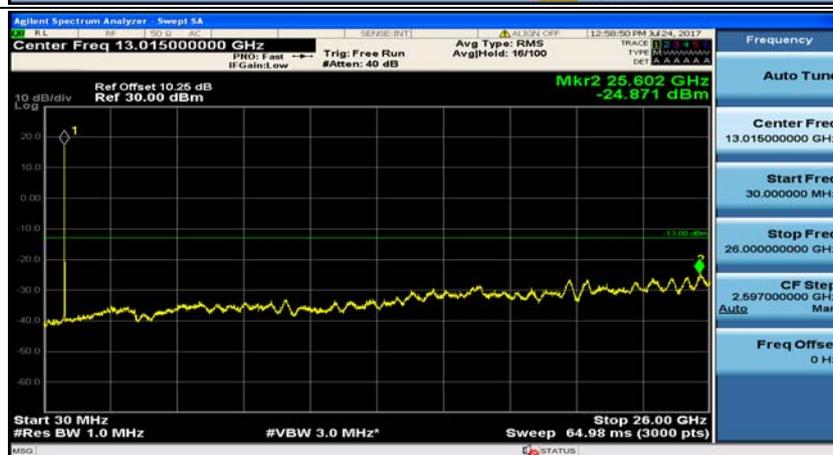
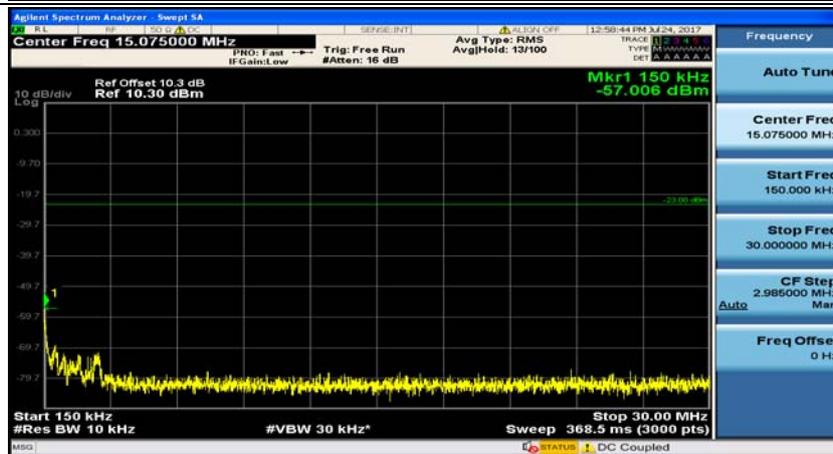
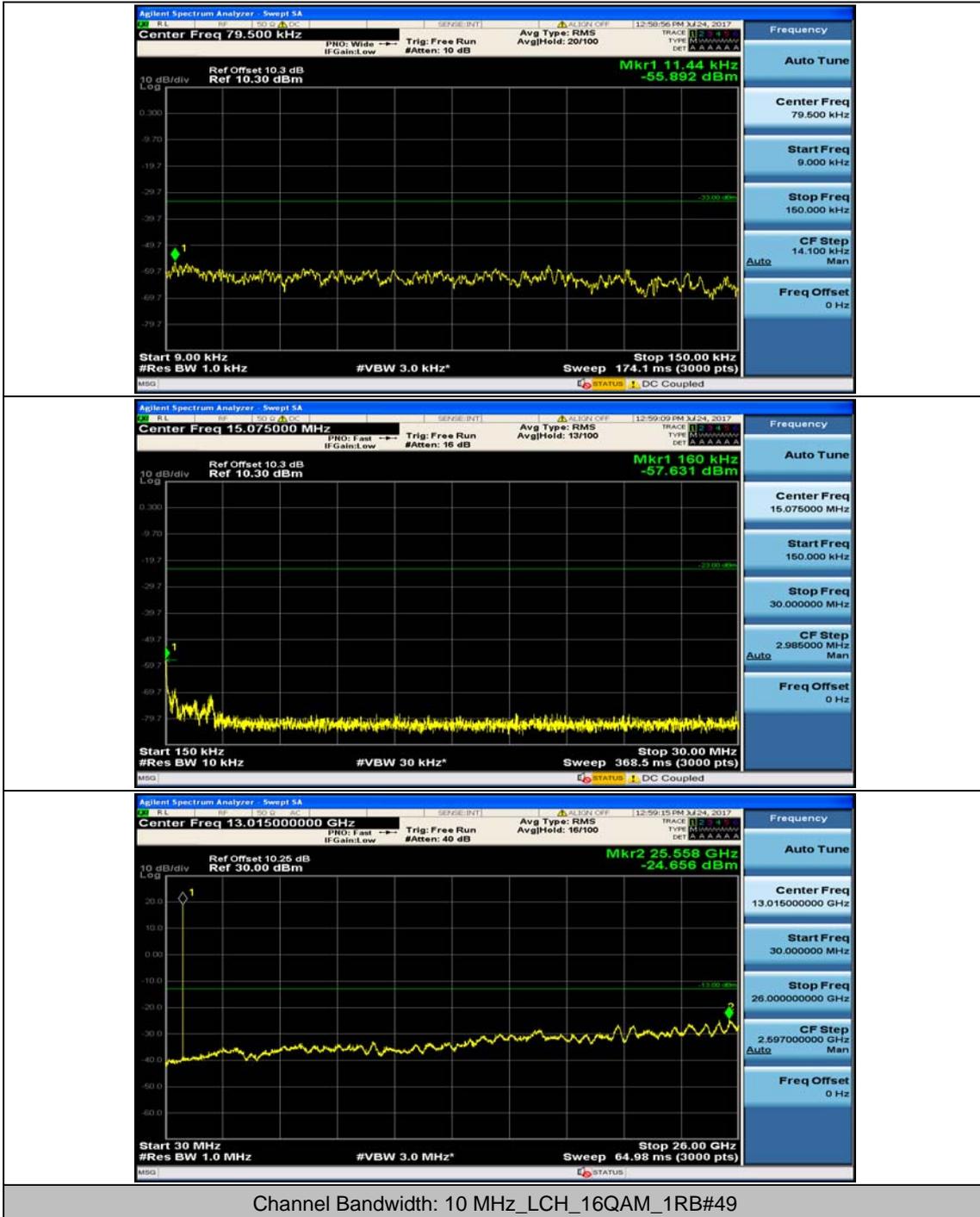
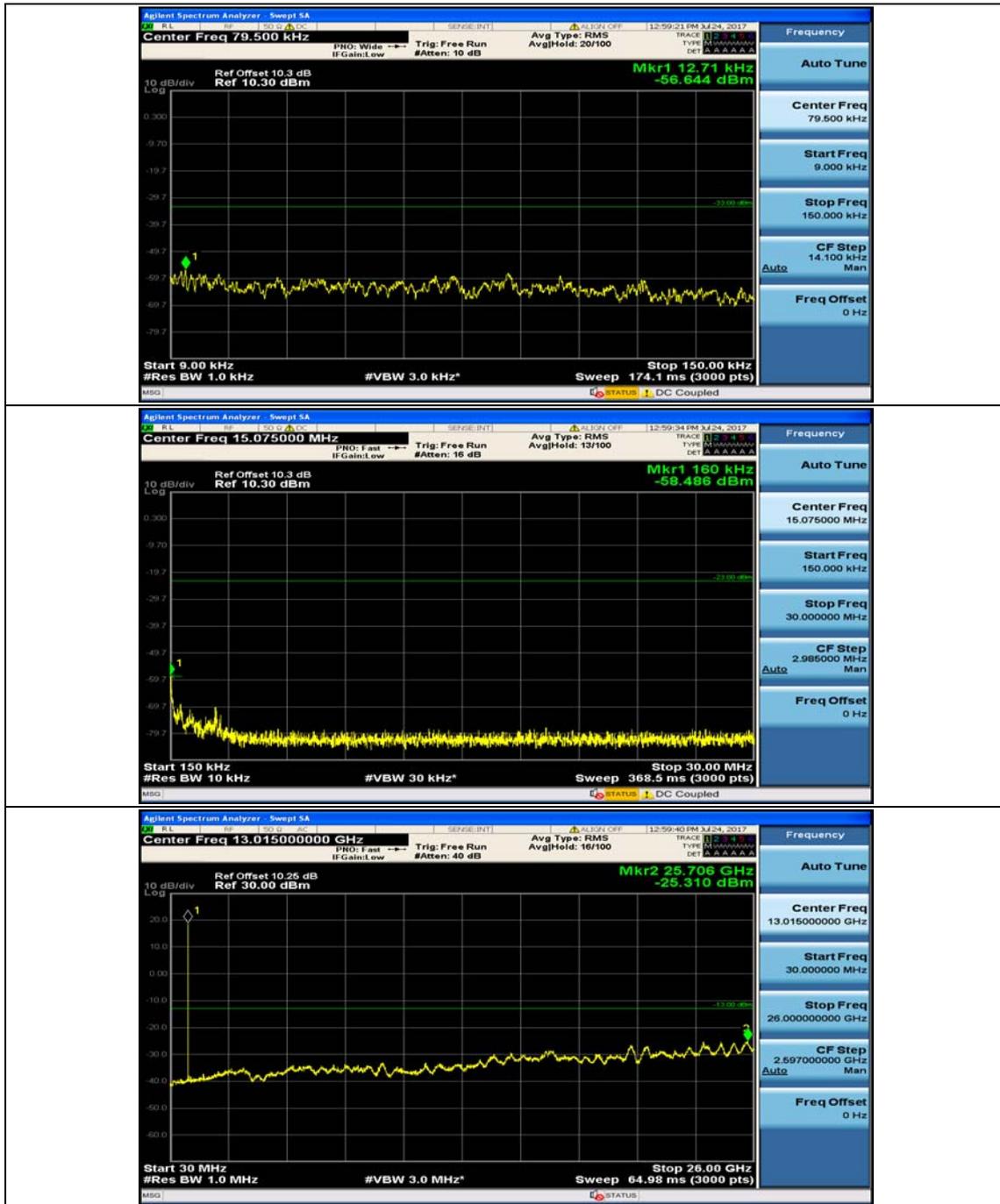


