

## 7Appendix\_G: Field Strength of Spurious Radiation

Note: We tested all modes, but the data presented below is the worst case.

9kHz~150kHz, VBW = 200Hz, VBW = 600 Hz, Detector: PK

150kHz~30MHz, VBW = 9kHz, VBW = 30k Hz, Detector: PK

30MHz~1GHz, RBW = 100 kHz, VBW = 300 kHz. Detector: PK

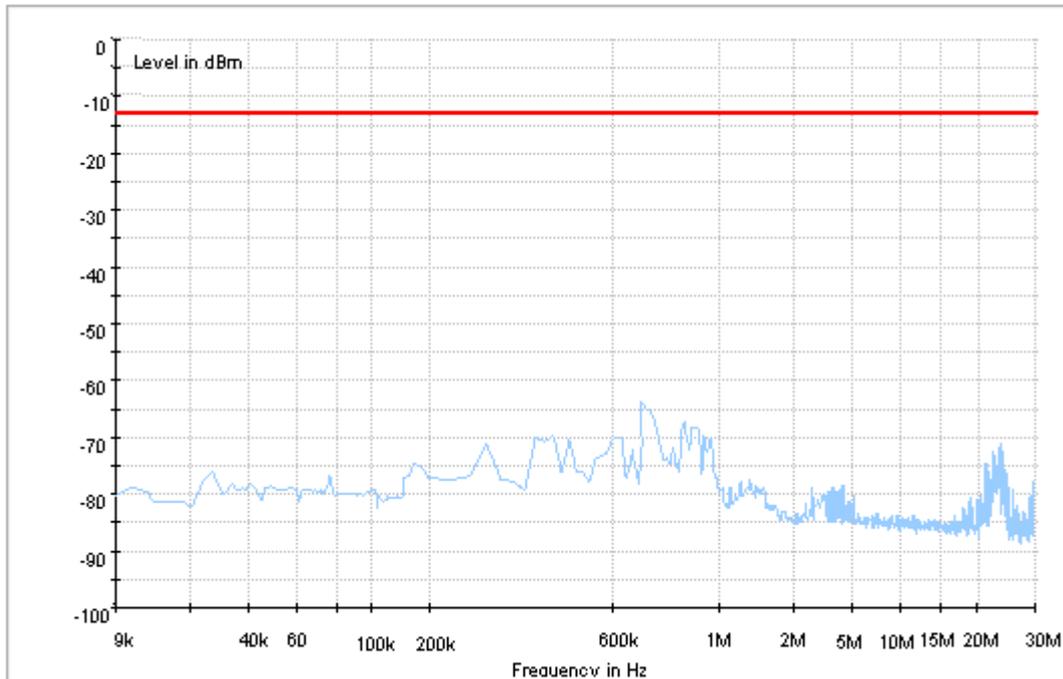
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

