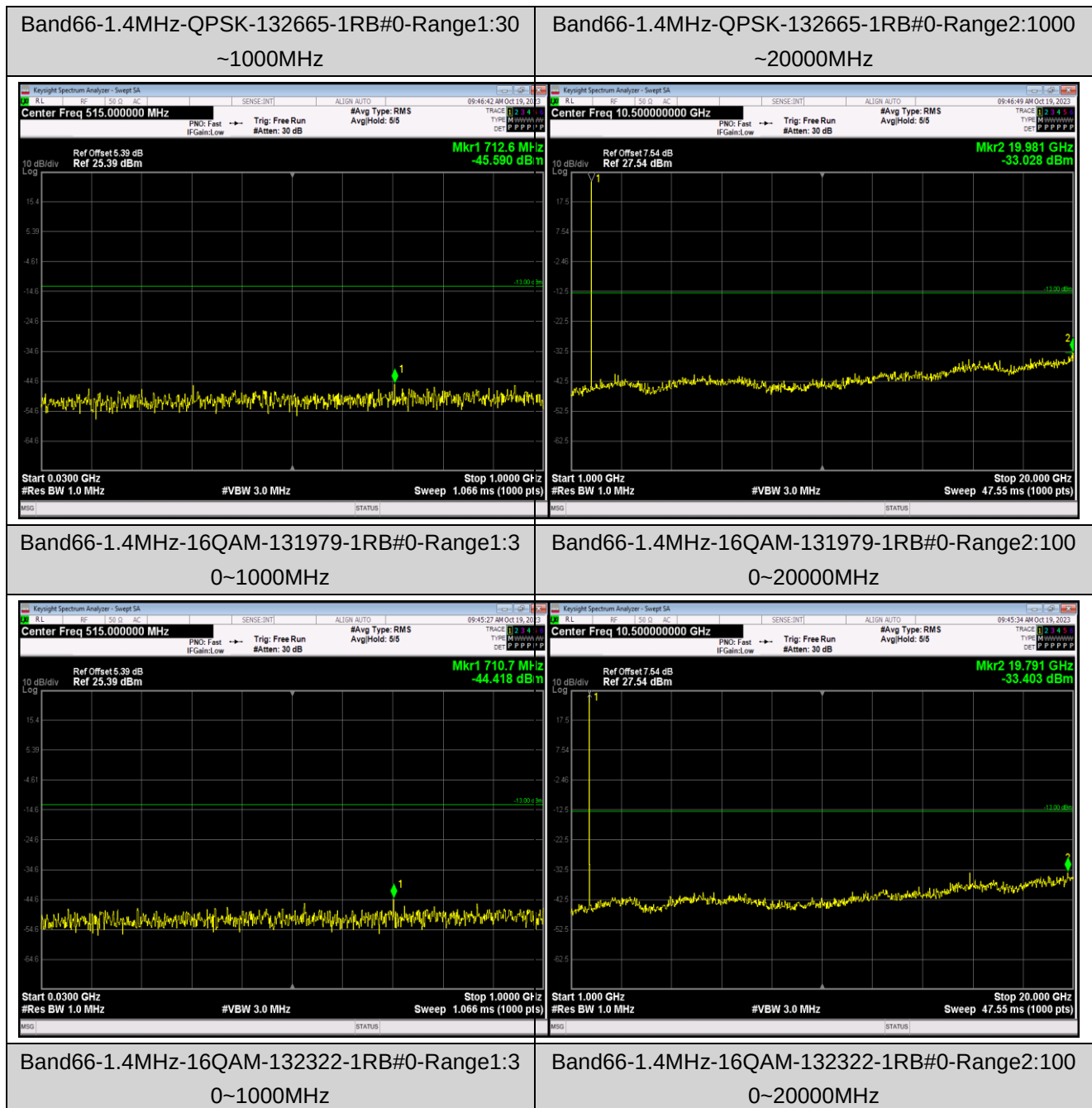
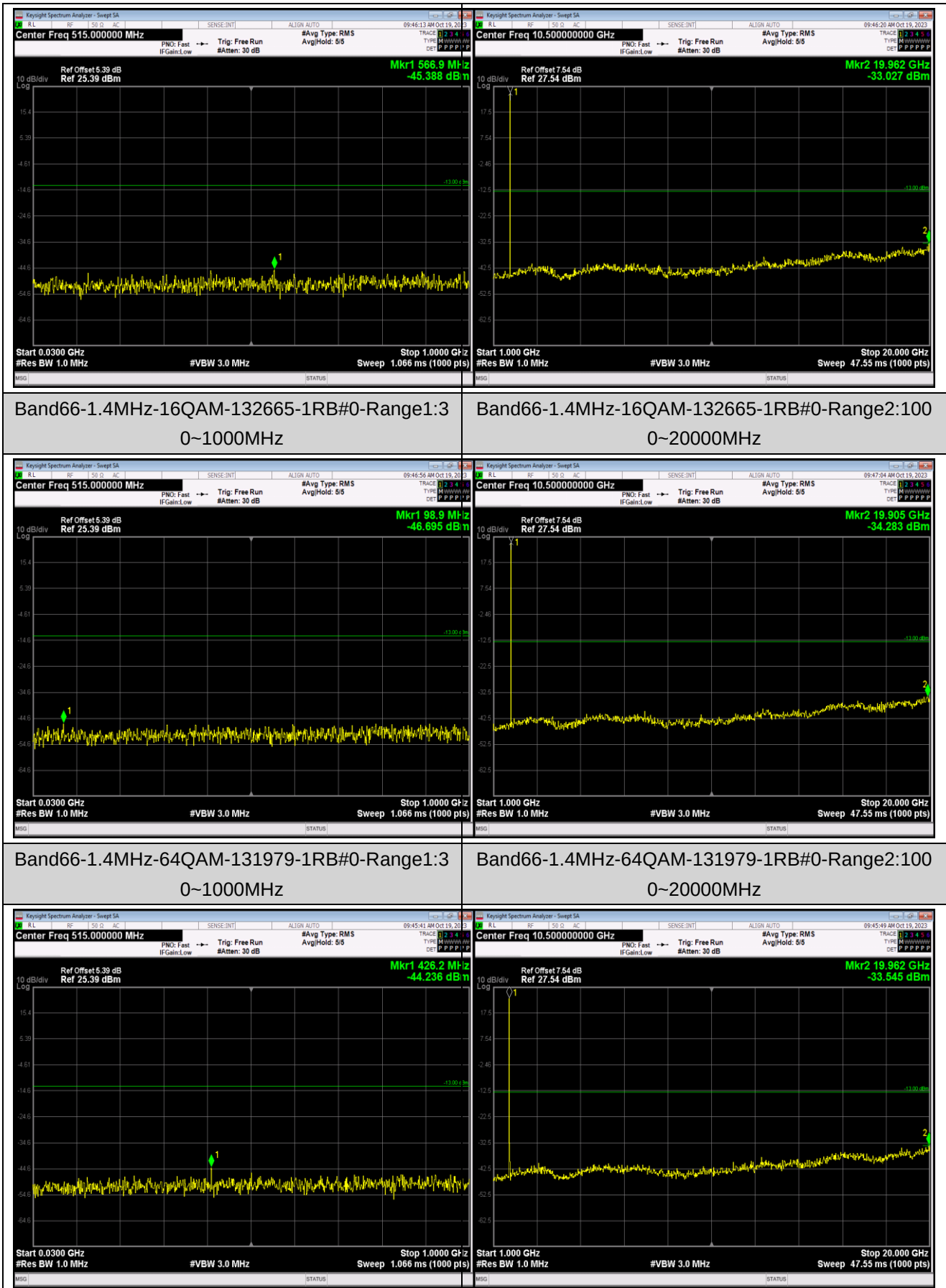
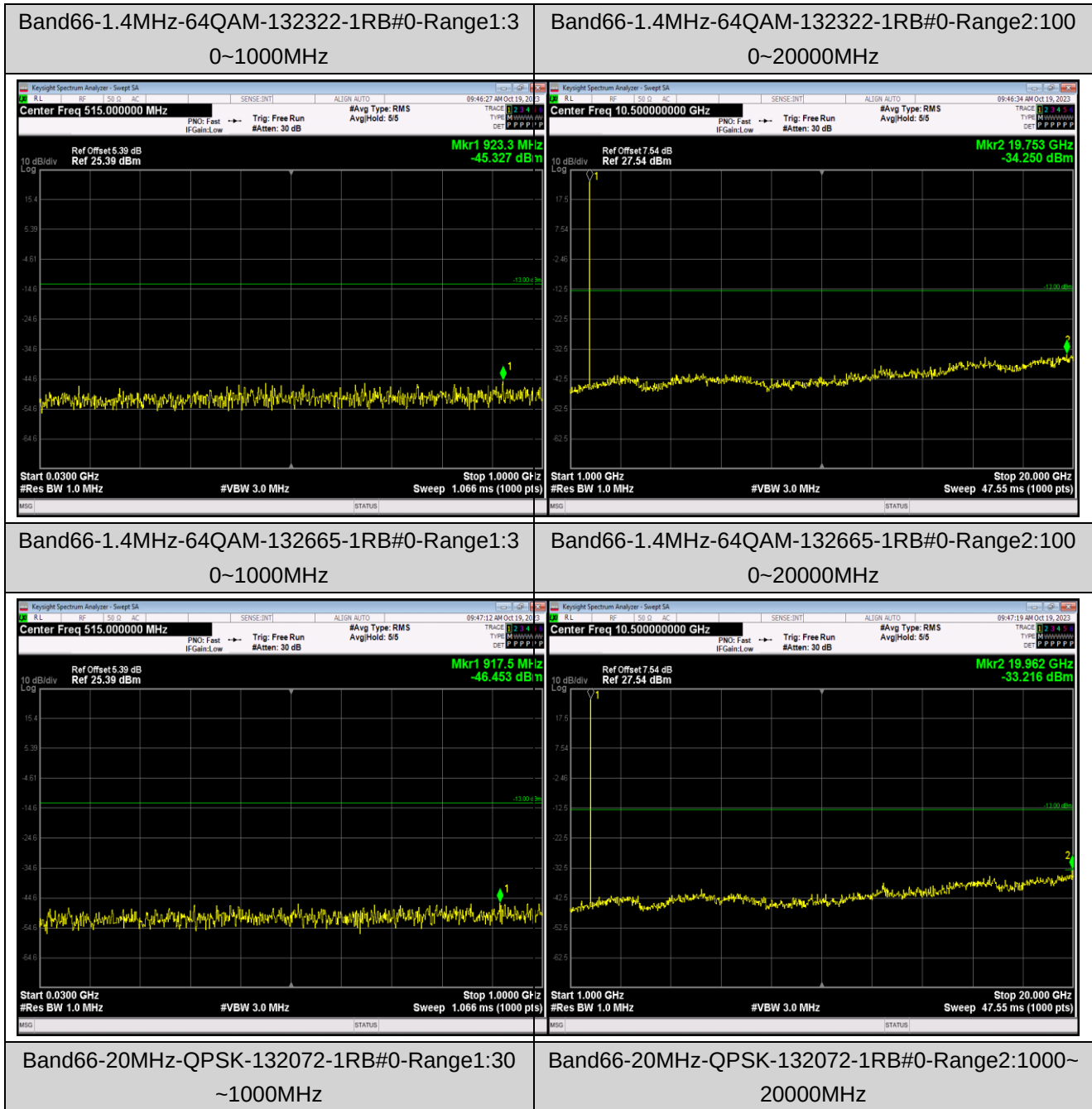
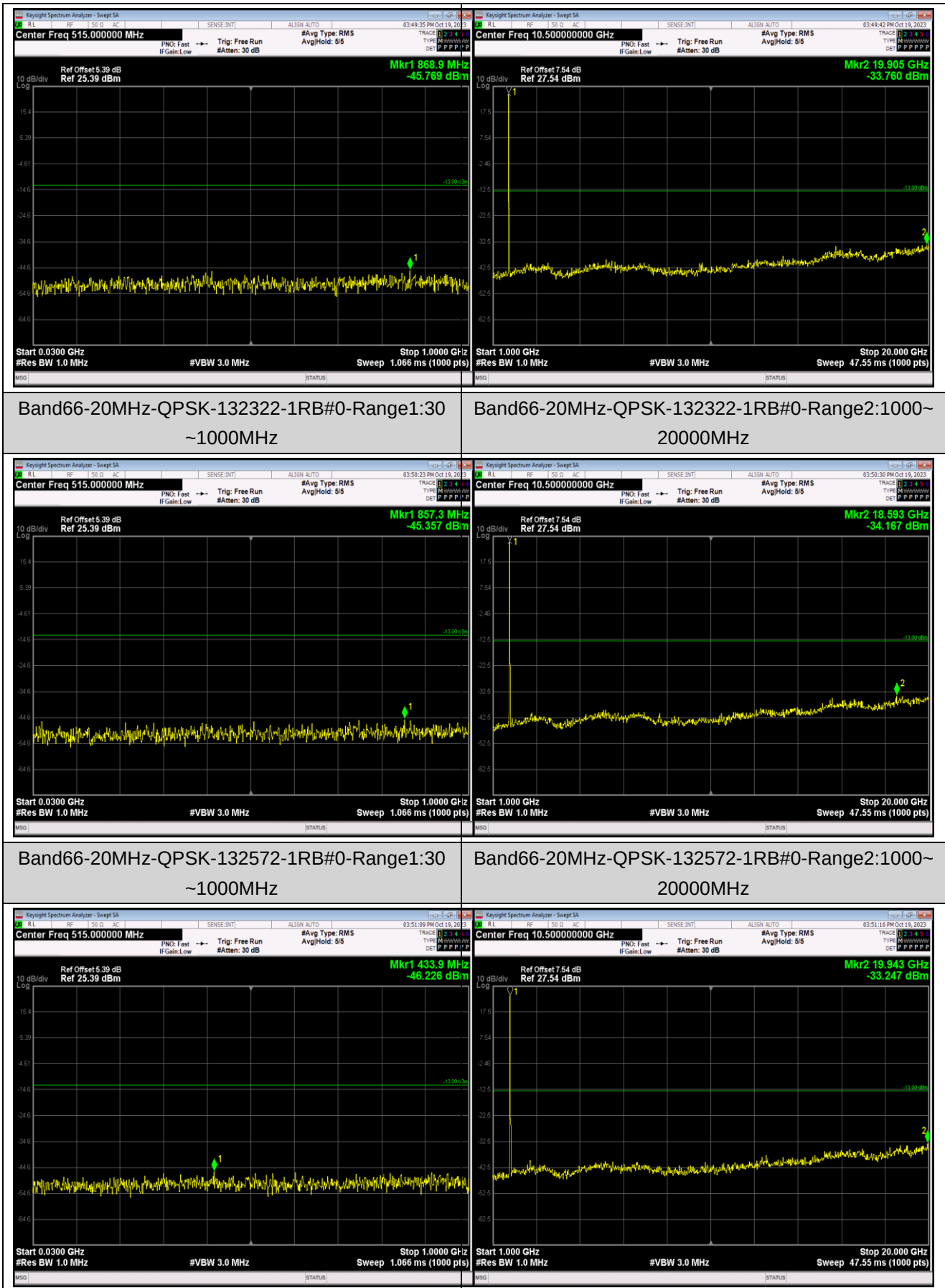
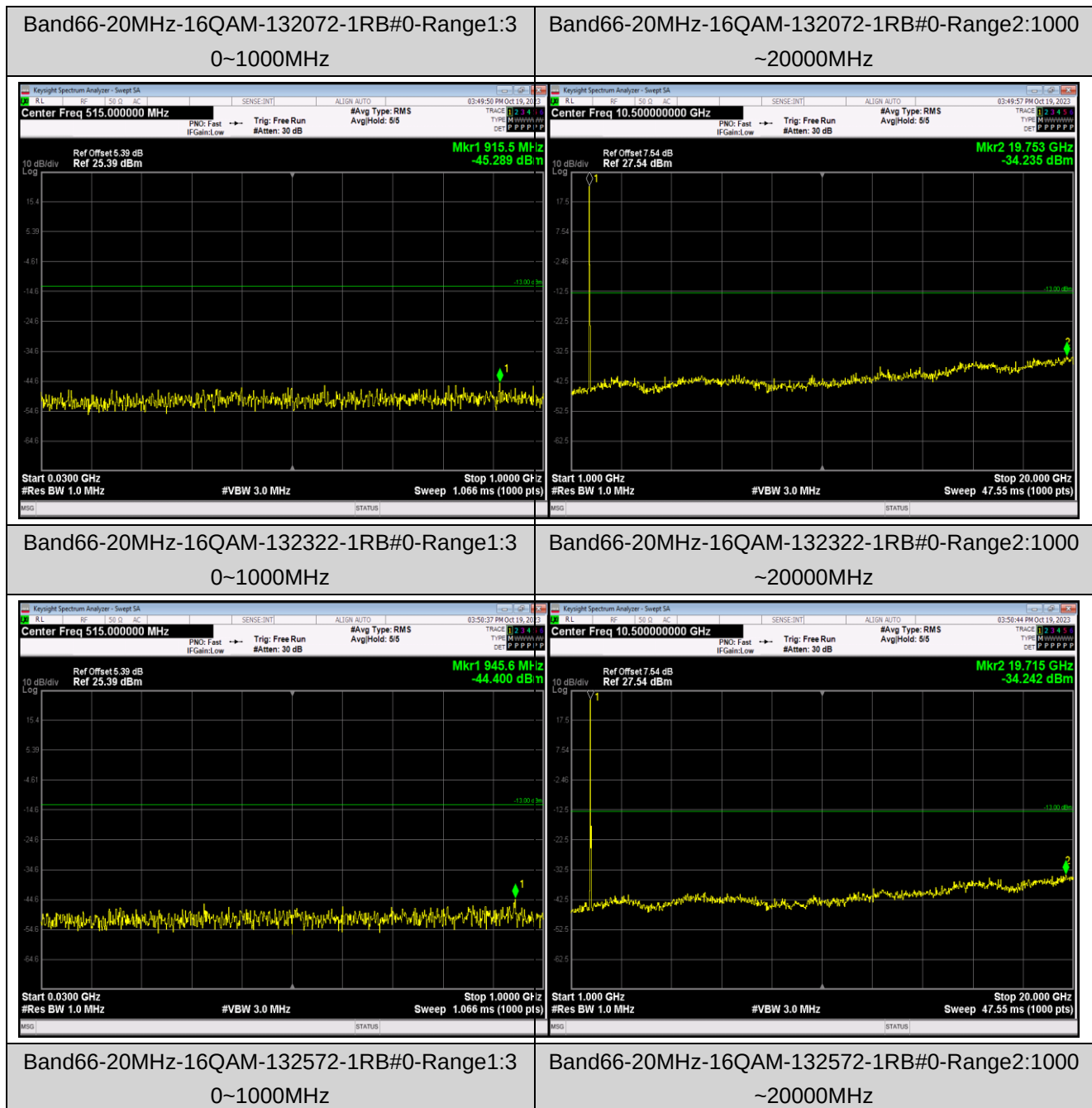


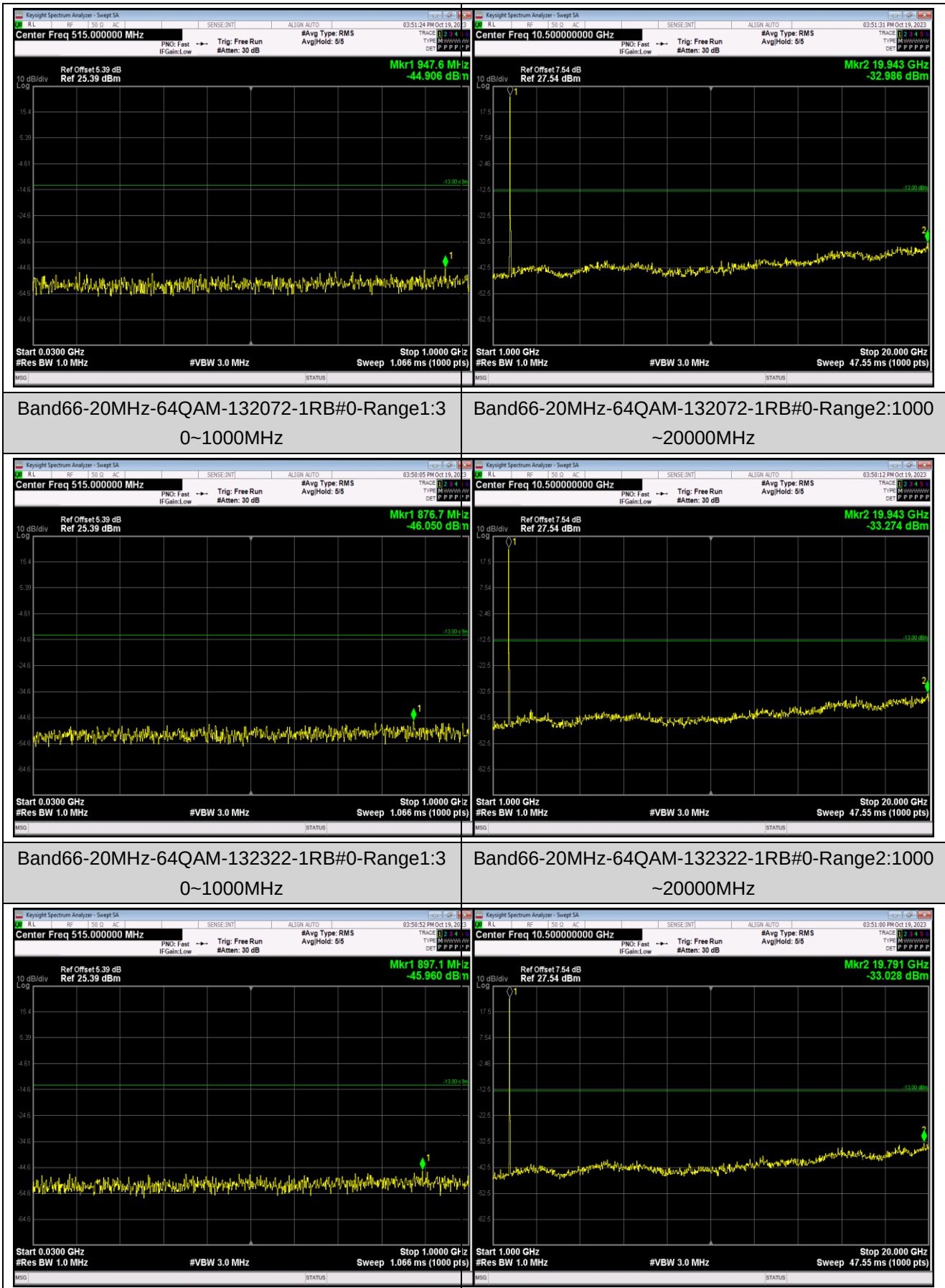


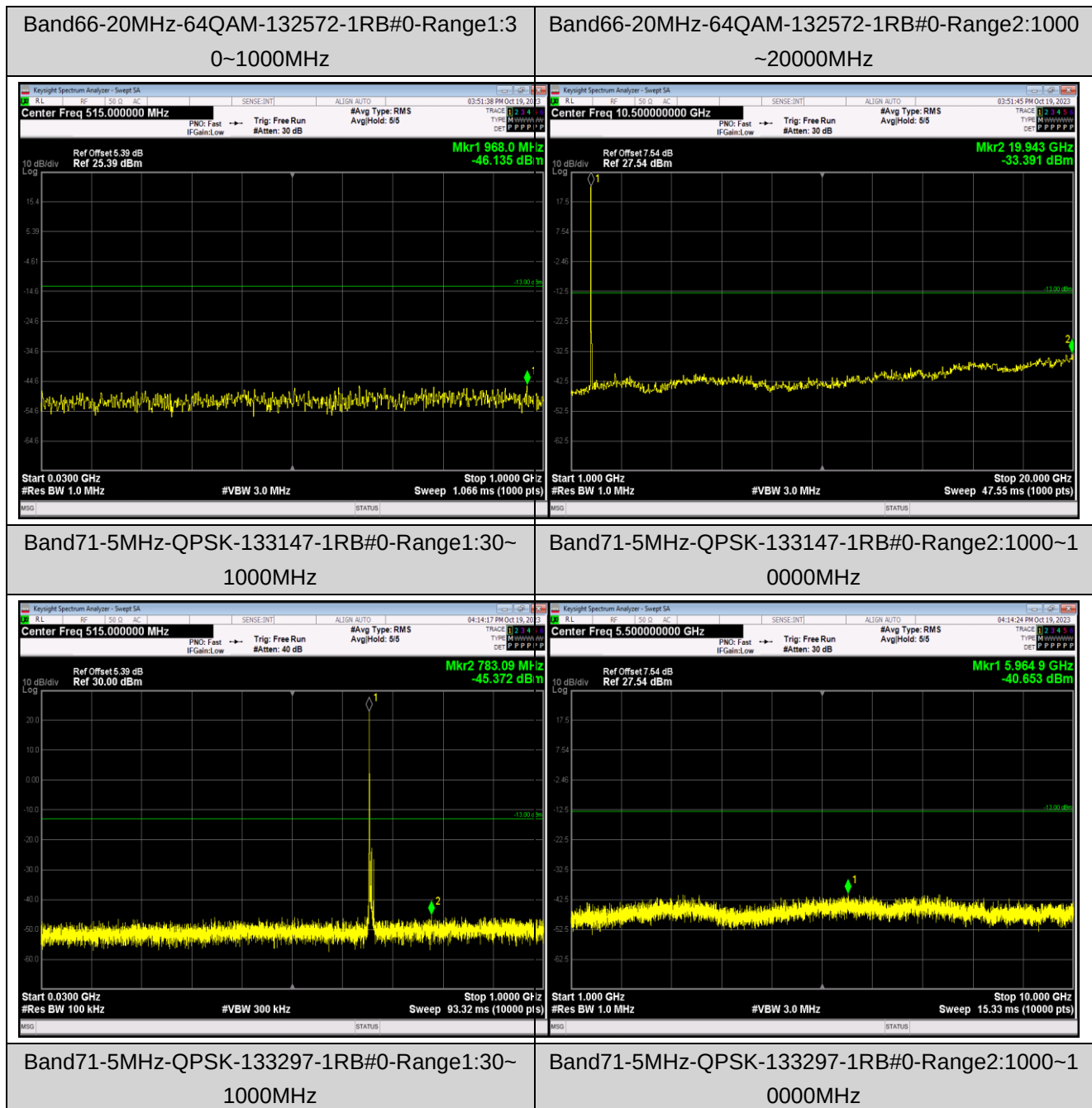


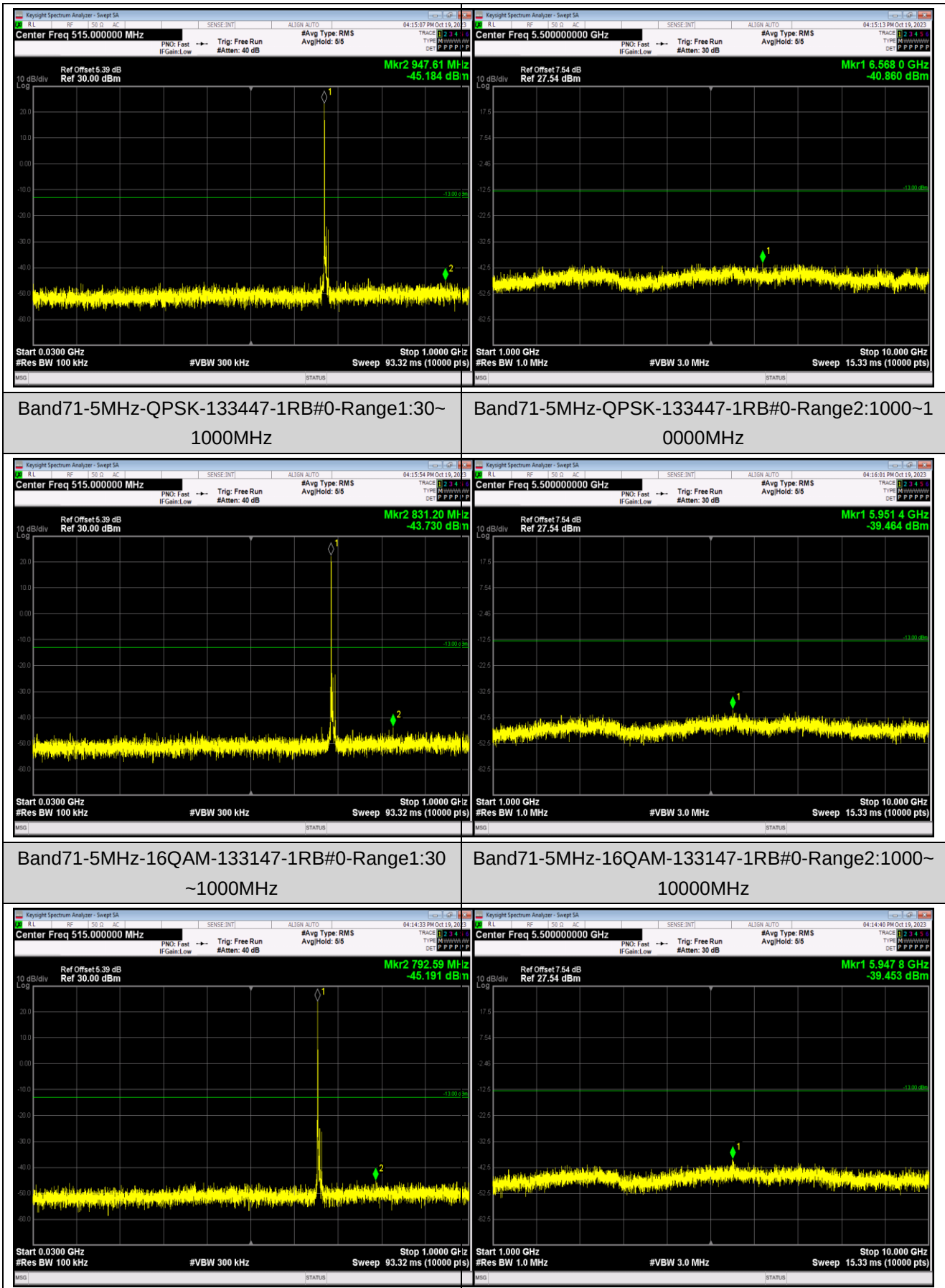


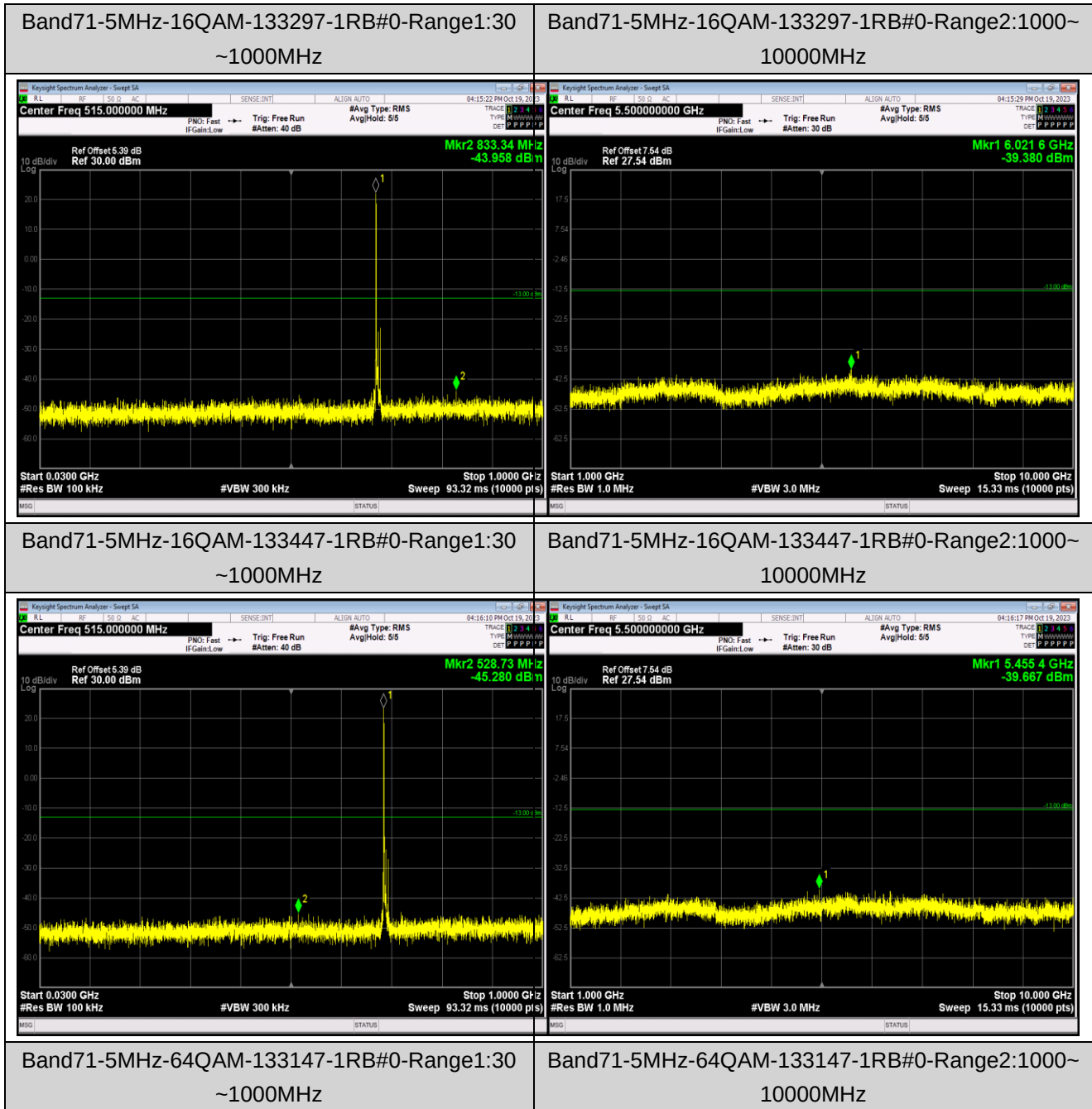


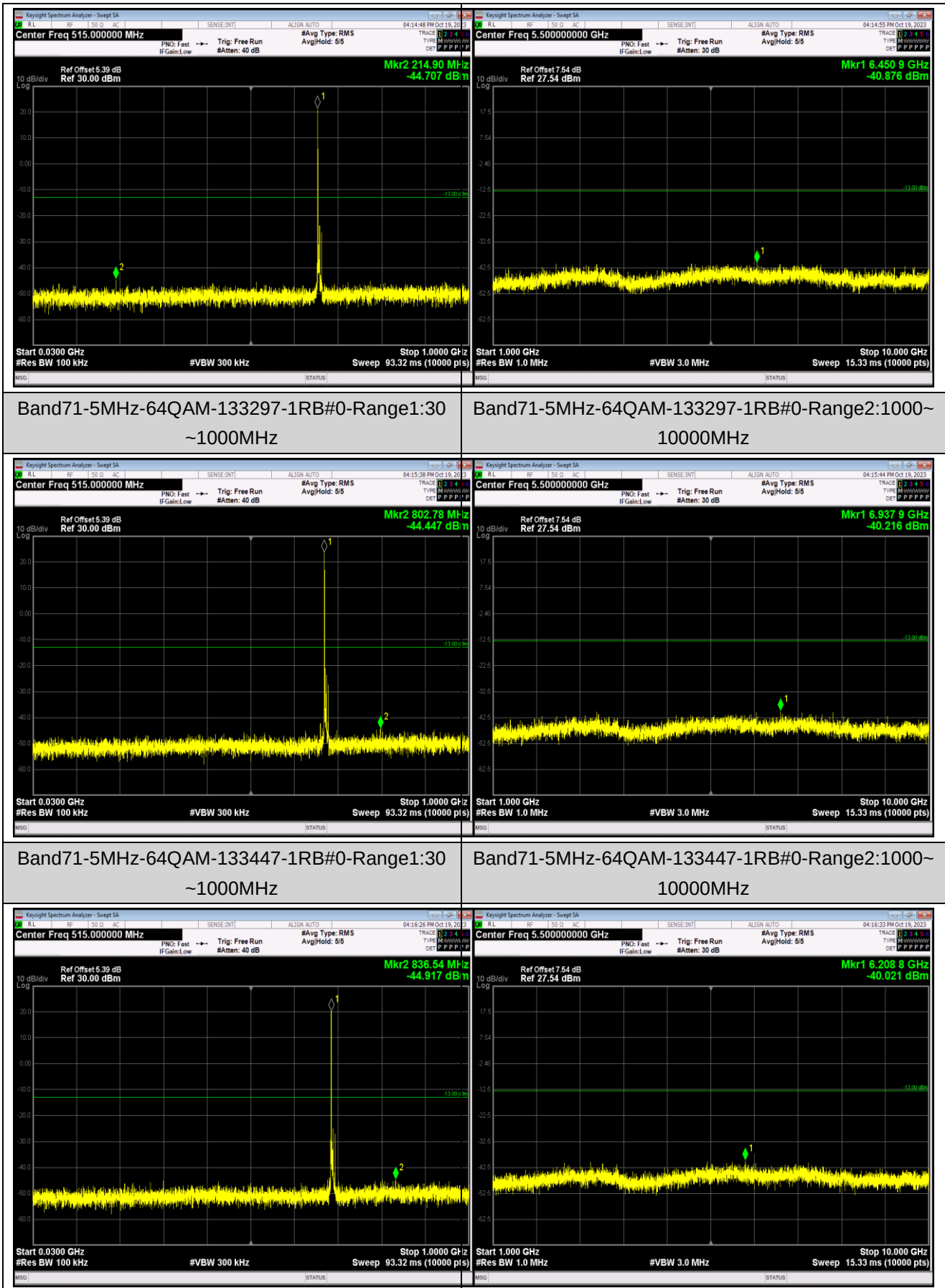


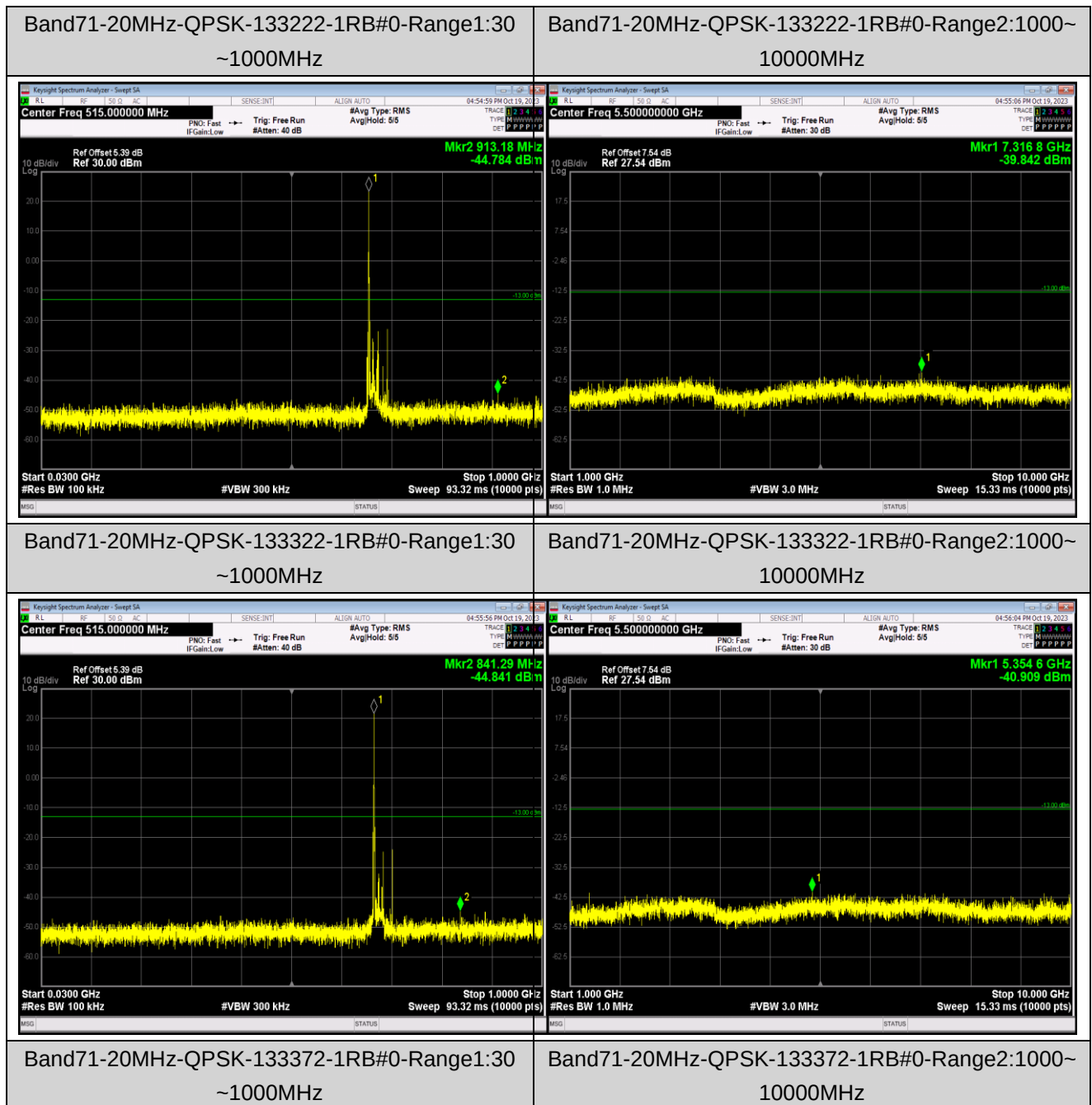


