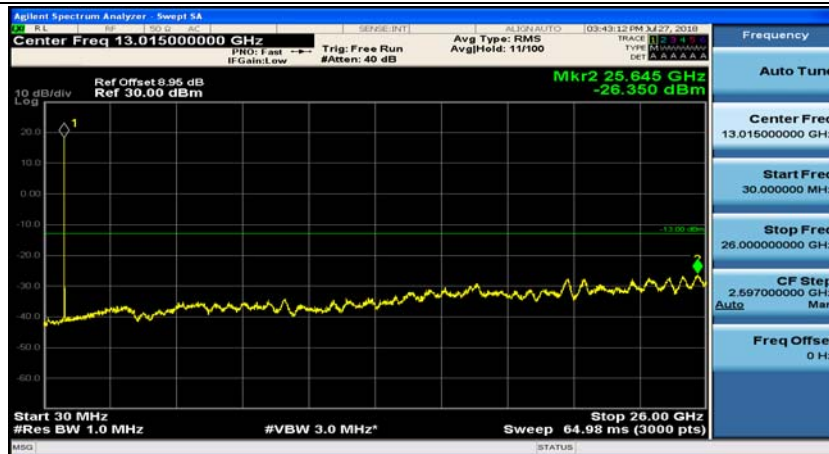
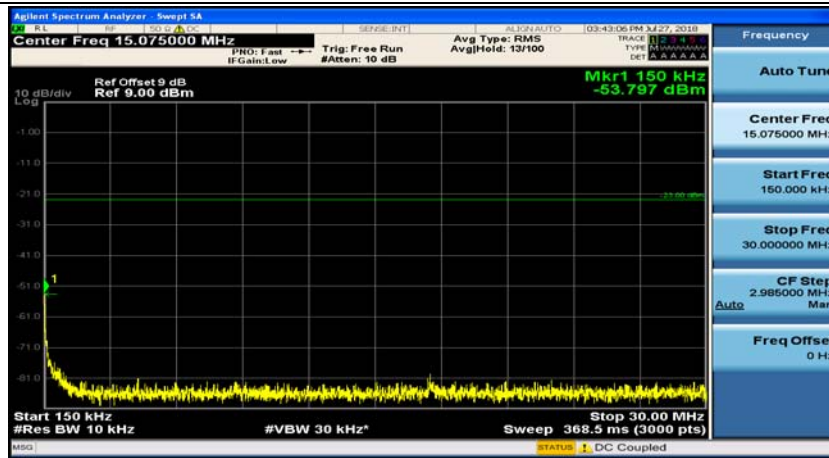
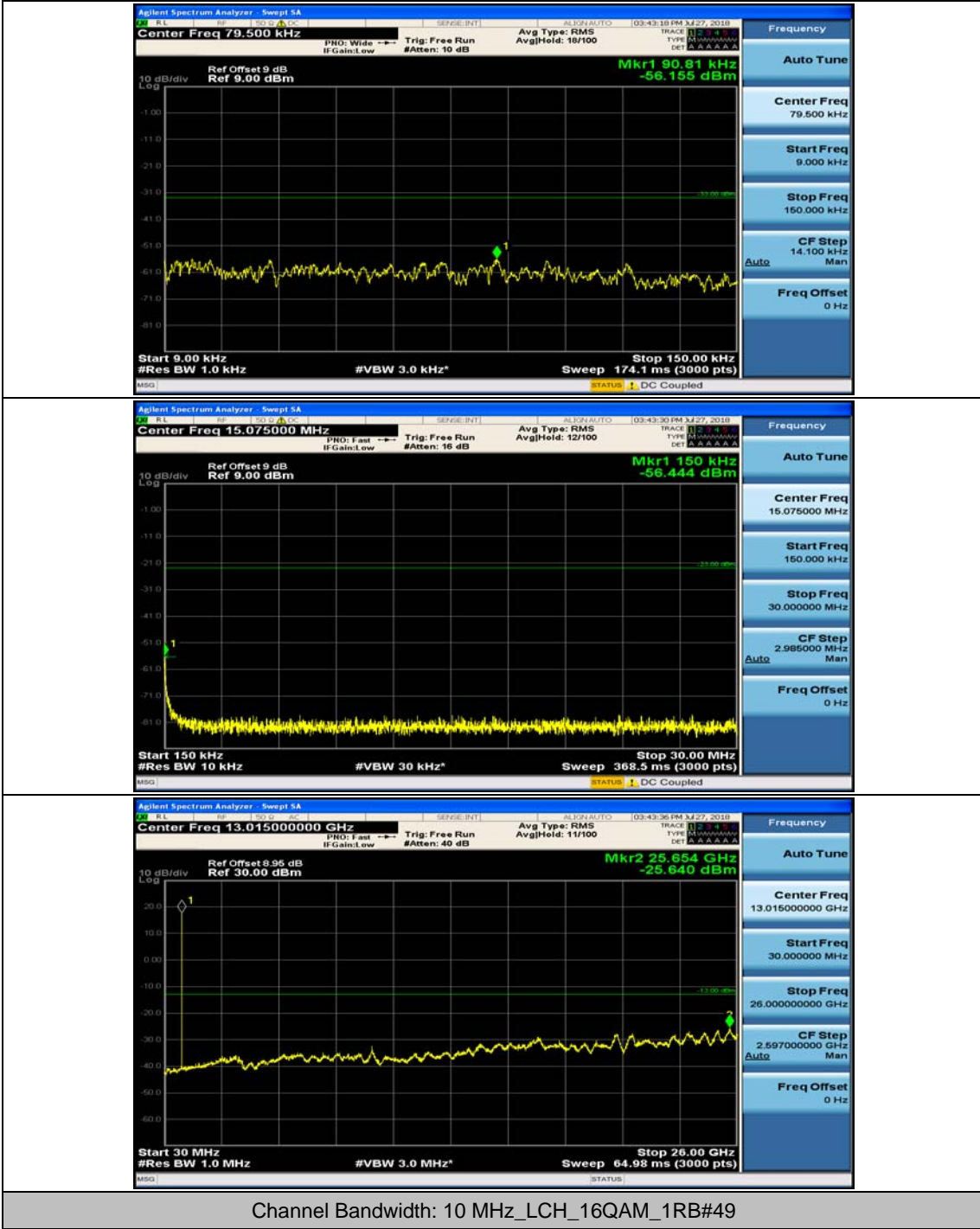
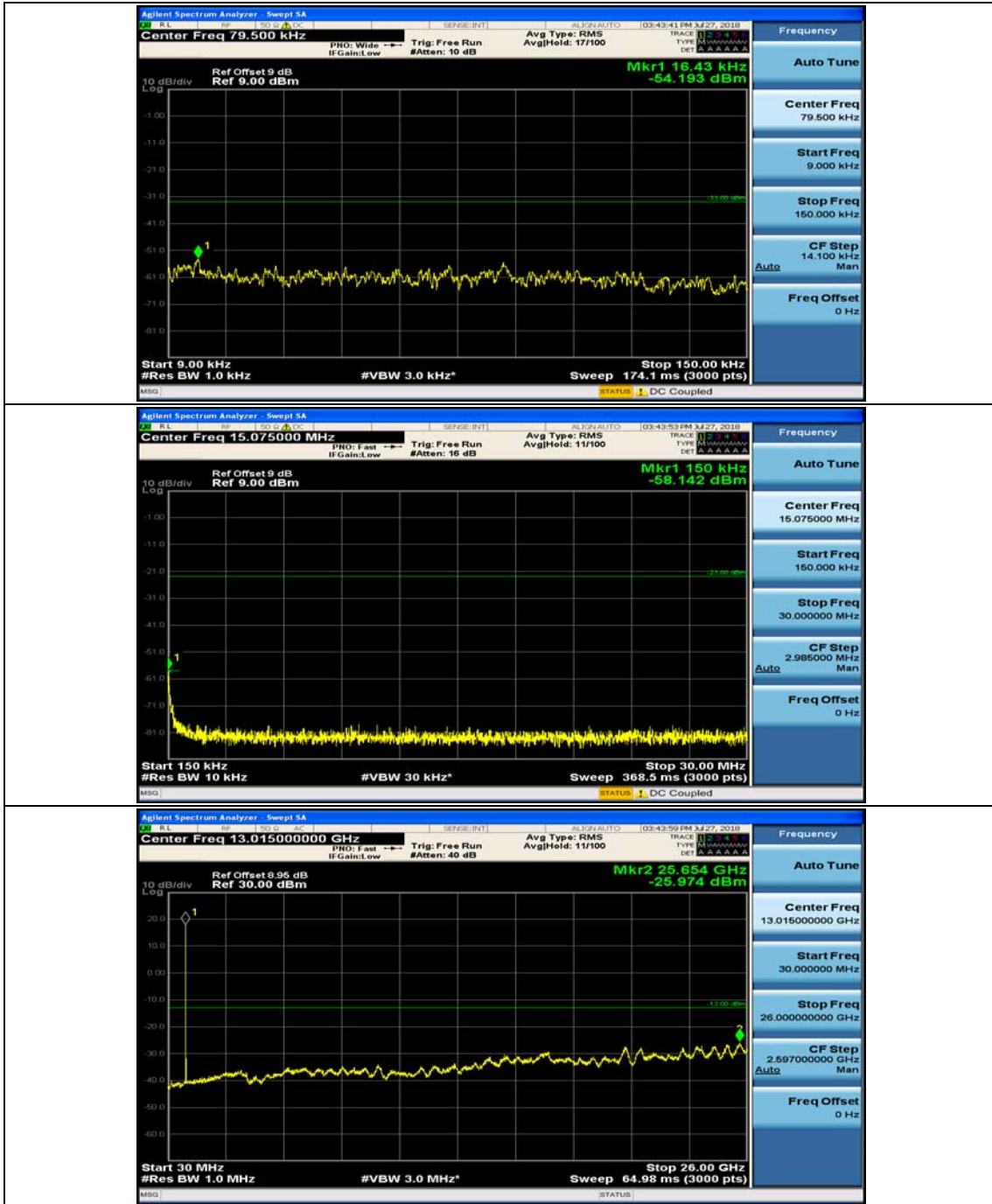


