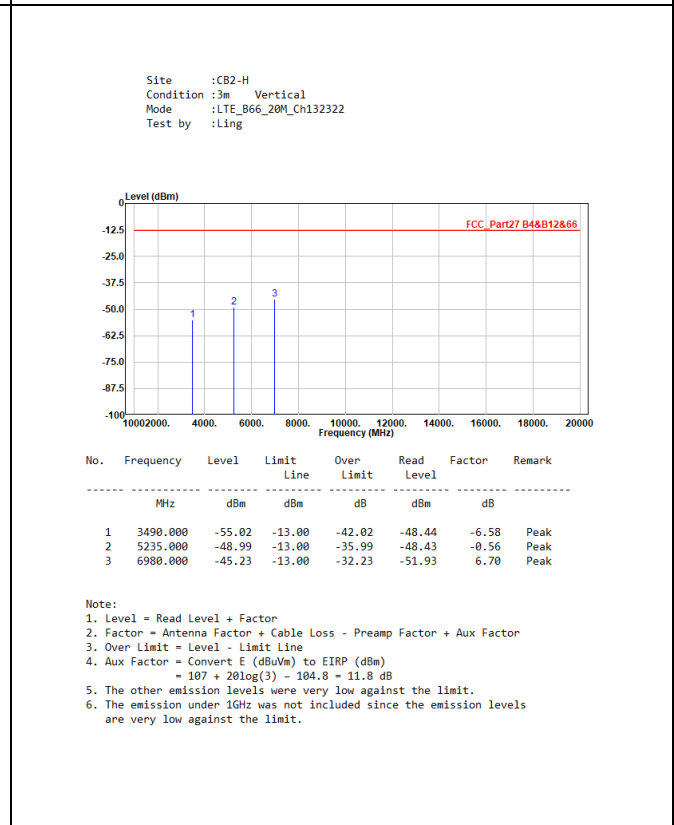
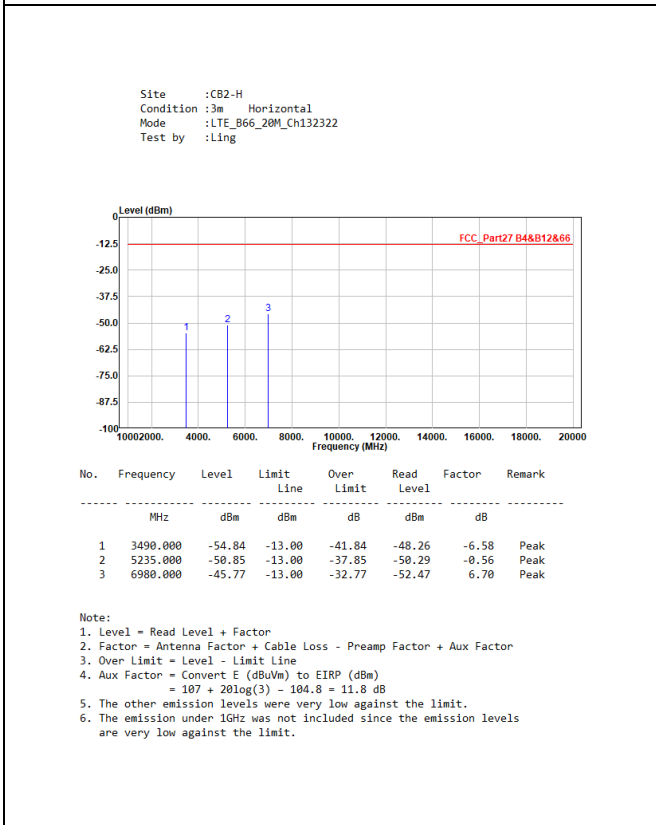
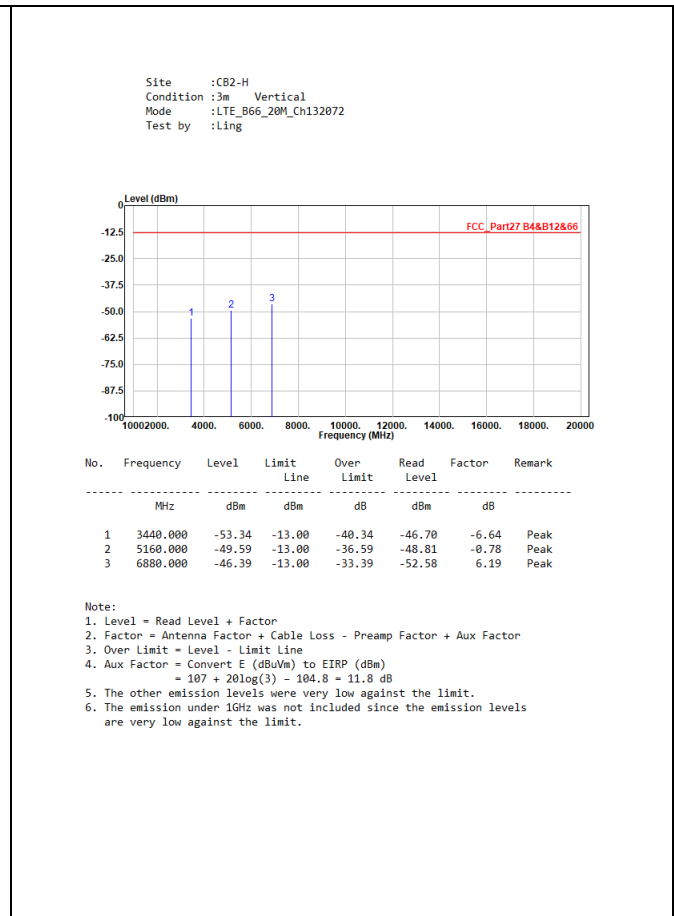
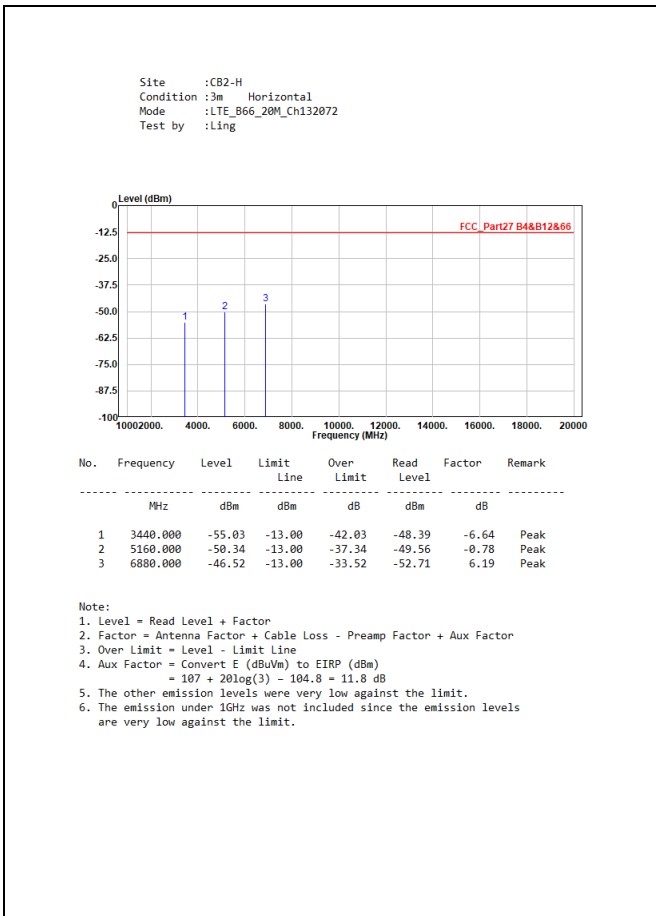


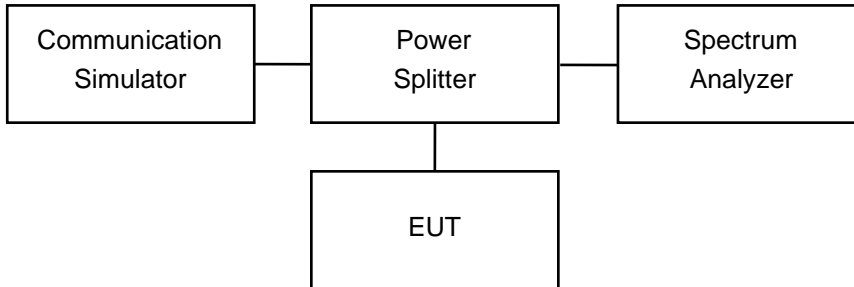
Mode 4: LTE Band 66





7. Conducted Band Edge

7.1. Test Setup



7.2. Test Procedure

1. The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The path loss was compensated to the results for each measurement.
2. In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

