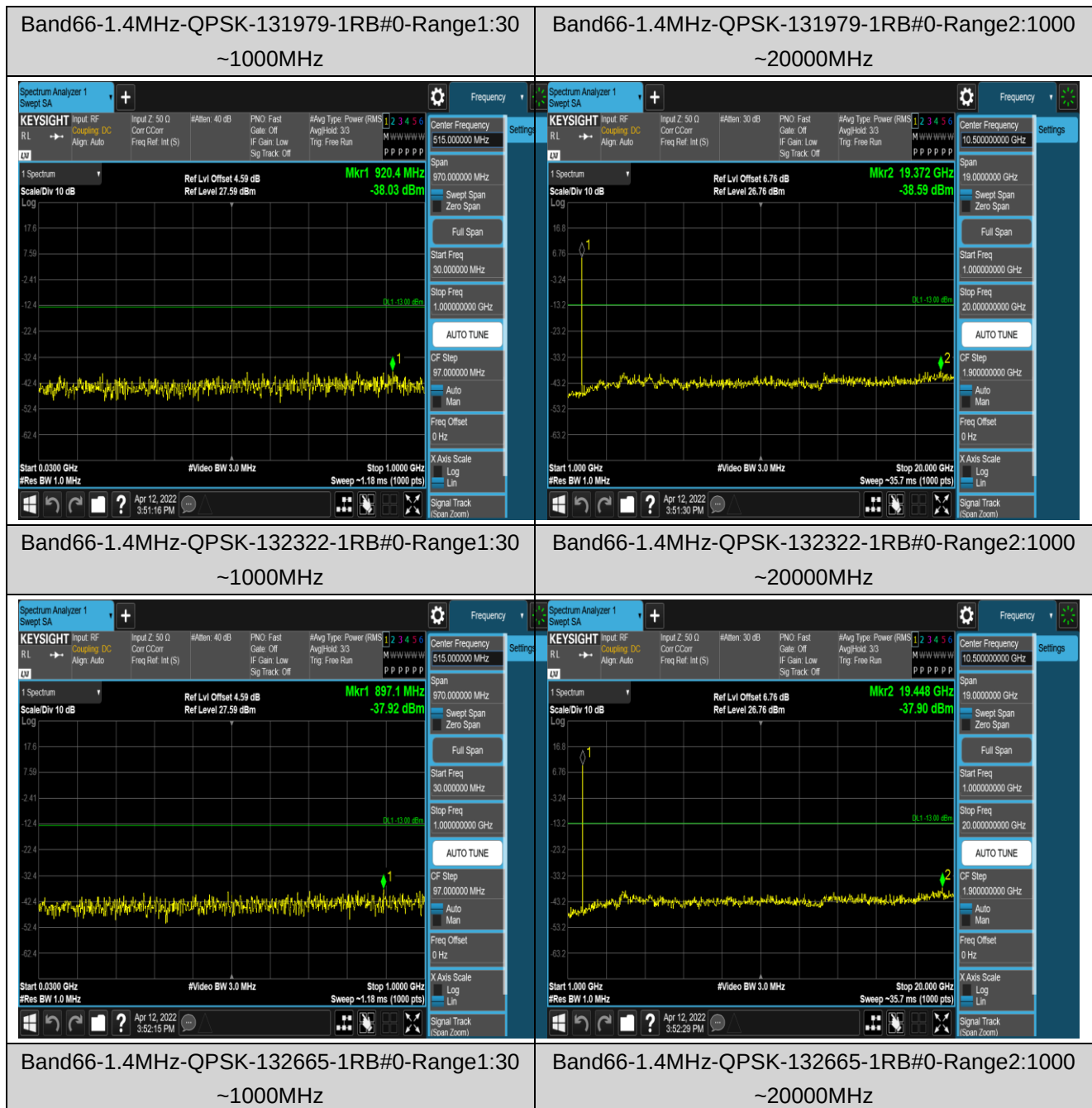






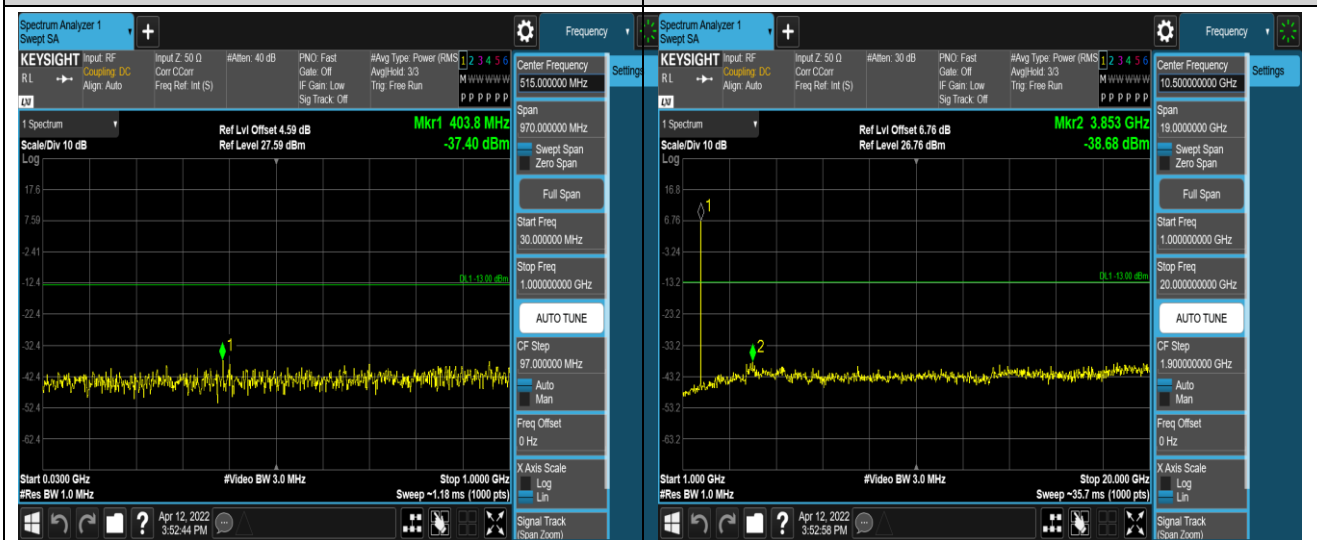
Band66-1.4MHz-16QAM-131979-1RB#0-Range1:3
0~1000MHz

