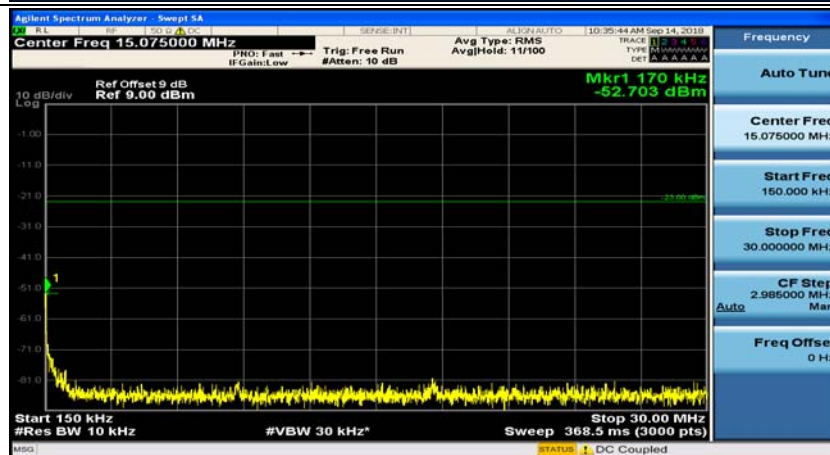
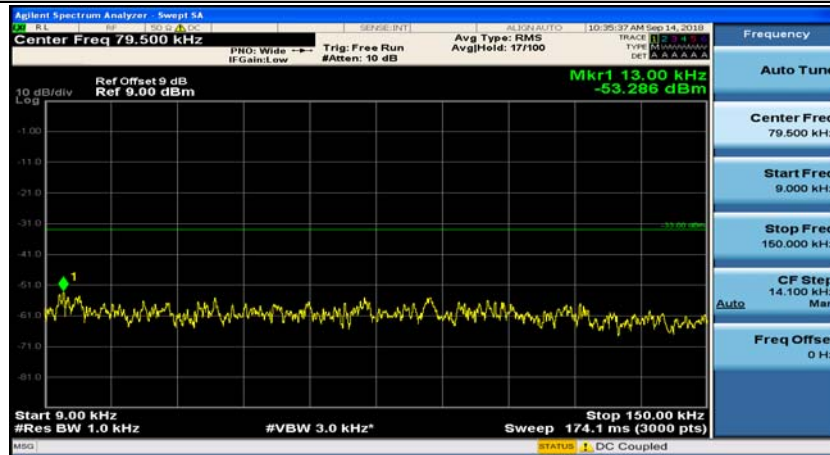
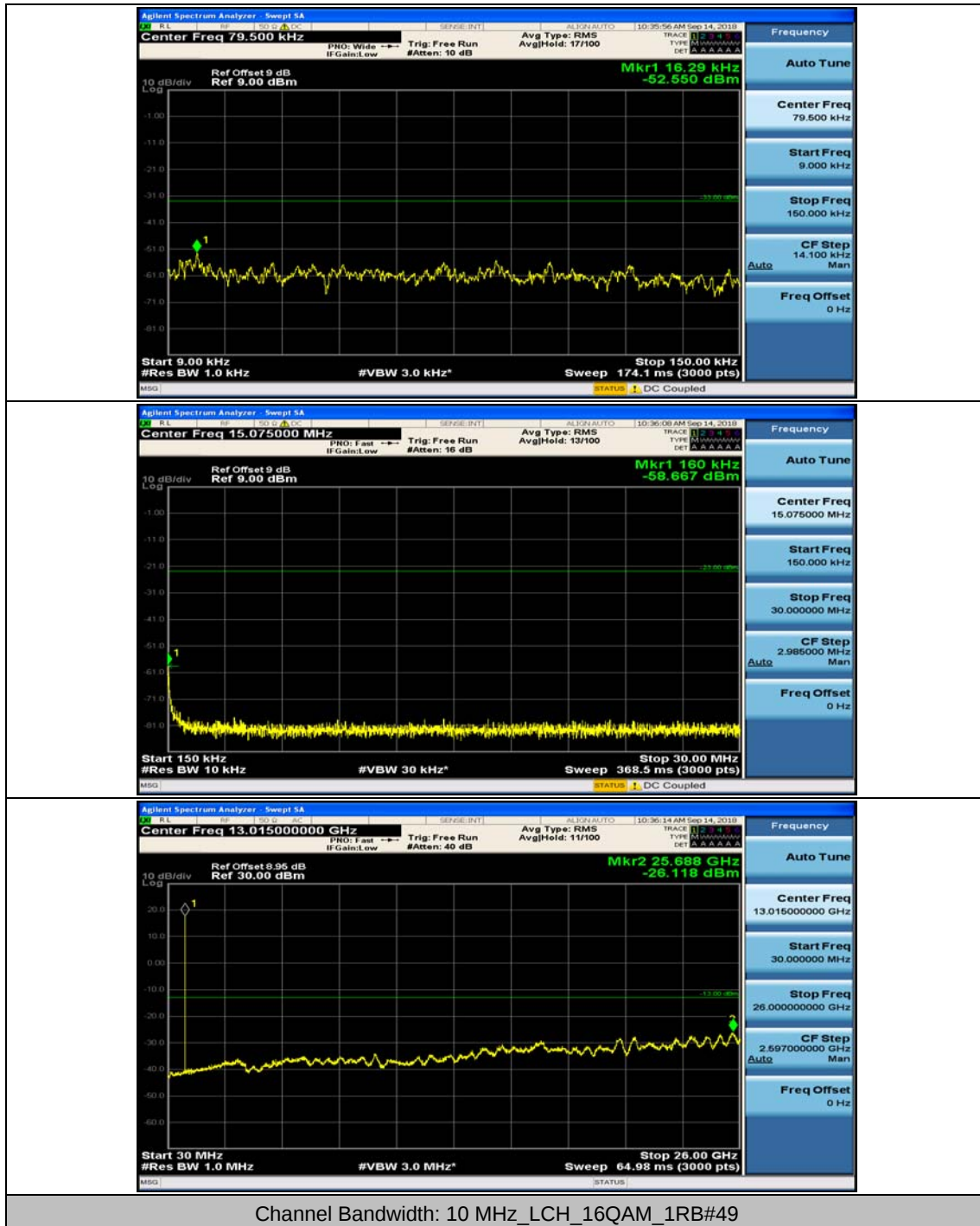
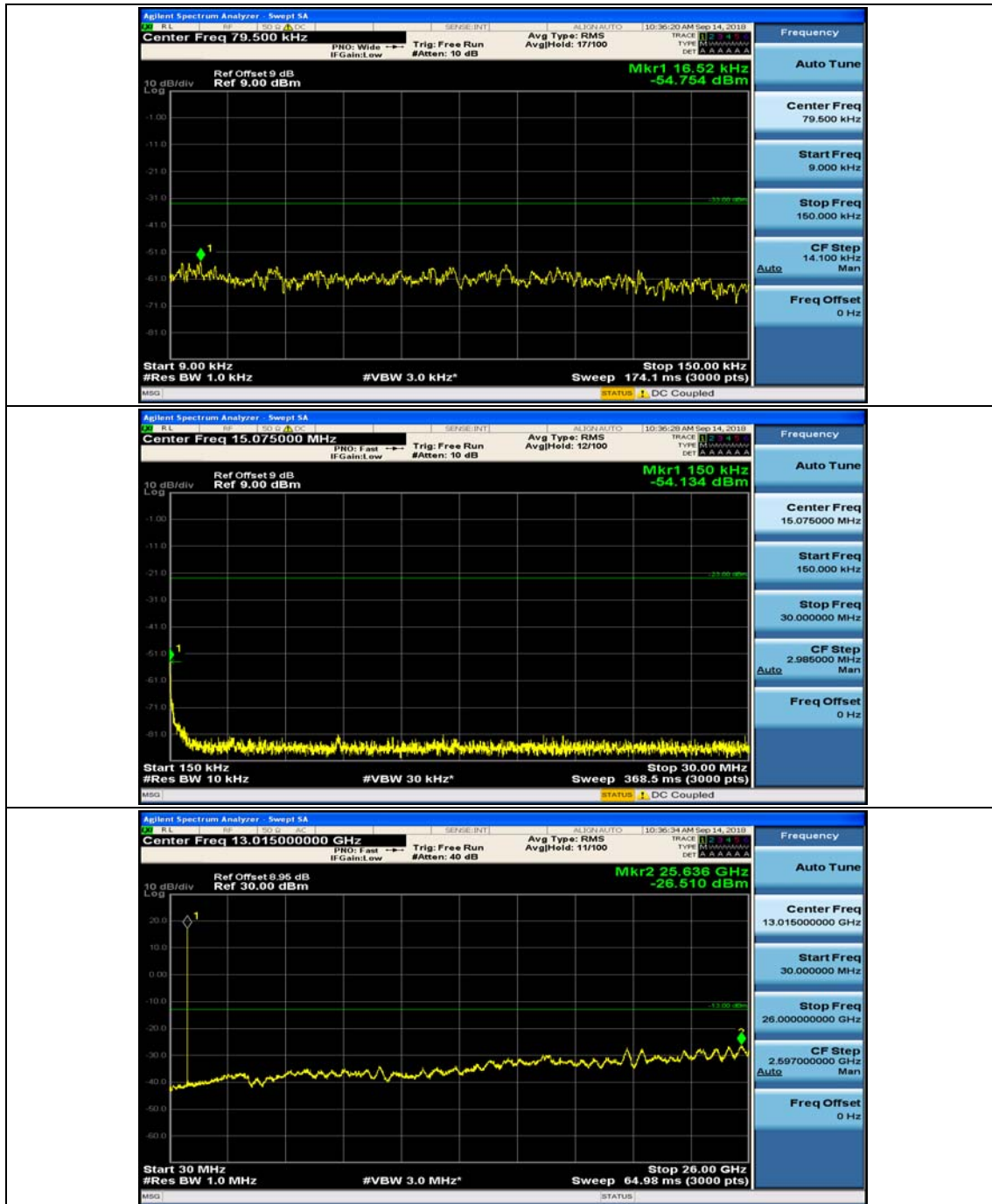


