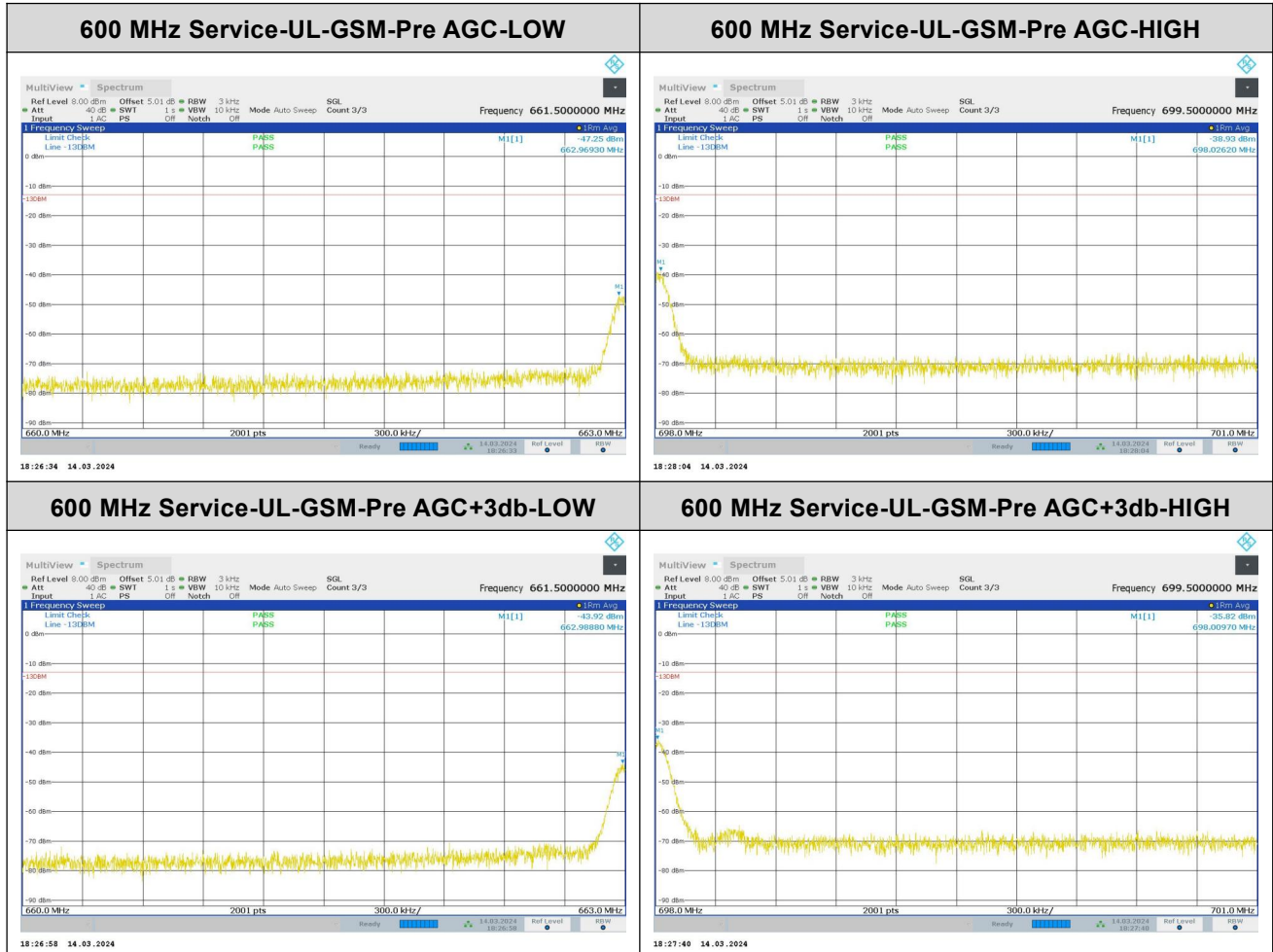


3.4.4 Test results

600 MHz Service



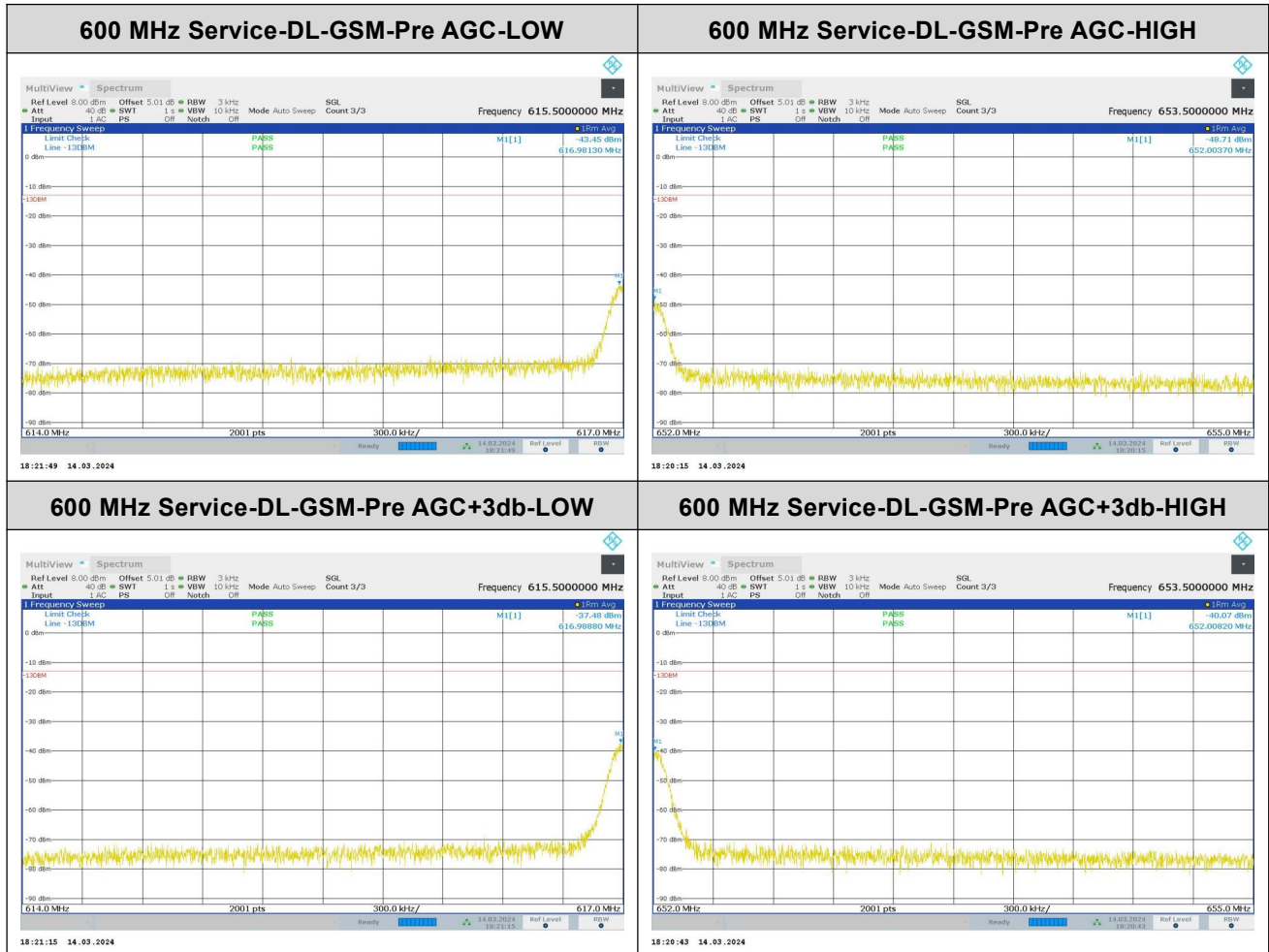
600 MHz Service



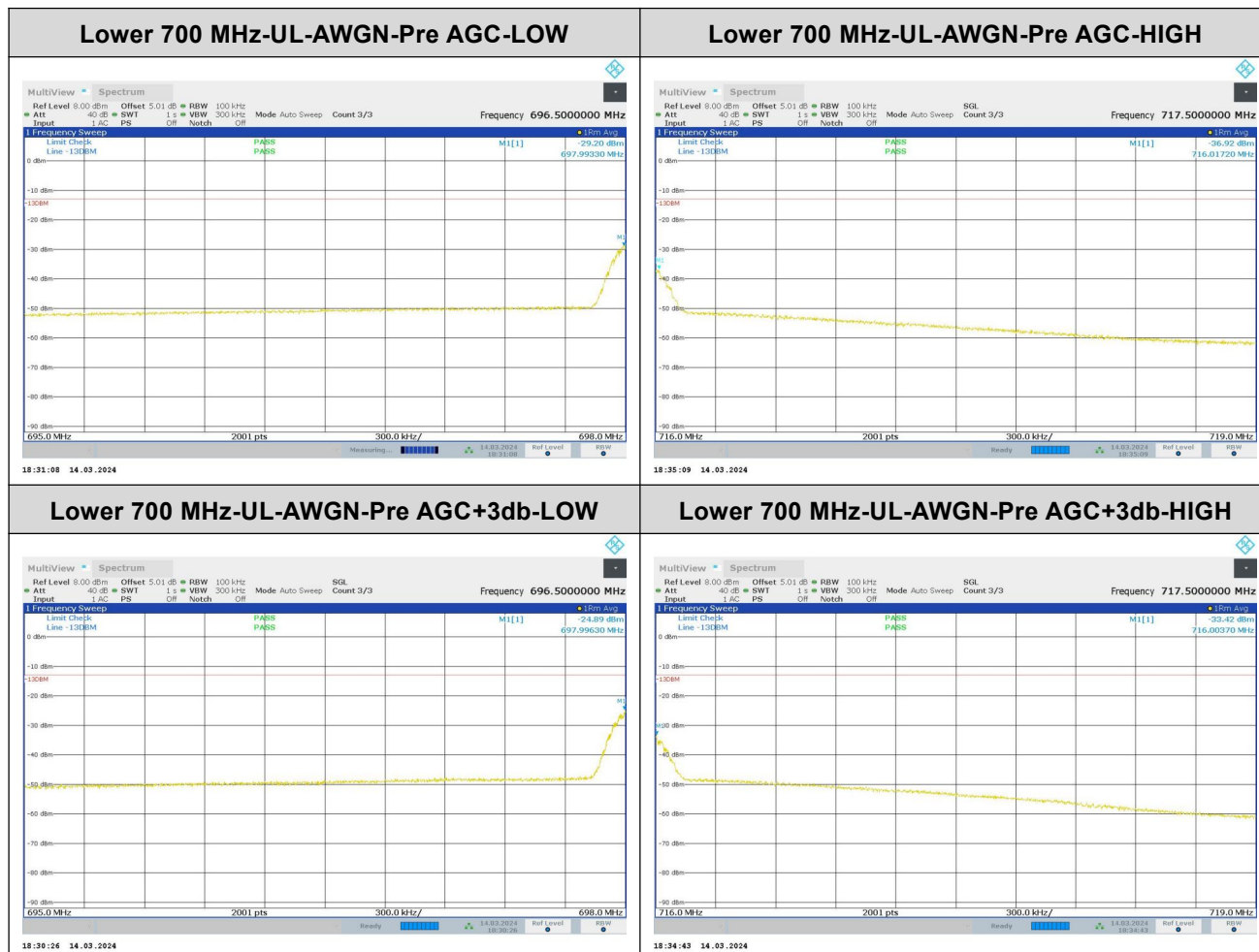
600 MHz Service



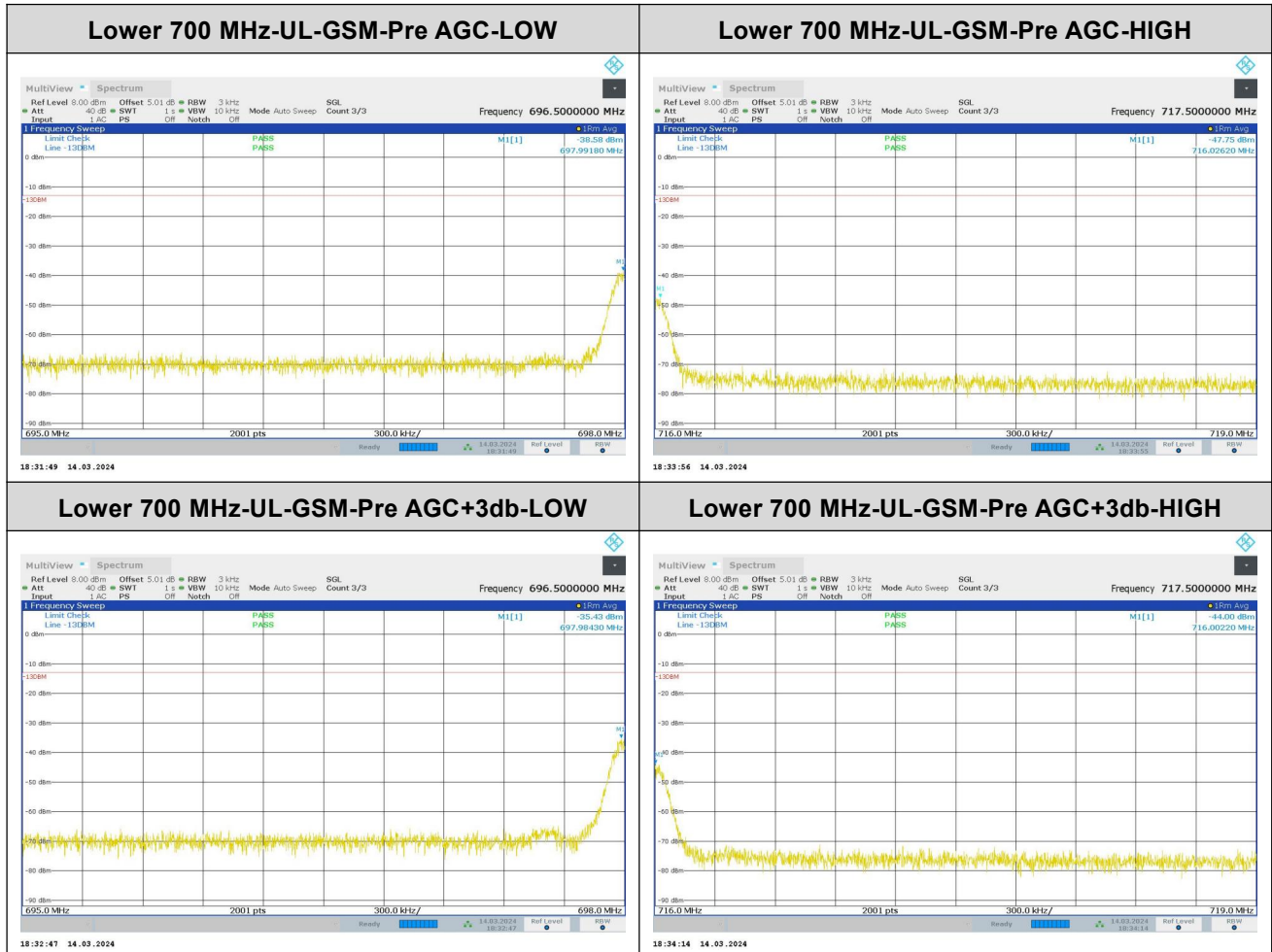
600 MHz Service



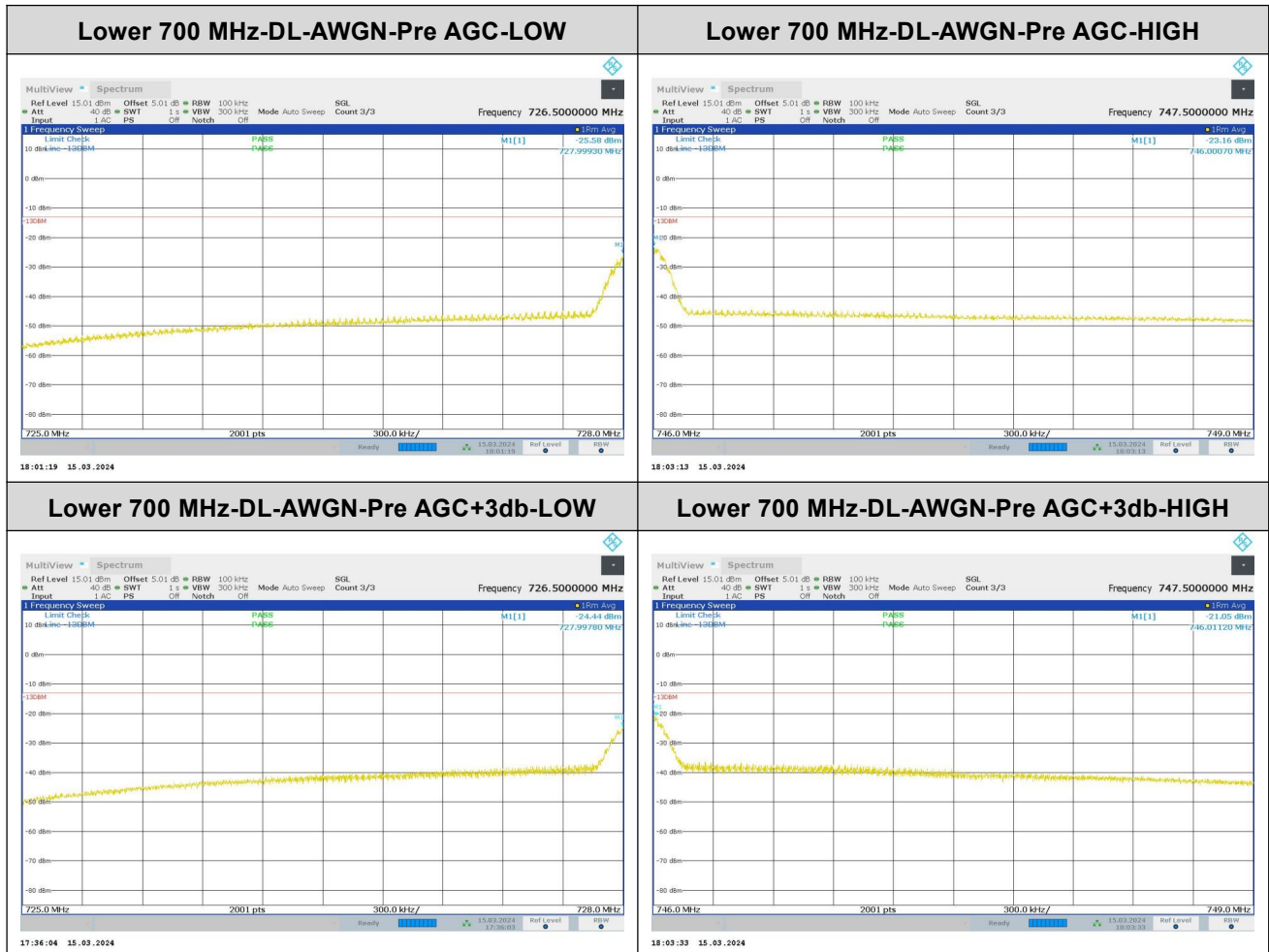
Lower 700 MHz



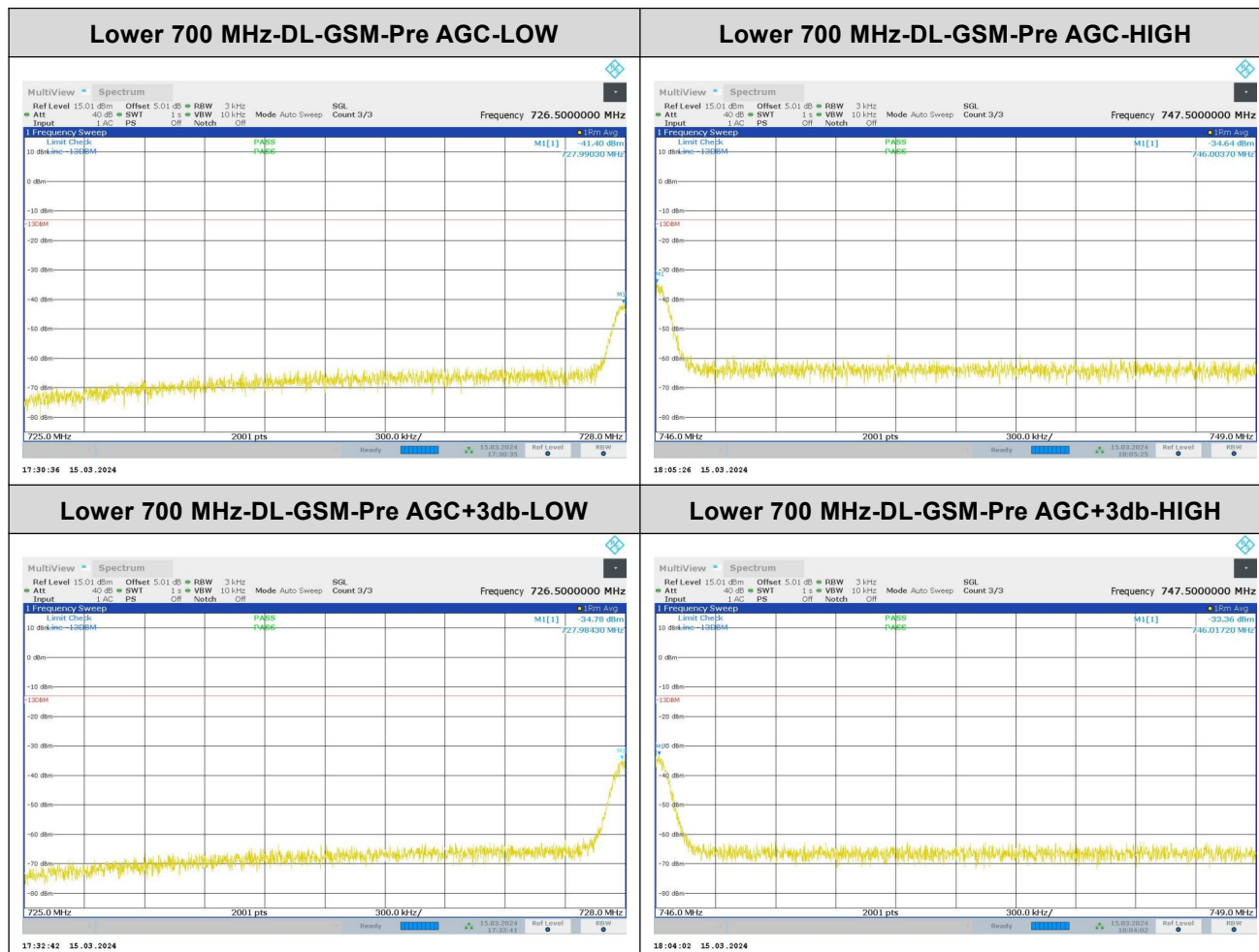
Lower 700 MHz



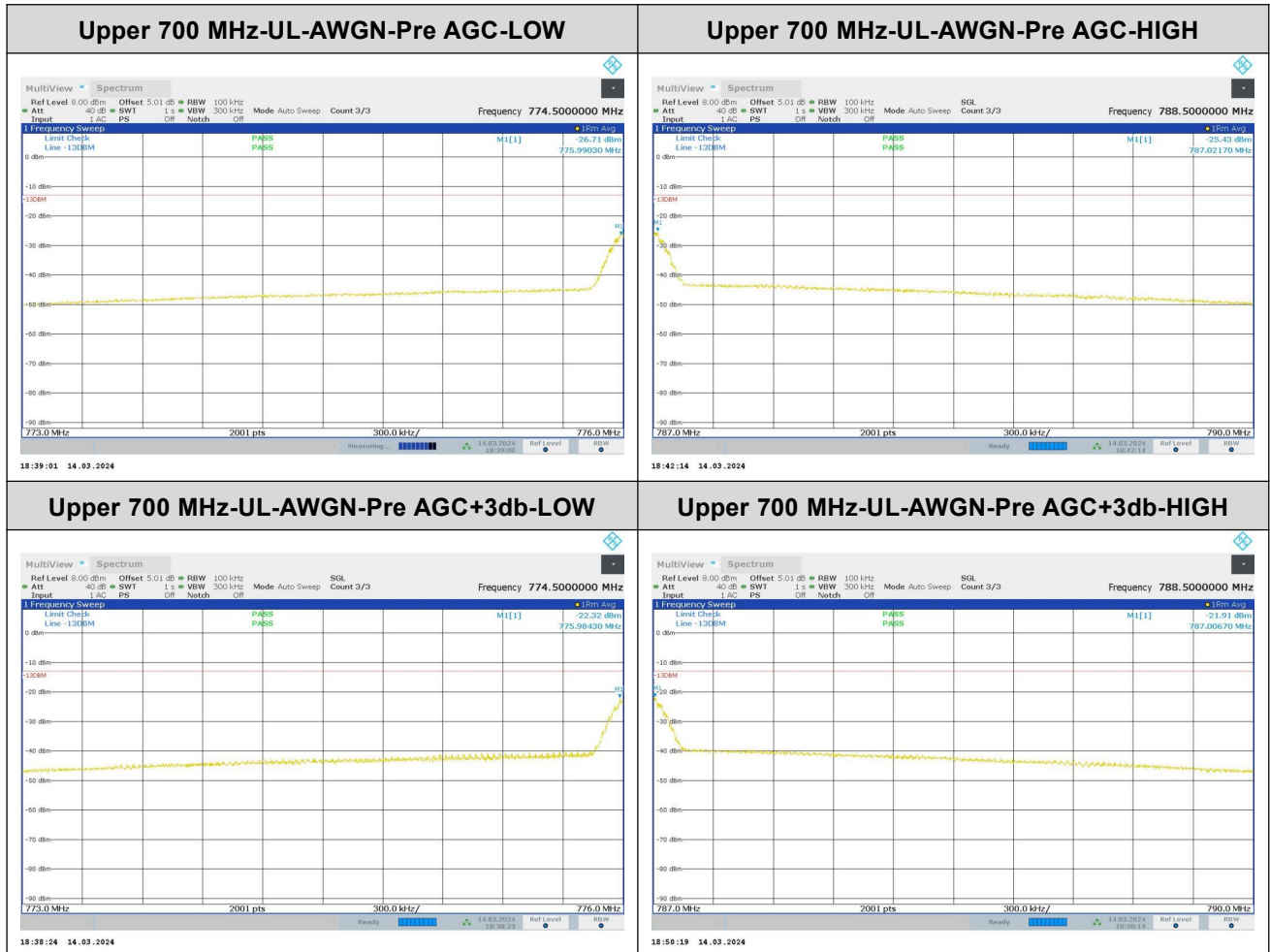
Lower 700 MHz



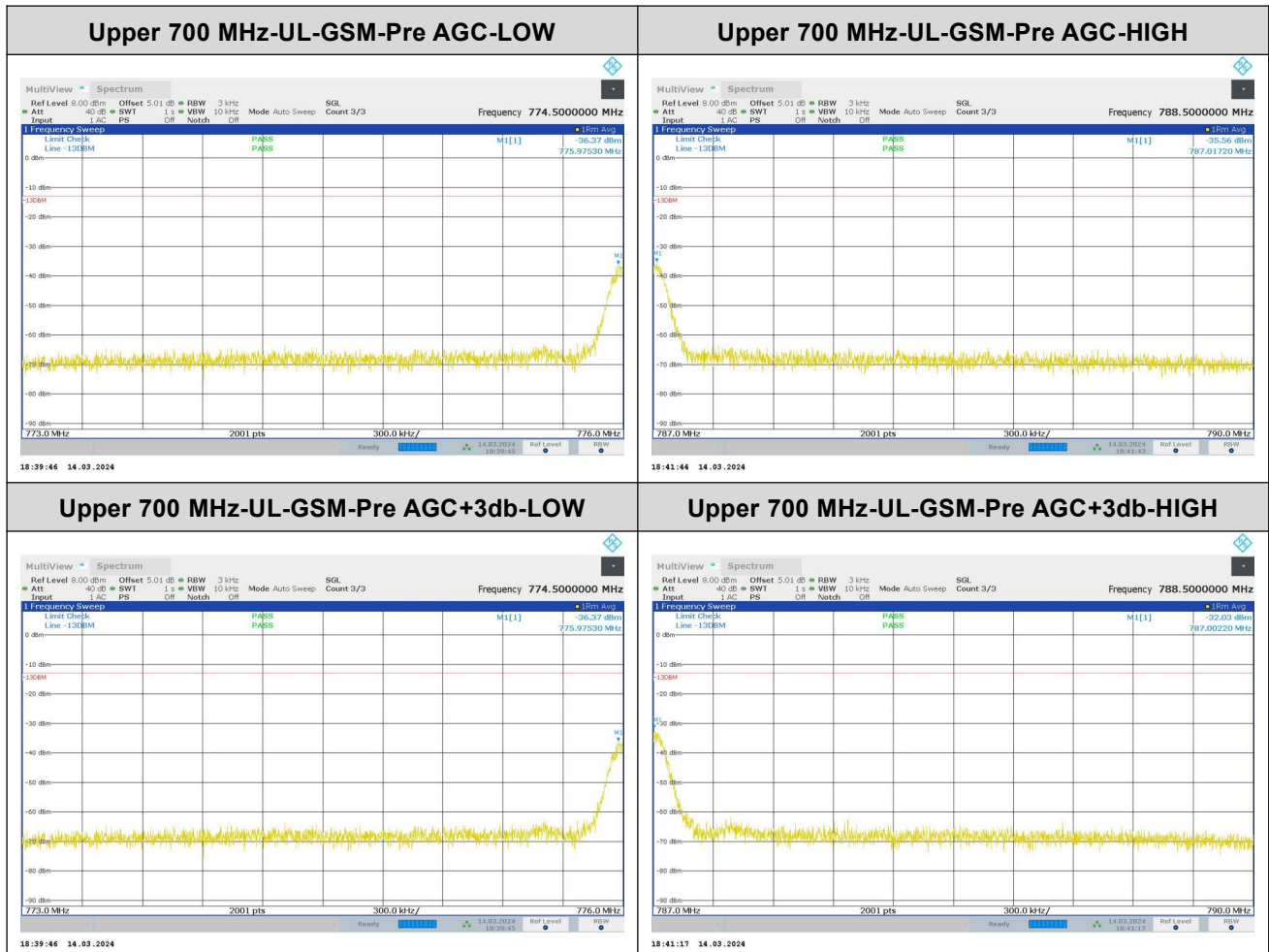
Lower 700 MHz



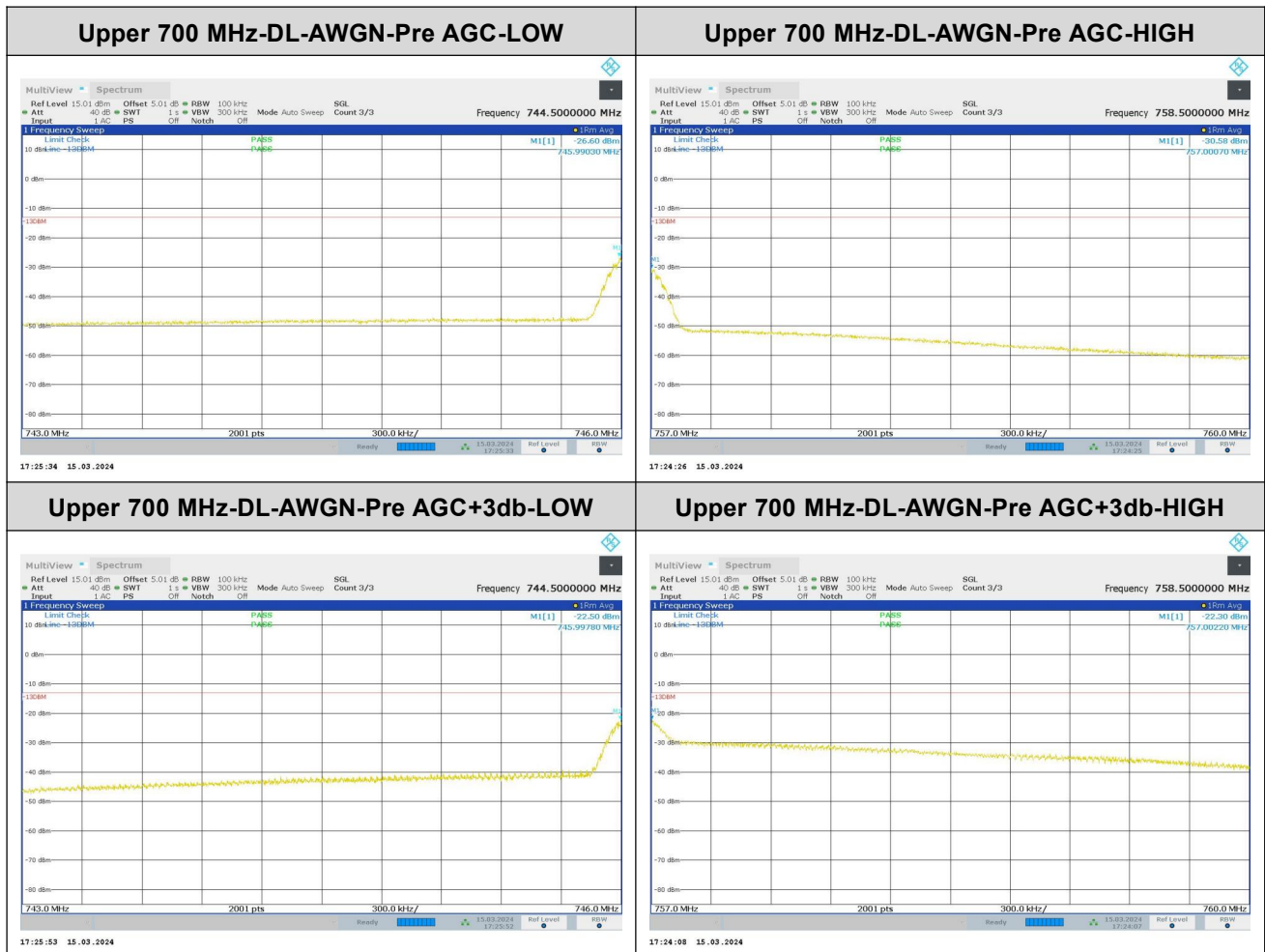
Upper 700 MHz



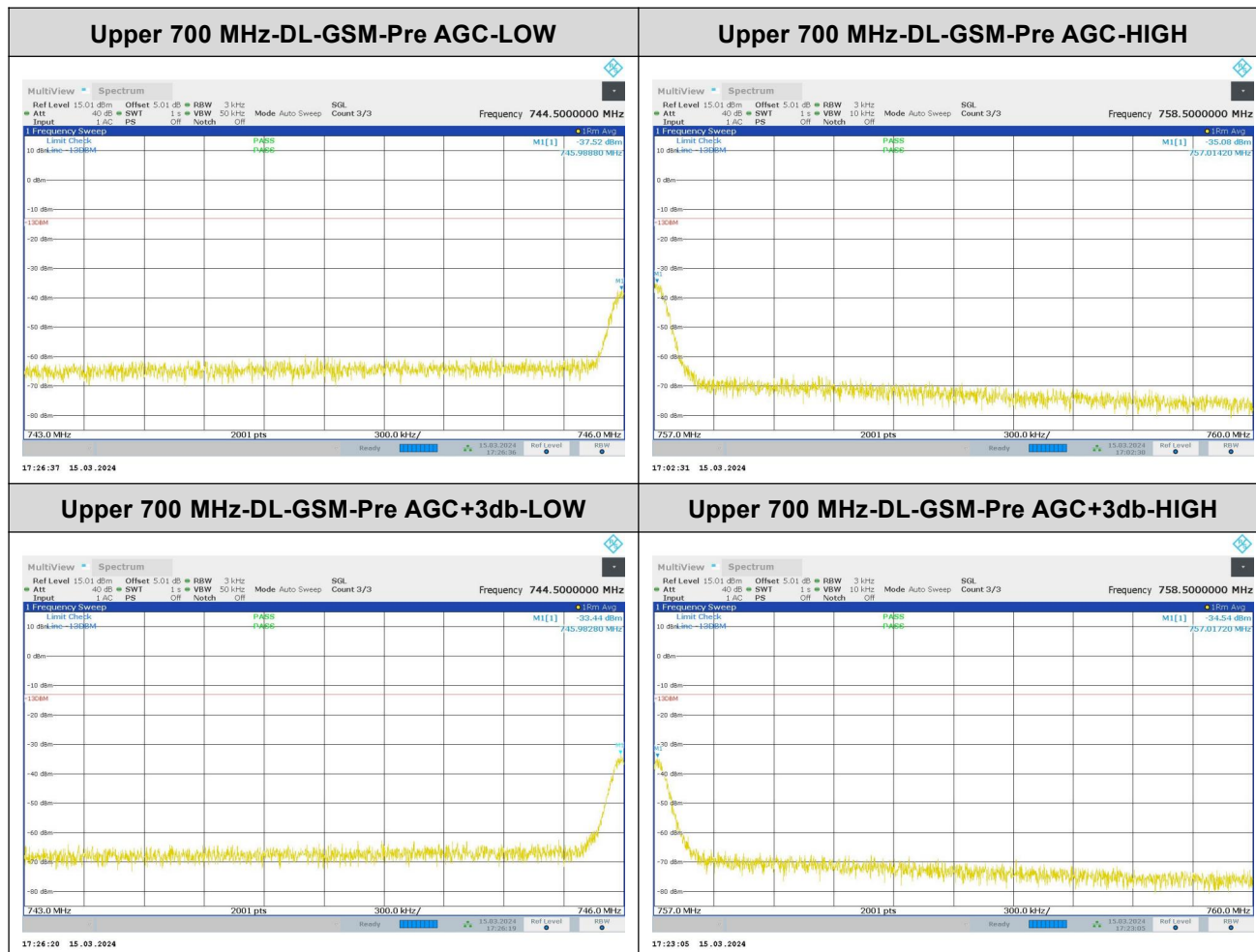
Upper 700 MHz



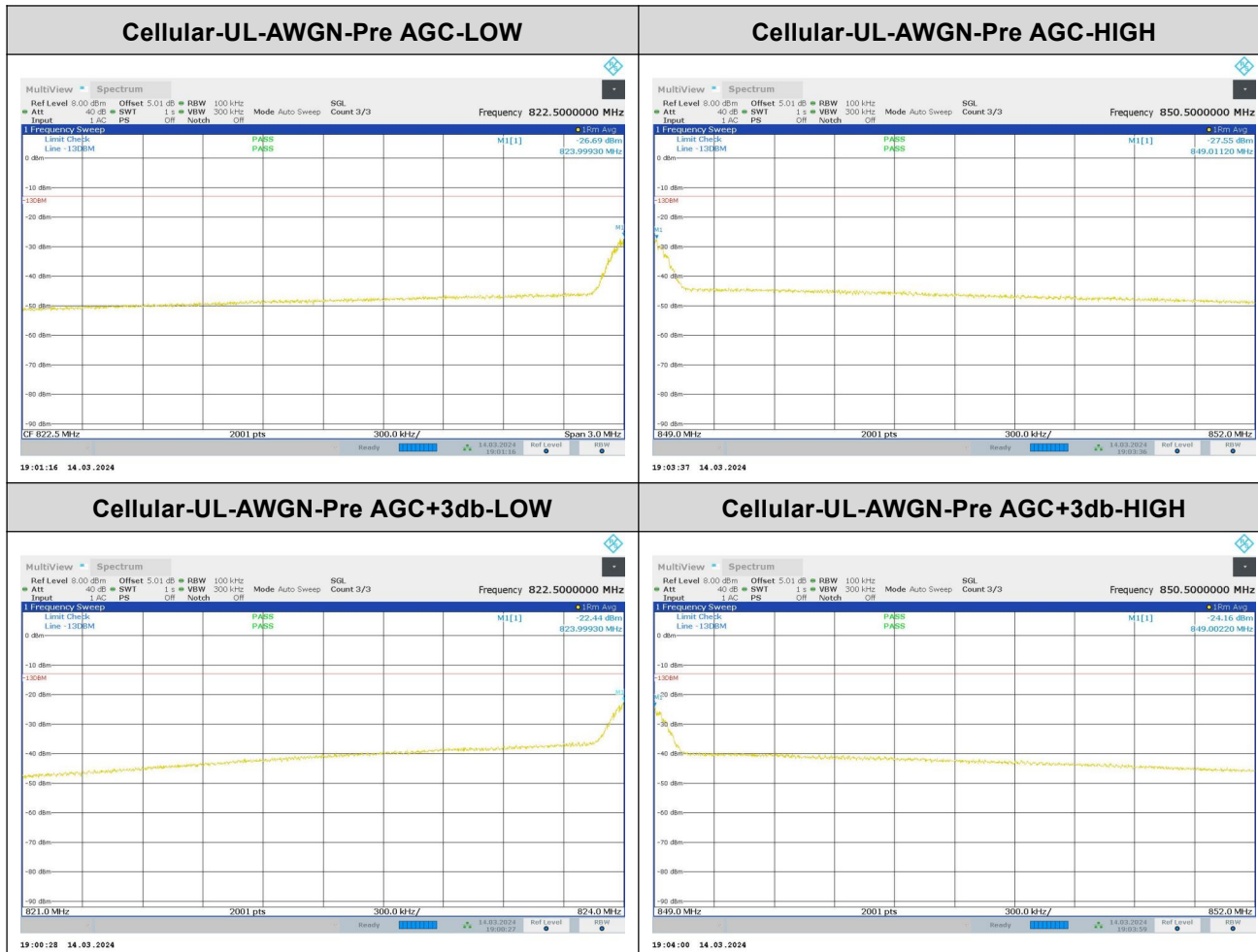