Band66-1.4MHz-16QAM-131979-1RB#0-Range2:100
0~20000MHz



Band66-1.4MHz-16QAM-132322-1RB#0-Range1:3
0~1000MHz

Band66-1.4MHz-16QAM-132322-1RB#0-Range2:100
0~20000MHz

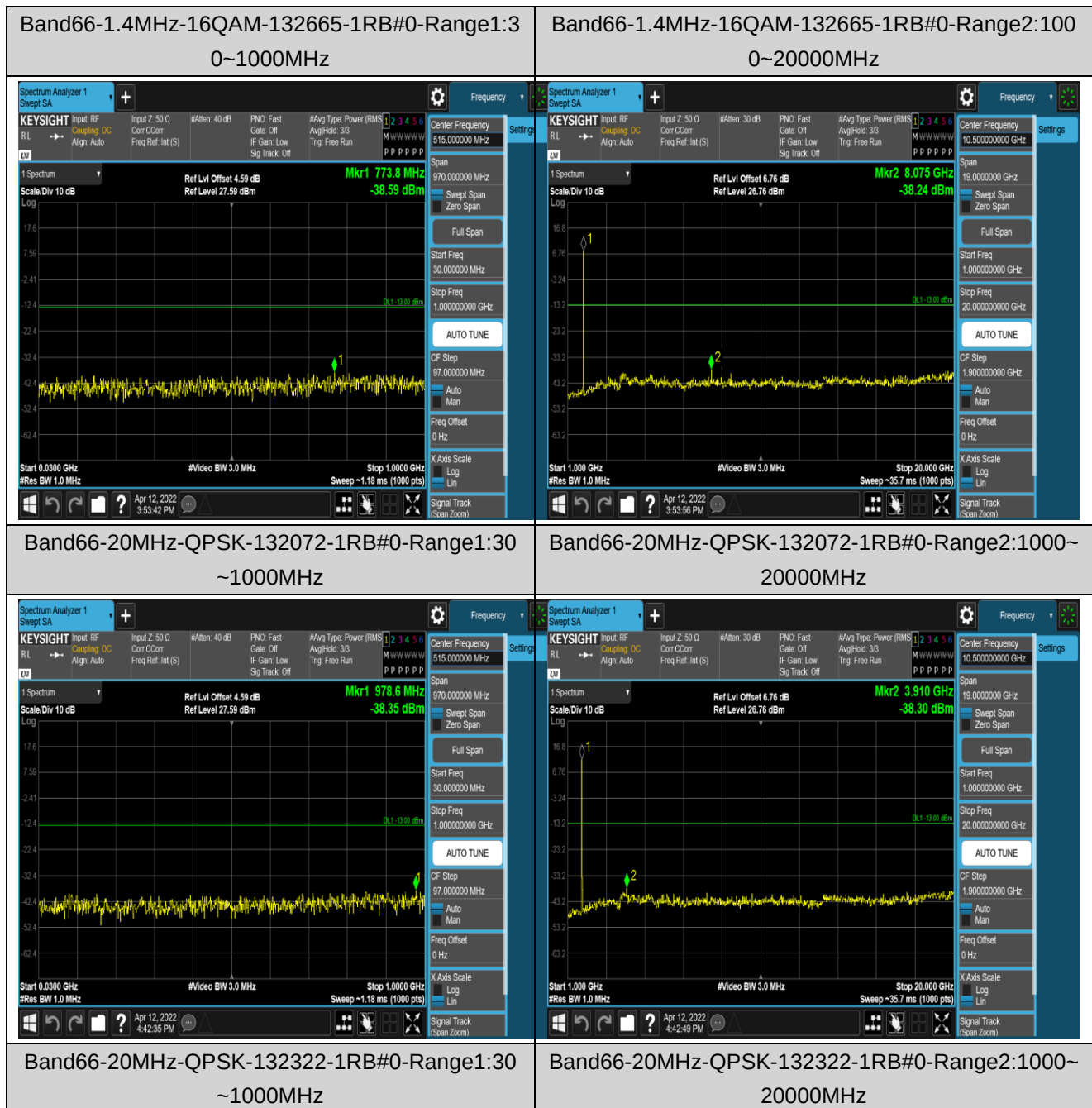


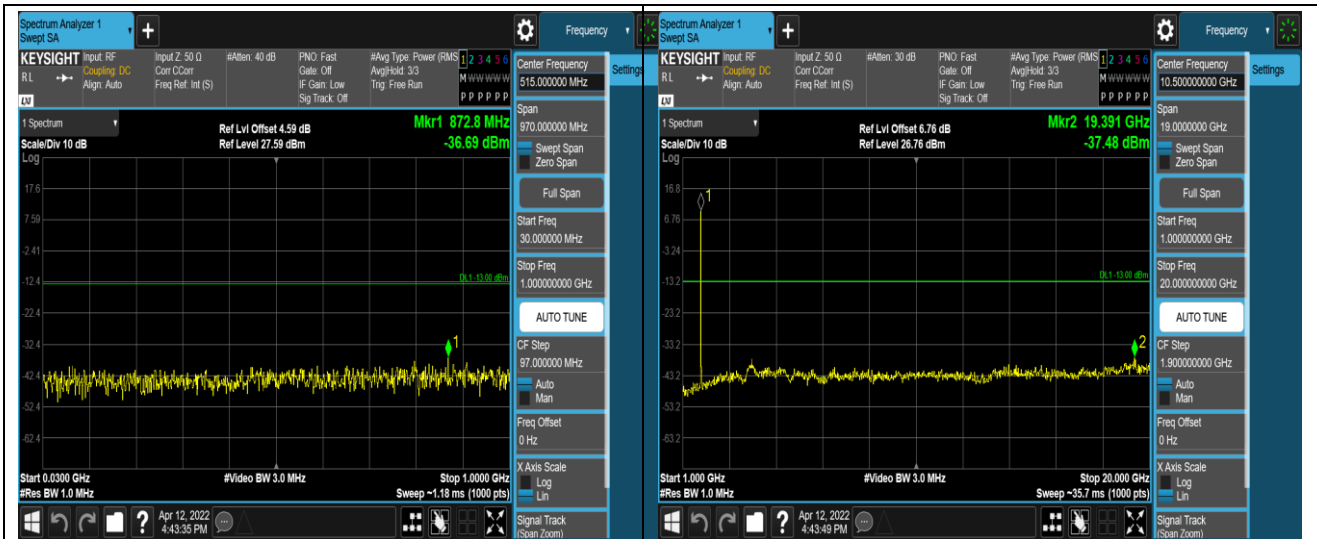
JianYan Testing Group Shenzhen Co., Ltd.

