



**BUREAU  
VERITAS**

Test Report No.: W7L-P23030016RF08

**CHANNEL BANDWIDTH: 20MHz+20MHz QPSK**

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	38048	2599.8	22.81	-1.5	21.31	135.21	2
37901	2585.1	38099	2604.9	22.66	-1.5	21.16	130.62	2
37952	2590.2	38150	2610	22.51	-1.5	21.01	126.18	2

**CHANNEL BANDWIDTH: 20MHz+20MHz 16QAM**

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	38048	2599.8	22.08	-1.5	20.58	114.29	2
37901	2585.1	38099	2604.9	21.82	-1.5	20.32	107.65	2
37952	2590.2	38150	2610	21.7	-1.5	20.20	104.71	2

**CHANNEL BANDWIDTH: 20MHz+20MHz 64QAM**

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580.0	38048	2599.8	20.77	-1.5	19.27	84.53	2
37901	2585.1	38099	2604.9	20.53	-1.5	19.03	79.98	2
37952	2590.2	38150	2610	20.68	-1.5	19.18	82.79	2



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Test Report No.: W7L-P23030016RF08

LTE BAND CA\_41C

LTE BAND CA_41C 5M+20M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39683	2499.3	39800	2511	22.63	-1.5	21.13	129.72	2
40528	2583.8	40645	2595.5	22.48	-1.5	20.98	125.31	2
41373	2668.3	41490	2680	21.99	-1.5	20.49	111.94	2
LTE BAND CA_41C 5M+20M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39683	2499.3	39800	2511	21.8	-1.5	20.30	107.15	2
40528	2583.8	40645	2595.5	21.71	-1.5	20.21	104.95	2
41373	2668.3	41490	2680	21.11	-1.5	19.61	91.41	2
LTE BAND CA_41C 5M+20M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39683	2499.3	39800	2511	20.33	-1.5	18.83	76.38	2
40528	2583.8	40645	2595.5	20.22	-1.5	18.72	74.47	2
41373	2668.3	41490	2680	19.75	-1.5	18.25	66.83	2



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LTE BAND CA_41C 20M+5M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39867	2517.7	22.65	-1.5	21.15	130.32	2
40595	2590.5	40712	2602.2	22.53	-1.5	21.03	126.77	2
41440	2675	41557	2686.7	22.02	-1.5	20.52	112.72	2
LTE BAND CA_41C 20M+5M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39867	2517.7	21.73	-1.5	20.23	105.44	2
40595	2590.5	40712	2602.2	21.74	-1.5	20.24	105.68	2
41440	2675	41557	2686.7	21.15	-1.5	19.65	92.26	2
LTE BAND CA_41C 20M+5M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39867	2517.7	20.31	-1.5	18.81	76.03	2
40595	2590.5	40712	2602.2	20.17	-1.5	18.67	73.62	2
41440	2675	41557	2686.7	19.76	-1.5	18.26	66.99	2



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LTE BAND CA_41C 10M+15M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39703	2501.3	39823	2513.3	22.63	-1.5	21.13	129.72	2
40549	2585.9	40669	2597.9	22.48	-1.5	20.98	125.31	2
41395	2670.5	41515	2682.5	22.03	-1.5	20.53	112.98	2
LTE BAND CA_41C 10M+15M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39703	2501.3	39823	2513.3	21.76	-1.5	20.26	106.17	2
40549	2585.9	40669	2597.9	21.71	-1.5	20.21	104.95	2
41395	2670.5	41515	2682.5	21.05	-1.5	19.55	90.16	2
LTE BAND CA_41C 10M+15M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39703	2501.3	39823	2513.3	20.31	-1.5	18.81	76.03	2
40549	2585.9	40669	2597.9	20.16	-1.5	18.66	73.45	2
41395	2670.5	41515	2682.5	19.73	-1.5	18.23	66.53	2



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LTE BAND CA_41C 15M+10M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39725	2503.5	39845	2515.5	22.69	-1.5	21.19	131.52	2
40571	2588.1	40691	2600.1	22.54	-1.5	21.04	127.06	2
41417	2672.7	41537	2684.7	22.01	-1.5	20.51	112.46	2
LTE BAND CA_41C 15M+10M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39725	2503.5	39845	2515.5	21.83	-1.5	20.33	107.89	2
40571	2588.1	40691	2600.1	21.74	-1.5	20.24	105.68	2
41417	2672.7	41537	2684.7	21.09	-1.5	19.59	90.99	2
LTE BAND CA_41C 15M+10M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39725	2503.5	39845	2515.5	20.32	-1.5	18.82	76.21	2
40571	2588.1	40691	2600.1	20.22	-1.5	18.72	74.47	2
41417	2672.7	41537	2684.7	19.73	-1.5	18.23	66.53	2



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LTE BAND CA_41C 15M+15M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39725	2496	39875	2511	22.66	-1.5	21.16	130.62	2
40545	2585.5	40695	2600.5	22.53	-1.5	21.03	126.77	2
41365	2667.5	41515	2682.5	21.99	-1.5	20.49	111.94	2
LTE BAND CA_41C 15M+15M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39725	2496	39875	2511	21.83	-1.5	20.33	107.89	2
40545	2585.5	40695	2600.5	21.74	-1.5	20.24	105.68	2
41365	2667.5	41515	2682.5	21.11	-1.5	19.61	91.41	2
LTE BAND CA_41C 15M+15M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39725	2496	39875	2511	20.32	-1.5	18.82	76.21	2
40545	2585.5	40695	2600.5	20.22	-1.5	18.72	74.47	2
41365	2667.5	41515	2682.5	19.75	-1.5	18.25	66.83	2



