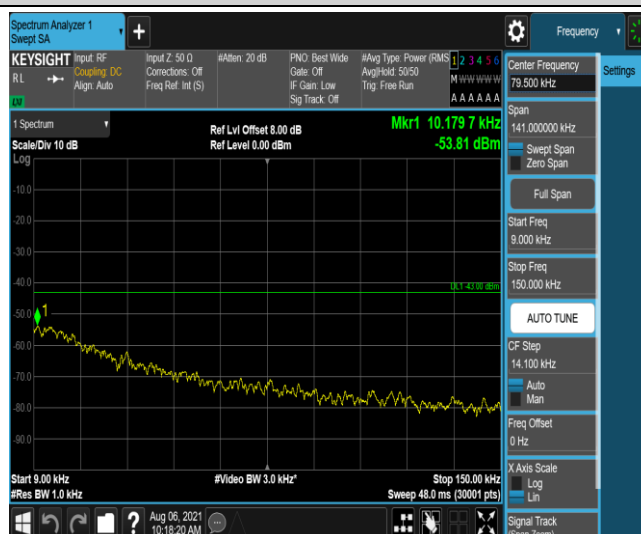




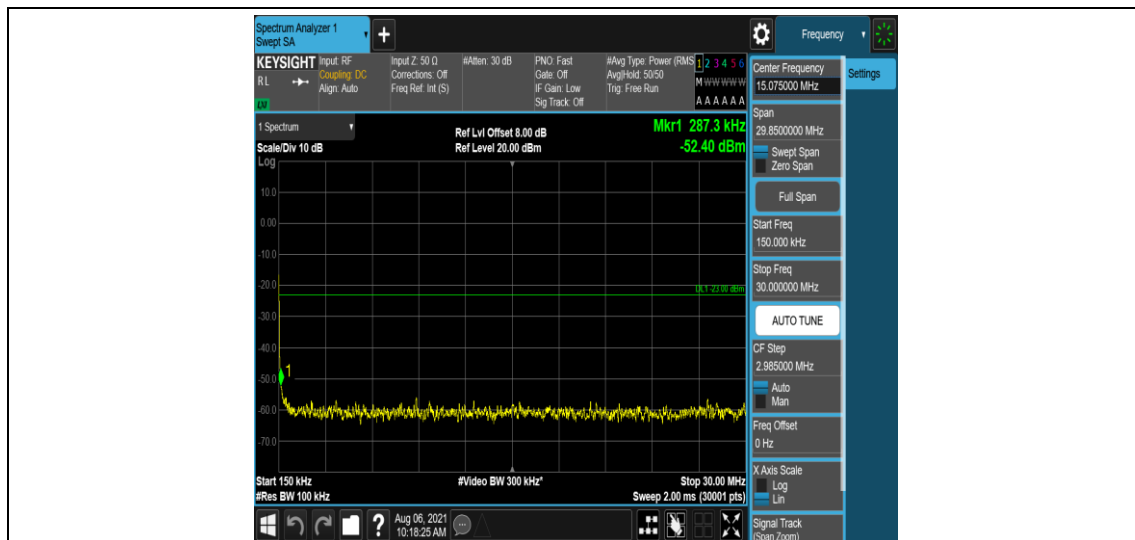
Band12-10MHz-QPSK-23130-1-0-High-5000-12000--58.19-PASS



Band12-10MHz-QPSK-23130-1-0-High-12000-26500--52.7-PASS



Band12-10MHz-16QAM-23060-1-0-Low-0.009-0.15--53.81-PASS



Band12-10MHz-16QAM-23060-1-0-Low-0.15-30--52.41-PASS



Band12-10MHz-16QAM-23060-1-0-Low-30-1000--33.69-PASS



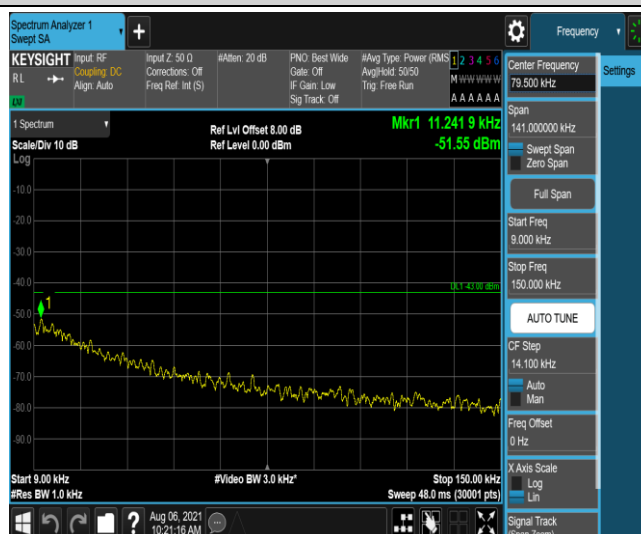
Band12-10MHz-16QAM-23060-1-0-Low-1000-5000--36.98-PASS