### Part I - Test Plots

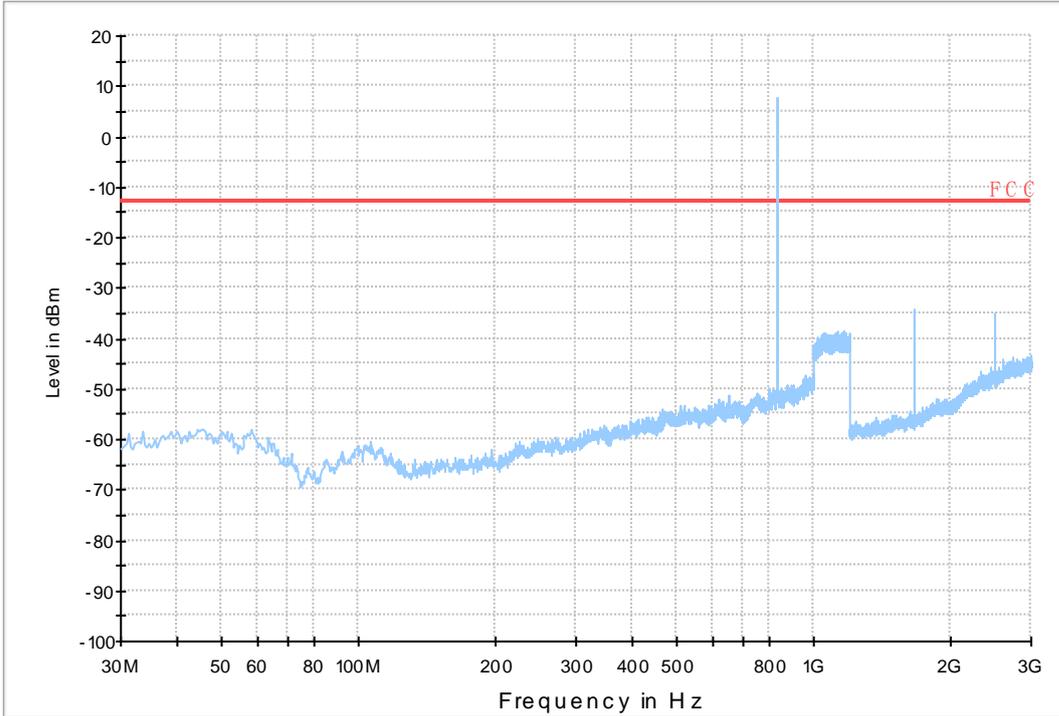
#### 7.1 For LTE

##### 7.1.1 Test Band = BAND26\_ANT1

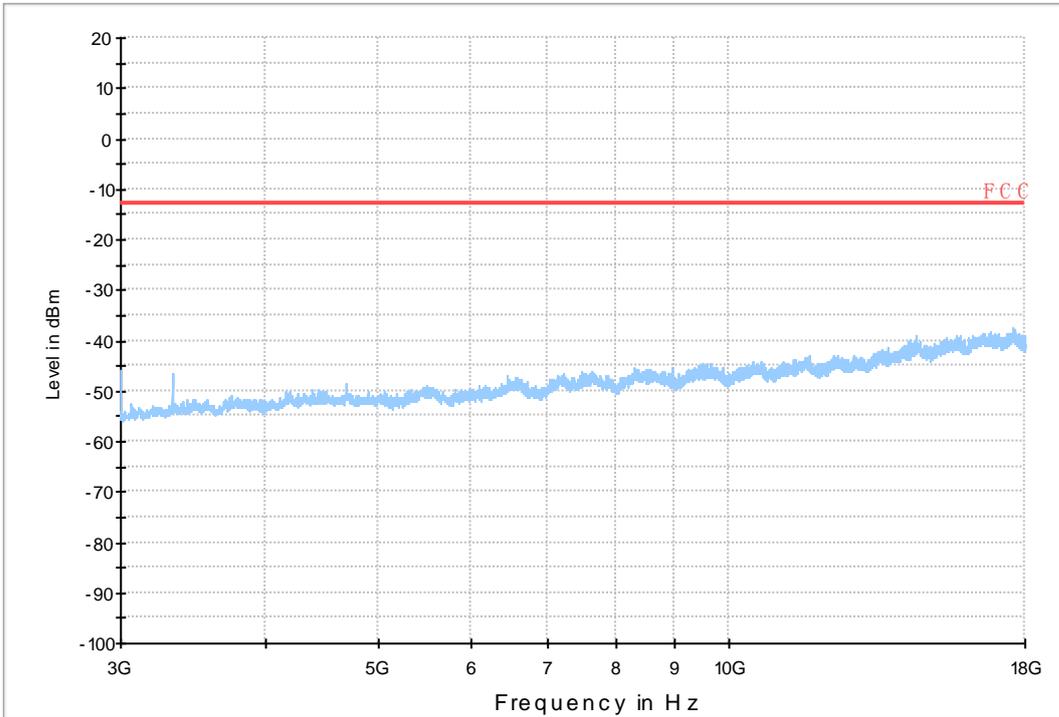
##### 7.1.1.1 Test Bandwidth = 1.4



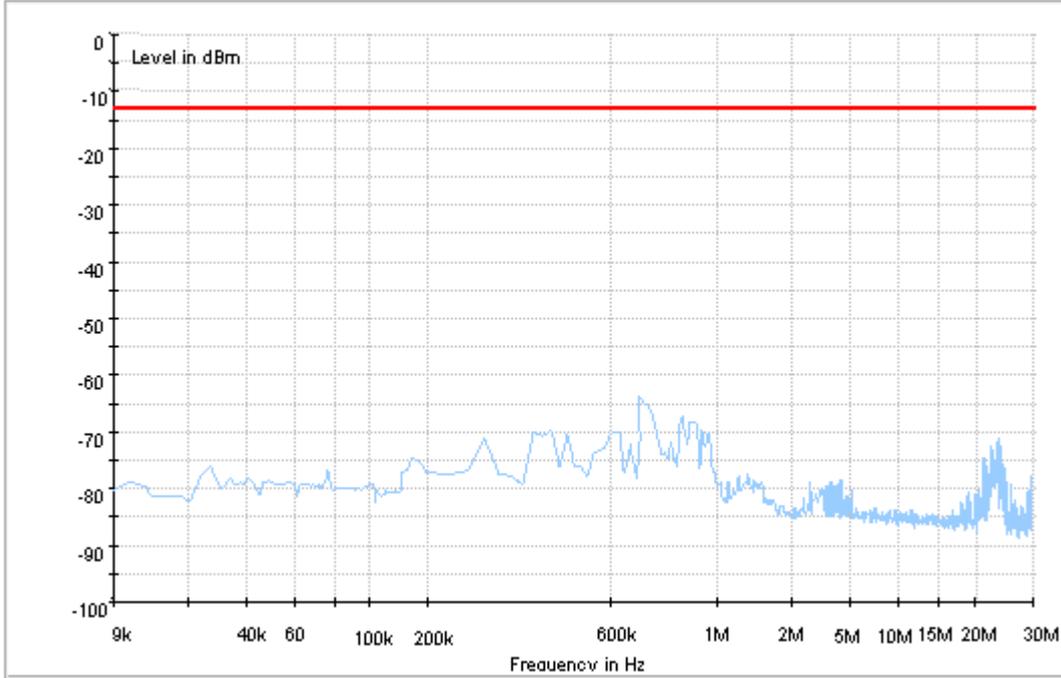
Copy of RSE-TX-DIRECTOR BELOW 1G\_L



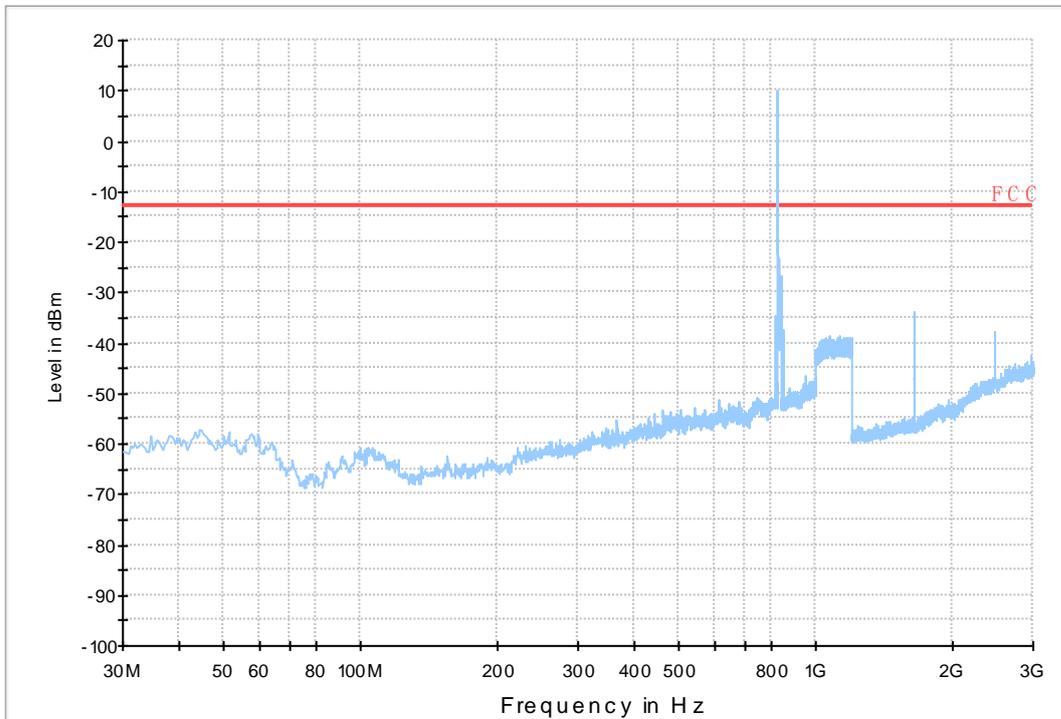
Copy of RSE-TX-DIRECTOR BELOW 1G\_H



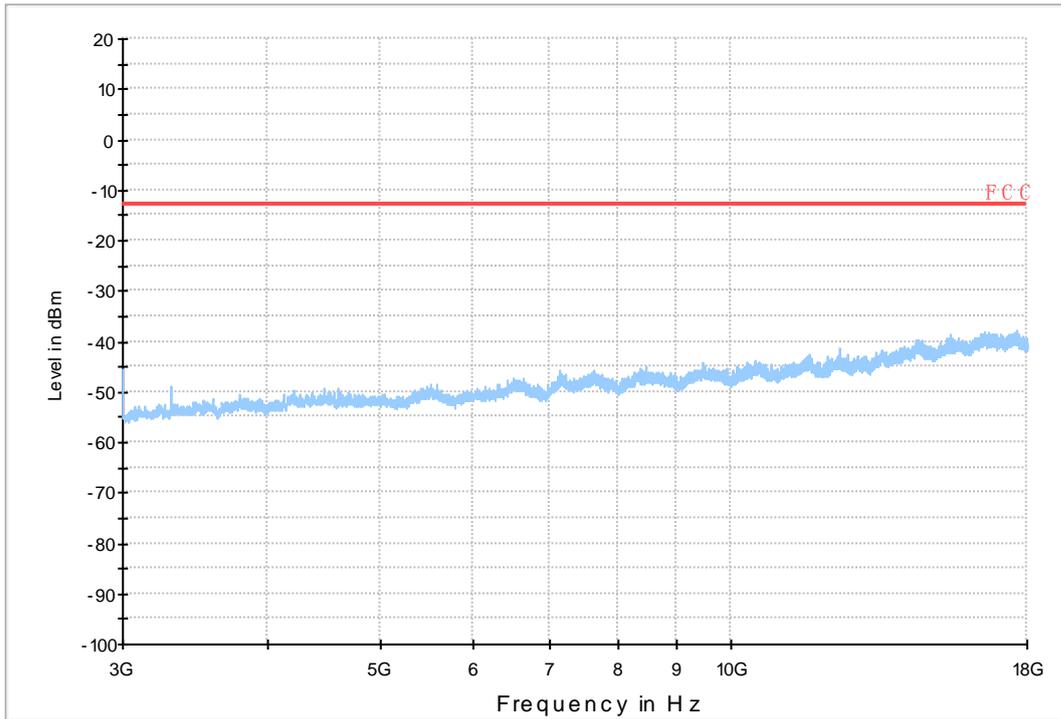
### 7.1.1.2 Test Bandwidth = 15



Copy of RSE-TX-DIRECTOR BELOW 1G\_L

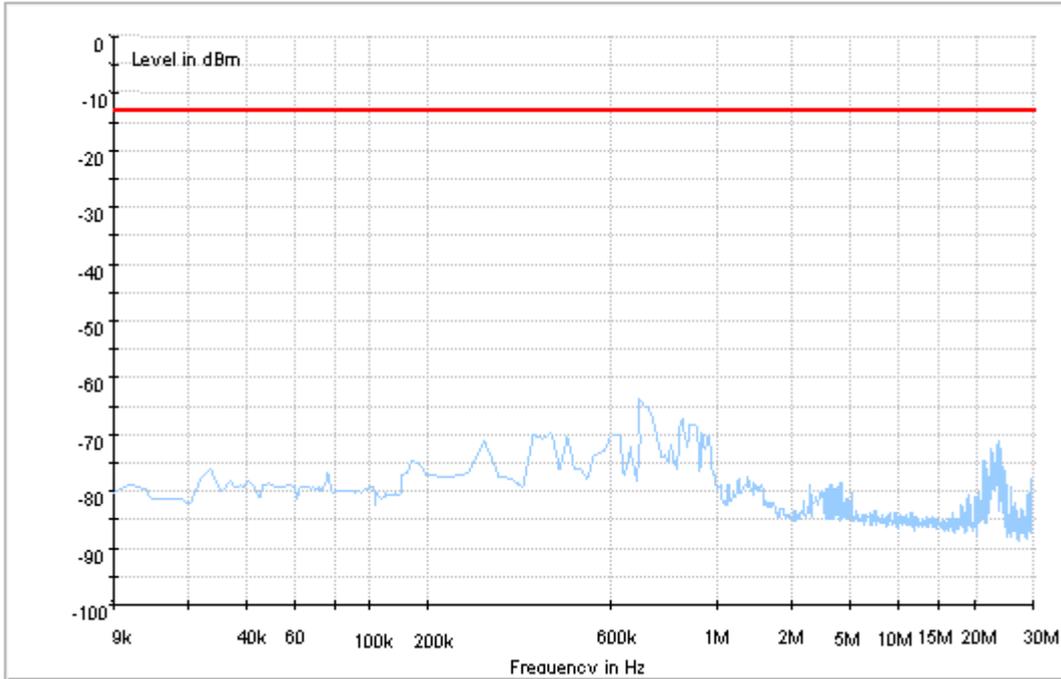


Copy of RSE-TX-DIRECTOR BELOW 1G\_H

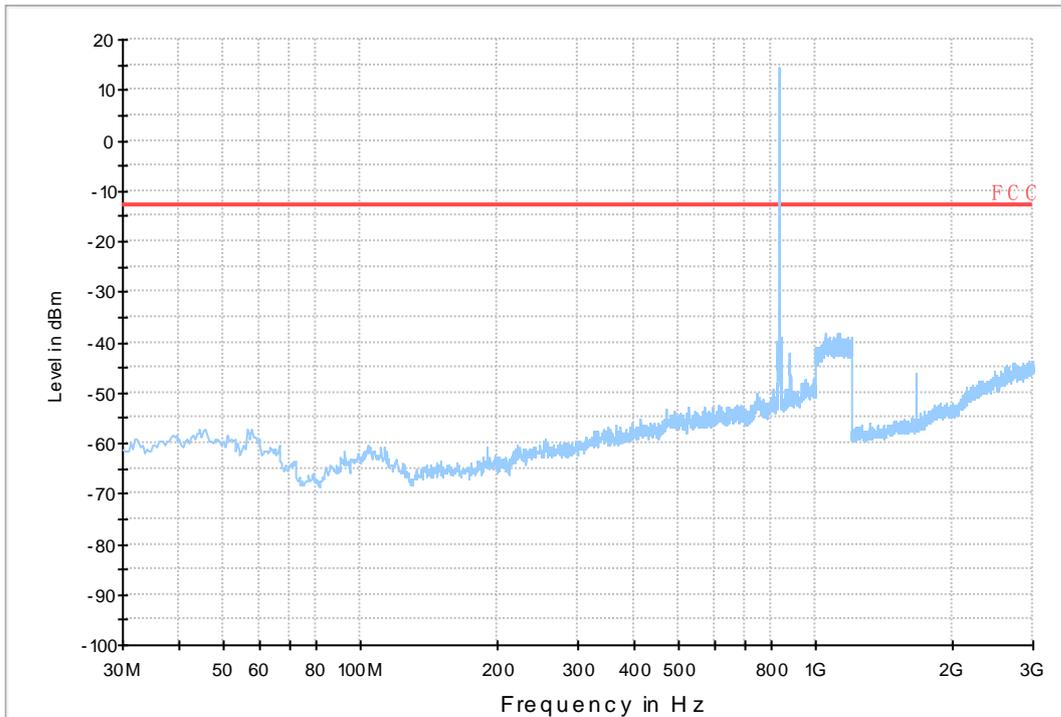


### 7.1.2 Test Band = BAND26\_ANT2

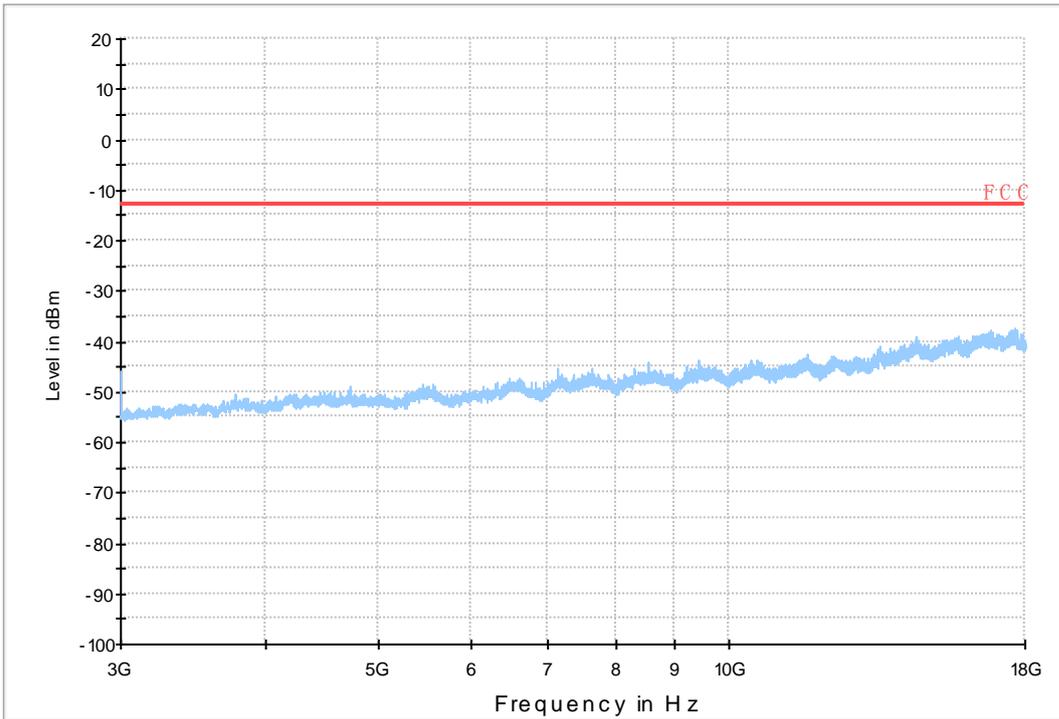
#### 7.1.2.1 Test Bandwidth = 1.4



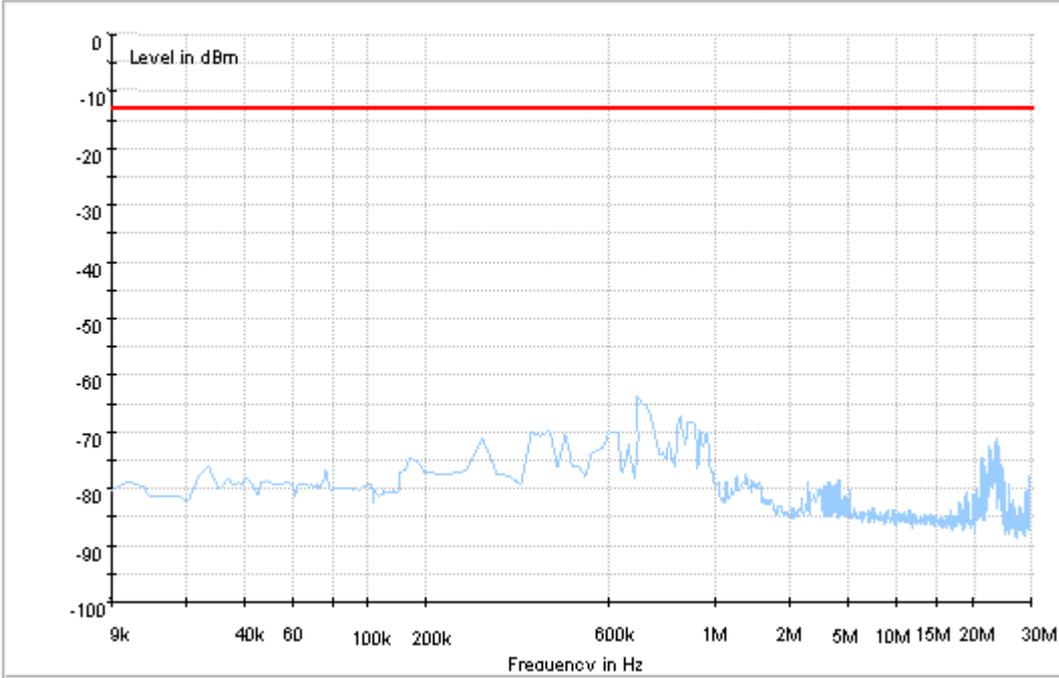
Copy of RSE-TX-DIRECTOR BELOW 1G\_L



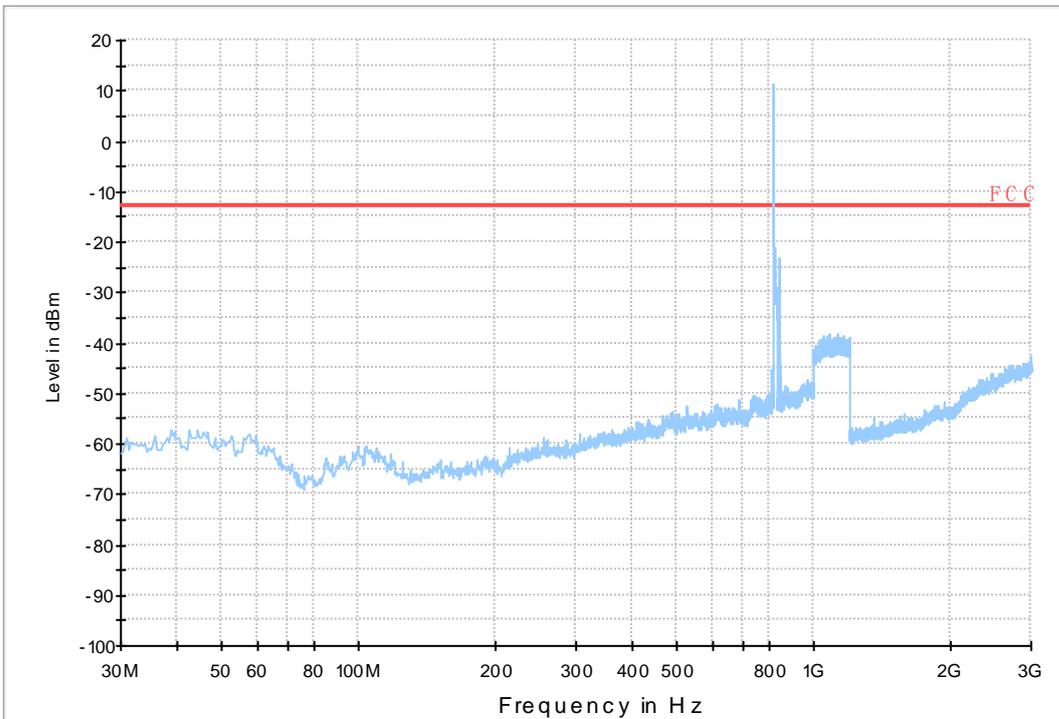
Copy of RSE-TX-DIRECTOR BELOW 1G\_H



