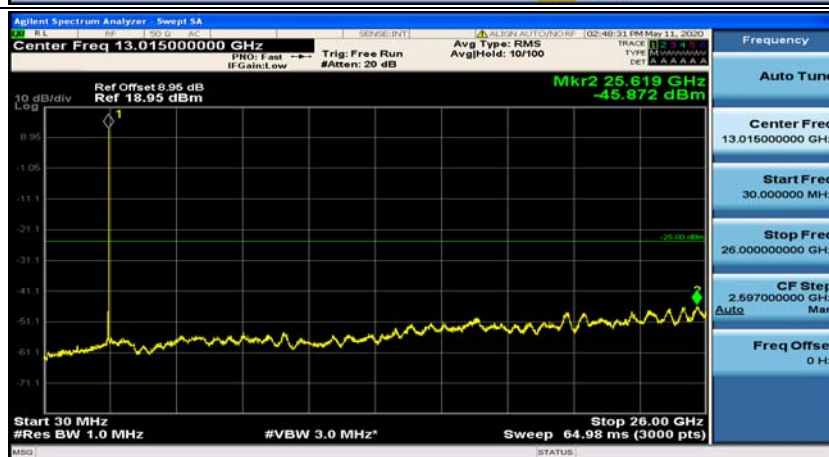
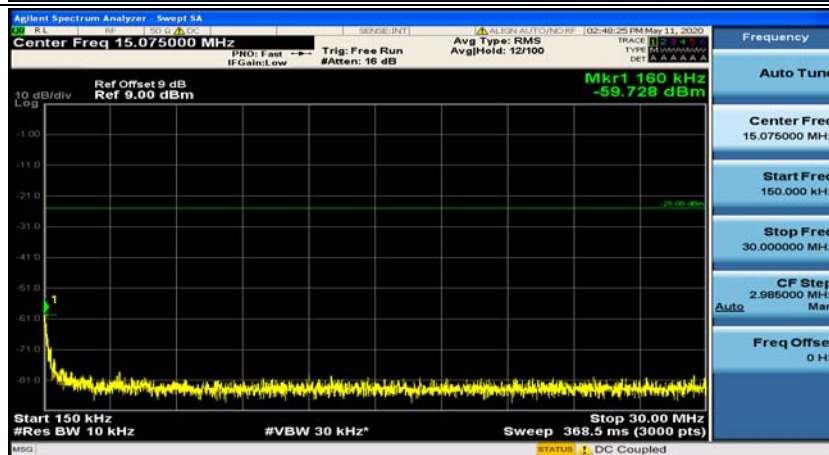
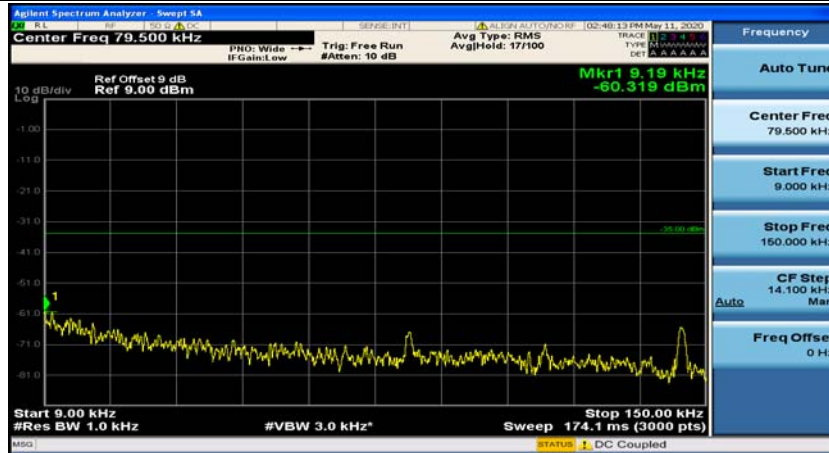
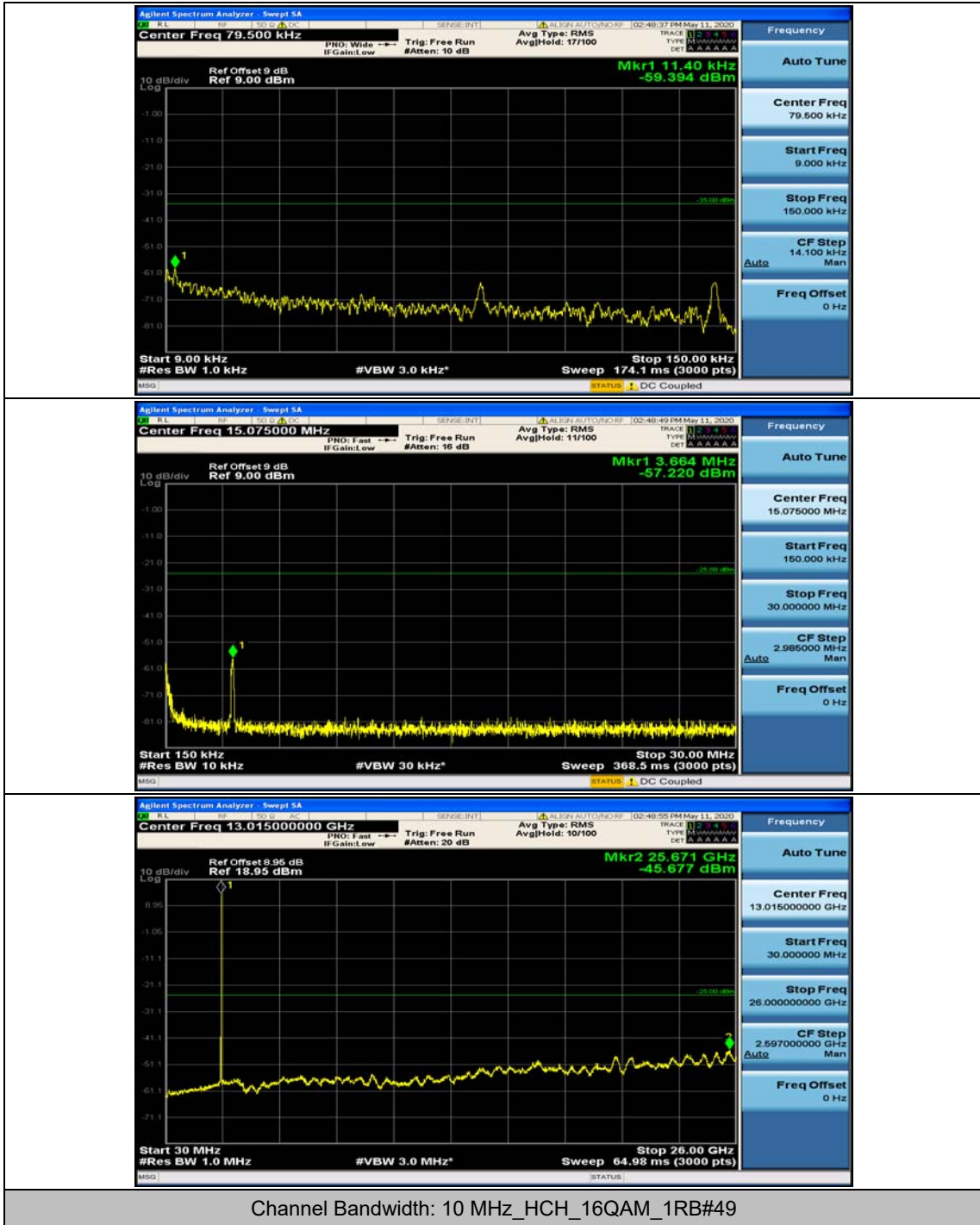


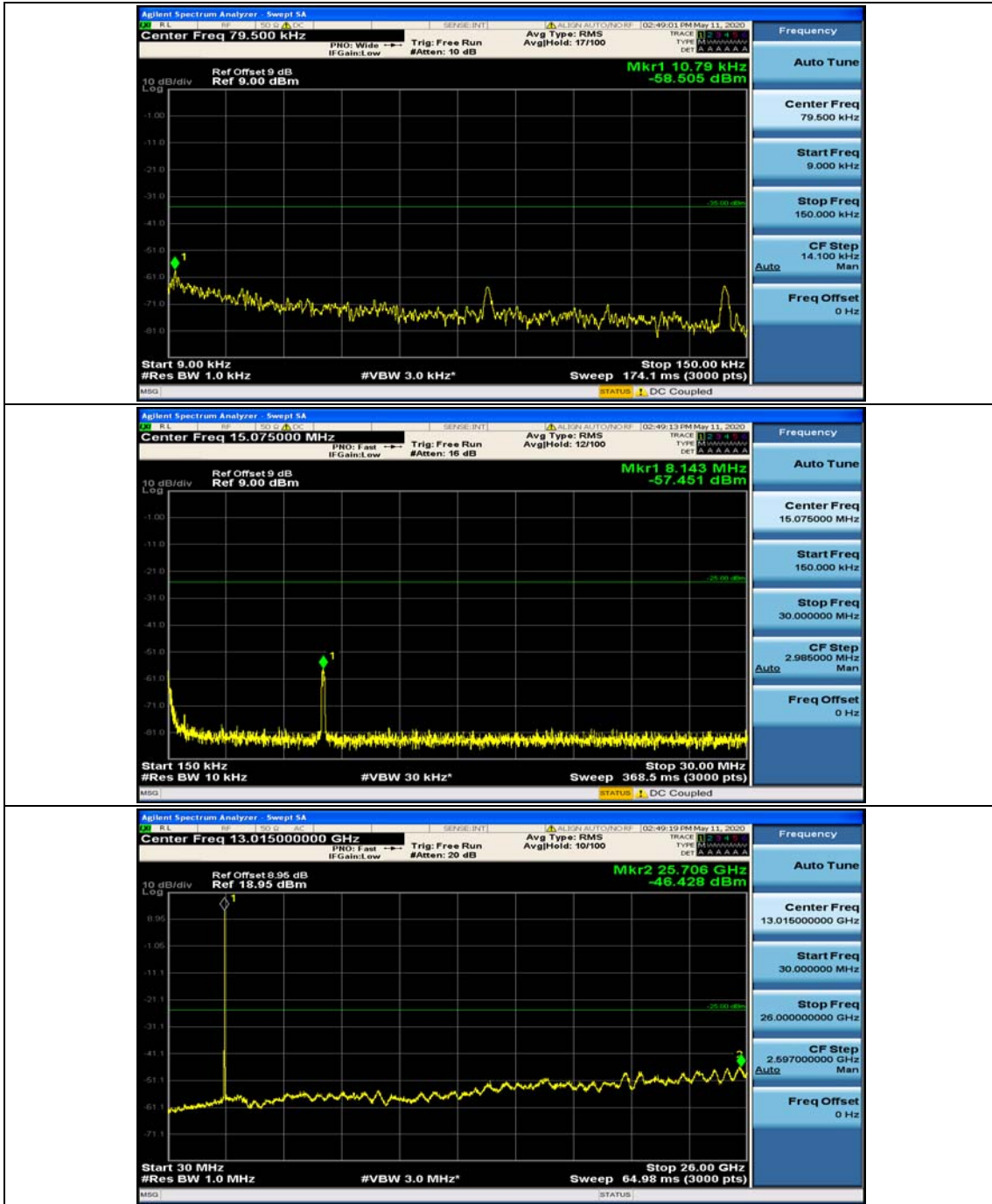


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



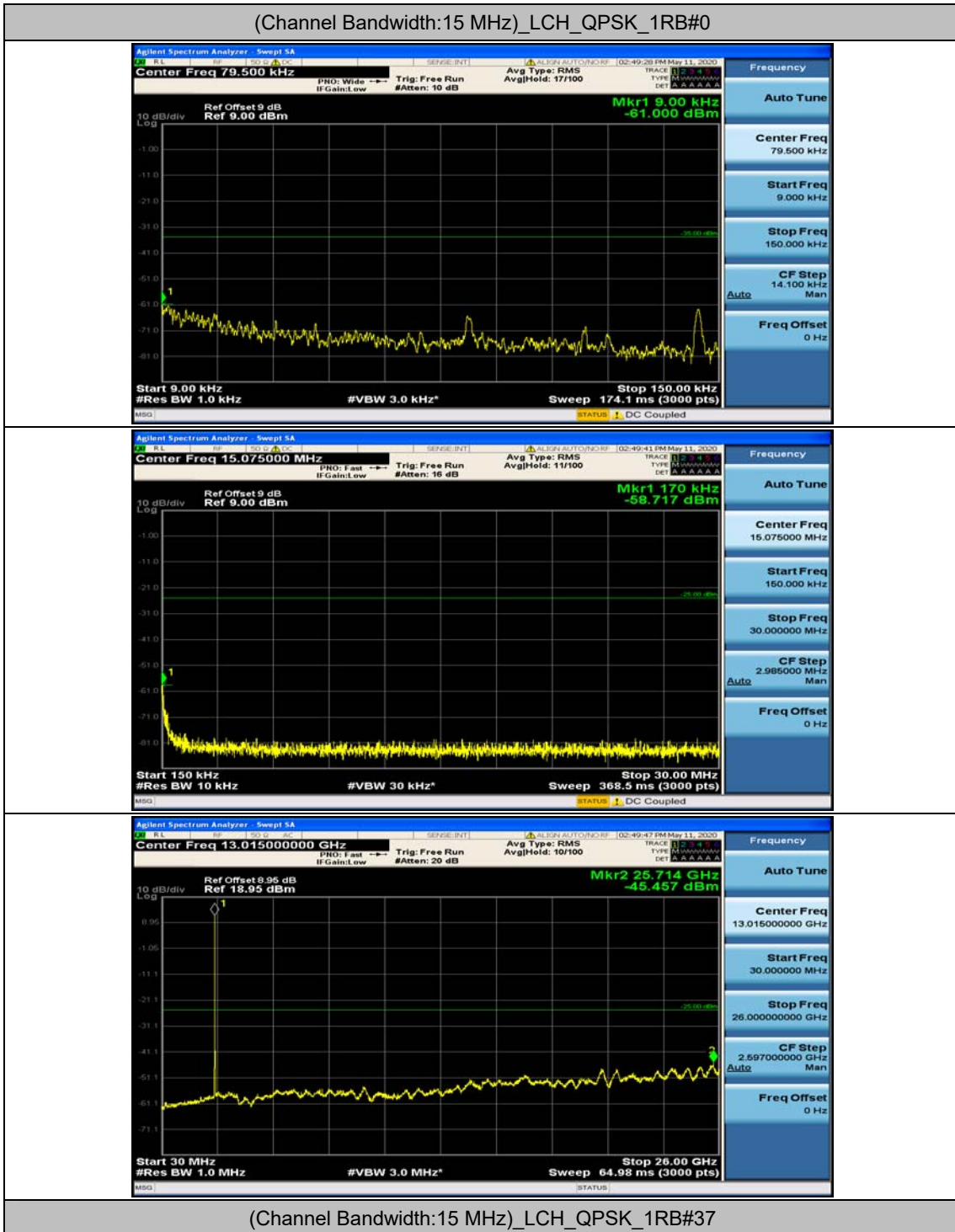
Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24