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

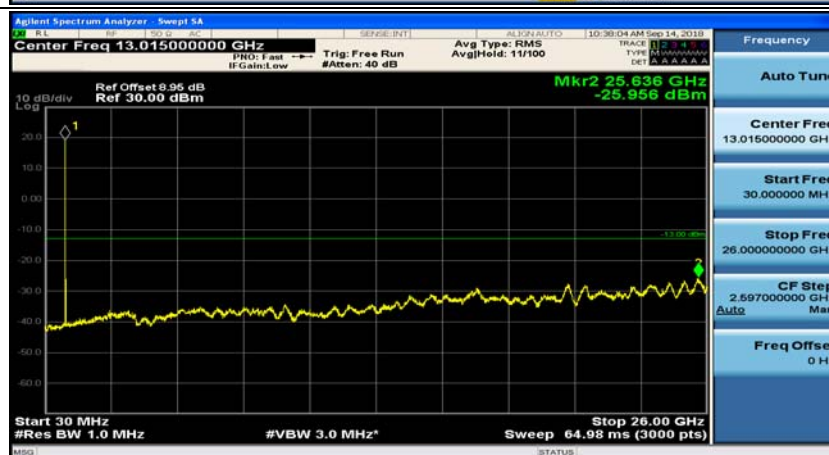
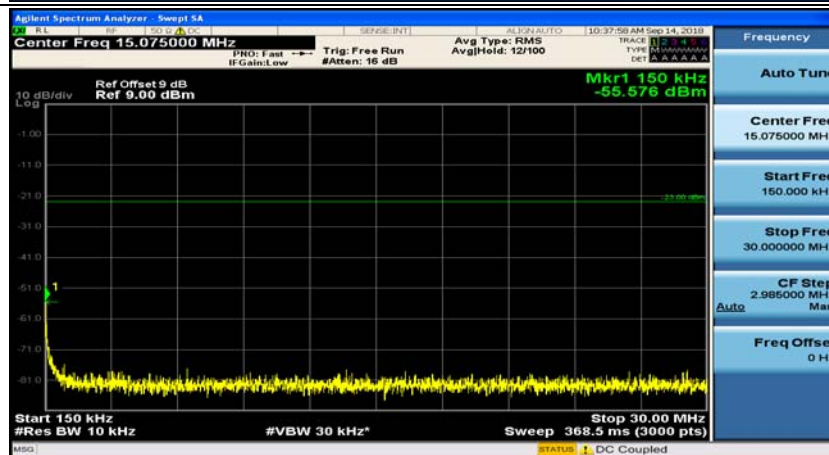
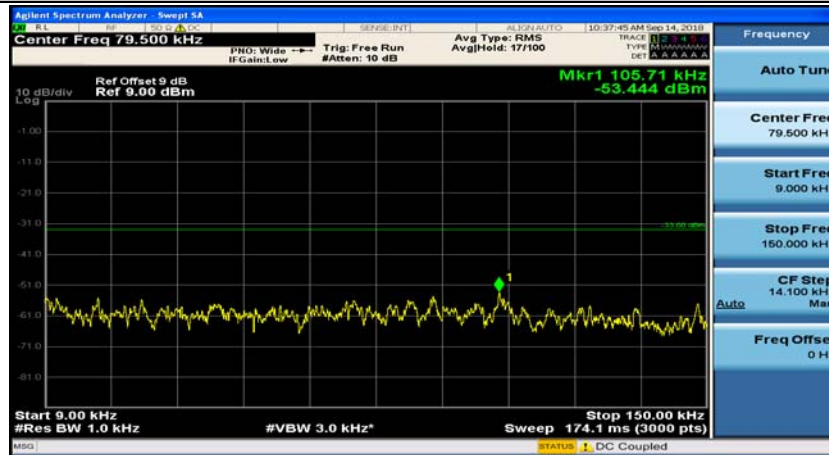


