

Appendix E: Conducted Spurious Emission

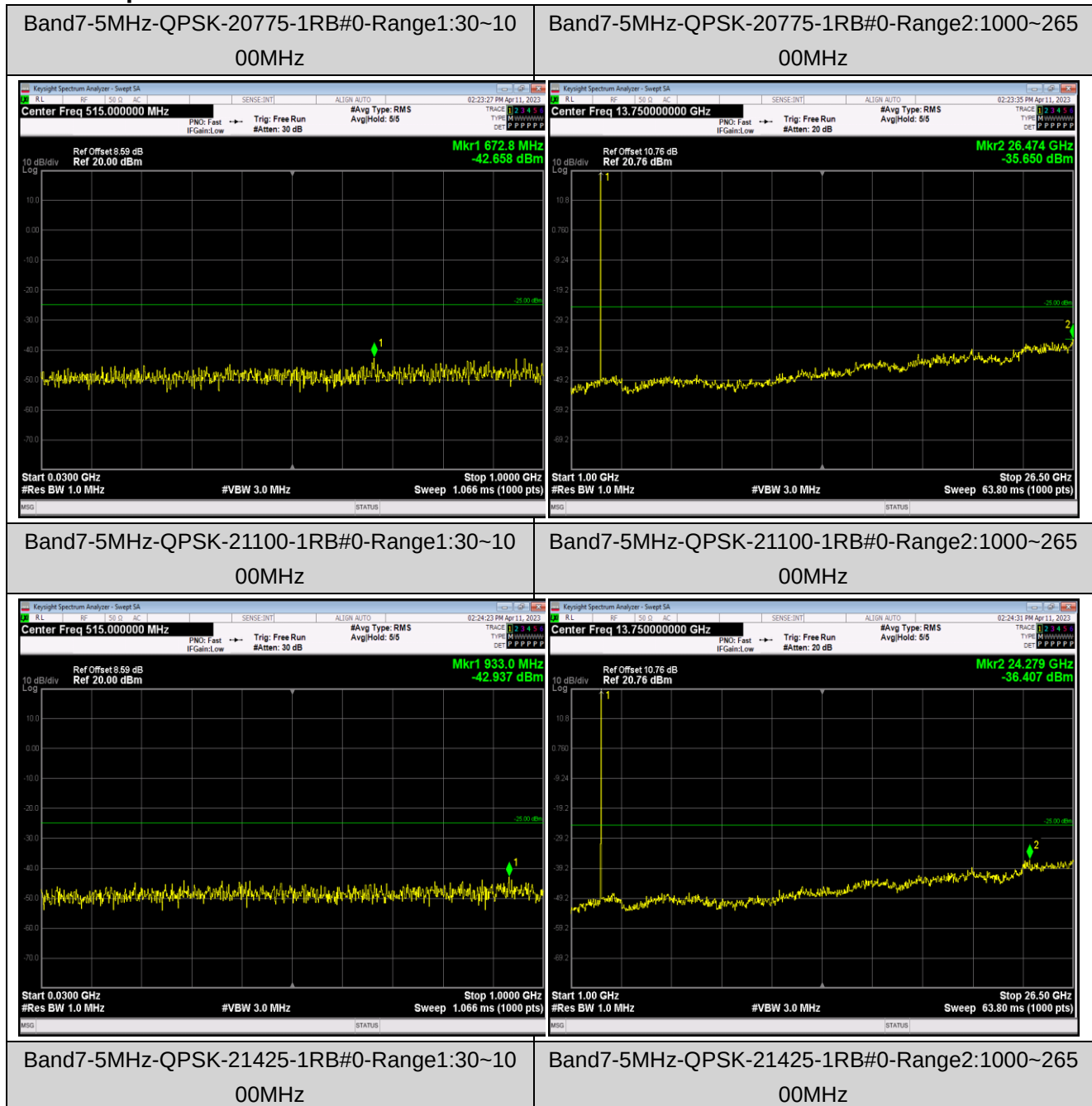
Test Result (worst case)

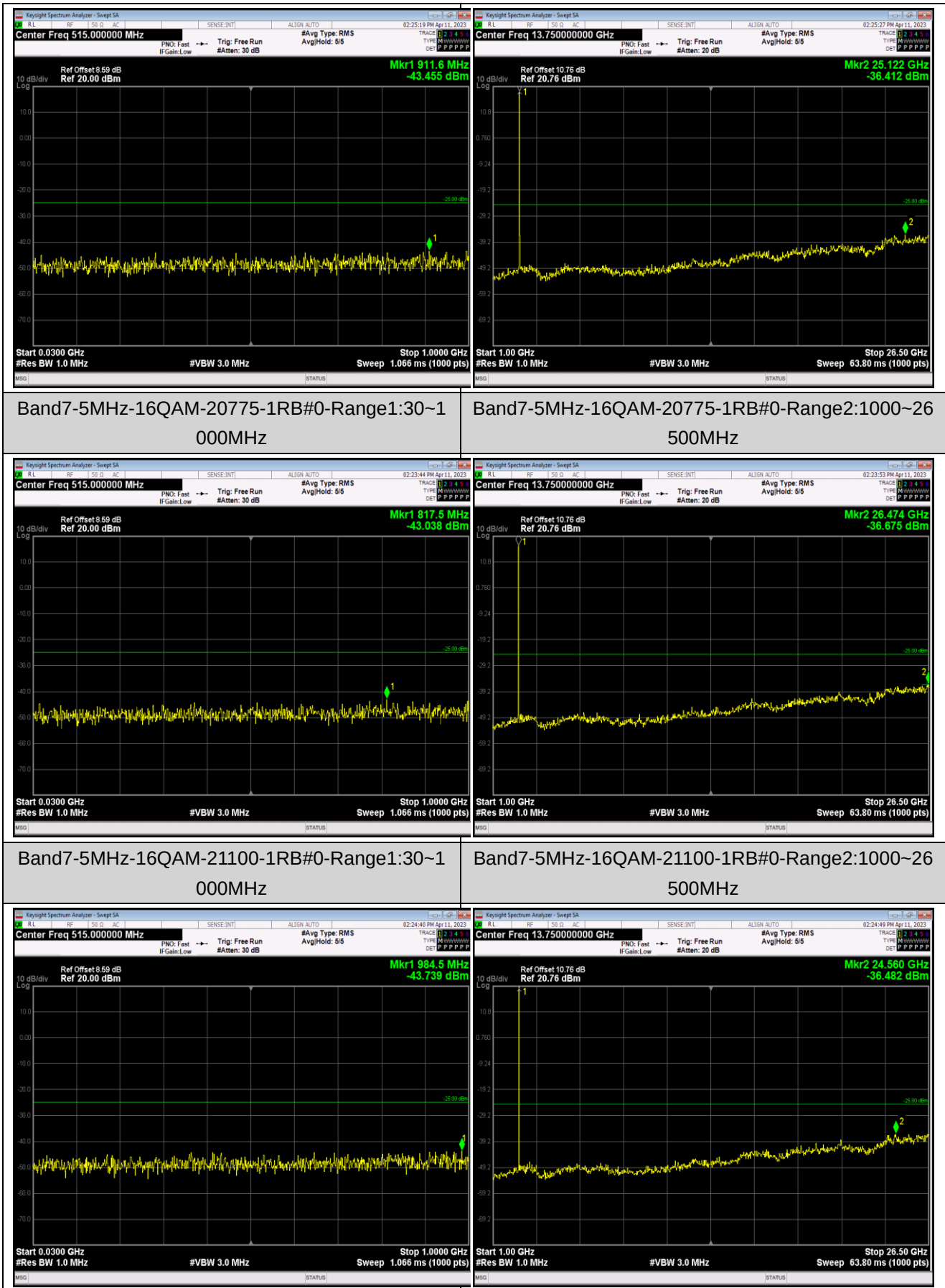
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band7	5MHz	QPSK	20775	1RB#0	Range1:30~1000MHz	-42.66	PASS
Band7	5MHz	QPSK	20775	1RB#0	Range2:1000~26500MHz	-35.65	PASS
Band7	5MHz	QPSK	21100	1RB#0	Range1:30~1000MHz	-42.94	PASS
Band7	5MHz	QPSK	21100	1RB#0	Range2:1000~26500MHz	-36.41	PASS
Band7	5MHz	QPSK	21425	1RB#0	Range1:30~1000MHz	-43.46	PASS
Band7	5MHz	QPSK	21425	1RB#0	Range2:1000~26500MHz	-36.41	PASS
Band7	5MHz	16QAM	20775	1RB#0	Range1:30~1000MHz	-43.04	PASS
Band7	5MHz	16QAM	20775	1RB#0	Range2:1000~26500MHz	-36.68	PASS
Band7	5MHz	16QAM	21100	1RB#0	Range1:30~1000MHz	-43.74	PASS
Band7	5MHz	16QAM	21100	1RB#0	Range2:1000~26500MHz	-36.48	PASS
Band7	5MHz	16QAM	21425	1RB#0	Range1:30~1000MHz	-43.14	PASS
Band7	5MHz	16QAM	21425	1RB#0	Range2:1000~26500MHz	-35.25	PASS
Band7	5MHz	64QAM	20775	1RB#0	Range1:30~1000MHz	-43.11	PASS
Band7	5MHz	64QAM	20775	1RB#0	Range2:1000~26500MHz	-35.2	PASS
Band7	5MHz	64QAM	21100	1RB#0	Range1:30~1000MHz	-44.18	PASS
Band7	5MHz	64QAM	21100	1RB#0	Range2:1000~26500MHz	-35.65	PASS
Band7	5MHz	64QAM	21425	1RB#0	Range1:30~1000MHz	-43.44	PASS
Band7	5MHz	64QAM	21425	1RB#0	Range2:1000~26500MHz	-35.44	PASS
Band7	20MHz	QPSK	20850	1RB#0	Range1:30~1000MHz	-43.02	PASS
Band7	20MHz	QPSK	20850	1RB#0	Range2:1000~26500MHz	-34.28	PASS
Band7	20MHz	QPSK	21100	1RB#0	Range1:30~1000MHz	-41.96	PASS
Band7	20MHz	QPSK	21100	1RB#0	Range2:1000~26500MHz	-36.2	PASS
Band7	20MHz	QPSK	21350	1RB#0	Range1:30~1000MHz	-43.05	PASS
Band7	20MHz	QPSK	21350	1RB#0	Range2:1000~26500MHz	-35.88	PASS
Band7	20MHz	16QAM	20850	1RB#0	Range1:30~1000MHz	-43.23	PASS
Band7	20MHz	16QAM	20850	1RB#0	Range2:1000~26500MHz	-35.63	PASS
Band7	20MHz	16QAM	21100	1RB#0	Range1:30~1000MHz	-42.37	PASS
Band7	20MHz	16QAM	21100	1RB#0	Range2:1000~26500MHz	-36.28	PASS
Band7	20MHz	16QAM	21350	1RB#0	Range1:30~1000MHz	-43.64	PASS
Band7	20MHz	16QAM	21350	1RB#0	Range2:1000~26500MHz	-34.67	PASS
Band7	20MHz	64QAM	20850	1RB#0	Range1:30~1000MHz	-43.22	PASS
Band7	20MHz	64QAM	20850	1RB#0	Range2:1000~26500MHz	-35.49	PASS
Band7	20MHz	64QAM	21100	1RB#0	Range1:30~1000MHz	-42.64	PASS
Band7	20MHz	64QAM	21100	1RB#0	Range2:1000~26500MHz	-36.16	PASS
Band7	20MHz	64QAM	21350	1RB#0	Range1:30~1000MHz	-43.49	PASS
Band7	20MHz	64QAM	21350	1RB#0	Range2:1000~26500MHz	-35.25	PASS

