



Frequency Stability

Test Conditions		LTE Band 66 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0007	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0013	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0033	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0037	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0065	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.65 V. ; Maximum Voltage =4.25 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of ERP/EIRP and Radiated Test

ERP/EIRP

LTE Band 2 / 1.4MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	6	0	18.13	0.0650	15.83	0.0383
Middle		6	0	17.99	0.0630	15.69	0.0371
Highest		6	0	18.00	0.0631	15.70	0.0372
Lowest	16QAM	1	5	17.90	0.0617	15.60	0.0363
Middle		1	5	17.54	0.0568	15.24	0.0334
Highest		1	5	17.58	0.0573	15.28	0.0337
Lowest	64QAM	1	3	17.97	0.0627	15.67	0.0369
Middle		1	3	17.80	0.0603	15.50	0.0355
Highest		1	3	17.58	0.0573	15.28	0.0337
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 3MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	18.07	0.0641	15.77	0.0378
Middle		1	8	17.99	0.0630	15.69	0.0371
Highest		1	8	18.17	0.0656	15.87	0.0386
Lowest	16QAM	1	8	17.52	0.0565	15.22	0.0333
Middle		1	8	17.91	0.0618	15.61	0.0364
Highest		1	8	17.97	0.0627	15.67	0.0369
Lowest	64QAM	1	8	17.94	0.0622	15.64	0.0366
Middle		1	8	17.93	0.0621	15.63	0.0366
Highest		1	8	18.00	0.0631	15.70	0.0372
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 5MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	12	7	18.15	0.0653	15.85	0.0385
Middle		12	7	18.08	0.0643	15.78	0.0378
Highest		12	7	18.23	0.0665	15.93	0.0392
Lowest	16QAM	12	7	17.70	0.0589	15.40	0.0347
Middle		12	7	17.52	0.0565	15.22	0.0333
Highest		12	7	17.74	0.0594	15.44	0.0350
Lowest	64QAM	1	12	17.86	0.0611	15.56	0.0360
Middle		1	12	17.85	0.0610	15.55	0.0359
Highest		1	12	17.89	0.0615	15.59	0.0362
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 10MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	18.13	0.0650	15.83	0.0383
Middle		1	0	17.83	0.0607	15.53	0.0357
Highest		1	0	18.11	0.0647	15.81	0.0381
Lowest	16QAM	1	0	17.50	0.0562	15.20	0.0331
Middle		1	0	17.99	0.0630	15.69	0.0371
Highest		1	0	17.53	0.0566	15.23	0.0333
Lowest	64QAM	1	49	17.19	0.0524	14.89	0.0308
Middle		1	49	17.82	0.0605	15.52	0.0356
Highest		1	49	17.64	0.0581	15.34	0.0342
Limit	EIRP < 2W		Result		PASS		

LTE Band 2 / 15MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	75	0	18.02	0.0634	15.72	0.0373
Middle		75	0	18.23	0.0665	15.93	0.0392
Highest		75	0	18.12	0.0649	15.82	0.0382
Lowest	16QAM	1	74	18.06	0.0640	15.76	0.0377
Middle		1	74	18.06	0.0640	15.76	0.0377
Highest		1	74	17.79	0.0601	15.49	0.0354
Lowest	64QAM	1	0	17.69	0.0587	15.39	0.0346
Middle		1	0	18.01	0.0632	15.71	0.0372
Highest		1	0	17.81	0.0604	15.51	0.0356
Limit	EIRP < 2W		Result		PASS		

LTE Band 2 / 20MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	50	50	18.05	0.0638	15.75	0.0376
Middle		50	50	18.23	0.0665	15.93	0.0392
Highest		50	50	18.29	0.0675	15.99	0.0397
Lowest	16QAM	1	99	17.47	0.0558	15.17	0.0329
Middle		1	99	17.66	0.0583	15.36	0.0344
Highest		1	99	18.04	0.0637	15.74	0.0375
Lowest	64QAM	1	99	17.45	0.0556	15.15	0.0327
Middle		1	99	17.59	0.0574	15.29	0.0338
Highest		1	99	17.84	0.0608	15.54	0.0358
Limit	EIRP < 2W		Result		PASS		



LTE Band 25 / 1.4MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	3	18.15	0.0653	15.85	0.0385
Middle		1	3	17.85	0.0610	15.55	0.0359
Highest		1	3	18.12	0.0649	15.82	0.0382
Lowest	16QAM	1	3	17.79	0.0601	15.49	0.0354
Middle		1	3	17.52	0.0565	15.22	0.0333
Highest		1	3	17.69	0.0587	15.39	0.0346
Lowest	64QAM	1	3	17.95	0.0624	15.65	0.0367
Middle		1	3	17.47	0.0558	15.17	0.0329
Highest		1	3	17.79	0.0601	15.49	0.0354
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 3MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	18.16	0.0655	15.86	0.0385
Middle		1	8	17.99	0.0630	15.69	0.0371
Highest		1	8	18.05	0.0638	15.75	0.0376
Lowest	16QAM	1	8	17.68	0.0586	15.38	0.0345
Middle		1	8	17.71	0.0590	15.41	0.0348
Highest		1	8	17.83	0.0607	15.53	0.0357
Lowest	64QAM	1	8	17.95	0.0624	15.65	0.0367
Middle		1	8	17.47	0.0558	15.17	0.0329
Highest		1	8	17.68	0.0586	15.38	0.0345
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 5MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	18.03	0.0635	15.73	0.0374
Middle		1	0	17.82	0.0605	15.52	0.0356
Highest		1	0	17.80	0.0603	15.50	0.0355
Lowest	16QAM	1	0	18.00	0.0631	15.70	0.0372
Middle		1	0	17.80	0.0603	15.50	0.0355
Highest		1	0	17.52	0.0565	15.22	0.0333
Lowest	64QAM	1	0	17.76	0.0597	15.46	0.0352
Middle		1	0	17.71	0.0590	15.41	0.0348
Highest		1	0	17.44	0.0555	15.14	0.0327
Limit	EIRP < 2W			Result		PASS	



LTE Band 25 / 10MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	25	0	18.19	0.0659	15.89	0.0388
Middle		25	0	17.83	0.0607	15.53	0.0357
Highest		25	0	18.03	0.0635	15.73	0.0374
Lowest	16QAM	1	0	18.06	0.0640	15.76	0.0377
Middle		1	0	17.55	0.0569	15.25	0.0335
Highest		1	0	17.65	0.0582	15.35	0.0343
Lowest	64QAM	50	0	17.75	0.0596	15.45	0.0351
Middle		50	0	17.39	0.0548	15.09	0.0323
Highest		50	0	17.67	0.0585	15.37	0.0344
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 15MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	18.38	0.0689	16.08	0.0406
Middle		1	74	17.90	0.0617	15.60	0.0363
Highest		1	74	18.29	0.0675	15.99	0.0397
Lowest	16QAM	1	37	18.19	0.0659	15.89	0.0388
Middle		1	37	17.74	0.0594	15.44	0.0350
Highest		1	37	17.99	0.0630	15.69	0.0371
Lowest	64QAM	1	74	18.13	0.0650	15.83	0.0383
Middle		1	74	17.68	0.0586	15.38	0.0345
Highest		1	74	17.76	0.0597	15.46	0.0352
Limit	EIRP < 2W			Result		PASS	

