

LTE Band 13 / 5 MHz / 782 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-3.43	-0.0044
12.00	-2.99	-0.0038
9.00	-4.59	-0.0059

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-3.37	-0.0043
-30	-3.00	-0.0038
-20	-2.98	-0.0038
-10	-3.68	-0.0047
0	-3.62	-0.0046
10	-4.18	-0.0053
20	-3.31	-0.0042
30	-3.24	-0.0041
40	-3.70	-0.0047
50	-4.45	-0.0057
60	-3.75	-0.0048
70	-3.15	-0.0040
80	-4.28	-0.0055
85	-3.85	-0.0049

LTE Band 13 / 5 MHz / 784.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-2.47	-0.0031
12.00	-1.05	-0.0013
9.00	-0.94	-0.0012

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-2.29	-0.0029
-30	-1.57	-0.0020
-20	-1.41	-0.0018
-10	-1.19	-0.0015
0	-0.81	-0.0010
10	-1.36	-0.0017
20	-1.02	-0.0013
30	-0.95	-0.0012
40	-1.72	-0.0022
50	-2.02	-0.0026
60	-2.41	-0.0031
70	-1.75	-0.0022
80	-1.82	-0.0023
85	-1.58	-0.0020

LTE Band 13 / 10 MHz / 782 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	0.83	0.0011
12.00	1.56	0.0020
9.00	1.55	0.0020

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	1.15	0.0015
-30	1.11	0.0014
-20	1.02	0.0013
-10	1.57	0.0020
0	2.10	0.0027
10	1.66	0.0021
20	1.53	0.0020
30	0.19	0.0002
40	1.01	0.0013
50	1.59	0.0020
60	0.69	0.0009
70	1.09	0.0014
80	0.51	0.0007
85	0.53	0.0007

Mode 6: LTE Band 26 (Part 90)**LTE Band 26 / 1.4 MHz / 814.7 MHz**

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-4.19	-0.0051
12.00	-2.68	-0.0033
9.00	-3.39	-0.0042

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-2.93	-0.0036
-30	-3.69	-0.0045
-20	-4.02	-0.0049
-10	-2.92	-0.0036
0	-2.86	-0.0035
10	-2.54	-0.0031
20	-4.22	-0.0052
30	-3.11	-0.0038
40	-3.38	-0.0041
50	-3.31	-0.0041
60	-2.96	-0.0036
70	-2.40	-0.0029
80	-2.40	-0.0029
85	-2.42	-0.0030

LTE Band 26 / 1.4 MHz / 819 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-3.14	-0.0038
12.00	-2.25	-0.0027
9.00	-3.50	-0.0043

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-1.61	-0.0020
-30	-3.50	-0.0043
-20	-2.74	-0.0033
-10	-3.33	-0.0041
0	-3.18	-0.0039
10	-2.59	-0.0032
20	-3.20	-0.0039
30	-2.54	-0.0031
40	-3.02	-0.0037
50	-3.45	-0.0042
60	-2.71	-0.0033
70	-2.88	-0.0035
80	-3.04	-0.0037
85	-2.27	-0.0028

LTE Band 26 / 1.4 MHz / 823.3 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-2.36	-0.0029
12.00	-2.16	-0.0026
9.00	-1.94	-0.0024

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-2.87	-0.0035
-30	-2.99	-0.0036
-20	-3.00	-0.0036
-10	-2.16	-0.0026
0	-2.69	-0.0033
10	-1.82	-0.0022
20	-2.25	-0.0027
30	-1.90	-0.0023
40	-3.09	-0.0038
50	-2.79	-0.0034
60	-2.24	-0.0027
70	-2.63	-0.0032
80	-2.57	-0.0031
85	-3.31	-0.0040

LTE Band 26 / 3 MHz / 815.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	3.34	0.0041
12.00	3.11	0.0038
9.00	2.65	0.0032

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	3.00	0.0037
-30	2.79	0.0034
-20	2.58	0.0032
-10	2.17	0.0027
0	3.07	0.0038
10	2.60	0.0032
20	2.42	0.0030
30	2.03	0.0025
40	1.98	0.0024
50	2.76	0.0034
60	2.90	0.0036
70	2.19	0.0027
80	2.26	0.0028
85	2.77	0.0034

LTE Band 26 / 3 MHz / 819 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	0.16	0.0002
12.00	1.55	0.0019
9.00	0.96	0.0012

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	0.82	0.0010
-30	0.77	0.0009
-20	0.87	0.0011
-10	1.15	0.0014
0	0.76	0.0009
10	1.70	0.0021
20	0.28	0.0003
30	1.06	0.0013
40	0.13	0.0002
50	-0.20	-0.0002
60	0.65	0.0008
70	1.52	0.0019
80	0.90	0.0011
85	1.09	0.0013

