



Appendix for test report

1Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results(Worst case: External antenna 3dBi)

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
BAND5	LTE/TM1	1.4	LCH	RB1#0	22.46	23.31	38.5	PASS
				RB1#3	22.51	23.36	38.5	PASS
				RB1#5	22.51	23.36	38.5	PASS
				RB3#0	22.51	23.36	38.5	PASS
				RB3#2	22.46	23.31	38.5	PASS
				RB3#3	22.49	23.34	38.5	PASS
				RB6#0	21.41	22.26	38.5	PASS
			MCH	RB1#0	22.46	23.31	38.5	PASS
				RB1#3	22.43	23.28	38.5	PASS
				RB1#5	22.49	23.34	38.5	PASS
				RB3#0	22.38	23.23	38.5	PASS
				RB3#2	22.43	23.28	38.5	PASS
				RB3#3	22.37	23.22	38.5	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB6#0	21.42	22.27	38.5	PASS
			HCH	RB1#0	22.52	23.37	38.5	PASS
				RB1#3	22.49	23.34	38.5	PASS
				RB1#5	22.52	23.37	38.5	PASS
				RB3#0	22.52	23.37	38.5	PASS
				RB3#2	22.55	23.4	38.5	PASS
				RB3#3	22.51	23.36	38.5	PASS
				RB6#0	21.5	22.35	38.5	PASS
		3		LCH	RB1#0	22.43	23.28	38.5
			RB1#7		22.43	23.28	38.5	PASS
			RB1#14		22.39	23.24	38.5	PASS
			RB8#0		21.4	22.25	38.5	PASS
			RB8#4		21.47	22.32	38.5	PASS
			RB8#7		21.45	22.3	38.5	PASS
			RB15#0		21.48	22.33	38.5	PASS
			MCH	RB1#0	22.38	23.23	38.5	PASS
				RB1#7	22.51	23.36	38.5	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict		
				RB1#14	22.44	23.29	38.5	PASS		
				RB8#0	21.39	22.24	38.5	PASS		
				RB8#4	21.4	22.25	38.5	PASS		
				RB8#7	21.38	22.23	38.5	PASS		
				RB15#0	21.4	22.25	38.5	PASS		
			HCH	RB1#0	22.5	23.35	38.5	PASS		
				RB1#7	22.54	23.39	38.5	PASS		
				RB1#14	22.53	23.38	38.5	PASS		
				RB8#0	21.46	22.31	38.5	PASS		
				RB8#4	21.47	22.32	38.5	PASS		
			LCH	RB8#7	21.47	22.32	38.5	PASS		
				RB15#0	21.51	22.36	38.5	PASS		
				5	LCH	RB1#0	22.42	23.27	38.5	PASS
						RB1#13	22.47	23.32	38.5	PASS
						RB1#24	22.37	23.22	38.5	PASS
		RB12#0	21.49			22.34	38.5	PASS		
		RB12#6	21.42			22.27	38.5	PASS		



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict			
				RB12#13	21.45	22.3	38.5	PASS			
				RB25#0	21.45	22.3	38.5	PASS			
			MCH	RB1#0	22.37	23.22	38.5	PASS			
				RB1#13	22.44	23.29	38.5	PASS			
				RB1#24	22.41	23.26	38.5	PASS			
				RB12#0	21.41	22.26	38.5	PASS			
				RB12#6	21.45	22.3	38.5	PASS			
				RB12#13	21.43	22.28	38.5	PASS			
				RB25#0	21.37	22.22	38.5	PASS			
				HCH	RB1#0	22.46	23.31	38.5	PASS		
			RB1#13		22.49	23.34	38.5	PASS			
			RB1#24		22.52	23.37	38.5	PASS			
			RB12#0		21.55	22.4	38.5	PASS			
			RB12#6		21.48	22.33	38.5	PASS			
			RB12#13		21.52	22.37	38.5	PASS			
							RB25#0	21.51	22.36	38.5	PASS
					10	LCH	RB1#0	22.35	23.2	38.5	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB1#25	22.46	23.31	38.5	PASS
				RB1#49	22.3	23.15	38.5	PASS
				RB25#0	21.39	22.24	38.5	PASS
				RB25#13	21.43	22.28	38.5	PASS
				RB25#25	21.29	22.14	38.5	PASS
				RB50#0	21.39	22.24	38.5	PASS
			MCH	RB1#0	22.34	23.19	38.5	PASS
			MCH	RB1#25	22.52	23.37	38.5	PASS
			MCH	RB1#49	22.44	23.29	38.5	PASS
			MCH	RB25#0	21.35	22.2	38.5	PASS
			MCH	RB25#13	21.37	22.22	38.5	PASS
			MCH	RB25#25	21.38	22.23	38.5	PASS
			MCH	RB50#0	21.35	22.2	38.5	PASS
			HCH	RB1#0	22.33	23.18	38.5	PASS
			HCH	RB1#25	22.47	23.32	38.5	PASS
			HCH	RB1#49	22.44	23.29	38.5	PASS
			HCH	RB25#0	21.43	22.28	38.5	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict	
				RB25#13	21.49	22.34	38.5	PASS	
				RB25#25	21.44	22.29	38.5	PASS	
				RB50#0	21.4	22.25	38.5	PASS	
	LTE/TM2	1.4		LCH	RB1#0	21.53	22.38	38.5	PASS
					RB1#3	21.54	22.39	38.5	PASS
					RB1#5	21.55	22.4	38.5	PASS
					RB3#0	21.49	22.34	38.5	PASS
					RB3#2	21.54	22.39	38.5	PASS
					RB3#3	21.49	22.34	38.5	PASS
				MCH	RB6#0	20.44	21.29	38.5	PASS
					RB1#0	21.48	22.33	38.5	PASS
					RB1#3	21.52	22.37	38.5	PASS
					RB1#5	21.52	22.37	38.5	PASS
					RB3#0	21.45	22.3	38.5	PASS
					RB3#2	21.49	22.34	38.5	PASS
				RB3#3	21.46	22.31	38.5	PASS	
				RB6#0	20.38	21.23	38.5	PASS	



