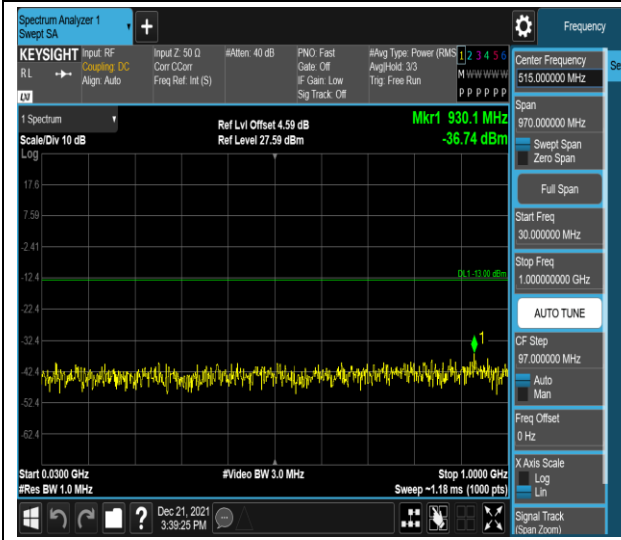


Band66-20MHz-QPSK-132322-1RB#0-Range1:30
~1000MHz

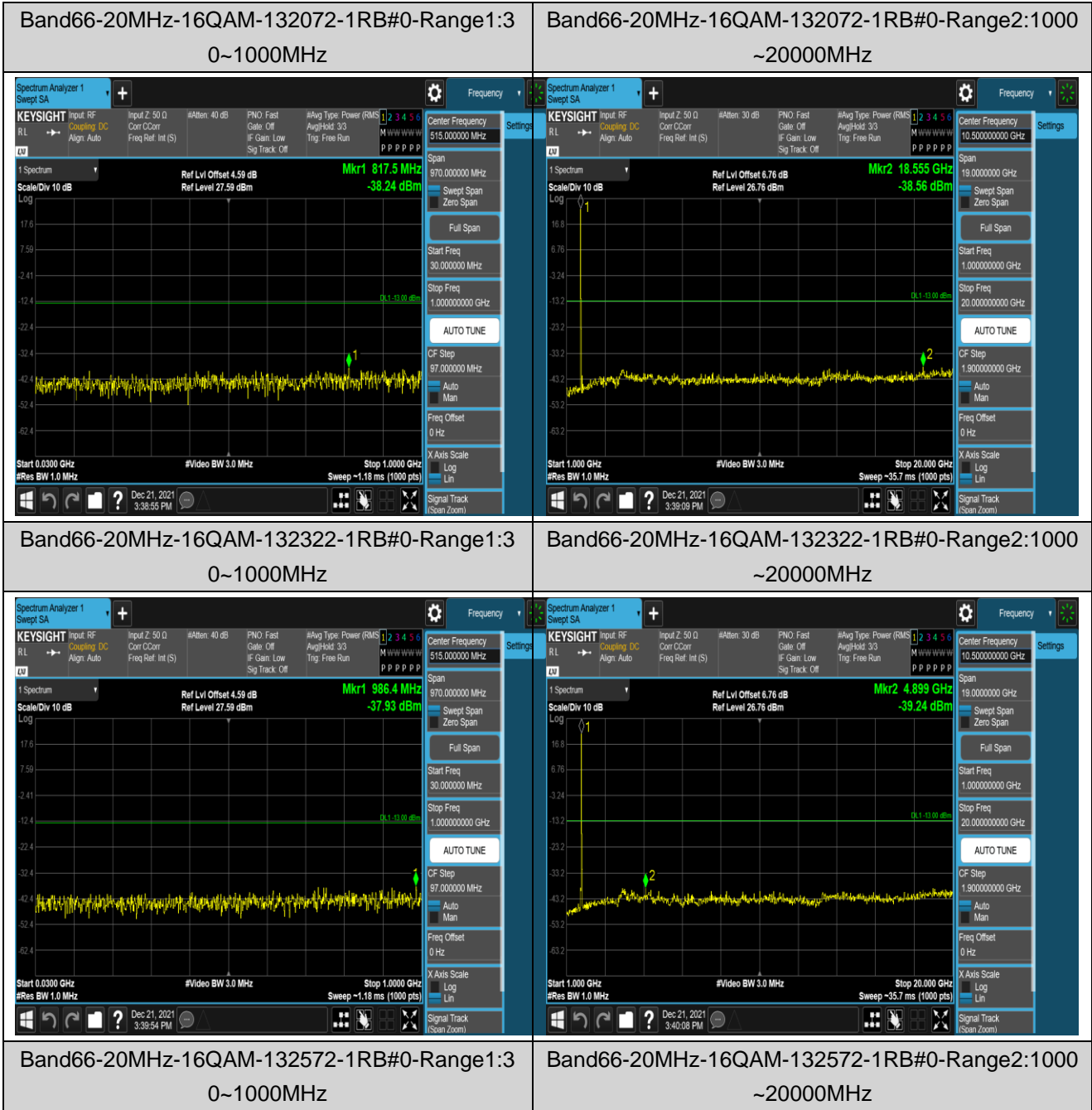
Band66-20MHz-QPSK-132322-1RB#0-Range2:1000~
20000MHz

