

FCC Appendix RF Test Data for LTE Band 13

FCC ID : 2BVLN-QS-1208

Company : Wuhan Qinggou Intelligent Technology Co., Ltd.

EUT : Qingo AI Vending

Model Number : QS-1208CRSW(G)-US

Report No. : CTA26071002304

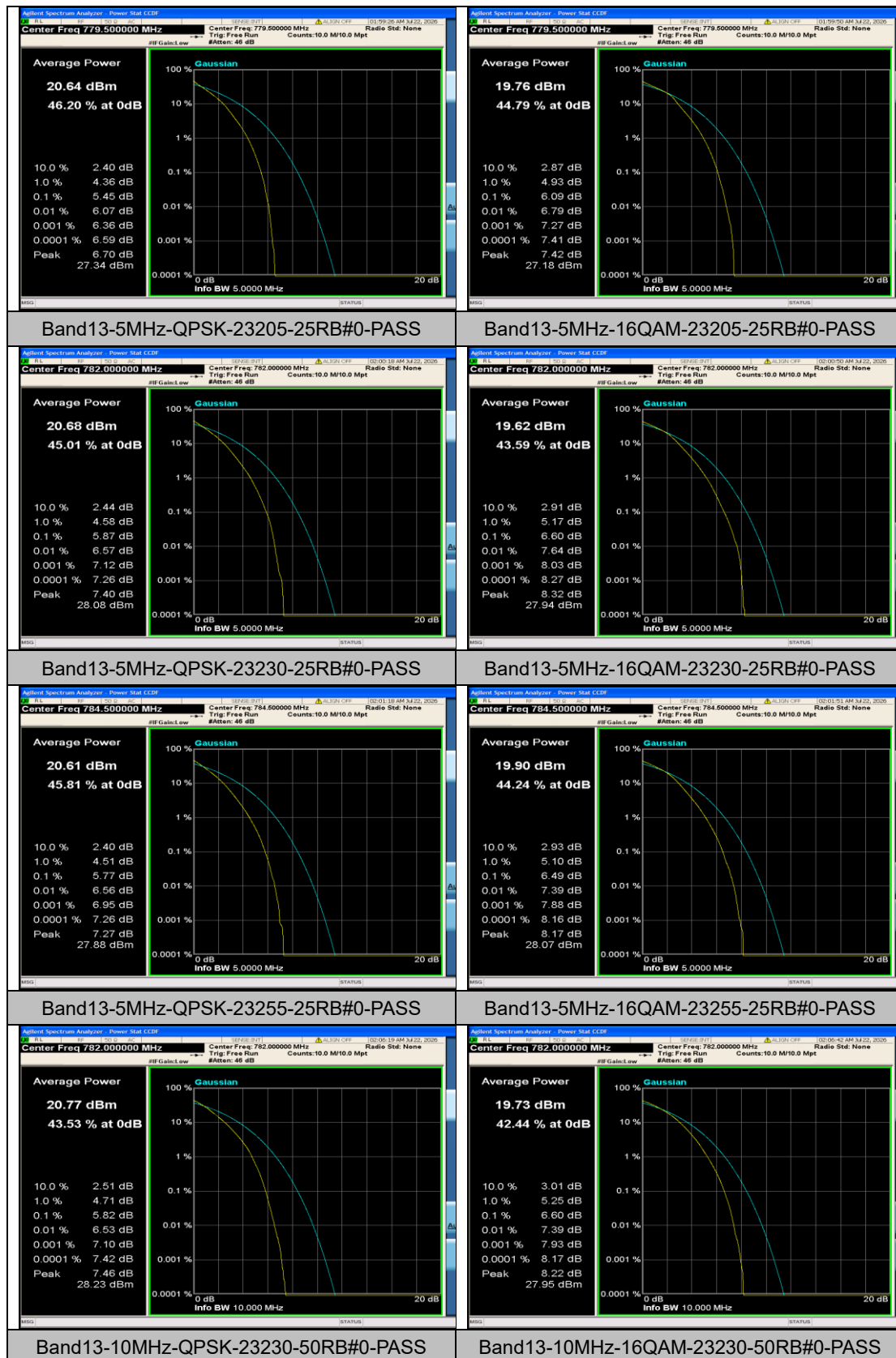
Reviewed By : Eric Wang

Appendix B: Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	5.45	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	6.09	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.87	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	6.60	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.77	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.49	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.82	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	6.60	13	PASS