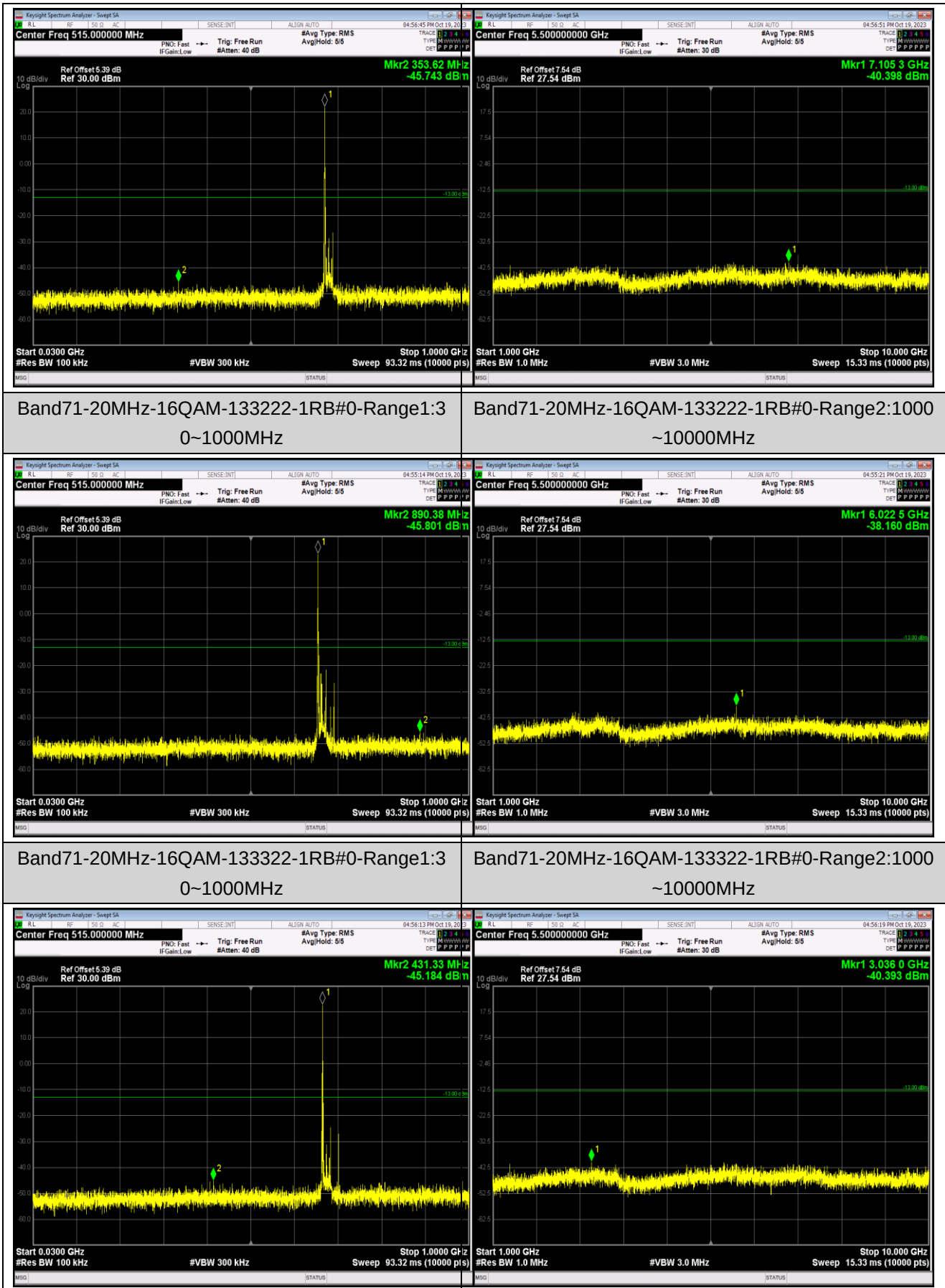


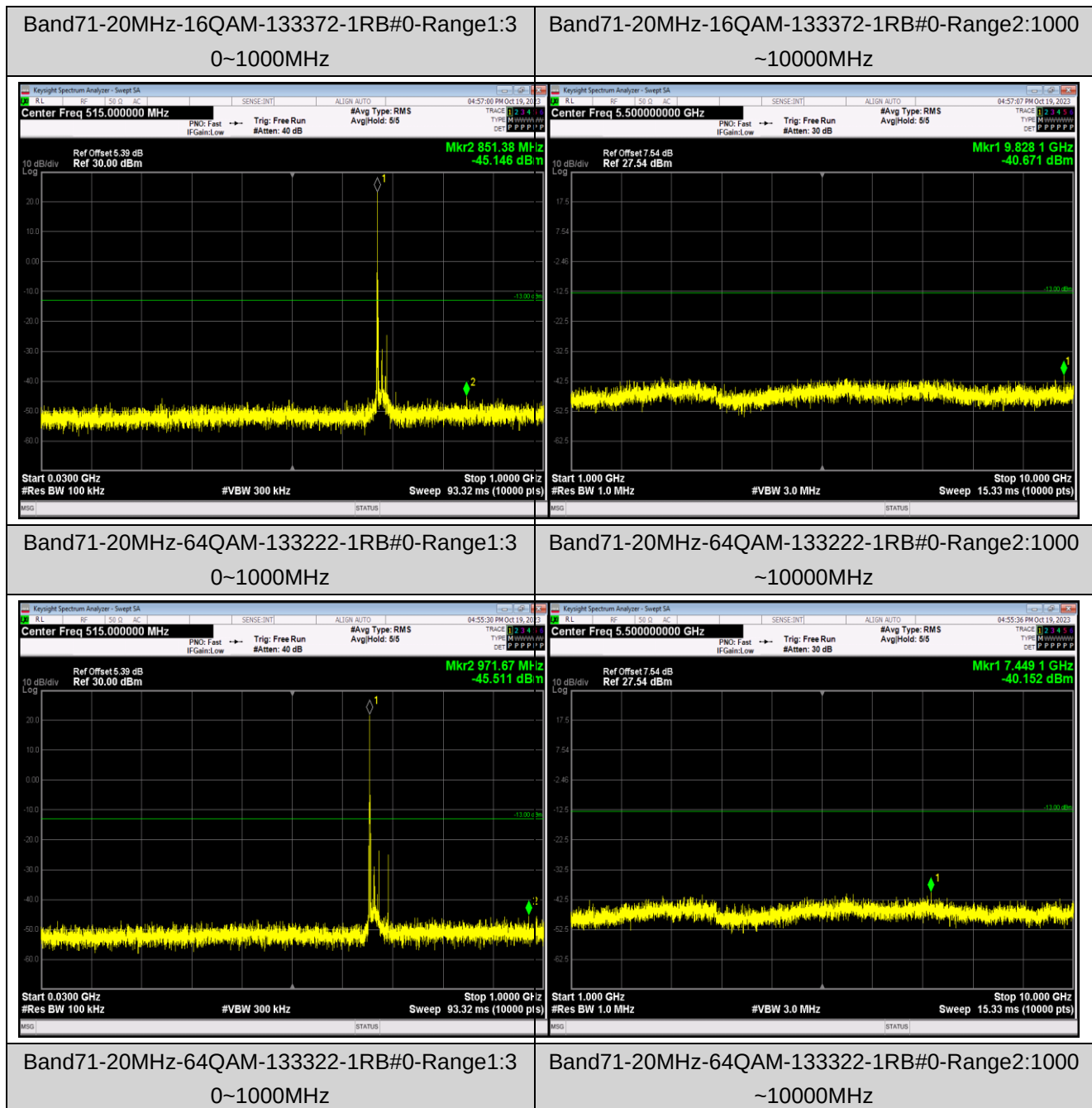


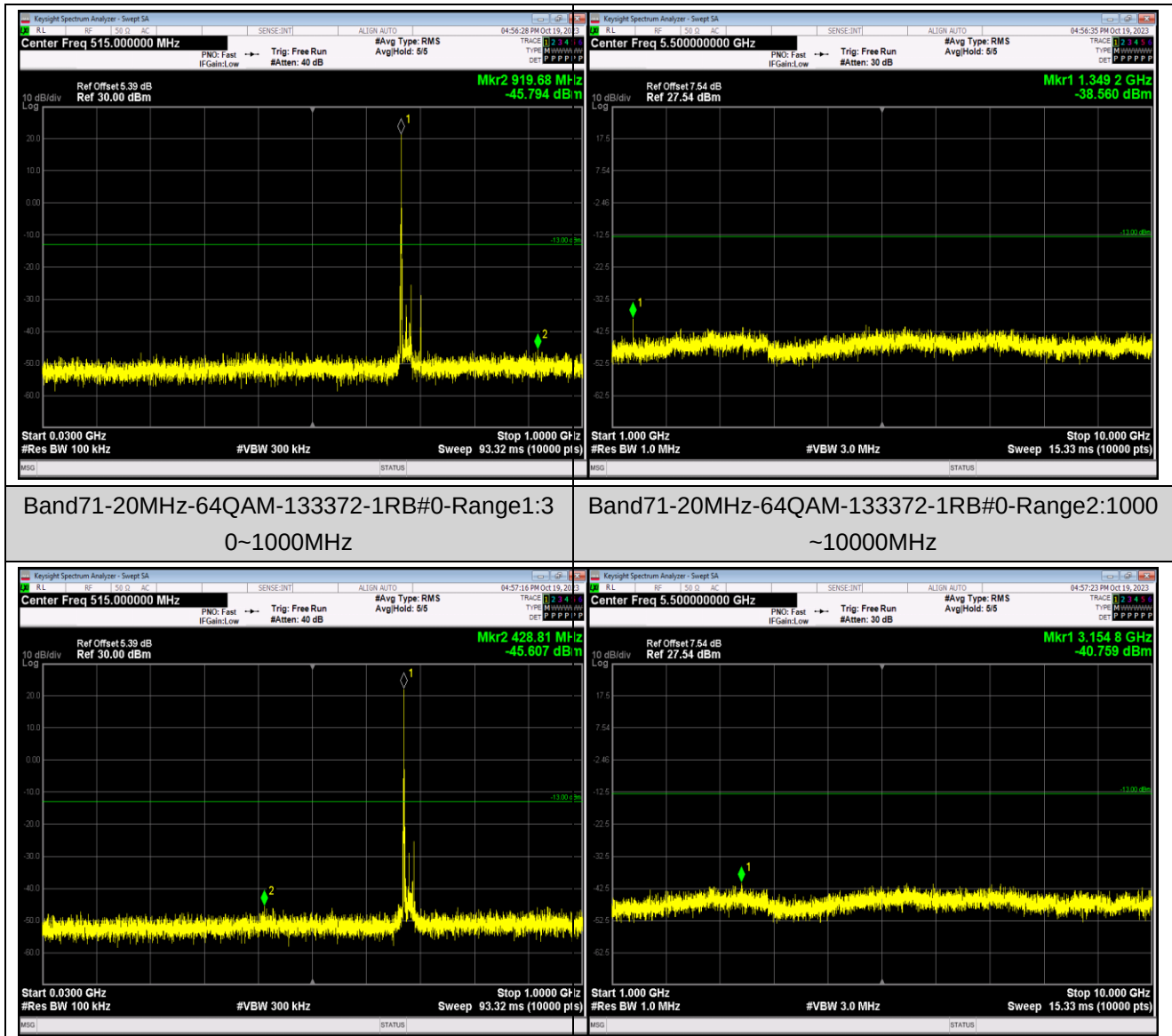












Appendix F: Frequency Stability

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					
3.80	-30	-12.82	-0.006819	Within authorized band for Band 2	Pass
	-20	-17.70	-0.009415		
	-10	-15.18	-0.008074		
	0	-14.33	-0.007622		
	10	-14.12	-0.007511		
	20	-15.56	-0.008277		
	30	-97.85	-0.052048		
	40	-15.31	-0.008144		
	50	-16.92	-0.009000		
