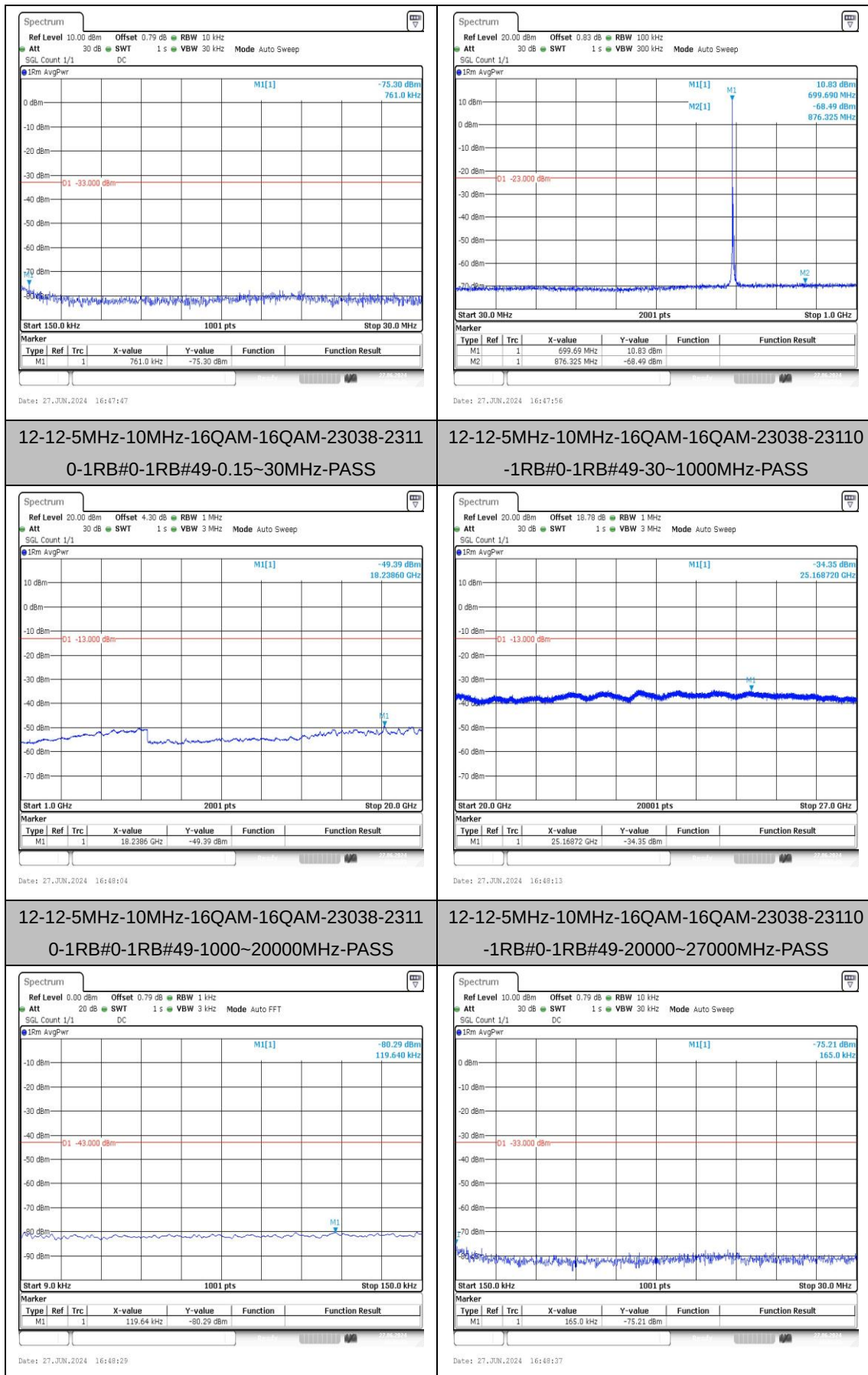
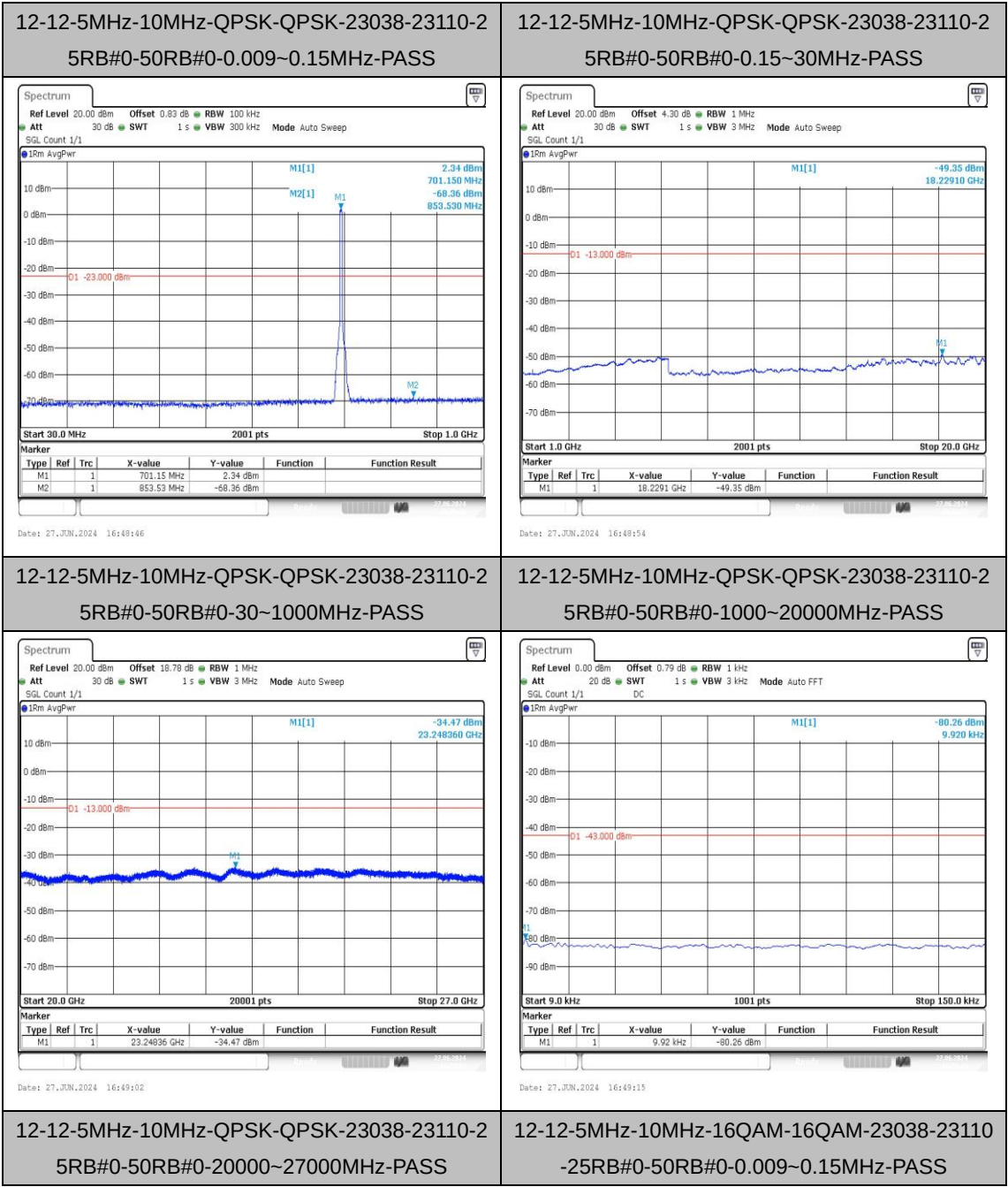
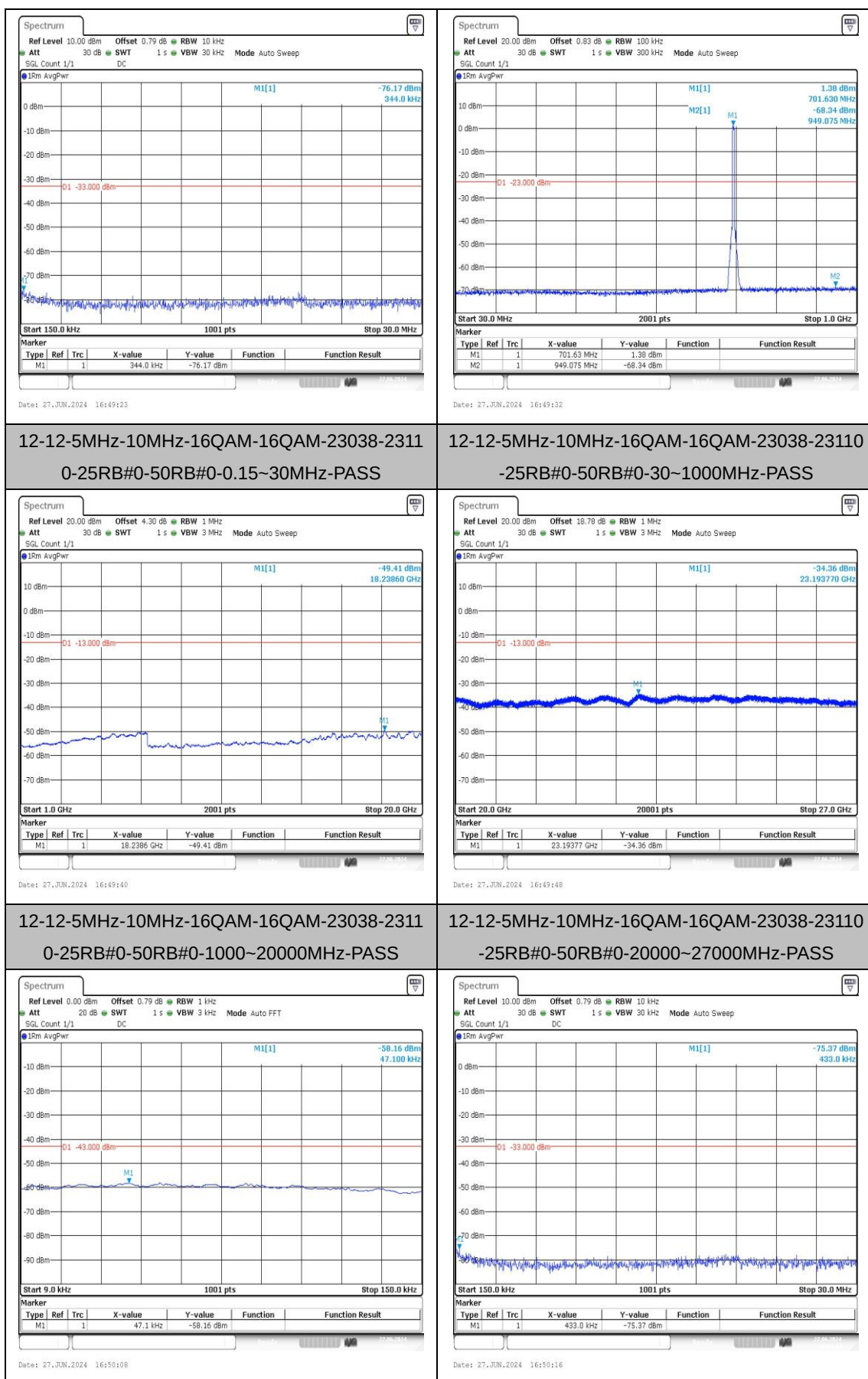