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
			HCH	RB1#0	21.64	22.49	38.5	PASS
				RB1#3	21.68	22.53	38.5	PASS
				RB1#5	21.64	22.49	38.5	PASS
				RB3#0	21.56	22.41	38.5	PASS
				RB3#2	21.58	22.43	38.5	PASS
				RB3#3	21.58	22.43	38.5	PASS
				RB6#0	20.43	21.28	38.5	PASS
		3	LCH	RB1#0	21.39	22.24	38.5	PASS
				RB1#7	21.51	22.36	38.5	PASS
				RB1#14	21.35	22.2	38.5	PASS
				RB8#0	20.42	21.27	38.5	PASS
				RB8#4	20.39	21.24	38.5	PASS
				RB8#7	20.41	21.26	38.5	PASS
				RB15#0	20.35	21.2	38.5	PASS
				MCH	RB1#0	21.34	22.19	38.5
RB1#7	21.49	22.34	38.5		PASS			
RB1#14	21.47	22.32	38.5		PASS			



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB8#0	20.43	21.28	38.5	PASS
				RB8#4	20.45	21.3	38.5	PASS
				RB8#7	20.5	21.35	38.5	PASS
				RB15#0	20.38	21.23	38.5	PASS
			HCH	RB1#0	21.87	22.72	38.5	PASS
				RB1#7	21.9	22.75	38.5	PASS
				RB1#14	21.86	22.71	38.5	PASS
				RB8#0	20.46	21.31	38.5	PASS
				RB8#4	20.44	21.29	38.5	PASS
				RB8#7	20.5	21.35	38.5	PASS
				RB15#0	20.47	21.32	38.5	PASS
				LCH	RB1#0	21.48	22.33	38.5
			RB1#13		21.48	22.33	38.5	PASS
			RB1#24		21.43	22.28	38.5	PASS
		RB12#0	20.36		21.21	38.5	PASS	
		RB12#6	20.37		21.22	38.5	PASS	
		RB12#13	20.35		21.2	38.5	PASS	
				5				



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#0	20.33	21.18	38.5	PASS
			MCH	RB1#0	21.58	22.43	38.5	PASS
				RB1#13	21.71	22.56	38.5	PASS
				RB1#24	21.63	22.48	38.5	PASS
				RB12#0	20.36	21.21	38.5	PASS
				RB12#6	20.35	21.2	38.5	PASS
				RB12#13	20.38	21.23	38.5	PASS
				RB25#0	20.37	21.22	38.5	PASS
				HCH	RB1#0	21.84	22.69	38.5
			RB1#13		21.92	22.77	38.5	PASS
			RB1#24		21.83	22.68	38.5	PASS
			RB12#0		20.47	21.32	38.5	PASS
			RB12#6		20.5	21.35	38.5	PASS
			RB12#13		20.45	21.3	38.5	PASS
			RB25#0		20.43	21.28	38.5	PASS
		10	LCH		RB1#0	21.23	22.08	38.5
				RB1#25	21.6	22.45	38.5	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB1#49	21.18	22.03	38.5	PASS
				RB25#0	20.31	21.16	38.5	PASS
				RB25#13	20.35	21.2	38.5	PASS
				RB25#25	20.31	21.16	38.5	PASS
				RB50#0	20.35	21.2	38.5	PASS
			MCH	RB1#0	21.49	22.34	38.5	PASS
			MCH	RB1#25	21.63	22.48	38.5	PASS
			MCH	RB1#49	21.59	22.44	38.5	PASS
			MCH	RB25#0	20.31	21.16	38.5	PASS
			MCH	RB25#13	20.31	21.16	38.5	PASS
			MCH	RB25#25	20.38	21.23	38.5	PASS
			MCH	RB50#0	20.31	21.16	38.5	PASS
			HCH	RB1#0	21.55	22.4	38.5	PASS
			HCH	RB1#25	21.75	22.6	38.5	PASS
			HCH	RB1#49	21.67	22.52	38.5	PASS
			HCH	RB25#0	20.39	21.24	38.5	PASS
			HCH	RB25#13	20.43	21.28	38.5	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	Test RB	Measured[dBm]	ERP [dBm]	Limit [dBm]	Verdict
				RB25#25	20.4	21.25	38.5	PASS
				RB50#0	20.34	21.19	38.5	PASS

