

5. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER

5.1 DESCRIPTION OF THE ERP/EIRP MEASUREMENT

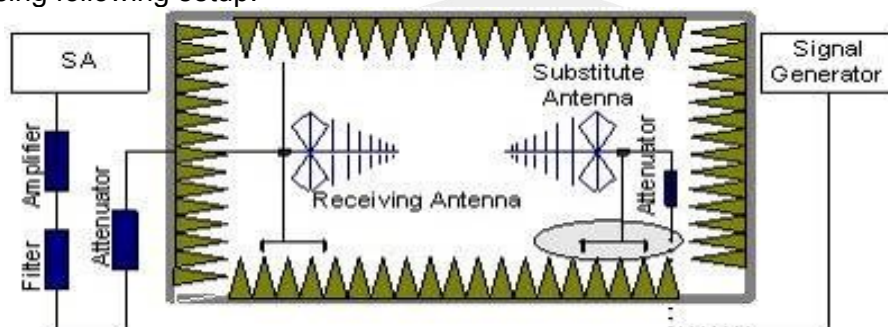
5.1.1 MEASUREMENT METHOD

Effective radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems. Mobile and portable (hand-held) stations operating are limited to average ERP, Equivalent isotropic radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas, Mobile and portable (hand-held) stations operating are limited to average EIRP.

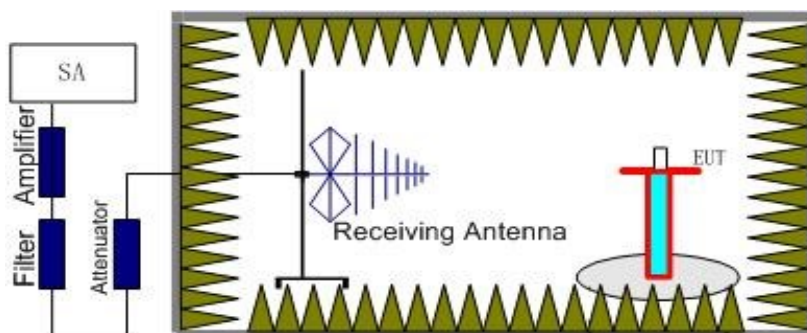
5.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, $RSE = R_x \text{ (dBuV)} + CL \text{ (dB)} + SA \text{ (dB)} + Gain \text{ (dBi)} - 107 \text{ (dBuV to dBm)}$ The SA is calibrated using following setup.



b) EUT was placed on a 1.5m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.



Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

Power=PMea+ARpl



5.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01v03r01 Section 5.6 and ANSI C63.26 2015 Section 5.2.
2. The EUT was placed on a non-conductive rotating platform 1.5 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with Peak detector.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 m in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to ANSI C63.26 2015. The EUT was replaced by dipole antenna (substitution antenna) at same location and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. $EIRP = S.G \text{ Level} + \text{Gain} - \text{Cable loss}$; $ERP = S.G \text{ Level} + \text{Gain} - \text{Cable loss} - 2.15$.
5. RB Set greater than bandwidth, VB Set spectrum analyzer Maximum support.





5.1.4 TEST RESULTS

Note: Test is divided into three directions, X/Y/Z. X pattern for the worst.

