

8.3 For LTE

8.3.1 Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND4	LTE/TM1	1.4	LCH	TN	VL	-7.37	-0.00433	PASS
					VN	-1.02	-0.0016	PASS
					VH	0.77	0.00345	PASS
			MCH	TN	VL	0.10	0.00006	PASS
					VN	-0.89	-0.00051	PASS
					VH	-0.76	-0.00044	PASS
			HCH	TN	VL	-0.59	-0.00034	PASS
					VN	-1.65	-0.00094	PASS
					VH	-0.94	-0.00054	PASS
		3	LCH	TN	VL	-7.37	-0.00431	PASS
					VN	-1.02	-0.0006	PASS
					VH	0.77	0.00045	PASS
			MCH	TN	VL	0.93	0.00054	PASS
					VN	-0.29	-0.00017	PASS
					VH	-2.85	-0.00165	PASS
			HCH	TN	VL	1.97	0.00112	PASS
					VN	-1.19	-0.00068	PASS
					VH	4.26	0.00243	PASS
		5	LCH	TN	VL	5.51	0.00322	PASS
					VN	-2.92	-0.00171	PASS
					VH	-3.48	-0.00203	PASS
			MCH	TN	VL	7.07	0.00408	PASS
					VN	1.02	0.00059	PASS
					VH	1.00	0.00046	PASS
			HCH	TN	VL	-0.30	-0.00017	PASS
					VN	-1.79	-0.00102	PASS
					VH	-2.66	-0.00152	PASS
		10	LCH	TN	VL	-1.57	-0.00092	PASS
					VN	1.67	0.00097	PASS
					VH	-3.02	-0.00176	PASS
MCH	TN		VL	1.23	0.00071	PASS		
			VN	1.80	0.00104	PASS		
			VH	5.14	0.00297	PASS		
HCH	TN	VL	2.66	0.00152	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					VN	-4.35	-0.00249	PASS	
					VH	1.27	0.00073	PASS	
		15	LCH	TN	VL	0.29	0.00017	PASS	
					VN	4.76	0.00277	PASS	
					VH	-1.29	-0.00075	PASS	
			MCH	TN	VL	2.05	0.00118	PASS	
					VN	4.21	0.00243	PASS	
					VH	6.21	0.00358	PASS	
			HCH	TN	VL	3.71	0.00212	PASS	
					VN	6.42	0.00367	PASS	
					VH	6.25	0.00358	PASS	
		20	LCH	TN	VL	1.40	0.00081	PASS	
					VN	-1.37	-0.0008	PASS	
					VH	3.33	0.00194	PASS	
			MCH	TN	VL	6.71	0.00387	PASS	
					VN	4.61	0.00266	PASS	
					VH	2.05	0.00118	PASS	
			HCH	TN	VL	-0.30	-0.00017	PASS	
					VN	-0.72	-0.00041	PASS	
					VH	-3.42	-0.00196	PASS	
		LTE/TM2	1.4	LCH	TN	VL	-1.36	-0.00079	PASS
						VN	-1.20	-0.0007	PASS
						VH	0.37	0.00022	PASS
				MCH	TN	VL	-0.30	-0.00017	PASS
						VN	0.44	0.00025	PASS
						VH	0.99	0.00057	PASS
				HCH	TN	VL	-3.08	-0.00176	PASS
						VN	-2.16	-0.00123	PASS
						VH	-2.27	-0.00129	PASS
			3	LCH	TN	VL	5.41	0.00316	PASS
						VN	1.60	0.00093	PASS
						VH	3.12	0.00182	PASS
				MCH	TN	VL	-2.90	-0.00167	PASS
						VN	-1.80	-0.00104	PASS
						VH	1.39	0.0008	PASS
				HCH	TN	VL	2.50	0.00143	PASS
						VN	2.16	0.00123	PASS
						VH	4.03	0.0023	PASS
		5	LCH	TN	VL	2.12	0.00124	PASS	

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					VN	0.77	0.00045	PASS	
					VH	2.06	0.0012	PASS	
					VL	-1.12	-0.00065	PASS	
			MCH	TN	VN	-2.26	-0.0013	PASS	
					VH	-0.94	-0.00054	PASS	
					VL	1.06	0.0006	PASS	
			HCH	TN	VN	-2.03	-0.00116	PASS	
					VH	-3.75	-0.00214	PASS	
					VL	-0.57	-0.00033	PASS	
		10	LCH	TN	VN	-1.56	-0.00091	PASS	
					VH	0.47	0.00027	PASS	
