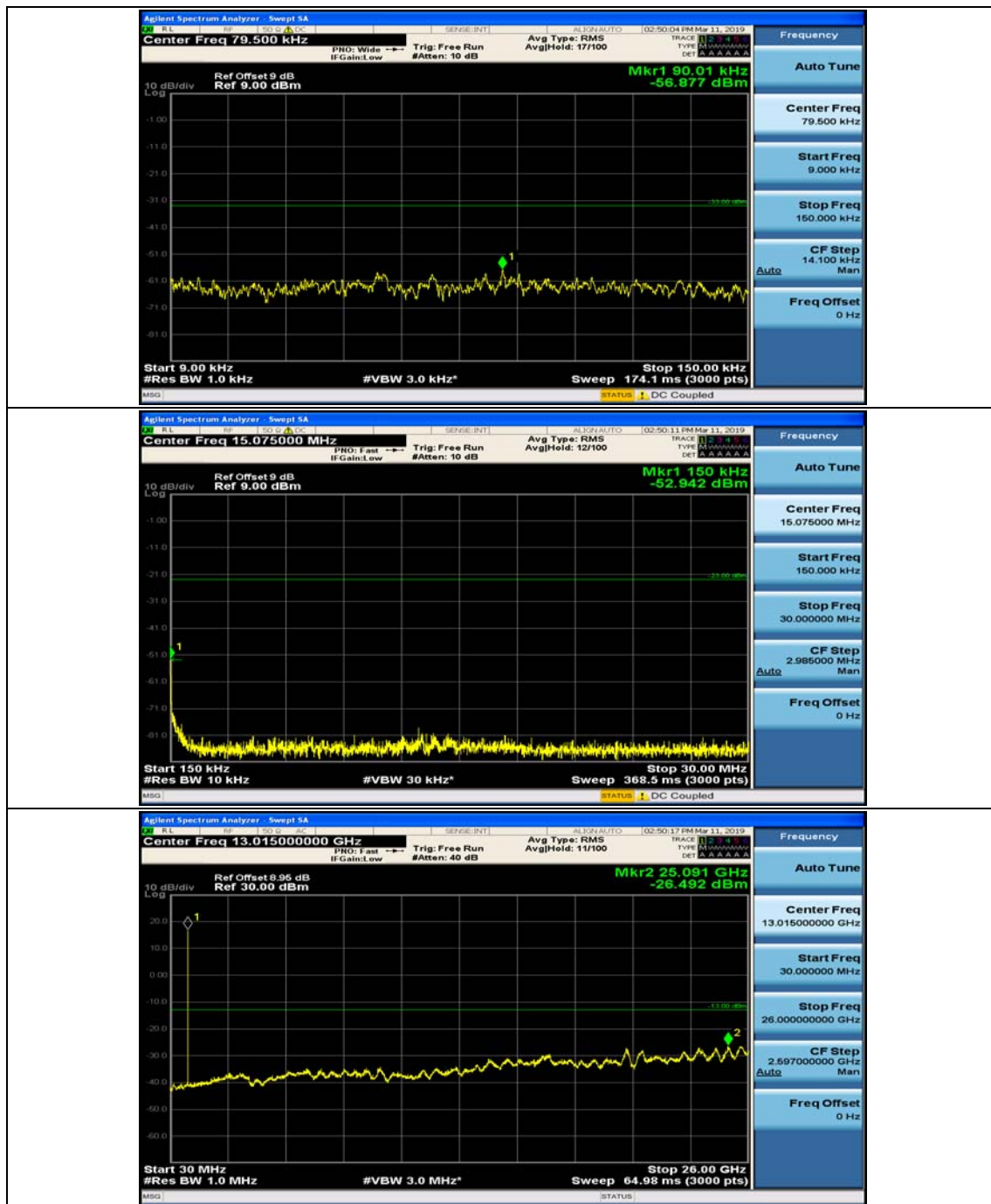
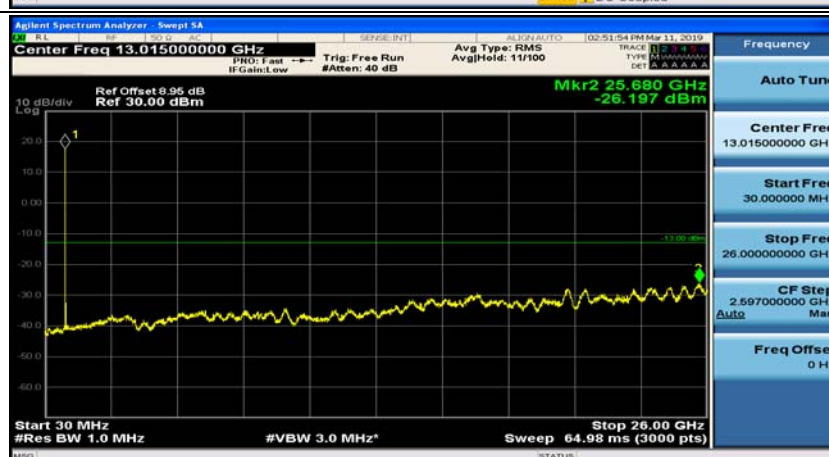
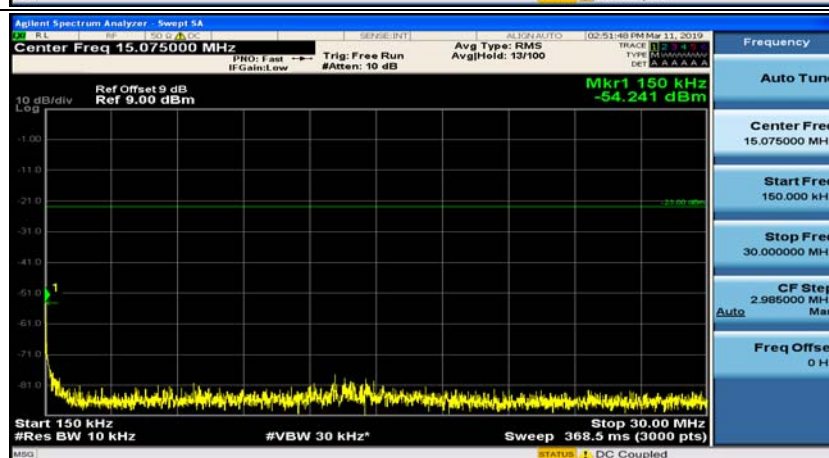
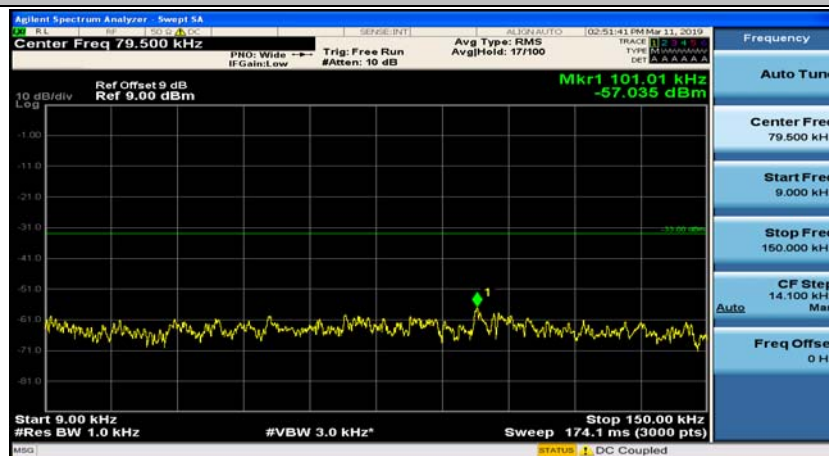
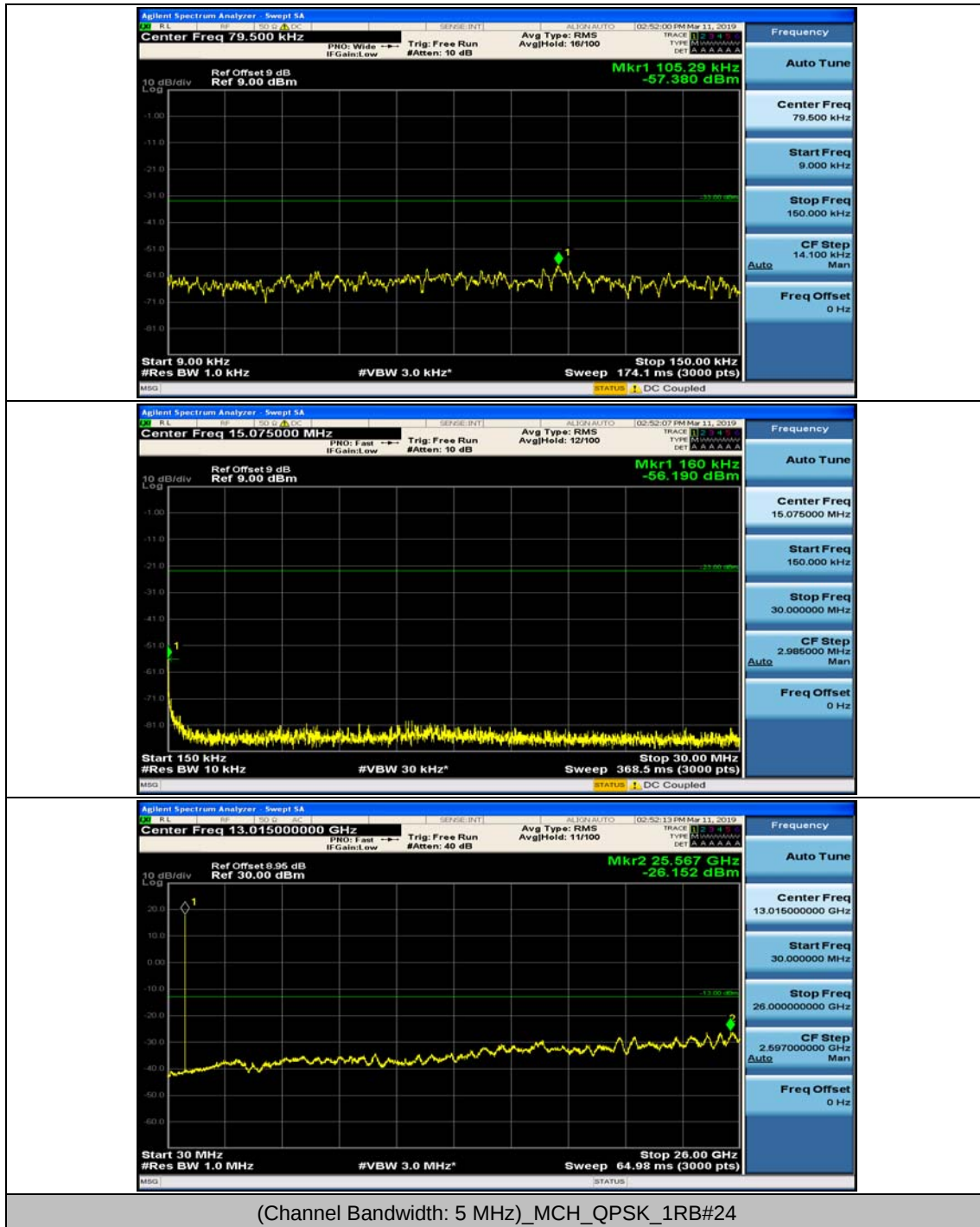


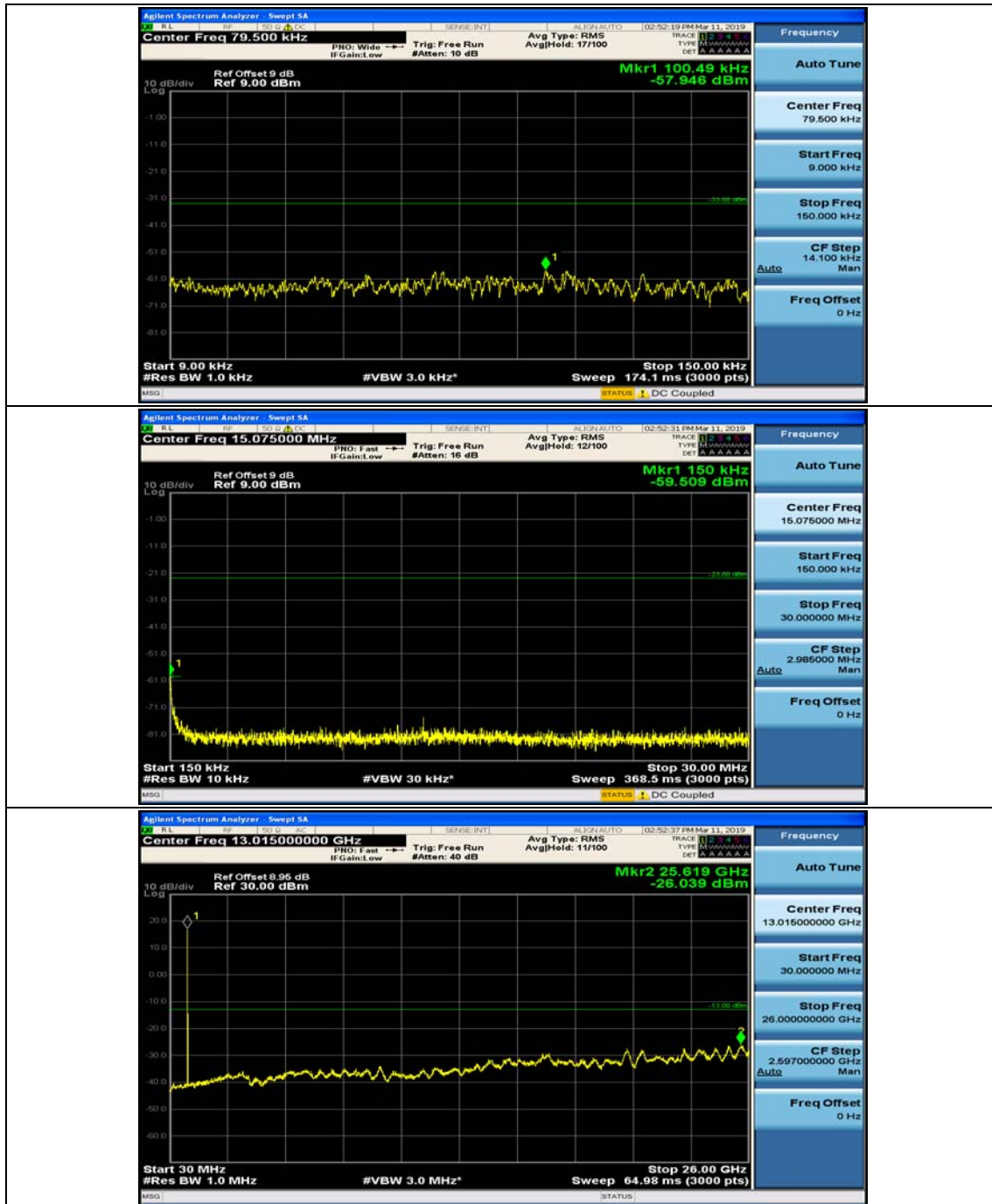


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0

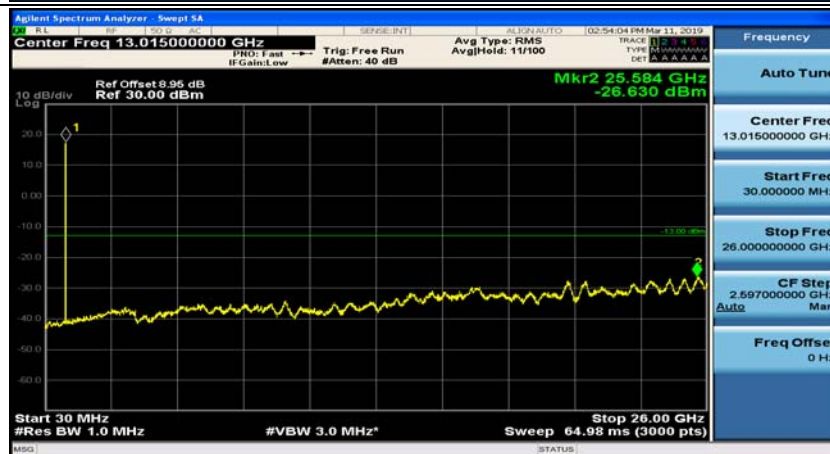
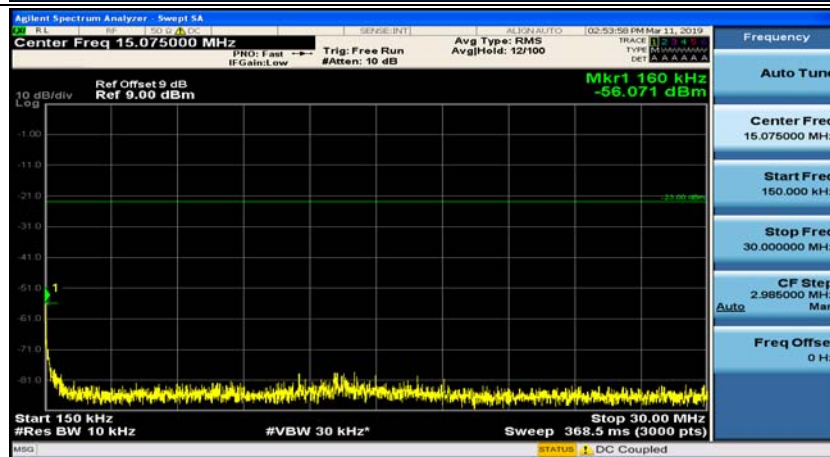
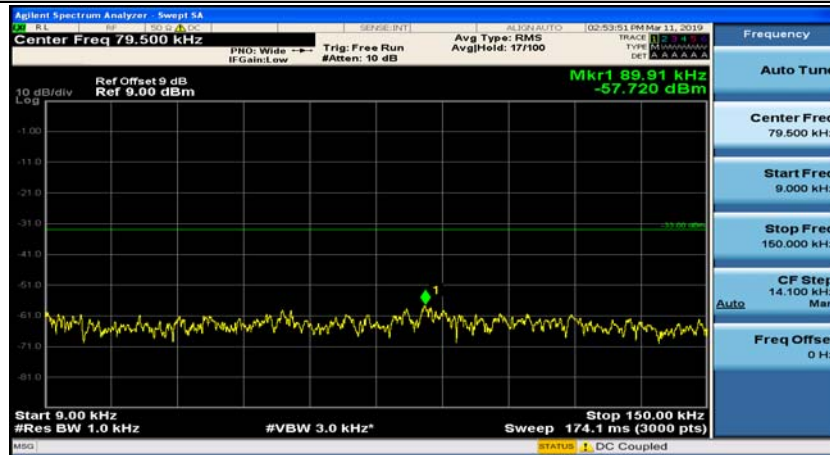


