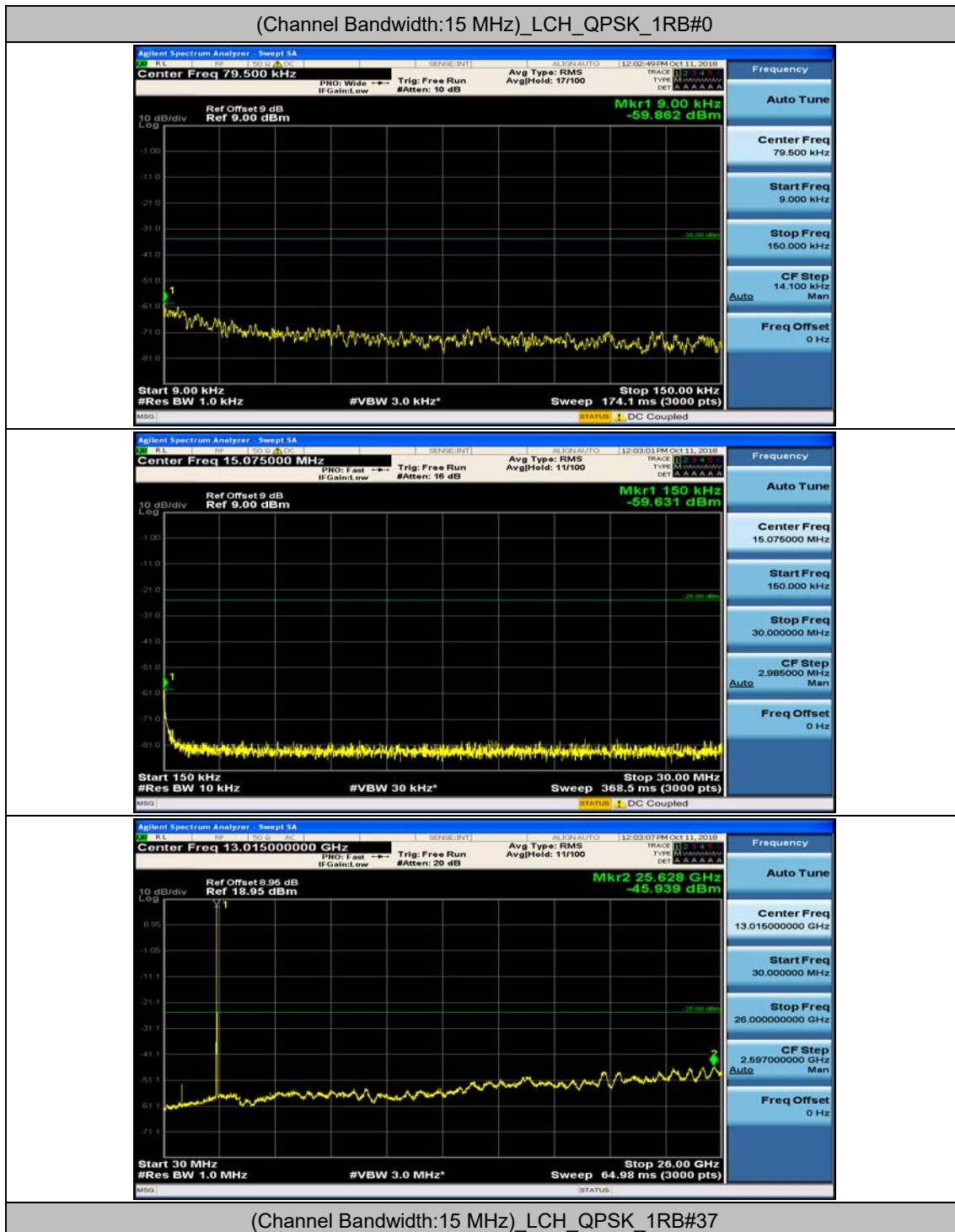
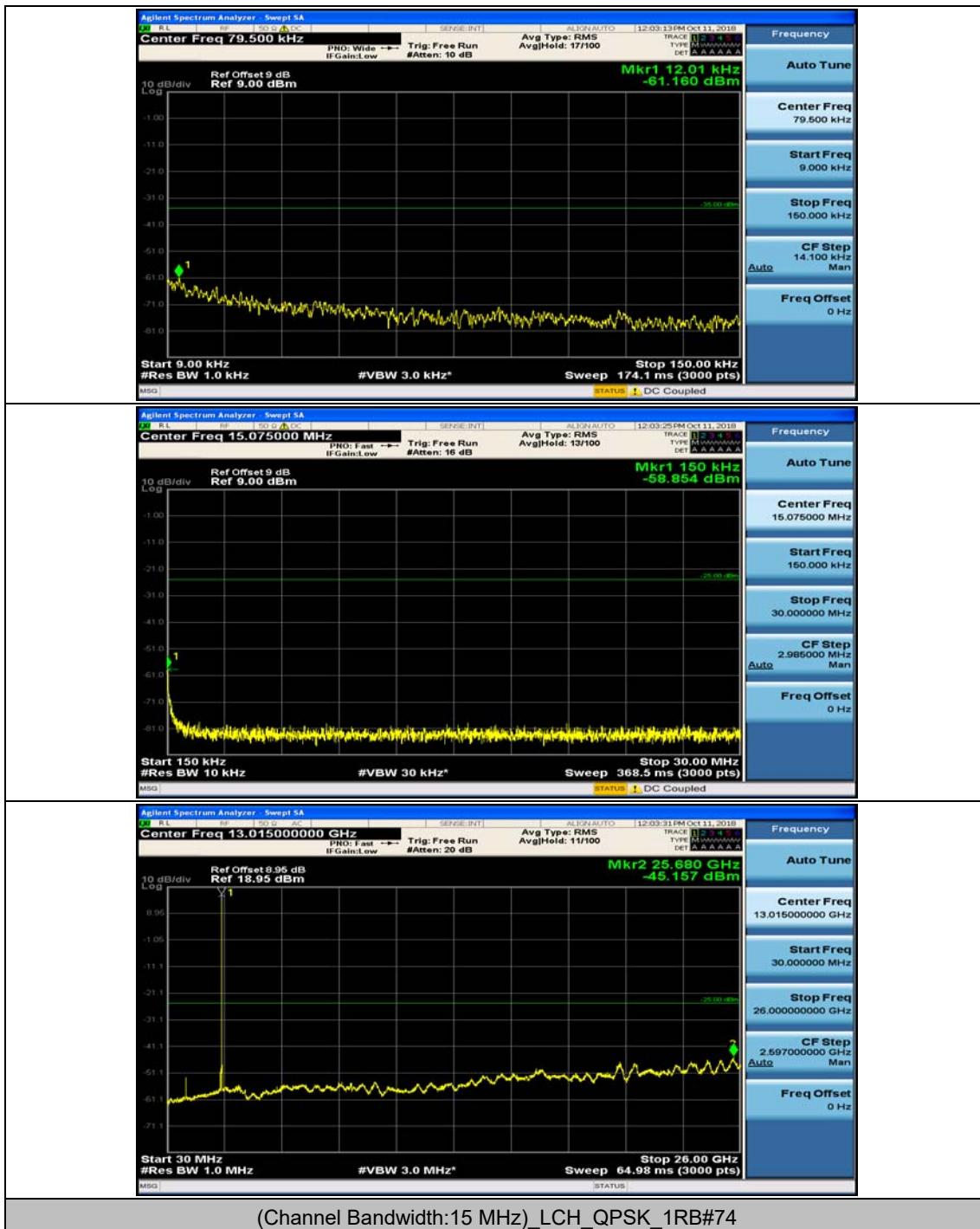
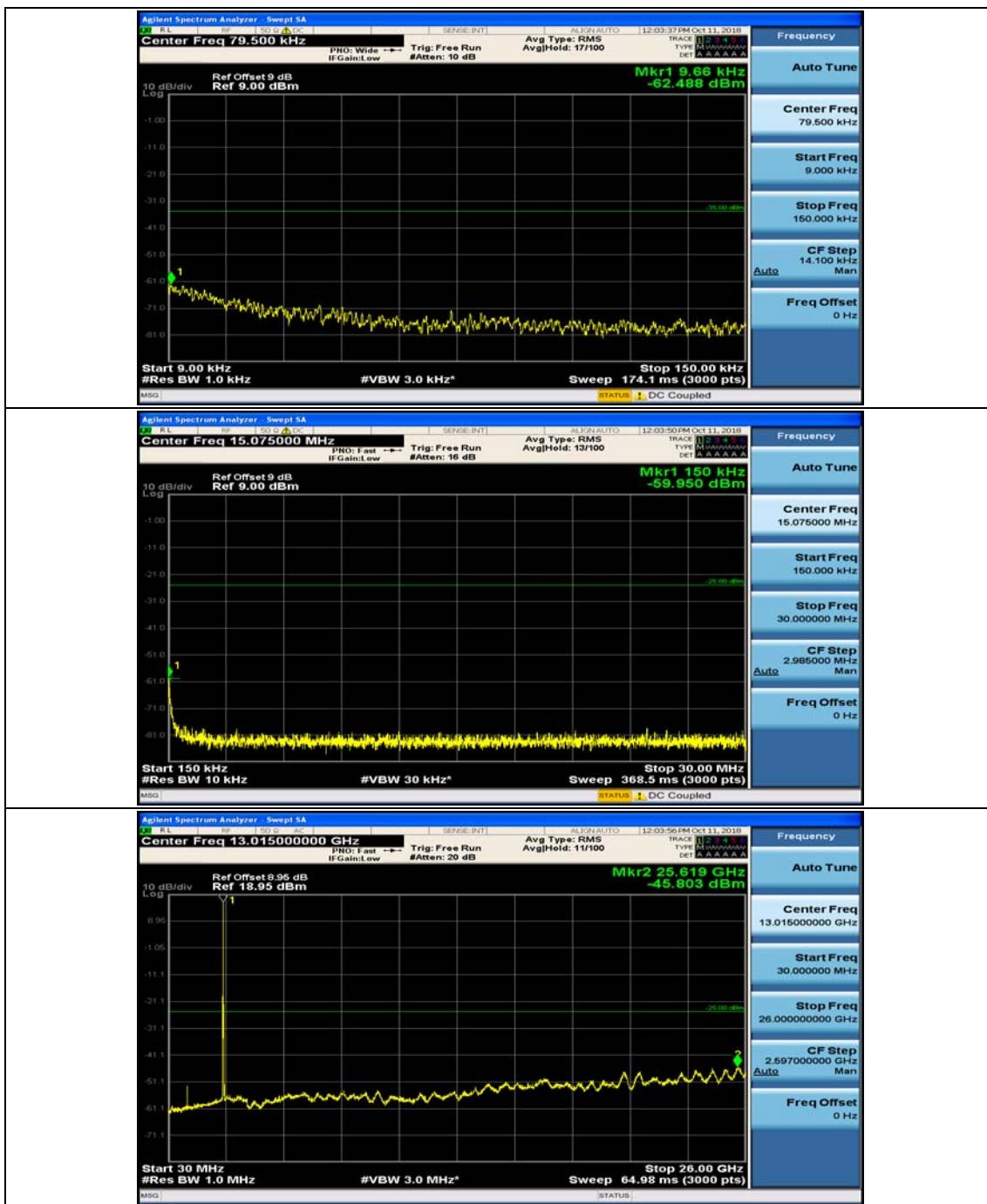
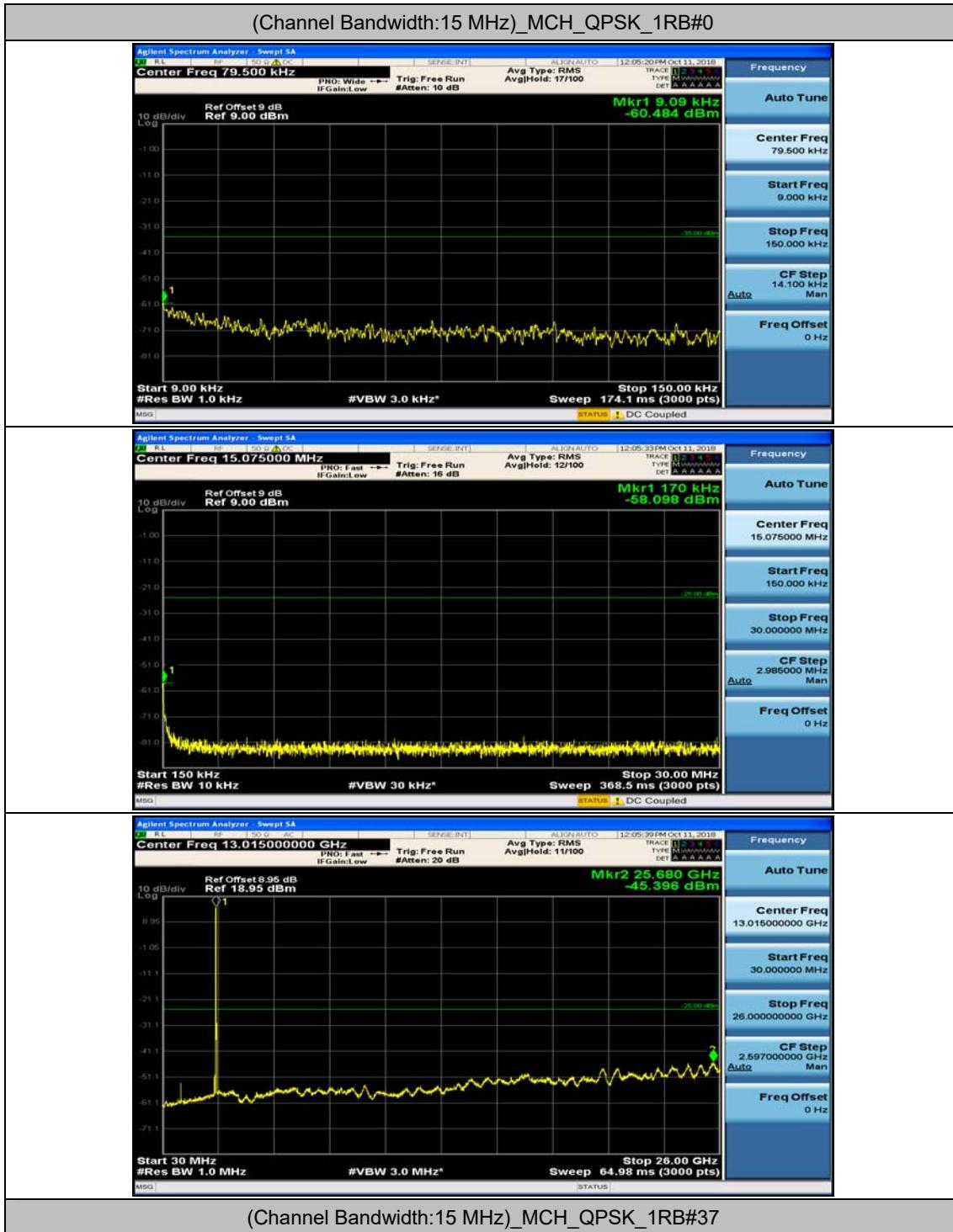