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

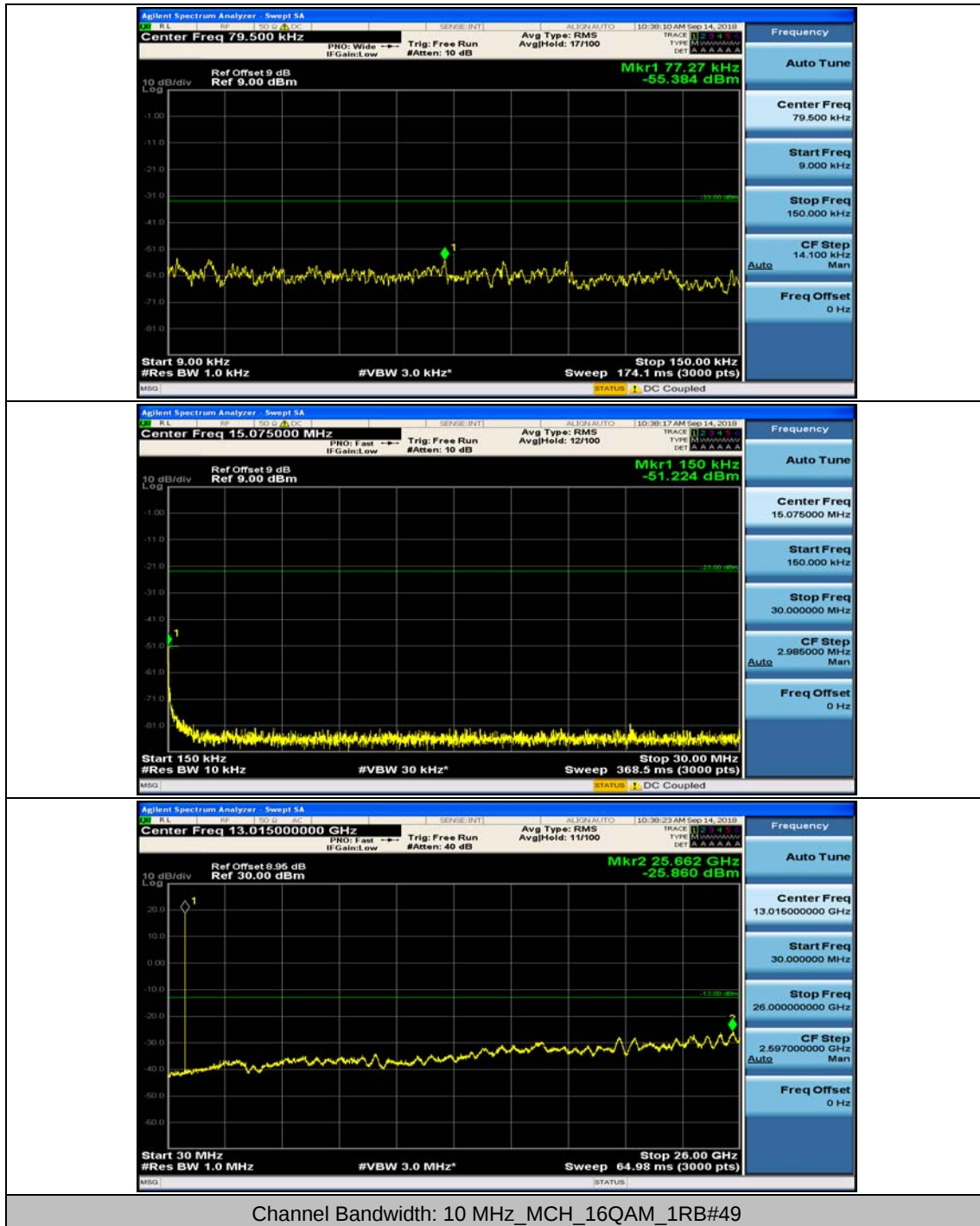


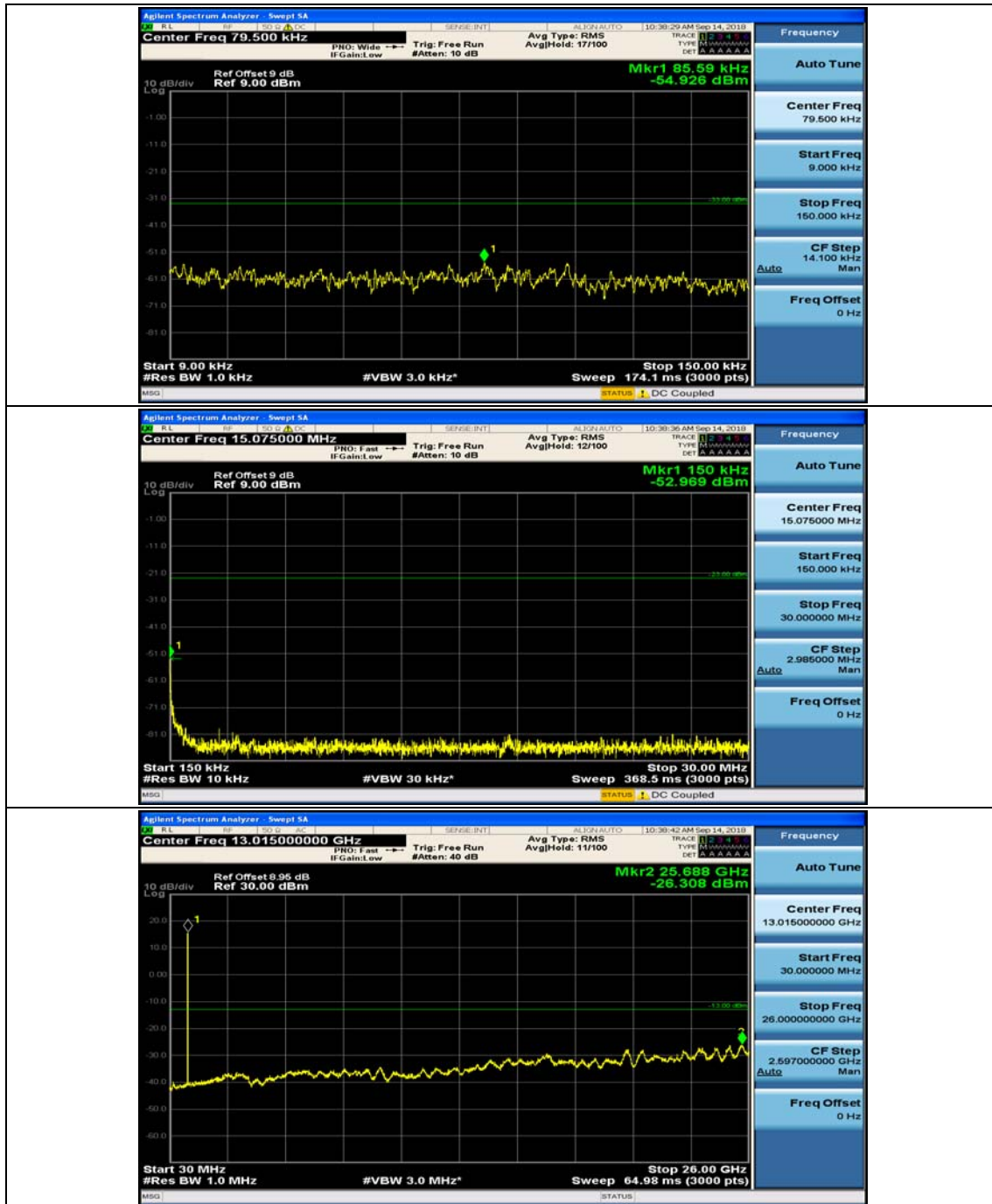


