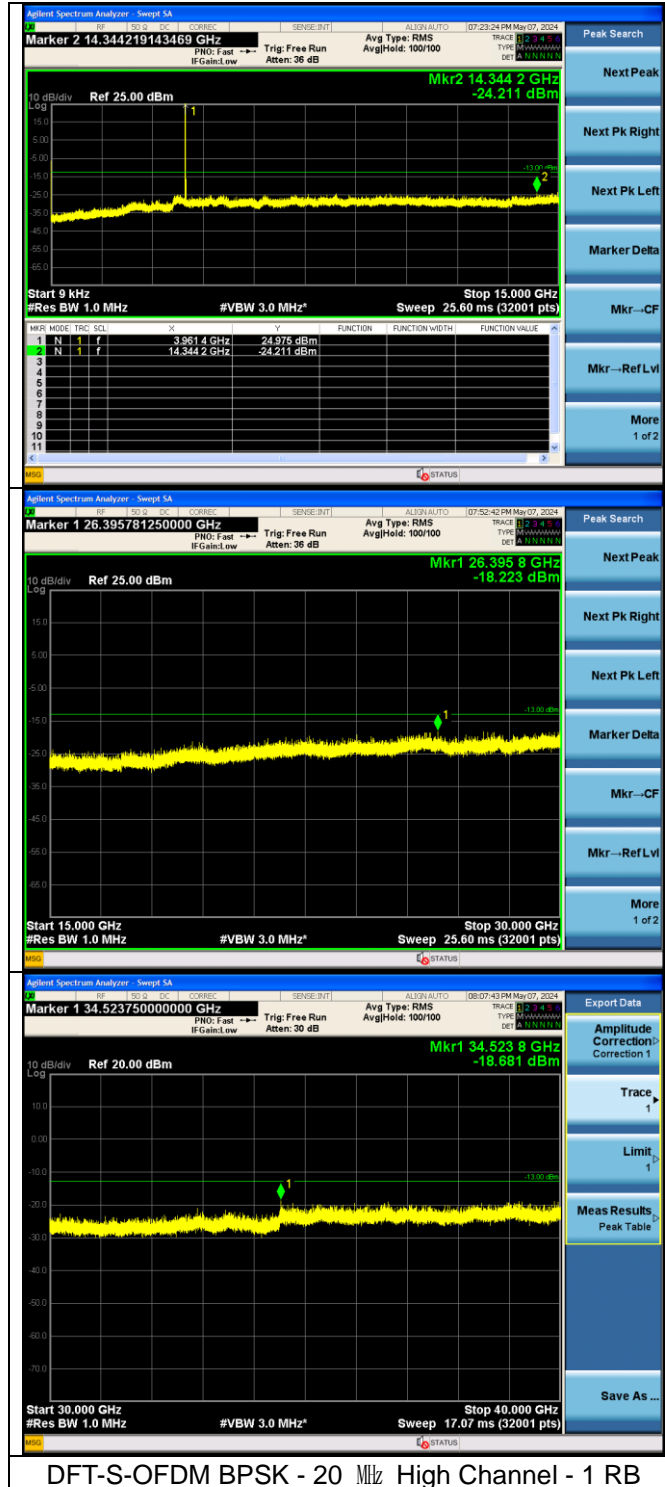
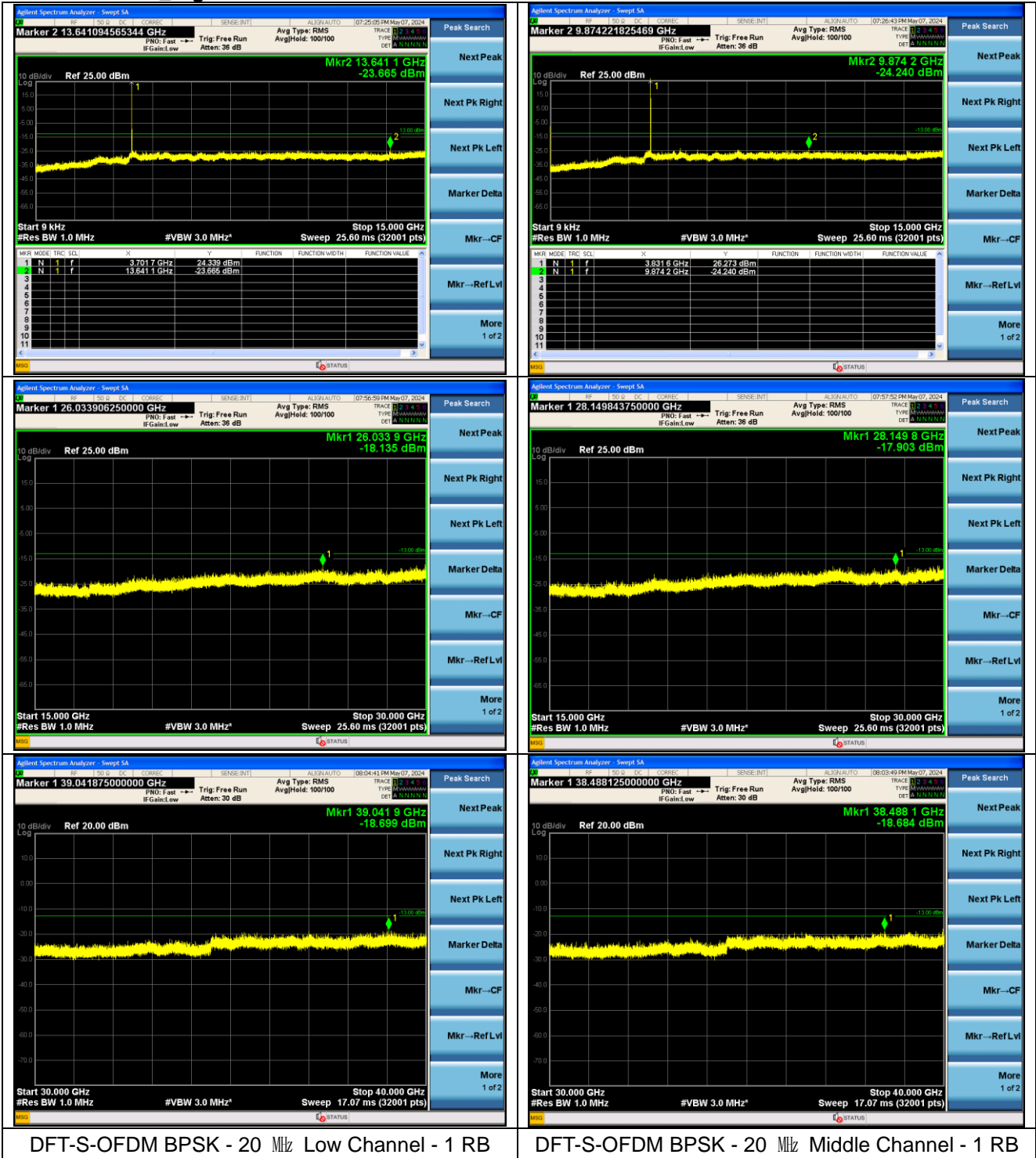


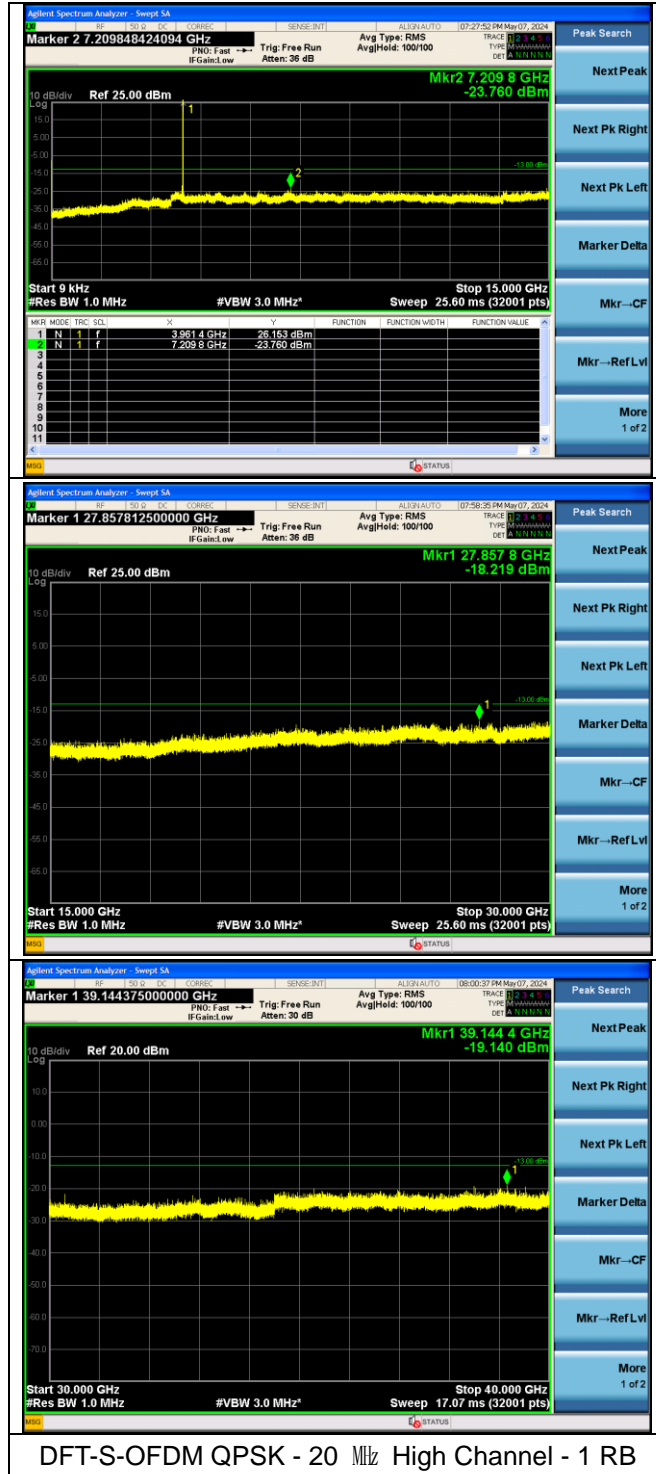
NR band 77/78_Low Band



NR band 77/78_High Band

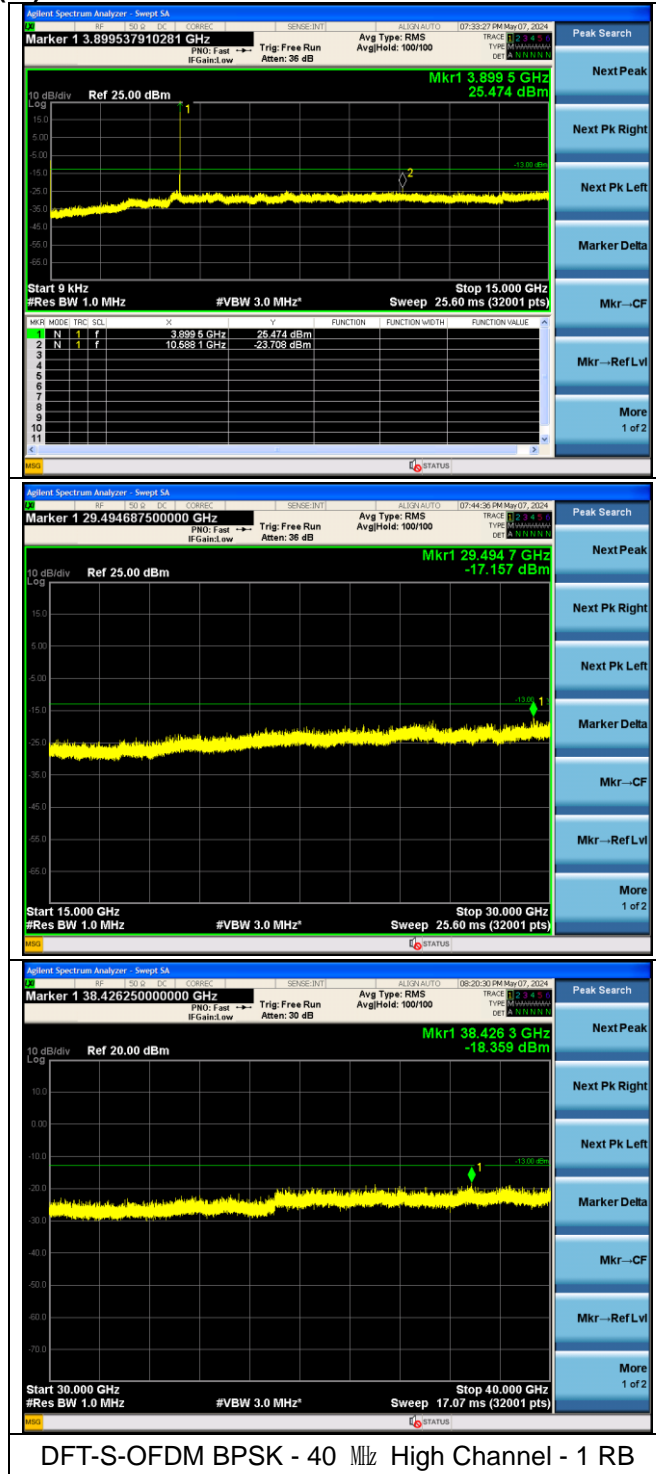


NR band 77/78_High Band



DFT-S-OFDM QPSK - 20 MHz High Channel - 1 RB

NR band 77_High Band (IC)



