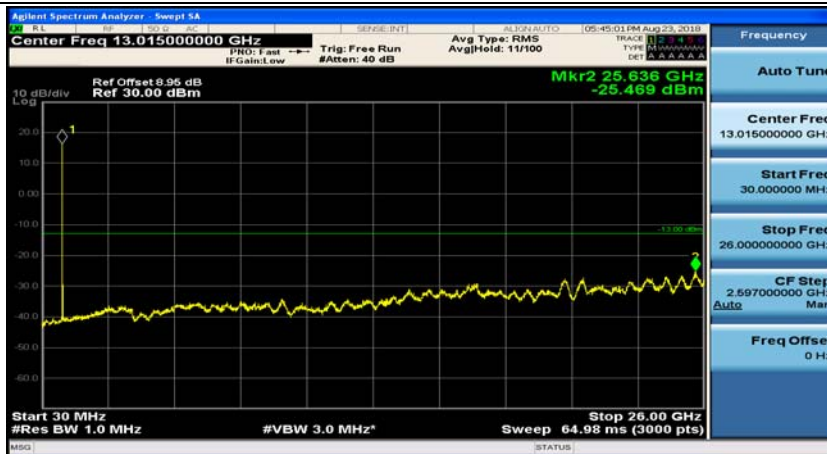
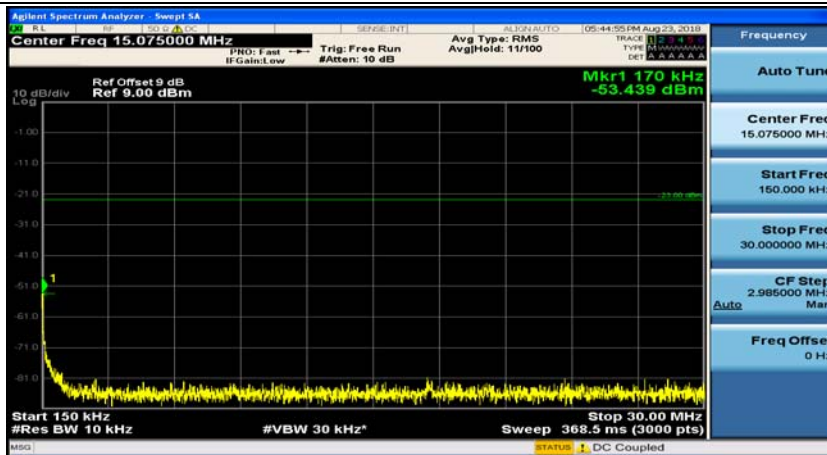
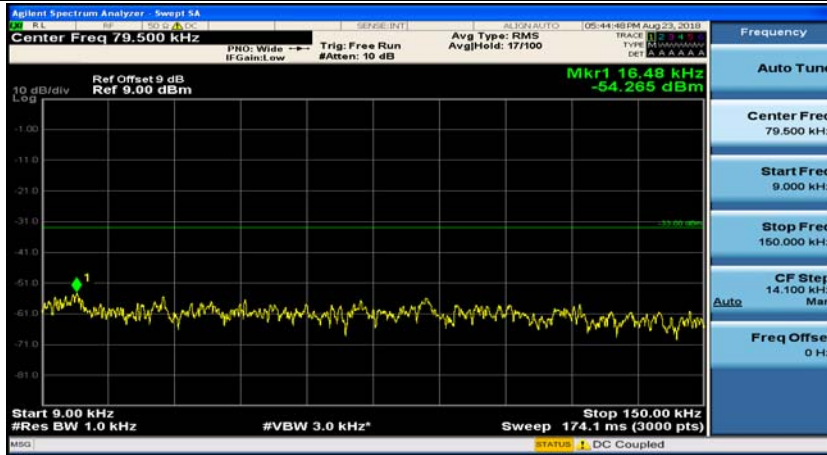
