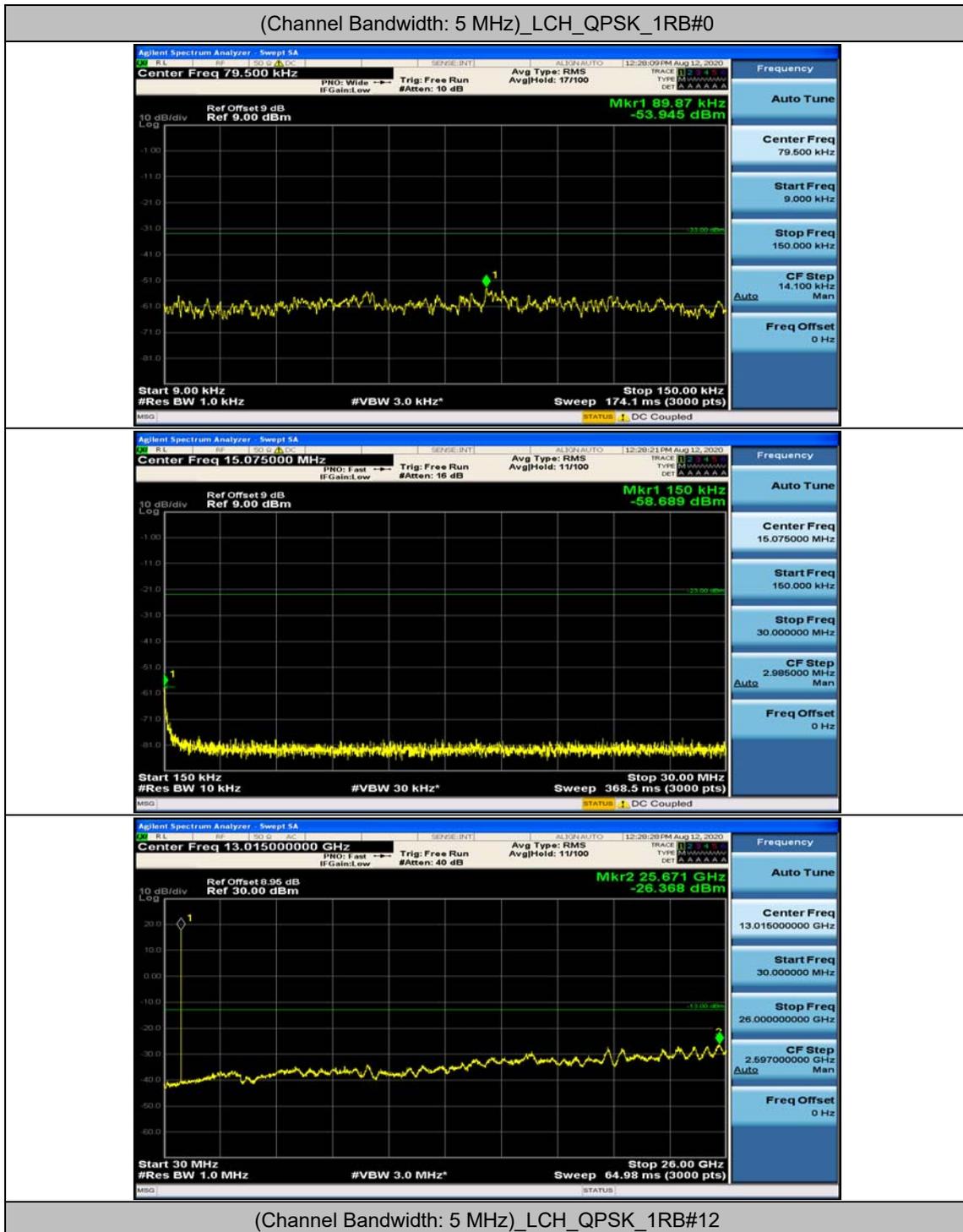
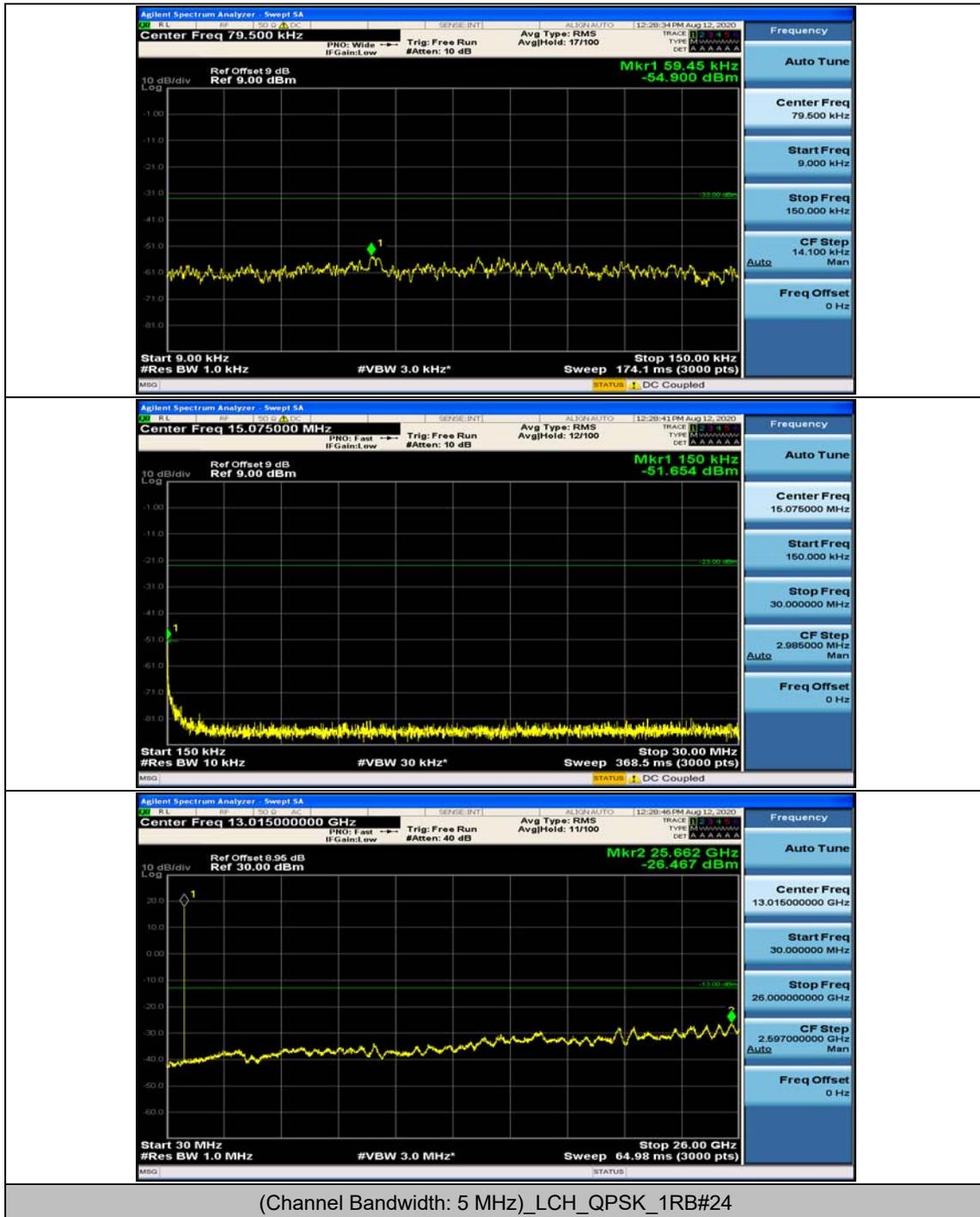
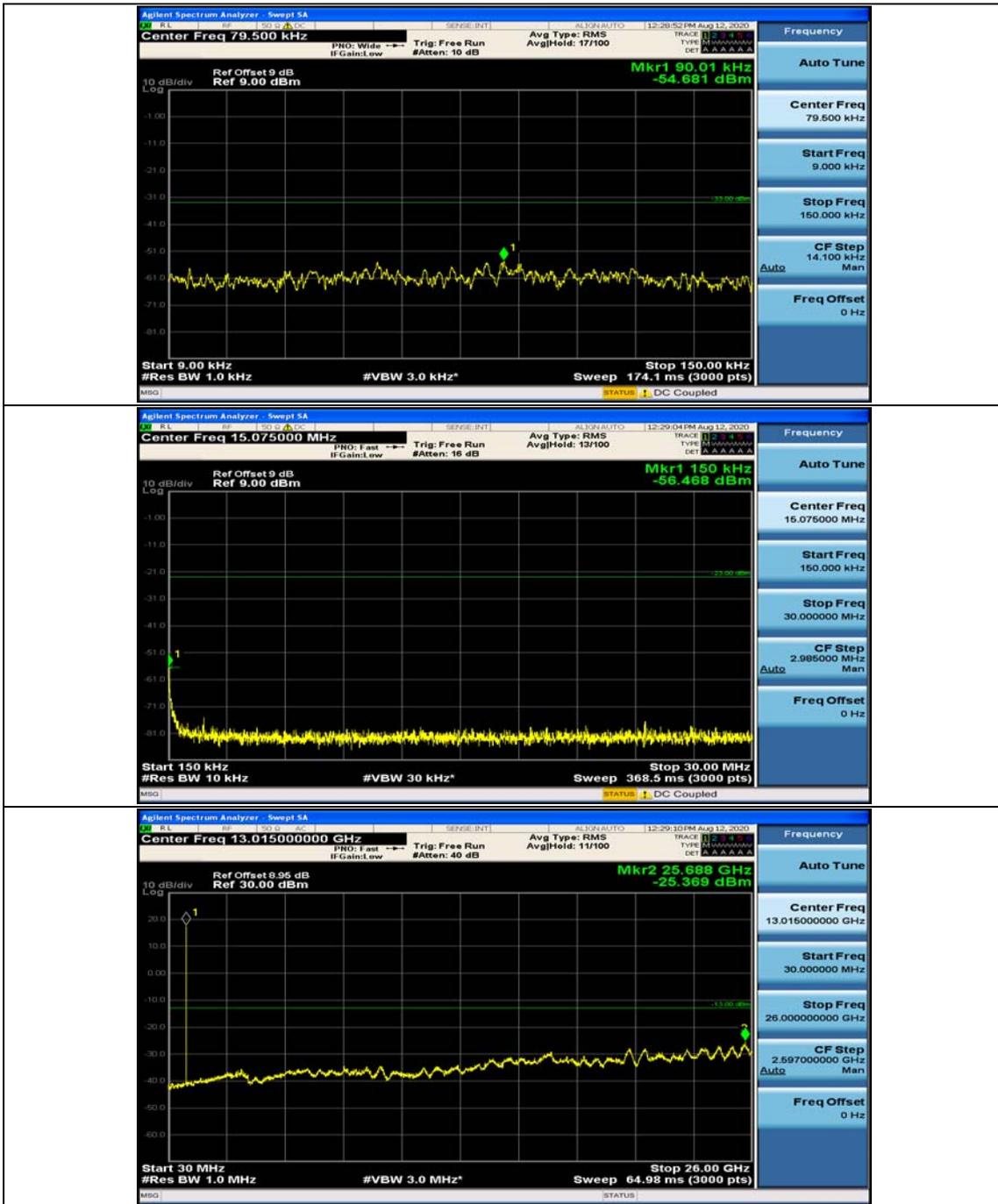
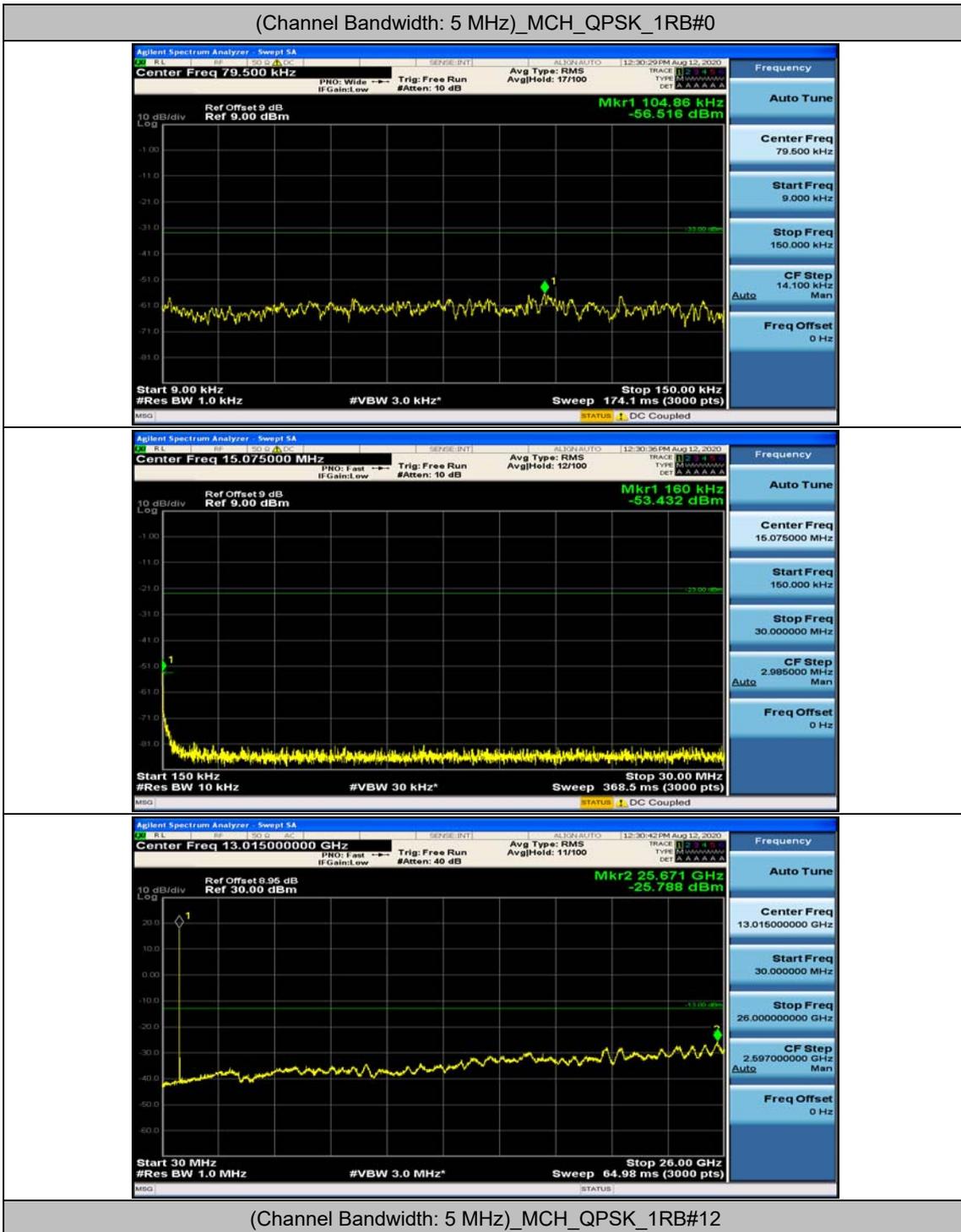


