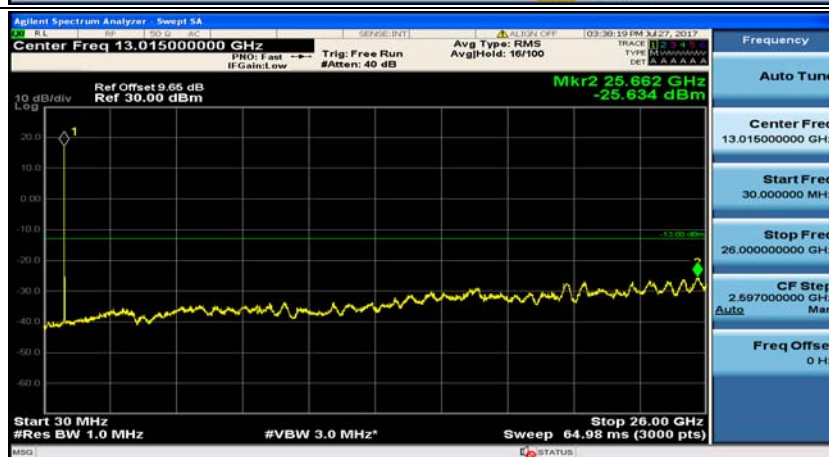
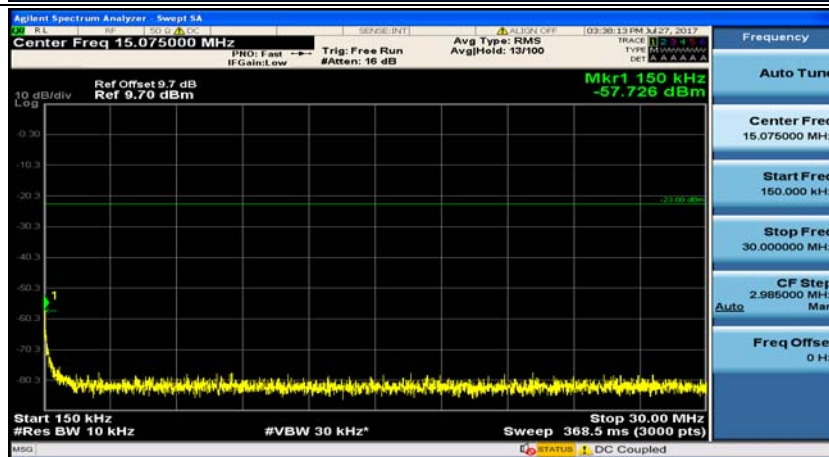
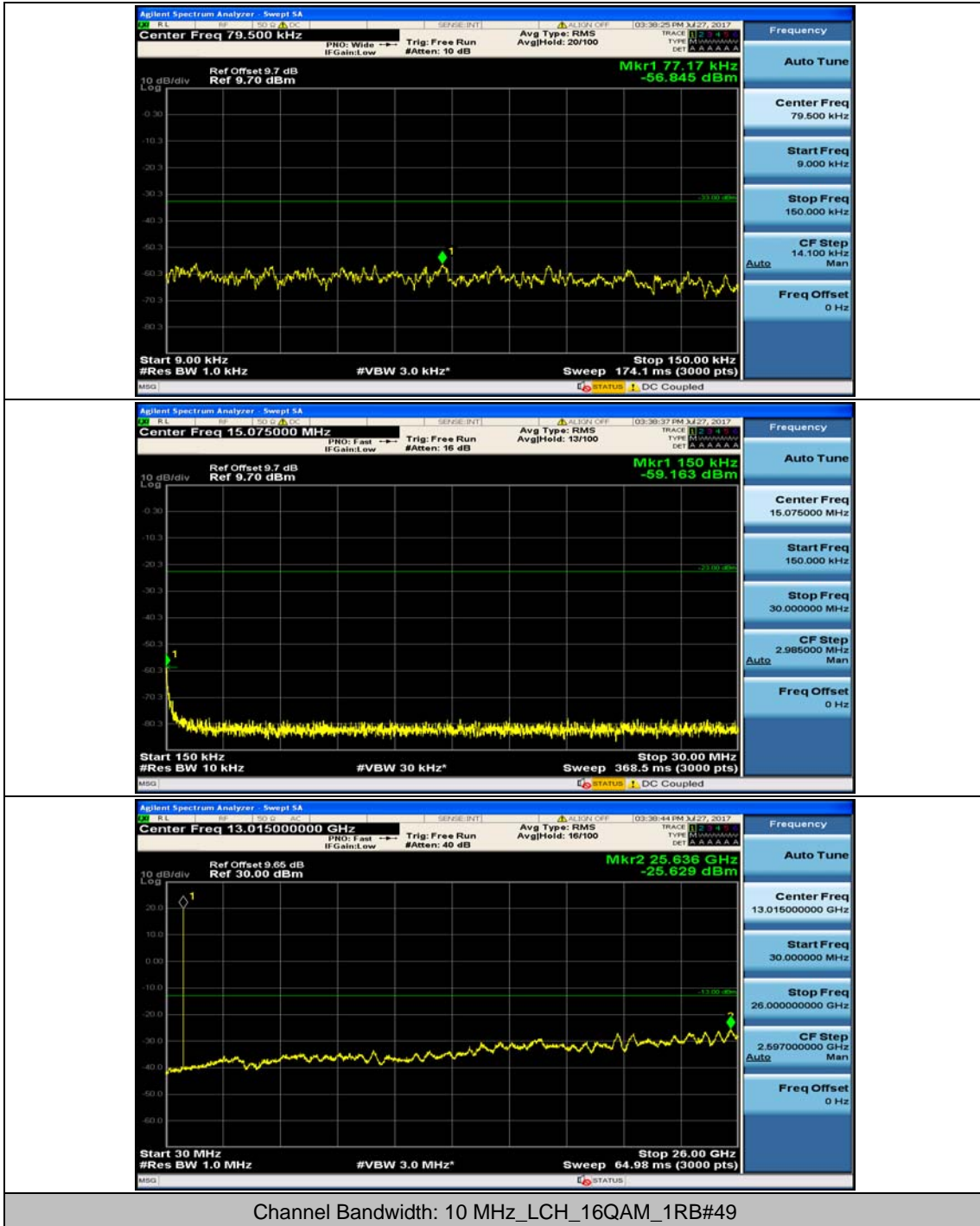
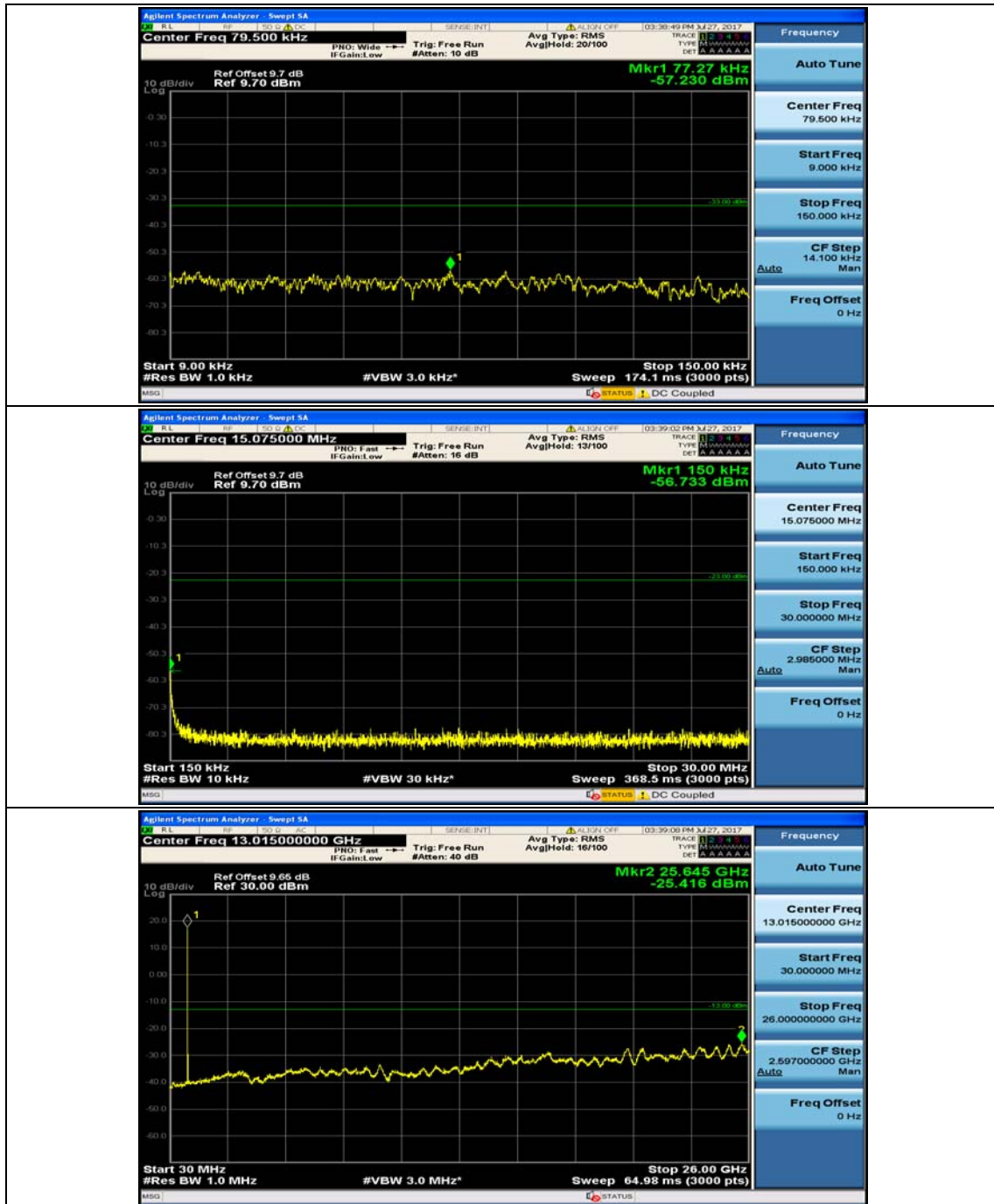