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

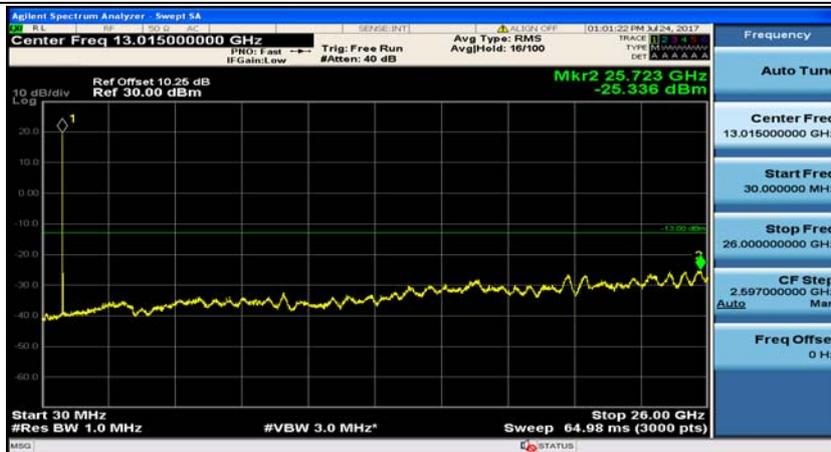
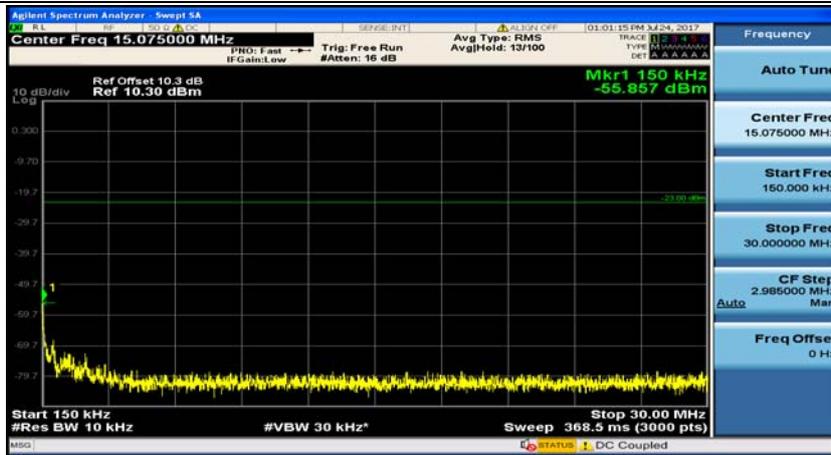
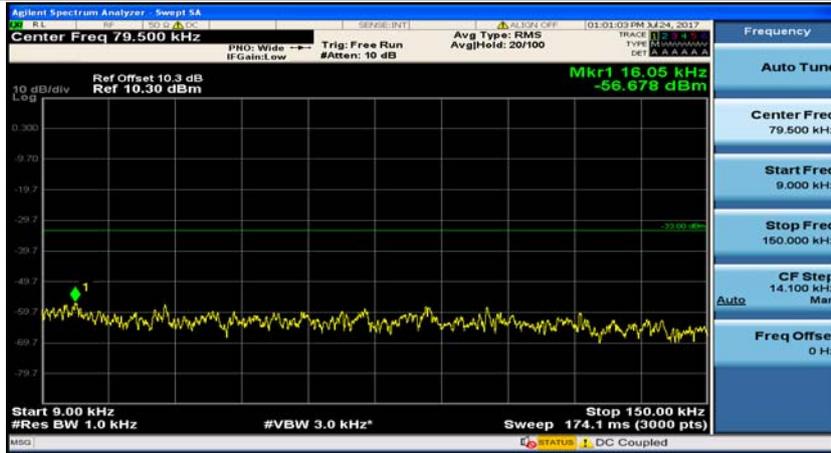