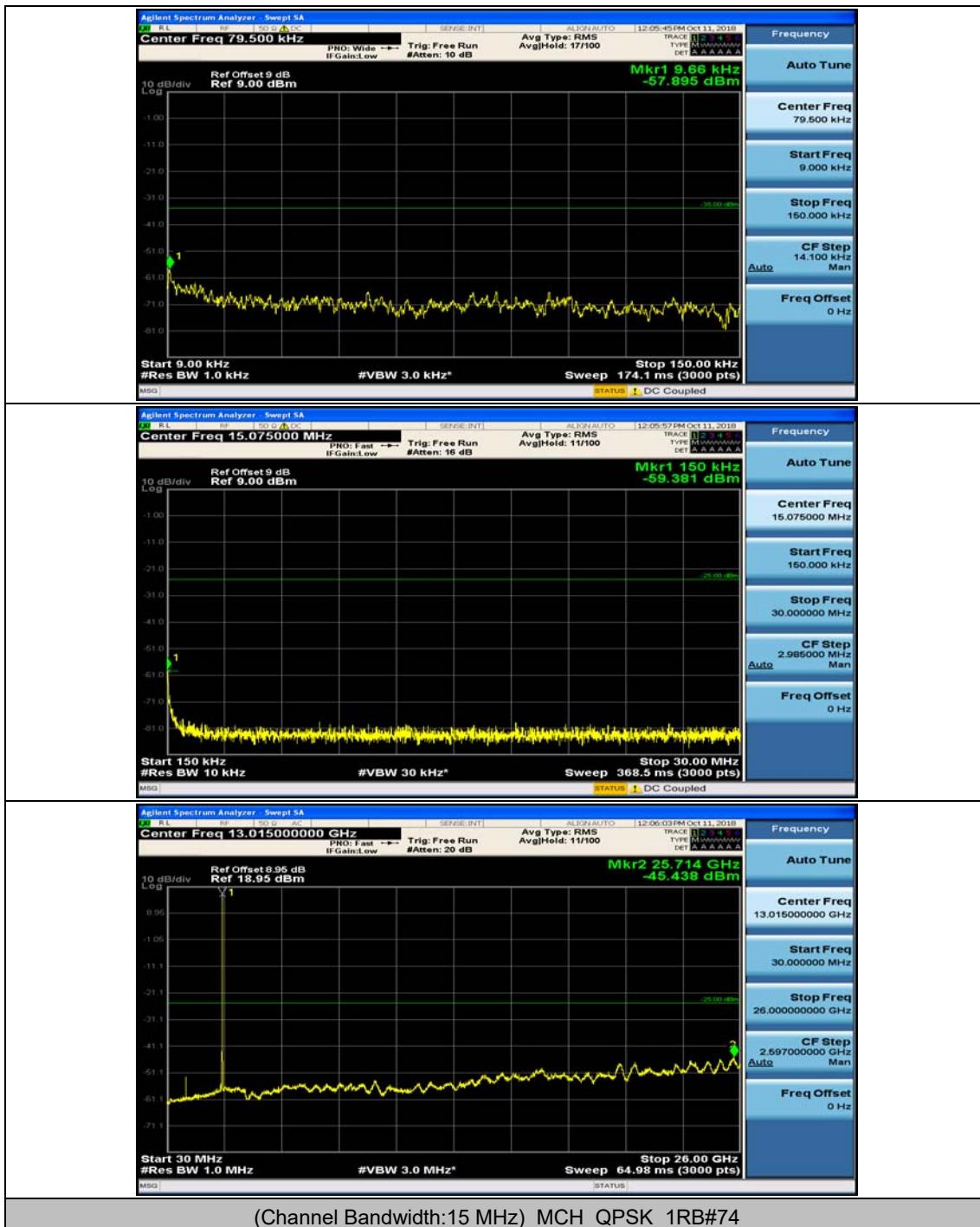
## Channel Bandwidth: 15 MHz

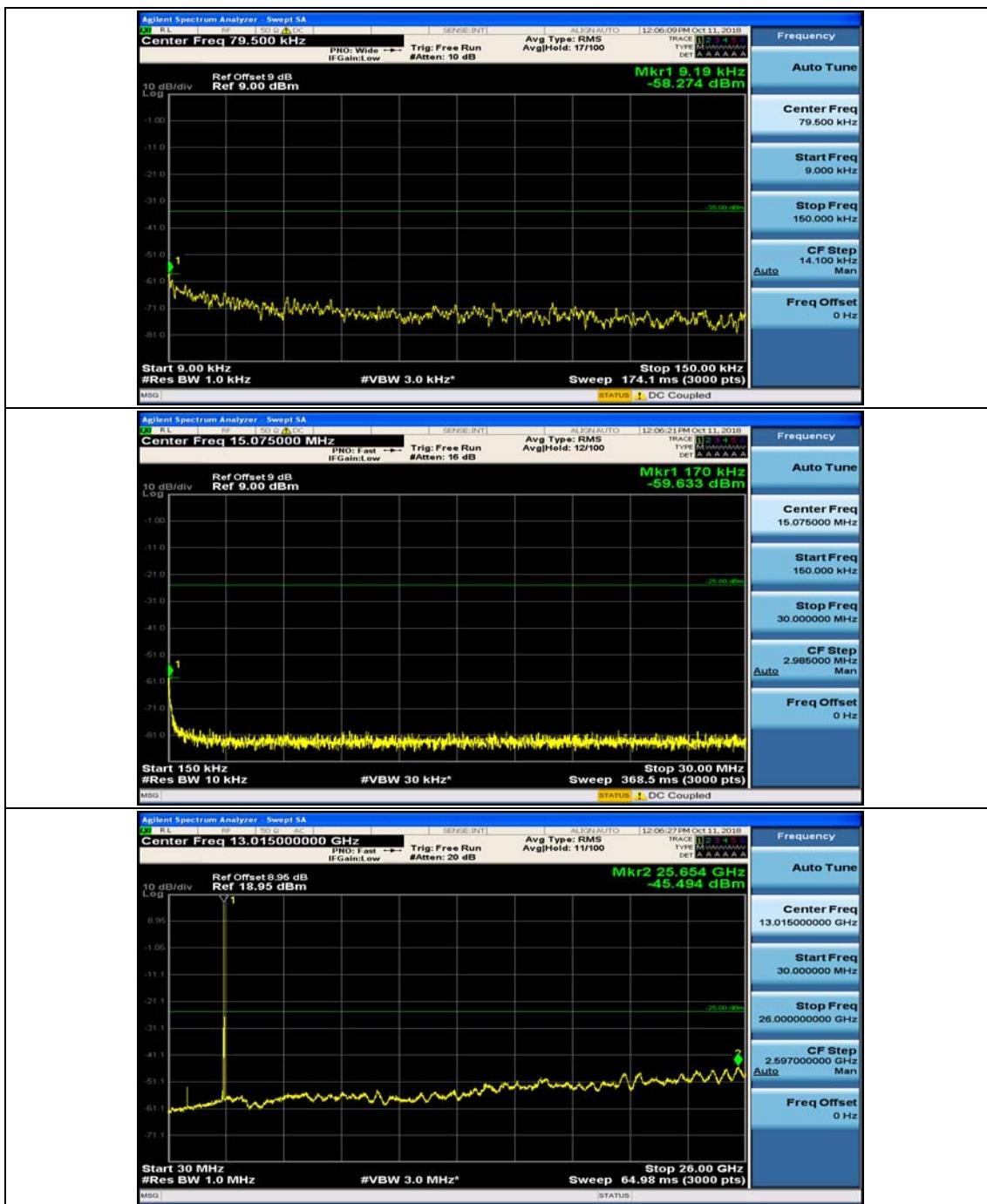


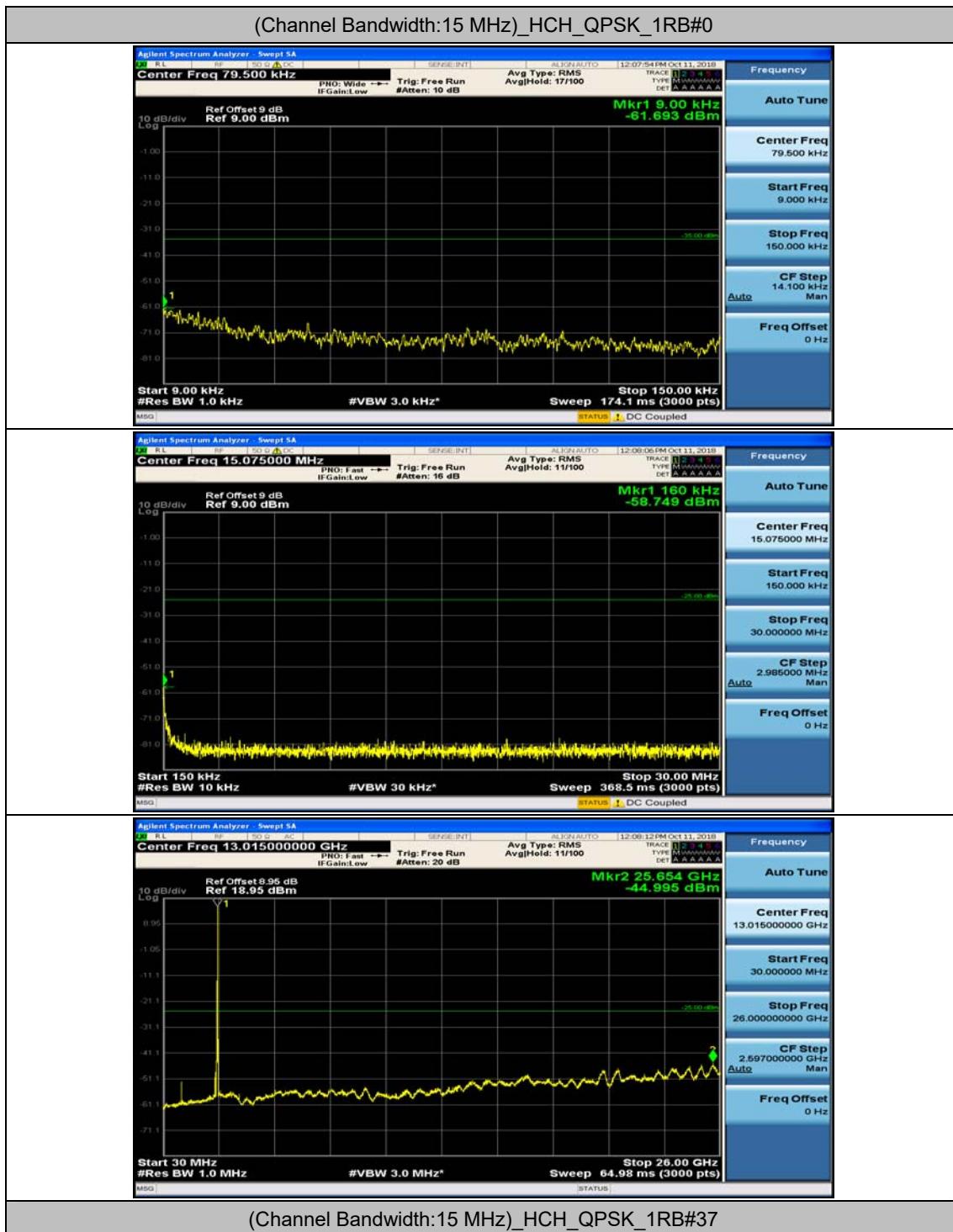


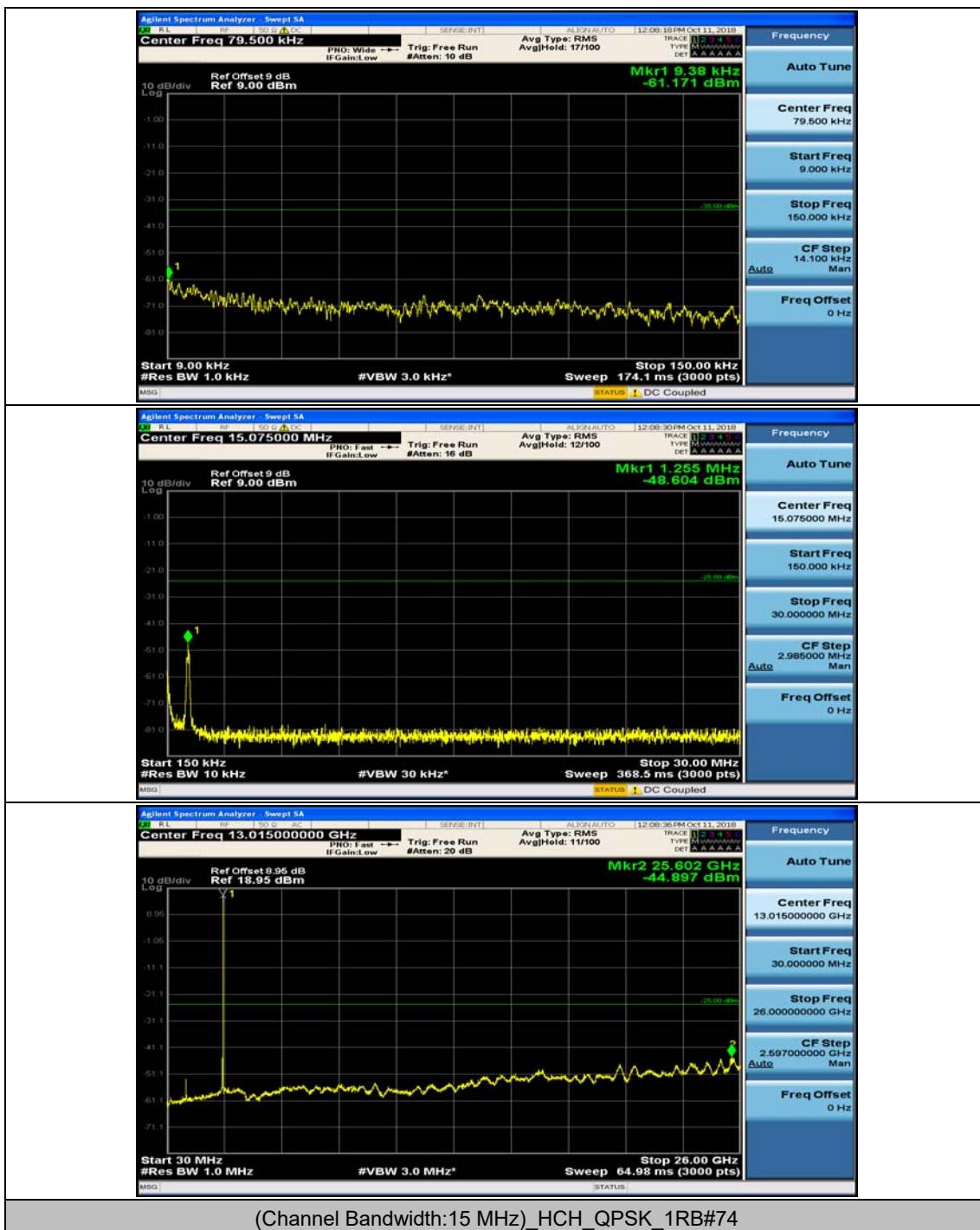


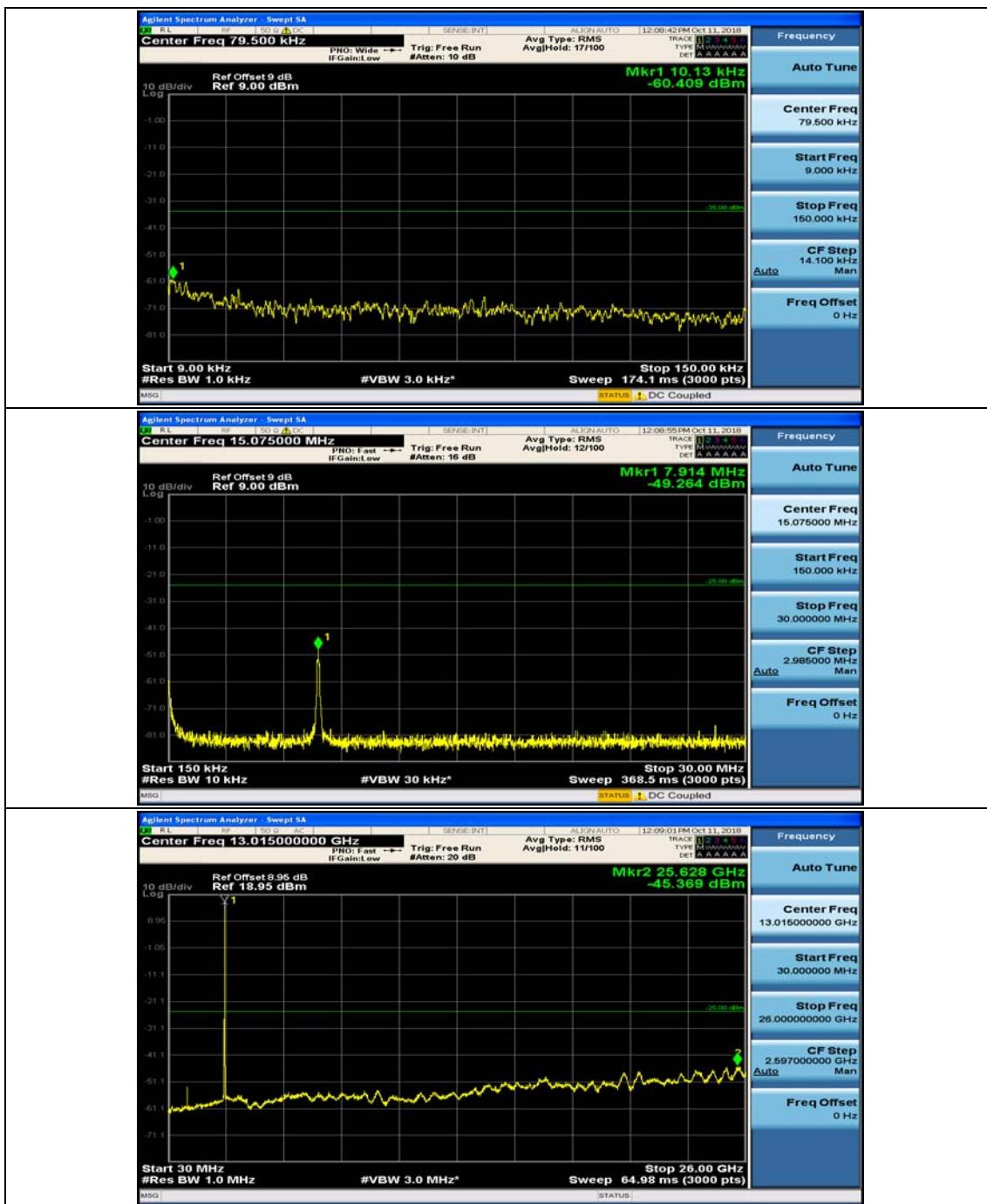


