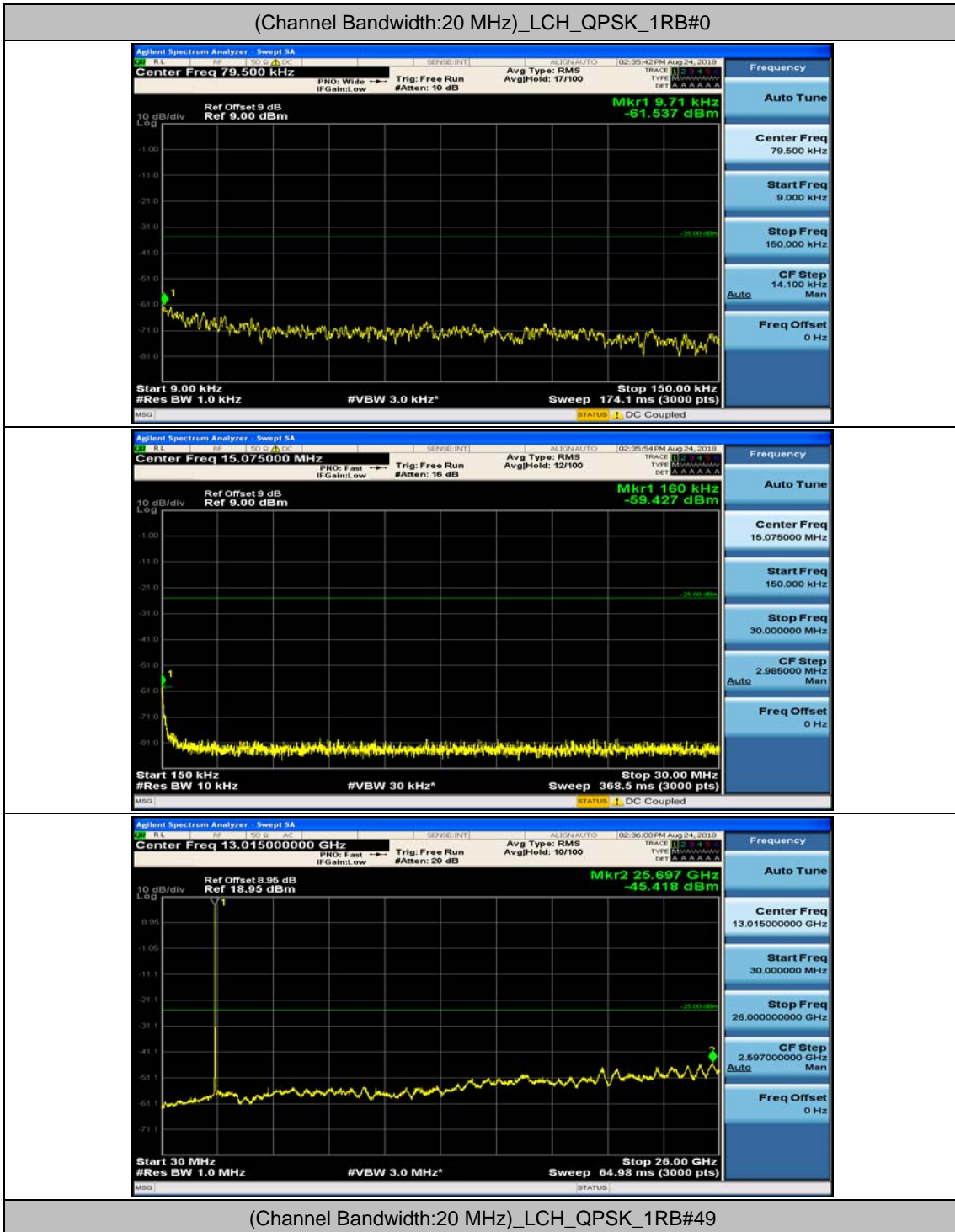
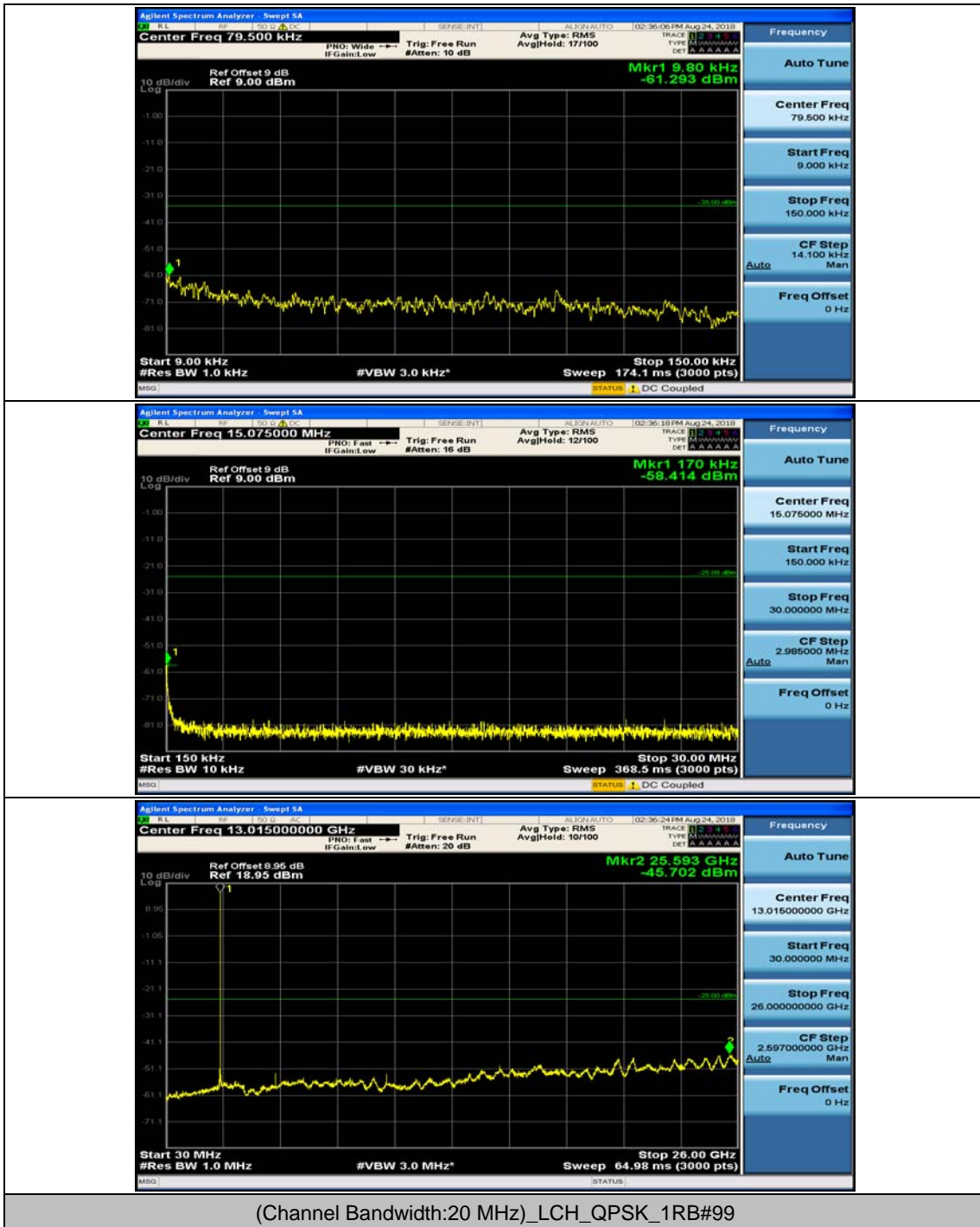
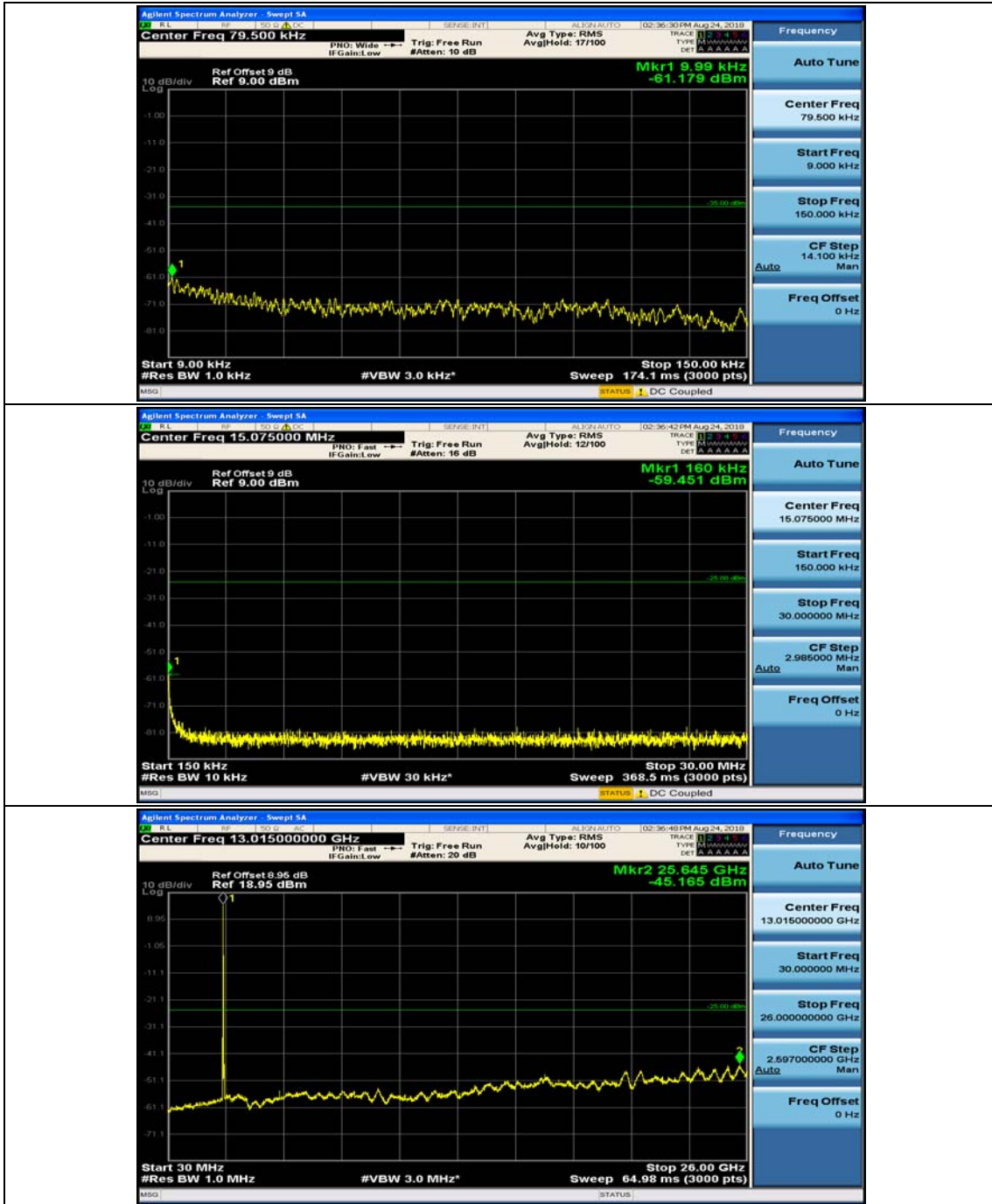