7. Band Edge and Emission Mask

7.1. Limit

- §27.53(l)(2), for mobile operations in the 3 700-3 980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz . Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

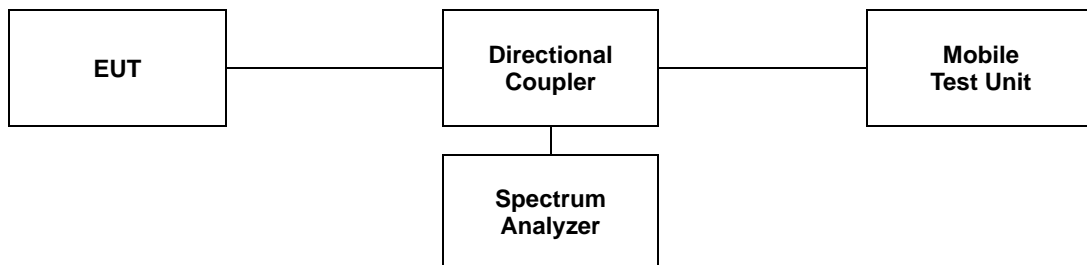
- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log_{10} (P) \text{ dB}$ on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log_{10} (P) \text{ dB}$ on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log_{10} (P) \text{ dB}$ on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log_{10} (P) \text{ dB}$ on all frequencies between 2 490.5 MHz and 2 496 MHz and $55 + 10 \log_{10} (P) \text{ dB}$ at or below 2 490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2 495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

- §27.53(n)(2), for mobile operations in the 3 450-3 550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz . Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

7.2. Test Procedure

The test follows section 5.7 of ANSI C63.26-2015.

- a. Span was set large enough so as to capture all out of band emissions near the band edge.
- b. $RBW \geq 1\%$ of OBW
- c. $VBW \geq 3 \times RBW$.
- d. Detector = RMS.
- e. Trace mode = Average.
- f. Sweep time = Auto.
- g. The trace was allowed to stabilize.
- h. All path loss of frequency range was investigated and compensated to spectrum analyzer as TDF function.

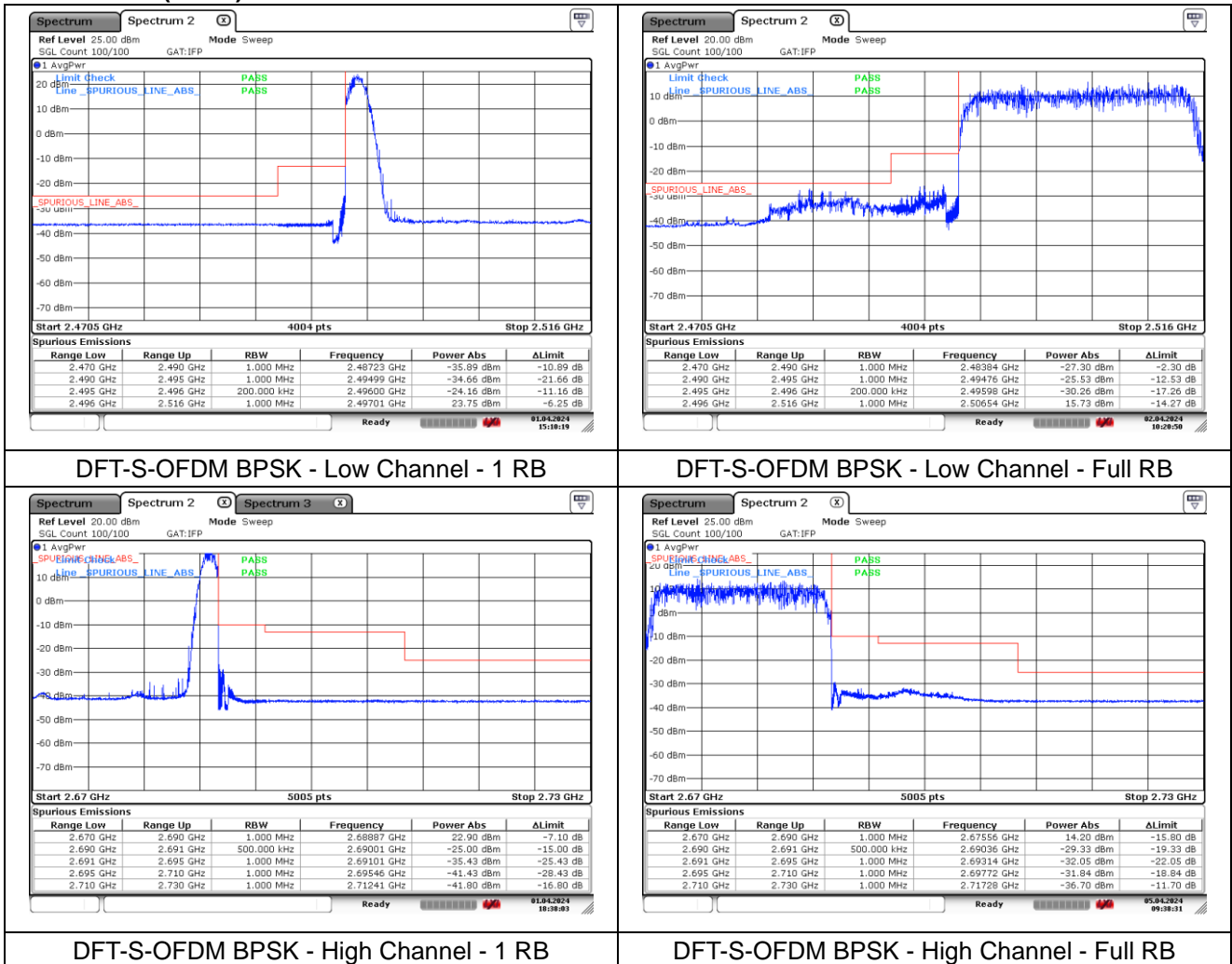


7.3. Test Results

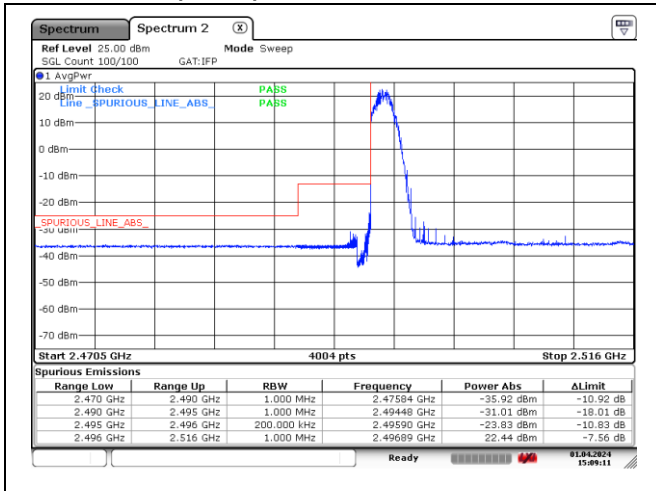
Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

- Test plots

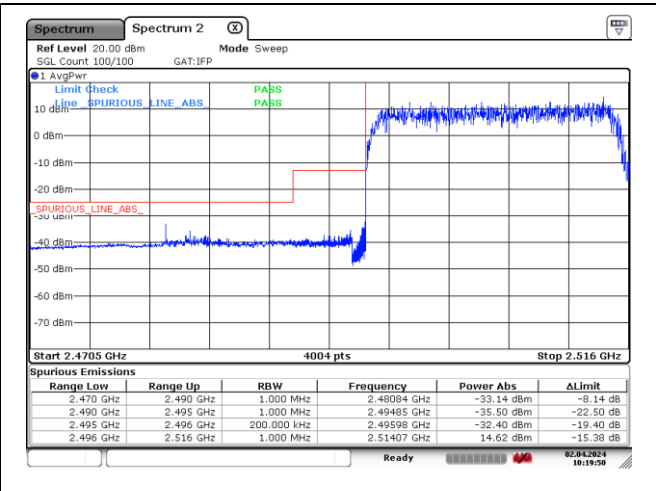
NR band 41 (20 MHz)



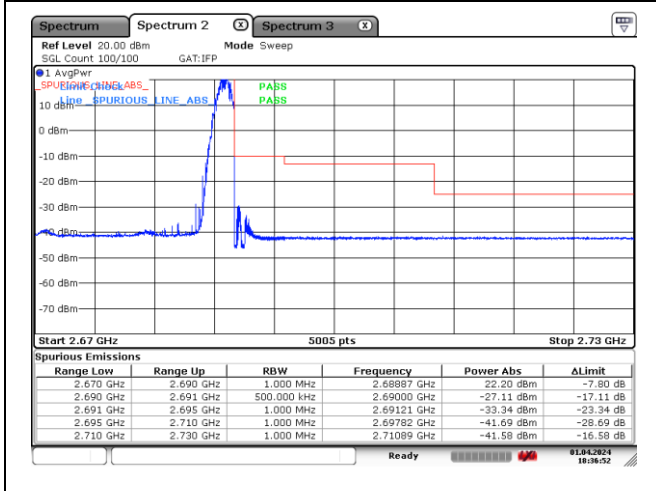
NR band 41 (20 MHz)



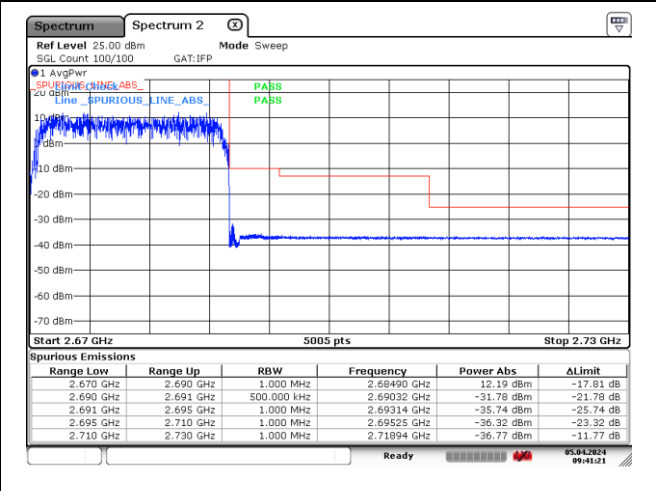
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - Low Channel - Full RB