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

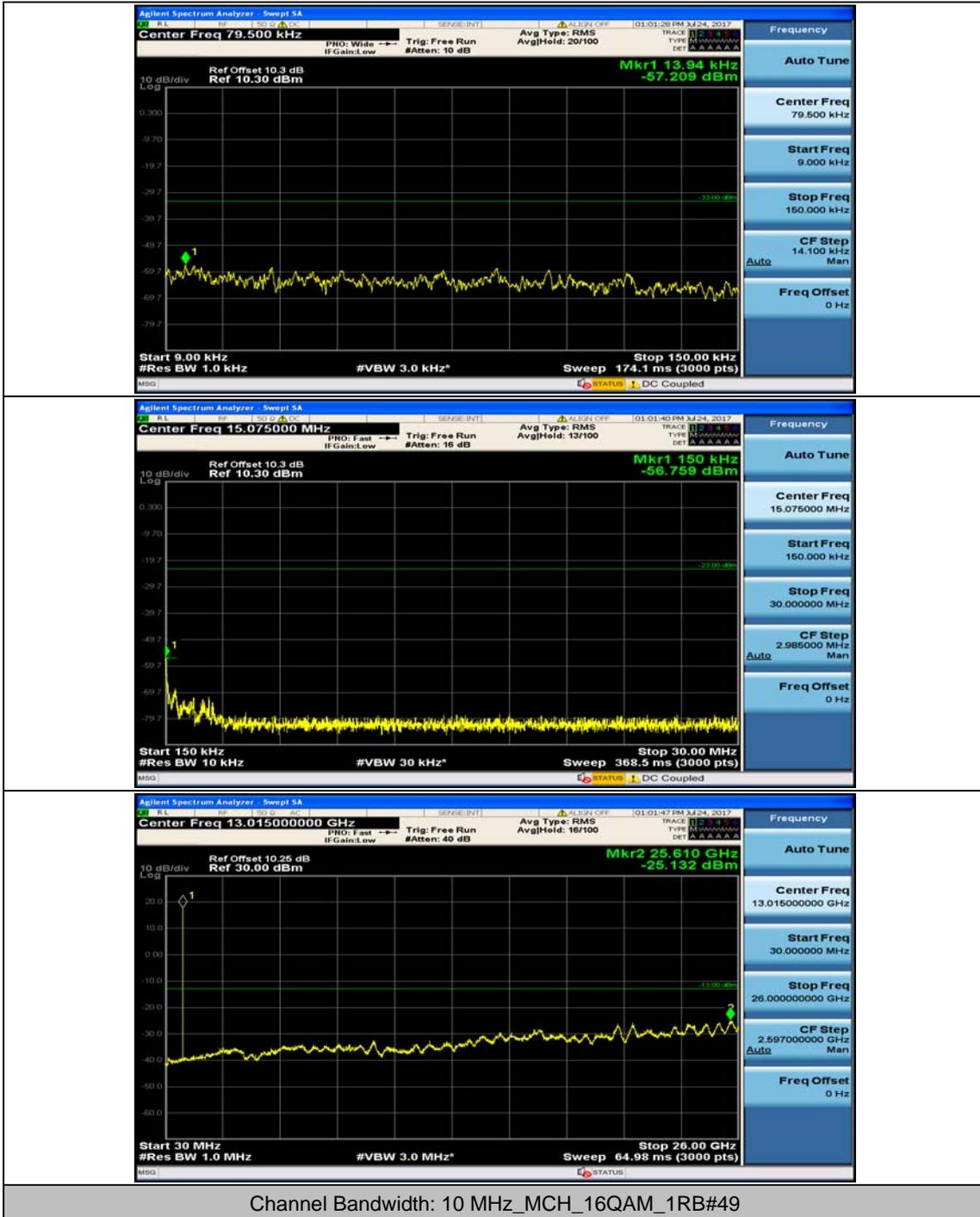


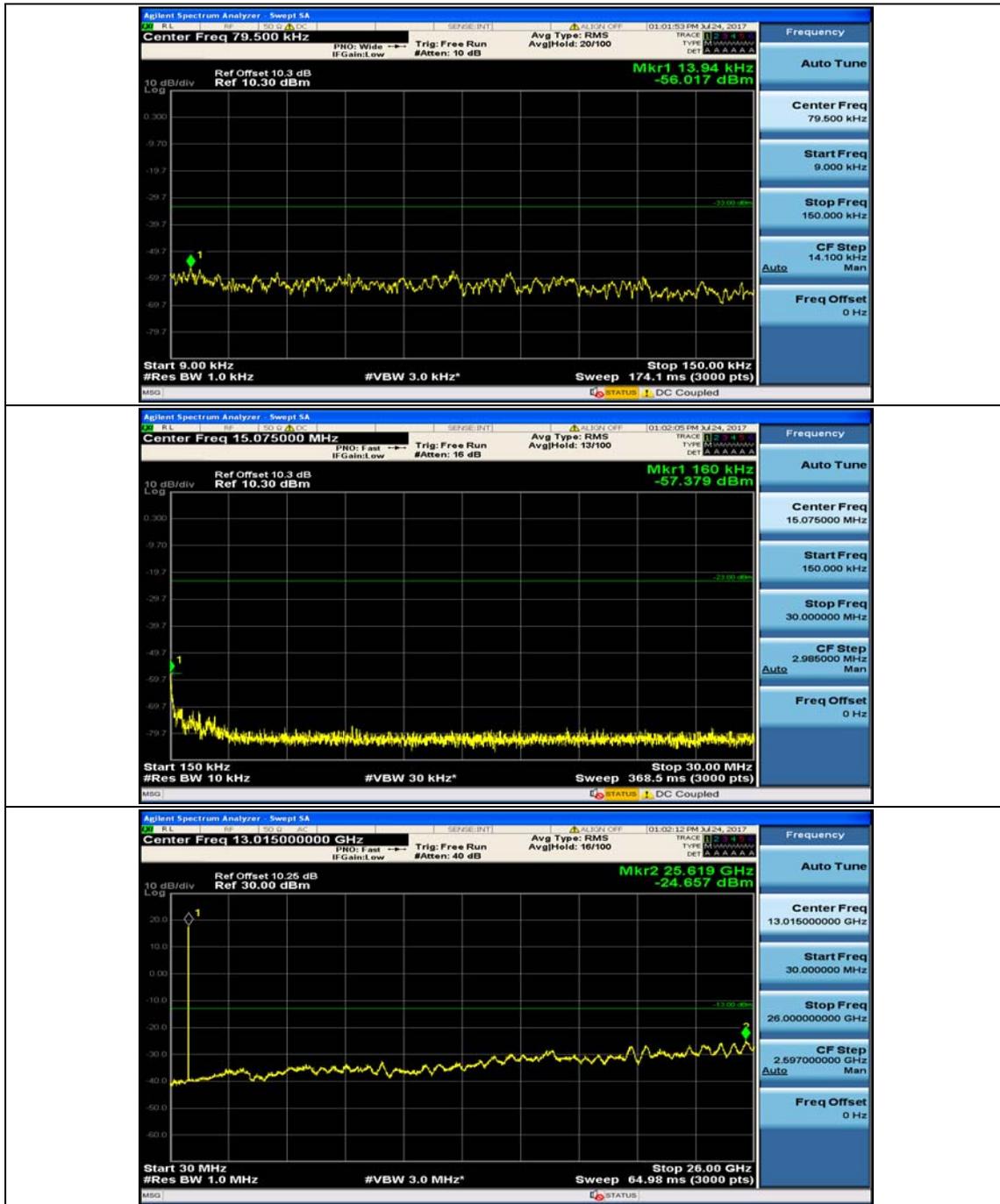


