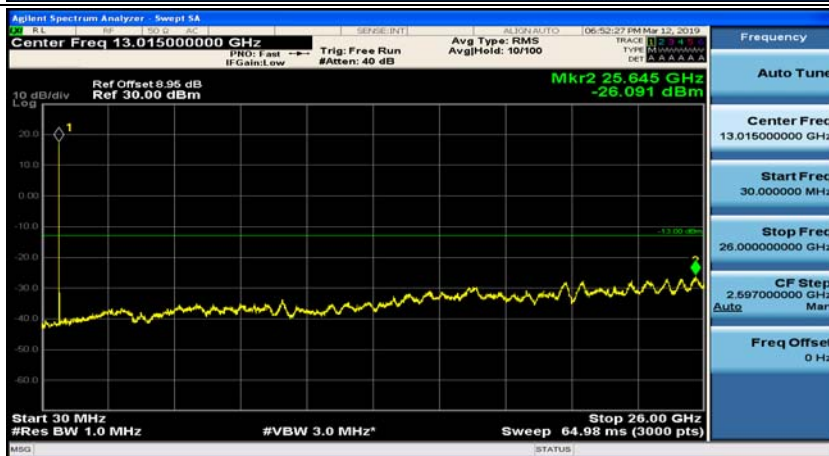
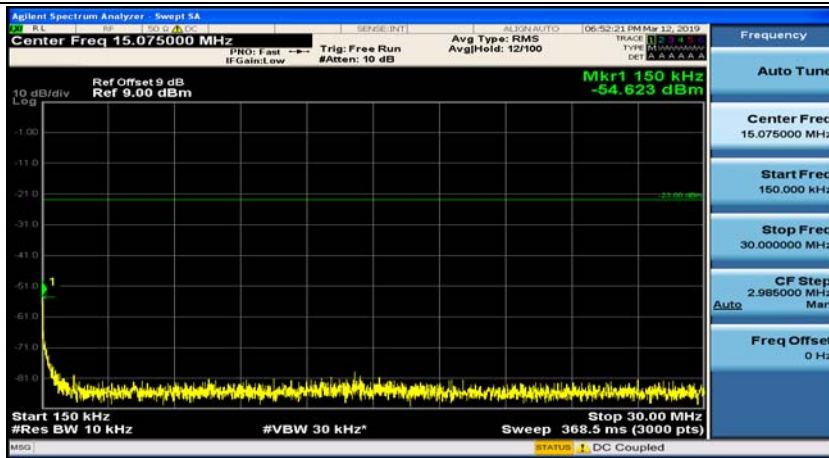
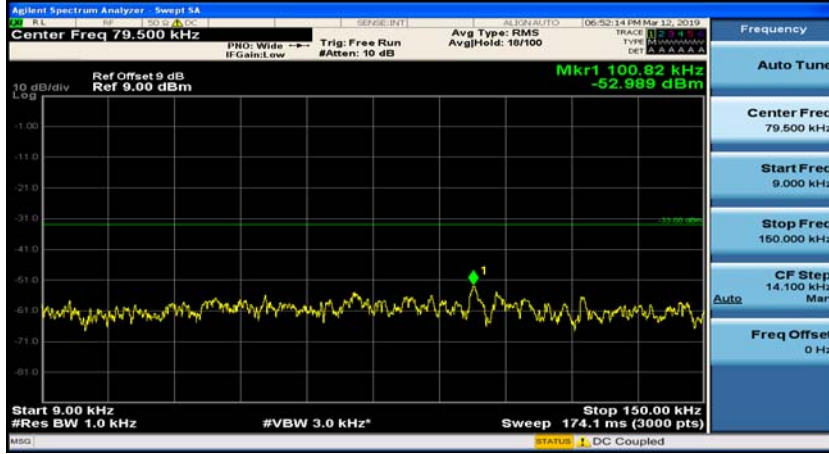
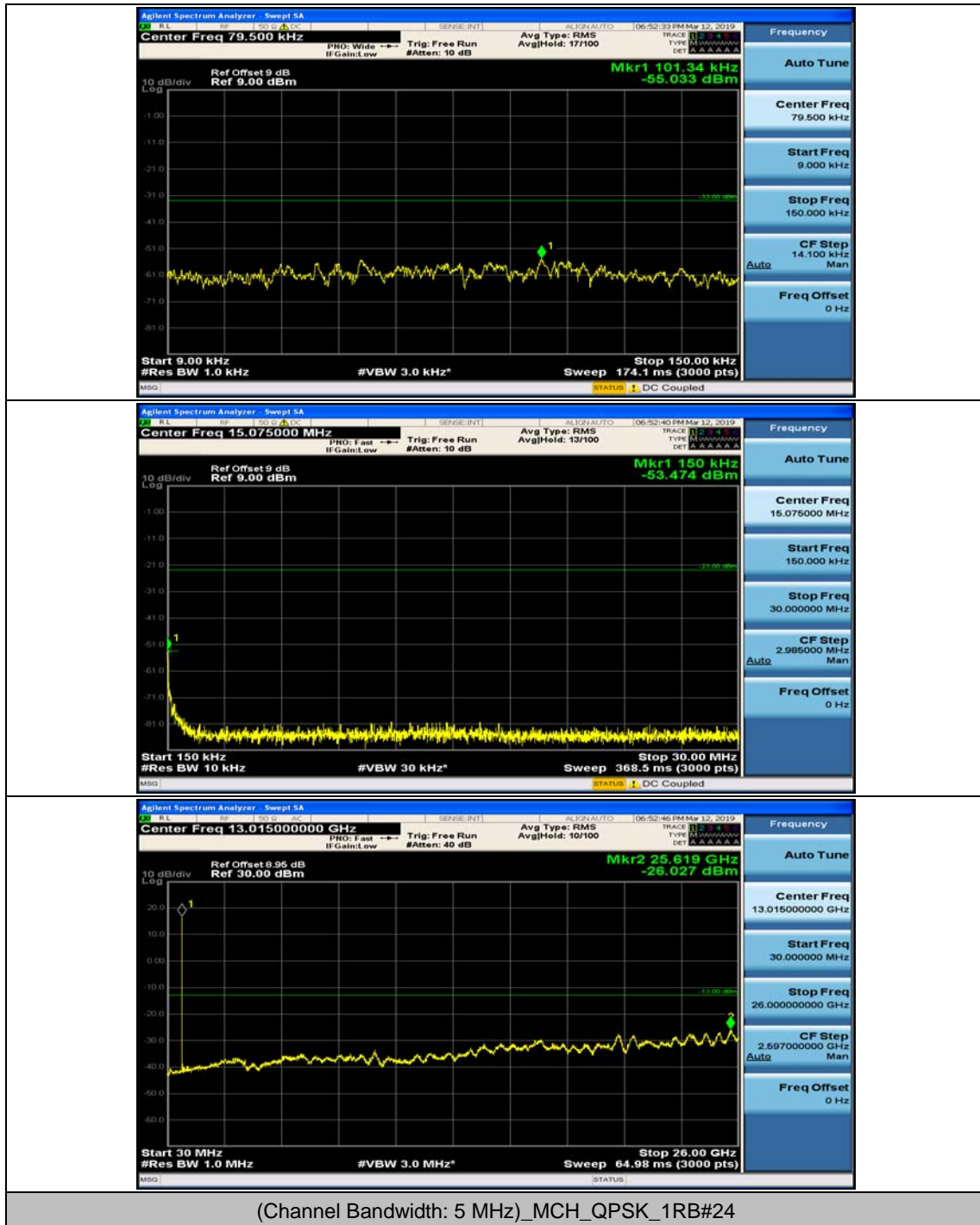
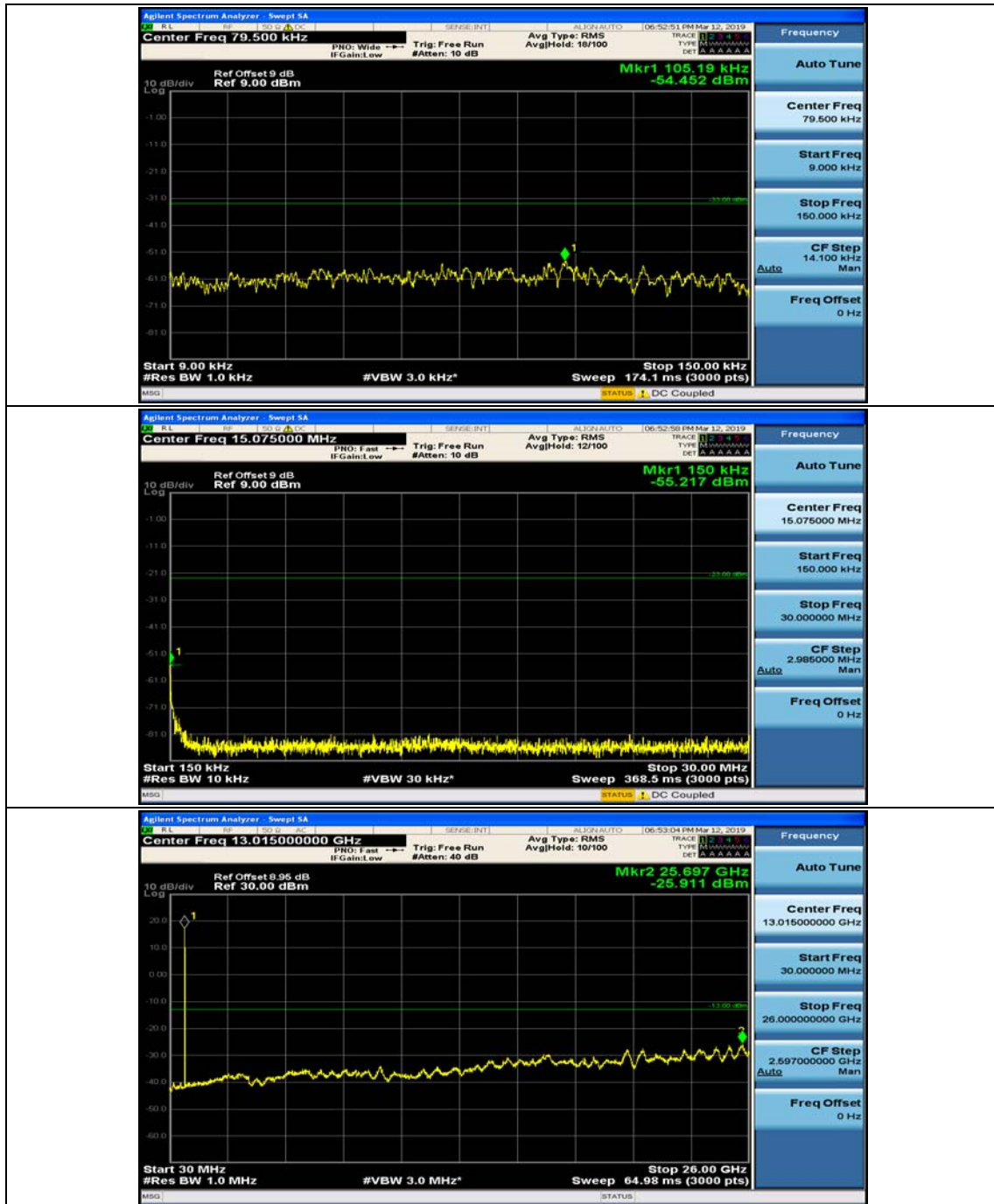


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0

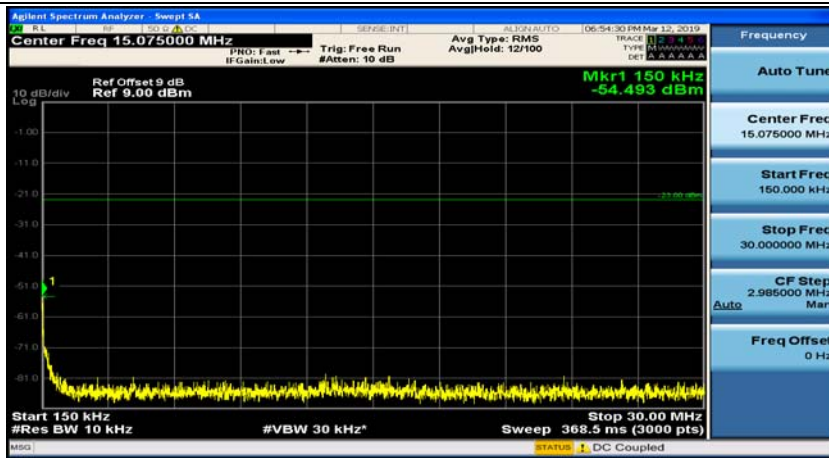
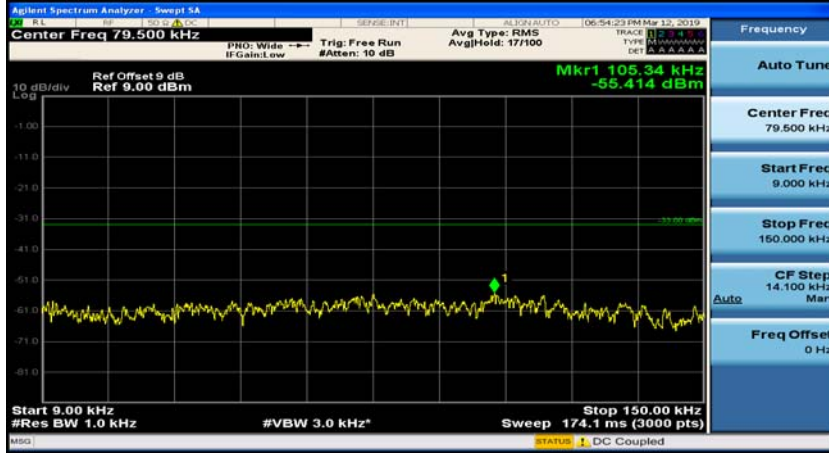


