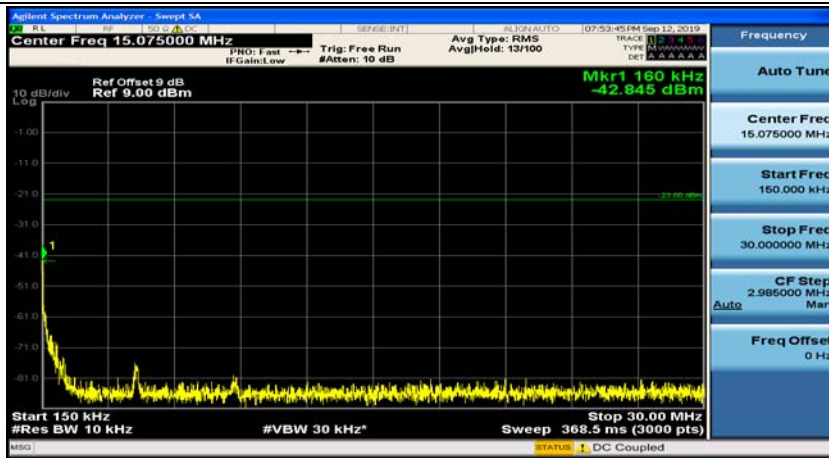
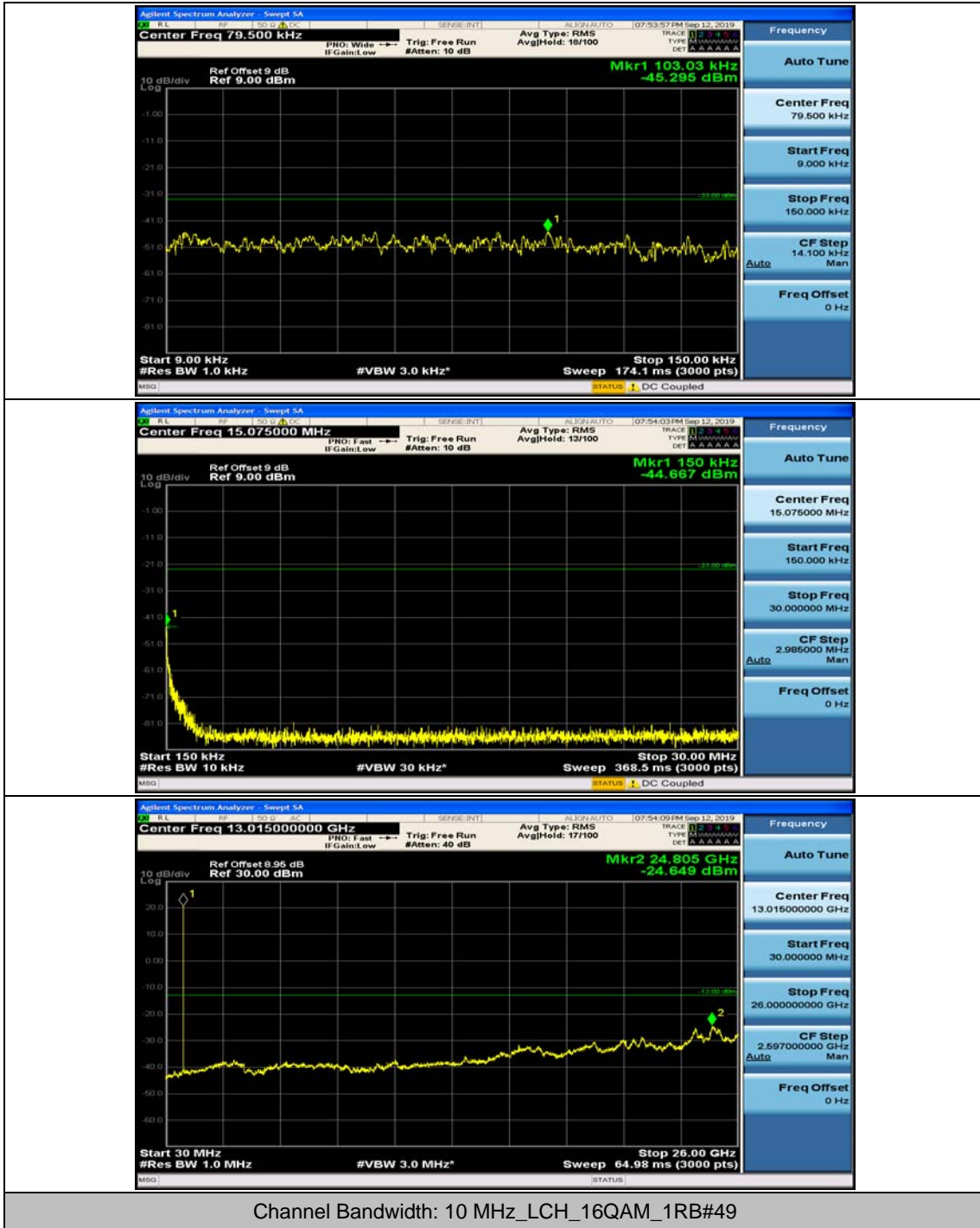
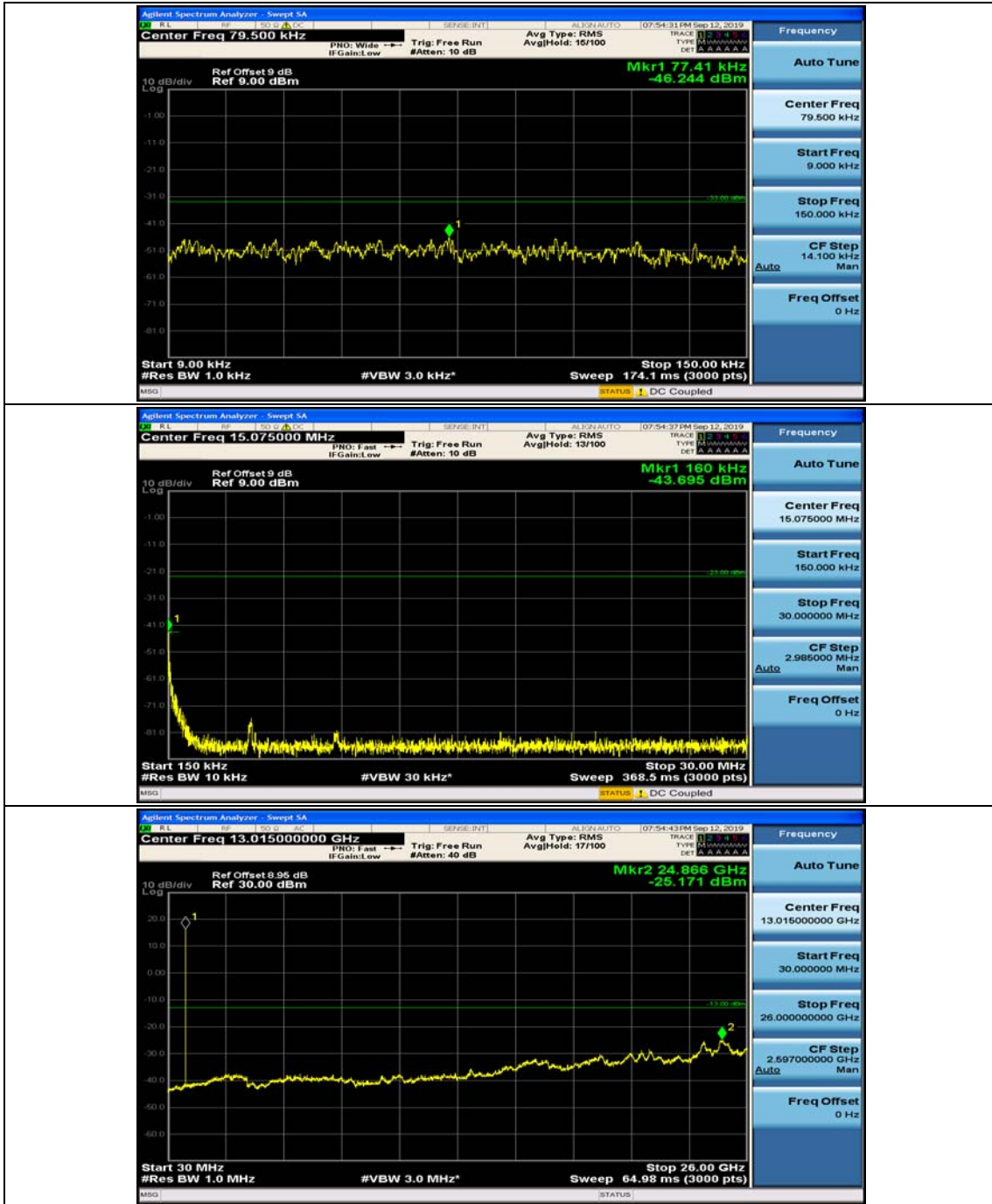