					VL	-4.46	-0.00257	PASS	
			MCH	TN	VN	-4.69	-0.00271	PASS	
					VH	2.59	0.00149	PASS	
					VL	1.96	0.00112	PASS	
			HCH	TN	VN	2.42	0.00138	PASS	
					VH	2.05	0.00117	PASS	
					VL	1.22	0.00071	PASS	
			15	LCH	TN	VN	-0.50	-0.00029	PASS
						VH	1.93	0.00112	PASS
						VL	0.93	0.00054	PASS
		MCH		TN	VN	5.71	0.0033	PASS	
					VH	2.29	0.00132	PASS	
					VL	4.26	0.00244	PASS	
		HCH		TN	VN	3.69	0.00211	PASS	
					VH	-1.92	-0.0011	PASS	
					VL	2.43	0.00141	PASS	
		20	LCH	TN	VN	-0.54	-0.00031	PASS	
					VH	1.73	0.00101	PASS	
					VL	0.59	0.00034	PASS	
			MCH	TN	VN	4.89	0.00282	PASS	
					VH	0.87	0.0005	PASS	
					VL	0.36	0.00021	PASS	
			HCH	TN	VN	-2.33	-0.00134	PASS	
					VH	-1.14	-0.00065	PASS	
					VL				

8.3.2 Frequency Error vs. Voltage:



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND4	LTE/TM1	1.4	LCH	VN	-30	-1.63	-0.00095	PASS
					-20	0.67	0.00039	PASS
					-10	-0.17	-0.0001	PASS
					0	-1.24	-0.00072	PASS
					10	0.23	0.00013	PASS
					20	-1.04	-0.00061	PASS
					30	-1.57	-0.00092	PASS
					40	-0.39	-0.00023	PASS
					50	-0.99	-0.00058	PASS
			MCH	VN	-30	-2.39	-0.00138	PASS
					-20	-2.59	-0.00149	PASS
					-10	-3.95	-0.00228	PASS
					0	-0.39	-0.00023	PASS
					10	1.39	0.0008	PASS
					20	-1.43	-0.00083	PASS
		30			-0.74	-0.00043	PASS	
		40			2.49	0.00144	PASS	
		50			0.46	0.00027	PASS	
		HCH	VN	-30	-2.76	-0.00157	PASS	
				-20	-2.57	-0.00146	PASS	
				-10	-3.86	-0.0022	PASS	
				0	-3.52	-0.00201	PASS	
				10	-3.83	-0.00218	PASS	
				20	-4.56	-0.0026	PASS	
				30	-0.37	-0.00021	PASS	
				40	-1.16	-0.00066	PASS	
				50	-2.73	-0.00156	PASS	
		3	LCH	VN	-30	-0.86	-0.0005	PASS
					-20	0.94	0.00055	PASS
					-10	-1.16	-0.00068	PASS
0	-3.95				-0.00231	PASS		
10	2.59				0.00151	PASS		
20	-4.35				-0.00254	PASS		
30	3.43				0.002	PASS		
40	-1.66				-0.00097	PASS		
50	1.03				0.0006	PASS		
MCH	VN		-30	0.49	0.00028	PASS		
			-20	-0.41	-0.00024	PASS		
			-10	4.11	0.00237	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					0	0.86	0.0005	PASS		
					10	-0.93	-0.00054	PASS		
					20	0.26	0.00015	PASS		
					30	1.60	0.00092	PASS		
					40	-1.00	-0.00058	PASS		
					50	-2.75	-0.00159	PASS		
			HCH	VN	-30	2.10	0.0012	PASS		
					-20	-0.26	-0.00015	PASS		
					-10	-1.69	-0.00096	PASS		
					0	3.92	0.00224	PASS		
					10	0.86	0.00049	PASS		
					20	1.17	0.00067	PASS		
			LCH	VN	30	-0.41	-0.00023	PASS		
					40	-0.72	-0.00041	PASS		
					50	-4.98	-0.00284	PASS		
					-30	0.51	0.0003	PASS		
					-20	-2.22	-0.0013	PASS		
					-10	-1.24	-0.00072	PASS		
		5		LCH	VN	0	1.23	0.00072	PASS	
						10	-1.76	-0.00103	PASS	
						20	-1.00	-0.00058	PASS	
						30	0.39	0.00023	PASS	
						40	1.39	0.00081	PASS	
