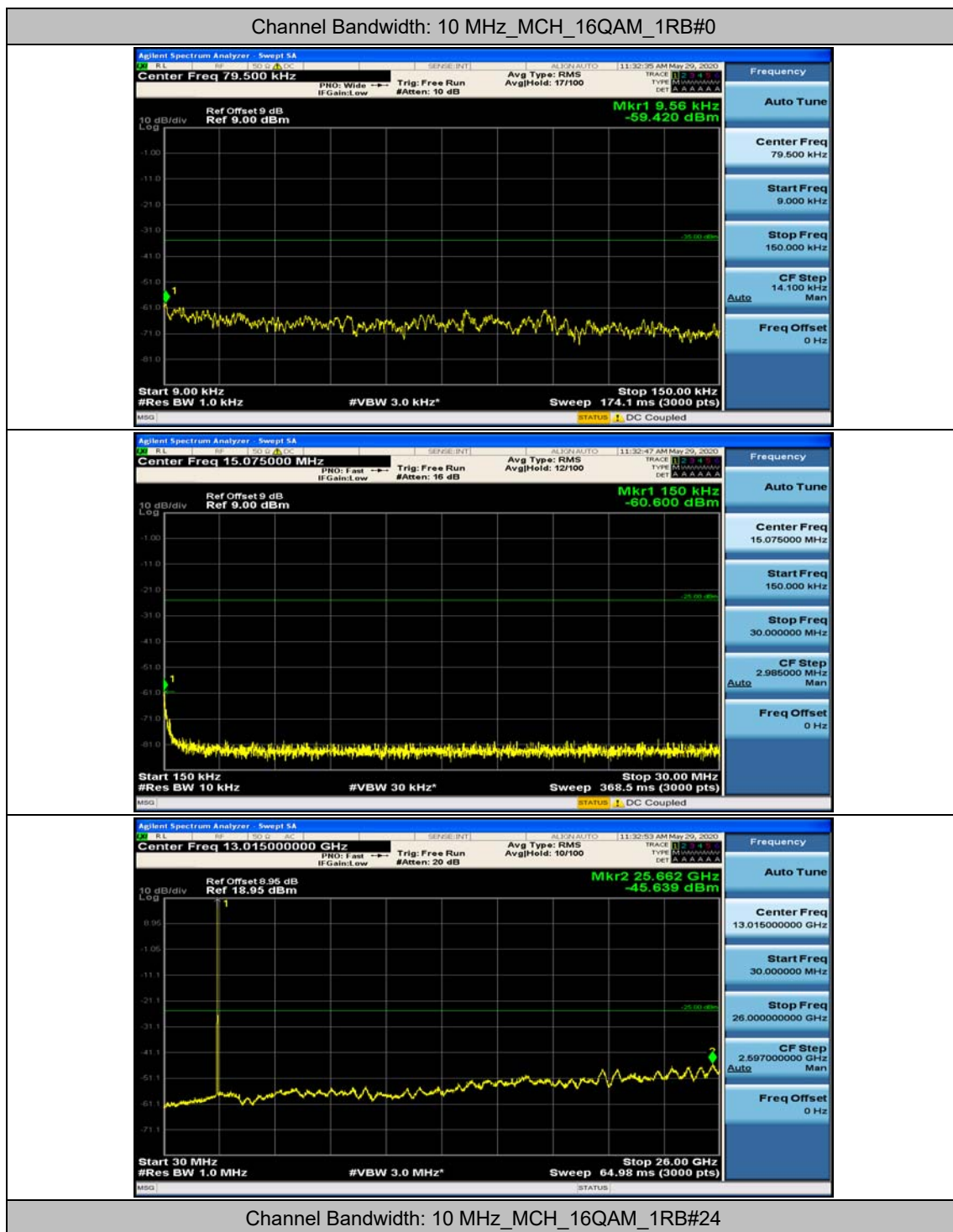
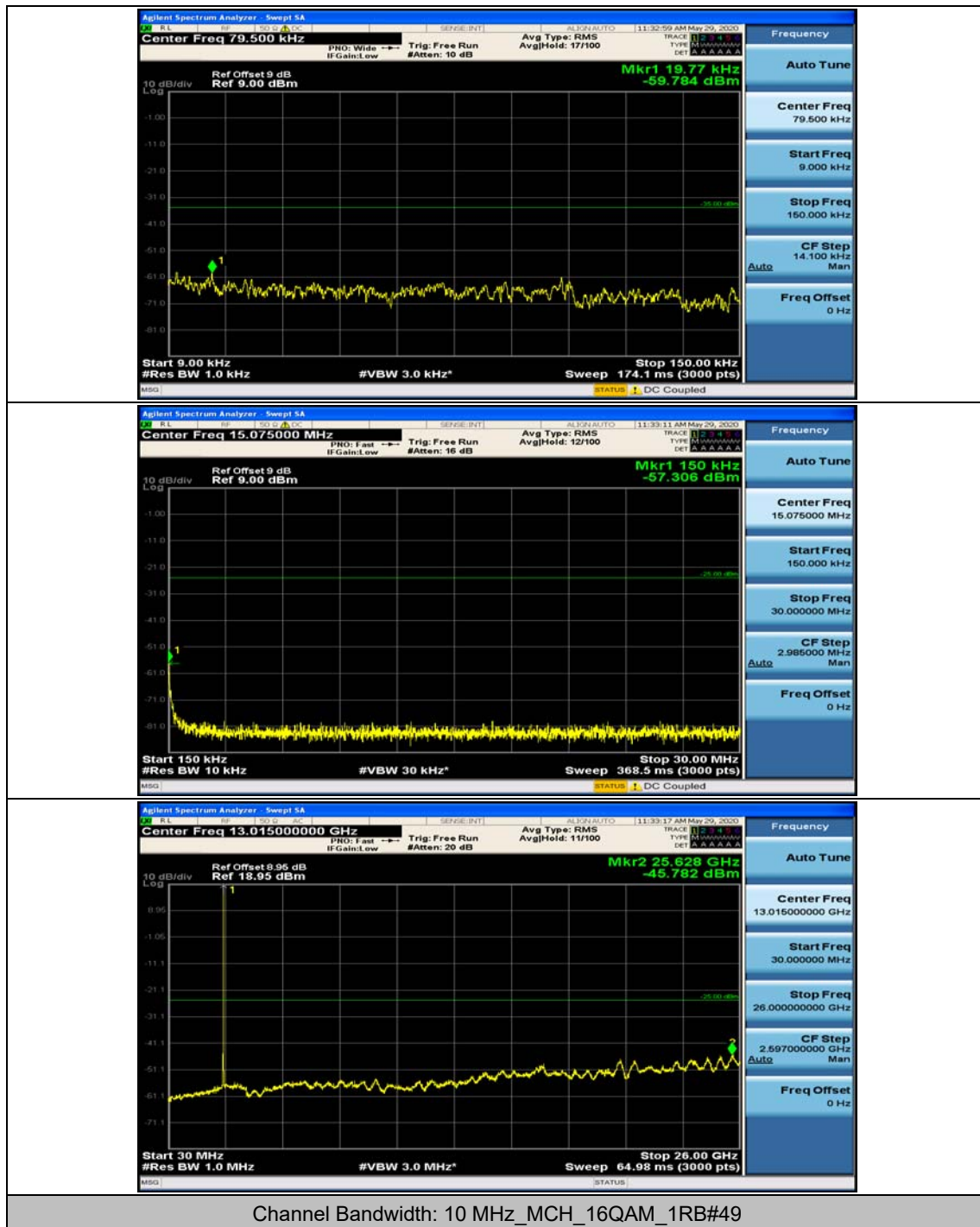
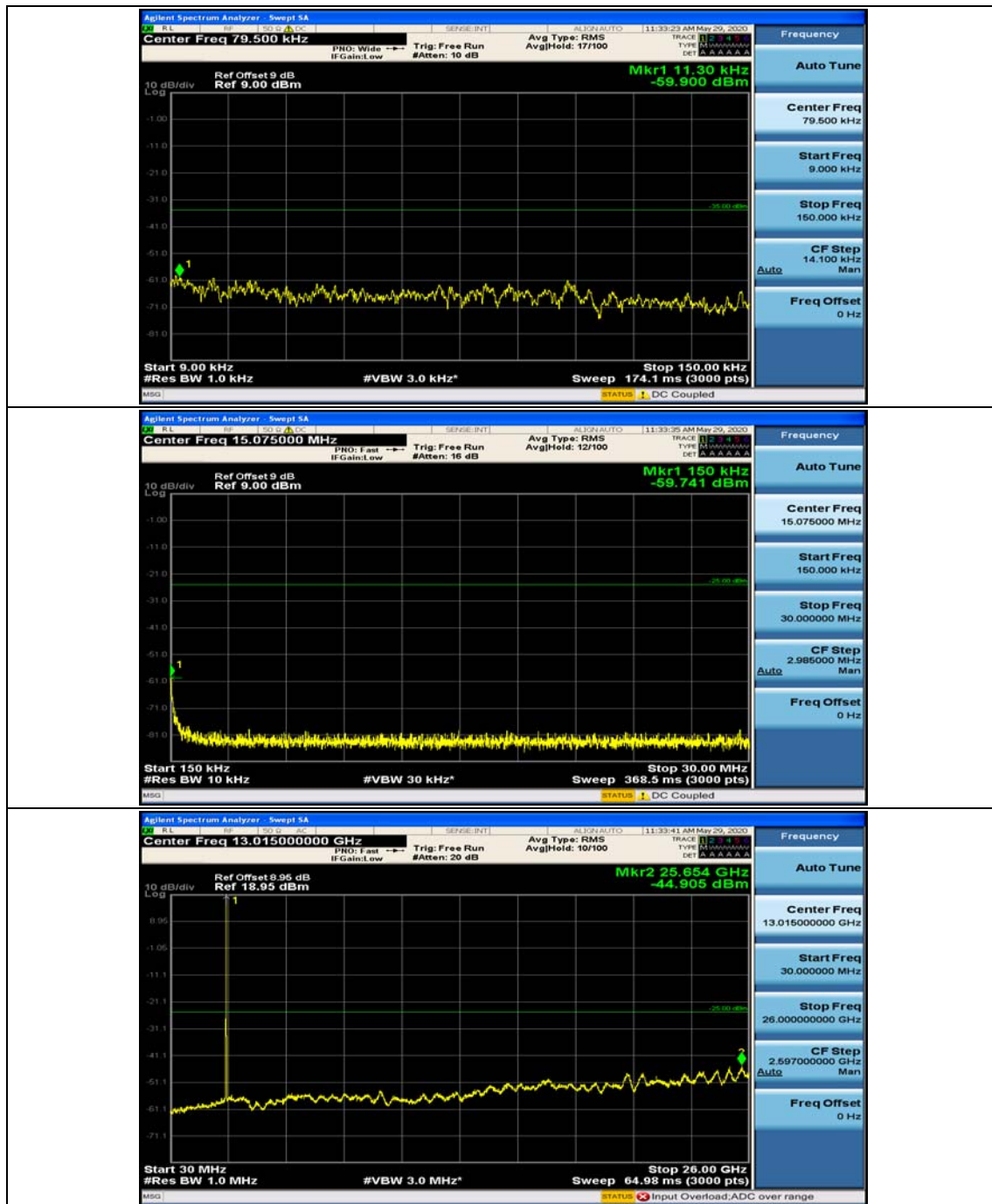
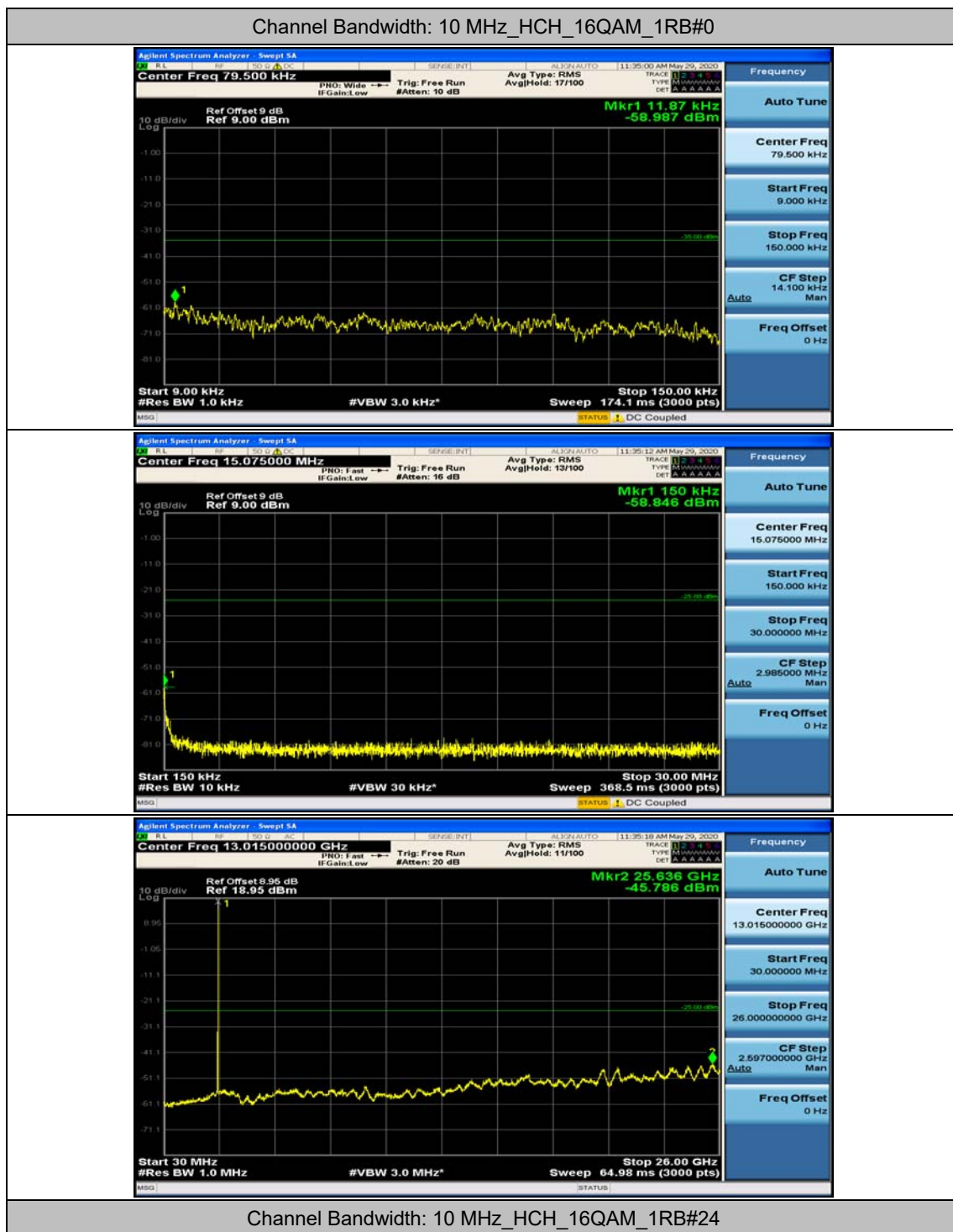
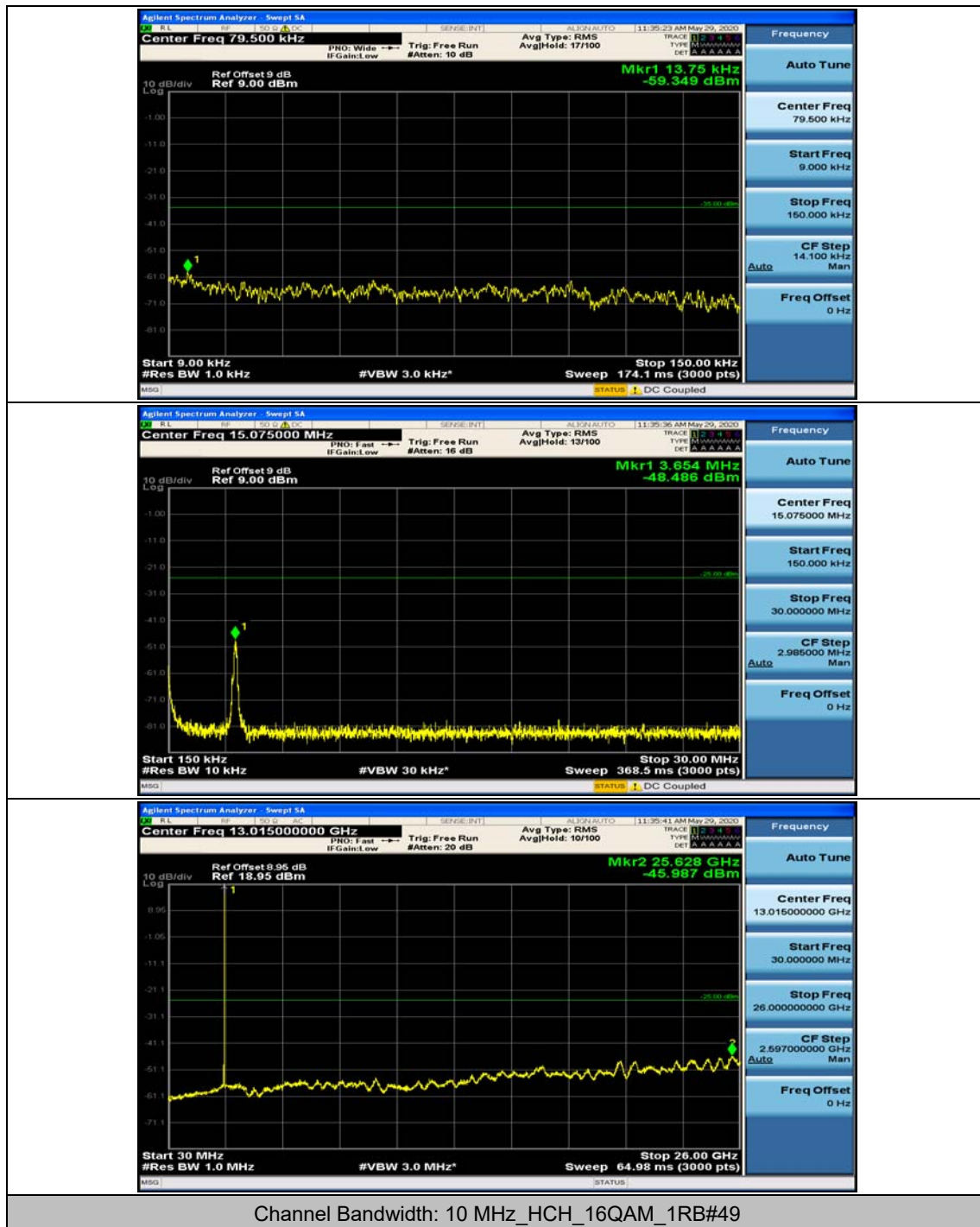