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

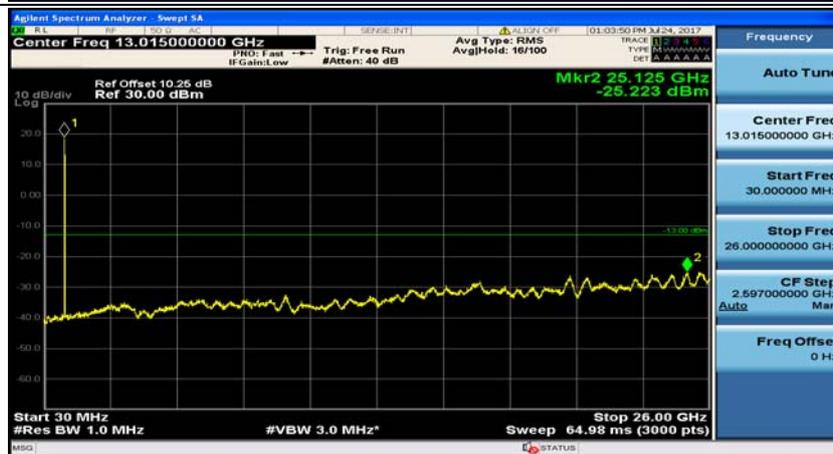
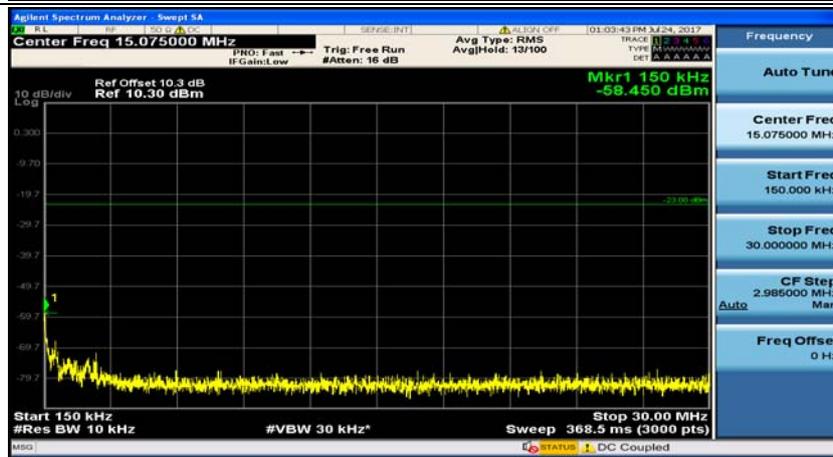