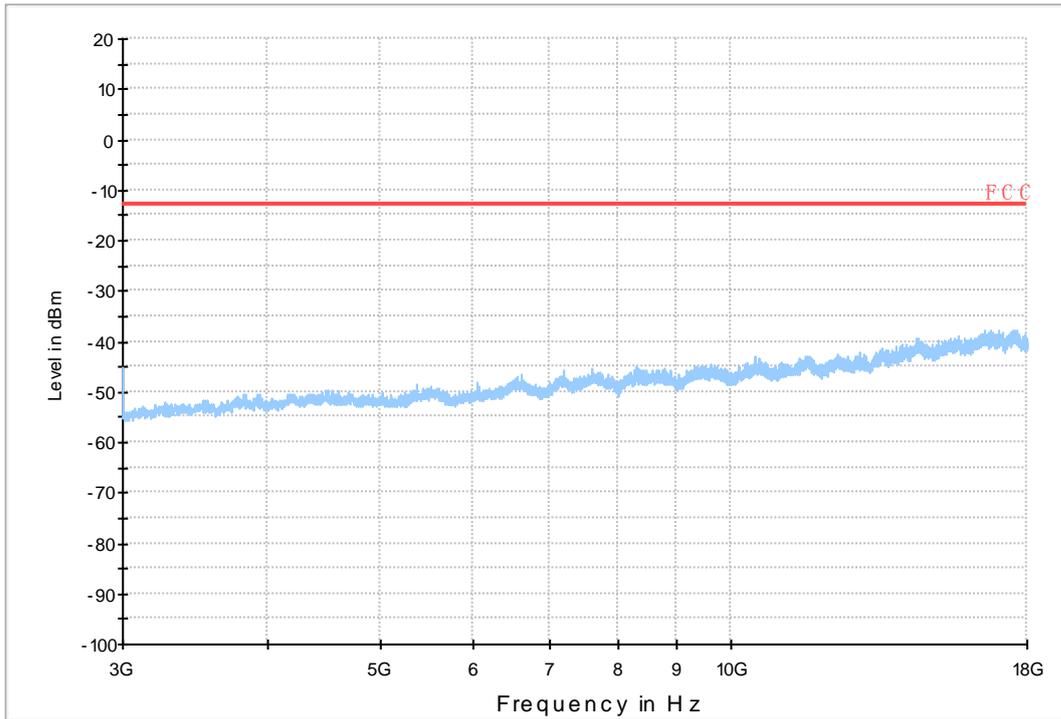
### 7.1.2.2 Test Bandwidth = 15



Copy of RSE-TX-DIRECTOR BELOW 1G\_L



Copy of RSE-TX-DIRECTOR BELOW 1G\_H



## 8Appendix\_H: Frequency Stability

### 8.1 For LTE

#### 8.1.1Frequency Error vs. Voltage:

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
BAND26	LTE/TM1	1.4	LCH	TN	VL	-0.17	-0.00021	PASS
					VN	1.95	0.00236	PASS
					VH	-0.26	-0.00032	PASS
			MCH	TN	VL	0.53	0.00063	PASS
					VN	1.22	0.00146	PASS
					VH	2.12	0.00253	PASS
			HCH	TN	VL	1.92	0.00226	PASS
					VN	-0.06	-0.00007	PASS
					VH	-0.80	-0.00094	PASS
		3	LCH	TN	VL	11.84	0.01434	PASS
					VN	-0.44	-0.00053	PASS
					VH	-16.47	-0.01995	PASS
			MCH	TN	VL	-5.58	-0.00667	PASS
					VN	-2.16	-0.00258	PASS
					VH	-1.37	-0.00164	PASS
			HCH	TN	VL	-4.26	-0.00503	PASS
					VN	5.64	0.00665	PASS
					VH	1.47	0.00173	PASS
		5	LCH	TN	VL	0.53	0.00064	PASS