						50	-3.38	-0.00197	PASS	
				MCH	VN	-30	1.66	0.00096	PASS	
						-20	3.75	0.00216	PASS	
						-10	-1.20	-0.00069	PASS	
						0	-3.42	-0.00197	PASS	
						10	-2.62	-0.00151	PASS	
						20	1.14	0.00066	PASS	
		HCH	VN	30	4.85	0.0028	PASS			
				40	-0.63	-0.00036	PASS			
				50	2.68	0.00155	PASS			
				-30	-0.24	-0.00014	PASS			
				-20	-2.72	-0.00155	PASS			
				-10	-2.59	-0.00148	PASS			
							0	2.29	0.00131	PASS
							10	2.65	0.00151	PASS
							20	4.12	0.00235	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
					30	1.13	0.00064	PASS			
					40	-0.83	-0.00047	PASS			
					50	0.74	0.00042	PASS			
					10	LCH	VN	-30	-1.27	-0.00074	PASS
								-20	-0.62	-0.00036	PASS
								-10	-5.52	-0.00322	PASS
								0	-0.66	-0.00038	PASS
								10	-1.39	-0.00081	PASS
								20	-0.90	-0.00052	PASS
		30	0.89	0.00052				PASS			
		40	-4.31	-0.00251				PASS			
		50	0.17	0.0001				PASS			
		10	MCH	VN	-30	4.02	0.00232	PASS			
					-20	4.51	0.0026	PASS			
					-10	2.83	0.00163	PASS			
					0	-1.12	-0.00065	PASS			
					10	-7.30	-0.00421	PASS			
					20	4.03	0.00233	PASS			
					30	6.07	0.0035	PASS			
					40	2.70	0.00156	PASS			
					50	4.48	0.00259	PASS			
		10	HCH	VN	-30	-0.37	-0.00021	PASS			
					-20	6.75	0.00386	PASS			
					-10	1.46	0.00083	PASS			
					0	1.46	0.00083	PASS			
					10	-3.58	-0.00205	PASS			
					20	1.52	0.00087	PASS			
					30	1.75	0.001	PASS			
					40	-0.09	-0.00005	PASS			
					50	3.19	0.00182	PASS			
		15	LCH	VN	-30	-1.13	-0.00066	PASS			
					-20	-0.86	-0.0005	PASS			
					-10	-2.23	-0.0013	PASS			
					0	0.89	0.00052	PASS			
					10	-0.62	-0.00036	PASS			
					20	-0.06	-0.00003	PASS			
					30	1.67	0.00097	PASS			
					40	2.09	0.00122	PASS			
					50	2.05	0.00119	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			MCH	VN	-30	5.62	0.00324	PASS
					-20	4.95	0.00286	PASS
					-10	8.47	0.00489	PASS
					0	-0.31	-0.00018	PASS
					10	6.97	0.00402	PASS
					20	2.52	0.00145	PASS
					30	-2.52	-0.00145	PASS
					40	-2.13	-0.00123	PASS
					50	2.05	0.00118	PASS
			HCH	VN	-30	0.90	0.00052	PASS
					-20	1.87	0.00107	PASS
					-10	3.00	0.00172	PASS
					0	6.12	0.0035	PASS
					10	5.56	0.00318	PASS
					20	2.89	0.00165	PASS
					30	9.63	0.00551	PASS
					40	7.10	0.00406	PASS
					50	7.25	0.00415	PASS
		20	LCH	VN	-30	-1.26	-0.00073	PASS
					-20	1.65	0.00096	PASS
					-10	-0.16	-0.00009	PASS
					0	2.10	0.00122	PASS
					10	1.65	0.00096	PASS
					20	0.69	0.0004	PASS
					30	0.46	0.00027	PASS
					40	-0.54	-0.00031	PASS
					50	2.73	0.00159	PASS
			MCH	VN	-30	5.26	0.00304	PASS
					-20	4.16	0.0024	PASS
					-10	5.22	0.00301	PASS
					0	7.20	0.00416	PASS
					10	-0.57	-0.00033	PASS
