -44.3 -47.5 -41.4	
Low Channe 1.418 2.127 2.836 1.418	(dBm) -65.1 -60.5 -66.3 -65.2	(H/V) H H V	3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9	37.6 37.5 36.6 37.6	1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5	-13.0 -13.0 -13.0 -13.0	-48.0 -41.7 -44.3 -47.5	
Low Channe 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channe	(dBm) I (709MHz) -65.1 -66.3 -66.3 -65.2 -60.4 -66.4 (710MHz)	(H/V) H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6	37.6 37.5 36.6 37.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3	
Low Channe 1.418 2.127 2.836 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420	(dBm) 1 (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2	(H/V) H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5	37.6 37.5 36.6 37.6 37.5 36.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 44.3	
Low Channe 1.418 2.127 2.836 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130	(dBm) I (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8	(H/V) H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -17.9 -21.6 -21.6 -22.4	37.6 37.5 36.6 37.6 37.5 36.6 37.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 46.0	
Low Channe 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420	(dBm) I (709MHz) -65.1 -66.3 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.8 -66.3 -65.2	(H/V) H H V V V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9	37.6 37.5 36.6 37.6 37.5 36.6 37.6 37.5 36.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 48.1 46.0 44.3 47.5	
Ow Channe 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.420 2.130	(dBm) (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.7	(H/V) H H V V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9 -22.2	37.6 37.5 36.6 37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5 -58.7	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 44.3 48.1 46.0 44.3 47.5 45.7	
Low Channe 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420	(dBm) I (709MHz) -65.1 -66.3 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.8 -66.3 -65.2	(H/V) H H V V V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9	37.6 37.5 36.6 37.6 37.5 36.6 37.6 37.5 36.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 48.1 46.0 44.3 47.5	
ow Channe 1.418 2.127 2.836 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420 2.130 2.840	(dBm) I (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.8 -66.3 -65.2 -64.7 -66.8	(H/V) H H V V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9 -22.2	37.6 37.5 36.6 37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.6 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5 -58.7	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 44.3 48.1 46.0 44.3 47.5 45.7	
ow Channe 1.418 2.127 2.836 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420 2.130 2.840 1.422	(dBm) (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.8 -66.3 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -64.8 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65.2 -65.2 -64.8 -65.2 -65.2 -64.8 -65.2 -65	(H/V) H H V V V H H H V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9 -22.2 -22.1 -24.5 -22.4 -21.7 -23.9 -22.2 -22.1 -22.1	37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5 -58.7 -57.7 -61.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 46.0 44.3 47.5 45.7 44.7 48.1	
ow Channe 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420 2.130 2.840 1.422 2.133	(dBm) I (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -65.2 -64.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.7 -66.8 -66.8 -65.2 -66.8 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.4 -66.4 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.8 -66.3 -65.2 -66.8 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2	(H/V) H H V V V V H H H V V V H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9 -22.2 -22.1 -22.1 -22.1 -22.1 -22.3 -22.1	37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5 -58.7 -57.7 -57.7 -61.1 -60.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 46.0 44.3 47.5 45.7 44.7 48.1 47.4	
ow Channel 1.418 2.127 2.836 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420 2.130 2.840 High Channel 1.422 2.133 2.840	(dBm) (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -66.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.7 -66.8 -66.3 -65.2 -66.2 -66.2 -66.2	(H/V) H H V V V V H H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9 -22.2 -22.1 -24.5 -23.9 -21.5	37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.6 37.6 37.6 37.6 37.6 37.6 37.5 36.6	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5 -58.7 -58.7 -57.7 -61.1 -60.4 -57.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 46.0 44.3 47.5 45.7 44.7 48.1 47.4 48.1	
ow Channe 1.418 2.127 2.836 1.418 2.127 2.836 Mid Channel 1.420 2.130 2.840 1.420 2.130 2.840 1.422 2.133	(dBm) I (709MHz) -65.1 -60.5 -66.3 -65.2 -60.4 -65.2 -64.4 (710MHz) -65.2 -64.8 -66.3 -65.2 -64.7 -66.8 -66.8 -65.2 -66.8 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.4 -66.4 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.4 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.3 -65.2 -66.8 -66.3 -65.2 -66.8 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2 -66.2	(H/V) H H V V V V H H H V V V H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -24.4 -18.1 -21.7 -23.9 -17.9 -21.6 -24.5 -22.4 -21.7 -23.9 -22.2 -22.1 -22.1 -22.1 -22.1 -22.3 -22.1	37.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 36.6 37.5 37.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-61.0 -54.7 -57.3 -60.5 -54.4 -57.3 -61.1 -59.0 -57.3 -60.5 -58.7 -57.7 -57.7 -61.1 -60.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	48.0 41.7 44.3 47.5 41.4 44.3 48.1 46.0 44.3 47.5 45.7 44.7 48.1 47.4	