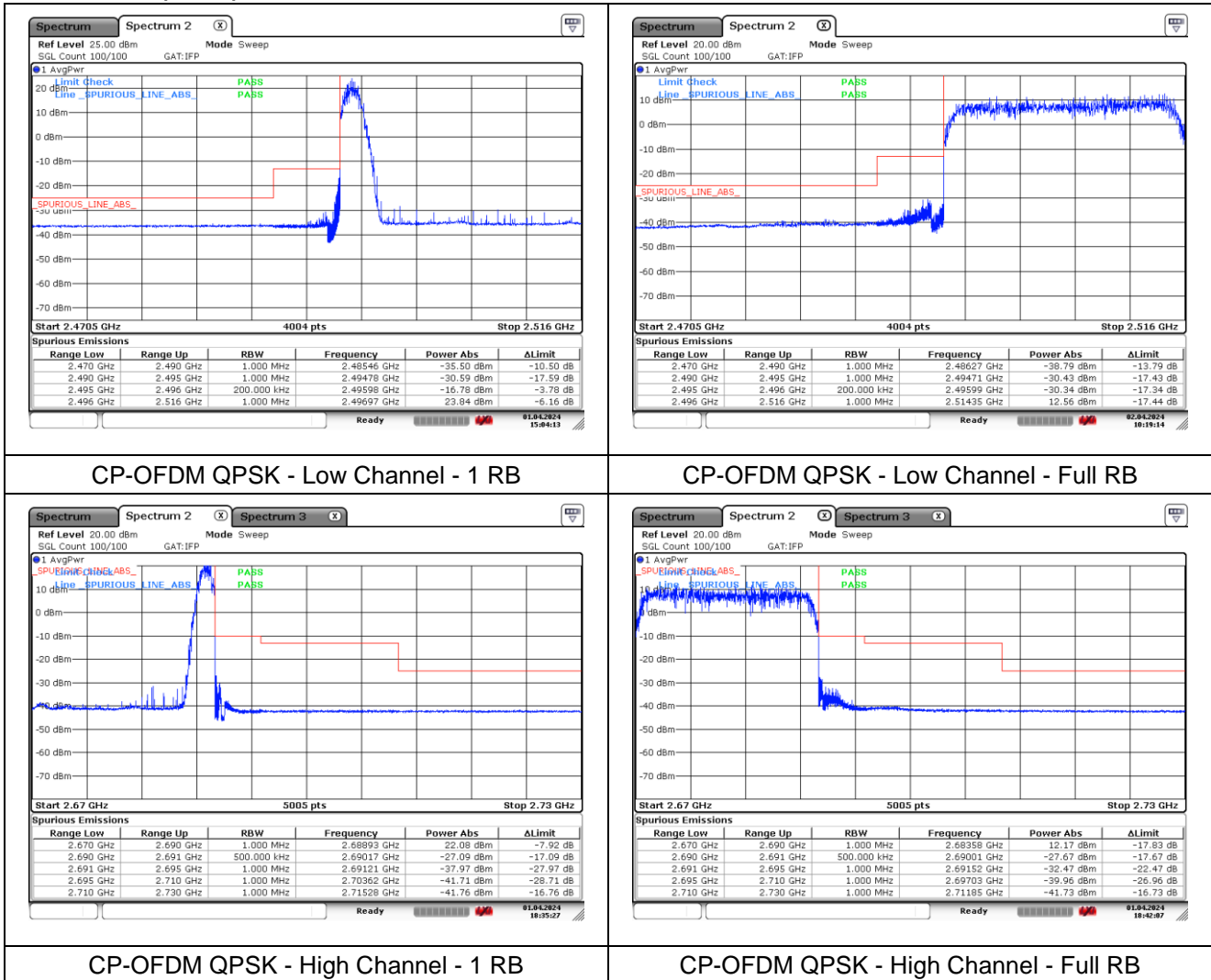


DFT-S-OFDM 16QAM - High Channel - 1 RB

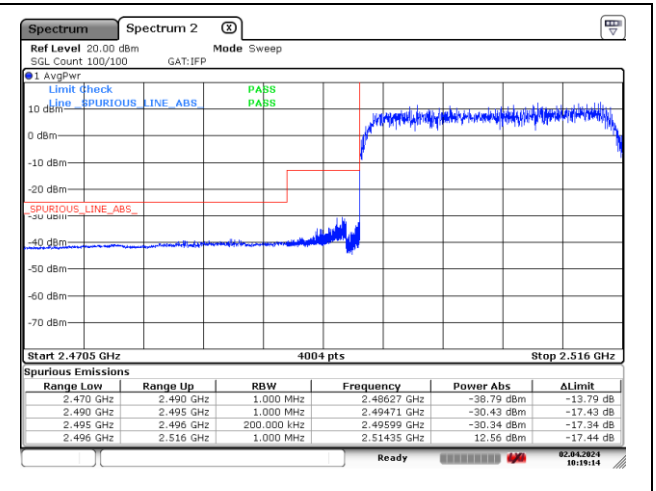
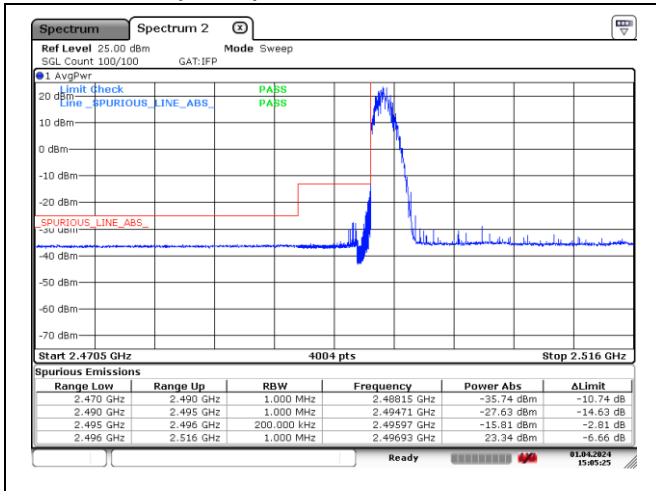


DFT-S-OFDM 16QAM - High Channel - Full RB

NR band 41 (20 MHz)

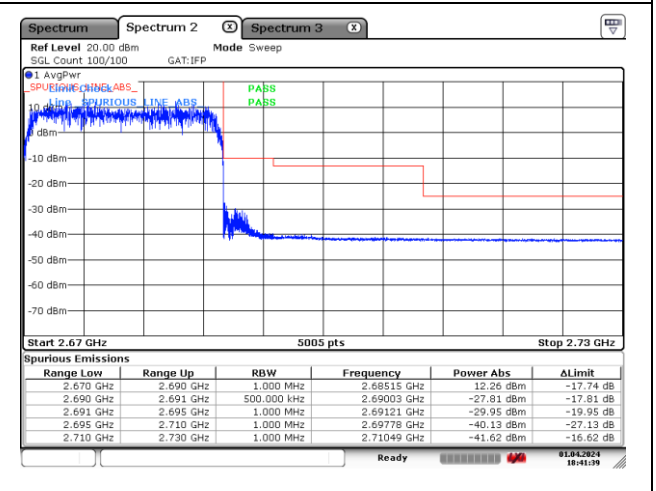
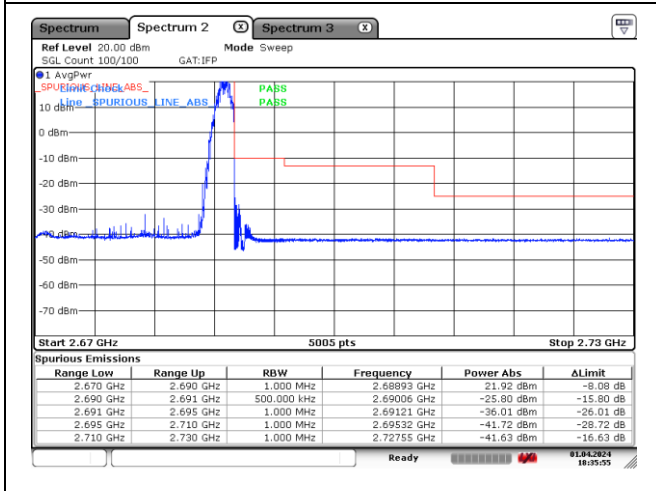


NR band 41 (20 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB

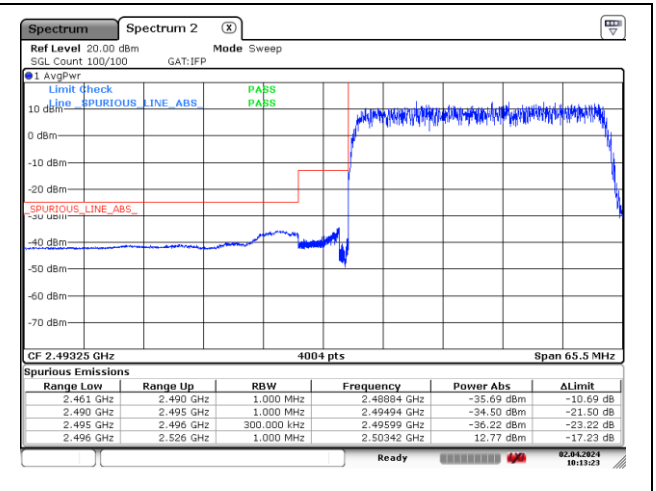
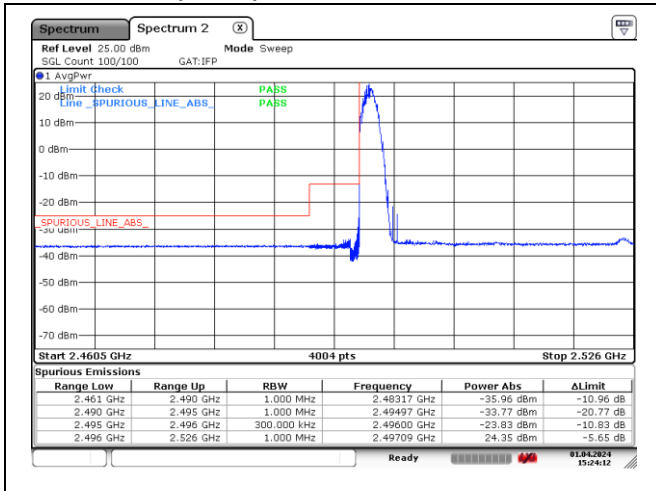
CP-OFDM 16QAM - Low Channel - Full RB



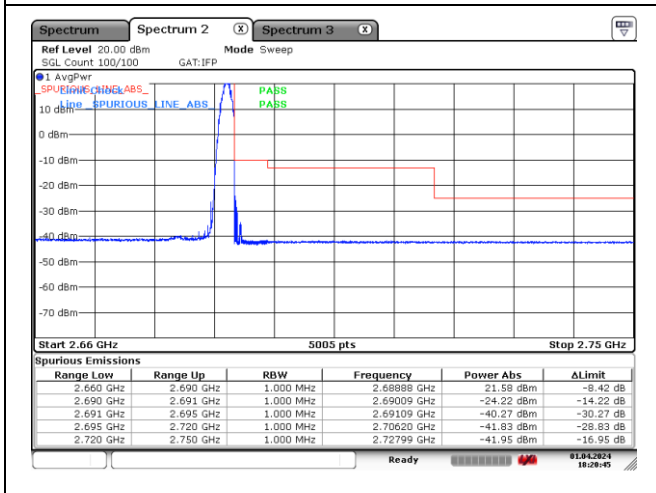
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

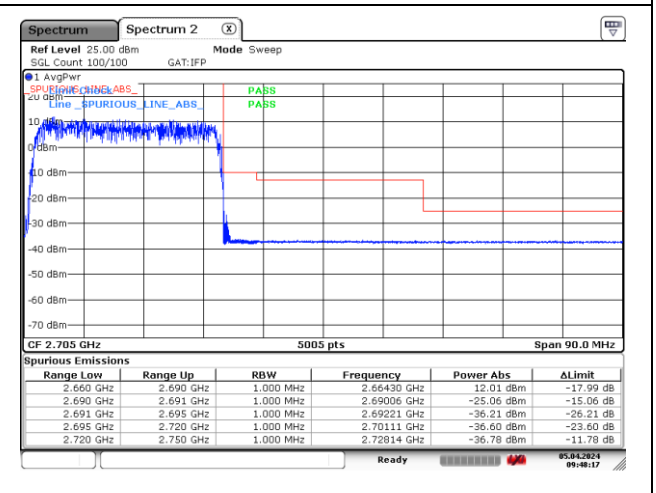
NR band 41 (30 MHz)



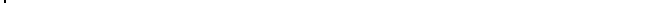
DFT-S-OFDM BPSK - Low Channel - 1 RB



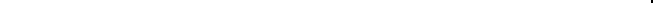
DFT-S-OFDM BPSK - Low Channel - Full RB



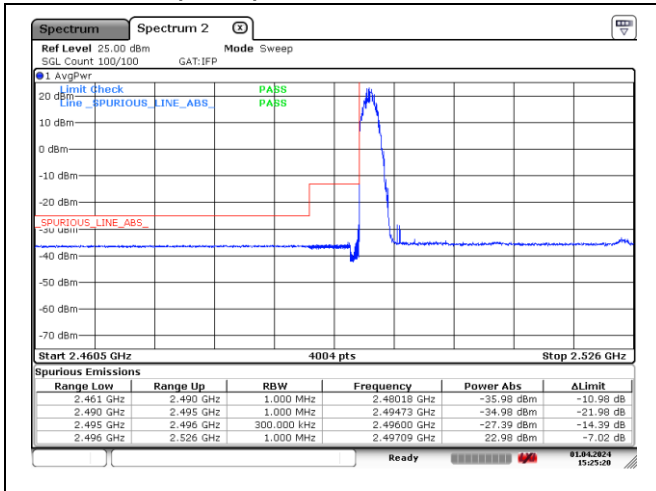
DFT-S-OFDM BPSK - High Channel - 1 RB



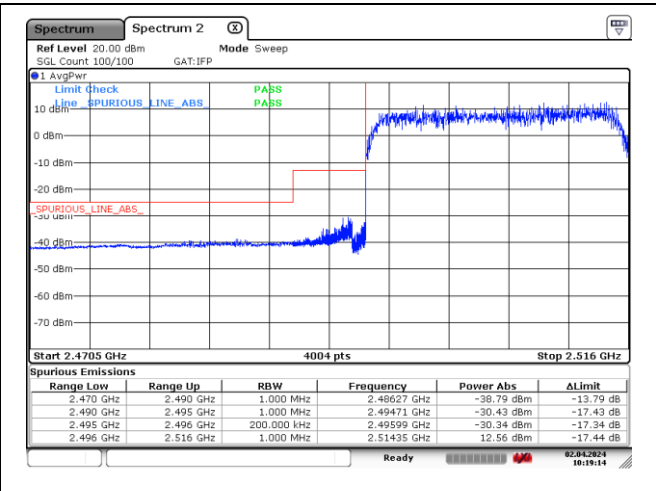
DFT-S-OFDM BPSK - High Channel - Full RB



