

7. Band Edge and Emission Mask

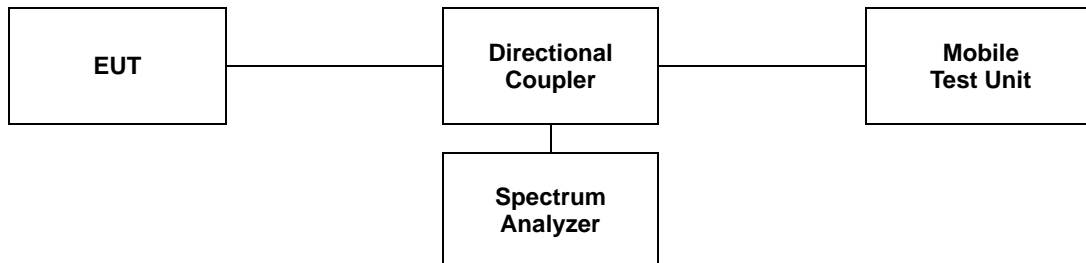
7.1. Limit

- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log_{10} (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log_{10} (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log_{10} (P)$ 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 $43 + 10 \log_{10} (P)$ dB on all frequencies between 2 490.5 MHz and 2 496 MHz and $55 + 10 \log_{10} (P)$ 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.

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.



