















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	-1.77	-0.001035	± 2.5	PASS
		VN	TN	3.63	0.002122	± 2.5	PASS
		VH	TN	2.42	0.001415	± 2.5	PASS
	MCH	VL	TN	-1.93	-0.001114	± 2.5	PASS
		VN	TN	0.19	0.000110	± 2.5	PASS
		VH	TN	2.67	0.001541	± 2.5	PASS
	HCH	VL	TN	-0.77	-0.000439	± 2.5	PASS
		VN	TN	-1.92	-0.001094	± 2.5	PASS
		VH	TN	3.16	0.001801	± 2.5	PASS
16QAM	LCH	VL	TN	2.84	0.001660	± 2.5	PASS
		VN	TN	-0.51	-0.000298	± 2.5	PASS
		VH	TN	-0.55	-0.000322	± 2.5	PASS
	MCH	VL	TN	2.14	0.001235	± 2.5	PASS
		VN	TN	4.63	0.002672	± 2.5	PASS
		VH	TN	-1.9	-0.001097	± 2.5	PASS
	HCH	VL	TN	0.18	0.000103	± 2.5	PASS
		VN	TN	4.91	0.002799	± 2.5	PASS
		VH	TN	-0.55	-0.000314	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-1.45	-0.000848	± 2.5	PASS
		VN	-20	-0.56	-0.000327	± 2.5	PASS
		VN	-10	4.64	0.002712	± 2.5	PASS
		VN	0	3.37	0.001970	± 2.5	PASS
		VN	10	3.6	0.002104	± 2.5	PASS
		VN	20	4.42	0.002584	± 2.5	PASS
		VN	30	2.27	0.001327	± 2.5	PASS
		VN	40	-0.18	-0.000105	± 2.5	PASS
		VN	50	-1.51	-0.000883	± 2.5	PASS

	MCH	VN	-30	4.74	0.002736	± 2.5	PASS
		VN	-20	4.57	0.002638	± 2.5	PASS
		VN	-10	2.14	0.001235	± 2.5	PASS
		VN	0	-0.78	-0.000450	± 2.5	PASS
		VN	10	1.04	0.000600	± 2.5	PASS
		VN	20	0.26	0.000150	± 2.5	PASS
		VN	30	-0.54	-0.000312	± 2.5	PASS
		VN	40	-0.64	-0.000369	± 2.5	PASS
		VN	50	3.3	0.001905	± 2.5	PASS
	HCH	VN	-30	-0.88	-0.000502	± 2.5	PASS
		VN	-20	3.31	0.001887	± 2.5	PASS
		VN	-10	2.54	0.001448	± 2.5	PASS
		VN	0	-1.33	-0.000758	± 2.5	PASS
		VN	10	-0.01	-0.000006	± 2.5	PASS
		VN	20	1.84	0.001049	± 2.5	PASS
		VN	30	0.92	0.000524	± 2.5	PASS
		VN	40	3.23	0.001841	± 2.5	PASS
		VN	50	4.7	0.002679	± 2.5	PASS
16QAM	LCH	VN	-30	0.29	0.000170	± 2.5	PASS
		VN	-20	3.33	0.001947	± 2.5	PASS
		VN	-10	3.02	0.001765	± 2.5	PASS
		VN	0	-0.73	-0.000427	± 2.5	PASS
		VN	10	-0.41	-0.000240	± 2.5	PASS
		VN	20	2.08	0.001216	± 2.5	PASS
		VN	30	4.11	0.002403	± 2.5	PASS
		VN	40	-0.7	-0.000409	± 2.5	PASS
		VN	50	-1.35	-0.000789	± 2.5	PASS
	MCH	VN	-30	-0.76	-0.000433	± 2.5	PASS
		VN	-20	-0.06	-0.000034	± 2.5	PASS
		VN	-10	-0.61	-0.000348	± 2.5	PASS
		VN	0	0.3	0.000171	± 2.5	PASS
		VN	10	-0.77	-0.000439	± 2.5	PASS
		VN	20	-0.05	-0.000029	± 2.5	PASS
		VN	30	-0.86	-0.000490	± 2.5	PASS