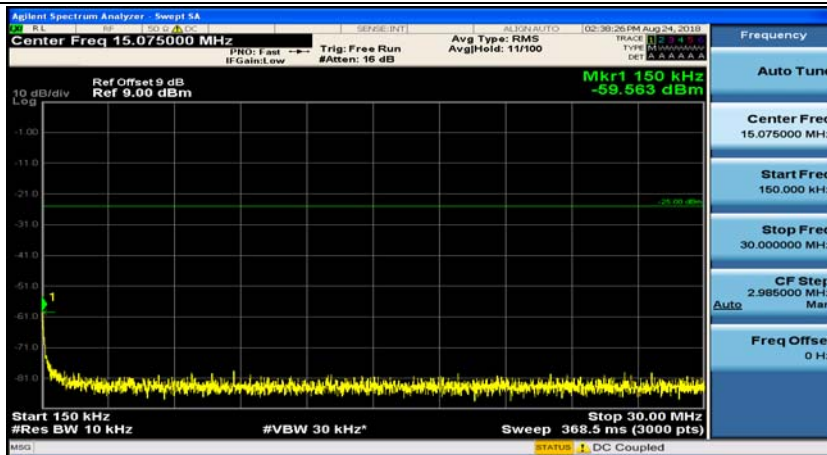
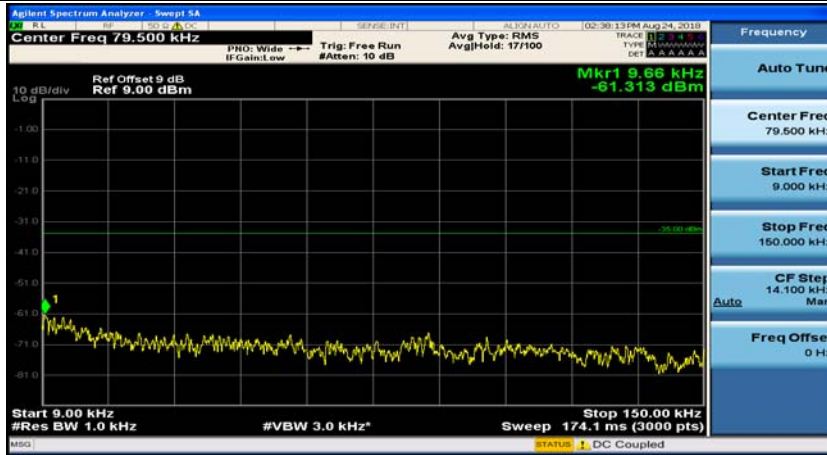
Channel Bandwidth: 20 MHz



