



Band66-1.4MHz-QPSK-131979-1RB#0-Range1:30
~1000MHz

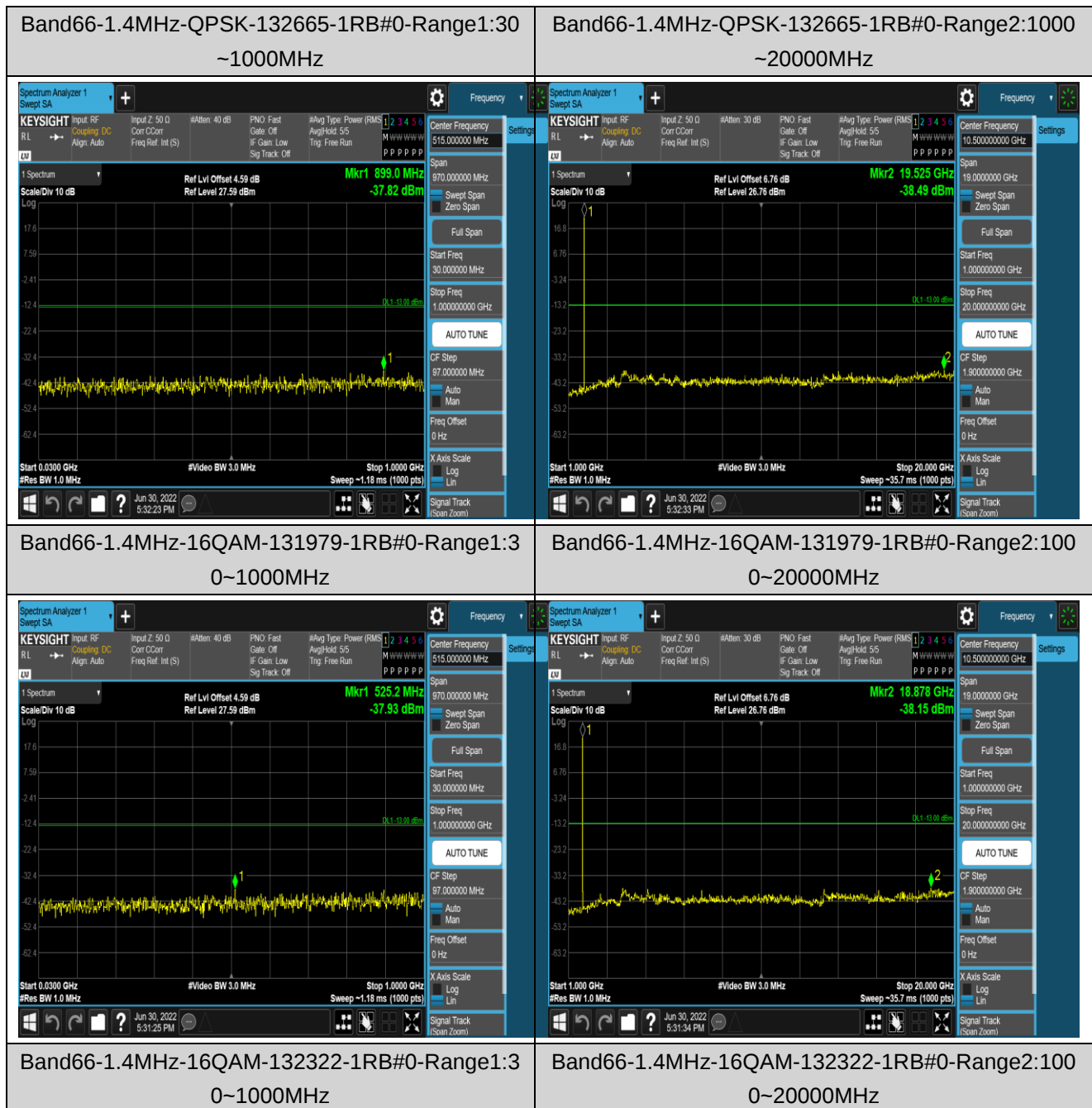
Band66-1.4MHz-QPSK-131979-1RB#0-Range2:1000
~20000MHz



