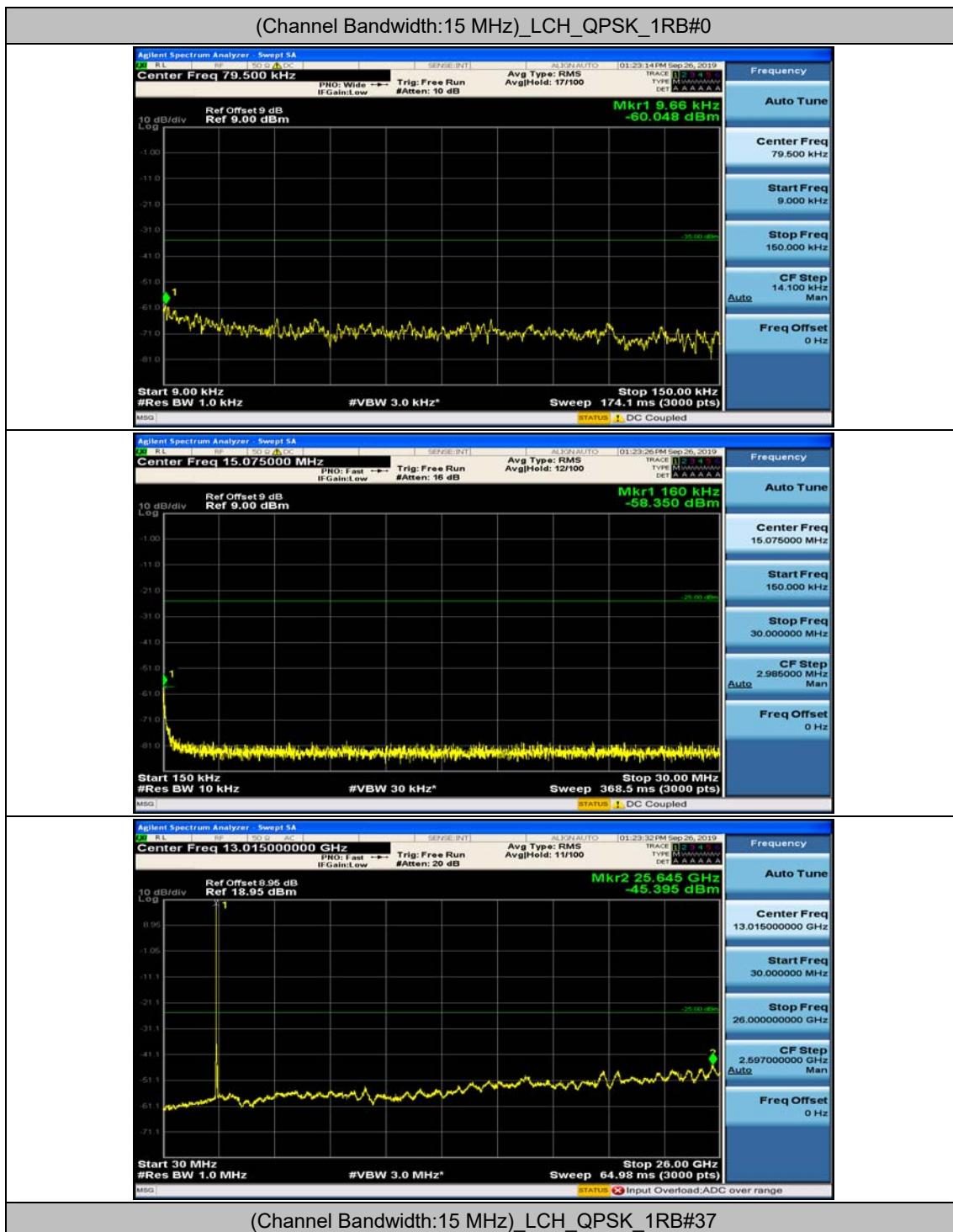
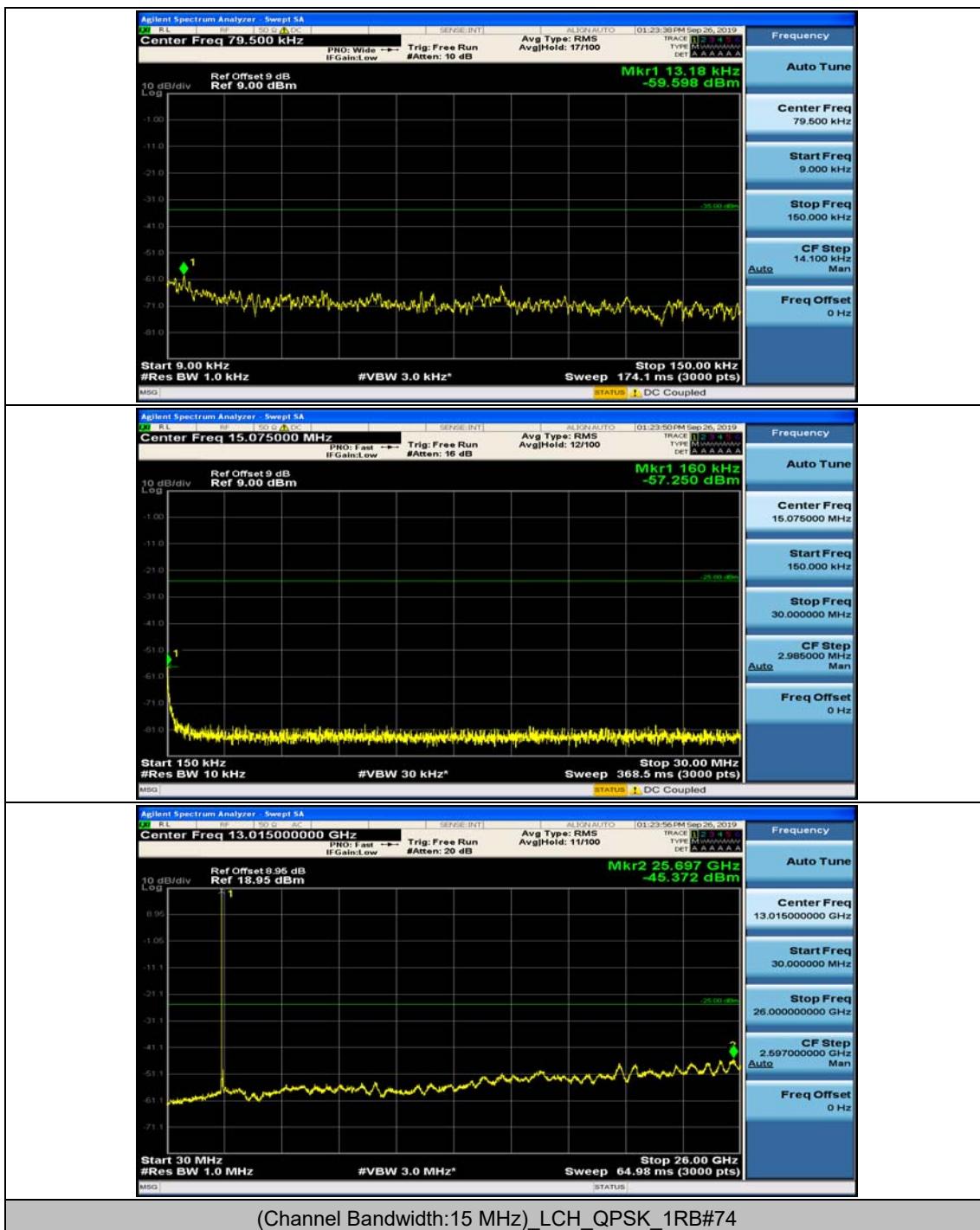
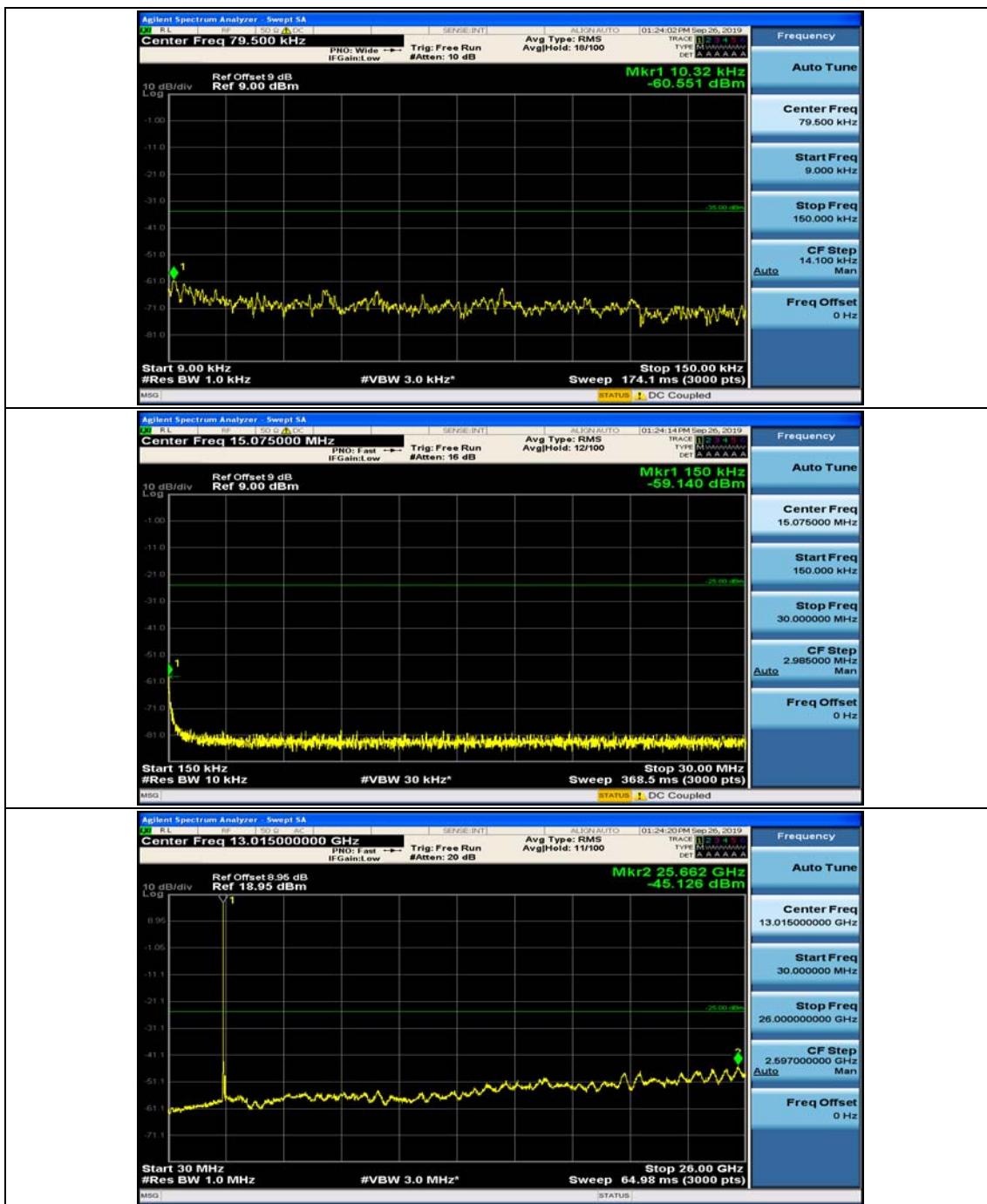
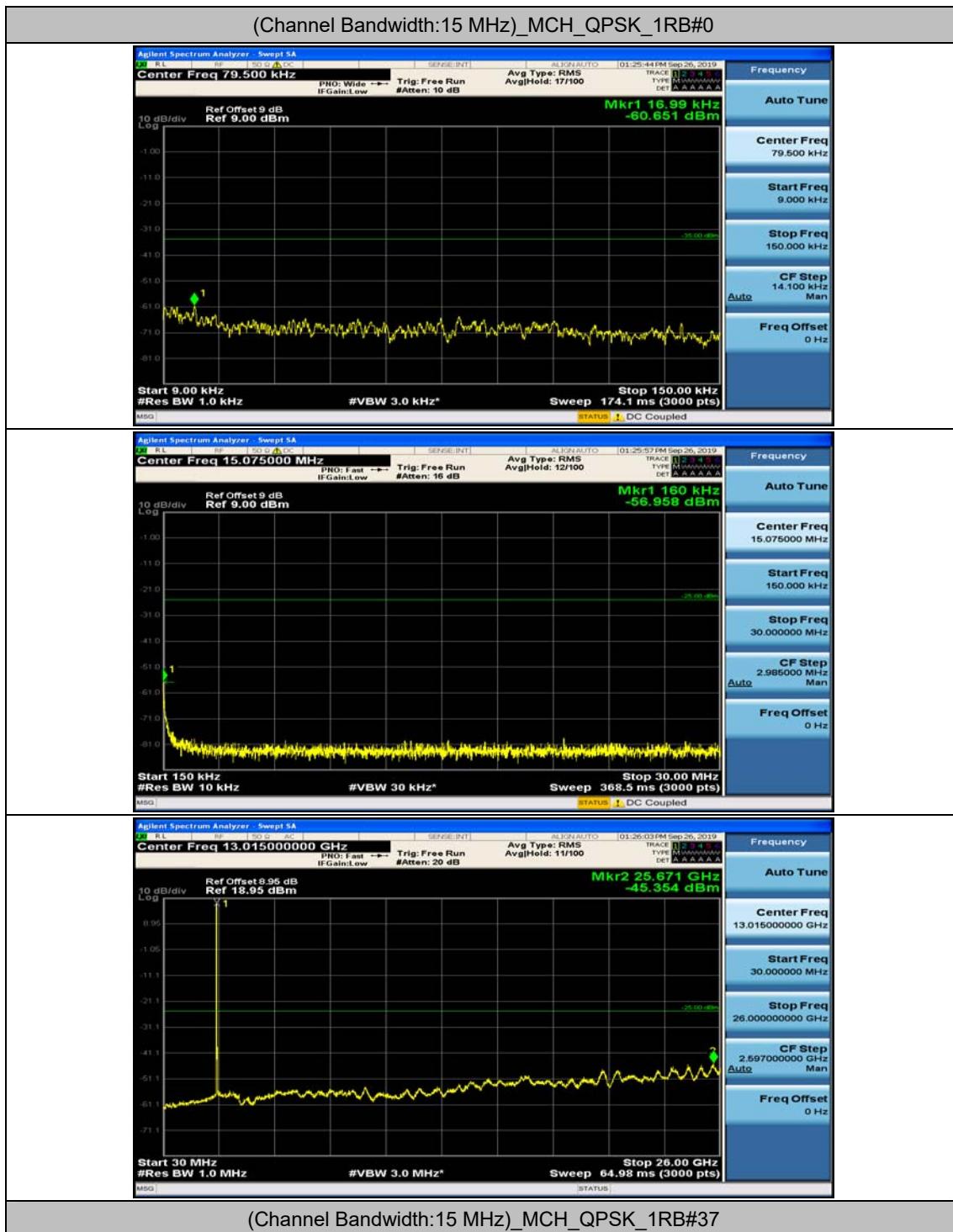