No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

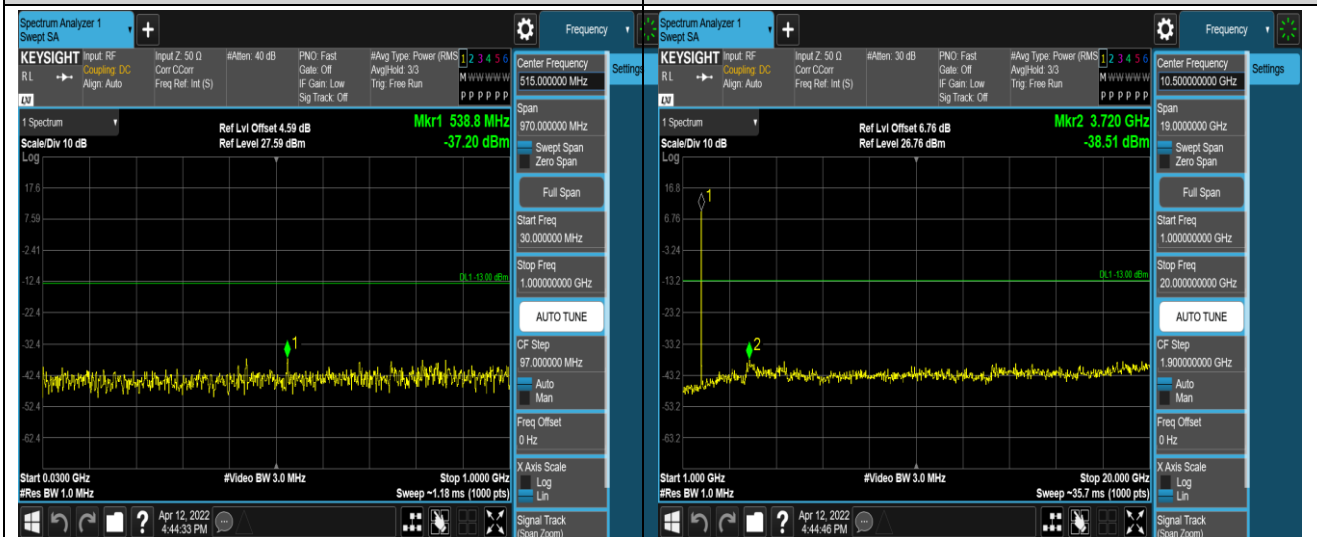
Project No.: JYTSZR2204028





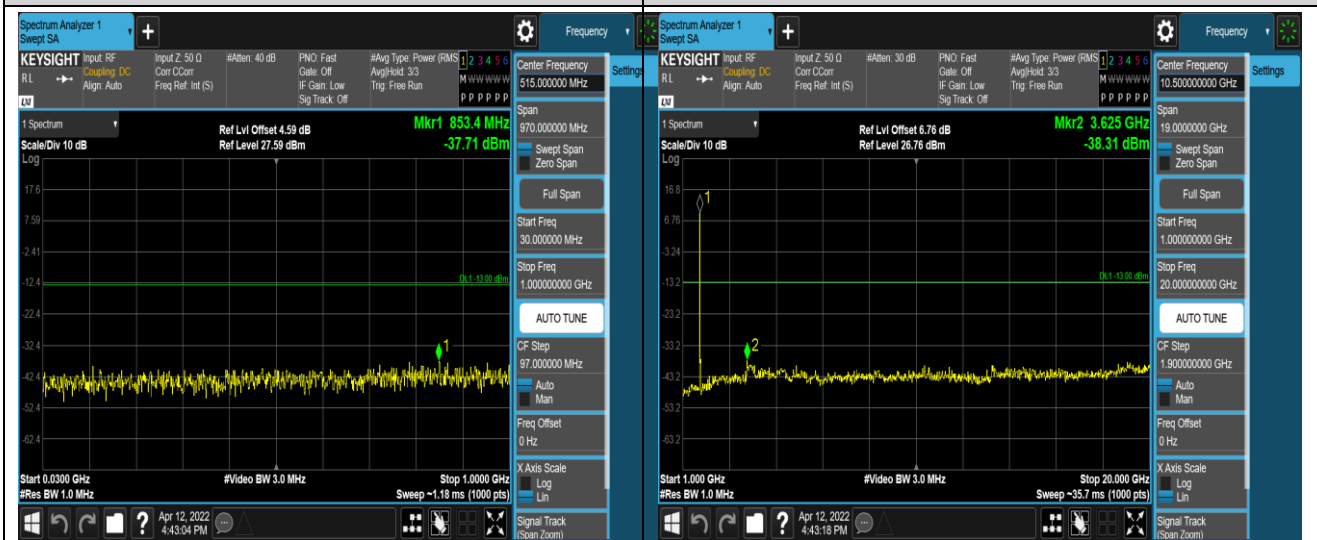
Band66-20MHz-QPSK-132572-1RB#0-Range1:30~1000MHz