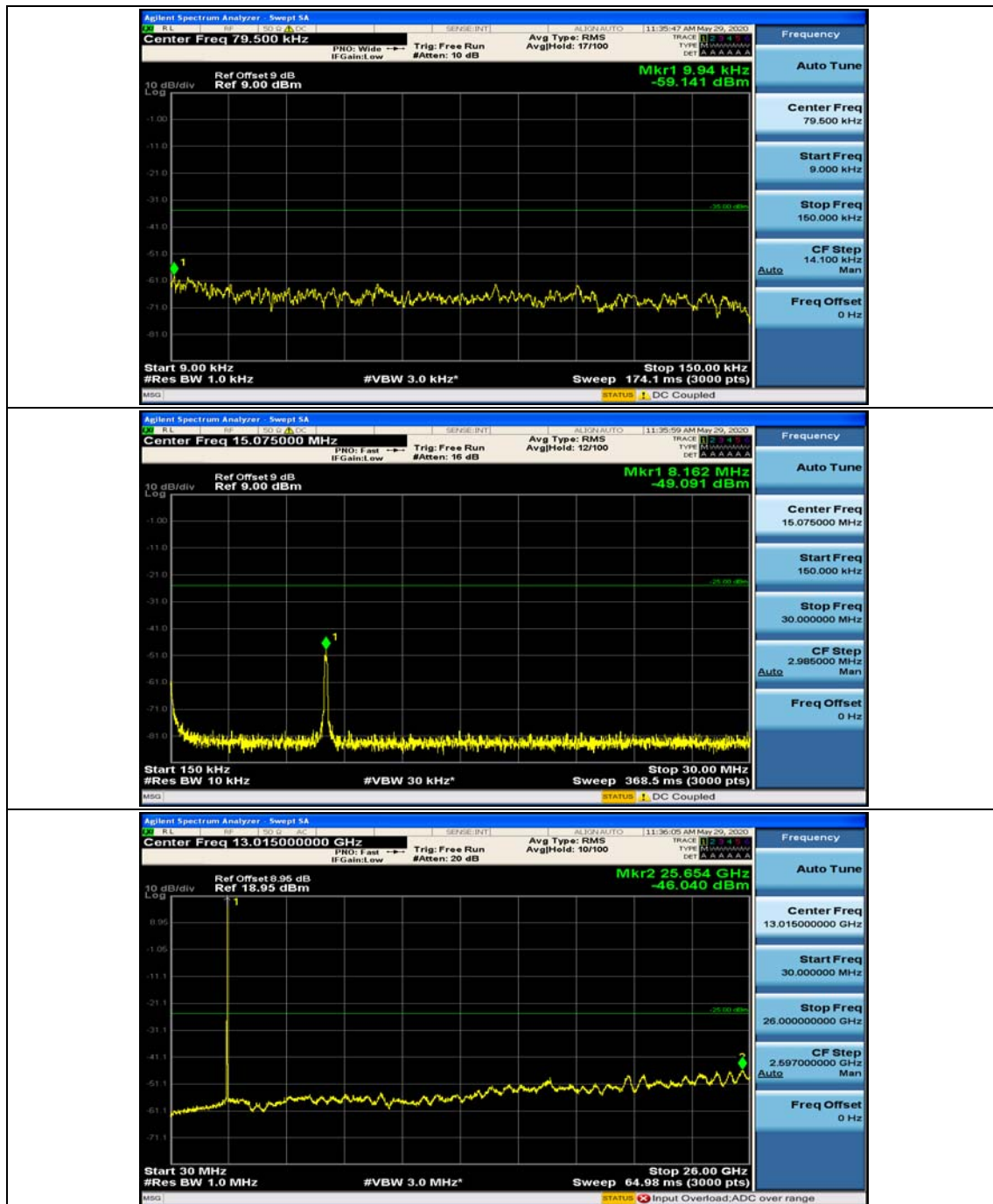




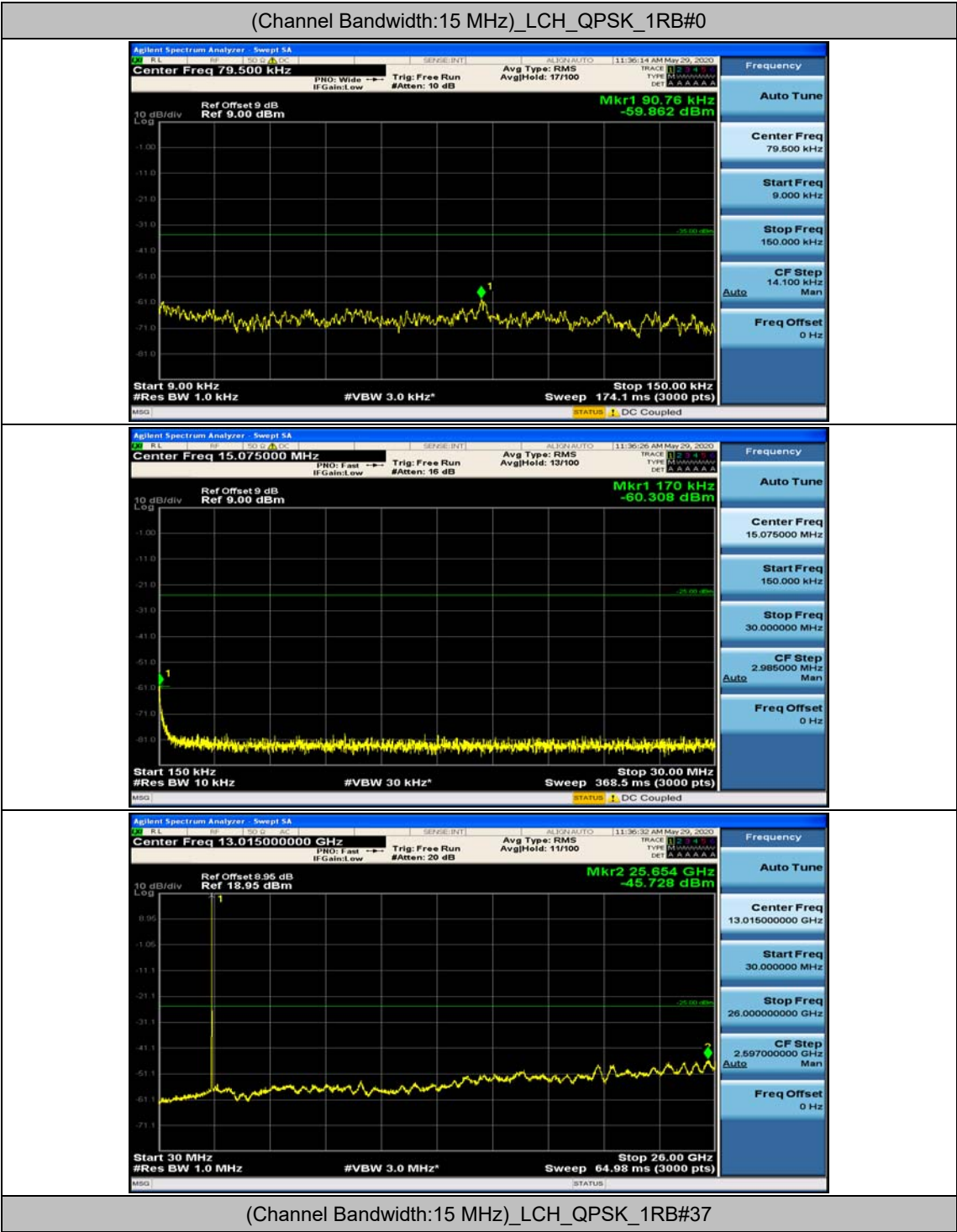


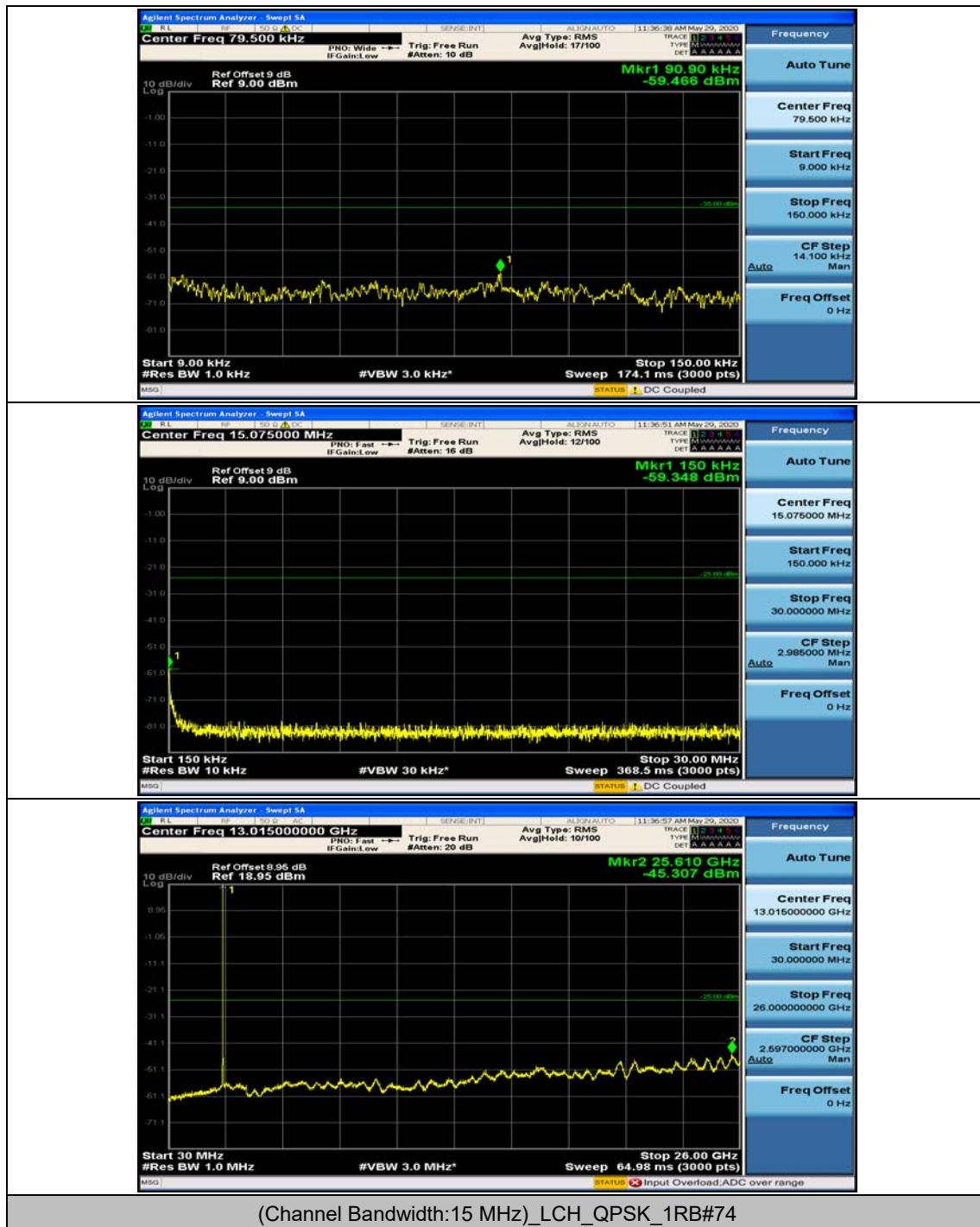


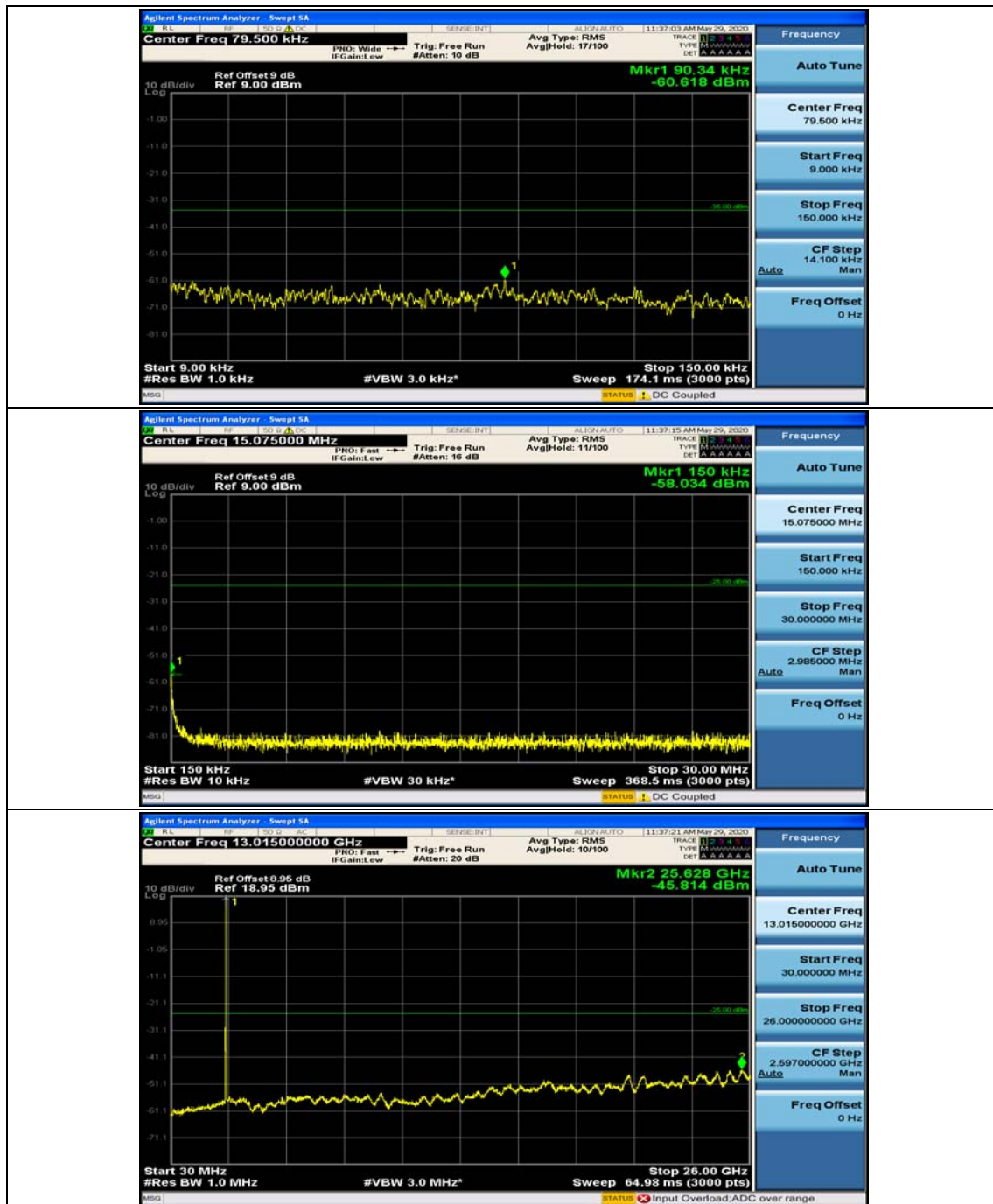




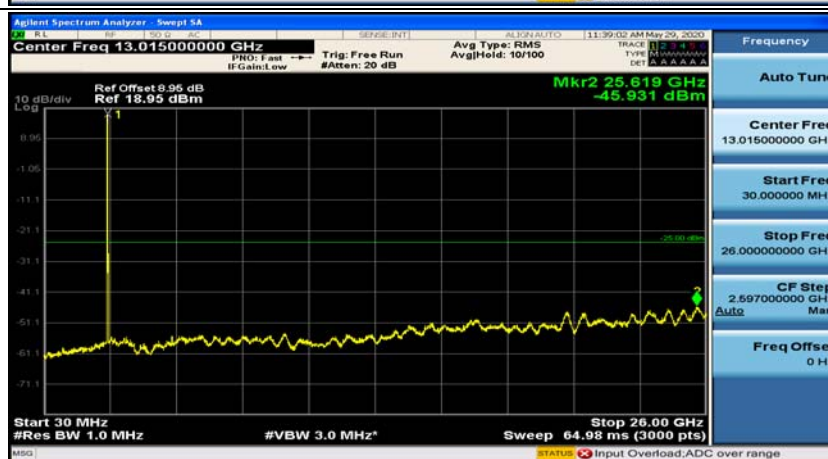
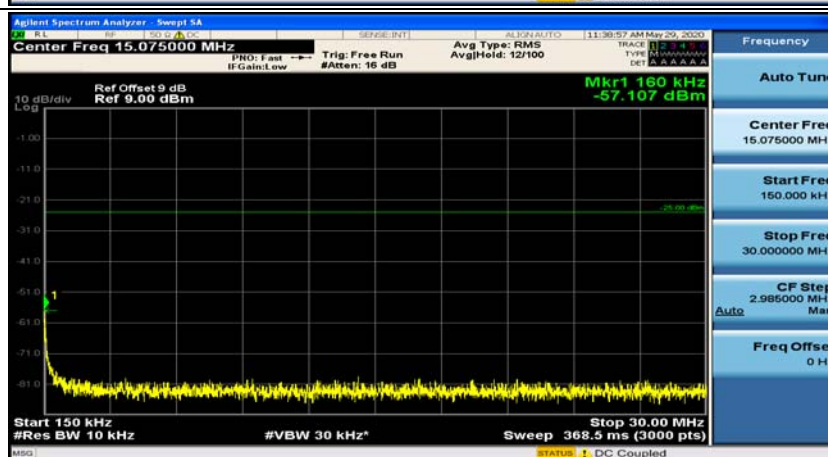
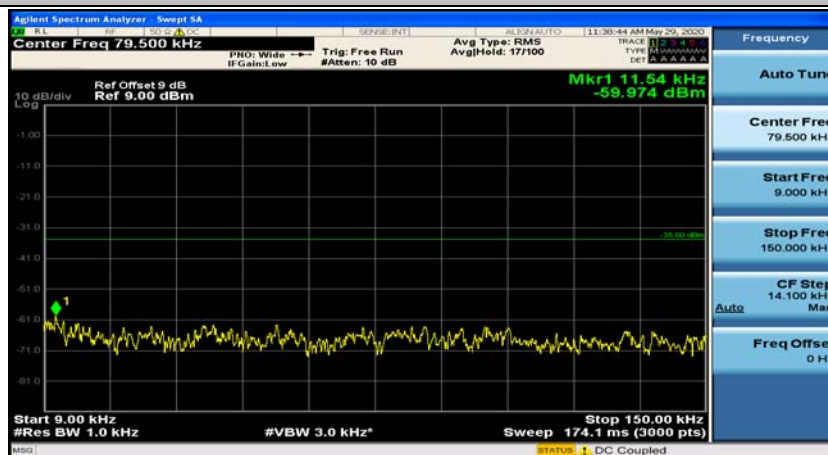
Channel Bandwidth: 15 MHz