		VN	40	2.71	0.001545	± 2.5	PASS
		VN	50	3.18	0.001813	± 2.5	PASS
	HCH	VN	-30	-1.67	-0.000952	± 2.5	PASS
		VN	-20	-0.68	-0.000388	± 2.5	PASS
		VN	-10	4.99	0.002844	± 2.5	PASS
		VN	0	4.59	0.002616	± 2.5	PASS
		VN	10	3.54	0.002018	± 2.5	PASS

		VN	20	3.28	0.001870	± 2.5	PASS
		VN	30	4.41	0.002514	± 2.5	PASS
		VN	40	3.75	0.002138	± 2.5	PASS
		VN	50	1.31	0.000747	± 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	-1.39	-0.000812	± 2.5	PASS
		VN	TN	0.83	0.000485	± 2.5	PASS
		VH	TN	1.13	0.000660	± 2.5	PASS
	MCH	VL	TN	0.67	0.000387	± 2.5	PASS
		VN	TN	3	0.001732	± 2.5	PASS
		VH	TN	4.24	0.002447	± 2.5	PASS
	HCH	VL	TN	3.17	0.001808	± 2.5	PASS
		VN	TN	3.48	0.001985	± 2.5	PASS
		VH	TN	3.39	0.001933	± 2.5	PASS
16QAM	LCH	VL	TN	0.94	0.000549	± 2.5	PASS
		VN	TN	0.36	0.000210	± 2.5	PASS
		VH	TN	-0.91	-0.000532	± 2.5	PASS
	MCH	VL	TN	1.6	0.000924	± 2.5	PASS
		VN	TN	0.69	0.000398	± 2.5	PASS
		VH	TN	4.26	0.002459	± 2.5	PASS
	HCH	VL	TN	-0.44	-0.000251	± 2.5	PASS
		VN	TN	2.1	0.001198	± 2.5	PASS
		VH	TN	3.78	0.002156	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.29	0.000754	± 2.5	PASS
		VN	-20	-1.36	-0.000795	± 2.5	PASS
		VN	-10	1.82	0.001063	± 2.5	PASS
		VN	0	3.86	0.002255	± 2.5	PASS
		VN	10	0.17	0.000099	± 2.5	PASS
		VN	20	-1.77	-0.001034	± 2.5	PASS
		VN	30	4.02	0.002349	± 2.5	PASS
		VN	40	3.47	0.002027	± 2.5	PASS
	VN	50	1.74	0.001017	± 2.5	PASS	
MCH	VN	-30	4.68	0.002701	± 2.5	PASS	

		VN	-20	1.13	0.000652	± 2.5	PASS
		VN	-10	0.36	0.000208	± 2.5	PASS
		VN	0	3.09	0.001784	± 2.5	PASS
		VN	10	-1.61	-0.000929	± 2.5	PASS
		VN	20	4.69	0.002707	± 2.5	PASS
		VN	30	-1.99	-0.001149	± 2.5	PASS
		VN	40	3.25	0.001876	± 2.5	PASS
		VN	50	4.28	0.002470	± 2.5	PASS
	HCH	VN	-30	1.1	0.000627	± 2.5	PASS
		VN	-20	-0.79	-0.000451	± 2.5	PASS
		VN	-10	-1.84	-0.001049	± 2.5	PASS
		VN	0	-1.24	-0.000707	± 2.5	PASS
		VN	10	-0.79	-0.000451	± 2.5	PASS
		VN	20	3.24	0.001848	± 2.5	PASS
		VN	30	-0.4	-0.000228	± 2.5	PASS
		VN	40	1.88	0.001072	± 2.5	PASS
		VN	50	0.09	0.000051	± 2.5	PASS
		16QAM	LCH	VN	-30	-1.53	-0.000883
VN	-20			-0.39	-0.000225	± 2.5	PASS
VN	-10			0.45	0.000260	± 2.5	PASS
VN	0			0.88	0.000508	± 2.5	PASS
VN	10			2.43	0.001403	± 2.5	PASS
VN	20			4.6	0.002655	± 2.5	PASS
VN	30			0.01	0.000006	± 2.5	PASS
