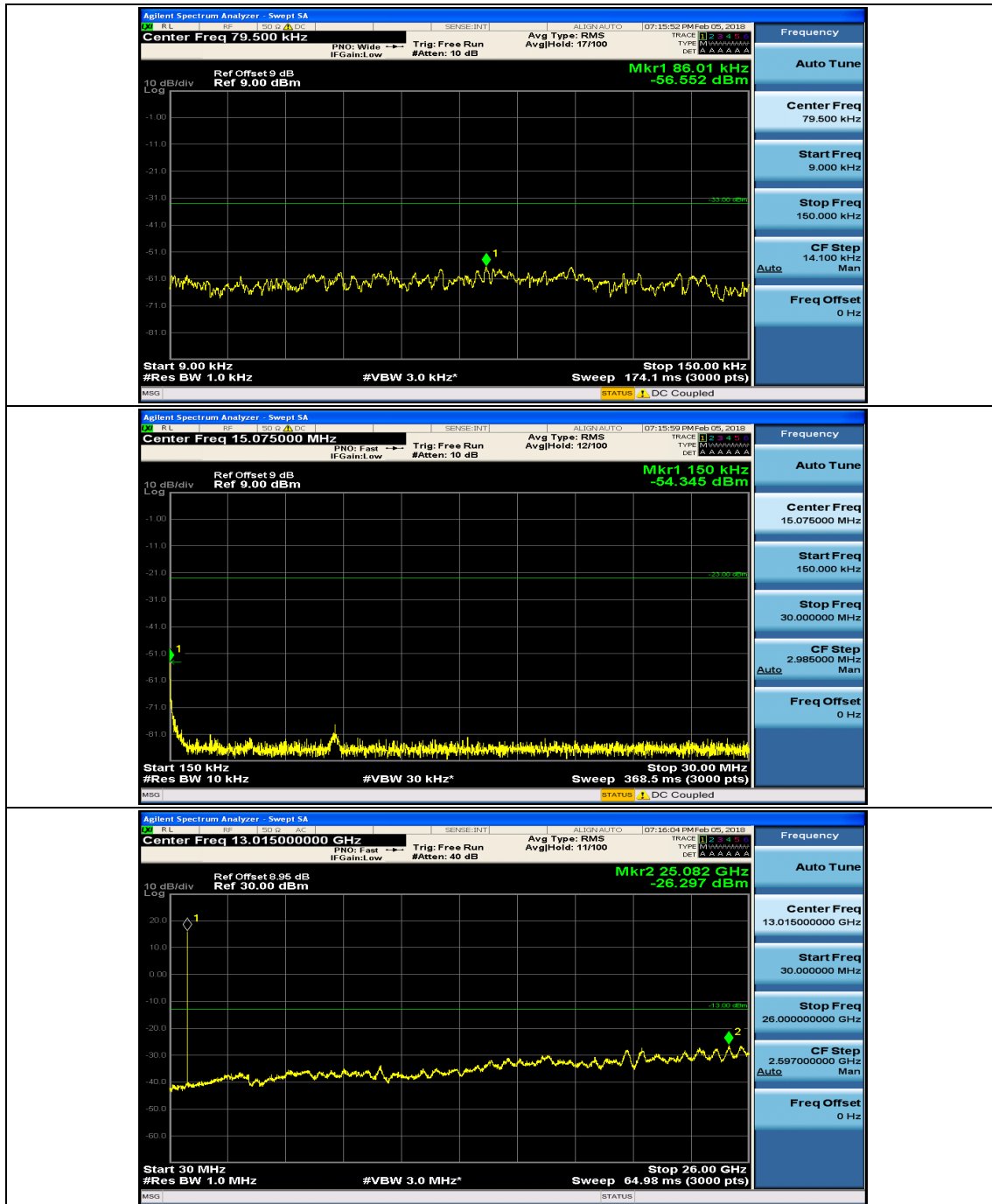
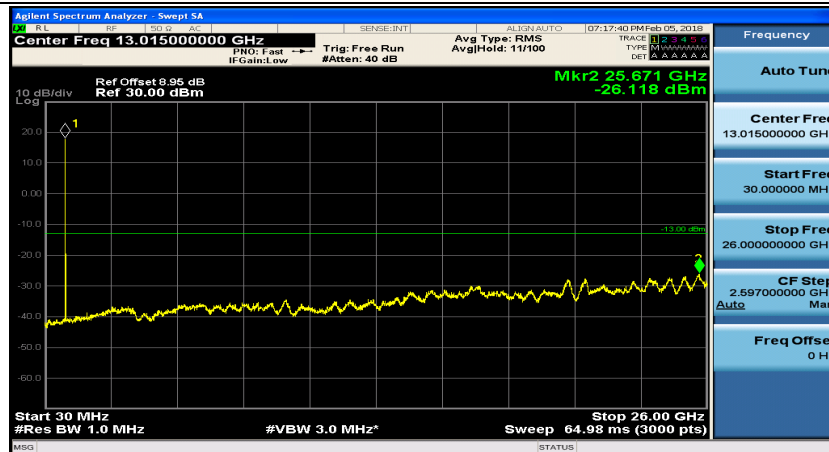
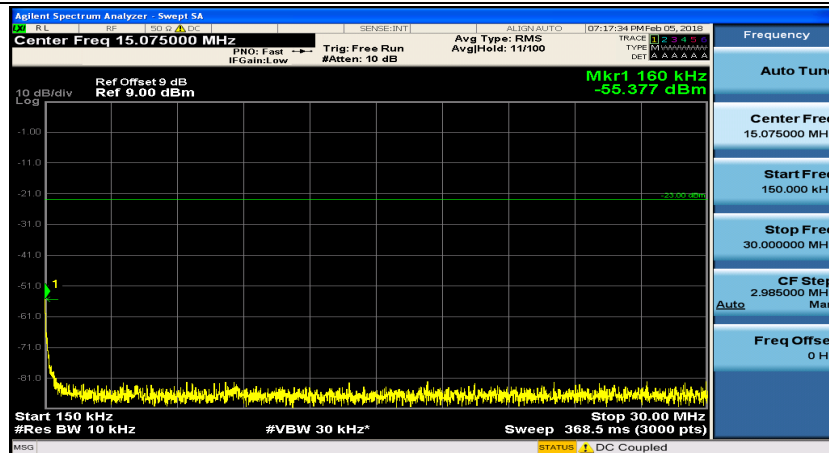
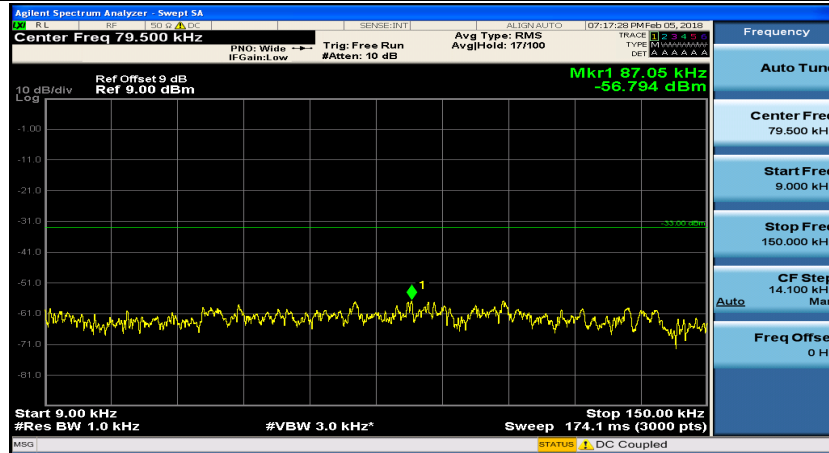
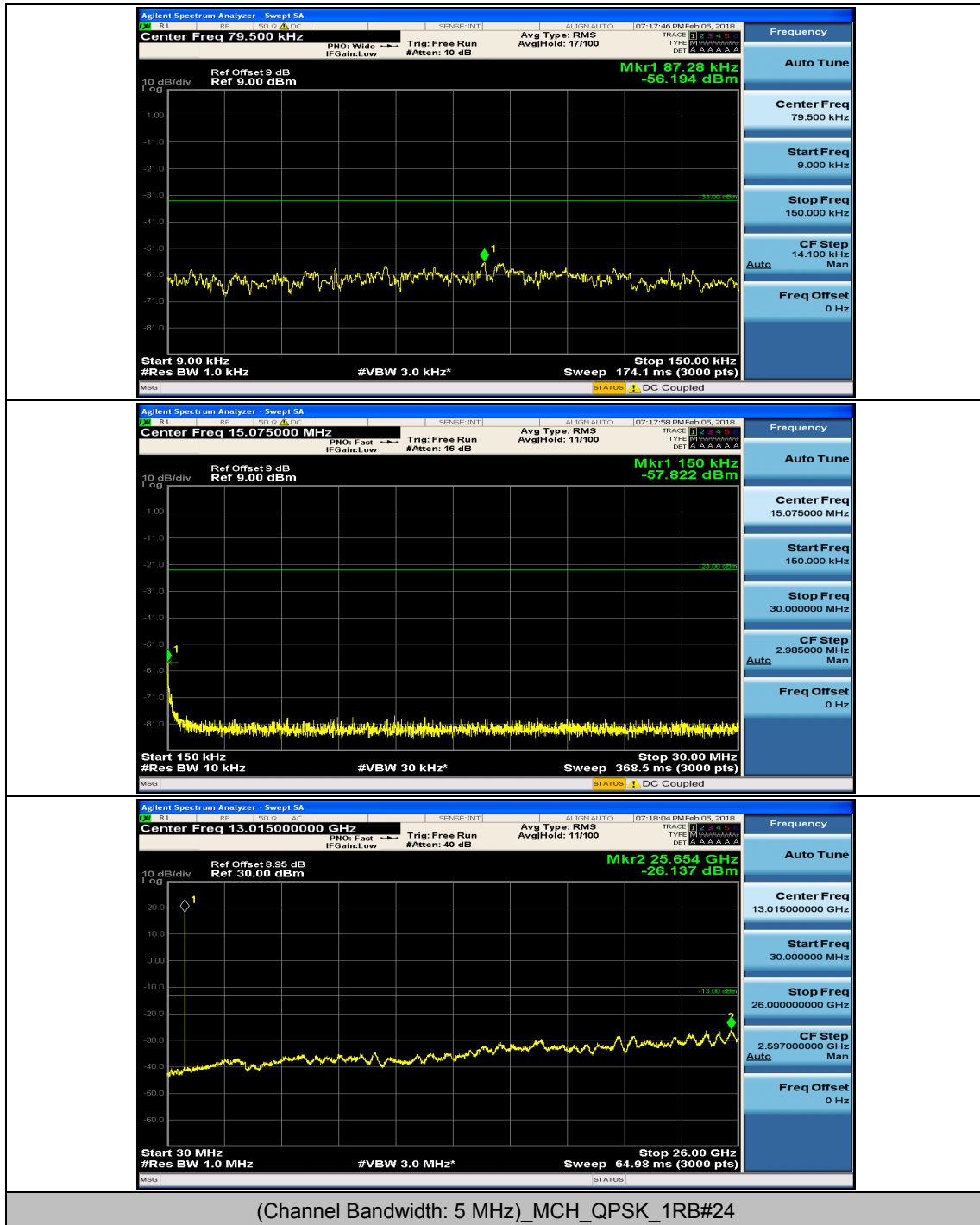


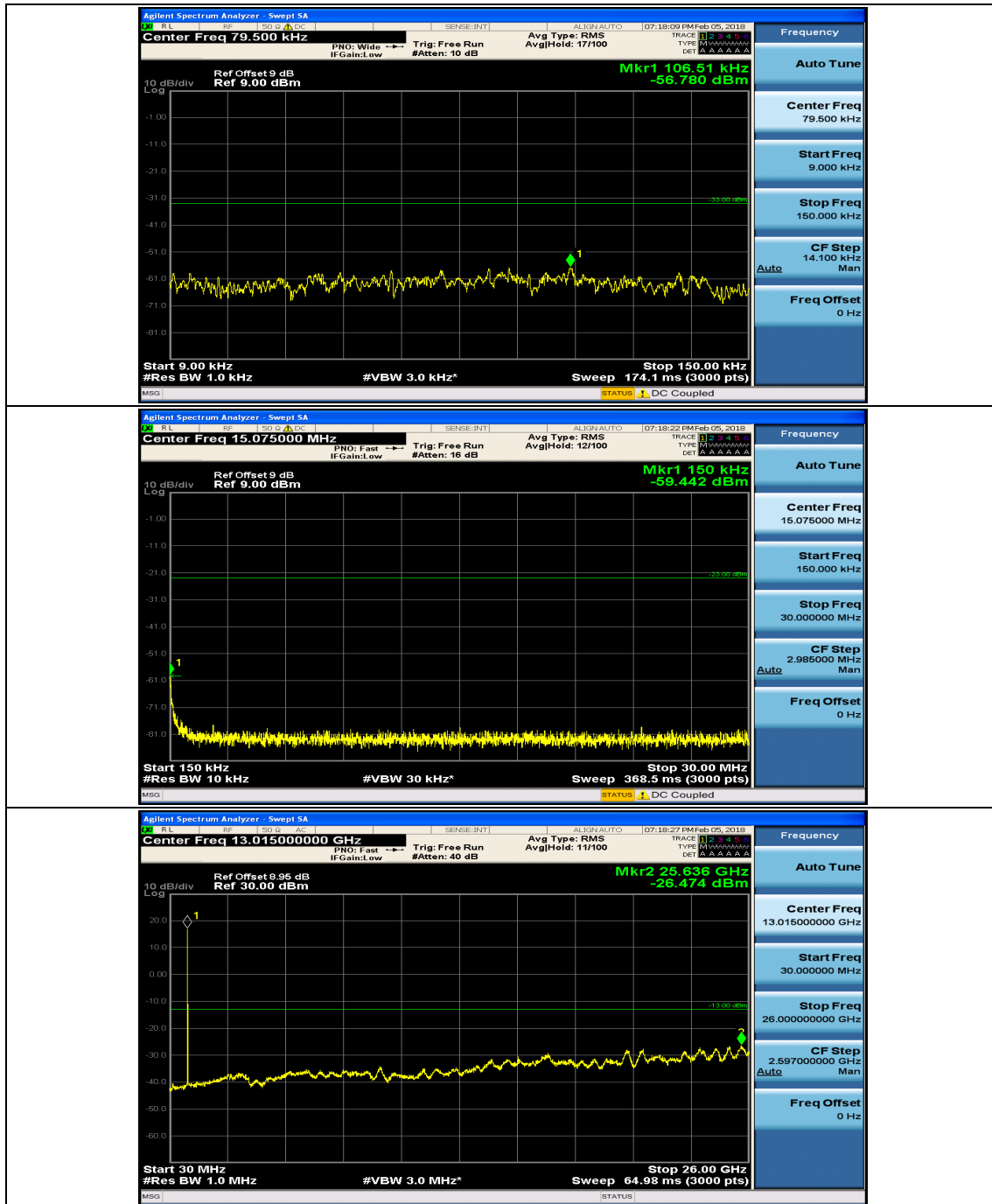


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0

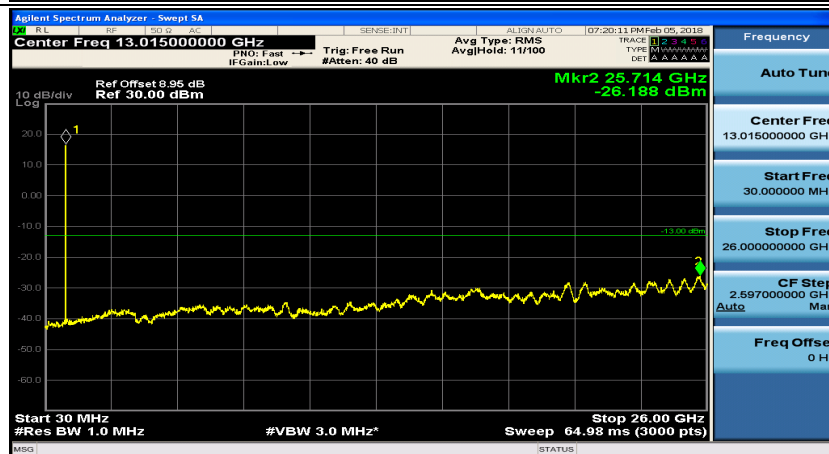
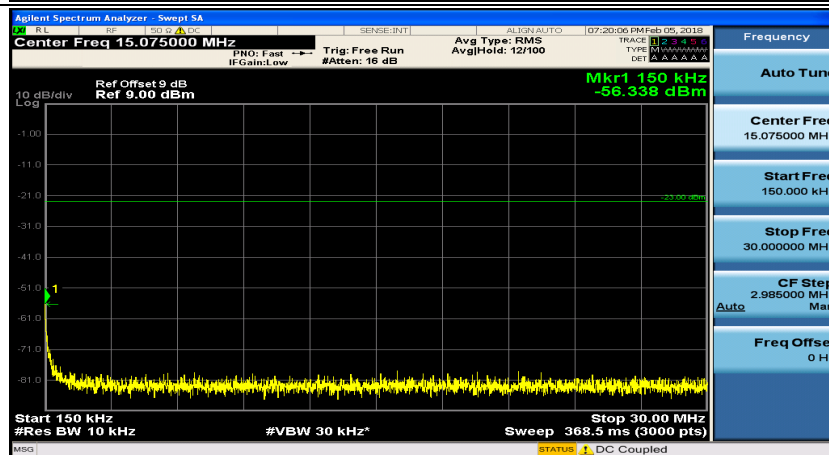
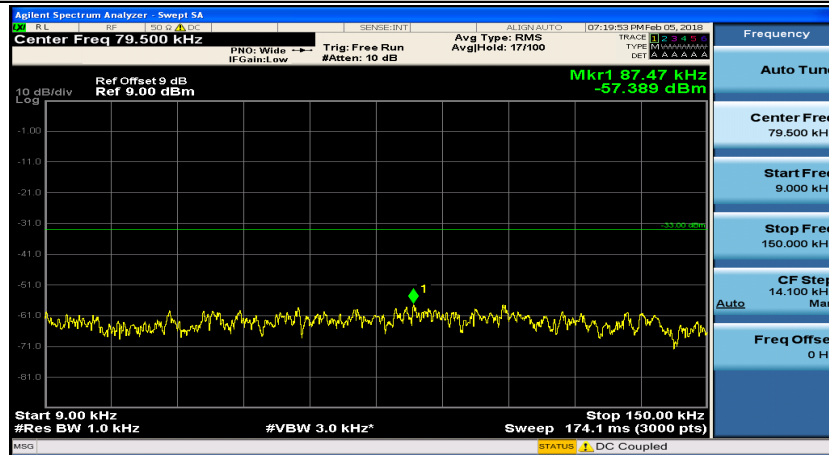