LTE Band 26 / 3 MHz / 822.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	2.50	0.0030
12.00	2.88	0.0035
9.00	2.14	0.0026

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	2.93	0.0036
-30	2.51	0.0031
-20	2.06	0.0025
-10	2.06	0.0025
0	2.61	0.0032
10	2.40	0.0029
20	2.40	0.0029
30	2.13	0.0026
40	2.83	0.0034
50	2.61	0.0032
60	1.76	0.0021
70	2.63	0.0032
80	1.77	0.0022
85	2.46	0.0030

LTE Band 26 / 5 MHz / 816.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	1.28	0.0016
12.00	2.11	0.0026
9.00	1.60	0.0020

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	1.69	0.0021
-30	1.56	0.0019
-20	1.39	0.0017
-10	1.51	0.0018
0	1.47	0.0018
10	1.88	0.0023
20	2.33	0.0029
30	2.19	0.0027
40	1.14	0.0014
50	2.15	0.0026
60	2.49	0.0030
70	2.66	0.0033
80	1.38	0.0017
85	0.93	0.0011

LTE Band 26 / 5 MHz / 819 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-2.31	-0.0028
12.00	-1.23	-0.0015
9.00	-2.91	-0.0036

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-1.97	-0.0024
-30	-0.93	-0.0011
-20	-0.83	-0.0010
-10	-0.72	-0.0009
0	-1.77	-0.0022
10	-1.90	-0.0023
20	-1.87	-0.0023
30	-2.00	-0.0024
40	-2.30	-0.0028
50	-1.98	-0.0024
60	-1.85	-0.0023
70	-1.44	-0.0018
80	-2.05	-0.0025
85	-2.45	-0.0030

LTE Band 26 / 5 MHz / 821.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-0.60	-0.0007
12.00	0.56	0.0007
9.00	0.20	0.0002

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	0.12	0.0001
-30	0.13	0.0002
-20	-0.28	-0.0003
-10	0.13	0.0002
0	0.31	0.0004
10	-0.42	-0.0005
20	1.28	0.0016
30	0.01	0.0000
40	0.05	0.0001
50	-0.63	-0.0008
60	-0.19	-0.0002
70	0.15	0.0002
80	-0.26	-0.0003
85	0.76	0.0009

LTE Band 26 / 10 MHz / 819 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-2.44	-0.0030
12.00	-2.16	-0.0026
9.00	-2.89	-0.0035

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-1.74	-0.0021
-30	-2.74	-0.0033
-20	-2.74	-0.0033
-10	-2.40	-0.0029
0	-3.19	-0.0039
10	-2.10	-0.0026
20	-3.13	-0.0038
30	-2.40	-0.0029
40	-2.28	-0.0028
50	-3.39	-0.0041
60	-1.73	-0.0021
70	-2.92	-0.0036
80	-2.97	-0.0036
85	-2.86	-0.0035

Mode 7: LTE Band 41**LTE Band 41 / 5 MHz / 2498.5 MHz**

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-2.79	-0.0011
12.00	-2.52	-0.0010
9.00	-2.76	-0.0011

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-2.16	-0.0009
-30	-3.28	-0.0013
-20	-3.65	-0.0015
-10	-2.34	-0.0009
0	-2.49	-0.0010
10	-3.12	-0.0012
20	-3.69	-0.0015
30	-2.41	-0.0010
40	-3.16	-0.0013
50	-2.92	-0.0012
60	-2.47	-0.0010
70	-2.37	-0.0009
80	-3.60	-0.0014
85	-4.03	-0.0016

LTE Band 41 / 5 MHz / 2593 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-2.10	-0.0008
12.00	-1.33	-0.0005
9.00	-1.91	-0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-2.29	-0.0009
-30	-2.48	-0.0010
-20	-1.38	-0.0005
-10	-1.38	-0.0005
0	-1.62	-0.0006
10	-1.45	-0.0006
20	-1.10	-0.0004
30	-2.39	-0.0009
40	-1.59	-0.0006
50	-1.08	-0.0004
60	-1.91	-0.0007
70	-1.77	-0.0007
80	-1.60	-0.0006
85	-2.04	-0.0008

LTE Band 41 / 5 MHz / 2687.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	2.10	0.0008
12.00	2.32	0.0009
9.00	1.50	0.0006