VN	40			0.47	0.000271	± 2.5	PASS
VN	50			3.64	0.002101	± 2.5	PASS
MCH	VN		-30	3.78	0.002156	± 2.5	PASS
	VN		-20	-0.72	-0.000411	± 2.5	PASS
	VN		-10	0.97	0.000553	± 2.5	PASS
	VN		0	2.88	0.001642	± 2.5	PASS
	VN		10	4.62	0.002635	± 2.5	PASS
	VN		20	-1.73	-0.000987	± 2.5	PASS
	VN		30	3.87	0.002207	± 2.5	PASS
	VN		40	1.89	0.001078	± 2.5	PASS
	VN		50	3.71	0.002116	± 2.5	PASS
HCH	VN		-30	4.83	0.002754	± 2.5	PASS
	VN		-20	-1.18	-0.000673	± 2.5	PASS
	VN		-10	0.62	0.000354	± 2.5	PASS
	VN		0	0.56	0.000319	± 2.5	PASS
	VN		10	2.99	0.001705	± 2.5	PASS
	VN		20	-1.89	-0.001078	± 2.5	PASS

		VN	30	-1.91	-0.001089	± 2.5	PASS
		VN	40	1.04	0.000593	± 2.5	PASS
		VN	50	1.81	0.001032	± 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	3.58	0.002091	± 2.5	PASS
		VN	TN	3.46	0.002020	± 2.5	PASS
		VH	TN	-0.89	-0.000520	± 2.5	PASS
	MCH	VL	TN	0.58	0.000335	± 2.5	PASS
		VN	TN	4.14	0.002390	± 2.5	PASS
		VH	TN	4.89	0.002823	± 2.5	PASS
	HCH	VL	TN	2.88	0.001643	± 2.5	PASS
		VN	TN	4.89	0.002790	± 2.5	PASS
		VH	TN	3.44	0.001963	± 2.5	PASS
16QAM	LCH	VL	TN	-1.68	-0.000981	± 2.5	PASS
		VN	TN	3.78	0.002207	± 2.5	PASS
		VH	TN	1.46	0.000853	± 2.5	PASS
	MCH	VL	TN	-0.74	-0.000427	± 2.5	PASS
		VN	TN	4.78	0.002759	± 2.5	PASS
		VH	TN	1.63	0.000941	± 2.5	PASS
	HCH	VL	TN	0.56	0.000320	± 2.5	PASS
		VN	TN	0.98	0.000559	± 2.5	PASS
		VH	TN	3.65	0.002083	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	1.81	0.001057	± 2.5	PASS
		VN	-20	1.57	0.000917	± 2.5	PASS
		VN	-10	-0.24	-0.000140	± 2.5	PASS
		VN	0	0.3	0.000175	± 2.5	PASS
		VN	10	4.46	0.002604	± 2.5	PASS
		VN	20	-0.91	-0.000531	± 2.5	PASS
		VN	30	4.15	0.002423	± 2.5	PASS
		VN	40	0.91	0.000531	± 2.5	PASS
		VN	50	3.55	0.002073	± 2.5	PASS
	MCH	VN	-30	-0.86	-0.000496	± 2.5	PASS
		VN	-20	-1.68	-0.000970	± 2.5	PASS

		VN	-10	-0.99	-0.000571	± 2.5	PASS		
		VN	0	4.05	0.002338	± 2.5	PASS		
		VN	10	0.44	0.000254	± 2.5	PASS		
		VN	20	0.74	0.000427	± 2.5	PASS		
		VN	30	-1.76	-0.001016	± 2.5	PASS		
		VN	40	1.3	0.000750	± 2.5	PASS		
		VN	50	-1.91	-0.001102	± 2.5	PASS		
	HCH	VN	-30	4.86	0.002773	± 2.5	PASS		
		VN	-20	3.03	0.001588	± 2.5	PASS		
		VN	-10	1.35	0.000708	± 2.5	PASS		
		VN	0	-0.44	-0.000231	± 2.5	PASS		
		VN	10	-0.89	-0.000467	± 2.5	PASS		
		VN	20	3.37	0.001767	± 2.5	PASS		