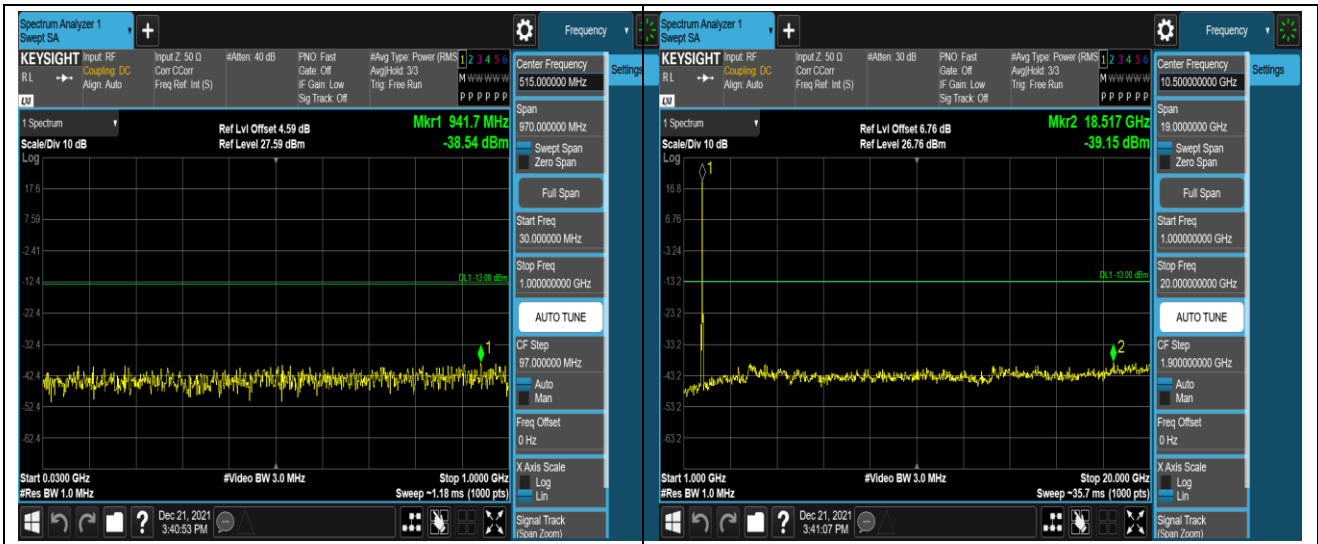


Band66-20MHz-QPSK-132572-1RB#0-Range1:30
~1000MHz

Band66-20MHz-QPSK-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					
3.70	-30	33.07	0.017590	Within authorized band for Band 2	Pass
	-20	47.92	0.025489		
	-10	9.96	0.005298		
	0	24.19	0.012867		
	10	34.53	0.018367		
	20	47.01	0.025005		
	30	17.09	0.009090		
	40	27.25	0.014495		
	50	32.06	0.017053		
16QAM					
3.70	-30	12.23	0.006505	Within authorized band for Band 2	Pass
	-20	8.24	0.004383		
	-10	-7.87	-0.004186		
	0	-13.06	-0.006947		
	10	-14.92	-0.007936		
	20	-15.15	-0.008059		
	30	-20.91	-0.011122		
	40	-22.53	-0.011984		
	50	-26.39	-0.014037		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	9.50	0.005053	Within authorized band for Band 2	Pass
	3.70	-31.27	-0.016633		
	4.20	41.33	0.021984		
16QAM					
25	3.50	-27.84	-0.014809	Within authorized band for Band 2	Pass
	3.70	43.72	0.023255		
	4.20	-44.62	-0.023734		

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					
3.70	-30	4.11	0.004913	±2.5	Pass
	-20	8.03	0.009600		
	-10	8.08	0.009659		
	0	7.62	0.009109		
	10	10.13	0.012110		
	20	10.41	0.012445		
	30	10.27	0.012277		
	40	12.43	0.014860		
	50	11.77	0.014071		
16QAM					
3.70	-30	11.42	0.013652	±2.5	Pass
	-20	9.70	0.011596		
	-10	6.81	0.008141		
	0	5.05	0.006037		
	10	2.96	0.003539		
	20	3.99	0.004770		
	30	3.20	0.003825		
	40	3.38	0.004041		
	50	2.46	0.002941		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-1.42	-0.001698	±2.5	Pass
	3.70	5.76	0.006886		
	4.20	4.78	0.005714		
16QAM					
25	3.50	14.85	0.017753	±2.5	Pass
	3.70	14.05	0.016796		
	4.20	12.15	0.014525		

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

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	-2.68	-0.003788	Within authorized band for Band 12	Pass