Radiated Power (EIRP) for LTE Band 2 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.33	2.37	10.40	21.36	Horizontal	Pass
	1	0	Middle	12.5	2.39	10.42	20.53	Horizontal	Pass
	1	0	Highest	11.86	2.40	10.44	19.90	Horizontal	Pass
	1	0	Lowest	14.71	2.37	10.40	22.74	Vertical	Pass
	1	0	Middle	13.81	2.39	10.42	21.84	Vertical	Pass
	1	0	Highest	13.33	2.40	10.44	21.37	Vertical	Pass
16QAM	1	0	Lowest	12.93	2.37	10.40	20.96	Horizontal	Pass
	1	0	Middle	12.29	2.39	10.42	20.32	Horizontal	Pass
	1	0	Highest	11.6	2.40	10.44	19.64	Horizontal	Pass
	1	0	Lowest	14.37	2.37	10.40	22.40	Vertical	Pass
	1	0	Middle	13.64	2.39	10.42	21.67	Vertical	Pass
	1	0	Highest	12.92	2.40	10.44	20.96	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 2 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.22	2.37	10.40	21.25	Horizontal	Pass
	1	0	Middle	12.59	2.39	10.42	20.62	Horizontal	Pass
	1	0	Highest	12.89	2.40	10.44	20.93	Horizontal	Pass
	1	0	Lowest	14.56	2.37	10.40	22.59	Vertical	Pass
	1	0	Middle	13.98	2.39	10.42	22.01	Vertical	Pass
	1	0	Highest	14.33	2.40	10.44	22.37	Vertical	Pass
16QAM	1	0	Lowest	13.03	2.37	10.40	21.06	Horizontal	Pass
	1	0	Middle	12.24	2.39	10.42	20.27	Horizontal	Pass
	1	0	Highest	12.61	2.40	10.44	20.65	Horizontal	Pass
	1	0	Lowest	14.46	2.37	10.40	22.49	Vertical	Pass
	1	0	Middle	13.55	2.39	10.42	21.58	Vertical	Pass
	1	0	Highest	14.09	2.40	10.44	22.13	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 2 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.22	2.37	10.40	21.25	Horizontal	Pass
	1	0	Middle	12.74	2.39	10.42	20.77	Horizontal	Pass
	1	0	Highest	13	2.40	10.44	21.04	Horizontal	Pass
	1	0	Lowest	14.65	2.37	10.40	22.68	Vertical	Pass
	1	0	Middle	14.05	2.39	10.42	22.08	Vertical	Pass
	1	0	Highest	14.33	2.40	10.44	22.37	Vertical	Pass
16QAM	1	0	Lowest	12.97	2.37	10.40	21.00	Horizontal	Pass
	1	0	Middle	12.42	2.39	10.42	20.45	Horizontal	Pass
	1	0	Highest	12.7	2.40	10.44	20.74	Horizontal	Pass
	1	0	Lowest	14.46	2.37	10.40	22.49	Vertical	Pass
	1	0	Middle	13.73	2.39	10.42	21.76	Vertical	Pass
	1	0	Highest	14.13	2.40	10.44	22.17	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 2 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.36	2.37	10.40	21.39	Horizontal	Pass
	1	0	Middle	12.67	2.39	10.42	20.70	Horizontal	Pass
	1	0	Highest	13.06	2.40	10.44	21.10	Horizontal	Pass
	1	0	Lowest	14.66	2.37	10.40	22.69	Vertical	Pass
	1	0	Middle	14.11	2.39	10.42	22.14	Vertical	Pass
	1	0	Highest	14.36	2.40	10.44	22.40	Vertical	Pass
16QAM	1	0	Lowest	12.98	2.37	10.40	21.01	Horizontal	Pass
	1	0	Middle	12.33	2.39	10.42	20.36	Horizontal	Pass
	1	0	Highest	12.79	2.40	10.44	20.83	Horizontal	Pass
	1	0	Lowest	14.46	2.37	10.40	22.49	Vertical	Pass
	1	0	Middle	13.75	2.39	10.42	21.78	Vertical	Pass
	1	0	Highest	14.22	2.40	10.44	22.26	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 2 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.33	2.37	10.40	21.36	Horizontal	Pass
	1	0	Middle	12.86	2.39	10.42	20.89	Horizontal	Pass
	1	0	Highest	13.07	2.40	10.44	21.11	Horizontal	Pass
	1	0	Lowest	14.79	2.37	10.40	22.82	Vertical	Pass
	1	0	Middle	14.22	2.39	10.42	22.25	Vertical	Pass
	1	0	Highest	14.55	2.40	10.44	22.59	Vertical	Pass
16QAM	1	0	Lowest	12.92	2.37	10.40	20.95	Horizontal	Pass
	1	0	Middle	12.73	2.39	10.42	20.76	Horizontal	Pass
	1	0	Highest	12.73	2.40	10.44	20.77	Horizontal	Pass
	1	0	Lowest	14.38	2.37	10.40	22.41	Vertical	Pass
	1	0	Middle	14.14	2.39	10.42	22.17	Vertical	Pass
	1	0	Highest	14.18	2.40	10.44	22.22	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 2 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.48	2.37	10.40	21.51	Horizontal	Pass
	1	0	Middle	13.4	2.39	10.42	21.43	Horizontal	Pass
	1	0	Highest	13.44	2.40	10.44	21.48	Horizontal	Pass
	1	0	Lowest	14.86	2.37	10.40	22.89	Vertical	Pass
	1	0	Middle	14.77	2.39	10.42	22.80	Vertical	Pass
	1	0	Highest	14.85	2.40	10.44	22.89	Vertical	Pass
16QAM	1	0	Lowest	13.29	2.37	10.40	21.32	Horizontal	Pass
	1	0	Middle	13.03	2.39	10.42	21.06	Horizontal	Pass
	1	0	Highest	13.02	2.40	10.44	21.06	Horizontal	Pass
	1	0	Lowest	14.68	2.37	10.40	22.71	Vertical	Pass
	1	0	Middle	14.38	2.39	10.42	22.41	Vertical	Pass
	1	0	Highest	14.44	2.40	10.44	22.48	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 4 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.33	2.35	10.13	21.11	Horizontal	Pass
	1	0	Middle	13.26	2.36	10.16	21.06	Horizontal	Pass
	1	0	Highest	13.5	2.37	10.22	21.35	Horizontal	Pass
	1	0	Lowest	14.8	2.35	10.13	22.58	Vertical	Pass
	1	0	Middle	14.76	2.36	10.16	22.56	Vertical	Pass
	1	0	Highest	14.84	2.37	10.22	22.69	Vertical	Pass
16QAM	1	0	Lowest	12.98	2.35	10.13	20.76	Horizontal	Pass
	1	0	Middle	13.03	2.36	10.16	20.83	Horizontal	Pass
	1	0	Highest	13.12	2.37	10.22	20.97	Horizontal	Pass
	1	0	Lowest	14.48	2.35	10.13	22.26	Vertical	Pass
	1	0	Middle	14.51	2.36	10.16	22.31	Vertical	Pass
	1	0	Highest	14.42	2.37	10.22	22.27	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.47	2.35	10.13	21.25	Horizontal	Pass
	1	0	Middle	13.36	2.36	10.16	21.16	Horizontal	Pass
	1	0	Highest	13.46	2.37	10.22	21.31	Horizontal	Pass
	1	0	Lowest	14.89	2.35	10.13	22.67	Vertical	Pass
	1	0	Middle	14.81	2.36	10.16	22.61	Vertical	Pass
	1	0	Highest	14.87	2.37	10.22	22.72	Vertical	Pass
16QAM	1	0	Lowest	13.2	2.35	10.13	20.98	Horizontal	Pass
	1	0	Middle	13.11	2.36	10.16	20.91	Horizontal	Pass
	1	0	Highest	13.19	2.37	10.22	21.04	Horizontal	Pass
	1	0	Lowest	14.52	2.35	10.13	22.30	Vertical	Pass
	1	0	Middle	14.53	2.36	10.16	22.33	Vertical	Pass
	1	0	Highest	14.59	2.37	10.22	22.44	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for LTE Band 4 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.54	2.35	10.13	21.32	Horizontal	Pass
	1	0	Middle	13.52	2.36	10.16	21.32	Horizontal	Pass
	1	0	Highest	13.4	2.37	10.22	21.25	Horizontal	Pass
	1	0	Lowest	14.91	2.35	10.13	22.69	Vertical	Pass
	1	0	Middle	14.88	2.36	10.16	22.68	Vertical	Pass
	1	0	Highest	14.78	2.37	10.22	22.63	Vertical	Pass
16QAM	1	0	Lowest	13.23	2.35	10.13	21.01	Horizontal	Pass
	1	0	Middle	13.1	2.36	10.16	20.90	Horizontal	Pass
	1	0	Highest	13.14	2.37	10.22	20.99	Horizontal	Pass
	1	0	Lowest	14.67	2.35	10.13	22.45	Vertical	Pass
	1	0	Middle	14.54	2.36	10.16	22.34	Vertical	Pass
	1	0	Highest	14.5	2.37	10.22	22.35	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.78	2.35	10.13	21.56	Horizontal	Pass
	1	0	Middle	13.59	2.36	10.16	21.39	Horizontal	Pass
	1	0	Highest	13.53	2.37	10.22	21.38	Horizontal	Pass
	1	0	Lowest	15.17	2.35	10.13	22.95	Vertical	Pass
	1	0	Middle	15.03	2.36	10.16	22.83	Vertical	Pass
	1	0	Highest	14.95	2.37	10.22	22.80	Vertical	Pass
16QAM	1	0	Lowest	13.58	2.35	10.13	21.36	Horizontal	Pass
	1	0	Middle	13.32	2.36	10.16	21.12	Horizontal	Pass
	1	0	Highest	13.42	2.37	10.22	21.27	Horizontal	Pass
	1	0	Lowest	15	2.35	10.13	22.78	Vertical	Pass
	1	0	Middle	14.7	2.36	10.16	22.50	Vertical	Pass
	1	0	Highest	14.84	2.37	10.22	22.69	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for LTE Band 4 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.78	2.35	10.13	21.56	Horizontal	Pass
	1	0	Middle	13.62	2.36	10.16	21.42	Horizontal	Pass
	1	0	Highest	13.66	2.37	10.22	21.51	Horizontal	Pass
	1	0	Lowest	15.24	2.35	10.13	23.02	Vertical	Pass
	1	0	Middle	15.09	2.36	10.16	22.89	Vertical	Pass
	1	0	Highest	15.05	2.37	10.22	22.90	Vertical	Pass
16QAM	1	0	Lowest	13.66	2.35	10.13	21.44	Horizontal	Pass
	1	0	Middle	13.38	2.36	10.16	21.18	Horizontal	Pass
	1	0	Highest	13.5	2.37	10.22	21.35	Horizontal	Pass
	1	0	Lowest	15.05	2.35	10.13	22.83	Vertical	Pass
	1	0	Middle	14.81	2.36	10.16	22.61	Vertical	Pass
	1	0	Highest	14.87	2.37	10.22	22.72	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for LTE Band 4 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	14.26	2.35	10.13	22.04	Horizontal	Pass
	1	0	Middle	14.41	2.36	10.16	22.21	Horizontal	Pass
	1	0	Highest	14.04	2.37	10.22	21.89	Horizontal	Pass
	1	0	Lowest	15.74	2.35	10.13	23.52	Vertical	Pass
	1	0	Middle	15.87	2.36	10.16	23.67	Vertical	Pass
	1	0	Highest	15.53	2.37	10.22	23.38	Vertical	Pass
16QAM	1	0	Lowest	14.2	2.35	10.13	21.98	Horizontal	Pass
	1	0	Middle	14.23	2.36	10.16	22.03	Horizontal	Pass
	1	0	Highest	14.13	2.37	10.22	21.98	Horizontal	Pass
	1	0	Lowest	15.64	2.35	10.13	23.42	Vertical	Pass
	1	0	Middle	15.53	2.36	10.16	23.33	Vertical	Pass
	1	0	Highest	15.44	2.37	10.22	23.29	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (ERP) for LTE Band 5 / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	17.92	1.27	6.70	2.15	21.20	Horizontal	Pass
	1	0	Middle	17.81	1.28	6.70	2.15	21.08	Horizontal	Pass
	1	0	Highest	18.07	1.29	6.70	2.15	21.33	Horizontal	Pass
	1	0	Lowest	19.25	1.27	6.70	2.15	22.53	Vertical	Pass
	1	0	Middle	19.29	1.28	6.70	2.15	22.56	Vertical	Pass
	1	0	Highest	19.41	1.29	6.70	2.15	22.67	Vertical	Pass
16QAM	1	0	Lowest	17.61	1.27	6.70	2.15	20.89	Horizontal	Pass
	1	0	Middle	17.46	1.28	6.70	2.15	20.73	Horizontal	Pass
	1	0	Highest	17.64	1.29	6.70	2.15	20.90	Horizontal	Pass
	1	0	Lowest	19.02	1.27	6.70	2.15	22.30	Vertical	Pass
	1	0	Middle	18.91	1.28	6.70	2.15	22.18	Vertical	Pass
	1	0	Highest	19.07	1.29	6.70	2.15	22.33	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for LTE Band 5 / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	18.04	1.27	6.70	2.15	21.32	Horizontal	Pass
	1	0	Middle	17.85	1.28	6.70	2.15	21.12	Horizontal	Pass
	1	0	Highest	17.89	1.29	6.70	2.15	21.15	Horizontal	Pass
	1	0	Lowest	19.46	1.27	6.70	2.15	22.74	Vertical	Pass
	1	0	Middle	19.27	1.28	6.70	2.15	22.54	Vertical	Pass
	1	0	Highest	19.36	1.29	6.70	2.15	22.62	Vertical	Pass
16QAM	1	0	Lowest	17.92	1.27	6.70	2.15	21.20	Horizontal	Pass
	1	0	Middle	17.69	1.28	6.70	2.15	20.96	Horizontal	Pass
	1	0	Highest	17.71	1.29	6.70	2.15	20.97	Horizontal	Pass
	1	0	Lowest	19.22	1.27	6.70	2.15	22.50	Vertical	Pass
	1	0	Middle	19.03	1.28	6.70	2.15	22.30	Vertical	Pass
	1	0	Highest	19.18	1.29	6.70	2.15	22.44	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (ERP) for LTE Band 5 / 5M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P.(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	18.05	1.27	6.70	2.15	21.33	Horizontal	Pass
	1	0	Middle	18.07	1.28	6.70	2.15	21.34	Horizontal	Pass
	1	0	Highest	18.16	1.29	6.70	2.15	21.42	Horizontal	Pass
	1	0	Lowest	19.49	1.27	6.70	2.15	22.77	Vertical	Pass
	1	0	Middle	19.41	1.28	6.70	2.15	22.68	Vertical	Pass
	1	0	Highest	19.64	1.29	6.70	2.15	22.90	Vertical	Pass
16QAM	1	0	Lowest	17.89	1.27	6.70	2.15	21.17	Horizontal	Pass
	1	0	Middle	17.77	1.28	6.70	2.15	21.04	Horizontal	Pass
	1	0	Highest	17.94	1.29	6.70	2.15	21.20	Horizontal	Pass
	1	0	Lowest	19.26	1.27	6.70	2.15	22.54	Vertical	Pass
	1	0	Middle	19.17	1.28	6.70	2.15	22.44	Vertical	Pass
	1	0	Highest	19.31	1.29	6.70	2.15	22.57	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for LTE Band 5 / 10M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P.(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	18.57	1.27	6.70	2.15	21.85	Horizontal	Pass
	1	0	Middle	18.61	1.28	6.70	2.15	21.88	Horizontal	Pass
	1	0	Highest	18.72	1.29	6.70	2.15	21.98	Horizontal	Pass
	1	0	Lowest	19.93	1.27	6.70	2.15	23.21	Vertical	Pass
	1	0	Middle	20.09	1.28	6.70	2.15	23.36	Vertical	Pass
	1	0	Highest	20.1	1.29	6.70	2.15	23.36	Vertical	Pass
16QAM	1	0	Lowest	18.43	1.27	6.70	2.15	21.71	Horizontal	Pass
	1	0	Middle	18.33	1.28	6.70	2.15	21.60	Horizontal	Pass
	1	0	Highest	18.39	1.29	6.70	2.15	21.65	Horizontal	Pass
	1	0	Lowest	19.77	1.27	6.70	2.15	23.05	Vertical	Pass
	1	0	Middle	19.75	1.28	6.70	2.15	23.02	Vertical	Pass
	1	0	Highest	19.76	1.29	6.70	2.15	23.02	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (EIRP) for LTE Band 7 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.77	2.56	10.60	19.81	Horizontal	Pass
	1	0	Middle	11.89	2.67	10.65	19.87	Horizontal	Pass
	1	0	Highest	12	2.72	10.70	19.98	Horizontal	Pass
	1	0	Lowest	13.24	2.56	10.60	21.28	Vertical	Pass
	1	0	Middle	13.36	2.67	10.65	21.34	Vertical	Pass
	1	0	Highest	13.41	2.72	10.70	21.39	Vertical	Pass
16QAM	1	0	Lowest	11.57	2.56	10.60	19.61	Horizontal	Pass
	1	0	Middle	11.66	2.67	10.65	19.64	Horizontal	Pass
	1	0	Highest	11.81	2.72	10.70	19.79	Horizontal	Pass
	1	0	Lowest	12.88	2.56	10.60	20.92	Vertical	Pass
	1	0	Middle	13.16	2.67	10.65	21.14	Vertical	Pass
	1	0	Highest	13.23	2.72	10.70	21.21	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 7 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.96	2.56	10.60	20.00	Horizontal	Pass
	1	0	Middle	12.08	2.67	10.65	20.06	Horizontal	Pass
	1	0	Highest	12.2	2.72	10.70	20.18	Horizontal	Pass
	1	0	Lowest	13.38	2.56	10.60	21.42	Vertical	Pass
	1	0	Middle	13.43	2.67	10.65	21.41	Vertical	Pass
	1	0	Highest	13.53	2.72	10.70	21.51	Vertical	Pass
16QAM	1	0	Lowest	11.84	2.56	10.60	19.88	Horizontal	Pass
	1	0	Middle	11.93	2.67	10.65	19.91	Horizontal	Pass
	1	0	Highest	11.9	2.72	10.70	19.88	Horizontal	Pass
	1	0	Lowest	13.23	2.56	10.60	21.27	Vertical	Pass
	1	0	Middle	13.25	2.67	10.65	21.23	Vertical	Pass
	1	0	Highest	13.33	2.72	10.70	21.31	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 7 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.27	2.56	10.60	20.31	Horizontal	Pass
	1	0	Middle	12.51	2.67	10.65	20.49	Horizontal	Pass
	1	0	Highest	12.44	2.72	10.70	20.42	Horizontal	Pass
	1	0	Lowest	13.69	2.56	10.60	21.73	Vertical	Pass
	1	0	Middle	13.93	2.67	10.65	21.91	Vertical	Pass
	1	0	Highest	13.83	2.72	10.70	21.81	Vertical	Pass
16QAM	1	0	Lowest	12.09	2.56	10.60	20.13	Horizontal	Pass
	1	0	Middle	12.24	2.67	10.65	20.22	Horizontal	Pass
	1	0	Highest	12.39	2.72	10.70	20.37	Horizontal	Pass
	1	0	Lowest	13.46	2.56	10.60	21.50	Vertical	Pass
	1	0	Middle	13.74	2.67	10.65	21.72	Vertical	Pass
	1	0	Highest	13.75	2.72	10.70	21.73	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 7 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.21	2.56	10.60	21.25	Horizontal	Pass
	1	0	Middle	13.43	2.67	10.65	21.41	Horizontal	Pass
	1	0	Highest	13.25	2.72	10.70	21.23	Horizontal	Pass
	1	0	Lowest	14.61	2.56	10.60	22.65	Vertical	Pass
	1	0	Middle	14.77	2.67	10.65	22.75	Vertical	Pass
	1	0	Highest	14.7	2.72	10.70	22.68	Vertical	Pass
16QAM	1	0	Lowest	12.87	2.56	10.60	20.91	Horizontal	Pass
	1	0	Middle	13	2.67	10.65	20.98	Horizontal	Pass
	1	0	Highest	12.96	2.72	10.70	20.94	Horizontal	Pass
	1	0	Lowest	14.23	2.56	10.60	22.27	Vertical	Pass
	1	0	Middle	14.4	2.67	10.65	22.38	Vertical	Pass
	1	0	Highest	14.3	2.72	10.70	22.28	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (ERP) for LTE Band 12 / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	19.24	1.21	6.40	2.15	22.28	Horizontal	Pass
	1	0	Middle	18.94	1.22	6.40	2.15	21.97	Horizontal	Pass
	1	0	Highest	19.01	1.23	6.40	2.15	22.03	Horizontal	Pass
	1	0	Lowest	20.56	1.21	6.40	2.15	23.60	Vertical	Pass