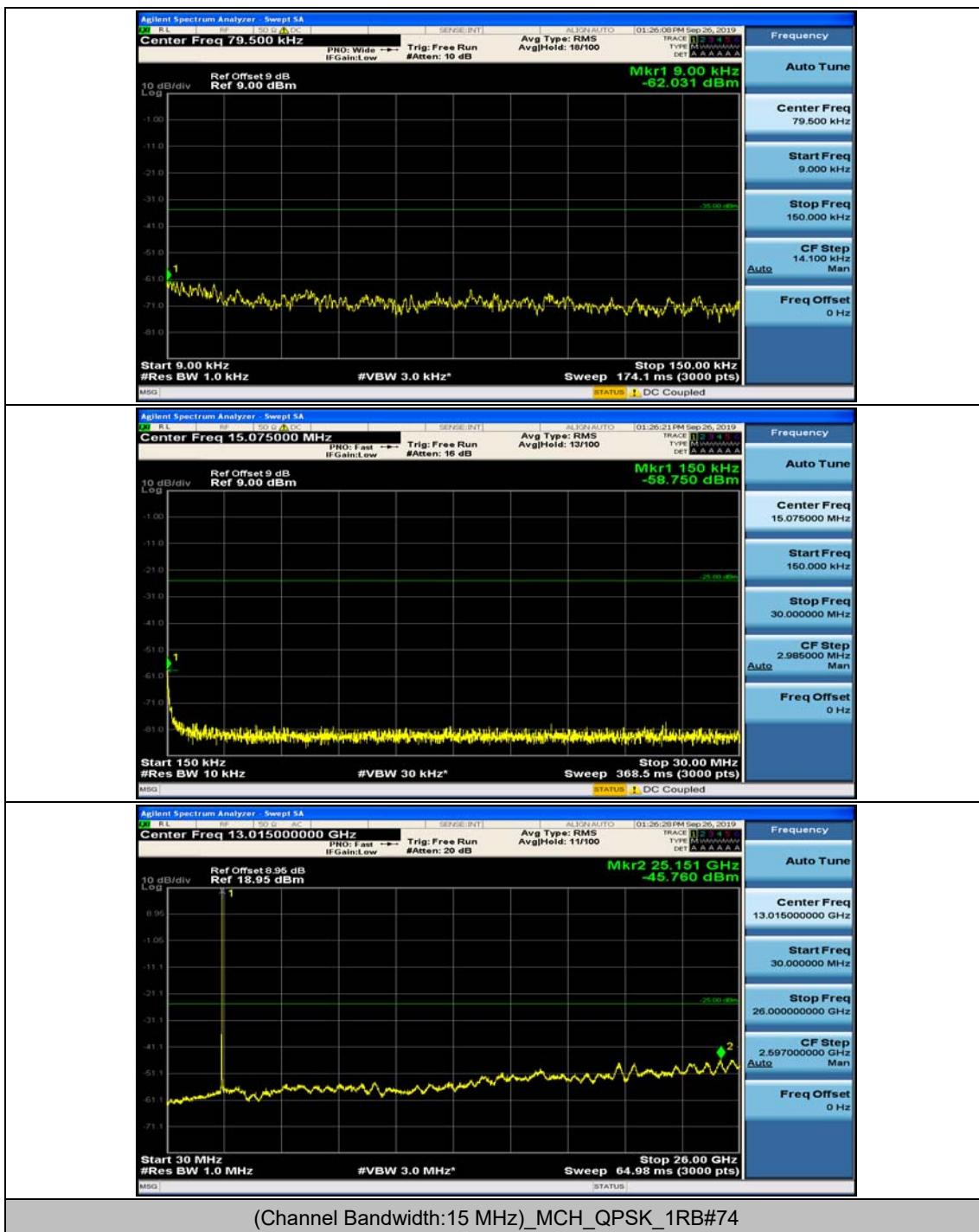
Channel Bandwidth: 15 MHz

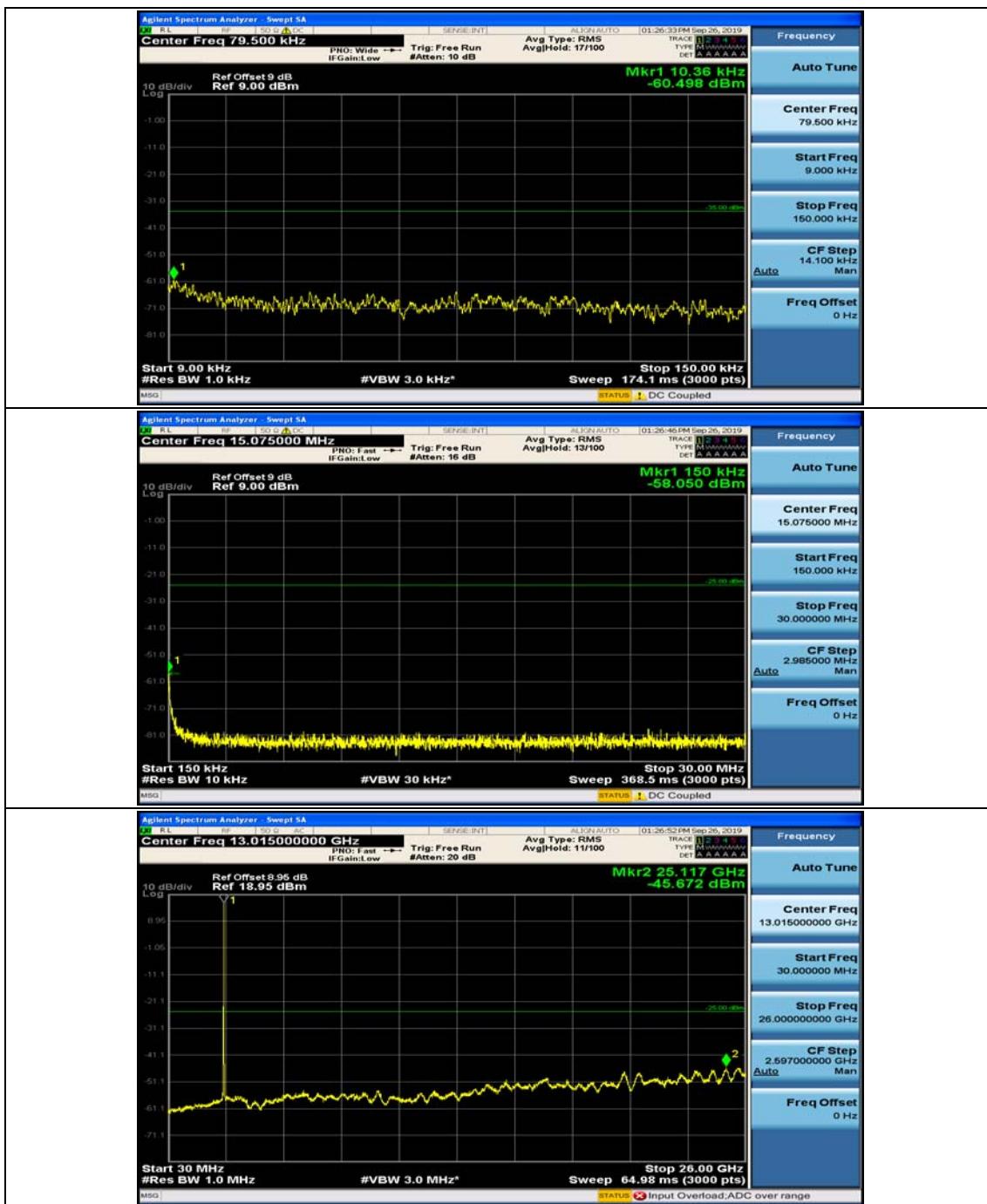


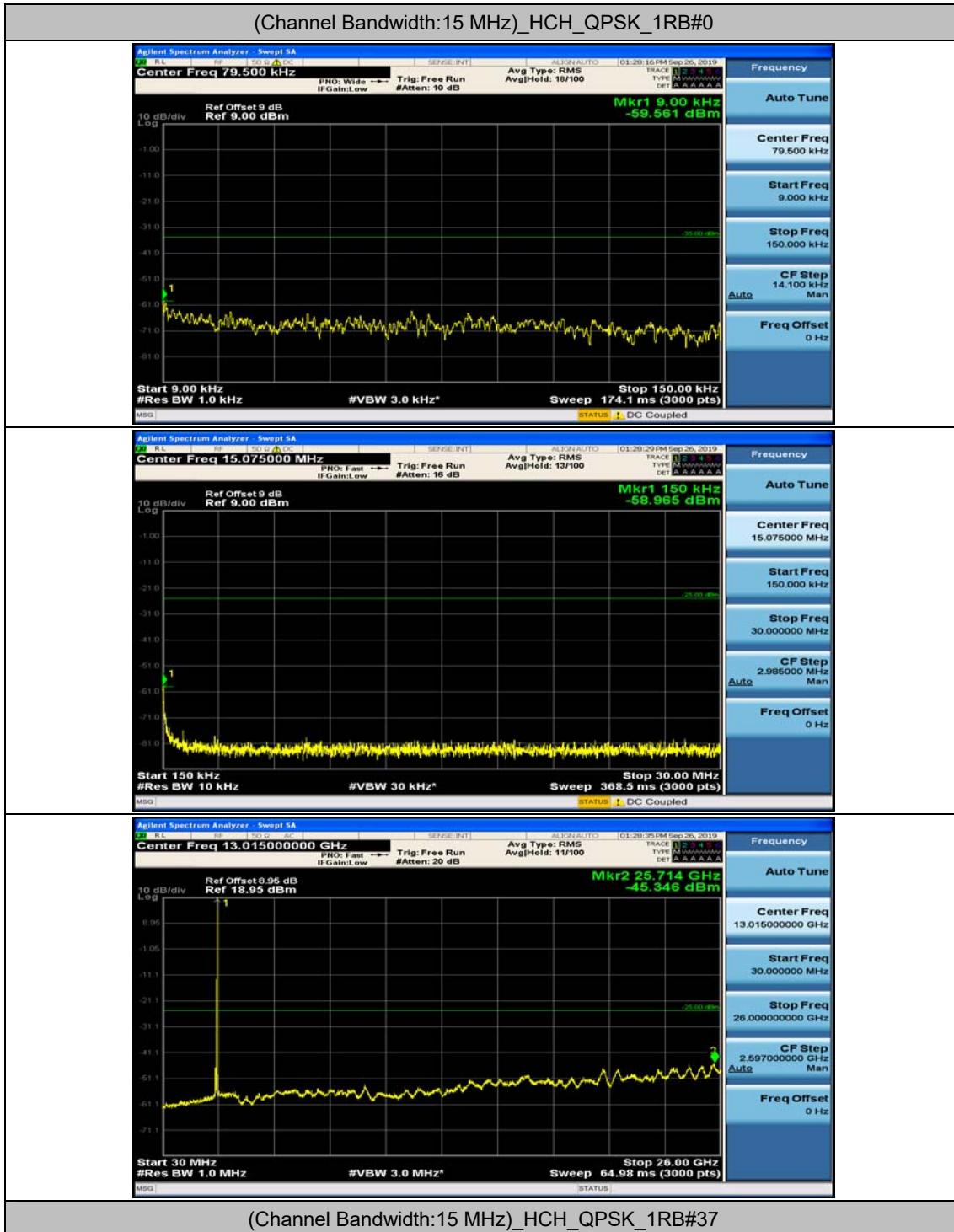


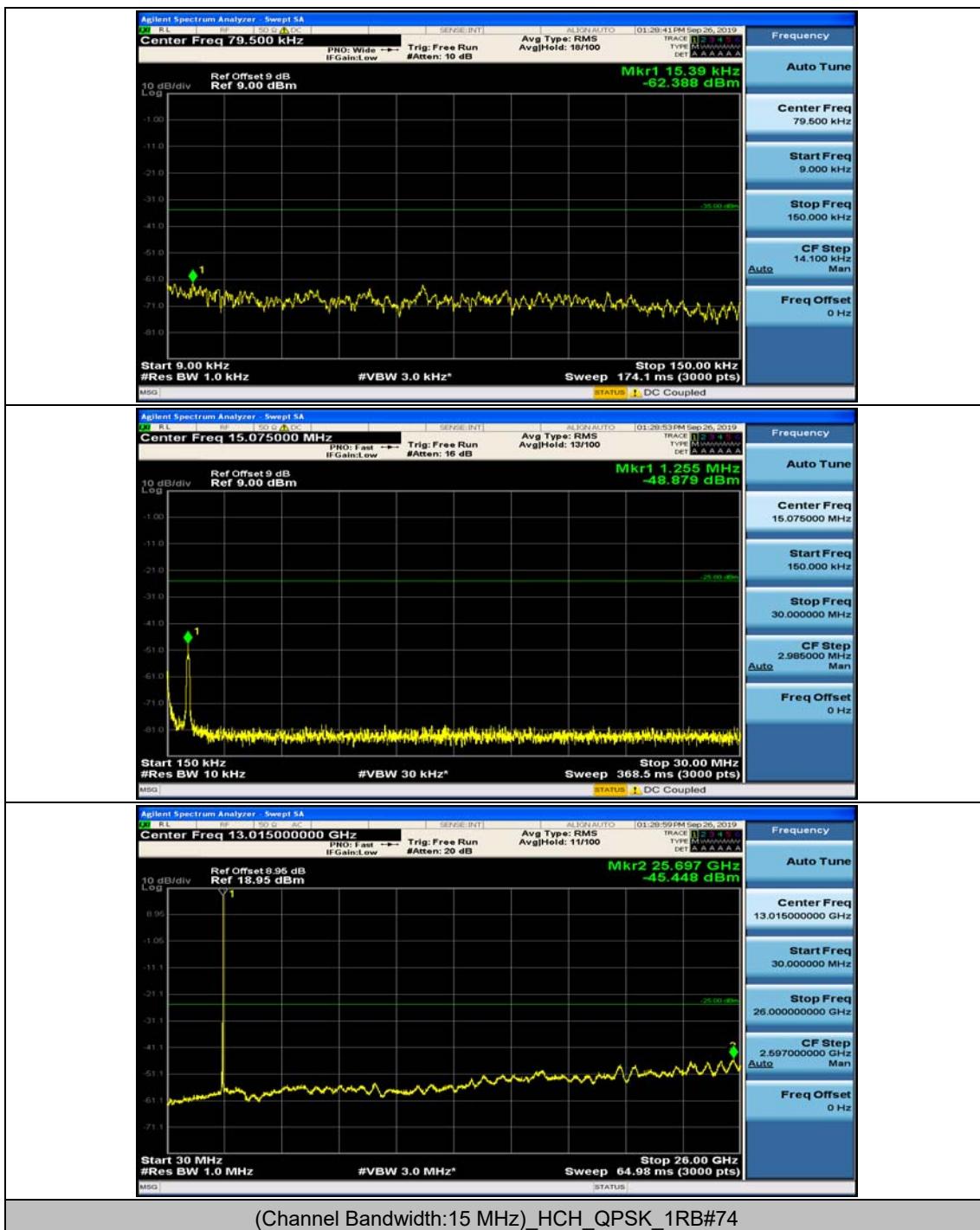


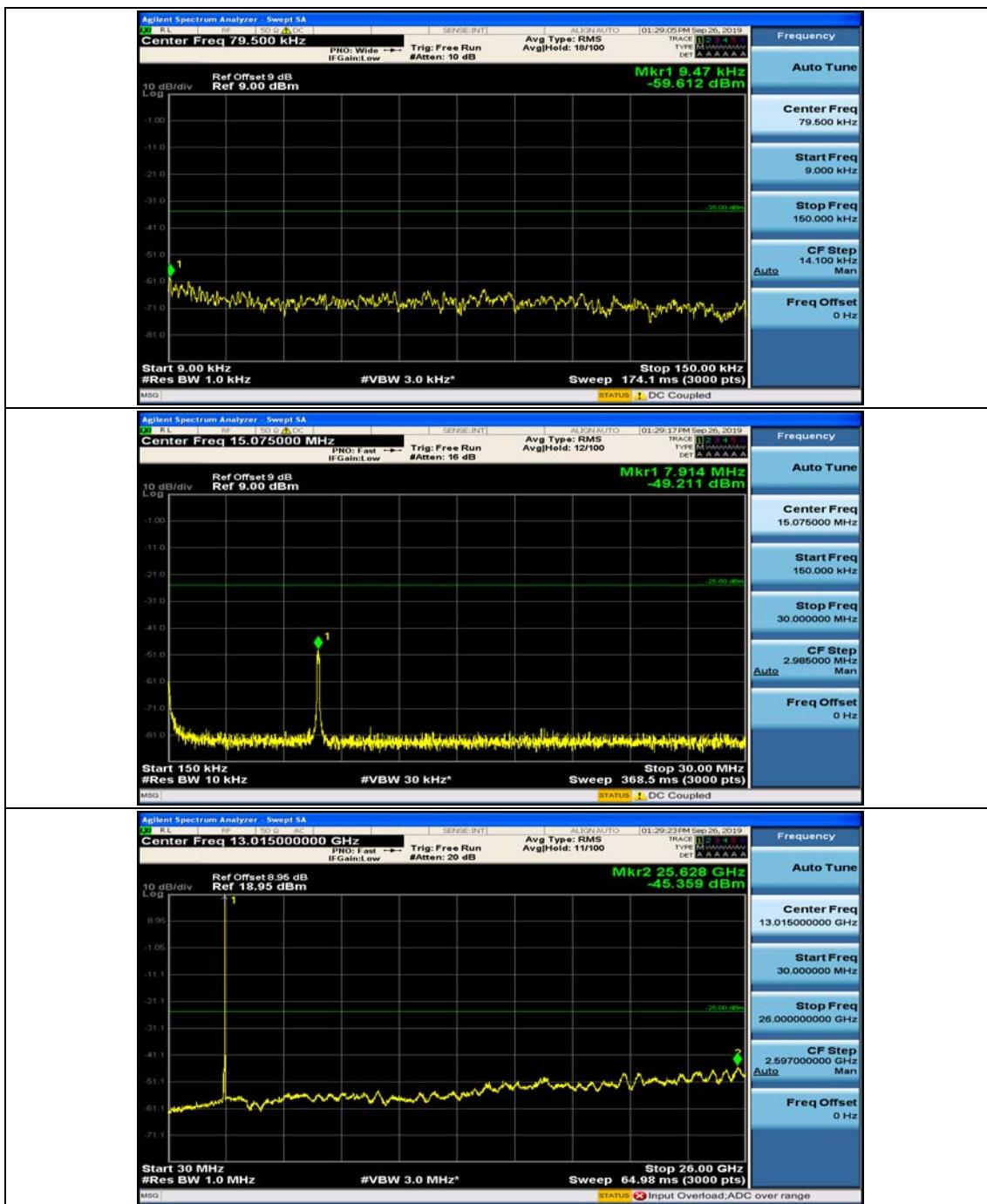


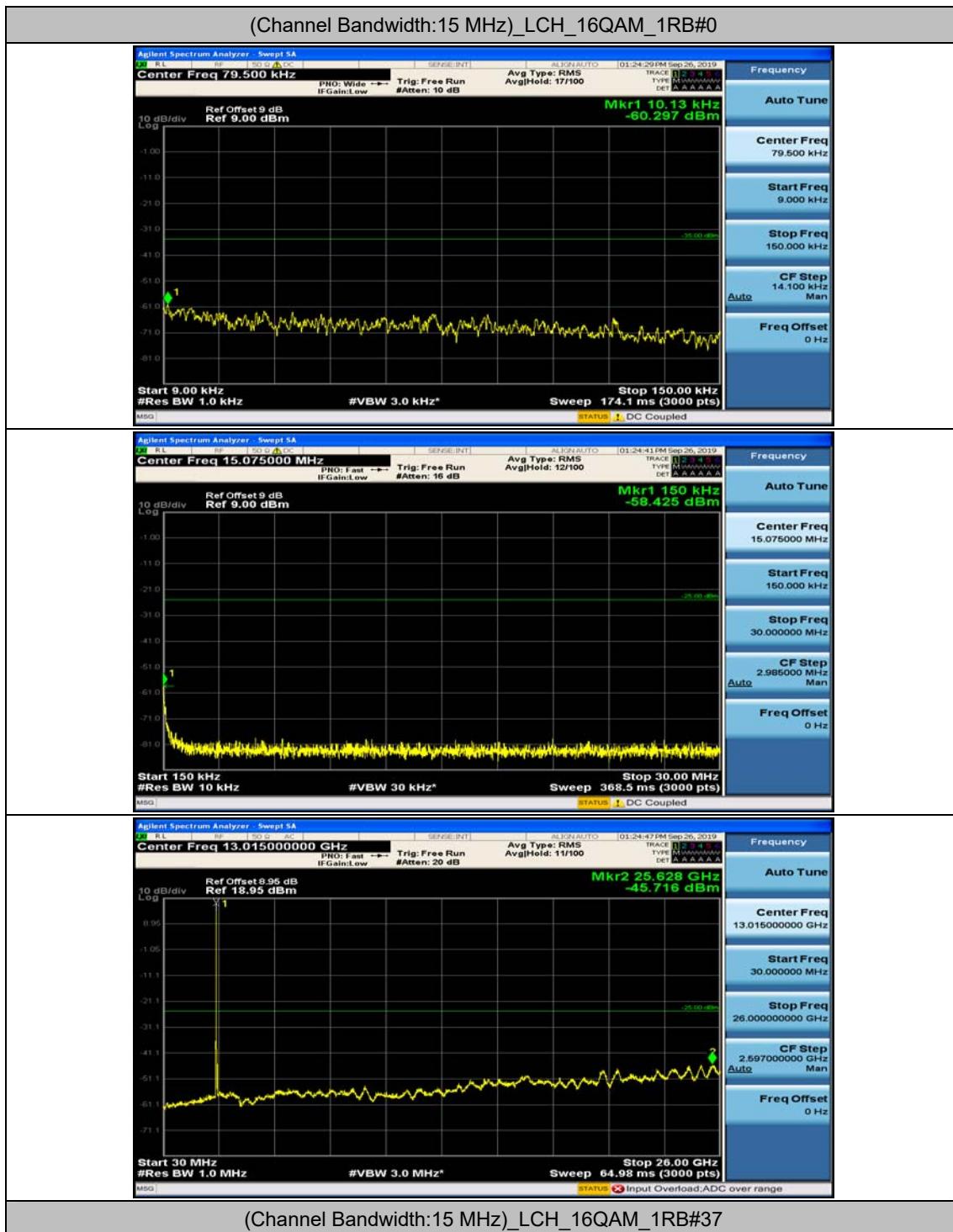


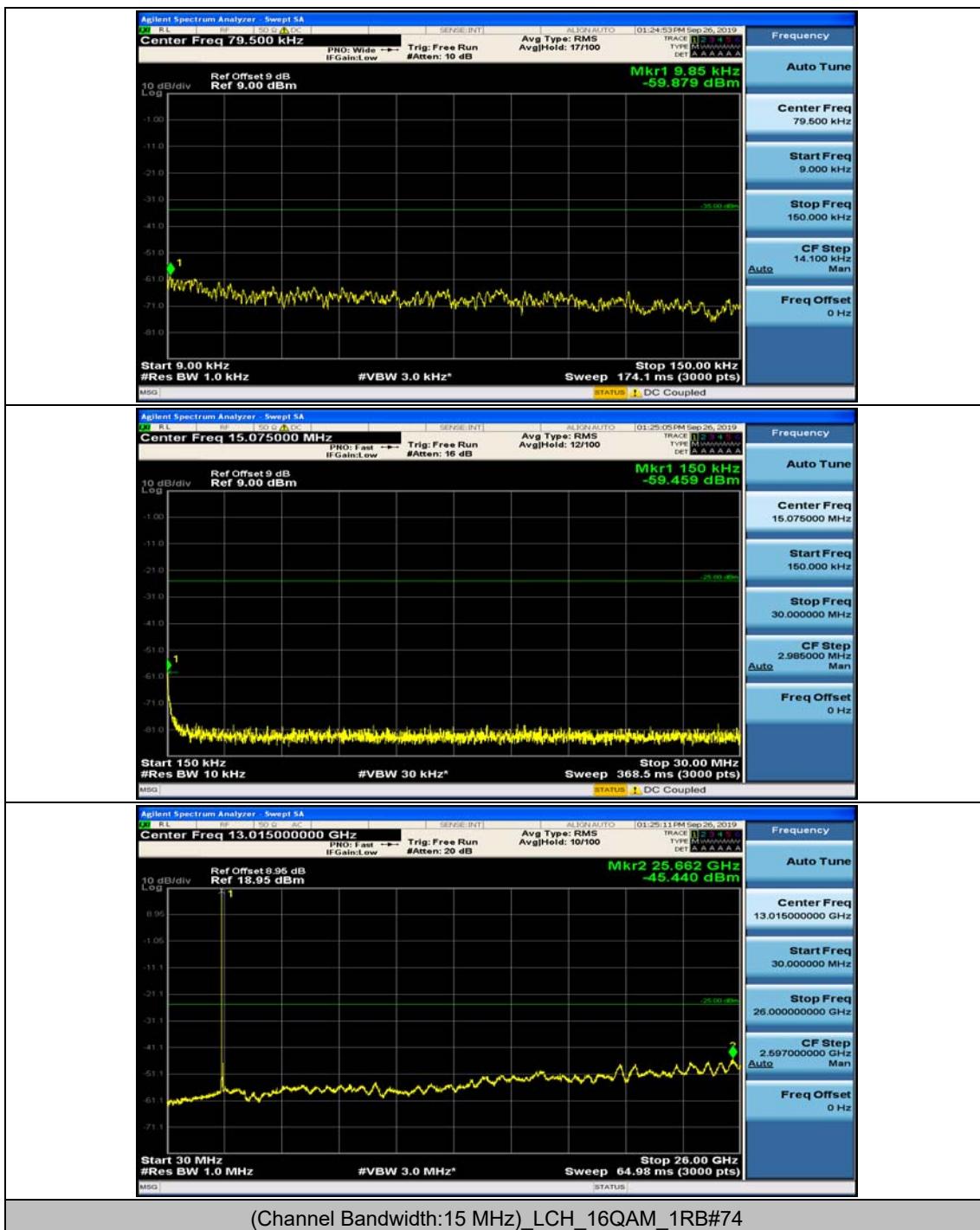


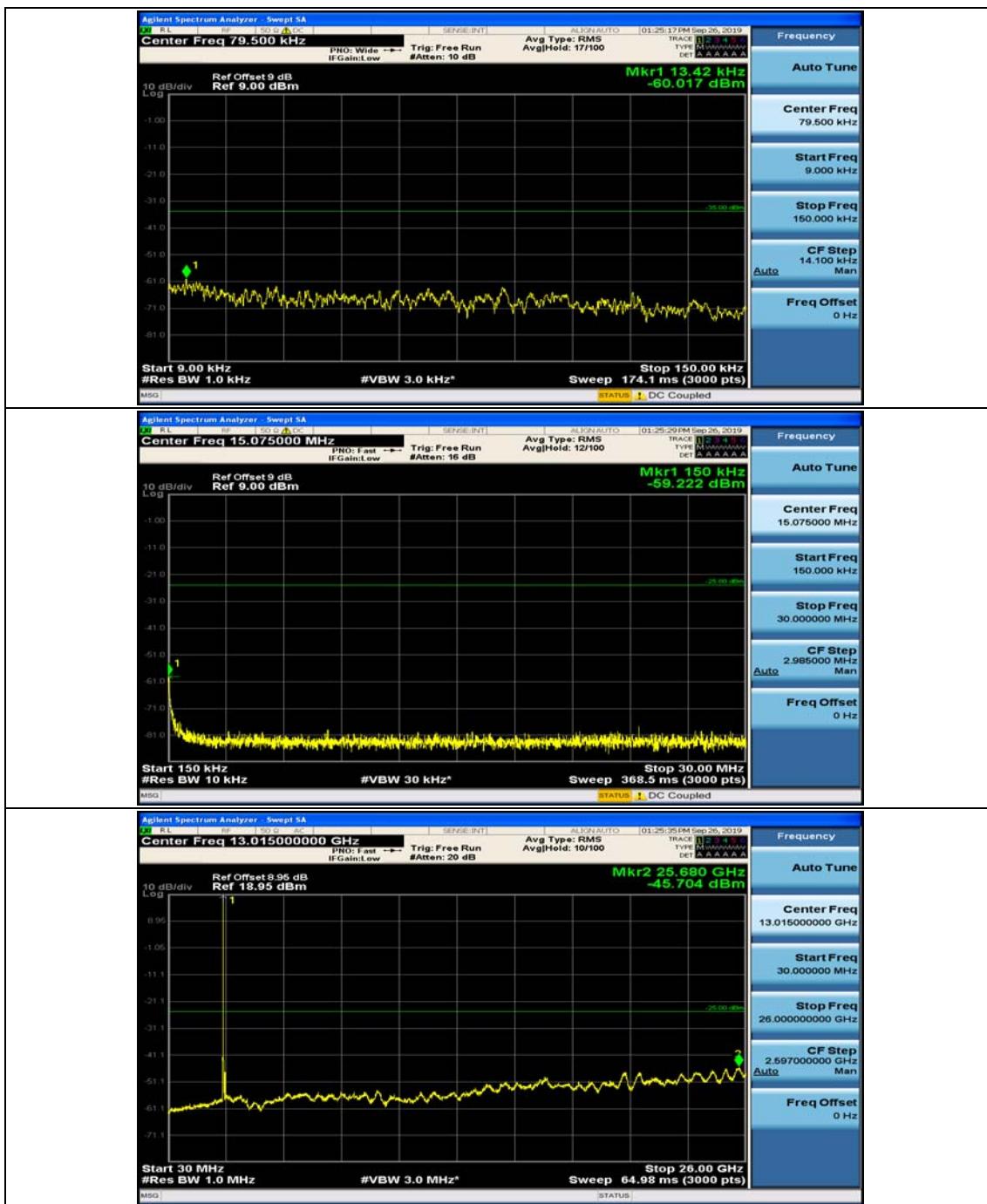


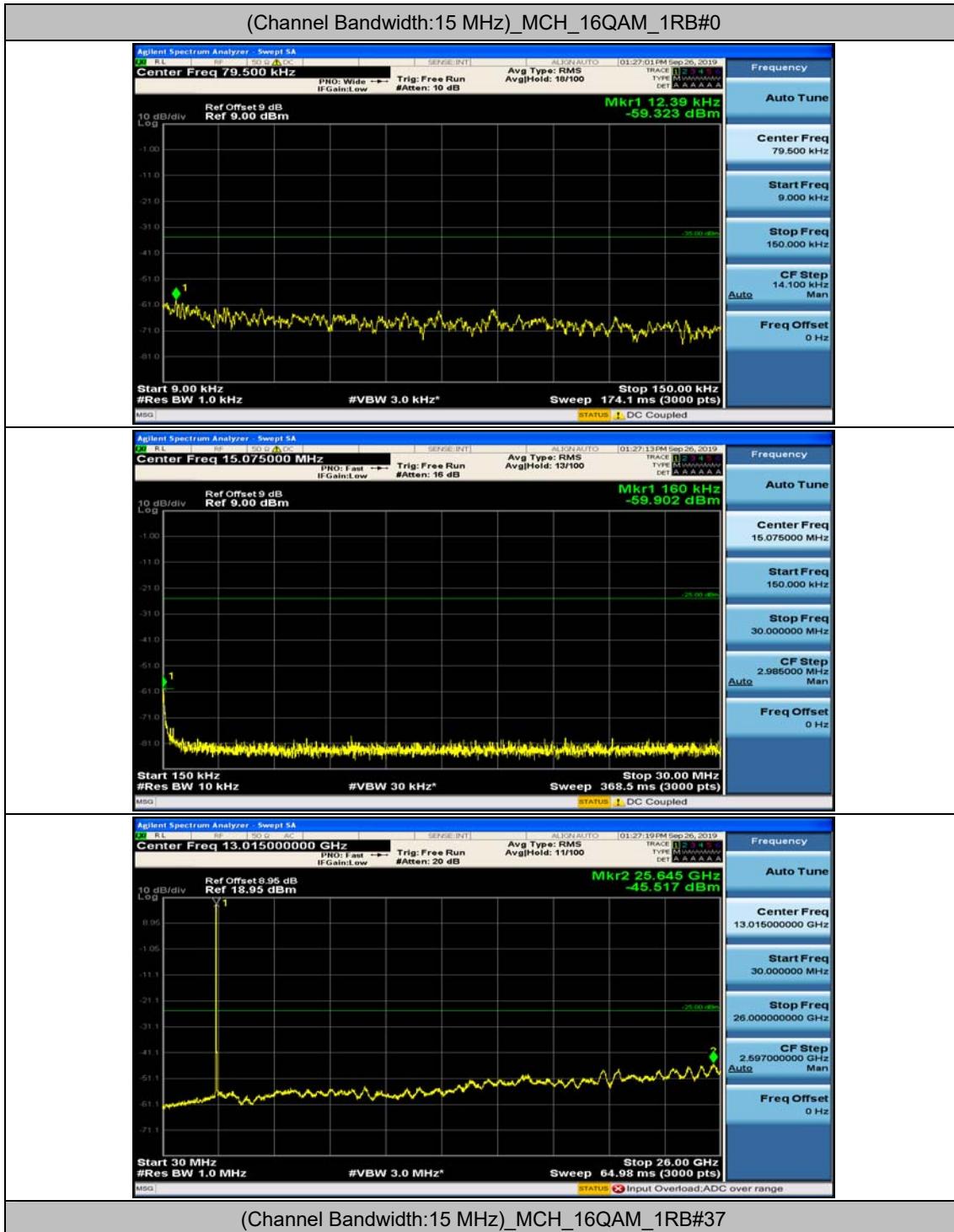


