

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	-0.81	-0.00044	PASS
				VN	1.09	0.00059	PASS
				VH	-2.88	-0.00155	PASS
		MCH	TN	VL	2.63	0.00140	PASS
				VN	-1.62	-0.00086	PASS
				VH	0.78	0.00041	PASS
		HCH	TN	VL	-2.66	-0.00140	PASS
				VN	-0.24	-0.00013	PASS
				VH	-0.07	-0.00004	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.26	-0.00014	PASS
				VN	-2.12	-0.00114	PASS
				VH	-0.92	-0.00049	PASS
		MCH	TN	VL	2.74	0.00146	PASS
				VN	-1.88	-0.00100	PASS
				VH	0.39	0.00021	PASS
		HCH	TN	VL	-2.15	-0.00113	PASS
				VN	-0.18	-0.00009	PASS
				VH	1.17	0.00061	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	-1.08	-0.00063	PASS
				VN	1.01	0.00059	PASS
				VH	-0.99	-0.00058	PASS
		MCH	TN	VL	1.35	0.00078	PASS
				VN	-1.73	-0.00100	PASS
				VH	1.66	0.00096	PASS
		HCH	TN	VL	-1.71	-0.00098	PASS
				VN	-0.31	-0.00018	PASS
				VH	-0.15	-0.00009	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.05	-0.00003	PASS
				VN	-2.19	-0.00127	PASS
				VH	0.55	0.00032	PASS
		MCH	TN	VL	1.54	0.00089	PASS
				VN	-1.98	-0.00114	PASS

		HCH	TN	VH	1.3	0.00075	PASS
				VL	-0.31	-0.00018	PASS
				VN	-1.25	-0.00072	PASS
				VH	1.09	0.00062	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	-1.16	-0.00165	PASS
				VN	0.26	0.00037	PASS
				VH	-1.03	-0.00146	PASS
		MCH	TN	VL	1.02	0.00144	PASS
				VN	-1.75	-0.00247	PASS
				VH	0.59	0.00083	PASS
		HCH	TN	VL	-1.78	-0.00250	PASS
				VN	-0.37	-0.00052	PASS
				VH	-0.19	-0.00027	PASS
	16QAM/ 10MHz	LCH	TN	VL	-0.2	-0.00028	PASS
				VN	-1.49	-0.00212	PASS
				VH	-1.06	-0.00151	PASS
		MCH	TN	VL	0.59	0.00083	PASS
				VN	-0.84	-0.00119	PASS
				VH	0.26	0.00037	PASS
		HCH	TN	VL	-0.53	-0.00075	PASS
				VN	-0.31	-0.00044	PASS
				VH	1.04	0.00146	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	0.93	0.00119	PASS
				VN	-0.19	-0.00024	PASS
				VH	0.57	0.00073	PASS
		HCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/
	16QAM/	LCH	TN	VL	/	/	/