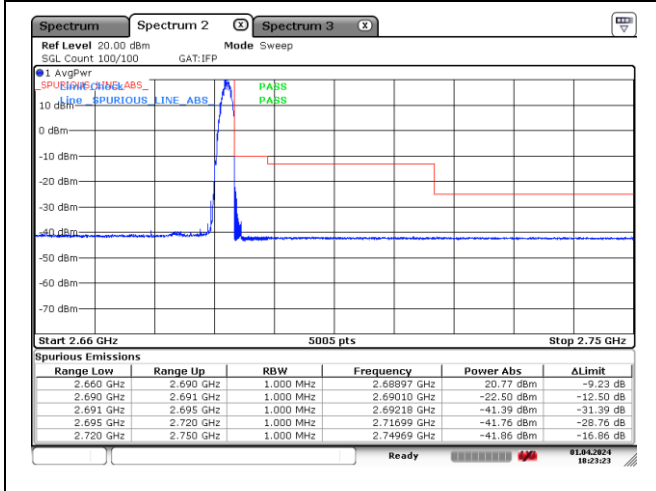
NR band 41 (30 MHz)



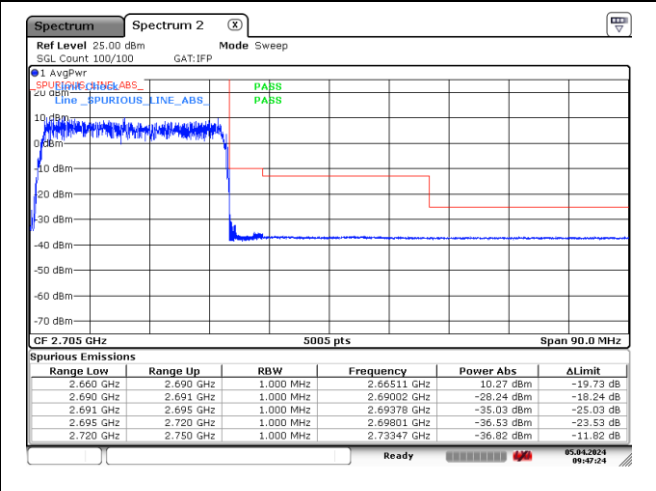
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - Low Channel - Full RB

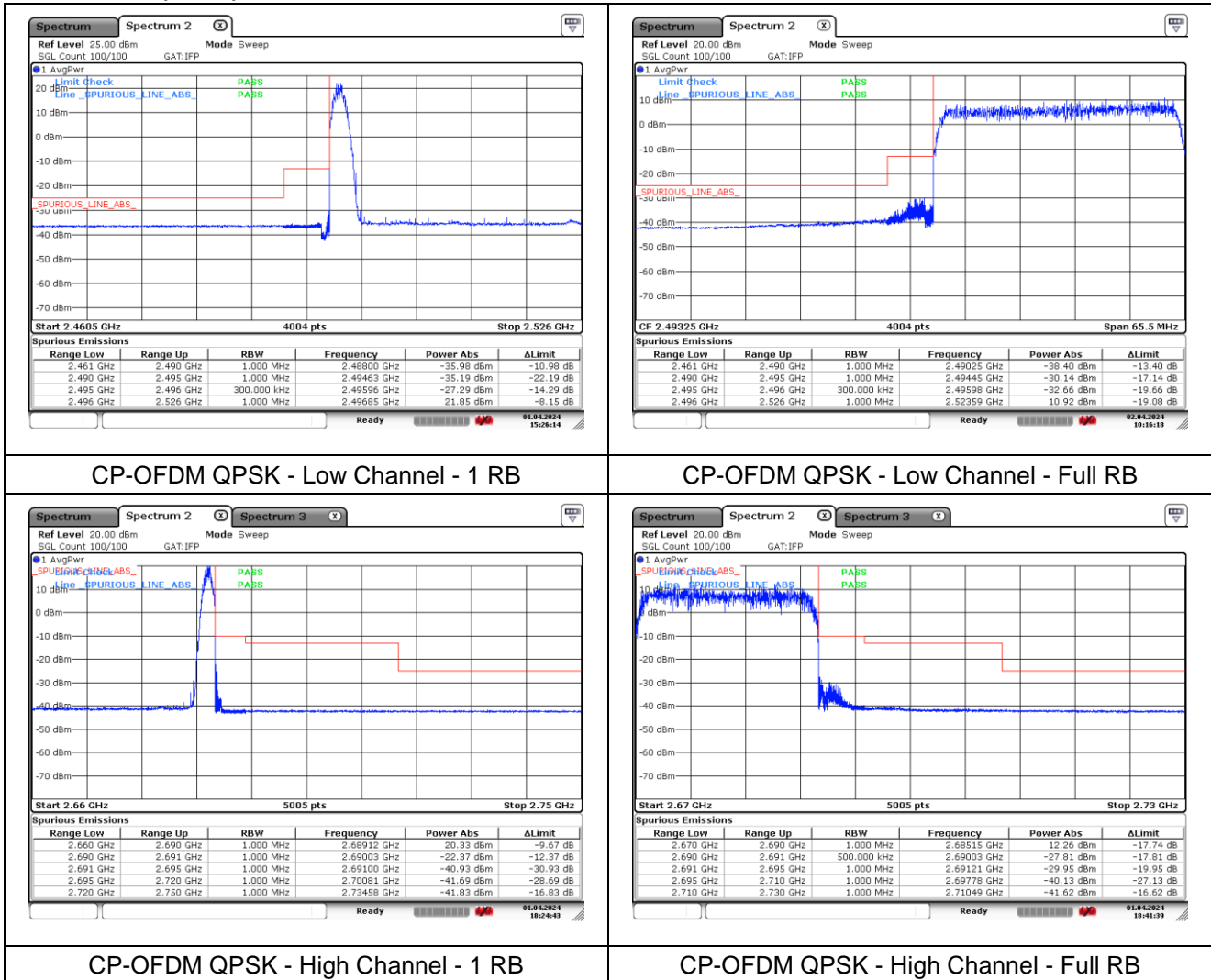


DFT-S-OFDM 16QAM - High Channel - 1 RB

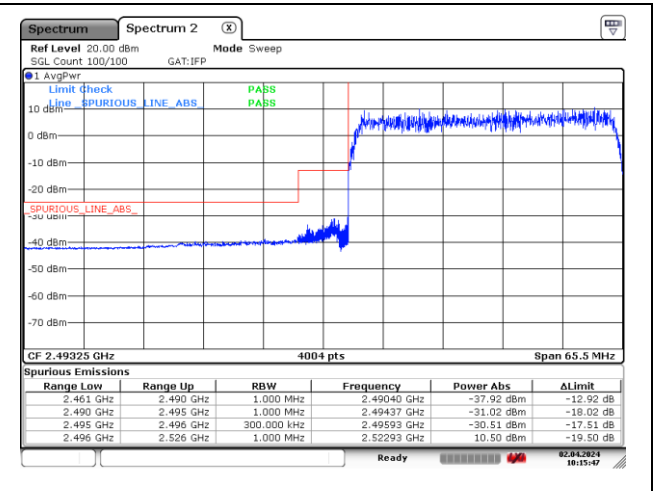
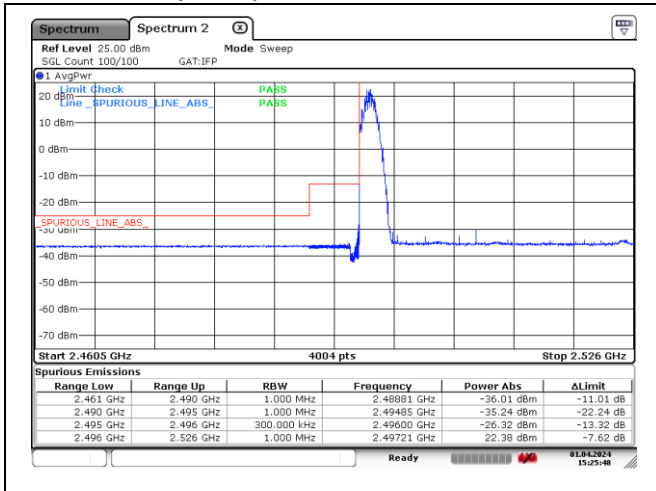


DFT-S-OFDM 16QAM - High Channel - Full RB

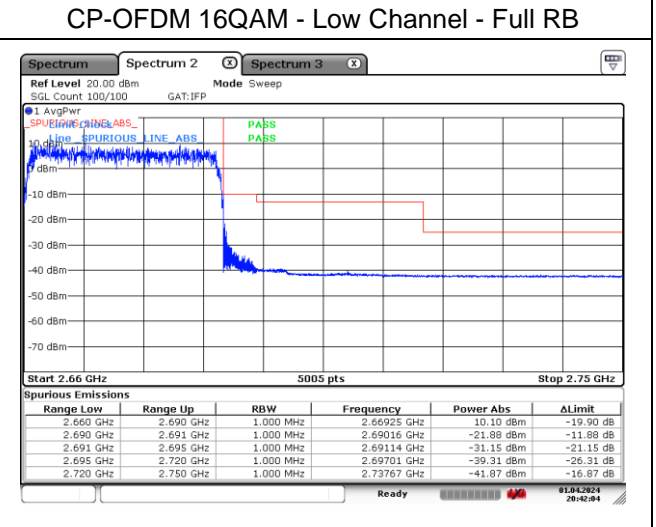
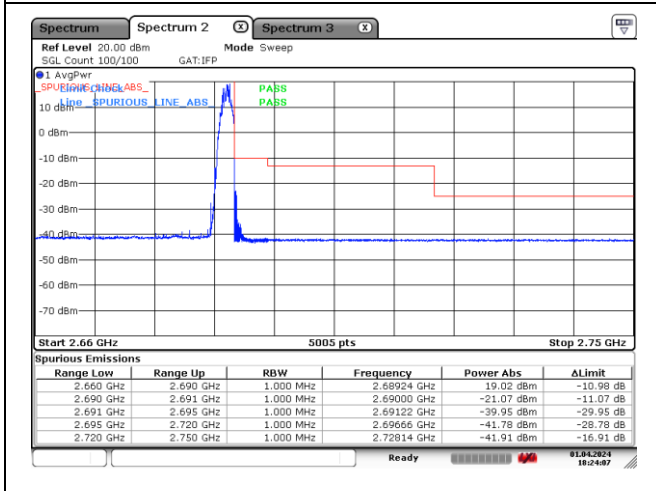
NR band 41 (30 MHz)



NR band 41 (30 MHz)



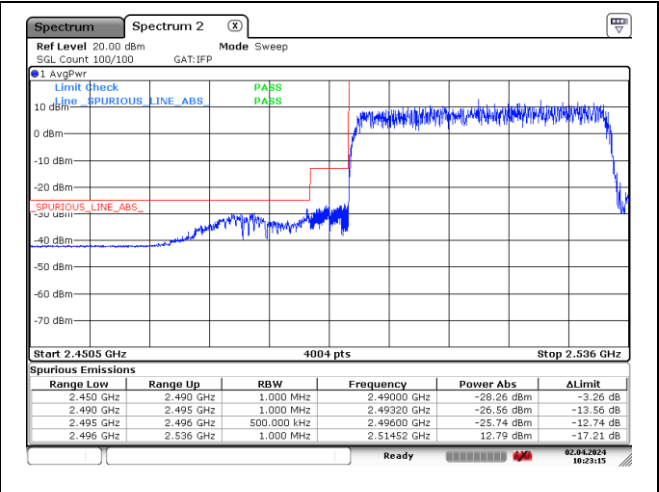
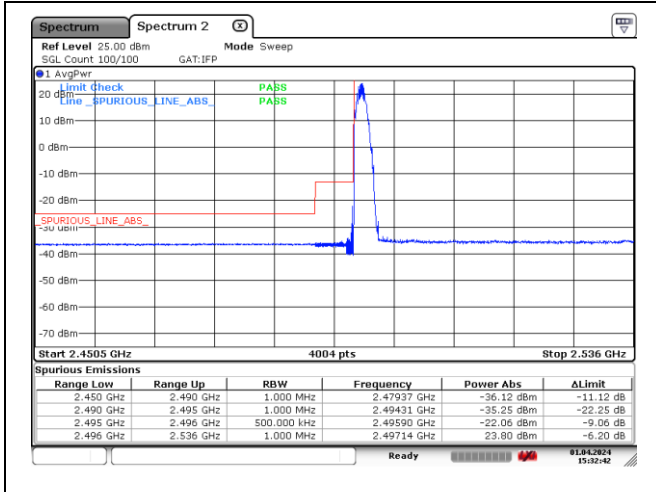
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - High Channel - 1 RB