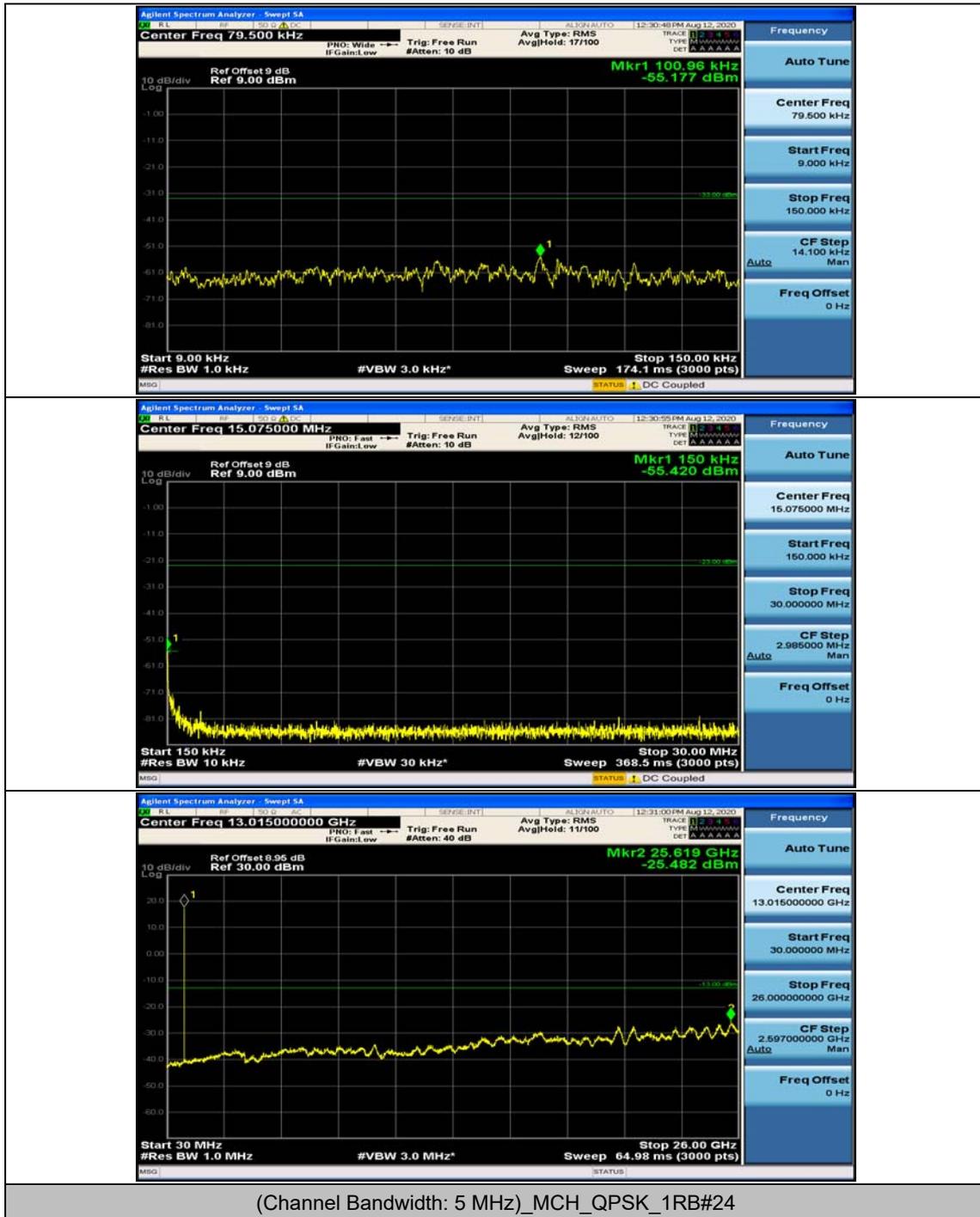
Channel Bandwidth: 5 MHz

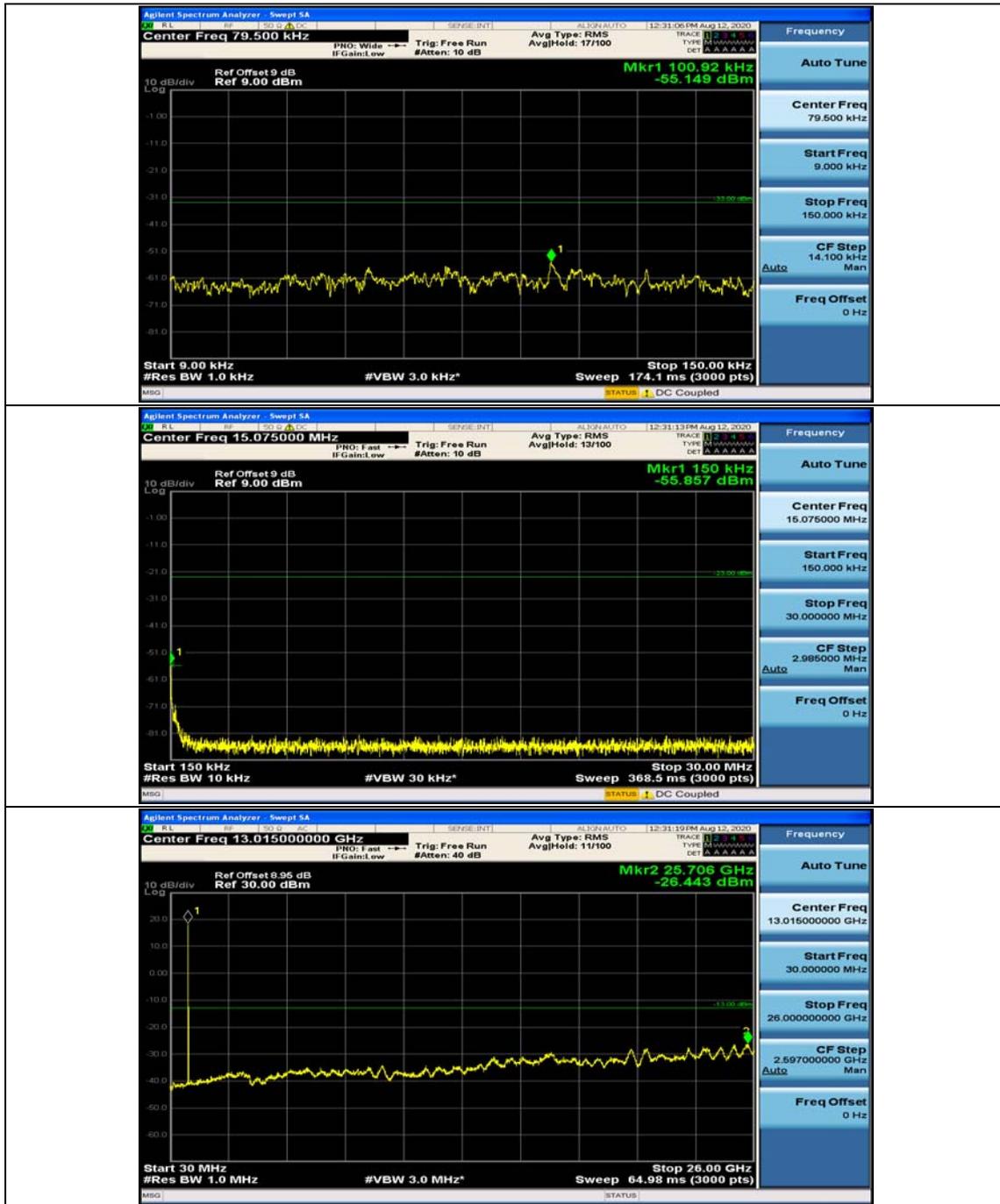


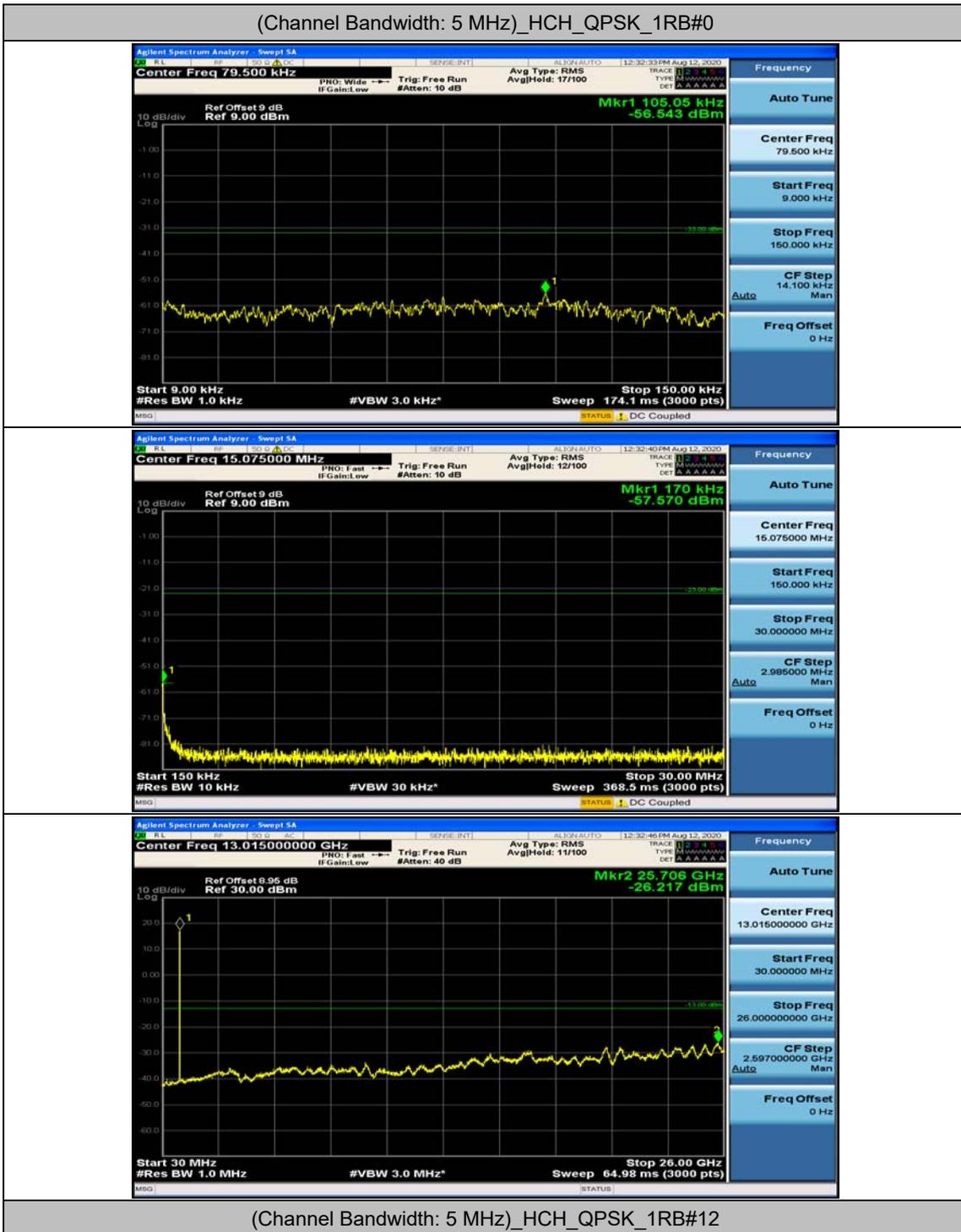


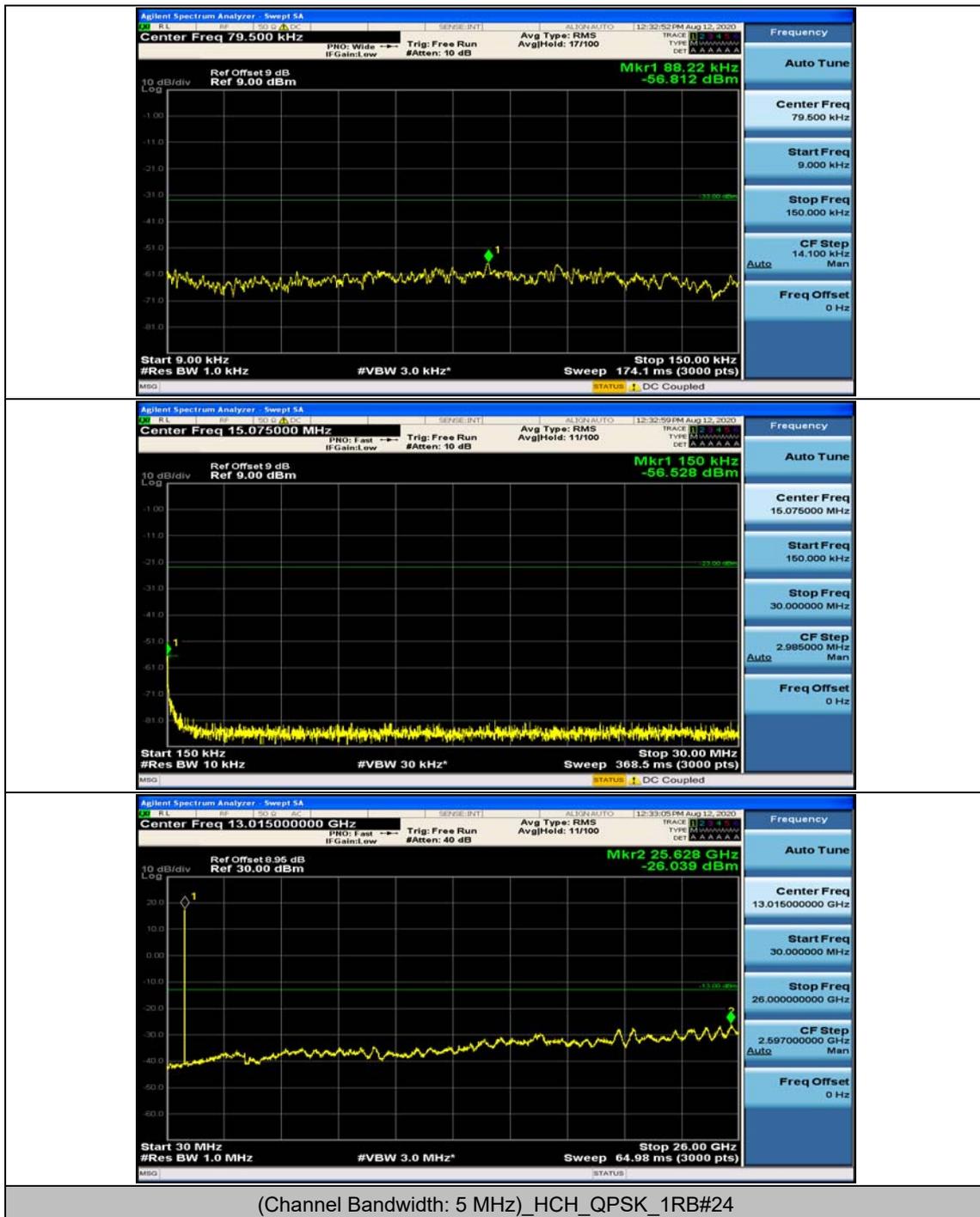


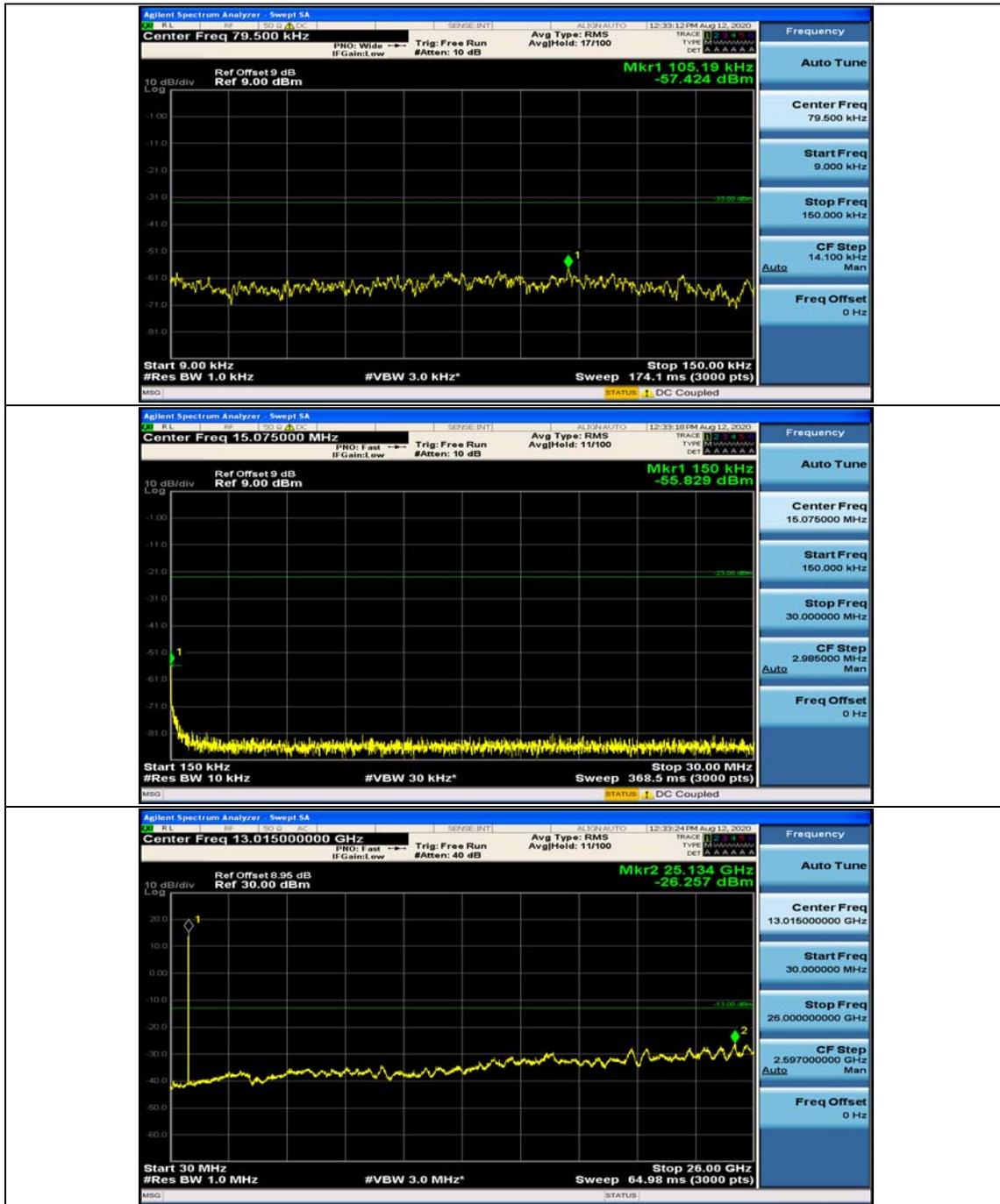


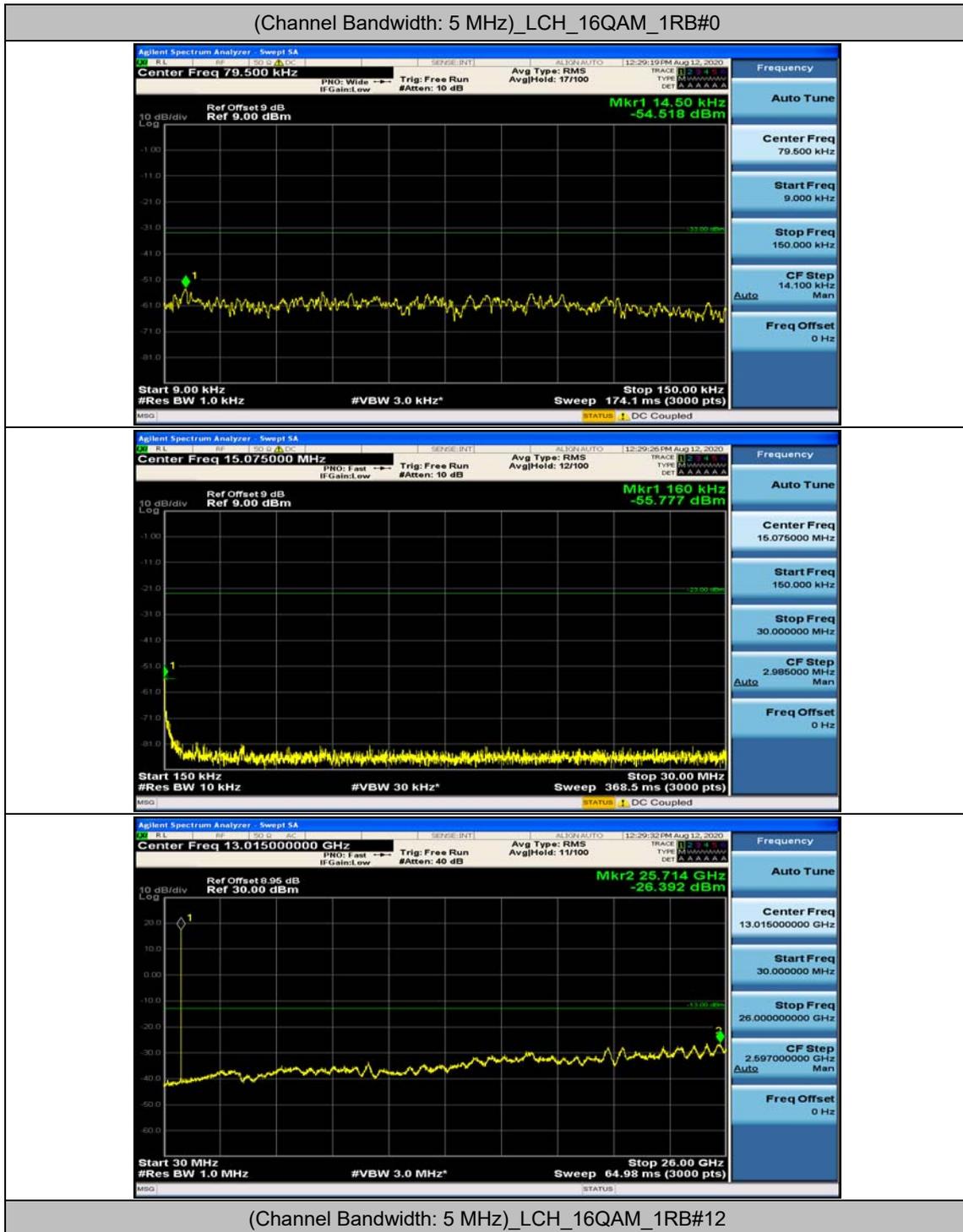


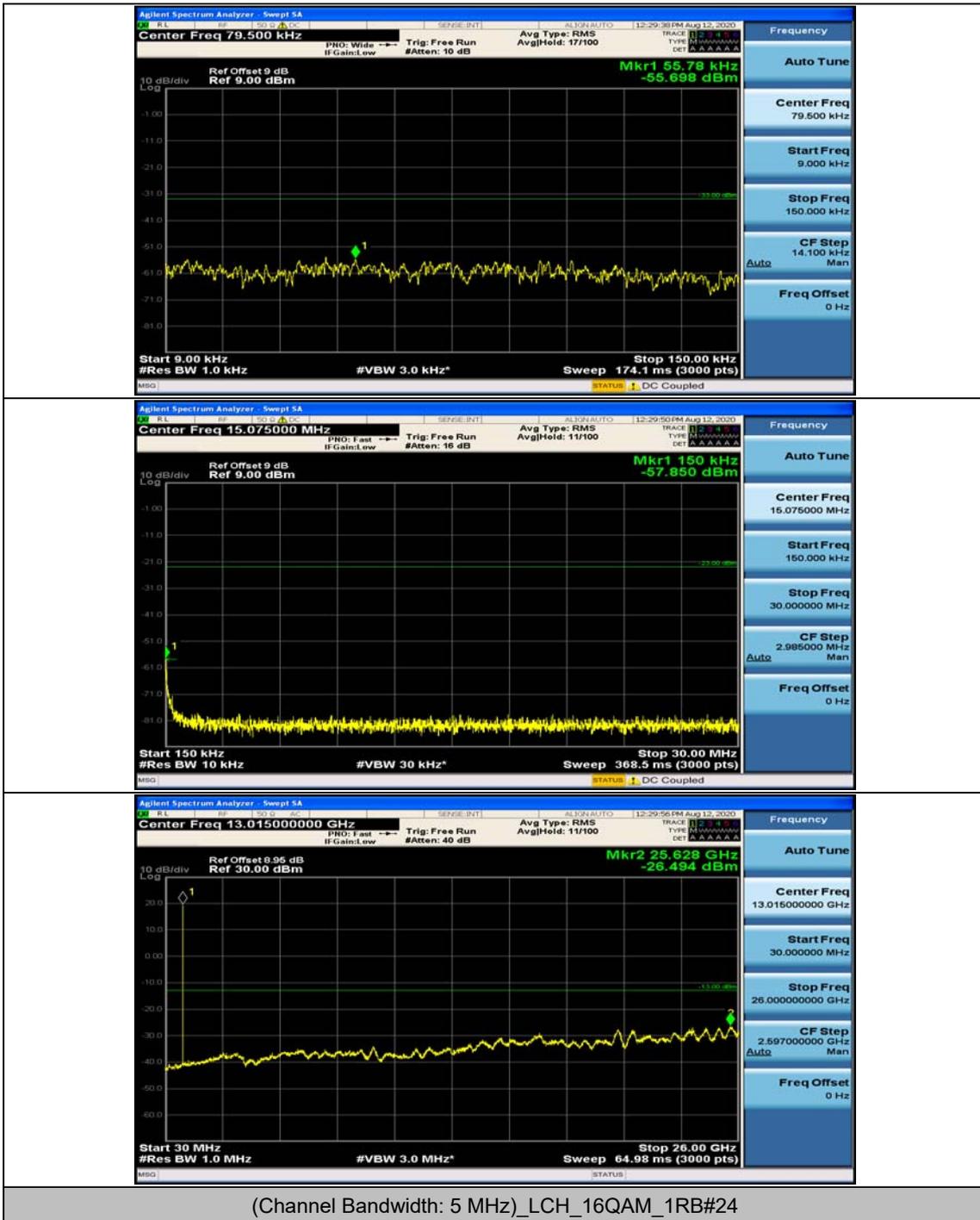


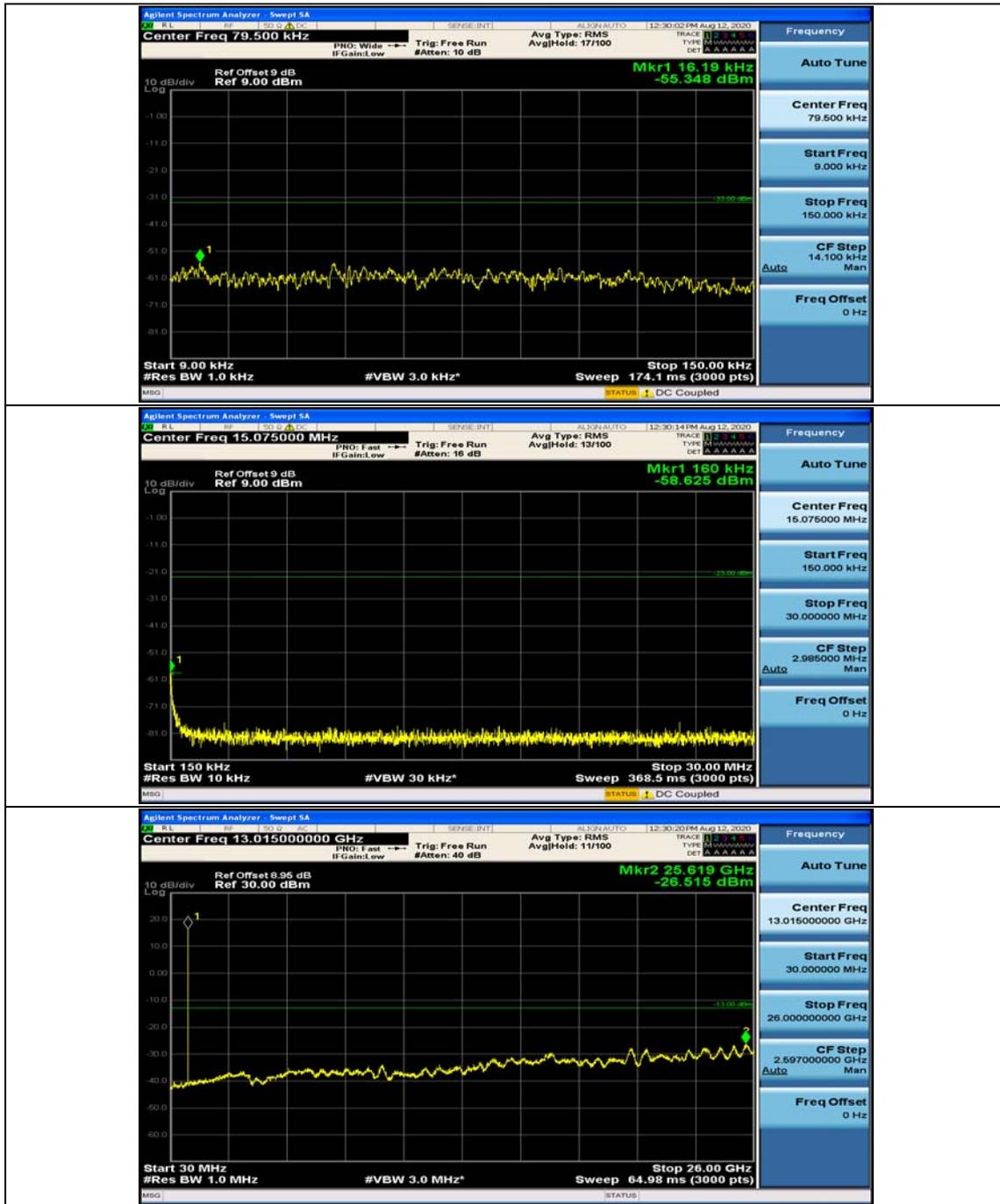


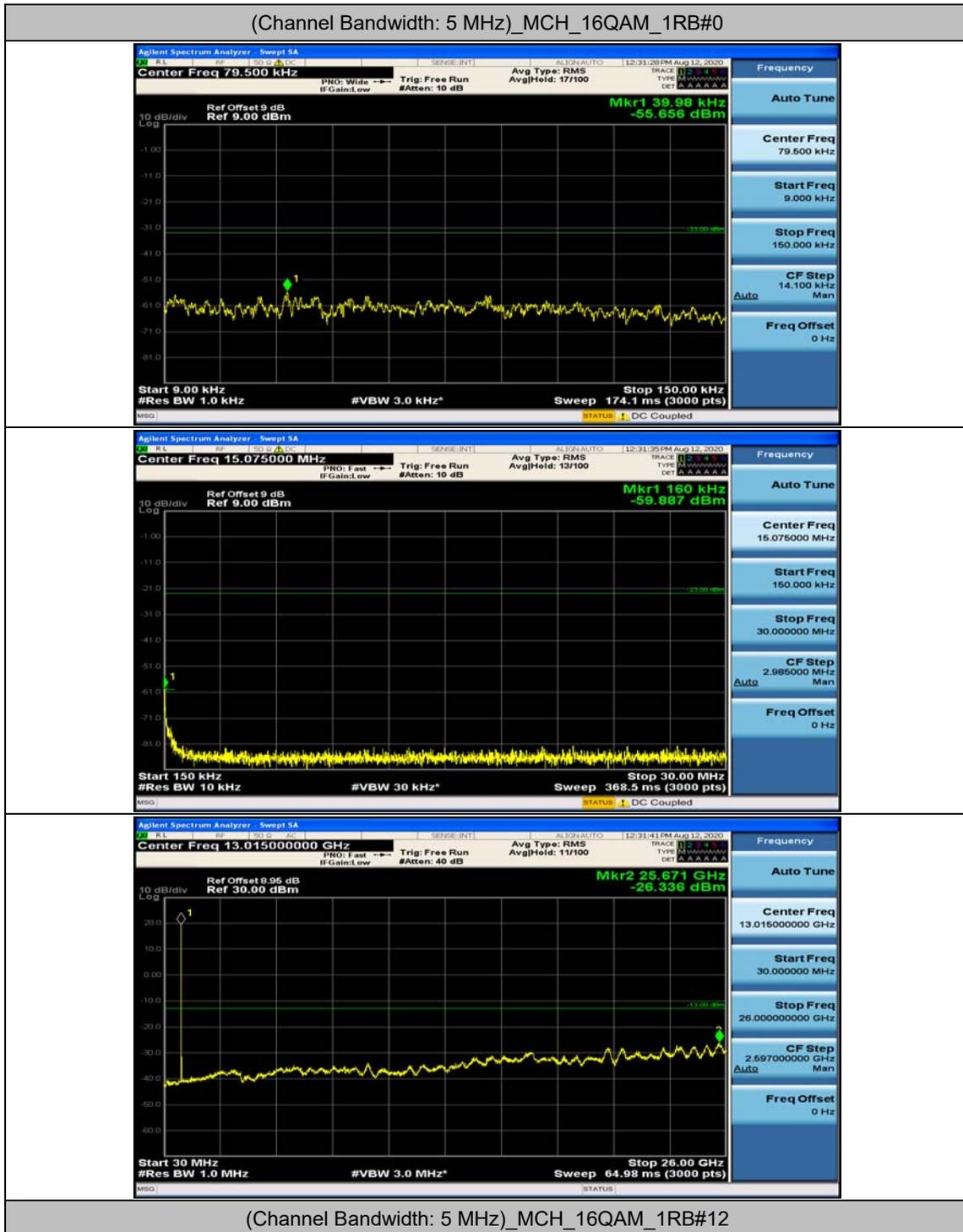