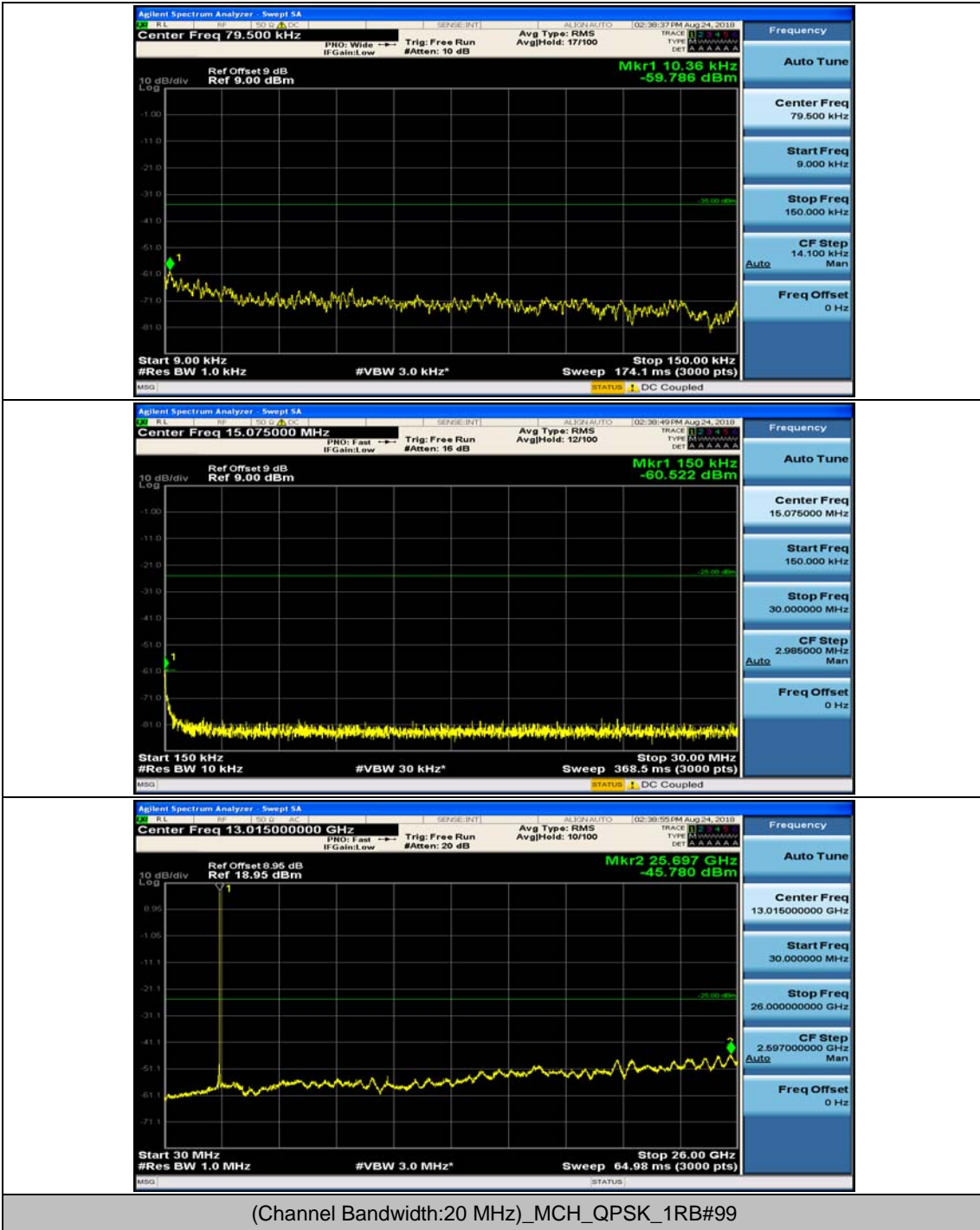


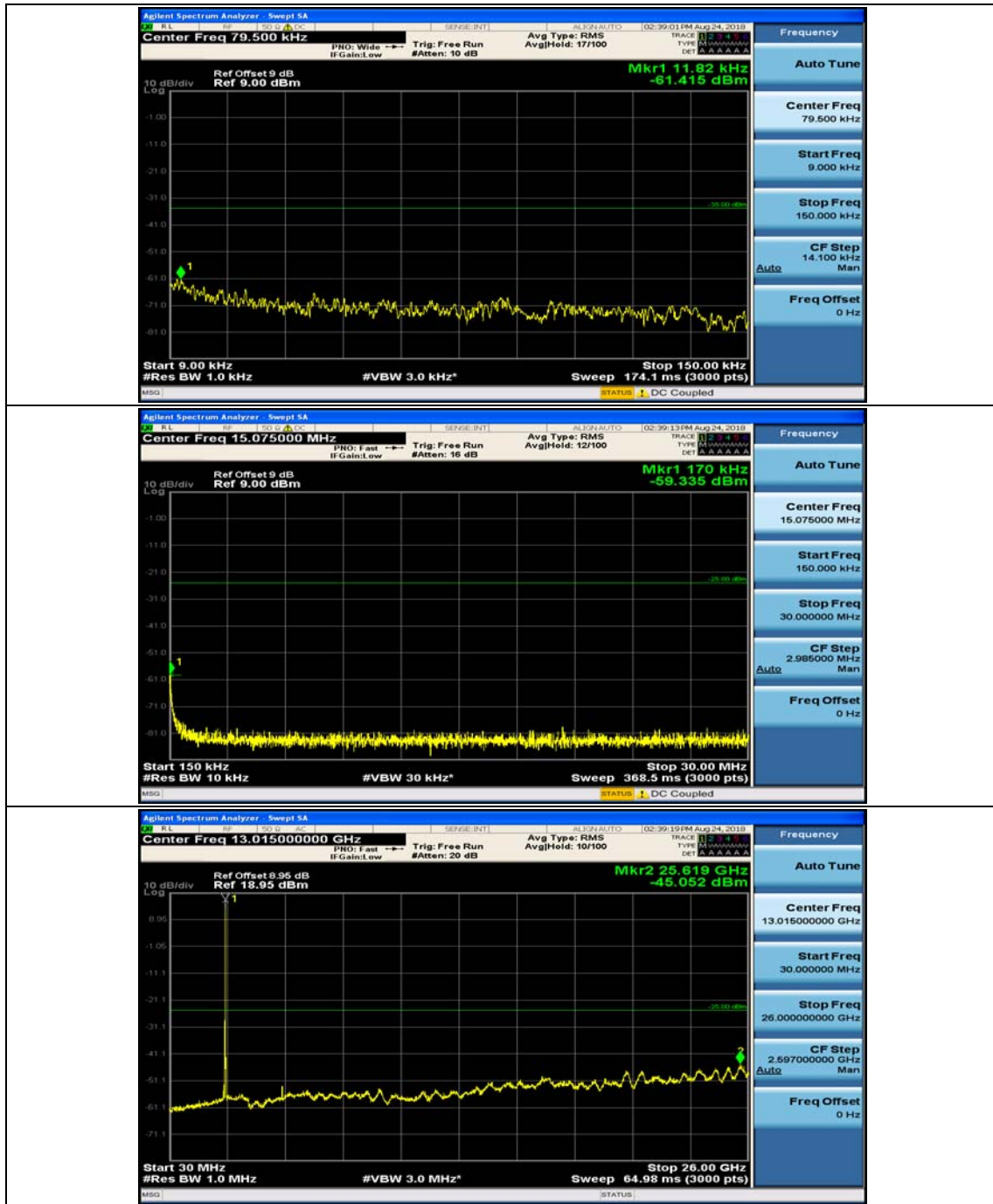


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

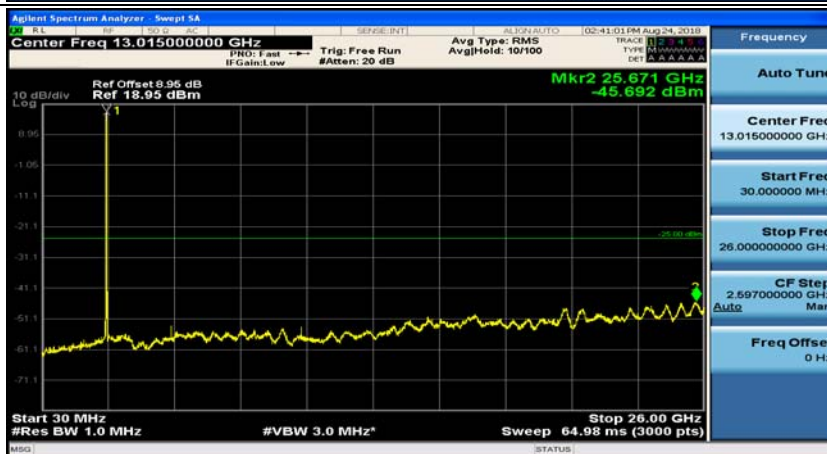
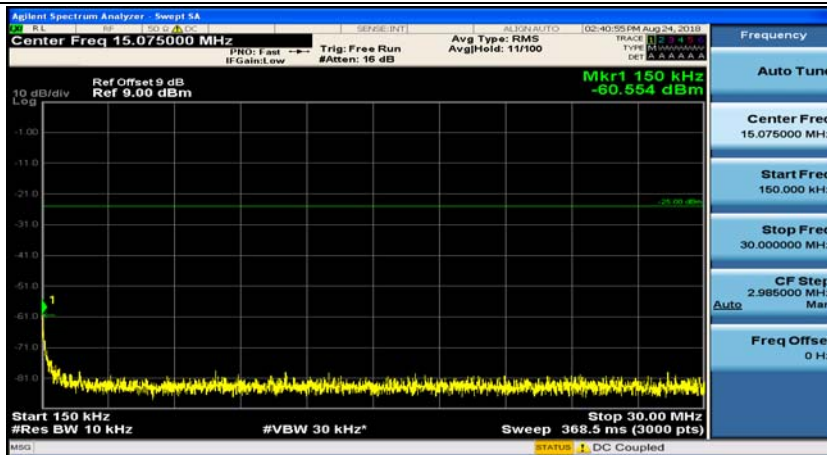
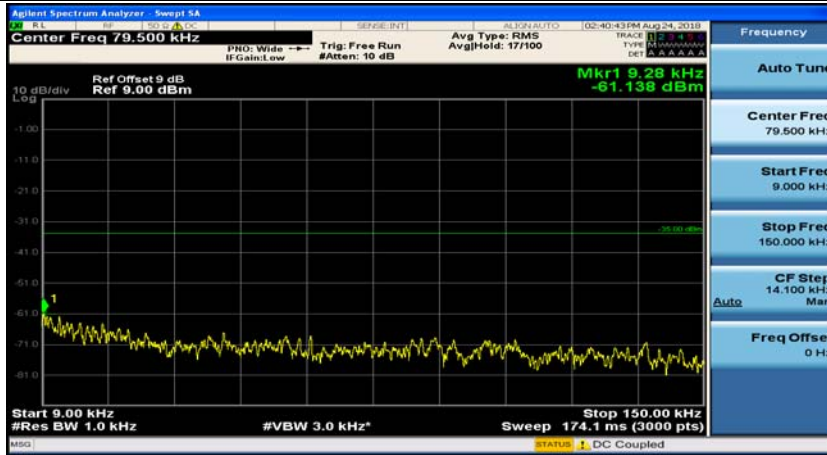