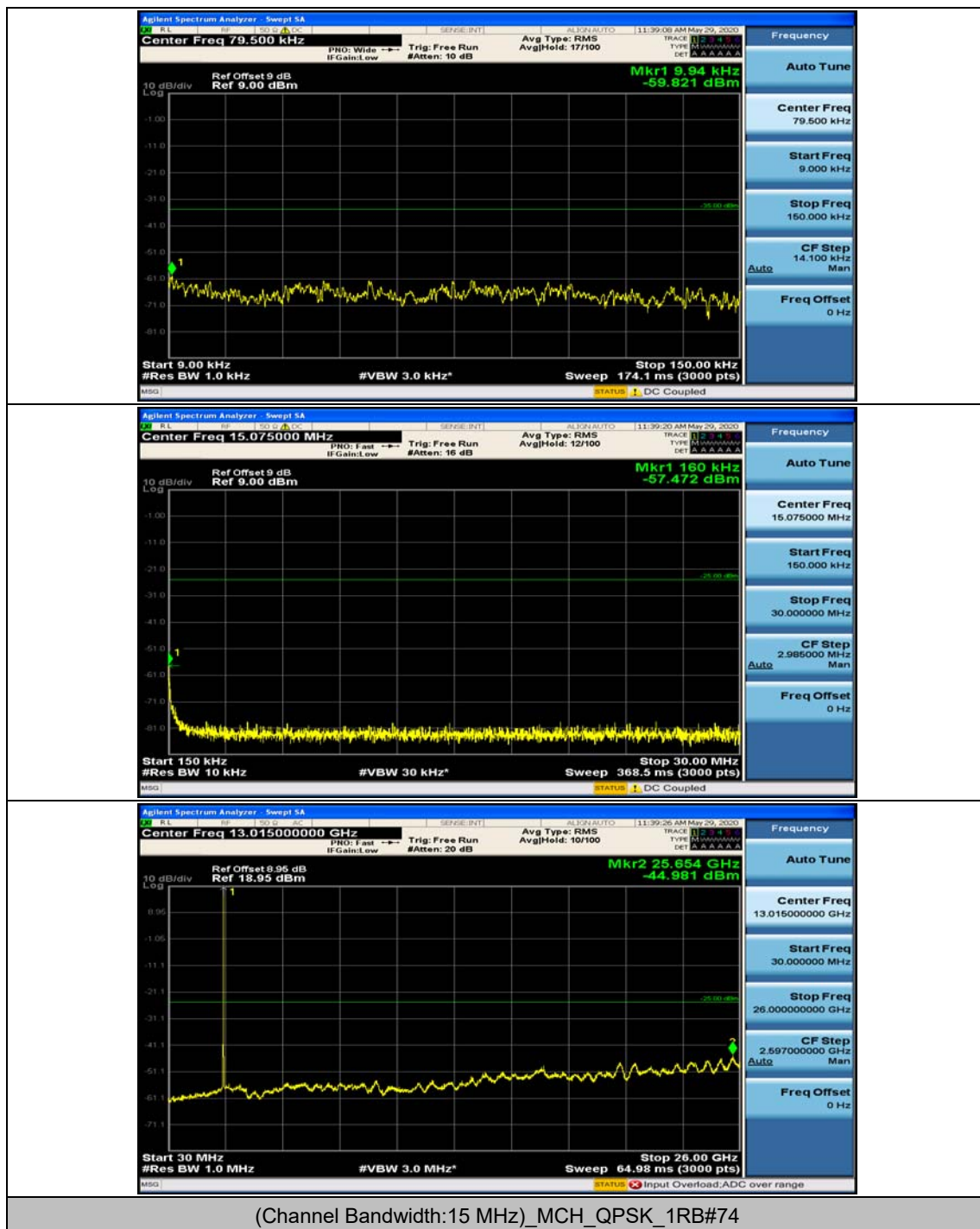


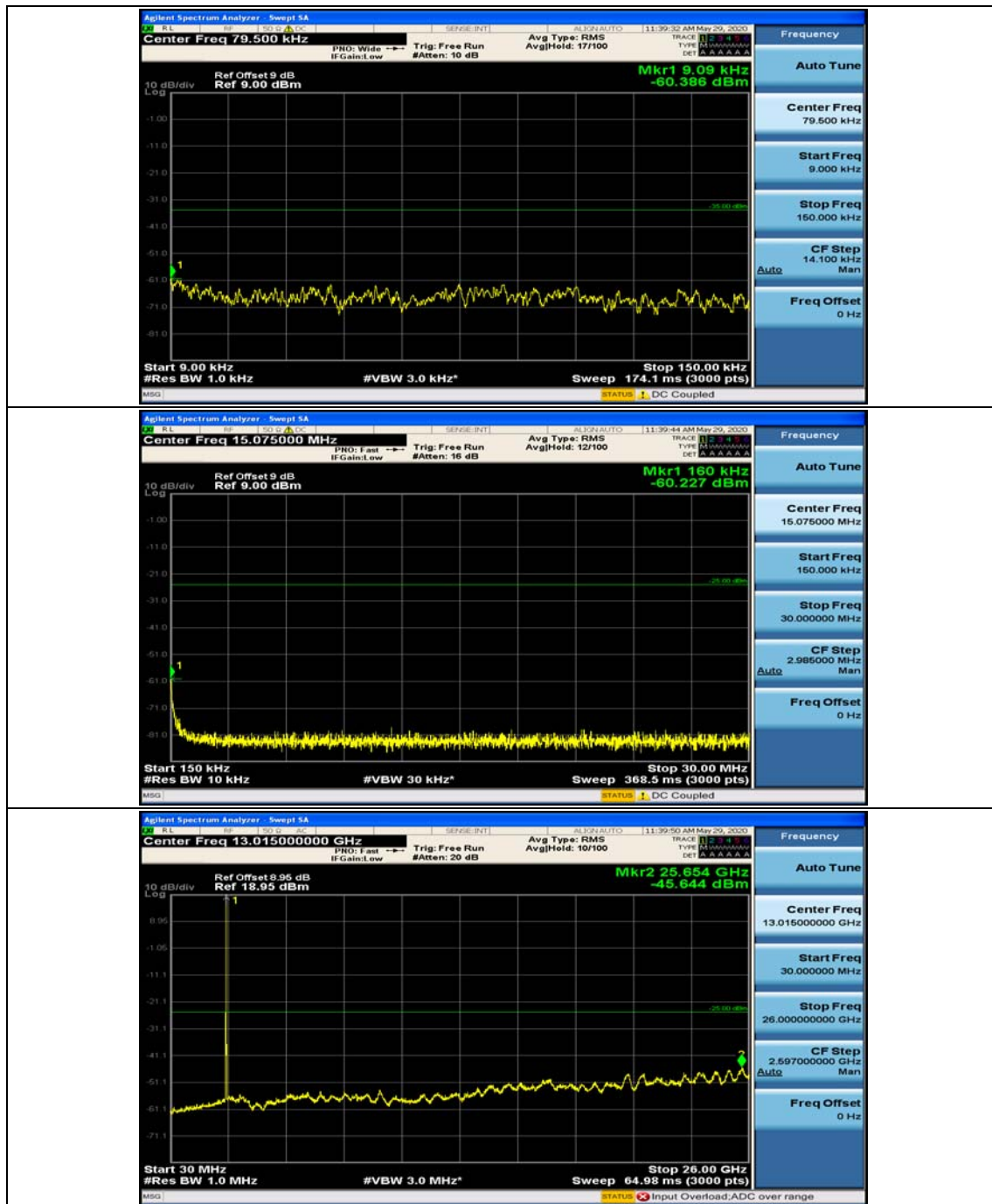


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

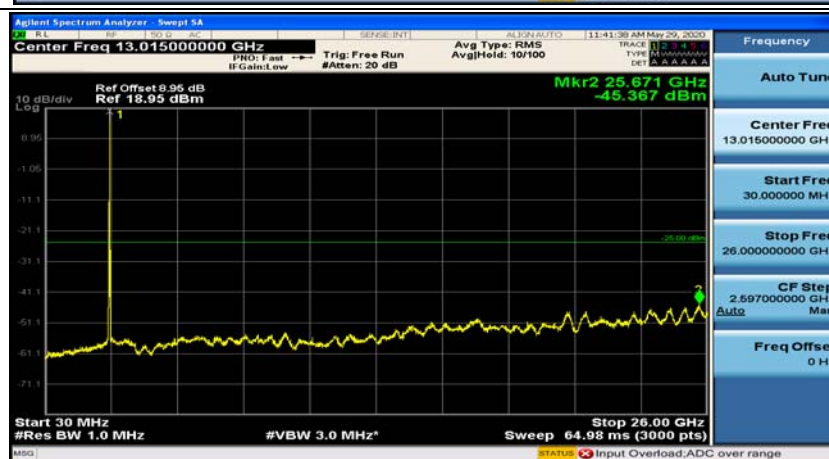
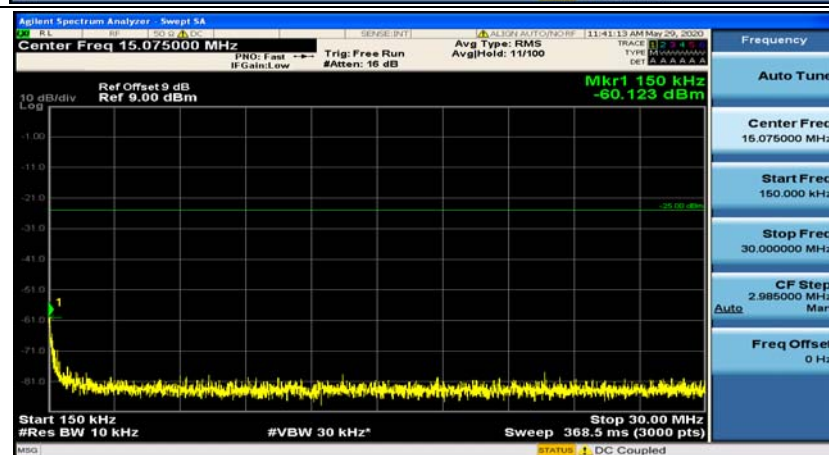
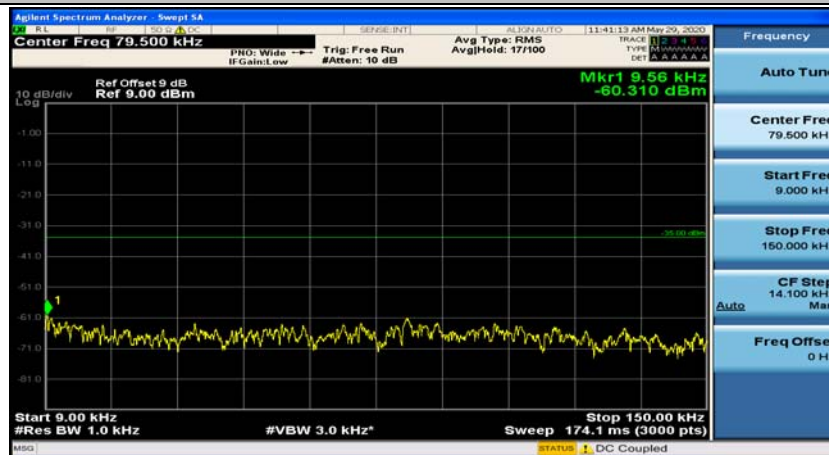


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

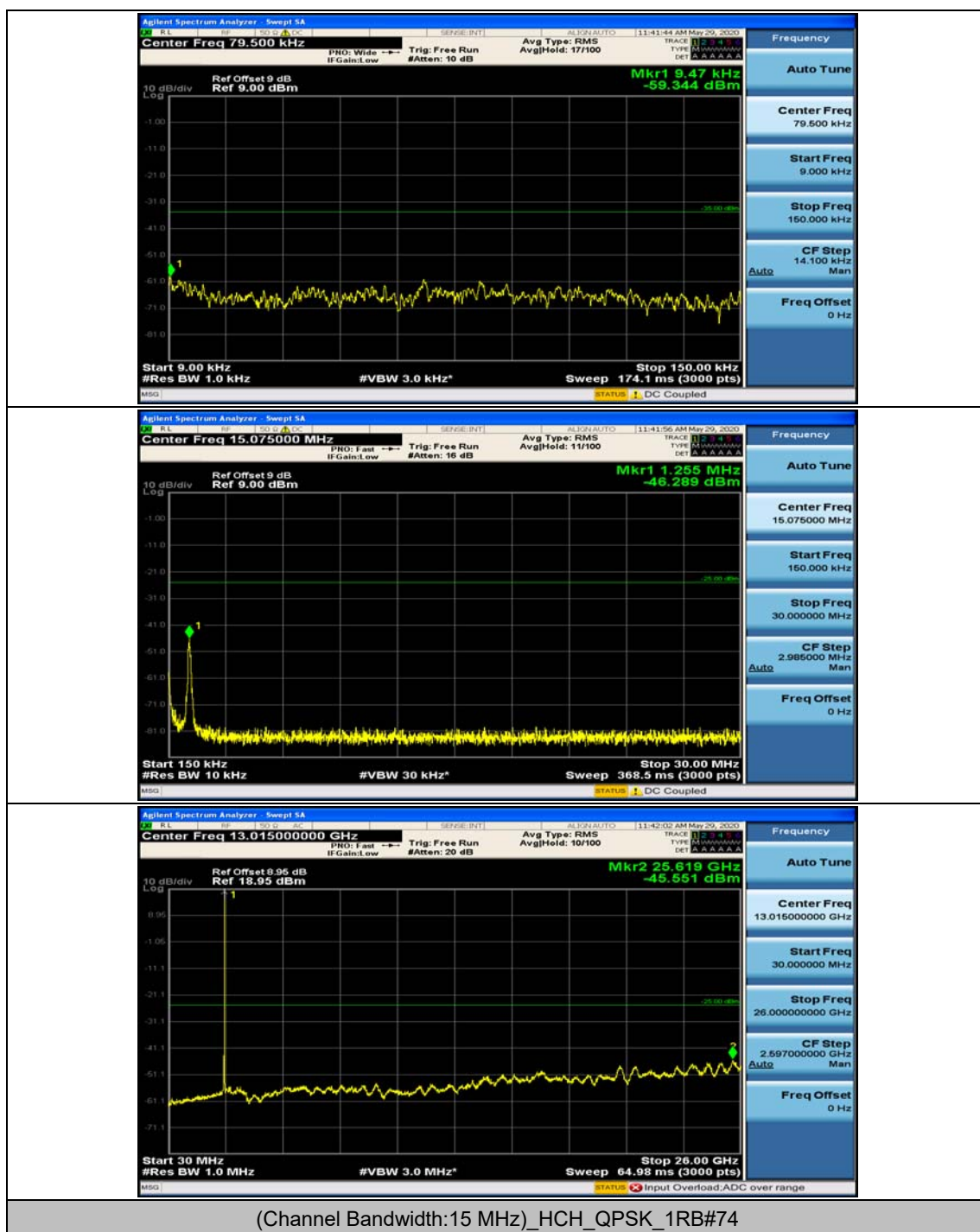


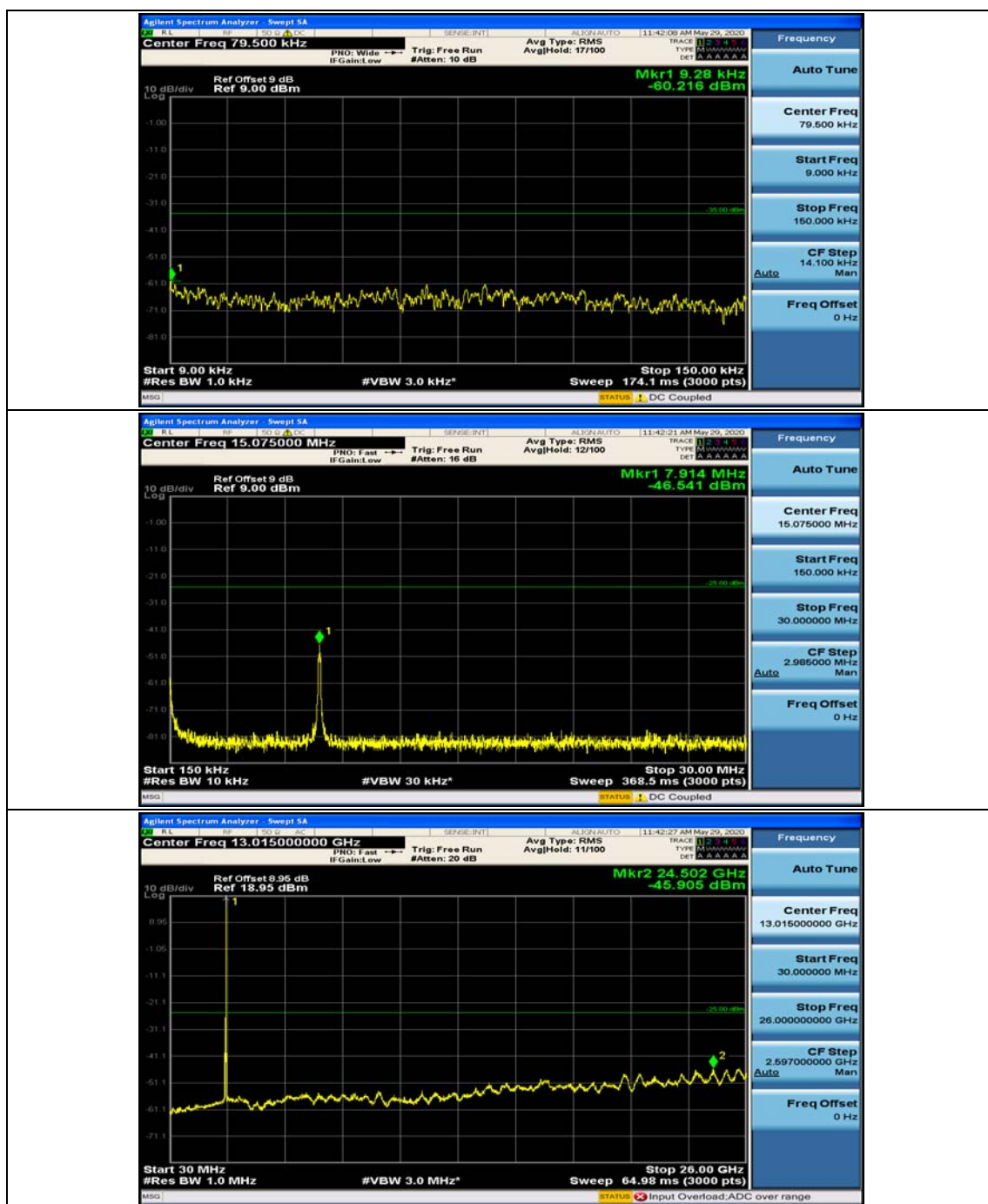


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

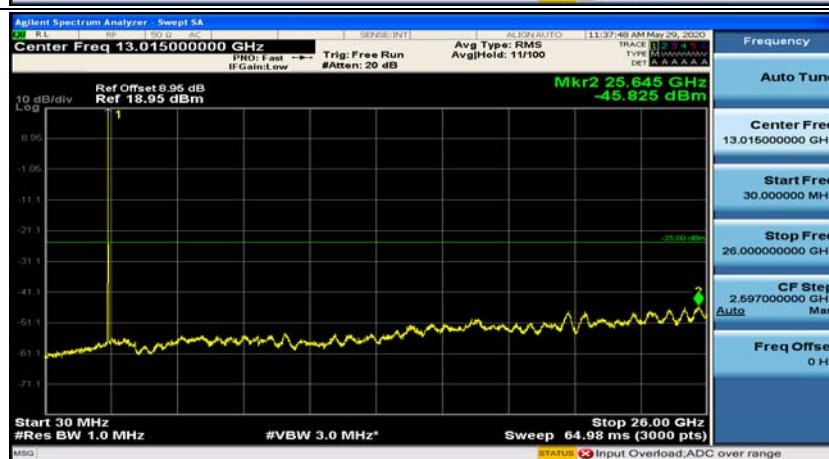
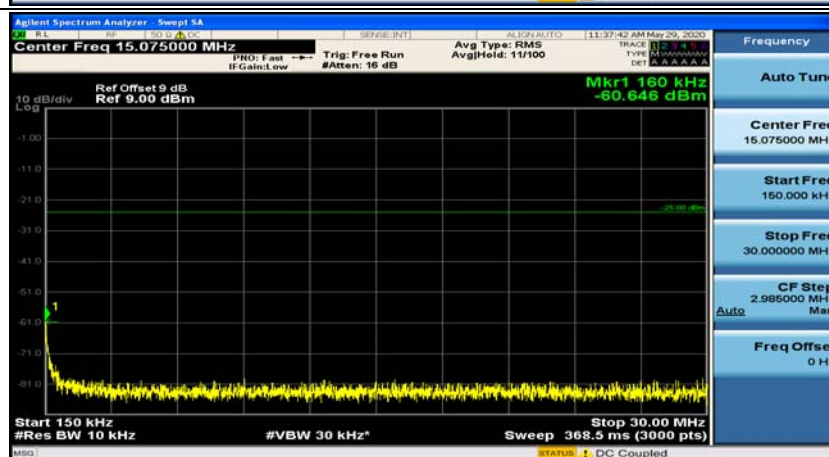
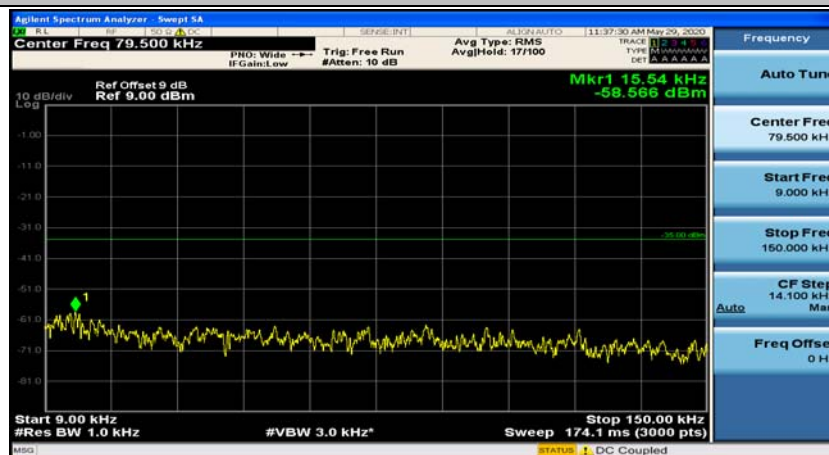