					VN	-0.69	-0.00083	PASS
					VH	1.16	0.0014	PASS
			MCH	TN	VL	-2.23	-0.00267	PASS
					VN	-2.89	-0.00345	PASS
					VH	4.09	0.00489	PASS
			HCH	TN	VL	-2.15	-0.00254	PASS
					VN	2.78	0.00328	PASS
					VH	-5.15	-0.00608	PASS
		10	LCH	TN	VL	-2.35	-0.00283	PASS
					VN	7.20	0.00869	PASS
					VH	5.89	0.0071	PASS

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict	
		15	MCH	TN	VL	7.37	0.00881	PASS	
					VN	0.67	0.0008	PASS	
					VH	-0.76	-0.00091	PASS	
			HCH	TN	VL	0.11	0.00013	PASS	
					VN	3.86	0.00457	PASS	
					VH	4.42	0.00524	PASS	
			LCH	TN	VL	-9.87	-0.01187	PASS	
					VN	-13.46	-0.01619	PASS	
					VH	0.74	0.00089	PASS	
		MCH	TN	VL	13.99	0.01672	PASS		
				VN	-20.24	-0.0242	PASS		
				VH	-9.61	-0.01149	PASS		
		HCH	TN	VL	0.63	0.00075	PASS		
				VN	-3.86	-0.00459	PASS		
				VH	0.26	0.00031	PASS		
		LTE/TM2	1.4	LCH	TN	VL	-0.20	-0.00024	PASS
						VN	-0.50	-0.00061	PASS