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LTE BAND CA_41C 10M+20M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39705	2501.5	39849	2515.9	22.64	-1.5	21.14	130.02	2
40526	2583.6	40670	2598	22.47	-1.5	20.97	125.03	2
41346	2665.6	41490	2680	21.99	-1.5	20.49	111.94	2
LTE BAND CA_41C 10M+20M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39705	2501.5	39849	2515.9	21.76	-1.5	20.26	106.17	2
40526	2583.6	40670	2598	21.78	-1.5	20.28	106.66	2
41346	2665.6	41490	2680	21.16	-1.5	19.66	92.47	2
LTE BAND CA_41C 10M+20M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39705	2501.5	39849	2515.9	20.35	-1.5	18.85	76.74	2
40526	2583.6	40670	2598	20.16	-1.5	18.66	73.45	2
41346	2665.6	41490	2680	19.76	-1.5	18.26	66.99	2



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LTE BAND CA_41C 20M+10M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39894	2520.4	22.66	-1.5	21.16	130.62	2
40571	2588.1	40715	2602.5	22.51	-1.5	21.01	126.18	2
41391	2670.1	41535	2684.5	22.05	-1.5	20.55	113.50	2
LTE BAND CA_41C 20M+10M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39894	2520.4	21.82	-1.5	20.32	107.65	2
40571	2588.1	40715	2602.5	21.78	-1.5	20.28	106.66	2
41391	2670.1	41535	2684.5	21.09	-1.5	19.59	90.99	2
LTE BAND CA_41C 20M+10M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39894	2520.4	20.3	-1.5	18.80	75.86	2
40571	2588.1	40715	2602.5	20.19	-1.5	18.69	73.96	2
41391	2670.1	41535	2684.5	19.73	-1.5	18.23	66.53	2





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LTE BAND CA_41C 15M+20M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39728	2503.8	39899	2520.9	22.63	-1.5	21.13	129.72	2
40523	2583.3	40694	2600.4	22.5	-1.5	21.00	125.89	2
41319	2662.9	41490	2680	22.05	-1.5	20.55	113.50	2
LTE BAND CA_41C 15M+20M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39728	2503.8	39899	2520.9	21.79	-1.5	20.29	106.91	2
40523	2583.3	40694	2600.4	21.77	-1.5	20.27	106.41	2
41319	2662.9	41490	2680	21.09	-1.5	19.59	90.99	2
LTE BAND CA_41C 15M+20M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39728	2503.8	39899	2520.9	20.36	-1.5	18.86	76.91	2
40523	2583.3	40694	2600.4	20.19	-1.5	18.69	73.96	2
41319	2662.9	41490	2680	19.71	-1.5	18.21	66.22	2



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LTE BAND CA_41C 20M+15M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39921	2523.1	22.68	-1.5	21.18	131.22	2
40546	2585.6	40717	2602.7	22.55	-1.5	21.05	127.35	2
41341	2665.1	41512	2682.2	22.07	-1.5	20.57	114.02	2
LTE BAND CA_41C 20M+15M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39921	2523.1	21.81	-1.5	20.31	107.40	2
40546	2585.6	40717	2602.7	21.78	-1.5	20.28	106.66	2
41341	2665.1	41512	2682.2	21.15	-1.5	19.65	92.26	2
LTE BAND CA_41C 20M+15M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39921	2523.1	20.37	-1.5	18.87	77.09	2
40546	2585.6	40717	2602.7	20.24	-1.5	18.74	74.82	2
41341	2665.1	41512	2682.2	19.73	-1.5	18.23	66.53	2



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LTE BAND CA_41C 20M+20M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39948	2525.8	22.71	-1.5	21.21	132.13	2
40521	2583.1	40719	2602.9	22.55	-1.5	21.05	127.35	2
41292	2660.2	41490	2680	22.07	-1.5	20.57	114.02	2
LTE BAND CA_41C 20M+20M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39948	2525.8	21.84	-1.5	20.34	108.14	2
40521	2583.1	40719	2602.9	21.79	-1.5	20.29	106.91	2
41292	2660.2	41490	2680	21.17	-1.5	19.67	92.68	2
LTE BAND CA_41C 20M+20M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Lmit (W)
39750	2506	39948	2525.8	20.37	-1.5	18.87	77.09	2
40521	2583.1	40719	2602.9	20.24	-1.5	18.74	74.82	2
41292	2660.2	41490	2680	19.77	-1.5	18.27	67.14	2



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LTE BAND CA\_42C

LTE BAND CA\_42C 5M+20M QPSK

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42123	3453.3	42240	3465.0	22.48	-1.3	21.18	131.22	23
42498	3490.8	42615	3502.5	22.62	-1.3	21.32	135.52	23
42873	3528.3	42990	3540.0	22.47	-1.3	21.17	130.92	23

LTE BAND CA\_42C 5M+20M 16QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42123	3453.3	42240	3465.0	21.72	-1.3	20.42	110.15	23
42498	3490.8	42615	3502.5	21.66	-1.3	20.36	108.64	23
42873	3528.3	42990	3540.0	21.63	-1.3	20.33	107.89	23