Note1:

a, For getting the ERP (Efficient Radiated Power) or EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b, SGP = Signal Generator Level

Note2:

$$\text{SET Span} = 1.5 * \text{OBW}$$

$$\text{SET RBW} = 1\% \text{ of the OBW, not to exceed 1MHz}$$

$$\text{SET VBW} \geq 3 * \text{RBW}$$

SET Sweep time = auto - couple.

Detector: RMS



2Appendix_B: Peak-to-Average Ratio

void

3Appendix_C: Modulation Characteristics

void

4Appendix_D: Bandwidth

void

5Appendix_E: Band Edges Compliance

void

6Appendix_F: Spurious Emission at Antenna Terminal

Void



7Appendix_G: Field Strength of Spurious Radiation

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

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

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

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

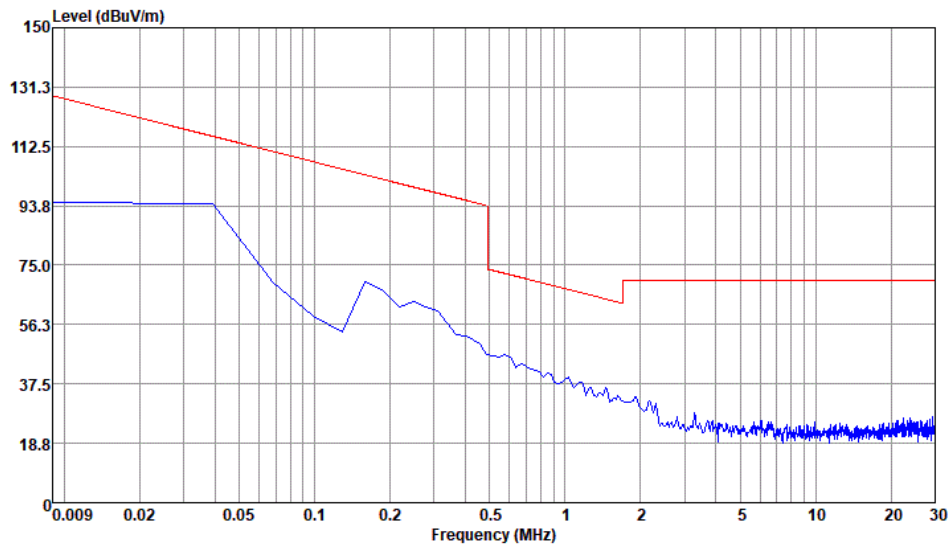
Above 1GHz, RBW = 1 MHz, VBW = 3 MHz. Detector: PK