					20	5.81	0.00335	PASS
					30	6.62	0.00382	PASS
					40	0.07	0.00004	PASS
					50	4.36	0.00252	PASS
		HCH	VN	-30	2.60	0.00149	PASS	
				-20	-1.69	-0.00097	PASS	
				-10	-1.00	-0.00057	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					0	2.47	0.00142	PASS		
					10	1.36	0.00078	PASS		
					20	-1.02	-0.00058	PASS		
					30	-1.14	-0.00065	PASS		
					40	-1.16	-0.00066	PASS		
					50	-2.09	-0.0012	PASS		
	LTE/TM2	1.4	LCH	VN	-30	-0.03	-0.00002	PASS		
					-20	-0.72	-0.00042	PASS		
					-10	-1.17	-0.00068	PASS		
					0	-2.36	-0.00138	PASS		
					10	-1.19	-0.0007	PASS		
					20	-1.46	-0.00085	PASS		
					30	-0.99	-0.00058	PASS		
					40	-1.37	-0.0008	PASS		
					50	0.26	0.00015	PASS		
					MCH	VN	-30	2.47	0.00143	PASS
							-20	2.55	0.00147	PASS
							-10	-1.59	-0.00092	PASS
							0	-0.44	-0.00025	PASS
							10	-0.29	-0.00017	PASS
		20	-2.89	-0.00167			PASS			
		30	-0.30	-0.00017			PASS			
		40	-1.42	-0.00082			PASS			
		50	0.77	0.00044			PASS			
		HCH	VN	-30			0.37	0.00021	PASS	
				-20	-1.75	-0.001	PASS			
				-10	-0.56	-0.00032	PASS			
				0	0.14	0.00008	PASS			
				10	0.96	0.00055	PASS			
				20	-3.62	-0.00206	PASS			
30	-2.57			-0.00146	PASS					
40	0.31			0.00018	PASS					
3	LCH	VN	-30	0.83	0.00048	PASS				
			-20	-2.13	-0.00124	PASS				
			-10	-3.60	-0.0021	PASS				
			0	2.46	0.00144	PASS				
			10	-2.05	-0.0012	PASS				
			20	2.16	0.00126	PASS				



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					30	3.78	0.00221	PASS		
					40	-0.04	-0.00002	PASS		
					50	0.40	0.00023	PASS		
			MCH	VN	-30	3.58	0.00207	PASS		
					-20	4.82	0.00278	PASS		
					-10	2.32	0.00134	PASS		
					0	2.27	0.00131	PASS		
					10	7.57	0.00437	PASS		
					20	-1.03	-0.00059	PASS		
					30	2.12	0.00122	PASS		
					40	1.93	0.00111	PASS		
					50	-0.67	-0.00039	PASS		
					HCH	VN	-30	0.92	0.00052	PASS
			-20	0.77			0.00044	PASS		
			-10	0.96			0.00055	PASS		
			0	-1.40			-0.0008	PASS		
			10	-1.67			-0.00095	PASS		
			20	-0.29			-0.00017	PASS		
			30	-1.00			-0.00057	PASS		
			40	-3.00			-0.00171	PASS		
			5		LCH	VN	-30	1.73	0.00101	PASS
							-20	-4.38	-0.00256	PASS
							-10	-3.29	-0.00192	PASS
							0	-0.14	-0.00008	PASS
							10	-1.03	-0.0006	PASS
							20	1.20	0.0007	PASS
							30	-1.83	-0.00107	PASS
							40	0.82	0.00048	PASS
					50	2.22	0.0013	PASS		
					MCH	VN	-30	7.90	0.00456	PASS
							-20	-7.74	-0.00447	PASS
							-10	3.79	0.00219	PASS
							0	1.92	0.00111	PASS
							10	-0.79	-0.00046	PASS
							20	-0.29	-0.00017	PASS
			30	-1.09			-0.00063	PASS		
40	0.19	0.00011	PASS							
50	6.67	0.00385	PASS							



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			HCH	VN	-30	-0.66	-0.00038	PASS
