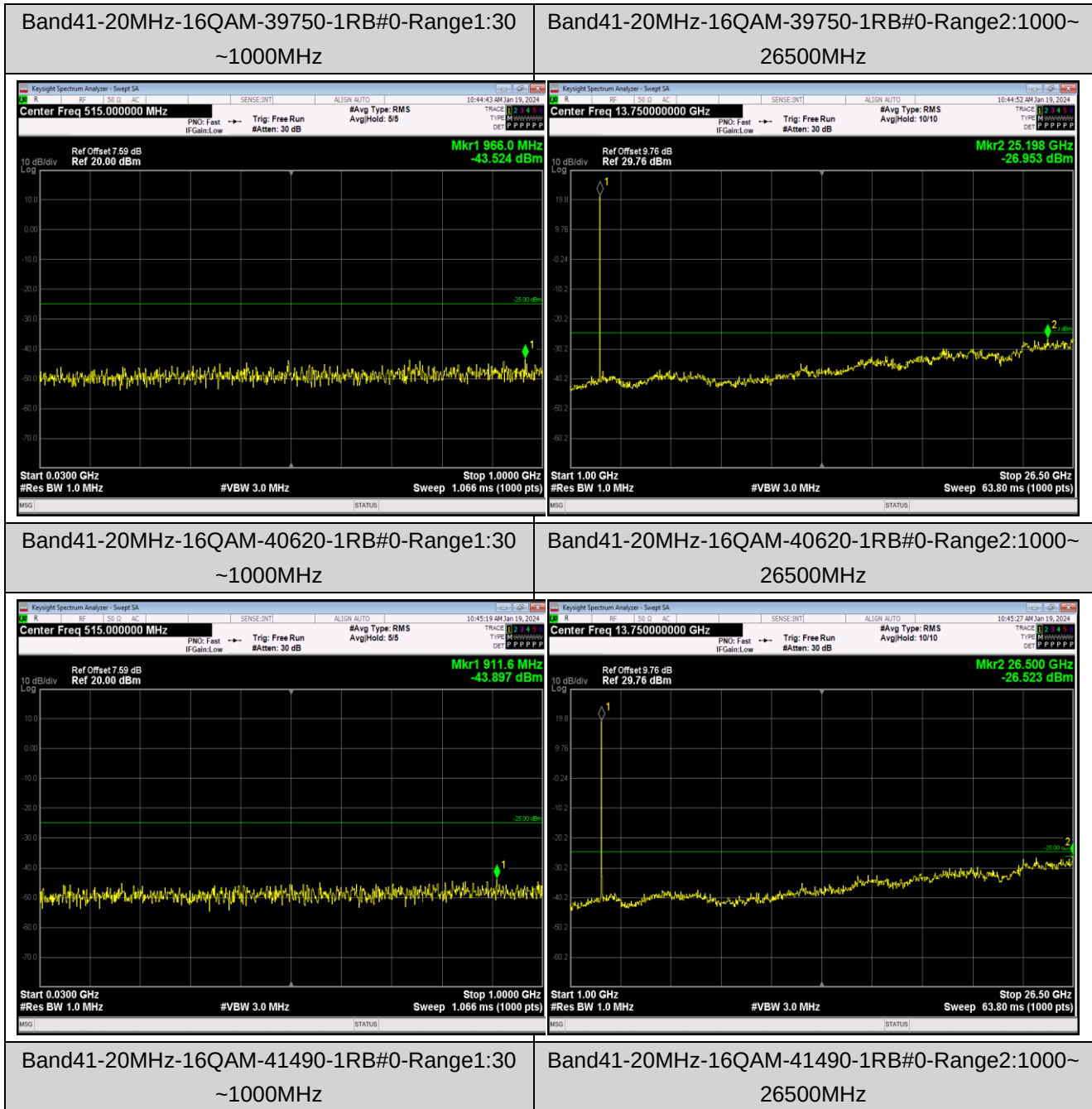
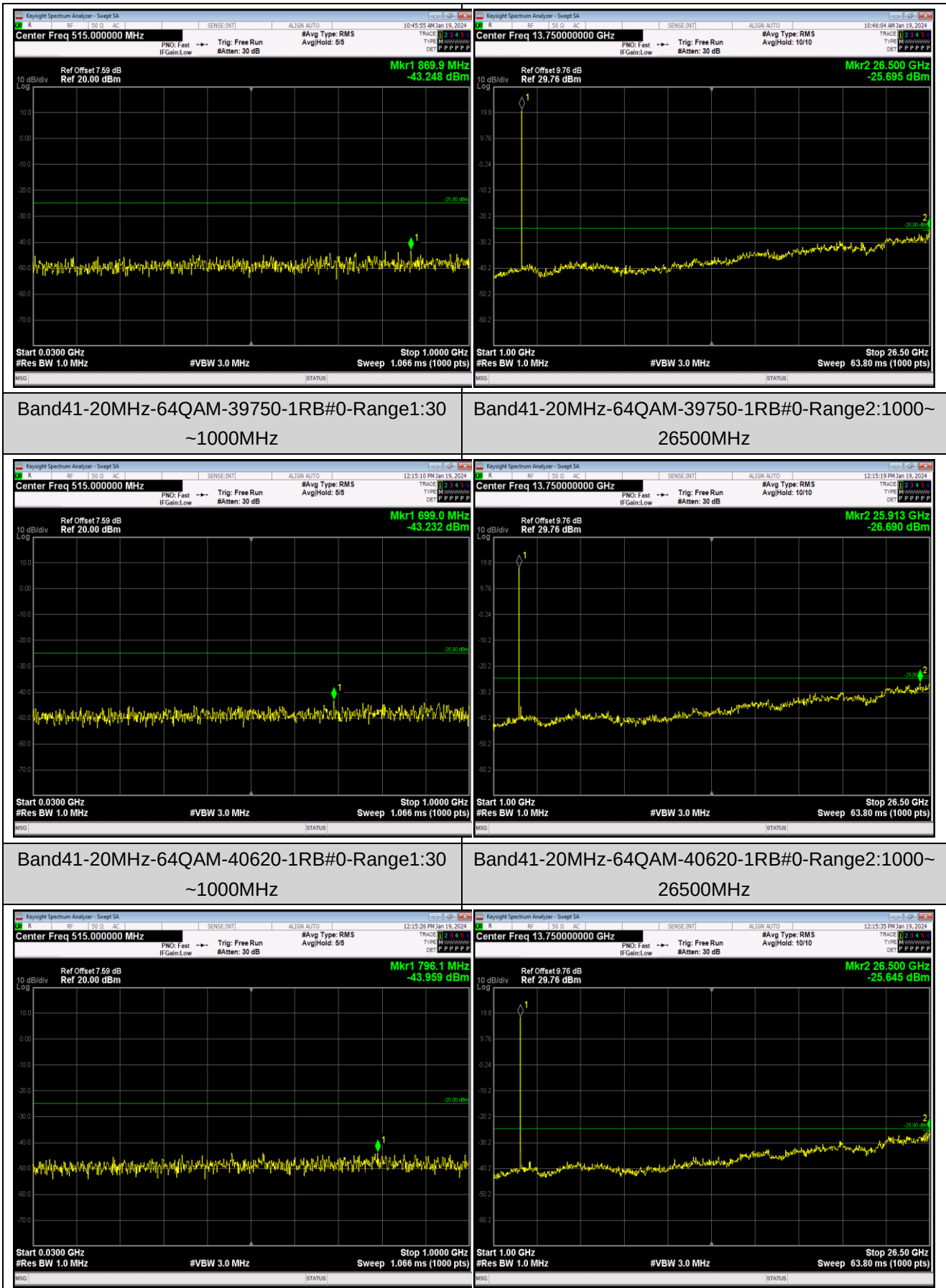
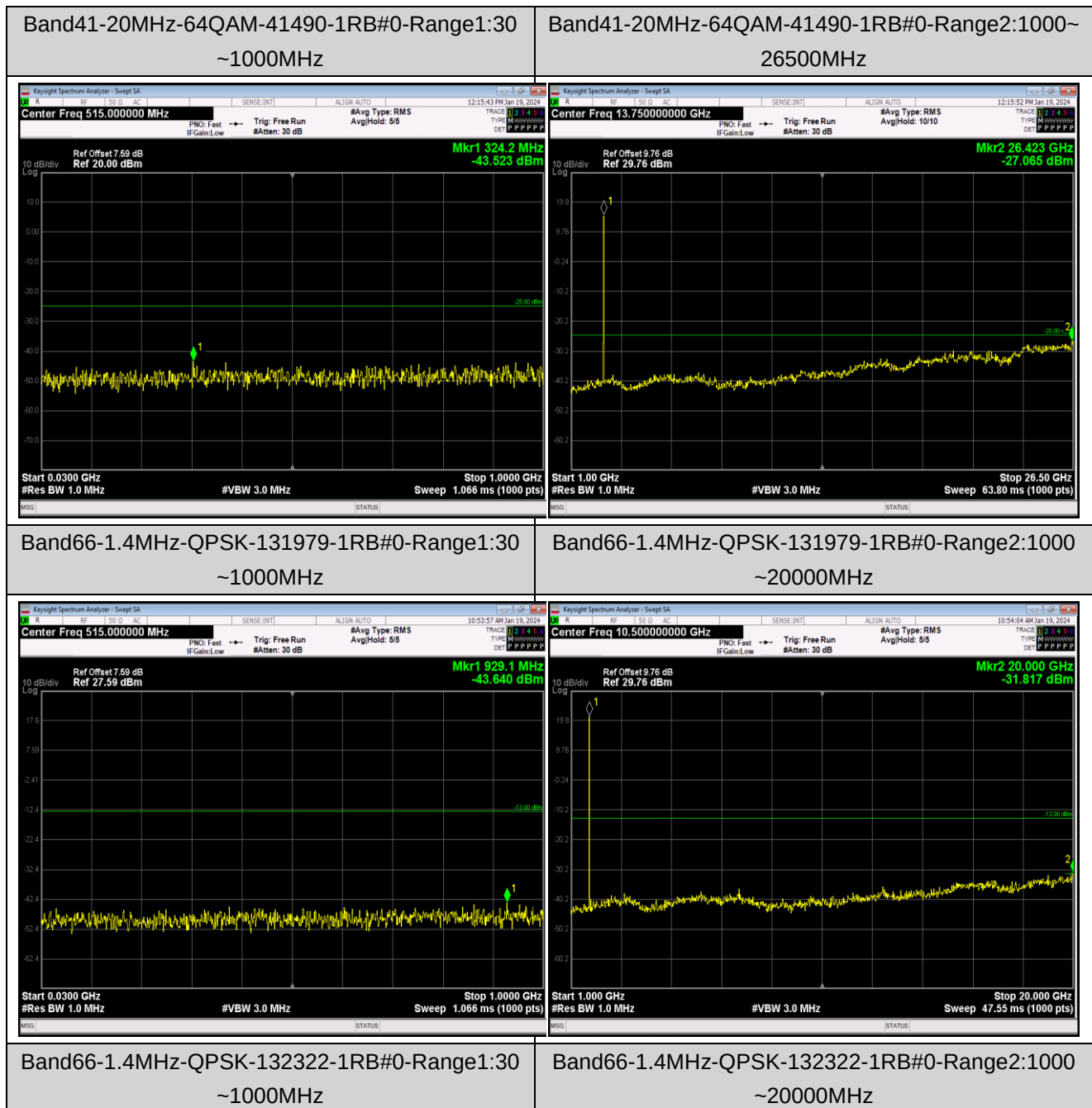
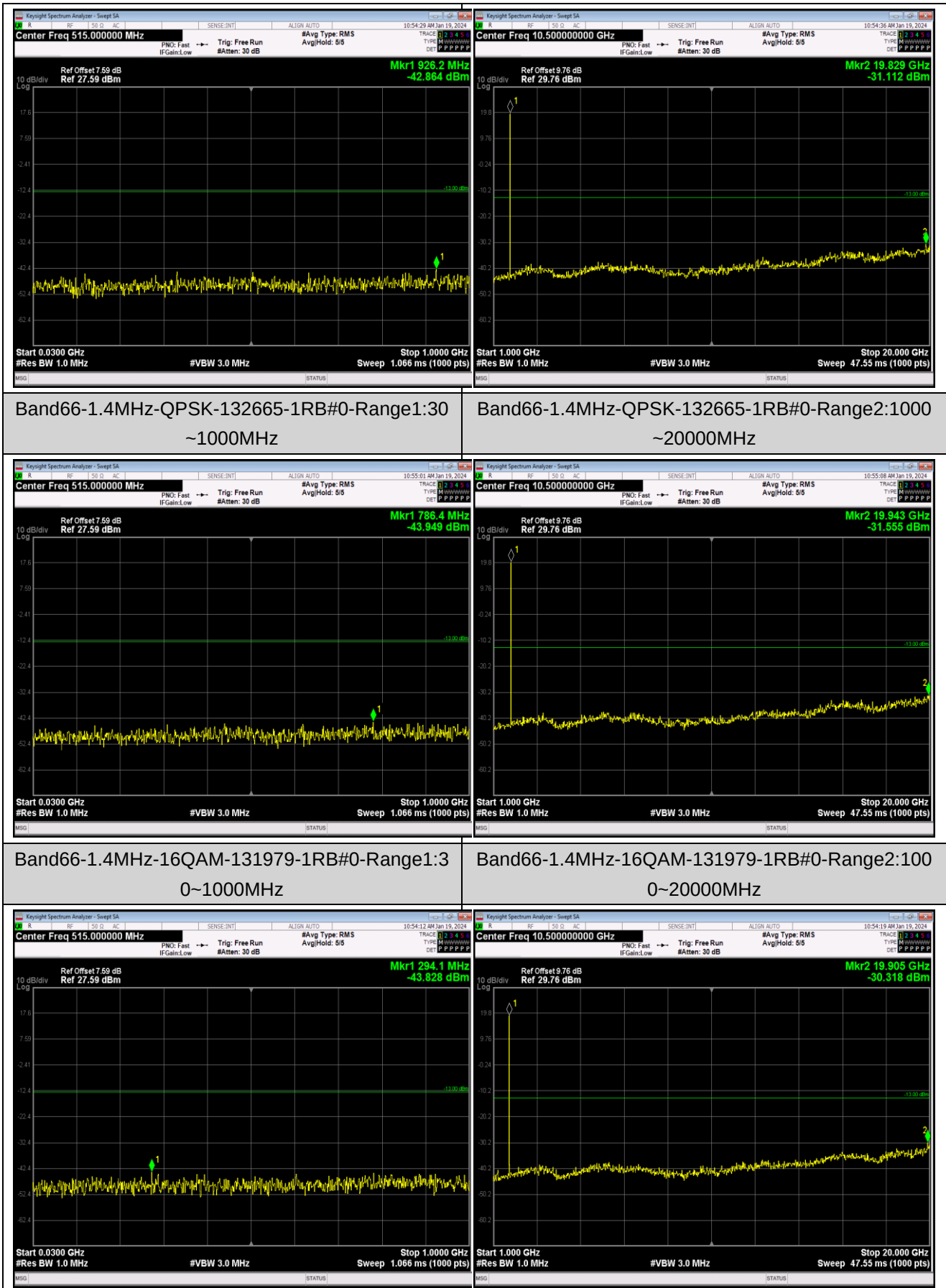
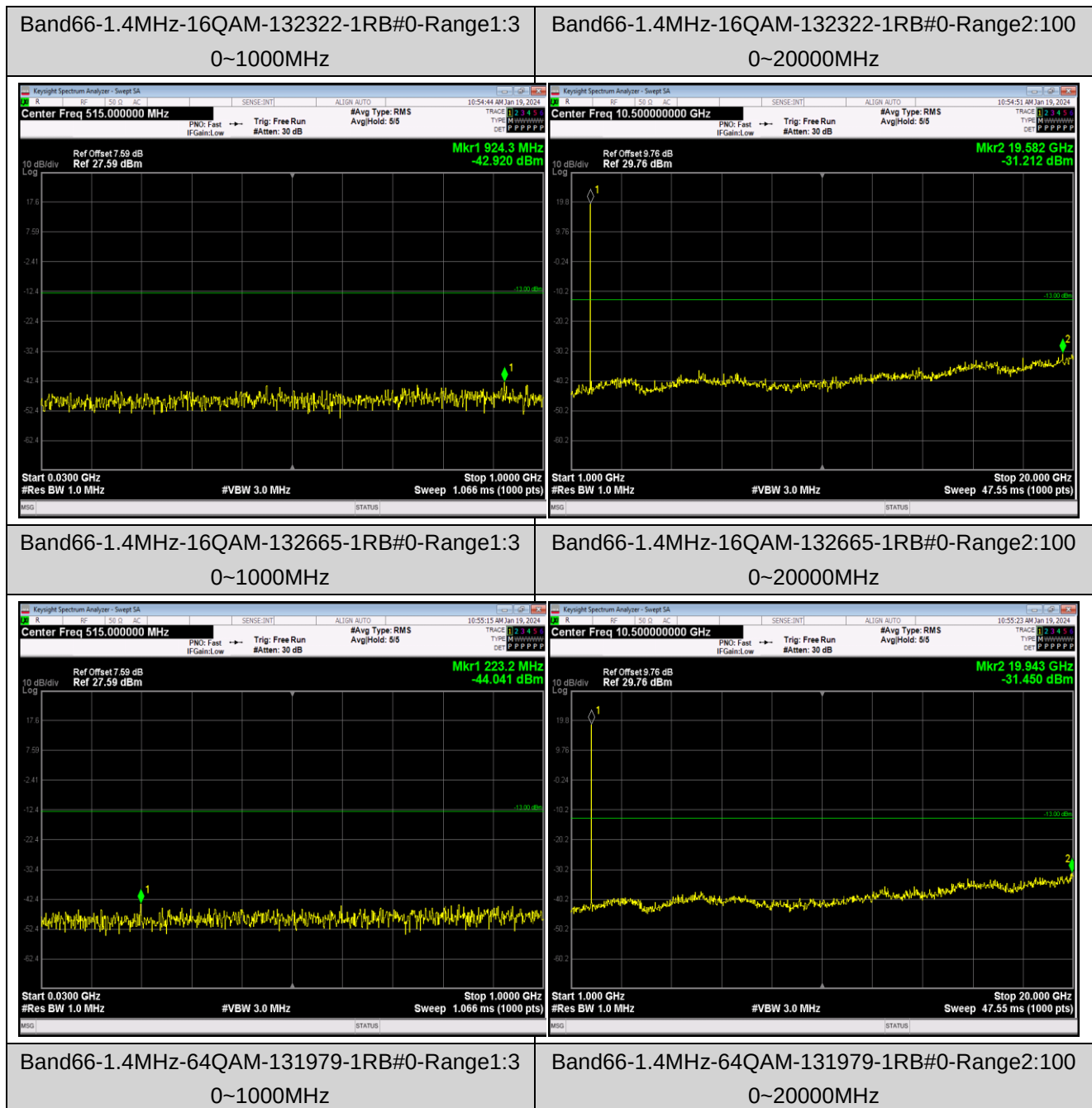


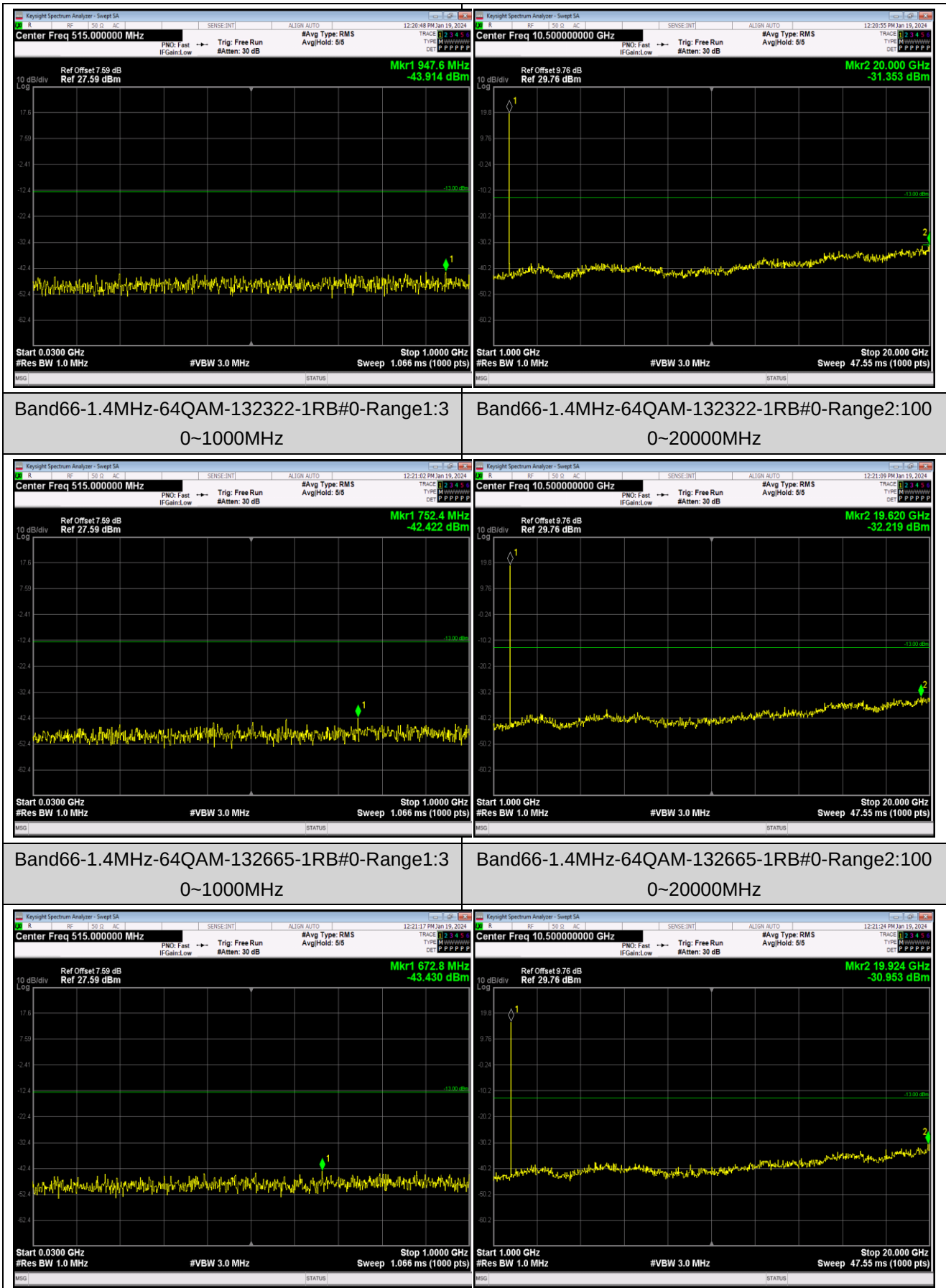


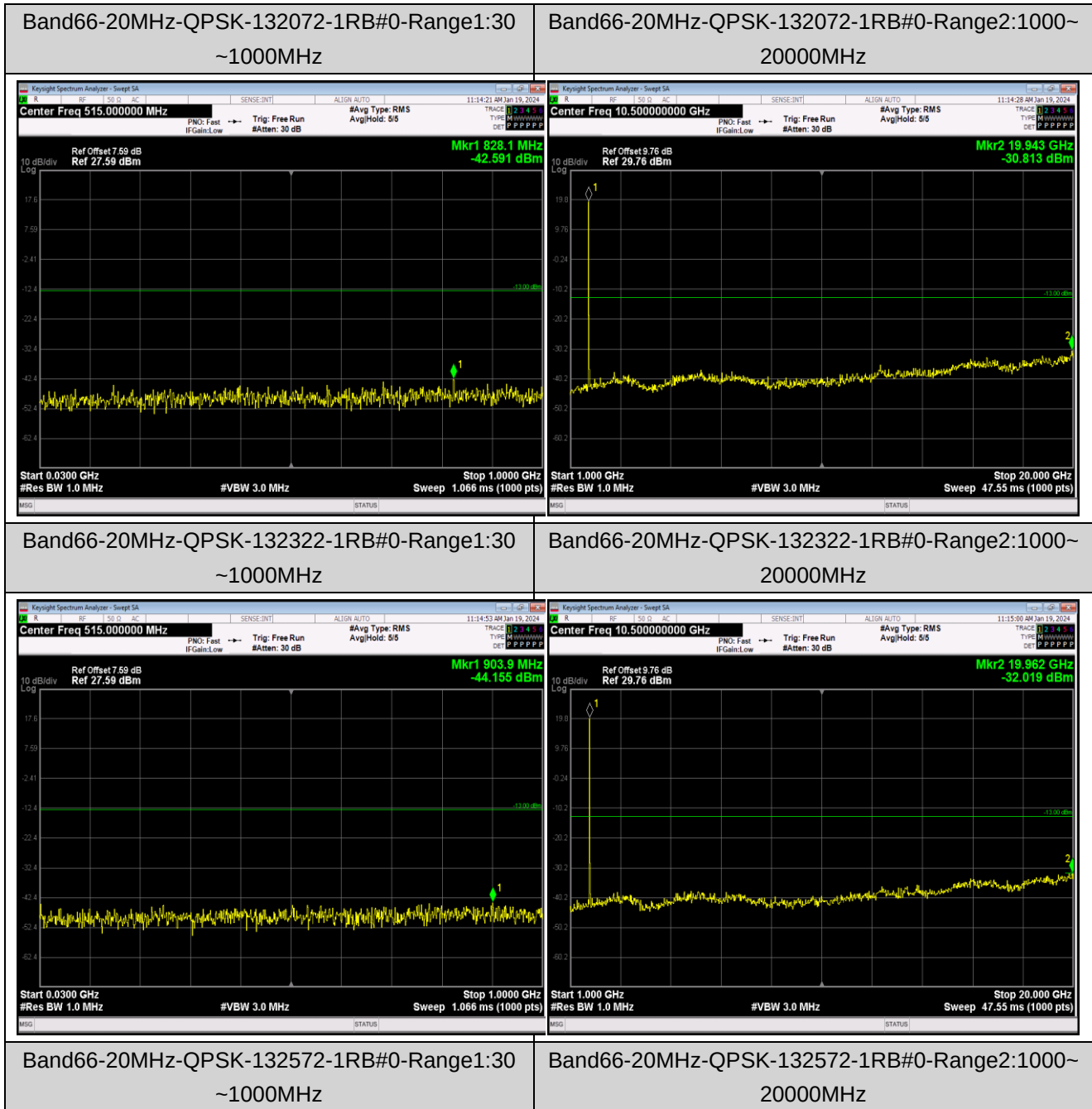


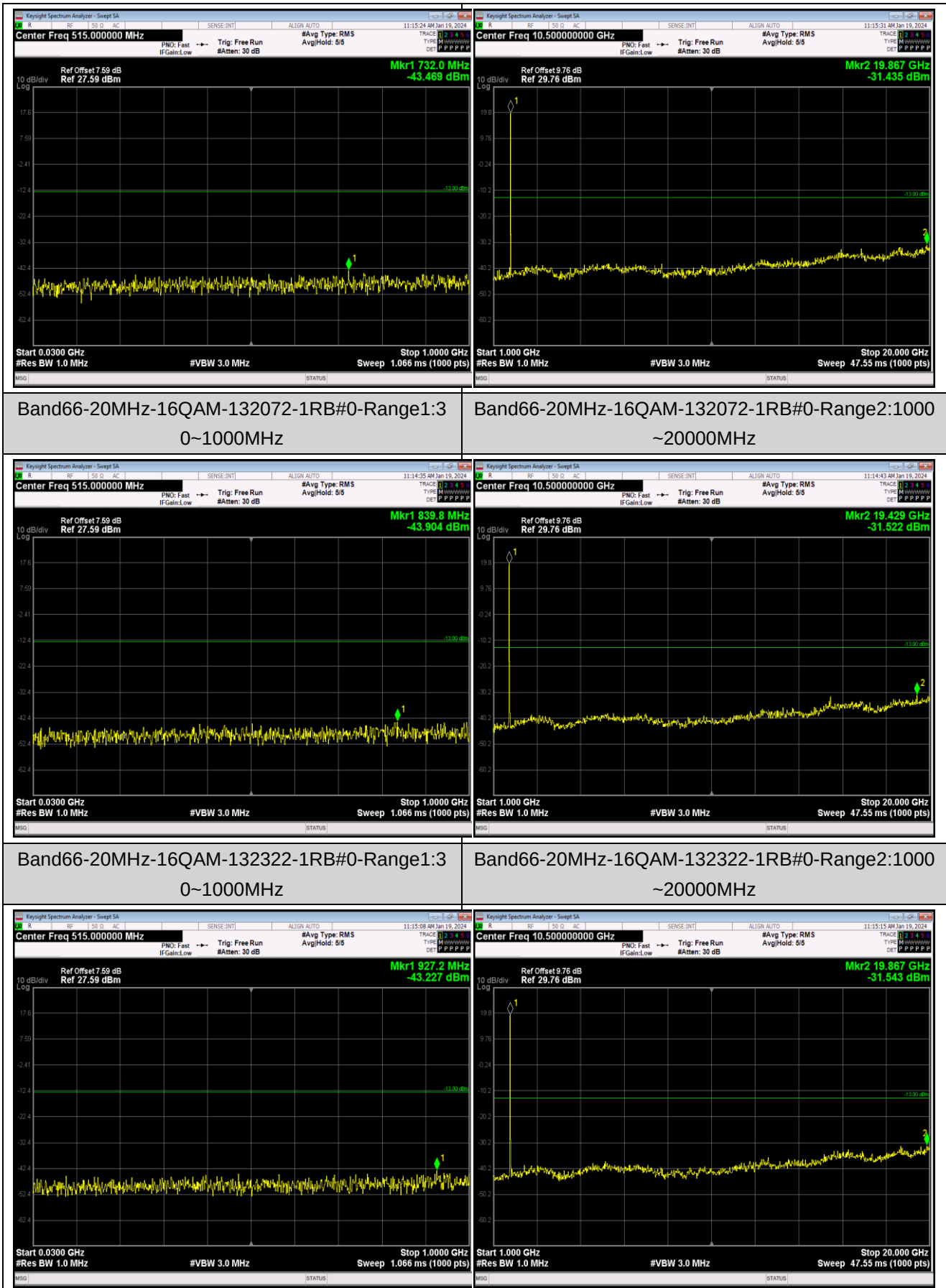


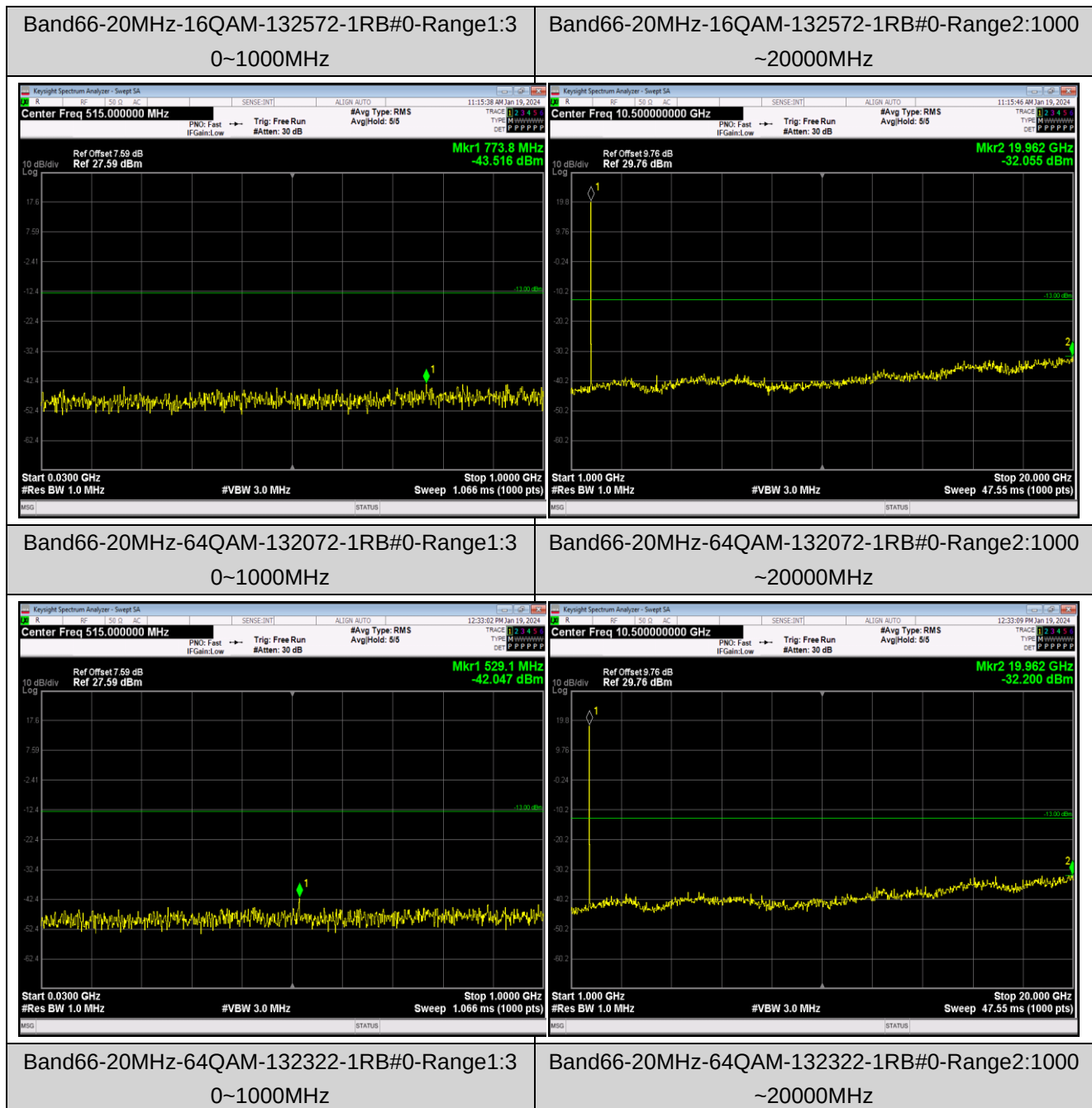


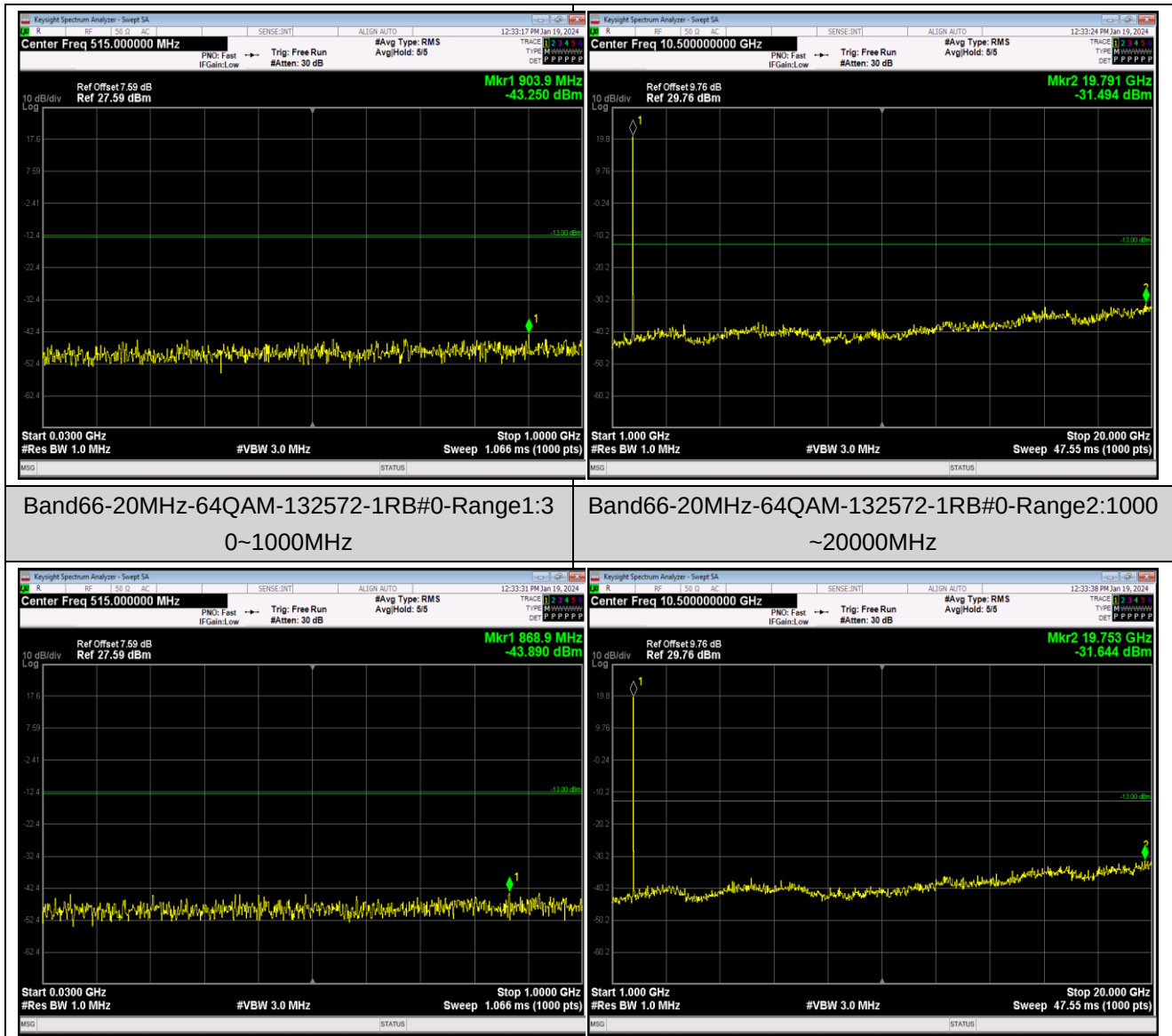












Appendix F: Frequency Stability

Test Result

LTE Band 7 part:

Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.91	-30	-15.59	-0.006150	Within authorized band for Band 7	Pass
	-20	-21.59	-0.008517		
	-10	-18.44	-0.007274		
	0	-18.93	-0.007467		
	10	-15.96	-0.006296		
	20	-16.48	-0.006501		
	30	-19.96	-0.007874		
	40	-19.74	-0.007787		
	50	-15.38	-0.006067		
16QAM					
3.91	-30	-21.34	-0.008418	Within authorized band for Band 7	Pass
	-20	-18.93	-0.007467		
	-10	3.35	0.001321		
	0	-25.28	-0.009972		
	10	-15.51	-0.006118		
	20	-16.32	-0.006438		
	30	-17.14	-0.006761		
	40	-13.82	-0.005452		
	50	-14.20	-0.005602		
64QAM					
3.91	-30	-9.58	-0.003779	Within authorized band for Band 7	Pass
	-20	-11.00	-0.004339		
	-10	-16.91	-0.006671		
	0	-14.75	-0.005819		
	10	-9.78	-0.003858		
	20	-12.70	-0.005010		
	30	-11.07	-0.004367		
	40	11.90	0.004694		
	50	-13.86	-0.005467		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-18.21	-0.007183	Within authorized band for Band 7	Pass
	3.91	5.06	0.001996		
	4.50	-21.24	-0.008379		
16QAM					
25	3.45	-17.14	-0.006761	Within authorized band for Band 7	Pass
	3.91	-21.46	-0.008465		
	4.50	-16.18	-0.006383		
64QAM					