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

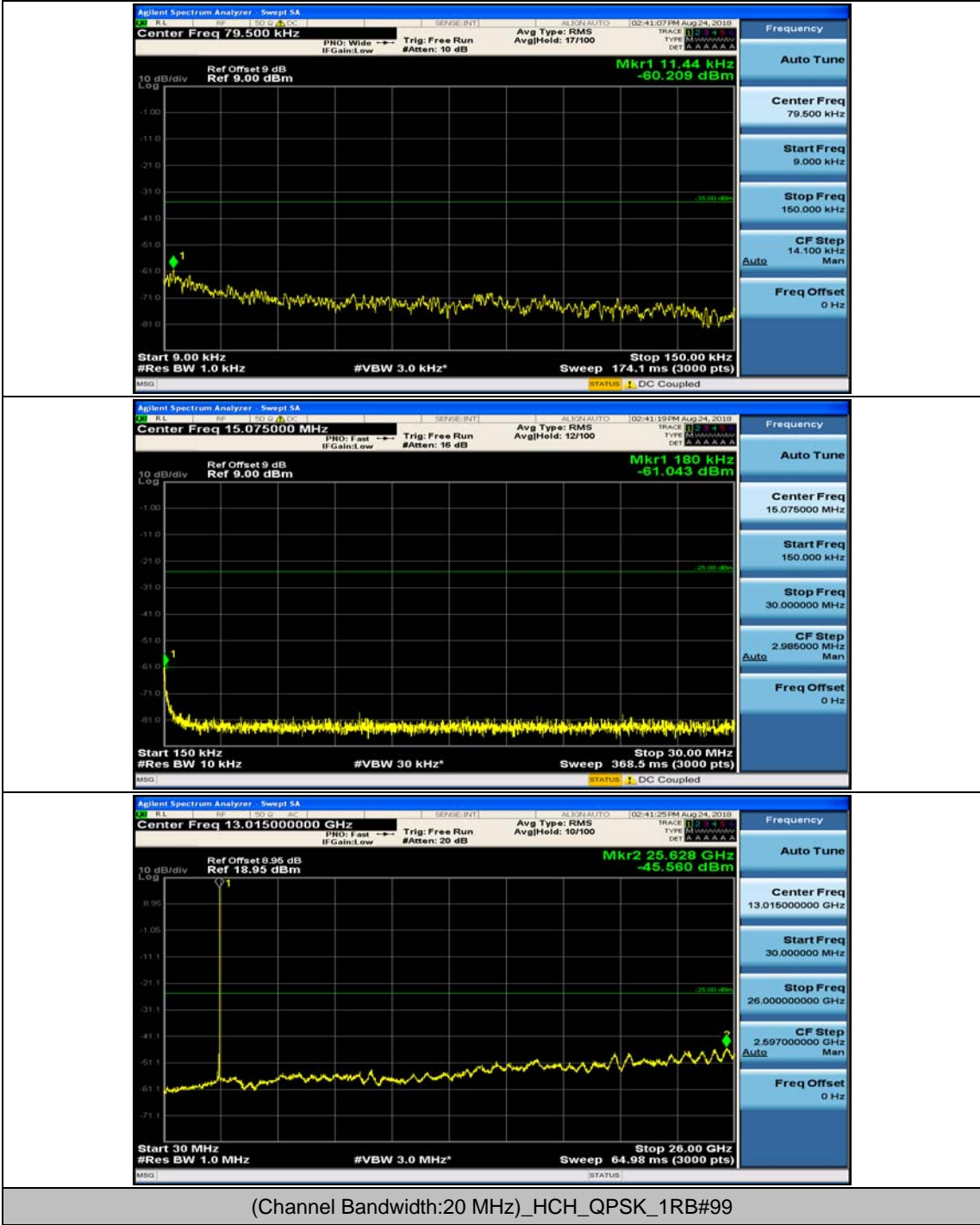


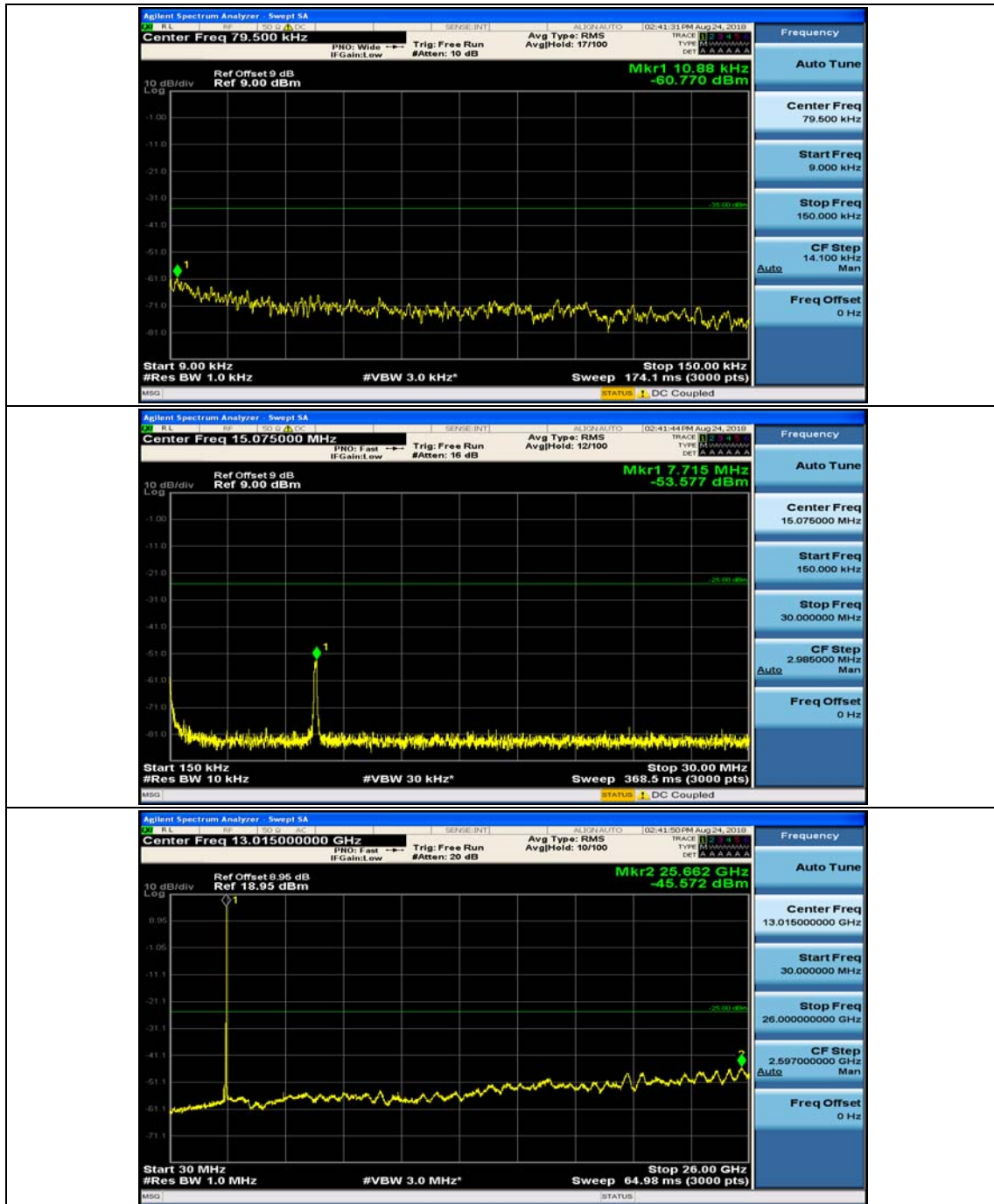


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

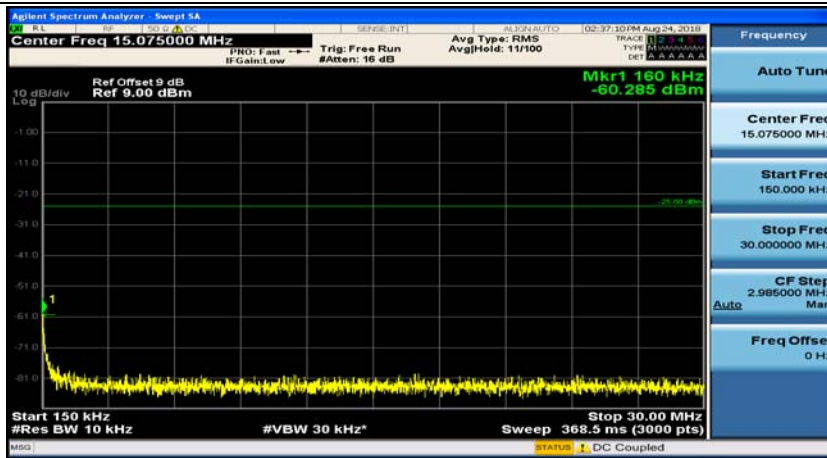
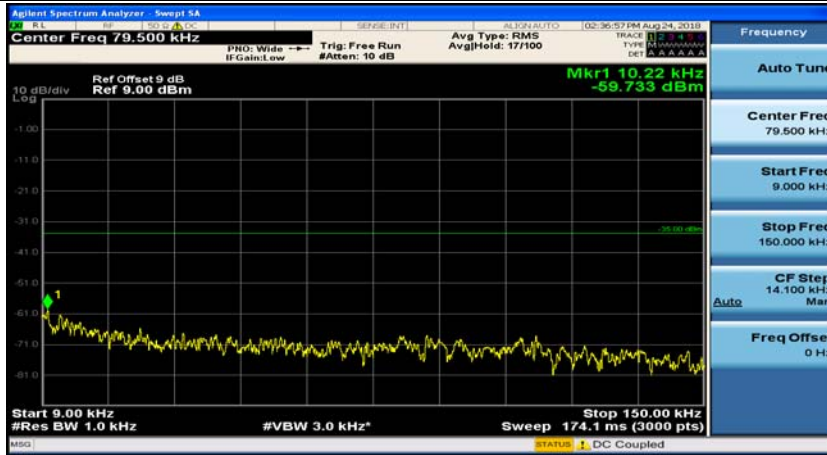