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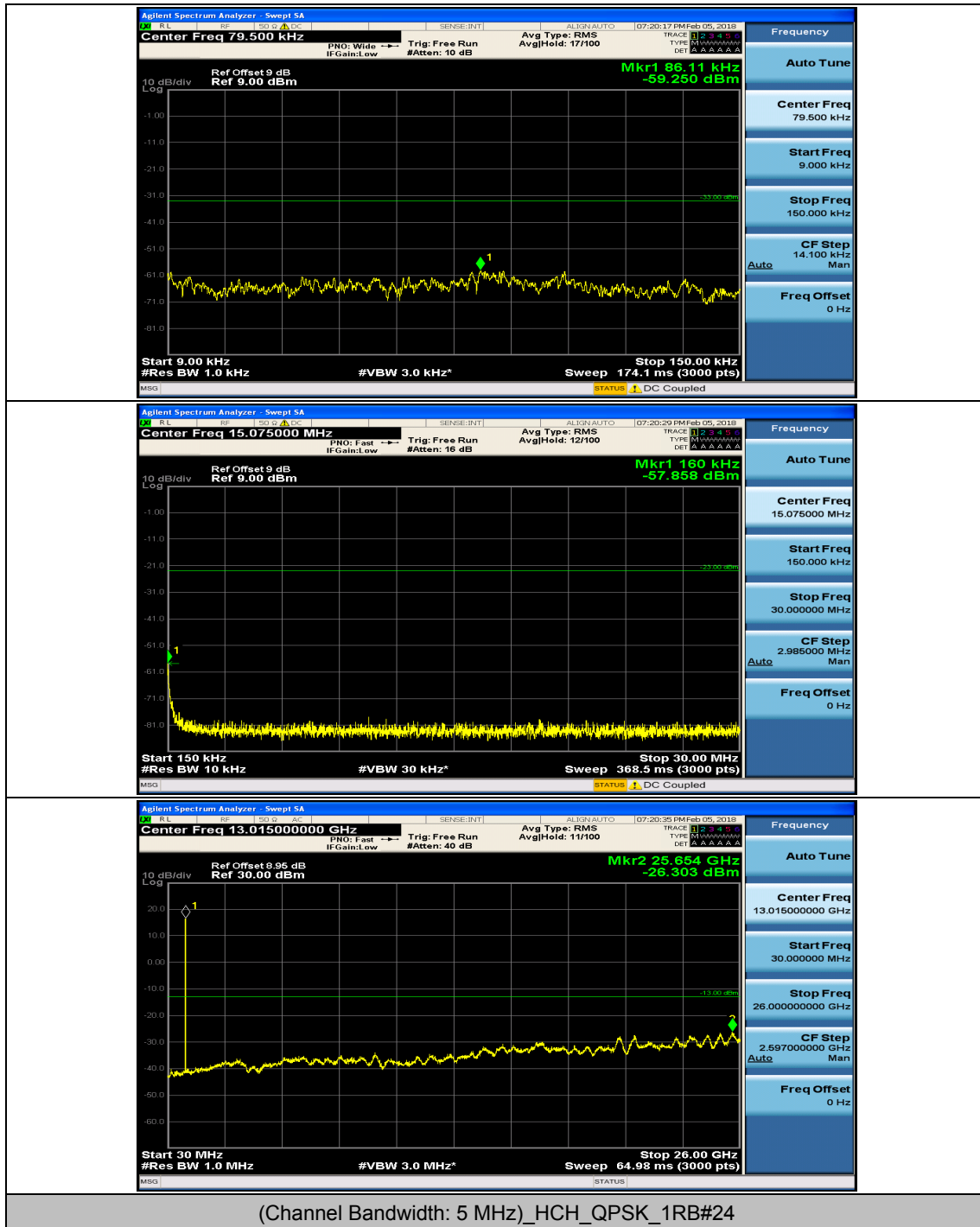


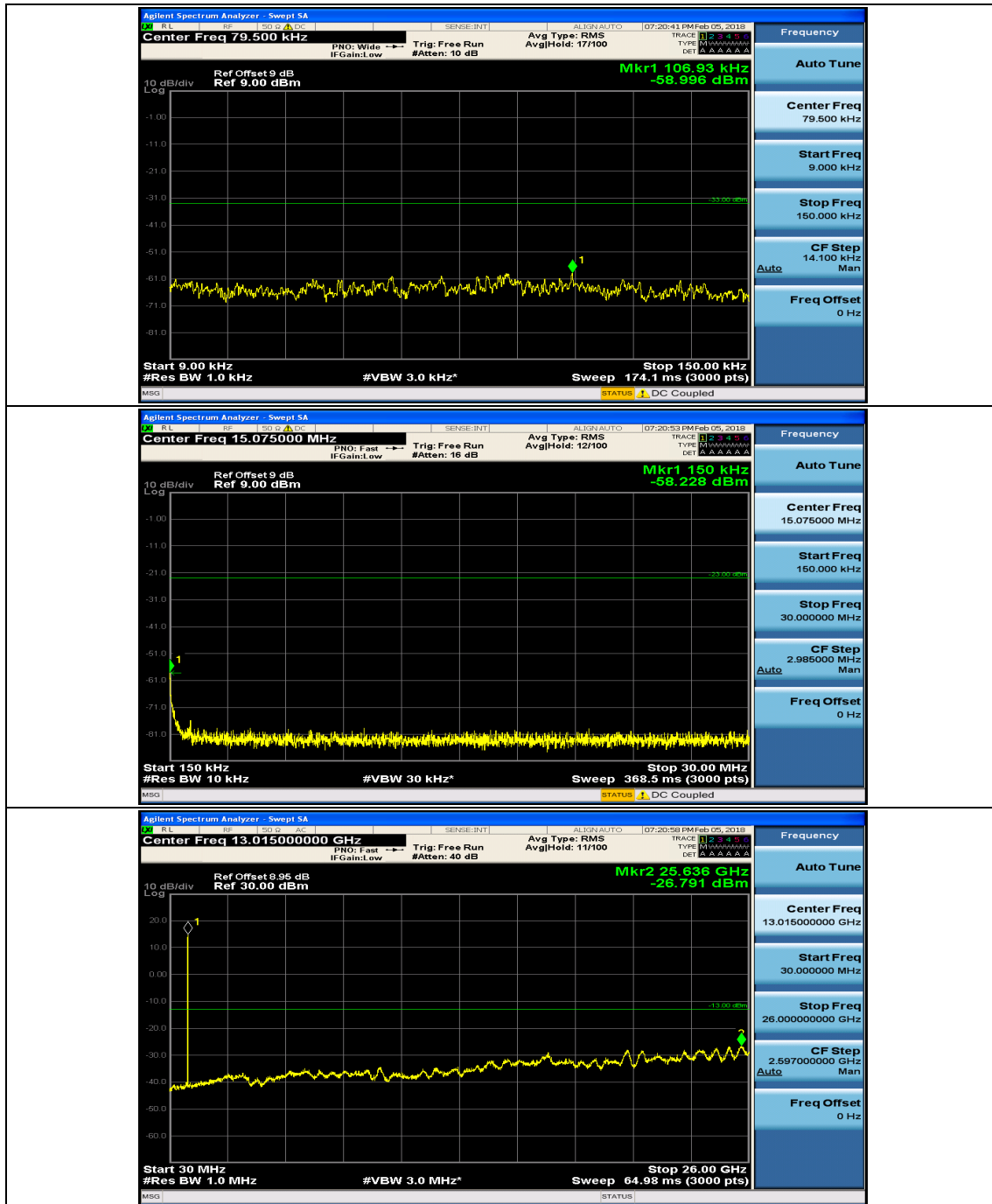


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

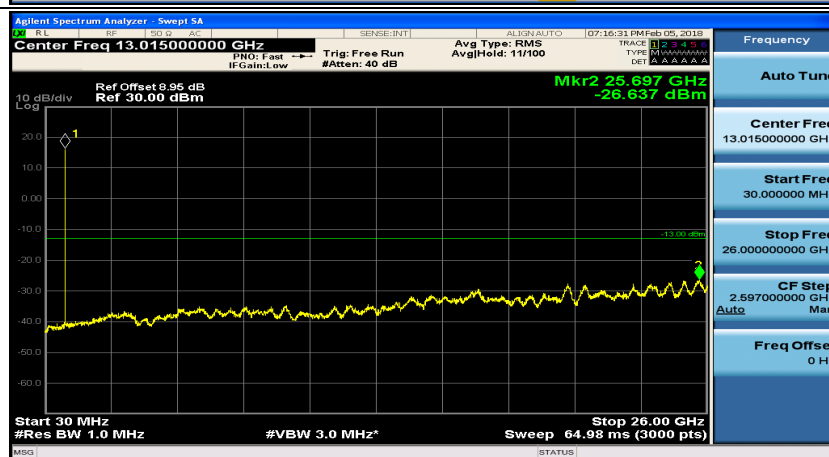
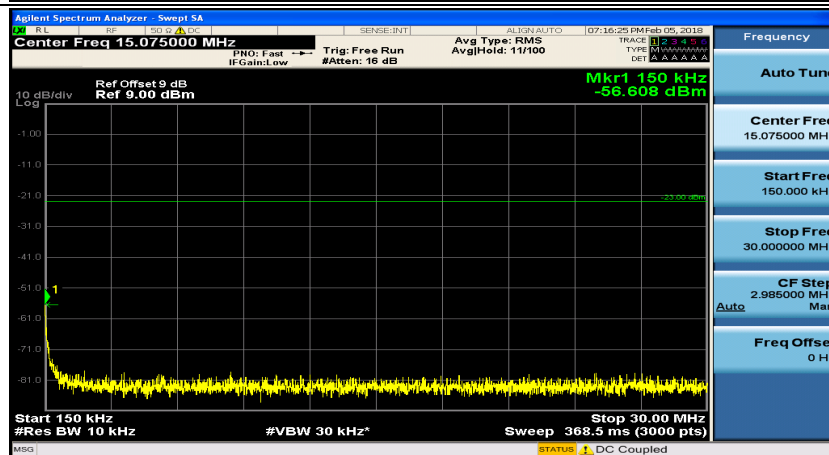
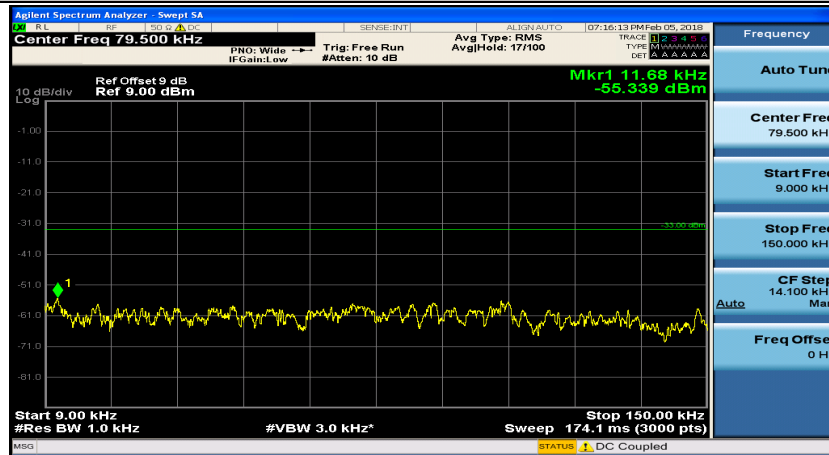