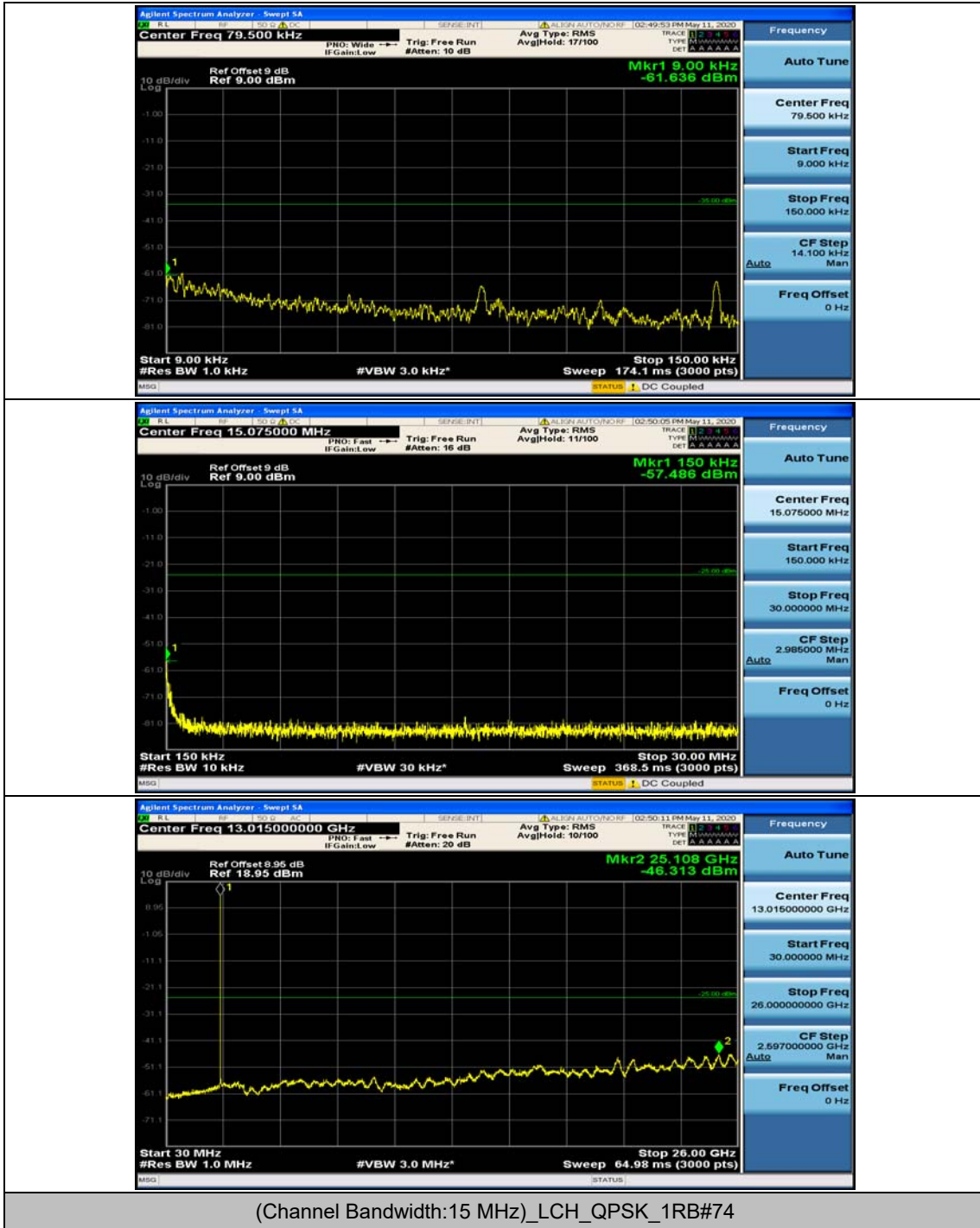


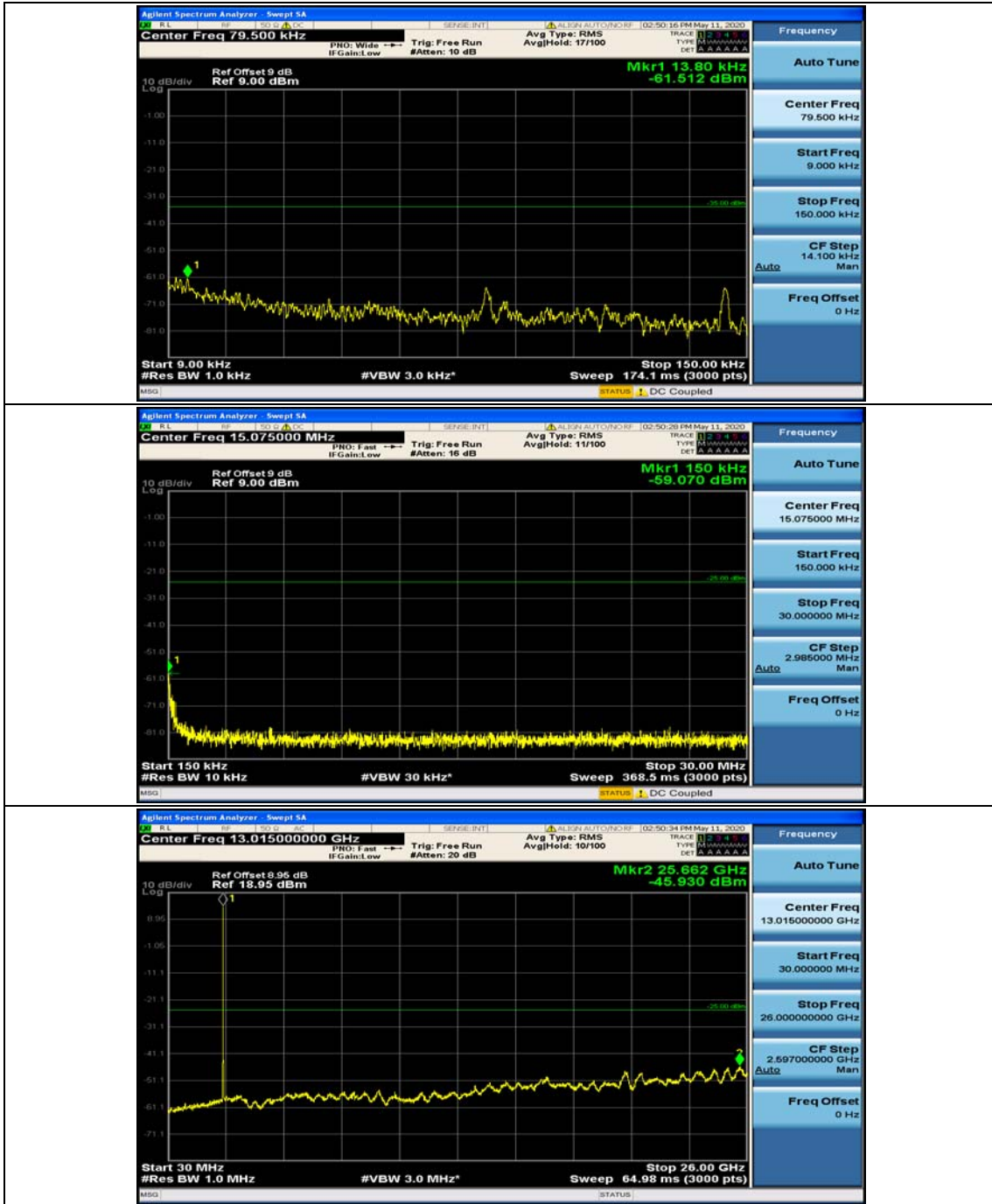




Channel Bandwidth: 15 MHz

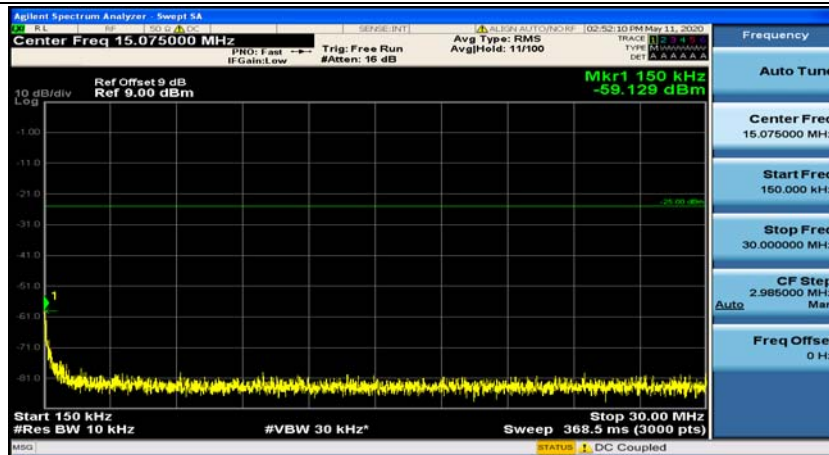




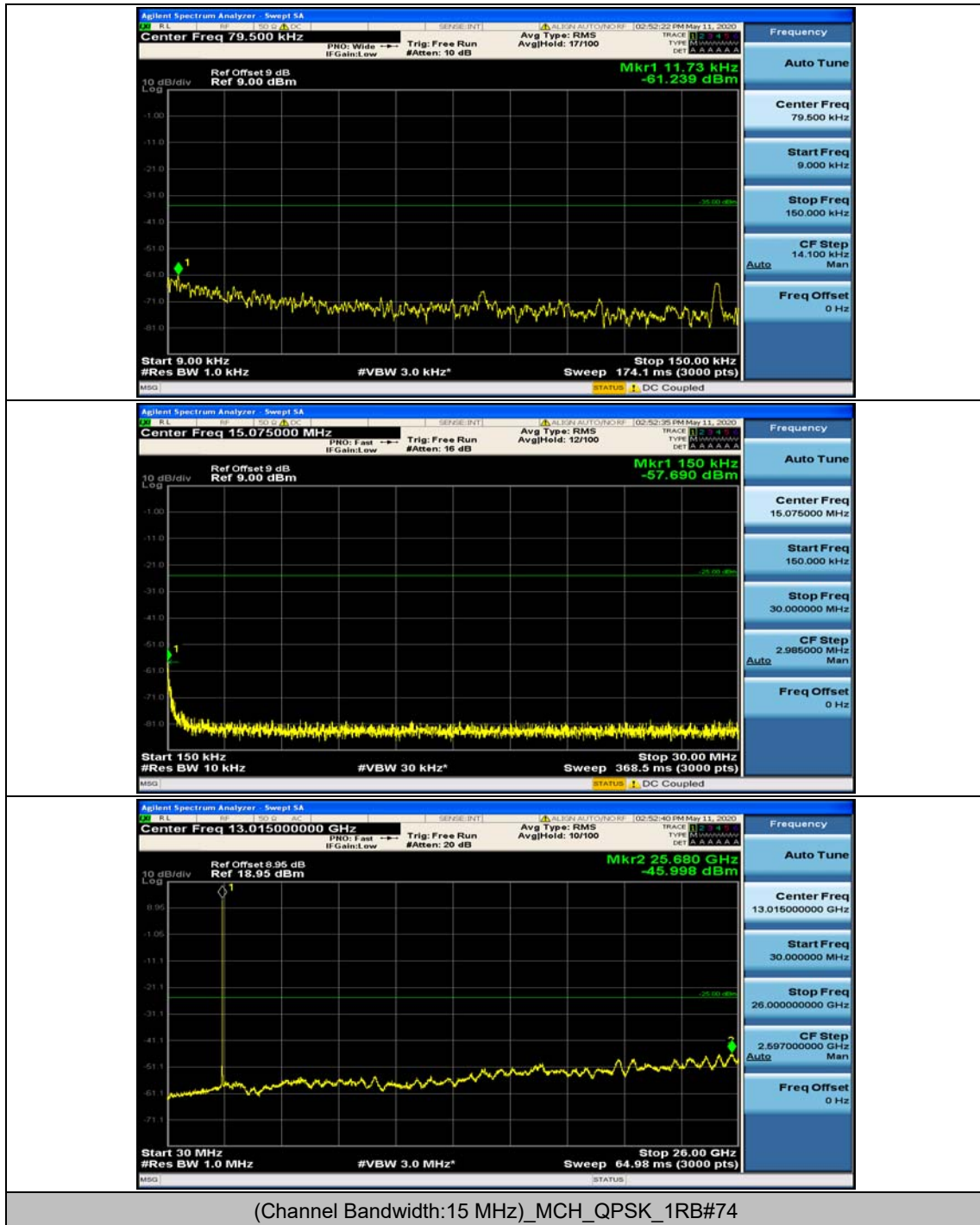


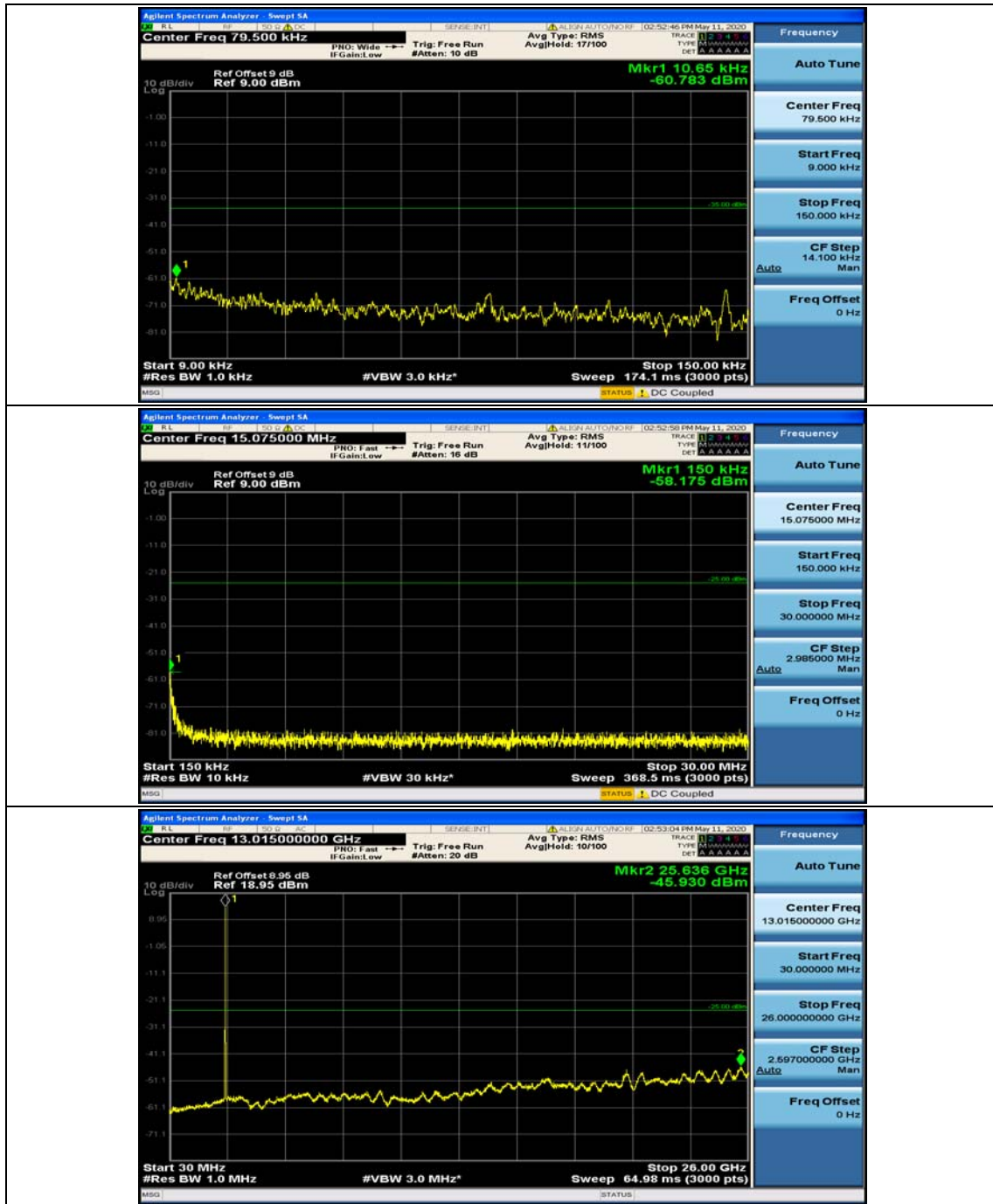


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0



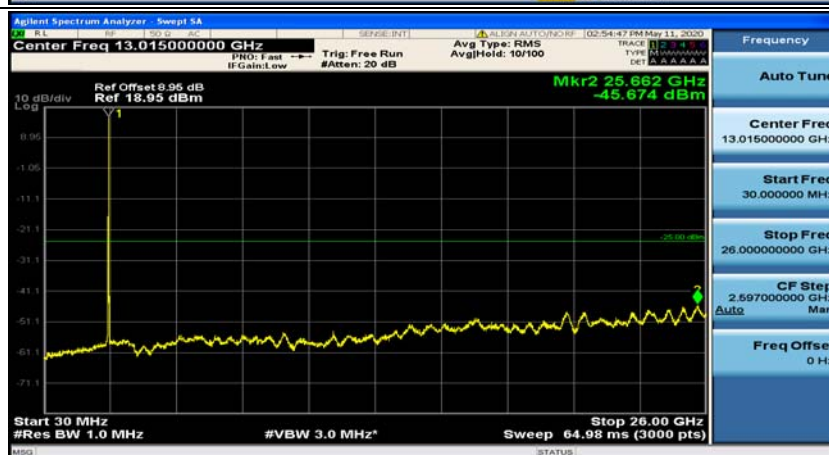
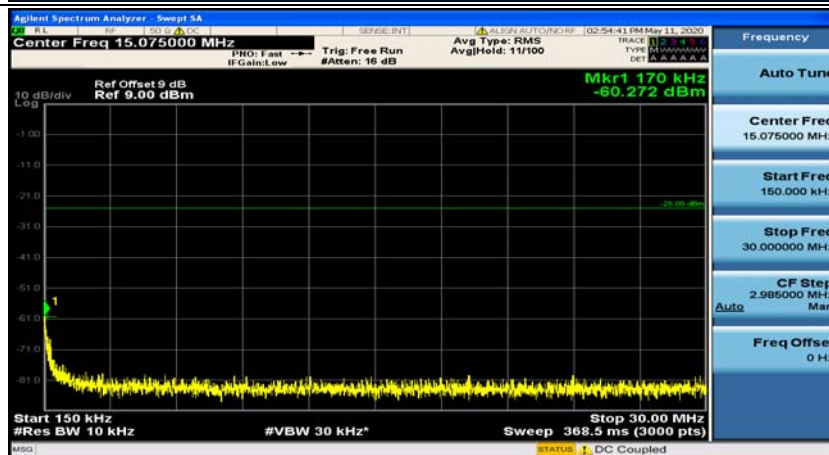
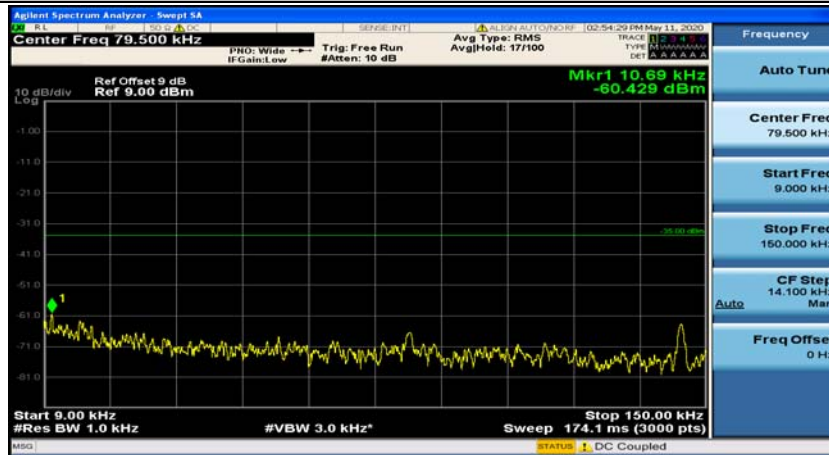
(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37



