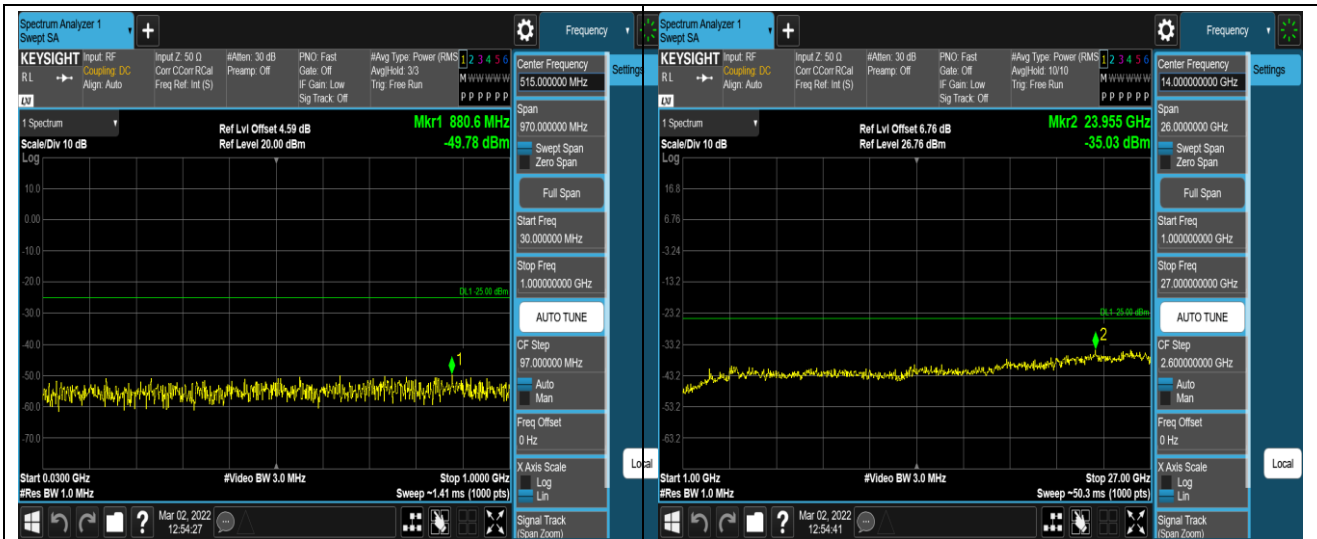
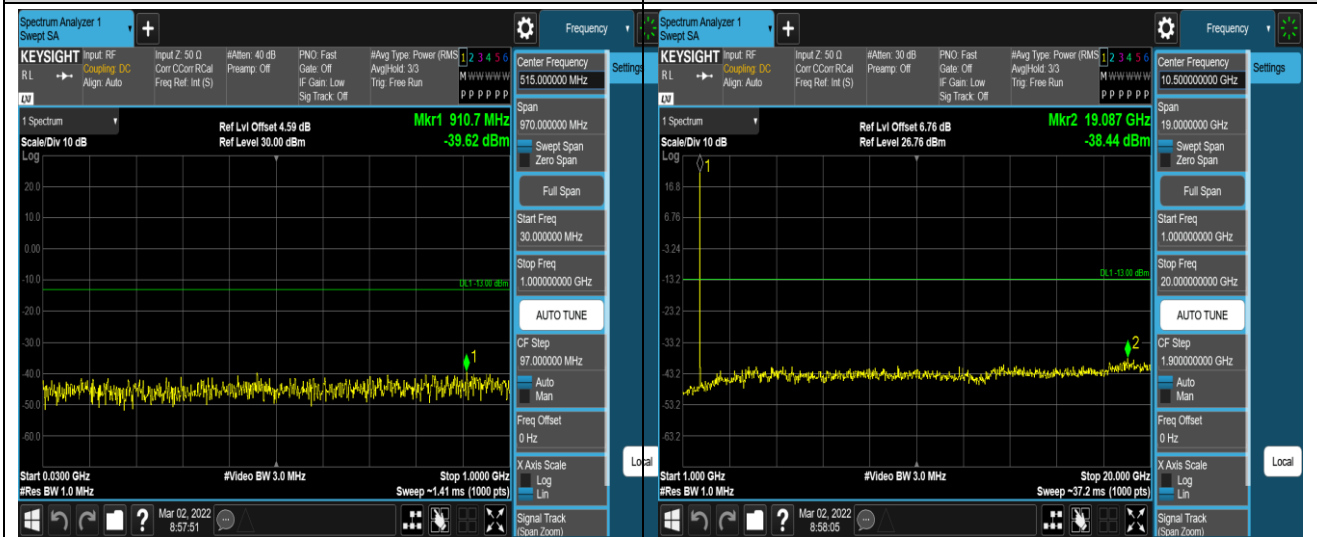




Band66-1.4MHz-QPSK-131979-1RB#0-Range1:30
~1000MHz

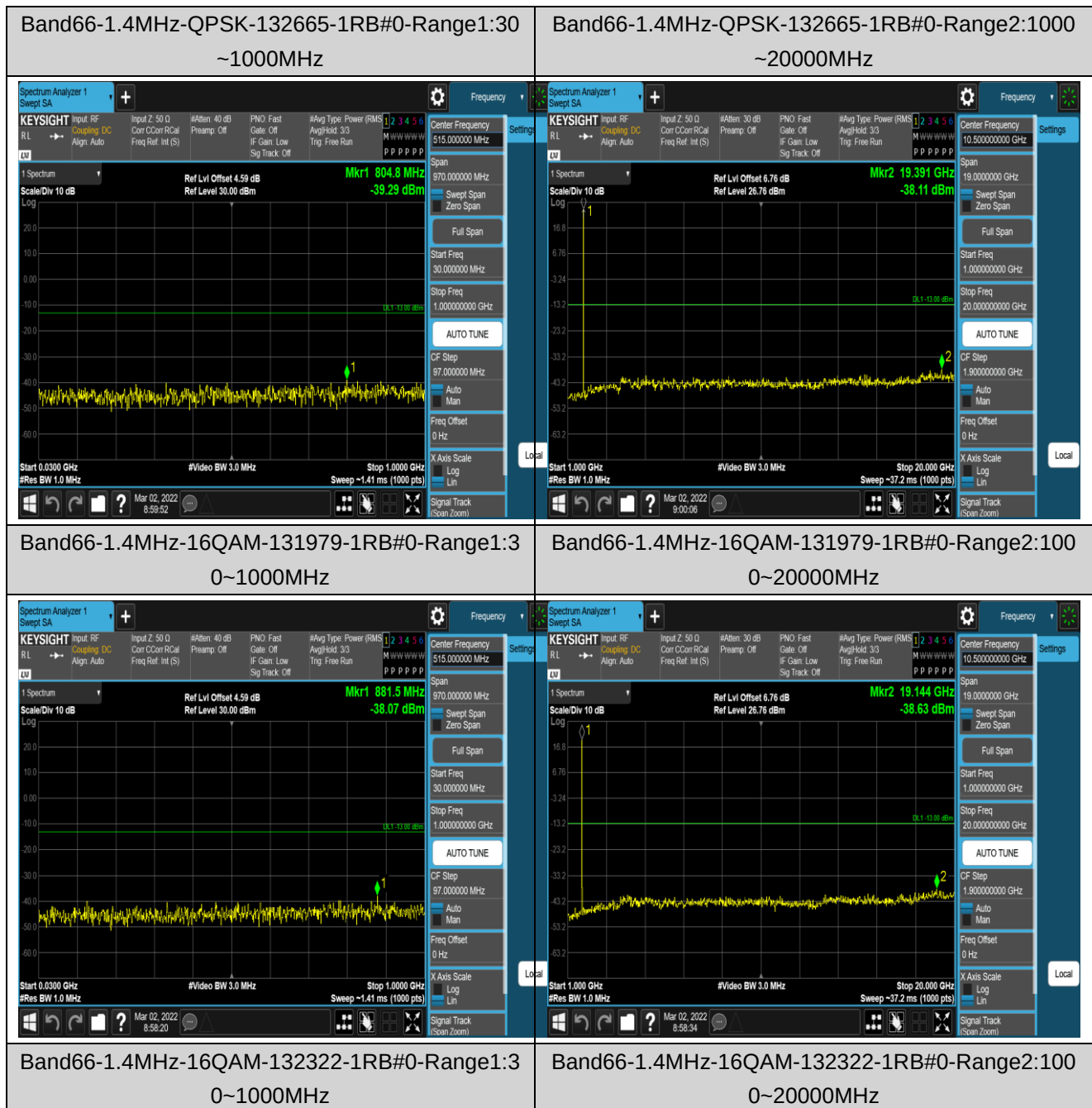
Band66-1.4MHz-QPSK-131979-1RB#0-Range2:1000
~20000MHz

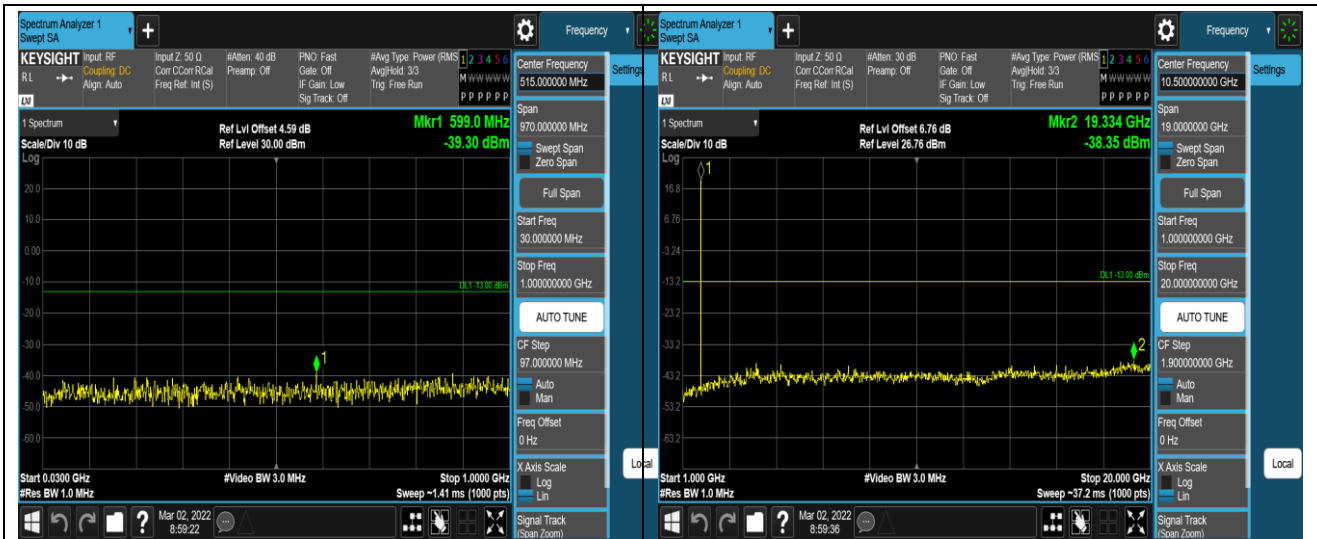


Band66-1.4MHz-QPSK-132322-1RB#0-Range1:30
~1000MHz

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

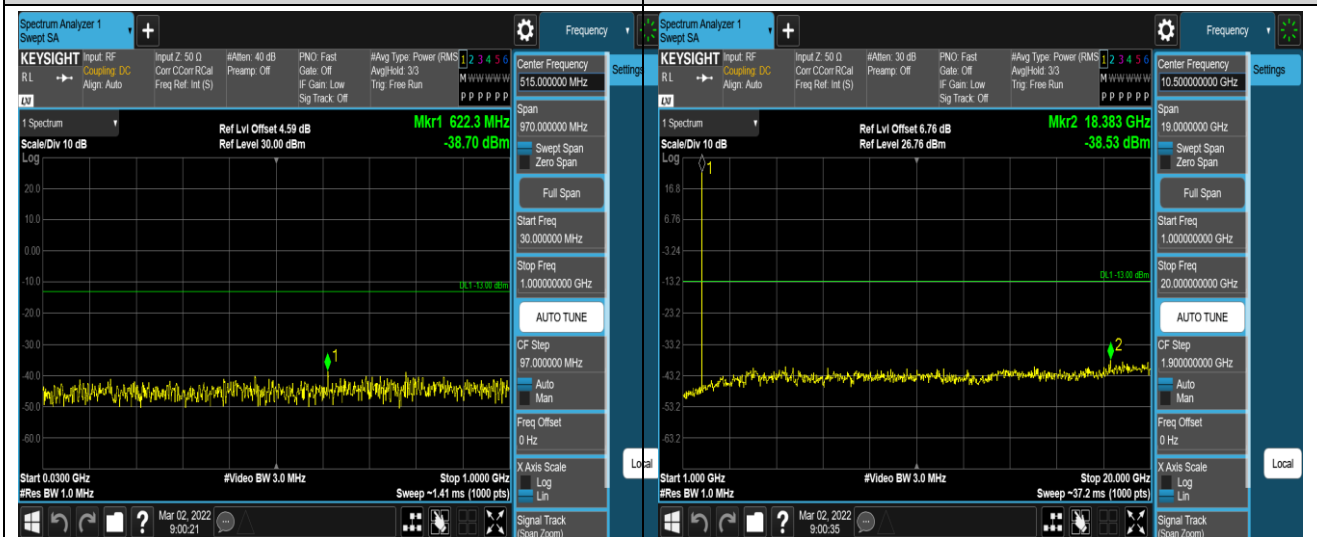






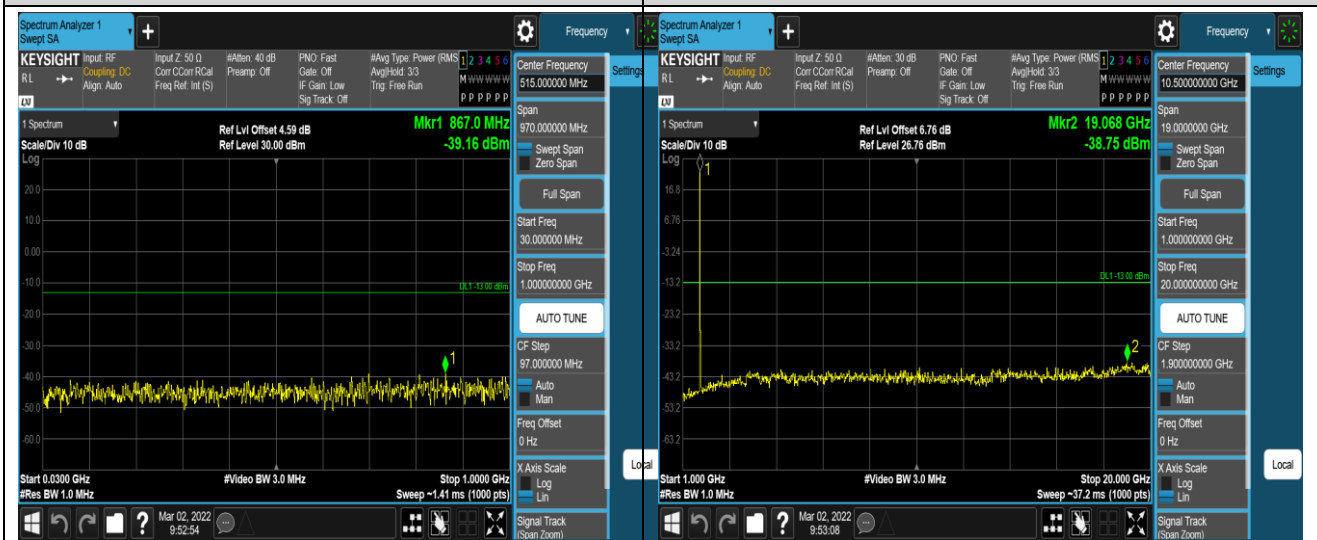
Band66-1.4MHz-16QAM-132665-1RB#0-Range1:3
0~1000MHz

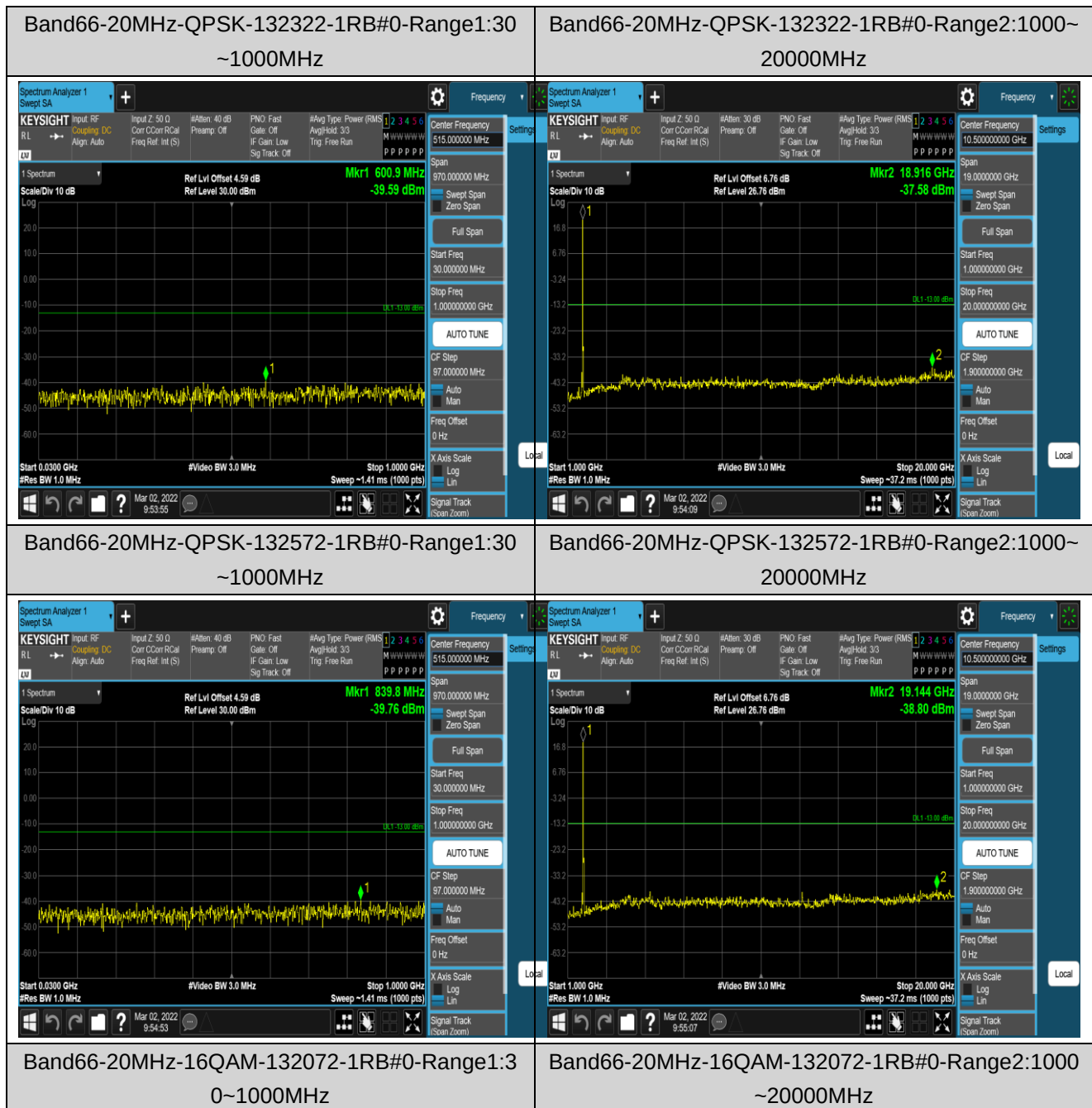
Band66-1.4MHz-16QAM-132665-1RB#0-Range2:100
0~20000MHz

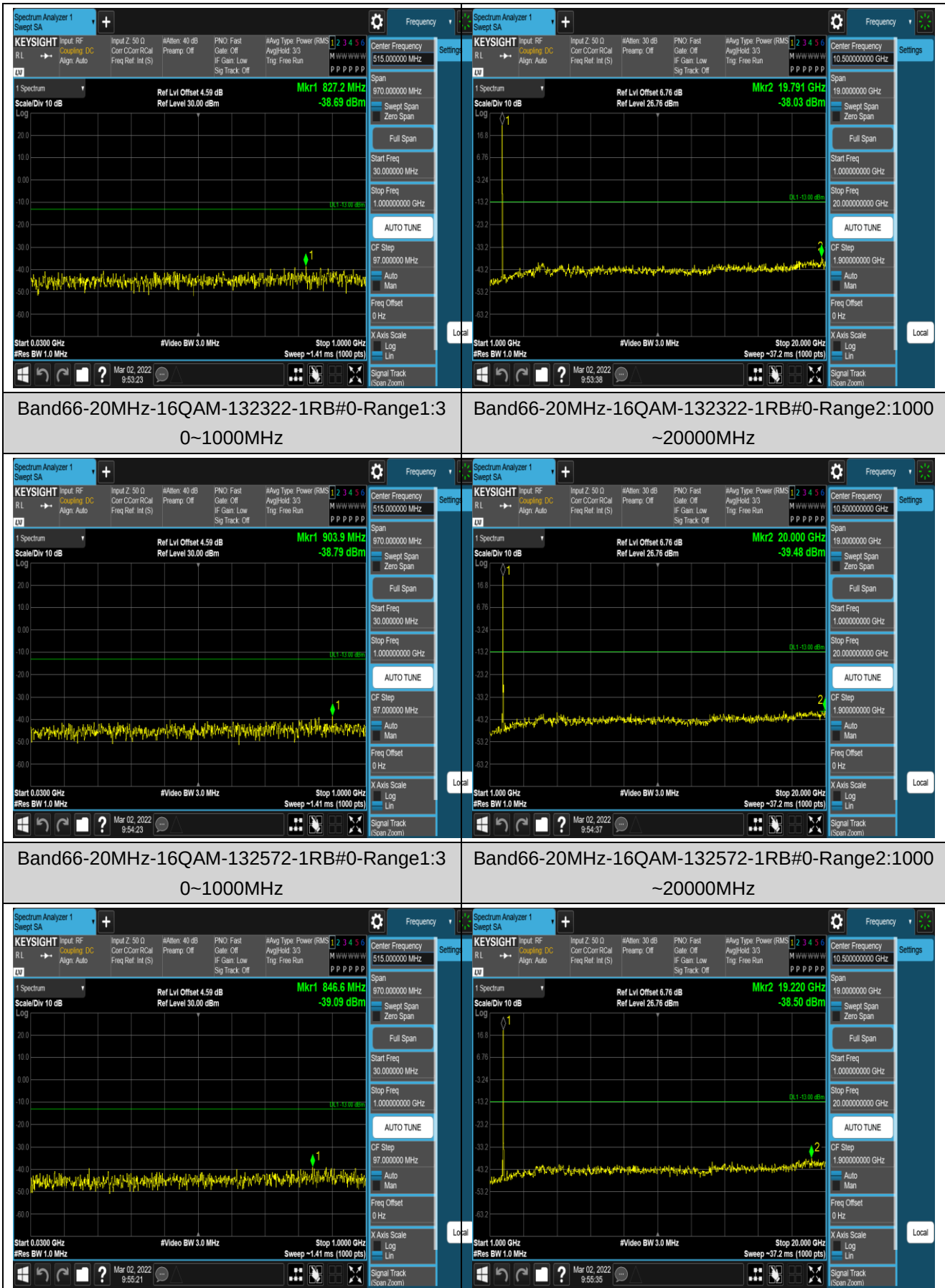