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

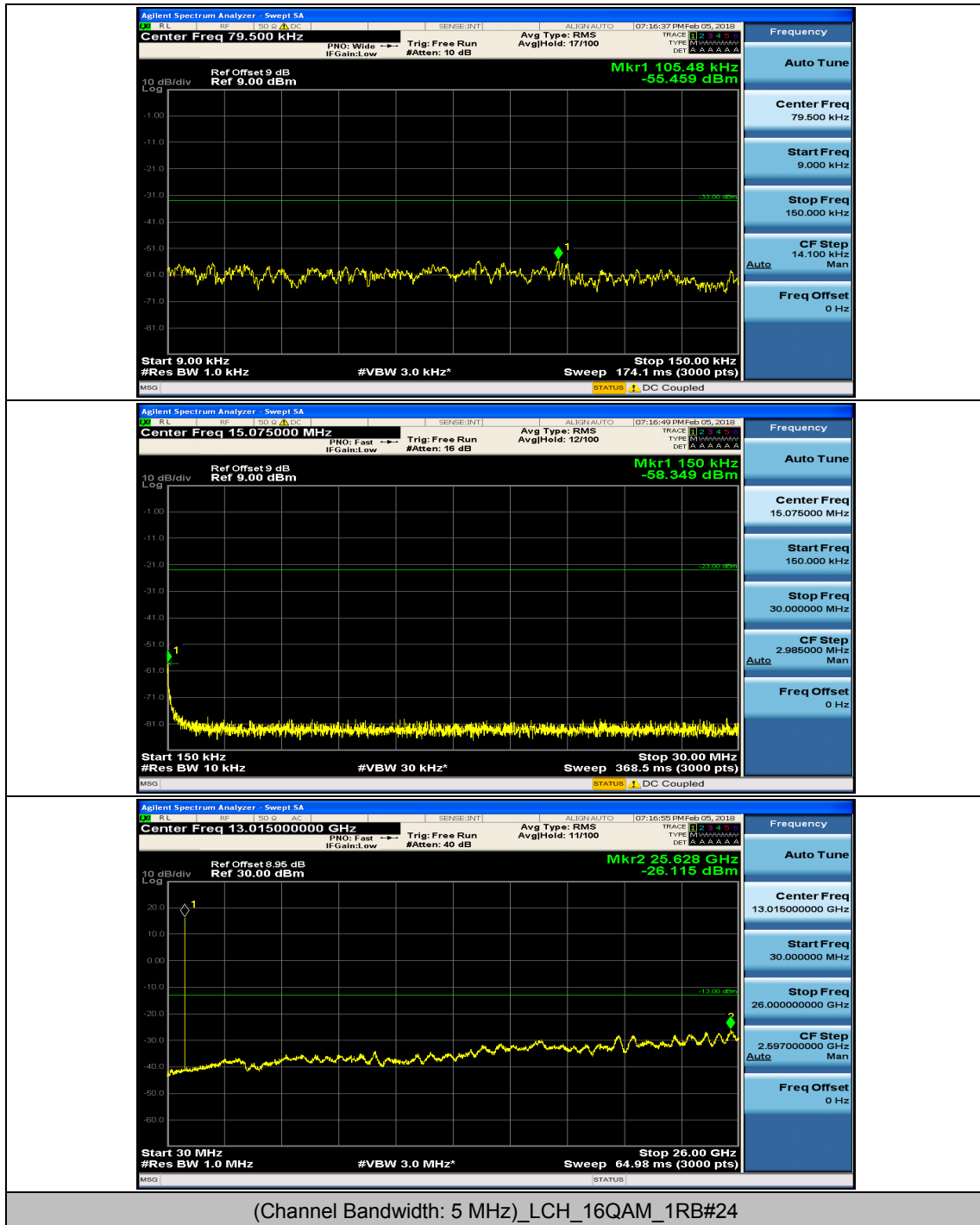


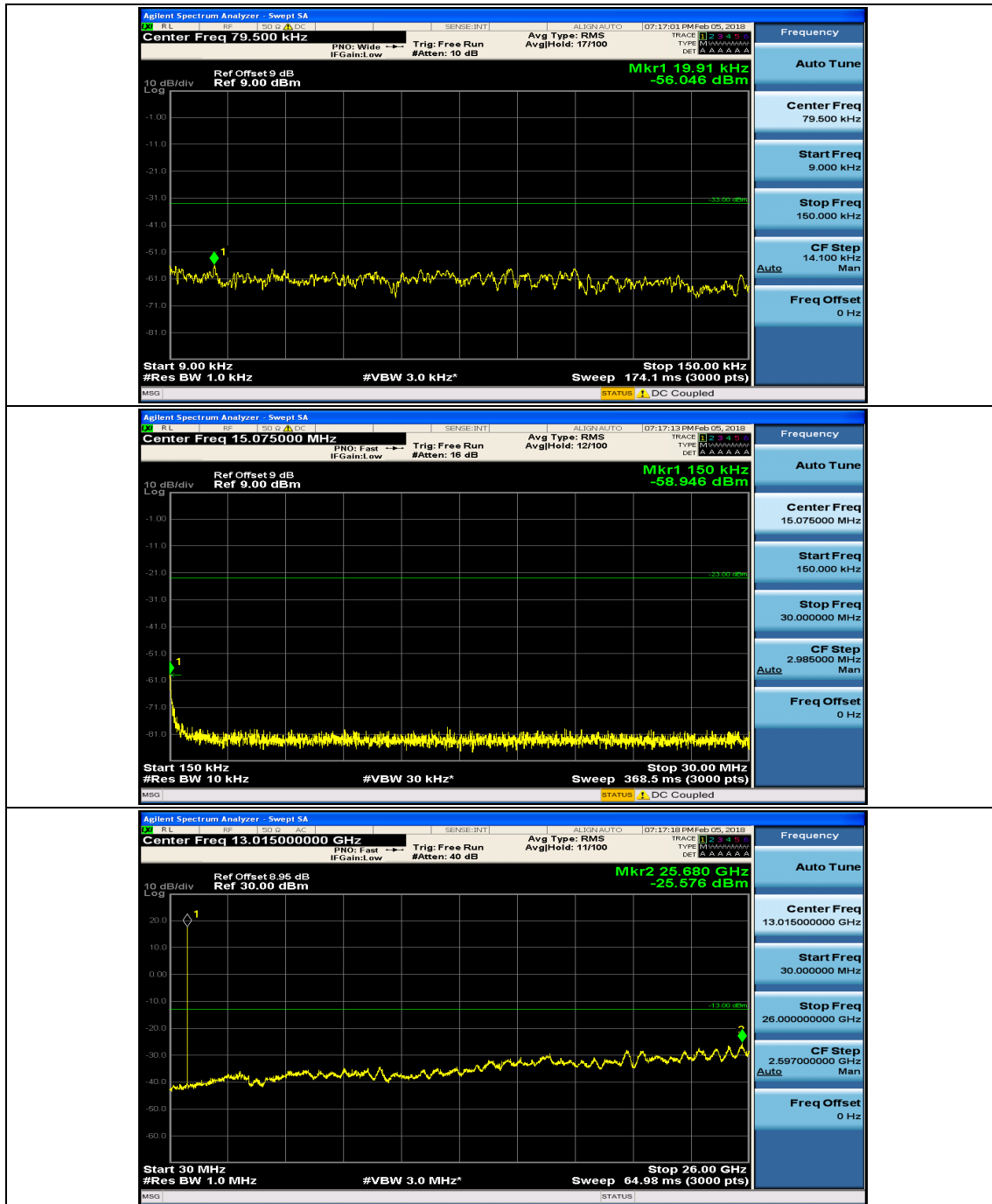


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0

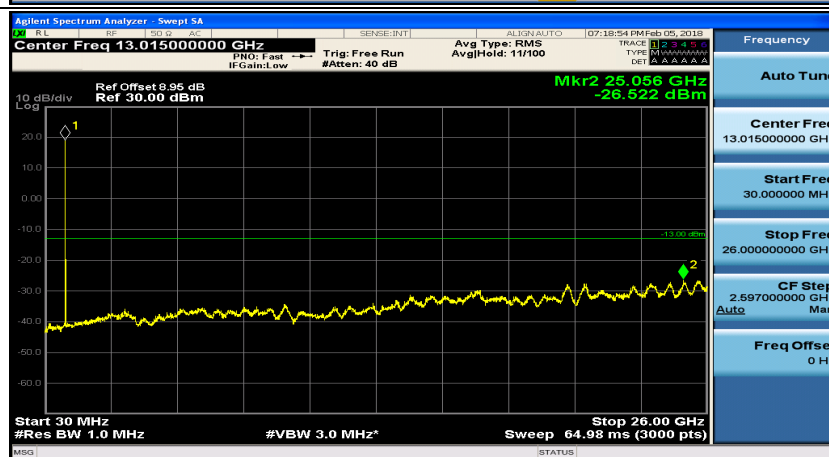
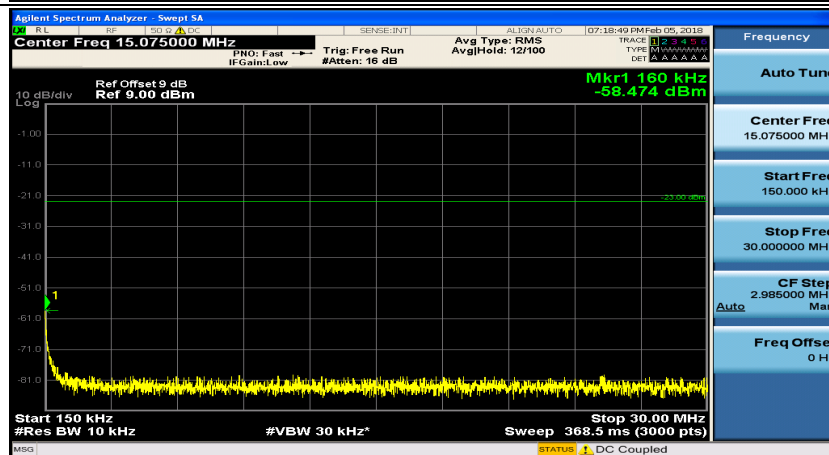
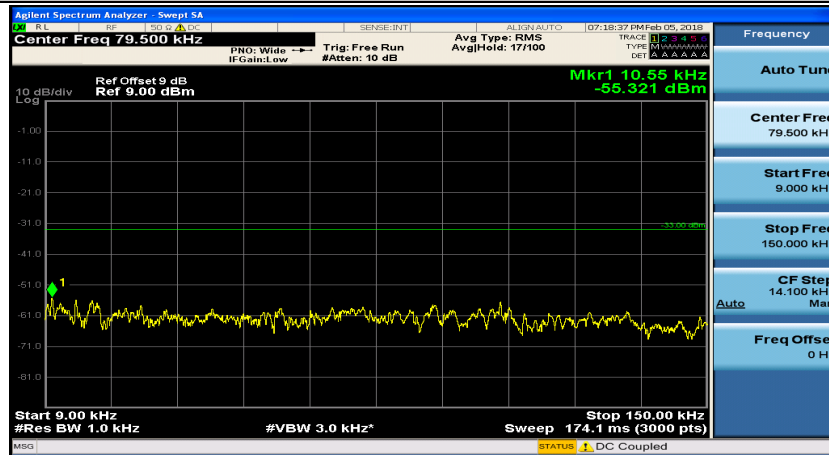


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

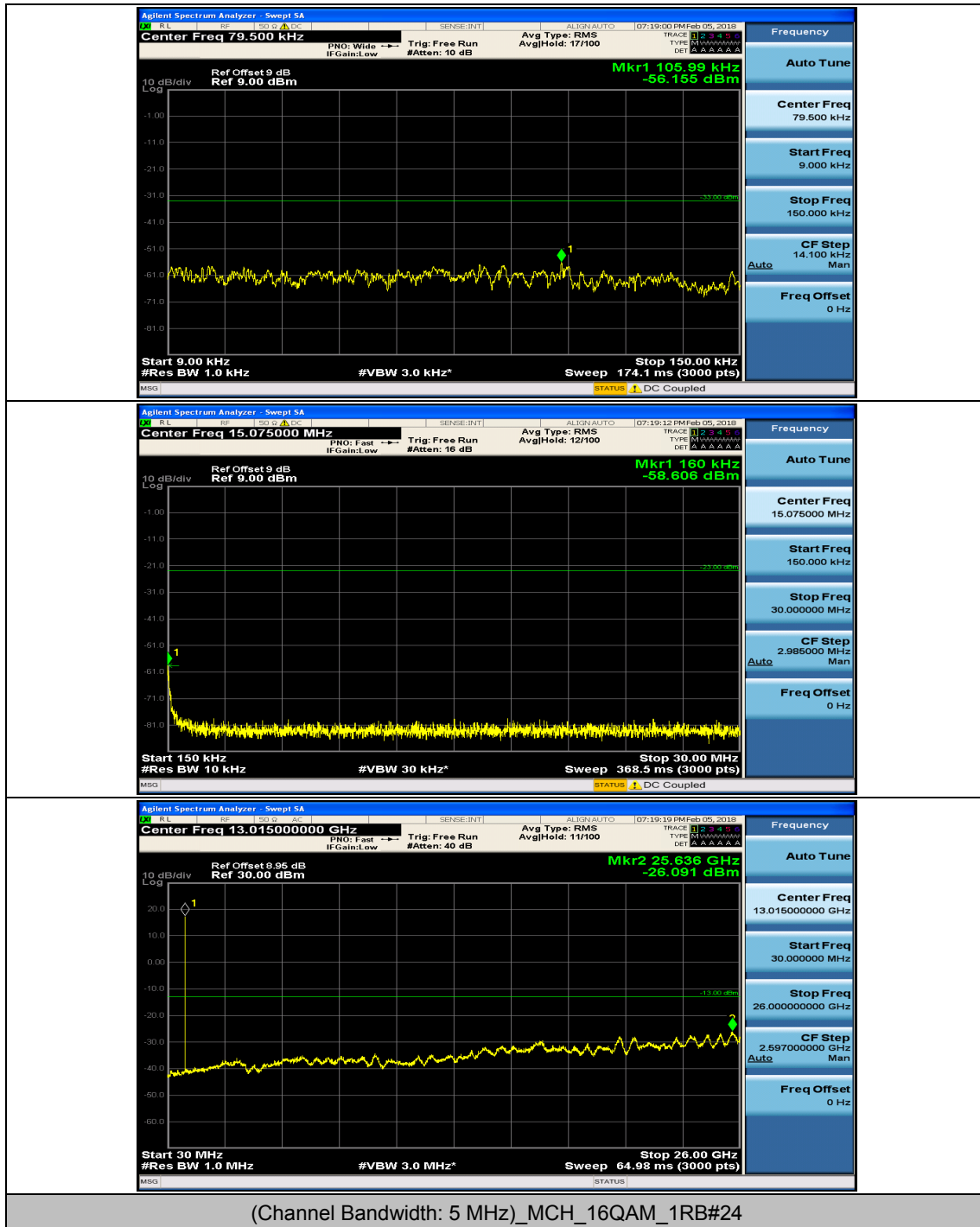


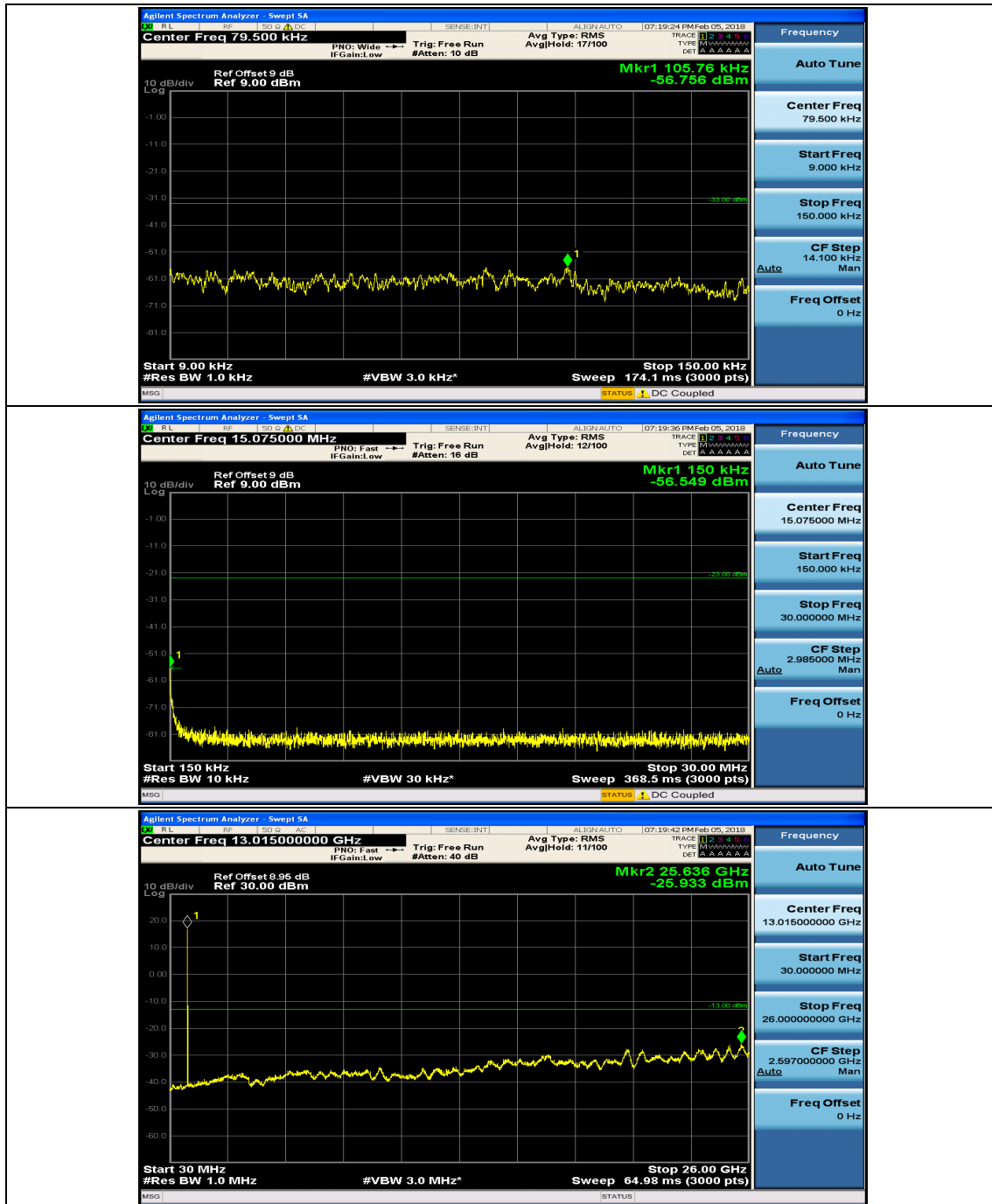


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0

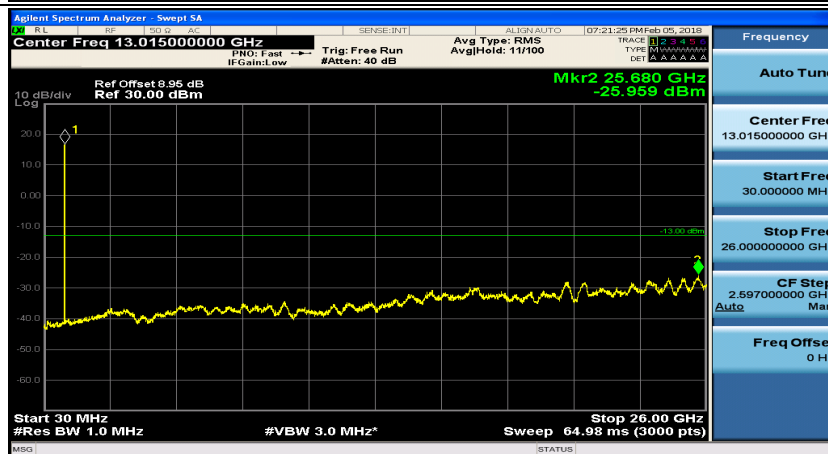
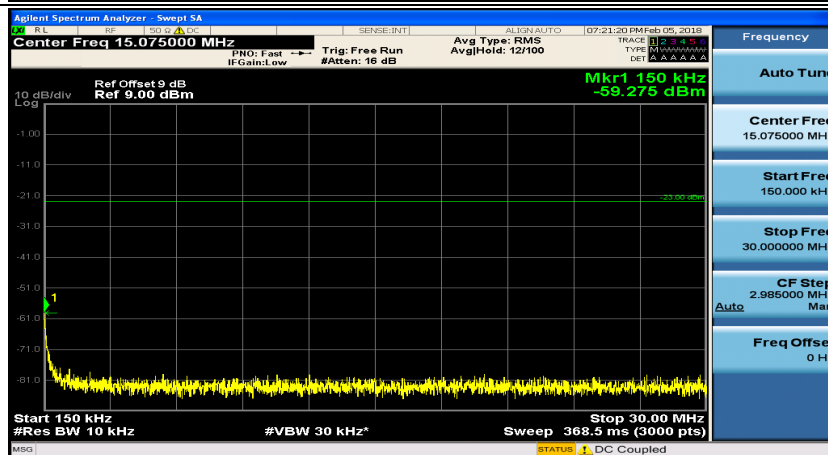
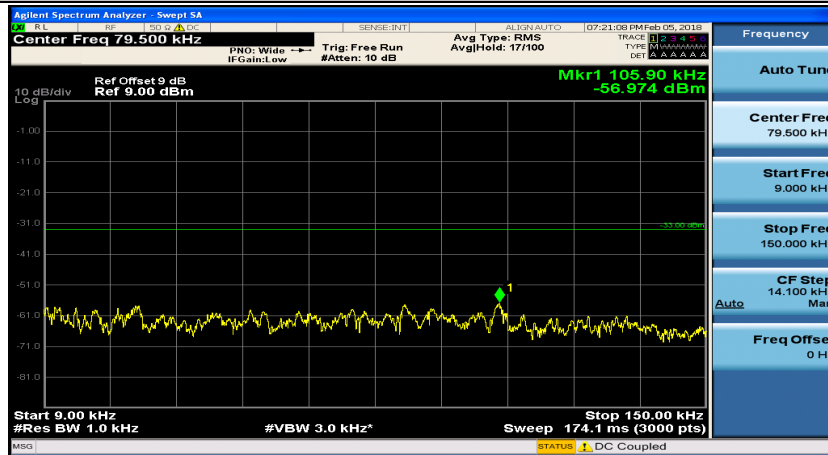


