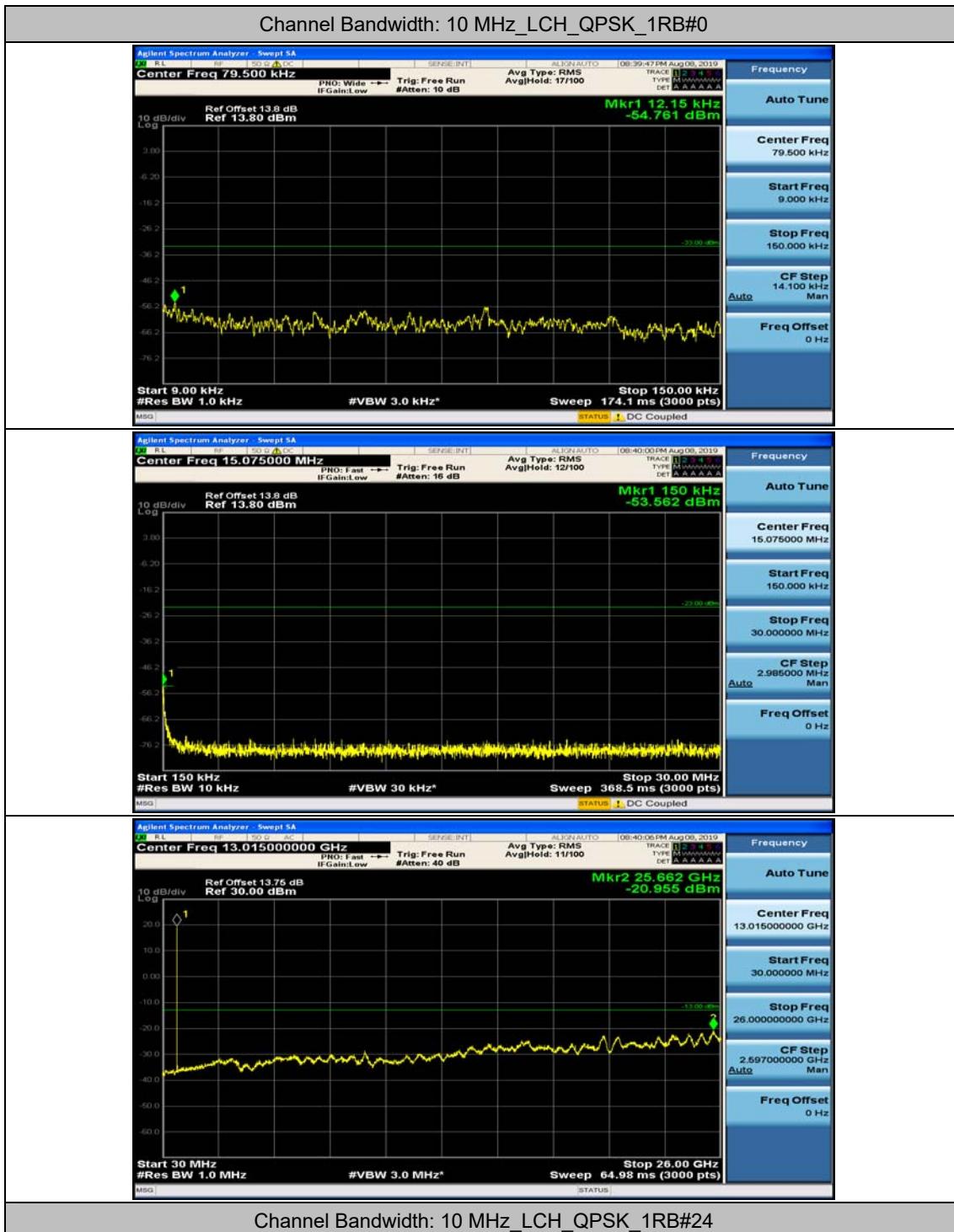
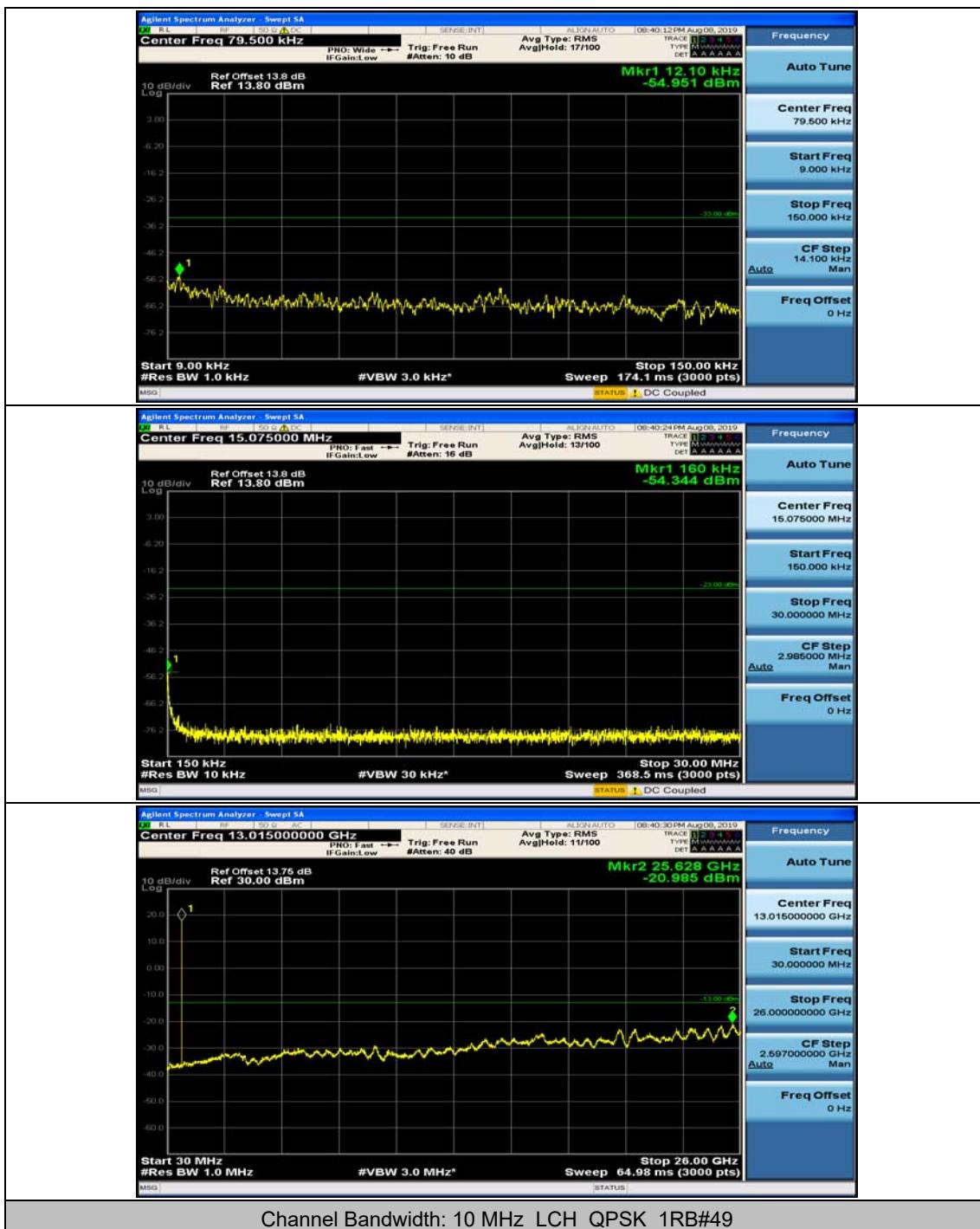
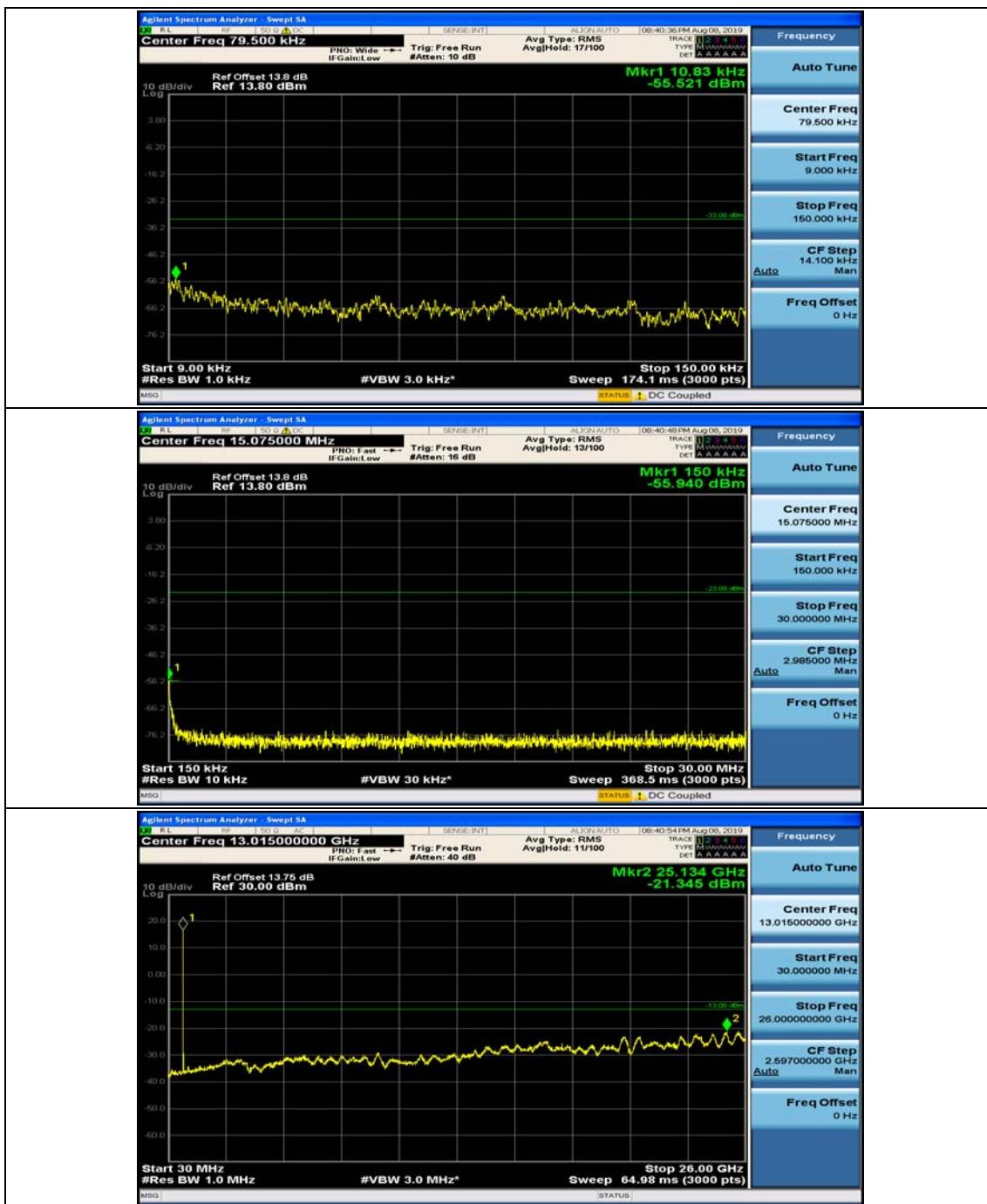
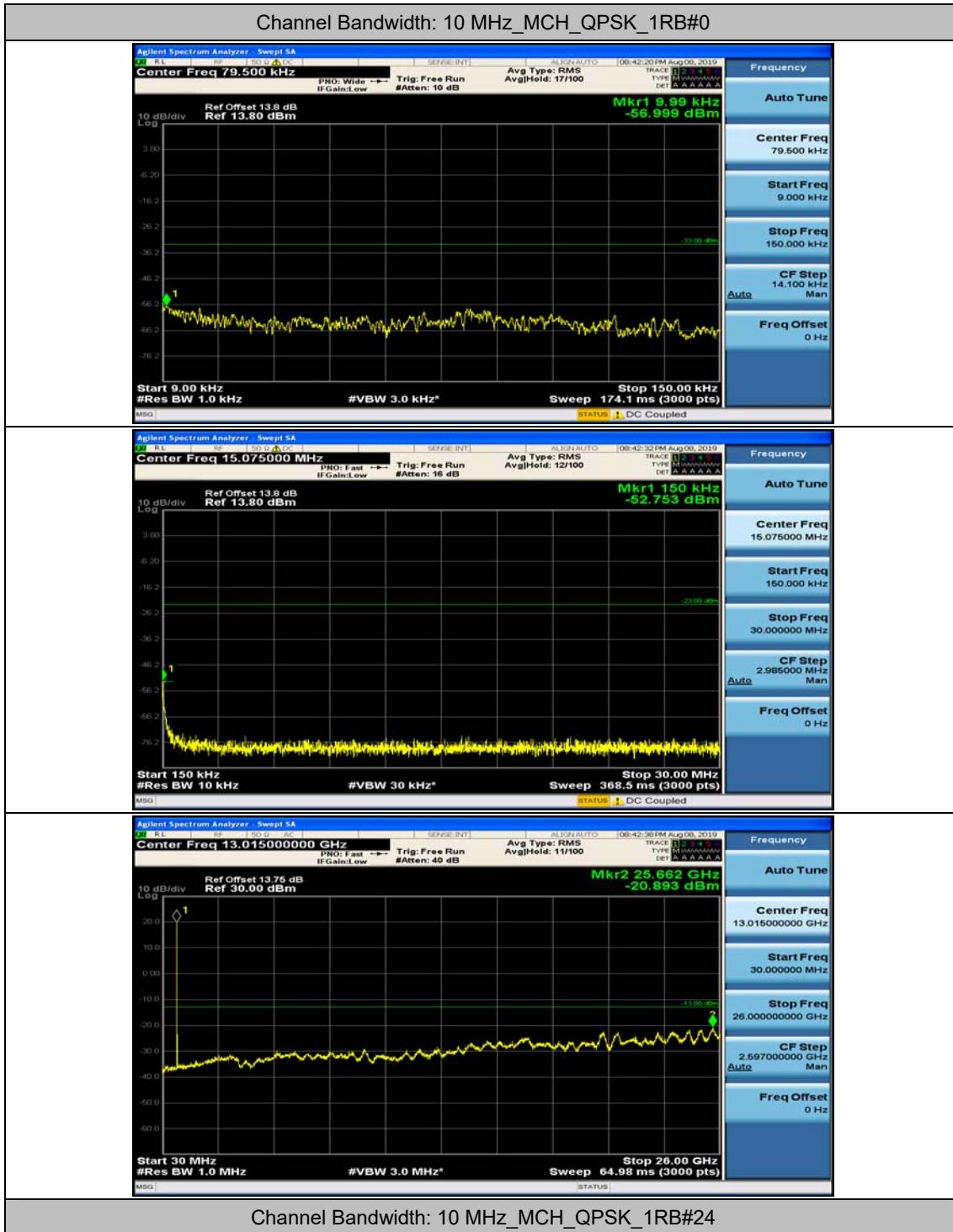