Band66-20MHz-QPSK-132072-1RB#0-Range1:30
~1000MHz

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







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	-3.58	-0.001904	Within authorized band for Band 2	Pass
	-20	-12.45	-0.006622		
	-10	-9.18	-0.004883		
	0	3.88	0.002064		
	10	-5.76	-0.003064		
	20	12.07	0.006420		
	30	-11.19	-0.005952		
	40	-14.79	-0.007867		
	50	-2.86	-0.001521		
16QAM					
3.87	-30	14.43	0.007676	Within authorized band for Band 2	Pass
	-20	2.29	0.001218		
	-10	12.23	0.006505		
	0	-2.07	-0.001101		
	10	5.02	0.002670		
	20	13.65	0.007261		
	30	-10.11	-0.005378		
	40	14.09	0.007495		
	50	5.55	0.002952		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-2.25	-0.001197	Within authorized band for Band 2	Pass
	3.87	-12.53	-0.006665		
	4.45	11.30	0.006011		
16QAM					
25	3.50	10.19	0.005420	Within authorized band for Band 2	Pass
	3.87	-3.68	-0.001957		
	4.45	9.14	0.004862		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	-2.07	-0.002475	±2.5	Pass
	-20	-6.54	-0.007818		
	-10	-6.59	-0.007878		
	0	-10.34	-0.012361		
	10	-10.39	-0.012421		
	20	-2.65	-0.003168		
	30	-11.16	-0.013341		
	40	-5.92	-0.007077		
	50	-5.58	-0.006671		
16QAM					
3.87	-30	-6.29	-0.007519	±2.5	Pass
	-20	-4.98	-0.005953		
	-10	-5.46	-0.006527		
	0	-4.35	-0.005200		
	10	-6.39	-0.007639		
	20	1.77	0.002116		
	30	-2.80	-0.003347		
