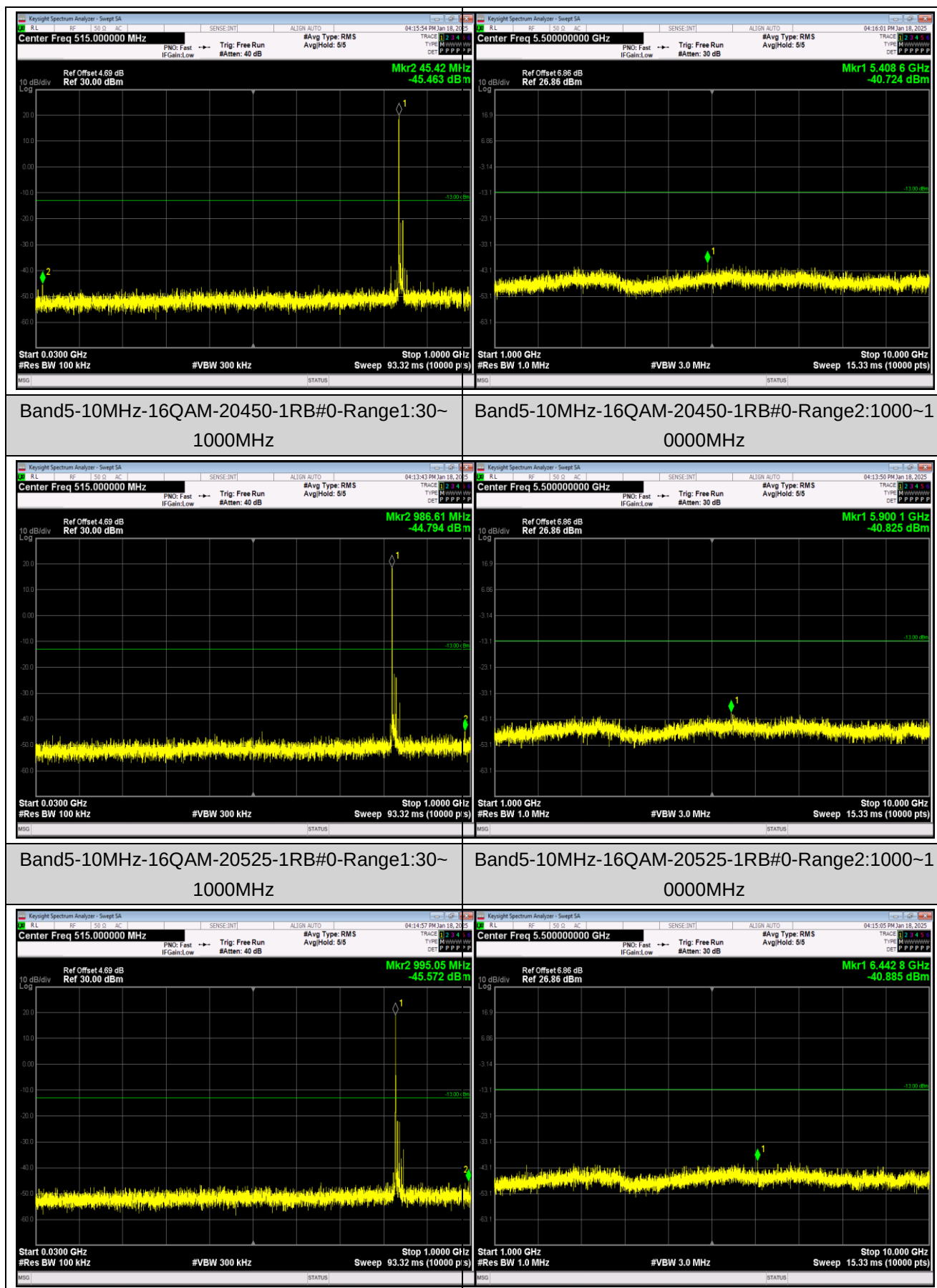


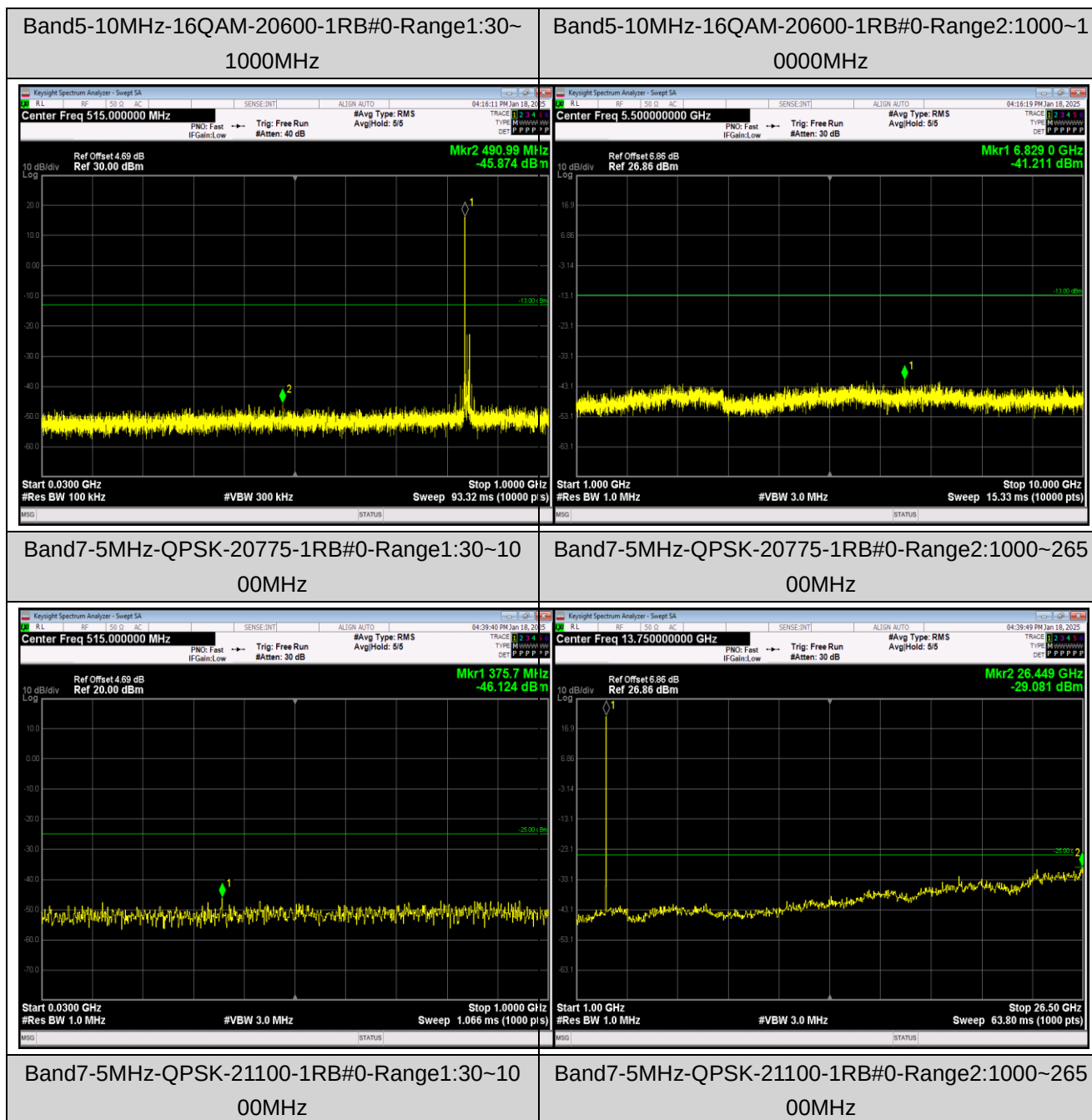


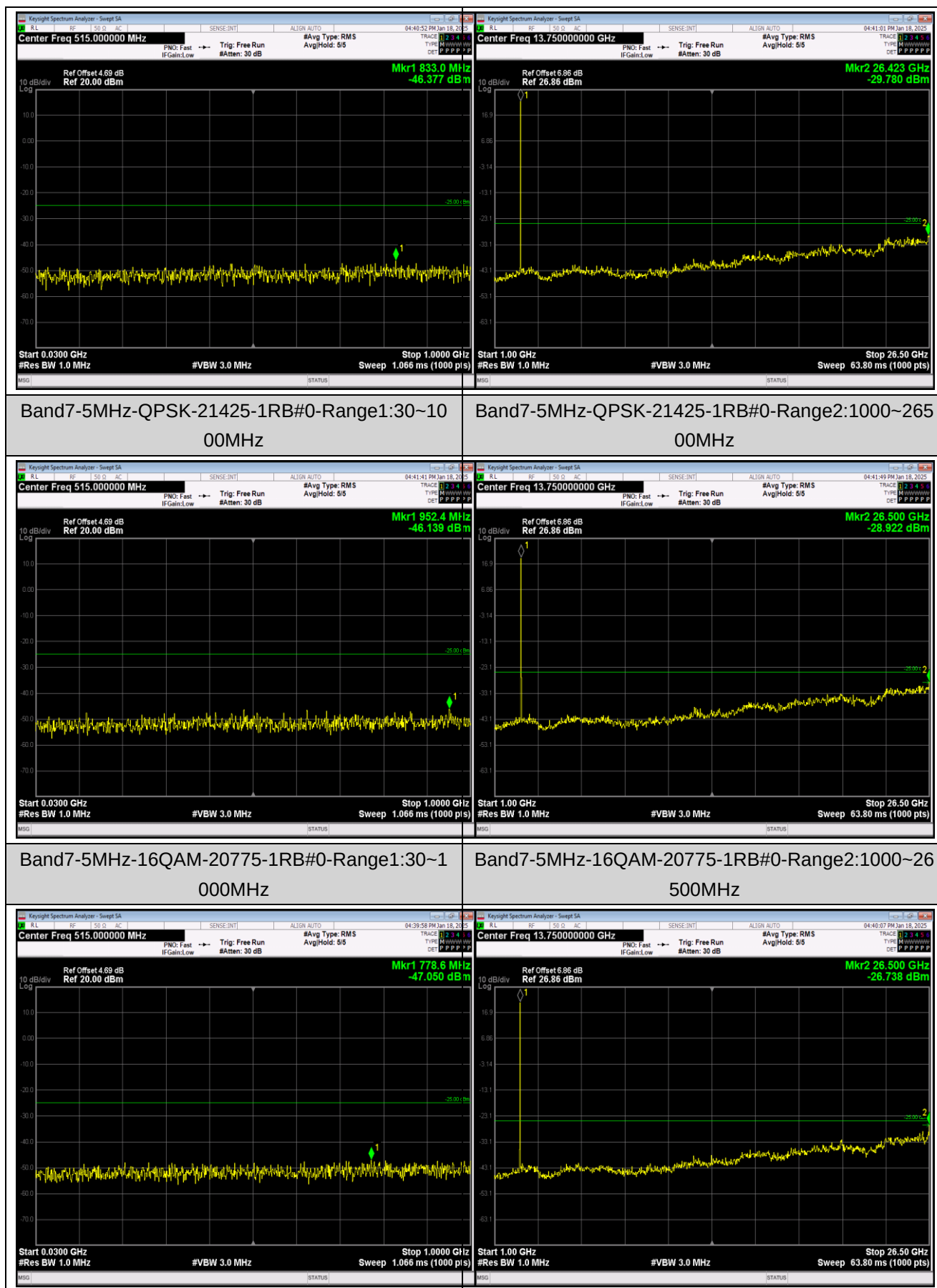
Band5-10MHz-16QAM-20450-1RB#0-Range1:30~1000MHz

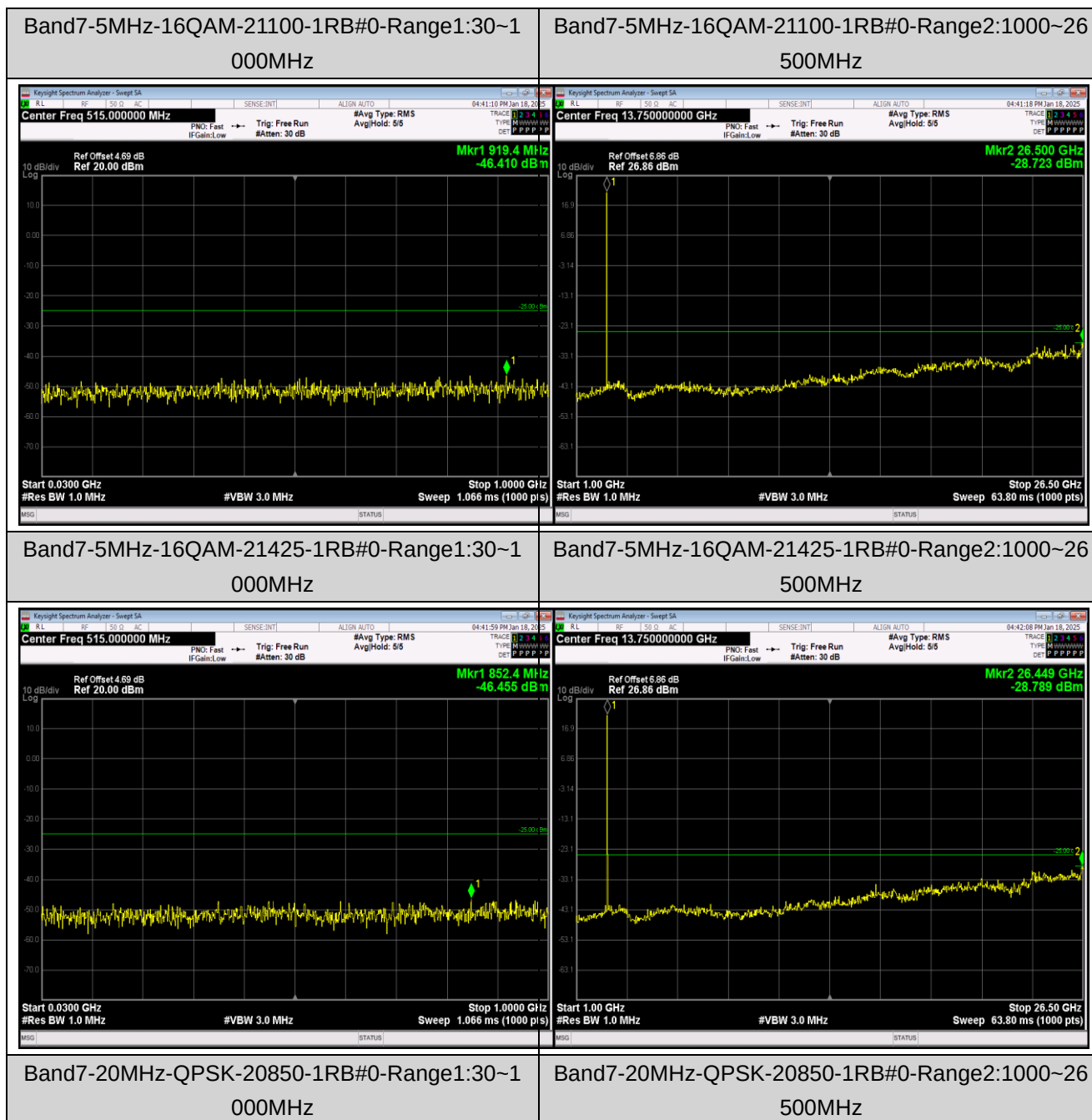
Band5-10MHz-16QAM-20450-1RB#0-Range2:1000~10000MHz

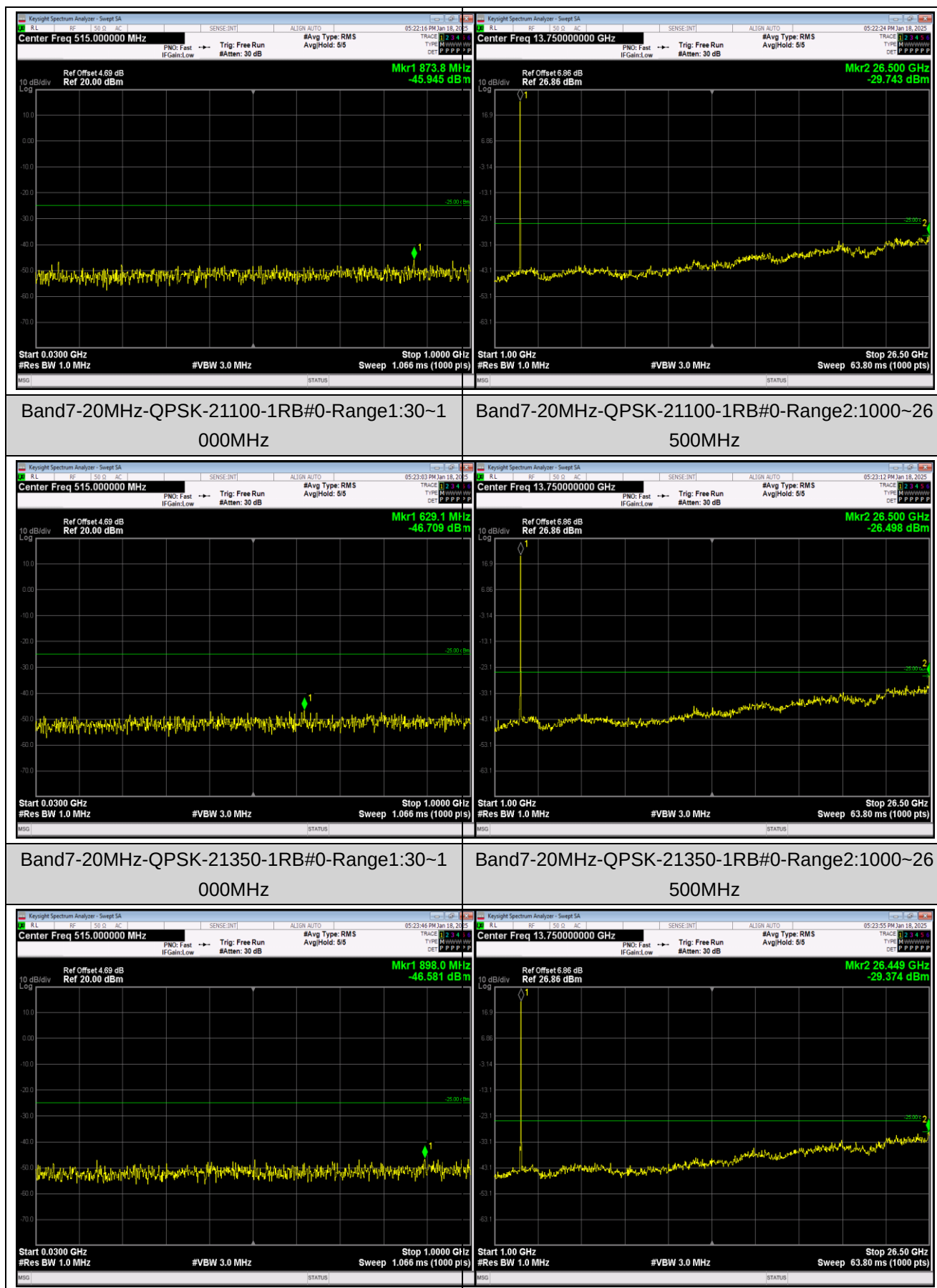
Band5-10MHz-16QAM-20525-1RB#0-Range1:30~1000MHz

Band5-10MHz-16QAM-20525-1RB#0-Range2:1000~10000MHz







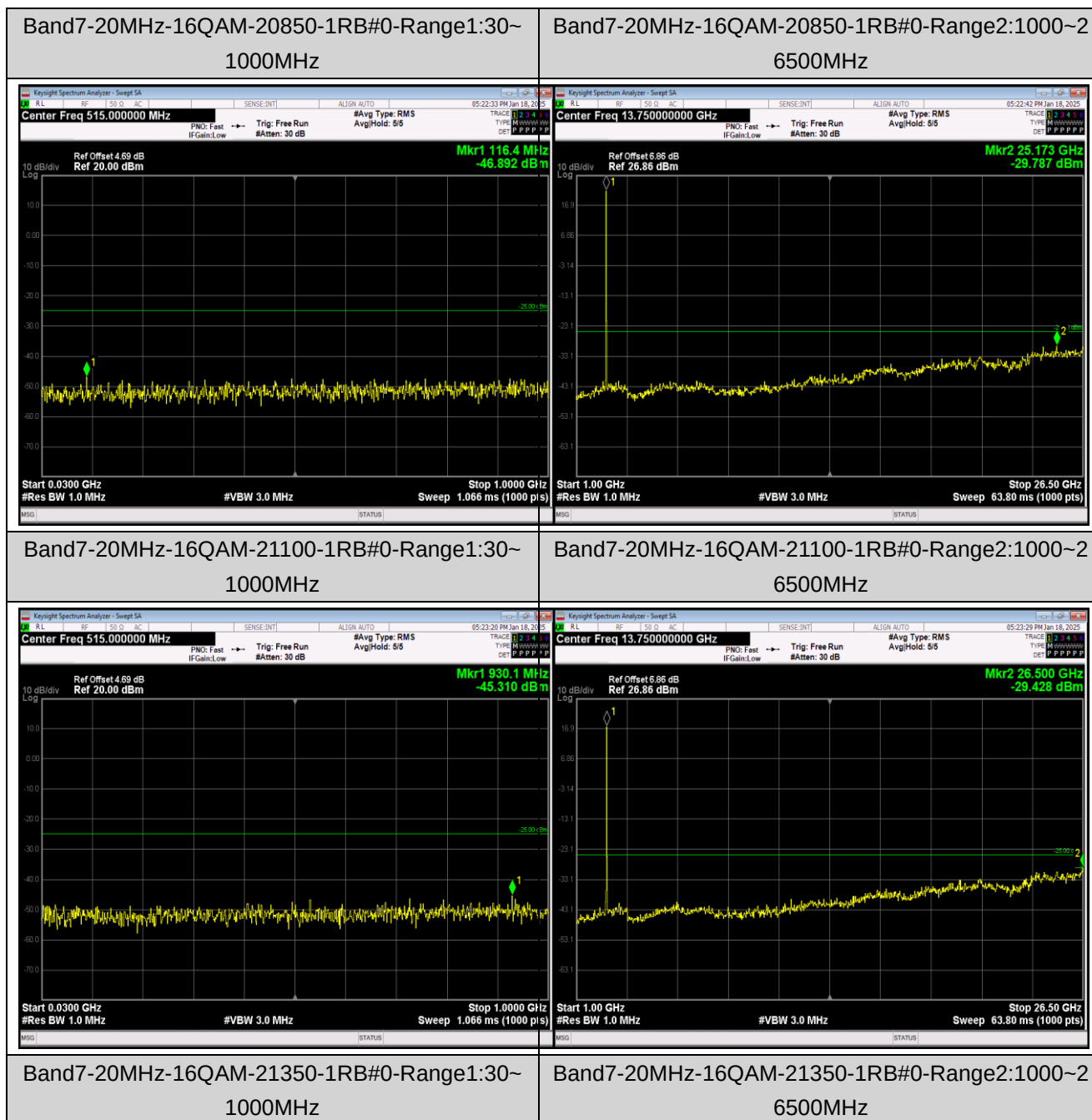


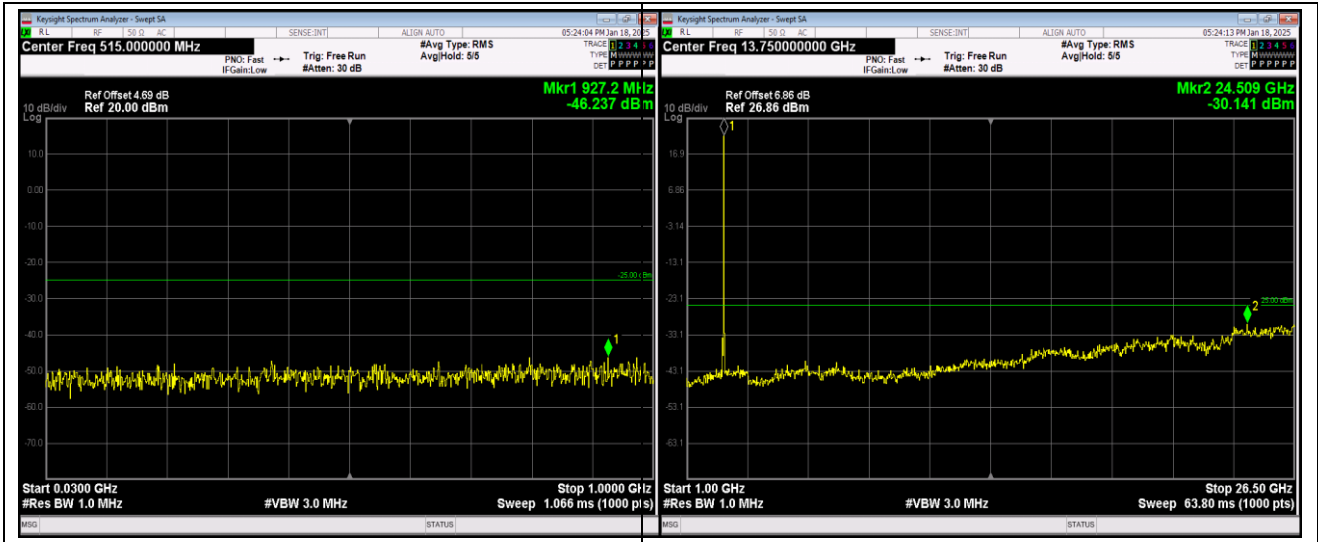
Band7-20MHz-QPSK-21100-1RB#0-Range1:30~1
000MHz