Page 1985 of 1995

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

				stitution Measu iated Chamber						
Company: Project #: Date: Fest Engir Configurat Node:	neer: iion:	15U20165 06/01/15 Ali.P EUT only	10MHz 16QAN	4						
est Equip										
	Chamb	er	P	re-amplifer		Filter	1		Limit	
	3m Chamber G	•	3m (Chamber G 🖵	Filte	r	-	EIRP		•
Frequence (GHz)	y SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	el (709MHz)	(1.0.0)		(42.11)						
1.418	-65.1	Н	3.0	-24.4	37.6	1.0	-61.0	-13.0	-48.0	
2.127	-60.3	Н	3.0	-18.0	37.5	1.0	-54.5	-13.0	-41.5	
2.836 1.418	-66.3 -65.2	H V	3.0 3.0	-21.7 -23.9	36.6 37.6	1.0 1.0	-57.3 -60.5	-13.0 -13.0	-44.3 -47.5	<u> </u>
2.127	-60.5	V	3.0	-23.9 -18.0	37.5	1.0	-60.5 -54.5	-13.0	-47.5 -41.5	
2.836	-66.8	v	3.0	-22.1	36.6	1.0	-57.7	-13.0	-44.7	
lid Channe 1.420	el (710MHz) -65.4	Н	3.0	-24.7	37.6	1.0	-61.3	-13.0	-48.3	
2.130	-65.4	H	3.0	-24.7	37.5	1.0	-60.3	-13.0	-40.5	I
	-66.1	Н	3.0	-21.5	36.6	1.0	-57.1	-13.0	-44.1	
2.840	-65.4	V	3.0	-24.1	37.6	1.0	-60.7	-13.0	-47.7	
2.840 1.420	-66.2	V V	3.0	-23.7	37.5	1.0	-60.2	-13.0	-47.2	
2.840 1.420 2.130			3.0	-22.0	36.6	1.0	-57.6	-13.0	-44.6	
2.840 1.420	-66.8	v		1		+				
2.840 1.420 2.130 2.840	-66.8	V								Υ
2.840 1.420 2.130 2.840 igh Chann 1.422	-66.8 el (711) -63.8	Н	3.0	-23.0	37.6	1.0	-59.6	-13.0	-46.6	
2.840 1.420 2.130 2.840 igh Chann 1.422 2.133	-66.8 el (711) -63.8 -66.2	H H	3.0	-23.9	37.5	1.0	-60.4	-13.0	-47.4	
2.840 1.420 2.130 2.840 igh Chann 1.422 2.133 2.844	-66.8 el (711) -63.8 -66.2 -66.2	H H H	3.0 3.0	-23.9 -21.5	37.5 36.6	1.0 1.0	-60.4 -57.1	-13.0 -13.0	-47.4 -44.1	
2.840 1.420 2.130 2.840 igh Chann 1.422 2.133	-66.8 el (711) -63.8 -66.2	H H	3.0	-23.9	37.5	1.0	-60.4	-13.0	-47.4	

Page 1986 of 1995

10.10.8. LTE BAND 25

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

				stitution Meas liated Chambe						
Company:										
Project #:		15U20165								
Date:		06/01/15								
Test Engi		Ali.P								
Configura Mode:		EUT only	20MHz QPSK							
Noue.		LIL Danu 20,								
	on: Horn T59 Sub Chambe 3m Chamber G		Pre	able e-amplifer hamber G 🖵	Filter	Filter	-	EIRP	Limit	-
L			I		I					1
Frequen	cy SA reading	Ant. Pol.	Distance	EIRP @ TX Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)		(H/V)		(dBm)						
	nel (1860MHz)		1				-	1		
3.72	-66.8	Н	3.0	-20.0	36.2	1.0	-55.2	-13.0	-42.2	
5.58	-66.7	H	3.0	-16.3	36.1	1.0	-51.4	-13.0	-38.4	
7.44 3.72	-66.5 -67.3	H V	3.0 3.0	-13.4 -20.1	35.2 36.2	1.0 1.0	-47.6 -55.3	-13.0 -13.0	-34.6 -42.3	
5.58	-67.3	V	3.0	-20.1	36.2 36.1	1.0	-00.3 -51.5	-13.0 -13.0	-42.3 -38.5	
7.44	-67.2	V	3.0	-16.4	35.2	1.0	-51.5 -48.4	-13.0	-35.4	
				1						
Mid Chann 3.77	el (1882.5MHz) -66.9	Н	3.0	-20.0	36.2	1.0	-55.2	-13.0	-42.2	
5.65	-66.7	H	3.0	-20.0 -16.2	36.2 36.1	1.0	-ɔɔ.z -51.3	-13.0 -13.0	-42.2 -38.3	
7.53	-67.4	H	3.0	-10.2	35.1	1.0	-48.3	-13.0	-35.3	
3.77	-66.5	V	3.0	-19.1	36.2	1.0	-54.3	-13.0	-41.3	
5.65	-66.2	V	3.0	-15.9	36.1	1.0	-51.0	-13.0	-38.0	
7.53	-67.6	V	3.0	-14.5	35.1	1.0	-48.6	-13.0	-35.6	
High Chan	nel (1905MHz)			-	1					
nign Chani 3.81	-65.6	Н	3.0	-18.6	36.1	1.0	-53.8	-13.0	-40.8	
	-66.4	H	3.0	-15.8	36.1	1.0	-50.9	-13.0	-37.9	
5.72	-66.9	H	3.0	-13.6	35.1	1.0	-47.6	-13.0	-34.6	
5.72 7.62	05.5	V	3.0	-18.0	36.1	1.0	-53.1	-13.0	-40.1	
5.72 7.62 3.81	-65.5	·			004	4.0	-50.9	-13.0	-37.9	
5.72 7.62	-65.5 -66.2 -66.8	V V	3.0 3.0	-15.8 -13.6	36.1 35.1	1.0 1.0	-30.5	-13.0	-34.6	