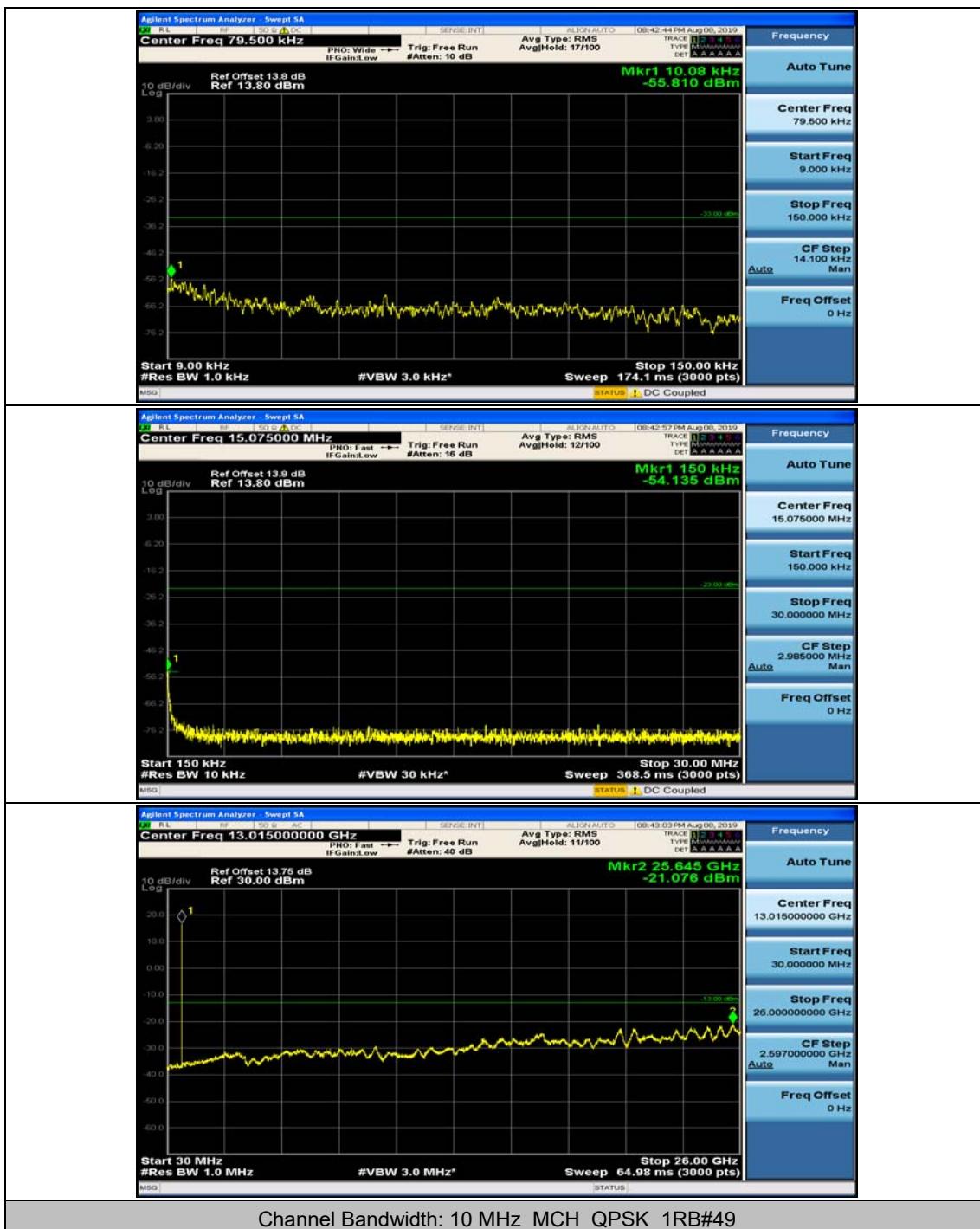
Channel Bandwidth: 10 MHz

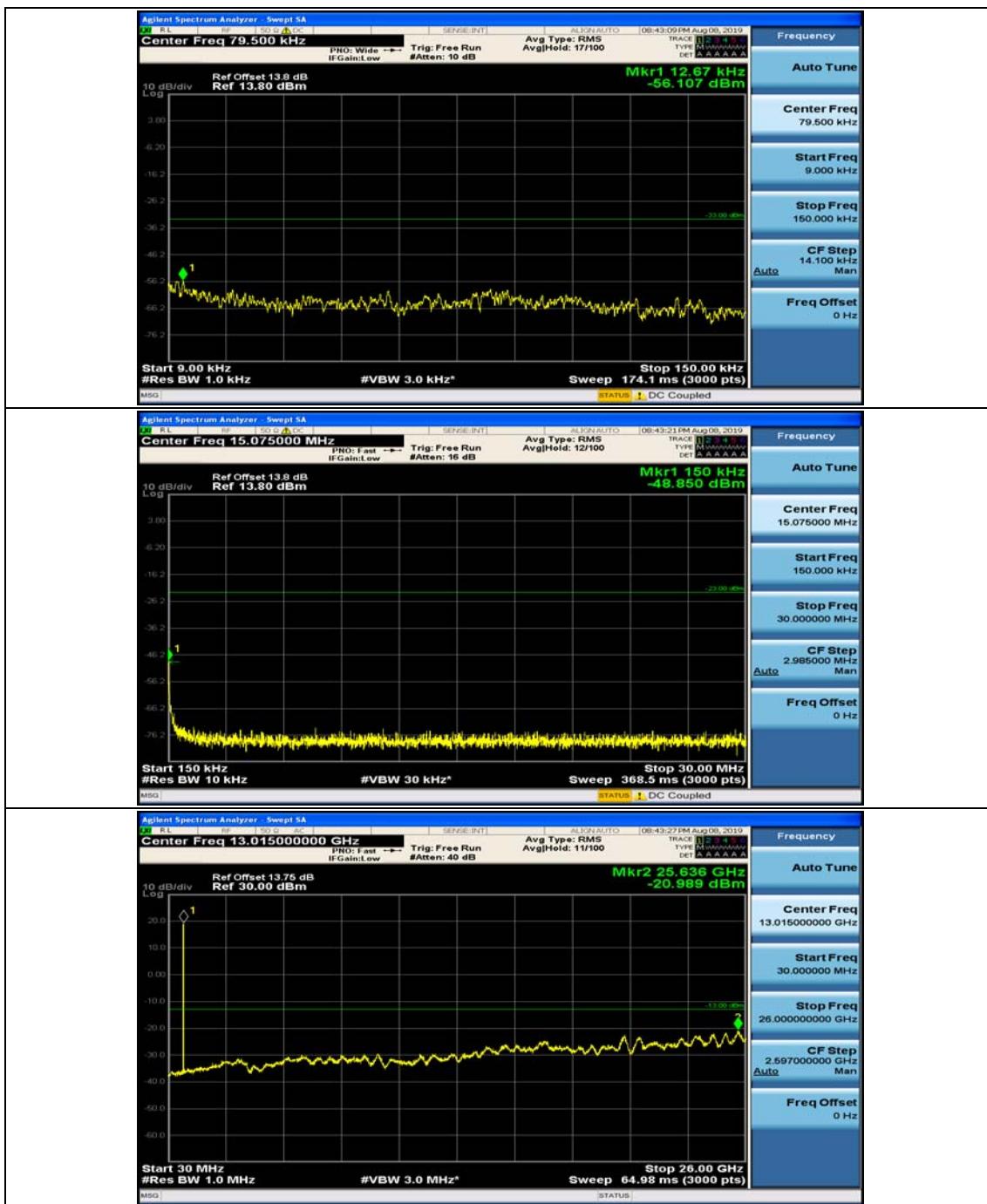


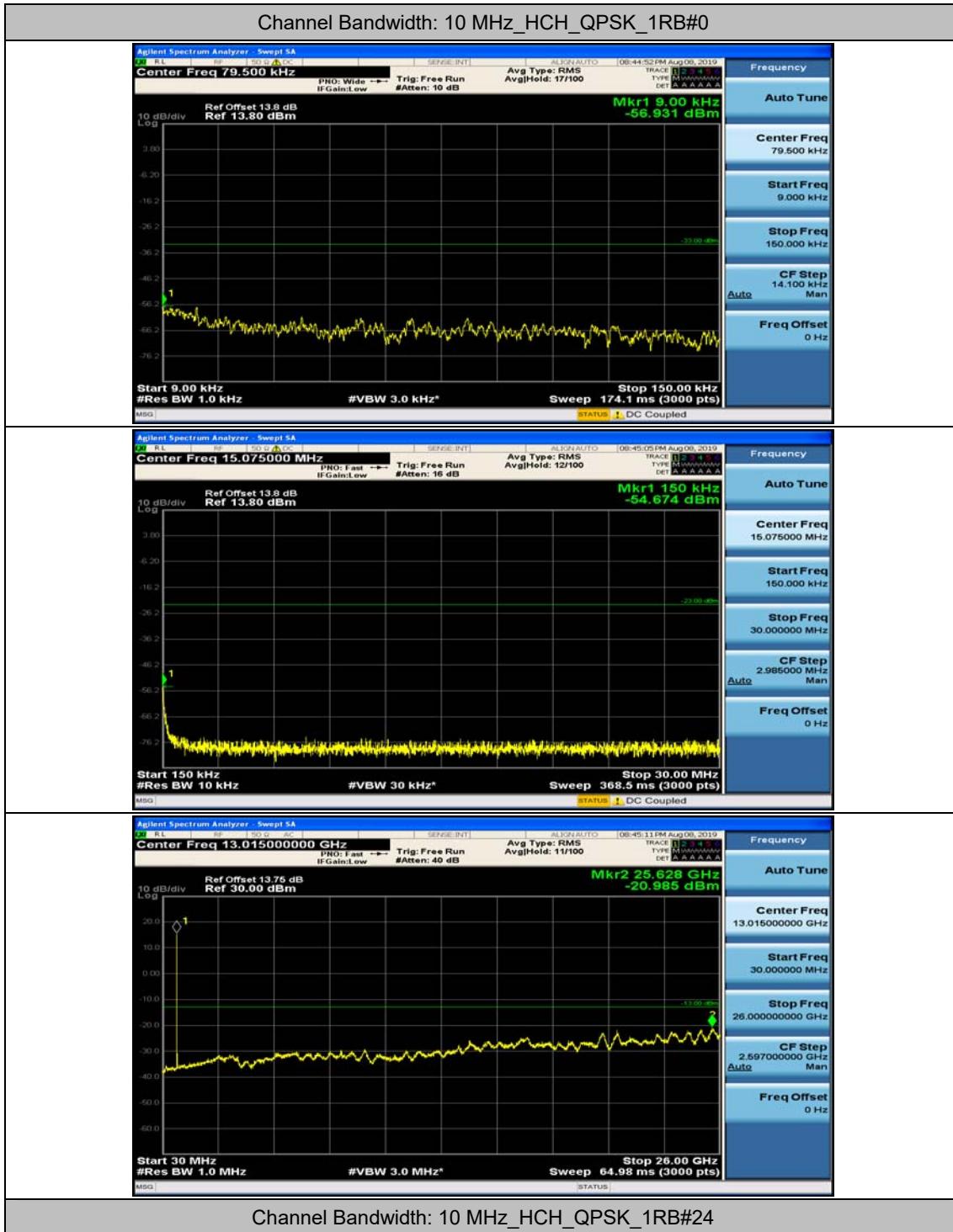


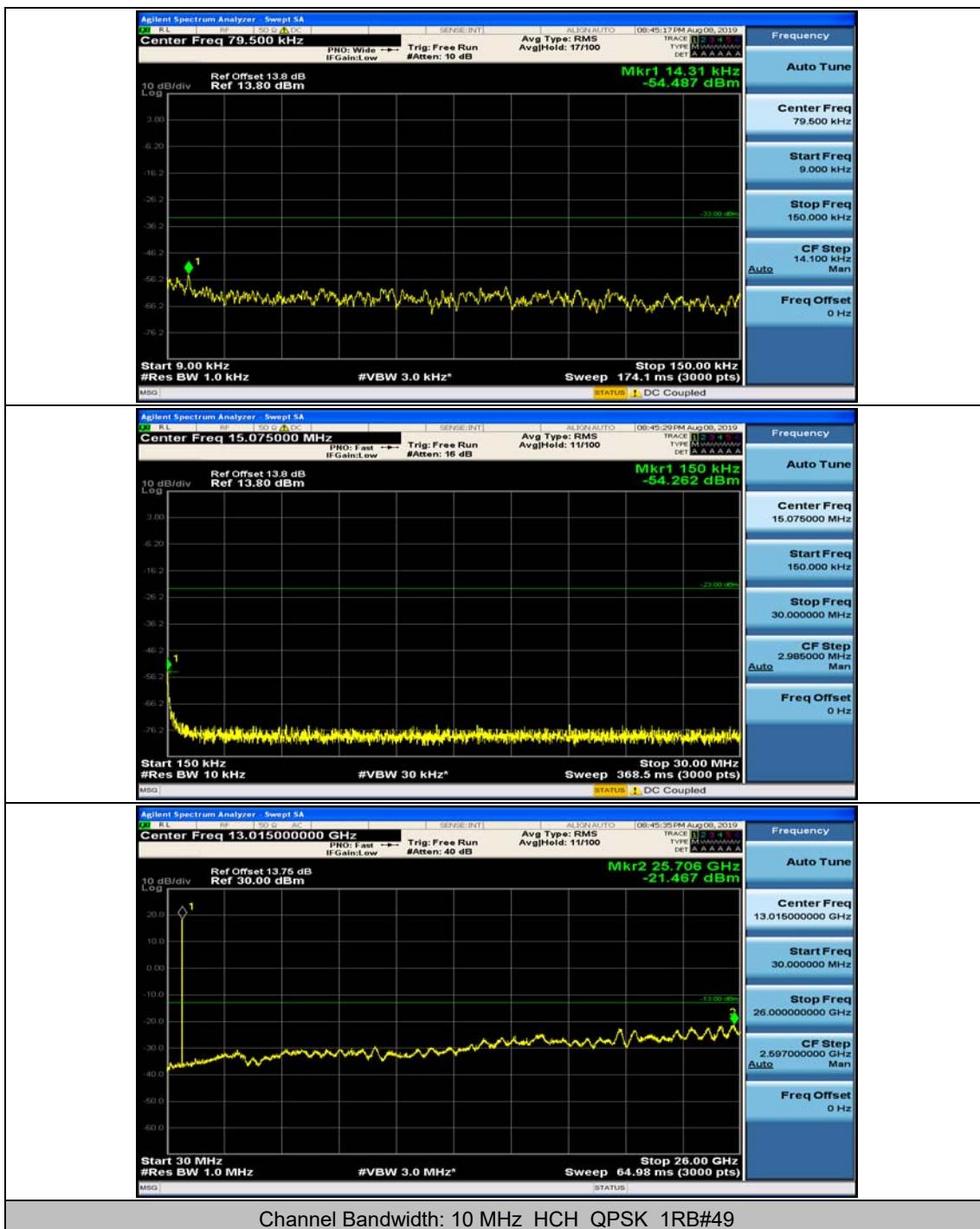


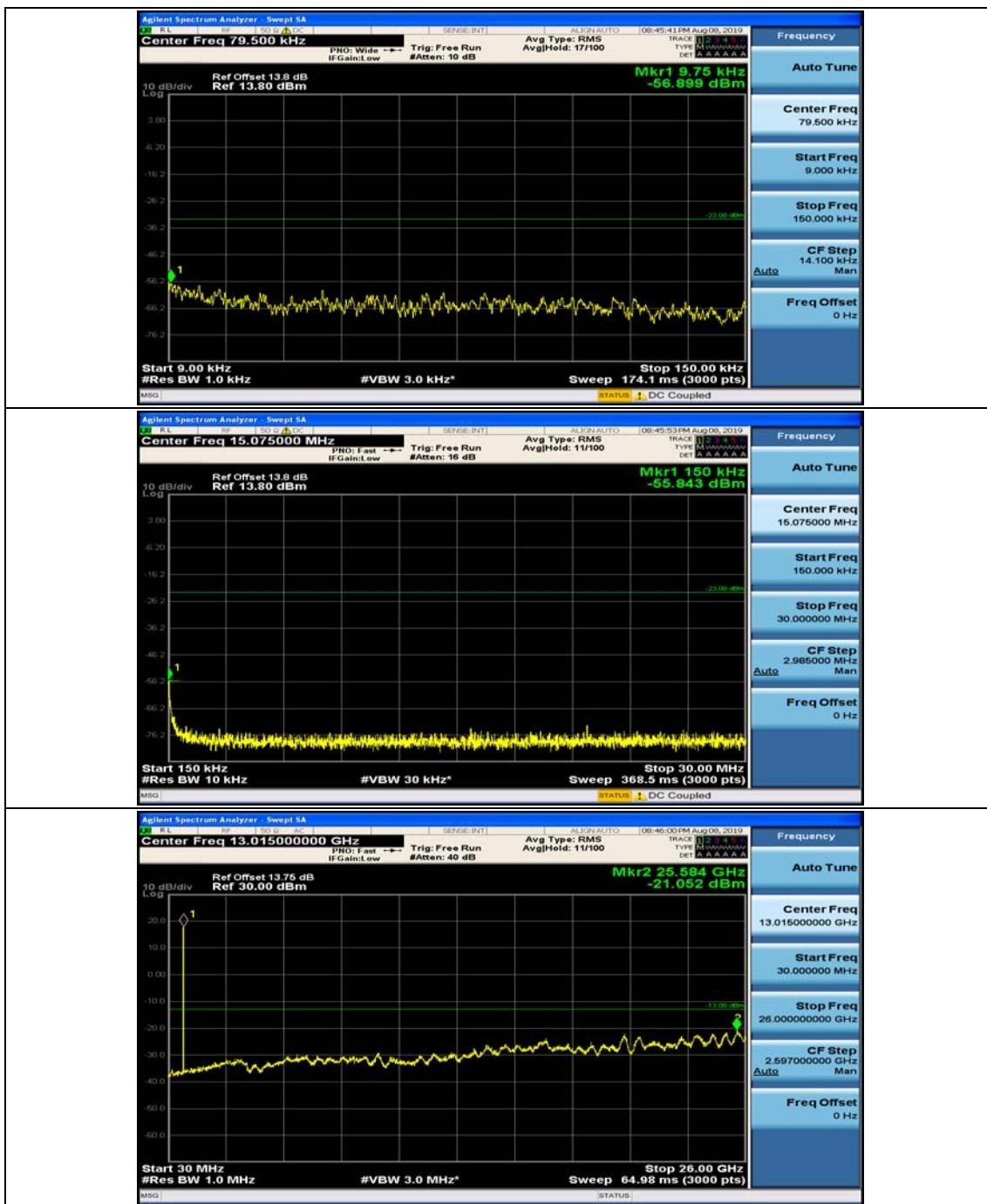


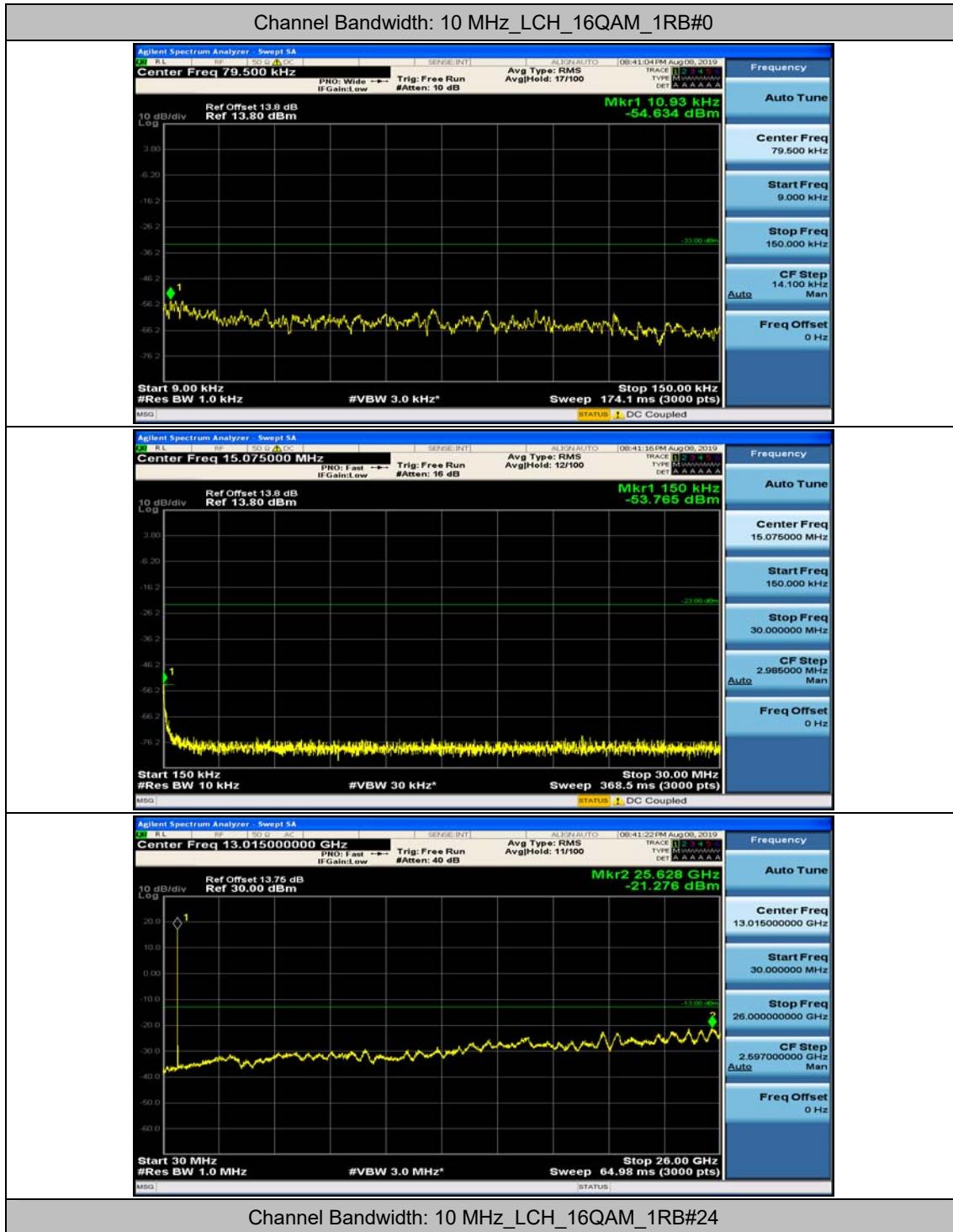


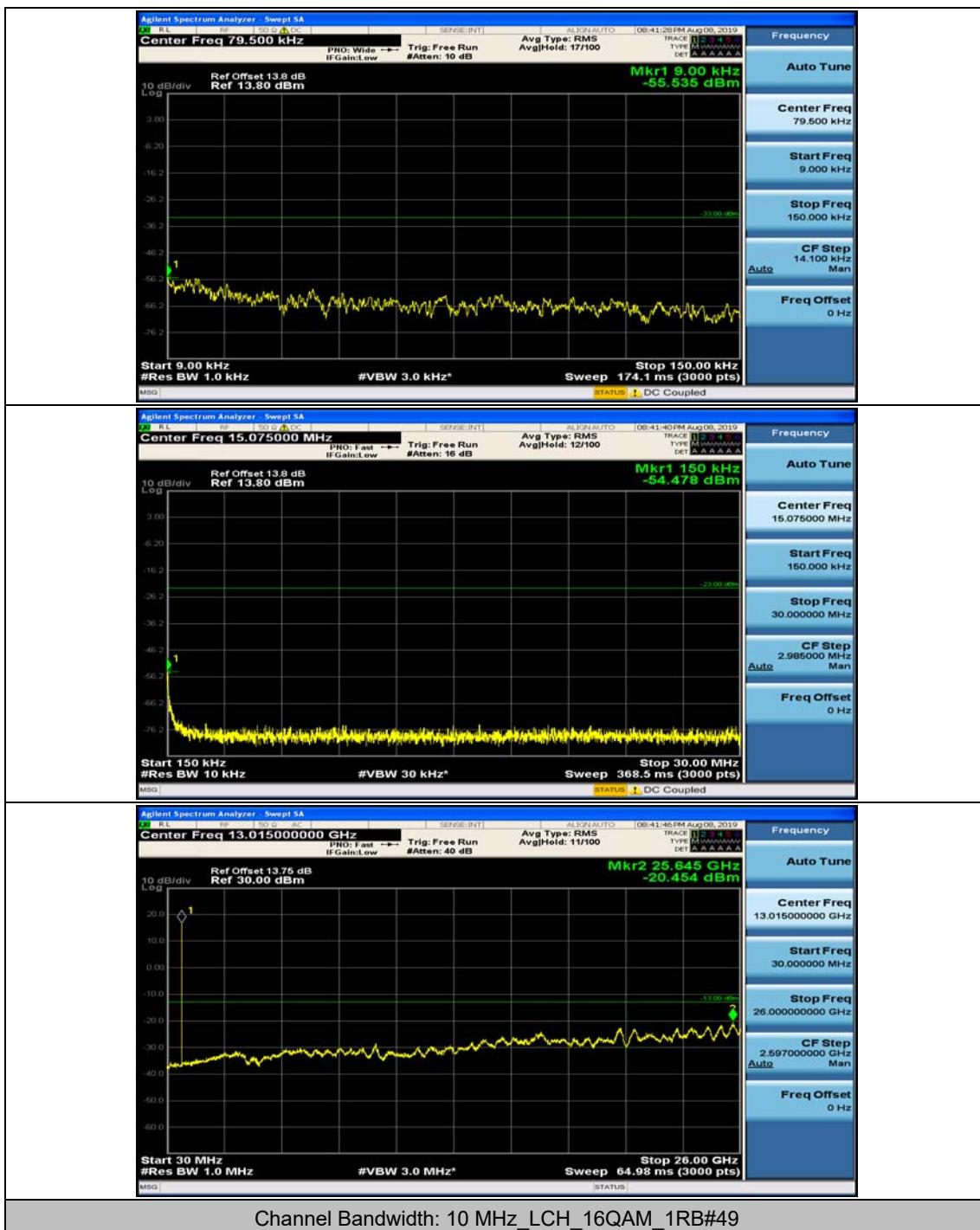


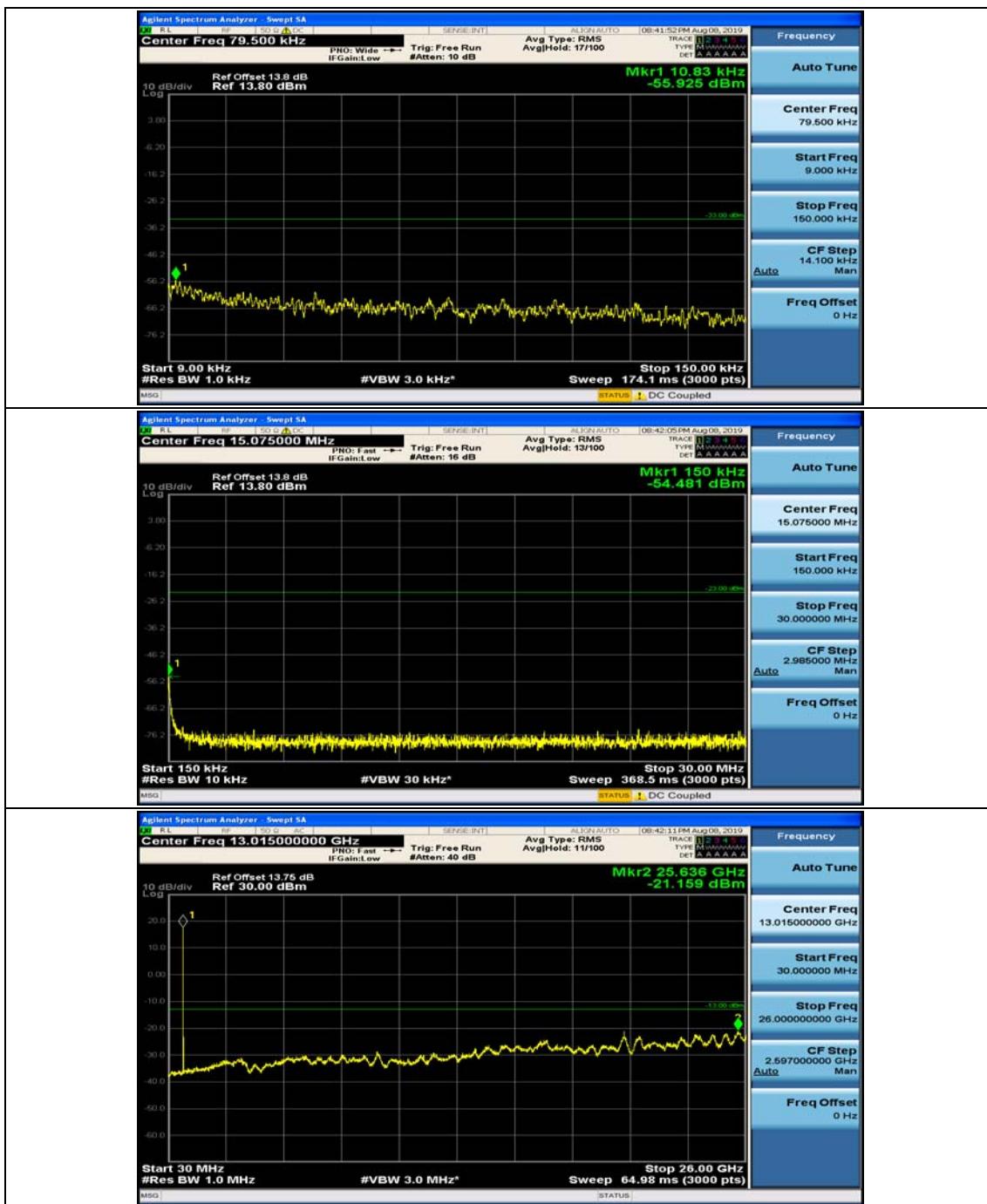


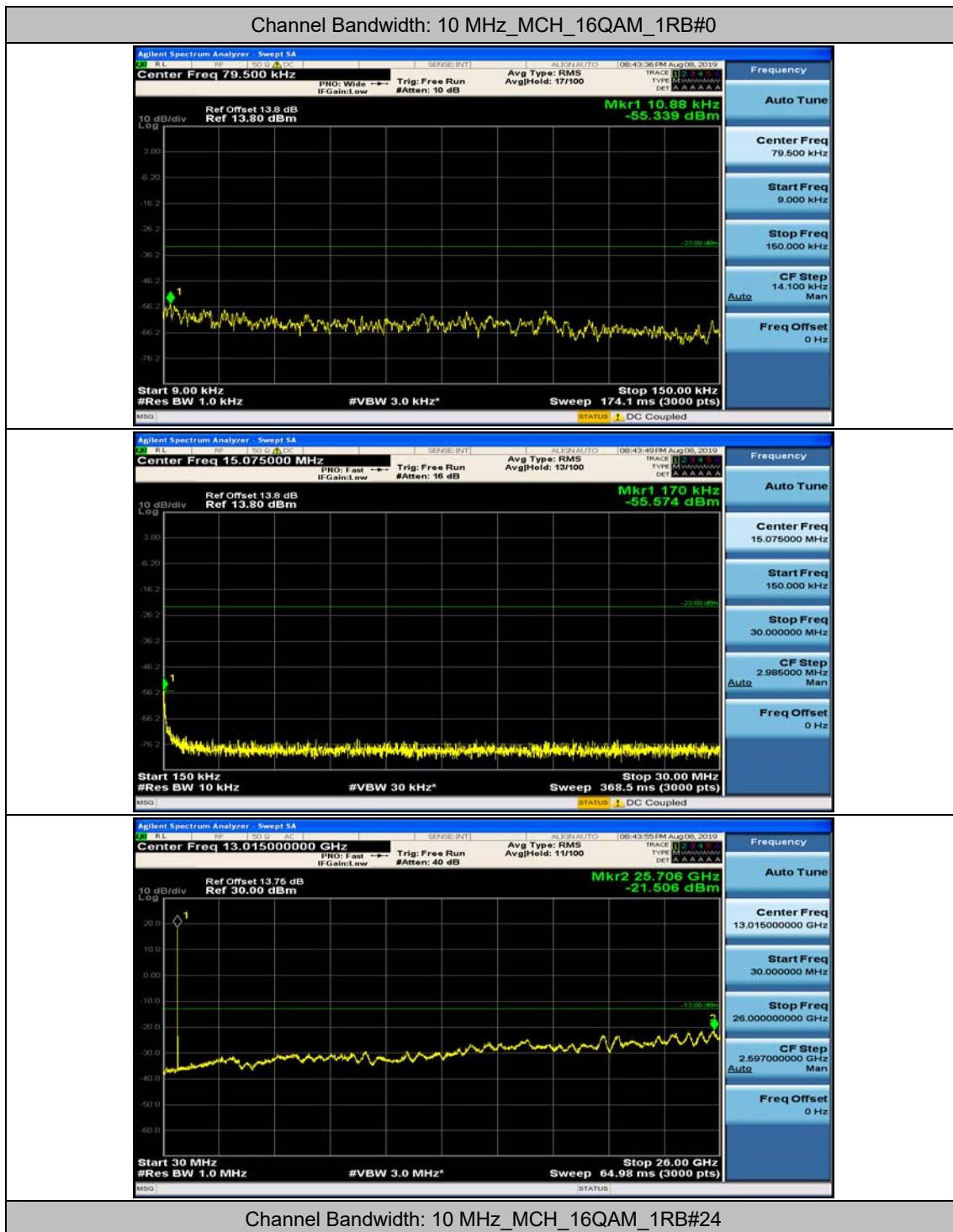


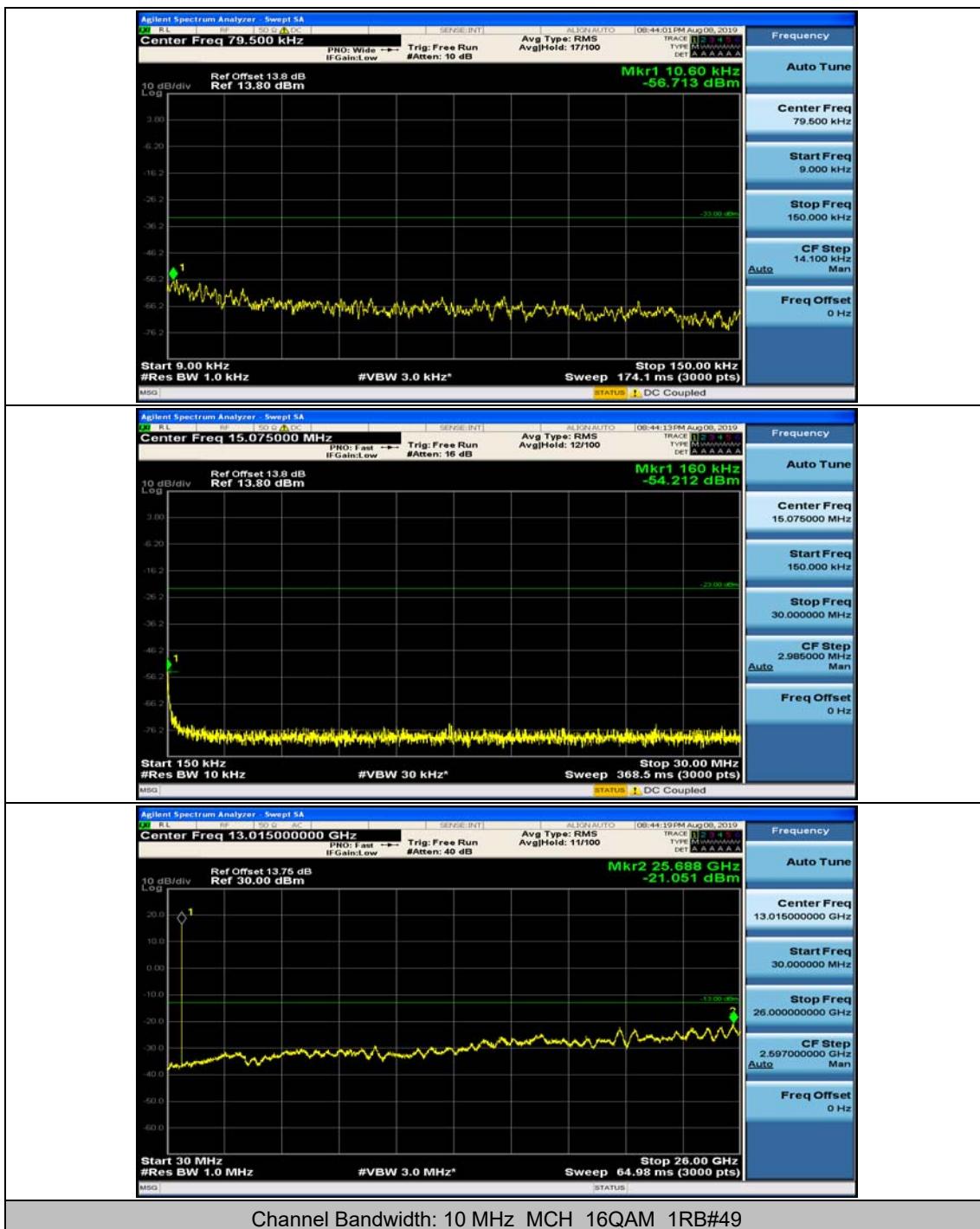


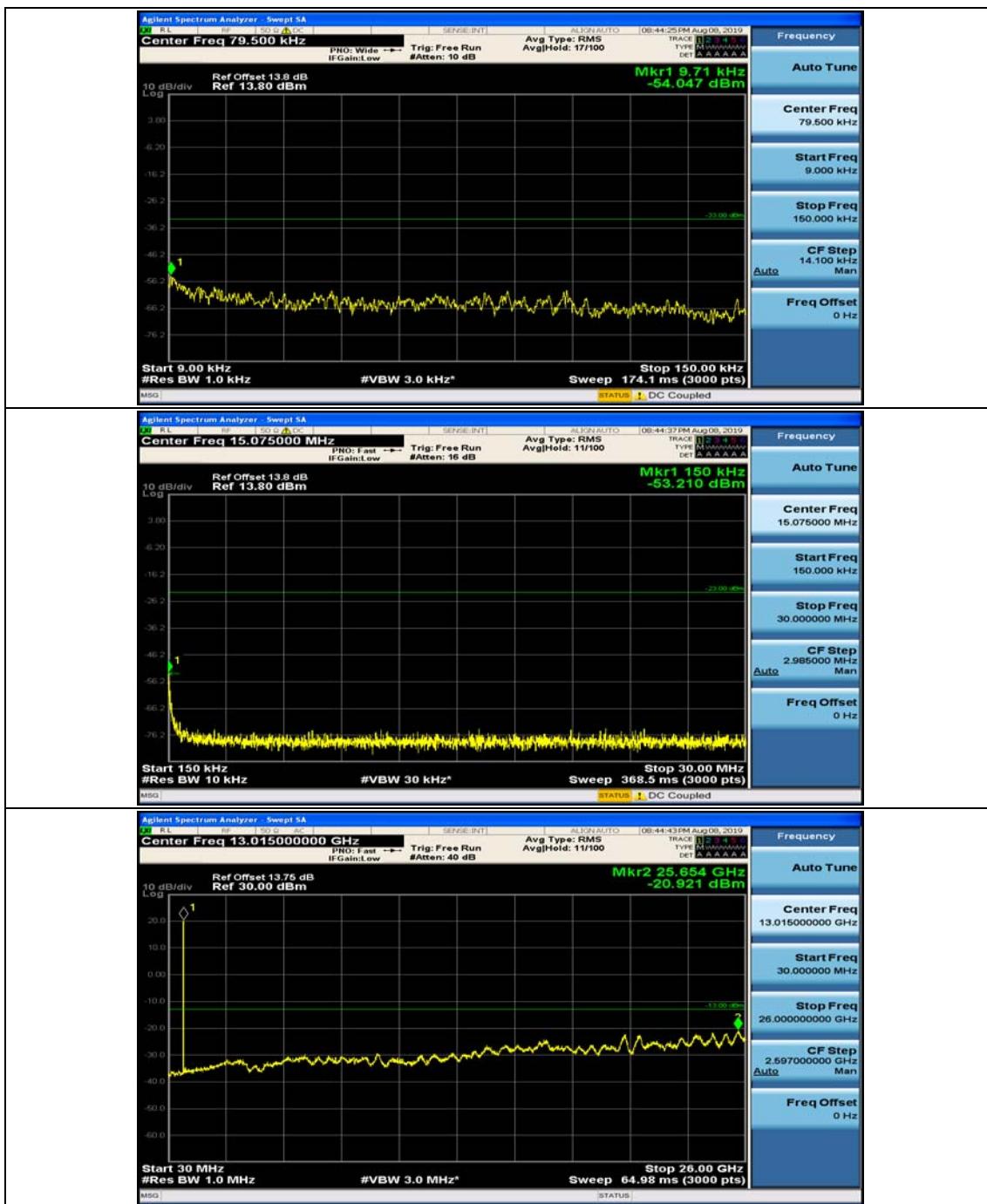


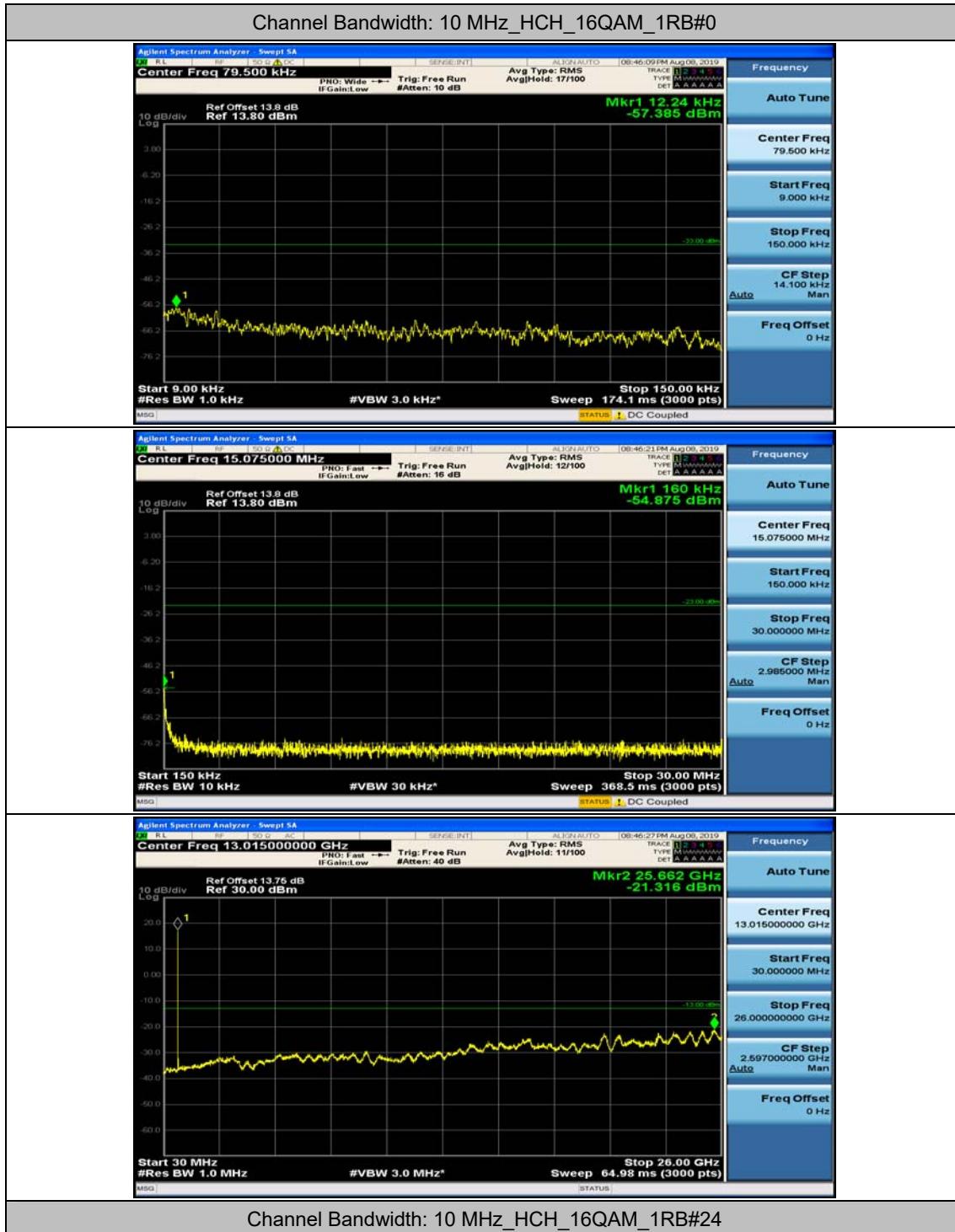


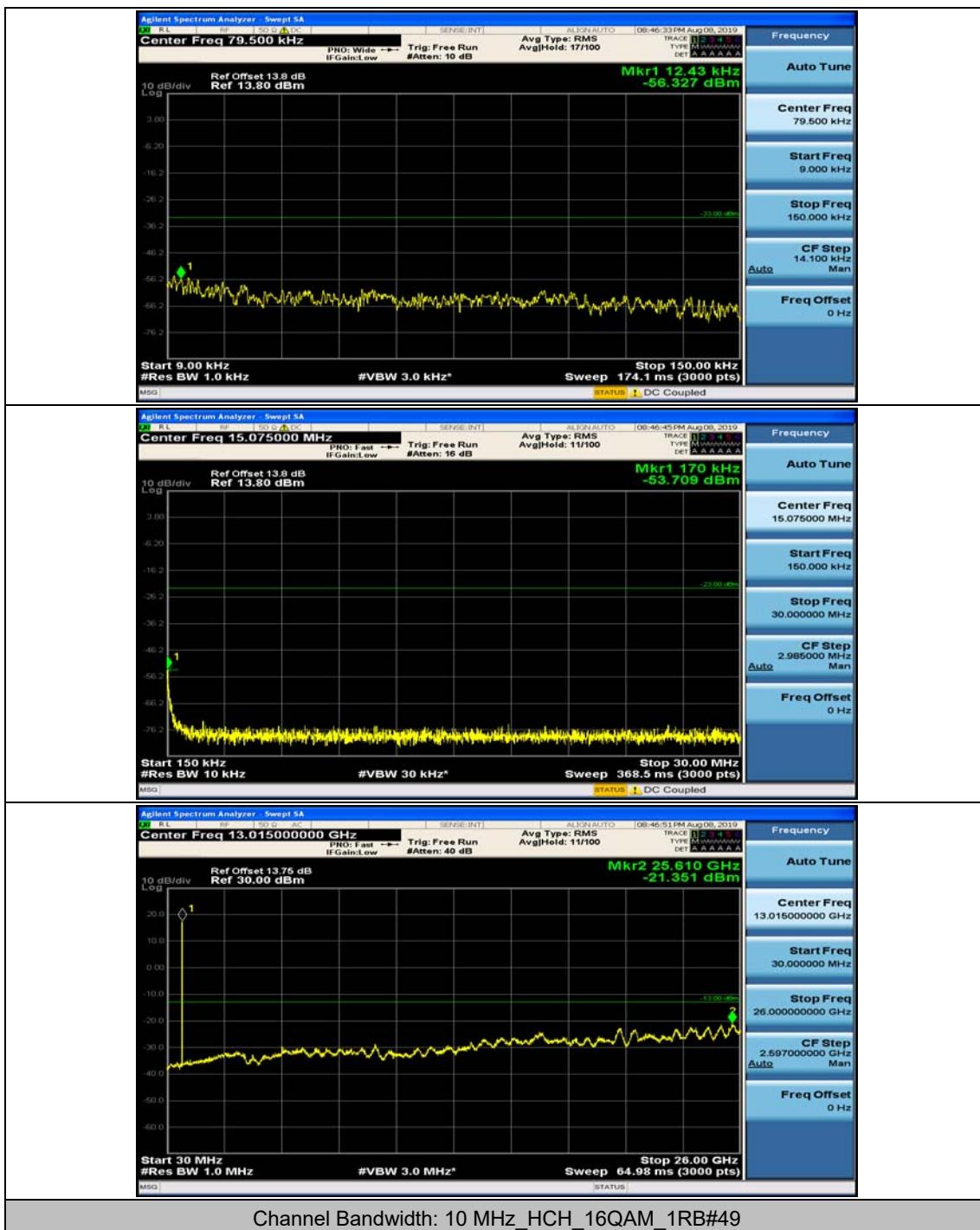


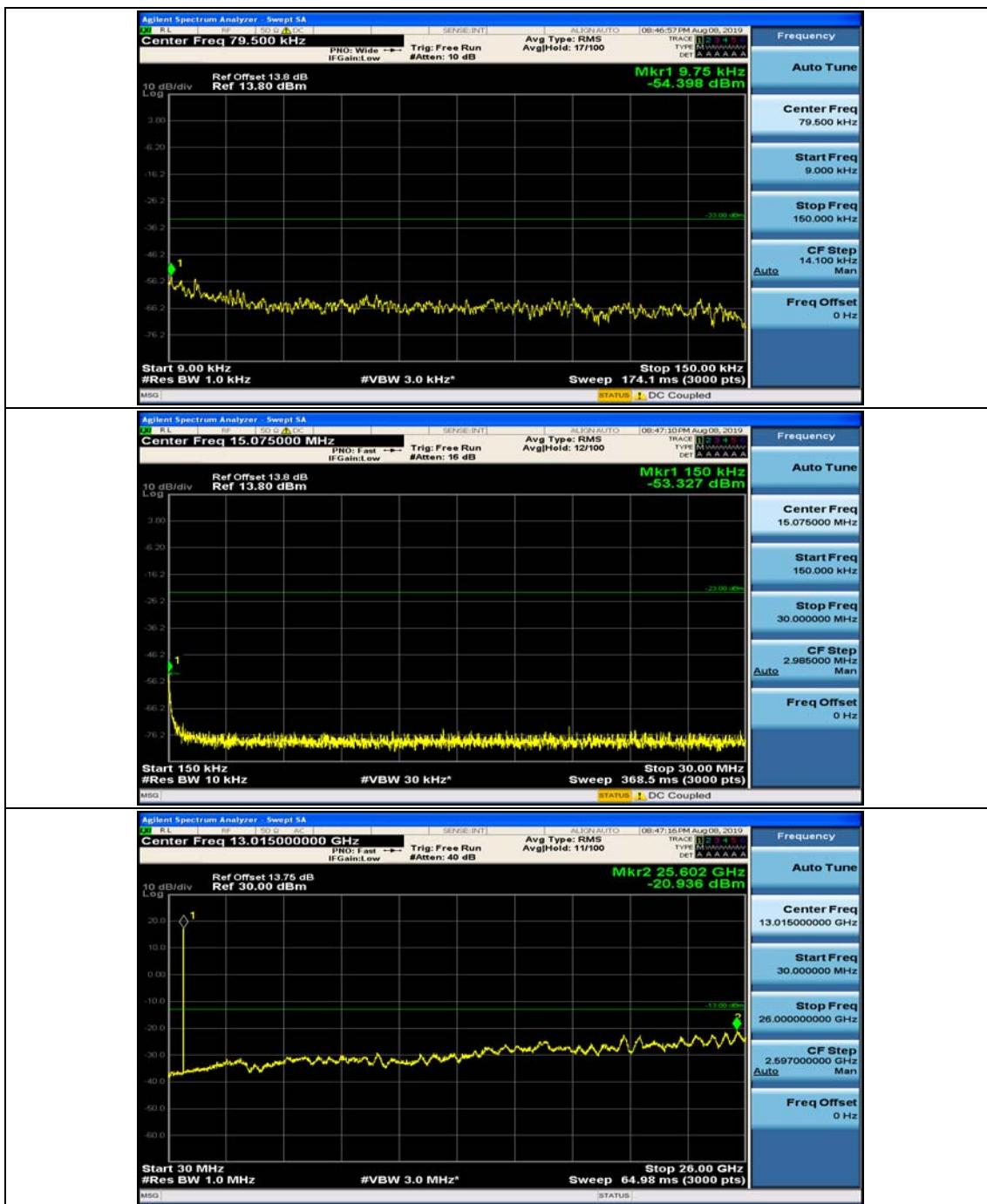












Appendix F: Frequency Stability

