

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	-0.03	-0.00002	PASS
				VN	1.1	0.00059	PASS
				VH	-2.02	-0.00109	PASS
		MCH	TN	VL	2.14	0.00114	PASS
				VN	-2.13	-0.00113	PASS
				VH	-0.46	-0.00024	PASS
		HCH	TN	VL	-0.88	-0.00046	PASS
				VN	-0.49	-0.00026	PASS
				VH	-0.07	-0.00004	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.74	-0.00040	PASS
				VN	-2.29	-0.00123	PASS
				VH	-2.42	-0.00130	PASS
		MCH	TN	VL	2.21	0.00118	PASS
				VN	-2.16	-0.00115	PASS
				VH	1.27	0.00068	PASS
		HCH	TN	VL	-2.37	-0.00125	PASS
				VN	-1.34	-0.00071	PASS
				VH	2.12	0.00112	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	-2.51	-0.00146	PASS
				VN	2.48	0.00144	PASS
				VH	0.31	0.00018	PASS
		MCH	TN	VL	2.31	0.00133	PASS
				VN	-0.8	-0.00046	PASS
				VH	2.68	0.00155	PASS
		HCH	TN	VL	-0.46	-0.00026	PASS
				VN	0.89	0.00051	PASS
				VH	1.28	0.00073	PASS
	16QAM/ 20MHz	LCH	TN	VL	-2.21	-0.00128	PASS
				VN	-0.9	-0.00052	PASS
				VH	0.93	0.00054	PASS
		MCH	TN	VL	2.51	0.00145	PASS
				VN	-0.79	-0.00046	PASS

		HCH	TN	VH	2.6	0.00150	PASS
				VL	-1.01	-0.00058	PASS
				VN	0.02	0.00001	PASS
				VH	2.47	0.00142	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	-2.38	-0.00338	PASS
				VN	1.91	0.00271	PASS
				VH	0.45	0.00064	PASS
		MCH	TN	VL	2.16	0.00305	PASS
				VN	-0.64	-0.00090	PASS
				VH	1.79	0.00253	PASS
		HCH	TN	VL	-0.35	-0.00049	PASS
				VN	1.01	0.00142	PASS
				VH	1.42	0.00200	PASS
	16QAM/ 10MHz	LCH	TN	VL	-2.1	-0.00298	PASS
				VN	-0.78	-0.00111	PASS
				VH	0.05	0.00007	PASS
		MCH	TN	VL	1.74	0.00246	PASS
				VN	-0.69	-0.00098	PASS
				VH	1.74	0.00246	PASS
		HCH	TN	VL	-0.91	-0.00128	PASS
				VN	1.14	0.00160	PASS
				VH	2.6	0.00366	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	2.21	0.00283	PASS
				VN	-0.73	-0.00093	PASS
				VH	1.71	0.00219	PASS
		HCH	TN	VL	/	/	/
				VN	/	/	/
				VH	/	/	/
	16QAM/	LCH	TN	VL	/	/	/

	10MHz			VN	/	/	/
				VH	/	/	/
				VL	1.29	0.00165	PASS
		MCH	TN	VN	-1.07	-0.00137	PASS
				VH	1.35	0.00173	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	-0.55	-0.00030	PASS
				VN	1.44	0.00077	PASS
				VH	-2.7	-0.00145	PASS
		MCH	TN	VL	2.47	0.00131	PASS
				VN	-1.81	-0.00096	PASS
				VH	0.68	0.00036	PASS
		HCH	TN	VL	-2.53	-0.00133	PASS
				VN	-0.16	-0.00008	PASS
				VH	0.24	0.00013	PASS
	16QAM/ 20MHz	LCH	TN	VL	-0.28	-0.00015	PASS
				VN	-1.95	-0.00105	PASS
				VH	-1.11	-0.00060	PASS
		MCH	TN	VL	2.59	0.00138	PASS
				VN	-1.81	-0.00096	PASS
				VH	0.57	0.00030	PASS
		HCH	TN	VL	-2.06	-0.00108	PASS
				VN	-0.03	-0.00002	PASS
				VH	1.43	0.00075	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	2.42	0.00130	PASS
				-20	2.43	0.00131	PASS
				-10	0.58	0.00031	PASS
				0	2.21	0.00119	PASS
				10	1.77	0.00095	PASS
				20	1.83	0.00098	PASS
				30	2.7	0.00145	PASS
				40	2.79	0.00150	PASS
				50	1.97	0.00106	PASS
		MCH	VN	-30	-0.36	-0.00019	PASS
				-20	-0.37	-0.00020	PASS
				-10	-2.15	-0.00114	PASS
				0	-0.56	-0.00030	PASS
				10	-1.69	-0.00090	PASS
				20	2.19	0.00116	PASS
				30	1.87	0.00099	PASS
				40	-0.31	-0.00016	PASS
				50	0.41	0.00022	PASS
