

Frequency Error VS. Voltage

Test Band	Test mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band2	QPSK/ 20MHz	LCH	TN	VL	-1.54	-0.00083	PASS
				VN	3.41	0.00183	PASS
				VH	0.29	0.00016	PASS
		MCH	TN	VL	4.45	0.00237	PASS
				VN	0.18	0.00010	PASS
				VH	1.85	0.00098	PASS
		HCH	TN	VL	1.43	0.00075	PASS
				VN	1.82	0.00096	PASS
				VH	2.24	0.00118	PASS
	16QAM/ 20MHz	LCH	TN	VL	-2.32	-0.00125	PASS
				VN	-1.03	-0.00055	PASS
				VH	-1.16	-0.00062	PASS
		MCH	TN	VL	3.47	0.00185	PASS
				VN	-0.9	-0.00048	PASS
				VH	2.53	0.00135	PASS
		HCH	TN	VL	-1.11	-0.00058	PASS
				VN	-0.08	-0.00004	PASS
				VH	3.38	0.00178	PASS

Test Band	Test mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band4	QPSK/ 20MHz	LCH	TN	VL	-1.61	-0.00094	PASS
				VN	3.38	0.00197	PASS
				VH	1.21	0.00070	PASS
		MCH	TN	VL	3.21	0.00185	PASS
				VN	0.1	0.00006	PASS
				VH	3.58	0.00207	PASS
		HCH	TN	VL	0.44	0.00025	PASS
				VN	1.79	0.00103	PASS
				VH	2.18	0.00125	PASS
	16QAM/ 20MHz	LCH	TN	VL	-1.8	-0.00105	PASS
				VN	-0.49	-0.00028	PASS
				VH	1.34	0.00078	PASS
		MCH	TN	VL	2.92	0.00169	PASS
				VN	-0.38	-0.00022	PASS

		HCH	TN	VH	3.01	0.00174	PASS
				VL	-0.6	-0.00034	PASS
				VN	0.43	0.00025	PASS
				VH	2.88	0.00165	PASS

Test Band	Test mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band12	QPSK/ 10MHz	LCH	TN	VL	-1.49	-0.00212	PASS
				VN	2.8	0.00398	PASS
				VH	1.34	0.00190	PASS
		MCH	TN	VL	4.5	0.00636	PASS
				VN	0.25	0.00035	PASS
				VH	2.68	0.00379	PASS
		HCH	TN	VL	0.54	0.00076	PASS
				VN	1.9	0.00267	PASS
				VH	2.31	0.00325	PASS
	16QAM/ 10MHz	LCH	TN	VL	-1.58	-0.00224	PASS
				VN	-0.26	-0.00037	PASS
				VH	0.57	0.00081	PASS
		MCH	TN	VL	2.26	0.00319	PASS
				VN	-0.17	-0.00024	PASS
				VH	2.26	0.00319	PASS
		HCH	TN	VL	-0.39	-0.00055	PASS
				VN	1.66	0.00233	PASS
				VH	3.12	0.00439	PASS

Test Band	Test mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band13	QPSK/ 10MHz	LCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/
		MCH	TN	VL	2.87	0.00367	PASS
				VN	-0.07	-0.00009	PASS
				VH	2.37	0.00303	PASS
		HCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/
	16QAM/	LCH	TN	VL	/	/	/