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

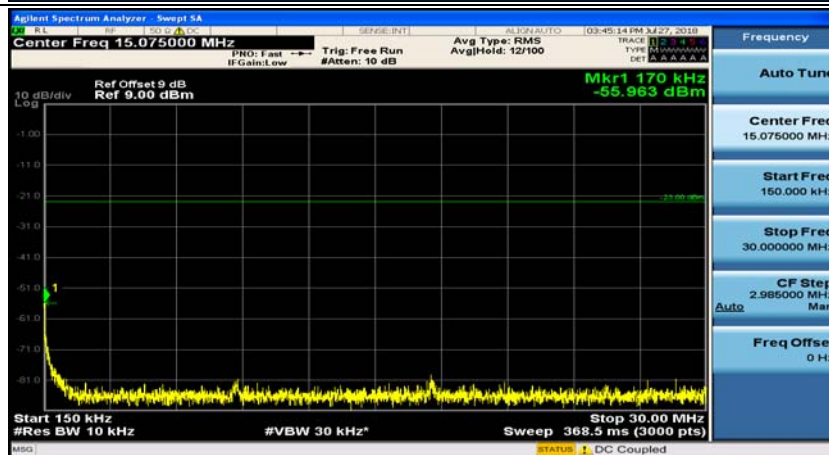
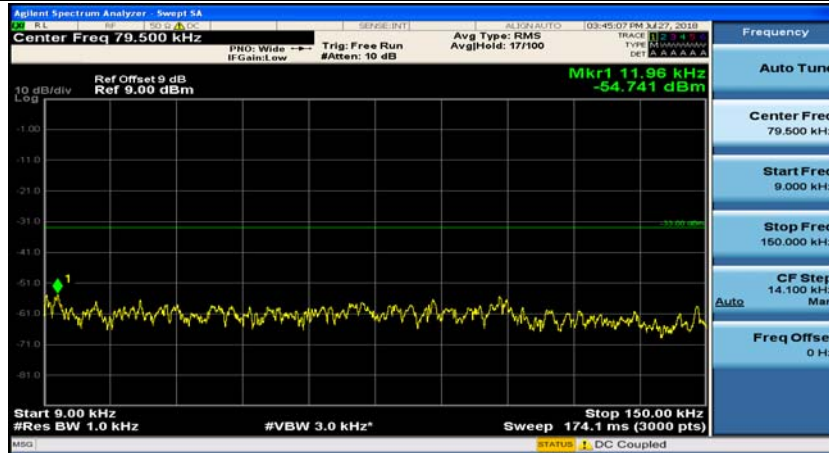