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

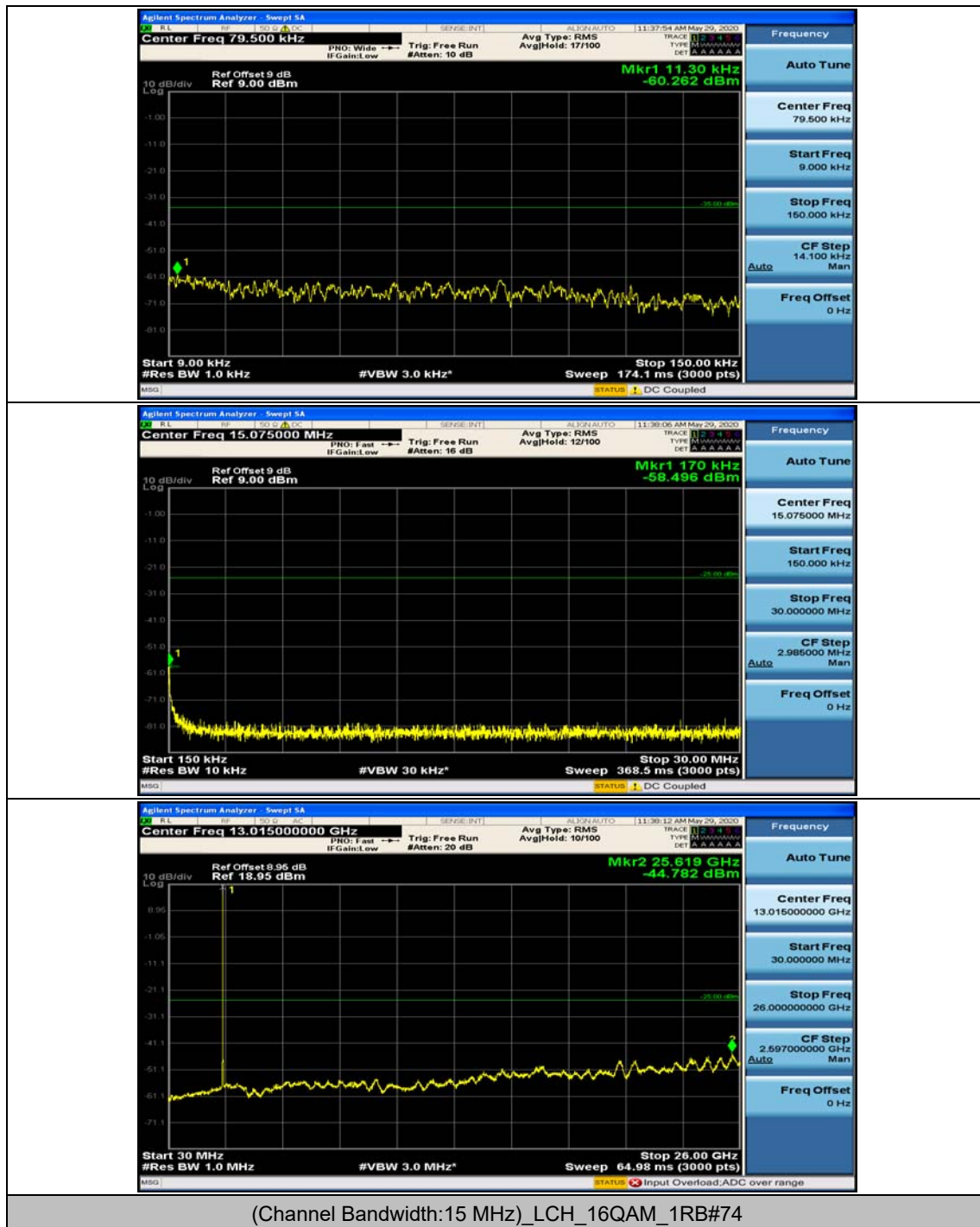


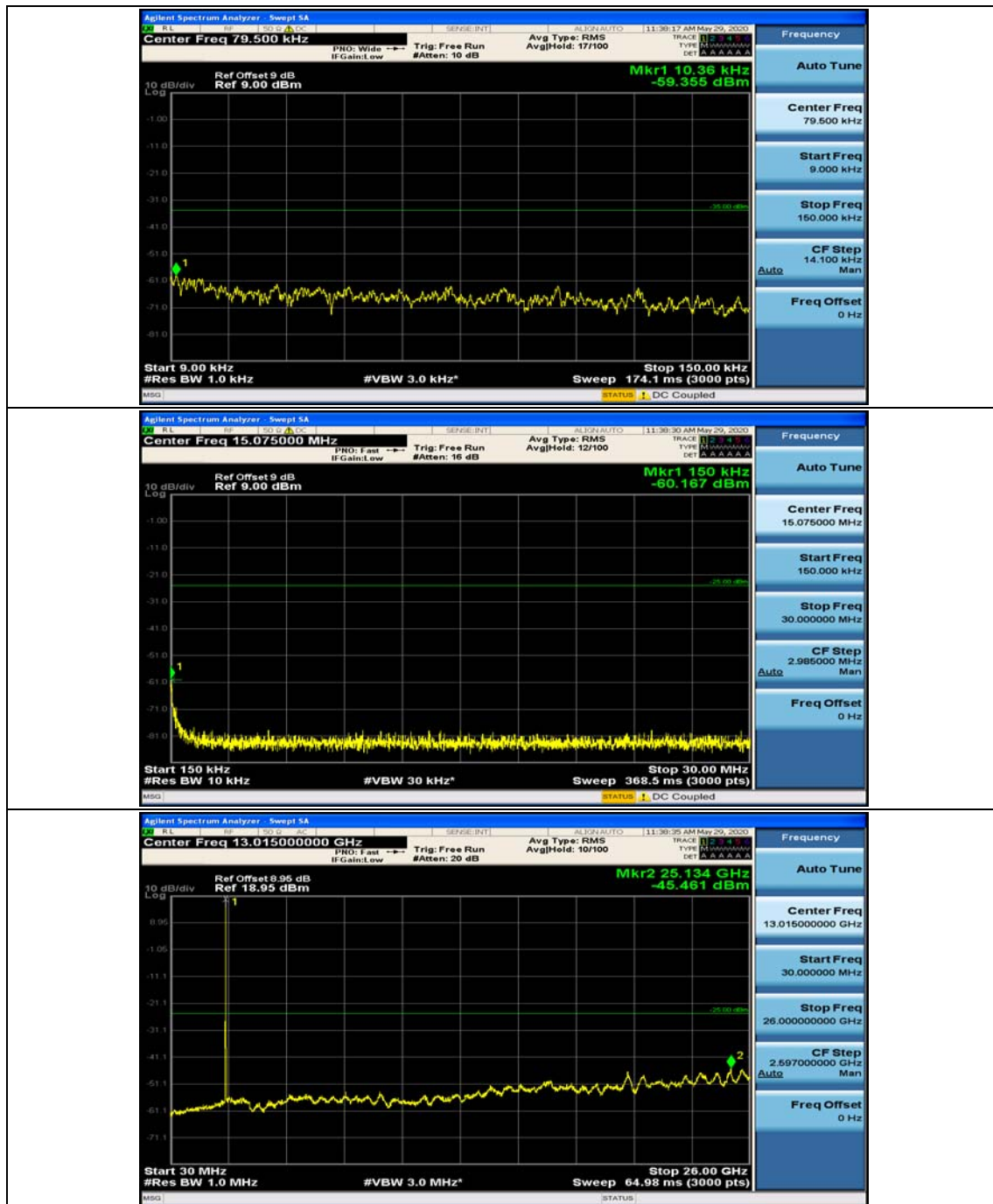


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

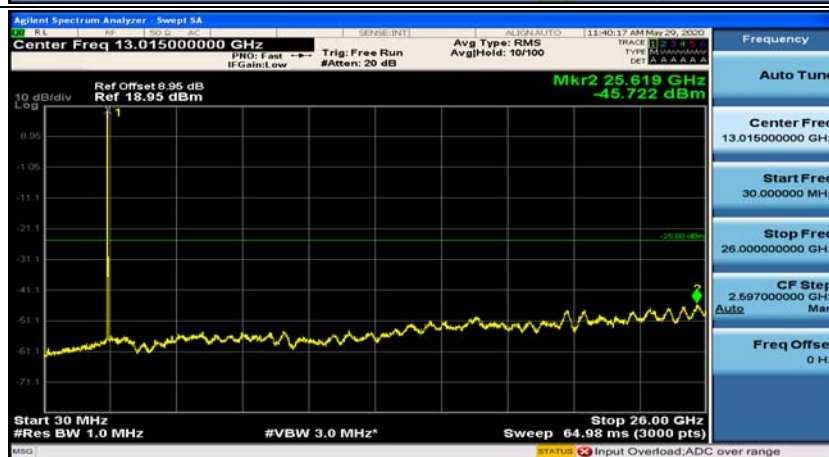
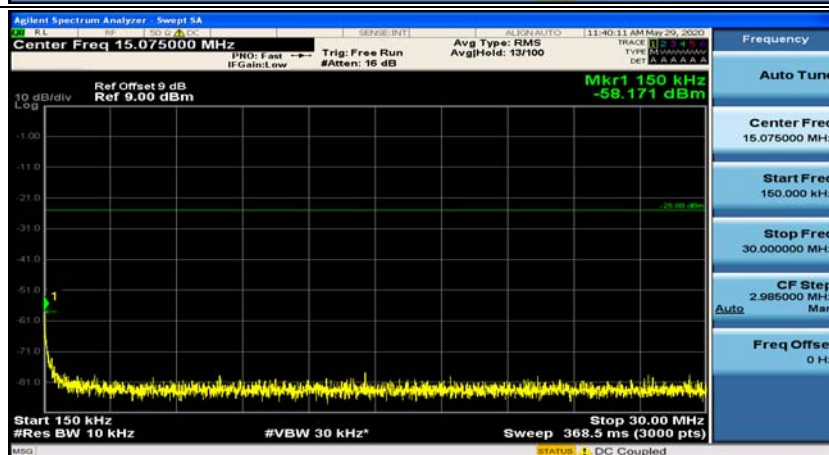
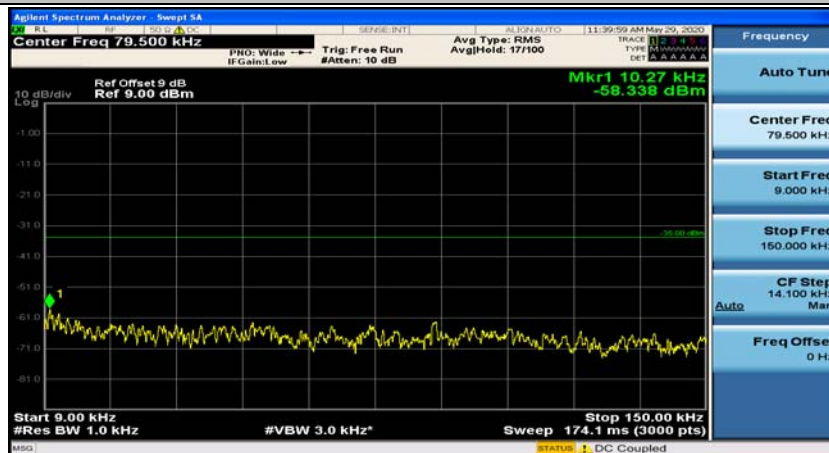


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

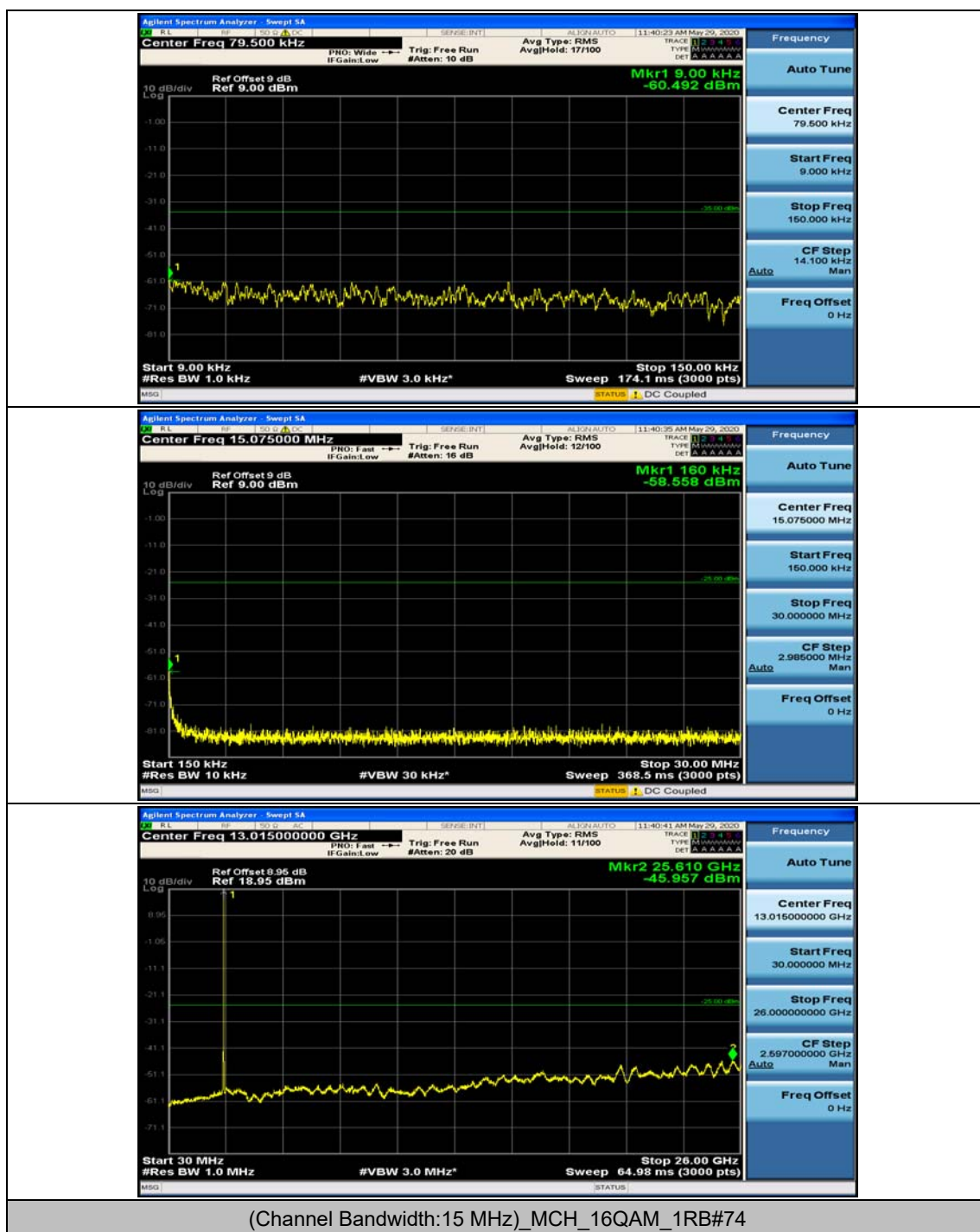


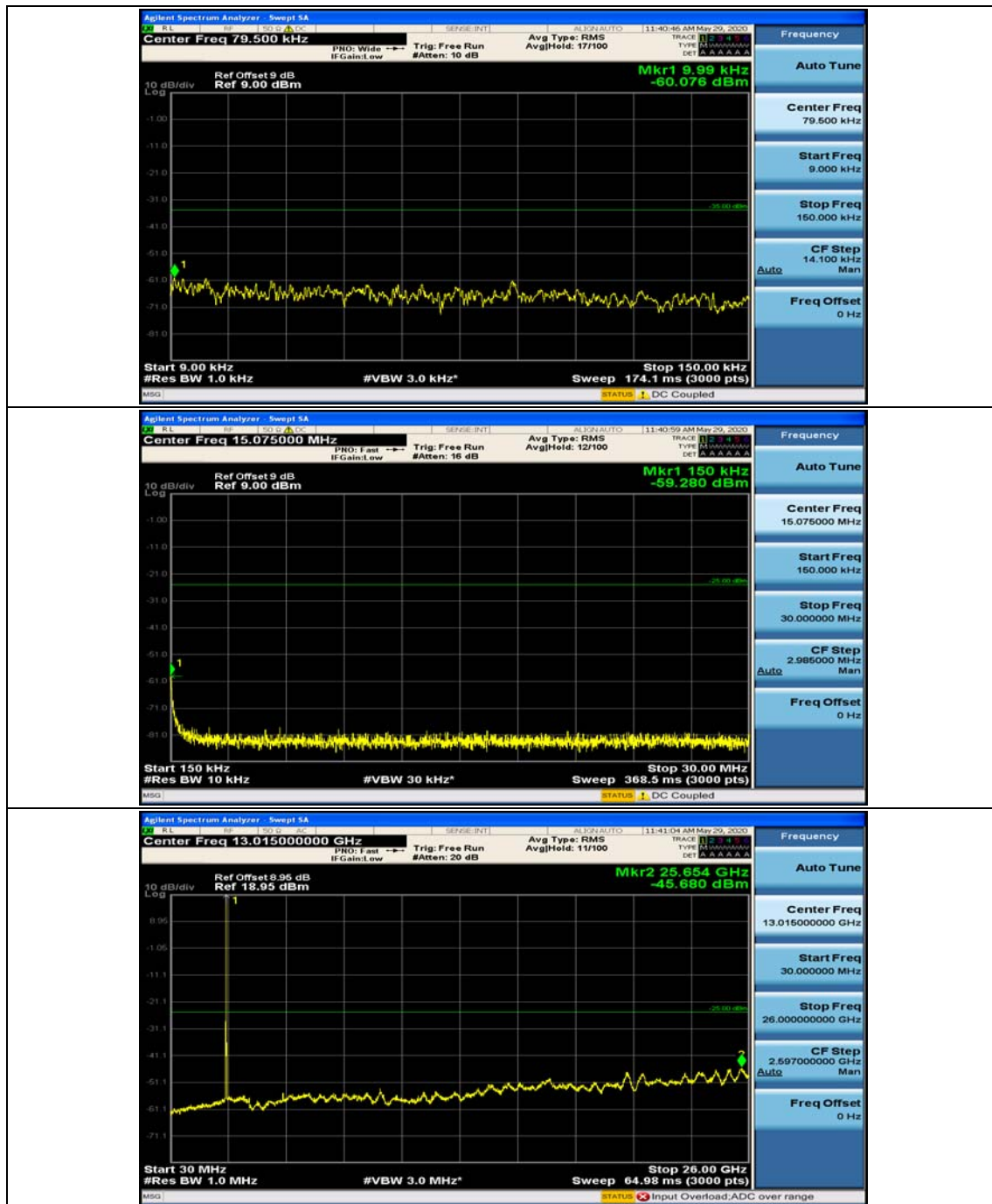


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

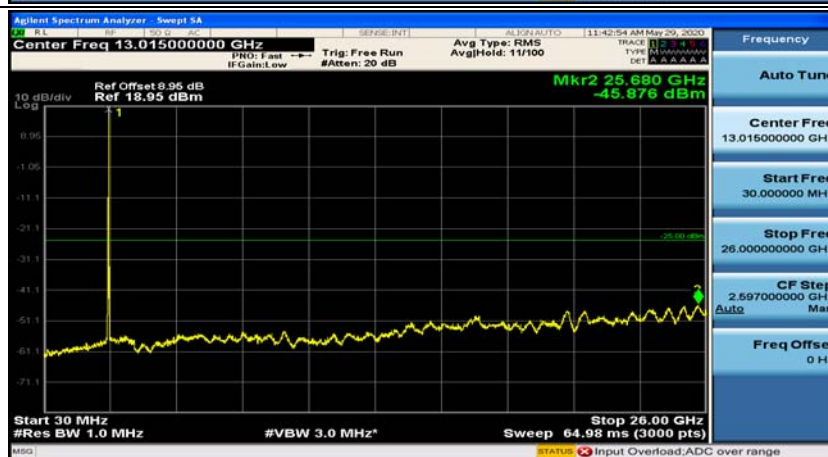
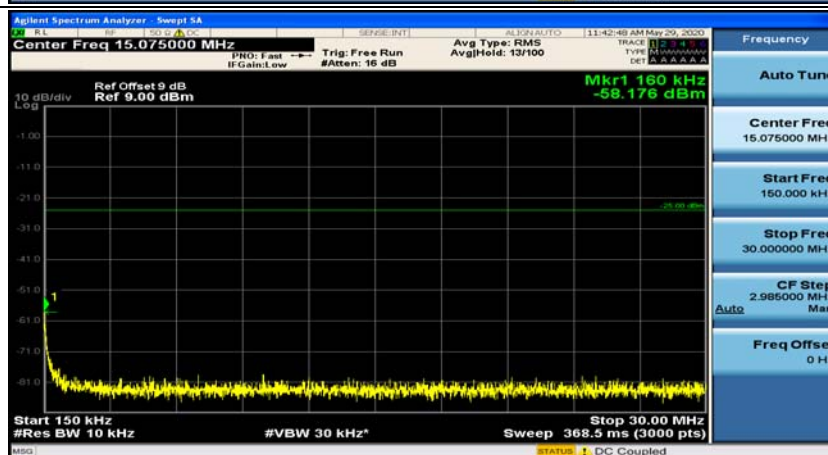
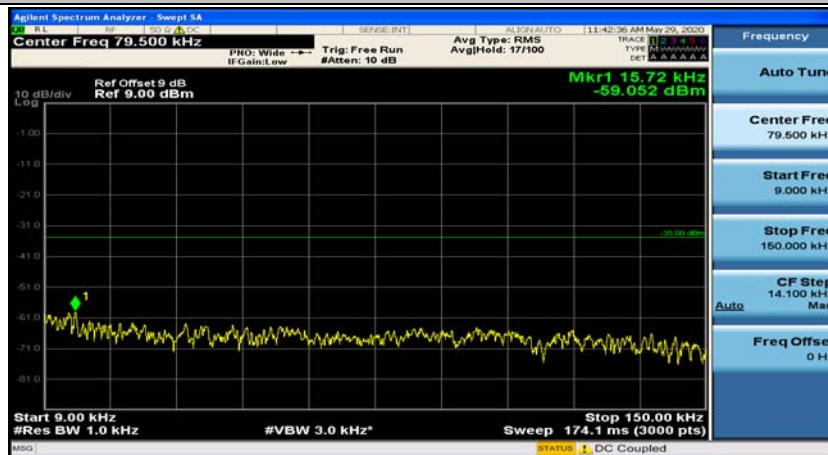