Upper 700 MHz



Upper 700 MHz

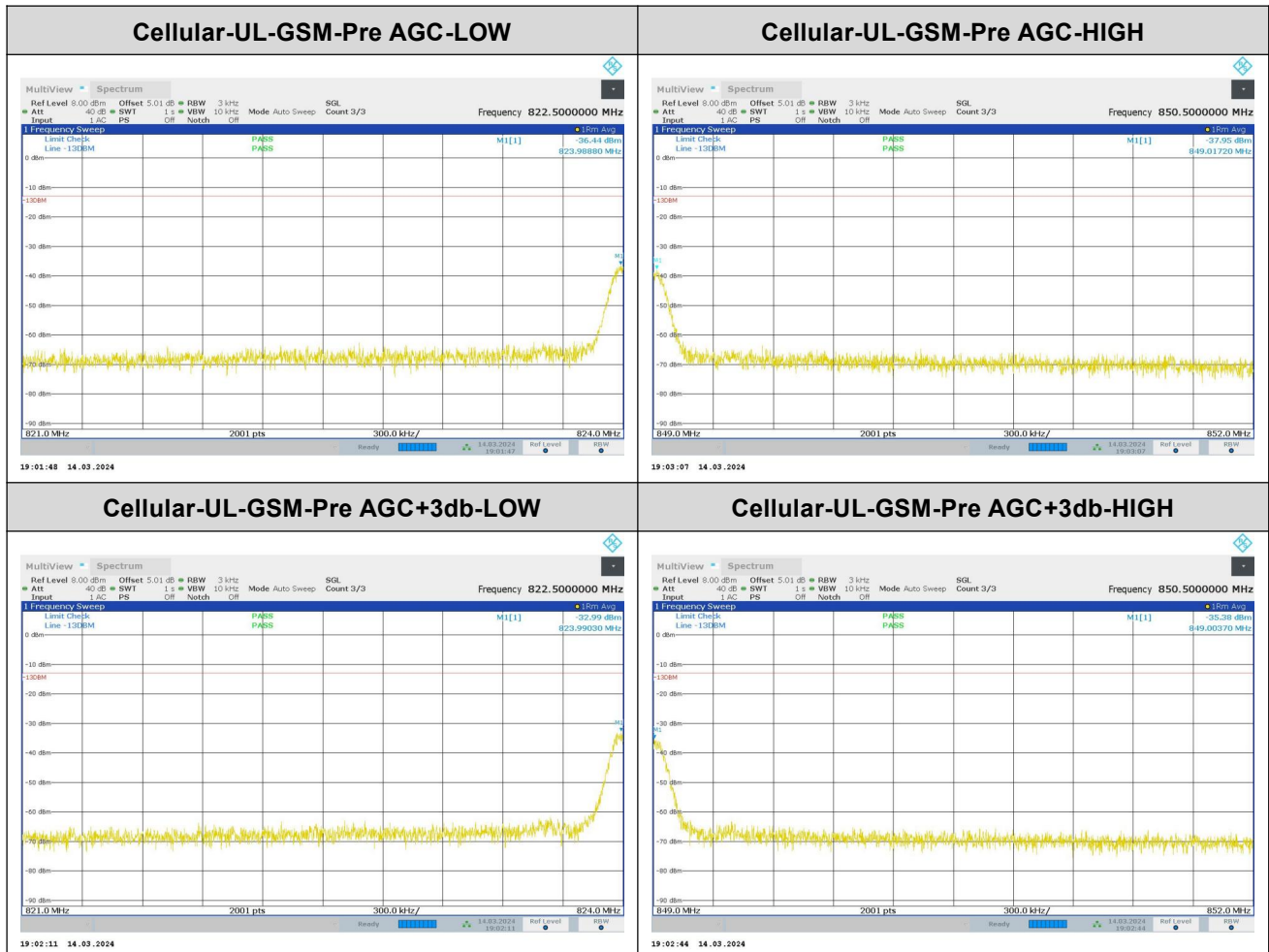


Cellular

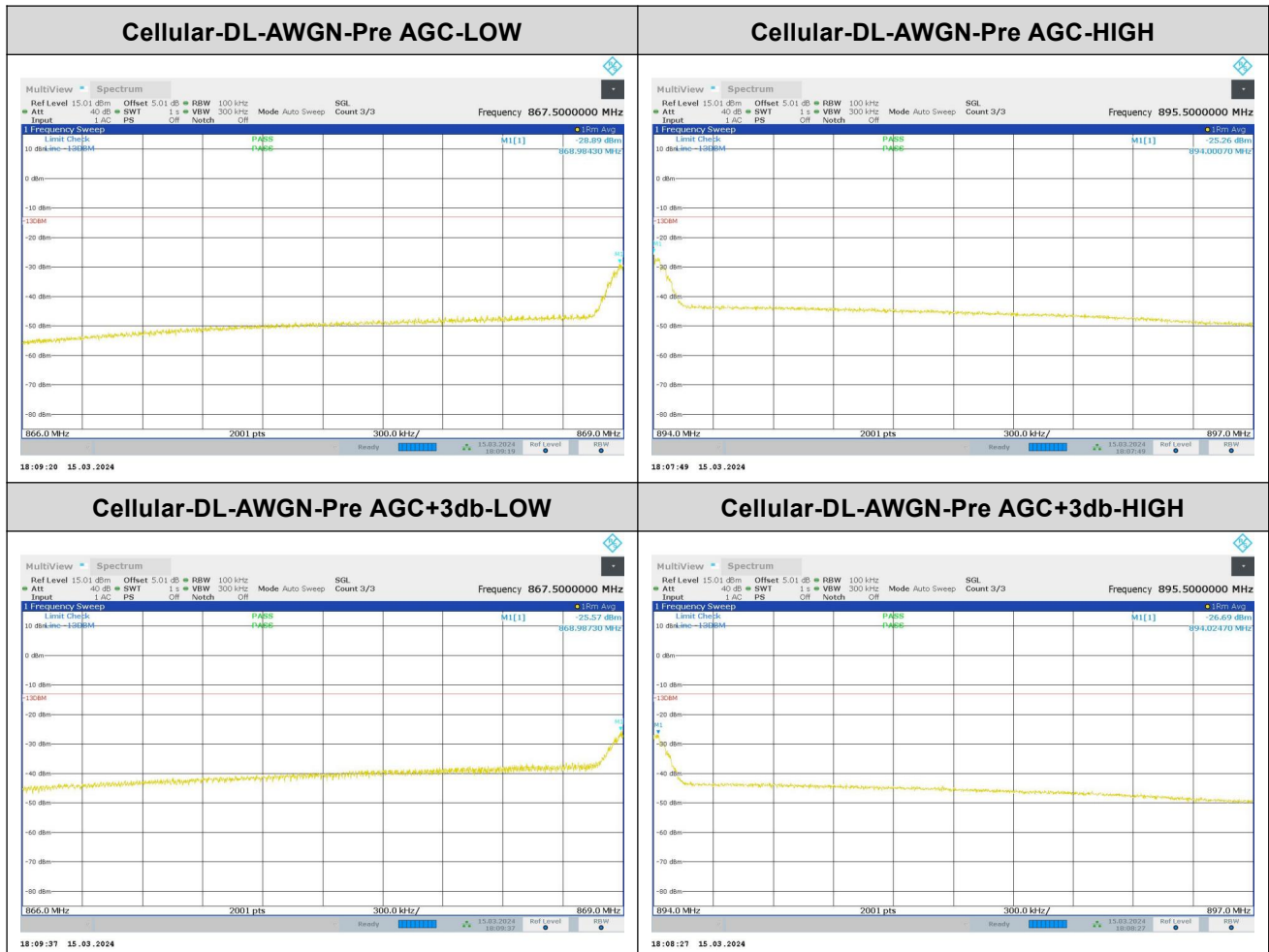




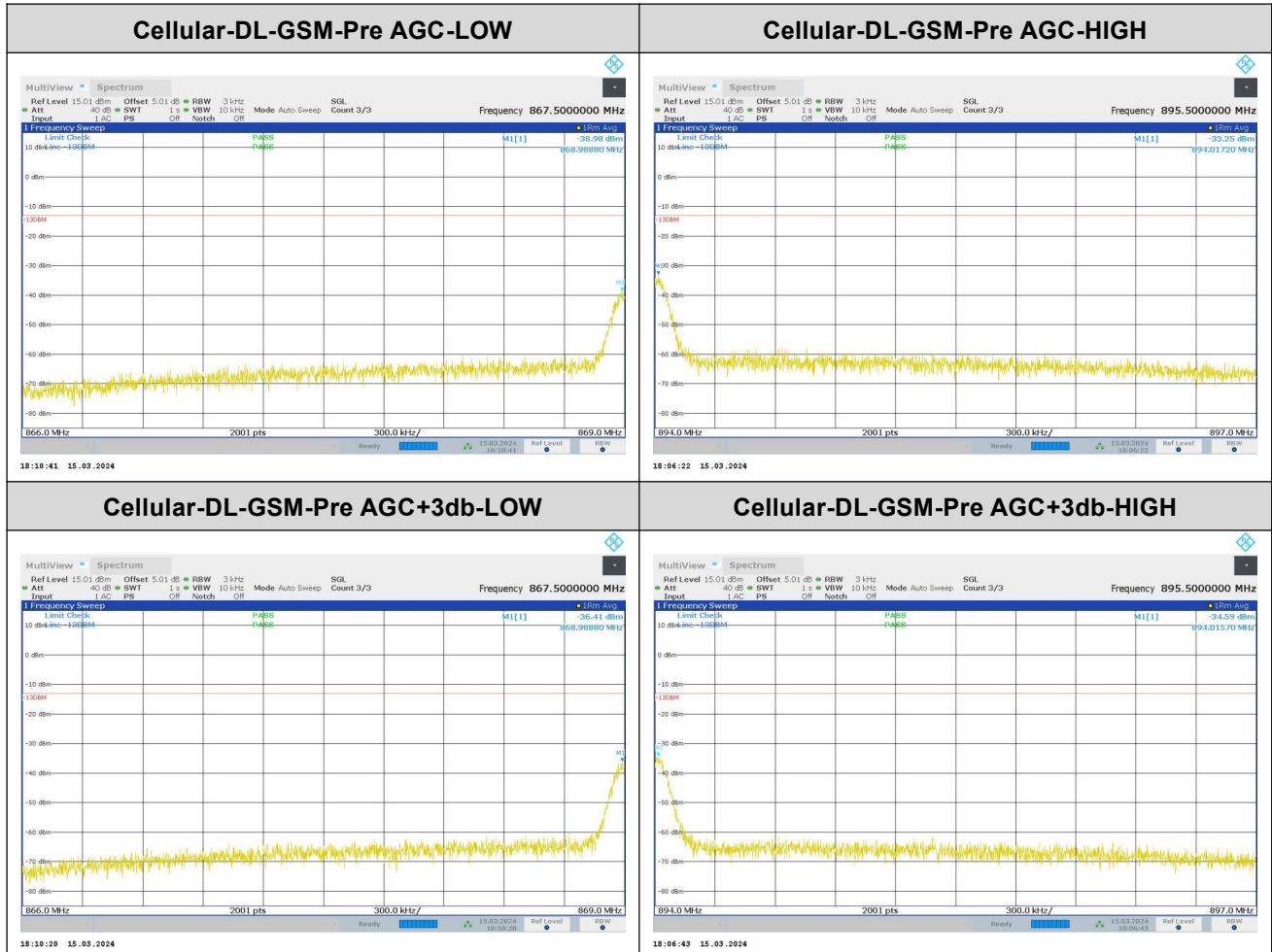
Cellular



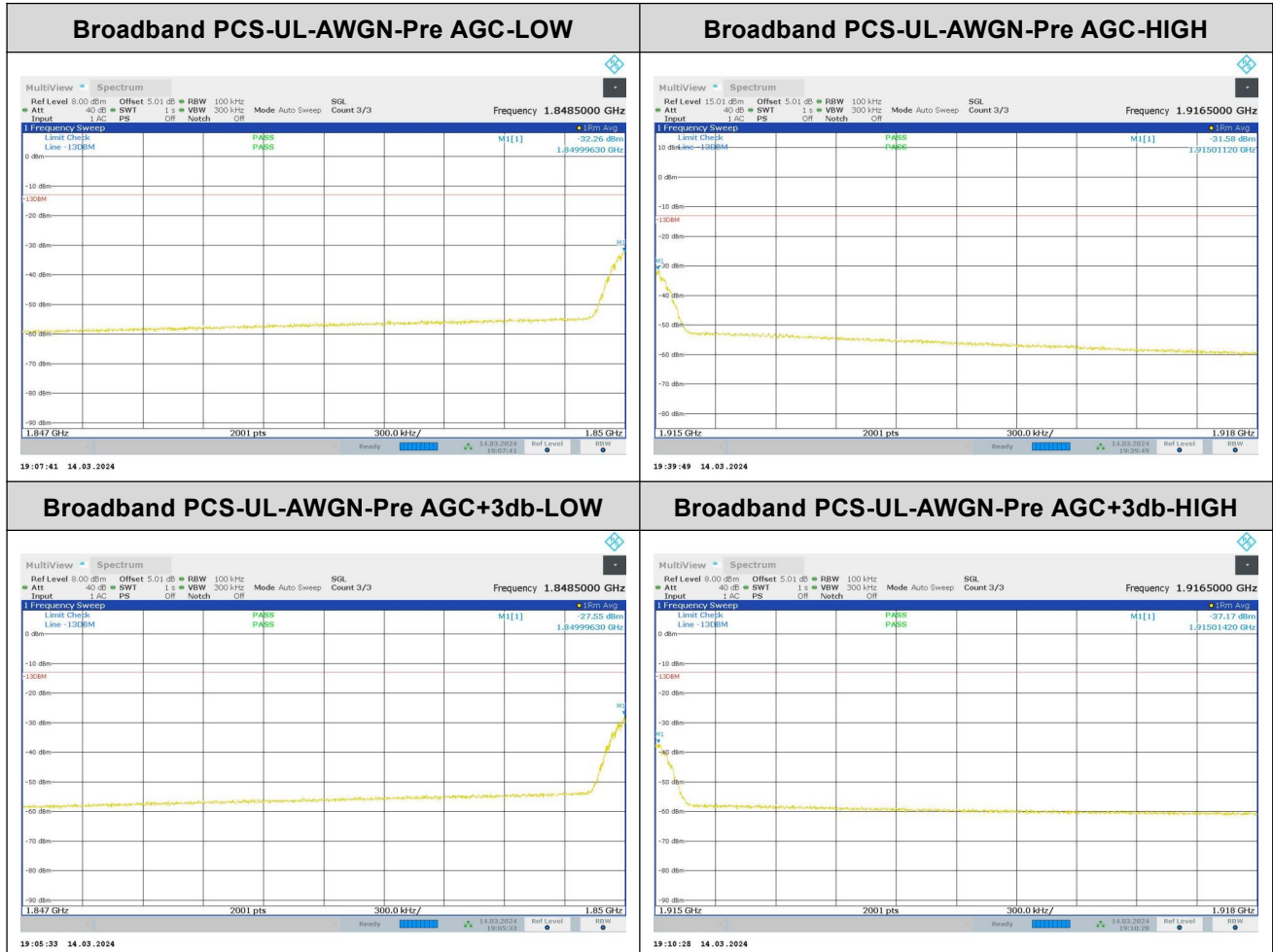
Cellular



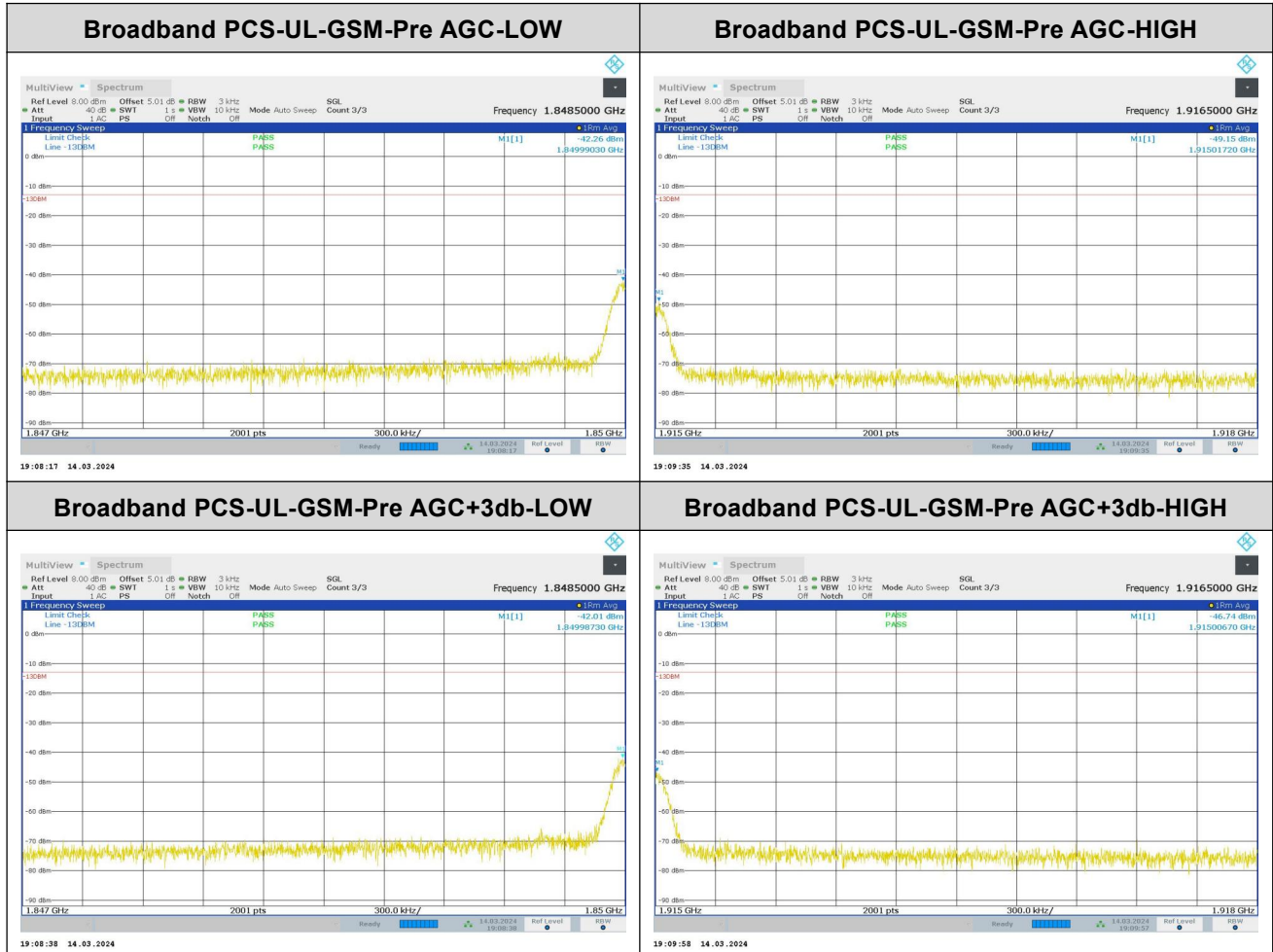
Cellular



Broadband PCS



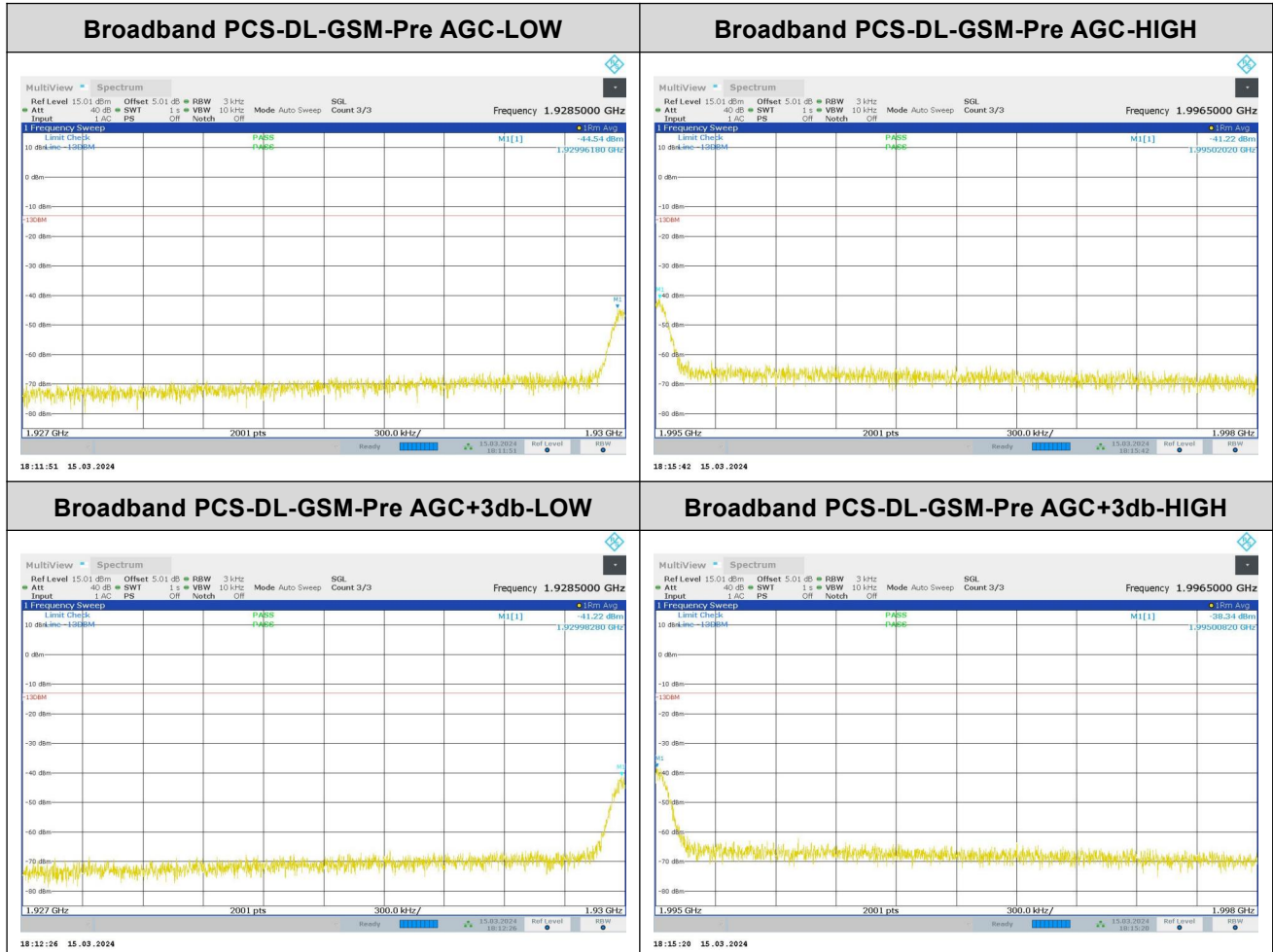
Broadband PCS



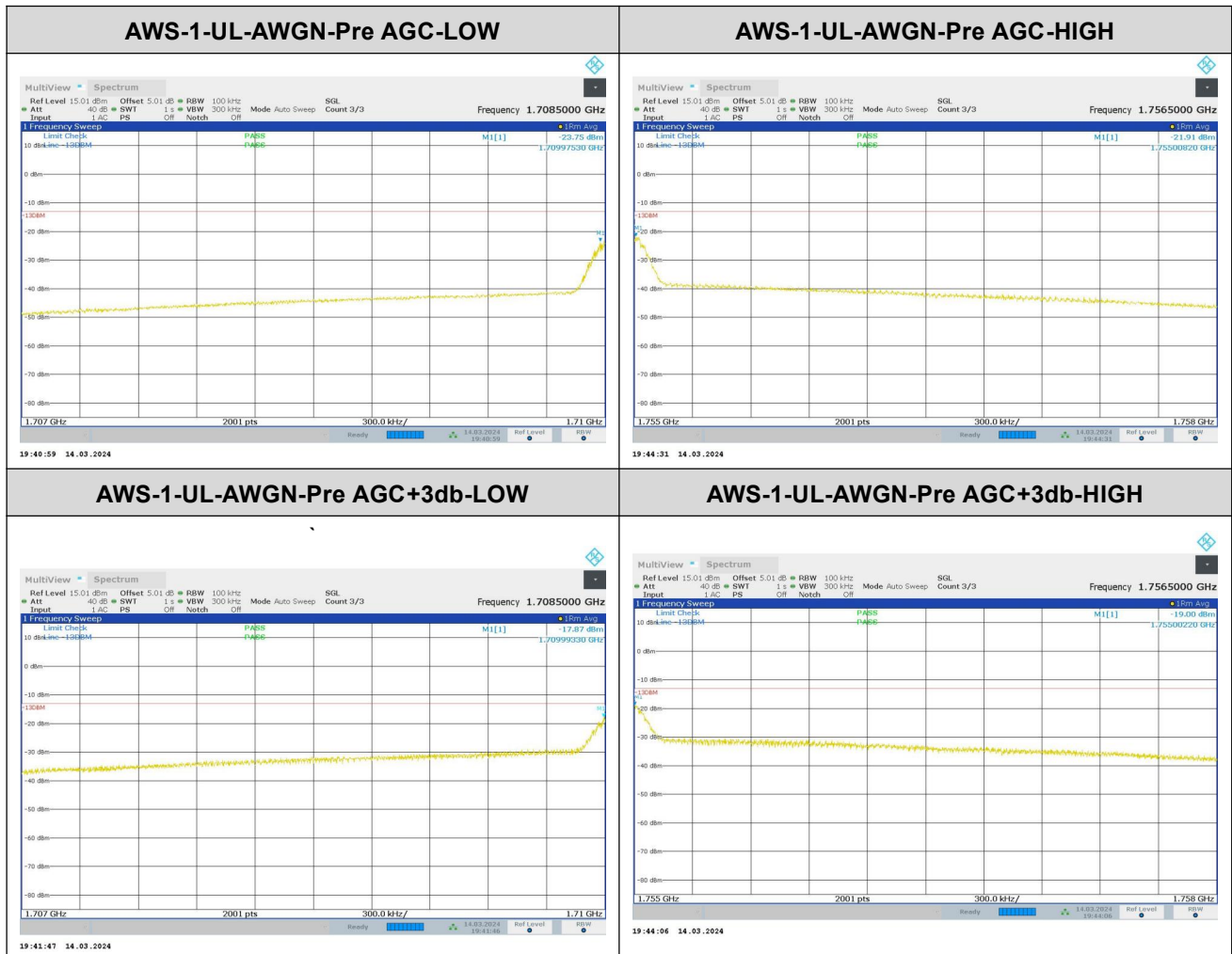
Broadband PCS



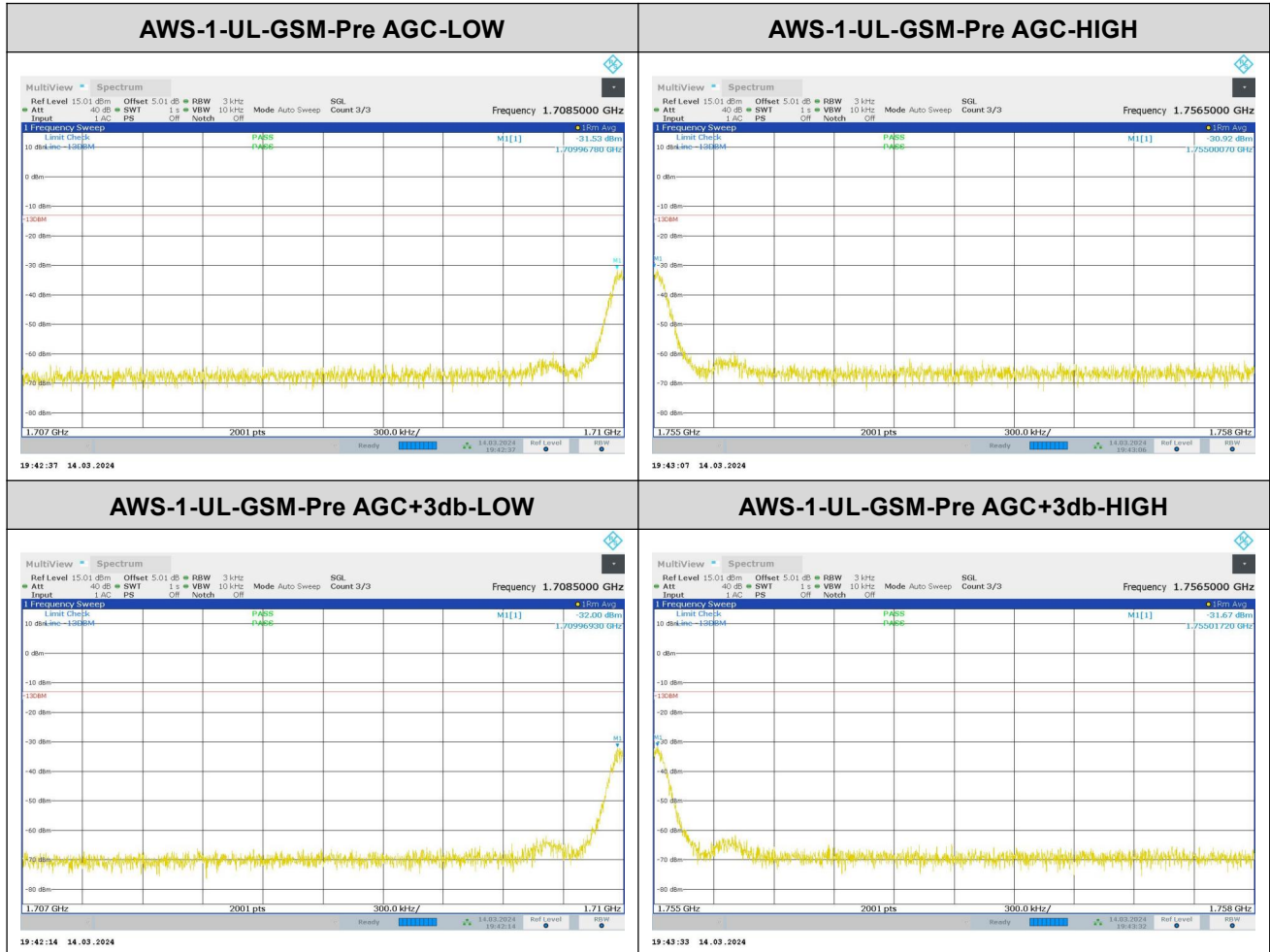
Broadband PCS



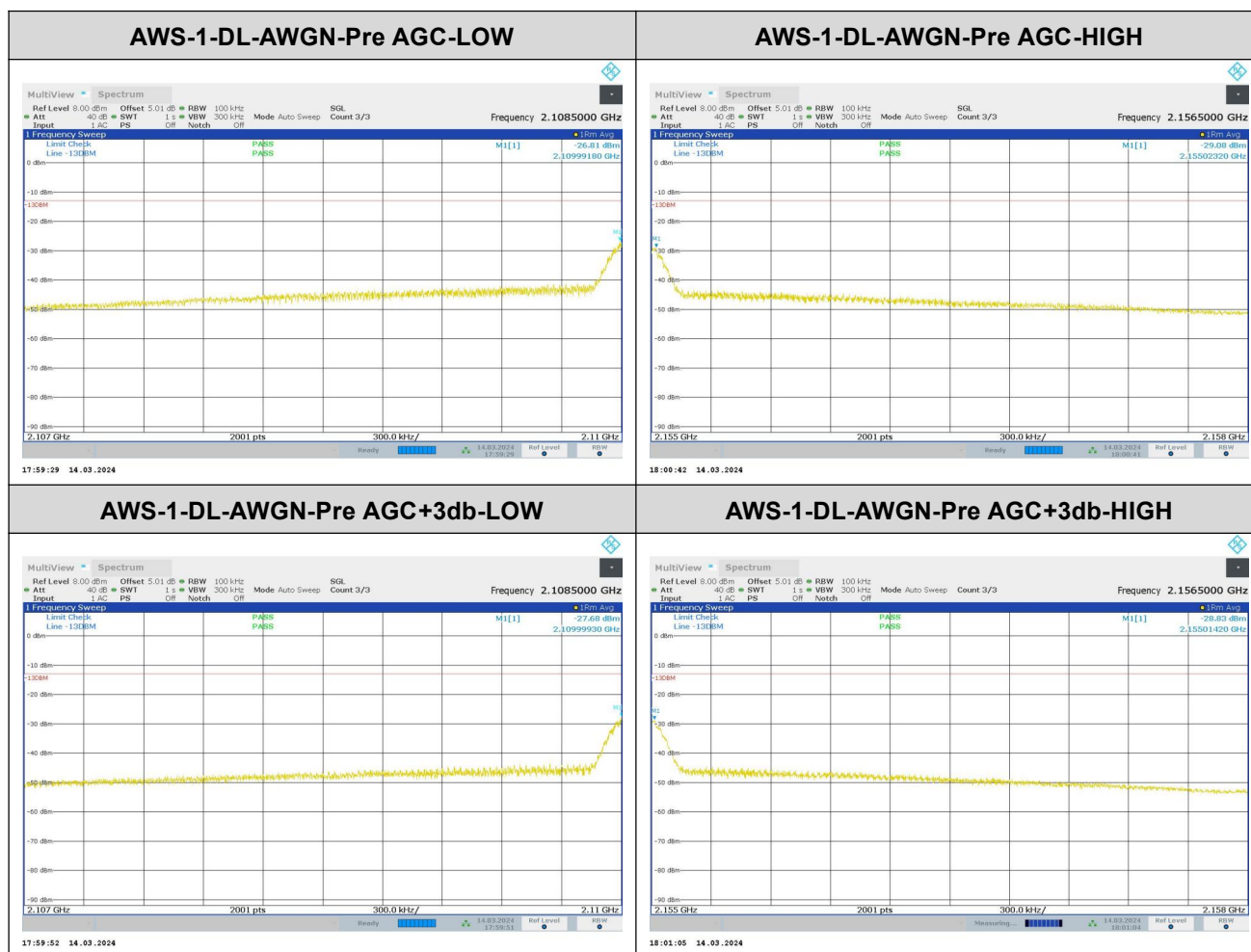
AWS-1



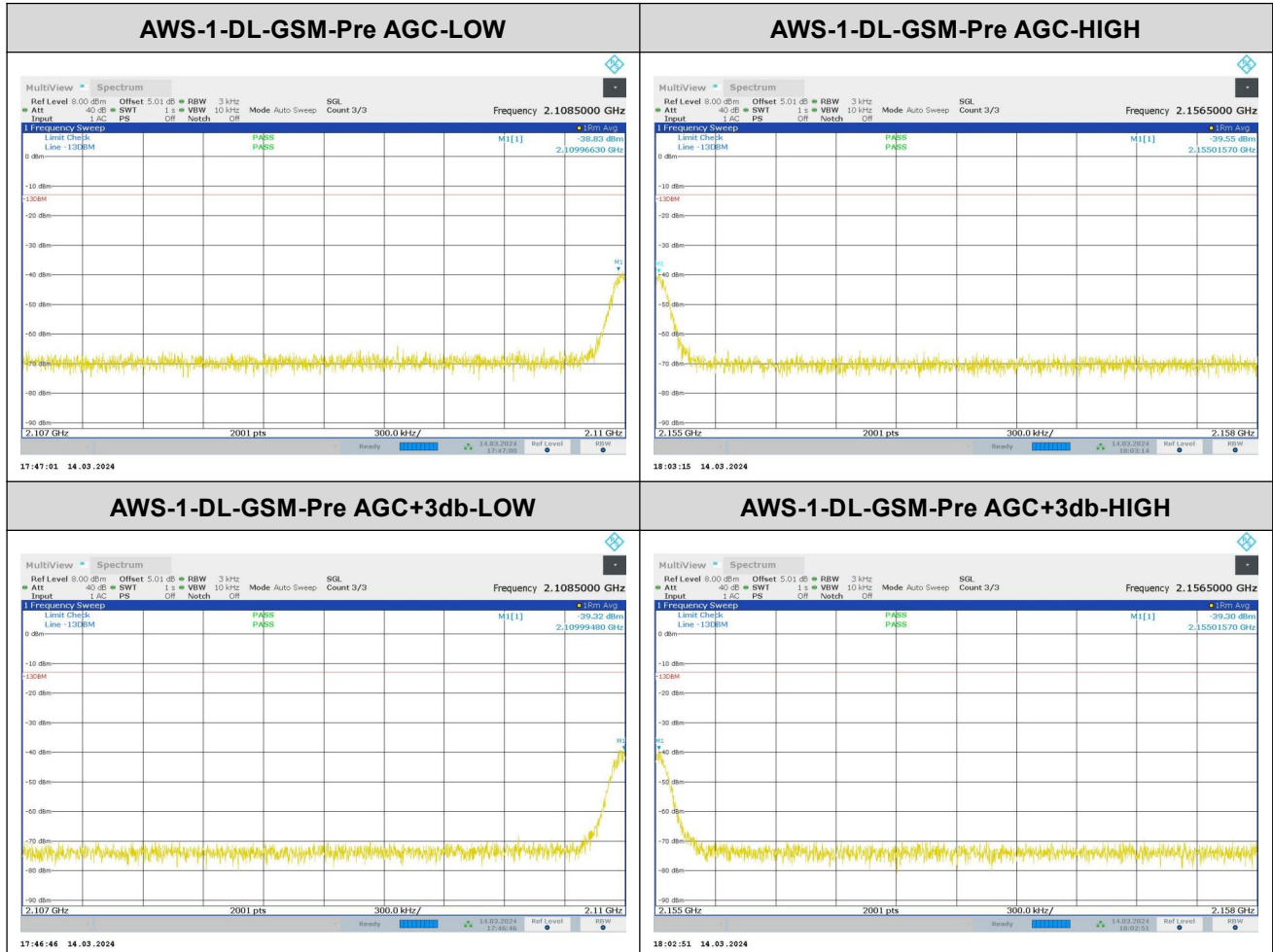
AWS-1



AWS-1



AWS-1





3.5 TRANSMITTER SPURIOUS EMISSIONS MEASUREMENT

3.5.1 standard Applicable