	10MHz			VN	/	/	/
				VH	/	/	/
		MCH	TN	VL	1.83	0.00234	PASS
				VN	-0.53	-0.00068	PASS
				VH	1.89	0.00242	PASS
		HCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band2	QPSK/ 20MHz	LCH	VN	-30	1.57	0.00084	PASS
				-20	1.58	0.00085	PASS
				-10	-0.27	-0.00015	PASS
				0	1.36	0.00073	PASS
				10	0.92	0.00049	PASS
				20	0.98	0.00053	PASS
				30	2.15	0.00116	PASS
				40	1.94	0.00104	PASS
				50	1.12	0.00060	PASS
		MCH	VN	-30	-1.21	-0.00064	PASS
				-20	-1.22	-0.00065	PASS
				-10	-3	-0.00160	PASS
				0	-1.41	-0.00075	PASS
				10	-2.54	-0.00135	PASS
				20	1.34	0.00071	PASS
				30	4.12	0.00219	PASS
				40	-1.16	-0.00062	PASS
				50	-0.44	-0.00023	PASS
		HCH	VN	-30	0.93	0.00049	PASS
				-20	0.92	0.00048	PASS
				-10	-0.07	-0.00004	PASS
				0	0.97	0.00051	PASS
				10	-1.05	-0.00055	PASS
				20	1.06	0.00056	PASS
				30	0.91	0.00048	PASS
				40	-0.81	-0.00043	PASS
				50	-2.05	-0.00108	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band2	16QAM/ 20MHz	LCH	VN	-30	1.19	0.00064	PASS
				-20	1.2	0.00065	PASS
				-10	-0.65	-0.00035	PASS
				0	0.69	0.00037	PASS
				10	1.05	0.00056	PASS
				20	0.64	0.00034	PASS
				30	1.77	0.00095	PASS
				40	1.56	0.00084	PASS
				50	1.6	0.00086	PASS
		MCH	VN	-30	-1.59	-0.00085	PASS
				-20	-1.6	-0.00085	PASS
				-10	-0.89	-0.00047	PASS
				0	-1.79	-0.00095	PASS
				10	-2.92	-0.00155	PASS
				20	0.96	0.00051	PASS
				30	0.97	0.00052	PASS
				40	-1.54	-0.00082	PASS
				50	-0.82	-0.00044	PASS
		HCH	VN	-30	0.8	0.00042	PASS
				-20	0.87	0.00046	PASS
				-10	-0.45	-0.00024	PASS
				0	0.79	0.00042	PASS
				10	-1.43	-0.00075	PASS
				20	1.08	0.00057	PASS
				30	0.53	0.00028	PASS
				40	-1.19	-0.00063	PASS
				50	-2.43	-0.00128	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band4	QPSK/ 20MHz	LCH	VN	-30	1.27	0.00074	PASS
				-20	1.28	0.00074	PASS
				-10	0.41	0.00024	PASS
				0	1.1	0.00064	PASS
				10	1.49	0.00087	PASS
				20	1.36	0.00079	PASS
				30	1.9	0.00110	PASS
				40	1.41	0.00082	PASS
				50	1.56	0.00091	PASS
		MCH	VN	-30	-2.1	-0.00121	PASS
				-20	-2.1	-0.00121	PASS
				-10	-1.24	-0.00072	PASS
				0	-1.7	-0.00098	PASS
				10	-0.94	-0.00054	PASS
				20	-2.36	-0.00136	PASS
				30	-1.24	-0.00072	PASS
				40	-0.89	-0.00051	PASS
				50	-0.94	-0.00054	PASS
		HCH	VN	-30	2.32	0.00133	PASS
				-20	2.31	0.00132	PASS
				-10	0.24	0.00014	PASS
				0	1.25	0.00072	PASS
				10	-1.16	-0.00066	PASS
				20	0.36	0.00021	PASS
				30	1.18	0.00068	PASS
				40	-0.95	-0.00054	PASS
				50	-0.69	-0.00040	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band4	16QAM/ 20MHz	LCH	VN	-30	2.29	0.00133	PASS
				-20	2.28	0.00133	PASS
				-10	0.43	0.00025	PASS
				0	1.06	0.00062	PASS
				10	1.62	0.00094	PASS
				20	1.68	0.00098	PASS
				30	0.85	0.00049	PASS
				40	1.64	0.00095	PASS
				50	1.82	0.00106	PASS
		MCH	VN	-30	-0.51	-0.00029	PASS
				-20	-0.52	-0.00030	PASS
				-10	-2.3	-0.00133	PASS
				0	0.29	0.00017	PASS
				10	-1.84	-0.00106	PASS
				20	2.04	0.00118	PASS
				30	0.82	0.00047	PASS
				40	-0.46	-0.00027	PASS
				50	0.26	0.00015	PASS