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

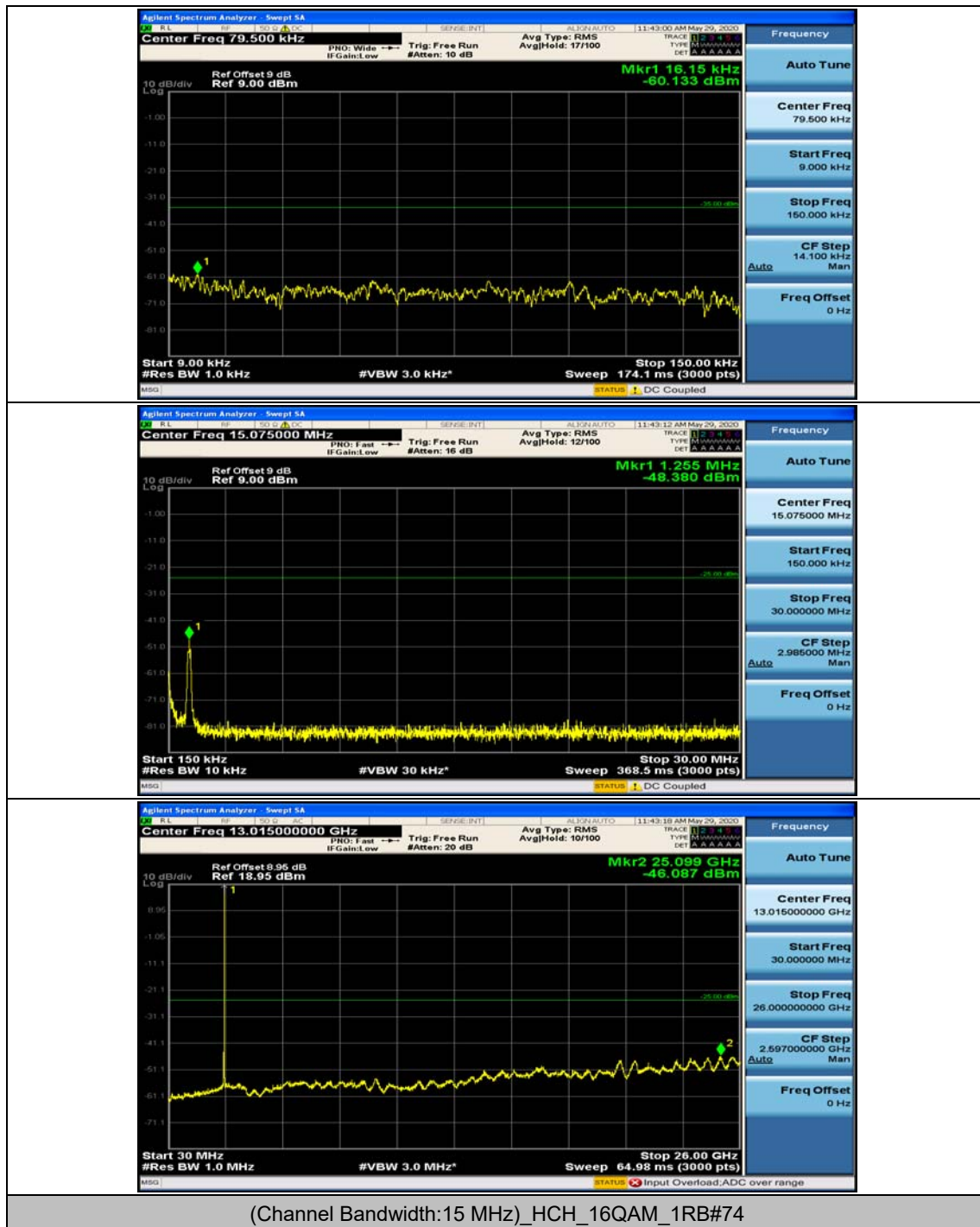


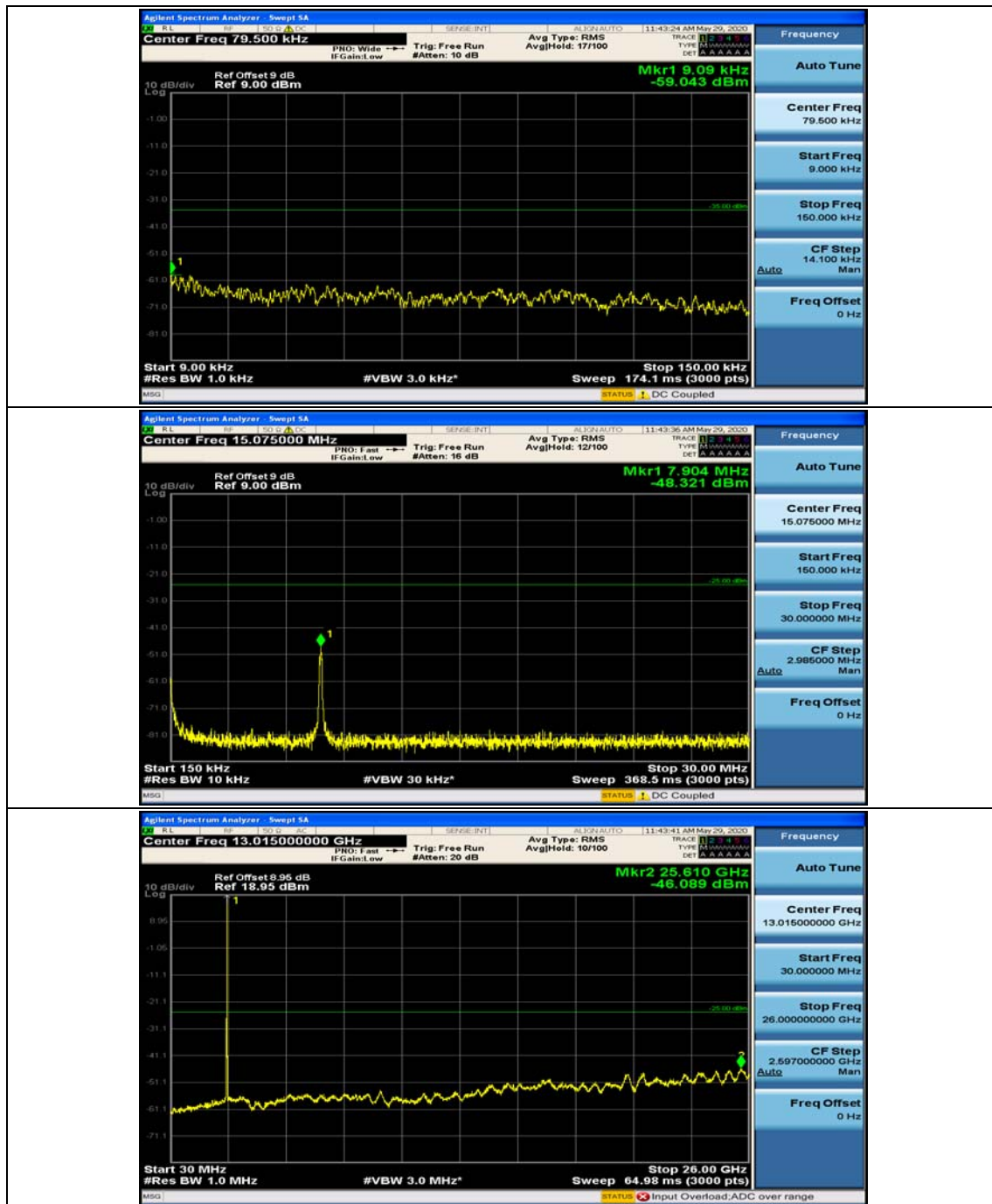


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

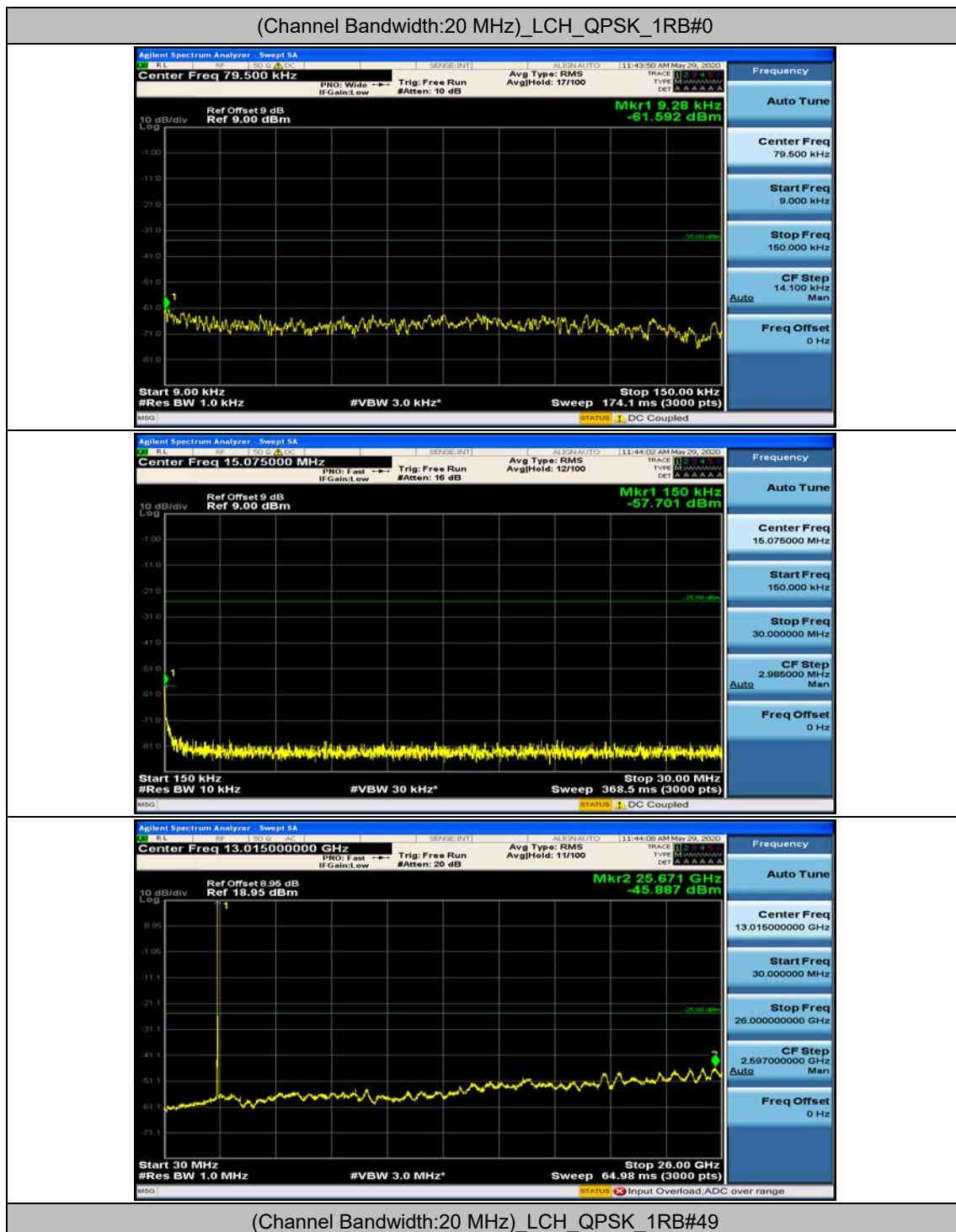


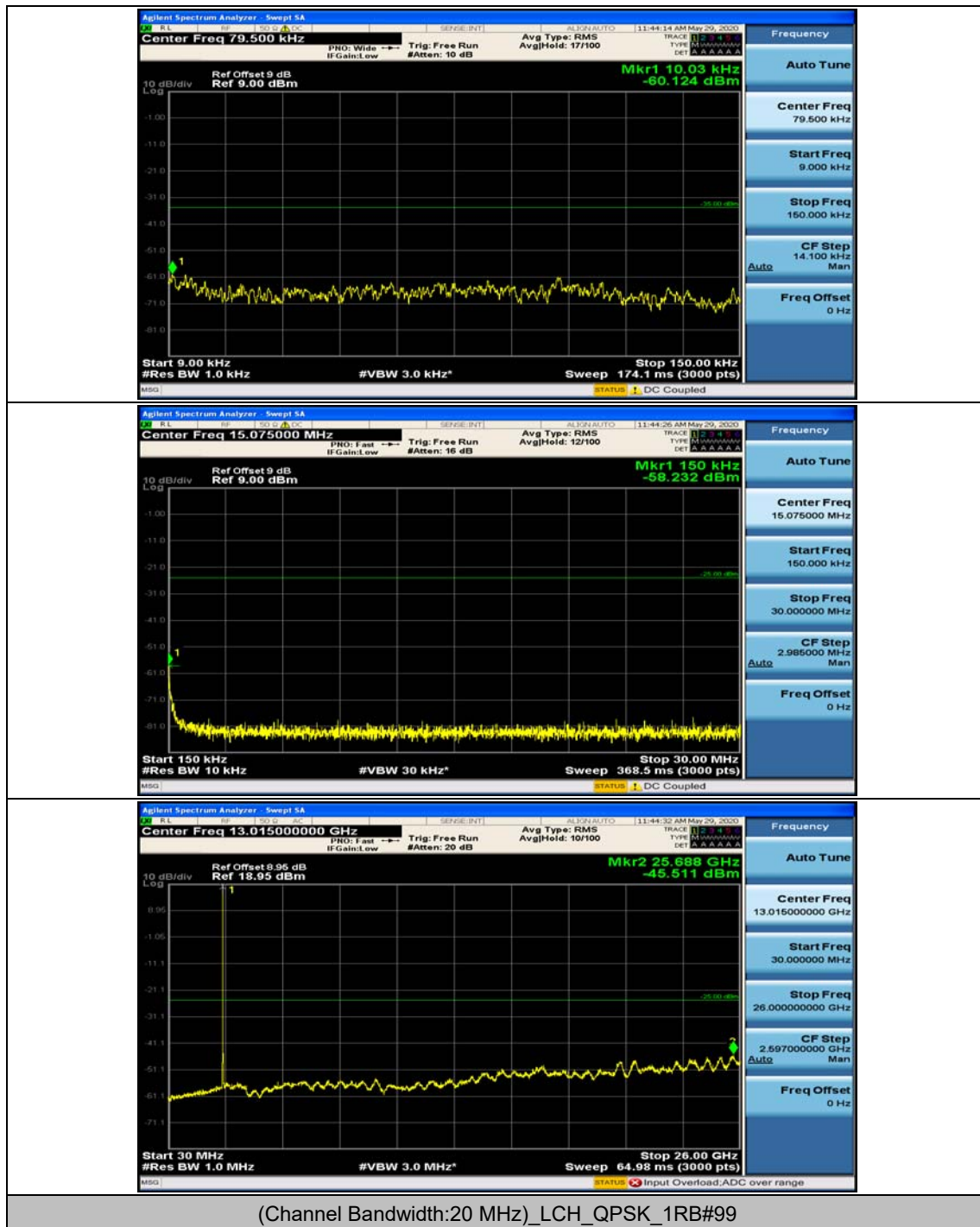
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

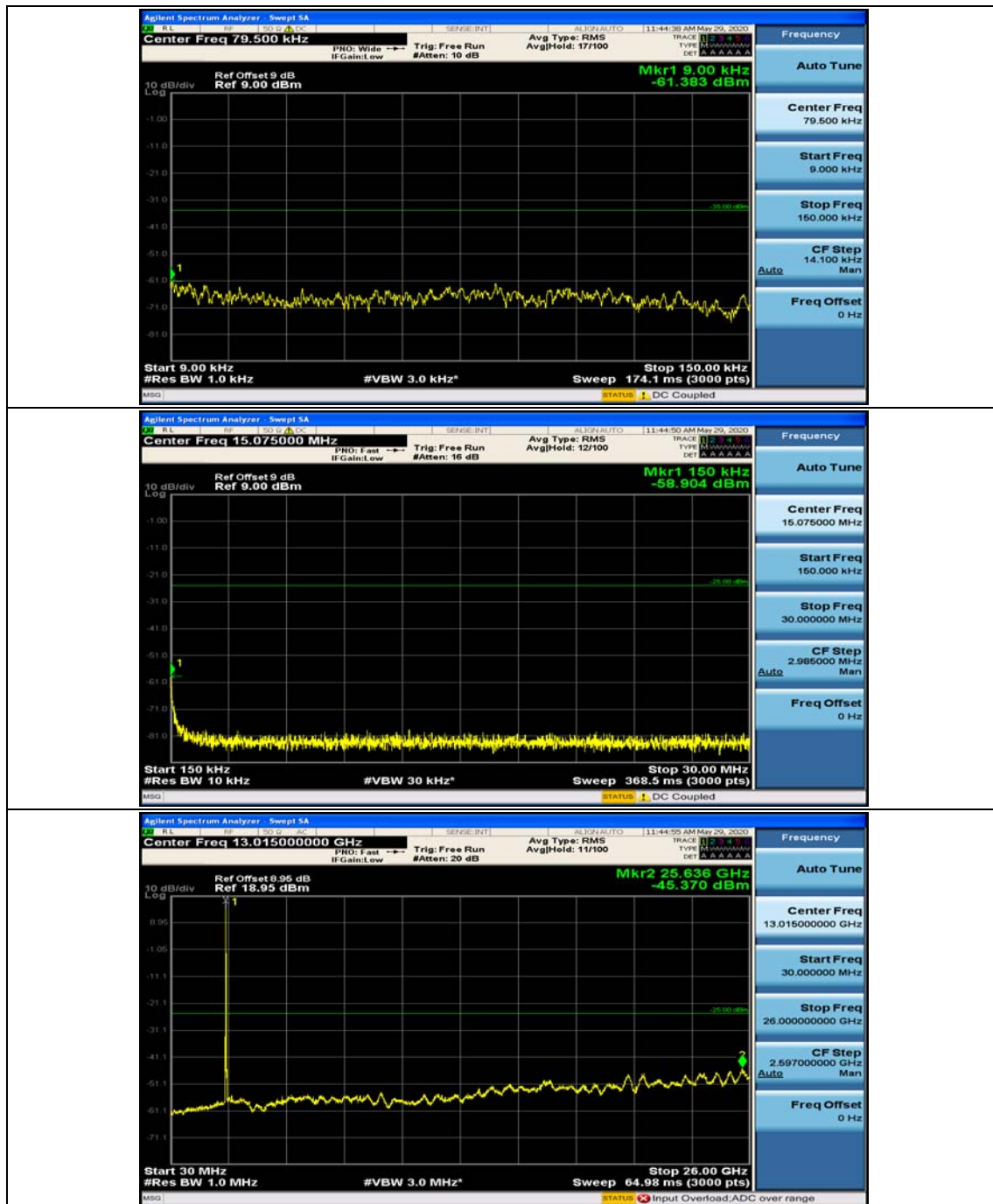




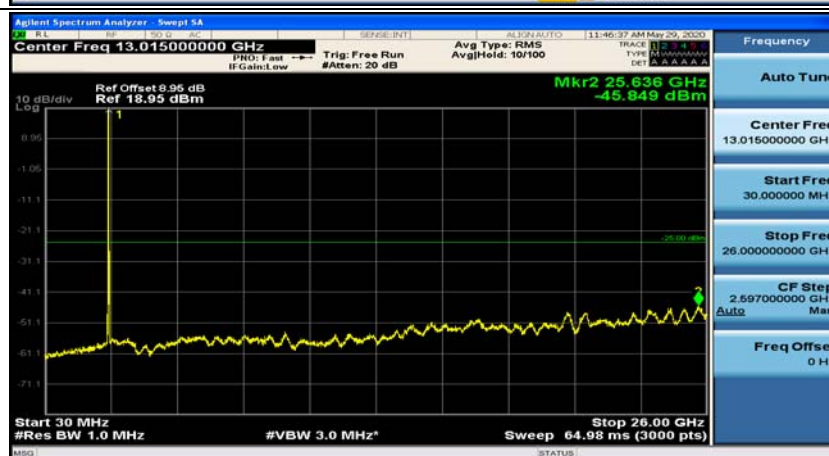
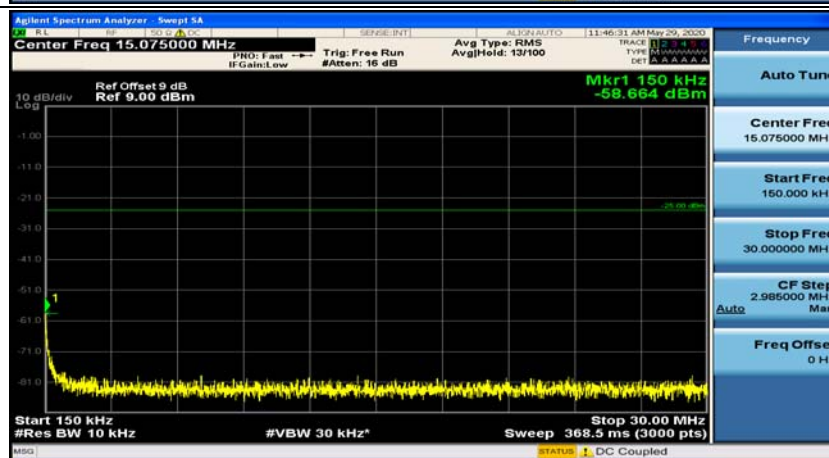
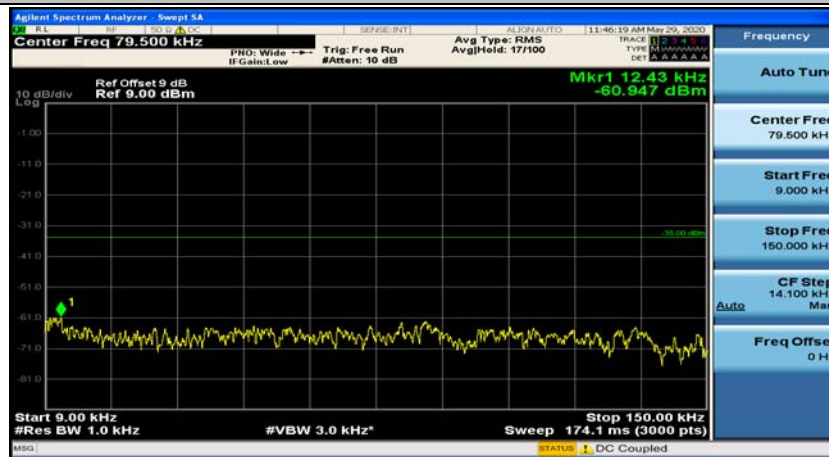
Channel Bandwidth: 20 MHz