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

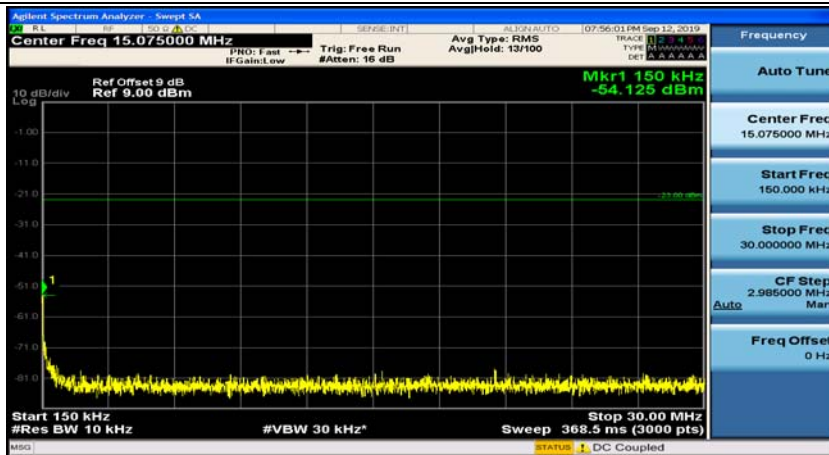
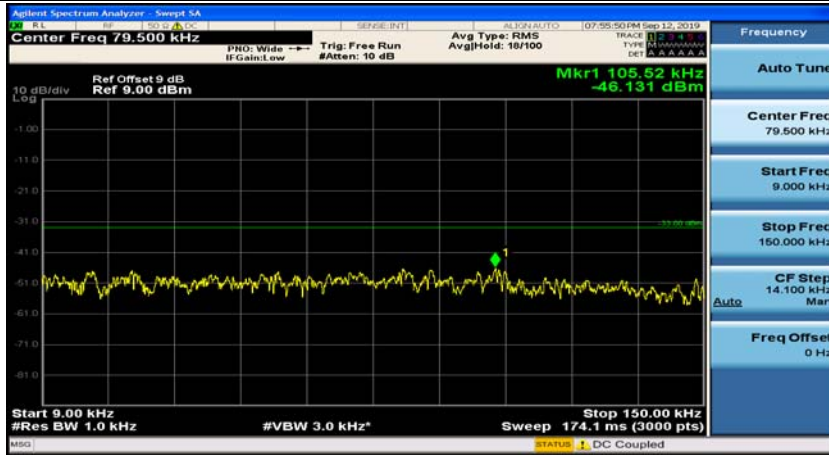


