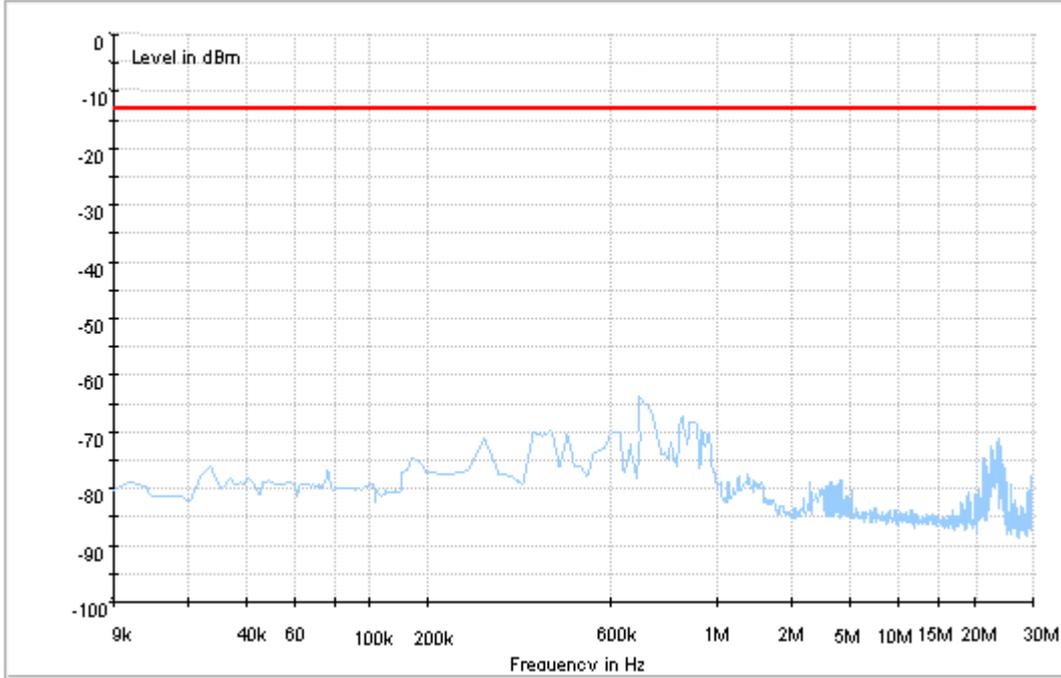
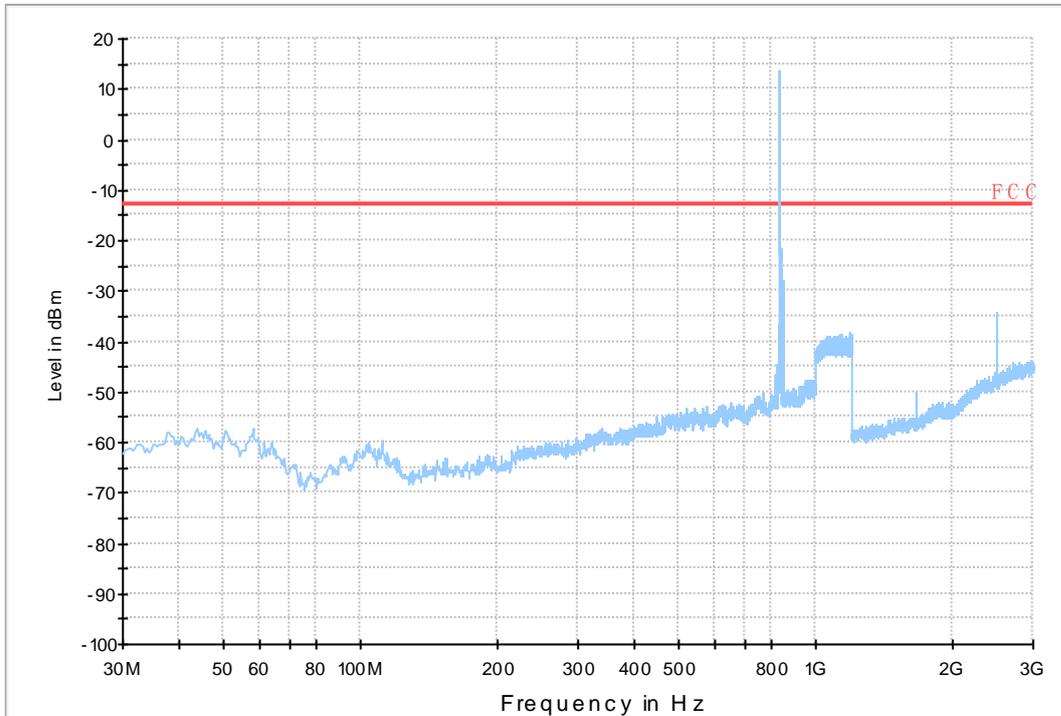