		HCH	VN	-30	1.78	0.00094	PASS
				-20	1.77	0.00093	PASS
				-10	0.78	0.00041	PASS
				0	1.82	0.00096	PASS
				10	-0.2	-0.00011	PASS
				20	1.91	0.00101	PASS
				30	1.76	0.00093	PASS
				40	0.04	0.00002	PASS
				50	-1.2	-0.00063	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	1.4	0.00075	PASS
				-20	1.41	0.00076	PASS
				-10	-0.44	-0.00024	PASS
				0	0.9	0.00048	PASS
				10	1.26	0.00068	PASS
				20	0.85	0.00046	PASS
				30	1.98	0.00106	PASS
				40	1.77	0.00095	PASS
				50	1.81	0.00097	PASS
		MCH	VN	-30	-1.38	-0.00073	PASS
				-20	-1.39	-0.00074	PASS
				-10	-0.68	-0.00036	PASS
				0	-1.58	-0.00084	PASS
				10	-2.71	-0.00144	PASS
				20	1.17	0.00062	PASS
				30	1.18	0.00063	PASS
				40	-1.33	-0.00071	PASS
				50	-0.61	-0.00032	PASS
		HCH	VN	-30	1.01	0.00053	PASS
				-20	1.08	0.00057	PASS
				-10	-0.24	-0.00013	PASS
				0	1	0.00053	PASS
				10	-1.22	-0.00064	PASS
				20	1.29	0.00068	PASS
				30	0.74	0.00039	PASS
				40	-0.98	-0.00052	PASS
				50	-2.22	-0.00117	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	2.41	0.00140	PASS
				-20	2.42	0.00141	PASS
				-10	1.55	0.00090	PASS
				0	2.24	0.00130	PASS
				10	2.63	0.00153	PASS
				20	2.5	0.00145	PASS
				30	1.6	0.00093	PASS
				40	2.55	0.00148	PASS
				50	2.7	0.00157	PASS
		MCH	VN	-30	-0.96	-0.00055	PASS
				-20	-0.96	-0.00055	PASS
				-10	-0.1	-0.00006	PASS
				0	-0.56	-0.00032	PASS
				10	0.2	0.00012	PASS
				20	-1.22	-0.00070	PASS
				30	-0.1	-0.00006	PASS
				40	0.25	0.00014	PASS
				50	0.2	0.00012	PASS
		HCH	VN	-30	1.83	0.00105	PASS
				-20	1.55	0.00089	PASS
				-10	1.38	0.00079	PASS
				0	2.39	0.00137	PASS
				10	-0.02	-0.00001	PASS
				20	1.5	0.00086	PASS
				30	2.32	0.00133	PASS
				40	0.19	0.00011	PASS
				50	0.45	0.00026	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	1.98	0.00115	PASS
				-20	1.93	0.00112	PASS
				-10	1.19	0.00069	PASS
				0	1.82	0.00106	PASS
				10	2.38	0.00138	PASS
				20	2.44	0.00142	PASS
				30	1.61	0.00094	PASS
				40	2.4	0.00140	PASS
				50	2.58	0.00150	PASS
		MCH	VN	-30	0.25	0.00014	PASS
				-20	0.24	0.00014	PASS
				-10	-1.54	-0.00089	PASS
				0	1.05	0.00061	PASS
				10	-1.08	-0.00062	PASS
				20	2.8	0.00162	PASS
				30	1.58	0.00091	PASS
				40	0.3	0.00017	PASS
				50	1.02	0.00059	PASS
		HCH	VN	-30	2.37	0.00136	PASS
				-20	2.38	0.00136	PASS
				-10	1.39	0.00080	PASS
				0	2.43	0.00139	PASS
				10	0.41	0.00023	PASS
				20	2.52	0.00144	PASS
				30	2.37	0.00136	PASS
				40	0.65	0.00037	PASS
				50	-0.59	-0.00034	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	2.64	0.00375	PASS
				-20	2.63	0.00374	PASS
				-10	1.76	0.00250	PASS
				0	1.9	0.00270	PASS
				10	1.4	0.00199	PASS
				20	1.49	0.00212	PASS
				30	1.29	0.00183	PASS
				40	2.76	0.00392	PASS
				50	2.91	0.00413	PASS
		MCH	VN	-30	-1.74	-0.00246	PASS
				-20	-1.75	-0.00247	PASS
				-10	-2.89	-0.00408	PASS
				0	0.65	0.00092	PASS
				10	-2.59	-0.00366	PASS
				20	-1.01	-0.00143	PASS
				30	0.11	0.00016	PASS
				40	-2.54	-0.00359	PASS
				50	-1.59	-0.00225	PASS
		HCH	VN	-30	1.6	0.00225	PASS
				-20	1.64	0.00231	PASS