Page 1987 of 1995

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

			-	titution Measu ated Chamber						
Company: Project #:		15U20165								
Date:		06/01/15								
Test Engi		Ali.P								
Configura Mode:		EUT only	20MHz 16QAM							
noue.		LTE Danu 23,								
<u>Test Equi</u> Substituti	on: Horn T59 Sub Chambe			ble e-amplifer		Filter			Limit	
Г	3m Chamber G	-	3m C	hamber G 🗸	Filte	r .	-	EIRP		•
L			,		1	-		I		
Frequen	cy SA reading	Ant. Pol.	Distance	EIRP @ TX Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	(H/V)		(dBm)						
	······			· · · · · · · · · · · · · · · · · · ·					-42.7	
Low Chann 3.72	-67.3	Н	3.0	-20.5	36.2	1.0	-55.7	-13.0		
3.72 5.58	-67.3 -66.6	Н	3.0	-16.2	36.1	1.0	-51.3	-13.0	-38.3	
3.72	-67.3									
3.72 5.58 7.44 3.72 5.58	-67.3 -66.6 -67.2 -67.6 -66.5	H H V V	3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3	36.1 35.2 36.2 36.1	1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4	-13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4	
3.72 5.58 7.44 3.72	-67.3 -66.6 -67.2 -67.6	H H V	3.0 3.0 3.0	-16.2 -14.1 -20.4	36.1 35.2 36.2	1.0 1.0 1.0	-51.3 -48.3 -55.6	-13.0 -13.0 -13.0	-38.3 -35.3 -42.6	
3.72 5.58 7.44 3.72 5.58 7.44	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8	H H V V	3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3	36.1 35.2 36.2 36.1	1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4	-13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4	
3.72 5.58 7.44 3.72 5.58 7.44	-67.3 -66.6 -67.2 -67.6 -66.5	H H V V	3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3	36.1 35.2 36.2 36.1	1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4	-13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4	
3.72 5.58 7.44 3.72 5.58 7.44 Mid Channe	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 el (1882.5MHz)	H H V V V	3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8	36.1 35.2 36.2 36.1 35.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4 -49.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4 -36.0	
3.72 5.58 7.44 3.72 5.58 7.44 Aid Channe 3.77 5.65 7.53	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 el (1882.5MHz) -66.9 -66.4 -67.2	H H V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 48.3 -55.6 -51.4 49.0 -55.2 -51.0 48.1	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4 -36.0 	
3.72 5.58 7.44 3.72 5.58 7.44 Wid Chann 3.77 5.65 7.53 3.77	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.9 -66.4 -67.2 -66.4 -67.2 -66.2	H H V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -18.8	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.2 36.1 35.1 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 48.3 -55.6 -51.4 49.0 -55.2 -51.0 48.1 -54.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4 -36.0 	
3.72 5.58 7.44 3.72 5.58 7.44 Mid Channo 3.77 5.65 7.53 3.77 5.65	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.5 -66.9 -66.9 -66.4 -67.2 -66.2 -66.5	H H V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -18.8 -16.2	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.1 35.1 36.2 36.1 35.1 36.2 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 48.3 -55.6 -51.4 49.0 -55.2 -55.2 -51.0 48.1 -54.0 -51.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4 -36.0 	