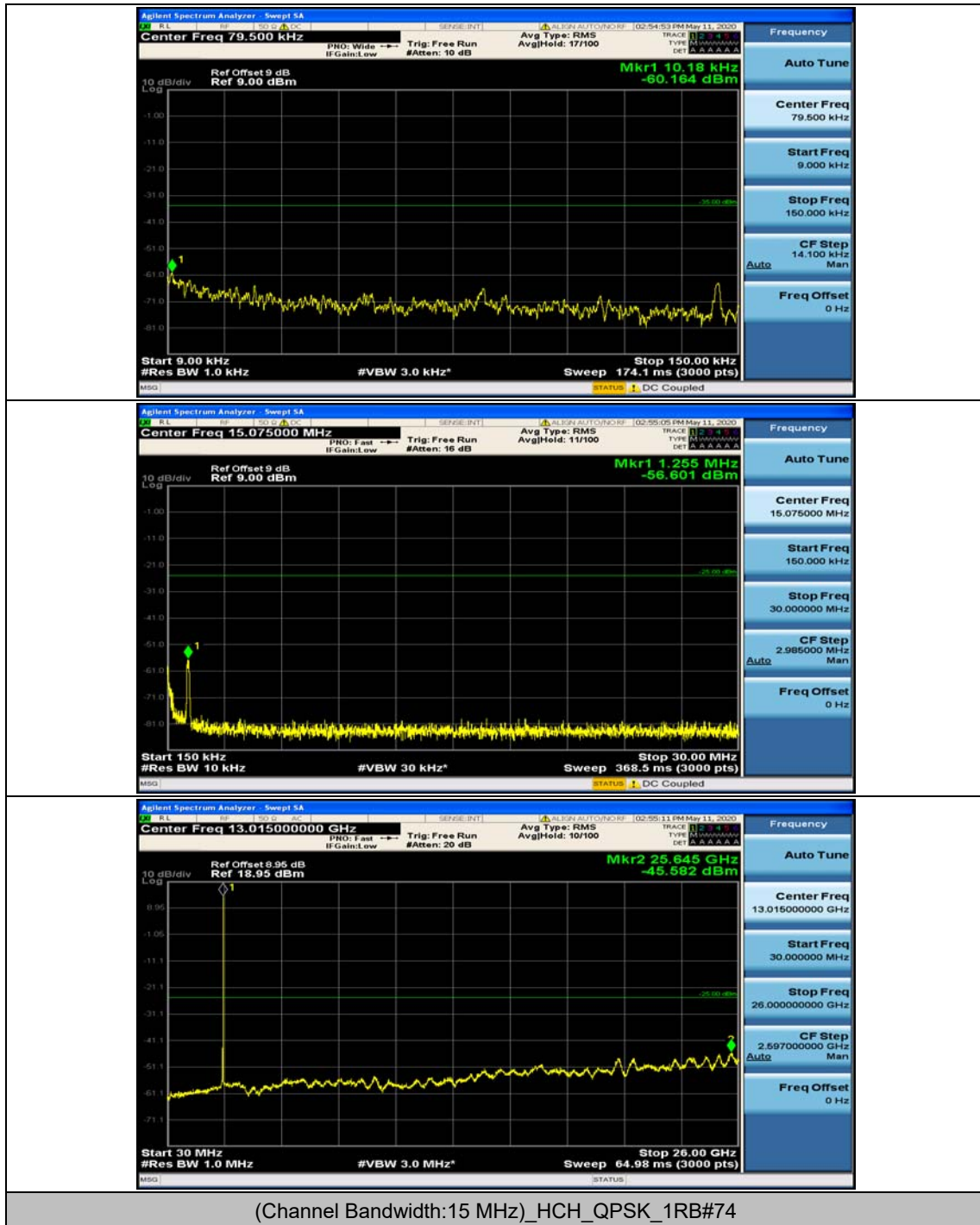


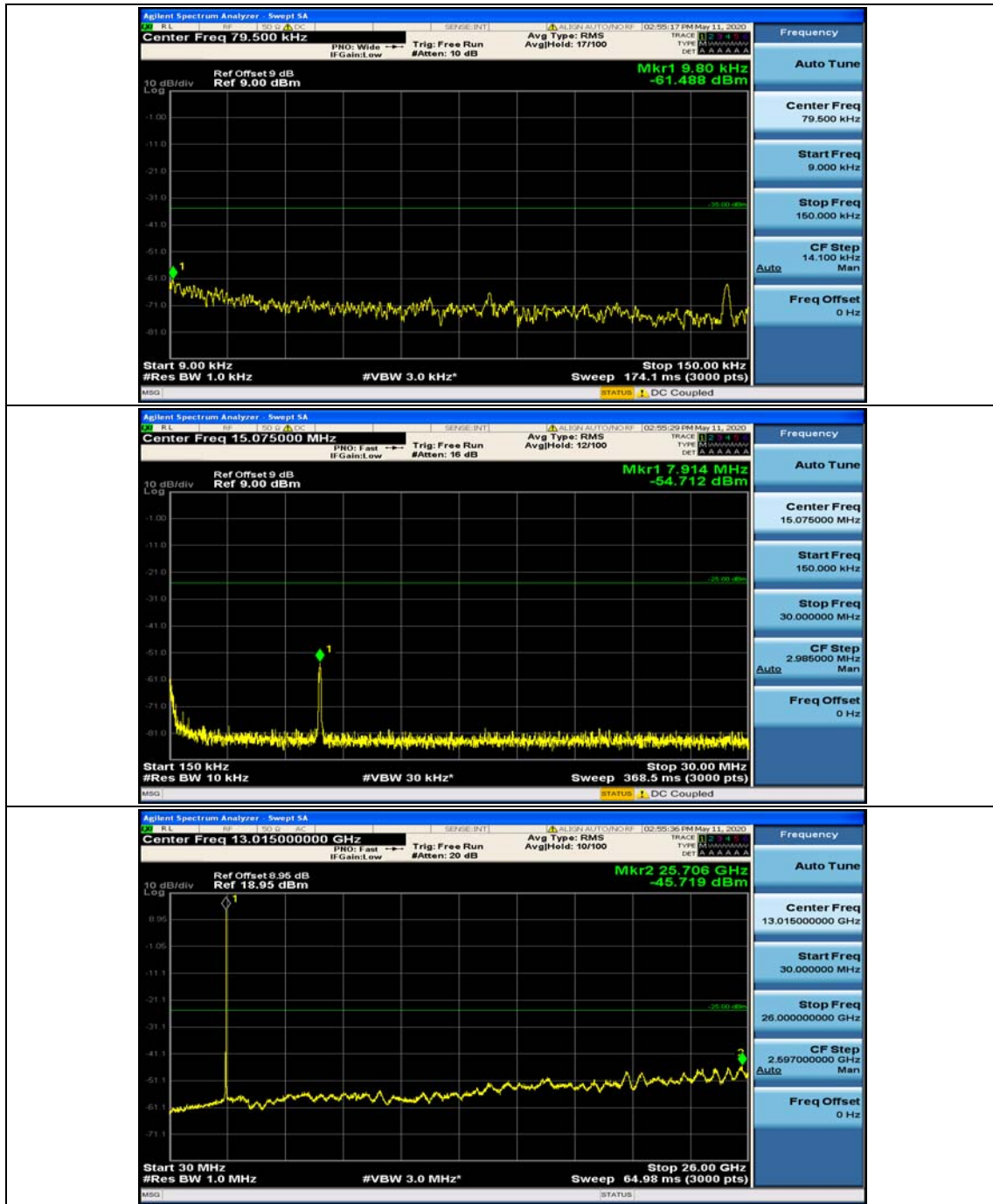


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



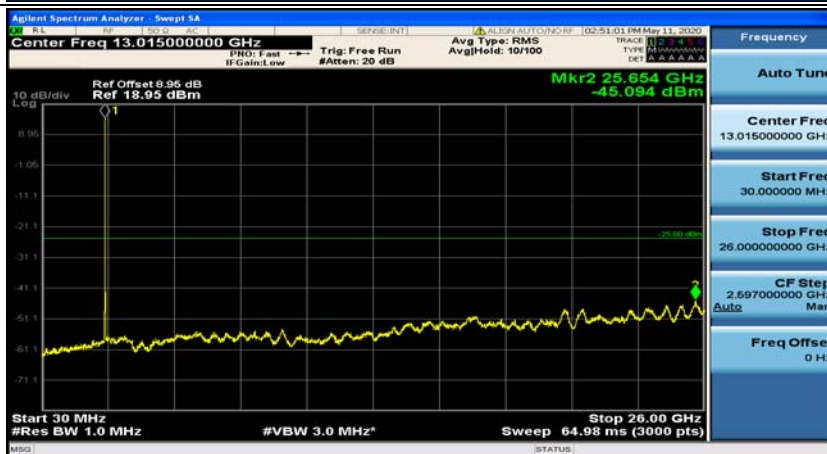
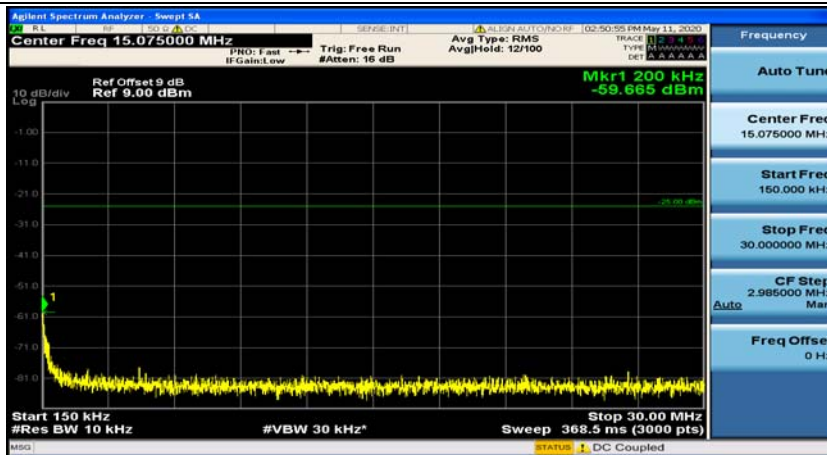
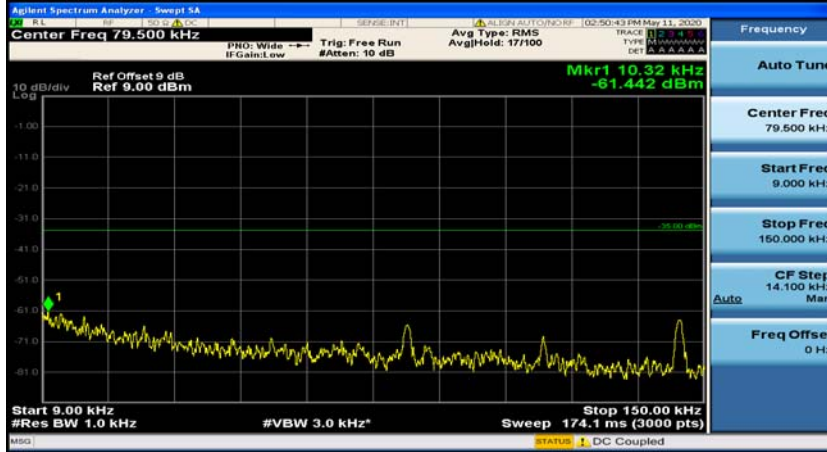
(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37



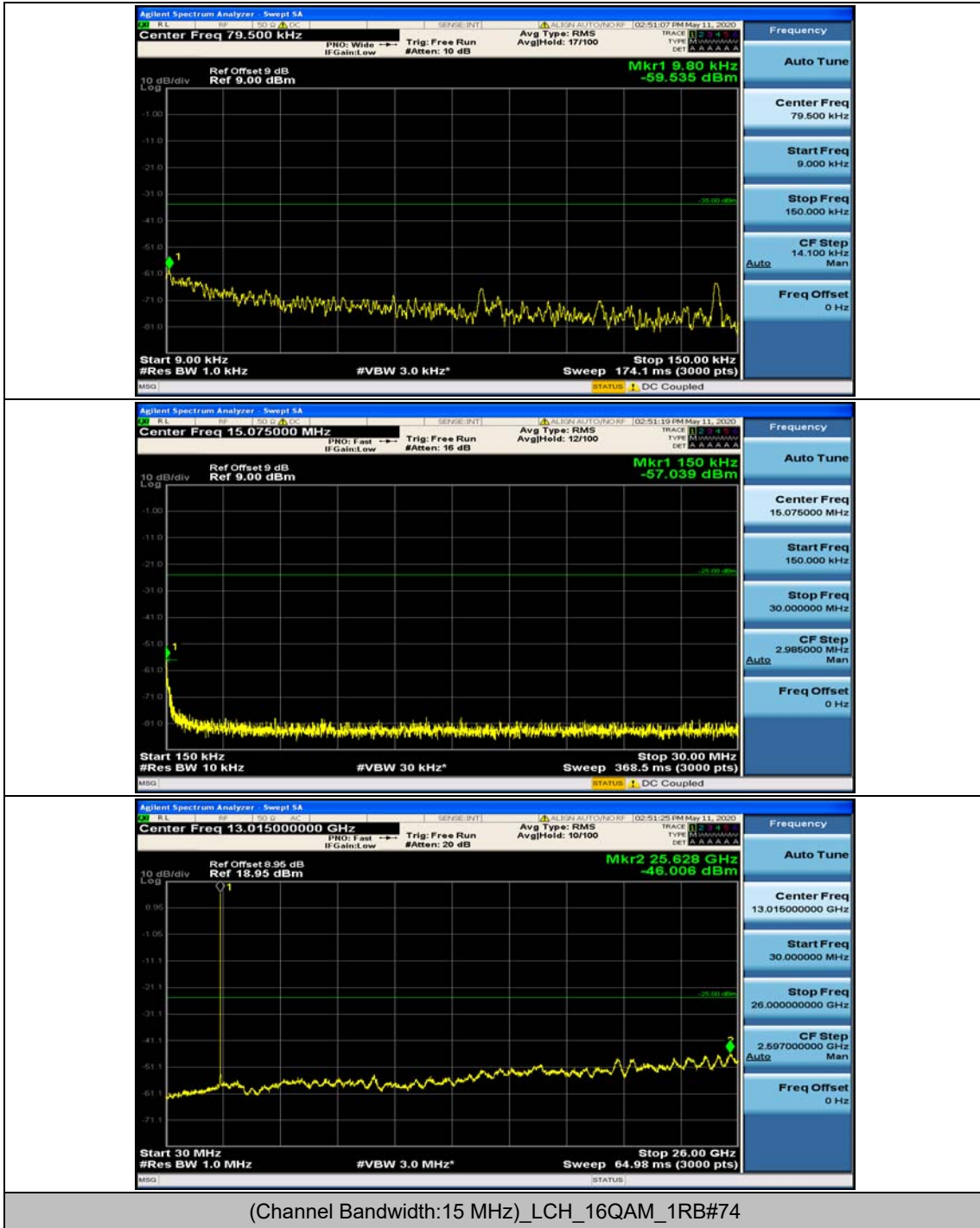


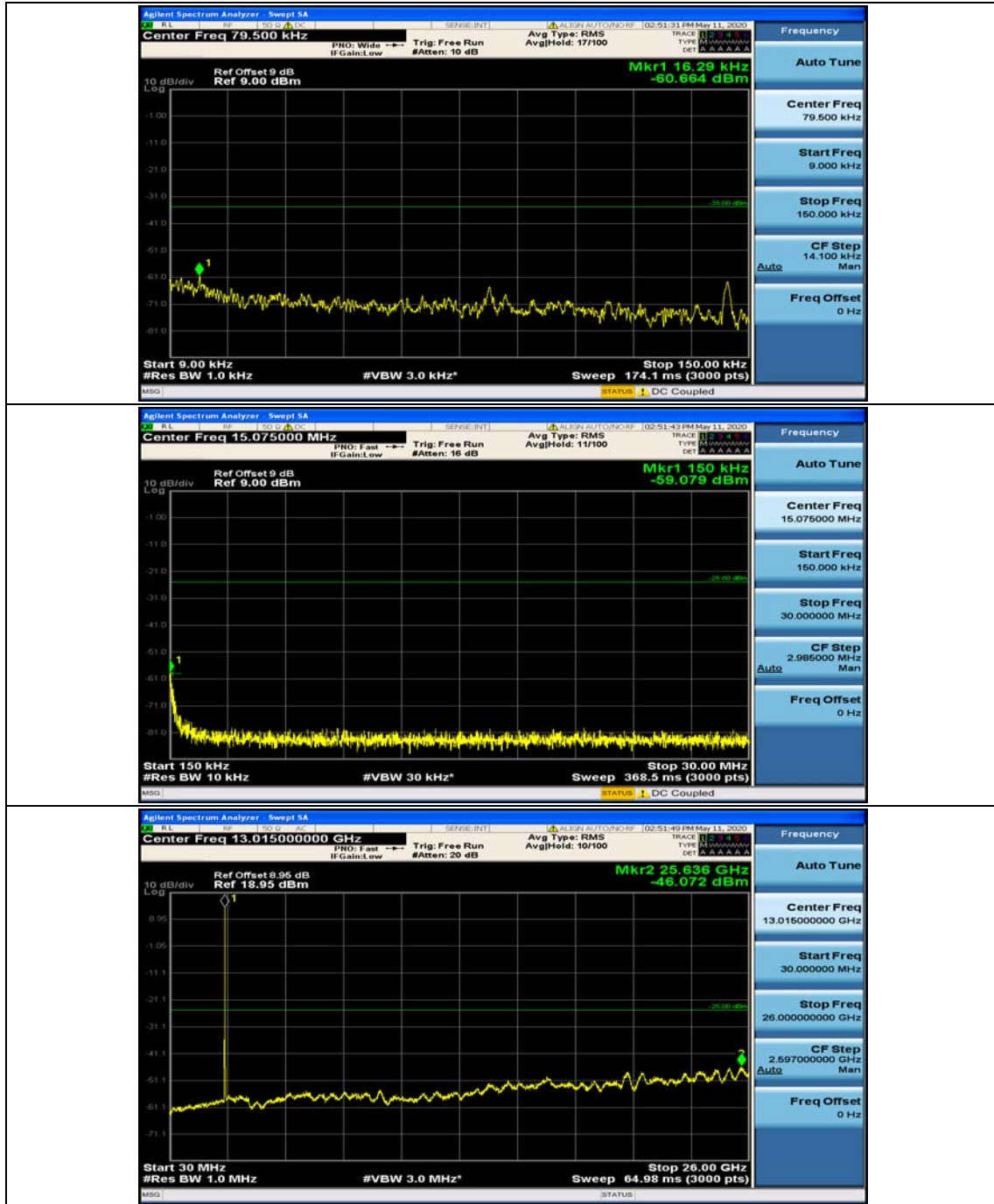


(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#0



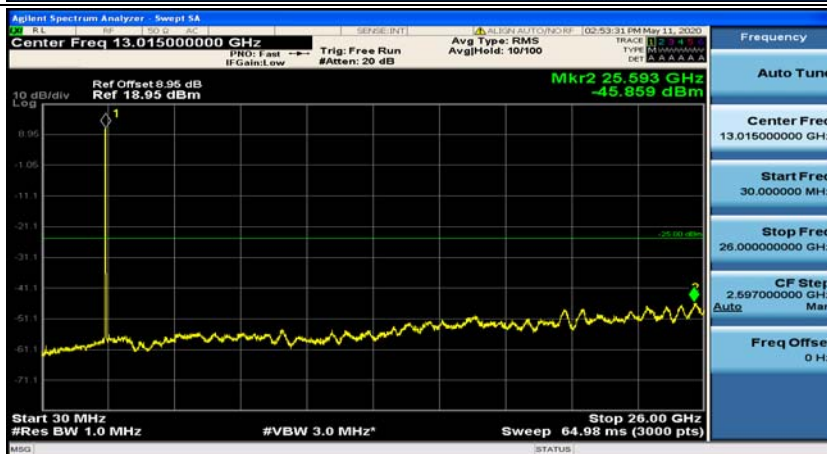
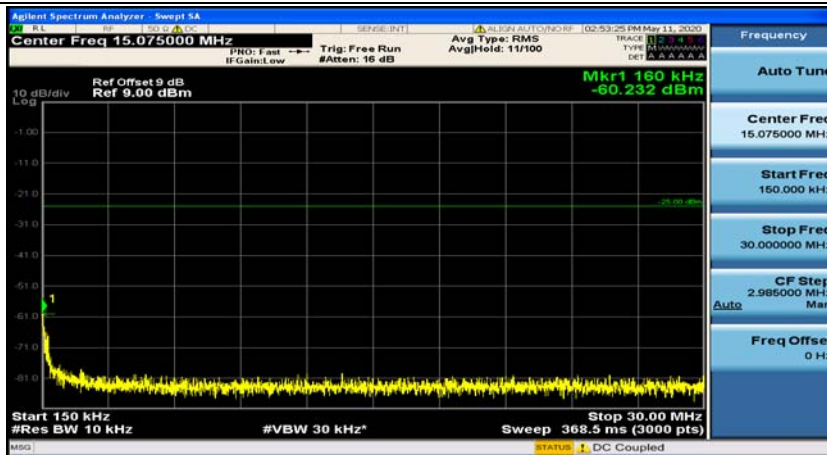
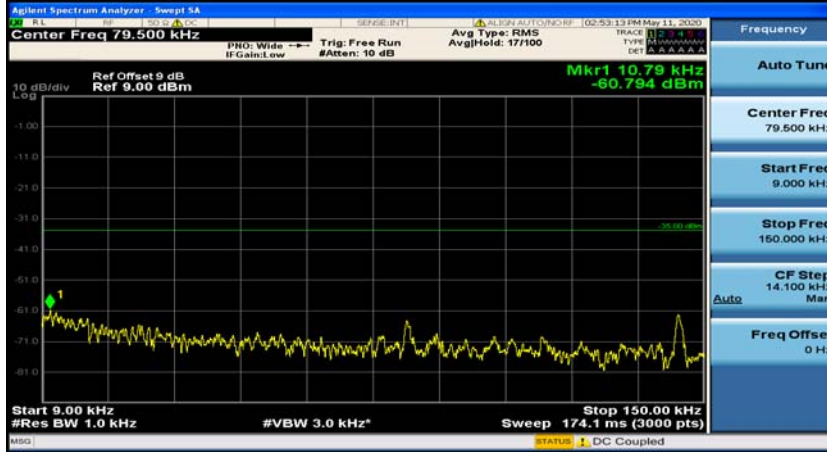
(Channel Bandwidth:15 MHz)_LCH_16QAM_1RB#37