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	0.39	0.000557	± 2.5	PASS
		VN	TN	0.71	0.001015	± 2.5	PASS
		VH	TN	-1.47	-0.002101	± 2.5	PASS
	MCH	VL	TN	2.97	0.004198	± 2.5	PASS
		VN	TN	1.76	0.002488	± 2.5	PASS
		VH	TN	2.57	0.003633	± 2.5	PASS
	HCH	VL	TN	-0.39	-0.000545	± 2.5	PASS
		VN	TN	1.85	0.002586	± 2.5	PASS
		VH	TN	-0.13	-0.000182	± 2.5	PASS
16QAM	LCH	VL	TN	4.84	0.006917	± 2.5	PASS
		VN	TN	2.57	0.003673	± 2.5	PASS
		VH	TN	0.82	0.001172	± 2.5	PASS
	MCH	VL	TN	-1.49	-0.002106	± 2.5	PASS
		VN	TN	2.35	0.003322	± 2.5	PASS
		VH	TN	-0.63	-0.000890	± 2.5	PASS
	HCH	VL	TN	0.46	0.000643	± 2.5	PASS
		VN	TN	3.89	0.005438	± 2.5	PASS
		VH	TN	0.54	0.000755	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.18	0.000257	± 2.5	PASS
		VN	-20	4.53	0.006474	± 2.5	PASS
		VN	-10	0.08	0.000114	± 2.5	PASS
		VN	0	-0.61	-0.000872	± 2.5	PASS
		VN	10	0.26	0.000372	± 2.5	PASS
		VN	20	-0.41	-0.000586	± 2.5	PASS
		VN	30	4.14	0.005917	± 2.5	PASS
		VN	40	2.49	0.003559	± 2.5	PASS
		VN	50	3.37	0.004816	± 2.5	PASS
	MCH	VN	-30	1.66	0.002346	± 2.5	PASS
		VN	-20	3.24	0.004580	± 2.5	PASS

	HCH	VN	-10	2.71	0.003830	± 2.5	PASS
		VN	0	0.11	0.000155	± 2.5	PASS
		VN	10	2.62	0.003703	± 2.5	PASS
		VN	20	2.94	0.004155	± 2.5	PASS
		VN	30	3.65	0.005159	± 2.5	PASS
		VN	40	-0.04	-0.000057	± 2.5	PASS
		VN	50	-0.34	-0.000481	± 2.5	PASS
		VN	-30	2.94	0.004110	± 2.5	PASS
		VN	-20	-1.41	-0.001971	± 2.5	PASS
