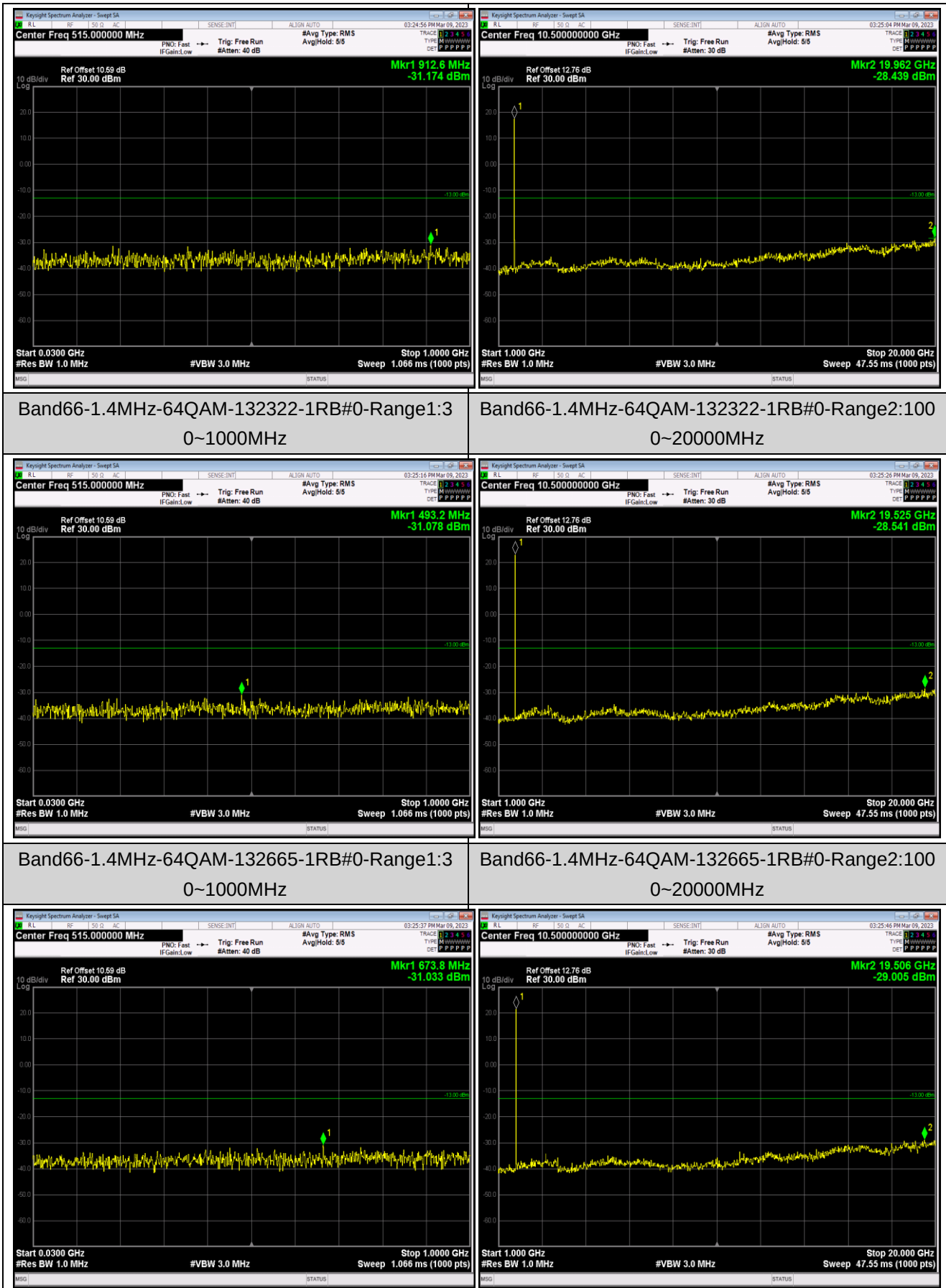
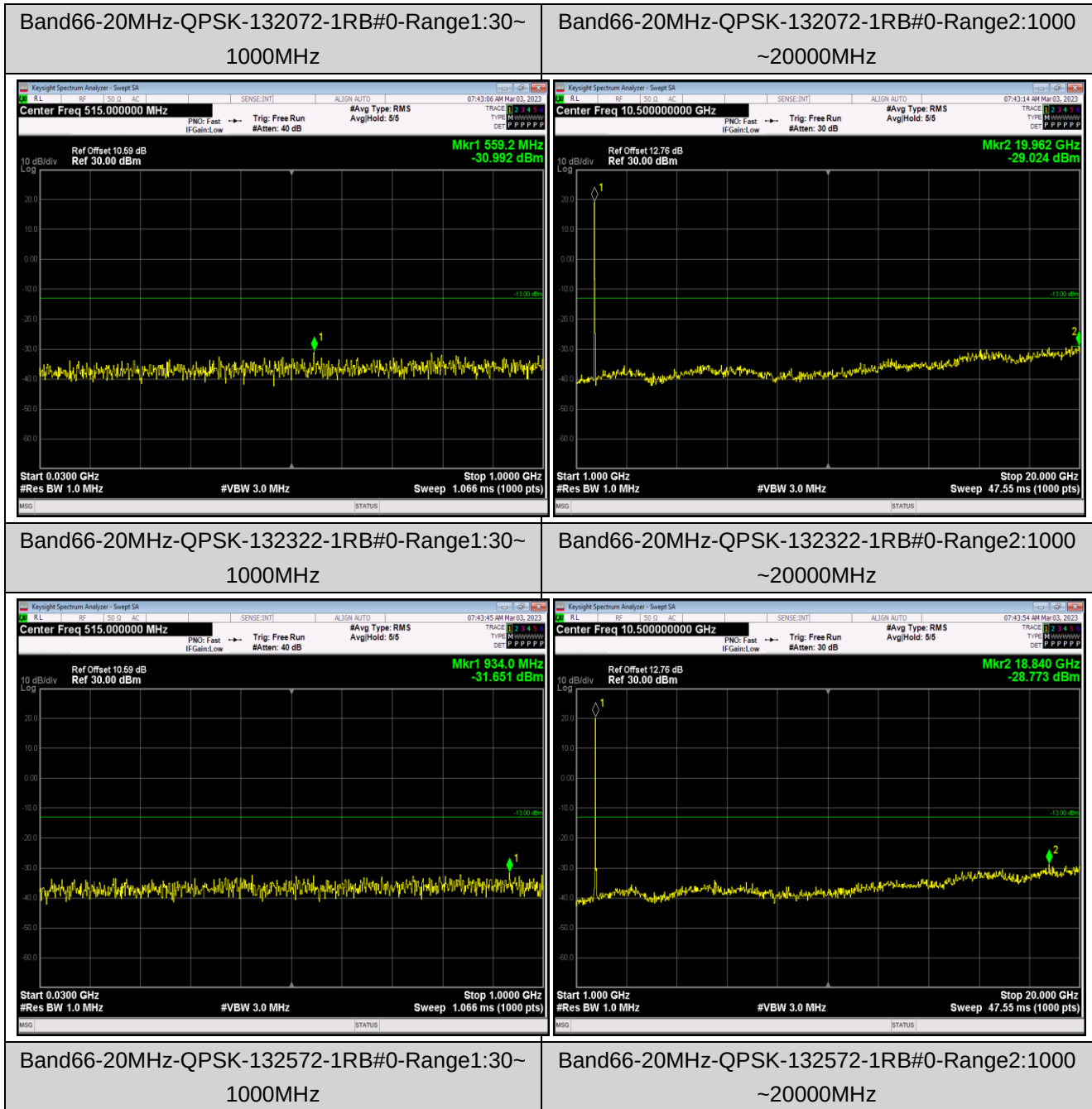