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

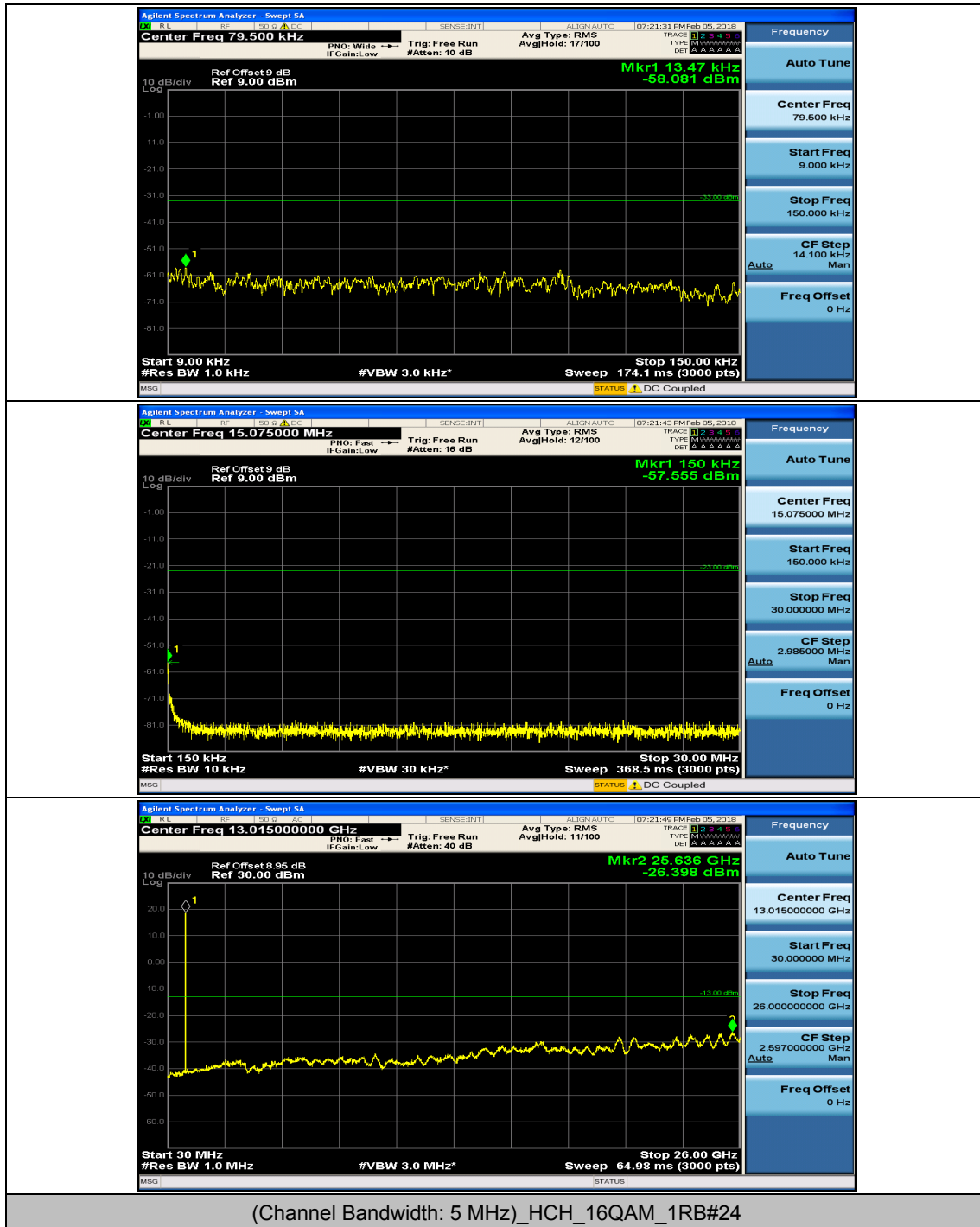


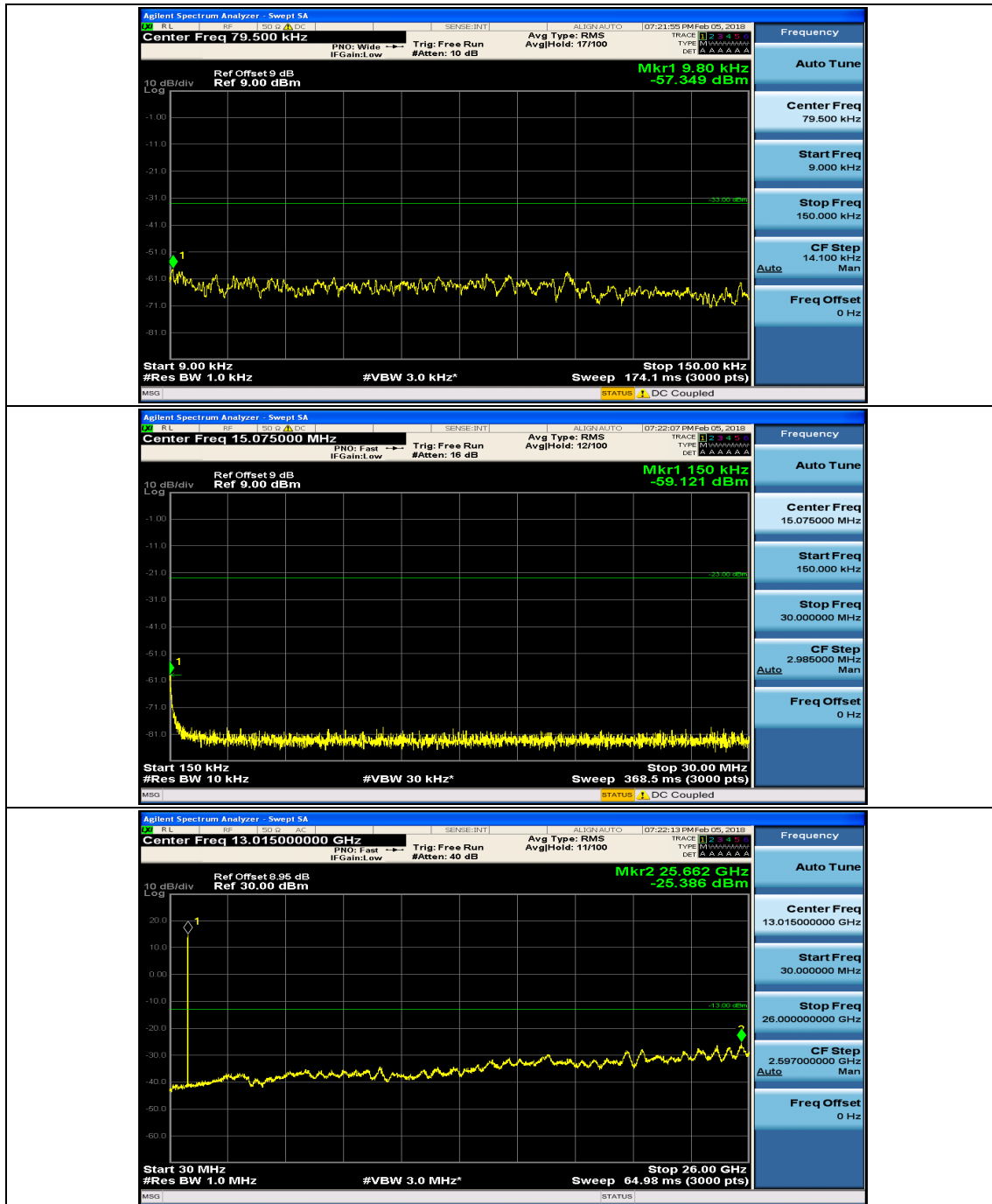


(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0

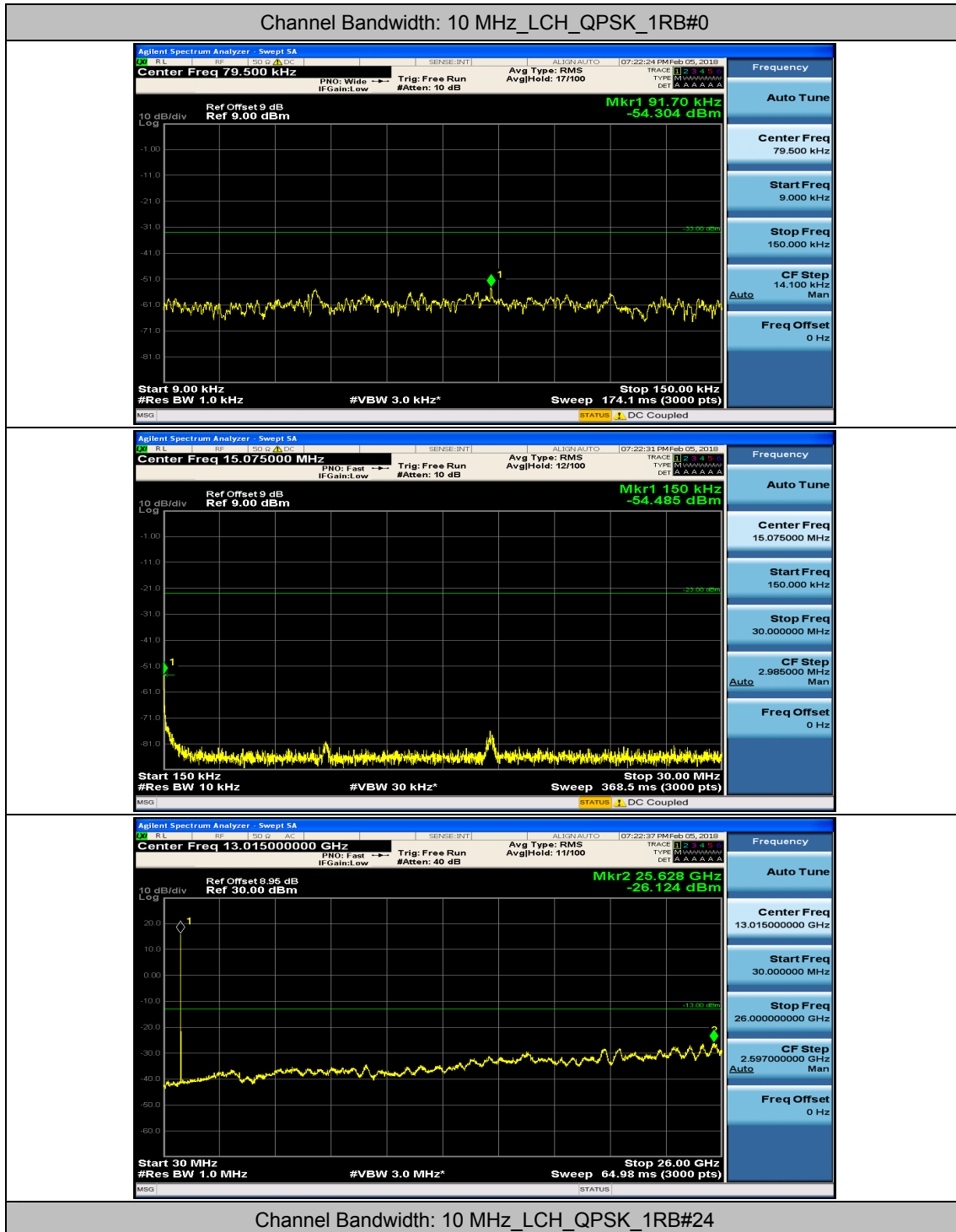


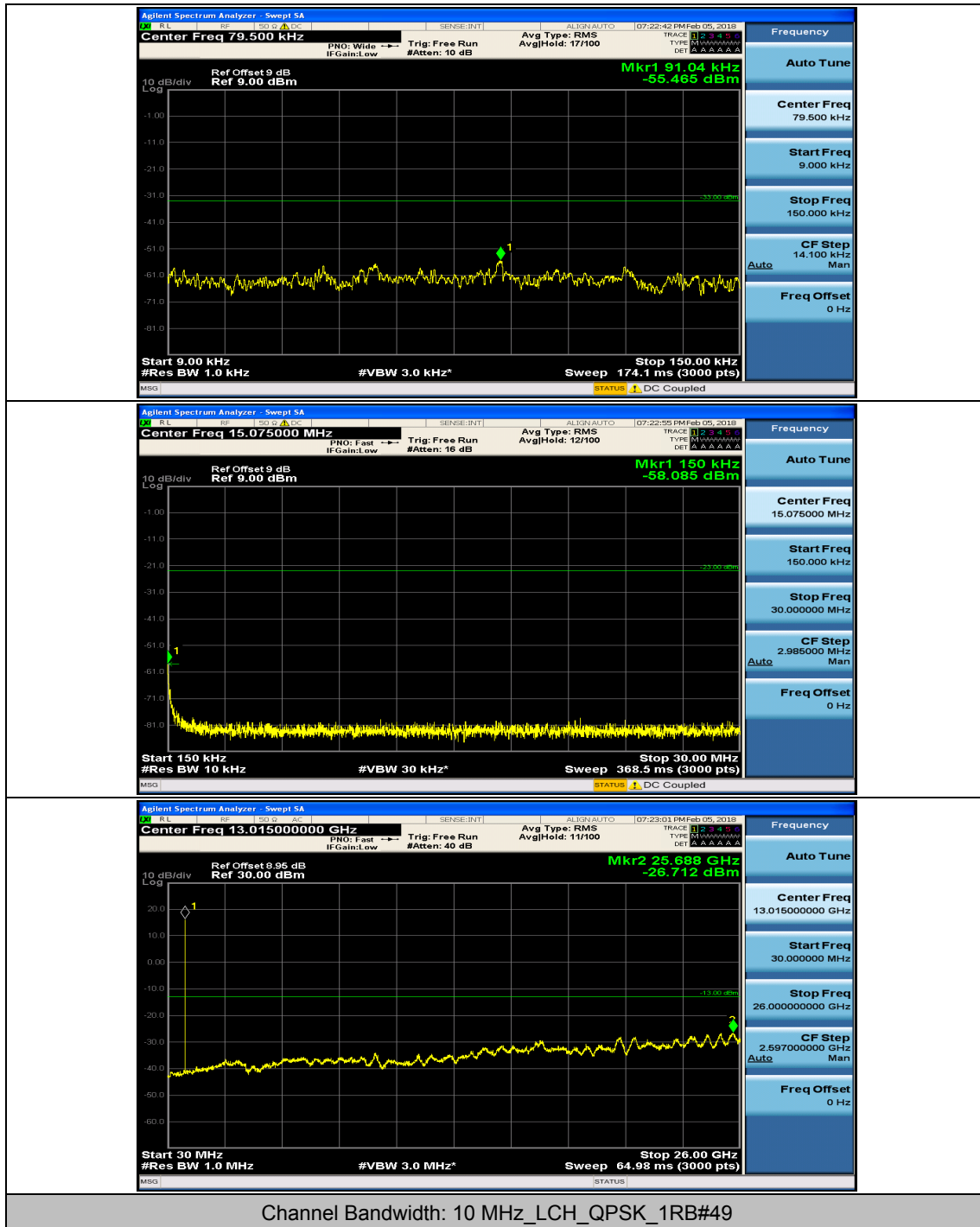
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12

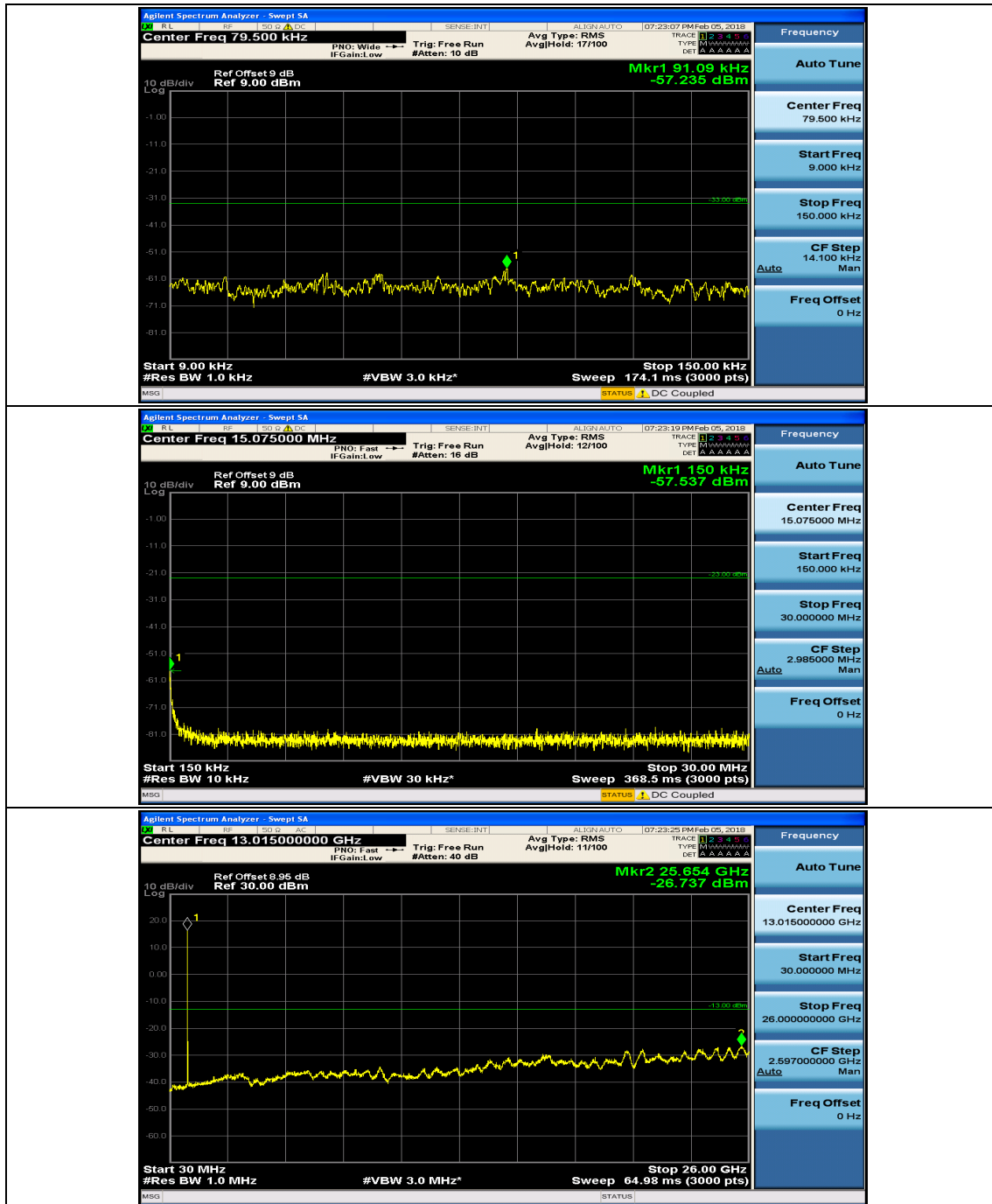




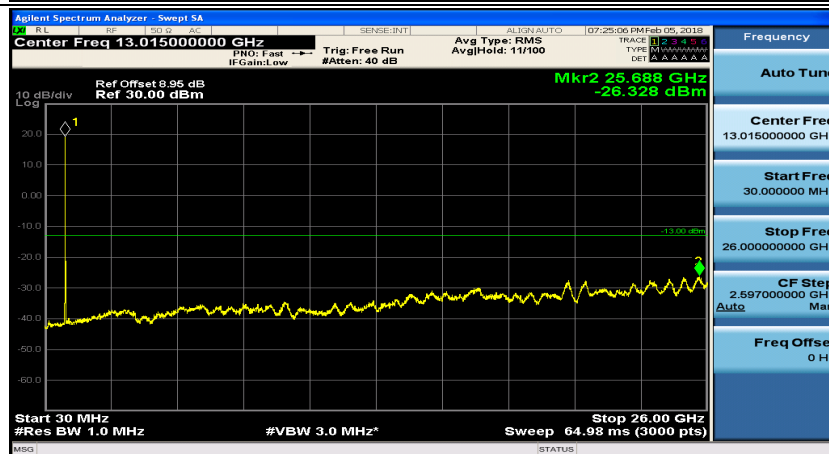
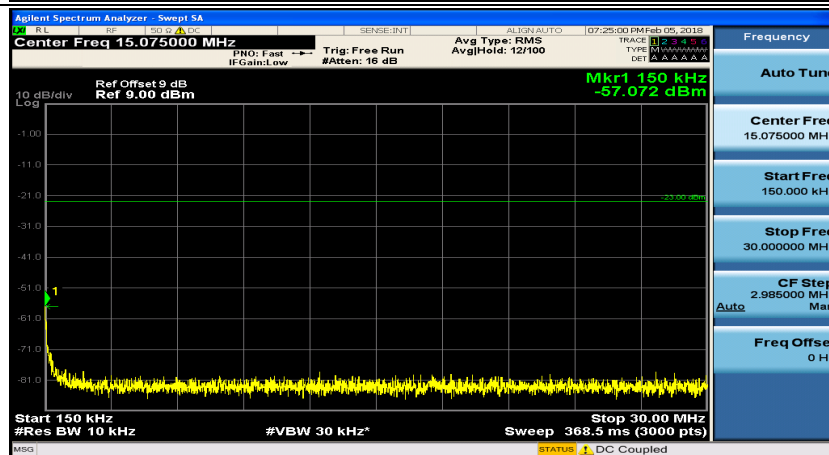
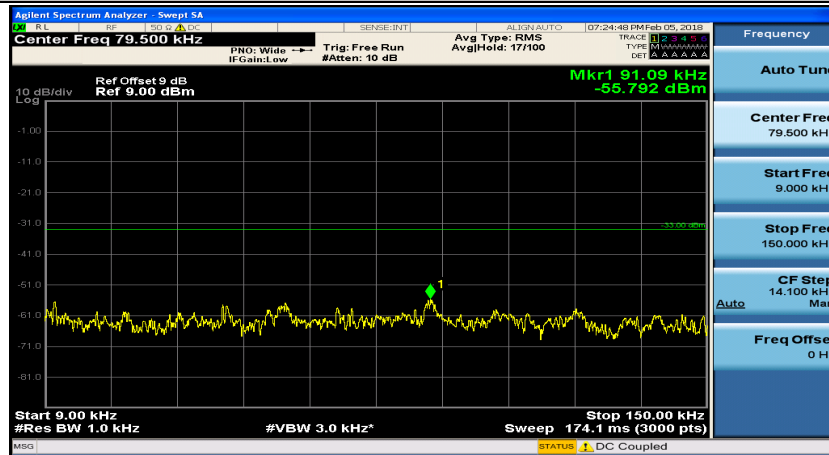
Channel Bandwidth: 10 MHz