	1	0	Middle	20.37	1.22	6.40	2.15	23.40	Vertical	Pass
	1	0	Highest	20.5	1.23	6.40	2.15	23.52	Vertical	Pass
16QAM	1	0	Lowest	19.01	1.21	6.40	2.15	22.05	Horizontal	Pass
	1	0	Middle	18.47	1.22	6.40	2.15	21.50	Horizontal	Pass
	1	0	Highest	18.76	1.23	6.40	2.15	21.78	Horizontal	Pass
	1	0	Lowest	20.35	1.21	6.40	2.15	23.39	Vertical	Pass
	1	0	Middle	19.96	1.22	6.40	2.15	22.99	Vertical	Pass
	1	0	Highest	20.19	1.23	6.40	2.15	23.21	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for LTE Band 12 / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	19.1	1.21	6.40	2.15	22.14	Horizontal	Pass
	1	0	Middle	19.24	1.22	6.40	2.15	22.27	Horizontal	Pass
	1	0	Highest	19.2	1.23	6.40	2.15	22.22	Horizontal	Pass
	1	0	Lowest	20.51	1.21	6.40	2.15	23.55	Vertical	Pass
	1	0	Middle	20.55	1.22	6.40	2.15	23.58	Vertical	Pass
	1	0	Highest	20.63	1.23	6.40	2.15	23.65	Vertical	Pass
16QAM	1	0	Lowest	18.79	1.21	6.40	2.15	21.83	Horizontal	Pass
	1	0	Middle	18.79	1.22	6.40	2.15	21.82	Horizontal	Pass
	1	0	Highest	19.08	1.23	6.40	2.15	22.10	Horizontal	Pass
	1	0	Lowest	20.25	1.21	6.40	2.15	23.29	Vertical	Pass
	1	0	Middle	20.23	1.22	6.40	2.15	23.26	Vertical	Pass
	1	0	Highest	20.4	1.23	6.40	2.15	23.42	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for LTE Band 12 / 5M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P.(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	19.3	1.21	6.40	2.15	22.34	Horizontal	Pass
	1	0	Middle	19.17	1.22	6.40	2.15	22.20	Horizontal	Pass
	1	0	Highest	19.22	1.23	6.40	2.15	22.24	Horizontal	Pass
	1	0	Lowest	20.63	1.21	6.40	2.15	23.67	Vertical	Pass
	1	0	Middle	20.67	1.22	6.40	2.15	23.70	Vertical	Pass
	1	0	Highest	20.69	1.23	6.40	2.15	23.71	Vertical	Pass
16QAM	1	0	Lowest	18.95	1.21	6.40	2.15	21.99	Horizontal	Pass
	1	0	Middle	18.92	1.22	6.40	2.15	21.95	Horizontal	Pass
	1	0	Highest	19.09	1.23	6.40	2.15	22.11	Horizontal	Pass
	1	0	Lowest	20.29	1.21	6.40	2.15	23.33	Vertical	Pass
	1	0	Middle	20.34	1.22	6.40	2.15	23.37	Vertical	Pass
	1	0	Highest	20.51	1.23	6.40	2.15	23.53	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for LTE Band 12 / 10M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P.(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	19.33	1.21	6.40	2.15	22.37	Horizontal	Pass
	1	0	Middle	19.5	1.22	6.40	2.15	22.53	Horizontal	Pass
	1	0	Highest	19.39	1.23	6.40	2.15	22.41	Horizontal	Pass
	1	0	Lowest	20.7	1.21	6.40	2.15	23.74	Vertical	Pass
	1	0	Middle	20.81	1.22	6.40	2.15	23.84	Vertical	Pass
	1	0	Highest	20.8	1.23	6.40	2.15	23.82	Vertical	Pass
16QAM	1	0	Lowest	19.04	1.21	6.40	2.15	22.08	Horizontal	Pass
	1	0	Middle	19.22	1.22	6.40	2.15	22.25	Horizontal	Pass
	1	0	Highest	19.15	1.23	6.40	2.15	22.17	Horizontal	Pass
	1	0	Lowest	20.42	1.21	6.40	2.15	23.46	Vertical	Pass
	1	0	Middle	20.65	1.22	6.40	2.15	23.68	Vertical	Pass
	1	0	Highest	20.6	1.23	6.40	2.15	23.62	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for LTE Band 13 / 5M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P.(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	17.44	1.21	6.40	2.15	20.48	Horizontal	Pass
	1	0	Middle	17.62	1.22	6.40	2.15	20.65	Horizontal	Pass
	1	0	Highest	17.51	1.23	6.40	2.15	20.53	Horizontal	Pass
	1	0	Lowest	18.93	1.21	6.40	2.15	21.97	Vertical	Pass
	1	0	Middle	19.02	1.22	6.40	2.15	22.05	Vertical	Pass
	1	0	Highest	18.97	1.23	6.40	2.15	21.99	Vertical	Pass
16QAM	1	0	Lowest	17.22	1.21	6.40	2.15	20.26	Horizontal	Pass
	1	0	Middle	17.29	1.22	6.40	2.15	20.32	Horizontal	Pass
	1	0	Highest	17.4	1.23	6.40	2.15	20.42	Horizontal	Pass
	1	0	Lowest	18.57	1.21	6.40	2.15	21.61	Vertical	Pass
	1	0	Middle	18.7	1.22	6.40	2.15	21.73	Vertical	Pass
	1	0	Highest	18.87	1.23	6.40	2.15	21.89	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for LTE Band 13 / 10M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P.(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Middle	18.46	1.22	6.40	2.15	21.49	Horizontal	Pass
	1	0	Middle	19.83	1.22	6.40	2.15	22.86	Vertical	Pass
16QAM	1	0	Middle	18.13	1.22	6.40	2.15	21.16	Horizontal	Pass
	1	0	Middle	19.53	1.22	6.40	2.15	22.56	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for LTE Band 17 / 5M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	17.79	1.21	6.40	2.15	20.83	Horizontal	Pass
	1	0	Middle	17.97	1.22	6.40	2.15	21.00	Horizontal	Pass
	1	0	Highest	17.99	1.23	6.40	2.15	21.01	Horizontal	Pass
	1	0	Lowest	19.27	1.21	6.40	2.15	22.31	Vertical	Pass
	1	0	Middle	19.28	1.22	6.40	2.15	22.31	Vertical	Pass
	1	0	Highest	19.42	1.23	6.40	2.15	22.44	Vertical	Pass
16QAM	1	0	Lowest	17.5	1.21	6.40	2.15	20.54	Horizontal	Pass
	1	0	Middle	17.68	1.22	6.40	2.15	20.71	Horizontal	Pass
	1	0	Highest	17.66	1.23	6.40	2.15	20.68	Horizontal	Pass
	1	0	Lowest	18.92	1.21	6.40	2.15	21.96	Vertical	Pass
	1	0	Middle	19.04	1.22	6.40	2.15	22.07	Vertical	Pass
	1	0	Highest	19.03	1.23	6.40	2.15	22.05	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for LTE Band 17 / 10M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	18.37	1.21	6.40	2.15	21.41	Horizontal	Pass
	1	0	Middle	18.37	1.22	6.40	2.15	21.40	Horizontal	Pass
	1	0	Highest	18.41	1.23	6.40	2.15	21.43	Horizontal	Pass
	1	0	Lowest	19.79	1.21	6.40	2.15	22.83	Vertical	Pass
	1	0	Middle	19.77	1.22	6.40	2.15	22.80	Vertical	Pass
	1	0	Highest	19.86	1.23	6.40	2.15	22.88	Vertical	Pass
16QAM	1	0	Lowest	18.05	1.21	6.40	2.15	21.09	Horizontal	Pass
	1	0	Middle	18.16	1.22	6.40	2.15	21.19	Horizontal	Pass
	1	0	Highest	18.39	1.23	6.40	2.15	21.41	Horizontal	Pass
	1	0	Lowest	19.41	1.21	6.40	2.15	22.45	Vertical	Pass
	1	0	Middle	19.52	1.22	6.40	2.15	22.55	Vertical	Pass
	1	0	Highest	19.7	1.23	6.40	2.15	22.72	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (EIRP) for LTE Band 25 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.67	2.37	10.40	20.70	Horizontal	Pass
	1	0	Middle	12.66	2.39	10.42	20.69	Horizontal	Pass
	1	0	Highest	12.84	2.40	10.44	20.88	Horizontal	Pass
	1	0	Lowest	14.04	2.37	10.40	22.07	Vertical	Pass
	1	0	Middle	14.16	2.39	10.42	22.19	Vertical	Pass
	1	0	Highest	14.18	2.40	10.44	22.22	Vertical	Pass
16QAM	1	0	Lowest	12.36	2.37	10.40	20.39	Horizontal	Pass
	1	0	Middle	12.48	2.39	10.42	20.51	Horizontal	Pass
	1	0	Highest	12.55	2.40	10.44	20.59	Horizontal	Pass
	1	0	Lowest	13.75	2.37	10.40	21.78	Vertical	Pass
	1	0	Middle	13.86	2.39	10.42	21.89	Vertical	Pass
	1	0	Highest	13.94	2.40	10.44	21.98	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 25 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.8	2.37	10.40	20.83	Horizontal	Pass
	1	0	Middle	12.85	2.39	10.42	20.88	Horizontal	Pass
	1	0	Highest	12.97	2.40	10.44	21.01	Horizontal	Pass
	1	0	Lowest	14.3	2.37	10.40	22.33	Vertical	Pass
	1	0	Middle	14.25	2.39	10.42	22.28	Vertical	Pass
	1	0	Highest	14.43	2.40	10.44	22.47	Vertical	Pass
16QAM	1	0	Lowest	12.49	2.37	10.40	20.52	Horizontal	Pass
	1	0	Middle	12.58	2.39	10.42	20.61	Horizontal	Pass
	1	0	Highest	12.68	2.40	10.44	20.72	Horizontal	Pass
	1	0	Lowest	13.97	2.37	10.40	22.00	Vertical	Pass
	1	0	Middle	14.02	2.39	10.42	22.05	Vertical	Pass
	1	0	Highest	14.16	2.40	10.44	22.20	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 25 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.27	2.37	10.40	21.30	Horizontal	Pass
	1	0	Middle	13.3	2.39	10.42	21.33	Horizontal	Pass
	1	0	Highest	13.15	2.40	10.44	21.19	Horizontal	Pass
	1	0	Lowest	14.61	2.37	10.40	22.64	Vertical	Pass
	1	0	Middle	14.63	2.39	10.42	22.66	Vertical	Pass
	1	0	Highest	14.51	2.40	10.44	22.55	Vertical	Pass
16QAM	1	0	Lowest	12.84	2.37	10.40	20.87	Horizontal	Pass
	1	0	Middle	12.95	2.39	10.42	20.98	Horizontal	Pass
	1	0	Highest	12.79	2.40	10.44	20.83	Horizontal	Pass
	1	0	Lowest	14.33	2.37	10.40	22.36	Vertical	Pass
	1	0	Middle	14.34	2.39	10.42	22.37	Vertical	Pass
	1	0	Highest	14.21	2.40	10.44	22.25	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 25 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.3	2.37	10.40	21.33	Horizontal	Pass
	1	0	Middle	13.29	2.39	10.42	21.32	Horizontal	Pass
	1	0	Highest	13.39	2.40	10.44	21.43	Horizontal	Pass
	1	0	Lowest	14.64	2.37	10.40	22.67	Vertical	Pass
	1	0	Middle	14.68	2.39	10.42	22.71	Vertical	Pass
	1	0	Highest	14.72	2.40	10.44	22.76	Vertical	Pass
16QAM	1	0	Lowest	13.1	2.37	10.40	21.13	Horizontal	Pass
	1	0	Middle	12.92	2.39	10.42	20.95	Horizontal	Pass
	1	0	Highest	12.95	2.40	10.44	20.99	Horizontal	Pass
	1	0	Lowest	14.42	2.37	10.40	22.45	Vertical	Pass
	1	0	Middle	14.38	2.39	10.42	22.41	Vertical	Pass
	1	0	Highest	14.33	2.40	10.44	22.37	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 25 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.33	2.37	10.40	21.36	Horizontal	Pass
	1	0	Middle	13.48	2.39	10.42	21.51	Horizontal	Pass
	1	0	Highest	13.62	2.40	10.44	21.66	Horizontal	Pass
	1	0	Lowest	14.75	2.37	10.40	22.78	Vertical	Pass
	1	0	Middle	14.89	2.39	10.42	22.92	Vertical	Pass
	1	0	Highest	15.05	2.40	10.44	23.09	Vertical	Pass
16QAM	1	0	Lowest	13.08	2.37	10.40	21.11	Horizontal	Pass
	1	0	Middle	13.25	2.39	10.42	21.28	Horizontal	Pass
	1	0	Highest	13.25	2.40	10.44	21.29	Horizontal	Pass
	1	0	Lowest	14.57	2.37	10.40	22.60	Vertical	Pass
	1	0	Middle	14.65	2.39	10.42	22.68	Vertical	Pass
	1	0	Highest	14.71	2.40	10.44	22.75	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 25 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I. R.P(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.87	2.37	10.40	21.90	Horizontal	Pass
	1	0	Middle	13.81	2.39	10.42	21.84	Horizontal	Pass
	1	0	Highest	13.98	2.40	10.44	22.02	Horizontal	Pass
	1	0	Lowest	15.23	2.37	10.40	23.26	Vertical	Pass
	1	0	Middle	15.25	2.39	10.42	23.28	Vertical	Pass
	1	0	Highest	15.34	2.40	10.44	23.38	Vertical	Pass
16QAM	1	0	Lowest	13.55	2.37	10.40	21.58	Horizontal	Pass
	1	0	Middle	13.64	2.39	10.42	21.67	Horizontal	Pass
	1	0	Highest	13.74	2.40	10.44	21.78	Horizontal	Pass
	1	0	Lowest	14.98	2.37	10.40	23.01	Vertical	Pass
	1	0	Middle	14.98	2.39	10.42	23.01	Vertical	Pass
	1	0	Highest	15.13	2.40	10.44	23.17	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (ERP) for LTE Band 26(Part 22) / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	18.85	1.27	6.70	2.15	22.13	Horizontal	Pass
	1	0	Middle	18.86	1.28	6.70	2.15	22.13	Horizontal	Pass
	1	0	Highest	18.87	1.29	6.70	2.15	22.13	Horizontal	Pass
	1	0	Lowest	20.19	1.27	6.70	2.15	23.47	Vertical	Pass
	1	0	Middle	20.25	1.28	6.70	2.15	23.52	Vertical	Pass
	1	0	Highest	20.29	1.29	6.70	2.15	23.55	Vertical	Pass
16QAM	1	0	Lowest	18.59	1.27	6.70	2.15	21.87	Horizontal	Pass
	1	0	Middle	18.65	1.28	6.70	2.15	21.92	Horizontal	Pass
	1	0	Highest	18.69	1.29	6.70	2.15	21.95	Horizontal	Pass
	1	0	Lowest	19.98	1.27	6.70	2.15	23.26	Vertical	Pass
	1	0	Middle	20.06	1.28	6.70	2.15	23.33	Vertical	Pass
	1	0	Highest	19.99	1.29	6.70	2.15	23.25	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for LTE Band 26(Part 22) / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	19.06	1.27	6.70	2.15	22.34	Horizontal	Pass
	1	0	Middle	19.07	1.28	6.70	2.15	22.34	Horizontal	Pass
	1	0	Highest	19	1.29	6.70	2.15	22.26	Horizontal	Pass
	1	0	Lowest	20.36	1.27	6.70	2.15	23.64	Vertical	Pass
	1	0	Middle	20.4	1.28	6.70	2.15	23.67	Vertical	Pass
	1	0	Highest	20.39	1.29	6.70	2.15	23.65	Vertical	Pass
16QAM	1	0	Lowest	18.65	1.27	6.70	2.15	21.93	Horizontal	Pass
	1	0	Middle	18.51	1.28	6.70	2.15	21.78	Horizontal	Pass
	1	0	Highest	18.82	1.29	6.70	2.15	22.08	Horizontal	Pass
	1	0	Lowest	20.06	1.27	6.70	2.15	23.34	Vertical	Pass
	1	0	Middle	19.99	1.28	6.70	2.15	23.26	Vertical	Pass
	1	0	Highest	20.23	1.29	6.70	2.15	23.49	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (ERP) for LTE Band 26(Part 22) / 5M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	18.98	1.27	6.70	2.15	22.26	Horizontal	Pass
	1	0	Middle	18.94	1.28	6.70	2.15	22.21	Horizontal	Pass
	1	0	Highest	18.91	1.29	6.70	2.15	22.17	Horizontal	Pass
	1	0	Lowest	20.3	1.27	6.70	2.15	23.58	Vertical	Pass
	1	0	Middle	20.34	1.28	6.70	2.15	23.61	Vertical	Pass
	1	0	Highest	20.37	1.29	6.70	2.15	23.63	Vertical	Pass
16QAM	1	0	Lowest	18.86	1.27	6.70	2.15	22.14	Horizontal	Pass
	1	0	Middle	18.8	1.28	6.70	2.15	22.07	Horizontal	Pass
	1	0	Highest	18.72	1.29	6.70	2.15	21.98	Horizontal	Pass
	1	0	Lowest	20.2	1.27	6.70	2.15	23.48	Vertical	Pass
	1	0	Middle	20.19	1.28	6.70	2.15	23.46	Vertical	Pass
	1	0	Highest	20.19	1.29	6.70	2.15	23.45	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for LTE Band 26(Part 22) / 10M										
Modulation	RB		Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
	Size	Offset							Of Max. ERP	
QPSK	1	0	Lowest	18.91	1.27	6.70	2.15	22.19	Horizontal	Pass
	1	0	Middle	19.11	1.28	6.70	2.15	22.38	Horizontal	Pass
	1	0	Highest	19.14	1.29	6.70	2.15	22.40	Horizontal	Pass
	1	0	Lowest	20.37	1.27	6.70	2.15	23.65	Vertical	Pass
	1	0	Middle	20.42	1.28	6.70	2.15	23.69	Vertical	Pass
	1	0	Highest	20.56	1.29	6.70	2.15	23.82	Vertical	Pass
16QAM	1	0	Lowest	18.63	1.27	6.70	2.15	21.91	Horizontal	Pass
	1	0	Middle	18.94	1.28	6.70	2.15	22.21	Horizontal	Pass
	1	0	Highest	18.84	1.29	6.70	2.15	22.10	Horizontal	Pass
	1	0	Lowest	20.12	1.27	6.70	2.15	23.40	Vertical	Pass
	1	0	Middle	20.28	1.28	6.70	2.15	23.55	Vertical	Pass
	1	0	Highest	20.21	1.29	6.70	2.15	23.47	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (ERP) for LTE Band 26(Part 22) / 15M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	19.3	1.27	6.70	2.15	22.58	Horizontal	Pass
	1	0	Middle	19.22	1.28	6.70	2.15	22.49	Horizontal	Pass
	1	0	Highest	19.34	1.29	6.70	2.15	22.60	Horizontal	Pass
	1	0	Lowest	20.62	1.27	6.70	2.15	23.90	Vertical	Pass
	1	0	Middle	20.63	1.28	6.70	2.15	23.90	Vertical	Pass
	1	0	Highest	20.76	1.29	6.70	2.15	24.02	Vertical	Pass
16QAM	1	0	Lowest	19.01	1.27	6.70	2.15	22.29	Horizontal	Pass
	1	0	Middle	18.88	1.28	6.70	2.15	22.15	Horizontal	Pass
	1	0	Highest	19.12	1.29	6.70	2.15	22.38	Horizontal	Pass
	1	0	Lowest	20.42	1.27	6.70	2.15	23.70	Vertical	Pass
	1	0	Middle	20.32	1.28	6.70	2.15	23.59	Vertical	Pass
	1	0	Highest	20.48	1.29	6.70	2.15	23.74	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for LTE Band 26(Part 90) / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	18.27	1.27	6.70	2.15	21.55	Horizontal	Pass
	1	0	Middle	18.97	1.27	6.70	2.15	22.25	Horizontal	Pass
	1	0	Highest	18.95	1.27	6.70	2.15	22.23	Horizontal	Pass
	1	0	Lowest	19.75	1.27	6.70	2.15	23.03	Vertical	Pass
	1	0	Middle	20.36	1.27	6.70	2.15	23.64	Vertical	Pass
	1	0	Highest	20.27	1.27	6.70	2.15	23.55	Vertical	Pass
16QAM	1	0	Lowest	18.19	1.27	6.70	2.15	21.47	Horizontal	Pass
	1	0	Middle	18.69	1.27	6.70	2.15	21.97	Horizontal	Pass
	1	0	Highest	18.73	1.27	6.70	2.15	22.01	Horizontal	Pass
	1	0	Lowest	19.59	1.27	6.70	2.15	22.87	Vertical	Pass
	1	0	Middle	20.11	1.27	6.70	2.15	23.39	Vertical	Pass
	1	0	Highest	20.14	1.27	6.70	2.15	23.42	Vertical	Pass
Limit	ERP<100W=50dBm									