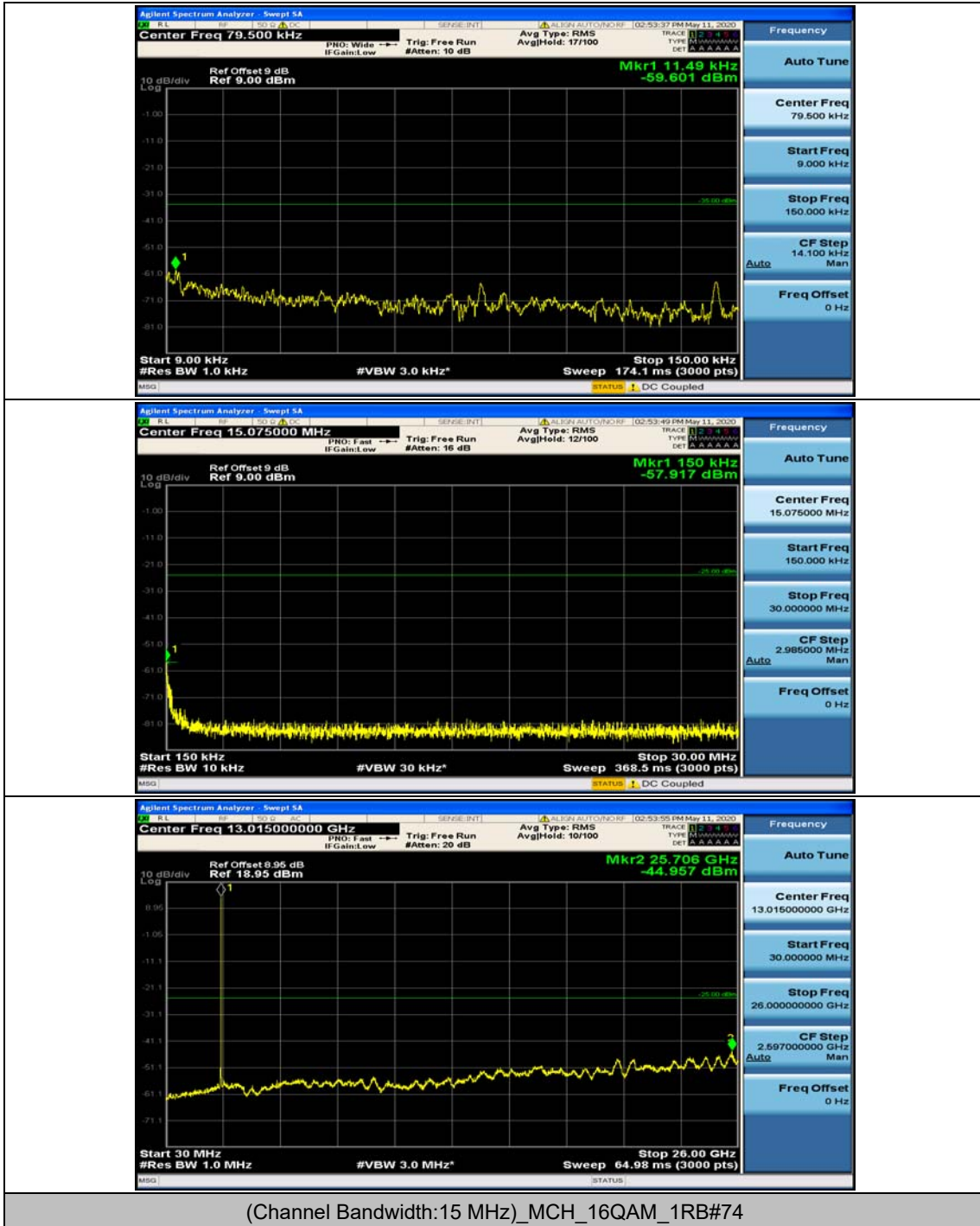


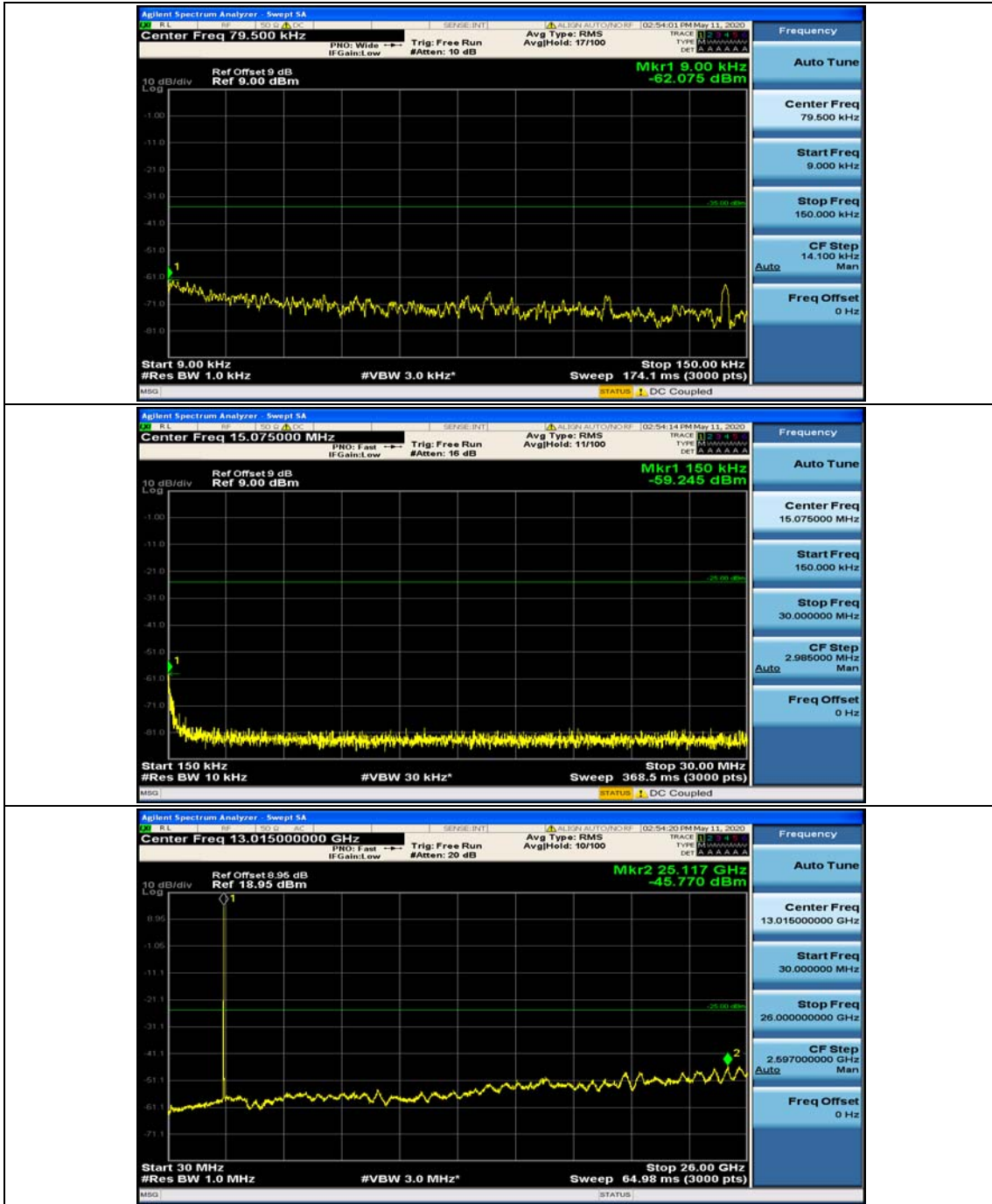


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0



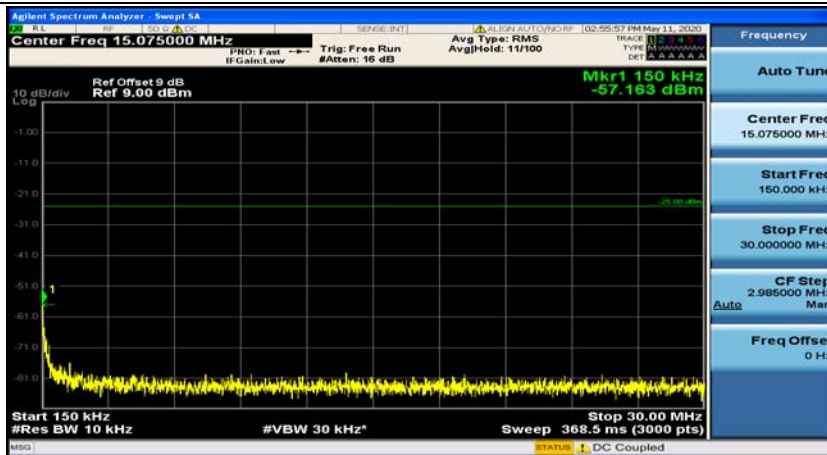
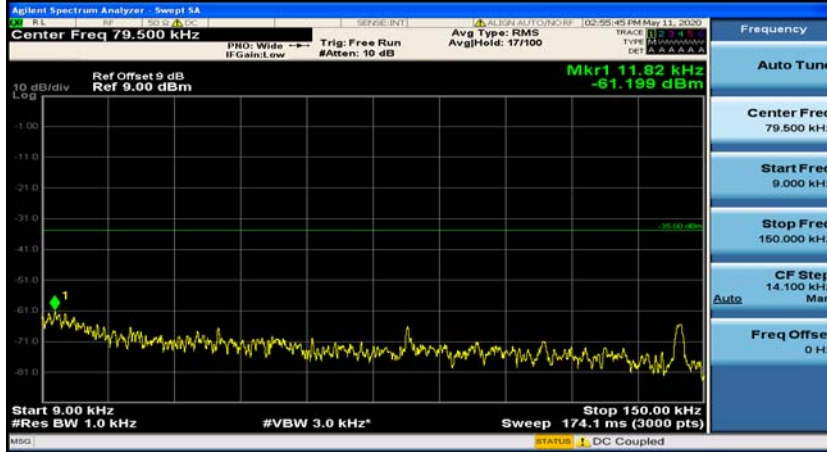
(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37



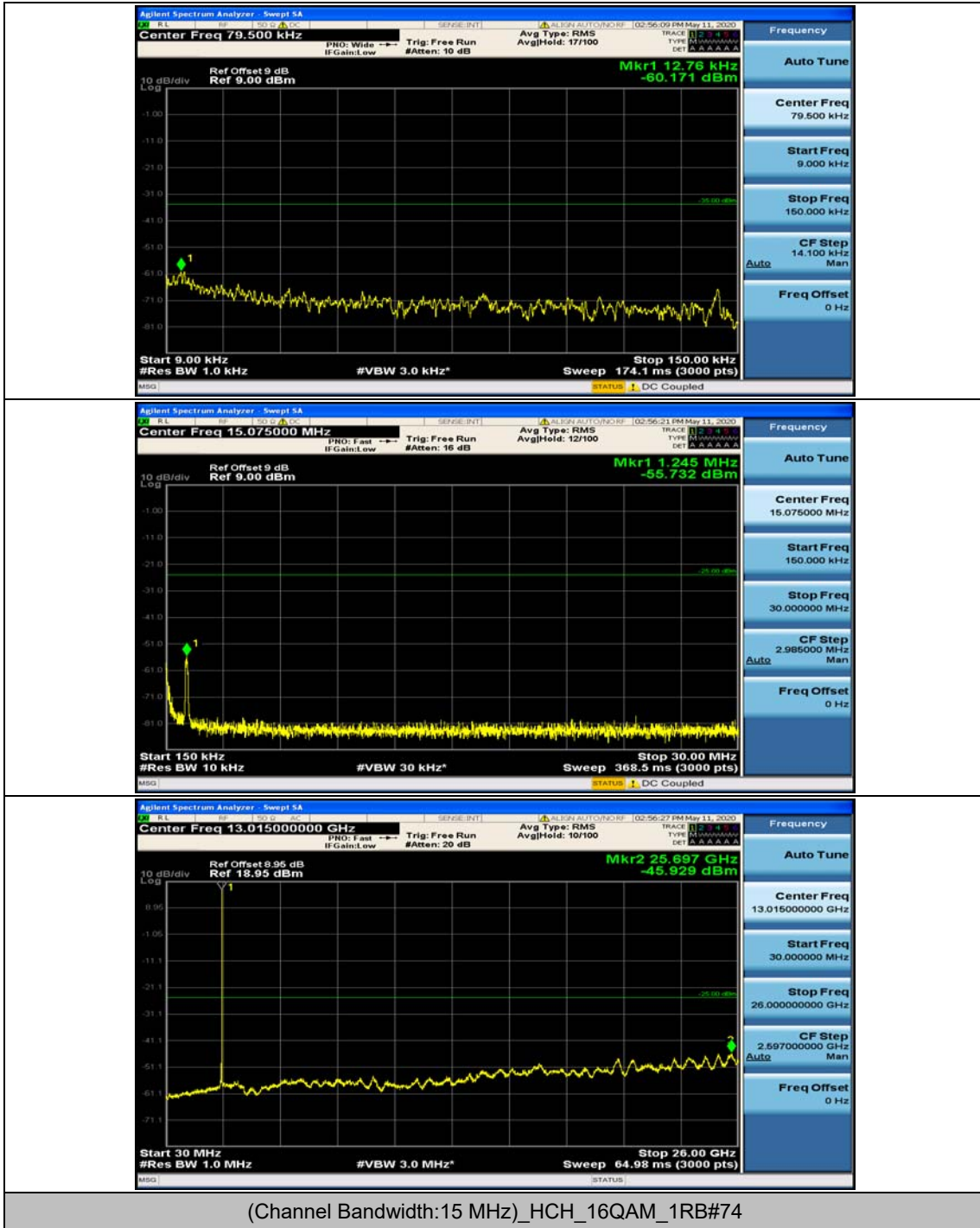


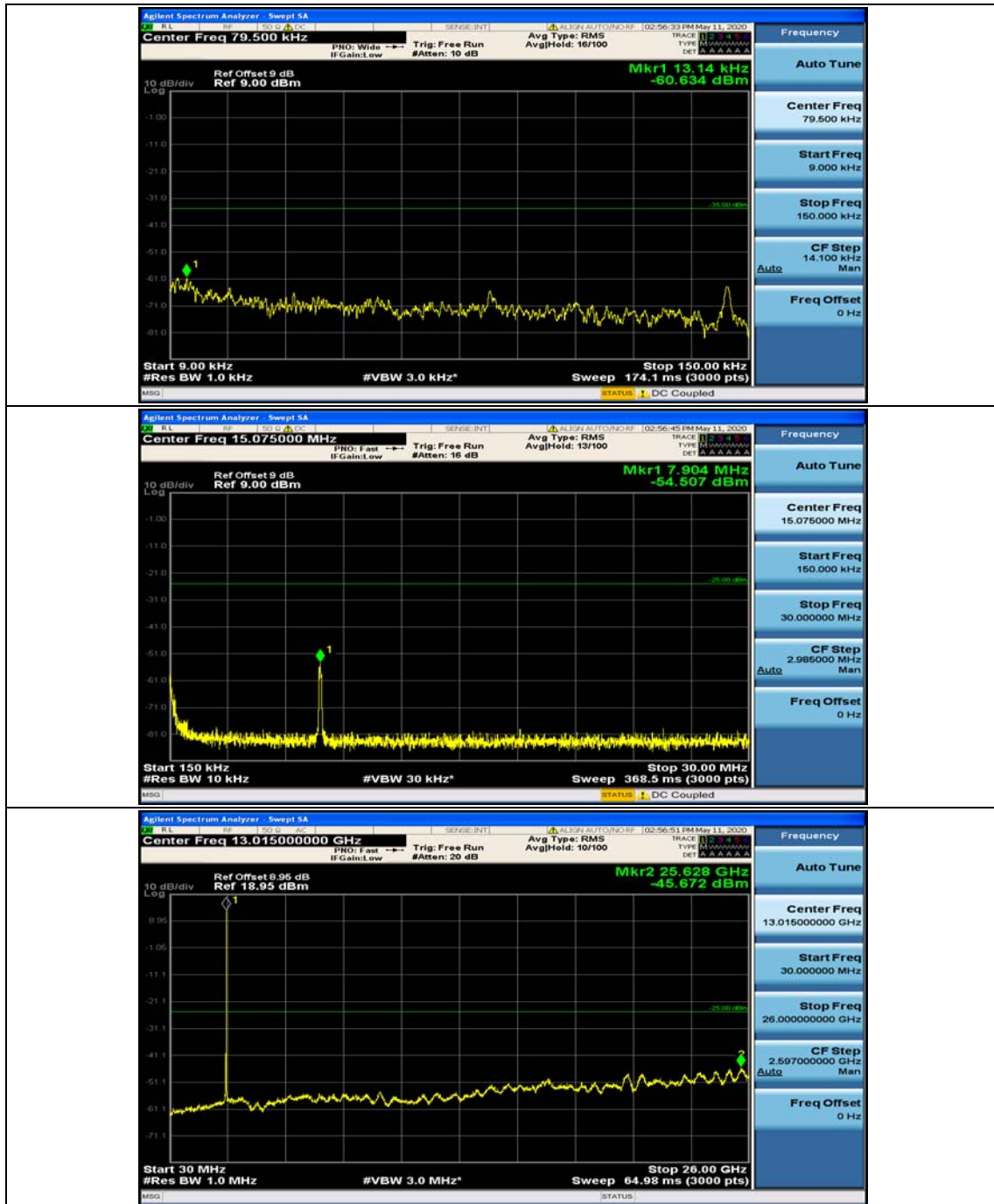


(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



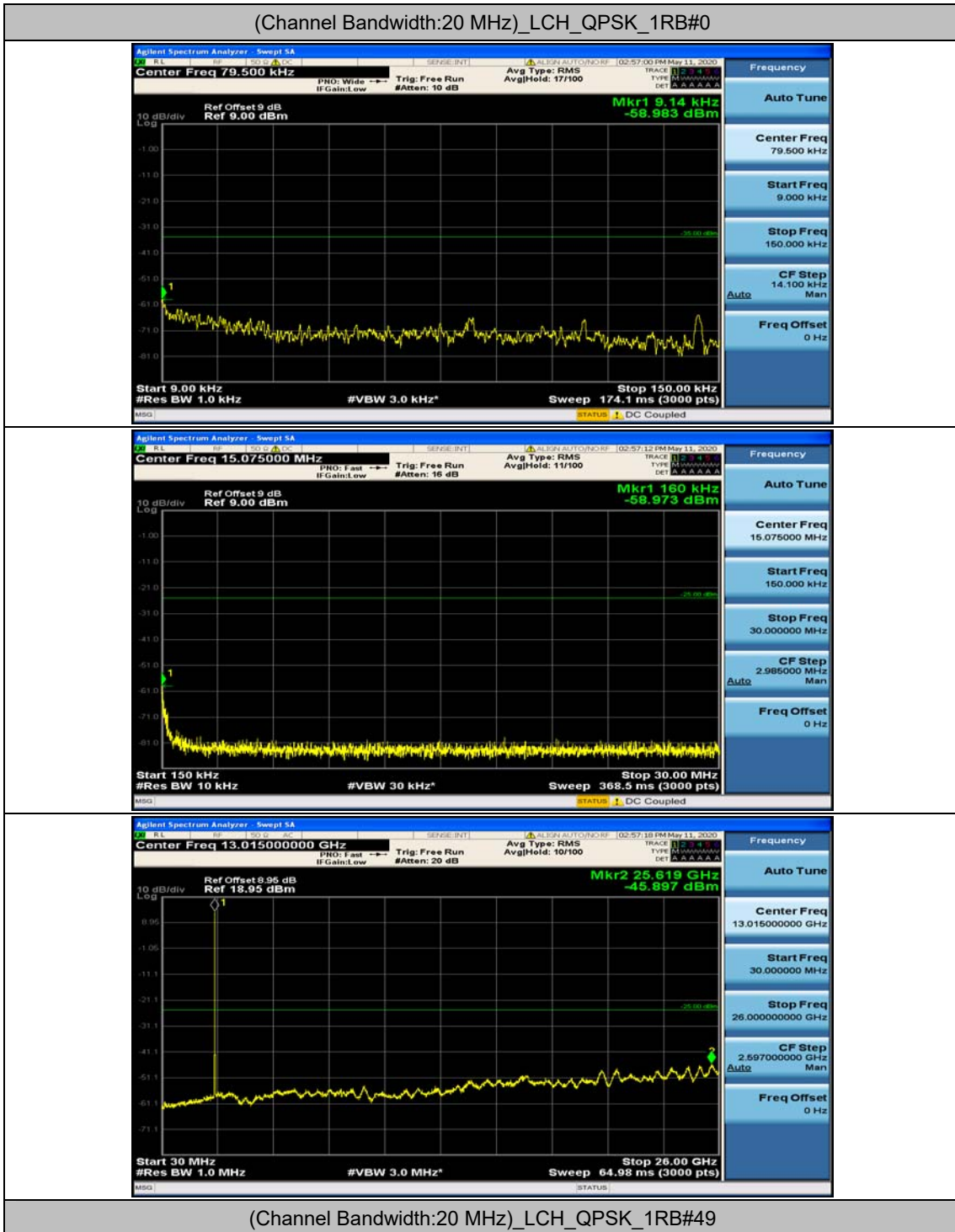
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37

