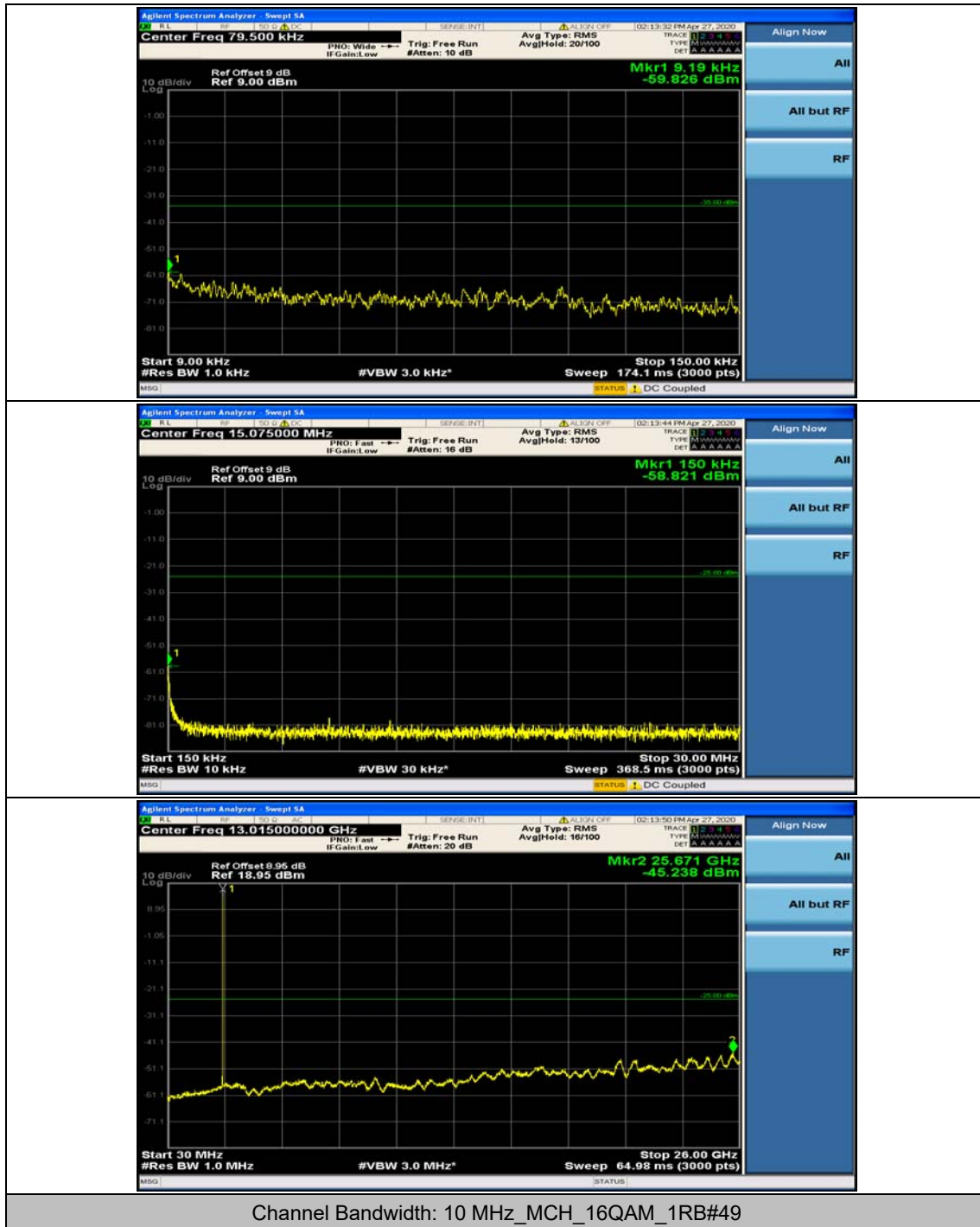
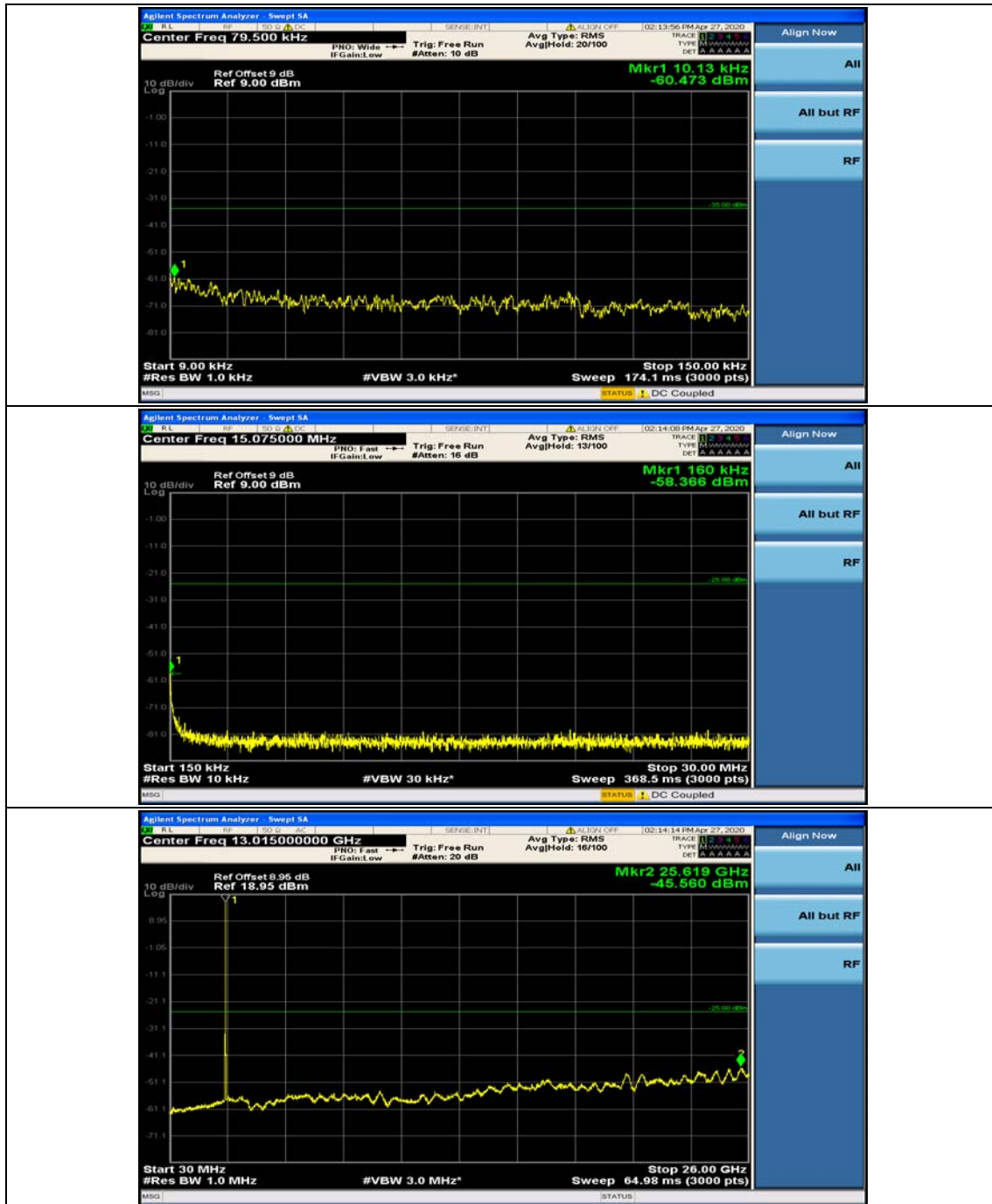
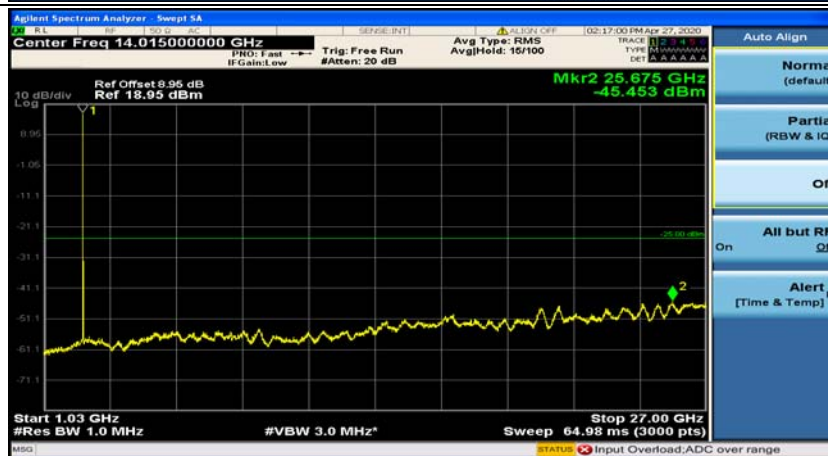
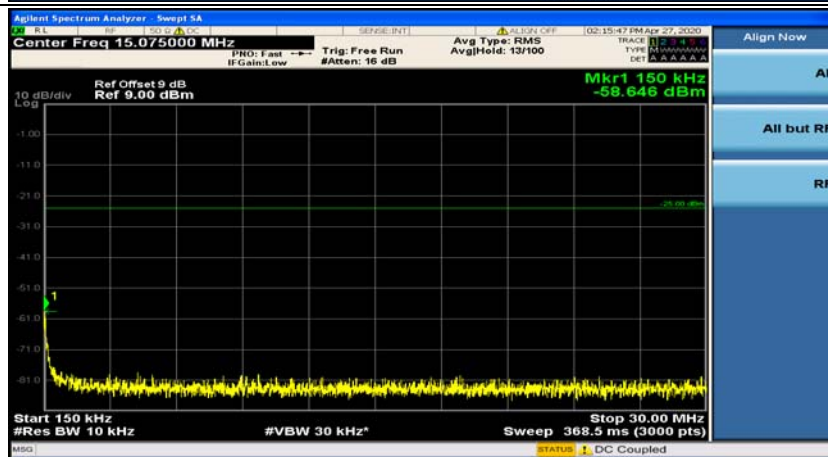
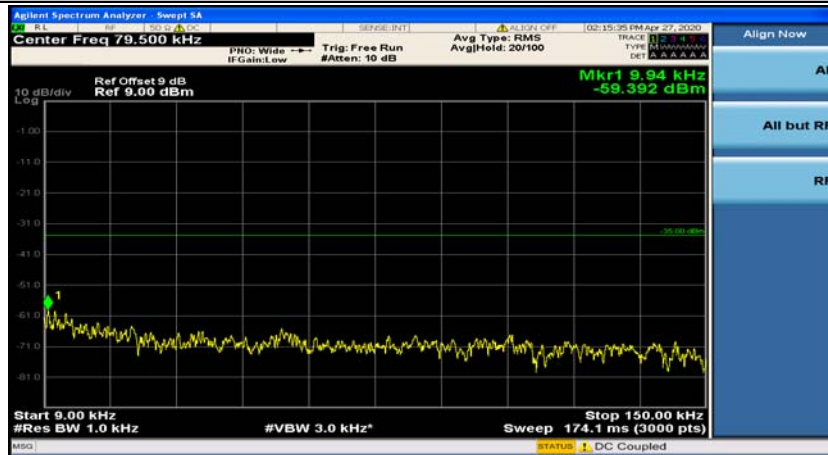