Radiated Power (ERP) for LTE Band 26(Part 90) / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	18.66	1.27	6.70	2.15	21.94	Horizontal	Pass
	1	0	Middle	18.98	1.27	6.70	2.15	22.26	Horizontal	Pass
	1	0	Highest	19	1.27	6.70	2.15	22.28	Horizontal	Pass
	1	0	Lowest	20.03	1.27	6.70	2.15	23.31	Vertical	Pass
	1	0	Middle	20.45	1.27	6.70	2.15	23.73	Vertical	Pass
	1	0	Highest	20.43	1.27	6.70	2.15	23.71	Vertical	Pass
16QAM	1	0	Lowest	18.44	1.27	6.70	2.15	21.72	Horizontal	Pass
	1	0	Middle	18.75	1.27	6.70	2.15	22.03	Horizontal	Pass
	1	0	Highest	18.73	1.27	6.70	2.15	22.01	Horizontal	Pass
	1	0	Lowest	19.76	1.27	6.70	2.15	23.04	Vertical	Pass
	1	0	Middle	20.2	1.27	6.70	2.15	23.48	Vertical	Pass
	1	0	Highest	20.18	1.27	6.70	2.15	23.46	Vertical	Pass
Limit	ERP<100W=50dBm									

Radiated Power (ERP) for LTE Band 26(Part 90) / 5M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	18.96	1.27	6.70	2.15	22.24	Horizontal	Pass
	1	0	Middle	18.94	1.27	6.70	2.15	22.22	Horizontal	Pass
	1	0	Highest	19.02	1.27	6.70	2.15	22.30	Horizontal	Pass
	1	0	Lowest	20.28	1.27	6.70	2.15	23.56	Vertical	Pass
	1	0	Middle	20.38	1.27	6.70	2.15	23.66	Vertical	Pass
	1	0	Highest	20.41	1.27	6.70	2.15	23.69	Vertical	Pass
16QAM	1	0	Lowest	18.75	1.27	6.70	2.15	22.03	Horizontal	Pass
	1	0	Middle	18.82	1.27	6.70	2.15	22.10	Horizontal	Pass
	1	0	Highest	18.9	1.27	6.70	2.15	22.18	Horizontal	Pass
	1	0	Lowest	20.09	1.27	6.70	2.15	23.37	Vertical	Pass
	1	0	Middle	20.13	1.27	6.70	2.15	23.41	Vertical	Pass
	1	0	Highest	20.27	1.27	6.70	2.15	23.55	Vertical	Pass
Limit	ERP<100W=50dBm									

