



Band4-1.4MHz-16QAM-19957-1RB#0



Band4-1.4MHz-16QAM-19957-1RB#5



Band4-1.4MHz-16QAM-19957-6RB#0



Band4-1.4MHz-16QAM-20393-1RB#0



Band4-1.4MHz-16QAM-20393-1RB#5



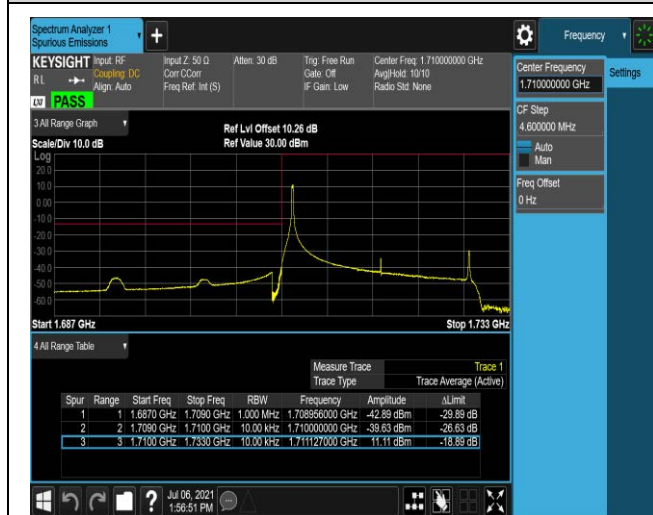
Band4-1.4MHz-16QAM-20393-6RB#0



Band4-20MHz-QPSK-20050-1RB#0



Band4-20MHz-QPSK-20050-1RB#99



Band4-20MHz-QPSK-20050-100RB#0