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

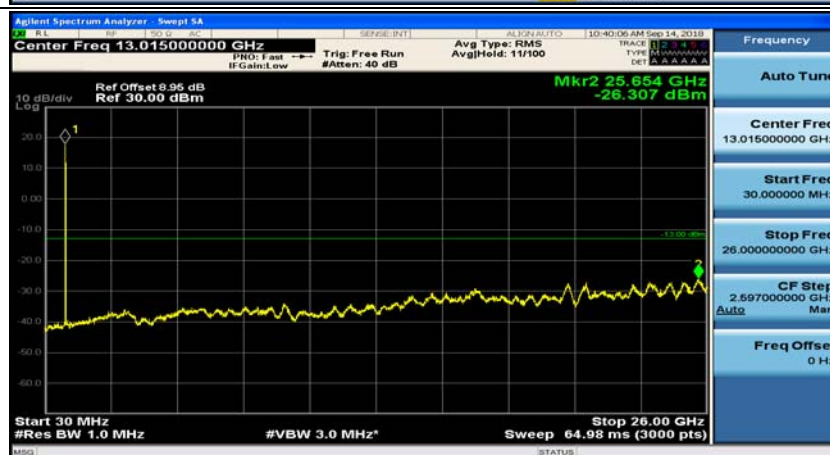
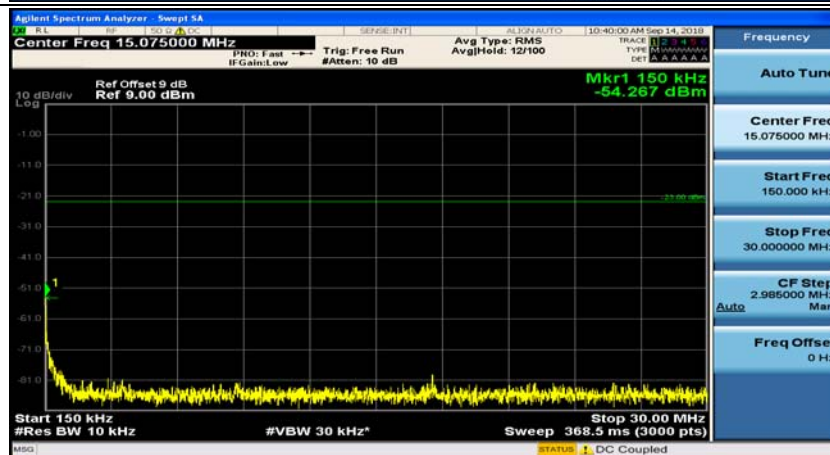
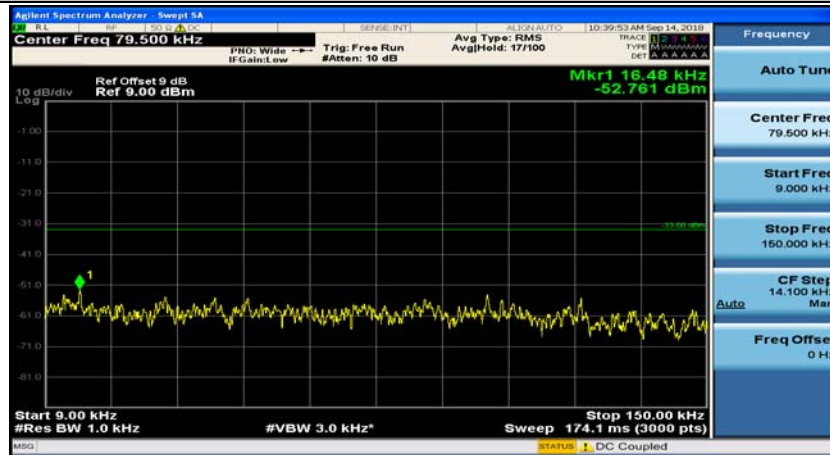