				-10	1.59	0.00224	PASS
				0	4.6	0.00647	PASS
				10	0.19	0.00027	PASS
				20	1.54	0.00217	PASS
				30	2.53	0.00356	PASS
				40	0.4	0.00056	PASS
				50	-2.34	-0.00329	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	2.09	0.00297	PASS
				-20	2.1	0.00298	PASS
				-10	0.25	0.00036	PASS
				0	1.88	0.00267	PASS
				10	1.44	0.00205	PASS
				20	1.5	0.00213	PASS
				30	2.67	0.00379	PASS
				40	2.46	0.00349	PASS
				50	1.64	0.00233	PASS
		MCH	VN	-30	-0.71	-0.00100	PASS
				-20	-0.7	-0.00099	PASS
				-10	0.52	0.00073	PASS
				0	0.11	0.00016	PASS
				10	-2.02	-0.00286	PASS
				20	1.86	0.00263	PASS
				30	1.64	0.00232	PASS
				40	-0.64	-0.00090	PASS
				50	0.08	0.00011	PASS
		HCH	VN	-30	1.43	0.00201	PASS
				-20	1.44	0.00203	PASS
				-10	0.45	0.00063	PASS
				0	1.49	0.00210	PASS
				10	-0.53	-0.00075	PASS
				20	1.58	0.00222	PASS
				30	1.43	0.00201	PASS
				40	-0.29	-0.00041	PASS
				50	-1.53	-0.00215	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	0.3	0.00038	PASS
				-20	0.29	0.00037	PASS
				-10	0.15	0.00019	PASS
				0	-1.31	-0.00168	PASS
				10	-0.55	-0.00070	PASS
				20	0.03	0.00004	PASS
				30	0.15	0.00019	PASS
				40	0.5	0.00064	PASS
				50	0.45	0.00058	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	-0.47	-0.00060	PASS
				-20	-0.48	-0.00061	PASS
				-10	0.74	0.00095	PASS
				0	-0.67	-0.00086	PASS
				10	1.2	0.00153	PASS
				20	2.08	0.00266	PASS
				30	1.86	0.00238	PASS
				40	-0.42	-0.00054	PASS
				50	0.3	0.00038	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	2.7	0.00145	PASS
				-20	2.71	0.00146	PASS
				-10	1.84	0.00099	PASS
				0	2.53	0.00136	PASS
				10	1.92	0.00103	PASS
				20	1.79	0.00096	PASS
				30	2.33	0.00125	PASS
				40	2.84	0.00153	PASS
				50	2.99	0.00161	PASS
		MCH	VN	-30	-0.66	-0.00035	PASS
				-20	-0.67	-0.00036	PASS
				-10	-2.81	-0.00149	PASS
				0	-0.27	-0.00014	PASS
				10	-2.51	-0.00133	PASS
				20	-0.93	-0.00049	PASS
				30	0.19	0.00010	PASS
				40	-2.46	-0.00131	PASS
				50	-1.51	-0.00080	PASS
		HCH	VN	-30	2.18	0.00114	PASS
				-20	2.27	0.00119	PASS
				-10	1.67	0.00088	PASS
				0	2.03	0.00107	PASS
				10	0.27	0.00014	PASS
				20	1.82	0.00096	PASS
				30	2.61	0.00137	PASS
				40	0.48	0.00025	PASS
				50	-2.26	-0.00119	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	1.76	0.00095	PASS
				-20	1.77	0.00095	PASS
				-10	-0.08	-0.00004	PASS
				0	1.18	0.00063	PASS
				10	1.06	0.00057	PASS
				20	0.8	0.00043	PASS
				30	2.34	0.00126	PASS
				40	2.13	0.00115	PASS
				50	2.31	0.00124	PASS
		MCH	VN	-30	-1.04	-0.00055	PASS
				-20	-1.03	-0.00055	PASS
				-10	-2.81	-0.00149	PASS
				0	-0.22	-0.00012	PASS
				10	-2.35	-0.00125	PASS
				20	1.53	0.00081	PASS
				30	0.82	0.00044	PASS
				40	-0.97	-0.00052	PASS
				50	-0.25	-0.00013	PASS
		HCH	VN	-30	1.2	0.00063	PASS
				-20	1.03	0.00054	PASS
				-10	0.12	0.00006	PASS
				0	0.96	0.00050	PASS
				10	-0.86	-0.00045	PASS
				20	0.93	0.00049	PASS
				30	1.1	0.00058	PASS
				40	-0.62	-0.00033	PASS
				50	-1.86	-0.00098	PASS

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