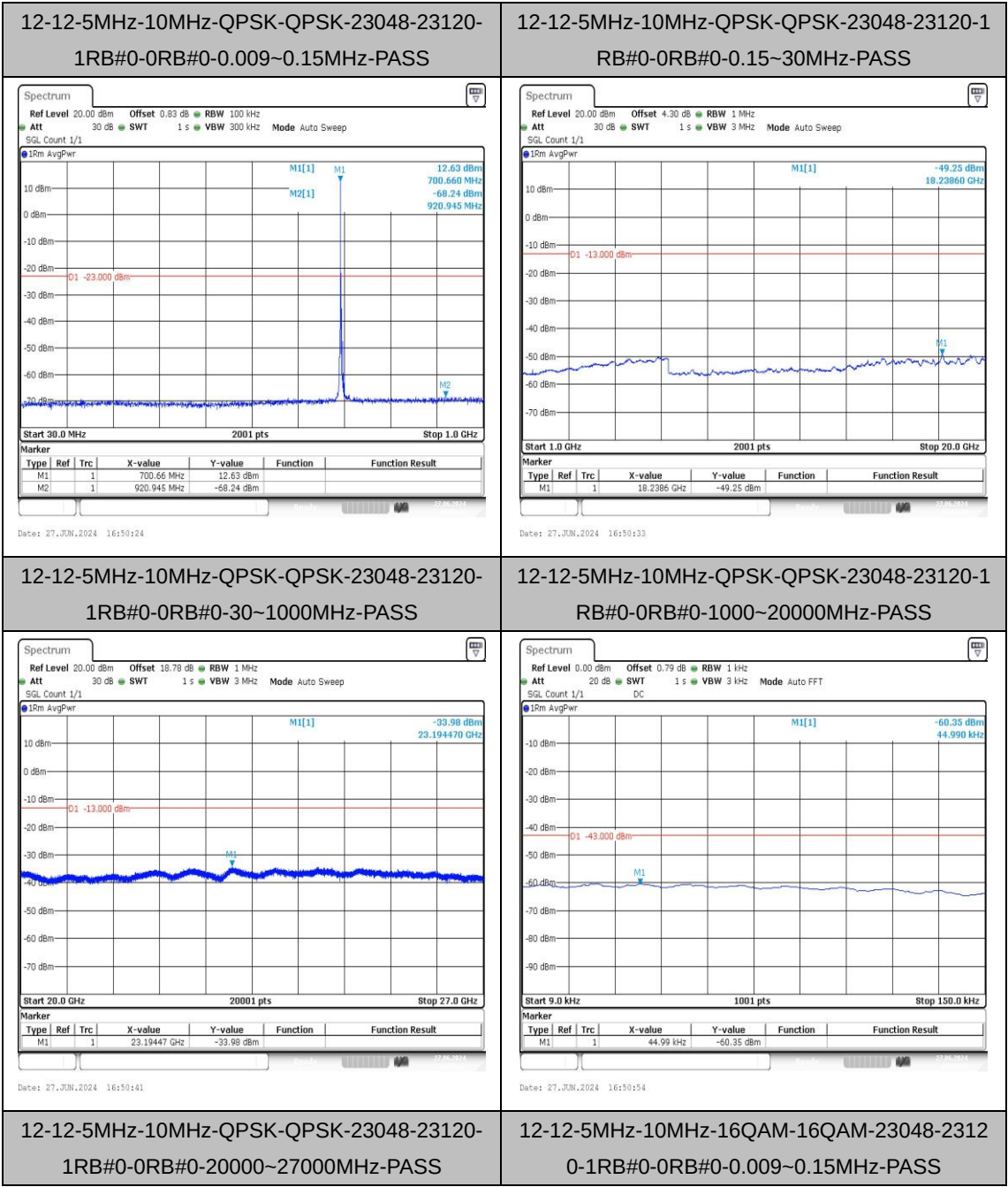
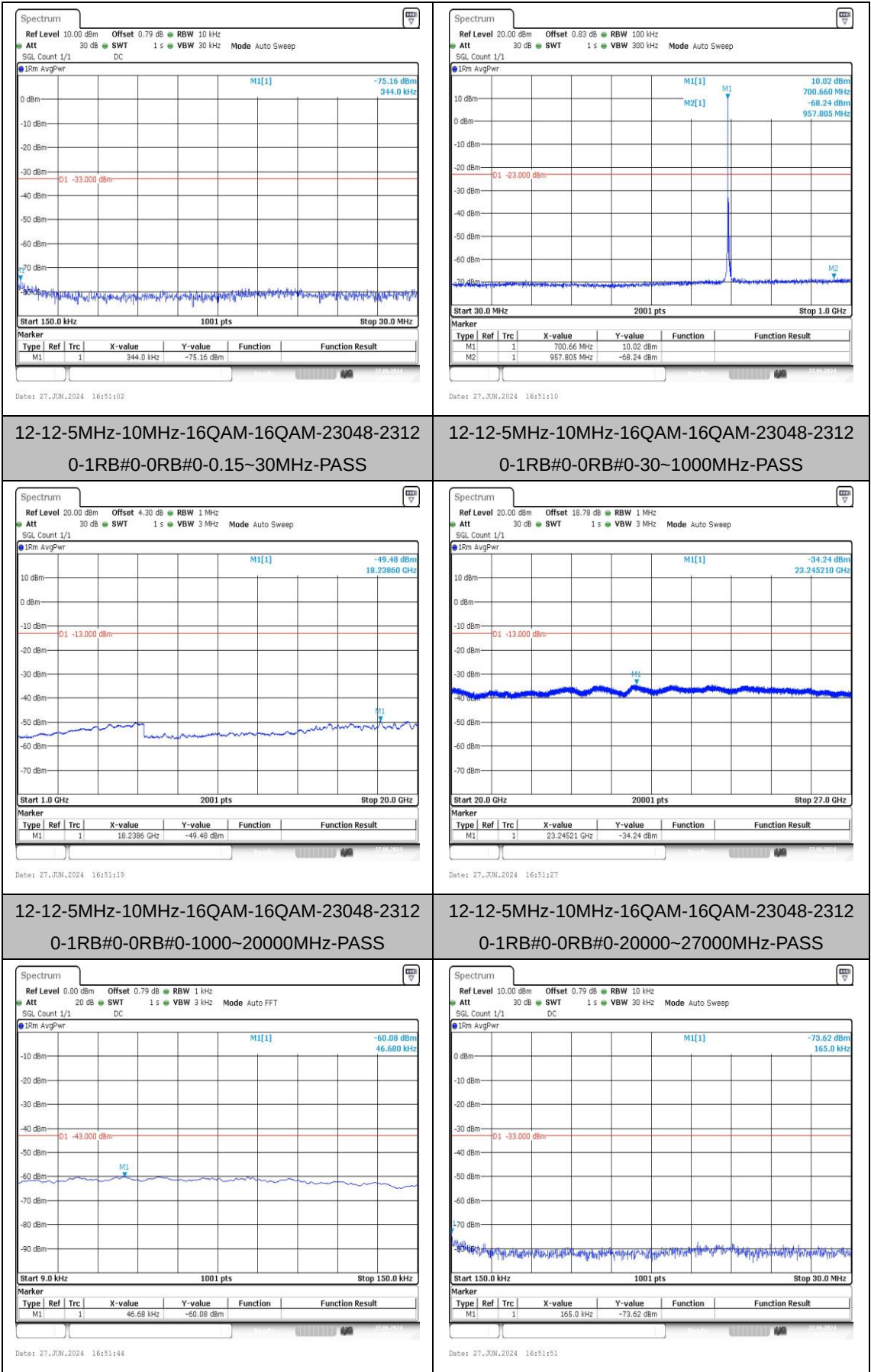