LTE BAND CA\_42C 5M+20M 64QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42123	3453.3	42240	3465.0	20.16	-1.3	18.86	76.91	23
42498	3490.8	42615	3502.5	20.01	-1.3	18.71	74.30	23
42873	3528.3	42990	3540.0	20.07	-1.3	18.77	75.34	23



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LTE BAND CA_42C 20M+5M QPSK								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42307	3471.7	22.42	-1.3	21.12	129.42	23
42565	3497.5	42682	3509.2	22.58	-1.3	21.28	134.28	23
42940	3535.0	43057	3546.7	22.49	-1.3	21.19	131.52	23
LTE BAND CA_42C 20M+5M 16QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42307	3471.7	21.67	-1.3	20.37	108.89	23
42565	3497.5	42682	3509.2	21.64	-1.3	20.34	108.14	23
42940	3535.0	43057	3546.7	21.68	-1.3	20.38	109.14	23
LTE BAND CA_42C 20M+5M 64QAM								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42307	3471.7	20.19	-1.3	18.89	77.45	23
42565	3497.5	42682	3509.2	20.04	-1.3	18.74	74.82	23
42940	3535.0	43057	3546.7	20.09	-1.3	18.79	75.68	23



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LTE BAND CA\_42C 10M+20M QPSK

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42145	3455.5	42289	3469.9	22.48	-1.3	21.18	131.22	23
42496	3490.6	42640	3505.0	22.62	-1.3	21.32	135.52	23
42846	3525.6	42990	3540.0	22.43	-1.3	21.13	129.72	23

LTE BAND CA\_42C 10M+20M 16QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42145	3455.5	42289	3469.9	21.72	-1.3	20.42	110.15	23
42496	3490.6	42640	3505.0	21.66	-1.3	20.36	108.64	23
42846	3525.6	42990	3540.0	21.68	-1.3	20.38	109.14	23

LTE BAND CA\_42C 10M+20M 64QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42145	3455.5	42289	3469.9	20.16	-1.3	18.86	76.91	23
42496	3490.6	42640	3505.0	20.07	-1.3	18.77	75.34	23
42846	3525.6	42990	3540.0	20.09	-1.3	18.79	75.68	23



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LTE BAND CA\_42C 20M+10M QPSK

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42334	3474.4	22.47	-1.3	21.17	130.92	23
42541	3495.1	42685	3509.5	22.61	-1.3	21.31	135.21	23
42891	3530.1	43035	3544.5	22.43	-1.3	21.13	129.72	23

LTE BAND CA\_42C 20M+10M 16QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42334	3474.4	21.71	-1.3	20.41	109.90	23
42541	3495.1	42685	3509.5	21.66	-1.3	21.31	135.21	23
42891	3530.1	43035	3544.5	21.63	-1.3	21.13	129.72	23

LTE BAND CA\_42C 20M+10M 64QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42334	3474.4	20.13	-1.3	18.83	76.38	23
42541	3495.1	42685	3509.5	20.07	-1.3	18.77	75.34	23
42891	3530.1	43035	3544.5	20.12	-1.3	18.82	76.21	23



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LTE BAND CA\_42C 15M+20M QPSK

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42168	3457.8	42339	3474.9	22.45	-1.3	21.15	130.32	23
42493	3490.3	42664	3507.4	22.57	-1.3	21.27	133.97	23
42819	3522.9	42990	3540.0	22.49	-1.3	21.19	131.52	23

LTE BAND CA\_42C 15M+20M 16QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42168	3457.8	42339	3474.9	21.71	-1.3	20.41	109.90	23
42493	3490.3	42664	3507.4	21.69	-1.3	20.39	109.40	23
42819	3522.9	42990	3540.0	21.63	-1.3	20.33	107.89	23

LTE BAND CA\_42C 15M+20M 64QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42168	3457.8	42339	3474.9	20.13	-1.3	18.83	76.38	23
42493	3490.3	42664	3507.4	20.04	-1.3	18.74	74.82	23
42819	3522.9	42990	3540.0	20.12	-1.3	18.82	76.21	23





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LTE BAND CA\_42C 20M+15M QPSK

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42361	3477.1	22.43	-1.3	21.13	129.72	23
42516	3492.6	42687	3509.7	22.59	-1.3	21.29	134.59	23
42841	3525.1	43012	3542.2	22.49	-1.3	21.19	131.52	23

LTE BAND CA\_42C 20M+15M 16QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42361	3477.1	21.67	-1.3	20.37	108.89	23
42516	3492.6	42687	3509.7	21.71	-1.3	20.41	109.90	23
42841	3525.1	43012	3542.2	21.72	-1.3	20.42	110.15	23

LTE BAND CA\_42C 20M+15M 64QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42361	3477.1	20.14	-1.3	18.84	76.56	23
42516	3492.6	42687	3509.7	20.09	-1.3	18.79	75.68	23
42841	3525.1	43012	3542.2	20.16	-1.3	18.86	76.91	23



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LTE BAND CA\_42C 20M+20M QPSK

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42388	3479.8	22.5	-1.3	21.20	131.83	23
42491	3490.1	42689	3509.9	22.67	-1.3	21.37	137.09	23
42792	3520.2	42990	3540.0	22.57	-1.3	21.27	133.97	23

LTE BAND CA\_42C 20M+20M 16QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42388	3479.8	21.73	-1.3	20.43	110.41	23
42491	3490.1	42689	3509.9	21.79	-1.3	20.49	111.94	23
42792	3520.2	42990	3540.0	21.76	-1.3	20.46	111.17	23