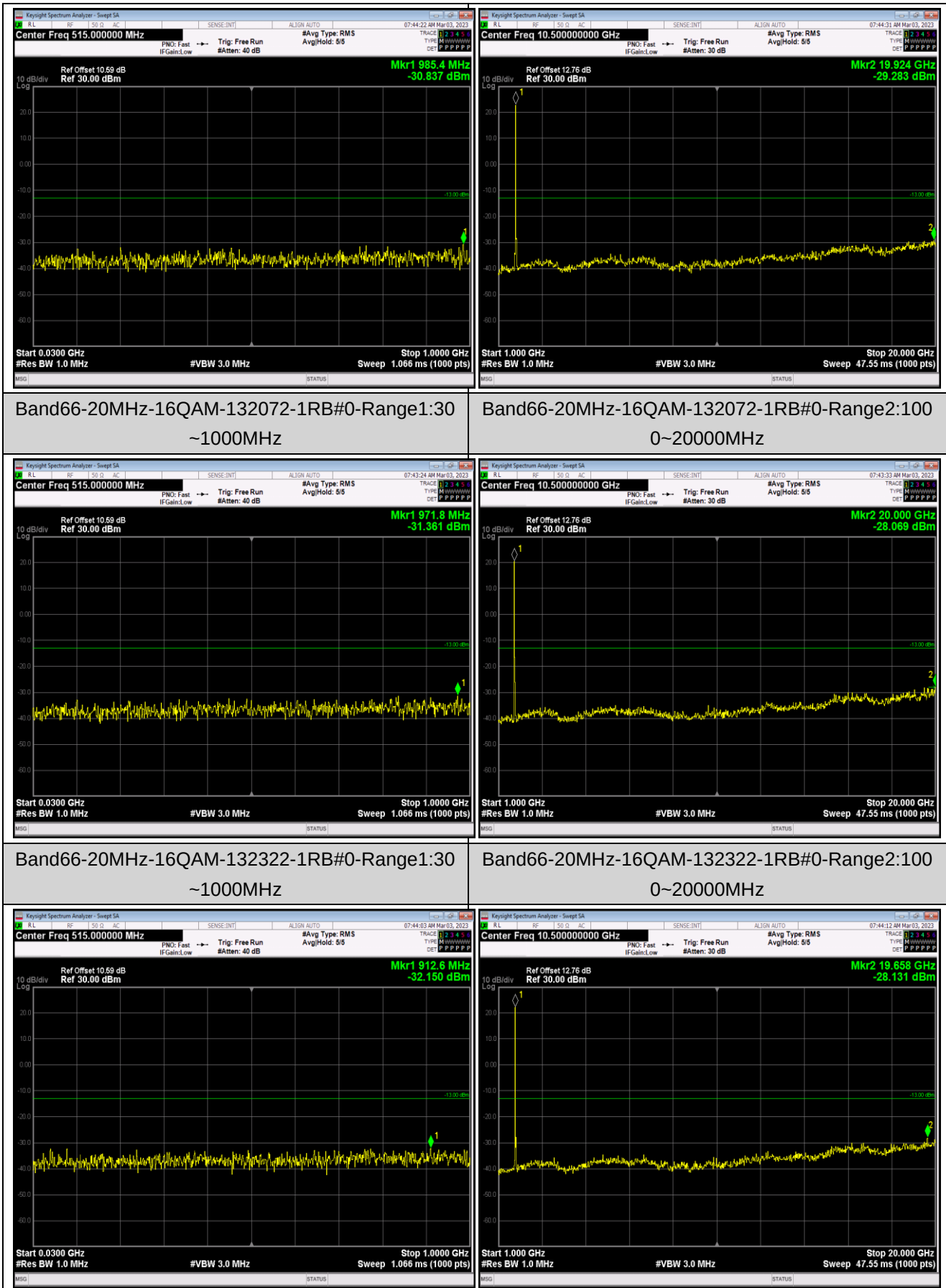