		VN	30	2.93	0.001536	± 2.5	PASS		
		VN	40	-0.53	-0.000278	± 2.5	PASS		
		VN	50	0.98	0.000514	± 2.5	PASS		
		16QAM	LCH	VN	-30	2.17	0.001253	± 2.5	PASS
				VN	-20	3.5	0.002020	± 2.5	PASS
				VN	-10	3.26	0.001882	± 2.5	PASS
VN	0			1.07	0.000618	± 2.5	PASS		
VN	10			4.55	0.002626	± 2.5	PASS		
VN	20			-0.36	-0.000208	± 2.5	PASS		
VN	30			-0.08	-0.000046	± 2.5	PASS		
VN	40			3.93	0.002268	± 2.5	PASS		
VN	50			1.55	0.000895	± 2.5	PASS		
MCH	VN		-30	-0.49	-0.000280	± 2.5	PASS		
	VN		-20	3.89	0.002220	± 2.5	PASS		
	VN		-10	3.99	0.002277	± 2.5	PASS		
	VN		0	4.3	0.002454	± 2.5	PASS		
	VN		10	-0.46	-0.000262	± 2.5	PASS		
	VN		20	4.35	0.002482	± 2.5	PASS		
	VN		30	-0.14	-0.000080	± 2.5	PASS		
	VN		40	2.09	0.001193	± 2.5	PASS		
	VN		50	-0.9	-0.000514	± 2.5	PASS		
HCH	VN		-30	4.92	0.002579	± 2.5	PASS		
	VN		-20	1.34	0.000702	± 2.5	PASS		
	VN		-10	1.29	0.000676	± 2.5	PASS		
	VN		0	4.26	0.002233	± 2.5	PASS		
	VN		10	0.24	0.000126	± 2.5	PASS		
	VN		20	3.32	0.001740	± 2.5	PASS		
	VN		30	-0.9	-0.000472	± 2.5	PASS		

		VN	40	-0.78	-0.000409	± 2.5	PASS
		VN	50	-1.19	-0.000624	± 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	2.79	0.001627	± 2.5	PASS
		VN	TN	0.06	0.000035	± 2.5	PASS
		VH	TN	0.32	0.000187	± 2.5	PASS
	MCH	VL	TN	3.04	0.001755	± 2.5	PASS
		VN	TN	4.81	0.002776	± 2.5	PASS
		VH	TN	4.53	0.002615	± 2.5	PASS
	HCH	VL	TN	4.15	0.002371	± 2.5	PASS
		VN	TN	-1.32	-0.000754	± 2.5	PASS
		VH	TN	4.35	0.002486	± 2.5	PASS
16QAM	LCH	VL	TN	1.93	0.001125	± 2.5	PASS
		VN	TN	-0.19	-0.000111	± 2.5	PASS
		VH	TN	0.46	0.000268	± 2.5	PASS
	MCH	VL	TN	3.68	0.002124	± 2.5	PASS
		VN	TN	4.75	0.002742	± 2.5	PASS
		VH	TN	2.09	0.001206	± 2.5	PASS
	HCH	VL	TN	4.41	0.002520	± 2.5	PASS
		VN	TN	-0.42	-0.000240	± 2.5	PASS
		VH	TN	0.36	0.000206	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.82	0.002227	± 2.5	PASS
		VN	-20	4.34	0.002531	± 2.5	PASS
		VN	-10	1.77	0.001032	± 2.5	PASS
		VN	0	-1.96	-0.001143	± 2.5	PASS
		VN	10	-1.18	-0.000688	± 2.5	PASS
		VN	20	4.16	0.002426	± 2.5	PASS
		VN	30	2.96	0.001726	± 2.5	PASS
		VN	40	2.08	0.001213	± 2.5	PASS
		VN	50	3.88	0.002262	± 2.5	PASS
	MCH	VN	-30	1.14	0.000658	± 2.5	PASS
		VN	-20	-1.44	-0.000831	± 2.5	PASS
		VN	-10	-0.71	-0.000410	± 2.5	PASS

		VN	0	2.89	0.001668	± 2.5	PASS		