Band4-20MHz-QPSK-20300-1RB#0



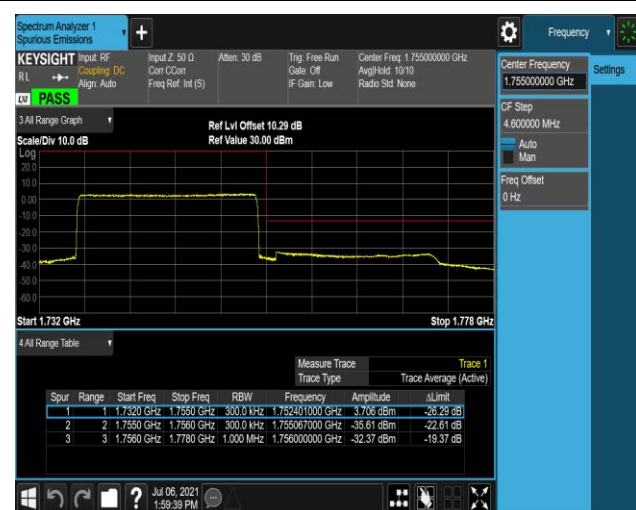
Band4-20MHz-QPSK-20300-1RB#99



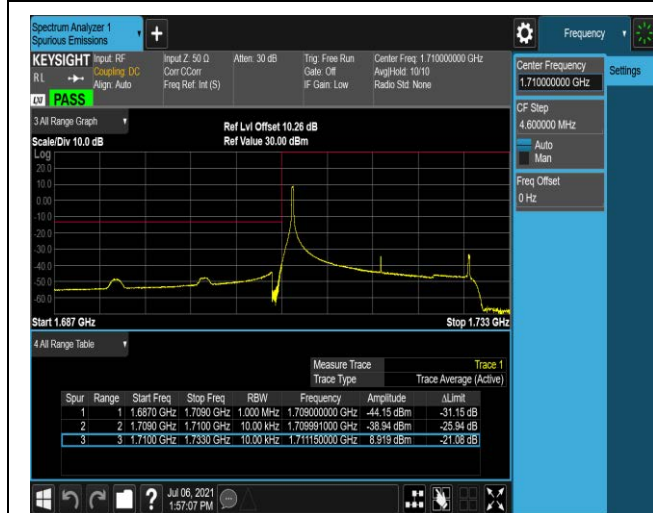
Band4-20MHz-QPSK-20300-100RB#0



Band4-20MHz-16QAM-20050-1RB#0



Band4-20MHz-16QAM-20050-1RB#99



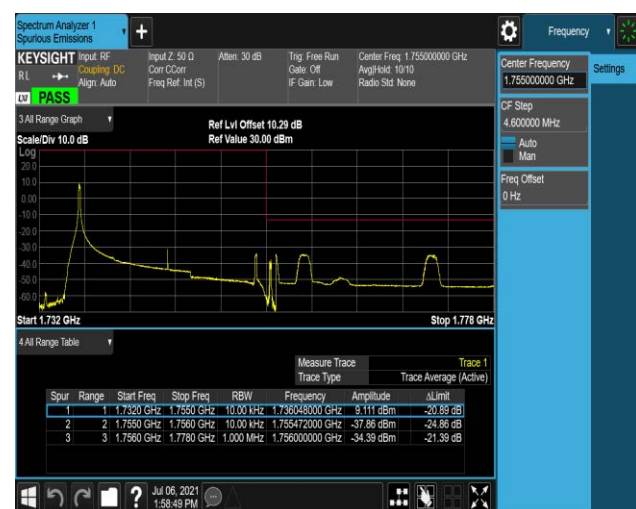
Band4-20MHz-16QAM-20050-100RB#0