Radiated Power (ERP) for LTE Band 26(Part 90) / 10M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Middle	19.41	1.27	6.70	2.15	22.69	Horizontal	Pass
	1	0	Middle	20.73	1.27	6.70	2.15	24.01	Vertical	Pass
16QAM	1	0	Middle	18.89	1.27	6.70	2.15	22.17	Horizontal	Pass
	1	0	Middle	20.21	1.27	6.70	2.15	23.49	Vertical	Pass
Limit	ERP<100W=50dBm									



Radiated Power (EIRP) for LTE Band41 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.61	2.56	10.60	20.65	Horizontal	Pass
	1	0	Middle	12.66	2.67	10.65	20.64	Horizontal	Pass
	1	0	Highest	12.97	2.72	10.70	20.95	Horizontal	Pass
	1	0	Lowest	14.06	2.56	10.60	22.10	Vertical	Pass
	1	0	Middle	14.14	2.67	10.65	22.12	Vertical	Pass
	1	0	Highest	14.34	2.72	10.70	22.32	Vertical	Pass
16QAM	1	0	Lowest	12.37	2.56	10.60	20.41	Horizontal	Pass
	1	0	Middle	12.57	2.67	10.65	20.55	Horizontal	Pass
	1	0	Highest	12.59	2.72	10.70	20.57	Horizontal	Pass
	1	0	Lowest	13.78	2.56	10.60	21.82	Vertical	Pass
	1	0	Middle	13.88	2.67	10.65	21.86	Vertical	Pass
	1	0	Highest	14.03	2.72	10.70	22.01	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 41 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.77	2.56	10.60	20.81	Horizontal	Pass
	1	0	Middle	12.98	2.67	10.65	20.96	Horizontal	Pass
	1	0	Highest	13.06	2.72	10.70	21.04	Horizontal	Pass
	1	0	Lowest	14.1	2.56	10.60	22.14	Vertical	Pass
	1	0	Middle	14.36	2.67	10.65	22.34	Vertical	Pass
	1	0	Highest	14.46	2.72	10.70	22.44	Vertical	Pass
16QAM	1	0	Lowest	12.65	2.56	10.60	20.69	Horizontal	Pass
	1	0	Middle	12.64	2.67	10.65	20.62	Horizontal	Pass
	1	0	Highest	12.58	2.72	10.70	20.56	Horizontal	Pass
	1	0	Lowest	14.03	2.56	10.60	22.07	Vertical	Pass
	1	0	Middle	14.1	2.67	10.65	22.08	Vertical	Pass
	1	0	Highest	14.05	2.72	10.70	22.03	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for LTE Band 41 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.95	2.56	10.60	20.99	Horizontal	Pass
	1	0	Middle	12.97	2.67	10.65	20.95	Horizontal	Pass
	1	0	Highest	13.15	2.72	10.70	21.13	Horizontal	Pass
	1	0	Lowest	14.45	2.56	10.60	22.49	Vertical	Pass
	1	0	Middle	14.43	2.67	10.65	22.41	Vertical	Pass
	1	0	Highest	14.58	2.72	10.70	22.56	Vertical	Pass
16QAM	1	0	Lowest	12.78	2.56	10.60	20.82	Horizontal	Pass
	1	0	Middle	12.84	2.67	10.65	20.82	Horizontal	Pass
	1	0	Highest	13.05	2.72	10.70	21.03	Horizontal	Pass
	1	0	Lowest	14.23	2.56	10.60	22.27	Vertical	Pass
	1	0	Middle	14.28	2.67	10.65	22.26	Vertical	Pass
	1	0	Highest	14.37	2.72	10.70	22.35	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for LTE Band 41 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.54	2.56	10.60	21.58	Horizontal	Pass
	1	0	Middle	13.53	2.67	10.65	21.51	Horizontal	Pass
	1	0	Highest	13.67	2.72	10.70	21.65	Horizontal	Pass
	1	0	Lowest	14.85	2.56	10.60	22.89	Vertical	Pass
	1	0	Middle	14.94	2.67	10.65	22.92	Vertical	Pass
	1	0	Highest	15.1	2.72	10.70	23.08	Vertical	Pass
16QAM	1	0	Lowest	13.26	2.56	10.60	21.30	Horizontal	Pass
	1	0	Middle	13.13	2.67	10.65	21.11	Horizontal	Pass
	1	0	Highest	13.39	2.72	10.70	21.37	Horizontal	Pass
	1	0	Lowest	14.71	2.56	10.60	22.75	Vertical	Pass
	1	0	Middle	14.58	2.67	10.65	22.56	Vertical	Pass
	1	0	Highest	14.75	2.72	10.70	22.73	Vertical	Pass
Limit	EIRP<2W=33dBm								

6. OCCUPIED BANDWIDTH

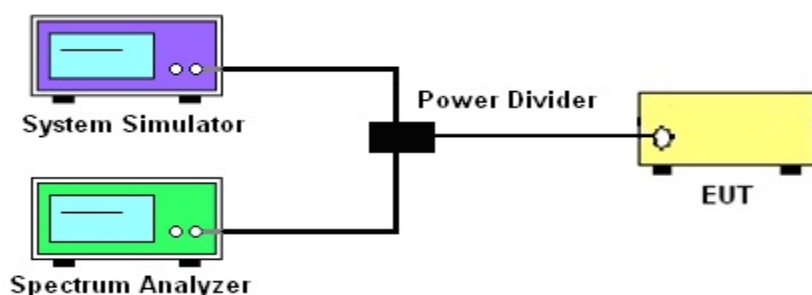
6.1 DESCRIPTION OF OCCUPIED BANDWIDTH MEASUREMENT

6.1.1 MEASUREMENT METHOD

1.The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

2.The 26 db emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 db below the maximum in-band spectral density of the modulated signal. spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

6.1.2 TEST SETUP



6.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.2 and 4.3.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Set the test probe and measure the Occupied Bandwidth of the spectrum analyzer.
5. Measure and record the Occupied Bandwidth from the Spectrum Analyzer.