3.72 5.58 7.44 3.72 5.58 7.44 Wid Chann 3.77 5.65 7.53 3.77	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.9 -66.4 -67.2 -66.4 -67.2 -66.2	H H V V H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -18.8	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.1 35.1 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 48.3 -55.6 -51.4 49.0 -55.2 -51.0 48.1 -54.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4 -36.0 	
3.72 5.58 7.44 3.72 5.58 7.44 Mid Channe 3.77 5.65 7.53 3.77 5.65 7.53	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.5 -66.9 -66.9 -66.4 -67.2 -66.2 -66.5	H H V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -18.8 -16.2	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.1 35.1 36.2 36.1 35.1 36.2 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 48.3 -55.6 -51.4 49.0 -55.2 -55.2 -51.0 48.1 -54.0 -51.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.3 -35.3 -42.6 -38.4 -36.0 	
3.72 5.58 7.44 3.72 5.58 7.58 7.58 7.54 4 did Chann 3.77 5.65 7.53 3.77 5.65 7.53 3.73 4 igh Chann 3.81	-67.3 -66.6 -67.2 -67.6 -67.6 -67.8 -67.8 -66.9 -66.9 -66.9 -66.4 -67.2 -66.2 -66.2 -66.5 -67.6 -67.6 -67.6 -67.6	H H V V V V V V V V V V H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -15.9 -14.0 -18.8 -16.2 -14.5 -18.7	36.1 35.2 36.2 36.1 35.2 36.1 35.2 36.1 35.1 36.2 36.1 35.1 36.2 36.1 35.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4 -49.0 -55.2 -51.0 -48.1 -54.0 -51.3 -48.6 -53.8	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	38.3 35.3 42.6 38.4 36.0 42.2 38.0 35.1 41.0 38.3 35.6 40.8	
3.72 5.58 7.44 3.72 5.58 7.44 4 did Chann 3.77 5.65 7.53 3.77 5.65 7.53 3.75 5.65 7.53 3.71 5.65 7.53	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.9 -66.4 -67.2 -66.5 -67.6 -66.5 -67.6 -66.5 -67.6 -66.4	H H V V V V H H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -15.9 -14.0 -18.8 -16.2 -14.5 -18.7 -15.8	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.1 36.2 36.1 35.1 36.2 36.1 35.1 36.1 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4 -49.0 -55.2 -51.0 -48.1 -54.0 -51.3 -48.6 -51.3 -48.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	38.3 35.3 42.6 38.4 36.0 42.2 38.0 35.1 41.0 38.3 35.6 40.8 37.9	
3.72 5.58 7.44 3.72 5.58 7.44 Mid Chann 3.77 5.65 7.53 3.77 5.65 7.53 3.77 5.65 7.53 1igh Chann 3.81 5.72 7.62	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.9 -66.4 -67.2 -66.2 -67.6 -67.2 -66.2 -67.2	H H V V V H H H V V V V H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -18.8 -16.2 -14.5 -16.2 -14.5 -15.8 -15.8 -13.9	36.1 35.2 36.2 36.1 35.2 36.1 35.1 36.1 35.1 36.1 35.1 36.1 36.1 36.1 35.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4 -49.0 -55.2 -51.0 -48.1 -54.0 -51.3 -48.1 -54.0 -51.3 -48.1 -53.8 -53.8 -50.9 -48.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	38.3 35.3 42.6 38.4 36.0 42.2 38.0 35.1 41.0 38.3 35.6 40.8 37.9 35.0	
3.72 5.58 7.44 3.72 5.58 7.44 Wid Chann 3.77 5.65 7.53 3.77 5.65 7.53 3.77 5.65 7.53	-67.3 -66.6 -67.2 -67.6 -66.5 -67.8 -66.9 -66.4 -67.2 -66.5 -67.6 -66.5 -67.6 -66.5 -67.6 -66.4	H H V V V V H H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-16.2 -14.1 -20.4 -16.3 -14.8 -20.0 -15.9 -14.0 -15.9 -14.0 -18.8 -16.2 -14.5 -18.7 -15.8	36.1 35.2 36.2 36.1 35.2 36.2 36.1 35.1 36.2 36.1 35.1 36.2 36.1 35.1 36.1 36.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.3 -48.3 -55.6 -51.4 -49.0 -55.2 -51.0 -48.1 -54.0 -51.3 -48.6 -51.3 -48.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	38.3 35.3 42.6 38.4 36.0 42.2 38.0 35.1 41.0 38.3 35.6 40.8 37.9	