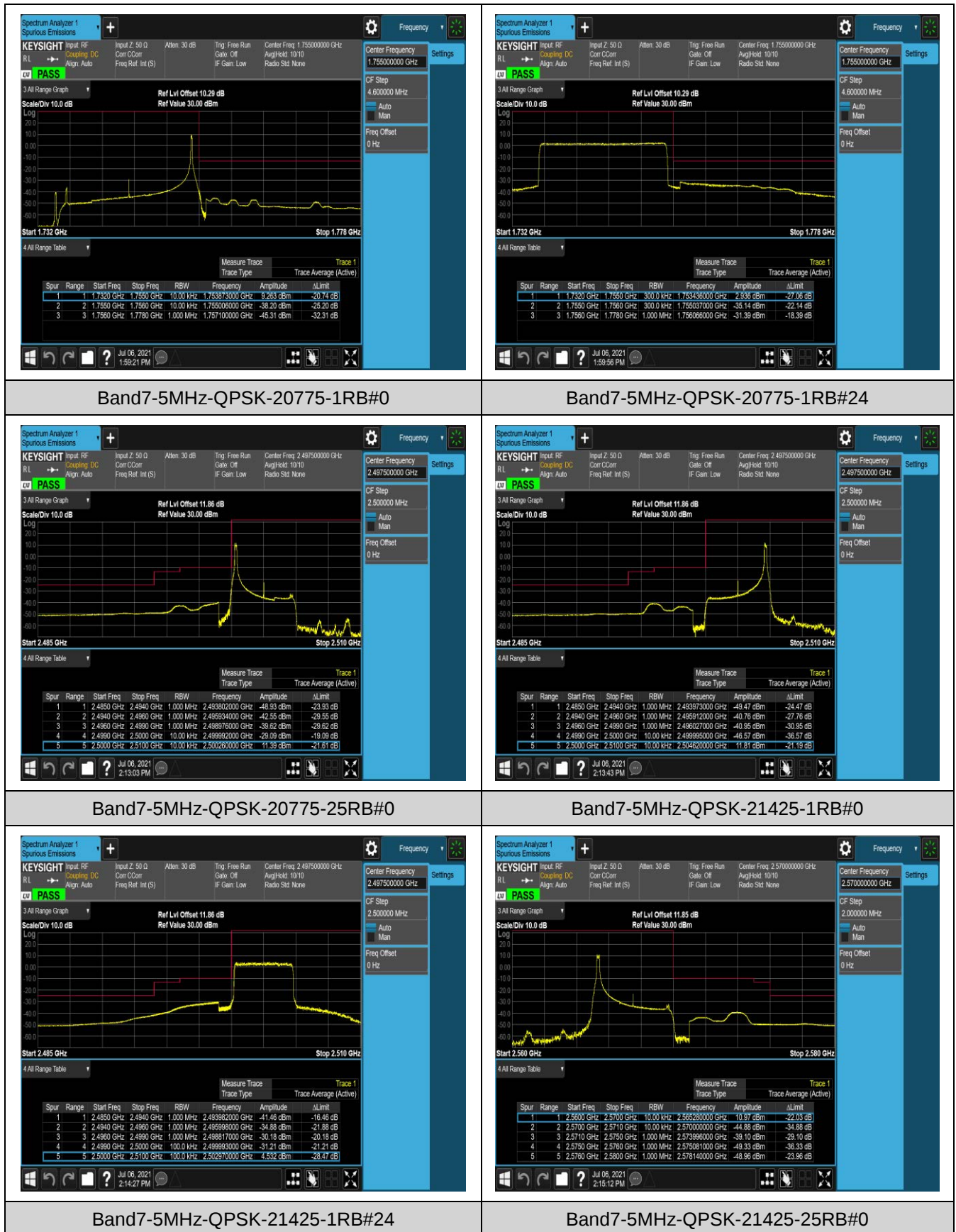
Band4-20MHz-16QAM-20300-1RB#0



Band4-20MHz-16QAM-20300-1RB#99

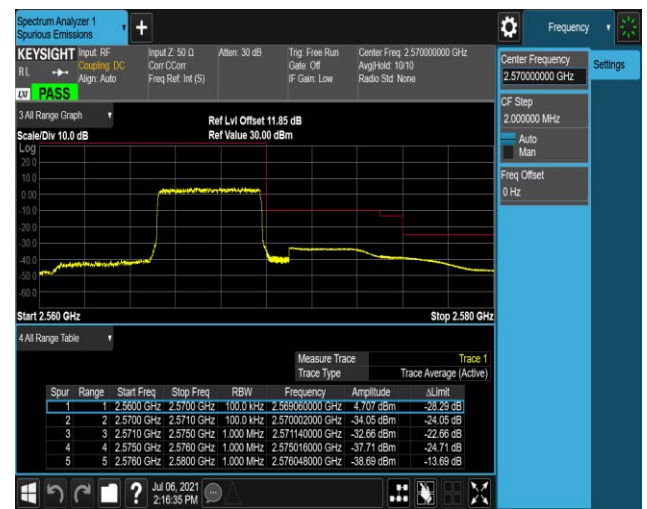


Band4-20MHz-16QAM-20300-100RB#0





Band7-5MHz-16QAM-20775-1RB#0



Band7-5MHz-16QAM-20775-1RB#24



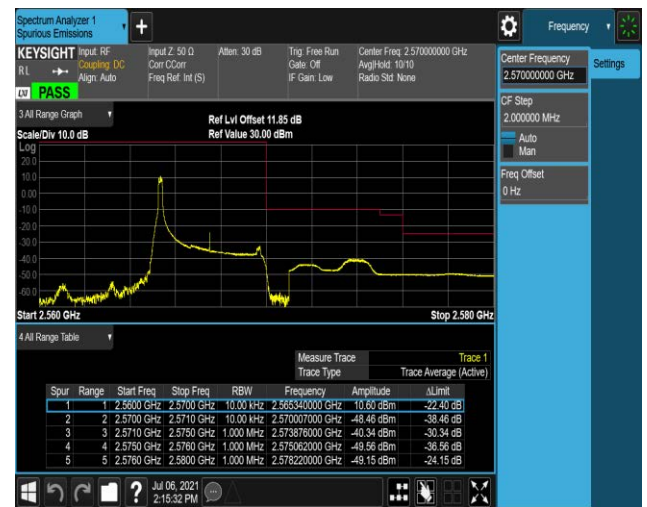
Band7-5MHz-16QAM-20775-25RB#0