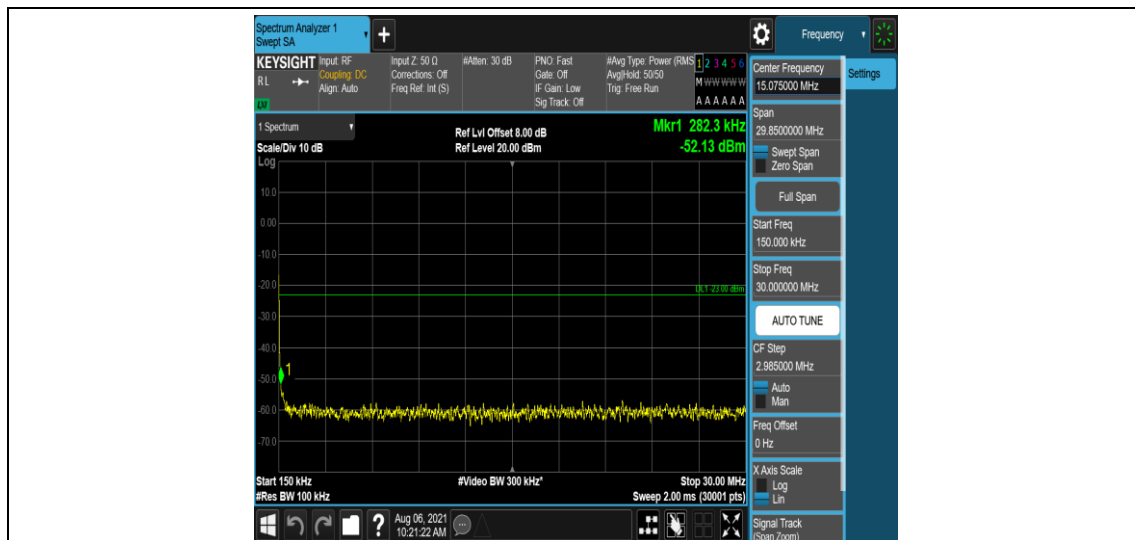
Band12-10MHz-16QAM-23060-1-0-Low-5000-12000--58.19-PASS



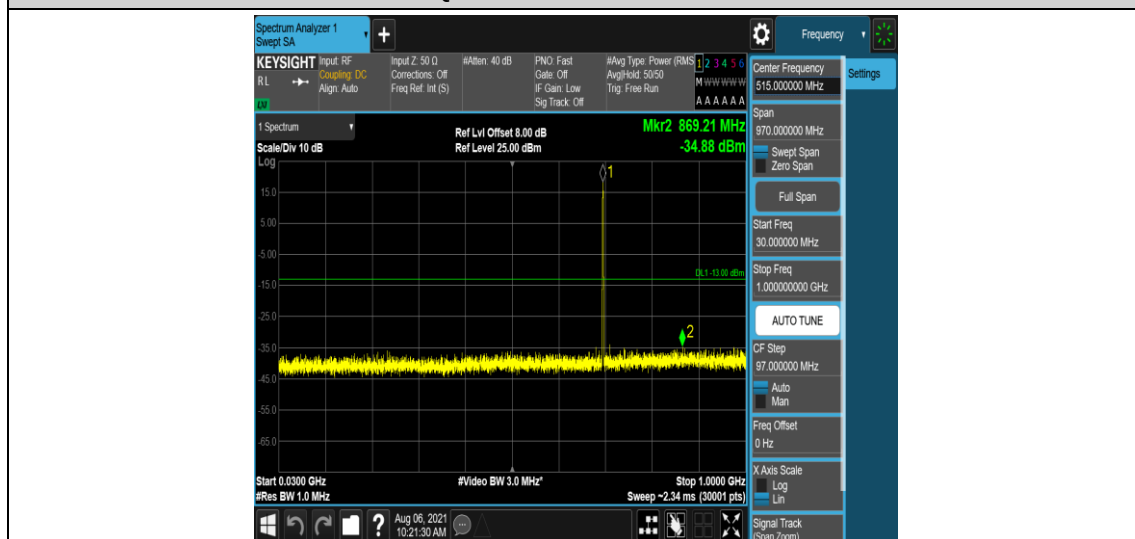
Band12-10MHz-16QAM-23060-1-0-Low-12000-26500--52.71-PASS