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

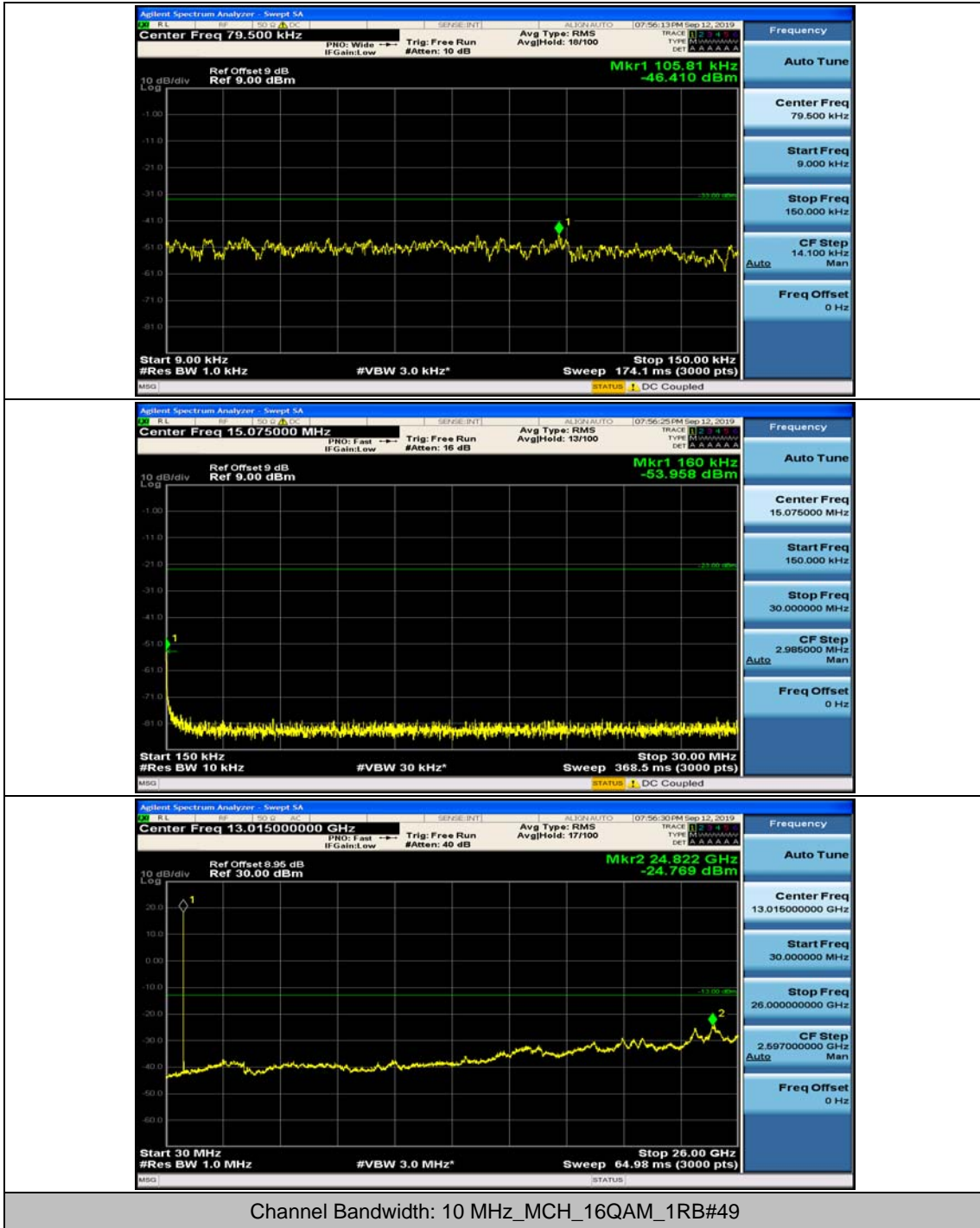


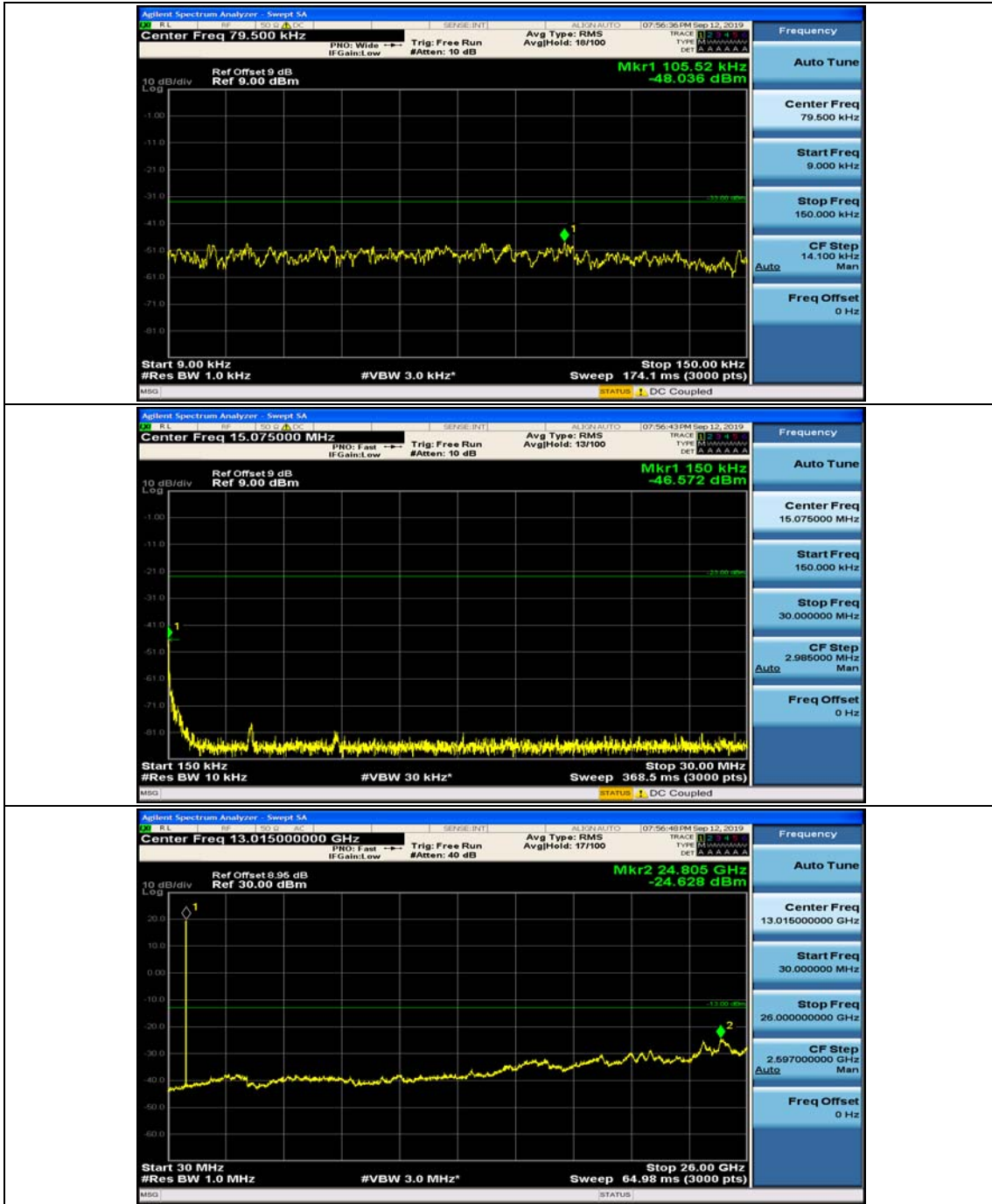