LTE BAND CA\_42C 20M+20M 64QAM

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
42190	3460.0	42388	3479.8	20.21	-1.3	18.91	77.80	23
42491	3490.1	42689	3509.9	20.13	-1.3	18.83	76.38	23
42792	3520.2	42990	3540.0	20.22	-1.3	18.92	77.98	23

**REMARKS:** ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

## 3.2 FREQUENCY STABILITY MEASUREMENT

### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

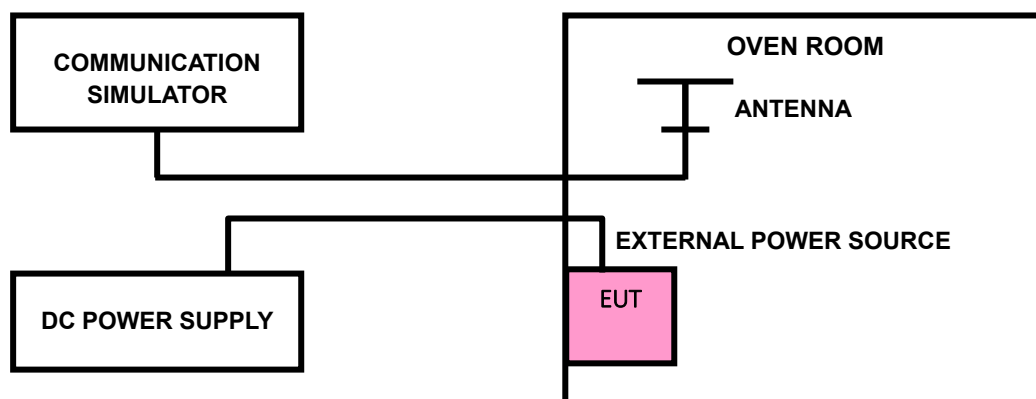
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

### 3.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the  $\pm 0.5^{\circ}\text{C}$  during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

**NOTE:** The frequency error was recorded frequency error from the communication simulator.

### 3.2.3 TEST SETUP



### 3.2.4 TEST RESULTS

Please Refer to Appendix Of this test report.

#### LTE BAND CA\_7C

LTE BAND CA_7C channel and Frequency List					
BW(MHz)	Channel/Frequncy(MHz)		Lowest	Middle	Highest
10+20	PCC	channel	20805	21006	21206
		Frequncy	2505.5	2525.6	2545.6
	SCC	channel	20949	21150	21350
		Frequncy	2519.9	2540	2560
15+10	PCC	channel	20825	21051	21277
		Frequncy	2507.5	2530.1	2552.7
	SCC	channel	20945	21171	21397
		Frequncy	2519.5	2542.1	2564.7
15+15	PCC	channel	20825	21025	21225
		Frequncy	2507.5	2527.5	2547.5
	SCC	channel	20975	21175	21375
		Frequncy	2522.5	2542.5	2562.5
15+20	PCC	channel	20828	21003	21179
		Frequncy	2507.8	2525.3	2542.9
	SCC	channel	20999	21174	21350
		Frequncy	2524.9	2542.4	2560
20+10	PCC	channel	20850	21051	21251
		Frequncy	2510	2530.1	2550.1
	SCC	channel	20994	21195	21395
		Frequncy	2524.4	2544.5	2564.5
20+15	PCC	channel	20850	21026	21201
		Frequncy	2510	2527.6	2545.1
	SCC	channel	21021	21197	21372
		Frequncy	2527.1	2544.7	2562.2
20+20	PCC	channel	20850	21001	21152
		Frequncy	2510	2525.1	2540.2
	SCC	channel	21048	21199	21350
		Frequncy	2529.8	2544.9	2560



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LTE BAND CA\_38C

LTE BAND CA_38C channel and Frequency List					
BW(MHz)	Channel/Frequncy(MHz)		Lowest	Middle	Highest
15+15	PCC	channel	37825	37925	38025
		Frequncy	2577.5	2587.5	2597.5
	SCC	channel	37975	38075	38175
		Frequncy	2592.5	2602.5	2612.5
20+20	PCC	channel	37850	37901	37952
		Frequncy	2580.0	2585.1	2590.2
	SCC	channel	38048	38099	38150
		Frequncy	2599.8	2604.9	2610

LTE BAND CA\_41C

LTE BAND CA_41C channel and Frequency List					
BW(MHz)	Channel/Frequncy(MHz)		Lowest	Middle	Highest
5+20	PCC	channel	39683	40528	41373
		Frequncy	2499.3	2583.8	2668.3
	SCC	channel	39800	40645	41490
		Frequncy	2511	2595.5	2680
10+15	PCC	channel	39703	40549	41395
		Frequncy	2501.3	2585.9	2670.5
	SCC	channel	39823	40669	41515
		Frequncy	2513.3	2597.9	2682.5
10+20	PCC	channel	39705	40526	41346
		Frequncy	2501.5	2583.6	2665.6
	SCC	channel	39849	40670	41490
		Frequncy	2515.9	2598.0	2680
15+10	PCC	channel	39725	40571	41417
		Frequncy	2503.5	2588.1	2672.7
	SCC	channel	39845	40691	41537
		Frequncy	2515.5	2600.1	2684.7