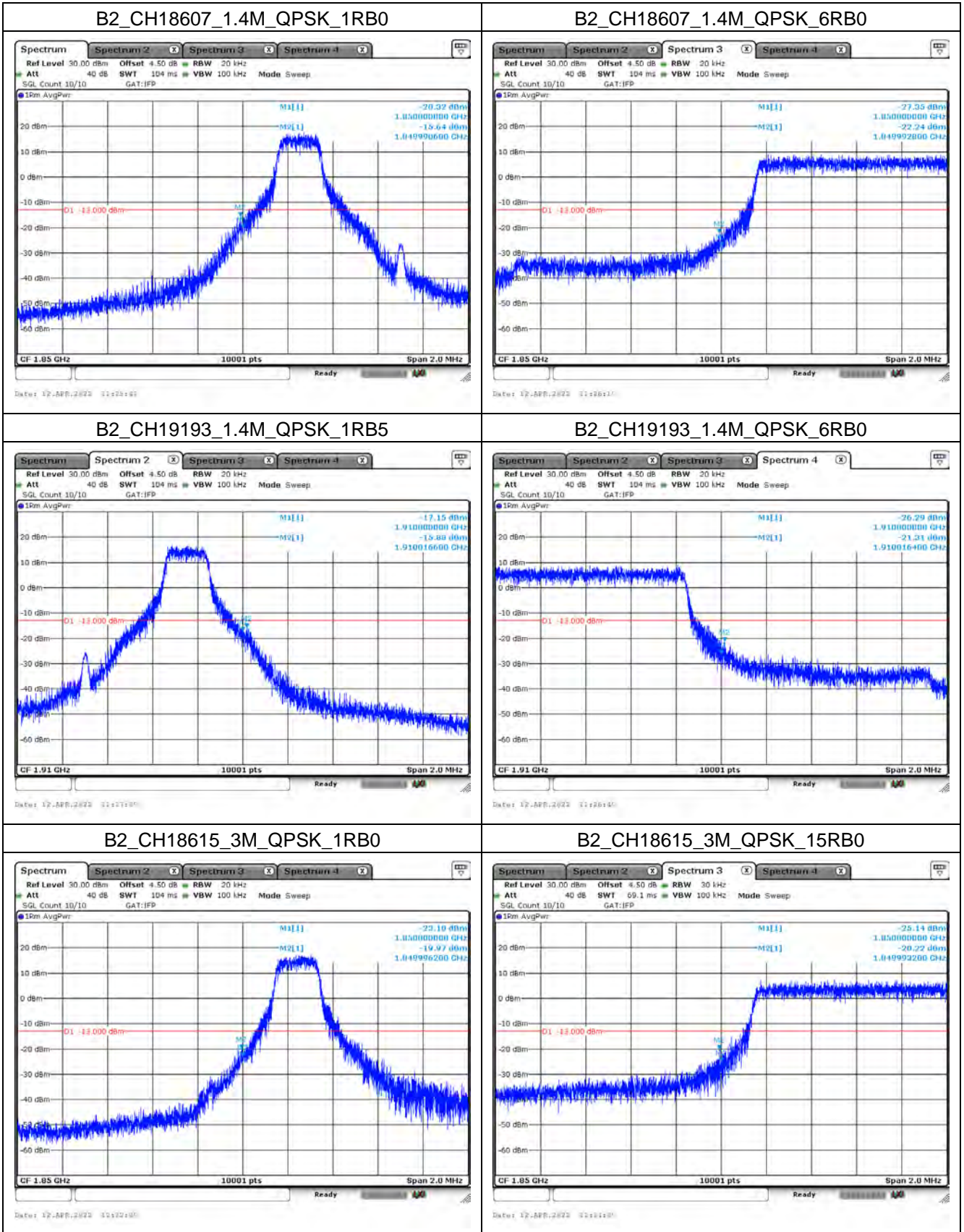
7.3. Test Methodology and Reference Procedures

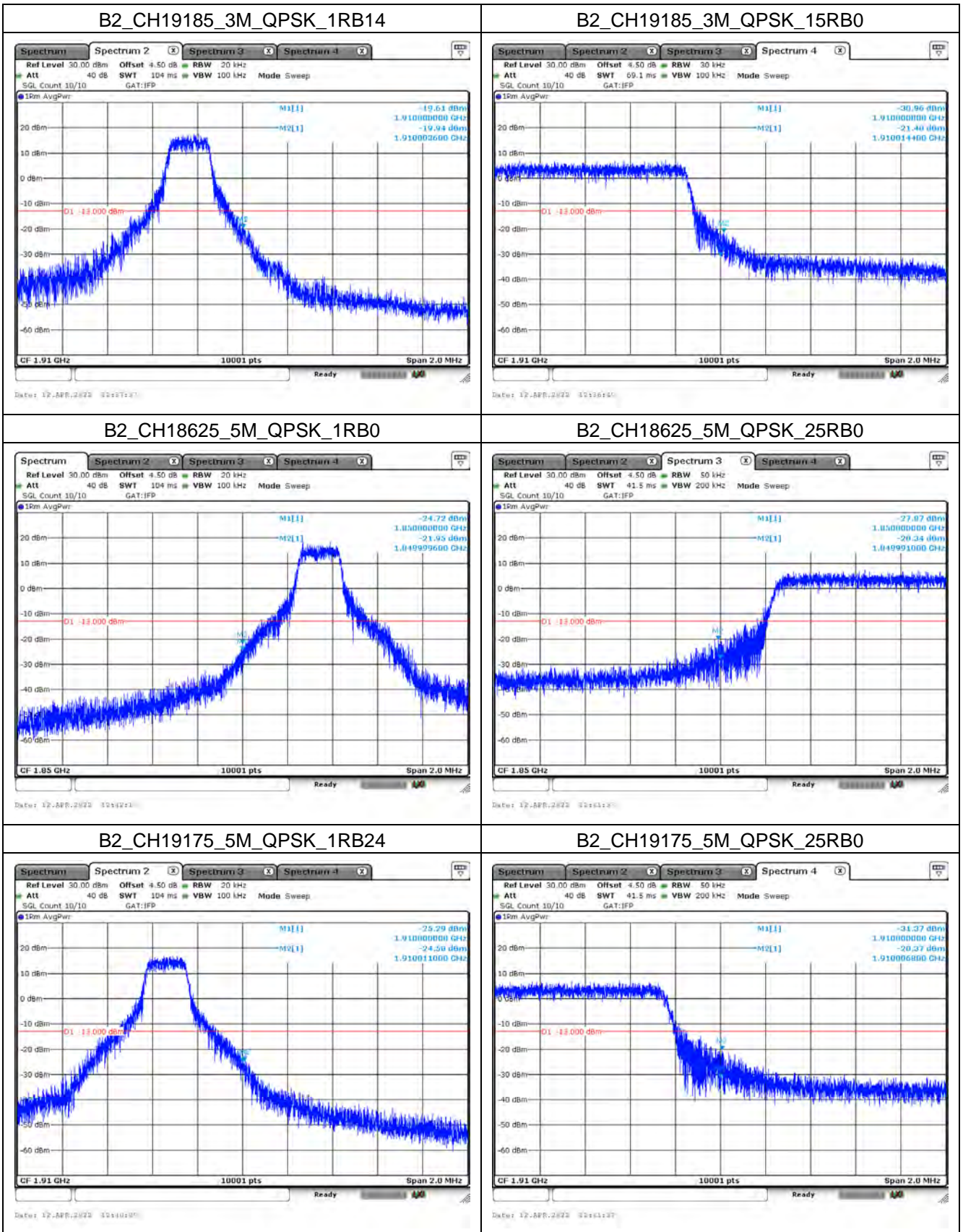
KDB 971168 D01 Power Meas License Digital Systems v03r01