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

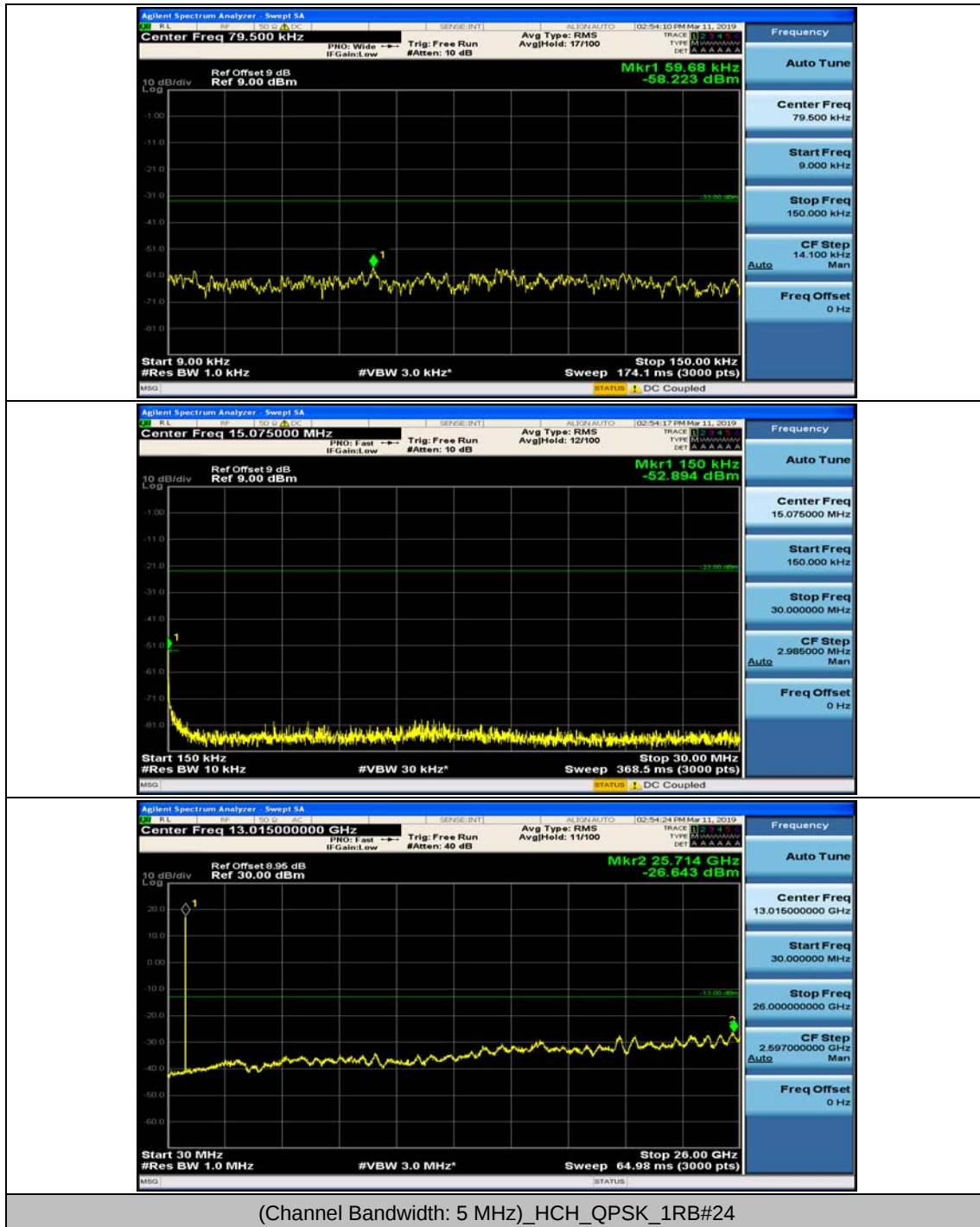


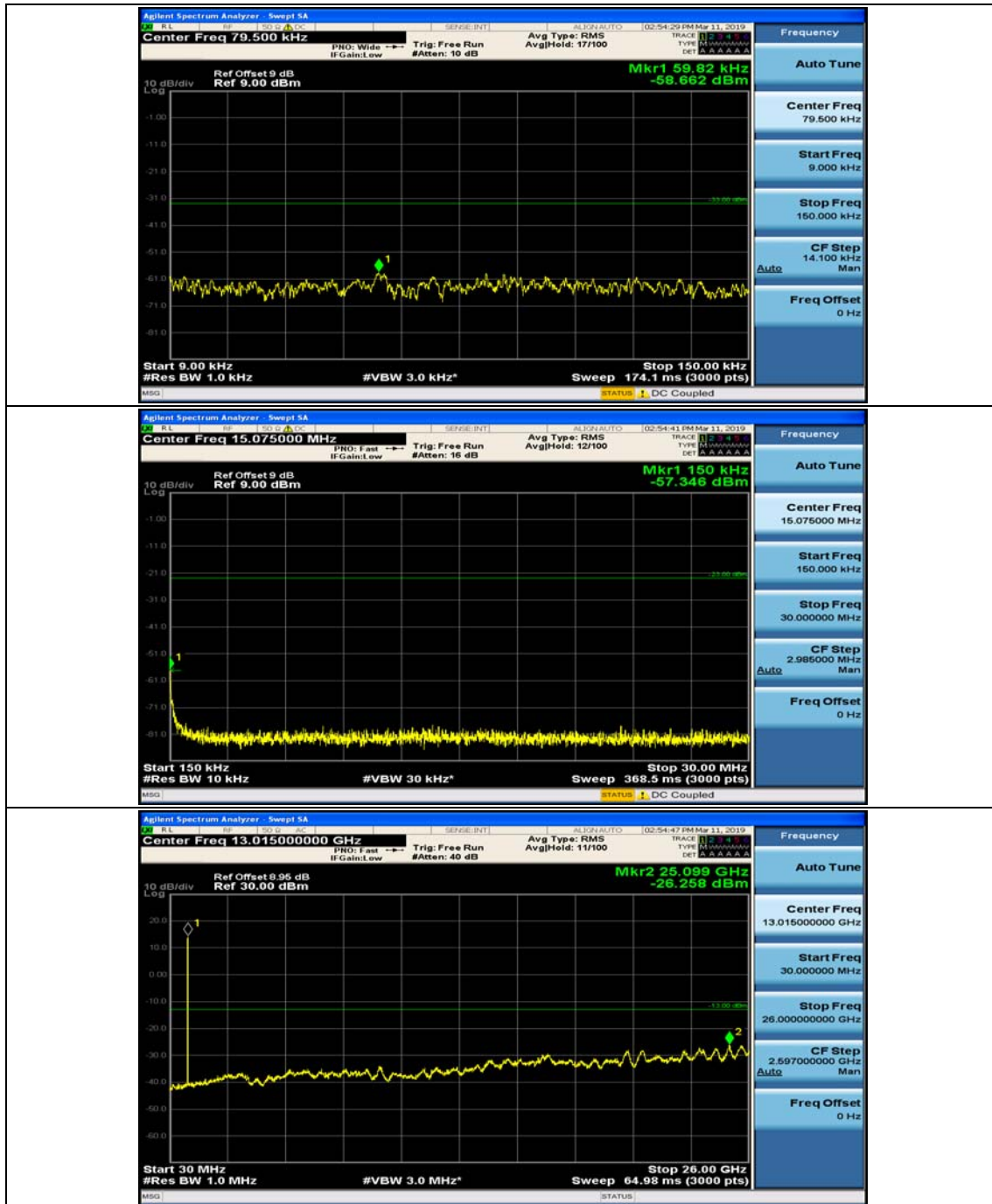


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

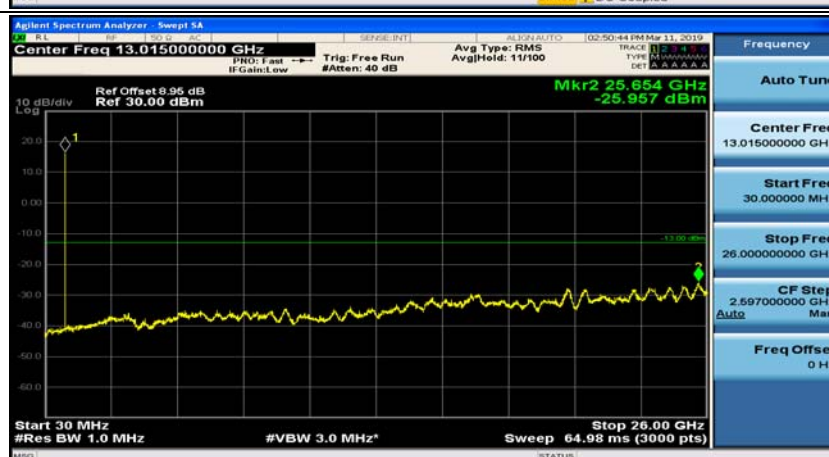
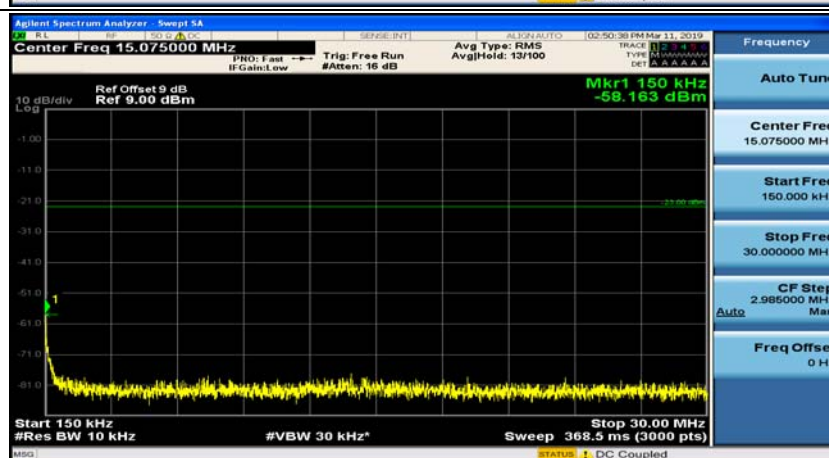
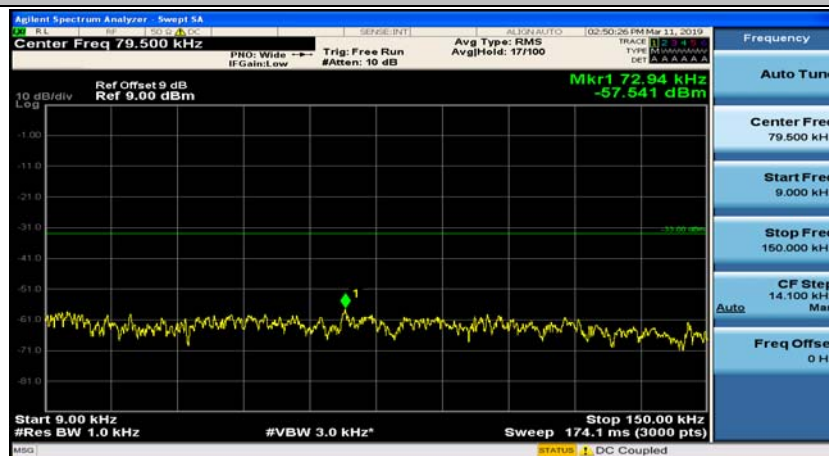