		VN	-10	-1.35	-0.001887	± 2.5	PASS
16QAM	LCH	VN	0	2.59	0.003621	± 2.5	PASS
		VN	10	1.28	0.001789	± 2.5	PASS
		VN	20	3.36	0.004697	± 2.5	PASS
		VN	30	4	0.005592	± 2.5	PASS
		VN	40	3.83	0.005354	± 2.5	PASS
		VN	50	-0.79	-0.001104	± 2.5	PASS
		VN	-30	2.23	0.003187	± 2.5	PASS
		VN	-20	1.73	0.002472	± 2.5	PASS
		VN	-10	3.87	0.005531	± 2.5	PASS
	MCH	VN	0	2.45	0.003502	± 2.5	PASS
		VN	10	0.39	0.000557	± 2.5	PASS
		VN	20	4.24	0.006060	± 2.5	PASS
		VN	30	-0.7	-0.001000	± 2.5	PASS
		VN	40	-0.52	-0.000743	± 2.5	PASS
		VN	50	3.1	0.004430	± 2.5	PASS
		VN	-30	2.25	0.003180	± 2.5	PASS
		VN	-20	0.22	0.000311	± 2.5	PASS
		VN	-10	-0.71	-0.001004	± 2.5	PASS
		VN	0	4.63	0.006544	± 2.5	PASS
	HCH	VN	10	1.53	0.002163	± 2.5	PASS