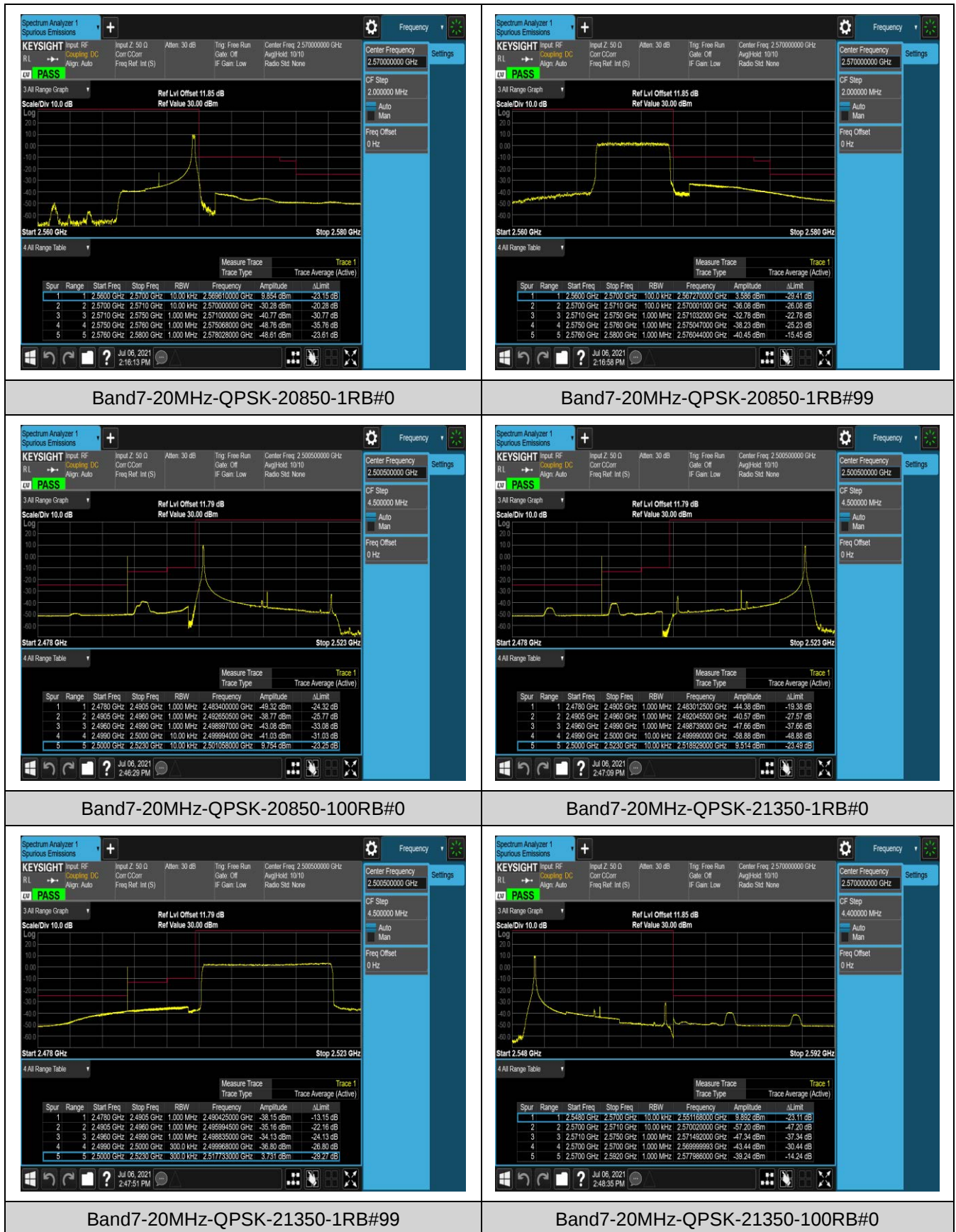
Band7-5MHz-16QAM-21425-1RB#0

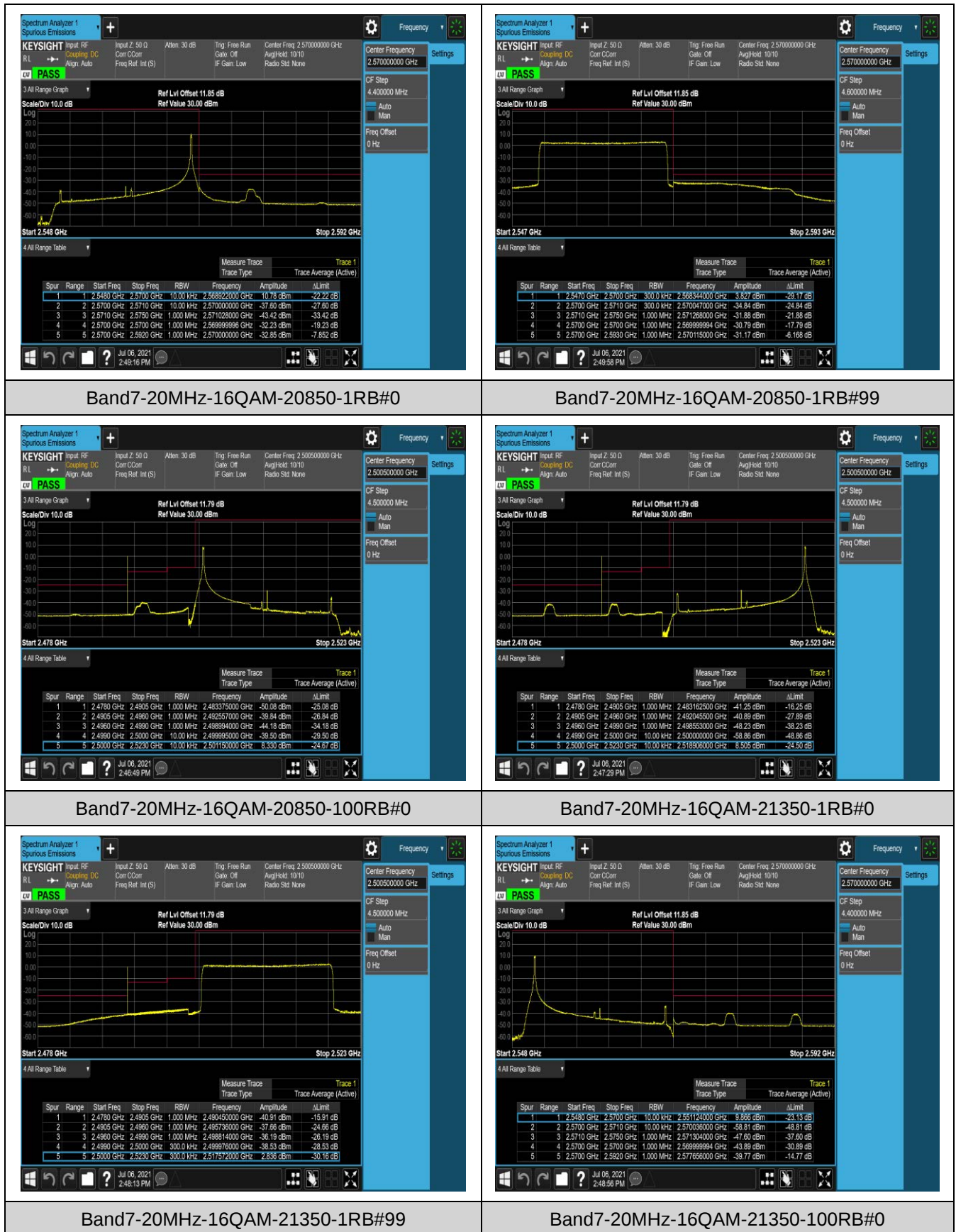


Band7-5MHz-16QAM-21425-1RB#24



Band7-5MHz-16QAM-21425-25RB#0







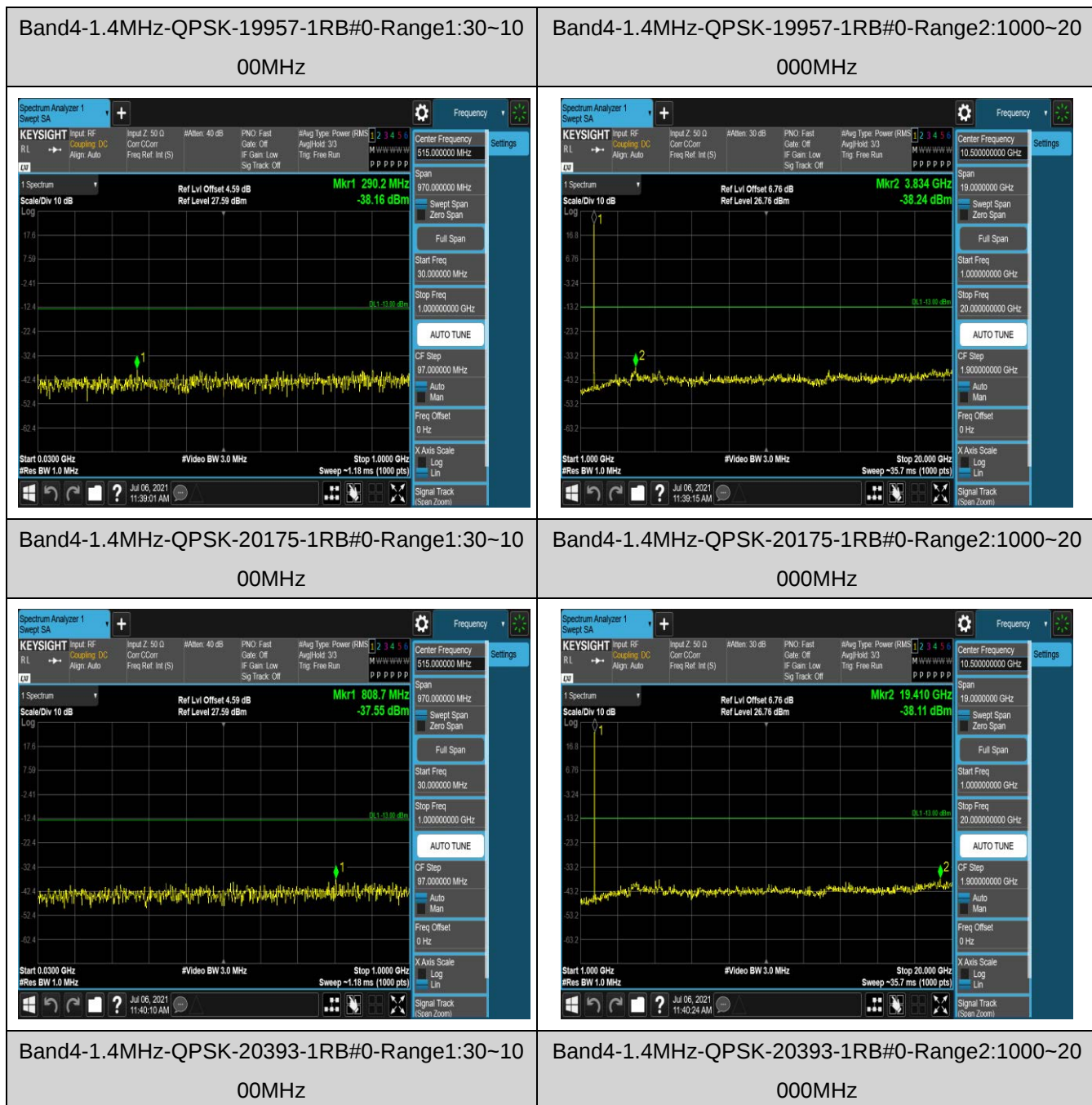
Appendix E: Conducted Spurious Emission

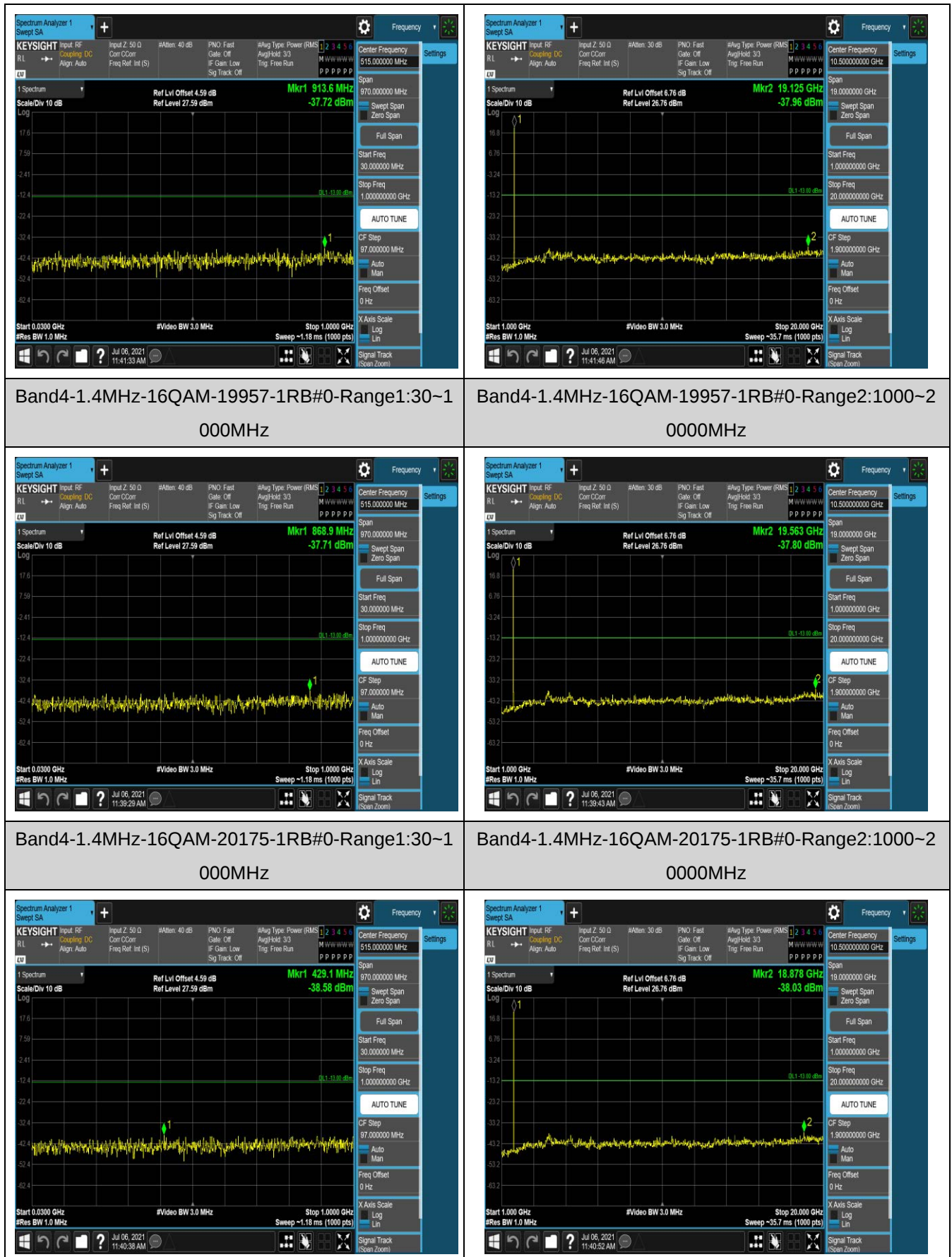
Test Result (worst case)