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

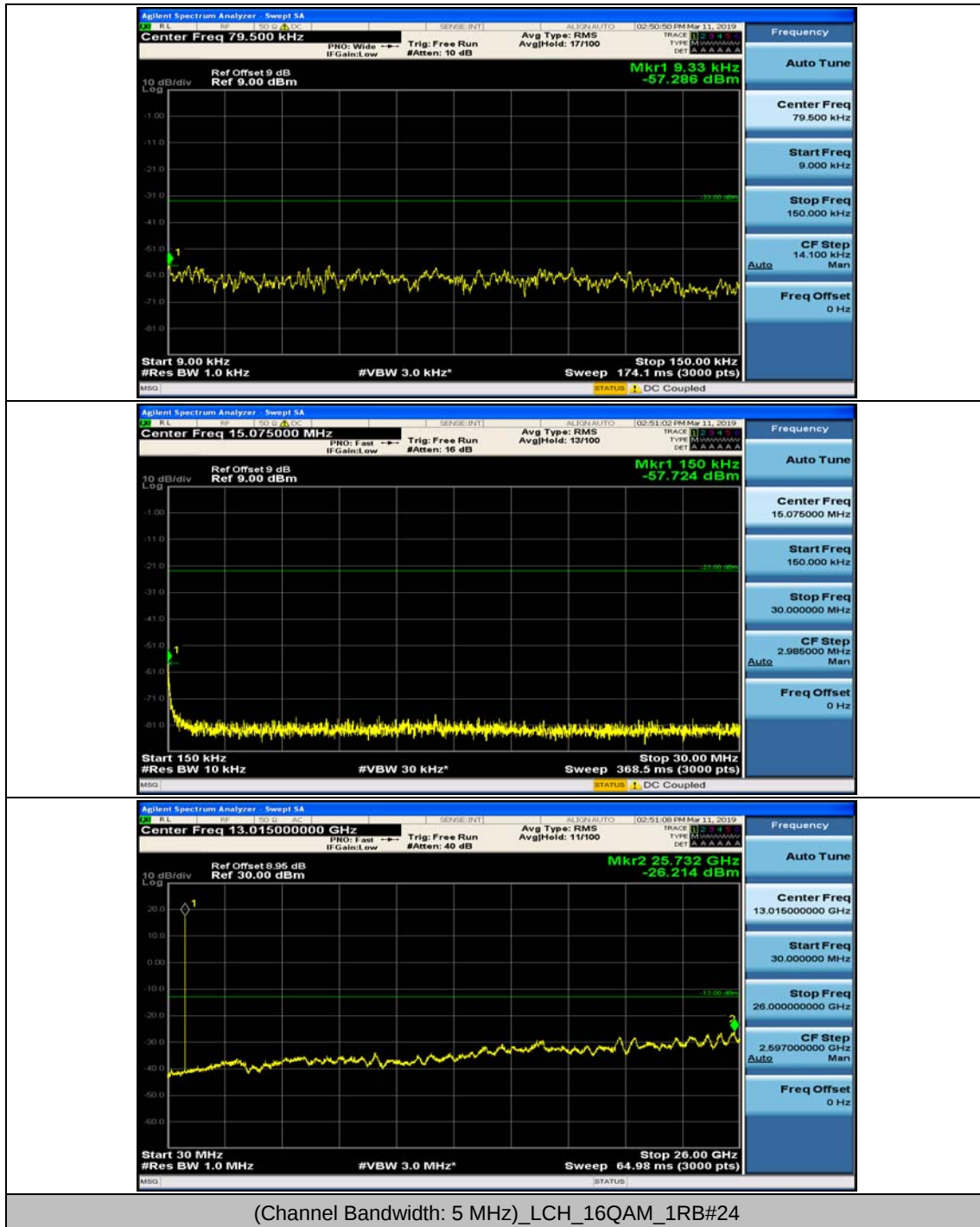


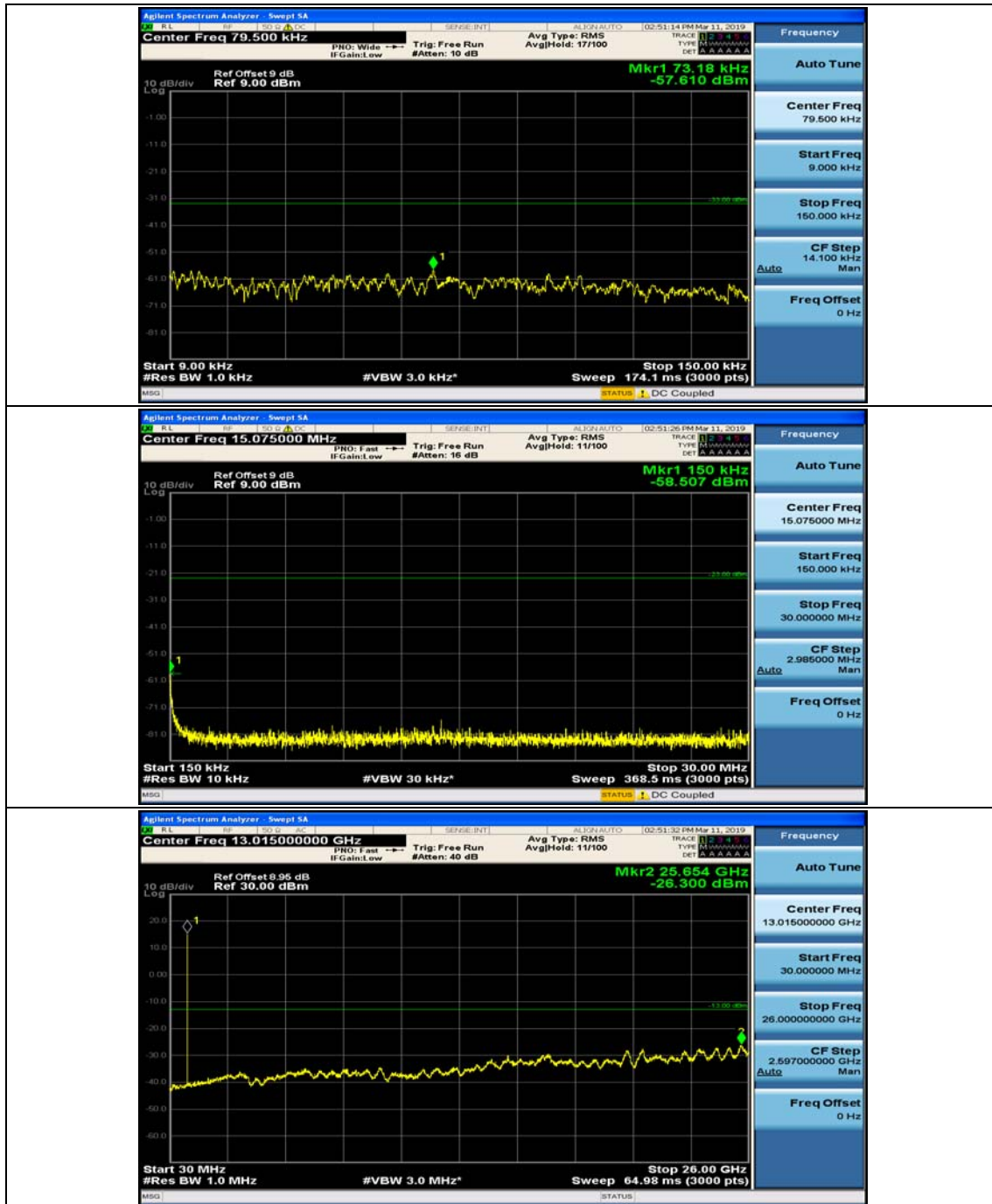


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0

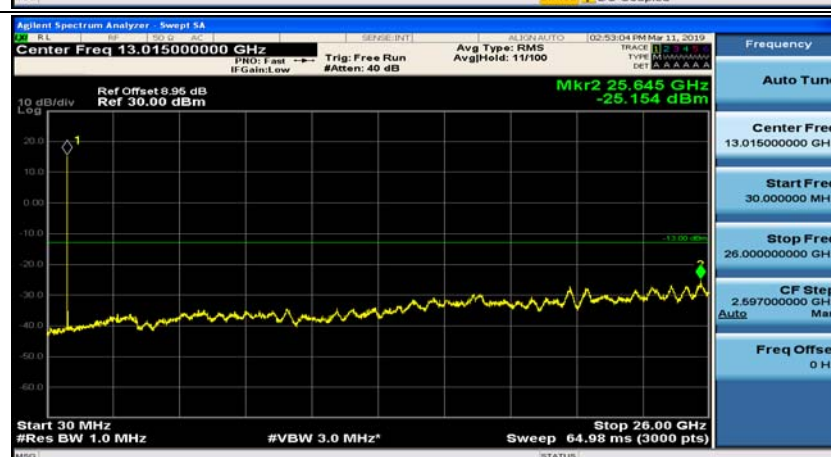
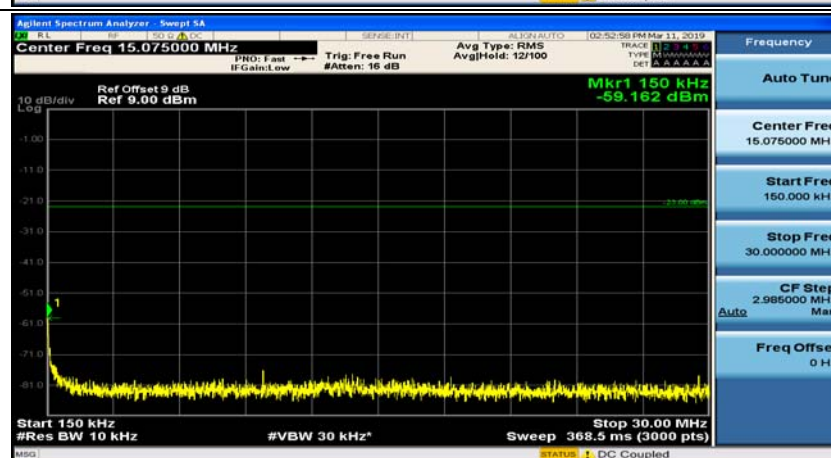
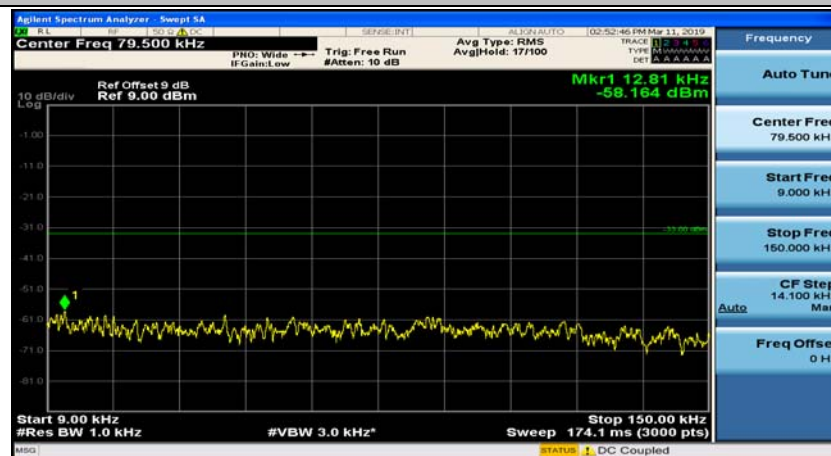


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

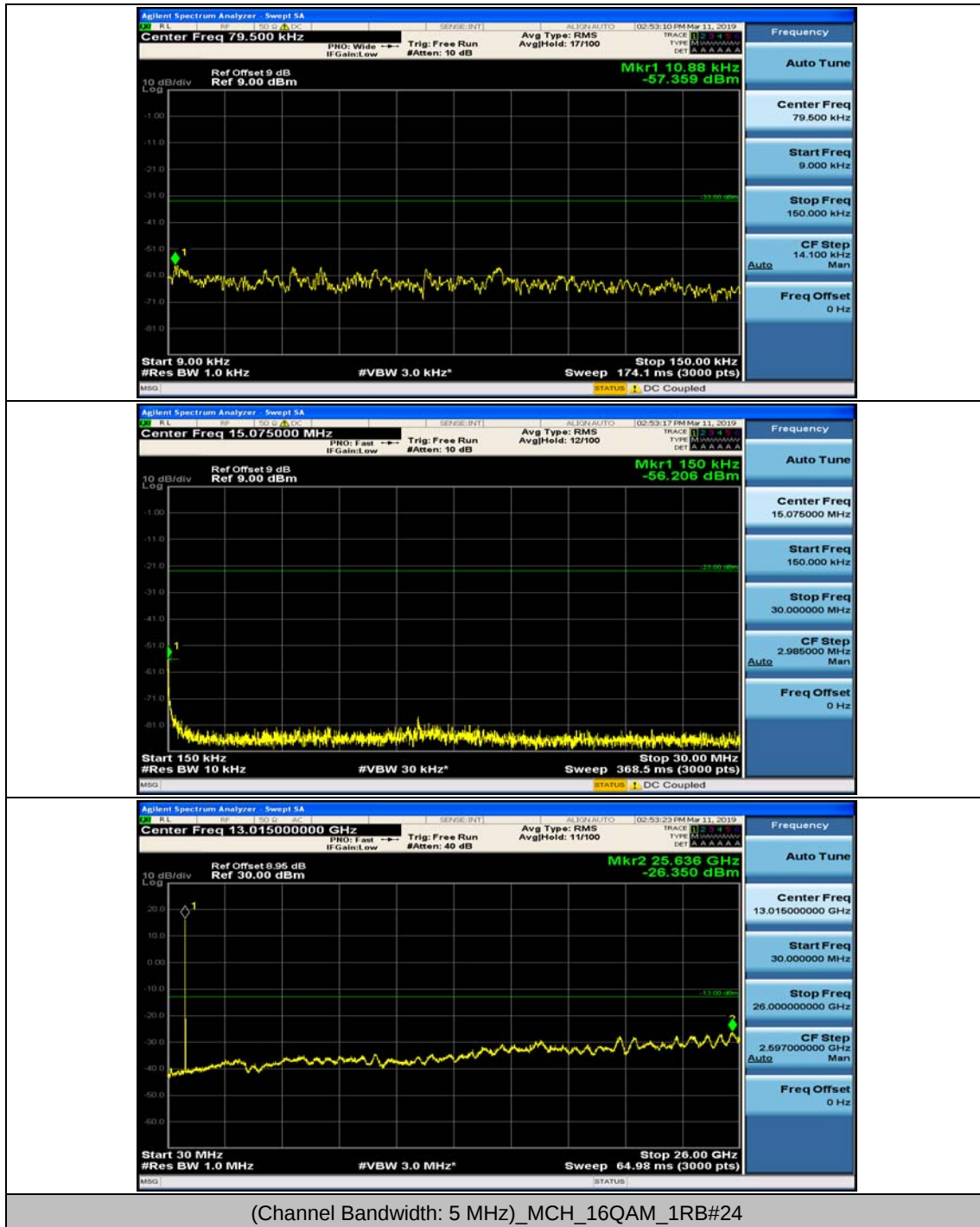


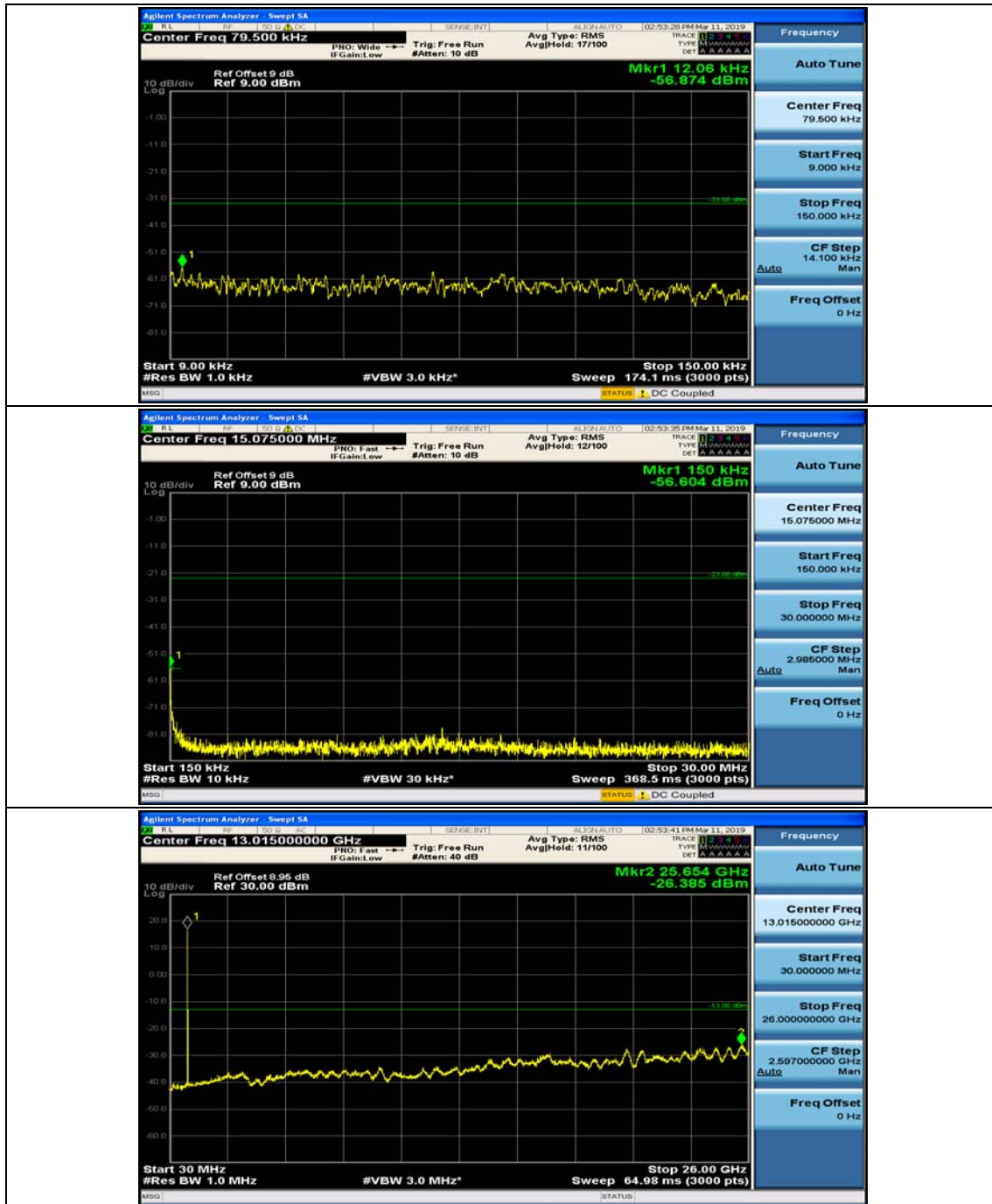


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0

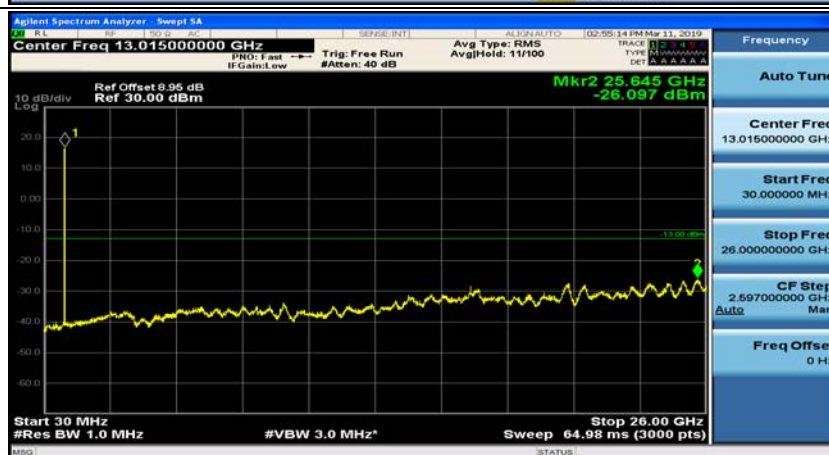
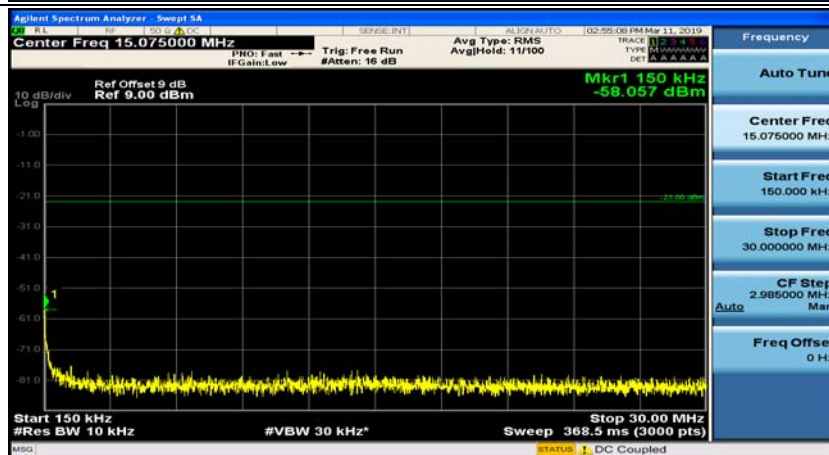
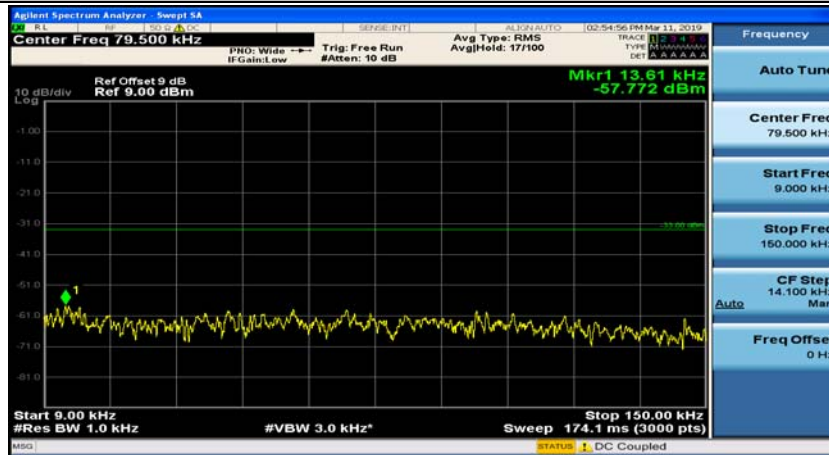