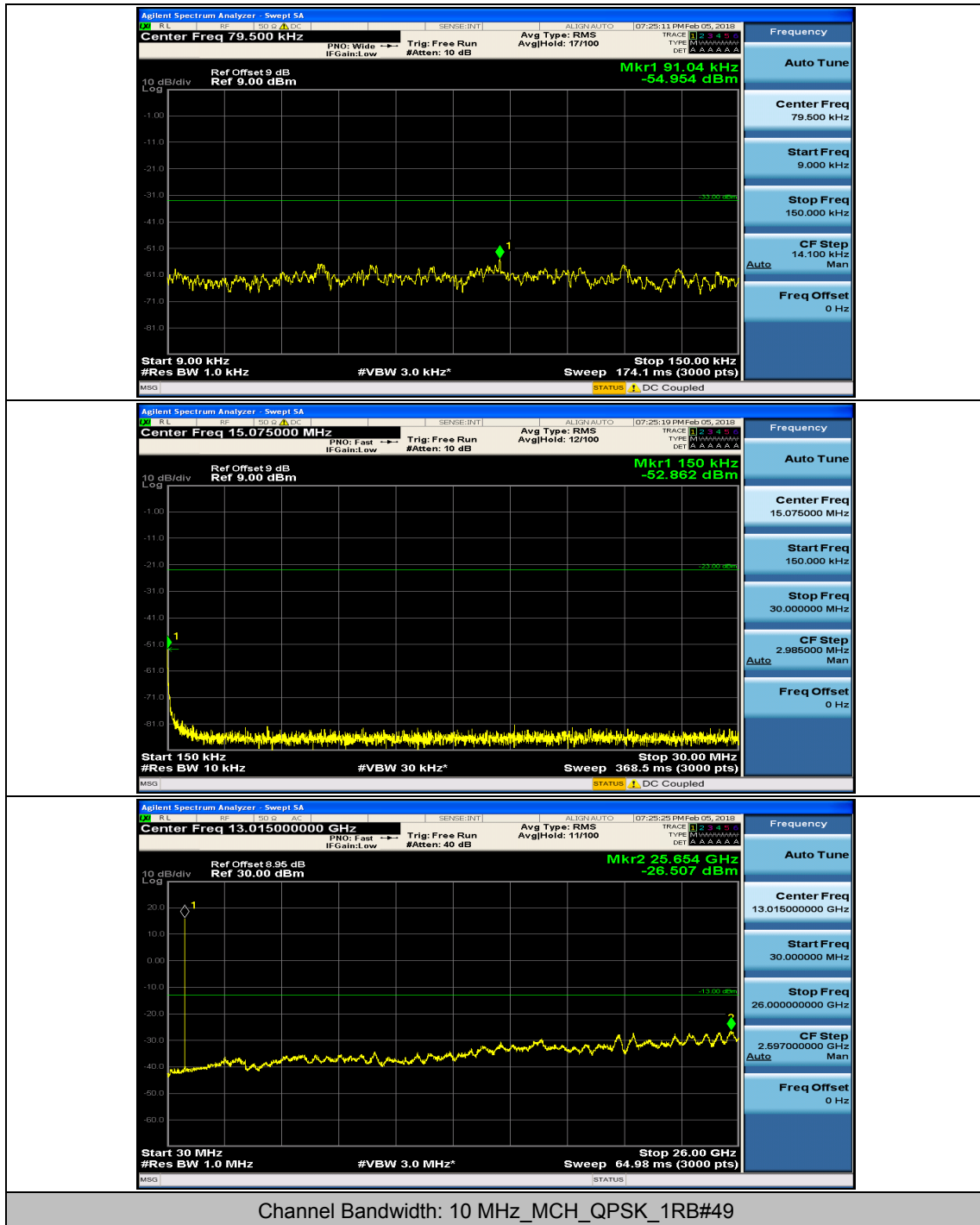


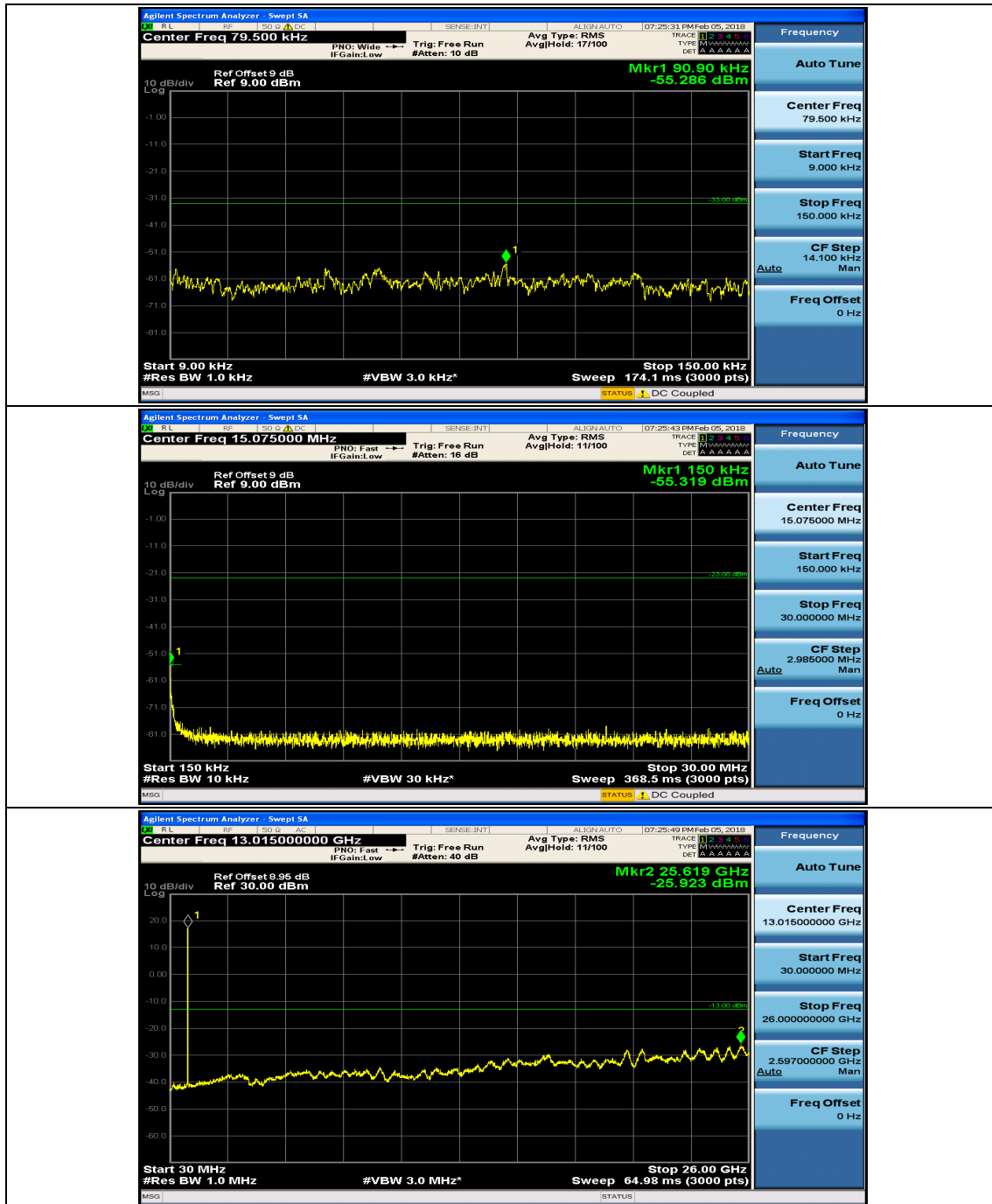


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0

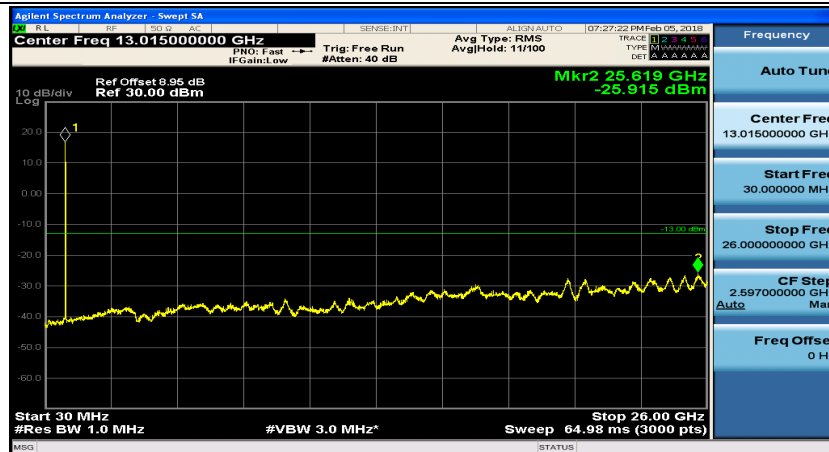
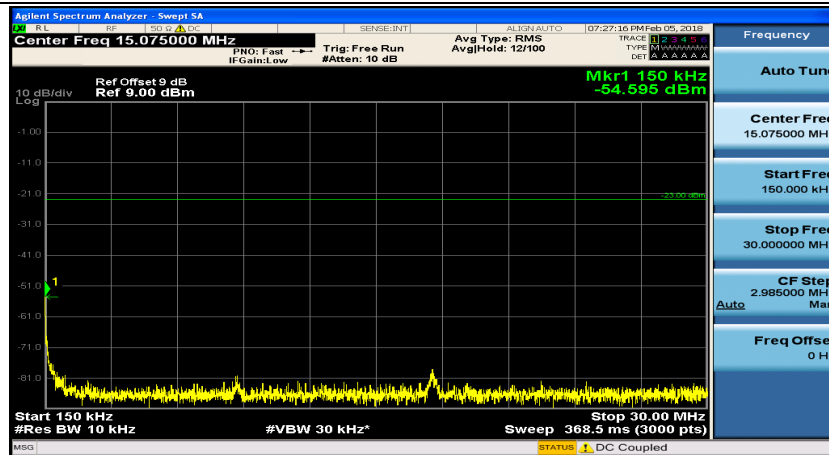
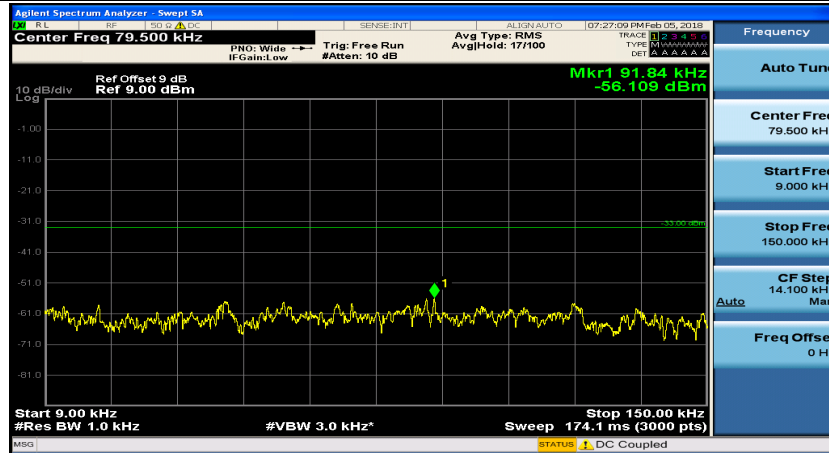