Part I - Test Plots

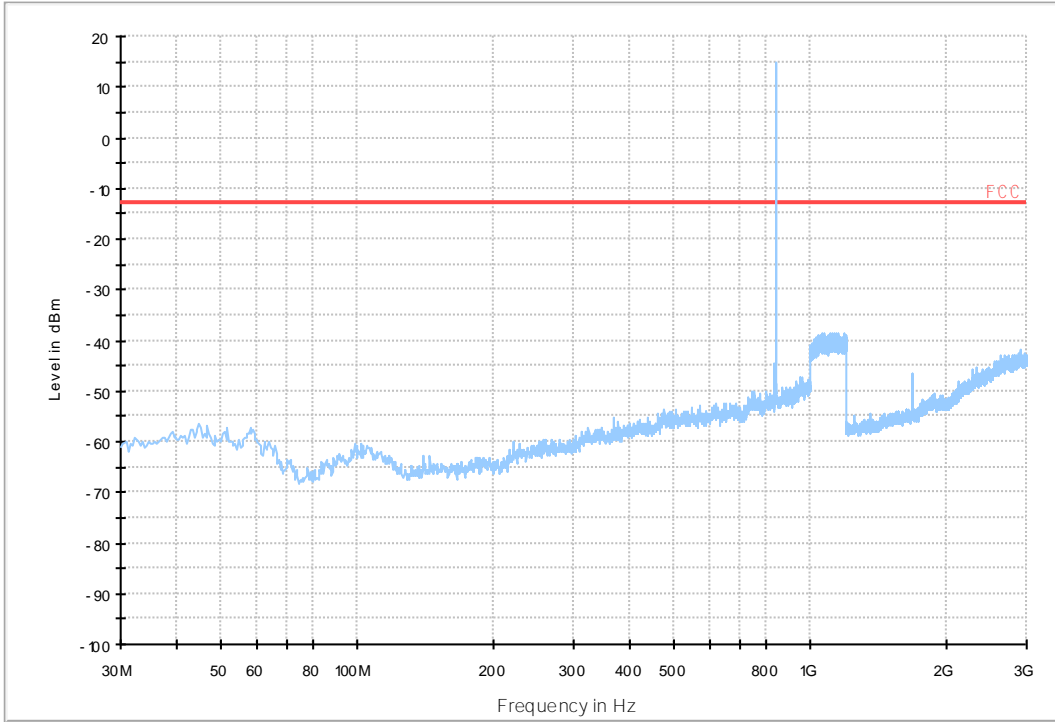
7.1 For LTE

7.1.1 Test Band = BAND5_ External antenna 1dBi

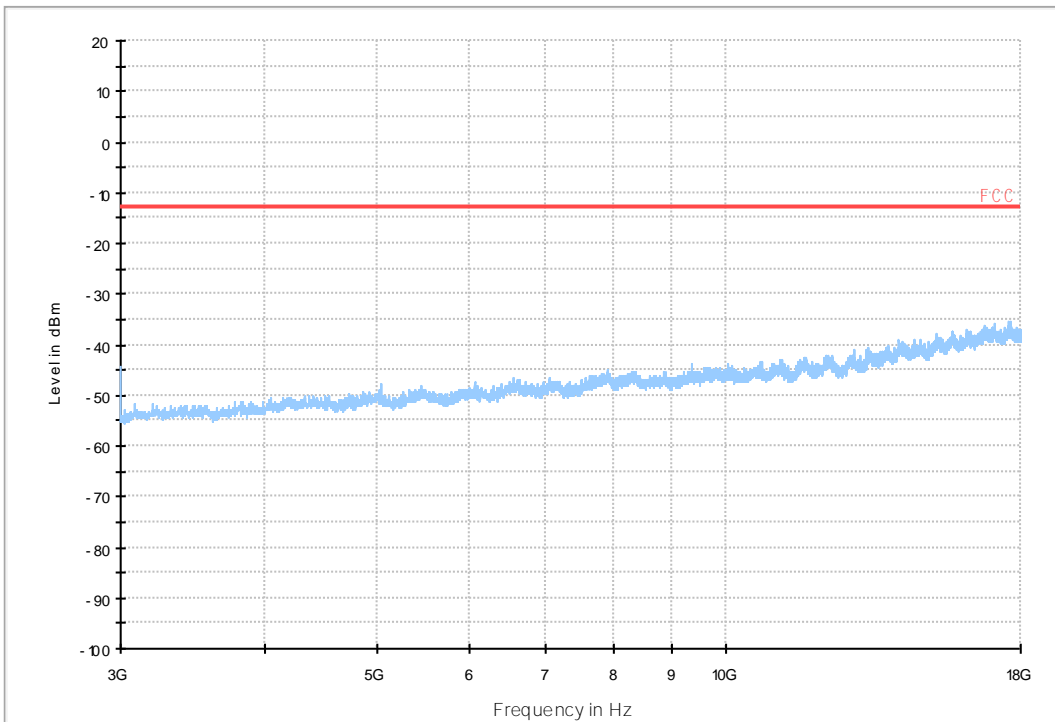
7.1.1.1 Test Bandwidth = 1.4