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

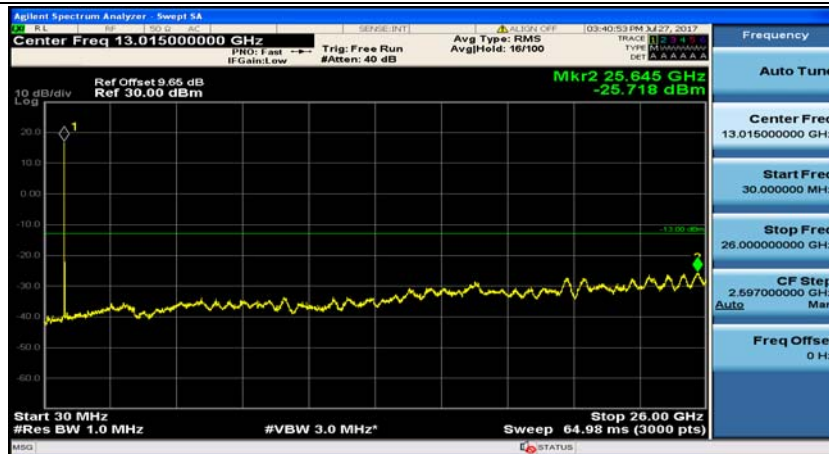
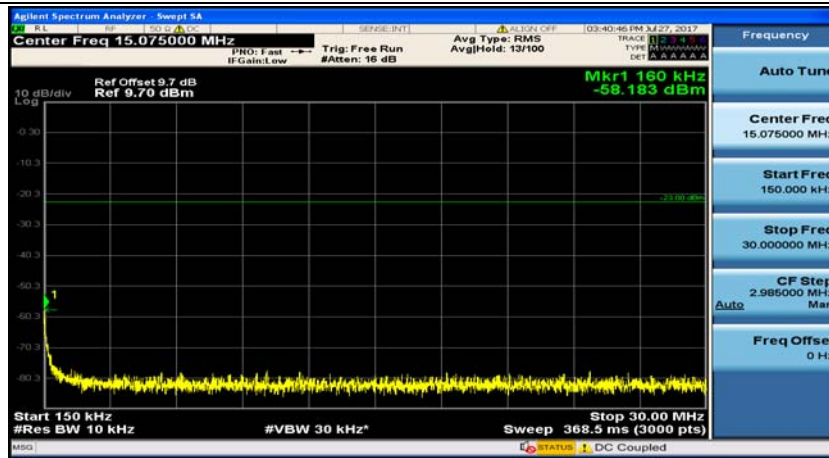
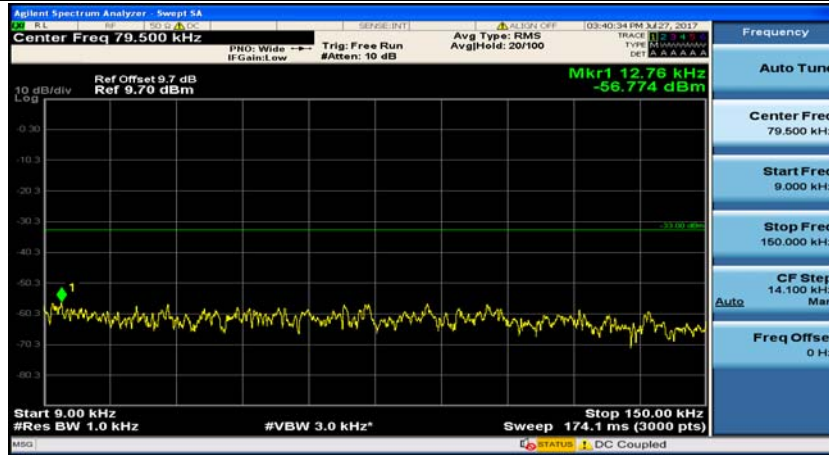