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	PK	PK	PK	PK	PK	PK
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto



6.1.4 MEASUREMENT RESULT

LTE Band 2 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.102	1.293	1.1	1.306	1.106	1.32
1.4	16-QAM	1.108	1.365	1.108	1.321	1.0991	1.384
3	QPSK	2.69	2.985	2.693	3.02	2.689	3.104
3	16-QAM	2.692	3.077	2.685	2.986	2.687	3.07
5	QPSK	4.538	5.289	4.518	5.27	4.512	5.427
5	16-QAM	4.552	5.364	4.534	5.328	4.545	5.446
10	QPSK	8.937	9.799	8.958	9.979	8.961	9.747
10	16-QAM	8.931	9.78	8.953	9.868	8.949	10
15	QPSK	13.45	15.15	13.508	15.54	13.553	15.42
15	16-QAM	13.48	14.92	13.539	15.21	13.544	14.86
20	QPSK	17.932	19.65	18.013	19.88	18.026	19.96
20	16-QAM	17.947	19.74	17.988	19.82	18.01	20.18
LTE Band 4 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.102	1.326	1.098	1.313	1.1068	1.346
1.4	16-QAM	1.109	1.409	1.11	1.298	1.104	1.383
3	QPSK	2.693	2.996	2.691	3.085	2.6913	2.979
3	16-QAM	2.687	3.04	2.692	3.099	2.686	3.002
5	QPSK	4.515	5.47	4.5381	5.234	4.522	5.211
5	16-QAM	4.544	5.519	4.542	5.415	4.533	5.308
10	QPSK	8.936	9.751	8.941	9.897	8.961	9.761
10	16-QAM	8.946	9.732	8.946	9.731	8.962	10.1
15	QPSK	13.459	15.2	13.494	15.81	13.531	15.47
15	16-QAM	13.498	14.98	13.514	15.21	13.52	14.97
20	QPSK	17.913	19.59	17.948	19.88	17.993	19.96
20	16-QAM	17.965	19.64	17.939	19.85	18.012	20.17
LTE Band 5 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.098	1.29	1.144	2.021	1.1	1.319
1.4	16-QAM	1.108	1.296	1.13	2.151	1.107	1.342
3	QPSK	2.69	2.992	2.724	5.028	2.694	3.311
3	16-QAM	2.692	3.11	2.71	4.144	2.691	3.418
5	QPSK	4.52	5.207	4.5602	7.243	4.545	6.198
5	16-QAM	4.539	5.264	4.574	8.162	4.5526	6.687
10	QPSK	8.95	10.13	8.969	13.97	8.959	10.81
10	16-QAM	8.958	9.766	8.952	11.76	8.958	10.04



LTE Band 7 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.518	5.248	4.514	5.326	4.527	5.317
5	16-QAM	4.532	5.309	4.549	5.353	4.554	5.402
10	QPSK	8.939	9.81	8.949	9.854	8.942	9.747
10	16-QAM	8.953	10.06	8.936	9.805	8.948	9.911
15	QPSK	13.529	15.53	13.502	15.31	13.454	15.26
15	16-QAM	13.54	15.32	13.5	14.91	13.486	14.9
20	QPSK	17.953	19.66	17.979	19.81	17.916	19.52
20	16-QAM	17.989	19.8	17.977	19.86	17.931	19.7
LTE Band 12 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.1	1.296	1.102	1.291	1.099	1.298
1.4	16-QAM	1.102	1.38	1.1089	1.398	1.108	1.299
3	QPSK	2.6915	3.003	2.693	2.987	2.69	3.085
3	16-QAM	2.693	3.074	2.685	2.989	2.688	3.064
5	QPSK	4.5259	5.289	4.514	5.367	4.534	5.349
5	16-QAM	4.531	5.322	4.546	5.509	4.562	5.531
10	QPSK	8.939	9.803	8.931	9.918	8.956	9.728
10	16-QAM	8.945	9.679	8.932	9.851	8.946	10.07
LTE Band 13 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.5141	5.15	4.502	5.359	4.53	5.212
5	16-QAM	4.525	5.306	4.523	5.389	4.538	5.353
10	QPSK	N/A	N/A	8.912	9.652	N/A	N/A
10	16-QAM	N/A	N/A	8.911	9.683	N/A	N/A
LTE Band 26 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.1	1.3	1.1052	1.34	1.102	1.315
1.4	16-QAM	1.1	1.414	1.108	1.337	1.108	1.315
3	QPSK	2.69	3.035	2.692	2.978	2.689	3.006
3	16-QAM	2.6877	3.021	2.691	3.094	2.687	2.989
5	QPSK	4.517	5.211	4.504	5.16	4.512	5.314
5	16-QAM	4.515	5.297	4.535	5.333	4.529	5.337
10	QPSK	N/A	N/A	8.914	9.691	N/A	N/A
10	16-QAM	N/A	N/A	8.903	9.686	N/A	N/A
LTE Band 17 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.513	5.248	4.512	5.388	4.54	5.324
5	16-QAM	4.538	5.603	4.545	5.407	4.538	5.301
10	QPSK	8.921	9.722	8.932	9.862	8.947	9.71
10	16-QAM	8.922	9.749	8.936	9.786	8.95	9.939



LTE Band 25 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.097	1.309	1.106	1.322	1.1032	1.478
1.4	16-QAM	1.1	1.376	1.108	1.319	1.108	1.313
3	QPSK	2.693	3.02	2.689	3.094	2.69	2.987
3	16-QAM	2.688	2.991	2.6879	3.037	2.691	3.086
5	QPSK	4.519	5.206	4.517	5.502	4.525	5.294
5	16-QAM	4.544	5.374	4.52	5.355	4.527	5.252
10	QPSK	8.93	9.768	8.957	9.943	8.924	9.695
10	16-QAM	8.953	10.01	8.943	9.755	8.924	9.8
15	QPSK	13.446	15.14	13.531	15.64	13.491	15.06
15	16-QAM	13.497	14.92	13.5	14.93	13.504	15.15
20	QPSK	17.906	19.81	18.005	19.87	17.971	19.64
20	16-QAM	17.924	19.75	17.989	19.6	17.98	19.84

LTE Band 26 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	1.1049	1.315	1.1048	1.297	1.098	1.298
1.4	16-QAM	1.1088	1.362	1.11	1.364	1.0965	1.348
3	QPSK	2.6938	3.016	2.6873	3.1	2.6873	2.977
3	16-QAM	2.687	3.068	2.69	3.077	2.685	2.983
5	QPSK	4.5225	5.452	4.518	5.276	4.496	5.155
5	16-QAM	4.558	5.499	4.512	5.314	4.532	5.292
10	QPSK	8.948	9.733	8.923	9.82	8.959	9.737
10	16-QAM	8.959	9.964	8.922	9.749	8.943	9.741
15	QPSK	13.457	15.08	13.444	15.29	13.504	15.27
15	16-QAM	13.51	14.95	13.454	15.13	13.499	14.87

LTE Band 41 Bandwidth [MHz]							
BW [MHz]	Mode	Lowest		Middle		Highest	
		99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	4.496	5.043	4.521	5.164	4.52	5.27
5	16-QAM	4.513	5.183	4.516	5.215	4.513	5.373
10	QPSK	8.944	9.939	8.943	9.868	8.954	9.891
10	16-QAM	8.931	9.671	8.934	10.03	8.949	9.752
15	QPSK	13.464	15.6	13.483	15.74	13.515	15.29
15	16-QAM	13.543	15.18	13.523	15.78	13.506	15
20	QPSK	17.921	19.84	17.928	19.7	17.943	19.61
20	16-QAM	17.92	19.53	17.962	19.72	17.926	19.82

Note: Test chart See Appendix A



7. CONDUCTED BAND EDGE

7.1 DESCRIPTION OF CONDUCTED BAND EDGE MEASUREMENT

7.1.1 MEASUREMENT METHOD

1. §22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

2. §24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. 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

3. §27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

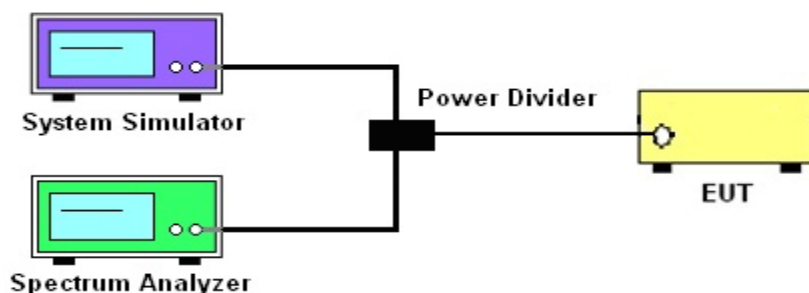
4. §27.53(m)(4)

For operations in the 2500 MHz ~ 2570 MHz band this section, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

5. §27.53 (g)

For operations in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

7.1.2 TEST SETUP



7.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS/AVG detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$

Band 7:

$$= P(W) - [55 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [55 + 10\log(P)] \text{ (dB)}$$

$$= -25\text{dBm}.$$

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	12MHz	13MHz	15MHz	20MHz	25MHz	30MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	RMS	RMS	RMS	RMS	RMS	RMS
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto

7.1.4 MEASUREMENT RESULT

Note: Test chart See Appendix B

8. CONDUCTED SPURIOUS EMISSION

8.1 DESCRIPTION OF CONDUCTED SPURIOUS EMISSION MEASUREMENT

8.1.1 MEASUREMENT METHOD

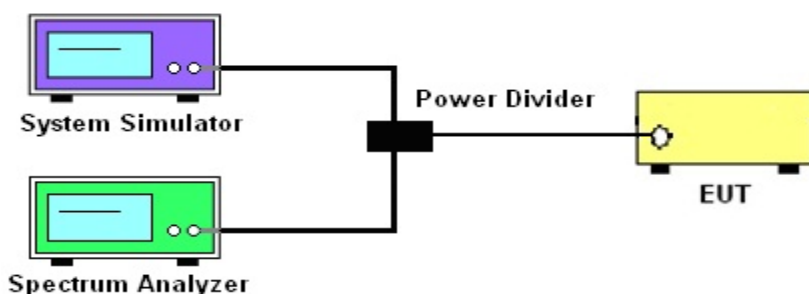
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

8.1.2 TEST SETUP



8.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement
4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)} = [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

For Band 7: $P(W) - [43 + 10\log(P)] \text{ (dB)} = -25\text{dBm}$

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	Auto	Auto	Auto	Auto	Auto	Auto
RBW	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz
VBW	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz
Detector	PK	PK	PK	PK	PK	PK
Trace	Max	Max	Max	Max	Max	Max

8.1.4 TEST RESULTS

Note: Test chart See Appendix C

9. RADIATED SPURIOUS EMISSION

9.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

9.1.1 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

9.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, $RSE = Rx \text{ (dBuV)} + CL \text{ (dB)} + SA \text{ (dB)} + Gain \text{ (dBi)} - 107 \text{ (dBuV to dBm)}$ The SA is calibrated using following setup.

