

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	0.72	0.00039	PASS
				VN	1.17	0.00063	PASS
				VH	-0.39	-0.00021	PASS
		MCH	TN	VL	1.28	0.00068	PASS
				VN	-0.84	-0.00045	PASS
				VH	0.29	0.00015	PASS
		HCH	TN	VL	0.19	0.00010	PASS
				VN	0.06	0.00003	PASS
				VH	0.27	0.00014	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.55	-0.00030	PASS
				VN	-0.52	-0.00028	PASS
				VH	-0.78	-0.00042	PASS
		MCH	TN	VL	0.82	0.00044	PASS
				VN	-0.68	-0.00036	PASS
				VH	1.11	0.00059	PASS
		HCH	TN	VL	-0.85	-0.00045	PASS
				VN	-1.06	-0.00056	PASS
				VH	0.71	0.00037	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	-1.76	-0.00102	PASS
				VN	0.65	0.00038	PASS
				VH	1.17	0.00068	PASS
		MCH	TN	VL	-0.64	-0.00037	PASS
				VN	0.49	0.00028	PASS
				VH	1.26	0.00073	PASS
		HCH	TN	VL	0.61	0.00035	PASS
				VN	0.74	0.00042	PASS
				VH	0.68	0.00039	PASS
	16QAM/ 20MHz	LCH	TN	VL	0.02	0.00001	PASS
				VN	0.87	0.00051	PASS
				VH	1.58	0.00092	PASS
		MCH	TN	VL	-1.06	-0.00061	PASS
				VN	0.69	0.00040	PASS

		HCH	TN	VH	-0.33	-0.00019	PASS
				VL	0.51	0.00029	PASS
				VN	0.3	0.00017	PASS
				VH	-1.04	-0.00060	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	-1.63	-0.00232	PASS
				VN	0.25	0.00036	PASS
				VH	0.47	0.00067	PASS
		MCH	TN	VL	1.3	0.00184	PASS
				VN	0.65	0.00092	PASS
				VH	0.3	0.00042	PASS
		HCH	TN	VL	0.72	0.00101	PASS
				VN	0.31	0.00044	PASS
				VH	-0.73	-0.00103	PASS
	16QAM/ 10MHz	LCH	TN	VL	0.3	0.00043	PASS
				VN	0.99	0.00141	PASS
				VH	0.87	0.00124	PASS
		MCH	TN	VL	0.35	0.00049	PASS
				VN	0.79	0.00112	PASS
				VH	1.58	0.00223	PASS
		HCH	TN	VL	0.61	0.00086	PASS
				VN	-0.38	-0.00053	PASS
				VH	-1.45	-0.00204	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	0.75	0.00096	PASS
				VN	-0.29	-0.00037	PASS
				VH	0.52	0.00066	PASS
		HCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/
	16QAM/	LCH	TN	VL	/	/	/

	10MHz			VN	/	/	/
				VH	/	/	/
				VL	-0.19	-0.00024	PASS
		MCH	TN	VN	-0.42	-0.00054	PASS
				VH	0.3	0.00038	PASS
				VL	/	/	/
		HCH	TN	VN	/	/	/
				VH	/	/	/
				VH	/	/	/

Test Band	Test mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 Band25	QPSK/ 20MHz	LCH	TN	VL	0.2	0.00011	PASS
				VN	0.13	0.00007	PASS
				VH	1.19	0.00064	PASS
		MCH	TN	VL	-0.91	-0.00048	PASS
				VN	-0.52	-0.00028	PASS
				VH	0.82	0.00044	PASS
		HCH	TN	VL	0.66	0.00035	PASS
				VN	0.39	0.00020	PASS
				VH	0.58	0.00030	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.09	-0.00005	PASS
				VN	-0.18	-0.00010	PASS
				VH	0.53	0.00028	PASS
		MCH	TN	VL	-0.22	-0.00012	PASS
				VN	-0.33	-0.00018	PASS
				VH	0.41	0.00022	PASS
		HCH	TN	VL	-0.54	-0.00028	PASS
				VN	0.25	0.00013	PASS
				VH	0.02	0.00001	PASS