					-20	-1.10	-0.00063	PASS
					-10	-1.54	-0.00088	PASS
					0	-2.25	-0.00128	PASS
					10	-3.53	-0.00201	PASS
					20	1.16	0.00066	PASS
					30	-2.82	-0.00161	PASS
					40	-0.92	-0.00052	PASS
					50	2.32	0.00132	PASS
		10	LCH	VN	-30	1.47	0.00086	PASS
					-20	2.23	0.0013	PASS
					-10	2.96	0.00173	PASS
					0	2.16	0.00126	PASS
					10	-3.19	-0.00186	PASS
					20	-4.62	-0.00269	PASS
					30	3.12	0.00182	PASS
					40	-1.30	-0.00076	PASS
					50	3.10	0.00181	PASS
			MCH	VN	-30	2.69	0.00155	PASS
					-20	3.72	0.00215	PASS
					-10	-0.74	-0.00043	PASS
					0	4.79	0.00276	PASS
					10	1.75	0.00101	PASS
					20	5.29	0.00305	PASS
					30	1.63	0.00094	PASS
					40	3.81	0.0022	PASS
					50	3.63	0.0021	PASS
		HCH	VN	-30	5.46	0.00312	PASS	
				-20	-2.02	-0.00115	PASS	
				-10	-0.41	-0.00023	PASS	
				0	0.77	0.00044	PASS	
				10	2.27	0.0013	PASS	
				20	2.89	0.00165	PASS	
				30	1.57	0.0009	PASS	
				40	2.43	0.00139	PASS	
				50	-0.49	-0.00028	PASS	
		15	LCH	VN	-30	-1.82	-0.00106	PASS
					-20	1.76	0.00102	PASS
					-10	0.79	0.00046	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
					0	-2.29	-0.00133	PASS			
					10	6.62	0.00385	PASS			
					20	3.22	0.00187	PASS			
					30	-0.64	-0.00037	PASS			
					40	-2.65	-0.00154	PASS			
					50	-3.33	-0.00194	PASS			
			MCH	VN	-30	6.21	0.00358	PASS			
					-20	4.75	0.00274	PASS			
					-10	1.66	0.00096	PASS			
					0	-0.01	-0.00001	PASS			
					10	4.65	0.00268	PASS			
					20	0.13	0.00008	PASS			
					30	1.92	0.00111	PASS			
					40	-0.06	-0.00003	PASS			
			HCH	VN	50	6.29	0.00363	PASS			
					-30	8.81	0.00504	PASS			
					-20	3.62	0.00207	PASS			
					-10	5.21	0.00298	PASS			
					0	5.29	0.00303	PASS			
					10	3.05	0.00175	PASS			
					20	7.14	0.00409	PASS			
					30	7.34	0.0042	PASS			
			LCH	VN	40	9.76	0.00559	PASS			
					50	2.83	0.00162	PASS			
					-30	4.76	0.00277	PASS			
					-20	-4.05	-0.00235	PASS			
					-10	2.45	0.00142	PASS			
					0	3.32	0.00193	PASS			
					10	-1.57	-0.00091	PASS			
					20	0.13	0.00008	PASS			
			MCH	VN	30	0.92	0.00053	PASS			
					40	2.23	0.0013	PASS			
					50	-0.34	-0.0002	PASS			
					-30	2.49	0.00144	PASS			
					-20	3.88	0.00224	PASS			
					-10	2.09	0.00121	PASS			
								0	1.63	0.00094	PASS
								10	1.50	0.00087	PASS
								20	2.47	0.00143	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					30	4.11	0.00237	PASS
					40	3.71	0.00214	PASS
					50	1.29	0.00074	PASS
			HCH	VN	-30	5.11	0.00293	PASS
					-20	2.15	0.00123	PASS
					-10	-3.35	-0.00192	PASS
					0	-0.44	-0.00025	PASS
					10	-1.27	-0.00073	PASS
					20	-0.36	-0.00021	PASS
					30	-0.87	-0.0005	PASS
					40	-2.42	-0.00139	PASS
					50	-6.28	-0.0036	PASS

END