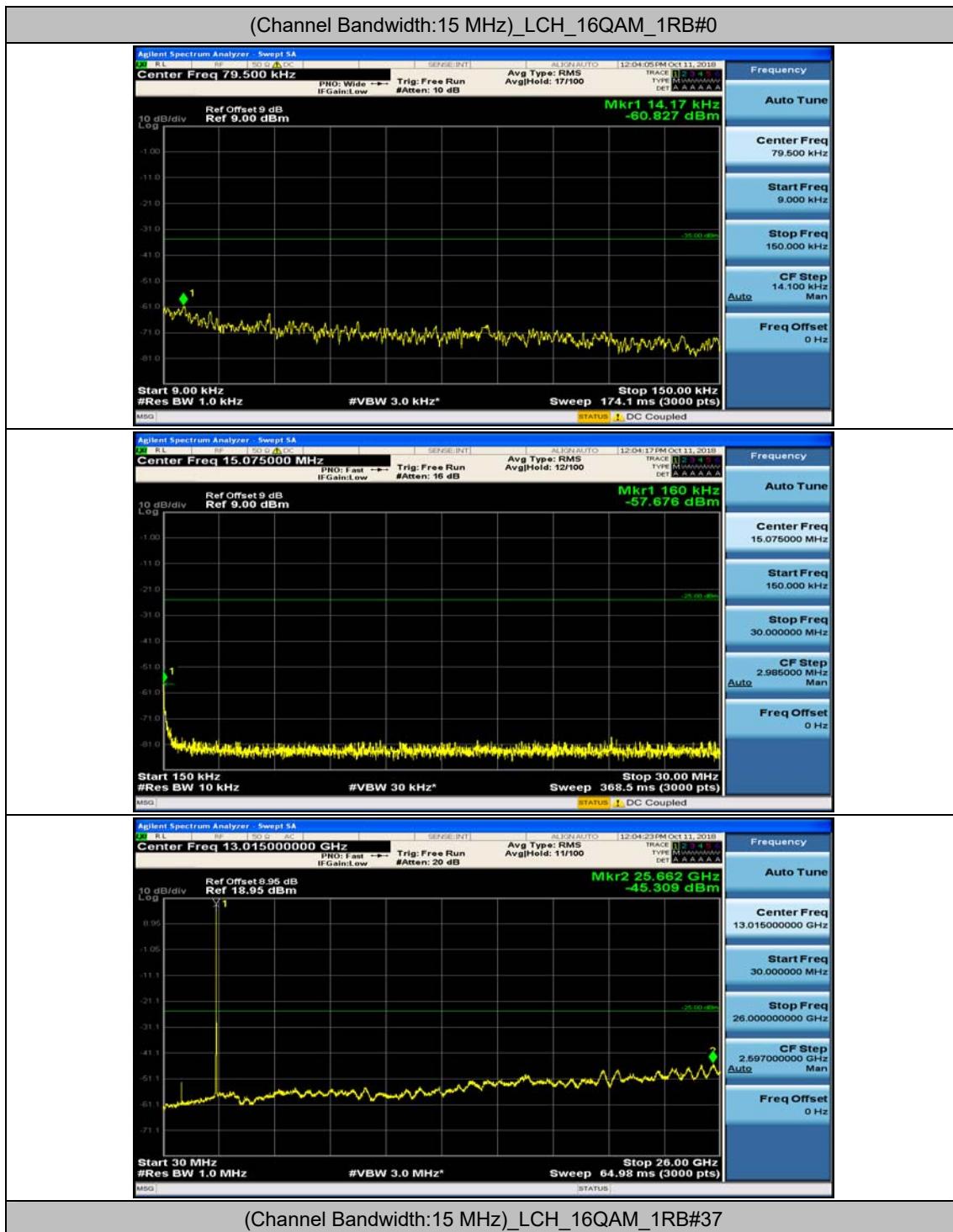


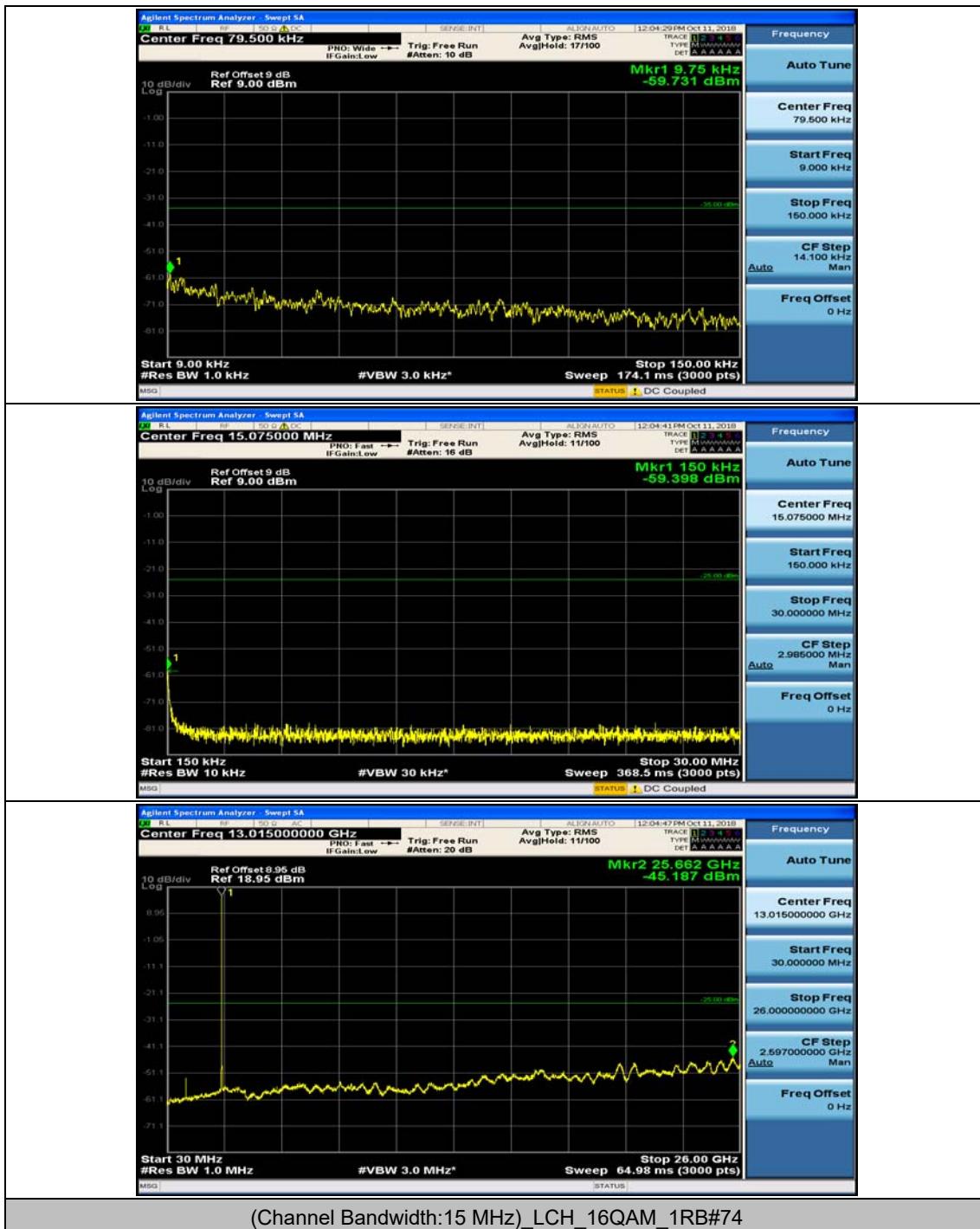


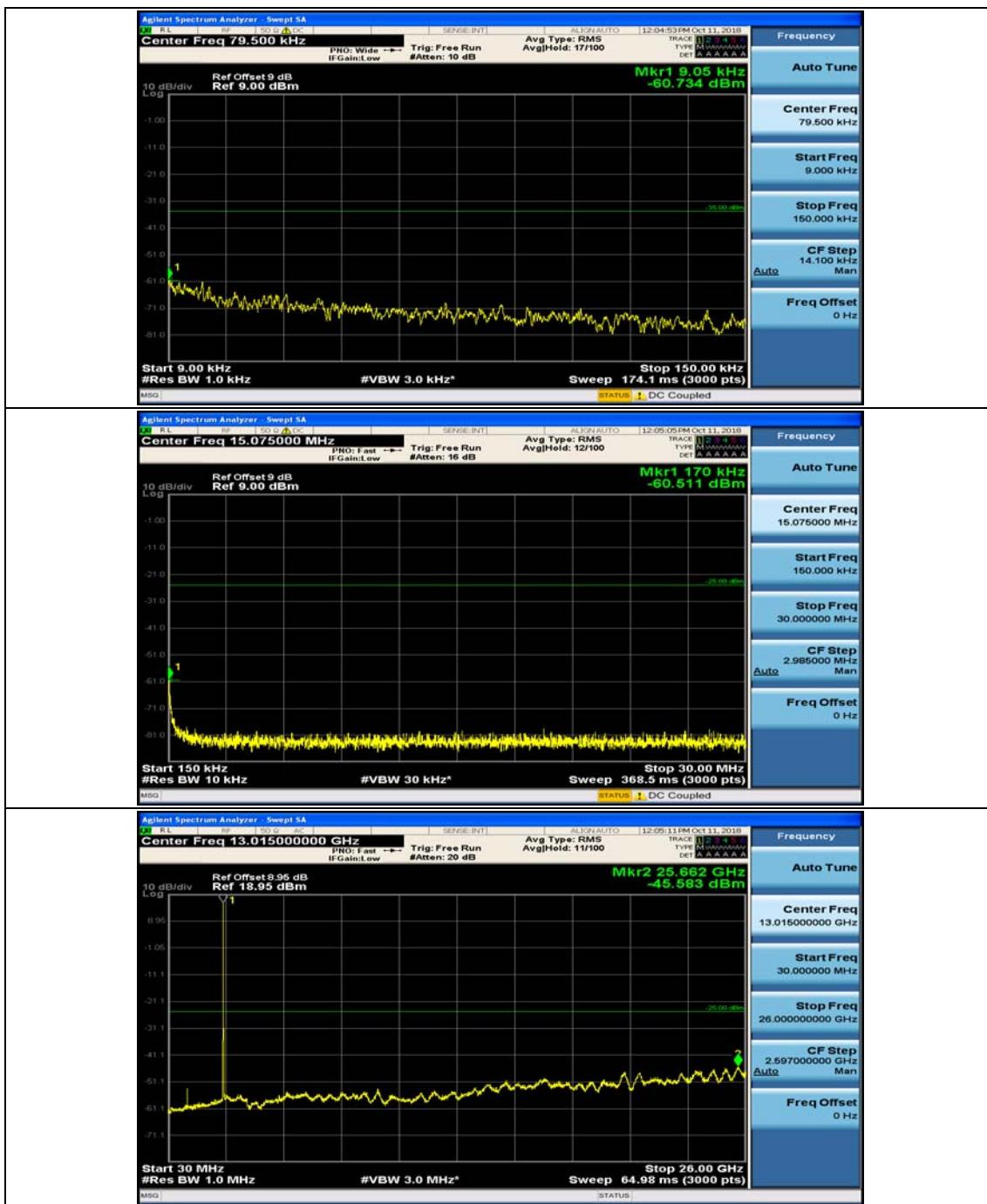


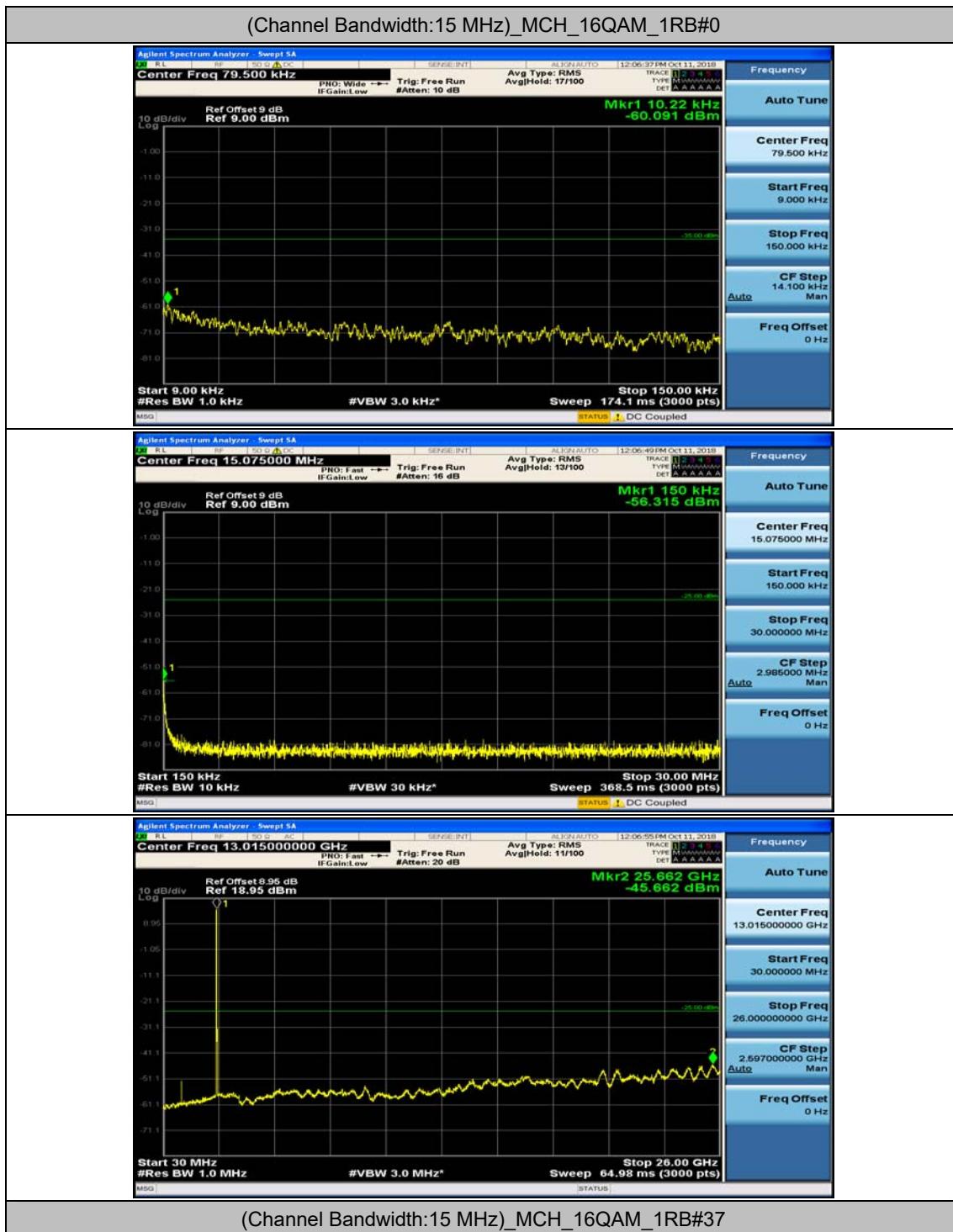




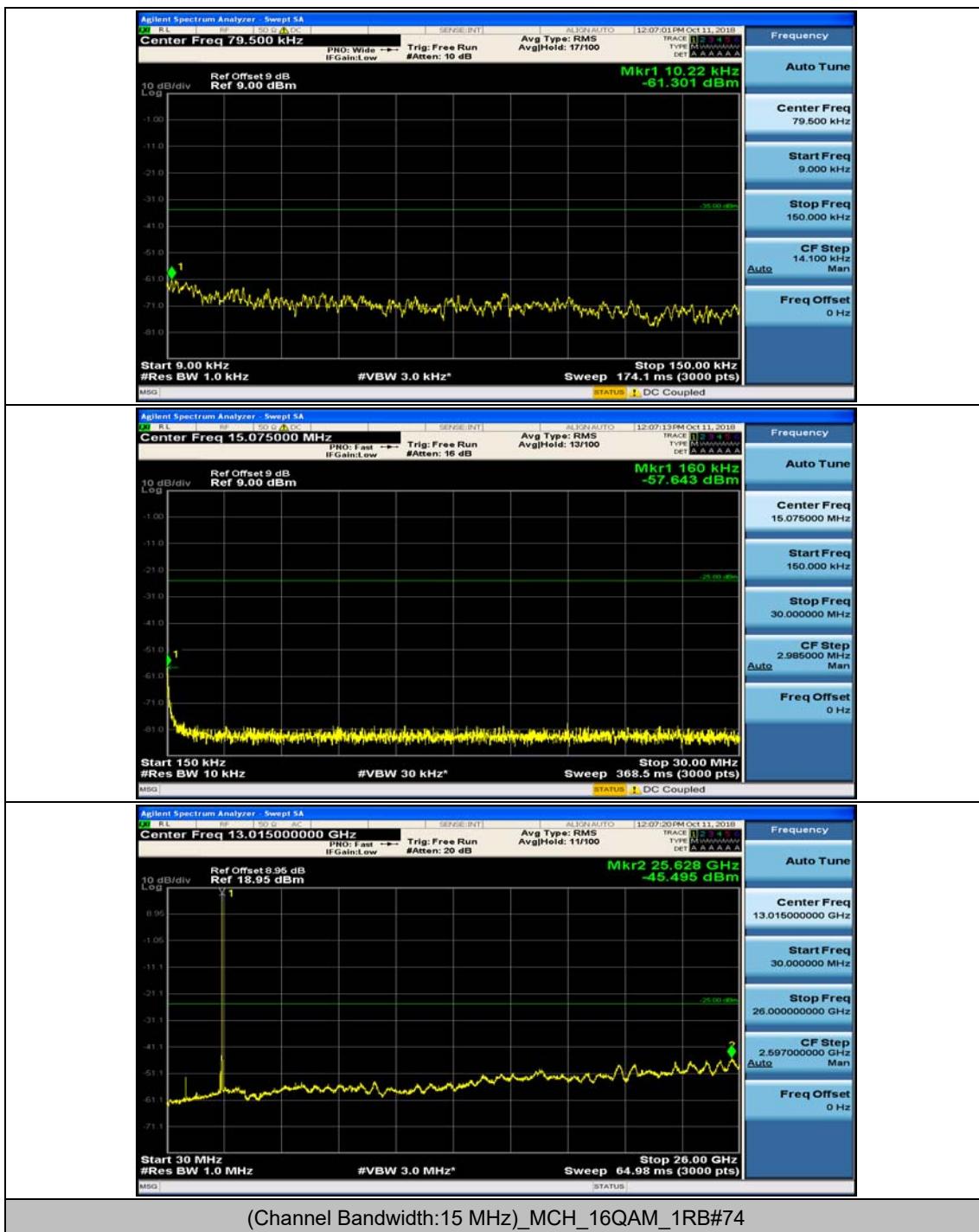