Band12-10MHz-16QAM-23095-1-0-Low-0.009-0.15--51.55-PASS



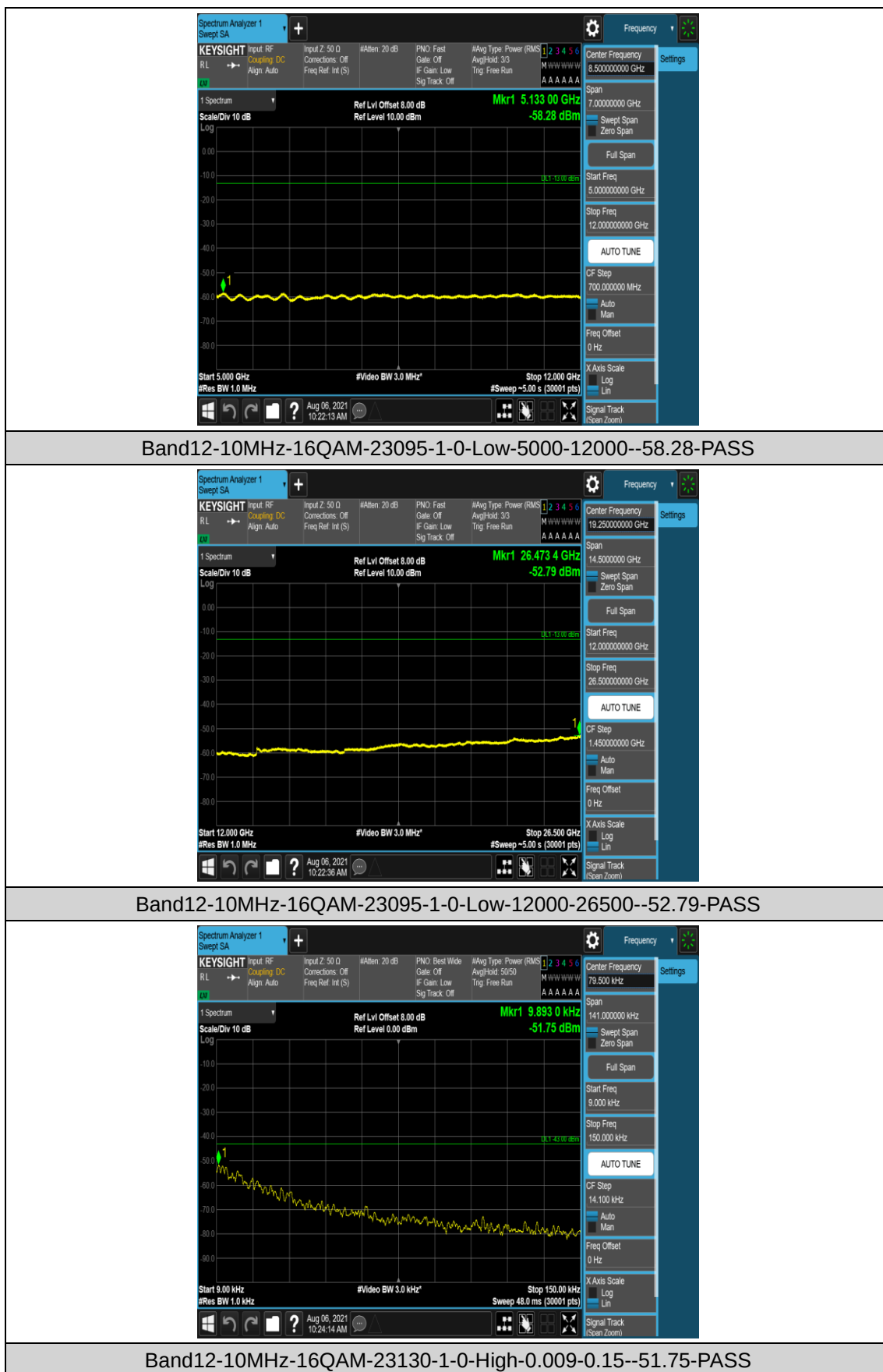
Band12-10MHz-16QAM-23095-1-0-Low-0.15-30--52.13-PASS