Test Graphs

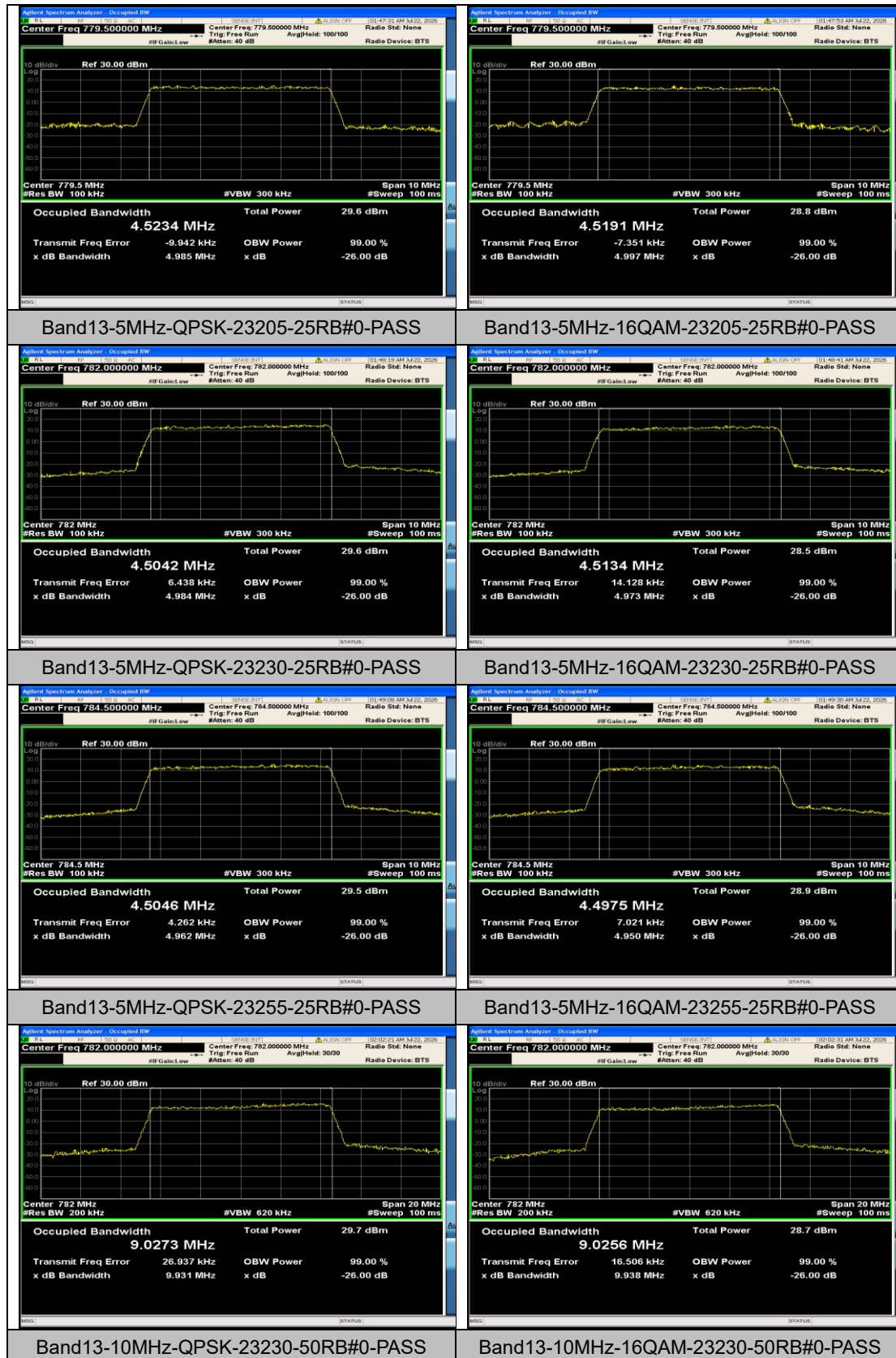


Appendix C: 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5234	4.985	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5191	4.997	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5042	4.984	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5134	4.973	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5046	4.962	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.4975	4.950	PASS
Band13	10MHz	QPSK	23230	50RB#0	9.0273	9.931	PASS
Band13	10MHz	16QAM	23230	50RB#0	9.0256	9.938	PASS

