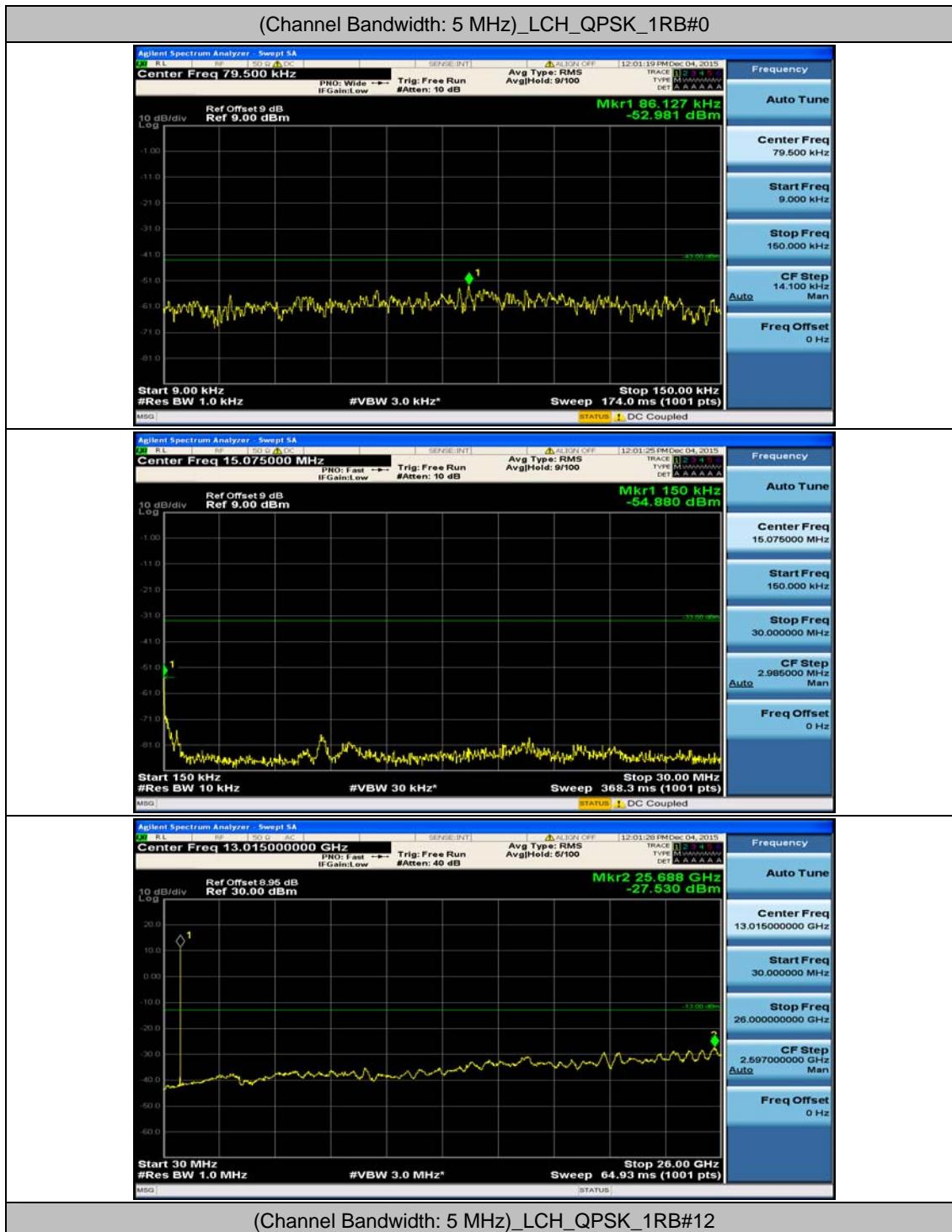
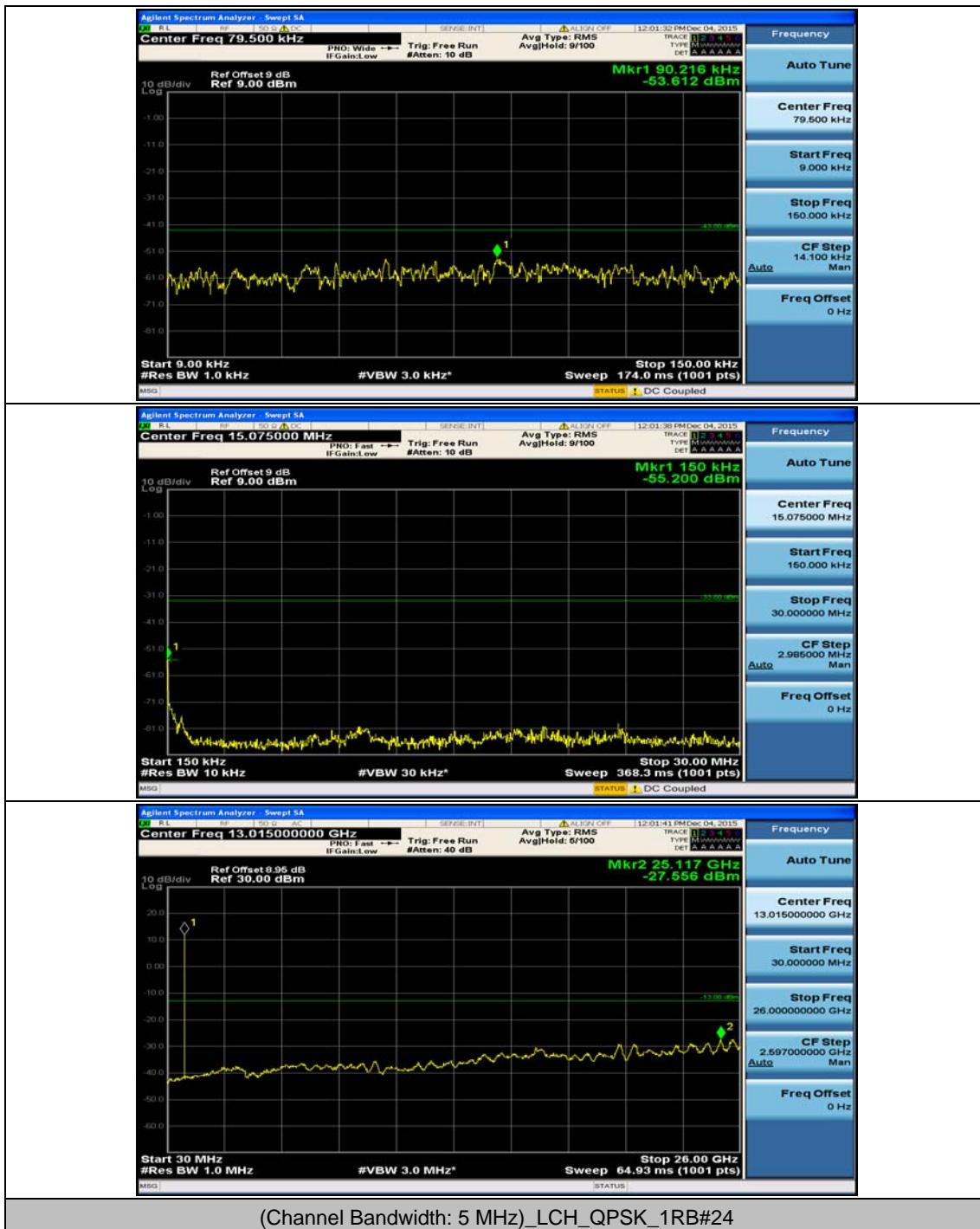
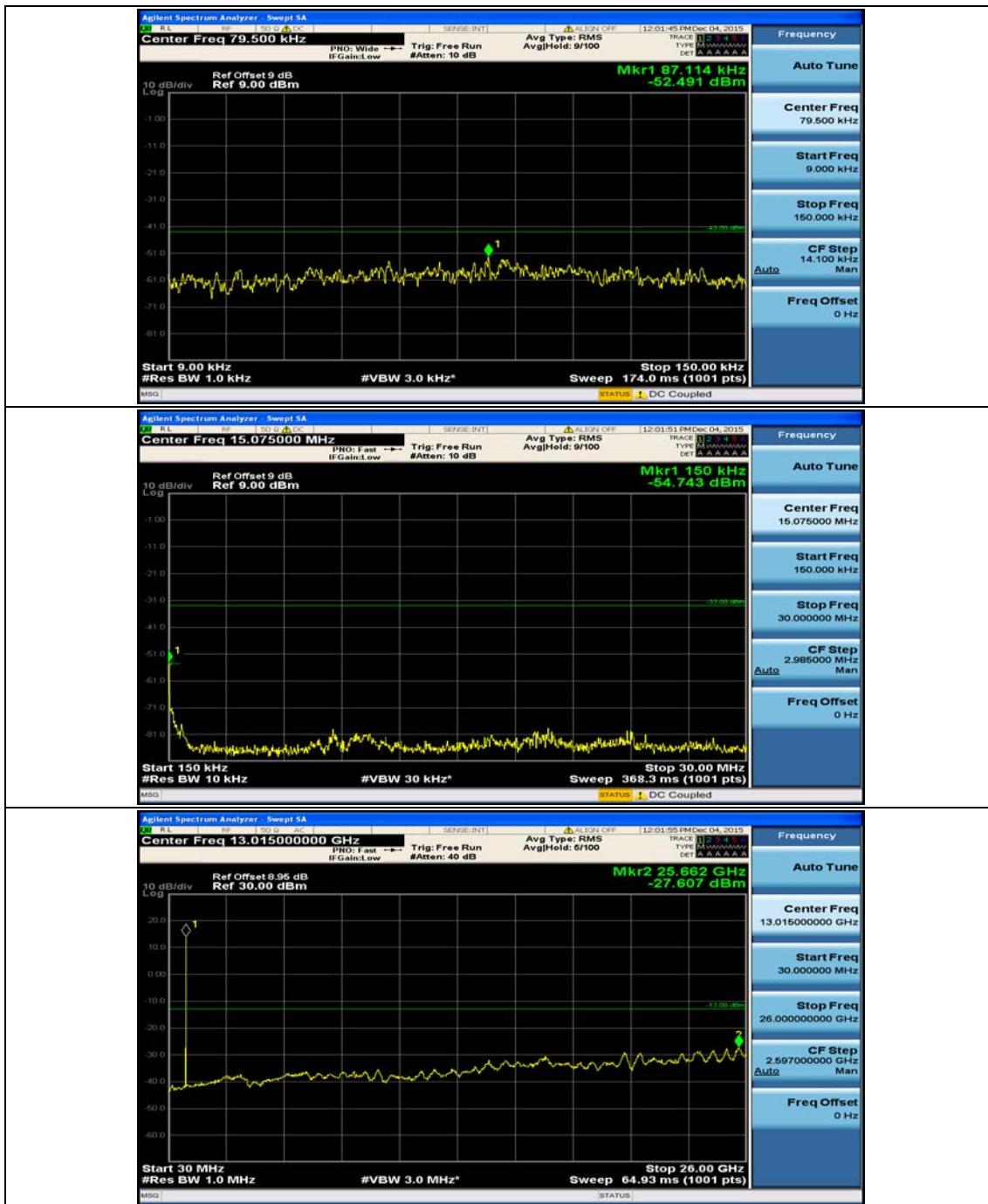
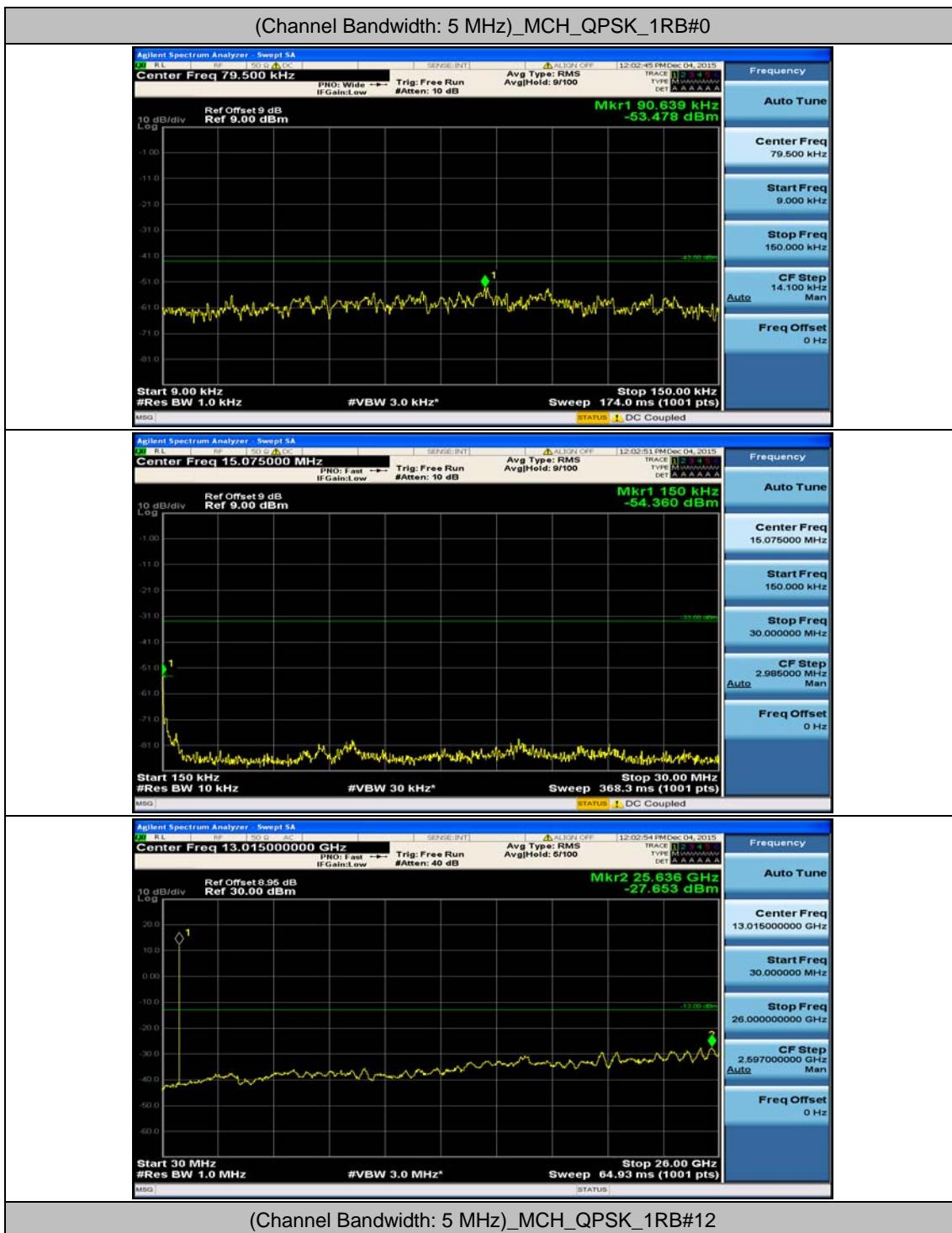