Band66-1.4MHz-QPSK-132322-1RB#0-Range1:30
~1000MHz

Band66-1.4MHz-QPSK-132322-1RB#0-Range2:1000
~20000MHz







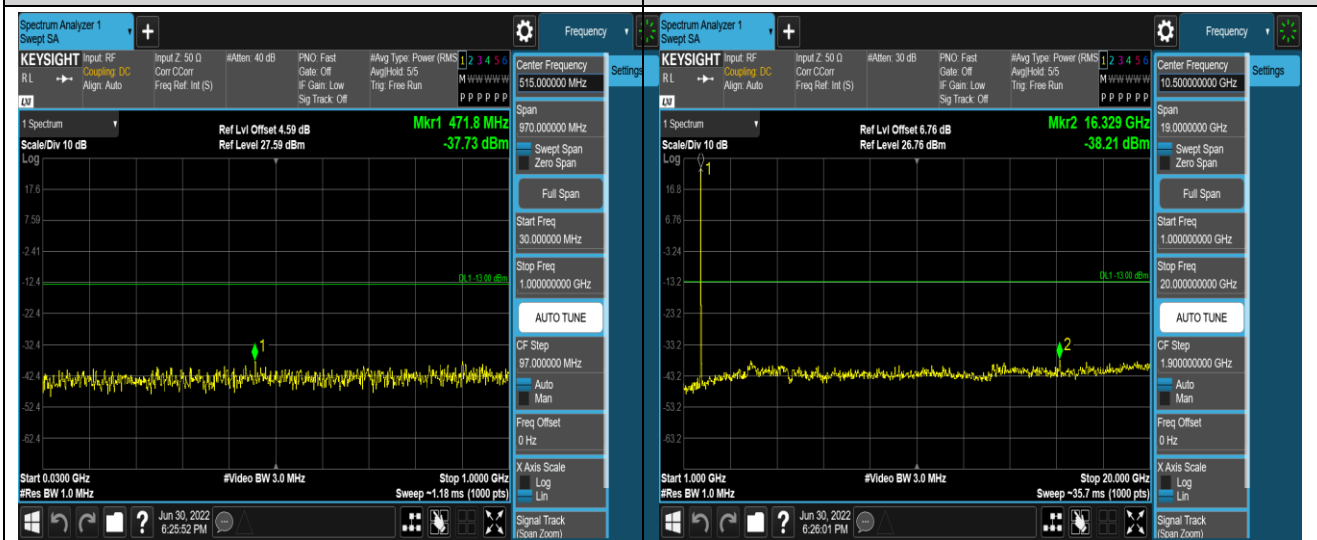
Band66-1.4MHz-16QAM-132665-1RB#0-Range1:3
0~1000MHz

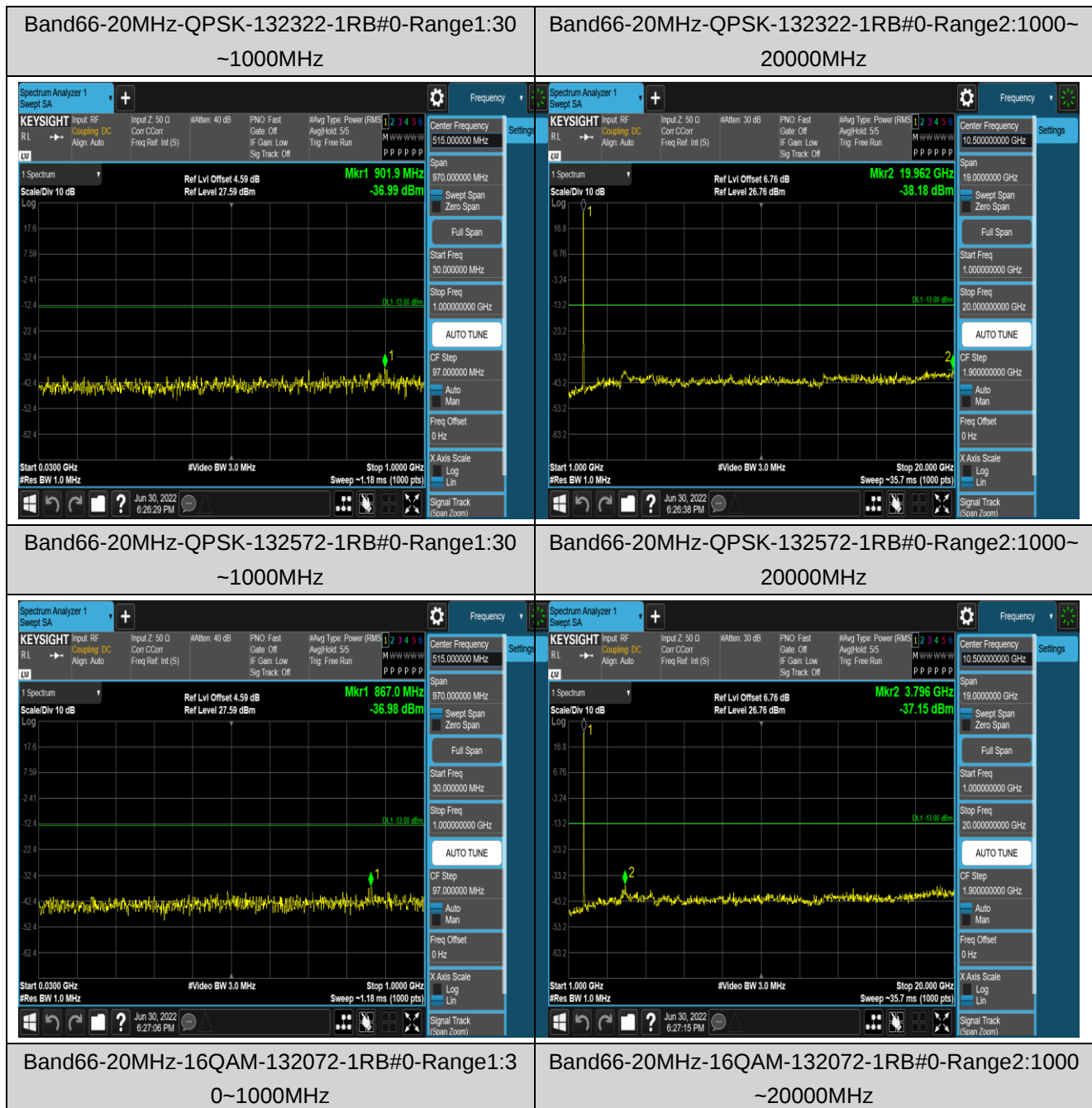
Band66-1.4MHz-16QAM-132665-1RB#0-Range2:100
0~20000MHz