Test Graphs

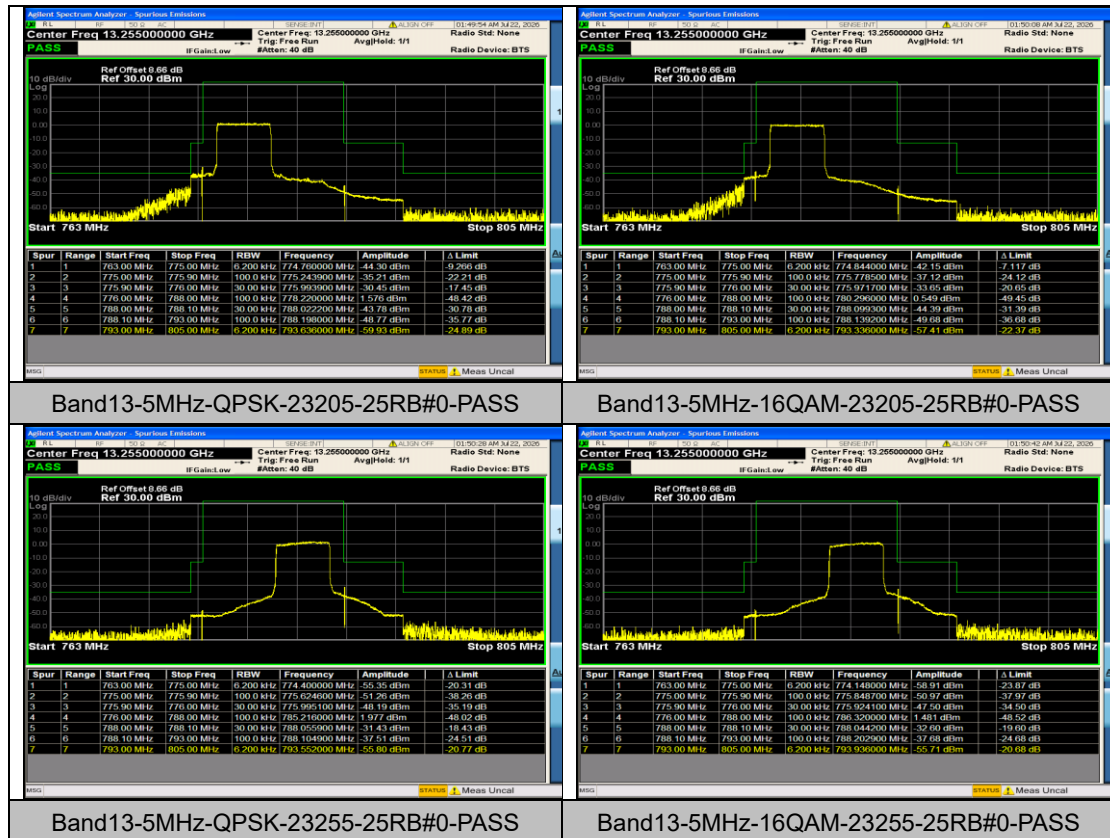


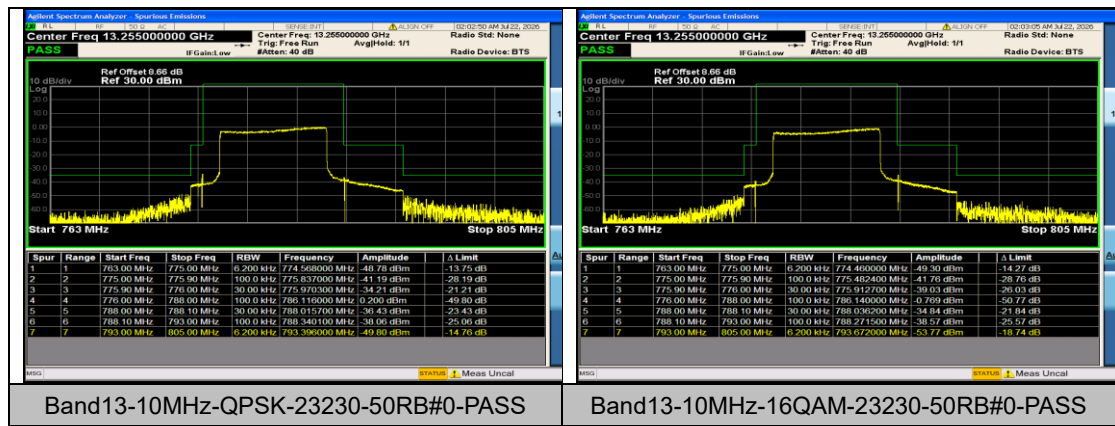
Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	-44.30	PASS
Band13	5MHz	16QAM	23205	25RB#0	-42.15	PASS
Band13	5MHz	QPSK	23255	25RB#0	-31.43	PASS
Band13	5MHz	16QAM	23255	25RB#0	-32.60	PASS
Band13	10MHz	QPSK	23230	50RB#0	-48.78	PASS
Band13	10MHz	16QAM	23230	50RB#0	-49.30	PASS