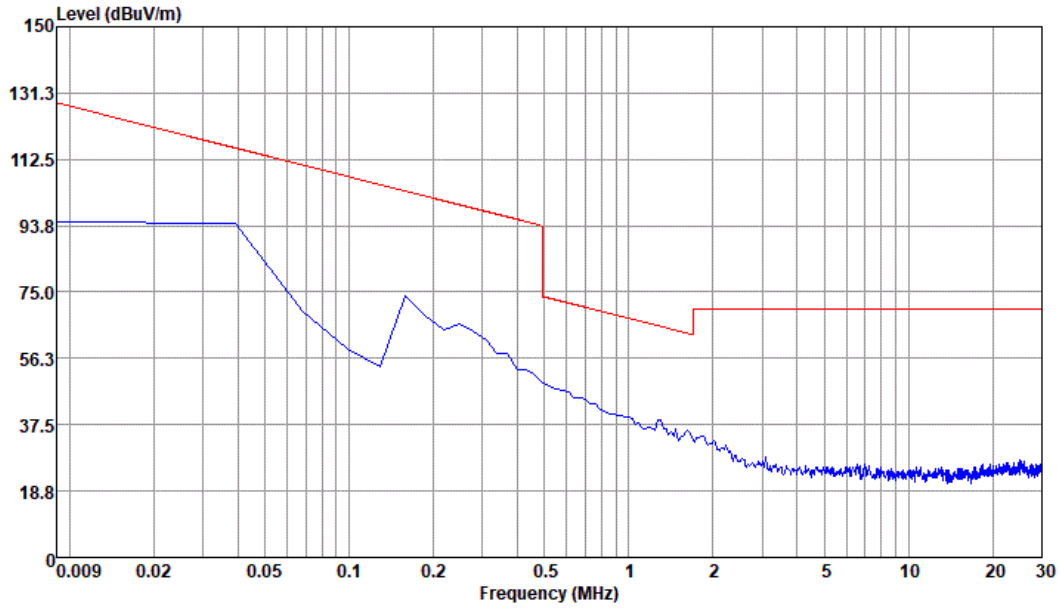
LTE FDD RSE-TX-DIRECTOR BELOW 1G_L



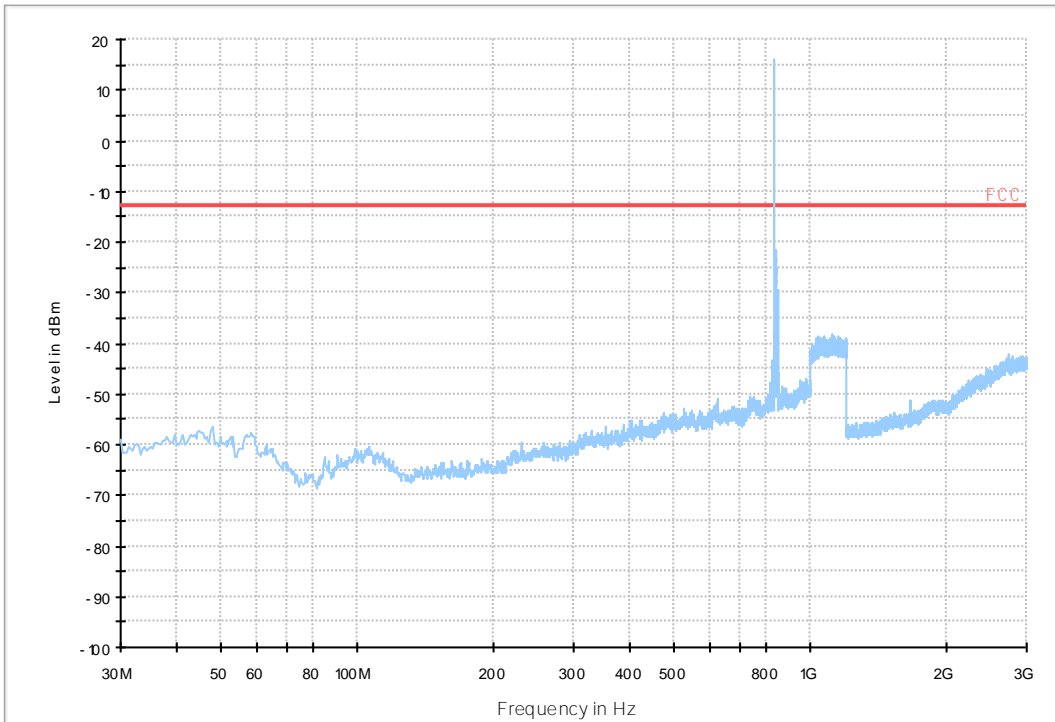
LTE FDD RSE-TX-DIRECTOR BELOW 1G_H



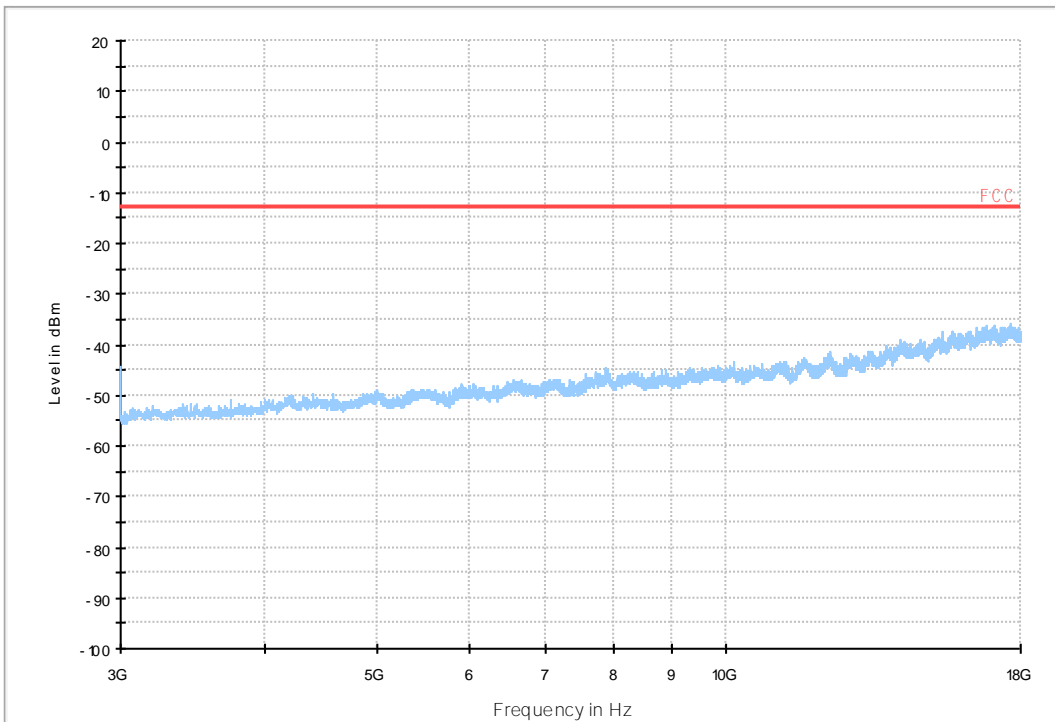
7.1.1.2 Test Bandwidth = 10