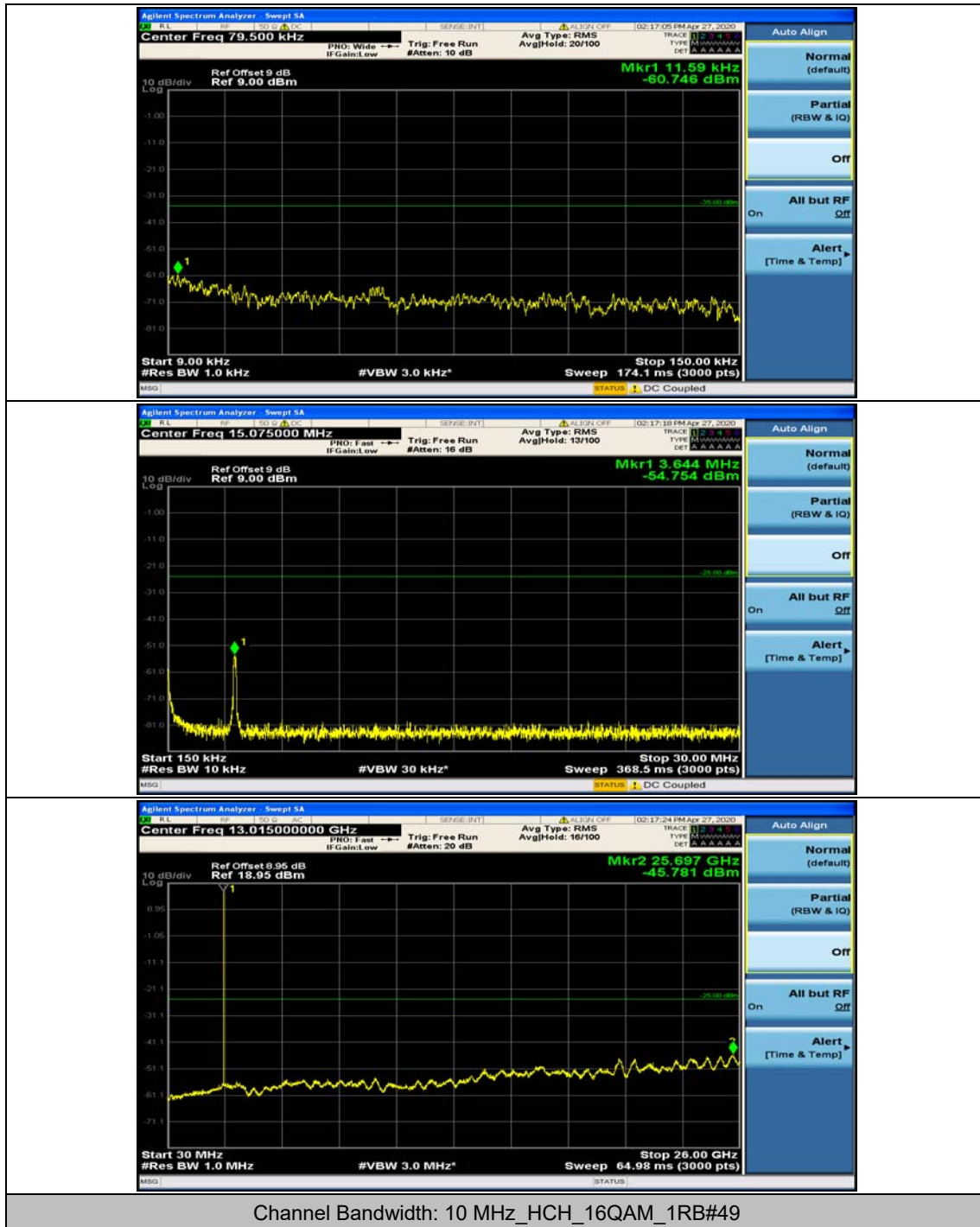


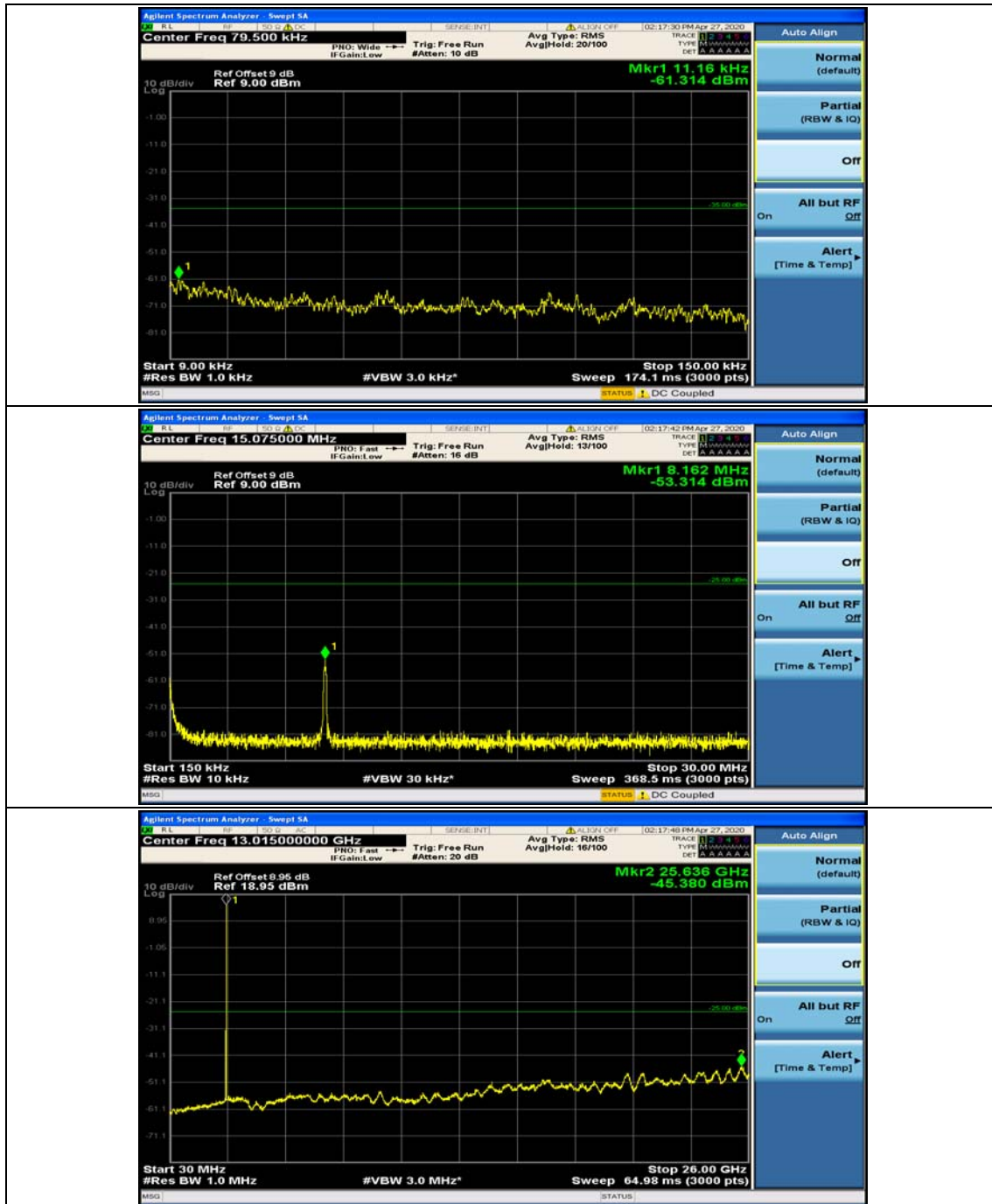


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0

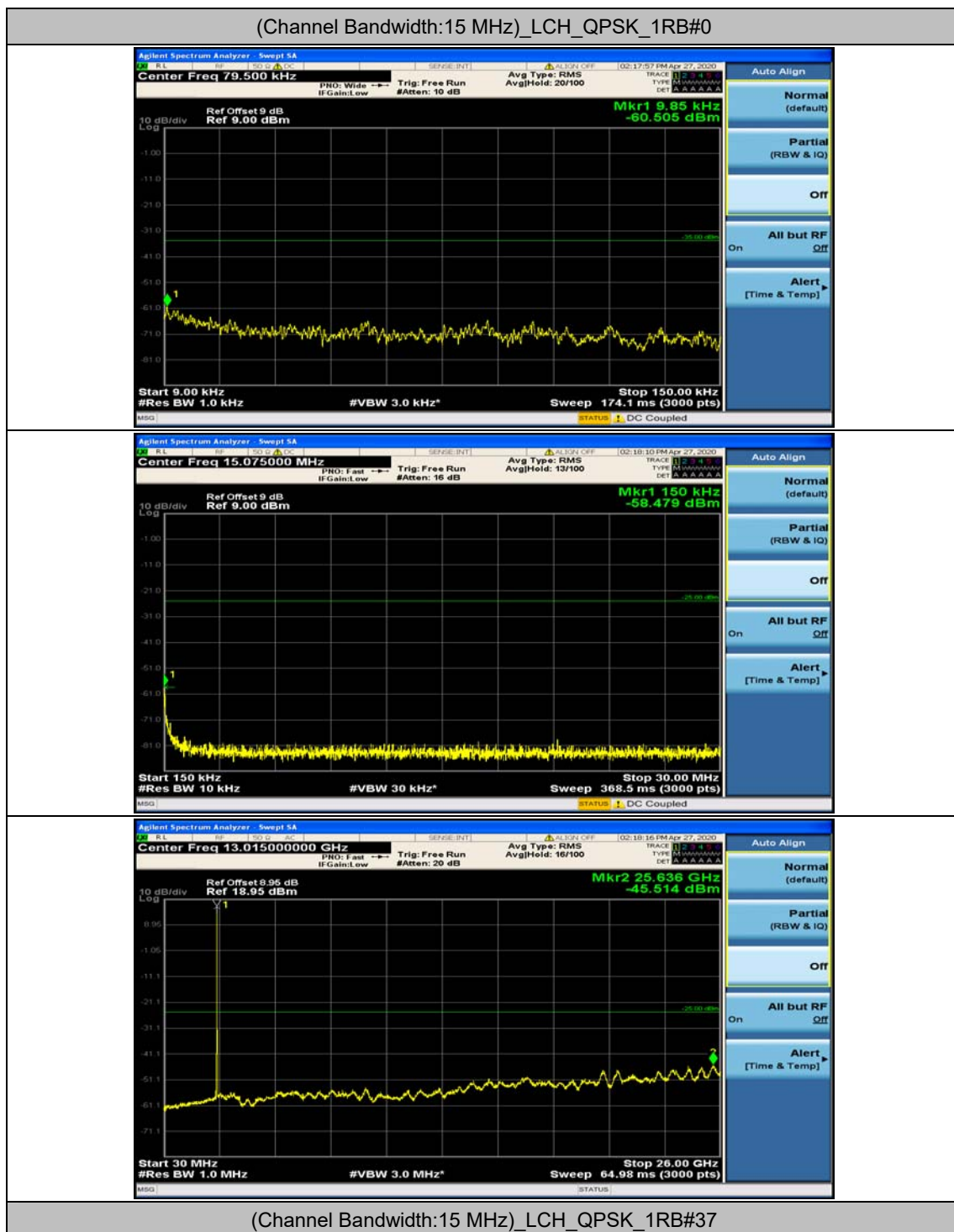


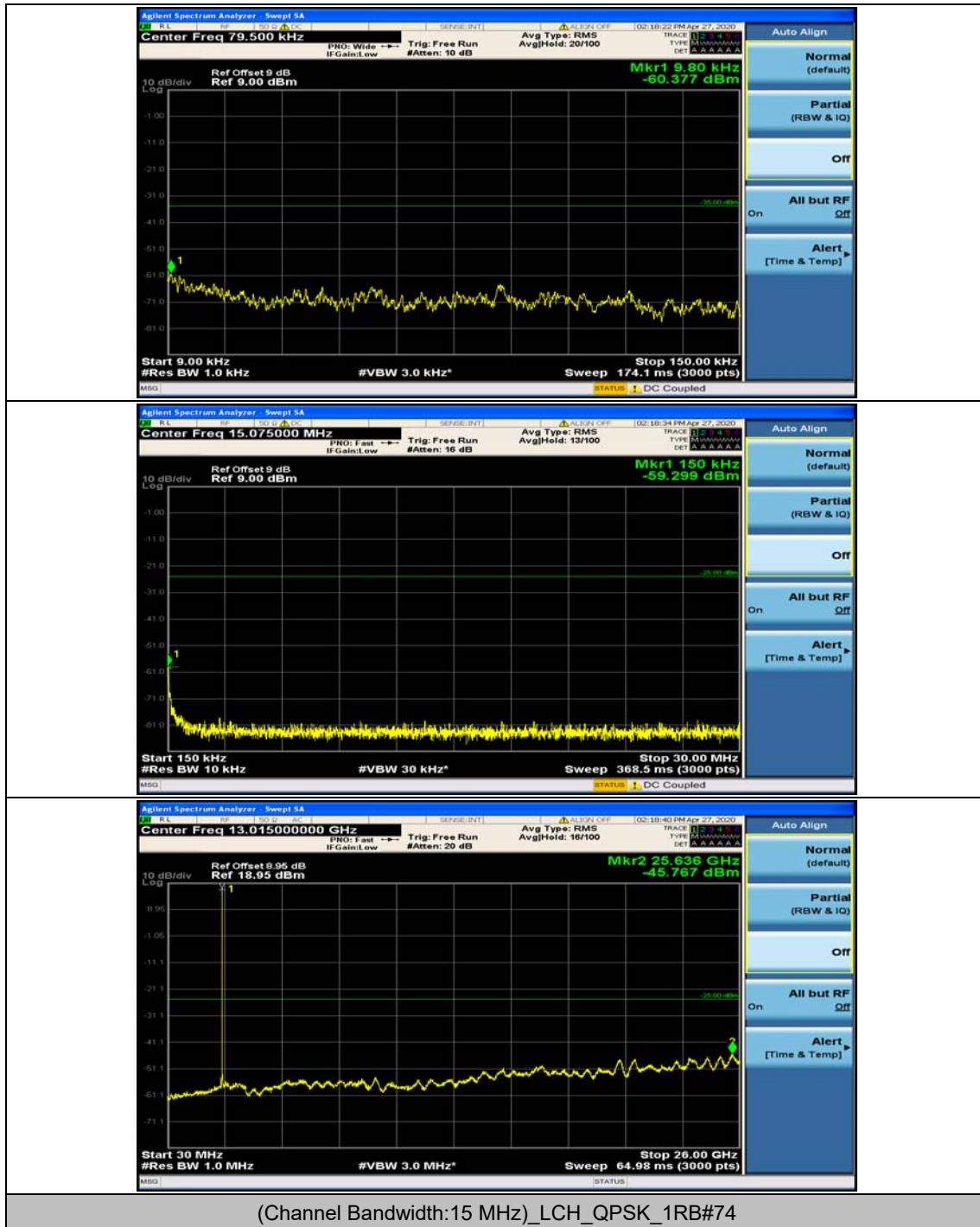
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

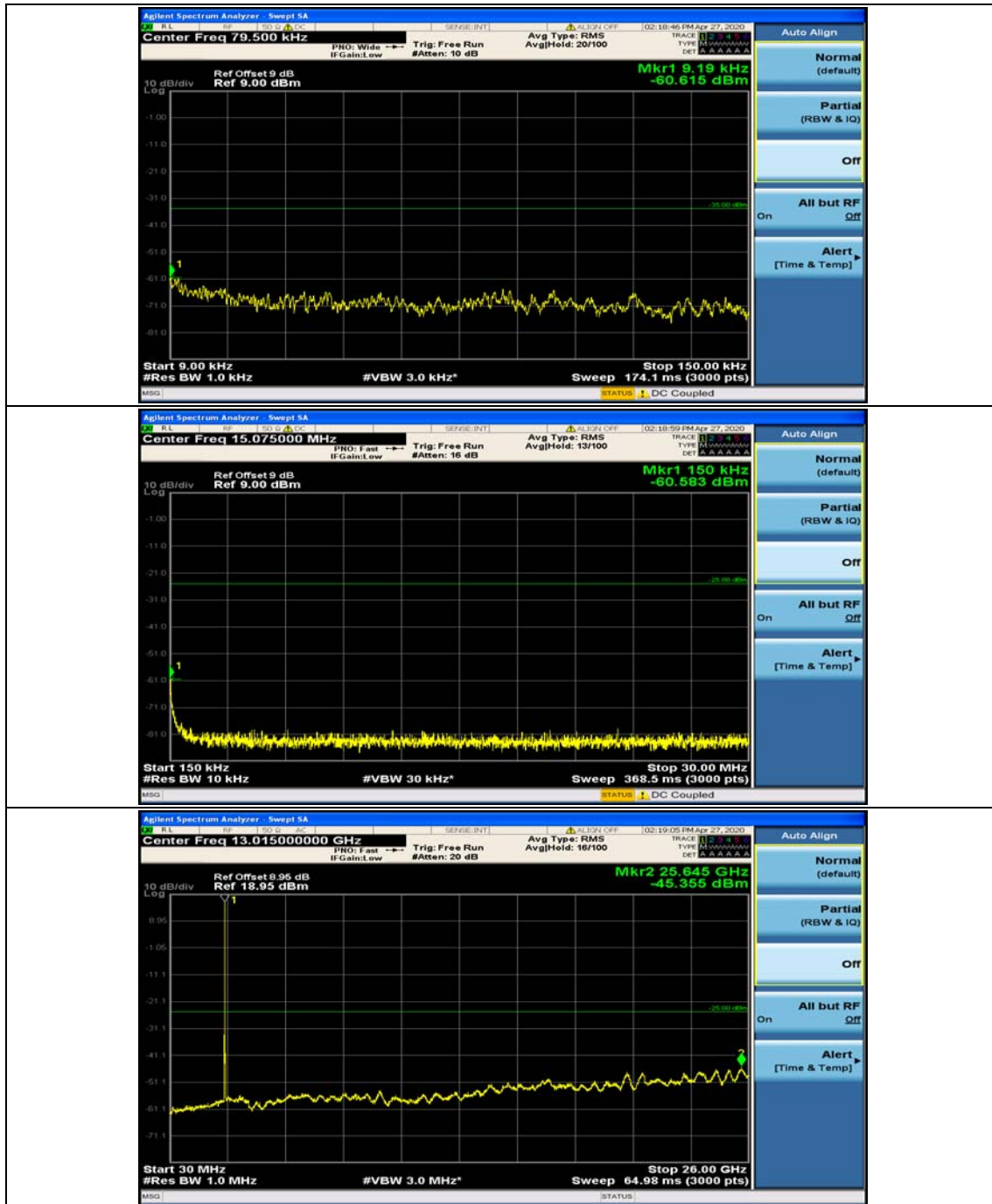




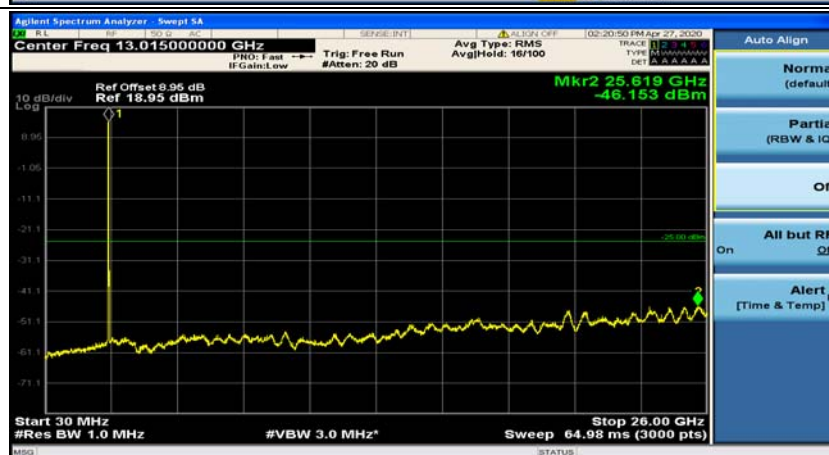
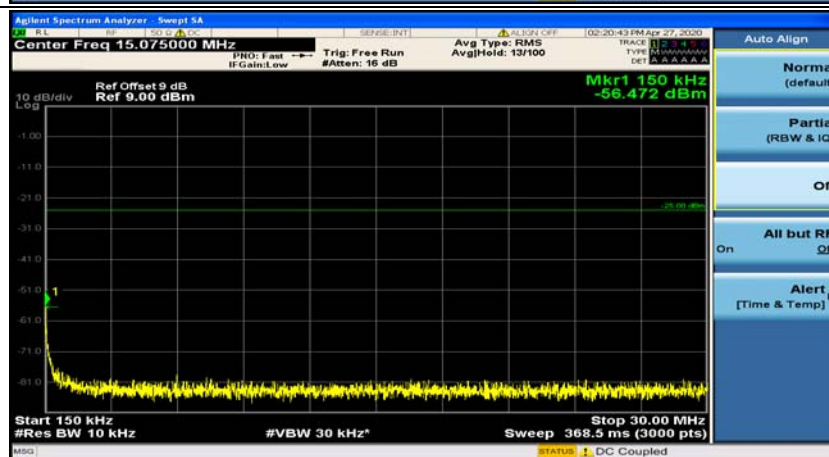
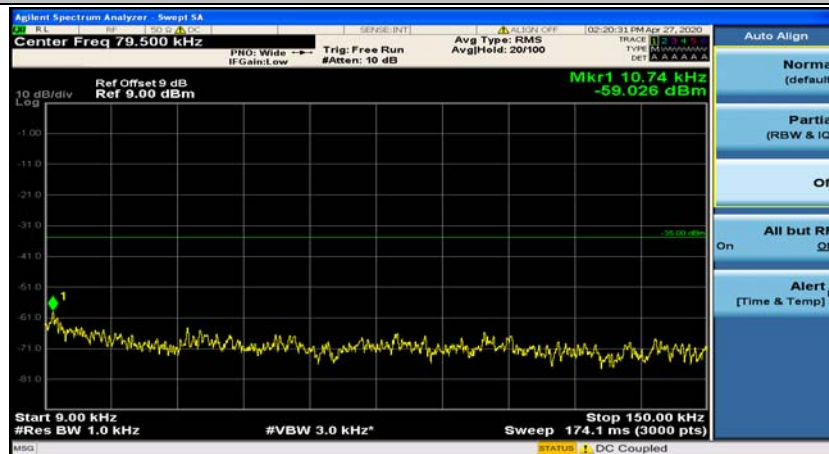
Channel Bandwidth: 15 MHz



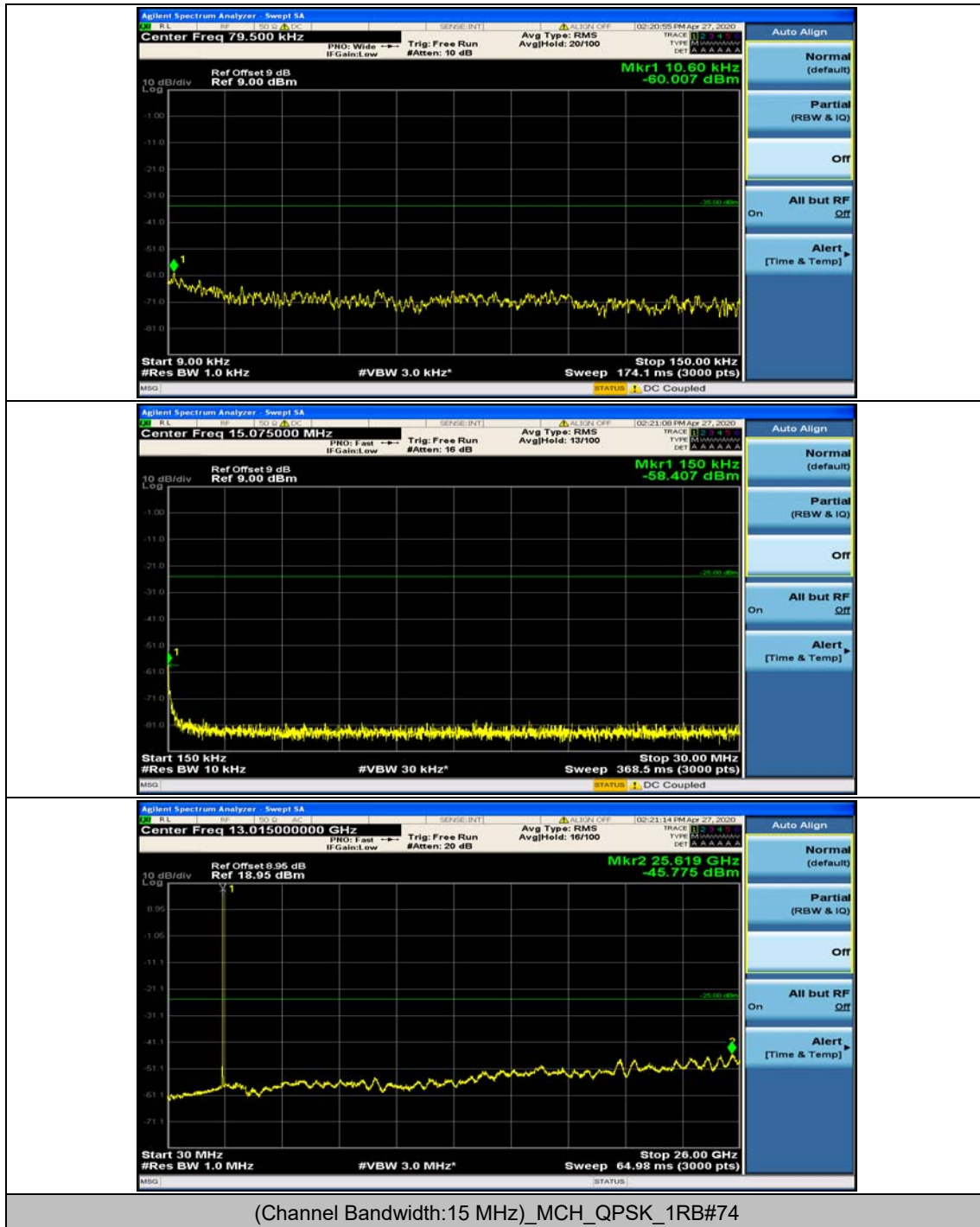


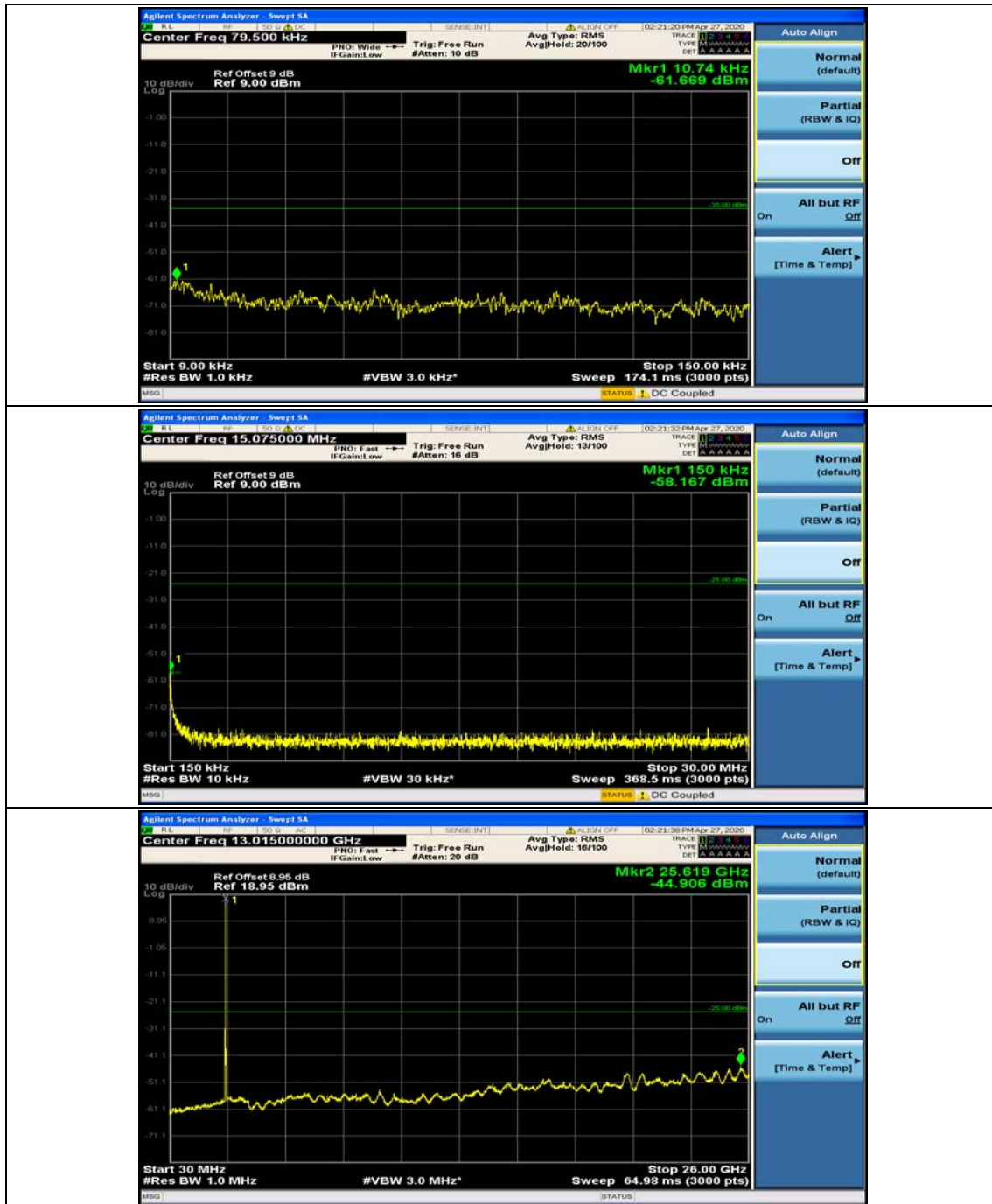


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

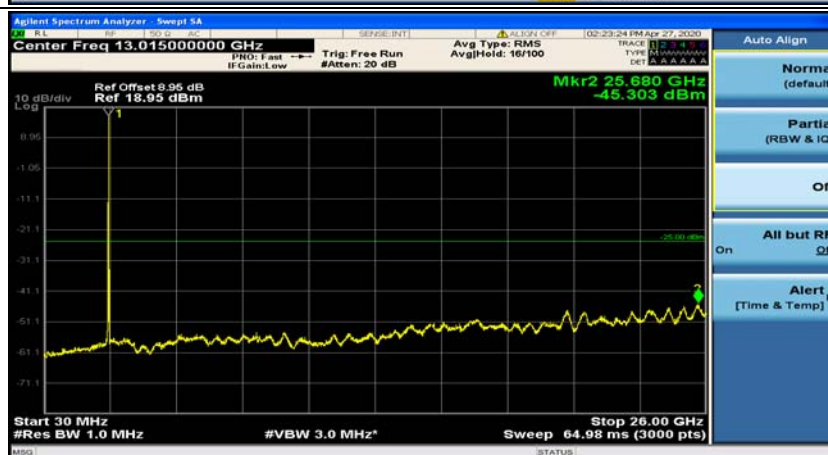
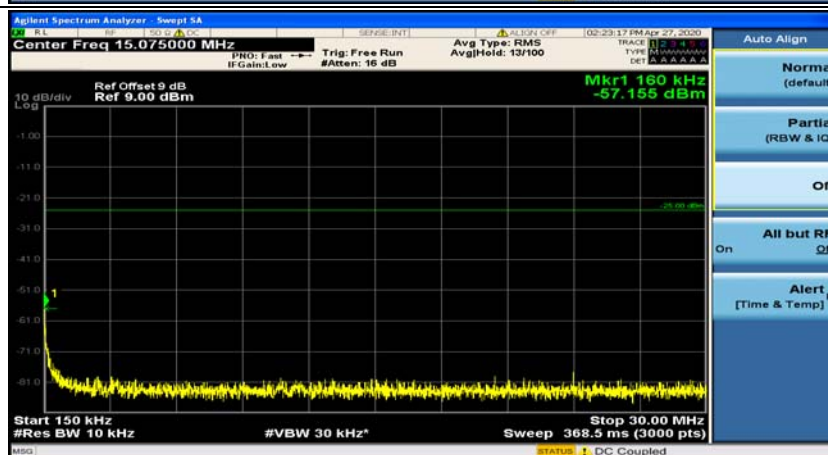
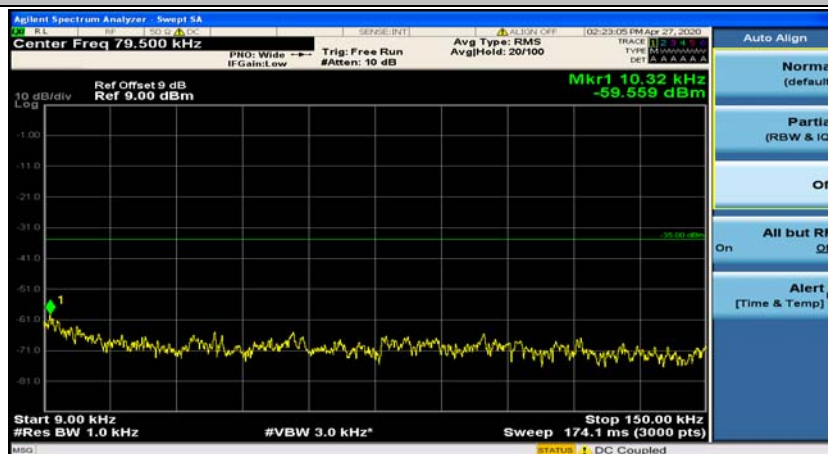


