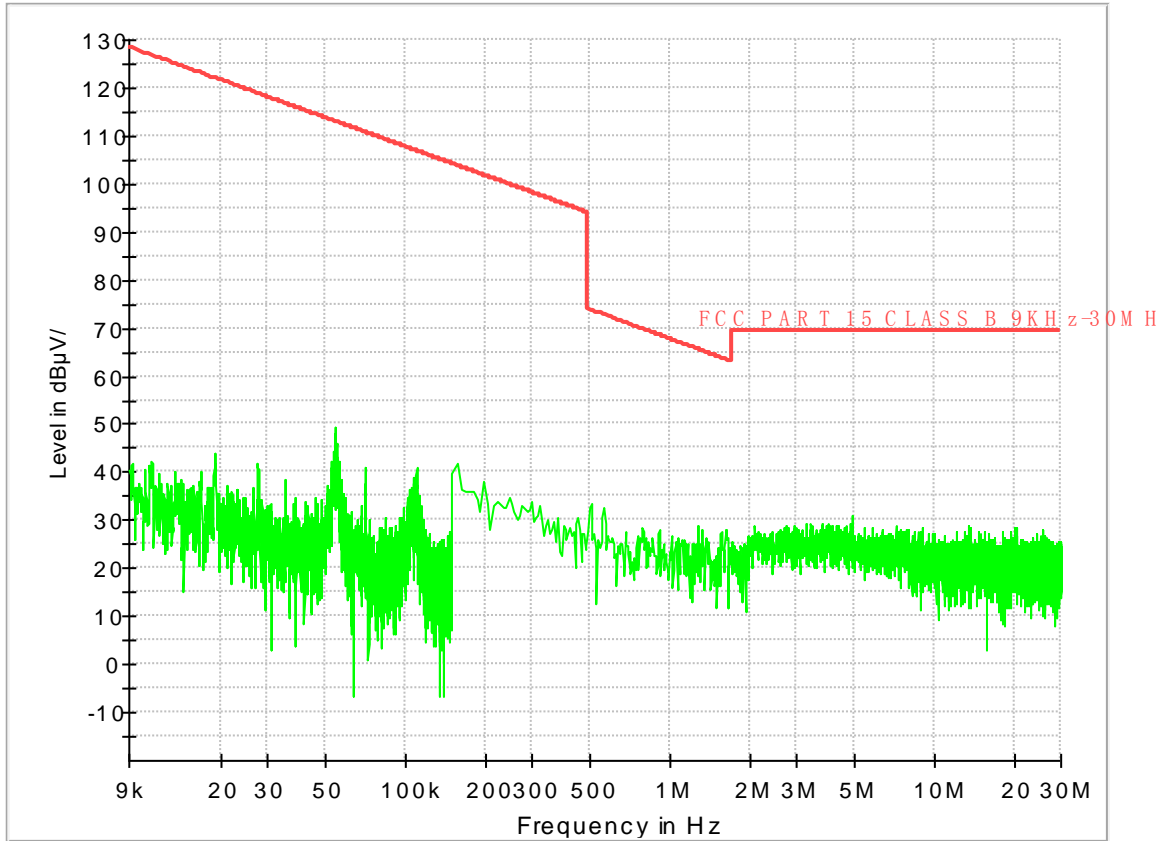
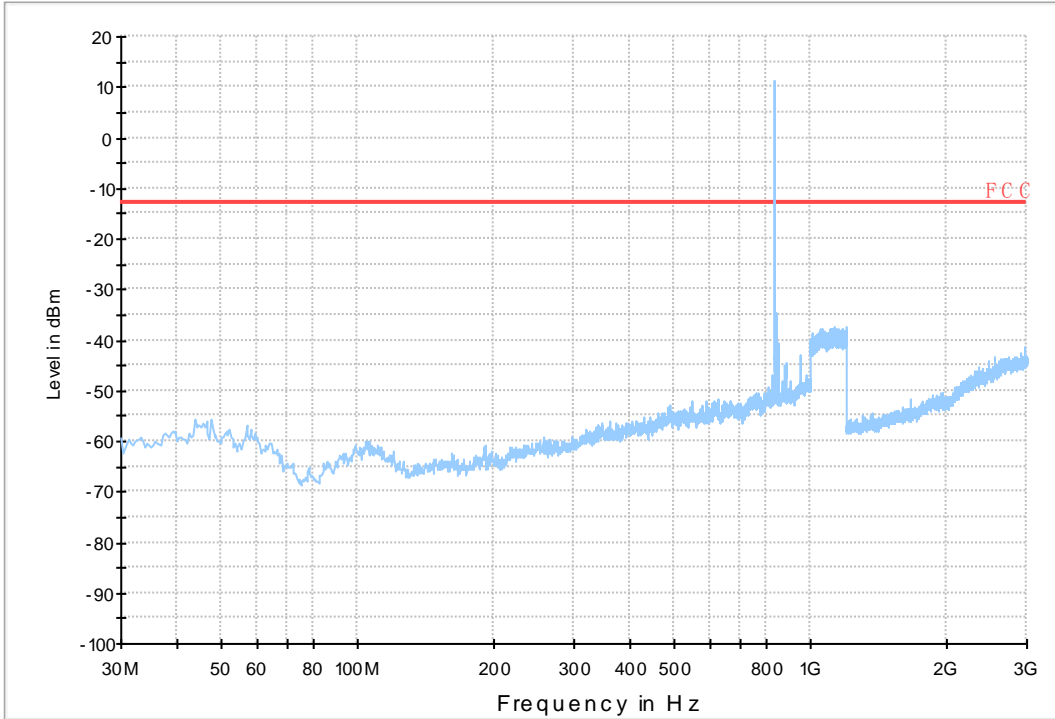


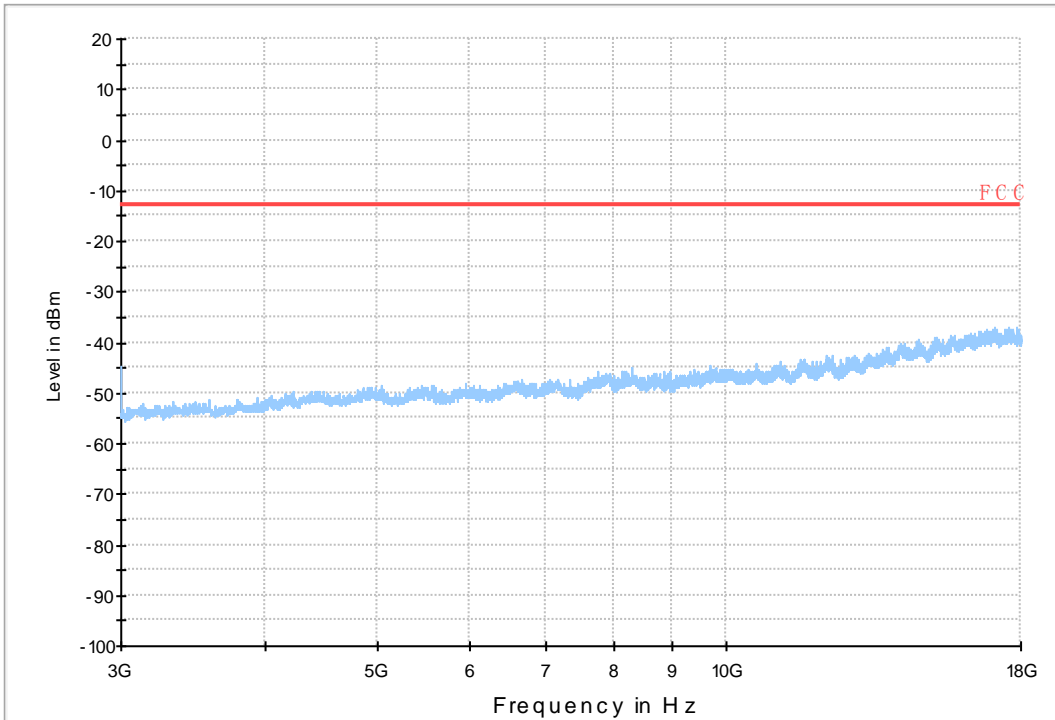
## 7.1.1.3 Test Bandwidth = 10



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	-11.54	-0.01399	PASS
					VN	-9.70	-0.01176	PASS
					VH	-7.81	-0.00947	PASS
			MCH	TN	VL	-10.63	-0.01271	PASS
					VN	-4.68	-0.00559	PASS
					VH	-6.35	-0.00759	PASS
			HCH	TN	VL	-13.16	-0.01551	PASS
					VN	-8.30	-0.00978	PASS
					VH	-1.16	-0.00137	PASS
		3	LCH	TN	VL	-2.36	-0.00286	PASS
					VN	0.00	0	PASS
					VH	-8.77	-0.01062	PASS
			MCH	TN	VL	-6.88	-0.00822	PASS
					VN	-9.73	-0.01163	PASS
					VH	0.09	0.00011	PASS
			HCH	TN	VL	-7.15	-0.00844	PASS
					VN	-6.95	-0.0082	PASS
					VH	-9.90	-0.01168	PASS
		5	LCH	TN	VL	-4.68	-0.00566	PASS
					VN	-7.93	-0.00959	PASS
					VH	-8.83	-0.01068	PASS
			MCH	TN	VL	-2.75	-0.00329	PASS
					VN	-2.23	-0.00267	PASS
					VH	-1.96	-0.00234	PASS
			HCH	TN	VL	-8.45	-0.00998	PASS
					VN	-4.59	-0.00542	PASS
					VH	-4.18	-0.00494	PASS
10	LCH	TN	VL	-13.73	-0.01656	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					VN	-9.97	-0.01203	PASS		
					VH	-9.88	-0.01192	PASS		
					MCH	TN	VL	-7.45	-0.00891	PASS
							VN	-9.33	-0.01115	PASS
					VH		VH	-5.99	-0.00716	PASS
							VL	-6.55	-0.00776	PASS
			HCH	TN	VN	-4.55	-0.00539	PASS		
					VH	-3.91	-0.00463	PASS		
					LCH	TN	VL	2.45	0.00297	PASS
							VN	-7.12	-0.00863	PASS
							VH	-7.28	-0.00883	PASS
					MCH	TN	VL	-8.87	-0.0106	PASS
	VN	-3.69	-0.00441	PASS						
	VH	-10.17	-0.01216	PASS						
	HCH	TN	VL	-8.21	-0.00968	PASS				
			VN	-2.46	-0.0029	PASS				
			VH	-7.77	-0.00916	PASS				
	3	LCH	TN	VL	-7.10	-0.0086	PASS			