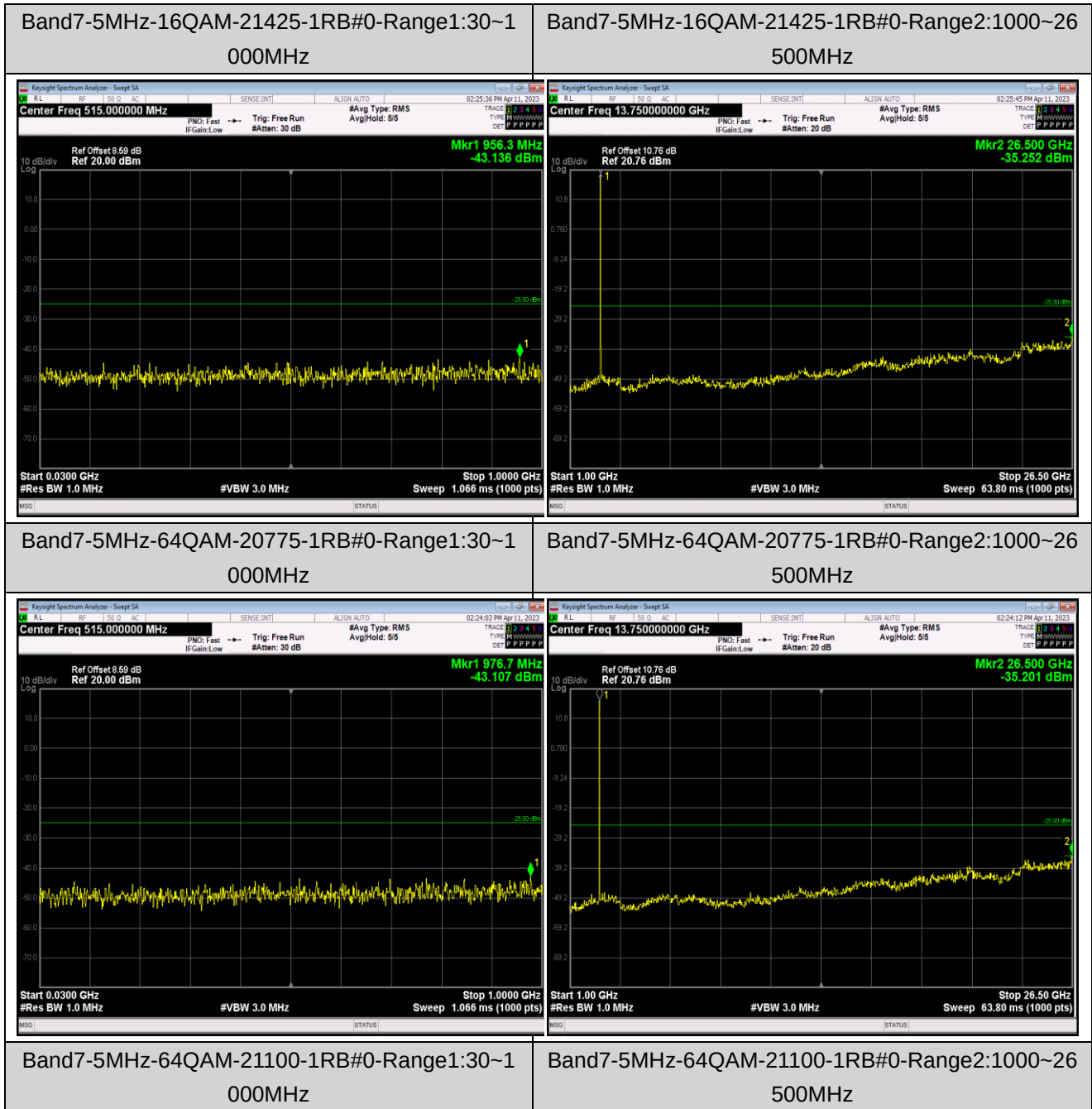
Band41	5MHz	QPSK	39675	1RB#0	Range1:30~1000MHz	-42.91	PASS
Band41	5MHz	QPSK	39675	1RB#0	Range2:1000~26500MHz	-35.26	PASS
Band41	5MHz	QPSK	40620	1RB#0	Range1:30~1000MHz	-43.64	PASS
Band41	5MHz	QPSK	40620	1RB#0	Range2:1000~26500MHz	-35.64	PASS
Band41	5MHz	QPSK	41565	1RB#0	Range1:30~1000MHz	-43.35	PASS
Band41	5MHz	QPSK	41565	1RB#0	Range2:1000~26500MHz	-35.47	PASS
Band41	5MHz	16QAM	39675	1RB#0	Range1:30~1000MHz	-42.94	PASS
Band41	5MHz	16QAM	39675	1RB#0	Range2:1000~26500MHz	-35.37	PASS
Band41	5MHz	16QAM	40620	1RB#0	Range1:30~1000MHz	-43.08	PASS
Band41	5MHz	16QAM	40620	1RB#0	Range2:1000~26500MHz	-35.16	PASS
Band41	5MHz	16QAM	41565	1RB#0	Range1:30~1000MHz	-44.33	PASS
Band41	5MHz	16QAM	41565	1RB#0	Range2:1000~26500MHz	-35.51	PASS
Band41	5MHz	64QAM	39675	1RB#0	Range1:30~1000MHz	-43.94	PASS
Band41	5MHz	64QAM	39675	1RB#0	Range2:1000~26500MHz	-34.88	PASS
Band41	5MHz	64QAM	40620	1RB#0	Range1:30~1000MHz	-43.75	PASS
Band41	5MHz	64QAM	40620	1RB#0	Range2:1000~26500MHz	-35.33	PASS
Band41	5MHz	64QAM	41565	1RB#0	Range1:30~1000MHz	-43.76	PASS
Band41	5MHz	64QAM	41565	1RB#0	Range2:1000~26500MHz	-35	PASS
Band41	20MHz	QPSK	39750	1RB#0	Range1:30~1000MHz	-42.94	PASS
Band41	20MHz	QPSK	39750	1RB#0	Range2:1000~26500MHz	-35.59	PASS
Band41	20MHz	QPSK	40620	1RB#0	Range1:30~1000MHz	-41.6	PASS
Band41	20MHz	QPSK	40620	1RB#0	Range2:1000~26500MHz	-35.5	PASS
Band41	20MHz	QPSK	41490	1RB#0	Range1:30~1000MHz	-43.75	PASS
Band41	20MHz	QPSK	41490	1RB#0	Range2:1000~26500MHz	-35.35	PASS
Band41	20MHz	16QAM	39750	1RB#0	Range1:30~1000MHz	-43.16	PASS
Band41	20MHz	16QAM	39750	1RB#0	Range2:1000~26500MHz	-35.48	PASS
Band41	20MHz	16QAM	40620	1RB#0	Range1:30~1000MHz	-42.97	PASS
Band41	20MHz	16QAM	40620	1RB#0	Range2:1000~26500MHz	-35.28	PASS
Band41	20MHz	16QAM	41490	1RB#0	Range1:30~1000MHz	-43.69	PASS
Band41	20MHz	16QAM	41490	1RB#0	Range2:1000~26500MHz	-35.17	PASS
Band41	20MHz	64QAM	39750	1RB#0	Range1:30~1000MHz	-41.93	PASS
Band41	20MHz	64QAM	39750	1RB#0	Range2:1000~26500MHz	-34.92	PASS
Band41	20MHz	64QAM	40620	1RB#0	Range1:30~1000MHz	-44.02	PASS
Band41	20MHz	64QAM	40620	1RB#0	Range2:1000~26500MHz	-35.62	PASS
Band41	20MHz	64QAM	41490	1RB#0	Range1:30~1000MHz	-43.74	PASS
Band41	20MHz	64QAM	41490	1RB#0	Range2:1000~26500MHz	-34.65	PASS