Page 1988 of 1995

10.10.9. LTE BAND 26

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

				titution Measu						
		UL Fr	emont Radi	ated Chambe	ſ					
Company:										
Project #:		15U20165								
Date:		06/01/15								
Test Engine	er:	Ali.P								
Configuratio	n:	EUT only								
Mode:		LTE Band 26 (9	90S), 10MHz Q	PSK						
Test Equipm										
Substitution	: Horn T59 Sub	ostitution, and	d 8ft SMA Ca	hle						
				bie						
				bie						
	Chambe			e-amplifer		Filter	1		Limit	
31	Chambe n Chamber G	er	Pre		Filter		-	EIRP		Ţ
3n			Pre	e-amplifer	Filter		•			•
3n		er	Pre	e-amplifer	Filter		•			·
3n		er	Pre	e-amplifer hamber G 🖵	Filter		r			•
		er	Pre	e-amplifer	I		EIRP			• Notes
	n Chamber G	er T	Pre 3m C	e-amplifer hamber G 🖵 EIRP @ TX	Filter	•		EIRP		
Frequency (GHz)	n Chamber G SA reading (dBm)	er T	Pre 3m C	e-amplifer hamber G 🗸 EIRP @ TX Ant End	I	•		EIRP		
Frequency (GHz)	n Chamber G SA reading (dBm)	er T	Pre 3m C	e-amplifer hamber G 🗸 EIRP @ TX Ant End	I	•		EIRP		
Frequency (GHz) Mid Channel (1.638 2.457	n Chamber G SA reading (dBm) 819MHz) -65.6 -65.9	Ant. Pol. (H/V)	Distance	e-amplifer hamber G • EIRP @ TX Ant End (dBm) -24.1 -22.7	Preamp 37.8 36.7	Attenuator		EIRP Limit -13.0 -13.0	Deita 48.0 45.4	
Frequency (GHz) Mid Channel (1.638 2.457 3.276	A reading (dBm) 819MHz) -65.6 -65.9 -65.8	Ant. Pol. (H/V) H H	Pre 3m C Distance	EIRP @ TX Ant End (dBm) -22.7 -19.9	Preamp 37.8 36.7 36.5	Attenuator 1.0 1.0	EIRP -61.0 -58.4 -55.4	EIRP	Delta 48.0 45.4 42.4	
Frequency (GHz) Mid Channel (1.638 2.457 3.276 1.638	n Chamber G SA reading (dBm) 819MHz) -65.6 -65.9 -65.8 -65.2	Ant. Pol. (H/V) H H H V	Pre 3m C Distance 3.0 3.0 3.0 3.0	EIRP @ TX Ant End (dBm) -24.1 -22.7 -19.9 -23.4	Preamp 37.8 36.7 36.5 37.8	Attenuator	EIRP -61.0 -58.4 -55.4 -60.2	EIRP	Delta 48.0 45.4 42.4 47.2	
Frequency (GHz) Mid Channel (1.638 2.457 3.276	A reading (dBm) 819MHz) -65.6 -65.9 -65.8	Ant. Pol. (H/V) H H	Pre 3m C Distance	EIRP @ TX Ant End (dBm) -22.7 -19.9	Preamp 37.8 36.7 36.5	Attenuator 1.0 1.0	EIRP -61.0 -58.4 -55.4	EIRP	Delta 48.0 45.4 42.4	

Page 1989 of 1995

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

				titution Meas ated Chambe						
		0L11	emontradi	ated chambe	•					
Company:										
Project #:		15U20165								
Date: Test Engine		06/01/15 Ali.P								
Configuration										
Jonfiguratio Mode:		EUT only LTE Band 26 (9	000) 10MU- 1/	MAG						
2	Chamber G			e-amplifer	Filte	Filter		FIDD	Limit	
3	Chambe m Chamber G	er •		e-amplifer :hamber G ↓	Filte	-	•	EIRP	Limit	v
Frequency	m Chamber G	• Ant. Pol.		EIRP @ TX Ant End	Filte	-	EIRP	EIRP	Limit	• Notes
Frequency (GHz)	m Chamber G	•	3m C	thamber G		r .				• Notes
Frequency (GHz) Mid Channel	m Chamber G	Ant. Pol. (H/V)	3m C Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
Frequency (GHz)	m Chamber G	• Ant. Pol.	3m C	EIRP @ TX Ant End		r .				Notes
Frequency (GHz) Mid Channel 1.638 2.457 3.276	m Chamber G SA reading (dBm) (819MHz) -66.2 -59.9 -66.6	Ant. Pol. (H/V) H H H	3m C Distance	EIRP @ TX Ant End (dBm) -24.8 -16.8 -20.7	Preamp 37.8 36.7 36.5	Attenuator	EIRP -61.6 -52.5 -56.2	Limit -13.0 -13.0 -13.0	Delta -48.6 -39.5 -43.2	Notes
Frequency (GHz) Mid Channel 1.638 2.457 3.276 1.638	M Chamber G SA reading (dBm) (819MHz) -66.2 -59.9 -66.6 -66.4	Ant. Pol. (H/V) H H H V	3m C Distance	EIRP @ TX Ant End (dBm) -24.8 -16.8 -20.7 -24.6	Preamp 37.8 36.7 36.5 37.8	Attenuator	EIRP -61.6 -52.5 -56.2 -61.4	Limit -13.0 -13.0 -13.0 -13.0	Delta -48.6 -39.5 -43.2 -48.4	Notes
Frequency (GHz) Mid Channel 1.638 2.457 3.276	m Chamber G SA reading (dBm) (819MHz) -66.2 -59.9 -66.6	Ant. Pol. (H/V) H H H	3m C Distance	EIRP @ TX Ant End (dBm) -24.8 -16.8 -20.7	Preamp 37.8 36.7 36.5	Attenuator	EIRP -61.6 -52.5 -56.2	Limit -13.0 -13.0 -13.0	Delta -48.6 -39.5 -43.2	Notes