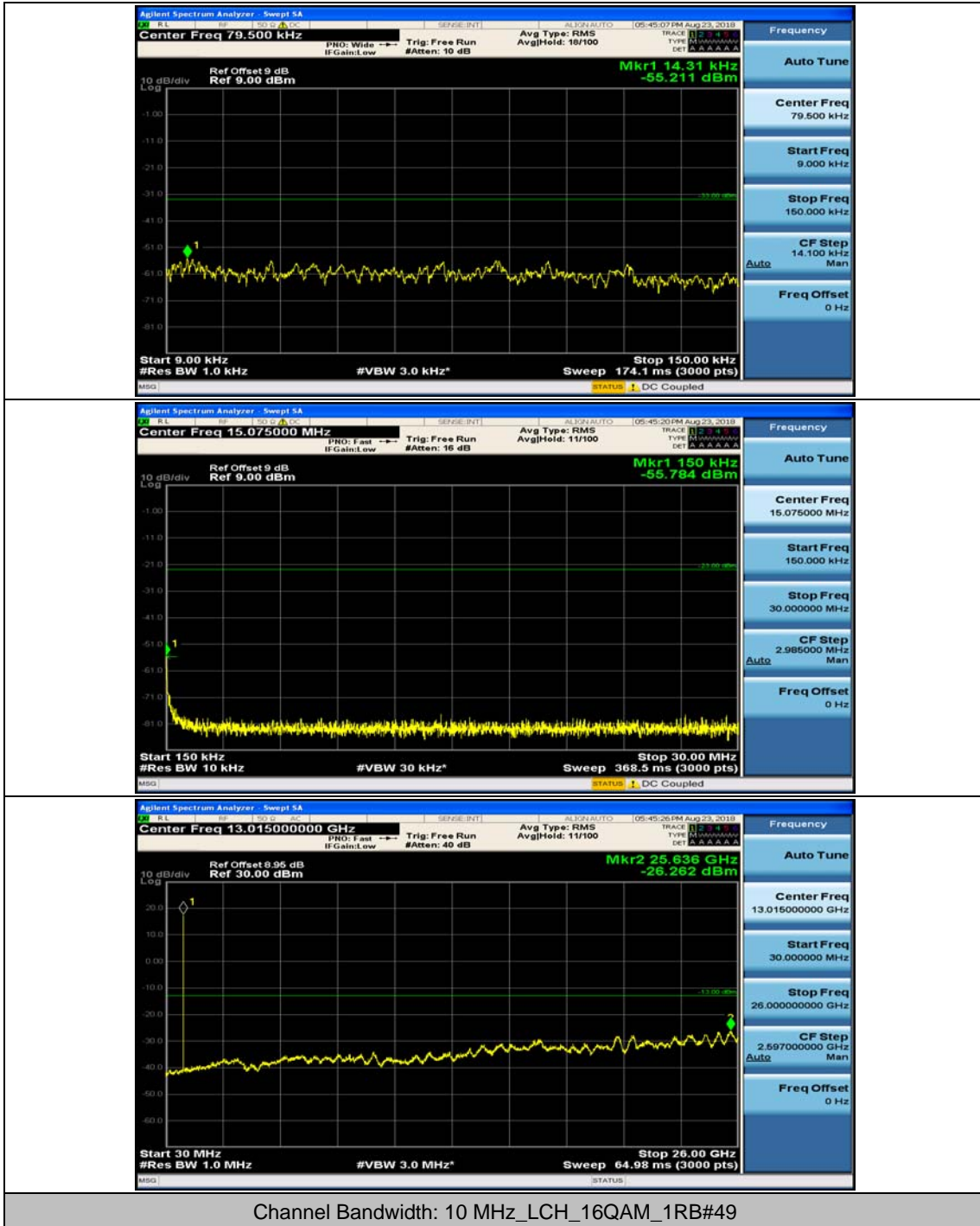
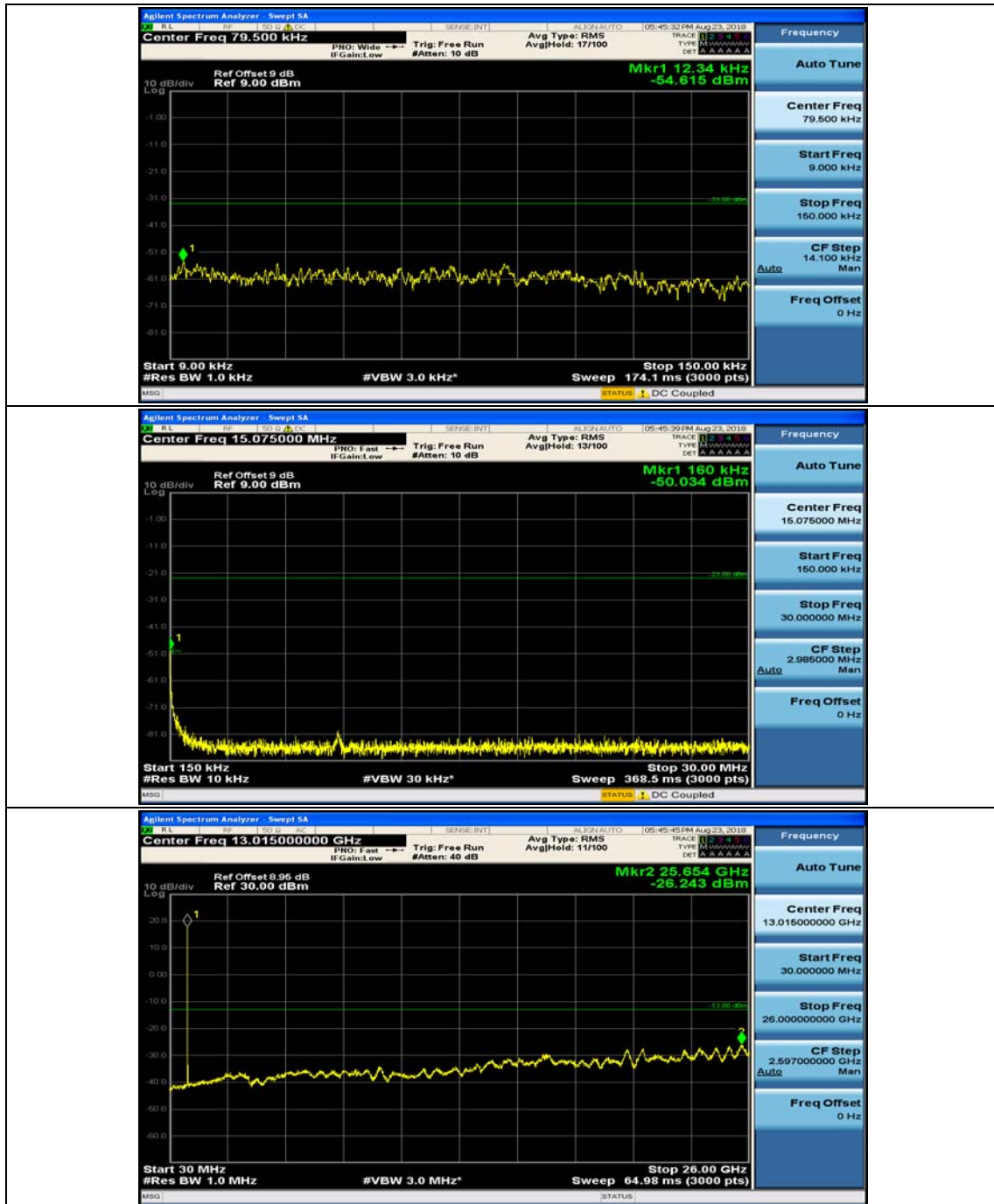