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

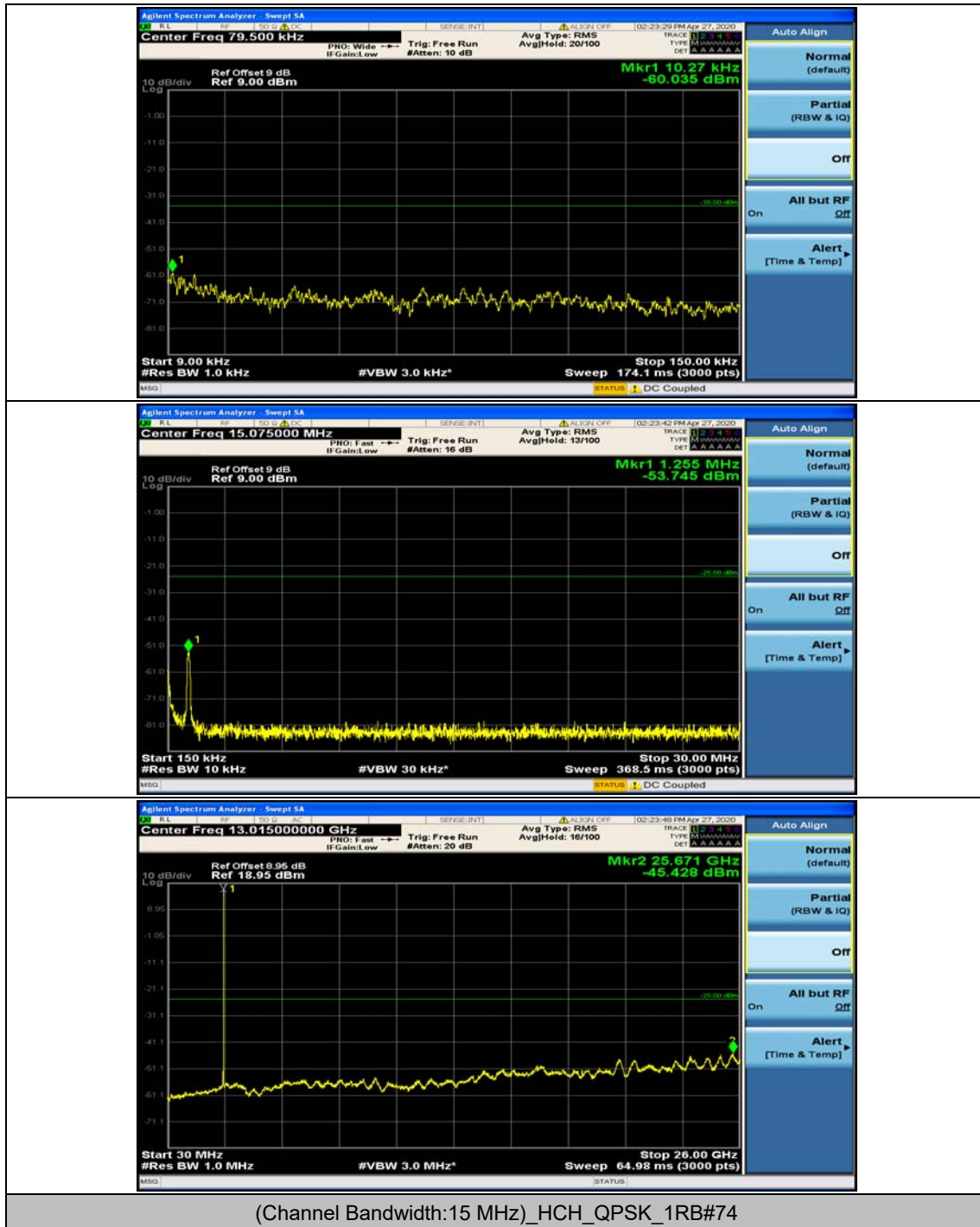


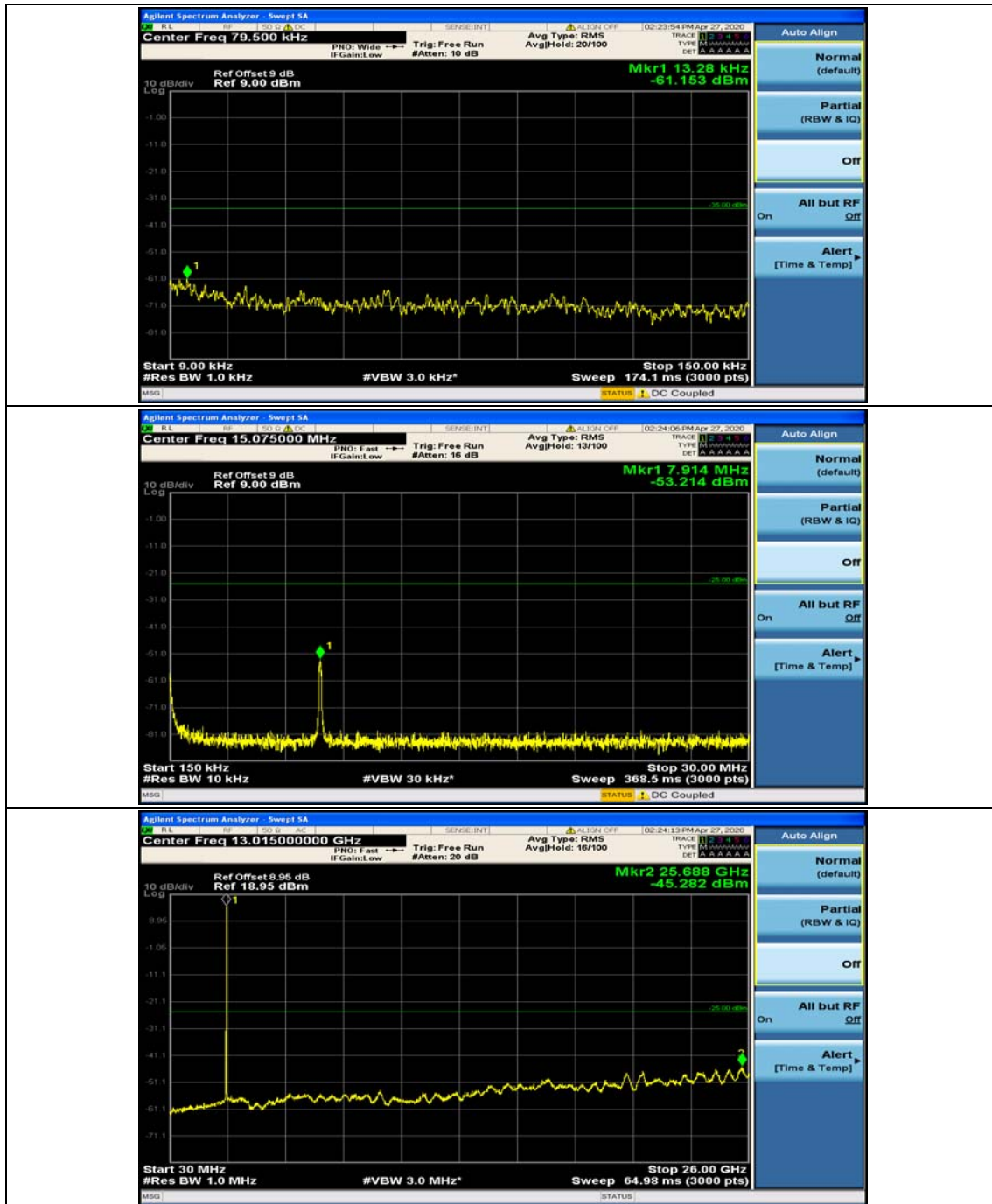


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0

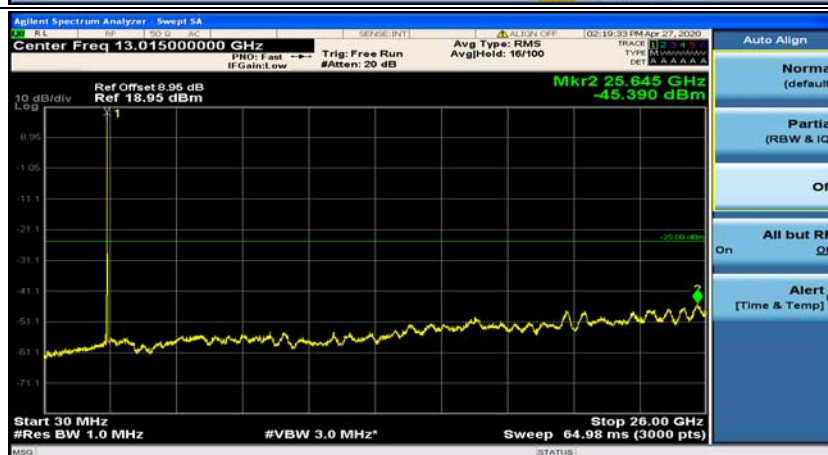
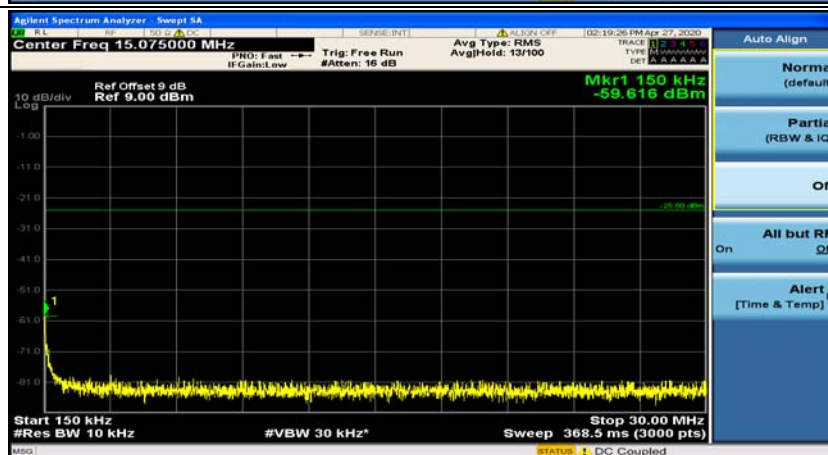
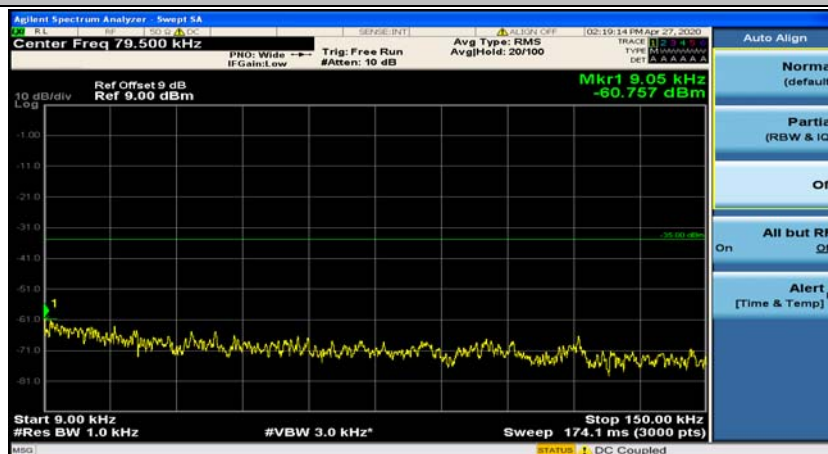


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37

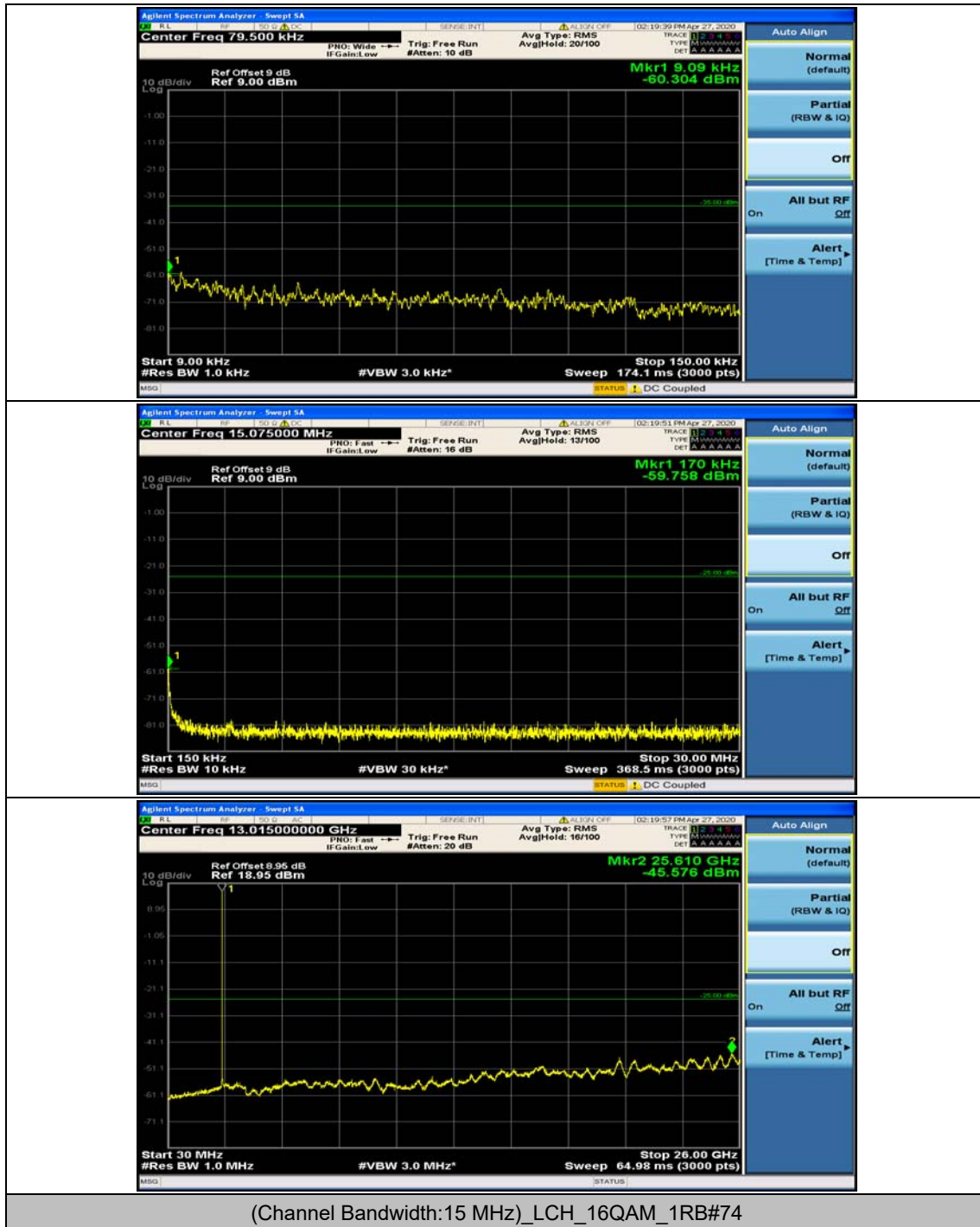


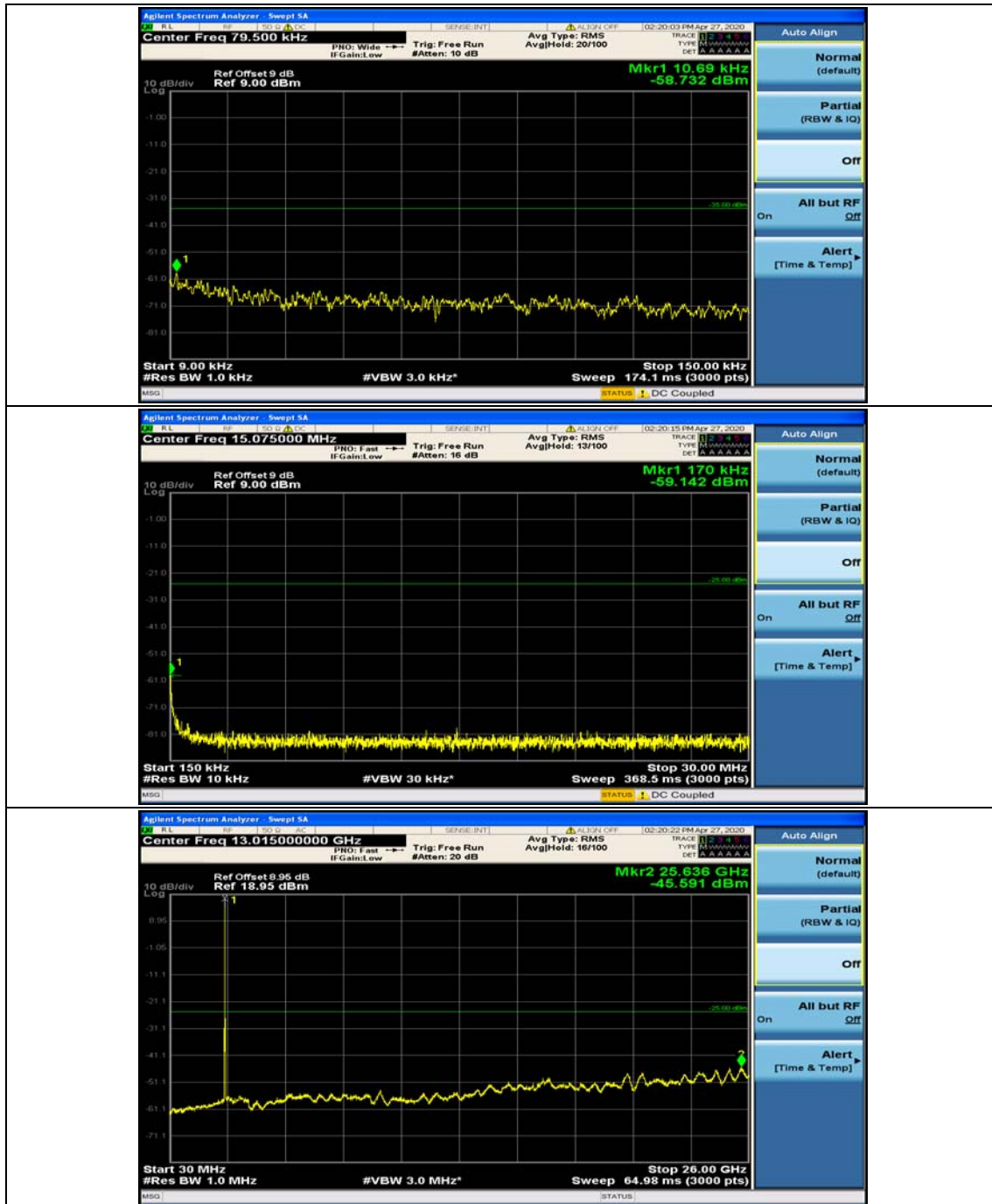


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0

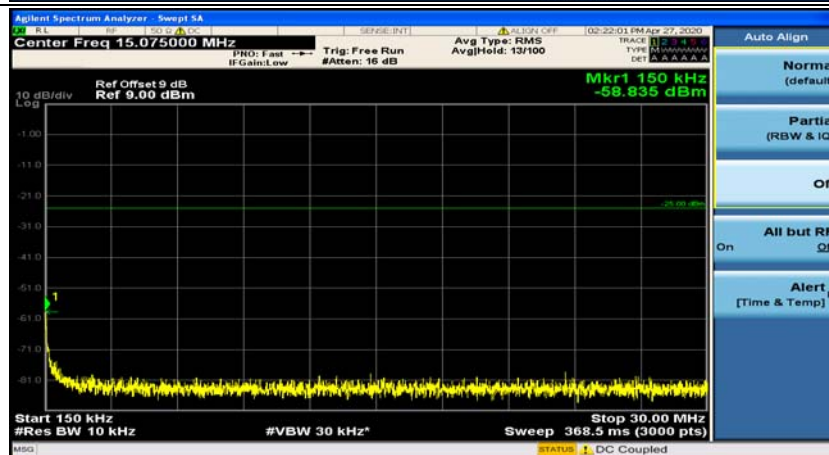
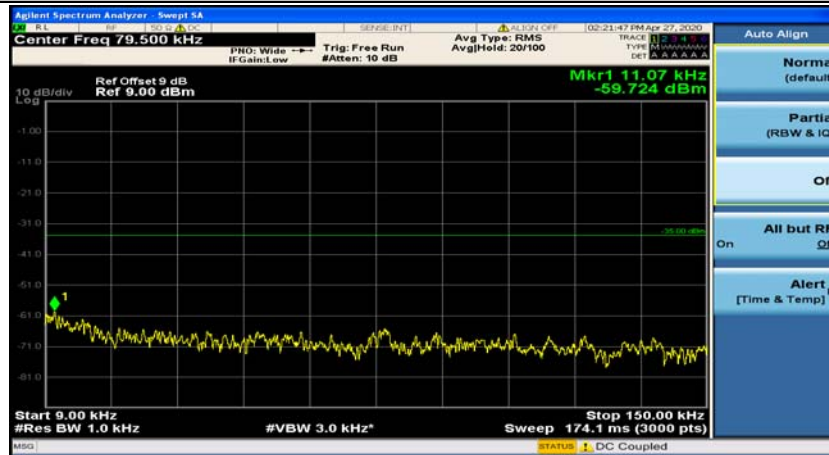