Band12-10MHz-16QAM-23095-1-0-Low-30-1000--34.88-PASS

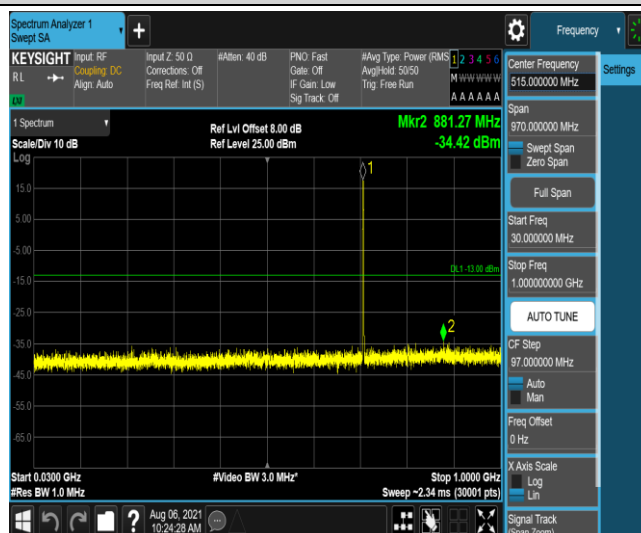


Band12-10MHz-16QAM-23095-1-0-Low-1000-5000--37.04-PASS





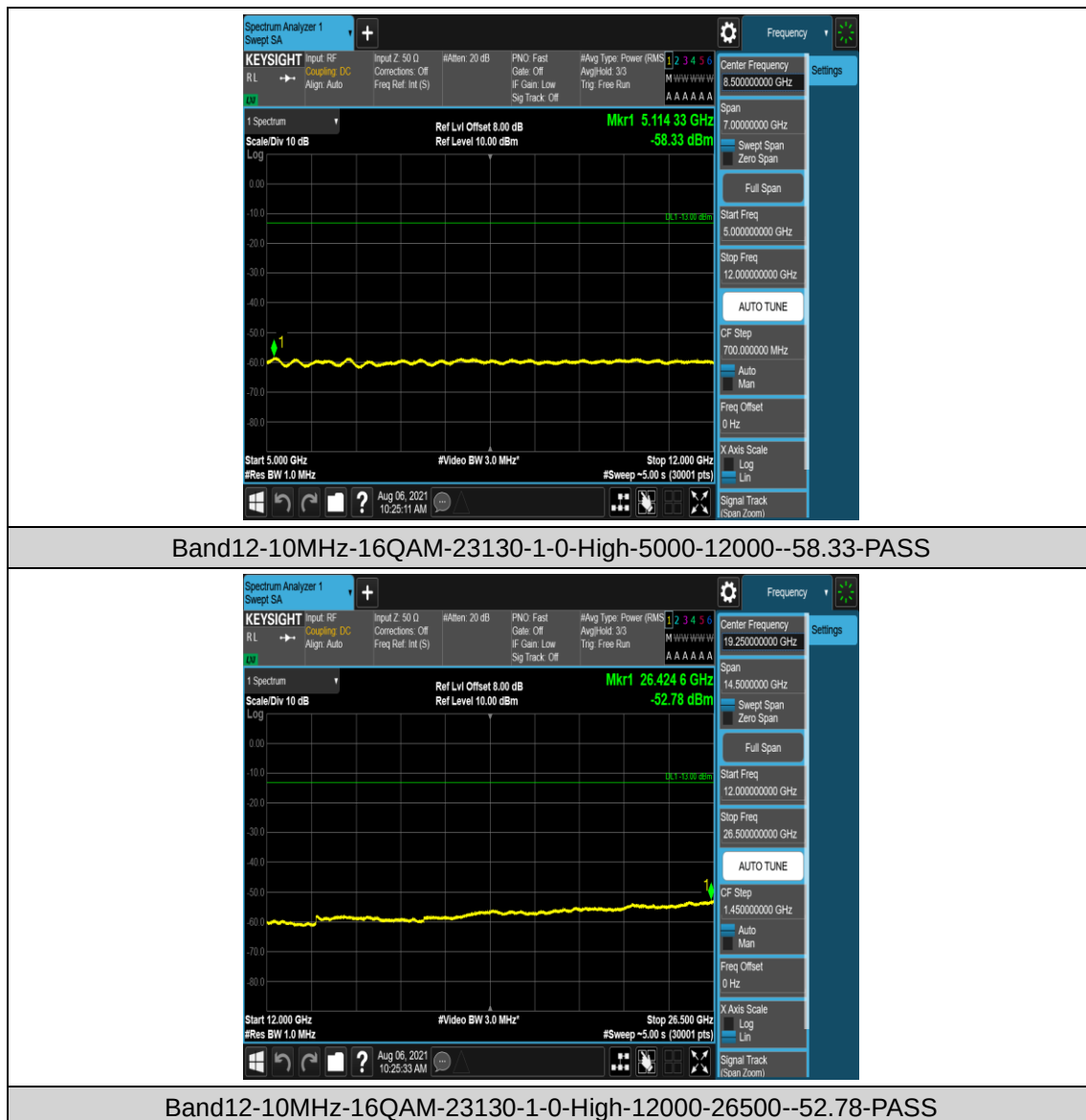
Band12-10MHz-16QAM-23130-1-0-High-0.15-30--48.22-PASS