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

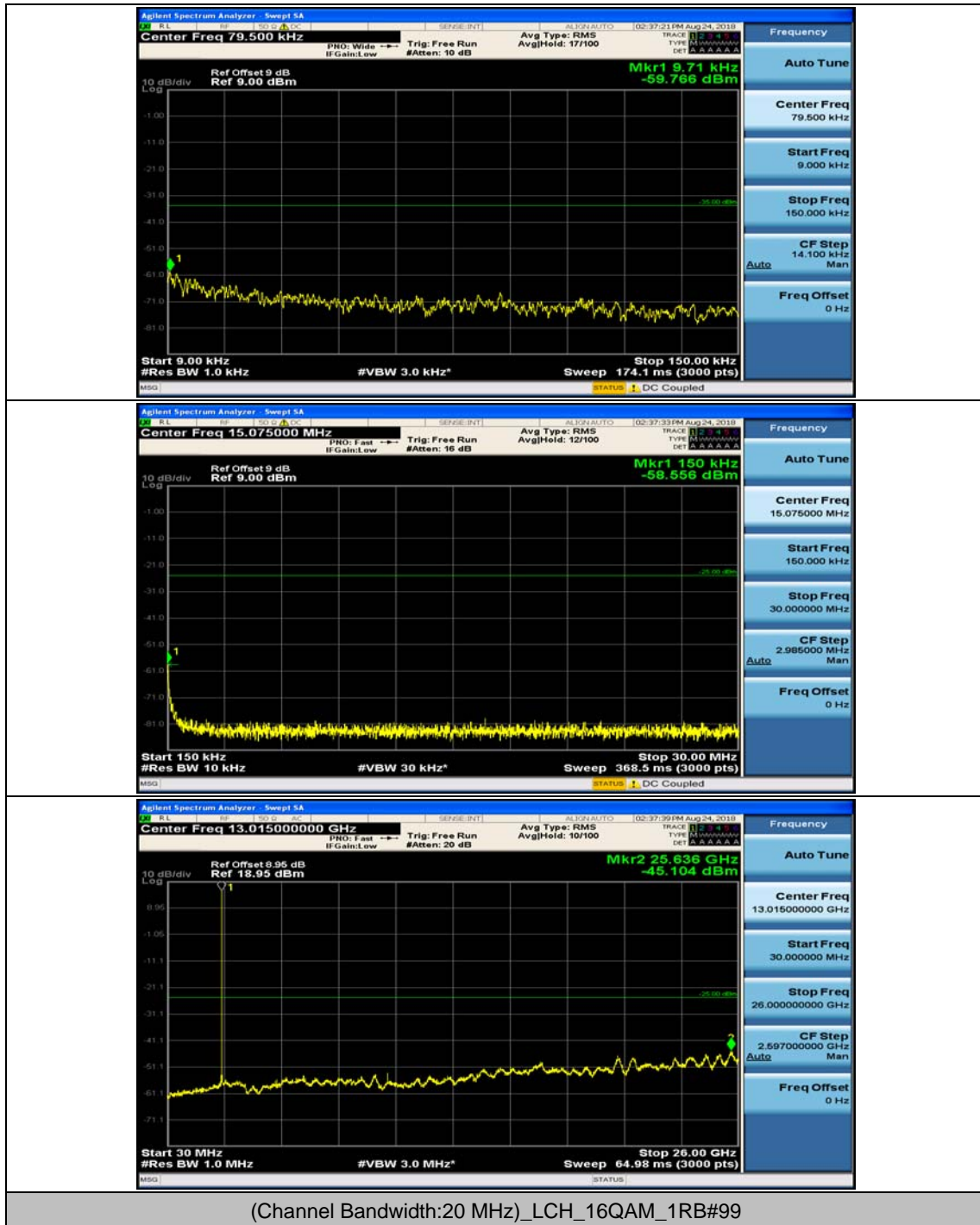


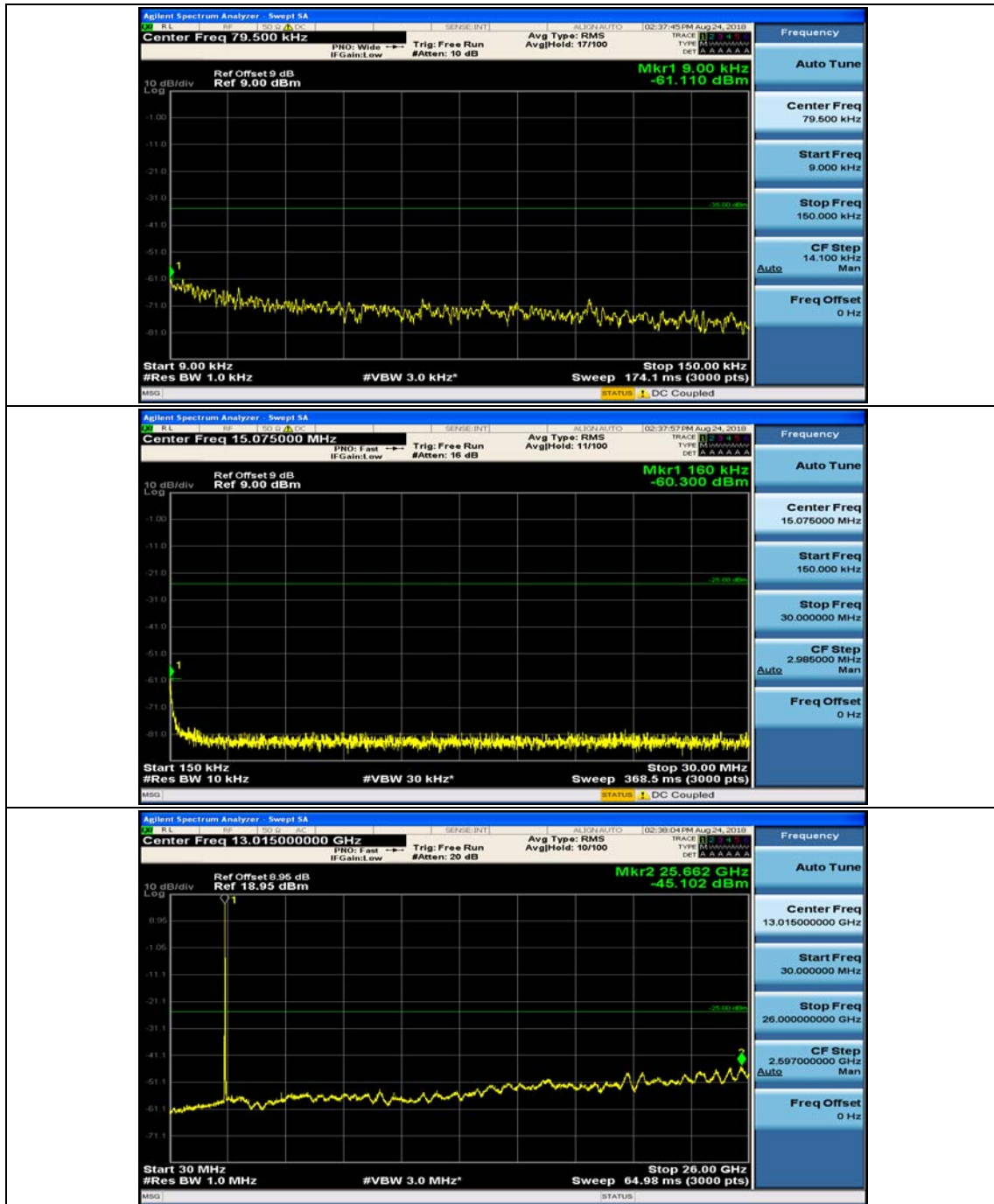


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

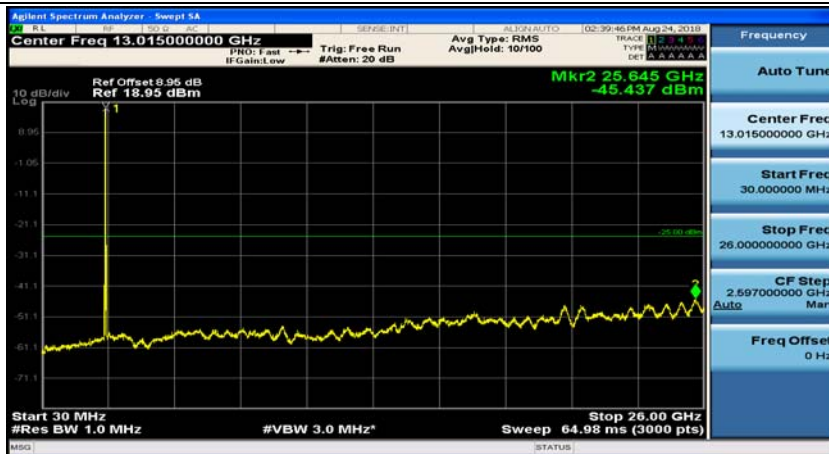
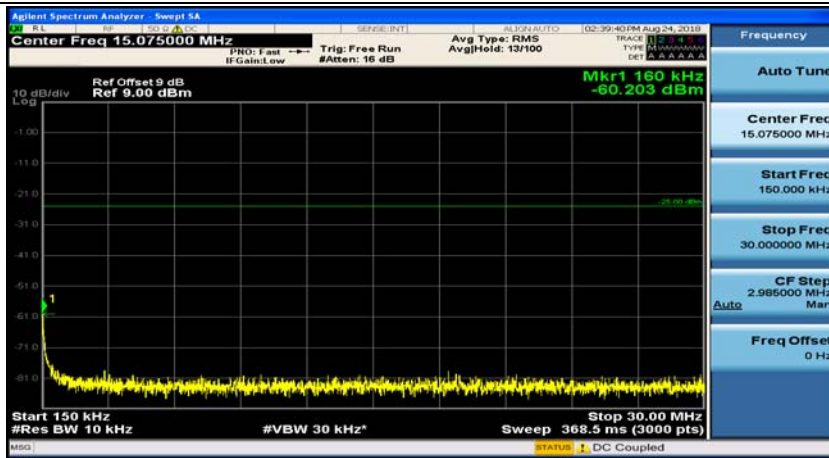
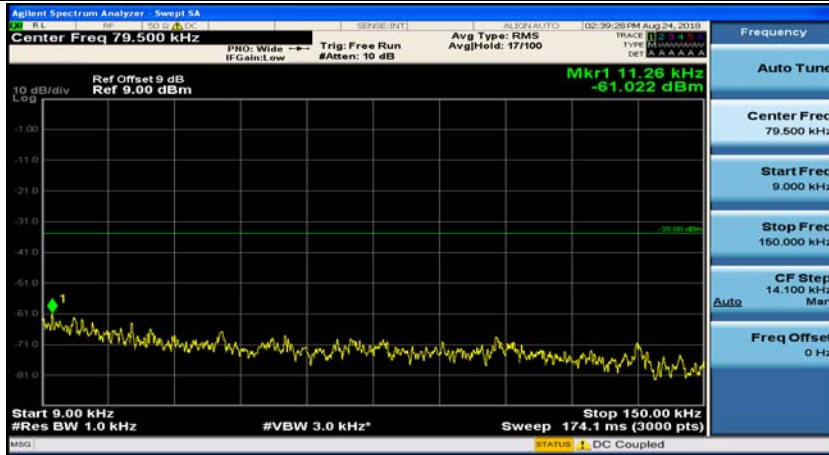