		VN	20	4.12	0.005823	± 2.5	PASS
		VN	30	4.62	0.006530	± 2.5	PASS
		VN	40	4.49	0.006346	± 2.5	PASS
		VN	50	-1.73	-0.002445	± 2.5	PASS
		VN	-30	4.29	0.005997	± 2.5	PASS
		VN	-20	0.58	0.000811	± 2.5	PASS

		VN	40	4.63	0.006473	± 2.5	PASS
		VN	50	0.12	0.000168	± 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	2.84	0.004054	± 2.5	PASS
		VN	TN	1.44	0.002056	± 2.5	PASS
		VH	TN	3.09	0.004411	± 2.5	PASS
	MCH	VL	TN	-0.08	-0.000113	± 2.5	PASS
		VN	TN	2.82	0.003986	± 2.5	PASS
		VH	TN	4.41	0.006233	± 2.5	PASS
	HCH	VL	TN	1.63	0.002281	± 2.5	PASS
		VN	TN	1.3	0.001819	± 2.5	PASS
		VH	TN	-1.41	-0.001973	± 2.5	PASS
16QAM	LCH	VL	TN	4.21	0.006010	± 2.5	PASS
		VN	TN	0.77	0.001099	± 2.5	PASS
		VH	TN	0.36	0.000514	± 2.5	PASS
	MCH	VL	TN	-1.2	-0.001696	± 2.5	PASS
		VN	TN	-1.22	-0.001724	± 2.5	PASS
		VH	TN	4.65	0.006572	± 2.5	PASS
	HCH	VL	TN	2.15	0.003009	± 2.5	PASS
		VN	TN	3.62	0.005066	± 2.5	PASS
		VH	TN	-0.26	-0.000364	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.63	0.005182	± 2.5	PASS
		VN	-20	2.33	0.003326	± 2.5	PASS
		VN	-10	1.65	0.002355	± 2.5	PASS
		VN	0	-1.67	-0.002384	± 2.5	PASS
		VN	10	1.49	0.002127	± 2.5	PASS
		VN	20	0.96	0.001370	± 2.5	PASS
		VN	30	1.88	0.002684	± 2.5	PASS
		VN	40	1.67	0.002384	± 2.5	PASS
		VN	50	3.2	0.004568	± 2.5	PASS
	MCH	VN	-30	-1.85	-0.002615	± 2.5	PASS
		VN	-20	-1.46	-0.002064	± 2.5	PASS
		VN	-10	3.73	0.005272	± 2.5	PASS