LTE Band 25 / 20MHz (Average) (GT - LC = -2.3 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	50	24	18.25	0.0668	15.95	0.0394
Middle		50	24	18.08	0.0643	15.78	0.0378
Highest		50	24	18.39	0.0690	16.09	0.0406
Lowest	16QAM	1	0	18.26	0.0670	15.96	0.0394
Middle		1	0	17.68	0.0586	15.38	0.0345
Highest		1	0	18.19	0.0659	15.89	0.0388
Lowest	64QAM	1	0	18.04	0.0637	15.74	0.0375
Middle		1	0	17.88	0.0614	15.58	0.0361
Highest		1	0	18.11	0.0647	15.81	0.0381
Limit	EIRP < 2W			Result		PASS	



LTE Band 4 / 1.4MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	3	1	17.95	0.0624	16.45	0.0442
Middle		3	1	18.01	0.0632	16.51	0.0448
Highest		3	1	18.06	0.0640	16.56	0.0453
Lowest	16QAM	1	3	17.77	0.0598	16.27	0.0424
Middle		1	3	18.00	0.0631	16.50	0.0447
Highest		1	3	17.62	0.0578	16.12	0.0409
Lowest	64QAM	3	3	17.51	0.0564	16.01	0.0399
Middle		3	3	17.55	0.0569	16.05	0.0403
Highest		3	3	17.80	0.0603	16.30	0.0427
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 3MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	8	18.01	0.0632	16.51	0.0448
Middle		1	8	18.18	0.0658	16.68	0.0466
Highest		1	8	18.12	0.0649	16.62	0.0459
Lowest	16QAM	1	8	18.02	0.0634	16.52	0.0449
Middle		1	8	18.11	0.0647	16.61	0.0458
Highest		1	8	18.08	0.0643	16.58	0.0455
Lowest	64QAM	1	8	17.74	0.0594	16.24	0.0421
Middle		1	8	17.94	0.0622	16.44	0.0441
Highest		1	8	18.07	0.0641	16.57	0.0454
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 5MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	12	13	18.00	0.0631	16.50	0.0447
Middle		12	13	18.04	0.0637	16.54	0.0451
Highest		12	13	18.14	0.0652	16.64	0.0461
Lowest	16QAM	12	7	17.60	0.0575	16.10	0.0407
Middle		12	7	17.64	0.0581	16.14	0.0411
Highest		12	7	17.58	0.0573	16.08	0.0406
Lowest	64QAM	1	12	17.74	0.0594	16.24	0.0421
Middle		1	12	17.90	0.0617	16.40	0.0437
Highest		1	12	17.89	0.0615	16.39	0.0436
Limit	EIRP < 1W			Result		PASS	



LTE Band 4 / 10MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	17.77	0.0598	16.27	0.0424
Middle		1	25	18.09	0.0644	16.59	0.0456
Highest		1	25	18.21	0.0662	16.71	0.0469
Lowest	16QAM	1	25	17.93	0.0621	16.43	0.0440
Middle		1	25	17.58	0.0573	16.08	0.0406
Highest		1	25	18.14	0.0652	16.64	0.0461
Lowest	64QAM	1	0	17.26	0.0532	15.76	0.0377
Middle		1	0	17.98	0.0628	16.48	0.0445
Highest		1	0	17.92	0.0619	16.42	0.0439
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 15MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	36	20	18.09	0.0644	16.59	0.0456
Middle		36	20	18.26	0.0670	16.76	0.0474
Highest		36	20	18.35	0.0684	16.85	0.0484
Lowest	16QAM	1	74	17.56	0.0570	16.06	0.0404
Middle		1	74	18.11	0.0647	16.61	0.0458
Highest		1	74	18.02	0.0634	16.52	0.0449
Lowest	64QAM	1	37	17.47	0.0558	15.97	0.0395
Middle		1	37	18.09	0.0644	16.59	0.0456
Highest		1	37	17.76	0.0597	16.26	0.0423
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 20MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	50	24	18.17	0.0656	16.67	0.0465
Middle		50	24	18.24	0.0667	16.74	0.0472
Highest		50	24	18.36	0.0685	16.86	0.0485
Lowest	16QAM	1	0	17.59	0.0574	16.09	0.0406
Middle		1	0	18.14	0.0652	16.64	0.0461
Highest		1	0	17.63	0.0579	16.13	0.0410
Lowest	64QAM	1	0	17.96	0.0625	16.46	0.0443
Middle		1	0	17.85	0.0610	16.35	0.0432
Highest		1	0	18.14	0.0652	16.64	0.0461
Limit	EIRP < 1W			Result		PASS	



LTE Band 5 / 1.4MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	3	23.57	0.2275	17.92	0.0619
Middle		1	3	23.55	0.2265	17.90	0.0617
Highest		1	3	23.61	0.2296	17.96	0.0625
Lowest	16QAM	1	3	22.15	0.1641	16.50	0.0447
Middle		1	3	22.29	0.1694	16.64	0.0461
Highest		1	3	22.30	0.1698	16.65	0.0462
Lowest	64QAM	1	3	21.11	0.1291	15.46	0.0352
Middle		1	3	21.51	0.1416	15.86	0.0385
Highest		1	3	21.16	0.1306	15.51	0.0356
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 3MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	23.58	0.2280	17.93	0.0621
Middle		1	8	23.64	0.2312	17.99	0.0630
Highest		1	8	23.63	0.2307	17.98	0.0628
Lowest	16QAM	1	8	22.61	0.1824	16.96	0.0497
Middle		1	8	22.51	0.1782	16.86	0.0485
Highest		1	8	22.28	0.1690	16.63	0.0460
Lowest	64QAM	1	8	21.36	0.1368	15.71	0.0372
Middle		1	8	21.33	0.1358	15.68	0.0370
Highest		1	8	21.54	0.1426	15.89	0.0388
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 5MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	23.42	0.2198	17.77	0.0598
Middle		1	12	23.61	0.2296	17.96	0.0625
Highest		1	12	23.60	0.2291	17.95	0.0624
Lowest	16QAM	1	12	22.20	0.1660	16.55	0.0452
Middle		1	12	22.21	0.1663	16.56	0.0453
Highest		1	12	22.11	0.1626	16.46	0.0443
Lowest	64QAM	1	12	21.28	0.1343	15.63	0.0366
Middle		1	12	21.39	0.1377	15.74	0.0375
Highest		1	12	21.44	0.1393	15.79	0.0379
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 10MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.55	0.2265	17.90	0.0617
Middle		1	0	23.53	0.2254	17.88	0.0614
Highest		1	0	23.65	0.2317	18.00	0.0631
Lowest	16QAM	1	49	22.41	0.1742	16.76	0.0474
Middle		1	49	22.29	0.1694	16.64	0.0461
Highest		1	49	22.26	0.1683	16.61	0.0458
Lowest	64QAM	1	0	21.03	0.1268	15.38	0.0345
Middle		1	0	21.34	0.1361	15.69	0.0371
Highest		1	0	21.24	0.1330	15.59	0.0362
Limit	ERP < 7W			Result		PASS	