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15+15	PCC	channel	39725	40545	41365
		Frequncy	2503.5	2585.5	2667.5
	SCC	channel	39875	40695	41515
		Frequncy	2518.5	2600.5	2682.5
15+20	PCC	channel	39728	40523	41319
		Frequncy	2503.8	2583.3	2662.9
	SCC	channel	39899	40694	41490
		Frequncy	2520.9	2600.4	2680
20+5	PCC	channel	39750	40595	41440
		Frequncy	2506	2590.5	2675
	SCC	channel	39867	40712	41557
		Frequncy	2517.7	2602.2	2686.7
20+10	PCC	channel	39750	40571	41391
		Frequncy	2506	2588.1	2670.1
	SCC	channel	39894	40715	41535
		Frequncy	2520.4	2602.5	2684.5
20+15	PCC	channel	39750	40546	41341
		Frequncy	2506	2585.6	2665.1
	SCC	channel	39921	40717	41512
		Frequncy	2523.1	2602.7	2682.2
20+20	PCC	channel	39750	40521	41292
		Frequncy	2506	2583.1	2660.2
	SCC	channel	39948	40719	41490
		Frequncy	2525.8	2602.9	2680



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**LTE BAND CA\_42C**

LTE BAND CA_42C channel and Frequency List					
BW(MHz)	Channel/Frequncy(MHz)		Lowest	Middle	Highest
5+20	PCC	channel	42123	42498	42873
		Frequncy	3453.3	3490.8	3528.3
	SCC	channel	42240	42615	42990
		Frequncy	3465	3502.5	3540
10+20	PCC	channel	42145	42496	42846
		Frequncy	3455.5	3490.6	3525.6
	SCC	channel	42289	42640	42990
		Frequncy	3469.9	3505	3540
15+20	PCC	channel	42168	42493	42819
		Frequncy	3457.8	3490.3	3522.9
	SCC	channel	42339	42664	42990
		Frequncy	3474.9	3507.4	3540
20+5	PCC	channel	41290	42565	42940
		Frequncy	3460	3497.5	3535
	SCC	channel	42307	42682	43057
		Frequncy	3471.7	3509.2	3546.7
20+10	PCC	channel	42190	42541	42891
		Frequncy	3460	3495.1	3530.1
	SCC	channel	42334	42685	43035
		Frequncy	3474.4	3509.5	3544.5
20+15	PCC	channel	42190	42516	42841
		Frequncy	3460	3492.6	3525.1
	SCC	channel	42361	42687	43012
		Frequncy	3477.1	3509.7	3542.2
20+20	PCC	channel	42190	42491	42792
		Frequncy	3460	3490.1	3520.2
	SCC	channel	42388	42689	42990
		Frequncy	3479.8	3509.9	3540

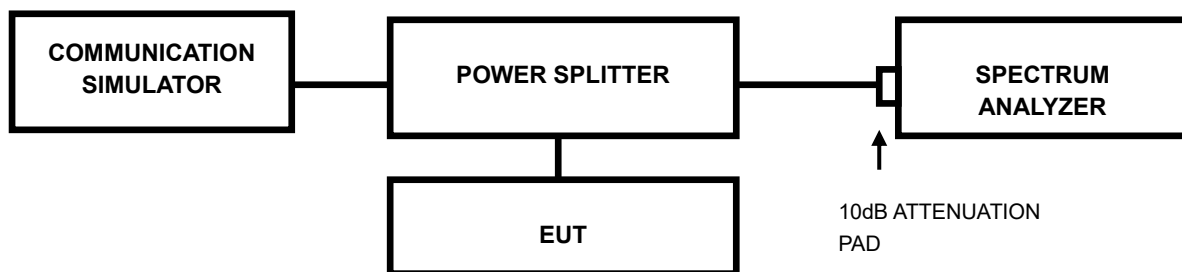
Note: VL = Low voltage(3.6V); VN/NV = Normal voltage(3.7V); VH = High voltage(4.2V);  
NT = Normal temperature (25°C)

### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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 power of a given emission.

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.





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### 3.3.4 TEST RESULTS

Please Refer to Appendix Of this test report.



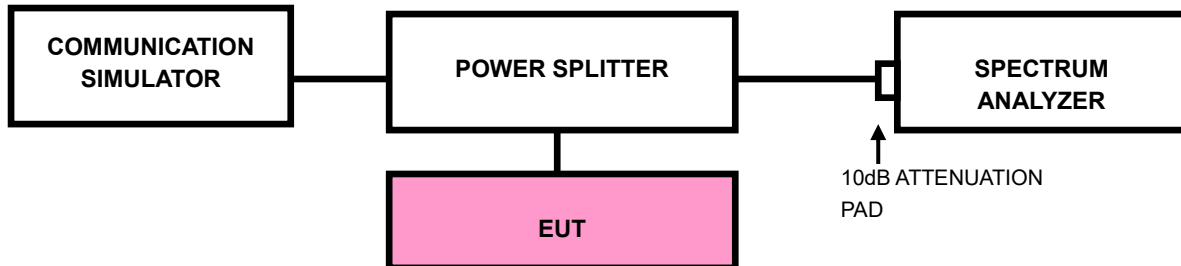
### 3.4 BAND EDGE MEASUREMENT

#### 3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(m)(4) specified that For mobile digital stations, 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 that  $43 + 10 \log (P)$  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. For mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

According to FCC Part 27.53 (n)(2)For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz 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, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz.