Band66-20MHz-QPSK-132572-1RB#0-Range2:1000~20000MHz



Band66-20MHz-16QAM-132072-1RB#0-Range1:30~1000MHz

Band66-20MHz-16QAM-132072-1RB#0-Range2:1000~20000MHz





Appendix F: Frequency Stability

Test Result

LTE Band 2 part:

Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 Frequency=1880.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-14.26	-0.007585	Within authorized band for Band 2	Pass
	-20	-16.58	-0.008819		
	-10	-16.47	-0.008761		
	0	-15.79	-0.008399		
	10	-16.78	-0.008926		
	20	-13.56	-0.007213		
	30	-13.06	-0.006947		
	40	-12.86	-0.006840		
	50	-18.07	-0.009612		
16QAM					
3.85	-30	-14.36	-0.007638	Within authorized band for Band 2	Pass
	-20	-9.20	-0.004894		
	-10	-10.34	-0.005500		
	0	-12.09	-0.006431		
	10	-18.01	-0.009580		
	20	-13.79	-0.007335		
	30	-14.99	-0.007973		
	40	-10.23	-0.005441		
	50	-13.25	-0.007048		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-15.45	-0.008218	Within authorized band for Band 2	Pass
	3.85	-13.65	-0.007261		
	4.40	-19.03	-0.010122		
16QAM					
25	3.50	-11.49	-0.006112	Within authorized band for Band 2	Pass
	3.85	-12.70	-0.006755		
	4.40	-3.73	-0.001984		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 5 part:

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-7.07	-0.008452	±2.5	Pass
	-20	-10.20	-0.012194		
	-10	-11.53	-0.013784		
	0	-11.86	-0.014178		
	10	-10.30	-0.012313		
	20	-7.95	-0.009504		
	30	-9.13	-0.010915		
	40	-8.44	-0.010090		
	50	-7.15	-0.008548		
16QAM					
3.85	-30	-12.83	-0.015338	±2.5	Pass
	-20	-14.09	-0.016844		
	-10	-8.55	-0.010221		
	0	-7.85	-0.009384		
	10	-11.60	-0.013867		
	20	-7.93	-0.009480		
	30	-12.63	-0.015099		
	40	-8.37	-0.010006		
	50	-15.34	-0.018338		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-8.25	-0.009863	±2.5	Pass
	3.85	-9.96	-0.011907		
	4.40	-9.97	-0.011919		
16QAM					
25	3.50	-9.93	-0.011871	±2.5	Pass
	3.85	-5.41	-0.006467		
	4.40	-4.73	-0.005655		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 7 part:

Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-18.54	-0.007314	Within authorized band for Band 7	Pass
	-20	-20.73	-0.008178		
	-10	-8.84	-0.003487		
	0	-20.84	-0.008221		
	10	13.95	0.005503		
	20	-11.90	-0.004694		
	30	-3.05	-0.001203		
	40	-18.04	-0.007116		
	50	12.09	0.004769		
16QAM					
3.85	-30	-23.26	-0.009176	Within authorized band for Band 7	Pass
	-20	-10.50	-0.004142		
	-10	-19.48	-0.007684		
	0	-15.89	-0.006268		
	10	11.83	0.004667		
	20	-16.95	-0.006686		
	30	-22.00	-0.008679		
	40	3.98	0.001570		
	50	7.84	0.003093		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	8.13	0.003207	Within authorized band for Band 7	Pass
	3.85	-19.58	-0.007724		
	4.40	-19.80	-0.007811		
16QAM					
25	3.50	8.65	0.003412	Within authorized band for Band 7	Pass
	3.85	-18.71	-0.007381		
	4.40	14.88	0.005870		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 17 part:

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 Frequency=710.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-13.78	-0.019408	Within authorized band for Band 17	Pass
	-20	-10.07	-0.014183		
	-10	-10.19	-0.014352		
	0	-7.31	-0.010296		
	10	-10.41	-0.014662		
	20	-11.04	-0.015549		
	30	-7.75	-0.010915		
	40	-9.13	-0.012859		
	50	-10.53	-0.014831		
16QAM					
3.85	-30	-12.66	-0.017831	Within authorized band for Band 17	Pass
	-20	-10.67	-0.015028		
	-10	-7.65	-0.010775		
	0	-4.98	-0.007014		
	10	-5.39	-0.007592		
	20	-8.73	-0.012296		
	30	-4.48	-0.006310		
	40	-7.04	-0.009915		
	50	-10.39	-0.014634		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-2.09	-0.002944	Within authorized band for Band 17	Pass
	3.85	-11.54	-0.016254		
	4.40	-5.12	-0.007211		
16QAM					
25	3.50	-8.10	-0.011408	Within authorized band for Band 17	Pass
	3.85	-10.41	-0.014662		
	4.40	-10.27	-0.014465		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 41 part:

Reference Frequency: LTE Band 41 (10MHz) Middle channel=40640 Frequency=2595.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-16.88	-0.006505	Within authorized band for Band 41	Pass
	-20	-11.96	-0.004609		
	-10	-14.46	-0.005572		
	0	6.62	0.002551		
	10	-7.47	-0.002879		
	20	-15.96	-0.006150		
	30	-8.73	-0.003364		
	40	-13.63	-0.005252		
	50	-18.35	-0.007071		
16QAM					
3.85	-30	-18.88	-0.007276	Within authorized band for Band 41	Pass
	-20	13.76	0.005303		
	-10	-15.08	-0.005811		
	0	-16.05	-0.006185		
	10	-17.31	-0.006671		
	20	-13.07	-0.005037		
	30	-16.04	-0.006181		
	40	-21.01	-0.008096		
	50	-17.80	-0.006859		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	14.61	0.005630	Within authorized band for Band 41	Pass
	3.85	-18.93	-0.007295		
	4.40	11.29	0.004351		
16QAM					
25	3.50	-16.71	-0.006439	Within authorized band for Band41	Pass
	3.85	-11.30	-0.004355		
	4.40	-9.88	-0.003807		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 66 part:

Reference Frequency: LTE Band 66 (10MHz) Middle channel=132322 Frequency=1745.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-7.84	-0.004493	Within authorized band for Band 66	Pass
	-20	-13.00	-0.007450		
	-10	-9.28	-0.005318		
	0	-10.47	-0.006000		
	10	-12.52	-0.007175		
	20	-6.34	-0.003633		
	30	-7.91	-0.004533		
	40	8.75	0.005014		
	50	8.45	0.004842		
16QAM					
3.85	-30	5.51	0.003158	Within authorized band for Band 66	Pass
	-20	10.51	0.006023		
	-10	-12.19	-0.006986		
	0	-13.49	-0.007731		
	10	-6.19	-0.003547		
	20	-5.88	-0.003370		
	30	-9.71	-0.005564		
	40	3.33	0.001908		
	50	6.58	0.003771		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-9.26	-0.005307	Within authorized band for Band 66	Pass
	3.85	-11.59	-0.006642		
	4.40	-1.77	-0.001014		
16QAM					
25	3.50	8.30	0.004756	Within authorized band for Band 66	Pass
	3.85	-16.59	-0.009507		
	4.40	-4.79	-0.002745		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

Appendix G: Modulation Characteristics

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band2	20MHz	QPSK	18900	100RB#0	PASS	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS	PASS
Band5	10MHz	QPSK	20525	50RB#0	PASS	PASS
Band5	10MHz	16QAM	20525	50RB#0	PASS	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS	PASS
Band17	10MHz	QPSK	23790	50RB#0	PASS	PASS
Band17	10MHz	16QAM	23790	50RB#0	PASS	PASS
Band41	20MHz	QPSK	40640	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40640	100RB#0	PASS	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS	PASS

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

Test Graphs