						VH	0.19	0.00023	PASS
	MCH			TN	VL	-6.88	-0.00822	PASS	
					VN	-0.90	-0.00108	PASS	
					VH	-1.02	-0.00122	PASS	
	HCH			TN	VL	-1.06	-0.00125	PASS	
					VN	0.79	0.00093	PASS	
					VH	-1.10	-0.0013	PASS	
	3		LCH	TN	VL	5.79	0.00701	PASS	
					VN	-16.98	-0.02057	PASS	
					VH	-0.63	-0.00076	PASS	
			MCH	TN	VL	-3.78	-0.00452	PASS	
					VN	-3.15	-0.00377	PASS	
					VH	0.60	0.00072	PASS	
	HCH		TN	VL	-4.06	-0.00479	PASS		
				VN	7.08	0.00835	PASS		
				VH	1.97	0.00232	PASS		
	5	LCH	TN	VL	-0.63	-0.00076	PASS		
				VN	0.37	0.00045	PASS		
				VH	0.40	0.00048	PASS		
		MCH	TN	VL	-2.49	-0.00298	PASS		
				VN	-7.85	-0.00938	PASS		
				VH	0.80	0.00096	PASS		

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
		10	HCH	TN	VL	1.57	0.00185	PASS		
					VN	-1.69	-0.002	PASS		
					VH	1.14	0.00135	PASS		
			LCH	TN	VL	-4.71	-0.00568	PASS		
					VN	-8.07	-0.00973	PASS		