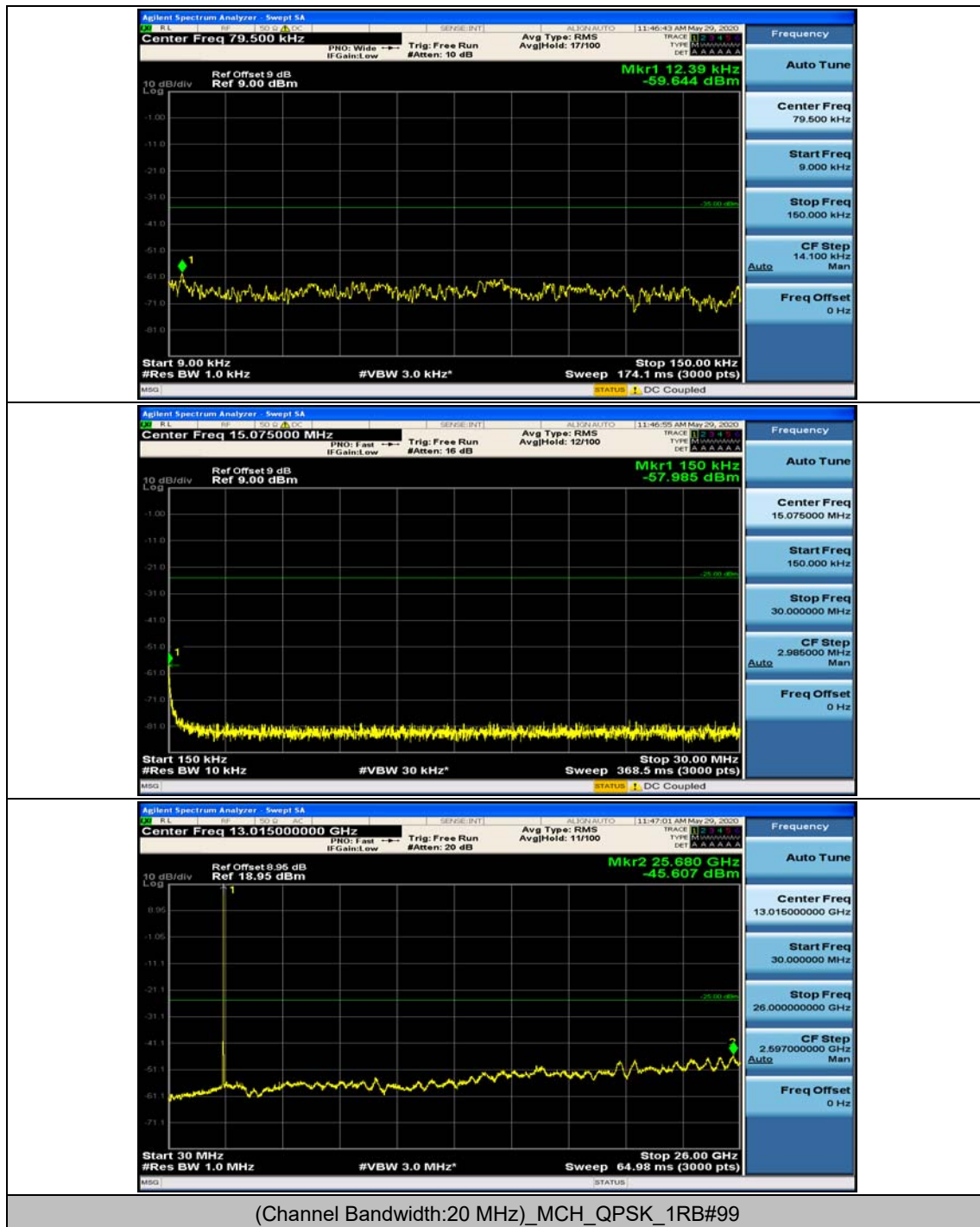


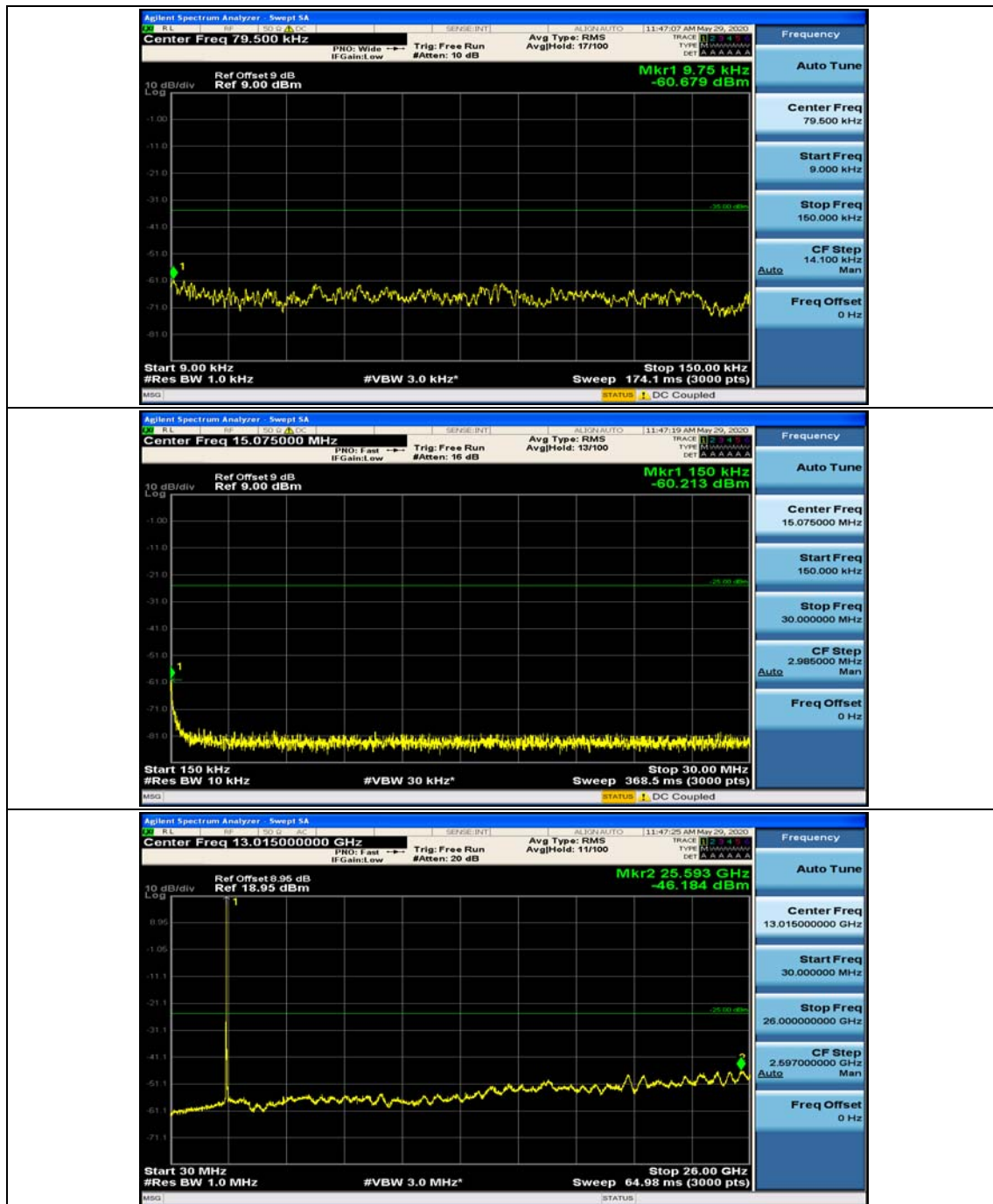


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

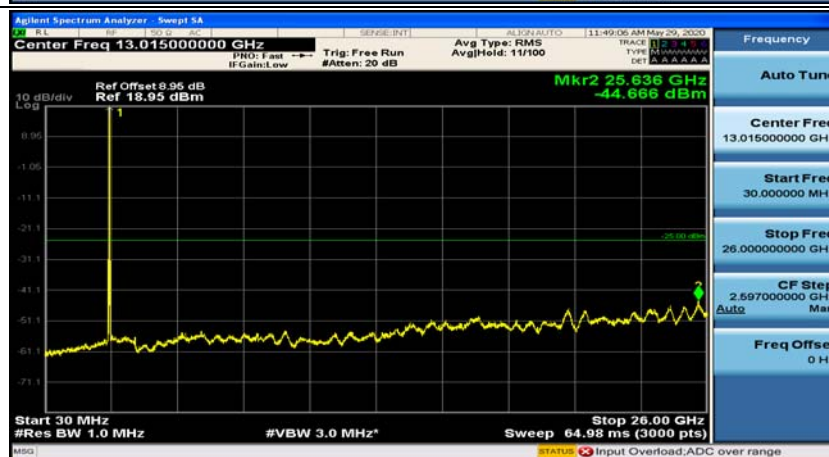
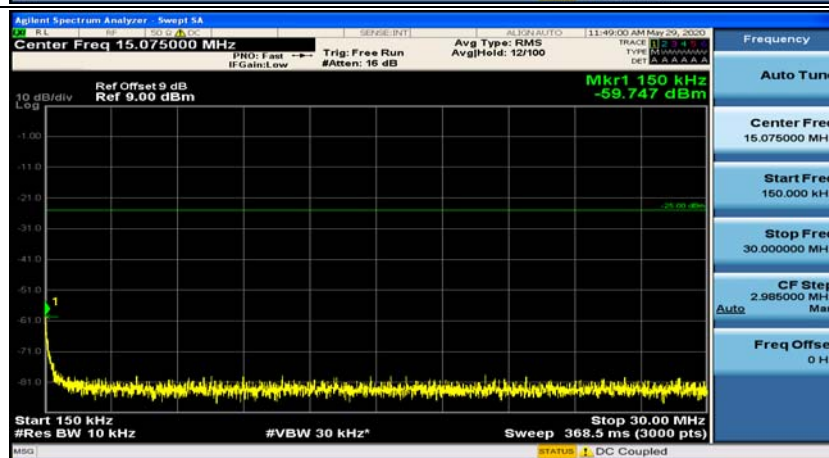
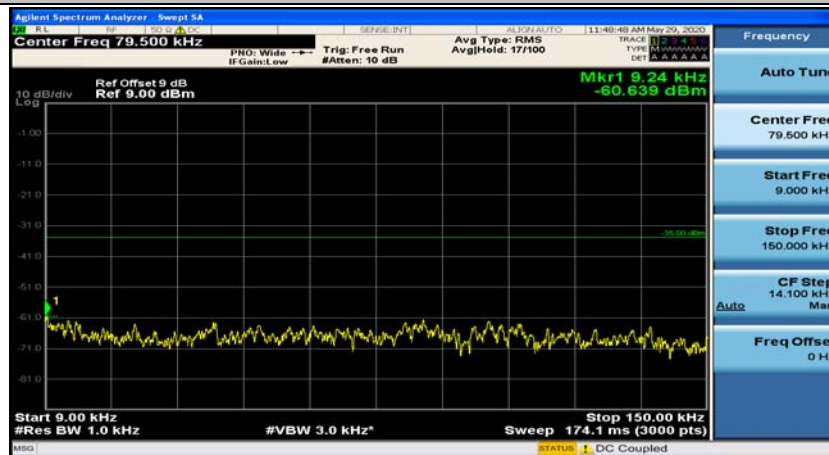


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

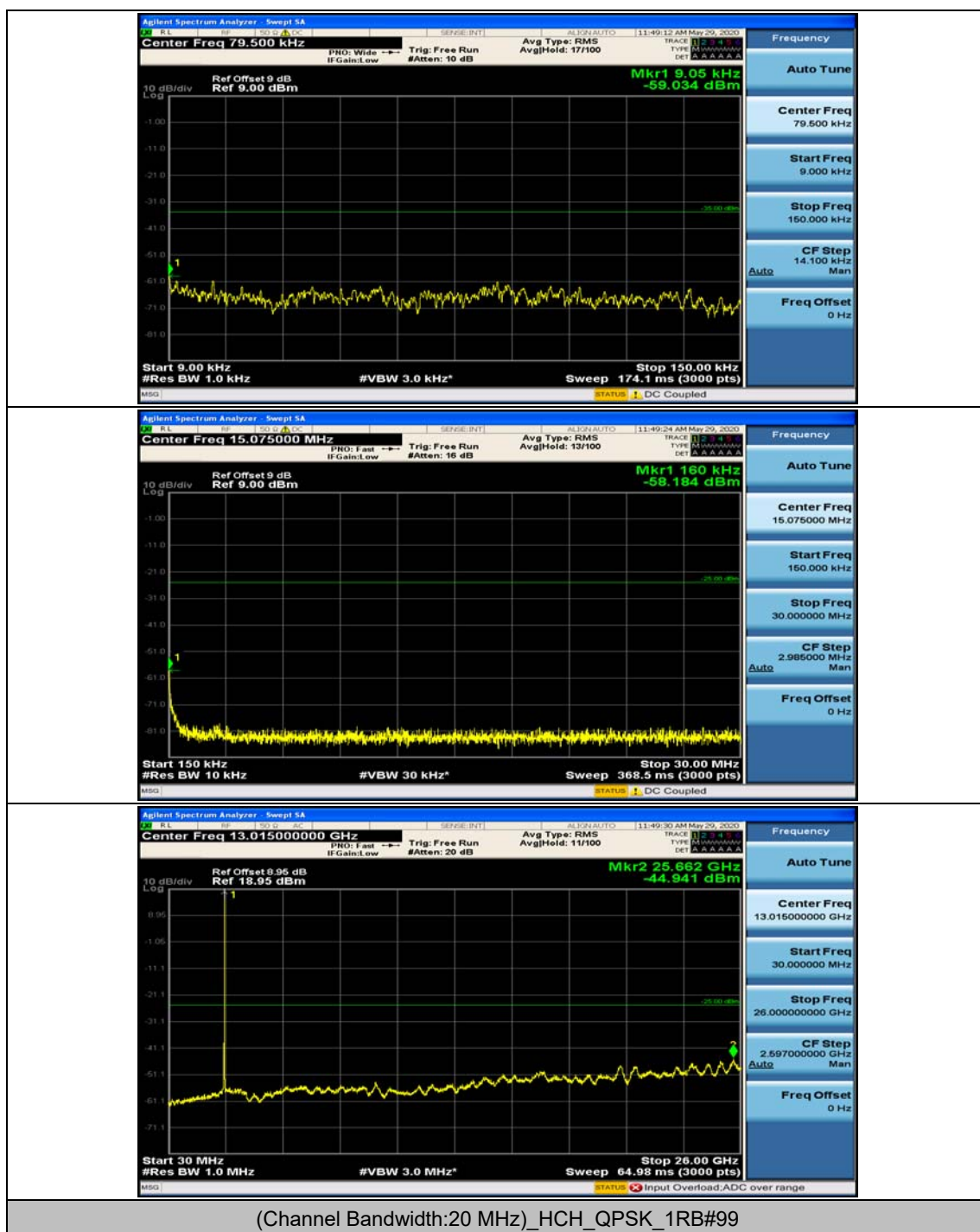


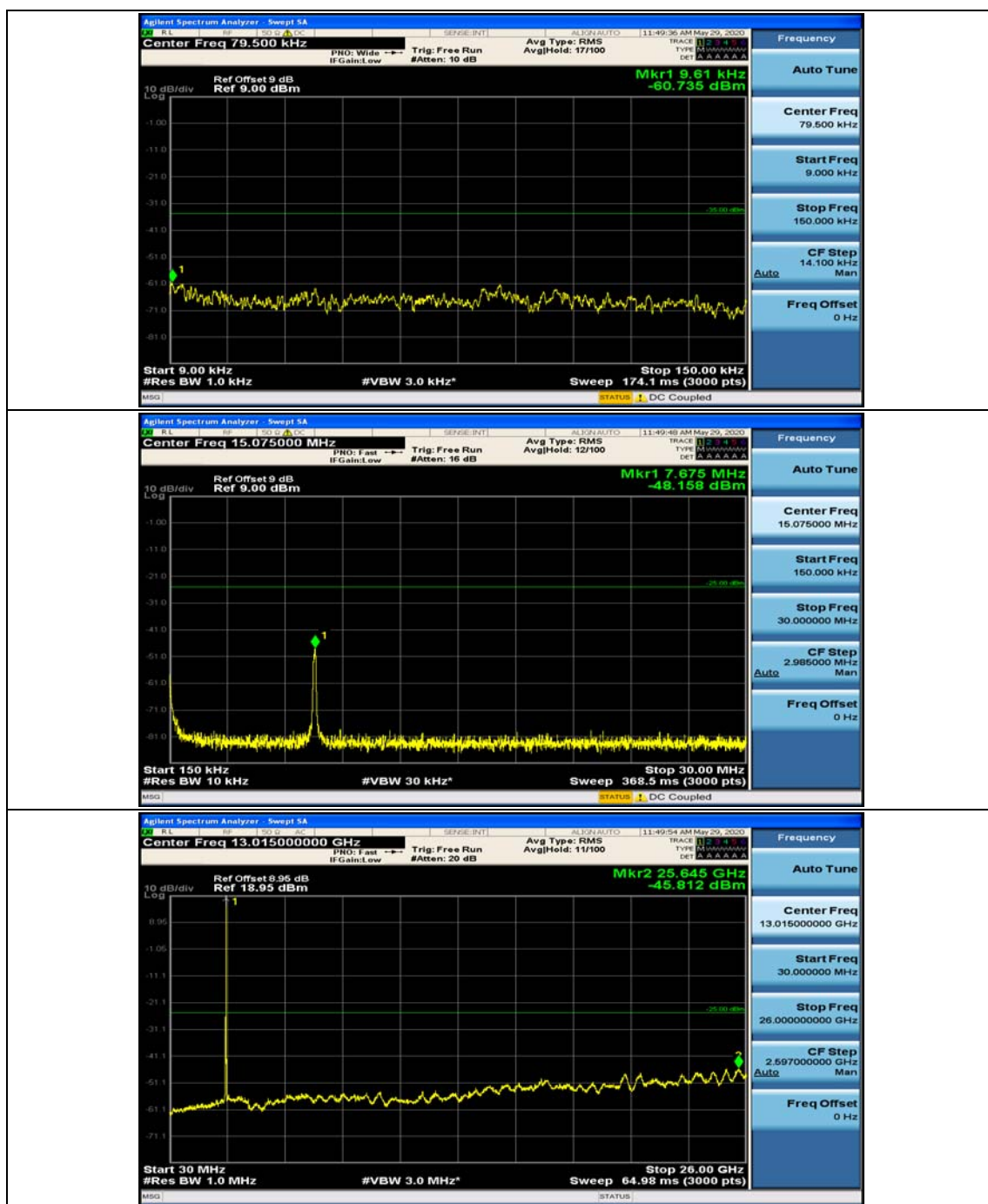


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

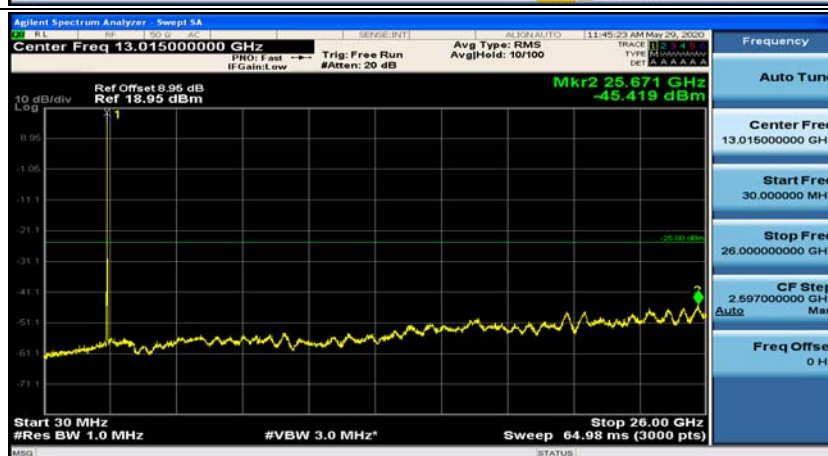
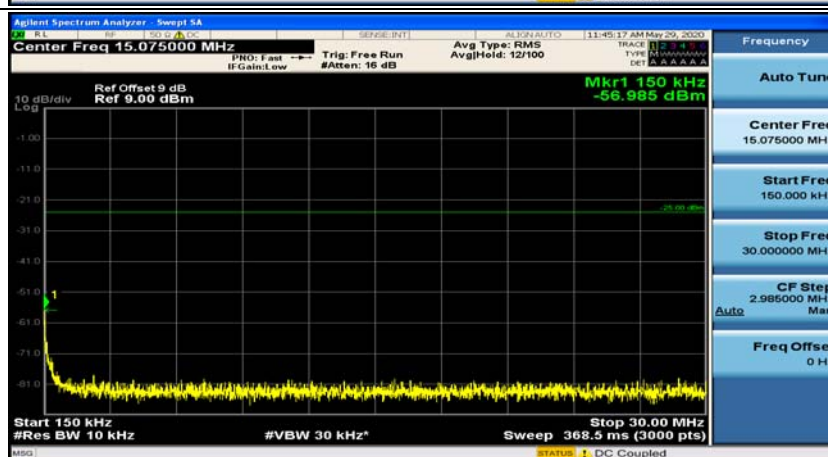
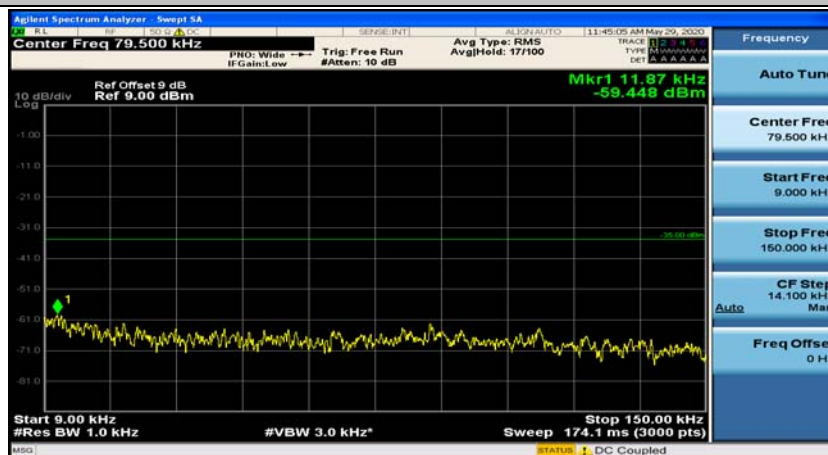