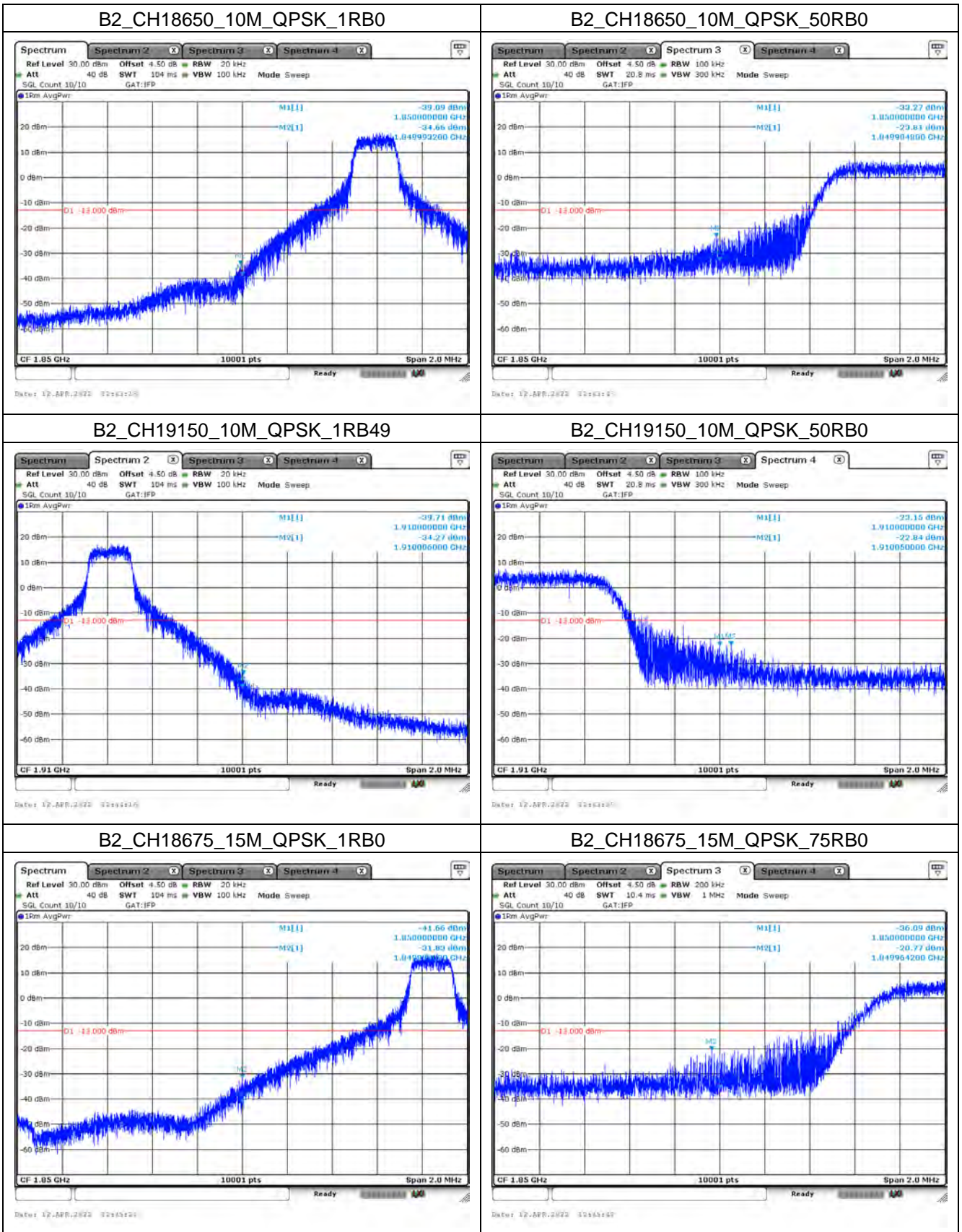
ANSI C63.26-2015

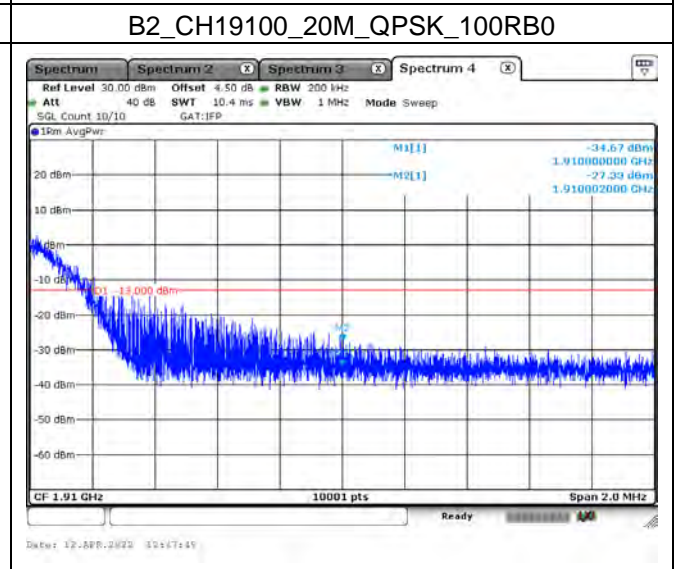
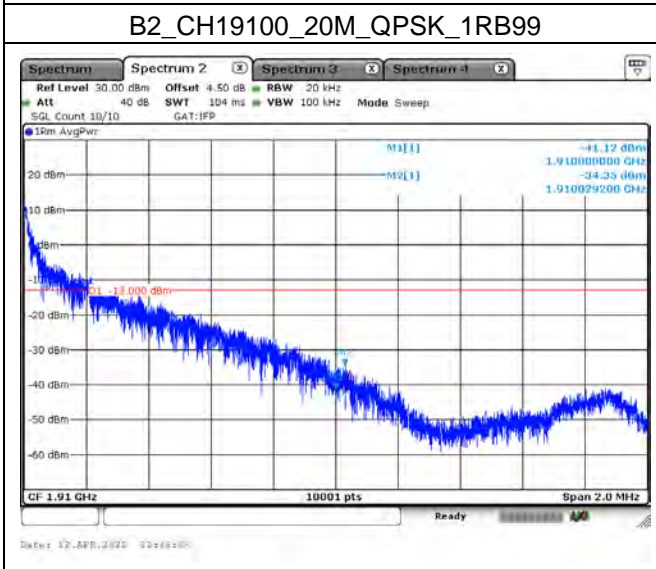
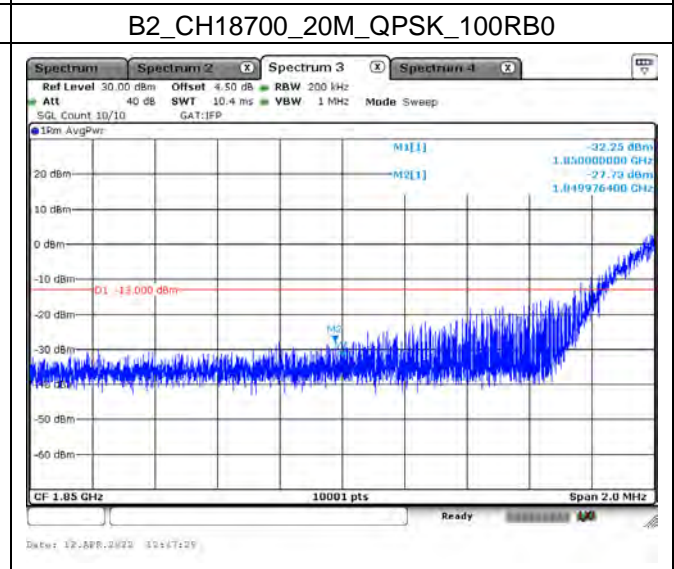
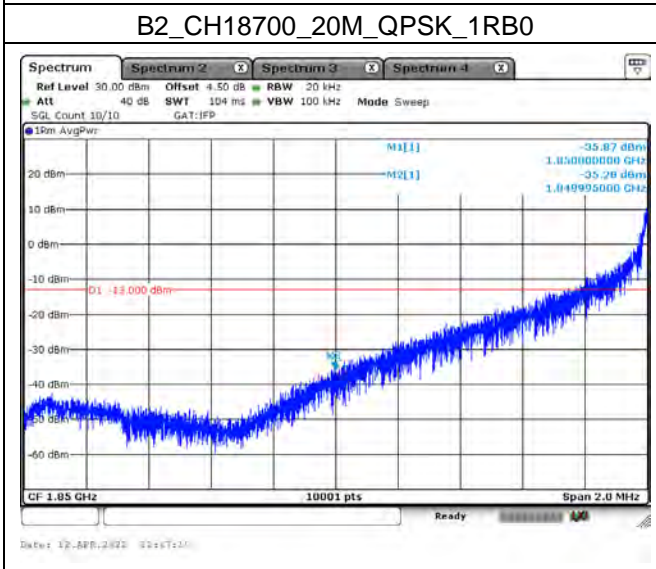
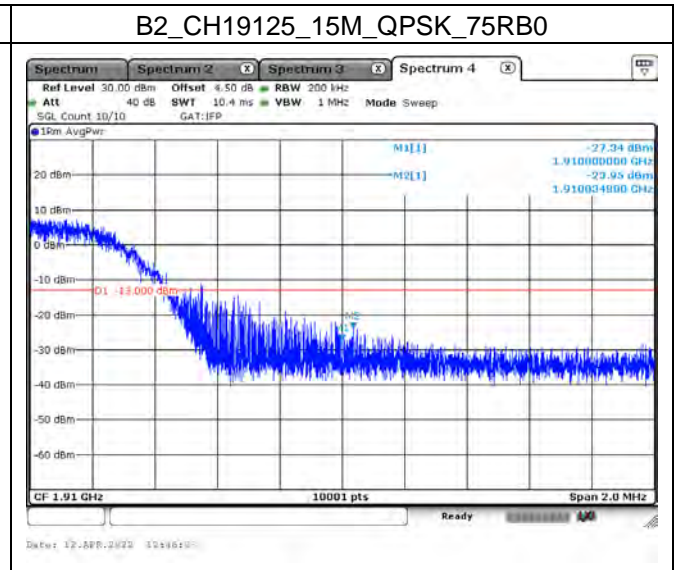
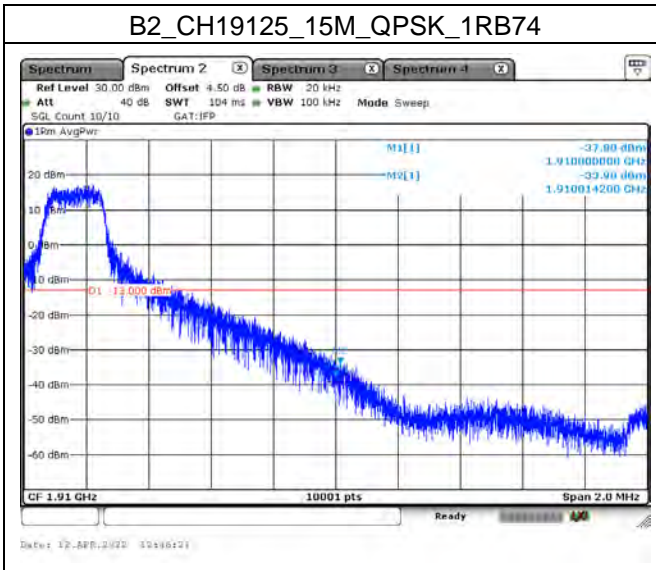
7.4. Test Result of Conducted Band Edge