				VN	-9.26	-0.01122	PASS			
				VH	-9.94	-0.01204	PASS			
		MCH	TN	VL	-1.87	-0.00224	PASS			
				VN	-5.52	-0.0066	PASS			
				VH	-4.72	-0.00564	PASS			
		HCH	TN	VL	-8.78	-0.01036	PASS			
				VN	-11.62	-0.01371	PASS			
				VH	-4.05	-0.00478	PASS			
	5	LCH	TN	VL	-9.57	-0.01158	PASS			
				VN	-6.87	-0.00831	PASS			
				VH	-2.98	-0.00361	PASS			
		MCH	TN	VL	-7.42	-0.00887	PASS			
				VN	-6.01	-0.00718	PASS			
				VH	-7.08	-0.00846	PASS			
		HCH	TN	VL	-7.94	-0.00938	PASS			
				VN	-6.27	-0.00741	PASS			
				VH	-6.07	-0.00717	PASS			
	10	LCH	TN	VL	-8.73	-0.01053	PASS			
				VN	-3.16	-0.00381	PASS			
				VH	-8.84	-0.01066	PASS			
		MCH	TN	VL	-9.20	-0.011	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					VN	-2.36	-0.00282	PASS
					VH	-3.13	-0.00374	PASS
			HCH	TN	VL	-7.12	-0.00844	PASS
					VN	-4.22	-0.005	PASS
					VH	-6.44	-0.00763	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	-3.05	-0.0037	PASS
					-20	0.54	0.00065	PASS
					-10	-3.93	-0.00477	PASS
					0	-12.04	-0.0146	PASS
					10	-4.51	-0.00547	PASS
					20	-5.68	-0.00689	PASS
					30	-4.55	-0.00552	PASS
					40	-9.01	-0.01093	PASS
			50	-3.92	-0.00475	PASS		
			MCH	VN	-30	-10.29	-0.0123	PASS
					-20	-8.70	-0.0104	PASS
					-10	-7.07	-0.00845	PASS
					0	-5.56	-0.00665	PASS
					10	-7.55	-0.00903	PASS
					20	-10.29	-0.0123	PASS
					30	-6.69	-0.008	PASS
					40	-3.00	-0.00359	PASS
			50	-10.03	-0.01199	PASS		
			HCH	VN	-30	0.44	0.00052	PASS
					-20	-13.06	-0.0154	PASS
					-10	-10.81	-0.01274	PASS
					0	-6.44	-0.00759	PASS
					10	-7.05	-0.00831	PASS
					20	0.23	0.00027	PASS
		30			-4.16	-0.0049	PASS	
		40			-5.75	-0.00678	PASS	