Band12-10MHz-16QAM-23130-1-0-High-30-1000--34.42-PASS



Band12-10MHz-16QAM-23130-1-0-High-1000-5000--37.15-PASS



Appendix F: Frequency Stability for M1

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	1.14	0.001629	± 2.5	PASS
		VN	TN	0.98	0.001401	± 2.5	PASS
		VH	TN	-0.14	-0.000200	± 2.5	PASS
	MCH	VL	TN	3.02	0.004269	± 2.5	PASS
		VN	TN	3.3	0.004664	± 2.5	PASS
		VH	TN	-0.45	-0.000636	± 2.5	PASS
	HCH	VL	TN	0.74	0.001035	± 2.5	PASS
		VN	TN	1.37	0.001915	± 2.5	PASS
		VH	TN	4.34	0.006067	± 2.5	PASS
16QAM	LCH	VL	TN	3.47	0.004959	± 2.5	PASS
		VN	TN	4.55	0.006503	± 2.5	PASS
		VH	TN	0.02	0.000029	± 2.5	PASS
	MCH	VL	TN	3.38	0.004777	± 2.5	PASS
		VN	TN	-1.84	-0.002601	± 2.5	PASS
		VH	TN	-0.43	-0.000608	± 2.5	PASS
	HCH	VL	TN	-0.57	-0.000797	± 2.5	PASS
		VN	TN	3.28	0.004585	± 2.5	PASS
		VH	TN	0.33	0.000461	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.08	0.004402	± 2.5	PASS
		VN	-20	0.16	0.000229	± 2.5	PASS
		VN	-10	1.96	0.002801	± 2.5	PASS
		VN	0	3.97	0.005674	± 2.5	PASS
		VN	10	4.54	0.006488	± 2.5	PASS
		VN	20	-0.28	-0.000400	± 2.5	PASS
		VN	30	4.02	0.005745	± 2.5	PASS
		VN	40	4.67	0.006674	± 2.5	PASS
		VN	50	2.68	0.003830	± 2.5	PASS
	MCH	VN	-30	-1.16	-0.001640	± 2.5	PASS

		VN	-20	1.69	0.002389	± 2.5	PASS
		VN	-10	-0.16	-0.000226	± 2.5	PASS
		VN	0	2.46	0.003477	± 2.5	PASS
		VN	10	-1.26	-0.001781	± 2.5	PASS
		VN	20	-0.51	-0.000721	± 2.5	PASS
		VN	30	3.07	0.004339	± 2.5	PASS
		VN	40	-0.39	-0.000551	± 2.5	PASS
		VN	50	3	0.004240	± 2.5	PASS
	HCH	VN	-30	4.53	0.006333	± 2.5	PASS
		VN	-20	3.95	0.005522	± 2.5	PASS
		VN	-10	4.6	0.006431	± 2.5	PASS
		VN	0	4.93	0.006892	± 2.5	PASS
		VN	10	3	0.004194	± 2.5	PASS
		VN	20	0.01	0.000014	± 2.5	PASS
		VN	30	2.07	0.002894	± 2.5	PASS
		VN	40	4.27	0.005970	± 2.5	PASS
		VN	50	2.83	0.003956	± 2.5	PASS
16QAM	LCH	VN	-30	-1.58	-0.002258	± 2.5	PASS
		VN	-20	3.31	0.004731	± 2.5	PASS
		VN	-10	4.08	0.005831	± 2.5	PASS
		VN	0	2.7	0.003859	± 2.5	PASS
		VN	10	4.19	0.005988	± 2.5	PASS
		VN	20	-1.9	-0.002715	± 2.5	PASS
		VN	30	1.36	0.001944	± 2.5	PASS
		VN	40	4.5	0.006431	± 2.5	PASS
		VN	50	0.38	0.000543	± 2.5	PASS
	MCH	VN	-30	3.09	0.004367	± 2.5	PASS
		VN	-20	-1	-0.001413	± 2.5	PASS
		VN	-10	0.91	0.001286	± 2.5	PASS
		VN	0	4.83	0.006827	± 2.5	PASS
		VN	10	4.31	0.006092	± 2.5	PASS
		VN	20	-1.65	-0.002332	± 2.5	PASS
		VN	30	-0.16	-0.000226	± 2.5	PASS
		VN	40	-0.64	-0.000905	± 2.5	PASS
		VN	50	2.64	0.003731	± 2.5	PASS
	HCH	VN	-30	2.84	0.003970	± 2.5	PASS
		VN	-20	1.35	0.001887	± 2.5	PASS
		VN	-10	3.87	0.005410	± 2.5	PASS
		VN	0	-1.8	-0.002516	± 2.5	PASS
		VN	10	2.9	0.004054	± 2.5	PASS
		VN	20	-0.37	-0.000517	± 2.5	PASS