Mode 1: LTE Band 2

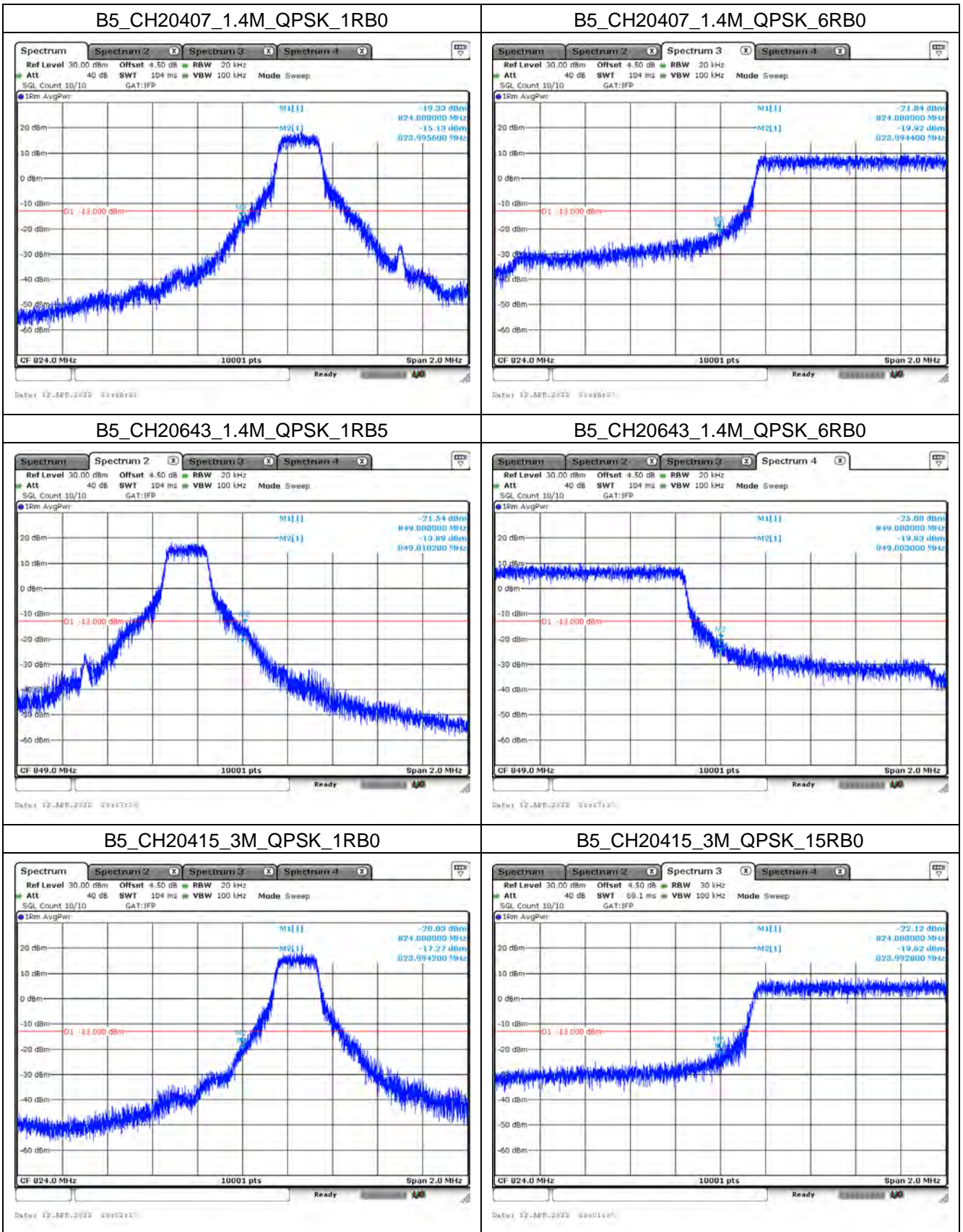


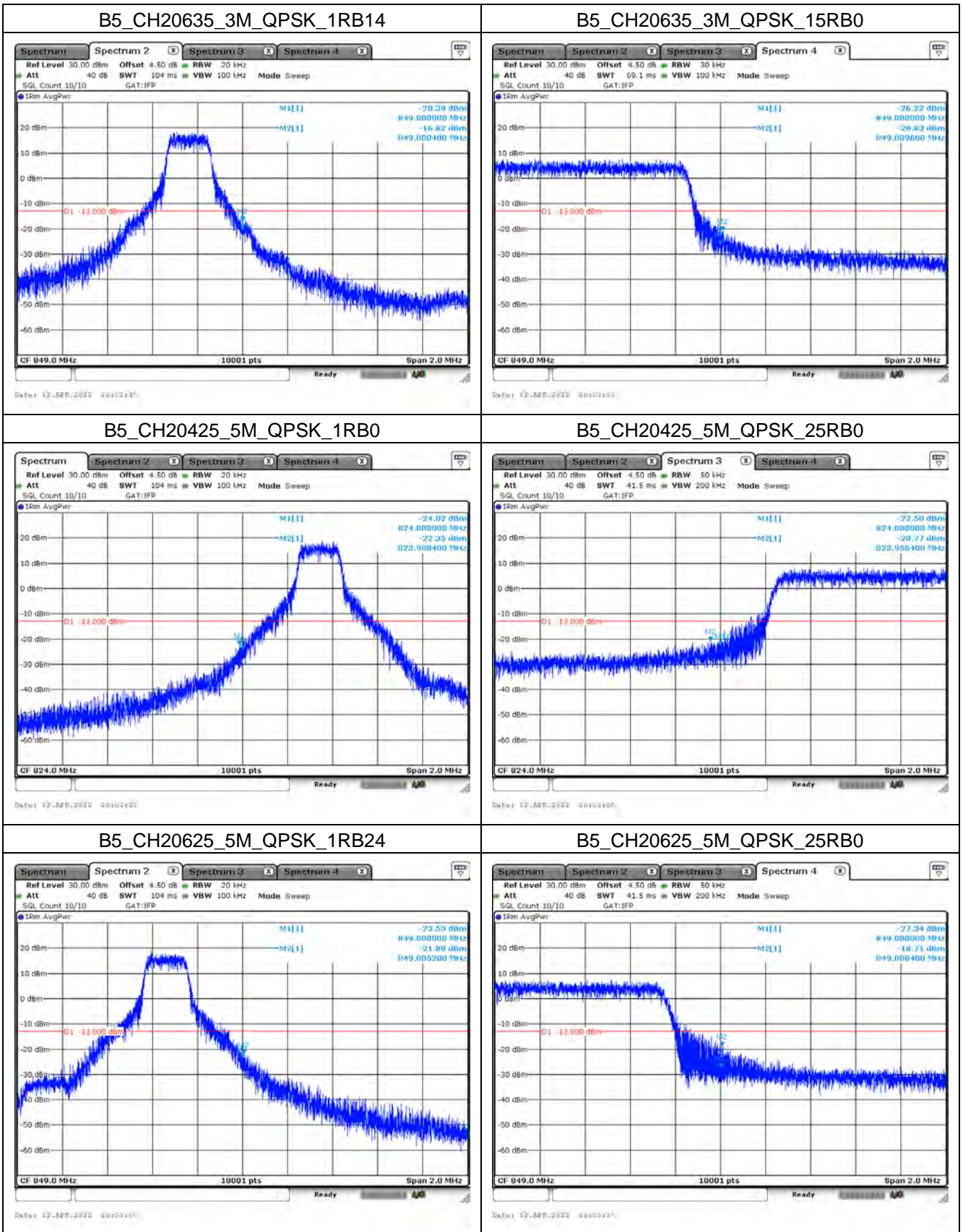


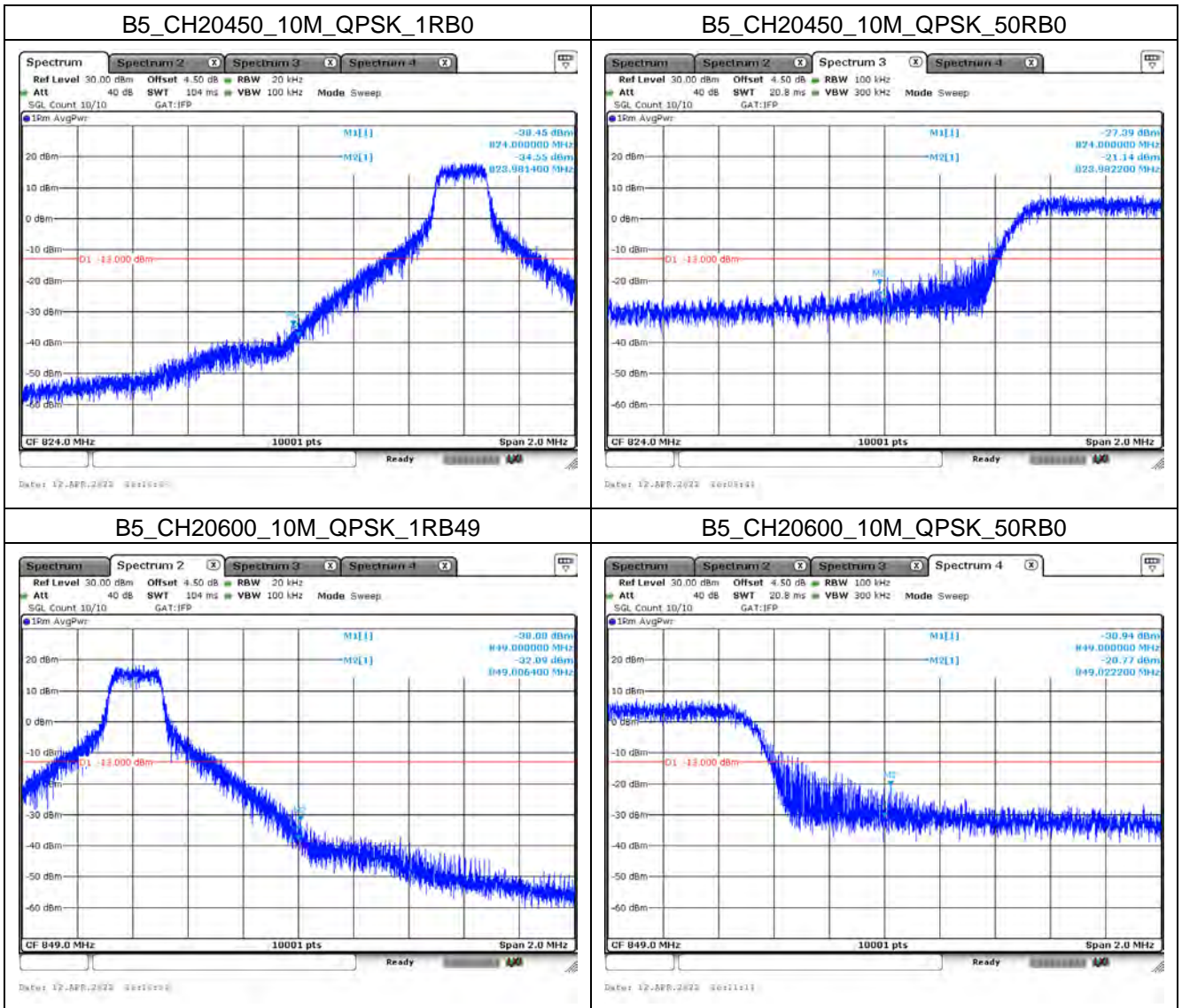




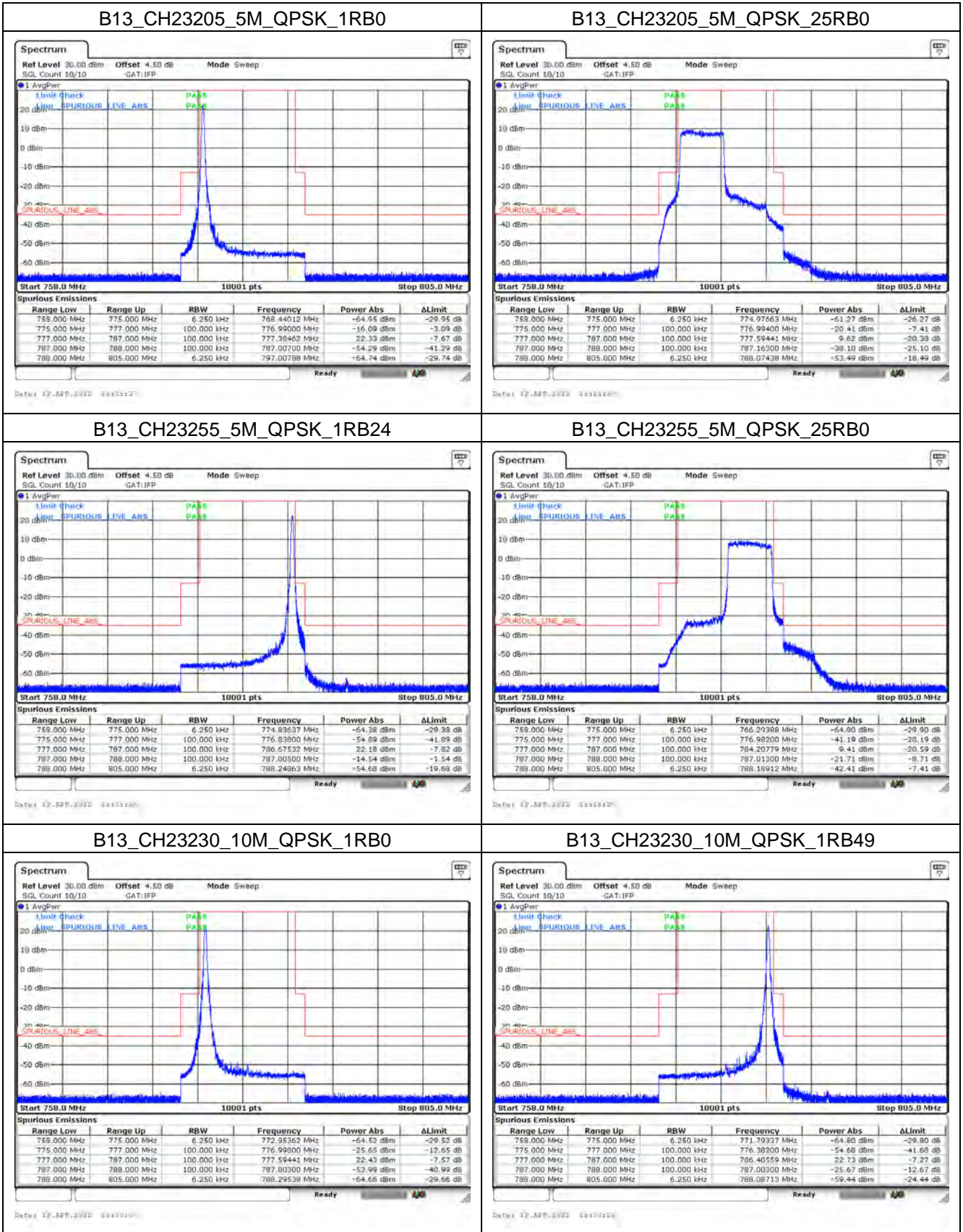
Mode 2: LTE Band 5

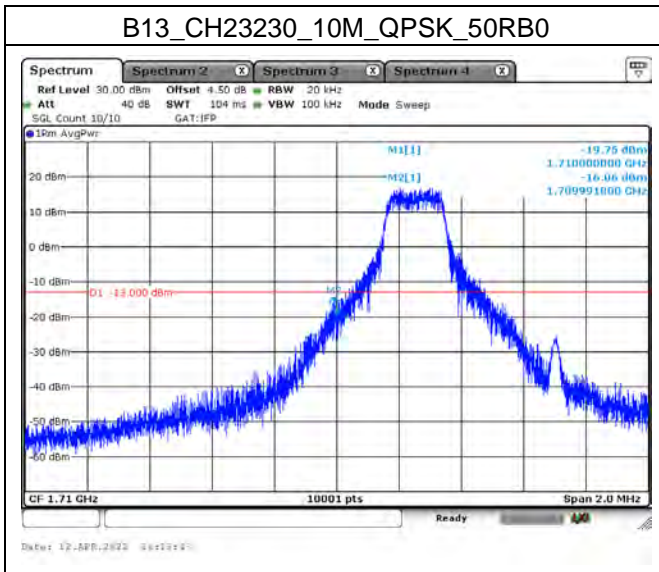




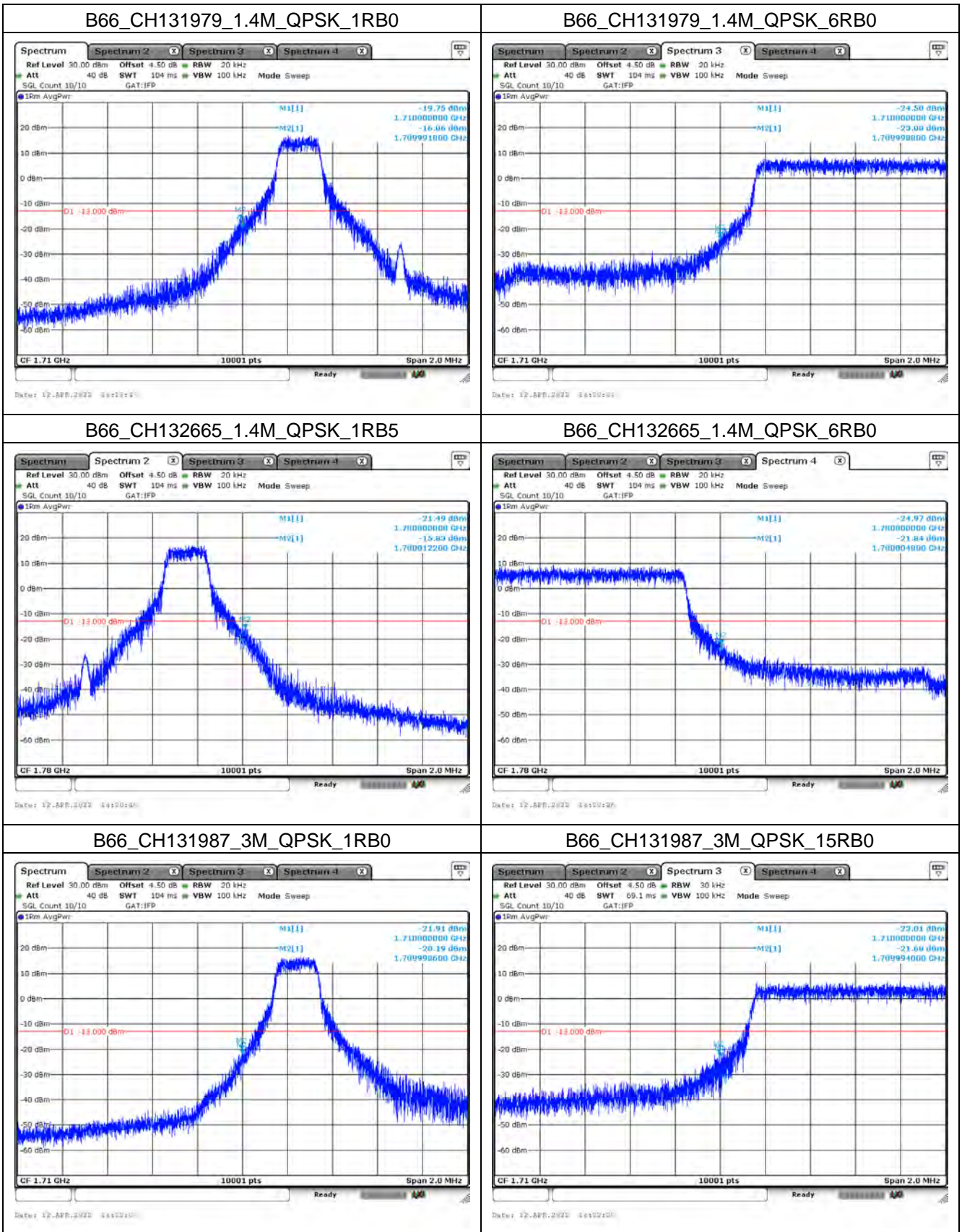


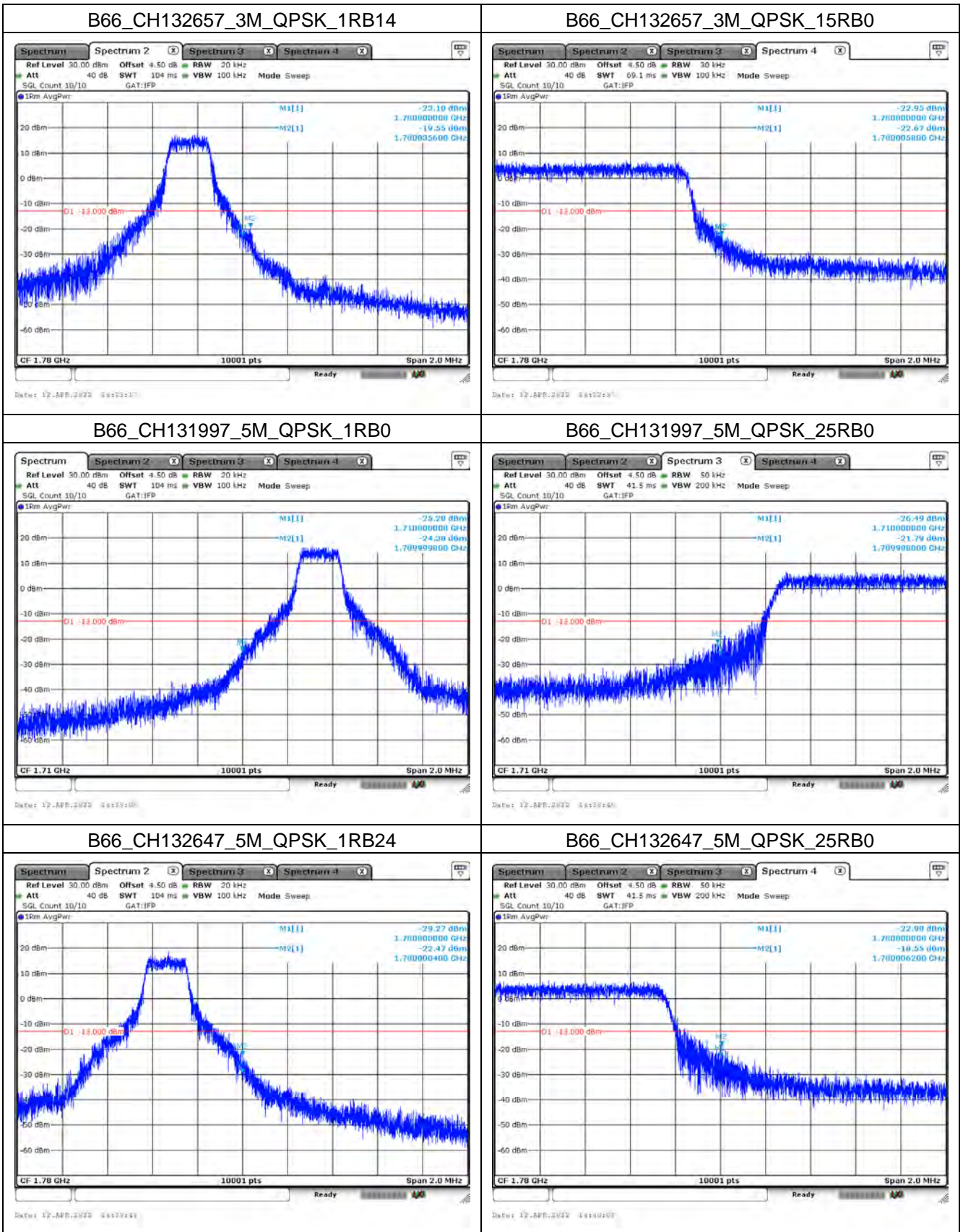
Mode 3: LTE Band 13

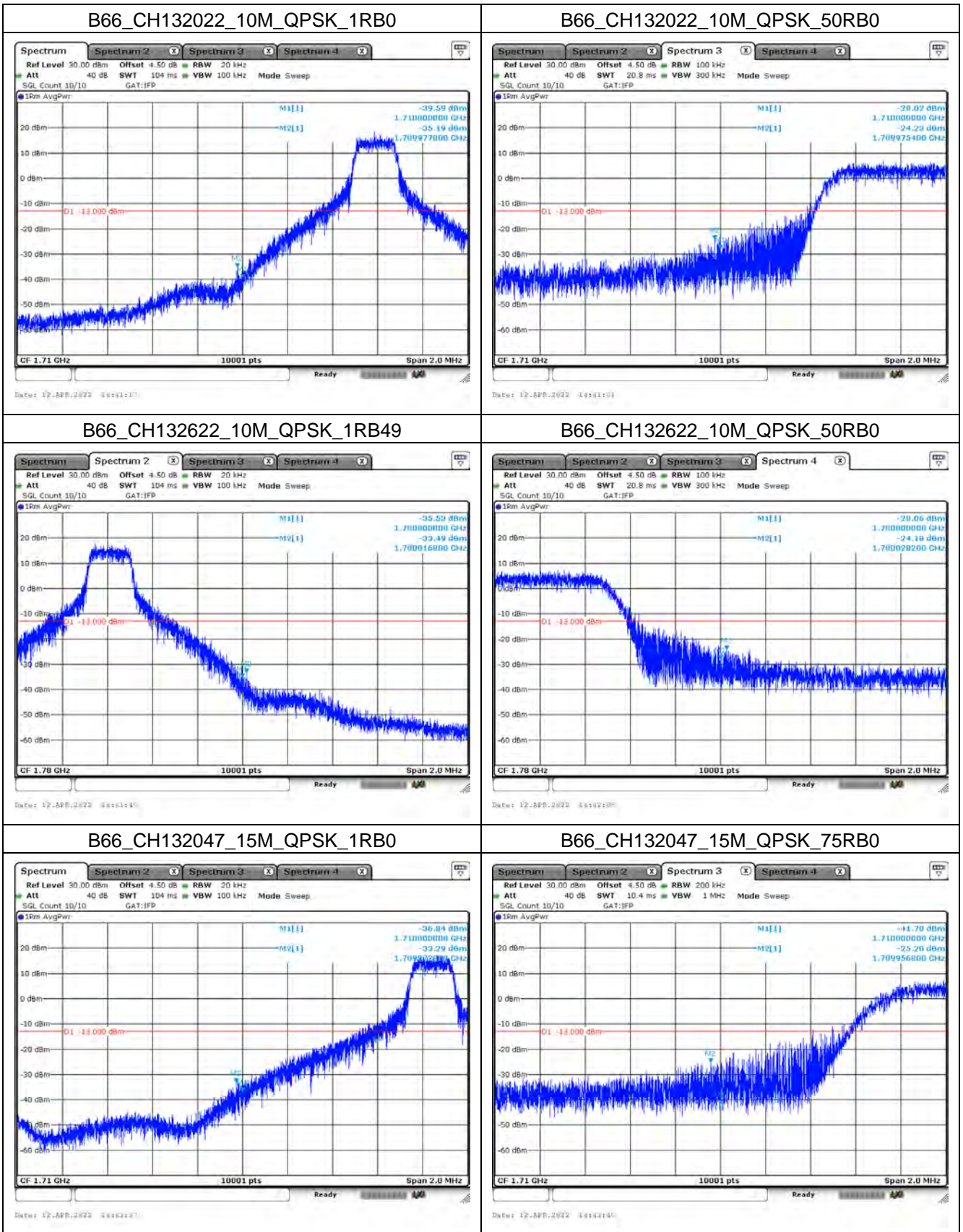


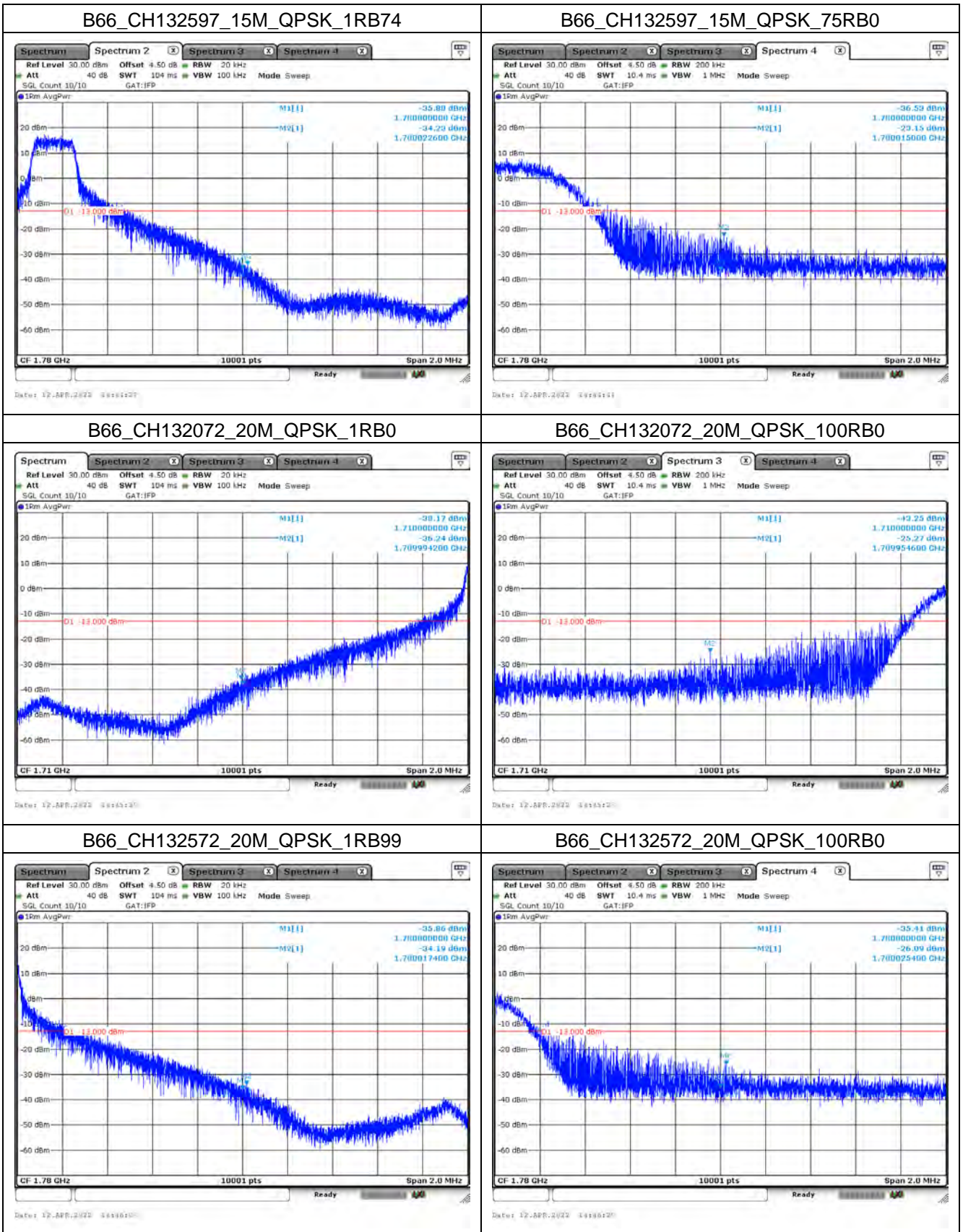


Mode 4: LTE Band 66



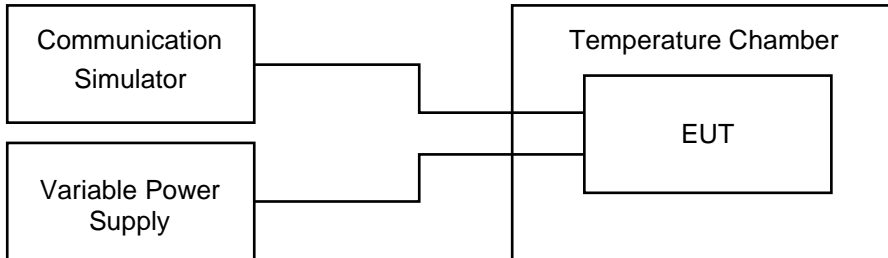






8. Frequency Stability

8.1. Test Setup



8.2. Test Procedure

Frequency Stability under Temperature Variations:

The EUT under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a communication simulator. The EUT was placed inside the temperature chamber. Set the EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC or DC power supply to power the EUT and set the voltage to rated voltage. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

8.3. Test Methodology and Reference Procedures

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8.4. Test Result of Frequency Stability

Mode 1: LTE Band 2