LTE Band 7 / 5MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	12	13	19.84	0.0964	18.94	0.0783
Middle		12	13	19.74	0.0942	18.84	0.0766
Highest		12	13	19.76	0.0946	18.86	0.0769
Lowest	16QAM	1	12	19.47	0.0885	18.57	0.0719
Middle		1	12	19.44	0.0879	18.54	0.0714
Highest		1	12	19.39	0.0869	18.49	0.0706
Lowest	64QAM	1	24	19.45	0.0881	18.55	0.0716
Middle		1	24	19.33	0.0857	18.43	0.0697
Highest		1	24	19.42	0.0875	18.52	0.0711
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 10MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	25	12	19.68	0.0929	18.78	0.0755
Middle		25	12	19.74	0.0942	18.84	0.0766
Highest		25	12	19.71	0.0935	18.81	0.0760
Lowest	16QAM	1	25	19.36	0.0863	18.46	0.0701
Middle		1	25	19.39	0.0869	18.49	0.0706
Highest		1	25	19.36	0.0863	18.46	0.0701
Lowest	64QAM	1	49	19.30	0.0851	18.40	0.0692
Middle		1	49	19.35	0.0861	18.45	0.0700
Highest		1	49	19.35	0.0861	18.45	0.0700
Limit	EIRP < 2W			Result		PASS	

LTE Band 7 / 15MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	36	20	19.86	0.0968	18.96	0.0787
Middle		36	20	19.86	0.0968	18.96	0.0787
Highest		36	20	19.89	0.0975	18.99	0.0793
Lowest	16QAM	1	74	19.50	0.0891	18.60	0.0724
Middle		1	74	19.50	0.0891	18.60	0.0724
Highest		1	74	19.54	0.0899	18.64	0.0731
Lowest	64QAM	1	0	19.40	0.0871	18.50	0.0708
Middle		1	0	19.37	0.0865	18.47	0.0703
Highest		1	0	19.49	0.0889	18.59	0.0723
Limit	EIRP < 2W			Result		PASS	



LTE Band 7 / 20MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	50	24	19.94	0.0986	19.04	0.0802
Middle		50	24	19.83	0.0962	18.93	0.0782
Highest		50	24	19.75	0.0944	18.85	0.0767
Lowest	16QAM	1	99	19.55	0.0902	18.65	0.0733
Middle		1	99	19.48	0.0887	18.58	0.0721
Highest		1	99	19.37	0.0865	18.47	0.0703
Lowest	64QAM	1	99	19.52	0.0895	18.62	0.0728
Middle		1	99	19.43	0.0877	18.53	0.0713
Highest		1	99	19.30	0.0851	18.40	0.0692
Limit	EIRP < 2W			Result		PASS	



LTE Band 12 / 1.4MHz (Average) (GT - LC = -4.9 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	3	23.52	0.2249	16.47	0.0444
Middle		1	3	23.28	0.2128	16.23	0.0420
Highest		1	3	23.45	0.2213	16.40	0.0437
Lowest	16QAM	1	0	22.33	0.1710	15.28	0.0337
Middle		1	0	21.78	0.1507	14.73	0.0297
Highest		1	0	22.05	0.1603	15.00	0.0316
Lowest	64QAM	1	0	20.98	0.1253	13.93	0.0247
Middle		1	0	20.77	0.1194	13.72	0.0236
Highest		1	0	21.18	0.1312	14.13	0.0259
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 3MHz (Average) (GT - LC = -4.9 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	23.57	0.2275	16.52	0.0449
Middle		1	8	23.31	0.2143	16.26	0.0423
Highest		1	8	23.55	0.2265	16.50	0.0447
Lowest	16QAM	1	8	22.55	0.1799	15.50	0.0355
Middle		1	8	22.03	0.1596	14.98	0.0315
Highest		1	8	21.92	0.1556	14.87	0.0307
Lowest	64QAM	1	8	21.21	0.1321	14.16	0.0261
Middle		1	8	21.29	0.1346	14.24	0.0265
Highest		1	8	21.34	0.1361	14.29	0.0269
Limit	ERP < 3W			Result		PASS	

LTE Band 12 / 5MHz (Average) (GT - LC = -4.9 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	23.51	0.2244	16.46	0.0443
Middle		1	24	23.33	0.2153	16.28	0.0425
Highest		1	24	23.44	0.2208	16.39	0.0436
Lowest	16QAM	1	24	22.49	0.1774	15.44	0.0350
Middle		1	24	21.67	0.1469	14.62	0.0290
Highest		1	24	22.10	0.1622	15.05	0.0320
Lowest	64QAM	1	24	21.41	0.1384	14.36	0.0273
Middle		1	24	21.14	0.1300	14.09	0.0256
Highest		1	24	20.78	0.1197	13.73	0.0236
Limit	ERP < 3W			Result		PASS	



LTE Band 12 / 10MHz (Average) (GT - LC = -4.9 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	49	23.95	0.2483	16.90	0.0490
Middle		1	49	23.19	0.2084	16.14	0.0411
Highest		1	49	23.51	0.2244	16.46	0.0443
Lowest	16QAM	1	49	21.95	0.1567	14.90	0.0309
Middle		1	49	21.96	0.1570	14.91	0.0310
Highest		1	49	22.61	0.1824	15.56	0.0360
Lowest	64QAM	1	49	21.50	0.1413	14.45	0.0279
Middle		1	49	21.09	0.1285	14.04	0.0254
Highest		1	49	21.20	0.1318	14.15	0.0260
Limit	ERP < 3W			Result		PASS	



LTE Band 13 / 5MHz (Average) (GT - LC = -2.8 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	23.42	0.2198	18.47	0.0703
Middle		1	24	23.46	0.2218	18.51	0.0710
Highest		1	24	23.49	0.2234	18.54	0.0714
Lowest	16QAM	1	24	22.46	0.1762	17.51	0.0564
Middle		1	24	22.17	0.1648	17.22	0.0527
Highest		1	24	22.45	0.1758	17.50	0.0562
Lowest	64QAM	1	24	21.24	0.1330	16.29	0.0426
Middle		1	24	21.05	0.1274	16.10	0.0407
Highest		1	24	21.05	0.1274	16.10	0.0407
Limit	ERP < 3W			Result		PASS	

LTE Band 13 / 10MHz (Average) (GT - LC = -2.8 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	-	-	-	-	-	-
Middle		1	25	23.52	0.2249	18.57	0.0719
Highest		-	-	-	-	-	-
Lowest	16QAM	-	-	-	-	-	-
Middle		1	25	22.33	0.1710	17.38	0.0547
Highest		-	-	-	-	-	-
Lowest	64QAM	-	-	-	-	-	-
Middle		1	25	21.34	0.1361	16.39	0.0436
Highest		-	-	-	-	-	-
Limit	ERP < 3W			Result		PASS	



LTE Band 17 / 5MHz (Average) (GT - LC = -4.9 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	23.62	0.2301	16.57	0.0454
Middle		1	24	23.69	0.2339	16.64	0.0461
Highest		1	24	23.50	0.2239	16.45	0.0442
Lowest	16QAM	1	24	22.66	0.1845	15.61	0.0364
Middle		1	24	22.66	0.1845	15.61	0.0364
Highest		1	24	22.50	0.1778	15.45	0.0351
Lowest	64QAM	1	12	21.33	0.1358	14.28	0.0268
Middle		1	12	21.05	0.1274	14.00	0.0251
Highest		1	12	21.07	0.1279	14.02	0.0252
Limit	ERP < 3W			Result		PASS	

LTE Band 17 / 10MHz (Average) (GT - LC = -4.9 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	23.69	0.2339	16.64	0.0461
Middle		1	25	23.69	0.2339	16.64	0.0461
Highest		1	25	23.76	0.2377	16.71	0.0469
Lowest	16QAM	1	49	22.37	0.1726	15.32	0.0340
Middle		1	49	22.47	0.1766	15.42	0.0348
Highest		1	49	22.89	0.1945	15.84	0.0384
Lowest	64QAM	1	0	21.59	0.1442	14.54	0.0284
Middle		1	0	21.23	0.1327	14.18	0.0262
Highest		1	0	21.41	0.1384	14.36	0.0273
Limit	ERP < 3W			Result		PASS	