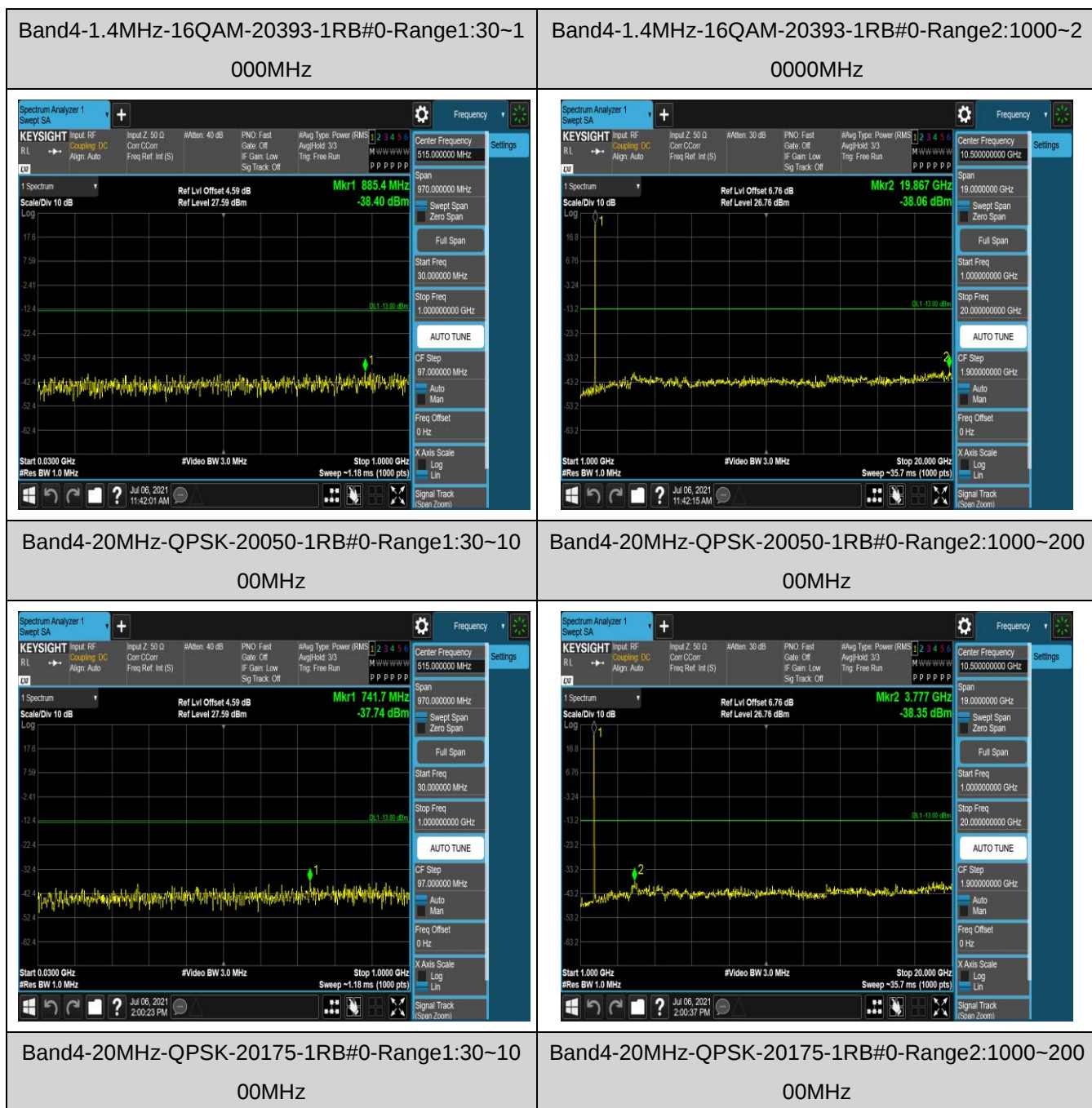
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band4	1.4MHz	QPSK	19957	1RB#0	Range1:30~1000MHz	-38.16	PASS
Band4	1.4MHz	QPSK	19957	1RB#0	Range2:1000~20000MHz	-38.24	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	Range1:30~1000MHz	-37.55	PASS
Band4	1.4MHz	QPSK	20175	1RB#0	Range2:1000~20000MHz	-38.11	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	Range1:30~1000MHz	-37.72	PASS
Band4	1.4MHz	QPSK	20393	1RB#0	Range2:1000~20000MHz	-37.96	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	Range1:30~1000MHz	-37.71	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	Range2:1000~20000MHz	-37.8	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	Range1:30~1000MHz	-38.58	PASS
Band4	1.4MHz	16QAM	20175	1RB#0	Range2:1000~20000MHz	-38.03	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	Range1:30~1000MHz	-38.41	PASS
Band4	1.4MHz	16QAM	20393	1RB#0	Range2:1000~20000MHz	-38.06	PASS
Band4	20MHz	QPSK	20050	1RB#0	Range1:30~1000MHz	-37.74	PASS
Band4	20MHz	QPSK	20050	1RB#0	Range2:1000~20000MHz	-38.35	PASS
Band4	20MHz	QPSK	20175	1RB#0	Range1:30~1000MHz	-37.68	PASS
Band4	20MHz	QPSK	20175	1RB#0	Range2:1000~20000MHz	-37.72	PASS
Band4	20MHz	QPSK	20300	1RB#0	Range1:30~1000MHz	-36.69	PASS
Band4	20MHz	QPSK	20300	1RB#0	Range2:1000~20000MHz	-37.31	PASS
Band4	20MHz	16QAM	20050	1RB#0	Range1:30~1000MHz	-37.68	PASS
Band4	20MHz	16QAM	20050	1RB#0	Range2:1000~20000MHz	-38.84	PASS
Band4	20MHz	16QAM	20175	1RB#0	Range1:30~1000MHz	-37.88	PASS
Band4	20MHz	16QAM	20175	1RB#0	Range2:1000~20000MHz	-37.87	PASS
Band4	20MHz	16QAM	20300	1RB#0	Range1:30~1000MHz	-37.4	PASS
Band4	20MHz	16QAM	20300	1RB#0	Range2:1000~20000MHz	-38.12	PASS
Band7	5MHz	QPSK	20775	1RB#0	Range1:30~1000MHz	-48.02	PASS
Band7	5MHz	QPSK	20775	1RB#0	Range2:1000~27000MHz	-35.82	PASS
Band7	5MHz	QPSK	21100	1RB#0	Range1:30~1000MHz	-46.89	PASS
Band7	5MHz	QPSK	21100	1RB#0	Range2:1000~27000MHz	-35.9	PASS
Band7	5MHz	QPSK	21425	1RB#0	Range1:30~1000MHz	-47.42	PASS
Band7	5MHz	QPSK	21425	1RB#0	Range2:1000~27000MHz	-35.63	PASS
Band7	5MHz	16QAM	20775	1RB#0	Range1:30~1000MHz	-49.66	PASS