LTE FDD RSE-TX-DIRECTOR BELOW 1G_L

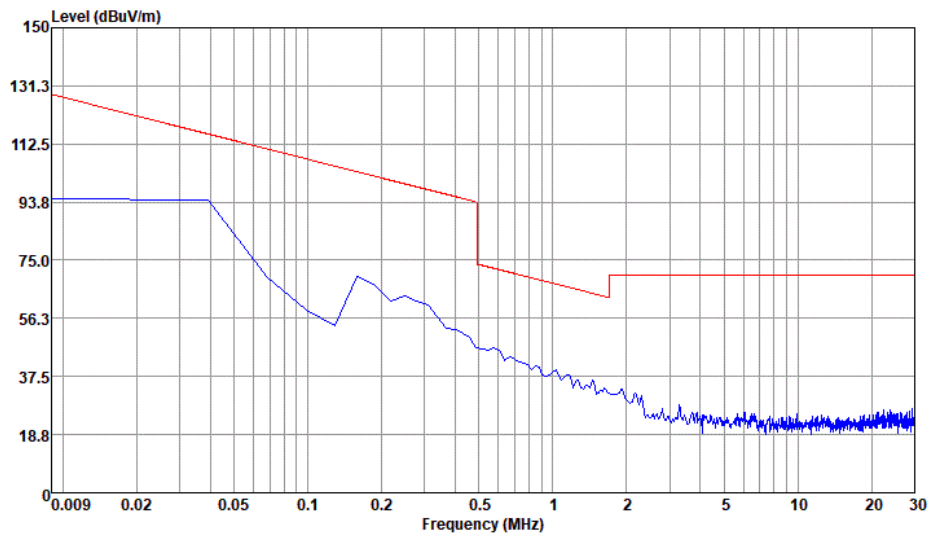


LTE FDD RSE-TX-DIRECTOR BELOW 1G_H

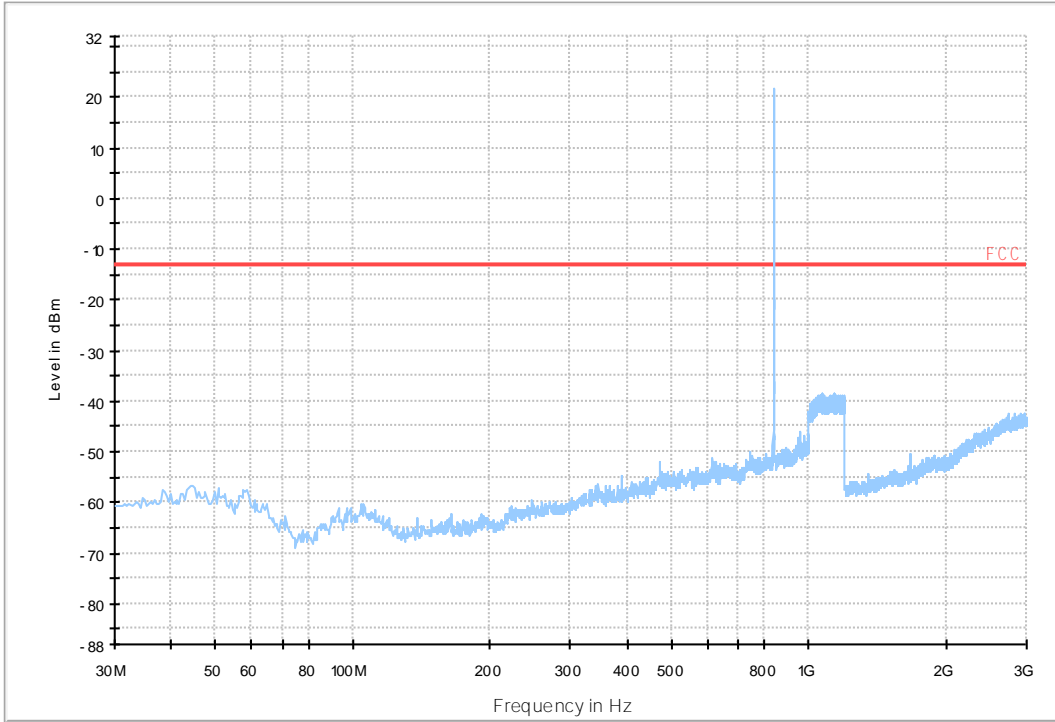


7.1.2 Test Band = BAND5_ External antenna 3dBi