LTE Band 41 / 5MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	12	13	21.97	0.1574	21.07	0.1279
Middle		12	13	22.01	0.1589	21.11	0.1291
Highest		12	13	21.77	0.1503	20.87	0.1222
Lowest	16QAM	1	24	21.46	0.1400	20.56	0.1138
Middle		1	24	21.52	0.1419	20.62	0.1153
Highest		1	24	21.28	0.1343	20.38	0.1091
Lowest	64QAM	1	12	21.24	0.1330	20.34	0.1081
Middle		1	12	21.29	0.1346	20.39	0.1094
Highest		1	12	21.05	0.1274	20.15	0.1035
Limit	EIRP < 2W			Result		PASS	

LTE Band 41 / 10MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	25	12	21.91	0.1552	21.01	0.1262
Middle		25	12	21.99	0.1581	21.09	0.1285
Highest		25	12	21.79	0.1510	20.89	0.1227
Lowest	16QAM	25	12	21.50	0.1413	20.60	0.1148
Middle		25	12	21.53	0.1422	20.63	0.1156
Highest		25	12	21.33	0.1358	20.43	0.1104
Lowest	64QAM	1	0	21.19	0.1315	20.29	0.1069
Middle		1	0	21.24	0.1330	20.34	0.1081
Highest		1	0	21.03	0.1268	20.13	0.1030
Limit	EIRP < 2W			Result		PASS	

LTE Band 41 / 15MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	36	39	22.11	0.1626	21.21	0.1321
Middle		36	39	22.13	0.1633	21.23	0.1327
Highest		36	39	21.94	0.1563	21.04	0.1271
Lowest	16QAM	75	0	21.63	0.1455	20.73	0.1183
Middle		75	0	21.66	0.1466	20.76	0.1191
Highest		75	0	21.44	0.1393	20.54	0.1132
Lowest	64QAM	1	74	21.38	0.1374	20.48	0.1117
Middle		1	74	21.39	0.1377	20.49	0.1119
Highest		1	74	21.23	0.1327	20.33	0.1079
Limit	EIRP < 2W			Result		PASS	



LTE Band 41 / 20MHz (Average) (GT - LC = -0.9 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	50	50	22.15	0.1641	21.25	0.1334
Middle		50	50	22.14	0.1637	21.24	0.1330
Highest		50	50	22.01	0.1589	21.11	0.1291
Lowest	16QAM	50	50	21.69	0.1476	20.79	0.1199
Middle		50	50	21.68	0.1472	20.78	0.1197
Highest		50	50	21.56	0.1432	20.66	0.1164
Lowest	64QAM	1	0	21.37	0.1371	20.47	0.1114
Middle		1	0	21.30	0.1349	20.40	0.1096
Highest		1	0	21.07	0.1279	20.17	0.1040
Limit	EIRP < 2W			Result		PASS	



LTE Band 26 / 1.4MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	3	23.37	0.2173	17.72	0.0592
Middle		1	3	23.49	0.2234	17.84	0.0608
Highest		1	3	23.27	0.2123	17.62	0.0578
Lowest	16QAM	1	3	22.36	0.1722	16.71	0.0469
Middle		1	3	22.02	0.1592	16.37	0.0434
Highest		1	3	22.03	0.1596	16.38	0.0435
Lowest	64QAM	1	3	21.23	0.1327	15.58	0.0361
Middle		1	3	21.38	0.1374	15.73	0.0374
Highest		1	3	20.90	0.1230	15.25	0.0335
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 3MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	23.40	0.2188	17.75	0.0596
Middle		1	8	23.43	0.2203	17.78	0.0600
Highest		1	8	23.32	0.2148	17.67	0.0585
Lowest	16QAM	1	0	22.04	0.1600	16.39	0.0436
Middle		1	0	22.10	0.1622	16.45	0.0442
Highest		1	0	22.28	0.1690	16.63	0.0460
Lowest	64QAM	1	0	21.03	0.1268	15.38	0.0345
Middle		1	0	21.34	0.1361	15.69	0.0371
Highest		1	0	20.60	0.1148	14.95	0.0313
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 5MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	24	23.32	0.2148	17.67	0.0585
Middle		1	24	23.42	0.2198	17.77	0.0598
Highest		1	24	23.30	0.2138	17.65	0.0582
Lowest	16QAM	1	24	21.82	0.1521	16.17	0.0414
Middle		1	24	22.02	0.1592	16.37	0.0434
Highest		1	24	22.29	0.1694	16.64	0.0461
Lowest	64QAM	1	12	21.17	0.1309	15.52	0.0356
Middle		1	12	21.40	0.1380	15.75	0.0376
Highest		1	12	21.14	0.1300	15.49	0.0354
Limit	ERP < 7W			Result		PASS	



LTE Band 26 / 10MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.67	0.2328	18.02	0.0634
Middle		1	0	23.40	0.2188	17.75	0.0596
Highest		1	0	23.49	0.2234	17.84	0.0608
Lowest	16QAM	1	25	22.47	0.1766	16.82	0.0481
Middle		1	25	22.34	0.1714	16.69	0.0467
Highest		1	25	22.62	0.1828	16.97	0.0498
Lowest	64QAM	1	25	20.83	0.1211	15.18	0.0330
Middle		1	25	20.80	0.1202	15.15	0.0327
Highest		1	25	21.37	0.1371	15.72	0.0373
Limit	ERP < 7W			Result		PASS	

LTE Band 26 / 15MHz (Average) (GT - LC = -3.5 dB)							
Channel	Mode	RB		Conducted		ERP	
		Size	Offset	Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	0	23.68	0.2333	18.03	0.0635
Middle		1	0	23.50	0.2239	17.85	0.0610
Highest		1	0	23.55	0.2265	17.90	0.0617
Lowest	16QAM	1	37	22.68	0.1854	17.03	0.0505
Middle		1	37	22.27	0.1687	16.62	0.0459
Highest		1	37	22.12	0.1629	16.47	0.0444
Lowest	64QAM	1	0	21.44	0.1393	15.79	0.0379
Middle		1	0	21.61	0.1449	15.96	0.0394
Highest		1	0	21.48	0.1406	15.83	0.0383
Limit	ERP < 7W			Result		PASS	



LTE Band 66 / 1.4MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	6	0	17.93	0.0621	16.43	0.0440
Middle		6	0	17.99	0.0630	16.49	0.0446
Highest		6	0	18.11	0.0647	16.61	0.0458
Lowest	16QAM	1	3	17.36	0.0545	15.86	0.0385
Middle		1	3	17.59	0.0574	16.09	0.0406
Highest		1	3	18.01	0.0632	16.51	0.0448
Lowest	64QAM	1	3	17.76	0.0597	16.26	0.0423
Middle		1	3	17.85	0.0610	16.35	0.0432
Highest		1	3	17.78	0.0600	16.28	0.0425
Limit	EIRP < 1W		Result		PASS		