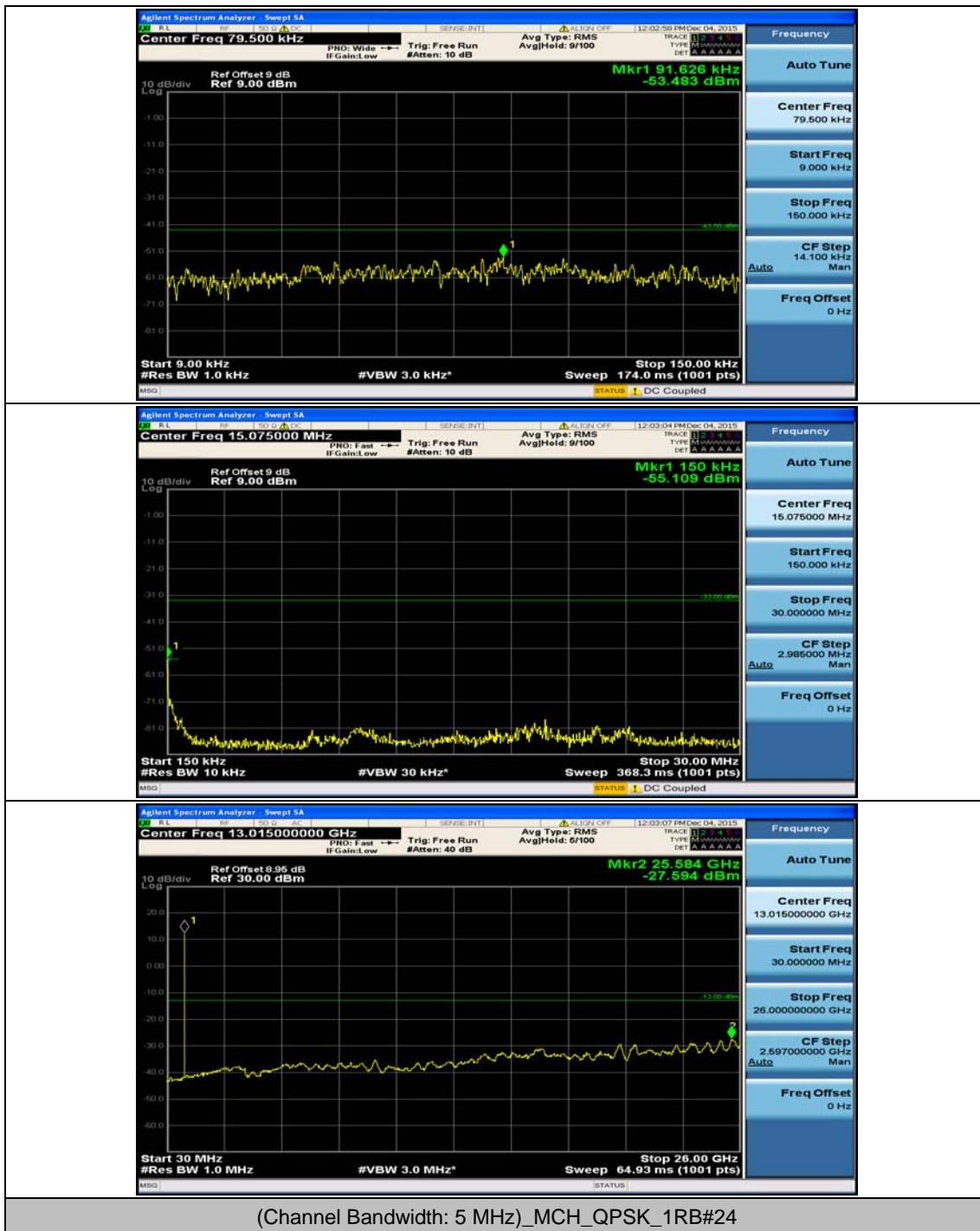
Channel Bandwidth: 5 MHz

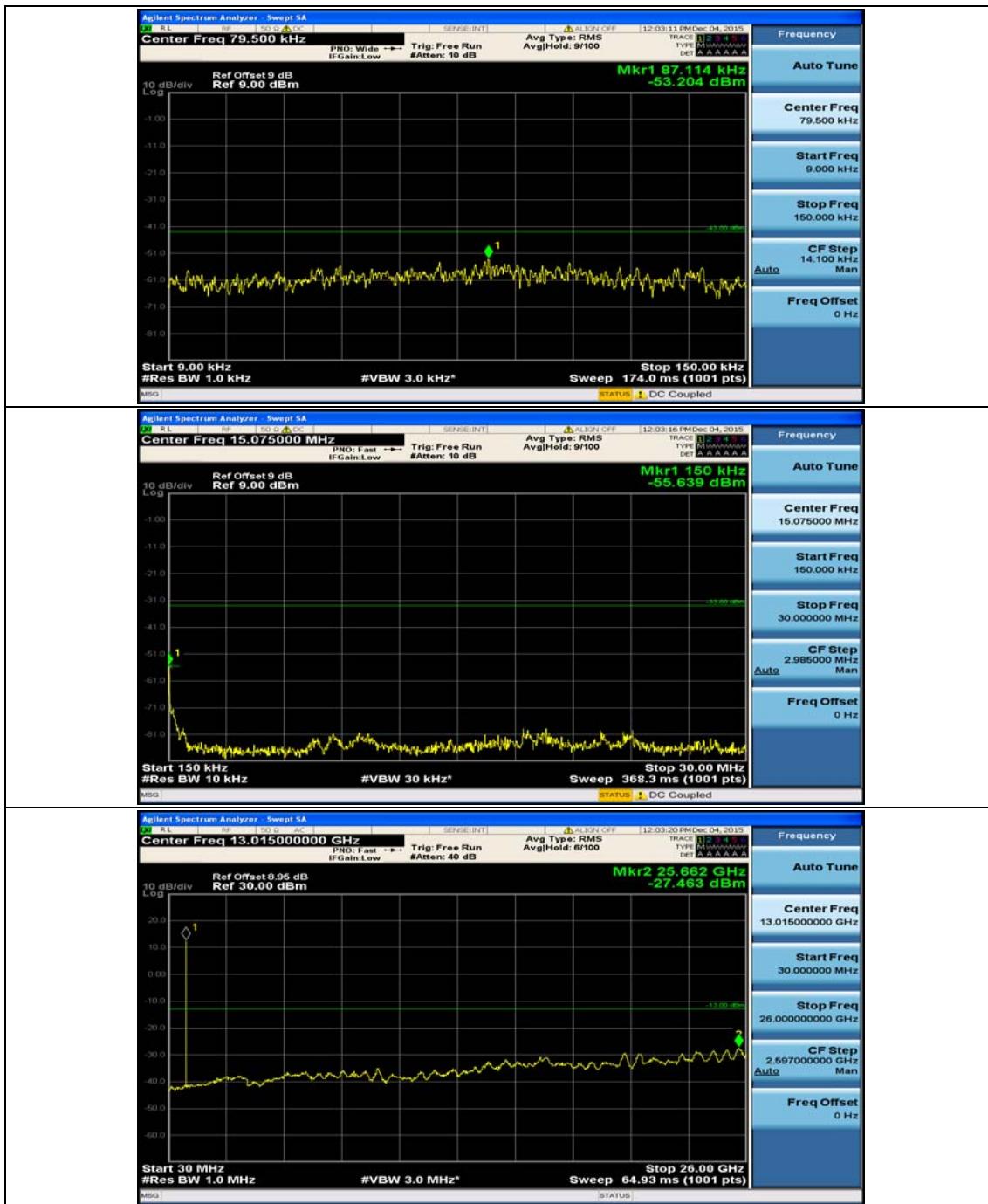


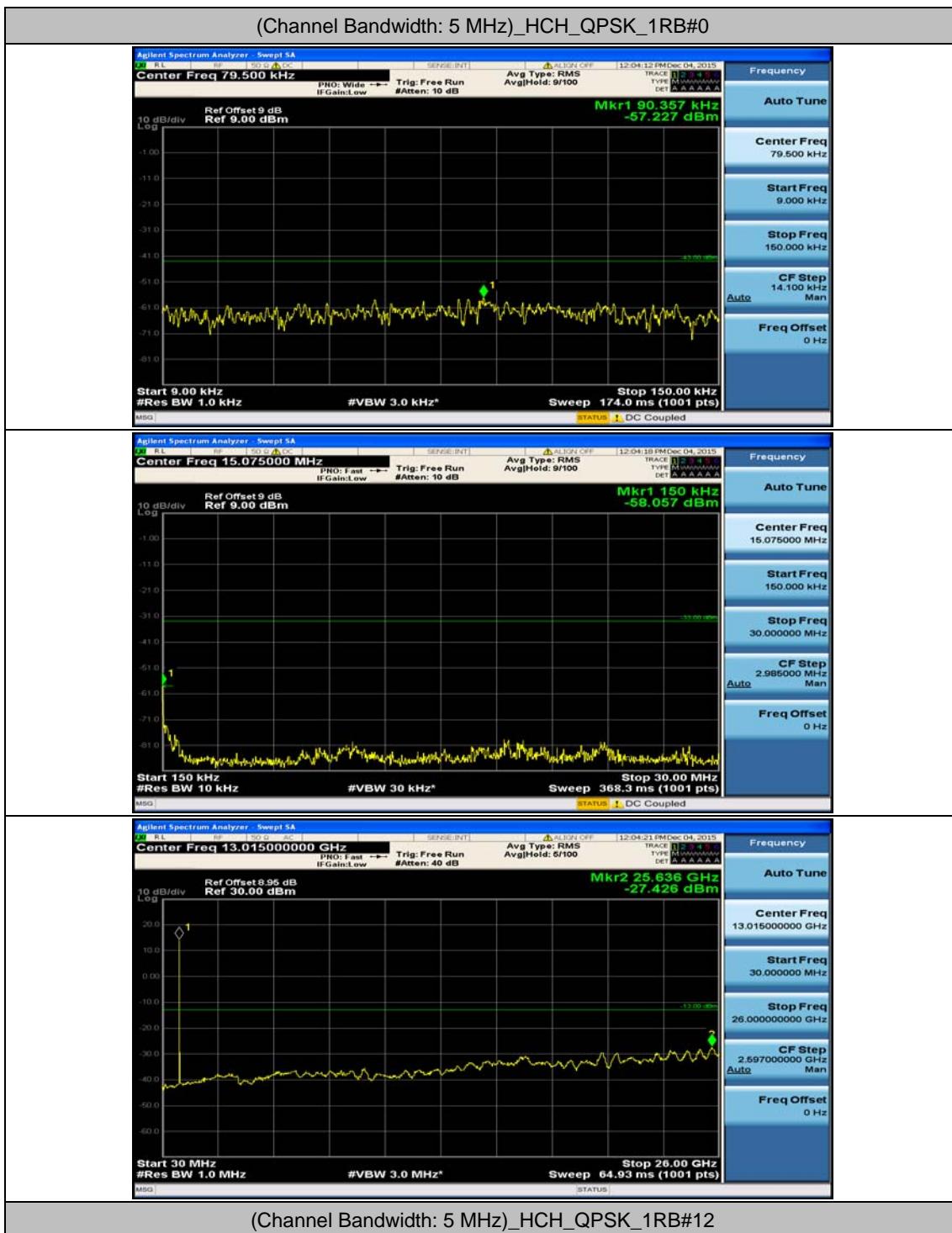


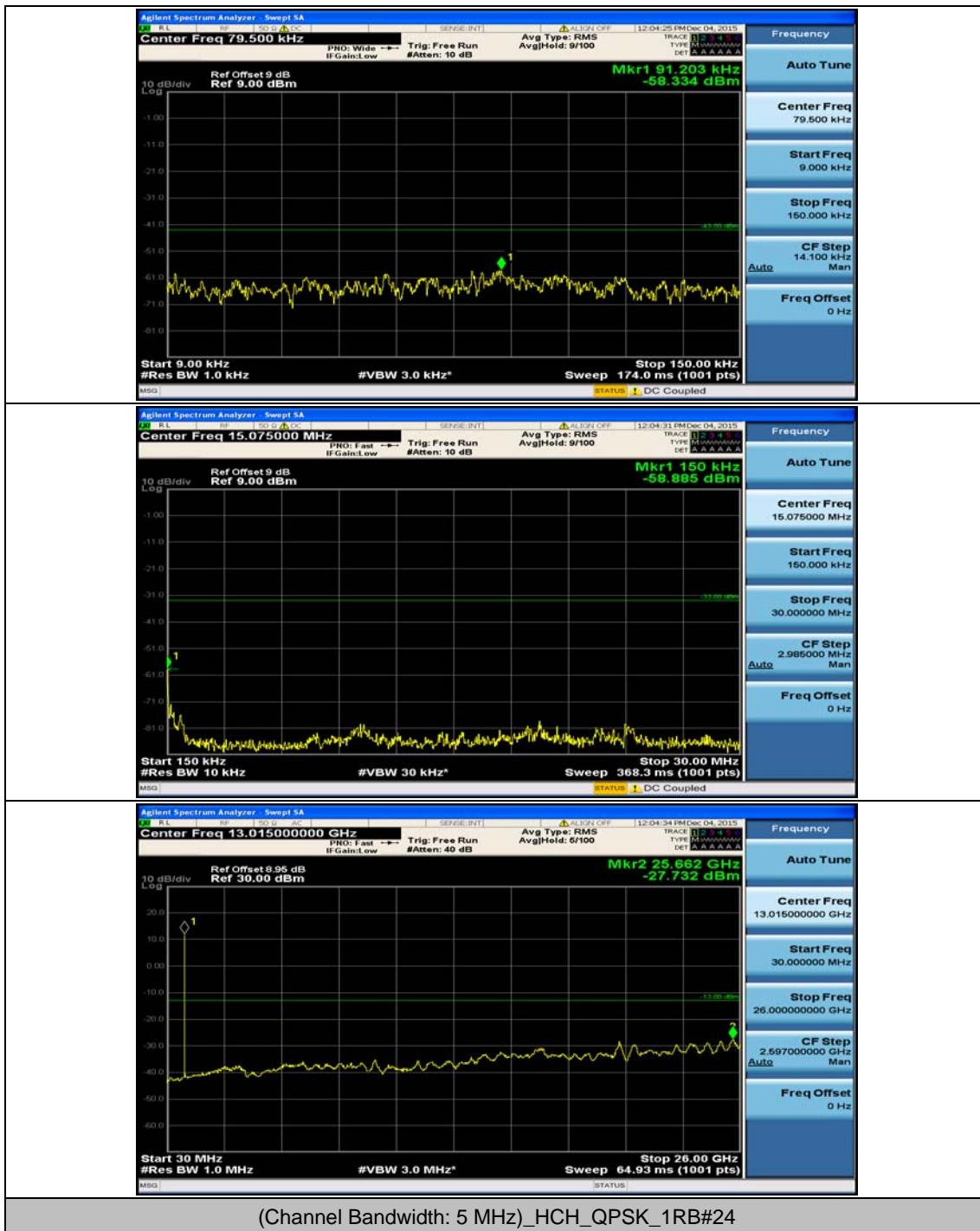


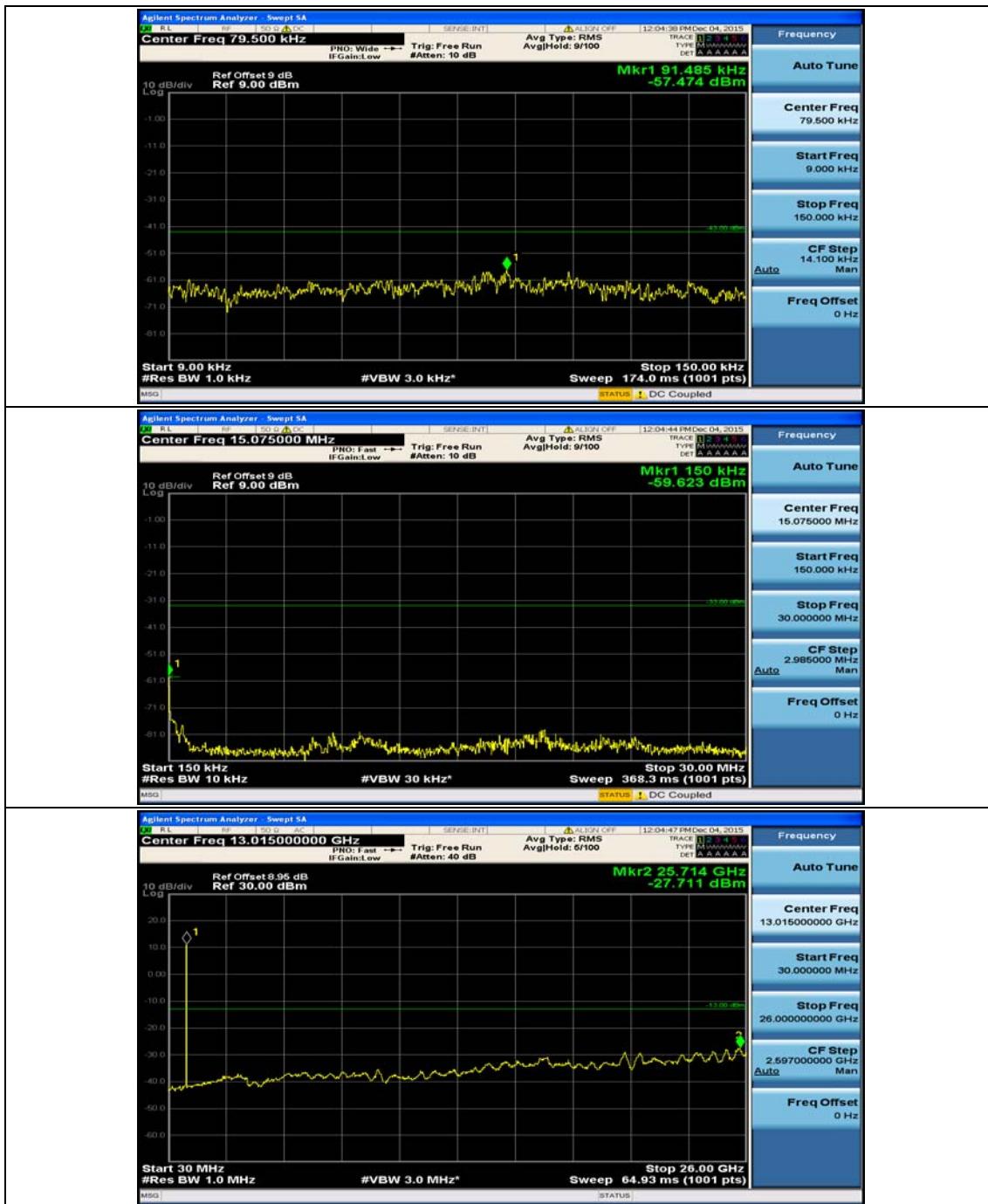


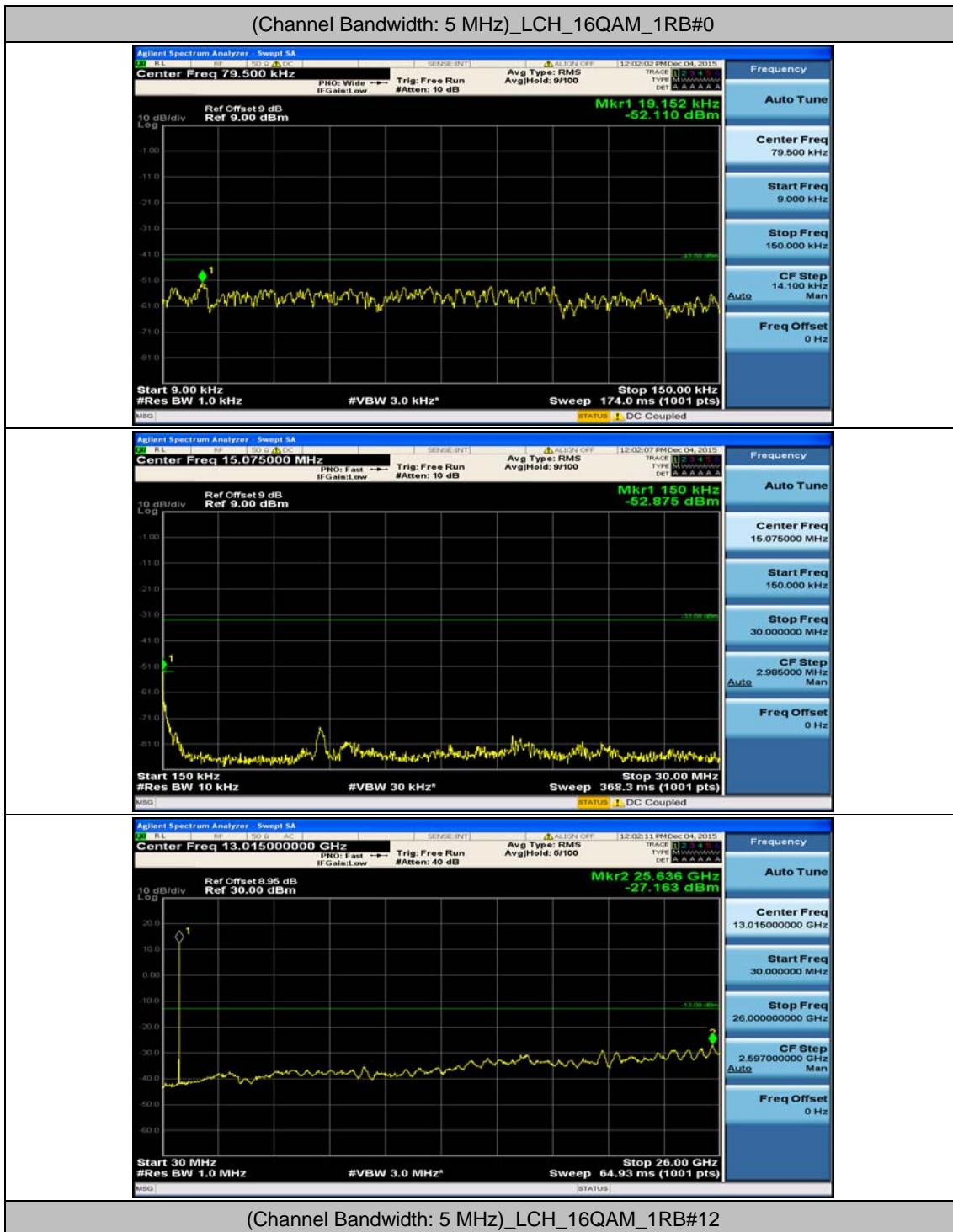


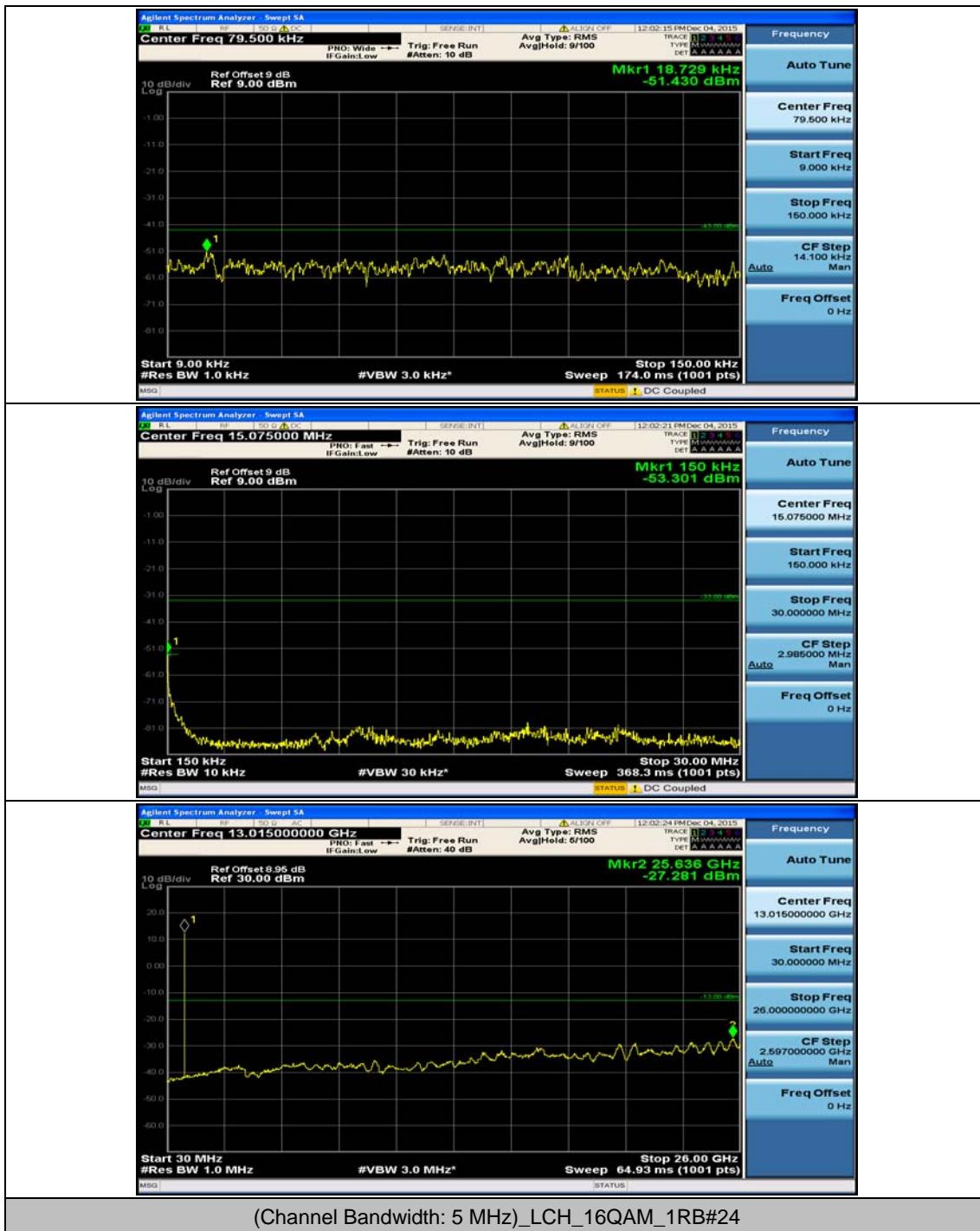


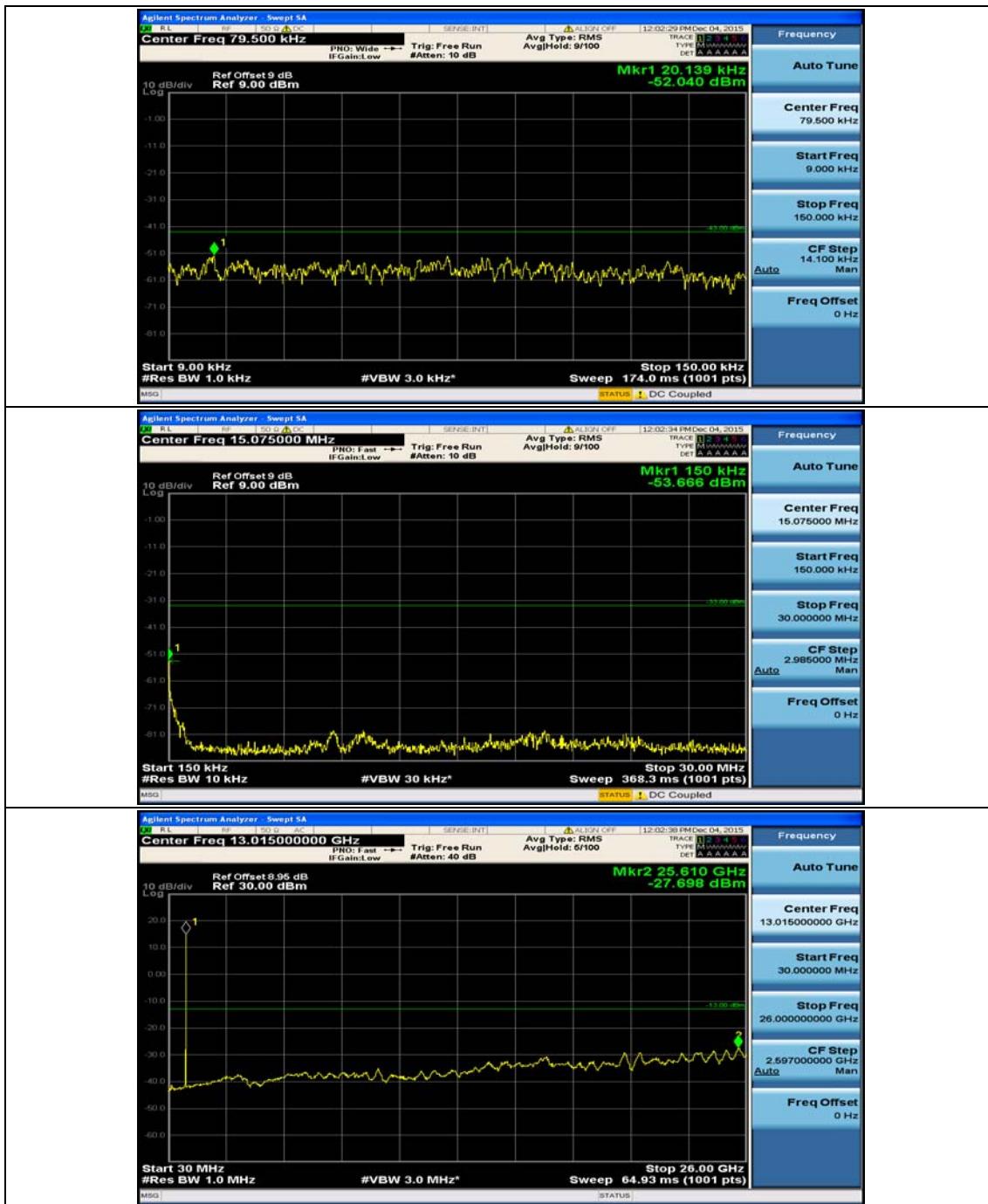


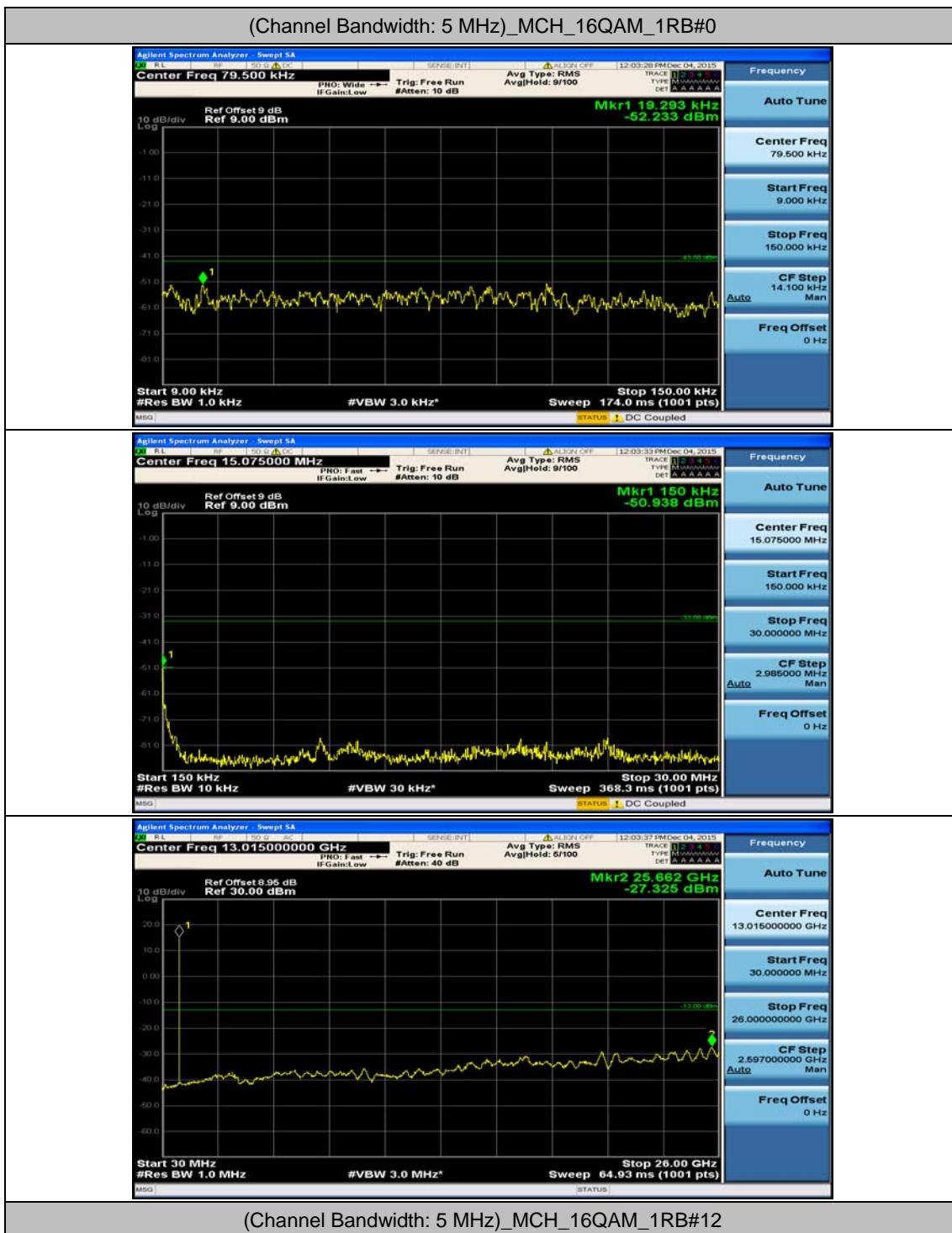


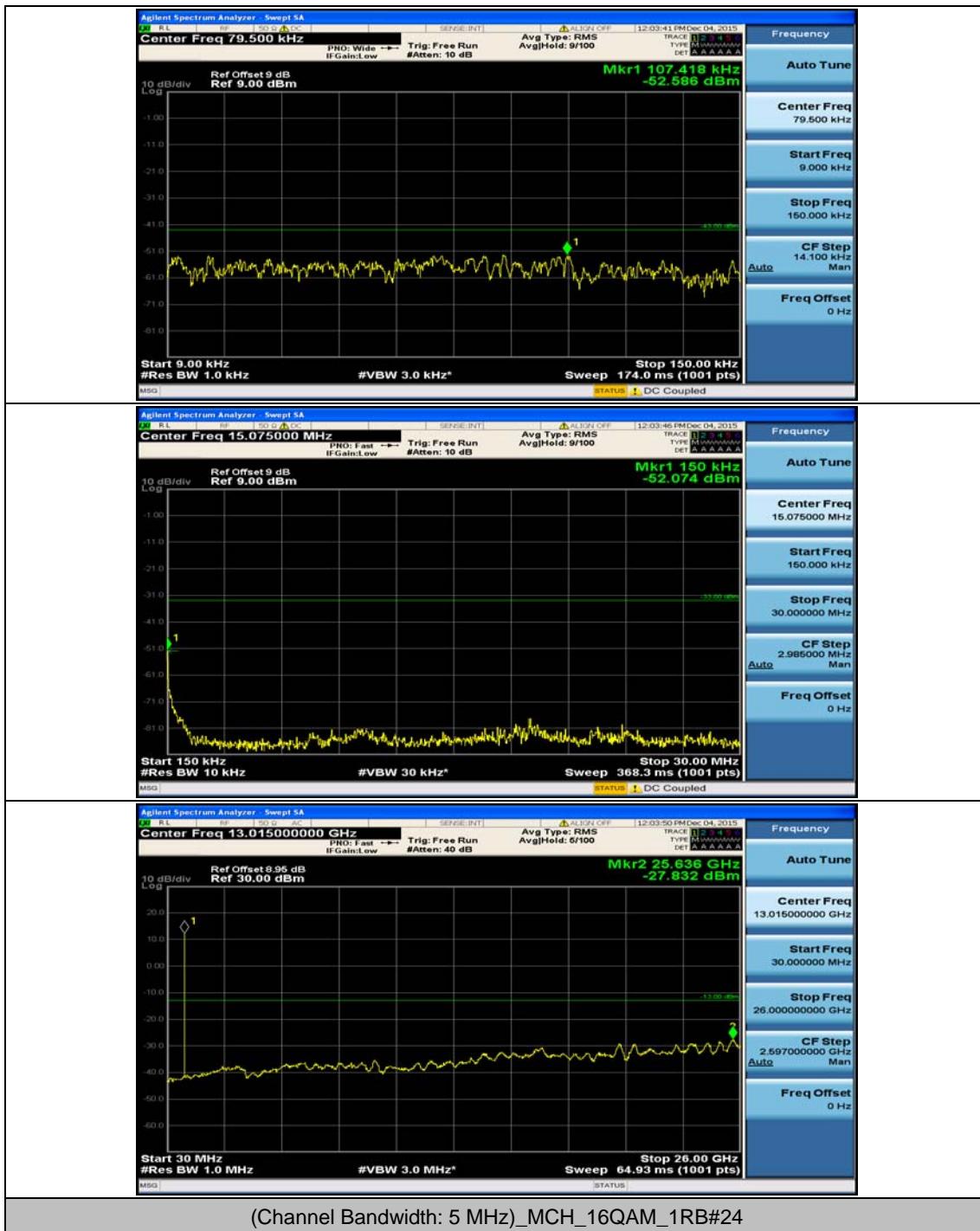