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

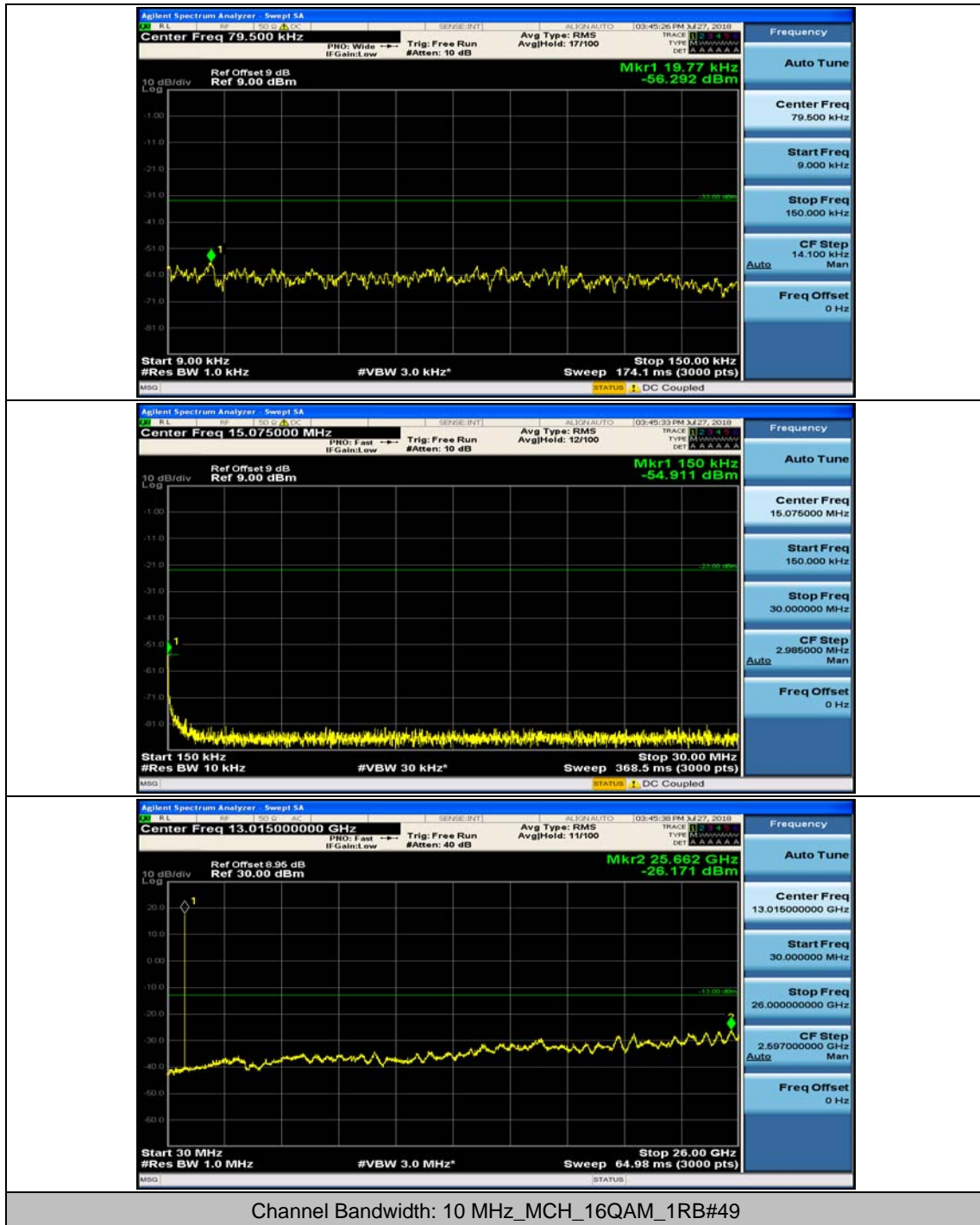


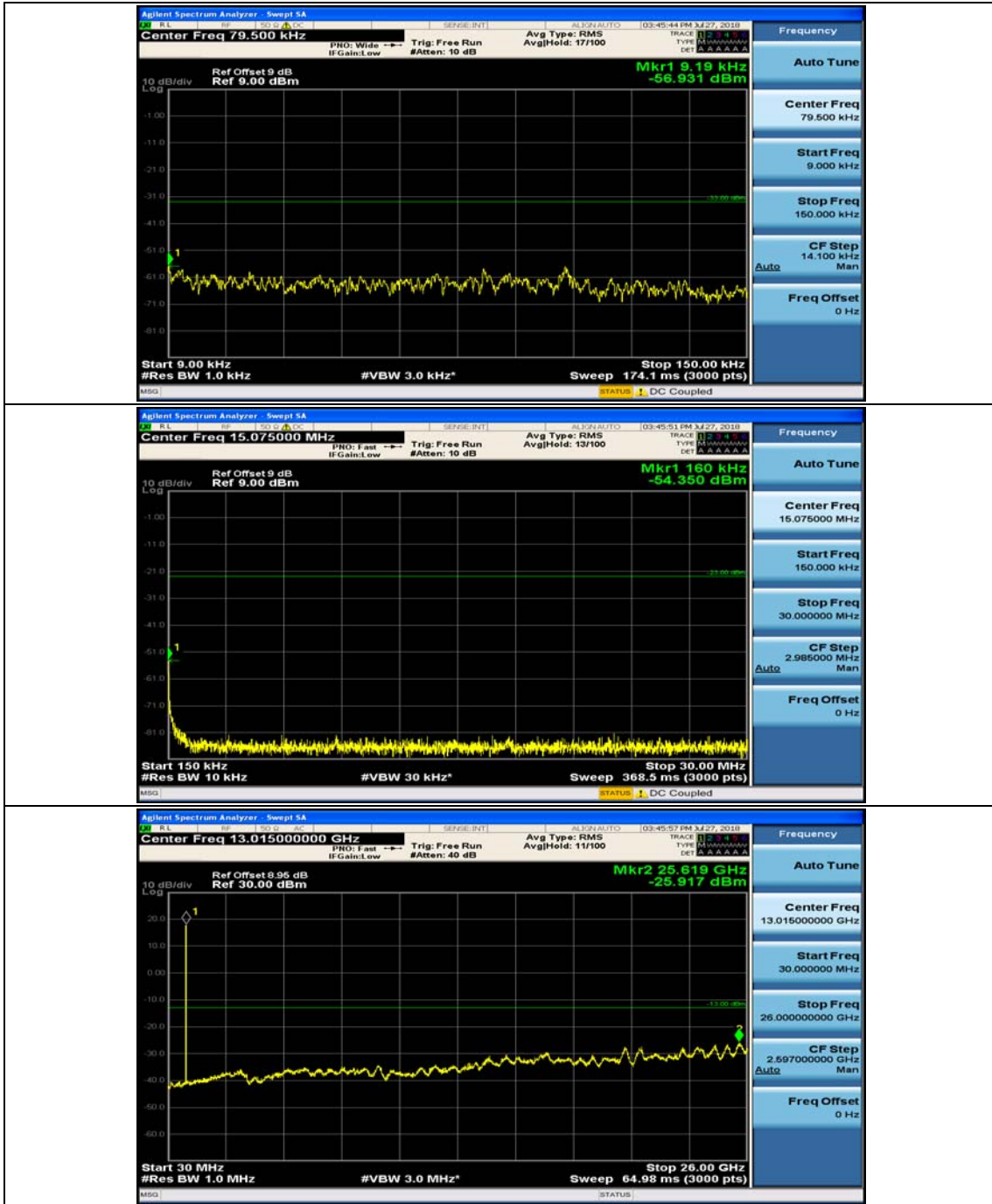