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	2.99	0.0011
-30	1.39	0.0005
-20	1.18	0.0004
-10	2.20	0.0008
0	1.96	0.0007
10	2.12	0.0008
20	1.98	0.0007
30	1.95	0.0007
40	0.63	0.0002
50	1.61	0.0006
60	1.19	0.0004
70	0.80	0.0003
80	1.60	0.0006
85	2.26	0.0008

LTE Band 41 / 10 MHz / 2501 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-1.55	-0.0006
12.00	-1.31	-0.0005
9.00	-2.06	-0.0008

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-1.10	-0.0004
-30	-1.40	-0.0006
-20	-2.08	-0.0008
-10	-1.60	-0.0006
0	-1.62	-0.0006
10	-1.95	-0.0008
20	-1.35	-0.0005
30	-2.17	-0.0009
40	-0.95	-0.0004
50	-2.60	-0.0010
60	-1.50	-0.0006
70	-2.07	-0.0008
80	-2.02	-0.0008
85	-2.01	-0.0008

LTE Band 41 / 10 MHz / 2593 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-4.51	-0.0017
12.00	-3.92	-0.0015
9.00	-4.54	-0.0018

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-4.29	-0.0017
-30	-4.25	-0.0016
-20	-4.92	-0.0019
-10	-4.97	-0.0019
0	-4.20	-0.0016
10	-4.99	-0.0019
20	-4.73	-0.0018
30	-5.48	-0.0021
40	-3.91	-0.0015
50	-3.93	-0.0015
60	-4.99	-0.0019
70	-4.11	-0.0016
80	-4.41	-0.0017
85	-3.52	-0.0014

LTE Band 41 / 10 MHz / 2685 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	-1.02	-0.0004
12.00	-1.22	-0.0005
9.00	-1.85	-0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	-1.36	-0.0005
-30	-2.22	-0.0008
-20	-1.45	-0.0005
-10	-2.02	-0.0008
0	-1.54	-0.0006
10	-1.22	-0.0005
20	-1.67	-0.0006
30	-2.24	-0.0008
40	-2.42	-0.0009
50	-1.32	-0.0005
60	-1.78	-0.0007
70	-1.61	-0.0006
80	-1.74	-0.0006
85	-2.03	-0.0008

LTE Band 41 / 15 MHz / 2503.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	1.44	0.0006
12.00	1.65	0.0007
9.00	1.16	0.0005

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	1.03	0.0004
-30	1.55	0.0006
-20	0.61	0.0002
-10	0.98	0.0004
0	0.99	0.0004
10	0.44	0.0002
20	2.14	0.0009
30	1.24	0.0005
40	1.29	0.0005
50	0.85	0.0003
60	0.41	0.0002
70	1.11	0.0004
80	0.21	0.0001
85	1.25	0.0005

LTE Band 41 / 15 MHz / 2593 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	1.50	0.0006
12.00	1.45	0.0006
9.00	0.99	0.0004

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	0.56	0.0002
-30	0.24	0.0001
-20	0.92	0.0004
-10	1.04	0.0004
0	1.39	0.0005
10	1.45	0.0006
20	1.12	0.0004
30	0.55	0.0002
40	1.58	0.0006
50	0.78	0.0003
60	1.16	0.0004
70	0.93	0.0004
80	1.48	0.0006
85	0.79	0.0003

LTE Band 41 / 15 MHz / 2682.5 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	1.07	0.0004
12.00	1.36	0.0005
9.00	0.45	0.0002

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	1.47	0.0005
-30	1.04	0.0004
-20	0.76	0.0003
-10	1.12	0.0004
0	0.86	0.0003
10	1.42	0.0005
20	1.02	0.0004
30	0.78	0.0003
40	0.69	0.0003
50	0.88	0.0003
60	-0.04	0.0000
70	1.59	0.0006
80	0.79	0.0003
85	0.58	0.0002

LTE Band 41 / 20 MHz / 2506 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	1.59	0.0006
12.00	1.94	0.0008
9.00	2.22	0.0009

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	0.78	0.0003
-30	2.05	0.0008
-20	1.31	0.0005
-10	1.69	0.0007
0	1.34	0.0005
10	1.74	0.0007
20	0.70	0.0003
30	1.01	0.0004
40	2.35	0.0009
50	1.36	0.0005
60	1.30	0.0005
70	2.02	0.0008
80	0.75	0.0003
85	0.57	0.0002

LTE Band 41 / 20 MHz / 2593 MHz

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	0.85	0.0003
12.00	1.35	0.0005
9.00	0.94	0.0004