LTE Band 66 / 3MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	8	4	18.02	0.0634	16.52	0.0449
Middle		8	4	18.13	0.0650	16.63	0.0460
Highest		8	4	18.03	0.0635	16.53	0.0450
Lowest	16QAM	1	14	17.93	0.0621	16.43	0.0440
Middle		1	14	17.66	0.0583	16.16	0.0413
Highest		1	14	18.01	0.0632	16.51	0.0448
Lowest	64QAM	1	14	17.54	0.0568	16.04	0.0402
Middle		1	14	17.91	0.0618	16.41	0.0438
Highest		1	14	17.44	0.0555	15.94	0.0393
Limit	EIRP < 1W		Result		PASS		

LTE Band 66 / 5MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	12	7	18.04	0.0637	16.54	0.0451
Middle		12	7	18.12	0.0649	16.62	0.0459
Highest		12	7	18.08	0.0643	16.58	0.0455
Lowest	16QAM	1	24	17.94	0.0622	16.44	0.0441
Middle		1	24	17.72	0.0592	16.22	0.0419
Highest		1	24	18.08	0.0643	16.58	0.0455
Lowest	64QAM	1	24	17.56	0.0570	16.06	0.0404
Middle		1	24	17.90	0.0617	16.40	0.0437
Highest		1	24	17.64	0.0581	16.14	0.0411
Limit	EIRP < 1W		Result		PASS		



LTE Band 66 / 10MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	25	12	17.99	0.0630	16.49	0.0446
Middle		25	12	18.06	0.0640	16.56	0.0453
Highest		25	12	18.24	0.0667	16.74	0.0472
Lowest	16QAM	1	0	17.78	0.0600	16.28	0.0425
Middle		1	0	18.21	0.0662	16.71	0.0469
Highest		1	0	17.78	0.0600	16.28	0.0425
Lowest	64QAM	25	0	17.62	0.0578	16.12	0.0409
Middle		25	0	17.67	0.0585	16.17	0.0414
Highest		25	0	17.75	0.0596	16.25	0.0422
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 15MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	36	0	18.33	0.0681	16.83	0.0482
Middle		36	0	18.31	0.0678	16.81	0.0480
Highest		36	0	18.42	0.0695	16.92	0.0492
Lowest	16QAM	1	0	18.18	0.0658	16.68	0.0466
Middle		1	0	17.90	0.0617	16.40	0.0437
Highest		1	0	18.29	0.0675	16.79	0.0478
Lowest	64QAM	1	0	17.83	0.0607	16.33	0.0430
Middle		1	0	18.08	0.0643	16.58	0.0455
Highest		1	0	17.98	0.0628	16.48	0.0445
Limit	EIRP < 1W			Result		PASS	

LTE Band 66 / 20MHz (Average) (GT - LC = -1.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	50	0	18.18	0.0658	16.68	0.0466
Middle		50	0	18.30	0.0676	16.80	0.0479
Highest		50	0	18.44	0.0698	16.94	0.0494
Lowest	16QAM	1	49	17.71	0.0590	16.21	0.0418
Middle		1	49	18.00	0.0631	16.50	0.0447
Highest		1	49	18.17	0.0656	16.67	0.0465
Lowest	64QAM	1	49	17.84	0.0608	16.34	0.0431
Middle		1	49	17.95	0.0624	16.45	0.0442
Highest		1	49	18.18	0.0658	16.68	0.0466
Limit	EIRP < 1W			Result		PASS	



Radiated Spurious Emission

LTE Band 7

LTE Band 7 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5016	-65.83	-25	-40.83	-58.68	-75.58	2.35	12.10	H
	7529	-61.20	-25	-36.20	-59.32	-69.19	2.11	10.10	H
	10044	-60.11	-25	-35.11	-62.12	-70.06	1.87	11.82	H
									H
									H
									H
	5016	-64.86	-25	-39.86	-58.33	-74.61	2.35	12.10	V
	7529	-61.09	-25	-36.09	-59.11	-69.08	2.11	10.10	V
	10044	-60.54	-25	-35.54	-61.7	-70.49	1.87	11.82	V
									V
									V
									V
Middle	5046	-65.63	-25	-40.63	-58.66	-75.40	2.34	12.11	H
	7604	-62.65	-25	-37.65	-60.34	-70.91	2.11	10.37	H
	10140	-58.67	-25	-33.67	-60.82	-68.50	2.02	11.86	H
									H
									H
									H
	5046	-65.08	-25	-40.08	-58.71	-74.85	2.34	12.11	V
	7604	-62.49	-25	-37.49	-60.22	-70.75	2.11	10.37	V
	10140	-59.68	-25	-34.68	-61.17	-69.51	2.02	11.86	V
									V
									V
									V



Highest	5124	-65.15	-25	-40.15	-58.39	-74.97	2.31	12.12	H
	7680	-61.00	-25	-36.00	-58.88	-69.53	2.11	10.65	H
	10236	-59.84	-25	-34.84	-62.14	-69.56	2.17	11.89	H
									H
									H
									H
									H
	5124	-64.93	-25	-39.93	-58.75	-74.75	2.31	12.12	V
	7680	-60.79	-25	-35.79	-58.72	-69.32	2.11	10.65	V
	10236	-60.12	-25	-35.12	-61.94	-69.84	2.17	11.89	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 12

LTE Band 12 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1416	-62.05	-13.00	-49.05	-74.04	-66.56	1.15	7.81	H
	2126	-60.09	-13.00	-47.09	-75.07	-66.76	1.38	10.20	H
	2834	-59.96	-13.00	-46.96	-75.41	-67.12	1.45	10.77	H
									H
									H
									H
									H
	1416	-62.35	-13.00	-49.35	-73.81	-66.86	1.15	7.81	V
	2126	-60.22	-13.00	-47.22	-75.52	-66.89	1.38	10.20	V
	2834	-59.99	-13.00	-46.99	-75.86	-67.15	1.45	10.77	V
									V
									V
									V
									V
Middle	1424	-62.31	-13.00	-49.31	-74.26	-66.86	1.15	7.85	H
	2136	-54.82	-13.00	-41.82	-69.97	-61.50	1.38	10.21	H
	2848	-60.41	-13.00	-47.41	-75.89	-67.58	1.45	10.78	H
									H
									H
									H
									H
	1424	-62.81	-13.00	-49.81	-74.26	-67.36	1.15	7.85	V
	2136	-52.86	-13.00	-39.86	-68.35	-59.54	1.38	10.21	V
	2848	-60.10	-13.00	-47.10	-76.01	-67.27	1.45	10.78	V
									V
									V
									V
									V



Highest	1432	-61.85	-13.00	-48.85	-73.79	-66.43	1.16	7.89	H
	2146	-60.59	-13.00	-47.59	-75.91	-67.27	1.38	10.22	H
	2861	-60.33	-13.00	-47.33	-75.83	-67.51	1.45	10.79	H
									H
									H
									H
									H
	1432	-62.33	-13.00	-49.33	-73.79	-66.91	1.16	7.89	V
	2146	-60.10	-13.00	-47.10	-75.78	-66.78	1.38	10.22	V
	2861	-59.75	-13.00	-46.75	-75.69	-66.93	1.45	10.79	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 13