		50	-14.68	-0.01731	PASS			
3	LCH	VN	-30	-8.18	-0.00991	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
		5			-20	-8.07	-0.00978	PASS	
					-10	-10.83	-0.01312	PASS	
					0	-5.82	-0.00705	PASS	
					10	-5.35	-0.00648	PASS	
					20	-6.84	-0.00829	PASS	
					30	-5.66	-0.00686	PASS	
					40	-6.31	-0.00764	PASS	
					50	-10.40	-0.0126	PASS	
			MCH	VN	-30	-8.70	-0.0104	PASS	
					-20	-2.52	-0.00301	PASS	
					-10	-1.44	-0.00172	PASS	
					0	-11.89	-0.01421	PASS	
					10	-7.31	-0.00874	PASS	
					20	-10.94	-0.01308	PASS	
					30	-8.50	-0.01016	PASS	
					40	-11.70	-0.01399	PASS	
			HCH	VN	-30	-5.22	-0.00616	PASS	
					-20	-6.18	-0.00729	PASS	
					-10	-2.27	-0.00268	PASS	
					0	-3.30	-0.00389	PASS	
					10	-1.19	-0.0014	PASS	
					20	-2.75	-0.00324	PASS	
					30	-5.31	-0.00627	PASS	
					40	-9.28	-0.01095	PASS	
			5	LCH	VN	-30	-3.08	-0.00373	PASS
						-20	-8.35	-0.0101	PASS
						-10	-4.76	-0.00576	PASS
						0	-3.93	-0.00475	PASS
		10				-9.47	-0.01146	PASS	
		20				-3.06	-0.0037	PASS	
		30				-6.02	-0.00728	PASS	
		40				-4.59	-0.00555	PASS	
		50				-6.92	-0.00837	PASS	
		MCH				VN	-30	-1.56	-0.00186
				-20	-1.99		-0.00238	PASS	
				-10	-5.99		-0.00716	PASS	
			0	-10.81	-0.01292		PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					10	-8.63	-0.01032	PASS		
					20	-7.98	-0.00954	PASS		
					30	-5.15	-0.00616	PASS		
					40	-7.94	-0.00949	PASS		
					50	-2.02	-0.00241	PASS		
			HCH	VN	-30	-7.02	-0.00829	PASS		
					-20	-3.26	-0.00385	PASS		
					-10	-7.77	-0.00918	PASS		
					0	-5.22	-0.00617	PASS		
					10	-8.67	-0.01024	PASS		
					20	-7.02	-0.00829	PASS		
					30	-8.84	-0.01044	PASS		
					40	-7.04	-0.00832	PASS		