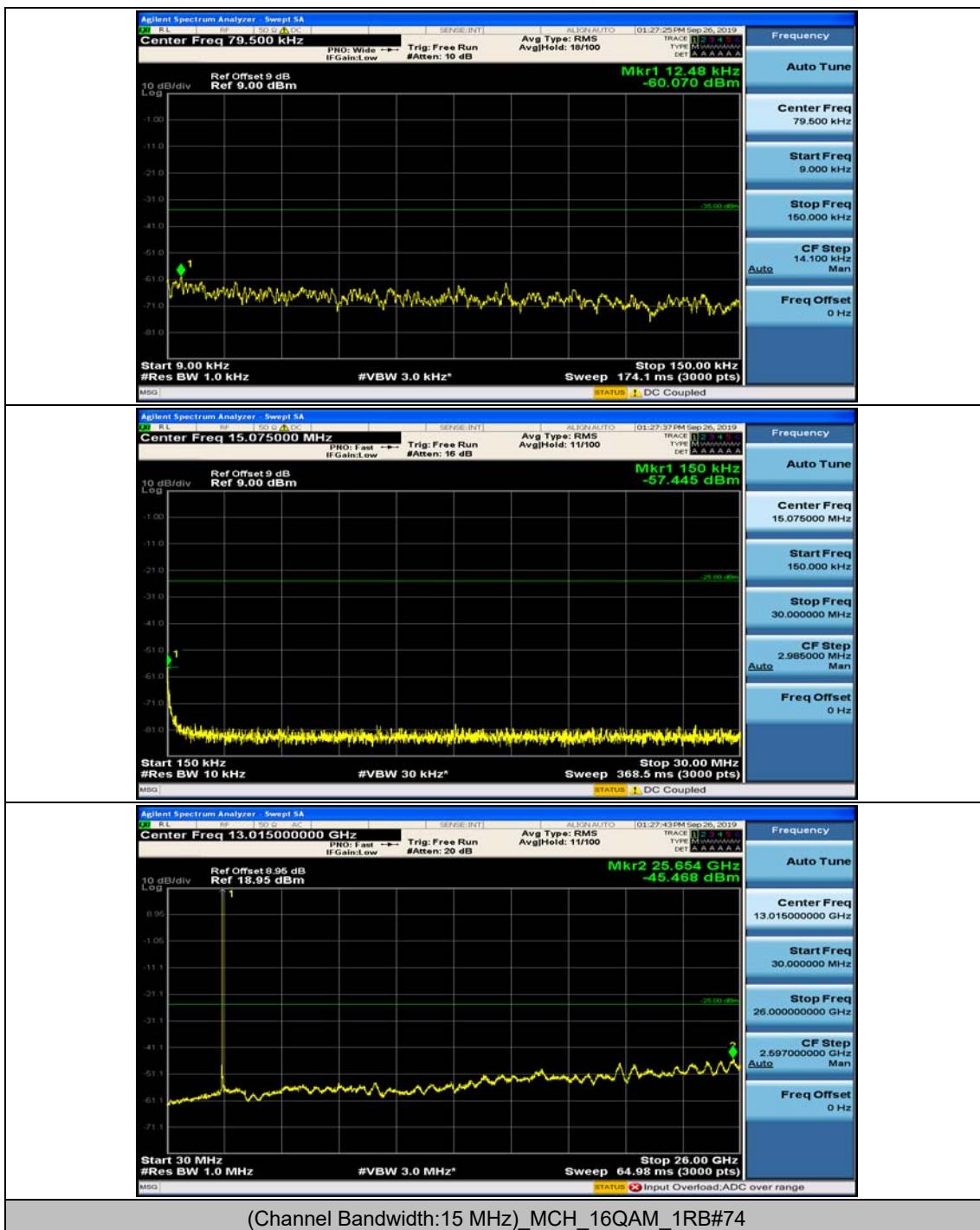


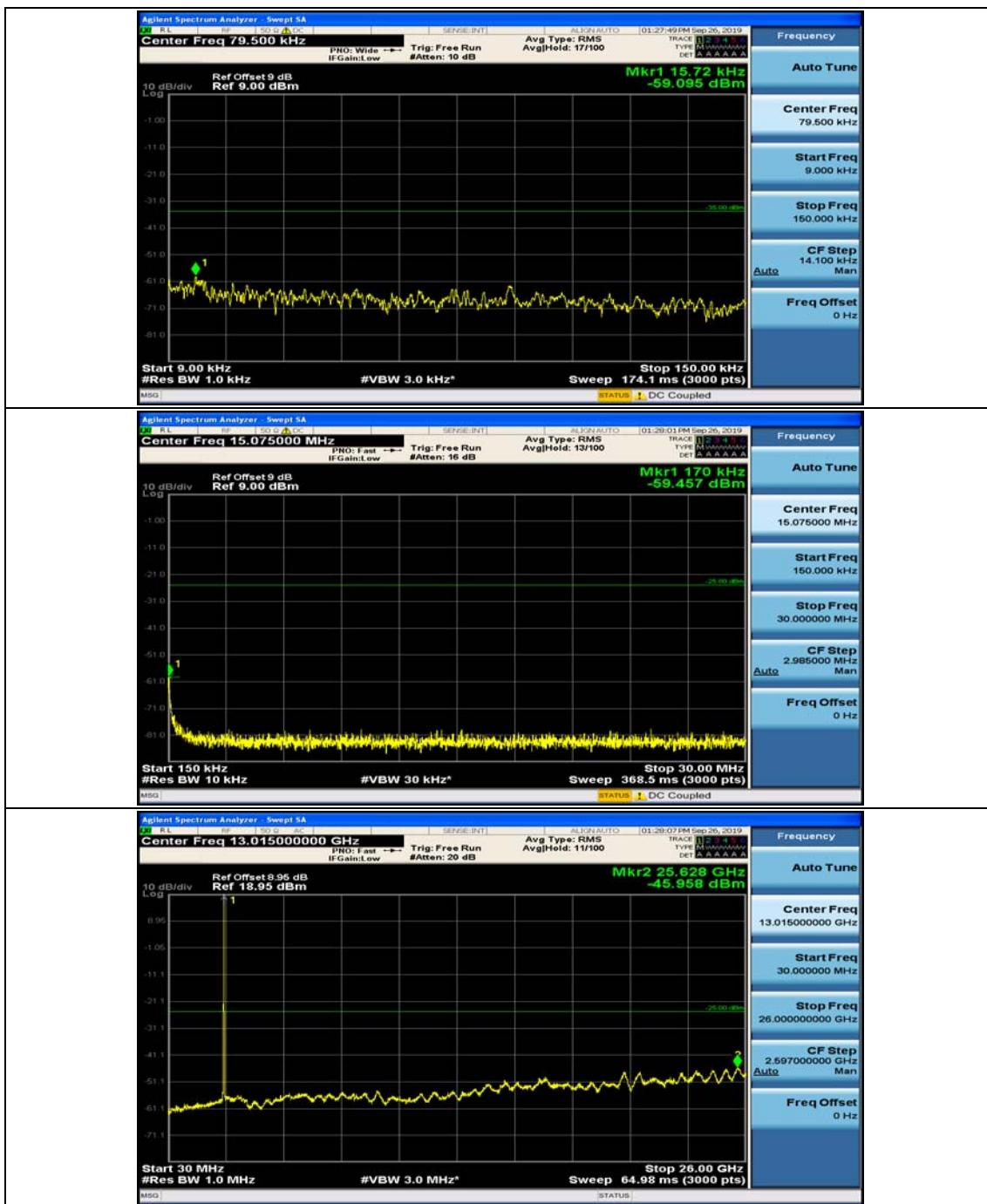


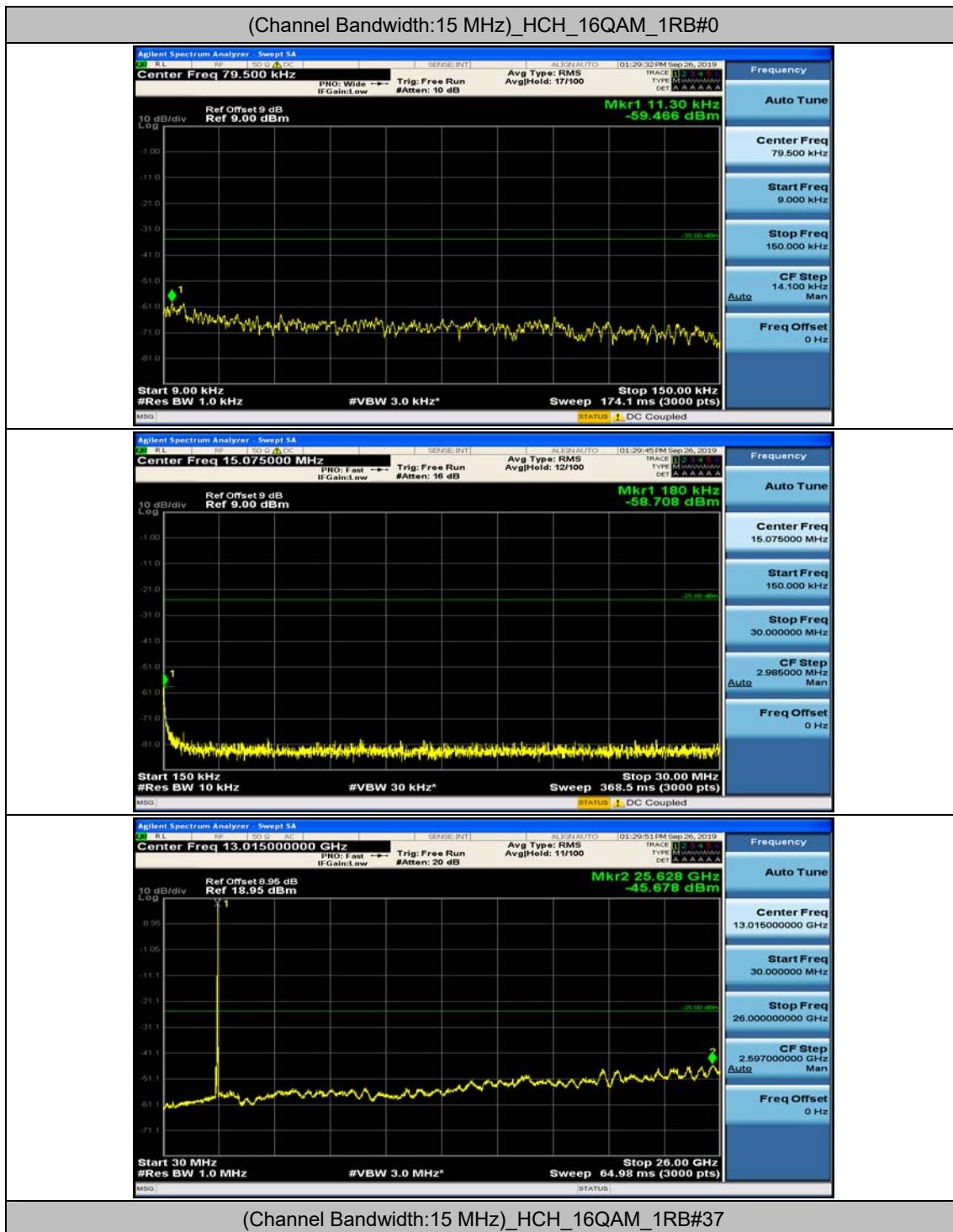


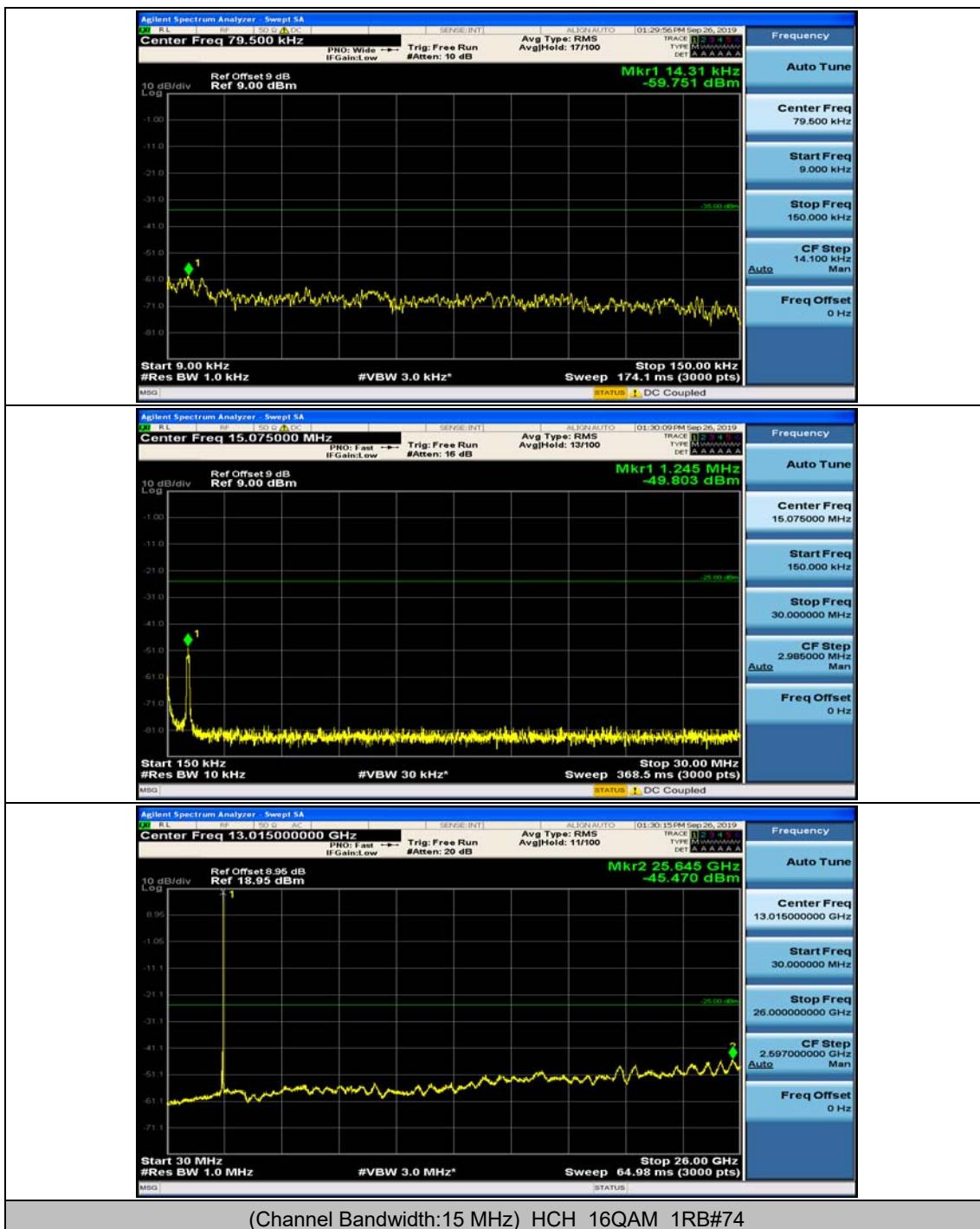


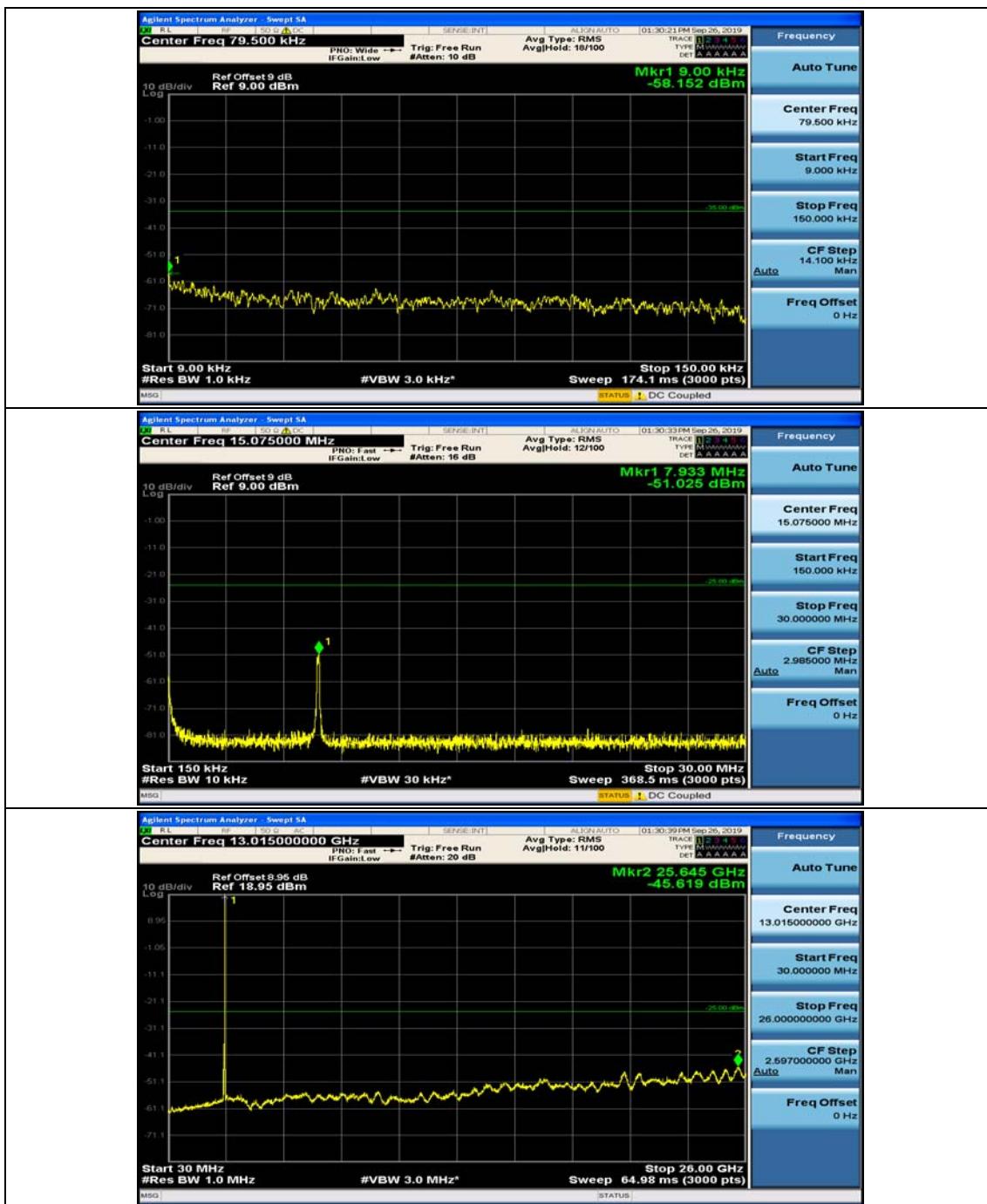




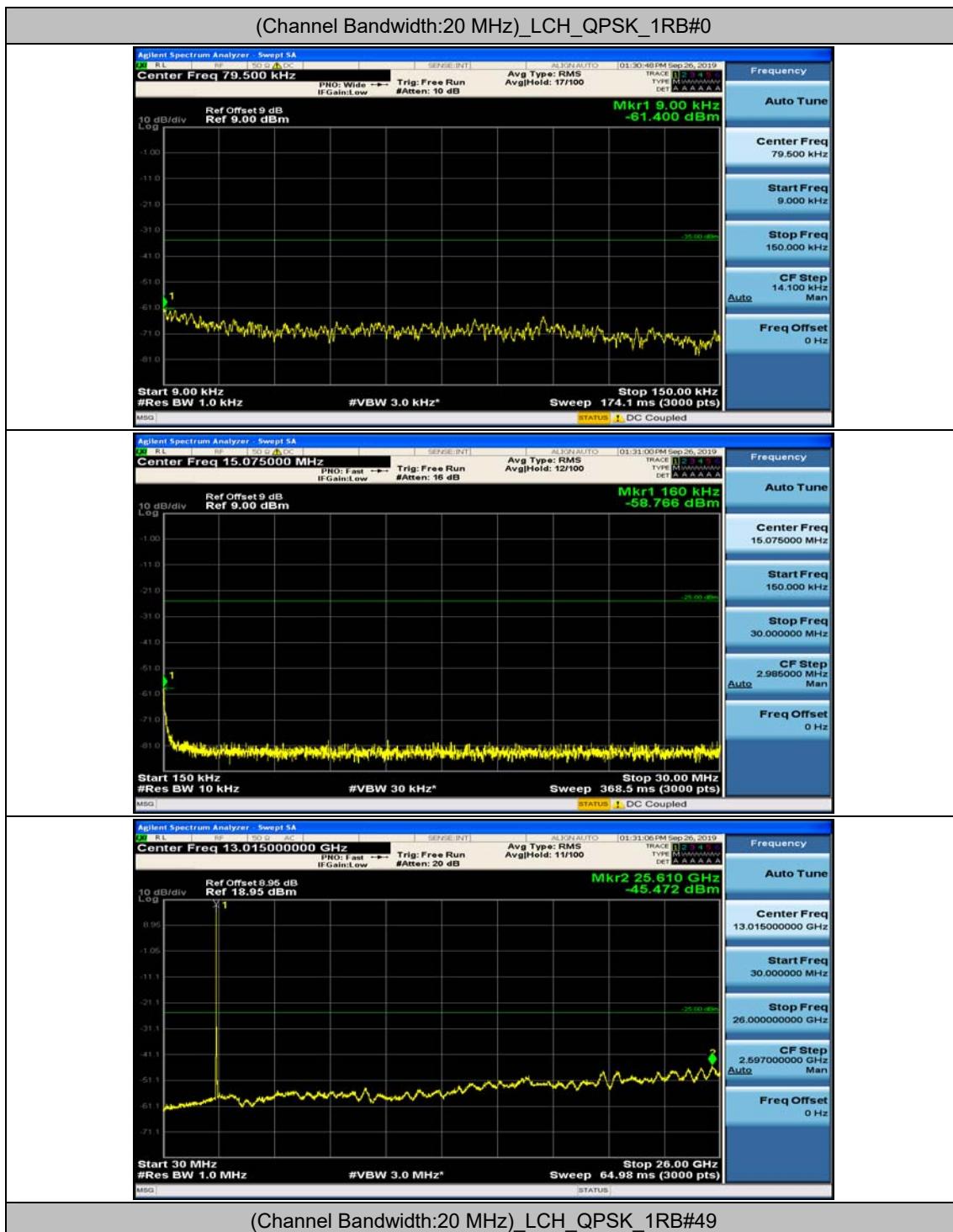


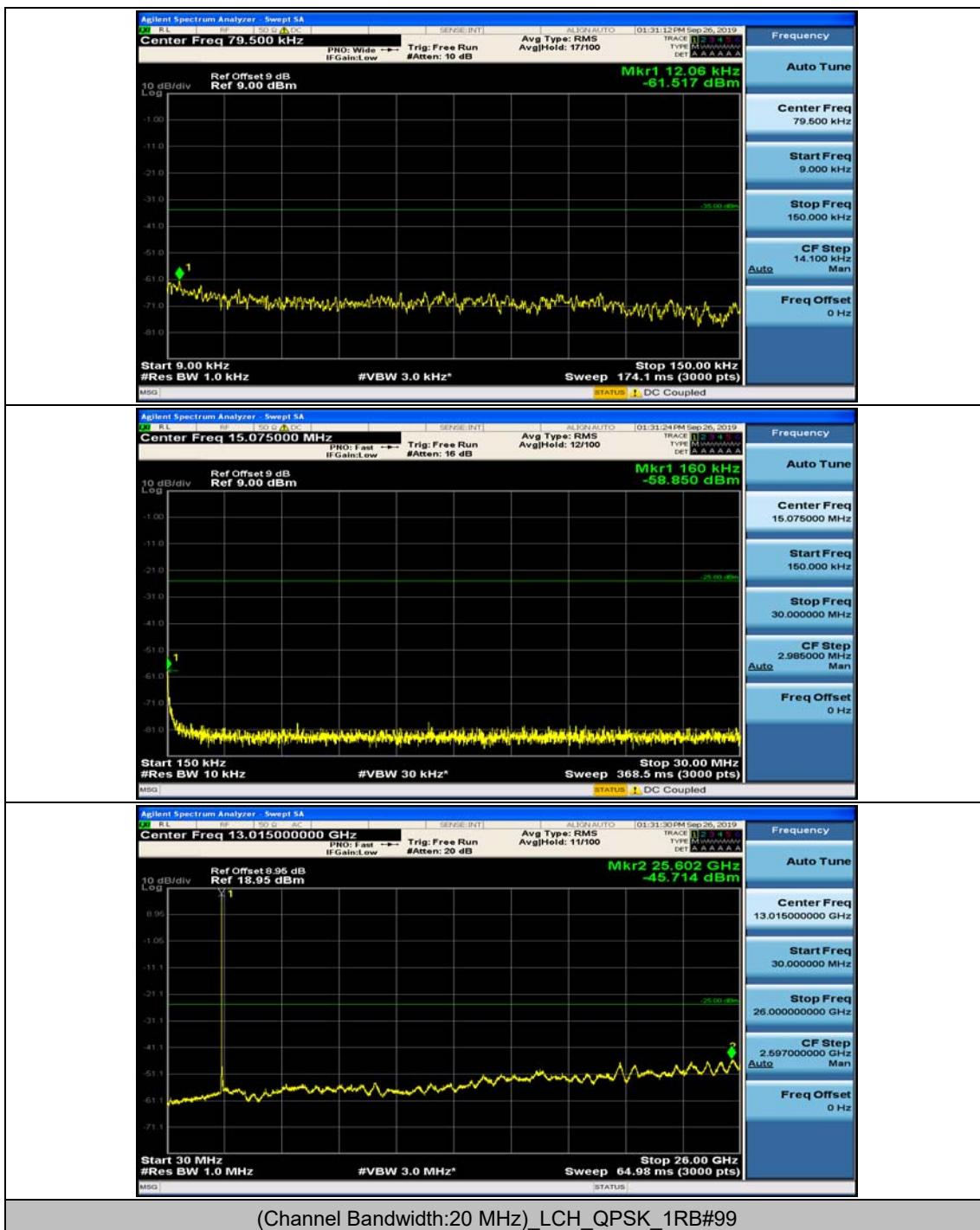


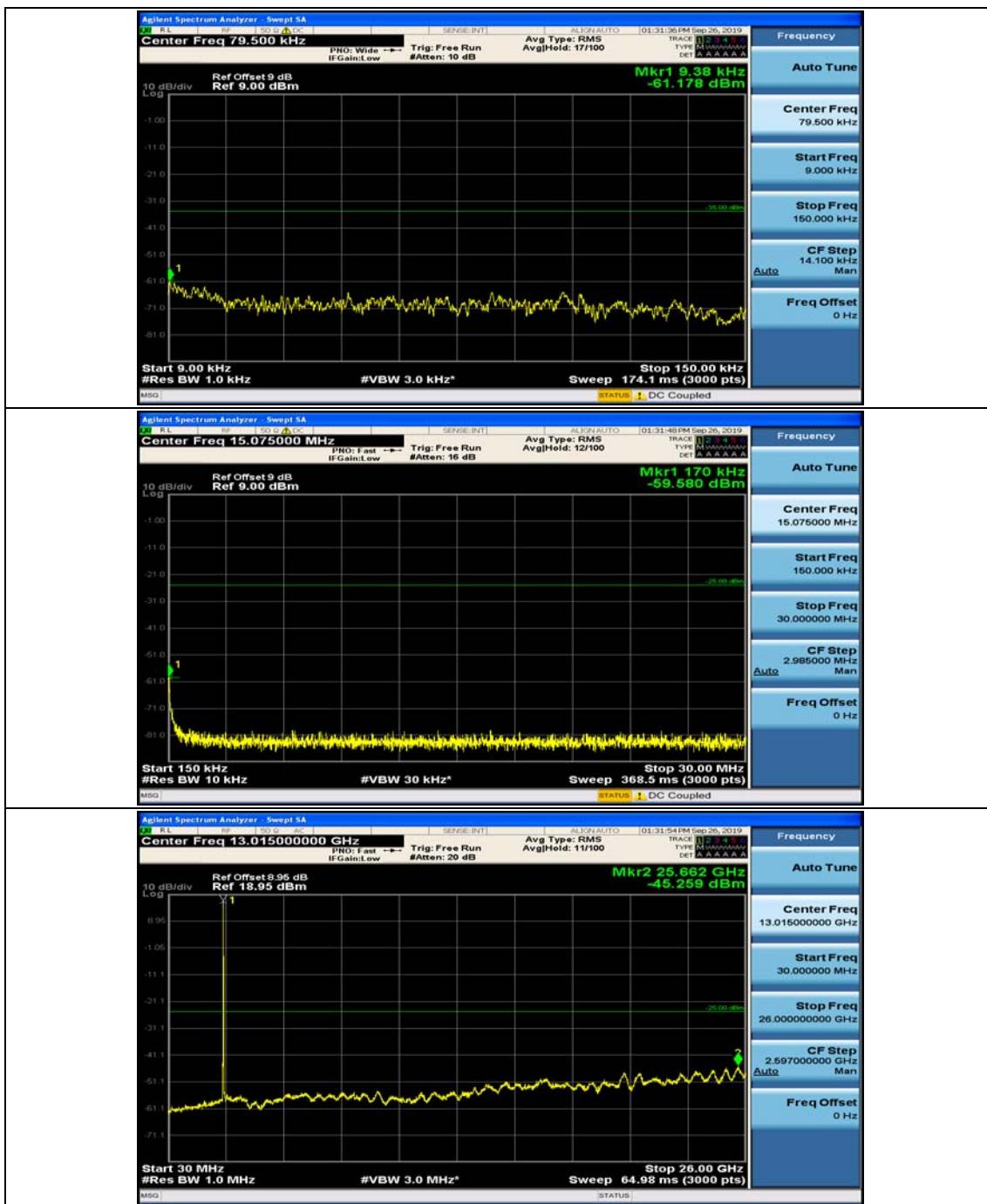


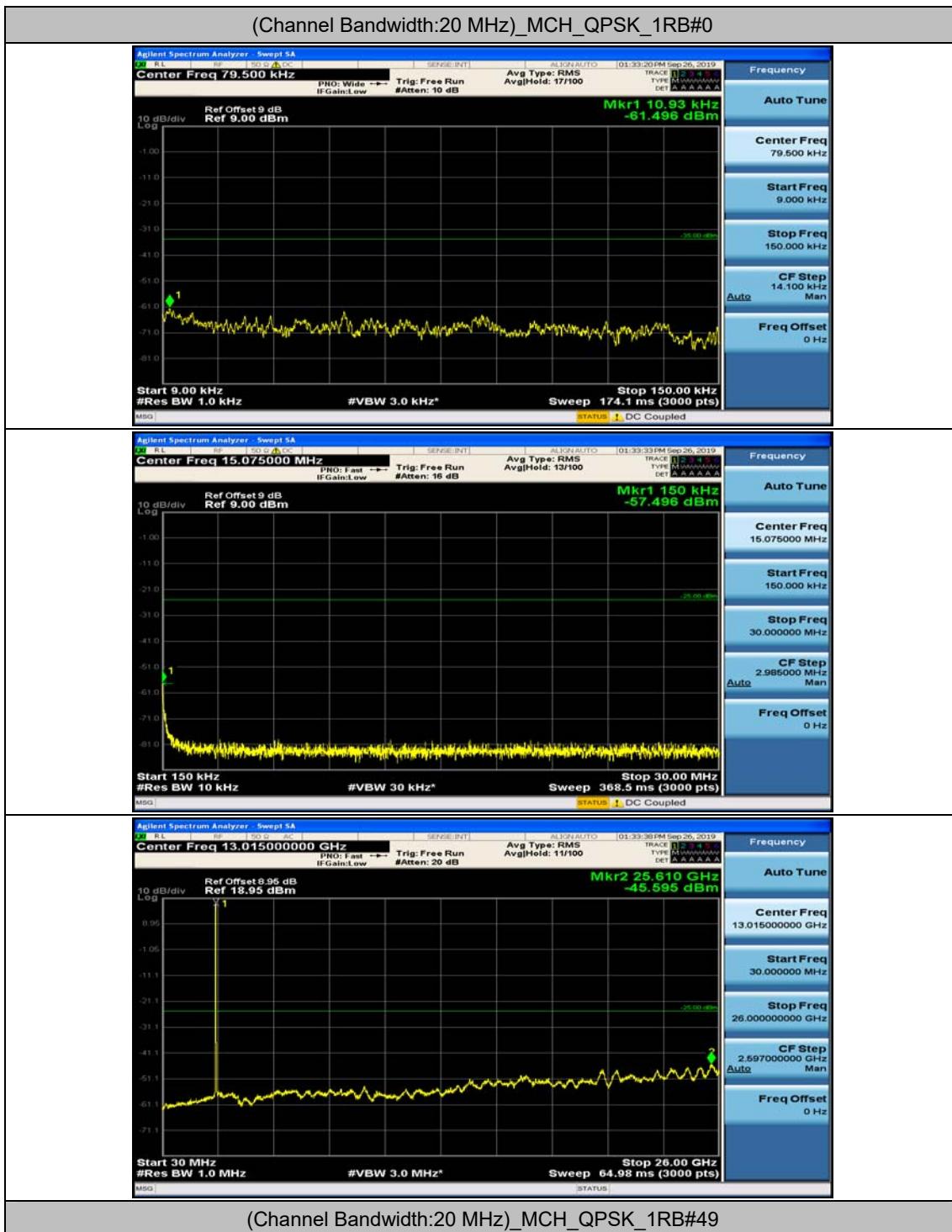


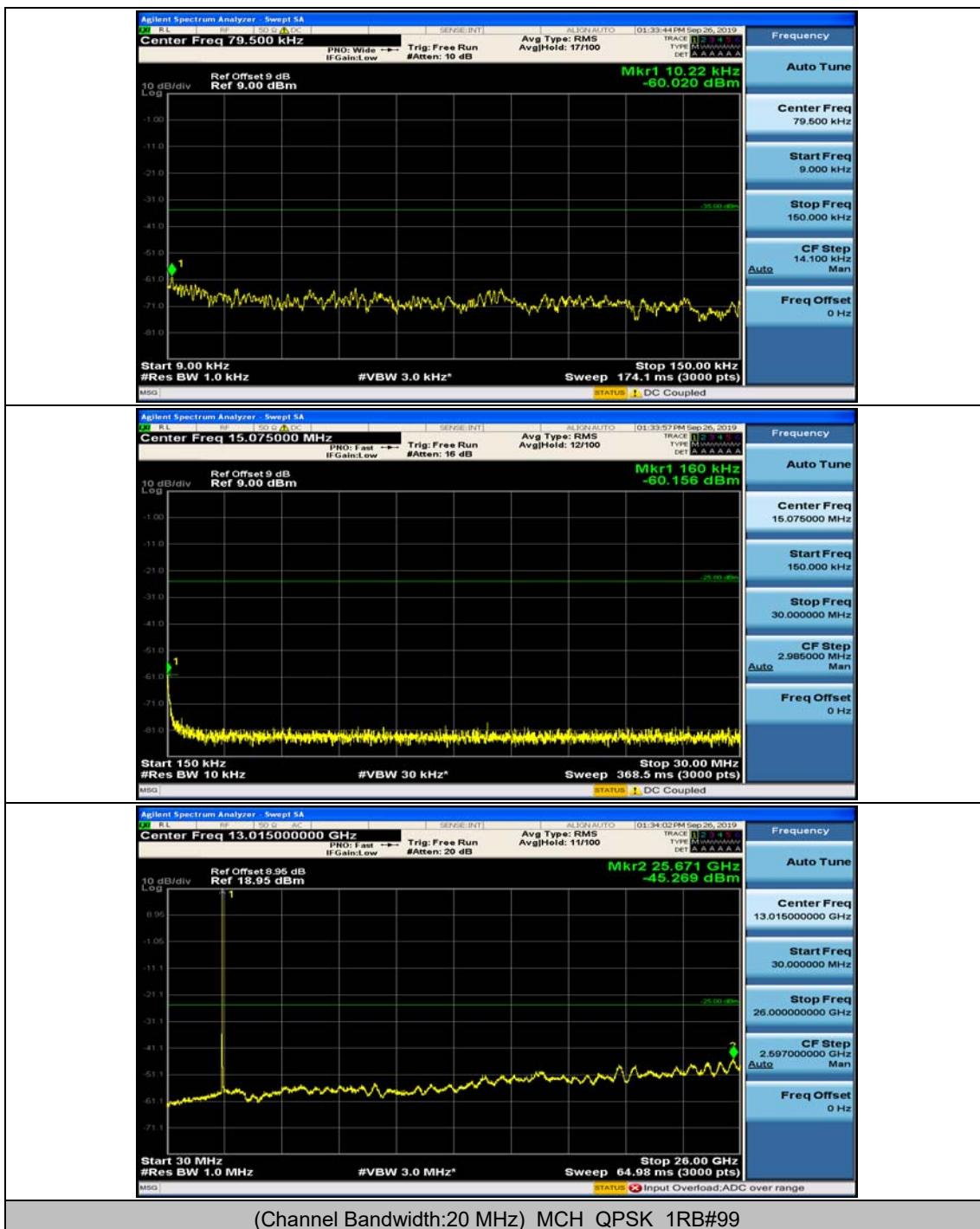