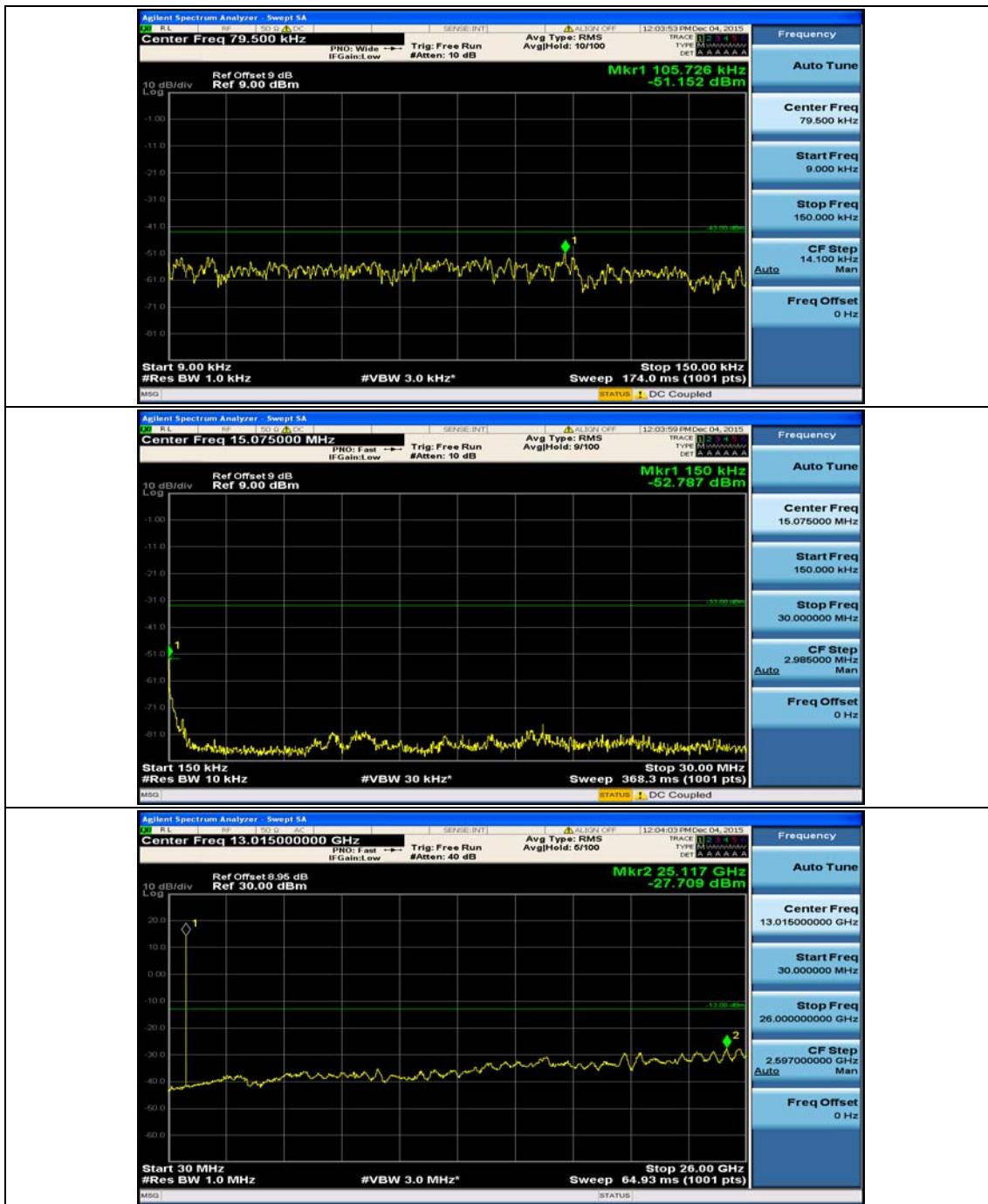


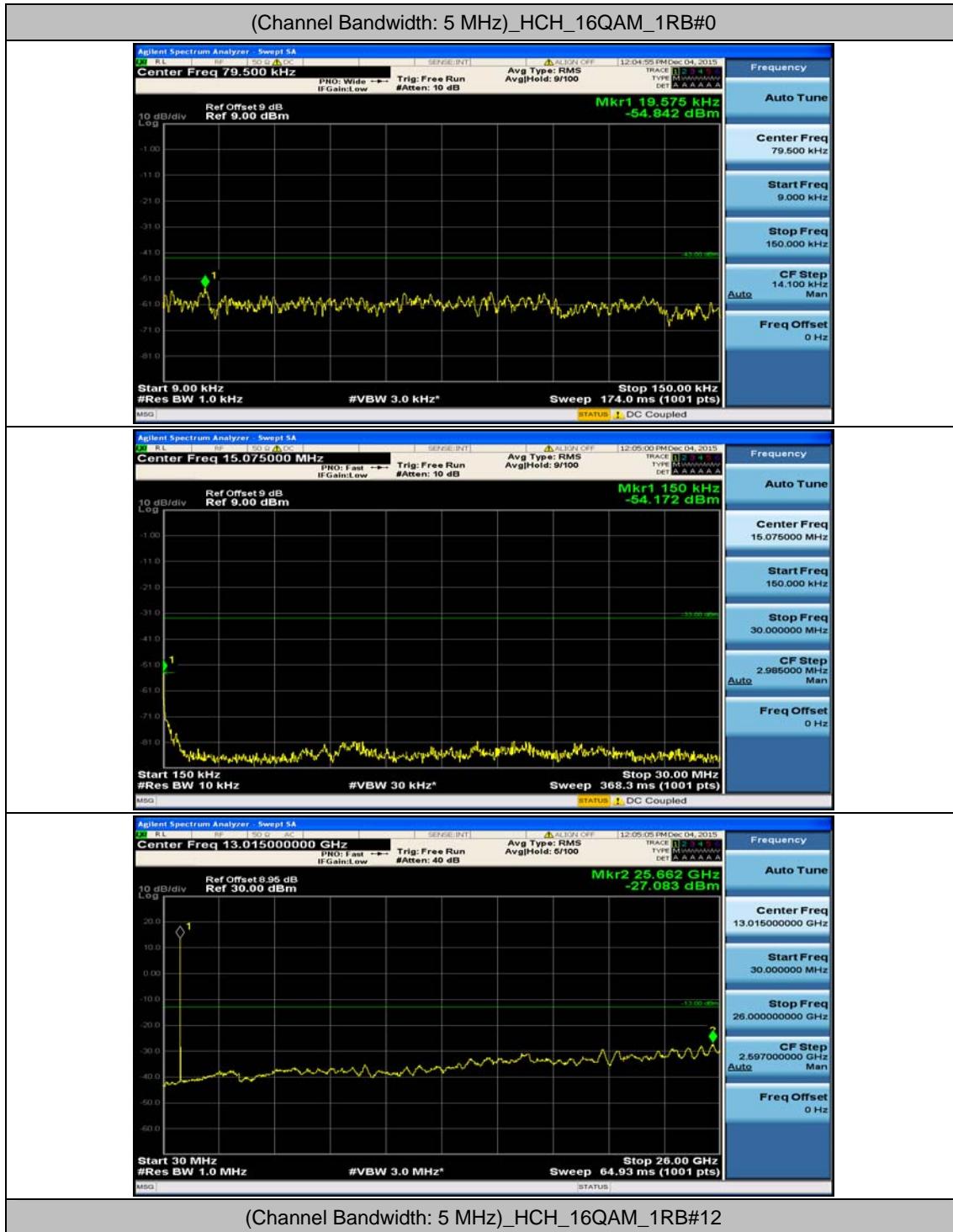


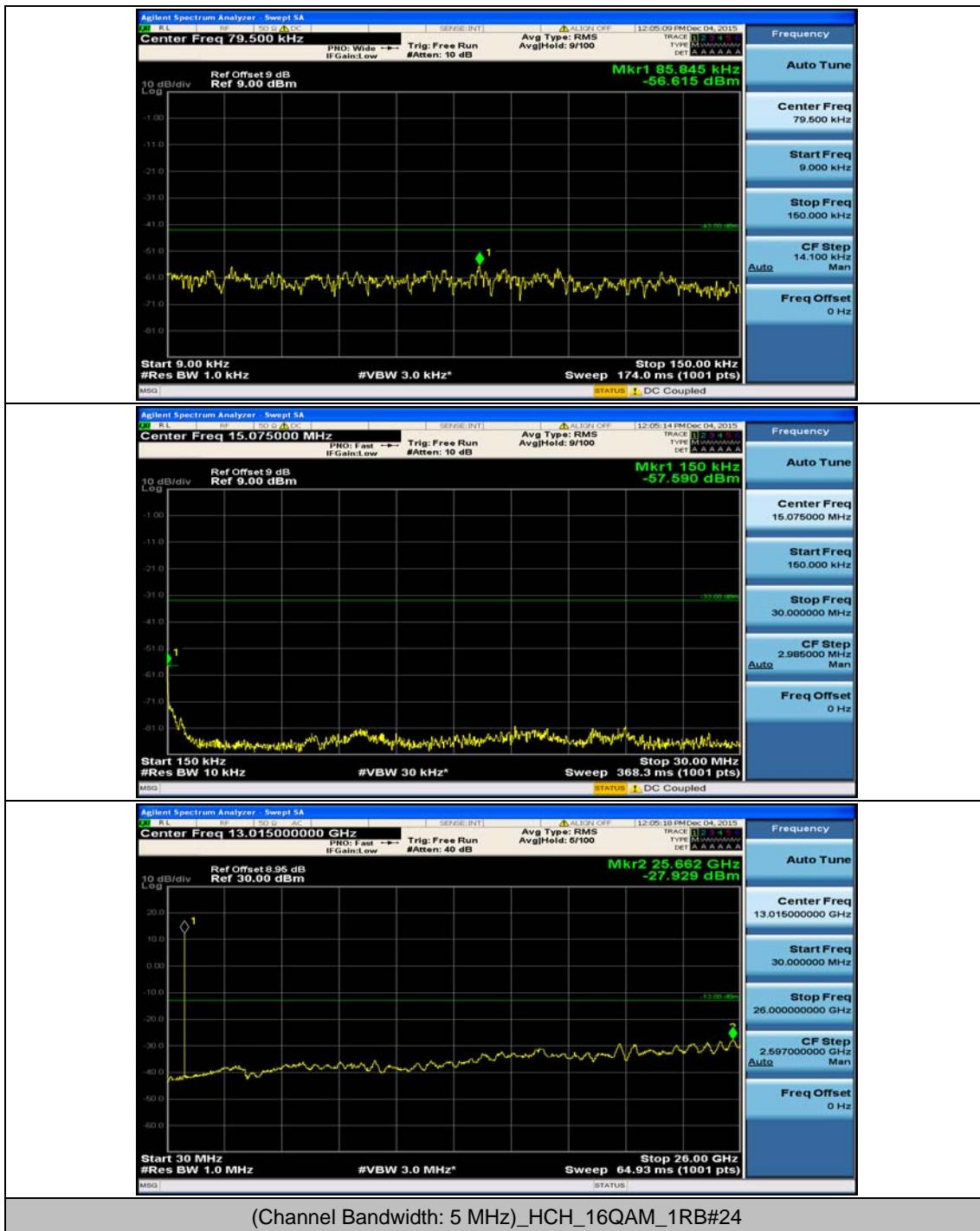


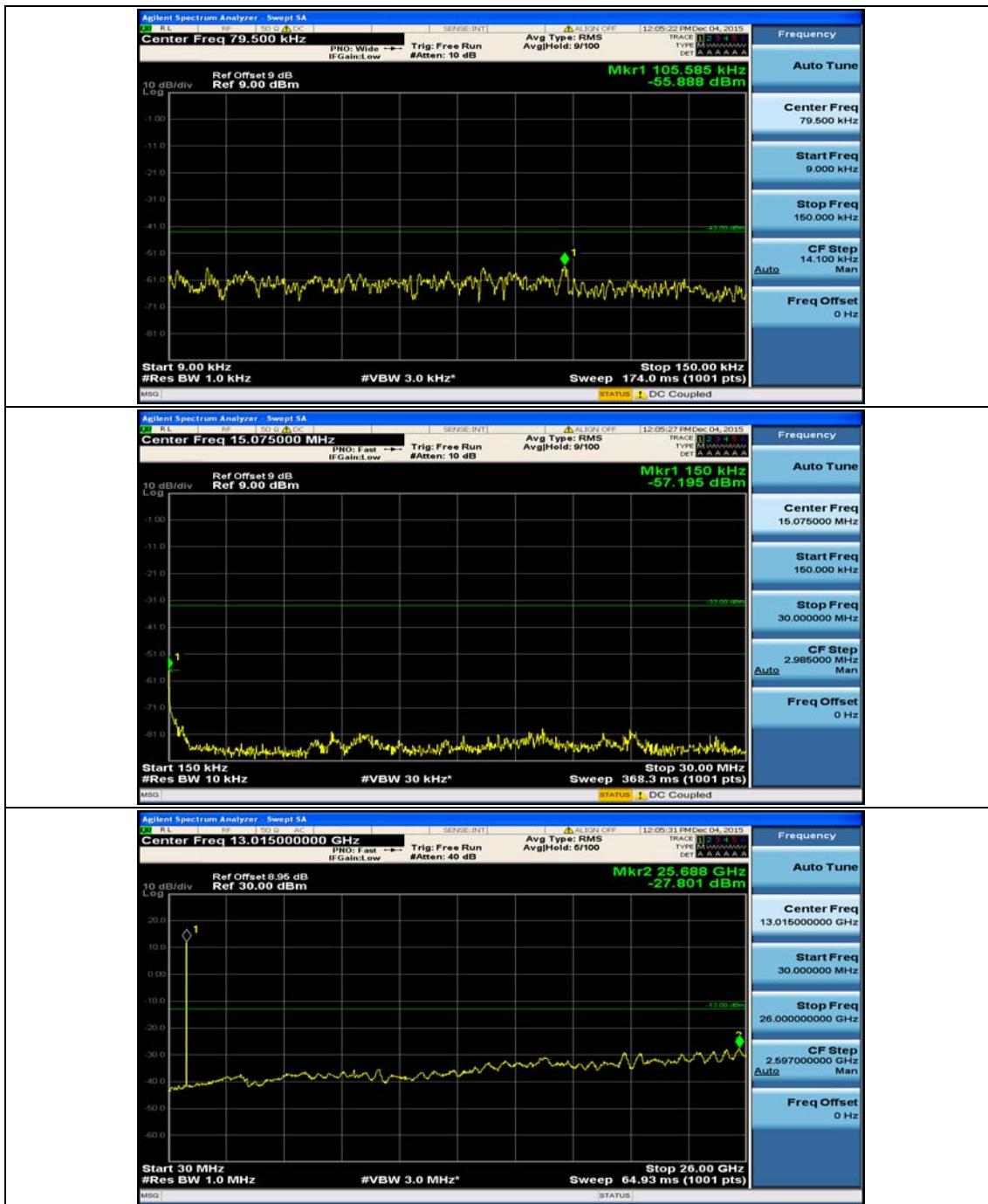




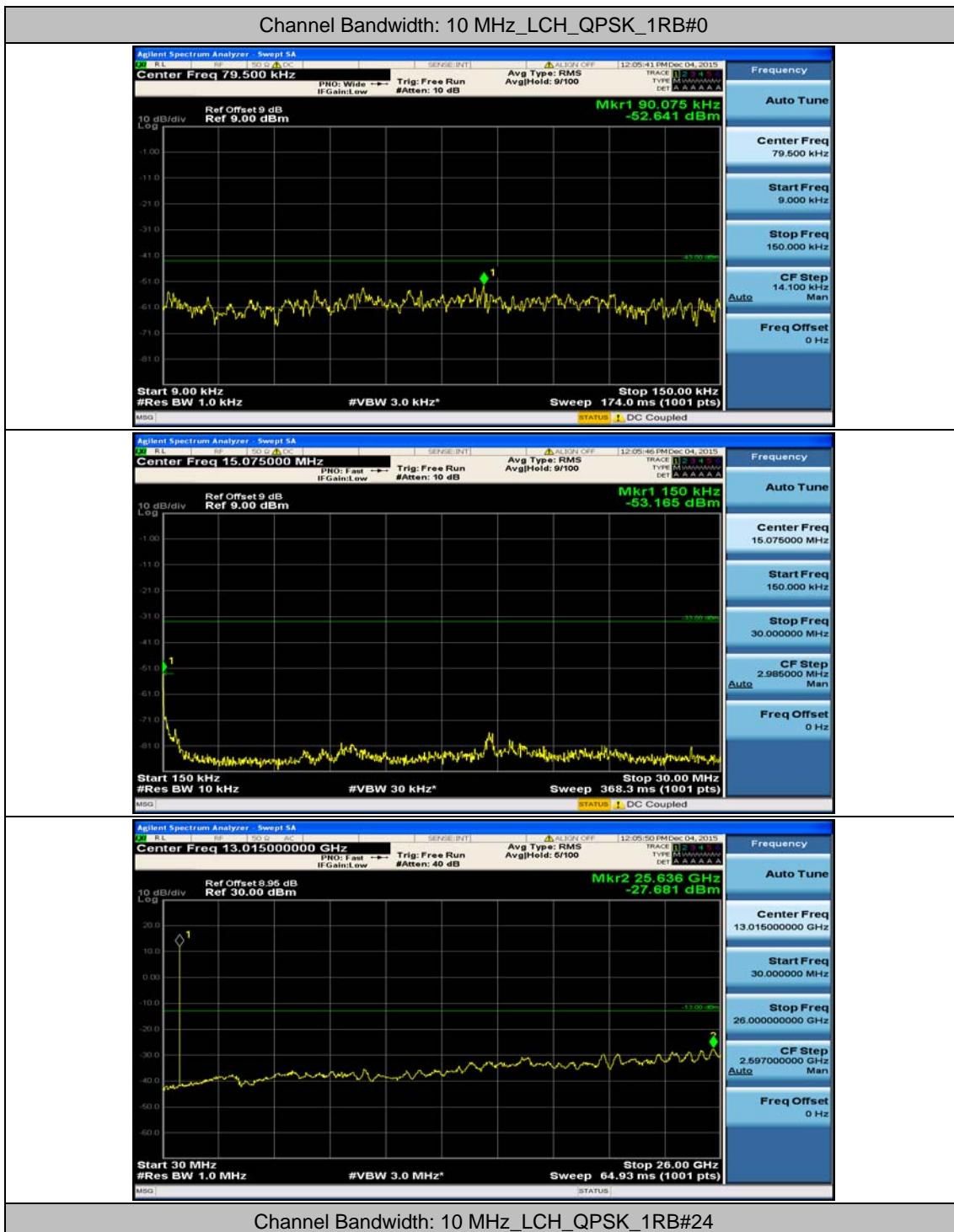


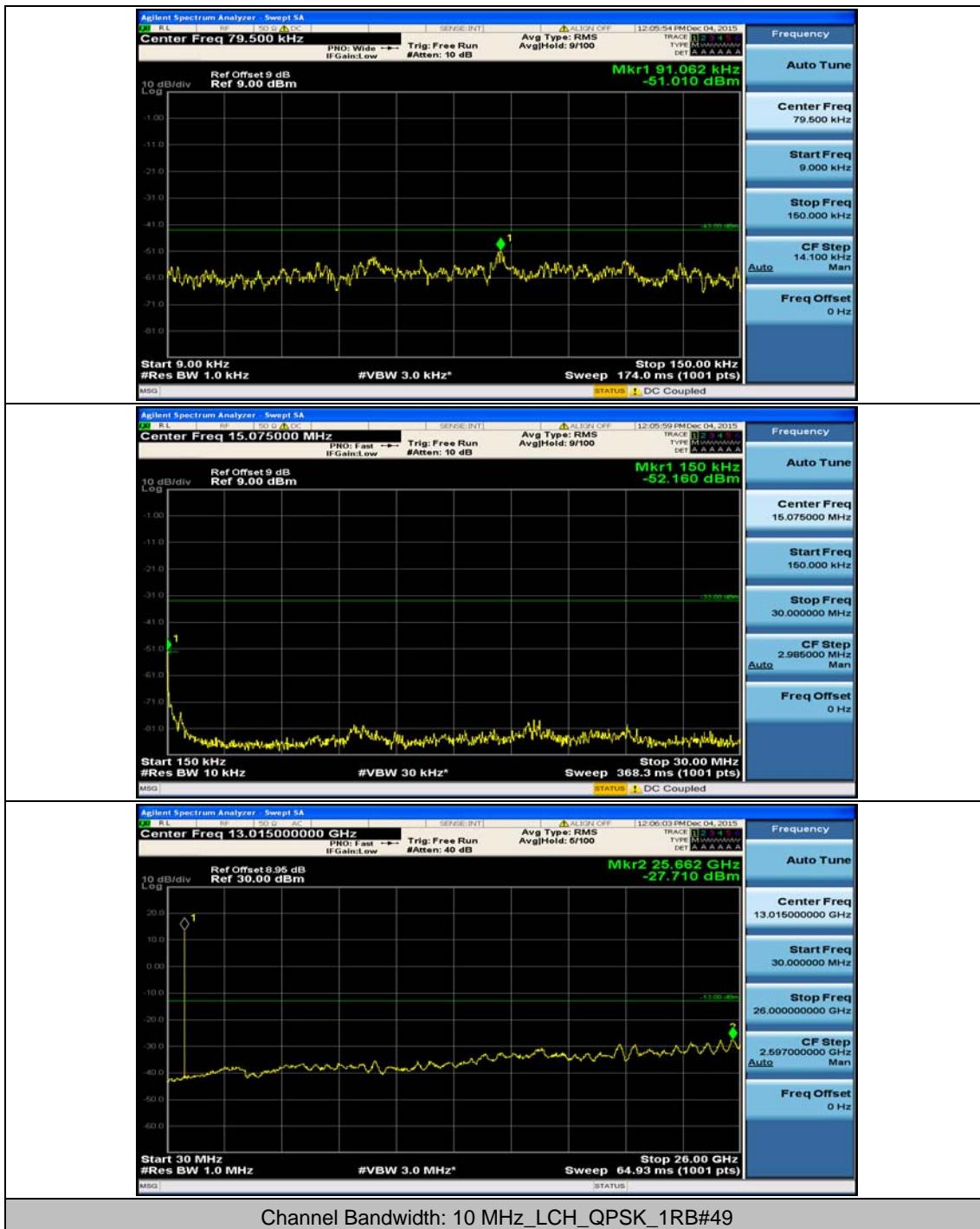


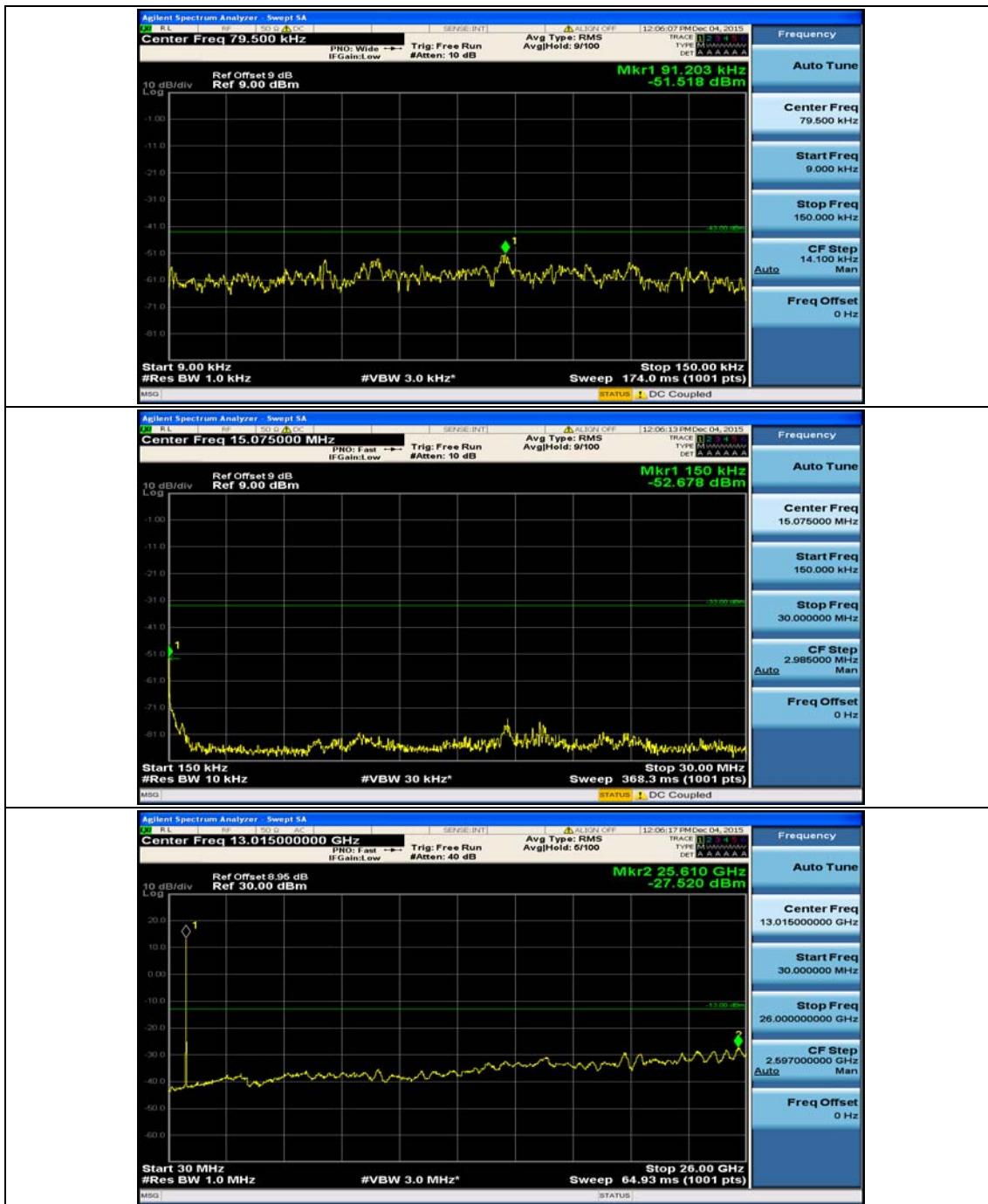


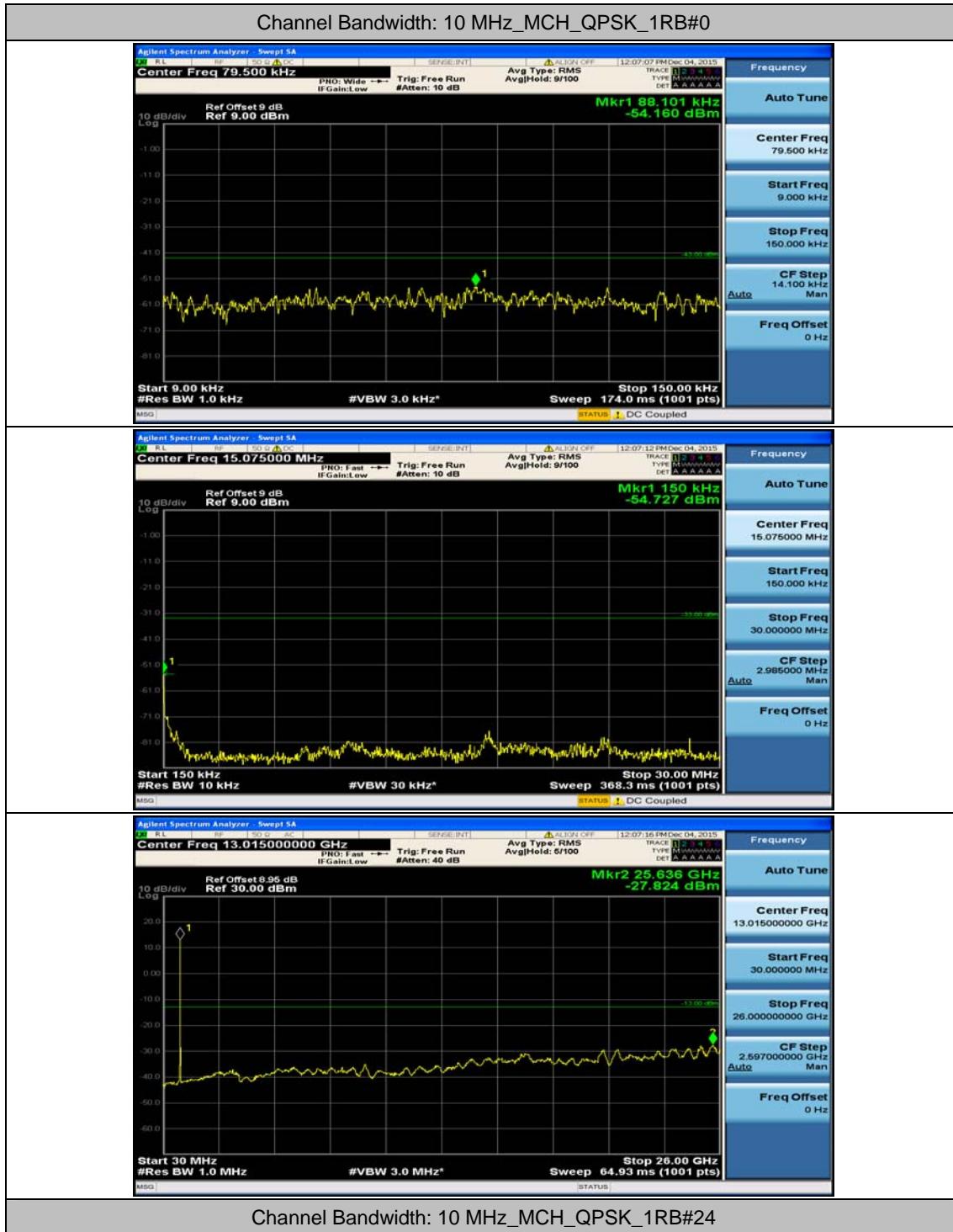


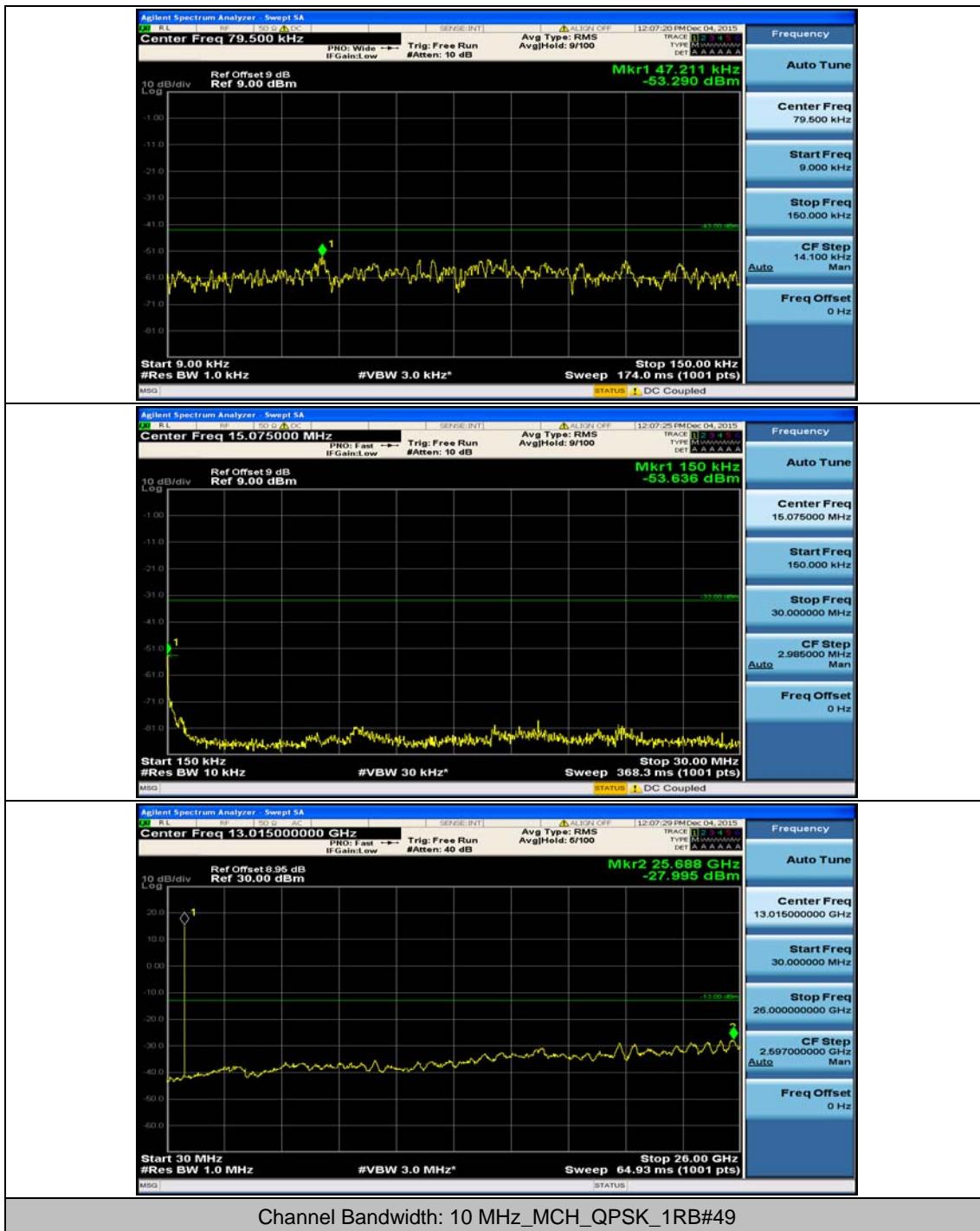
Channel Bandwidth: 10 MHz

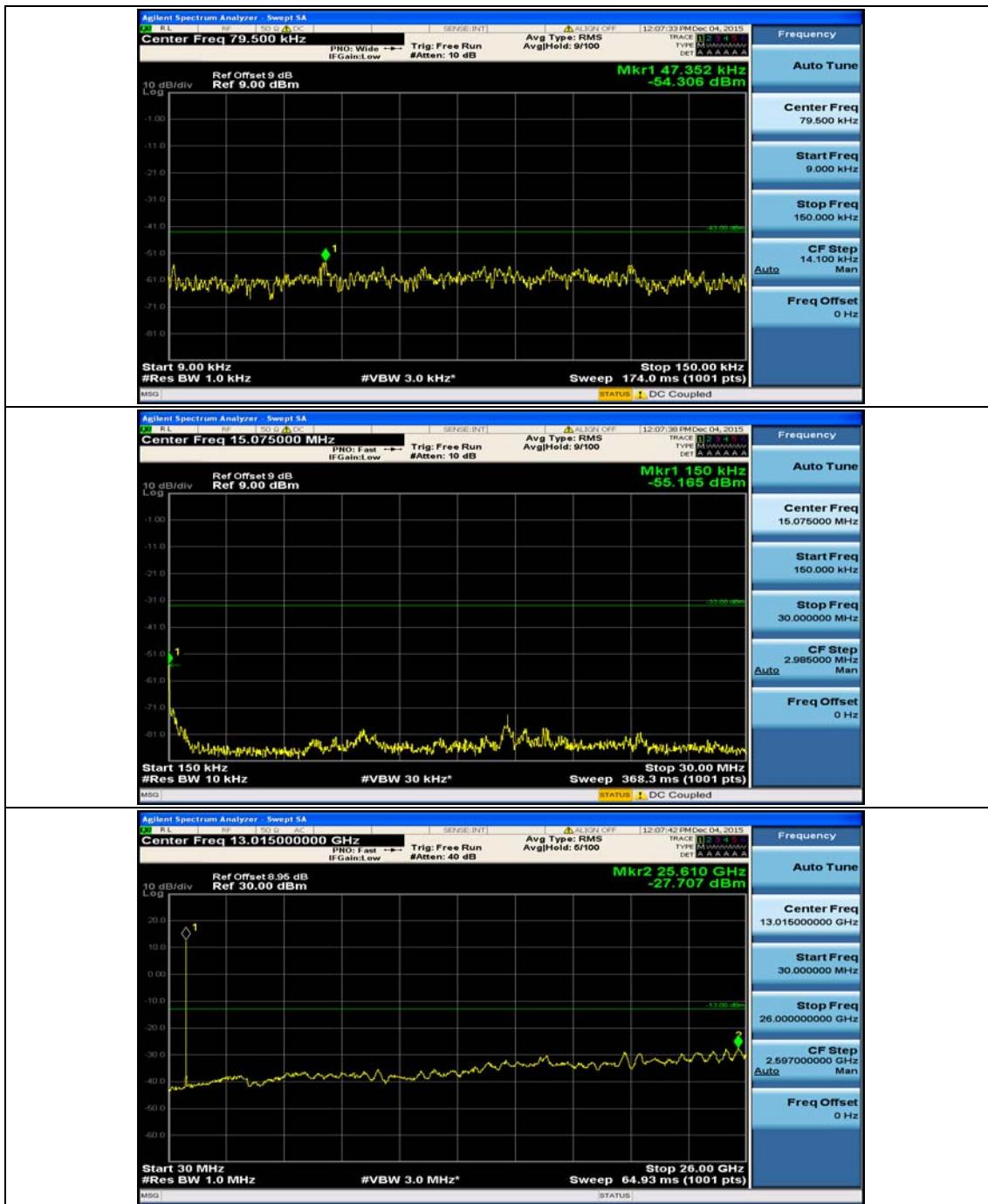