					50	-6.94	-0.0082	PASS		
					LCH	VN	-30	-5.94	-0.00717	PASS
							-20	-9.61	-0.01159	PASS
							-10	-6.47	-0.0078	PASS
							0	-5.25	-0.00633	PASS
							10	-6.78	-0.00818	PASS
							20	-8.85	-0.01068	PASS
		30	-3.91	-0.00472			PASS			
		40	-6.55	-0.0079			PASS			
		50	-9.91	-0.01195			PASS			
		MCH	VN	-30			-6.94	-0.0083	PASS	
				-20	-9.06	-0.01083	PASS			
				-10	-5.14	-0.00614	PASS			
				0	-4.95	-0.00592	PASS			
				10	-9.97	-0.01192	PASS			
				20	-0.56	-0.00067	PASS			
				30	-8.70	-0.0104	PASS			
				40	-8.15	-0.00974	PASS			
				50	-3.00	-0.00359	PASS			
		HCH	VN	-30	-7.95	-0.00942	PASS			
				-20	-4.79	-0.00568	PASS			
				-10	-7.40	-0.00877	PASS			
				0	-6.08	-0.0072	PASS			
				10	-8.57	-0.01015	PASS			
				20	-4.39	-0.0052	PASS			
				30	-6.94	-0.00822	PASS			
		10					-30	-5.94	-0.00717	PASS
-20	-9.61						-0.01159	PASS		
-10	-6.47						-0.0078	PASS		
0	-5.25						-0.00633	PASS		
10	-6.78						-0.00818	PASS		
20	-8.85						-0.01068	PASS		
30	-3.91						-0.00472	PASS		
40	-6.55						-0.0079	PASS		
50	-9.91						-0.01195	PASS		
-30	-6.94						-0.0083	PASS		
-20	-9.06	-0.01083	PASS							
-10	-5.14	-0.00614	PASS							
0	-4.95	-0.00592	PASS							
10	-9.97	-0.01192	PASS							
20	-0.56	-0.00067	PASS							
30	-8.70	-0.0104	PASS							
40	-8.15	-0.00974	PASS							
50	-3.00	-0.00359	PASS							
-30	-7.95	-0.00942	PASS							
-20	-4.79	-0.00568	PASS							
-10	-7.40	-0.00877	PASS							
0	-6.08	-0.0072	PASS							
10	-8.57	-0.01015	PASS							
20	-4.39	-0.0052	PASS							
30	-6.94	-0.00822	PASS							

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
	LTE/TM2	1.4	LCH	VN	40	-6.77	-0.00802	PASS