Page 1990 of 1995

10.10.10. LTE BAND 41

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

			-	titution Meas ated Chamb						
Company:										
Project #:		15U20165								
Date: To ot Emain		06/02/15								
Test Engir Configurat		Ali.P EUT only								
Mode:		LTE Band 41, 3	20MHz QPSK							
<u>Test Equip</u> Substitutio	<u>ment:</u> n: Horn T59 Sul	ostitution, an	d 8ft SMA Ca	ble						
	Chamb	er	Pr	e-amplifer		Filter			Limit	
	3m Chamber G	•	3m C	hamber G 🖵	Filte	ər	-	EIRP		•
				EIRP @ TX						
-		Ant. Pol.	Distance	Ant End	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz)	(dBm)	Ant. Pol. (H/V)	Distance	Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
(GHz) Low Channe	(dBm)	(H/V)		(dBm)						Notes
(GHz)	(dBm)		Distance 3.0 3.0		Preamp 36.2 35.1	Attenuator	EIRP -51.6 -47.5	Limit -13.0 -13.0	-38.6 -34.5	Notes
(GHz) Low Channe 5.01 7.52 10.02	(dBm) el (2506MHz) -65.7 -66.5 -63.8	(H/V) H H H	3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3	36.2 35.1 33.3	1.0 1.0 1.0	-51.6 -47.5 -40.7	-13.0 -13.0 -13.0	-38.6 -34.5 -27.7	Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01	(dBm) -65.7 -66.5 -63.8 -68.0	(H/V) H H V	3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7	36.2 35.1 33.3 36.2	1.0 1.0 1.0 1.0 1.0	-51.6 -47.5 -40.7 -53.9	-13.0 -13.0 -13.0 -13.0	-38.6 -34.5 -27.7 -40.9	Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52	(dBm) (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9	(H/V) H H V V	3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8	36.2 35.1 33.3 36.2 35.1	1.0 1.0 1.0 1.0 1.0	-51.6 -47.5 -40.7 -53.9 -48.9	-13.0 -13.0 -13.0 -13.0 -13.0	-38.6 -34.5 -27.7 -40.9 -35.9	Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02	(dBm) el (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3	(H/V) H H V	3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7	36.2 35.1 33.3 36.2	1.0 1.0 1.0 1.0 1.0	-51.6 -47.5 -40.7 -53.9	-13.0 -13.0 -13.0 -13.0	-38.6 -34.5 -27.7 -40.9	Notes
Low Chann 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe	(dBm) el (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 -68.3 -68.3 -1000 -67.9 -68.3 -68.3 -68.3 -68.3 -68.3 -68.3 -68.3 -68.3 -69.5 -6	(H/V) H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0	36.2 35.1 33.3 36.2 35.1 33.3	1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe 5.19	(dBm) el (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 -68.3 -68.3 -68.3 -68.3 -68.3 -68.5 -65.5 -6	(H/V) H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7	36.2 35.1 33.3 36.2 35.1 33.3 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 -47.5 -40.7 -53.9 -48.9 -45.3 -52.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe 5.19 7.78	(dBm) 1 (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 1 (2593MHz) -66.5 -67.8	(H/V) H H V V V V H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3 -52.0 48.3	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-38.6 -34.5 -27.7 -40.9 -35.9 -32.3 -32.3 -39.0 -35.3	Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe 5.19 7.78 10.37 5.19	(dBm) el (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 -68.3 -68.3 -68.3 -68.3 -68.3 -68.5 -65.5 -6	(H/V) H H V V V V H H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7	36.2 35.1 33.3 36.2 35.1 33.3 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 -47.5 -40.7 -53.9 -48.9 -45.3 -52.0	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe 5.19 7.78 10.37 5.19 7.78	(dBm) 1 (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 1 (2593MHz) -66.5 -67.8 -64.3 -67.1 -67.8	(H/V) H H V V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -14.4 -8.7 -17.6 -14.4	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3 -52.0 -52.0 48.3 40.8 -52.9 -52.9 -48.