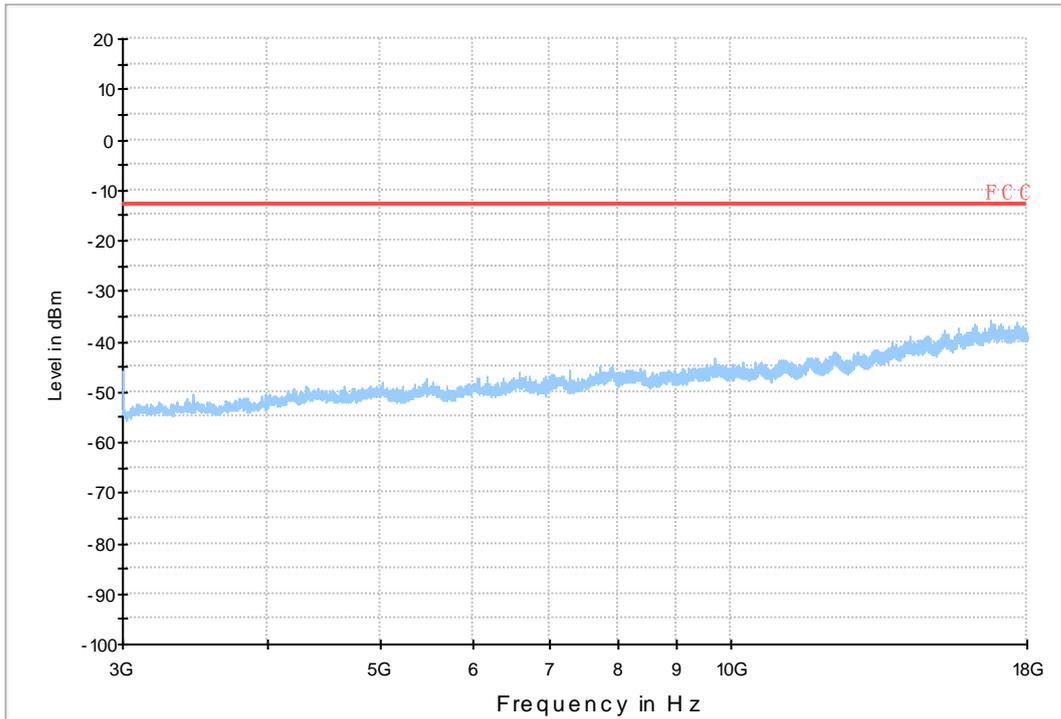
7.1.2.2 Test Bandwidth = 10



Copy of RSE-TX-DIRECTOR BELOW 1G_L



Copy of RSE-TX-DIRECTOR BELOW 1G_H



8Appendix_H: Frequency Stability

8.1 For LTE

8.1.1 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
BAND5	LTE/TM1	1.4	LCH	TN	VL	-9.77	-0.01185	PASS
					VN	-7.62	-0.00924	PASS
					VH	-7.01	-0.0085	PASS
			MCH	TN	VL	-0.59	-0.00071	PASS
					VN	22.29	0.02665	PASS
					VH	-10.71	-0.0128	PASS
			HCH	TN	VL	-3.60	-0.00424	PASS
					VN	9.33	0.011	PASS
					VH	30.26	0.03567	PASS
		3	LCH	TN	VL	0.13	0.00016	PASS
					VN	1.24	0.0015	PASS
					VH	1.13	0.00137	PASS
			MCH	TN	VL	2.42	0.00289	PASS
					VN	4.05	0.00484	PASS
					VH	-1.72	-0.00206	PASS
			HCH	TN	VL	-2.19	-0.00258	PASS
					VN	-1.79	-0.00211	PASS
					VH	-4.92	-0.00581	PASS
		5	LCH	TN	VL	1.56	0.00189	PASS
					VN	-0.77	-0.00093	PASS
					VH	3.59	0.00434	PASS
			MCH	TN	VL	-0.87	-0.00104	PASS
					VN	-1.93	-0.00231	PASS
					VH	-1.04	-0.00124	PASS
			HCH	TN	VL	-1.57	-0.00185	PASS
					VN	-4.78	-0.00565	PASS
					VH	-1.44	-0.0017	PASS
		10	LCH	TN	VL	-9.54	-0.01151	PASS
					VN	-3.12	-0.00376	PASS
					VH	-0.16	-0.00019	PASS
			MCH	TN	VL	-0.62	-0.00074	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					VN	-6.67	-0.00797	PASS		
					VH	-4.32	-0.00516	PASS		