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

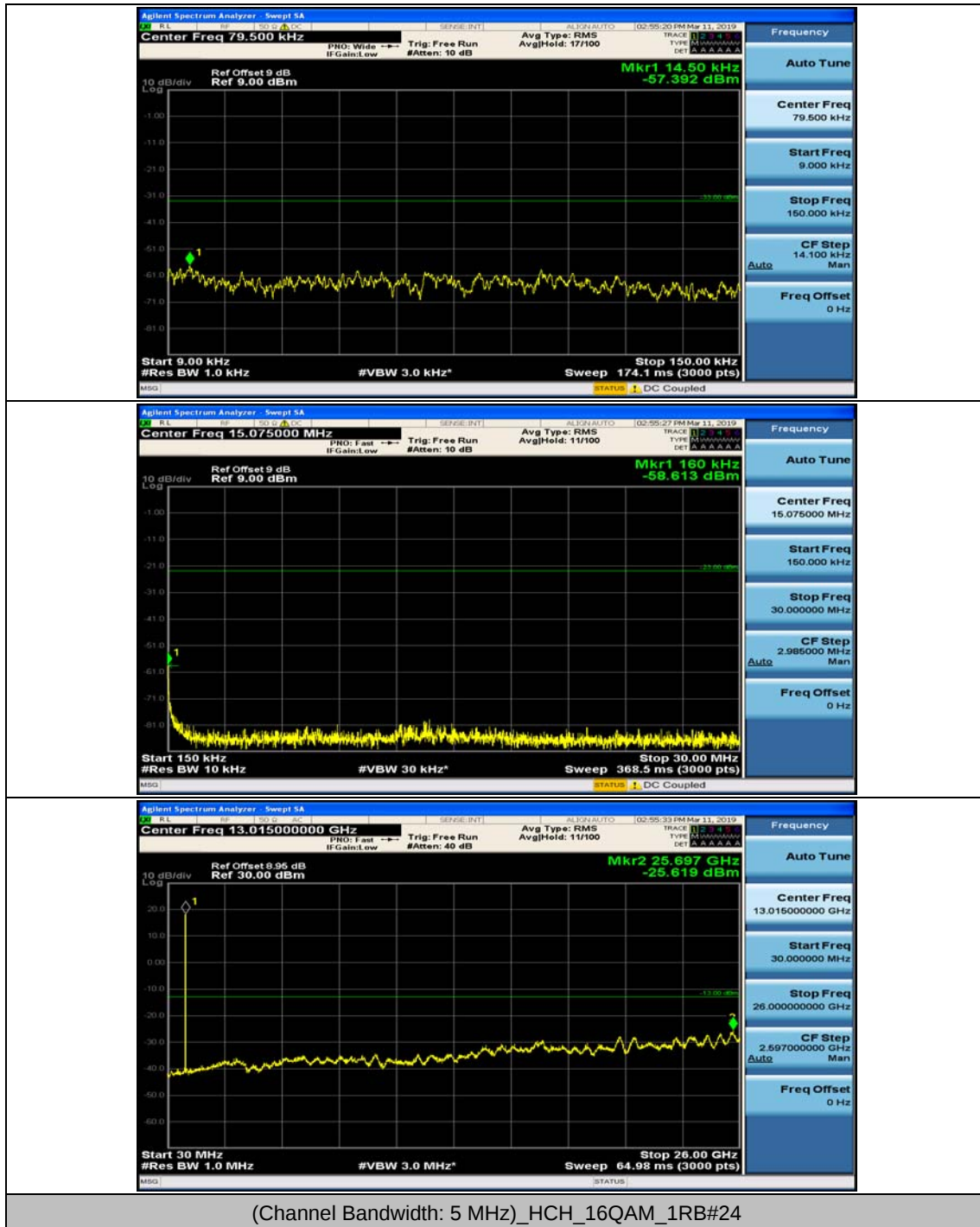


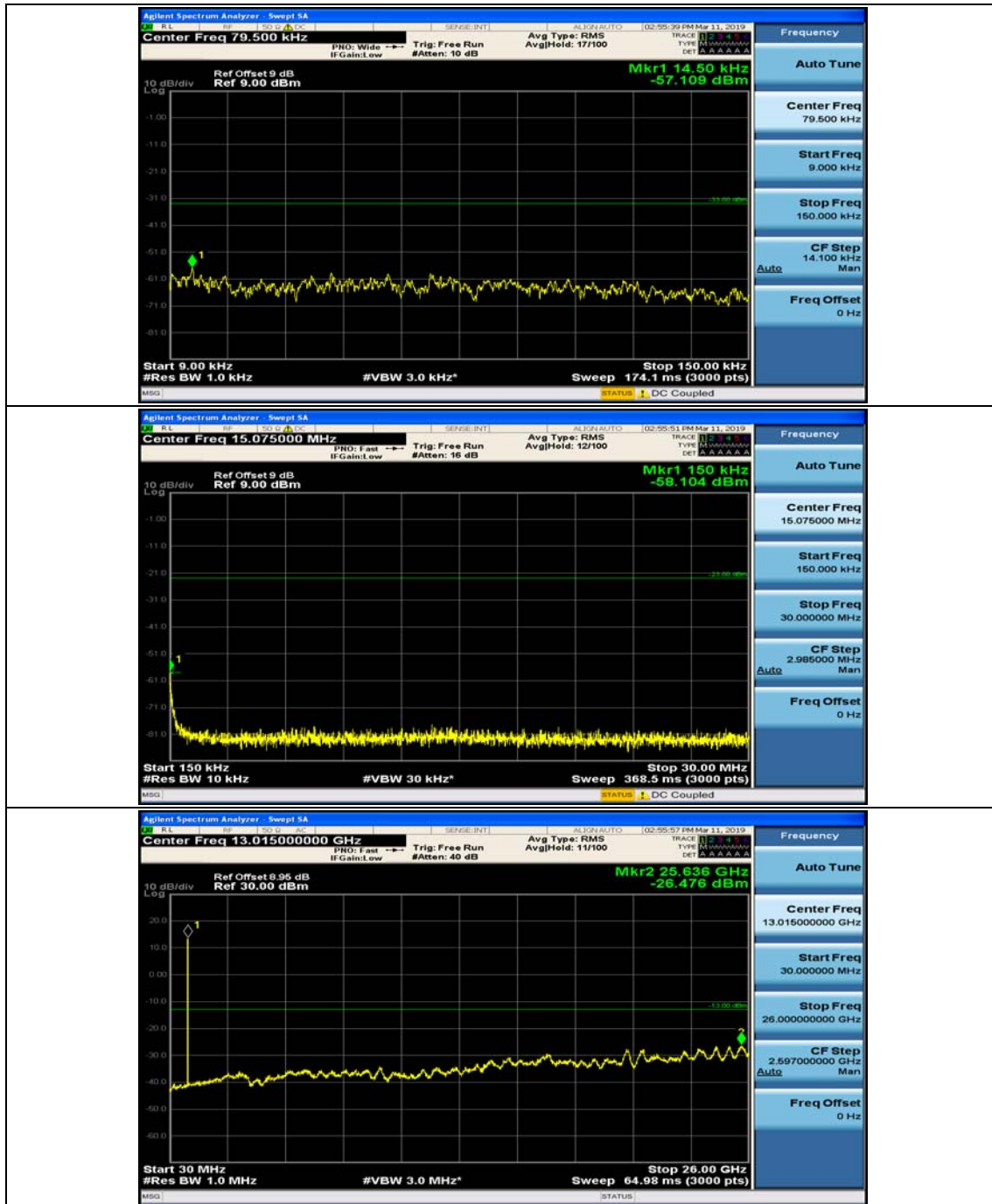


(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0

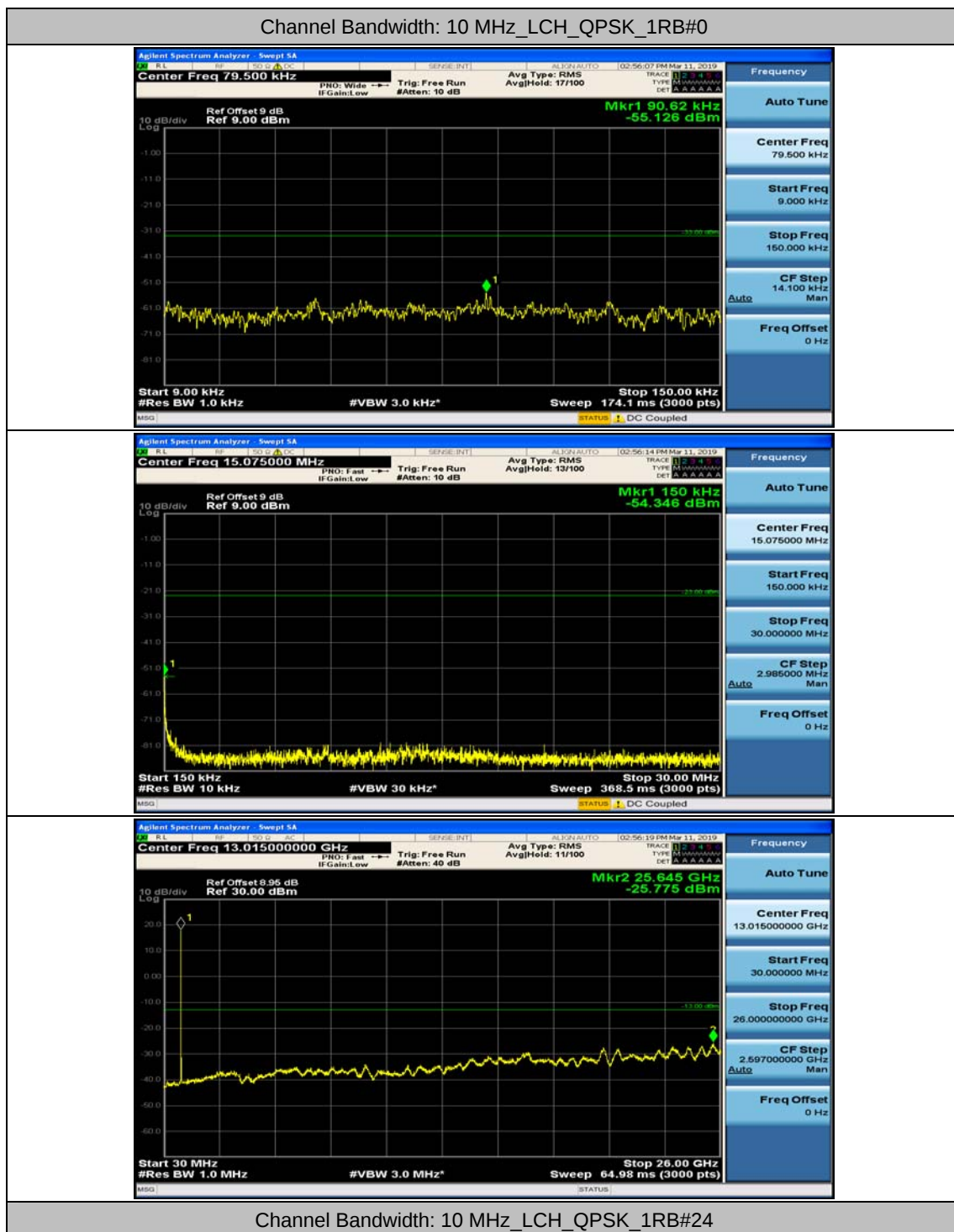


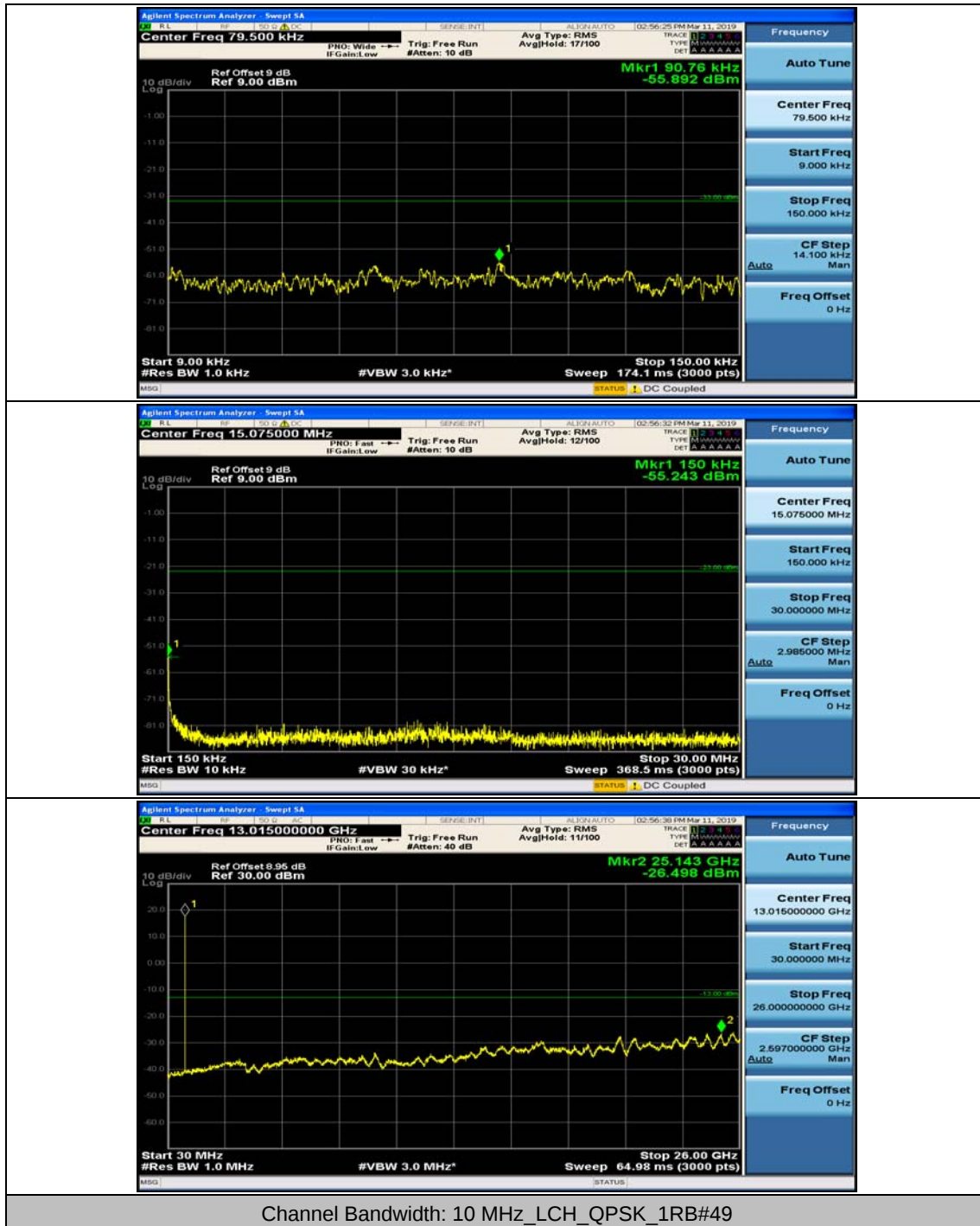
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