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

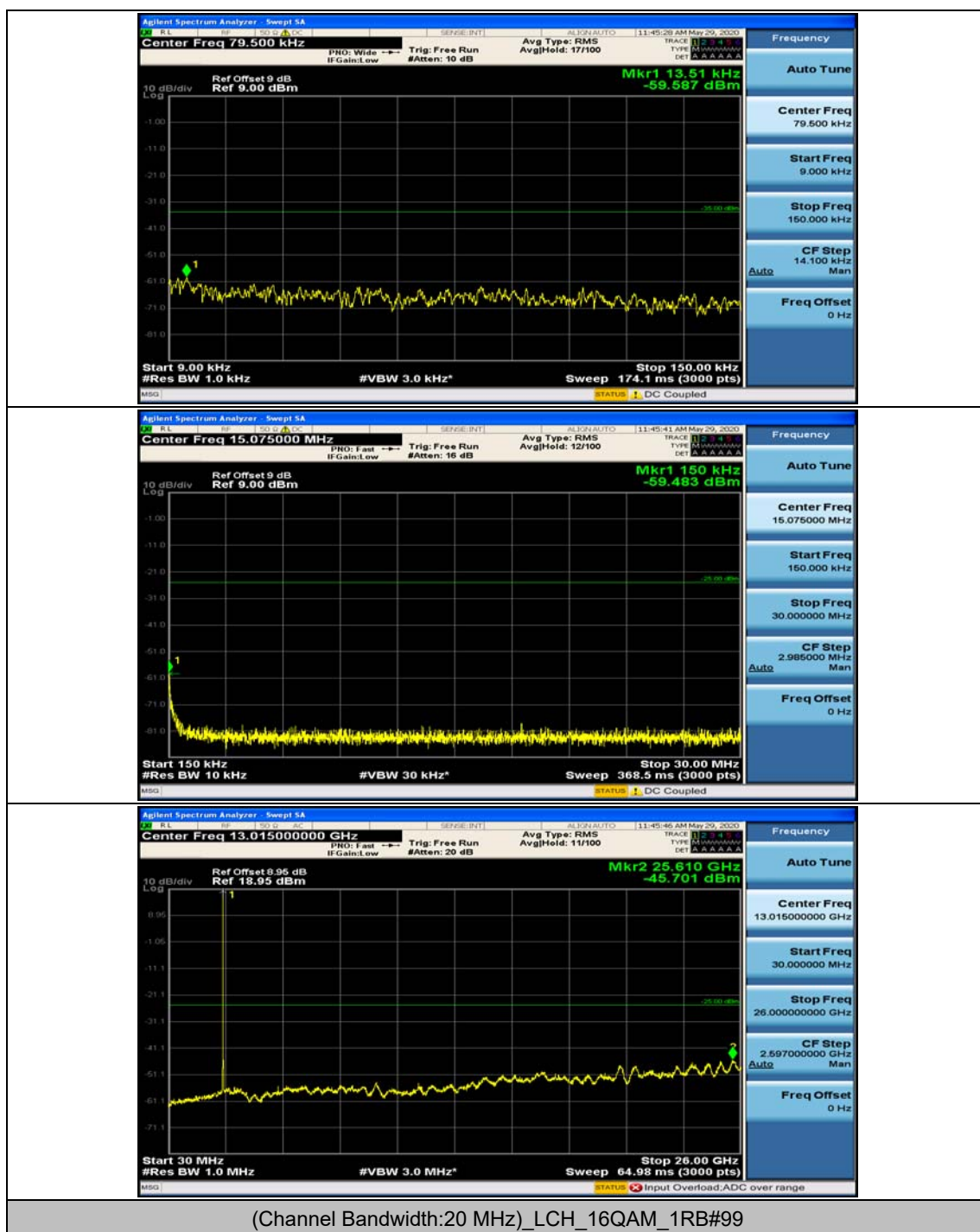


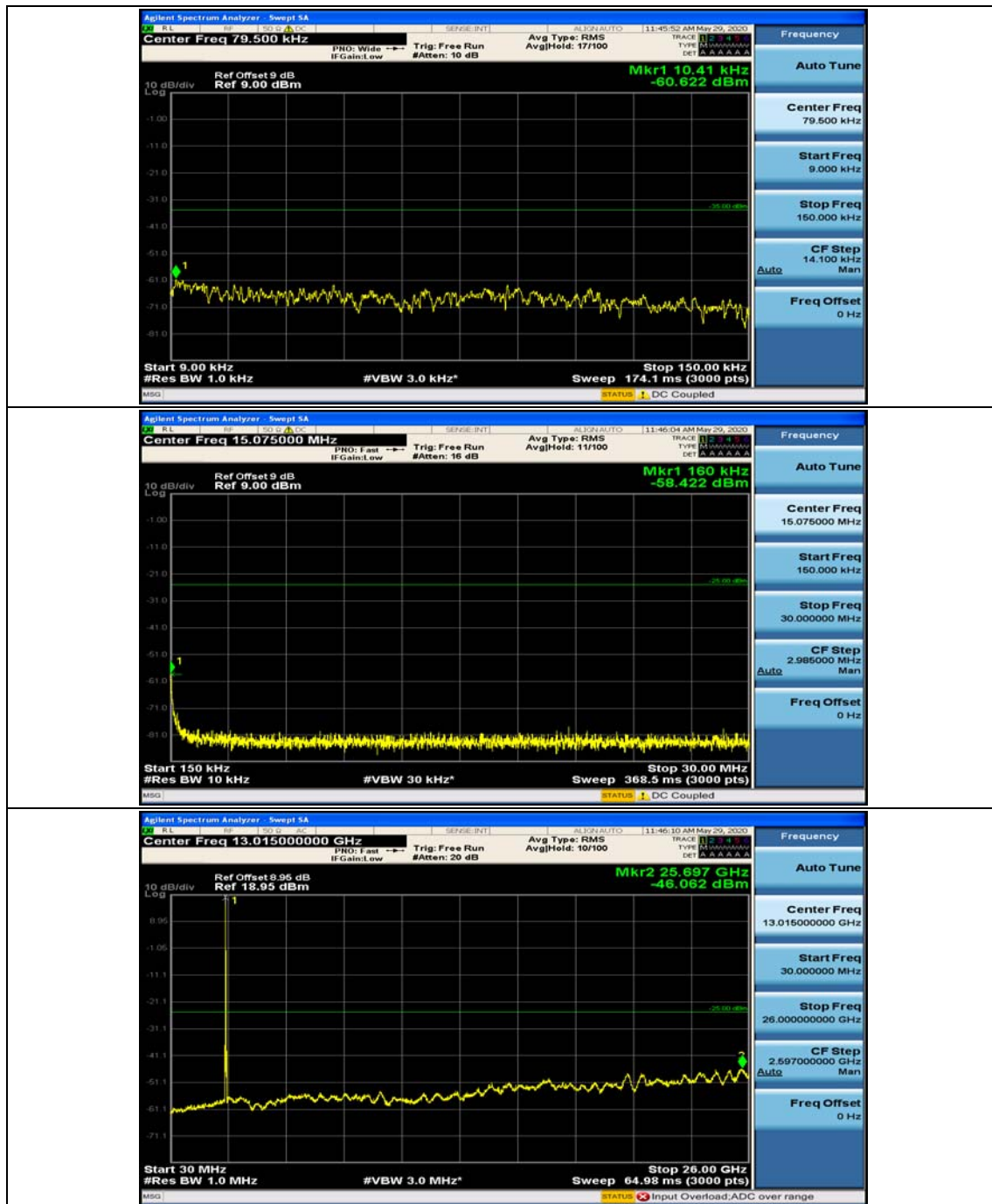


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

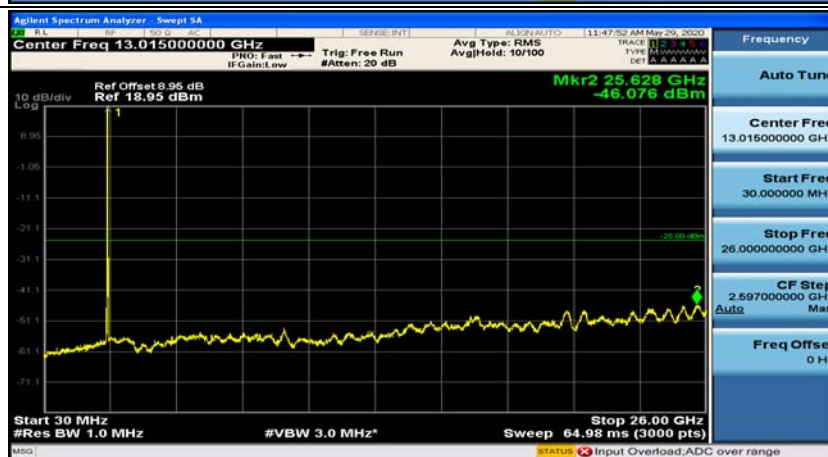
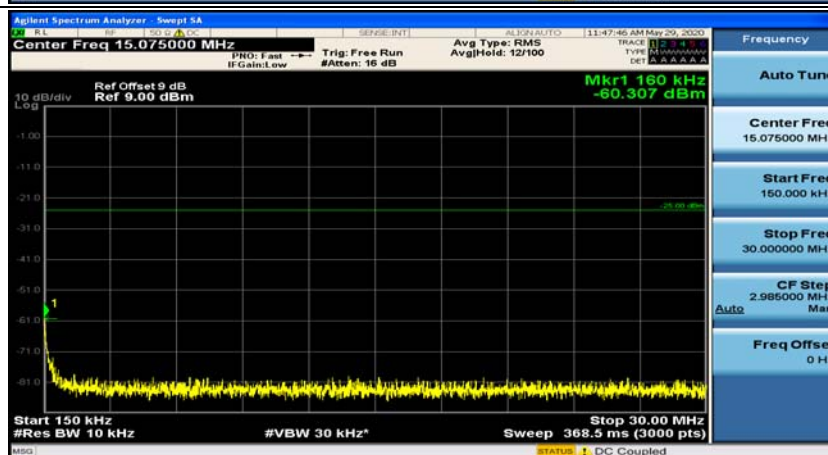
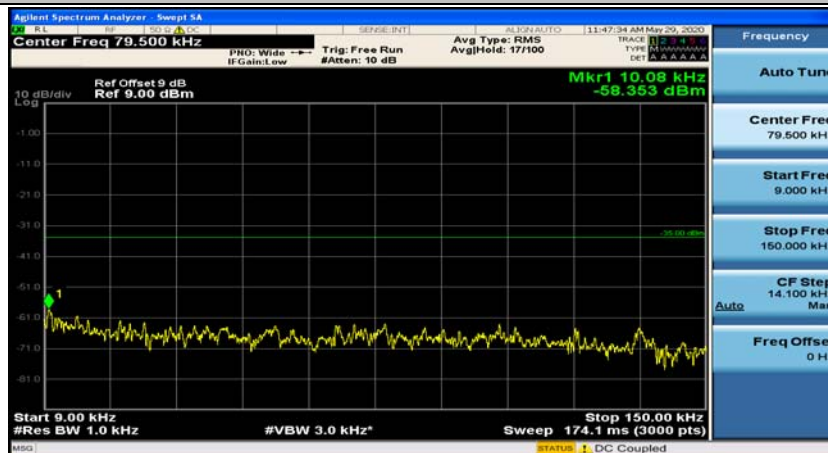


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

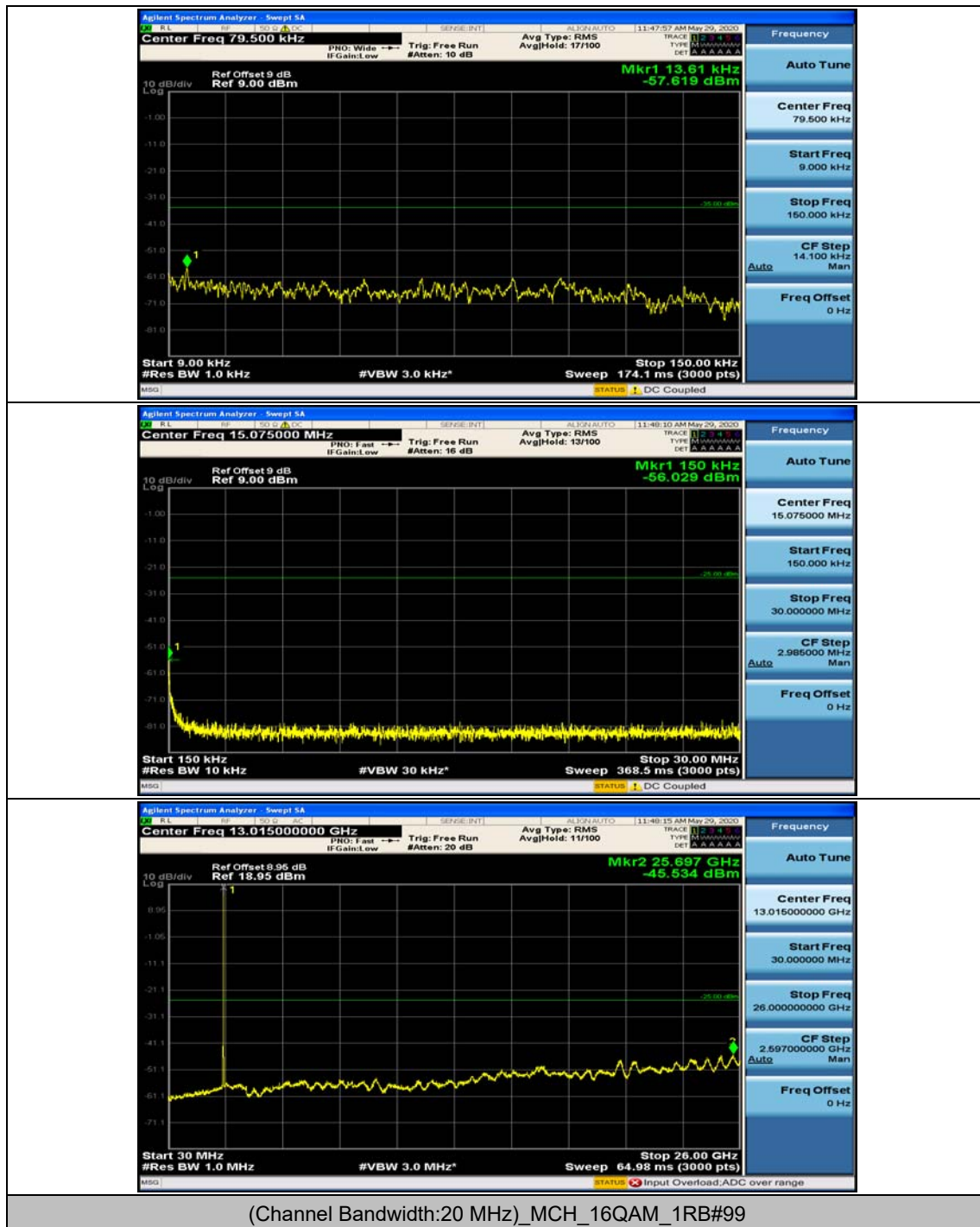


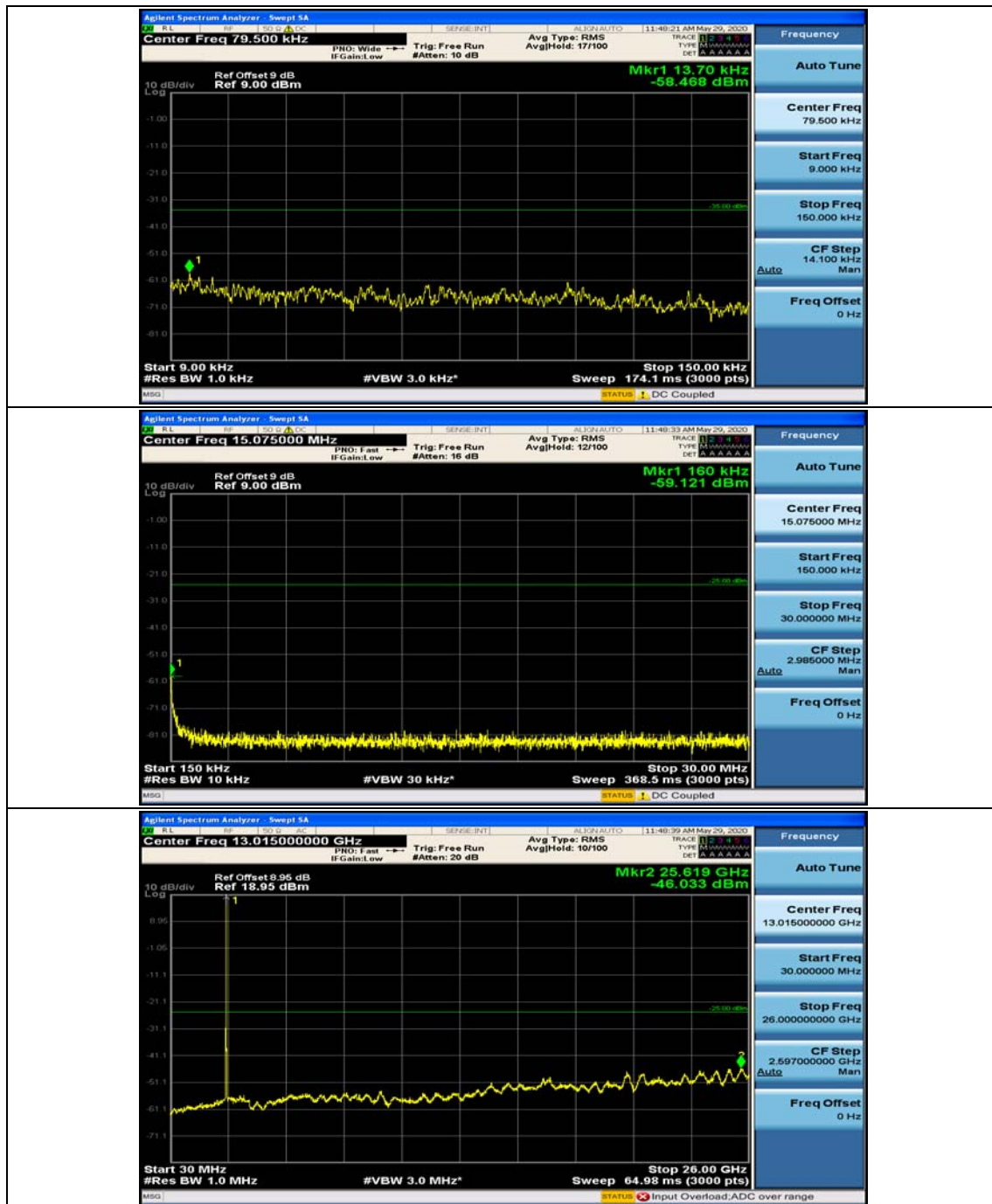


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

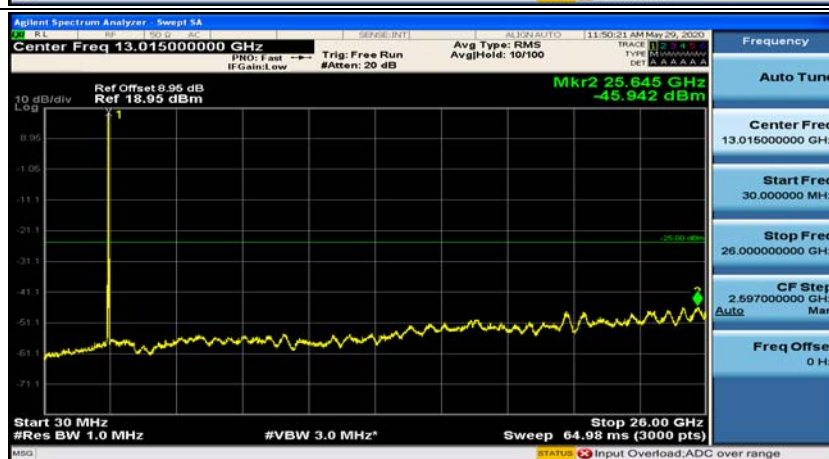
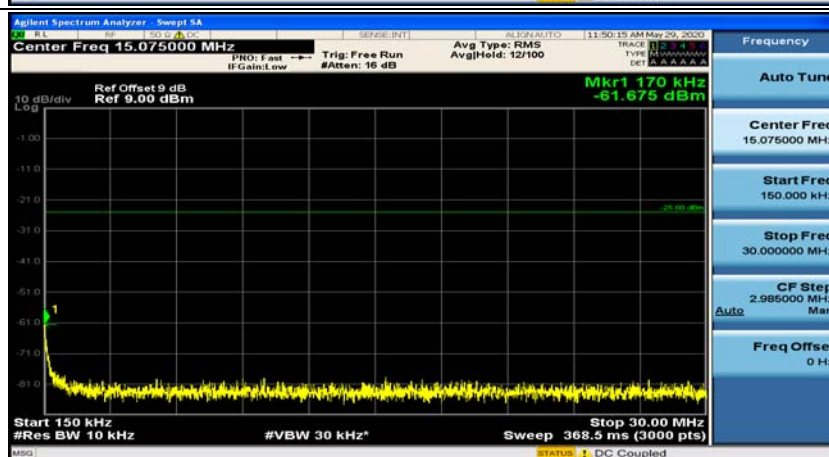
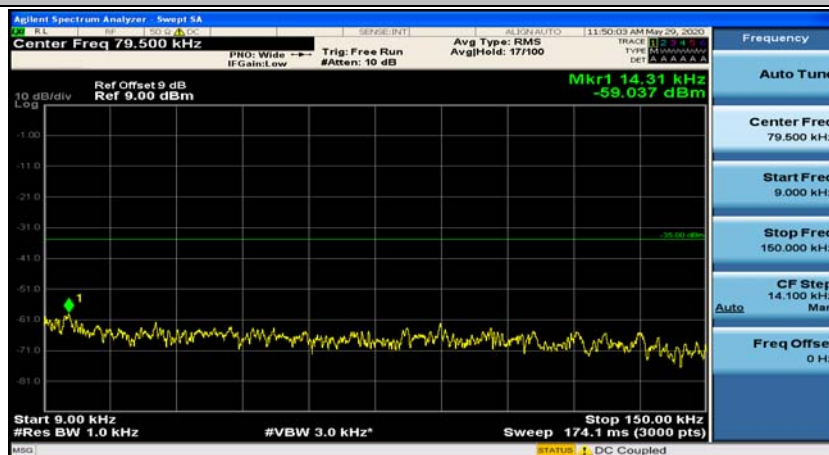