		VN	30	1.37	0.001915	± 2.5	PASS
		VN	40	1.15	0.001608	± 2.5	PASS
		VN	50	1.74	0.002433	± 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	3.53	0.005039	± 2.5	PASS
		VN	TN	2.9	0.004140	± 2.5	PASS
		VH	TN	2.99	0.004268	± 2.5	PASS
	MCH	VL	TN	-1.15	-0.001625	± 2.5	PASS
		VN	TN	-1.68	-0.002375	± 2.5	PASS
		VH	TN	3.48	0.004919	± 2.5	PASS
	HCH	VL	TN	-0.53	-0.000742	± 2.5	PASS
		VN	TN	3.82	0.005346	± 2.5	PASS
		VH	TN	0.39	0.000546	± 2.5	PASS
16QAM	LCH	VL	TN	0.67	0.000956	± 2.5	PASS
		VN	TN	1.48	0.002113	± 2.5	PASS
		VH	TN	-1.06	-0.001513	± 2.5	PASS
	MCH	VL	TN	3.96	0.005597	± 2.5	PASS
		VN	TN	-1.51	-0.002134	± 2.5	PASS
		VH	TN	4.71	0.006657	± 2.5	PASS
	HCH	VL	TN	1.17	0.001638	± 2.5	PASS
		VN	TN	3.51	0.004913	± 2.5	PASS
		VH	TN	1.8	0.002519	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.28	0.000400	± 2.5	PASS
		VN	-20	-0.41	-0.000585	± 2.5	PASS
		VN	-10	0.3	0.000428	± 2.5	PASS
		VN	0	1.59	0.002270	± 2.5	PASS
		VN	10	-1.99	-0.002841	± 2.5	PASS
		VN	20	2.35	0.003355	± 2.5	PASS
		VN	30	2.54	0.003626	± 2.5	PASS
		VN	40	2.65	0.003783	± 2.5	PASS
		VN	50	3.74	0.005339	± 2.5	PASS
	MCH	VN	-30	1.11	0.001569	± 2.5	PASS
		VN	-20	2.38	0.003364	± 2.5	PASS

		VN	-10	-1.52	-0.002148	± 2.5	PASS
		VN	0	3.9	0.005512	± 2.5	PASS
		VN	10	-0.57	-0.000806	± 2.5	PASS
		VN	20	1.03	0.001456	± 2.5	PASS
		VN	30	3.18	0.004495	± 2.5	PASS
		VN	40	3.97	0.005611	± 2.5	PASS
		VN	50	1.38	0.001951	± 2.5	PASS
	HCH	VN	-30	0.4	0.000560	± 2.5	PASS
		VN	-20	-0.33	-0.000462	± 2.5	PASS
		VN	-10	3.05	0.004269	± 2.5	PASS
		VN	0	4.1	0.005738	± 2.5	PASS
		VN	10	1.94	0.002715	± 2.5	PASS
		VN	20	2.11	0.002953	± 2.5	PASS
		VN	30	-1.2	-0.001679	± 2.5	PASS
		VN	40	0.38	0.000532	± 2.5	PASS
		VN	50	3.37	0.004717	± 2.5	PASS
16QAM	LCH	VN	-30	1.59	0.002270	± 2.5	PASS
		VN	-20	1.46	0.002084	± 2.5	PASS
		VN	-10	-1.12	-0.001599	± 2.5	PASS
		VN	0	4.2	0.005996	± 2.5	PASS
		VN	10	4.01	0.005724	± 2.5	PASS
		VN	20	4.34	0.006196	± 2.5	PASS
		VN	30	4.95	0.007066	± 2.5	PASS
		VN	40	0.45	0.000642	± 2.5	PASS
		VN	50	2.39	0.003412	± 2.5	PASS
	MCH	VN	-30	2.68	0.003788	± 2.5	PASS
		VN	-20	4.12	0.005823	± 2.5	PASS
		VN	-10	3.69	0.005216	± 2.5	PASS
		VN	0	2.9	0.004099	± 2.5	PASS
		VN	10	2.63	0.003717	± 2.5	PASS
		VN	20	-1.99	-0.002813	± 2.5	PASS
		VN	30	0.19	0.000269	± 2.5	PASS
		VN	40	3.58	0.005060	± 2.5	PASS
		VN	50	-1.71	-0.002417	± 2.5	PASS
	HCH	VN	-30	1.25	0.001749	± 2.5	PASS
		VN	-20	4.32	0.006046	± 2.5	PASS
		VN	-10	-1.77	-0.002477	± 2.5	PASS
		VN	0	-0.19	-0.000266	± 2.5	PASS
		VN	10	-1.64	-0.002295	± 2.5	PASS
		VN	20	-1.49	-0.002085	± 2.5	PASS
		VN	30	1.57	0.002197	± 2.5	PASS