FCC §2.1053, §22.917, §24.238 and §27.53.

Spurious attenuation limit in dB = $43 + 10 \log_{10}(\text{power out in Watts}) = -13\text{dBm}$

(a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of § 2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter,

3.5.2 Measurement procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT.

The test was performed by placing the EUT on 3-orthogonal axis. The frequency range up to tenth harmonic of the fundamental frequency was investigated.

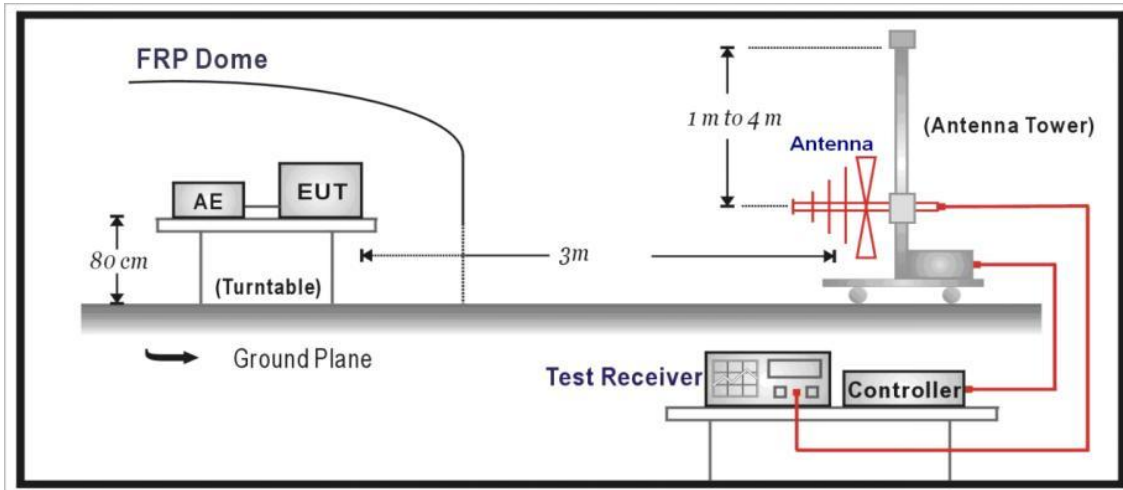
Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = $10 \lg(\text{TXpwr in Watts}/0.001)$ – the absolute level