Channel Bandwidth: 20 MHz

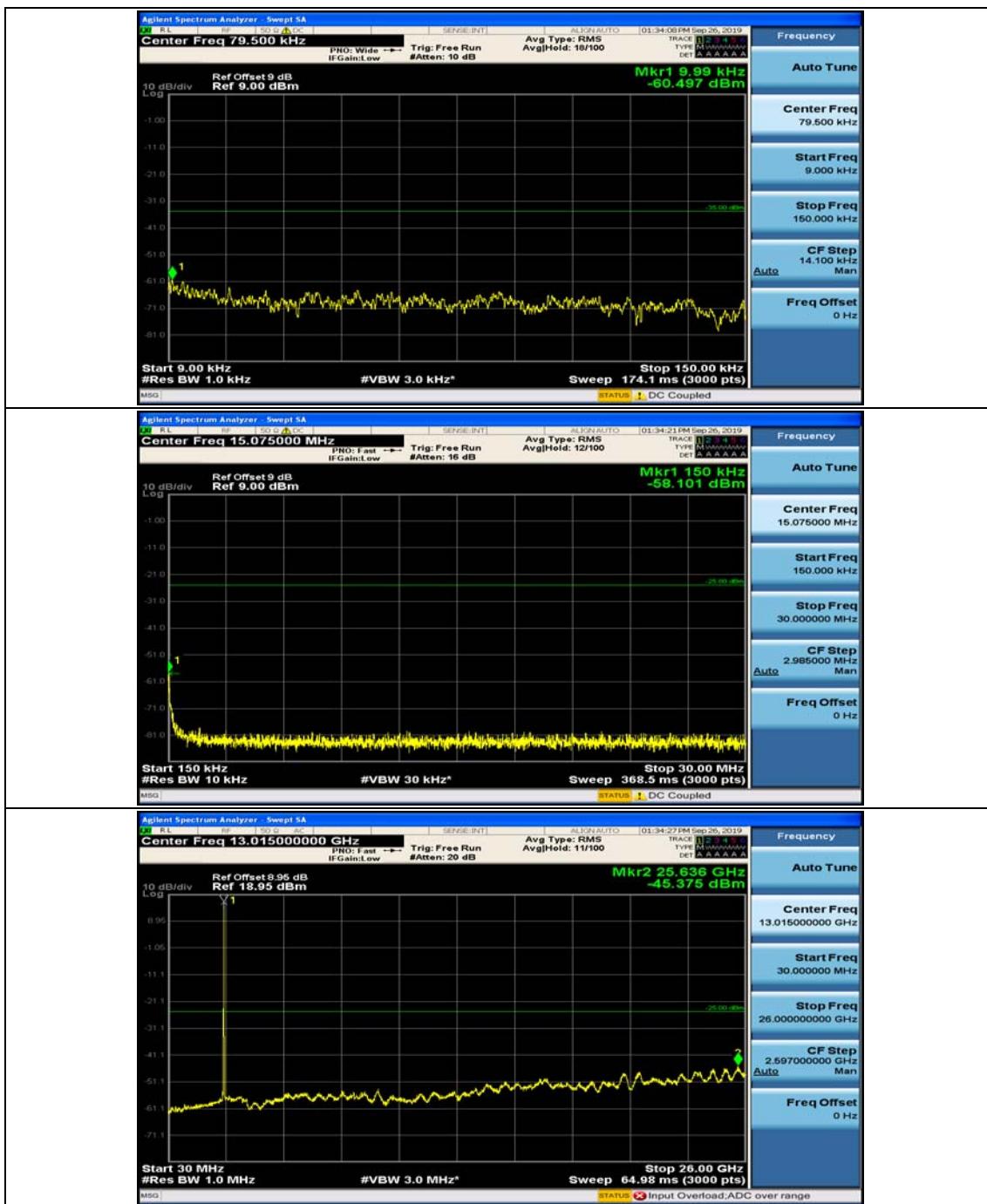


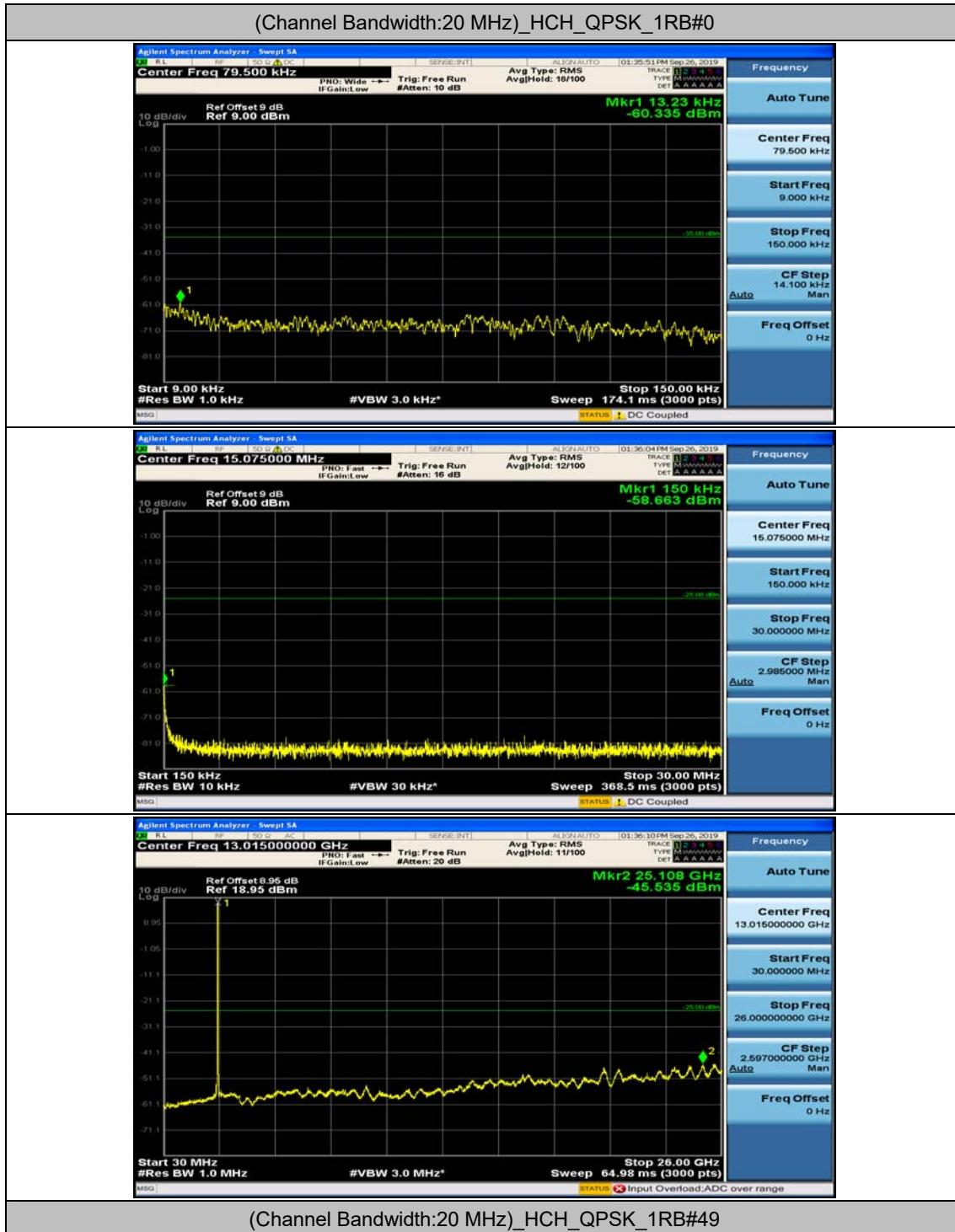


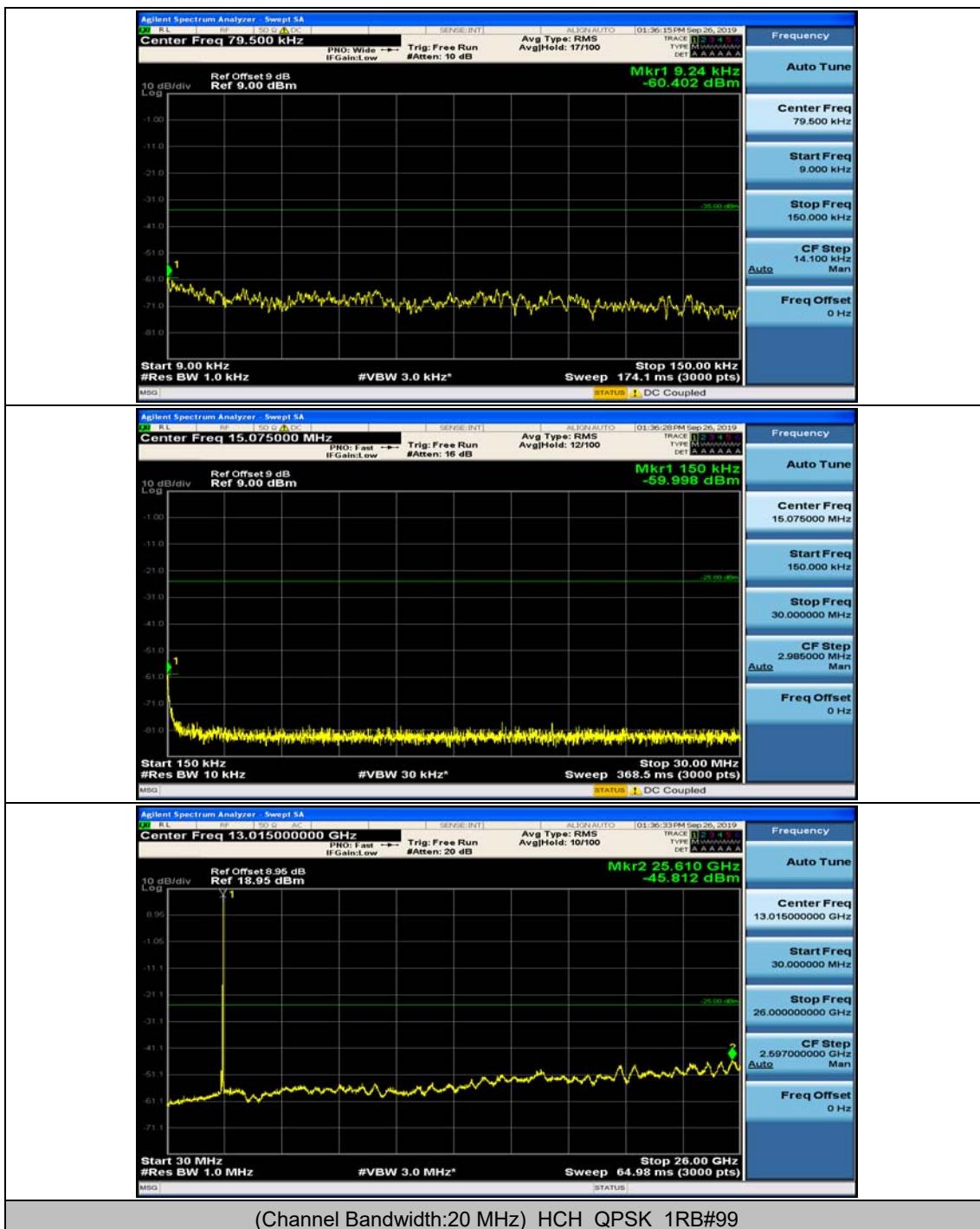


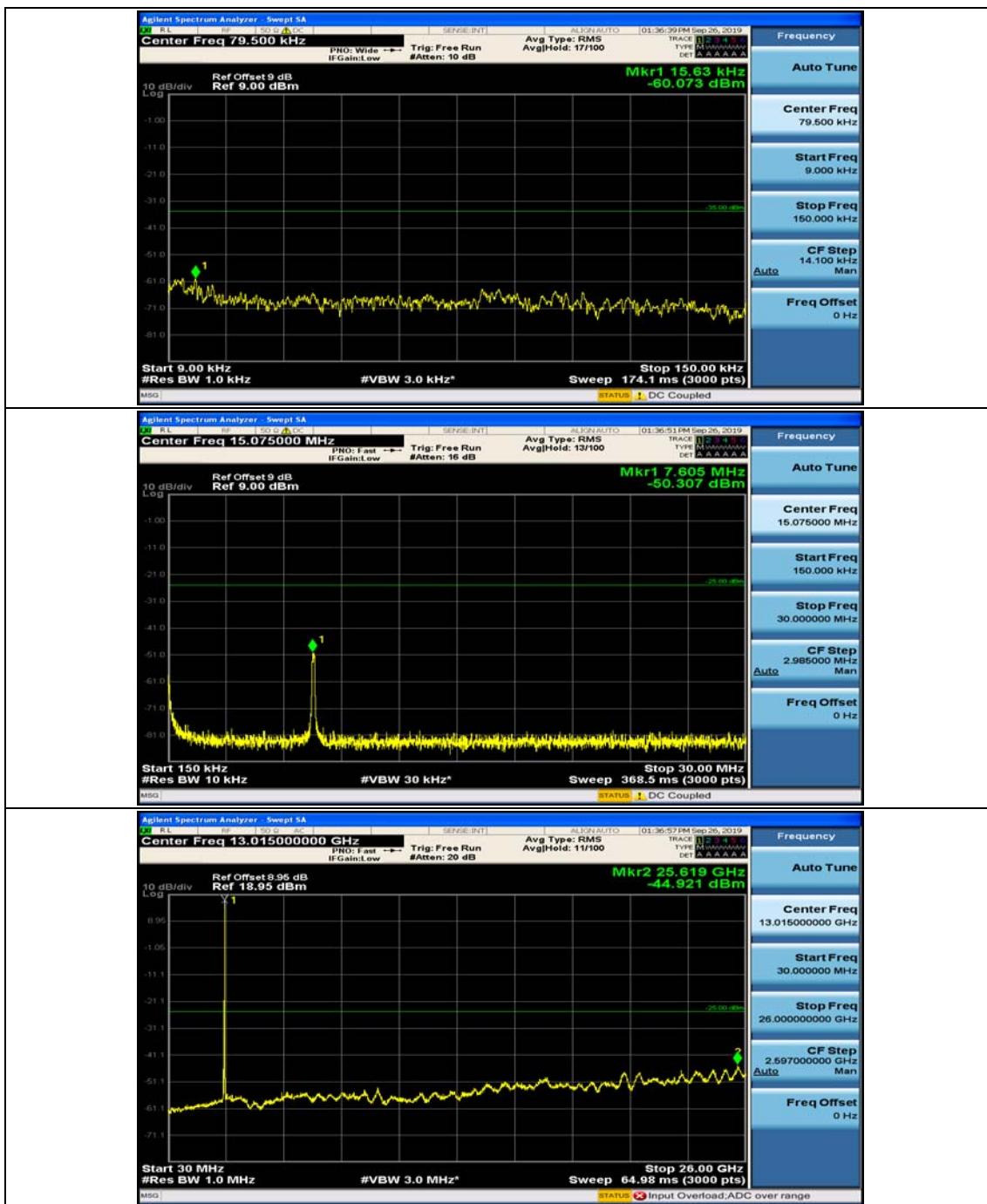


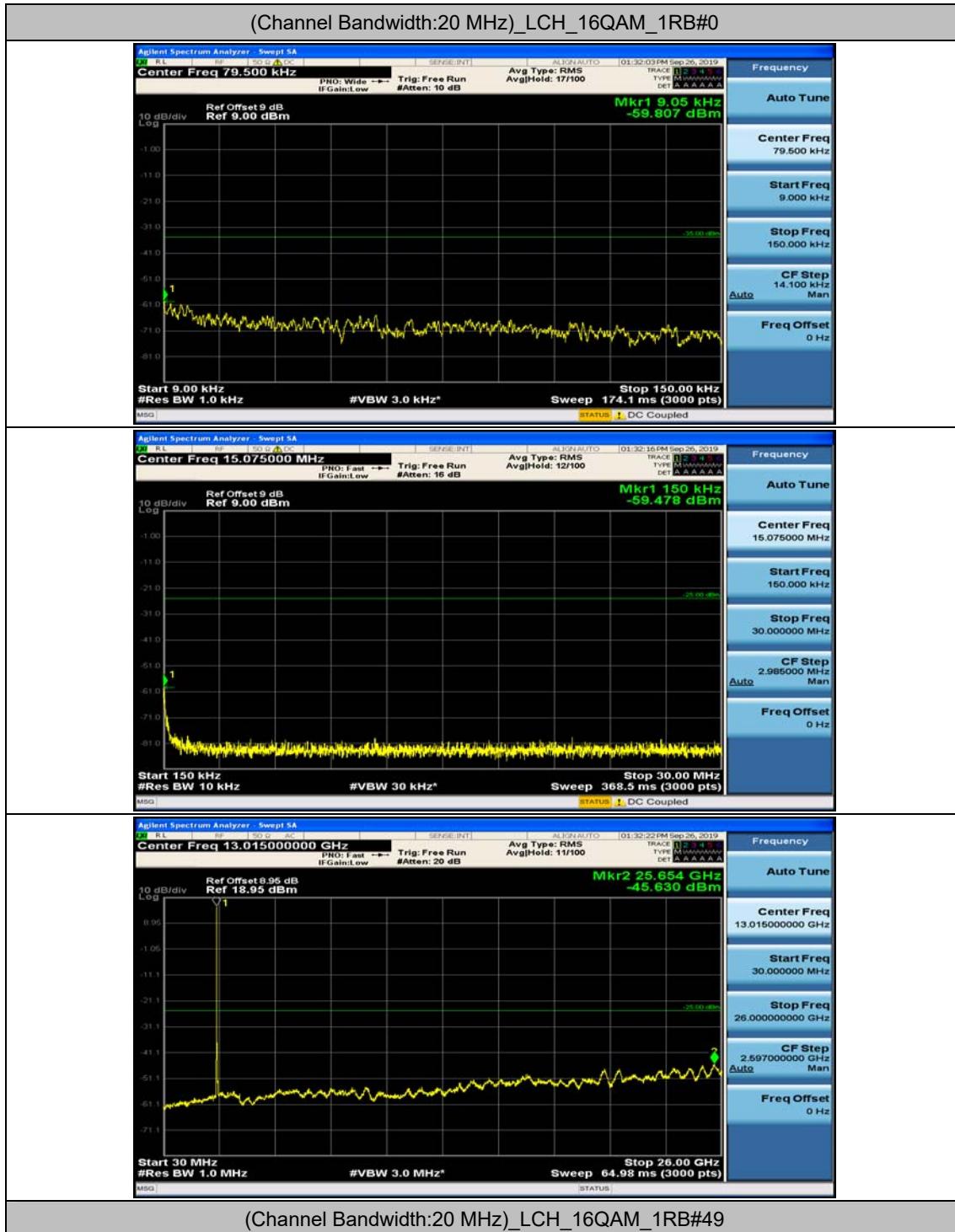


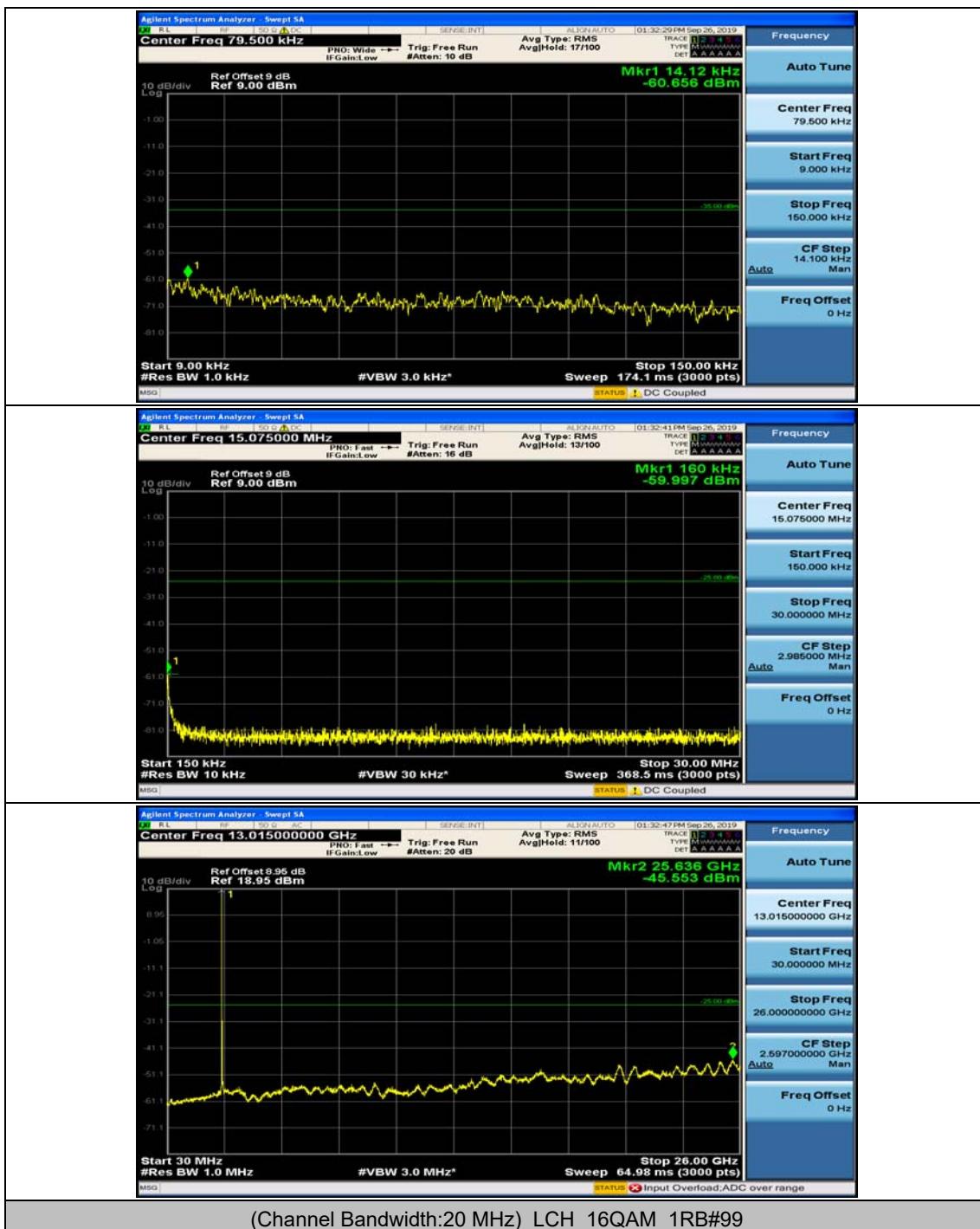


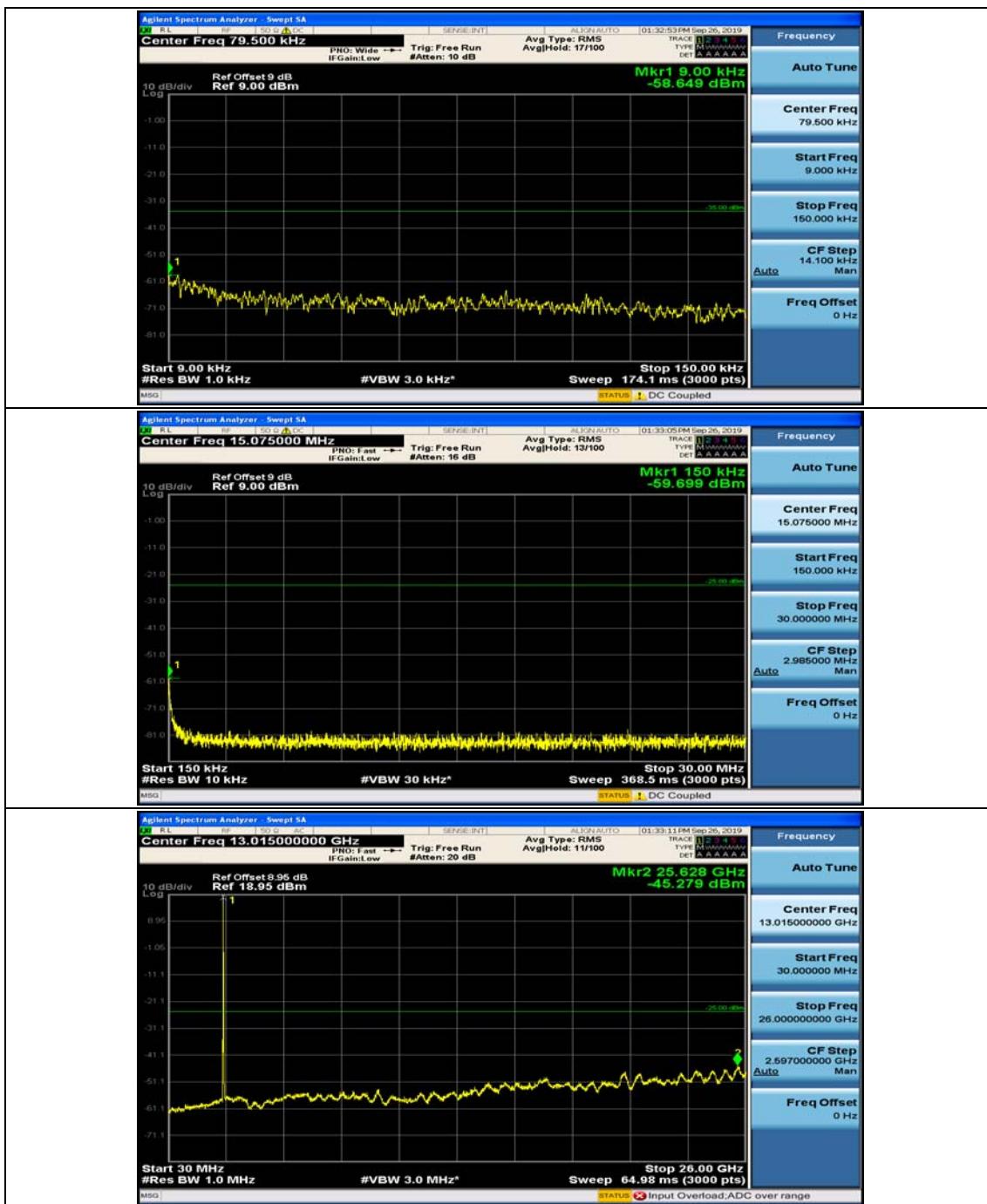


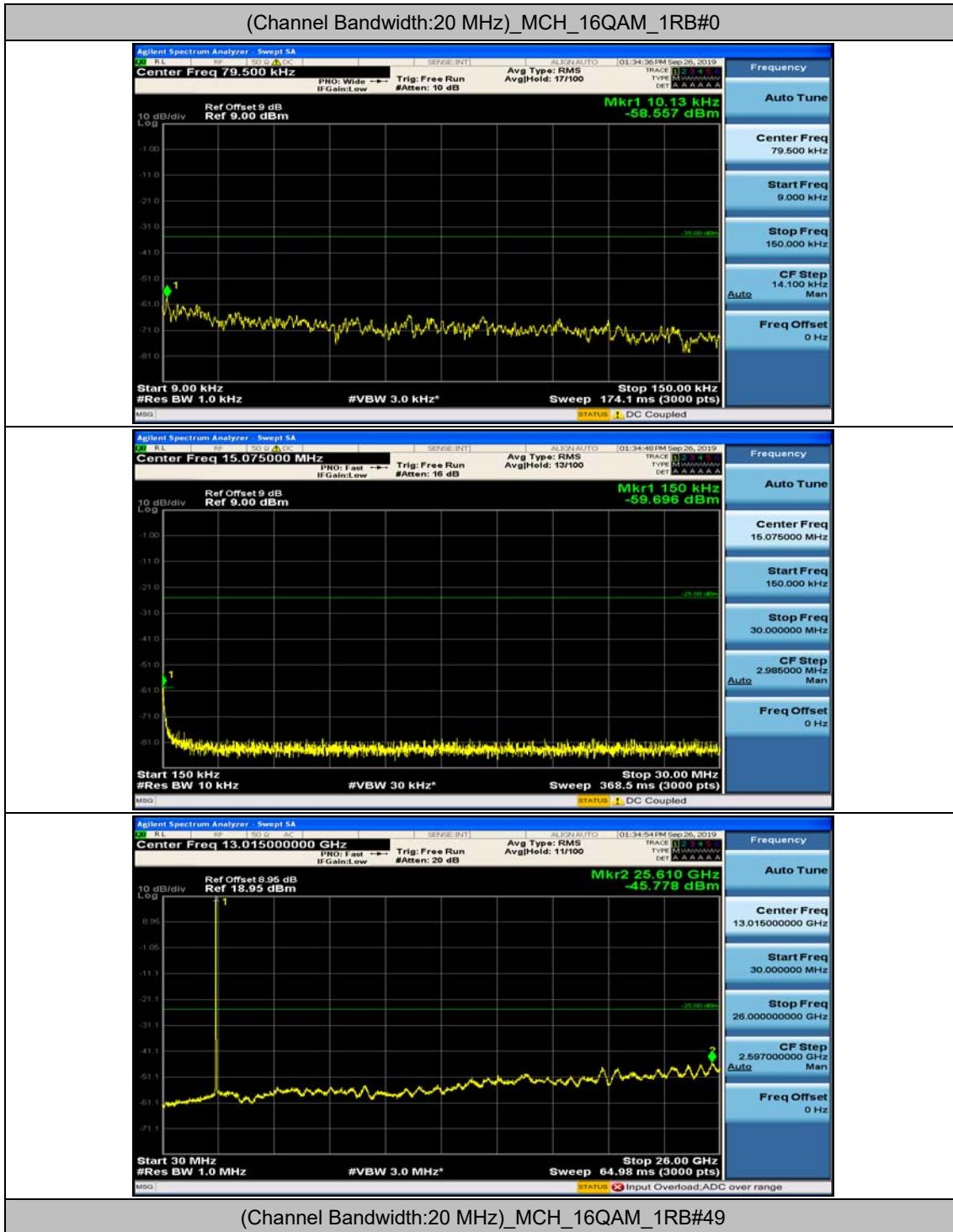


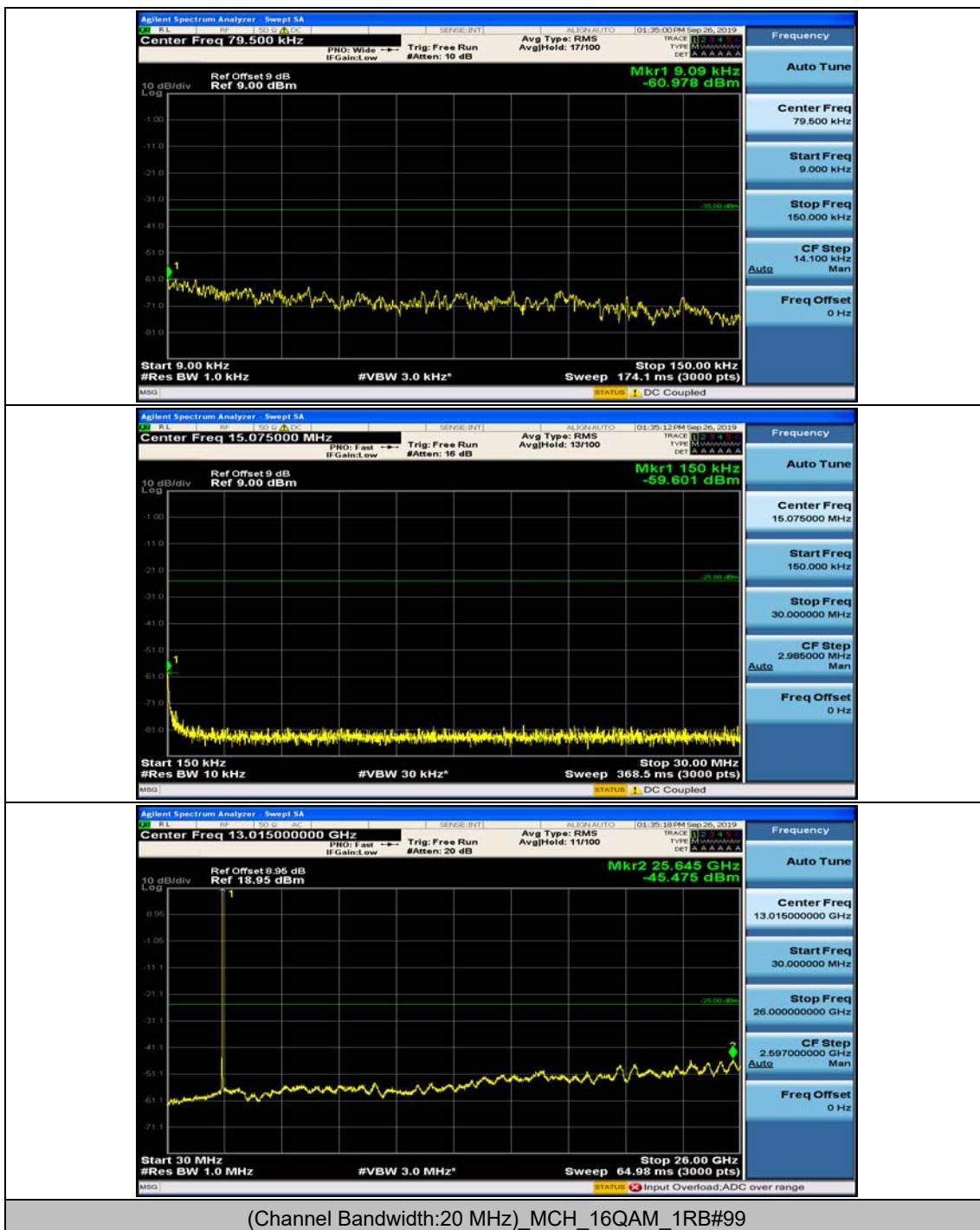