LTE Band 2 / 1.4 MHz / 1850.7 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.30	0.0012
120.00	3.12	0.0017
102.00	3.11	0.0017

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	3.18	0.0017
-20	1.55	0.0008
-10	2.09	0.0011
0	2.47	0.0013
10	2.83	0.0015
20	3.18	0.0017
30	2.21	0.0012
40	2.71	0.0015
50	3.55	0.0019

LTE Band 2 / 1.4 MHz / 1909.3 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.73	0.0009
120.00	2.66	0.0014
102.00	1.83	0.0010

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.16	0.0011
-20	1.96	0.0010
-10	2.65	0.0014
0	2.14	0.0011
10	1.24	0.0006
20	2.32	0.0012
30	1.79	0.0009
40	2.41	0.0013
50	1.27	0.0007

LTE Band 2 / 3 MHz / 1851.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.26	0.0018
120.00	3.02	0.0016
102.00	2.07	0.0011

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	3.01	0.0016
-20	2.50	0.0014
-10	1.95	0.0011
0	1.67	0.0009
10	2.34	0.0013
20	2.62	0.0014
30	2.69	0.0015
40	2.32	0.0013
50	3.33	0.0018

LTE Band 2 / 3 MHz / 1908.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.23	0.0017
120.00	2.86	0.0015
102.00	1.96	0.0010

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.23	0.0012
-20	2.39	0.0013