### 3.4.2 TEST SETUP





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### 3.4.3 TEST PROCEDURES

- a) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- b) Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
- c) Set the resolution bandwidth (RBW)  $\geq 1\%$  EBW in the 1MHz band immediately outside and adjacent to the band edge.
- d) Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- e) Set the video bandwidth (VBW) to  $\geq 3 \times$  RBW.
- f) Select the average power (RMS) display detector.
- g) Set the number of measurement points to  $\geq 1001$ .
- h) Use auto-coupled sweep time.
- i) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- j) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.
- k) Record the max trace plot into the test report.

### 3.4.4 TEST RESULTS

Please Refer to Appendix Of this test report.

### 3.5 CONDUCTED SPURIOUS EMISSIONS

#### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

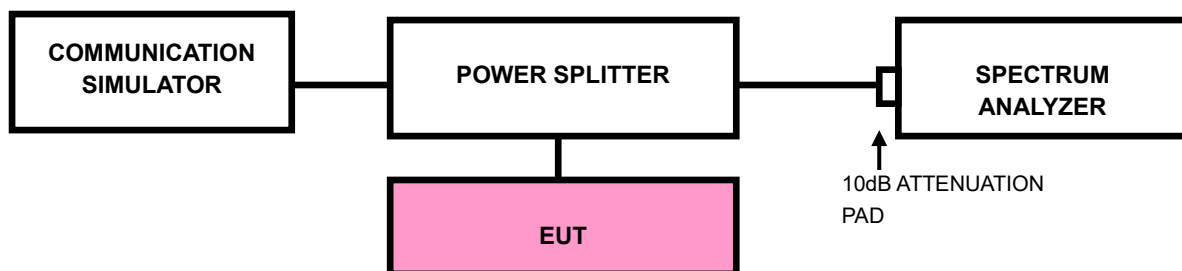
For: LTE Band7C/Band41C

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log_{10}(P)$  dB. The limit of emission is equal to  $-25\text{dBm}$ .

#### 3.5.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 9kHz up to a frequency including its 10<sup>th</sup> harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

#### 3.5.3 TEST SETUP





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### 3.5.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix Of this test report.



### 3.6 RADIATED EMISSION MEASUREMENT

#### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. The emission limit equal to  $-13\text{dBm}$ .

For: LTE Band7/ Band41

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log_{10}(P)$  dB. The limit of emission is equal to  $-25\text{dBm}$ .

#### 3.6.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G.
- c.  $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$ .
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole,  $\text{E.R.P power} = \text{E.I.P.R power} - 2.15\text{dBi}$ .

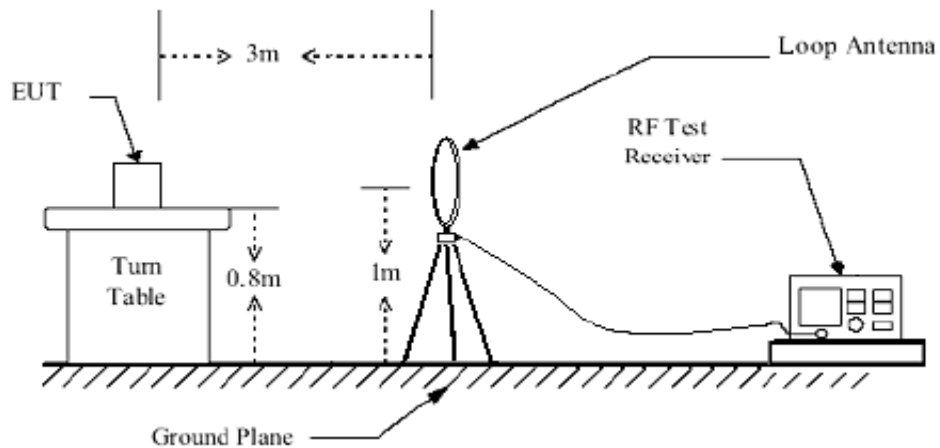
**NOTE:** The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