	-20	2.65	0.003746		
	-10	3.30	0.004664		
	0	5.29	0.007477		
	10	7.91	0.011180		
	20	8.90	0.012580		
	30	8.84	0.012495		
	40	10.59	0.014968		
	50	10.89	0.015392		
16QAM					
3.70	-30	4.85	0.006855	Within authorized band for Band 12	Pass
	-20	4.81	0.006799		
	-10	2.42	0.003420		
	0	3.05	0.004311		
	10	3.02	0.004269		
	20	3.18	0.004495		
	30	4.29	0.006064		
	40	3.39	0.004792		
	50	3.42	0.004834		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-7.87	-0.011124	Within authorized band for Band 12	Pass
	3.70	-4.62	-0.006530		
	4.20	-4.73	-0.006686		
16QAM					
25	3.50	8.80	0.012438	Within authorized band for Band 12	Pass
	3.70	11.86	0.016763		
	4.20	7.75	0.010954		

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					
3.70	-30	38.97	0.022332	Within authorized band for Band 66	Pass
	-20	48.74	0.027931		
	-10	46.36	0.026567		
	0	14.71	0.008430		
	10	32.06	0.018372		
	20	22.26	0.012756		
	30	30.03	0.017209		
	40	9.03	0.005175		
	50	6.21	0.003559		
16QAM					
3.70	-30	11.77	0.006745	Within authorized band for Band 66	Pass
	-20	-41.21	-0.023616		
	-10	-8.80	-0.005043		
	0	-27.18	-0.015576		
	10	5.05	0.002894		
	20	-15.51	-0.008888		
	30	-33.46	-0.019175		
	40	-25.01	-0.014332		
	50	-37.85	-0.021691		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	21.80	0.012493	Within authorized band for Band 66	Pass
	3.70	-38.39	-0.022000		
	4.20	26.91	0.015421		
16QAM					
25	3.50	-33.89	-0.019421	Within authorized band for Band 66	Pass
	3.70	-41.63	-0.023857		
	4.20	-31.96	-0.018315		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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
Band12	10MHz	QPSK	23095	50RB#0	PASS	PASS
Band12	10MHz	16QAM	23095	50RB#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

