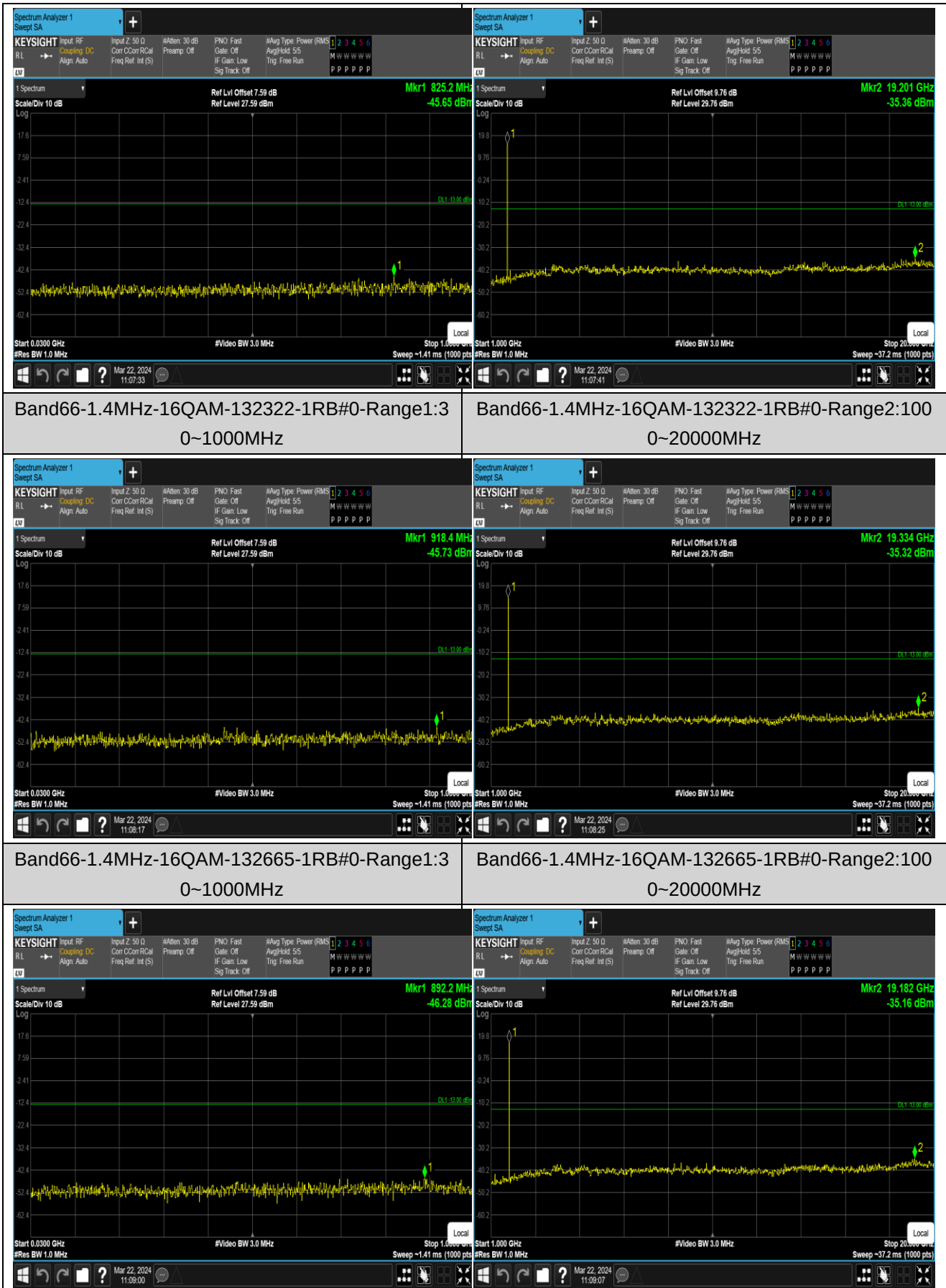
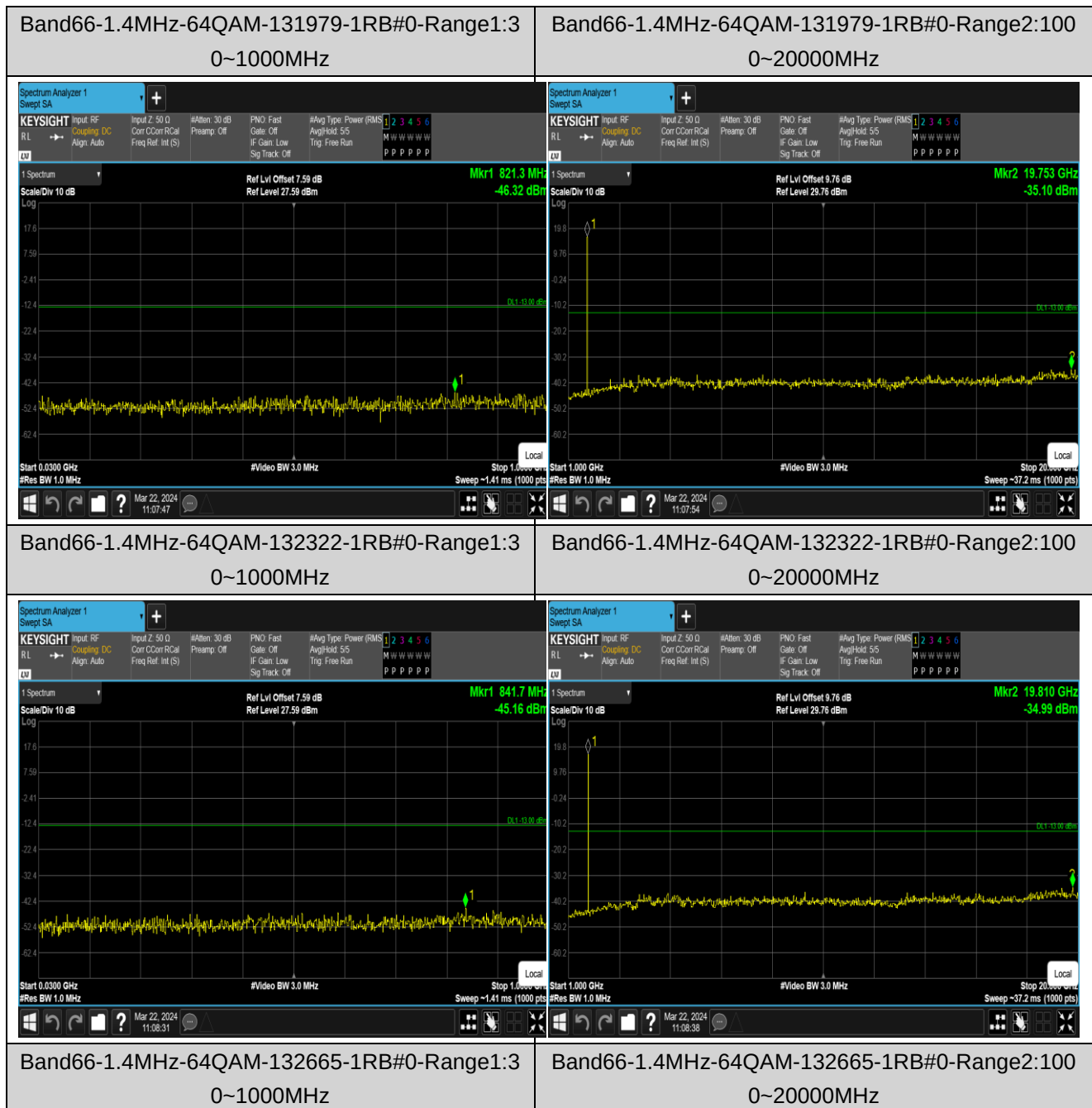
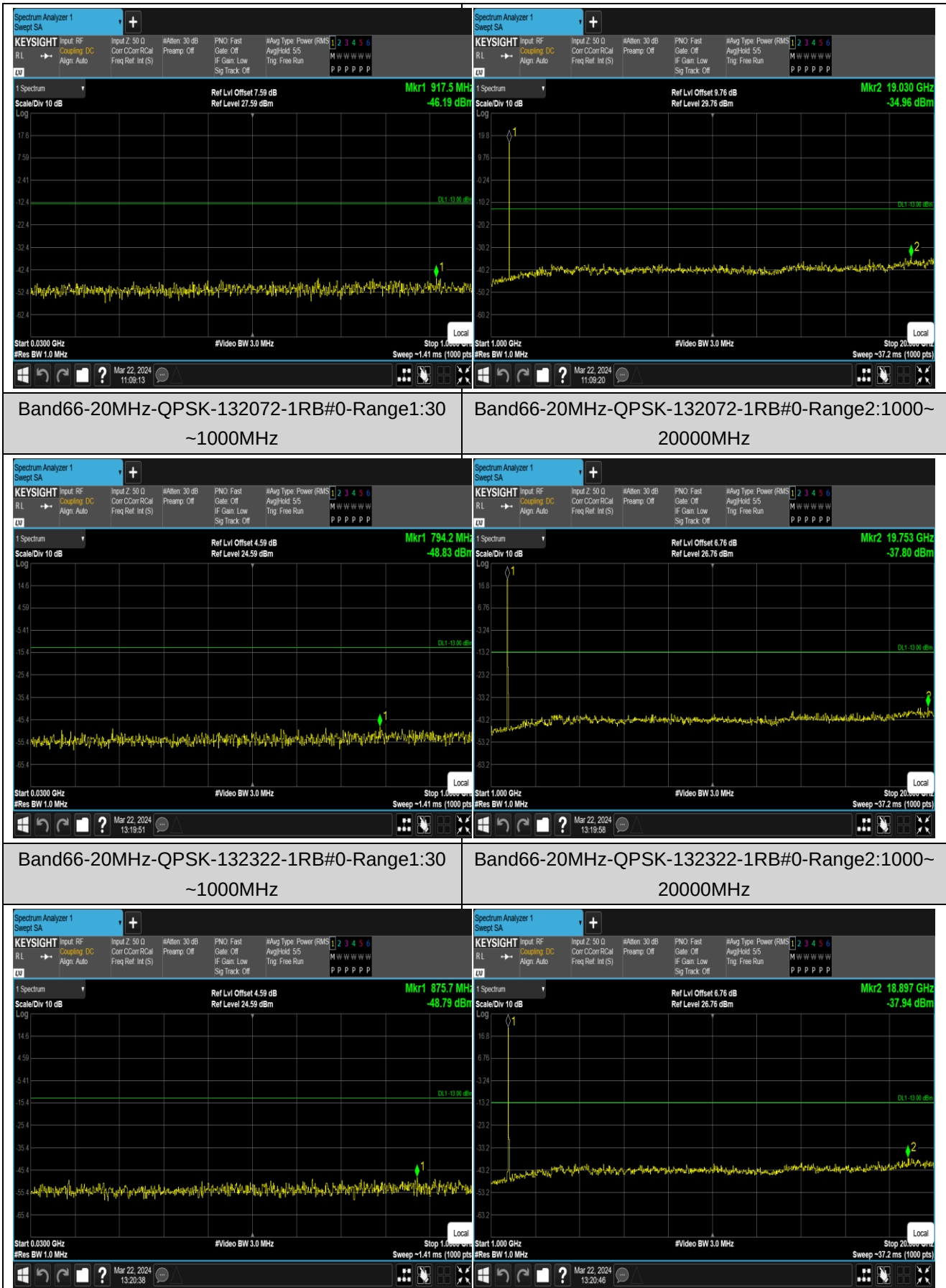






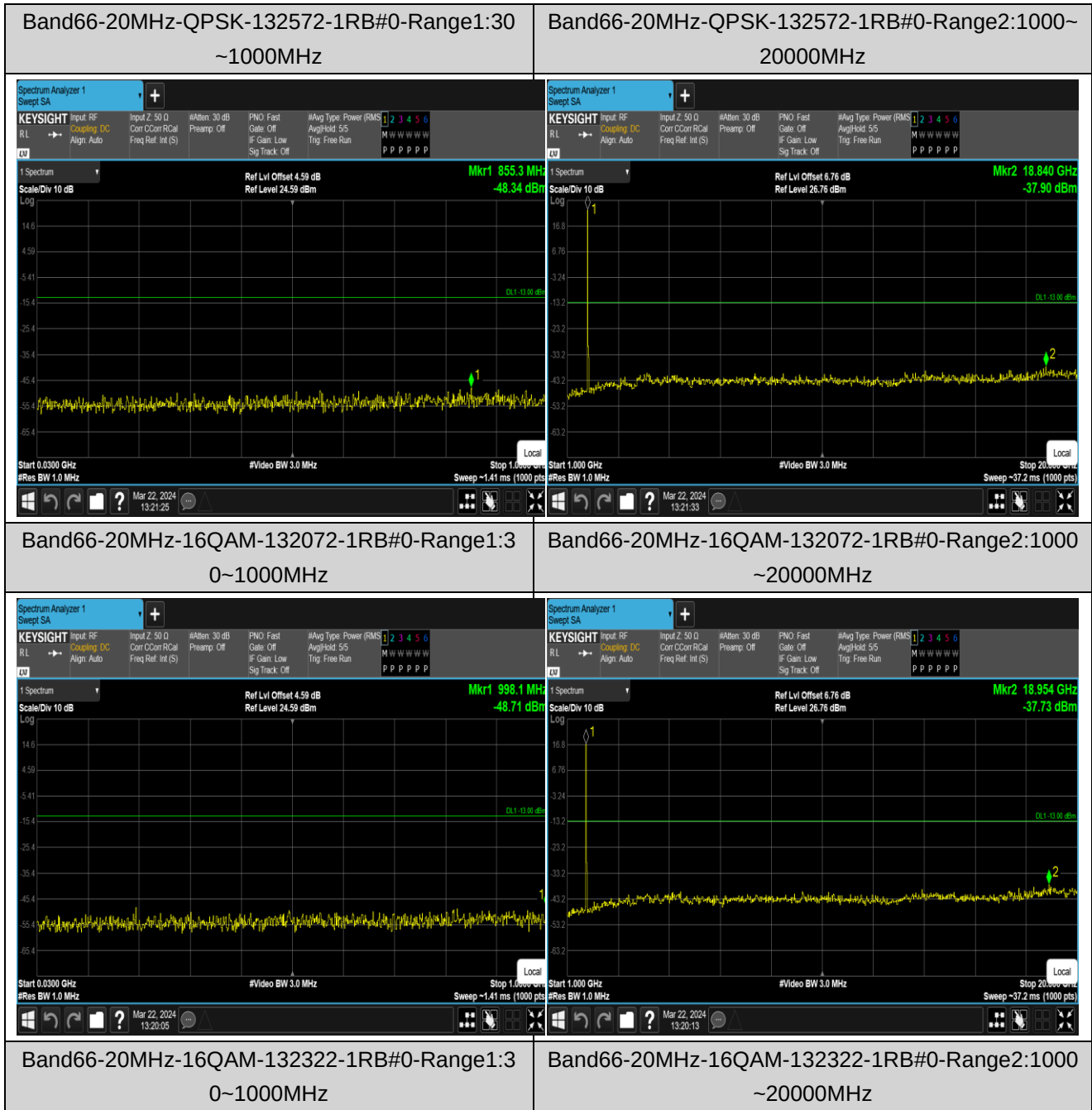


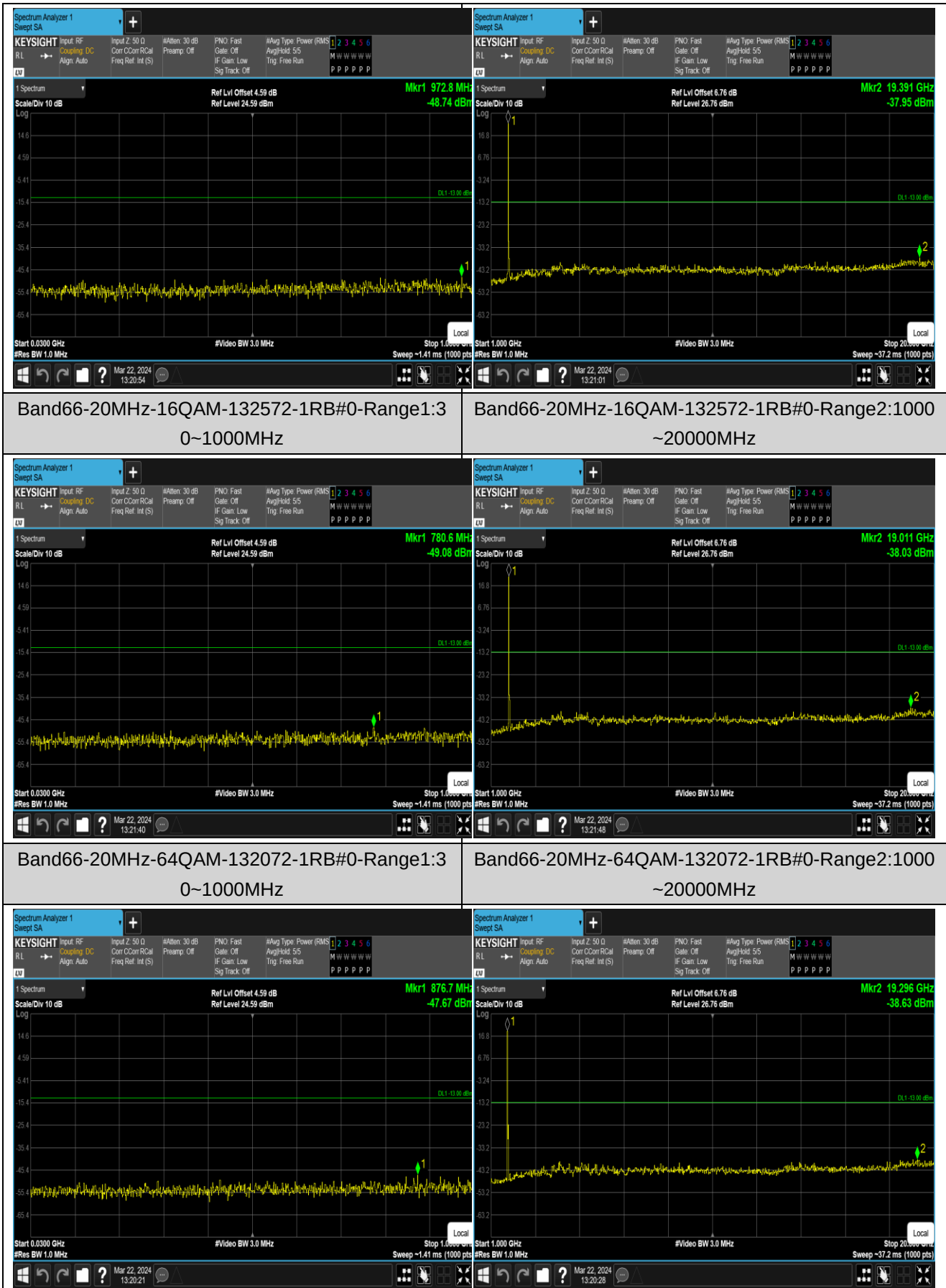
Band66-20MHz-QPSK-132072-1RB#0-Range1:30
~1000MHz

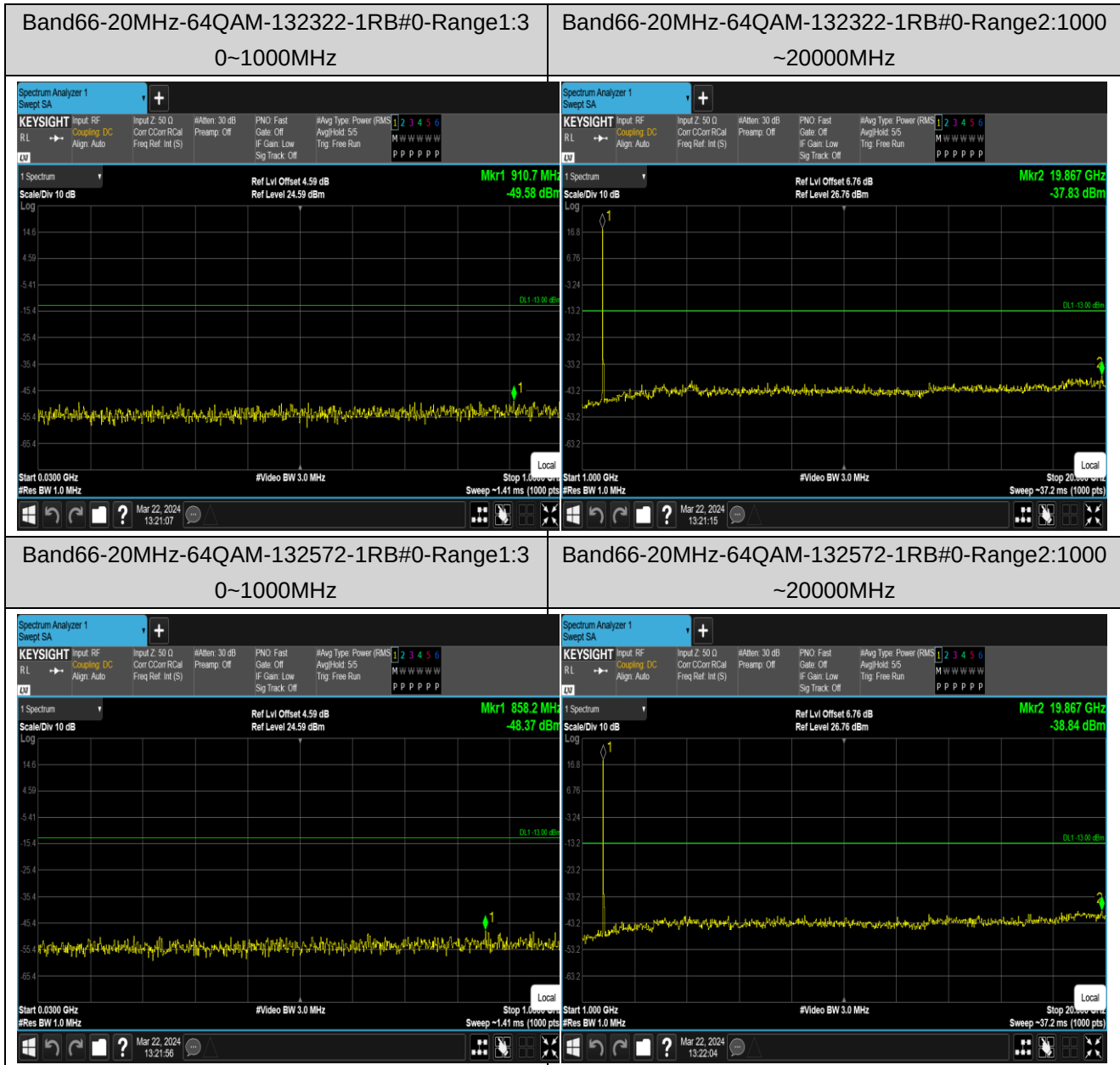
Band66-20MHz-QPSK-132072-1RB#0-Range2:1000~
20000MHz

Band66-20MHz-QPSK-132322-1RB#0-Range1:30
~1000MHz

Band66-20MHz-QPSK-132322-1RB#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	-2.80	-0.001489	Within authorized band for Band 2	Pass
	-20	-7.87	-0.004186		
	-10	9.07	0.004824		
	0	9.94	0.005287		
	10	4.45	0.002367		
	20	-3.09	-0.001644		
	30	-8.70	-0.004628		
	40	-5.36	-0.002851		