#### 3.6.3 DEVIATION FROM TEST STANDARD

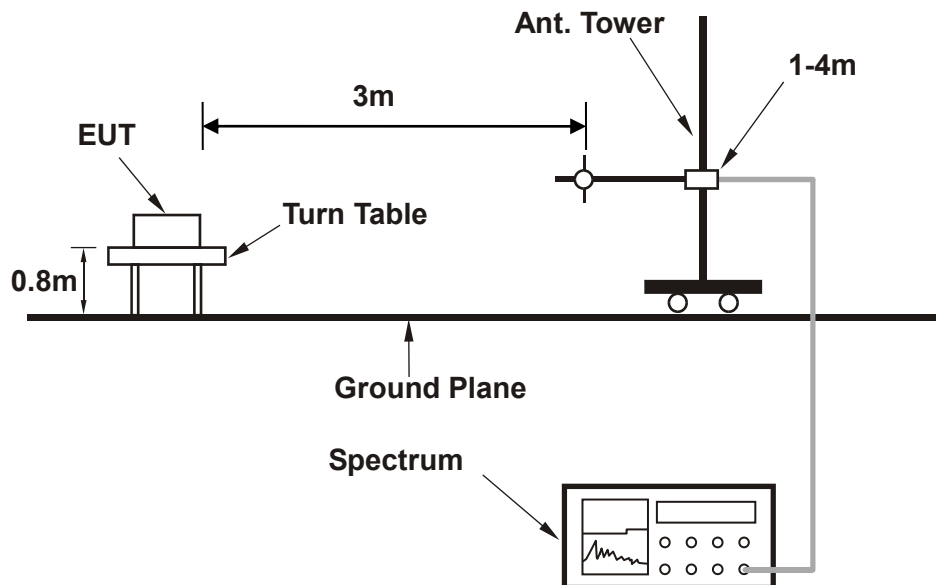
No deviation

### 3.6.4 TEST SETUP

#### < Frequency Range below 30MHz >

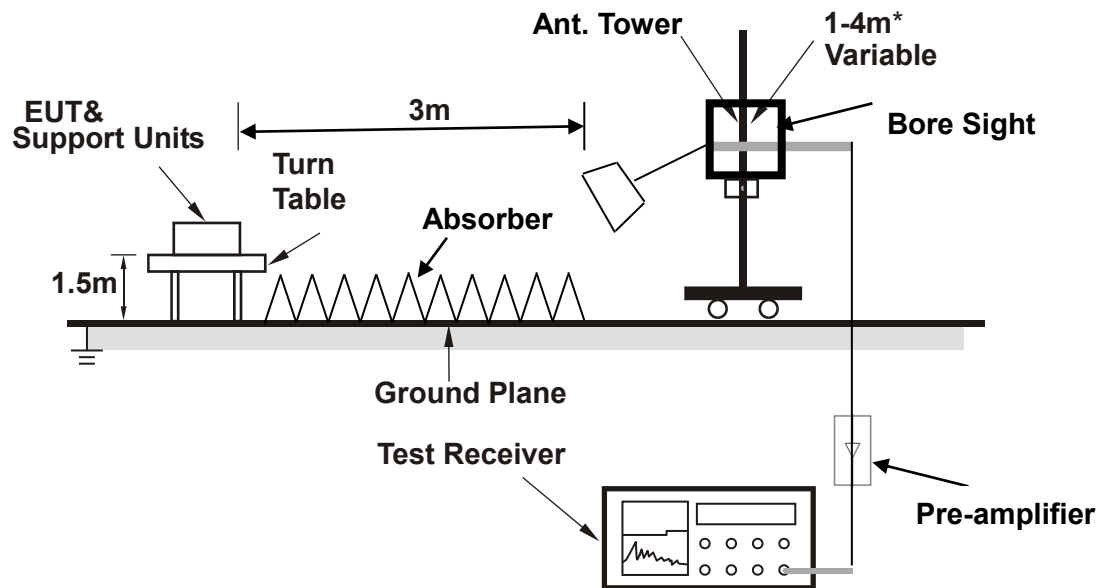


#### < Frequency Range 30MHz~1GHz >





<Frequency Range above 1GHz>



**Note:** Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

#### BELOW 1GHz WORST-CASE DATA

30 MHz – 1GHz data:

LTE Band CA\_38C

CHANNEL BANDWIDTH: (15+15) MHz / QPSK

MODE	TX channel PCC 37925	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 38075		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	33.550	-78.64	-25.00	53.64	-9.38	H	5.1	1
1	53.850	-70.87	-25.00	45.87	-6.95	H	359.1	1
1	125.050	-77.01	-25.00	52.01	-14.42	H	1	1
1	224.100	-72.88	-25.00	47.88	-8.30	H	0.9	2
1	351.700	-79.18	-25.00	54.18	-7.33	H	357.6	1
2	670.046	-77.98	-25.00	52.98	-0.69	H	359.1	1





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<b>MODE</b>	TX channel PCC 37925	<b>FREQUENCY RANGE</b>	Above 1000MHz
	TX channel SCC 38075		
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	54.050	-69.82	-25.00	44.82	-6.44	V	355.4	2
1	68.450	-74.45	-25.00	49.45	-2.66	V	1	1
1	104.250	-80.48	-25.00	55.48	-9.00	V	2.3	2
1	202.500	-77.23	-25.00	52.23	-10.86	V	359	2
1	250.050	-79.88	-25.00	54.88	-9.48	V	359	2
1	375.050	-81.14	-25.00	56.14	-5.96	V	1	1





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Test Report No.: W7L-P23030016RF08