	10MHz			VN	/	/	/
				VH	/	/	/
		MCH	TN	VL	0.28	0.00036	PASS
				VN	0.35	0.00045	PASS
				VH	0.44	0.00056	PASS
		HCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/
				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	1.1	0.00059	PASS
				-20	1.02	0.00055	PASS
				-10	0.32	0.00017	PASS
				0	1.35	0.00073	PASS
				10	0.77	0.00041	PASS
				20	0.55	0.00030	PASS
				30	0.86	0.00046	PASS
				40	1.42	0.00076	PASS
				50	1.34	0.00072	PASS
		MCH	VN	-30	-1.98	-0.00105	PASS
				-20	-1.19	-0.00063	PASS
				-10	-0.63	-0.00033	PASS
				0	-1.46	-0.00078	PASS
				10	-1.07	-0.00057	PASS
				20	-2.45	-0.00130	PASS
				30	-1.24	-0.00066	PASS
				40	-0.89	-0.00047	PASS
				50	-0.27	-0.00014	PASS
		HCH	VN	-30	0.66	0.00035	PASS
				-20	0.45	0.00024	PASS
				-10	0.06	0.00003	PASS
				0	0.62	0.00033	PASS
				10	-1.27	-0.00067	PASS
				20	0.33	0.00017	PASS
				30	1.03	0.00054	PASS
				40	-1.19	-0.00062	PASS
				50	-1.06	-0.00056	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	1.18	0.00063	PASS
				-20	1.1	0.00059	PASS
				-10	-0.58	-0.00031	PASS
				0	1.02	0.00055	PASS
				10	0.93	0.00050	PASS
				20	0.58	0.00031	PASS
				30	1.89	0.00102	PASS
				40	1.73	0.00093	PASS
				50	1.68	0.00090	PASS
		MCH	VN	-30	-1.34	-0.00071	PASS
				-20	-1.52	-0.00081	PASS
				-10	-0.81	-0.00043	PASS
				0	-0.39	-0.00021	PASS
				10	-0.74	-0.00039	PASS
				20	1.03	0.00055	PASS
				30	0.41	0.00022	PASS
				40	-1.44	-0.00076	PASS
				50	-0.83	-0.00044	PASS
		HCH	VN	-30	0.7	0.00037	PASS
				-20	0.68	0.00036	PASS
				-10	-0.47	-0.00025	PASS
				0	0.57	0.00030	PASS
				10	-1.38	-0.00072	PASS
				20	0.46	0.00024	PASS
				30	0.54	0.00028	PASS
				40	-1.27	-0.00067	PASS
				50	-0.55	-0.00029	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	1.29	0.00075	PASS
				-20	1.21	0.00070	PASS
				-10	0.51	0.00030	PASS
				0	1.54	0.00090	PASS
				10	1.96	0.00114	PASS
				20	1.74	0.00101	PASS
				30	0.61	0.00035	PASS
				40	1.61	0.00094	PASS
				50	1.53	0.00089	PASS
		MCH	VN	-30	-1.8	-0.00104	PASS
				-20	-1.99	-0.00115	PASS
				-10	-0.77	-0.00044	PASS
				0	-1.27	-0.00073	PASS
				10	-0.73	-0.00042	PASS
				20	-0.02	-0.00001	PASS
				30	-1.05	-0.00061	PASS
				40	-0.76	-0.00044	PASS
				50	-0.92	-0.00053	PASS
		HCH	VN	-30	0.79	0.00045	PASS
				-20	0.66	0.00038	PASS
				-10	0.25	0.00014	PASS
				0	1.46	0.00084	PASS
				10	-1.08	-0.00062	PASS
				20	0.49	0.00028	PASS
				30	1.22	0.00070	PASS
				40	-1.08	-0.00062	PASS
				50	-0.62	-0.00036	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	0.6	0.00035	PASS
				-20	0.46	0.00027	PASS
				-10	-0.11	-0.00006	PASS
				0	0.86	0.00050	PASS
				10	1.45	0.00084	PASS
				20	1.42	0.00083	PASS
				30	0.36	0.00021	PASS
				40	1.2	0.00070	PASS
				50	1.15	0.00067	PASS
		MCH	VN	-30	-0.85	-0.00049	PASS
				-20	-1.05	-0.00061	PASS
				-10	-0.23	-0.00013	PASS
				0	0.08	0.00005	PASS
				10	-0.2	-0.00012	PASS
				20	1.5	0.00087	PASS
				30	0.37	0.00021	PASS
				40	-0.97	-0.00056	PASS
				50	-0.36	-0.00021	PASS
		HCH	VN	-30	1.07	0.00061	PASS
				-20	1.23	0.00070	PASS
				-10	0	0.00000	PASS
				0	1.24	0.00071	PASS
				10	-0.91	-0.00052	PASS
				20	1.25	0.00072	PASS
				30	1.01	0.00058	PASS
				40	-0.8	-0.00046	PASS
				50	-0.46	-0.00026	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	1.62	0.00230	PASS
				-20	1.52	0.00216	PASS
				-10	0.82	0.00116	PASS
				0	1.3	0.00185	PASS
				10	0.83	0.00118	PASS
				20	0.83	0.00118	PASS
				30	0.4	0.00057	PASS
				40	1.51	0.00214	PASS
				50	1.34	0.00190	PASS
		MCH	VN	-30	-0.9	-0.00127	PASS
				-20	-0.81	-0.00114	PASS
				-10	-0.51	-0.00072	PASS
				0	0.04	0.00006	PASS
				10	-0.16	-0.00023	PASS
				20	-1.95	-0.00276	PASS
				30	-0.74	-0.00105	PASS
				40	-0.11	-0.00016	PASS
				50	-0.32	-0.00045	PASS
		HCH	VN	-30	0.66	0.00093	PASS
				-20	0.85	0.00120	PASS
				-10	0.56	0.00079	PASS
				0	1.59	0.00224	PASS
				10	-0.77	-0.00108	PASS
				20	0.63	0.00089	PASS
				30	0.95	0.00134	PASS
				40	-0.69	-0.00097	PASS
				50	-0.28	-0.00039	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	1.2	0.00170	PASS
				-20	1.12	0.00159	PASS
				-10	-0.56	-0.00080	PASS
				0	1.41	0.00200	PASS
				10	1	0.00142	PASS
				20	0.97	0.00138	PASS
				30	1.91	0.00271	PASS
				40	1.75	0.00249	PASS
				50	0.7	0.00099	PASS
		MCH	VN	-30	-1.32	-0.00187	PASS
				-20	-1.5	-0.00212	PASS
				-10	0.08	0.00011	PASS
				0	-0.37	-0.00052	PASS
				10	-0.22	-0.00031	PASS
				20	1.05	0.00148	PASS
				30	0.92	0.00130	PASS
				40	-1.42	-0.00201	PASS
				50	-0.81	-0.00114	PASS
		HCH	VN	-30	0.62	0.00087	PASS
				-20	0.78	0.00110	PASS
				-10	-0.45	-0.00063	PASS
				0	0.79	0.00111	PASS
				10	-1.36	-0.00191	PASS
				20	0.8	0.00113	PASS
				30	0.56	0.00079	PASS
				40	-1.25	-0.00176	PASS
				50	-1.01	-0.00142	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	-0.43	-0.00055	PASS
				-20	-0.63	-0.00081	PASS
				-10	-0.41	-0.00052	PASS
				0	0.02	0.00003	PASS
				10	-1.37	-0.00175	PASS
				20	-0.9	-0.00115	PASS
				30	-0.69	-0.00088	PASS
				40	-0.4	-0.00051	PASS
				50	-0.56	-0.00072	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	-1.28	-0.00164	PASS
				-20	-0.91	-0.00116	PASS
				-10	0.1	0.00013	PASS
				0	-1.35	-0.00173	PASS
				10	0.3	0.00038	PASS
				20	1.07	0.00137	PASS
				30	0.94	0.00120	PASS
				40	-1.4	-0.00179	PASS
				50	-0.79	-0.00101	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.