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe 5.19 7.78 10.37 5.19	(dBm) e1 (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 -68.3 -68.3 -68.3 -68.3 -66.5 -67.8 -64.3 -67.1	(H/V) H H V V V V H H H H H V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -16.7 -14.4 -8.7 -17.6	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 -47.5 -40.7 -53.9 -45.3 -45.3 -52.0 -52.0 -48.3 -40.8 -52.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) Low Channe 5.01 7.52 10.02 5.01 7.52 10.02 Mid Channe 5.19 7.78 10.37 5.19 7.78 10.37	(dBm) el (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 -68.3 -68.3 -67.9 -68.3 -67.9 -66.5 -67.8 -64.3 -67.8 -64.3 -67.8 -64.3 -67.8 -64.3 -67.8 -64.3 -67.8 -64.9	(H/V) H H V V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -14.4 -8.7 -17.6 -14.4	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3 -52.0 -52.0 48.3 40.8 -52.9 -52.9 -48.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) .cow Channe 5.01 7.52 10.02 5.01 7.52 10.02 Wid Channe 5.19 7.78 10.37 5.19 7.78 10.37	(dBm) 1 (2506MHz) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 1 (2593MHz) -66.5 -67.8 -64.3 -67.1 -67.8	(H/V) H H V V V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -14.4 -8.7 -17.6 -14.4	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3 -52.0 -52.0 48.3 40.8 -52.9 -52.9 -48.4	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) .cow Channe 5.01 7.52 10.02 5.01 7.52 10.02 Wid Channe 5.19 7.78 10.37 5.19 7.78 10.37	(dBm) 1 (2506MHz) - 65.7 - 66.5 - 63.8 - 68.0 - 67.9 - 68.3 - 68.3 - 67.9 - 68.3 - 67.9 - 68.3 - 67.8 - 64.3 - 67.8 - 64.9 - 65.3 - 64.2	(H/V) H H V V V V H H H H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -14.4 -8.7 -17.6 -14.4 -8.7 -17.6 -14.4 -9.4 -15.3 -10.5	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 33.1 36.2 34.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3 -52.0 -52.0 48.3 40.8 -52.9 48.4 41.6 -50.5 -50.5	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) .ow Channe 5.01 7.52 10.02 5.01 7.52 10.02 Wid Channe 5.19 7.78 10.37 5.19 7.78 10.37 410 5.36 8.04 10.72	(dBm) -65.7 -66.5 -63.8 -68.0 -67.9 -68.3 -68.3 -68.3 -68.3 -67.9 -66.5 -67.8 -64.3 -67.1 -67.8 -64.3 -67.1 -67.8 -64.9 -65.3 -64.2 -64.2 -64.2 -64.0	(H/V) H H V V V V H H H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -14.4 -13.0 -16.7 -14.4 -17.6 -14.4 -9.4 -15.3 -10.5 -8.3	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 34.9 33.1 36.2 34.8 32.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 -48.9 -48.9 -52.0 -48.3 -40.8 -52.9 -48.4 -41.6 -50.5 -44.3 -40.2	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes
(GHz) .cow Channe 5.01 7.52 10.02 5.01 7.52 10.02 Wid Channe 5.19 7.78 10.37 5.19 7.78 10.37	(dBm) 1 (2506MHz) - 65.7 - 66.5 - 63.8 - 68.0 - 67.9 - 68.3 - 68.3 - 67.9 - 68.3 - 67.9 - 68.3 - 67.8 - 64.3 - 67.8 - 64.9 - 65.3 - 64.2	(H/V) H H V V V V H H H H H H H H	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	(dBm) -16.3 -13.4 -8.3 -18.7 -14.8 -13.0 -16.7 -14.4 -8.7 -17.6 -14.4 -8.7 -17.6 -14.4 -9.4 -15.3 -10.5	36.2 35.1 33.3 36.2 35.1 33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.3 33.1 36.2 34.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.6 47.5 40.7 -53.9 48.9 45.3 -52.0 -52.0 48.3 40.8 -52.9 48.4 41.6 -50.5 -50.5	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0		Notes