Band7-20MHz-QPSK-21100-1RB#0-Range2:1000~26
500MHz

Band7-20MHz-QPSK-21350-1RB#0-Range1:30~1
000MHz

Band7-20MHz-QPSK-21350-1RB#0-Range2:1000~26
500MHz





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	-62.31	-0.033144	Within authorized band for Band 2	Pass
	-20	-31.51	-0.016761		
	-10	-23.88	-0.012702		
	0	44.69	0.023771		
	10	-63.10	-0.033564		
	20	-36.79	-0.019569		
	30	-32.89	-0.017495		
	40	36.42	0.019372		
	50	14.98	0.007968		
16QAM					
3.70	-30	-51.34	-0.027309	Within authorized band for Band 2	Pass
	-20	-24.83	-0.013207		
	-10	-50.10	-0.026649		
	0	38.39	0.020420		
	10	-44.07	-0.023441		
	20	39.60	0.021064		
	30	41.77	0.022218		
	40	-26.88	-0.014298		
	50	-33.87	-0.018016		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.40	-32.11	-0.017080	Within authorized band for Band 2	Pass
	3.70	32.80	0.017447		
	4.20	-21.70	-0.011543		
16QAM					
25	3.40	48.52	0.025809	Within authorized band for Band 2	Pass
	3.70	42.47	0.022590		
	4.20	-48.17	-0.025622		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 4 part:

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 Frequency=1732.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	-53.36	-0.030799	Within authorized band for Band 4	Pass
	-20	37.64	0.021726		
	-10	-38.39	-0.022159		
	0	-41.43	-0.023913		
	10	-47.74	-0.027556		
	20	-37.95	-0.021905		
	30	-23.35	-0.013478		
	40	40.17	0.023186		
	50	-37.99	-0.021928		
16QAM					
3.70	-30	27.82	0.016058	Within authorized band for Band 4	Pass
	-20	20.83	0.012023		
	-10	-30.24	-0.017455		
	0	-47.15	-0.027215		
	10	46.51	0.026846		
	20	27.79	0.016040		
	30	-18.04	-0.010413		
	40	-42.60	-0.024589		
	50	32.69	0.018869		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.40	-34.29	-0.019792	Within authorized band for Band 4	Pass
	3.70	-37.06	-0.021391		
	4.20	-21.27	-0.012277		
16QAM					
25	3.40	-40.68	-0.023481	Within authorized band for Band 4	Pass
	3.70	-28.45	-0.016421		
	4.20	46.53	0.026857		
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	19.60	0.023431	±2.5	Pass
	-20	-24.02	-0.028715		
	-10	33.53	0.040084		
	0	27.02	0.032301		
	10	11.17	0.013353		
	20	12.40	0.014824		
	30	29.38	0.035123		
	40	-31.41	-0.037549		
	50	-27.11	-0.032409		
16QAM					