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

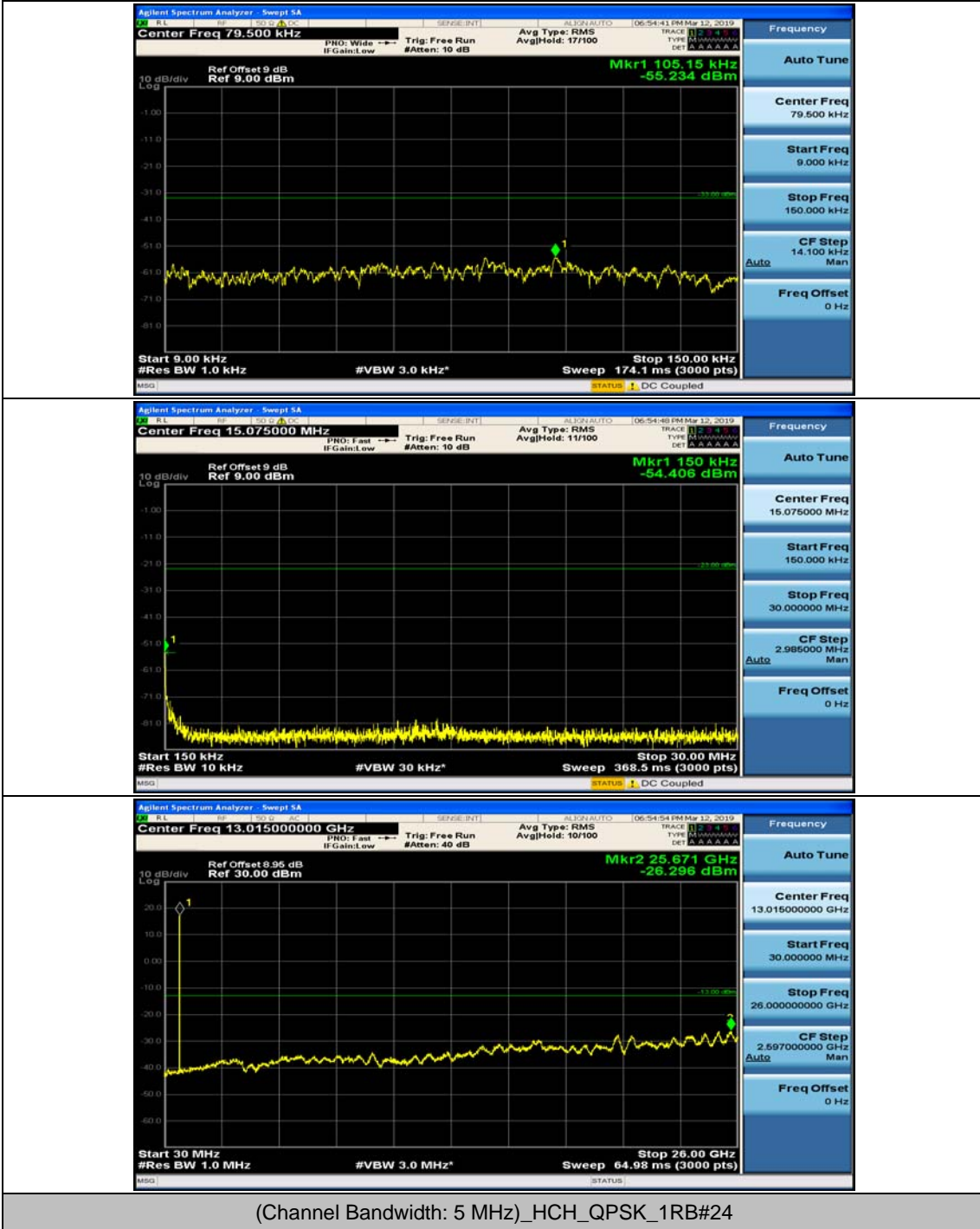


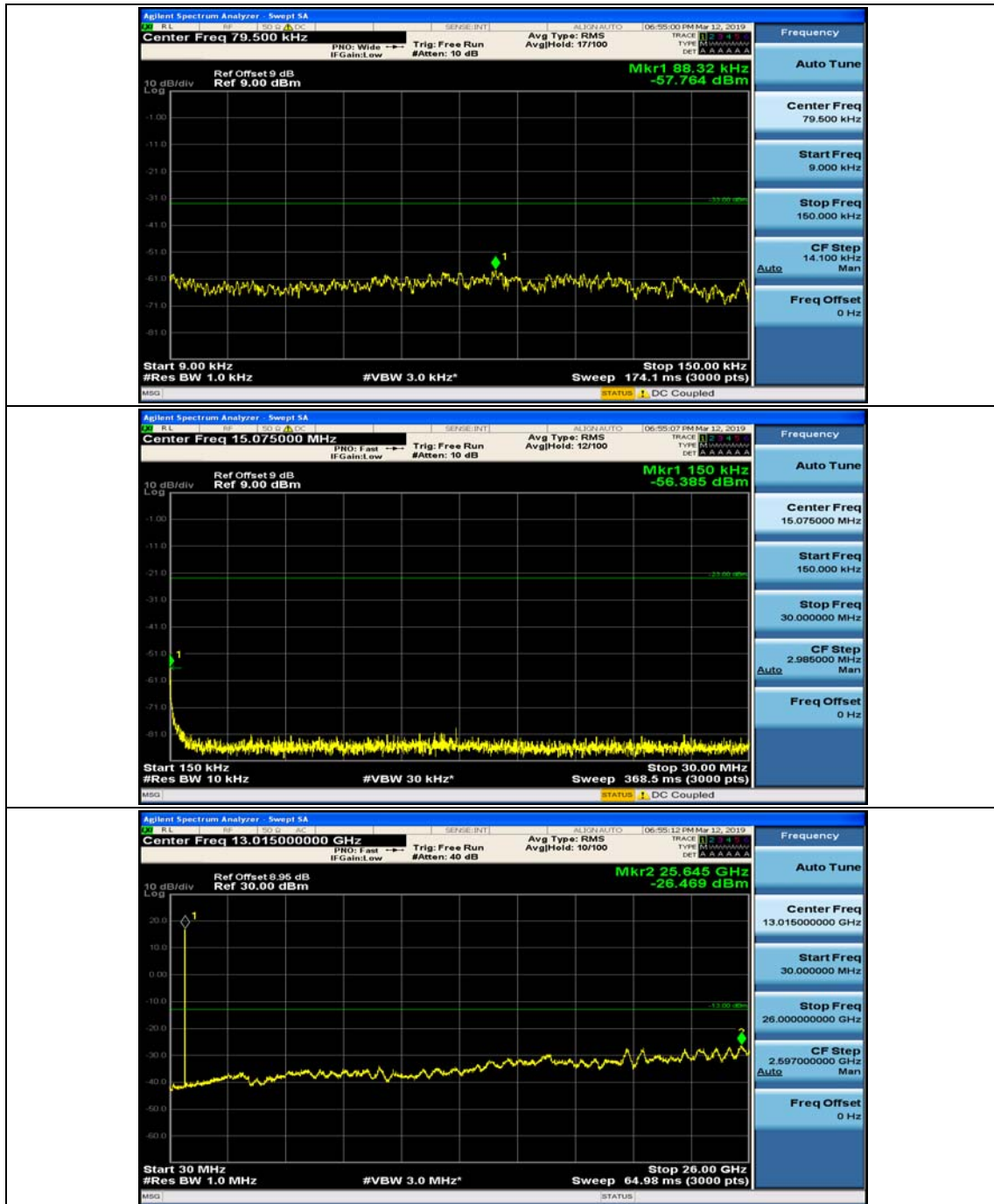


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

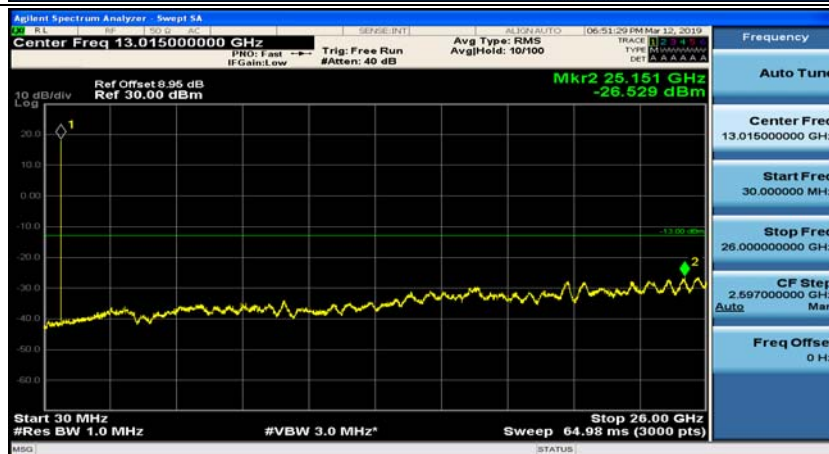
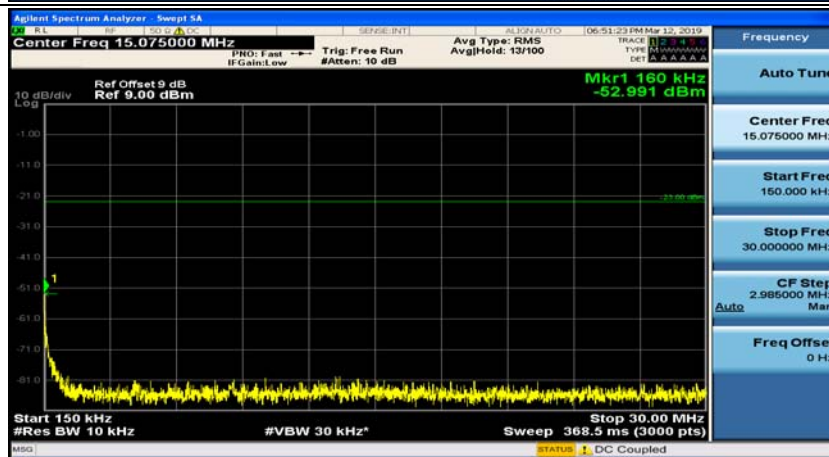
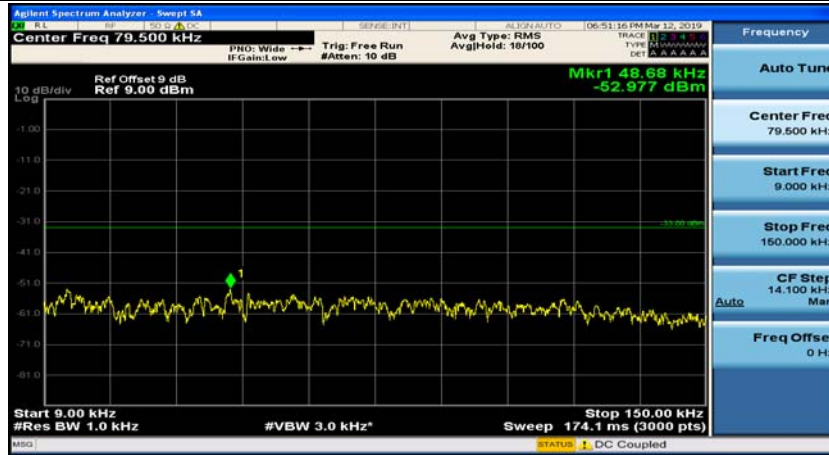


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

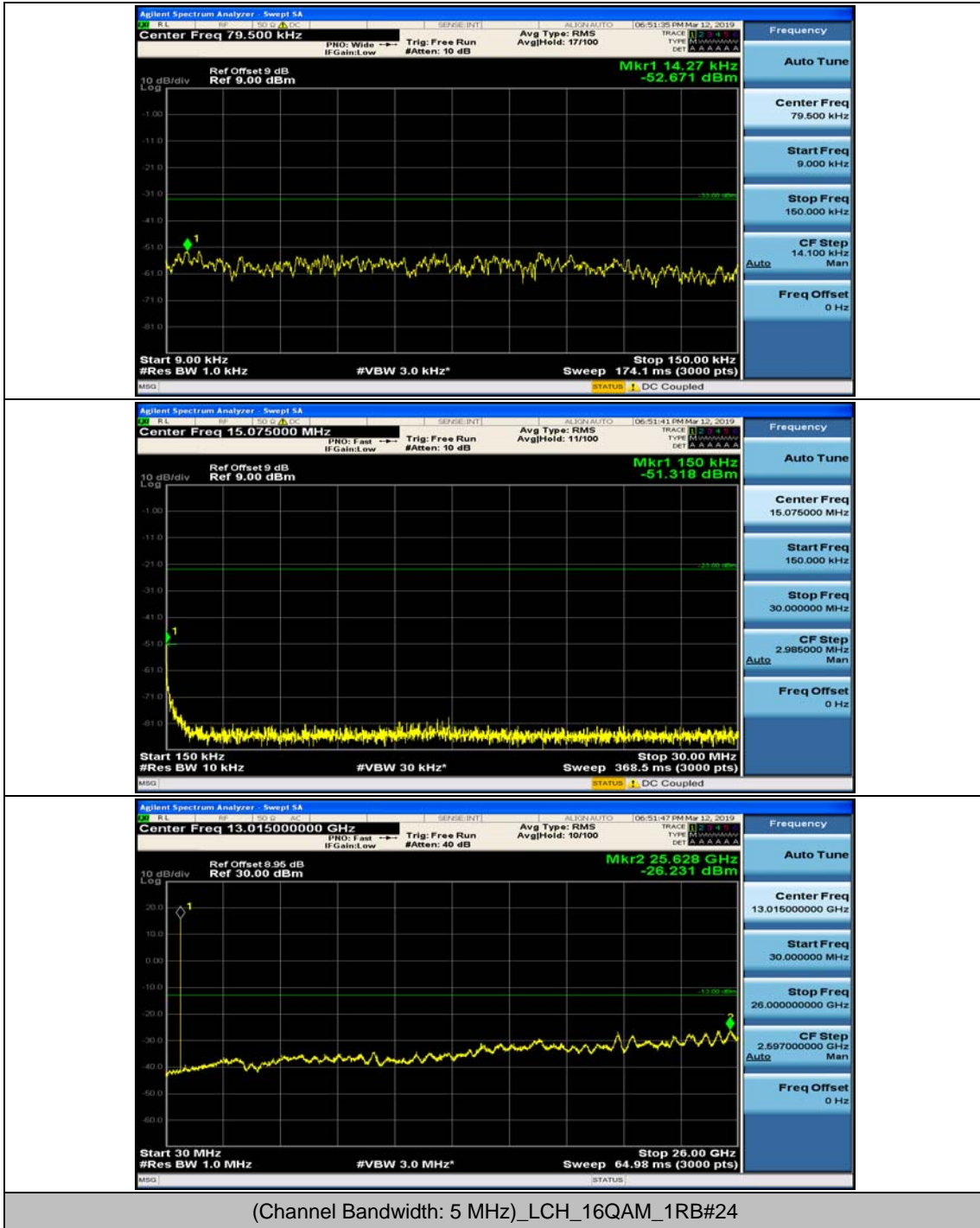


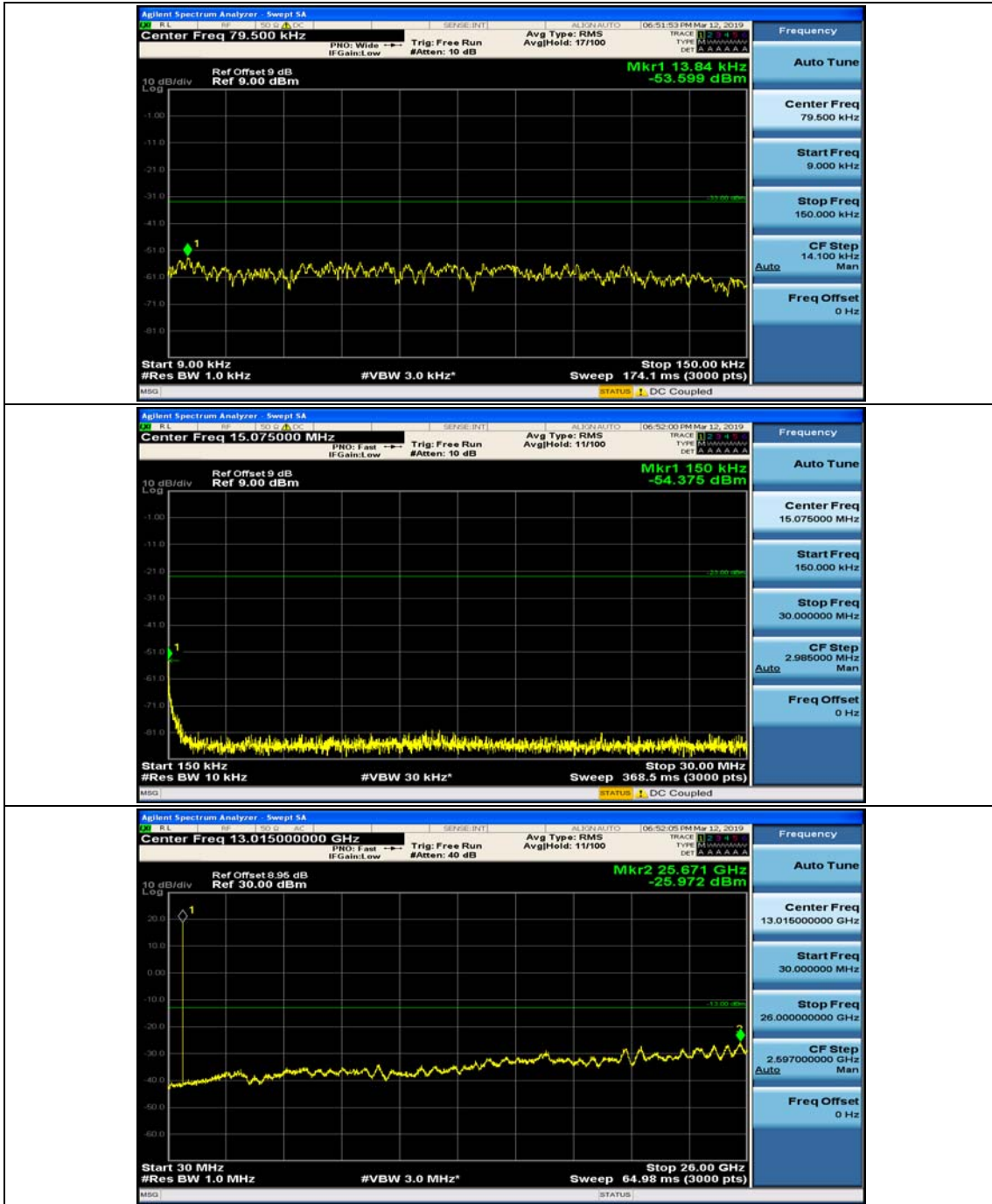


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0

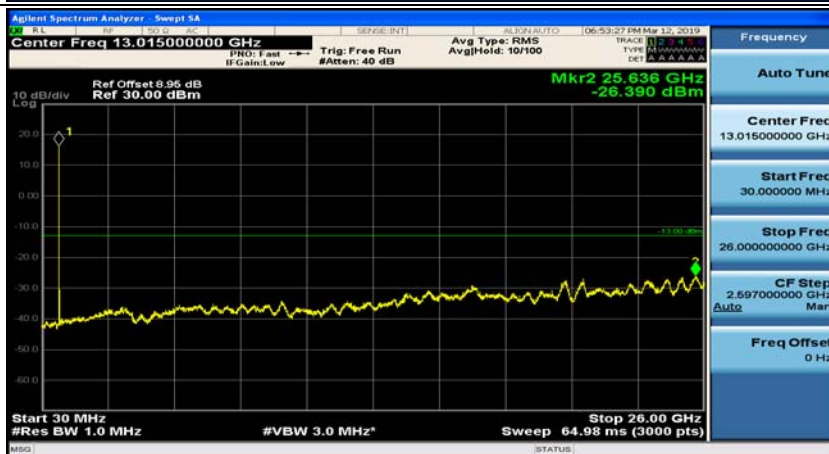
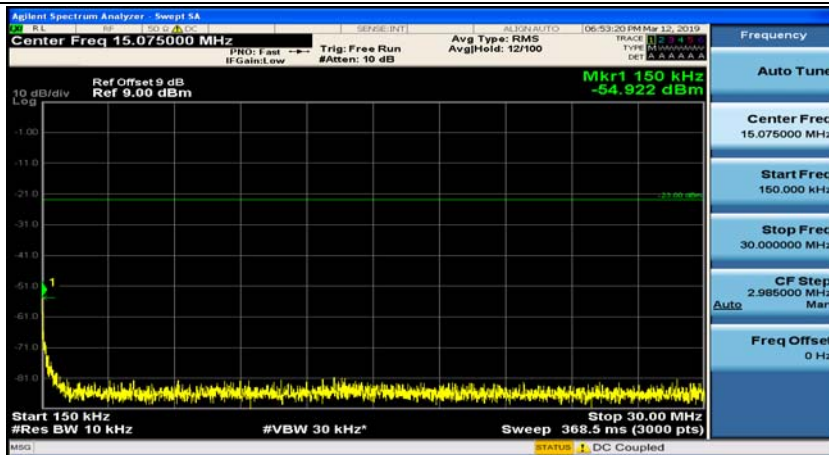
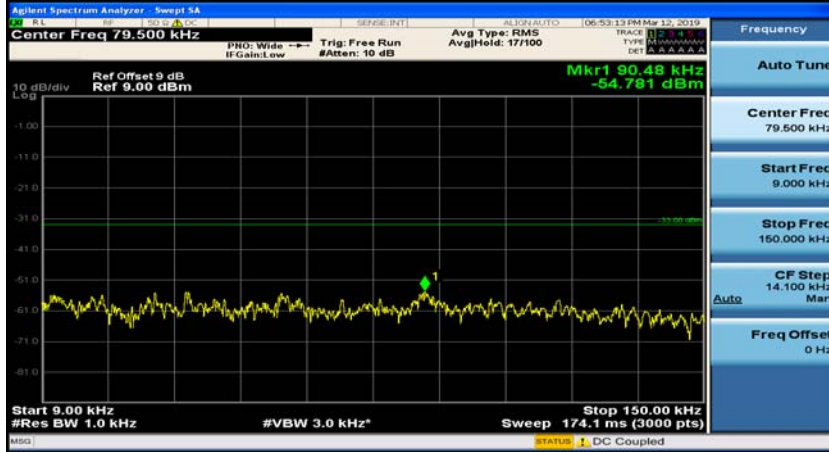