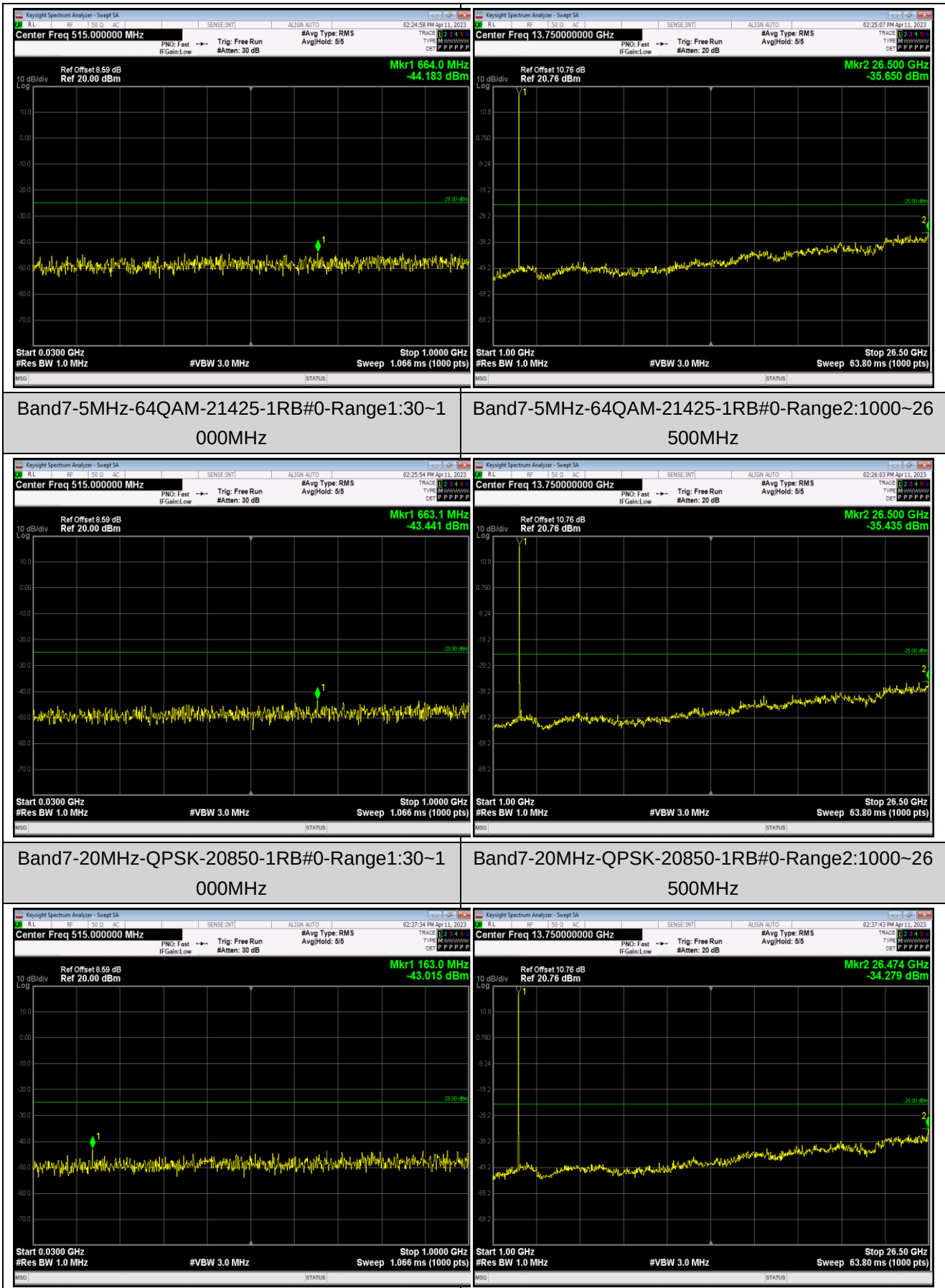
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