	40	-9.36	-0.011189		
	50	-5.18	-0.006192		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.91	-0.007065	±2.5	Pass
	3.87	-1.32	-0.001578		
	4.45	1.79	0.002140		
16QAM					
25	3.50	-6.81	-0.008141	±2.5	Pass
	3.87	-10.60	-0.012672		
	4.45	-5.72	-0.006838		
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	3.75	0.001479	Within authorized band for Band 7	Pass
	-20	2.98	0.001176		
	-10	-13.52	-0.005333		
	0	14.33	0.005653		
	10	8.88	0.003503		
	20	6.67	0.002631		
	30	15.34	0.006051		
	40	4.31	0.001700		
	50	-16.18	-0.006383		
16QAM					
3.87	-30	18.42	0.007266	Within authorized band for Band 7	Pass
	-20	15.55	0.006134		
	-10	-16.67	-0.006576		
	0	-24.29	-0.009582		
	10	7.58	0.002990		
	20	-5.14	-0.002028		
	30	5.69	0.002245		
	40	3.05	0.001203		
	50	17.71	0.006986		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	6.65	0.002623	Within authorized band for Band 7	Pass
	3.87	-13.89	-0.005479		
	4.45	-18.74	-0.007393		
16QAM					
25	3.50	-17.18	-0.006777	Within authorized band for Band 7	Pass
	3.87	11.50	0.004536		
	4.45	-20.00	-0.007890		
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	4.53	0.001746	Within authorized band for Band 41	Pass
	-20	9.48	0.003653		
	-10	5.65	0.002177		
	0	4.33	0.001669		
	10	7.24	0.002790		
	20	12.75	0.004913		
	30	5.18	0.001996		
	40	2.32	0.000894		
	50	8.30	0.003198		
16QAM					