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

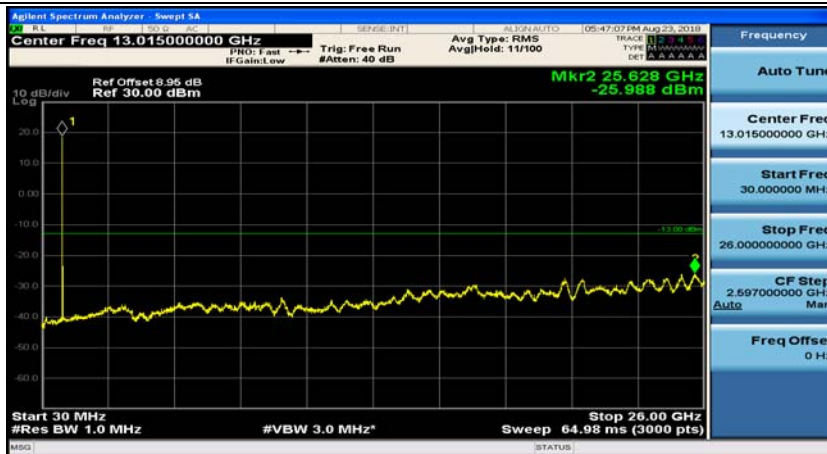
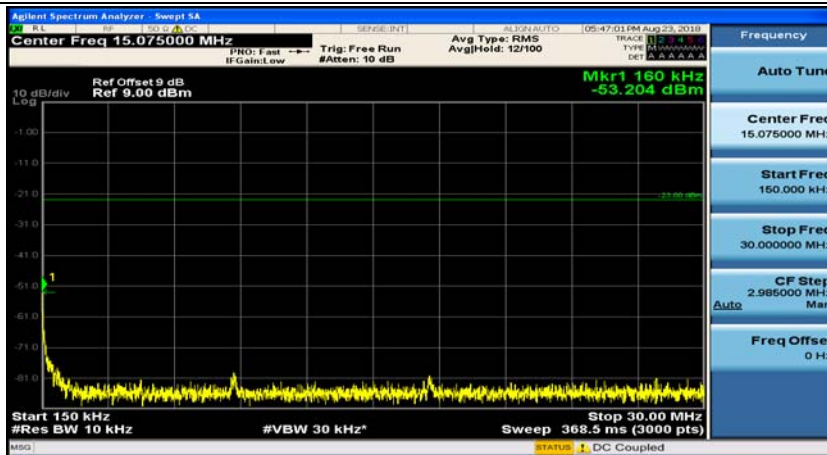