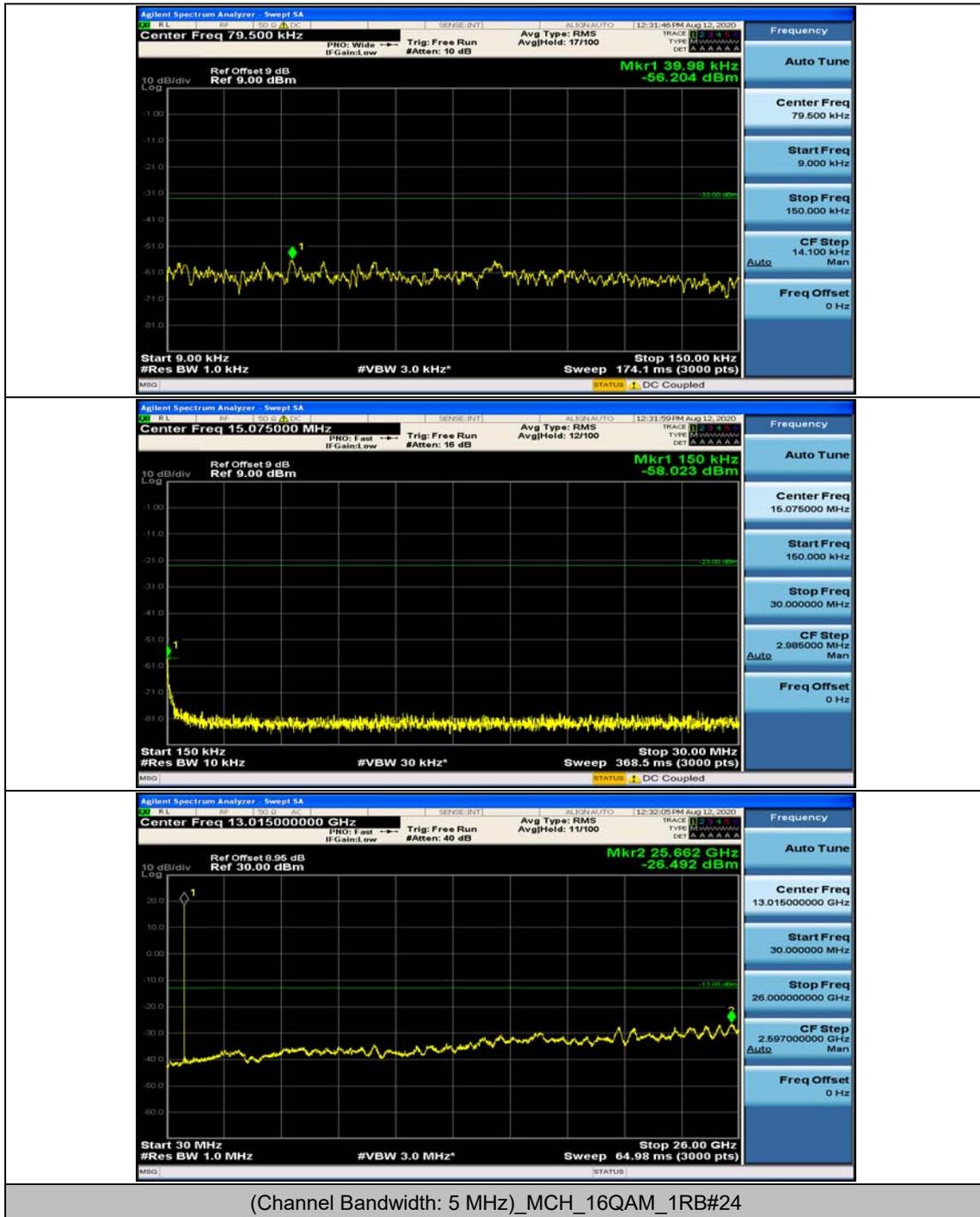


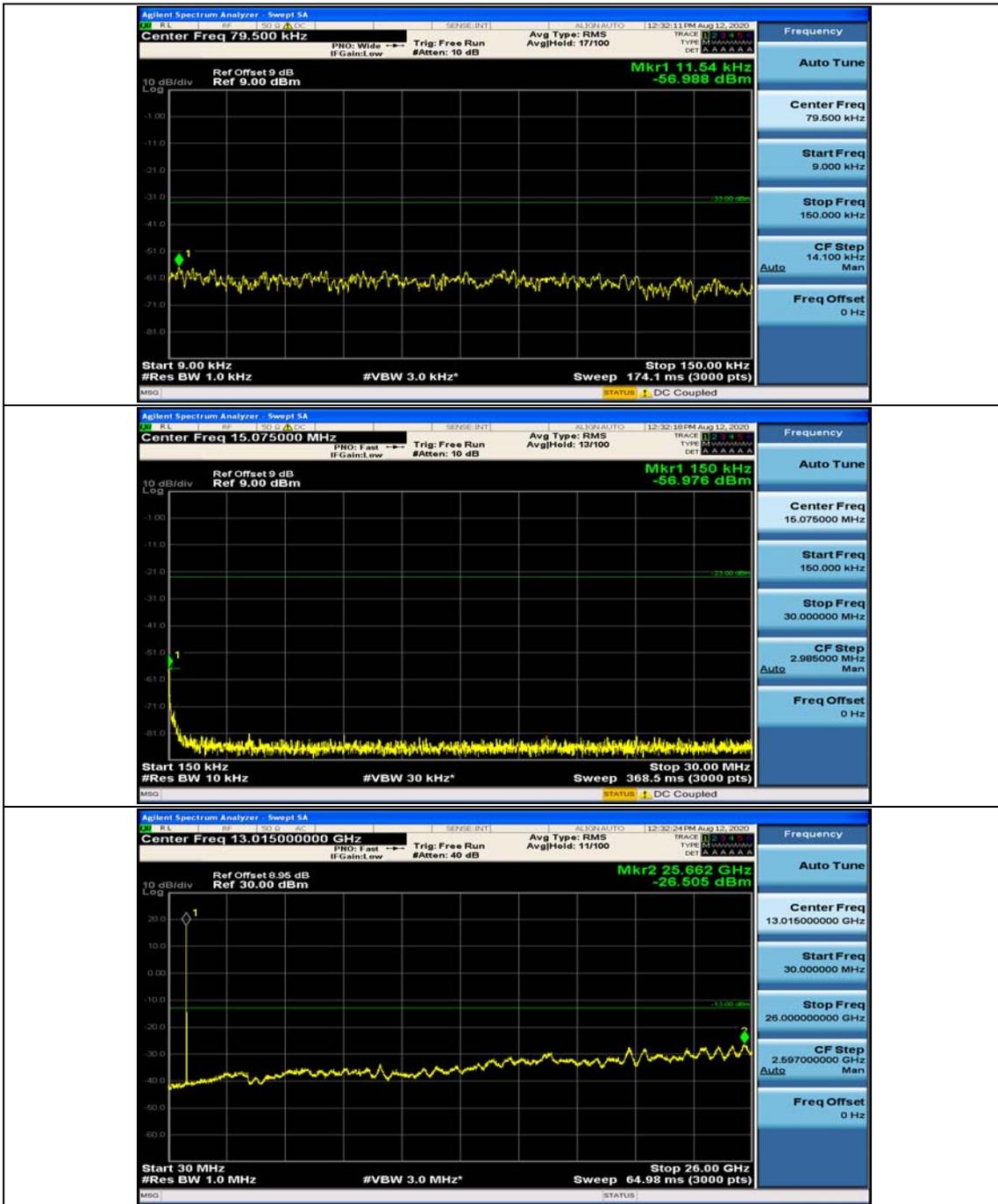


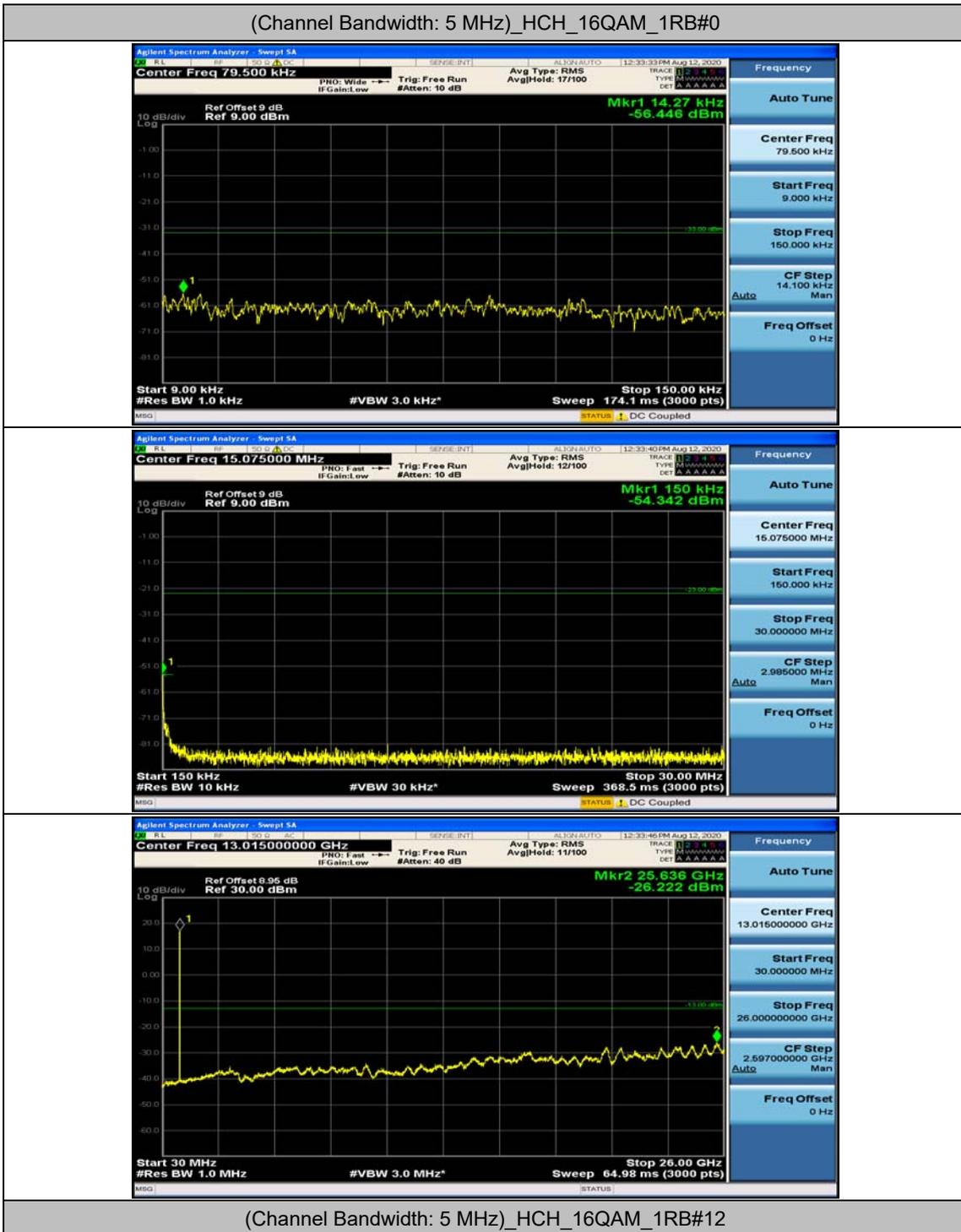


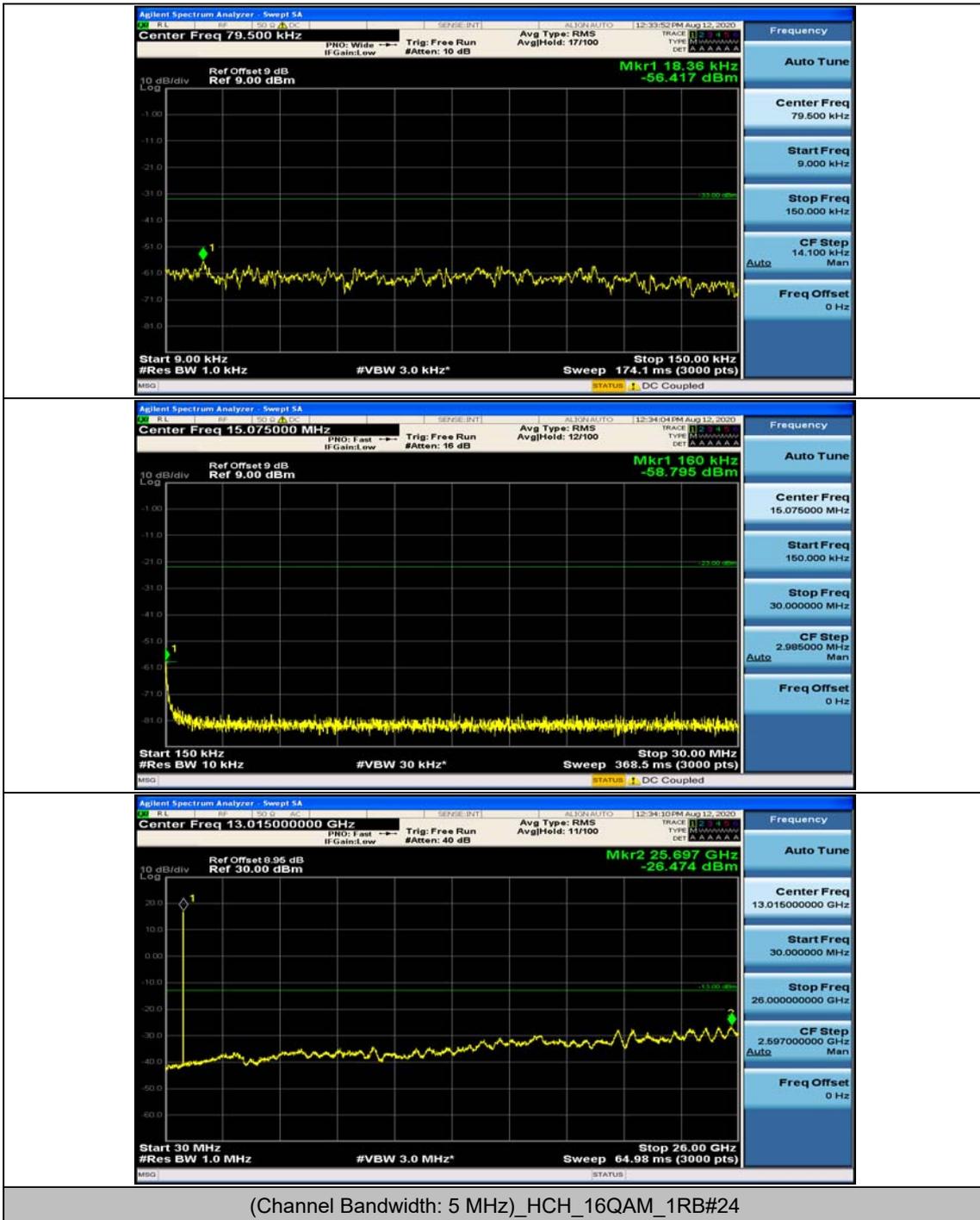


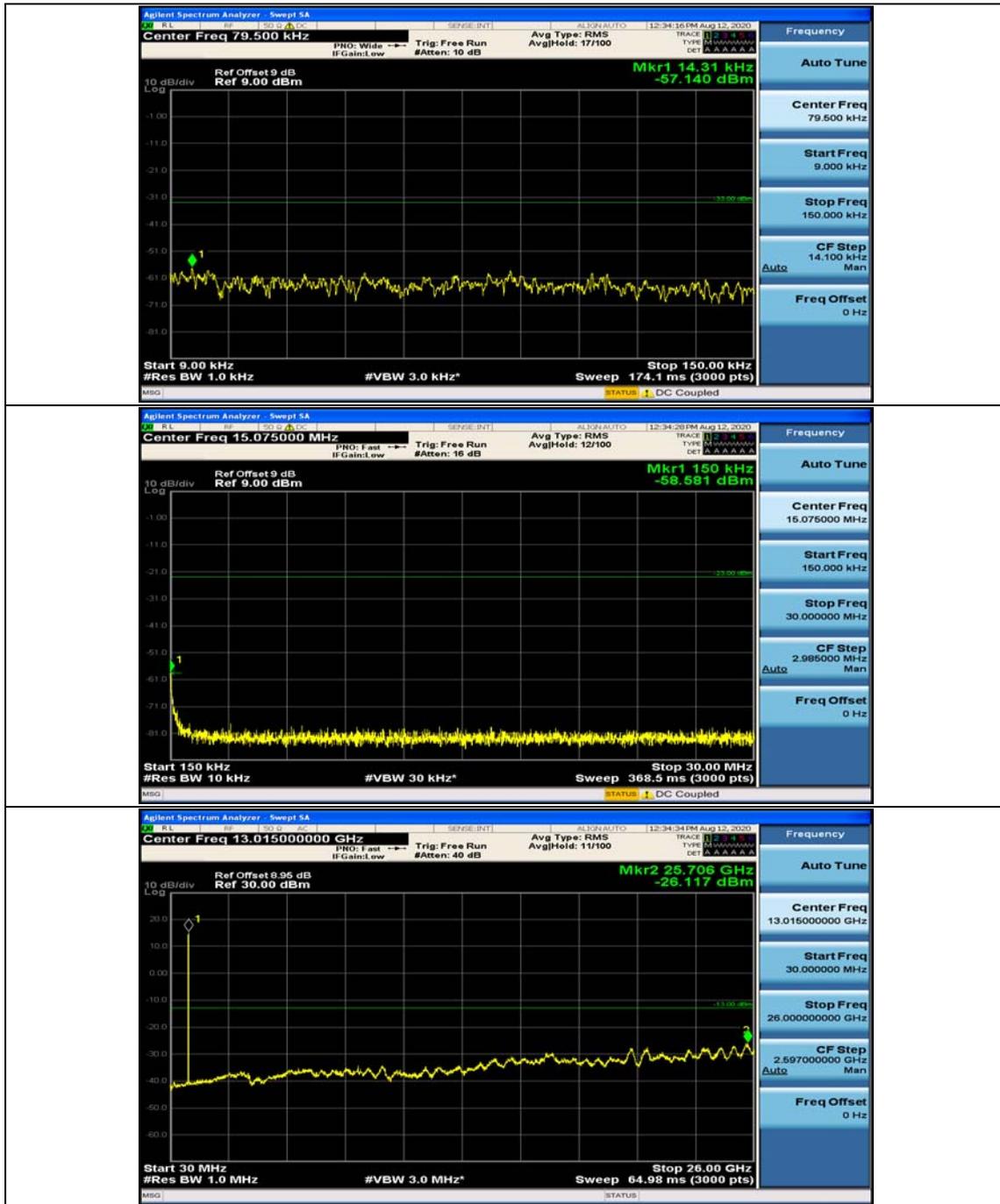




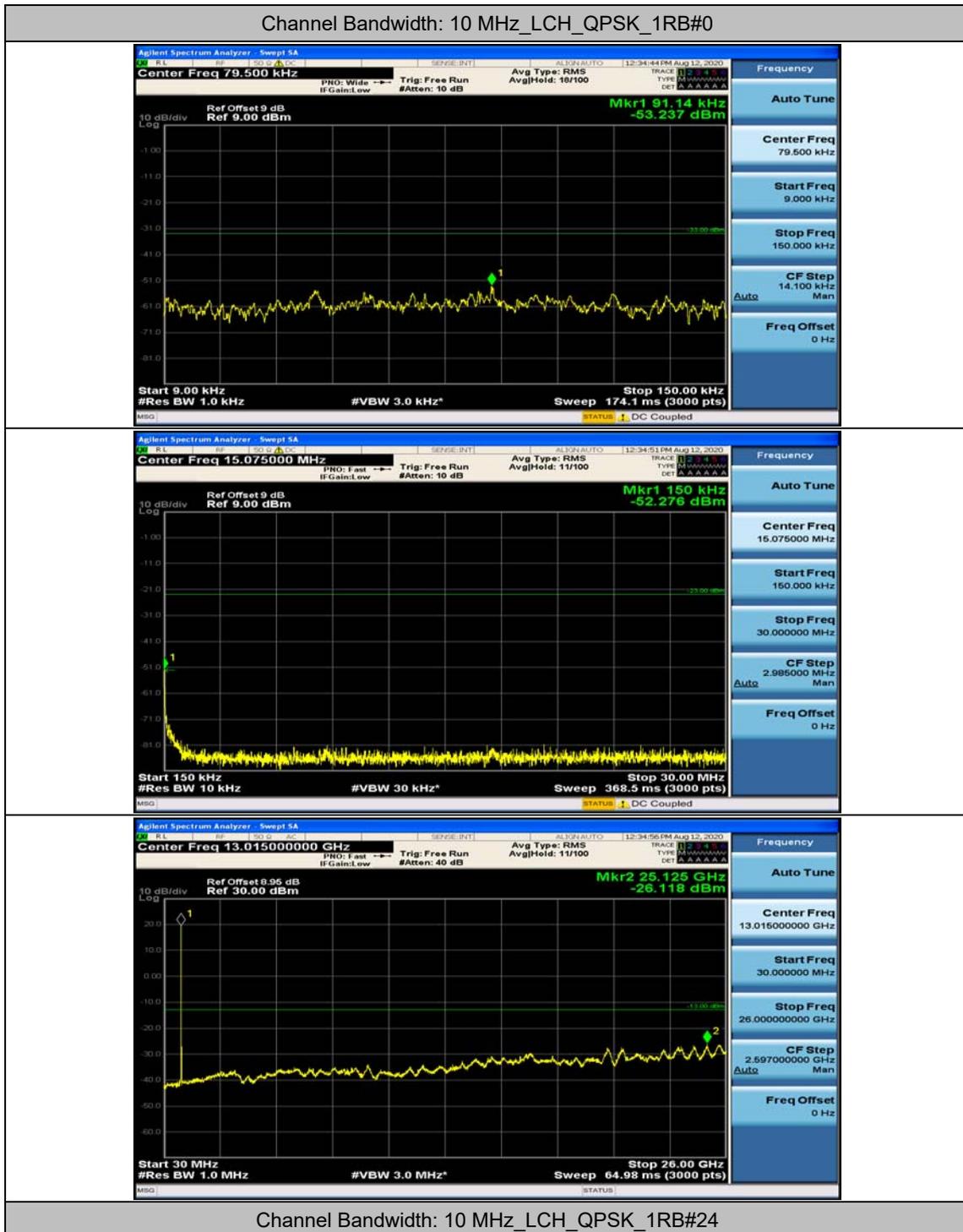


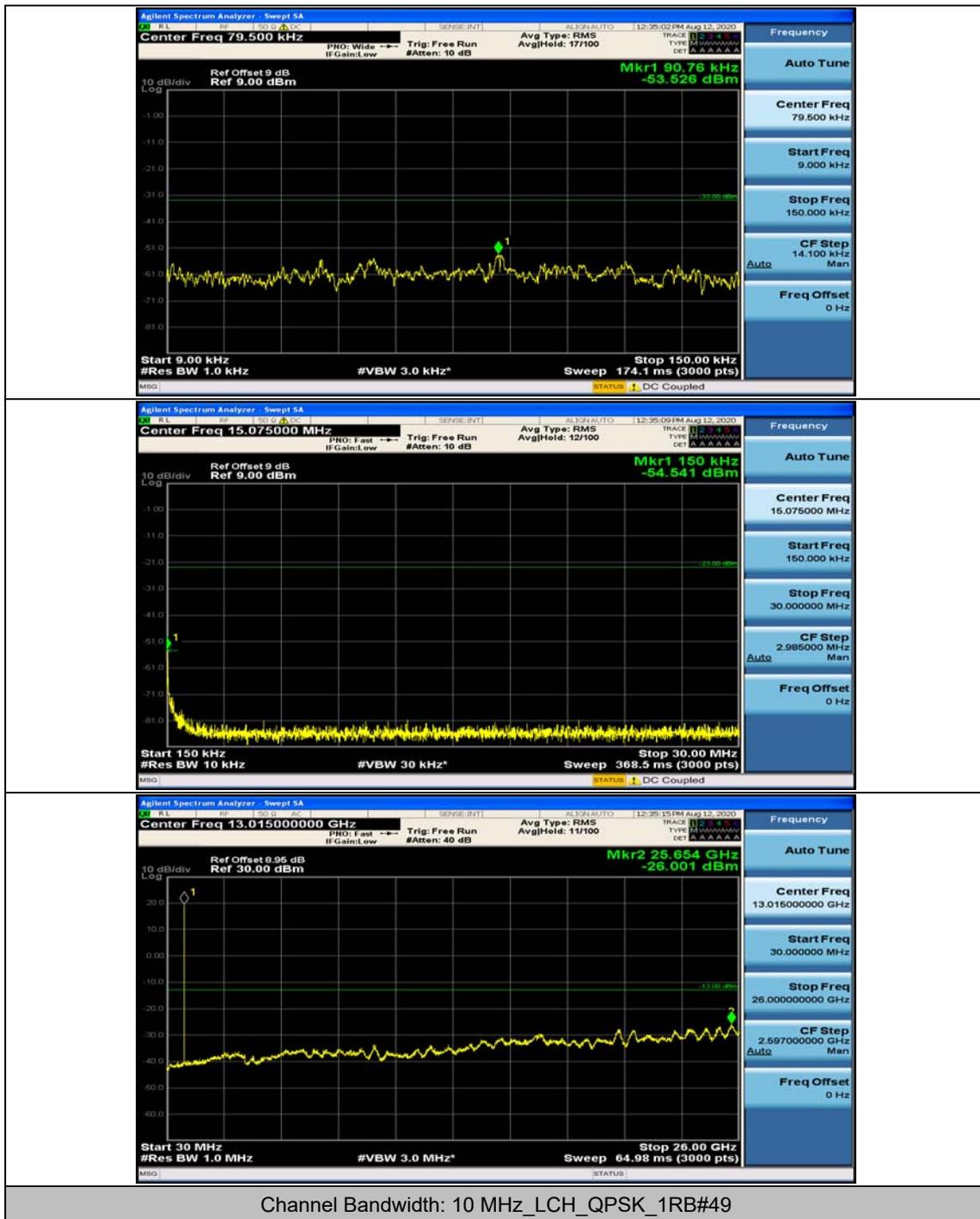


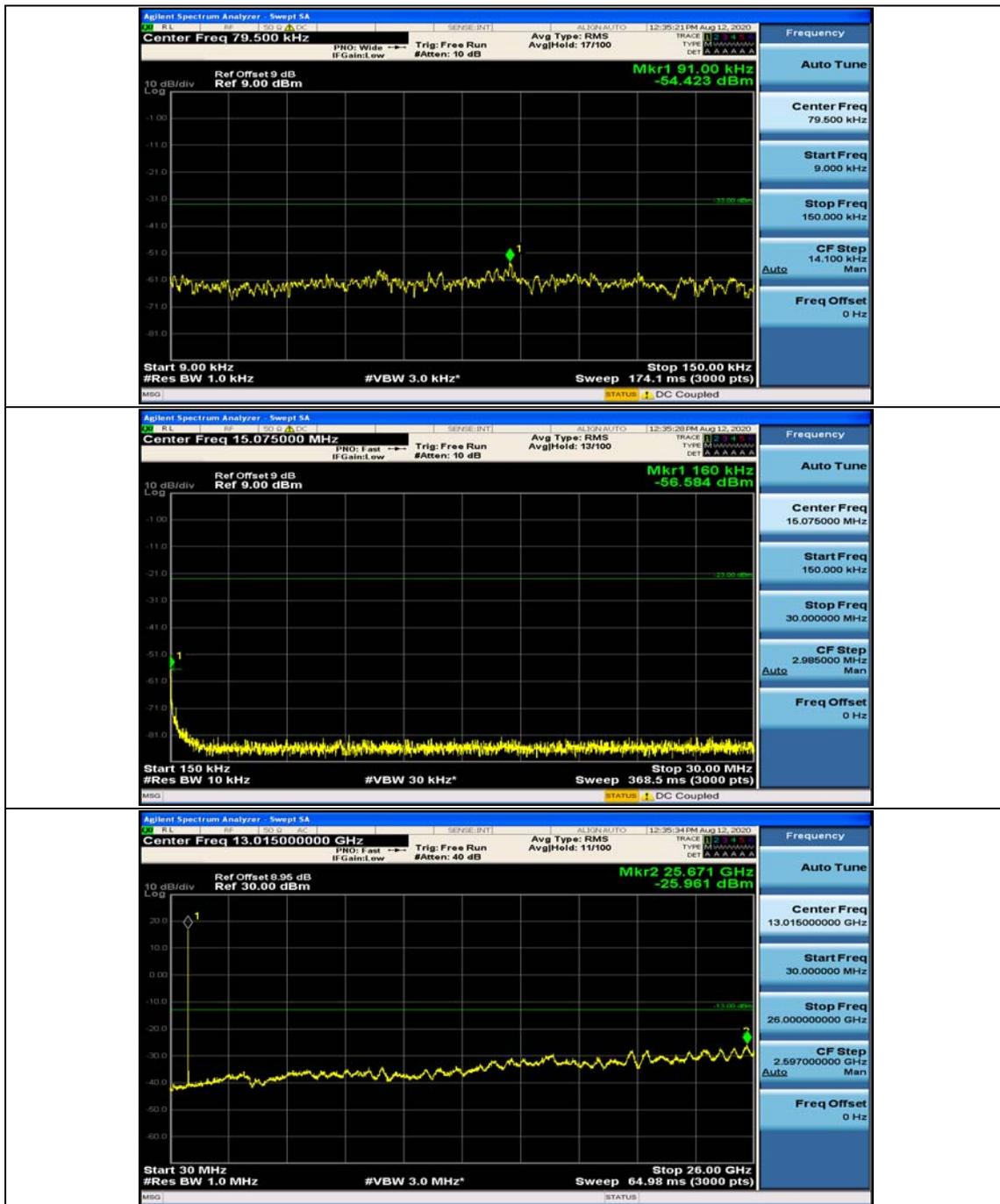


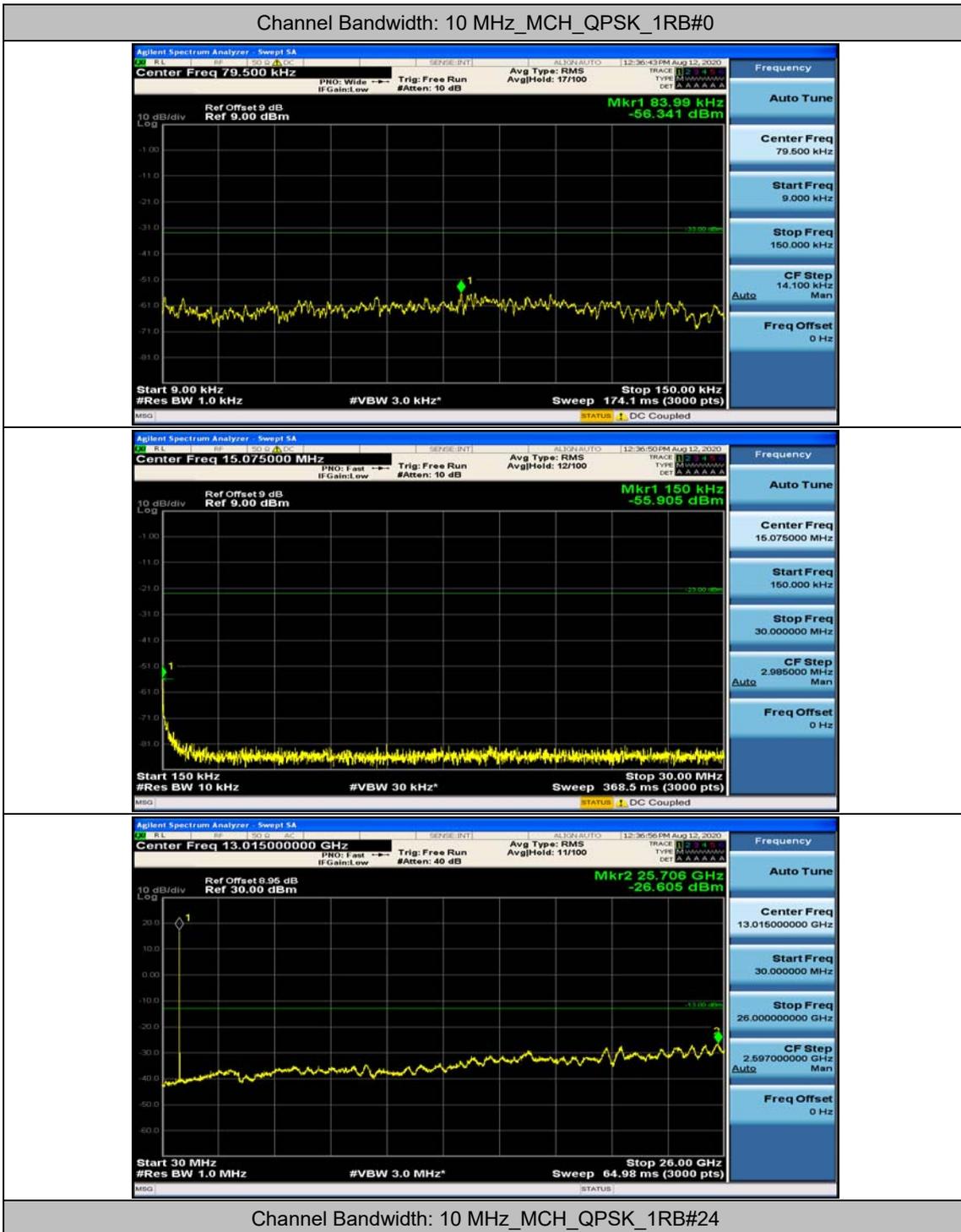


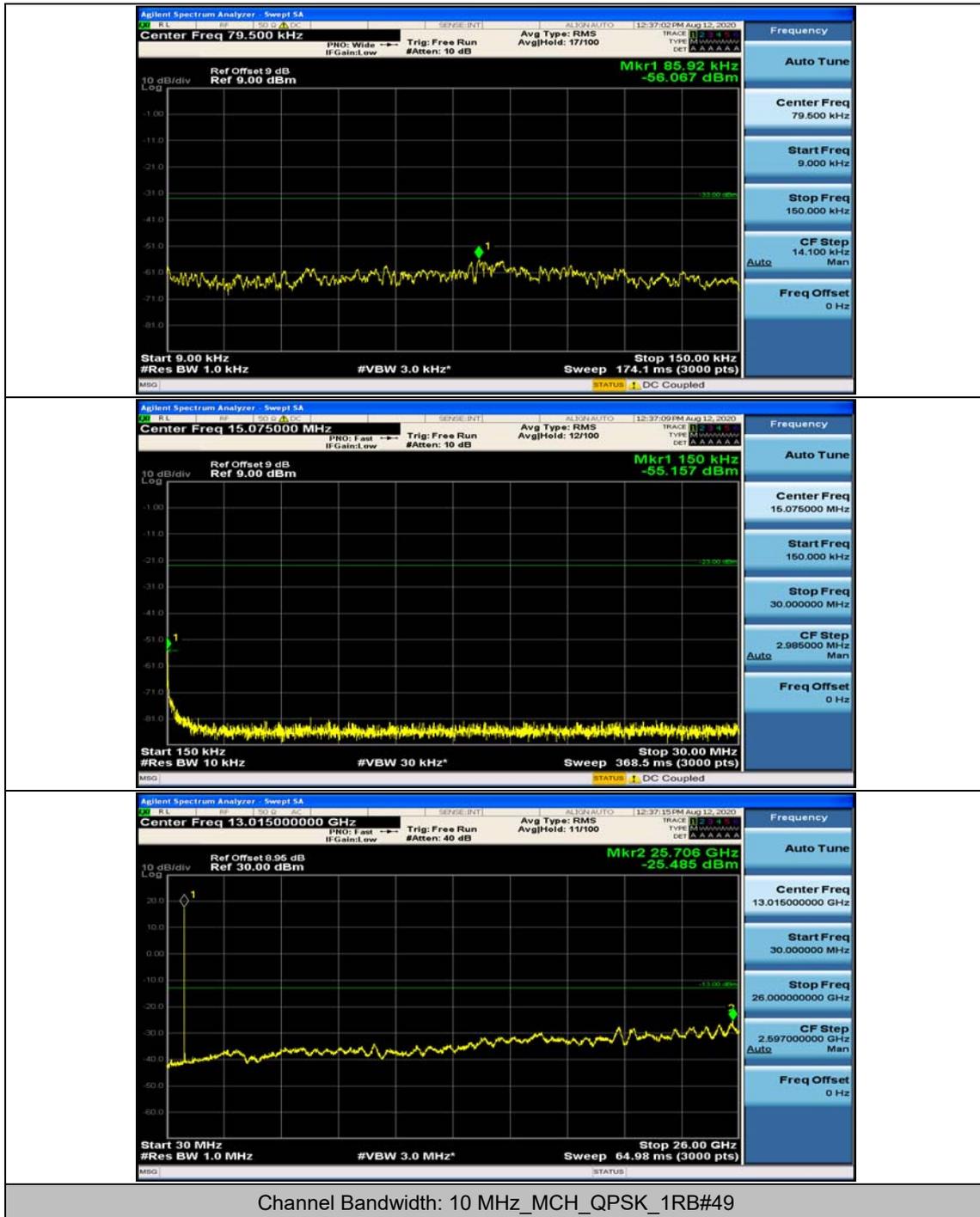
