

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	-2.17	-0.00117	PASS
				VN	2.78	0.00150	PASS
				VH	-0.34	-0.00018	PASS
		MCH	TN	VL	0.76	0.00041	PASS
				VN	-0.45	-0.00024	PASS
				VH	1.22	0.00065	PASS
		HCH	TN	VL	0.8	0.00042	PASS
				VN	1.19	0.00062	PASS
				VH	1.61	0.00084	PASS
	16QAM/ 20MHz	LCH	TN	VL	-2.12	-0.00114	PASS
				VN	-0.83	-0.00045	PASS
				VH	-0.96	-0.00052	PASS
		MCH	TN	VL	1.5	0.00080	PASS
				VN	-0.7	-0.00037	PASS
				VH	2.73	0.00146	PASS
		HCH	TN	VL	-0.91	-0.00048	PASS
				VN	0.12	0.00006	PASS
				VH	1.41	0.00074	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	-1.85	-0.00108	PASS
				VN	0.08	0.00005	PASS
				VH	0.97	0.00057	PASS
		MCH	TN	VL	-0.09	-0.00005	PASS
				VN	-0.14	-0.00008	PASS
				VH	0.28	0.00016	PASS
		HCH	TN	VL	0.2	0.00011	PASS
				VN	1.55	0.00088	PASS
				VH	1.94	0.00111	PASS
	16QAM/ 20MHz	LCH	TN	VL	-1.21	-0.00071	PASS
				VN	0.1	0.00006	PASS
				VH	1.93	0.00113	PASS
		MCH	TN	VL	1.34	0.00078	PASS
				VN	0.21	0.00012	PASS

		HCH	TN	VH	-1.12	-0.00065	PASS
				VL	-0.01	-0.00001	PASS
				VN	1.02	0.00058	PASS
				VH	1.3	0.00074	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	-0.92	-0.00131	PASS
				VN	0.31	0.00044	PASS
				VH	1.91	0.00273	PASS
		MCH	TN	VL	2.01	0.00286	PASS
				VN	0.82	0.00117	PASS
				VH	0.19	0.00027	PASS
		HCH	TN	VL	1.11	0.00155	PASS
				VN	2.47	0.00346	PASS
				VH	2.88	0.00403	PASS
	16QAM/ 10MHz	LCH	TN	VL	-0.18	-0.00026	PASS
				VN	1.14	0.00163	PASS
				VH	1.97	0.00281	PASS
		MCH	TN	VL	1.49	0.00212	PASS
				VN	1.23	0.00175	PASS
				VH	-1.06	-0.00151	PASS
		HCH	TN	VL	1.01	0.00141	PASS
				VN	-1.66	-0.00232	PASS
				VH	2.35	0.00329	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	0.76	0.00098	PASS
				VN	0.37	0.00048	PASS
				VH	0.49	0.00063	PASS
		MCH	TN	VL	0.02	0.00003	PASS
				VN	0.14	0.00018	PASS
				VH	2.58	0.00332	PASS
		HCH	TN	VL	2.09	0.00266	PASS
				VN	2.32	0.00295	PASS
				VH	1.78	0.00227	PASS
	16QAM/	LCH	TN	VL	2.5	0.00321	PASS

	10MHz			VN	2.43	0.00312	PASS
				VH	2.64	0.00339	PASS
		MCH	TN	VL	0.7	0.00090	PASS
				VN	0.51	0.00066	PASS
				VH	2.93	0.00377	PASS
		HCH	TN	VL	2.83	0.00360	PASS
				VN	2.87	0.00365	PASS
				VH	0.25	0.00032	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	2.01	0.00109	PASS
				-20	2.02	0.00109	PASS
				-10	0.17	0.00009	PASS
				0	-1.26	-0.00068	PASS
				10	1.36	0.00073	PASS
				20	1.42	0.00077	PASS
				30	2.59	0.00140	PASS
				40	2.38	0.00129	PASS
				50	1.56	0.00084	PASS
		MCH	VN	-30	-0.77	-0.00041	PASS
				-20	-0.78	-0.00042	PASS
				-10	-2.56	-0.00137	PASS
				0	-0.97	-0.00052	PASS
				10	-2.1	-0.00112	PASS
				20	1.78	0.00095	PASS
				30	1.5	0.00080	PASS
				40	-0.72	-0.00038	PASS
				50	0	0.00000	PASS
		HCH	VN	-30	2.2	0.00115	PASS
				-20	2.19	0.00115	PASS
				-10	1.2	0.00063	PASS