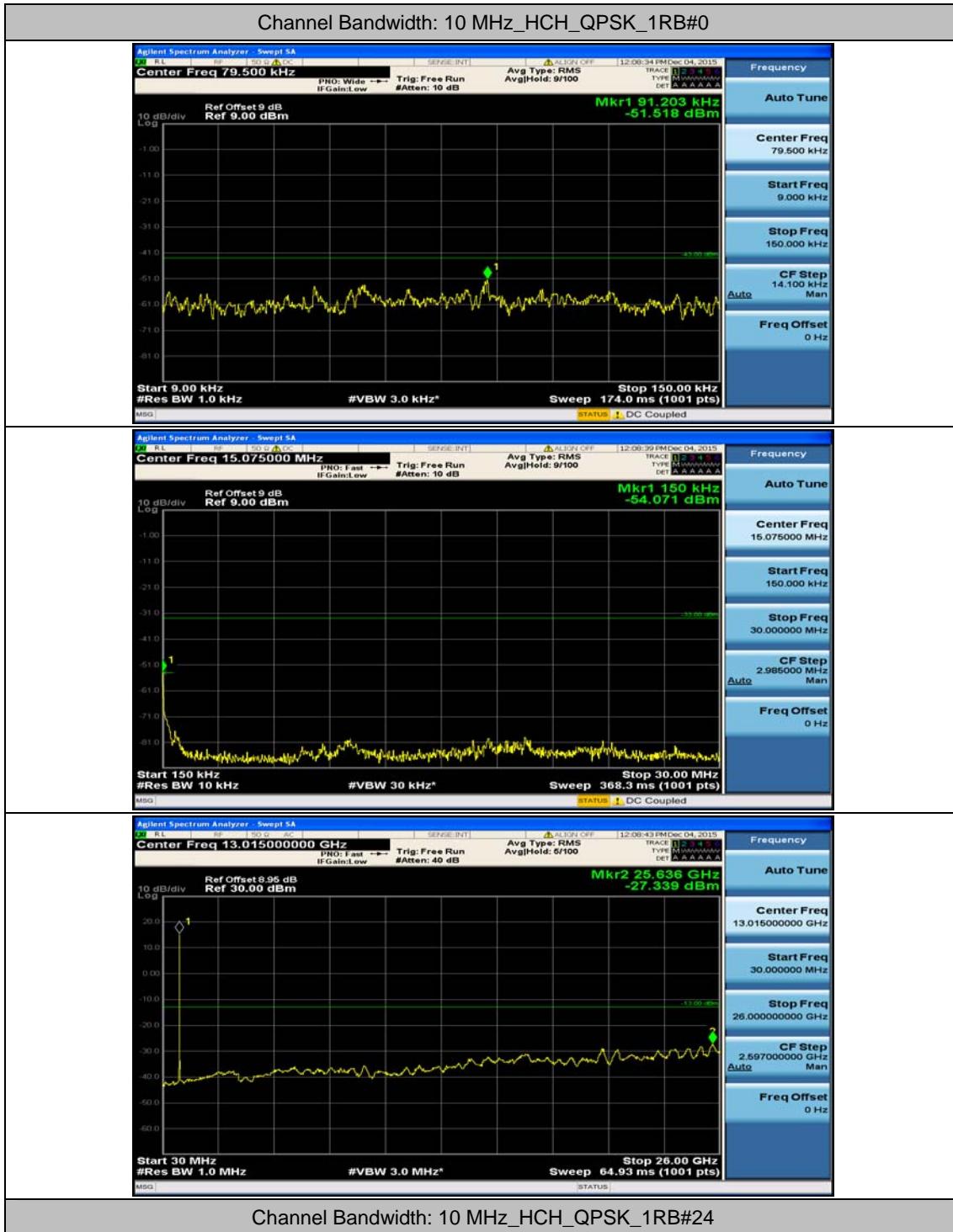


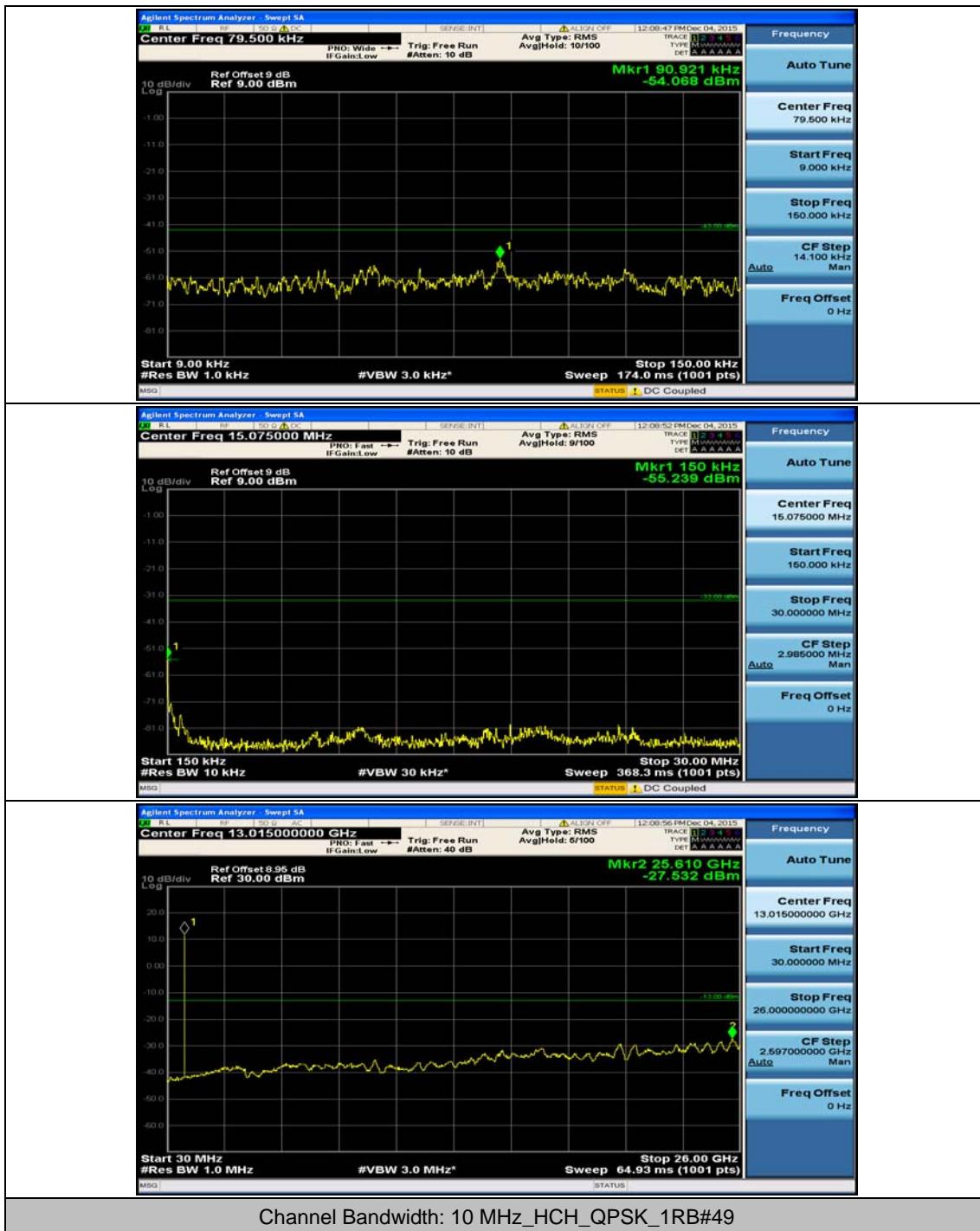


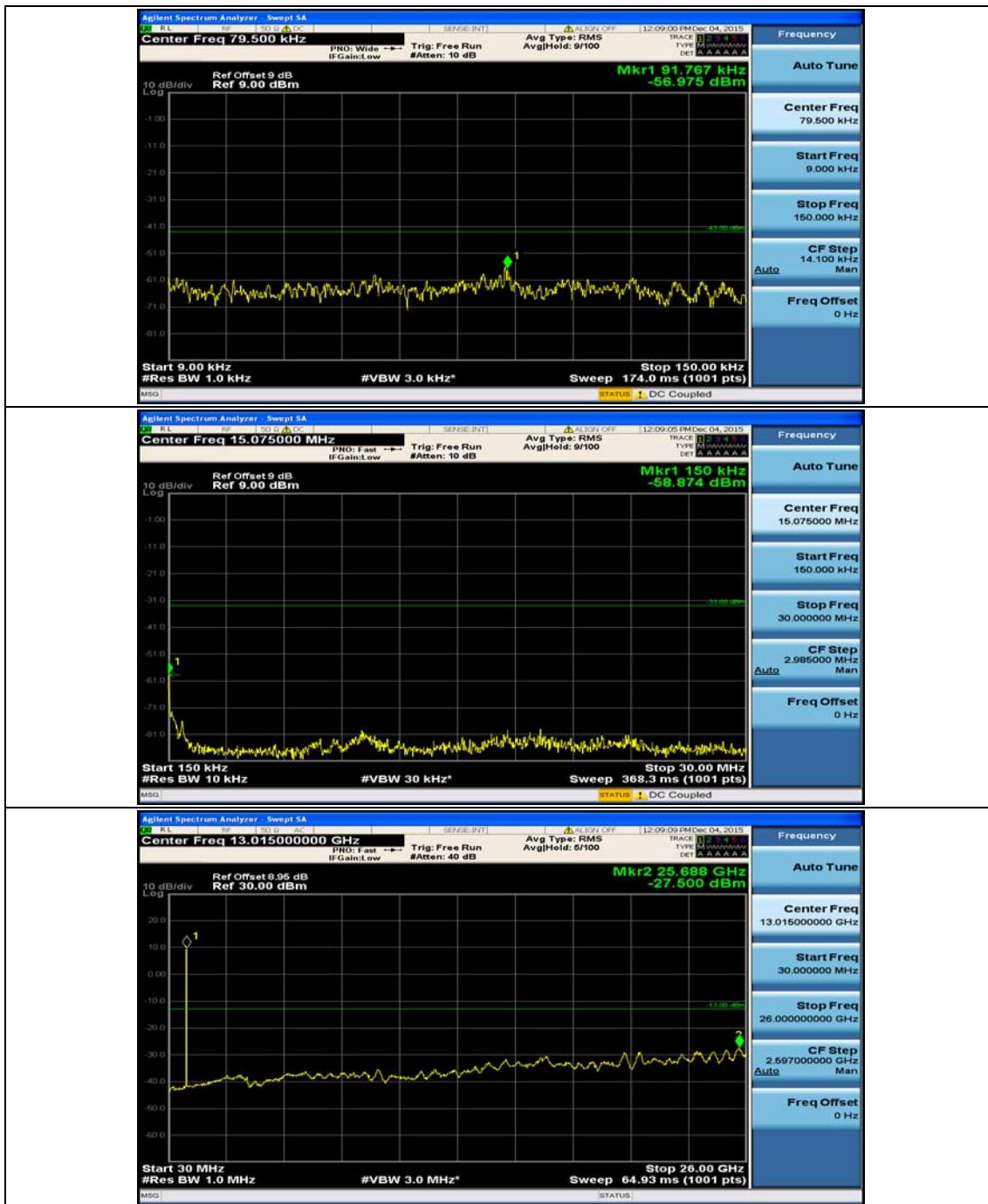


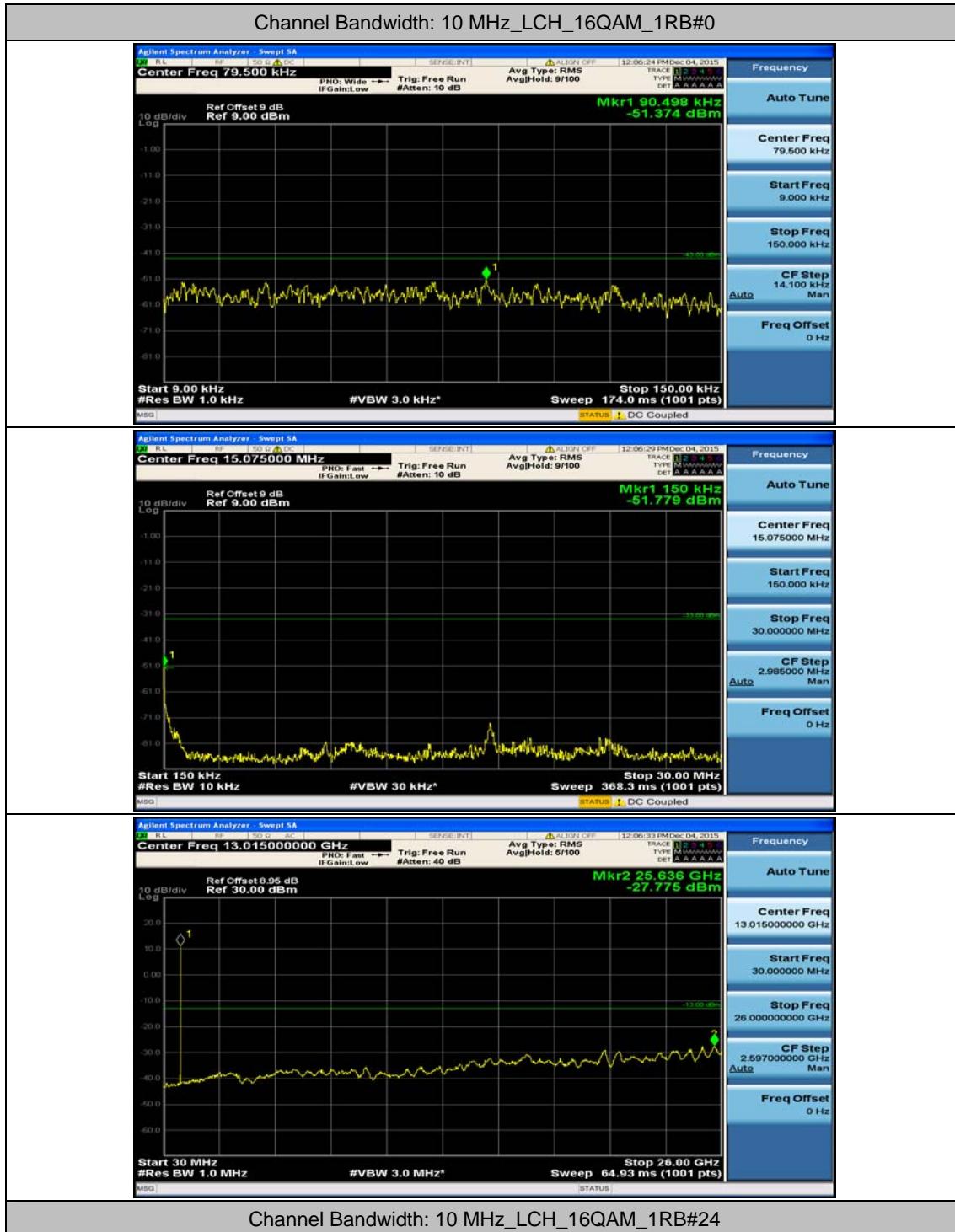


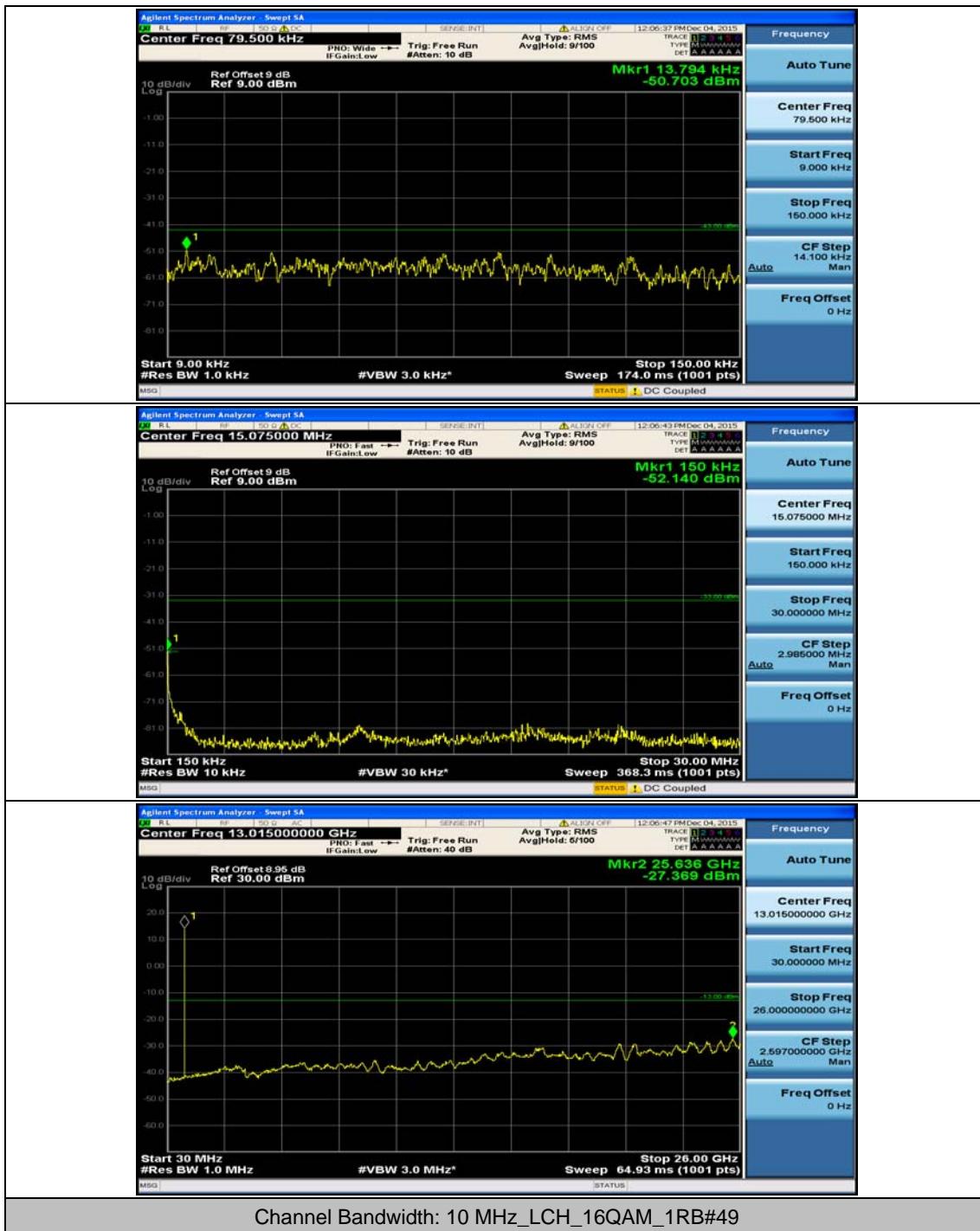


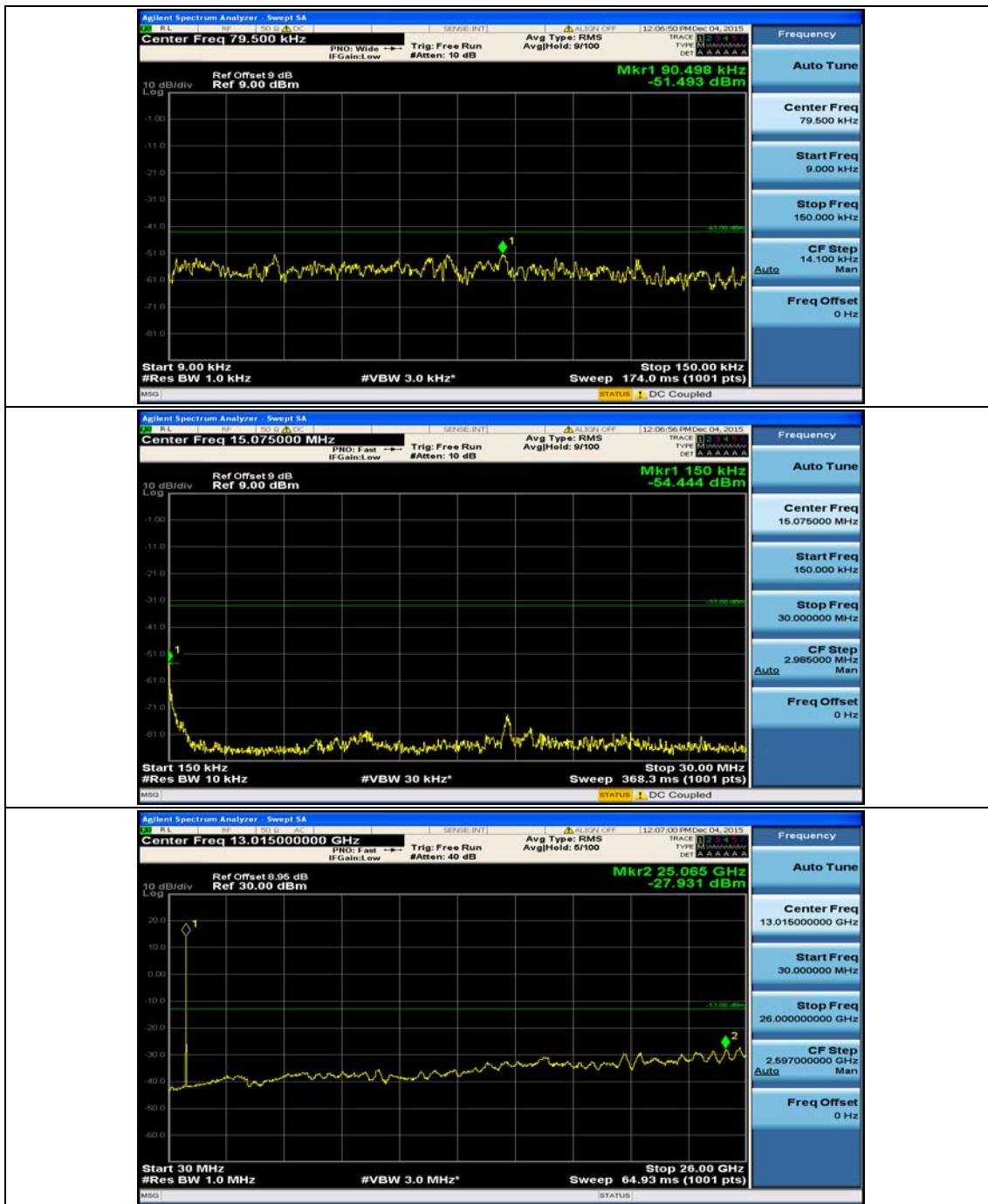


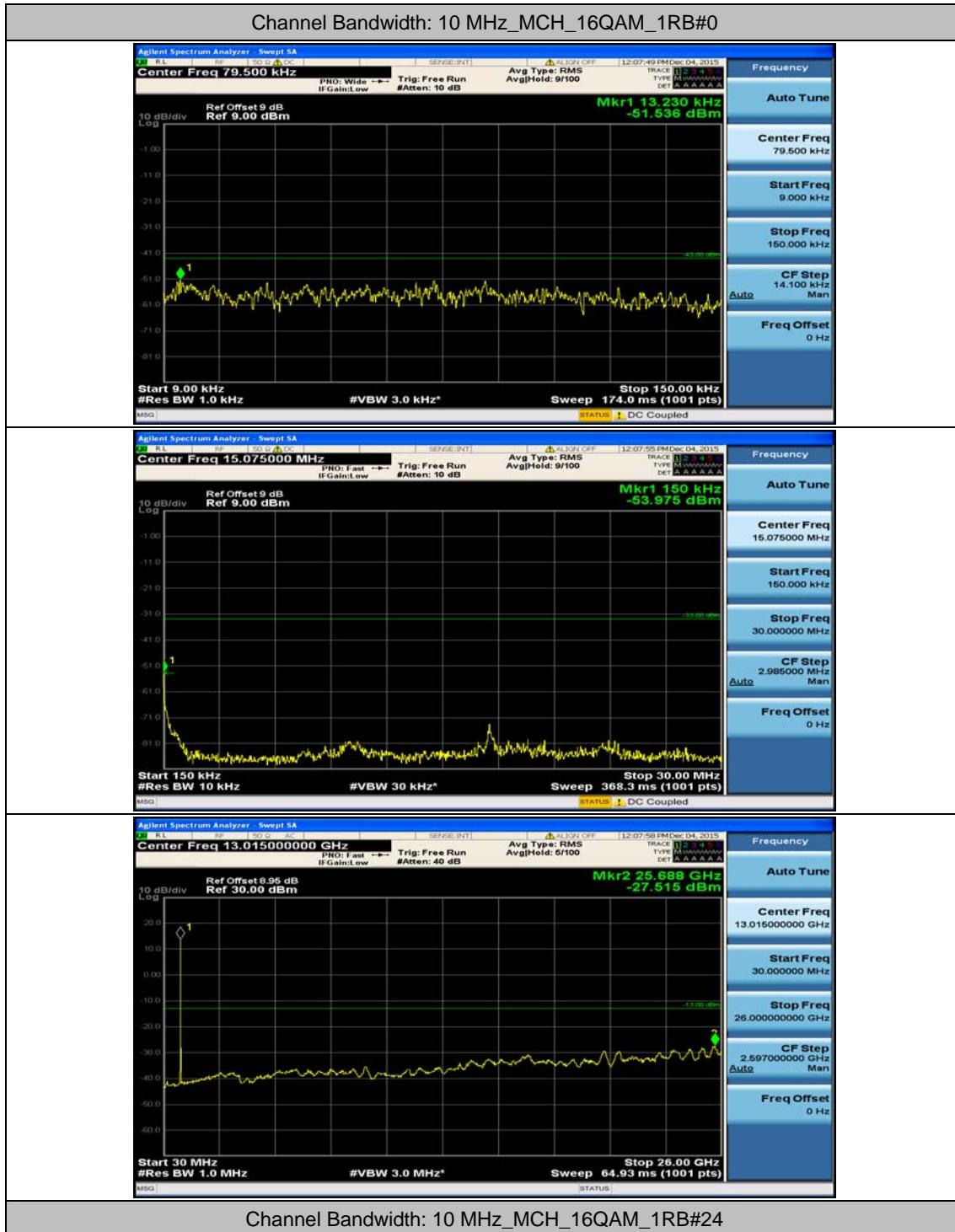


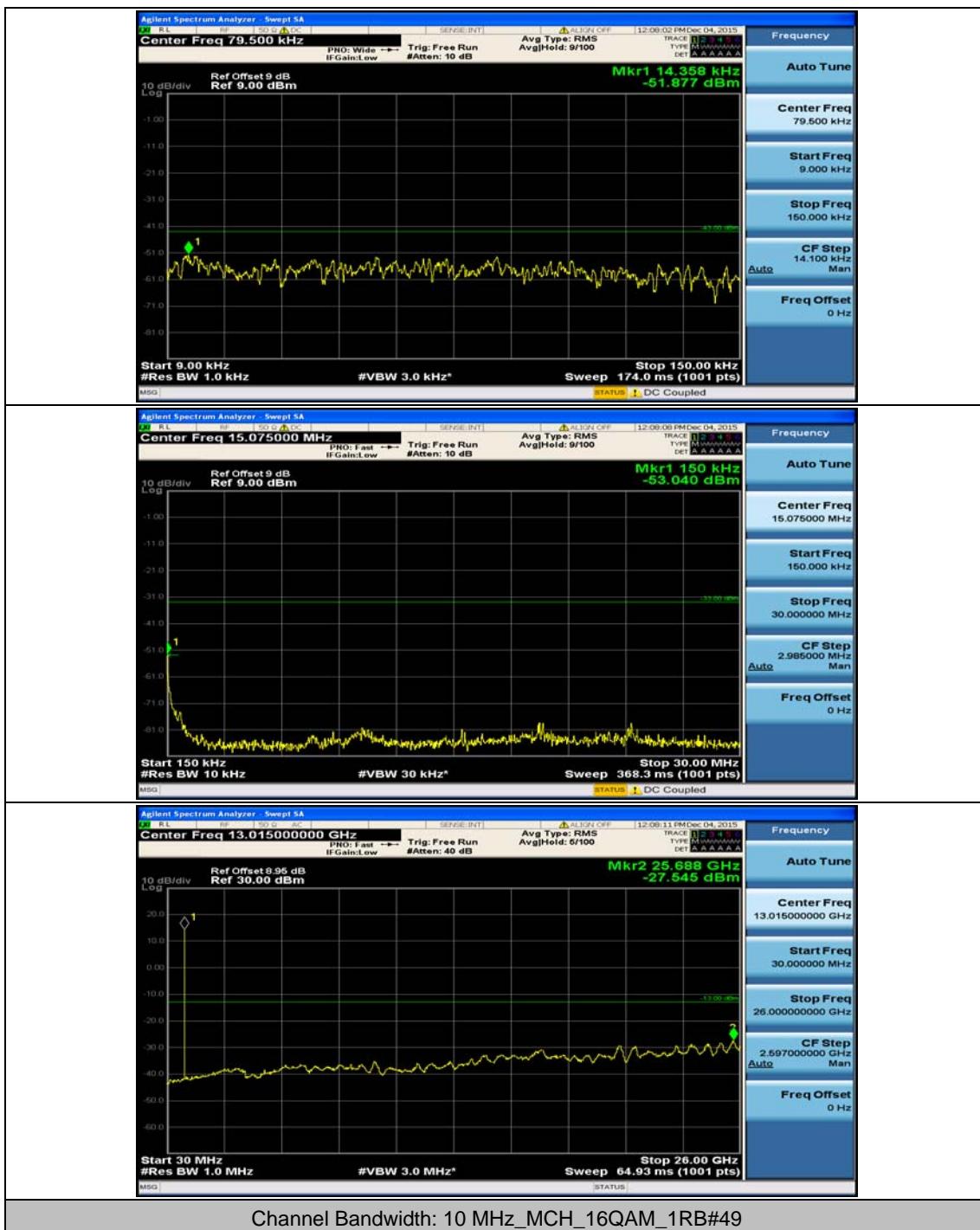


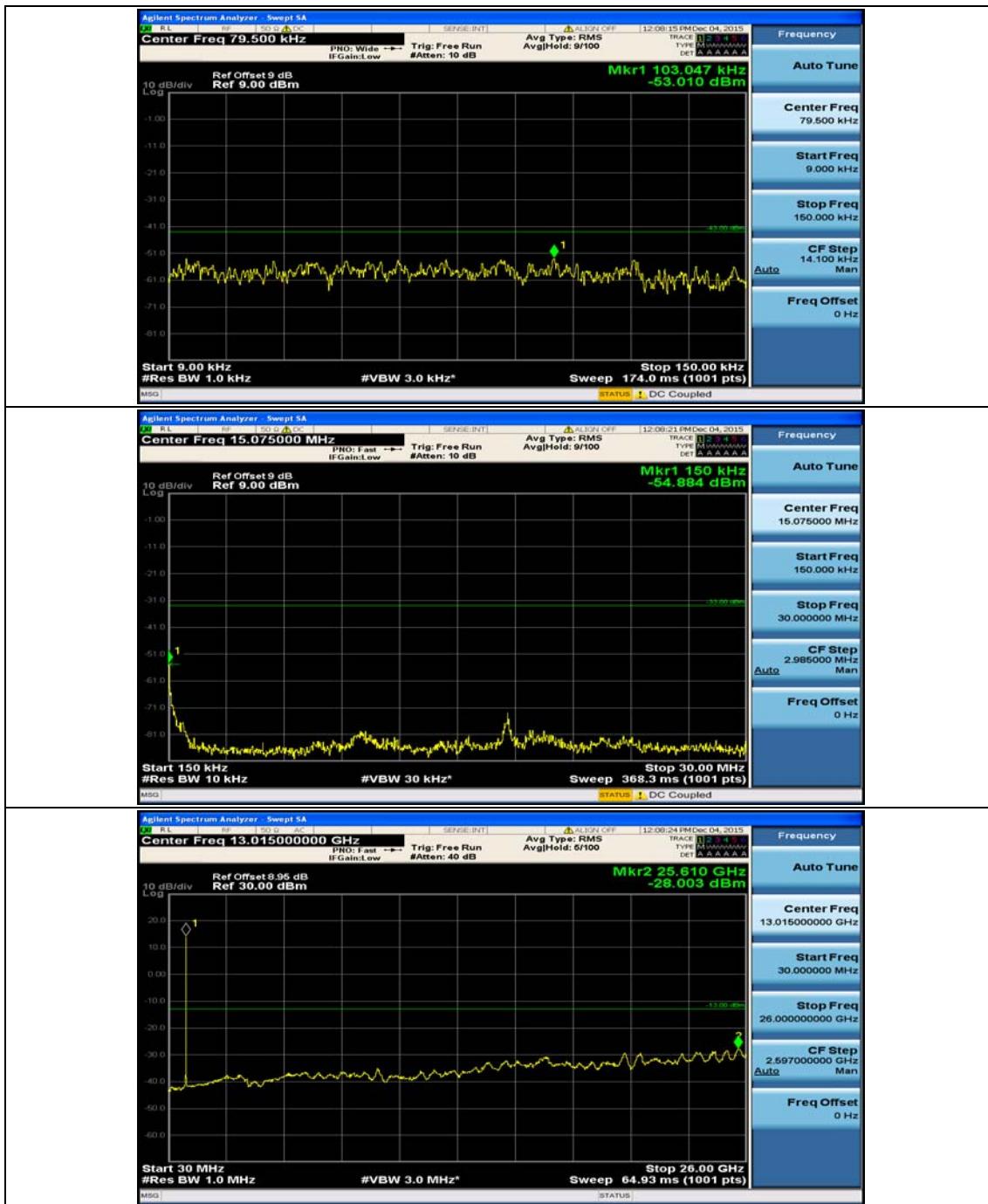


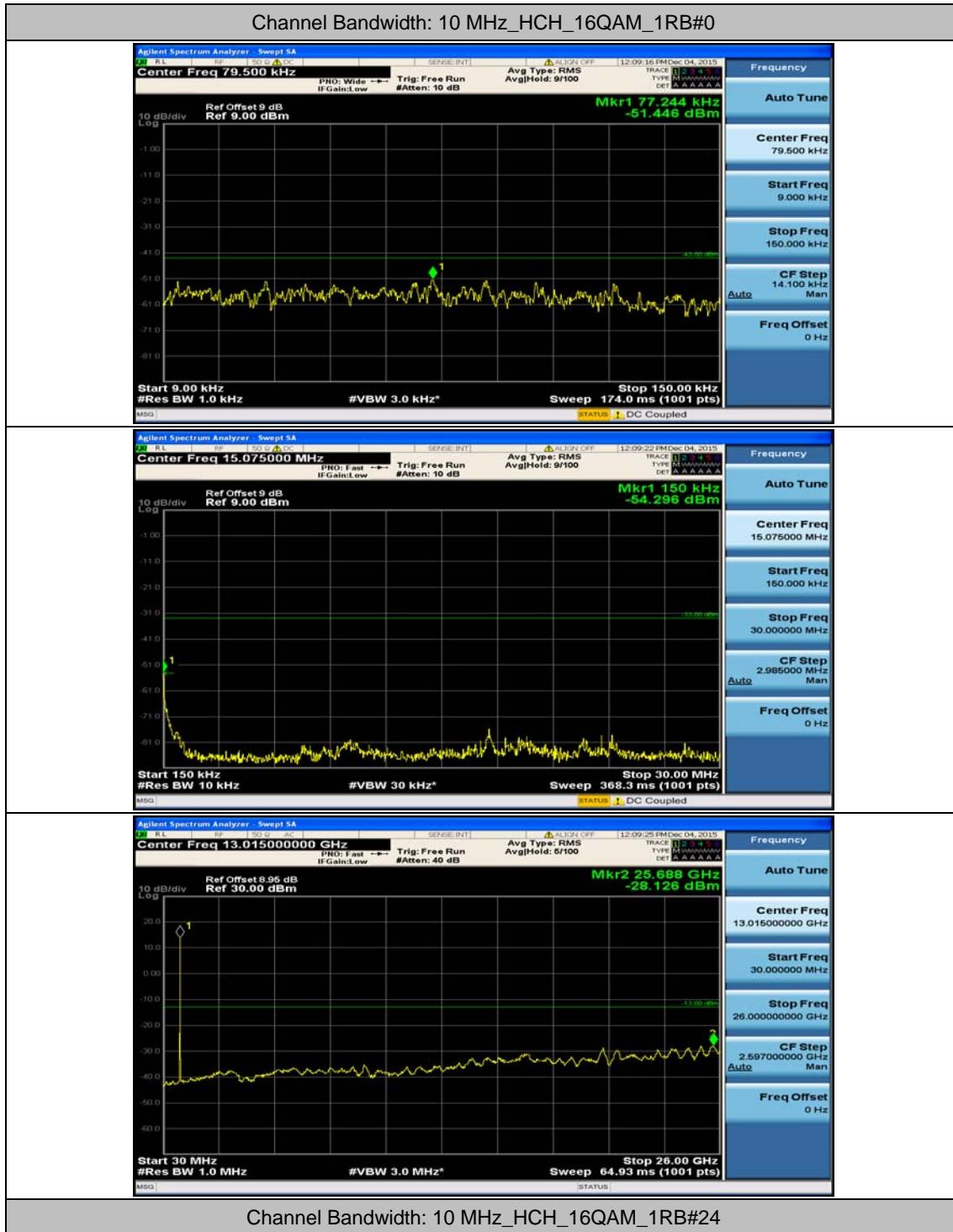