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

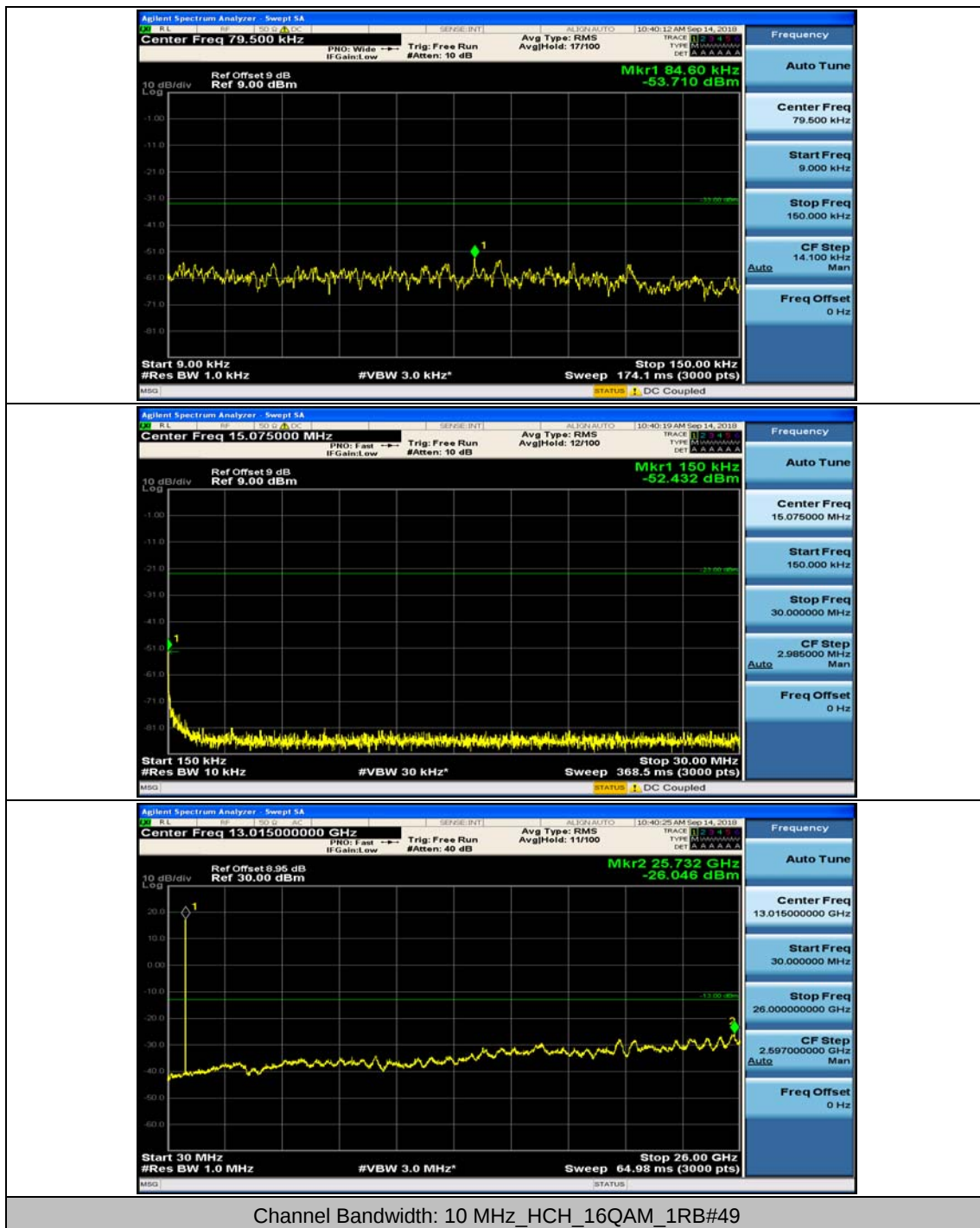


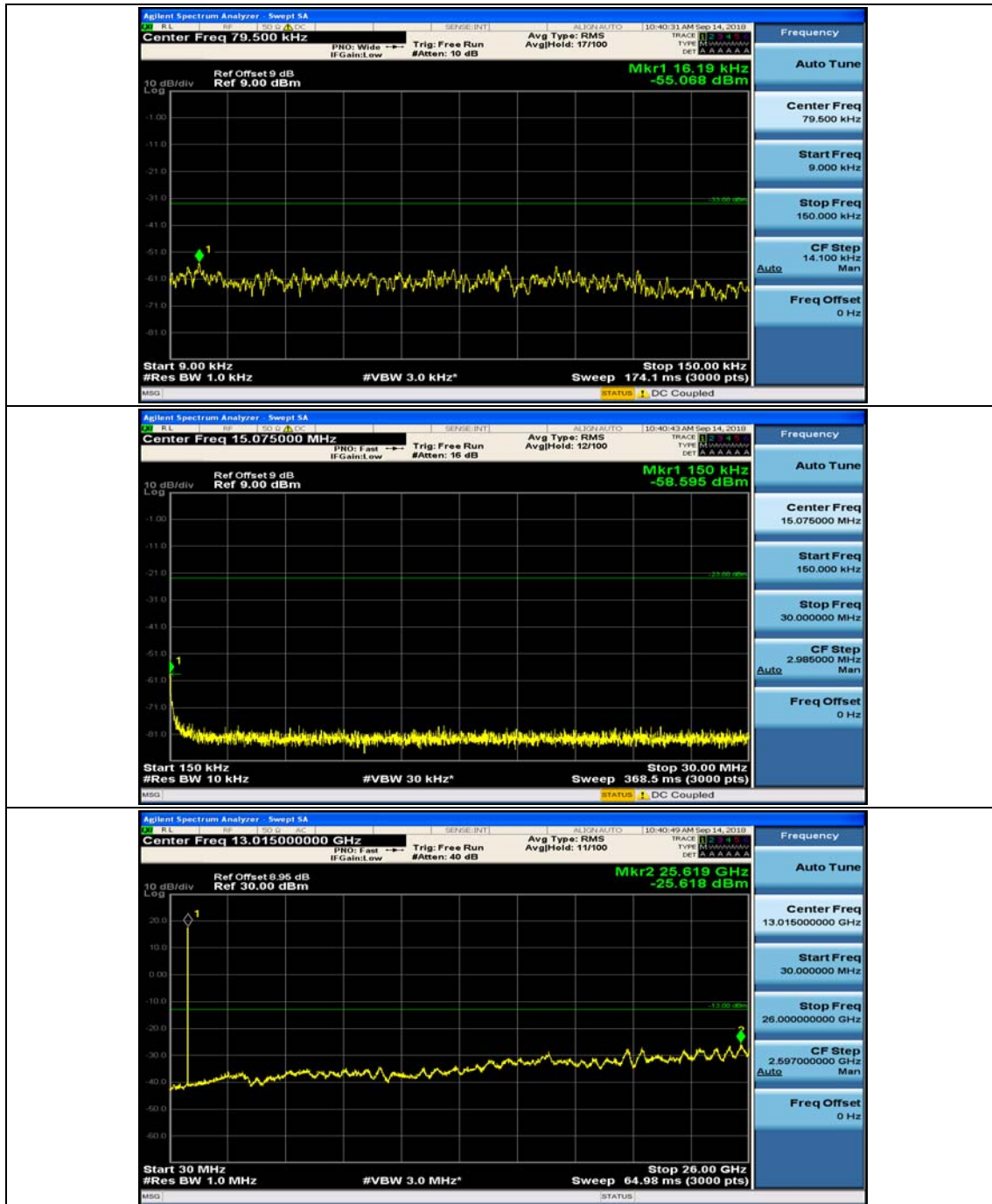


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24





Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.27	-0.001540	± 2.5	PASS
		VN	TN	2.07	0.002510	± 2.5	PASS
		VH	TN	-1.46	-0.001770	± 2.5	PASS
	MCH	VL	TN	1.2	0.001435	± 2.5	PASS
		VN	TN	0.08	0.000096	± 2.5	PASS
		VH	TN	3.43	0.004100	± 2.5	PASS
	HCH	VL	TN	2.71	0.003195	± 2.5	PASS
		VN	TN	0.24	0.000283	± 2.5	PASS
		VH	TN	4.66	0.005493	± 2.5	PASS
16QAM	LCH	VL	TN	-0.48	-0.000582	± 2.5	PASS
		VN	TN	3.19	0.003868	± 2.5	PASS
		VH	TN	3.45	0.004183	± 2.5	PASS
	MCH	VL	TN	1.65	0.001973	± 2.5	PASS
		VN	TN	2.9	0.003467	± 2.5	PASS
		VH	TN	1.11	0.001327	± 2.5	PASS
	HCH	VL	TN	2.93	0.003454	± 2.5	PASS
		VN	TN	2.54	0.002994	± 2.5	PASS
		VH	TN	-1.41	-0.001662	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.65	0.000788	± 2.5	PASS
		VN	-20	2.31	0.002801	± 2.5	PASS
		VN	-10	-0.11	-0.000133	± 2.5	PASS
		VN	0	3.37	0.004086	± 2.5	PASS
		VN	10	2.9	0.003516	± 2.5	PASS
		VN	20	1.58	0.001916	± 2.5	PASS
		VN	30	0.68	0.000825	± 2.5	PASS
		VN	40	2.14	0.002595	± 2.5	PASS
		VN	50	2.5	0.003031	± 2.5	PASS
	MCH	VN	-30	2.49	0.002977	± 2.5	PASS
		VN	-20	4.91	0.005870	± 2.5	PASS

		VN	-10	-1.13	-0.001351	± 2.5	PASS
		VN	0	4.36	0.005212	± 2.5	PASS
		VN	10	0.58	0.000693	± 2.5	PASS
		VN	20	0.12	0.000143	± 2.5	PASS
		VN	30	-0.38	-0.000454	± 2.5	PASS
		VN	40	-0.08	-0.000096	± 2.5	PASS
		VN	50	4.59	0.005487	± 2.5	PASS
	HCH	VN	-30	4.59	0.005411	± 2.5	PASS
		VN	-20	2.08	0.002452	± 2.5	PASS
		VN	-10	0.62	0.000731	± 2.5	PASS
		VN	0	-0.78	-0.000919	± 2.5	PASS
		VN	10	2.22	0.002617	± 2.5	PASS
		VN	20	3.39	0.003996	± 2.5	PASS
		VN	30	3.17	0.003737	± 2.5	PASS
		VN	40	1.69	0.001992	± 2.5	PASS
		VN	50	4.43	0.005222	± 2.5	PASS
16QAM	LCH	VN	-30	-1.7	-0.002061	± 2.5	PASS
		VN	-20	-0.94	-0.001140	± 2.5	PASS
		VN	-10	2.59	0.003141	± 2.5	PASS
		VN	0	-0.28	-0.000340	± 2.5	PASS
		VN	10	4.46	0.005408	± 2.5	PASS
		VN	20	3.51	0.004256	± 2.5	PASS
		VN	30	0.71	0.000861	± 2.5	PASS
		VN	40	-1.77	-0.002146	± 2.5	PASS
		VN	50	1.92	0.002328	± 2.5	PASS
	MCH	VN	-30	3.17	0.003737	± 2.5	PASS
		VN	-20	1.76	0.002075	± 2.5	PASS
		VN	-10	-0.38	-0.000448	± 2.5	PASS
		VN	0	4.68	0.005517	± 2.5	PASS
		VN	10	-1.9	-0.002240	± 2.5	PASS
		VN	20	2.5	0.002947	± 2.5	PASS
		VN	30	-1.68	-0.001980	± 2.5	PASS
		VN	40	2.84	0.003348	± 2.5	PASS
		VN	50	-0.91	-0.001073	± 2.5	PASS
	HCH	VN	-30	4.73	0.005576	± 2.5	PASS
		VN	-20	1.96	0.002311	± 2.5	PASS
		VN	-10	0.06	0.000071	± 2.5	PASS
		VN	0	0.98	0.001155	± 2.5	PASS
		VN	10	1.28	0.001509	± 2.5	PASS
		VN	20	0.23	0.000271	± 2.5	PASS
		VN	30	1.74	0.002051	± 2.5	PASS

		VN	40	0.42	0.000495	± 2.5	PASS
		VN	50	2.68	0.003159	± 2.5	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	3.06	0.003707	± 2.5	PASS
		VN	TN	1.03	0.001248	± 2.5	PASS
		VH	TN	1.61	0.001950	± 2.5	PASS
	MCH	VL	TN	4.33	0.005176	± 2.5	PASS
		VN	TN	-0.44	-0.000526	± 2.5	PASS
		VH	TN	4.94	0.005906	± 2.5	PASS
	HCH	VL	TN	1.99	0.002348	± 2.5	PASS
		VN	TN	1.98	0.002336	± 2.5	PASS
		VH	TN	0.8	0.000944	± 2.5	PASS
16QAM	LCH	VL	TN	2.14	0.002592	± 2.5	PASS
		VN	TN	2.3	0.002786	± 2.5	PASS
		VH	TN	-0.05	-0.000061	± 2.5	PASS
	MCH	VL	TN	-1.82	-0.002176	± 2.5	PASS
		VN	TN	-1.55	-0.001853	± 2.5	PASS
		VH	TN	-0.6	-0.000717	± 2.5	PASS
	HCH	VL	TN	-0.08	-0.000094	± 2.5	PASS
		VN	TN	-0.08	-0.000094	± 2.5	PASS
		VH	TN	0.72	0.000850	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.27	0.003961	± 2.5	PASS
		VN	-20	-0.57	-0.000690	± 2.5	PASS
		VN	-10	-1.97	-0.002386	± 2.5	PASS
		VN	0	-0.7	-0.000848	± 2.5	PASS
		VN	10	-1.86	-0.002253	± 2.5	PASS
		VN	20	-1.14	-0.001381	± 2.5	PASS
		VN	30	1.91	0.002314	± 2.5	PASS
		VN	40	0.2	0.000242	± 2.5	PASS
		VN	50	0.86	0.001042	± 2.5	PASS
	MCH	VN	-30	-1.73	-0.002068	± 2.5	PASS
		VN	-20	2.84	0.003395	± 2.5	PASS
		VN	-10	-0.36	-0.000430	± 2.5	PASS

		VN	0	2.46	0.002941	± 2.5	PASS
		VN	10	4.04	0.004830	± 2.5	PASS
		VN	20	4.2	0.005021	± 2.5	PASS
		VN	30	1.98	0.002367	± 2.5	PASS
		VN	40	0.24	0.000287	± 2.5	PASS
		VN	50	4.19	0.005009	± 2.5	PASS
	HCH	VN	-30	1.1	0.001298	± 2.5	PASS
		VN	-20	1.81	0.002136	± 2.5	PASS
		VN	-10	1.97	0.002324	± 2.5	PASS
		VN	0	2.54	0.002997	± 2.5	PASS
		VN	10	0.96	0.001133	± 2.5	PASS
		VN	20	-1.73	-0.002041	± 2.5	PASS
		VN	30	2.9	0.003422	± 2.5	PASS
		VN	40	4.9	0.005782	± 2.5	PASS
		VN	50	0.67	0.000791	± 2.5	PASS
QPSK	LCH	VN	-30	4.85	0.005798	± 2.5	PASS
		VN	-20	-1.22	-0.001458	± 2.5	PASS
		VN	-10	0.45	0.000538	± 2.5	PASS
		VN	0	-0.14	-0.000167	± 2.5	PASS
		VN	10	1.31	0.001566	± 2.5	PASS
		VN	20	3.87	0.004626	± 2.5	PASS
		VN	30	4.9	0.005858	± 2.5	PASS
		VN	40	-1.33	-0.001590	± 2.5	PASS
		VN	50	0.45	0.000538	± 2.5	PASS
	MCH	VN	-30	3.68	0.004342	± 2.5	PASS
		VN	-20	1.03	0.001215	± 2.5	PASS
		VN	-10	0.87	0.001027	± 2.5	PASS
		VN	0	-0.19	-0.000224	± 2.5	PASS
		VN	10	2.57	0.003032	± 2.5	PASS
		VN	20	1.63	0.001923	± 2.5	PASS
		VN	30	4.83	0.005699	± 2.5	PASS
		VN	40	3.72	0.004389	± 2.5	PASS
		VN	50	3.38	0.003988	± 2.5	PASS
	HCH	VN	-30	2.41	0.002844	± 2.5	PASS
		VN	-20	3.82	0.004507	± 2.5	PASS
		VN	-10	1.17	0.001381	± 2.5	PASS
		VN	0	1.55	0.001829	± 2.5	PASS
		VN	10	1.34	0.001581	± 2.5	PASS
		VN	20	-1.58	-0.001864	± 2.5	PASS
		VN	30	-1.76	-0.002077	± 2.5	PASS
		VN	40	1.87	0.002206	± 2.5	PASS

		VN	50	3.9	0.004602	± 2.5	PASS
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Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-0.11	-0.000133	± 2.5	PASS
		VN	TN	1.84	0.002226	± 2.5	PASS
		VH	TN	-0.34	-0.000411	± 2.5	PASS
	MCH	VL	TN	-0.73	-0.000873	± 2.5	PASS
		VN	TN	1.06	0.001267	± 2.5	PASS
		VH	TN	4.29	0.005129	± 2.5	PASS
	HCH	VL	TN	3.1	0.003662	± 2.5	PASS
		VN	TN	2.78	0.003284	± 2.5	PASS
		VH	TN	2.99	0.003532	± 2.5	PASS
16QAM	LCH	VL	TN	0.89	0.001077	± 2.5	PASS
		VN	TN	3.49	0.004223	± 2.5	PASS
		VH	TN	3.48	0.004211	± 2.5	PASS
	MCH	VL	TN	2.77	0.003311	± 2.5	PASS
		VN	TN	1.9	0.002271	± 2.5	PASS
		VH	TN	-1.14	-0.001363	± 2.5	PASS
	HCH	VL	TN	4.31	0.005092	± 2.5	PASS
		VN	TN	-1.65	-0.001949	± 2.5	PASS
		VH	TN	0.19	0.000224	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.46	0.001766	± 2.5	PASS
		VN	-20	0.44	0.000532	± 2.5	PASS
		VN	-10	2.77	0.003351	± 2.5	PASS
		VN	0	1.23	0.001488	± 2.5	PASS
		VN	10	0.22	0.000266	± 2.5	PASS
		VN	20	2.41	0.002916	± 2.5	PASS
		VN	30	-1.37	-0.001658	± 2.5	PASS
		VN	40	1.84	0.002226	± 2.5	PASS
		VN	50	1.34	0.001621	± 2.5	PASS
	MCH	VN	-30	2.96	0.003539	± 2.5	PASS
		VN	-20	-0.76	-0.000909	± 2.5	PASS
		VN	-10	2.11	0.002522	± 2.5	PASS
		VN	0	2.3	0.002750	± 2.5	PASS