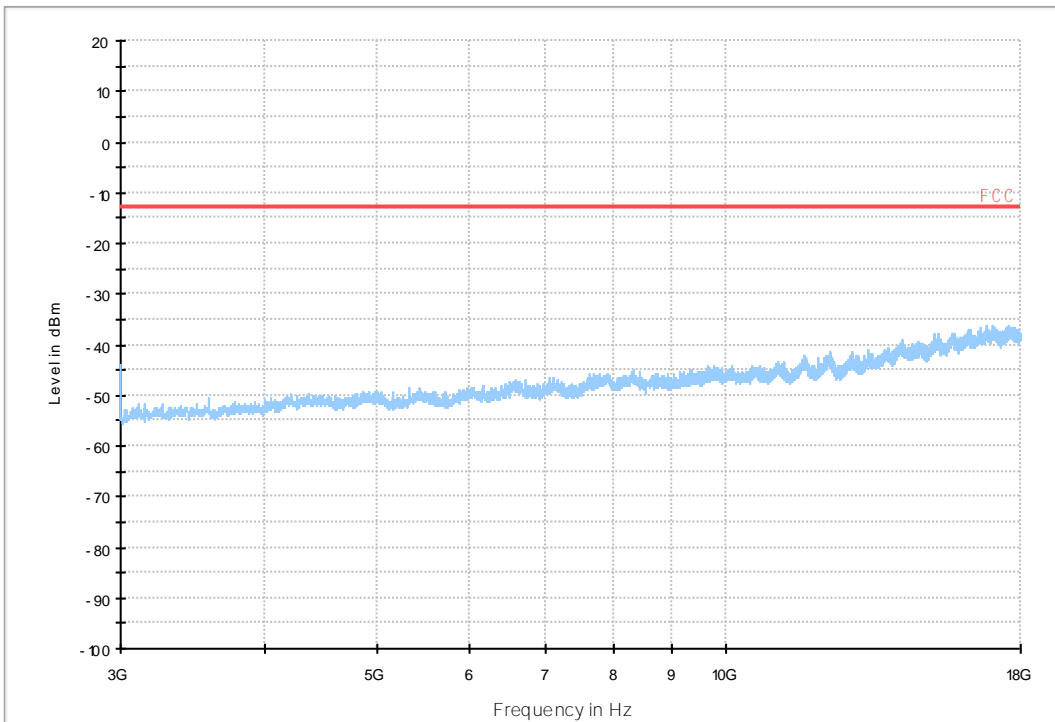
7.1.2.1 Test Bandwidth = 1.4



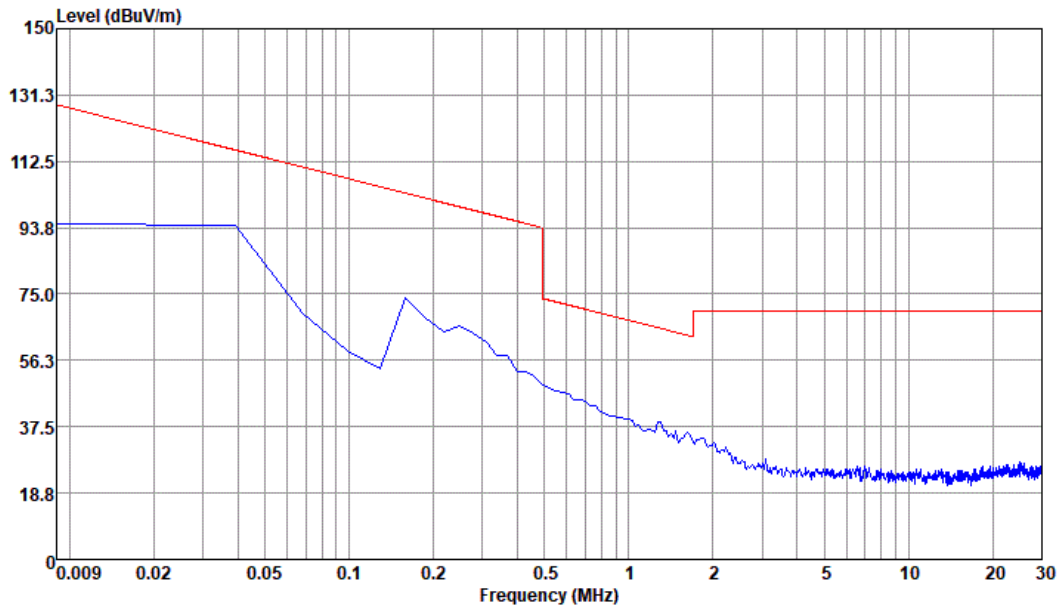
LTE FDD RSE-TX-DIRECTOR BELOW 1G_L



LTE FDD RSE-TX-DIRECTOR BELOW 1G_H

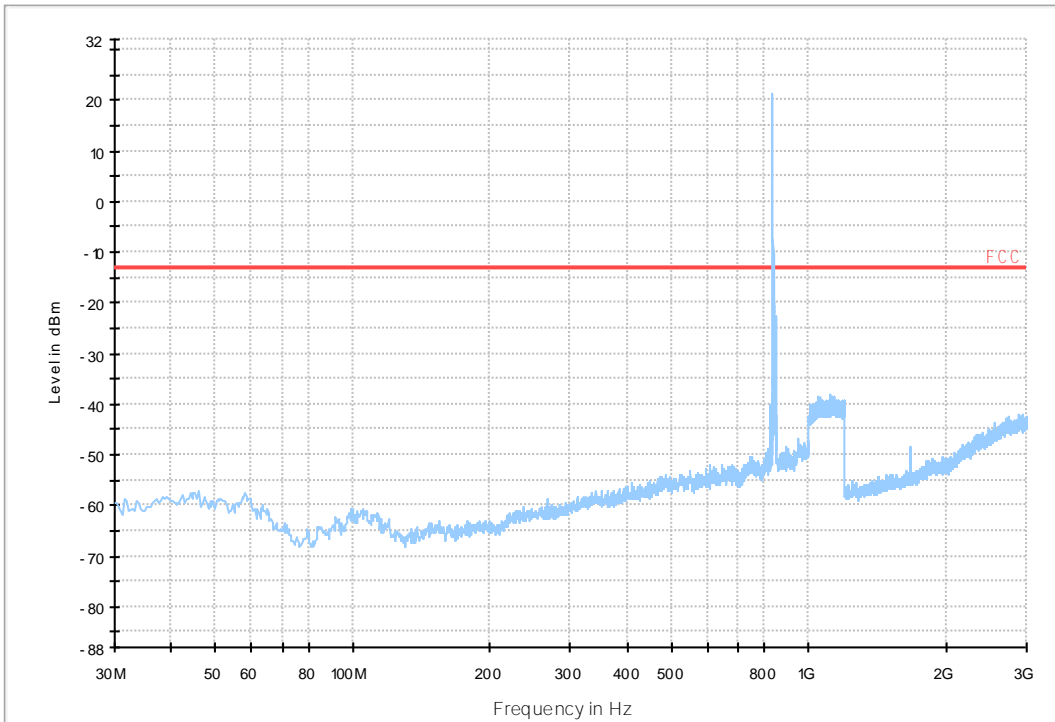