Channel Bandwidth: 10 MHz

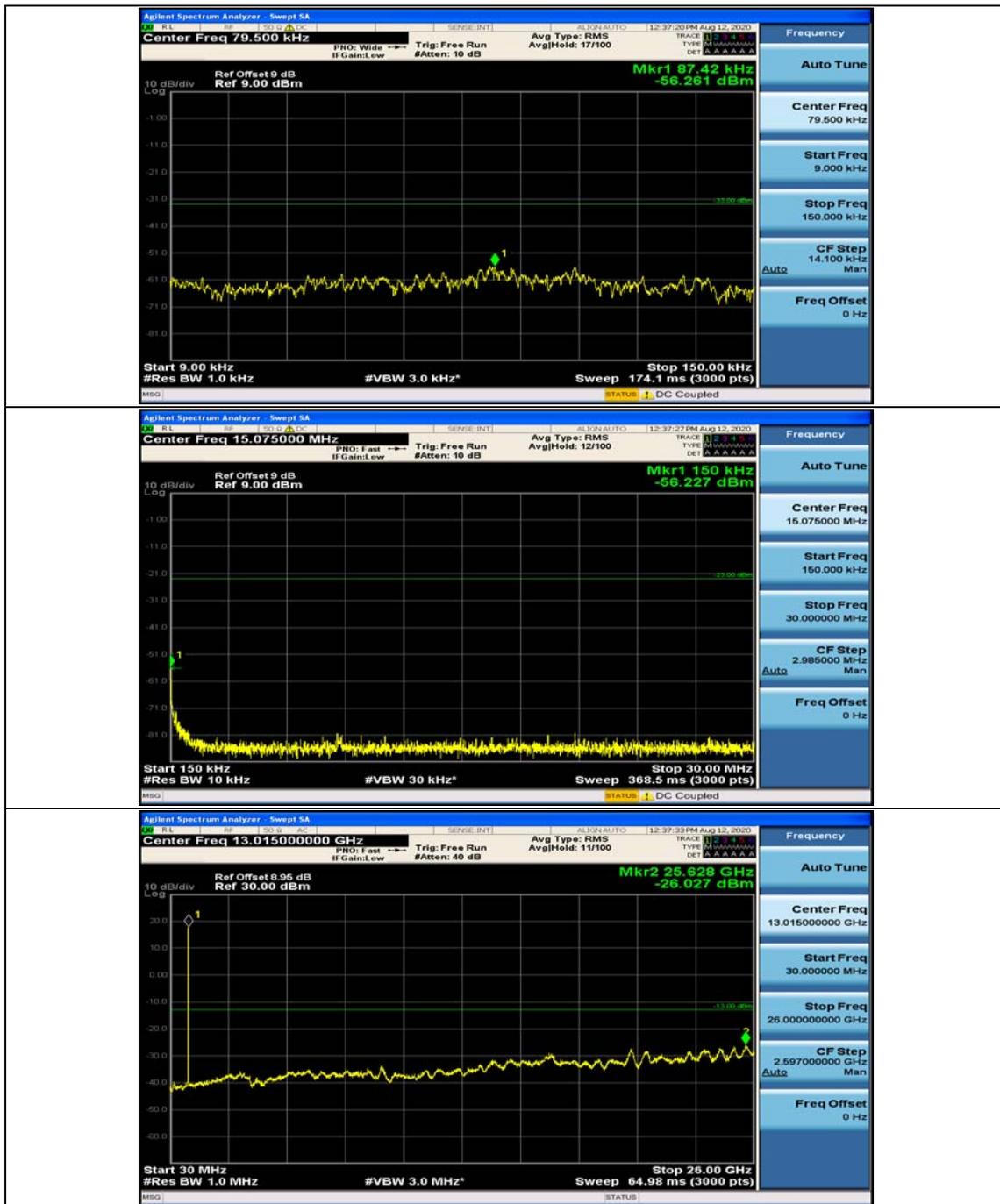


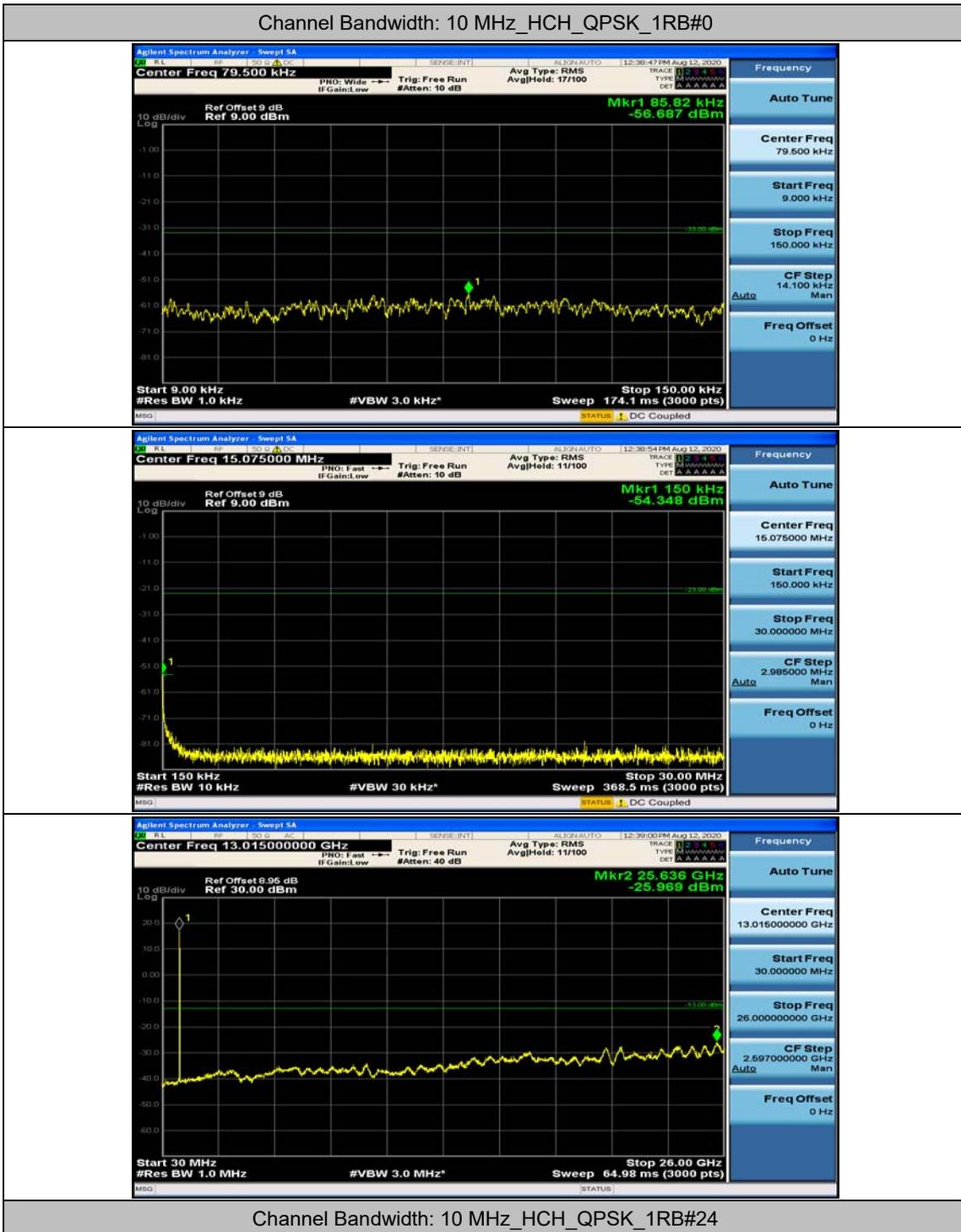


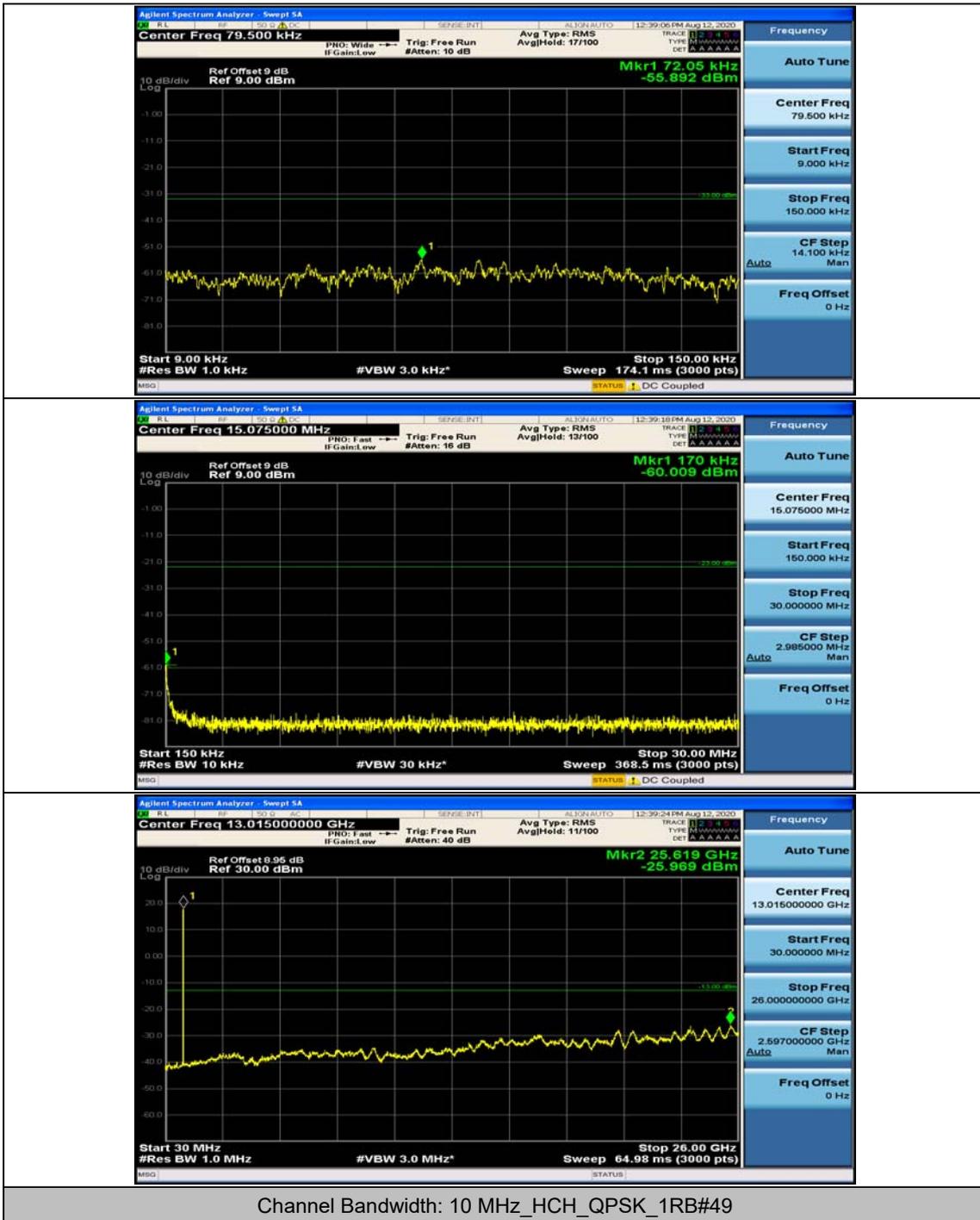


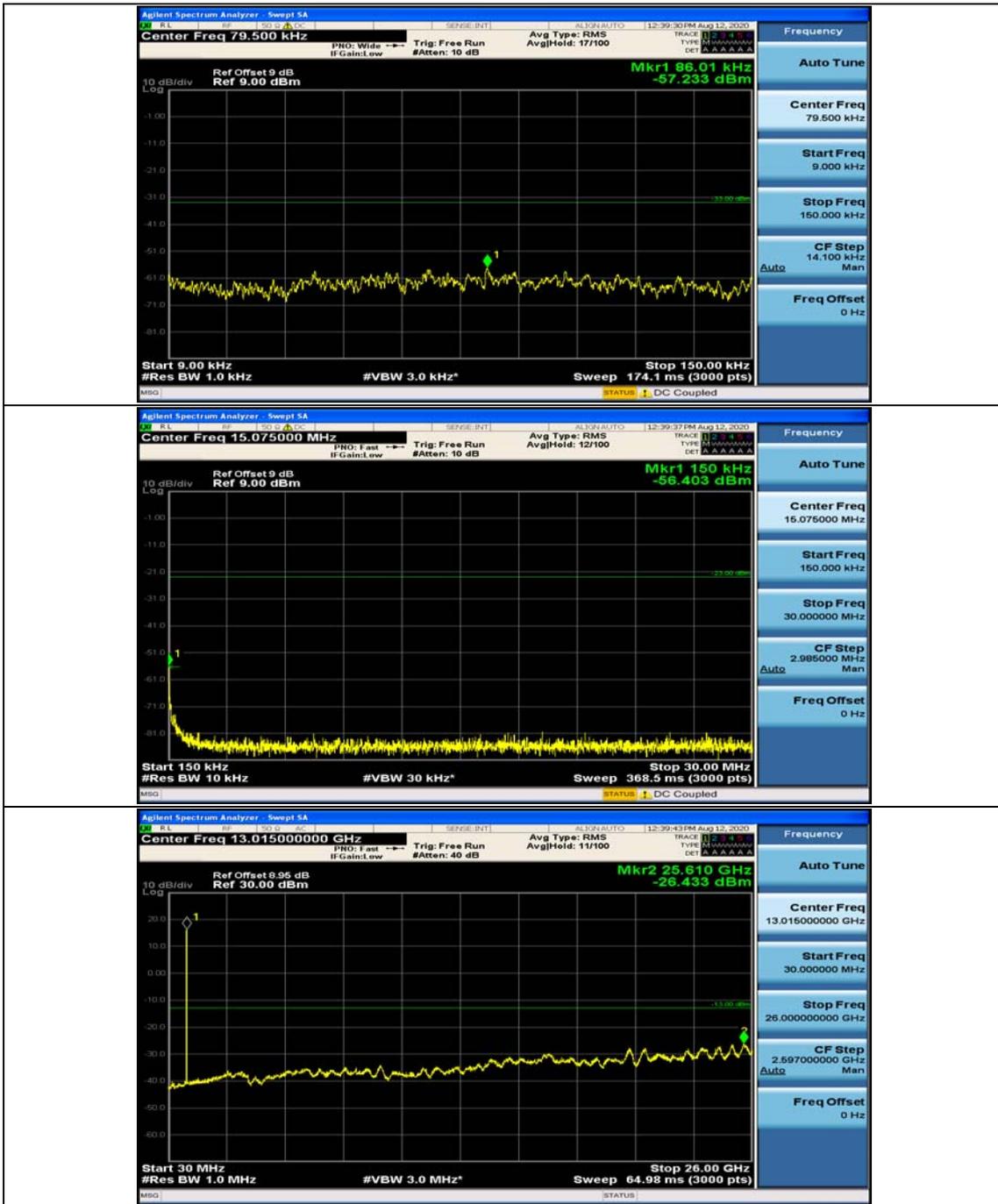


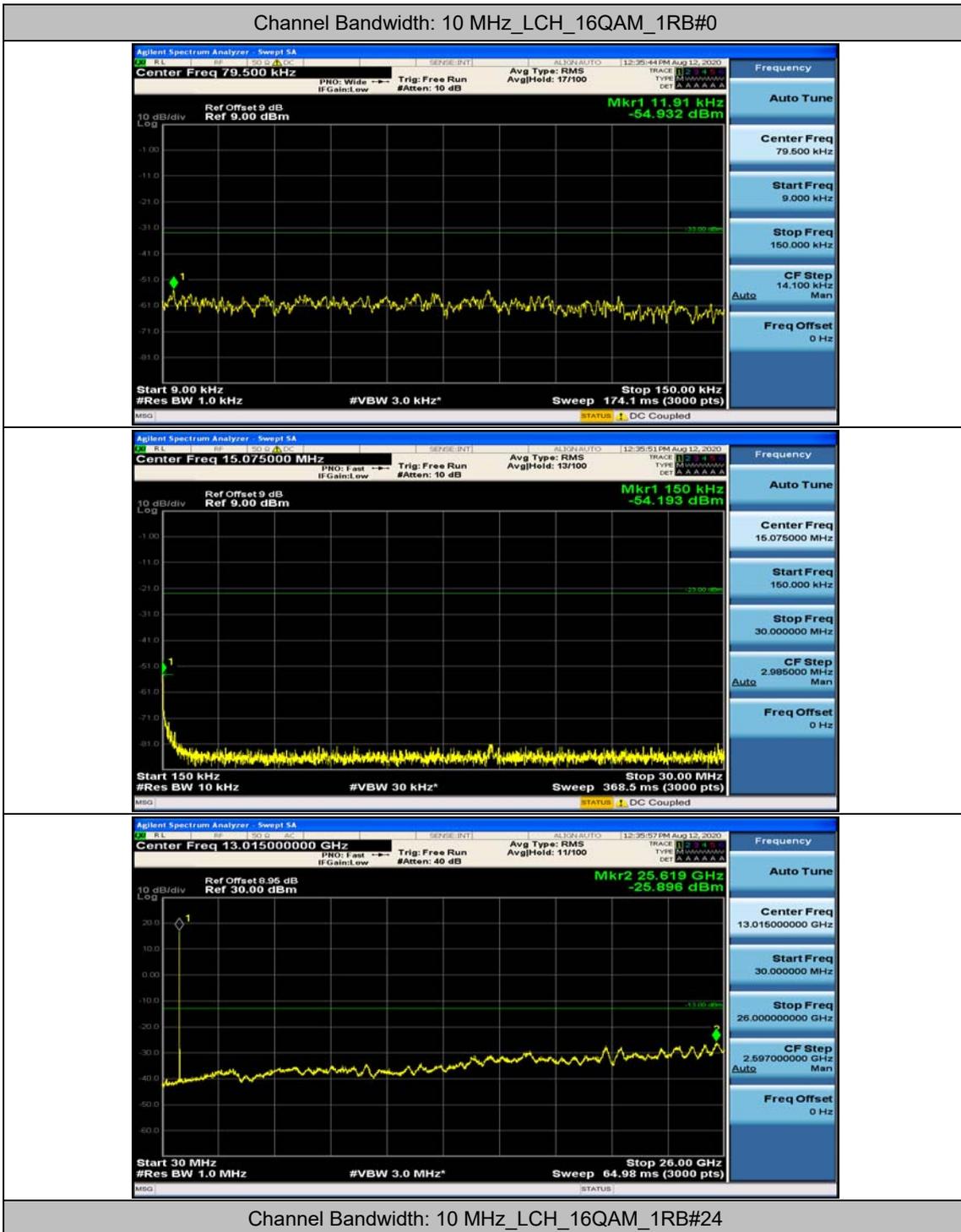


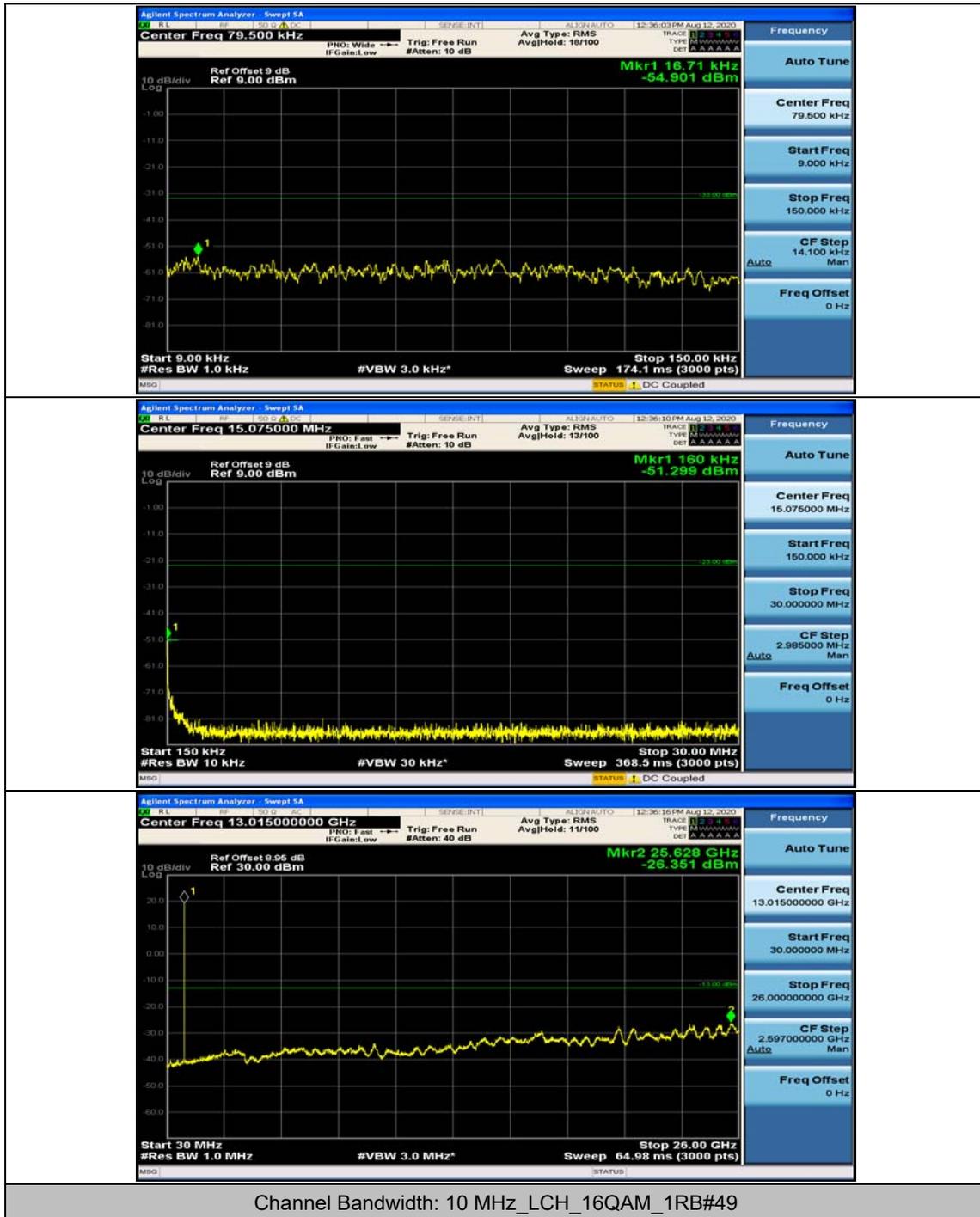


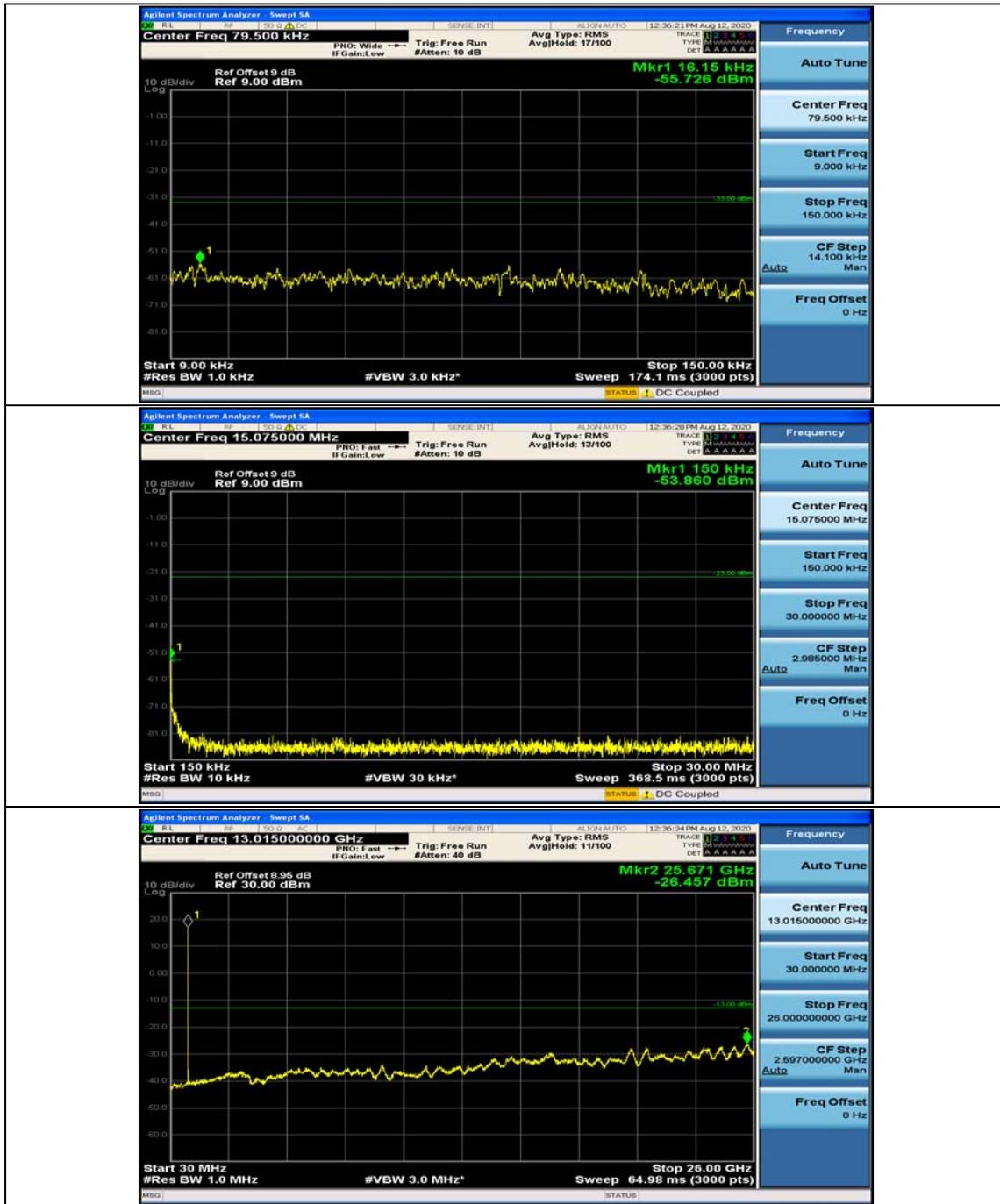


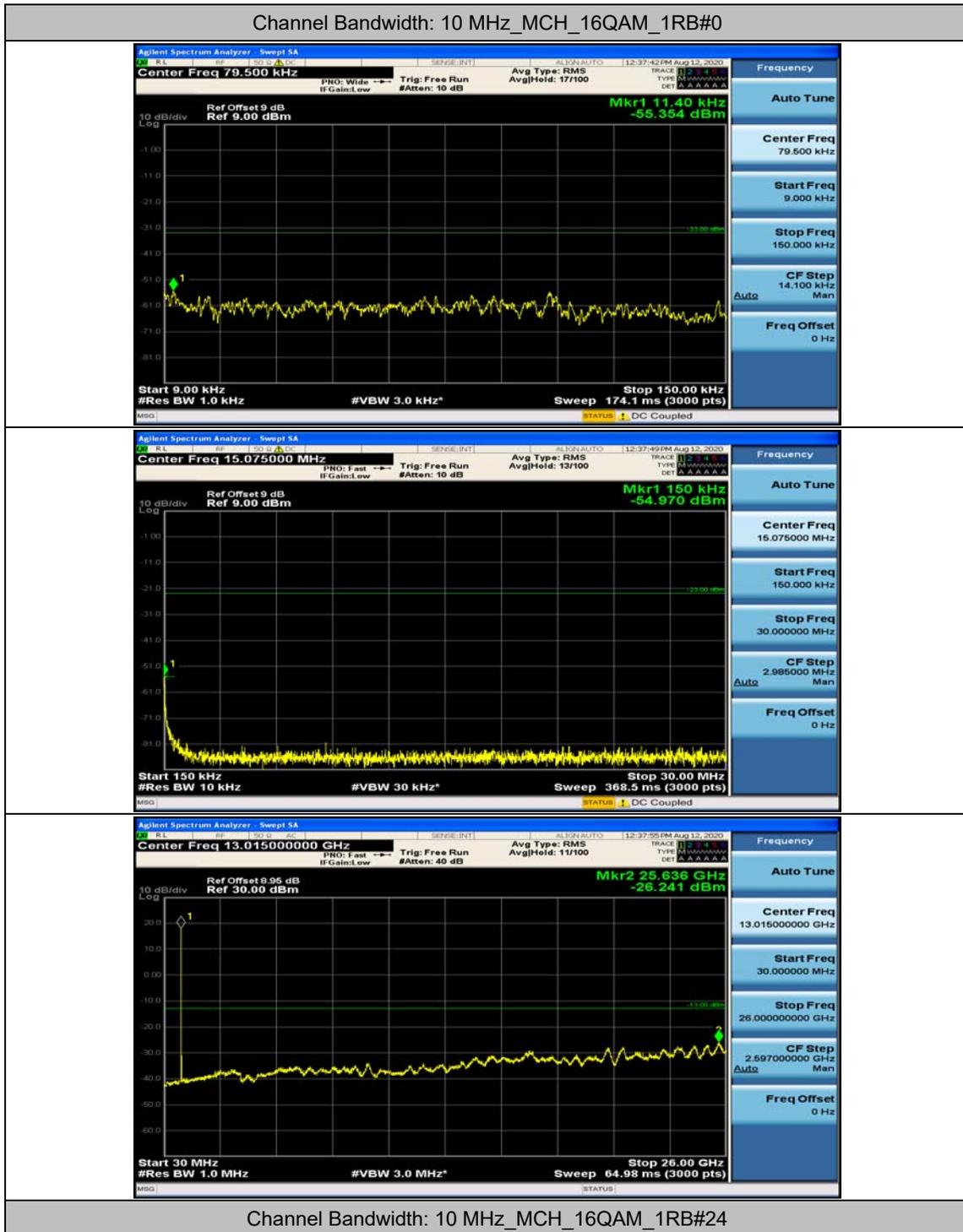


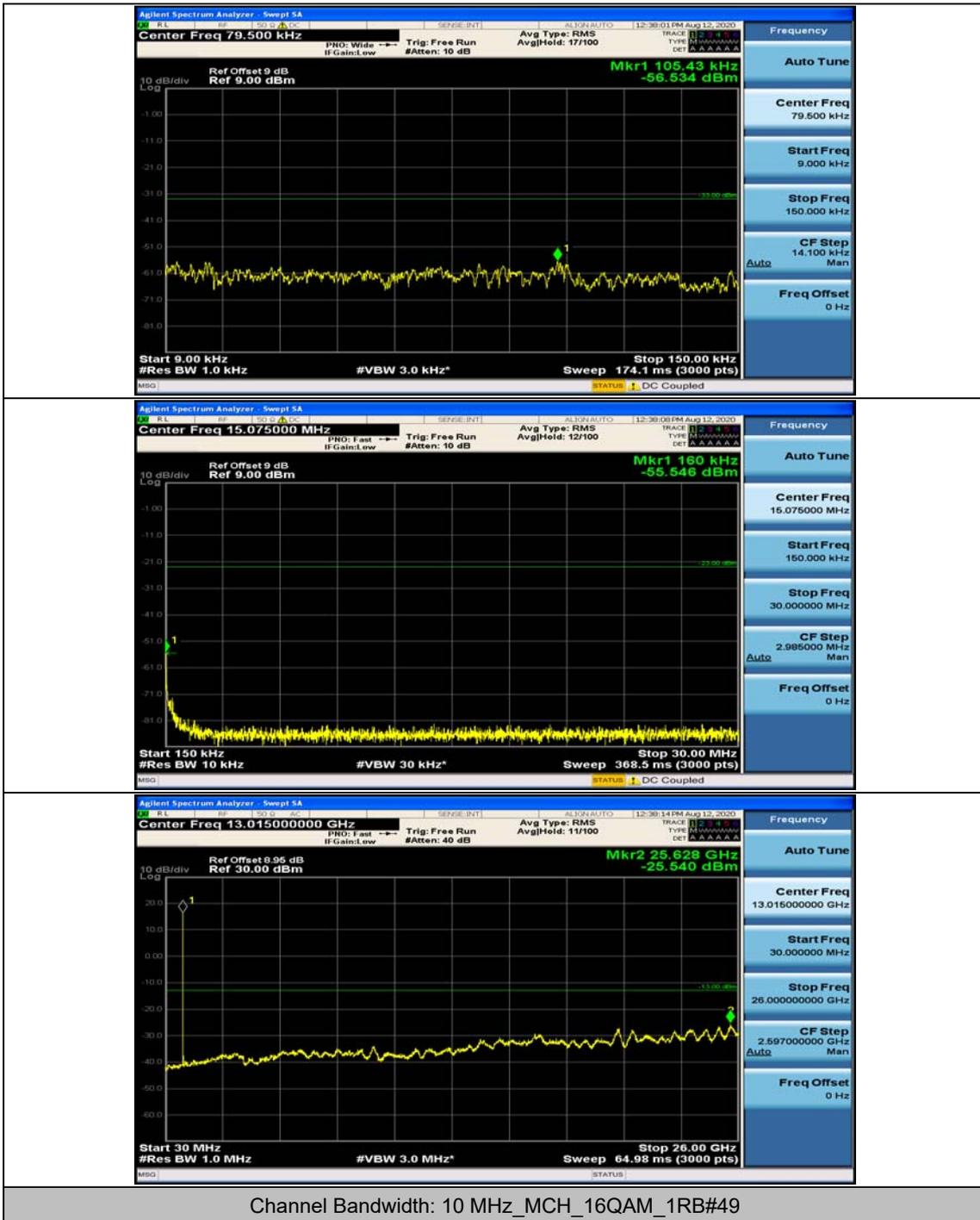