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

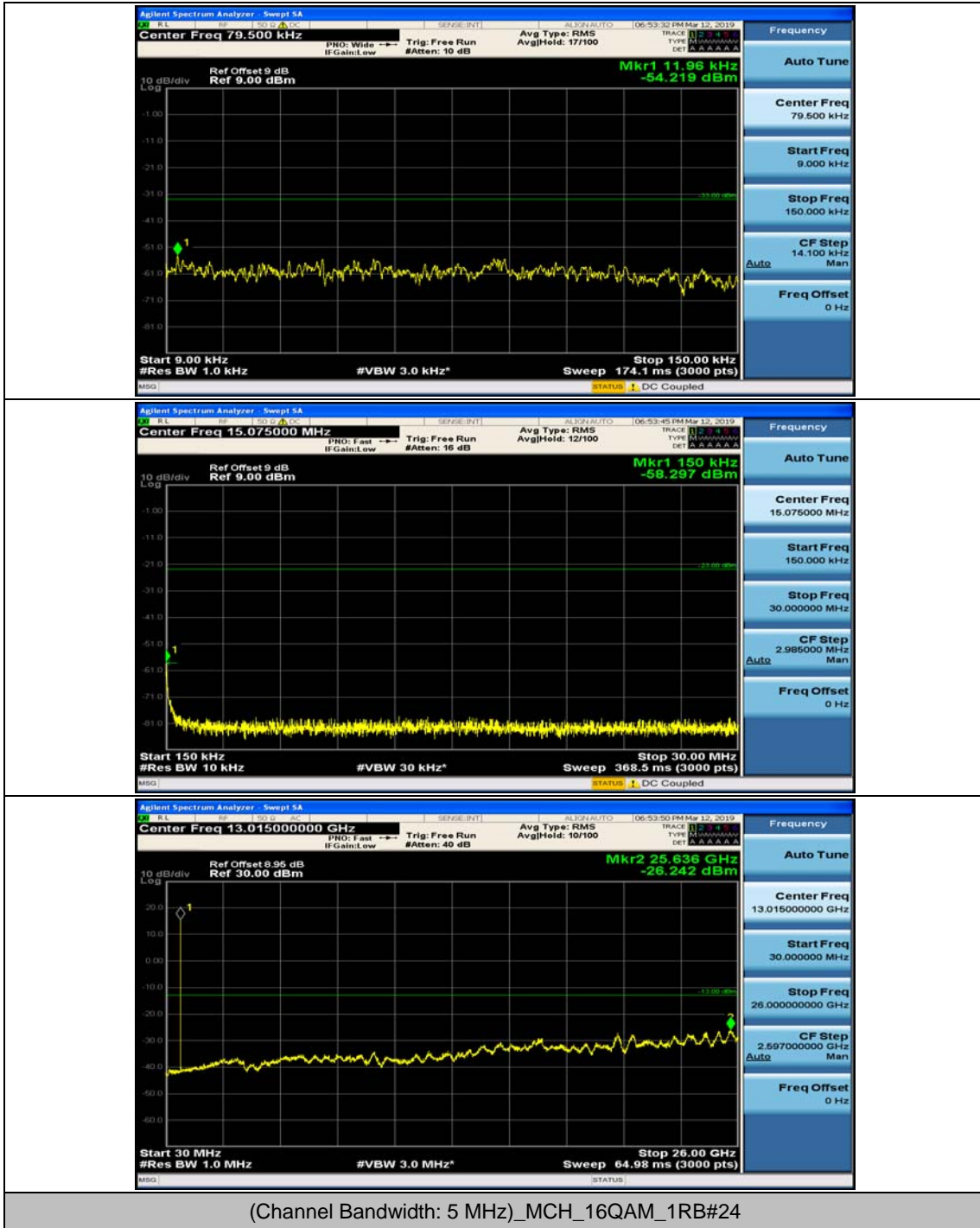


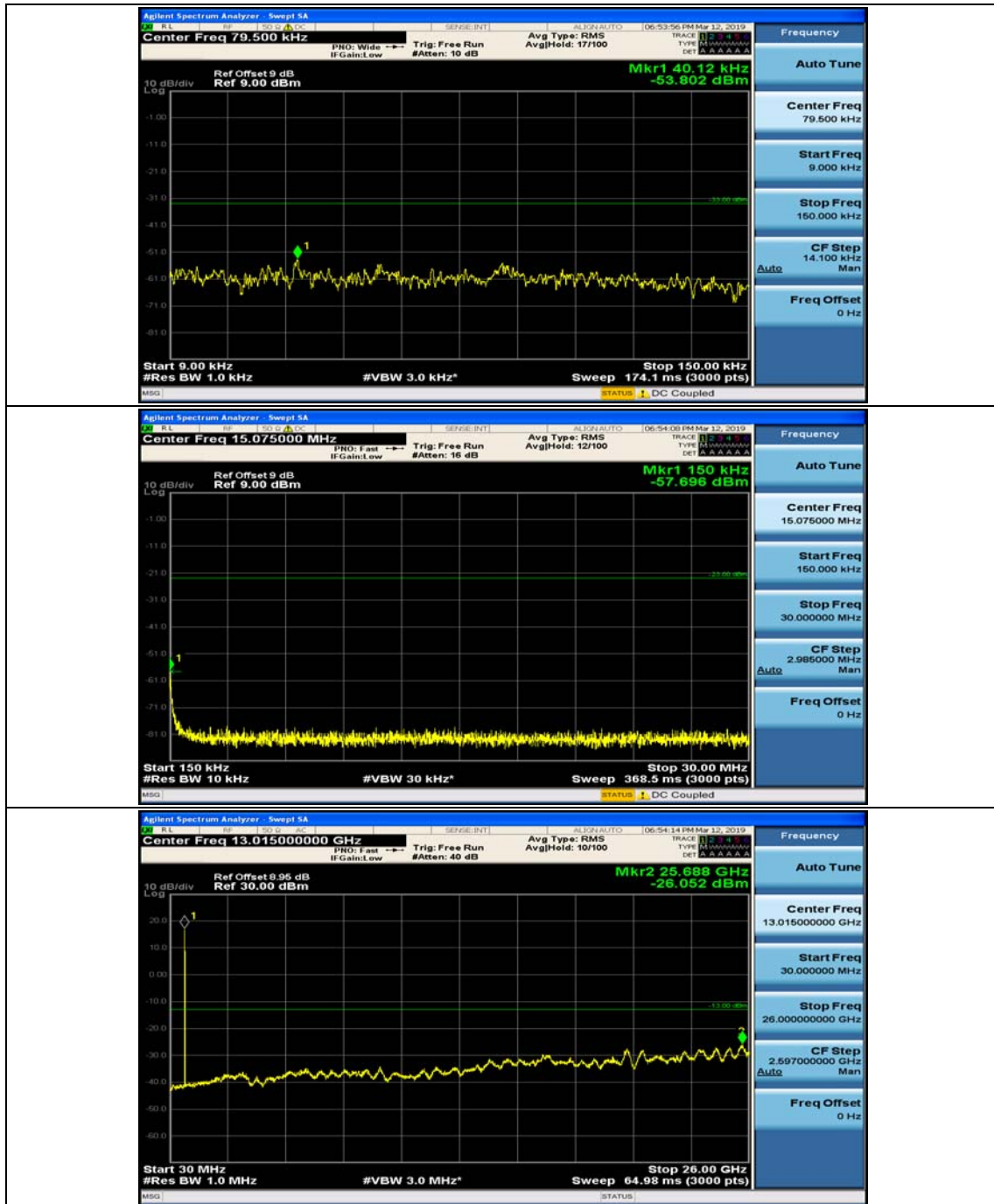


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0

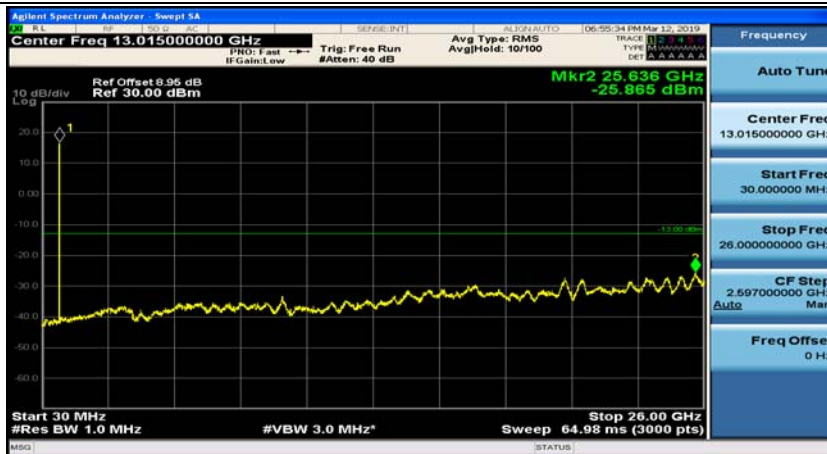
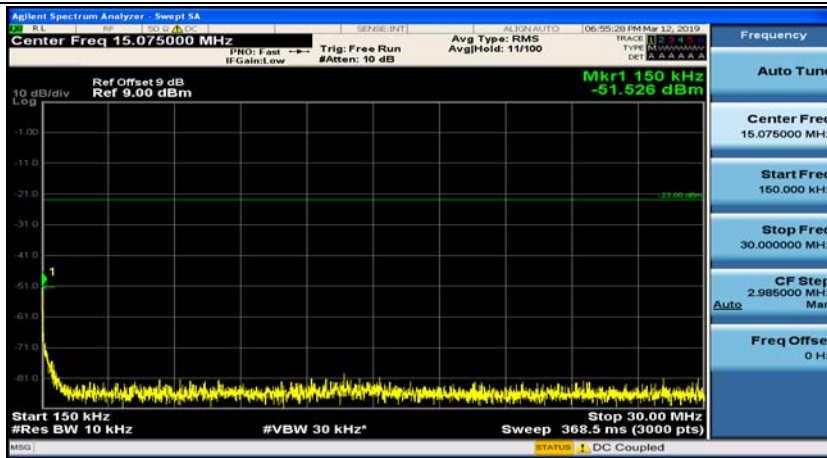