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	0.74	0.0003
-30	1.34	0.0005
-20	0.81	0.0003
-10	1.08	0.0004
0	0.24	0.0001
10	0.83	0.0003
20	1.35	0.0005
30	0.34	0.0001
40	1.07	0.0004
50	0.45	0.0002
60	0.18	0.0001
70	1.09	0.0004
80	1.20	0.0005
85	0.33	0.0001

LTE Band 41 / 20 MHz / 2680 MHz

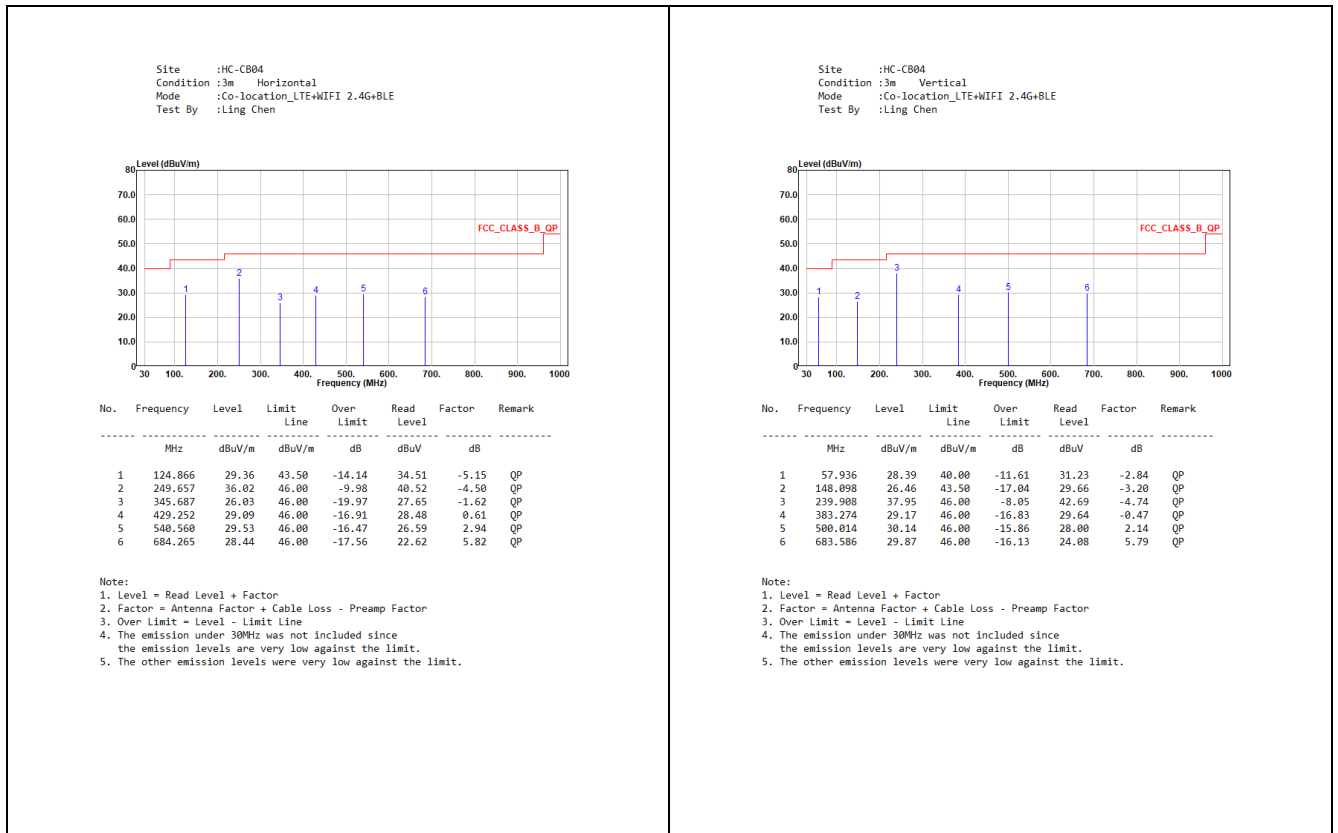
Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
18.00	0.91	0.0003
12.00	1.33	0.0005
9.00	0.02	0.0000

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-40	1.04	0.0004
-30	0.48	0.0002
-20	1.39	0.0005
-10	1.21	0.0005
0	0.82	0.0003
10	0.64	0.0002
20	0.64	0.0002
30	1.31	0.0005
40	0.63	0.0002
50	0.36	0.0001
60	1.33	0.0005
70	1.43	0.0005
80	0.44	0.0002
85	0.65	0.0002

Appendix G. Test Result of Radiated Emissions Co-location

WWAN LTE + WiFi 2.4 GHz + Bluetooth

30 MHz ~ 1 GHz:



Above 1 GHz:

