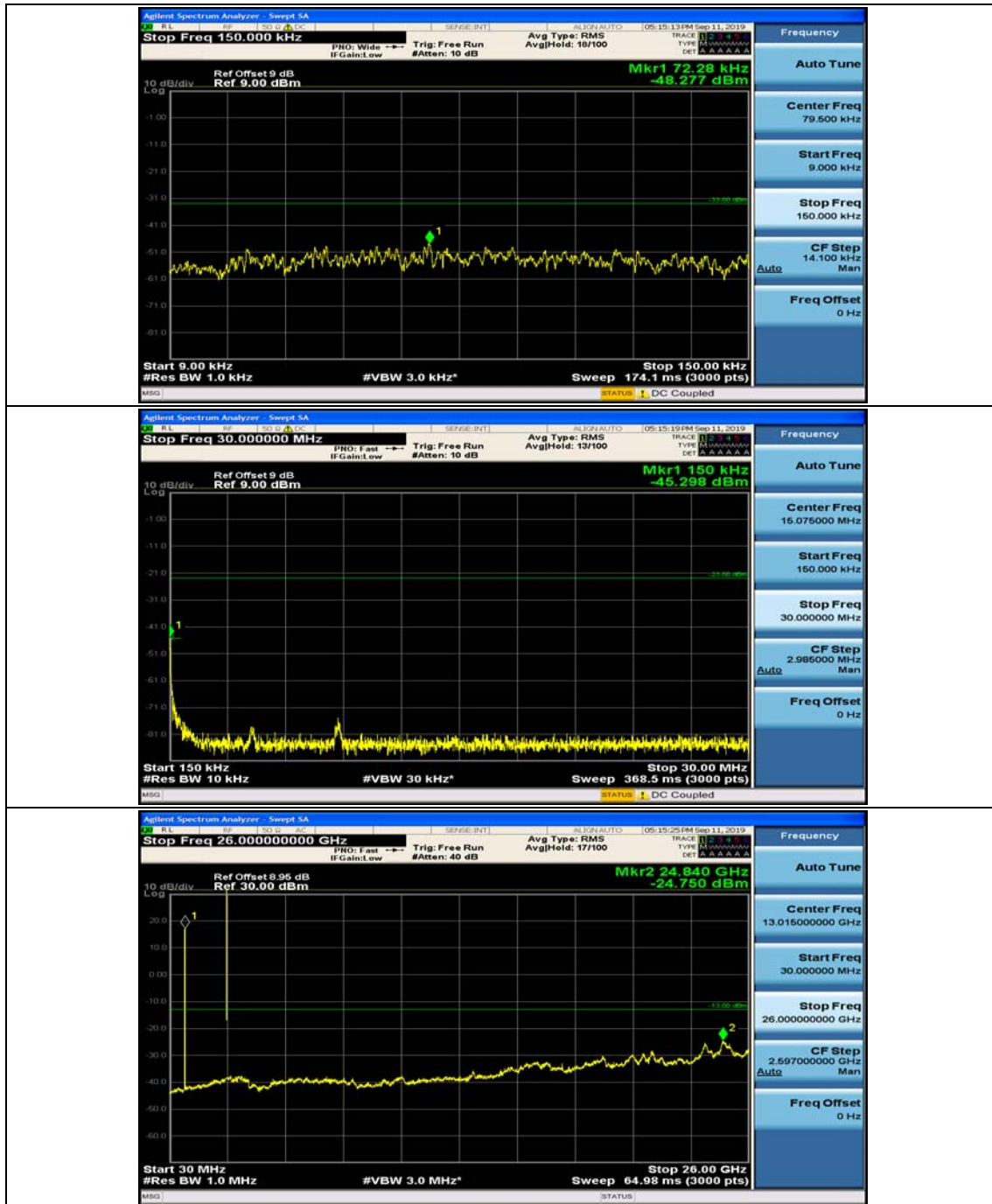
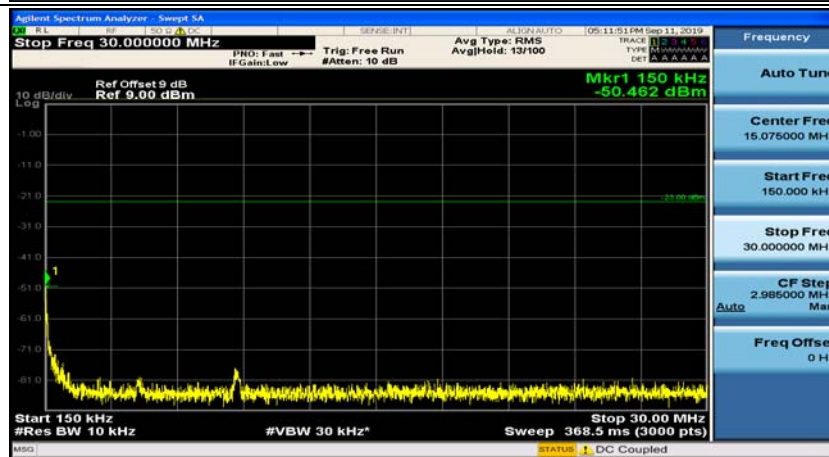
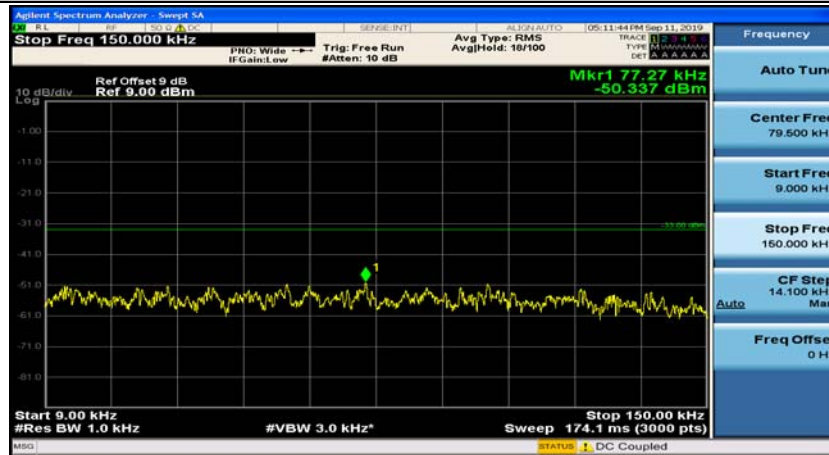
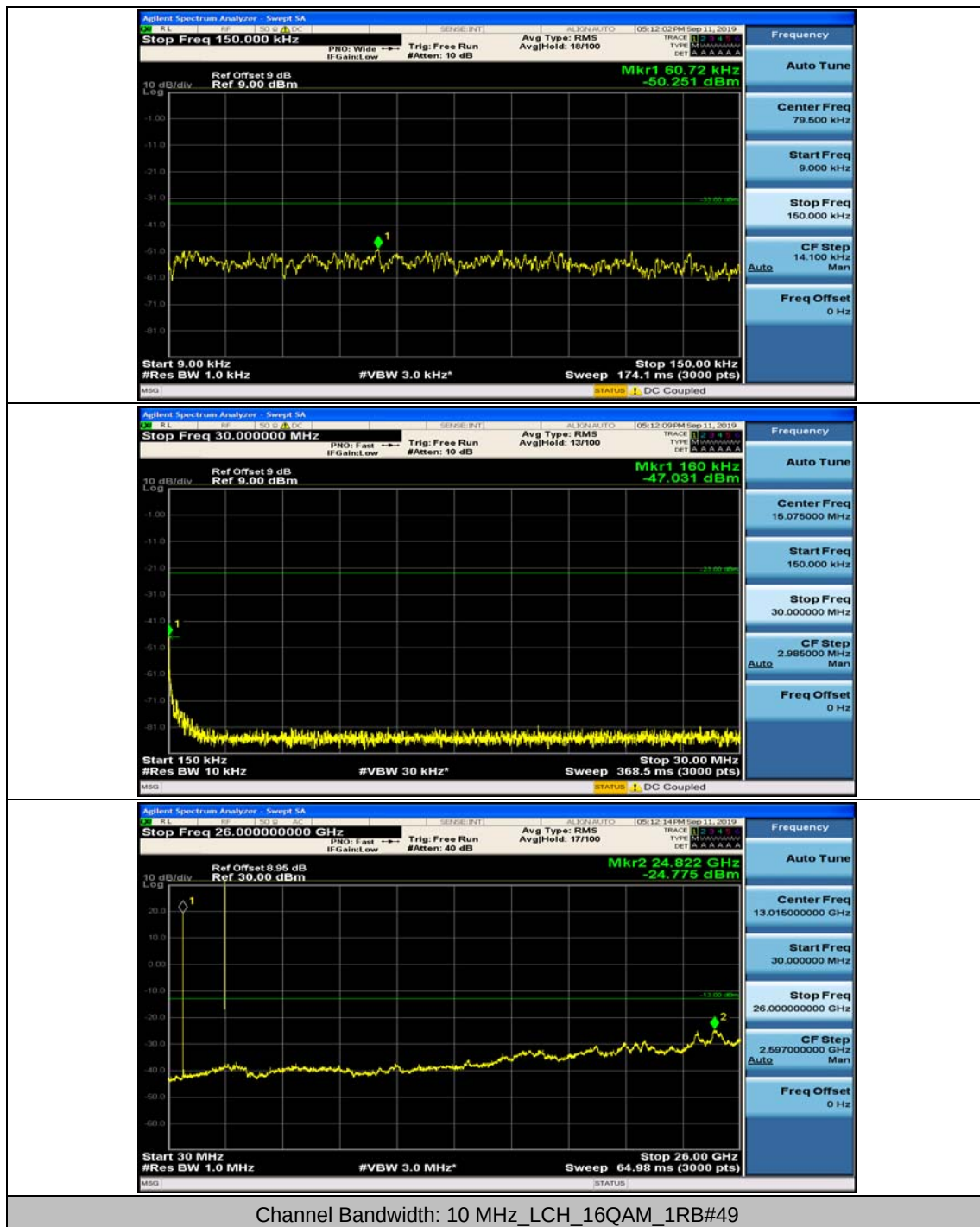


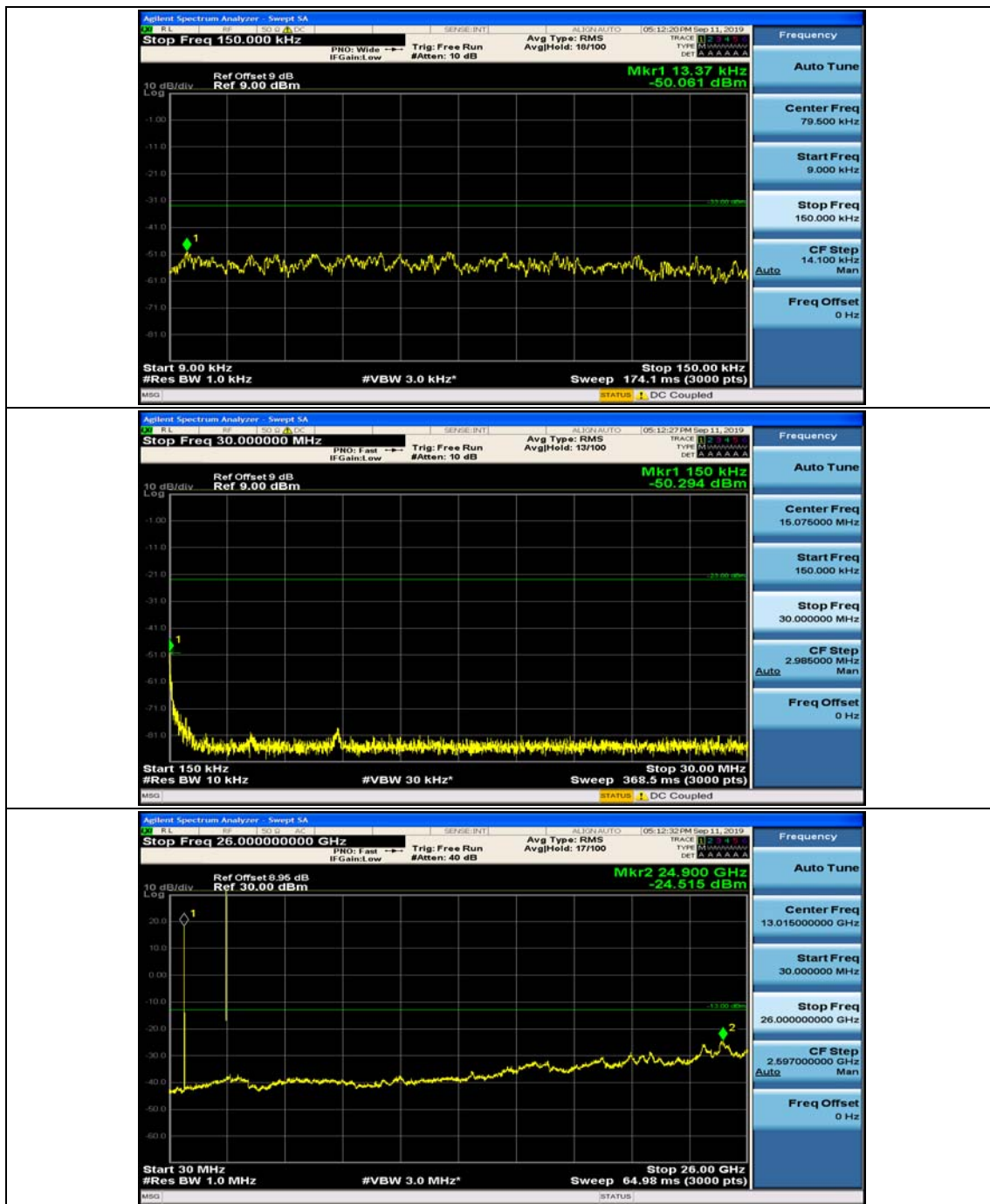


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

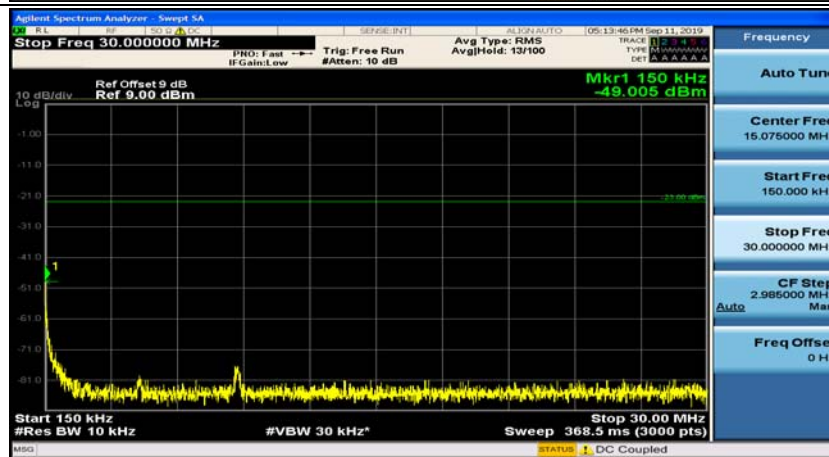
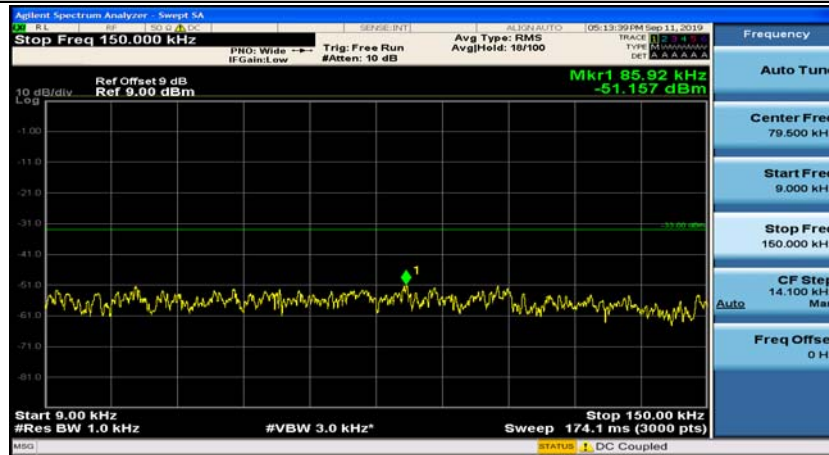


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

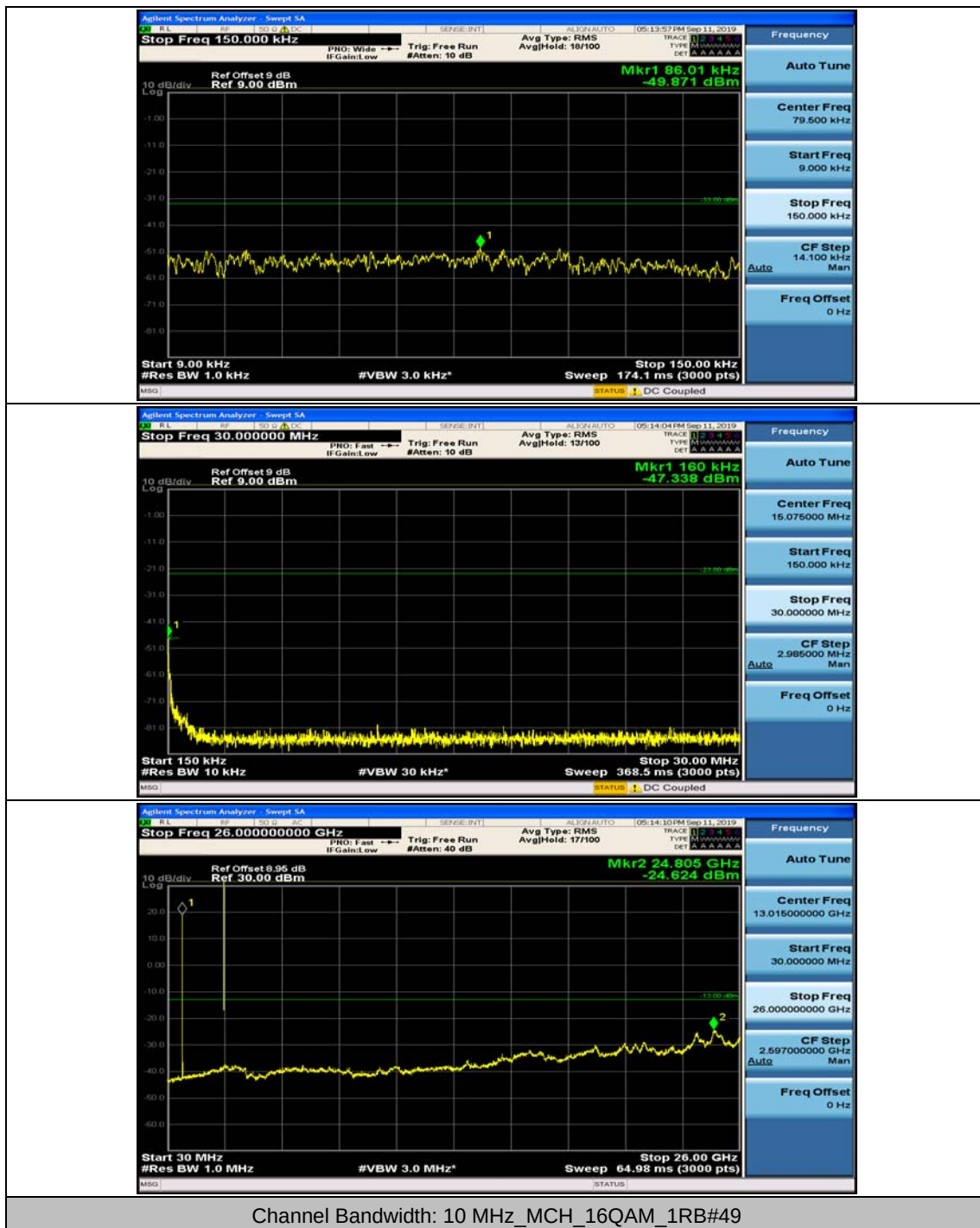


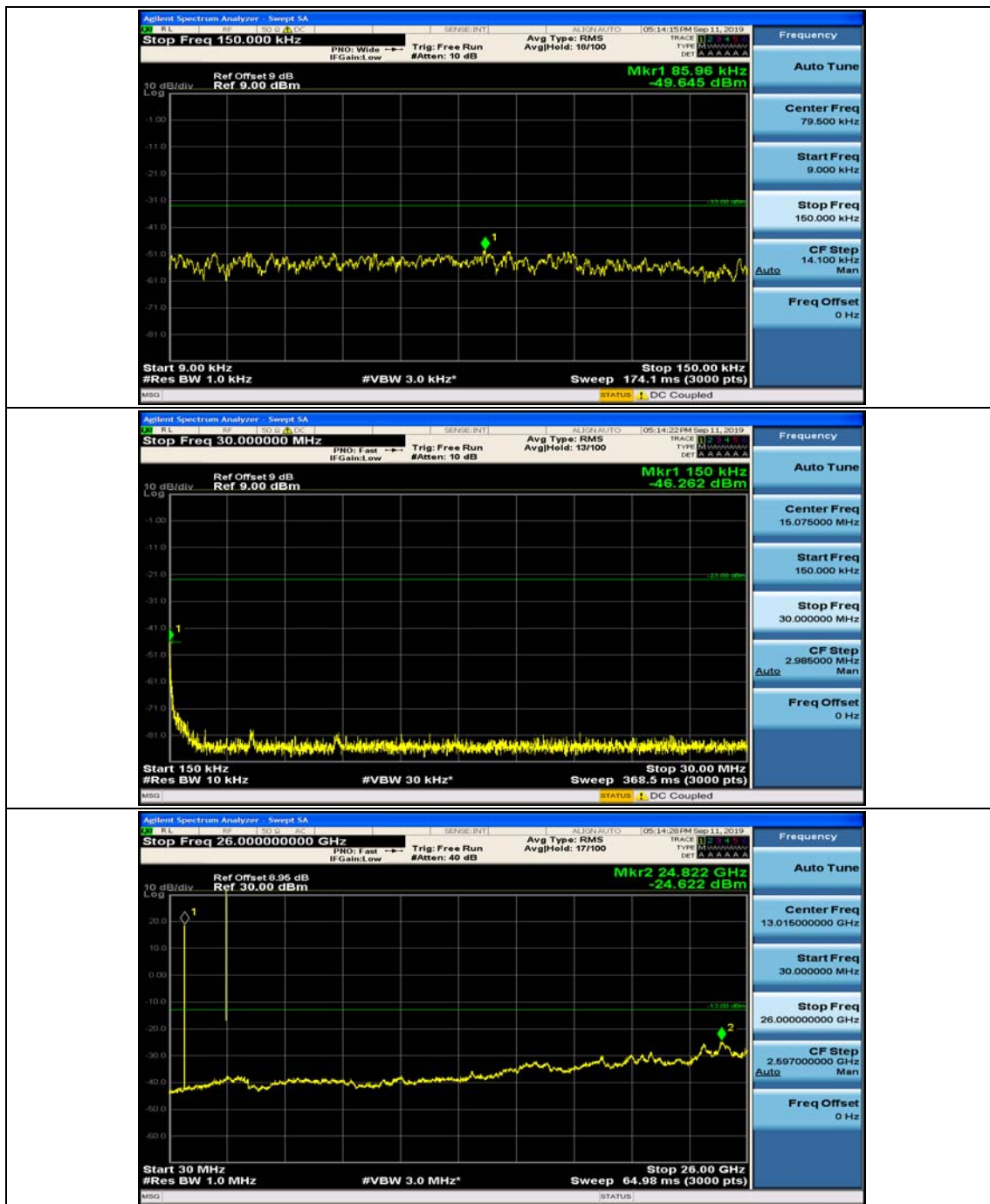


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

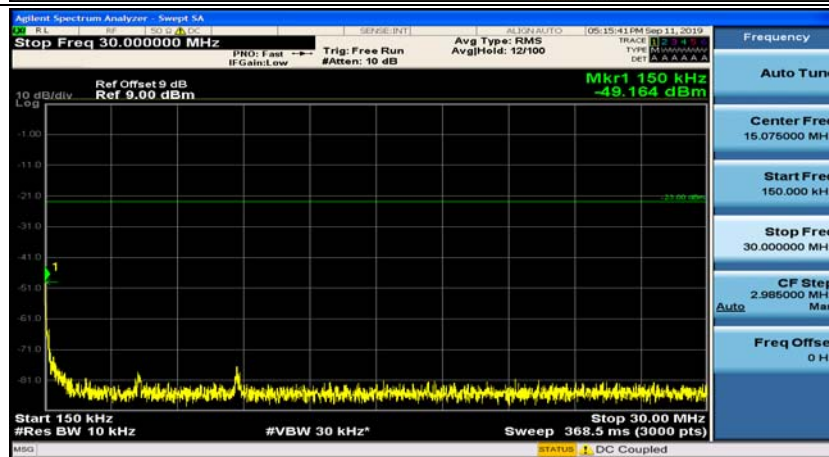
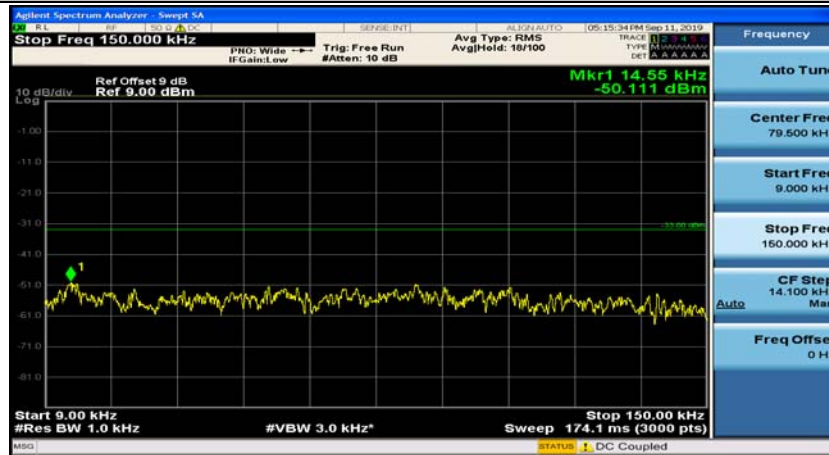


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

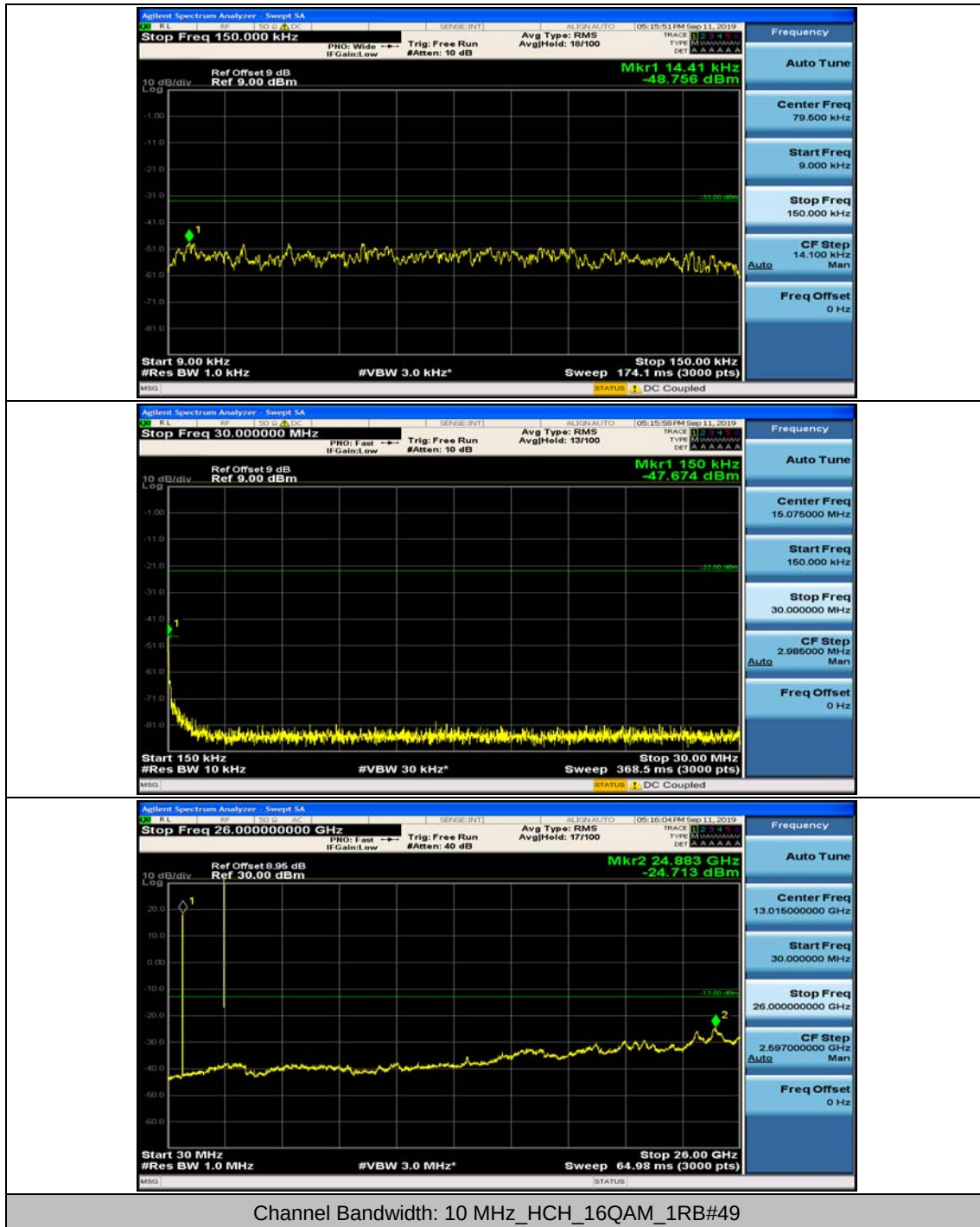


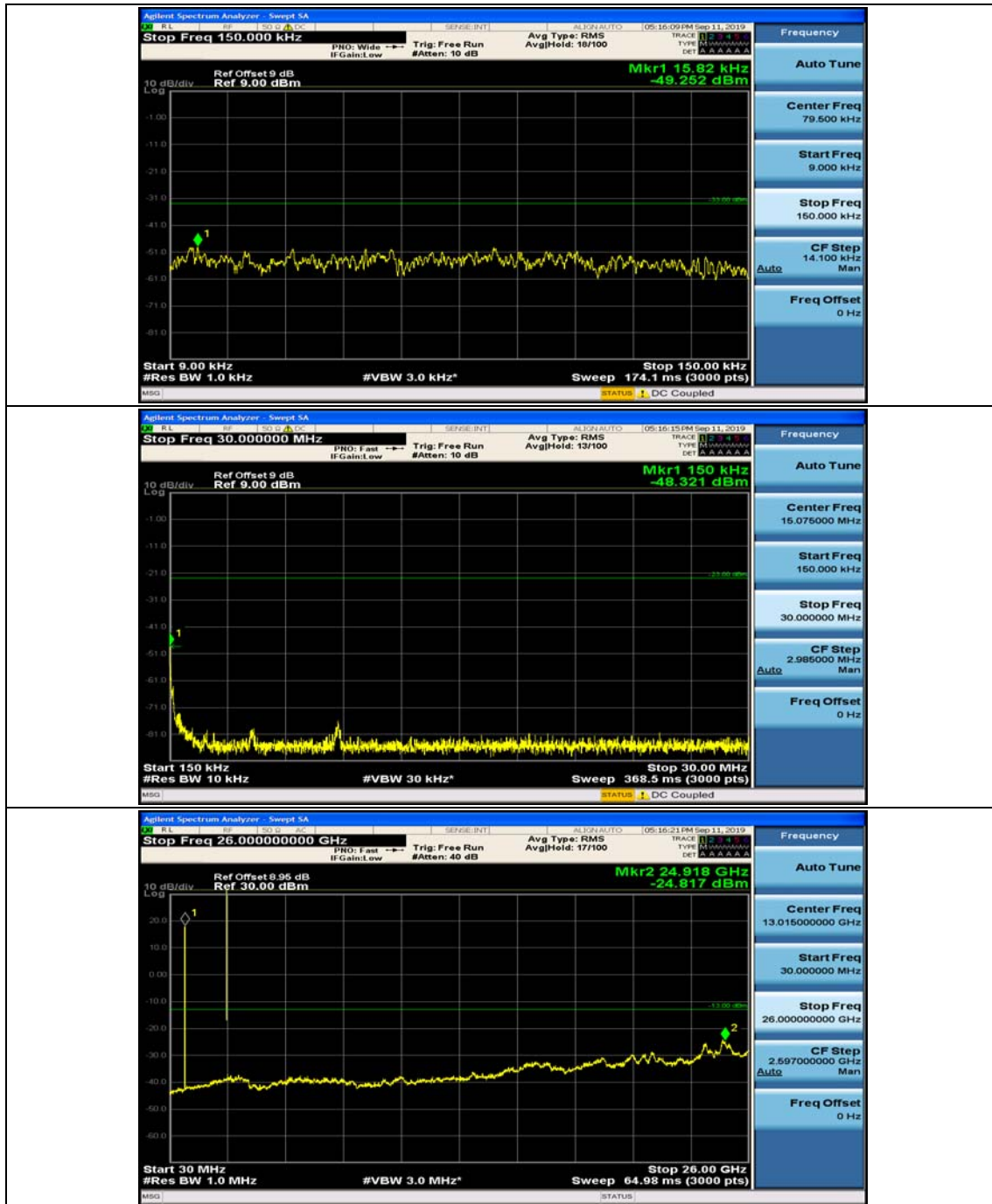


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



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	3.29	0.004702	± 2.5	PASS
		VN	TN	0.81	0.001158	± 2.5	PASS
		VH	TN	-0.24	-0.000343	± 2.5	PASS
	MCH	VL	TN	-0.69	-0.000975	± 2.5	PASS
		VN	TN	4.44	0.006276	± 2.5	PASS
		VH	TN	2.36	0.003336	± 2.5	PASS
	HCH	VL	TN	2.29	0.003201	± 2.5	PASS
		VN	TN	-1.64	-0.002293	± 2.5	PASS
		VH	TN	1.14	0.001594	± 2.5	PASS
16QAM	LCH	VL	TN	3.93	0.005617	± 2.5	PASS
		VN	TN	0.12	0.000172	± 2.5	PASS
		VH	TN	-1.33	-0.001901	± 2.5	PASS
	MCH	VL	TN	0.29	0.000410	± 2.5	PASS
		VN	TN	-0.86	-0.001216	± 2.5	PASS
		VH	TN	2.52	0.003562	± 2.5	PASS
	HCH	VL	TN	4.88	0.006822	± 2.5	PASS
		VN	TN	-1.15	-0.001608	± 2.5	PASS
		VH	TN	4.42	0.006179	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.99	0.001415	± 2.5	PASS
		VN	-20	-1.14	-0.001629	± 2.5	PASS
		VN	-10	0.96	0.001372	± 2.5	PASS
		VN	0	2.48	0.003544	± 2.5	PASS
		VN	10	0.78	0.001115	± 2.5	PASS
		VN	20	3.5	0.005002	± 2.5	PASS
		VN	30	0.61	0.000872	± 2.5	PASS
		VN	40	-0.86	-0.001229	± 2.5	PASS
		VN	50	2.98	0.004259	± 2.5	PASS
	MCH	VN	-30	1.91	0.002700	± 2.5	PASS

		VN	-20	-0.12	-0.000170	± 2.5	PASS
		VN	-10	-0.98	-0.001385	± 2.5	PASS
		VN	0	0.76	0.001074	± 2.5	PASS
		VN	10	-1.53	-0.002163	± 2.5	PASS
		VN	20	1.8	0.002544	± 2.5	PASS
		VN	30	4.48	0.006332	± 2.5	PASS
		VN	40	-1.37	-0.001936	± 2.5	PASS
		VN	50	-1.69	-0.002389	± 2.5	PASS
	HCH	VN	-30	-1.88	-0.002628	± 2.5	PASS
		VN	-20	0.48	0.000671	± 2.5	PASS
		VN	-10	2.51	0.003509	± 2.5	PASS
		VN	0	4.35	0.006081	± 2.5	PASS
		VN	10	-1.5	-0.002097	± 2.5	PASS
		VN	20	-1.27	-0.001775	± 2.5	PASS
		VN	30	-1.93	-0.002698	± 2.5	PASS
		VN	40	2.52	0.003523	± 2.5	PASS
		VN	50	4.37	0.006109	± 2.5	PASS
16QAM	LCH	VN	-30	1.74	0.002487	± 2.5	PASS
		VN	-20	0.14	0.000200	± 2.5	PASS
		VN	-10	3.77	0.005388	± 2.5	PASS
		VN	0	-0.12	-0.000172	± 2.5	PASS
		VN	10	1.21	0.001729	± 2.5	PASS
		VN	20	3.3	0.004716	± 2.5	PASS
		VN	30	3.04	0.004345	± 2.5	PASS
		VN	40	3.61	0.005159	± 2.5	PASS
		VN	50	4.13	0.005903	± 2.5	PASS
	MCH	VN	-30	2.76	0.003901	± 2.5	PASS
		VN	-20	0.72	0.001018	± 2.5	PASS
		VN	-10	2.99	0.004226	± 2.5	PASS
		VN	0	3.02	0.004269	± 2.5	PASS
		VN	10	-1.01	-0.001428	± 2.5	PASS
		VN	20	0.16	0.000226	± 2.5	PASS
		VN	30	-1.41	-0.001993	± 2.5	PASS
		VN	40	-1.63	-0.002304	± 2.5	PASS
		VN	50	-0.3	-0.000424	± 2.5	PASS
	HCH	VN	-30	-1.49	-0.002083	± 2.5	PASS
		VN	-20	0.63	0.000881	± 2.5	PASS
		VN	-10	0.18	0.000252	± 2.5	PASS
		VN	0	3.77	0.005271	± 2.5	PASS
		VN	10	0.28	0.000391	± 2.5	PASS
		VN	20	-0.75	-0.001049	± 2.5	PASS

		VN	30	2.82	0.003942	± 2.5	PASS
		VN	40	3.49	0.004879	± 2.5	PASS
		VN	50	-0.96	-0.001342	± 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	4.39	0.006267	± 2.5	PASS
		VN	TN	-0.51	-0.000728	± 2.5	PASS
		VH	TN	-0.24	-0.000343	± 2.5	PASS
	MCH	VL	TN	-0.64	-0.000905	± 2.5	PASS
		VN	TN	-0.51	-0.000721	± 2.5	PASS
		VH	TN	3.6	0.005088	± 2.5	PASS
	HCH	VL	TN	3.84	0.005374	± 2.5	PASS
		VN	TN	0.3	0.000420	± 2.5	PASS
		VH	TN	0.69	0.000966	± 2.5	PASS
16QAM	LCH	VL	TN	0.07	0.000100	± 2.5	PASS
		VN	TN	0.46	0.000657	± 2.5	PASS
		VH	TN	3.25	0.004640	± 2.5	PASS
	MCH	VL	TN	-0.22	-0.000311	± 2.5	PASS
		VN	TN	3.08	0.004353	± 2.5	PASS
		VH	TN	2.55	0.003604	± 2.5	PASS
	HCH	VL	TN	-1.04	-0.001456	± 2.5	PASS
		VN	TN	1.37	0.001917	± 2.5	PASS
		VH	TN	-0.81	-0.001134	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.26	0.003226	± 2.5	PASS
		VN	-20	3	0.004283	± 2.5	PASS
		VN	-10	-0.69	-0.000985	± 2.5	PASS
		VN	0	-0.72	-0.001028	± 2.5	PASS
		VN	10	4.24	0.006053	± 2.5	PASS
		VN	20	0.47	0.000671	± 2.5	PASS
		VN	30	2.46	0.003512	± 2.5	PASS
		VN	40	4.66	0.006652	± 2.5	PASS
		VN	50	0.5	0.000714	± 2.5	PASS
	MCH	VN	-30	-0.43	-0.000608	± 2.5	PASS
		VN	-20	3.17	0.004481	± 2.5	PASS

		VN	-10	-1.91	-0.002700	± 2.5	PASS	
		VN	0	4.91	0.006940	± 2.5	PASS	
		VN	10	-0.55	-0.000777	± 2.5	PASS	
		VN	20	0.03	0.000042	± 2.5	PASS	
		VN	30	2.72	0.003845	± 2.5	PASS	
		VN	40	3.8	0.005371	± 2.5	PASS	
		VN	50	-1.82	-0.002572	± 2.5	PASS	
	HCH	VN	-30	-1.2	-0.001679	± 2.5	PASS	
		VN	-20	4.99	0.006984	± 2.5	PASS	
		VN	-10	2.08	0.002911	± 2.5	PASS	
		VN	0	2.82	0.003947	± 2.5	PASS	
		VN	10	2.83	0.003961	± 2.5	PASS	
		VN	20	4.07	0.005696	± 2.5	PASS	
		VN	30	0.51	0.000714	± 2.5	PASS	
		VN	40	0.04	0.000056	± 2.5	PASS	
		VN	50	-0.22	-0.000308	± 2.5	PASS	
	QPSK	LCH	VN	-30	-1.42	-0.002027	± 2.5	PASS
			VN	-20	4.68	0.006681	± 2.5	PASS
VN			-10	-0.02	-0.000029	± 2.5	PASS	
VN			0	0.03	0.000043	± 2.5	PASS	
VN			10	2.23	0.003183	± 2.5	PASS	
VN			20	4.61	0.006581	± 2.5	PASS	
VN			30	-1.76	-0.002512	± 2.5	PASS	
VN			40	0.06	0.000086	± 2.5	PASS	
VN			50	4.3	0.006138	± 2.5	PASS	
MCH		VN	-30	-0.73	-0.001032	± 2.5	PASS	
		VN	-20	2.6	0.003675	± 2.5	PASS	
		VN	-10	0.76	0.001074	± 2.5	PASS	
		VN	0	1.04	0.001470	± 2.5	PASS	
		VN	10	-0.14	-0.000198	± 2.5	PASS	
		VN	20	1.18	0.001668	± 2.5	PASS	
		VN	30	0.31	0.000438	± 2.5	PASS	
		VN	40	-0.44	-0.000622	± 2.5	PASS	
		VN	50	1.65	0.002332	± 2.5	PASS	
HCH		VN	-30	-0.29	-0.000406	± 2.5	PASS	
		VN	-20	2.11	0.002953	± 2.5	PASS	
		VN	-10	3.84	0.005374	± 2.5	PASS	
		VN	0	3.09	0.004325	± 2.5	PASS	
		VN	10	2.17	0.003037	± 2.5	PASS	
		VN	20	1.66	0.002323	± 2.5	PASS	
		VN	30	1.66	0.002323	± 2.5	PASS	

		VN	40	1.96	0.002743	± 2.5	PASS
		VN	50	-0.57	-0.000798	± 2.5	PASS

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	-0.05	-0.000071	± 2.5	PASS
		VN	TN	0.19	0.000271	± 2.5	PASS
		VH	TN	-0.34	-0.000485	± 2.5	PASS
	MCH	VL	TN	0.82	0.001159	± 2.5	PASS
		VN	TN	2.77	0.003915	± 2.5	PASS
		VH	TN	2.33	0.003293	± 2.5	PASS
	HCH	VL	TN	4.25	0.005957	± 2.5	PASS
		VN	TN	-1.31	-0.001836	± 2.5	PASS
		VH	TN	4.02	0.005634	± 2.5	PASS
16QAM	LCH	VL	TN	0.68	0.000969	± 2.5	PASS
		VN	TN	4.8	0.006842	± 2.5	PASS
		VH	TN	2.35	0.003350	± 2.5	PASS
	MCH	VL	TN	1.26	0.001781	± 2.5	PASS
		VN	TN	4.06	0.005739	± 2.5	PASS
		VH	TN	-1.7	-0.002403	± 2.5	PASS
	HCH	VL	TN	-0.39	-0.000547	± 2.5	PASS
		VN	TN	1.21	0.001696	± 2.5	PASS
		VH	TN	-1.21	-0.001696	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.91	0.002723	± 2.5	PASS
		VN	-20	0.79	0.001126	± 2.5	PASS
		VN	-10	3.93	0.005602	± 2.5	PASS
		VN	0	3.8	0.005417	± 2.5	PASS
		VN	10	4.85	0.006914	± 2.5	PASS
		VN	20	3.65	0.005203	± 2.5	PASS
		VN	30	0.38	0.000542	± 2.5	PASS
		VN	40	-1.17	-0.001668	± 2.5	PASS
		VN	50	4.25	0.006058	± 2.5	PASS
	MCH	VN	-30	-1.06	-0.001498	± 2.5	PASS
		VN	-20	-1.63	-0.002304	± 2.5	PASS
		VN	-10	0.42	0.000594	± 2.5	PASS

		VN	0	0.01	0.000014	± 2.5	PASS
		VN	10	0.71	0.001004	± 2.5	PASS
		VN	20	4.34	0.006134	± 2.5	PASS
		VN	30	-1.18	-0.001668	± 2.5	PASS
		VN	40	1.3	0.001837	± 2.5	PASS
		VN	50	-1.41	-0.001993	± 2.5	PASS
	HCH	VN	-30	0.14	0.000196	± 2.5	PASS
		VN	-20	-1.97	-0.002761	± 2.5	PASS
		VN	-10	0.87	0.001219	± 2.5	PASS
		VN	0	3.9	0.005466	± 2.5	PASS
		VN	10	2.61	0.003658	± 2.5	PASS
		VN	20	-1.17	-0.001640	± 2.5	PASS
		VN	30	4.48	0.006279	± 2.5	PASS
		VN	40	-0.04	-0.000056	± 2.5	PASS
		VN	50	-0.6	-0.000841	± 2.5	PASS
16QAM	LCH	VN	-30	3.76	0.005360	± 2.5	PASS
		VN	-20	3.39	0.004833	± 2.5	PASS
		VN	-10	-0.55	-0.000784	± 2.5	PASS
		VN	0	4.01	0.005716	± 2.5	PASS
		VN	10	0.06	0.000086	± 2.5	PASS
		VN	20	1.45	0.002067	± 2.5	PASS
		VN	30	-1.41	-0.002010	± 2.5	PASS
		VN	40	2.44	0.003478	± 2.5	PASS
		VN	50	-1.39	-0.001981	± 2.5	PASS
	MCH	VN	-30	0.79	0.001117	± 2.5	PASS
		VN	-20	4.67	0.006601	± 2.5	PASS
		VN	-10	1.37	0.001936	± 2.5	PASS
		VN	0	-1.21	-0.001710	± 2.5	PASS
		VN	10	0.81	0.001145	± 2.5	PASS
		VN	20	0.4	0.000565	± 2.5	PASS
		VN	30	0.54	0.000763	± 2.5	PASS
		VN	40	-0.32	-0.000452	± 2.5	PASS
		VN	50	4.93	0.006968	± 2.5	PASS
	HCH	VN	-30	-1.2	-0.001682	± 2.5	PASS
		VN	-20	-1.46	-0.002046	± 2.5	PASS
		VN	-10	4.9	0.006868	± 2.5	PASS
		VN	0	0.56	0.000785	± 2.5	PASS
		VN	10	1.25	0.001752	± 2.5	PASS
		VN	20	-0.69	-0.000967	± 2.5	PASS
		VN	30	4.95	0.006938	± 2.5	PASS
		VN	40	0.11	0.000154	± 2.5	PASS

		VN	50	0.31	0.000434	± 2.5	PASS
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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	1.08	0.001534	± 2.5	PASS
		VN	TN	-0.64	-0.000909	± 2.5	PASS
		VH	TN	-1.54	-0.002188	± 2.5	PASS
	MCH	VL	TN	3.61	0.005102	± 2.5	PASS
		VN	TN	-0.42	-0.000594	± 2.5	PASS
		VH	TN	4.26	0.006021	± 2.5	PASS
	HCH	VL	TN	-1.66	-0.002335	± 2.5	PASS
		VN	TN	-0.05	-0.000070	± 2.5	PASS
		VH	TN	3.08	0.004332	± 2.5	PASS
16QAM	LCH	VL	TN	2.43	0.003452	± 2.5	PASS
		VN	TN	4.13	0.005866	± 2.5	PASS
		VH	TN	-1.35	-0.001918	± 2.5	PASS
	MCH	VL	TN	0.69	0.000975	± 2.5	PASS
		VN	TN	1.61	0.002276	± 2.5	PASS
		VH	TN	-1.61	-0.002276	± 2.5	PASS
	HCH	VL	TN	4.62	0.006498	± 2.5	PASS
		VN	TN	4.73	0.006653	± 2.5	PASS
		VH	TN	2.54	0.003572	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.17	0.004503	± 2.5	PASS
		VN	-20	-0.89	-0.001264	± 2.5	PASS
		VN	-10	0.67	0.000952	± 2.5	PASS
		VN	0	-0.27	-0.000384	± 2.5	PASS
		VN	10	3.37	0.004787	± 2.5	PASS
		VN	20	1.46	0.002074	± 2.5	PASS
		VN	30	-0.22	-0.000313	± 2.5	PASS
		VN	40	3.71	0.005270	± 2.5	PASS
		VN	50	-1.49	-0.002116	± 2.5	PASS
	MCH	VN	-30	-1.81	-0.002558	± 2.5	PASS
		VN	-20	-1.81	-0.002558	± 2.5	PASS
		VN	-10	2.74	0.003873	± 2.5	PASS
		VN	0	0.01	0.000014	± 2.5	PASS

		VN	10	1.59	0.002247	± 2.5	PASS
		VN	20	3.26	0.004608	± 2.5	PASS
		VN	30	1.39	0.001965	± 2.5	PASS
		VN	40	-0.59	-0.000834	± 2.5	PASS
		VN	50	2.68	0.003788	± 2.5	PASS
	HCH	VN	-30	0.14	0.000197	± 2.5	PASS
		VN	-20	2.41	0.003390	± 2.5	PASS
		VN	-10	0.95	0.001336	± 2.5	PASS
		VN	0	0.99	0.001392	± 2.5	PASS
		VN	10	2.27	0.003193	± 2.5	PASS
		VN	20	-1.75	-0.002461	± 2.5	PASS
		VN	30	-1.68	-0.002363	± 2.5	PASS
		VN	40	4.13	0.005809	± 2.5	PASS
		VN	50	-1.47	-0.002068	± 2.5	PASS
		VN	-30	2.17	0.003082	± 2.5	PASS
QPSK	LCH	VN	-20	1.92	0.002727	± 2.5	PASS
		VN	-10	-0.76	-0.001080	± 2.5	PASS
		VN	0	4.17	0.005923	± 2.5	PASS
		VN	10	-1.28	-0.001818	± 2.5	PASS
		VN	20	3.88	0.005511	± 2.5	PASS
		VN	30	3.11	0.004418	± 2.5	PASS
		VN	40	4.18	0.005938	± 2.5	PASS
		VN	50	0.96	0.001364	± 2.5	PASS
	MCH	VN	-30	4.8	0.006784	± 2.5	PASS
		VN	-20	4.16	0.005880	± 2.5	PASS
		VN	-10	-1.79	-0.002530	± 2.5	PASS
		VN	0	-0.37	-0.000523	± 2.5	PASS
		VN	10	2.02	0.002855	± 2.5	PASS
		VN	20	4.23	0.005979	± 2.5	PASS
		VN	30	4.42	0.006247	± 2.5	PASS
		VN	40	3.59	0.005074	± 2.5	PASS
		VN	50	1.98	0.002799	± 2.5	PASS
	HCH	VN	-30	-1.63	-0.002293	± 2.5	PASS
		VN	-20	4.97	0.006990	± 2.5	PASS
		VN	-10	2.83	0.003980	± 2.5	PASS
		VN	0	3.88	0.005457	± 2.5	PASS
		VN	10	3.92	0.005513	± 2.5	PASS
		VN	20	3.49	0.004909	± 2.5	PASS
		VN	30	1.17	0.001646	± 2.5	PASS
		VN	40	0.84	0.001181	± 2.5	PASS
		VN	50	2	0.002813	± 2.5	PASS