Test Graphs





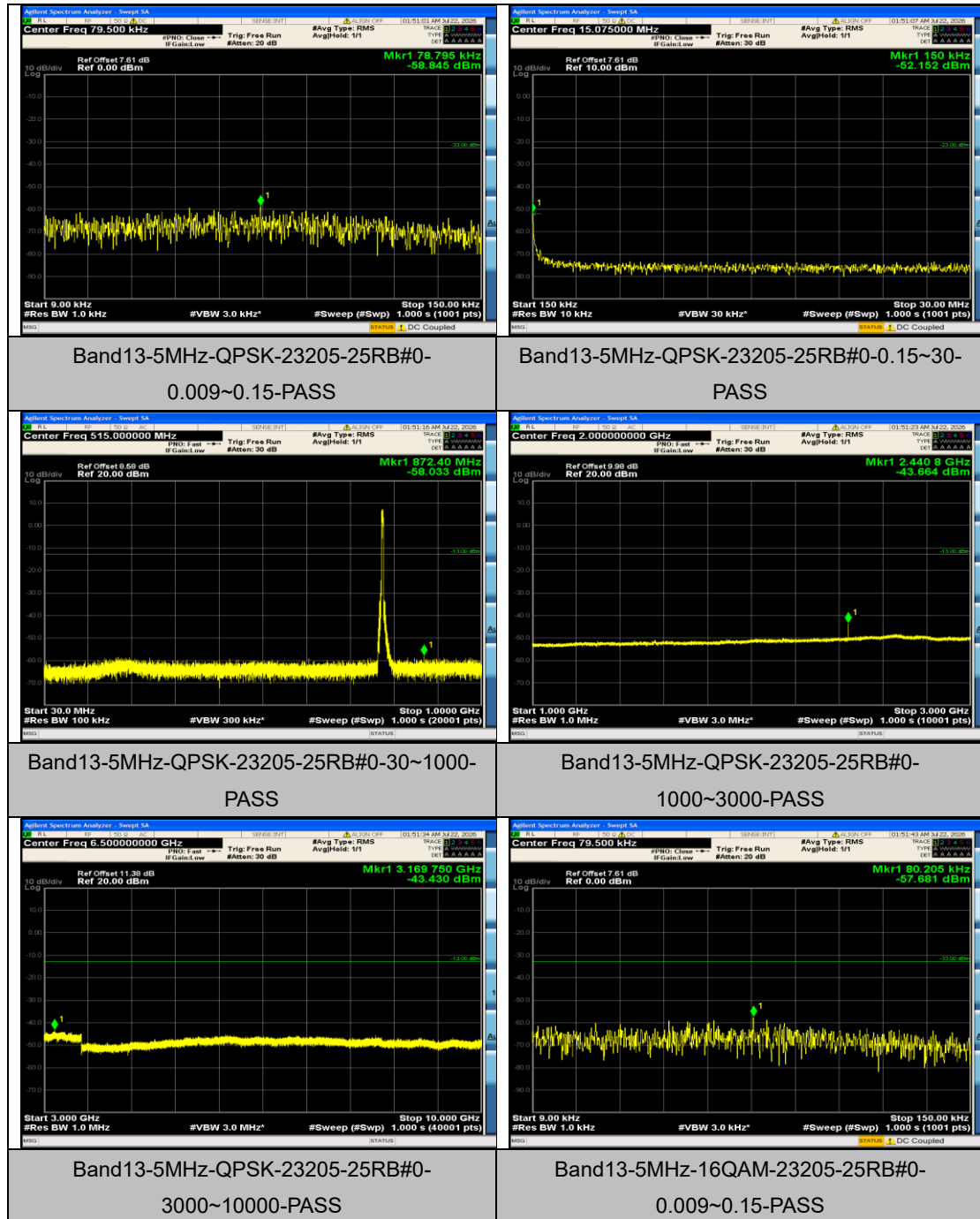
Appendix E: Conducted Spurious Emission

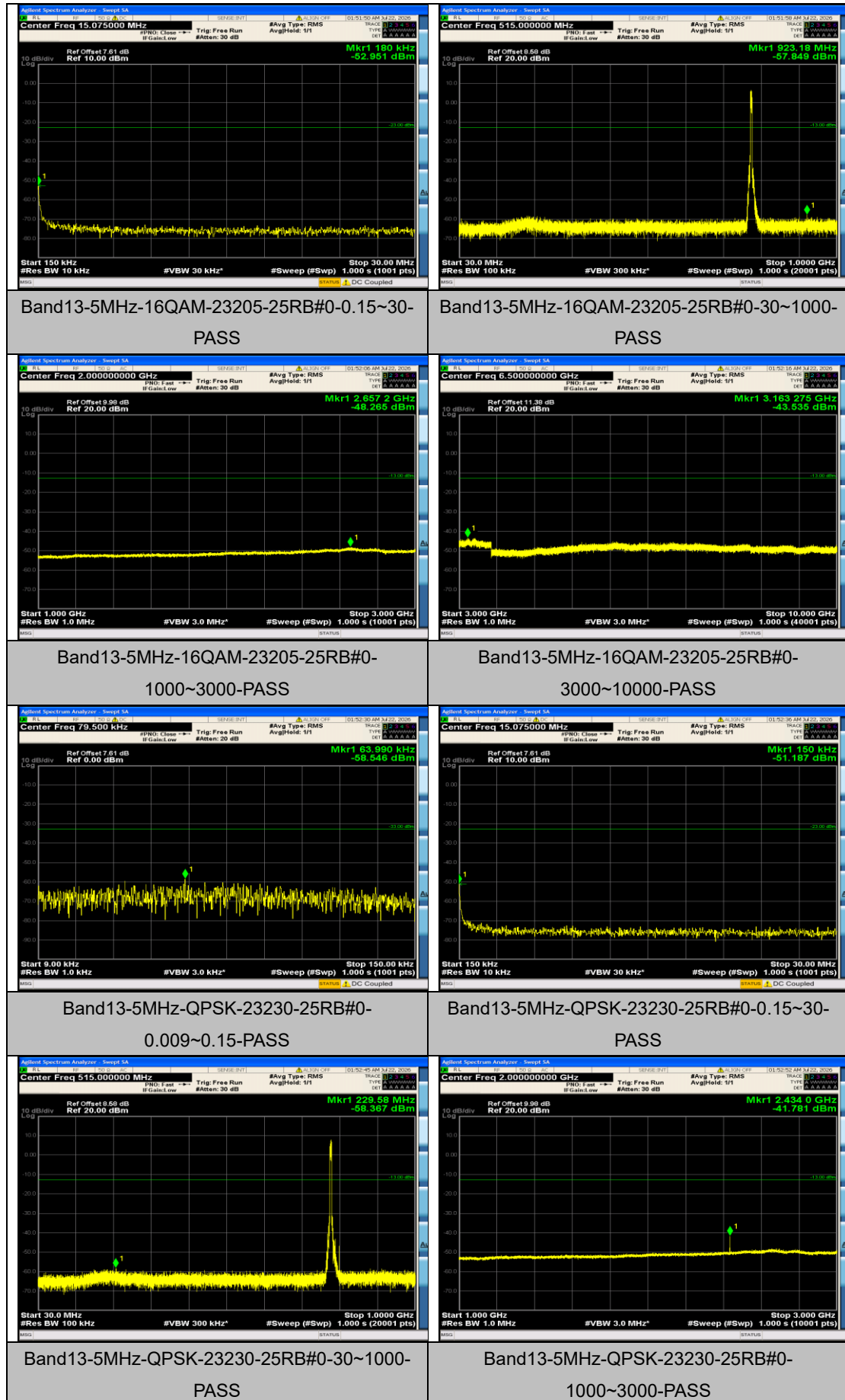
Test Result

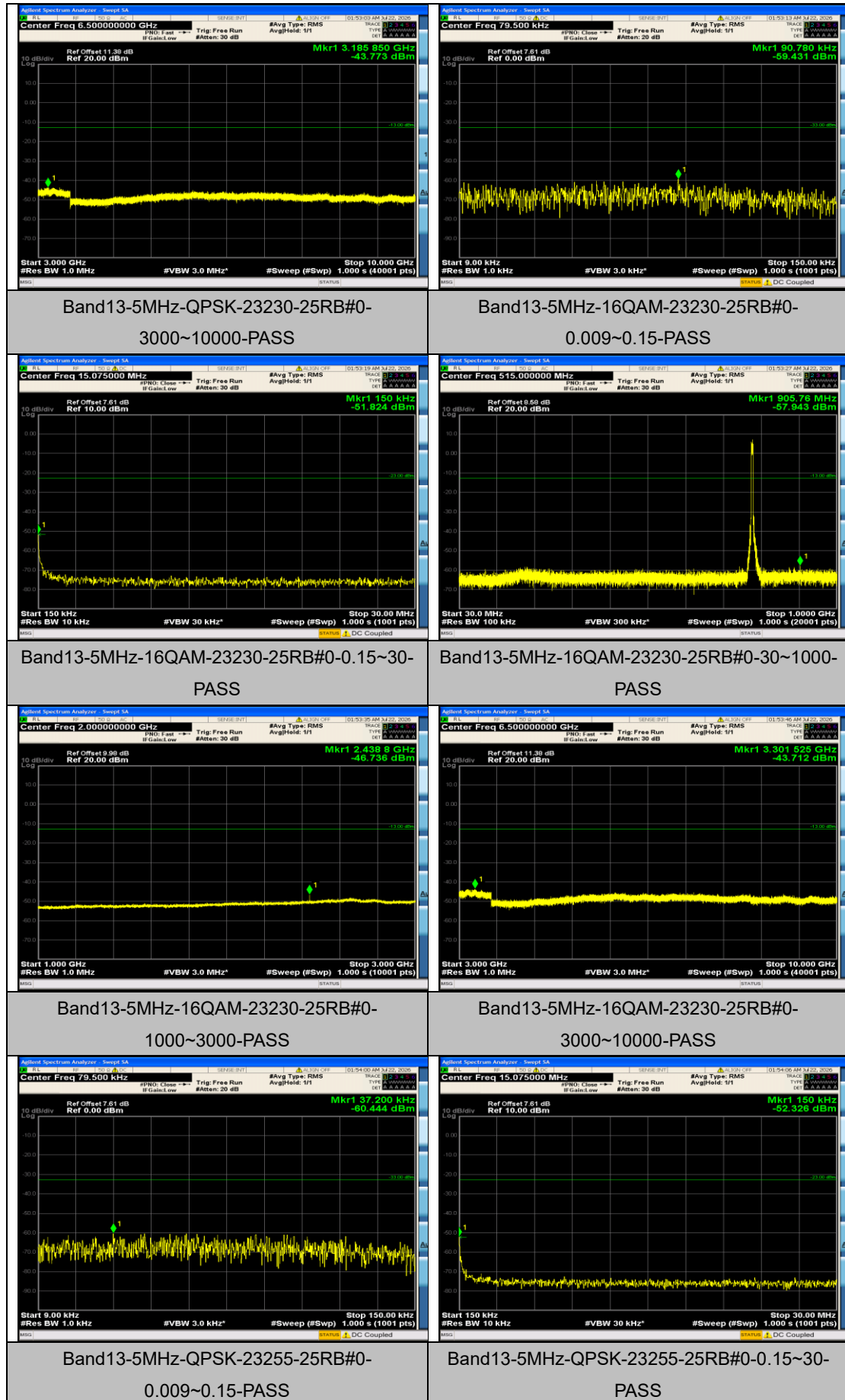
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	0.009~0.15	-58.85	PASS
Band13	5MHz	QPSK	23205	25RB#0	0.15~30	-52.15	PASS
Band13	5MHz	QPSK	23205	25RB#0	30~1000	-58.03	PASS
Band13	5MHz	QPSK	23205	25RB#0	1000~3000	-43.66	PASS
Band13	5MHz	QPSK	23205	25RB#0	3000~10000	-43.43	PASS
Band13	5MHz	16QAM	23205	25RB#0	0.009~0.15	-57.68	PASS
Band13	5MHz	16QAM	23205	25RB#0	0.15~30	-52.95	PASS
Band13	5MHz	16QAM	23205	25RB#0	30~1000	-57.85	PASS
Band13	5MHz	16QAM	23205	25RB#0	1000~3000	-48.27	PASS