3.87	-30	2.29	0.000882	Within authorized band for Band 41	Pass
	-20	-5.51	-0.002123		
	-10	1.96	0.000755		
	0	5.74	0.002212		
	10	2.50	0.000963		
	20	-9.06	-0.003491		
	30	4.28	0.001649		
	40	-2.43	-0.000936		
	50	7.30	0.002813		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-6.75	-0.002601	Within authorized band for Band 41	Pass
	3.87	9.53	0.003672		
	4.45	8.58	0.003306		
16QAM					
25	3.50	6.48	0.002497	Within authorized band for Band41	Pass
	3.87	-6.51	-0.002509		
	4.45	9.24	0.003561		
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	-9.37	-0.005370	Within authorized band for Band 66	Pass
	-20	-8.83	-0.005060		
	-10	-9.06	-0.005192		
	0	-10.70	-0.006132		
	10	11.66	0.006682		
	20	11.04	0.006327		
	30	-1.54	-0.000883		
	40	-9.26	-0.005307		
	50	-9.51	-0.005450		
16QAM					
3.87	-30	12.72	0.007289	Within authorized band for Band 66	Pass
	-20	-7.42	-0.004252		
	-10	-15.11	-0.008659		
	0	6.75	0.003868		
	10	8.18	0.004688		
	20	-7.55	-0.004327		
	30	-8.68	-0.004974		
	40	-7.82	-0.004481		
	50	11.26	0.006453		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-3.32	-0.001903	Within authorized band for Band 66	Pass
	3.87	-5.14	-0.002946		
	4.45	4.81	0.002756		
16QAM					
25	3.50	5.64	0.003232	Within authorized band for Band 66	Pass
	3.87	7.02	0.004023		
	4.45	6.98	0.004000		
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