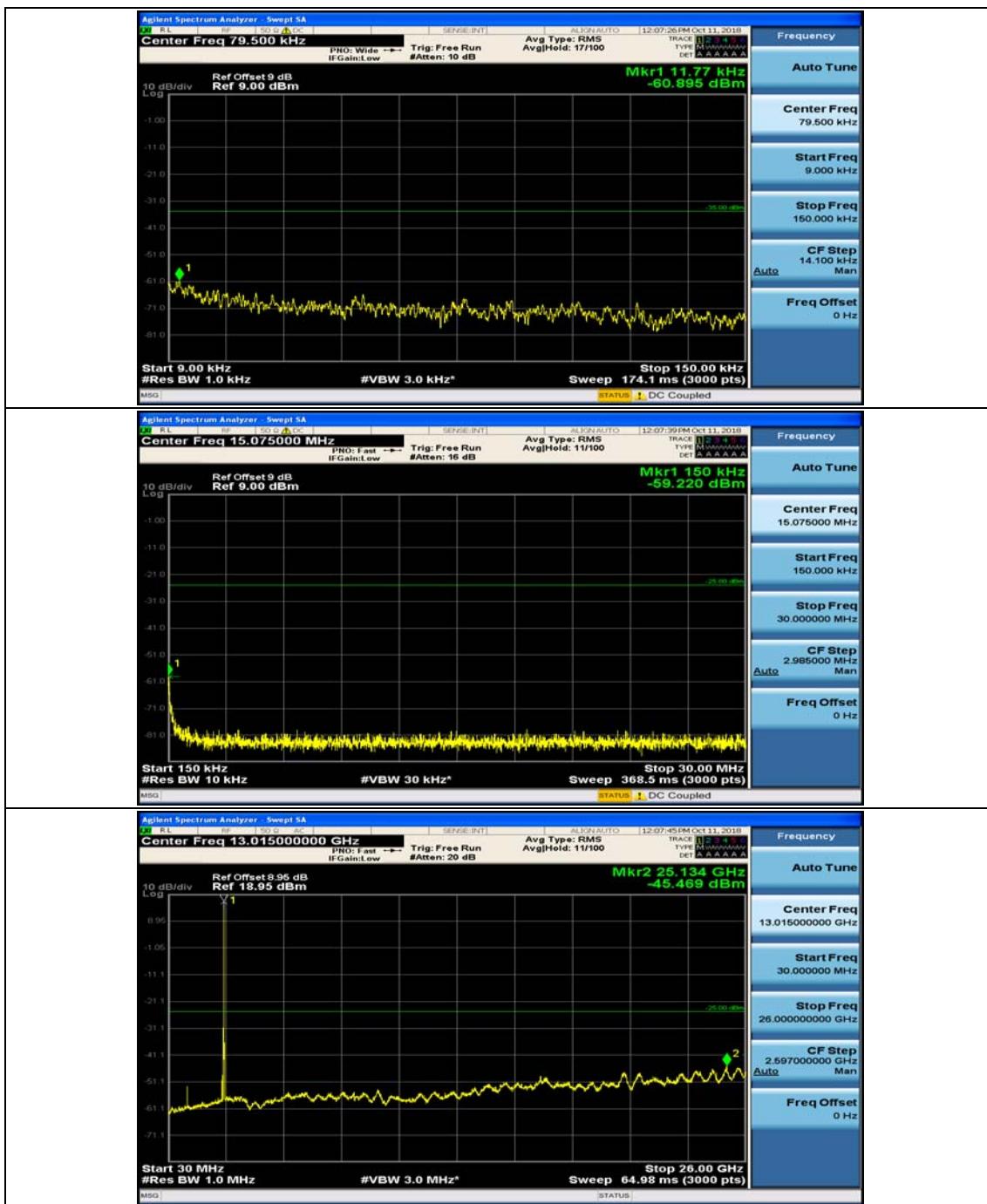


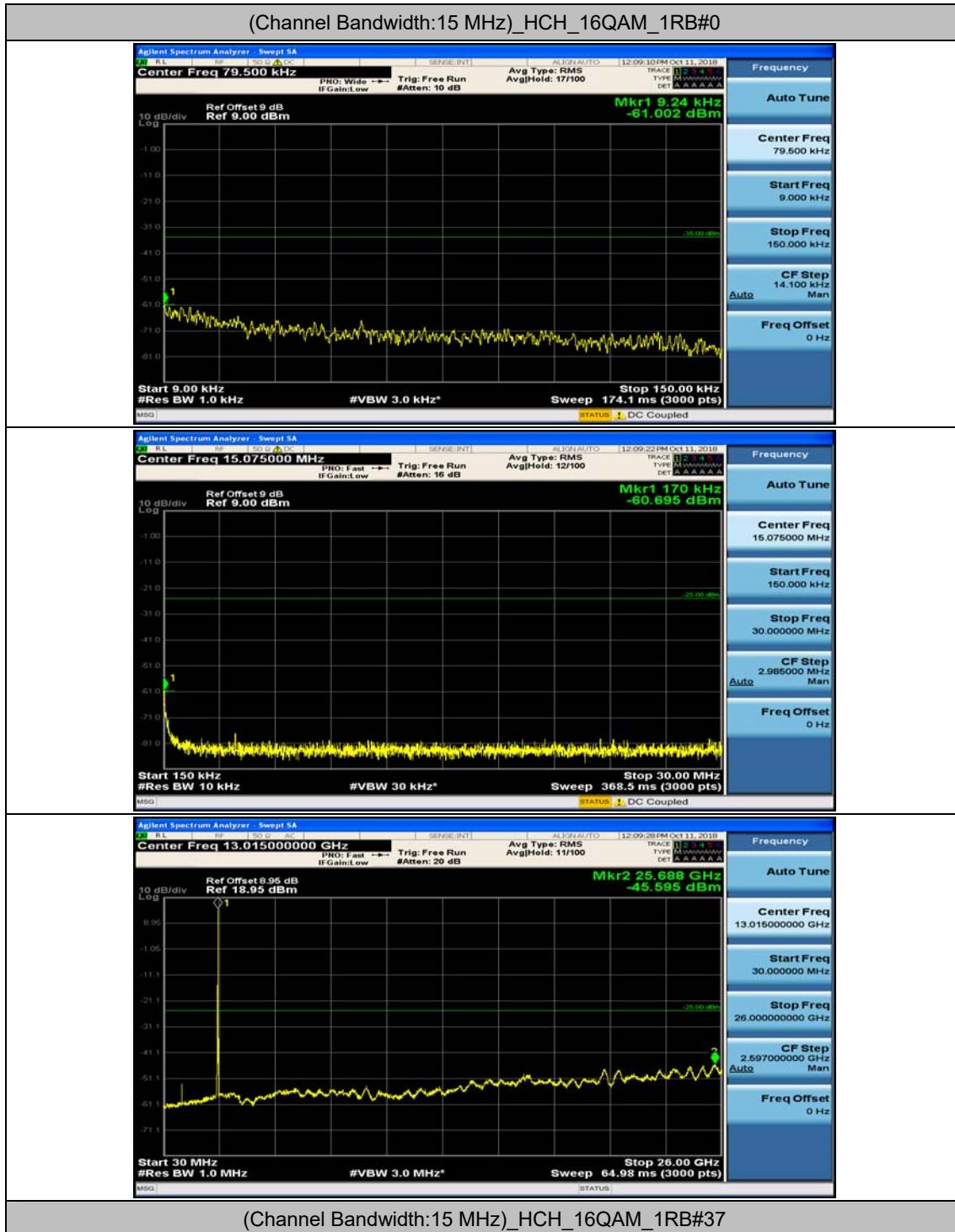


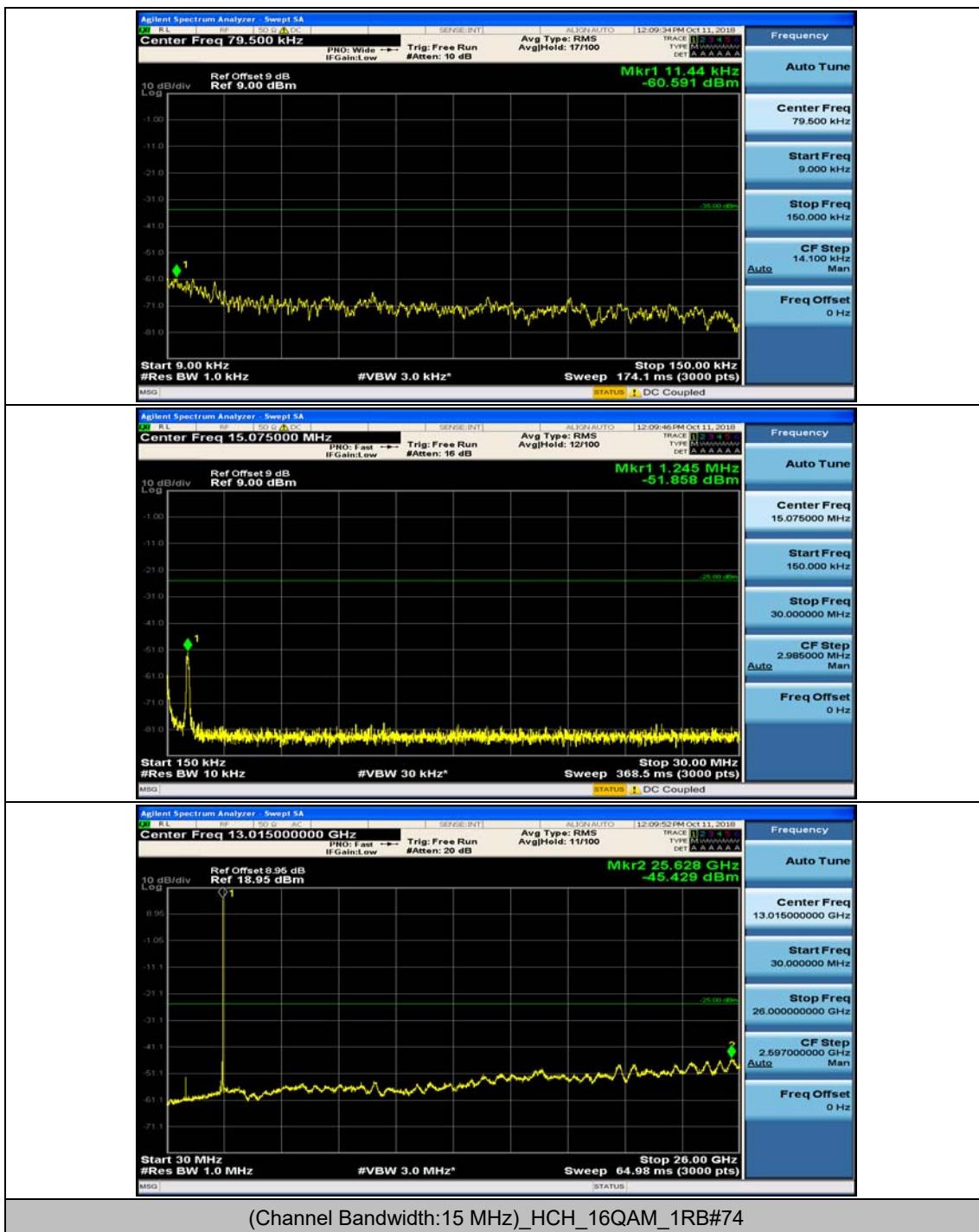


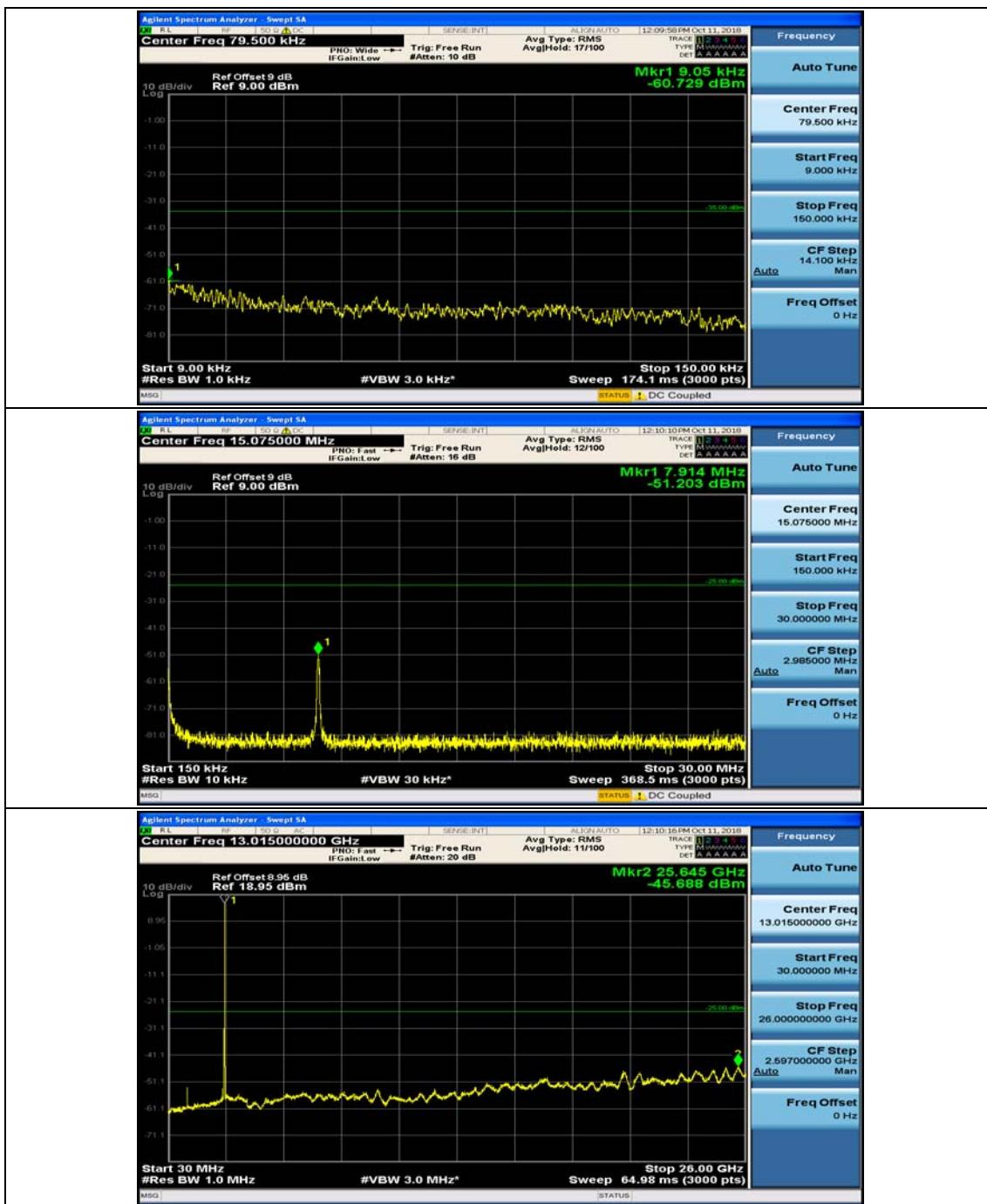
(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_1RB#37