		VN	40	-2	-0.002799	± 2.5	PASS
		VN	50	1.35	0.001889	± 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	-1.93	-0.002751	± 2.5	PASS
		VN	TN	1.91	0.002723	± 2.5	PASS
		VH	TN	0.27	0.000385	± 2.5	PASS
	MCH	VL	TN	2.96	0.004184	± 2.5	PASS
		VN	TN	4.91	0.006940	± 2.5	PASS
		VH	TN	2.92	0.004127	± 2.5	PASS
	HCH	VL	TN	1.04	0.001458	± 2.5	PASS
		VN	TN	4.56	0.006391	± 2.5	PASS
		VH	TN	-0.29	-0.000406	± 2.5	PASS
16QAM	LCH	VL	TN	3.88	0.005531	± 2.5	PASS
		VN	TN	2.3	0.003279	± 2.5	PASS
		VH	TN	2.76	0.003934	± 2.5	PASS
	MCH	VL	TN	4.73	0.006686	± 2.5	PASS
		VN	TN	2.72	0.003845	± 2.5	PASS
		VH	TN	-0.2	-0.000283	± 2.5	PASS
	HCH	VL	TN	1.57	0.002200	± 2.5	PASS
		VN	TN	0.49	0.000687	± 2.5	PASS
		VH	TN	3.71	0.005200	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.04	0.001483	± 2.5	PASS
		VN	-20	2.53	0.003607	± 2.5	PASS
		VN	-10	-0.52	-0.000741	± 2.5	PASS
		VN	0	-0.81	-0.001155	± 2.5	PASS
		VN	10	1.13	0.001611	± 2.5	PASS
		VN	20	-0.86	-0.001226	± 2.5	PASS
		VN	30	3.4	0.004847	± 2.5	PASS
		VN	40	2.43	0.003464	± 2.5	PASS
		VN	50	-1.59	-0.002267	± 2.5	PASS
	MCH	VN	-30	-1.02	-0.001442	± 2.5	PASS
		VN	-20	4.49	0.006346	± 2.5	PASS
		VN	-10	2.55	0.003604	± 2.5	PASS

		VN	0	0.87	0.001230	± 2.5	PASS
		VN	10	-0.92	-0.001300	± 2.5	PASS
		VN	20	0.7	0.000989	± 2.5	PASS
		VN	30	0.04	0.000057	± 2.5	PASS
		VN	40	3.03	0.004283	± 2.5	PASS
		VN	50	0.16	0.000226	± 2.5	PASS
	HCH	VN	-30	3.83	0.005368	± 2.5	PASS
		VN	-20	1.03	0.001444	± 2.5	PASS
		VN	-10	0.4	0.000561	± 2.5	PASS
		VN	0	4.74	0.006643	± 2.5	PASS
		VN	10	1.14	0.001598	± 2.5	PASS
		VN	20	2.54	0.003560	± 2.5	PASS
		VN	30	-0.88	-0.001233	± 2.5	PASS
		VN	40	3.06	0.004289	± 2.5	PASS
		VN	50	1.3	0.001822	± 2.5	PASS
16QAM	LCH	VN	-30	1.06	0.001511	± 2.5	PASS
		VN	-20	2.36	0.003364	± 2.5	PASS
		VN	-10	-0.78	-0.001112	± 2.5	PASS
		VN	0	-0.99	-0.001411	± 2.5	PASS
		VN	10	-1.57	-0.002238	± 2.5	PASS
		VN	20	1.57	0.002238	± 2.5	PASS
		VN	30	-0.58	-0.000827	± 2.5	PASS
		VN	40	3.96	0.005645	± 2.5	PASS
		VN	50	1.72	0.002452	± 2.5	PASS
	MCH	VN	-30	0.68	0.000961	± 2.5	PASS
		VN	-20	3.43	0.004848	± 2.5	PASS
		VN	-10	1.35	0.001908	± 2.5	PASS
		VN	0	1.44	0.002035	± 2.5	PASS
		VN	10	0.98	0.001385	± 2.5	PASS
		VN	20	2.41	0.003406	± 2.5	PASS
		VN	30	1.74	0.002459	± 2.5	PASS
		VN	40	-0.82	-0.001159	± 2.5	PASS
		VN	50	4.77	0.006742	± 2.5	PASS
	HCH	VN	-30	-0.28	-0.000392	± 2.5	PASS
		VN	-20	-1.52	-0.002130	± 2.5	PASS
		VN	-10	-0.97	-0.001359	± 2.5	PASS
		VN	0	-0.8	-0.001121	± 2.5	PASS
		VN	10	4.52	0.006335	± 2.5	PASS
		VN	20	3.64	0.005102	± 2.5	PASS
		VN	30	-1.96	-0.002747	± 2.5	PASS
		VN	40	3.41	0.004779	± 2.5	PASS