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

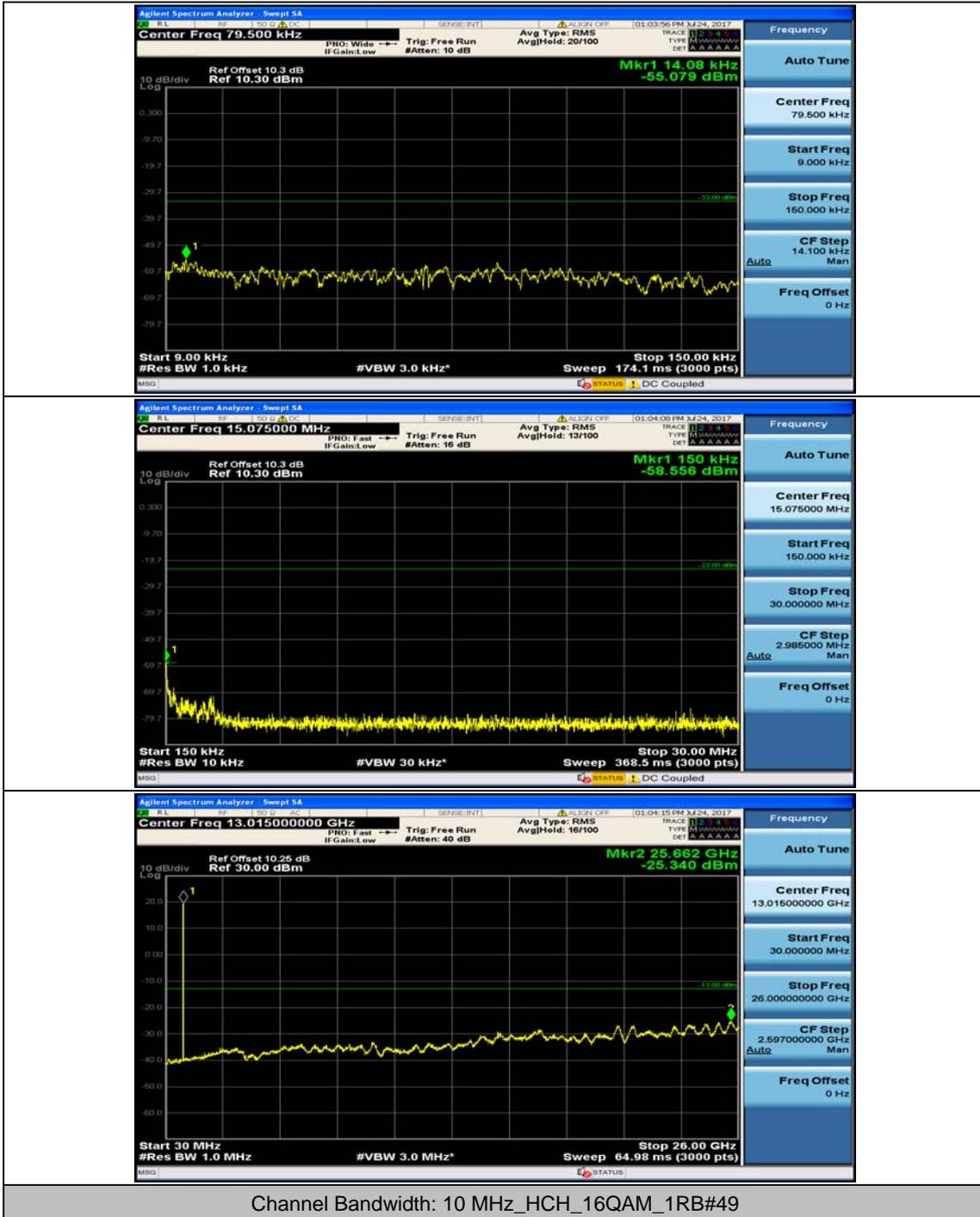


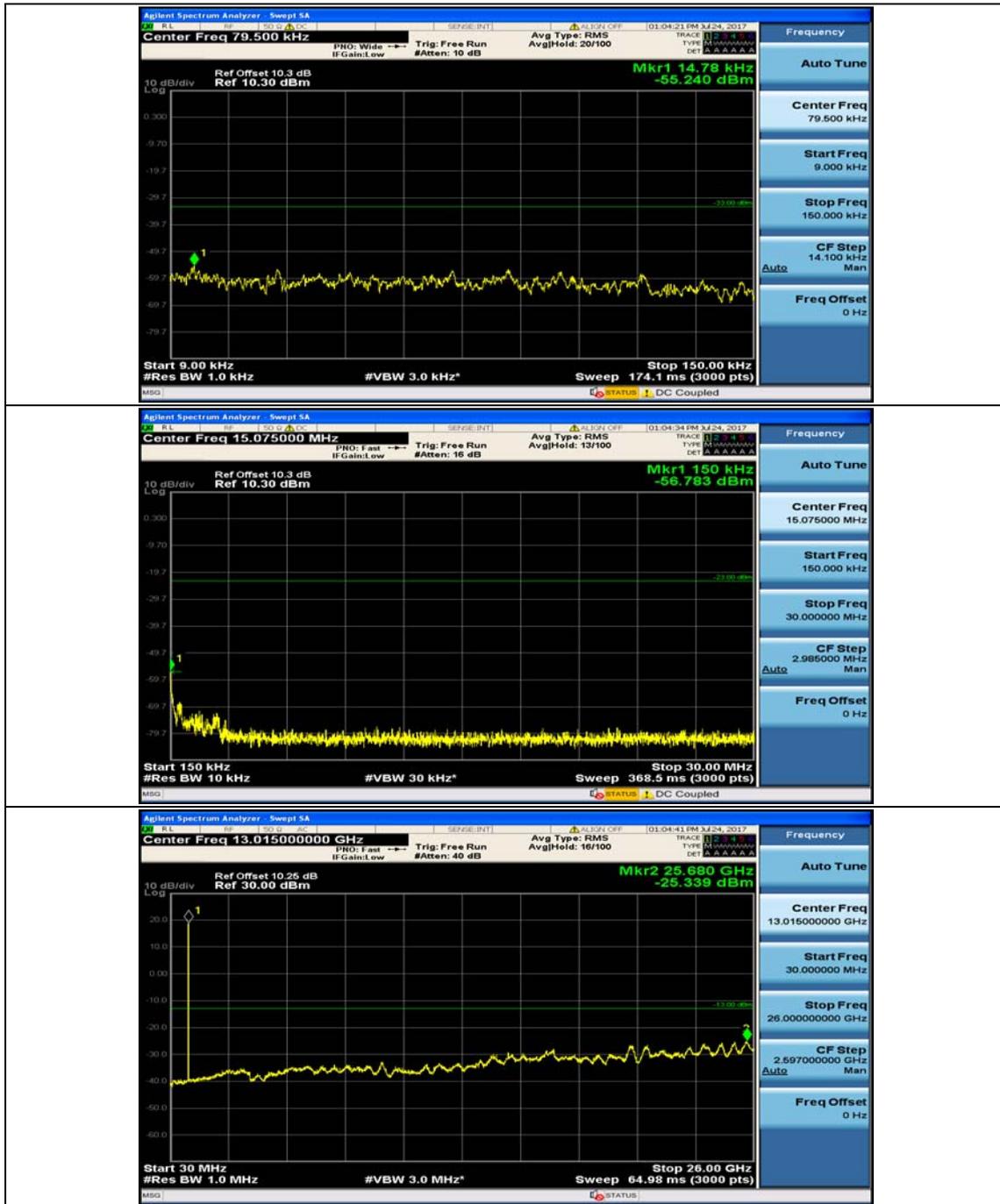


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



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	-1.7	-0.002061	± 2.5	PASS
		VN	TN	3.42	0.004147	± 2.5	PASS
		VH	TN	4.84	0.005869	± 2.5	PASS
	MCH	VL	TN	-1.06	-0.001267	± 2.5	PASS
		VN	TN	3.75	0.004483	± 2.5	PASS
		VH	TN	-0.41	-0.000490	± 2.5	PASS
	HCH	VL	TN	4.08	0.004810	± 2.5	PASS
		VN	TN	-1.05	-0.001238	± 2.5	PASS
		VH	TN	2.74	0.003230	± 2.5	PASS
16QAM	LCH	VL	TN	1.38	0.001673	± 2.5	PASS
		VN	TN	0.08	0.000097	± 2.5	PASS
		VH	TN	-1.94	-0.002352	± 2.5	PASS
	MCH	VL	TN	-1.57	-0.001877	± 2.5	PASS
		VN	TN	1.16	0.001387	± 2.5	PASS
		VH	TN	-0.72	-0.000861	± 2.5	PASS
	HCH	VL	TN	0.91	0.001073	± 2.5	PASS
		VN	TN	-0.85	-0.001002	± 2.5	PASS
		VH	TN	0.8	0.000943	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.78	0.003371	± 2.5	PASS
		VN	-20	1.6	0.001940	± 2.5	PASS
		VN	-10	1.05	0.001273	± 2.5	PASS
		VN	0	1.03	0.001249	± 2.5	PASS
		VN	10	-0.05	-0.000061	± 2.5	PASS
		VN	20	0.85	0.001031	± 2.5	PASS
		VN	30	1.63	0.001976	± 2.5	PASS
		VN	40	1.34	0.001625	± 2.5	PASS
		VN	50	3.37	0.004086	± 2.5	PASS
	MCH	VN	-30	1.49	0.001781	± 2.5	PASS

	VN	-20	0.78	0.000932	± 2.5	PASS	
		-10	4.03	0.004818	± 2.5	PASS	
		0	-0.71	-0.000849	± 2.5	PASS	
		10	4.61	0.005511	± 2.5	PASS	
		20	1.02	0.001219	± 2.5	PASS	
		30	3.16	0.003778	± 2.5	PASS	
		40	-1.34	-0.001602	± 2.5	PASS	
		50	4.92	0.005882	± 2.5	PASS	
	HCH	VN	-30	-1.46	-0.001721	± 2.5	PASS
		VN	-20	3.32	0.003914	± 2.5	PASS
		VN	-10	4.8	0.005658	± 2.5	PASS
		VN	0	1.87	0.002204	± 2.5	PASS
		VN	10	0.76	0.000896	± 2.5	PASS
		VN	20	-0.33	-0.000389	± 2.5	PASS
		VN	30	4.28	0.005045	± 2.5	PASS
		VN	40	0.66	0.000778	± 2.5	PASS
		VN	50	-1.08	-0.001273	± 2.5	PASS
		16QAM	LCH	VN	-30	-1.73	-0.002098
VN	-20			2.39	0.002898	± 2.5	PASS