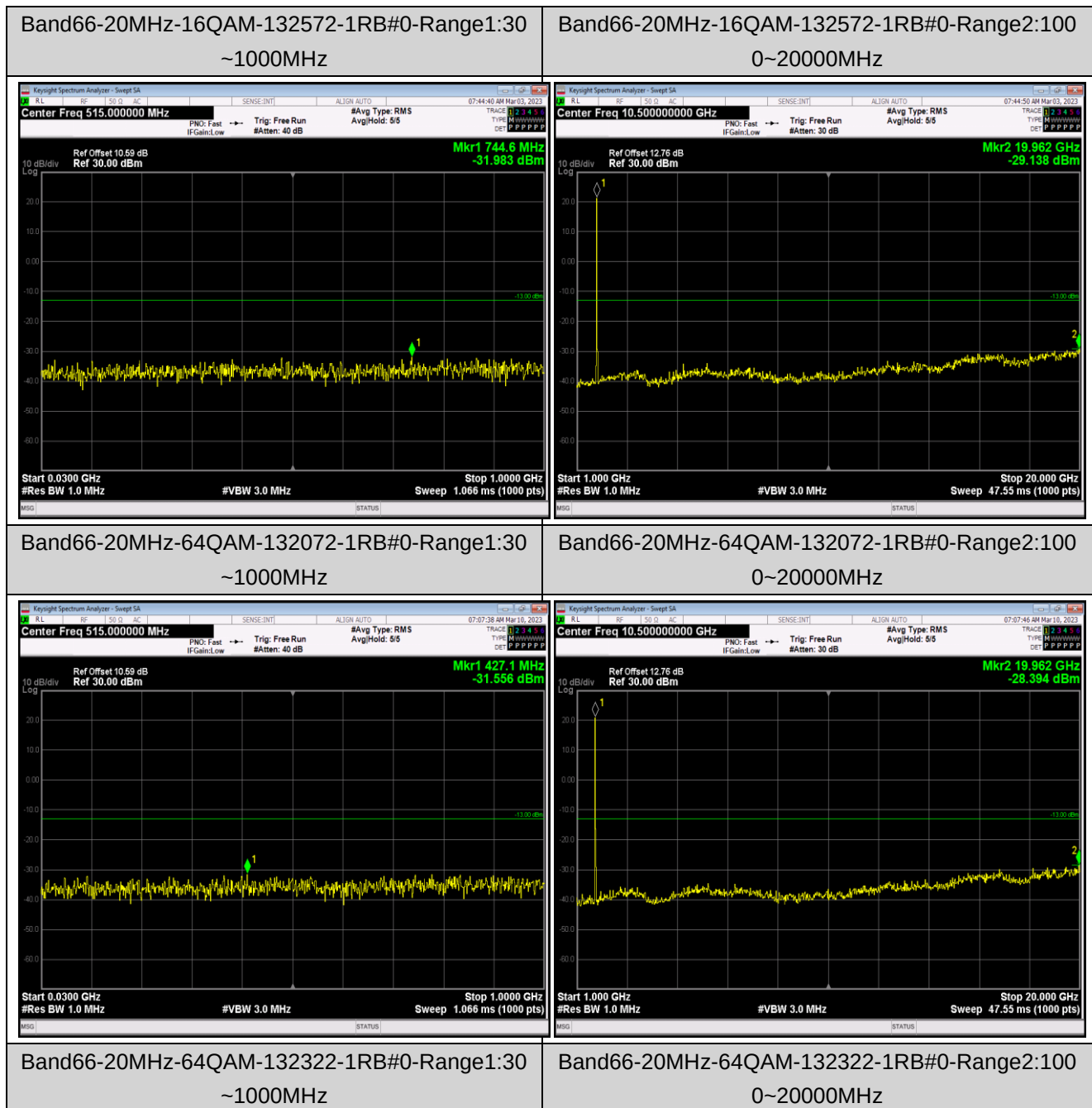
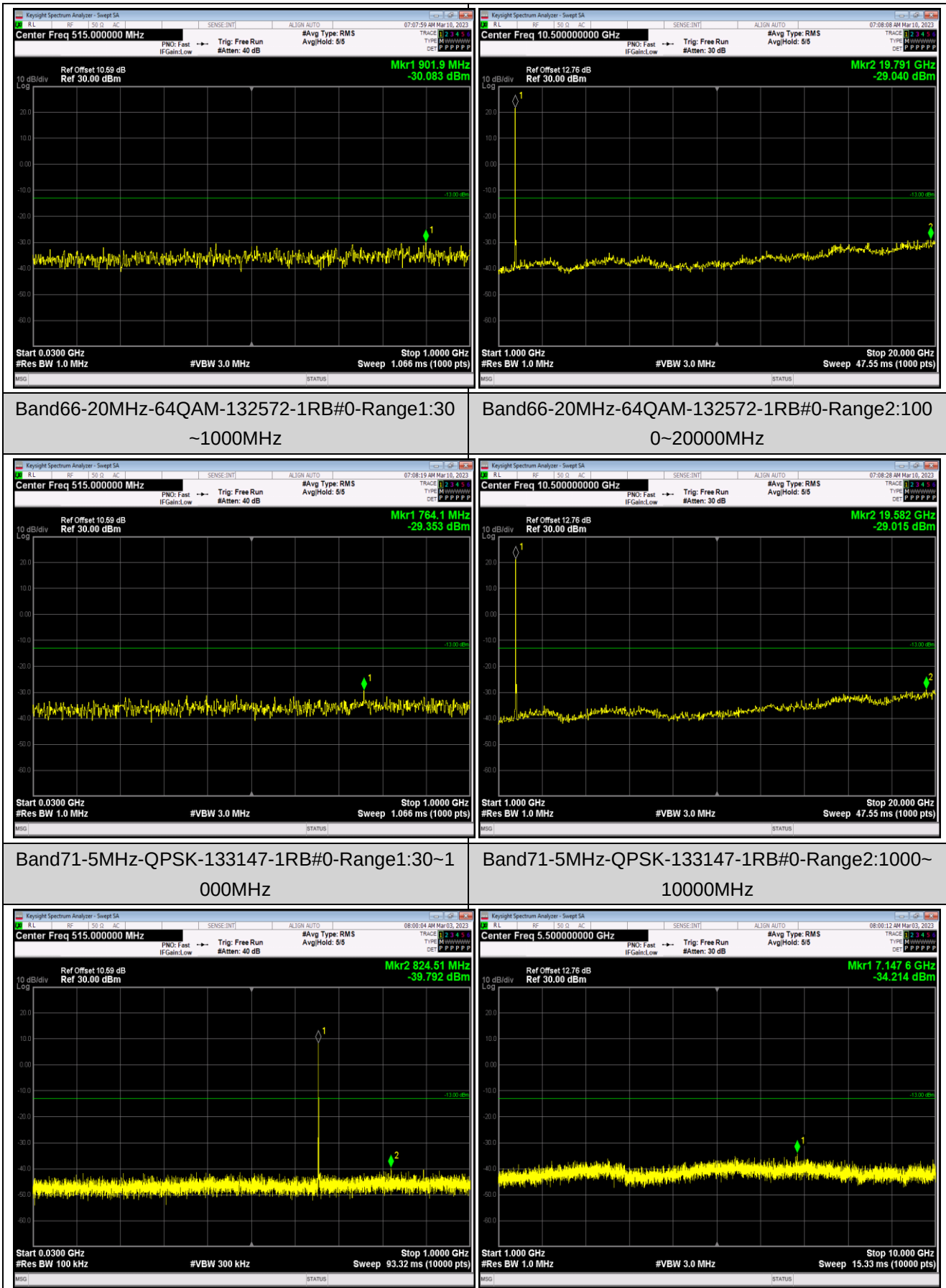