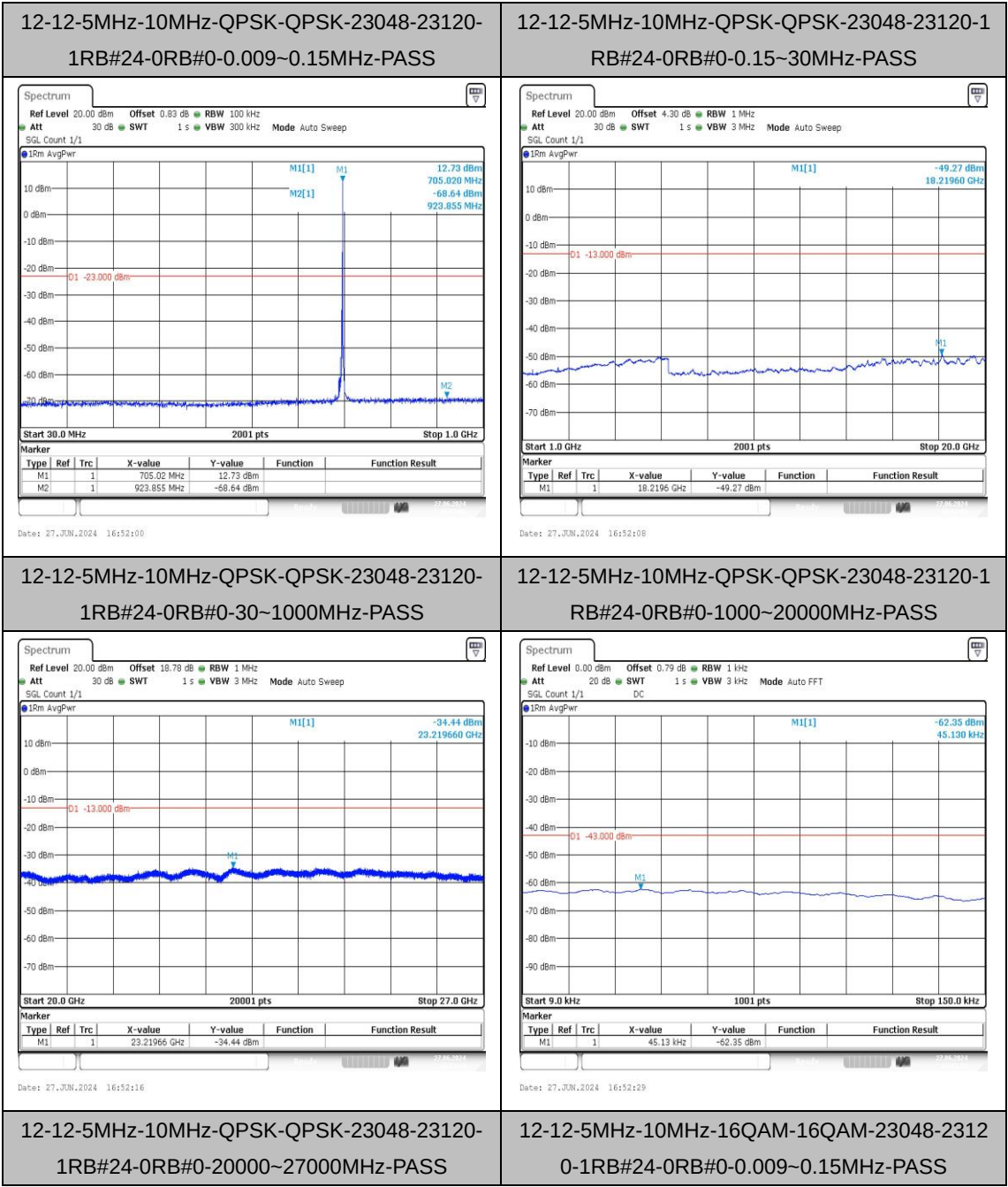


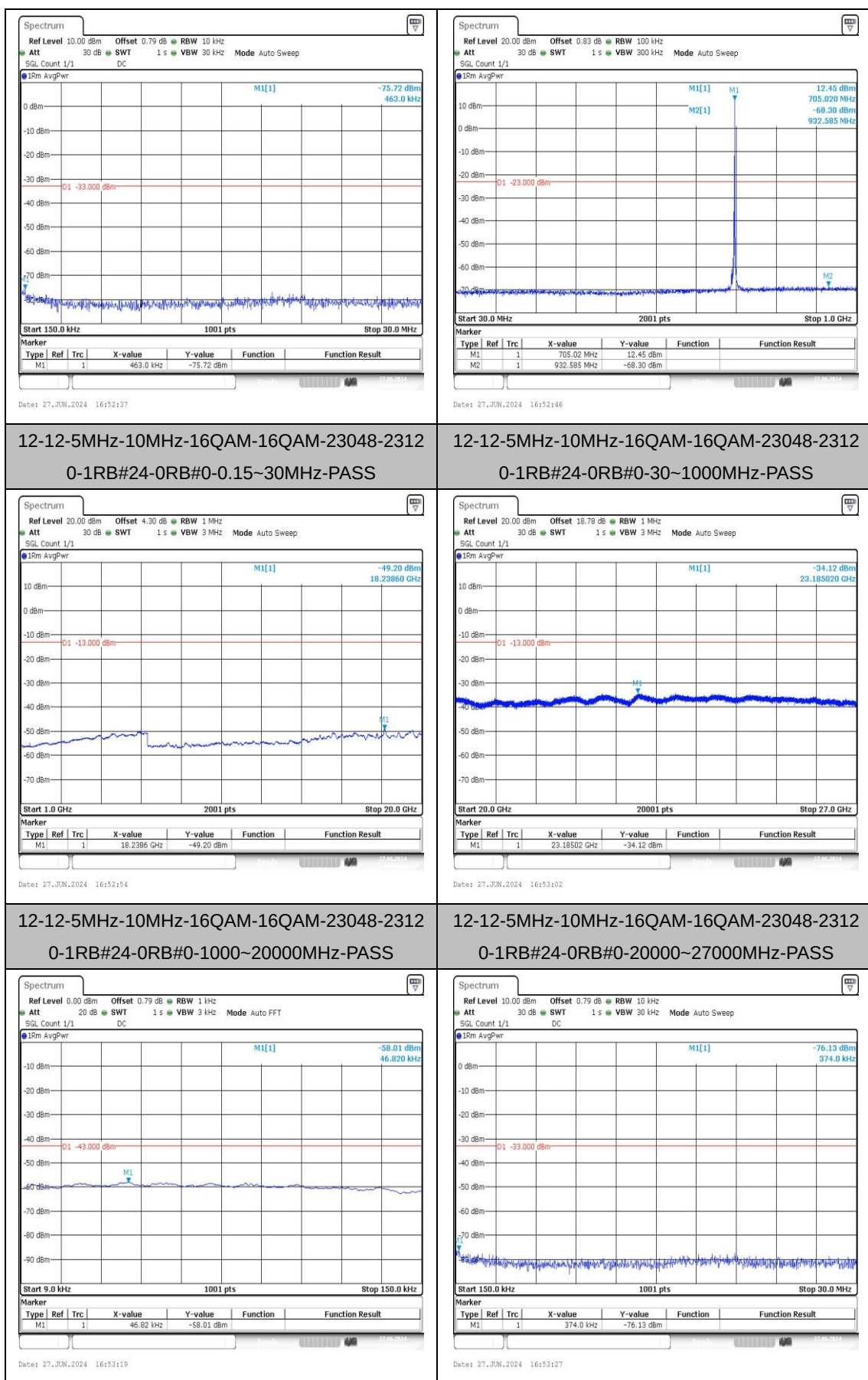


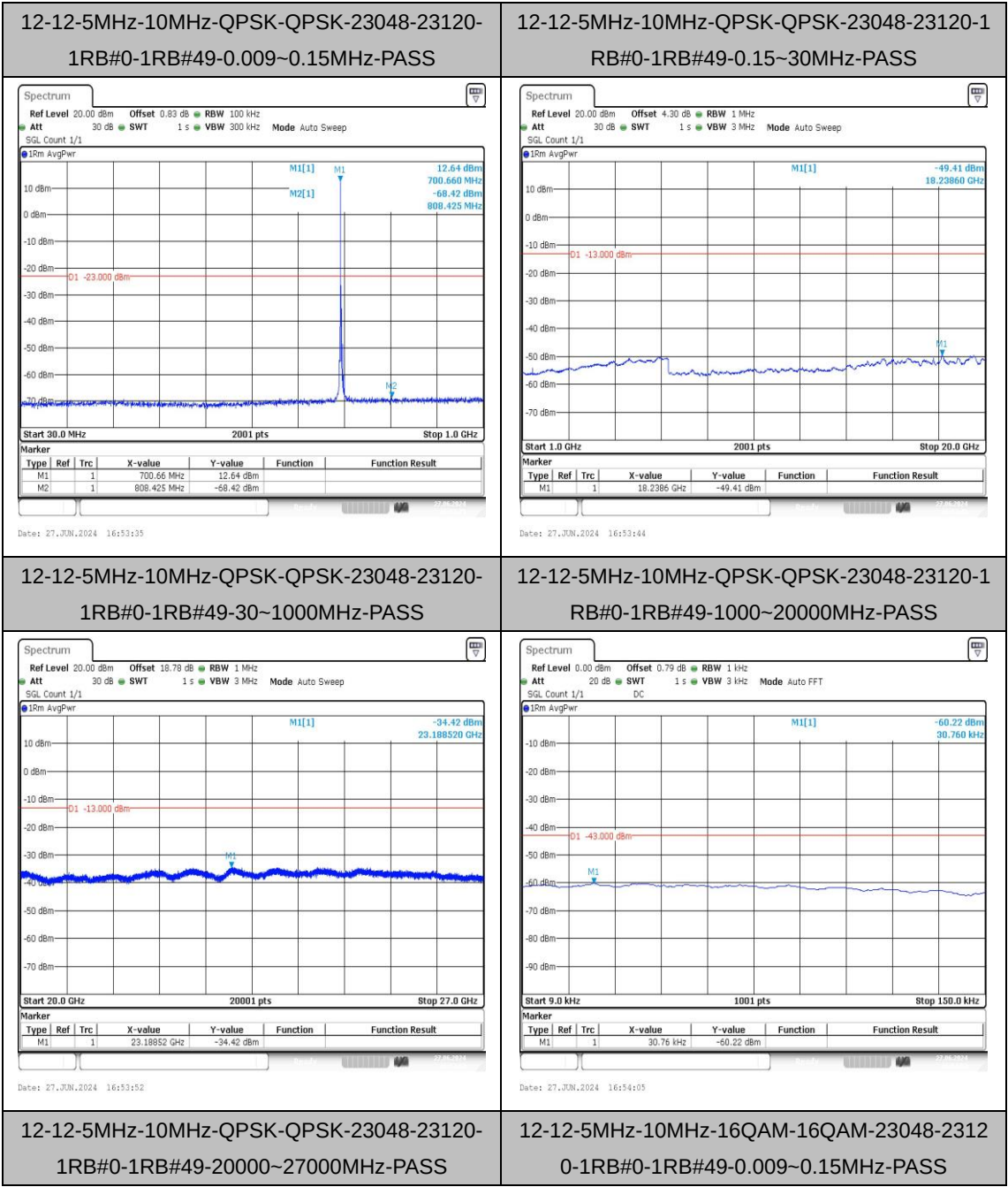


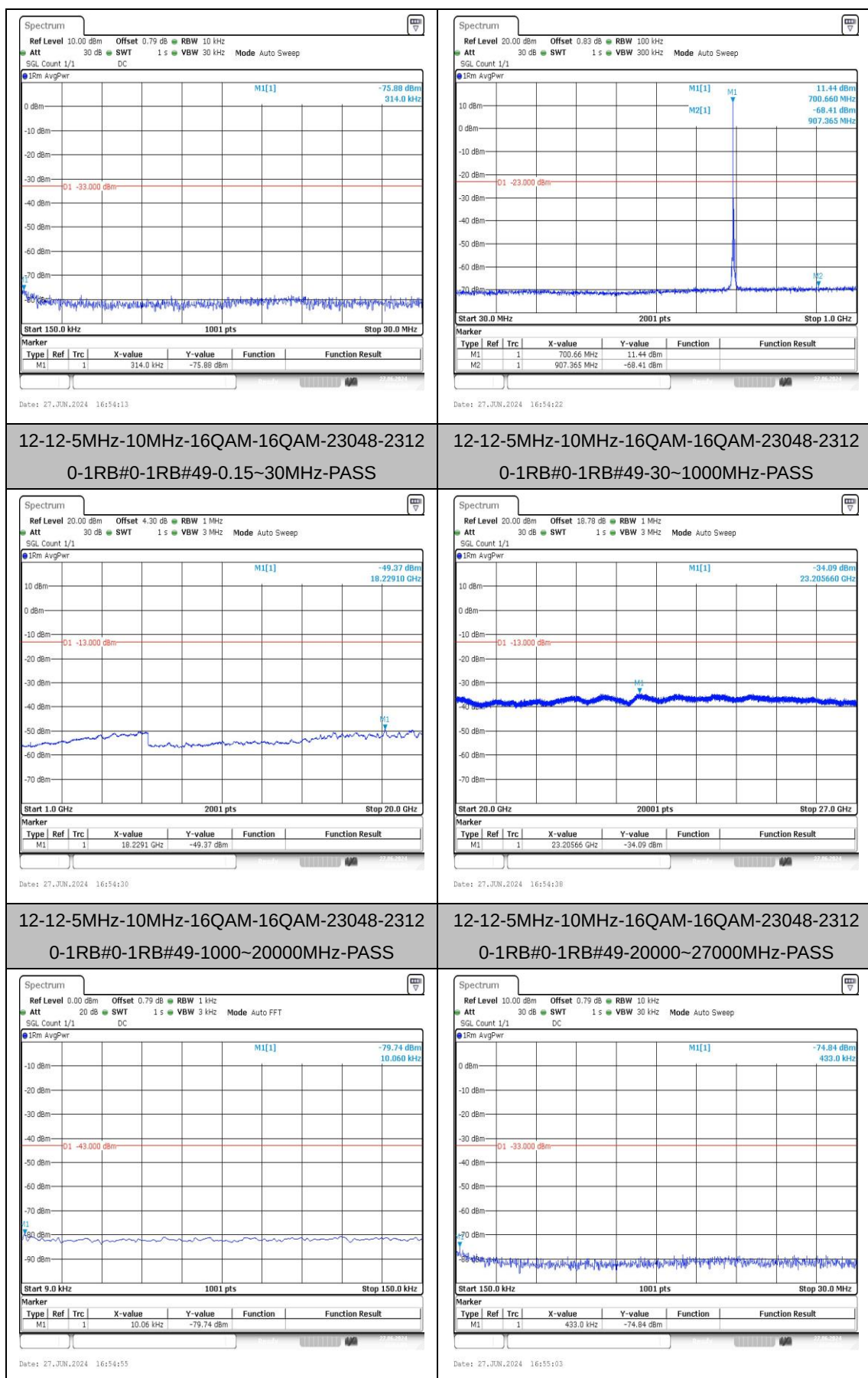


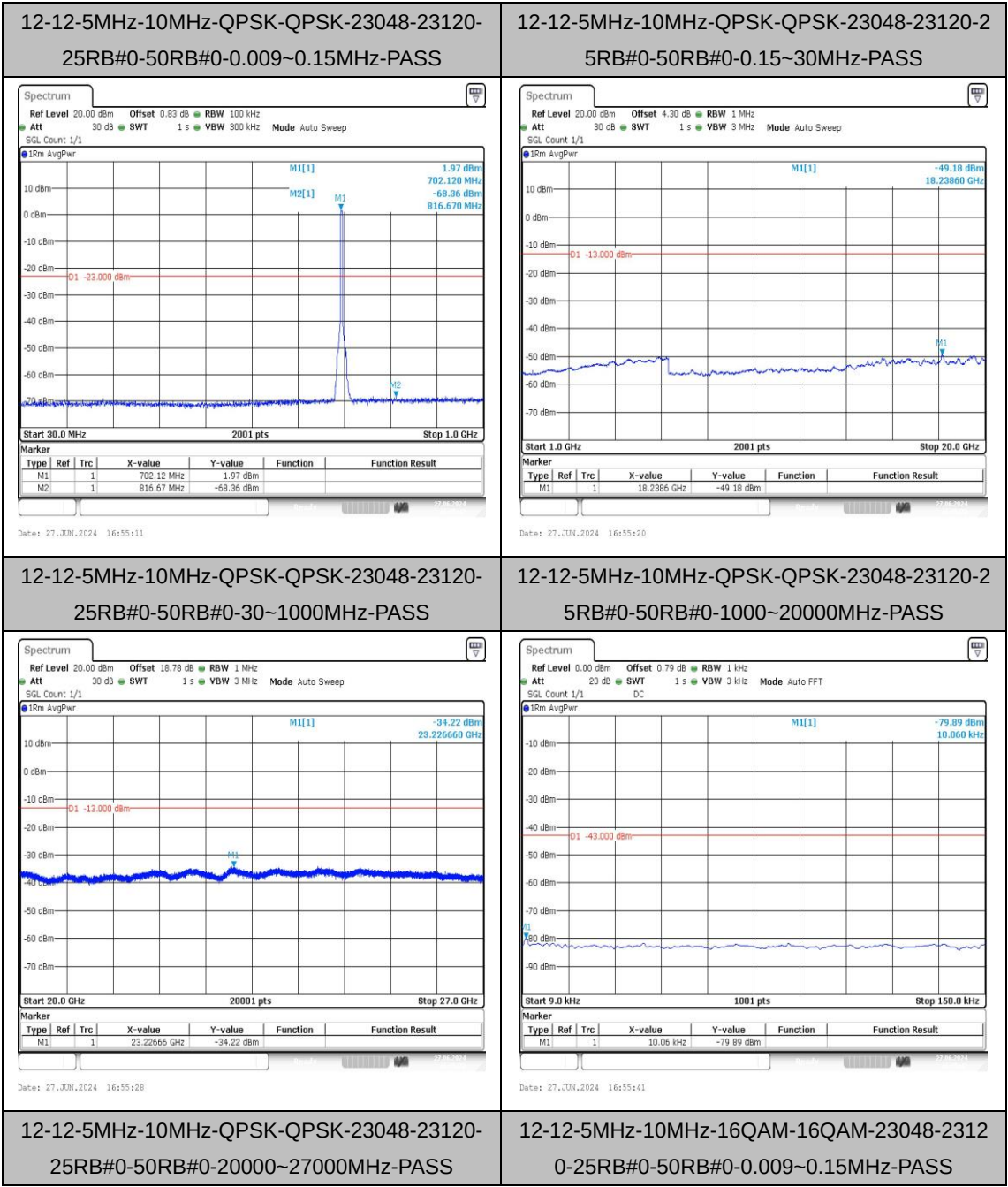


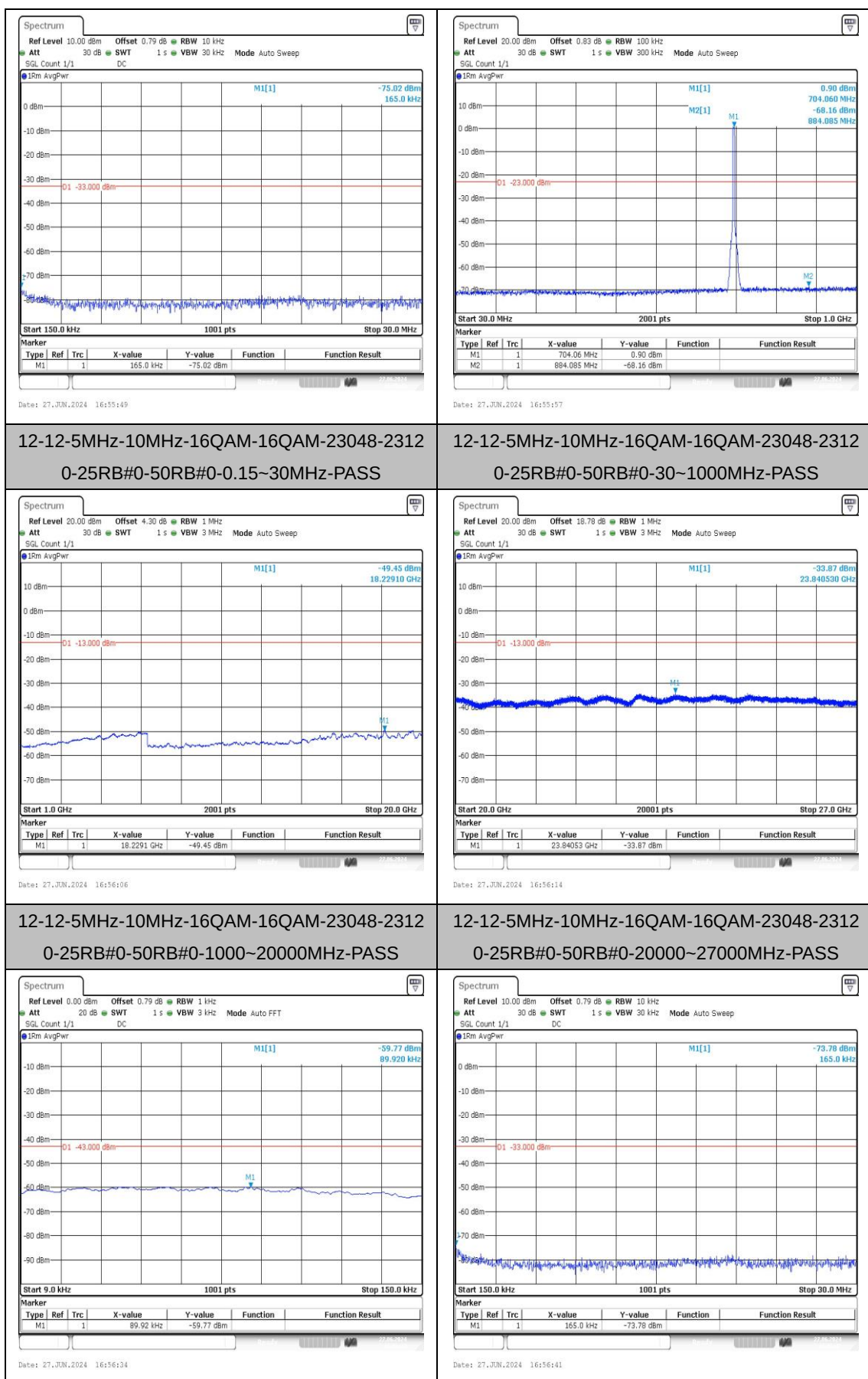


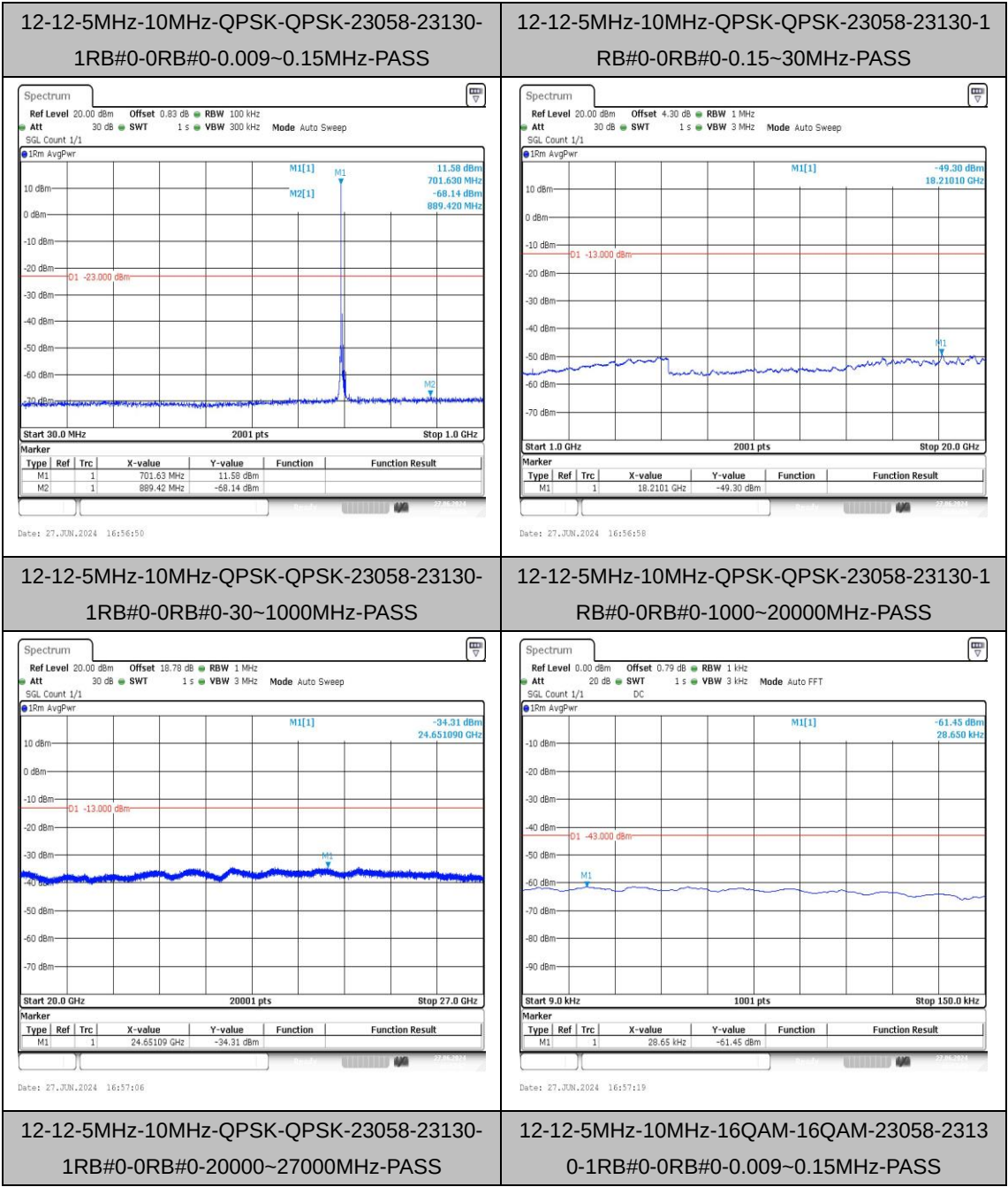


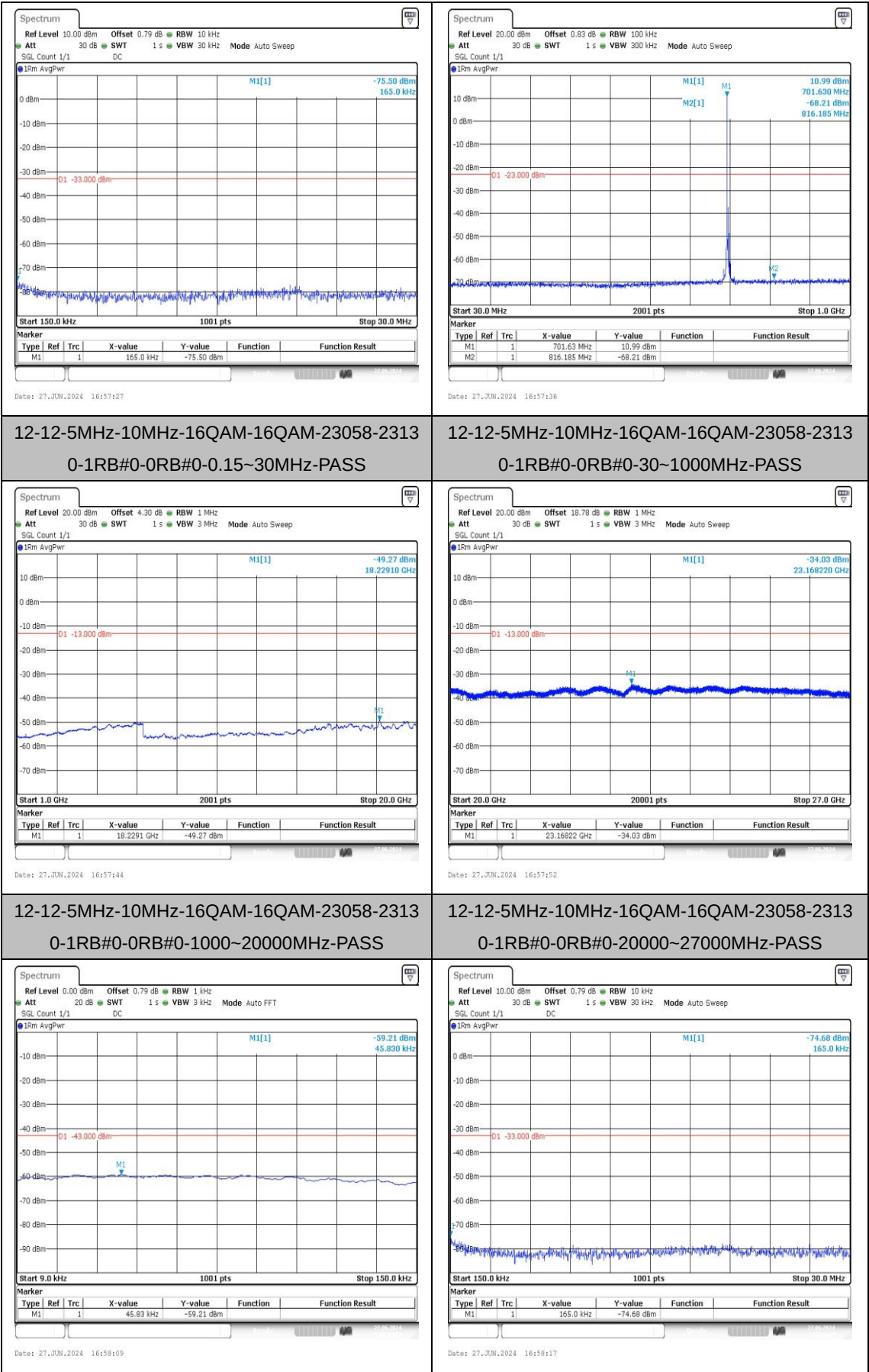


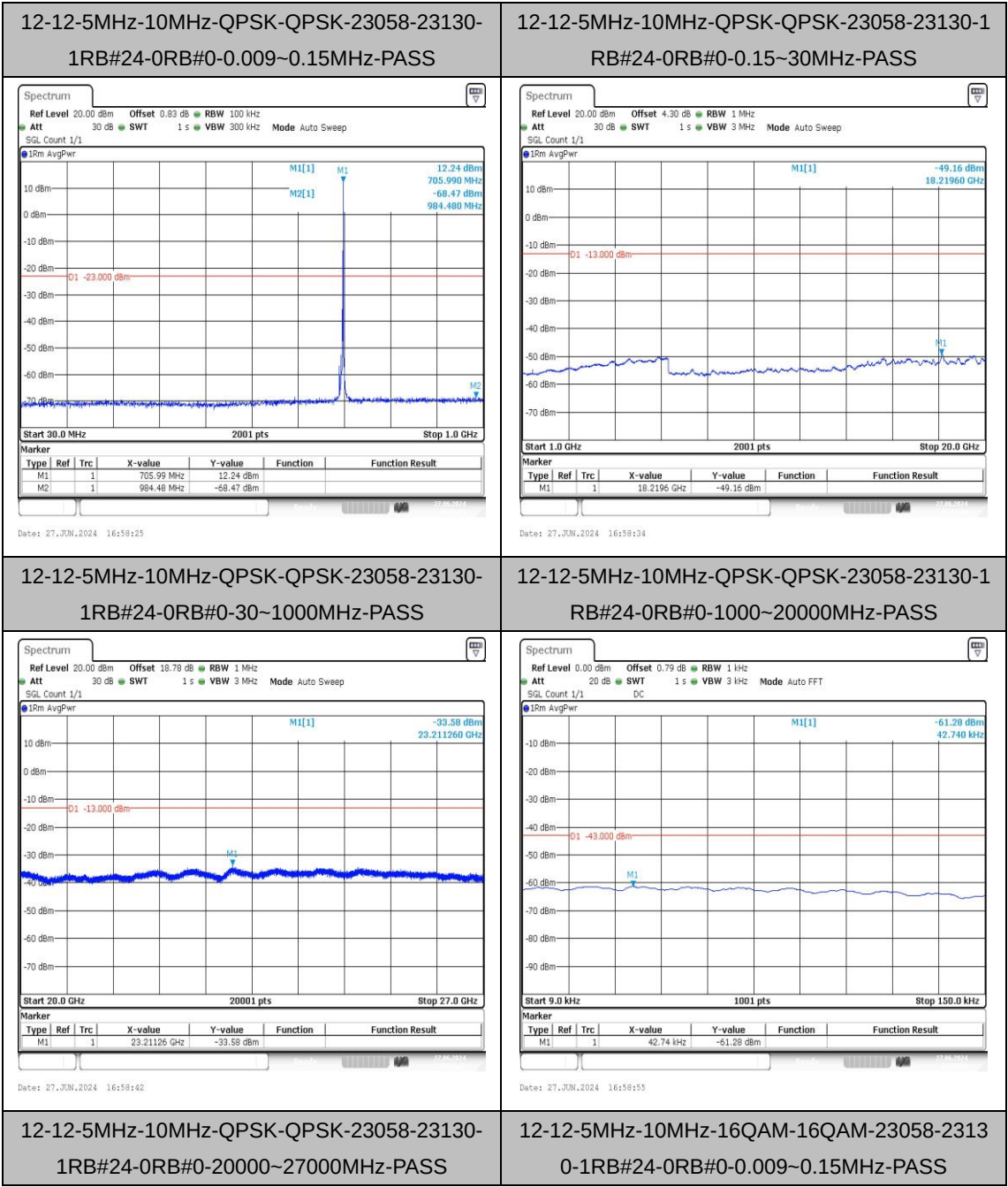


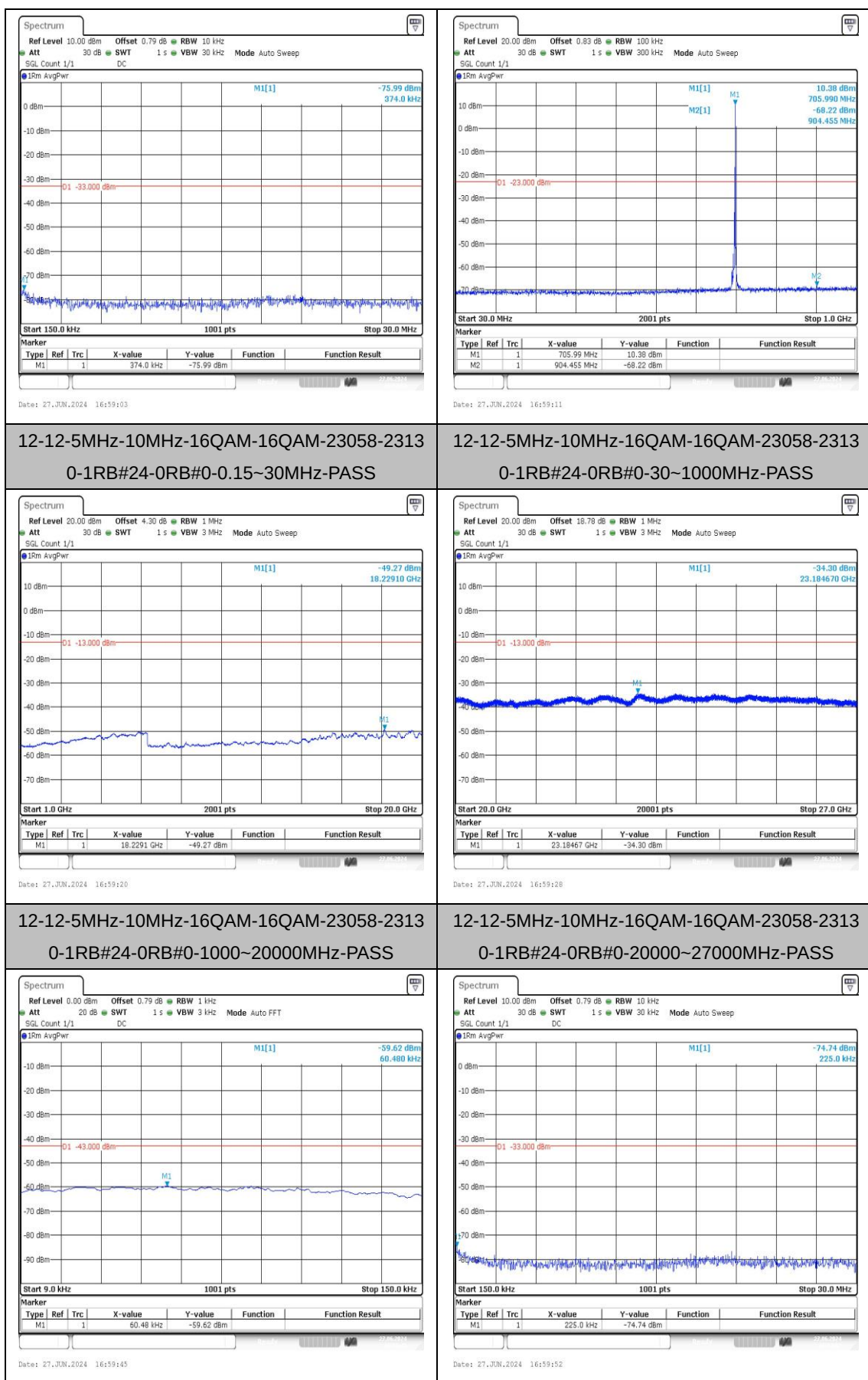


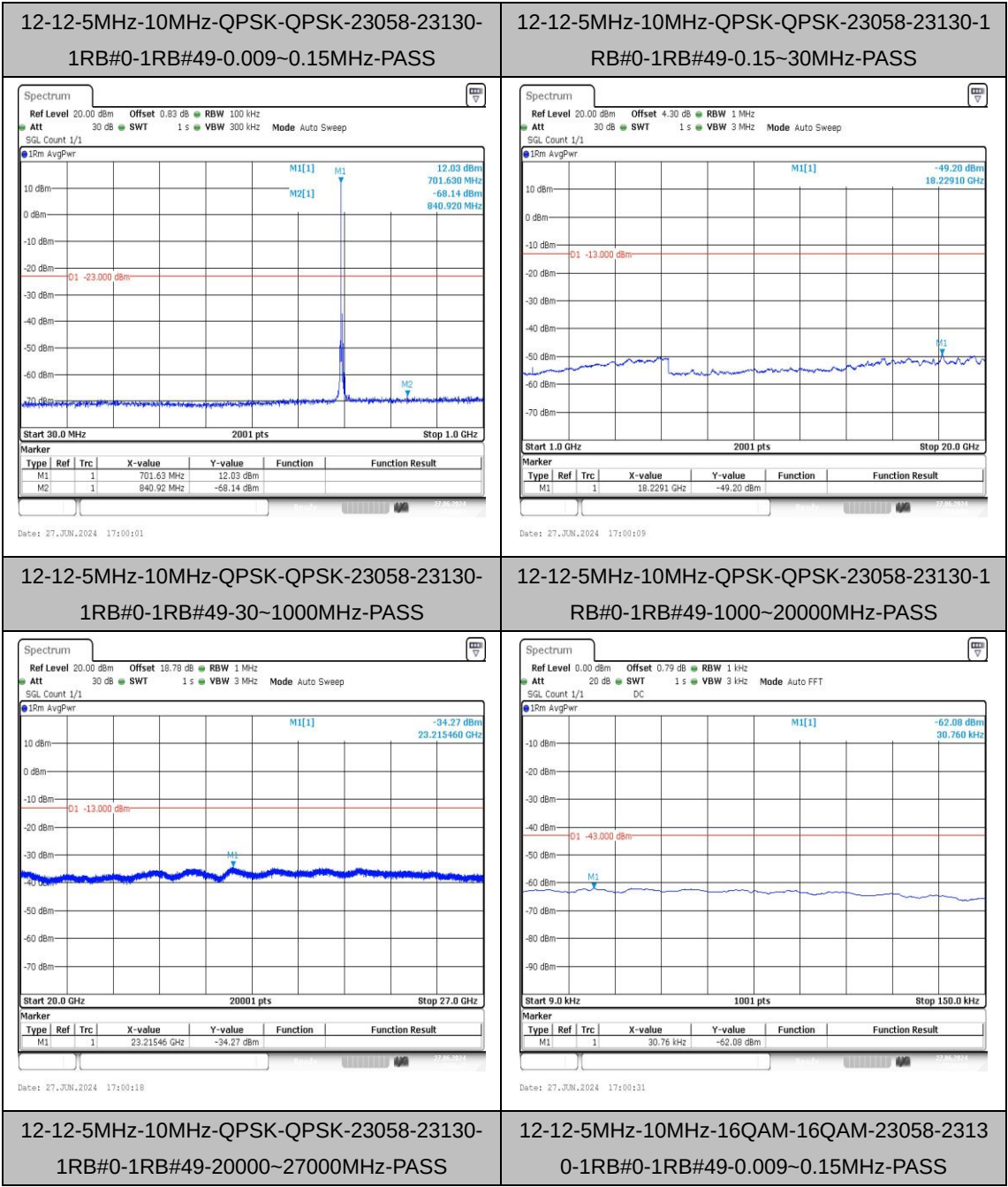


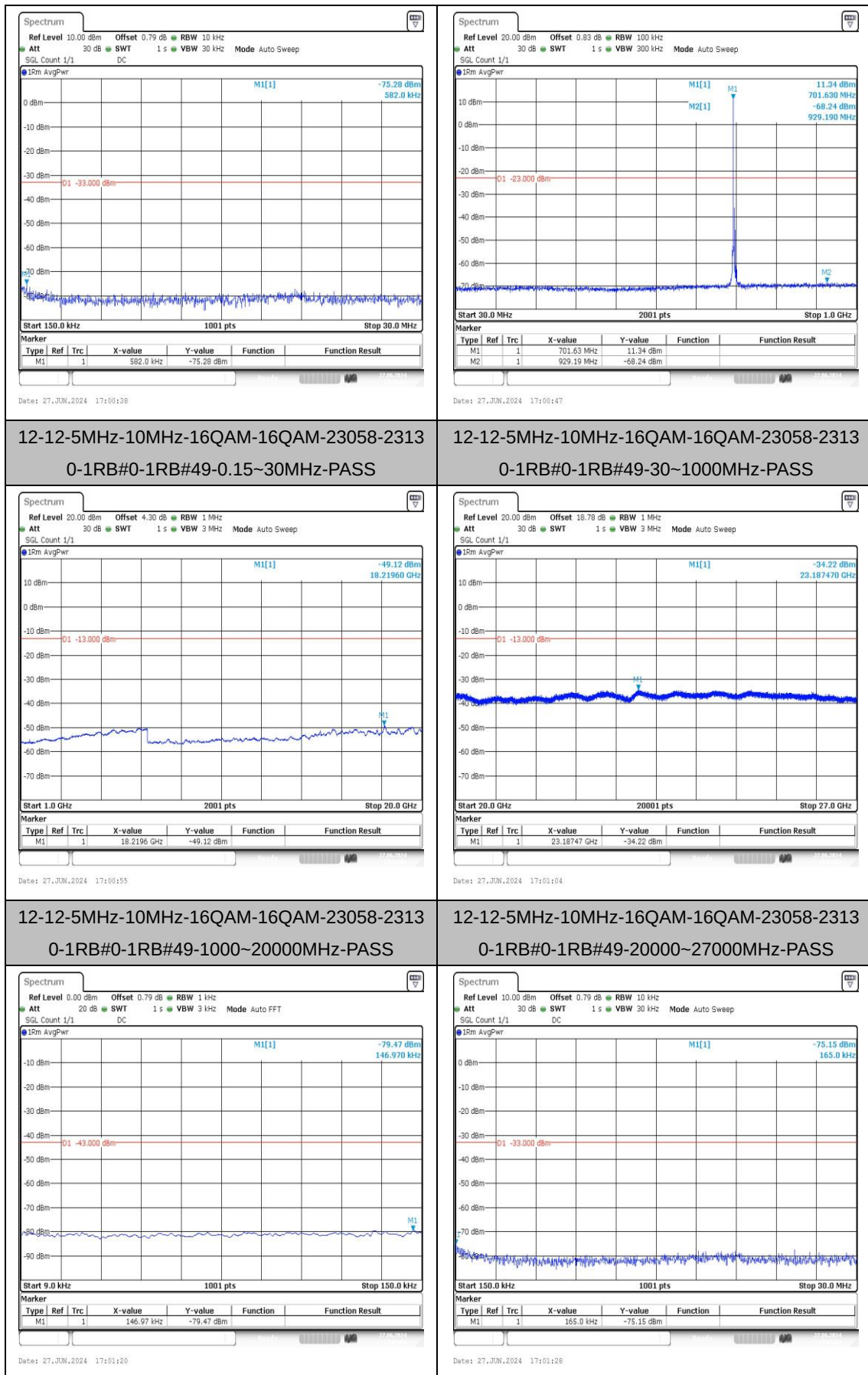


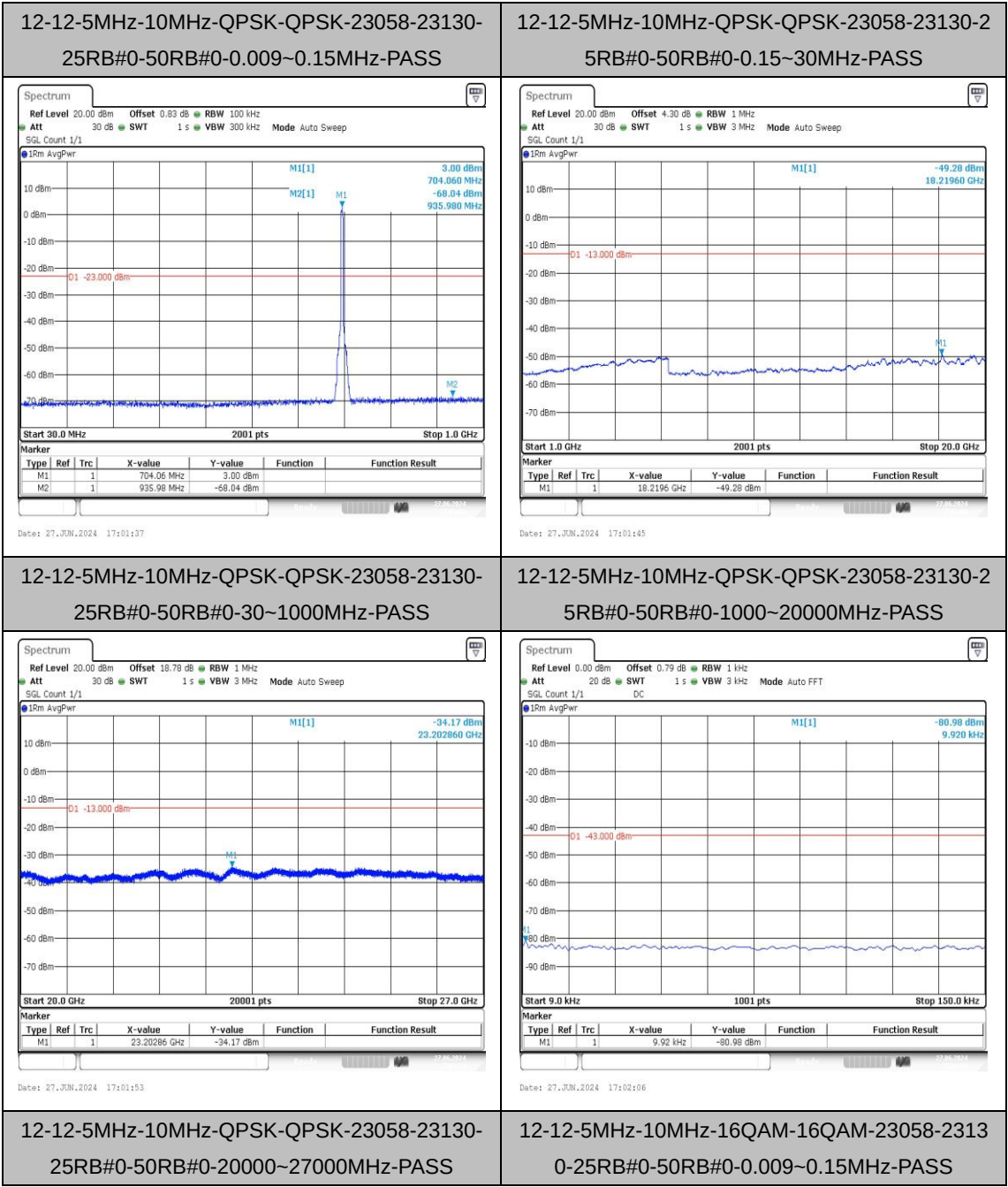


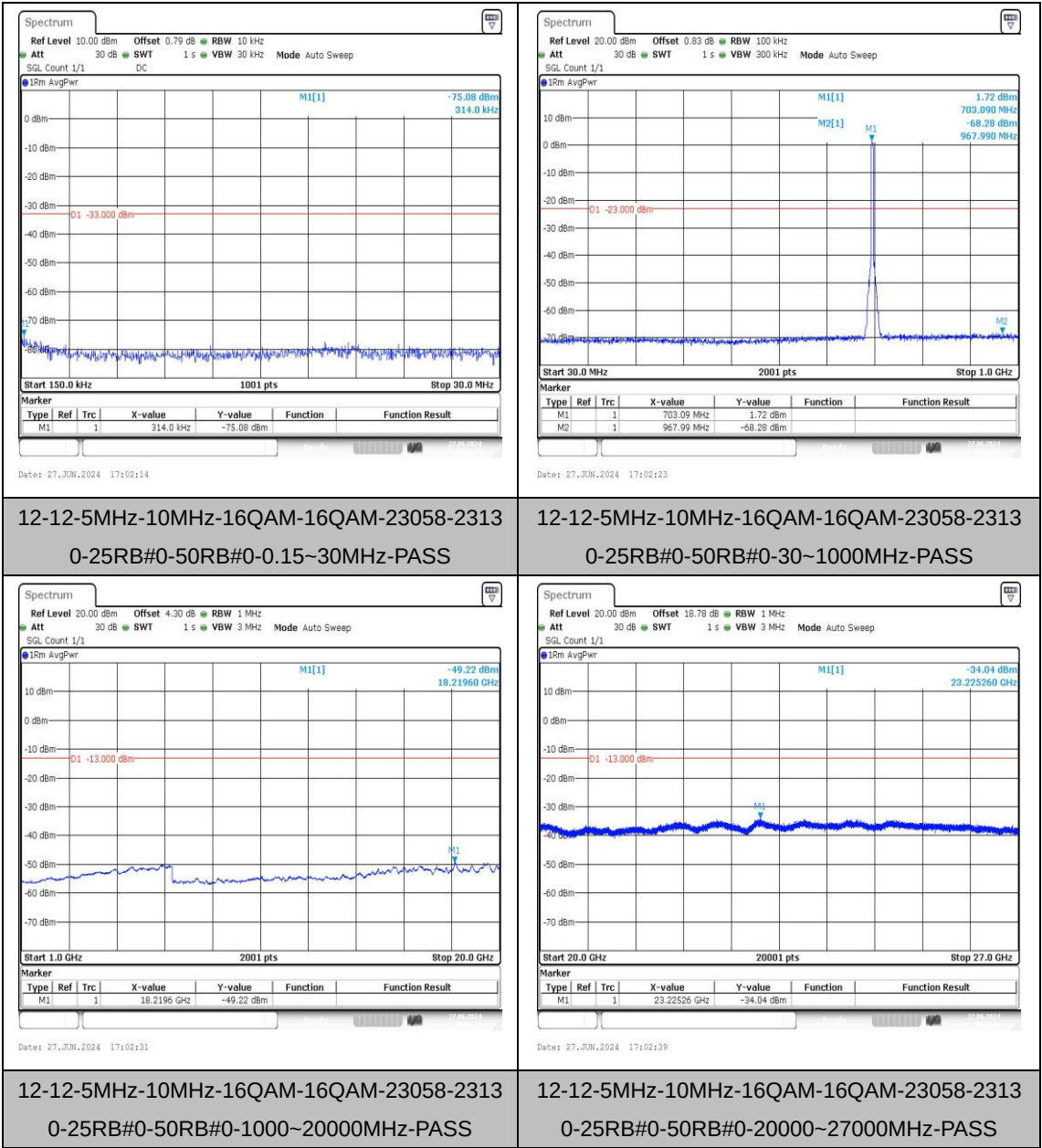












Appendix F: Frequency Stability

Test Result

Voltage										
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	VN	NT	2.22	0.003165	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	VL	NT	2.46	0.003507	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	VH	NT	2.57	0.003664	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	VN	NT	1.90	0.002708	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	VL	NT	3.81	0.005431	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	VH	NT	2.15	0.003065	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	VN	NT	-1.96	-0.002780	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	VL	NT	-3.50	-0.004964	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	VH	NT	-1.66	-0.002354	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	VN	NT	-3.03	-0.004297	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	VL	NT	-2.33	-0.003304	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	VH	NT	1.59	0.002255	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	VN	NT	-1.89	-0.002667	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	VL	NT	1.24	0.001750	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	VH	NT	1.52	0.002145	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23107-23155	25RB#0-2 5RB#0	VN	NT	-1.82	-0.002568	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23107-23155	25RB#0-2 5RB#0	VL	NT	-2.96	-0.004177	±2.5	PASS