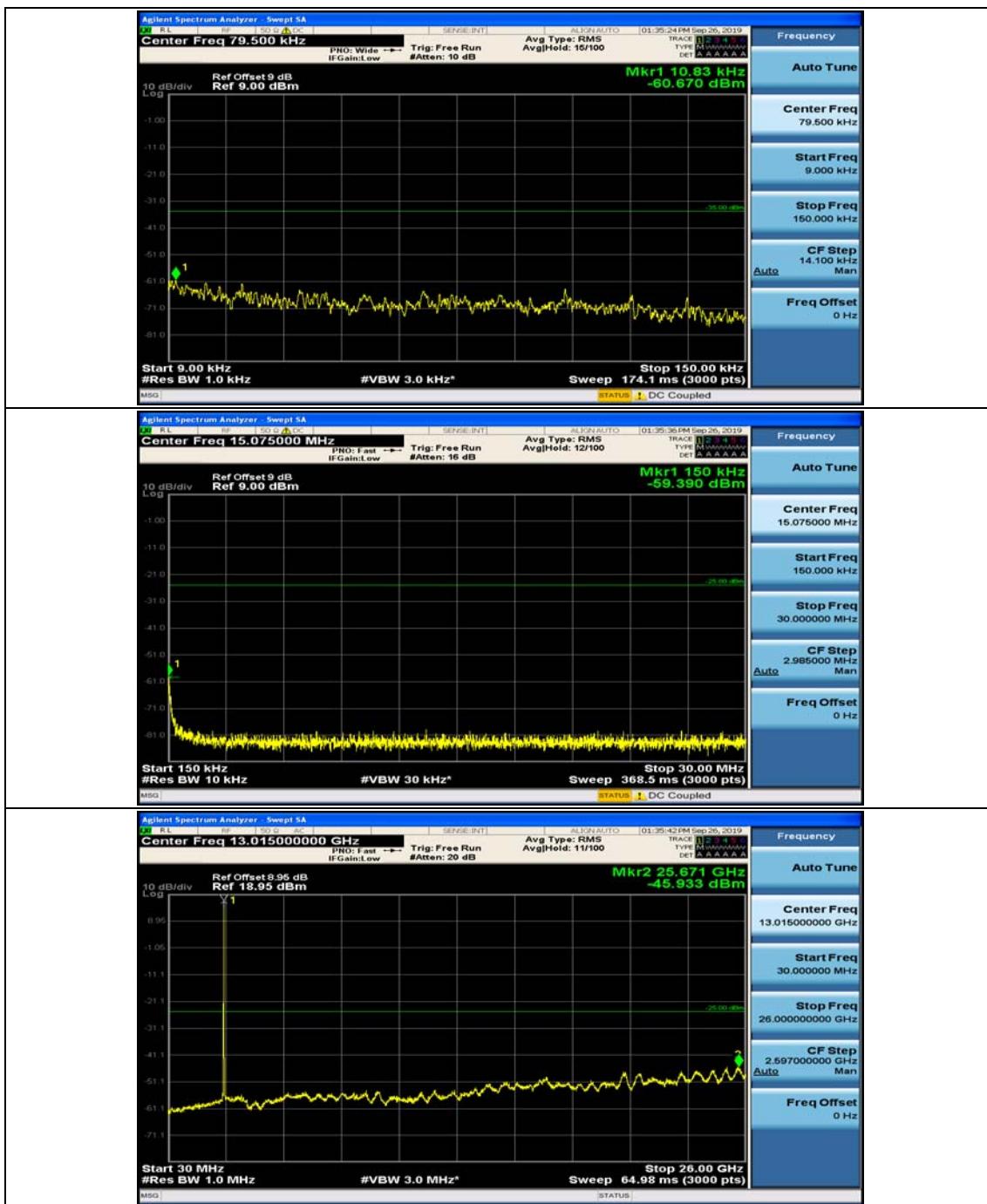


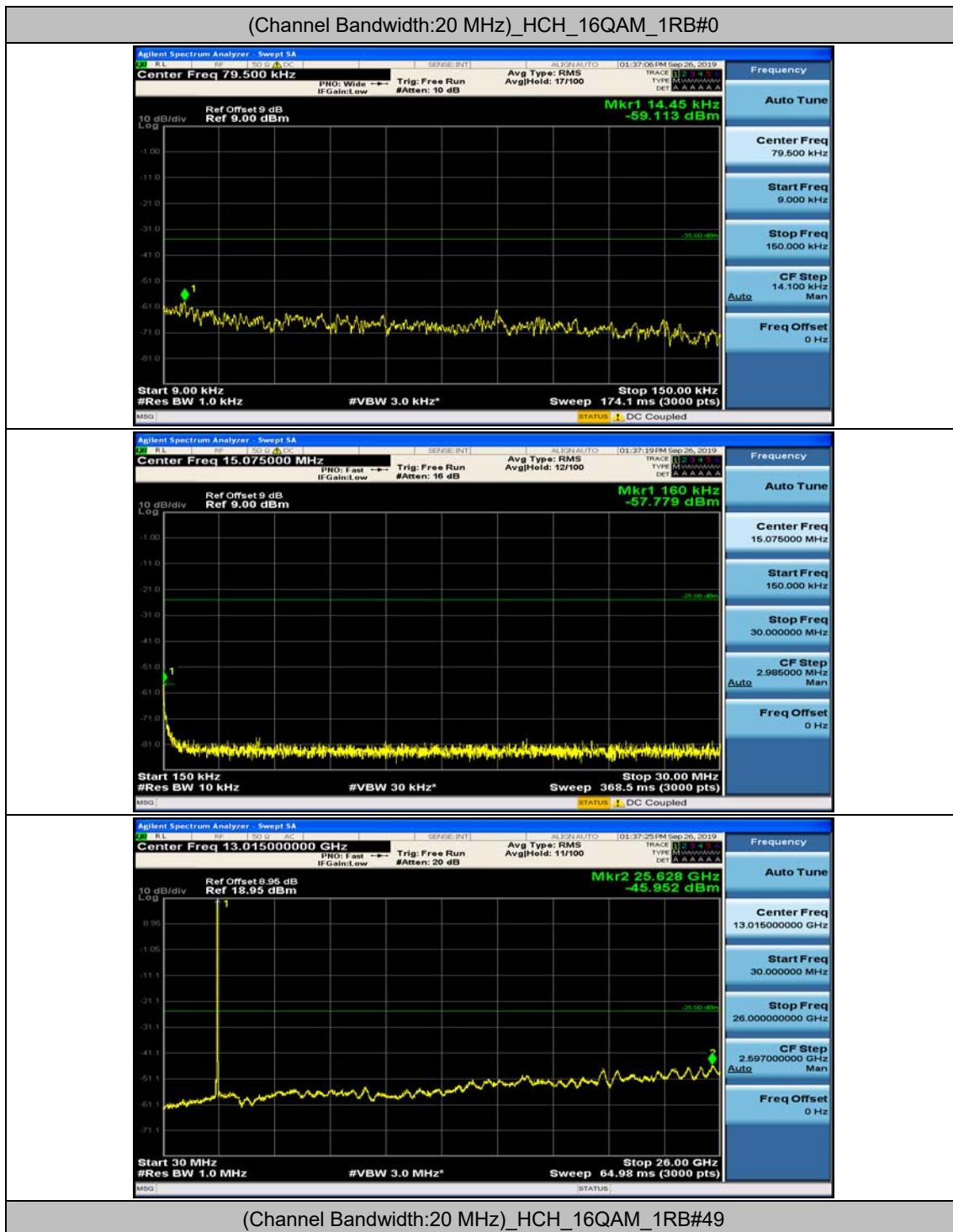


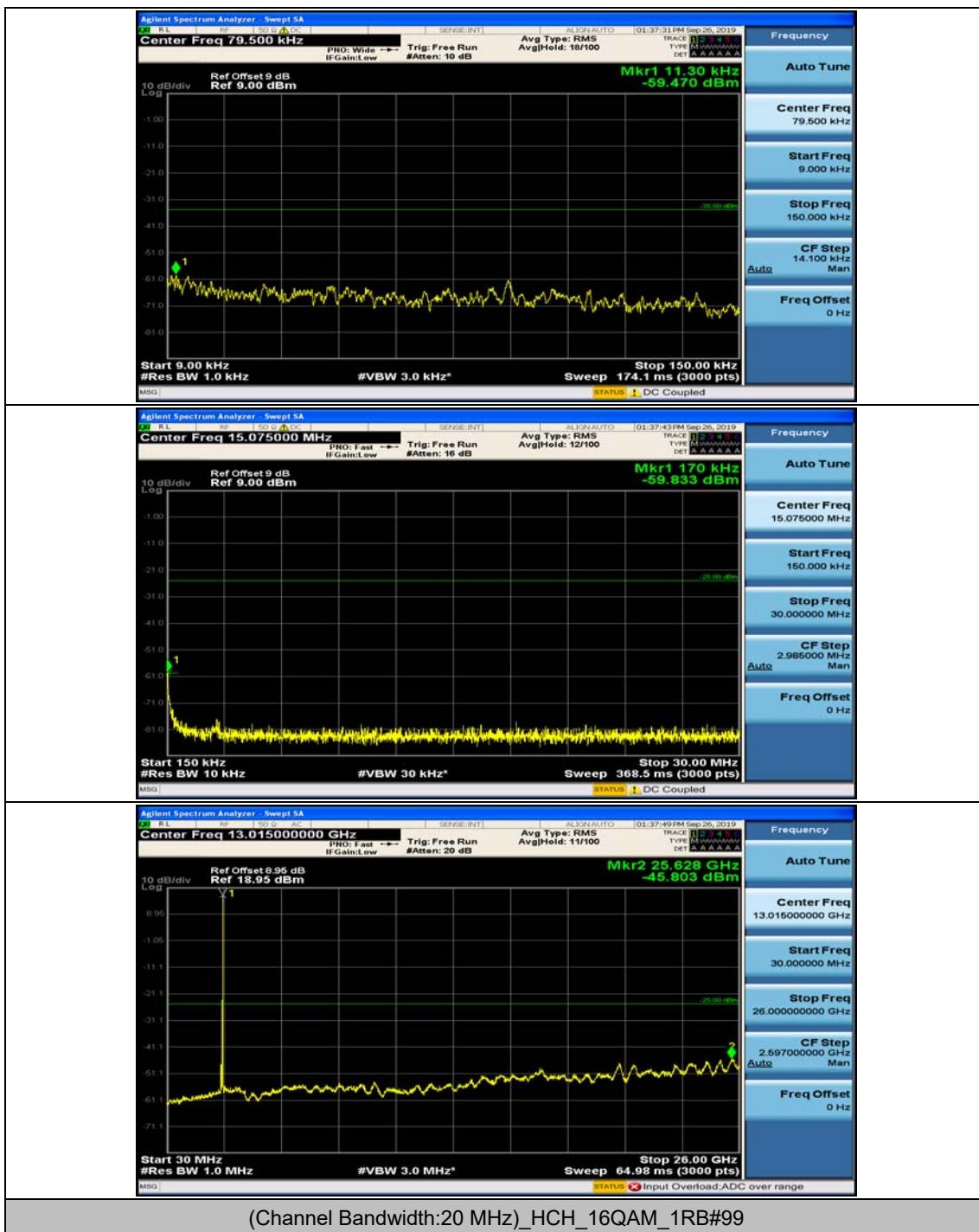


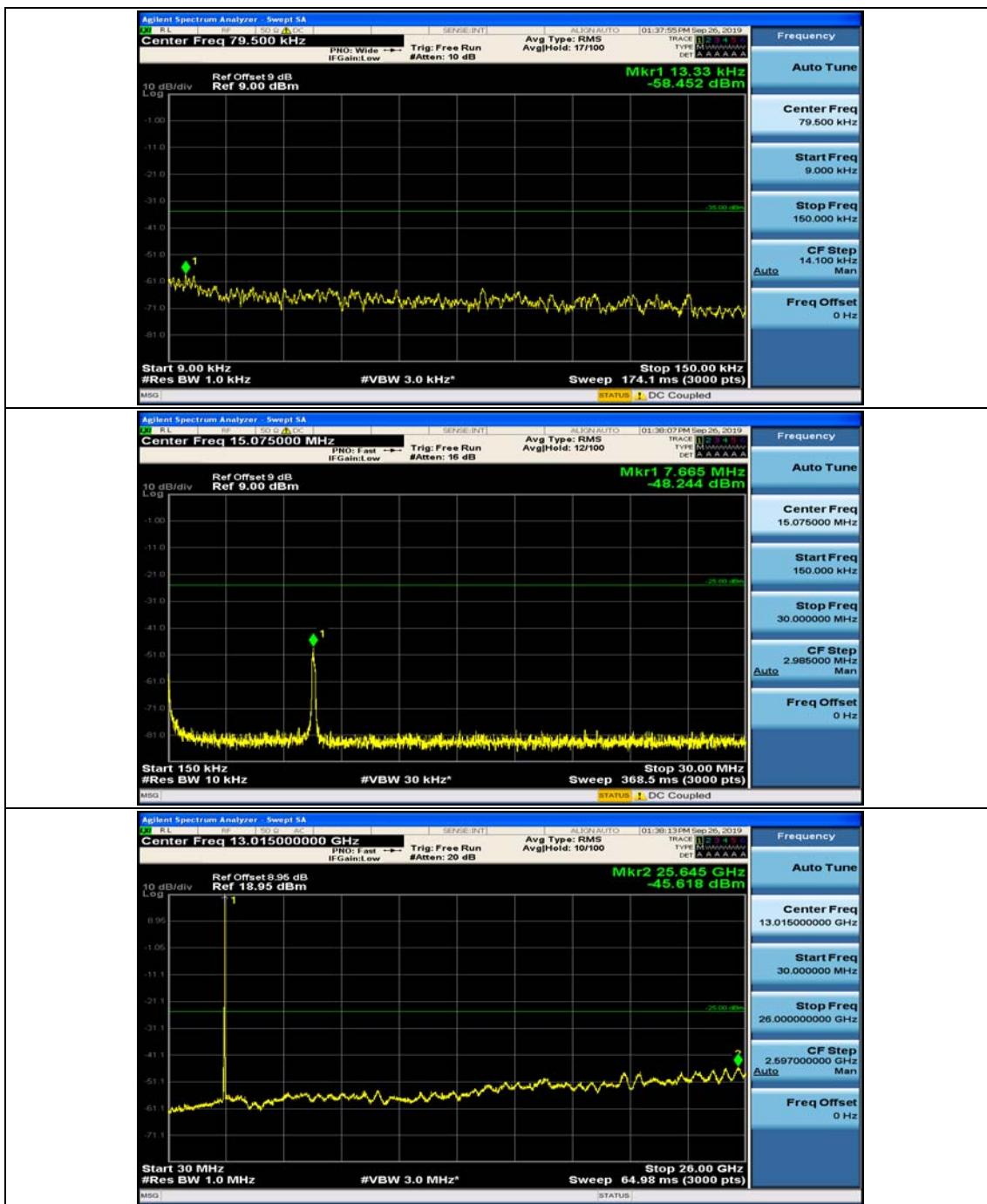












Appendix F: Frequency Stability

Test Result

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	3.45	0.001379	± 2.5	PASS
		VN	TN	-0.06	-0.000024	± 2.5	PASS
		VH	TN	1.17	0.000468	± 2.5	PASS
	MCH	VL	TN	2.75	0.001085	± 2.5	PASS
		VN	TN	-1.61	-0.000635	± 2.5	PASS