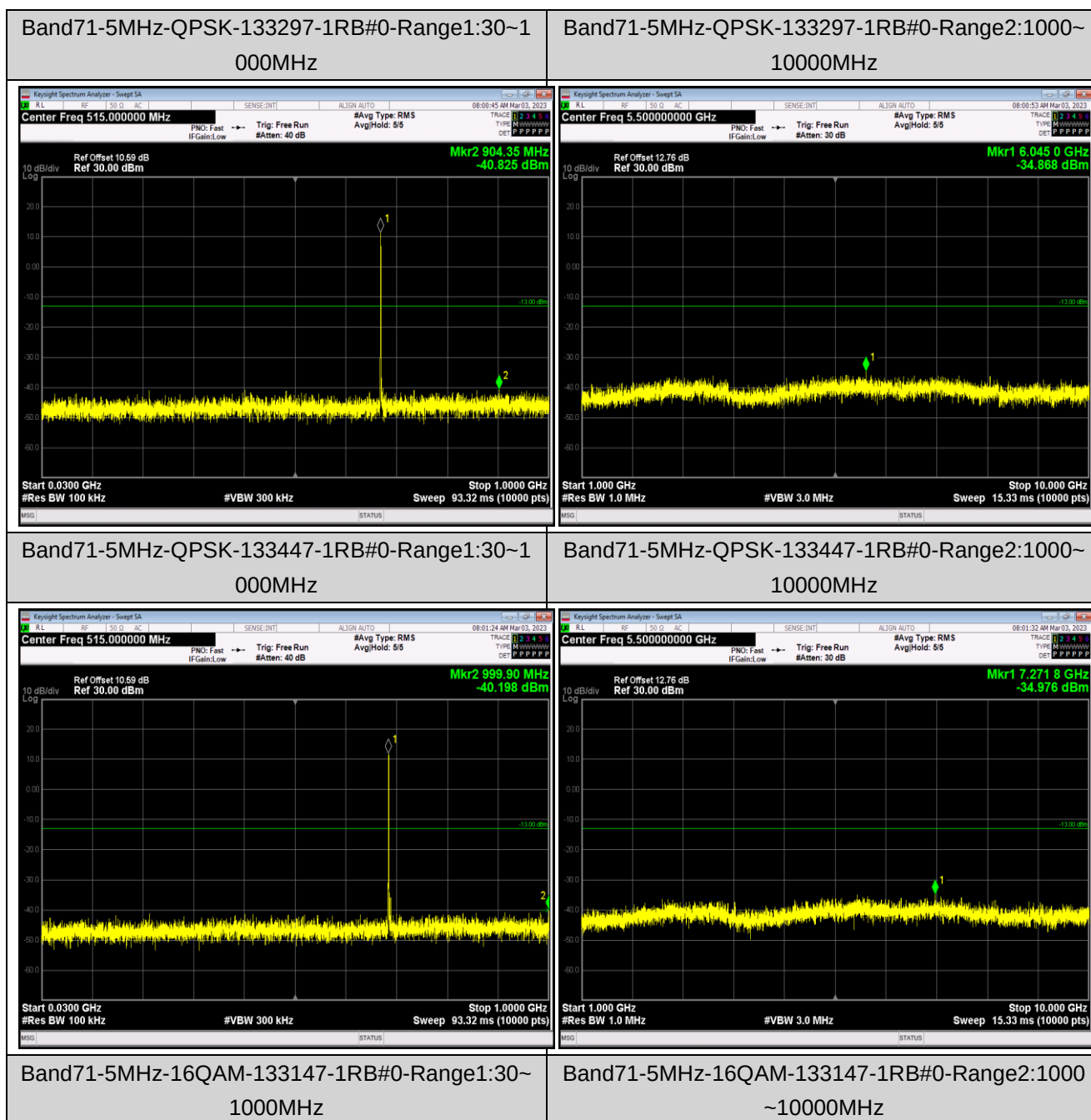


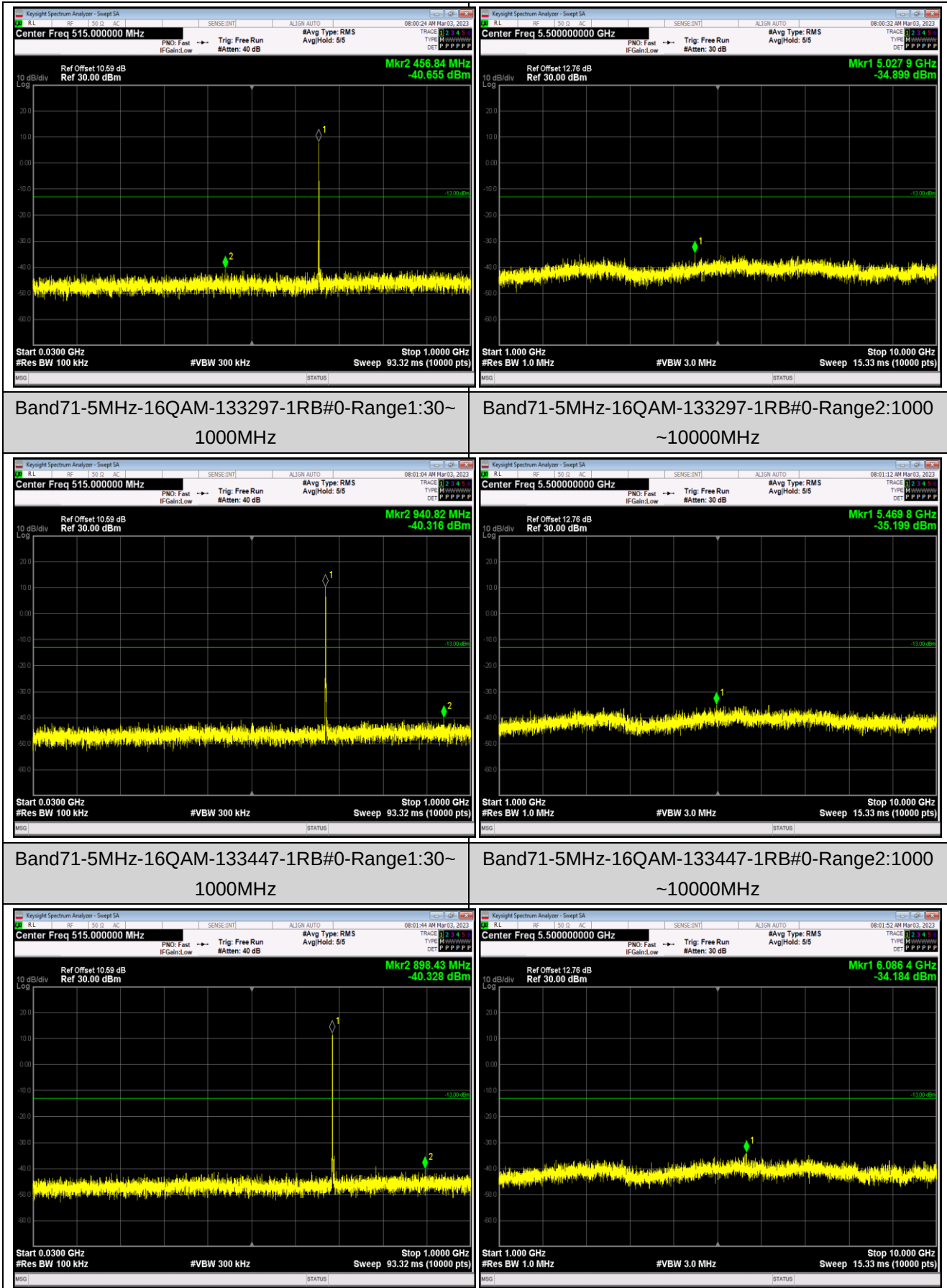


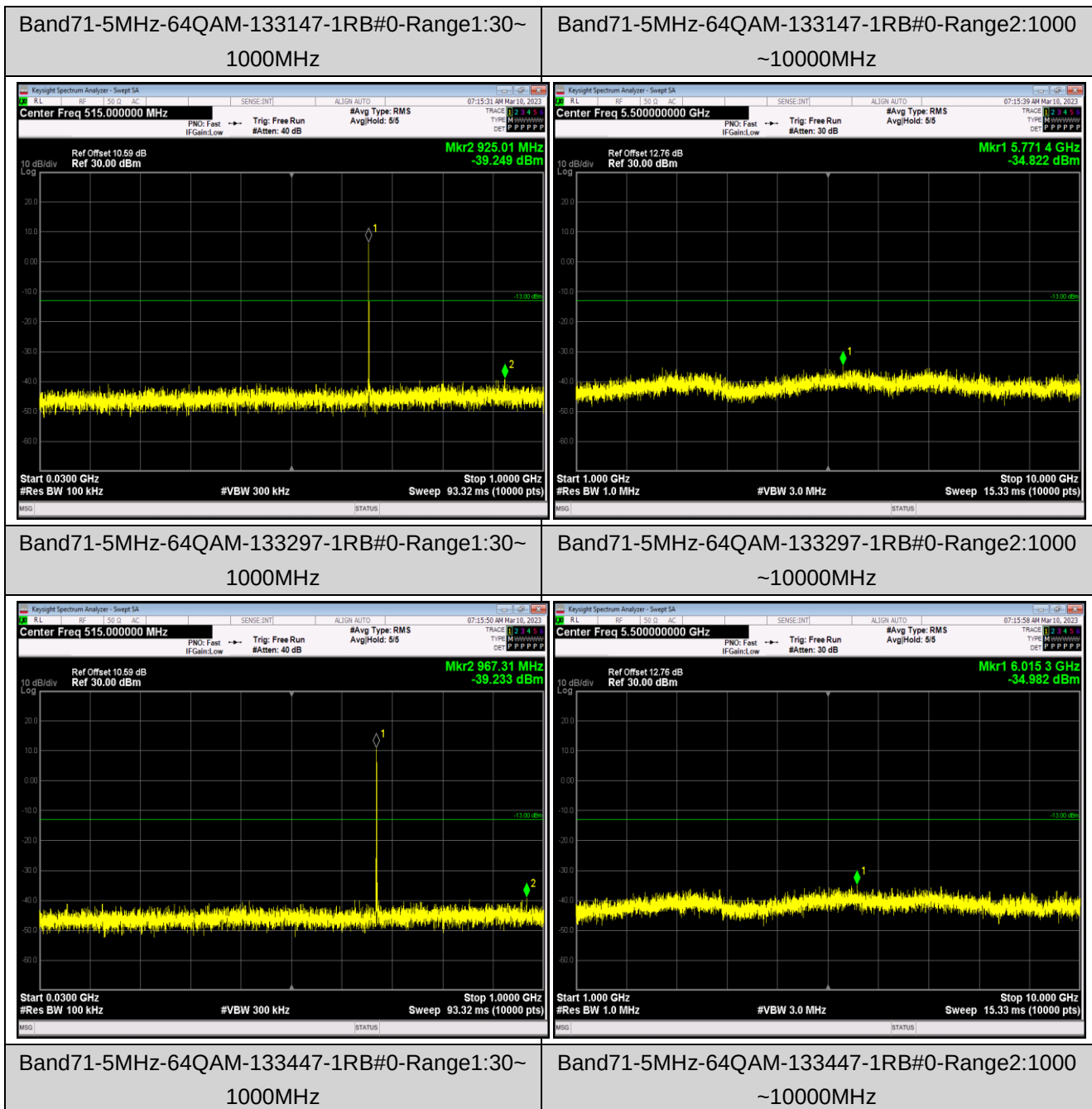


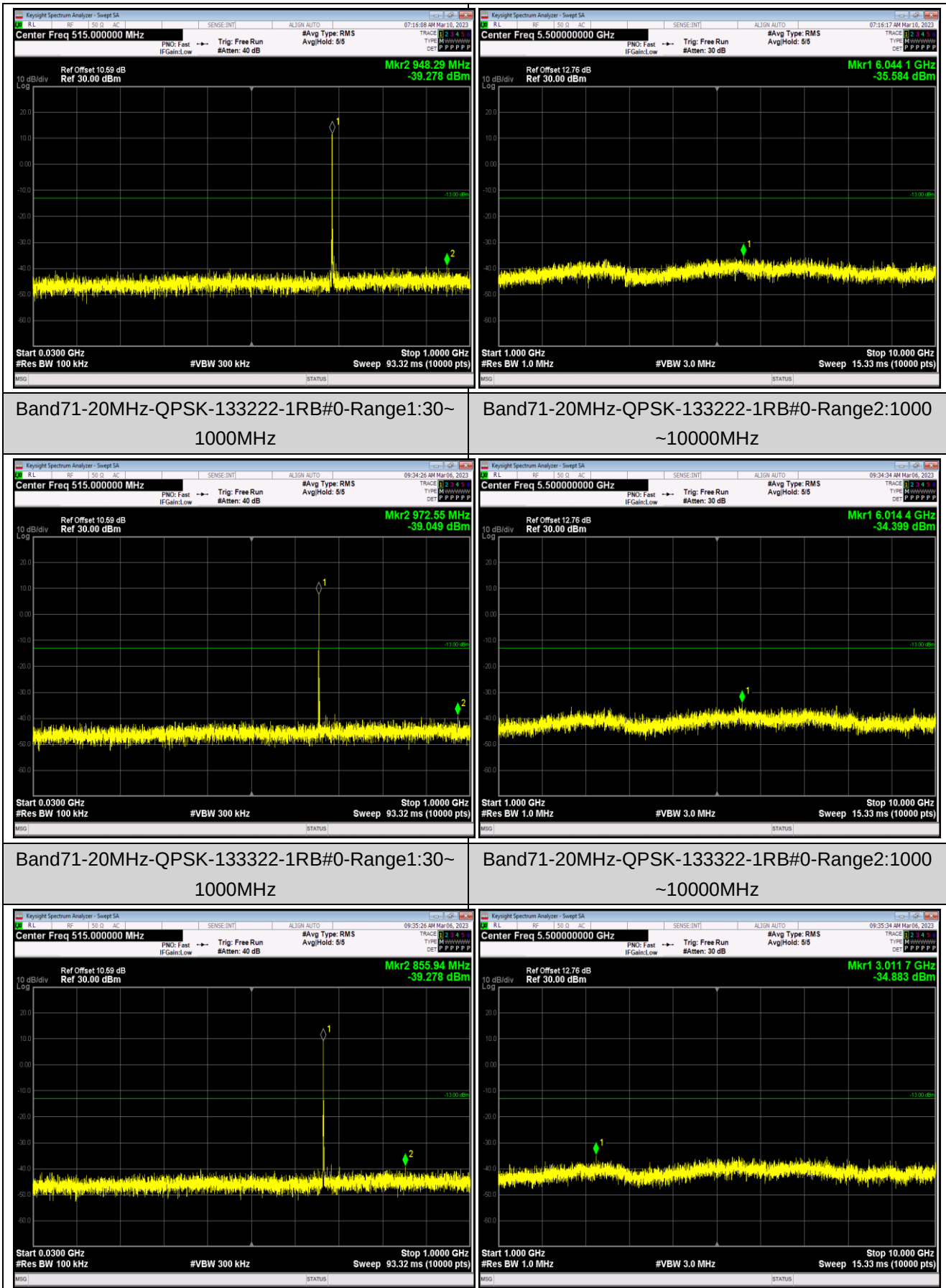


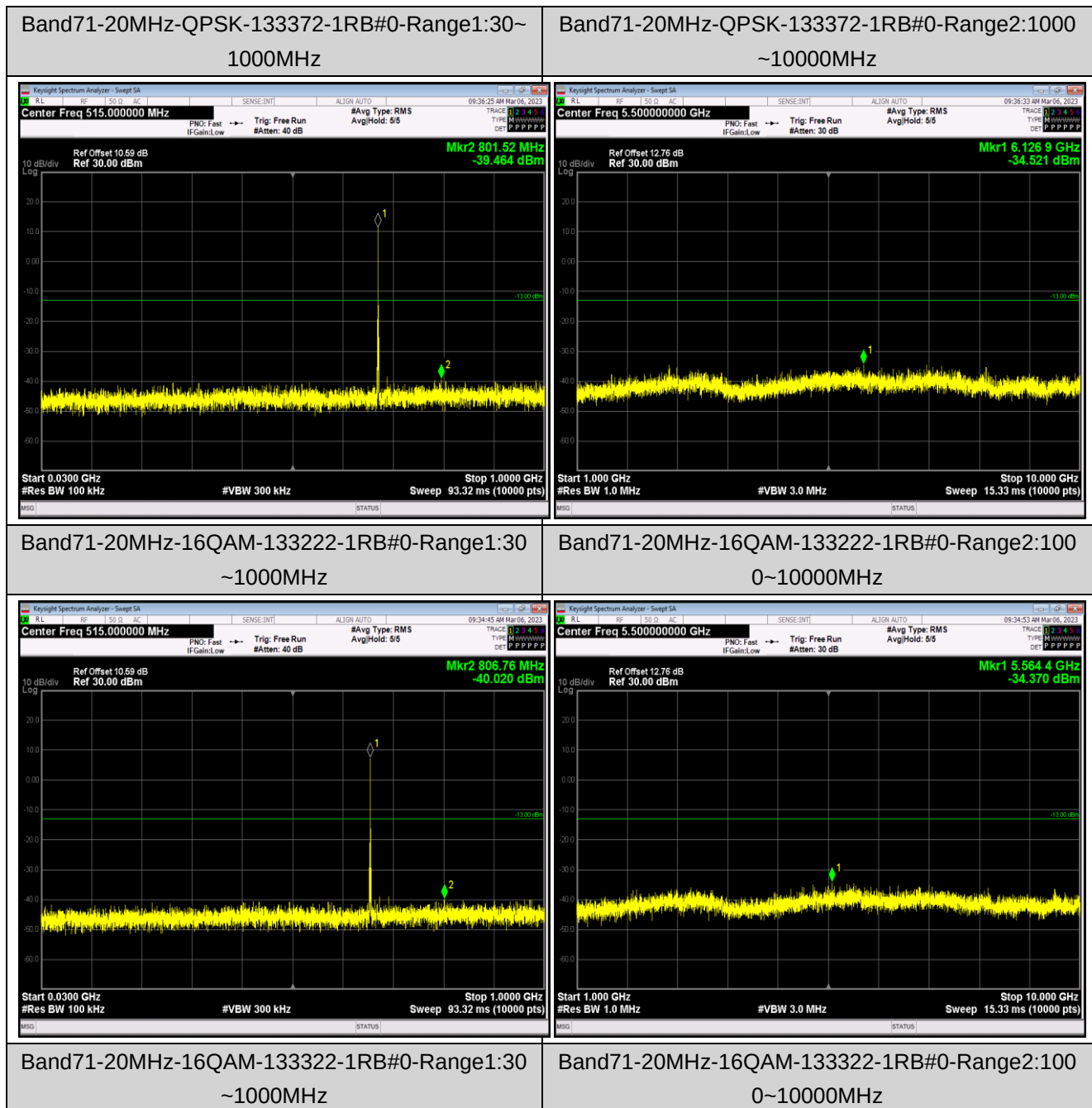


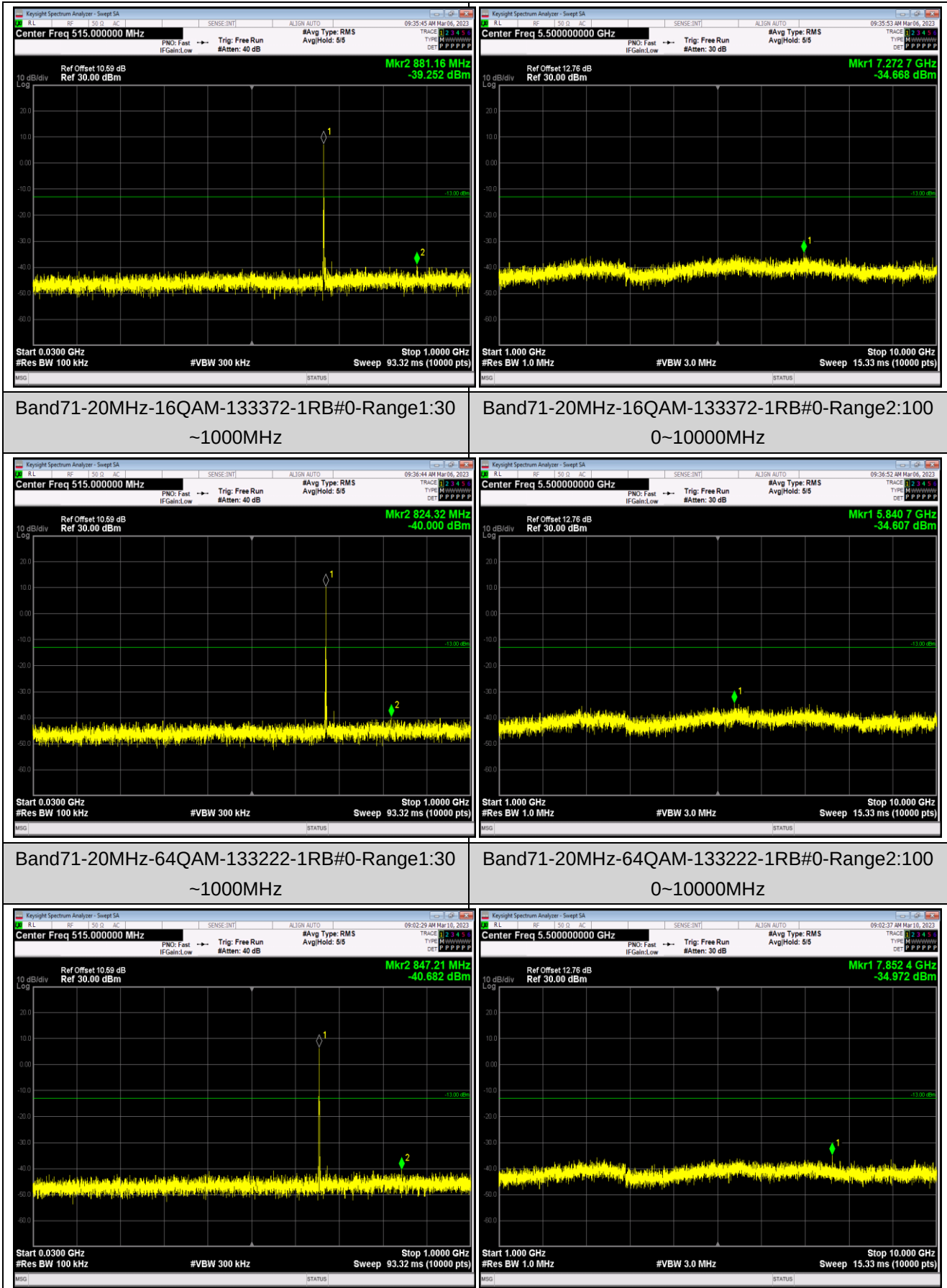


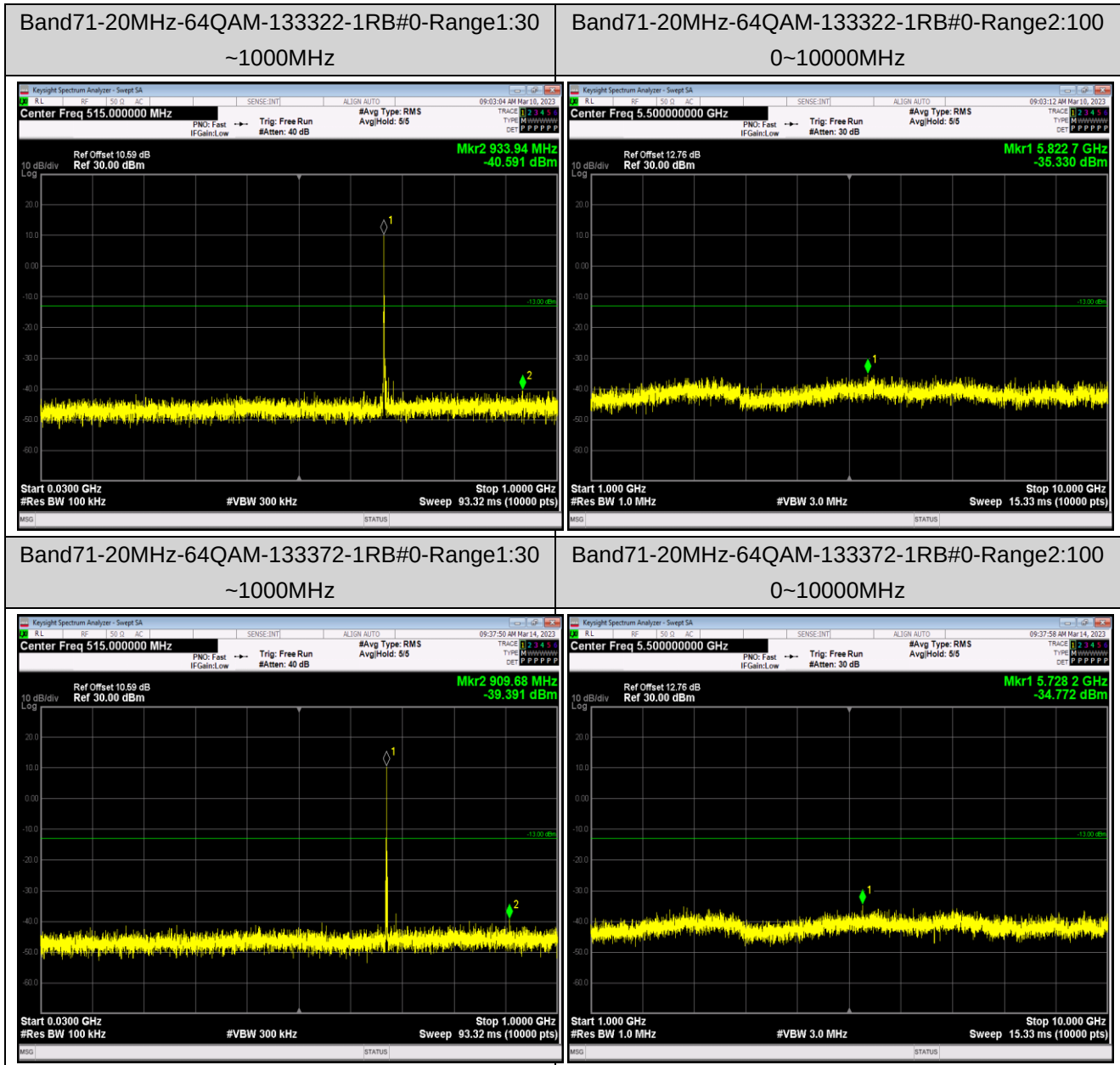












Appendix F: Frequency Stability

Test Result

LTE Band 2 part:

Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 Frequency=1880.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-7.15	-0.003803	Within authorized band for Band 2	Pass
	-20	-7.87	-0.004186		
	-10	-18.65	-0.009920		
	0	-14.08	-0.007489		
	10	-14.08	-0.007489		
	20	-19.74	-0.010500		
	30	-13.93	-0.007410		
	40	-8.98	-0.004777		
	50	-12.09	-0.006431		
16QAM					
3.80	-30	-17.35	-0.009229	Within authorized band for Band 2	Pass
	-20	5.31	0.002824		
	-10	-10.97	-0.005835		
	0	-13.19	-0.007016		
	10	-14.00	-0.007447		
	20	2.36	0.001255		
	30	-15.34	-0.008160		
	40	-21.69	-0.011537		
	50	-13.60	-0.007234		
64QAM					
3.80	-30	5.62	0.002989	Within authorized band for Band 2	Pass