12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	VH	NT	-2.73	-0.003852	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	VN	NT	-2.75	-0.003918	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	VL	NT	-4.32	-0.006156	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	VH	NT	-2.43	-0.003463	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	VN	NT	-2.32	-0.003306	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	VL	NT	1.33	0.001895	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	VH	NT	-1.50	-0.002137	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	VN	NT	-2.29	-0.003258	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	VL	NT	-3.09	-0.004397	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	VH	NT	-2.83	-0.004027	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	VN	NT	2.66	0.003785	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	VL	NT	-2.02	-0.002874	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	VH	NT	-2.10	-0.002988	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	VN	NT	-2.98	-0.004234	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	VL	NT	-2.27	-0.003225	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	VH	NT	-4.05	-0.005754	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	VN	NT	2.16	0.003069	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	VL	NT	-2.05	-0.002913	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	VH	NT	-2.19	-0.003112	±2.5	PASS

Temperature

Band	Bandwidth	Modulation	Channel	RB Configuration	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	-50	1.90	0.002708	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	-30	-2.07	-0.002951	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	-20	-2.99	-0.004262	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	-10	2.68	0.003820	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	0	-3.40	-0.004847	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	10	1.96	0.002794	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	20	2.86	0.004077	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23035-23083	25RB#0-2 5RB#0	NV	30	-1.54	-0.002195	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	-50	2.78	0.003963	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	-30	2.43	0.003464	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	-20	1.77	0.002523	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	-10	3.29	0.004690	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	0	3.02	0.004305	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	10	2.68	0.003820	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	20	2.10	0.002994	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23035-23083	25RB#0-2 5RB#0	NV	30	2.19	0.003122	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	-50	-1.75	-0.002482	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	-30	-2.62	-0.003716	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	-20	-1.93	-0.002737	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	-10	-2.09	-0.002964	±2.5	PASS

12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	0	2.06	0.002922	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	10	2.59	0.003673	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	20	-3.65	-0.005177	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23071-23119	25RB#0-2 5RB#0	NV	30	-2.90	-0.004113	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	-50	1.80	0.002553	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	