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

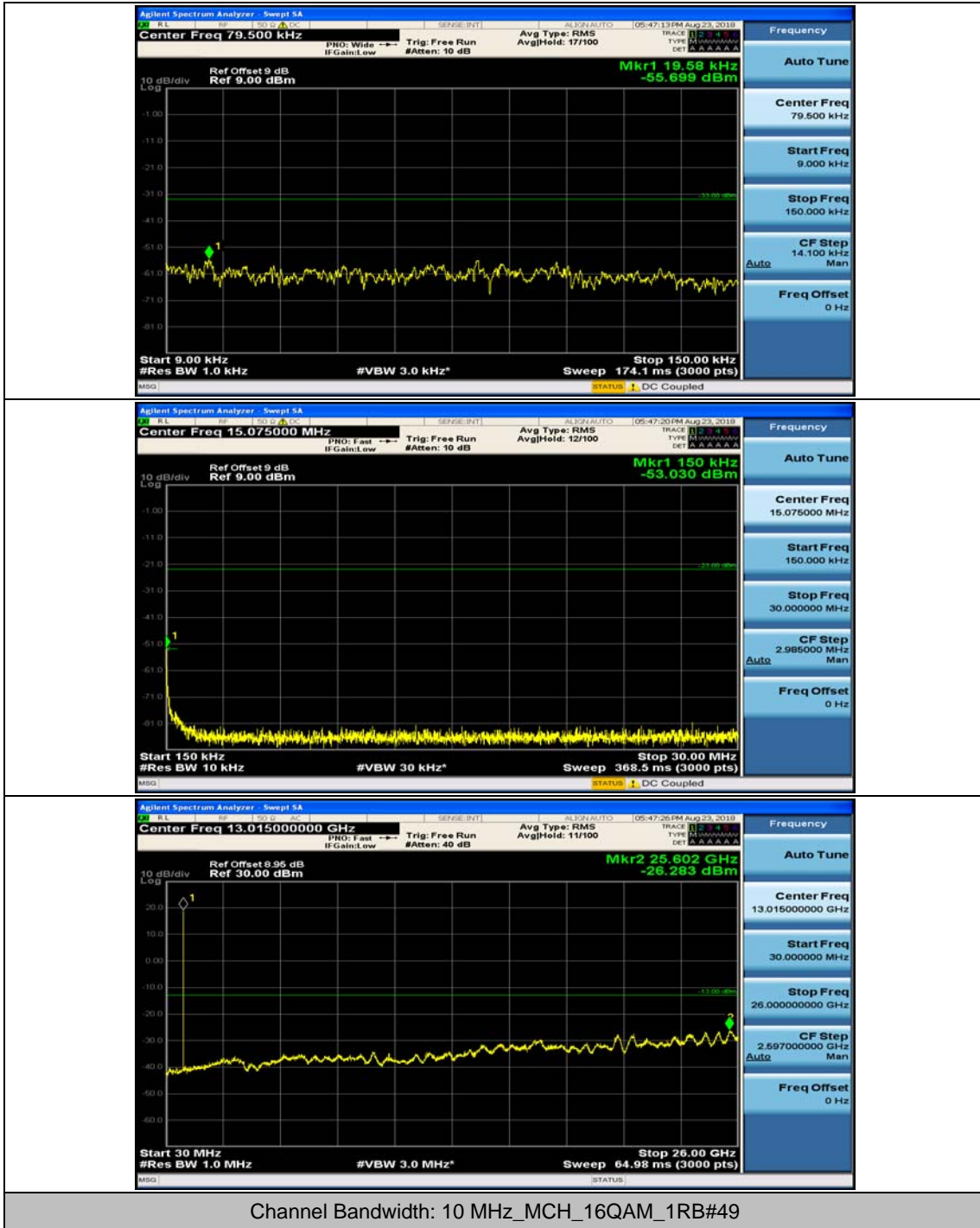


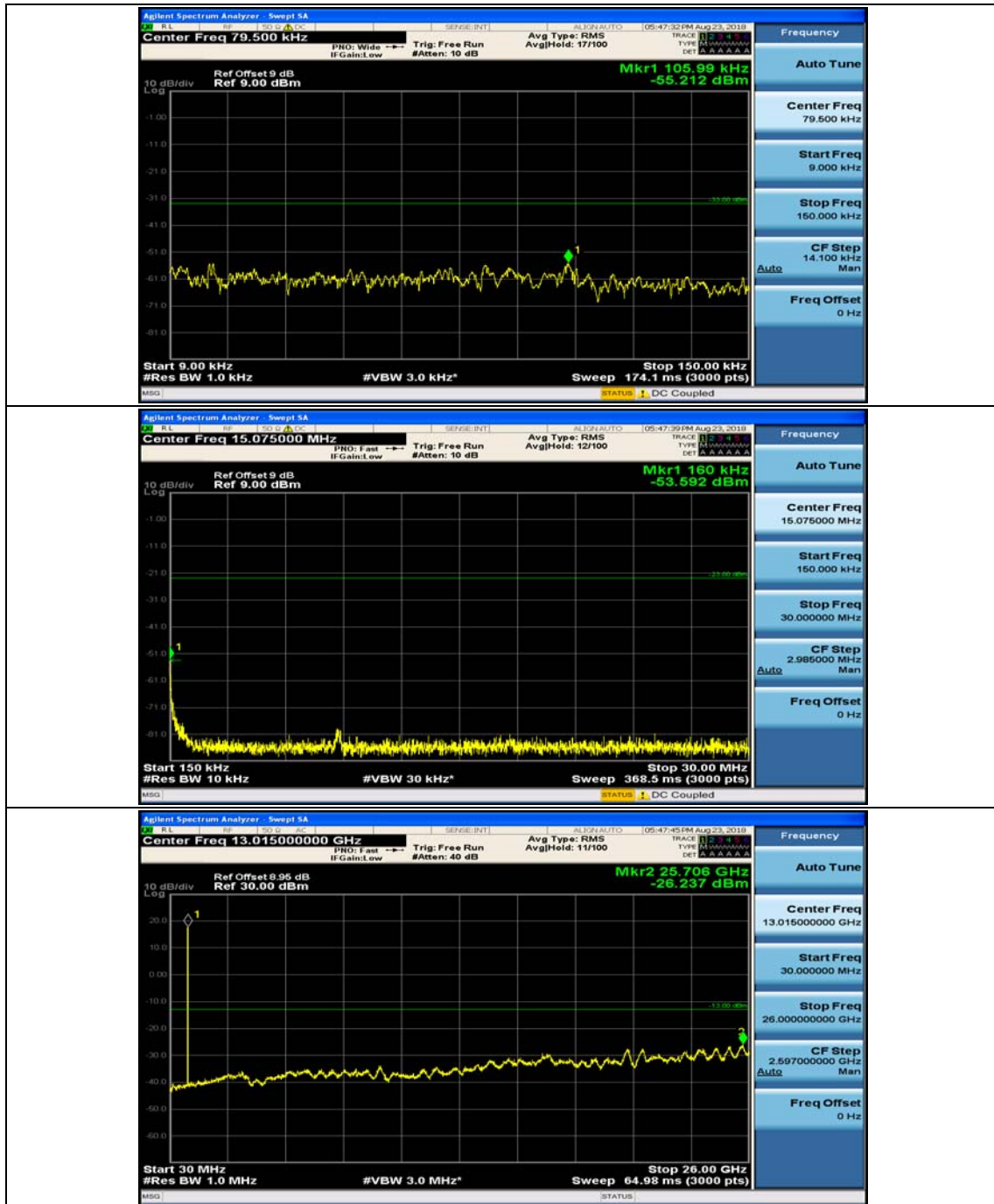


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

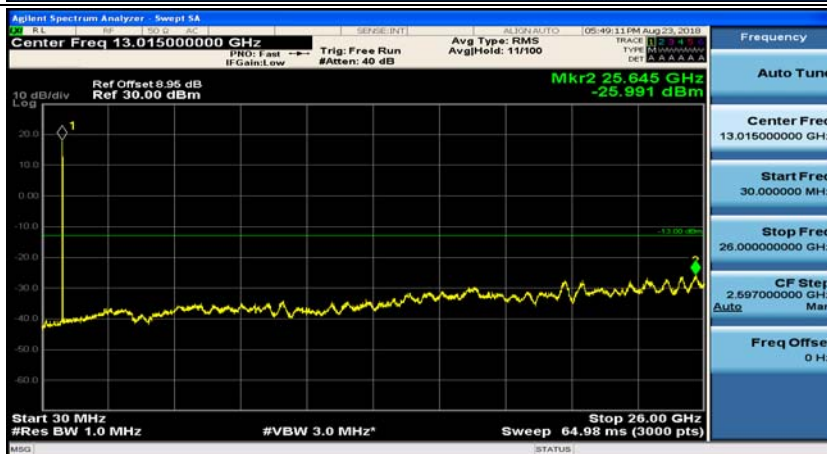
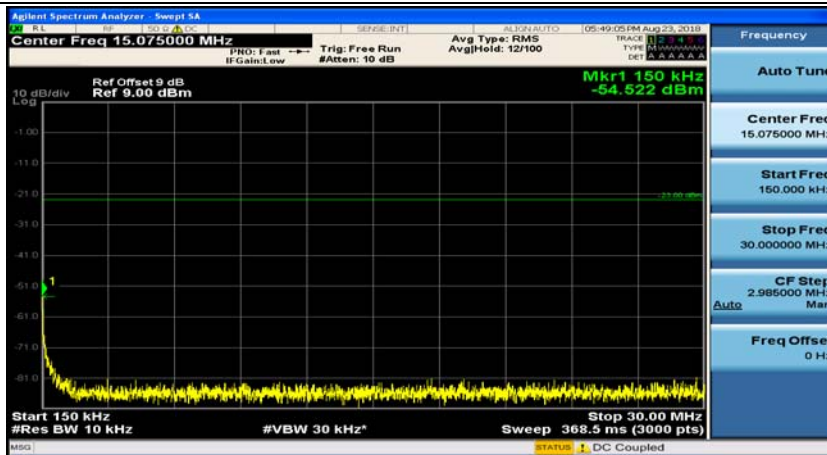