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

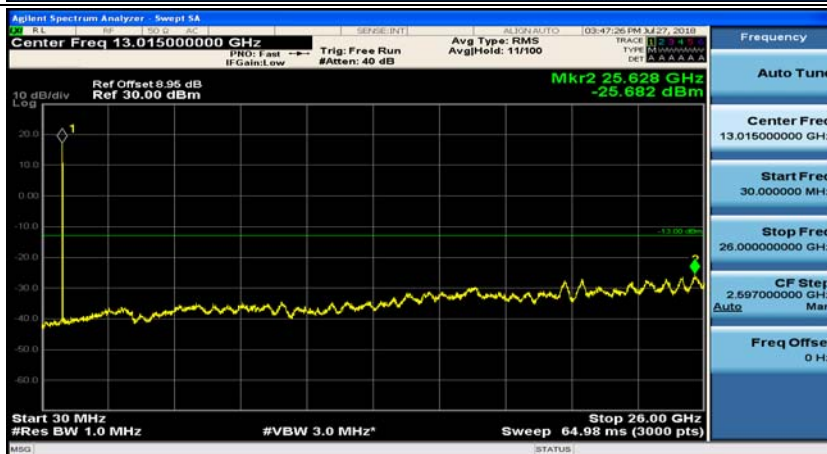
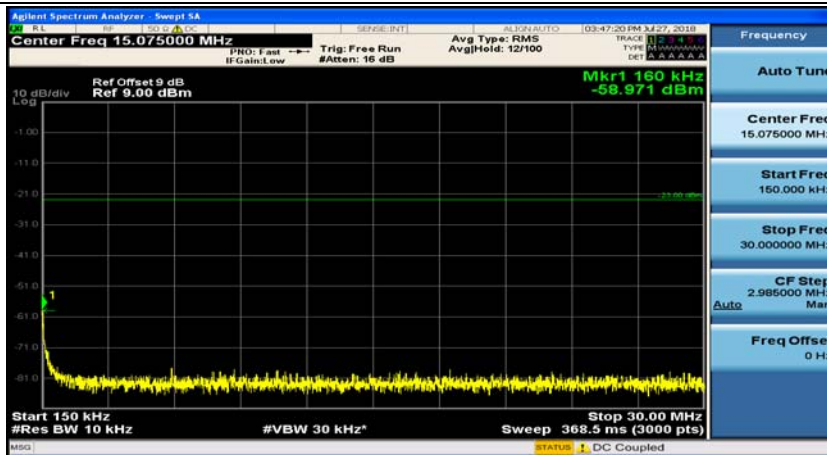
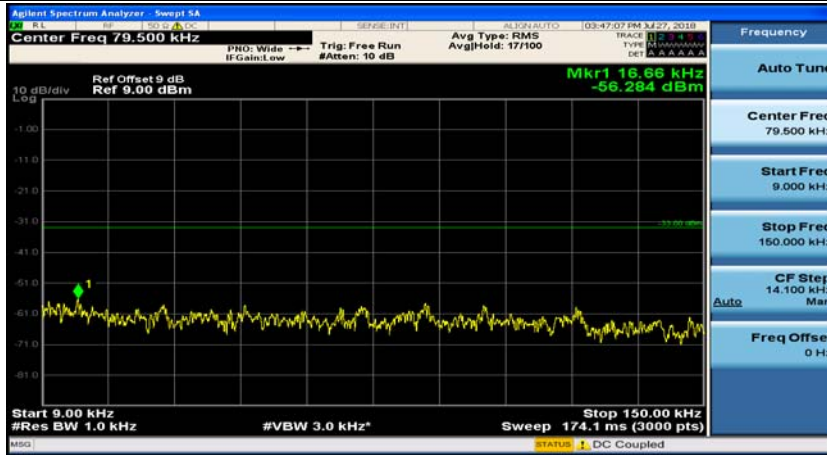