3.70	-30	23.42	0.027998	±2.5	Pass
	-20	7.20	0.008607		
	-10	13.19	0.015768		
	0	-26.98	-0.032253		
	10	28.92	0.034573		
	20	-11.90	-0.014226		
	30	-22.62	-0.027041		
	40	-31.36	-0.037490		
	50	-21.03	-0.025140		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.40	-17.92	-0.021423	±2.5	Pass
	3.70	-14.23	-0.017011		
	4.20	12.40	0.014824		
16QAM					
25	3.40	21.47	0.025666	±2.5	Pass
	3.70	18.80	0.022475		
	4.20	26.82	0.032062		
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					
3.70	-30	36.01	0.014205	Within authorized band for Band 7	Pass
	-20	43.19	0.017037		
	-10	45.19	0.017826		
	0	-53.69	-0.021179		
	10	60.22	0.023755		
	20	-42.16	-0.016631		
	30	-40.90	-0.016134		
	40	-91.84	-0.036229		
	50	-50.34	-0.019858		
16QAM					
3.70	-30	-56.58	-0.022320	Within authorized band for Band 7	Pass
	-20	48.29	0.019049		
	-10	37.92	0.014959		
	0	37.97	0.014978		
	10	57.13	0.022536		
	20	-28.41	-0.011207		
	30	-46.52	-0.018351		
	40	36.39	0.014355		
	50	-49.27	-0.019436		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.40	-57.32	-0.022611	Within authorized band for Band 7	Pass
	3.70	15.75	0.006213		
	4.20	-35.08	-0.013838		
16QAM					
25	3.40	27.64	0.010903	Within authorized band for Band 7	Pass
	3.70	39.37	0.015531		
	4.20	33.69	0.013290		
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	27RB#0	PASS	PASS
Band4	20MHz	QPSK	20175	100RB#0	PASS	PASS
Band4	20MHz	16QAM	20175	27RB#0	PASS	PASS
Band5	10MHz	QPSK	20525	50RB#0	PASS	PASS
Band5	10MHz	16QAM	20525	27RB#0	PASS	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS	PASS
Band7	20MHz	16QAM	21100	27RB#0	PASS	PASS

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

Test Graphs