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

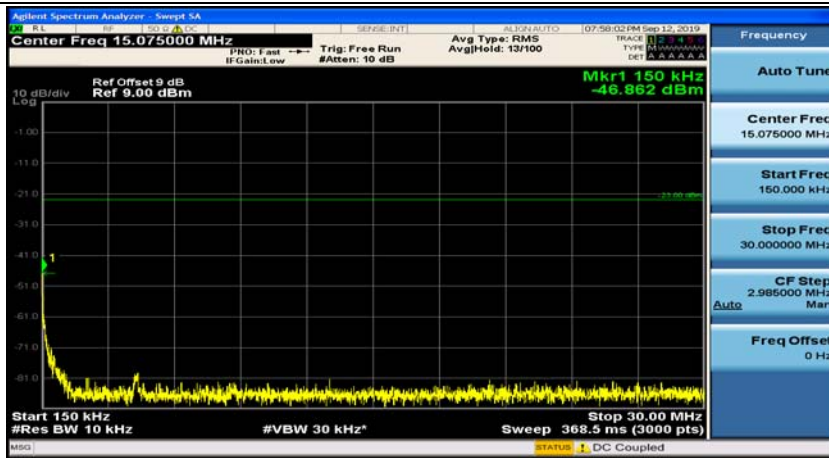
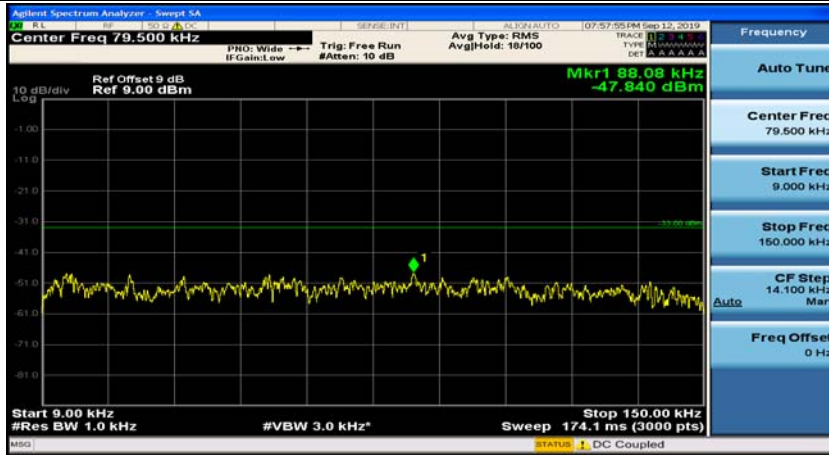


Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

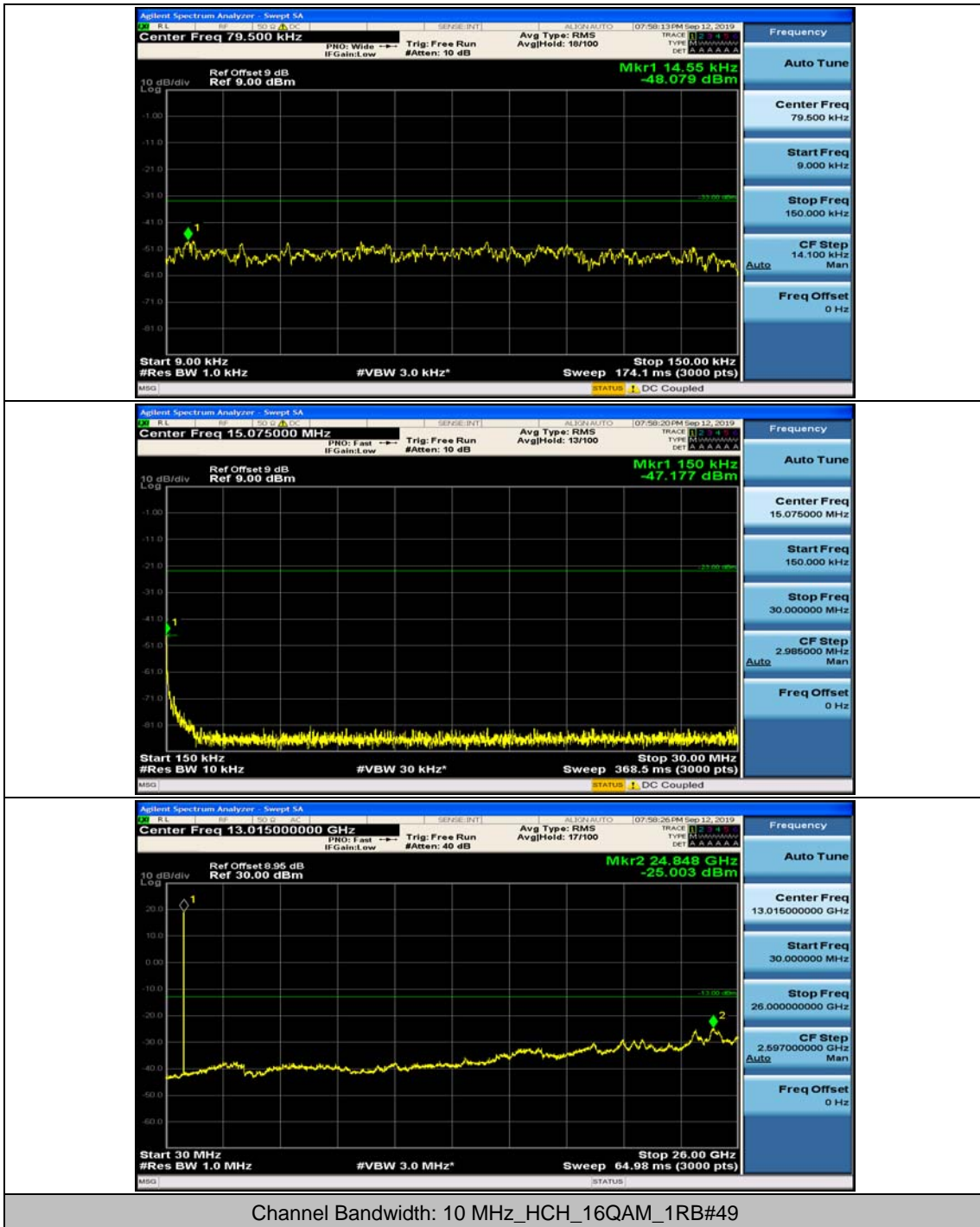


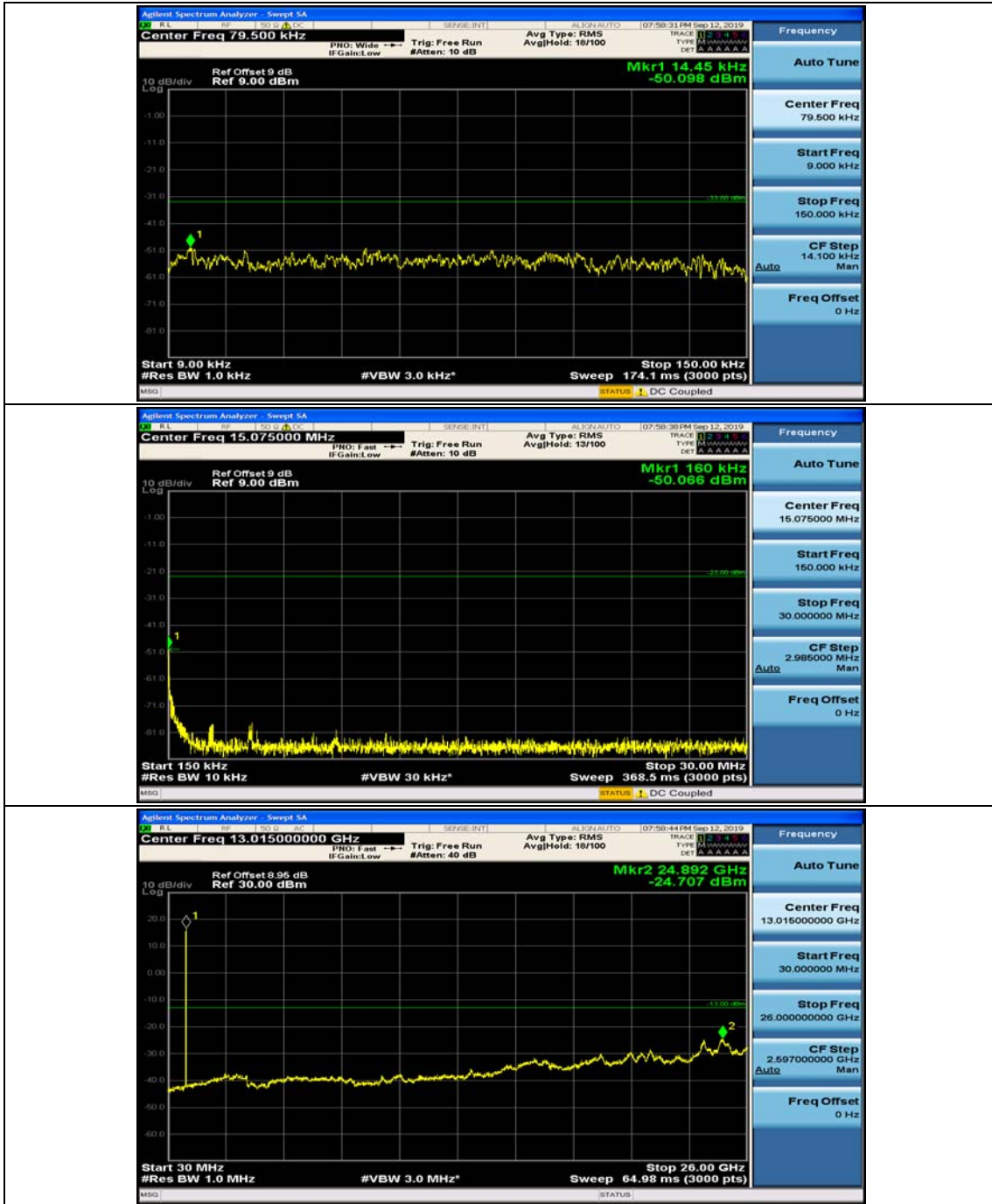


Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0



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	-1.11	-0.001346	± 2.5	PASS
		VN	TN	1.94	0.002352	± 2.5	PASS
		VH	TN	-0.41	-0.000497	± 2.5	PASS
	MCH	VL	TN	-0.17	-0.000203	± 2.5	PASS
		VN	TN	-1.16	-0.001387	± 2.5	PASS
		VH	TN	-1.68	-0.002008	± 2.5	PASS
	HCH	VL	TN	0.26	0.000306	± 2.5	PASS
		VN	TN	-1.2	-0.001415	± 2.5	PASS
		VH	TN	1.23	0.001450	± 2.5	PASS
16QAM	LCH	VL	TN	-0.61	-0.000740	± 2.5	PASS
		VN	TN	-1.66	-0.002013	± 2.5	PASS
		VH	TN	0.09	0.000109	± 2.5	PASS
	MCH	VL	TN	1.27	0.001518	± 2.5	PASS
		VN	TN	-0.15	-0.000179	± 2.5	PASS
		VH	TN	-1.4	-0.001674	± 2.5	PASS
	HCH	VL	TN	0.08	0.000094	± 2.5	PASS
		VN	TN	4.46	0.005258	± 2.5	PASS
		VH	TN	0.42	0.000495	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.81	-0.002195	± 2.5	PASS
		VN	-20	0.89	0.001079	± 2.5	PASS
		VN	-10	4.41	0.005347	± 2.5	PASS
		VN	0	-1.86	-0.002255	± 2.5	PASS
		VN	10	3.16	0.003832	± 2.5	PASS
		VN	20	-0.66	-0.000800	± 2.5	PASS
		VN	30	1.95	0.002364	± 2.5	PASS
		VN	40	0.88	0.001067	± 2.5	PASS
		VN	50	2.38	0.002886	± 2.5	PASS
	MCH	VN	-30	4.99	0.005965	± 2.5	PASS

	VN	-20	1.37	0.001638	± 2.5	PASS	
		VN	-10	-1.23	-0.001470	± 2.5	PASS
		VN	0	4.55	0.005439	± 2.5	PASS
		VN	10	0.54	0.000646	± 2.5	PASS
		VN	20	2.84	0.003395	± 2.5	PASS
		VN	30	-1.87	-0.002236	± 2.5	PASS
		VN	40	3.44	0.004112	± 2.5	PASS
		VN	50	4.55	0.005439	± 2.5	PASS
	HCH	VN	-30	2.51	0.002959	± 2.5	PASS
		VN	-20	0.48	0.000566	± 2.5	PASS
		VN	-10	0.82	0.000967	± 2.5	PASS
		VN	0	-1.27	-0.001497	± 2.5	PASS
		VN	10	3.95	0.004656	± 2.5	PASS
		VN	20	2.57	0.003030	± 2.5	PASS
		VN	30	0.64	0.000754	± 2.5	PASS
		VN	40	-0.18	-0.000212	± 2.5	PASS
		VN	50	0.6	0.000707	± 2.5	PASS
		16QAM	LCH	VN	-30	-0.44	-0.000534
VN	-20			4.74	0.005748	± 2.5	PASS