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

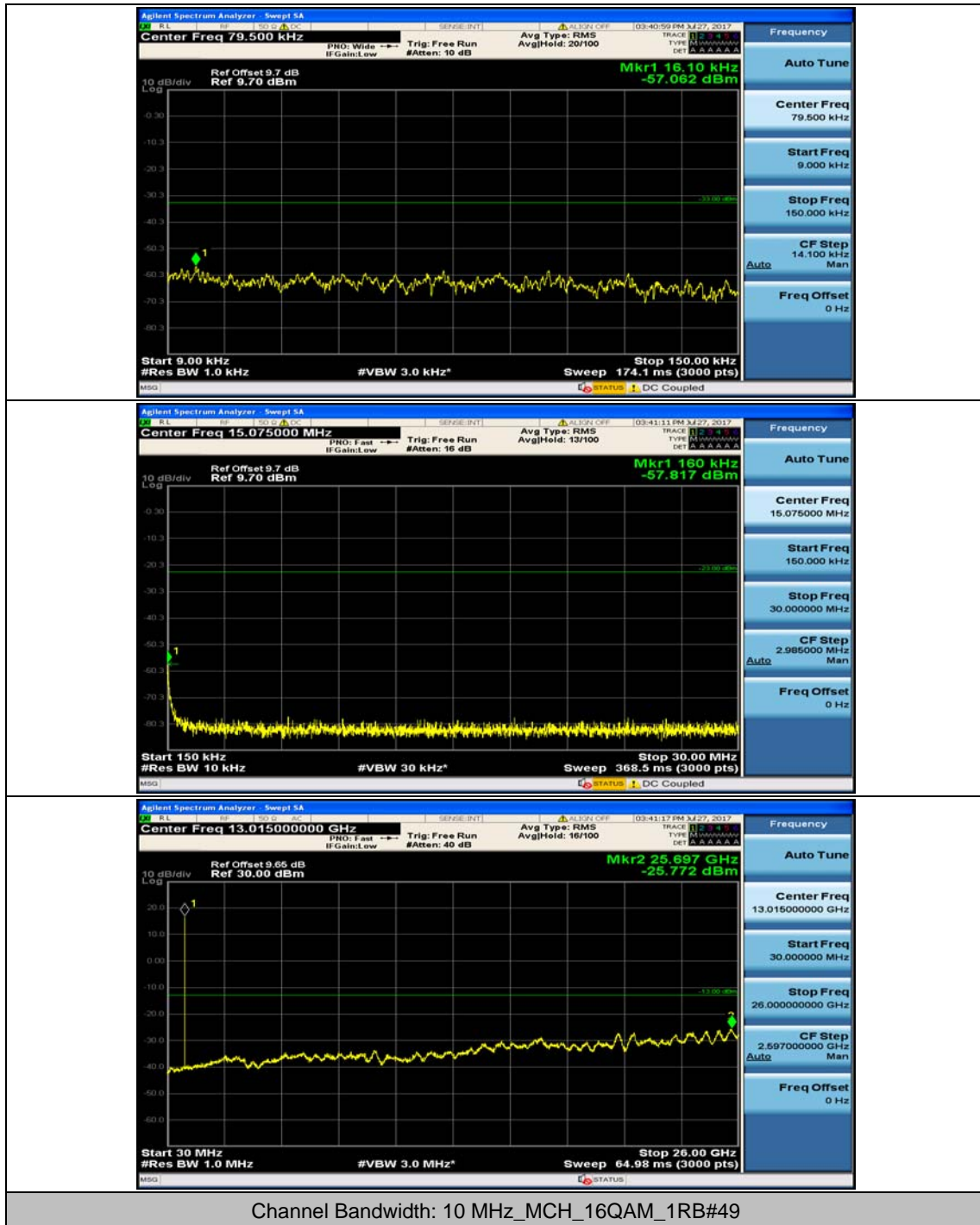


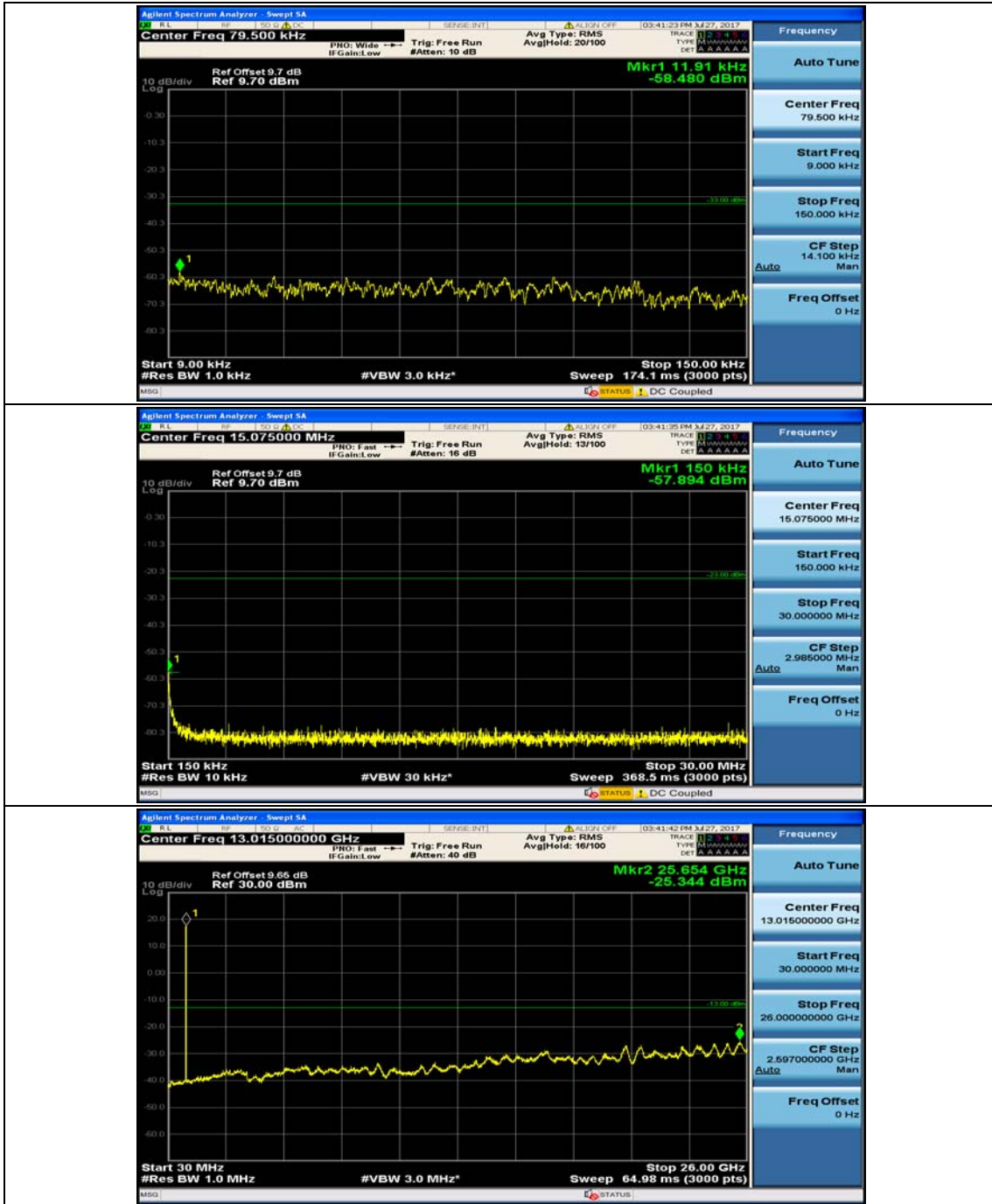