-10	2.43	0.0013
0	2.60	0.0014
10	1.61	0.0008
20	2.45	0.0013
30	2.93	0.0015
40	1.71	0.0009
50	2.41	0.0013

LTE Band 2 / 5 MHz / 1852.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.13	0.0006
120.00	2.41	0.0013
102.00	1.80	0.0010

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.51	0.0008
-20	2.50	0.0013
-10	1.96	0.0011
0	1.58	0.0009
10	0.92	0.0005
20	1.13	0.0006
30	1.34	0.0007
40	2.18	0.0012
50	2.60	0.0014

LTE Band 2 / 5 MHz / 1907.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.28	0.0017
120.00	3.02	0.0016
102.00	2.79	0.0015

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.83	0.0015
-20	3.06	0.0016
-10	3.61	0.0019
0	2.46	0.0013
10	2.81	0.0015
20	2.51	0.0013
30	2.90	0.0015
40	2.29	0.0012
50	2.78	0.0015

LTE Band 2 / 10 MHz / 1855 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.74	0.0009
120.00	2.74	0.0015
102.00	1.52	0.0008

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.24	0.0012
-20	1.75	0.0009
-10	1.79	0.0010
0	1.99	0.0011
10	1.42	0.0008
20	1.55	0.0008
30	2.69	0.0015
40	2.32	0.0013
50	1.72	0.0009

LTE Band 2 / 10 MHz / 1905 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.61	0.0014