					50	-5.12	-0.00607	PASS
					-30	-9.97	-0.01209	PASS
					-20	-4.81	-0.00583	PASS
					-10	-4.01	-0.00486	PASS
					0	3.20	0.00388	PASS
					10	-1.26	-0.00153	PASS
					20	-7.97	-0.00966	PASS
					30	-4.42	-0.00536	PASS
			40	0.74	0.0009	PASS		
			50	-5.31	-0.00644	PASS		
			MCH	VN	-30	-0.17	-0.0002	PASS
					-20	-5.69	-0.0068	PASS
					-10	-3.62	-0.00433	PASS
					0	-7.80	-0.00932	PASS
					10	-10.13	-0.01211	PASS
					20	-2.55	-0.00305	PASS
					30	-3.95	-0.00472	PASS
		40			-6.15	-0.00735	PASS	
		50			-9.17	-0.01096	PASS	
		HCH	VN	-30	-10.86	-0.0128	PASS	
				-20	-8.71	-0.01027	PASS	
				-10	-4.65	-0.00548	PASS	
				0	-8.08	-0.00952	PASS	
				10	-0.83	-0.00098	PASS	
				20	-7.44	-0.00877	PASS	
				30	-7.98	-0.00941	PASS	
				40	-9.33	-0.011	PASS	
				50	-2.30	-0.00271	PASS	
		3	LCH	VN	-30	-0.94	-0.00114	PASS
					-20	-11.13	-0.01348	PASS
					-10	-6.44	-0.0078	PASS
					0	-3.79	-0.00459	PASS
10	-6.95				-0.00842	PASS		
20	-0.24				-0.00029	PASS		
30	-5.72				-0.00693	PASS		
40	-6.01				-0.00728	PASS		
50	-7.94				-0.00962	PASS		
MCH	VN		-30	-6.74	-0.00806	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-20	-11.26	-0.01346	PASS
					-10	-4.02	-0.00481	PASS
					0	-12.04	-0.01439	PASS
					10	-3.19	-0.00381	PASS
					20	-8.51	-0.01017	PASS
					30	-4.45	-0.00532	PASS
					40	-2.78	-0.00332	PASS
					50	-9.54	-0.0114	PASS
					HCH	VN	-30	-6.01
			-20	-7.20			-0.0085	PASS
			-10	-4.73			-0.00558	PASS
			0	-6.90			-0.00814	PASS
			10	-1.02			-0.0012	PASS
			20	-10.61			-0.01252	PASS
			30	-7.87			-0.00929	PASS
			40	-7.35			-0.00867	PASS
			50	-6.05			-0.00714	PASS
			5	LCH	VN	-30	-8.77	-0.01061
