

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	-1.10	-0.00059	PASS
				VN	2.85	0.00154	PASS
				VH	0.73	0.00039	PASS
		MCH	TN	VL	1.83	0.00098	PASS
				VN	0.62	0.00033	PASS
				VH	2.29	0.00122	PASS
		HCH	TN	VL	1.87	0.00098	PASS
				VN	2.26	0.00118	PASS
				VH	2.68	0.00140	PASS
	16QAM/ 20MHz	LCH	TN	VL	-1.29	-0.00070	PASS
				VN	0.00	0.00000	PASS
				VH	-0.13	-0.00007	PASS
		MCH	TN	VL	2.33	0.00124	PASS
				VN	0.13	0.00007	PASS
				VH	1.90	0.00102	PASS
		HCH	TN	VL	-0.08	-0.00004	PASS
				VN	0.95	0.00050	PASS
				VH	2.24	0.00117	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	-0.78	-0.00046	PASS
				VN	0.15	0.00009	PASS
				VH	2.04	0.00119	PASS
		MCH	TN	VL	0.98	0.00057	PASS
				VN	0.93	0.00054	PASS
				VH	1.35	0.00078	PASS
		HCH	TN	VL	1.27	0.00072	PASS
				VN	2.62	0.00149	PASS
				VH	3.01	0.00172	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.38	-0.00022	PASS
				VN	0.93	0.00054	PASS
				VH	2.76	0.00161	PASS
		MCH	TN	VL	2.17	0.00126	PASS
				VN	1.04	0.00060	PASS

		HCH	TN	VH	-1.95	-0.00113	PASS
				VL	0.82	0.00047	PASS
				VN	1.85	0.00106	PASS
				VH	2.13	0.00121	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	0.15	0.00021	PASS
				VN	0.38	0.00054	PASS
				VH	2.98	0.00426	PASS
		MCH	TN	VL	3.08	0.00438	PASS
				VN	1.89	0.00269	PASS
				VH	1.26	0.00179	PASS
		HCH	TN	VL	2.18	0.00305	PASS
				VN	3.54	0.00495	PASS
				VH	3.95	0.00553	PASS
	16QAM/ 10MHz	LCH	TN	VL	0.65	0.00093	PASS
				VN	1.97	0.00281	PASS
				VH	2.80	0.00400	PASS
		MCH	TN	VL	2.32	0.00330	PASS
				VN	2.06	0.00293	PASS
				VH	-1.89	-0.00269	PASS
		HCH	TN	VL	1.84	0.00257	PASS
				VN	-0.83	-0.00116	PASS
				VH	3.18	0.00445	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	1.83	0.00235	PASS
				VN	0.44	0.00057	PASS
				VH	1.56	0.00200	PASS
		MCH	TN	VL	1.09	0.00140	PASS
				VN	1.21	0.00155	PASS
				VH	3.65	0.00469	PASS
		HCH	TN	VL	3.16	0.00402	PASS
				VN	3.39	0.00431	PASS
				VH	2.85	0.00363	PASS
	16QAM/	LCH	TN	VL	3.33	0.00428	PASS

	10MHz			VN	3.26	0.00419	PASS
				VH	3.47	0.00446	PASS
		MCH	TN	VL	1.53	0.00197	PASS
				VN	1.34	0.00172	PASS
				VH	2.10	0.00270	PASS
		HCH	TN	VL	3.66	0.00466	PASS
				VN	3.70	0.00471	PASS
				VH	1.08	0.00137	PASS