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

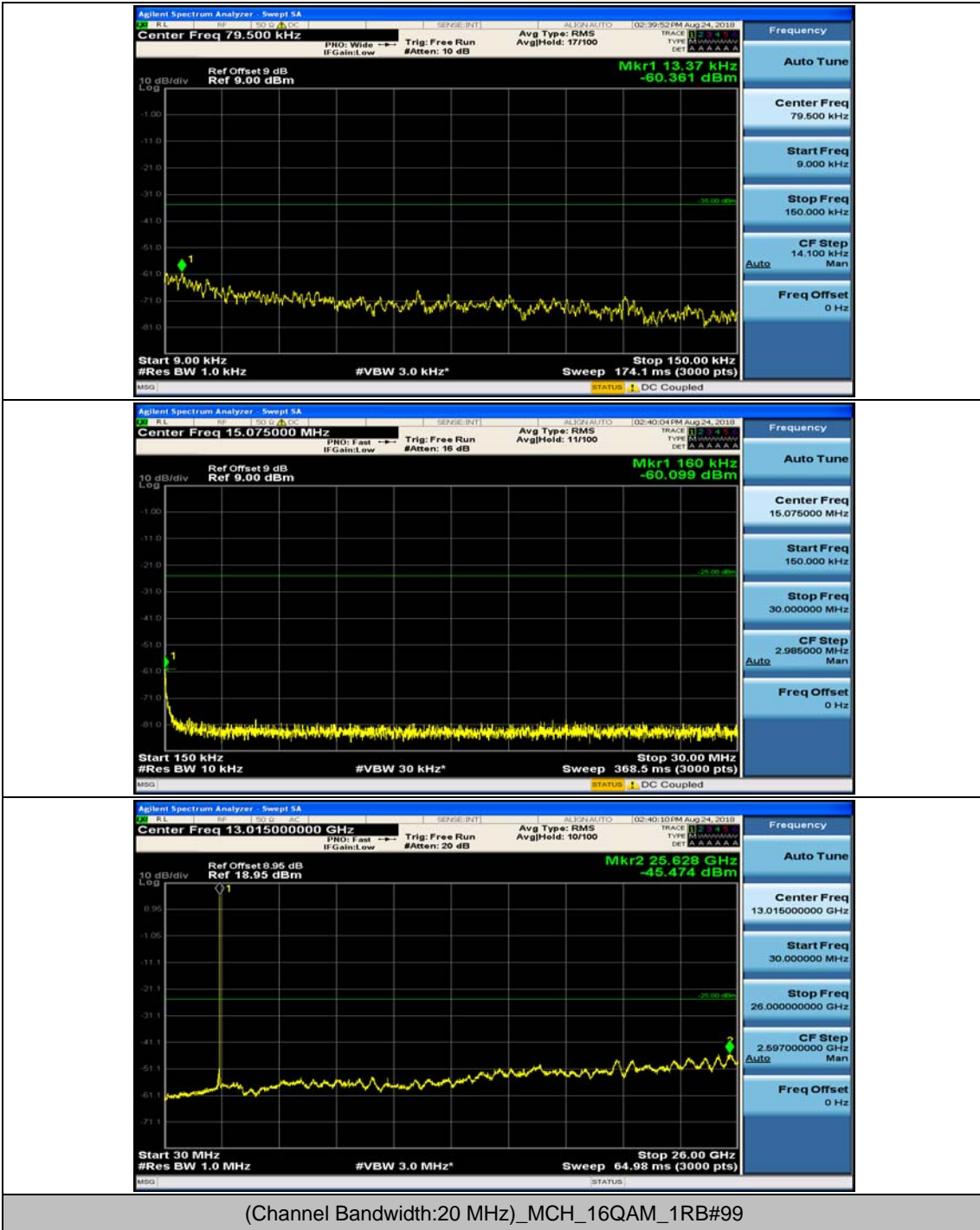


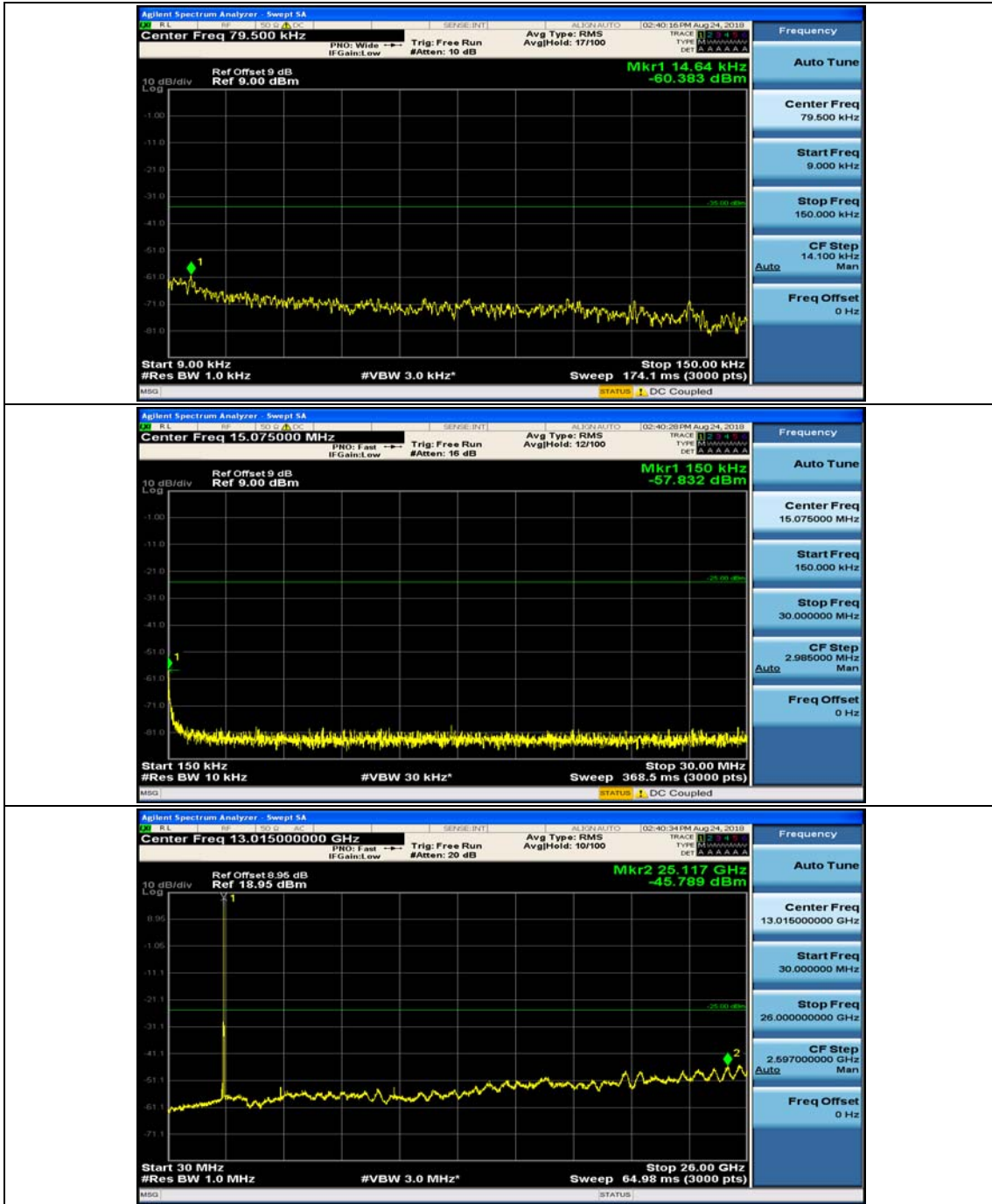


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

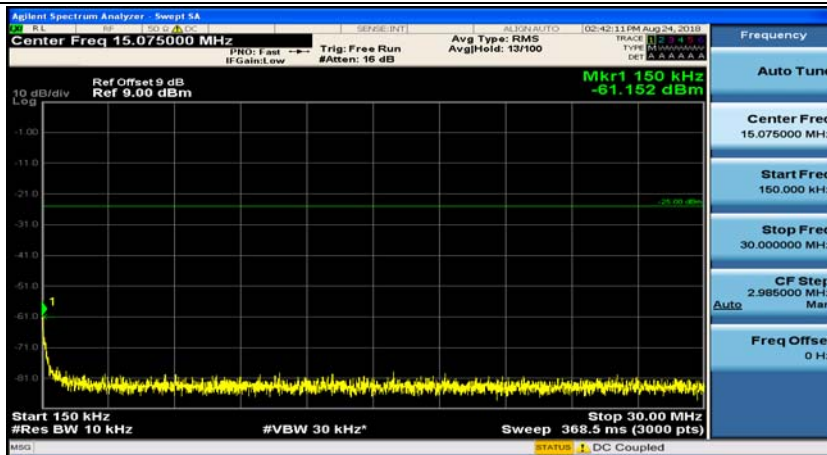
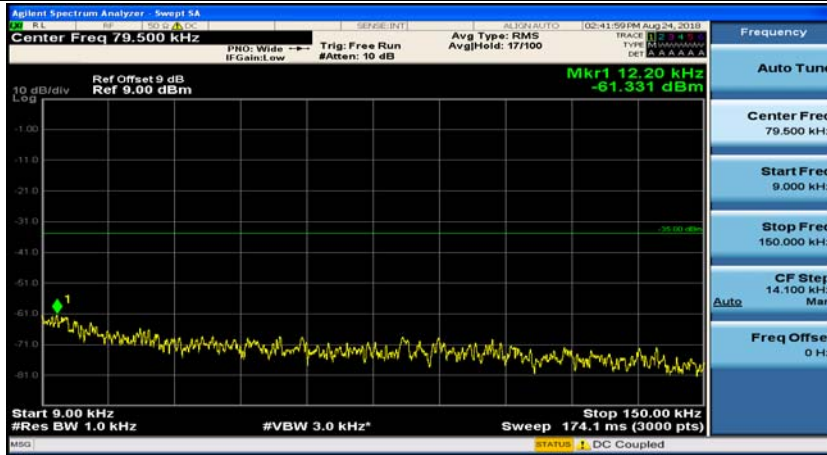