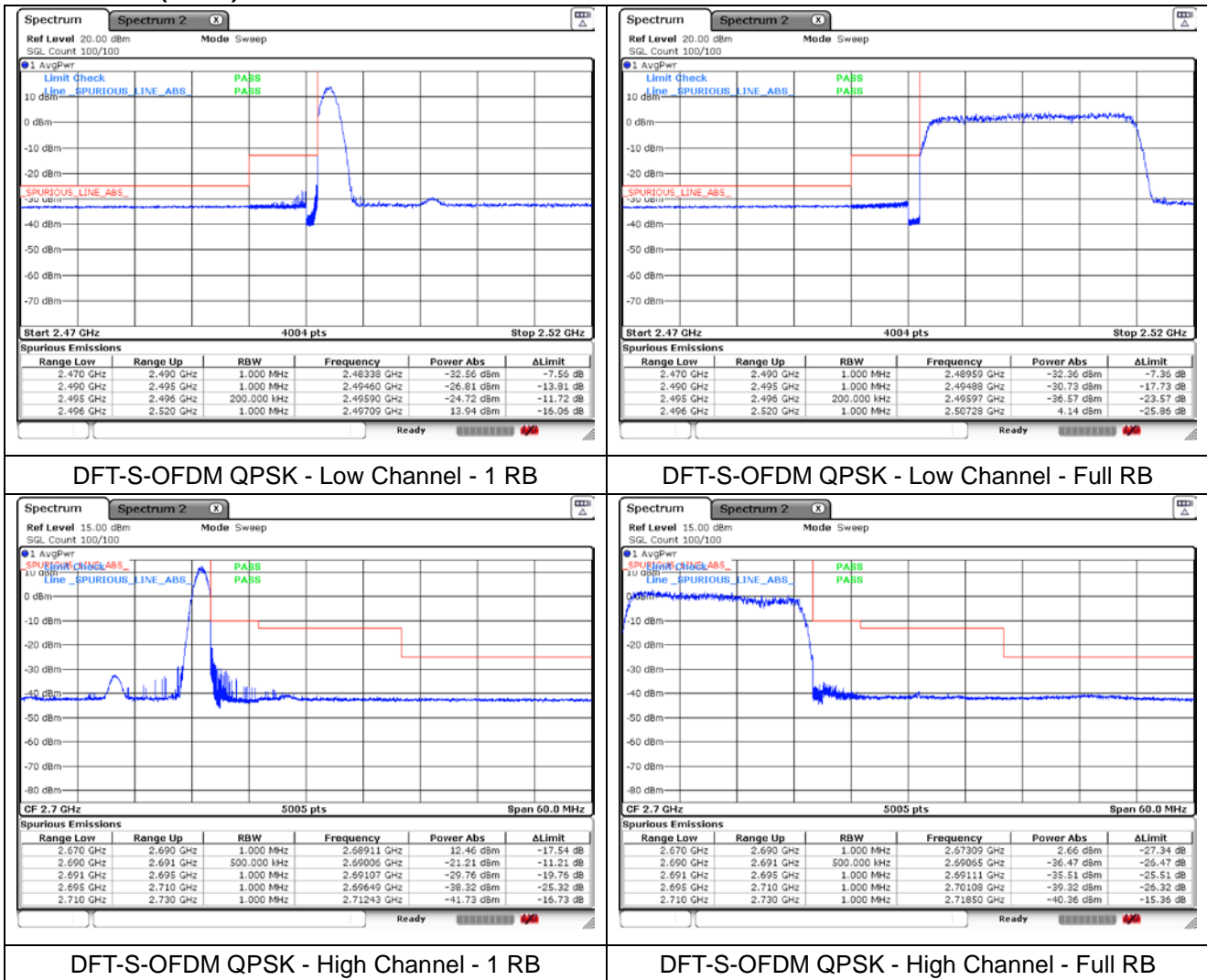
7.3. Test Results

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

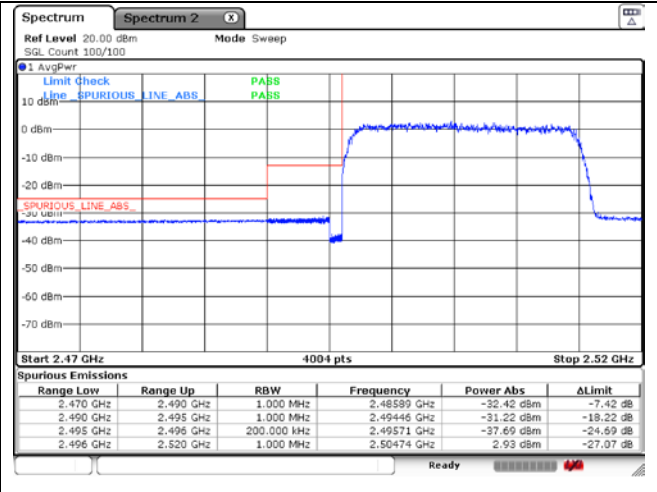
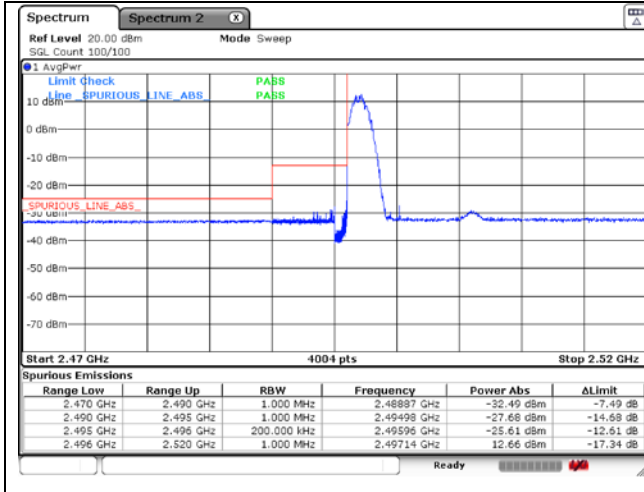
- Test plots

SIM 1

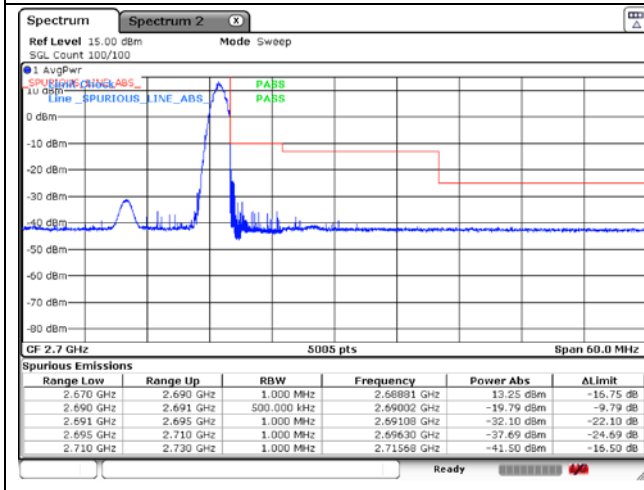
NR band 41 (20 MHz)