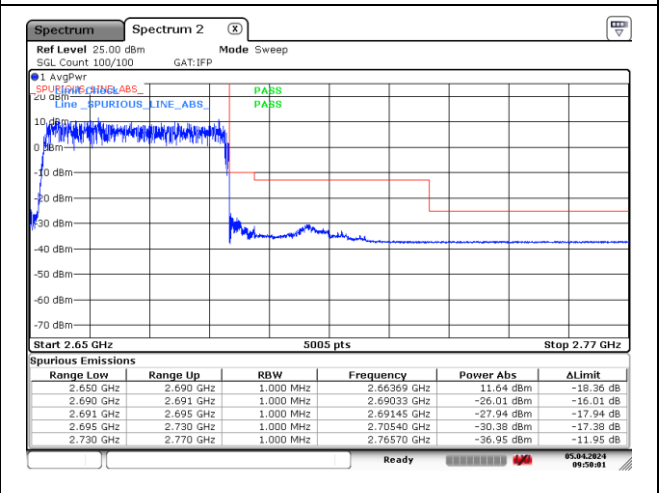
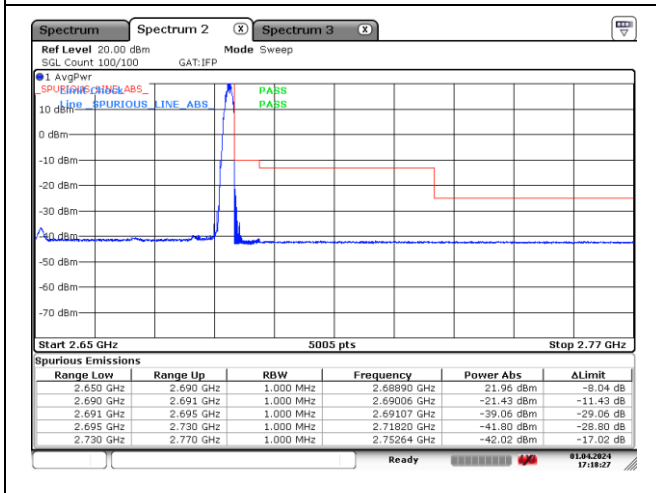
CP-OFDM 16QAM - High Channel - Full RB

NR band 41 (40 MHz)



DFT-S-OFDM BPSK - Low Channel - 1 RB

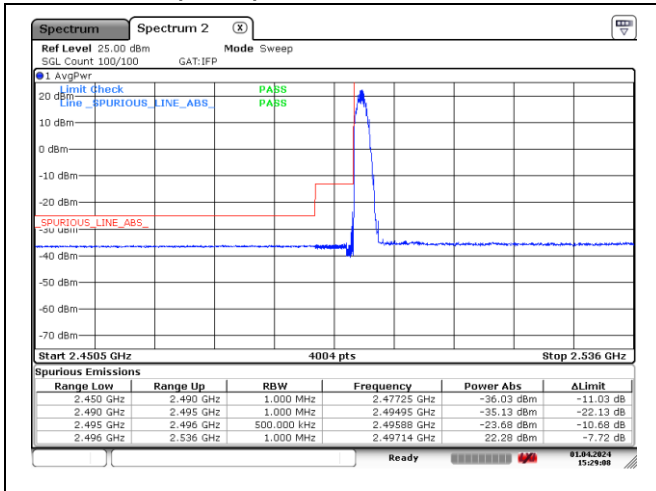
DFT-S-OFDM BPSK - Low Channel - Full RB



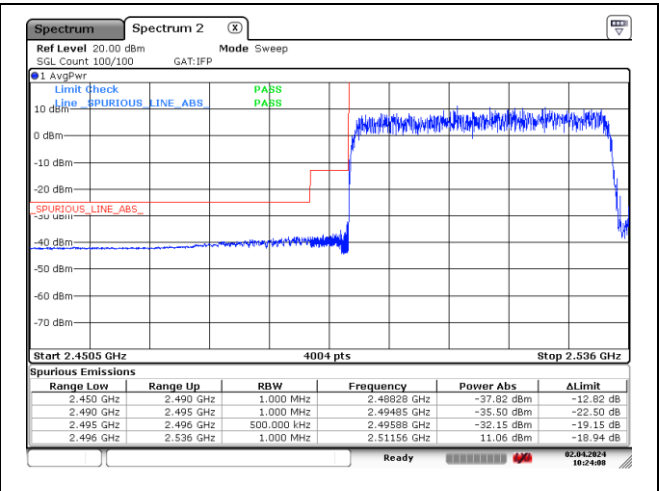
DFT-S-OFDM BPSK - High Channel - 1 RB

DFT-S-OFDM BPSK - High Channel - Full RB

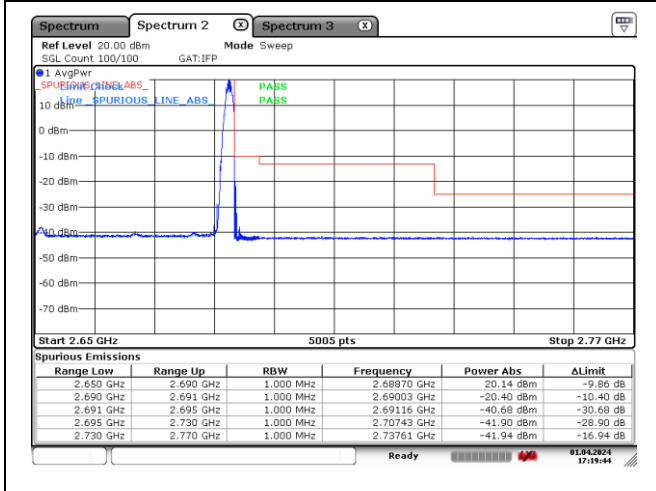
NR band 41 (40 MHz)



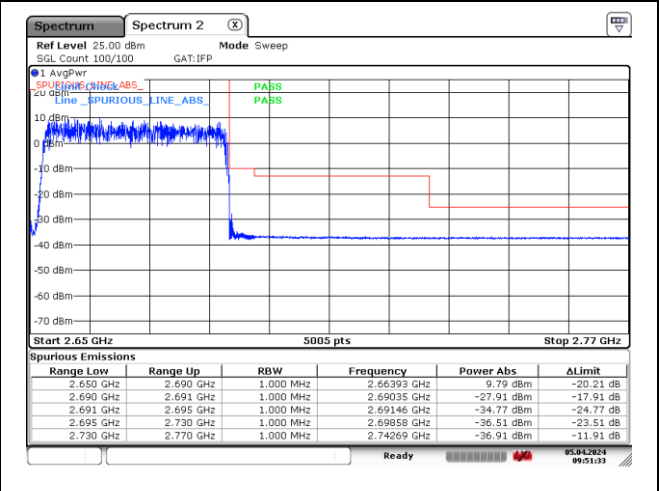
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - Low Channel - Full RB

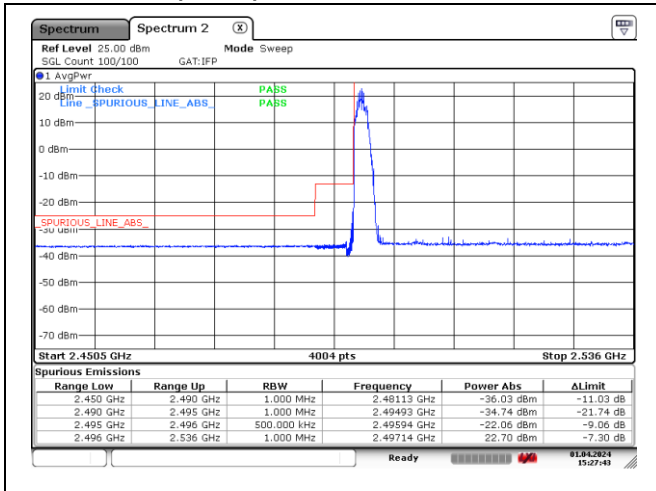


DFT-S-OFDM 16QAM - High Channel - 1 RB

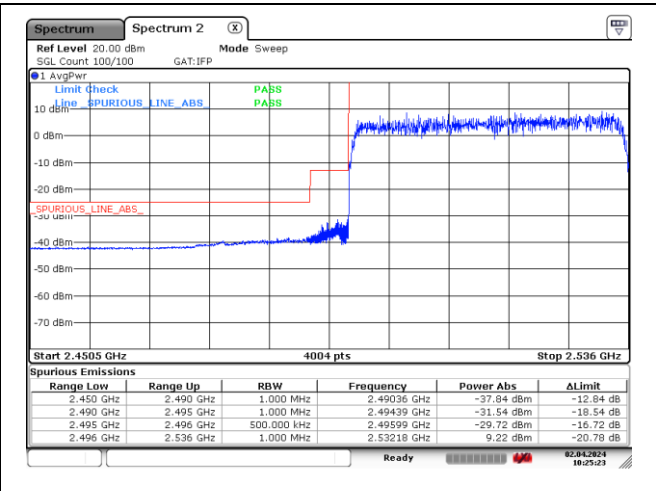


DFT-S-OFDM 16QAM - High Channel - Full RB

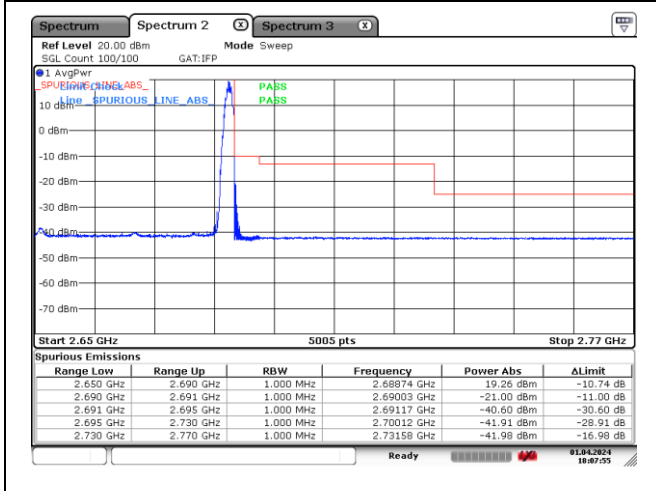
NR band 41 (40 MHz)



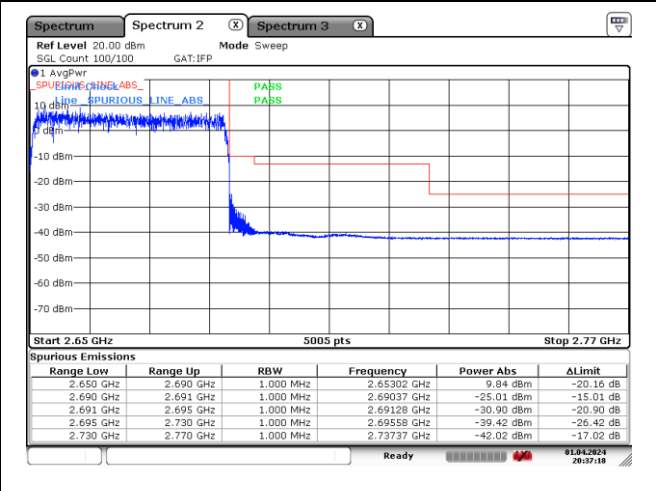
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - Low Channel - Full RB

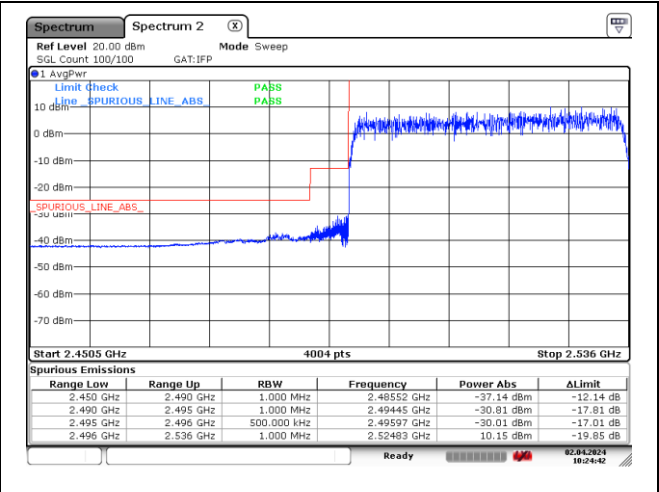
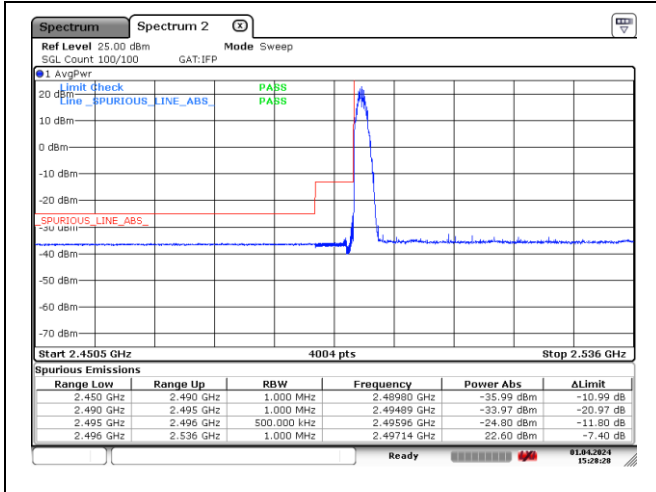