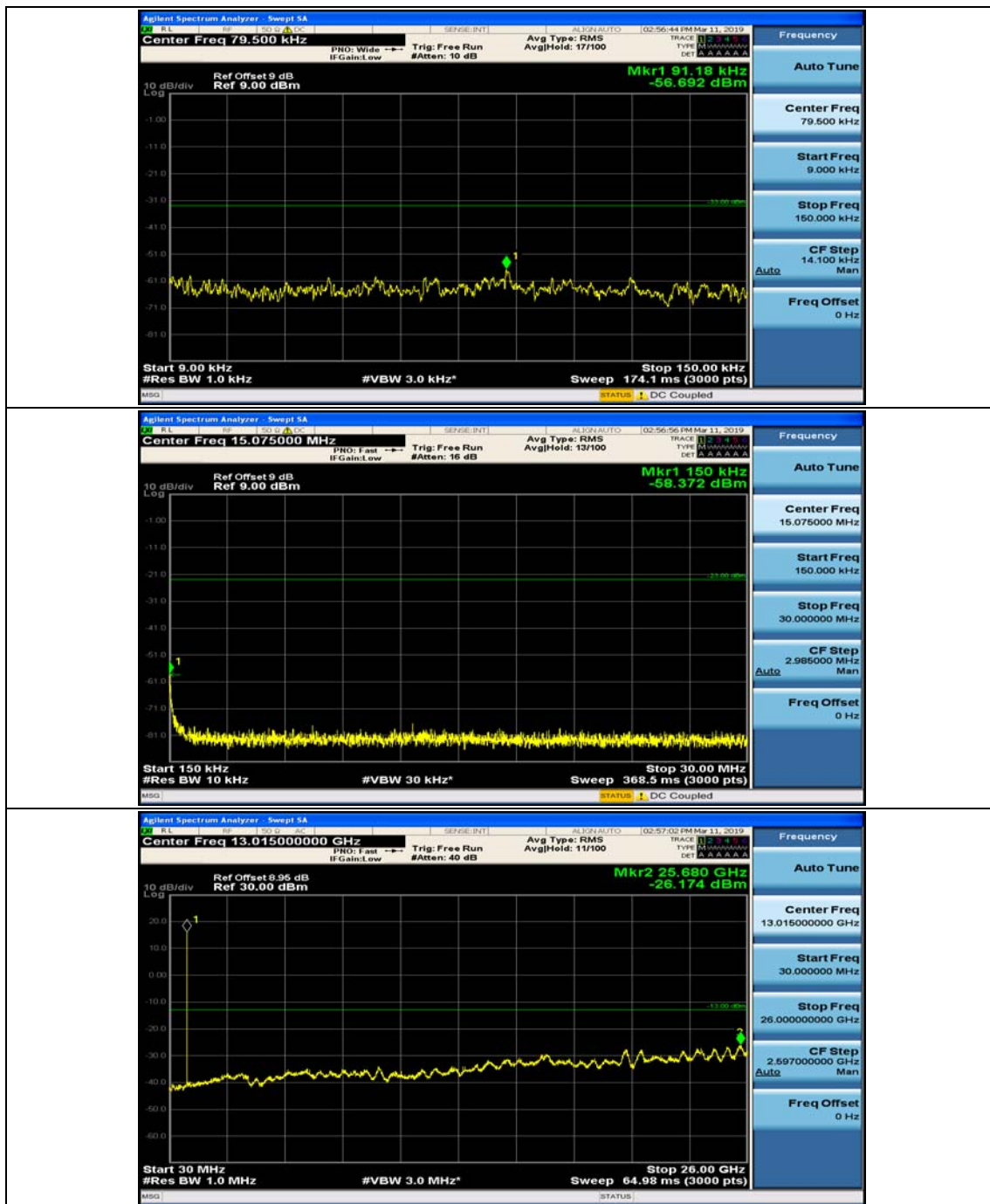




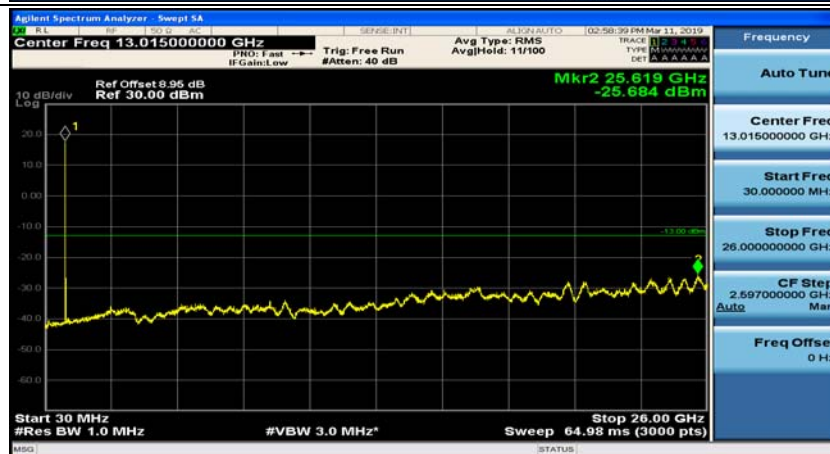
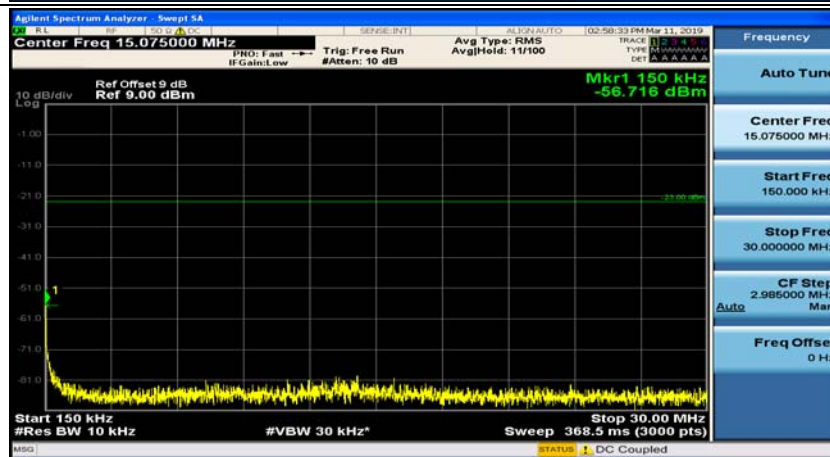
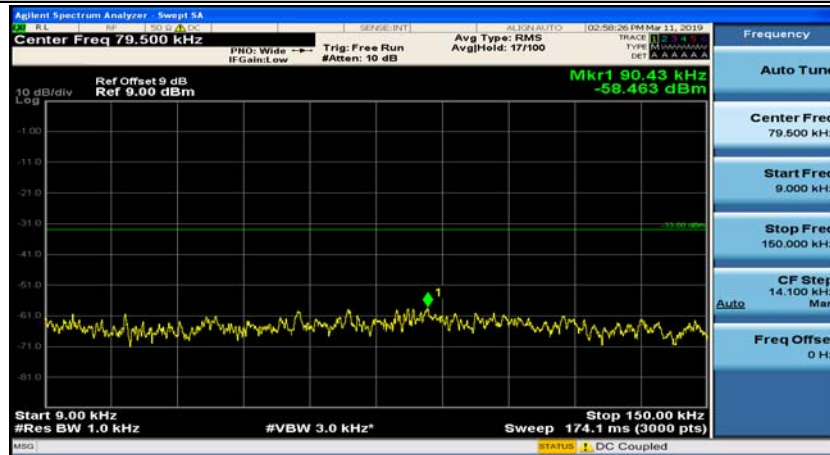
Channel Bandwidth: 10 MHz



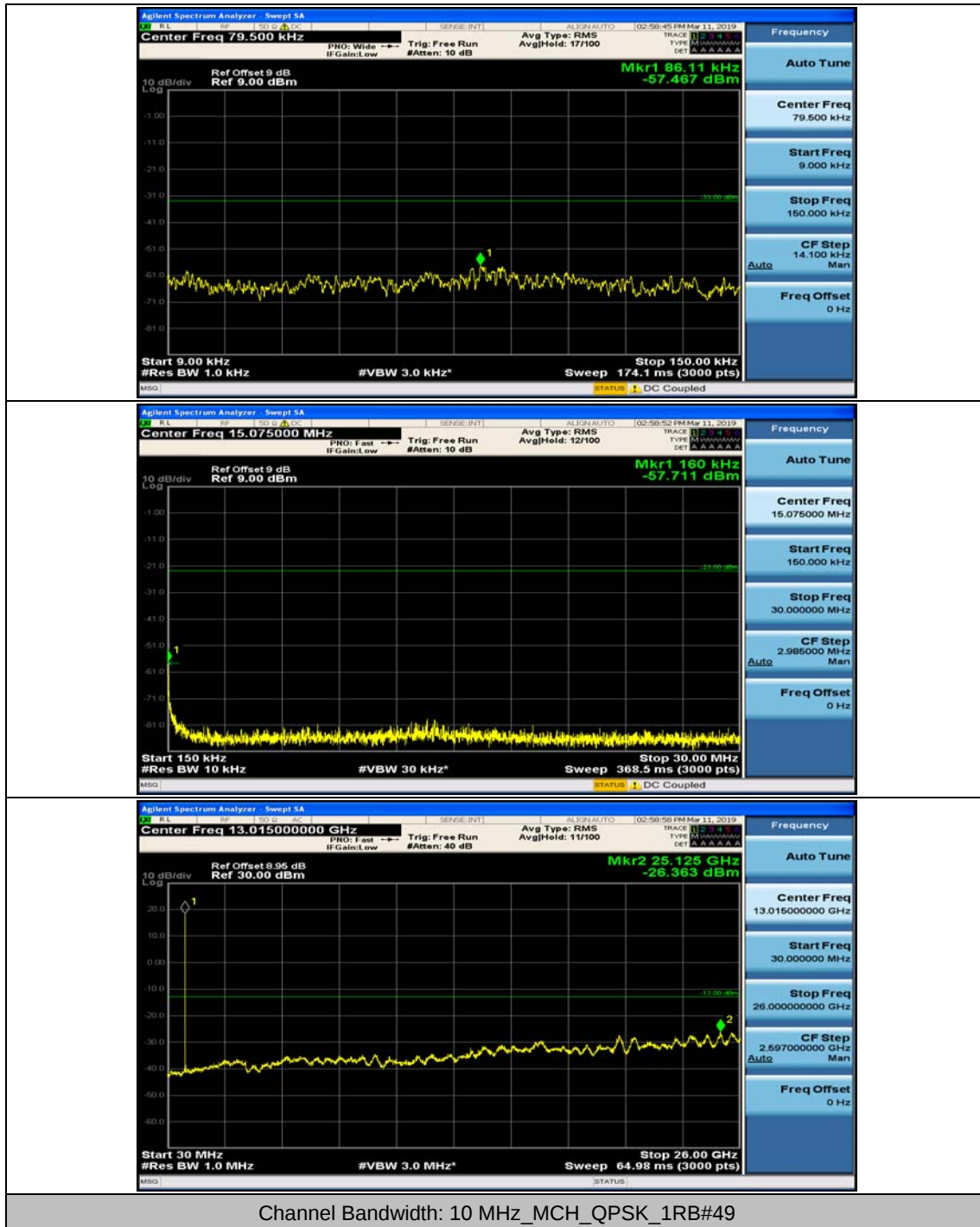


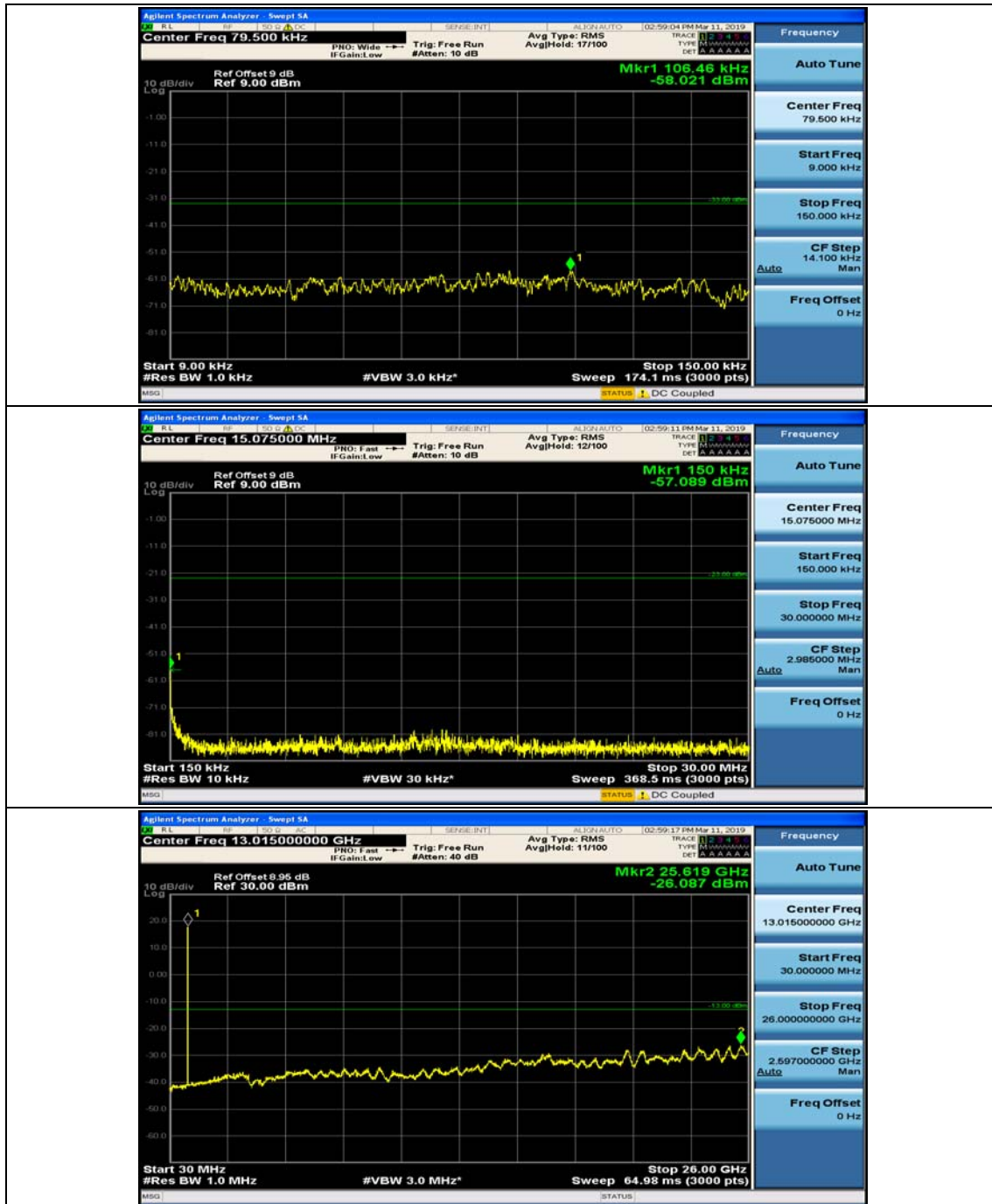


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0

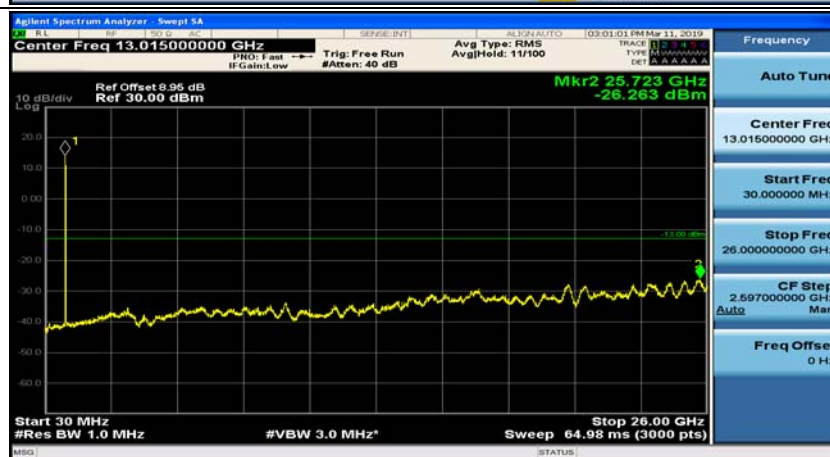
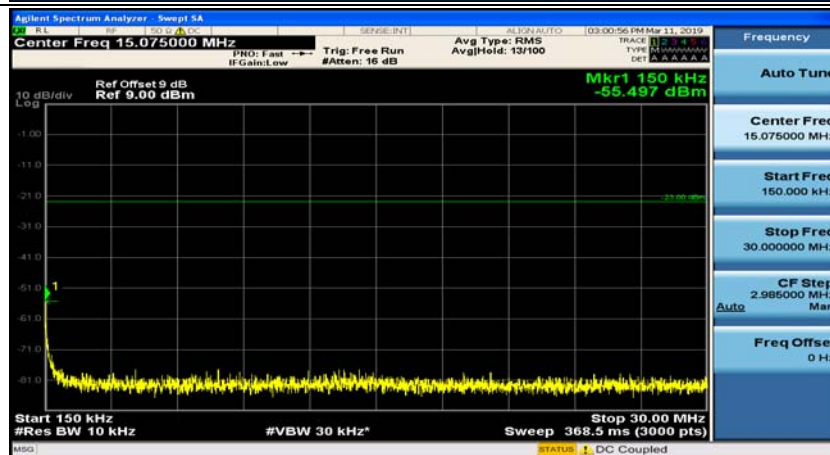