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37

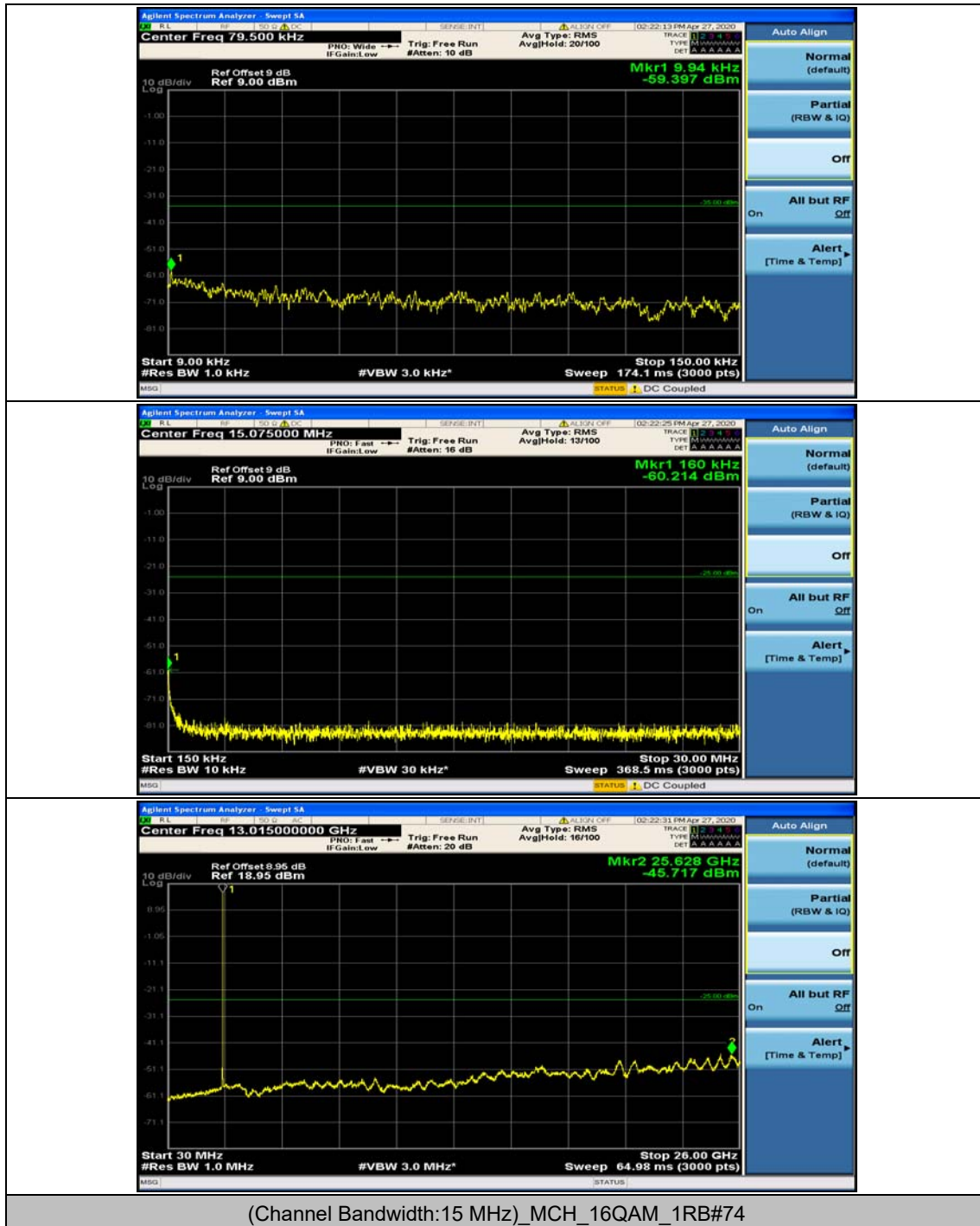


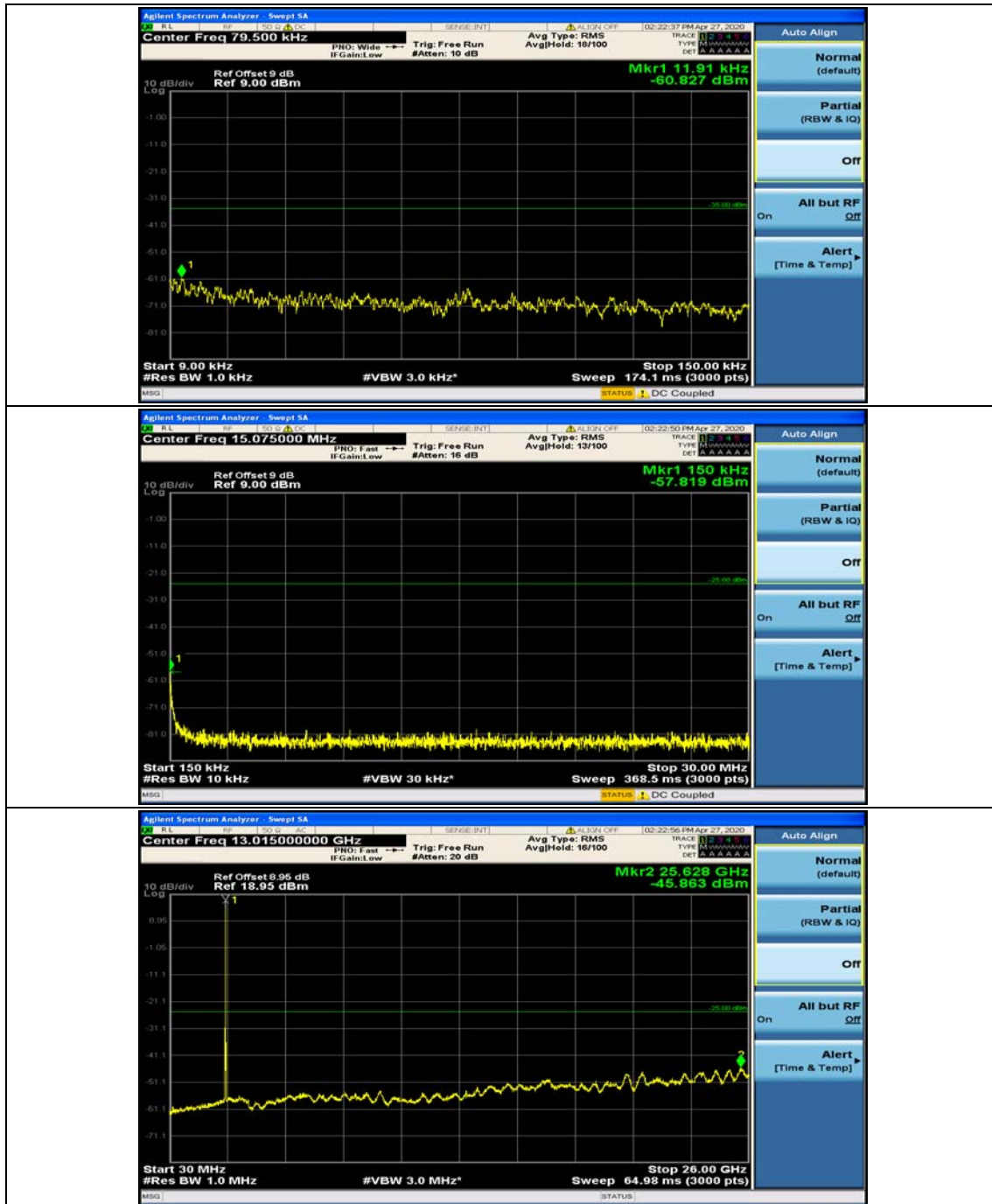


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

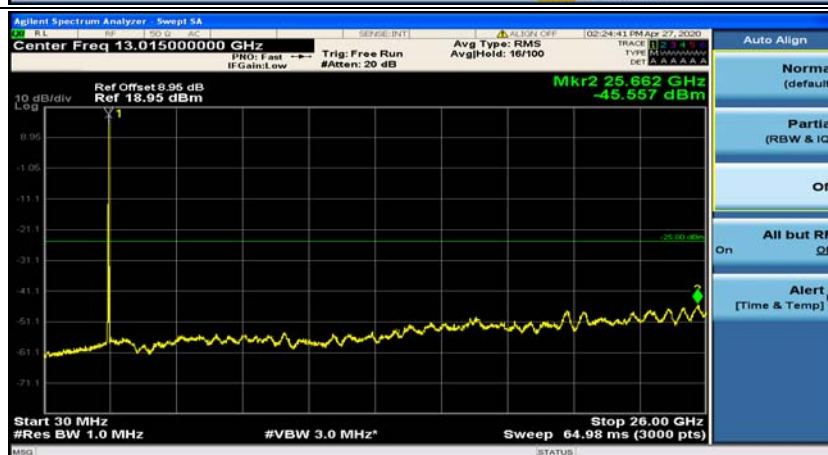
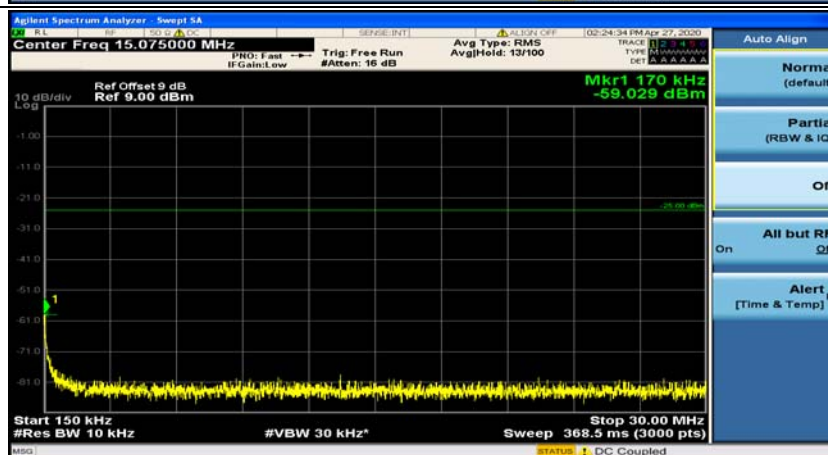
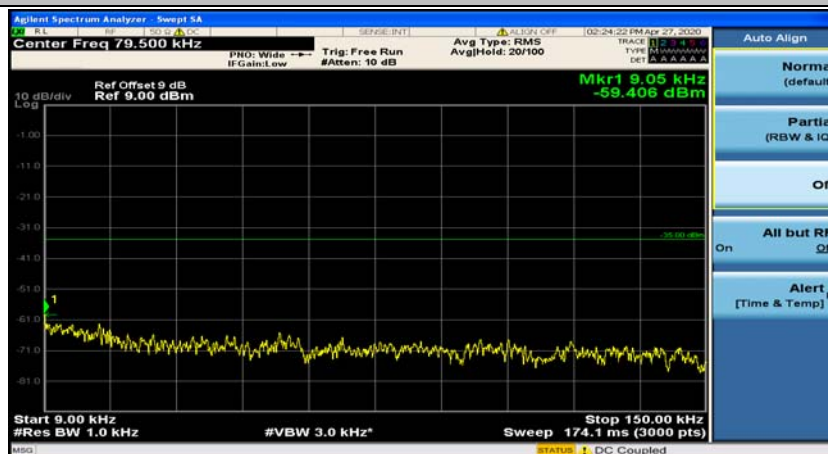