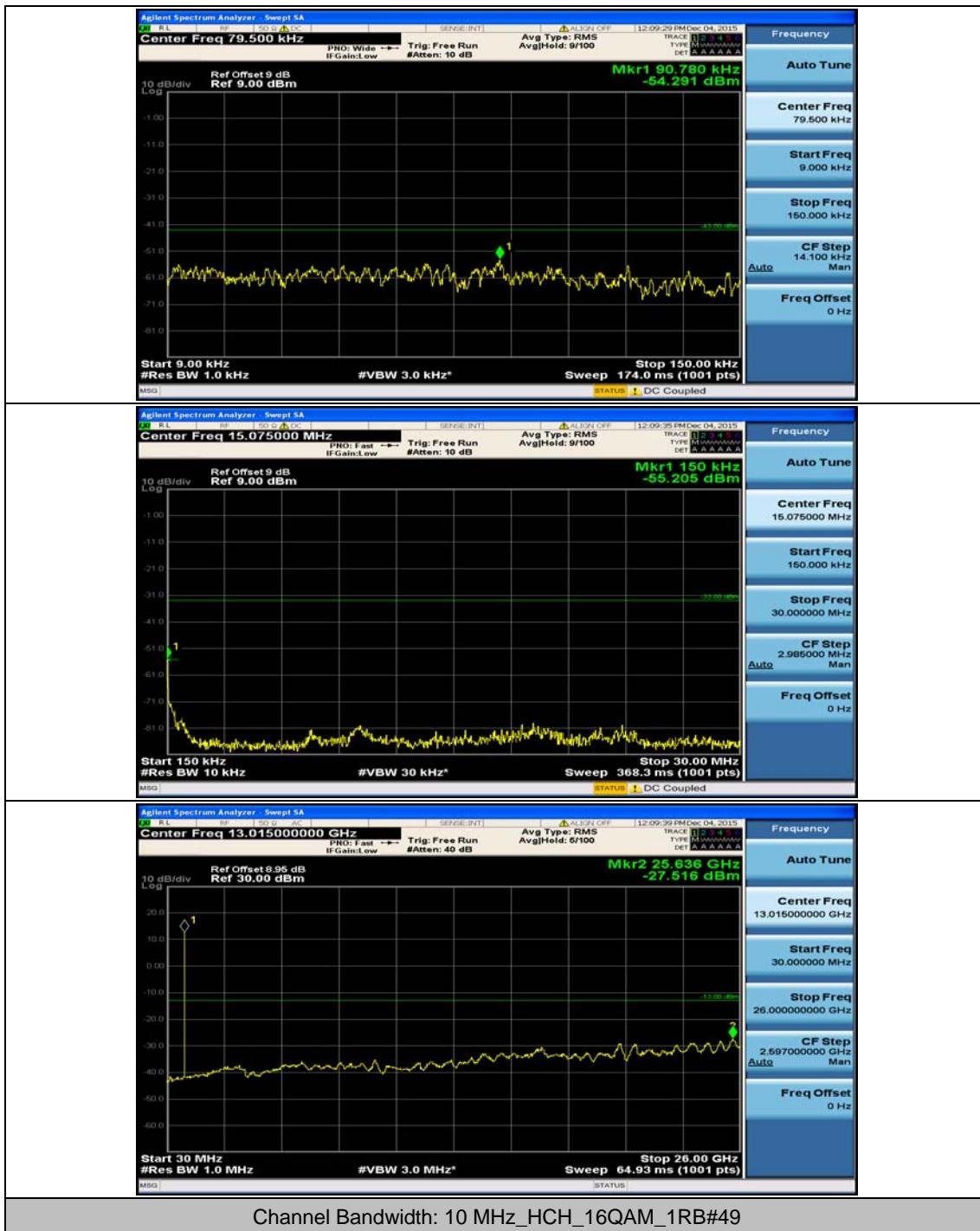


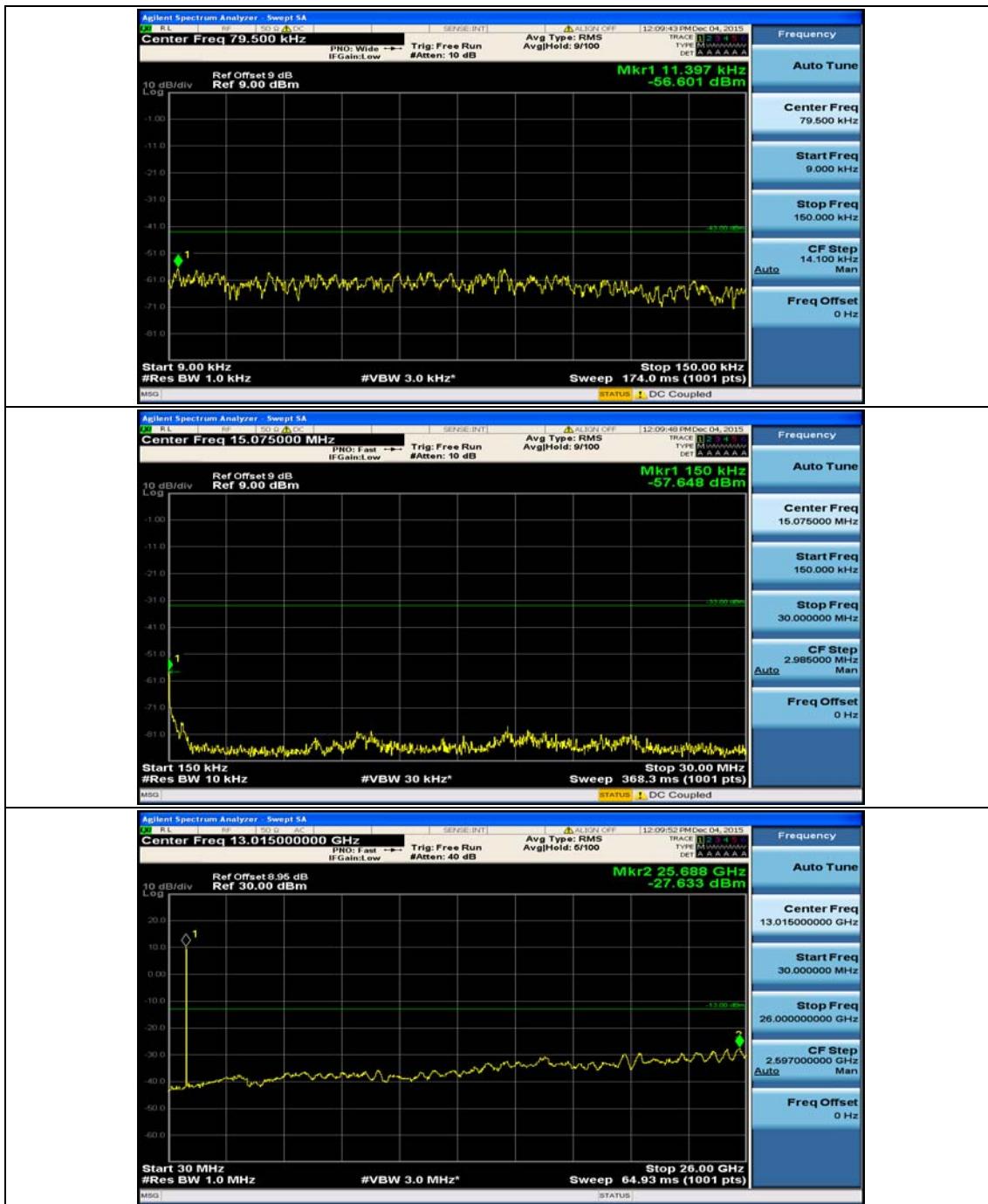












Appendix F: Frequency Stability

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	1.83	0.002220	± 2.5	PASS
		VN	TN	1.19	0.001440	± 2.5	PASS
		VH	TN	0.87	0.001056	± 2.5	PASS
	MCH	VL	TN	-1.89	-0.002257	± 2.5	PASS
		VN	TN	0.06	0.000068	± 2.5	PASS
		VH	TN	3.25	0.003882	± 2.5	PASS
	HCH	VL	TN	2.06	0.002428	± 2.5	PASS
		VN	TN	2.30	0.002715	± 2.5	PASS
		VH	TN	1.75	0.002062	± 2.5	PASS