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

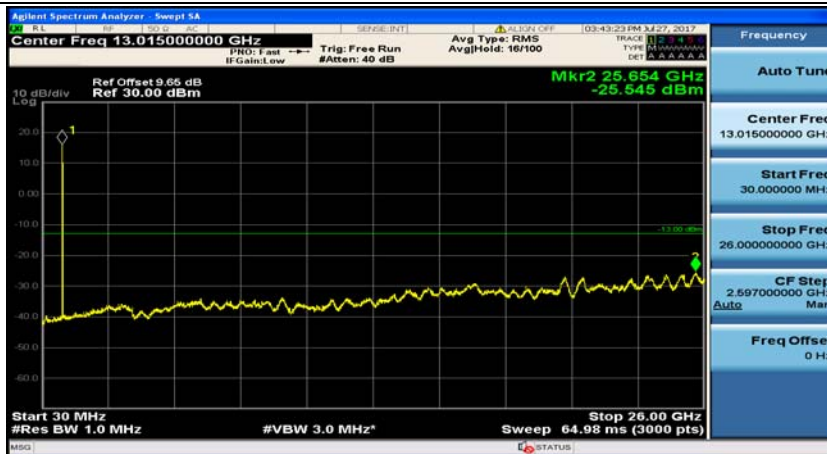
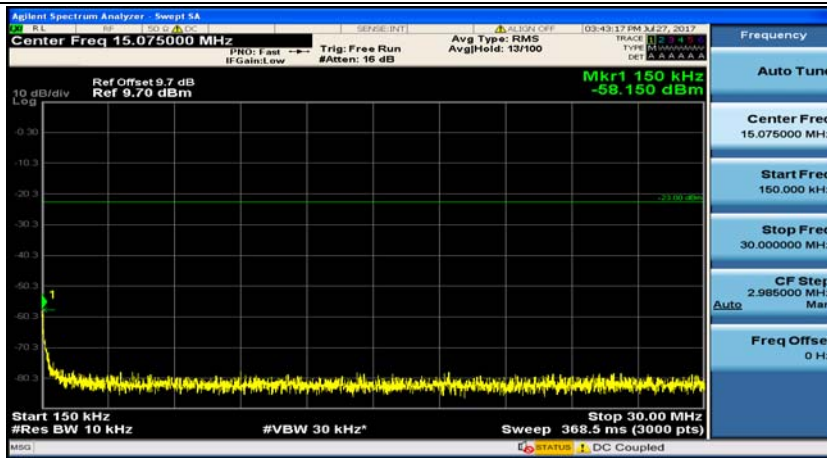