	50	-4.81	-0.002559		
16QAM					
3.87	-30	-2.73	-0.001452	Within authorized band for Band 2	Pass
	-20	-3.99	-0.002122		
	-10	4.55	0.002420		
	0	-2.17	-0.001154		
	10	6.24	0.003319		
	20	-2.20	-0.001170		
	30	5.15	0.002739		
	40	5.98	0.003181		
	50	-5.16	-0.002745		
64QAM					
3.87	-30	6.05	0.003218	Within authorized band for Band 2	Pass
	-20	3.95	0.002101		
	-10	-7.72	-0.004106		
	0	7.38	0.003926		
	10	-5.39	-0.002867		
	20	-4.62	-0.002457		
	30	3.20	0.001702		
	40	-3.23	-0.001718		
	50	5.79	0.003080		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-4.98	-0.002649	Within authorized band for Band 2	Pass
	3.87	2.95	0.001569		
	4.45	1.76	0.000936		
16QAM					
25	3.45	-7.61	-0.004048	Within authorized band for Band 2	Pass
	3.87	-3.10	-0.001649		
	4.45	-10.33	-0.005495		
64QAM					
25	3.45	6.45	0.003431	Within authorized band for Band 2	Pass
	3.87	-3.13	-0.001665		
	4.45	4.38	0.002330		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-2.76	-0.001089	Within authorized band for Band 7	Pass
	-20	-6.87	-0.002710		
	-10	4.99	0.001968		
	0	8.34	0.003290		
	10	-4.95	-0.001953		
	20	2.53	0.000998		
	30	-7.52	-0.002966		
	40	9.24	0.003645		
	50	-3.58	-0.001412		
16QAM					
3.85	-30	-8.15	-0.003215	Within authorized band for Band 7	Pass
	-20	-11.04	-0.004355		
	-10	-10.29	-0.004059		
	0	-8.34	-0.003290		
	10	-10.93	-0.004312		
	20	5.06	0.001996		
	30	-7.14	-0.002817		
	40	-4.88	-0.001925		