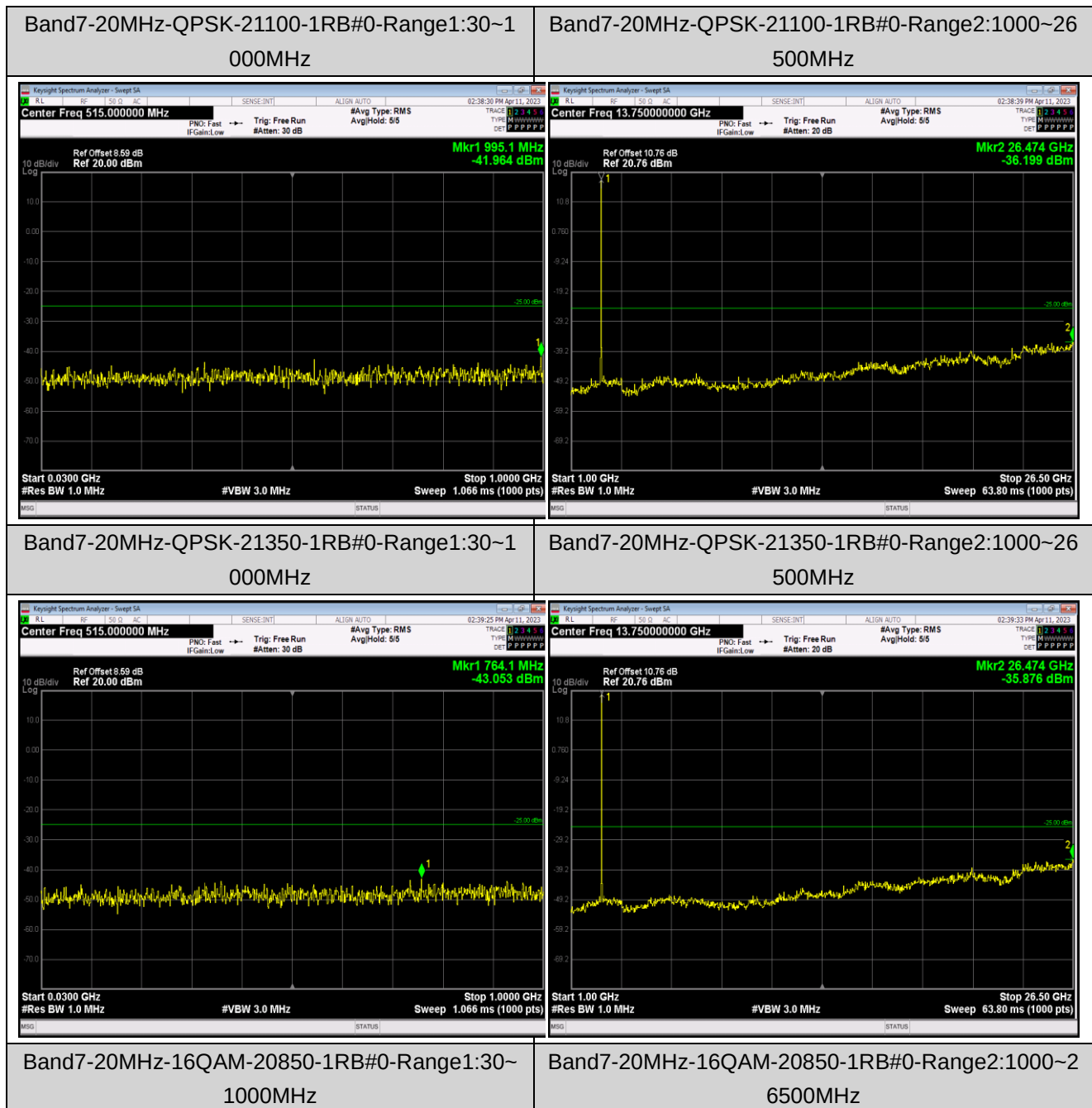
Test Graphs

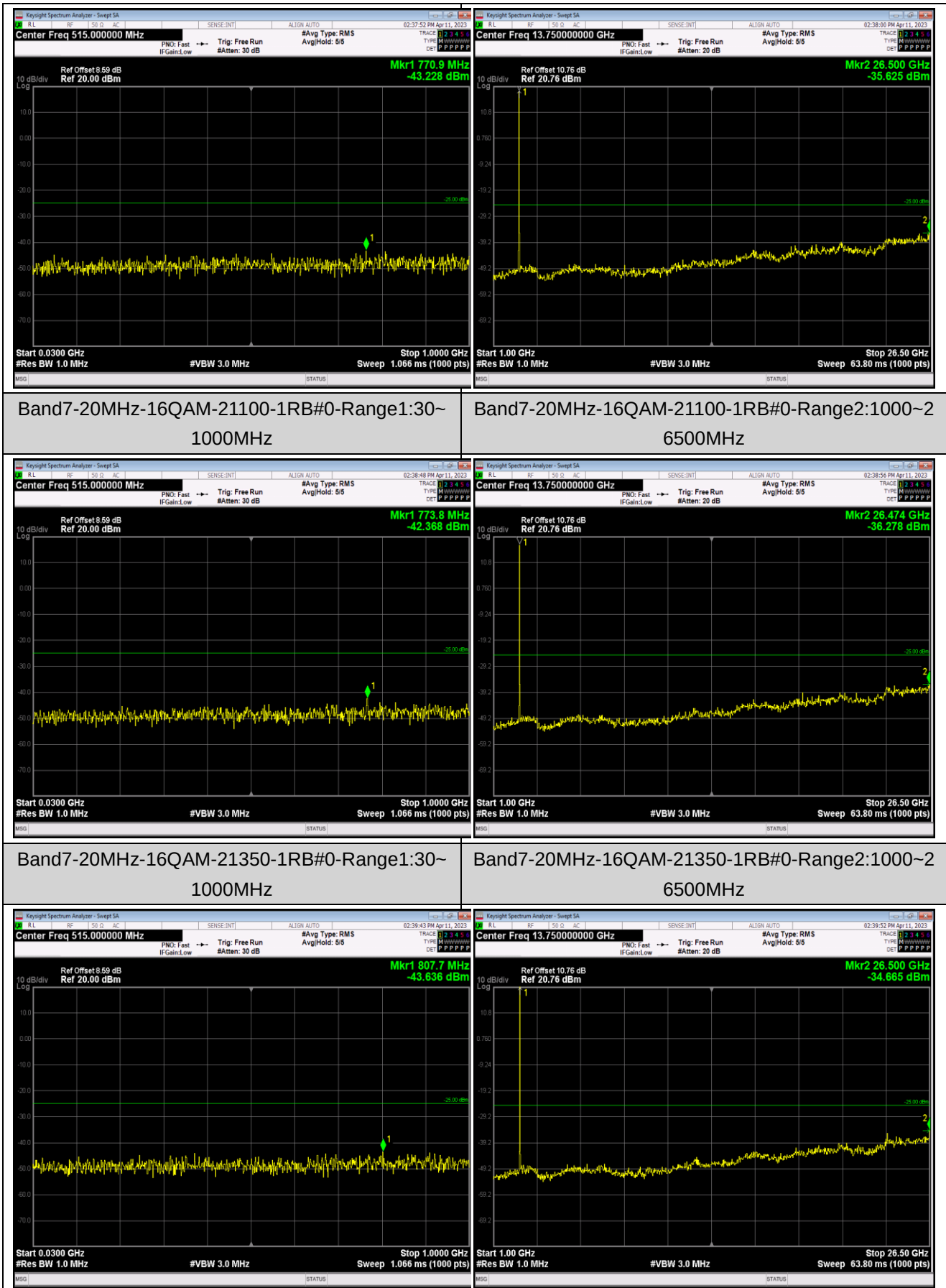


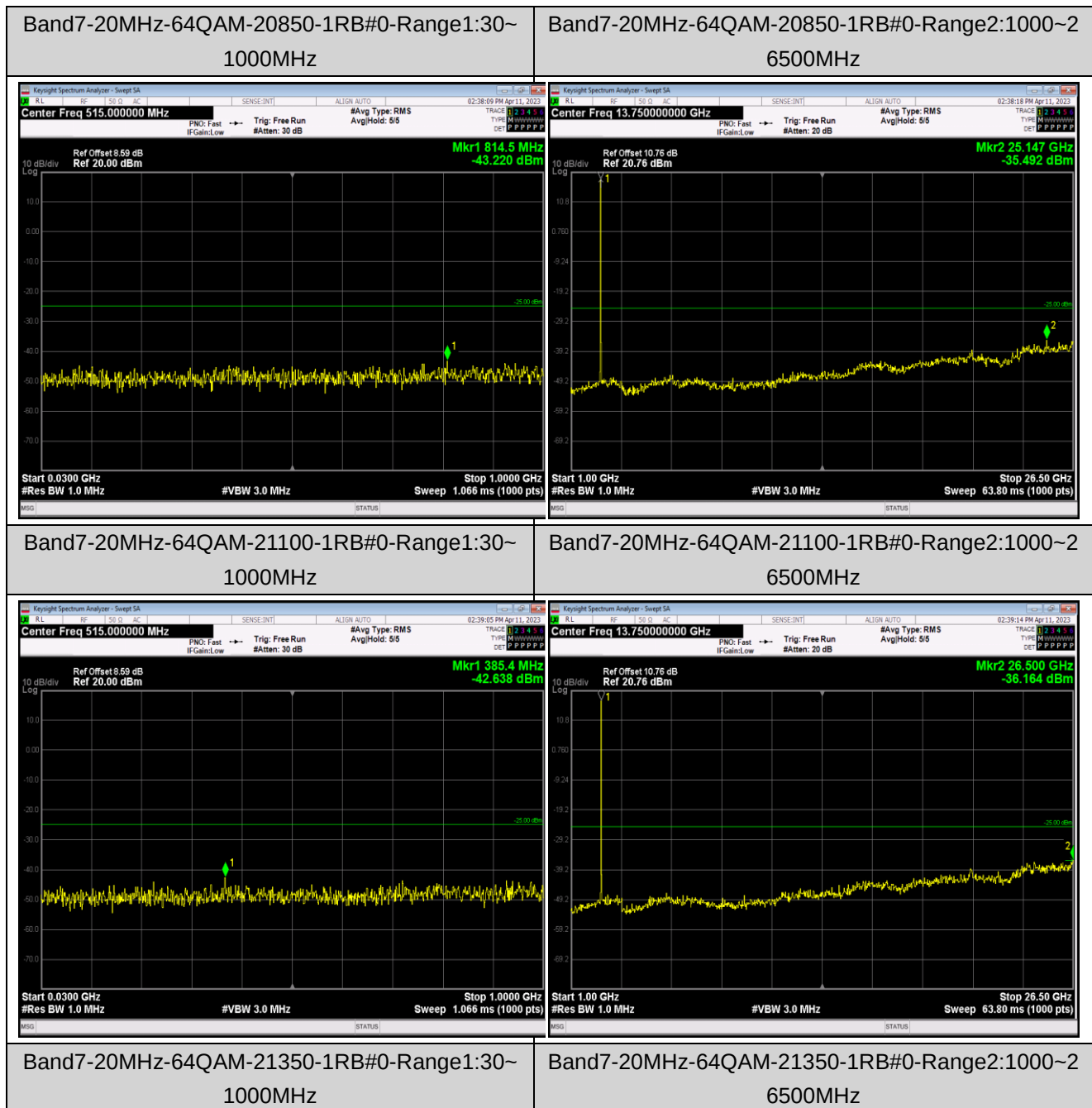


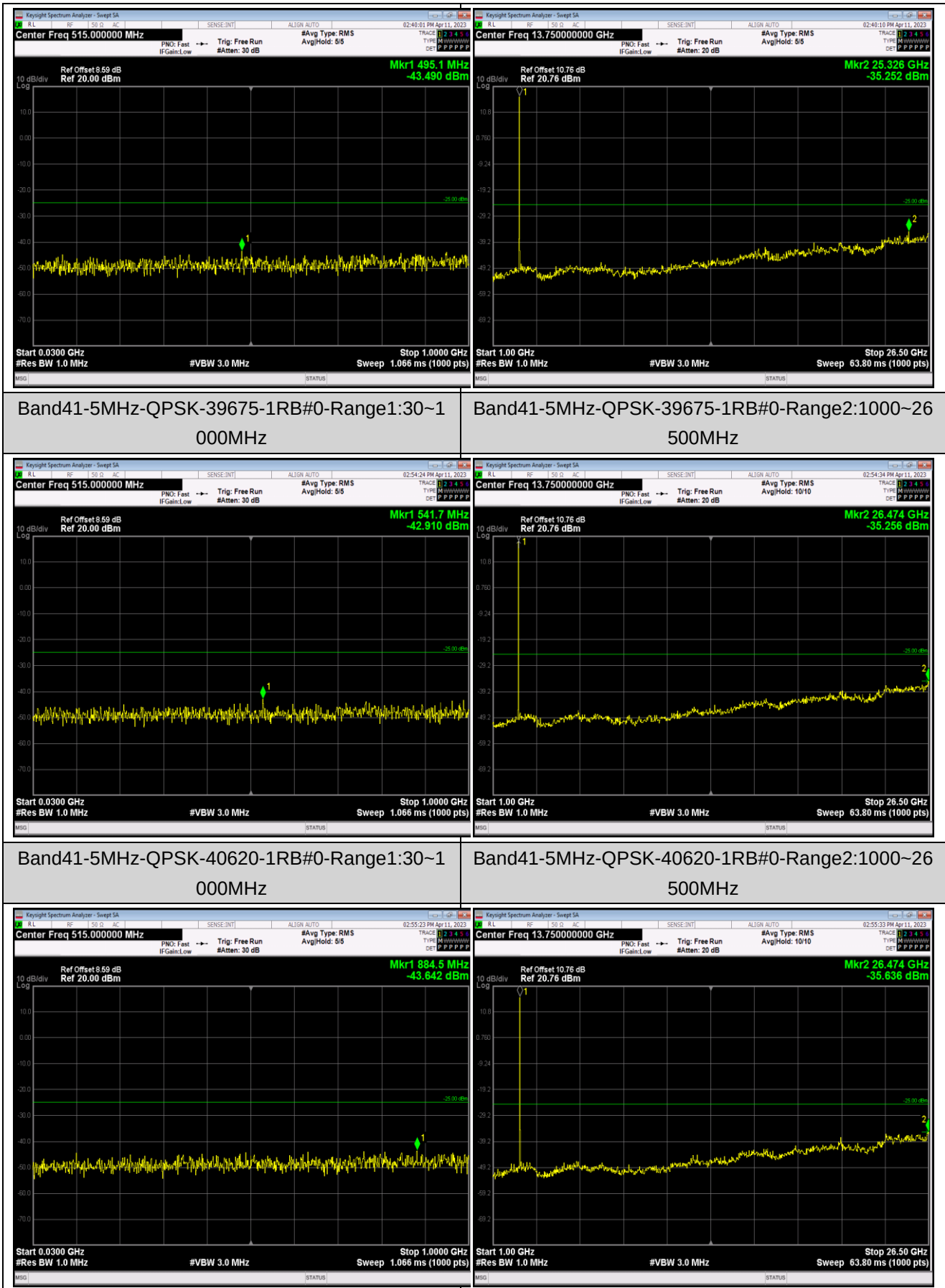


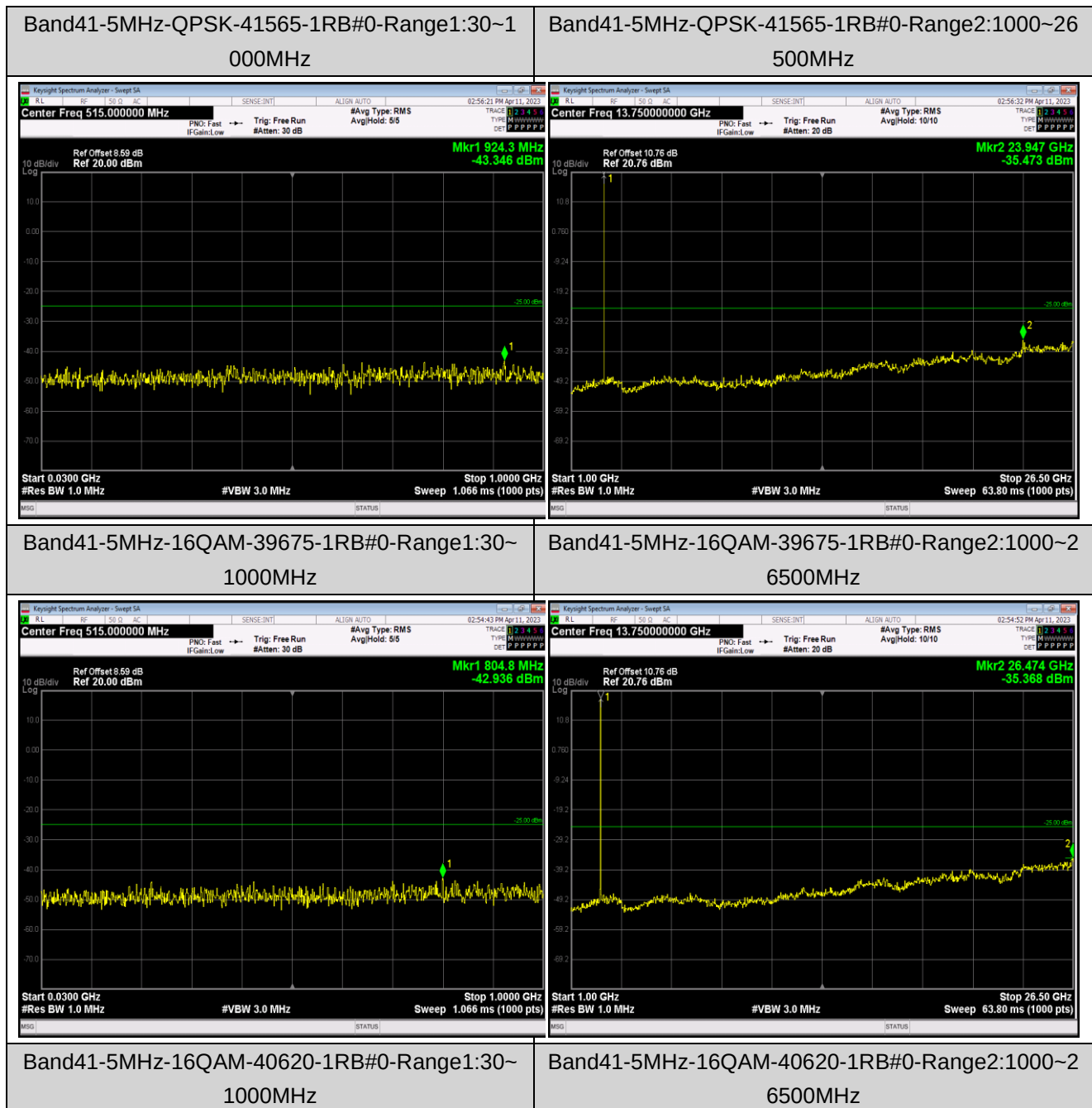


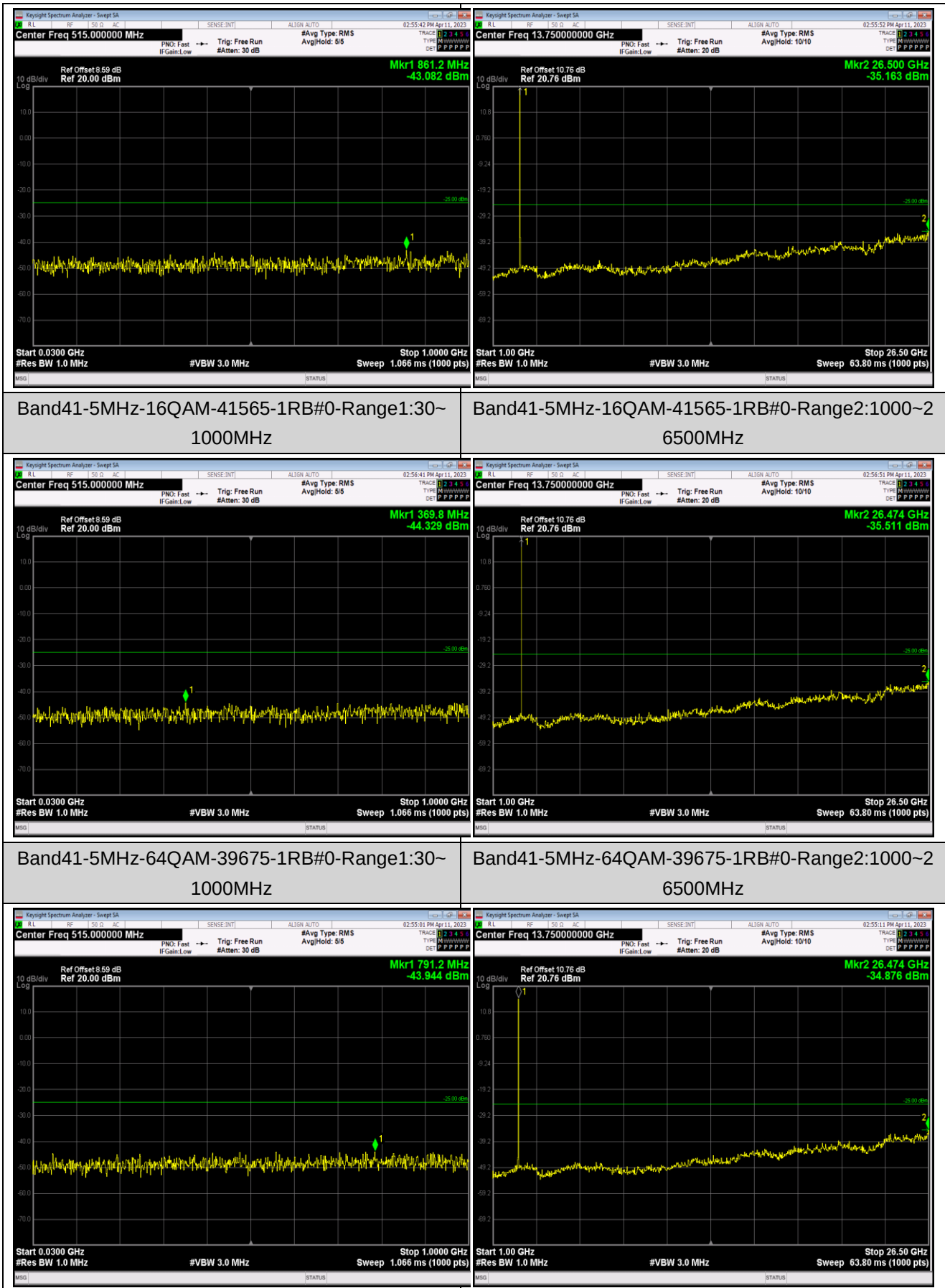


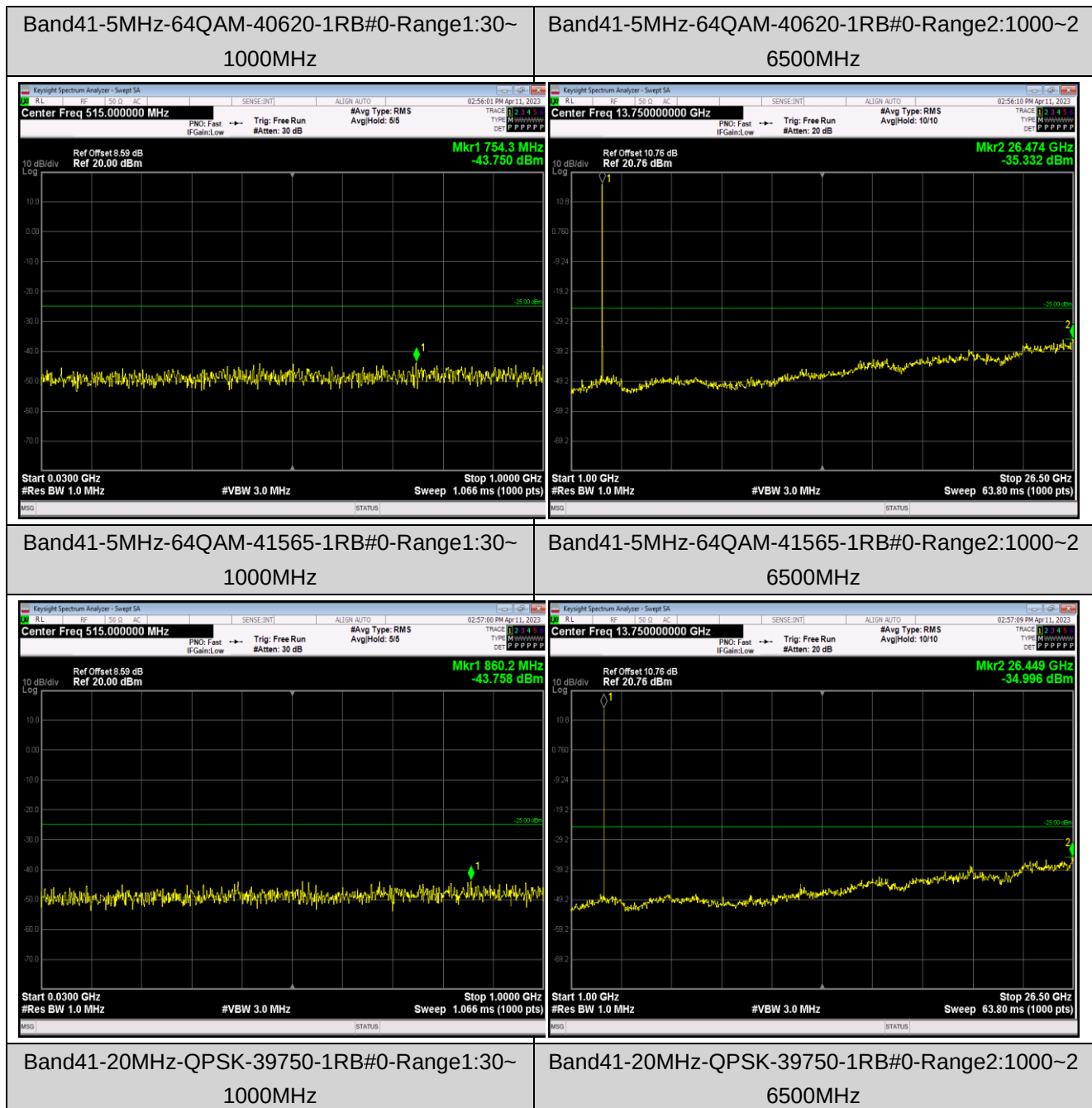


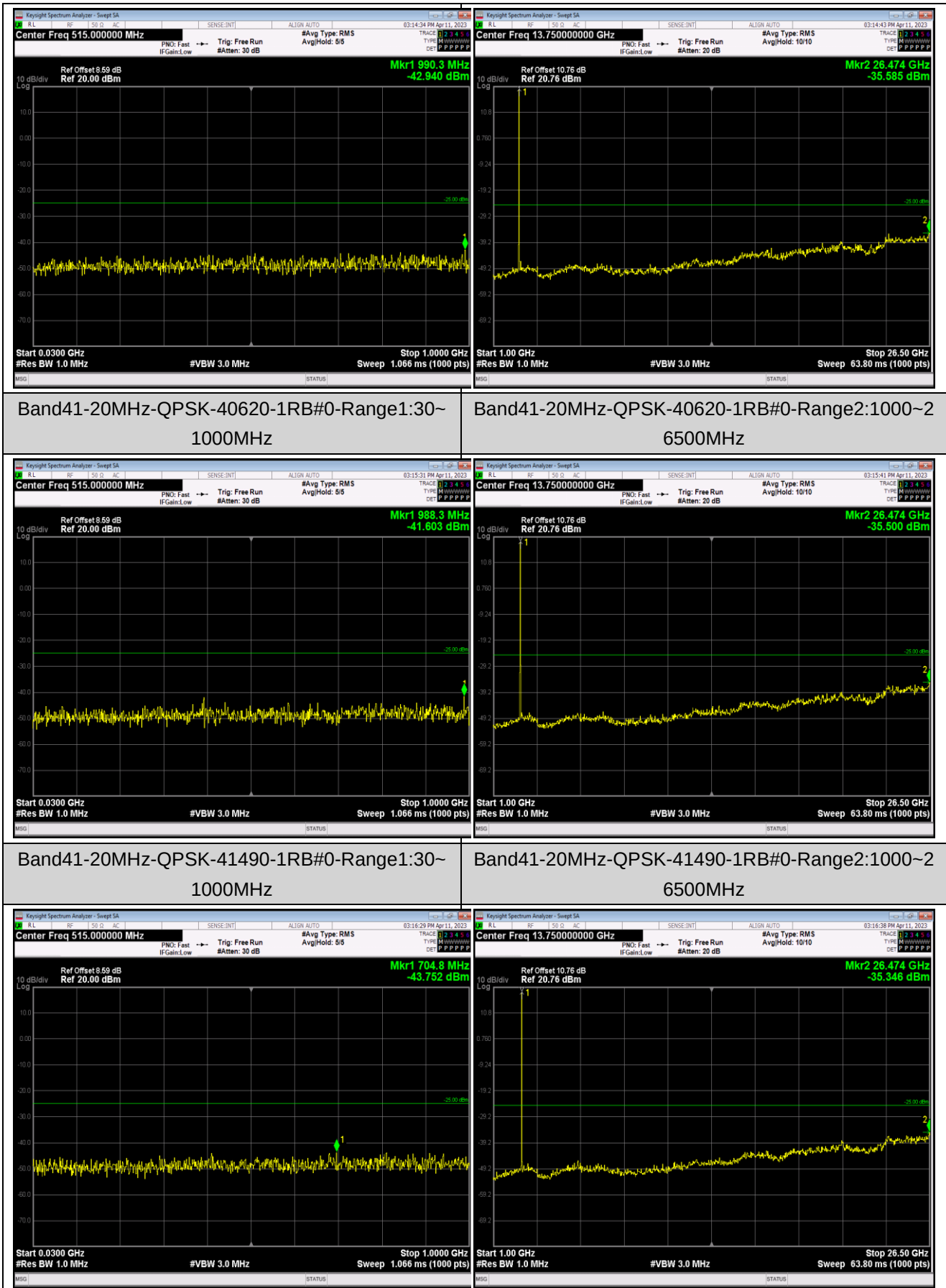


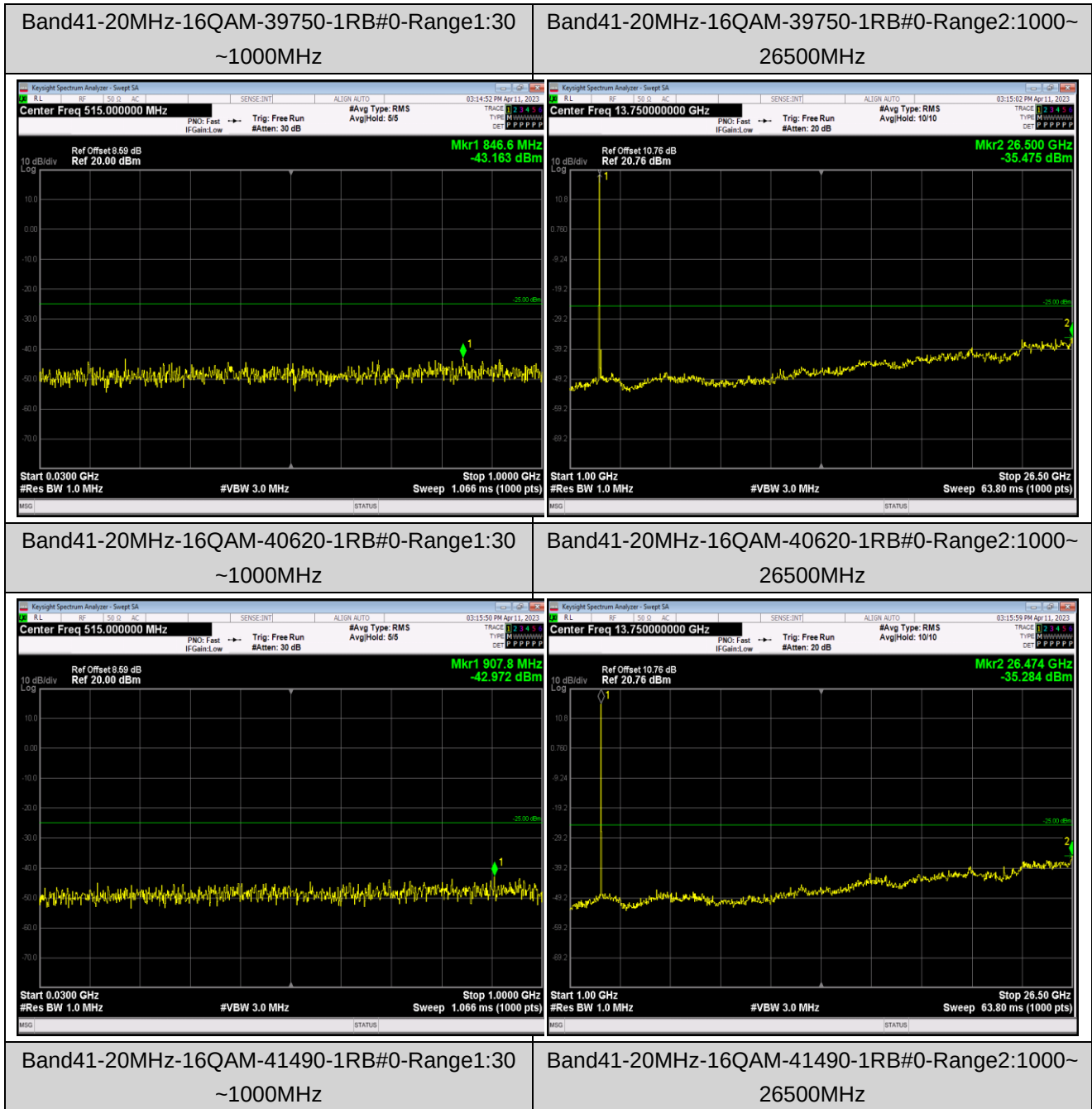


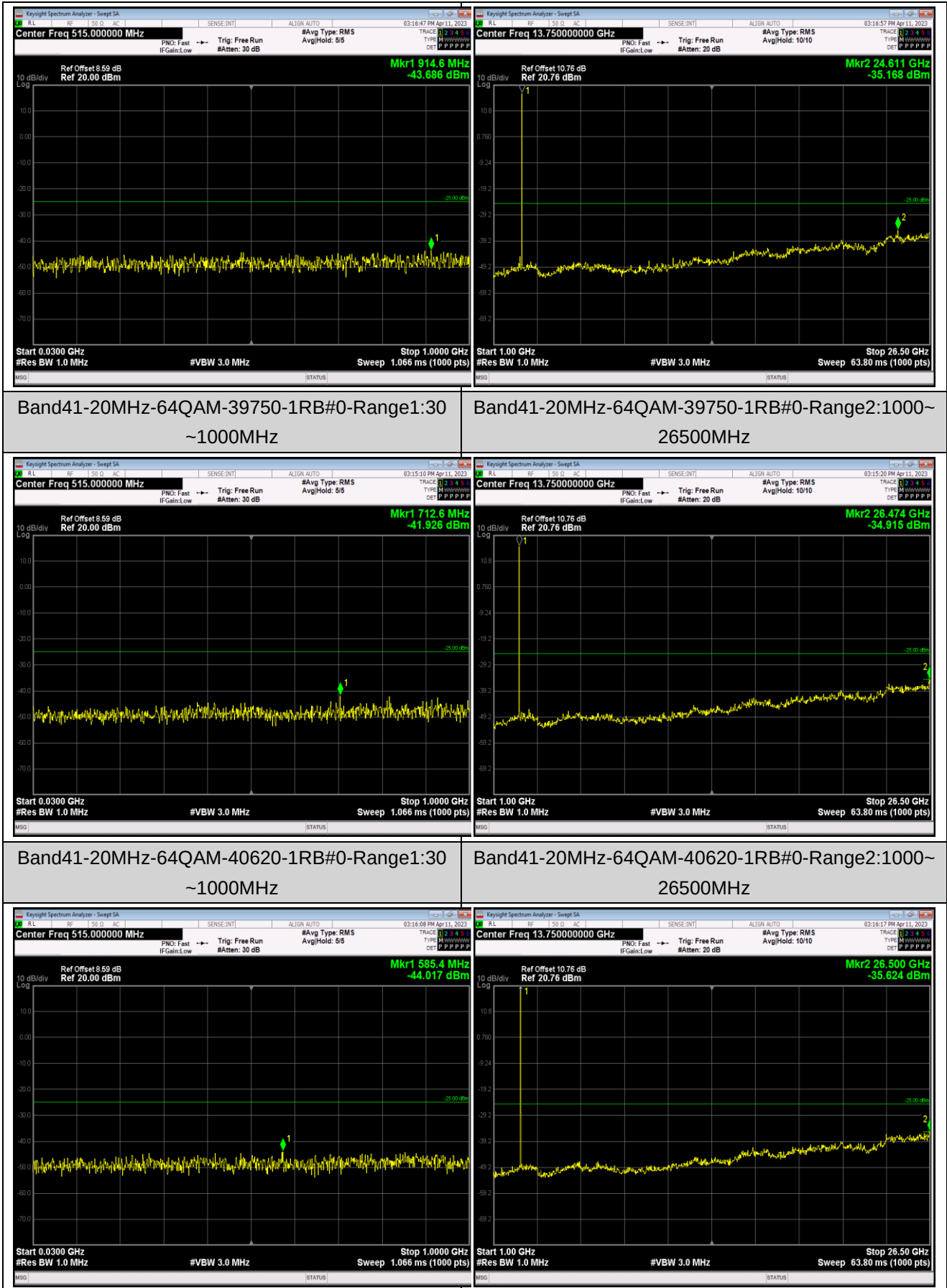


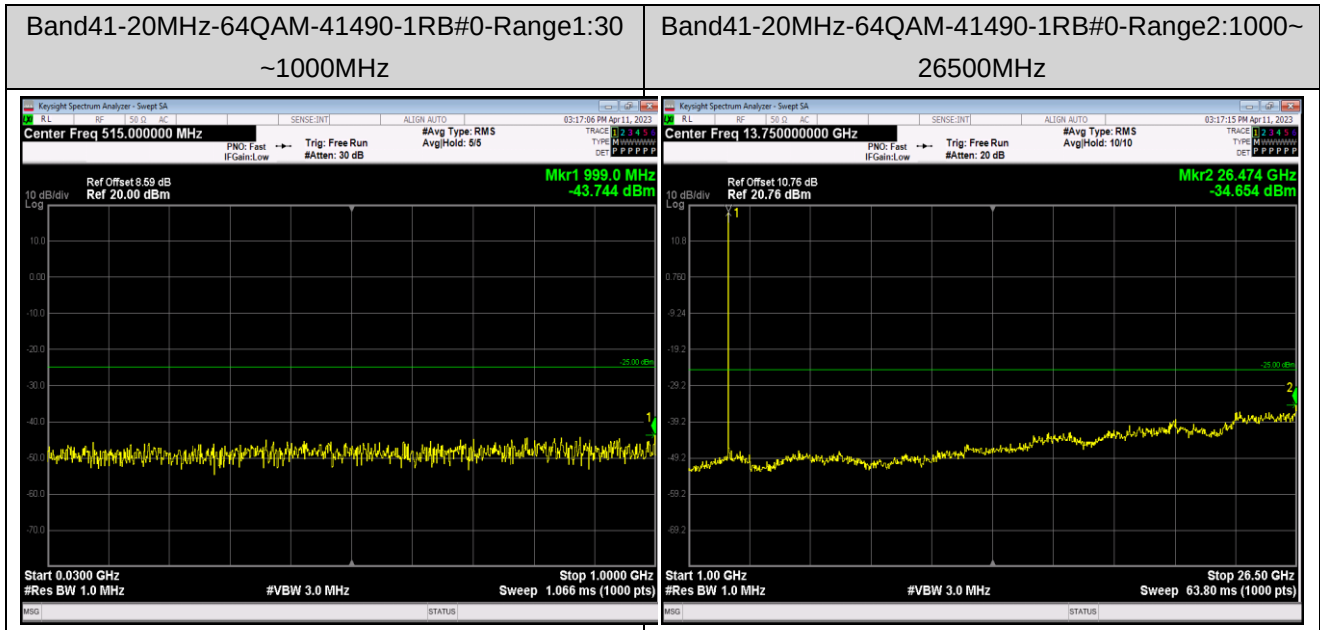












Appendix F: Frequency Stability

Test Result

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					