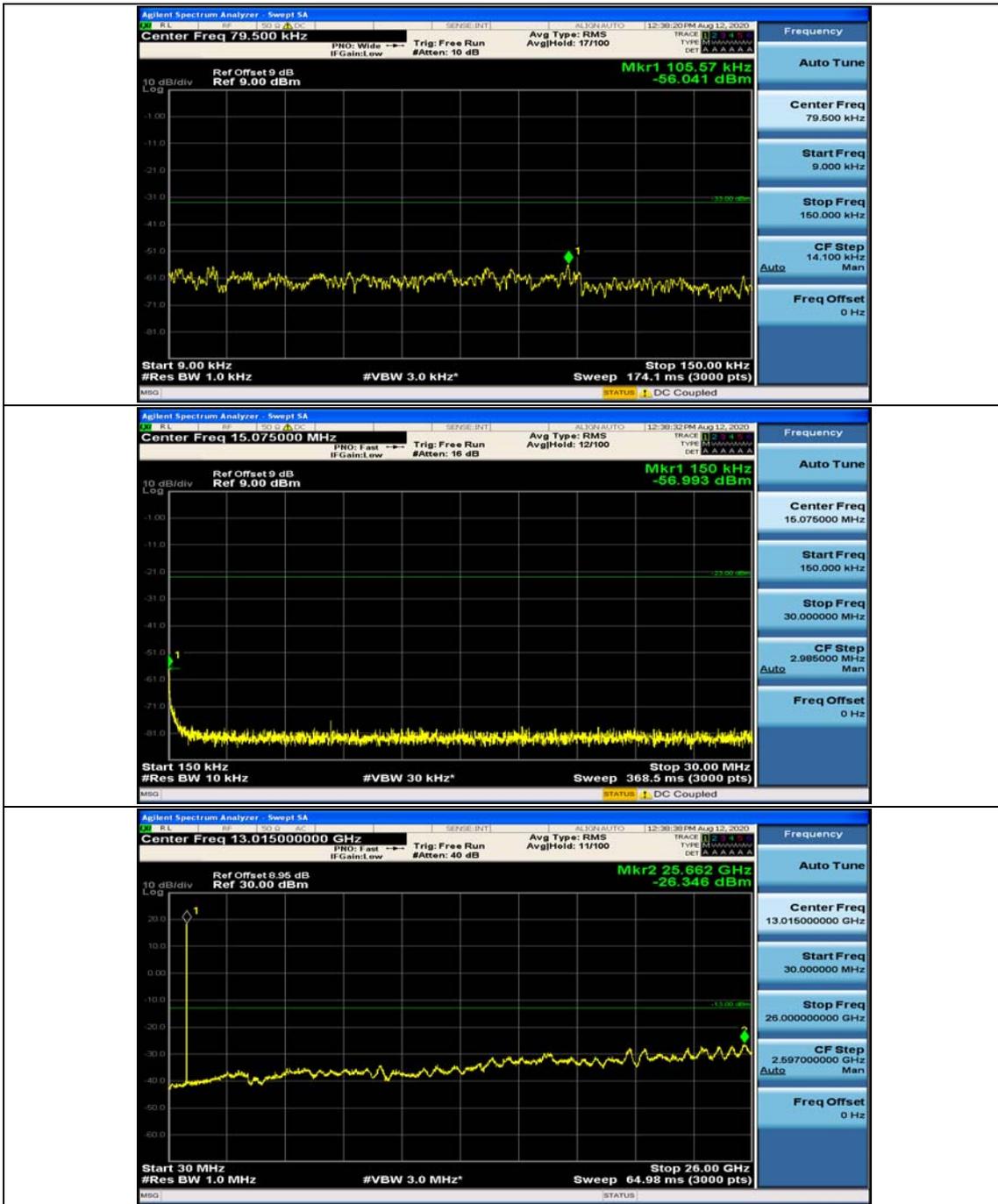


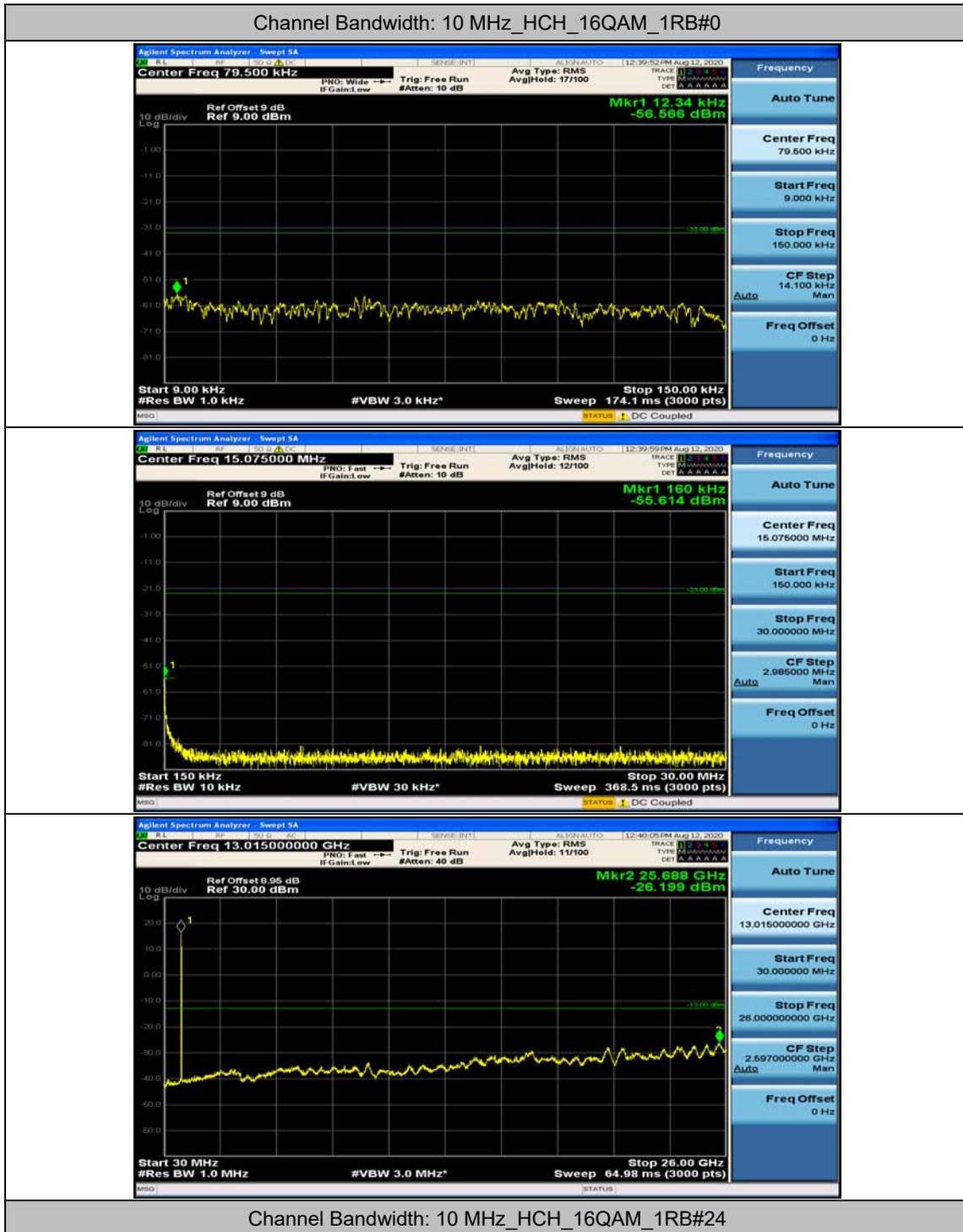


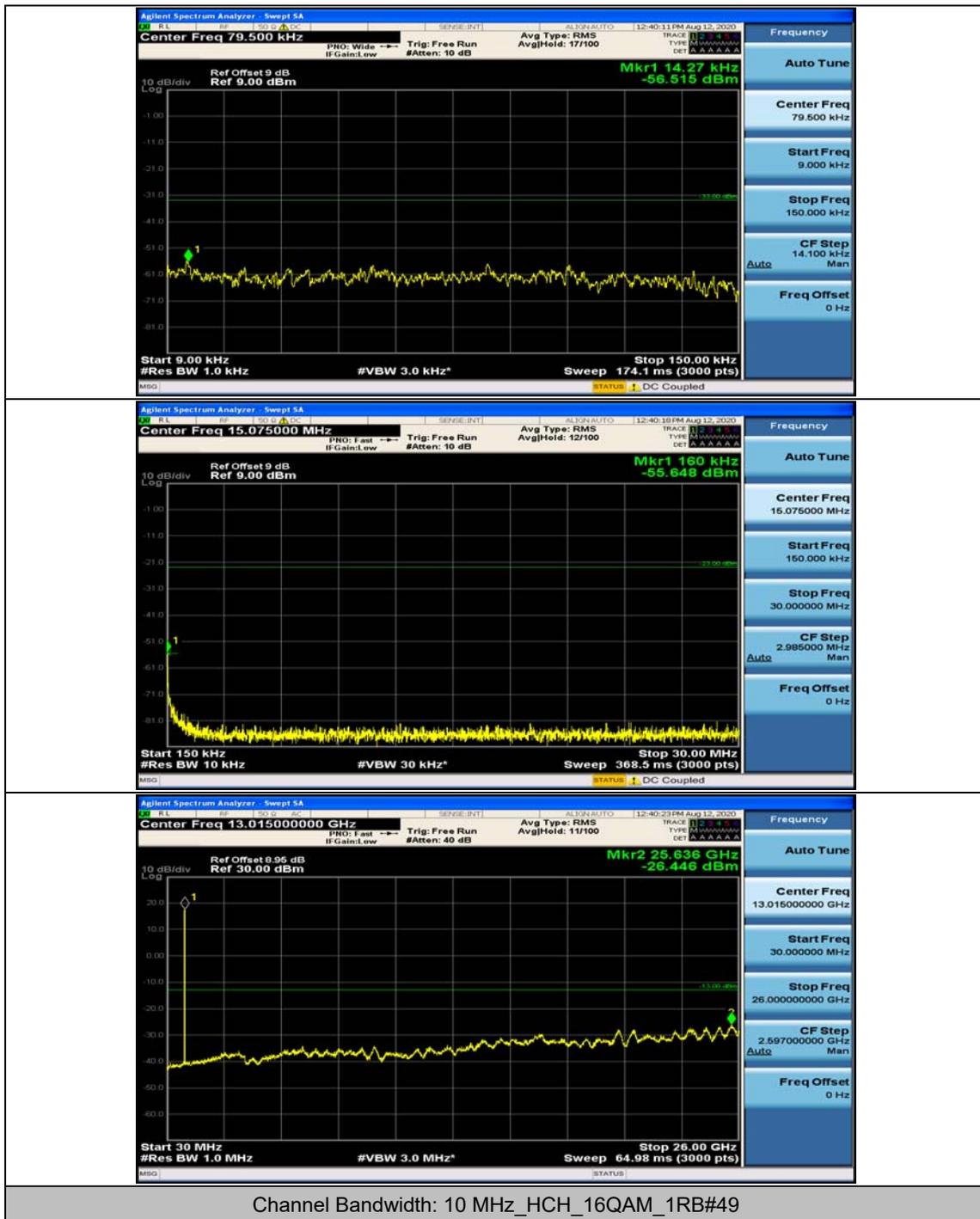


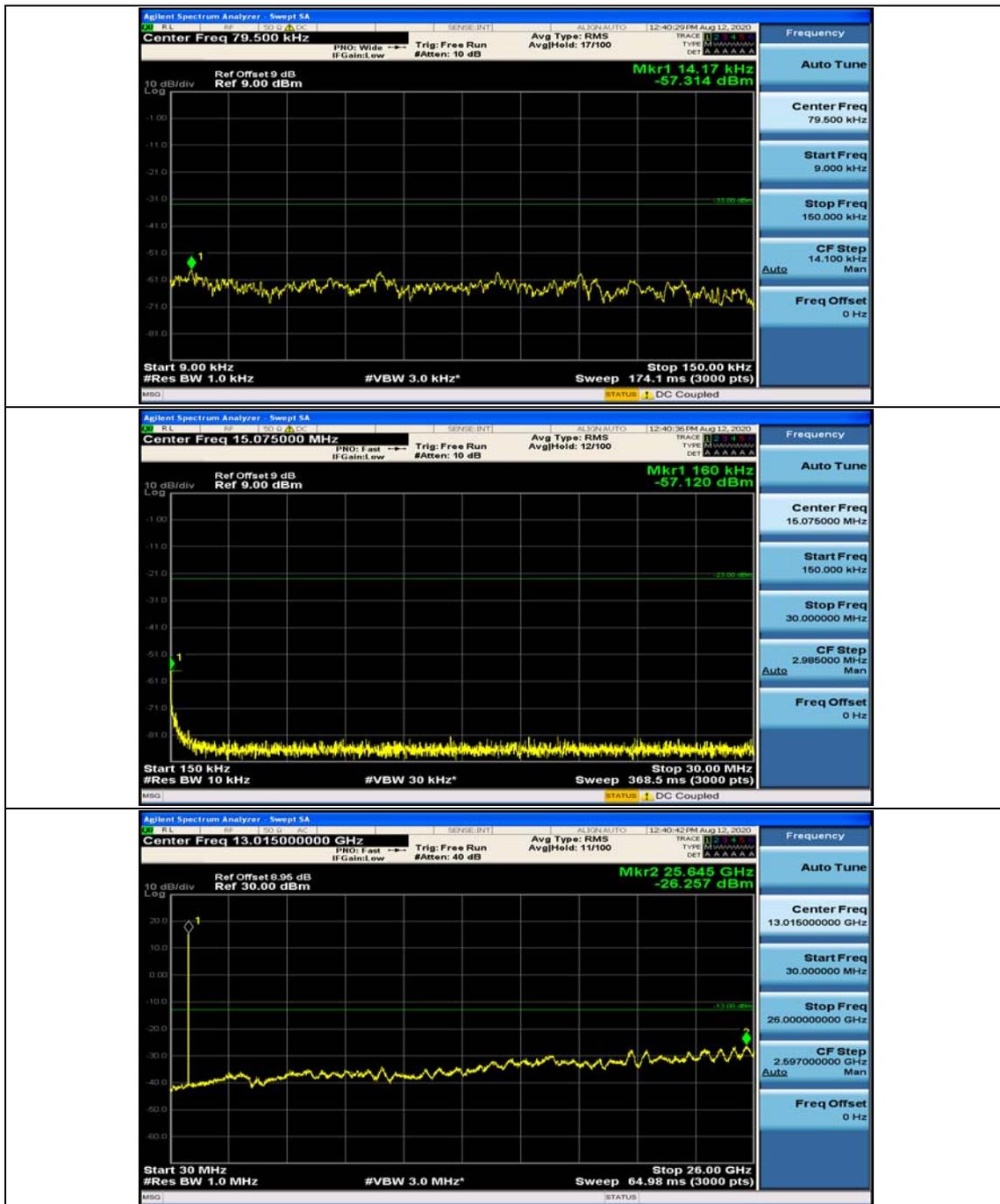












Appendix F: Frequency Stability

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	2.77	0.003359	± 2.5	PASS
		VN	TN	2.15	0.002607	± 2.5	PASS
		VH	TN	3.94	0.004777	± 2.5	PASS
	MCH	VL	TN	-1.77	-0.002116	± 2.5	PASS
		VN	TN	4.71	0.005631	± 2.5	PASS