					VH	3.93	0.00474	PASS		
					MCH	TN	VL	2.15	0.00257	PASS
							VN	-10.74	-0.01284	PASS
							VH	-1.70	-0.00203	PASS
		HCH	TN	VL	-2.65	-0.00314	PASS			
				VN	1.10	0.0013	PASS			
				VH	-4.99	-0.00591	PASS			
		15	LCH	TN	VL	-7.22	-0.00868	PASS		
					VN	-11.46	-0.01378	PASS		
					VH	-7.34	-0.00883	PASS		
			MCH	TN	VL	1.83	0.00219	PASS		
					VN	1.92	0.0023	PASS		
					VH	0.56	0.00067	PASS		
			HCH	TN	VL	-4.53	-0.00538	PASS		
					VN	-1.70	-0.00202	PASS		
					VH	4.71	0.0056	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
BAND26	LTE/TM1	1.4	LCH	VN	-30	1.02	0.00124	PASS
					-20	-0.13	-0.00016	PASS
					-10	1.06	0.00129	PASS
					0	0.51	0.00062	PASS
					10	-1.02	-0.00124	PASS
					20	0.57	0.00069	PASS
					30	-0.83	-0.00101	PASS
					40	0.41	0.0005	PASS
					50	0.63	0.00076	PASS
			MCH	VN	-30	0.01	0.00001	PASS
					-20	-0.94	-0.00112	PASS