LTE Band 13 / 5MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1559	-63.35	-42.15	-21.20	-64.35	-68.43	1.19	8.42	H
	2338	-60.50	-13	-47.50	-61.50	-67.31	1.41	10.37	H
	3118	-59.67	-13	-46.67	-60.67	-67.22	1.56	11.25	H
									H
									H
									H
									H
	1559	-63.53	-42.15	-21.38	-64.53	-68.61	1.19	8.42	V
	2338	-59.92	-13	-46.92	-60.92	-66.73	1.41	10.37	V
	3118	-58.79	-13	-45.79	-59.79	-66.34	1.56	11.25	V
									V
									V
									V
									V
Middle	1560	-63.12	-42.15	-20.97	-64.12	-68.21	1.19	8.43	H
	2346	-60.75	-13	-47.75	-61.75	-67.56	1.42	10.38	H
	3128	-59.82	-13	-46.82	-60.82	-67.39	1.56	11.28	H
									H
									H
									H
									H
	1560	-63.51	-42.15	-21.36	-64.51	-68.60	1.19	8.43	V
	2346	-60.08	-13	-47.08	-61.08	-66.89	1.42	10.38	V
	3128	-59.46	-13	-46.46	-60.46	-67.03	1.56	11.28	V
									V
									V
									V
									V
								V	



Highest	1568	-63.63	-42.15	-21.48	-64.63	-68.74	1.20	8.46	H
	2353	-60.50	-13	-47.50	-61.50	-67.32	1.42	10.38	H
	3138	-59.31	-13	-46.31	-60.31	-66.90	1.57	11.31	H
									H
									H
									H
									H
	1568	-63.45	-42.15	-21.30	-64.45	-68.56	1.20	8.46	V
	2344	-60.22	-13	-47.22	-61.22	-67.03	1.42	10.38	V
	3136	-59.52	-13	-46.52	-60.52	-67.11	1.57	11.31	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 13 / 10MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1564	-63.34	-42.15	-21.19	-64.34	-68.44	1.19	8.44	H
	2346	-60.69	-13	-47.69	-61.69	-67.50	1.42	10.38	H
	3128	-59.32	-13	-46.32	-60.32	-66.89	1.56	11.28	H
									H
									H
									H
									H
	1564	-63.70	-42.15	-21.55	-64.7	-68.80	1.19	8.44	V
	2346	-60.02	-13	-47.02	-61.02	-66.83	1.42	10.38	V
	3128	-59.21	-13	-46.21	-60.21	-66.78	1.56	11.28	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 25

LTE Band 25 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3721	-58.67	-13	-45.67	-76.79	-68.95	1.98	12.27	H
	5576	-56.32	-13	-43.32	-77.07	-66.49	2.14	12.31	H
	7438	-51.25	-13	-38.25	-76.79	-59.21	2.15	10.11	H
									H
									H
									H
									H
	3721	-58.12	-13	-45.12	-76.76	-68.40	1.98	12.27	V
	5576	-55.89	-13	-42.89	-77.28	-66.06	2.14	12.31	V
	7438	-51.47	-13	-38.47	-76.93	-59.43	2.15	10.11	V
									V
									V
									V
									V
Middle	3756	-58.55	-13	-45.55	-76.74	-68.79	2.00	12.25	H
	5639	-56.17	-13	-43.17	-77.1	-66.44	2.12	12.39	H
	7522	-51.07	-13	-38.07	-76.36	-59.03	2.11	10.08	H
									H
									H
									H
									H
	3756	-57.78	-13	-44.78	-76.47	-68.02	2.00	12.25	V
	5639	-55.55	-13	-42.55	-77.1	-65.82	2.12	12.39	V
	7522	-51.37	-13	-38.37	-76.56	-59.33	2.11	10.08	V
									V
									V
									V
									V



Highest	3812	-58.53	-13	-45.53	-76.81	-68.71	2.03	12.21	H
	5714	-56.26	-13	-43.26	-77.61	-66.65	2.11	12.50	H
	7618	-51.41	-13	-38.41	-76.22	-59.72	2.11	10.42	H
									H
									H
									H
									H
	3812	-58.03	-13	-45.03	-76.79	-68.21	2.03	12.21	V
	5714	-55.44	-13	-42.44	-77.35	-65.83	2.11	12.50	V
	7618	-51.60	-13	-38.60	-76.45	-59.91	2.11	10.42	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 26

LTE Band 26 / 15MHz / QPSK									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-64.25	-13	-51.25	-74.97	-69.64	1.23	8.76	H
	2475	-61.26	-13	-48.26	-75.78	-68.15	1.44	10.48	H
	3300	-59.96	-13	-46.96	-75.99	-67.90	1.71	11.80	H
									H
									H
									H
									H
	1648	-63.98	-13	-50.98	-74.58	-69.37	1.23	8.76	V
	2475	-60.60	-13	-47.60	-75.4	-67.49	1.44	10.48	V
	3300	-60.03	-13	-47.03	-76.46	-67.97	1.71	11.80	V
									V
									V
									V
									V
Middle	1656	-64.58	-13	-51.58	-75.31	-69.99	1.23	8.79	H
	2490	-61.26	-13	-48.26	-75.75	-68.16	1.44	10.49	H
	3320	-60.04	-13	-47.04	-75.95	-68.03	1.72	11.86	H
									H
									H
									H
									H
	1656	-64.59	-13	-51.59	-75.19	-70.00	1.23	8.79	V
	2490	-60.90	-13	-47.90	-75.61	-67.80	1.44	10.49	V
	3320	-59.83	-13	-46.83	-76.31	-67.82	1.72	11.86	V
									V
									V
									V
									V



Highest	1672	-64.33	-13	-51.33	-75.09	-69.80	1.24	8.85	H
	2505	-61.12	-13	-48.12	-75.58	-68.03	1.44	10.50	H
	3340	-60.02	-13	-47.02	-75.8	-68.05	1.74	11.92	H
									H
									H
									H
									H
	1672	-64.20	-13	-51.20	-74.85	-69.67	1.24	8.85	V
	2505	-61.31	-13	-48.31	-75.97	-68.22	1.44	10.50	V
	3340	-59.43	-13	-46.43	-75.72	-67.46	1.74	11.92	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 41

LTE Band 41 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	5016	-65.64	-25	-40.64	-58.49	-75.39	2.35	12.10	H
	7536	-61.42	-25	-36.42	-59.49	-69.43	2.11	10.13	H
	10042	-60.04	-25	-35.04	-62.05	-69.99	1.87	11.82	H
									H
									H
									H
									H
	5016	-64.97	-25	-39.97	-58.44	-74.72	2.35	12.10	V
	7536	-61.46	-25	-36.46	-59.45	-69.47	2.11	10.13	V
	10042	-60.86	-25	-35.86	-62.02	-70.81	1.87	11.82	V
									V
									V
									V
									V
Middle	5196	-65.96	-25	-40.96	-59.46	-75.82	2.28	12.14	H
	7788	-61.55	-25	-36.55	-59.68	-70.47	2.11	11.04	H
	10390	-59.14	-25	-34.14	-61.68	-68.68	2.42	11.96	H
									H
									H
									H
									H
	5196	-64.88	-25	-39.88	-58.93	-74.74	2.28	12.14	V
	7788	-61.54	-25	-36.54	-59.73	-70.46	2.11	11.04	V
	10390	-59.36	-25	-34.36	-61.72	-68.90	2.42	11.96	V
									V
									V
									V
									V



Highest	5364	-65.67	-25	-40.67	-59.82	-75.63	2.21	12.17	H
	8053	-61.56	-25	-36.56	-60.89	-71.33	2.11	11.88	H
	10738	-59.09	-25	-34.09	-62.19	-68.13	2.62	11.67	H
									H
									H
									H
									H
	5364	-65.01	-25	-40.01	-59.67	-74.97	2.21	12.17	V
	8053	-61.84	-25	-36.84	-60.92	-71.61	2.11	11.88	V
	10738	-59.33	-25	-34.33	-62.47	-68.37	2.62	11.67	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