16QAM					
3.80	-30	-18.37	-0.009771	Within authorized band for Band 2	Pass
	-20	-14.72	-0.007830		
	-10	-18.74	-0.009968		
	0	-16.84	-0.008957		
	10	-14.00	-0.007447		
	20	-16.14	-0.008585		
	30	-9.46	-0.005032		
	40	-12.22	-0.006500		
	50	-8.30	-0.004415		
64QAM					
3.80	-30	-17.61	-0.009367	Within authorized band for Band 2	Pass
	-20	-19.00	-0.010106		
	-10	-14.08	-0.007489		
	0	-14.53	-0.007729		
	10	-13.49	-0.007176		
	20	-11.70	-0.006223		
	30	-10.16	-0.005404		
	40	-14.32	-0.007617		
	50	-15.55	-0.008271		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-18.05	-0.009601	Within authorized band for Band 2	Pass
	3.80	-18.42	-0.009798		
	4.35	-15.39	-0.008186		
16QAM					
25	3.50	-14.79	-0.007867	Within authorized band for Band 2	Pass
	3.80	-16.21	-0.008622		
	4.35	3.86	0.002053		
64QAM					
25	3.50	-14.02	-0.007457	Within authorized band for Band 2	Pass
	3.80	-12.07	-0.006420		