120.00	2.82	0.0015
102.00	1.36	0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.77	0.0015
-20	1.20	0.0006
-10	2.68	0.0014
0	2.78	0.0015
10	1.65	0.0009
20	1.25	0.0007
30	1.60	0.0008
40	1.99	0.0010
50	2.12	0.0011

LTE Band 2 / 15 MHz / 1857.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.26	0.0007
120.00	2.31	0.0012
102.00	1.20	0.0006

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.23	0.0012
-20	1.29	0.0007
-10	1.54	0.0008
0	1.89	0.0010
10	1.70	0.0009
20	0.76	0.0004
30	2.64	0.0014
40	1.76	0.0009
50	1.69	0.0009

LTE Band 2 / 15 MHz / 1902.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.27	0.0012
120.00	2.37	0.0012
102.00	1.59	0.0008

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.64	0.0009
-20	1.42	0.0007
-10	2.07	0.0011
0	1.69	0.0009
10	1.54	0.0008
20	1.23	0.0006
30	2.50	0.0013
40	1.47	0.0008
50	2.01	0.0011

LTE Band 2 / 20 MHz / 1860 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.45	0.0008
120.00	2.31	0.0012
102.00	1.28	0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.04	0.0011
-20	2.27	0.0012
-10	1.99	0.0011
0	0.94	0.0005
10	2.54	0.0014
20	0.89	0.0005
30	2.26	0.0012
40	1.49	0.0008
50	1.56	0.0008