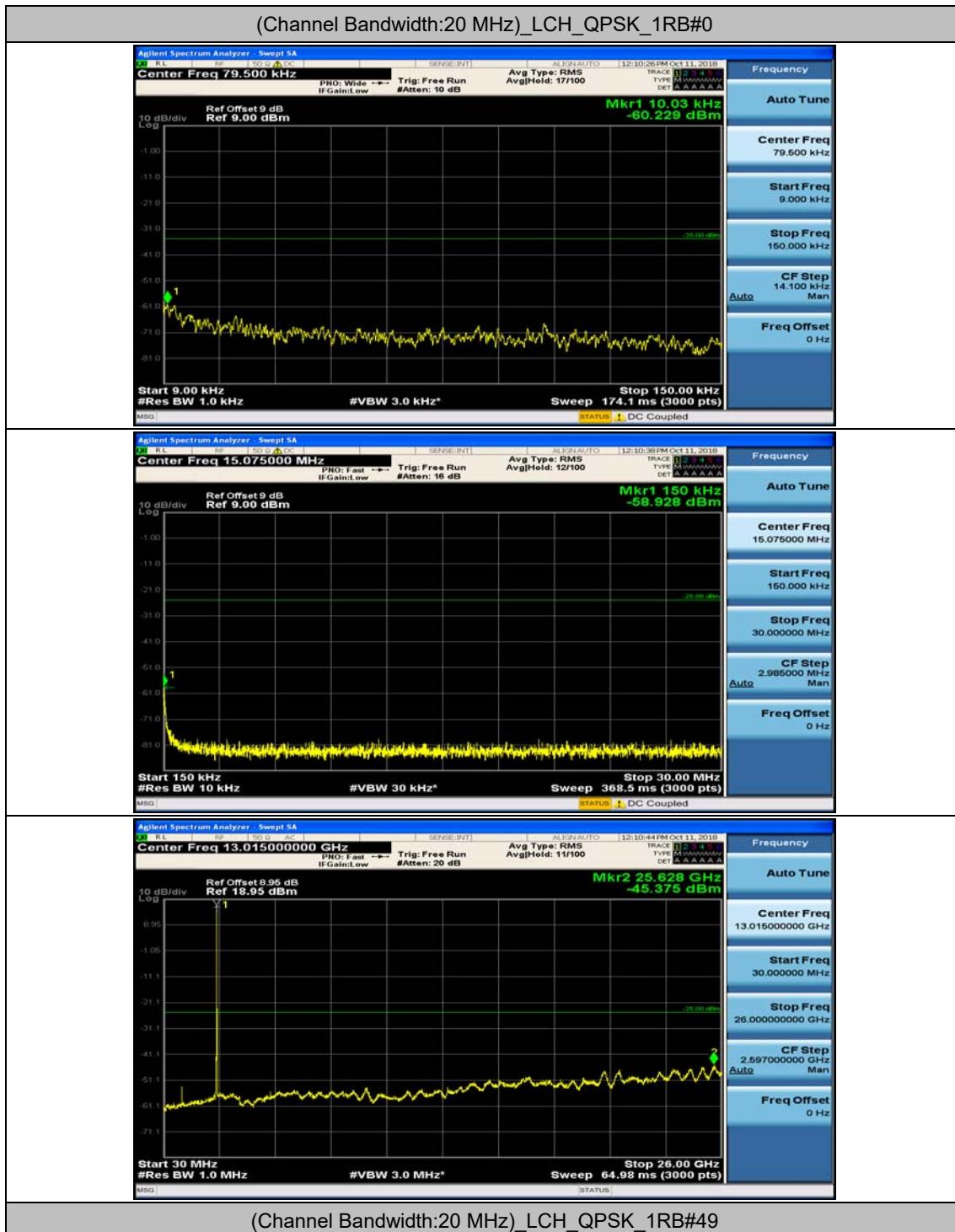


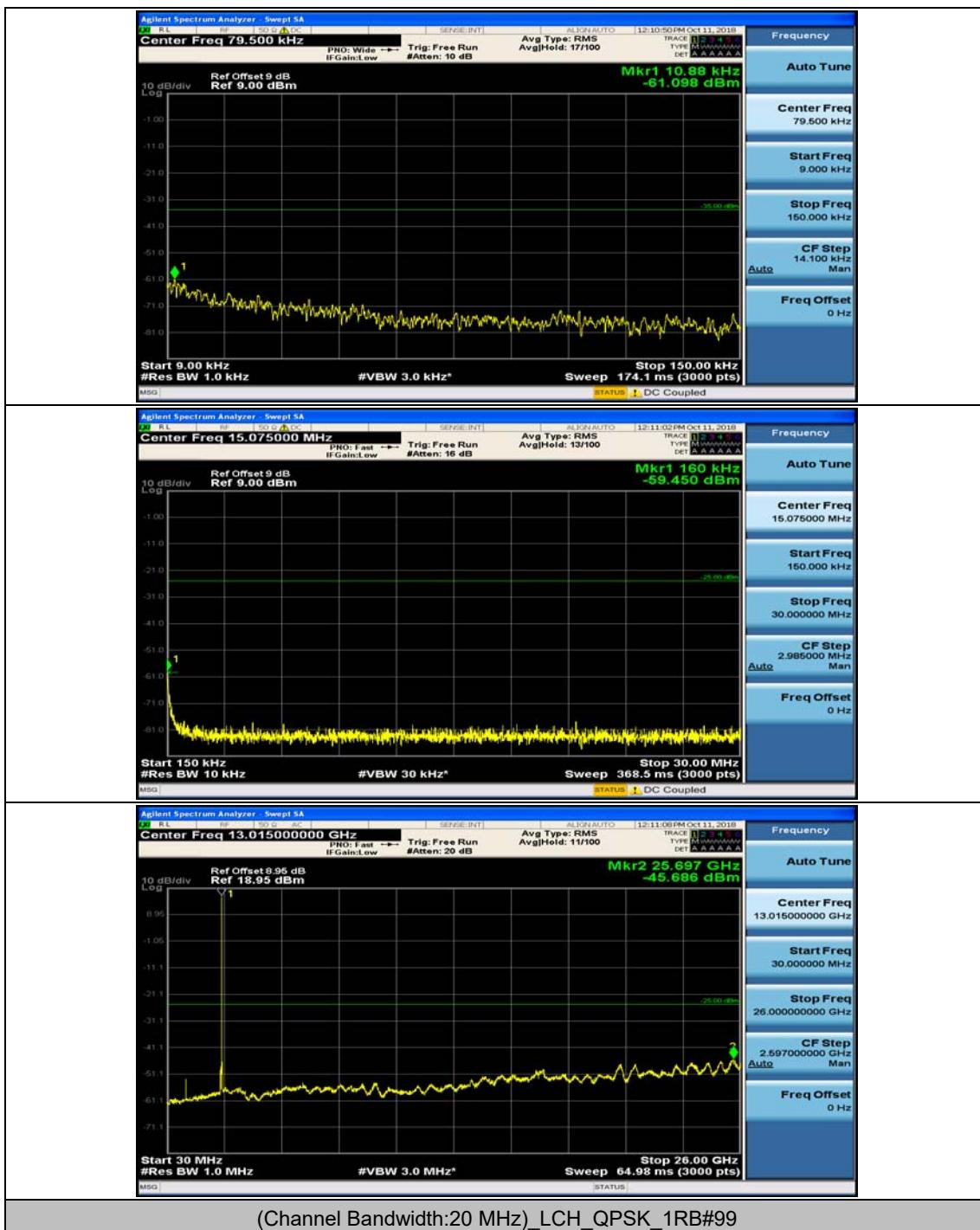


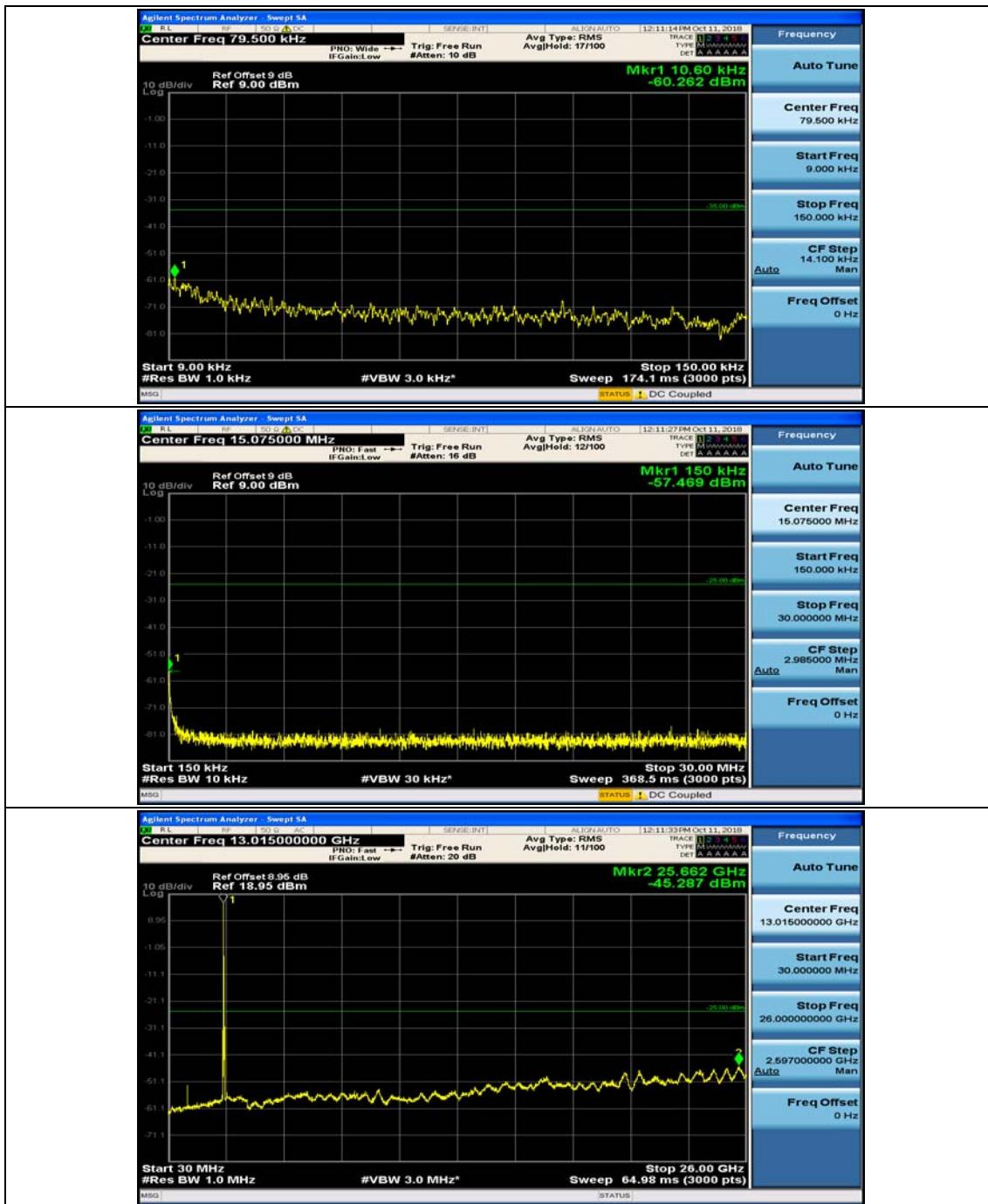


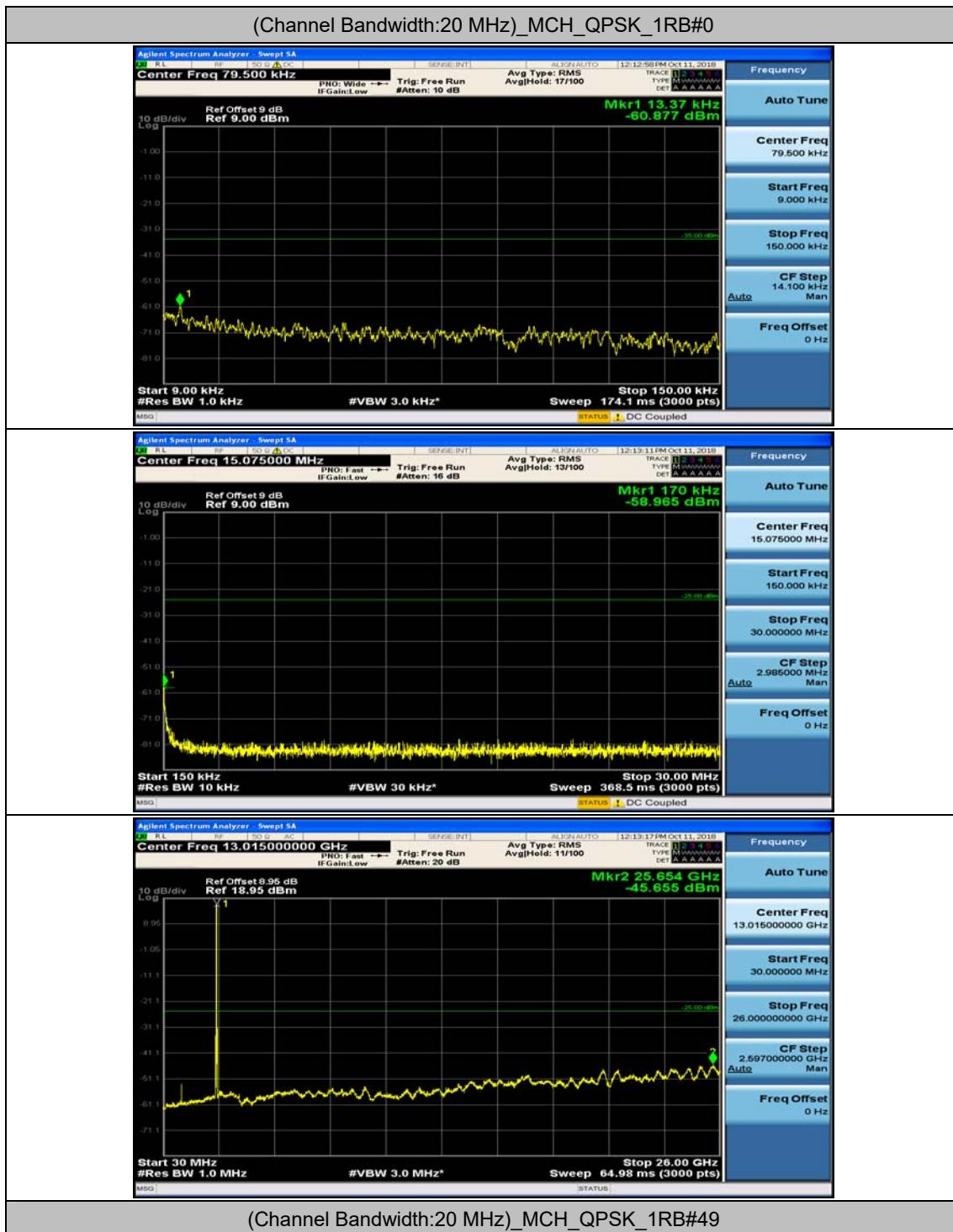


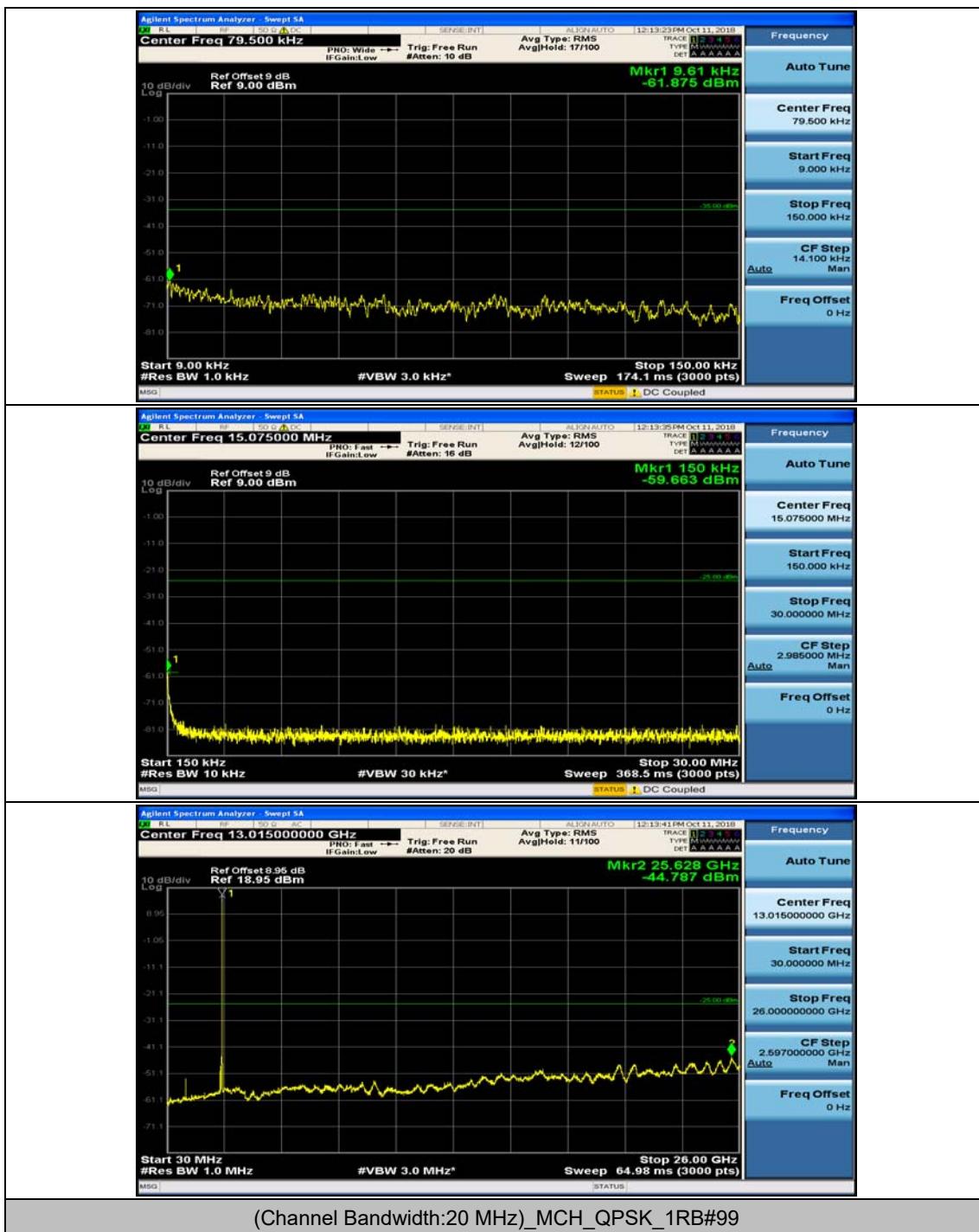
### **Channel Bandwidth: 20 MHz**

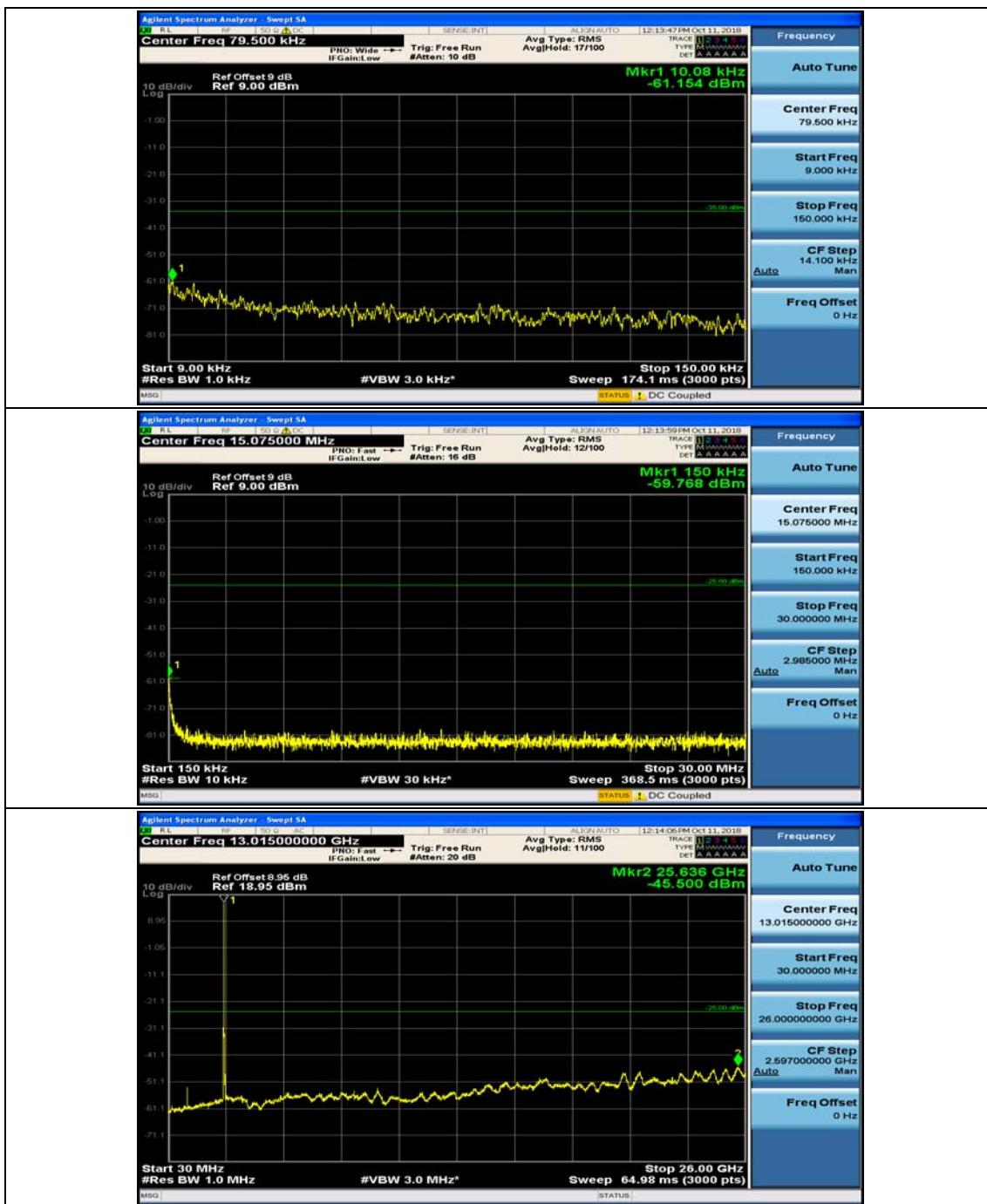


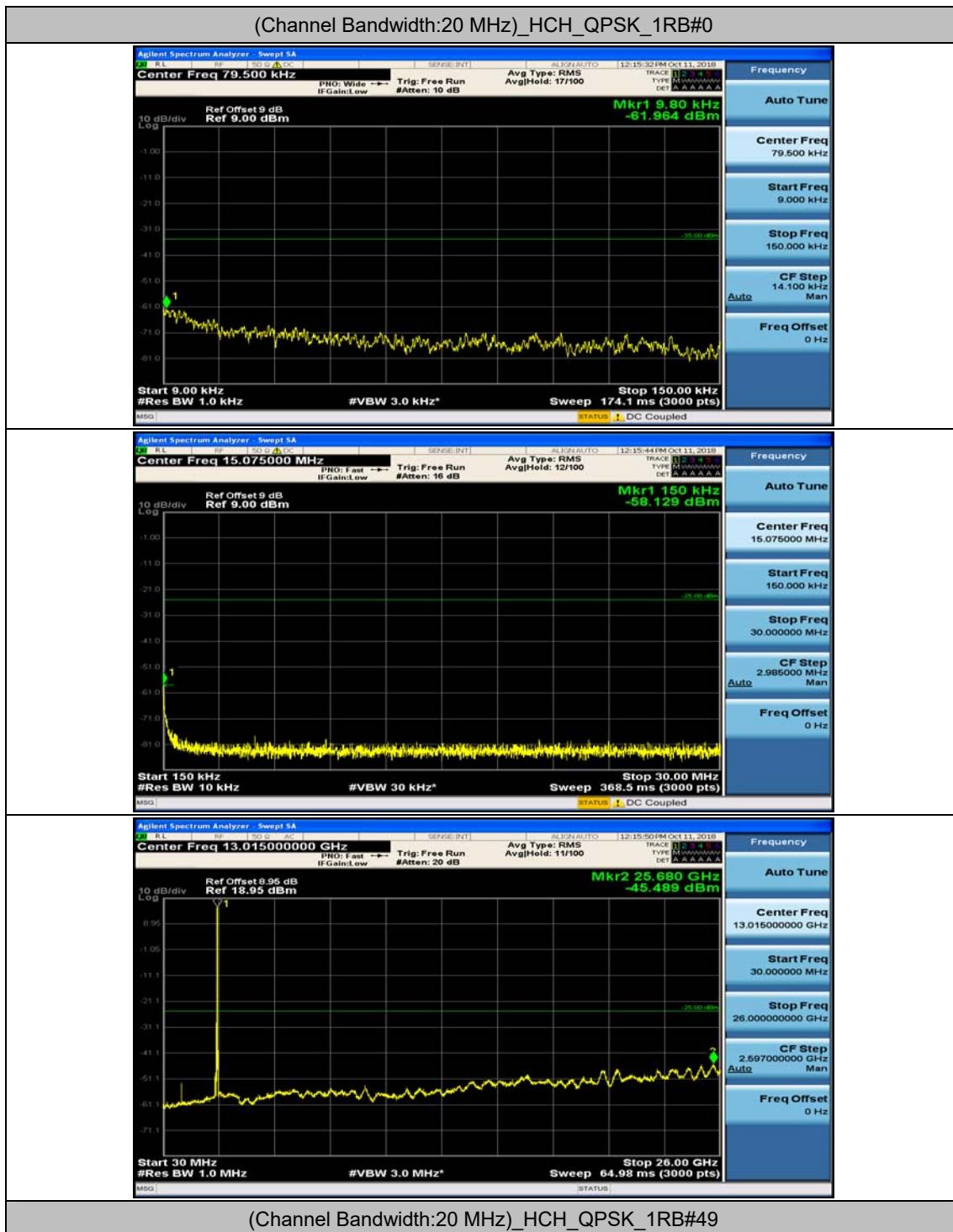