Band13	5MHz	16QAM	23205	25RB#0	3000~10000	-43.54	PASS
Band13	5MHz	QPSK	23230	25RB#0	0.009~0.15	-58.55	PASS
Band13	5MHz	QPSK	23230	25RB#0	0.15~30	-51.19	PASS
Band13	5MHz	QPSK	23230	25RB#0	30~1000	-58.37	PASS
Band13	5MHz	QPSK	23230	25RB#0	1000~3000	-41.78	PASS
Band13	5MHz	QPSK	23230	25RB#0	3000~10000	-43.77	PASS
Band13	5MHz	16QAM	23230	25RB#0	0.009~0.15	-59.43	PASS
Band13	5MHz	16QAM	23230	25RB#0	0.15~30	-51.82	PASS
Band13	5MHz	16QAM	23230	25RB#0	30~1000	-57.94	PASS
Band13	5MHz	16QAM	23230	25RB#0	1000~3000	-46.74	PASS
Band13	5MHz	16QAM	23230	25RB#0	3000~10000	-43.71	PASS
Band13	5MHz	QPSK	23255	25RB#0	0.009~0.15	-60.44	PASS
Band13	5MHz	QPSK	23255	25RB#0	0.15~30	-52.33	PASS
Band13	5MHz	QPSK	23255	25RB#0	30~1000	-58.73	PASS
Band13	5MHz	QPSK	23255	25RB#0	1000~3000	-47.45	PASS
Band13	5MHz	QPSK	23255	25RB#0	3000~10000	-43.64	PASS
Band13	5MHz	16QAM	23255	25RB#0	0.009~0.15	-57.94	PASS
Band13	5MHz	16QAM	23255	25RB#0	0.15~30	-52.41	PASS
Band13	5MHz	16QAM	23255	25RB#0	30~1000	-57.93	PASS
Band13	5MHz	16QAM	23255	25RB#0	1000~3000	-48.25	PASS
Band13	5MHz	16QAM	23255	25RB#0	3000~10000	-43.26	PASS
Band13	10MHz	QPSK	23230	50RB#0	0.009~0.15	-59.55	PASS
Band13	10MHz	QPSK	23230	50RB#0	0.15~30	-52.89	PASS
Band13	10MHz	QPSK	23230	50RB#0	30~1000	-55.95	PASS
Band13	10MHz	QPSK	23230	50RB#0	1000~3000	-48.40	PASS
Band13	10MHz	QPSK	23230	50RB#0	3000~10000	-43.44	PASS
Band13	10MHz	16QAM	23230	50RB#0	0.009~0.15	-59.40	PASS