	50	-7.51	-0.002963		
64QAM					
3.85	-30	-11.69	-0.004611	Within authorized band for Band 7	Pass
	-20	-3.99	-0.001574		
	-10	-9.18	-0.003621		
	0	-5.01	-0.001976		
	10	3.49	0.001377		
	20	-10.90	-0.004300		
	30	-3.59	-0.001416		
	40	-6.90	-0.002722		
	50	-10.73	-0.004233		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	7.14	0.002817	Within authorized band for Band 7	Pass
	3.87	-9.50	-0.003748		
	4.45	-4.95	-0.001953		
16QAM					
25	3.45	4.28	0.001688	Within authorized band for Band 7	Pass
	3.87	-7.45	-0.002939		
	4.45	-10.97	-0.004327		
64QAM					
25	3.45	-11.94	-0.004710	Within authorized band for Band 7	Pass
	3.87	-9.11	-0.003594		
	4.45	-9.07	-0.003578		
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	-3.42	-0.001319	Within authorized band for Band 41	Pass
	-20	-5.99	-0.002310		
	-10	-3.16	-0.001219		
	0	-6.11	-0.002356		
	10	-7.41	-0.002858		
	20	-6.98	-0.002692		
	30	-7.75	-0.002989		
	40	-3.12	-0.001203		
	50	-6.95	-0.002680		
16QAM					
3.87	-30	-3.93	-0.001516	Within authorized band for Band 41	Pass
	-20	-4.18	-0.001612		
	-10	-4.36	-0.001681		
	0	3.75	0.001446		
	10	-7.35	-0.002835		
	20	-2.20	-0.000848		
	30	-6.38	-0.002460		
	40	-6.92	-0.002669		
	50	3.40	0.001311		
64QAM					
3.87	-30	-7.62	-0.002939	Within authorized band for Band 41	Pass
	-20	-3.38	-0.001304		
	-10	-1.66	-0.000640		
	0	-6.17	-0.002379		
	10	-8.41	-0.003243		
	20	-5.44	-0.002098		