16QAM	LCH	VL	TN	1.96	0.002376	± 2.5	PASS
		VN	TN	1.09	0.001318	± 2.5	PASS
		VH	TN	-1.60	-0.001939	± 2.5	PASS
	MCH	VL	TN	1.10	0.001317	± 2.5	PASS
		VN	TN	-1.04	-0.001248	± 2.5	PASS
		VH	TN	1.39	0.001659	± 2.5	PASS
	HCH	VL	TN	1.92	0.002260	± 2.5	PASS
		VN	TN	0.07	0.000084	± 2.5	PASS
		VH	TN	2.22	0.002619	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.76	0.002134	± 2.5	PASS
		VN	-20	2.26	0.002741	± 2.5	PASS
		VN	-10	2.02	0.002446	± 2.5	PASS
		VN	0	0.53	0.000642	± 2.5	PASS
		VN	10	-2.05	-0.002475	± 2.5	PASS
		VN	20	2.90	0.003521	± 2.5	PASS
		VN	30	0.01	0.000017	± 2.5	PASS
		VN	40	4.12	0.004996	± 2.5	PASS
		VN	50	0.24	0.000295	± 2.5	PASS
	MCH	VN	-30	-1.47	-0.001761	± 2.5	PASS
		VN	-20	-1.70	-0.002035	± 2.5	PASS
		VN	-10	1.73	0.002069	± 2.5	PASS
		VN	0	1.66	0.001984	± 2.5	PASS
		VN	10	1.86	0.002250	± 2.5	PASS
		VN	20	3.73	0.004463	± 2.5	PASS
		VN	30	0.69	0.000821	± 2.5	PASS