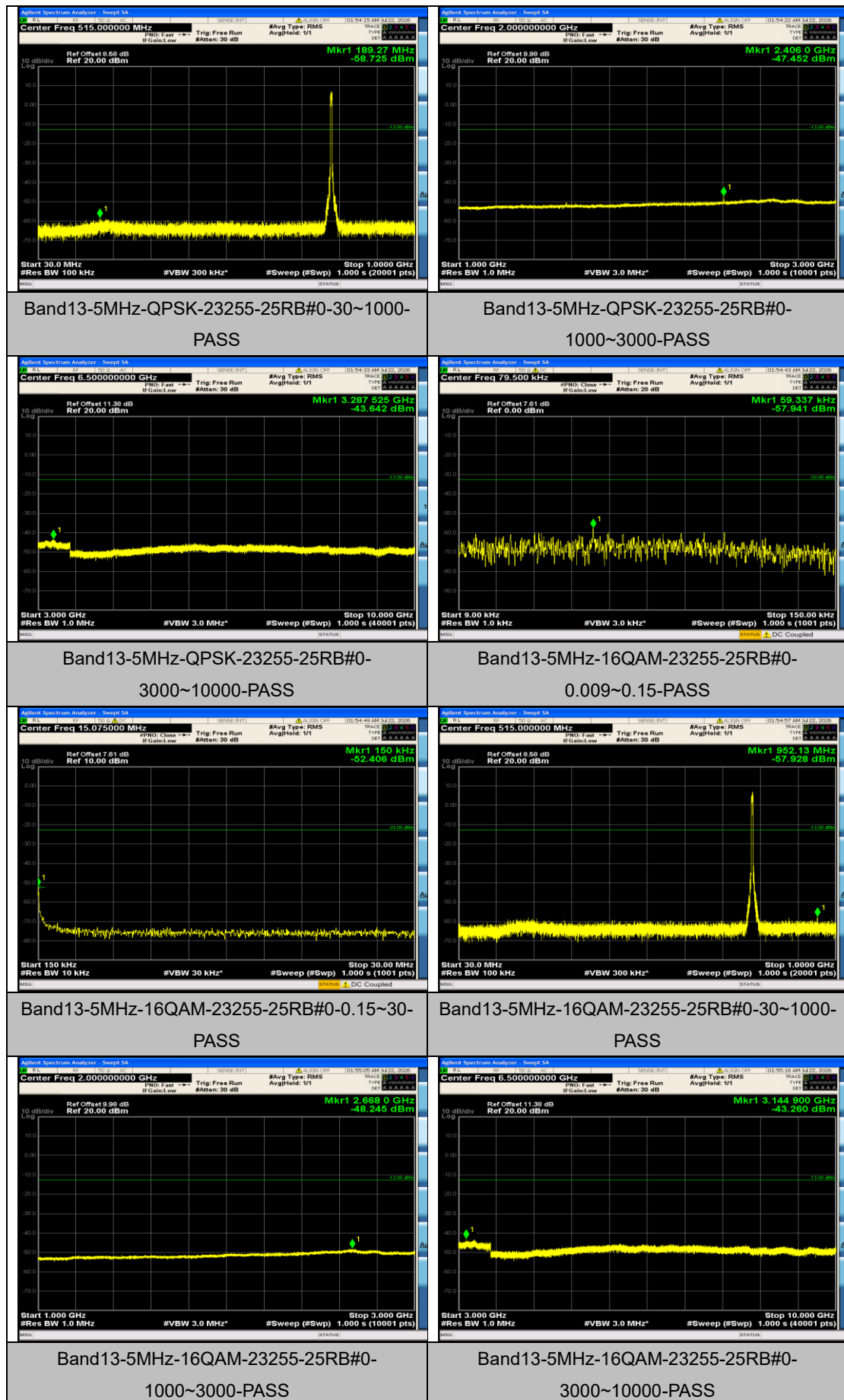
Band13	10MHz	16QAM	23230	50RB#0	0.15~30	-51.40	PASS
Band13	10MHz	16QAM	23230	50RB#0	30~1000	-56.05	PASS
Band13	10MHz	16QAM	23230	50RB#0	1000~3000	-44.27	PASS
Band13	10MHz	16QAM	23230	50RB#0	3000~10000	-43.72	PASS