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37

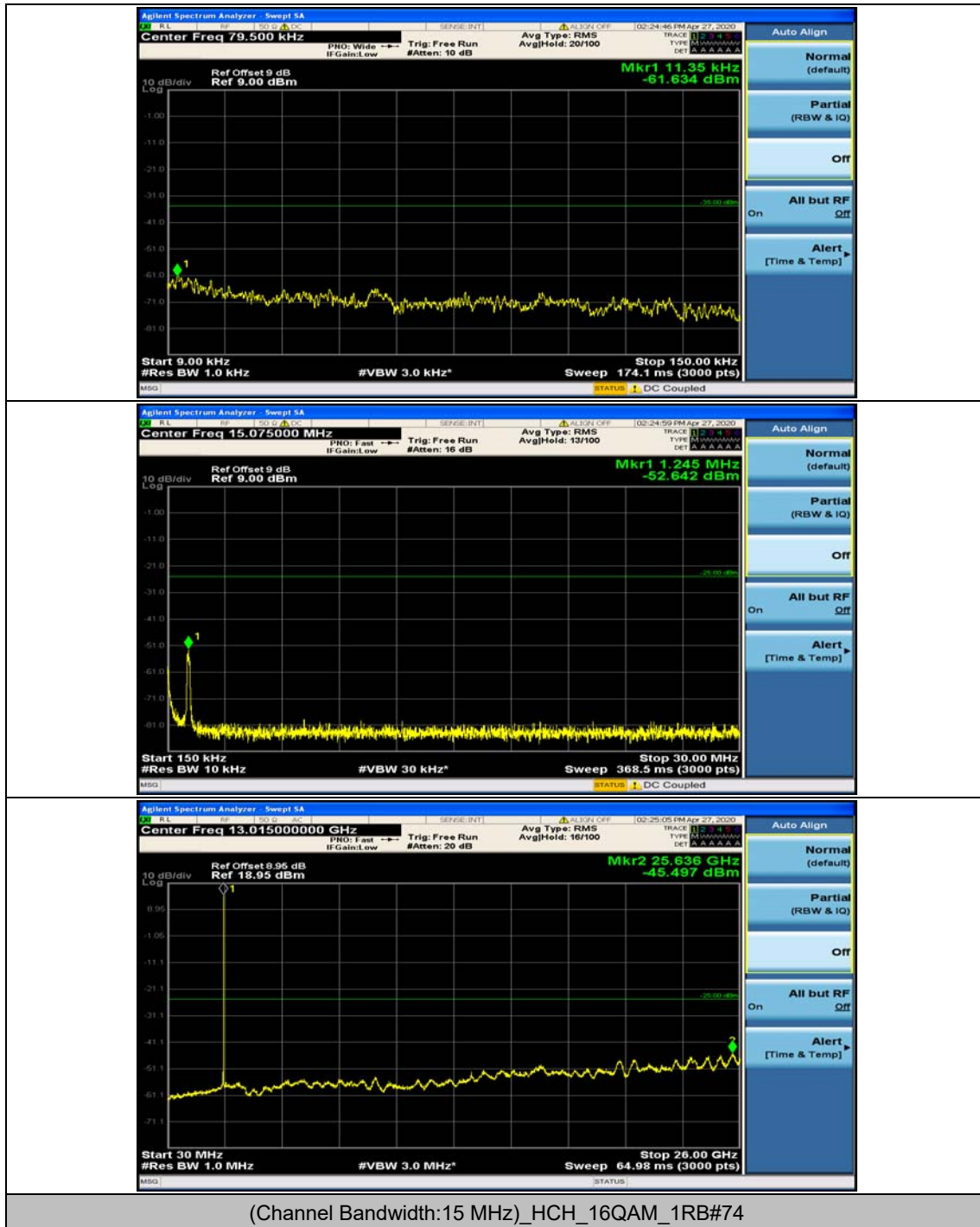


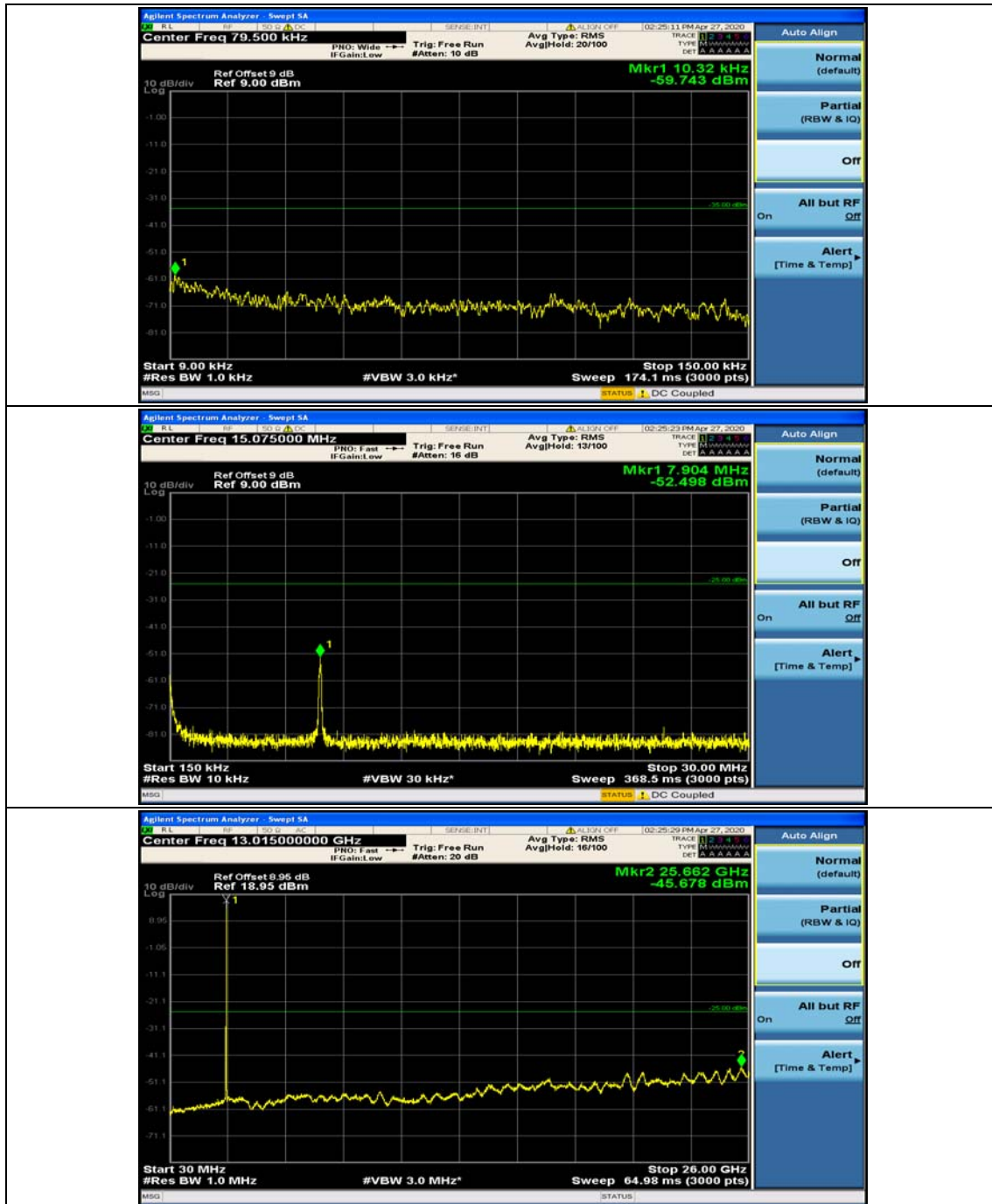


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0

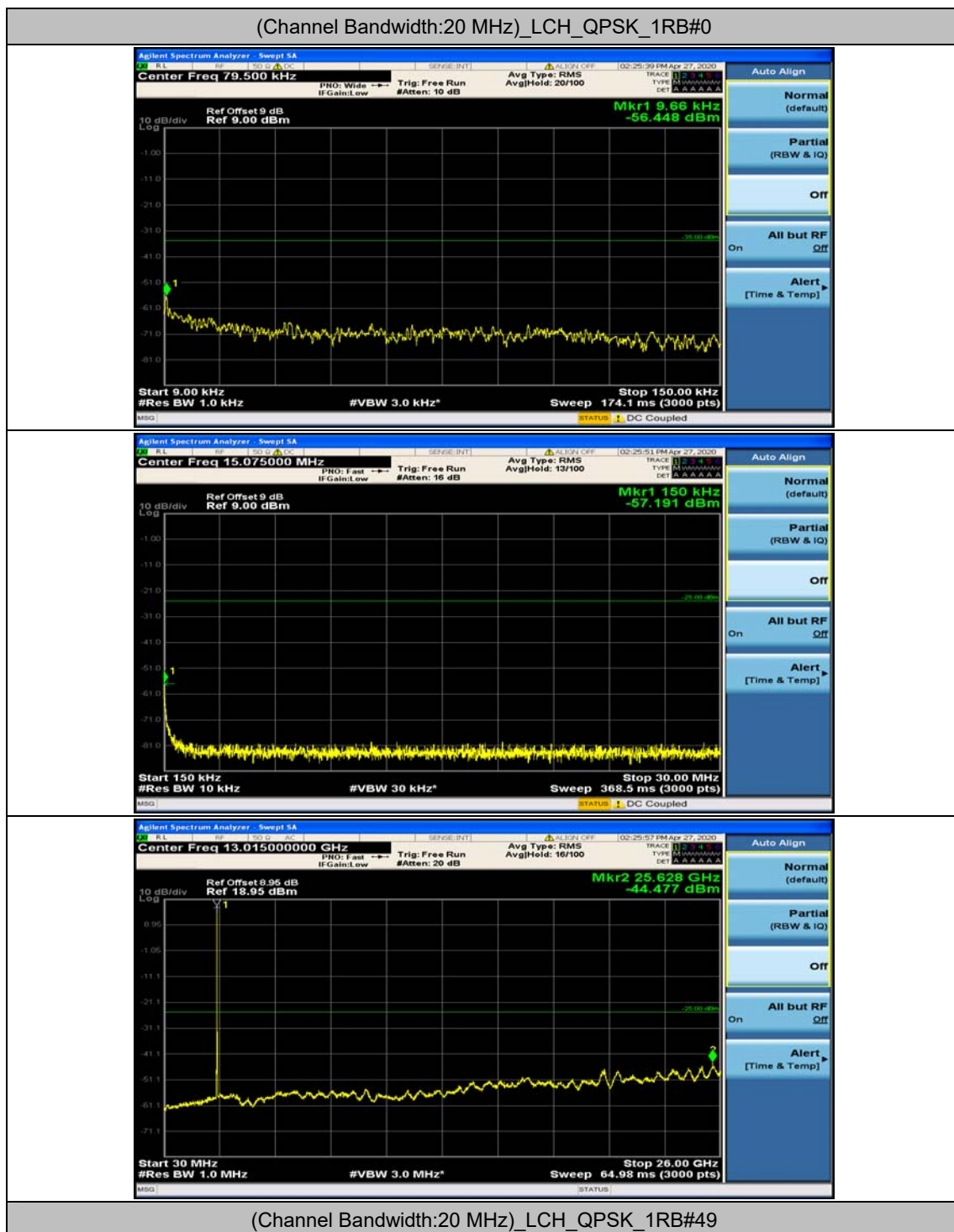


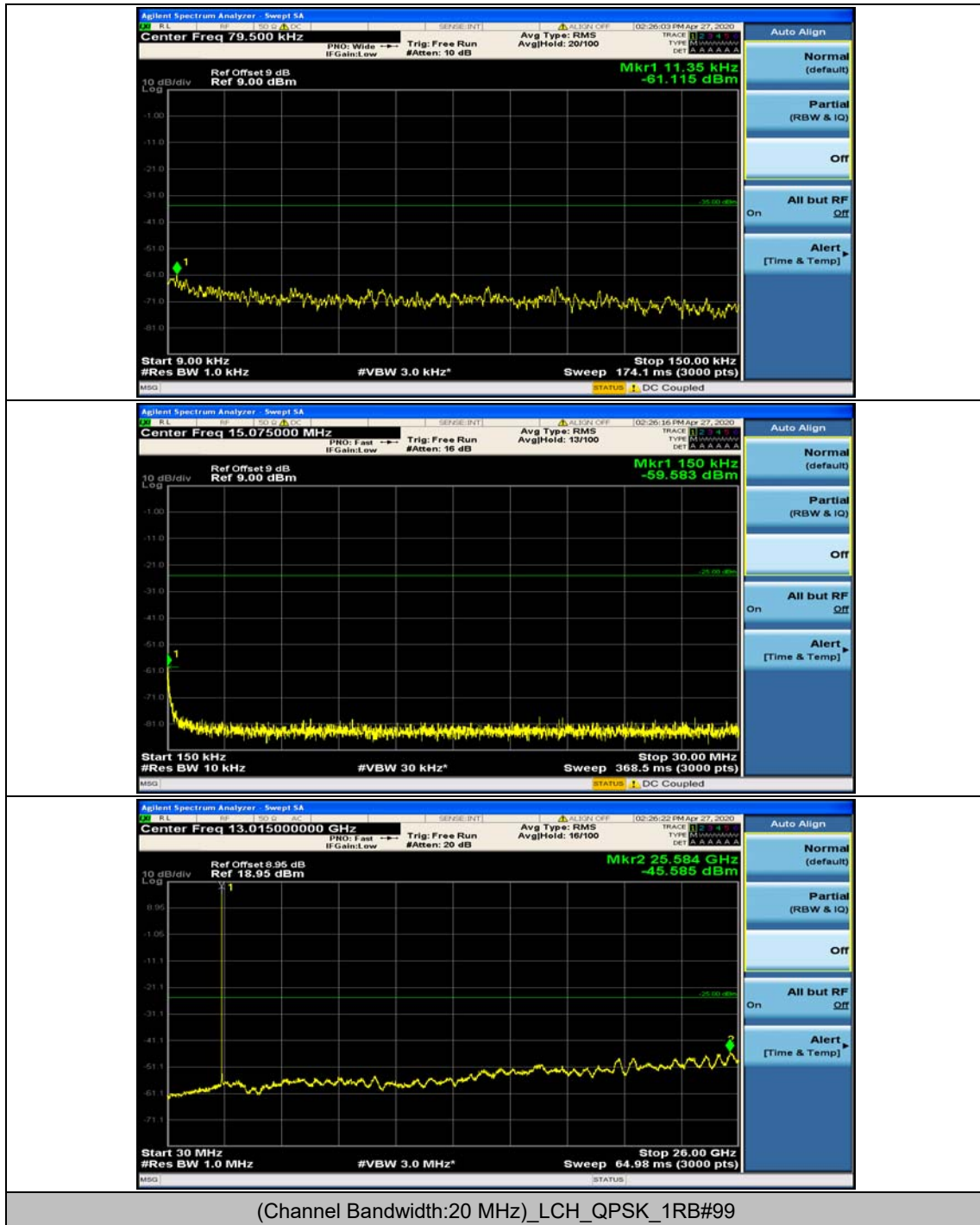
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

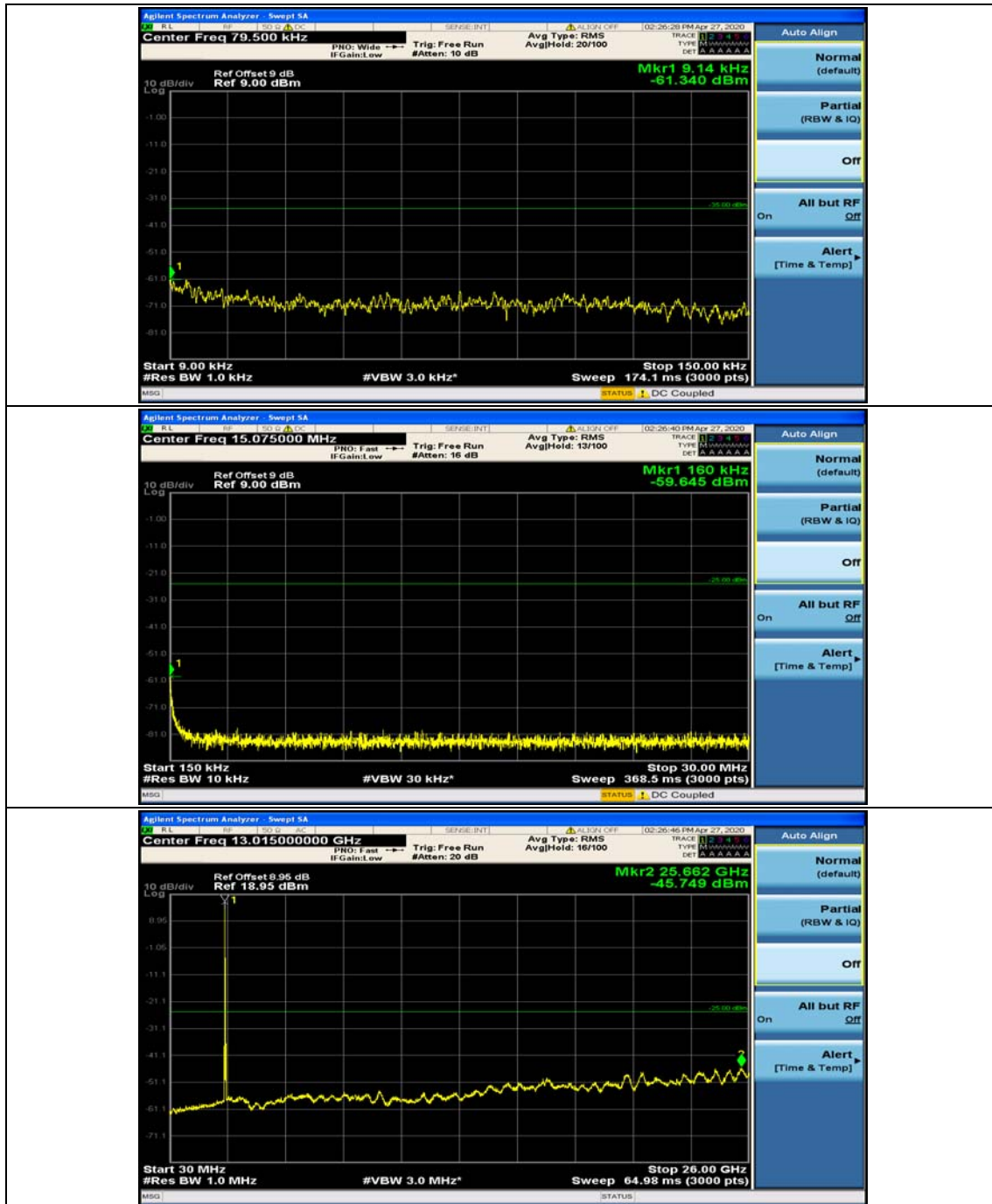




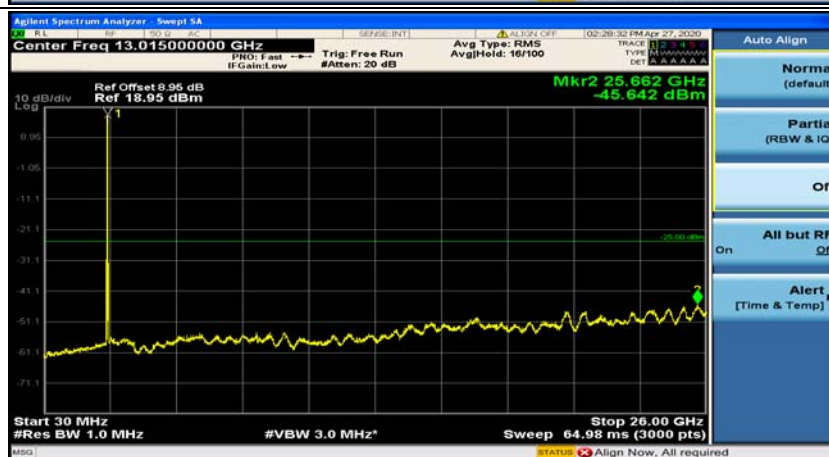
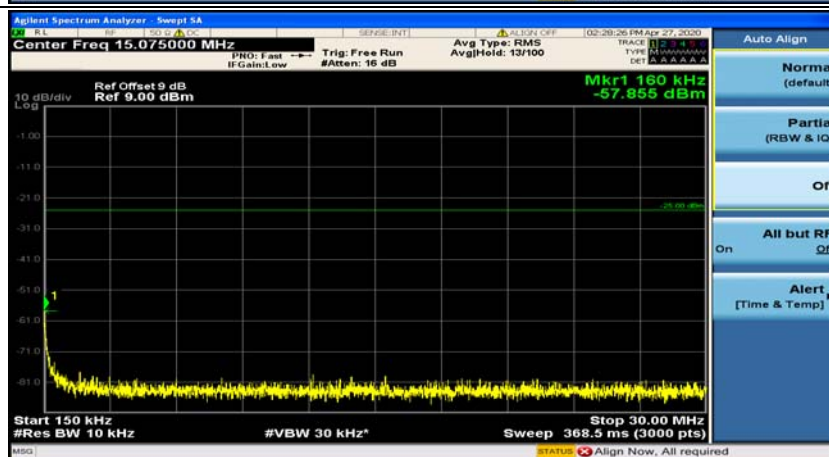
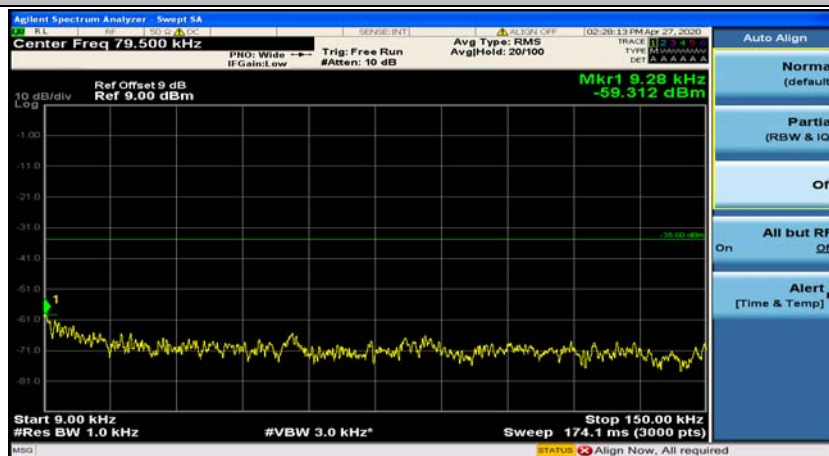
Channel Bandwidth: 20 MHz