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

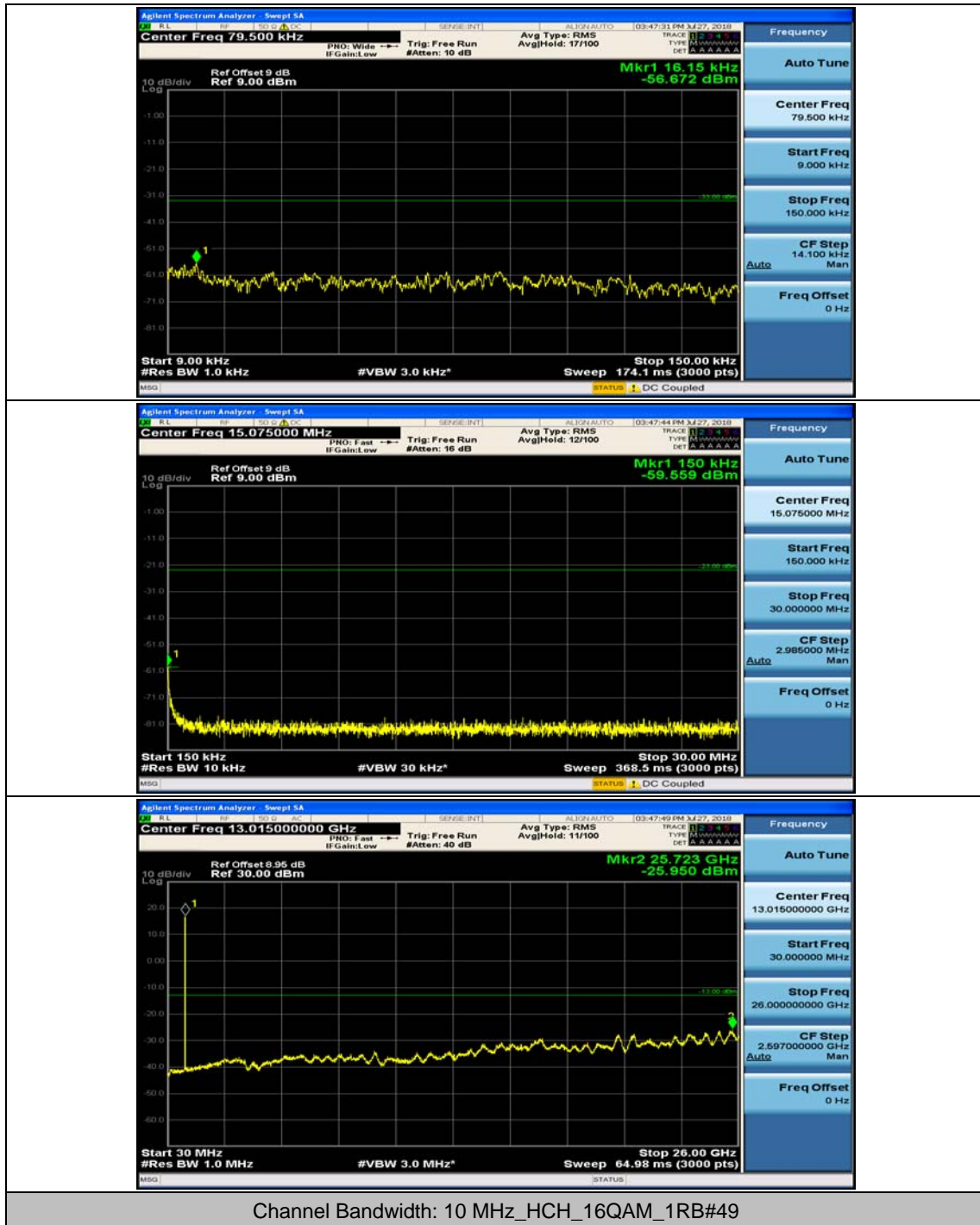


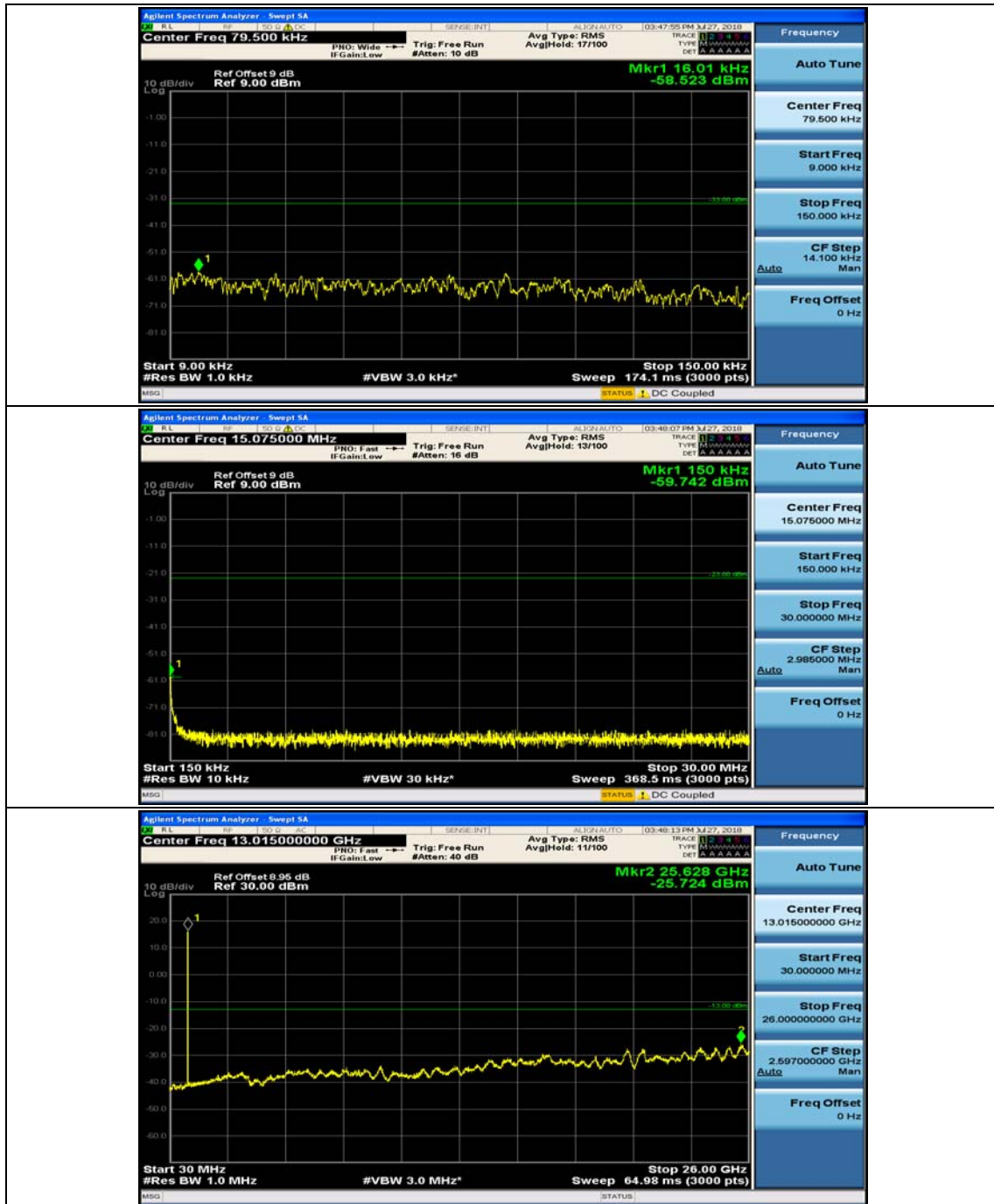


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



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	-1.07	-0.001297	± 2.5	PASS
		VN	TN	0.2	0.000243	± 2.5	PASS
		VH	TN	0.42	0.000509	± 2.5	PASS
	MCH	VL	TN	0.71	0.000849	± 2.5	PASS
		VN	TN	3.71	0.004435	± 2.5	PASS
		VH	TN	0.5	0.000598	± 2.5	PASS
	HCH	VL	TN	0.63	0.000743	± 2.5	PASS
		VN	TN	2.93	0.003454	± 2.5	PASS
		VH	TN	-0.81	-0.000955	± 2.5	PASS
16QAM	LCH	VL	TN	4.59	0.005566	± 2.5	PASS
		VN	TN	-0.78	-0.000946	± 2.5	PASS
		VH	TN	1.67	0.002025	± 2.5	PASS
	MCH	VL	TN	2.23	0.002666	± 2.5	PASS
		VN	TN	-0.72	-0.000861	± 2.5	PASS
		VH	TN	-0.49	-0.000586	± 2.5	PASS
	HCH	VL	TN	-0.32	-0.000377	± 2.5	PASS
		VN	TN	-1.77	-0.002087	± 2.5	PASS
		VH	TN	0.17	0.000200	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.09	0.002534	± 2.5	PASS
		VN	-20	3.51	0.004256	± 2.5	PASS
		VN	-10	0.85	0.001031	± 2.5	PASS
		VN	0	3.63	0.004402	± 2.5	PASS
		VN	10	2.76	0.003347	± 2.5	PASS
		VN	20	-0.09	-0.000109	± 2.5	PASS
		VN	30	0.24	0.000291	± 2.5	PASS
		VN	40	4.94	0.005990	± 2.5	PASS
	MCH	VN	-30	-0.34	-0.000406	± 2.5	PASS
		VN	-20	0.02	0.000024	± 2.5	PASS

		VN	-10	4.21	0.005033	± 2.5	PASS	
		VN	0	-1.73	-0.002068	± 2.5	PASS	
		VN	10	-0.9	-0.001076	± 2.5	PASS	
		VN	20	-0.31	-0.000371	± 2.5	PASS	
		VN	30	3.47	0.004148	± 2.5	PASS	
		VN	40	2.22	0.002654	± 2.5	PASS	
		VN	50	0.23	0.000275	± 2.5	PASS	
	HCH	VN	-30	-1.71	-0.002016	± 2.5	PASS	
		VN	-20	-0.64	-0.000754	± 2.5	PASS	
		VN	-10	-1.37	-0.001615	± 2.5	PASS	
		VN	0	4.98	0.005871	± 2.5	PASS	
		VN	10	1.29	0.001521	± 2.5	PASS	
		VN	20	4.23	0.004986	± 2.5	PASS	
		VN	30	-0.27	-0.000318	± 2.5	PASS	
	16QAM	LCH	VN	40	-1.13	-0.001332	± 2.5	PASS
			VN	50	0.93	0.001096	± 2.5	PASS
			VN	-30	-1.02	-0.001237	± 2.5	PASS
			VN	-20	0.42	0.000509	± 2.5	PASS
VN			-10	0.53	0.000643	± 2.5	PASS	