Frequency Error VS. Temperature

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	1.83	0.00099	PASS
				-20	1.84	0.00099	PASS
				-10	-0.01	-0.00001	PASS
				0	-1.44	-0.00078	PASS
				10	1.18	0.00064	PASS
				20	1.24	0.00067	PASS
				30	2.41	0.00130	PASS
				40	2.20	0.00119	PASS
				50	1.38	0.00075	PASS
		MCH	VN	-30	-0.53	-0.00028	PASS
				-20	-0.54	-0.00029	PASS
				-10	-2.32	-0.00124	PASS
				0	-0.73	-0.00039	PASS
				10	-1.86	-0.00099	PASS
				20	2.02	0.00108	PASS
				30	1.74	0.00093	PASS
				40	-0.48	-0.00026	PASS
				50	0.24	0.00013	PASS
		HCH	VN	-30	2.14	0.00112	PASS
				-20	2.13	0.00112	PASS
				-10	1.14	0.00060	PASS
				0	0.01	0.00001	PASS
				10	0.16	0.00008	PASS
				20	2.27	0.00119	PASS
				30	2.12	0.00111	PASS
				40	0.40	0.00021	PASS
				50	-3.01	-0.00158	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	0.93	0.00050	PASS
				-20	0.94	0.00051	PASS
				-10	-0.91	-0.00049	PASS
				0	-2.63	-0.00142	PASS
				10	0.79	0.00043	PASS
				20	0.38	0.00021	PASS
				30	1.51	0.00082	PASS
				40	1.30	0.00070	PASS
				50	1.34	0.00072	PASS
		MCH	VN	-30	-1.43	-0.00076	PASS
				-20	-1.44	-0.00077	PASS
				-10	-0.73	-0.00039	PASS
				0	-1.63	-0.00087	PASS
				10	-2.76	-0.00147	PASS
				20	1.12	0.00060	PASS
				30	1.13	0.00060	PASS
				40	-1.38	-0.00074	PASS
				50	-0.66	-0.00035	PASS
		HCH	VN	-30	1.49	0.00078	PASS
				-20	1.56	0.00082	PASS
				-10	0.24	0.00013	PASS
				0	-0.69	-0.00036	PASS
				10	-0.74	-0.00039	PASS
				20	1.77	0.00093	PASS
				30	1.22	0.00064	PASS
				40	-0.50	-0.00026	PASS
				50	-2.91	-0.00153	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	1.26	0.00074	PASS
				-20	1.27	0.00074	PASS
				-10	0.40	0.00023	PASS
				0	-1.97	-0.00115	PASS
				10	1.48	0.00086	PASS
				20	1.35	0.00079	PASS
				30	1.89	0.00110	PASS
				40	1.40	0.00082	PASS
				50	1.55	0.00091	PASS
		MCH	VN	-30	-1.69	-0.00098	PASS
				-20	-1.69	-0.00098	PASS
				-10	-0.83	-0.00048	PASS
				0	-1.29	-0.00075	PASS
				10	-0.53	-0.00031	PASS
				20	-1.95	-0.00113	PASS
				30	-0.83	-0.00048	PASS
				40	-0.48	-0.00028	PASS
				50	-0.53	-0.00031	PASS
		HCH	VN	-30	-1.46	-0.00083	PASS
				-20	-1.47	-0.00084	PASS
				-10	1.18	0.00067	PASS
				0	0.02	0.00001	PASS
				10	-0.22	-0.00013	PASS
				20	1.30	0.00074	PASS
				30	2.12	0.00121	PASS
				40	-0.01	-0.00001	PASS
				50	-1.92	-0.00110	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	-0.08	-0.00005	PASS
				-20	-0.09	-0.00005	PASS
				-10	1.12	0.00065	PASS
				0	-1.31	-0.00077	PASS
				10	2.31	0.00135	PASS
				20	2.37	0.00138	PASS
				30	1.54	0.00090	PASS
				40	2.33	0.00136	PASS
				50	2.51	0.00147	PASS
		MCH	VN	-30	0.60	0.00035	PASS
				-20	0.59	0.00034	PASS
				-10	-1.19	-0.00069	PASS
				0	-1.66	-0.00096	PASS
				10	-0.73	-0.00042	PASS
				20	3.15	0.00183	PASS
				30	1.93	0.00112	PASS
				40	0.65	0.00038	PASS
				50	1.37	0.00079	PASS
		HCH	VN	-30	-1.47	-0.00084	PASS
				-20	-1.46	-0.00083	PASS
				-10	-2.45	-0.00140	PASS
				0	1.14	0.00065	PASS
				10	1.29	0.00074	PASS
				20	-1.32	-0.00075	PASS
				30	-1.47	-0.00084	PASS
				40	1.53	0.00087	PASS