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

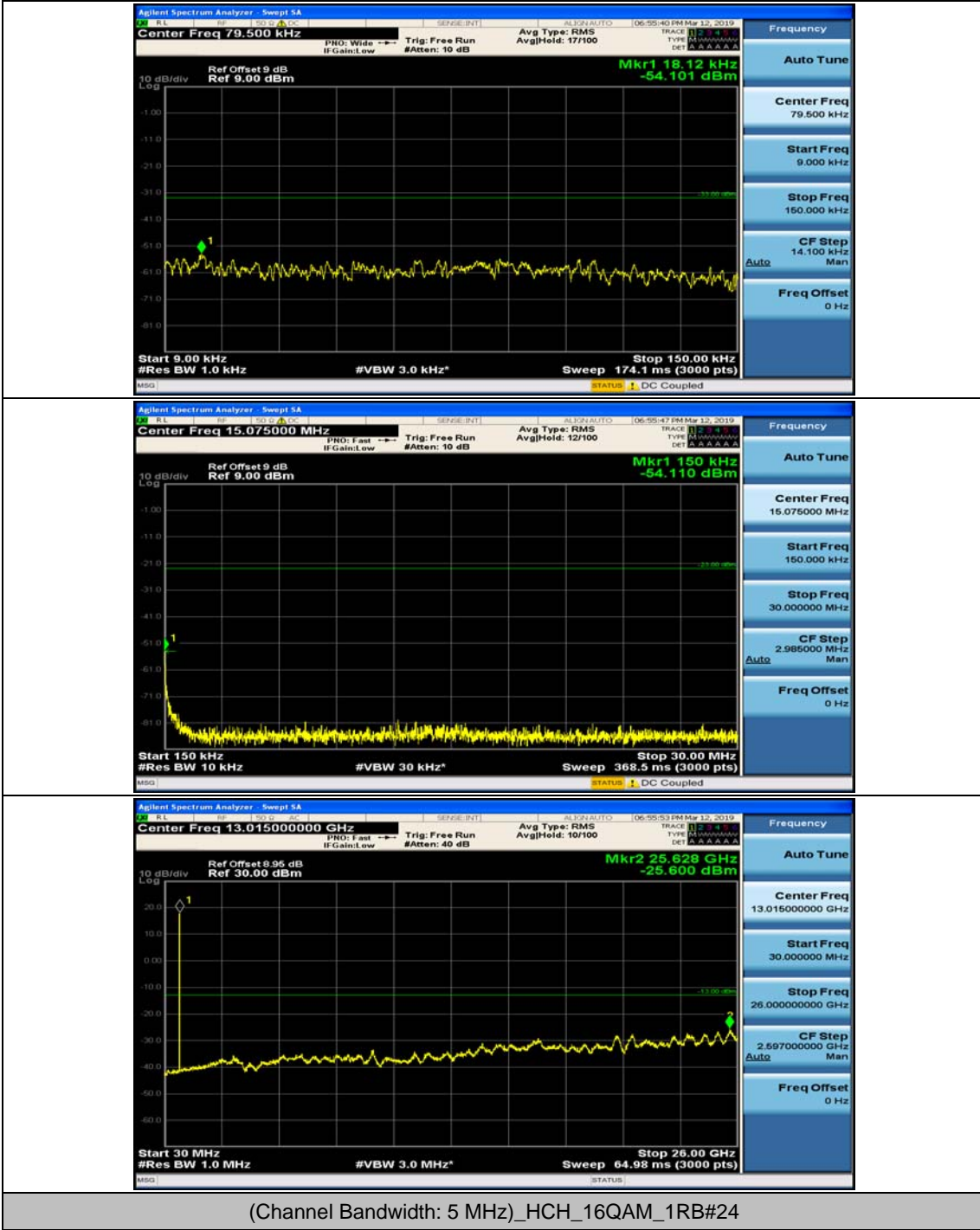


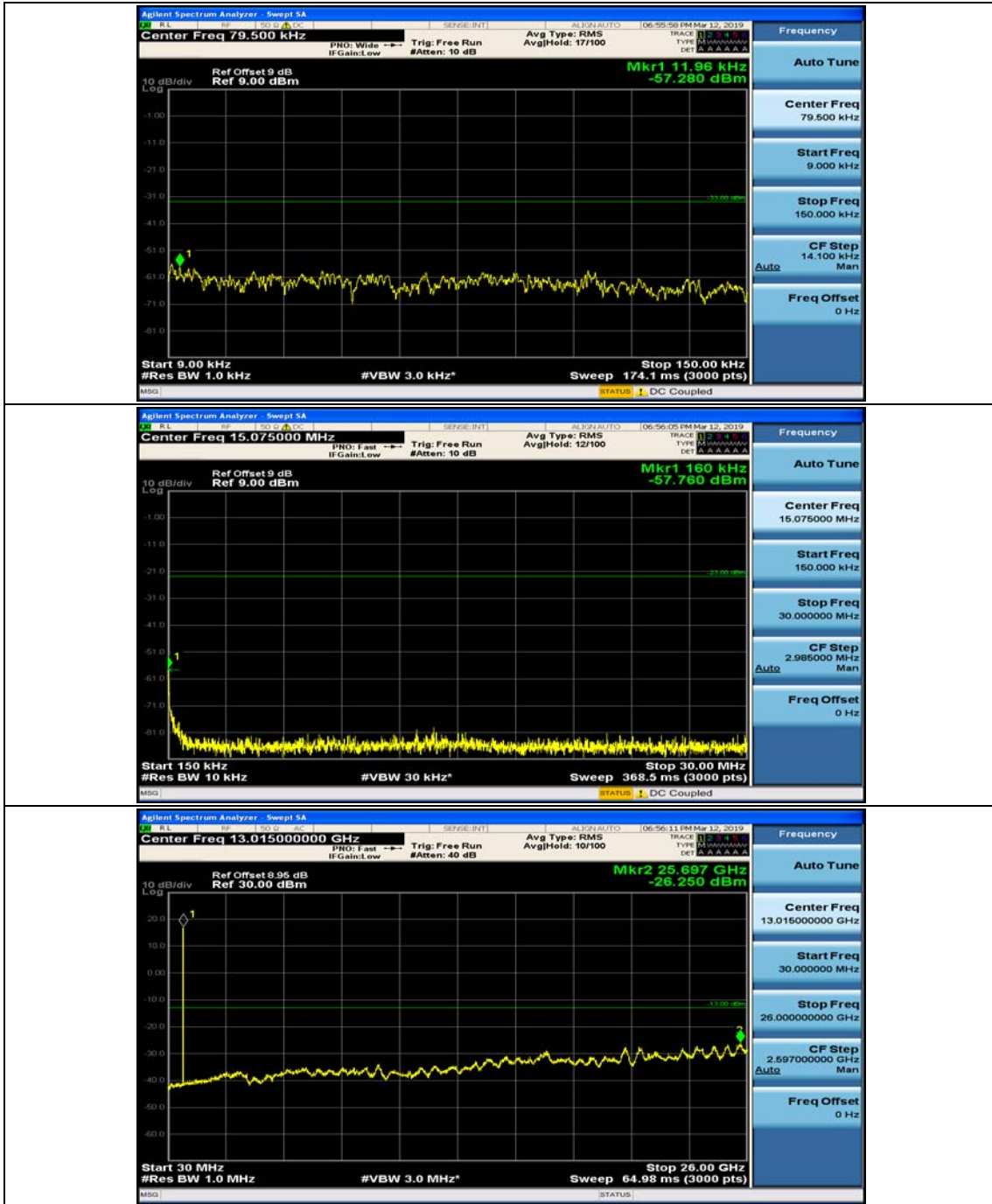


(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0

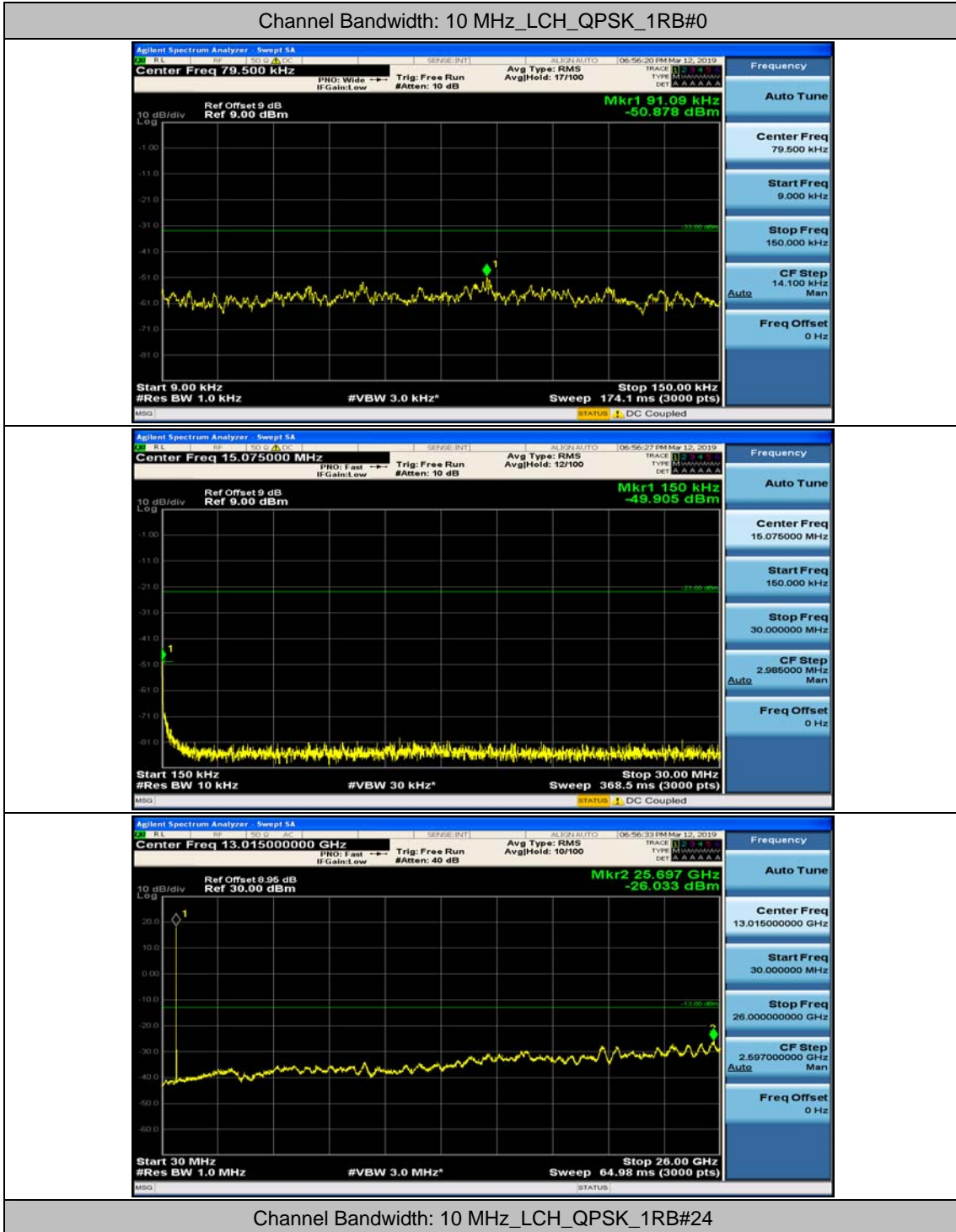


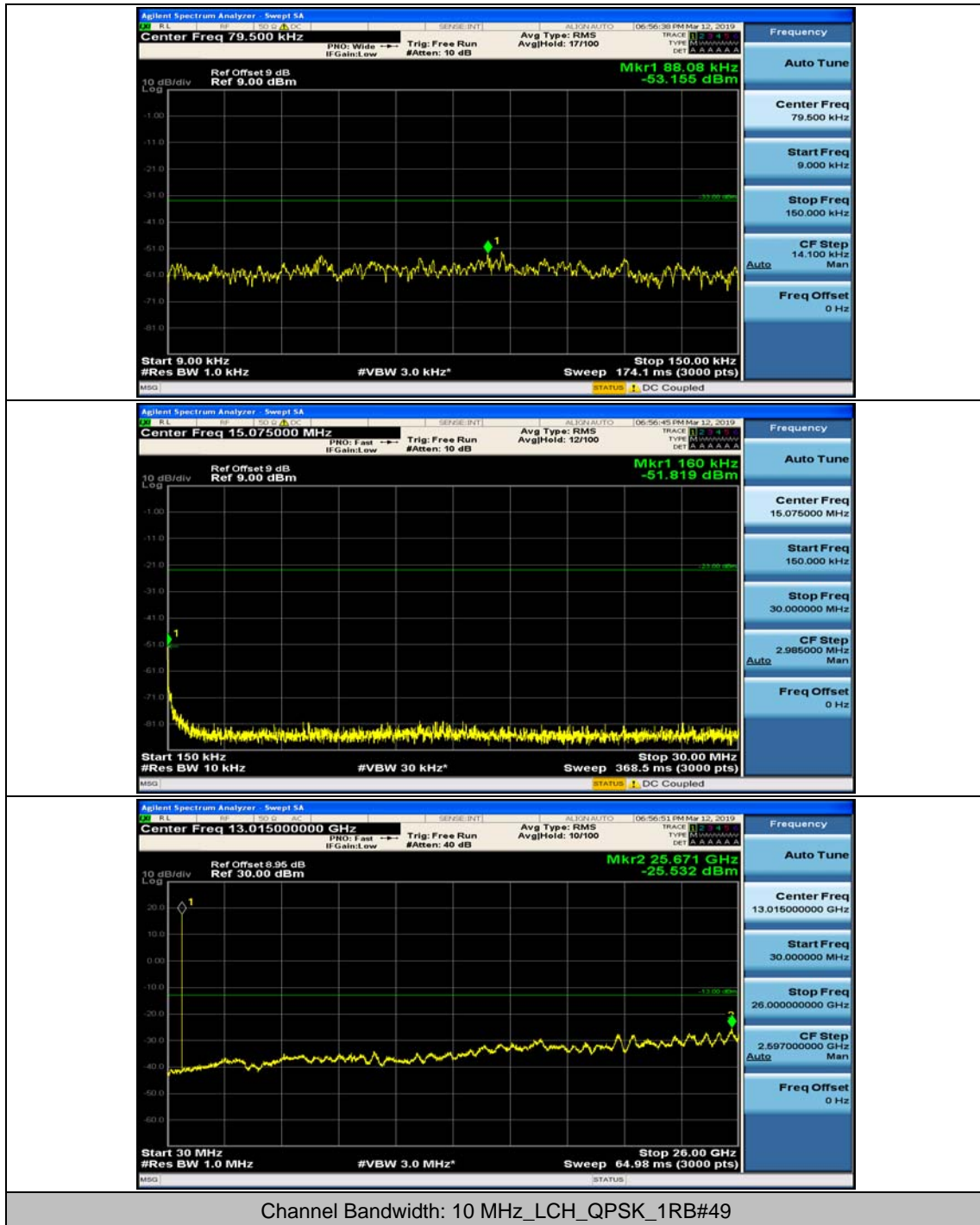
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

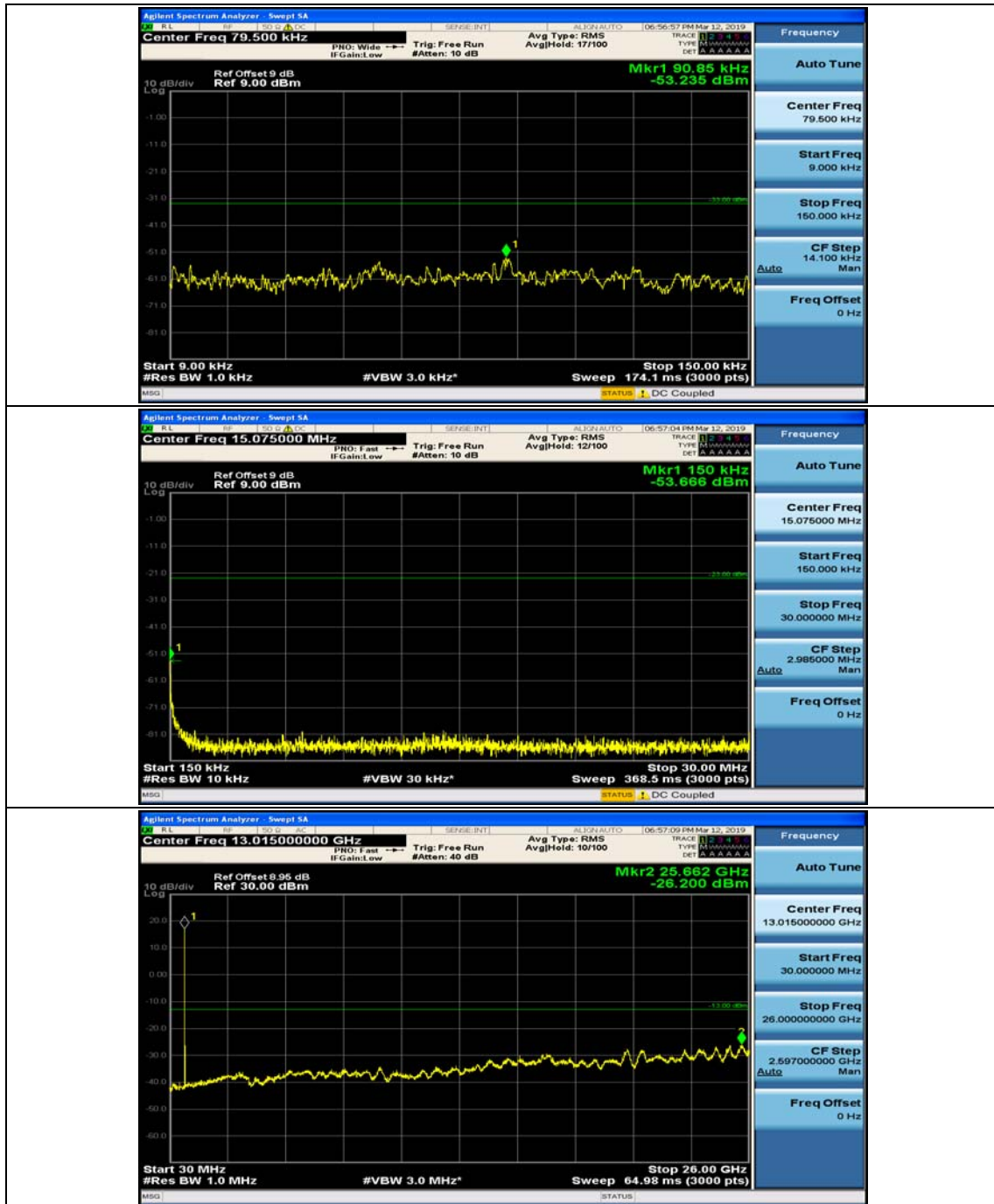




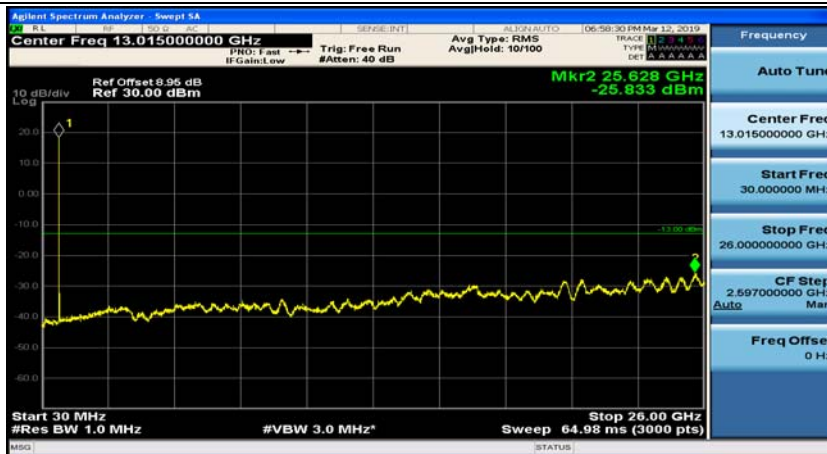
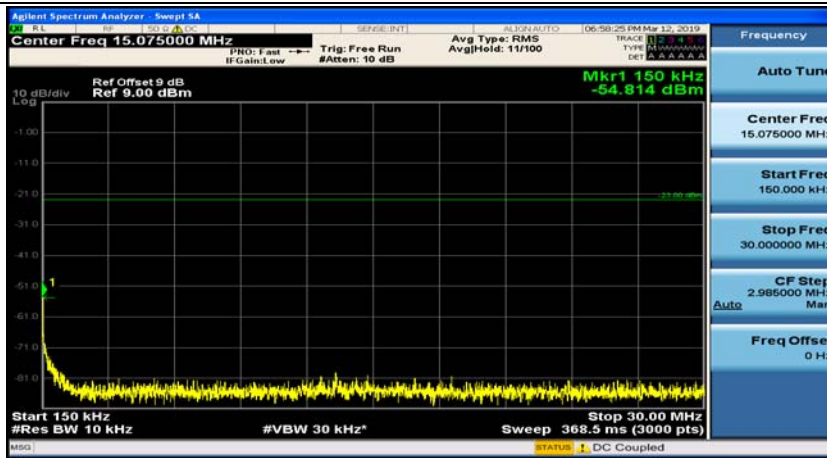
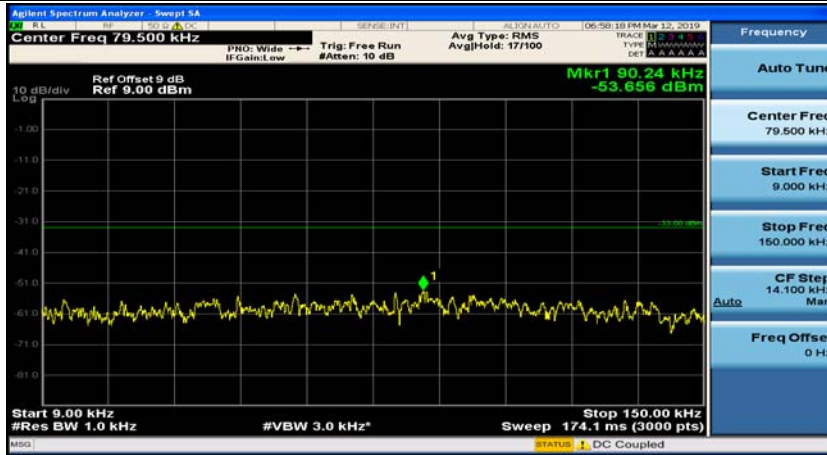
Channel Bandwidth: 10 MHz