VN			0	0.41	0.000497	± 2.5	PASS	
VN			10	4.66	0.005651	± 2.5	PASS	
VN			20	1.3	0.001576	± 2.5	PASS	
VN			30	-1.75	-0.002122	± 2.5	PASS	
MCH		VN	40	3.34	0.004050	± 2.5	PASS	
		VN	50	0.1	0.000121	± 2.5	PASS	
		VN	-30	4.68	0.005517	± 2.5	PASS	
		VN	-20	-1.37	-0.001615	± 2.5	PASS	
		VN	-10	3.06	0.003607	± 2.5	PASS	
		VN	0	2.4	0.002829	± 2.5	PASS	
		VN	10	1.51	0.001780	± 2.5	PASS	
		VN	20	1.83	0.002157	± 2.5	PASS	
		VN	30	4.49	0.005293	± 2.5	PASS	
HCH	VN	40	-0.9	-0.001061	± 2.5	PASS		
	VN	50	2.57	0.003030	± 2.5	PASS		
	VN	-30	3.78	0.004456	± 2.5	PASS		
	VN	-20	-1.3	-0.001532	± 2.5	PASS		
	VN	-10	-1.01	-0.001191	± 2.5	PASS		
	VN	0	-1.47	-0.001733	± 2.5	PASS		
	VN	10	-0.3	-0.000354	± 2.5	PASS		
VN	20	1.02	0.001202	± 2.5	PASS			
VN	30	3.9	0.004597	± 2.5	PASS			

		VN	40	3.65	0.004303	± 2.5	PASS
		VN	50	3.52	0.004149	± 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	1.3	0.001575	± 2.5	PASS
		VN	TN	-0.64	-0.000775	± 2.5	PASS
		VH	TN	4.29	0.005197	± 2.5	PASS
	MCH	VL	TN	4.69	0.005607	± 2.5	PASS
		VN	TN	-0.68	-0.000813	± 2.5	PASS
		VH	TN	4.36	0.005212	± 2.5	PASS
	HCH	VL	TN	4.48	0.005286	± 2.5	PASS
		VN	TN	-1.37	-0.001617	± 2.5	PASS
		VH	TN	4.47	0.005274	± 2.5	PASS
16QAM	LCH	VL	TN	4.01	0.004858	± 2.5	PASS
		VN	TN	1.59	0.001926	± 2.5	PASS
		VH	TN	3.54	0.004288	± 2.5	PASS
	MCH	VL	TN	1.58	0.001889	± 2.5	PASS
		VN	TN	0.76	0.000909	± 2.5	PASS
		VH	TN	4.18	0.004997	± 2.5	PASS
	HCH	VL	TN	3.54	0.004177	± 2.5	PASS
		VN	TN	1.63	0.001923	± 2.5	PASS
		VH	TN	-0.45	-0.000531	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.48	0.001793	± 2.5	PASS
		VN	-20	1.05	0.001272	± 2.5	PASS
		VN	-10	-1.24	-0.001502	± 2.5	PASS
		VN	0	1.53	0.001853	± 2.5	PASS
		VN	10	2.35	0.002847	± 2.5	PASS
		VN	20	0.68	0.000824	± 2.5	PASS
		VN	30	4.67	0.005657	± 2.5	PASS
		VN	40	4.68	0.005669	± 2.5	PASS
		VN	50	0.76	0.000921	± 2.5	PASS
	MCH	VN	-30	1.77	0.002116	± 2.5	PASS
		VN	-20	-1.77	-0.002116	± 2.5	PASS
		VN	-10	1.35	0.001614	± 2.5	PASS