VN	-10			-0.81	-0.000982	± 2.5	PASS
VN	0			-1.71	-0.002073	± 2.5	PASS
VN	10			-1.58	-0.001916	± 2.5	PASS
VN	20			0.21	0.000255	± 2.5	PASS
VN	30			4.79	0.005808	± 2.5	PASS
VN	40			3.16	0.003832	± 2.5	PASS
VN	50			1.35	0.001637	± 2.5	PASS
MCH	VN		-30	1.7	0.002004	± 2.5	PASS
	VN		-20	1.8	0.002122	± 2.5	PASS
	VN		-10	2.42	0.002853	± 2.5	PASS
	VN		0	2.18	0.002570	± 2.5	PASS
	VN		10	4.16	0.004904	± 2.5	PASS
	VN		20	-1.73	-0.002039	± 2.5	PASS
	VN		30	-1.89	-0.002228	± 2.5	PASS
	VN		40	4.86	0.005729	± 2.5	PASS
	VN		50	-0.79	-0.000931	± 2.5	PASS
HCH	VN		-30	0.44	0.000519	± 2.5	PASS
	VN		-20	4.07	0.004798	± 2.5	PASS
	VN		-10	3.79	0.004468	± 2.5	PASS
	VN		0	0.33	0.000389	± 2.5	PASS
	VN		10	-1.75	-0.002063	± 2.5	PASS
	VN		20	4.68	0.005517	± 2.5	PASS

		VN	30	2.84	0.003348	± 2.5	PASS
		VN	40	-1.43	-0.001686	± 2.5	PASS
		VN	50			± 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	2.48	0.003004	± 2.5	PASS
		VN	TN	4.09	0.004955	± 2.5	PASS
		VH	TN	3.04	0.003683	± 2.5	PASS
	MCH	VL	TN	0.79	0.000944	± 2.5	PASS
		VN	TN	1.59	0.001901	± 2.5	PASS
		VH	TN	1.12	0.001339	± 2.5	PASS
	HCH	VL	TN	-1.64	-0.001935	± 2.5	PASS
		VN	TN	-1.18	-0.001392	± 2.5	PASS
		VH	TN	3.64	0.004295	± 2.5	PASS
16QAM	LCH	VL	TN	2.05	0.002483	± 2.5	PASS
		VN	TN	0.1	0.000121	± 2.5	PASS
		VH	TN	-0.33	-0.000400	± 2.5	PASS
	MCH	VL	TN	1.25	0.001494	± 2.5	PASS
		VN	TN	1.02	0.001219	± 2.5	PASS
		VH	TN	1.22	0.001458	± 2.5	PASS
	HCH	VL	TN	2.05	0.002419	± 2.5	PASS
		VN	TN	1.98	0.002336	± 2.5	PASS
		VH	TN	2.37	0.002796	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.99	-0.002411	± 2.5	PASS
		VN	-20	-0.99	-0.001199	± 2.5	PASS
		VN	-10	-1.85	-0.002241	± 2.5	PASS
		VN	0	-1.79	-0.002168	± 2.5	PASS
		VN	10	2.11	0.002556	± 2.5	PASS
		VN	20	3.06	0.003707	± 2.5	PASS
		VN	30	4.52	0.005475	± 2.5	PASS
		VN	40	2.01	0.002435	± 2.5	PASS
		VN	50	3.36	0.004070	± 2.5	PASS
	MCH	VN	-30	0.08	0.000096	± 2.5	PASS
		VN	-20	1.29	0.001542	± 2.5	PASS