		VN	10	2.84	0.001639	± 2.5	PASS		
		VN	20	-0.77	-0.000444	± 2.5	PASS		
		VN	30	0.59	0.000341	± 2.5	PASS		
		VN	40	-1.25	-0.000722	± 2.5	PASS		
		VN	50	2.01	0.001160	± 2.5	PASS		
	HCH	VN	-30	0.99	0.000566	± 2.5	PASS		
		VN	-20	1.73	0.000989	± 2.5	PASS		
		VN	-10	1.5	0.000857	± 2.5	PASS		
		VN	0	-0.67	-0.000383	± 2.5	PASS		
		VN	10	1.35	0.000771	± 2.5	PASS		
		VN	20	0.99	0.000566	± 2.5	PASS		
		VN	30	-1.28	-0.000731	± 2.5	PASS		
		VN	40	-1.9	-0.001086	± 2.5	PASS		
		VN	50	4.46	0.002549	± 2.5	PASS		
		16QAM	LCH	VN	-30	1.91	0.001102	± 2.5	PASS
				VN	-20	1.4	0.000808	± 2.5	PASS
				VN	-10	1.18	0.000681	± 2.5	PASS
VN	0			-0.13	-0.000075	± 2.5	PASS		
VN	10			1.09	0.000629	± 2.5	PASS		
VN	20			-1.14	-0.000658	± 2.5	PASS		
VN	30			1.85	0.001068	± 2.5	PASS		
VN	40			2.66	0.001535	± 2.5	PASS		
VN	50			1.05	0.000606	± 2.5	PASS		
MCH	VN		-30	1.52	0.000869	± 2.5	PASS		
	VN		-20	-0.86	-0.000491	± 2.5	PASS		
	VN		-10	1.17	0.000669	± 2.5	PASS		
	VN		0	1.55	0.000886	± 2.5	PASS		
	VN		10	3.43	0.001960	± 2.5	PASS		
	VN		20	2.17	0.001240	± 2.5	PASS		
	VN		30	-1.89	-0.001080	± 2.5	PASS		
	VN		40	0.15	0.000086	± 2.5	PASS		
	VN		50	0.2	0.000114	± 2.5	PASS		
HCH	VN	-30	-0.3	-0.000171	± 2.5	PASS			
	VN	-20	0.59	0.000337	± 2.5	PASS			
	VN	-10	1.22	0.000697	± 2.5	PASS			
	VN	0	-0.61	-0.000349	± 2.5	PASS			
	VN	10	1.76	0.001006	± 2.5	PASS			
	VN	20	2.17	0.001240	± 2.5	PASS			
	VN	30	4.15	0.002371	± 2.5	PASS			
	VN	40	-0.49	-0.000280	± 2.5	PASS			

		VN	50	1.03	0.000589	± 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	0.55	0.000320	± 2.5	PASS
		VN	TN	1.46	0.000850	± 2.5	PASS
		VH	TN	-0.82	-0.000477	± 2.5	PASS
	MCH	VL	TN	4.18	0.002413	± 2.5	PASS
		VN	TN	-0.23	-0.000133	± 2.5	PASS
		VH	TN	-1.82	-0.001051	± 2.5	PASS
	HCH	VL	TN	-0.34	-0.000195	± 2.5	PASS
		VN	TN	-0.76	-0.000435	± 2.5	PASS
		VH	TN	-0.66	-0.000378	± 2.5	PASS
16QAM	LCH	VL	TN	2.11	0.001229	± 2.5	PASS
		VN	TN	4.53	0.002638	± 2.5	PASS
		VH	TN	0.02	0.000012	± 2.5	PASS
	MCH	VL	TN	-1.81	-0.001045	± 2.5	PASS
		VN	TN	0.21	0.000121	± 2.5	PASS
		VH	TN	1.43	0.000825	± 2.5	PASS
	HCH	VL	TN	-0.94	-0.000538	± 2.5	PASS
		VN	TN	0.21	0.000120	± 2.5	PASS
		VH	TN	0.03	0.000017	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	0.16	0.000093	± 2.5	PASS