		VN	0	-0.15	-0.000179	± 2.5	PASS		
		VN	10	0.58	0.000693	± 2.5	PASS		
		VN	20	4.22	0.005045	± 2.5	PASS		
		VN	30	1.83	0.002188	± 2.5	PASS		
		VN	40	-1.23	-0.001470	± 2.5	PASS		
		VN	50	1.95	0.002331	± 2.5	PASS		
	HCH	VN	-30	4.3	0.005074	± 2.5	PASS		
		VN	-20	-0.6	-0.000708	± 2.5	PASS		
		VN	-10	-0.68	-0.000802	± 2.5	PASS		
		VN	0	-1.62	-0.001912	± 2.5	PASS		
		VN	10	1.07	0.001263	± 2.5	PASS		
		VN	20	2.59	0.003056	± 2.5	PASS		
		VN	30	-1.43	-0.001687	± 2.5	PASS		
		VN	40	2.33	0.002749	± 2.5	PASS		
		VN	50	-1.86	-0.002195	± 2.5	PASS		
		QPSK	LCH	VN	-30	-0.46	-0.000550	± 2.5	PASS
				VN	-20	-0.44	-0.000526	± 2.5	PASS
				VN	-10	-1.11	-0.001327	± 2.5	PASS
VN	0			1.28	0.001530	± 2.5	PASS		
VN	10			4.65	0.005559	± 2.5	PASS		
VN	20			4.89	0.005846	± 2.5	PASS		
VN	30			3.04	0.003634	± 2.5	PASS		
VN	40			-0.89	-0.001064	± 2.5	PASS		
VN	50			4.63	0.005535	± 2.5	PASS		
MCH	VN		-30	2.95	0.003481	± 2.5	PASS		
	VN		-20	3.09	0.003646	± 2.5	PASS		
	VN		-10	0.89	0.001050	± 2.5	PASS		
	VN		0	-0.29	-0.000342	± 2.5	PASS		
	VN		10	-1.45	-0.001711	± 2.5	PASS		
	VN		20	-1.31	-0.001546	± 2.5	PASS		
	VN		30	3.66	0.004319	± 2.5	PASS		
	VN		40	1.33	0.001569	± 2.5	PASS		
	VN		50	0.62	0.000732	± 2.5	PASS		
HCH	VN		-30	0.32	0.000378	± 2.5	PASS		
	VN		-20	4.36	0.005145	± 2.5	PASS		
	VN		-10	2.31	0.002726	± 2.5	PASS		
	VN		0	3.77	0.004448	± 2.5	PASS		
	VN		10	1.04	0.001227	± 2.5	PASS		
	VN		20	4.29	0.005062	± 2.5	PASS		
	VN		30	3.64	0.004295	± 2.5	PASS		
	VN		40	-1.39	-0.001640	± 2.5	PASS		

		VN	50	2.7	0.003186	± 2.5	PASS
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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	2.79	0.003376	± 2.5	PASS
		VN	TN	-0.46	-0.000557	± 2.5	PASS
		VH	TN	-0.09	-0.000109	± 2.5	PASS
	MCH	VL	TN	-0.25	-0.000299	± 2.5	PASS
		VN	TN	5	0.005977	± 2.5	PASS
		VH	TN	1.53	0.001829	± 2.5	PASS
	HCH	VL	TN	-0.03	-0.000035	± 2.5	PASS
		VN	TN	0.74	0.000874	± 2.5	PASS
		VH	TN	0.88	0.001040	± 2.5	PASS
16QAM	LCH	VL	TN	2.89	0.003497	± 2.5	PASS
		VN	TN	4.71	0.005699	± 2.5	PASS
		VH	TN	3.86	0.004670	± 2.5	PASS
	MCH	VL	TN	-0.35	-0.000418	± 2.5	PASS
		VN	TN	3.38	0.004041	± 2.5	PASS
		VH	TN	0.5	0.000598	± 2.5	PASS
	HCH	VL	TN	3.4	0.004017	± 2.5	PASS
		VN	TN	-0.94	-0.001110	± 2.5	PASS
		VH	TN	4.09	0.004832	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.26	-0.000315	± 2.5	PASS
		VN	-20	2.29	0.002771	± 2.5	PASS
		VN	-10	1.06	0.001283	± 2.5	PASS
		VN	0	-1.53	-0.001851	± 2.5	PASS
		VN	10	3.16	0.003823	± 2.5	PASS
		VN	20	1.4	0.001694	± 2.5	PASS
		VN	30	-0.8	-0.000968	± 2.5	PASS
		VN	40	-1.11	-0.001343	± 2.5	PASS
		VN	50	3.55	0.004295	± 2.5	PASS
	MCH	VN	-30	1.4	0.001674	± 2.5	PASS
		VN	-20	1.58	0.001889	± 2.5	PASS
		VN	-10	-1.14	-0.001363	± 2.5	PASS
		VN	0	-1.62	-0.001937	± 2.5	PASS