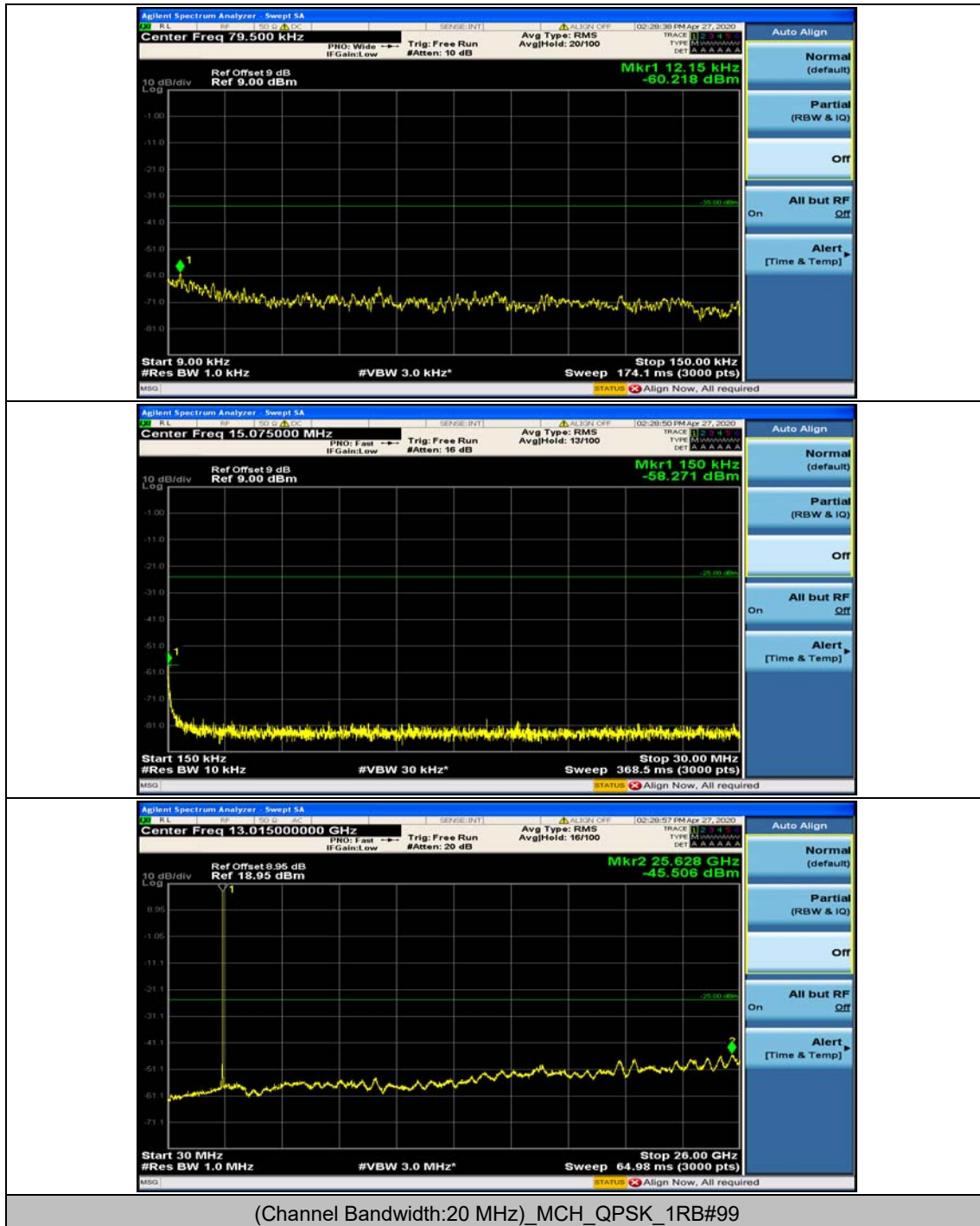


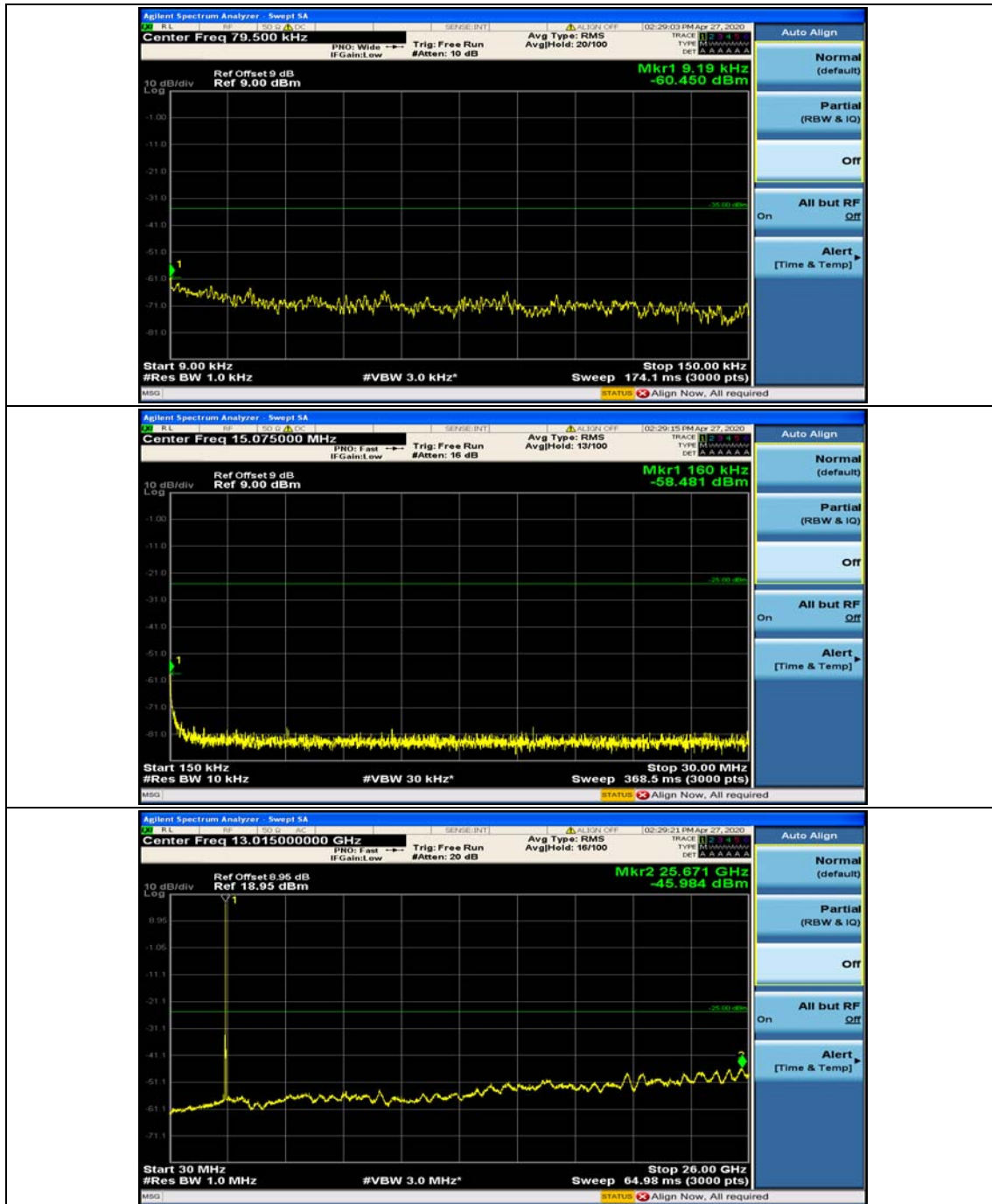


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0

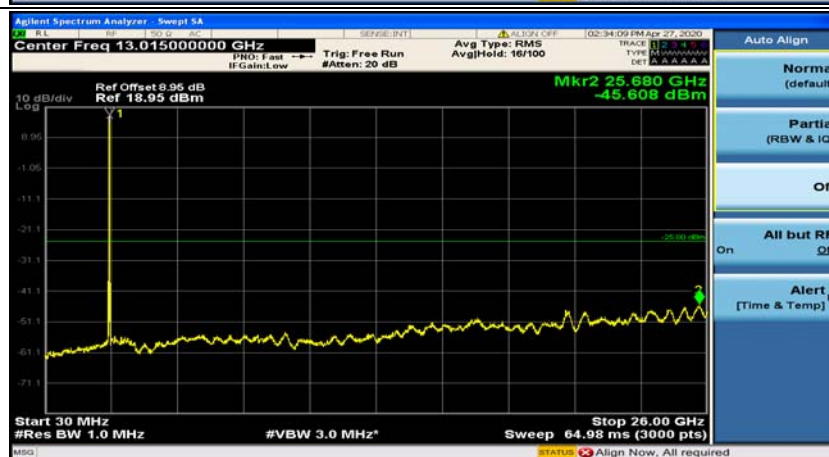
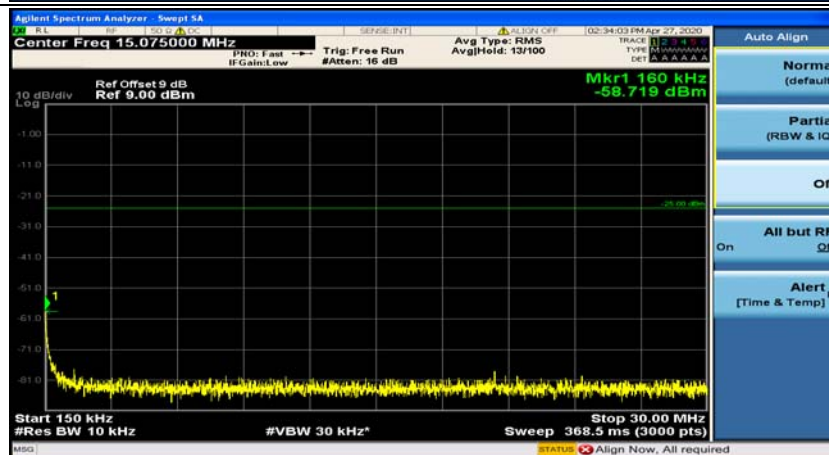
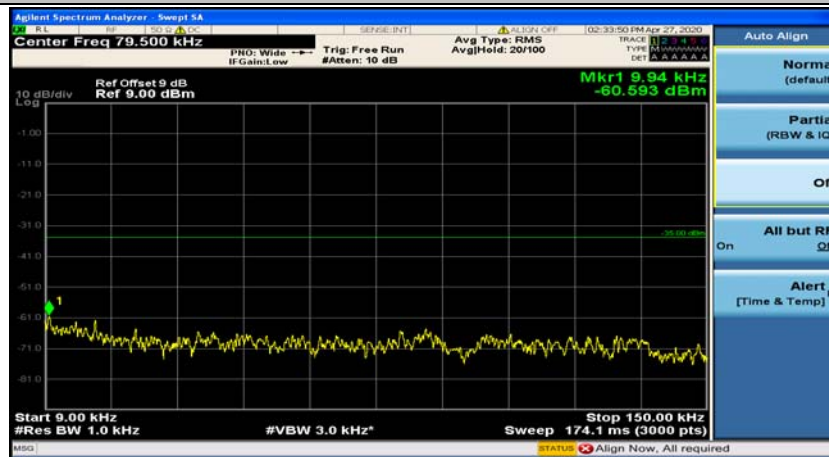


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49

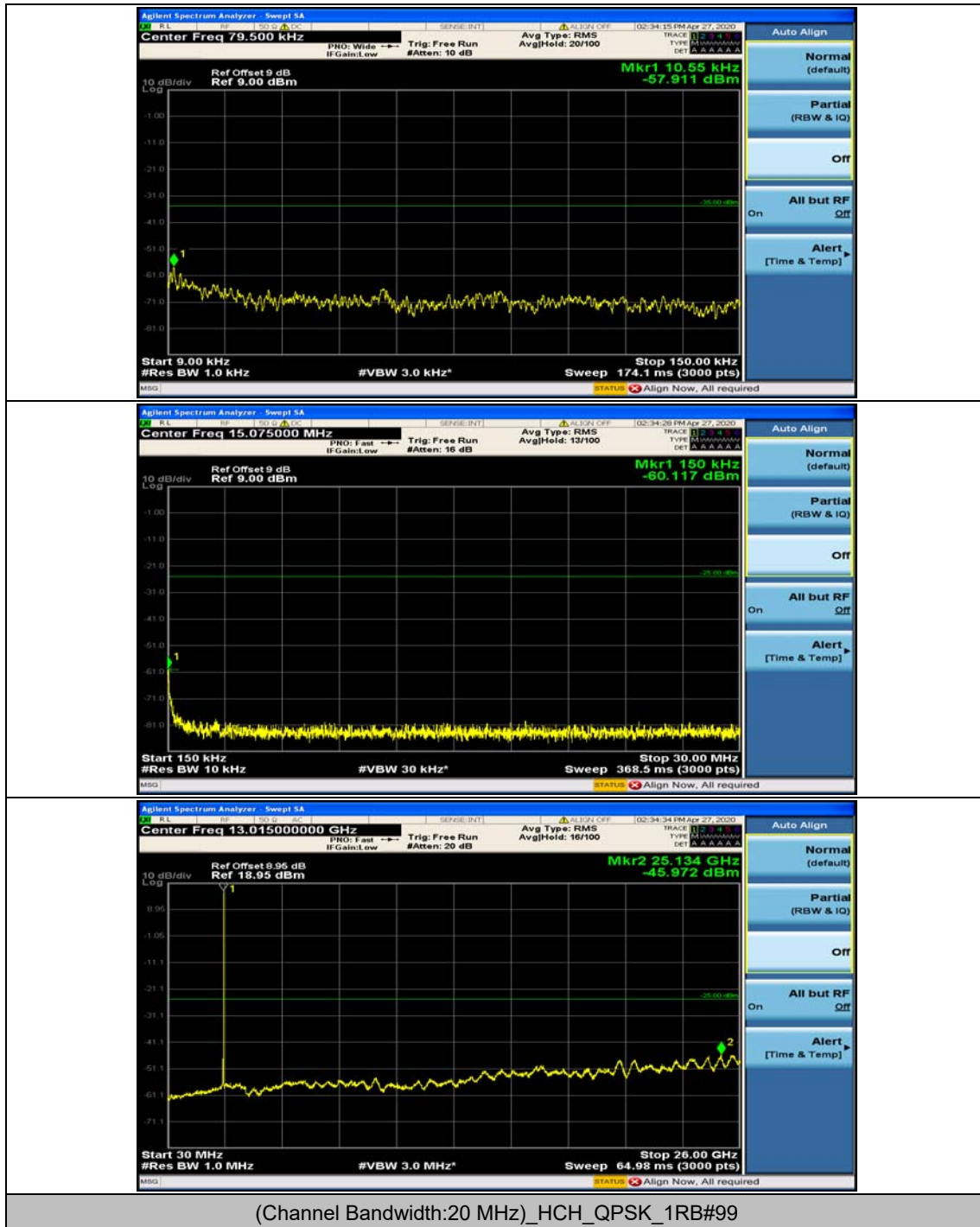


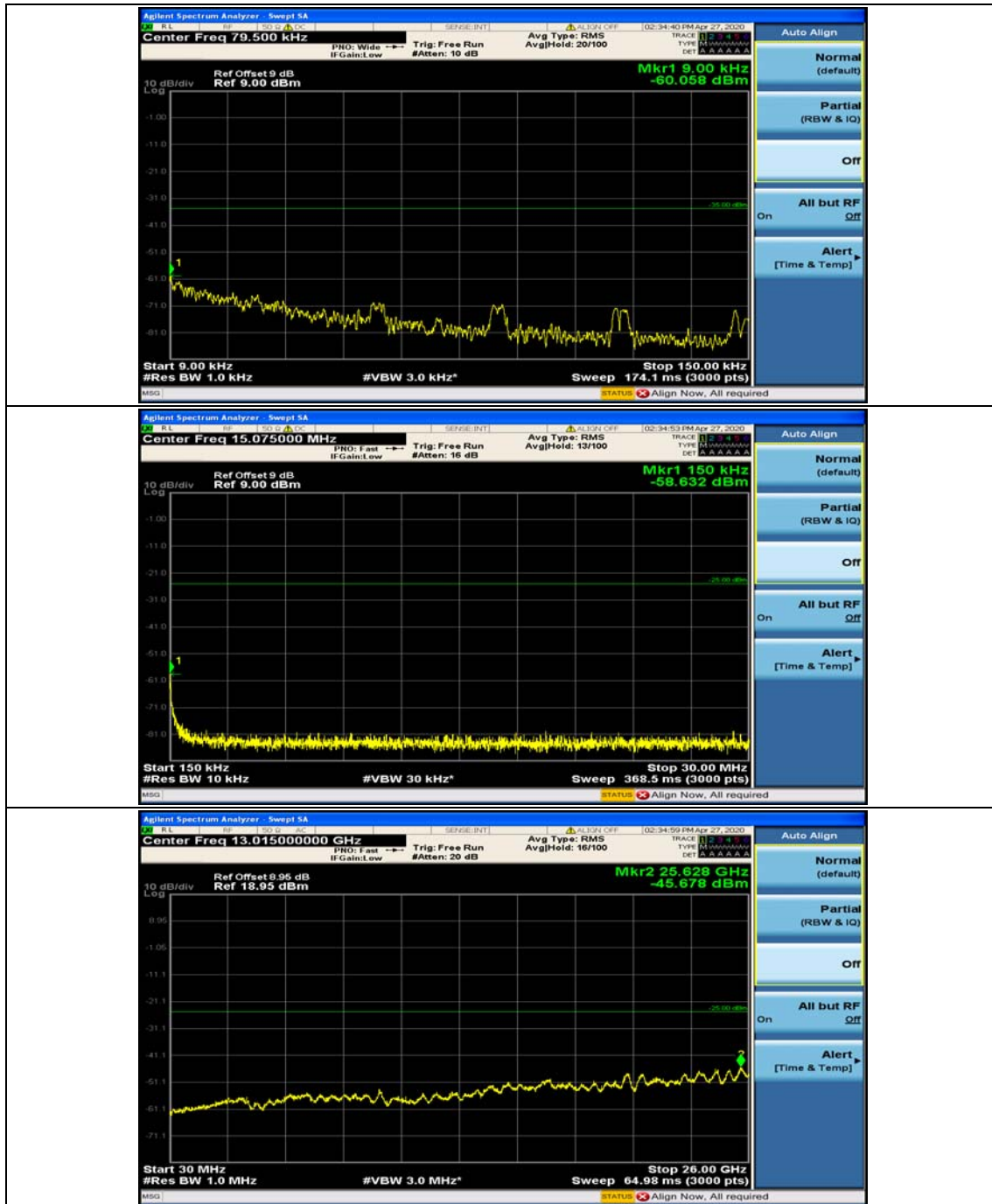


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0

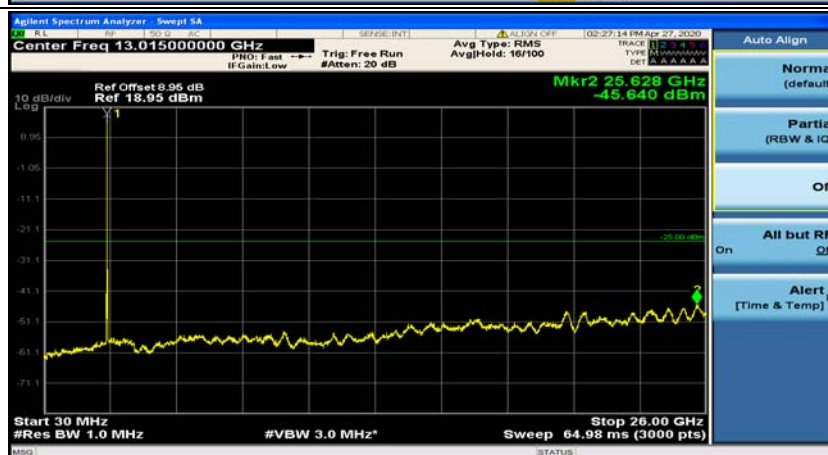
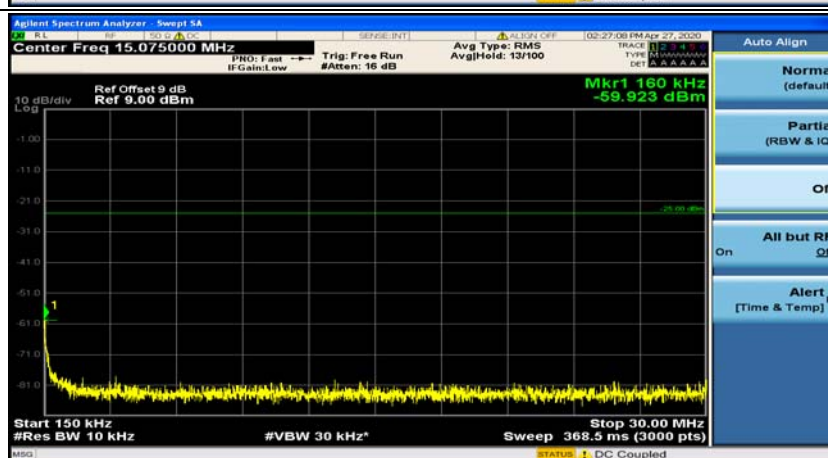
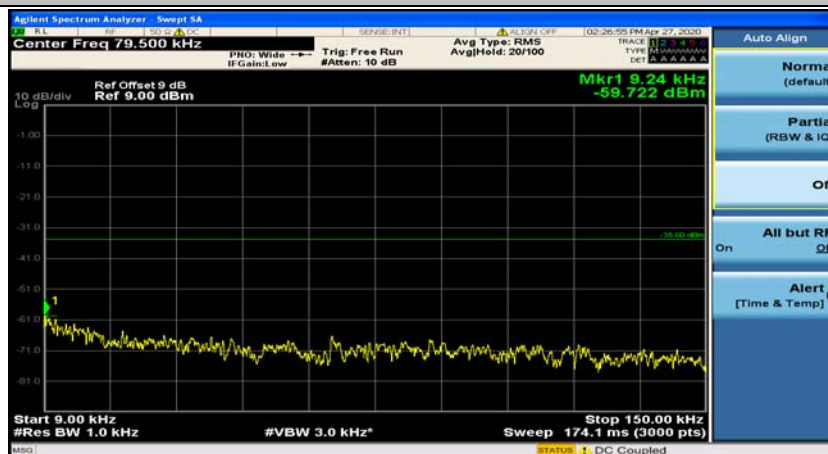