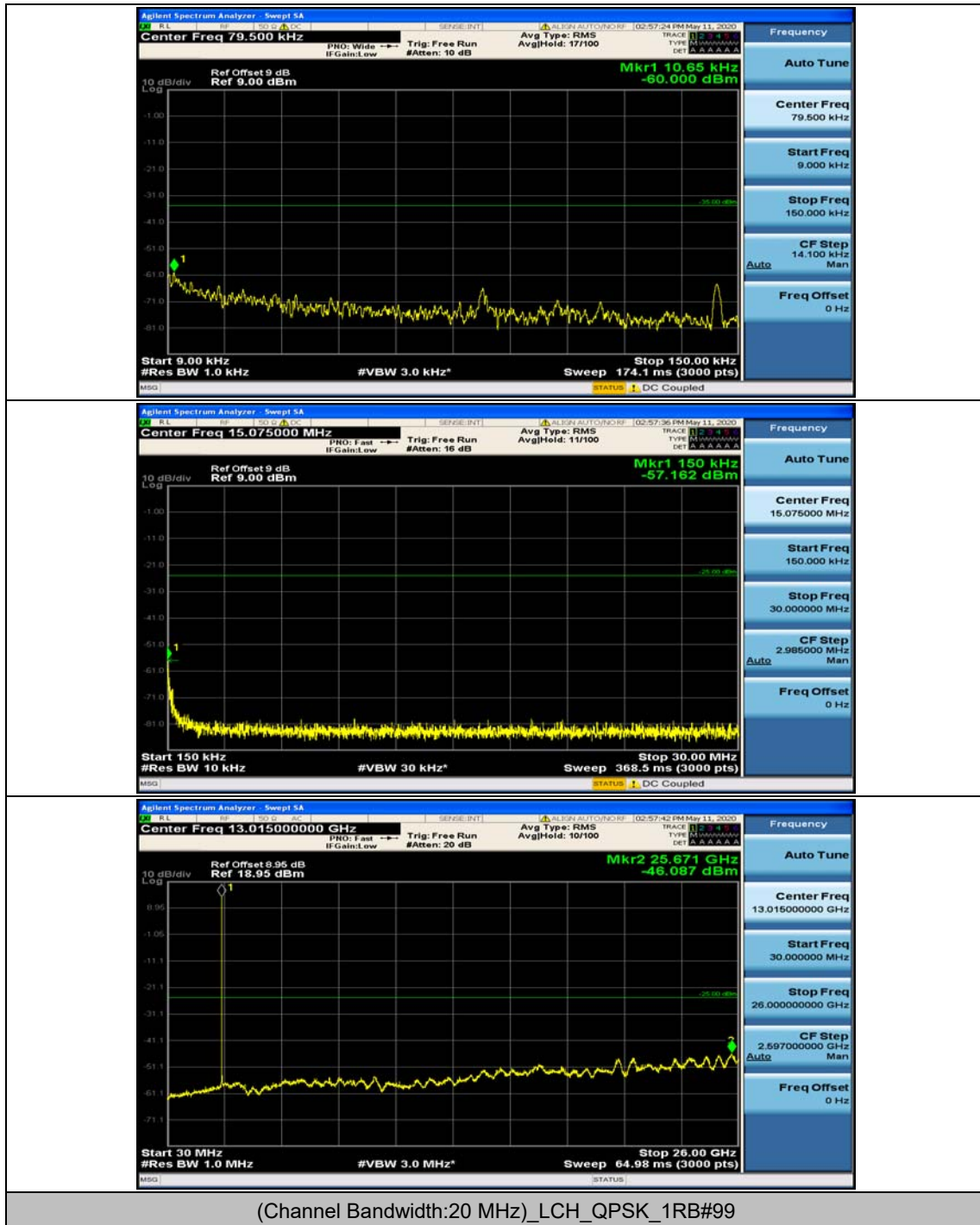


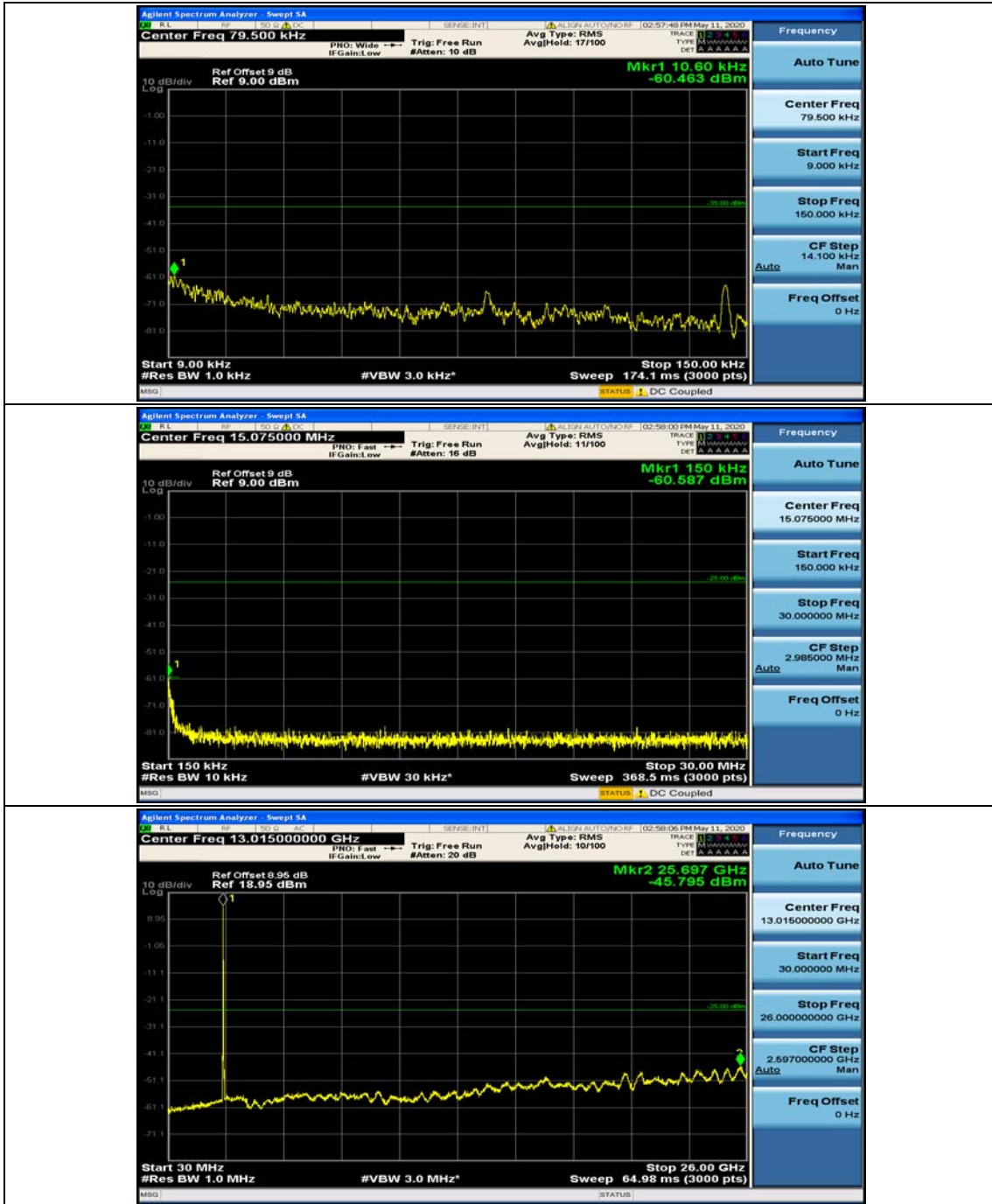




Channel Bandwidth: 20 MHz

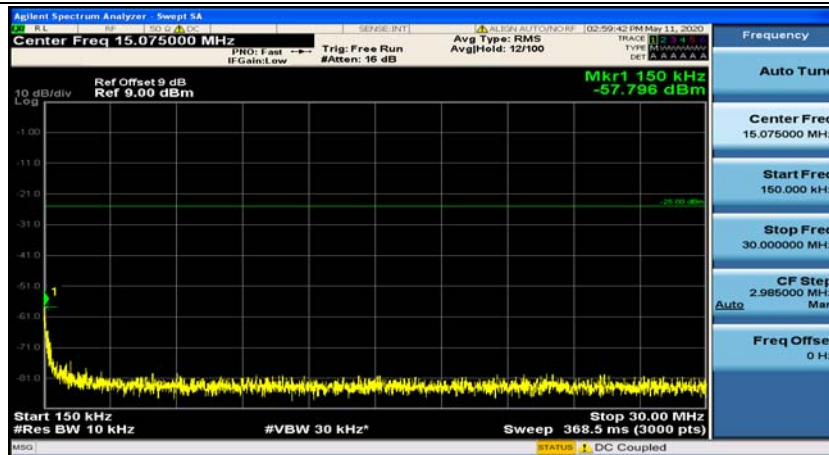
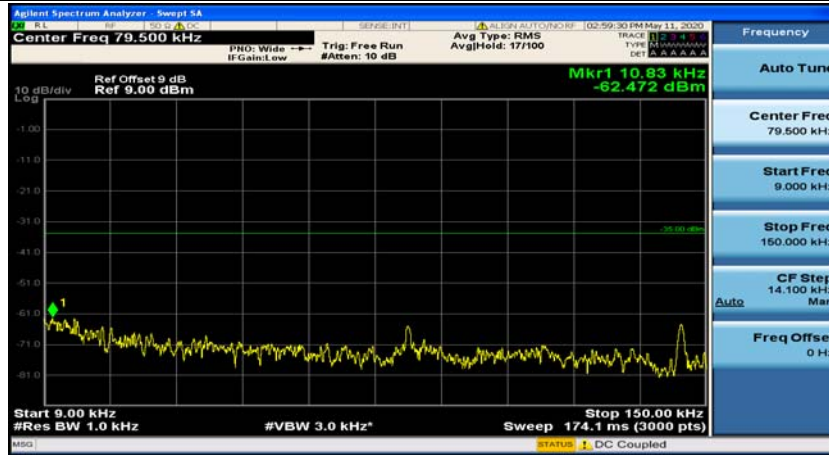




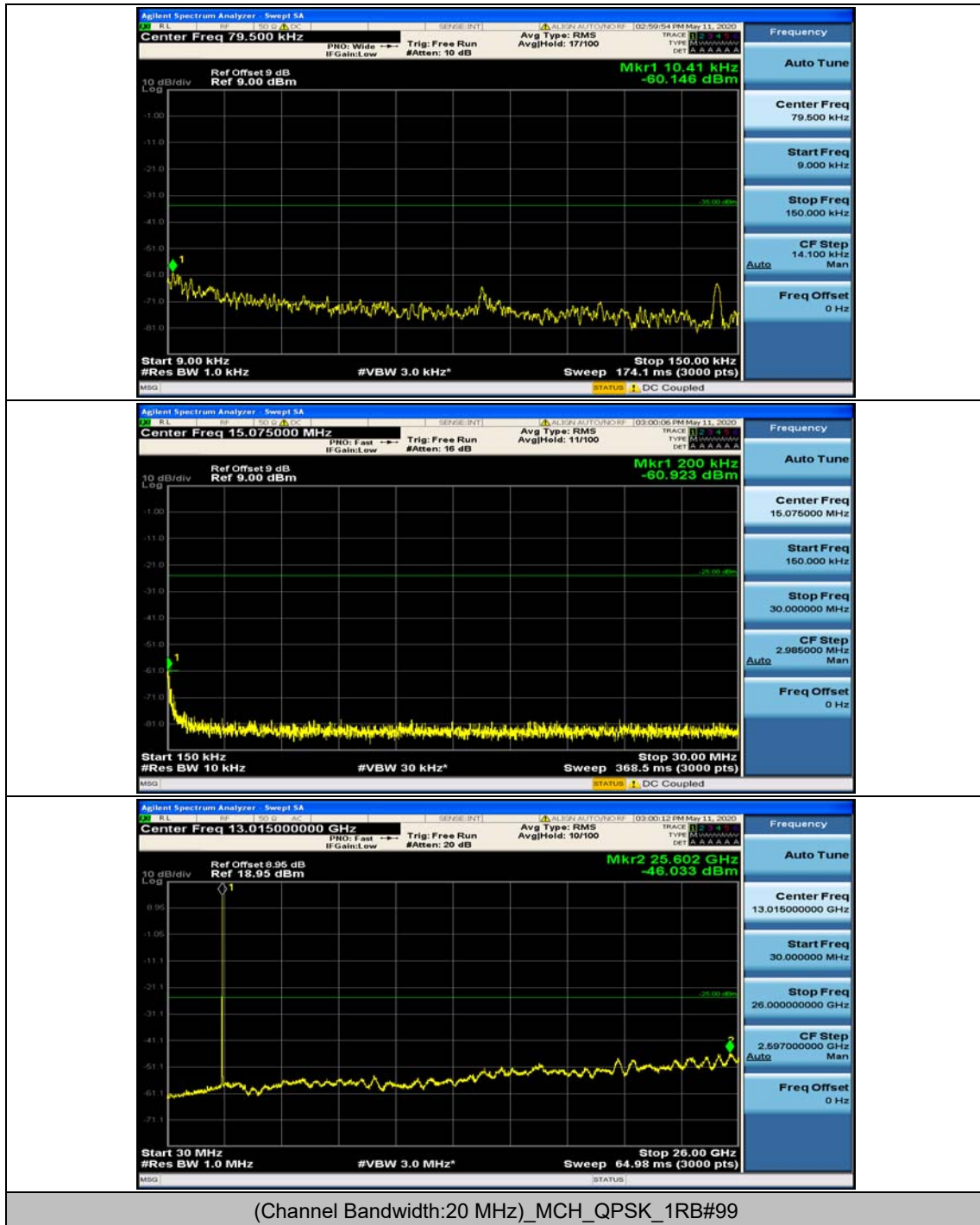


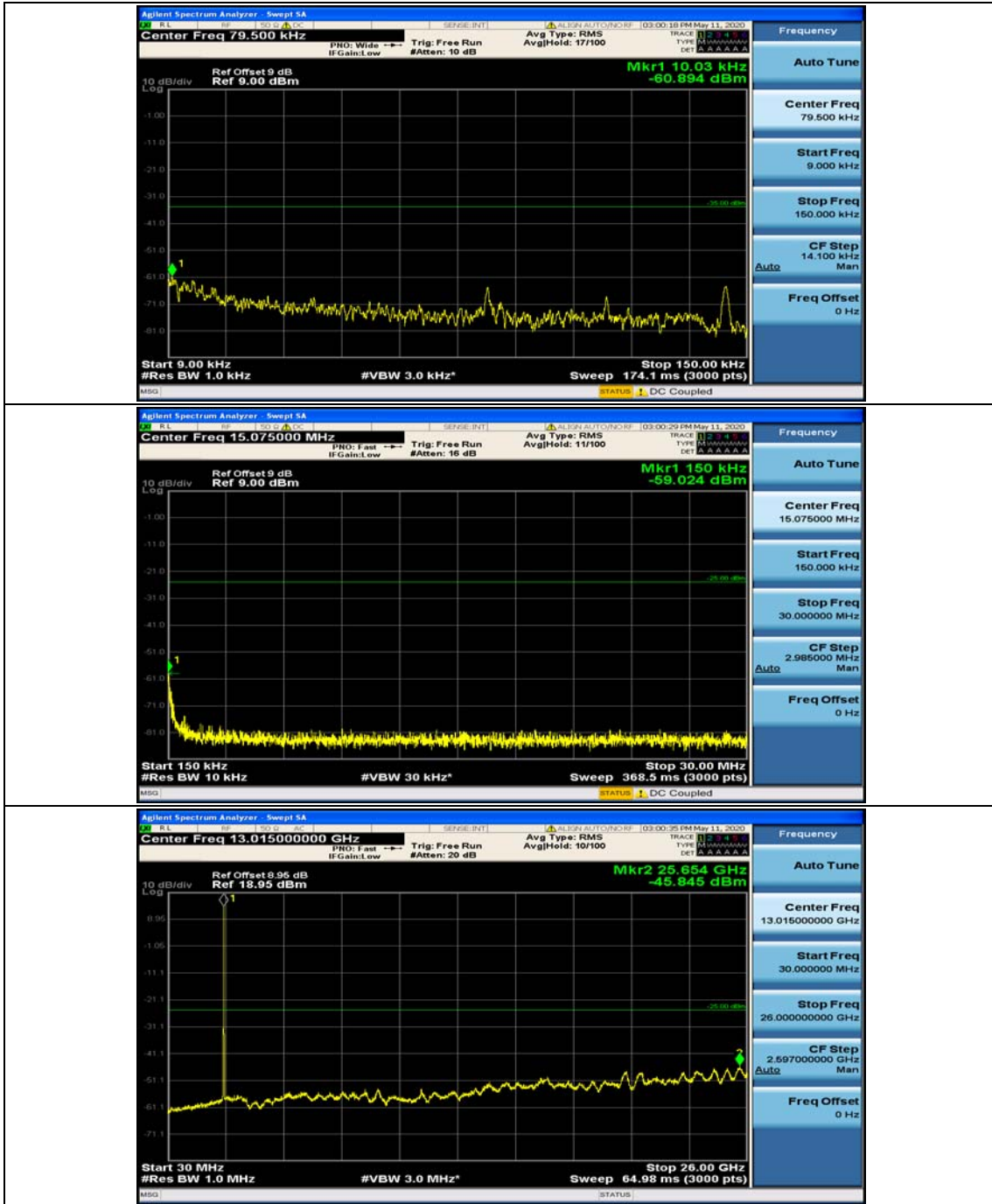


(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#0



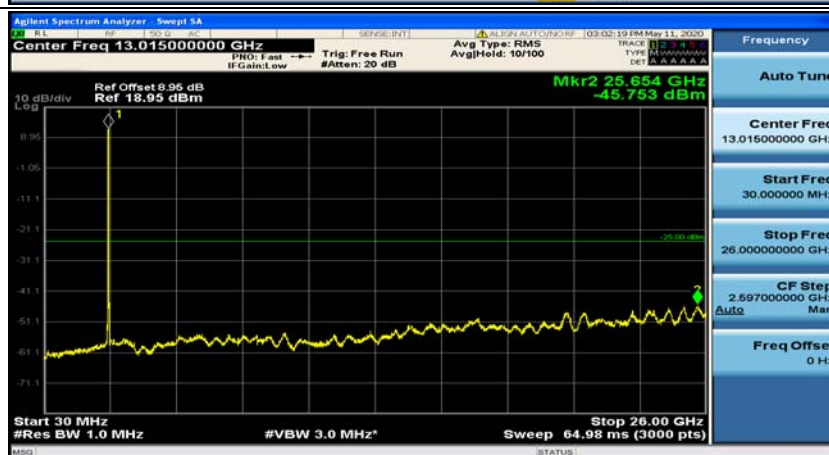
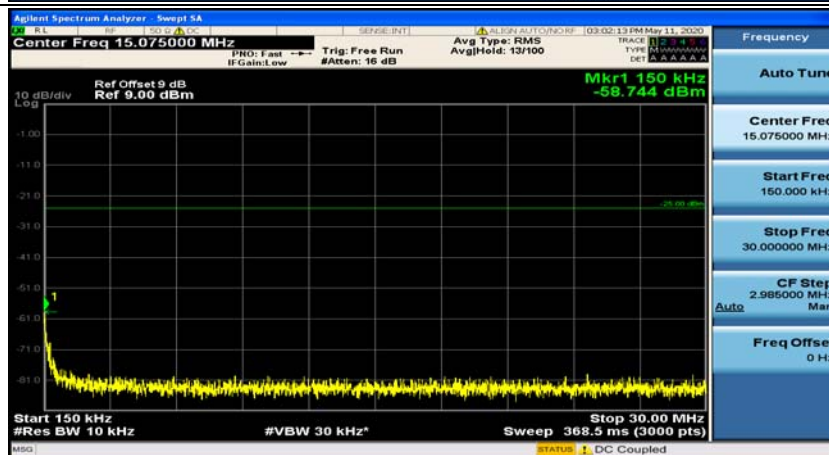
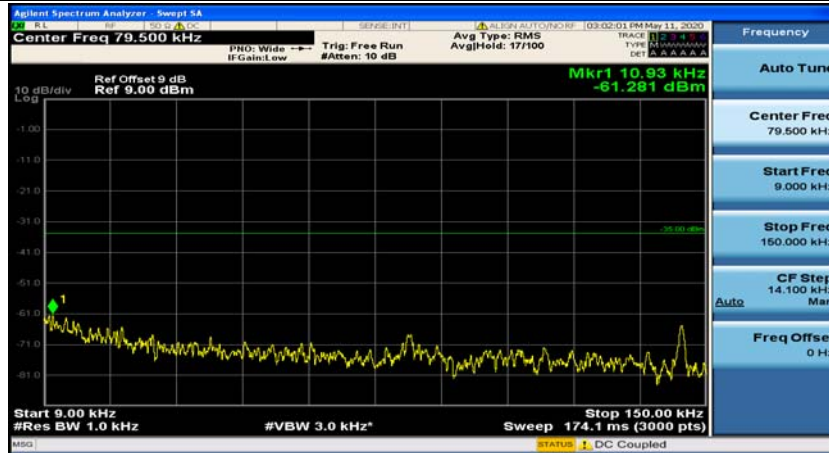
(Channel Bandwidth:20 MHz)_MCH_QPSK_1RB#49