		-20				-6.81	-0.00824	PASS
		-10				-9.61	-0.01163	PASS
		0				-11.50	-0.01391	PASS
		10				-8.30	-0.01004	PASS
		20				-1.07	-0.00129	PASS
		30				-5.06	-0.00612	PASS
		40				-6.82	-0.00825	PASS
		50				-7.71	-0.00933	PASS
		MCH		VN	-30	-3.62	-0.00433	PASS
					-20	-7.10	-0.00849	PASS
					-10	-7.60	-0.00909	PASS
					0	-3.63	-0.00434	PASS
					10	-4.63	-0.00553	PASS
					20	0.06	0.00007	PASS
					30	-6.74	-0.00806	PASS
					40	-1.19	-0.00142	PASS
					50	-2.35	-0.00281	PASS
		HCH	VN	-30	-9.83	-0.01161	PASS	
-20	0.27			0.00032	PASS			
-10	-6.74			-0.00796	PASS			
0	-4.68			-0.00553	PASS			



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					10	-5.44	-0.00643	PASS		
					20	-5.19	-0.00613	PASS		
					30	-6.74	-0.00796	PASS		
					40	-6.01	-0.0071	PASS		
					50	-6.78	-0.00801	PASS		
		10	LCH	VN	-30	-8.31	-0.01002	PASS		
					-20	-5.81	-0.00701	PASS		
					-10	-2.43	-0.00293	PASS		
					0	-7.60	-0.00917	PASS		
					10	-5.01	-0.00604	PASS		
					20	-10.59	-0.01277	PASS		
					30	-8.85	-0.01068	PASS		
					40	-8.21	-0.0099	PASS		
					50	-9.06	-0.01093	PASS		
					MCH	VN	-30	-7.17	-0.00857	PASS
							-20	-5.72	-0.00684	PASS
							-10	-7.78	-0.0093	PASS
							0	-6.17	-0.00738	PASS
							10	-5.28	-0.00631	PASS
							20	-3.00	-0.00359	PASS
			30	-4.49			-0.00537	PASS		
			40	-4.72			-0.00564	PASS		
			50	-7.12			-0.00851	PASS		
			HCH	VN			-30	-5.41	-0.00641	PASS
					-20	-4.84	-0.00573	PASS		
					-10	-8.71	-0.01032	PASS		
					0	-4.51	-0.00534	PASS		
					10	-6.14	-0.00727	PASS		
					20	-6.94	-0.00822	PASS		
					30	-2.66	-0.00315	PASS		
40	-3.56	-0.00422			PASS					
50	-4.86	-0.00576	PASS							

END