LTE Band 2 / 20 MHz / 1900 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.37	0.0012
120.00	2.26	0.0012
102.00	1.72	0.0009

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.04	0.0011
-20	1.25	0.0007
-10	1.43	0.0008
0	1.25	0.0007
10	2.46	0.0013
20	1.77	0.0009
30	2.16	0.0011
40	1.91	0.0010
50	2.58	0.0014

Mode 2: LTE Band 5**LTE Band 5 / 1.4 MHz / 824.7 MHz**

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.23	0.0039
120.00	3.12	0.0038
102.00	2.03	0.0025

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	3.38	0.0041
-20	1.95	0.0024
-10	2.61	0.0032
0	2.76	0.0033
10	2.68	0.0032
20	2.09	0.0025
30	1.65	0.0020
40	3.47	0.0042
50	2.66	0.0032

LTE Band 5 / 1.4 MHz / 848.3 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.85	0.0022
120.00	2.87	0.0034
102.00	2.12	0.0025

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.05	0.0024
-20	1.58	0.0019
-10	2.08	0.0025
0	2.87	0.0034
10	3.21	0.0038
20	1.89	0.0022
30	3.13	0.0037
40	2.30	0.0027
50	2.41	0.0028

LTE Band 5 / 3 MHz / 825.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.09	0.0025
120.00	2.47	0.0030
102.00	1.69	0.0020

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.27	0.0027
-20	1.40	0.0017
-10	2.51	0.0030
0	2.40	0.0029
10	1.76	0.0021
20	1.28	0.0016
30	1.73	0.0021
40	1.55	0.0019
50	2.81	0.0034

LTE Band 5 / 3 MHz / 847.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.05	0.0024
120.00	2.49	0.0029
102.00	1.28	0.0015

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.28	0.0027
-20	1.96	0.0023
-10	1.59	0.0019
0	1.85	0.0022
10	1.15	0.0014
20	2.58	0.0030
30	2.31	0.0027
40	2.51	0.0030
50	2.38	0.0028

LTE Band 5 / 5 MHz / 826.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.31	0.0028
120.00	2.79	0.0034
102.00	1.85	0.0022

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.65	0.0032
-20	2.92	0.0035
-10	2.19	0.0026
0	2.75	0.0033
10	1.98	0.0024
20	1.77	0.0021
30	1.96	0.0024
40	3.23	0.0039
50	2.72	0.0033

LTE Band 5 / 5 MHz / 846.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.57	0.0019
120.00	2.71	0.0032
102.00	2.86	0.0034

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.77	0.0033
-20	2.22	0.0026
-10	3.41	0.0040
0	2.44	0.0029
10	1.97	0.0023
20	1.34	0.0016
30	1.64	0.0019
40	2.43	0.0029
50	2.29	0.0027

LTE Band 5 / 10 MHz / 829 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.32	0.0028
120.00	2.49	0.0030
102.00	2.35	0.0028

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.56	0.0031
-20	1.48	0.0018
-10	1.45	0.0017
0	1.72	0.0021
10	1.60	0.0019
20	1.47	0.0018
30	1.78	0.0021
40	2.22	0.0027
50	2.24	0.0027

LTE Band 5 / 10 MHz / 844 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.35	0.0040
120.00	2.55	0.0030
102.00	1.97	0.0023

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.94	0.0023
-20	2.79	0.0033
-10	0.98	0.0012
0	1.98	0.0023
10	2.20	0.0026
20	2.06	0.0024
30	1.75	0.0021
40	2.66	0.0032
50	1.93	0.0023

Mode 3: LTE Band 13**LTE Band 13 / 5 MHz / 779.5 MHz**

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.19	0.0028
120.00	2.41	0.0031
102.00	1.93	0.0025

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.33	0.0030
-20	2.19	0.0028
-10	2.41	0.0031
0	2.83	0.0036
10	1.47	0.0019
20	1.76	0.0023
30	1.11	0.0014
40	2.19	0.0028
50	2.17	0.0028

LTE Band 13 / 5 MHz / 784.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.72	0.0022
120.00	2.54	0.0032
102.00	1.49	0.0019

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.26	0.0029
-20	1.85	0.0024
-10	2.75	0.0035
0	2.27	0.0029
10	1.43	0.0018
20	2.19	0.0028
30	1.96	0.0025
40	2.33	0.0030
50	1.93	0.0025

LTE Band 13 / 10 MHz / 782 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.55	0.0020
120.00	2.38	0.0030
102.00	1.97	0.0025

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.22	0.0028
-20	2.21	0.0028
-10	1.87	0.0024
0	2.71	0.0035
10	1.06	0.0014
20	1.41	0.0018
30	2.62	0.0034
40	1.63	0.0021
50	1.40	0.0018

Mode 4: LTE Band 66**LTE Band 66 / 1.4 MHz / 1710.7 MHz**

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.80	0.0011
120.00	2.56	0.0015
102.00	2.25	0.0013

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.79	0.0010
-20	2.21	0.0013
-10	1.54	0.0009
0	1.60	0.0009
10	2.72	0.0016
20	1.10	0.0006
30	2.44	0.0014
40	2.34	0.0014
50	1.39	0.0008

LTE Band 66 / 1.4 MHz / 1779.3 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.82	0.0016
120.00	2.31	0.0013
102.00	2.09	0.0012

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.24	0.0007
-20	1.26	0.0007
-10	0.82	0.0005
0	1.93	0.0011
10	2.80	0.0016
20	1.65	0.0009
30	2.04	0.0011
40	1.70	0.0010
50	2.26	0.0013

LTE Band 66 / 3 MHz / 1711.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.03	0.0012
120.00	1.92	0.0011
102.00	1.47	0.0009

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.69	0.0010
-20	1.50	0.0009
-10	1.22	0.0007
0	1.49	0.0009
10	1.65	0.0010
20	1.60	0.0009
30	1.38	0.0008
40	1.36	0.0008
50	1.53	0.0009

LTE Band 66 / 3 MHz / 1778.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	0.84	0.0005
120.00	1.63	0.0009
102.00	0.48	0.0003

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.18	0.0007
-20	1.40	0.0008
-10	0.88	0.0005
0	1.51	0.0008
10	1.72	0.0010
20	0.88	0.0005
30	0.75	0.0004
40	0.10	0.0001
50	1.11	0.0006

LTE Band 66 / 5 MHz / 1712.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.66	0.0016
120.00	2.97	0.0017
102.00	1.85	0.0011

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.82	0.0016
-20	1.64	0.0010
-10	2.51	0.0015
0	2.74	0.0016
10	2.71	0.0016
20	2.74	0.0016
30	3.26	0.0019
40	2.54	0.0015
50	2.75	0.0016

LTE Band 66 / 5 MHz / 1777.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.83	0.0016
120.00	2.90	0.0016
102.00	1.71	0.0010

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.01	0.0011
-20	3.60	0.0020
-10	2.48	0.0014
0	2.31	0.0013
10	1.90	0.0011
20	2.44	0.0014
30	2.59	0.0015
40	2.05	0.0012
50	2.01	0.0011

LTE Band 66 / 10 MHz / 1715 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.07	0.0006
120.00	2.19	0.0013
102.00	2.15	0.0013

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.43	0.0008
-20	1.51	0.0009
-10	0.67	0.0004
0	1.39	0.0008
10	1.52	0.0009
20	1.83	0.0011
30	1.49	0.0009
40	2.30	0.0013
50	1.52	0.0009

LTE Band 66 / 10 MHz / 1775 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.39	0.0008
120.00	2.24	0.0013
102.00	2.33	0.0013

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.38	0.0008
-20	1.28	0.0007
-10	1.42	0.0008
0	2.36	0.0013
10	0.66	0.0004
20	1.56	0.0009
30	1.56	0.0009
40	1.01	0.0006
50	1.69	0.0010

LTE Band 66 / 15 MHz / 1717.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.88	0.0011
120.00	2.32	0.0014
102.00	1.56	0.0009

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.32	0.0014
-20	2.40	0.0014
-10	2.81	0.0016
0	2.82	0.0016
10	2.01	0.0012
20	1.85	0.0011
30	1.27	0.0007
40	2.51	0.0015
50	2.84	0.0017

LTE Band 66 / 15 MHz / 1772.5 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.09	0.0017
120.00	2.84	0.0016
102.00	2.38	0.0013

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.42	0.0008
-20	2.09	0.0012
-10	2.55	0.0014
0	2.59	0.0015
10	2.96	0.0017
20	1.62	0.0009
30	2.53	0.0014
40	1.90	0.0011
50	1.96	0.0011

LTE Band 66 / 20 MHz / 1720 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.67	0.0016
120.00	2.88	0.0017
102.00	2.46	0.0014

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.54	0.0015
-20	2.84	0.0017
-10	2.07	0.0012
0	2.41	0.0014
10	1.85	0.0011
20	2.89	0.0017
30	1.55	0.0009
40	2.63	0.0015
50	2.17	0.0013

LTE Band 66 / 20 MHz / 1770 MHz

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.68	0.0009
120.00	2.67	0.0015
102.00	1.87	0.0011

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.44	0.0014
-20	2.83	0.0016
-10	1.70	0.0010
0	1.84	0.0010
10	2.22	0.0013
20	2.10	0.0012
30	2.39	0.0014
40	1.34	0.0008
50	1.57	0.0009