				0	0.07	0.00004	PASS
				10	0.22	0.00012	PASS
				20	2.33	0.00122	PASS
				30	2.18	0.00114	PASS
				40	0.46	0.00024	PASS
				50	-2.95	-0.00155	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	1.11	0.00060	PASS
				-20	1.12	0.00060	PASS
				-10	-0.73	-0.00039	PASS
				0	-2.45	-0.00132	PASS
				10	0.97	0.00052	PASS
				20	0.56	0.00030	PASS
				30	1.69	0.00091	PASS
				40	1.48	0.00080	PASS
				50	1.52	0.00082	PASS
		MCH	VN	-30	-1.67	-0.00089	PASS
				-20	-1.68	-0.00090	PASS
				-10	-0.97	-0.00052	PASS
				0	-1.87	-0.00100	PASS
				10	-3	-0.00160	PASS
				20	0.88	0.00047	PASS
				30	0.89	0.00048	PASS
				40	-1.62	-0.00087	PASS
				50	-0.9	-0.00048	PASS
		HCH	VN	-30	1.55	0.00081	PASS
				-20	1.62	0.00085	PASS
				-10	0.3	0.00016	PASS
				0	-0.63	-0.00033	PASS
				10	-0.68	-0.00036	PASS
				20	1.83	0.00096	PASS
				30	1.28	0.00067	PASS
				40	-0.44	-0.00023	PASS
				50	-2.85	-0.00149	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	1.44	0.00084	PASS
				-20	1.45	0.00085	PASS
				-10	0.58	0.00034	PASS
				0	-1.79	-0.00105	PASS
				10	1.66	0.00097	PASS
				20	1.53	0.00089	PASS
				30	2.07	0.00121	PASS
				40	1.58	0.00092	PASS
				50	1.73	0.00101	PASS
		MCH	VN	-30	-1.93	-0.00112	PASS
				-20	-1.93	-0.00112	PASS
				-10	-1.07	-0.00062	PASS
				0	-1.53	-0.00089	PASS
				10	-0.77	-0.00045	PASS
				20	-2.19	-0.00127	PASS
				30	-1.07	-0.00062	PASS
				40	-0.72	-0.00042	PASS
				50	-0.77	-0.00045	PASS
		HCH	VN	-30	-1.4	-0.00080	PASS
				-20	-1.41	-0.00080	PASS
				-10	1.24	0.00071	PASS
				0	0.08	0.00005	PASS
				10	-0.16	-0.00009	PASS
				20	1.36	0.00078	PASS
				30	2.18	0.00124	PASS
				40	0.05	0.00003	PASS
				50	-1.86	-0.00106	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	0.1	0.00006	PASS
				-20	0.09	0.00005	PASS
				-10	1.3	0.00076	PASS
				0	-1.13	-0.00066	PASS
				10	2.49	0.00145	PASS
				20	2.55	0.00149	PASS
				30	1.72	0.00100	PASS
				40	2.51	0.00147	PASS
				50	2.69	0.00157	PASS
		MCH	VN	-30	0.36	0.00021	PASS
				-20	0.35	0.00020	PASS
				-10	-1.43	-0.00083	PASS
				0	-1.9	-0.00110	PASS
				10	-0.97	-0.00056	PASS
				20	2.91	0.00169	PASS
				30	1.69	0.00098	PASS
				40	0.41	0.00024	PASS
				50	1.13	0.00066	PASS
		HCH	VN	-30	-1.41	-0.00080	PASS
				-20	-1.4	-0.00080	PASS
				-10	-2.39	-0.00136	PASS
				0	1.2	0.00068	PASS
				10	1.35	0.00077	PASS
				20	-1.26	-0.00072	PASS
				30	-1.41	-0.00080	PASS
				40	1.59	0.00091	PASS
				50	-1.82	-0.00104	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	2.47	0.00353	PASS
				-20	2.46	0.00351	PASS
				-10	1.59	0.00227	PASS
				0	2.22	0.00317	PASS
				10	4.67	0.00667	PASS
				20	4.54	0.00648	PASS
				30	3.08	0.00440	PASS
				40	2.59	0.00370	PASS
				50	2.74	0.00391	PASS
		MCH	VN	-30	-1.91	-0.00271	PASS