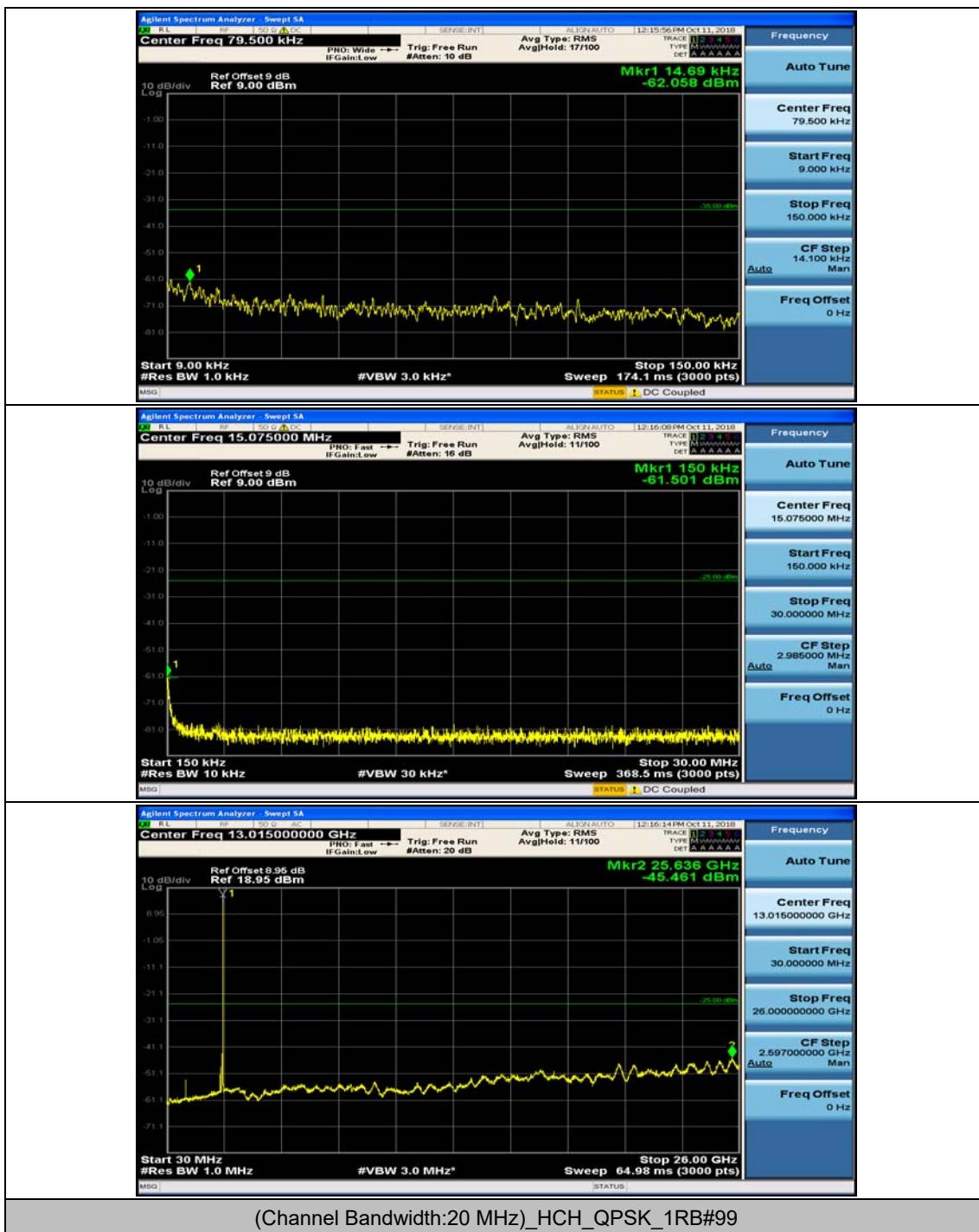




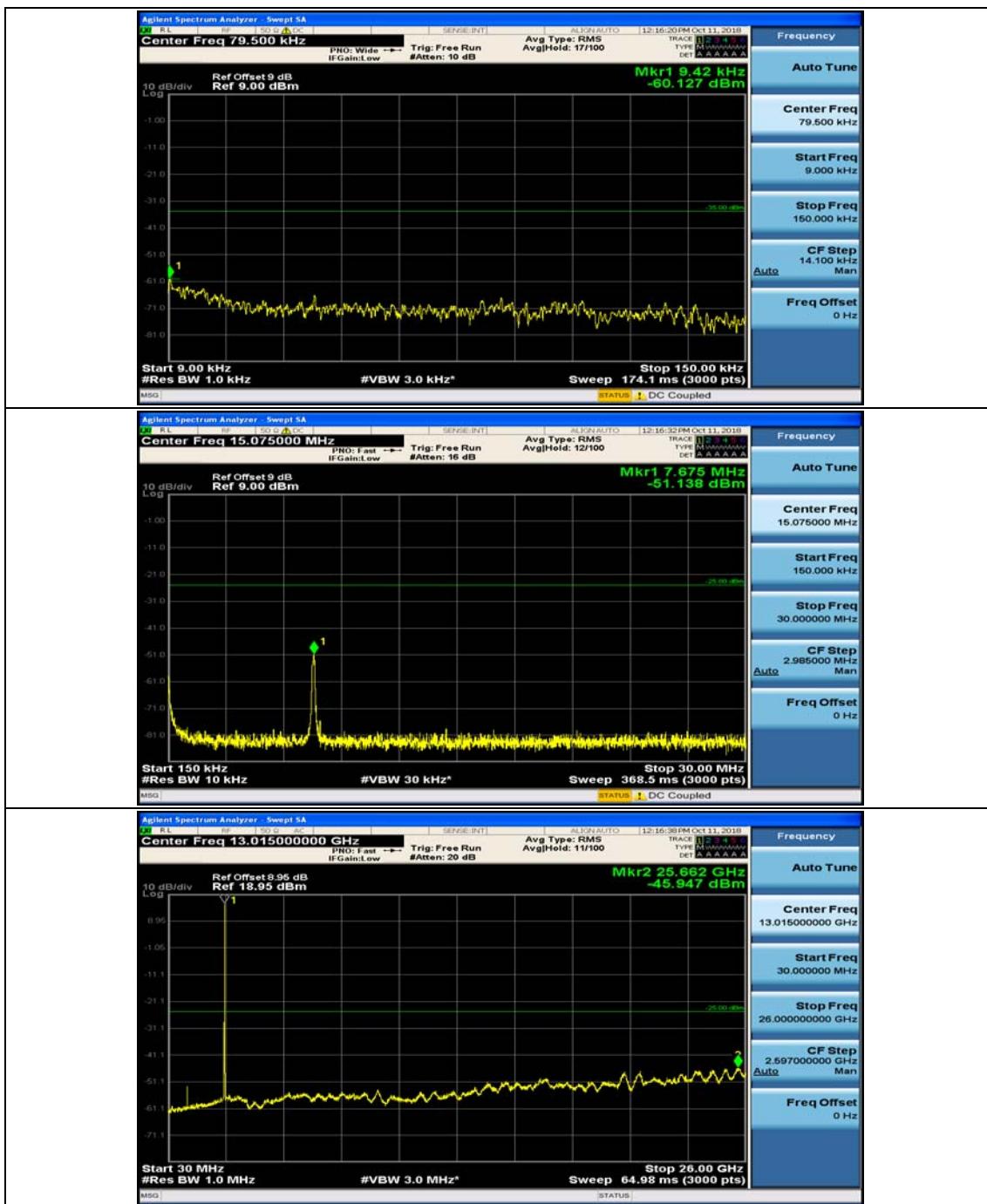


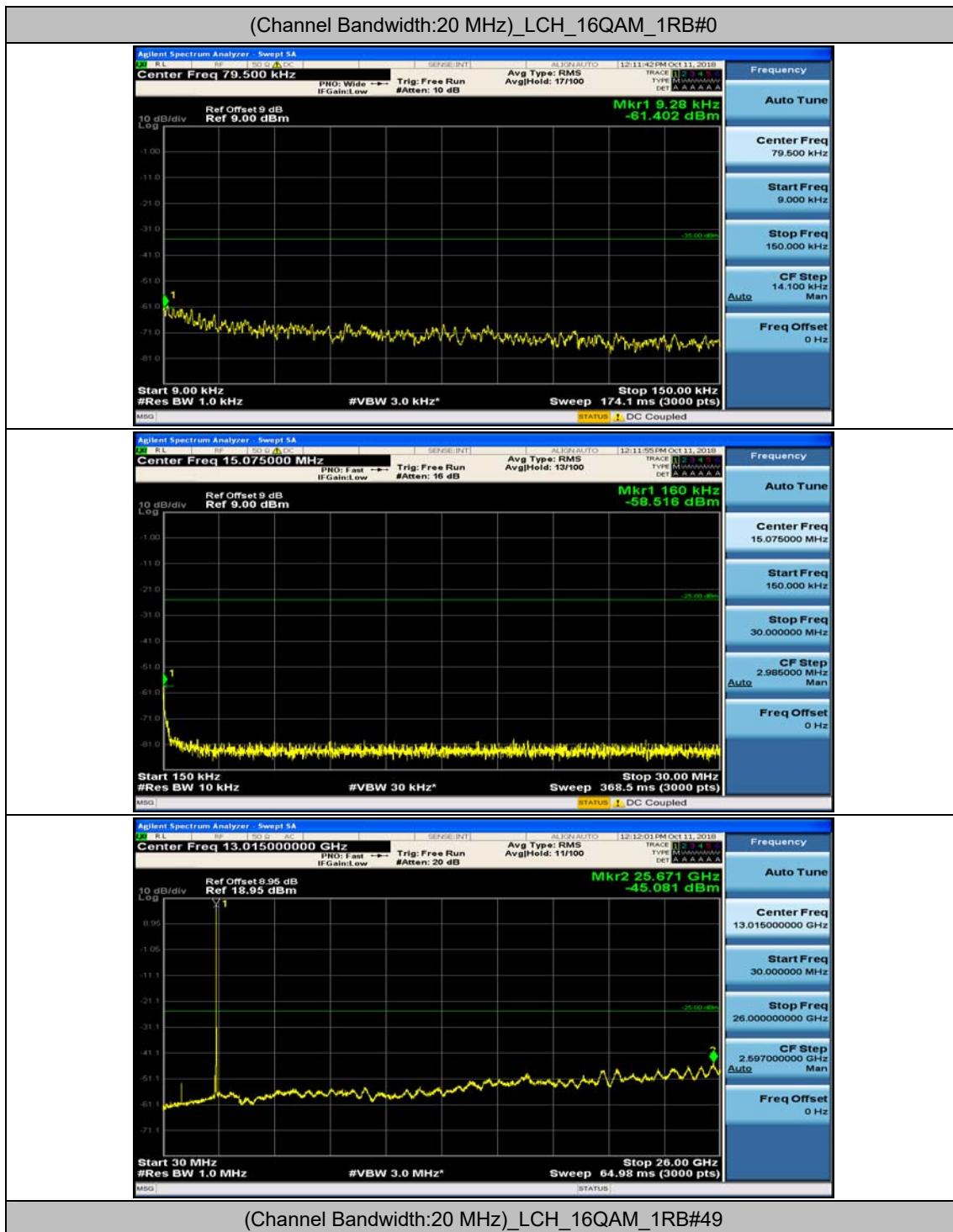


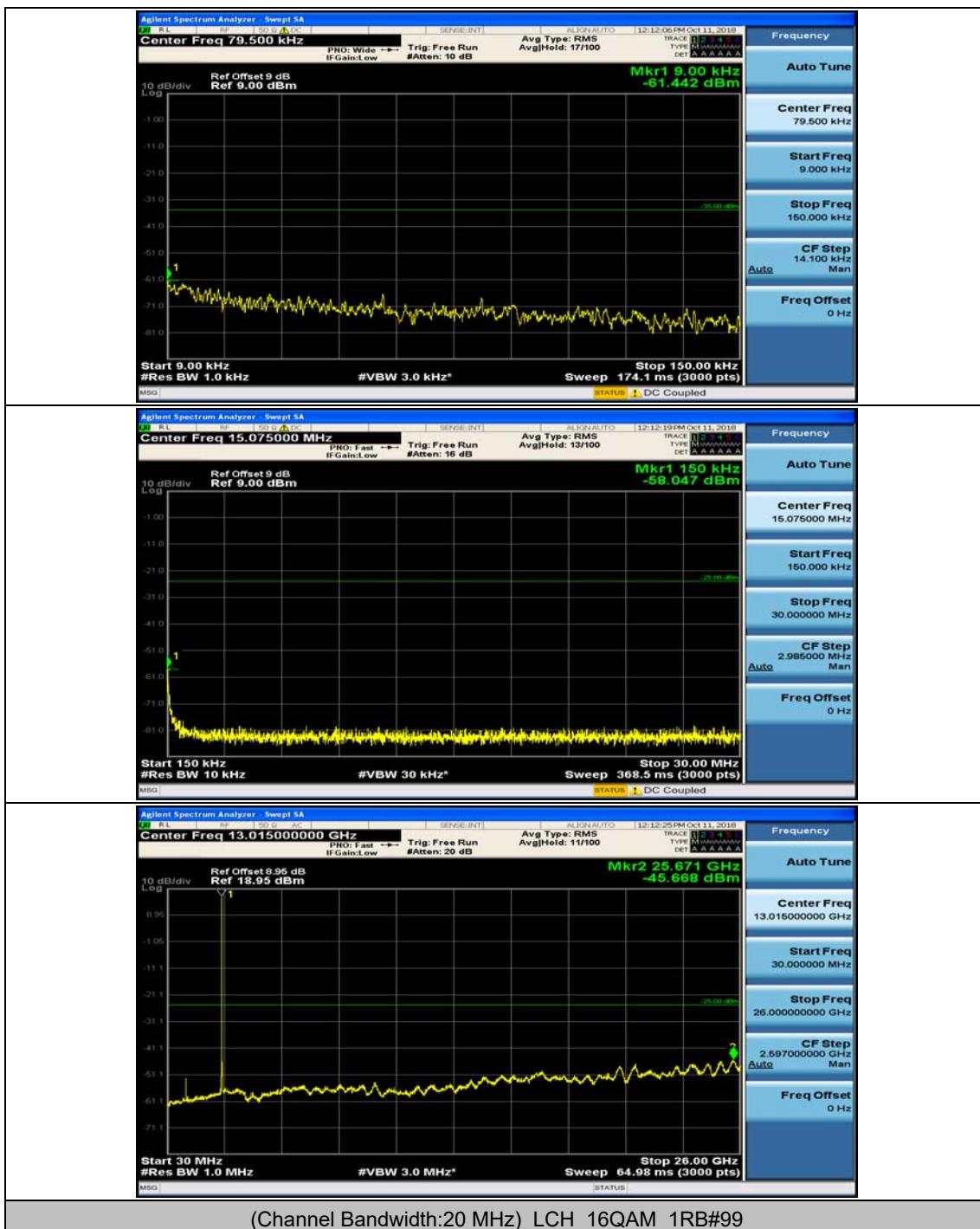


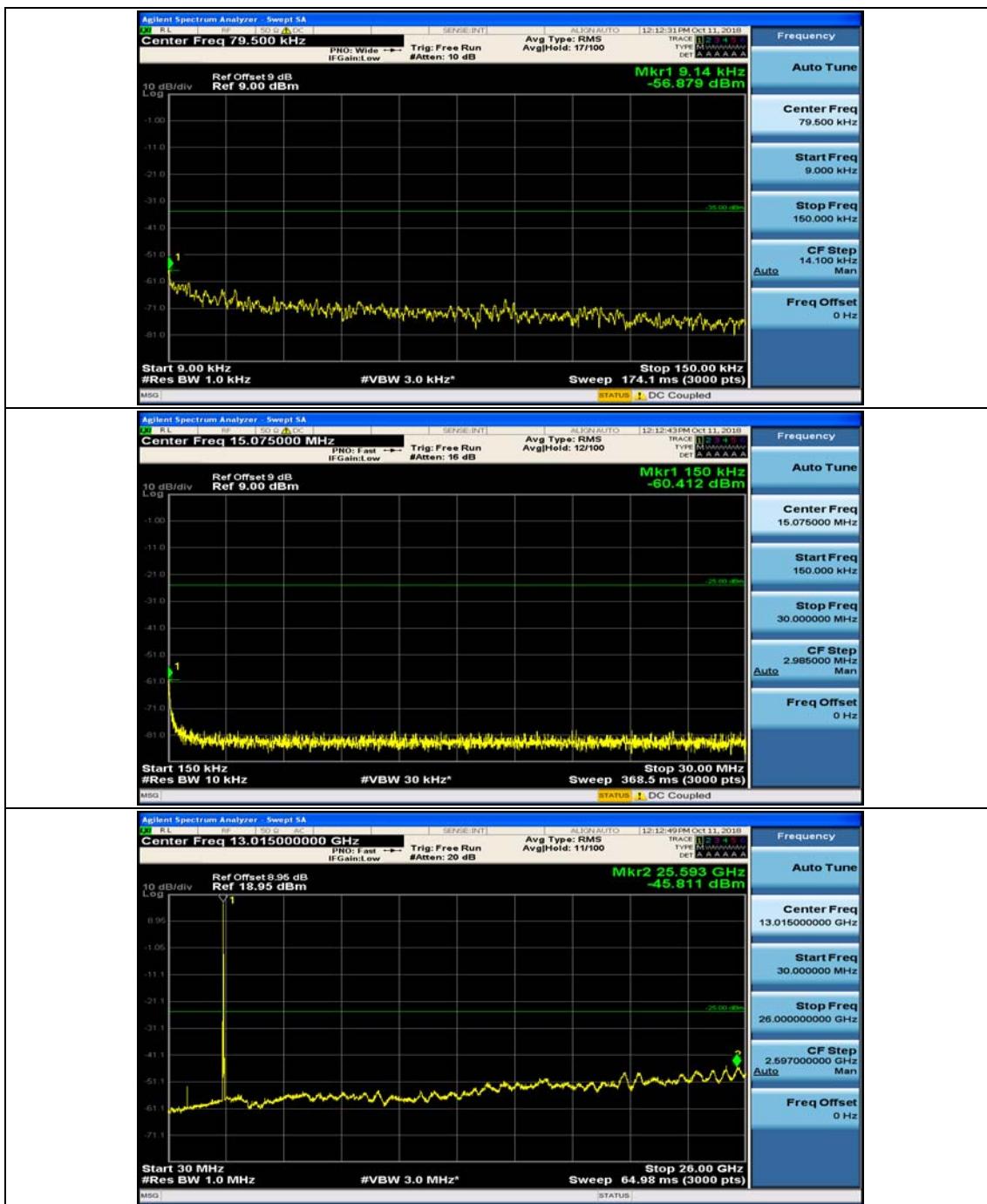


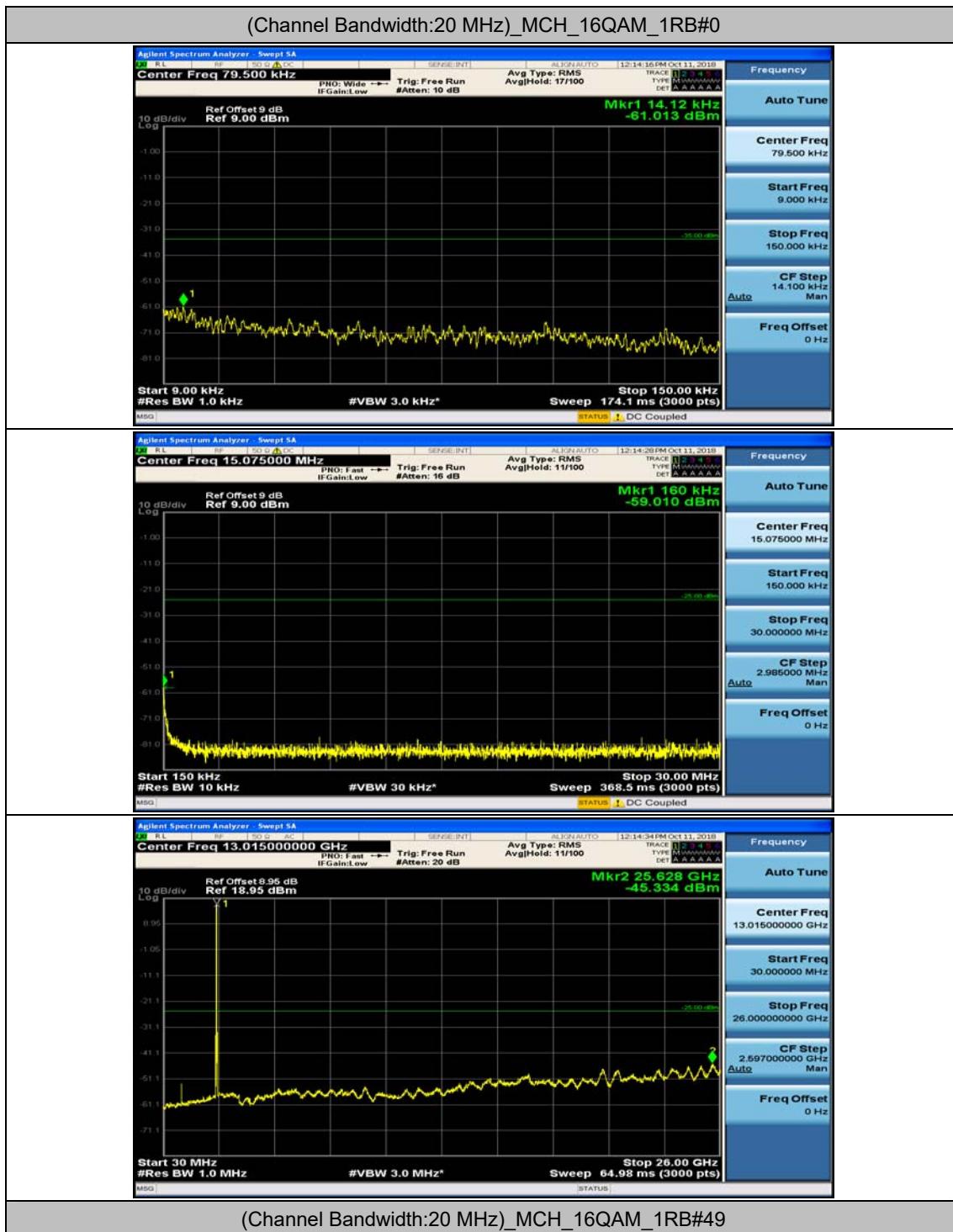
(Channel Bandwidth:20 MHz)\_HCH\_QPSK\_1RB#99