25	3.45	-10.87	-0.004288	Within authorized band for Band 7	Pass
	3.91	-14.62	-0.005767		
	4.50	-12.29	-0.004848		
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					
3.91	-30	-14.99	-0.005781	Within authorized band for Band 41	Pass
	-20	-14.72	-0.005677		
	-10	-11.62	-0.004481		
	0	-14.92	-0.005754		
	10	-14.59	-0.005627		
	20	-15.61	-0.006020		
	30	-11.30	-0.004358		
	40	-9.40	-0.003625		
	50	-14.78	-0.005700		
16QAM					
3.91	-30	-15.02	-0.005793	Within authorized band for Band 41	Pass
	-20	-11.83	-0.004562		
	-10	13.12	0.005060		
	0	-10.76	-0.004150		
	10	-10.74	-0.004142		
	20	-11.52	-0.004443		
	30	-11.64	-0.004489		
	40	-12.67	-0.004886		
	50	-13.43	-0.005179		
64QAM					
3.91	-30	-13.15	-0.005071	Within authorized band for Band 41	Pass
	-20	-11.92	-0.004597		
	-10	-8.98	-0.003463		
	0	-10.33	-0.003984		
	10	-14.65	-0.005650		
	20	-10.09	-0.003891		
	30	-7.68	-0.002962		
	40	-8.97	-0.003459		
	50	-11.94	-0.004605		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-13.25	-0.005110	Within authorized band for Band 41	Pass
	3.91	21.51	0.008295		
	4.50	9.21	0.003552		
16QAM					