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

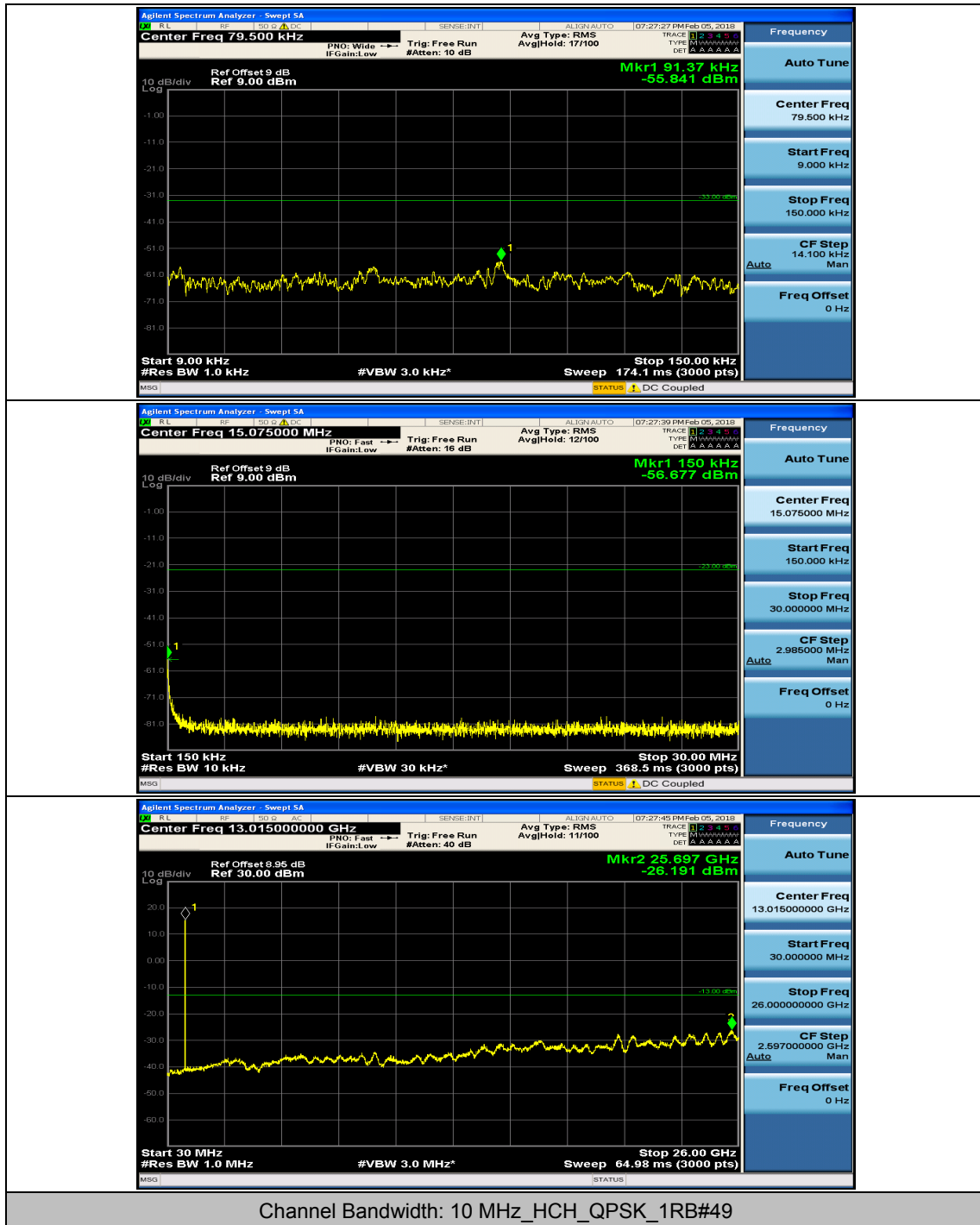


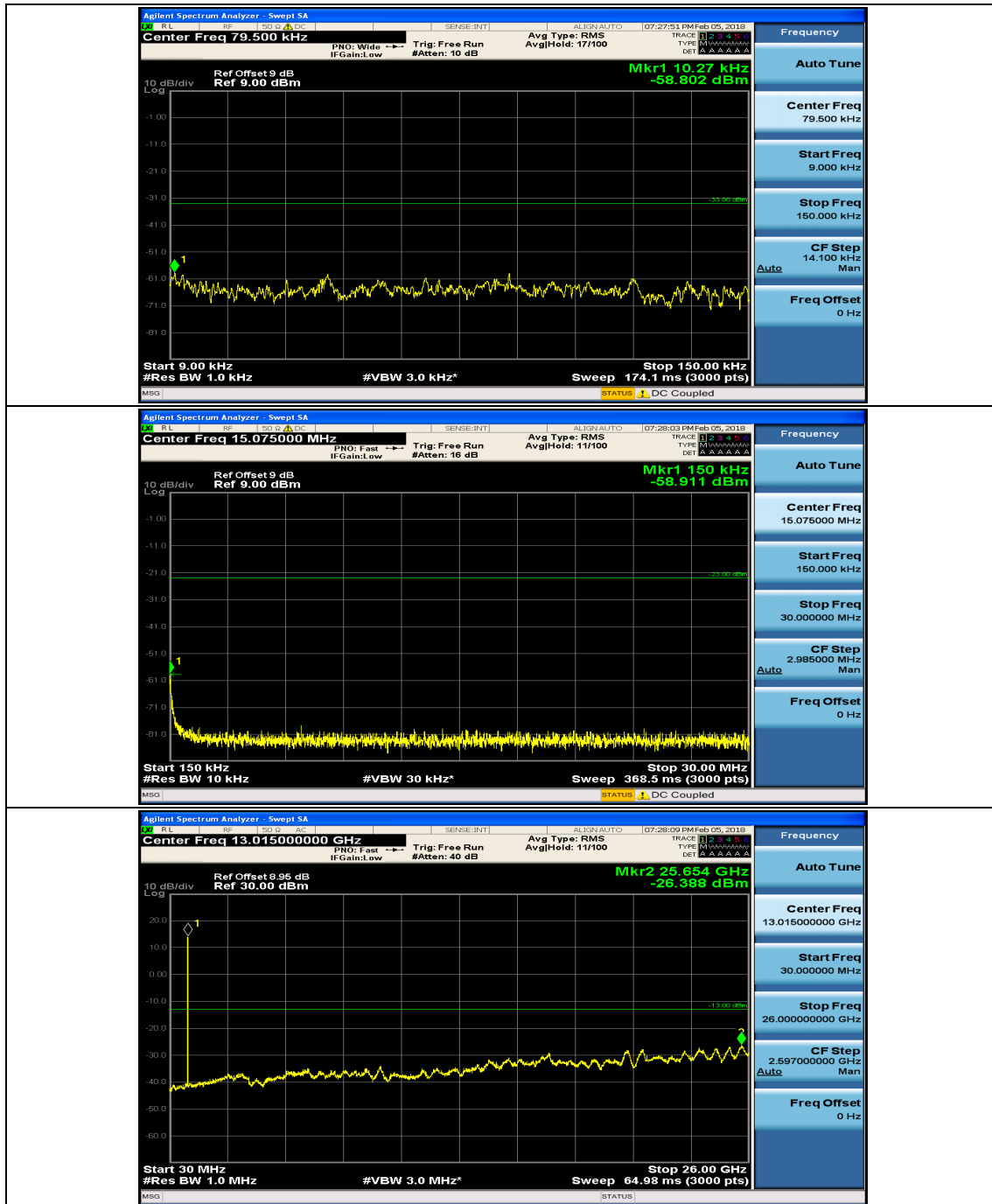


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0

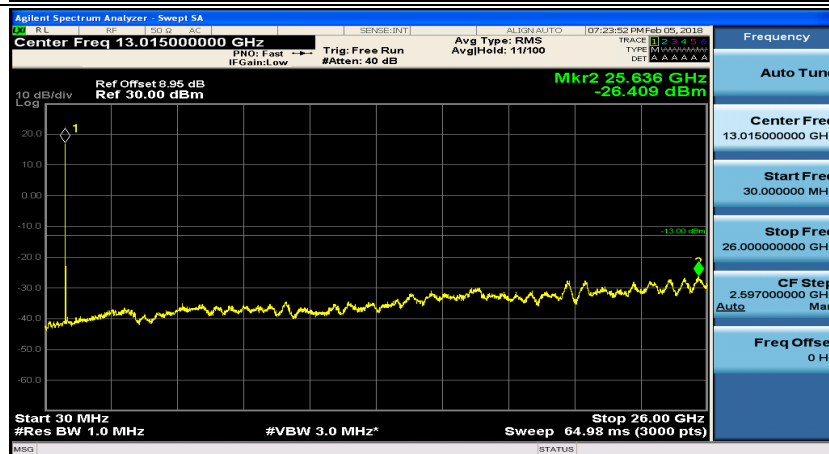
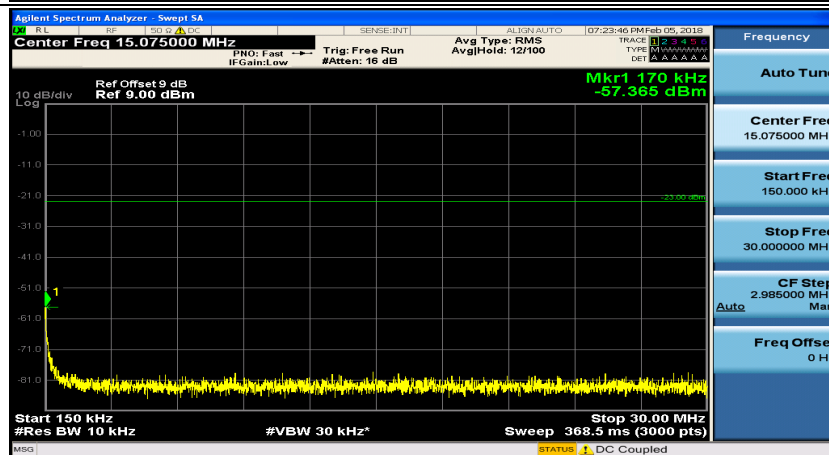
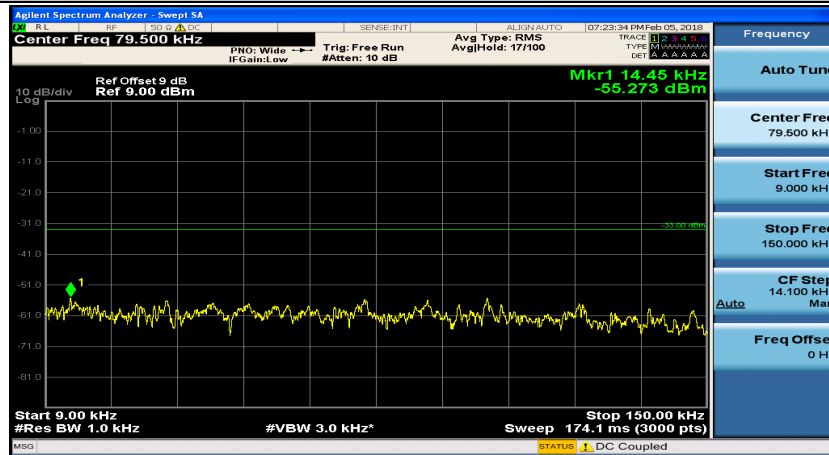


Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

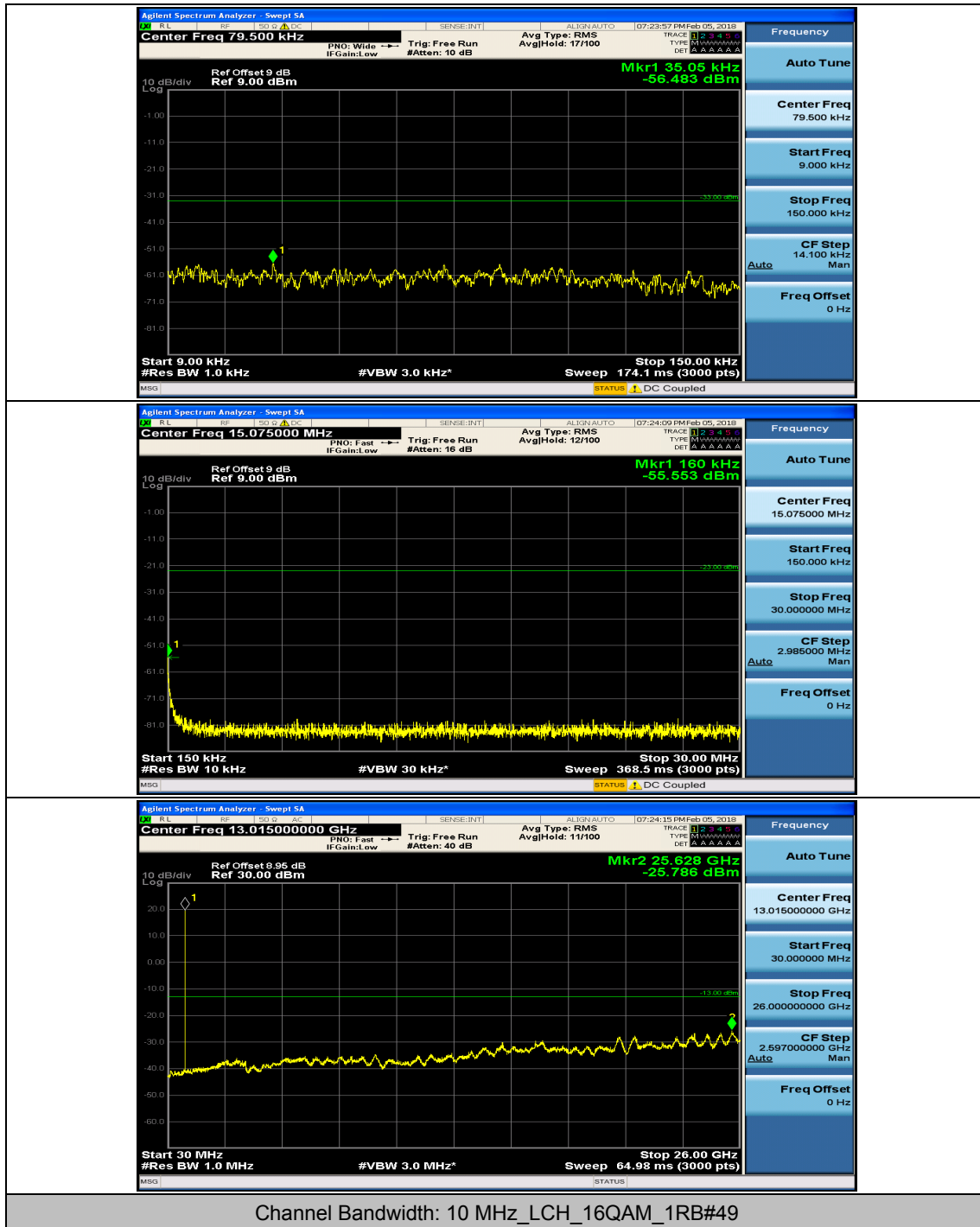


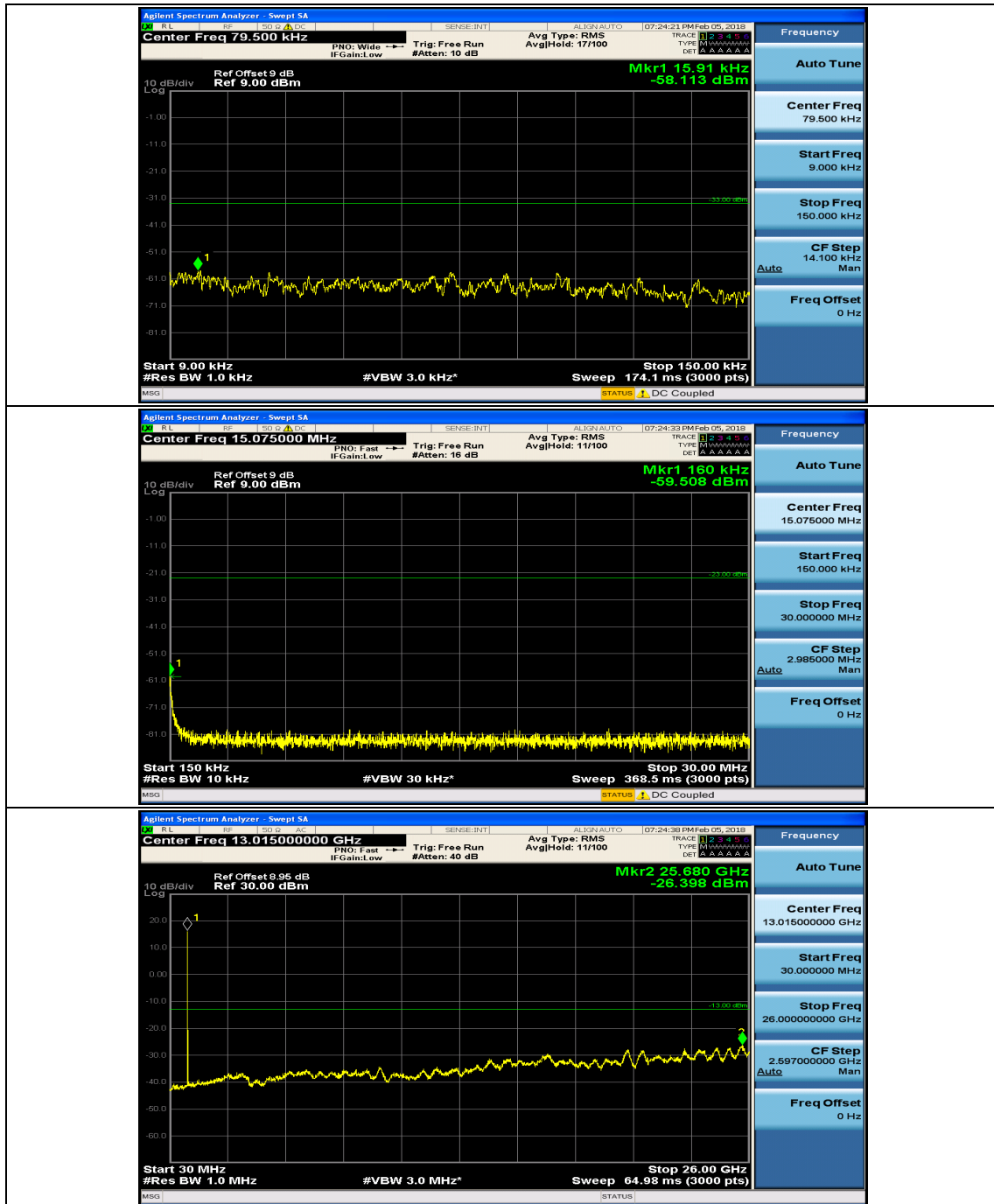


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

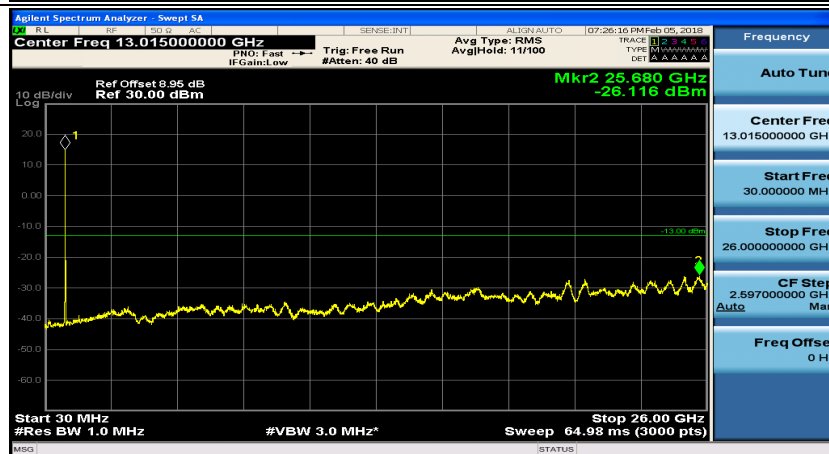
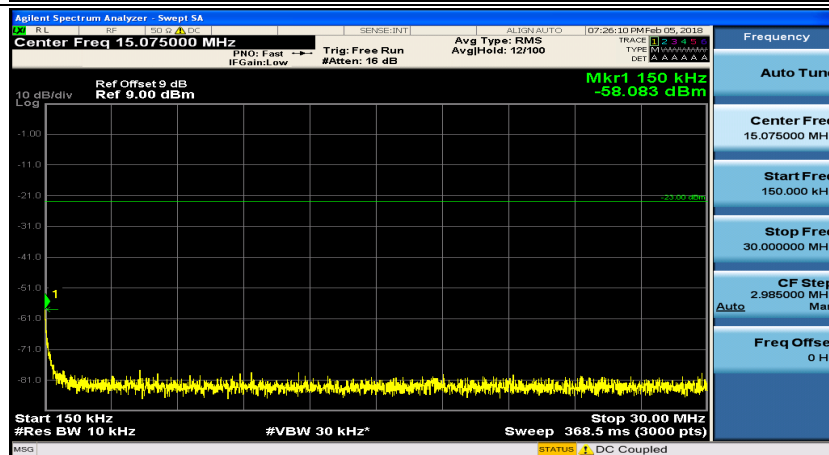
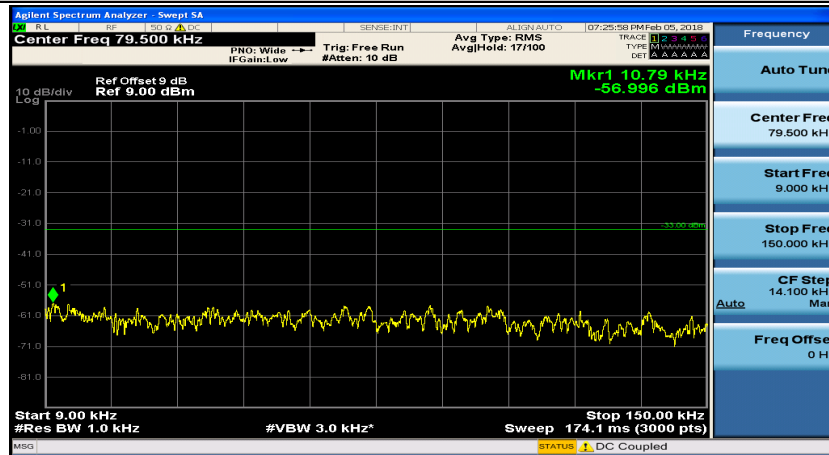