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

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







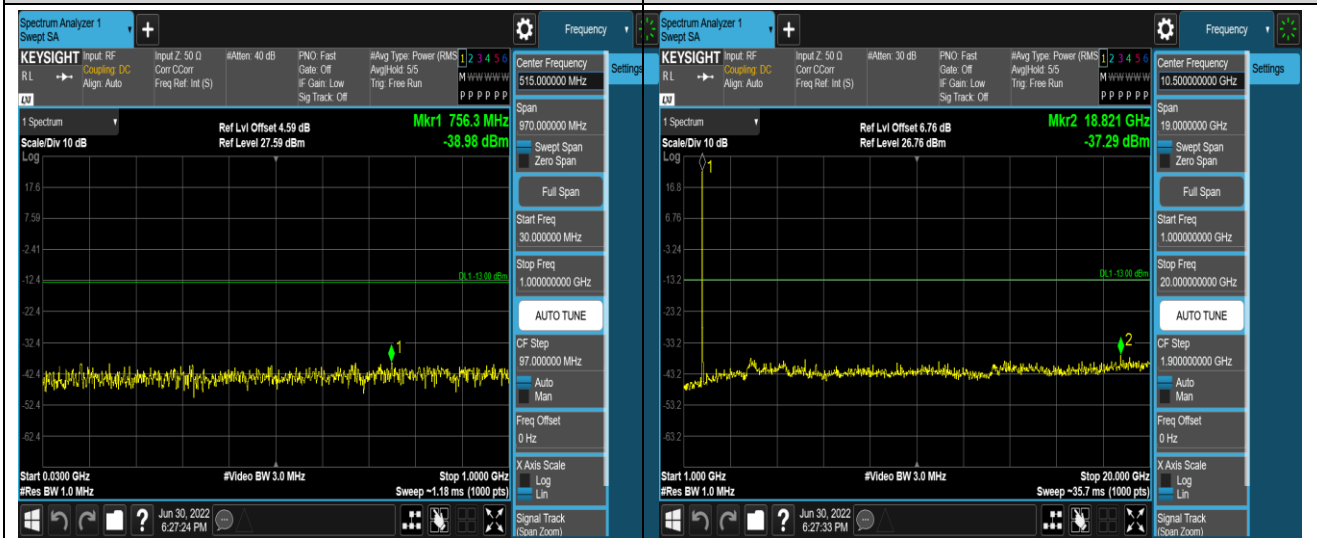
Band66-20MHz-16QAM-132322-1RB#0-Range1:3
0~1000MHz