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49

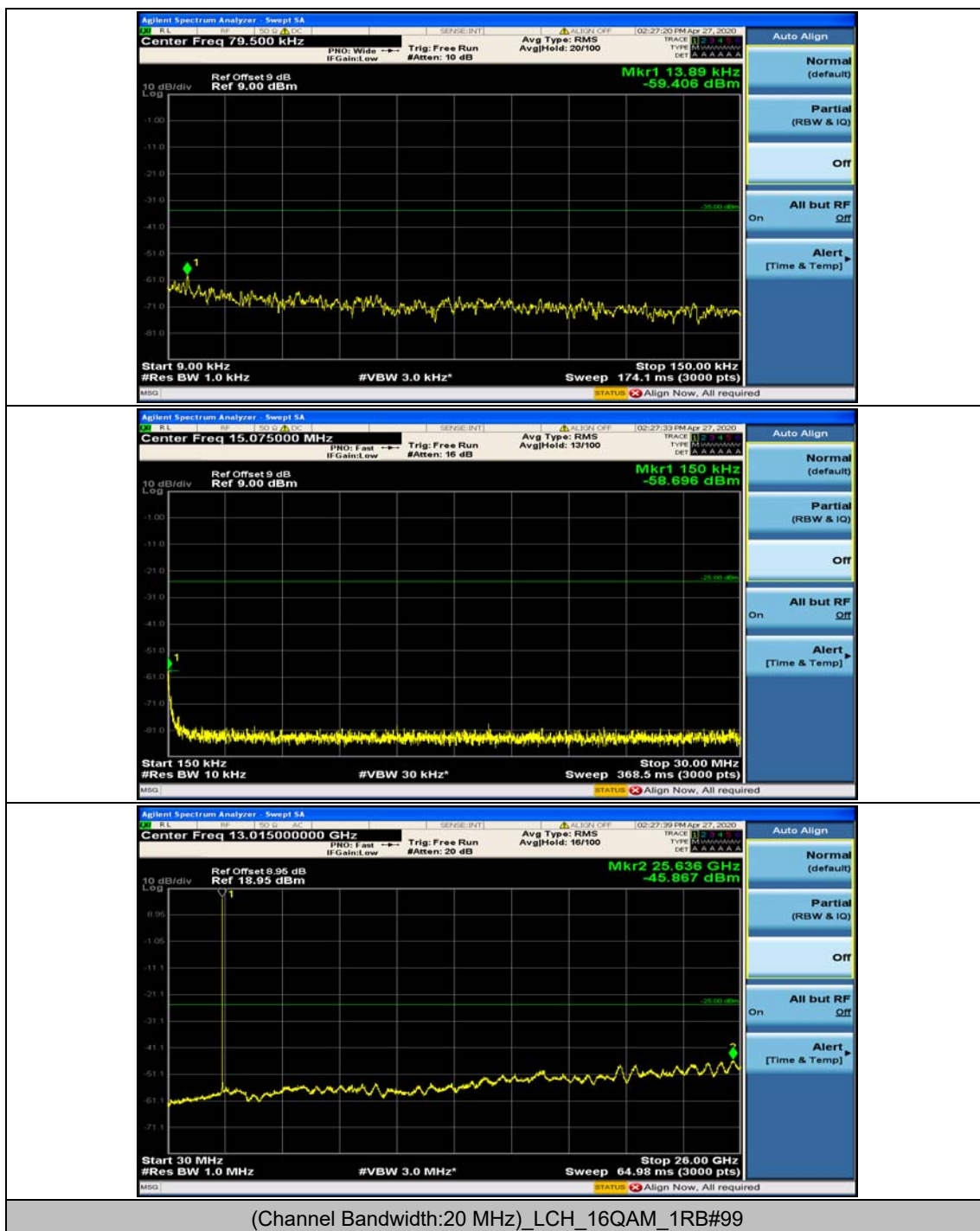


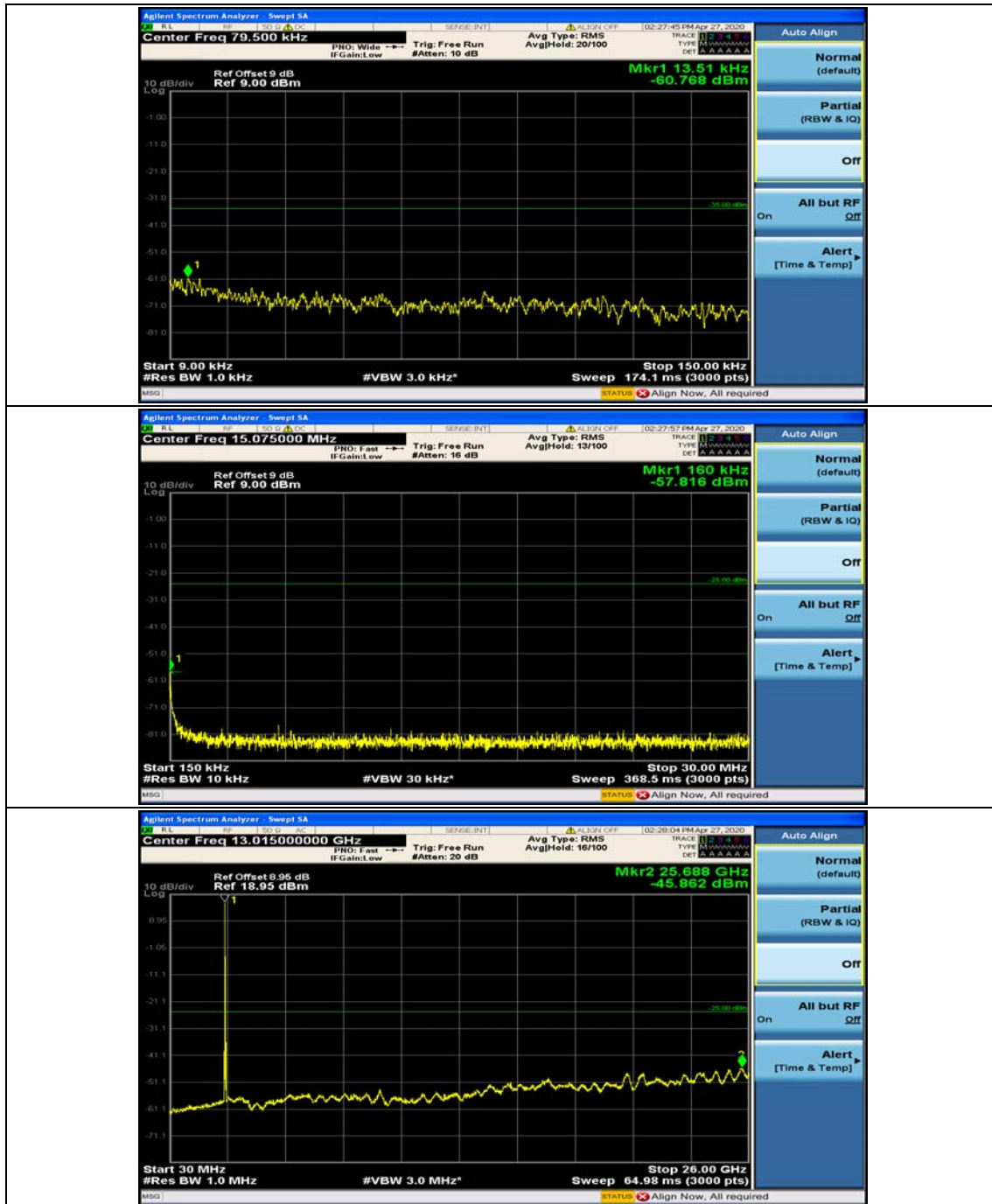


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0

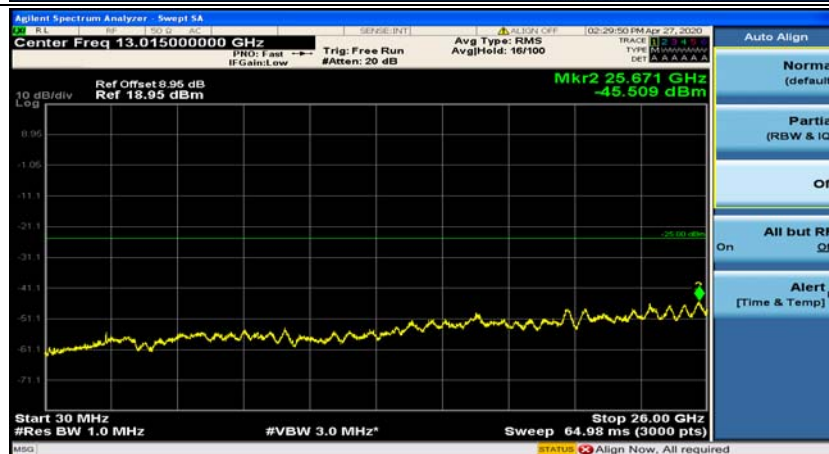
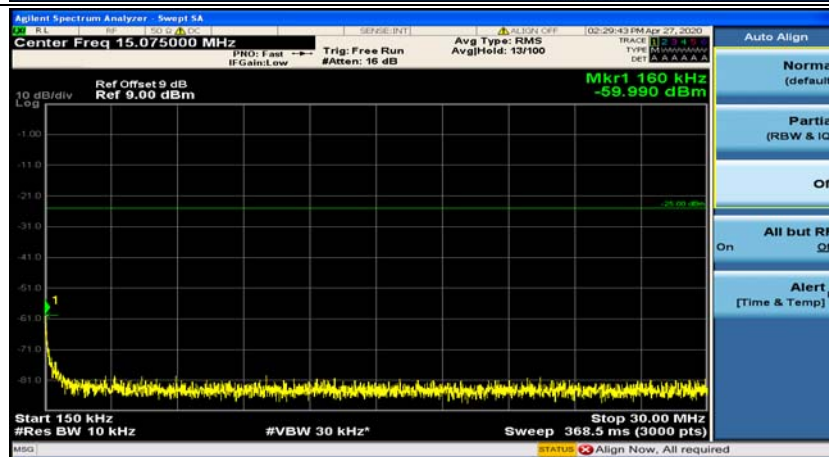
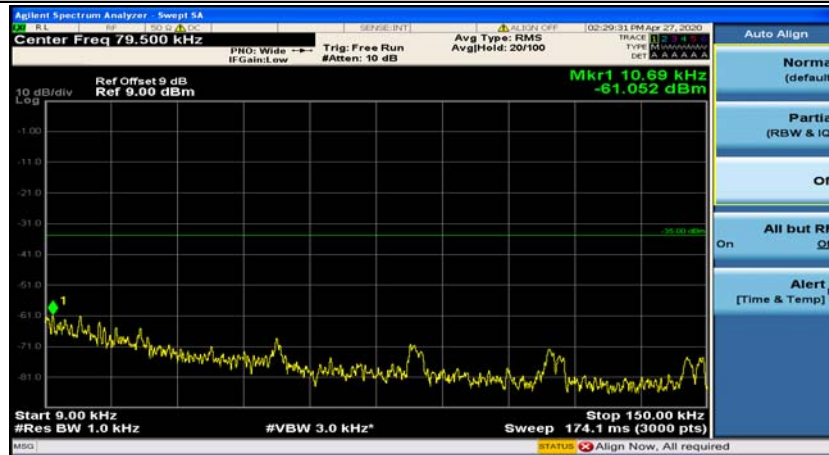


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49

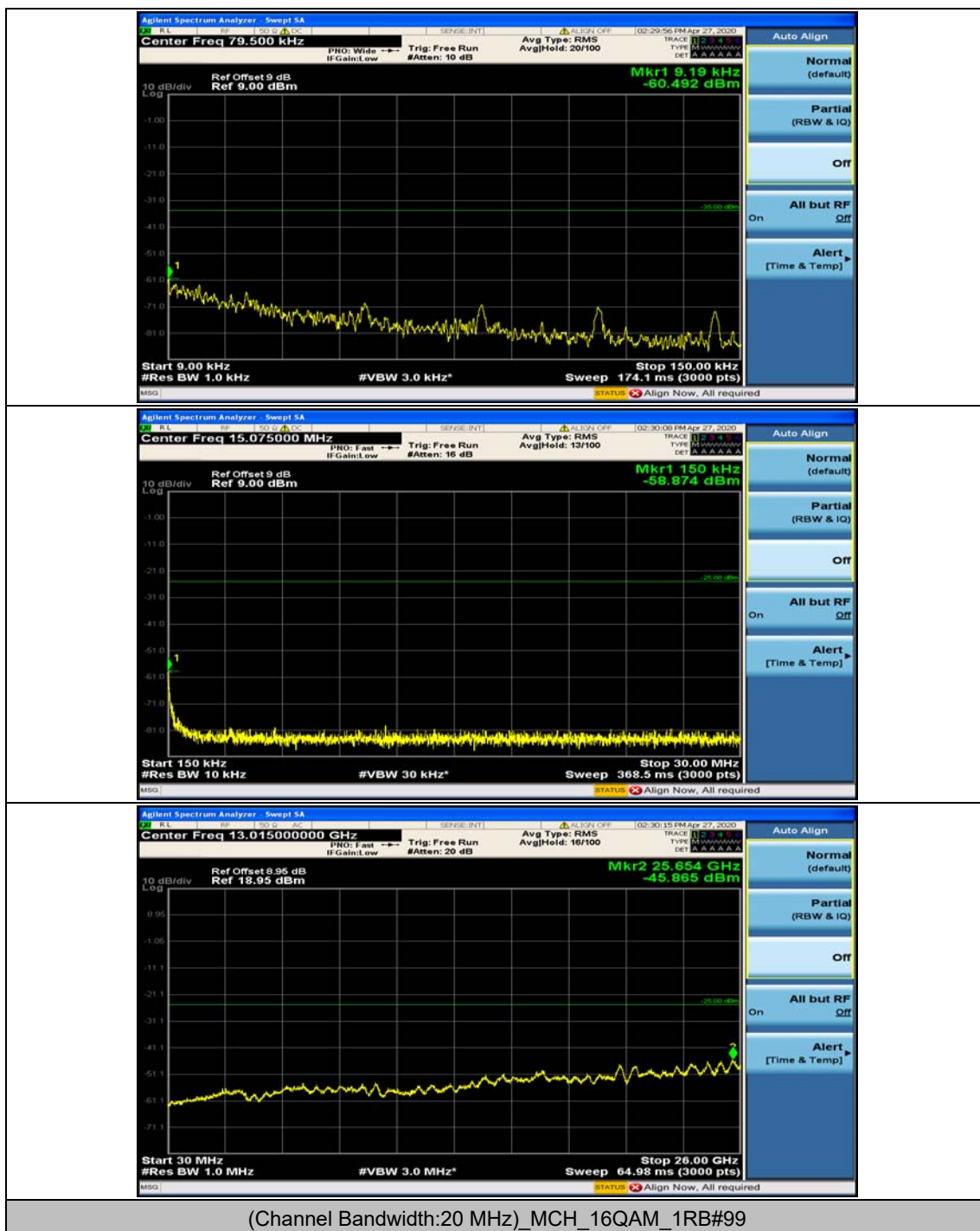


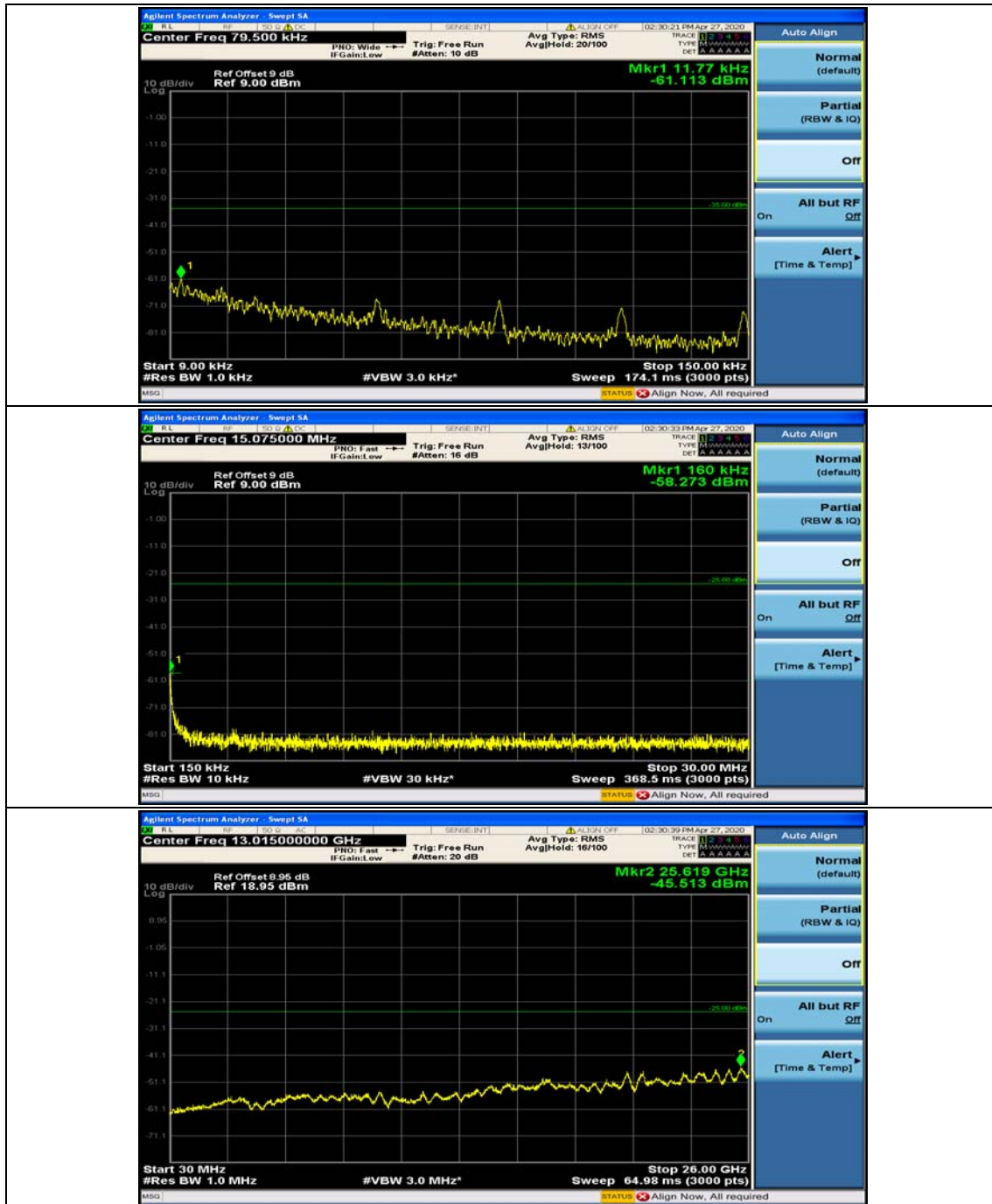


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0

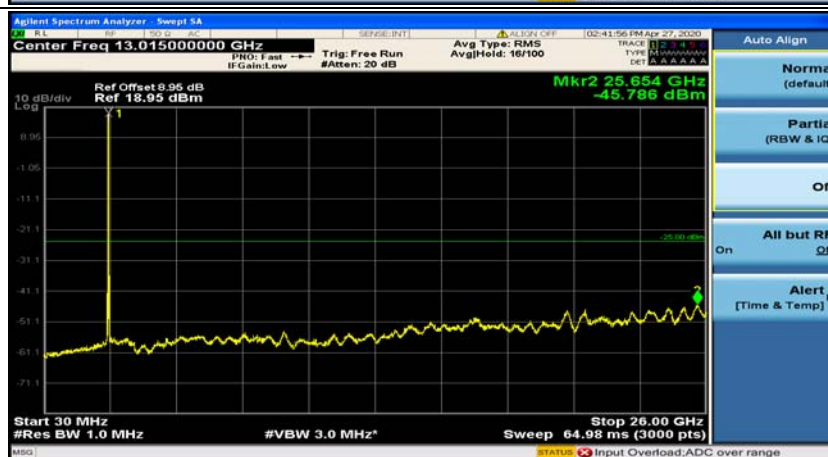
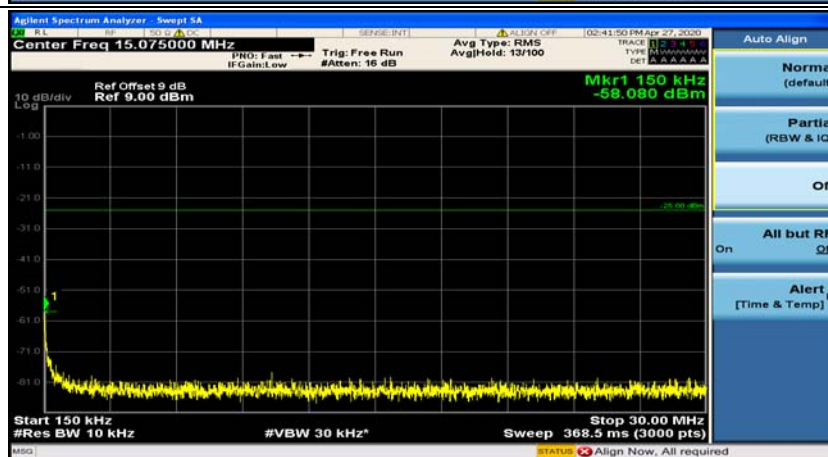
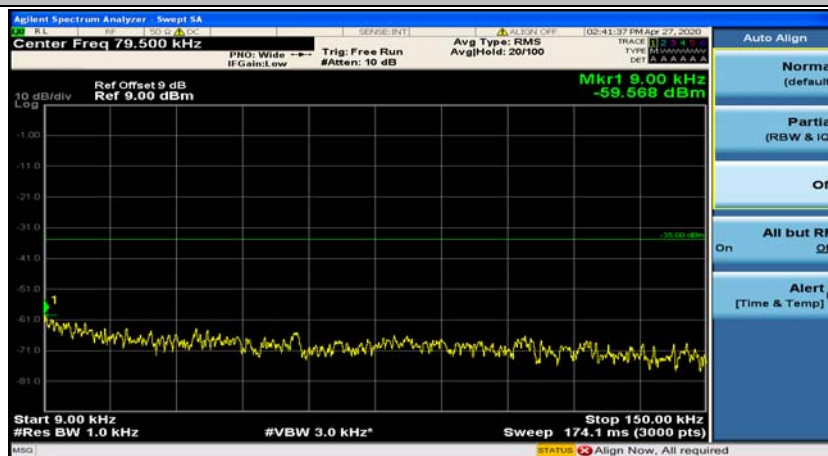