		VN	50	3.02	0.004233	± 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	2.34	0.003324	± 2.5	PASS
		VN	TN	3.71	0.005270	± 2.5	PASS
		VH	TN	4.45	0.006321	± 2.5	PASS
	MCH	VL	TN	3.91	0.005527	± 2.5	PASS
		VN	TN	-1.65	-0.002332	± 2.5	PASS
		VH	TN	4.22	0.005965	± 2.5	PASS
	HCH	VL	TN	3.34	0.004698	± 2.5	PASS
		VN	TN	4.26	0.005992	± 2.5	PASS
		VH	TN	1.68	0.002363	± 2.5	PASS
16QAM	LCH	VL	TN	4.66	0.006619	± 2.5	PASS
		VN	TN	-0.64	-0.000909	± 2.5	PASS
		VH	TN	1.73	0.002457	± 2.5	PASS
	MCH	VL	TN	4.6	0.006502	± 2.5	PASS
		VN	TN	3.18	0.004495	± 2.5	PASS
		VH	TN	1.57	0.002219	± 2.5	PASS
	HCH	VL	TN	4.04	0.005682	± 2.5	PASS
		VN	TN	-1.12	-0.001575	± 2.5	PASS
		VH	TN	4.23	0.005949	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.99	-0.002827	± 2.5	PASS
		VN	-20	2.01	0.002855	± 2.5	PASS
		VN	-10	4.41	0.006264	± 2.5	PASS
		VN	0	-1.85	-0.002628	± 2.5	PASS
		VN	10	-0.7	-0.000994	± 2.5	PASS
		VN	20	4.31	0.006122	± 2.5	PASS
		VN	30	2.94	0.004176	± 2.5	PASS
		VN	40	-1.05	-0.001491	± 2.5	PASS
		VN	50	1.21	0.001719	± 2.5	PASS
	MCH	VN	-30	0.51	0.000721	± 2.5	PASS
		VN	-20	4.44	0.006276	± 2.5	PASS
		VN	-10	-1.14	-0.001611	± 2.5	PASS
		VN	0	3.51	0.004961	± 2.5	PASS
		VN	10	4.88	0.006898	± 2.5	PASS

		VN	20	0.07	0.000099	± 2.5	PASS
		VN	30	0.06	0.000085	± 2.5	PASS
		VN	40	2.28	0.003223	± 2.5	PASS
		VN	50	1.38	0.001951	± 2.5	PASS
	HCH	VN	-30	3.37	0.004740	± 2.5	PASS
		VN	-20	3.74	0.005260	± 2.5	PASS
		VN	-10	2.31	0.003249	± 2.5	PASS
		VN	0	-0.07	-0.000098	± 2.5	PASS
		VN	10	2.94	0.004135	± 2.5	PASS
		VN	20	1.17	0.001646	± 2.5	PASS
		VN	30	-1.81	-0.002546	± 2.5	PASS
		VN	40	-0.94	-0.001322	± 2.5	PASS
		VN	50	0.09	0.000127	± 2.5	PASS
		VN	-30	0.95	0.001349	± 2.5	PASS
		VN	-20	2.13	0.003026	± 2.5	PASS
		VN	-10	2.4	0.003409	± 2.5	PASS
		VN	0	2.49	0.003537	± 2.5	PASS
		VN	10	-0.24	-0.000341	± 2.5	PASS
16QAM	LCH	VN	20	1.36	0.001932	± 2.5	PASS
		VN	30	2.87	0.004077	± 2.5	PASS
		VN	40	2.38	0.003381	± 2.5	PASS
		VN	50	-1.63	-0.002315	± 2.5	PASS
	MCH	VN	-30	-1.87	-0.002643	± 2.5	PASS
		VN	-20	1.53	0.002163	± 2.5	PASS
		VN	-10	-0.2	-0.000283	± 2.5	PASS
		VN	0	0.25	0.000353	± 2.5	PASS
		VN	10	1.77	0.002502	± 2.5	PASS
		VN	20	1.61	0.002276	± 2.5	PASS
		VN	30	-1.24	-0.001753	± 2.5	PASS
		VN	40	1.31	0.001852	± 2.5	PASS
		VN	50	4.31	0.006092	± 2.5	PASS
	HCH	VN	-30	-0.47	-0.000661	± 2.5	PASS
		VN	-20	4.97	0.006990	± 2.5	PASS
		VN	-10	3.42	0.004810	± 2.5	PASS
		VN	0	0.77	0.001083	± 2.5	PASS
		VN	10	4.56	0.006414	± 2.5	PASS
		VN	20	2.98	0.004191	± 2.5	PASS
		VN	30	2.93	0.004121	± 2.5	PASS
		VN	40	2.31	0.003249	± 2.5	PASS
		VN	50	4.34	0.006104	± 2.5	PASS