LTE Band 66

LTE Band 66 / 20MHz / QPSK									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3441	-59.69	-13	-46.69	-76.26	-70.09	1.82	12.22	H
	5160	-56.09	-13	-43.09	-76.75	-65.93	2.29	12.13	H
	6880	-53.18	-13	-40.18	-76.94	-61.82	2.38	11.02	H
									H
									H
									H
									H
	3441	-58.96	-13	-45.96	-76.1	-69.36	1.82	12.22	V
	5160	-55.51	-13	-42.51	-76.73	-65.35	2.29	12.13	V
	6880	-52.48	-13	-39.48	-76.81	-61.12	2.38	11.02	V
									V
									V
									V
									V
Middle	3490	-59.02	-13	-46.02	-76.1	-69.53	1.86	12.37	H
	5235	-56.44	-13	-43.44	-77.18	-66.32	2.26	12.15	H
	6980	-52.49	-13	-39.49	-76.54	-61.00	2.41	10.92	H
									H
									H
									H
									H
	3490	-58.59	-13	-45.59	-76.14	-69.10	1.86	12.37	V
	5235	-55.40	-13	-42.40	-76.68	-65.28	2.26	12.15	V
	6980	-51.81	-13	-38.81	-76.53	-60.32	2.41	10.92	V
									V
									V
									V
									V



Highest	3539	-59.30	-13	-46.30	-76.77	-69.79	1.89	12.38	H
	5310	-57.21	-13	-44.21	-78.02	-67.14	2.23	12.16	H
	7080	-51.88	-13	-38.88	-76.4	-60.26	2.37	10.76	H
									H
									H
									H
									H
	3539	-58.53	-13	-45.53	-76.5	-69.02	1.89	12.38	V
	5310	-56.47	-13	-43.47	-77.8	-66.40	2.23	12.16	V
	7080	-51.32	-13	-38.32	-76.39	-59.70	2.37	10.76	V
									V
									V
									V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Verification and validation of Mobile Country Code

1. For this product when the Mobile Country Code (=MCC) is set to US MCC, the below bands will be disabled.

- LTE B19

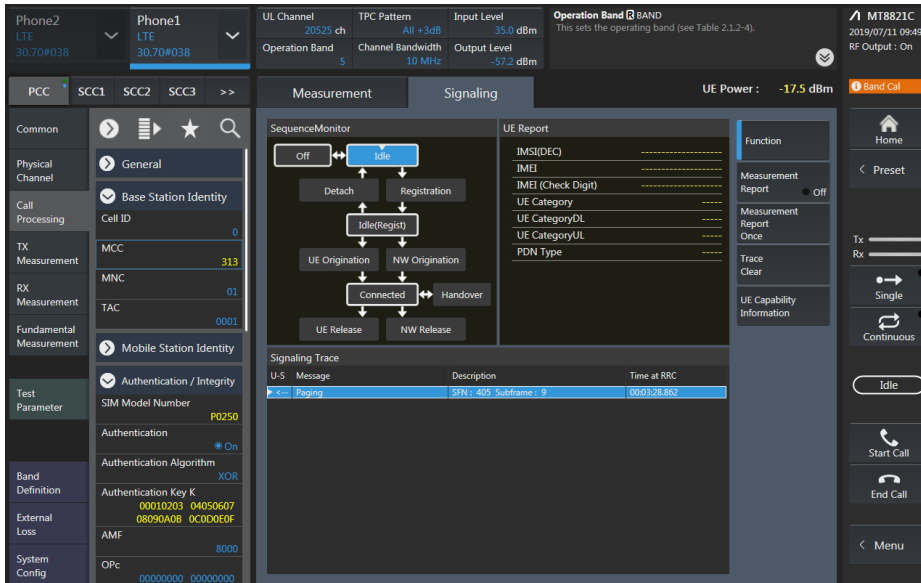
- LTE B38

- LTE B40

- LTE B46

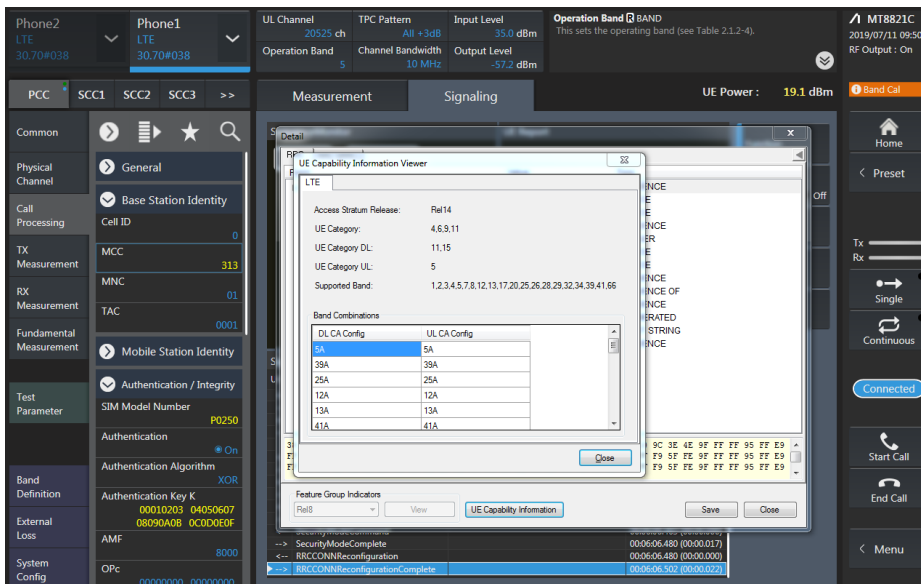
The following pages show that when US MCC is connected on the base station, LTE B19/38/40/46 cannot be registered and no capability (i.e. disabled). On the other hand, when non-US MCC is connected, the above bands are able to register and have capability.

➤ UE don't show B19, B38, B40 with US MCC (310)



The screenshot shows the UE configuration interface with the following details:

- Phone1 (LTE 30.70#038):** MCC: 313, MNC: 01, TAC: 0001
- Authentication / Integrity:** SIM Model Number: P0250, Authentication: On, Algorithm: XOR, Key K: 0010203 04050607 08090A0B 0C0D0E0F, AMF: 8000, OPC: 00000000 00000000
- Measurement / Signaling:** UE Power: -17.5 dBm
- SequenceMonitor:** State transitions from Idle to Detach, Registration, Idle(Regist), Connected, and back to Idle. Includes transitions for UE Origination, NW Origination, Handover, and UE Release/NW Release.
- UE Report:** IMSI(DEC), IMEI, IMEI (Check Digit), UE Category, UE CategoryDL, UE CategoryUL, PDN Type.
- Signaling Trace:** U-S Message: FRING, Description: SRR: 495, Subframe: 9, Time at RRC: 00:33:28.662