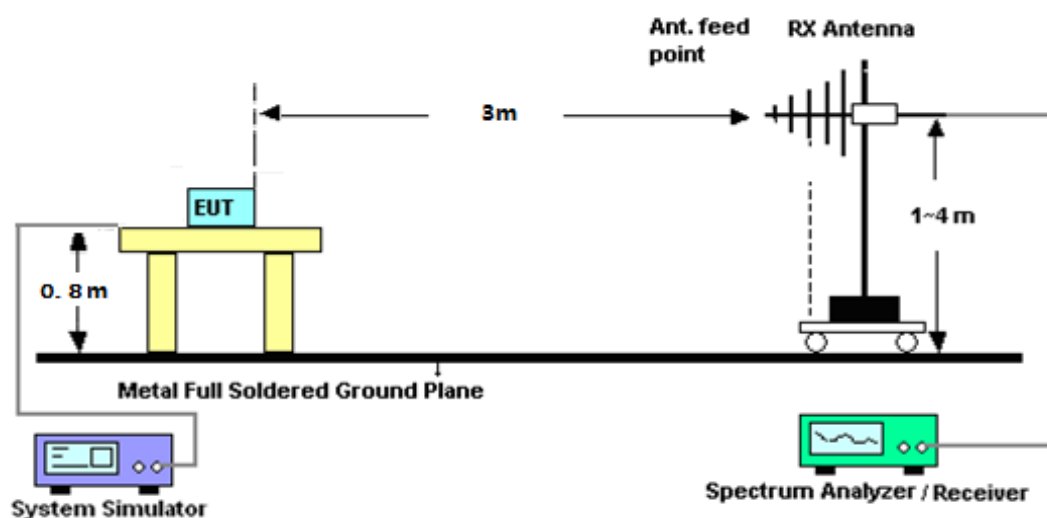
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

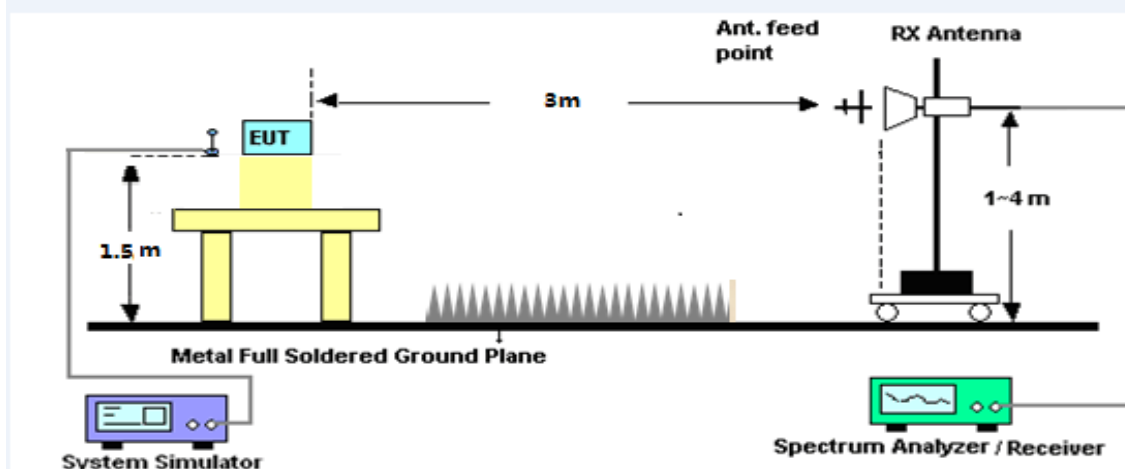
The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

Power=PMea+ARpl

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



9.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 7 and ANSI C63.26 2015 Section 5.5.
2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm

For Band 7:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm

$P_{Mea} = S.G \text{ Level} + \text{Ant-Cable loss}; \text{Margin} = P_{Mea} - \text{Limit}.$



9.1.4 TEST RESULTS

LTE Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3701.27	-33.68	12.60	12.93	-34.01	-13.00	-21.01	H
5552.03	-34.40	13.10	17.11	-38.41	-13.00	-25.41	H
7402.76	-32.70	11.50	22.20	-43.40	-13.00	-30.40	H
3701.27	-35.14	12.60	12.93	-35.47	-13.00	-22.47	V
5552.03	-34.19	13.10	17.11	-38.20	-13.00	-25.20	V
7402.76	-32.10	11.50	22.20	-42.80	-13.00	-29.80	V
LTE Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3760.02	-34.69	12.60	12.93	-35.02	-13.00	-22.02	H
5640.20	-34.34	13.10	17.11	-38.35	-13.00	-25.35	H
7520.23	-33.50	11.50	22.20	-44.20	-13.00	-31.20	H
3760.02	-35.93	12.60	12.93	-36.26	-13.00	-23.26	V
5640.20	-35.04	13.10	17.11	-39.05	-13.00	-26.05	V
7520.23	-32.55	11.50	22.20	-43.25	-13.00	-30.25	V
LTE Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3818.24	-33.59	12.60	12.93	-33.92	-13.00	-20.92	H
5727.75	-35.48	13.10	17.11	-39.49	-13.00	-26.49	H
7637.18	-33.35	11.50	22.20	-44.05	-13.00	-31.05	H
3818.24	-34.72	12.60	12.93	-35.05	-13.00	-22.05	V
5727.75	-34.88	13.10	17.11	-38.89	-13.00	-25.89	V
7637.18	-32.33	11.50	22.20	-43.03	-13.00	-30.03	V



LTE Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3703.27	-33.44	12.60	12.93	-33.77	-13.00	-20.77	H
5554.24	-35.21	13.10	17.11	-39.22	-13.00	-26.22	H
7405.76	-32.16	11.50	22.20	-42.86	-13.00	-29.86	H
3703.27	-35.96	12.60	12.93	-36.29	-13.00	-23.29	V
5554.24	-34.39	13.10	17.11	-38.40	-13.00	-25.40	V
7405.76	-31.95	11.50	22.20	-42.65	-13.00	-29.65	V
LTE Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.91	-34.28	12.60	12.93	-34.61	-13.00	-21.61	H
5639.84	-34.05	13.10	17.11	-38.06	-13.00	-25.06	H
7520.29	-33.27	11.50	22.20	-43.97	-13.00	-30.97	H
3759.91	-36.00	12.60	12.93	-36.33	-13.00	-23.33	V
5639.84	-34.03	13.10	17.11	-38.04	-13.00	-25.04	V
7520.29	-32.52	11.50	22.20	-43.22	-13.00	-30.22	V
LTE Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3817.24	-34.06	12.60	12.93	-34.39	-13.00	-21.39	H
5725.35	-35.21	13.10	17.11	-39.22	-13.00	-26.22	H
7634.01	-32.53	11.50	22.20	-43.23	-13.00	-30.23	H
3817.24	-35.49	12.60	12.93	-35.82	-13.00	-22.82	V
5725.35	-33.91	13.10	17.11	-37.92	-13.00	-24.92	V
7634.01	-33.20	11.50	22.20	-43.90	-13.00	-30.90	V



LTE Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3705.38	-34.88	12.60	12.93	-35.21	-13.00	-22.21	H
5557.58	-34.00	13.10	17.11	-38.01	-13.00	-25.01	H
7410.18	-32.53	11.50	22.20	-43.23	-13.00	-30.23	H
3705.38	-35.29	12.60	12.93	-35.62	-13.00	-22.62	V
5557.58	-33.87	13.10	17.11	-37.88	-13.00	-24.88	V
7410.18	-32.64	11.50	22.20	-43.34	-13.00	-30.34	V
LTE Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.99	-34.92	12.60	12.93	-35.25	-13.00	-22.25	H
5640.11	-34.30	13.10	17.11	-38.31	-13.00	-25.31	H
7520.11	-33.52	11.50	22.20	-44.22	-13.00	-31.22	H
3759.99	-34.57	12.60	12.93	-34.90	-13.00	-21.90	V
5640.11	-33.80	13.10	17.11	-37.81	-13.00	-24.81	V
7520.11	-32.44	11.50	22.20	-43.14	-13.00	-30.14	V
LTE Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3815.09	-33.52	12.60	12.93	-33.85	-13.00	-20.85	H
5722.36	-34.30	13.10	17.11	-38.31	-13.00	-25.31	H
7630.27	-33.62	11.50	22.20	-44.32	-13.00	-31.32	H
3815.09	-35.54	12.60	12.93	-35.87	-13.00	-22.87	V
5722.36	-34.39	13.10	17.11	-38.40	-13.00	-25.40	V
7630.27	-32.57	11.50	22.20	-43.27	-13.00	-30.27	V



LTE Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3710.00	-34.77	12.60	12.93	-35.10	-13.00	-22.10	H
5565.06	-34.08	13.10	17.11	-38.09	-13.00	-25.09	H
7420.07	-32.46	11.50	22.20	-43.16	-13.00	-30.16	H
3710.00	-35.82	12.60	12.93	-36.15	-13.00	-23.15	V
5565.06	-34.03	13.10	17.11	-38.04	-13.00	-25.04	V
7420.07	-32.30	11.50	22.20	-43.00	-13.00	-30.00	V
LTE Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.88	-33.98	12.60	12.93	-34.31	-13.00	-21.31	H
5640.19	-34.71	13.10	17.11	-38.72	-13.00	-25.72	H
7519.83	-33.12	11.50	22.20	-43.82	-13.00	-30.82	H
3759.88	-35.41	12.60	12.93	-35.74	-13.00	-22.74	V
5640.19	-33.89	13.10	17.11	-37.90	-13.00	-24.90	V
7519.83	-32.27	11.50	22.20	-42.97	-13.00	-29.97	V
LTE Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3810.38	-34.06	12.60	12.93	-34.39	-13.00	-21.39	H
5714.66	-34.40	13.10	17.11	-38.41	-13.00	-25.41	H
7619.84	-32.63	11.50	22.20	-43.33	-13.00	-30.33	H
3810.38	-35.47	12.60	12.93	-35.80	-13.00	-22.80	V
5714.66	-34.25	13.10	17.11	-38.26	-13.00	-25.26	V
7619.84	-31.74	11.50	22.20	-42.44	-13.00	-29.44	V



LTE Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3715.22	-34.54	12.60	12.93	-34.87	-13.00	-21.87	H
5572.41	-34.81	13.10	17.11	-38.82	-13.00	-25.82	H
7430.59	-32.24	11.50	22.20	-42.94	-13.00	-29.94	H
3715.22	-35.20	12.60	12.93	-35.53	-13.00	-22.53	V
5572.41	-34.92	13.10	17.11	-38.93	-13.00	-25.93	V
7430.59	-32.17	11.50	22.20	-42.87	-13.00	-29.87	V
LTE Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3760.15	-34.20	12.60	12.93	-34.53	-13.00	-21.53	H
5640.09	-34.53	13.10	17.11	-38.54	-13.00	-25.54	H
7520.13	-33.45	11.50	22.20	-44.15	-13.00	-31.15	H
3760.15	-34.88	12.60	12.93	-35.21	-13.00	-22.21	V
5640.09	-34.72	13.10	17.11	-38.73	-13.00	-25.73	V
7520.13	-32.68	11.50	22.20	-43.38	-13.00	-30.38	V
LTE Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3804.93	-34.19	12.60	12.93	-34.52	-13.00	-21.52	H
5707.58	-34.65	13.10	17.11	-38.66	-13.00	-25.66	H
7609.85	-33.22	11.50	22.20	-43.92	-13.00	-30.92	H
3804.93	-35.03	12.60	12.93	-35.36	-13.00	-22.36	V
5707.58	-34.47	13.10	17.11	-38.48	-13.00	-25.48	V
7609.85	-33.20	11.50	22.20	-43.90	-13.00	-30.90	V