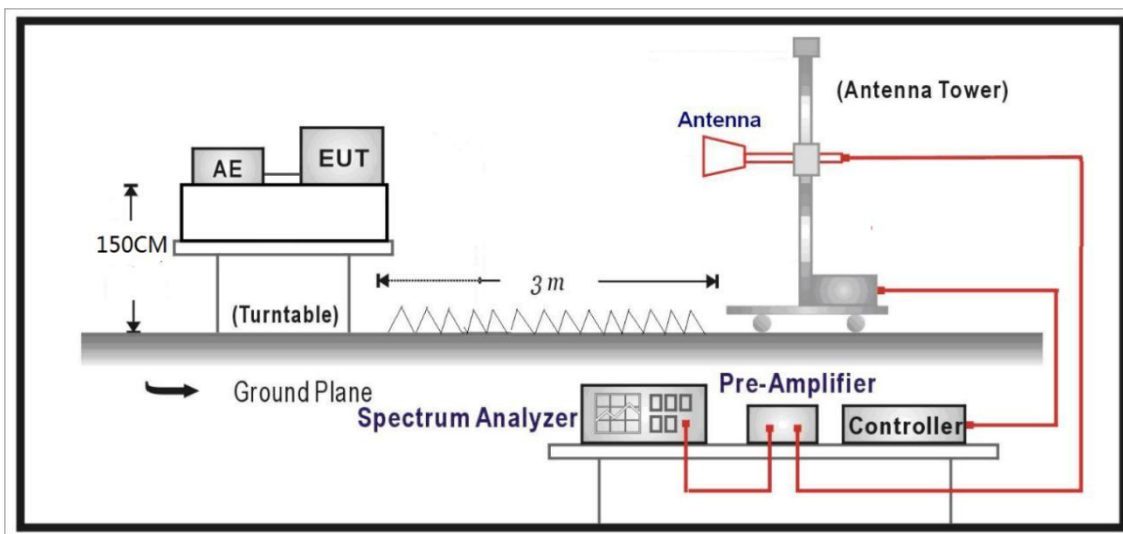
Spurious attenuation limit in dB = $43 + 10 \log_{10}(\text{power out in Watts})$

3.5.3 Test setup

30MHz-1GHz Test Setup:



1GHz -40GHz Test Setup:





3.5.4 Test results

Test Mode		600 MHz Service - Uplink(Pro25T-6S-IOT)					
Horizontal							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	57.1807	-94.16	-66.38	-13.00	53.38	27.78	74
2	129.948	-87.55	-63.78	-13.00	50.78	23.77	135
3	454.5115	-92.70	-62.86	-13.00	49.86	29.84	135
4	2228.4457	-58.53	-48.48	-13.00	35.48	10.05	319
5	5783.8284	-59.53	-39.60	-13.00	26.60	19.93	172
6	16960.9361	-78.82	-44.34	-13.00	31.34	34.48	360