		HCH	VN	-30	1.61	0.00092	PASS
				-20	1.62	0.00093	PASS
				-10	0.63	0.00036	PASS
				0	1.67	0.00096	PASS
				10	-0.35	-0.00020	PASS
				20	1.76	0.00101	PASS
				30	1.61	0.00092	PASS
				40	-0.11	-0.00006	PASS
				50	-1.35	-0.00077	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band12	QPSK/ 10MHz	LCH	VN	-30	1.6	0.00227	PASS
				-20	1.59	0.00226	PASS
				-10	0.72	0.00102	PASS
				0	4.41	0.00626	PASS
				10	3.8	0.00540	PASS
				20	3.67	0.00521	PASS
				30	2.21	0.00314	PASS
				40	1.72	0.00244	PASS
				50	1.87	0.00266	PASS
		MCH	VN	-30	-2.78	-0.00393	PASS
				-20	-2.79	-0.00394	PASS
				-10	-3.93	-0.00555	PASS
				0	-0.39	-0.00055	PASS
				10	-3.63	-0.00513	PASS
				20	-2.05	-0.00290	PASS
				30	-0.93	-0.00131	PASS
				40	-3.58	-0.00506	PASS
				50	-2.63	-0.00372	PASS
		HCH	VN	-30	2.63	0.00370	PASS
				-20	2.62	0.00368	PASS
				-10	0.55	0.00077	PASS
				0	3.56	0.00501	PASS
				10	-0.85	-0.00120	PASS
				20	4.67	0.00657	PASS
				30	1.49	0.00210	PASS
				40	-0.64	-0.00090	PASS
				50	-3.38	-0.00475	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band12	16QAM/10MHz	LCH	VN	-30	1.5	0.00213	PASS
				-20	1.51	0.00214	PASS
				-10	-0.34	-0.00048	PASS
				0	1.29	0.00183	PASS
				10	0.85	0.00121	PASS
				20	0.91	0.00129	PASS
				30	2.08	0.00295	PASS
				40	1.87	0.00266	PASS
				50	1.05	0.00149	PASS
		MCH	VN	-30	-1.3	-0.00184	PASS
				-20	-1.29	-0.00182	PASS
				-10	-0.07	-0.00010	PASS
				0	-0.48	-0.00068	PASS
				10	-2.61	-0.00369	PASS
				20	1.27	0.00180	PASS
				30	1.05	0.00148	PASS
				40	-1.23	-0.00174	PASS
				50	-0.51	-0.00072	PASS
		HCH	VN	-30	0.84	0.00118	PASS
				-20	0.85	0.00120	PASS
				-10	-0.14	-0.00020	PASS
				0	0.9	0.00127	PASS
				10	-1.12	-0.00158	PASS
				20	0.99	0.00139	PASS
				30	0.84	0.00118	PASS
				40	-0.88	-0.00124	PASS
				50	-2.12	-0.00298	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band13	QPSK/ 10MHz	LCH	VN	-20	/	/	/
				-10	/	/	/
				0	/	/	/
				10	/	/	/
				20	/	/	/
				30	/	/	/
				40	/	/	/
				50	/	/	/
				55	/	/	/
		MCH	VN	-30	-0.41	-0.00052	PASS
				-20	-0.42	-0.00054	PASS
				-10	-0.56	-0.00072	PASS
				0	-2.02	-0.00258	PASS
				10	-1.26	-0.00161	PASS
				20	-0.68	-0.00087	PASS
				30	-0.56	-0.00072	PASS
				40	-0.21	-0.00027	PASS
				50	-0.26	-0.00033	PASS
		HCH	VN	-20	/	/	/
				-10	/	/	/
				0	/	/	/
				10	/	/	/
				20	/	/	/
				30	/	/	/
				40	/	/	/
				50	/	/	/
				55	/	/	/

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band13	16QAM/ 10MHz	LCH	VN	-20	/	/	/
				-10	/	/	/
				0	/	/	/
				10	/	/	/
				20	/	/	/
				30	/	/	/
				40	/	/	/
				50	/	/	/
				55	/	/	/
		MCH	VN	-30	-1.26	-0.00161	PASS
				-20	-1.27	-0.00162	PASS
				-10	-0.05	-0.00006	PASS
				0	-1.46	-0.00187	PASS
				10	0.41	0.00052	PASS
				20	1.29	0.00165	PASS
				30	1.07	0.00137	PASS
				40	-1.21	-0.00155	PASS
				50	-0.49	-0.00063	PASS
		HCH	VN	-20	/	/	/
				-10	/	/	/
				0	/	/	/
				10	/	/	/
				20	/	/	/
				30	/	/	/
				40	/	/	/
				50	/	/	/
				55	/	/	/

Note: All modes have been tested and we only record the worst test result.