

## LTE Band 66 \_20M



## **APPENDIX I - FREQUENCY STABILITY**

Test Mode:	LTE Band 4_CH20175_1.4M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	5.24	0.003024531	±2.5
-10	3.57	0.002060606	
0	5.20	0.003001443	
10	5.45	0.003145743	
20	-0.72	-0.000415584	
30	2.23	0.001287157	
40	5.03	0.002903319	
50	2.93	0.001691198	
Max. Deviation (ppm)	5.45	0.003145743	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-0.91	-0.000525253	±2.5
3.8	-3.90	-0.002251082	
3.3	-4.17	-0.002406926	
Max. Deviation (ppm)	-4.17	-0.002406926	

Test Mode:	LTE Band 4_CH20175_3M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	-4.16	-0.002401154	±2.5
-10	2.74	0.001581530	
0	0.24	0.000138528	
10	-0.37	-0.000213564	
20	1.90	0.001096681	
30	-2.58	-0.001489177	
40	-3.52	-0.002031746	
50	-1.07	-0.000617605	
Max. Deviation (ppm)	-4.16	-0.002401154	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-5.97	-0.003445887	±2.5
3.8	1.16	0.000669553	
3.3	2.21	0.001275613	
Max. Deviation (ppm)	-5.97	-0.003445887	

Test Mode:	LTE Band 4_CH20175_5M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	2.78	0.001604618	±2.5
-10	4.46	0.002574315	
0	-3.03	-0.001748918	
10	-0.94	-0.000542569	
20	-2.13	-0.001229437	
30	-4.98	-0.002874459	
40	-3.77	-0.002176046	
50	-3.39	-0.00195671	
Max. Deviation (ppm)	-4.98	-0.002874459	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	0.98	0.000565657	±2.5
3.8	4.72	0.002724387	
3.3	0.74	0.000427128	
Max. Deviation (ppm)	4.72	0.002724387	

Test Mode:	LTE Band 4_CH20175_10M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	2.57	0.001483405	±2.5
-10	4.22	0.002435786	
0	-3.29	-0.00189899	
10	-1.17	-0.000675325	
20	-2.38	-0.001373737	
30	-5.26	-0.003036075	
40	-4.06	-0.002343434	
50	-3.67	-0.002118326	
Max. Deviation (ppm)	-5.26	-0.003036075	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-2.24	-0.001292929	±2.5
3.8	4.88	0.002816739	
3.3	1.74	0.001004329	
Max. Deviation (ppm)	4.88	0.002816739	

Test Mode:	LTE Band 4_CH20175_15M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	5.34	0.003082251	±2.5
-10	5.81	0.003353535	
0	-1.65	-0.000952381	
10	6.00	0.003463203	
20	-0.19	-0.000109668	
30	-4.19	-0.00241847	
40	-2.46	-0.001419913	
50	-5.71	-0.003295815	
Max. Deviation (ppm)	6	0.003463203	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	5.16	0.002978355	±2.5
3.8	-2.12	-0.001223665	
3.3	-3.90	-0.002251082	
Max. Deviation (ppm)	5.16	0.002978355	

Test Mode:	LTE Band 4_CH20175_20M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	5.07	0.002926407	±2.5
-10	5.58	0.003220779	
0	-1.95	-0.001125541	
10	5.75	0.003318903	
20	-0.42	-0.000242424	
30	-4.41	-0.002545455	
40	-2.66	-0.001535354	
45	-5.98	-0.003451659	
Max. Deviation (ppm)	-5.98	-0.003451659	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	1.65	0.000952381	±2.5
3.8	5.02	0.002897547	
3.3	0.21	0.000121212	
Max. Deviation (ppm)	5.02	0.002897547	

Test Mode:	LTE Band 7_CH21100_5M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	-1.88	-0.000741617	±2.5
-10	-4.66	-0.001838264	
0	-2.80	-0.001104536	
10	-5.93	-0.00233925	
20	0.63	0.000248521	
30	-6.20	-0.002445759	
40	0.62	0.000244576	
50	-5.88	-0.002319527	
Max. Deviation (ppm)	-6.2	-0.002445759	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-4.92	-0.001940828	±2.5
3.8	3.23	0.001274162	
3.3	-3.09	-0.001218935	
Max. Deviation (ppm)	-4.92	-0.001940828	

Test Mode:	LTE Band 7_CH21100_10M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	-2.02	-0.000796844	±2.5
-10	3.63	0.001431953	
0	-2.57	-0.001013807	
10	-0.26	-0.000102564	
20	-3.73	-0.00147140	
30	-4.98	-0.001964497	
40	-5.11	-0.002015779	
50	-0.27	-0.000106509	
Max. Deviation (ppm)	-5.11	-0.002015779	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	0.48	0.000189349	±2.5
3.8	3.82	0.001506903	
3.3	1.84	0.000725838	
Max. Deviation (ppm)	3.82	0.001506903	