					HCH	TN	VL	-0.62	-0.00073	PASS
							VN	0.01	0.00001	PASS
					VH	-0.80	-0.00095	PASS		
			LCH	TN	VL	-0.21	-0.00025	PASS		
					VN	-7.95	-0.00964	PASS		
					VH	0.99	0.0012	PASS		
			MCH	TN	VL	-9.84	-0.01176	PASS		
					VN	28.88	0.03452	PASS		
	VH	-7.61			-0.0091	PASS				
	HCH	TN	VL	5.14	0.00606	PASS				
			VN	-15.05	-0.01774	PASS				
			VH	15.25	0.01798	PASS				
	1.4	3	LCH	TN	VL	6.61	0.00801	PASS		
					VN	-1.93	-0.00234	PASS		
					VH	0.19	0.00023	PASS		
			MCH	TN	VL	2.46	0.00294	PASS		
					VN	3.86	0.00461	PASS		
					VH	-1.50	-0.00179	PASS		
		HCH	TN	VL	-0.84	-0.00099	PASS			
				VN	-2.22	-0.00262	PASS			
				VH	-6.57	-0.00775	PASS			
		5	LCH	TN	VL	-1.39	-0.00168	PASS		
					VN	-1.36	-0.00165	PASS		
					VH	-0.87	-0.00105	PASS		
	MCH		TN	VL	7.77	0.00929	PASS			
				VN	-1.85	-0.00221	PASS			
				VH	-0.66	-0.00079	PASS			
	HCH		TN	VL	-1.24	-0.00146	PASS			
				VN	-2.10	-0.00248	PASS			
				VH	-1.03	-0.00122	PASS			
	10	LCH	TN	VL	-2.23	-0.00269	PASS			
				VN	-5.65	-0.00682	PASS			
				VH	-4.43	-0.00534	PASS			
		MCH	TN	VL	-0.89	-0.00106	PASS			
				VN	-6.04	-0.00722	PASS			
				VH	-10.09	-0.01206	PASS			
	HCH	TN	VL	0.21	0.00025	PASS				



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-0.07	-0.00008	PASS
					VH	1.59	0.00188	PASS