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

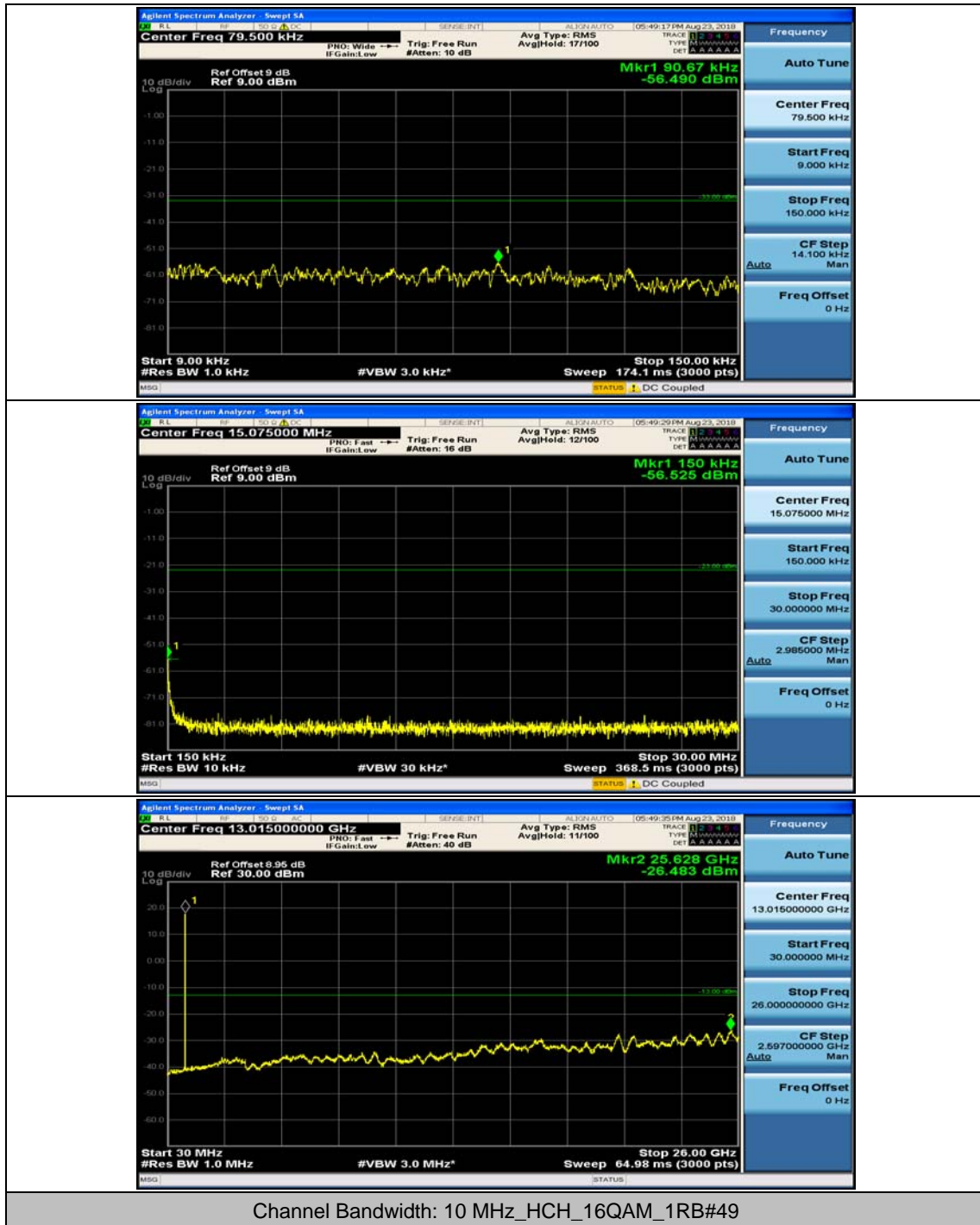


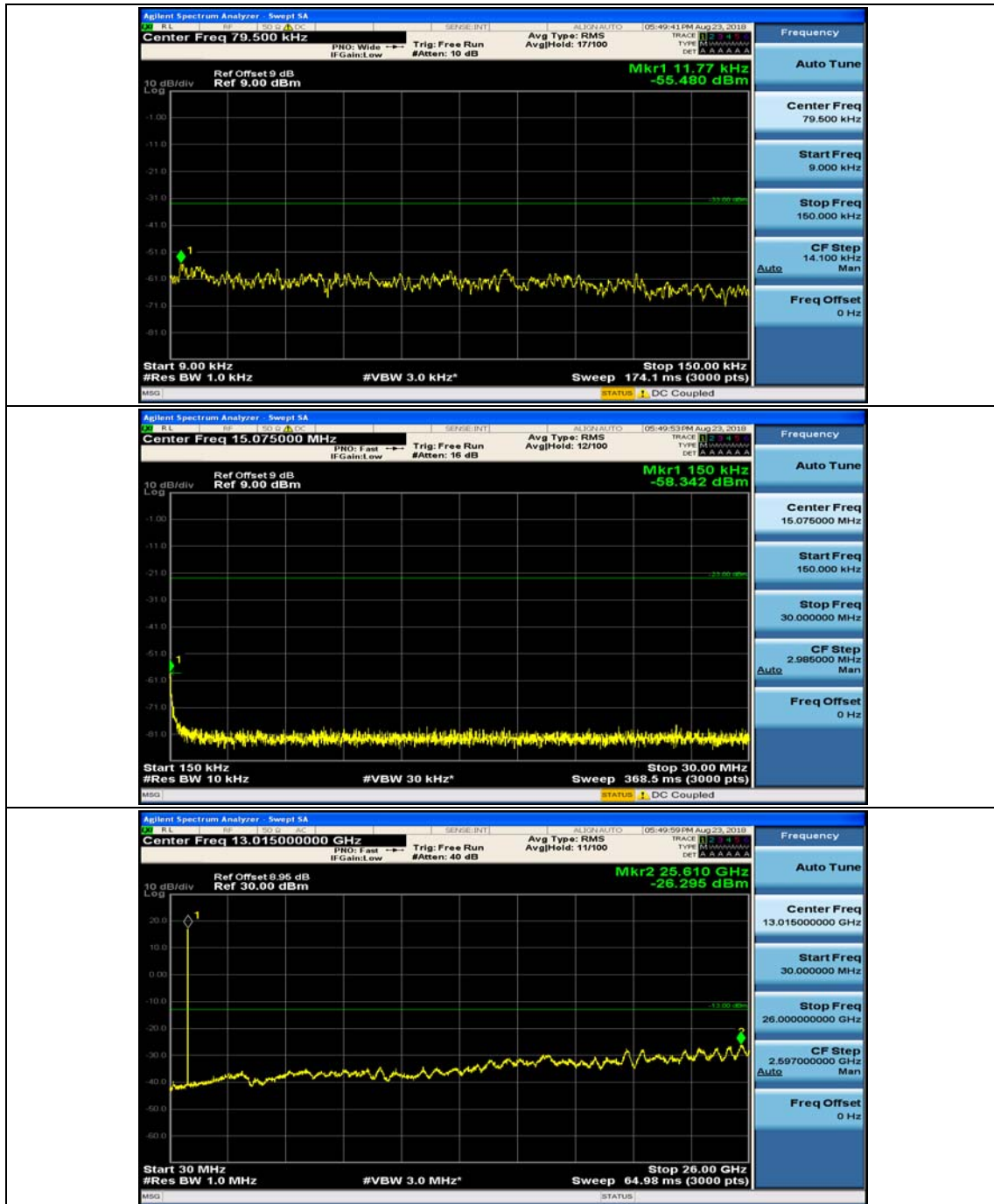


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



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	2.72	0.003298	± 2.5	PASS
		VN	TN	4.2	0.005093	± 2.5	PASS
		VH	TN	3.92	0.004753	± 2.5	PASS
	MCH	VL	TN	-1.93	-0.002307	± 2.5	PASS
		VN	TN	-0.02	-0.000024	± 2.5	PASS
		VH	TN	-1.71	-0.002044	± 2.5	PASS
	HCH	VL	TN	4.99	0.005882	± 2.5	PASS
		VN	TN	1.82	0.002145	± 2.5	PASS
		VH	TN	0.92	0.001085	± 2.5	PASS
16QAM	LCH	VL	TN	0.15	0.000182	± 2.5	PASS
		VN	TN	-1.98	-0.002401	± 2.5	PASS
		VH	TN	2.65	0.003213	± 2.5	PASS
	MCH	VL	TN	2.85	0.003407	± 2.5	PASS
		VN	TN	-1.54	-0.001841	± 2.5	PASS
		VH	TN	2.63	0.003144	± 2.5	PASS
	HCH	VL	TN	2.21	0.002605	± 2.5	PASS
		VN	TN	2.08	0.002452	± 2.5	PASS
		VH	TN	1.64	0.001933	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.51	0.001831	± 2.5	PASS
		VN	-20	3.3	0.004001	± 2.5	PASS
		VN	-10	4.26	0.005166	± 2.5	PASS
		VN	0	4.76	0.005772	± 2.5	PASS
		VN	10	2.28	0.002765	± 2.5	PASS
		VN	20	0.5	0.000606	± 2.5	PASS
		VN	30	1.14	0.001382	± 2.5	PASS
		VN	40	-0.87	-0.001055	± 2.5	PASS
	MCH	VN	-30	4.51	0.005392	± 2.5	PASS
		VN	-20	2.89	0.003455	± 2.5	PASS

		VN	-10	2.59	0.003096	± 2.5	PASS		
		VN	0	-0.81	-0.000968	± 2.5	PASS		
		VN	10	1.82	0.002176	± 2.5	PASS		
		VN	20	4.75	0.005678	± 2.5	PASS		
		VN	30	2.87	0.003431	± 2.5	PASS		
		VN	40	2.95	0.003527	± 2.5	PASS		
		VN	50	0.64	0.000765	± 2.5	PASS		
	HCH	VN	-30	1.71	0.002016	± 2.5	PASS		
		VN	-20	2.09	0.002464	± 2.5	PASS		
		VN	-10	2.62	0.003089	± 2.5	PASS		
		VN	0	-1.32	-0.001556	± 2.5	PASS		
		VN	10	-1.51	-0.001780	± 2.5	PASS		
		VN	20	-0.34	-0.000401	± 2.5	PASS		
		VN	30	1.68	0.001980	± 2.5	PASS		
		VN	40	-0.01	-0.000012	± 2.5	PASS		
		VN	50	0.68	0.000802	± 2.5	PASS		
		16QAM	LCH	VN	-30	2.34	0.002837	± 2.5	PASS
				VN	-20	0.25	0.000303	± 2.5	PASS
VN	-10			1.41	0.001710	± 2.5	PASS		
VN	0			-1.54	-0.001867	± 2.5	PASS		