-30	-2.40	-0.003404	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	-20	3.52	0.004992	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	-10	-2.62	-0.003716	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	0	2.32	0.003290	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	10	2.40	0.003404	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	20	1.79	0.002539	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23071-23119	25RB#0-2 5RB#0	NV	30	1.77	0.002510	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	-50	-1.95	-0.002752	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	-30	-2.02	-0.002850	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	-20	-2.70	-0.003810	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	-10	-2.23	-0.003147	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	0	2.62	0.003697	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	10	2.25	0.003175	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	20	2.62	0.003697	±2.5	PASS
12-12	5MHz-5 MHz	QPSK-Q PSK	23107-23155	25RB#0-2 5RB#0	NV	30	-1.42	-0.002004	±2.5	PASS
12-12	5MHz-5 MHz	16QAM-16QAM	23107-23155	25RB#0-2 5RB#0	NV	-50	2.62	0.003697	±2.5	PASS

12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	-30	2.65	0.003739	±2.5	PASS
12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	-20	-1.95	-0.002752	±2.5	PASS
12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	-10	1.86	0.002625	±2.5	PASS
12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	0	-2.02	-0.002850	±2.5	PASS
12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	10	-2.53	-0.003570	±2.5	PASS
12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	20	-2.40	-0.003386	±2.5	PASS