				50	-1.88	-0.00107	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	2.29	0.00327	PASS
				-20	2.28	0.00326	PASS
				-10	1.41	0.00201	PASS
				0	2.04	0.00291	PASS
				10	4.49	0.00641	PASS
				20	4.36	0.00623	PASS
				30	2.90	0.00414	PASS
				40	2.41	0.00344	PASS
				50	2.56	0.00366	PASS
		MCH	VN	-30	-1.67	-0.00237	PASS
				-20	-1.68	-0.00239	PASS
				-10	-2.82	-0.00401	PASS
				0	-2.34	-0.00333	PASS
				10	-2.52	-0.00358	PASS
				20	-0.94	-0.00134	PASS
				30	0.18	0.00026	PASS
				40	-2.47	-0.00351	PASS
				50	-1.52	-0.00216	PASS
		HCH	VN	-30	4.27	0.00597	PASS
				-20	4.26	0.00596	PASS
				-10	2.19	0.00306	PASS
				0	3.03	0.00424	PASS
				10	0.79	0.00111	PASS
				20	6.31	0.00883	PASS
				30	3.13	0.00438	PASS
				40	1.00	0.00140	PASS
				50	-3.91	-0.00547	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	1.89	0.00270	PASS
				-20	1.90	0.00271	PASS
				-10	0.05	0.00007	PASS
				0	-1.38	-0.00197	PASS
				10	1.24	0.00177	PASS
				20	1.30	0.00186	PASS
				30	2.47	0.00353	PASS
				40	2.26	0.00323	PASS
				50	1.44	0.00206	PASS
		MCH	VN	-30	-0.49	-0.00070	PASS
				-20	-0.48	-0.00068	PASS
				-10	0.74	0.00105	PASS
				0	-2.73	-0.00388	PASS
				10	-1.80	-0.00256	PASS
				20	2.08	0.00296	PASS
				30	1.86	0.00264	PASS
				40	-0.42	-0.00060	PASS
				50	0.30	0.00043	PASS
		HCH	VN	-30	2.18	0.00305	PASS
				-20	2.19	0.00306	PASS
				-10	1.20	0.00168	PASS
				0	0.07	0.00010	PASS
				10	0.22	0.00031	PASS
				20	2.33	0.00326	PASS
				30	2.18	0.00305	PASS
				40	0.46	0.00064	PASS
				50	-2.95	-0.00413	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	-30	0.13	0.00017	PASS
				-20	0.18	0.00023	PASS
				-10	0.27	0.00035	PASS
				0	0.60	0.00077	PASS
				10	-2.20	-0.00283	PASS
				20	0.21	0.00027	PASS
				30	-0.17	-0.00022	PASS
				40	0.28	0.00036	PASS
				50	0.47	0.00060	PASS
		MCH	VN	-30	0.53	0.00068	PASS
				-20	0.52	0.00067	PASS
				-10	0.38	0.00049	PASS
				0	-4.14	-0.00532	PASS
				10	-0.32	-0.00041	PASS
				20	0.26	0.00033	PASS
				30	0.38	0.00049	PASS
				40	0.73	0.00094	PASS
				50	0.68	0.00087	PASS
		HCH	VN	-30	1.11	0.00141	PASS
				-20	1.52	0.00193	PASS
				-10	1.69	0.00215	PASS
				0	1.16	0.00148	PASS
				10	-1.15	-0.00146	PASS
				20	0.55	0.00070	PASS
				30	1.92	0.00244	PASS
				40	0.66	0.00084	PASS
				50	1.21	0.00154	PASS

Test Band	Test mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CatM1 band13	16QAM/ 10MHz	LCH	VN	-30	-0.30	-0.00039	PASS
				-20	-0.53	-0.00068	PASS
				-10	-0.27	-0.00035	PASS
				0	0.30	0.00039	PASS
				10	-3.20	-0.00411	PASS
				20	0.47	0.00060	PASS
				30	0.71	0.00091	PASS
				40	-0.31	-0.00040	PASS
				50	0.08	0.00010	PASS
		MCH	VN	-30	-0.32	-0.00041	PASS
				-20	-0.33	-0.00042	PASS
				-10	0.89	0.00114	PASS
				0	-3.58	-0.00460	PASS
				10	1.35	0.00173	PASS
				20	2.23	0.00287	PASS
				30	2.01	0.00258	PASS
				40	-0.27	-0.00035	PASS
				50	0.45	0.00058	PASS
		HCH	VN	-30	1.66	0.00211	PASS
				-20	1.74	0.00221	PASS
				-10	2.23	0.00284	PASS
				0	2.45	0.00312	PASS
				10	0.50	0.00064	PASS
				20	2.14	0.00272	PASS
				30	1.55	0.00197	PASS
				40	2.77	0.00353	PASS
				50	2.92	0.00372	PASS

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