CP-OFDM QPSK - High Channel - 1 RB



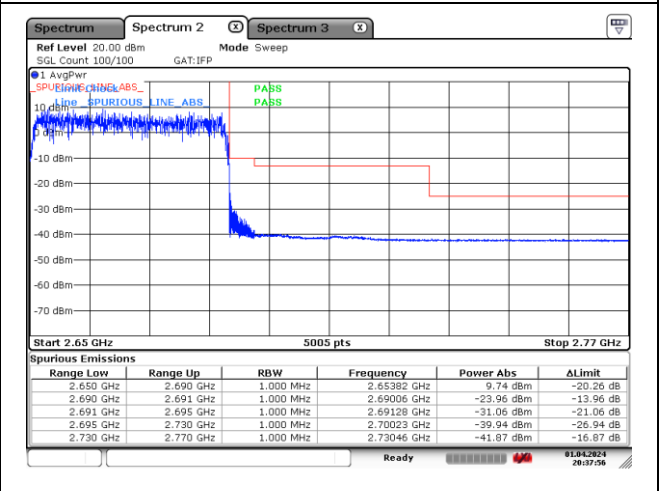
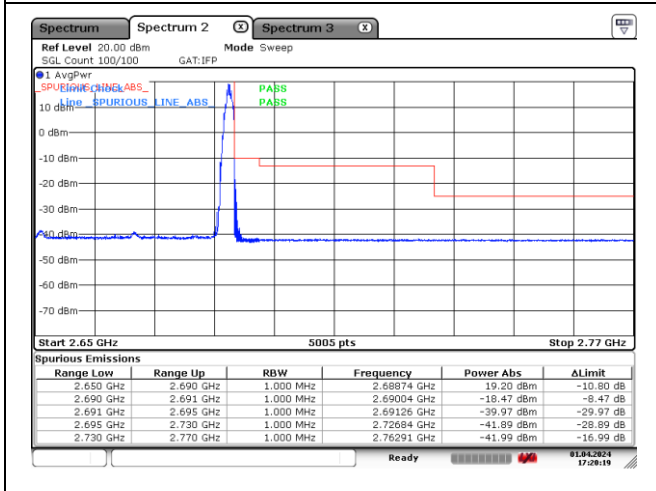
CP-OFDM QPSK - High Channel - Full RB

NR band 41 (40 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB

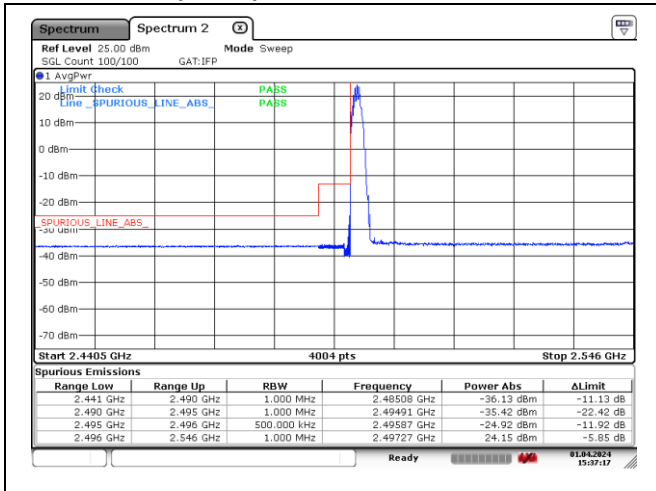
CP-OFDM 16QAM - Low Channel - Full RB



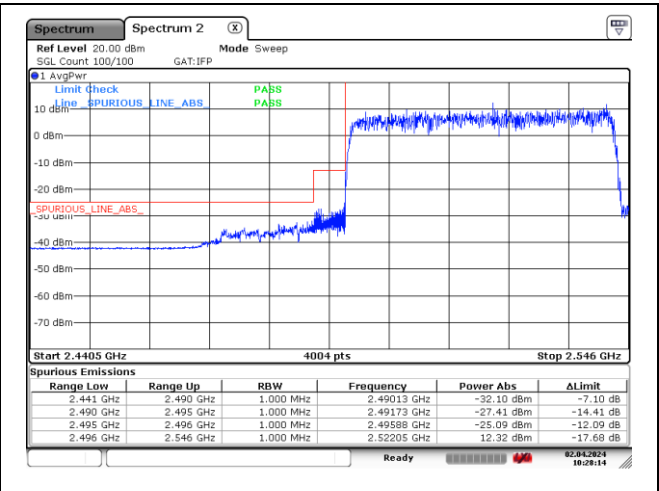
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

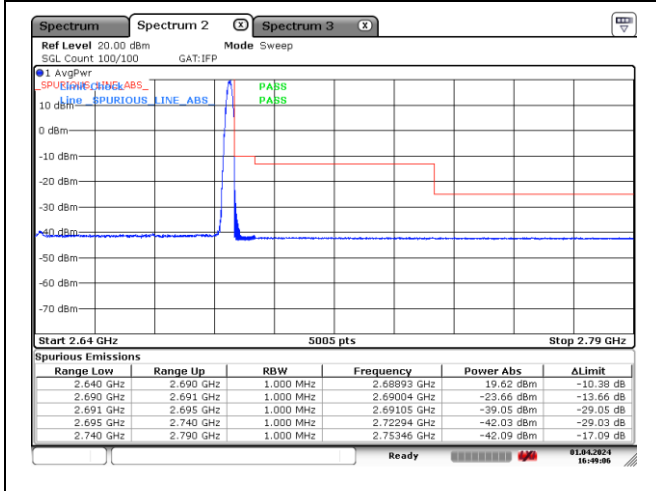
NR band 41 (50 MHz)



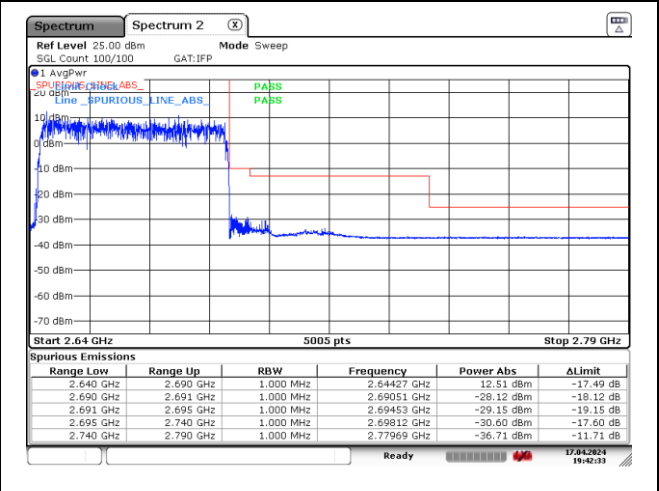
DFT-S-OFDM BPSK - Low Channel - 1 RB



DFT-S-OFDM BPSK - Low Channel - Full RB

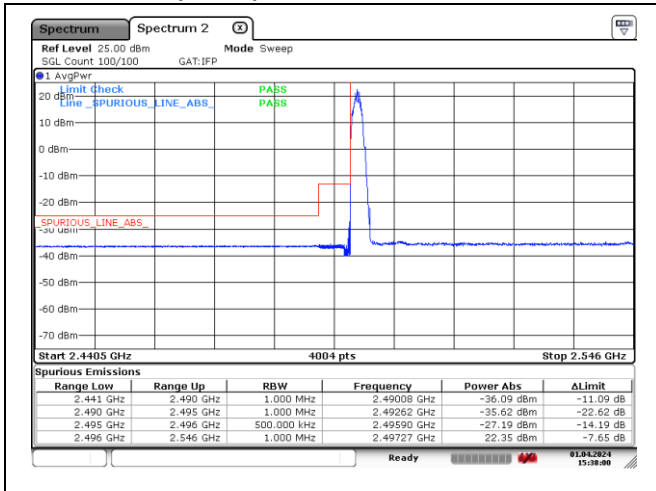


DFT-S-OFDM BPSK - High Channel - 1 RB

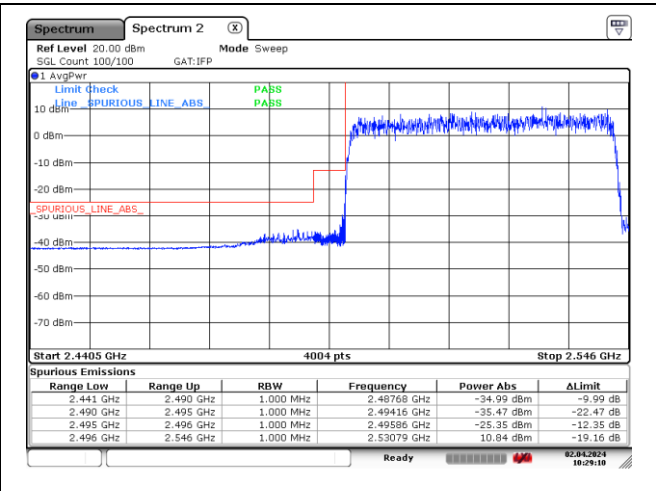


DFT-S-OFDM BPSK - High Channel - Full RB

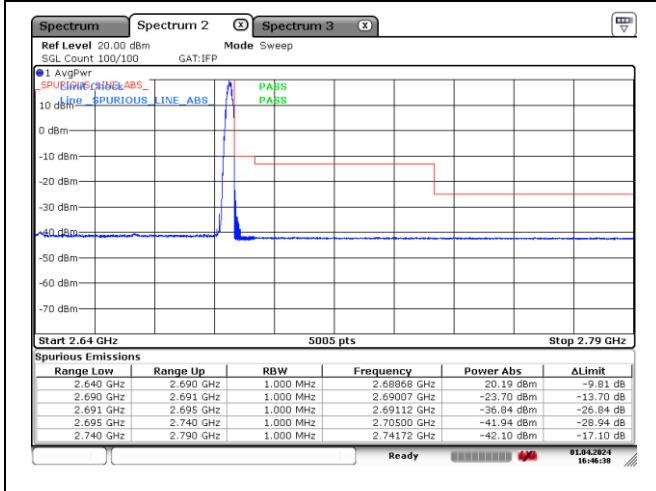
NR band 41 (50 MHz)



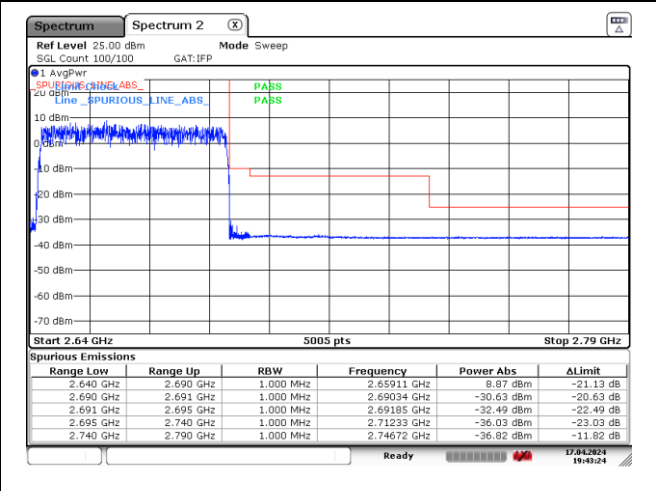
DFT-S-OFDM 16QAM - Low Channel - 1 RB



DFT-S-OFDM 16QAM - Low Channel - Full RB

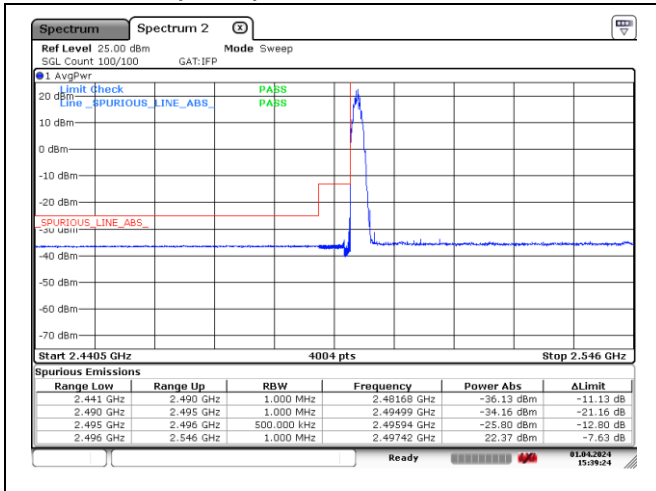


DFT-S-OFDM 16QAM - High Channel - 1 RB

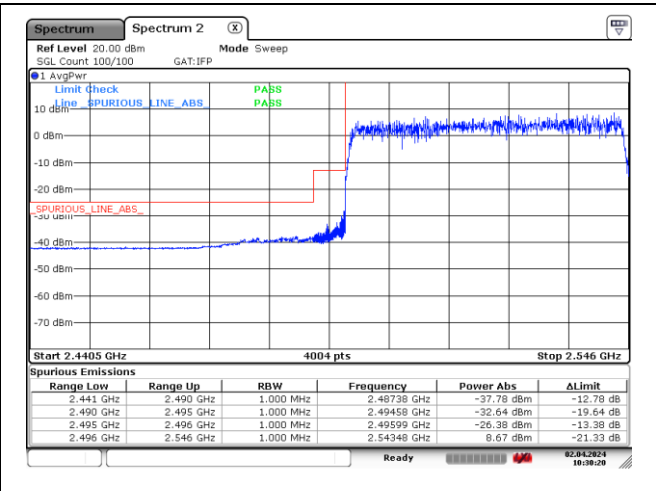


DFT-S-OFDM 16QAM - High Channel - Full RB

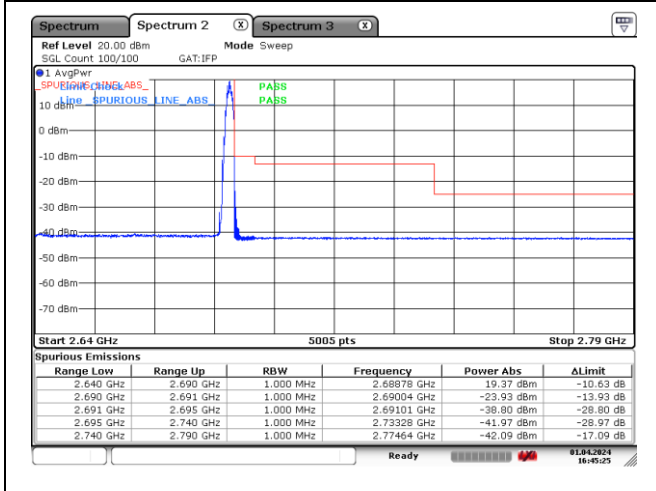
NR band 41 (50 MHz)