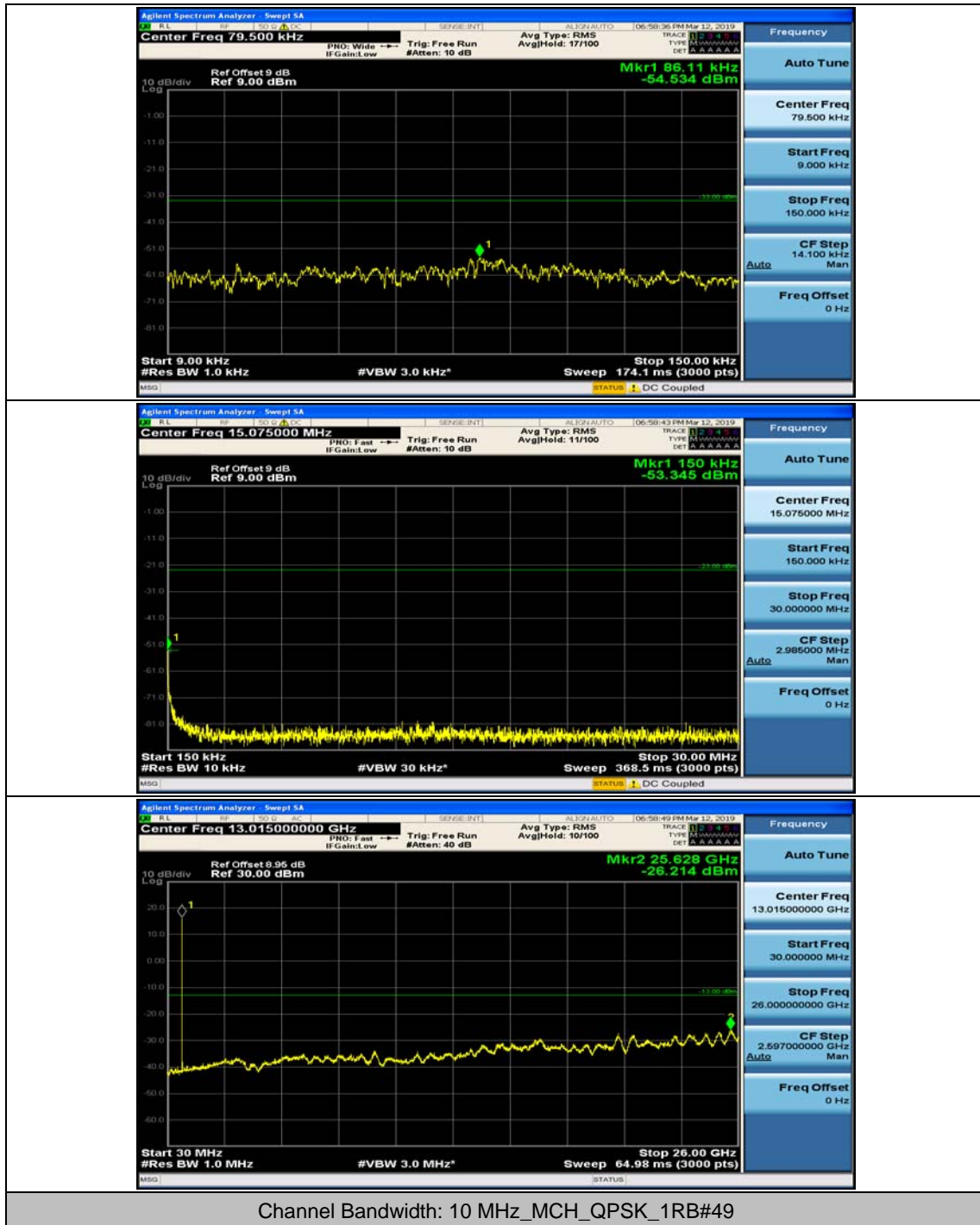


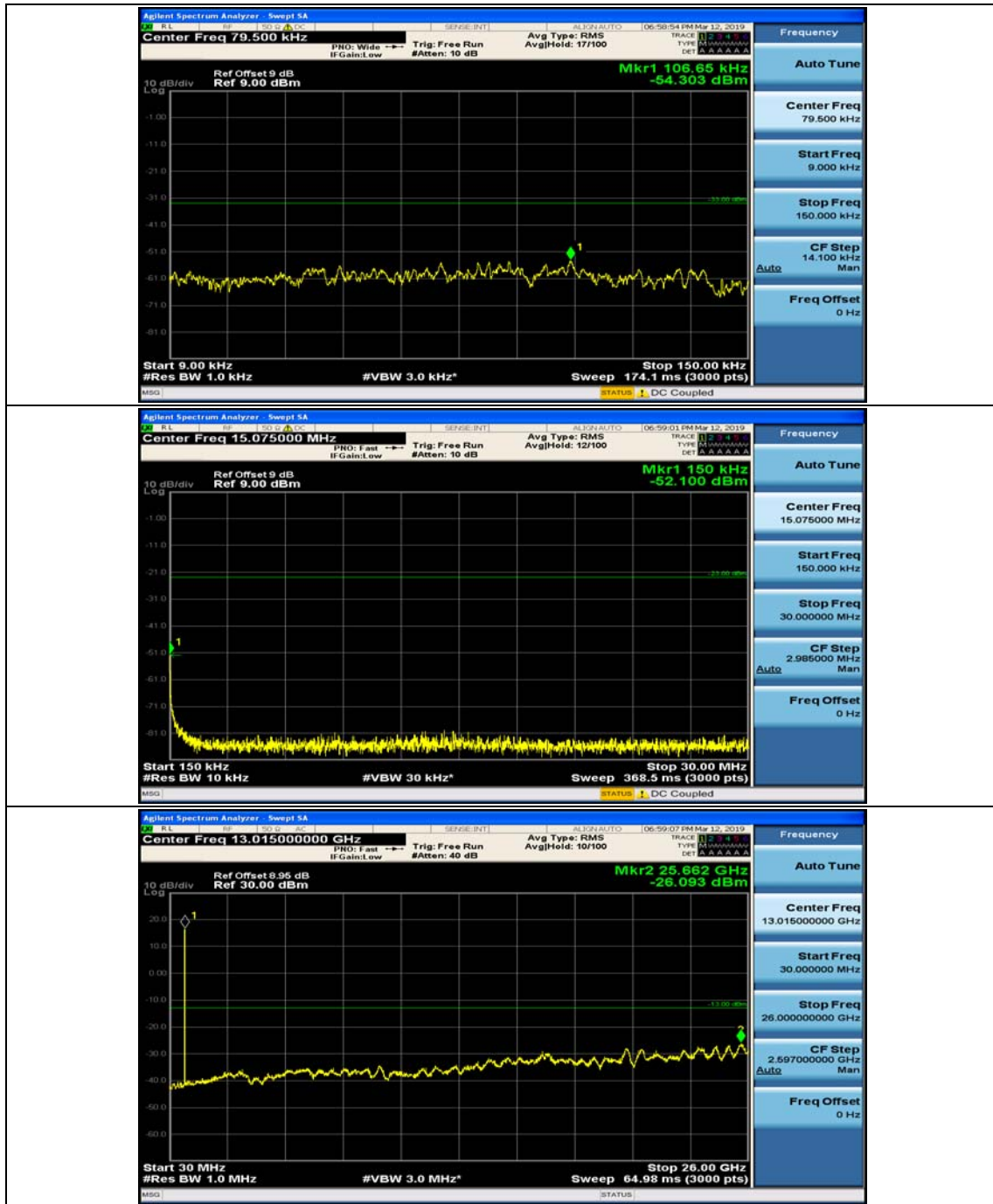


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0

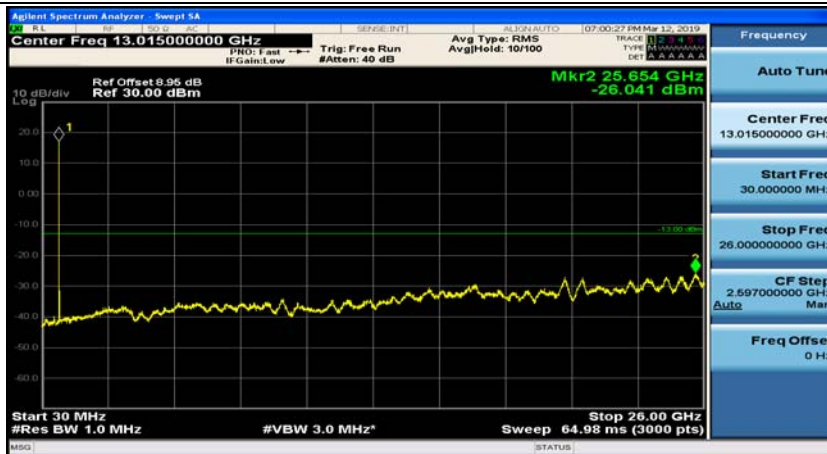
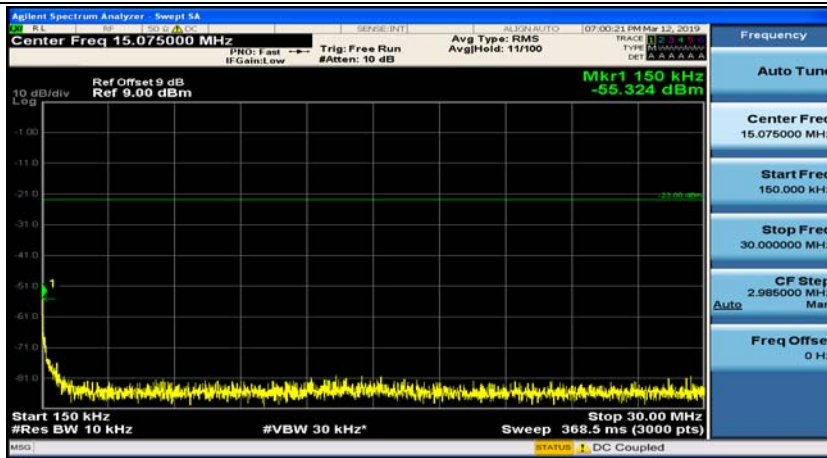
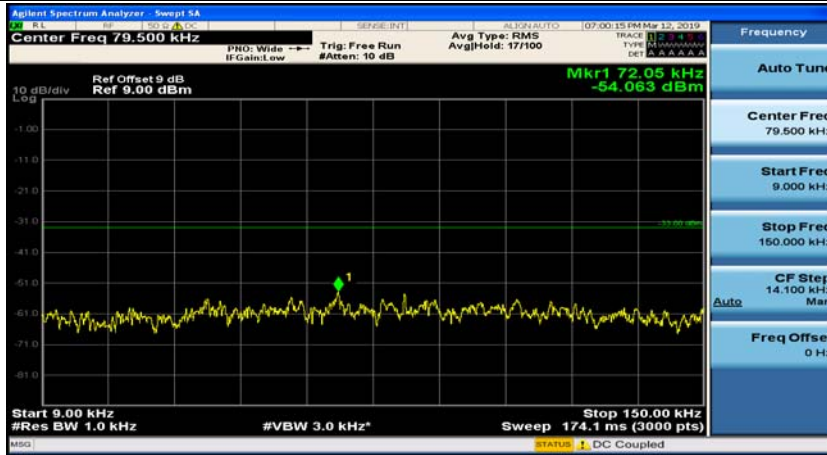