Band66-20MHz-16QAM-132322-1RB#0-Range2:1000
~20000MHz



Band66-20MHz-16QAM-132572-1RB#0-Range1:3
0~1000MHz

Band66-20MHz-16QAM-132572-1RB#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					
3.87	-30	10.34	0.005500	Within authorized band for Band 2	Pass
	-20	7.84	0.004170		
	-10	-9.58	-0.005096		
	0	13.39	0.007122		
	10	9.61	0.005112		
	20	6.97	0.003707		
	30	5.45	0.002899		
	40	11.34	0.006032		
	50	10.07	0.005356		
16QAM					
3.87	-30	11.54	0.006138	Within authorized band for Band 2	Pass
	-20	12.42	0.006606		
	-10	10.00	0.005319		
	0	9.18	0.004883		
	10	10.09	0.005367		
	20	11.86	0.006309		
	30	10.80	0.005745		
	40	10.47	0.005569		
	50	10.11	0.005378		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	8.63	0.004590	Within authorized band for Band 2	Pass
	3.87	10.03	0.005335		
	4.45	9.11	0.004846		
16QAM					
25	3.50	7.18	0.003819	Within authorized band for Band 2	Pass
	3.87	15.26	0.008117		
	4.45	-8.84	-0.004702		
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					
3.87	-30	3.43	0.004100	±2.5	Pass
	-20	-4.76	-0.005690		
	-10	-5.28	-0.006312		
	0	-5.89	-0.007041		
	10	-5.24	-0.006264		
	20	-6.22	-0.007436		
	30	-4.98	-0.005953		
	40	-4.11	-0.004913		
	50	-4.23	-0.005057		
16QAM					
3.87	-30	-3.42	-0.004088	±2.5	Pass
	-20	-4.58	-0.005475		
	-10	-8.31	-0.009934		
	0	3.86	0.004614		
	10	-5.05	-0.006037		
	20	-4.76	-0.005690		
	30	-4.85	-0.005798		
	40	-4.69	-0.005607		
	50	-5.42	-0.006479		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-4.58	-0.005475	±2.5	Pass
	3.87	-4.62	-0.005523		
	4.45	-3.29	-0.003933		
16QAM					
25	3.50	-3.81	-0.004555	±2.5	Pass
	3.87	-5.24	-0.006264		
	4.45	-4.31	-0.005152		
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					
3.87	-30	5.31	0.002095	Within authorized band for Band 7	Pass
	-20	5.79	0.002284		
	-10	-9.46	-0.003732		
	0	5.09	0.002008		
	10	-7.65	-0.003018		
	20	-11.32	-0.004465		
	30	-10.14	-0.004000		
	40	-8.80	-0.003471		
	50	-10.84	-0.004276		
16QAM					
3.87	-30	-8.74	-0.003448	Within authorized band for Band 7	Pass
	-20	9.46	0.003732		
	-10	-8.75	-0.003452		
	0	-5.39	-0.002126		
	10	-10.20	-0.004024		
	20	6.85	0.002702		
	30	5.84	0.002304		
	40	-9.28	-0.003661		
	50	5.56	0.002193		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	7.55	0.002978	Within authorized band for Band 7	Pass
	3.87	4.62	0.001822		
	4.45	8.77	0.003460		
16QAM					
25	3.50	-9.67	-0.003815	Within authorized band for Band 7	Pass
	3.87	8.73	0.003444		
	4.45	-10.11	-0.003988		
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					
3.87	-30	17.17	0.006617	Within authorized band for Band 41	Pass
	-20	-14.98	-0.005773		
	-10	10.07	0.003881		
	0	12.32	0.004748		
	10	16.65	0.006416		
	20	19.38	0.007468		
	30	-9.20	-0.003545		
	40	-5.71	-0.002200		
	50	-8.83	-0.003403		
16QAM					
3.87	-30	13.38	0.005156	Within authorized band for Band 41	Pass
	-20	3.72	0.001434		
	-10	16.51	0.006362		
	0	16.68	0.006428		
	10	-15.38	-0.005927		
	20	-11.22	-0.004324		
	30	8.21	0.003164		
	40	14.78	0.005696		
	50	-10.71	-0.004127		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	19.30	0.007437	Within authorized band for Band 41	Pass
	3.87	18.61	0.007171		
	4.45	15.98	0.006158		
16QAM					
25	3.50	-16.72	-0.006443	Within authorized band for Band41	Pass
	3.87	17.55	0.006763		
	4.45	23.59	0.009091		
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					
3.87	-30	9.20	0.005272	Within authorized band for Band 66	Pass
	-20	11.17	0.006401		
	-10	8.70	0.004986		
	0	10.01	0.005736		
	10	9.38	0.005375		
	20	13.72	0.007862		
	30	10.99	0.006298		
	40	7.21	0.004132		
	50	6.45	0.003696		
16QAM					
3.87	-30	9.57	0.005484	Within authorized band for Band 66	Pass
	-20	6.84	0.003920		
	-10	-6.55	-0.003754		
	0	-6.58	-0.003771		
	10	7.95	0.004556		
	20	-7.84	-0.004493		
	30	7.80	0.004470		
	40	-7.30	-0.004183		
	50	-6.14	-0.003519		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	7.93	0.004544	Within authorized band for Band 66	Pass
	3.87	11.42	0.006544		
	4.45	10.01	0.005736		
16QAM					
25	3.50	3.62	0.002074	Within authorized band for Band 66	Pass
	3.87	11.03	0.006321		
	4.45	7.25	0.004155		
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
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