8.1.2 Frequency Error vs. Temperature:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND5	LTE/TM1	1.4	LCH	VN	-30	0.21	0.00025	PASS
					-20	-14.61	-0.01772	PASS
					-10	-3.29	-0.00399	PASS
					0	-10.64	-0.0129	PASS
					10	-0.04	-0.00005	PASS
					20	-8.50	-0.01031	PASS
					30	-15.02	-0.01821	PASS
					40	0.16	0.00019	PASS
			50	-15.68	-0.01901	PASS		
			MCH	VN	-30	6.88	0.00822	PASS
					-20	4.06	0.00485	PASS
					-10	-10.01	-0.01197	PASS
					0	-4.56	-0.00545	PASS
					10	0.59	0.00071	PASS
					20	-0.29	-0.00035	PASS
					30	13.62	0.01628	PASS
		40			-15.78	-0.01886	PASS	
		HCH	VN	-30	12.20	0.01438	PASS	
				-20	11.03	0.013	PASS	
				-10	21.63	0.0255	PASS	
				0	-6.62	-0.0078	PASS	
				10	-12.85	-0.01515	PASS	
				20	9.70	0.01143	PASS	
				30	-4.82	-0.00568	PASS	
				40	-8.53	-0.01006	PASS	
		3	LCH	VN	-30	-4.95	-0.006	PASS
					-20	-5.01	-0.00607	PASS
					-10	-1.23	-0.00149	PASS
					0	-2.12	-0.00257	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
					10	1.34	0.00162	PASS	
					20	0.96	0.00116	PASS	
					30	-2.33	-0.00282	PASS	
					40	-2.99	-0.00362	PASS	
					50	-2.42	-0.00293	PASS	
			MCH	VN	-30	-4.96	-0.00593	PASS	
					-20	-7.24	-0.00866	PASS	
					-10	0.86	0.00103	PASS	
					0	1.62	0.00194	PASS	
					10	3.46	0.00414	PASS	
					20	2.30	0.00275	PASS	
					30	12.22	0.01461	PASS	
					40	1.93	0.00231	PASS	
					50	-2.23	-0.00267	PASS	
					HCH	VN	-30	-2.83	-0.00334
			-20	-3.16			-0.00373	PASS	
			-10	-2.47			-0.00291	PASS	
			0	2.19			0.00258	PASS	
			10	-1.53			-0.00181	PASS	
			20	0.70			0.00083	PASS	
			30	-1.06			-0.00125	PASS	
			40	2.36			0.00278	PASS	
			5	LCH	VN	-30	-0.37	-0.00045	PASS
						-20	0.26	0.00031	PASS
						-10	-1.17	-0.00142	PASS
						0	0.13	0.00016	PASS
						10	1.29	0.00156	PASS
						20	-1.53	-0.00185	PASS
						30	-0.73	-0.00088	PASS
						40	-4.63	-0.0056	PASS
				MCH	VN	50	0.14	0.00017	PASS
						-30	-0.63	-0.00075	PASS
						-20	0.99	0.00118	PASS
-10	0.29	0.00035				PASS			
0	0.01	0.00001				PASS			
10	0.23	0.00027				PASS			
20	0.19	0.00023				PASS			
30	0.26	0.00031	PASS						