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

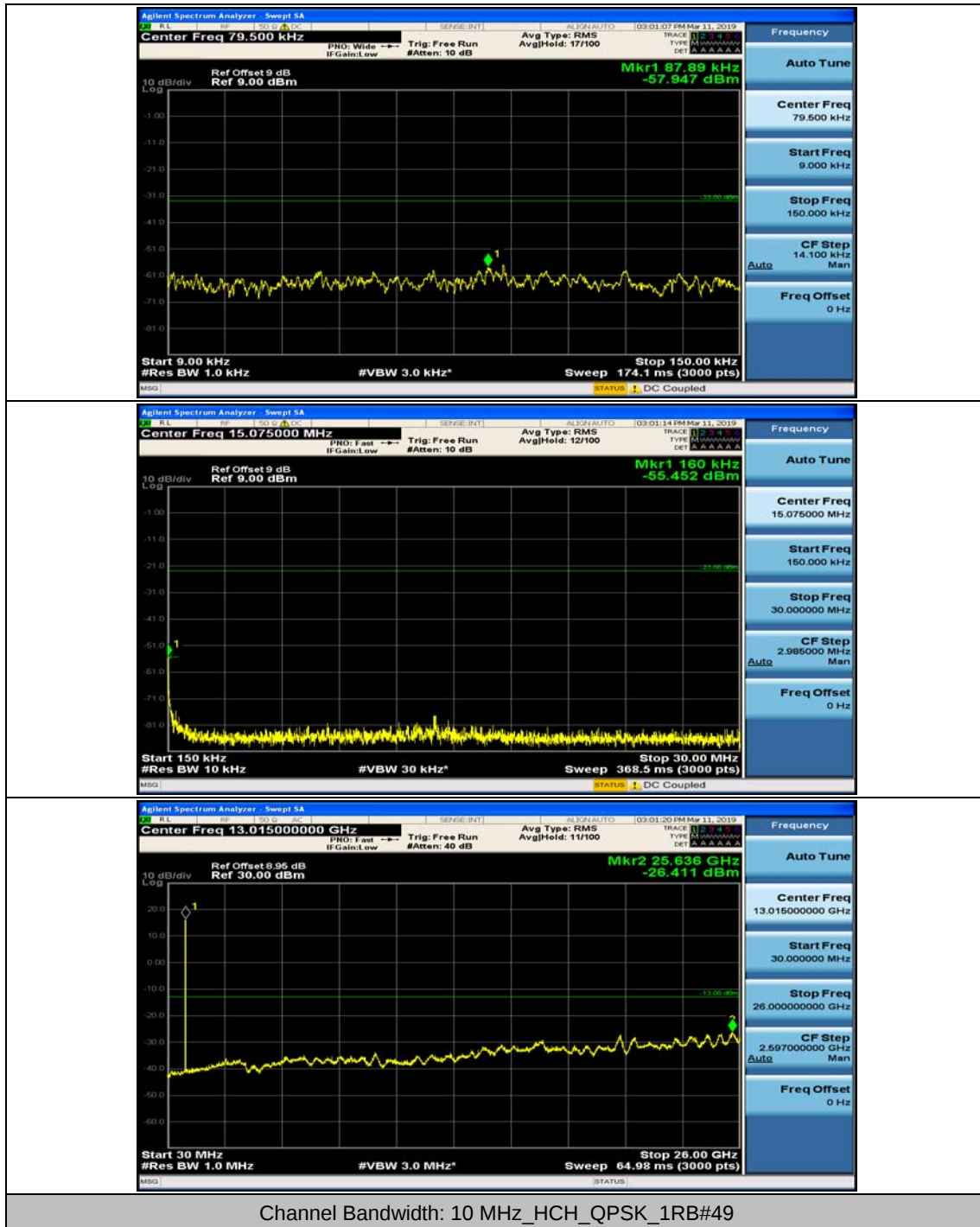


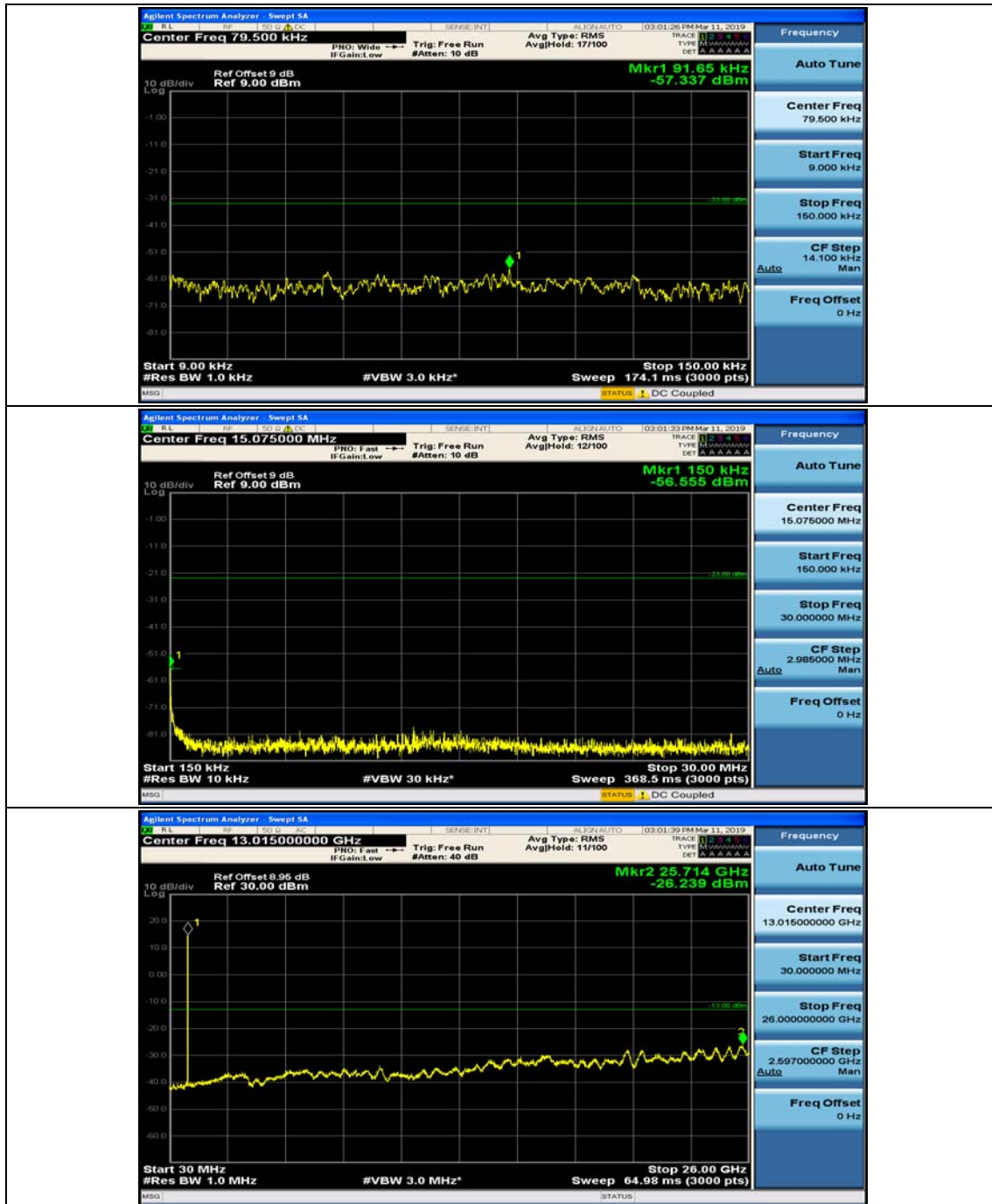


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0

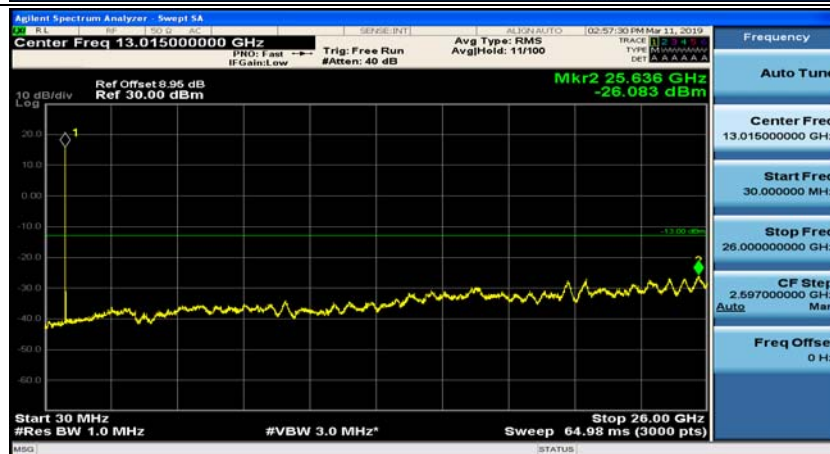
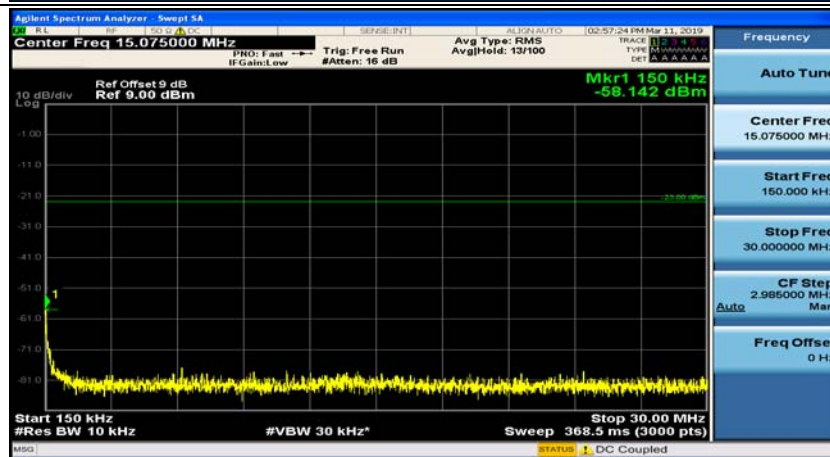
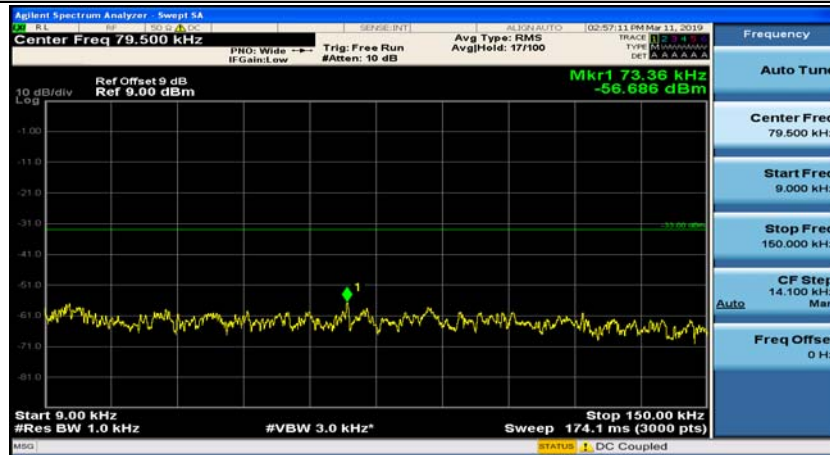


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

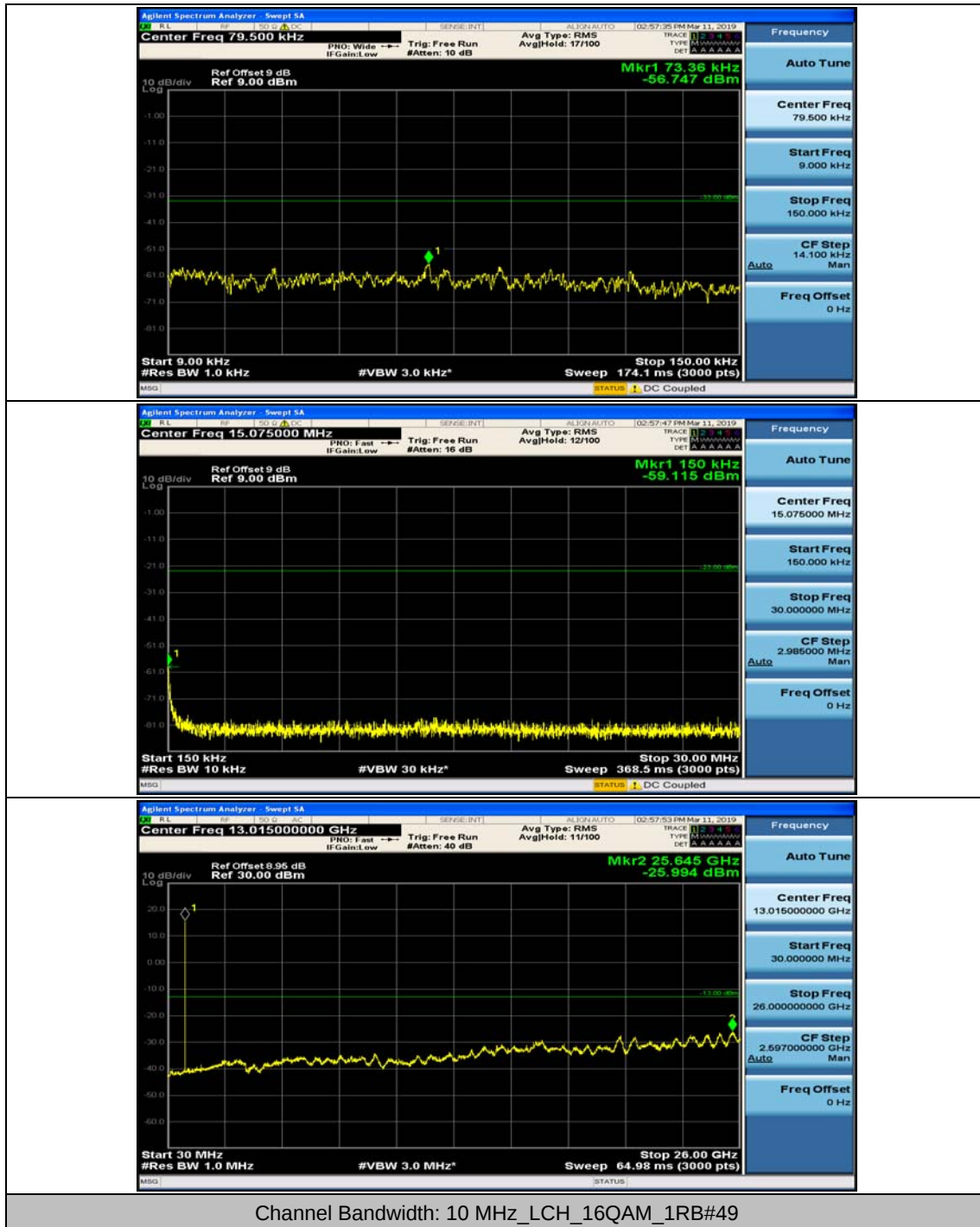


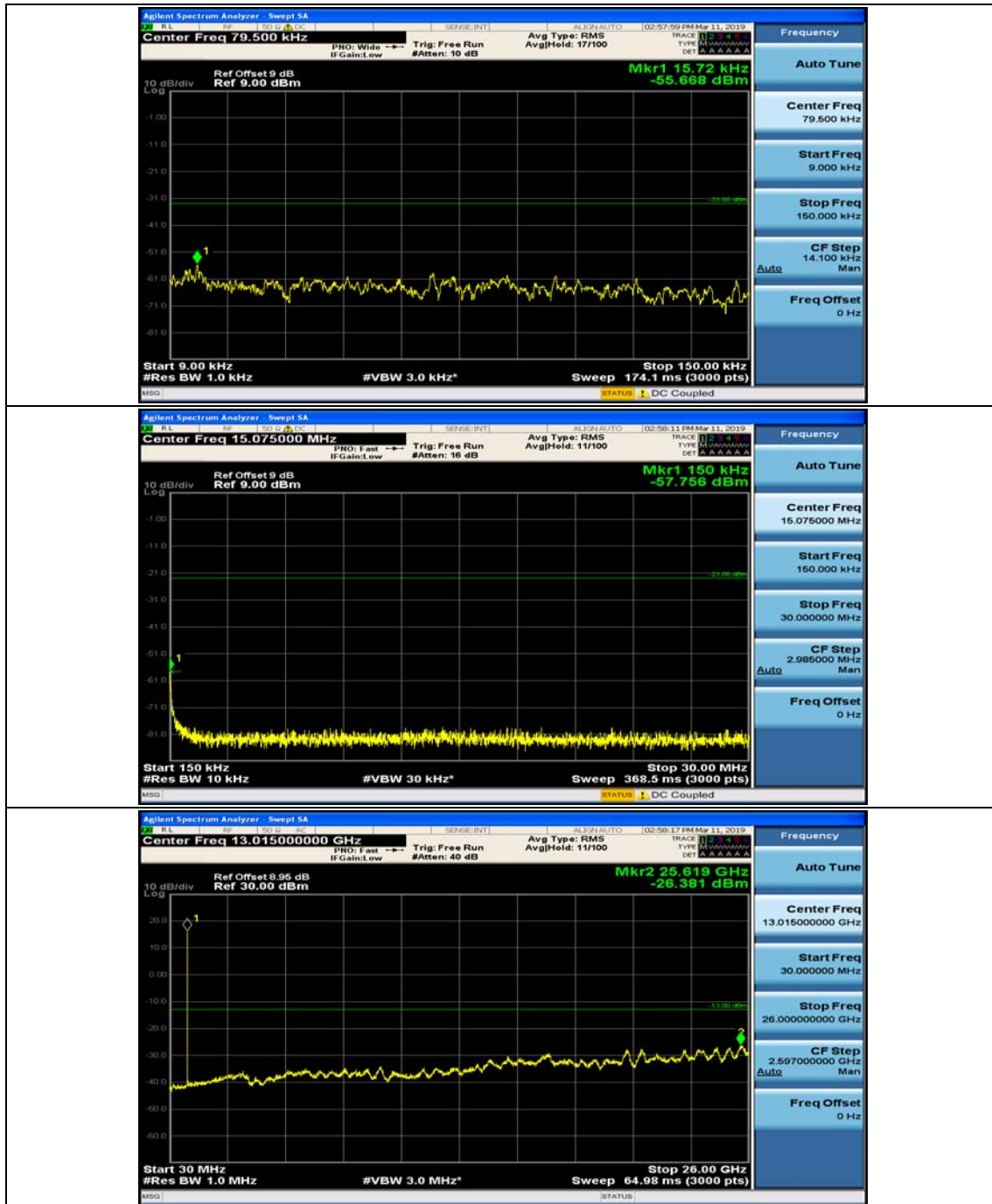


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

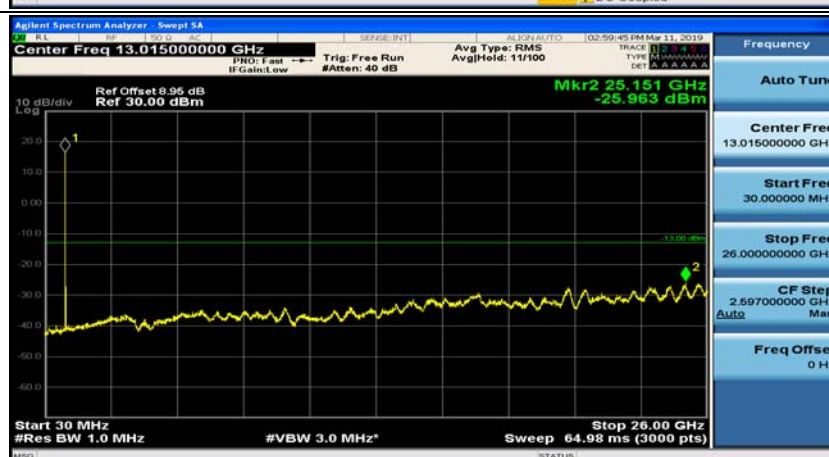
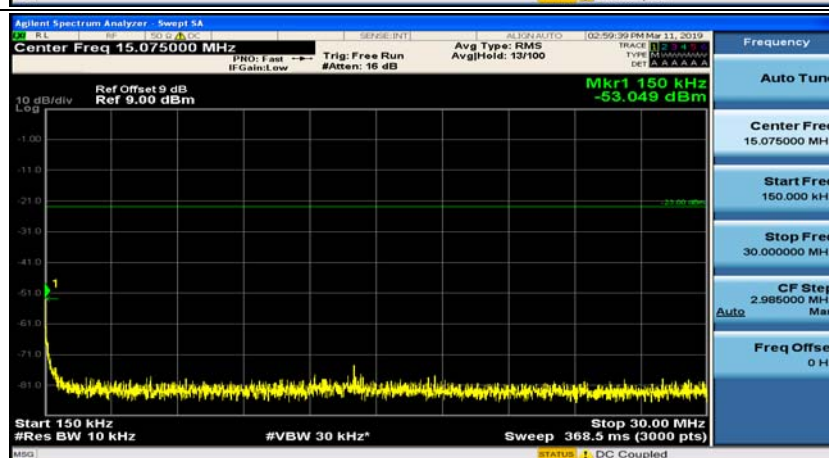
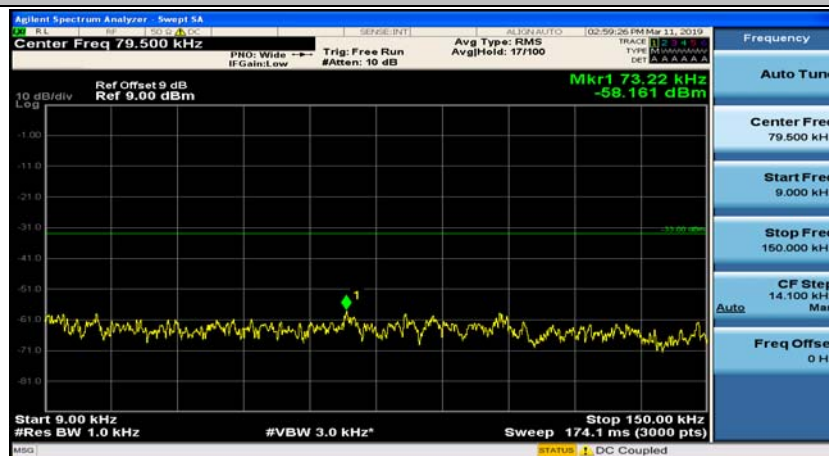