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49

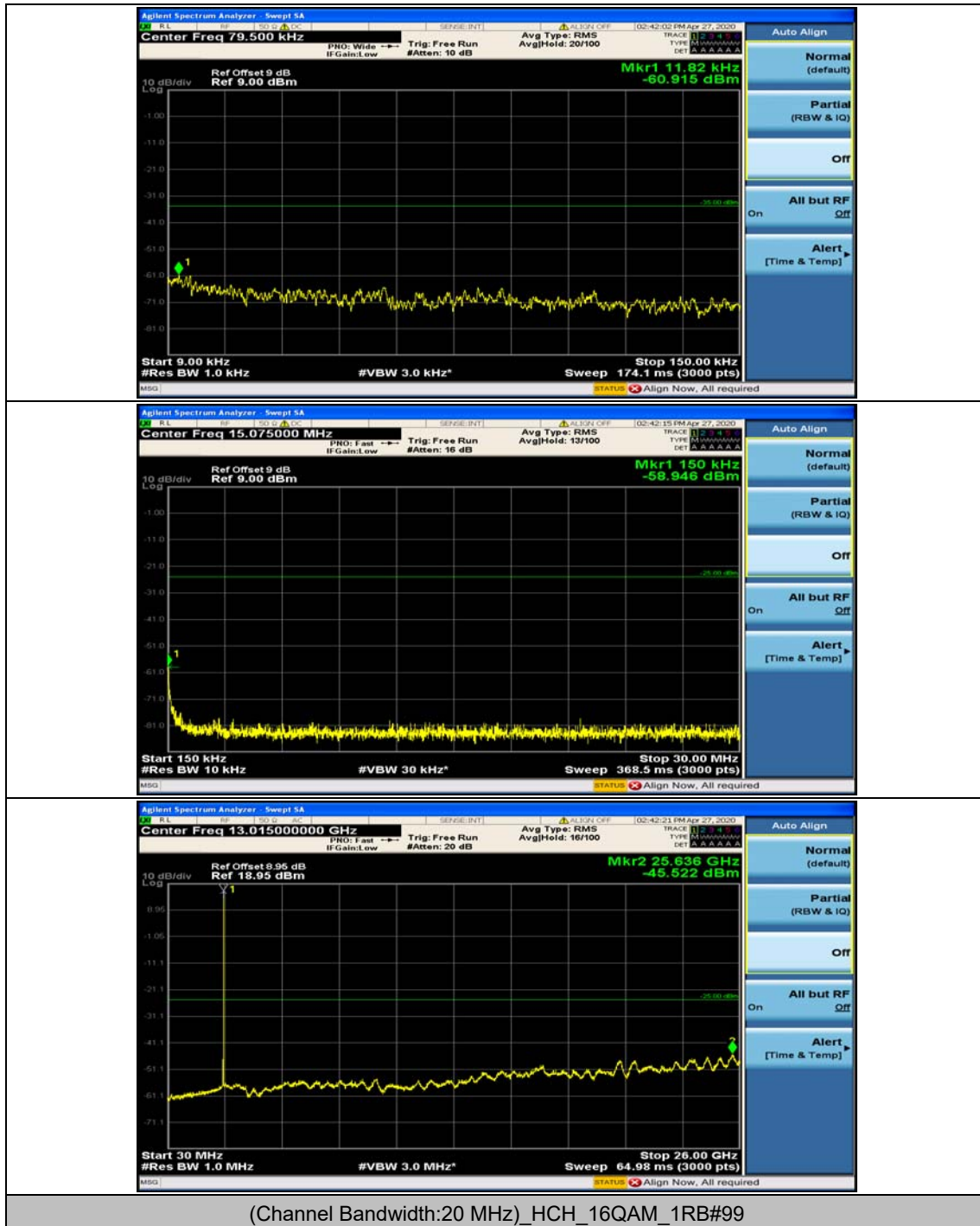


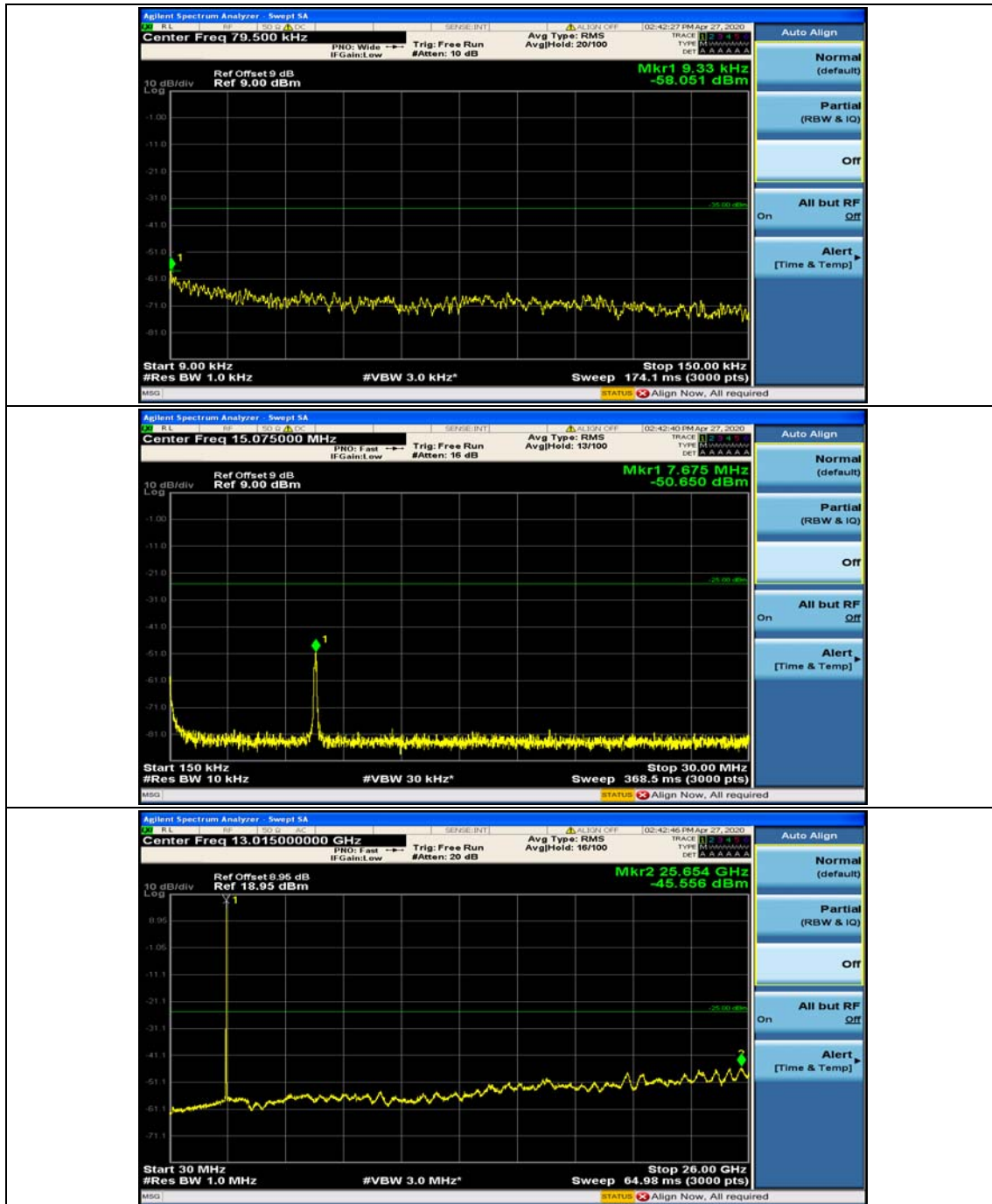


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(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	-0.93	-0.000372	± 2.5	PASS
		VN	TN	4.59	0.001834	± 2.5	PASS
		VH	TN	4.64	0.001854	± 2.5	PASS
	MCH	VL	TN	-1.63	-0.000643	± 2.5	PASS
		VN	TN	4.7	0.001854	± 2.5	PASS
		VH	TN	-0.4	-0.000158	± 2.5	PASS
	HCH	VL	TN	0.16	0.000062	± 2.5	PASS
		VN	TN	1.58	0.000615	± 2.5	PASS
		VH	TN	4.87	0.001897	± 2.5	PASS
16QAM	LCH	VL	TN	2.22	0.000887	± 2.5	PASS
		VN	TN	4.48	0.001790	± 2.5	PASS
		VH	TN	4.1	0.001638	± 2.5	PASS
	MCH	VL	TN	1.52	0.000600	± 2.5	PASS
		VN	TN	4.2	0.001657	± 2.5	PASS
		VH	TN	1.56	0.000615	± 2.5	PASS
	HCH	VL	TN	0.54	0.000210	± 2.5	PASS
		VN	TN	-0.42	-0.000164	± 2.5	PASS
		VH	TN	3.5	0.001363	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.24	0.001694	± 2.5	PASS
		VN	-20	1.75	0.000699	± 2.5	PASS
		VN	-10	-1.77	-0.000707	± 2.5	PASS
		VN	0	1.76	0.000703	± 2.5	PASS
		VN	10	1.1	0.000440	± 2.5	PASS
		VN	20	4.1	0.001638	± 2.5	PASS
		VN	30	4.5	0.001798	± 2.5	PASS
		VN	40	0.82	0.000328	± 2.5	PASS
		VN	50	1.95	0.000779	± 2.5	PASS
	MCH	VN	-30	-1.76	-0.000694	± 2.5	PASS
		VN	-20	-1.38	-0.000544	± 2.5	PASS



		VN	-10	-0.34	-0.000134	± 2.5	PASS
		VN	0	3.56	0.001404	± 2.5	PASS
		VN	10	-0.86	-0.000339	± 2.5	PASS
		VN	20	4.91	0.001937	± 2.5	PASS
		VN	30	1.03	0.000406	± 2.5	PASS
		VN	40	3.25	0.001282	± 2.5	PASS
		VN	50	-1.98	-0.000781	± 2.5	PASS
	HCH	VN	-30	2.58	0.001005	± 2.5	PASS
		VN	-20	2.59	0.001009	± 2.5	PASS
		VN	-10	0.49	0.000191	± 2.5	PASS
		VN	0	2.95	0.001149	± 2.5	PASS
		VN	10	1.94	0.000756	± 2.5	PASS
		VN	20	-0.47	-0.000183	± 2.5	PASS
		VN	30	-0.97	-0.000378	± 2.5	PASS
		VN	40	-0.99	-0.000386	± 2.5	PASS
		VN	50	4.78	0.001862	± 2.5	PASS
16QAM	LCH	VN	-30	0.58	0.000232	± 2.5	PASS
		VN	-20	1.64	0.000655	± 2.5	PASS
		VN	-10	0.69	0.000276	± 2.5	PASS
		VN	0	3.35	0.001339	± 2.5	PASS
		VN	10	0.57	0.000228	± 2.5	PASS
		VN	20	0.62	0.000248	± 2.5	PASS
		VN	30	-0.87	-0.000348	± 2.5	PASS
		VN	40	-0.79	-0.000316	± 2.5	PASS
		VN	50	3.68	0.001471	± 2.5	PASS
	MCH	VN	-30	0.71	0.000280	± 2.5	PASS
		VN	-20	3.49	0.001377	± 2.5	PASS
		VN	-10	0.71	0.000280	± 2.5	PASS
		VN	0	-1.43	-0.000564	± 2.5	PASS
		VN	10	1.37	0.000540	± 2.5	PASS
		VN	20	0.39	0.000154	± 2.5	PASS
		VN	30	1.38	0.000544	± 2.5	PASS
		VN	40	3.48	0.001373	± 2.5	PASS
		VN	50	-1.96	-0.000773	± 2.5	PASS
	HCH	VN	-30	-1.08	-0.000421	± 2.5	PASS
		VN	-20	1.62	0.000631	± 2.5	PASS
		VN	-10	-1.62	-0.000631	± 2.5	PASS
		VN	0	0.59	0.000230	± 2.5	PASS
		VN	10	1.9	0.000740	± 2.5	PASS
		VN	20	4.13	0.001609	± 2.5	PASS
		VN	30	4.69	0.001827	± 2.5	PASS

		VN	40	3.79	0.001476	± 2.5	PASS
		VN	50	0.89	0.000347	± 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	-1.35	-0.000539	± 2.5	PASS
		VN	TN	0.46	0.000184	± 2.5	PASS
		VH	TN	0.82	0.000327	± 2.5	PASS
	MCH	VL	TN	2.18	0.000860	± 2.5	PASS
		VN	TN	0.58	0.000229	± 2.5	PASS
		VH	TN	-0.19	-0.000075	± 2.5	PASS
	HCH	VL	TN	1.35	0.000526	± 2.5	PASS
		VN	TN	0.24	0.000094	± 2.5	PASS
		VH	TN	2.05	0.000799	± 2.5	PASS
16QAM	LCH	VL	TN	0.9	0.000359	± 2.5	PASS
		VN	TN	1.37	0.000547	± 2.5	PASS
		VH	TN	2.61	0.001042	± 2.5	PASS
	MCH	VL	TN	4.31	0.001700	± 2.5	PASS
		VN	TN	-1.81	-0.000714	± 2.5	PASS
		VH	TN	4.98	0.001964	± 2.5	PASS
	HCH	VL	TN	0.43	0.000168	± 2.5	PASS
		VN	TN	-1.6	-0.000624	± 2.5	PASS
		VH	TN	1.04	0.000405	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.47	0.000986	± 2.5	PASS
		VN	-20	1.69	0.000675	± 2.5	PASS
		VN	-10	0.34	0.000136	± 2.5	PASS
		VN	0	0.45	0.000180	± 2.5	PASS
		VN	10	1.62	0.000647	± 2.5	PASS
		VN	20	1.78	0.000711	± 2.5	PASS
		VN	30	3.67	0.001465	± 2.5	PASS
		VN	40	-1.2	-0.000479	± 2.5	PASS
		VN	50	3.75	0.001497	± 2.5	PASS
	MCH	VN	-30	1.81	0.000714	± 2.5	PASS
		VN	-20	3.74	0.001475	± 2.5	PASS
		VN	-10	4.78	0.001886	± 2.5	PASS



		VN	0	3.18	0.001254	± 2.5	PASS
		VN	10	-1.47	-0.000580	± 2.5	PASS
		VN	20	0.22	0.000087	± 2.5	PASS
		VN	30	3.4	0.001341	± 2.5	PASS
		VN	40	4.06	0.001602	± 2.5	PASS
		VN	50	0.12	0.000047	± 2.5	PASS
	HCH	VN	-30	2.52	0.000982	± 2.5	PASS
		VN	-20	2.51	0.000979	± 2.5	PASS
		VN	-10	2.69	0.001049	± 2.5	PASS
		VN	0	0.91	0.000355	± 2.5	PASS
		VN	10	3.03	0.001181	± 2.5	PASS
		VN	20	-0.17	-0.000066	± 2.5	PASS
		VN	30	1.4	0.000546	± 2.5	PASS
		VN	40	0.28	0.000109	± 2.5	PASS
		VN	50	4.28	0.001669	± 2.5	PASS
16QAM	LCH	VN	-30	-0.32	-0.000128	± 2.5	PASS
		VN	-20	3.2	0.001277	± 2.5	PASS
		VN	-10	1.48	0.000591	± 2.5	PASS
		VN	0	-0.81	-0.000323	± 2.5	PASS
		VN	10	2.55	0.001018	± 2.5	PASS
		VN	20	0.02	0.000008	± 2.5	PASS
		VN	30	0.02	0.000008	± 2.5	PASS
		VN	40	4.37	0.001745	± 2.5	PASS
		VN	50	2.41	0.000962	± 2.5	PASS
	MCH	VN	-30	-0.87	-0.000343	± 2.5	PASS
		VN	-20	1.26	0.000497	± 2.5	PASS
		VN	-10	2.99	0.001179	± 2.5	PASS
		VN	0	1.89	0.000746	± 2.5	PASS
		VN	10	-1.69	-0.000667	± 2.5	PASS
		VN	20	3.16	0.001247	± 2.5	PASS
		VN	30	0.15	0.000059	± 2.5	PASS
		VN	40	-1.88	-0.000742	± 2.5	PASS
		VN	50	-0.62	-0.000245	± 2.5	PASS
	HCH	VN	-30	2.19	0.000854	± 2.5	PASS
		VN	-20	2.87	0.001119	± 2.5	PASS
		VN	-10	3.87	0.001509	± 2.5	PASS
		VN	0	0.05	0.000019	± 2.5	PASS
		VN	10	2.92	0.001138	± 2.5	PASS
		VN	20	-1.41	-0.000550	± 2.5	PASS
		VN	30	3.94	0.001536	± 2.5	PASS
		VN	40	2.46	0.000959	± 2.5	PASS



		VN	50	2.85	0.001111	± 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	2.37	0.000945	± 2.5	PASS
		VH	TN	4	0.001595	± 2.5	PASS
	MCH	VL	TN	2.23	0.000880	± 2.5	PASS
		VN	TN	0.66	0.000260	± 2.5	PASS
		VH	TN	3.28	0.001294	± 2.5	PASS
	HCH	VL	TN	1.14	0.000445	± 2.5	PASS
		VN	TN	-0.21	-0.000082	± 2.5	PASS
		VH	TN	1.47	0.000574	± 2.5	PASS
16QAM	LCH	VL	TN	-1.99	-0.000794	± 2.5	PASS
		VN	TN	0.99	0.000395	± 2.5	PASS
		VH	TN	0.21	0.000084	± 2.5	PASS
	MCH	VL	TN	3.91	0.001542	± 2.5	PASS
		VN	TN	3.02	0.001191	± 2.5	PASS
		VH	TN	4.86	0.001917	± 2.5	PASS
	HCH	VL	TN	2.4	0.000937	± 2.5	PASS
		VN	TN	3.89	0.001518	± 2.5	PASS
		VH	TN	0.7	0.000273	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.09	0.001631	± 2.5	PASS
		VN	-20	2.23	0.000889	± 2.5	PASS
		VN	-10	-1.71	-0.000682	± 2.5	PASS
		VN	0	0.94	0.000375	± 2.5	PASS
		VN	10	1.26	0.000502	± 2.5	PASS
		VN	20	0.55	0.000219	± 2.5	PASS
		VN	30	-1.37	-0.000546	± 2.5	PASS
		VN	40	3.97	0.001583	± 2.5	PASS
		VN	50	0.6	0.000239	± 2.5	PASS
	MCH	VN	-30	-1.99	-0.000785	± 2.5	PASS
		VN	-20	2.28	0.000899	± 2.5	PASS
		VN	-10	3.23	0.001274	± 2.5	PASS
		VN	0	2.91	0.001148	± 2.5	PASS



		VN	10	2.38	0.000939	± 2.5	PASS
		VN	20	1.93	0.000761	± 2.5	PASS
		VN	30	2.17	0.000856	± 2.5	PASS
		VN	40	3.88	0.001531	± 2.5	PASS
		VN	50	2.13	0.000840	± 2.5	PASS
	HCH	VN	-30	4.81	0.001877	± 2.5	PASS
		VN	-20	0.34	0.000133	± 2.5	PASS
		VN	-10	3.34	0.001303	± 2.5	PASS
		VN	0	4.78	0.001865	± 2.5	PASS
		VN	10	-0.41	-0.000160	± 2.5	PASS
		VN	20	4.98	0.001943	± 2.5	PASS
		VN	30	-0.92	-0.000359	± 2.5	PASS
		VN	40	4.97	0.001940	± 2.5	PASS
		VN	50	-1.17	-0.000457	± 2.5	PASS
		VN	-30	0.38	0.000152	± 2.5	PASS
16QAM	LCH	VN	-20	2.13	0.000849	± 2.5	PASS
		VN	-10	4.46	0.001779	± 2.5	PASS
		VN	0	3.51	0.001400	± 2.5	PASS
		VN	10	2.15	0.000857	± 2.5	PASS
		VN	20	4.29	0.001711	± 2.5	PASS
		VN	30	-0.58	-0.000231	± 2.5	PASS
		VN	40	-1.25	-0.000499	± 2.5	PASS
		VN	50	3.58	0.001428	± 2.5	PASS
	MCH	VN	-30	-1.12	-0.000442	± 2.5	PASS
		VN	-20	0.74	0.000292	± 2.5	PASS
		VN	-10	3.61	0.001424	± 2.5	PASS
		VN	0	0.16	0.000063	± 2.5	PASS
		VN	10	-0.71	-0.000280	± 2.5	PASS
		VN	20	2.81	0.001108	± 2.5	PASS
		VN	30	4.89	0.001929	± 2.5	PASS
		VN	40	2.85	0.001124	± 2.5	PASS
		VN	50	2.56	0.001010	± 2.5	PASS
	HCH	VN	-30	1.93	0.000753	± 2.5	PASS
		VN	-20	0.81	0.000316	± 2.5	PASS
		VN	-10	2.47	0.000964	± 2.5	PASS
		VN	0	0.19	0.000074	± 2.5	PASS
		VN	10	-1.15	-0.000449	± 2.5	PASS
		VN	20	-1.39	-0.000542	± 2.5	PASS
		VN	30	2.86	0.001116	± 2.5	PASS
		VN	40	-1.8	-0.000702	± 2.5	PASS
		VN	50	3.87	0.001510	± 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	2.02	0.000805	± 2.5	PASS
		VN	TN	-1.6	-0.000637	± 2.5	PASS
		VH	TN	1.76	0.000701	± 2.5	PASS
	MCH	VL	TN	1.68	0.000663	± 2.5	PASS
		VN	TN	-1.71	-0.000675	± 2.5	PASS
		VH	TN	0.05	0.000020	± 2.5	PASS
	HCH	VL	TN	-0.82	-0.000320	± 2.5	PASS
		VN	TN	1.93	0.000754	± 2.5	PASS
		VH	TN	3.24	0.001266	± 2.5	PASS
16QAM	LCH	VL	TN	1.46	0.000582	± 2.5	PASS
		VN	TN	-1.17	-0.000466	± 2.5	PASS
		VH	TN	0.73	0.000291	± 2.5	PASS
	MCH	VL	TN	1.08	0.000426	± 2.5	PASS
		VN	TN	3.13	0.001235	± 2.5	PASS
		VH	TN	-0.87	-0.000343	± 2.5	PASS
	HCH	VL	TN	4.54	0.001773	± 2.5	PASS
		VN	TN	3.43	0.001340	± 2.5	PASS
		VH	TN	-0.68	-0.000266	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.46	0.000582	± 2.5	PASS
		VN	-20	1.91	0.000761	± 2.5	PASS
		VN	-10	-0.38	-0.000151	± 2.5	PASS
		VN	0	1.6	0.000637	± 2.5	PASS
		VN	10	4.61	0.001837	± 2.5	PASS
		VN	20	3.93	0.001566	± 2.5	PASS
		VN	30	4.76	0.001896	± 2.5	PASS
		VN	40	3.74	0.001490	± 2.5	PASS
		VN	50	-0.27	-0.000108	± 2.5	PASS
	MCH	VN	-30	-0.92	-0.000363	± 2.5	PASS
		VN	-20	3.41	0.001345	± 2.5	PASS
		VN	-10	-0.09	-0.000036	± 2.5	PASS
		VN	0	4.19	0.001653	± 2.5	PASS
		VN	10	1	0.000394	± 2.5	PASS
		VN	20	1.6	0.000631	± 2.5	PASS



		VN	30	3.9	0.001538	± 2.5	PASS
		VN	40	-1.87	-0.000738	± 2.5	PASS
		VN	50	0.97	0.000383	± 2.5	PASS
	HCH	VN	-30	2.24	0.000875	± 2.5	PASS
		VN	-20	-0.39	-0.000152	± 2.5	PASS
		VN	-10	-1.49	-0.000582	± 2.5	PASS
		VN	0	1.79	0.000699	± 2.5	PASS
		VN	10	-0.15	-0.000059	± 2.5	PASS
		VN	20	1.49	0.000582	± 2.5	PASS
		VN	30	1.14	0.000445	± 2.5	PASS
		VN	40	1.13	0.000441	± 2.5	PASS
		VN	50	2.89	0.001129	± 2.5	PASS
16QAM	LCH	VN	-30	1.61	0.000641	± 2.5	PASS
		VN	-20	4.63	0.001845	± 2.5	PASS
		VN	-10	-0.49	-0.000195	± 2.5	PASS
		VN	0	4.93	0.001964	± 2.5	PASS
		VN	10	0.67	0.000267	± 2.5	PASS
		VN	20	1.25	0.000498	± 2.5	PASS
		VN	30	-0.04	-0.000016	± 2.5	PASS
		VN	40	2.92	0.001163	± 2.5	PASS
		VN	50	2.27	0.000904	± 2.5	PASS
	MCH	VN	-30	-1.69	-0.000667	± 2.5	PASS
		VN	-20	2.8	0.001105	± 2.5	PASS
		VN	-10	2.37	0.000935	± 2.5	PASS
		VN	0	1.36	0.000536	± 2.5	PASS
		VN	10	4.8	0.001893	± 2.5	PASS
		VN	20	-0.36	-0.000142	± 2.5	PASS
		VN	30	1.62	0.000639	± 2.5	PASS
		VN	40	4.92	0.001941	± 2.5	PASS
		VN	50	-1.91	-0.000753	± 2.5	PASS
	HCH	VN	-30	2.79	0.001090	± 2.5	PASS
		VN	-20	4	0.001563	± 2.5	PASS
		VN	-10	2.13	0.000832	± 2.5	PASS
		VN	0	1.62	0.000633	± 2.5	PASS
		VN	10	2.47	0.000965	± 2.5	PASS
		VN	20	2.89	0.001129	± 2.5	PASS
		VN	30	-1.8	-0.000703	± 2.5	PASS
		VN	40	4.76	0.001859	± 2.5	PASS
		VN	50	3.2	0.001250	± 2.5	PASS