		VH	TN	0.82	0.000323	± 2.5	PASS
	HCH	VL	TN	3.51	0.001367	± 2.5	PASS
		VN	TN	2.72	0.001059	± 2.5	PASS
		VH	TN	-0.05	-0.000019	± 2.5	PASS
16QAM	LCH	VL	TN	0.87	0.000348	± 2.5	PASS
		VN	TN	3.77	0.001506	± 2.5	PASS
		VH	TN	3.53	0.001411	± 2.5	PASS
	MCH	VL	TN	-1.87	-0.000738	± 2.5	PASS
		VN	TN	-0.59	-0.000233	± 2.5	PASS
		VH	TN	1.7	0.000671	± 2.5	PASS
	HCH	VL	TN	0.3	0.000117	± 2.5	PASS
		VN	TN	-1.8	-0.000701	± 2.5	PASS
		VH	TN	3.22	0.001254	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.66	0.001463	± 2.5	PASS
		VN	-20	3.17	0.001267	± 2.5	PASS
		VN	-10	2.15	0.000859	± 2.5	PASS
		VN	0	1.76	0.000703	± 2.5	PASS
		VN	10	-1.01	-0.000404	± 2.5	PASS
		VN	20	1.68	0.000671	± 2.5	PASS
		VN	30	-0.02	-0.000008	± 2.5	PASS
		VN	40	-0.68	-0.000272	± 2.5	PASS
		VN	50	2.12	0.000847	± 2.5	PASS
	MCH	VN	-30	3.49	0.001377	± 2.5	PASS