Vertical							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	48.7269	-93.05	-64.59	-13.00	51.59	28.46	172
2	95.8116	-84.88	-65.16	-13.00	52.16	19.72	233
3	167.2947	-90.31	-65.28	-13.00	52.28	25.03	111
4	2401.3803	-36.51	-27.17	-13.00	14.17	9.34	0
5	6187.1287	-60.72	-40.40	-13.00	27.40	20.32	360
6	16395.7696	-78.34	-44.57	-13.00	31.57	33.77	173

Test Mode		600 MHz Service - Downllink(Pro25T-6S-IOT)					
Horizontal							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	56.6457	-94.44	-66.75	-13.00	53.75	27.69	260
2	169.3279	-90.59	-65.08	-13.00	52.08	25.51	140
3	751.2521	-86.81	-51.23	-13.00	38.23	35.58	320
4	1966.9534	-56.29	-48.03	-13.00	35.03	8.26	140
5	5740.264	-59.61	-40.30	-13.00	27.30	19.31	100
6	17350.5851	-80.86	-45.82	-13.00	32.82	35.04	320
Vertical							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	47.2287	-94.09	-65.98	-13.00	52.98	28.11	80
2	139.579	-92.23	-66.94	-13.00	53.94	25.29	20
3	482.6553	-93.04	-62.20	-13.00	49.20	30.84	20
4	738.0898	-85.97	-50.55	-13.00	37.55	35.42	20
5	5740.9241	-59.07	-39.98	-13.00	26.98	19.09	40
6	16378.2178	-77.67	-44.48	-13.00	31.48	33.19	140



Test Mode		Lower700 MHz - Uplink(Pro25T-6S-IOT)					
Horizontal							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	56.9667	-94.54	-66.79	-13.00	53.79	27.75	110
2	130.269	-88.42	-64.54	-13.00	51.54	23.88	110