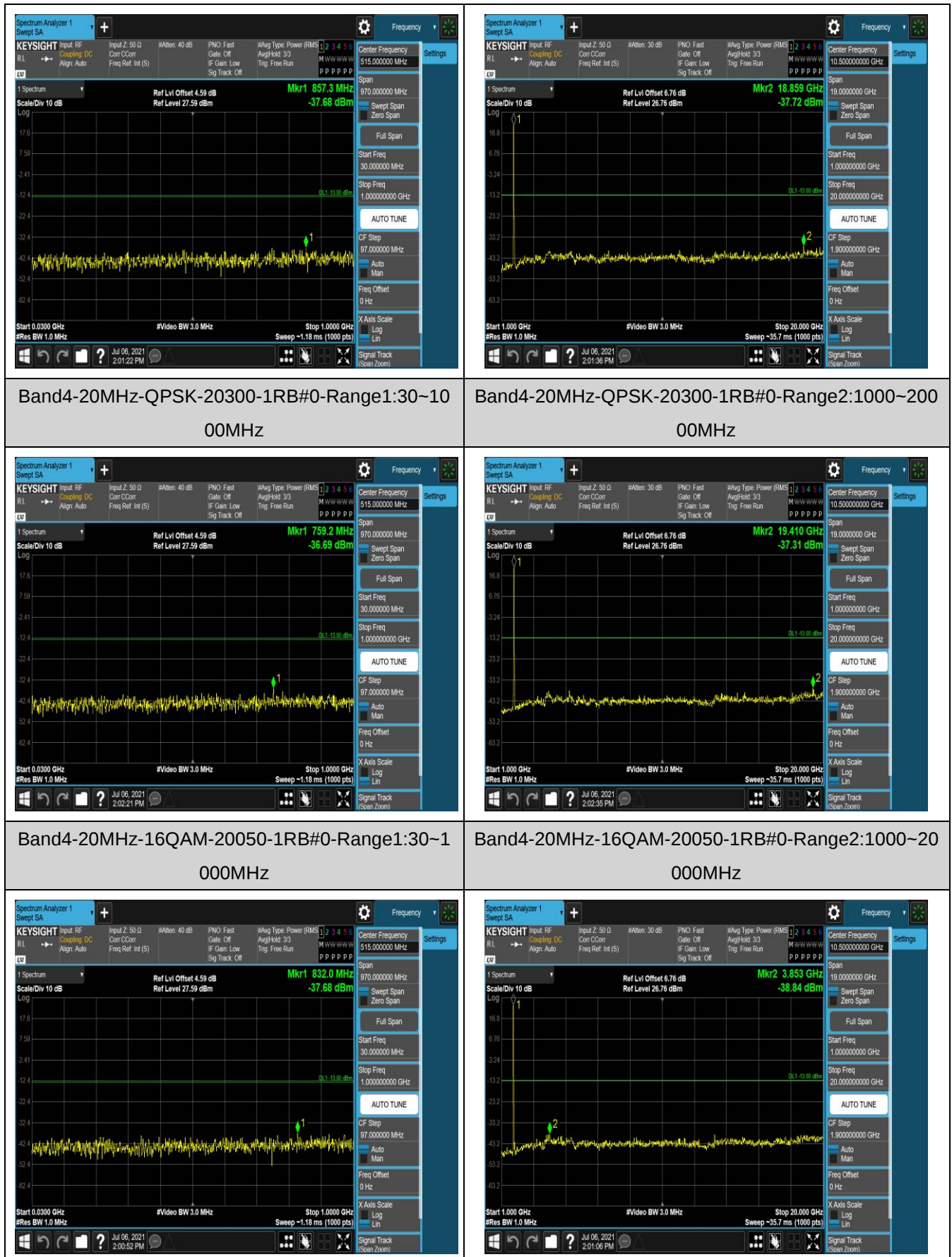
Band7	5MHz	16QAM	20775	1RB#0	Range2:1000~27000MHz	-35.91	PASS
Band7	5MHz	16QAM	21100	1RB#0	Range1:30~1000MHz	-48.89	PASS
Band7	5MHz	16QAM	21100	1RB#0	Range2:1000~27000MHz	-35.75	PASS
Band7	5MHz	16QAM	21425	1RB#0	Range1:30~1000MHz	-48.69	PASS
Band7	5MHz	16QAM	21425	1RB#0	Range2:1000~27000MHz	-36.04	PASS
Band7	20MHz	QPSK	20850	1RB#0	Range1:30~1000MHz	-48.68	PASS
Band7	20MHz	QPSK	20850	1RB#0	Range2:1000~27000MHz	-35.28	PASS
Band7	20MHz	QPSK	21100	1RB#0	Range1:30~1000MHz	-46.69	PASS
Band7	20MHz	QPSK	21100	1RB#0	Range2:1000~27000MHz	-35.58	PASS
Band7	20MHz	QPSK	21350	1RB#0	Range1:30~1000MHz	-47.76	PASS
Band7	20MHz	QPSK	21350	1RB#0	Range2:1000~27000MHz	-35.6	PASS
Band7	20MHz	16QAM	20850	1RB#0	Range1:30~1000MHz	-47.65	PASS
Band7	20MHz	16QAM	20850	1RB#0	Range2:1000~27000MHz	-35.23	PASS
Band7	20MHz	16QAM	21100	1RB#0	Range1:30~1000MHz	-48.27	PASS
Band7	20MHz	16QAM	21100	1RB#0	Range2:1000~27000MHz	-34.89	PASS
Band7	20MHz	16QAM	21350	1RB#0	Range1:30~1000MHz	-48.34	PASS
Band7	20MHz	16QAM	21350	1RB#0	Range2:1000~27000MHz	-36.01	PASS