3.87	-30	-15.61	-0.006158	Within authorized band for Band 7	Pass
	-20	-16.22	-0.006398		
	-10	-16.09	-0.006347		
	0	3.53	0.001393		
	10	4.92	0.001941		
	20	-3.58	-0.001412		
	30	13.23	0.005219		
	40	-12.32	-0.004860		
	50	4.09	0.001613		
16QAM					
3.87	-30	5.54	0.002185	Within authorized band for Band 7	Pass
	-20	-13.83	-0.005456		
	-10	-10.13	-0.003996		
	0	-12.15	-0.004793		
	10	-9.94	-0.003921		
	20	-4.28	-0.001688		
	30	-9.98	-0.003937		
	40	-9.33	-0.003680		
	50	-5.34	-0.002107		
64QAM					
3.87	-30	-10.51	-0.004146	Within authorized band for Band 7	Pass
	-20	2.79	0.001101		
	-10	-11.22	-0.004426		
	0	-11.90	-0.004694		
	10	3.43	0.001353		
	20	-12.42	-0.004899		
	30	5.95	0.002347		
	40	-12.62	-0.004978		
	50	-12.02	-0.004742		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	3.89	0.001535	Within authorized band for Band 7	Pass
	3.87	6.51	0.002568		
	4.45	-9.98	-0.003937		
16QAM					
25	3.45	12.47	0.004919	Within authorized band for Band 7	Pass
	3.87	12.30	0.004852		
	4.45	-11.76	-0.004639		
64QAM					
25	3.45	9.77	0.003854	Within authorized band for Band 7	Pass
	3.87	-12.03	-0.004746		
	4.45	3.78	0.001491		
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=40620 Frequency=2593.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	5.15	0.001986	Within authorized band for Band 41	Pass