12-12	5MHz-5 MHz	16QAM- 16QAM	23107- 23155	25RB#0-2 5RB#0	NV	30	-1.97	-0.002780	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	-50	-2.50	-0.003562	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	-30	-3.68	-0.005244	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	-20	-4.43	-0.006312	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	-10	-2.56	-0.003648	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	0	-2.32	-0.003306	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	10	-1.83	-0.002608	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	20	-2.22	-0.003163	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23038- 23110	25RB#0-5 0RB#0	NV	30	-2.52	-0.003591	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	-50	-1.75	-0.002494	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	-30	1.72	0.002451	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	-20	-2.10	-0.002992	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	-10	-3.59	-0.005115	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	0	-1.97	-0.002807	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	10	-2.36	-0.003363	±2.5	PASS

12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	20	2.05	0.002921	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23038- 23110	25RB#0-5 0RB#0	NV	30	-2.13	-0.003035	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	-50	-3.86	-0.005492	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	-30	-2.66	-0.003785	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	-20	-5.08	-0.007228	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	-10	-3.35	-0.004767	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	0	-1.19	-0.001693	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	10	-3.82	-0.005435	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	20	-4.92	-0.007001	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23048- 23120	25RB#0-5 0RB#0	NV	30	-2.32	-0.003301	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	-50	-3.79	-0.005393	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	-30	-2.60	-0.003699	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	-20	-3.79	-0.005393	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	-10	2.69	0.003828	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	0	-2.70	-0.003842	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	10	2.89	0.004112	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	20	-2.90	-0.004126	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23048- 23120	25RB#0-5 0RB#0	NV	30	-3.22	-0.004582	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	-50	-2.73	-0.003879	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	-30	-2.72	-0.003865	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	-20	-3.09	-0.004390	±2.5	PASS

12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	-10	-4.18	-0.005939	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	0	1.42	0.002018	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	10	-2.72	-0.003865	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	20	-2.46	-0.003495	±2.5	PASS
12-12	5MHz-1 0MHz	QPSK-Q PSK	23058- 23130	25RB#0-5 0RB#0	NV	30	-1.70	-0.002415	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	-50	-2.40	-0.003410	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	-30	-1.79	-0.002543	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	-20	-1.49	-0.002117	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	-10	-1.97	-0.002799	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	0	-1.40	-0.001989	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	10	-1.76	-0.002501	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	20	-1.59	-0.002259	±2.5	PASS
12-12	5MHz-1 0MHz	16QAM- 16QAM	23058- 23130	25RB#0-5 0RB#0	NV	30	-2.73	-0.003879	±2.5	PASS