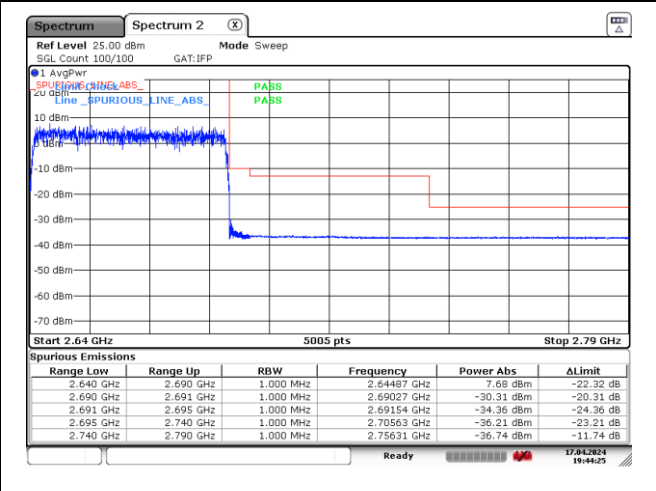
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - Low Channel - Full RB

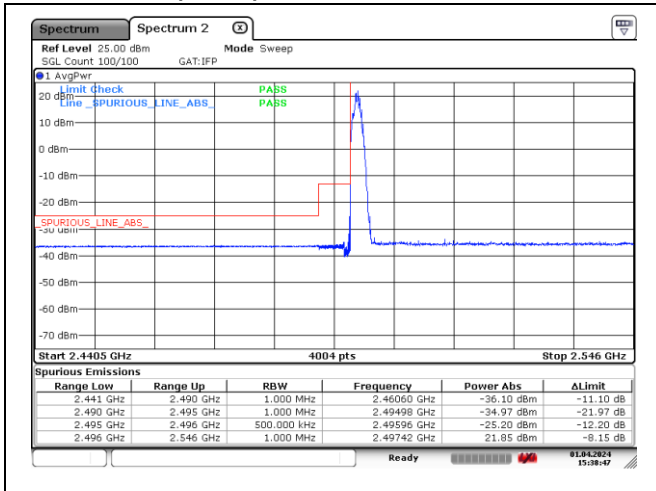


CP-OFDM QPSK - High Channel - 1 RB

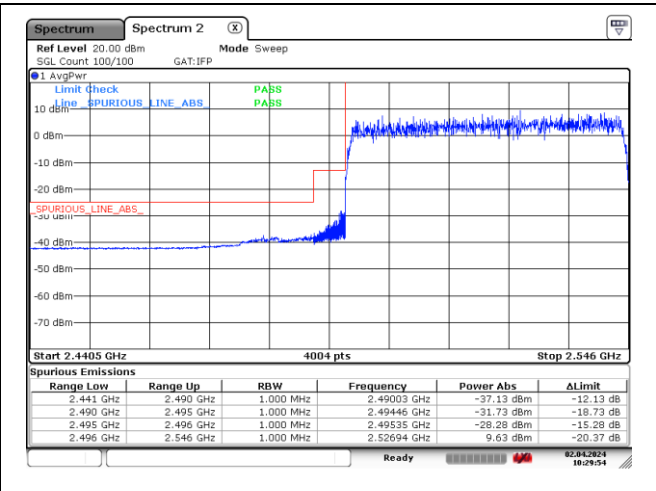


CP-OFDM QPSK - High Channel - Full RB

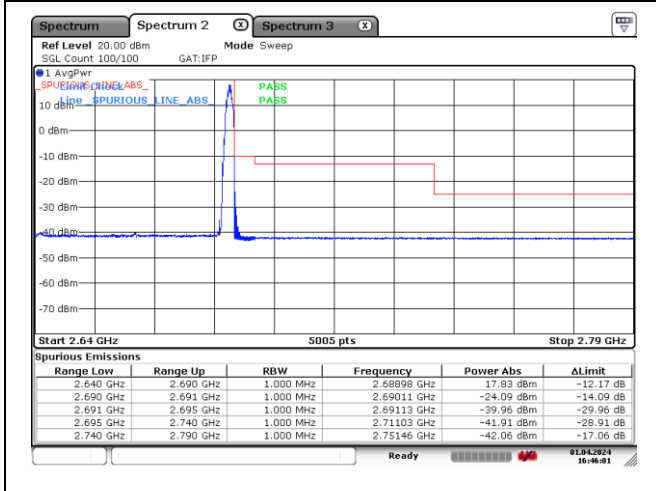
NR band 41 (50 MHz)



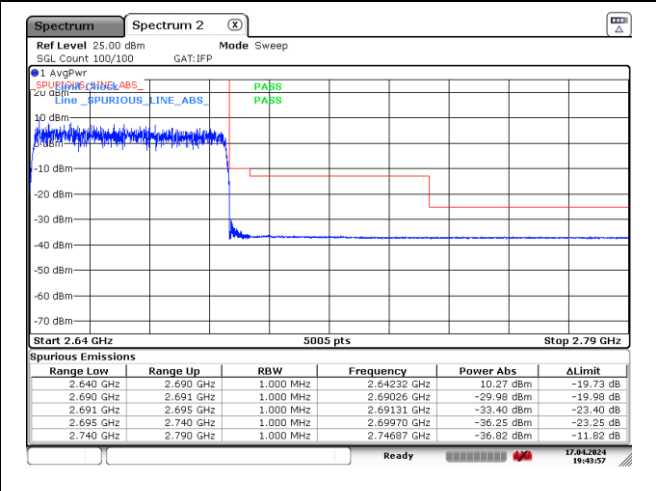
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - Low Channel - Full RB

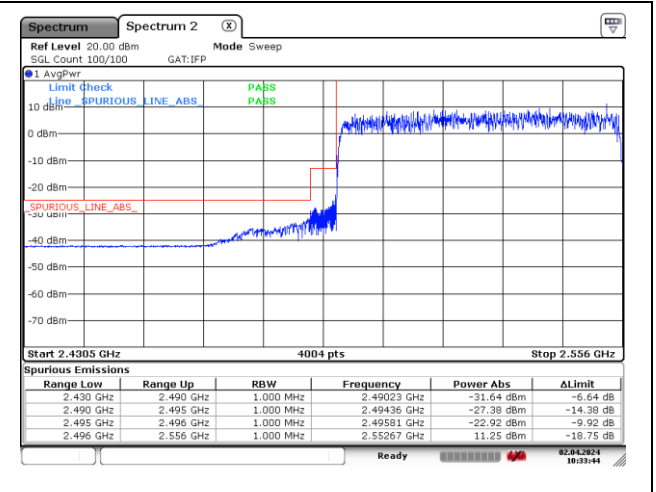
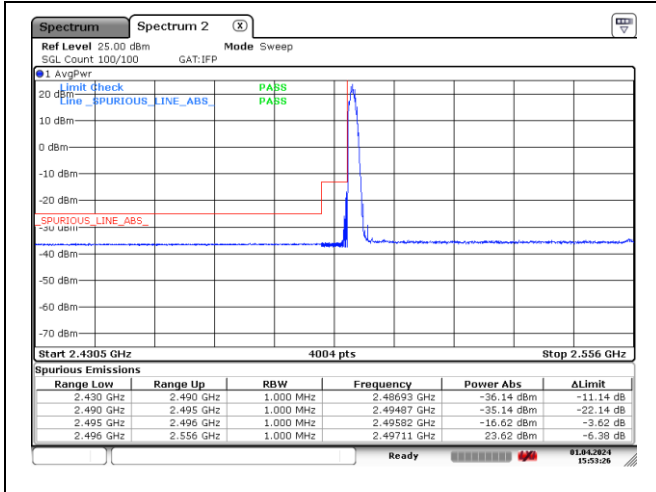


CP-OFDM 16QAM - High Channel - 1 RB



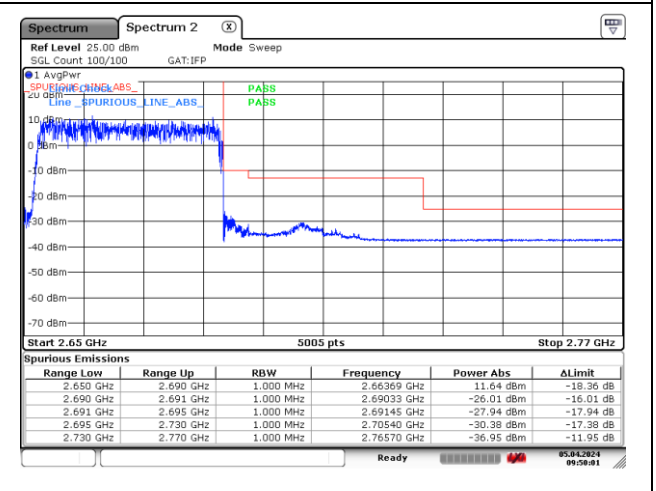
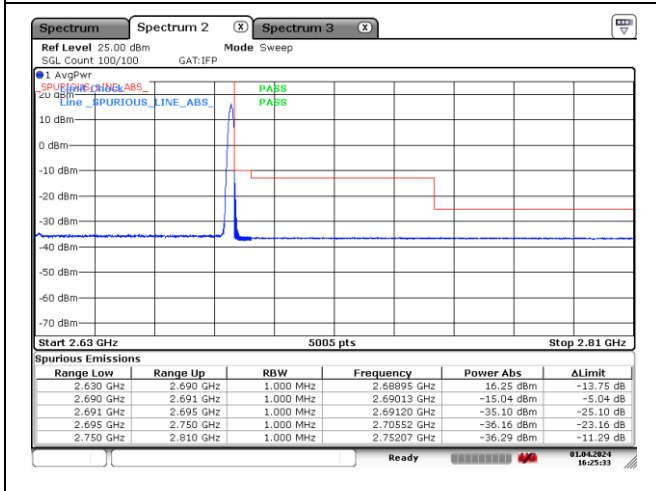
CP-OFDM 16QAM - High Channel - Full RB

NR band 41 (60 MHz)



DFT-S-OFDM BPSK - Low Channel - 1 RB

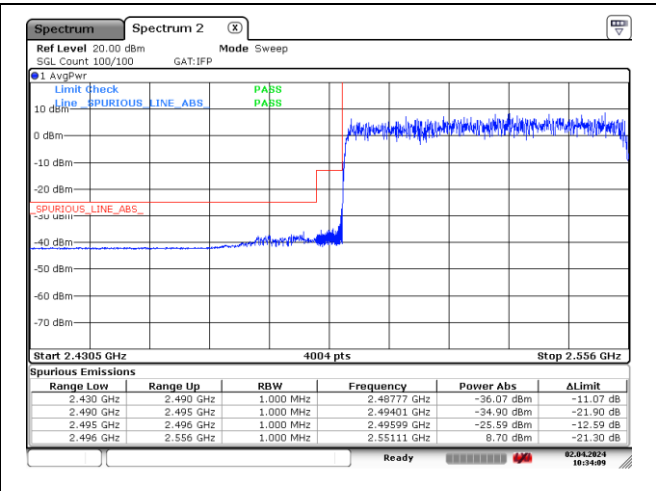
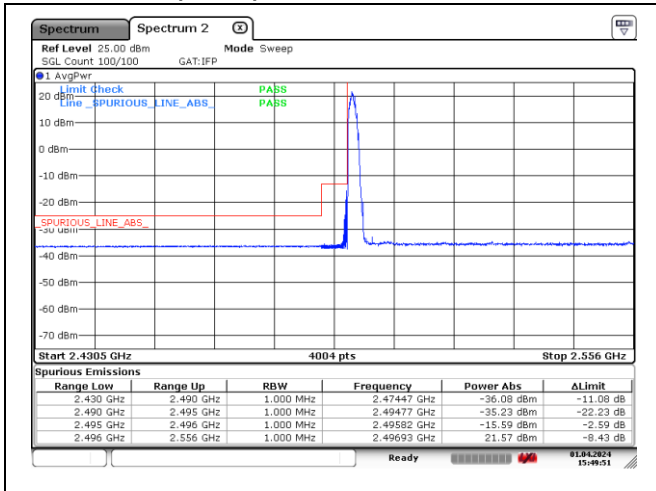
DFT-S-OFDM BPSK - Low Channel - Full RB