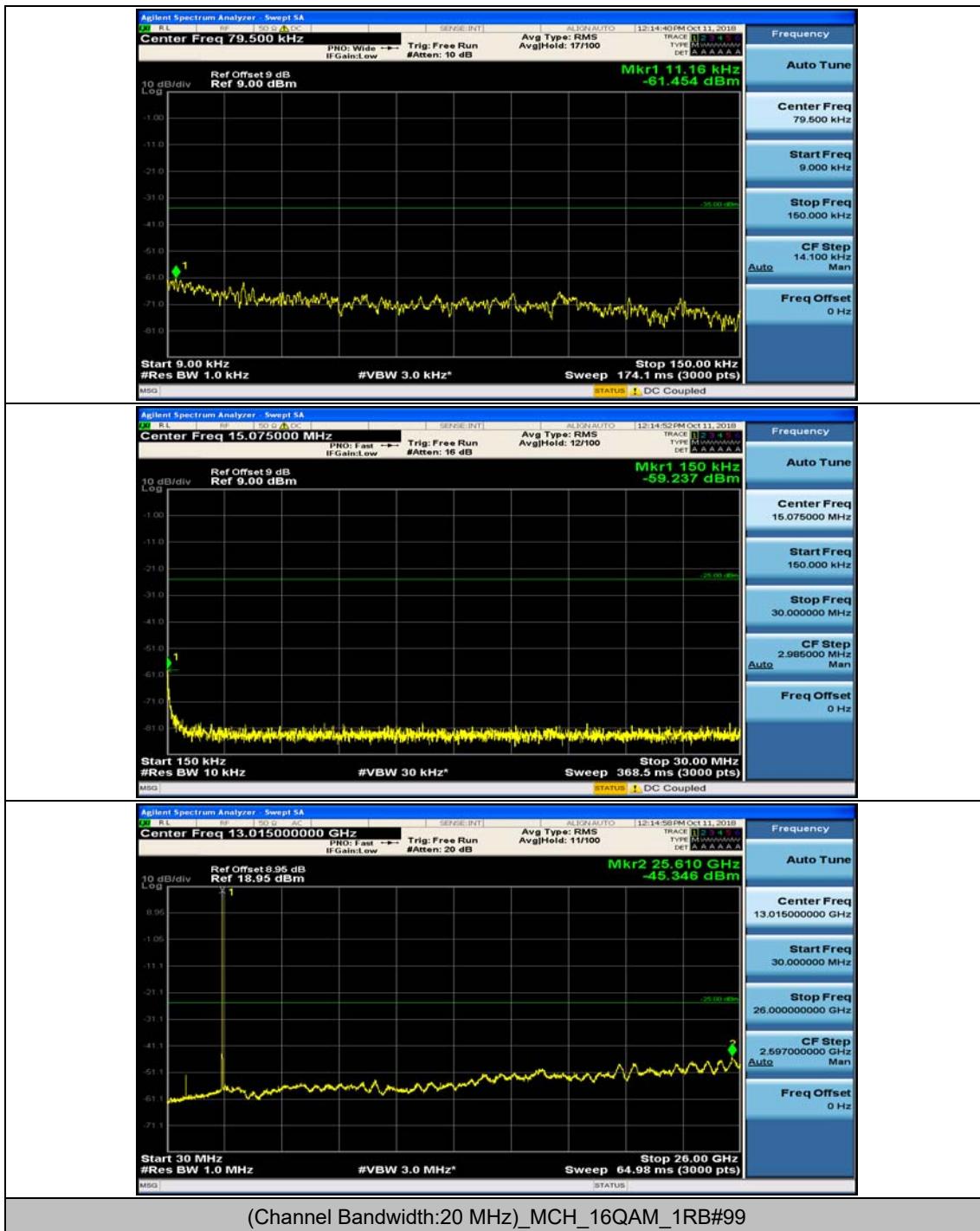




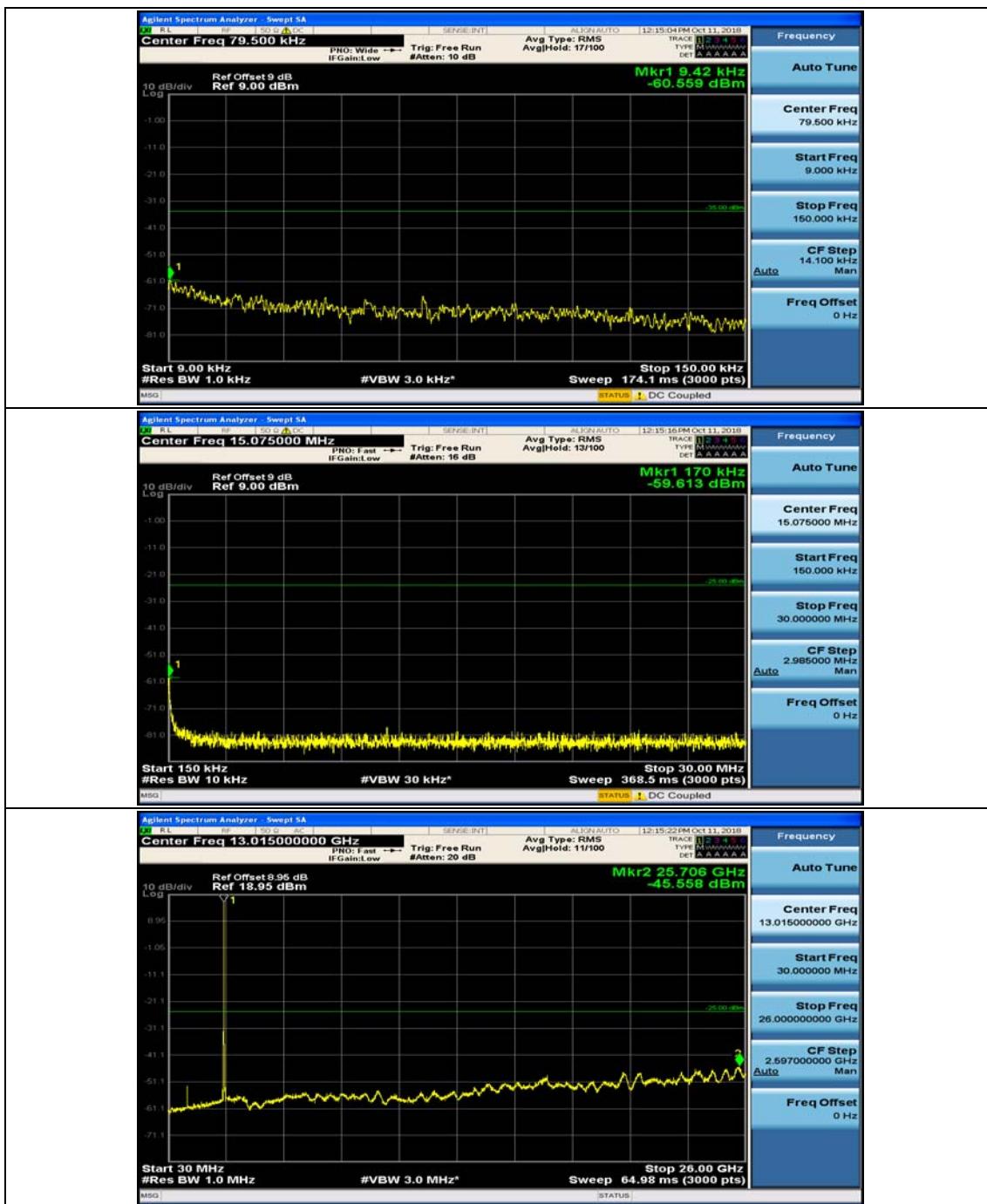


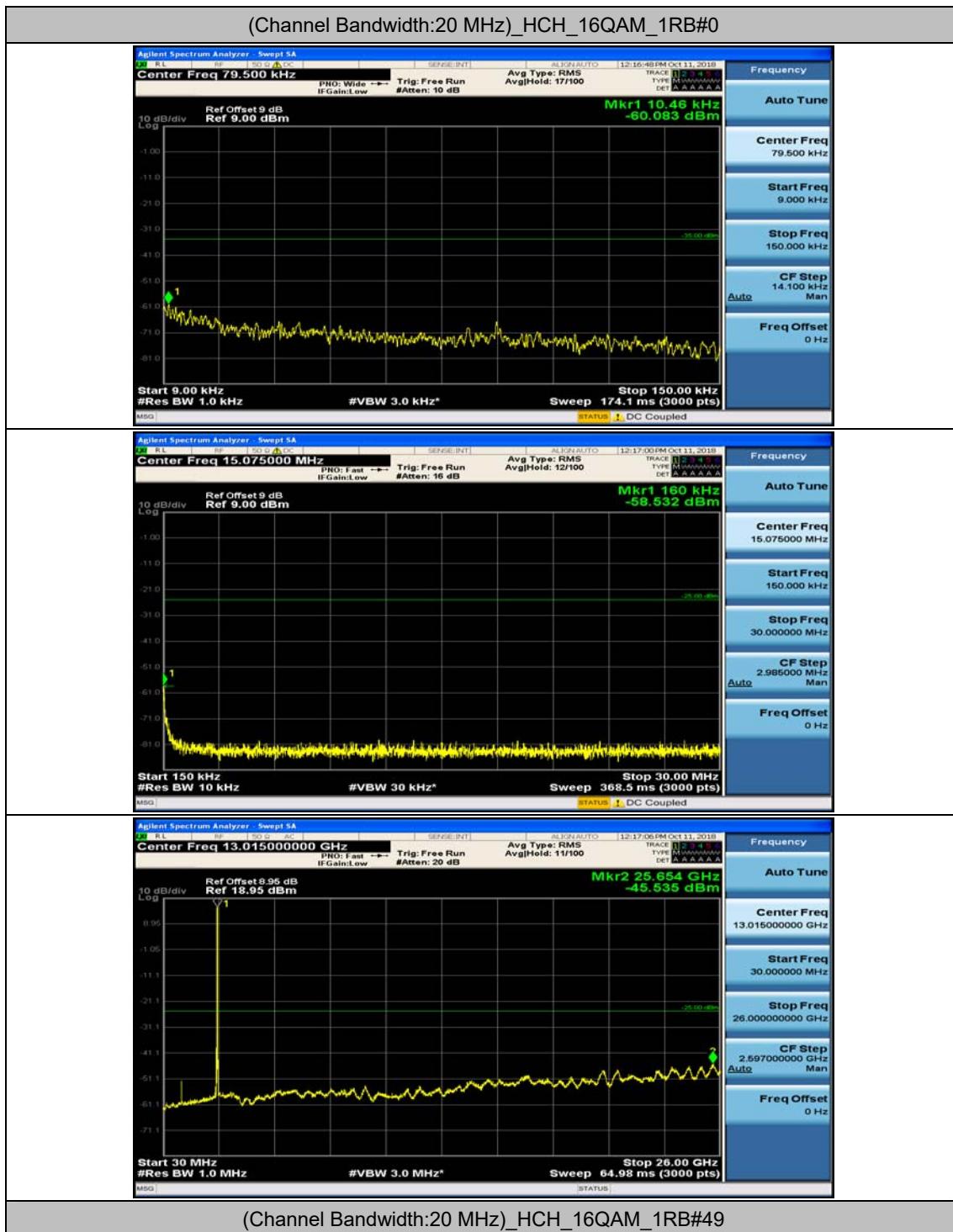


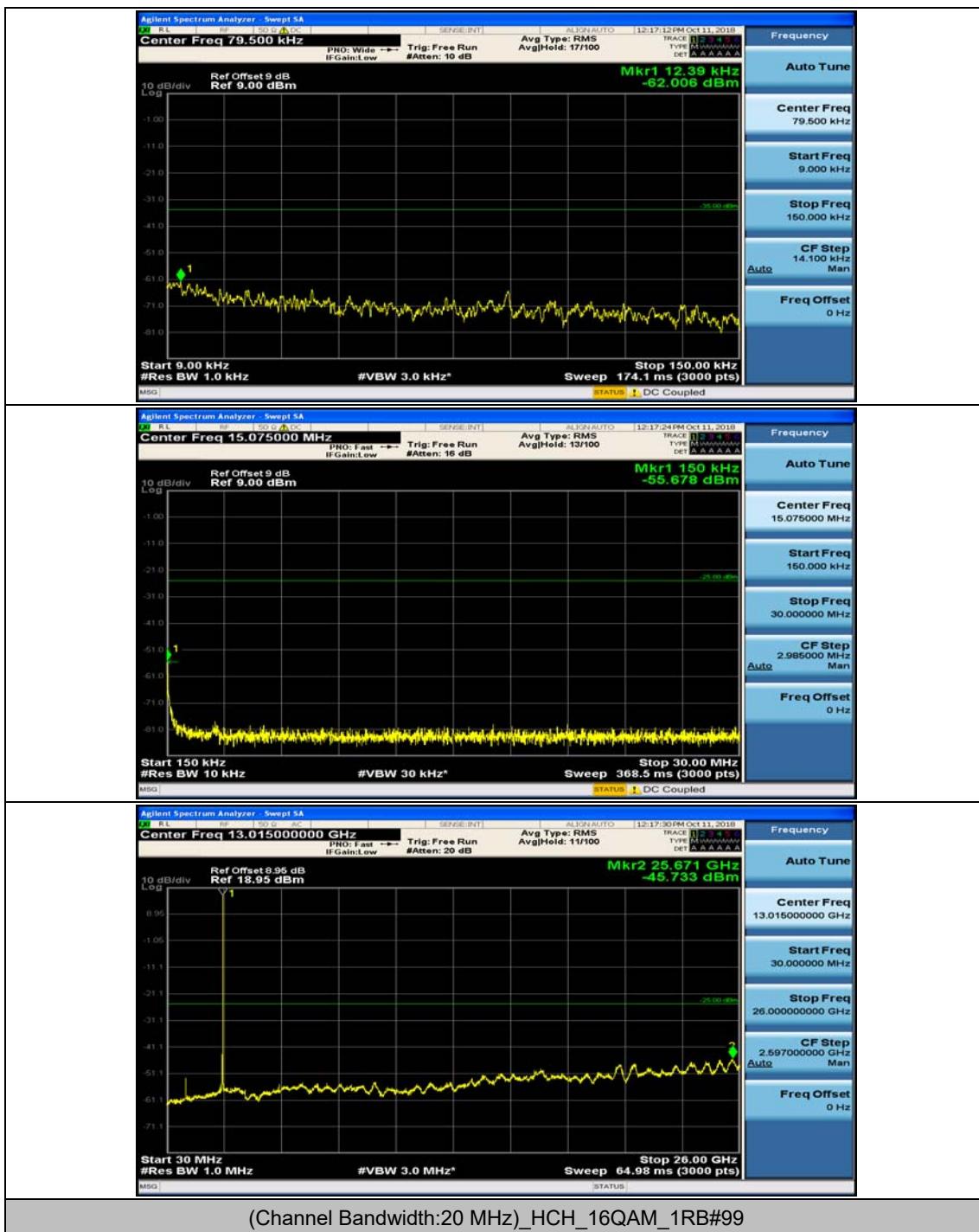


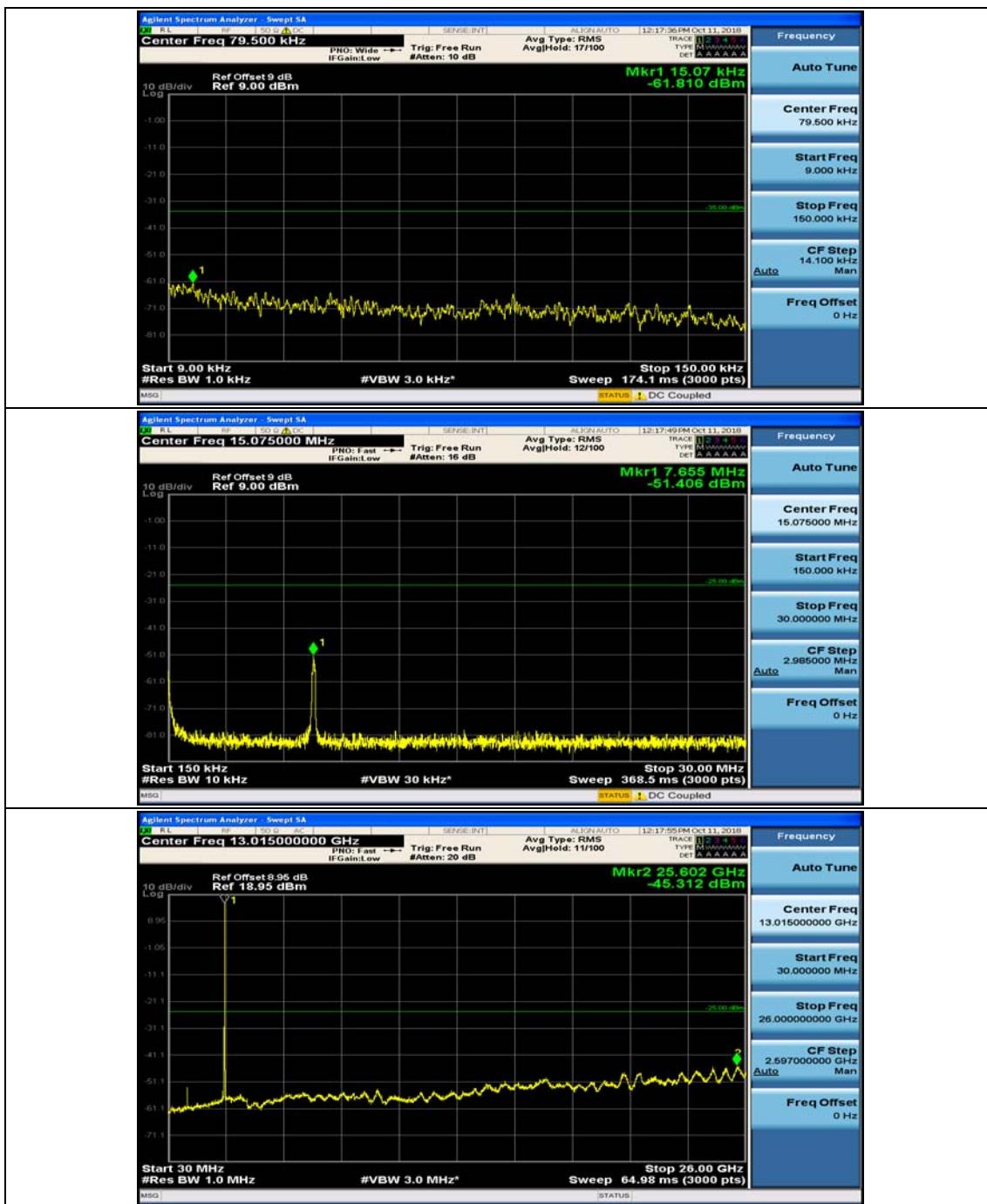


(Channel Bandwidth:20 MHz)\_MCH\_16QAM\_1RB#99









## 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	3.08	0.001231	± 2.5	PASS
		VN	TN	-1.08	-0.000432	± 2.5	PASS
		VH	TN	1.16	0.000464	± 2.5	PASS
	MCH	VL	TN	3.48	0.001373	± 2.5	PASS
		VN	TN	-0.07	-0.000028	± 2.5	PASS
		VH	TN	-0.62	-0.000245	± 2.5	PASS
	HCH	VL	TN	4.15	0.001616	± 2.5	PASS
		VN	TN	2.48	0.000966	± 2.5	PASS
		VH	TN	4.09	0.001593	± 2.5	PASS
16QAM	LCH	VL	TN	1.47	0.000587	± 2.5	PASS
		VN	TN	-1.12	-0.000448	± 2.5	PASS
		VH	TN	-1.67	-0.000667	± 2.5	PASS
	MCH	VL	TN	-1.73	-0.000682	± 2.5	PASS
		VN	TN	-0.69	-0.000272	± 2.5	PASS
		VH	TN	1.26	0.000497	± 2.5	PASS
	HCH	VL	TN	-0.95	-0.000370	± 2.5	PASS
		VN	TN	4.09	0.001593	± 2.5	PASS
		VH	TN	-1.79	-0.000697	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.35	0.001738	± 2.5	PASS
		VN	-20	0.46	0.000184	± 2.5	PASS
		VN	-10	2.16	0.000863	± 2.5	PASS
		VN	0	3	0.001199	± 2.5	PASS
		VN	10	3.42	0.001367	± 2.5	PASS
		VN	20	0.9	0.000360	± 2.5	PASS
		VN	30	4.64	0.001854	± 2.5	PASS
		VN	40	1.21	0.000484	± 2.5	PASS
		VN	50	-1.18	-0.000472	± 2.5	PASS
	MCH	VN	-30	2.64	0.001041	± 2.5	PASS
		VN	-20	-0.33	-0.000130	± 2.5	PASS