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

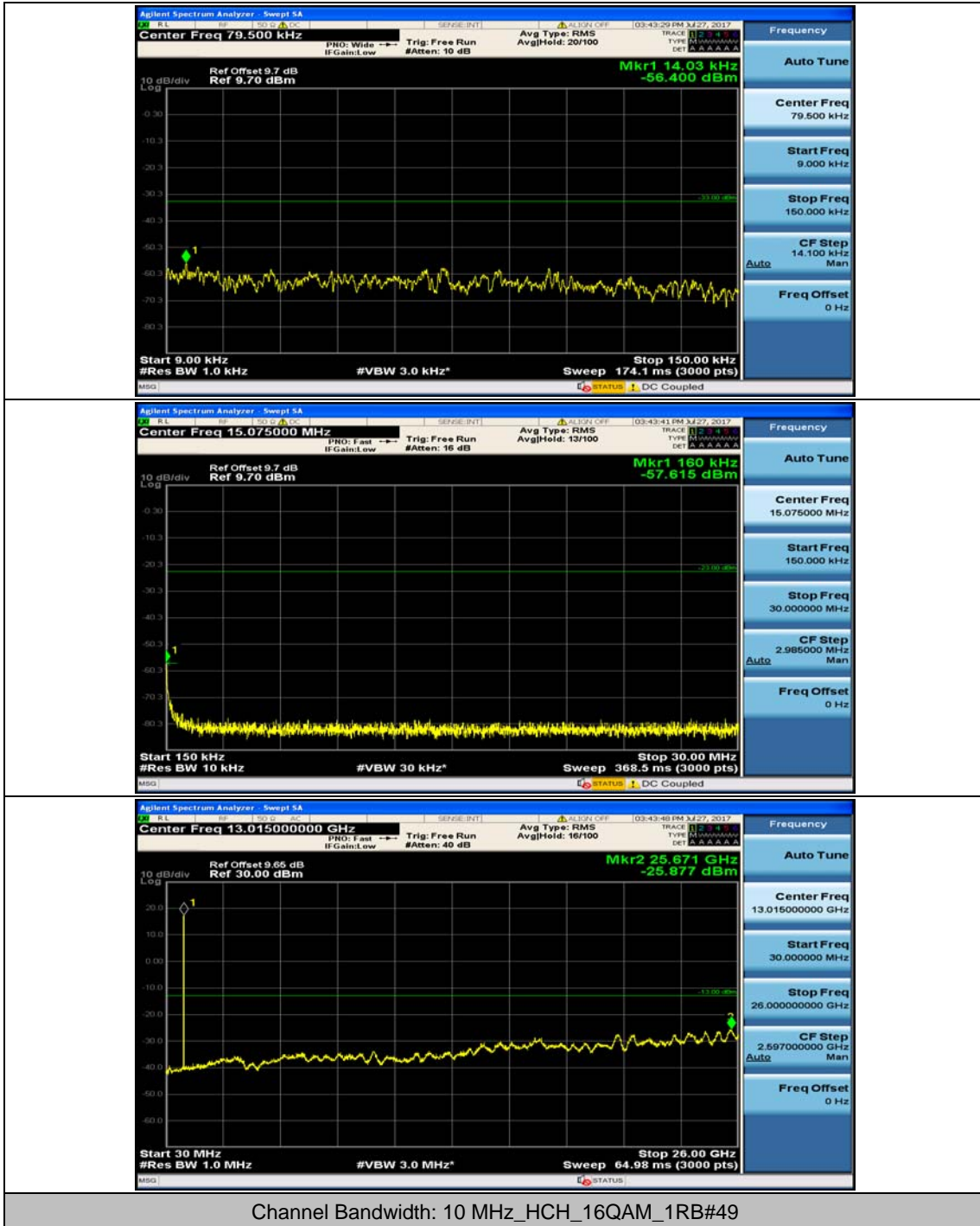


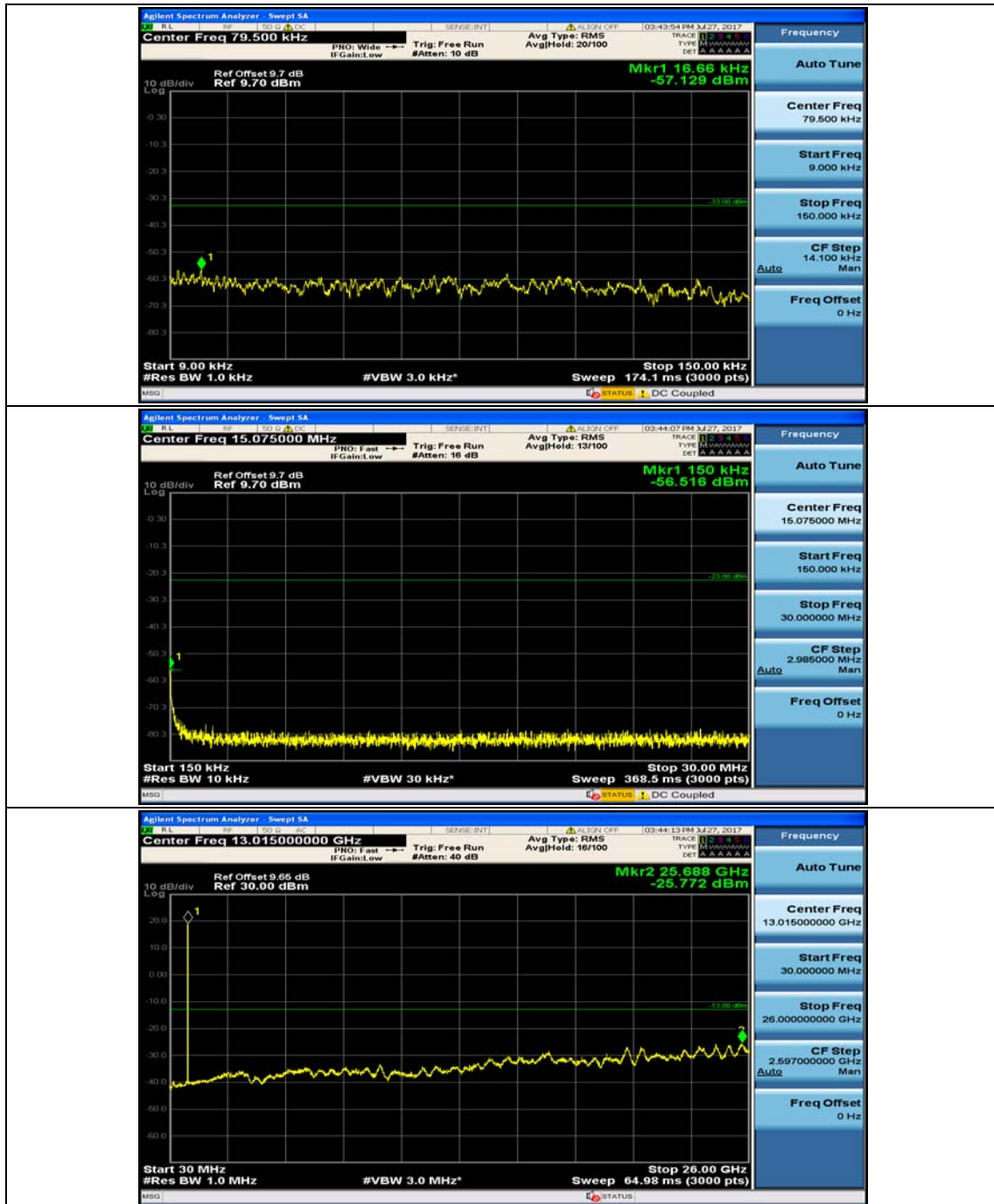


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24





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	-0.05	-0.000061	± 2.5	PASS
		VN	TN	-1.99	-0.002413	± 2.5	PASS
		VH	TN	4.44	0.005384	± 2.5	PASS
	MCH	VL	TN	1.14	0.001363	± 2.5	PASS
		VN	TN	3.63	0.004340	± 2.5	PASS
		VH	TN	-1.18	-0.001411	± 2.5	PASS
	HCH	VL	TN	3.15	0.003713	± 2.5	PASS
		VN	TN	-1.89	-0.002228	± 2.5	PASS
		VH	TN	-0.07	-0.000083	± 2.5	PASS
16QAM	LCH	VL	TN	-1.53	-0.001855	± 2.5	PASS
		VN	TN	-0.7	-0.000849	± 2.5	PASS
		VH	TN	4.56	0.005529	± 2.5	PASS
	MCH	VL	TN	1.51	0.001805	± 2.5	PASS
		VN	TN	-1.37	-0.001638	± 2.5	PASS
		VH	TN	4.39	0.005248	± 2.5	PASS
	HCH	VL	TN	-1.1	-0.001297	± 2.5	PASS
		VN	TN	-1.72	-0.002028	± 2.5	PASS
		VH	TN	3.08	0.003631	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.93	0.005978	± 2.5	PASS
		VN	-20	3.23	0.003917	± 2.5	PASS
		VN	-10	-1.35	-0.001637	± 2.5	PASS
		VN	0	0.17	0.000206	± 2.5	PASS
		VN	10	2.71	0.003286	± 2.5	PASS
		VN	20	-0.55	-0.000667	± 2.5	PASS
		VN	30	3.94	0.004777	± 2.5	PASS
		VN	40	-1.12	-0.001358	± 2.5	PASS
		VN	50	-1.27	-0.001540	± 2.5	PASS
	MCH	VN	-30	0.84	0.001004	± 2.5	PASS

		VN	-20	-1.79	-0.002140	± 2.5	PASS
		VN	-10	3.77	0.004507	± 2.5	PASS
		VN	0	-0.69	-0.000825	± 2.5	PASS
		VN	10	1.66	0.001984	± 2.5	PASS
		VN	20	3.56	0.004256	± 2.5	PASS
		VN	30	2.9	0.003467	± 2.5	PASS
		VN	40	2.26	0.002702	± 2.5	PASS
		VN	50	4.85	0.005798	± 2.5	PASS
	HCH	VN	-30	4.66	0.005493	± 2.5	PASS
		VN	-20	3.98	0.004692	± 2.5	PASS
		VN	-10	3.88	0.004574	± 2.5	PASS
		VN	0	4.67	0.005505	± 2.5	PASS
		VN	10	2.78	0.003277	± 2.5	PASS
		VN	20	0.93	0.001096	± 2.5	PASS
		VN	30	0.49	0.000578	± 2.5	PASS
		VN	40	0.24	0.000283	± 2.5	PASS
		VN	50	-1.6	-0.001886	± 2.5	PASS
		16QAM	LCH	VN	-30	-0.21	-0.000255
VN	-20			2.07	0.002510	± 2.5	PASS