Test Mode:	LTE Band 7_CH21100_15M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	-3.30	-0.001301775	±2.5
-10	-3.14	-0.001238659	
0	-2.22	-0.000875740	
10	4.41	0.001739645	
20	3.47	0.001368836	
30	-0.37	-0.000145957	
40	1.98	0.000781065	
50	0.91	0.000358974	
Max. Deviation (ppm)	4.41	0.001739645	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-5.80	-0.002287968	±2.5
3.8	-4.62	-0.001822485	
3.3	3.72	0.001467456	
Max. Deviation (ppm)	-5.8	-0.002287968	

Test Mode:	LTE Band 7_CH21100_20M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	2.27	0.000895464	±2.5
-10	-5.98	-0.002358974	
0	-4.72	-0.001861933	
10	1.87	0.000737673	
20	3.17	0.001250493	
30	0.88	0.00034714	
40	0.73	0.000287968	
50	1.93	0.000761341	
Max. Deviation (ppm)	-5.98	-0.002358974	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-4.28	-0.001688363	±2.5
3.8	-5.48	-0.002161736	
3.3	4.31	0.001700197	
Max. Deviation (ppm)	-5.48	-0.002161736	

Test Mode:	LTE Band 66_CH132322_1.4M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	3.00	0.004285714	±2.5
-10	-4.88	-0.006971429	
0	4.32	0.006171429	
10	-1.45	-0.002071429	
20	-2.62	-0.003742857	
30	0.68	0.000971429	
40	1.13	0.001614286	
50	-2.17	-0.003100000	
Max. Deviation (ppm)	-4.88	-0.006971429	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-4.90	-0.007000000	±2.5
3.8	4.03	0.005757143	
3.3	-5.09	-0.007271429	
Max. Deviation (ppm)	-5.09	-0.007271429	

Test Mode:	LTE Band 66_CH132322_3M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	3.24	0.004628571	±2.5
-10	5.67	0.008100000	
0	-3.90	-0.005571430	
10	0.61	0.000871429	
20	-0.21	-0.000300000	
30	0.93	0.001328571	
40	0.38	0.000542857	
50	-6.23	-0.008900000	
Max. Deviation (ppm)	-6.23	-0.008900000	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	5.56	0.007942857	±2.5
3.8	4.09	0.005842857	
3.3	2.18	0.003114286	
Max. Deviation (ppm)	5.56	0.007942857	



Test Mode:	LTE Band 66_CH132322_5M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	5.51	0.007871429	±2.5
-10	4.84	0.006914286	
0	1.80	0.002571429	
10	0.69	0.000985714	
20	-5.16	-0.007371429	
30	4.58	0.006542857	
40	3.06	0.004371429	
50	-3.85	-0.00550000	
Max. Deviation (ppm)	5.51	0.007871429	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-3.95	-0.005642857	±2.5
3.8	-2.53	-0.003614286	
3.3	-1.04	-0.001485714	
Max. Deviation (ppm)	-3.95	-0.005642857	

Test Mode:	LTE Band 66_CH132322_10M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	-5.61	-0.008014286	±2.5
-10	-5.03	-0.007185714	
0	1.48	0.002114286	
10	-0.27	-0.000385714	
20	-0.14	-0.000200000	
30	-3.45	-0.004928571	
40	1.27	0.001814286	
50	-3.88	-0.005542857	
Max. Deviation (ppm)	-5.61	-0.008014286	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	4.15	0.005928571	±2.5
3.8	4.04	0.005771429	
3.3	1.95	0.002785714	
Max. Deviation (ppm)	4.15	0.005928571	

Test Mode:	LTE Band 66_CH132322_15M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	5.57	0.007957	±2.5
-10	-5.03	-0.00719	
0	-2.61	-0.00373	
10	5.49	0.007843	
20	-3.75	-0.00536	
30	0.97	0.001386	
40	4.66	0.006657	
50	4.86	0.006943	
Max. Deviation (ppm)	5.57	0.007957	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-5.10	-0.00729	±2.5
3.8	3.12	0.004457	
3.3	3.12	0.004457	
Max. Deviation (ppm)	-5.1	-0.00729	

Test Mode:	LTE Band 66_CH132322_20M
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**Temperature vs. Frequency Stability**

Temperature(°C)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
-20	2.94	0.0042	±2.5
-10	1.86	0.002657	
0	1.41	0.002014	
10	-6.19	-0.00884	
20	4.82	0.006886	
30	4.45	0.006357	
40	4.83	0.0069	
50	5.39	0.00770	
Max. Deviation (ppm)	-6.19	-0.00884	

**Voltage vs. Frequency Stability**

Voltage(Volts)	Frequency Error (Hz)	Frequency Error (ppm)	Limit(ppm)
4.3	-2.14	-0.00306	±2.5
3.8	-2.19	-0.00313	
3.3	3.37	0.004814	
Max. Deviation (ppm)	3.37	0.004814	

End of Test Report