25	3.45	-10.59	-0.004084	Within authorized band for Band41	Pass
	3.91	8.43	0.003251		
	4.50	-12.23	-0.004717		
64QAM					
25	3.45	-11.89	-0.004585	Within authorized band for Band41	Pass
	3.91	-9.21	-0.003552		
	4.50	-9.67	-0.003729		
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					
3.91	-30	7.04	0.004034	Within authorized band for Band 66	Pass
	-20	11.27	0.006458		
	-10	-6.67	-0.003822		
	0	7.61	0.004361		
	10	11.93	0.006837		
	20	-7.82	-0.004481		
	30	7.67	0.004395		
	40	-9.64	-0.005524		
	50	11.69	0.006699		
16QAM					
3.91	-30	10.19	0.005840	Within authorized band for Band 66	Pass
	-20	9.17	0.005255		
	-10	9.20	0.005272		
	0	9.71	0.005564		
	10	9.18	0.005261		
	20	-8.20	-0.004699		
	30	-8.35	-0.004785		
	40	-4.72	-0.002705		
	50	-8.57	-0.004911		
64QAM					
3.91	-30	8.33	0.004774	Within authorized band for Band 66	Pass
	-20	-5.84	-0.003347		
	-10	6.47	0.003708		
	0	5.91	0.003387		
	10	-6.71	-0.003845		
	20	7.25	0.004155		
	30	-6.38	-0.003656		
	40	-7.44	-0.004264		
	50	6.58	0.003771		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	8.43	0.004831	Within authorized band for Band 66	Pass
	3.91	7.34	0.004206		
	4.45	11.77	0.006745		
16QAM					
25	3.45	8.37	0.004797	Within authorized band for Band 66	Pass
	3.91	7.90	0.004527		
	4.45	12.26	0.007026		
64QAM					
25	3.45	-9.43	-0.005404	Within authorized band for Band 66	Pass
	3.91	-7.44	-0.004264		
	4.45	-8.67	-0.004968		
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
Band66	20MHz	QPSK	132322	100RB#0	PASS	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS	PASS
Band66	20MHz	64QAM	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