VN	-10			1.88	0.002280	± 2.5	PASS
VN	0			1.11	0.001346	± 2.5	PASS
VN	10			0.87	0.001055	± 2.5	PASS
VN	20			2.35	0.002850	± 2.5	PASS
VN	30			3.18	0.003856	± 2.5	PASS
VN	40			4.79	0.005808	± 2.5	PASS
VN	50			4.86	0.005893	± 2.5	PASS
MCH	VN		-30	0.85	0.001002	± 2.5	PASS
	VN		-20	4.54	0.005352	± 2.5	PASS
	VN		-10	-0.23	-0.000271	± 2.5	PASS
	VN		0	-0.24	-0.000283	± 2.5	PASS
	VN		10	4.51	0.005317	± 2.5	PASS
	VN		20	-1.26	-0.001485	± 2.5	PASS
	VN		30	-0.51	-0.000601	± 2.5	PASS
	VN		40	0.44	0.000519	± 2.5	PASS
	VN		50	2.91	0.003430	± 2.5	PASS
HCH	VN		-30	3.16	0.003725	± 2.5	PASS
	VN		-20	0.65	0.000766	± 2.5	PASS
	VN		-10	4.24	0.004998	± 2.5	PASS
	VN		0	-0.04	-0.000047	± 2.5	PASS
	VN		10	-1.65	-0.001945	± 2.5	PASS
	VN		20	3.12	0.003678	± 2.5	PASS

		VN	30	2.13	0.002511	± 2.5	PASS
		VN	40	1.79	0.002110	± 2.5	PASS
		VN	50	3.68	0.004338	± 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	-0.71	-0.000861	± 2.5	PASS
		VN	TN	-1.15	-0.001394	± 2.5	PASS
		VH	TN	0.34	0.000412	± 2.5	PASS
	MCH	VL	TN	3.07	0.003670	± 2.5	PASS
		VN	TN	-0.83	-0.000992	± 2.5	PASS
		VH	TN	3.99	0.004770	± 2.5	PASS
	HCH	VL	TN	1.26	0.001485	± 2.5	PASS
		VN	TN	-0.41	-0.000483	± 2.5	PASS
		VH	TN	3.85	0.004538	± 2.5	PASS
16QAM	LCH	VL	TN	-1.53	-0.001855	± 2.5	PASS
		VN	TN	2.49	0.003019	± 2.5	PASS
		VH	TN	-1.46	-0.001770	± 2.5	PASS
	MCH	VL	TN	2.04	0.002439	± 2.5	PASS
		VN	TN	4.96	0.005929	± 2.5	PASS
		VH	TN	2.7	0.003228	± 2.5	PASS
	HCH	VL	TN	1.49	0.001756	± 2.5	PASS
		VN	TN	3.5	0.004126	± 2.5	PASS
		VH	TN	-0.64	-0.000754	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	2.93	0.003553	± 2.5	PASS
		VN	-20	3.66	0.004438	± 2.5	PASS
		VN	-10	1.83	0.002219	± 2.5	PASS
		VN	0	-0.58	-0.000703	± 2.5	PASS
		VN	10	0.96	0.001164	± 2.5	PASS
		VN	20	4.68	0.005675	± 2.5	PASS
		VN	30	4.18	0.005069	± 2.5	PASS
		VN	40	1.95	0.002364	± 2.5	PASS
		VN	50	2.9	0.003516	± 2.5	PASS
	MCH	VN	-30	3.79	0.004531	± 2.5	PASS
		VN	-20	-0.01	-0.000012	± 2.5	PASS