		VH	TN	-0.05	-0.000060	± 2.5	PASS
	HCH	VL	TN	0.71	0.000837	± 2.5	PASS
		VN	TN	2.11	0.002487	± 2.5	PASS
		VH	TN	-1.35	-0.001591	± 2.5	PASS
16QAM	LCH	VL	TN	1.73	0.002098	± 2.5	PASS
		VN	TN	-0.26	-0.000315	± 2.5	PASS
		VH	TN	-0.2	-0.000243	± 2.5	PASS
	MCH	VL	TN	0.61	0.000729	± 2.5	PASS
		VN	TN	-0.69	-0.000825	± 2.5	PASS
		VH	TN	2.93	0.003503	± 2.5	PASS
	HCH	VL	TN	4.21	0.004963	± 2.5	PASS
		VN	TN	1.12	0.001320	± 2.5	PASS
		VH	TN	-1.35	-0.001591	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.89	0.003504	± 2.5	PASS
		VN	-20	2.87	0.003480	± 2.5	PASS
		VN	-10	0.62	0.000752	± 2.5	PASS
		VN	0	0.07	0.000085	± 2.5	PASS
		VN	10	0.61	0.000740	± 2.5	PASS
		VN	20	-1.53	-0.001855	± 2.5	PASS
		VN	30	-1.58	-0.001916	± 2.5	PASS
		VN	40	4.22	0.005117	± 2.5	PASS
		VN	50	2.19	0.002656	± 2.5	PASS
	MCH	VN	-30	2.53	0.003025	± 2.5	PASS

		VN	-20	0.48	0.000574	± 2.5	PASS
		VN	-10	2.8	0.003347	± 2.5	PASS
		VN	0	1.98	0.002367	± 2.5	PASS
		VN	10	3.77	0.004507	± 2.5	PASS
		VN	20	-1.76	-0.002104	± 2.5	PASS
		VN	30	1.35	0.001614	± 2.5	PASS
		VN	40	2.33	0.002785	± 2.5	PASS
		VN	50	0.47	0.000562	± 2.5	PASS
	HCH	VN	-30	0.81	0.000955	± 2.5	PASS
		VN	-20	0.55	0.000648	± 2.5	PASS
		VN	-10	3.1	0.003654	± 2.5	PASS
		VN	0	-1.22	-0.001438	± 2.5	PASS
		VN	10	2.92	0.003442	± 2.5	PASS
		VN	20	1.09	0.001285	± 2.5	PASS
		VN	30	-1.91	-0.002252	± 2.5	PASS
		VN	40	-1.84	-0.002169	± 2.5	PASS
		VN	50	3.5	0.004126	± 2.5	PASS
		16QAM	LCH	VN	-30	0.76	0.000922
VN	-20			-0.38	-0.000461	± 2.5	PASS
VN	-10			4.78	0.005796	± 2.5	PASS
VN	0			0.61	0.000740	± 2.5	PASS
VN	10			-0.83	-0.001006	± 2.5	PASS
VN	20			1.53	0.001855	± 2.5	PASS
VN	30			3.06	0.003710	± 2.5	PASS
VN	40			2.17	0.002631	± 2.5	PASS
VN	50			-0.14	-0.000170	± 2.5	PASS
MCH	VN		-30	1.27	0.001497	± 2.5	PASS
	VN		-20	-0.88	-0.001037	± 2.5	PASS
	VN		-10	2.7	0.003183	± 2.5	PASS
	VN		0	1.33	0.001568	± 2.5	PASS
	VN		10	0.97	0.001143	± 2.5	PASS
	VN		20	-0.21	-0.000248	± 2.5	PASS
	VN		30	-0.85	-0.001002	± 2.5	PASS
	VN		40	0.63	0.000743	± 2.5	PASS
	VN		50	-0.06	-0.000071	± 2.5	PASS
HCH	VN		-30	3.77	0.004444	± 2.5	PASS
	VN		-20	-1.8	-0.002122	± 2.5	PASS
	VN		-10	4.6	0.005423	± 2.5	PASS
	VN		0	1.08	0.001273	± 2.5	PASS
	VN		10	3.86	0.004550	± 2.5	PASS
	VN		20	0.04	0.000047	± 2.5	PASS

		VN	30	1.66	0.001957	± 2.5	PASS
		VN	40	-0.97	-0.001143	± 2.5	PASS
		VN	50	1.57	0.001851	± 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	2.77	0.003356	± 2.5	PASS
		VN	TN	4.9	0.005936	± 2.5	PASS
		VH	TN	4.7	0.005694	± 2.5	PASS
	MCH	VL	TN	-1.36	-0.001626	± 2.5	PASS
		VN	TN	2.95	0.003527	± 2.5	PASS
		VH	TN	0.81	0.000968	± 2.5	PASS
	HCH	VL	TN	4.74	0.005593	± 2.5	PASS
		VN	TN	-1.81	-0.002136	± 2.5	PASS
		VH	TN	-1.99	-0.002348	± 2.5	PASS
16QAM	LCH	VL	TN	2.11	0.002556	± 2.5	PASS
		VN	TN	1.3	0.001575	± 2.5	PASS
		VH	TN	0.31	0.000376	± 2.5	PASS
	MCH	VL	TN	4.54	0.005427	± 2.5	PASS
		VN	TN	3.64	0.004351	± 2.5	PASS
		VH	TN	1.24	0.001482	± 2.5	PASS
	HCH	VL	TN	3.16	0.003729	± 2.5	PASS
		VN	TN	-0.16	-0.000189	± 2.5	PASS
		VH	TN	-1.12	-0.001322	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.97	0.002386	± 2.5	PASS
		VN	-20	-1.91	-0.002314	± 2.5	PASS
		VN	-10	-1.47	-0.001781	± 2.5	PASS
		VN	0	0.64	0.000775	± 2.5	PASS
		VN	10	4.04	0.004894	± 2.5	PASS
		VN	20	-0.91	-0.001102	± 2.5	PASS
		VN	30	5	0.006057	± 2.5	PASS
		VN	40	3.26	0.003949	± 2.5	PASS
		VN	50	1.38	0.001672	± 2.5	PASS
	MCH	VN	-30	0.55	0.000658	± 2.5	PASS

		VN	-20	1.14	0.001363	± 2.5	PASS
		VN	-10	0.61	0.000729	± 2.5	PASS
		VN	0	1.15	0.001375	± 2.5	PASS
		VN	10	2.09	0.002499	± 2.5	PASS
		VN	20	-0.05	-0.000060	± 2.5	PASS
		VN	30	-0.12	-0.000143	± 2.5	PASS
		VN	40	2.31	0.002762	± 2.5	PASS
		VN	50	-0.67	-0.000801	± 2.5	PASS
	HCH	VN	-30	-0.99	-0.001168	± 2.5	PASS
		VN	-20	-1.39	-0.001640	± 2.5	PASS
		VN	-10	-1.66	-0.001959	± 2.5	PASS
		VN	0	0.8	0.000944	± 2.5	PASS
		VN	10	3.51	0.004142	± 2.5	PASS
		VN	20	4.24	0.005003	± 2.5	PASS
		VN	30	-0.68	-0.000802	± 2.5	PASS
		VN	40	2.01	0.002372	± 2.5	PASS
		VN	50	-0.78	-0.000920	± 2.5	PASS
		16QAM	LCH	VN	-30	3.19	0.003814
VN	-20			3.47	0.004148	± 2.5	PASS
VN	-10			2.33	0.002785	± 2.5	PASS
VN	0			-0.49	-0.000586	± 2.5	PASS
VN	10			-0.95	-0.001136	± 2.5	PASS
VN	20			2.72	0.003252	± 2.5	PASS
VN	30			-0.83	-0.000992	± 2.5	PASS
VN	40			3.45	0.004124	± 2.5	PASS
VN	50			1.7	0.002032	± 2.5	PASS
MCH	VN		-30	1.96	0.002313	± 2.5	PASS
	VN		-20	1.94	0.002289	± 2.5	PASS
	VN		-10	-1.98	-0.002336	± 2.5	PASS
	VN		0	-0.9	-0.001062	± 2.5	PASS
	VN		10	0.12	0.000142	± 2.5	PASS
	VN		20	4.23	0.004991	± 2.5	PASS
	VN		30	2.31	0.002726	± 2.5	PASS
	VN		40	-0.92	-0.001086	± 2.5	PASS
	VN		50	1.79	0.002112	± 2.5	PASS
HCH	VN	-30	3.55	0.004189	± 2.5	PASS	
	VN	-20	3.68	0.004342	± 2.5	PASS	
	VN	-10	4.74	0.005593	± 2.5	PASS	
	VN	0	1.15	0.001357	± 2.5	PASS	
	VN	10	4.61	0.005440	± 2.5	PASS	
	VN	20	3.75	0.004425	± 2.5	PASS	

		VN	30	4.37	0.005156	± 2.5	PASS
		VN	40	3.43	0.004047	± 2.5	PASS
		VN	50	4.66	0.005499	± 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	2.77	0.003351	± 2.5	PASS
		VN	TN	1.34	0.001621	± 2.5	PASS
		VH	TN	4.26	0.005154	± 2.5	PASS
	MCH	VL	TN	2.01	0.002403	± 2.5	PASS
		VN	TN	4.58	0.005475	± 2.5	PASS
		VH	TN	0.89	0.001064	± 2.5	PASS
	HCH	VL	TN	-1.83	-0.002162	± 2.5	PASS
		VN	TN	-1.72	-0.002032	± 2.5	PASS
		VH	TN	-1.1	-0.001299	± 2.5	PASS
16QAM	LCH	VL	TN	1	0.001210	± 2.5	PASS
		VN	TN	2.55	0.003085	± 2.5	PASS
		VH	TN	0.12	0.000145	± 2.5	PASS
	MCH	VL	TN	0.28	0.000335	± 2.5	PASS
		VN	TN	0.15	0.000179	± 2.5	PASS
		VH	TN	0.43	0.000514	± 2.5	PASS
	HCH	VL	TN	3.29	0.003887	± 2.5	PASS
		VN	TN	1.29	0.001524	± 2.5	PASS
		VH	TN	-0.71	-0.000839	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.22	0.003896	± 2.5	PASS
		VN	-20	4.87	0.005892	± 2.5	PASS
		VN	-10	3.07	0.003714	± 2.5	PASS
		VN	0	4.46	0.005396	± 2.5	PASS
		VN	10	-1.01	-0.001222	± 2.5	PASS
		VN	20	2.74	0.003315	± 2.5	PASS
		VN	30	0.45	0.000544	± 2.5	PASS
		VN	40	4.44	0.005372	± 2.5	PASS
		VN	50	1.92	0.002323	± 2.5	PASS
	MCH	VN	-30	4.85	0.005798	± 2.5	PASS

		VN	-20	3.7	0.004423	± 2.5	PASS
		VN	-10	4.24	0.005069	± 2.5	PASS
		VN	0	4.79	0.005726	± 2.5	PASS
		VN	10	0.93	0.001112	± 2.5	PASS
		VN	20	3.4	0.004065	± 2.5	PASS
		VN	30	3.4	0.004065	± 2.5	PASS
		VN	40	-1.22	-0.001458	± 2.5	PASS
		VN	50	1.72	0.002056	± 2.5	PASS
	HCH	VN	-30	0.78	0.000921	± 2.5	PASS
		VN	-20	4.24	0.005009	± 2.5	PASS
		VN	-10	-0.18	-0.000213	± 2.5	PASS
		VN	0	-0.25	-0.000295	± 2.5	PASS
		VN	10	1.66	0.001961	± 2.5	PASS
		VN	20	2.25	0.002658	± 2.5	PASS
		VN	30	-0.39	-0.000461	± 2.5	PASS
		VN	40	1.75	0.002067	± 2.5	PASS
		VN	50	3.56	0.004206	± 2.5	PASS
		16QAM	LCH	VN	-30	2.06	0.002463
VN	-20			1.53	0.001829	± 2.5	PASS
VN	-10			1.4	0.001674	± 2.5	PASS
VN	0			-0.99	-0.001184	± 2.5	PASS
VN	10			-1.37	-0.001638	± 2.5	PASS
VN	20			0.54	0.000646	± 2.5	PASS
VN	30			3.55	0.004244	± 2.5	PASS
VN	40			3.7	0.004423	± 2.5	PASS
VN	50			2.01	0.002403	± 2.5	PASS
MCH	VN		-30	4.3	0.005080	± 2.5	PASS
	VN		-20	2.37	0.002800	± 2.5	PASS
	VN		-10	1.03	0.001217	± 2.5	PASS
	VN		0	-0.26	-0.000307	± 2.5	PASS
	VN		10	2.67	0.003154	± 2.5	PASS
	VN		20	2.12	0.002504	± 2.5	PASS
	VN		30	-1.68	-0.001985	± 2.5	PASS
	VN		40	3.7	0.004371	± 2.5	PASS
	VN		50	2.32	0.002741	± 2.5	PASS
HCH	VN		-30	0.32	0.000378	± 2.5	PASS
	VN		-20	3.31	0.003910	± 2.5	PASS
	VN		-10	-0.89	-0.001051	± 2.5	PASS
	VN		0	0.31	0.000366	± 2.5	PASS
	VN		10	1.8	0.002126	± 2.5	PASS
	VN		20	4.41	0.005210	± 2.5	PASS

		VN	30	3.21	0.003792	± 2.5	PASS
		VN	40	1.11	0.001311	± 2.5	PASS
		VN	50	0.41	0.000484	± 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	2.77	0.003341	± 2.5	PASS
		VN	TN	-0.2	-0.000241	± 2.5	PASS
		VH	TN	3.31	0.003993	± 2.5	PASS
	MCH	VL	TN	4.08	0.004877	± 2.5	PASS
		VN	TN	2.95	0.003527	± 2.5	PASS
		VH	TN	-0.89	-0.001064	± 2.5	PASS
	HCH	VL	TN	-0.65	-0.000770	± 2.5	PASS
		VN	TN	0.86	0.001019	± 2.5	PASS
		VH	TN	0.96	0.001137	± 2.5	PASS
16QAM	LCH	VL	TN	-1.85	-0.002232	± 2.5	PASS
		VN	TN	-1.66	-0.002002	± 2.5	PASS
		VH	TN	-0.73	-0.000881	± 2.5	PASS
	MCH	VL	TN	4.26	0.005093	± 2.5	PASS
		VN	TN	2.37	0.002833	± 2.5	PASS
		VH	TN	2.68	0.003204	± 2.5	PASS
	HCH	VL	TN	-0.31	-0.000367	± 2.5	PASS
		VN	TN	1.29	0.001528	± 2.5	PASS
		VH	TN	2.33	0.002761	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.48	0.001785	± 2.5	PASS
		VN	-20	3.33	0.004017	± 2.5	PASS
		VN	-10	3.45	0.004162	± 2.5	PASS
		VN	0	1.89	0.002280	± 2.5	PASS
		VN	10	-1.08	-0.001303	± 2.5	PASS
		VN	20	3.95	0.004765	± 2.5	PASS
		VN	30	3	0.003619	± 2.5	PASS
		VN	40	4.71	0.005682	± 2.5	PASS
		VN	50	-0.2	-0.000241	± 2.5	PASS
	MCH	VN	-30	0.47	0.000562	± 2.5	PASS

	VN	VN	-20	-0.7	-0.000837	± 2.5	PASS
		VN	-10	-0.82	-0.000980	± 2.5	PASS
		VN	0	0.62	0.000741	± 2.5	PASS
		VN	10	-0.18	-0.000215	± 2.5	PASS
		VN	20	2.75	0.003288	± 2.5	PASS
		VN	30	3.77	0.004507	± 2.5	PASS
		VN	40	2.43	0.002905	± 2.5	PASS
		VN	50	2.73	0.003264	± 2.5	PASS
	HCH	VN	-30	4.08	0.004834	± 2.5	PASS
		VN	-20	-1.53	-0.001813	± 2.5	PASS
		VN	-10	-1.94	-0.002299	± 2.5	PASS
		VN	0	1.24	0.001469	± 2.5	PASS
		VN	10	-0.61	-0.000723	± 2.5	PASS
		VN	20	-0.21	-0.000249	± 2.5	PASS
		VN	30	2.33	0.002761	± 2.5	PASS
		VN	40	-0.05	-0.000059	± 2.5	PASS
		VN	50	-0.54	-0.000640	± 2.5	PASS
		16QAM	LCH	VN	-30	2.67	0.003192
VN	-20			4.4	0.005260	± 2.5	PASS
VN	-10			3.41	0.004077	± 2.5	PASS
VN	0			4.52	0.005403	± 2.5	PASS
VN	10			3.83	0.004579	± 2.5	PASS
VN	20			-0.82	-0.000980	± 2.5	PASS
VN	30			-1.03	-0.001231	± 2.5	PASS
VN	40			0.19	0.000227	± 2.5	PASS
VN	50			2.21	0.002642	± 2.5	PASS
MCH	VN		-30	-0.2	-0.000237	± 2.5	PASS
	VN		-20	3.4	0.004028	± 2.5	PASS
	VN		-10	-0.58	-0.000687	± 2.5	PASS
	VN		0	-1.2	-0.001422	± 2.5	PASS
	VN		10	3.59	0.004254	± 2.5	PASS
	VN		20	4.5	0.005332	± 2.5	PASS
	VN		30	4.48	0.005308	± 2.5	PASS
	VN		40	4.89	0.005794	± 2.5	PASS
	VN		50	-1.6	-0.001896	± 2.5	PASS
HCH	VN		-30	2.27	0.002690	± 2.5	PASS
	VN		-20	1.88	0.002227	± 2.5	PASS
	VN		-10	0.64	0.000758	± 2.5	PASS
	VN		0	-1	-0.001185	± 2.5	PASS
	VN		10	2.2	0.002607	± 2.5	PASS
	VN		20	-1.51	-0.001789	± 2.5	PASS

		VN	30	2.48	0.002938	± 2.5	PASS
		VN	40	1.76	0.002085	± 2.5	PASS
		VN	50	4.43	0.005249	± 2.5	PASS