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

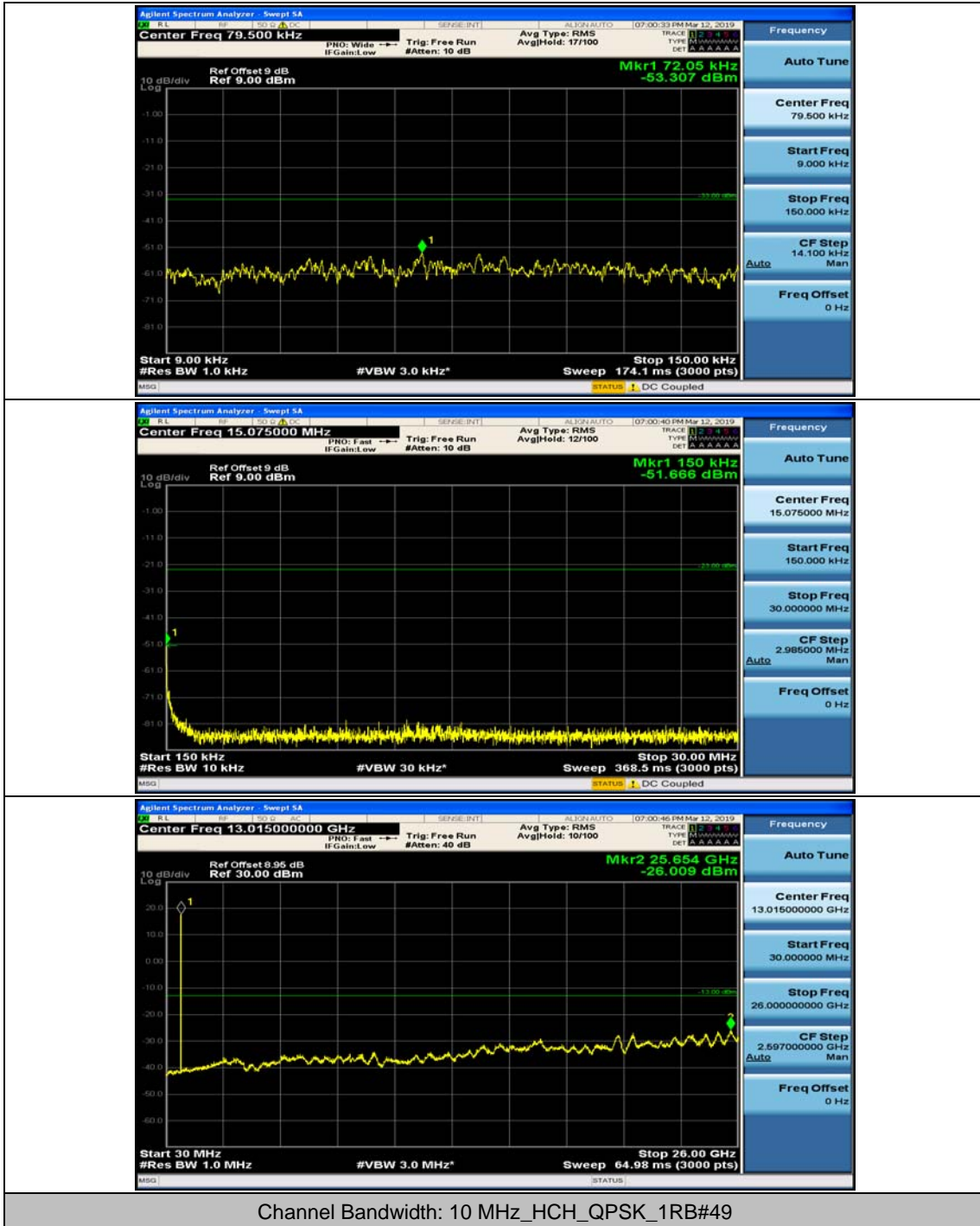


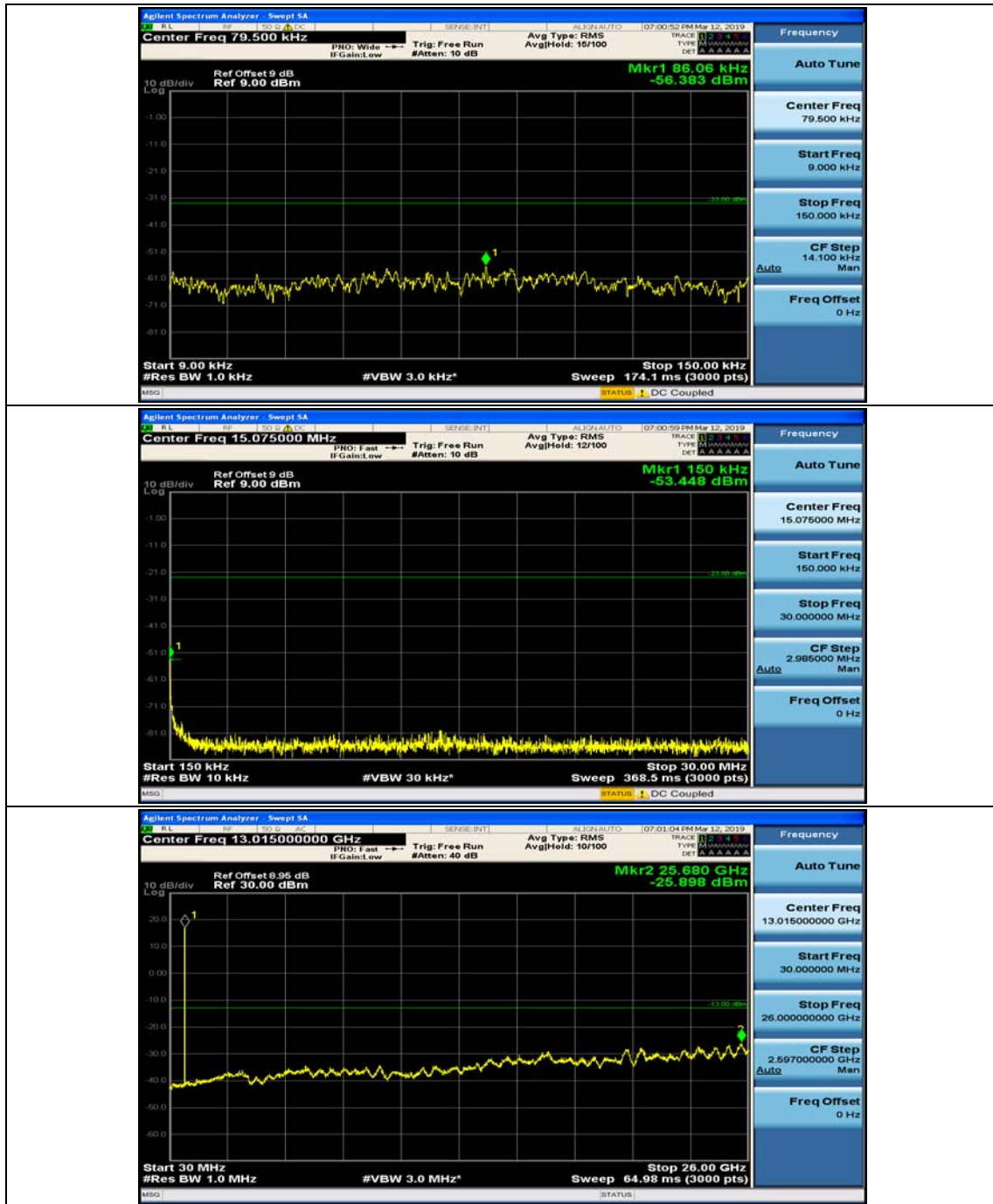


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0

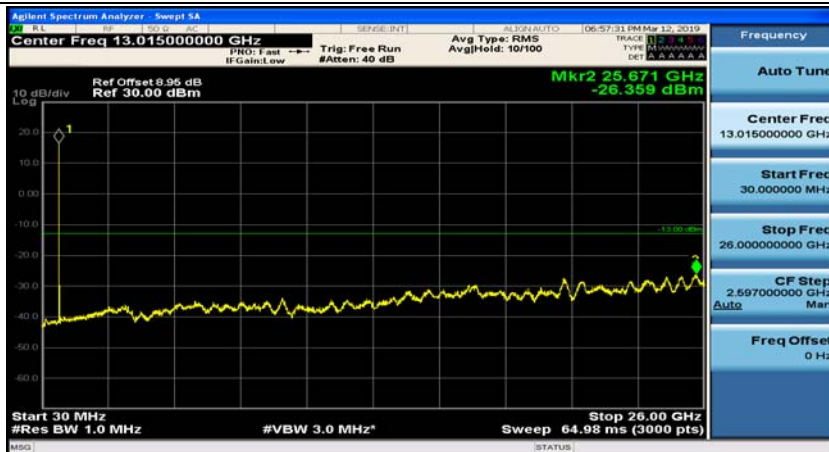
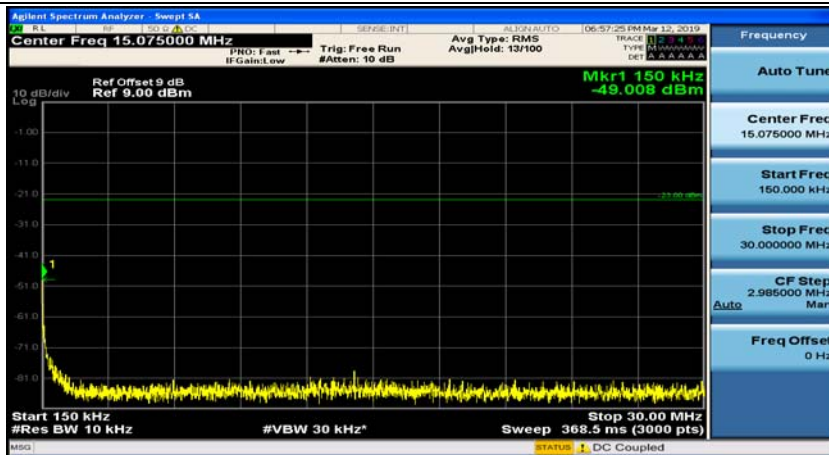
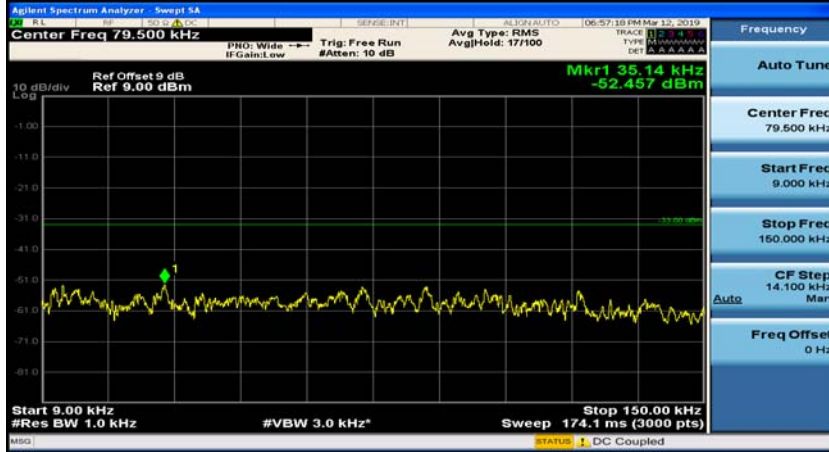


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

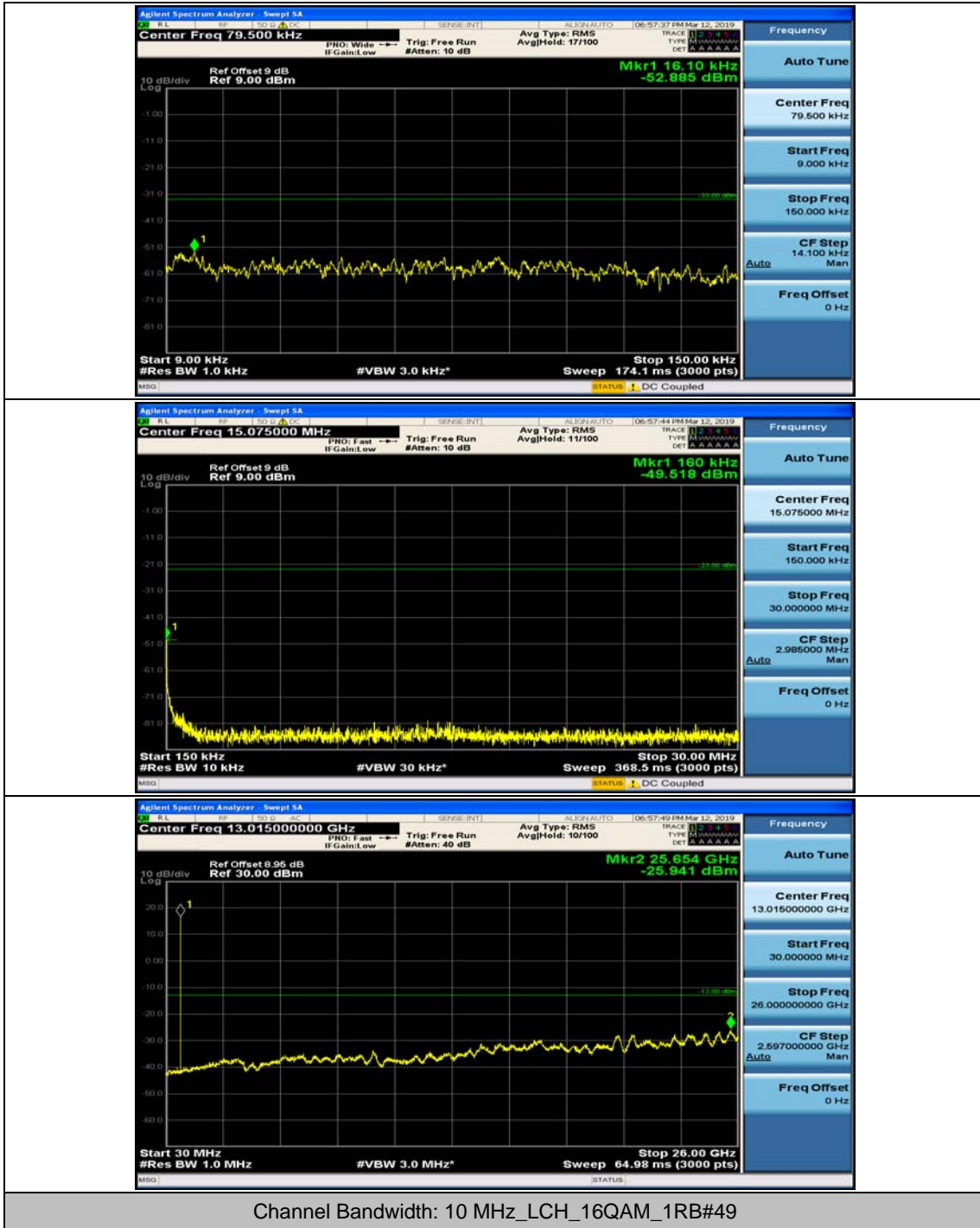


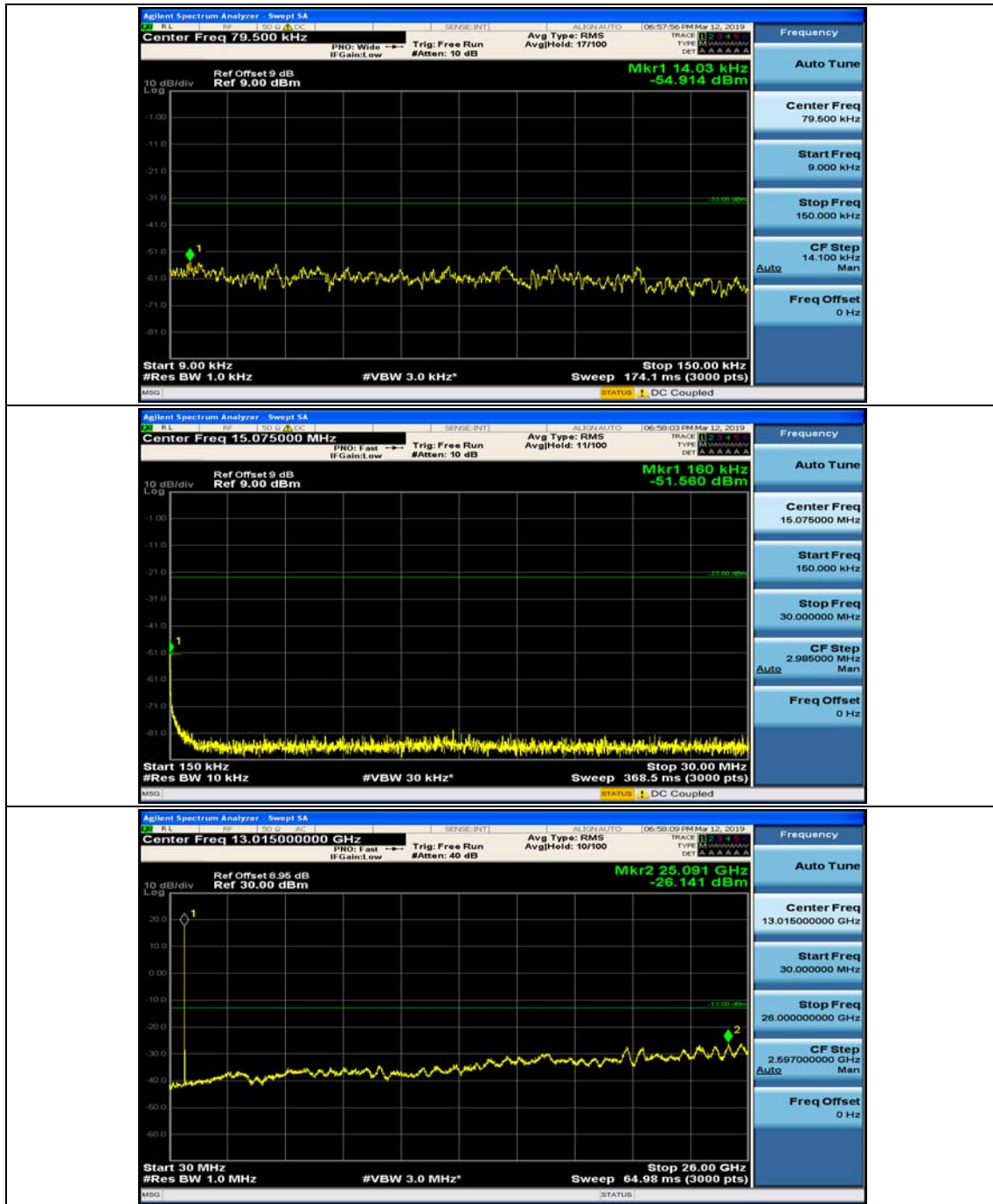


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

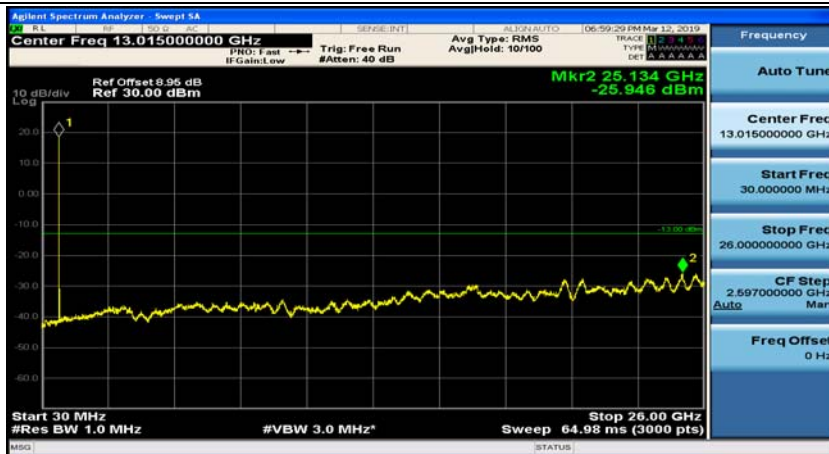
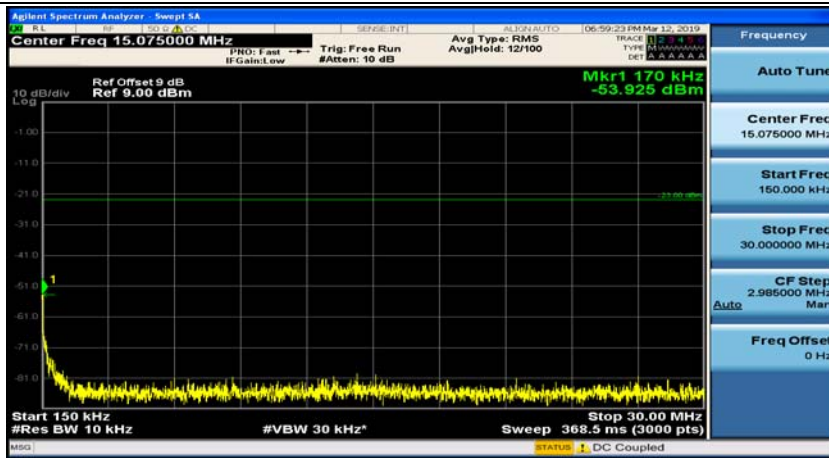
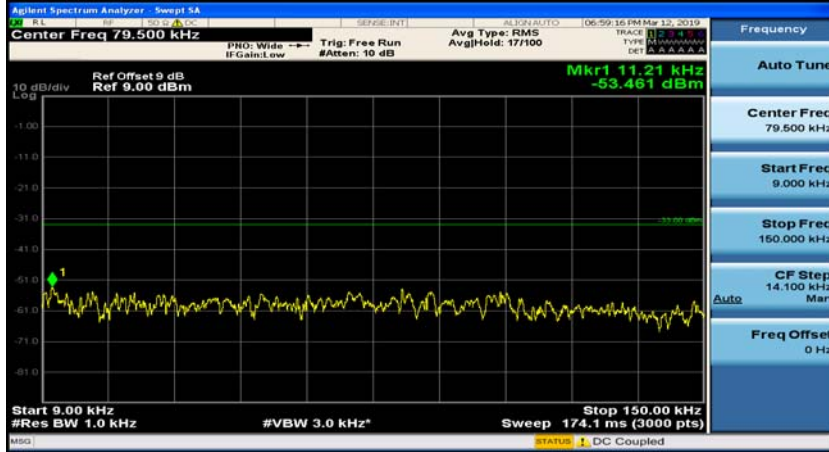