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

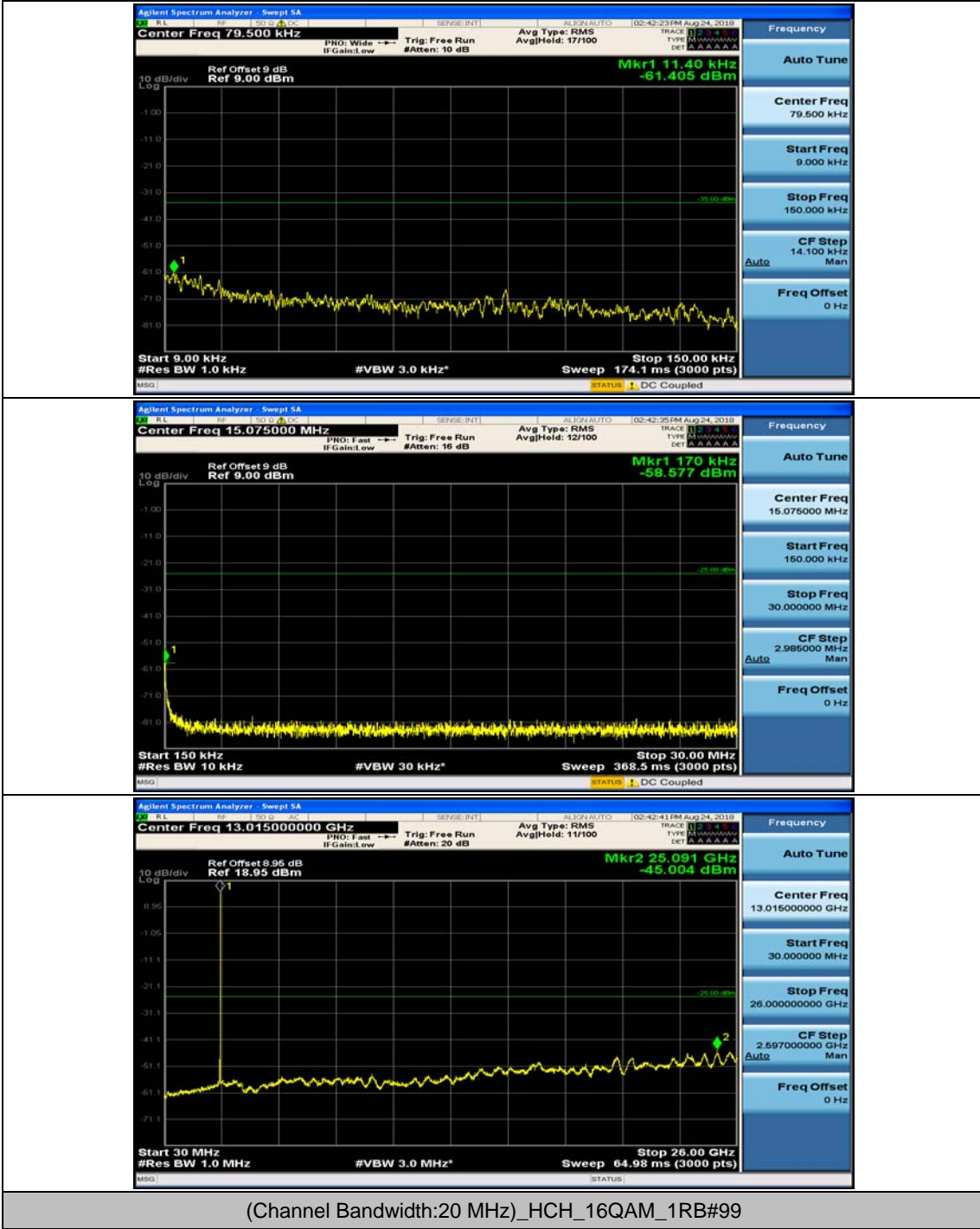


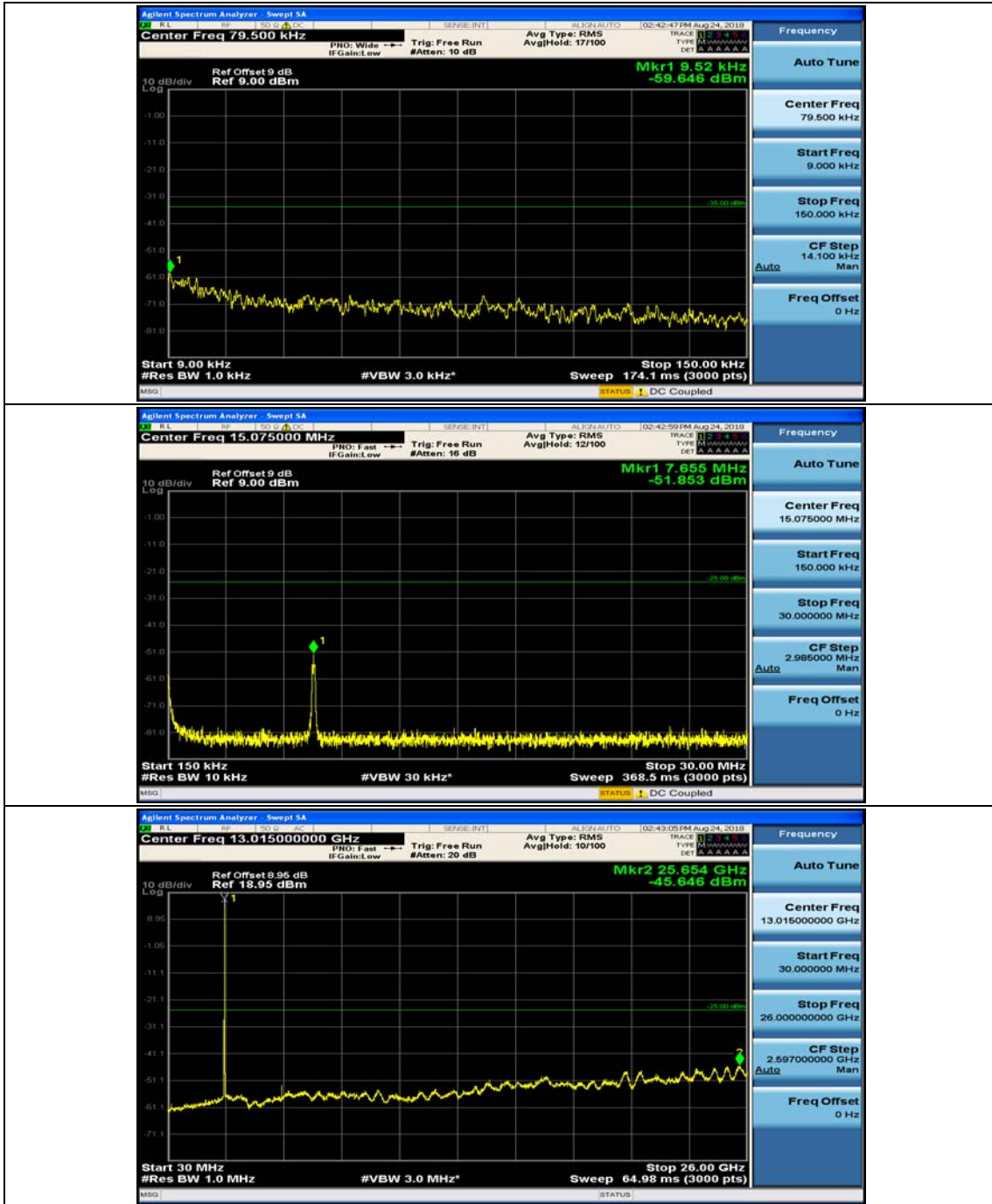


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#49





Appendix F: Frequency Stability

Test Result

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	4.4	0.001758	± 2.5	PASS
		VN	TN	1.35	0.000539	± 2.5	PASS
		VH	TN	3.2	0.001279	± 2.5	PASS
	MCH	VL	TN	4.12	0.001625	± 2.5	PASS
		VN	TN	4.03	0.001590	± 2.5	PASS
		VH	TN	3.75	0.001479	± 2.5	PASS
	HCH	VL	TN	4.37	0.001702	± 2.5	PASS
		VN	TN	3.27	0.001274	± 2.5	PASS
		VH	TN	-1.08	-0.000421	± 2.5	PASS
16QAM	LCH	VL	TN	3.71	0.001483	± 2.5	PASS
		VN	TN	1.45	0.000579	± 2.5	PASS
		VH	TN	3.09	0.001235	± 2.5	PASS
	MCH	VL	TN	-0.61	-0.000241	± 2.5	PASS
		VN	TN	-1.48	-0.000584	± 2.5	PASS
		VH	TN	4.53	0.001787	± 2.5	PASS
	HCH	VL	TN	-1.6	-0.000623	± 2.5	PASS
		VN	TN	-0.76	-0.000296	± 2.5	PASS
		VH	TN	-0.76	-0.000296	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.48	-0.000192	± 2.5	PASS
		VN	-20	1.53	0.000611	± 2.5	PASS
		VN	-10	3.33	0.001331	± 2.5	PASS
		VN	0	4.06	0.001622	± 2.5	PASS
		VN	10	0.4	0.000160	± 2.5	PASS
		VN	20	-0.55	-0.000220	± 2.5	PASS
		VN	30	-0.76	-0.000304	± 2.5	PASS
		VN	40	0.96	0.000384	± 2.5	PASS
		VN	50	-0.72	-0.000288	± 2.5	PASS
	MCH	VN	-30	0.14	0.000055	± 2.5	PASS
		VN	-20	2.69	0.001061	± 2.5	PASS

		VN	-10	1.96	0.000773	± 2.5	PASS	
		VN	0	2.89	0.001140	± 2.5	PASS	
		VN	10	-0.7	-0.000276	± 2.5	PASS	
		VN	20	-0.41	-0.000162	± 2.5	PASS	
		VN	30	3.84	0.001515	± 2.5	PASS	
		VN	40	-1.76	-0.000694	± 2.5	PASS	
		VN	50	2.14	0.000844	± 2.5	PASS	
	HCH	VN	-30	-1.71	-0.000666	± 2.5	PASS	
		VN	-20	1.77	0.000689	± 2.5	PASS	
		VN	-10	1.04	0.000405	± 2.5	PASS	
		VN	0	1.54	0.000600	± 2.5	PASS	
		VN	10	-0.57	-0.000222	± 2.5	PASS	
		VN	20	2.63	0.001024	± 2.5	PASS	
		VN	30	-0.06	-0.000023	± 2.5	PASS	
	16QAM	LCH	VN	40	3.98	0.001550	± 2.5	PASS
			VN	50	-1.57	-0.000611	± 2.5	PASS
			VN	-30	1.78	0.000711	± 2.5	PASS
			VN	-20	2.93	0.001171	± 2.5	PASS
VN			-10	1.9	0.000759	± 2.5	PASS	
VN			0	-0.34	-0.000136	± 2.5	PASS	
VN			10	1.01	0.000404	± 2.5	PASS	
VN			20	4	0.001598	± 2.5	PASS	
VN			30	-0.66	-0.000264	± 2.5	PASS	
MCH		VN	40	-0.77	-0.000308	± 2.5	PASS	
		VN	50	2.12	0.000847	± 2.5	PASS	
		VN	-30	2.54	0.001002	± 2.5	PASS	
		VN	-20	1.41	0.000556	± 2.5	PASS	
		VN	-10	-0.09	-0.000036	± 2.5	PASS	
		VN	0	0.9	0.000355	± 2.5	PASS	
		VN	10	0.25	0.000099	± 2.5	PASS	
		VN	20	4.45	0.001755	± 2.5	PASS	
		VN	30	-0.32	-0.000126	± 2.5	PASS	
HCH	VN	40	-1.4	-0.000552	± 2.5	PASS		
	VN	50	-0.89	-0.000351	± 2.5	PASS		
	VN	-30	4.45	0.001733	± 2.5	PASS		
	VN	-20	-0.63	-0.000245	± 2.5	PASS		
	VN	-10	1.01	0.000393	± 2.5	PASS		
	VN	0	3.65	0.001422	± 2.5	PASS		
	VN	10	3.21	0.001250	± 2.5	PASS		
VN	20	3.74	0.001457	± 2.5	PASS			
VN	30	0.18	0.000070	± 2.5	PASS			

		VN	40	4.53	0.001764	± 2.5	PASS
		VN	50	0.9	0.000351	± 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	1.16	0.000463	± 2.5	PASS
		VN	TN	3.42	0.001365	± 2.5	PASS
		VH	TN	4.37	0.001745	± 2.5	PASS
	MCH	VL	TN	2.91	0.001148	± 2.5	PASS
		VN	TN	2.13	0.000840	± 2.5	PASS
		VH	TN	0.75	0.000296	± 2.5	PASS
	HCH	VL	TN	2.56	0.000998	± 2.5	PASS
		VN	TN	1.63	0.000635	± 2.5	PASS
		VH	TN	3.27	0.001275	± 2.5	PASS
16QAM	LCH	VL	TN	0.36	0.000144	± 2.5	PASS
		VN	TN	0.19	0.000076	± 2.5	PASS
		VH	TN	-1.76	-0.000703	± 2.5	PASS
	MCH	VL	TN	4.18	0.001649	± 2.5	PASS
		VN	TN	3.21	0.001266	± 2.5	PASS
		VH	TN	3.08	0.001215	± 2.5	PASS
	HCH	VL	TN	4.77	0.001860	± 2.5	PASS
		VN	TN	3.52	0.001372	± 2.5	PASS
		VH	TN	2.39	0.000932	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	1.5	0.000599	± 2.5	PASS
		VN	-20	-1.94	-0.000774	± 2.5	PASS
		VN	-10	1.78	0.000711	± 2.5	PASS
		VN	0	-1.04	-0.000415	± 2.5	PASS
		VN	10	3.74	0.001493	± 2.5	PASS
		VN	20	3.05	0.001218	± 2.5	PASS
		VN	30	-0.49	-0.000196	± 2.5	PASS
		VN	40	-1.53	-0.000611	± 2.5	PASS
		VN	50	-1.84	-0.000735	± 2.5	PASS
	MCH	VN	-30	0.12	0.000047	± 2.5	PASS
		VN	-20	4.14	0.001633	± 2.5	PASS
		VN	-10	2.24	0.000884	± 2.5	PASS

		VN	0	-1.34	-0.000529	± 2.5	PASS		
		VN	10	2.76	0.001089	± 2.5	PASS		
		VN	20	2.03	0.000801	± 2.5	PASS		
		VN	30	-1.3	-0.000513	± 2.5	PASS		
		VN	40	-1.52	-0.000600	± 2.5	PASS		
		VN	50	4.62	0.001822	± 2.5	PASS		
	HCH	VN	-30	2.03	0.000791	± 2.5	PASS		
		VN	-20	2.87	0.001119	± 2.5	PASS		
		VN	-10	0.62	0.000242	± 2.5	PASS		
		VN	0	4.4	0.001715	± 2.5	PASS		
		VN	10	0.07	0.000027	± 2.5	PASS		
		VN	20	-1.71	-0.000667	± 2.5	PASS		
		VN	30	2.02	0.000788	± 2.5	PASS		
		VN	40	0.63	0.000246	± 2.5	PASS		
		VN	50	1.17	0.000456	± 2.5	PASS		
		QPSK	LCH	VN	-30	2.38	0.000950	± 2.5	PASS
				VN	-20	2.5	0.000998	± 2.5	PASS
				VN	-10	0.6	0.000240	± 2.5	PASS
VN	0			0.24	0.000096	± 2.5	PASS		
VN	10			2.39	0.000954	± 2.5	PASS		
VN	20			1.7	0.000679	± 2.5	PASS		
VN	30			3.44	0.001373	± 2.5	PASS		
VN	40			2.59	0.001034	± 2.5	PASS		
VN	50			3.35	0.001337	± 2.5	PASS		
MCH	VN			-30	1.35	0.000533	± 2.5	PASS	
	VN		-20	1.91	0.000753	± 2.5	PASS		
	VN		-10	1.49	0.000588	± 2.5	PASS		
	VN		0	4.54	0.001791	± 2.5	PASS		
	VN		10	-1.1	-0.000434	± 2.5	PASS		
	VN		20	-0.74	-0.000292	± 2.5	PASS		
	VN		30	1.13	0.000446	± 2.5	PASS		
	VN		40	2.63	0.001037	± 2.5	PASS		
	VN		50	-0.2	-0.000079	± 2.5	PASS		
	HCH		VN	-30	3.98	0.001552	± 2.5	PASS	
VN			-20	2.56	0.000998	± 2.5	PASS		
VN			-10	0.78	0.000304	± 2.5	PASS		
VN			0	-0.51	-0.000199	± 2.5	PASS		
VN			10	0.93	0.000363	± 2.5	PASS		
VN			20	-0.02	-0.000008	± 2.5	PASS		
VN			30	0.27	0.000105	± 2.5	PASS		
VN			40	0.67	0.000261	± 2.5	PASS		