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	0.87	0.00104	PASS
					0	0.50	0.0006	PASS
					10	-0.83	-0.00099	PASS
					20	-1.00	-0.0012	PASS
					30	5.55	0.00663	PASS
					40	0.04	0.00005	PASS
					50	-2.63	-0.00314	PASS
			HCH	VN	-30	-0.54	-0.00064	PASS
					-20	-0.16	-0.00019	PASS
					-10	2.17	0.00256	PASS
					0	0.49	0.00058	PASS
					10	-0.29	-0.00034	PASS
					20	0.39	0.00046	PASS
					30	-0.97	-0.00114	PASS
		3	LCH	VN	-30	11.03	0.01336	PASS
					-20	1.87	0.00227	PASS
					-10	-8.57	-0.01038	PASS
					0	-7.05	-0.00854	PASS
					10	12.89	0.01561	PASS
					20	-3.39	-0.00411	PASS
					30	-8.88	-0.01076	PASS
					40	13.79	0.01671	PASS
			50	-0.19	-0.00023	PASS		
			MCH	VN	-30	-7.57	-0.00905	PASS
					-20	-4.13	-0.00494	PASS
					-10	-1.82	-0.00218	PASS
					0	-3.73	-0.00446	PASS
					10	3.09	0.00369	PASS
					20	6.45	0.00771	PASS
					30	3.45	0.00412	PASS
		40			-1.44	-0.00172	PASS	
		HCH	VN	-30	-3.48	-0.00411	PASS	
				-20	6.17	0.00728	PASS	
				-10	-2.55	-0.00301	PASS	
				0	-2.35	-0.00277	PASS	
				10	-5.68	-0.0067	PASS	



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					20	1.93	0.00228	PASS		
					30	-2.62	-0.00309	PASS		
					40	3.26	0.00385	PASS		
					50	-2.99	-0.00353	PASS		
		5	LCH	VN	-30	0.00	0	PASS		
					-20	1.16	0.0014	PASS		
					-10	0.36	0.00044	PASS		
					0	-0.16	-0.00019	PASS		
					10	0.50	0.0006	PASS		
					20	0.56	0.00068	PASS		
					30	-0.24	-0.00029	PASS		
					40	-7.48	-0.00929	PASS		
					50	1.59	0.00168	PASS		
					MCH	VN	-30	-0.37	-0.00069	PASS
							-20	0.25	0.00005	PASS
							-10	-0.12	-0.00039	PASS
			0	3.71			0.00419	PASS		
			10	1.65			0.00173	PASS		
			20	0.16			-0.00005	PASS		
			HCH	VN	30	2.87	0.00319	PASS		
					40	-2.24	-0.00292	PASS		
					50	0.08	-0.00015	PASS		
					-30	2.12	0.00226	PASS		
					-20	-3.53	-0.00442	PASS		
					-10	-5.5	-0.00675	PASS		
			10	LCH	VN	0	2.9	0.00318	PASS	
						10	1.11	0.00106	PASS	
						20	-4.86	-0.00599	PASS	
		30				5.18	0.00587	PASS		
		40				7.14	0.00819	PASS		
		50				2.48	0.00268	PASS		
		-30				-2.55	-0.00332	PASS		
-20	-2.71	-0.00351				PASS				
-10	-0.42	-0.00075	PASS							
0	7.96	0.00936	PASS							
10	-2.63	-0.00341	PASS							
20	-3.6	-0.00458	PASS							
30	6.27	0.00732	PASS							
40	-9.15	-0.01128	PASS							



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
			MCH	VN	50	-2.84	-0.00367	PASS
					-30	4.15	0.00479	PASS
					-20	-4.33	-0.00549	PASS
					-10	1.94	0.00211	PASS
					0	11.18	0.01332	PASS
					10	-10.45	-0.01291	PASS
					20	0.34	0.00017	PASS
					30	-16.03	-0.01968	PASS
					40	9.96	0.01184	PASS
			50	-1.77	-0.00239	PASS		
			HCH	VN	-30	7.69	0.00895	PASS
					-20	-3.73	-0.0047	PASS
					-10	-3.41	-0.00432	PASS
					0	-4.83	-0.00602	PASS
					10	-0.52	-0.00087	PASS
					20	-2.74	-0.00352	PASS
					30	-9.71	-0.01185	PASS
					40	5.47	0.00629	PASS
		50			-2.6	-0.00335	PASS	
		15	LCH	VN	-30	7.37	0.00844	PASS
					-20	-26.92	-0.03198	PASS
					-10	4.98	0.00562	PASS
					0	1.18	0.00114	PASS
					10	15.7	0.01826	PASS
					20	-16.65	-0.01988	PASS
					30	-9.56	-0.01152	PASS
					40	6.39	0.00728	PASS
					50	-18.19	-0.02169	PASS
			MCH	VN	-30	-0.81	-0.00122	PASS
					-20	14.93	0.01785	PASS
					-10	-19.62	-0.02401	PASS
					0	-6.19	-0.00774	PASS
					10	0.79	0.00072	PASS
					20	-25.61	-0.03126	PASS
					30	-3.38	-0.00434	PASS
					40	16.36	0.01958	PASS
50	2.94				0.00332	PASS		
HCH	VN	-30	2.85	0.00316	PASS			
		-20	4.2	0.00478	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
					-10	-2.7	-0.00347	PASS		
					0	-5.8	-0.00718	PASS		
					10	0.49	0.00034	PASS		
					20	-1.25	-0.00174	PASS		
					30	-2.28	-0.00297	PASS		
					40	-2.35	-0.00305	PASS		
					50	8.98	0.01049	PASS		
	LTE/TM2	1.4	LCH	VN	-30	3.81	0.00425	PASS		
					-20	-0.44	-0.00077	PASS		
					-10	7.93	0.00911	PASS		
					0	-2.96	-0.00374	PASS		
					10	-5.67	-0.00694	PASS		
					20	-8.68	-0.01049	PASS		
					30	-8.02	-0.00971	PASS		
					40	-4.04	-0.00502	PASS		
					50	-4.67	-0.00576	PASS		
					MCH	VN	-30	1.51	0.00159	PASS
							-20	-4.49	-0.00567	PASS
							-10	0.49	0.00035	PASS
							0	5.73	0.00669	PASS
							10	-1.28	-0.00179	PASS
			20	2.17			0.00238	PASS		
			30	-1.12			-0.0016	PASS		
			HCH	VN	-30	-0.37	-0.00069	PASS		
					-20	0.25	0.00005	PASS		
					-10	-0.12	-0.00039	PASS		
					0	3.71	0.00419	PASS		
					10	1.65	0.00173	PASS		
					20	0.16	-0.00005	PASS		
					30	2.87	0.00319	PASS		
			3	LCH	VN	-30	2.12	0.00226	PASS	
						-20	-3.53	-0.00442	PASS	
						-10	-5.5	-0.00675	PASS	
0						2.9	0.00318	PASS		
10						1.11	0.00106	PASS		



Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
		5			20	-4.86	-0.00599	PASS
					30	5.18	0.00587	PASS
					40	7.14	0.00819	PASS
					50	2.48	0.00268	PASS
			MCH	VN	-30	-0.75	-0.00114	PASS
					-20	-2.71	-0.00351	PASS
					-10	-0.42	-0.00075	PASS
					0	7.96	0.00936	PASS
					10	-2.63	-0.00341	PASS
					20	-3.6	-0.00458	PASS
					30	6.27	0.00732	PASS
					40	-9.15	-0.01128	PASS
			HCH	VN	50	-2.84	-0.00367	PASS
					-30	4.15	0.00479	PASS
					-20	-4.33	-0.00549	PASS
					-10	1.94	0.00211	PASS
					0	11.18	0.01332	PASS
					10	-10.45	-0.01291	PASS
					20	0.34	0.00017	PASS
					30	-16.03	-0.01968	PASS
		LCH	VN	40	9.96	0.01184	PASS	
				50	-1.77	-0.00239	PASS	
				-30	7.69	0.00895	PASS	
				-20	-3.73	-0.0047	PASS	
				-10	-3.41	-0.00432	PASS	
				0	-4.83	-0.00602	PASS	
				10	-0.52	-0.00087	PASS	
				20	-2.74	-0.00352	PASS	
		MCH	VN	30	-9.71	-0.01185	PASS	
				40	5.47	0.00629	PASS	
				50	-2.6	-0.00335	PASS	
				-30	7.37	0.00844	PASS	
-20	-26.92			-0.03198	PASS			
-10	4.98			0.00562	PASS			
0	1.18			0.00114	PASS			
10	15.7			0.01826	PASS			
20	-16.65	-0.01988	PASS					
30	-9.56	-0.01152	PASS					
40	6.39	0.00728	PASS					

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict			
			HCH	VN	50	-18.19	-0.02169	PASS			
					-30	-0.81	-0.00122	PASS			
					-20	14.93	0.01785	PASS			
					-10	-19.62	-0.02401	PASS			
					0	-6.19	-0.00774	PASS			
					10	0.79	0.00072	PASS			
					20	-25.61	-0.03126	PASS			
					30	-3.38	-0.00434	PASS			
					40	16.36	0.01958	PASS			
					50	2.94	0.00332	PASS			
			LCH	VN	-30	2.85	0.00316	PASS			
					-20	4.2	0.00478	PASS			
					-10	-2.7	-0.00347	PASS			
					0	-5.8	-0.00718	PASS			
					10	0.49	0.00034	PASS			
					20	-1.25	-0.00174	PASS			
					30	-2.28	-0.00297	PASS			
					40	-2.35	-0.00305	PASS			
					50	8.98	0.01049	PASS			
						MCH	VN	-30	3.81	0.00425	PASS
								-20	-0.44	-0.00077	PASS
								-10	7.93	0.00911	PASS
								0	-2.96	-0.00374	PASS
								10	-5.67	-0.00694	PASS
								20	-8.68	-0.01049	PASS
								30	-8.02	-0.00971	PASS
								40	-4.04	-0.00502	PASS
						HCH	VN	-30	1.51	0.00159	PASS
		-20	-4.49	-0.00567				PASS			
		-10	0.49	0.00035				PASS			
		0	5.73	0.00669				PASS			
		10	-1.28	-0.00179				PASS			
		20	2.17	0.00238				PASS			
		30	-1.12	-0.0016				PASS			
		40	-7.48	-0.00929				PASS			
			LCH	VN	-30	1.59	0.00168	PASS			
					-20	-0.37	-0.00069	PASS			
			LCH	VN	-30	-0.37	-0.00069	PASS			
					-20	0.25	0.00005	PASS			

Test Band	Test Mode	Test Bandwidth (MHz)	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
					-10	-0.12	-0.00039	PASS
					0	3.71	0.00419	PASS
					10	1.65	0.00173	PASS
					20	0.16	-0.00005	PASS
					30	2.87	0.00319	PASS
					40	-2.24	-0.00292	PASS
					50	0.08	-0.00015	PASS
			MCH	VN	-30	2.12	0.00226	PASS
					-20	-3.53	-0.00442	PASS
					-10	5.34	0.00614	PASS
					0	2.9	0.00318	PASS
					10	1.11	0.00106	PASS
					20	-4.86	-0.00599	PASS
					30	5.18	0.00587	PASS
			HCH	VN	40	7.14	0.00819	PASS
					50	2.48	0.00268	PASS
					-30	-2.55	-0.00332	PASS
					-20	-2.71	-0.00351	PASS
					-10	-0.42	-0.00075	PASS
					0	7.96	0.00936	PASS
					10	-2.63	-0.00341	PASS
					20	-3.6	-0.00458	PASS
			30	6.27	0.00732	PASS		
			40	-9.15	-0.01128	PASS		
			50	-2.84	-0.00367	PASS		

END