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					40	0.46	0.00055	PASS		
					50	1.10	0.00132	PASS		
			HCH	VN	-30	-2.45	-0.00289	PASS		
					-20	-1.19	-0.00141	PASS		
					-10	-1.29	-0.00152	PASS		
					0	-0.62	-0.00073	PASS		
					10	-2.98	-0.00352	PASS		
					20	-1.73	-0.00204	PASS		
					30	-1.85	-0.00219	PASS		
					40	-1.27	-0.0015	PASS		
		50	-0.40	-0.00047	PASS					
					LCH	VN	-30	3.75	0.00452	PASS
							-20	-5.05	-0.00609	PASS
							-10	3.82	0.00461	PASS
							0	-2.60	-0.00314	PASS
							10	2.16	0.00261	PASS
							20	-0.11	-0.00013	PASS
							30	3.58	0.00432	PASS
							40	-2.96	-0.00357	PASS
							50	0.67	0.00081	PASS
										MCH
		-20	0.19	0.00023	PASS					
		-10	0.57	0.00068	PASS					
		0	-0.51	-0.00061	PASS					
		10	0.04	0.00005	PASS					
		20	-0.24	-0.00029	PASS					
		30	2.65	0.00317	PASS					
		40	-0.67	-0.0008	PASS					
		50	-0.01	-0.00001	PASS					
					HCH	VN				
							-20	0.70	0.00083	PASS
							-10	-0.56	-0.00066	PASS
							0	-1.00	-0.00118	PASS
							10	0.53	0.00063	PASS
							20	0.27	0.00032	PASS
							30	-3.05	-0.00361	PASS
							40	-1.32	-0.00156	PASS
		50	0.36	0.00043	PASS					
		LTE/TM2	1.4	LCH	VN	-30	-2.39	-0.0029	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
		3			-20	6.51	0.00789	PASS	
					-10	-12.49	-0.01514	PASS	
					0	-9.04	-0.01096	PASS	
					10	-11.74	-0.01424	PASS	
					20	-3.49	-0.00423	PASS	
					30	-3.62	-0.00439	PASS	
					40	3.85	0.00467	PASS	
					50	-16.11	-0.01953	PASS	
			MCH	VN	-30	8.83	0.01056	PASS	
					-20	-10.30	-0.01231	PASS	
					-10	-1.39	-0.00166	PASS	
					0	-10.80	-0.01291	PASS	
					10	13.92	0.01664	PASS	
					20	-0.09	-0.00011	PASS	
					30	1.26	0.00151	PASS	
					40	-32.67	-0.03906	PASS	
			HCH	VN	-30	15.79	0.01861	PASS	
					-20	-5.69	-0.00671	PASS	
					-10	5.79	0.00683	PASS	
					0	2.32	0.00273	PASS	
					10	-0.54	-0.00064	PASS	
					20	-1.95	-0.0023	PASS	
					30	-5.25	-0.00619	PASS	
					40	8.77	0.01034	PASS	
			3	LCH	VN	-30	-2.86	-0.00346	PASS
						-20	7.21	0.00873	PASS
						-10	1.85	0.00224	PASS
						0	-0.41	-0.0005	PASS
		10				1.79	0.00217	PASS	
		20				1.42	0.00172	PASS	
		30				1.97	0.00239	PASS	
		40				-2.32	-0.00281	PASS	
		50		-0.40	-0.00048	PASS			
		MCH		VN	-30	5.41	0.00647	PASS	
					-20	-5.01	-0.00599	PASS	
					-10	-6.45	-0.00771	PASS	
			0		-11.12	-0.01329	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					10	-4.31	-0.00515	PASS
					20	3.30	0.00395	PASS
					30	-4.16	-0.00497	PASS
					40	-1.75	-0.00209	PASS
					50	-11.24	-0.01344	PASS
			HCH	VN	-30	-0.39	-0.00046	PASS
					-20	-1.34	-0.00158	PASS
					-10	1.99	0.00235	PASS
					0	-2.68	-0.00316	PASS
					10	-1.96	-0.00231	PASS
					20	0.29	0.00034	PASS
					30	-2.40	-0.00283	PASS
					40	0.21	0.00025	PASS
					50	1.57	0.00185	PASS
					LCH	VN	-30	-4.39
			-20	-1.17			-0.00142	PASS
			-10	-0.34			-0.00041	PASS
			0	-0.54			-0.00065	PASS
			10	0.21			0.00025	PASS
			20	1.47			0.00178	PASS
		30	-3.05	-0.00369			PASS	
		40	1.39	0.00168			PASS	
		50	0.92	0.00111			PASS	
		MCH	VN	-30			0.77	0.00092
				-20	0.13	0.00016	PASS	
				-10	0.14	0.00017	PASS	
				0	-0.13	-0.00016	PASS	
				10	-0.62	-0.00074	PASS	
				20	-0.13	-0.00016	PASS	
				30	-0.41	-0.00049	PASS	
				40	-0.49	-0.00059	PASS	
				50	0.16	0.00019	PASS	
				HCH	VN	-30	-2.40	-0.00284
		-20	-0.94			-0.00111	PASS	
		-10	1.34			0.00158	PASS	
		0	0.84			0.00099	PASS	
		10	-3.52			-0.00416	PASS	
		20	0.37			0.00044	PASS	
		30	-1.36			-0.00161	PASS	
		5						



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					40	-1.83	-0.00216	PASS
					50	1.24	0.00146	PASS
		10	LCH	VN	-30	5.31	0.00641	PASS
					-20	5.44	0.00656	PASS
					-10	1.02	0.00123	PASS
					0	-2.16	-0.00261	PASS
					10	1.77	0.00214	PASS
					20	0.16	0.00019	PASS
					30	1.66	0.002	PASS
					40	2.80	0.00338	PASS
					50	0.76	0.00092	PASS
					MCH	VN	-30	-1.27
			-20	-4.49			-0.00537	PASS
			-10	2.43			0.0029	PASS
			0	0.17			0.0002	PASS
			10	-3.38			-0.00404	PASS
			20	-3.35			-0.004	PASS
			30	-2.03			-0.00243	PASS
			40	-0.24			-0.00029	PASS
			HCH	VN	50	-0.11	-0.00013	PASS
					-30	6.17	0.00731	PASS
					-20	3.63	0.0043	PASS
					-10	5.78	0.00685	PASS
					0	8.77	0.01039	PASS
					10	1.19	0.00141	PASS
					20	2.62	0.0031	PASS
		30			2.88	0.00341	PASS	
		40	1.50	0.00178	PASS			
					50	3.62	0.00429	PASS

END