		VN	10	2.6	0.003108	± 2.5	PASS
		VN	20	4.41	0.005272	± 2.5	PASS
		VN	30	-1.85	-0.002212	± 2.5	PASS
		VN	40	-1.53	-0.001829	± 2.5	PASS
		VN	50	-1.31	-0.001566	± 2.5	PASS
	HCH	VN	-30	1.09	0.001288	± 2.5	PASS
		VN	-20	2.15	0.002540	± 2.5	PASS
		VN	-10	3.38	0.003993	± 2.5	PASS
		VN	0	1.55	0.001831	± 2.5	PASS
		VN	10	0.44	0.000520	± 2.5	PASS
		VN	20	-1.42	-0.001677	± 2.5	PASS
		VN	30	-0.76	-0.000898	± 2.5	PASS
		VN	40	1.8	0.002126	± 2.5	PASS
		VN	50	0.76	0.000898	± 2.5	PASS
16QAM	LCH	VN	-30	0.99	0.001184	± 2.5	PASS
		VN	-20	0.31	0.000371	± 2.5	PASS
		VN	-10	4.21	0.005033	± 2.5	PASS
		VN	0	-1.36	-0.001626	± 2.5	PASS
		VN	10	4.14	0.004949	± 2.5	PASS
		VN	20	3.58	0.004280	± 2.5	PASS
		VN	30	2.13	0.002546	± 2.5	PASS
		VN	40	4.61	0.005511	± 2.5	PASS
		VN	50	4.95	0.005918	± 2.5	PASS
	MCH	VN	-30	1.84	0.002174	± 2.5	PASS
		VN	-20	1.25	0.001477	± 2.5	PASS
		VN	-10	2.83	0.003343	± 2.5	PASS
		VN	0	0.85	0.001004	± 2.5	PASS
		VN	10	2.09	0.002469	± 2.5	PASS
		VN	20	0.48	0.000567	± 2.5	PASS
		VN	30	0.51	0.000602	± 2.5	PASS
		VN	40	0.28	0.000331	± 2.5	PASS
		VN	50	-0.94	-0.001110	± 2.5	PASS
	HCH	VN	-30	-1.74	-0.002056	± 2.5	PASS
		VN	-20	-1.17	-0.001382	± 2.5	PASS
		VN	-10	1.54	0.001819	± 2.5	PASS
		VN	0	2.87	0.003390	± 2.5	PASS
		VN	10	0.89	0.001051	± 2.5	PASS
		VN	20	1.88	0.002221	± 2.5	PASS
		VN	30	2.84	0.003355	± 2.5	PASS
		VN	40	4.68	0.005529	± 2.5	PASS
		VN	50	4.01	0.004737	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.97	0.003583	± 2.5	PASS
		VN	TN	0.28	0.000338	± 2.5	PASS
		VH	TN	1.51	0.001821	± 2.5	PASS
	MCH	VL	TN	1.8	0.002152	± 2.5	PASS
		VN	TN	0.64	0.000765	± 2.5	PASS
		VH	TN	-0.73	-0.000873	± 2.5	PASS
	HCH	VL	TN	1.15	0.001363	± 2.5	PASS
		VN	TN	-0.77	-0.000912	± 2.5	PASS
		VH	TN	-0.62	-0.000735	± 2.5	PASS
16QAM	LCH	VL	TN	3.87	0.004668	± 2.5	PASS
		VN	TN	-1.82	-0.002195	± 2.5	PASS
		VH	TN	2.47	0.002979	± 2.5	PASS
	MCH	VL	TN	0.99	0.001184	± 2.5	PASS
		VN	TN	2.8	0.003347	± 2.5	PASS
		VH	TN	4.04	0.004830	± 2.5	PASS
	HCH	VL	TN	2.04	0.002417	± 2.5	PASS
		VN	TN	1.47	0.001742	± 2.5	PASS
		VH	TN	0.12	0.000142	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.88	0.004680	± 2.5	PASS
		VN	-20	1.72	0.002075	± 2.5	PASS
		VN	-10	3.76	0.004536	± 2.5	PASS
		VN	0	3.81	0.004596	± 2.5	PASS
		VN	10	-0.57	-0.000688	± 2.5	PASS
		VN	20	3.74	0.004511	± 2.5	PASS
		VN	30	0.7	0.000844	± 2.5	PASS
		VN	40	1.56	0.001882	± 2.5	PASS
		VN	50	2.84	0.003426	± 2.5	PASS
	MCH	VN	-30	0.63	0.000753	± 2.5	PASS
		VN	-20	3.42	0.004088	± 2.5	PASS
		VN	-10	1.13	0.001351	± 2.5	PASS
		VN	0	0.9	0.001076	± 2.5	PASS
		VN	10	2.57	0.003072	± 2.5	PASS
		VN	20	0.36	0.000430	± 2.5	PASS

		VN	30	1.46	0.001745	± 2.5	PASS
		VN	40	3.65	0.004363	± 2.5	PASS
		VN	50	3.94	0.004710	± 2.5	PASS
	HCH	VN	-30	4.99	0.005912	± 2.5	PASS
		VN	-20	4.16	0.004929	± 2.5	PASS
		VN	-10	1.2	0.001422	± 2.5	PASS
		VN	0	1.44	0.001706	± 2.5	PASS
		VN	10	3.86	0.004573	± 2.5	PASS
		VN	20	4.59	0.005438	± 2.5	PASS
		VN	30	0.58	0.000687	± 2.5	PASS
		VN	40	-1.85	-0.002192	± 2.5	PASS
		VN	50	4.11	0.004870	± 2.5	PASS
QPSK	LCH	VN	-30	-0.94	-0.001124	± 2.5	PASS
		VN	-20	2.06	0.002463	± 2.5	PASS
		VN	-10	-0.1	-0.000120	± 2.5	PASS
		VN	0	1.39	0.001662	± 2.5	PASS
		VN	10	2.12	0.002534	± 2.5	PASS
		VN	20	-0.5	-0.000598	± 2.5	PASS
		VN	30	1.06	0.001267	± 2.5	PASS
		VN	40	0.04	0.000048	± 2.5	PASS
		VN	50	0.47	0.000562	± 2.5	PASS
	MCH	VN	-30	3.7	0.004384	± 2.5	PASS
		VN	-20	0.02	0.000024	± 2.5	PASS
		VN	-10	1.47	0.001742	± 2.5	PASS
		VN	0	0.57	0.000675	± 2.5	PASS
		VN	10	2.19	0.002595	± 2.5	PASS
		VN	20	2.89	0.003424	± 2.5	PASS
		VN	30	3.31	0.003922	± 2.5	PASS
		VN	40	-1.09	-0.001291	± 2.5	PASS
		VN	50	2.39	0.002832	± 2.5	PASS
	HCH	VN	-30	0.89	0.001055	± 2.5	PASS
		VN	-20	-1.23	-0.001457	± 2.5	PASS
		VN	-10	4.53	0.005367	± 2.5	PASS
		VN	0	0.71	0.000841	± 2.5	PASS
		VN	10	3.92	0.004645	± 2.5	PASS
		VN	20	4.85	0.005746	± 2.5	PASS
		VN	30	1.33	0.001576	± 2.5	PASS
		VN	40	2.76	0.003270	± 2.5	PASS
		VN	50	2.78	0.003294	± 2.5	PASS