	-20	-18.48	-0.009830		
	-10	-10.51	-0.005590		
	0	-12.67	-0.006739		
	10	-16.35	-0.008697		
	20	-15.44	-0.008213		
	30	-10.80	-0.005745		
	40	-9.70	-0.005160		
	50	-16.39	-0.008718		
Voltage					
Temperature	Power supplied	Frequency error		Limit (ppm)	Result

(°C)	(Vdc)	Hz	ppm		
QPSK					
25	3.30	-15.56	-0.008277	Within authorized band for Band 2	Pass
	3.80	-20.01	-0.010644		
	4.35	-11.72	-0.006234		
16QAM					
25	3.30	-6.28	-0.003340	Within authorized band for Band 2	Pass
	3.80	-16.64	-0.008851		
	4.35	-23.42	-0.012457		
64QAM					
25	3.30	-12.92	-0.006872	Within authorized band for Band 2	Pass
	3.80	-17.42	-0.009266		
	4.35	-6.51	-0.003463		
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					
3.80	-30	-15.02	-0.005925	Within authorized band for Band 7	Pass
	-20	9.06	0.003574		
	-10	17.88	0.007053		
	0	-8.63	-0.003404		
	10	-18.20	-0.007179		
	20	-9.86	-0.003890		
	30	-5.15	-0.002032		
	40	-13.63	-0.005377		
	50	-15.44	-0.006091		
16QAM					
3.80	-30	11.16	0.004402	Within authorized band for Band 7	Pass
	-20	-13.40	-0.005286		