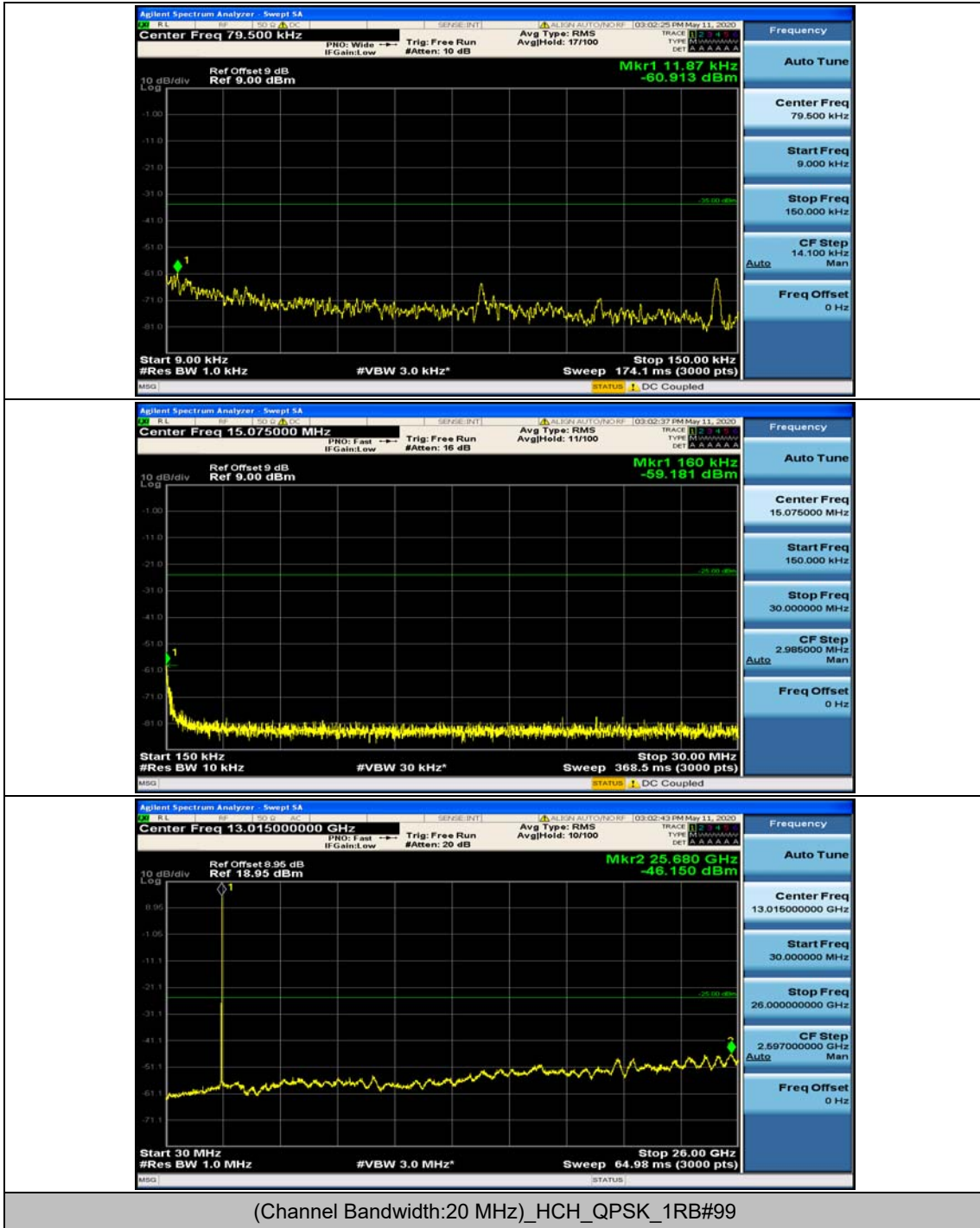


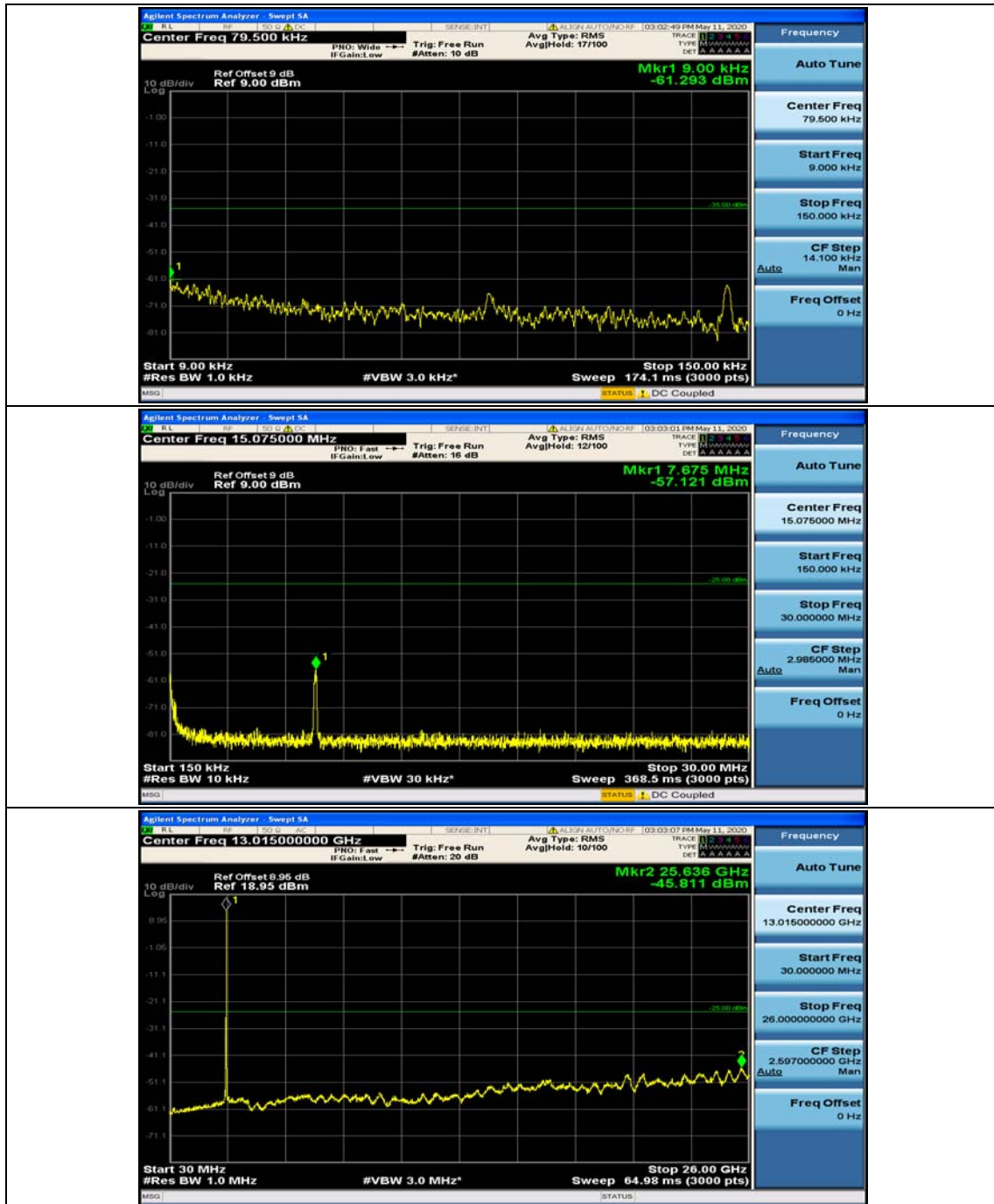


(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#0



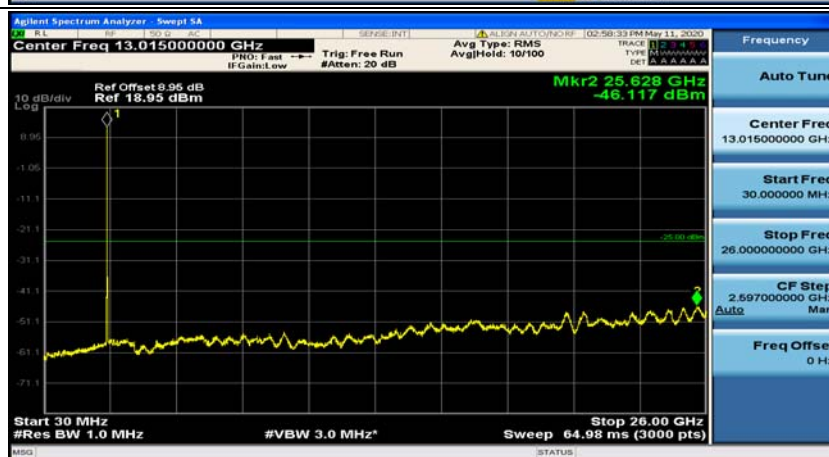
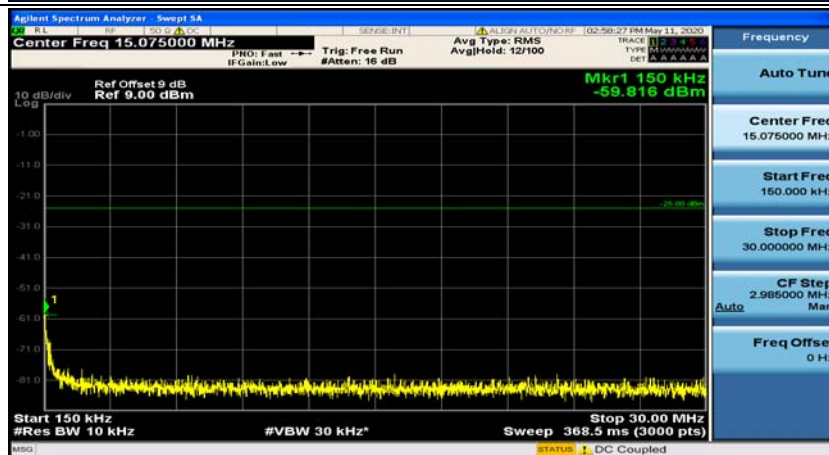
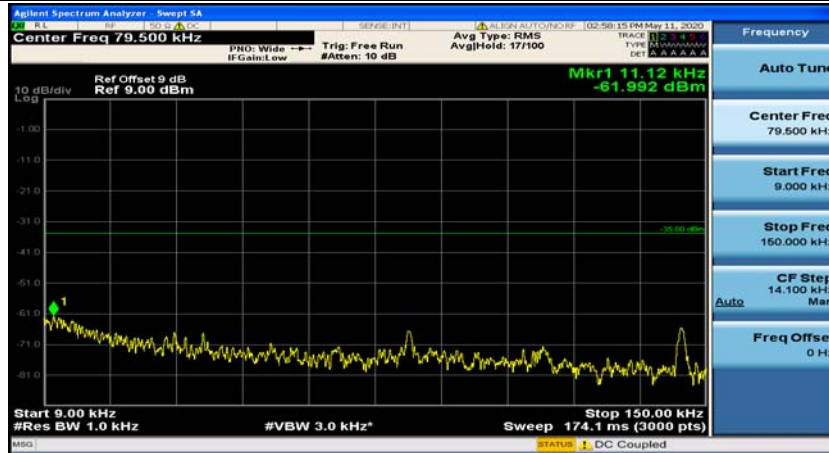
(Channel Bandwidth:20 MHz)_HCH_QPSK_1RB#49



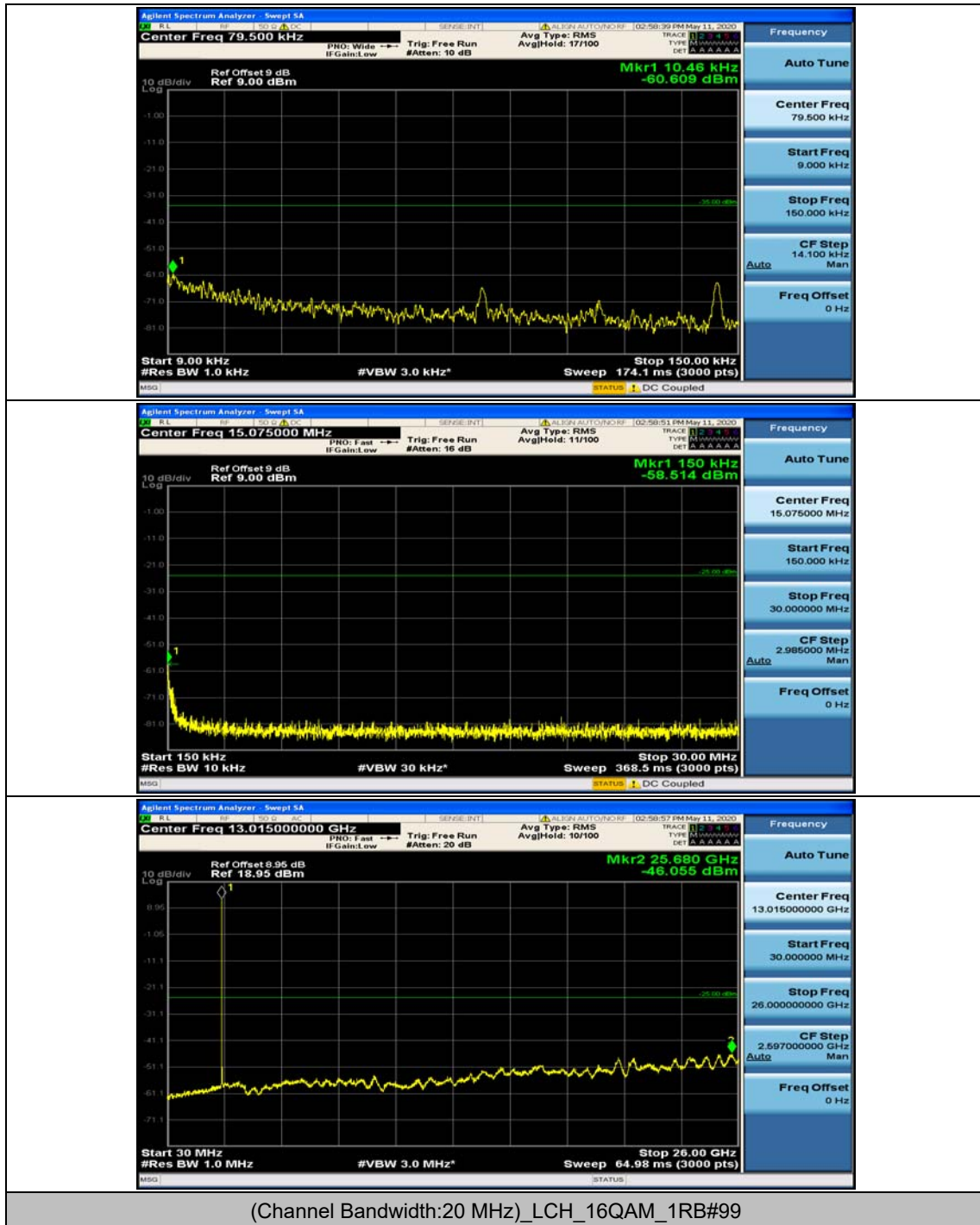


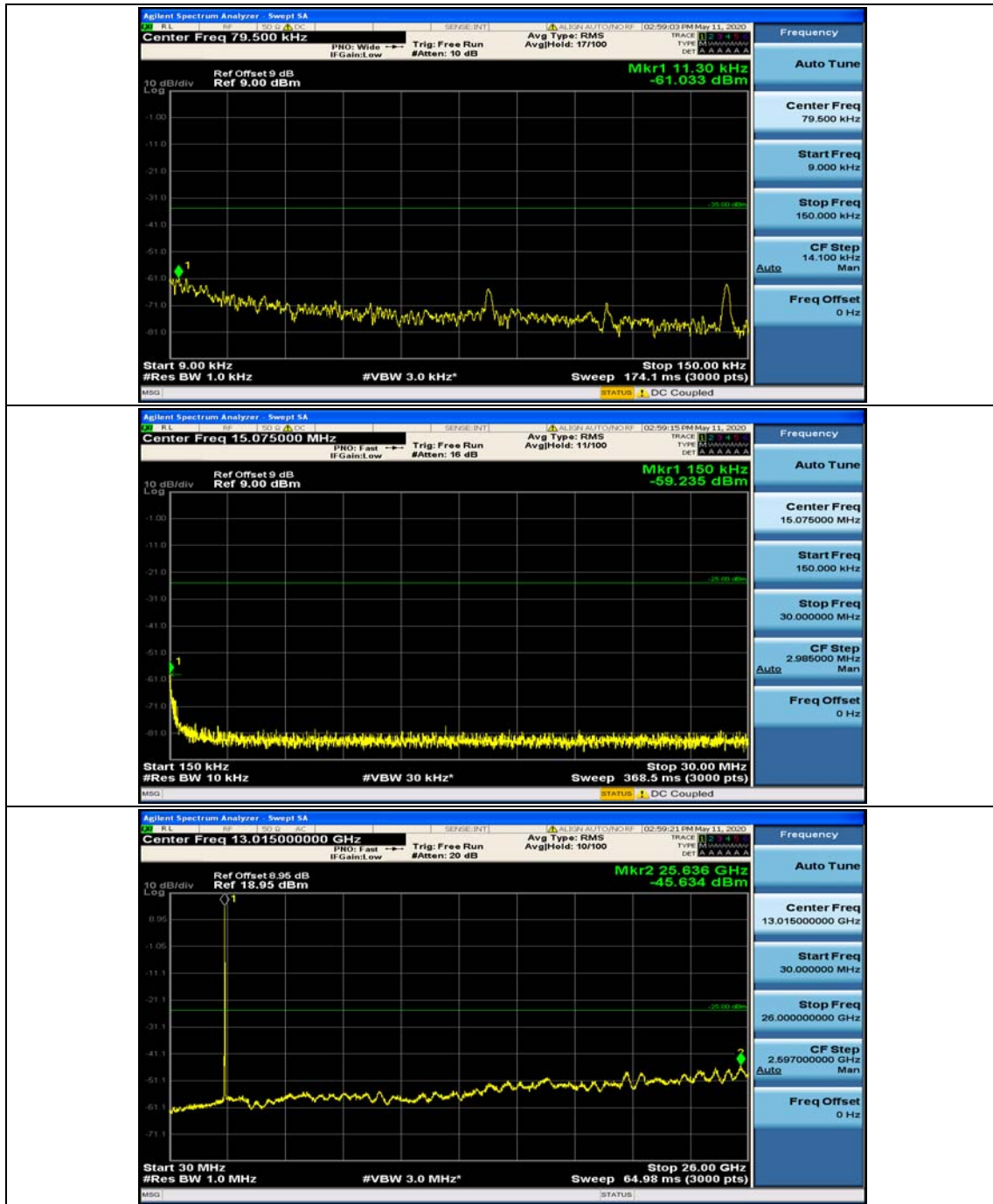


(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#0



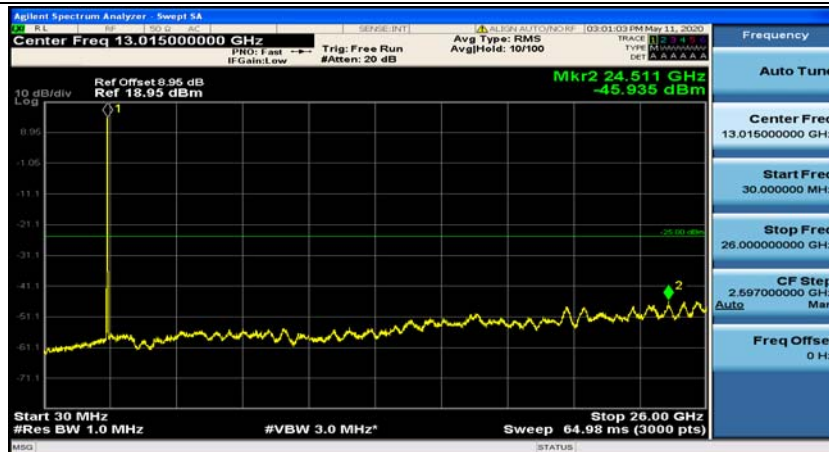
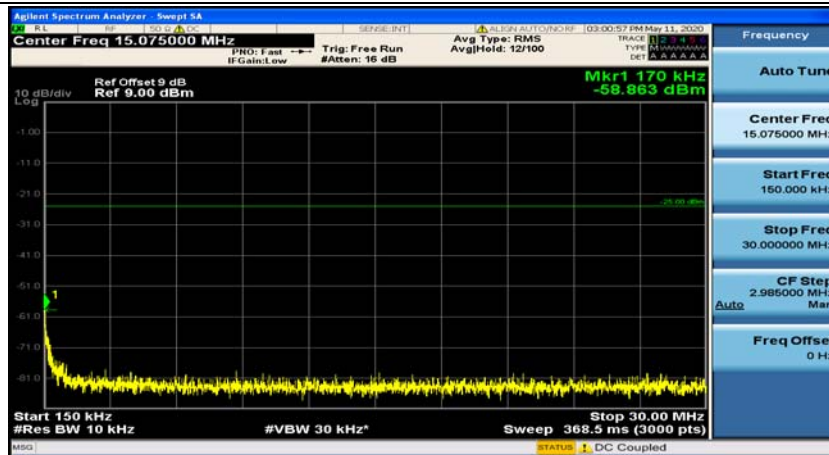
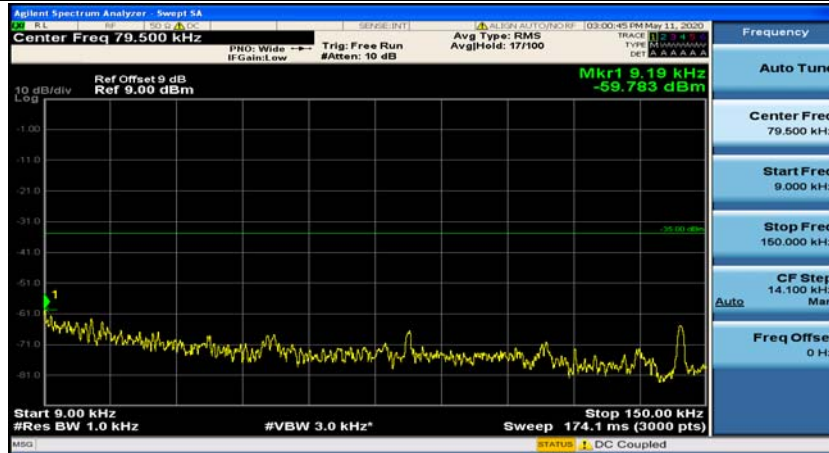
(Channel Bandwidth:20 MHz)_LCH_16QAM_1RB#49