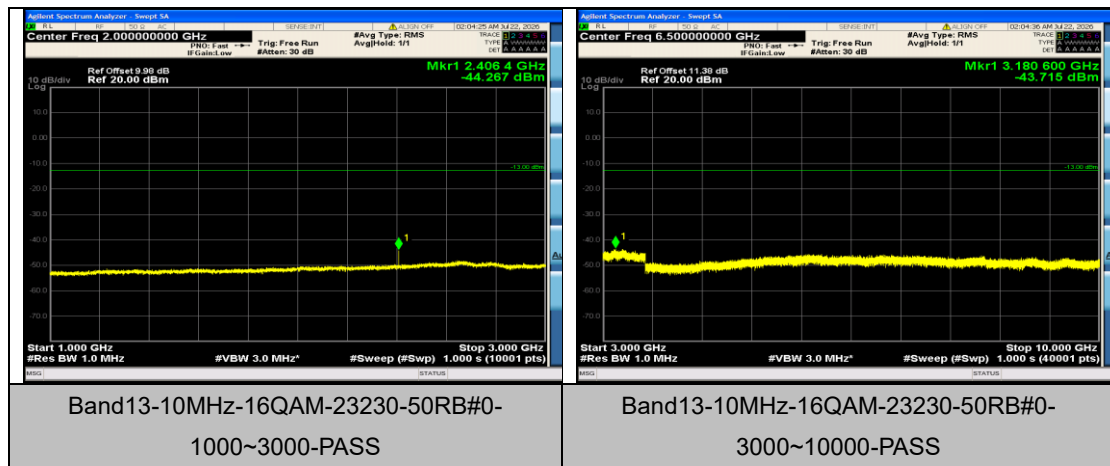
Test Graphs











Appendix F: Frequency Stability

Test Result

Temperature										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	NV	-30	-13.45	-0.017255	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	-20	-16.32	-0.020936	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	-10	-20.46	-0.026248	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	0	-22.54	-0.028916	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	10	-24.55	-0.031495	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	20	-23.80	-0.030532	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	30	-26.05	-0.033419	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	40	-28.15	-0.036113	±2.5	PASS
Band13	5MHz	QPSK	23205	25RB#0	NV	50	-27.12	-0.034792	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	-30	-28.97	-0.037165	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	-20	-30.67	-0.039346	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	-10	-30.16	-0.038691	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	0	-28.64	-0.036742	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	10	-27.97	-0.035882	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	20	-25.26	-0.032405	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	30	-24.00	-0.030789	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	40	-22.16	-0.028428	±2.5	PASS
Band13	5MHz	16QAM	23205	25RB#0	NV	50	-20.21	-0.025927	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	-30	2.42	0.003095	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	-20	-2.45	-0.003133	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	-10	-5.46	-0.006982	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	0	-8.90	-0.011381	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	10	-11.19	-0.014309	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	20	-13.86	-0.017724	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	30	-14.75	-0.018862	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	40	-19.80	-0.025320	±2.5	PASS
Band13	5MHz	QPSK	23230	25RB#0	NV	50	-22.63	-0.028939	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	-30	-28.71	-0.036714	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	-20	-29.73	-0.038018	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	-10	-27.87	-0.035639	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	0	-25.99	-0.033235	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	10	-25.28	-0.032327	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	20	-24.23	-0.030985	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	30	-21.59	-0.027609	±2.5	PASS
Band13	5MHz	16QAM	23230	25RB#0	NV	40	-20.36	-0.026036	±2.5	PASS

Band13	5MHz	16QAM	23230	25RB#0	NV	50	-18.84	-0.024092	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	-30	3.49	0.004449	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	-20	-2.79	-0.003556	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	-10	-3.89	-0.004959	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	0	-3.19	-0.004066	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	10	-3.23	-0.004117	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	20	-3.25	-0.004143	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	30	-2.35	-0.002996	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	40	-3.60	-0.004589	±2.5	PASS
Band13	5MHz	QPSK	23255	25RB#0	NV	50	-5.41	-0.006896	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	-30	-3.68	-0.004691	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	-20	-3.92	-0.004997	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	-10	-6.24	-0.007954	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	0	-3.22	-0.004105	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	10	-2.76	-0.003518	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	20	3.30	0.004207	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	30	4.86	0.006195	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	40	7.51	0.009573	±2.5	PASS
Band13	5MHz	16QAM	23255	25RB#0	NV	50	7.75	0.009879	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-30	2.53	0.003235	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-20	2.50	0.003197	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	-10	2.65	0.003389	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	0	2.43	0.003107	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	10	2.85	0.003645	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	20	0.83	0.001061	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	30	3.48	0.004450	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	40	2.52	0.003223	±2.5	PASS
Band13	10MHz	QPSK	23230	50RB#0	NV	50	2.00	0.002558	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-30	6.59	0.008427	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-20	6.62	0.008465	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	-10	9.78	0.012506	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	0	9.64	0.012327	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	10	7.48	0.009565	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	20	6.84	0.008747	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	30	8.21	0.010499	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	40	9.28	0.011867	±2.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	NV	50	10.61	0.013568	±2.5	PASS