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	0.64	0.00034	PASS
				-20	0.77	0.00041	PASS
				-10	0.62	0.00033	PASS
				0	0.99	0.00053	PASS
				10	0.61	0.00033	PASS
				20	0.34	0.00018	PASS
				30	0.86	0.00046	PASS
				40	0.73	0.00039	PASS
				50	1.09	0.00059	PASS
		MCH	VN	-30	0.39	0.00021	PASS
				-20	0.38	0.00020	PASS
				-10	-1.01	-0.00054	PASS
				0	0.19	0.00010	PASS
				10	-0.94	-0.00050	PASS
				20	0.42	0.00022	PASS
				30	1.06	0.00056	PASS
				40	0.44	0.00023	PASS
				50	1.16	0.00062	PASS
		HCH	VN	-30	1.24	0.00065	PASS
				-20	-0.07	-0.00004	PASS
				-10	1	0.00052	PASS
				0	0.27	0.00014	PASS
				10	0.55	0.00029	PASS
				20	0.24	0.00013	PASS
				30	0.27	0.00014	PASS
				40	0.79	0.00041	PASS
				50	-0.45	-0.00024	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	-0.38	-0.00020	PASS
				-20	-0.25	-0.00013	PASS
				-10	-0.4	-0.00022	PASS
				0	-0.32	-0.00017	PASS
				10	0.1	0.00005	PASS
				20	-0.64	-0.00034	PASS
				30	0.14	0.00008	PASS
				40	-0.29	-0.00016	PASS
				50	0.93	0.00050	PASS
		MCH	VN	-30	-0.63	-0.00033	PASS
				-20	-0.64	-0.00034	PASS
				-10	0.46	0.00024	PASS
				0	-0.83	-0.00044	PASS
				10	-1.12	-0.00059	PASS
				20	-0.6	-0.00032	PASS
				30	0.37	0.00020	PASS
				40	-0.58	-0.00031	PASS
				50	0.14	0.00007	PASS
		HCH	VN	-30	0.47	0.00025	PASS
				-20	-0.76	-0.00040	PASS
				-10	-0.02	-0.00001	PASS
				0	-0.55	-0.00029	PASS
				10	-0.47	-0.00025	PASS
				20	-0.38	-0.00020	PASS
				30	-0.75	-0.00039	PASS
				40	-0.23	-0.00012	PASS
				50	-1.47	-0.00077	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	0.63	0.00037	PASS
				-20	0.76	0.00044	PASS
				-10	0.91	0.00053	PASS
				0	0.55	0.00032	PASS
				10	0.81	0.00047	PASS
				20	1.01	0.00059	PASS
				30	-0.24	-0.00014	PASS
				40	0.49	0.00028	PASS
				50	1.26	0.00073	PASS
		MCH	VN	-30	-0.21	-0.00012	PASS
				-20	-0.21	-0.00012	PASS
				-10	1.04	0.00060	PASS
				0	0.19	0.00011	PASS
				10	0.95	0.00055	PASS
				20	-2.99	-0.00173	PASS
				30	-0.91	-0.00053	PASS
				40	0.74	0.00043	PASS
				50	0.95	0.00055	PASS
		HCH	VN	-30	1.29	0.00074	PASS
				-20	-0.29	-0.00017	PASS
				-10	0.54	0.00031	PASS
				0	0.84	0.00048	PASS
				10	0.73	0.00042	PASS
				20	-0.17	-0.00010	PASS
				30	0.83	0.00048	PASS
				40	0.94	0.00054	PASS
				50	1.2	0.00069	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	0.2	0.00012	PASS
				-20	0.27	0.00016	PASS
				-10	1.23	0.00072	PASS
				0	0.6	0.00035	PASS
				10	1.22	0.00071	PASS
				20	0.95	0.00055	PASS
				30	-0.23	-0.00013	PASS
				40	0.34	0.00020	PASS
				50	1.41	0.00082	PASS
		MCH	VN	-30	0.58	0.00033	PASS
				-20	0.99	0.00057	PASS
				-10	-0.4	-0.00023	PASS
				0	1.29	0.00074	PASS
				10	-0.33	-0.00019	PASS
				20	1.03	0.00059	PASS
				30	0.77	0.00044	PASS
				40	1.05	0.00061	PASS
				50	1.77	0.00102	PASS
		HCH	VN	-30	0.86	0.00049	PASS
				-20	0.54	0.00031	PASS
				-10	0.66	0.00038	PASS
				0	0.88	0.00050	PASS
				10	1.16	0.00066	PASS
				20	0.85	0.00049	PASS
				30	0.88	0.00050	PASS
				40	0.7	0.00040	PASS
				50	0.16	0.00009	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	0.86	0.00122	PASS
				-20	0.97	0.00138	PASS
				-10	1.1	0.00156	PASS
				0	0.68	0.00097	PASS
				10	0.24	0.00034	PASS
				20	0	0.00000	PASS
				30	-0.55	-0.00078	PASS
				40	0.7	0.00099	PASS
				50	1.44	0.00205	PASS
		MCH	VN	-30	-0.99	-0.00140	PASS
				-20	-1	-0.00141	PASS