		VN	50	0.94	0.000366	± 2.5	PASS
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Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	4.67	0.001862	± 2.5	PASS
		VN	TN	-0.36	-0.000144	± 2.5	PASS
		VH	TN	0	0.000000	± 2.5	PASS
	MCH	VL	TN	4.49	0.001771	± 2.5	PASS
		VN	TN	3.35	0.001321	± 2.5	PASS
		VH	TN	-1.89	-0.000746	± 2.5	PASS
	HCH	VL	TN	-0.73	-0.000285	± 2.5	PASS
		VN	TN	-1.85	-0.000722	± 2.5	PASS
		VH	TN	2.56	0.000999	± 2.5	PASS
16QAM	LCH	VL	TN	2.65	0.001057	± 2.5	PASS
		VN	TN	3.54	0.001412	± 2.5	PASS
		VH	TN	3.5	0.001396	± 2.5	PASS
	MCH	VL	TN	-0.79	-0.000312	± 2.5	PASS
		VN	TN	-0.09	-0.000036	± 2.5	PASS
		VH	TN	1.12	0.000442	± 2.5	PASS
	HCH	VL	TN	-0.46	-0.000180	± 2.5	PASS
		VN	TN	3.37	0.001315	± 2.5	PASS
		VH	TN	0.8	0.000312	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.65	-0.000658	± 2.5	PASS
		VN	-20	0.93	0.000371	± 2.5	PASS
		VN	-10	1.62	0.000646	± 2.5	PASS
		VN	0	2.75	0.001097	± 2.5	PASS
		VN	10	1.8	0.000718	± 2.5	PASS
		VN	20	1.69	0.000674	± 2.5	PASS
		VN	30	0.41	0.000164	± 2.5	PASS
		VN	40	1.7	0.000678	± 2.5	PASS
		VN	50	0.21	0.000084	± 2.5	PASS
	MCH	VN	-30	1.63	0.000643	± 2.5	PASS
		VN	-20	1.97	0.000777	± 2.5	PASS
		VN	-10	1.31	0.000517	± 2.5	PASS
		VN	0	3.73	0.001471	± 2.5	PASS

		VN	10	0.73	0.000288	± 2.5	PASS
		VN	20	4.09	0.001613	± 2.5	PASS
		VN	30	3.44	0.001357	± 2.5	PASS
		VN	40	0.89	0.000351	± 2.5	PASS
		VN	50	3.64	0.001436	± 2.5	PASS
	HCH	VN	-30	4.08	0.001592	± 2.5	PASS
		VN	-20	0.06	0.000023	± 2.5	PASS
		VN	-10	1.04	0.000406	± 2.5	PASS
		VN	0	3.63	0.001417	± 2.5	PASS
		VN	10	-1.45	-0.000566	± 2.5	PASS
		VN	20	0.54	0.000211	± 2.5	PASS
		VN	30	3.23	0.001260	± 2.5	PASS
		VN	40	2.71	0.001058	± 2.5	PASS
		VN	50	4.71	0.001838	± 2.5	PASS
		QPSK	LCH	VN	-30	4.27	0.001703
VN	-20			4.63	0.001846	± 2.5	PASS
VN	-10			0.79	0.000315	± 2.5	PASS
VN	0			1.21	0.000483	± 2.5	PASS
VN	10			-0.64	-0.000255	± 2.5	PASS
VN	20			2.88	0.001149	± 2.5	PASS
VN	30			-0.21	-0.000084	± 2.5	PASS
VN	40			2.26	0.000901	± 2.5	PASS
VN	50			3.18	0.001268	± 2.5	PASS
MCH	VN		-30	2.64	0.001041	± 2.5	PASS
	VN		-20	1.72	0.000679	± 2.5	PASS
	VN		-10	3.01	0.001187	± 2.5	PASS
	VN		0	0.87	0.000343	± 2.5	PASS
	VN		10	1.63	0.000643	± 2.5	PASS
	VN		20	1.05	0.000414	± 2.5	PASS
	VN		30	-1.47	-0.000580	± 2.5	PASS
	VN		40	2.19	0.000864	± 2.5	PASS
	VN		50	2.05	0.000809	± 2.5	PASS
HCH	VN		-30	-1.62	-0.000632	± 2.5	PASS
	VN		-20	-0.29	-0.000113	± 2.5	PASS
	VN		-10	0.3	0.000117	± 2.5	PASS
	VN		0	0	0.000000	± 2.5	PASS
	VN		10	4.39	0.001713	± 2.5	PASS
	VN		20	1.08	0.000421	± 2.5	PASS
	VN		30	1.67	0.000652	± 2.5	PASS
	VN		40	4.5	0.001756	± 2.5	PASS
	VN		50	4.13	0.001612	± 2.5	PASS

Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	3.33	0.001327	± 2.5	PASS
		VN	TN	1.94	0.000773	± 2.5	PASS
		VH	TN	1.29	0.000514	± 2.5	PASS
	MCH	VL	TN	-1.16	-0.000458	± 2.5	PASS
		VN	TN	1.06	0.000418	± 2.5	PASS
		VH	TN	-1.83	-0.000722	± 2.5	PASS
	HCH	VL	TN	0.83	0.000324	± 2.5	PASS
		VN	TN	-1.4	-0.000547	± 2.5	PASS
		VH	TN	-1.58	-0.000617	± 2.5	PASS
16QAM	LCH	VL	TN	1.82	0.000725	± 2.5	PASS
		VN	TN	1.74	0.000693	± 2.5	PASS
		VH	TN	3.15	0.001255	± 2.5	PASS
	MCH	VL	TN	3.46	0.001365	± 2.5	PASS
		VN	TN	2.76	0.001089	± 2.5	PASS
		VH	TN	-1.9	-0.000750	± 2.5	PASS
	HCH	VL	TN	1.55	0.000605	± 2.5	PASS
		VN	TN	3.18	0.001242	± 2.5	PASS
		VH	TN	-0.3	-0.000117	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.69	-0.000275	± 2.5	PASS
		VN	-20	0.9	0.000359	± 2.5	PASS
		VN	-10	3.47	0.001382	± 2.5	PASS
		VN	0	-1.31	-0.000522	± 2.5	PASS
		VN	10	4.66	0.001857	± 2.5	PASS
		VN	20	3.53	0.001406	± 2.5	PASS
		VN	30	-1.62	-0.000645	± 2.5	PASS
		VN	40	2.47	0.000984	± 2.5	PASS
		VN	50	-1.55	-0.000618	± 2.5	PASS
	MCH	VN	-30	-0.21	-0.000083	± 2.5	PASS
		VN	-20	3.78	0.001491	± 2.5	PASS
		VN	-10	-0.84	-0.000331	± 2.5	PASS
		VN	0	0.18	0.000071	± 2.5	PASS
		VN	10	1.4	0.000552	± 2.5	PASS
		VN	20	1.7	0.000671	± 2.5	PASS

		VN	30	3.04	0.001199	± 2.5	PASS
		VN	40	4.18	0.001649	± 2.5	PASS
		VN	50	3.62	0.001428	± 2.5	PASS
	HCH	VN	-30	3.82	0.001492	± 2.5	PASS
		VN	-20	-1.83	-0.000715	± 2.5	PASS
		VN	-10	-1.1	-0.000430	± 2.5	PASS
		VN	0	1.54	0.000602	± 2.5	PASS
		VN	10	2.7	0.001055	± 2.5	PASS
		VN	20	0.14	0.000055	± 2.5	PASS
		VN	30	-1.46	-0.000570	± 2.5	PASS
		VN	40	-0.92	-0.000359	± 2.5	PASS
		VN	50	2.19	0.000855	± 2.5	PASS
QPSK	LCH	VN	-30	0.5	0.000199	± 2.5	PASS
		VN	-20	0.54	0.000215	± 2.5	PASS
		VN	-10	0.86	0.000343	± 2.5	PASS
		VN	0	4.61	0.001837	± 2.5	PASS
		VN	10	0.52	0.000207	± 2.5	PASS
		VN	20	0.56	0.000223	± 2.5	PASS
		VN	30	-0.14	-0.000056	± 2.5	PASS
		VN	40	0.76	0.000303	± 2.5	PASS
	MCH	VN	50	4.65	0.001853	± 2.5	PASS
		VN	-30	3.2	0.001262	± 2.5	PASS
		VN	-20	4.62	0.001822	± 2.5	PASS
		VN	-10	-1.22	-0.000481	± 2.5	PASS
		VN	0	1.5	0.000592	± 2.5	PASS
		VN	10	1.74	0.000686	± 2.5	PASS
		VN	20	4.62	0.001822	± 2.5	PASS
		VN	30	-0.24	-0.000095	± 2.5	PASS
	HCH	VN	40	1.56	0.000615	± 2.5	PASS
		VN	50	4.07	0.001606	± 2.5	PASS
		VN	-30	1.69	0.000660	± 2.5	PASS
		VN	-20	4.5	0.001758	± 2.5	PASS
		VN	-10	1.39	0.000543	± 2.5	PASS
		VN	0	-1.18	-0.000461	± 2.5	PASS
		VN	10	1.44	0.000563	± 2.5	PASS
		VN	20	3.11	0.001215	± 2.5	PASS
VN	30	1.33	0.000520	± 2.5	PASS		
VN	40	1.9	0.000742	± 2.5	PASS		
VN	50	-1.96	-0.000766	± 2.5	PASS		