		VN	10	2.62	0.003132	± 2.5	PASS
		VN	20	2.58	0.003084	± 2.5	PASS
		VN	30	4.94	0.005906	± 2.5	PASS
		VN	40	-0.85	-0.001016	± 2.5	PASS
		VN	50	-1.76	-0.002104	± 2.5	PASS
	HCH	VN	-30	2.67	0.003154	± 2.5	PASS
		VN	-20	0.16	0.000189	± 2.5	PASS
		VN	-10	1.52	0.001796	± 2.5	PASS
		VN	0	-0.51	-0.000602	± 2.5	PASS
		VN	10	3.13	0.003698	± 2.5	PASS
		VN	20	-1.11	-0.001311	± 2.5	PASS
		VN	30	0.93	0.001099	± 2.5	PASS
		VN	40	-1.99	-0.002351	± 2.5	PASS
		VN	50	3.51	0.004146	± 2.5	PASS
		16QAM	LCH	VN	-30	2.39	0.002857
VN	-20			-1.08	-0.001291	± 2.5	PASS
VN	-10			4.59	0.005487	± 2.5	PASS
VN	0			4.55	0.005439	± 2.5	PASS
VN	10			2.43	0.002905	± 2.5	PASS
VN	20			-0.97	-0.001160	± 2.5	PASS
VN	30			3.69	0.004411	± 2.5	PASS
VN	40			0.6	0.000717	± 2.5	PASS
VN	50			3.79	0.004531	± 2.5	PASS
MCH	VN		-30	0.96	0.001134	± 2.5	PASS
	VN		-20	3.48	0.004111	± 2.5	PASS
	VN		-10	-1.34	-0.001583	± 2.5	PASS
	VN		0	4.8	0.005670	± 2.5	PASS
	VN		10	0.38	0.000449	± 2.5	PASS
	VN		20	2.91	0.003438	± 2.5	PASS
	VN		30	4.27	0.005044	± 2.5	PASS
	VN		40	4.92	0.005812	± 2.5	PASS
	VN		50	2.5	0.002953	± 2.5	PASS
HCH	VN		-30	3.85	0.004548	± 2.5	PASS
	VN		-20	4	0.004725	± 2.5	PASS
	VN		-10	2.16	0.002552	± 2.5	PASS
	VN		0	3.63	0.004288	± 2.5	PASS
	VN		10	3.34	0.003946	± 2.5	PASS
	VN		20	-0.22	-0.000260	± 2.5	PASS
	VN		30	2.48	0.002930	± 2.5	PASS
	VN		40	1.32	0.001559	± 2.5	PASS
	VN		50	4.04	0.004773	± 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	2.11	0.002545	± 2.5	PASS
		VN	TN	0.41	0.000495	± 2.5	PASS
		VH	TN	2.86	0.003450	± 2.5	PASS
	MCH	VL	TN	3.48	0.004160	± 2.5	PASS
		VN	TN	3.55	0.004244	± 2.5	PASS
		VH	TN	3.39	0.004053	± 2.5	PASS
	HCH	VL	TN	2.93	0.003472	± 2.5	PASS
		VN	TN	-1.8	-0.002133	± 2.5	PASS
		VH	TN	4.68	0.005545	± 2.5	PASS
16QAM	LCH	VL	TN	0.09	0.000109	± 2.5	PASS
		VN	TN	-0.3	-0.000362	± 2.5	PASS
		VH	TN	2.12	0.002557	± 2.5	PASS
	MCH	VL	TN	-1.18	-0.001411	± 2.5	PASS
		VN	TN	0.93	0.001112	± 2.5	PASS
		VH	TN	-0.55	-0.000658	± 2.5	PASS
	HCH	VL	TN	-0.72	-0.000853	± 2.5	PASS
		VN	TN	-1.79	-0.002121	± 2.5	PASS
		VH	TN	1.98	0.002346	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	0.41	0.000495	± 2.5	PASS
		VN	-20	-1.18	-0.001423	± 2.5	PASS
		VN	-10	-0.87	-0.001049	± 2.5	PASS
		VN	0	-1.7	-0.002051	± 2.5	PASS
		VN	10	2.07	0.002497	± 2.5	PASS
		VN	20	4.63	0.005585	± 2.5	PASS
		VN	30	1.16	0.001399	± 2.5	PASS
		VN	40	-1.03	-0.001242	± 2.5	PASS
		VN	50	0.87	0.001049	± 2.5	PASS
	MCH	VN	-30	2.1	0.002510	± 2.5	PASS
		VN	-20	-1.51	-0.001805	± 2.5	PASS
		VN	-10	0.33	0.000395	± 2.5	PASS
		VN	0	3.41	0.004077	± 2.5	PASS
		VN	10	1.59	0.001901	± 2.5	PASS
		VN	20	2.91	0.003479	± 2.5	PASS
		VN	30	-0.75	-0.000897	± 2.5	PASS

		VN	40	-1.31	-0.001566	± 2.5	PASS
		VN	50	2.01	0.002403	± 2.5	PASS
	HCH	VN	-30	4.72	0.005592	± 2.5	PASS
		VN	-20	1.1	0.001303	± 2.5	PASS
		VN	-10	-1.15	-0.001363	± 2.5	PASS
		VN	0	0.38	0.000450	± 2.5	PASS
		VN	10	2.54	0.003009	± 2.5	PASS
		VN	20	1.91	0.002263	± 2.5	PASS
		VN	30	1.15	0.001363	± 2.5	PASS
		VN	40	2.04	0.002417	± 2.5	PASS
		VN	50	1.64	0.001943	± 2.5	PASS
QPSK	LCH	VN	-30	-1.59	-0.001901	± 2.5	PASS
		VN	-20	2.23	0.002666	± 2.5	PASS
		VN	-10	4.9	0.005858	± 2.5	PASS
		VN	0	-0.02	-0.000024	± 2.5	PASS
		VN	10	3.44	0.004112	± 2.5	PASS
		VN	20	1.04	0.001243	± 2.5	PASS
		VN	30	2.79	0.003335	± 2.5	PASS
		VN	40	0.24	0.000287	± 2.5	PASS
	MCH	VN	50	0.02	0.000024	± 2.5	PASS
		VN	-30	2	0.002370	± 2.5	PASS
		VN	-20	4.13	0.004893	± 2.5	PASS
		VN	-10	1.63	0.001931	± 2.5	PASS
		VN	0	-2	-0.002370	± 2.5	PASS
		VN	10	3.99	0.004727	± 2.5	PASS
		VN	20	4.23	0.005012	± 2.5	PASS
		VN	30	-1.92	-0.002275	± 2.5	PASS
		VN	40	-1.48	-0.001754	± 2.5	PASS
	HCH	VN	50	-1.09	-0.001291	± 2.5	PASS
		VN	-30	4.59	0.005438	± 2.5	PASS
		VN	-20	-1.65	-0.001955	± 2.5	PASS
		VN	-10	0.41	0.000486	± 2.5	PASS
		VN	0	4.62	0.005474	± 2.5	PASS
		VN	10	1.7	0.002014	± 2.5	PASS
		VN	20	4.84	0.005735	± 2.5	PASS
		VN	30	4.53	0.005367	± 2.5	PASS
		VN	40	-1.71	-0.002026	± 2.5	PASS
	VN	50	2.38	0.002820	± 2.5	PASS	