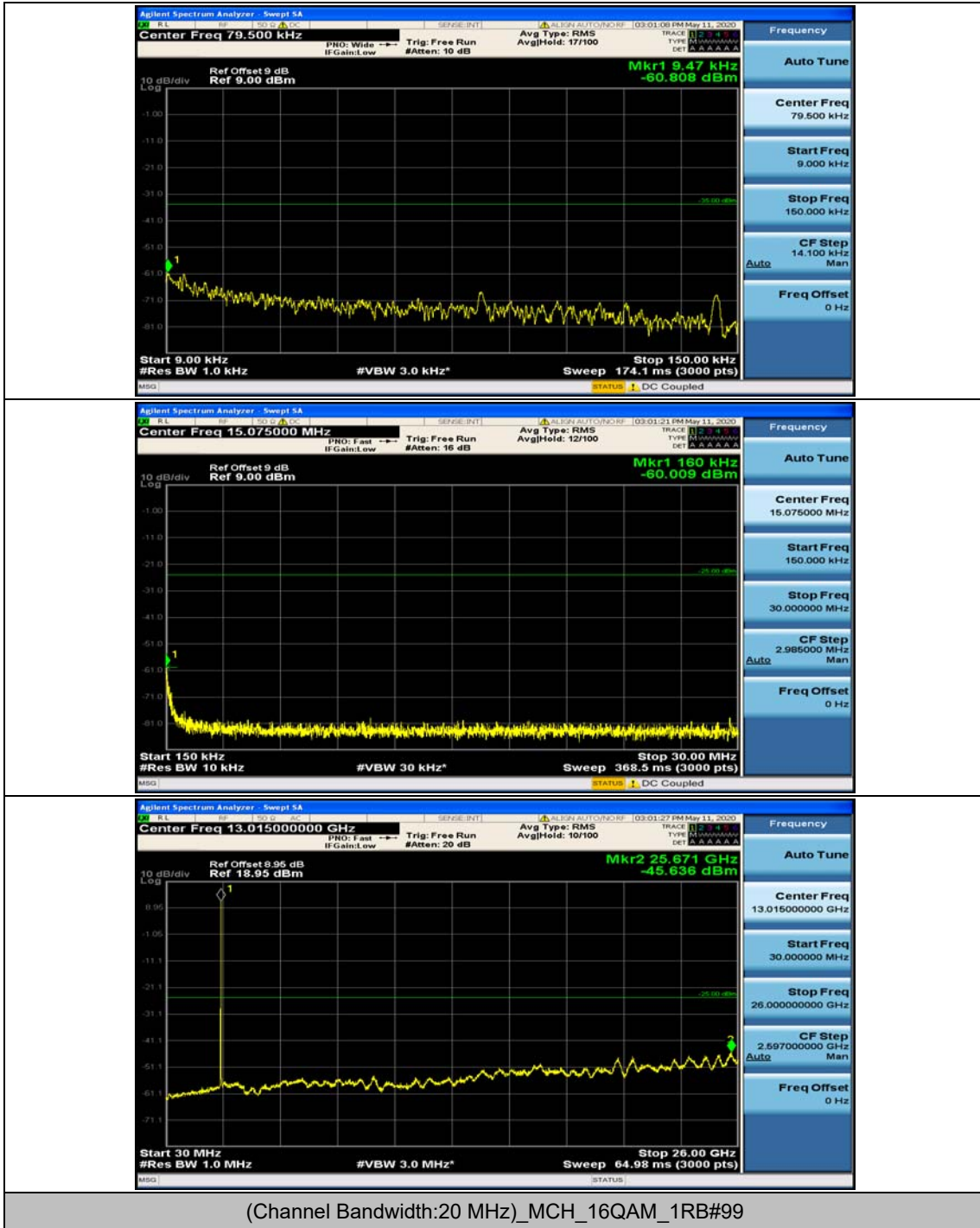


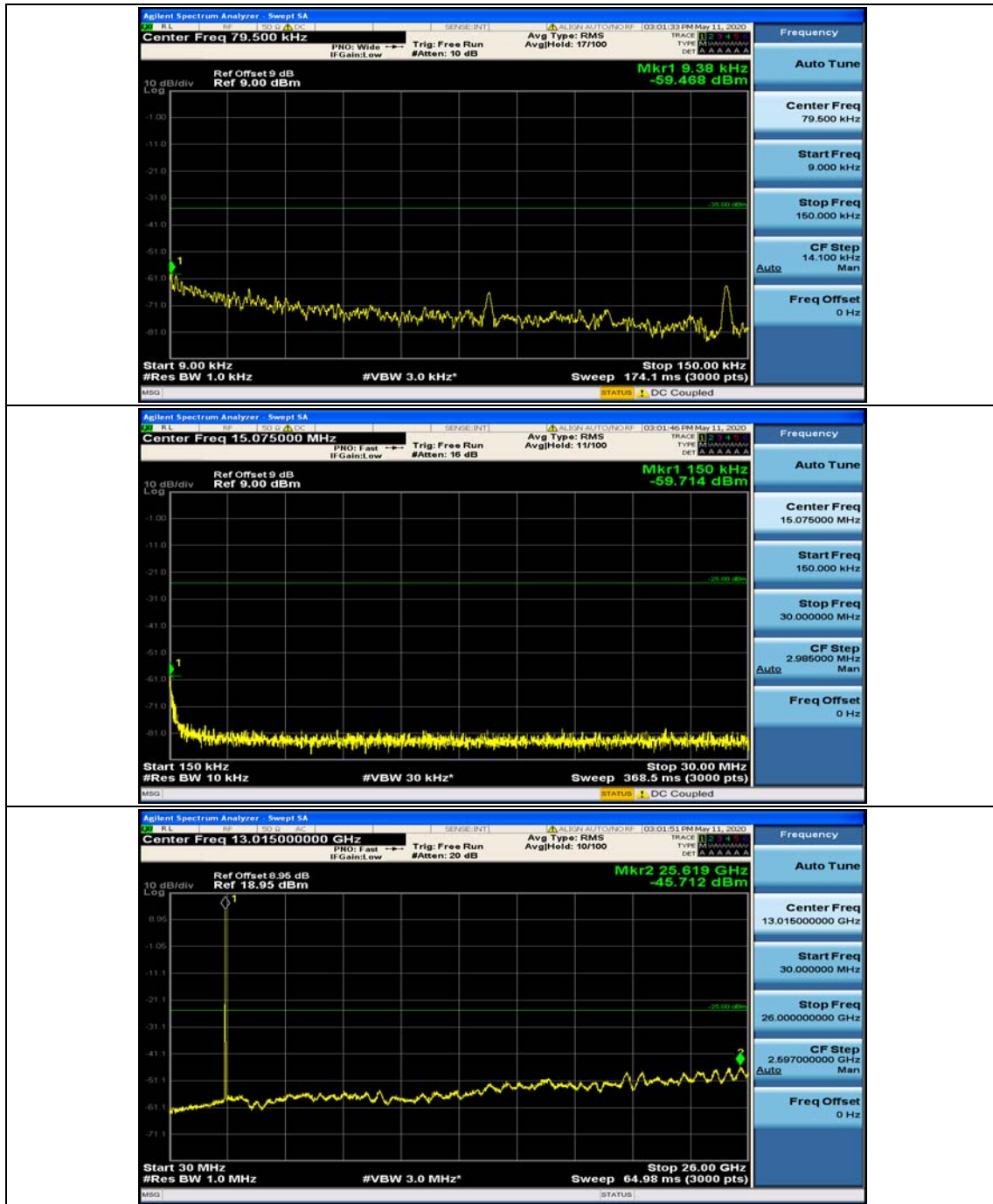


(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#0



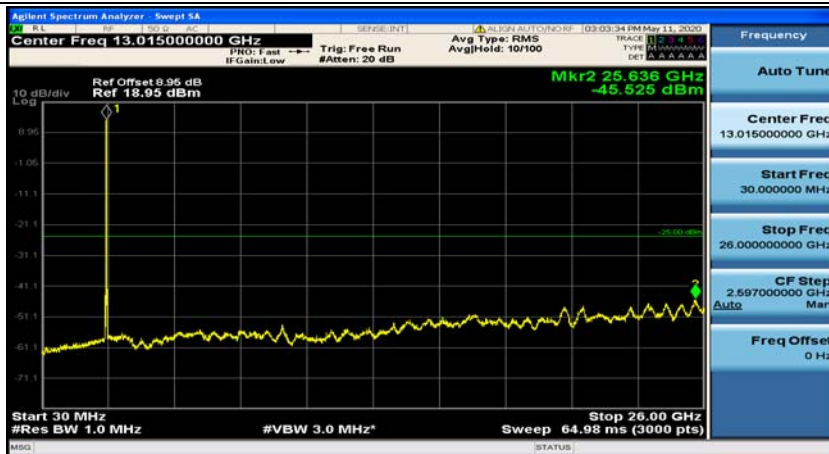
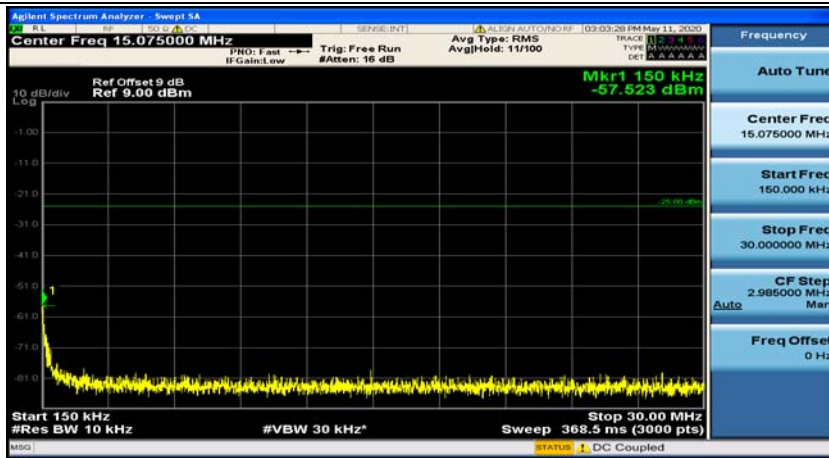
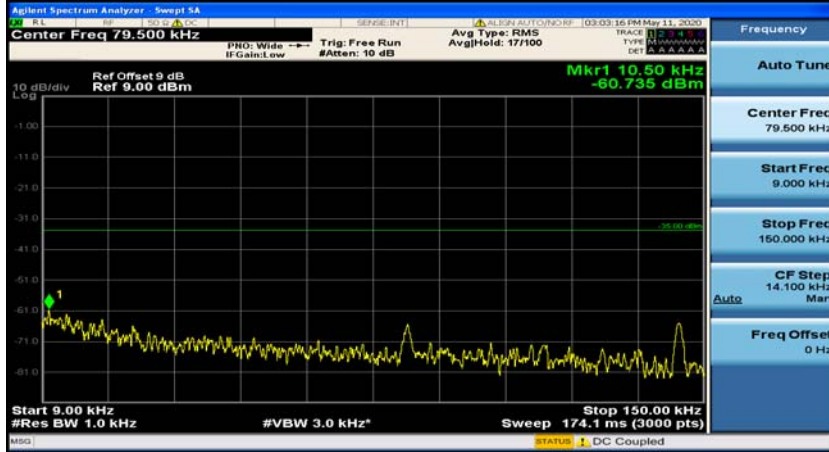
(Channel Bandwidth:20 MHz)_MCH_16QAM_1RB#49