				-10	-0.78	-0.00110	PASS
				0	0.79	0.00112	PASS
				10	-1.84	-0.00260	PASS
				20	-1.37	-0.00194	PASS
				30	-0.7	-0.00099	PASS
				40	-1.27	-0.00180	PASS
				50	-0.84	-0.00119	PASS
		HCH	VN	-30	1.06	0.00149	PASS
				-20	-0.2	-0.00028	PASS
				-10	1.81	0.00255	PASS
				0	1.89	0.00266	PASS
				10	0.94	0.00132	PASS
				20	-0.13	-0.00018	PASS
				30	1.04	0.00146	PASS
				40	1.15	0.00162	PASS
				50	-1.59	-0.00224	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	0.31	0.00044	PASS
				-20	0.44	0.00063	PASS
				-10	0.29	0.00041	PASS
				0	0.66	0.00094	PASS
				10	0.28	0.00040	PASS
				20	0.01	0.00001	PASS
				30	0.83	0.00118	PASS
				40	0.4	0.00057	PASS
				50	0.76	0.00108	PASS
		MCH	VN	-30	0.04	0.00006	PASS
				-20	0.05	0.00007	PASS
				-10	0.71	0.00100	PASS
				0	0.86	0.00122	PASS
				10	-0.84	-0.00119	PASS
				20	0.09	0.00013	PASS
				30	0.83	0.00117	PASS
				40	0.11	0.00016	PASS
				50	0.83	0.00117	PASS
		HCH	VN	-30	0.89	0.00125	PASS
				-20	-0.4	-0.00056	PASS
				-10	0.67	0.00094	PASS
				0	-0.06	-0.00008	PASS
				10	0.22	0.00031	PASS
				20	-0.09	-0.00013	PASS
				30	-0.06	-0.00008	PASS
				40	0.46	0.00065	PASS
				50	-0.78	-0.00110	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	-0.14	-0.00018	PASS
				-20	-0.2	-0.00026	PASS
				-10	0.19	0.00024	PASS
				0	-0.24	-0.00031	PASS
				10	-1.04	-0.00133	PASS
				20	-0.54	-0.00069	PASS
				30	-0.51	-0.00065	PASS
				40	-0.21	-0.00027	PASS
				50	-0.43	-0.00055	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	0.28	0.00036	PASS
				-20	0.27	0.00035	PASS
				-10	0.55	0.00070	PASS
				0	-1.19	-0.00152	PASS
				10	1.27	0.00162	PASS
				20	1.61	0.00206	PASS
				30	1.32	0.00169	PASS
				40	-1.08	-0.00138	PASS
				50	0.52	0.00066	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 band25	QPSK/ 20MHz	LCH	VN	-30	0.92	0.00049	PASS
				-20	1.05	0.00056	PASS
				-10	0.99	0.00053	PASS
				0	0.76	0.00041	PASS
				10	0.76	0.00041	PASS
				20	0.3	0.00016	PASS
				30	0.49	0.00026	PASS
				40	0.78	0.00042	PASS
				50	1.3	0.00070	PASS
		MCH	VN	-30	0.09	0.00005	PASS
				-20	0.08	0.00004	PASS
				-10	-1.05	-0.00056	PASS
				0	0.48	0.00025	PASS
				10	-1.02	-0.00054	PASS
				20	-0.06	-0.00003	PASS
				30	-0.62	-0.00033	PASS
				40	-1.3	-0.00069	PASS
				50	-0.76	-0.00040	PASS
		HCH	VN	-30	0.52	0.00027	PASS
				-20	0.43	0.00023	PASS
				-10	1.2	0.00063	PASS
				0	0.48	0.00025	PASS
				10	1.02	0.00054	PASS
				20	0.15	0.00008	PASS
				30	1.12	0.00059	PASS
				40	1.2	0.00063	PASS
				50	-1.51	-0.00079	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band25	16QAM/ 20MHz	LCH	VN	-30	-0.02	-0.00001	PASS
				-20	0.11	0.00006	PASS
				-10	-0.04	-0.00002	PASS
				0	-0.04	-0.00002	PASS
				10	-0.1	-0.00005	PASS
				20	-0.69	-0.00037	PASS
				30	0.5	0.00027	PASS
				40	0.07	0.00004	PASS
				50	1.15	0.00062	PASS
		MCH	VN	-30	-0.29	-0.00015	PASS
				-20	-0.28	-0.00015	PASS
				-10	-1.26	-0.00067	PASS
				0	0.53	0.00028	PASS
				10	-1.19	-0.00063	PASS
				20	-0.24	-0.00013	PASS
				30	0.01	0.00001	PASS
				40	-0.22	-0.00012	PASS
				50	0.5	0.00027	PASS
		HCH	VN	-30	0.66	0.00035	PASS
				-20	-0.81	-0.00043	PASS
				-10	0.34	0.00018	PASS
				0	-0.59	-0.00031	PASS
				10	-0.11	-0.00006	PASS
				20	-0.74	-0.00039	PASS
				30	-0.39	-0.00020	PASS
				40	0.13	0.00007	PASS
				50	-1.11	-0.00058	PASS

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