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

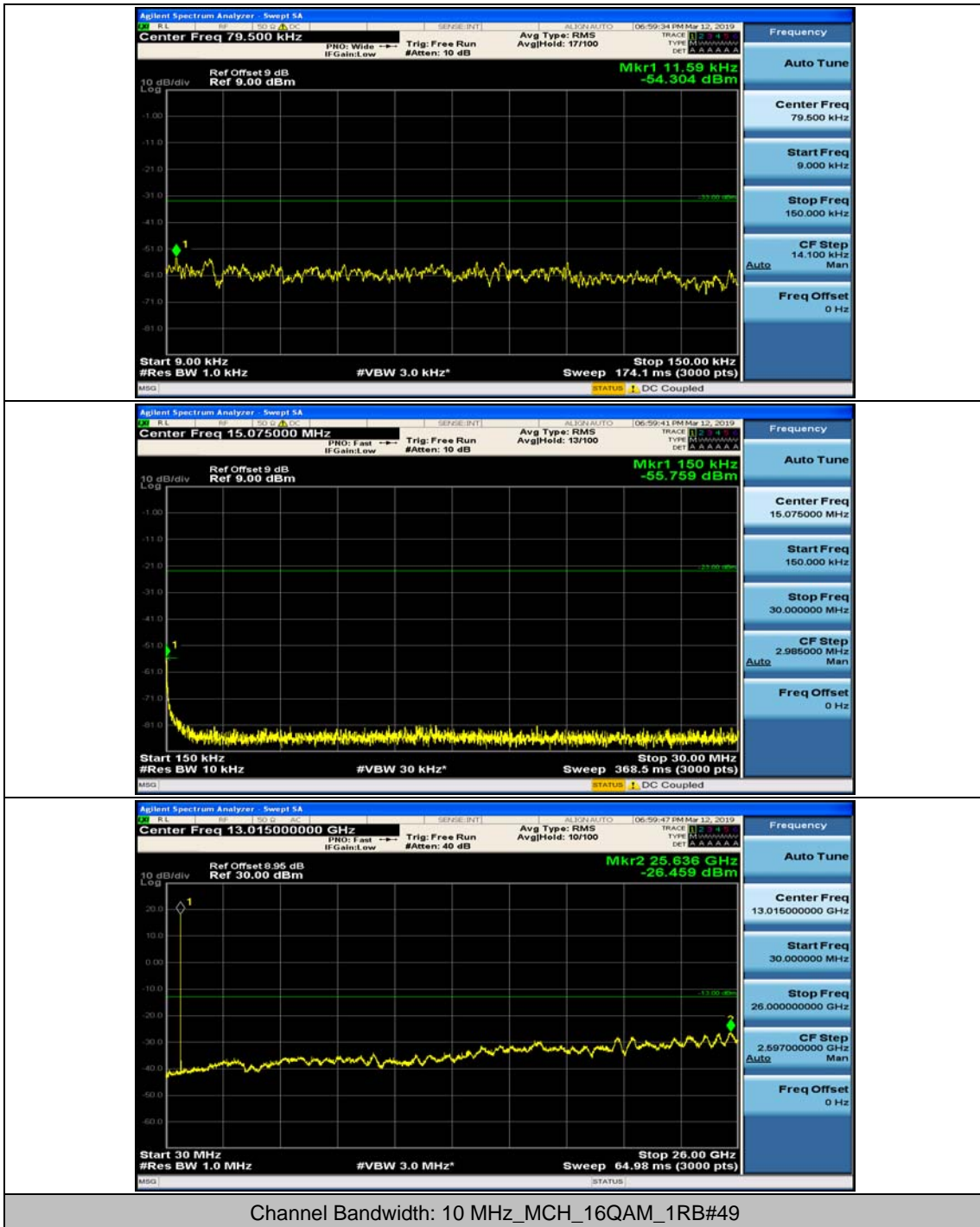


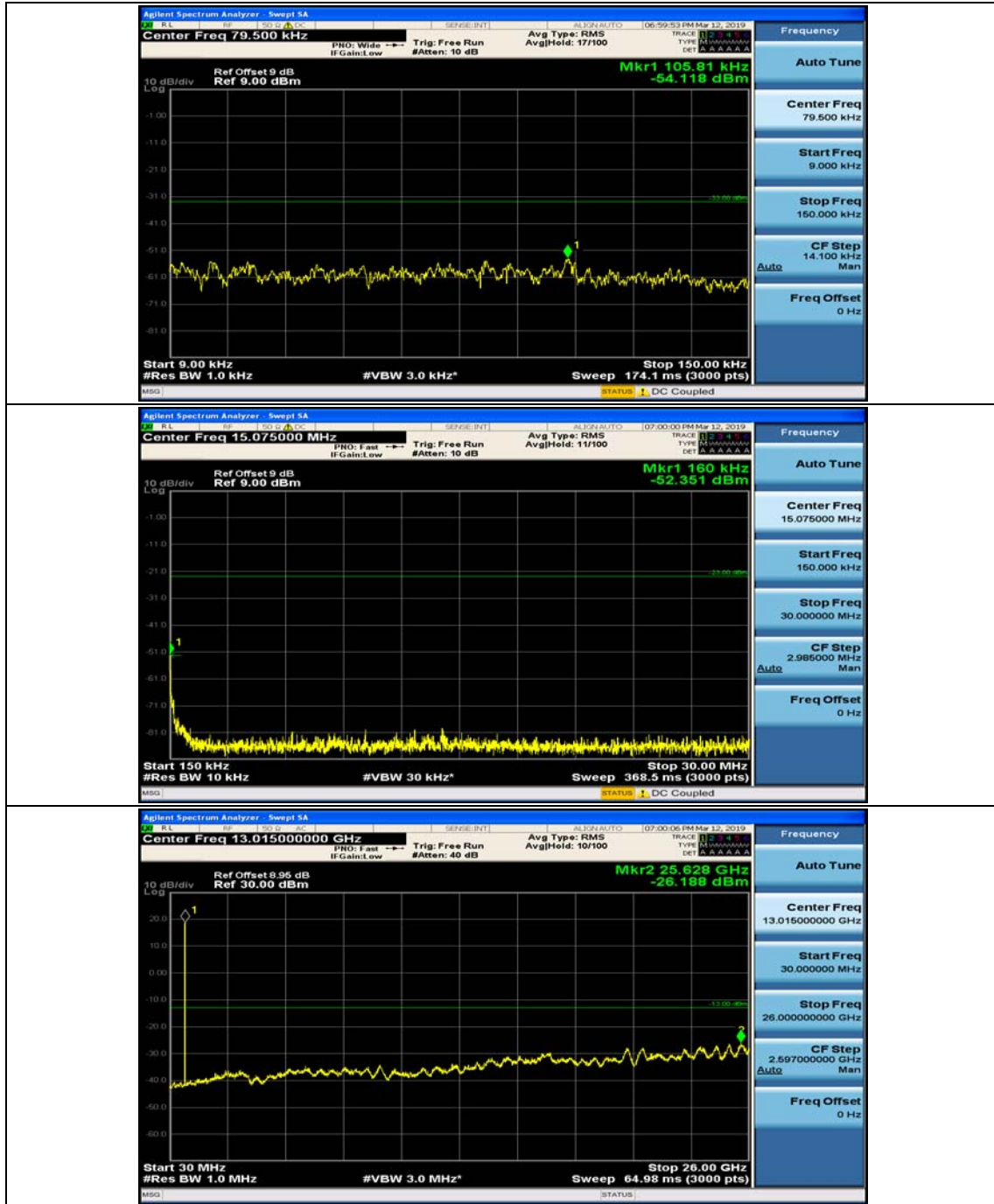


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

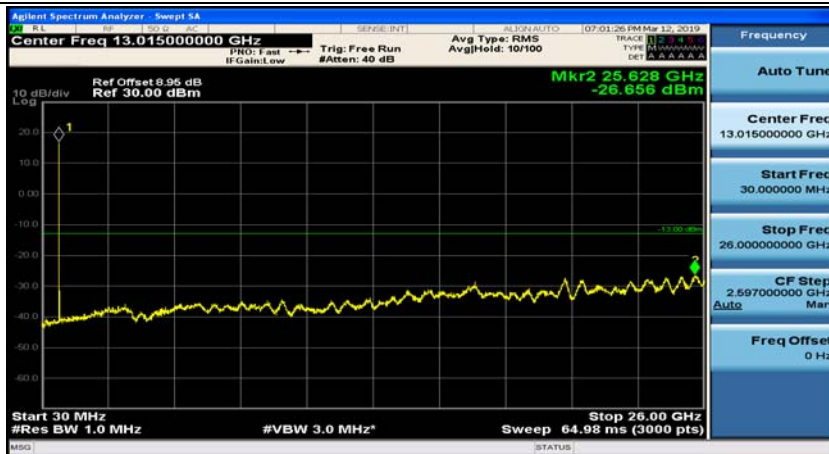
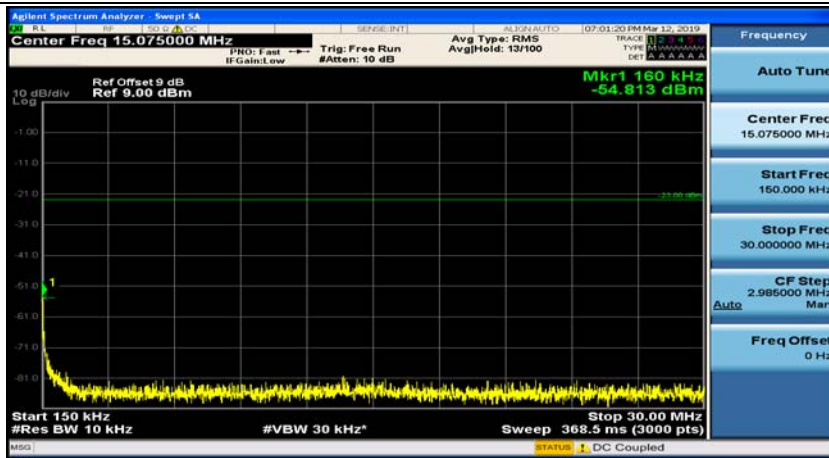


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

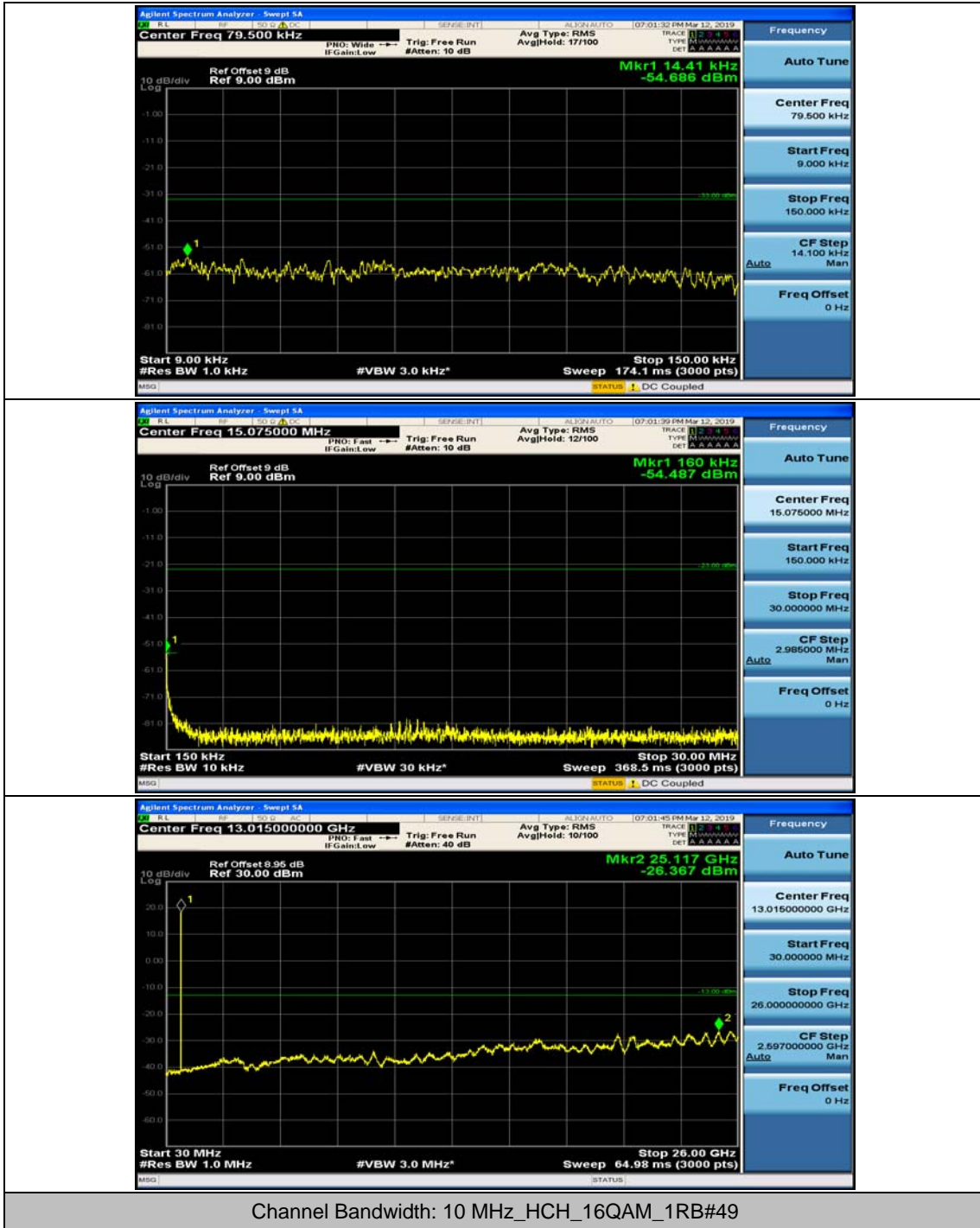




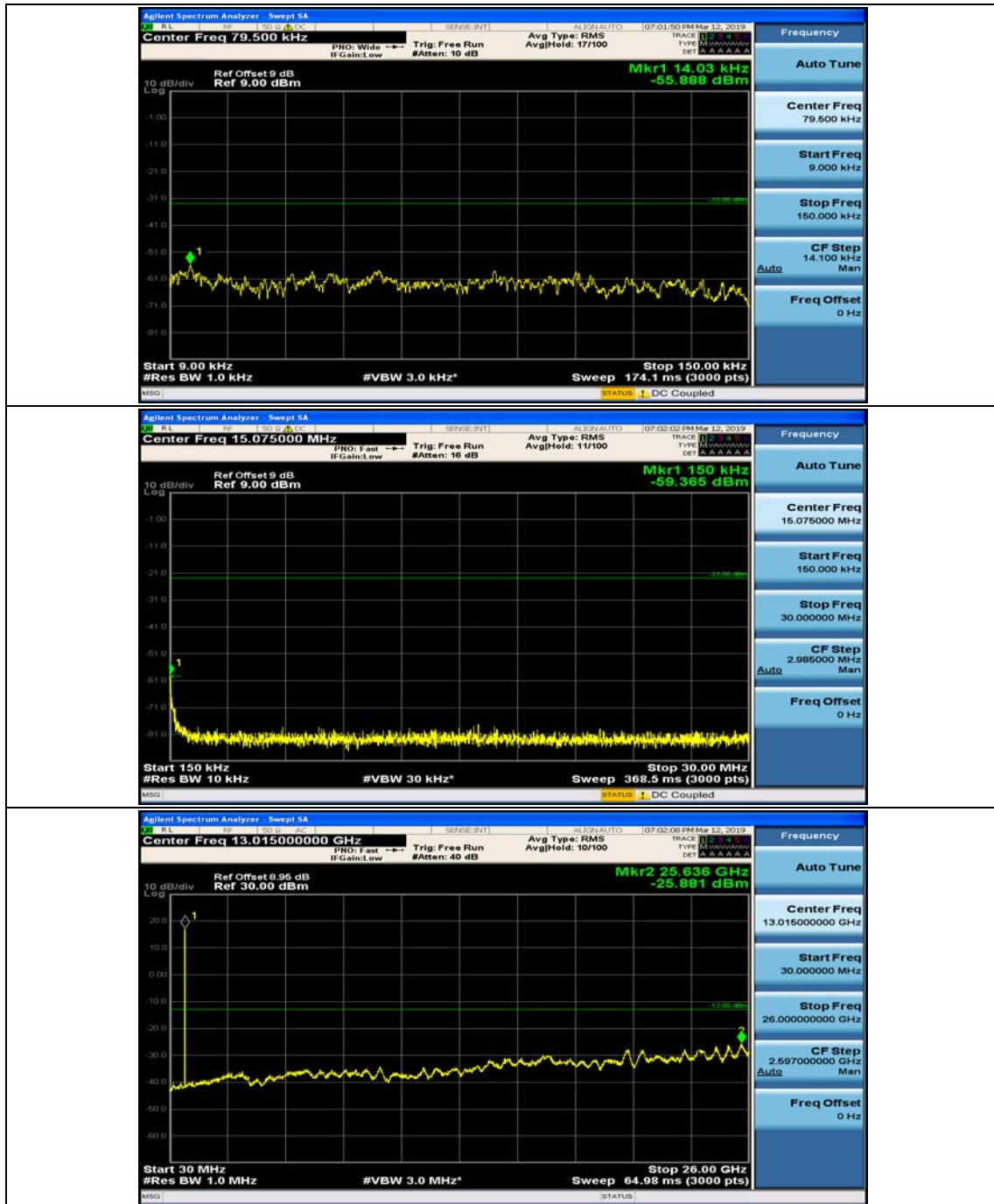
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49



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	-1.82	-0.002601	± 2.5	PASS
		VN	TN	0.91	0.001301	± 2.5	PASS
		VH	TN	-0.42	-0.000600	± 2.5	PASS
	MCH	VL	TN	4.59	0.006488	± 2.5	PASS
		VN	TN	-1.46	-0.002064	± 2.5	PASS
		VH	TN	1.85	0.002615	± 2.5	PASS
	HCH	VL	TN	-1.53	-0.002139	± 2.5	PASS
		VN	TN	-1.13	-0.001580	± 2.5	PASS
		VH	TN	4.87	0.006808	± 2.5	PASS
16QAM	LCH	VL	TN	-1.39	-0.001987	± 2.5	PASS
		VN	TN	-1.75	-0.002501	± 2.5	PASS
		VH	TN	-1.47	-0.002101	± 2.5	PASS
	MCH	VL	TN	-1.66	-0.002346	± 2.5	PASS
		VN	TN	-1.23	-0.001739	± 2.5	PASS
		VH	TN	4.37	0.006177	± 2.5	PASS
	HCH	VL	TN	-1.6	-0.002237	± 2.5	PASS
		VN	TN	2.22	0.003104	± 2.5	PASS
		VH	TN	-0.96	-0.001342	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.7	-0.001000	± 2.5	PASS
		VN	-20	3.14	0.004488	± 2.5	PASS
		VN	-10	3.59	0.005131	± 2.5	PASS
		VN	0	1.67	0.002387	± 2.5	PASS
		VN	10	-0.59	-0.000843	± 2.5	PASS
		VN	20	4.46	0.006374	± 2.5	PASS
		VN	30	0.28	0.000400	± 2.5	PASS
		VN	40	4.78	0.006831	± 2.5	PASS
		VN	50	0.69	0.000986	± 2.5	PASS
	MCH	VN	-30	4.46	0.006304	± 2.5	PASS