VN	-10			1.25	0.001516	± 2.5	PASS
VN	0			-1.27	-0.001540	± 2.5	PASS
VN	10			2.53	0.003068	± 2.5	PASS
VN	20			4.92	0.005966	± 2.5	PASS
VN	30			2.95	0.003577	± 2.5	PASS
VN	40			-0.23	-0.000279	± 2.5	PASS
VN	50			0.44	0.000534	± 2.5	PASS
MCH	VN		-30	1.71	0.002016	± 2.5	PASS
	VN		-20	-1.48	-0.001745	± 2.5	PASS
	VN		-10	3.69	0.004350	± 2.5	PASS
	VN		0	4.56	0.005375	± 2.5	PASS
	VN		10	4.84	0.005706	± 2.5	PASS
	VN		20	-1.58	-0.001863	± 2.5	PASS
	VN		30	2.67	0.003147	± 2.5	PASS
	VN		40	1.3	0.001532	± 2.5	PASS
	VN		50	3.65	0.004303	± 2.5	PASS
HCH	VN		-30	2.12	0.002499	± 2.5	PASS
	VN		-20	-1.98	-0.002334	± 2.5	PASS
	VN		-10	2.93	0.003454	± 2.5	PASS
	VN		0	1.91	0.002252	± 2.5	PASS
	VN		10	1.45	0.001709	± 2.5	PASS
	VN		20	3.56	0.004197	± 2.5	PASS

		VN	30	-1.17	-0.001379	± 2.5	PASS
		VN	40	3.4	0.004008	± 2.5	PASS
		VN	50	0.91	0.001073	± 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	-0.001576	± 2.5	PASS
		VN	TN	0.86	0.001043	± 2.5	PASS
		VH	TN	-0.49	-0.000594	± 2.5	PASS
	MCH	VL	TN	2.1	0.002510	± 2.5	PASS
		VN	TN	2.5	0.002989	± 2.5	PASS
		VH	TN	-0.77	-0.000921	± 2.5	PASS
	HCH	VL	TN	0.66	0.000778	± 2.5	PASS
		VN	TN	-1.65	-0.001945	± 2.5	PASS
		VH	TN	-0.47	-0.000554	± 2.5	PASS
16QAM	LCH	VL	TN	2.22	0.002692	± 2.5	PASS
		VN	TN	-0.86	-0.001043	± 2.5	PASS
		VH	TN	-1.24	-0.001504	± 2.5	PASS
	MCH	VL	TN	0.07	0.000084	± 2.5	PASS
		VN	TN	3.71	0.004435	± 2.5	PASS
		VH	TN	0.03	0.000036	± 2.5	PASS
	HCH	VL	TN	0.4	0.000472	± 2.5	PASS
		VN	TN	-1.93	-0.002275	± 2.5	PASS
		VH	TN	0.31	0.000365	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.8	0.003395	± 2.5	PASS
		VN	-20	4.08	0.004947	± 2.5	PASS
		VN	-10	1.01	0.001225	± 2.5	PASS
		VN	0	2.13	0.002583	± 2.5	PASS
		VN	10	4.85	0.005881	± 2.5	PASS
		VN	20	0.54	0.000655	± 2.5	PASS
		VN	30	-1.58	-0.001916	± 2.5	PASS
		VN	40	3.3	0.004001	± 2.5	PASS
		VN	50	0.16	0.000194	± 2.5	PASS
	MCH	VN	-30	2.12	0.002534	± 2.5	PASS
		VN	-20	3.89	0.004650	± 2.5	PASS