	30	-3.30	-0.001273		
	40	-4.23	-0.001631		
	50	-4.95	-0.001909		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-3.95	-0.001523	Within authorized band for Band 41	Pass
	3.87	-4.99	-0.001924		
	4.45	4.88	0.001882		
16QAM					
25	3.45	1.76	0.000679	Within authorized band for Band41	Pass
	3.87	-2.82	-0.001088		
	4.45	-3.30	-0.001273		
64QAM					
25	3.45	-6.47	-0.002495	Within authorized band for Band41	Pass
	3.87	-8.01	-0.003089		
	4.45	-5.52	-0.002129		
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	-5.97	-0.003421	Within authorized band for Band 66	Pass
	-20	-8.65	-0.004957		
	-10	-9.67	-0.005542		
	0	6.69	0.003834		
	10	8.15	0.004670		
	20	8.97	0.005140		
	30	4.73	0.002711		
	40	7.15	0.004097		
	50	5.06	0.002900		
16QAM					
3.87	-30	11.06	0.006338	Within authorized band for Band 66	Pass
	-20	9.66	0.005536		
	-10	-4.11	-0.002355		
	0	3.15	0.001805		
	10	7.52	0.004309		
	20	7.82	0.004481		
	30	3.76	0.002155		
	40	-3.50	-0.002006		
	50	11.23	0.006436		
64QAM					
3.87	-30	-4.46	-0.002556	Within authorized band for Band 66	Pass
	-20	10.24	0.005868		
	-10	-5.62	-0.003221		
	0	1.82	0.001043		
	10	-7.34	-0.004206		
	20	-7.41	-0.004246		
	30	8.23	0.004716		
	40	-2.55	-0.001461		
	50	-4.38	-0.002510		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	2.80	0.001605	Within authorized band for Band 66	Pass
	3.87	6.81	0.003903		
	4.45	-7.37	-0.004223		
16QAM					
25	3.45	11.79	0.006756	Within authorized band for Band 66	Pass
	3.87	7.00	0.004011		
	4.45	6.37	0.003650		
64QAM					
25	3.45	11.16	0.006395	Within authorized band for Band 66	Pass
	3.87	-6.02	-0.003450		
	4.45	6.21	0.003559		
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
Band2	20MHz	64QAM	18900	100RB#0	PASS	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS	PASS
Band7	20MHz	64QAM	21100	100RB#0	PASS	PASS
Band41	20MHz	QPSK	40620	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40620	100RB#0	PASS	PASS
Band41	20MHz	64QAM	40620	100RB#0	PASS	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS	PASS
Band66	20MHz	64QAM	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