		VN	-10	-1.52	-0.001817	± 2.5	PASS		
		VN	0	1.94	0.002319	± 2.5	PASS		
		VN	10	2.84	0.003395	± 2.5	PASS		
		VN	20	1.41	0.001686	± 2.5	PASS		
		VN	30	-1.81	-0.002164	± 2.5	PASS		
		VN	40	4.8	0.005738	± 2.5	PASS		
		VN	50	-0.36	-0.000430	± 2.5	PASS		
	HCH	VN	-30	3.83	0.004519	± 2.5	PASS		
		VN	-20	0.85	0.001003	± 2.5	PASS		
		VN	-10	0.51	0.000602	± 2.5	PASS		
		VN	0	-1.97	-0.002324	± 2.5	PASS		
		VN	10	3.89	0.004590	± 2.5	PASS		
		VN	20	-0.47	-0.000555	± 2.5	PASS		
		VN	30	3.71	0.004378	± 2.5	PASS		
		VN	40	0.23	0.000271	± 2.5	PASS		
		VN	50	-1.8	-0.002124	± 2.5	PASS		
		QPSK	LCH	VN	-30	4.51	0.005392	± 2.5	PASS
				VN	-20	1.26	0.001506	± 2.5	PASS
VN	-10			4.69	0.005607	± 2.5	PASS		
VN	0			2.61	0.003120	± 2.5	PASS		
VN	10			2.9	0.003467	± 2.5	PASS		
VN	20			1.7	0.002032	± 2.5	PASS		
VN	30			0.66	0.000789	± 2.5	PASS		
VN	40			2.62	0.003132	± 2.5	PASS		
VN	50			0.19	0.000227	± 2.5	PASS		
MCH	VN		-30	2.9	0.003422	± 2.5	PASS		
	VN		-20	4.14	0.004885	± 2.5	PASS		
	VN		-10	-1.56	-0.001841	± 2.5	PASS		
	VN		0	4.16	0.004909	± 2.5	PASS		
	VN		10	0.23	0.000271	± 2.5	PASS		
	VN		20	2.03	0.002395	± 2.5	PASS		
	VN		30	4.34	0.005121	± 2.5	PASS		
	VN		40	-0.6	-0.000708	± 2.5	PASS		
	VN		50	0.27	0.000319	± 2.5	PASS		
HCH	VN		-30	1.31	0.001546	± 2.5	PASS		
	VN		-20	4.93	0.005817	± 2.5	PASS		
	VN		-10	4.99	0.005888	± 2.5	PASS		
	VN		0	1.89	0.002230	± 2.5	PASS		
	VN		10	0.71	0.000838	± 2.5	PASS		
	VN		20	4.73	0.005581	± 2.5	PASS		
	VN		30	3.34	0.003941	± 2.5	PASS		

		VN	40	4.73	0.005581	± 2.5	PASS
		VN	50	-0.58	-0.000684	± 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	1.89	0.002287	± 2.5	PASS
		VN	TN	1.79	0.002166	± 2.5	PASS
		VH	TN	3.98	0.004815	± 2.5	PASS
	MCH	VL	TN	2.6	0.003108	± 2.5	PASS
		VN	TN	3.77	0.004507	± 2.5	PASS
		VH	TN	1.26	0.001506	± 2.5	PASS
	HCH	VL	TN	3.97	0.004690	± 2.5	PASS
		VN	TN	1.13	0.001335	± 2.5	PASS
		VH	TN	4.37	0.005162	± 2.5	PASS
16QAM	LCH	VL	TN	-1.86	-0.002250	± 2.5	PASS
		VN	TN	2.78	0.003364	± 2.5	PASS
		VH	TN	1.03	0.001246	± 2.5	PASS
	MCH	VL	TN	-1.72	-0.002056	± 2.5	PASS
		VN	TN	-0.24	-0.000287	± 2.5	PASS
		VH	TN	0.82	0.000980	± 2.5	PASS
	HCH	VL	TN	4.39	0.005186	± 2.5	PASS
		VN	TN	1.06	0.001252	± 2.5	PASS
		VH	TN	4.92	0.005812	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.19	0.005070	± 2.5	PASS
		VN	-20	1.04	0.001258	± 2.5	PASS
		VN	-10	0.94	0.001137	± 2.5	PASS
		VN	0	-1.74	-0.002105	± 2.5	PASS
		VN	10	2.21	0.002674	± 2.5	PASS
		VN	20	-1.87	-0.002263	± 2.5	PASS
		VN	30	1.93	0.002335	± 2.5	PASS
		VN	40	4.81	0.005820	± 2.5	PASS
		VN	50	0.65	0.000786	± 2.5	PASS
	MCH	VN	-30	2.61	0.003120	± 2.5	PASS
		VN	-20	-0.1	-0.000120	± 2.5	PASS
		VN	-10	4.59	0.005487	± 2.5	PASS

		VN	0	4.13	0.004937	± 2.5	PASS		
		VN	10	-0.65	-0.000777	± 2.5	PASS		
		VN	20	2.24	0.002678	± 2.5	PASS		
		VN	30	0.85	0.001016	± 2.5	PASS		
		VN	40	1.14	0.001363	± 2.5	PASS		
		VN	50	0.31	0.000371	± 2.5	PASS		
	HCH	VN	-30	-0.46	-0.000543	± 2.5	PASS		
		VN	-20	3.83	0.004525	± 2.5	PASS		
		VN	-10	4.31	0.005092	± 2.5	PASS		
		VN	0	0.67	0.000791	± 2.5	PASS		
		VN	10	-1.55	-0.001831	± 2.5	PASS		
		VN	20	2.83	0.003343	± 2.5	PASS		
		VN	30	1.38	0.001630	± 2.5	PASS		
		VN	40	3.04	0.003591	± 2.5	PASS		
		VN	50	-1.16	-0.001370	± 2.5	PASS		
		16QAM	LCH	VN	-30	-0.29	-0.000347	± 2.5	PASS
				VN	-20	3.4	0.004065	± 2.5	PASS
				VN	-10	2.57	0.003072	± 2.5	PASS
VN	0			3.39	0.004053	± 2.5	PASS		
VN	10			3.81	0.004555	± 2.5	PASS		
VN	20			1.73	0.002068	± 2.5	PASS		
VN	30			2.53	0.003025	± 2.5	PASS		
VN	40			-0.47	-0.000562	± 2.5	PASS		
VN	50			-0.57	-0.000681	± 2.5	PASS		
MCH	VN		-30	2.28	0.002693	± 2.5	PASS		
	VN		-20	0.69	0.000815	± 2.5	PASS		
	VN		-10	4.06	0.004796	± 2.5	PASS		
	VN		0	3.06	0.003615	± 2.5	PASS		
	VN		10	1.24	0.001465	± 2.5	PASS		
	VN		20	0.35	0.000413	± 2.5	PASS		
	VN		30	3.16	0.003733	± 2.5	PASS		
	VN		40	-0.7	-0.000827	± 2.5	PASS		
	VN		50	-1.1	-0.001299	± 2.5	PASS		
HCH	VN		-30	4.76	0.005623	± 2.5	PASS		
	VN		-20	3.1	0.003662	± 2.5	PASS		
	VN		-10	2.02	0.002386	± 2.5	PASS		
	VN		0	4.18	0.004938	± 2.5	PASS		
	VN		10	4.13	0.004879	± 2.5	PASS		
	VN		20	4.22	0.004985	± 2.5	PASS		
	VN		30	0.85	0.001004	± 2.5	PASS		
	VN		40	0.11	0.000130	± 2.5	PASS		