**ABOVE 1GHz**

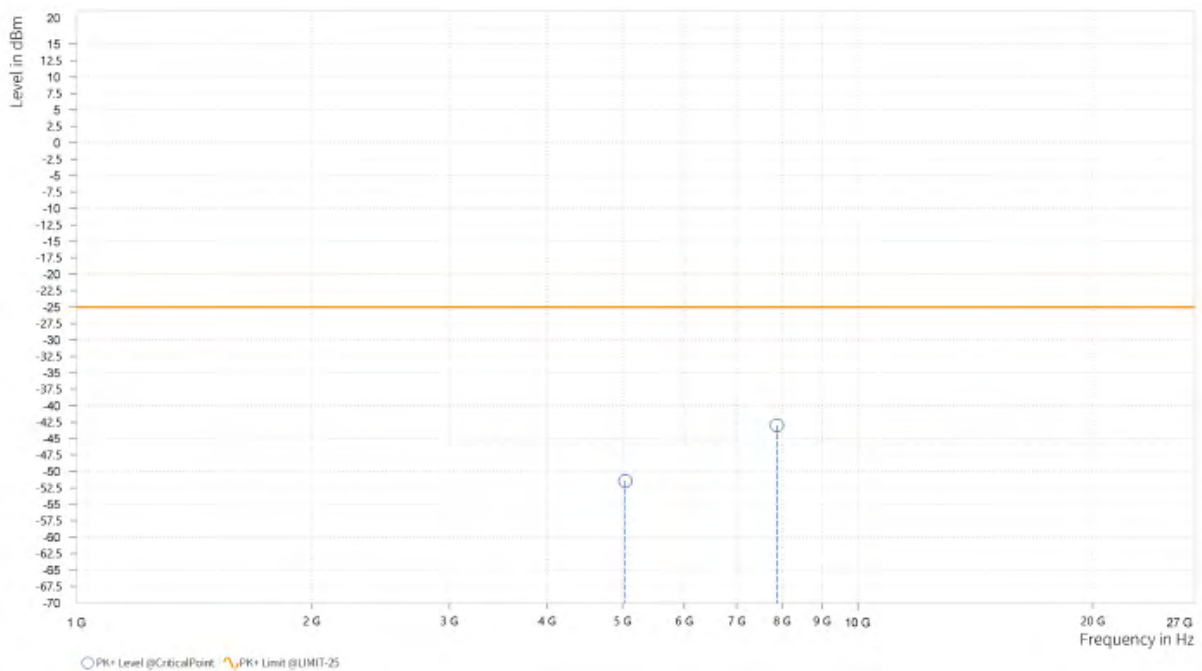
**Note:** For higher frequency, the emission is too low to be detected.

**LTE Band CA\_7C**

**CHANNEL BANDWIDTH: 10 MHz + 20MHz**

<b>MODE</b>	TX channel PCC 21006	<b>FREQUENCY RANGE</b>	Above 1000MHz
	TX channel SCC 21150		
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,042.500	-51.45	-25.00	26.45	25.66	H	208.8	1
5	7,884.000	-43.00	-25.00	18.00	33.01	H	359	2

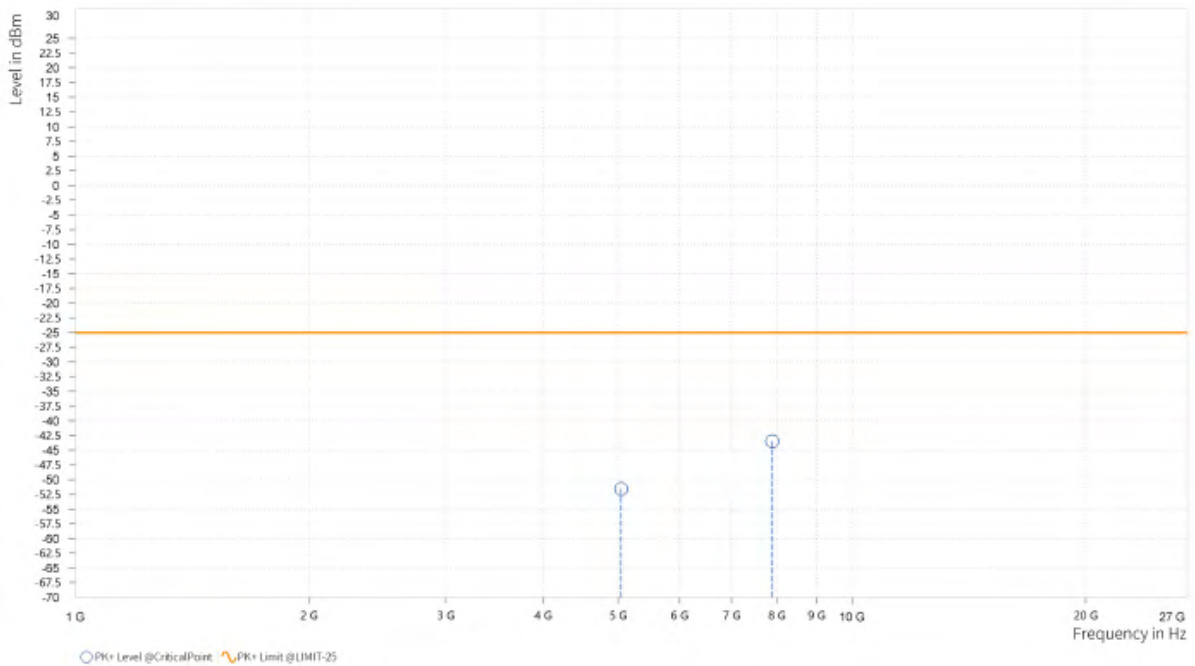




Test Report No.: W7L-P23030016RF08

MODE	TX channel PCC 21006	FREQUENCY RANGE	Above 1000MHz
	TX channel SCC 21150		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60HZ
TESTED BY	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,043.000	-51.60	-25.00	26.60	25.49	V	184.8	1
5	7,896.000	-43.47	-25.00	18.47	33.05	V	1	1



**CHANNEL BANDWIDTH: 15MHz + 10MHz**

<b>MODE</b>	TX channel PCC 21051	<b>FREQUENCY RANGE</b>	Above 1000MHz
	TX channel SCC 21171		
<b>ENVIRONMENTAL CONDITIONS</b>	23deg. C, 70%RH	<b>INPUT POWER</b>	AC 120V/60HZ
<b>TESTED BY</b>	Jace Hu		
<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>			

Rg	Frequency [MHz]	PK+ Level [dBm]	PK+ Limit [dBm]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,046.000	-50.88	-25.00	25.88	25.66	H	198	1
5	7,918.000	-43.95	-25.00	18.95	33.01	H	281.7	1