VN	10			1.77	0.002146	± 2.5	PASS		
VN	20			0.93	0.001128	± 2.5	PASS		
VN	30			-1.26	-0.001528	± 2.5	PASS		
VN	40			-1.43	-0.001734	± 2.5	PASS		
VN	50			2.05	0.002486	± 2.5	PASS		
MCH	VN		-30	0.33	0.000389	± 2.5	PASS		
	VN		-20	0.09	0.000106	± 2.5	PASS		
	VN		-10	3.1	0.003654	± 2.5	PASS		
	VN		0	-0.22	-0.000259	± 2.5	PASS		
	VN		10	1.52	0.001792	± 2.5	PASS		
	VN		20	2.59	0.003053	± 2.5	PASS		
	VN		30	3.56	0.004197	± 2.5	PASS		
	VN		40	-0.65	-0.000766	± 2.5	PASS		
	VN		50	1.07	0.001261	± 2.5	PASS		
HCH	VN		-30	0.58	0.000684	± 2.5	PASS		
	VN		-20	-1.3	-0.001532	± 2.5	PASS		
	VN		-10	-1.29	-0.001521	± 2.5	PASS		
	VN		0	0.13	0.000153	± 2.5	PASS		
	VN		10	1.57	0.001851	± 2.5	PASS		
	VN		20	0.61	0.000719	± 2.5	PASS		
	VN		30	-1.44	-0.001698	± 2.5	PASS		

		VN	40	-1.22	-0.001438	± 2.5	PASS
		VN	50	0.62	0.000731	± 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	2.78	0.003368	± 2.5	PASS
		VN	TN	1.74	0.002108	± 2.5	PASS
		VH	TN	2.58	0.003125	± 2.5	PASS
	MCH	VL	TN	-0.95	-0.001136	± 2.5	PASS
		VN	TN	-0.01	-0.000012	± 2.5	PASS
		VH	TN	1.8	0.002152	± 2.5	PASS
	HCH	VL	TN	3.75	0.004425	± 2.5	PASS
		VN	TN	-1.26	-0.001487	± 2.5	PASS
		VH	TN	-1.45	-0.001711	± 2.5	PASS
16QAM	LCH	VL	TN	-0.51	-0.000618	± 2.5	PASS
		VN	TN	0.47	0.000569	± 2.5	PASS
		VH	TN	2.04	0.002471	± 2.5	PASS
	MCH	VL	TN	2.57	0.003072	± 2.5	PASS
		VN	TN	3.63	0.004340	± 2.5	PASS
		VH	TN	5	0.005977	± 2.5	PASS
	HCH	VL	TN	3.13	0.003693	± 2.5	PASS
		VN	TN	1.88	0.002218	± 2.5	PASS
		VH	TN	1.76	0.002077	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.33	0.004034	± 2.5	PASS
		VN	-20	-0.79	-0.000957	± 2.5	PASS
		VN	-10	3.42	0.004143	± 2.5	PASS
		VN	0	-0.92	-0.001114	± 2.5	PASS
		VN	10	-0.66	-0.000800	± 2.5	PASS
		VN	20	-1.35	-0.001635	± 2.5	PASS
		VN	30	-0.59	-0.000715	± 2.5	PASS
		VN	40	-0.96	-0.001163	± 2.5	PASS
		VN	50	-0.47	-0.000569	± 2.5	PASS
	MCH	VN	-30	4.62	0.005523	± 2.5	PASS
		VN	-20	0.22	0.000263	± 2.5	PASS
		VN	-10	2.42	0.002893	± 2.5	PASS