	HCH	VN	40	0.26	0.000308	± 2.5	PASS
		VN	50	0.64	0.000770	± 2.5	PASS
		VN	-30	0.04	0.000051	± 2.5	PASS
		VN	-20	-0.11	-0.000135	± 2.5	PASS
		VN	-10	3.91	0.004604	± 2.5	PASS
		VN	0	0.31	0.000371	± 2.5	PASS
		VN	10	-1.29	-0.001558	± 2.5	PASS
		VN	20	0.62	0.000725	± 2.5	PASS
		VN	30	1.29	0.001518	± 2.5	PASS
		VN	40	1.92	0.002260	± 2.5	PASS
		VN	50	2.85	0.003356	± 2.5	PASS
16QAM	LCH	VN	-30	4.28	0.005186	± 2.5	PASS
		VN	-20	3.83	0.004649	± 2.5	PASS
		VN	-10	0.11	0.000139	± 2.5	PASS
		VN	0	3.79	0.004597	± 2.5	PASS
		VN	10	-1.04	-0.001263	± 2.5	PASS
		VN	20	3.72	0.004510	± 2.5	PASS
		VN	30	2.80	0.003400	± 2.5	PASS
		VN	40	2.65	0.003209	± 2.5	PASS
		VN	50	1.80	0.002186	± 2.5	PASS
	MCH	VN	-30	1.02	0.001214	± 2.5	PASS
		VN	-20	1.36	0.001625	± 2.5	PASS
		VN	-10	0.49	0.000581	± 2.5	PASS
		VN	0	1.20	0.001436	± 2.5	PASS
		VN	10	0.82	0.000975	± 2.5	PASS
		VN	20	0.74	0.000889	± 2.5	PASS
		VN	30	0.13	0.000154	± 2.5	PASS
		VN	40	0.49	0.000581	± 2.5	PASS
		VN	50	0.49	0.000581	± 2.5	PASS
	HCH	VN	-30	2.96	0.003491	± 2.5	PASS
		VN	-20	2.83	0.003339	± 2.5	PASS
		VN	-10	2.02	0.002378	± 2.5	PASS
		VN	0	1.40	0.001653	± 2.5	PASS
		VN	10	0.82	0.000975	± 2.5	PASS
		VN	20	-0.97	-0.001147	± 2.5	PASS
		VN	30	1.32	0.001551	± 2.5	PASS
		VN	40	0.94	0.001113	± 2.5	PASS
		VN	50	0.96	0.001130	± 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	-0.07	-0.000087	± 2.5	PASS
		VN	TN	0.62	0.000745	± 2.5	PASS
		VH	TN	1.20	0.001436	± 2.5	PASS
	MCH	VL	TN	0.47	0.000564	± 2.5	PASS

	HCH	VN	TN	0.17	0.000205	± 2.5	PASS	
		VH	TN	1.03	0.001231	± 2.5	PASS	
		VL	TN	-0.26	-0.000304	± 2.5	PASS	
		VN	TN	-0.34	-0.000405	± 2.5	PASS	
		VH	TN	-0.72	-0.000845	± 2.5	PASS	
	LCH	VL	TN	-2.35	-0.002842	± 2.5	PASS	
16QAM		VN	TN	-1.20	-0.001456	± 2.5	PASS	
		VH	TN	2.39	0.002822	± 2.5	PASS	
MCH	VL	TN	1.13	0.001351	± 2.5	PASS		
	VN	TN	1.20	0.001436	± 2.5	PASS		
	VH	TN	2.19	0.002586	± 2.5	PASS		
HCH	VL	TN	3.45	0.004068	± 2.5	PASS		
	VN	TN	-0.27	-0.000321	± 2.5	PASS		
	VH	TN	0.09	0.000101	± 2.5	PASS		
	Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict	
QPSK	LCH	VN	-30	1.02	0.001230	± 2.5	PASS	
		VN	-20	1.90	0.002305	± 2.5	PASS	
		VN	-10	-1.20	-0.001456	± 2.5	PASS	
		VN	0	-0.74	-0.000901	± 2.5	PASS	
		VN	10	-3.18	-0.003842	± 2.5	PASS	
		VN	20	2.53	0.003067	± 2.5	PASS	
		VN	30	0.73	0.000884	± 2.5	PASS	
		VN	40	2.50	0.003033	± 2.5	PASS	
		VN	50	-1.03	-0.001248	± 2.5	PASS	
	MCH	VN	-30	1.02	0.001214	± 2.5	PASS	
		VN	-20	1.07	0.001283	± 2.5	PASS	
		VN	-10	1.53	0.001830	± 2.5	PASS	
		VN	0	1.62	0.001932	± 2.5	PASS	
		VN	10	0.01	0.000017	± 2.5	PASS	
		VN	20	1.19	0.001419	± 2.5	PASS	
		VN	30	1.89	0.002257	± 2.5	PASS	
		VN	40	1.66	0.001984	± 2.5	PASS	
		VN	50	2.43	0.002907	± 2.5	PASS	
	HCH	VN	-30	0.41	0.000489	± 2.5	PASS	
		VN	-20	0.90	0.001063	± 2.5	PASS	
		VN	-10	0.73	0.000861	± 2.5	PASS	
		VN	0	0.80	0.000945	± 2.5	PASS	
		VN	10	-0.19	-0.000225	± 2.5	PASS	
		VN	20	4.33	0.005114	± 2.5	PASS	
		VN	30	1.56	0.001840	± 2.5	PASS	
		VN	40	2.75	0.003241	± 2.5	PASS	
		VN	50	-0.97	-0.001148	± 2.5	PASS	
QPSK	LCH	VN	-30	0.62	0.000745	± 2.5	PASS	
		VN	-20	0.24	0.000295	± 2.5	PASS	
		VN	-10	-0.93	-0.001126	± 2.5	PASS	
		VN	0	-0.24	-0.000295	± 2.5	PASS	
		VN	10	-0.62	-0.000744	± 2.5	PASS	
		VN	20	1.16	0.001404	± 2.5	PASS	

	MCH	VN	30	-0.44	-0.000537	± 2.5	PASS
		VN	40	-0.29	-0.000347	± 2.5	PASS
		VN	50	2.42	0.002929	± 2.5	PASS
		VN	-30	0.14	0.000171	± 2.5	PASS
		VN	-20	3.13	0.003745	± 2.5	PASS
		VN	-10	-0.69	-0.000821	± 2.5	PASS
		VN	0	-0.76	-0.000906	± 2.5	PASS
		VN	10	2.86	0.003420	± 2.5	PASS
		VN	20	2.02	0.002411	± 2.5	PASS
	HCH	VN	30	2.85	0.003403	± 2.5	PASS
		VN	40	3.45	0.004121	± 2.5	PASS
		VN	50	3.16	0.003779	± 2.5	PASS
		VN	-30	2.92	0.003443	± 2.5	PASS
		VN	-20	1.43	0.001688	± 2.5	PASS
		VN	-10	2.37	0.002802	± 2.5	PASS
		VN	0	2.10	0.002481	± 2.5	PASS
		VN	10	-0.87	-0.001043	± 2.5	PASS
		VN	20	-1.34	-0.001587	± 2.5	PASS
	LCH	VN	30	2.23	0.002633	± 2.5	PASS
		VN	40	1.24	0.001468	± 2.5	PASS
		VN	50	-0.16	-0.000186	± 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	1.93	0.002281	± 2.5	PASS
		VN	TN	-0.47	-0.000571	± 2.5	PASS
		VH	TN	2.20	0.002634	± 2.5	PASS
	MCH	VL	TN	1.53	0.001830	± 2.5	PASS
		VN	TN	1.06	0.001265	± 2.5	PASS
		VH	TN	1.93	0.002281	± 2.5	PASS
	HCH	VL	TN	1.57	0.001859	± 2.5	PASS
		VN	TN	0.89	0.001048	± 2.5	PASS
		VH	TN	1.10	0.001301	± 2.5	PASS
16QAM	LCH	VL	TN	0.76	0.000896	± 2.5	PASS
		VN	TN	0.54	0.000658	± 2.5	PASS
		VH	TN	1.57	0.001859	± 2.5	PASS
	MCH	VL	TN	1.10	0.001301	± 2.5	PASS
		VN	TN	0.83	0.000992	± 2.5	PASS
		VH	TN	0.76	0.000896	± 2.5	PASS
	HCH	VL	TN	2.20	0.002634	± 2.5	PASS
		VN	TN	-0.36	-0.000422	± 2.5	PASS
		VH	TN	1.76	0.002134	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict

	QPSK	LCH	VN	-30	1.76	0.002134	± 2.5	PASS
			VN	-20	2.26	0.002741	± 2.5	PASS
			VN	-10	2.02	0.002446	± 2.5	PASS
			VN	0	0.53	0.000642	± 2.5	PASS
			VN	10	1.17	0.001419	± 2.5	PASS
			VN	20	1.17	0.001419	± 2.5	PASS
			VN	30	0.37	0.000450	± 2.5	PASS
			VN	40	-0.57	-0.000692	± 2.5	PASS
			VN	50	0.20	0.000242	± 2.5	PASS
		MCH	VN	-30	-1.47	-0.001761	± 2.5	PASS
			VN	-20	-1.70	-0.002035	± 2.5	PASS
			VN	-10	1.73	0.002069	± 2.5	PASS
			VN	0	1.66	0.001984	± 2.5	PASS
			VN	10	-0.11	-0.000135	± 2.5	PASS
			VN	20	0.73	0.000872	± 2.5	PASS
			VN	30	1.65	0.001967	± 2.5	PASS
			VN	40	1.67	0.002001	± 2.5	PASS
			VN	50	-1.04	-0.001248	± 2.5	PASS
		HCH	VN	-30	0.04	0.000051	± 2.5	PASS
			VN	-20	-0.11	-0.000135	± 2.5	PASS
			VN	-10	3.91	0.004604	± 2.5	PASS
			VN	0	0.31	0.000371	± 2.5	PASS
			VN	10	-0.93	-0.001098	± 2.5	PASS
			VN	20	0.66	0.000777	± 2.5	PASS
			VN	30	-0.93	-0.001098	± 2.5	PASS
			VN	40	-0.34	-0.000406	± 2.5	PASS
			VN	50	0.54	0.000642	± 2.5	PASS
		LCH	VN	-30	4.28	0.005186	± 2.5	PASS
			VN	-20	3.83	0.004649	± 2.5	PASS
			VN	-10	0.11	0.000139	± 2.5	PASS
			VN	0	3.79	0.004597	± 2.5	PASS
			VN	10	-0.04	-0.000052	± 2.5	PASS
			VN	20	-0.04	-0.000052	± 2.5	PASS
			VN	30	0.03	0.000035	± 2.5	PASS
			VN	40	-0.46	-0.000554	± 2.5	PASS
			VN	50	2.75	0.003323	± 2.5	PASS
		MCH	VN	-30	1.02	0.001214	± 2.5	PASS
			VN	-20	1.36	0.001625	± 2.5	PASS
			VN	-10	0.49	0.000581	± 2.5	PASS
			VN	0	1.20	0.001436	± 2.5	PASS
			VN	10	0.39	0.000462	± 2.5	PASS
			VN	20	0.56	0.000667	± 2.5	PASS
			VN	30	0.39	0.000462	± 2.5	PASS
			VN	40	0.86	0.001026	± 2.5	PASS
			VN	50	0.87	0.001043	± 2.5	PASS
		HCH	VN	-30	2.96	0.003491	± 2.5	PASS
			VN	-20	2.83	0.003339	± 2.5	PASS
			VN	-10	2.02	0.002378	± 2.5	PASS
			VN	0	1.40	0.001653	± 2.5	PASS
			VN	10	2.96	0.003491	± 2.5	PASS

		VN	20	-0.53	-0.000625	± 2.5	PASS
		VN	30	2.57	0.003042	± 2.5	PASS
		VN	40	-0.26	-0.000304	± 2.5	PASS
		VN	50	-0.92	-0.001082	± 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	0.30	0.000162	± 2.5	PASS
		VN	TN	-0.20	-0.000108	± 2.5	PASS
		VH	TN	0.26	0.000139	± 2.5	PASS
	MCH	VL	TN	-0.76	-0.000403	± 2.5	PASS
		VN	TN	0.21	0.000114	± 2.5	PASS
		VH	TN	0.40	0.000213	± 2.5	PASS
	HCH	VL	TN	-1.62	-0.000849	± 2.5	PASS
		VN	TN	1.36	0.000713	± 2.5	PASS
		VH	TN	-1.49	-0.000781	± 2.5	PASS
16QAM	LCH	VL	TN	-0.94	-0.000509	± 2.5	PASS
		VN	TN	-2.36	-0.001272	± 2.5	PASS
		VH	TN	0.19	0.000100	± 2.5	PASS
	MCH	VL	TN	-1.19	-0.000632	± 2.5	PASS
		VN	TN	0.14	0.000076	± 2.5	PASS
		VH	TN	1.17	0.000624	± 2.5	PASS
	HCH	VL	TN	0.74	0.000390	± 2.5	PASS
		VN	TN	0.77	0.000405	± 2.5	PASS
		VH	TN	-1.06	-0.000556	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	0.40	0.000216	± 2.5	PASS
		VN	-20	-0.19	-0.000100	± 2.5	PASS
		VN	-10	-0.01	-0.000008	± 2.5	PASS
		VN	0	-1.24	-0.000671	± 2.5	PASS
		VN	10	-0.01	-0.000008	± 2.5	PASS
		VN	20	0.09	0.000046	± 2.5	PASS
		VN	30	-1.73	-0.000933	± 2.5	PASS
		VN	40	-1.24	-0.000671	± 2.5	PASS
		VN	50	0.31	0.000170	± 2.5	PASS
	MCH	VN	-30	-0.17	-0.000091	± 2.5	PASS
		VN	-20	-1.43	-0.000761	± 2.5	PASS
		VN	-10	-0.44	-0.000236	± 2.5	PASS
		VN	0	-0.17	-0.000091	± 2.5	PASS
		VN	10	-0.26	-0.000137	± 2.5	PASS
		VN	20	0.33	0.000175	± 2.5	PASS
		VN	30	0.64	0.000342	± 2.5	PASS
		VN	40	1.16	0.000616	± 2.5	PASS

	HCH	VN	50	1.43	0.000761	± 2.5	PASS
		VN	-30	0.07	0.000038	± 2.5	PASS
		VN	-20	-0.90	-0.000473	± 2.5	PASS
		VN	-10	-0.92	-0.000481	± 2.5	PASS
		VN	0	-0.23	-0.000120	± 2.5	PASS
		VN	10	0.96	0.000503	± 2.5	PASS
		VN	20	1.52	0.000796	± 2.5	PASS
		VN	30	1.26	0.000661	± 2.5	PASS
		VN	40	0.84	0.000443	± 2.5	PASS
		VN	50	1.04	0.000548	± 2.5	PASS
QPSK	LCH	VN	-30	-1.27	-0.000686	± 2.5	PASS
		VN	-20	-1.34	-0.000725	± 2.5	PASS
		VN	-10	-0.01	-0.000008	± 2.5	PASS
		VN	0	-0.70	-0.000378	± 2.5	PASS
		VN	10	-0.10	-0.000054	± 2.5	PASS
		VN	20	0.07	0.000039	± 2.5	PASS
		VN	30	0.24	0.000131	± 2.5	PASS
		VN	40	-1.19	-0.000640	± 2.5	PASS
		VN	50	-1.46	-0.000787	± 2.5	PASS
	MCH	VN	-30	0.04	0.000023	± 2.5	PASS
		VN	-20	-0.17	-0.000091	± 2.5	PASS
		VN	-10	-0.76	-0.000403	± 2.5	PASS
		VN	0	-0.46	-0.000243	± 2.5	PASS
		VN	10	-1.70	-0.000905	± 2.5	PASS
		VN	20	0.50	0.000266	± 2.5	PASS
		VN	30	-0.39	-0.000205	± 2.5	PASS
		VN	40	1.66	0.000883	± 2.5	PASS
		VN	50	0.50	0.000266	± 2.5	PASS
	HCH	VN	-30	0.96	0.000503	± 2.5	PASS
		VN	-20	-0.53	-0.000278	± 2.5	PASS
		VN	-10	-0.76	-0.000398	± 2.5	PASS
		VN	0	-0.13	-0.000068	± 2.5	PASS
		VN	10	-1.19	-0.000623	± 2.5	PASS
		VN	20	0.31	0.000165	± 2.5	PASS
		VN	30	0.29	0.000150	± 2.5	PASS
		VN	40	0.50	0.000263	± 2.5	PASS
		VN	50	1.06	0.000556	± 2.5	PASS