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

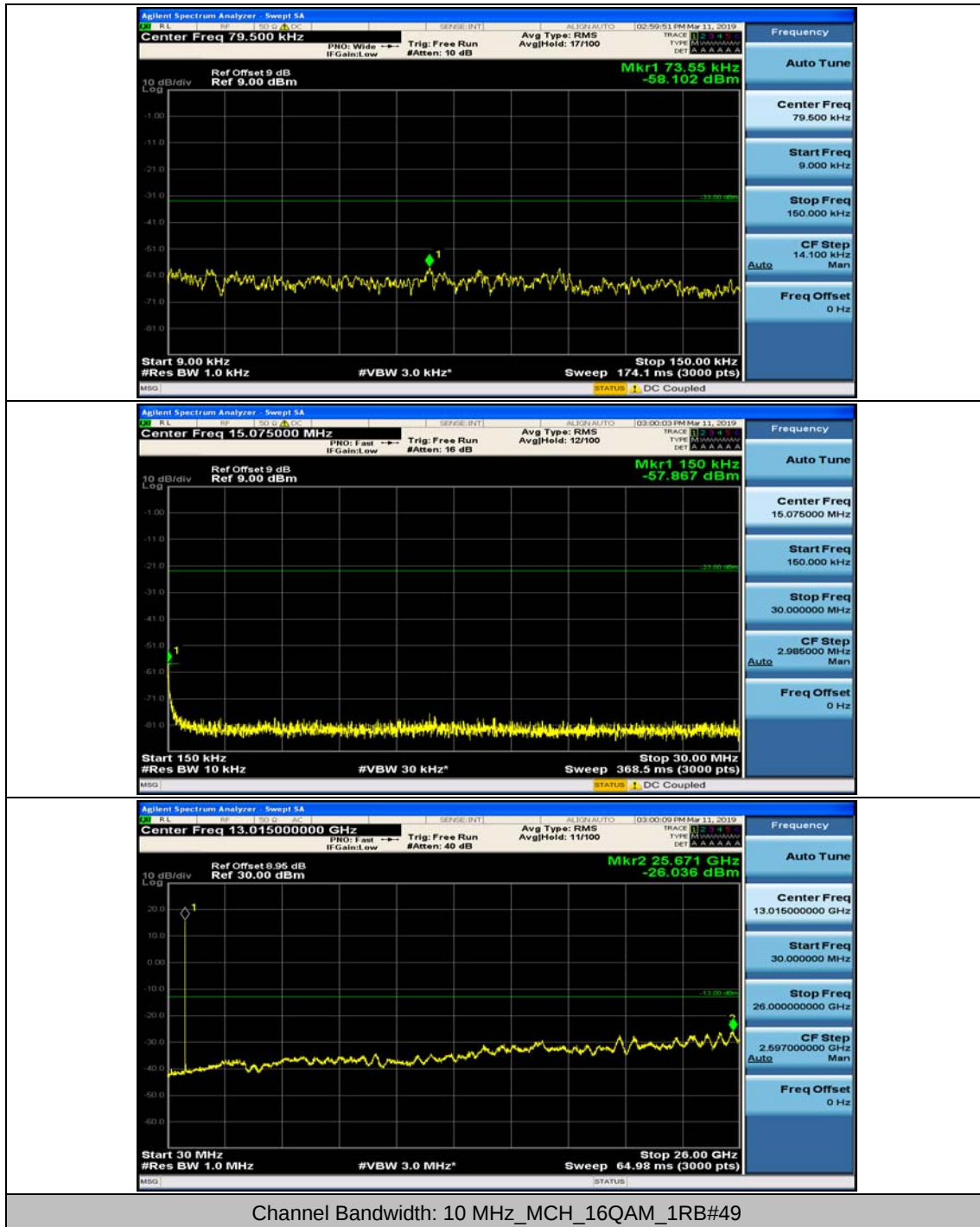


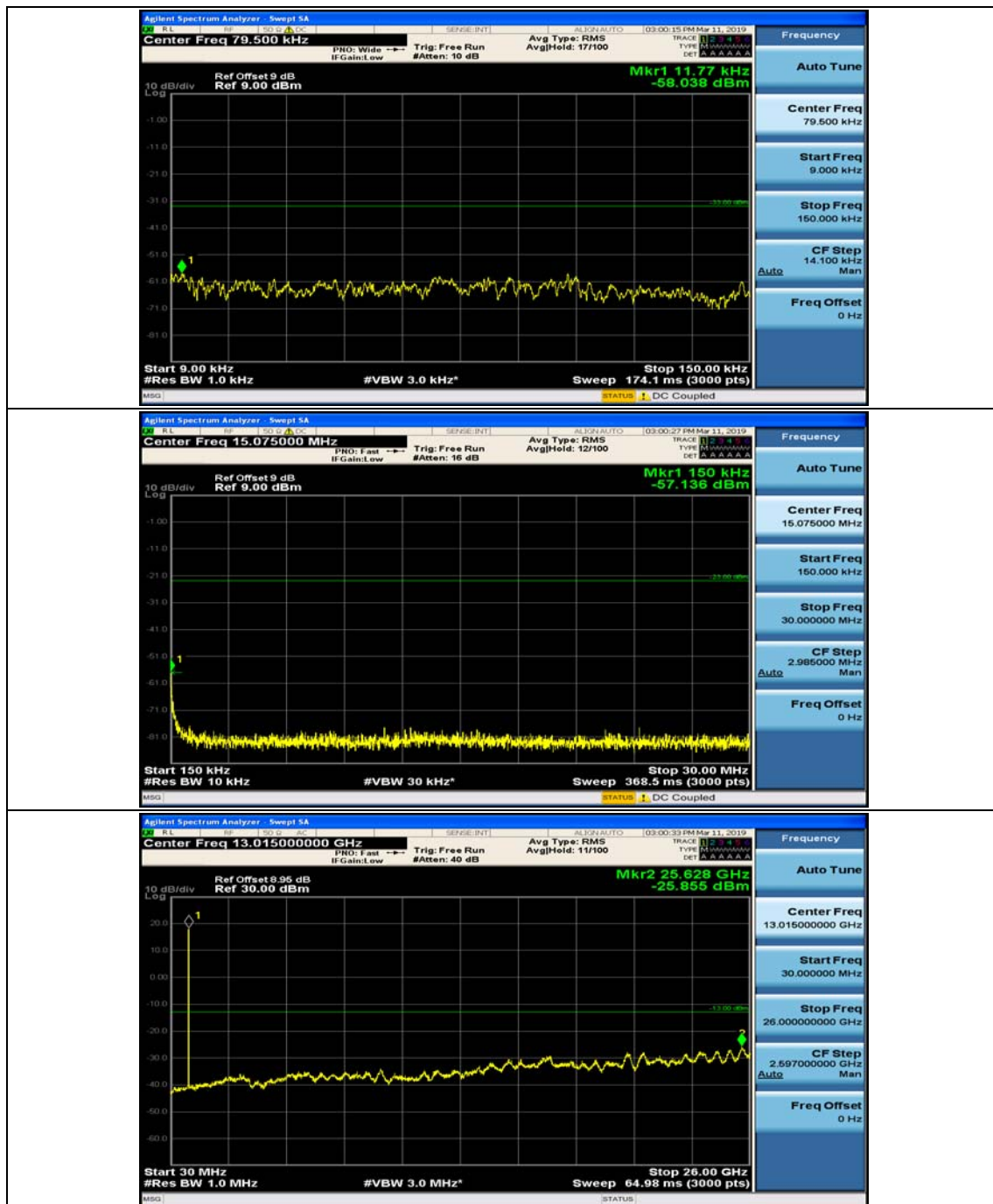


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

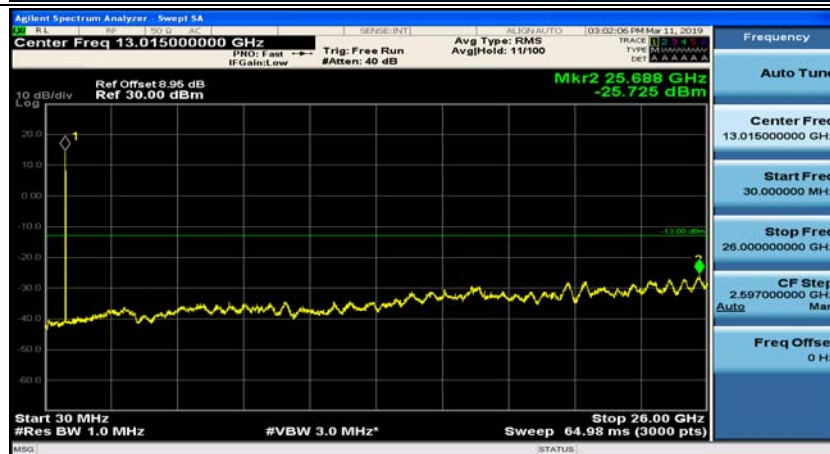
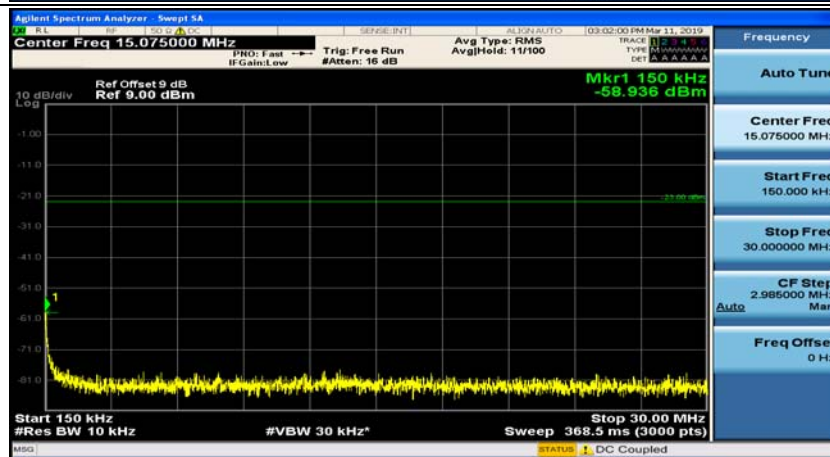


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

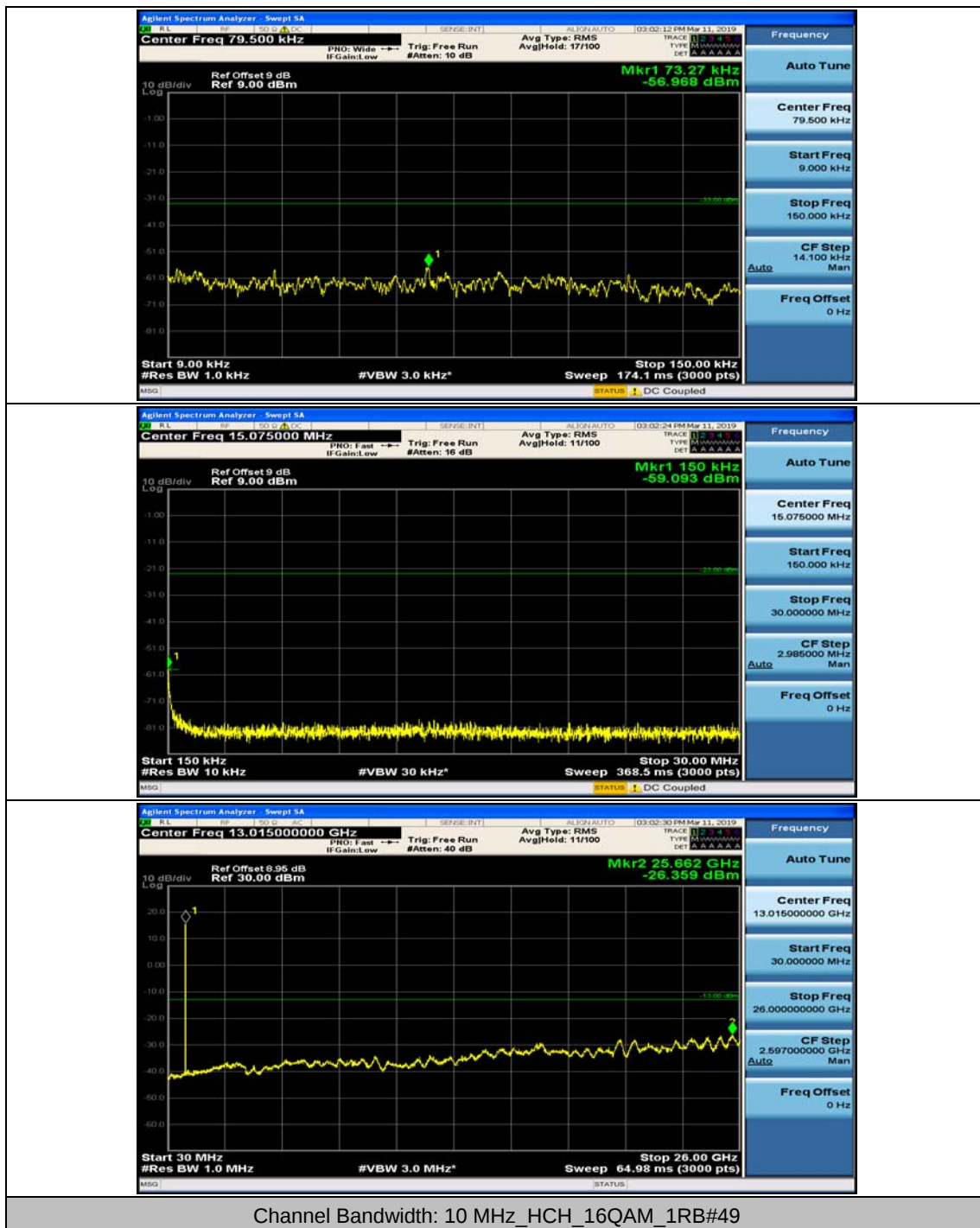


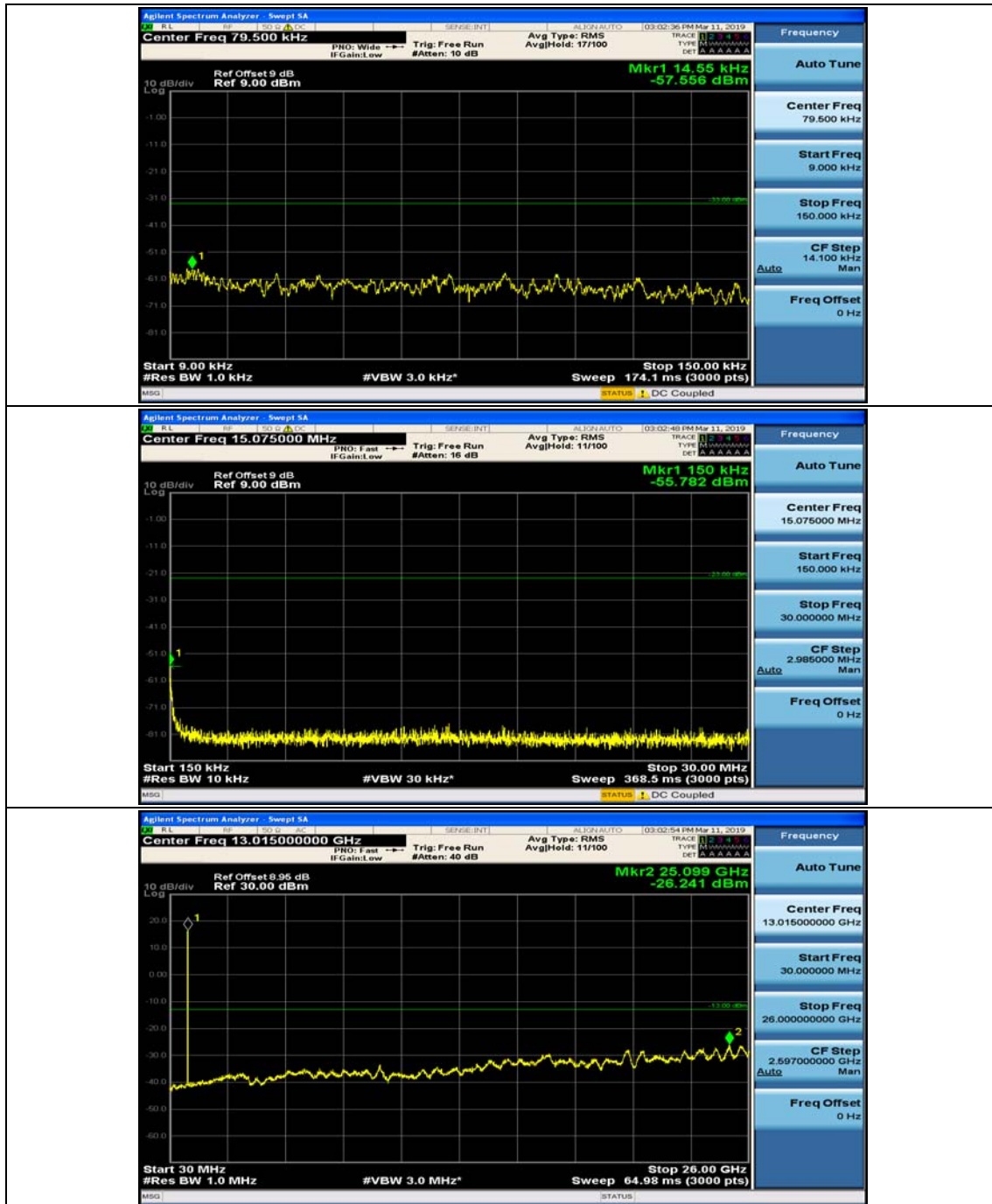


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



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	3.6	0.004365	± 2.5	PASS
		VN	TN	1.12	0.001358	± 2.5	PASS
		VH	TN	0.02	0.000024	± 2.5	PASS
	MCH	VL	TN	-1.42	-0.001698	± 2.5	PASS
		VN	TN	4.07	0.004866	± 2.5	PASS
		VH	TN	2.64	0.003156	± 2.5	PASS
	HCH	VL	TN	-0.36	-0.000424	± 2.5	PASS
		VN	TN	1.06	0.001250	± 2.5	PASS
		VH	TN	0.87	0.001026	± 2.5	PASS
16QAM	LCH	VL	TN	-0.46	-0.000558	± 2.5	PASS
		VN	TN	4.46	0.005408	± 2.5	PASS
		VH	TN	2.96	0.003589	± 2.5	PASS
	MCH	VL	TN	-1.82	-0.002176	± 2.5	PASS
		VN	TN	1.99	0.002379	± 2.5	PASS
		VH	TN	0.19	0.000227	± 2.5	PASS
	HCH	VL	TN	4.56	0.005375	± 2.5	PASS
		VN	TN	1.07	0.001261	± 2.5	PASS
		VH	TN	4.25	0.005010	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.03	0.000036	± 2.5	PASS
		VN	-20	0.21	0.000255	± 2.5	PASS
		VN	-10	-1.77	-0.002146	± 2.5	PASS
		VN	0	3.5	0.004244	± 2.5	PASS
		VN	10	2.81	0.003407	± 2.5	PASS
		VN	20	-1.43	-0.001734	± 2.5	PASS
		VN	30	0.31	0.000376	± 2.5	PASS
		VN	40	4.99	0.006051	± 2.5	PASS
		VN	50	3.49	0.004232	± 2.5	PASS
	MCH	VN	-30	2.36	0.002821	± 2.5	PASS

		VN	-20	2.23	0.002666	± 2.5	PASS
		VN	-10	1.3	0.001554	± 2.5	PASS
		VN	0	0.04	0.000048	± 2.5	PASS
		VN	10	-0.07	-0.000084	± 2.5	PASS
		VN	20	4.18	0.004997	± 2.5	PASS
		VN	30	-0.12	-0.000143	± 2.5	PASS
		VN	40	1.29	0.001542	± 2.5	PASS
		VN	50	-0.2	-0.000239	± 2.5	PASS
	HCH	VN	-30	3.6	0.004244	± 2.5	PASS
		VN	-20	4.27	0.005034	± 2.5	PASS
		VN	-10	4.47	0.005269	± 2.5	PASS
		VN	0	-0.2	-0.000236	± 2.5	PASS
		VN	10	-1.71	-0.002016	± 2.5	PASS
		VN	20	-1.36	-0.001603	± 2.5	PASS
		VN	30	-1.09	-0.001285	± 2.5	PASS
		VN	40	3.78	0.004456	± 2.5	PASS
		VN	50	-1.12	-0.001320	± 2.5	PASS
16QAM	LCH	VN	-30	4.03	0.004887	± 2.5	PASS
		VN	-20	3.82	0.004632	± 2.5	PASS
		VN	-10	-1.88	-0.002280	± 2.5	PASS
		VN	0	0.68	0.000825	± 2.5	PASS
		VN	10	4.07	0.004935	± 2.5	PASS
		VN	20	1.3	0.001576	± 2.5	PASS
		VN	30	-0.09	-0.000109	± 2.5	PASS
		VN	40	-1.79	-0.002170	± 2.5	PASS
		VN	50	3.1	0.003759	± 2.5	PASS
	MCH	VN	-30	1.63	0.001921	± 2.5	PASS
		VN	-20	0.08	0.000094	± 2.5	PASS
		VN	-10	4.88	0.005753	± 2.5	PASS
		VN	0	-1.14	-0.001344	± 2.5	PASS
		VN	10	0.96	0.001132	± 2.5	PASS
		VN	20	3.34	0.003937	± 2.5	PASS
		VN	30	-1.16	-0.001367	± 2.5	PASS
		VN	40	-0.71	-0.000837	± 2.5	PASS
		VN	50	3.26	0.003843	± 2.5	PASS
	HCH	VN	-30	2.31	0.002723	± 2.5	PASS
		VN	-20	2.12	0.002499	± 2.5	PASS
		VN	-10	0.28	0.000330	± 2.5	PASS
		VN	0	4.49	0.005293	± 2.5	PASS
		VN	10	3.23	0.003808	± 2.5	PASS
		VN	20	-0.24	-0.000283	± 2.5	PASS

		VN	30	-0.42	-0.000495	± 2.5	PASS
		VN	40	-0.75	-0.000884	± 2.5	PASS
		VN	50	4.27	0.005034	± 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	-1.28	-0.001551	± 2.5	PASS
		VN	TN	-1.08	-0.001308	± 2.5	PASS
		VH	TN	4.88	0.005912	± 2.5	PASS
	MCH	VL	TN	3.12	0.003730	± 2.5	PASS
		VN	TN	1.29	0.001542	± 2.5	PASS
		VH	TN	-0.29	-0.000347	± 2.5	PASS
	HCH	VL	TN	4.15	0.004897	± 2.5	PASS
		VN	TN	-1.71	-0.002018	± 2.5	PASS
		VH	TN	0.14	0.000165	± 2.5	PASS
16QAM	LCH	VL	TN	-0.79	-0.000957	± 2.5	PASS
		VN	TN	2.04	0.002471	± 2.5	PASS
		VH	TN	2.62	0.003174	± 2.5	PASS
	MCH	VL	TN	-1.25	-0.001494	± 2.5	PASS
		VN	TN	-0.78	-0.000932	± 2.5	PASS
		VH	TN	1.39	0.001662	± 2.5	PASS
	HCH	VL	TN	-0.76	-0.000897	± 2.5	PASS
		VN	TN	-1.92	-0.002265	± 2.5	PASS
		VH	TN	1.87	0.002206	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.78	-0.000945	± 2.5	PASS
		VN	-20	4.59	0.005560	± 2.5	PASS
		VN	-10	3.08	0.003731	± 2.5	PASS
		VN	0	1.09	0.001320	± 2.5	PASS
		VN	10	3.99	0.004833	± 2.5	PASS
		VN	20	-0.47	-0.000569	± 2.5	PASS
		VN	30	4.05	0.004906	± 2.5	PASS
		VN	40	3.18	0.003852	± 2.5	PASS
		VN	50	-0.5	-0.000606	± 2.5	PASS
	MCH	VN	-30	0.08	0.000096	± 2.5	PASS
		VN	-20	1.12	0.001339	± 2.5	PASS

		VN	-10	-0.43	-0.000514	± 2.5	PASS	
		VN	0	4.34	0.005188	± 2.5	PASS	
		VN	10	3.35	0.004005	± 2.5	PASS	
		VN	20	3.81	0.004555	± 2.5	PASS	
		VN	30	3.02	0.003610	± 2.5	PASS	
		VN	40	4.78	0.005714	± 2.5	PASS	
		VN	50	3.29	0.003933	± 2.5	PASS	
	HCH	VN	-30	-1.58	-0.001864	± 2.5	PASS	
		VN	-20	1.97	0.002324	± 2.5	PASS	
		VN	-10	2.43	0.002867	± 2.5	PASS	
		VN	0	2.07	0.002442	± 2.5	PASS	
		VN	10	-0.76	-0.000897	± 2.5	PASS	
		VN	20	0.08	0.000094	± 2.5	PASS	
		VN	30	-0.74	-0.000873	± 2.5	PASS	
		VN	40	0.63	0.000743	± 2.5	PASS	
		VN	50	4.55	0.005369	± 2.5	PASS	
	QPSK	LCH	VN	-30	1.99	0.002379	± 2.5	PASS
			VN	-20	3.75	0.004483	± 2.5	PASS
VN			-10	-1.88	-0.002247	± 2.5	PASS	
VN			0	-0.3	-0.000359	± 2.5	PASS	
VN			10	2.25	0.002690	± 2.5	PASS	
VN			20	4.9	0.005858	± 2.5	PASS	
VN			30	2.33	0.002785	± 2.5	PASS	
VN			40	-1.75	-0.002092	± 2.5	PASS	
VN			50	0.23	0.000275	± 2.5	PASS	
MCH		VN	-30	4.57	0.005392	± 2.5	PASS	
		VN	-20	-1.9	-0.002242	± 2.5	PASS	
		VN	-10	-1.34	-0.001581	± 2.5	PASS	
		VN	0	-0.55	-0.000649	± 2.5	PASS	
		VN	10	0.73	0.000861	± 2.5	PASS	
		VN	20	-1.47	-0.001735	± 2.5	PASS	
		VN	30	-0.73	-0.000861	± 2.5	PASS	
		VN	40	-1.25	-0.001475	± 2.5	PASS	
		VN	50	0.14	0.000165	± 2.5	PASS	
HCH	VN	-30	-0.43	-0.000507	± 2.5	PASS		
	VN	-20	2.61	0.003080	± 2.5	PASS		
	VN	-10	-0.52	-0.000614	± 2.5	PASS		
	VN	0	3.84	0.004531	± 2.5	PASS		
	VN	10	-1.36	-0.001605	± 2.5	PASS		
	VN	20	3.36	0.003965	± 2.5	PASS		
	VN	30	-0.39	-0.000460	± 2.5	PASS		

		VN	40	4.76	0.005617	± 2.5	PASS
		VN	50	3.02	0.003563	± 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	2.86	0.003460	± 2.5	PASS
		VN	TN	-0.08	-0.000097	± 2.5	PASS
		VH	TN	0.66	0.000799	± 2.5	PASS
	MCH	VL	TN	2.65	0.003168	± 2.5	PASS
		VN	TN	0.82	0.000980	± 2.5	PASS
		VH	TN	1	0.001195	± 2.5	PASS
	HCH	VL	TN	3.58	0.004229	± 2.5	PASS
		VN	TN	2.24	0.002646	± 2.5	PASS
		VH	TN	-0.86	-0.001016	± 2.5	PASS
16QAM	LCH	VL	TN	4.87	0.005892	± 2.5	PASS
		VN	TN	4.3	0.005203	± 2.5	PASS
		VH	TN	4.28	0.005178	± 2.5	PASS
	MCH	VL	TN	0.09	0.000108	± 2.5	PASS
		VN	TN	-0.97	-0.001160	± 2.5	PASS
		VH	TN	3.65	0.004363	± 2.5	PASS
	HCH	VL	TN	-1.23	-0.001453	± 2.5	PASS
		VN	TN	-1.4	-0.001654	± 2.5	PASS
		VH	TN	1.8	0.002126	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.52	0.003049	± 2.5	PASS
		VN	-20	-1.88	-0.002275	± 2.5	PASS
		VN	-10	3.1	0.003751	± 2.5	PASS
		VN	0	3.86	0.004670	± 2.5	PASS
		VN	10	3.33	0.004029	± 2.5	PASS
		VN	20	1.25	0.001512	± 2.5	PASS
		VN	30	1.3	0.001573	± 2.5	PASS
		VN	40	3.91	0.004731	± 2.5	PASS
		VN	50	2.04	0.002468	± 2.5	PASS
	MCH	VN	-30	-0.91	-0.001088	± 2.5	PASS
		VN	-20	0.23	0.000275	± 2.5	PASS
		VN	-10	0.69	0.000825	± 2.5	PASS

		VN	0	2.48	0.002965	± 2.5	PASS
		VN	10	2.02	0.002415	± 2.5	PASS
		VN	20	2.48	0.002965	± 2.5	PASS
		VN	30	3.42	0.004088	± 2.5	PASS
		VN	40	1.53	0.001829	± 2.5	PASS
		VN	50	1.75	0.002092	± 2.5	PASS
	HCH	VN	-30	-1.16	-0.001370	± 2.5	PASS
		VN	-20	0.18	0.000213	± 2.5	PASS
		VN	-10	1.66	0.001961	± 2.5	PASS
		VN	0	0.26	0.000307	± 2.5	PASS
		VN	10	3.36	0.003969	± 2.5	PASS
		VN	20	-1.98	-0.002339	± 2.5	PASS
		VN	30	2.05	0.002422	± 2.5	PASS
		VN	40	-0.28	-0.000331	± 2.5	PASS
		VN	50	1.99	0.002351	± 2.5	PASS
16QAM	LCH	VN	-30	0.57	0.000681	± 2.5	PASS
		VN	-20	-0.12	-0.000143	± 2.5	PASS
		VN	-10	-1.84	-0.002200	± 2.5	PASS
		VN	0	1.19	0.001423	± 2.5	PASS
		VN	10	4.83	0.005774	± 2.5	PASS
		VN	20	0.62	0.000741	± 2.5	PASS
		VN	30	4.82	0.005762	± 2.5	PASS
		VN	40	-1.32	-0.001578	± 2.5	PASS
		VN	50	-0.58	-0.000693	± 2.5	PASS
	MCH	VN	-30	4.94	0.005836	± 2.5	PASS
		VN	-20	0.61	0.000721	± 2.5	PASS
		VN	-10	3.45	0.004076	± 2.5	PASS
		VN	0	2.36	0.002788	± 2.5	PASS
		VN	10	4.05	0.004784	± 2.5	PASS
		VN	20	4.92	0.005812	± 2.5	PASS
		VN	30	0.13	0.000154	± 2.5	PASS
		VN	40	1.9	0.002245	± 2.5	PASS
		VN	50	2.06	0.002434	± 2.5	PASS
	HCH	VN	-30	1.99	0.002351	± 2.5	PASS
		VN	-20	4.97	0.005871	± 2.5	PASS
		VN	-10	-0.33	-0.000390	± 2.5	PASS
		VN	0	2.52	0.002977	± 2.5	PASS
		VN	10	1.91	0.002256	± 2.5	PASS
		VN	20	2.22	0.002623	± 2.5	PASS
		VN	30	4.9	0.005789	± 2.5	PASS
		VN	40	0.89	0.001051	± 2.5	PASS

		VN	50	-1.87	-0.002209	± 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	4.32	0.005211	± 2.5	PASS
		VN	TN	-0.65	-0.000784	± 2.5	PASS
		VH	TN	2.1	0.002533	± 2.5	PASS
	MCH	VL	TN	2.5	0.002989	± 2.5	PASS
		VN	TN	-0.04	-0.000048	± 2.5	PASS
		VH	TN	-1.23	-0.001470	± 2.5	PASS
	HCH	VL	TN	0.76	0.000900	± 2.5	PASS
		VN	TN	-1.16	-0.001374	± 2.5	PASS
		VH	TN	3.23	0.003827	± 2.5	PASS
16QAM	LCH	VL	TN	4.93	0.005947	± 2.5	PASS
		VN	TN	0.79	0.000953	± 2.5	PASS
		VH	TN	2.15	0.002593	± 2.5	PASS
	MCH	VL	TN	0.65	0.000777	± 2.5	PASS
		VN	TN	4.06	0.004854	± 2.5	PASS
		VH	TN	0.84	0.001004	± 2.5	PASS
	HCH	VL	TN	-1.7	-0.002014	± 2.5	PASS
		VN	TN	-0.07	-0.000083	± 2.5	PASS
		VH	TN	-1.96	-0.002322	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	2.14	0.002581	± 2.5	PASS
		VN	-20	0.82	0.000989	± 2.5	PASS
		VN	-10	2	0.002413	± 2.5	PASS
		VN	0	1.18	0.001423	± 2.5	PASS
		VN	10	2.6	0.003136	± 2.5	PASS
		VN	20	1.36	0.001641	± 2.5	PASS
		VN	30	0.88	0.001062	± 2.5	PASS
		VN	40	-1.64	-0.001978	± 2.5	PASS
		VN	50	3.86	0.004656	± 2.5	PASS
	MCH	VN	-30	-1.22	-0.001458	± 2.5	PASS
		VN	-20	0.23	0.000275	± 2.5	PASS
		VN	-10	1.19	0.001423	± 2.5	PASS
		VN	0	-0.58	-0.000693	± 2.5	PASS

		VN	10	3.94	0.004710	± 2.5	PASS
		VN	20	0.58	0.000693	± 2.5	PASS
		VN	30	-1.54	-0.001841	± 2.5	PASS
		VN	40	-0.41	-0.000490	± 2.5	PASS
		VN	50	-1.04	-0.001243	± 2.5	PASS
	HCH	VN	-30	1.42	0.001682	± 2.5	PASS
		VN	-20	3.63	0.004301	± 2.5	PASS
		VN	-10	-0.85	-0.001007	± 2.5	PASS
		VN	0	3.51	0.004159	± 2.5	PASS
		VN	10	0.09	0.000107	± 2.5	PASS
		VN	20	2.99	0.003543	± 2.5	PASS
		VN	30	3.68	0.004360	± 2.5	PASS
		VN	40	-0.97	-0.001149	± 2.5	PASS
		VN	50	0.26	0.000308	± 2.5	PASS
QPSK	LCH	VN	-30	2.41	0.002881	± 2.5	PASS
		VN	-20	3.66	0.004375	± 2.5	PASS
		VN	-10	-1.53	-0.001829	± 2.5	PASS
		VN	0	4.31	0.005152	± 2.5	PASS
		VN	10	-0.58	-0.000693	± 2.5	PASS
		VN	20	4.36	0.005212	± 2.5	PASS
		VN	30	-0.48	-0.000574	± 2.5	PASS
		VN	40	-0.5	-0.000598	± 2.5	PASS
		VN	50	1.91	0.002283	± 2.5	PASS
	MCH	VN	-30	4.51	0.005344	± 2.5	PASS
		VN	-20	3.01	0.003566	± 2.5	PASS
		VN	-10	-1.17	-0.001386	± 2.5	PASS
		VN	0	3.56	0.004218	± 2.5	PASS
		VN	10	1.06	0.001256	± 2.5	PASS
		VN	20	-0.33	-0.000391	± 2.5	PASS
		VN	30	3.3	0.003910	± 2.5	PASS
		VN	40	4.18	0.004953	± 2.5	PASS
		VN	50	4.86	0.005758	± 2.5	PASS
	HCH	VN	-30	-0.79	-0.000936	± 2.5	PASS
		VN	-20	2.89	0.003424	± 2.5	PASS
		VN	-10	3.97	0.004704	± 2.5	PASS
		VN	0	0.22	0.000261	± 2.5	PASS
		VN	10	1.92	0.002275	± 2.5	PASS
		VN	20	1.44	0.001706	± 2.5	PASS
		VN	30	0.04	0.000047	± 2.5	PASS
		VN	40	4.38	0.005190	± 2.5	PASS
		VN	50	-1.56	-0.001848	± 2.5	PASS