		VN	-10	1.2	0.001435	± 2.5	PASS	
		VN	0	4.3	0.005140	± 2.5	PASS	
		VN	10	-1.15	-0.001375	± 2.5	PASS	
		VN	20	0.56	0.000669	± 2.5	PASS	
		VN	30	3.95	0.004722	± 2.5	PASS	
		VN	40	2.26	0.002702	± 2.5	PASS	
		VN	50	4.1	0.004901	± 2.5	PASS	
	HCH	VN	-30	1.6	0.001886	± 2.5	PASS	
		VN	-20	4.22	0.004975	± 2.5	PASS	
		VN	-10	2.07	0.002440	± 2.5	PASS	
		VN	0	4.02	0.004739	± 2.5	PASS	
		VN	10	4.74	0.005588	± 2.5	PASS	
		VN	20	-1.26	-0.001485	± 2.5	PASS	
		VN	30	4.32	0.005093	± 2.5	PASS	
	QPSK	LCH	VN	40	1.7	0.002004	± 2.5	PASS
			VN	50	-1.94	-0.002287	± 2.5	PASS
			VN	-30	2.37	0.002874	± 2.5	PASS
			VN	-20	4.02	0.004874	± 2.5	PASS
VN			-10	1.44	0.001746	± 2.5	PASS	
VN			0	4.6	0.005578	± 2.5	PASS	
VN			10	-0.16	-0.000194	± 2.5	PASS	
VN			20	2.4	0.002910	± 2.5	PASS	
VN			30	3.09	0.003747	± 2.5	PASS	
MCH		VN	40	1.18	0.001431	± 2.5	PASS	
		VN	50	0.71	0.000861	± 2.5	PASS	
		VN	-30	-0.46	-0.000542	± 2.5	PASS	
		VN	-20	-0.08	-0.000094	± 2.5	PASS	
		VN	-10	1.58	0.001863	± 2.5	PASS	
		VN	0	-0.24	-0.000283	± 2.5	PASS	
		VN	10	-1.44	-0.001698	± 2.5	PASS	
		VN	20	3	0.003536	± 2.5	PASS	
		VN	30	2.72	0.003206	± 2.5	PASS	
HCH	VN	40	3.69	0.004350	± 2.5	PASS		
	VN	50	-1.43	-0.001686	± 2.5	PASS		
	VN	-30	-0.55	-0.000648	± 2.5	PASS		
	VN	-20	4.82	0.005682	± 2.5	PASS		
	VN	-10	3.89	0.004586	± 2.5	PASS		
	VN	0	1.86	0.002193	± 2.5	PASS		
	VN	10	3.96	0.004668	± 2.5	PASS		
VN	20	0.51	0.000601	± 2.5	PASS			
VN	30	4.4	0.005187	± 2.5	PASS			

		VN	40	2.53	0.002982	± 2.5	PASS
		VN	50	0.55	0.000648	± 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	2.41	0.002922	± 2.5	PASS
		VN	TN	0.33	0.000400	± 2.5	PASS
		VH	TN	1.96	0.002377	± 2.5	PASS
	MCH	VL	TN	0.6	0.000717	± 2.5	PASS
		VN	TN	4.43	0.005296	± 2.5	PASS
		VH	TN	-0.62	-0.000741	± 2.5	PASS
	HCH	VL	TN	3.78	0.004456	± 2.5	PASS
		VN	TN	2.93	0.003454	± 2.5	PASS
		VH	TN	3.68	0.004338	± 2.5	PASS
16QAM	LCH	VL	TN	4.27	0.005178	± 2.5	PASS
		VN	TN	-0.97	-0.001176	± 2.5	PASS
		VH	TN	3.15	0.003820	± 2.5	PASS
	MCH	VL	TN	4.67	0.005583	± 2.5	PASS
		VN	TN	4.85	0.005798	± 2.5	PASS
		VH	TN	-1.97	-0.002355	± 2.5	PASS
	HCH	VL	TN	0.65	0.000766	± 2.5	PASS
		VN	TN	3.29	0.003878	± 2.5	PASS
		VH	TN	3.45	0.004067	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.08	0.000097	± 2.5	PASS
		VN	-20	4.63	0.005614	± 2.5	PASS
		VN	-10	-1.27	-0.001540	± 2.5	PASS
		VN	0	0.2	0.000243	± 2.5	PASS
		VN	10	-1.17	-0.001419	± 2.5	PASS
		VN	20	2.91	0.003529	± 2.5	PASS
		VN	30	0.54	0.000655	± 2.5	PASS
		VN	40	2.28	0.002765	± 2.5	PASS
		VN	50	2.14	0.002595	± 2.5	PASS
	MCH	VN	-30	4.92	0.005882	± 2.5	PASS
		VN	-20	-1.4	-0.001674	± 2.5	PASS
		VN	-10	1.26	0.001506	± 2.5	PASS