		VN	-10	-1.62	-0.001937	± 2.5	PASS		
		VN	0	0.6	0.000717	± 2.5	PASS		
		VN	10	3.83	0.004579	± 2.5	PASS		
		VN	20	2.65	0.003168	± 2.5	PASS		
		VN	30	1.09	0.001303	± 2.5	PASS		
		VN	40	3.63	0.004340	± 2.5	PASS		
		VN	50	2.41	0.002881	± 2.5	PASS		
	HCH	VN	-30	-1.75	-0.002063	± 2.5	PASS		
		VN	-20	-1.26	-0.001485	± 2.5	PASS		
		VN	-10	1.57	0.001851	± 2.5	PASS		
		VN	0	1.29	0.001521	± 2.5	PASS		
		VN	10	-0.31	-0.000365	± 2.5	PASS		
		VN	20	2.98	0.003513	± 2.5	PASS		
		VN	30	-0.55	-0.000648	± 2.5	PASS		
		VN	40	0.12	0.000141	± 2.5	PASS		
		VN	50	0.3	0.000354	± 2.5	PASS		
		QPSK	LCH	VN	-30	-0.74	-0.000897	± 2.5	PASS
				VN	-20	0.22	0.000267	± 2.5	PASS
VN	-10			0.29	0.000352	± 2.5	PASS		
VN	0			-0.98	-0.001188	± 2.5	PASS		
VN	10			1.48	0.001795	± 2.5	PASS		
VN	20			4.39	0.005323	± 2.5	PASS		
VN	30			-1.61	-0.001952	± 2.5	PASS		
VN	40			1.91	0.002316	± 2.5	PASS		
VN	50			1.34	0.001625	± 2.5	PASS		
MCH	VN		-30	4.7	0.005540	± 2.5	PASS		
	VN		-20	-0.67	-0.000790	± 2.5	PASS		
	VN		-10	4.96	0.005847	± 2.5	PASS		
	VN		0	2.55	0.003006	± 2.5	PASS		
	VN		10	4	0.004715	± 2.5	PASS		
	VN		20	2.06	0.002428	± 2.5	PASS		
	VN		30	1.92	0.002263	± 2.5	PASS		
	VN		40	0.99	0.001167	± 2.5	PASS		
	VN		50	-1.26	-0.001485	± 2.5	PASS		
HCH	VN		-30	-1.53	-0.001804	± 2.5	PASS		
	VN		-20	-0.59	-0.000696	± 2.5	PASS		
	VN		-10	-0.31	-0.000365	± 2.5	PASS		
	VN		0	2.26	0.002664	± 2.5	PASS		
	VN		10	4.97	0.005859	± 2.5	PASS		
	VN		20	2.79	0.003289	± 2.5	PASS		
	VN		30	1.9	0.002240	± 2.5	PASS		

		VN	40	0.33	0.000389	± 2.5	PASS
		VN	50	1.64	0.001933	± 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	3.22	0.003904	± 2.5	PASS
		VN	TN	4.97	0.006026	± 2.5	PASS
		VH	TN	-0.46	-0.000558	± 2.5	PASS
	MCH	VL	TN	1.98	0.002367	± 2.5	PASS
		VN	TN	2.85	0.003407	± 2.5	PASS
		VH	TN	-1.24	-0.001482	± 2.5	PASS
	HCH	VL	TN	1.27	0.001497	± 2.5	PASS
		VN	TN	-0.73	-0.000861	± 2.5	PASS
		VH	TN	-1.78	-0.002098	± 2.5	PASS
16QAM	LCH	VL	TN	-0.84	-0.001019	± 2.5	PASS
		VN	TN	4.64	0.005626	± 2.5	PASS
		VH	TN	3.06	0.003710	± 2.5	PASS
	MCH	VL	TN	4.87	0.005822	± 2.5	PASS
		VN	TN	-0.07	-0.000084	± 2.5	PASS
		VH	TN	3.67	0.004387	± 2.5	PASS
	HCH	VL	TN	1.09	0.001285	± 2.5	PASS
		VN	TN	0.98	0.001155	± 2.5	PASS
		VH	TN	4.35	0.005128	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.93	-0.001128	± 2.5	PASS
		VN	-20	-1.4	-0.001698	± 2.5	PASS
		VN	-10	1.44	0.001746	± 2.5	PASS
		VN	0	1.96	0.002377	± 2.5	PASS
		VN	10	1.14	0.001382	± 2.5	PASS
		VN	20	4.86	0.005893	± 2.5	PASS
		VN	30	-1.18	-0.001431	± 2.5	PASS
		VN	40	0.66	0.000800	± 2.5	PASS
		VN	50	4.22	0.005117	± 2.5	PASS
	MCH	VN	-30	-1.83	-0.002188	± 2.5	PASS
		VN	-20	-1.1	-0.001315	± 2.5	PASS
		VN	-10	3.96	0.004734	± 2.5	PASS