		VN	-20	2.16	0.000852	± 2.5	PASS
		VN	-10	4.16	0.001641	± 2.5	PASS
		VN	0	-1.94	-0.000765	± 2.5	PASS
		VN	10	3.61	0.001424	± 2.5	PASS
		VN	20	2.89	0.001140	± 2.5	PASS
		VN	30	3.86	0.001523	± 2.5	PASS
		VN	40	2.64	0.001041	± 2.5	PASS
		VN	50	-0.78	-0.000308	± 2.5	PASS
	HCH	VN	-30	2.84	0.001106	± 2.5	PASS
		VN	-20	3.27	0.001274	± 2.5	PASS
		VN	-10	4	0.001558	± 2.5	PASS
		VN	0	2.98	0.001161	± 2.5	PASS
		VN	10	-1.21	-0.000471	± 2.5	PASS
		VN	20	-1.89	-0.000736	± 2.5	PASS
		VN	30	3.08	0.001200	± 2.5	PASS
		VN	40	-0.72	-0.000280	± 2.5	PASS
		VN	50	0.1	0.000039	± 2.5	PASS
16QAM	LCH	VN	-30	1.42	0.000567	± 2.5	PASS
		VN	-20	2.73	0.001091	± 2.5	PASS
		VN	-10	-1.05	-0.000420	± 2.5	PASS
		VN	0	4.7	0.001878	± 2.5	PASS
		VN	10	4.9	0.001958	± 2.5	PASS
		VN	20	1.3	0.000519	± 2.5	PASS
		VN	30	4.73	0.001890	± 2.5	PASS
		VN	40	2.45	0.000979	± 2.5	PASS
		VN	50	0.01	0.000004	± 2.5	PASS
	MCH	VN	-30	4.12	0.001625	± 2.5	PASS
		VN	-20	0.21	0.000083	± 2.5	PASS
		VN	-10	3.23	0.001274	± 2.5	PASS
		VN	0	2.13	0.000840	± 2.5	PASS
		VN	10	3.45	0.001361	± 2.5	PASS
		VN	20	3.45	0.001361	± 2.5	PASS
		VN	30	4.02	0.001586	± 2.5	PASS
		VN	40	1.16	0.000458	± 2.5	PASS
		VN	50	2.58	0.001018	± 2.5	PASS
	HCH	VN	-30	3.84	0.001496	± 2.5	PASS
		VN	-20	2.88	0.001122	± 2.5	PASS
		VN	-10	-1.23	-0.000479	± 2.5	PASS
		VN	0	2.36	0.000919	± 2.5	PASS
		VN	10	3.89	0.001515	± 2.5	PASS
		VN	20	2.99	0.001165	± 2.5	PASS

		VN	30	-0.79	-0.000308	± 2.5	PASS
		VN	40	4	0.001558	± 2.5	PASS
		VN	50	-1.06	-0.000413	± 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	-0.87	-0.000347	± 2.5	PASS
		VN	TN	2.82	0.001126	± 2.5	PASS
		VH	TN	-1.68	-0.000671	± 2.5	PASS
	MCH	VL	TN	4.21	0.001661	± 2.5	PASS
		VN	TN	2.65	0.001045	± 2.5	PASS
		VH	TN	4.83	0.001905	± 2.5	PASS
	HCH	VL	TN	4.62	0.001801	± 2.5	PASS
		VN	TN	4.67	0.001821	± 2.5	PASS
		VH	TN	4.2	0.001637	± 2.5	PASS
16QAM	LCH	VL	TN	-1.15	-0.000459	± 2.5	PASS
		VN	TN	2.86	0.001142	± 2.5	PASS
		VH	TN	2.66	0.001062	± 2.5	PASS
	MCH	VL	TN	-0.43	-0.000170	± 2.5	PASS
		VN	TN	-0.33	-0.000130	± 2.5	PASS
		VH	TN	3.73	0.001471	± 2.5	PASS
	HCH	VL	TN	3.56	0.001388	± 2.5	PASS
		VN	TN	0.38	0.000148	± 2.5	PASS
		VH	TN	-0.1	-0.000039	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	4.35	0.001737	± 2.5	PASS
		VN	-20	-1.2	-0.000479	± 2.5	PASS
		VN	-10	2.37	0.000946	± 2.5	PASS
		VN	0	0.14	0.000056	± 2.5	PASS
		VN	10	-0.71	-0.000283	± 2.5	PASS
		VN	20	-0.05	-0.000020	± 2.5	PASS
		VN	30	4.11	0.001641	± 2.5	PASS
		VN	40	0.53	0.000212	± 2.5	PASS
		VN	50	2.97	0.001186	± 2.5	PASS
	MCH	VN	-30	-0.64	-0.000252	± 2.5	PASS
		VN	-20	0.8	0.000316	± 2.5	PASS

		VN	-10	3.79	0.001495	± 2.5	PASS
		VN	0	0.21	0.000083	± 2.5	PASS
		VN	10	-1.07	-0.000422	± 2.5	PASS
		VN	20	-0.03	-0.000012	± 2.5	PASS
		VN	30	-1.16	-0.000458	± 2.5	PASS
		VN	40	4.97	0.001961	± 2.5	PASS
		VN	50	3.93	0.001550	± 2.5	PASS
	HCH	VN	-30	-0.12	-0.000047	± 2.5	PASS
		VN	-20	4.73	0.001844	± 2.5	PASS
		VN	-10	4.18	0.001630	± 2.5	PASS
		VN	0	1.7	0.000663	± 2.5	PASS
		VN	10	4.88	0.001903	± 2.5	PASS
		VN	20	-0.18	-0.000070	± 2.5	PASS
		VN	30	-0.5	-0.000195	± 2.5	PASS
		VN	40	0.21	0.000082	± 2.5	PASS
		VN	50	2.3	0.000897	± 2.5	PASS
	LCH	VN	-30	-0.22	-0.000088	± 2.5	PASS
		VN	-20	0.93	0.000371	± 2.5	PASS
		VN	-10	-1.71	-0.000683	± 2.5	PASS
		VN	0	4.31	0.001721	± 2.5	PASS
		VN	10	1.3	0.000519	± 2.5	PASS
		VN	20	-0.68	-0.000271	± 2.5	PASS
		VN	30	0.06	0.000024	± 2.5	PASS
		VN	40	1.94	0.000774	± 2.5	PASS
		VN	50	-0.64	-0.000255	± 2.5	PASS
	MCH	VN	-30	3.52	0.001389	± 2.5	PASS
		VN	-20	4.53	0.001787	± 2.5	PASS
		VN	-10	2.66	0.001049	± 2.5	PASS
		VN	0	-1.45	-0.000572	± 2.5	PASS
		VN	10	2.17	0.000856	± 2.5	PASS
		VN	20	4.26	0.001680	± 2.5	PASS
		VN	30	4.15	0.001637	± 2.5	PASS
		VN	40	-0.29	-0.000114	± 2.5	PASS
		VN	50	1.23	0.000485	± 2.5	PASS
	HCH	VN	-30	-0.23	-0.000090	± 2.5	PASS
		VN	-20	0.64	0.000250	± 2.5	PASS
		VN	-10	2.98	0.001162	± 2.5	PASS
		VN	0	0.17	0.000066	± 2.5	PASS
		VN	10	-0.03	-0.000012	± 2.5	PASS
		VN	20	2.78	0.001084	± 2.5	PASS
		VN	30	4.53	0.001766	± 2.5	PASS

		VN	40	1.19	0.000464	± 2.5	PASS
		VN	50	2.57	0.001002	± 2.5	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.8	-0.000718	± 2.5	PASS
		VN	TN	0.61	0.000243	± 2.5	PASS
		VH	TN	4.14	0.001651	± 2.5	PASS
	MCH	VL	TN	1.36	0.000536	± 2.5	PASS
		VN	TN	1.49	0.000588	± 2.5	PASS
		VH	TN	4.76	0.001878	± 2.5	PASS
	HCH	VL	TN	2.22	0.000866	± 2.5	PASS
		VN	TN	0	0.000000	± 2.5	PASS
		VH	TN	-1.99	-0.000777	± 2.5	PASS
16QAM	LCH	VL	TN	1.55	0.000618	± 2.5	PASS
		VN	TN	1.44	0.000574	± 2.5	PASS
		VH	TN	3.82	0.001523	± 2.5	PASS
	MCH	VL	TN	4.55	0.001795	± 2.5	PASS
		VN	TN	0.84	0.000331	± 2.5	PASS
		VH	TN	-0.39	-0.000154	± 2.5	PASS
	HCH	VL	TN	-0.61	-0.000238	± 2.5	PASS
		VN	TN	-0.19	-0.000074	± 2.5	PASS
		VH	TN	2.55	0.000995	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.74	0.000295	± 2.5	PASS
		VN	-20	-0.67	-0.000267	± 2.5	PASS
		VN	-10	0.15	0.000060	± 2.5	PASS
		VN	0	-1.98	-0.000790	± 2.5	PASS
		VN	10	0.09	0.000036	± 2.5	PASS
		VN	20	-1.04	-0.000415	± 2.5	PASS
		VN	30	1.76	0.000702	± 2.5	PASS
		VN	40	-0.56	-0.000223	± 2.5	PASS
		VN	50	-1.05	-0.000419	± 2.5	PASS
	MCH	VN	-30	0.89	0.000351	± 2.5	PASS
		VN	-20	-1.77	-0.000698	± 2.5	PASS
		VN	-10	-0.58	-0.000229	± 2.5	PASS

		VN	0	2.7	0.001065	± 2.5	PASS
		VN	10	0	0.000000	± 2.5	PASS
		VN	20	0.54	0.000213	± 2.5	PASS
		VN	30	2.64	0.001041	± 2.5	PASS
		VN	40	-0.37	-0.000146	± 2.5	PASS
		VN	50	1.09	0.000430	± 2.5	PASS
		VN	-30	-0.28	-0.000109	± 2.5	PASS
		VN	-20	3.41	0.001331	± 2.5	PASS
		VN	-10	-0.59	-0.000230	± 2.5	PASS
		VN	0	0.86	0.000336	± 2.5	PASS
		VN	10	-0.71	-0.000277	± 2.5	PASS
		VN	20	4.55	0.001776	± 2.5	PASS
		VN	30	-0.25	-0.000098	± 2.5	PASS
		VN	40	1.95	0.000761	± 2.5	PASS
		VN	50	4.97	0.001940	± 2.5	PASS
	LCH	VN	-30	-1.9	-0.000758	± 2.5	PASS
		VN	-20	3.71	0.001480	± 2.5	PASS
		VN	-10	0.06	0.000024	± 2.5	PASS
		VN	0	4.65	0.001854	± 2.5	PASS
		VN	10	3.83	0.001527	± 2.5	PASS
		VN	20	1.22	0.000487	± 2.5	PASS
		VN	30	4.17	0.001663	± 2.5	PASS
		VN	40	-0.79	-0.000315	± 2.5	PASS
		VN	50	-0.66	-0.000263	± 2.5	PASS
	MCH	VN	-30	2.67	0.001053	± 2.5	PASS
		VN	-20	3.86	0.001523	± 2.5	PASS
		VN	-10	-1.12	-0.000442	± 2.5	PASS
		VN	0	4.13	0.001629	± 2.5	PASS
		VN	10	1.57	0.000619	± 2.5	PASS
		VN	20	0.86	0.000339	± 2.5	PASS
		VN	30	4	0.001578	± 2.5	PASS
		VN	40	-0.55	-0.000217	± 2.5	PASS
		VN	50	4.12	0.001625	± 2.5	PASS
	HCH	VN	-30	3.74	0.001460	± 2.5	PASS
		VN	-20	2.56	0.000999	± 2.5	PASS
		VN	-10	0.44	0.000172	± 2.5	PASS
		VN	0	-1.88	-0.000734	± 2.5	PASS
		VN	10	-1.15	-0.000449	± 2.5	PASS
		VN	20	0.08	0.000031	± 2.5	PASS
		VN	30	-0.76	-0.000297	± 2.5	PASS
		VN	40	-1.87	-0.000730	± 2.5	PASS

		VN	50	4	0.001561	± 2.5	PASS
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Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.38	-0.000550	± 2.5	PASS
		VN	TN	3.64	0.001450	± 2.5	PASS
		VH	TN	1.42	0.000566	± 2.5	PASS
	MCH	VL	TN	1.17	0.000462	± 2.5	PASS
		VN	TN	3.05	0.001203	± 2.5	PASS
		VH	TN	-1.72	-0.000679	± 2.5	PASS
	HCH	VL	TN	4.75	0.001855	± 2.5	PASS
		VN	TN	-0.03	-0.000012	± 2.5	PASS
		VH	TN	0.47	0.000184	± 2.5	PASS
16QAM	LCH	VL	TN	4.14	0.001649	± 2.5	PASS
		VN	TN	4.58	0.001825	± 2.5	PASS
		VH	TN	4.1	0.001633	± 2.5	PASS
	MCH	VL	TN	2.36	0.000931	± 2.5	PASS
		VN	TN	-1.68	-0.000663	± 2.5	PASS
		VH	TN	4.55	0.001795	± 2.5	PASS
	HCH	VL	TN	-1.24	-0.000484	± 2.5	PASS
		VN	TN	-0.98	-0.000383	± 2.5	PASS
		VH	TN	-1.84	-0.000719	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.83	0.000729	± 2.5	PASS
		VN	-20	1.59	0.000633	± 2.5	PASS
		VN	-10	-0.26	-0.000104	± 2.5	PASS
		VN	0	-1.31	-0.000522	± 2.5	PASS
		VN	10	0.45	0.000179	± 2.5	PASS
		VN	20	1.86	0.000741	± 2.5	PASS
		VN	30	3.13	0.001247	± 2.5	PASS
		VN	40	1.71	0.000681	± 2.5	PASS
		VN	50	0.98	0.000390	± 2.5	PASS
	MCH	VN	-30	-1.51	-0.000596	± 2.5	PASS
		VN	-20	4.16	0.001641	± 2.5	PASS
		VN	-10	-0.23	-0.000091	± 2.5	PASS
		VN	0	4.5	0.001775	± 2.5	PASS

		VN	10	-1.24	-0.000489	\pm 2.5	PASS
		VN	20	-1.09	-0.000430	\pm 2.5	PASS
		VN	30	2.97	0.001172	\pm 2.5	PASS
		VN	40	1.96	0.000773	\pm 2.5	PASS
		VN	50	1.65	0.000651	\pm 2.5	PASS
		VN	-30	3.73	0.001457	\pm 2.5	PASS
		VN	-20	1.56	0.000609	\pm 2.5	PASS
		VN	-10	2.21	0.000863	\pm 2.5	PASS
		VN	0	3.98	0.001555	\pm 2.5	PASS
		VN	10	-0.64	-0.000250	\pm 2.5	PASS
	HCH	VN	20	1.84	0.000719	\pm 2.5	PASS
		VN	30	0.6	0.000234	\pm 2.5	PASS
		VN	40	4.36	0.001703	\pm 2.5	PASS
		VN	50	2.36	0.000922	\pm 2.5	PASS
		VN	-30	-0.62	-0.000247	\pm 2.5	PASS
		VN	-20	2.62	0.001044	\pm 2.5	PASS
		VN	-10	-1.67	-0.000665	\pm 2.5	PASS
		VN	0	-0.49	-0.000195	\pm 2.5	PASS
		VN	10	0.85	0.000339	\pm 2.5	PASS
		VN	20	0.16	0.000064	\pm 2.5	PASS
	LCH	VN	30	4.25	0.001693	\pm 2.5	PASS
		VN	40	4.66	0.001857	\pm 2.5	PASS
		VN	50	-0.26	-0.000104	\pm 2.5	PASS
		VN	-30	0.19	0.000075	\pm 2.5	PASS
		VN	-20	2.59	0.001022	\pm 2.5	PASS
		VN	-10	1.37	0.000540	\pm 2.5	PASS
		VN	0	3.06	0.001207	\pm 2.5	PASS
		VN	10	-0.88	-0.000347	\pm 2.5	PASS
		VN	20	4.29	0.001692	\pm 2.5	PASS
		VN	30	3.83	0.001511	\pm 2.5	PASS
	MCH	VN	40	1.16	0.000458	\pm 2.5	PASS
		VN	50	0.67	0.000264	\pm 2.5	PASS
		VN	-30	2.64	0.001031	\pm 2.5	PASS
		VN	-20	1.48	0.000578	\pm 2.5	PASS
		VN	-10	-0.58	-0.000227	\pm 2.5	PASS
		VN	0	-0.19	-0.000074	\pm 2.5	PASS
		VN	10	-0.82	-0.000320	\pm 2.5	PASS
		VN	20	4.26	0.001664	\pm 2.5	PASS
		VN	30	1.27	0.000496	\pm 2.5	PASS
		VN	40	-0.32	-0.000125	\pm 2.5	PASS
	HCH	VN	50	1.68	0.000656	\pm 2.5	PASS