	4.35	-16.15	-0.008590		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-13.98	-0.008069	Within authorized band for Band 4	Pass
	-20	-7.64	-0.004410		
	-10	-14.91	-0.008606		
	0	-6.05	-0.003492		
	10	-17.54	-0.010124		
	20	-13.50	-0.007792		
	30	-6.41	-0.003700		
	40	-9.34	-0.005391		
	50	-8.58	-0.004952		
16QAM					
3.80	-30	-8.01	-0.004623	Within authorized band for Band 4	Pass
	-20	-6.08	-0.003509		
	-10	-6.09	-0.003515		
	0	-12.49	-0.007209		
	10	-7.95	-0.004589		
	20	-5.16	-0.002978		
	30	-12.27	-0.007082		
	40	-8.78	-0.005068		
	50	-13.80	-0.007965		
64QAM					
3.80	-30	1.83	0.001056	Within authorized band for Band 4	Pass
	-20	-7.81	-0.004508		
	-10	-8.37	-0.004831		
	0	-9.78	-0.005645		
	10	-12.13	-0.007001		
	20	10.59	0.006113		
	30	-12.17	-0.007025		
	40	-7.97	-0.004600		
	50	-9.83	-0.005674		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-16.11	-0.009299	Within authorized band for Band 4	Pass
	3.80	-15.41	-0.008895		
	4.35	-15.22	-0.008785		
16QAM					