LTE Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3720.40	-33.44	12.60	12.93	-33.77	-13.00	-20.77	H
5580.19	-34.24	13.10	17.11	-38.25	-13.00	-25.25	H
7439.82	-33.16	11.50	22.20	-43.86	-13.00	-30.86	H
3720.40	-34.83	12.60	12.93	-35.16	-13.00	-22.16	V
5580.19	-34.42	13.10	17.11	-38.43	-13.00	-25.43	V
7439.82	-33.02	11.50	22.20	-43.72	-13.00	-30.72	V
LTE Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.93	-34.40	12.60	12.93	-34.73	-13.00	-21.73	H
5640.21	-34.76	13.10	17.11	-38.77	-13.00	-25.77	H
7520.02	-33.57	11.50	22.20	-44.27	-13.00	-31.27	H
3759.93	-35.31	12.60	12.93	-35.64	-13.00	-22.64	V
5640.21	-34.06	13.10	17.11	-38.07	-13.00	-25.07	V
7520.02	-33.04	11.50	22.20	-43.74	-13.00	-30.74	V
LTE Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3799.84	-33.55	12.60	12.93	-33.88	-13.00	-20.88	H
5700.06	-34.33	13.10	17.11	-38.34	-13.00	-25.34	H
7600.15	-33.17	11.50	22.20	-43.87	-13.00	-30.87	H
3799.84	-35.92	12.60	12.93	-36.25	-13.00	-23.25	V
5700.06	-34.82	13.10	17.11	-38.83	-13.00	-25.83	V
7600.15	-33.13	11.50	22.20	-43.83	-13.00	-30.83	V



LTE Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3421.20	-33.88	12.90	12.56	-33.54	-13.00	-20.54	H
5132.10	-35.10	13.10	16.32	-38.32	-13.00	-25.32	H
6842.53	-33.31	12.33	21.13	-42.11	-13.00	-29.11	H
3421.20	-35.15	12.90	12.56	-34.81	-13.00	-21.81	V
5132.10	-33.94	13.10	16.32	-37.16	-13.00	-24.16	V
6842.53	-32.86	12.33	21.13	-41.66	-13.00	-28.66	V
LTE Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.05	-34.89	12.90	12.56	-34.55	-13.00	-21.55	H
5196.85	-35.04	13.10	16.32	-38.26	-13.00	-25.26	H
6930.06	-32.55	12.33	21.13	-41.35	-13.00	-28.35	H
3465.05	-35.43	12.90	12.56	-35.09	-13.00	-22.09	V
5196.85	-33.82	13.10	16.32	-37.04	-13.00	-24.04	V
6930.06	-32.79	12.33	21.13	-41.59	-13.00	-28.59	V
LTE Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3508.42	-34.17	12.90	12.56	-33.83	-13.00	-20.83	H
5262.43	-34.10	13.10	16.32	-37.32	-13.00	-24.32	H
7015.36	-33.47	12.33	21.13	-42.27	-13.00	-29.27	H
3508.42	-35.07	12.90	12.56	-34.73	-13.00	-21.73	V
5262.43	-35.24	13.10	16.32	-38.46	-13.00	-25.46	V
7015.36	-32.56	12.33	21.13	-41.36	-13.00	-28.36	V



LTE Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3423.61	-33.65	12.90	12.56	-33.31	-13.00	-20.31	H
5136.03	-34.50	13.10	16.32	-37.72	-13.00	-24.72	H
6848.41	-33.15	12.33	21.13	-41.95	-13.00	-28.95	H
3423.61	-35.57	12.90	12.56	-35.23	-13.00	-22.23	V
5136.03	-33.88	13.10	16.32	-37.10	-13.00	-24.10	V
6848.41	-31.88	12.33	21.13	-40.68	-13.00	-27.68	V
LTE Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3464.59	-34.70	12.90	12.56	-34.36	-13.00	-21.36	H
5196.98	-34.41	13.10	16.32	-37.63	-13.00	-24.63	H
6930.09	-33.25	12.33	21.13	-42.05	-13.00	-29.05	H
3464.59	-34.96	12.90	12.56	-34.62	-13.00	-21.62	V
5196.98	-34.92	13.10	16.32	-38.14	-13.00	-25.14	V
6930.09	-32.05	12.33	21.13	-40.85	-13.00	-27.85	V
LTE Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3506.06	-33.53	12.90	12.56	-33.19	-13.00	-20.19	H
5261.59	-34.34	13.10	16.32	-37.56	-13.00	-24.56	H
7012.72	-32.71	12.33	21.13	-41.51	-13.00	-28.51	H
3506.06	-35.31	12.90	12.56	-34.97	-13.00	-21.97	V
5261.59	-34.38	13.10	16.32	-37.60	-13.00	-24.60	V
7012.72	-31.94	12.33	21.13	-40.74	-13.00	-27.74	V



LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3424.93	-33.54	12.90	12.56	-33.20	-13.00	-20.20	H
5136.93	-34.95	13.10	16.32	-38.17	-13.00	-25.17	H
6849.88	-32.57	12.33	21.13	-41.37	-13.00	-28.37	H
3424.93	-35.00	12.90	12.56	-34.66	-13.00	-21.66	V
5136.93	-34.31	13.10	16.32	-37.53	-13.00	-24.53	V
6849.88	-32.21	12.33	21.13	-41.01	-13.00	-28.01	V
LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3464.47	-33.67	12.90	12.56	-33.33	-13.00	-20.33	H
5196.90	-34.44	13.10	16.32	-37.66	-13.00	-24.66	H
6929.90	-32.95	12.33	21.13	-41.75	-13.00	-28.75	H
3464.47	-35.73	12.90	12.56	-35.39	-13.00	-22.39	V
5196.90	-34.35	13.10	16.32	-37.57	-13.00	-24.57	V
6929.90	-32.97	12.33	21.13	-41.77	-13.00	-28.77	V
LTE Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3504.87	-33.45	12.90	12.56	-33.11	-13.00	-20.11	H
5257.05	-35.05	13.10	16.32	-38.27	-13.00	-25.27	H
7010.08	-33.26	12.33	21.13	-42.06	-13.00	-29.06	H
3504.87	-35.37	12.90	12.56	-35.03	-13.00	-22.03	V
5257.05	-35.14	13.10	16.32	-38.36	-13.00	-25.36	V
7010.08	-32.13	12.33	21.13	-40.93	-13.00	-27.93	V



LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3430.15	-33.98	12.90	12.56	-33.64	-13.00	-20.64	H
5145.13	-34.82	13.10	16.32	-38.04	-13.00	-25.04	H
6860.53	-33.46	12.33	21.13	-42.26	-13.00	-29.26	H
3430.15	-35.93	12.90	12.56	-35.59	-13.00	-22.59	V
5145.13	-34.77	13.10	16.32	-37.99	-13.00	-24.99	V
6860.53	-32.34	12.33	21.13	-41.14	-13.00	-28.14	V
LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3464.38	-34.05	12.90	12.56	-33.71	-13.00	-20.71	H
5196.73	-34.21	13.10	16.32	-37.43	-13.00	-24.43	H
6929.62	-32.45	12.33	21.13	-41.25	-13.00	-28.25	H
3464.38	-35.34	12.90	12.56	-35.00	-13.00	-22.00	V
5196.73	-34.42	13.10	16.32	-37.64	-13.00	-24.64	V
6929.62	-32.28	12.33	21.13	-41.08	-13.00	-28.08	V
LTE Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3500.51	-34.40	12.90	12.56	-34.06	-13.00	-21.06	H
5250.04	-35.35	13.10	16.32	-38.57	-13.00	-25.57	H
6999.99	-32.59	12.33	21.13	-41.39	-13.00	-28.39	H
3500.51	-35.72	12.90	12.56	-35.38	-13.00	-22.38	V
5250.04	-34.04	13.10	16.32	-37.26	-13.00	-24.26	V
6999.99	-31.82	12.33	21.13	-40.62	-13.00	-27.62	V



LTE Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3435.04	-33.65	12.90	12.56	-33.31	-13.00	-20.31	H
5152.63	-34.96	13.10	16.32	-38.18	-13.00	-25.18	H
6870.73	-32.60	12.33	21.13	-41.40	-13.00	-28.40	H
3435.04	-35.73	12.90	12.56	-35.39	-13.00	-22.39	V
5152.63	-34.10	13.10	16.32	-37.32	-13.00	-24.32	V
6870.73	-32.36	12.33	21.13	-41.16	-13.00	-28.16	V
LTE Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3464.69	-33.95	12.90	12.56	-33.61	-13.00	-20.61	H
5196.58	-35.20	13.10	16.32	-38.42	-13.00	-25.42	H
6929.83	-32.96	12.33	21.13	-41.76	-13.00	-28.76	H
3464.69	-35.67	12.90	12.56	-35.33	-13.00	-22.33	V
5196.58	-33.97	13.10	16.32	-37.19	-13.00	-24.19	V
6929.83	-33.08	12.33	21.13	-41.88	-13.00	-28.88	V
LTE Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3495.52	-34.75	12.90	12.56	-34.41	-13.00	-21.41	H
5242.26	-34.28	13.10	16.32	-37.50	-13.00	-24.50	H
6990.23	-33.48	12.33	21.13	-42.28	-13.00	-29.28	H
3495.52	-35.82	12.90	12.56	-35.48	-13.00	-22.48	V
5242.26	-34.79	13.10	16.32	-38.01	-13.00	-25.01	V
6990.23	-32.83	12.33	21.13	-41.63	-13.00	-28.63	V



LTE Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3439.92	-34.67	12.90	12.56	-34.33	-13.00	-21.33	H
5159.89	-35.25	13.10	16.32	-38.47	-13.00	-25.47	H
6880.46	-32.50	12.33	21.13	-41.30	-13.00	-28.30	H
3439.92	-35.40	12.90	12.56	-35.06	-13.00	-22.06	V
5159.89	-33.82	13.10	16.32	-37.04	-13.00	-24.04	V
6880.46	-32.04	12.33	21.13	-40.84	-13.00	-27.84	V
LTE Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3464.96	-33.50	12.90	12.56	-33.16	-13.00	-20.16	H
5196.34	-34.66	13.10	16.32	-37.88	-13.00	-24.88	H
6929.62	-32.98	12.33	21.13	-41.78	-13.00	-28.78	H
3464.96	-35.68	12.90	12.56	-35.34	-13.00	-22.34	V
5196.34	-35.22	13.10	16.32	-38.44	-13.00	-25.44	V
6929.62	-33.02	12.33	21.13	-41.82	-13.00	-28.82	V
LTE Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3490.54	-34.82	12.90	12.56	-34.48	-13.00	-21.48	H
5235.11	-34.48	13.10	16.32	-37.70	-13.00	-24.70	H
6979.51	-33.00	12.33	21.13	-41.80	-13.00	-28.80	H
3490.54	-34.99	12.90	12.56	-34.65	-13.00	-21.65	V
5235.11	-34.57	13.10	16.32	-37.79	-13.00	-24.79	V
6979.51	-32.13	12.33	21.13	-40.93	-13.00	-27.93	V