Page 1991 of 1995

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

		-		titution Measu ated Chambe						
Company Project #		15U20165								
ate:		06/02/15 Ali.P								
Test Eng Configur		EUT only								
Node:			20MHz 16QAN	1						
	<u>iipment:</u> tion: Horn T59 Si	ıbstitution, ar	nd 8ft SMA Ca	ble						
	Chamb	er	Pre	-amplifer		Filter		1	Limit	
ſ	3m Chamber G	-	3m Cl	namber G 🖵	Filter	•		EIRP		•
_				EIRP @ TX	_					
Frequer (GHz)		Ant. Pol. (H/V)	Distance	Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	Notes
	nel (2506MHz)	(П/V)		(ubiii)						
5.01	-67.3	Н	3.0	-17.9	36.2	1.0	-53.1	-13.0	-40.1	
7.52	-65.8	Н	3.0	-12.6	35.1	1.0	-46.7	-13.0	-33.7	
	-64.4	H	3.0	-8.8	33.3	1.0	-41.2	-13.0	-28.2	
10.02		V	3.0	-17.6 -12.8	36.2 35.1	1.0 1.0	-52.8 -47.0	-13.0 -13.0	-39.8 -34.0	
10.02 5.01	-66.9		20					-13.0	-34.0	
10.02 5.01 7.52	-65.9	V	3.0				43.0			
10.02 5.01	-65.9		3.0 3.0	-10.6	33.3	1.0	-43.0	-13.0		
10.02 5.01 7.52 10.02 Aid Chani	-65.9 -66.0 nel (2593MHz)	V V	3.0	-10.6	33.3	1.0				
10.02 5.01 7.52 10.02 Aid Chann 5.19	-65.9 -66.0 nel (2593MHz) -65.6	V V H	3.0 3.0	-10.6 -15.9	33.3 36.3	1.0	-51.2	-13.0	-38.2	
10.02 5.01 7.52 10.02 Mid Chann 5.19 7.78	-65.9 -66.0 nel (2593MHz) -65.6 -68.1	V V H H	3.0 3.0 3.0	-10.6 -15.9 -14.6	33.3 36.3 34.9	1.0 1.0 1.0	-51.2 -48.6	-13.0 -13.0	-35.6	
10.02 5.01 7.52 10.02 Aid Chann 5.19 7.78 10.37	-65.9 -66.0 nel (2593MHz) -65.6 -68.1 -64.4	V V H H	3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7	33.3 36.3 34.9 33.1	1.0 1.0 1.0 1.0	-51.2 -48.6 -40.8	-13.0 -13.0 -13.0	-35.6 -27.8	
10.02 5.01 7.52 10.02 Mid Chann 5.19 7.78 10.37 5.19	-65.9 -66.0 nel (2593MHz) -65.6 -68.1 -64.4 -64.9	V V H H V	3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4	33.3 36.3 34.9 33.1 36.3	1.0 1.0 1.0 1.0 1.0	-51.2 -48.6 -40.8 -50.7	-13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7	
10.02 5.01 7.52 10.02 Mid Chann 5.19 7.78 10.37	-65.9 -66.0 nel (2593MHz) -65.6 -68.1 -64.9 -64.9 -66.5	V V H H	3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7	33.3 36.3 34.9 33.1	1.0 1.0 1.0 1.0	-51.2 -48.6 -40.8	-13.0 -13.0 -13.0	-35.6 -27.8	
10.02 5.01 7.52 10.02 Mid Chann 5.19 7.78 10.37 5.19 7.78 10.37	-65.9 -66.0 -65.6 -68.1 -64.4 -64.9 -66.5 -68.0	V V H H H V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4 -13.2	33.3 36.3 34.9 33.1 36.3 34.9	1.0 1.0 1.0 1.0 1.0 1.0	-51.2 -48.6 -40.8 -50.7 -47.1	-13.0 -13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7 -34.1	
10.02 5.01 7.52 10.02 Mid Chann 5.19 7.78 10.37 7.78 10.37 7.78 10.37	-65.9 -66.0 nel (2593MHz) -65.6 -68.1 -64.4 -64.9 -66.5 -68.0 nnel (2680MHz)	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4 -13.2 -12.5	33.3 36.3 34.9 33.1 36.3 34.9 33.1	1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.2 48.6 40.8 -50.7 47.1 44.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7 -34.1 -31.6	
10.02 5.01 7.52 10.02 Mid Chann 5.19 7.78 10.37 5.19 7.78 10.37 41gh Char 5.36	-65.9 -66.0 -65.6 -65.6 -68.1 -64.4 -64.9 -66.5 -68.0 -68.0	V V H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4 -13.2 -12.5 -17.9	33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.2 48.6 40.8 -50.7 47.1 44.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7 -34.1 -31.6 -40.2	
10.02 5.01 7.52 10.02 Aid Chan 5.19 7.78 10.37 5.19 7.78 10.37 10.37 5.19 7.78 10.37 5.19 8.04	65.9 -66.0 -68.1 -65.6 -68.1 -64.4 -64.9 -66.5 -68.0 -68.0 -68.0 -65.5	V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4 -13.2 -12.5 -17.9 -11.8	33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.2 34.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.2 48.6 40.8 -50.7 47.1 44.6 -53.2 45.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7 -34.1 -31.6 -40.2 -32.6	
10.02 5.01 7.52 10.02 Aid Chann 5.19 7.78 10.37 7.78 10.37 7.78 10.37 7.78 10.37 7.78 10.37 8.04 8.04 8.04 10.72	-65.9 -66.0 -68.1 -65.6 -68.1 -64.4 -64.9 -66.5 -68.0 -68.0 -68.0 -68.0 -68.0 -68.0 -68.0 -68.4 -68.0 -68.4 -68.4	V V H H V V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4 -13.2 -12.5 -17.9 -17.9 -11.8 -9.0	33.3 36.3 34.9 33.1 36.3 34.9 33.1 34.9 33.1 36.2 34.8 32.9	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.2 48.6 40.8 -50.7 47.1 44.6 -53.2 45.6 40.9	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7 -34.1 -31.6 	
10.02 5.01 7.52 10.02 Aid Chan 5.19 7.78 10.37 5.19 7.78 10.37 10.37 5.19 7.78 10.37 5.19 8.04	65.9 -66.0 -68.1 -65.6 -68.1 -64.4 -64.9 -66.5 -68.0 -68.0 -68.0 -65.5	V V H H H V V V	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	-10.6 -15.9 -14.6 -8.7 -15.4 -13.2 -12.5 -17.9 -11.8	33.3 36.3 34.9 33.1 36.3 34.9 33.1 36.2 34.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	-51.2 48.6 40.8 -50.7 47.1 44.6 -53.2 45.6	-13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0 -13.0	-35.6 -27.8 -37.7 -34.1 -31.6 -40.2 -32.6	

Page 1992 of 1995