	-20	11.01	0.004246		
	-10	-7.54	-0.002908		
	0	9.11	0.003513		
	10	-5.82	-0.002245		
	20	-4.02	-0.001550		
	30	11.53	0.004447		
	40	-10.47	-0.004038		
	50	-6.65	-0.002565		
16QAM					
3.87	-30	-7.10	-0.002738	Within authorized band for Band 41	Pass
	-20	7.32	0.002823		
	-10	4.98	0.001921		
	0	11.56	0.004458		
	10	-8.98	-0.003463		
	20	-9.36	-0.003610		
	30	12.25	0.004724		
	40	6.91	0.002665		
	50	8.61	0.003320		
64QAM					
3.87	-30	-2.22	-0.000856	Within authorized band for Band 41	Pass
	-20	7.37	0.002842		
	-10	7.80	0.003008		
	0	8.34	0.003216		
	10	-9.08	-0.003502		
	20	6.24	0.002406		
	30	-4.33	-0.001670		
	40	10.91	0.004207		
	50	-7.67	-0.002958		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-6.51	-0.002511	Within authorized band for Band 41	Pass
	3.87	-10.51	-0.004053		
	4.45	6.62	0.002553		
16QAM					
25	3.45	2.93	0.001130	Within authorized band for Band41	Pass
	3.87	9.83	0.003791		
	4.45	8.68	0.003347		
64QAM					
25	3.45	-4.38	-0.001689	Within authorized band for Band41	Pass
	3.87	8.94	0.003448		
	4.45	9.73	0.003752		
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
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

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

Test Graphs