25	3.50	-12.43	-0.007175	Within authorized band for Band 4	Pass
	3.80	-16.15	-0.009322		
	4.35	-9.56	-0.005518		
64QAM					
25	3.50	-15.13	-0.008733	Within authorized band for Band 4	Pass
	3.80	-6.79	-0.003919		
	4.35	-5.92	-0.003417		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-5.92	-0.007077	±2.5	Pass
	-20	-10.60	-0.012672		
	-10	-8.64	-0.010329		
	0	-7.34	-0.008775		
	10	-10.27	-0.012277		
	20	-12.37	-0.014788		
	30	-11.96	-0.014298		
	40	-12.72	-0.015206		
	50	-6.52	-0.007794		
16QAM					
3.80	-30	-10.24	-0.012241	±2.5	Pass
	-20	-12.16	-0.014537		
	-10	-10.41	-0.012445		
	0	-7.37	-0.008811		
	10	-9.13	-0.010915		
	20	-10.67	-0.012756		
	30	-9.97	-0.011919		
	40	-13.99	-0.016724		
	50	-9.24	-0.011046		
64QAM					
3.80	-30	-6.98	-0.008344	±2.5	Pass
	-20	-4.71	-0.005631		
	-10	-11.01	-0.013162		
	0	-7.25	-0.008667		
	10	-8.45	-0.010102		
	20	-9.61	-0.011488		
	30	-6.77	-0.008093		
	40	-8.85	-0.010580		
	50	-13.00	-0.015541		