		VN	-20	1.27	0.001795	± 2.5	PASS
		VN	-10	2.82	0.003986	± 2.5	PASS
		VN	0	0.05	0.000071	± 2.5	PASS
		VN	10	-1.6	-0.002261	± 2.5	PASS
		VN	20	4.99	0.007053	± 2.5	PASS
		VN	30	4.57	0.006459	± 2.5	PASS
		VN	40	3.13	0.004424	± 2.5	PASS
		VN	50	1.17	0.001654	± 2.5	PASS
	HCH	VN	-30	2.12	0.002964	± 2.5	PASS
		VN	-20	3.33	0.004655	± 2.5	PASS
		VN	-10	4.39	0.006137	± 2.5	PASS
		VN	0	4.19	0.005858	± 2.5	PASS
		VN	10	2.3	0.003215	± 2.5	PASS
		VN	20	1.4	0.001957	± 2.5	PASS
		VN	30	-0.78	-0.001090	± 2.5	PASS
		VN	40	2.27	0.003173	± 2.5	PASS
		VN	50	1.98	0.002768	± 2.5	PASS
		16QAM	LCH	VN	-30	2.72	0.003887
VN	-20			-1.76	-0.002515	± 2.5	PASS
VN	-10			-0.25	-0.000357	± 2.5	PASS
VN	0			-1.68	-0.002401	± 2.5	PASS
VN	10			-1.67	-0.002387	± 2.5	PASS
VN	20			0.43	0.000615	± 2.5	PASS
VN	30			3.81	0.005445	± 2.5	PASS
VN	40			1.9	0.002715	± 2.5	PASS
VN	50			2.09	0.002987	± 2.5	PASS
MCH	VN		-30	-0.06	-0.000085	± 2.5	PASS
	VN		-20	2.91	0.004113	± 2.5	PASS
	VN		-10	3.19	0.004509	± 2.5	PASS
	VN		0	2.71	0.003830	± 2.5	PASS
	VN		10	-0.31	-0.000438	± 2.5	PASS
	VN		20	-0.24	-0.000339	± 2.5	PASS
	VN		30	2.85	0.004028	± 2.5	PASS
	VN		40	1.75	0.002473	± 2.5	PASS
	VN		50	-1.49	-0.002106	± 2.5	PASS
HCH	VN		-30	4.99	0.006976	± 2.5	PASS
	VN		-20	2.29	0.003201	± 2.5	PASS
	VN		-10	-1.39	-0.001943	± 2.5	PASS
	VN		0	0.31	0.000433	± 2.5	PASS
	VN		10	3.02	0.004222	± 2.5	PASS
	VN		20	-1.21	-0.001692	± 2.5	PASS

		VN	30	0.77	0.001076	± 2.5	PASS
		VN	40	1.87	0.002614	± 2.5	PASS
		VN	50	2.04	0.002852	± 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	1.26	0.001799	± 2.5	PASS
		VN	TN	0.48	0.000685	± 2.5	PASS
		VH	TN	-0.1	-0.000143	± 2.5	PASS
	MCH	VL	TN	-0.56	-0.000792	± 2.5	PASS
		VN	TN	4.24	0.005993	± 2.5	PASS
		VH	TN	1.23	0.001739	± 2.5	PASS
	HCH	VL	TN	1.83	0.002561	± 2.5	PASS
		VN	TN	-0.38	-0.000532	± 2.5	PASS
		VH	TN	0.71	0.000994	± 2.5	PASS
16QAM	LCH	VL	TN	0.22	0.000314	± 2.5	PASS
		VN	TN	2.06	0.002941	± 2.5	PASS
		VH	TN	-1.11	-0.001585	± 2.5	PASS
	MCH	VL	TN	-1.38	-0.001951	± 2.5	PASS
		VN	TN	2.09	0.002954	± 2.5	PASS
		VH	TN	-1.72	-0.002431	± 2.5	PASS
	HCH	VL	TN	4.94	0.006914	± 2.5	PASS
		VN	TN	2.9	0.004059	± 2.5	PASS
		VH	TN	-1.02	-0.001428	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.99	0.002841	± 2.5	PASS
		VN	-20	3.66	0.005225	± 2.5	PASS
		VN	-10	2.32	0.003312	± 2.5	PASS
		VN	0	-1.67	-0.002384	± 2.5	PASS
		VN	10	0.31	0.000443	± 2.5	PASS
		VN	20	4.12	0.005882	± 2.5	PASS
		VN	30	-1.16	-0.001656	± 2.5	PASS
		VN	40	3.95	0.005639	± 2.5	PASS
		VN	50	2.16	0.003084	± 2.5	PASS
	MCH	VN	-30	4.82	0.006813	± 2.5	PASS
		VN	-20	-1.56	-0.002205	± 2.5	PASS

		VN	-10	1.46	0.002064	± 2.5	PASS	
		VN	0	4.41	0.006233	± 2.5	PASS	
		VN	10	-1.89	-0.002671	± 2.5	PASS	
		VN	20	0.55	0.000777	± 2.5	PASS	
		VN	30	0.06	0.000085	± 2.5	PASS	
		VN	40	-1.77	-0.002502	± 2.5	PASS	
		VN	50	3.17	0.004481	± 2.5	PASS	
	HCH	VN	-30	-0.98	-0.001372	± 2.5	PASS	
		VN	-20	0.26	0.000364	± 2.5	PASS	
		VN	-10	1.83	0.002561	± 2.5	PASS	
		VN	0	3.85	0.005388	± 2.5	PASS	
		VN	10	-0.9	-0.001260	± 2.5	PASS	
		VN	20	1.84	0.002575	± 2.5	PASS	
		VN	30	-1.59	-0.002225	± 2.5	PASS	
	QPSK	LCH	VN	40	1.82	0.002547	± 2.5	PASS
			VN	50	2.19	0.003065	± 2.5	PASS
			VN	-30	-0.28	-0.000400	± 2.5	PASS
			VN	-20	3.25	0.004640	± 2.5	PASS
VN			-10	-1.42	-0.002027	± 2.5	PASS	
VN			0	-1.77	-0.002527	± 2.5	PASS	
VN			10	2.41	0.003440	± 2.5	PASS	
VN			20	3.59	0.005125	± 2.5	PASS	
VN			30	-0.33	-0.000471	± 2.5	PASS	
MCH		VN	40	2.01	0.002869	± 2.5	PASS	
		VN	50	2.04	0.002912	± 2.5	PASS	
		VN	-30	3.92	0.005541	± 2.5	PASS	
		VN	-20	-1.74	-0.002459	± 2.5	PASS	
		VN	-10	3.79	0.005357	± 2.5	PASS	
		VN	0	3.28	0.004636	± 2.5	PASS	
		VN	10	4.59	0.006488	± 2.5	PASS	
		VN	20	-1.34	-0.001894	± 2.5	PASS	
		VN	30	3.81	0.005385	± 2.5	PASS	
HCH	VN	40	-0.64	-0.000905	± 2.5	PASS		
	VN	50	-0.43	-0.000608	± 2.5	PASS		
	VN	-30	3.38	0.004731	± 2.5	PASS		
	VN	-20	2.54	0.003555	± 2.5	PASS		
	VN	-10	3.28	0.004591	± 2.5	PASS		
	VN	0	2.08	0.002911	± 2.5	PASS		
	VN	10	2.53	0.003541	± 2.5	PASS		
	VN	20	0.07	0.000098	± 2.5	PASS		
	VN	30	-0.94	-0.001316	± 2.5	PASS		

		VN	40	0.56	0.000784	± 2.5	PASS
		VN	50	-0.78	-0.001092	± 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	1.85	0.002637	± 2.5	PASS
		VN	TN	-0.06	-0.000086	± 2.5	PASS
		VH	TN	3.85	0.005488	± 2.5	PASS
	MCH	VL	TN	2.76	0.003901	± 2.5	PASS
		VN	TN	3.42	0.004834	± 2.5	PASS
		VH	TN	3.26	0.004608	± 2.5	PASS
	HCH	VL	TN	-0.79	-0.001107	± 2.5	PASS
		VN	TN	-1.61	-0.002256	± 2.5	PASS
		VH	TN	1.6	0.002242	± 2.5	PASS
16QAM	LCH	VL	TN	-1.84	-0.002623	± 2.5	PASS
		VN	TN	-1.58	-0.002252	± 2.5	PASS
		VH	TN	-0.74	-0.001055	± 2.5	PASS
	MCH	VL	TN	2.15	0.003039	± 2.5	PASS
		VN	TN	2.99	0.004226	± 2.5	PASS
		VH	TN	1.75	0.002473	± 2.5	PASS
	HCH	VL	TN	1.94	0.002719	± 2.5	PASS
		VN	TN	0.57	0.000799	± 2.5	PASS
		VH	TN	0.3	0.000420	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.2	0.004562	± 2.5	PASS
		VN	-20	-1.81	-0.002580	± 2.5	PASS
		VN	-10	-0.08	-0.000114	± 2.5	PASS
		VN	0	3.8	0.005417	± 2.5	PASS
		VN	10	2.55	0.003635	± 2.5	PASS
		VN	20	2.39	0.003407	± 2.5	PASS
		VN	30	3.91	0.005574	± 2.5	PASS
		VN	40	4.45	0.006344	± 2.5	PASS
		VN	50	3.82	0.005445	± 2.5	PASS
	MCH	VN	-30	-0.58	-0.000820	± 2.5	PASS
		VN	-20	3.89	0.005498	± 2.5	PASS
		VN	-10	4.69	0.006629	± 2.5	PASS

		VN	0	3.69	0.005216	± 2.5	PASS		
		VN	10	1	0.001413	± 2.5	PASS		
		VN	20	-0.3	-0.000424	± 2.5	PASS		
		VN	30	2.35	0.003322	± 2.5	PASS		
		VN	40	3.43	0.004848	± 2.5	PASS		
		VN	50	3.57	0.005046	± 2.5	PASS		
	HCH	VN	-30	2.45	0.003434	± 2.5	PASS		
		VN	-20	-1.07	-0.001500	± 2.5	PASS		
		VN	-10	1.98	0.002775	± 2.5	PASS		
		VN	0	1.35	0.001892	± 2.5	PASS		
		VN	10	0.93	0.001303	± 2.5	PASS		
		VN	20	3.81	0.005340	± 2.5	PASS		
		VN	30	-0.49	-0.000687	± 2.5	PASS		
		VN	40	-0.64	-0.000897	± 2.5	PASS		
		VN	50	0.46	0.000645	± 2.5	PASS		
		16QAM	LCH	VN	-30	4.26	0.006073	± 2.5	PASS
				VN	-20	4.66	0.006643	± 2.5	PASS
				VN	-10	3.17	0.004519	± 2.5	PASS
VN	0			2.41	0.003435	± 2.5	PASS		
VN	10			-1.15	-0.001639	± 2.5	PASS		
VN	20			2.2	0.003136	± 2.5	PASS		
VN	30			4.01	0.005716	± 2.5	PASS		
VN	40			3.24	0.004619	± 2.5	PASS		
VN	50			-0.92	-0.001311	± 2.5	PASS		
MCH	VN		-30	0.58	0.000820	± 2.5	PASS		
	VN		-20	-1.05	-0.001484	± 2.5	PASS		
	VN		-10	1.96	0.002770	± 2.5	PASS		
	VN		0	0.66	0.000933	± 2.5	PASS		
	VN		10	-0.27	-0.000382	± 2.5	PASS		
	VN		20	3.24	0.004580	± 2.5	PASS		
	VN		30	-0.8	-0.001131	± 2.5	PASS		
	VN		40	3.9	0.005512	± 2.5	PASS		
	VN		50	2.75	0.003887	± 2.5	PASS		
HCH	VN		-30	4.35	0.006097	± 2.5	PASS		
	VN		-20	1.25	0.001752	± 2.5	PASS		
	VN		-10	1.98	0.002775	± 2.5	PASS		
	VN		0	1.35	0.001892	± 2.5	PASS		
	VN		10	2.5	0.003504	± 2.5	PASS		
	VN		20	0.13	0.000182	± 2.5	PASS		
	VN		30	3.61	0.005060	± 2.5	PASS		
	VN		40	3.99	0.005592	± 2.5	PASS		

		VN	50	2.44	0.003420	± 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	3.65	0.005185	± 2.5	PASS
		VN	TN	4.59	0.006520	± 2.5	PASS
		VH	TN	1.11	0.001577	± 2.5	PASS
	MCH	VL	TN	3.76	0.005314	± 2.5	PASS
		VN	TN	2.98	0.004212	± 2.5	PASS
		VH	TN	0.4	0.000565	± 2.5	PASS
	HCH	VL	TN	1.66	0.002335	± 2.5	PASS
		VN	TN	-1.74	-0.002447	± 2.5	PASS
		VH	TN	4.76	0.006695	± 2.5	PASS
16QAM	LCH	VL	TN	0.77	0.001094	± 2.5	PASS
		VN	TN	3.93	0.005582	± 2.5	PASS
		VH	TN	3.76	0.005341	± 2.5	PASS
	MCH	VL	TN	2.05	0.002898	± 2.5	PASS
		VN	TN	-0.19	-0.000269	± 2.5	PASS
		VH	TN	4.37	0.006177	± 2.5	PASS
	HCH	VL	TN	0	0.000000	± 2.5	PASS
		VN	TN	0.83	0.001167	± 2.5	PASS
		VH	TN	3.76	0.005288	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	1.3	0.001847	± 2.5	PASS
		VN	-20	0.39	0.000554	± 2.5	PASS
		VN	-10	0.86	0.001222	± 2.5	PASS
		VN	0	1.18	0.001676	± 2.5	PASS
		VN	10	1.74	0.002472	± 2.5	PASS
		VN	20	0.01	0.000014	± 2.5	PASS
		VN	30	0.6	0.000852	± 2.5	PASS
		VN	40	0.02	0.000028	± 2.5	PASS
		VN	50	-0.07	-0.000099	± 2.5	PASS
	MCH	VN	-30	1.03	0.001456	± 2.5	PASS
		VN	-20	0.67	0.000947	± 2.5	PASS
		VN	-10	1.4	0.001979	± 2.5	PASS
		VN	0	1.8	0.002544	± 2.5	PASS

		VN	10	2.2	0.003110	± 2.5	PASS
		VN	20	1.41	0.001993	± 2.5	PASS
		VN	30	0.42	0.000594	± 2.5	PASS
		VN	40	-1.27	-0.001795	± 2.5	PASS
		VN	50	-0.78	-0.001102	± 2.5	PASS
	HCH	VN	-30	3.15	0.004430	± 2.5	PASS
		VN	-20	3.65	0.005134	± 2.5	PASS
		VN	-10	4.76	0.006695	± 2.5	PASS
		VN	0	3.33	0.004684	± 2.5	PASS
		VN	10	-0.44	-0.000619	± 2.5	PASS
		VN	20	-1.64	-0.002307	± 2.5	PASS
		VN	30	4.58	0.006442	± 2.5	PASS
		VN	40	3.62	0.005091	± 2.5	PASS
		VN	50	1.28	0.001800	± 2.5	PASS
		QPSK	LCH	VN	-30	1.6	0.002273
VN	-20			4.93	0.007003	± 2.5	PASS
VN	-10			-1.59	-0.002259	± 2.5	PASS
VN	0			1.38	0.001960	± 2.5	PASS
VN	10			0.85	0.001207	± 2.5	PASS
VN	20			0.2	0.000284	± 2.5	PASS
VN	30			-1.81	-0.002571	± 2.5	PASS
VN	40			0.14	0.000199	± 2.5	PASS
VN	50			-0.31	-0.000440	± 2.5	PASS
MCH	VN		-30	2.09	0.002954	± 2.5	PASS
	VN		-20	0.34	0.000481	± 2.5	PASS
	VN		-10	4.55	0.006431	± 2.5	PASS
	VN		0	1.54	0.002177	± 2.5	PASS
	VN		10	2.32	0.003279	± 2.5	PASS
	VN		20	4.28	0.006049	± 2.5	PASS
	VN		30	-0.03	-0.000042	± 2.5	PASS
	VN		40	0.44	0.000622	± 2.5	PASS
	VN		50	3.95	0.005583	± 2.5	PASS
HCH	VN		-30	3.56	0.005007	± 2.5	PASS
	VN		-20	1.35	0.001899	± 2.5	PASS
	VN		-10	-1.8	-0.002532	± 2.5	PASS
	VN		0	3.62	0.005091	± 2.5	PASS
	VN		10	1.47	0.002068	± 2.5	PASS
	VN		20	4.28	0.006020	± 2.5	PASS
	VN		30	3.34	0.004698	± 2.5	PASS
	VN		40	-0.63	-0.000886	± 2.5	PASS
	VN		50	2.73	0.003840	± 2.5	PASS