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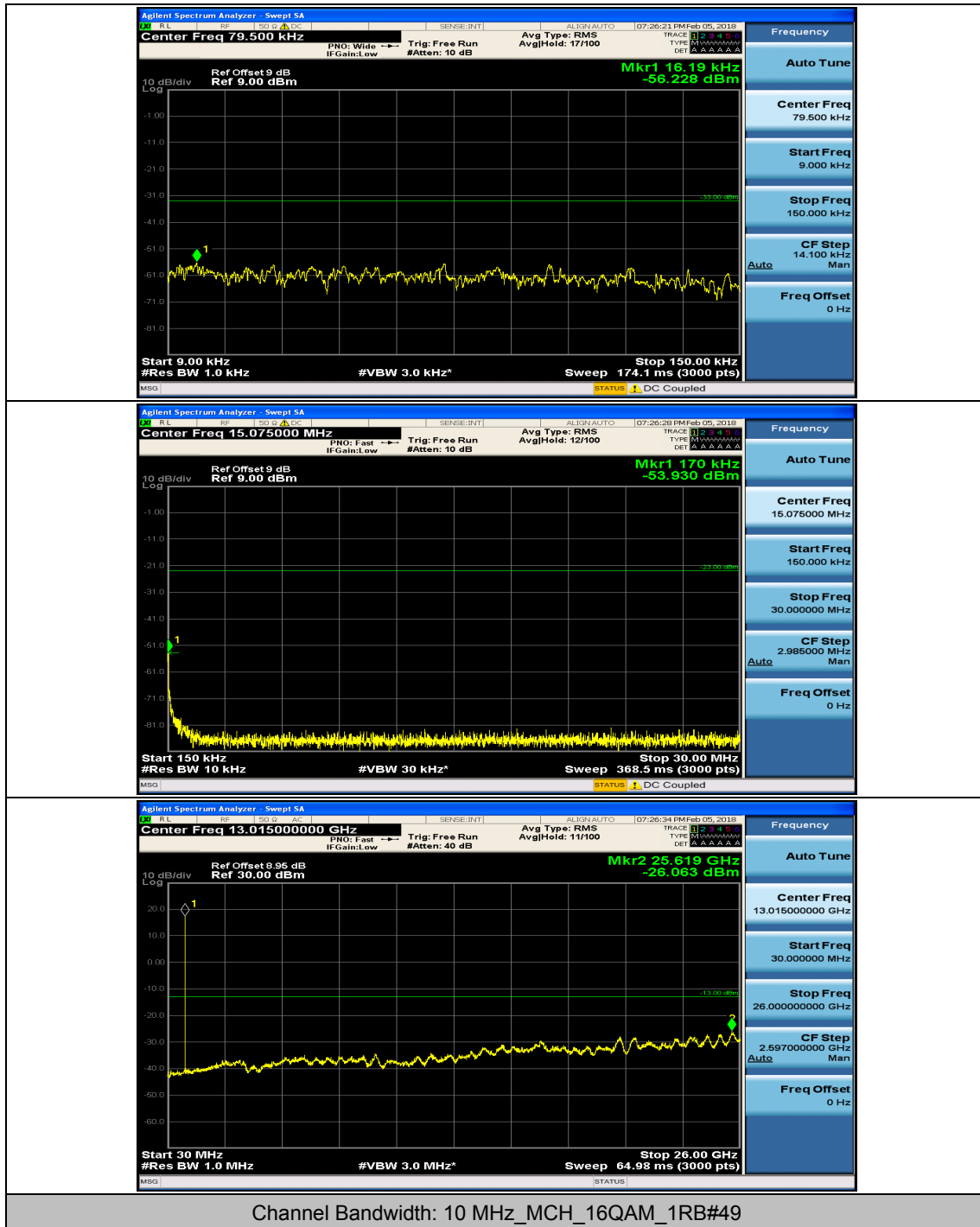


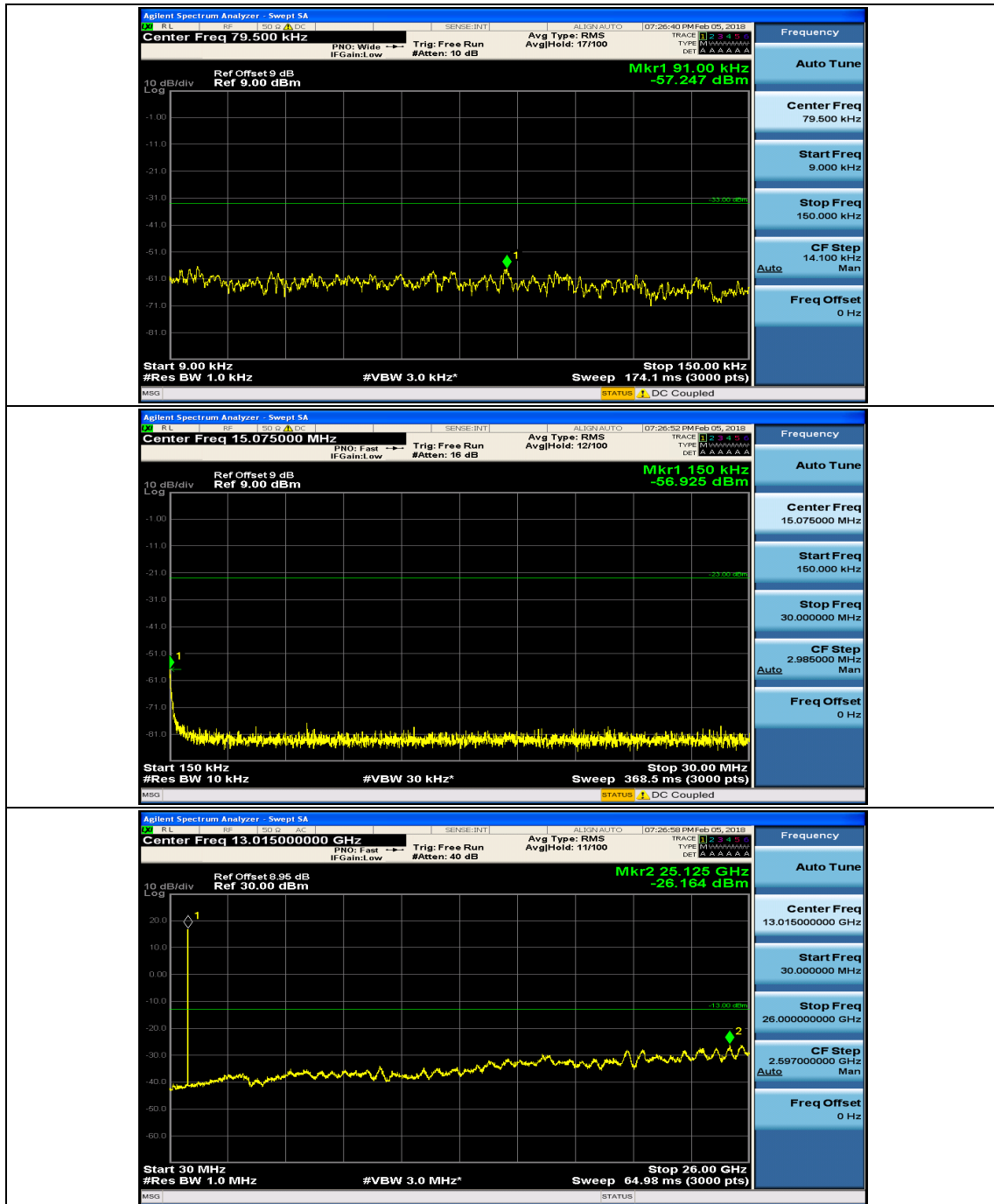


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

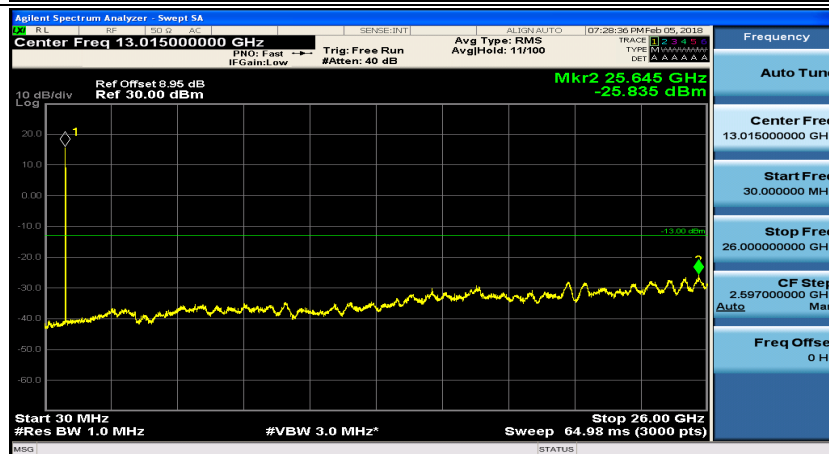
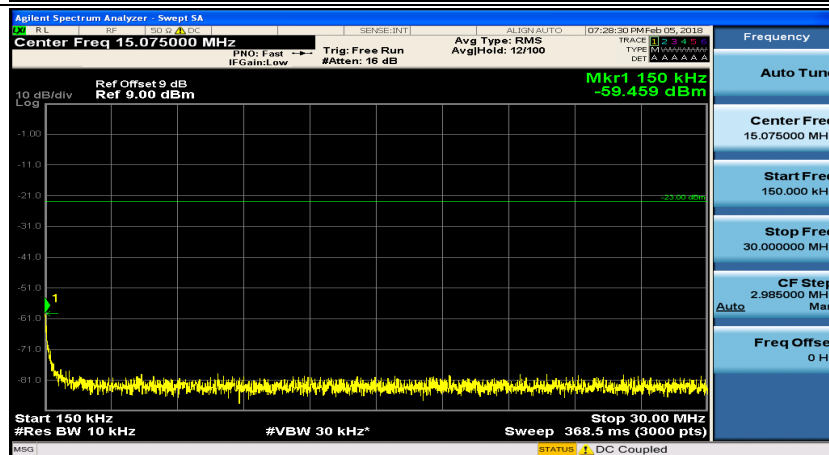
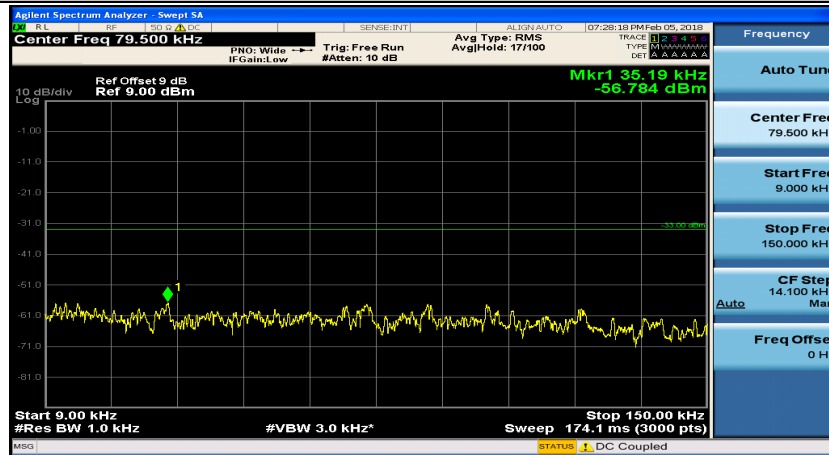


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

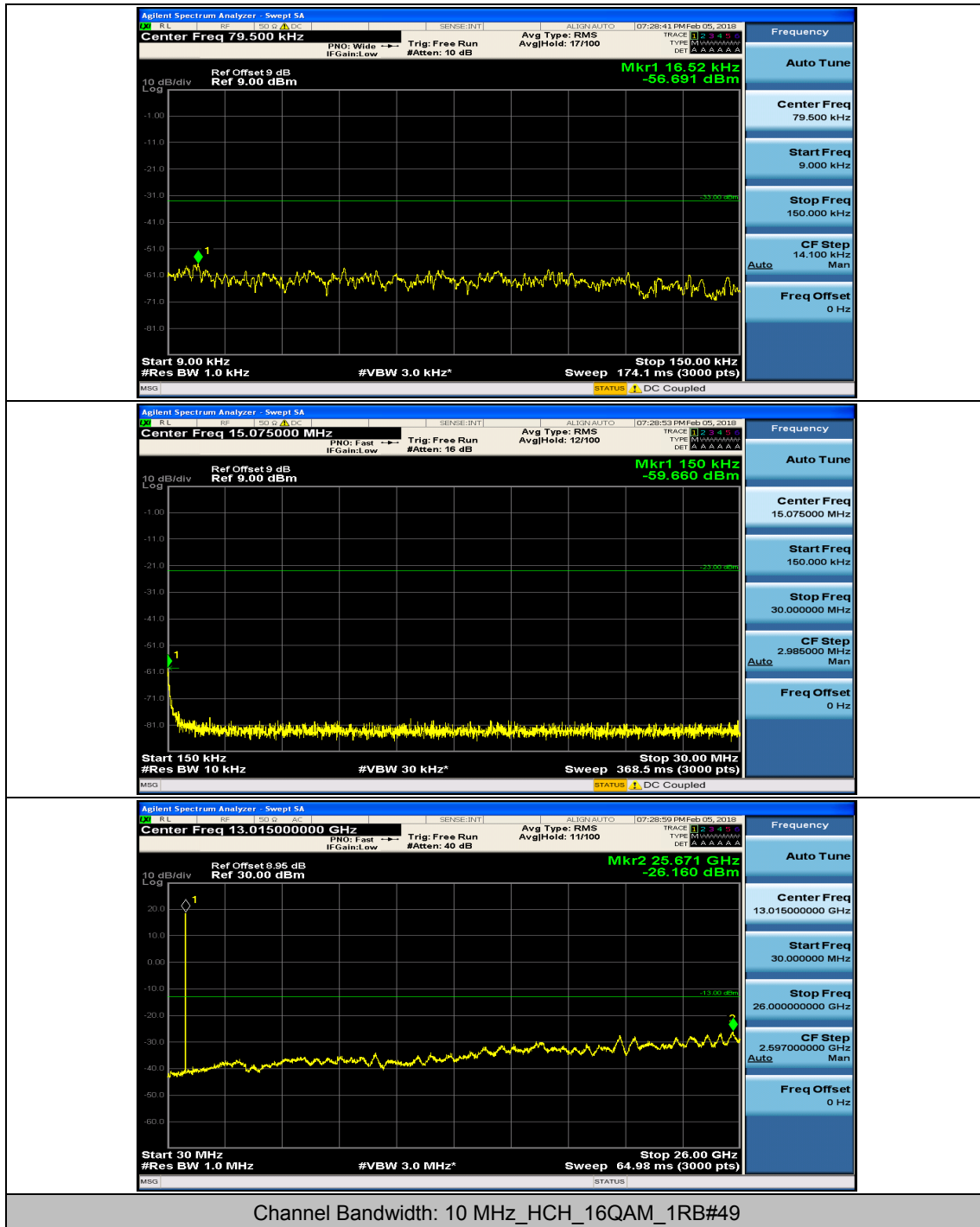


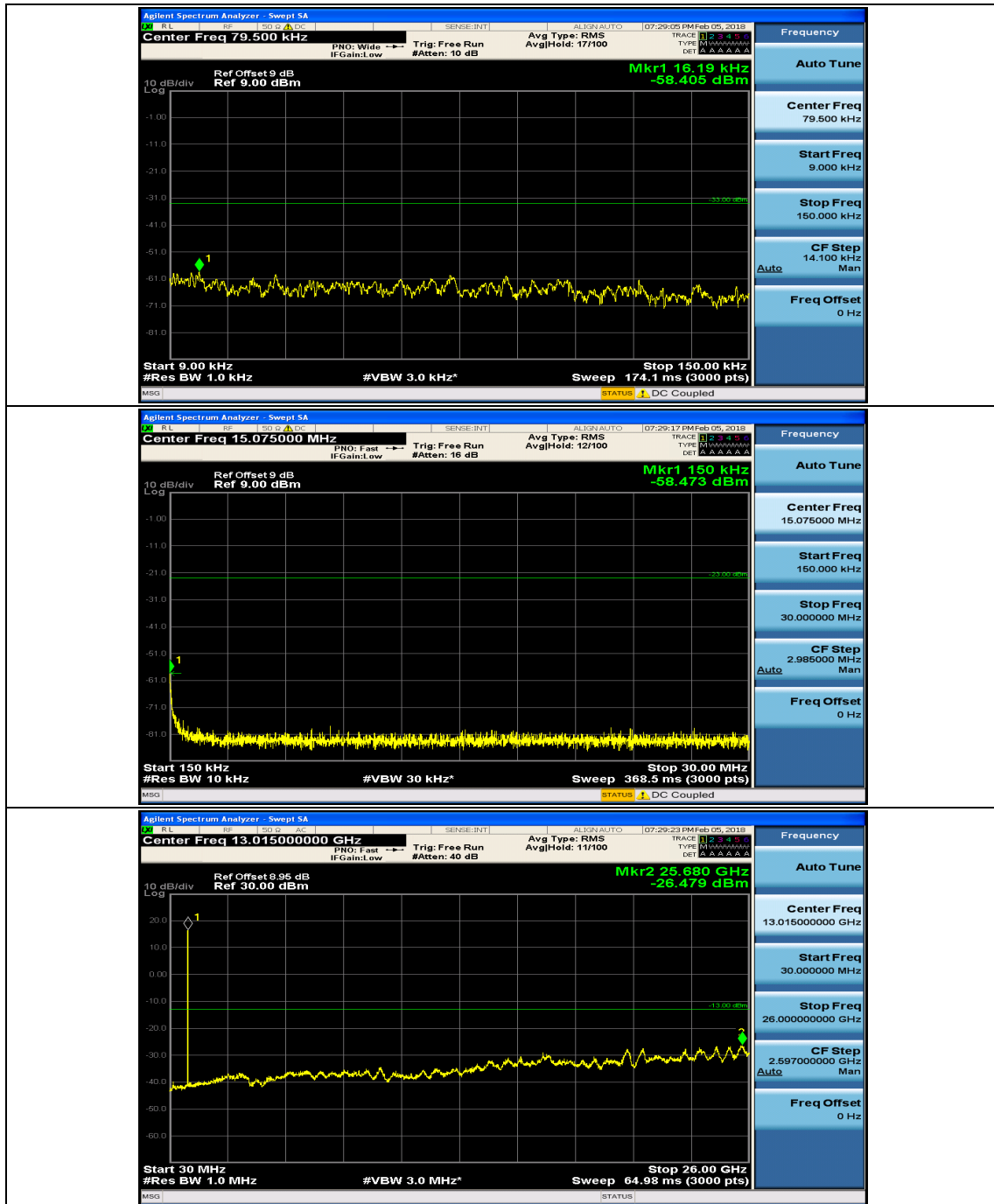


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24





Appendix E: 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	2.42	0.002934	± 2.5	PASS
		VN	TN	-0.08	-0.000097	± 2.5	PASS
		VH	TN	4.4	0.005335	± 2.5	PASS
	MCH	VL	TN	0.74	0.000885	± 2.5	PASS
		VN	TN	0.2	0.000239	± 2.5	PASS
		VH	TN	4.5	0.005380	± 2.5	PASS
	HCH	VL	TN	1.62	0.001910	± 2.5	PASS
		VN	TN	4.03	0.004751	± 2.5	PASS
		VH	TN	-1.56	-0.001839	± 2.5	PASS
16QAM	LCH	VL	TN	4.34	0.005263	± 2.5	PASS
		VN	TN	3.31	0.004014	± 2.5	PASS
		VH	TN	2.89	0.003504	± 2.5	PASS
	MCH	VL	TN	2.72	0.003252	± 2.5	PASS
		VN	TN	-1.09	-0.001303	± 2.5	PASS
		VH	TN	0.67	0.000801	± 2.5	PASS
	HCH	VL	TN	2.22	0.002617	± 2.5	PASS
		VN	TN	0.41	0.000483	± 2.5	PASS
		VH	TN	3.57	0.004208	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.15	0.002607	± 2.5	PASS
		VN	-20	4.48	0.005432	± 2.5	PASS
		VN	-10	2.54	0.003080	± 2.5	PASS
		VN	0	2.84	0.003444	± 2.5	PASS
		VN	10	3.23	0.003917	± 2.5	PASS
		VN	20	0.79	0.000958	± 2.5	PASS
		VN	30	-1.34	-0.001625	± 2.5	PASS
		VN	40	-1.02	-0.001237	± 2.5	PASS
		VN	50	0.52	0.000631	± 2.5	PASS
	MCH	VN	-30	0.41	0.000490	± 2.5	PASS
		VN	-20	0.6	0.000717	± 2.5	PASS
		VN	-10	-1.45	-0.001733	± 2.5	PASS