		VN	-10	-0.04	-0.000016	$\pm 2.5$	PASS
		VN	0	3.21	0.001266	$\pm 2.5$	PASS
		VN	10	4.15	0.001637	$\pm 2.5$	PASS
		VN	20	4	0.001578	$\pm 2.5$	PASS
		VN	30	2.12	0.000836	$\pm 2.5$	PASS
		VN	40	1.19	0.000469	$\pm 2.5$	PASS
		VN	50	0.86	0.000339	$\pm 2.5$	PASS
		VN	-30	3.34	0.001301	$\pm 2.5$	PASS
		VN	-20	4.81	0.001873	$\pm 2.5$	PASS
		VN	-10	2.66	0.001036	$\pm 2.5$	PASS
	HCH	VN	0	0.32	0.000125	$\pm 2.5$	PASS
		VN	10	3.69	0.001437	$\pm 2.5$	PASS
		VN	20	-0.96	-0.000374	$\pm 2.5$	PASS
		VN	30	2.16	0.000841	$\pm 2.5$	PASS
		VN	40	3.97	0.001546	$\pm 2.5$	PASS
		VN	50	4.17	0.001624	$\pm 2.5$	PASS
		VN	-30	-1.54	-0.000615	$\pm 2.5$	PASS
		VN	-20	0.31	0.000124	$\pm 2.5$	PASS
		VN	-10	4.51	0.001802	$\pm 2.5$	PASS
		VN	0	3.73	0.001491	$\pm 2.5$	PASS
	LCH	VN	10	3.47	0.001387	$\pm 2.5$	PASS
		VN	20	-1.42	-0.000567	$\pm 2.5$	PASS
		VN	30	0.96	0.000384	$\pm 2.5$	PASS
		VN	40	-0.32	-0.000128	$\pm 2.5$	PASS
		VN	50	4.28	0.001710	$\pm 2.5$	PASS
		VN	-30	3.91	0.001542	$\pm 2.5$	PASS
		VN	-20	-1.51	-0.000596	$\pm 2.5$	PASS
		VN	-10	2.05	0.000809	$\pm 2.5$	PASS
		VN	0	-0.14	-0.000055	$\pm 2.5$	PASS
		VN	10	2.68	0.001057	$\pm 2.5$	PASS
	MCH	VN	20	-1.82	-0.000718	$\pm 2.5$	PASS
		VN	30	1.66	0.000655	$\pm 2.5$	PASS
		VN	40	-0.21	-0.000083	$\pm 2.5$	PASS
		VN	50	0.8	0.000316	$\pm 2.5$	PASS
		VN	-30	-0.84	-0.000327	$\pm 2.5$	PASS
		VN	-20	0.38	0.000148	$\pm 2.5$	PASS
		VN	-10	3.59	0.001398	$\pm 2.5$	PASS
		VN	0	2.61	0.001017	$\pm 2.5$	PASS
		VN	10	0.82	0.000319	$\pm 2.5$	PASS
		VN	20	2.35	0.000915	$\pm 2.5$	PASS
	HCH	VN	30	4.85	0.001889	$\pm 2.5$	PASS

		VN	40	-0.6	-0.000234	$\pm 2.5$	PASS
		VN	50	-1.47	-0.000573	$\pm 2.5$	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	0.000870	0.000870	$\pm 2.5$	PASS
		VN	TN	0.000236	0.000236	$\pm 2.5$	PASS
		VH	TN	0.000064	0.000064	$\pm 2.5$	PASS
	MCH	VL	TN	-0.000458	-0.000458	$\pm 2.5$	PASS
		VN	TN	-0.000663	-0.000663	$\pm 2.5$	PASS
		VH	TN	0.001688	0.001688	$\pm 2.5$	PASS
	HCH	VL	TN	-0.000674	-0.000674	$\pm 2.5$	PASS
		VN	TN	-0.000507	-0.000507	$\pm 2.5$	PASS
		VH	TN	0.000113	0.000113	$\pm 2.5$	PASS
16QAM	LCH	VL	TN	0.000643	0.000643	$\pm 2.5$	PASS
		VN	TN	0.000204	0.000204	$\pm 2.5$	PASS
		VH	TN	0.000715	0.000715	$\pm 2.5$	PASS
	MCH	VL	TN	0.000146	0.000146	$\pm 2.5$	PASS
		VN	TN	0.001247	0.001247	$\pm 2.5$	PASS
		VH	TN	0.001542	0.001542	$\pm 2.5$	PASS
	HCH	VL	TN	0.000250	0.000250	$\pm 2.5$	PASS
		VN	TN	-0.000199	-0.000199	$\pm 2.5$	PASS
		VH	TN	-0.000612	-0.000612	$\pm 2.5$	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	3.7	0.001477	$\pm 2.5$	PASS
		VN	-20	0.65	0.000259	$\pm 2.5$	PASS
		VN	-10	3.59	0.001433	$\pm 2.5$	PASS
		VN	0	-0.62	-0.000248	$\pm 2.5$	PASS
		VN	10	1.97	0.000786	$\pm 2.5$	PASS
		VN	20	2.58	0.001030	$\pm 2.5$	PASS
		VN	30	0.53	0.000212	$\pm 2.5$	PASS
		VN	40	-0.08	-0.000032	$\pm 2.5$	PASS
		VN	50	-1.11	-0.000443	$\pm 2.5$	PASS
	MCH	VN	-30	4.77	0.001882	$\pm 2.5$	PASS
		VN	-20	4.92	0.001941	$\pm 2.5$	PASS
		VN	-10	2.79	0.001101	$\pm 2.5$	PASS

	HCH	VN	0	-1.1	-0.000434	$\pm 2.5$	PASS
		VN	10	-0.05	-0.000020	$\pm 2.5$	PASS
		VN	20	-0.8	-0.000316	$\pm 2.5$	PASS
		VN	30	4.1	0.001617	$\pm 2.5$	PASS
		VN	40	-1.68	-0.000663	$\pm 2.5$	PASS
		VN	50	2.26	0.000892	$\pm 2.5$	PASS
		VN	-30	-1.36	-0.000530	$\pm 2.5$	PASS
		VN	-20	4.88	0.001903	$\pm 2.5$	PASS
		VN	-10	2.92	0.001138	$\pm 2.5$	PASS
		VN	0	4.9	0.001910	$\pm 2.5$	PASS
	LCH	VN	10	2.44	0.000951	$\pm 2.5$	PASS
		VN	20	-0.49	-0.000191	$\pm 2.5$	PASS
		VN	30	1.78	0.000694	$\pm 2.5$	PASS
		VN	40	0.56	0.000218	$\pm 2.5$	PASS
		VN	50	-0.91	-0.000355	$\pm 2.5$	PASS
		VN	-30	-1.75	-0.000699	$\pm 2.5$	PASS
		VN	-20	-1.66	-0.000663	$\pm 2.5$	PASS
		VN	-10	3.01	0.001202	$\pm 2.5$	PASS
		VN	0	4.11	0.001641	$\pm 2.5$	PASS
		VN	10	1.92	0.000766	$\pm 2.5$	PASS
	QPSK	VN	20	3.8	0.001517	$\pm 2.5$	PASS
		VN	30	3.35	0.001337	$\pm 2.5$	PASS
		VN	40	0.98	0.000391	$\pm 2.5$	PASS
		VN	50	-0.49	-0.000196	$\pm 2.5$	PASS
		VN	-30	4.57	0.001803	$\pm 2.5$	PASS
		VN	-20	4.15	0.001637	$\pm 2.5$	PASS
		VN	-10	1.73	0.000682	$\pm 2.5$	PASS
		VN	0	3.58	0.001412	$\pm 2.5$	PASS
		VN	10	0.32	0.000126	$\pm 2.5$	PASS
		VN	20	4.24	0.001673	$\pm 2.5$	PASS
	MCH	VN	30	-1.18	-0.000465	$\pm 2.5$	PASS
		VN	40	3.04	0.001199	$\pm 2.5$	PASS
		VN	50	2.74	0.001081	$\pm 2.5$	PASS
		VN	-30	4.17	0.001626	$\pm 2.5$	PASS
		VN	-20	-0.49	-0.000191	$\pm 2.5$	PASS
		VN	-10	0.58	0.000226	$\pm 2.5$	PASS
		VN	0	-0.71	-0.000277	$\pm 2.5$	PASS
		VN	10	-0.66	-0.000257	$\pm 2.5$	PASS
		VN	20	0.75	0.000292	$\pm 2.5$	PASS
		VN	30	0.09	0.000035	$\pm 2.5$	PASS
	HCH	VN	40	0.17	0.000066	$\pm 2.5$	PASS

		VN	50	4.85	0.001891	$\pm 2.5$	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	0.27	0.000108	$\pm 2.5$	PASS
		VN	TN	-0.82	-0.000327	$\pm 2.5$	PASS
		VH	TN	3.29	0.001312	$\pm 2.5$	PASS
	MCH	VL	TN	0.86	0.000339	$\pm 2.5$	PASS
		VN	TN	0.07	0.000028	$\pm 2.5$	PASS
		VH	TN	-1.02	-0.000402	$\pm 2.5$	PASS
	HCH	VL	TN	2.2	0.000859	$\pm 2.5$	PASS
		VN	TN	1.88	0.000734	$\pm 2.5$	PASS
		VH	TN	0.52	0.000203	$\pm 2.5$	PASS
16QAM	LCH	VL	TN	4.11	0.001639	$\pm 2.5$	PASS
		VN	TN	-0.73	-0.000291	$\pm 2.5$	PASS
		VH	TN	-0.33	-0.000132	$\pm 2.5$	PASS
	MCH	VL	TN	1.19	0.000469	$\pm 2.5$	PASS
		VN	TN	3.14	0.001239	$\pm 2.5$	PASS
		VH	TN	1.54	0.000607	$\pm 2.5$	PASS
	HCH	VL	TN	0.25	0.000098	$\pm 2.5$	PASS
		VN	TN	1.52	0.000593	$\pm 2.5$	PASS
		VH	TN	-0.12	-0.000047	$\pm 2.5$	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.37	-0.000546	$\pm 2.5$	PASS
		VN	-20	-0.04	-0.000016	$\pm 2.5$	PASS
		VN	-10	0.07	0.000028	$\pm 2.5$	PASS
		VN	0	4.8	0.001914	$\pm 2.5$	PASS
		VN	10	1.07	0.000427	$\pm 2.5$	PASS
		VN	20	-1.93	-0.000770	$\pm 2.5$	PASS
		VN	30	3.05	0.001216	$\pm 2.5$	PASS
		VN	40	-1.76	-0.000702	$\pm 2.5$	PASS
		VN	50	0.29	0.000116	$\pm 2.5$	PASS
	MCH	VN	-30	-0.59	-0.000233	$\pm 2.5$	PASS
		VN	-20	3.01	0.001187	$\pm 2.5$	PASS
		VN	-10	3.94	0.001554	$\pm 2.5$	PASS
		VN	0	0.75	0.000296	$\pm 2.5$	PASS

		VN	10	-1.32	-0.000521	$\pm$ 2.5	PASS
		VN	20	-1.52	-0.000600	$\pm$ 2.5	PASS
		VN	30	-1.14	-0.000450	$\pm$ 2.5	PASS
		VN	40	3.83	0.001511	$\pm$ 2.5	PASS
		VN	50	4.67	0.001842	$\pm$ 2.5	PASS
		VN	-30	2.68	0.001046	$\pm$ 2.5	PASS
		VN	-20	-1.54	-0.000601	$\pm$ 2.5	PASS
		VN	-10	1.03	0.000402	$\pm$ 2.5	PASS
		VN	0	-1.57	-0.000613	$\pm$ 2.5	PASS
		VN	10	1.08	0.000421	$\pm$ 2.5	PASS
		VN	20	-0.97	-0.000379	$\pm$ 2.5	PASS
		VN	30	0.42	0.000164	$\pm$ 2.5	PASS
		VN	40	-0.67	-0.000261	$\pm$ 2.5	PASS
		VN	50	2.74	0.001069	$\pm$ 2.5	PASS
		VN	-30	-1.37	-0.000546	$\pm$ 2.5	PASS
		VN	-20	2.18	0.000869	$\pm$ 2.5	PASS
		VN	-10	0.86	0.000343	$\pm$ 2.5	PASS
		VN	0	2.99	0.001192	$\pm$ 2.5	PASS
		VN	10	1.2	0.000479	$\pm$ 2.5	PASS
		VN	20	3.61	0.001440	$\pm$ 2.5	PASS
		VN	30	1.83	0.000730	$\pm$ 2.5	PASS
		VN	40	1.75	0.000698	$\pm$ 2.5	PASS
		VN	50	-1.72	-0.000686	$\pm$ 2.5	PASS
		VN	-30	-1.59	-0.000627	$\pm$ 2.5	PASS
		VN	-20	4.59	0.001811	$\pm$ 2.5	PASS
		VN	-10	2.86	0.001128	$\pm$ 2.5	PASS
		VN	0	4.57	0.001803	$\pm$ 2.5	PASS
		VN	10	4.42	0.001744	$\pm$ 2.5	PASS
		VN	20	-1.24	-0.000489	$\pm$ 2.5	PASS
		VN	30	-1.47	-0.000580	$\pm$ 2.5	PASS
		VN	40	2.93	0.001156	$\pm$ 2.5	PASS
		VN	50	-1.28	-0.000505	$\pm$ 2.5	PASS
		VN	-30	1.83	0.000714	$\pm$ 2.5	PASS
		VN	-20	0.28	0.000109	$\pm$ 2.5	PASS
		VN	-10	4.77	0.001861	$\pm$ 2.5	PASS
		VN	0	3.33	0.001300	$\pm$ 2.5	PASS
		VN	10	4.64	0.001811	$\pm$ 2.5	PASS
		VN	20	1.09	0.000425	$\pm$ 2.5	PASS
		VN	30	3.42	0.001335	$\pm$ 2.5	PASS
		VN	40	1.41	0.000550	$\pm$ 2.5	PASS
		VN	50	1.93	0.000753	$\pm$ 2.5	PASS

## 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	-0.65	-0.000259	± 2.5	PASS
		VN	TN	2.09	0.000833	± 2.5	PASS
		VH	TN	2.88	0.001147	± 2.5	PASS
	MCH	VL	TN	3.26	0.001286	± 2.5	PASS
		VN	TN	4.61	0.001819	± 2.5	PASS
		VH	TN	1.06	0.000418	± 2.5	PASS
	HCH	VL	TN	1.95	0.000762	± 2.5	PASS
		VN	TN	3.18	0.001242	± 2.5	PASS
		VH	TN	3.59	0.001402	± 2.5	PASS
16QAM	LCH	VL	TN	1.33	0.000530	± 2.5	PASS
		VN	TN	4.15	0.001653	± 2.5	PASS
		VH	TN	2.78	0.001108	± 2.5	PASS
	MCH	VL	TN	2.34	0.000923	± 2.5	PASS
		VN	TN	1.91	0.000753	± 2.5	PASS
		VH	TN	-1.11	-0.000438	± 2.5	PASS
	HCH	VL	TN	3.86	0.001508	± 2.5	PASS
		VN	TN	-0.01	-0.000004	± 2.5	PASS
		VH	TN	-0.18	-0.000070	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.05	0.000817	± 2.5	PASS
		VN	-20	3.07	0.001223	± 2.5	PASS
		VN	-10	-1.7	-0.000677	± 2.5	PASS
		VN	0	3.77	0.001502	± 2.5	PASS
		VN	10	3.23	0.001287	± 2.5	PASS
		VN	20	2.51	0.001000	± 2.5	PASS
		VN	30	4.29	0.001709	± 2.5	PASS
		VN	40	-0.15	-0.000060	± 2.5	PASS
		VN	50	0.17	0.000068	± 2.5	PASS
	MCH	VN	-30	-1.4	-0.000552	± 2.5	PASS
		VN	-20	4.65	0.001834	± 2.5	PASS
		VN	-10	3.69	0.001456	± 2.5	PASS
		VN	0	2.34	0.000923	± 2.5	PASS
		VN	10	3.03	0.001195	± 2.5	PASS
		VN	20	2.19	0.000864	± 2.5	PASS

	HCH	VN	30	0.55	0.000217	$\pm 2.5$	PASS
		VN	40	-1.97	-0.000777	$\pm 2.5$	PASS
		VN	50	-0.12	-0.000047	$\pm 2.5$	PASS
		VN	-30	1.02	0.000398	$\pm 2.5$	PASS
		VN	-20	3.34	0.001305	$\pm 2.5$	PASS
		VN	-10	-1.06	-0.000414	$\pm 2.5$	PASS
		VN	0	2.12	0.000828	$\pm 2.5$	PASS
		VN	10	3.92	0.001531	$\pm 2.5$	PASS
		VN	20	1.34	0.000523	$\pm 2.5$	PASS
		VN	30	3.72	0.001453	$\pm 2.5$	PASS
	LCH	VN	40	4.29	0.001676	$\pm 2.5$	PASS
		VN	50	4.33	0.001691	$\pm 2.5$	PASS
		VN	-30	-0.24	-0.000096	$\pm 2.5$	PASS
		VN	-20	-1.03	-0.000410	$\pm 2.5$	PASS
		VN	-10	3.95	0.001574	$\pm 2.5$	PASS
		VN	0	4.29	0.001709	$\pm 2.5$	PASS
		VN	10	4.73	0.001884	$\pm 2.5$	PASS
		VN	20	4.04	0.001610	$\pm 2.5$	PASS
		VN	30	-0.28	-0.000112	$\pm 2.5$	PASS
		VN	40	-1.32	-0.000526	$\pm 2.5$	PASS
	MCH	VN	50	0.01	0.000004	$\pm 2.5$	PASS
		VN	-30	0.49	0.000193	$\pm 2.5$	PASS
		VN	-20	-0.29	-0.000114	$\pm 2.5$	PASS
		VN	-10	0.62	0.000245	$\pm 2.5$	PASS
		VN	0	3.49	0.001377	$\pm 2.5$	PASS
		VN	10	-1.09	-0.000430	$\pm 2.5$	PASS
		VN	20	3.53	0.001393	$\pm 2.5$	PASS
		VN	30	2.78	0.001097	$\pm 2.5$	PASS
		VN	40	0.27	0.000107	$\pm 2.5$	PASS
		VN	50	4.06	0.001602	$\pm 2.5$	PASS
	HCH	VN	-30	3	0.001172	$\pm 2.5$	PASS
		VN	-20	-0.19	-0.000074	$\pm 2.5$	PASS
		VN	-10	2.72	0.001063	$\pm 2.5$	PASS
		VN	0	-0.83	-0.000324	$\pm 2.5$	PASS
		VN	10	3.67	0.001434	$\pm 2.5$	PASS
		VN	20	-1.64	-0.000641	$\pm 2.5$	PASS
		VN	30	0.38	0.000148	$\pm 2.5$	PASS
		VN	40	0.9	0.000352	$\pm 2.5$	PASS
		VN	50	1.6	0.000625	$\pm 2.5$	PASS