		VN	-20	4.5	0.002620	± 2.5	PASS
		VN	-10	1.34	0.000780	± 2.5	PASS
		VN	0	0.43	0.000250	± 2.5	PASS
		VN	10	0.1	0.000058	± 2.5	PASS
		VN	20	3.66	0.002131	± 2.5	PASS
		VN	30	4.53	0.002638	± 2.5	PASS
		VN	40	-1.31	-0.000763	± 2.5	PASS
		VN	50	2.89	0.001683	± 2.5	PASS
	MCH	VN	-30	4.38	0.002528	± 2.5	PASS
		VN	-20	3.49	0.002014	± 2.5	PASS
		VN	-10	3.25	0.001876	± 2.5	PASS
		VN	0	1.25	0.000722	± 2.5	PASS

		VN	10	0.46	0.000266	± 2.5	PASS		
		VN	20	-0.69	-0.000398	± 2.5	PASS		
		VN	30	0.96	0.000554	± 2.5	PASS		
		VN	40	1.96	0.001131	± 2.5	PASS		
		VN	50	-1.58	-0.000912	± 2.5	PASS		
	HCH	VN	-30	-1.07	-0.000612	± 2.5	PASS		
		VN	-20	4.75	0.002718	± 2.5	PASS		
		VN	-10	-0.99	-0.000567	± 2.5	PASS		
		VN	0	4.32	0.002472	± 2.5	PASS		
		VN	10	3.78	0.002163	± 2.5	PASS		
		VN	20	0.69	0.000395	± 2.5	PASS		
		VN	30	4.91	0.002810	± 2.5	PASS		
		VN	40	-0.13	-0.000074	± 2.5	PASS		
		VN	50	2.43	0.001391	± 2.5	PASS		
		16QAM	LCH	VN	-30	4.99	0.002880	± 2.5	PASS
				VN	-20	-0.23	-0.000133	± 2.5	PASS
VN	-10			1.05	0.000606	± 2.5	PASS		
VN	0			4.95	0.002857	± 2.5	PASS		
VN	10			1.98	0.001143	± 2.5	PASS		
VN	20			3.26	0.001882	± 2.5	PASS		
VN	30			4.72	0.002724	± 2.5	PASS		
VN	40			4.09	0.002361	± 2.5	PASS		
VN	50			3.63	0.002095	± 2.5	PASS		
MCH	VN		-30	3.83	0.002192	± 2.5	PASS		
	VN		-20	4.92	0.002815	± 2.5	PASS		
	VN		-10	4.42	0.002529	± 2.5	PASS		
	VN		0	2.68	0.001534	± 2.5	PASS		
	VN		10	3.8	0.002175	± 2.5	PASS		
	VN		20	2.81	0.001608	± 2.5	PASS		
	VN		30	2.89	0.001654	± 2.5	PASS		
	VN		40	-0.06	-0.000034	± 2.5	PASS		
	VN		50	-1.4	-0.000801	± 2.5	PASS		
HCH	VN		-30	0.8	0.000458	± 2.5	PASS		
	VN		-20	-1.68	-0.000961	± 2.5	PASS		
	VN		-10	-1.44	-0.000824	± 2.5	PASS		
	VN		0	0.54	0.000309	± 2.5	PASS		
	VN		10	2.12	0.001213	± 2.5	PASS		
	VN		20	2.53	0.001448	± 2.5	PASS		
	VN	30	3.87	0.002215	± 2.5	PASS			
	VN	40	-1.67	-0.000956	± 2.5	PASS			
	VN	50	4.44	0.002541	± 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	-0.55	-0.000320	± 2.5	PASS
		VN	TN	-1.56	-0.000907	± 2.5	PASS
		VH	TN	2.61	0.001517	± 2.5	PASS
	MCH	VL	TN	-1.94	-0.001120	± 2.5	PASS
		VN	TN	0.85	0.000491	± 2.5	PASS
		VH	TN	-0.3	-0.000173	± 2.5	PASS
	HCH	VL	TN	0.92	0.000527	± 2.5	PASS
		VN	TN	2.66	0.001524	± 2.5	PASS