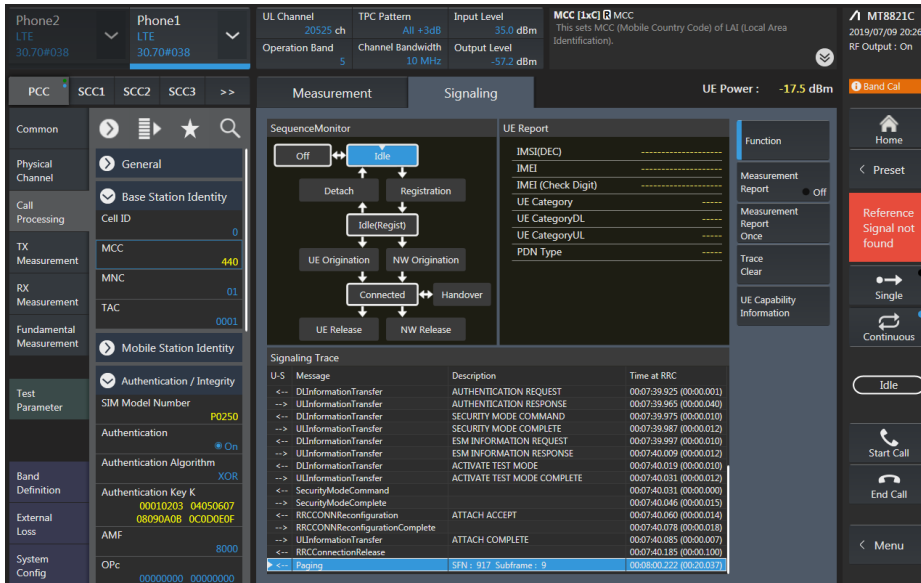


The screenshot shows the UE configuration interface with the following details:

- Phone1 (LTE 30.70#038):** MCC: 313, MNC: 01, TAC: 0001
- Authentication / Integrity:** SIM Model Number: P0250, Authentication: On, Algorithm: XOR, Key K: 0010203 04050607 08090A0B 0C0D0E0F, AMF: 8000, OPC: 00000000 00000000
- Measurement / Signaling:** UE Power: 19.1 dBm
- UE Capability Information Viewer (Open):**
 - Access Stratum Release: Rel14
 - UE Category: 4,6,9,11
 - UE Category DL: 11,15
 - UE Category UL: 5
 - Supported Band: 1,2,3,4,5,7,8,12,13,17,20,25,26,28,29,32,34,39,41,66
 - Band Combinations:

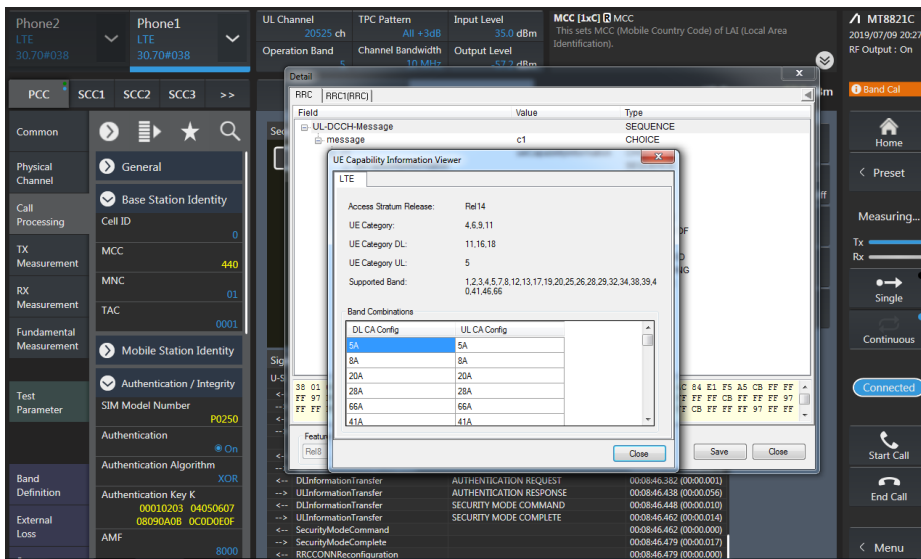
DL CA Config	UL CA Config
5A	5A
39A	39A
25A	25A
12A	12A
13A	13A
41A	41A
- Signaling Trace:** U-S Message: RRCCONNReconfigurationComplete, Description: RRCCONNReconfigurationComplete, Time at RRC: 00:06:06.302

➤ UE Shows B19, B38, B40, B46 with Non-US MCC (440)



The screenshot shows the UE measurement tool interface. The top status bar indicates the UE is in LTE mode on channel 20525 (B38) with an input level of 35.0 dBm and an output level of -57.2 dBm. The MCC is set to 440 (Non-US). The 'SequenceMonitor' window shows the state transitions: Idle (Regist) -> Connected -> Handover. The 'Signaling Trace' window shows the following messages:

U-S	Message	Description	Time at RRC
<-	DLInformationTransfer	AUTHENTICATION REQUEST	00:07:39.925 (00:00.001)
->	ULInformationTransfer	AUTHENTICATION RESPONSE	00:07:39.965 (00:00.040)
<-	DLInformationTransfer	SECURITY MODE COMMAND	00:07:39.975 (00:00.010)
->	ULInformationTransfer	SECURITY MODE COMPLETE	00:07:39.987 (00:00.012)
<-	DLInformationTransfer	ESM INFORMATION REQUEST	00:07:39.997 (00:00.010)
->	ULInformationTransfer	ESM INFORMATION RESPONSE	00:07:40.009 (00:00.012)
<-	DLInformationTransfer	ACTIVATE TEST MODE	00:07:40.019 (00:00.010)
->	ULInformationTransfer	ACTIVATE TEST MODE COMPLETE	00:07:40.031 (00:00.012)
<-	SecurityModeCommand	ATTACH ACCEPT	00:07:40.031 (00:00.000)
->	SecurityModeComplete	ATTACH ACCEPT	00:07:40.046 (00:00.015)
<-	RRCCONNReconfiguration	ATTACH ACCEPT	00:07:40.060 (00:00.014)
->	RRCCONNReconfigurationComplete	ATTACH ACCEPT	00:07:40.078 (00:00.018)
->	ULInformationTransfer	ATTACH COMPLETE	00:07:40.085 (00:00.007)
<-	RRCCONNRelease	ATTACH COMPLETE	00:07:40.135 (00:00.100)
<-	Paging	SFN: 917 Subframe: 9	00:08:00.222 (00:20.937)



The screenshot shows the UE measurement tool interface with the 'UE Capability Information Viewer' dialog box open. The dialog displays the following information:

- Access Stratum Release: Rel 14
- UE Category: 4,6,9,11
- UE Category DL: 11,16,18
- UE Category UL: 5
- Supported Band: 1,2,3,4,5,7,8,12,13,17,19,20,25,26,28,29,32,34,38,39,4,0,41,46,66

The 'Band Combinations' table is as follows:

DL CA Config	UL CA Config
5A	5A
5A	5A
20A	20A
20A	20A
66A	66A
41A	41A

The background shows the signaling trace with the following messages:

U-S	Message	Description	Time at RRC
<-	DLInformationTransfer	AUTHENTICATION REQUEST	00:08:46.382 (00:00.001)
->	ULInformationTransfer	AUTHENTICATION RESPONSE	00:08:46.438 (00:00.056)
<-	DLInformationTransfer	SECURITY MODE COMMAND	00:08:46.448 (00:00.010)
->	ULInformationTransfer	SECURITY MODE COMPLETE	00:08:46.462 (00:00.014)
<-	SecurityModeCommand	SECURITY MODE COMPLETE	00:08:46.462 (00:00.000)
->	SecurityModeComplete	SECURITY MODE COMPLETE	00:08:46.479 (00:00.017)
<-	RRCCONNReconfiguration	SECURITY MODE COMPLETE	00:08:46.479 (00:00.000)