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

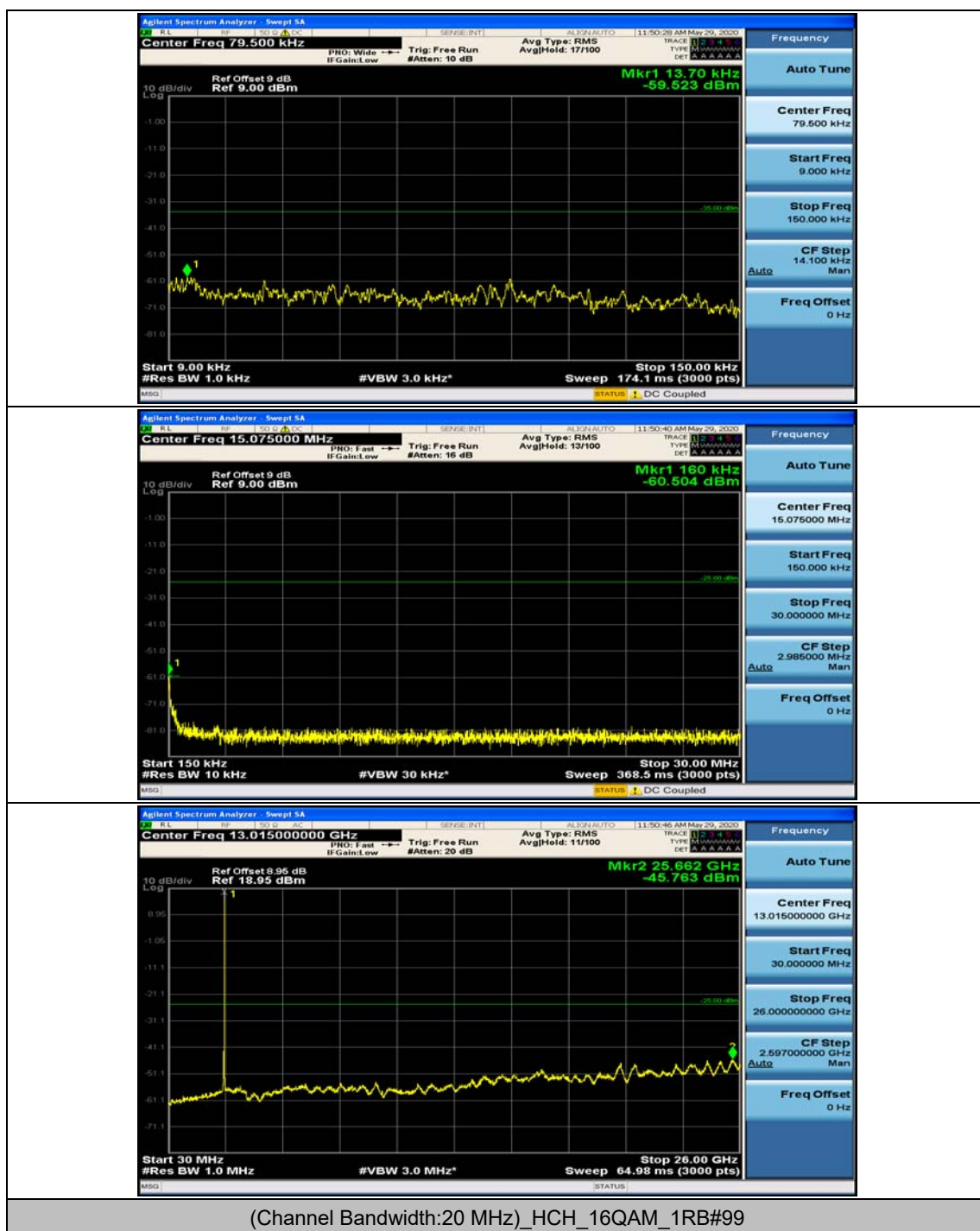


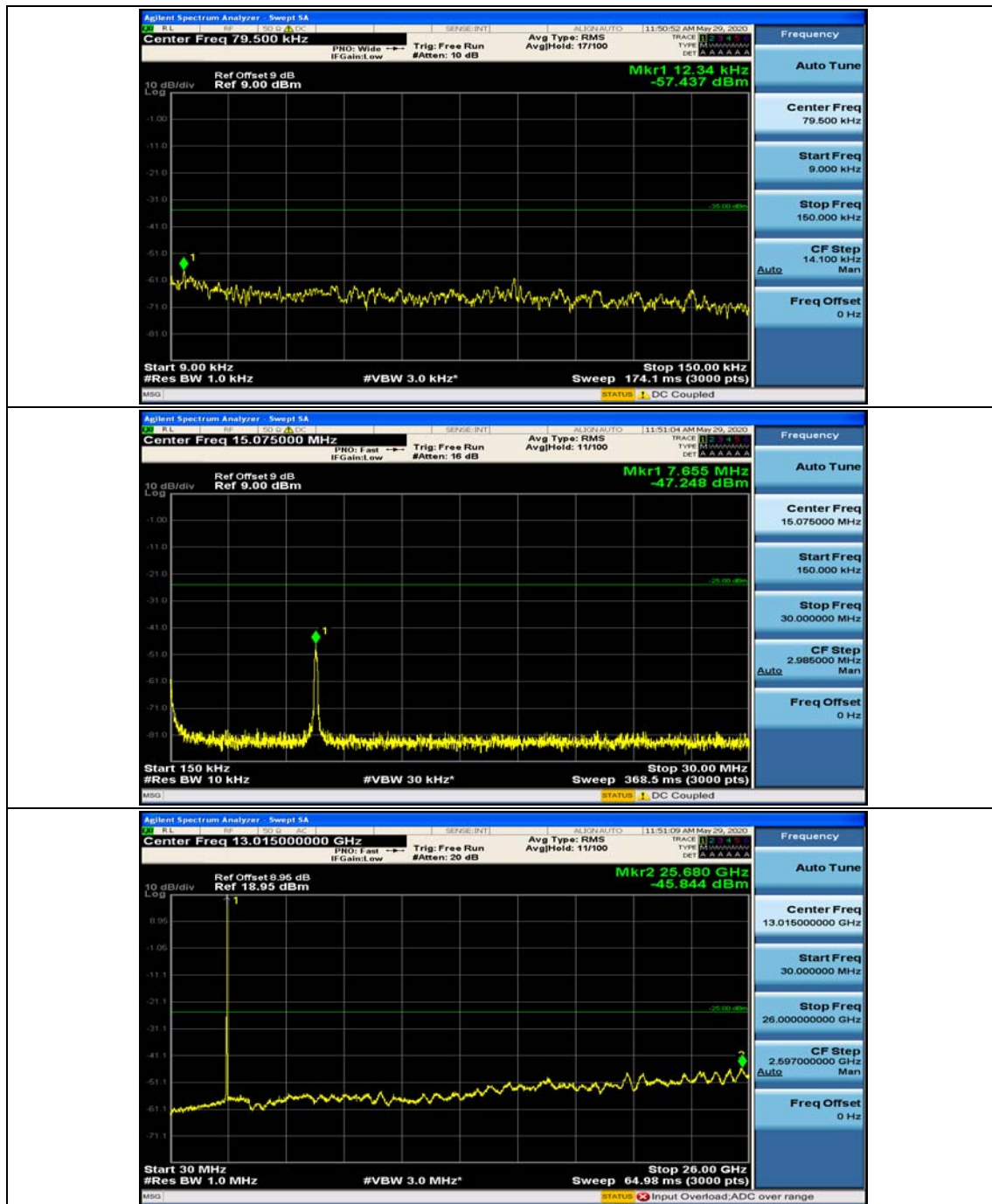


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(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	1.5	0.000599	± 2.5	PASS
		VN	TN	3.05	0.001219	± 2.5	PASS
		VH	TN	-1.48	-0.000591	± 2.5	PASS
	MCH	VL	TN	4.17	0.001645	± 2.5	PASS
		VN	TN	2.87	0.001132	± 2.5	PASS
		VH	TN	1.41	0.000556	± 2.5	PASS
	HCH	VL	TN	-0.98	-0.000382	± 2.5	PASS
		VN	TN	-1.32	-0.000514	± 2.5	PASS
		VH	TN	2.43	0.000946	± 2.5	PASS
16QAM	LCH	VL	TN	0.63	0.000252	± 2.5	PASS
		VN	TN	3.69	0.001475	± 2.5	PASS
		VH	TN	4.66	0.001862	± 2.5	PASS
	MCH	VL	TN	1.88	0.000742	± 2.5	PASS
		VN	TN	4.67	0.001842	± 2.5	PASS
		VH	TN	1.1	0.000434	± 2.5	PASS
	HCH	VL	TN	3.75	0.001461	± 2.5	PASS
		VN	TN	-1.93	-0.000752	± 2.5	PASS
		VH	TN	-1.46	-0.000569	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.51	0.001003	± 2.5	PASS
		VN	-20	2.6	0.001039	± 2.5	PASS
		VN	-10	-1.1	-0.000440	± 2.5	PASS
		VN	0	-0.43	-0.000172	± 2.5	PASS
		VN	10	3.19	0.001275	± 2.5	PASS
		VN	20	0	0.000000	± 2.5	PASS
		VN	30	-0.67	-0.000268	± 2.5	PASS
		VN	40	-0.54	-0.000216	± 2.5	PASS
		VN	50	4.43	0.001770	± 2.5	PASS
	MCH	VN	-30	-0.51	-0.000201	± 2.5	PASS

		VN	-20	0.2	0.000079	± 2.5	PASS
		VN	-10	1.63	0.000643	± 2.5	PASS
		VN	0	-1.05	-0.000414	± 2.5	PASS
		VN	10	-0.34	-0.000134	± 2.5	PASS
		VN	20	4.35	0.001716	± 2.5	PASS
		VN	30	-0.21	-0.000083	± 2.5	PASS
		VN	40	4.78	0.001886	± 2.5	PASS
		VN	50	4.27	0.001684	± 2.5	PASS
	HCH	VN	-30	-0.24	-0.000093	± 2.5	PASS
		VN	-20	-0.33	-0.000129	± 2.5	PASS
		VN	-10	3.43	0.001336	± 2.5	PASS
		VN	0	-0.07	-0.000027	± 2.5	PASS
		VN	10	1.04	0.000405	± 2.5	PASS
		VN	20	1.85	0.000721	± 2.5	PASS
		VN	30	0.76	0.000296	± 2.5	PASS
		VN	40	-1.08	-0.000421	± 2.5	PASS
		VN	50	3.48	0.001355	± 2.5	PASS
16QAM	LCH	VN	-30	2.21	0.000883	± 2.5	PASS
		VN	-20	-0.94	-0.000376	± 2.5	PASS
		VN	-10	0.28	0.000112	± 2.5	PASS
		VN	0	0.28	0.000112	± 2.5	PASS
		VN	10	3.26	0.001303	± 2.5	PASS
		VN	20	1.42	0.000567	± 2.5	PASS
		VN	30	1.41	0.000563	± 2.5	PASS
		VN	40	2.83	0.001131	± 2.5	PASS
		VN	50	0.42	0.000168	± 2.5	PASS
	MCH	VN	-30	1.64	0.000647	± 2.5	PASS
		VN	-20	-0.27	-0.000107	± 2.5	PASS
		VN	-10	1.38	0.000544	± 2.5	PASS
		VN	0	0.79	0.000312	± 2.5	PASS
		VN	10	0.53	0.000209	± 2.5	PASS
		VN	20	0.06	0.000024	± 2.5	PASS
		VN	30	1.36	0.000536	± 2.5	PASS
		VN	40	-0.99	-0.000391	± 2.5	PASS
		VN	50	1.49	0.000588	± 2.5	PASS
	HCH	VN	-30	3.73	0.001453	± 2.5	PASS
		VN	-20	1.18	0.000460	± 2.5	PASS
		VN	-10	-0.86	-0.000335	± 2.5	PASS
		VN	0	4.98	0.001940	± 2.5	PASS
		VN	10	4.45	0.001733	± 2.5	PASS
		VN	20	0.9	0.000351	± 2.5	PASS

		VN	30	2.15	0.000837	± 2.5	PASS
		VN	40	3.93	0.001531	± 2.5	PASS
		VN	50	2.3	0.000896	± 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	1.98	0.000790	± 2.5	PASS
		VN	TN	4.65	0.001856	± 2.5	PASS
		VH	TN	1.79	0.000715	± 2.5	PASS
	MCH	VL	TN	-1.31	-0.000517	± 2.5	PASS
		VN	TN	0.7	0.000276	± 2.5	PASS
		VH	TN	4.42	0.001744	± 2.5	PASS
	HCH	VL	TN	2.92	0.001138	± 2.5	PASS
		VN	TN	-1.57	-0.000612	± 2.5	PASS
		VH	TN	0.58	0.000226	± 2.5	PASS
16QAM	LCH	VL	TN	1.89	0.000754	± 2.5	PASS
		VN	TN	-0.06	-0.000024	± 2.5	PASS
		VH	TN	1.95	0.000778	± 2.5	PASS
	MCH	VL	TN	3.76	0.001483	± 2.5	PASS
		VN	TN	0.27	0.000107	± 2.5	PASS
		VH	TN	4.02	0.001586	± 2.5	PASS
	HCH	VL	TN	3.04	0.001185	± 2.5	PASS
		VN	TN	4.01	0.001563	± 2.5	PASS
		VH	TN	4.46	0.001739	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.42	0.000567	± 2.5	PASS
		VN	-20	1.02	0.000407	± 2.5	PASS
		VN	-10	1.23	0.000491	± 2.5	PASS
		VN	0	-1.93	-0.000770	± 2.5	PASS
		VN	10	-0.52	-0.000208	± 2.5	PASS
		VN	20	2.71	0.001082	± 2.5	PASS
		VN	30	4.76	0.001900	± 2.5	PASS
		VN	40	1.01	0.000403	± 2.5	PASS
		VN	50	1.43	0.000571	± 2.5	PASS
	MCH	VN	-30	-1.91	-0.000753	± 2.5	PASS
		VN	-20	-1.26	-0.000497	± 2.5	PASS

		VN	-10	1.31	0.000517	± 2.5	PASS	
		VN	0	4.93	0.001945	± 2.5	PASS	
		VN	10	-1.38	-0.000544	± 2.5	PASS	
		VN	20	4.27	0.001684	± 2.5	PASS	
		VN	30	0.04	0.000016	± 2.5	PASS	
		VN	40	4.06	0.001602	± 2.5	PASS	
		VN	50	2.68	0.001057	± 2.5	PASS	
	HCH	VN	-30	1.24	0.000483	± 2.5	PASS	
		VN	-20	-0.12	-0.000047	± 2.5	PASS	
		VN	-10	0.63	0.000246	± 2.5	PASS	
		VN	0	-1.77	-0.000690	± 2.5	PASS	
		VN	10	-0.7	-0.000273	± 2.5	PASS	
		VN	20	4.78	0.001864	± 2.5	PASS	
		VN	30	4.43	0.001727	± 2.5	PASS	
		VN	40	3.47	0.001353	± 2.5	PASS	
		VN	50	1.11	0.000433	± 2.5	PASS	
	16QAM	LCH	VN	-30	-0.74	-0.000295	± 2.5	PASS
			VN	-20	-0.09	-0.000036	± 2.5	PASS
VN			-10	-1.67	-0.000667	± 2.5	PASS	
VN			0	2.84	0.001134	± 2.5	PASS	
VN			10	0.54	0.000216	± 2.5	PASS	
VN			20	0.45	0.000180	± 2.5	PASS	
VN			30	2.69	0.001074	± 2.5	PASS	
VN			40	1	0.000399	± 2.5	PASS	
VN			50	4.48	0.001788	± 2.5	PASS	
MCH		VN	-30	1.35	0.000533	± 2.5	PASS	
		VN	-20	-0.27	-0.000107	± 2.5	PASS	
		VN	-10	1.71	0.000675	± 2.5	PASS	
		VN	0	4.08	0.001609	± 2.5	PASS	
		VN	10	1.56	0.000615	± 2.5	PASS	
		VN	20	2.64	0.001041	± 2.5	PASS	
		VN	30	4.25	0.001677	± 2.5	PASS	
		VN	40	-0.3	-0.000118	± 2.5	PASS	
		VN	50	-1.76	-0.000694	± 2.5	PASS	
HCH		VN	-30	2.27	0.000885	± 2.5	PASS	
		VN	-20	-0.04	-0.000016	± 2.5	PASS	
		VN	-10	2.18	0.000850	± 2.5	PASS	
		VN	0	-1.78	-0.000694	± 2.5	PASS	
		VN	10	4.78	0.001864	± 2.5	PASS	
		VN	20	0.93	0.000363	± 2.5	PASS	
		VN	30	1.06	0.000413	± 2.5	PASS	

		VN	40	-0.19	-0.000074	± 2.5	PASS
		VN	50	4.5	0.001754	± 2.5	PASS

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	0.91	0.000363	± 2.5	PASS
		VN	TN	4.78	0.001906	± 2.5	PASS
		VH	TN	4.18	0.001667	± 2.5	PASS
	MCH	VL	TN	-1.94	-0.000765	± 2.5	PASS
		VN	TN	0.69	0.000272	± 2.5	PASS
		VH	TN	1.62	0.000639	± 2.5	PASS
	HCH	VL	TN	4.06	0.001584	± 2.5	PASS
		VN	TN	4.1	0.001600	± 2.5	PASS
		VH	TN	0.66	0.000258	± 2.5	PASS
16QAM	LCH	VL	TN	-1.99	-0.000794	± 2.5	PASS
		VN	TN	4.31	0.001719	± 2.5	PASS
		VH	TN	-1.1	-0.000439	± 2.5	PASS
	MCH	VL	TN	1.74	0.000686	± 2.5	PASS
		VN	TN	0.45	0.000178	± 2.5	PASS
		VH	TN	2	0.000789	± 2.5	PASS
	HCH	VL	TN	3.35	0.001307	± 2.5	PASS
		VN	TN	0.68	0.000265	± 2.5	PASS
		VH	TN	-1.51	-0.000589	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.39	0.001352	± 2.5	PASS
		VN	-20	1.1	0.000439	± 2.5	PASS
		VN	-10	4.23	0.001687	± 2.5	PASS
		VN	0	2.81	0.001121	± 2.5	PASS
		VN	10	1.69	0.000674	± 2.5	PASS
		VN	20	-1.8	-0.000718	± 2.5	PASS
		VN	30	4.91	0.001958	± 2.5	PASS
		VN	40	1.34	0.000534	± 2.5	PASS
		VN	50	4.04	0.001611	± 2.5	PASS
	MCH	VN	-30	1.68	0.000663	± 2.5	PASS
		VN	-20	1.74	0.000686	± 2.5	PASS
		VN	-10	3.87	0.001527	± 2.5	PASS

		VN	0	2.22	0.000876	± 2.5	PASS
		VN	10	1.01	0.000398	± 2.5	PASS
		VN	20	0.93	0.000367	± 2.5	PASS
		VN	30	4.13	0.001629	± 2.5	PASS
		VN	40	3.37	0.001329	± 2.5	PASS
		VN	50	1.91	0.000753	± 2.5	PASS
	HCH	VN	-30	-0.94	-0.000367	± 2.5	PASS
		VN	-20	-1.87	-0.000730	± 2.5	PASS
		VN	-10	-0.98	-0.000382	± 2.5	PASS
		VN	0	-0.93	-0.000363	± 2.5	PASS
		VN	10	0.37	0.000144	± 2.5	PASS
		VN	20	2.76	0.001077	± 2.5	PASS
		VN	30	-0.61	-0.000238	± 2.5	PASS
		VN	40	4.29	0.001674	± 2.5	PASS
		VN	50	4.04	0.001577	± 2.5	PASS
16QAM	LCH	VN	-30	0.47	0.000187	± 2.5	PASS
		VN	-20	2.23	0.000889	± 2.5	PASS
		VN	-10	3.51	0.001400	± 2.5	PASS
		VN	0	4.77	0.001902	± 2.5	PASS
		VN	10	4.2	0.001675	± 2.5	PASS
		VN	20	0.72	0.000287	± 2.5	PASS
		VN	30	-1.51	-0.000602	± 2.5	PASS
		VN	40	3.5	0.001396	± 2.5	PASS
		VN	50	0.3	0.000120	± 2.5	PASS
	MCH	VN	-30	1.84	0.000726	± 2.5	PASS
		VN	-20	1.85	0.000730	± 2.5	PASS
		VN	-10	3.23	0.001274	± 2.5	PASS
		VN	0	2.87	0.001132	± 2.5	PASS
		VN	10	-0.84	-0.000331	± 2.5	PASS
		VN	20	1.55	0.000611	± 2.5	PASS
		VN	30	2.18	0.000860	± 2.5	PASS
		VN	40	1.73	0.000682	± 2.5	PASS
		VN	50	4.19	0.001653	± 2.5	PASS
	HCH	VN	-30	-0.16	-0.000062	± 2.5	PASS
		VN	-20	1.63	0.000636	± 2.5	PASS
		VN	-10	0.31	0.000121	± 2.5	PASS
		VN	0	2.62	0.001022	± 2.5	PASS
		VN	10	4.68	0.001826	± 2.5	PASS
		VN	20	2.39	0.000933	± 2.5	PASS
		VN	30	1.58	0.000617	± 2.5	PASS
		VN	40	4.67	0.001822	± 2.5	PASS

		VN	50	0.53	0.000207	± 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	-1.18	-0.000470	± 2.5	PASS
		VN	TN	3.04	0.001211	± 2.5	PASS
		VH	TN	3.08	0.001227	± 2.5	PASS
	MCH	VL	TN	2.17	0.000856	± 2.5	PASS
		VN	TN	-0.3	-0.000118	± 2.5	PASS
		VH	TN	1.8	0.000710	± 2.5	PASS
	HCH	VL	TN	-1.7	-0.000664	± 2.5	PASS
		VN	TN	-0.97	-0.000379	± 2.5	PASS
		VH	TN	0.36	0.000141	± 2.5	PASS
16QAM	LCH	VL	TN	3.94	0.001570	± 2.5	PASS
		VN	TN	-0.7	-0.000279	± 2.5	PASS
		VH	TN	4.81	0.001916	± 2.5	PASS
	MCH	VL	TN	-1.65	-0.000651	± 2.5	PASS
		VN	TN	2.49	0.000982	± 2.5	PASS
		VH	TN	4.79	0.001890	± 2.5	PASS
	HCH	VL	TN	0.79	0.000309	± 2.5	PASS
		VN	TN	1.28	0.000500	± 2.5	PASS
		VH	TN	2.38	0.000930	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.62	-0.000645	± 2.5	PASS
		VN	-20	-1.6	-0.000637	± 2.5	PASS
		VN	-10	3.55	0.001414	± 2.5	PASS
		VN	0	4.44	0.001769	± 2.5	PASS
		VN	10	-1.03	-0.000410	± 2.5	PASS
		VN	20	-1.81	-0.000721	± 2.5	PASS
		VN	30	2.61	0.001040	± 2.5	PASS
		VN	40	3.58	0.001426	± 2.5	PASS
		VN	50	2.15	0.000857	± 2.5	PASS
	MCH	VN	-30	4.57	0.001803	± 2.5	PASS
		VN	-20	-0.08	-0.000032	± 2.5	PASS
		VN	-10	3.66	0.001444	± 2.5	PASS
		VN	0	2.1	0.000828	± 2.5	PASS
		VN	10	-0.61	-0.000241	± 2.5	PASS

		VN	20	1.73	0.000682	± 2.5	PASS
		VN	30	4.9	0.001933	± 2.5	PASS
		VN	40	-1.86	-0.000734	± 2.5	PASS
		VN	50	-1.48	-0.000584	± 2.5	PASS
	HCH	VN	-30	-1.36	-0.000531	± 2.5	PASS
		VN	-20	-0.82	-0.000320	± 2.5	PASS
		VN	-10	0.35	0.000137	± 2.5	PASS
		VN	0	0.96	0.000375	± 2.5	PASS
		VN	10	4.02	0.001570	± 2.5	PASS
		VN	20	-0.28	-0.000109	± 2.5	PASS
		VN	30	3.76	0.001469	± 2.5	PASS
		VN	40	0.9	0.000352	± 2.5	PASS
		VN	50	1.4	0.000547	± 2.5	PASS
16QAM	LCH	VN	-30	0.61	0.000243	± 2.5	PASS
		VN	-20	1.09	0.000434	± 2.5	PASS
		VN	-10	2.1	0.000837	± 2.5	PASS
		VN	0	1.46	0.000582	± 2.5	PASS
		VN	10	0.69	0.000275	± 2.5	PASS
		VN	20	4.01	0.001598	± 2.5	PASS
		VN	30	4.27	0.001701	± 2.5	PASS
		VN	40	2.93	0.001167	± 2.5	PASS
		VN	50	-0.3	-0.000120	± 2.5	PASS
	MCH	VN	-30	2.17	0.000856	± 2.5	PASS
		VN	-20	1.96	0.000773	± 2.5	PASS
		VN	-10	1.96	0.000773	± 2.5	PASS
		VN	0	-1.5	-0.000592	± 2.5	PASS
		VN	10	2.42	0.000955	± 2.5	PASS
		VN	20	2.69	0.001061	± 2.5	PASS
		VN	30	1.39	0.000548	± 2.5	PASS
		VN	40	2.47	0.000974	± 2.5	PASS
		VN	50	-0.83	-0.000327	± 2.5	PASS
	HCH	VN	-30	4.16	0.001625	± 2.5	PASS
		VN	-20	-1	-0.000391	± 2.5	PASS
		VN	-10	2.48	0.000969	± 2.5	PASS
		VN	0	-0.52	-0.000203	± 2.5	PASS
		VN	10	1.05	0.000410	± 2.5	PASS
		VN	20	2.23	0.000871	± 2.5	PASS
		VN	30	-1.31	-0.000512	± 2.5	PASS
		VN	40	-0.86	-0.000336	± 2.5	PASS
		VN	50	3.49	0.001363	± 2.5	PASS