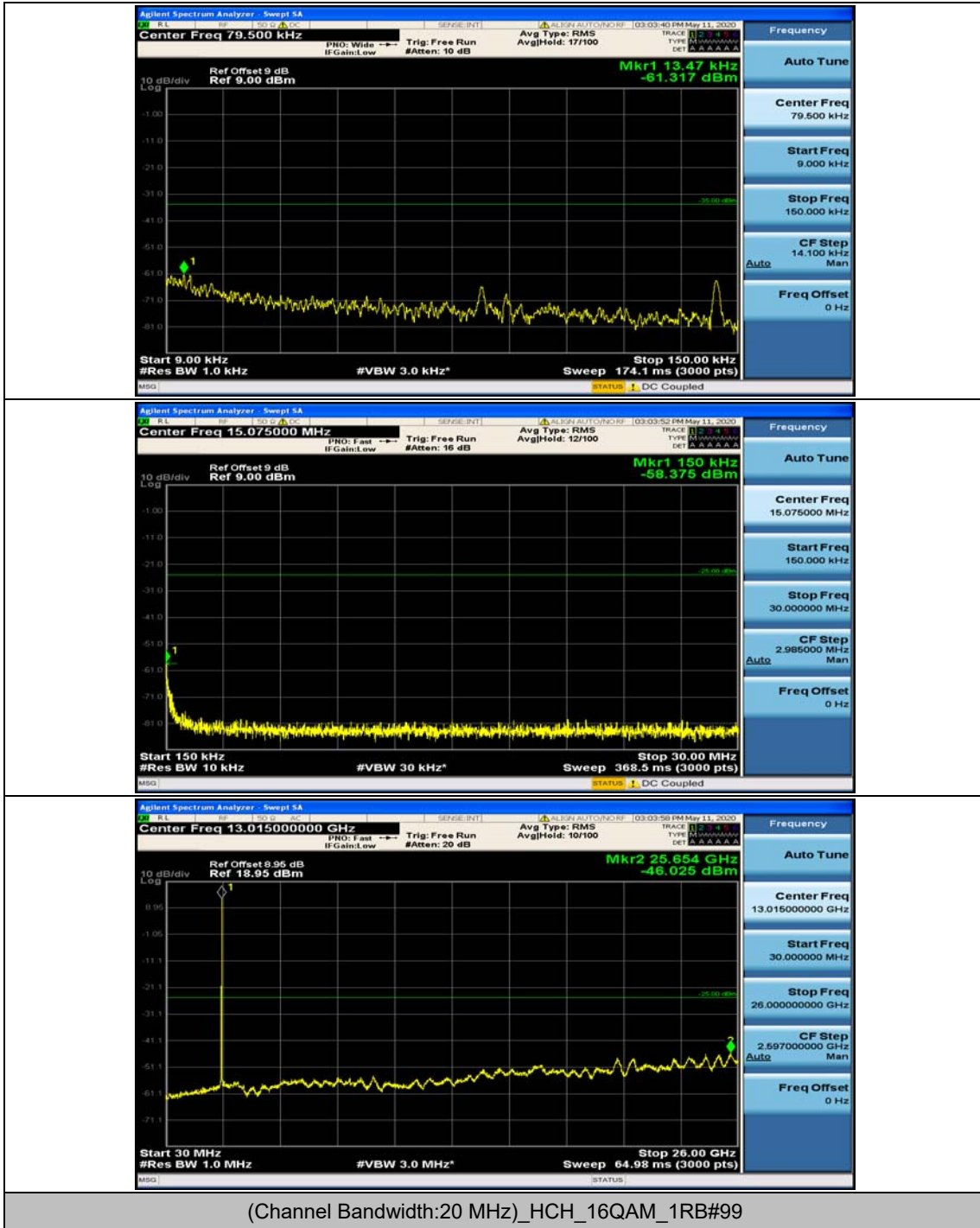


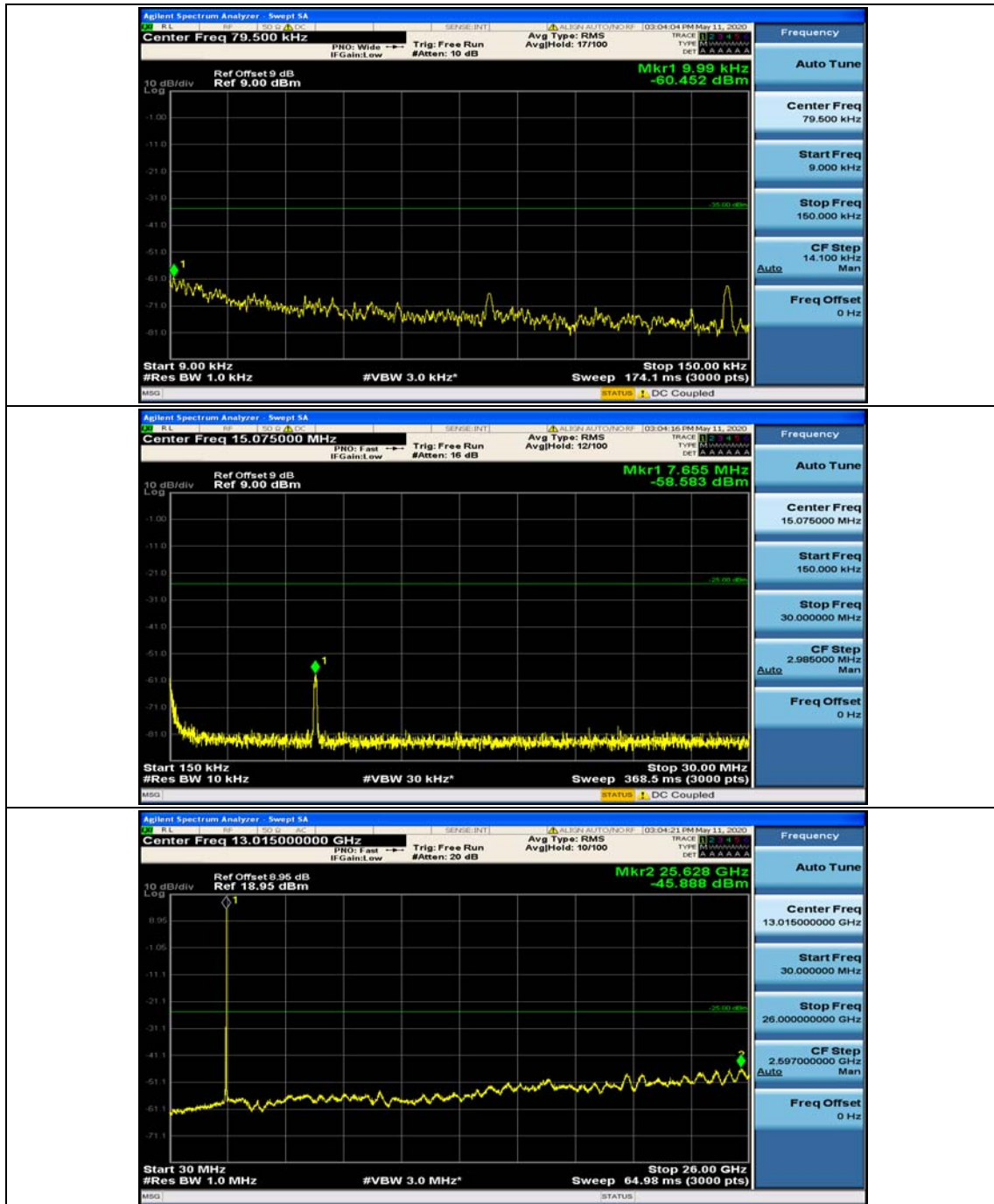


(Channel Bandwidth:20 MHz)_HCH_16QAM_1RB#0



(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	4.82	0.001926	± 2.5	PASS
		VN	TN	3	0.001199	± 2.5	PASS
		VH	TN	0.26	0.000104	± 2.5	PASS
	MCH	VL	TN	4.99	0.001968	± 2.5	PASS
		VN	TN	3.73	0.001471	± 2.5	PASS
		VH	TN	-1.04	-0.000410	± 2.5	PASS
	HCH	VL	TN	2.7	0.001052	± 2.5	PASS
		VN	TN	3.77	0.001468	± 2.5	PASS
		VH	TN	3.43	0.001336	± 2.5	PASS
16QAM	LCH	VL	TN	4.72	0.001886	± 2.5	PASS
		VN	TN	-1.23	-0.000492	± 2.5	PASS
		VH	TN	-1.73	-0.000691	± 2.5	PASS
	MCH	VL	TN	1.17	0.000462	± 2.5	PASS
		VN	TN	3.24	0.001278	± 2.5	PASS
		VH	TN	-1.25	-0.000493	± 2.5	PASS
	HCH	VL	TN	1.86	0.000724	± 2.5	PASS
		VN	TN	3.96	0.001542	± 2.5	PASS
		VH	TN	3.06	0.001192	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.56	-0.000623	± 2.5	PASS
		VN	-20	0.08	0.000032	± 2.5	PASS
		VN	-10	4.69	0.001874	± 2.5	PASS
		VN	0	2.3	0.000919	± 2.5	PASS
		VN	10	-0.86	-0.000344	± 2.5	PASS
		VN	20	0.28	0.000112	± 2.5	PASS
		VN	30	3.97	0.001586	± 2.5	PASS
		VN	40	1.5	0.000599	± 2.5	PASS
		VN	50	-0.66	-0.000264	± 2.5	PASS
	MCH	VN	-30	3.51	0.001385	± 2.5	PASS



	VN	-20	3.77	0.001487	± 2.5	PASS	
		-10	2.57	0.001014	± 2.5	PASS	
		0	-1.58	-0.000623	± 2.5	PASS	
		10	2.72	0.001073	± 2.5	PASS	
		20	3.48	0.001373	± 2.5	PASS	
		30	3.02	0.001191	± 2.5	PASS	
		40	-1.2	-0.000473	± 2.5	PASS	
		50	0.4	0.000158	± 2.5	PASS	
	HCH	VN	-30	1.49	0.000580	± 2.5	PASS
		VN	-20	-1.09	-0.000425	± 2.5	PASS
		VN	-10	0.11	0.000043	± 2.5	PASS
		VN	0	-0.48	-0.000187	± 2.5	PASS
		VN	10	3.79	0.001476	± 2.5	PASS
		VN	20	3.19	0.001242	± 2.5	PASS
		VN	30	1.44	0.000561	± 2.5	PASS
		VN	40	3	0.001168	± 2.5	PASS
		VN	50	-1.12	-0.000436	± 2.5	PASS
		16QAM	LCH	VN	-30	4.18	0.001670
VN	-20			4.28	0.001710	± 2.5	PASS
VN	-10			1.89	0.000755	± 2.5	PASS
VN	0			-1.81	-0.000723	± 2.5	PASS
VN	10			0.51	0.000204	± 2.5	PASS
VN	20			-1.74	-0.000695	± 2.5	PASS
VN	30			3.32	0.001327	± 2.5	PASS
VN	40			4.18	0.001670	± 2.5	PASS
VN	50			1.03	0.000412	± 2.5	PASS
MCH	VN		-30	-1.71	-0.000675	± 2.5	PASS
	VN		-20	1.22	0.000481	± 2.5	PASS
	VN		-10	3.38	0.001333	± 2.5	PASS
	VN		0	2.88	0.001136	± 2.5	PASS
	VN		10	1.84	0.000726	± 2.5	PASS
	VN		20	2.05	0.000809	± 2.5	PASS
	VN		30	-1.27	-0.000501	± 2.5	PASS
	VN		40	3.04	0.001199	± 2.5	PASS
	VN		50	4.64	0.001830	± 2.5	PASS
HCH	VN		-30	-1.18	-0.000460	± 2.5	PASS
	VN		-20	2.47	0.000962	± 2.5	PASS
	VN		-10	0.55	0.000214	± 2.5	PASS
	VN		0	-0.79	-0.000308	± 2.5	PASS
	VN		10	1.45	0.000565	± 2.5	PASS
	VN		20	3.47	0.001352	± 2.5	PASS



		VN	30	-1.37	-0.000534	± 2.5	PASS
		VN	40	2.1	0.000818	± 2.5	PASS
		VN	50	2.48	0.000966	± 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	3.69	0.001473	± 2.5	PASS
		VN	TN	3.63	0.001449	± 2.5	PASS
		VH	TN	1.5	0.000599	± 2.5	PASS
	MCH	VL	TN	0.97	0.000383	± 2.5	PASS
		VN	TN	4.27	0.001684	± 2.5	PASS
		VH	TN	-1.56	-0.000615	± 2.5	PASS
	HCH	VL	TN	2.27	0.000885	± 2.5	PASS
		VN	TN	4.44	0.001731	± 2.5	PASS
		VH	TN	-1.21	-0.000472	± 2.5	PASS
16QAM	LCH	VL	TN	4.74	0.001892	± 2.5	PASS
		VN	TN	3.93	0.001569	± 2.5	PASS
		VH	TN	-1.33	-0.000531	± 2.5	PASS
	MCH	VL	TN	0.47	0.000185	± 2.5	PASS
		VN	TN	-0.48	-0.000189	± 2.5	PASS
		VH	TN	-1.58	-0.000623	± 2.5	PASS
	HCH	VL	TN	4.42	0.001723	± 2.5	PASS
		VN	TN	-1.67	-0.000651	± 2.5	PASS
		VH	TN	2.83	0.001103	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.94	0.000375	± 2.5	PASS
		VN	-20	-0.97	-0.000387	± 2.5	PASS
		VN	-10	0.51	0.000204	± 2.5	PASS
		VN	0	1.45	0.000579	± 2.5	PASS
		VN	10	0.29	0.000116	± 2.5	PASS
		VN	20	-0.5	-0.000200	± 2.5	PASS
		VN	30	-0.05	-0.000020	± 2.5	PASS
		VN	40	4.43	0.001768	± 2.5	PASS
		VN	50	-1	-0.000399	± 2.5	PASS
	MCH	VN	-30	2.41	0.000951	± 2.5	PASS
		VN	-20	0.92	0.000363	± 2.5	PASS



		VN	-10	3.14	0.001239	± 2.5	PASS		
		VN	0	0.27	0.000107	± 2.5	PASS		
		VN	10	0.19	0.000075	± 2.5	PASS		
		VN	20	1.22	0.000481	± 2.5	PASS		
		VN	30	1.98	0.000781	± 2.5	PASS		
		VN	40	0.64	0.000252	± 2.5	PASS		
		VN	50	4.39	0.001732	± 2.5	PASS		
	HCH	VN	-30	3.89	0.001517	± 2.5	PASS		
		VN	-20	-0.73	-0.000285	± 2.5	PASS		
		VN	-10	2.06	0.000803	± 2.5	PASS		
		VN	0	1.13	0.000441	± 2.5	PASS		
		VN	10	4.09	0.001595	± 2.5	PASS		
		VN	20	1.65	0.000643	± 2.5	PASS		
		VN	30	-1.15	-0.000448	± 2.5	PASS		
		VN	40	-0.06	-0.000023	± 2.5	PASS		
		VN	50	-1.02	-0.000398	± 2.5	PASS		
		16QAM	LCH	VN	-30	2.91	0.001162	± 2.5	PASS
				VN	-20	-0.33	-0.000132	± 2.5	PASS
VN	-10			4.57	0.001824	± 2.5	PASS		
VN	0			-1.5	-0.000599	± 2.5	PASS		
VN	10			4.2	0.001677	± 2.5	PASS		
VN	20			0.63	0.000251	± 2.5	PASS		
VN	30			3.12	0.001246	± 2.5	PASS		
VN	40			-1.27	-0.000507	± 2.5	PASS		
VN	50			0.07	0.000028	± 2.5	PASS		
MCH	VN		-30	-0.62	-0.000245	± 2.5	PASS		
	VN		-20	0.41	0.000162	± 2.5	PASS		
	VN		-10	3.07	0.001211	± 2.5	PASS		
	VN		0	-1.99	-0.000785	± 2.5	PASS		
	VN		10	4.84	0.001909	± 2.5	PASS		
	VN		20	2.04	0.000805	± 2.5	PASS		
	VN		30	0.65	0.000256	± 2.5	PASS		
	VN		40	-1.7	-0.000671	± 2.5	PASS		
	VN		50	4.67	0.001842	± 2.5	PASS		
HCH	VN		-30	0.56	0.000218	± 2.5	PASS		
	VN		-20	3.7	0.001442	± 2.5	PASS		
	VN		-10	1.42	0.000554	± 2.5	PASS		
	VN		0	-1.07	-0.000417	± 2.5	PASS		
	VN		10	-1.72	-0.000671	± 2.5	PASS		
	VN		20	-0.69	-0.000269	± 2.5	PASS		
	VN		30	1.12	0.000437	± 2.5	PASS		



		VN	40	4.81	0.001875	± 2.5	PASS
		VN	50	3.48	0.001357	± 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	3.86	0.001539	± 2.5	PASS
		VN	TN	-0.2	-0.000080	± 2.5	PASS
		VH	TN	0.33	0.000132	± 2.5	PASS
	MCH	VL	TN	-0.22	-0.000087	± 2.5	PASS
		VN	TN	0.66	0.000260	± 2.5	PASS
		VH	TN	-1.49	-0.000588	± 2.5	PASS
	HCH	VL	TN	1.16	0.000453	± 2.5	PASS
		VN	TN	4.5	0.001756	± 2.5	PASS
		VH	TN	-1.2	-0.000468	± 2.5	PASS
16QAM	LCH	VL	TN	-1.27	-0.000506	± 2.5	PASS
		VN	TN	-1.37	-0.000546	± 2.5	PASS
		VH	TN	2.52	0.001005	± 2.5	PASS
	MCH	VL	TN	0.52	0.000205	± 2.5	PASS
		VN	TN	4.34	0.001712	± 2.5	PASS
		VH	TN	4.73	0.001866	± 2.5	PASS
	HCH	VL	TN	0.92	0.000359	± 2.5	PASS
		VN	TN	3.88	0.001514	± 2.5	PASS
		VH	TN	3.95	0.001541	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.96	0.000383	± 2.5	PASS
		VN	-20	3.94	0.001571	± 2.5	PASS
		VN	-10	-0.64	-0.000255	± 2.5	PASS
		VN	0	-1.99	-0.000794	± 2.5	PASS
		VN	10	3.99	0.001591	± 2.5	PASS
		VN	20	-1.37	-0.000546	± 2.5	PASS
		VN	30	0.86	0.000343	± 2.5	PASS
		VN	40	1.32	0.000526	± 2.5	PASS
		VN	50	-1.04	-0.000415	± 2.5	PASS
	MCH	VN	-30	4.26	0.001680	± 2.5	PASS
		VN	-20	4.04	0.001594	± 2.5	PASS
		VN	-10	1.77	0.000698	± 2.5	PASS



		VN	0	-1.42	-0.000560	± 2.5	PASS		
		VN	10	2.59	0.001022	± 2.5	PASS		
		VN	20	4.45	0.001755	± 2.5	PASS		
		VN	30	-0.98	-0.000387	± 2.5	PASS		
		VN	40	1.64	0.000647	± 2.5	PASS		
		VN	50	-0.01	-0.000004	± 2.5	PASS		
	HCH	VN	-30	0.78	0.000304	± 2.5	PASS		
		VN	-20	-1.46	-0.000570	± 2.5	PASS		
		VN	-10	0.49	0.000191	± 2.5	PASS		
		VN	0	1.17	0.000457	± 2.5	PASS		
		VN	10	2.14	0.000835	± 2.5	PASS		
		VN	20	-1.94	-0.000757	± 2.5	PASS		
		VN	30	0.89	0.000347	± 2.5	PASS		
		VN	40	2.21	0.000862	± 2.5	PASS		
		VN	50	-0.62	-0.000242	± 2.5	PASS		
		16QAM	LCH	VN	-30	0.61	0.000243	± 2.5	PASS
				VN	-20	1.98	0.000790	± 2.5	PASS
				VN	-10	-0.02	-0.000008	± 2.5	PASS
VN	0			2.76	0.001101	± 2.5	PASS		
VN	10			2.33	0.000929	± 2.5	PASS		
VN	20			1.78	0.000710	± 2.5	PASS		
VN	30			3	0.001196	± 2.5	PASS		
VN	40			3.57	0.001424	± 2.5	PASS		
VN	50			0.95	0.000379	± 2.5	PASS		
MCH	VN		-30	-1.28	-0.000505	± 2.5	PASS		
	VN		-20	-1.71	-0.000675	± 2.5	PASS		
	VN		-10	0.08	0.000032	± 2.5	PASS		
	VN		0	0.4	0.000158	± 2.5	PASS		
	VN		10	1.47	0.000580	± 2.5	PASS		
	VN		20	2.65	0.001045	± 2.5	PASS		
	VN		30	1.57	0.000619	± 2.5	PASS		
	VN		40	1.3	0.000513	± 2.5	PASS		
	VN		50	-1.48	-0.000584	± 2.5	PASS		
HCH	VN		-30	3.64	0.001420	± 2.5	PASS		
	VN		-20	0.6	0.000234	± 2.5	PASS		
	VN		-10	-0.9	-0.000351	± 2.5	PASS		
	VN		0	-0.67	-0.000261	± 2.5	PASS		
	VN		10	3.27	0.001276	± 2.5	PASS		
	VN		20	0.93	0.000363	± 2.5	PASS		
	VN		30	0.04	0.000016	± 2.5	PASS		
	VN		40	-1.33	-0.000519	± 2.5	PASS		



		VN	50	1.73	0.000675	± 2.5	PASS
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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	0.65	0.000259	± 2.5	PASS
		VN	TN	-0.13	-0.000052	± 2.5	PASS
		VH	TN	4.65	0.001853	± 2.5	PASS
	MCH	VL	TN	3.49	0.001377	± 2.5	PASS
		VN	TN	-0.99	-0.000391	± 2.5	PASS
		VH	TN	3.88	0.001531	± 2.5	PASS
	HCH	VL	TN	-1.75	-0.000684	± 2.5	PASS
		VN	TN	2.33	0.000910	± 2.5	PASS
		VH	TN	1.93	0.000754	± 2.5	PASS
16QAM	LCH	VL	TN	-1.8	-0.000717	± 2.5	PASS
		VN	TN	1.32	0.000526	± 2.5	PASS
		VH	TN	4.57	0.001821	± 2.5	PASS
	MCH	VL	TN	3.47	0.001369	± 2.5	PASS
		VN	TN	1.86	0.000734	± 2.5	PASS
		VH	TN	1.4	0.000552	± 2.5	PASS
	HCH	VL	TN	4.05	0.001582	± 2.5	PASS
		VN	TN	1.44	0.000563	± 2.5	PASS
		VH	TN	-0.17	-0.000066	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.94	-0.000375	± 2.5	PASS
		VN	-20	2.38	0.000948	± 2.5	PASS
		VN	-10	-0.02	-0.000008	± 2.5	PASS
		VN	0	4.69	0.001869	± 2.5	PASS
		VN	10	4.98	0.001984	± 2.5	PASS
		VN	20	3.53	0.001406	± 2.5	PASS
		VN	30	-0.35	-0.000139	± 2.5	PASS
		VN	40	-1.53	-0.000610	± 2.5	PASS
		VN	50	2.36	0.000940	± 2.5	PASS
	MCH	VN	-30	-0.24	-0.000095	± 2.5	PASS
		VN	-20	4.92	0.001941	± 2.5	PASS
		VN	-10	2.66	0.001049	± 2.5	PASS
		VN	0	-0.18	-0.000071	± 2.5	PASS



		VN	10	1.49	0.000588	± 2.5	PASS
		VN	20	-0.26	-0.000103	± 2.5	PASS
		VN	30	3.96	0.001562	± 2.5	PASS
		VN	40	1.46	0.000576	± 2.5	PASS
		VN	50	-0.09	-0.000036	± 2.5	PASS
	HCH	VN	-30	0.69	0.000270	± 2.5	PASS
		VN	-20	3.56	0.001391	± 2.5	PASS
		VN	-10	1.63	0.000637	± 2.5	PASS
		VN	0	0.09	0.000035	± 2.5	PASS
		VN	10	2.47	0.000965	± 2.5	PASS
		VN	20	4.59	0.001793	± 2.5	PASS
		VN	30	3.54	0.001383	± 2.5	PASS
		VN	40	1.9	0.000742	± 2.5	PASS
		VN	50	4.77	0.001863	± 2.5	PASS
		16QAM	LCH	VN	-30	4.94	0.001968
VN	-20			-1.11	-0.000442	± 2.5	PASS
VN	-10			1.79	0.000713	± 2.5	PASS
VN	0			0.14	0.000056	± 2.5	PASS
VN	10			-0.69	-0.000275	± 2.5	PASS
VN	20			-1.76	-0.000701	± 2.5	PASS
VN	30			-0.62	-0.000247	± 2.5	PASS
VN	40			1.18	0.000470	± 2.5	PASS
VN	50			-0.8	-0.000319	± 2.5	PASS
MCH	VN		-30	-0.01	-0.000004	± 2.5	PASS
	VN		-20	-1.87	-0.000738	± 2.5	PASS
	VN		-10	3	0.001183	± 2.5	PASS
	VN		0	0.97	0.000383	± 2.5	PASS
	VN		10	0.23	0.000091	± 2.5	PASS
	VN		20	4.92	0.001941	± 2.5	PASS
	VN		30	-0.85	-0.000335	± 2.5	PASS
	VN		40	-1.62	-0.000639	± 2.5	PASS
	VN		50	-1.06	-0.000418	± 2.5	PASS
HCH	VN		-30	4.12	0.001609	± 2.5	PASS
	VN		-20	1.2	0.000469	± 2.5	PASS
	VN		-10	-1.26	-0.000492	± 2.5	PASS
	VN		0	2.01	0.000785	± 2.5	PASS
	VN		10	-1.37	-0.000535	± 2.5	PASS
	VN		20	4.99	0.001949	± 2.5	PASS
	VN		30	4.4	0.001719	± 2.5	PASS
	VN		40	2.65	0.001035	± 2.5	PASS
	VN		50	-0.18	-0.000070	± 2.5	PASS