Test Graphs









Band4-20MHz-16QAM-20175-1RB#0-Range1:30~1

000MHz



Band4-20MHz-16QAM-20175-1RB#0-Range2:1000~20

000MHz



Band4-20MHz-16QAM-20300-1RB#0-Range1:30~1

000MHz



Band4-20MHz-16QAM-20300-1RB#0-Range2:1000~20

000MHz



Band7-5MHz-QPSK-20775-1RB#0-Range1:30~100

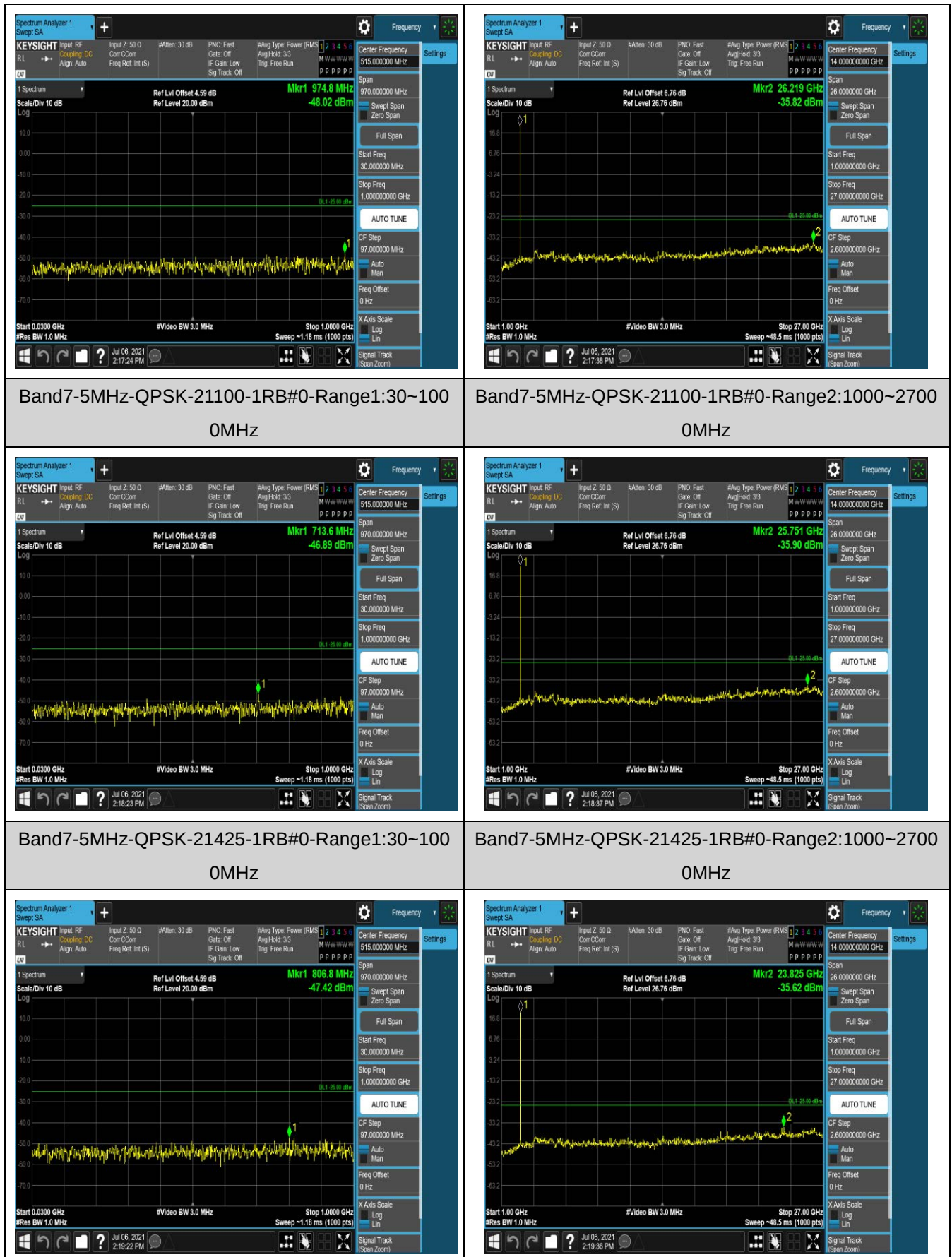
0MHz



Band7-5MHz-QPSK-20775-1RB#0-Range2:1000~2700

0MHz





Band7-5MHz-16QAM-20775-1RB#0-Range1:30~10

00MHz



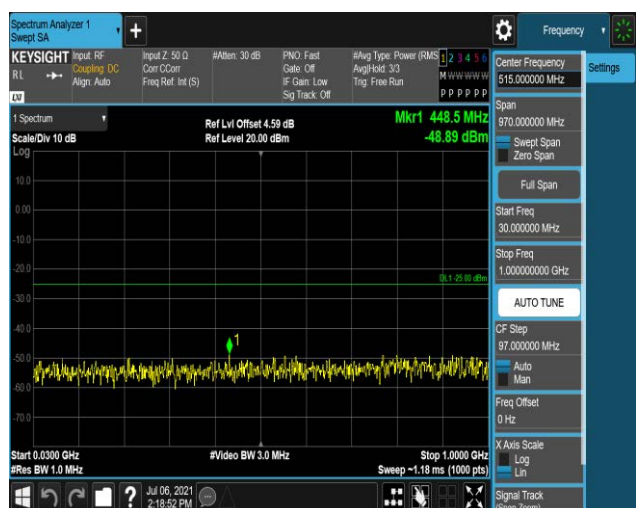
Band7-5MHz-16QAM-20775-1RB#0-Range2:1000~270