		VH	TN	-1.22	-0.000699	± 2.5	PASS
16QAM	LCH	VL	TN	0.87	0.000506	± 2.5	PASS
		VN	TN	2.93	0.001703	± 2.5	PASS
		VH	TN	1.2	0.000698	± 2.5	PASS
	MCH	VL	TN	-0.5	-0.000289	± 2.5	PASS
		VN	TN	0.4	0.000231	± 2.5	PASS
		VH	TN	1.38	0.000797	± 2.5	PASS
	HCH	VL	TN	0.92	0.000527	± 2.5	PASS
		VN	TN	3.2	0.001834	± 2.5	PASS
		VH	TN	-1.29	-0.000739	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.15	0.001831	± 2.5	PASS
		VN	-20	-1.55	-0.000901	± 2.5	PASS
		VN	-10	-0.49	-0.000285	± 2.5	PASS
		VN	0	1.44	0.000837	± 2.5	PASS
		VN	10	3.28	0.001907	± 2.5	PASS
		VN	20	0.79	0.000459	± 2.5	PASS
		VN	30	0	0.000000	± 2.5	PASS
		VN	40	4.26	0.002477	± 2.5	PASS
		VN	50	4.63	0.002692	± 2.5	PASS
	MCH	VN	-30	4.16	0.002401	± 2.5	PASS
		VN	-20	2.52	0.001455	± 2.5	PASS
		VN	-10	-1	-0.000577	± 2.5	PASS
		VN	0	-1.21	-0.000698	± 2.5	PASS
		VN	10	4.51	0.002603	± 2.5	PASS

		VN	20	-1.16	-0.000670	± 2.5	PASS
		VN	30	2.47	0.001426	± 2.5	PASS
		VN	40	-0.4	-0.000231	± 2.5	PASS
		VN	50	-1.44	-0.000831	± 2.5	PASS
	HCH	VN	-30	-0.99	-0.000567	± 2.5	PASS
		VN	-20	4	0.002292	± 2.5	PASS
		VN	-10	0.03	0.000017	± 2.5	PASS
		VN	0	3.29	0.001885	± 2.5	PASS
		VN	10	-1.78	-0.001020	± 2.5	PASS
		VN	20	0.06	0.000034	± 2.5	PASS
		VN	30	-0.88	-0.000504	± 2.5	PASS
		VN	40	-0.21	-0.000120	± 2.5	PASS
		VN	50	3.47	0.001989	± 2.5	PASS
16QAM	LCH	VN	-30	-0.15	-0.000087	± 2.5	PASS
		VN	-20	-0.44	-0.000254	± 2.5	PASS
		VN	-10	-0.27	-0.000156	± 2.5	PASS
		VN	0	2.42	0.001397	± 2.5	PASS
		VN	10	4.58	0.002644	± 2.5	PASS
		VN	20	-0.2	-0.000115	± 2.5	PASS
		VN	30	4.07	0.002349	± 2.5	PASS
		VN	40	-0.79	-0.000456	± 2.5	PASS
		VN	50	1.01	0.000583	± 2.5	PASS
	MCH	VN	-30	-1.84	-0.001054	± 2.5	PASS
		VN	-20	0.52	0.000298	± 2.5	PASS
		VN	-10	1.66	0.000951	± 2.5	PASS
		VN	0	1.87	0.001072	± 2.5	PASS
		VN	10	2.33	0.001335	± 2.5	PASS
		VN	20	0.72	0.000413	± 2.5	PASS
		VN	30	1.79	0.001026	± 2.5	PASS
		VN	40	2.16	0.001238	± 2.5	PASS
		VN	50	-1.53	-0.000877	± 2.5	PASS
	HCH	VN	-30	-1.15	-0.000659	± 2.5	PASS
		VN	-20	2.97	0.001702	± 2.5	PASS
		VN	-10	-1.33	-0.000762	± 2.5	PASS
		VN	0	0.01	0.000006	± 2.5	PASS
		VN	10	1.21	0.000693	± 2.5	PASS
		VN	20	1.98	0.001135	± 2.5	PASS
		VN	30	0.2	0.000115	± 2.5	PASS
		VN	40	-1.56	-0.000894	± 2.5	PASS
		VN	50	-0.29	-0.000166	± 2.5	PASS