	HCH	VN	0	-0.82	-0.001159	± 2.5	PASS
		VN	10	3.55	0.005018	± 2.5	PASS
		VN	20	3.29	0.004650	± 2.5	PASS
		VN	30	0	0.000000	± 2.5	PASS
		VN	40	1.66	0.002346	± 2.5	PASS
		VN	50	0.32	0.000452	± 2.5	PASS
		VN	-30	-1.16	-0.001624	± 2.5	PASS
		VN	-20	4.14	0.005794	± 2.5	PASS
		VN	-10	2.02	0.002827	± 2.5	PASS
		VN	0	-1.06	-0.001484	± 2.5	PASS
		VN	10	4.77	0.006676	± 2.5	PASS
		VN	20	-0.5	-0.000700	± 2.5	PASS
		VN	30	3.56	0.004983	± 2.5	PASS
		VN	40	4.96	0.006942	± 2.5	PASS
		VN	50	4.82	0.006746	± 2.5	PASS
16QAM	LCH	VN	-30	1.1	0.001570	± 2.5	PASS
		VN	-20	-0.97	-0.001385	± 2.5	PASS
		VN	-10	0.31	0.000443	± 2.5	PASS
		VN	0	1.73	0.002470	± 2.5	PASS
		VN	10	0.36	0.000514	± 2.5	PASS
		VN	20	2.24	0.003198	± 2.5	PASS
		VN	30	0.06	0.000086	± 2.5	PASS
		VN	40	1	0.001428	± 2.5	PASS
		VN	50	0.52	0.000742	± 2.5	PASS
	MCH	VN	-30	2.53	0.003576	± 2.5	PASS
		VN	-20	0.29	0.000410	± 2.5	PASS
		VN	-10	1.37	0.001936	± 2.5	PASS
		VN	0	3.54	0.005004	± 2.5	PASS
		VN	10	0.13	0.000184	± 2.5	PASS
		VN	20	3.5	0.004947	± 2.5	PASS
		VN	30	4.87	0.006883	± 2.5	PASS
		VN	40	-1.85	-0.002615	± 2.5	PASS
		VN	50	3.58	0.005060	± 2.5	PASS
	HCH	VN	-30	0.68	0.000952	± 2.5	PASS
		VN	-20	4.55	0.006368	± 2.5	PASS
		VN	-10	-0.84	-0.001176	± 2.5	PASS
		VN	0	4.42	0.006186	± 2.5	PASS
		VN	10	2.45	0.003429	± 2.5	PASS
		VN	20	-1.18	-0.001652	± 2.5	PASS
		VN	30	3.39	0.004745	± 2.5	PASS
		VN	40	3.57	0.004997	± 2.5	PASS

		VN	50	3.82	0.005346	± 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	0.31	0.000442	± 2.5	PASS
		VN	TN	-0.17	-0.000242	± 2.5	PASS
		VH	TN	1.13	0.001611	± 2.5	PASS
	MCH	VL	TN	2.11	0.002982	± 2.5	PASS
		VN	TN	-0.9	-0.001272	± 2.5	PASS
		VH	TN	2.25	0.003180	± 2.5	PASS
	HCH	VL	TN	-1.96	-0.002747	± 2.5	PASS
		VN	TN	2.49	0.003490	± 2.5	PASS
		VH	TN	3.18	0.004457	± 2.5	PASS
16QAM	LCH	VL	TN	2.68	0.003820	± 2.5	PASS
		VN	TN	2.44	0.003478	± 2.5	PASS
		VH	TN	4.49	0.006401	± 2.5	PASS
	MCH	VL	TN	2.88	0.004071	± 2.5	PASS
		VN	TN	2.56	0.003618	± 2.5	PASS
		VH	TN	1.6	0.002261	± 2.5	PASS
	HCH	VL	TN	-1.68	-0.002355	± 2.5	PASS
		VN	TN	4.02	0.005634	± 2.5	PASS
		VH	TN	2.71	0.003798	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.91	0.006999	± 2.5	PASS
		VN	-20	-1.84	-0.002623	± 2.5	PASS
		VN	-10	3.62	0.005160	± 2.5	PASS
		VN	0	4.5	0.006415	± 2.5	PASS
		VN	10	-1.9	-0.002708	± 2.5	PASS
		VN	20	3.41	0.004861	± 2.5	PASS
		VN	30	-0.67	-0.000955	± 2.5	PASS
		VN	40	-1.24	-0.001768	± 2.5	PASS
		VN	50	3.45	0.004918	± 2.5	PASS
	MCH	VN	-30	2.03	0.002869	± 2.5	PASS
		VN	-20	-1.25	-0.001767	± 2.5	PASS
		VN	-10	2.02	0.002855	± 2.5	PASS
		VN	0	3.4	0.004806	± 2.5	PASS

		VN	10	-1.68	-0.002375	± 2.5	PASS
		VN	20	-1.33	-0.001880	± 2.5	PASS
		VN	30	0.32	0.000452	± 2.5	PASS
		VN	40	4.22	0.005965	± 2.5	PASS
		VN	50	1.07	0.001512	± 2.5	PASS
		VN	-30	-0.27	-0.000378	± 2.5	PASS
		VN	-20	4.88	0.006840	± 2.5	PASS
		VN	-10	1.84	0.002579	± 2.5	PASS
		VN	0	3.6	0.005046	± 2.5	PASS
		VN	10	3.33	0.004667	± 2.5	PASS
	HCH	VN	20	1.49	0.002088	± 2.5	PASS
		VN	30	3.7	0.005186	± 2.5	PASS
		VN	40	3.9	0.005466	± 2.5	PASS
		VN	50	3.69	0.005172	± 2.5	PASS
		VN	-30	1.74	0.002480	± 2.5	PASS
		VN	-20	-0.74	-0.001055	± 2.5	PASS
		VN	-10	4.03	0.005745	± 2.5	PASS
		VN	0	1.83	0.002609	± 2.5	PASS
		VN	10	0.96	0.001368	± 2.5	PASS
		VN	20	3.31	0.004718	± 2.5	PASS
	LCH	VN	30	4.97	0.007085	± 2.5	PASS
		VN	40	0.83	0.001183	± 2.5	PASS
		VN	50	1.22	0.001739	± 2.5	PASS
		VN	-30	0.37	0.000523	± 2.5	PASS
		VN	-20	2.94	0.004155	± 2.5	PASS
		VN	-10	0.37	0.000523	± 2.5	PASS
		VN	0	3.33	0.004707	± 2.5	PASS
		VN	10	0.74	0.001046	± 2.5	PASS
		VN	20	2.27	0.003208	± 2.5	PASS
		VN	30	4.36	0.006163	± 2.5	PASS
	MCH	VN	40	-1.72	-0.002431	± 2.5	PASS
		VN	50	2.06	0.002912	± 2.5	PASS
		VN	-30	2.56	0.003588	± 2.5	PASS
		VN	-20	2.79	0.003910	± 2.5	PASS
		VN	-10	-0.88	-0.001233	± 2.5	PASS
		VN	0	1.9	0.002663	± 2.5	PASS
		VN	10	2.4	0.003364	± 2.5	PASS
		VN	20	-1.15	-0.001612	± 2.5	PASS
		VN	30	0.44	0.000617	± 2.5	PASS
		VN	40	0.16	0.000224	± 2.5	PASS
	HCH	VN	50	-0.76	-0.001065	± 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	0.37	0.000526	± 2.5	PASS
		VN	TN	3.25	0.004616	± 2.5	PASS
		VH	TN	3.09	0.004389	± 2.5	PASS
	MCH	VL	TN	0.22	0.000311	± 2.5	PASS
		VN	TN	-0.63	-0.000890	± 2.5	PASS
		VH	TN	2.02	0.002855	± 2.5	PASS
	HCH	VL	TN	-1.12	-0.001575	± 2.5	PASS
		VN	TN	0.3	0.000422	± 2.5	PASS
		VH	TN	1.85	0.002602	± 2.5	PASS
16QAM	LCH	VL	TN	2.49	0.003537	± 2.5	PASS
		VN	TN	3.58	0.005085	± 2.5	PASS
		VH	TN	3.07	0.004361	± 2.5	PASS
	MCH	VL	TN	3.7	0.005230	± 2.5	PASS
		VN	TN	2.34	0.003307	± 2.5	PASS
		VH	TN	2.57	0.003633	± 2.5	PASS
	HCH	VL	TN	4.16	0.005851	± 2.5	PASS
		VN	TN	0.89	0.001252	± 2.5	PASS
		VH	TN	-0.94	-0.001322	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	2.82	0.004006	± 2.5	PASS
		VN	-20	1.55	0.002202	± 2.5	PASS
		VN	-10	4.15	0.005895	± 2.5	PASS
		VN	0	0.91	0.001293	± 2.5	PASS
		VN	10	0.32	0.000455	± 2.5	PASS
		VN	20	4.48	0.006364	± 2.5	PASS
		VN	30	1.9	0.002699	± 2.5	PASS
		VN	40	4.75	0.006747	± 2.5	PASS
		VN	50	-0.47	-0.000668	± 2.5	PASS
	MCH	VN	-30	2.86	0.004042	± 2.5	PASS
		VN	-20	1.81	0.002558	± 2.5	PASS
		VN	-10	-0.05	-0.000071	± 2.5	PASS
		VN	0	-1.08	-0.001527	± 2.5	PASS
		VN	10	0.33	0.000466	± 2.5	PASS
		VN	20	-1.74	-0.002459	± 2.5	PASS

	HCH	VN	30	1.52	0.002148	± 2.5	PASS
		VN	40	-1.66	-0.002346	± 2.5	PASS
		VN	50	0.18	0.000254	± 2.5	PASS
		VN	-30	1.49	0.002096	± 2.5	PASS
		VN	-20	3.58	0.005035	± 2.5	PASS
		VN	-10	4.88	0.006864	± 2.5	PASS
		VN	0	0.96	0.001350	± 2.5	PASS
		VN	10	-0.28	-0.000394	± 2.5	PASS
		VN	20	-1.42	-0.001997	± 2.5	PASS
		VN	30	2.88	0.004051	± 2.5	PASS
	LCH	VN	40	-0.56	-0.000788	± 2.5	PASS
		VN	50	2.69	0.003783	± 2.5	PASS
		VN	-30	1.31	0.001861	± 2.5	PASS
		VN	-20	0.67	0.000952	± 2.5	PASS
		VN	-10	-0.16	-0.000227	± 2.5	PASS
		VN	0	4.87	0.006918	± 2.5	PASS
		VN	10	0.77	0.001094	± 2.5	PASS
		VN	20	2.31	0.003281	± 2.5	PASS
		VN	30	2.29	0.003253	± 2.5	PASS
	MCH	VN	40	-1.39	-0.001974	± 2.5	PASS
		VN	50	-1.38	-0.001960	± 2.5	PASS
		VN	-30	-0.92	-0.001300	± 2.5	PASS
		VN	-20	-1.45	-0.002049	± 2.5	PASS
		VN	-10	1.56	0.002205	± 2.5	PASS
		VN	0	-1.17	-0.001654	± 2.5	PASS
		VN	10	2.26	0.003194	± 2.5	PASS
		VN	20	-0.39	-0.000551	± 2.5	PASS
		VN	30	1.15	0.001625	± 2.5	PASS
	HCH	VN	40	3.1	0.004382	± 2.5	PASS
		VN	50	0.35	0.000495	± 2.5	PASS
		VN	-30	3.36	0.004726	± 2.5	PASS
		VN	-20	4.14	0.005823	± 2.5	PASS
		VN	-10	3.89	0.005471	± 2.5	PASS
		VN	0	0.08	0.000113	± 2.5	PASS
		VN	10	4.49	0.006315	± 2.5	PASS
		VN	20	0.76	0.001069	± 2.5	PASS
		VN	30	4.8	0.006751	± 2.5	PASS
		VN	40	1	0.001406	± 2.5	PASS
		VN	50	2.86	0.004023	± 2.5	PASS