		VN	50	2.42	0.002859	± 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	-0.46	-0.000555	± 2.5	PASS
		VN	TN	1.95	0.002352	± 2.5	PASS
		VH	TN	2.88	0.003474	± 2.5	PASS
	MCH	VL	TN	3.76	0.004495	± 2.5	PASS
		VN	TN	-1.02	-0.001219	± 2.5	PASS
		VH	TN	3.41	0.004077	± 2.5	PASS
	HCH	VL	TN	3.69	0.004372	± 2.5	PASS
		VN	TN	-1.51	-0.001789	± 2.5	PASS
		VH	TN	-0.38	-0.000450	± 2.5	PASS
16QAM	LCH	VL	TN	2.76	0.003329	± 2.5	PASS
		VN	TN	-0.08	-0.000097	± 2.5	PASS
		VH	TN	-0.25	-0.000302	± 2.5	PASS
	MCH	VL	TN	2.5	0.002989	± 2.5	PASS
		VN	TN	-1.68	-0.002008	± 2.5	PASS
		VH	TN	-0.61	-0.000729	± 2.5	PASS
	HCH	VL	TN	3.45	0.004088	± 2.5	PASS
		VN	TN	0.45	0.000533	± 2.5	PASS
		VH	TN	4.48	0.005308	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	4.36	0.005259	± 2.5	PASS
		VN	-20	-1.35	-0.001628	± 2.5	PASS
		VN	-10	-1.93	-0.002328	± 2.5	PASS
		VN	0	2.43	0.002931	± 2.5	PASS
		VN	10	4.73	0.005706	± 2.5	PASS
		VN	20	2.93	0.003534	± 2.5	PASS
		VN	30	-0.8	-0.000965	± 2.5	PASS
		VN	40	3.73	0.004499	± 2.5	PASS
		VN	50	3.88	0.004680	± 2.5	PASS
	MCH	VN	-30	1.49	0.001781	± 2.5	PASS
		VN	-20	-1.81	-0.002164	± 2.5	PASS
		VN	-10	1.25	0.001494	± 2.5	PASS
		VN	0	-0.58	-0.000693	± 2.5	PASS

		VN	10	-1.93	-0.002307	± 2.5	PASS
		VN	20	-1.79	-0.002140	± 2.5	PASS
		VN	30	0.2	0.000239	± 2.5	PASS
		VN	40	-1.04	-0.001243	± 2.5	PASS
		VN	50	3.28	0.003921	± 2.5	PASS
	HCH	VN	-30	1.11	0.001315	± 2.5	PASS
		VN	-20	-0.38	-0.000450	± 2.5	PASS
		VN	-10	-1.63	-0.001931	± 2.5	PASS
		VN	0	4.05	0.004799	± 2.5	PASS
		VN	10	4.55	0.005391	± 2.5	PASS
		VN	20	3.33	0.003945	± 2.5	PASS
		VN	30	2.23	0.002642	± 2.5	PASS
		VN	40	0.76	0.000900	± 2.5	PASS
		VN	50	1.36	0.001611	± 2.5	PASS
		QPSK	LCH	VN	-30	0.74	0.000885
VN	-20			-1.04	-0.001243	± 2.5	PASS
VN	-10			4.43	0.005296	± 2.5	PASS
VN	0			-0.83	-0.000992	± 2.5	PASS
VN	10			-1.22	-0.001458	± 2.5	PASS
VN	20			-1.05	-0.001255	± 2.5	PASS
VN	30			1.4	0.001674	± 2.5	PASS
VN	40			3.76	0.004495	± 2.5	PASS
VN	50			0.93	0.001112	± 2.5	PASS
MCH	VN		-30	0.02	0.000024	± 2.5	PASS
	VN		-20	3.63	0.004301	± 2.5	PASS
	VN		-10	1.85	0.002192	± 2.5	PASS
	VN		0	-1.7	-0.002014	± 2.5	PASS
	VN		10	4.06	0.004810	± 2.5	PASS
	VN		20	-0.99	-0.001173	± 2.5	PASS
	VN		30	4.23	0.005012	± 2.5	PASS
	VN		40	3.22	0.003815	± 2.5	PASS
	VN		50	3.15	0.003732	± 2.5	PASS
HCH	VN		-30	2.22	0.002630	± 2.5	PASS
	VN		-20	1.84	0.002180	± 2.5	PASS
	VN		-10	-0.37	-0.000438	± 2.5	PASS
	VN		0	0.53	0.000628	± 2.5	PASS
	VN		10	4.88	0.005782	± 2.5	PASS
	VN		20	2.04	0.002417	± 2.5	PASS
	VN		30	0.66	0.000782	± 2.5	PASS
	VN		40	2.86	0.003389	± 2.5	PASS
	VN		50	1.31	0.001552	± 2.5	PASS