				-20	-1.92	-0.00273	PASS
				-10	-3.06	-0.00435	PASS
				0	-2.58	-0.00367	PASS
				10	-2.76	-0.00392	PASS
				20	-1.18	-0.00168	PASS
				30	-0.06	-0.00009	PASS
				40	-2.71	-0.00385	PASS
				50	-1.76	-0.00250	PASS
		HCH	VN	-30	4.33	0.00606	PASS
				-20	4.32	0.00604	PASS
				-10	2.25	0.00315	PASS
				0	3.09	0.00432	PASS
				10	0.85	0.00119	PASS
				20	6.37	0.00891	PASS
				30	3.19	0.00446	PASS
				40	1.06	0.00148	PASS
				50	-3.85	-0.00539	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	2.07	0.00296	PASS
				-20	2.08	0.00297	PASS
				-10	0.23	0.00033	PASS
				0	-1.2	-0.00171	PASS
				10	1.42	0.00203	PASS
				20	1.48	0.00211	PASS
				30	2.65	0.00378	PASS
				40	2.44	0.00348	PASS
				50	1.62	0.00231	PASS
		MCH	VN	-30	-0.73	-0.00104	PASS
				-20	-0.72	-0.00102	PASS
				-10	0.5	0.00071	PASS
				0	-2.97	-0.00422	PASS
				10	-2.04	-0.00290	PASS
				20	1.84	0.00261	PASS
				30	1.62	0.00230	PASS
				40	-0.66	-0.00094	PASS
				50	0.06	0.00009	PASS
		HCH	VN	-30	2.24	0.00313	PASS
				-20	2.25	0.00315	PASS
				-10	1.26	0.00176	PASS
				0	0.13	0.00018	PASS
				10	0.28	0.00039	PASS
				20	2.39	0.00334	PASS
				30	2.24	0.00313	PASS
				40	0.52	0.00073	PASS
				50	-2.89	-0.00404	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	0.31	0.00040	PASS
				-20	0.36	0.00046	PASS
				-10	0.45	0.00058	PASS
				0	0.78	0.00100	PASS
				10	-2.02	-0.00260	PASS
				20	0.39	0.00050	PASS
				30	0.01	0.00001	PASS
				40	0.46	0.00059	PASS
				50	0.65	0.00084	PASS
		MCH	VN	-30	0.29	0.00037	PASS
				-20	0.28	0.00036	PASS
				-10	0.14	0.00018	PASS
				0	-4.38	-0.00561	PASS
				10	-0.56	-0.00072	PASS
				20	0.02	0.00003	PASS
				30	0.14	0.00018	PASS
				40	0.49	0.00063	PASS
				50	0.44	0.00056	PASS
		HCH	VN	-30	1.17	0.00149	PASS
				-20	1.58	0.00201	PASS
				-10	1.75	0.00223	PASS
				0	1.22	0.00155	PASS
				10	-1.09	-0.00139	PASS
				20	0.61	0.00078	PASS
				30	1.98	0.00252	PASS
				40	0.72	0.00092	PASS
				50	1.27	0.00162	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	-0.12	-0.00015	PASS
				-20	-0.35	-0.00045	PASS
				-10	-0.09	-0.00012	PASS
				0	0.48	0.00062	PASS
				10	-3.02	-0.00388	PASS
				20	0.65	0.00084	PASS
				30	0.89	0.00114	PASS
				40	-0.13	-0.00017	PASS
				50	0.26	0.00033	PASS
		MCH	VN	-30	-0.56	-0.00072	PASS
				-20	-0.57	-0.00073	PASS
				-10	0.65	0.00083	PASS
				0	-3.82	-0.00490	PASS
				10	1.11	0.00142	PASS
				20	1.99	0.00255	PASS
				30	1.77	0.00227	PASS
				40	-0.51	-0.00065	PASS
				50	0.21	0.00027	PASS
		HCH	VN	-30	1.72	0.00219	PASS
				-20	1.8	0.00229	PASS
				-10	2.29	0.00291	PASS
				0	2.51	0.00319	PASS
				10	0.56	0.00071	PASS
				20	2.2	0.00280	PASS
				30	1.61	0.00205	PASS
				40	2.83	0.00360	PASS
				50	2.98	0.00379	PASS

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