DFT-S-OFDM BPSK - High Channel - 1 RB

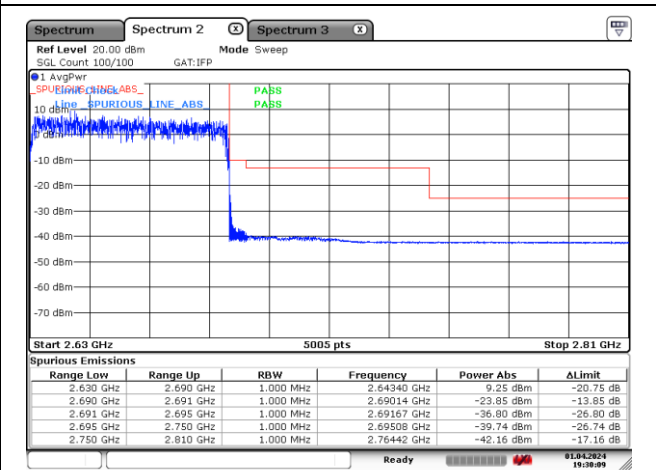
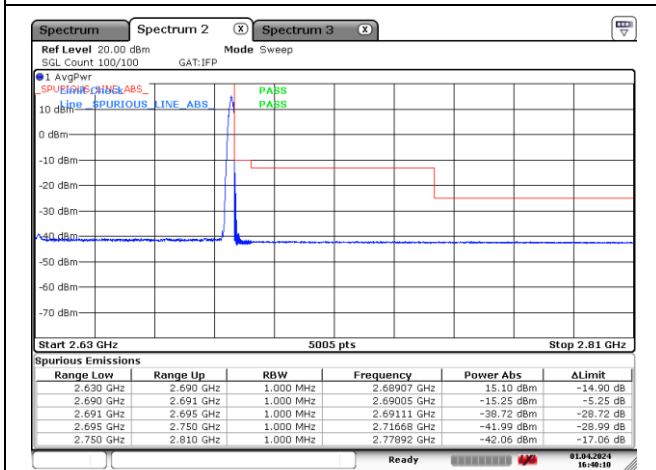
DFT-S-OFDM BPSK - High Channel - Full RB

NR band 41 (60 MHz)



DFT-S-OFDM 16QAM - Low Channel - 1 RB

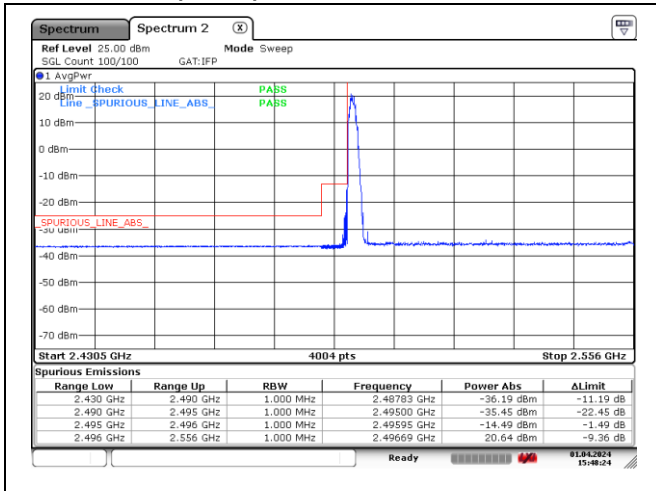
DFT-S-OFDM 16QAM - Low Channel - Full RB



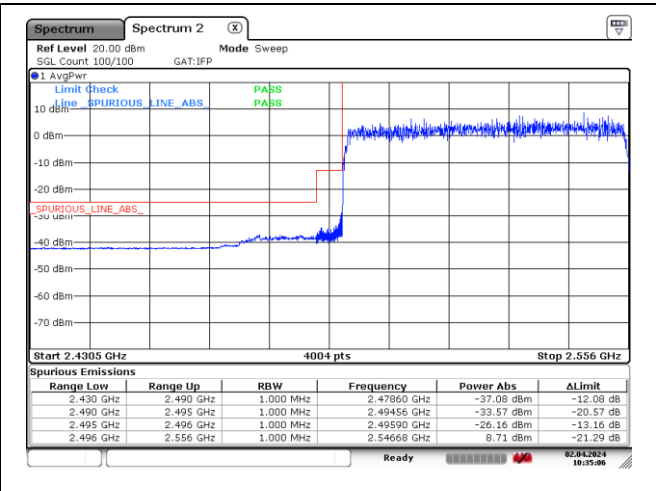
DFT-S-OFDM 16QAM - High Channel - 1 RB

DFT-S-OFDM 16QAM - High Channel - Full RB

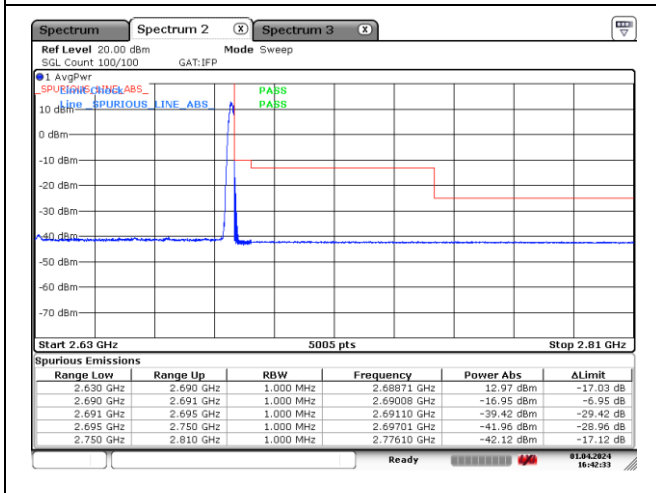
NR band 41 (60 MHz)



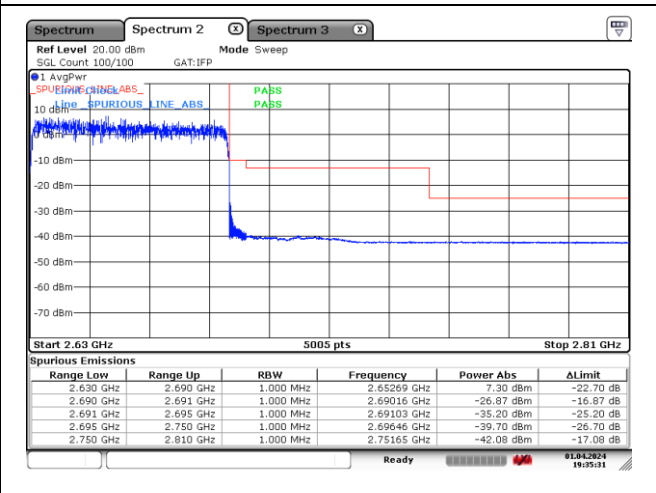
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - Low Channel - Full RB

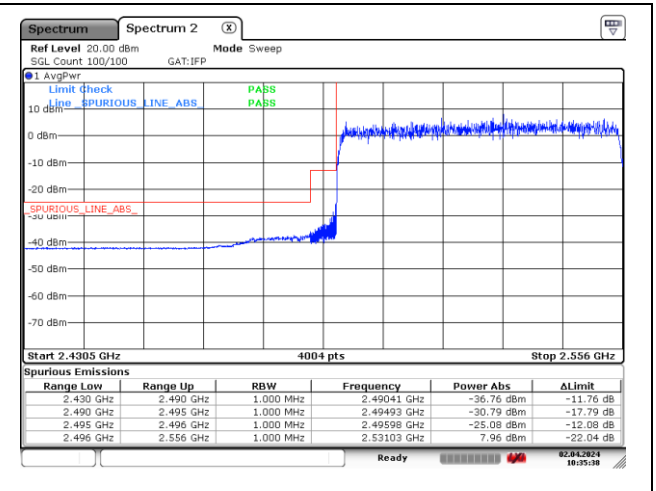
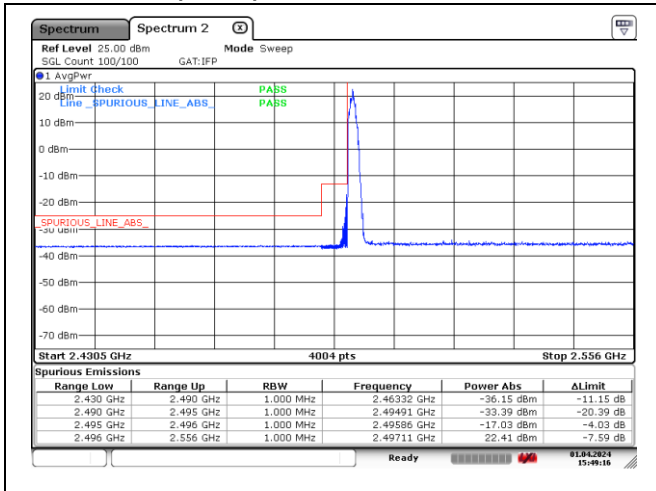


CP-OFDM QPSK - High Channel - 1 RB

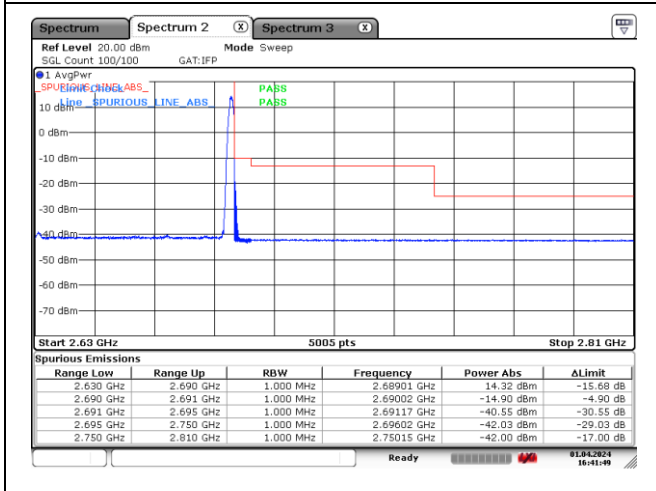


CP-OFDM QPSK - High Channel - Full RB

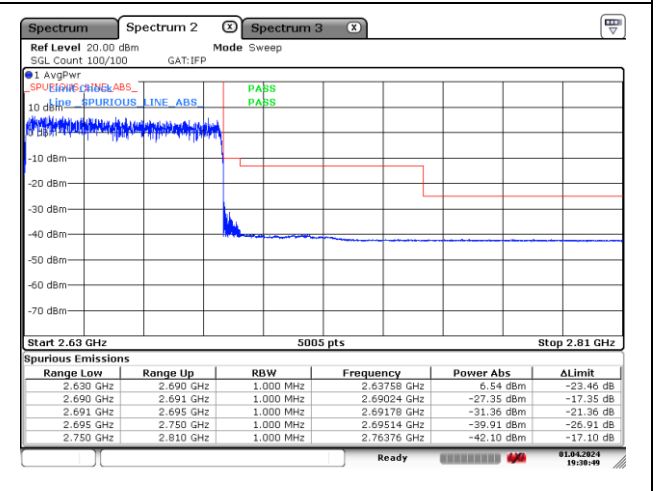
NR band 41 (60 MHz)



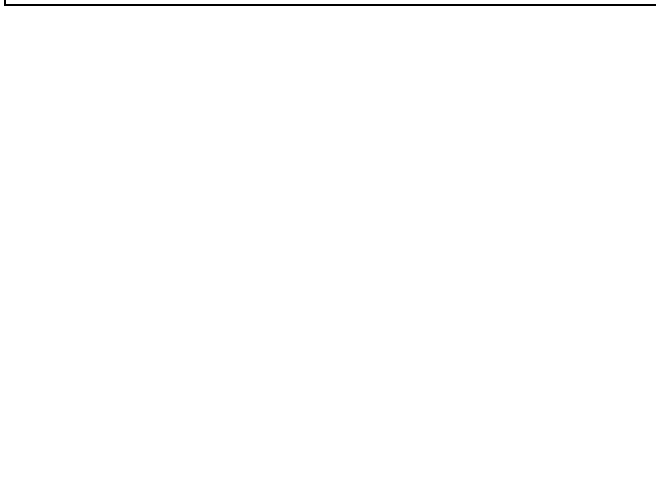
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - Low Channel - Full RB



CP-OFDM 16QAM - High Channel - 1 RB



CP-OFDM 16QAM - High Channel - Full RB