3	517.7548	-93.19	-62.37	-13.00	49.37	30.82	233
4	2005.3411	-57.86	-50.32	-13.00	37.32	7.54	294
5	5248.8449	-57.51	-39.08	-13.00	26.08	18.43	72
6	16313.8614	-76.91	-45.43	-13.00	32.43	31.48	0
Vertical							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	47.0147	-92.87	-64.86	-13.00	51.86	28.01	258
2	95.3835	-85.02	-65.31	-13.00	52.31	19.71	320
3	166.0106	-89.55	-64.77	-13.00	51.77	24.78	195
4	3408.9109	-54.63	-42.19	-13.00	29.19	12.44	294
5	5763.3663	-57.54	-38.64	-13.00	25.64	18.90	234
6	16370.027	-77.11	-44.90	-13.00	31.90	32.21	254

Test Mode		Lower700 MHz - Downllink(Pro25T-6S-IOT)					
Horizontal							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	56.2176	-94.23	-66.66	-13.00	53.66	27.57	260
2	177.9958	-92.10	-67.01	-13.00	54.01	25.09	260
3	554.6735	-92.51	-61.20	-13.00	48.20	31.31	200
4	1093.4723	-92.01	-52.73	-13.00	39.73	39.28	20
5	3122.1122	-60.43	-44.96	-13.00	31.96	15.47	220
6	5971.6172	-61.22	-40.88	-13.00	27.88	20.34	0
Vertical							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]
1	52.1512	-93.43	-65.91	-13.00	52.91	27.52	200
2	149.959	-93.07	-67.27	-13.00	54.27	25.80	140
3	455.1535	-93.61	-63.50	-13.00	50.50	30.11	80
4	1953.6507	-56.44	-49.98	-13.00	36.98	6.46	320
5	6122.4422	-62.16	-41.38	-13.00	28.38	20.78	220
6	16391.0891	-79.28	-44.82	-13.00	31.82	34.46	200