		VN	0	3.19	0.003814	± 2.5	PASS
		VN	10	5	0.005977	± 2.5	PASS
		VN	20	-0.09	-0.000108	± 2.5	PASS
		VN	30	1.95	0.002331	± 2.5	PASS
		VN	40	2.95	0.003527	± 2.5	PASS
		VN	50	1.41	0.001686	± 2.5	PASS
	HCH	VN	-30	3.21	0.003784	± 2.5	PASS
		VN	-20	-1.14	-0.001344	± 2.5	PASS
		VN	-10	-0.75	-0.000884	± 2.5	PASS
		VN	0	0.2	0.000236	± 2.5	PASS
		VN	10	4.55	0.005364	± 2.5	PASS
		VN	20	3.82	0.004503	± 2.5	PASS
		VN	30	2.88	0.003395	± 2.5	PASS
		VN	40	-0.94	-0.001108	± 2.5	PASS
		VN	50	4.93	0.005812	± 2.5	PASS
16QAM	LCH	VN	-30	-0.72	-0.000873	± 2.5	PASS
		VN	-20	0.65	0.000788	± 2.5	PASS
		VN	-10	-0.2	-0.000243	± 2.5	PASS
		VN	0	4.72	0.005723	± 2.5	PASS
		VN	10	2.41	0.002922	± 2.5	PASS
		VN	20	-1.82	-0.002207	± 2.5	PASS
		VN	30	2.19	0.002656	± 2.5	PASS
		VN	40	4.15	0.005032	± 2.5	PASS
		VN	50	1.15	0.001394	± 2.5	PASS
	MCH	VN	-30	-0.74	-0.000872	± 2.5	PASS
		VN	-20	0.06	0.000071	± 2.5	PASS
		VN	-10	4.42	0.005210	± 2.5	PASS
		VN	0	1.41	0.001662	± 2.5	PASS
		VN	10	-0.27	-0.000318	± 2.5	PASS
		VN	20	4.35	0.005128	± 2.5	PASS
		VN	30	4.02	0.004739	± 2.5	PASS
		VN	40	4.28	0.005045	± 2.5	PASS
		VN	50	2.51	0.002959	± 2.5	PASS
	HCH	VN	-30	1.93	0.002275	± 2.5	PASS
		VN	-20	3.76	0.004432	± 2.5	PASS
		VN	-10	4.01	0.004727	± 2.5	PASS
		VN	0	1.06	0.001250	± 2.5	PASS
		VN	10	3	0.003536	± 2.5	PASS
		VN	20	1.07	0.001261	± 2.5	PASS
		VN	30	0.79	0.000931	± 2.5	PASS
		VN	40	4.59	0.005411	± 2.5	PASS

		VN	50	4.6	0.005423	± 2.5	PASS
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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	0.09	0.000109	± 2.5	PASS
		VN	TN	4.41	0.005342	± 2.5	PASS
		VH	TN	1.86	0.002253	± 2.5	PASS
	MCH	VL	TN	2.98	0.003562	± 2.5	PASS
		VN	TN	2.19	0.002618	± 2.5	PASS
		VH	TN	4.04	0.004830	± 2.5	PASS
	HCH	VL	TN	4.24	0.005003	± 2.5	PASS
		VN	TN	4.3	0.005074	± 2.5	PASS
		VH	TN	0.26	0.000307	± 2.5	PASS
16QAM	LCH	VL	TN	4.67	0.005657	± 2.5	PASS
		VN	TN	2.2	0.002665	± 2.5	PASS
		VH	TN	2.46	0.002980	± 2.5	PASS
	MCH	VL	TN	3.76	0.004495	± 2.5	PASS
		VN	TN	1.95	0.002331	± 2.5	PASS
		VH	TN	-0.69	-0.000825	± 2.5	PASS
	HCH	VL	TN	4.97	0.005864	± 2.5	PASS
		VN	TN	-0.75	-0.000885	± 2.5	PASS
		VH	TN	4.2	0.004956	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.19	0.000230	± 2.5	PASS
		VN	-20	-1.58	-0.001914	± 2.5	PASS
		VN	-10	2.32	0.002810	± 2.5	PASS
		VN	0	-0.14	-0.000170	± 2.5	PASS
		VN	10	4.47	0.005415	± 2.5	PASS
		VN	20	3.33	0.004034	± 2.5	PASS
		VN	30	-0.68	-0.000824	± 2.5	PASS
		VN	40	3.63	0.004397	± 2.5	PASS
		VN	50	2.51	0.003041	± 2.5	PASS
	MCH	VN	-30	4.11	0.004913	± 2.5	PASS
		VN	-20	4.54	0.005427	± 2.5	PASS
		VN	-10	-0.18	-0.000215	± 2.5	PASS
		VN	0	2.72	0.003252	± 2.5	PASS
		VN	10	-1.88	-0.002247	± 2.5	PASS

		VN	20	0.59	0.000705	± 2.5	PASS
		VN	30	4.04	0.004830	± 2.5	PASS
		VN	40	3.77	0.004507	± 2.5	PASS
		VN	50	-1.86	-0.002224	± 2.5	PASS
	HCH	VN	-30	-0.62	-0.000732	± 2.5	PASS
		VN	-20	0.87	0.001027	± 2.5	PASS
		VN	-10	3.7	0.004366	± 2.5	PASS
		VN	0	0.53	0.000625	± 2.5	PASS
		VN	10	-0.3	-0.000354	± 2.5	PASS
		VN	20	0.37	0.000437	± 2.5	PASS
		VN	30	2.66	0.003139	± 2.5	PASS
		VN	40	2.35	0.002773	± 2.5	PASS
		VN	50	4.69	0.005534	± 2.5	PASS
		VN	-30	4.38	0.005236	± 2.5	PASS
		VN	-20	0.97	0.001160	± 2.5	PASS
		VN	-10	1.54	0.001841	± 2.5	PASS
		VN	0	3.1	0.003706	± 2.5	PASS
		VN	10	4.17	0.004985	± 2.5	PASS
16QAM	LCH	VN	20	0.37	0.000442	± 2.5	PASS
		VN	30	-0.72	-0.000861	± 2.5	PASS
		VN	40	-1.68	-0.002008	± 2.5	PASS
		VN	50	-1.71	-0.002044	± 2.5	PASS
	MCH	VN	-30	4.14	0.004885	± 2.5	PASS
		VN	-20	-1.02	-0.001204	± 2.5	PASS
		VN	-10	3.47	0.004094	± 2.5	PASS
		VN	0	3.23	0.003811	± 2.5	PASS
		VN	10	-0.27	-0.000319	± 2.5	PASS
		VN	20	0.44	0.000519	± 2.5	PASS
		VN	30	2.63	0.003103	± 2.5	PASS
		VN	40	-1.61	-0.001900	± 2.5	PASS
		VN	50	-0.93	-0.001097	± 2.5	PASS
	HCH	VN	-30	-0.09	-0.000106	± 2.5	PASS
		VN	-20	4.62	0.005451	± 2.5	PASS
		VN	-10	-0.04	-0.000047	± 2.5	PASS
		VN	0	-0.55	-0.000649	± 2.5	PASS
		VN	10	-0.77	-0.000909	± 2.5	PASS
		VN	20	2.99	0.003528	± 2.5	PASS
		VN	30	3.37	0.003976	± 2.5	PASS
		VN	40	4.81	0.005676	± 2.5	PASS
		VN	50	-0.19	-0.000224	± 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	3.62	0.004380	± 2.5	PASS
		VN	TN	3.32	0.004017	± 2.5	PASS
		VH	TN	2.84	0.003436	± 2.5	PASS
	MCH	VL	TN	1.6	0.001913	± 2.5	PASS
		VN	TN	4.89	0.005846	± 2.5	PASS
		VH	TN	-1.03	-0.001231	± 2.5	PASS
	HCH	VL	TN	3.14	0.003709	± 2.5	PASS
		VN	TN	0.3	0.000354	± 2.5	PASS
		VH	TN	2.53	0.002989	± 2.5	PASS
16QAM	LCH	VL	TN	0.46	0.000557	± 2.5	PASS
		VN	TN	1.39	0.001682	± 2.5	PASS
		VH	TN	-0.26	-0.000315	± 2.5	PASS
	MCH	VL	TN	3.71	0.004435	± 2.5	PASS
		VN	TN	-0.25	-0.000299	± 2.5	PASS
		VH	TN	2.25	0.002690	± 2.5	PASS
	HCH	VL	TN	-0.63	-0.000744	± 2.5	PASS
		VN	TN	1.2	0.001418	± 2.5	PASS
		VH	TN	1.38	0.001630	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.6	0.003146	± 2.5	PASS
		VN	-20	-0.27	-0.000327	± 2.5	PASS
		VN	-10	2.95	0.003569	± 2.5	PASS
		VN	0	0.07	0.000085	± 2.5	PASS
		VN	10	0.78	0.000944	± 2.5	PASS
		VN	20	-1.86	-0.002250	± 2.5	PASS
		VN	30	-0.25	-0.000302	± 2.5	PASS
		VN	40	1.01	0.001222	± 2.5	PASS
		VN	50	1.89	0.002287	± 2.5	PASS
	MCH	VN	-30	-1.92	-0.002295	± 2.5	PASS
		VN	-20	1.48	0.001769	± 2.5	PASS
		VN	-10	-0.74	-0.000885	± 2.5	PASS
		VN	0	-1.4	-0.001674	± 2.5	PASS
		VN	10	1.88	0.002247	± 2.5	PASS
		VN	20	2.08	0.002487	± 2.5	PASS
		VN	30	2.53	0.003025	± 2.5	PASS

		VN	40	0.1	0.000120	± 2.5	PASS
		VN	50	0.97	0.001160	± 2.5	PASS
	HCH	VN	-30	2.69	0.003178	± 2.5	PASS
		VN	-20	-0.11	-0.000130	± 2.5	PASS
		VN	-10	0.57	0.000673	± 2.5	PASS
		VN	0	3.58	0.004229	± 2.5	PASS
		VN	10	3.94	0.004654	± 2.5	PASS
		VN	20	-0.77	-0.000910	± 2.5	PASS
		VN	30	3.1	0.003662	± 2.5	PASS
		VN	40	-0.9	-0.001063	± 2.5	PASS
		VN	50	2.36	0.002788	± 2.5	PASS
16QAM	LCH	VN	-30	1.46	0.001745	± 2.5	PASS
		VN	-20	0.18	0.000215	± 2.5	PASS
		VN	-10	2.26	0.002702	± 2.5	PASS
		VN	0	4.14	0.004949	± 2.5	PASS
		VN	10	2.96	0.003539	± 2.5	PASS
		VN	20	3.14	0.003754	± 2.5	PASS
		VN	30	3.57	0.004268	± 2.5	PASS
		VN	40	-0.62	-0.000741	± 2.5	PASS
		VN	50	1.16	0.001387	± 2.5	PASS
	MCH	VN	-30	3.45	0.004076	± 2.5	PASS
		VN	-20	-1.87	-0.002209	± 2.5	PASS
		VN	-10	0.72	0.000851	± 2.5	PASS
		VN	0	-1.87	-0.002209	± 2.5	PASS
		VN	10	0.1	0.000118	± 2.5	PASS
		VN	20	3.54	0.004182	± 2.5	PASS
		VN	30	1.02	0.001205	± 2.5	PASS
		VN	40	4.53	0.005351	± 2.5	PASS
		VN	50	0.7	0.000827	± 2.5	PASS
	HCH	VN	-30	4.15	0.004903	± 2.5	PASS
		VN	-20	3.47	0.004099	± 2.5	PASS
		VN	-10	3.77	0.004454	± 2.5	PASS
		VN	0	1.48	0.001748	± 2.5	PASS
		VN	10	-1.34	-0.001583	± 2.5	PASS
		VN	20	-0.88	-0.001040	± 2.5	PASS
		VN	30	2.24	0.002646	± 2.5	PASS
		VN	40	-0.73	-0.000862	± 2.5	PASS
		VN	50	0.37	0.000437	± 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	3.82	0.004608	± 2.5	PASS
		VN	TN	4.44	0.005356	± 2.5	PASS
		VH	TN	0.44	0.000531	± 2.5	PASS
	MCH	VL	TN	0.1	0.000120	± 2.5	PASS
		VN	TN	3.56	0.004256	± 2.5	PASS
		VH	TN	3.4	0.004065	± 2.5	PASS
	HCH	VL	TN	3.55	0.004206	± 2.5	PASS
		VN	TN	-0.79	-0.000936	± 2.5	PASS
		VH	TN	1.01	0.001197	± 2.5	PASS
16QAM	LCH	VL	TN	2.43	0.002931	± 2.5	PASS
		VN	TN	-0.99	-0.001194	± 2.5	PASS
		VH	TN	0.57	0.000688	± 2.5	PASS
	MCH	VL	TN	2.52	0.003013	± 2.5	PASS
		VN	TN	0.82	0.000980	± 2.5	PASS
		VH	TN	-1.06	-0.001267	± 2.5	PASS
	HCH	VL	TN	1.11	0.001315	± 2.5	PASS
		VN	TN	-1.94	-0.002299	± 2.5	PASS
		VH	TN	1.3	0.001540	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	2.48	0.002992	± 2.5	PASS
		VN	-20	3.4	0.004101	± 2.5	PASS
		VN	-10	-1.83	-0.002207	± 2.5	PASS
		VN	0	4.75	0.005730	± 2.5	PASS
		VN	10	3.36	0.004053	± 2.5	PASS
		VN	20	-1.47	-0.001773	± 2.5	PASS
		VN	30	4.9	0.005911	± 2.5	PASS
		VN	40	2.54	0.003064	± 2.5	PASS
		VN	50	2.19	0.002642	± 2.5	PASS
	MCH	VN	-30	-1.55	-0.001853	± 2.5	PASS
		VN	-20	2.31	0.002762	± 2.5	PASS
		VN	-10	3.61	0.004316	± 2.5	PASS
		VN	0	1.67	0.001996	± 2.5	PASS
		VN	10	3.76	0.004495	± 2.5	PASS
		VN	20	-1.27	-0.001518	± 2.5	PASS
		VN	30	4.01	0.004794	± 2.5	PASS
		VN	40	0.29	0.000347	± 2.5	PASS
		VN	50	-1.69	-0.002020	± 2.5	PASS

	HCH	VN	-30	1.26	0.001493	± 2.5	PASS
		VN	-20	2.45	0.002903	± 2.5	PASS
		VN	-10	2.11	0.002500	± 2.5	PASS
		VN	0	-1.64	-0.001943	± 2.5	PASS
		VN	10	3.06	0.003626	± 2.5	PASS
		VN	20	1.23	0.001457	± 2.5	PASS
		VN	30	0.91	0.001078	± 2.5	PASS
		VN	40	1.36	0.001611	± 2.5	PASS
		VN	50	-1.82	-0.002156	± 2.5	PASS
QPSK	LCH	VN	-30	3.92	0.004686	± 2.5	PASS
		VN	-20	2.01	0.002403	± 2.5	PASS
		VN	-10	-1.34	-0.001602	± 2.5	PASS
		VN	0	-0.99	-0.001184	± 2.5	PASS
		VN	10	4.22	0.005045	± 2.5	PASS
		VN	20	0.95	0.001136	± 2.5	PASS
		VN	30	-1.49	-0.001781	± 2.5	PASS
		VN	40	-0.4	-0.000478	± 2.5	PASS
		VN	50	4.56	0.005451	± 2.5	PASS
	MCH	VN	-30	4.7	0.005569	± 2.5	PASS
		VN	-20	1.58	0.001872	± 2.5	PASS
		VN	-10	4.22	0.005000	± 2.5	PASS
		VN	0	4.2	0.004976	± 2.5	PASS
		VN	10	-1.77	-0.002097	± 2.5	PASS
		VN	20	-1.93	-0.002287	± 2.5	PASS
		VN	30	1.43	0.001694	± 2.5	PASS
		VN	40	-0.32	-0.000379	± 2.5	PASS
		VN	50	4.52	0.005355	± 2.5	PASS
	HCH	VN	-30	0.33	0.000391	± 2.5	PASS
		VN	-20	1.19	0.001410	± 2.5	PASS
		VN	-10	1.18	0.001398	± 2.5	PASS
		VN	0	1.76	0.002085	± 2.5	PASS
		VN	10	4.47	0.005296	± 2.5	PASS
		VN	20	2.6	0.003081	± 2.5	PASS
		VN	30	4.82	0.005711	± 2.5	PASS
		VN	40	-1.84	-0.002180	± 2.5	PASS
		VN	50	1.46	0.001730	± 2.5	PASS