		VN	0	1.72	0.002056	± 2.5	PASS		
		VN	10	2.87	0.003431	± 2.5	PASS		
		VN	20	0.98	0.001172	± 2.5	PASS		
		VN	30	-1.37	-0.001638	± 2.5	PASS		
		VN	40	-0.87	-0.001040	± 2.5	PASS		
		VN	50	0.19	0.000227	± 2.5	PASS		
	HCH	VN	-30	4.76	0.005611	± 2.5	PASS		
		VN	-20	3.38	0.003984	± 2.5	PASS		
		VN	-10	-0.61	-0.000719	± 2.5	PASS		
		VN	0	-1.33	-0.001568	± 2.5	PASS		
		VN	10	-0.61	-0.000719	± 2.5	PASS		
		VN	20	-0.46	-0.000542	± 2.5	PASS		
		VN	30	1.47	0.001733	± 2.5	PASS		
		VN	40	-1.87	-0.002204	± 2.5	PASS		
		VN	50	0.7	0.000825	± 2.5	PASS		
		16QAM	LCH	VN	-30	2.77	0.003359	± 2.5	PASS
				VN	-20	-1.71	-0.002073	± 2.5	PASS
				VN	-10	-0.06	-0.000073	± 2.5	PASS
VN	0			-0.88	-0.001067	± 2.5	PASS		
VN	10			2.8	0.003395	± 2.5	PASS		
VN	20			2.61	0.003165	± 2.5	PASS		
VN	30			2.45	0.002971	± 2.5	PASS		
VN	40			4.99	0.006051	± 2.5	PASS		
VN	50			4.37	0.005299	± 2.5	PASS		
MCH	VN		-30	-1.86	-0.002193	± 2.5	PASS		
	VN		-20	1.29	0.001521	± 2.5	PASS		
	VN		-10	0.2	0.000236	± 2.5	PASS		
	VN		0	1.42	0.001674	± 2.5	PASS		
	VN		10	0.54	0.000637	± 2.5	PASS		
	VN		20	0.87	0.001026	± 2.5	PASS		
	VN		30	2.3	0.002711	± 2.5	PASS		
	VN		40	2.74	0.003230	± 2.5	PASS		
	VN		50	-1.49	-0.001756	± 2.5	PASS		
HCH	VN		-30	4.08	0.004810	± 2.5	PASS		
	VN		-20	-1.13	-0.001332	± 2.5	PASS		
	VN		-10	1.12	0.001320	± 2.5	PASS		
	VN		0	3.69	0.004350	± 2.5	PASS		
	VN		10	2.47	0.002912	± 2.5	PASS		
	VN		20	2.17	0.002558	± 2.5	PASS		
	VN		30	1.55	0.001827	± 2.5	PASS		
	VN		40	4.59	0.005411	± 2.5	PASS		

		VN	50	3.55	0.004185	± 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	2.41	0.002922	± 2.5	PASS
		VN	TN	-0.93	-0.001128	± 2.5	PASS
		VH	TN	-1.95	-0.002364	± 2.5	PASS
	MCH	VL	TN	3.72	0.004447	± 2.5	PASS
		VN	TN	-0.48	-0.000574	± 2.5	PASS
		VH	TN	4.16	0.004973	± 2.5	PASS
	HCH	VL	TN	4.04	0.004762	± 2.5	PASS
		VN	TN	-1.38	-0.001627	± 2.5	PASS
		VH	TN	3.23	0.003808	± 2.5	PASS
16QAM	LCH	VL	TN	-1.73	-0.002098	± 2.5	PASS
		VN	TN	0.11	0.000133	± 2.5	PASS
		VH	TN	-1.42	-0.001722	± 2.5	PASS
	MCH	VL	TN	3.49	0.004172	± 2.5	PASS
		VN	TN	2.03	0.002427	± 2.5	PASS
		VH	TN	3.83	0.004579	± 2.5	PASS
	HCH	VL	TN	0.16	0.000189	± 2.5	PASS
		VN	TN	2.67	0.003147	± 2.5	PASS
		VH	TN	-0.41	-0.000483	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.97	0.004814	± 2.5	PASS
		VN	-20	3.87	0.004693	± 2.5	PASS
		VN	-10	-1.02	-0.001237	± 2.5	PASS
		VN	0	-1	-0.001213	± 2.5	PASS
		VN	10	-1.66	-0.002013	± 2.5	PASS
		VN	20	-1.18	-0.001431	± 2.5	PASS
		VN	30	-1.73	-0.002098	± 2.5	PASS
		VN	40	-1.72	-0.002086	± 2.5	PASS
		VN	50	-1.37	-0.001661	± 2.5	PASS
	MCH	VN	-30	-0.99	-0.001184	± 2.5	PASS
		VN	-20	-1.84	-0.002200	± 2.5	PASS
		VN	-10	3.48	0.004160	± 2.5	PASS
		VN	0	-1.02	-0.001219	± 2.5	PASS
		VN	10	4.33	0.005176	± 2.5	PASS

		VN	20	3.31	0.003957	± 2.5	PASS
		VN	30	2.03	0.002427	± 2.5	PASS
		VN	40	3.9	0.004662	± 2.5	PASS
		VN	50	0.31	0.000371	± 2.5	PASS
	HCH	VN	-30	3.19	0.003760	± 2.5	PASS
		VN	-20	4.3	0.005069	± 2.5	PASS
		VN	-10	-1.26	-0.001485	± 2.5	PASS
		VN	0	-0.12	-0.000141	± 2.5	PASS
		VN	10	0.04	0.000047	± 2.5	PASS
		VN	20	0.19	0.000224	± 2.5	PASS
		VN	30	2.44	0.002876	± 2.5	PASS
		VN	40	3.91	0.004609	± 2.5	PASS
		VN	50	3.17	0.003737	± 2.5	PASS
		QPSK	LCH	VN	-30	3.01	0.003650
VN	-20			0.6	0.000728	± 2.5	PASS
VN	-10			-1.91	-0.002316	± 2.5	PASS
VN	0			2.46	0.002983	± 2.5	PASS
VN	10			0.4	0.000485	± 2.5	PASS
VN	20			4.05	0.004911	± 2.5	PASS
VN	30			3.47	0.004208	± 2.5	PASS
VN	40			-1.76	-0.002134	± 2.5	PASS
VN	50			-1.54	-0.001867	± 2.5	PASS
MCH	VN		-30	-1.99	-0.002346	± 2.5	PASS
	VN		-20	4.48	0.005281	± 2.5	PASS
	VN		-10	-1.12	-0.001320	± 2.5	PASS
	VN		0	3.43	0.004043	± 2.5	PASS
	VN		10	0.77	0.000908	± 2.5	PASS
	VN		20	2.37	0.002794	± 2.5	PASS
	VN		30	-0.84	-0.000990	± 2.5	PASS
	VN		40	1.86	0.002193	± 2.5	PASS
	VN		50	3.43	0.004043	± 2.5	PASS
HCH	VN		-30	-0.86	-0.001014	± 2.5	PASS
	VN		-20	1.4	0.001650	± 2.5	PASS
	VN		-10	2.87	0.003383	± 2.5	PASS
	VN		0	3.16	0.003725	± 2.5	PASS
	VN		10	-1.67	-0.001969	± 2.5	PASS
	VN		20	1	0.001179	± 2.5	PASS
	VN		30	4.06	0.004786	± 2.5	PASS
	VN		40	-0.56	-0.000660	± 2.5	PASS
	VN		50	0.89	0.001049	± 2.5	PASS