		VN	0	3.85	0.004603	± 2.5	PASS		
		VN	10	-1.44	-0.001721	± 2.5	PASS		
		VN	20	-0.7	-0.000837	± 2.5	PASS		
		VN	30	4.03	0.004818	± 2.5	PASS		
		VN	40	2.5	0.002989	± 2.5	PASS		
		VN	50	0.81	0.000968	± 2.5	PASS		
	HCH	VN	-30	1.83	0.002159	± 2.5	PASS		
		VN	-20	3.81	0.004496	± 2.5	PASS		
		VN	-10	-0.91	-0.001074	± 2.5	PASS		
		VN	0	3.49	0.004118	± 2.5	PASS		
		VN	10	-0.24	-0.000283	± 2.5	PASS		
		VN	20	0.36	0.000425	± 2.5	PASS		
		VN	30	-0.33	-0.000389	± 2.5	PASS		
		VN	40	-0.98	-0.001156	± 2.5	PASS		
		VN	50	4.07	0.004802	± 2.5	PASS		
		QPSK	LCH	VN	-30	2.63	0.003144	± 2.5	PASS
				VN	-20	0.56	0.000669	± 2.5	PASS
				VN	-10	0.06	0.000072	± 2.5	PASS
VN	0			2.77	0.003311	± 2.5	PASS		
VN	10			2.23	0.002666	± 2.5	PASS		
VN	20			4.92	0.005882	± 2.5	PASS		
VN	30			3.96	0.004734	± 2.5	PASS		
VN	40			-1.7	-0.002032	± 2.5	PASS		
VN	50			2.78	0.003323	± 2.5	PASS		
MCH	VN		-30	-1.14	-0.001345	± 2.5	PASS		
	VN		-20	2.57	0.003032	± 2.5	PASS		
	VN		-10	-0.07	-0.000083	± 2.5	PASS		
	VN		0	-1.2	-0.001416	± 2.5	PASS		
	VN		10	1.15	0.001357	± 2.5	PASS		
	VN		20	1.86	0.002195	± 2.5	PASS		
	VN		30	1.4	0.001652	± 2.5	PASS		
	VN		40	2.54	0.002997	± 2.5	PASS		
	VN		50	0.1	0.000118	± 2.5	PASS		
HCH	VN		-30	2.66	0.003139	± 2.5	PASS		
	VN		-20	0.39	0.000460	± 2.5	PASS		
	VN		-10	2.22	0.002619	± 2.5	PASS		
	VN		0	4.8	0.005664	± 2.5	PASS		
	VN		10	1.62	0.001912	± 2.5	PASS		
	VN		20	2.62	0.003091	± 2.5	PASS		
	VN		30	4.75	0.005605	± 2.5	PASS		
	VN		40	-1.21	-0.001428	± 2.5	PASS		

		VN	50	-0.34	-0.000401	± 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	1.44	0.001742	± 2.5	PASS
		VN	TN	3.62	0.004380	± 2.5	PASS
		VH	TN	-0.13	-0.000157	± 2.5	PASS
	MCH	VL	TN	4.73	0.005655	± 2.5	PASS
		VN	TN	4.42	0.005284	± 2.5	PASS
		VH	TN	-0.42	-0.000502	± 2.5	PASS
	HCH	VL	TN	4.64	0.005481	± 2.5	PASS
		VN	TN	-0.7	-0.000827	± 2.5	PASS
		VH	TN	0.09	0.000106	± 2.5	PASS
16QAM	LCH	VL	TN	4.64	0.005614	± 2.5	PASS
		VN	TN	-0.01	-0.000012	± 2.5	PASS
		VH	TN	1.23	0.001488	± 2.5	PASS
	MCH	VL	TN	-1.54	-0.001841	± 2.5	PASS
		VN	TN	1.54	0.001841	± 2.5	PASS
		VH	TN	1.56	0.001865	± 2.5	PASS
	HCH	VL	TN	1.43	0.001689	± 2.5	PASS
		VN	TN	0.7	0.000827	± 2.5	PASS
		VH	TN	-1.17	-0.001382	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.35	0.004053	± 2.5	PASS
		VN	-20	2.89	0.003497	± 2.5	PASS
		VN	-10	-1.32	-0.001597	± 2.5	PASS
		VN	0	2.82	0.003412	± 2.5	PASS
		VN	10	-0.85	-0.001028	± 2.5	PASS
		VN	20	-1.29	-0.001561	± 2.5	PASS
		VN	30	2.12	0.002565	± 2.5	PASS
		VN	40	-0.1	-0.000121	± 2.5	PASS
		VN	50	0.59	0.000714	± 2.5	PASS
	MCH	VN	-30	3.03	0.003622	± 2.5	PASS
		VN	-20	1.21	0.001447	± 2.5	PASS
		VN	-10	3.78	0.004519	± 2.5	PASS
		VN	0	4.96	0.005929	± 2.5	PASS