00MHz



Band7-5MHz-16QAM-21100-1RB#0-Range1:30~10

00MHz



Band7-5MHz-16QAM-21100-1RB#0-Range2:1000~270

00MHz



Band7-5MHz-16QAM-21425-1RB#0-Range1:30~10

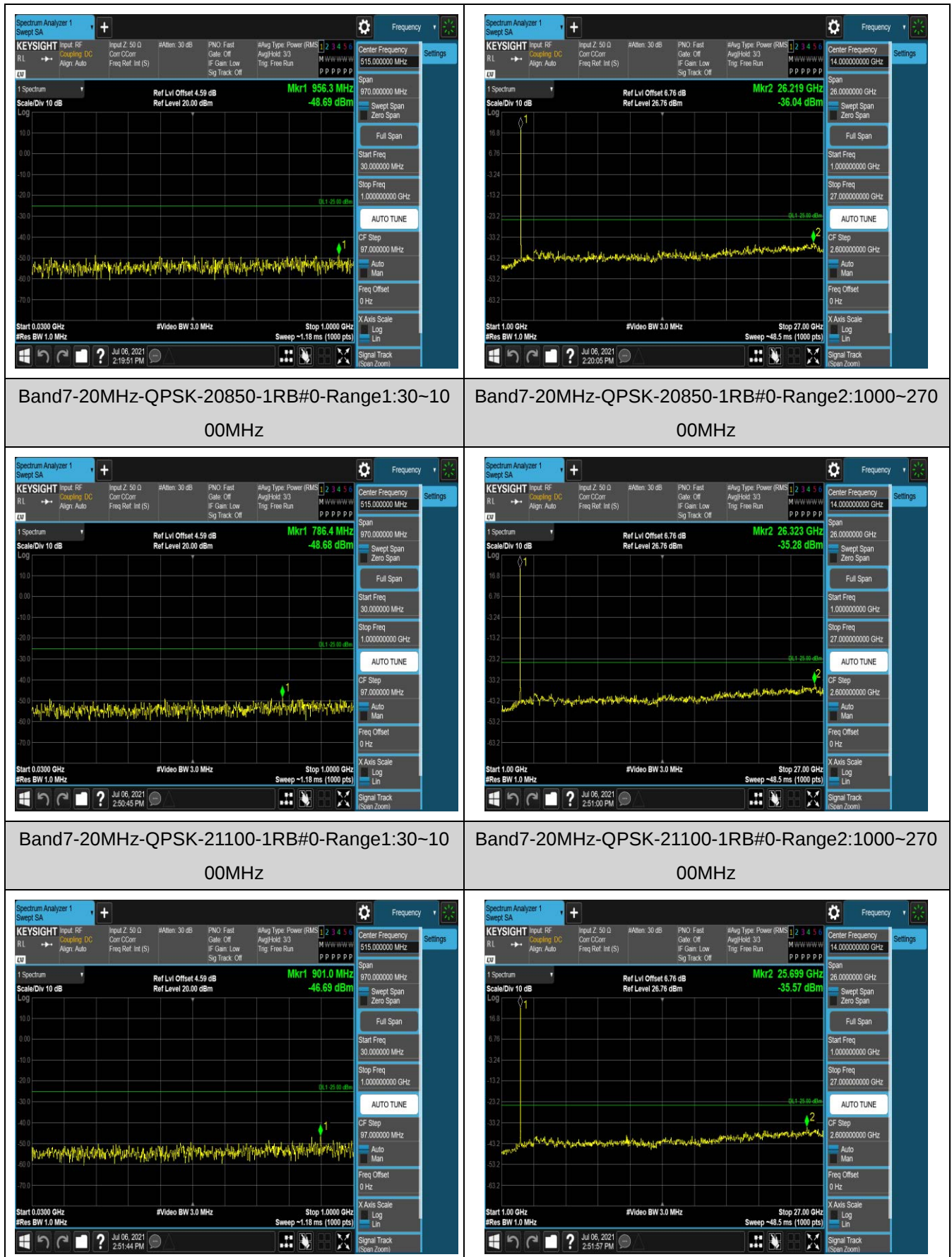
00MHz



Band7-5MHz-16QAM-21425-1RB#0-Range2:1000~270

00MHz





Band7-20MHz-QPSK-21350-1RB#0-Range1:30~10

00MHz



Band7-20MHz-QPSK-21350-1RB#0-Range2:1000~270

00MHz



Band7-20MHz-16QAM-20850-1RB#0-Range1:30~1

000MHz



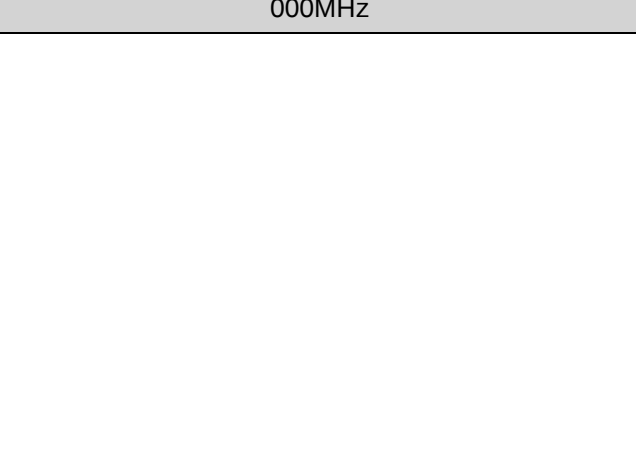
Band7-20MHz-16QAM-20850-1RB#0-Range2:1000~27

000MHz



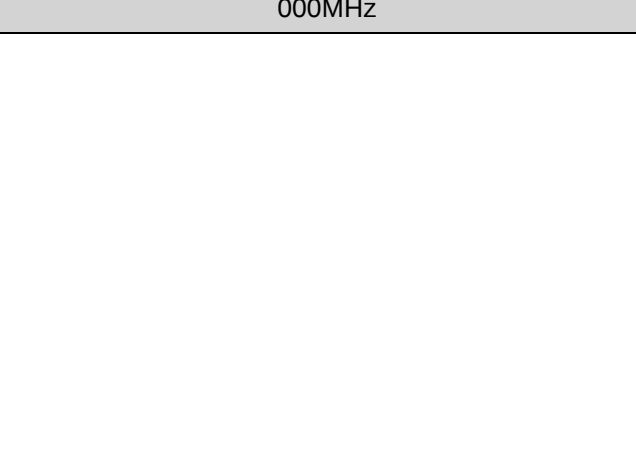
Band7-20MHz-16QAM-21100-1RB#0-Range1:30~1

000MHz



Band7-20MHz-16QAM-21100-1RB#0-Range2:1000~27

000MHz





Appendix F: Frequency Stability

Test Result (Worst case):

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					
3.80	-30	-46.95	-0.027100	Within authorized band for Band 4	Pass
	-20	-49.11	-0.028346		
	-10	-22.29	-0.012866		
	0	-30.46	-0.017582		
	10	-16.51	-0.009530		
	20	-26.06	-0.015042		
	30	-14.10	-0.008139		
	40	-21.16	-0.012214		
	50	-23.52	-0.013576		
16QAM					
3.80	-30	-15.56	-0.008981	Within authorized band for Band 4	Pass
	-20	-10.57	-0.006101		
	-10	-21.19	-0.012231		
	0	-21.04	-0.012144		
	10	-35.42	-0.020444		
	20	-34.02	-0.019636		
	30	14.36	0.008289		
	40	-30.07	-0.017356		
	50	-39.20	-0.022626		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-48.07	-0.027746	Within authorized band for Band 4	Pass
	3.80	-41.06	-0.023700		
	4.25	-45.23	-0.026107		
16QAM					
25	3.50	-34.03	-0.019642	Within authorized band for Band 4	Pass
	3.80	-5.66	-0.003267		
	4.25	-10.67	-0.006159		
Note: Only the worst case shown in the 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					
3.80	-30	-18.05	-0.007120	Within authorized band for Band 7	Pass
	-20	-19.83	-0.007822		
	-10	-14.96	-0.005901		
	0	-22.09	-0.008714		
	10	12.29	0.004848		
	20	-15.66	-0.006178		
	30	-26.61	-0.010497		
	40	-7.97	-0.003144		
	50	13.30	0.005247		
16QAM					
3.80	-30	-16.39	-0.006465	Within authorized band for Band 7	Pass
	-20	-44.17	-0.017424		
	-10	-6.64	-0.002619		
	0	17.38	0.006856		
	10	-26.29	-0.010371		
	20	-24.19	-0.009542		
	30	-3.89	-0.001535		
	40	6.77	0.002671		
	50	-36.86	-0.014540		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-45.78	-0.018059	Within authorized band for Band 7	Pass
	3.80	-51.44	-0.020292		
	4.25	-44.92	-0.017720		
16QAM					
25	3.50	-57.05	-0.022505	Within authorized band for Band 7	Pass
	3.80	27.19	0.010726		
	4.25	-55.68	-0.021964		
Note: Only the worst case shown in the report.					

Appendix G: Modulation Characteristics

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band4	20MHz	QPSK	20175	100RB#0	PASS	PASS
Band4	20MHz	16QAM	20175	100RB#0	PASS	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS	PASS

Test Graphs