7.1.2.2 Test Bandwidth = 10

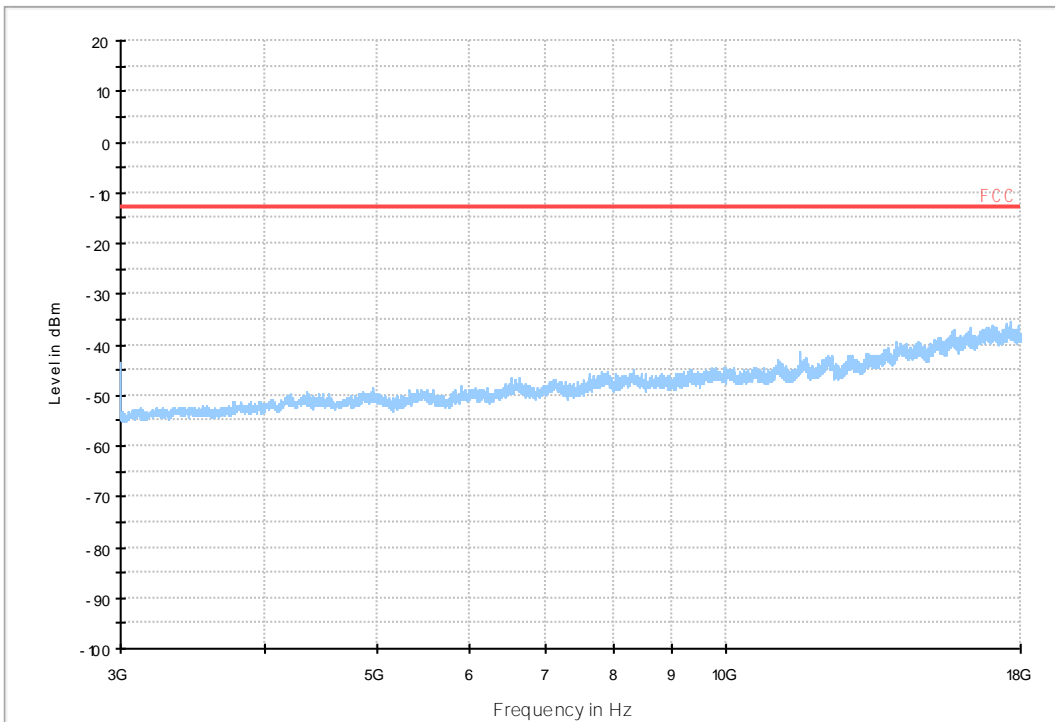




LTE FDD RSE-TX-DIRECTOR BELOW 1G_L



LTE FDD RSE-TX-DIRECTOR BELOW 1G_H





8Appendix_H: Frequency Stability

void

END