		VN	0	-0.05	-0.000060	± 2.5	PASS		
		VN	10	3.05	0.003646	± 2.5	PASS		
		VN	20	-0.6	-0.000717	± 2.5	PASS		
		VN	30	4.46	0.005332	± 2.5	PASS		
		VN	40	-1.52	-0.001817	± 2.5	PASS		
		VN	50	2.64	0.003156	± 2.5	PASS		
	HCH	VN	-30	1.59	0.001874	± 2.5	PASS		
		VN	-20	2.42	0.002853	± 2.5	PASS		
		VN	-10	4.27	0.005034	± 2.5	PASS		
		VN	0	1.62	0.001910	± 2.5	PASS		
		VN	10	-0.56	-0.000660	± 2.5	PASS		
		VN	20	-0.6	-0.000707	± 2.5	PASS		
		VN	30	0.83	0.000978	± 2.5	PASS		
		VN	40	-0.79	-0.000931	± 2.5	PASS		
		VN	50	1.22	0.001438	± 2.5	PASS		
		16QAM	LCH	VN	-30	1.7	0.002061	± 2.5	PASS
				VN	-20	1.9	0.002304	± 2.5	PASS
				VN	-10	-1.95	-0.002364	± 2.5	PASS
VN	0			-1.52	-0.001843	± 2.5	PASS		
VN	10			0.12	0.000146	± 2.5	PASS		
VN	20			-1.42	-0.001722	± 2.5	PASS		
VN	30			3.44	0.004171	± 2.5	PASS		
VN	40			2.88	0.003492	± 2.5	PASS		
VN	50			2.54	0.003080	± 2.5	PASS		
MCH	VN		-30	-1.87	-0.002204	± 2.5	PASS		
	VN		-20	-0.49	-0.000578	± 2.5	PASS		
	VN		-10	2.82	0.003324	± 2.5	PASS		
	VN		0	3.88	0.004574	± 2.5	PASS		
	VN		10	0.72	0.000849	± 2.5	PASS		
	VN		20	-1.34	-0.001580	± 2.5	PASS		
	VN		30	-0.45	-0.000530	± 2.5	PASS		
	VN		40	-1.51	-0.001780	± 2.5	PASS		
	VN		50	2.27	0.002676	± 2.5	PASS		
HCH	VN		-30	4.01	0.004727	± 2.5	PASS		
	VN		-20	3.96	0.004668	± 2.5	PASS		
	VN		-10	0.54	0.000637	± 2.5	PASS		
	VN		0	4.91	0.005788	± 2.5	PASS		
	VN		10	4.85	0.005717	± 2.5	PASS		
	VN		20	2.39	0.002817	± 2.5	PASS		
	VN		30	3.26	0.003843	± 2.5	PASS		
	VN		40	-0.2	-0.000236	± 2.5	PASS		

		VN	50	-1.49	-0.001756	± 2.5	PASS
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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	0.27	0.000327	± 2.5	PASS
		VN	TN	-0.67	-0.000812	± 2.5	PASS
		VH	TN	4.98	0.006039	± 2.5	PASS
	MCH	VL	TN	-0.96	-0.001148	± 2.5	PASS
		VN	TN	-1.42	-0.001698	± 2.5	PASS
		VH	TN	2.08	0.002487	± 2.5	PASS
	HCH	VL	TN	2.84	0.003348	± 2.5	PASS
		VN	TN	1.9	0.002240	± 2.5	PASS
		VH	TN	4.63	0.005458	± 2.5	PASS
16QAM	LCH	VL	TN	4.32	0.005238	± 2.5	PASS
		VN	TN	0.12	0.000146	± 2.5	PASS
		VH	TN	4.61	0.005590	± 2.5	PASS
	MCH	VL	TN	3.44	0.004112	± 2.5	PASS
		VN	TN	3.39	0.004053	± 2.5	PASS
		VH	TN	3.12	0.003730	± 2.5	PASS
	HCH	VL	TN	4.68	0.005517	± 2.5	PASS
		VN	TN	1.93	0.002275	± 2.5	PASS
		VH	TN	3.23	0.003808	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	4.95	0.006002	± 2.5	PASS
		VN	-20	-0.08	-0.000097	± 2.5	PASS
		VN	-10	2.63	0.003189	± 2.5	PASS
		VN	0	2.46	0.002983	± 2.5	PASS
		VN	10	1.81	0.002195	± 2.5	PASS
		VN	20	1.79	0.002170	± 2.5	PASS
		VN	30	-1.43	-0.001734	± 2.5	PASS
		VN	40	1.65	0.002001	± 2.5	PASS
		VN	50	-0.04	-0.000049	± 2.5	PASS
	MCH	VN	-30	1.98	0.002367	± 2.5	PASS
		VN	-20	-1.09	-0.001303	± 2.5	PASS
		VN	-10	2.92	0.003491	± 2.5	PASS
		VN	0	1.88	0.002247	± 2.5	PASS
		VN	10	2.46	0.002941	± 2.5	PASS

		VN	20	1	0.001195	± 2.5	PASS
		VN	30	2.73	0.003264	± 2.5	PASS
		VN	40	4.85	0.005798	± 2.5	PASS
		VN	50	0.34	0.000406	± 2.5	PASS
	HCH	VN	-30	1.72	0.002028	± 2.5	PASS
		VN	-20	3.15	0.003713	± 2.5	PASS
		VN	-10	4.59	0.005411	± 2.5	PASS
		VN	0	-0.87	-0.001026	± 2.5	PASS
		VN	10	3.11	0.003666	± 2.5	PASS
		VN	20	0.32	0.000377	± 2.5	PASS
		VN	30	2.73	0.003218	± 2.5	PASS
		VN	40	2	0.002358	± 2.5	PASS
		VN	50	-0.99	-0.001167	± 2.5	PASS
		QPSK	LCH	VN	-30	4.86	0.005893
VN	-20			2.95	0.003577	± 2.5	PASS
VN	-10			2.68	0.003250	± 2.5	PASS
VN	0			-1.24	-0.001504	± 2.5	PASS
VN	10			4.58	0.005554	± 2.5	PASS
VN	20			4.48	0.005432	± 2.5	PASS
VN	30			2.34	0.002837	± 2.5	PASS
VN	40			3.07	0.003723	± 2.5	PASS
VN	50			0.25	0.000303	± 2.5	PASS
MCH	VN		-30	0.3	0.000354	± 2.5	PASS
	VN		-20	0.45	0.000530	± 2.5	PASS
	VN		-10	1.12	0.001320	± 2.5	PASS
	VN		0	0.56	0.000660	± 2.5	PASS
	VN		10	-0.28	-0.000330	± 2.5	PASS
	VN		20	2.9	0.003419	± 2.5	PASS
	VN		30	-1.68	-0.001980	± 2.5	PASS
	VN		40	1.73	0.002039	± 2.5	PASS
	VN		50	-0.37	-0.000436	± 2.5	PASS
HCH	VN		-30	3.37	0.003973	± 2.5	PASS
	VN		-20	-1.6	-0.001886	± 2.5	PASS
	VN		-10	4.11	0.004845	± 2.5	PASS
	VN		0	0.66	0.000778	± 2.5	PASS
	VN		10	2.68	0.003159	± 2.5	PASS
	VN		20	4.71	0.005552	± 2.5	PASS
	VN		30	4.37	0.005151	± 2.5	PASS
	VN		40	4.34	0.005116	± 2.5	PASS
	VN		50	-0.23	-0.000271	± 2.5	PASS