	-10	-20.00	-0.007890		
	0	-13.93	-0.005495		
	10	8.68	0.003424		
	20	-18.61	-0.007341		
	30	-16.89	-0.006663		
	40	-17.18	-0.006777		
	50	-17.14	-0.006761		
64QAM					
3.80	-30	-4.03	-0.001590	Within authorized band for Band 7	Pass
	-20	5.82	0.002296		
	-10	-14.26	-0.005625		
	0	-11.39	-0.004493		
	10	-14.36	-0.005665		
	20	17.04	0.006722		
	30	-15.89	-0.006268		
	40	-12.65	-0.004990		
	50	-17.68	-0.006974		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.30	-5.68	-0.002241	Within authorized band for Band 7	Pass
	3.80	-12.56	-0.004955		
	4.35	20.07	0.007917		
16QAM					
25	3.80	-15.91	-0.006276	Within authorized band for Band 7	Pass
	4.35	-11.30	-0.004458		
	3.30	-20.00	-0.007890		
64QAM					
25	3.30	-15.94	-0.006288	Within authorized band for Band 7	Pass
	3.80	-19.35	-0.007633		
	4.35	-6.77	-0.002671		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-8.03	-0.011350	Within authorized band for Band 12	Pass
	-20	-10.86	-0.015350		
	-10	-9.43	-0.013329		
	0	-12.77	-0.018049		
	10	-11.14	-0.015746		
	20	-5.84	-0.008254		