		VN	10	3.44	0.004112	± 2.5	PASS
		VN	20	0.91	0.001088	± 2.5	PASS
		VN	30	1.49	0.001781	± 2.5	PASS
		VN	40	4.48	0.005356	± 2.5	PASS
		VN	50	1.14	0.001363	± 2.5	PASS
	HCH	VN	-30	0.15	0.000177	± 2.5	PASS
		VN	-20	-0.62	-0.000732	± 2.5	PASS
		VN	-10	1.91	0.002256	± 2.5	PASS
		VN	0	-1.41	-0.001666	± 2.5	PASS
		VN	10	-1.99	-0.002351	± 2.5	PASS
		VN	20	4.34	0.005127	± 2.5	PASS
		VN	30	2.18	0.002575	± 2.5	PASS
		VN	40	3.15	0.003721	± 2.5	PASS
		VN	50	3.02	0.003568	± 2.5	PASS
		16QAM	LCH	VN	-30	-1.93	-0.002307
VN	-20			0.69	0.000825	± 2.5	PASS
VN	-10			1.51	0.001805	± 2.5	PASS
VN	0			-1.93	-0.002307	± 2.5	PASS
VN	10			3.29	0.003933	± 2.5	PASS
VN	20			-1.7	-0.002032	± 2.5	PASS
VN	30			1.12	0.001339	± 2.5	PASS
VN	40			-0.53	-0.000634	± 2.5	PASS
VN	50			1.94	0.002319	± 2.5	PASS
MCH	VN		-30	0.23	0.000272	± 2.5	PASS
	VN		-20	1.36	0.001607	± 2.5	PASS
	VN		-10	-1.4	-0.001654	± 2.5	PASS
	VN		0	-0.67	-0.000791	± 2.5	PASS
	VN		10	0.29	0.000343	± 2.5	PASS
	VN		20	2.46	0.002906	± 2.5	PASS
	VN		30	0.36	0.000425	± 2.5	PASS
	VN		40	-0.2	-0.000236	± 2.5	PASS
	VN		50	-0.93	-0.001099	± 2.5	PASS
HCH	VN		-30	4.83	0.005706	± 2.5	PASS
	VN		-20	4.27	0.005044	± 2.5	PASS
	VN		-10	2.39	0.002823	± 2.5	PASS
	VN		0	-0.85	-0.001004	± 2.5	PASS
	VN		10	0.84	0.000992	± 2.5	PASS
	VN		20	3.98	0.004702	± 2.5	PASS
	VN		30	-0.26	-0.000307	± 2.5	PASS
	VN		40	1.07	0.001264	± 2.5	PASS
	VN		50	2.41	0.002847	± 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	1.55	0.001870	± 2.5	PASS
		VN	TN	-0.03	-0.000036	± 2.5	PASS
		VH	TN	2.25	0.002714	± 2.5	PASS
	MCH	VL	TN	-1.14	-0.001363	± 2.5	PASS
		VN	TN	2.83	0.003383	± 2.5	PASS
		VH	TN	2.18	0.002606	± 2.5	PASS
	HCH	VL	TN	3.62	0.004289	± 2.5	PASS
		VN	TN	0.63	0.000746	± 2.5	PASS
		VH	TN	2.19	0.002595	± 2.5	PASS
16QAM	LCH	VL	TN	-1	-0.001206	± 2.5	PASS
		VN	TN	3.17	0.003824	± 2.5	PASS
		VH	TN	2.57	0.003100	± 2.5	PASS
	MCH	VL	TN	2.06	0.002463	± 2.5	PASS
		VN	TN	-1.5	-0.001793	± 2.5	PASS
		VH	TN	2.85	0.003407	± 2.5	PASS
	HCH	VL	TN	-1.36	-0.001611	± 2.5	PASS
		VN	TN	1.62	0.001919	± 2.5	PASS
		VH	TN	-0.21	-0.000249	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-0.86	-0.001037	± 2.5	PASS
		VN	-20	-1.17	-0.001411	± 2.5	PASS
		VN	-10	-1.6	-0.001930	± 2.5	PASS
		VN	0	2.15	0.002593	± 2.5	PASS
		VN	10	0.88	0.001062	± 2.5	PASS
		VN	20	-0.88	-0.001062	± 2.5	PASS
		VN	30	4.27	0.005151	± 2.5	PASS
		VN	40	1.79	0.002159	± 2.5	PASS
		VN	50	-1.4	-0.001689	± 2.5	PASS
	MCH	VN	-30	0.79	0.000944	± 2.5	PASS
		VN	-20	4.31	0.005152	± 2.5	PASS
		VN	-10	-0.22	-0.000263	± 2.5	PASS
		VN	0	-1.14	-0.001363	± 2.5	PASS
		VN	10	3.44	0.004112	± 2.5	PASS
		VN	20	-0.67	-0.000801	± 2.5	PASS

	VN	30	3.97	0.004746	± 2.5	PASS	
		40	-0.19	-0.000227	± 2.5	PASS	
		50	-0.98	-0.001172	± 2.5	PASS	
	HCH	VN	-30	1.92	0.002275	± 2.5	PASS
		VN	-20	1.82	0.002156	± 2.5	PASS
		VN	-10	1.34	0.001588	± 2.5	PASS
		VN	0	2.88	0.003412	± 2.5	PASS
		VN	10	3.96	0.004692	± 2.5	PASS
		VN	20	-0.33	-0.000391	± 2.5	PASS
		VN	30	1.99	0.002358	± 2.5	PASS
		VN	40	3.45	0.004088	± 2.5	PASS
		VN	50	0.44	0.000521	± 2.5	PASS
QPSK	LCH	VN	-30	0.1	0.000120	± 2.5	PASS
		VN	-20	0.23	0.000275	± 2.5	PASS
		VN	-10	3.93	0.004698	± 2.5	PASS
		VN	0	1.97	0.002355	± 2.5	PASS
		VN	10	4.62	0.005523	± 2.5	PASS
		VN	20	-1.6	-0.001913	± 2.5	PASS
		VN	30	-0.27	-0.000323	± 2.5	PASS
		VN	40	1.34	0.001602	± 2.5	PASS
		VN	50	0.92	0.001100	± 2.5	PASS
	MCH	VN	-30	0.37	0.000438	± 2.5	PASS
		VN	-20	-0.74	-0.000877	± 2.5	PASS
		VN	-10	1.23	0.001457	± 2.5	PASS
		VN	0	4.11	0.004870	± 2.5	PASS
		VN	10	-1.95	-0.002310	± 2.5	PASS
		VN	20	0.36	0.000427	± 2.5	PASS
		VN	30	2.66	0.003152	± 2.5	PASS
		VN	40	0.94	0.001114	± 2.5	PASS
		VN	50	3.19	0.003780	± 2.5	PASS
	HCH	VN	-30	0.59	0.000699	± 2.5	PASS
		VN	-20	-1.03	-0.001220	± 2.5	PASS
		VN	-10	0.57	0.000675	± 2.5	PASS
		VN	0	-0.23	-0.000273	± 2.5	PASS
		VN	10	4.1	0.004858	± 2.5	PASS
		VN	20	4.59	0.005438	± 2.5	PASS
		VN	30	2.71	0.003211	± 2.5	PASS
		VN	40	2.13	0.002524	± 2.5	PASS
		VN	50	1.54	0.001825	± 2.5	PASS