	30	-9.50	-0.013428		
	40	-10.29	-0.014544		
	50	-12.43	-0.017569		
16QAM					
3.80	-30	-7.95	-0.011237	Within authorized band for Band 12	Pass
	-20	-7.95	-0.011237		
	-10	-7.14	-0.010092		
	0	-11.60	-0.016396		
	10	-10.70	-0.015124		
	20	-10.69	-0.015110		
	30	-8.04	-0.011364		
	40	-5.12	-0.007237		
	50	-9.94	-0.014049		
64QAM					
3.80	-30	-8.44	-0.011929	Within authorized band for Band 12	Pass
	-20	-13.25	-0.018728		
	-10	-10.29	-0.014544		
	0	-12.53	-0.017710		
	10	-9.93	-0.014035		
	20	-6.97	-0.009852		
	30	-12.90	-0.018233		
	40	-14.35	-0.020283		
	50	-12.67	-0.017908		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.30	-3.82	-0.005399	Within authorized band for Band 12	Pass
	3.80	-5.97	-0.008438		
	4.35	-5.28	-0.007463		
16QAM					
25	3.80	-9.38	-0.013258	Within authorized band for Band 12	Pass
	4.35	-12.73	-0.017993		
	3.30	-10.54	-0.014898		
64QAM					
25	3.30	-9.11	-0.012876	Within authorized band for Band 12	Pass
	3.80	-5.58	-0.007887		
	4.35	-10.74	-0.015180		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 13 part:

Reference Frequency: LTE Band 13(10MHz) Middle channel=23230 Frequency=782.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-7.68	-0.009821	Within authorized band for Band 13	Pass
	-20	-10.34	-0.013223		
	-10	-11.03	-0.014105		
	0	-14.46	-0.018491		
	10	-14.83	-0.018964		
	20	-10.89	-0.013926		
	30	-11.00	-0.014066		
	40	-14.36	-0.018363		
	50	-14.45	-0.018478		
16QAM					
3.80	-30	-10.80	-0.013811	Within authorized band for Band 13	Pass
	-20	-8.93	-0.011419		
	-10	-6.94	-0.008875		
	0	-17.58	-0.022481		
	10	-13.66	-0.017468		
	20	-12.89	-0.016483		
	30	-16.88	-0.021586		
	40	-11.87	-0.015179		
	50	-3.83	-0.004898		
64QAM					
3.80	-30	-8.97	-0.011471	Within authorized band for Band 13	Pass
	-20	-6.45	-0.008248		
	-10	-10.37	-0.013261		
	0	-6.39	-0.008171		
	10	-5.32	-0.006803		
	20	-6.42	-0.008210		
	30	-11.32	-0.014476		
	40	-9.98	-0.012762		
	50	-8.13	-0.010396		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.30	-9.66	-0.012353	Within authorized band for Band 13	Pass
	3.80	-8.18	-0.010460		
	4.35	-6.77	-0.008657		
16QAM					
25	3.80	-11.66	-0.014910	Within authorized band for Band 13	Pass
	4.35	-10.01	-0.012801		
	3.30	-10.76	-0.013760		
64QAM					
25	3.30	-13.32	-0.017033	Within authorized band for Band 13	Pass
	3.80	-7.55	-0.009655		
	4.35	-12.76	-0.016317		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 25 part:

Reference Frequency: LTE Band 25(10MHz) Middle channel=26365 Frequency=1882.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-18.05	-0.009588	Within authorized band for Band 25	Pass
	-20	-19.38	-0.010295		
	-10	-19.01	-0.010098		
	0	5.38	0.002858		
	10	-16.12	-0.008563		
	20	-18.54	-0.009849		
	30	5.85	0.003108		
	40	-18.27	-0.009705		
	50	-4.06	-0.002157		
16QAM					
3.80	-30	-16.42	-0.008722	Within authorized band for Band 25	Pass
	-20	-11.73	-0.006231		
	-10	-9.48	-0.005036		
	0	-7.81	-0.004149		
	10	-14.19	-0.007538		
	20	-11.70	-0.006215		
	30	-16.34	-0.008680		
	40	-7.44	-0.003952		
	50	-11.01	-0.005849		
64QAM					
3.80	-30	-12.00	-0.006375	Within authorized band for Band 25	Pass
	-20	-11.24	-0.005971		
	-10	-14.42	-0.007660		
	0	-10.20	-0.005418		
	10	-18.98	-0.010082		
	20	-13.83	-0.007347		
	30	-5.89	-0.003129		
	40	-6.17	-0.003278		
	50	-16.21	-0.008611		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.30	-10.24	-0.005440	Within authorized band for Band 25	Pass
	3.80	-7.87	-0.004181		
	4.35	-12.53	-0.006656		
16QAM					
25	3.80	-17.60	-0.009349	Within authorized band for Band 25	Pass
	4.35	-13.73	-0.007293		
	3.30	-17.71	-0.009408		
64QAM					
25	3.30	-14.03	-0.007453	Within authorized band for Band 25	Pass
	3.80	-17.75	-0.009429		
	4.35	-16.84	-0.008946		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 26 part:

Reference Frequency: LTE Band 26(10MHz) Middle channel=26915 Frequency=831.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-11.07	-0.013234	Within authorized band for Band 38	Pass
	-20	-10.67	-0.012756		
	-10	-9.43	-0.011273		
	0	-8.47	-0.010126		
	10	-7.70	-0.009205		
	20	-8.90	-0.010640		
	30	-9.37	-0.011201		
	40	-10.84	-0.012959		
	50	-12.56	-0.015015		
16QAM					
3.80	-30	-7.25	-0.008667	Within authorized band for Band 38	Pass
	-20	-11.89	-0.014214		
	-10	-5.16	-0.006169		
	0	-4.06	-0.004854		
	10	-10.37	-0.012397		
	20	-9.54	-0.011405		
	30	-12.43	-0.014860		
	40	-4.46	-0.005332		
	50	-7.77	-0.009289		
64QAM					
3.80	-30	-14.06	-0.016808	Within authorized band for Band 38	Pass
	-20	-13.50	-0.016139		
	-10	-14.88	-0.017788		
	0	-9.44	-0.011285		
	10	-12.42	-0.014848		
	20	-11.13	-0.013305		
	30	-12.67	-0.015146		
	40	-6.81	-0.008141		
	50	-10.37	-0.012397		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.30	-9.43	-0.011273	Within authorized band for Band 38	Pass
	3.80	-11.53	-0.013784		
	4.35	-8.37	-0.010006		
16QAM					
25	3.80	-12.72	-0.015206	Within authorized band for Band 38	Pass
	4.35	-8.51	-0.010173		
	3.30	-4.09	-0.004889		
64QAM					
25	3.30	-10.51	-0.012564	Within authorized band for Band 38	Pass
	3.80	-13.12	-0.015684		
	4.35	-7.72	-0.009229		
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					
3.80	-30	4.53	0.001747	Within authorized band for Band 41	Pass
	-20	-13.98	-0.005391		
	-10	-20.50	-0.007906		
	0	-18.04	-0.006957		
	10	-16.47	-0.006352		
	20	-22.57	-0.008704		
	30	-21.87	-0.008434		
	40	-18.38	-0.007088		
	50	-20.74	-0.007998		
16QAM					
3.80	-30	-16.97	-0.006545	Within authorized band for Band 41	Pass
	-20	-25.12	-0.009688		
	-10	-18.67	-0.007200		
	0	-20.11	-0.007755		
	10	-21.54	-0.008307		
	20	-20.04	-0.007728		
	30	-16.81	-0.006483		
	40	-5.74	-0.002214		
	50	-12.83	-0.004948		
64QAM					
3.80	-30	-17.75	-0.006845	Within authorized band for Band 41	Pass
	-20	-23.30	-0.008986		
	-10	-23.00	-0.008870		
	0	-13.25	-0.005110		
	10	-22.60	-0.008716		
	20	-15.91	-0.006136		
	30	-19.08	-0.007358		
	40	-15.05	-0.005804		
	50	-17.55	-0.006768		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					