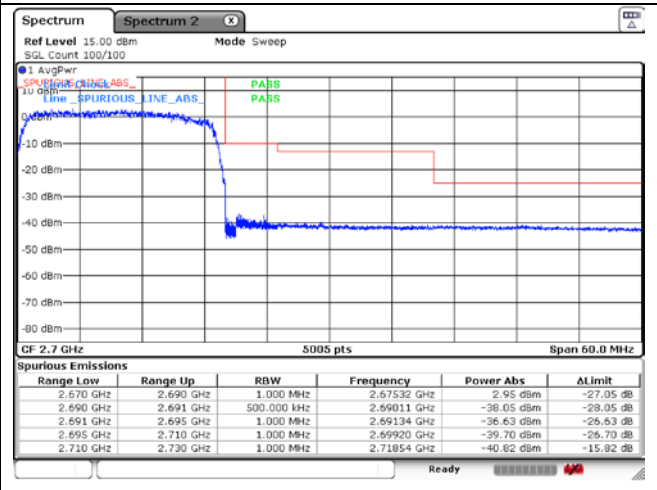
NR band 41 (20 MHz)



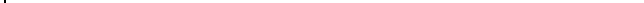
DFT-S-OFDM 16QAM - Low Channel - 1 RB



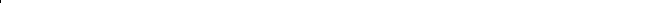
DFT-S-OFDM 16QAM - Low Channel - Full RB



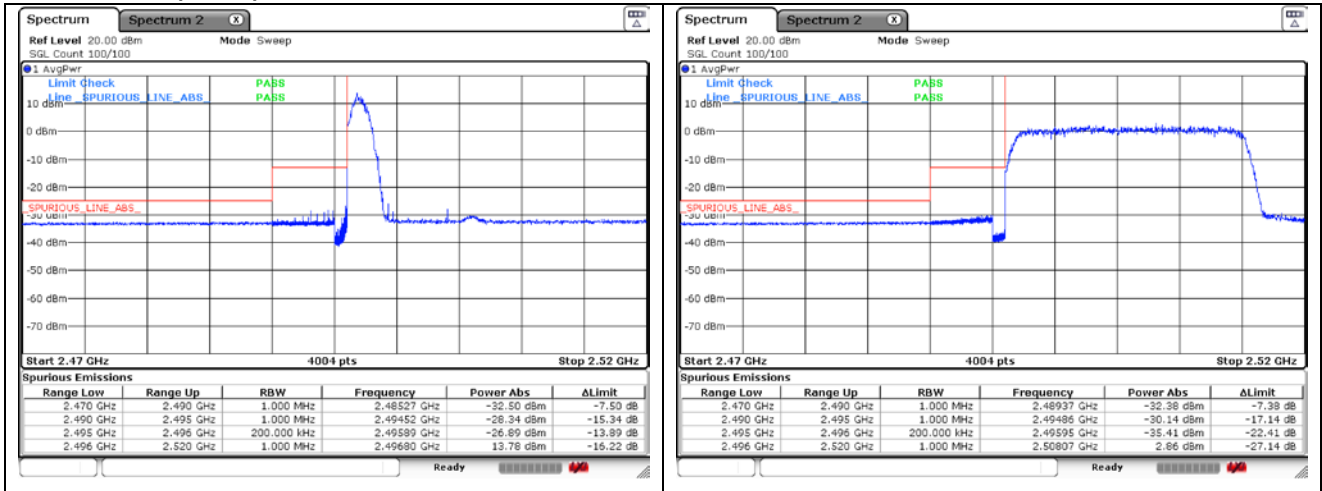
DFT-S-OFDM 16QAM - High Channel - 1 RB



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

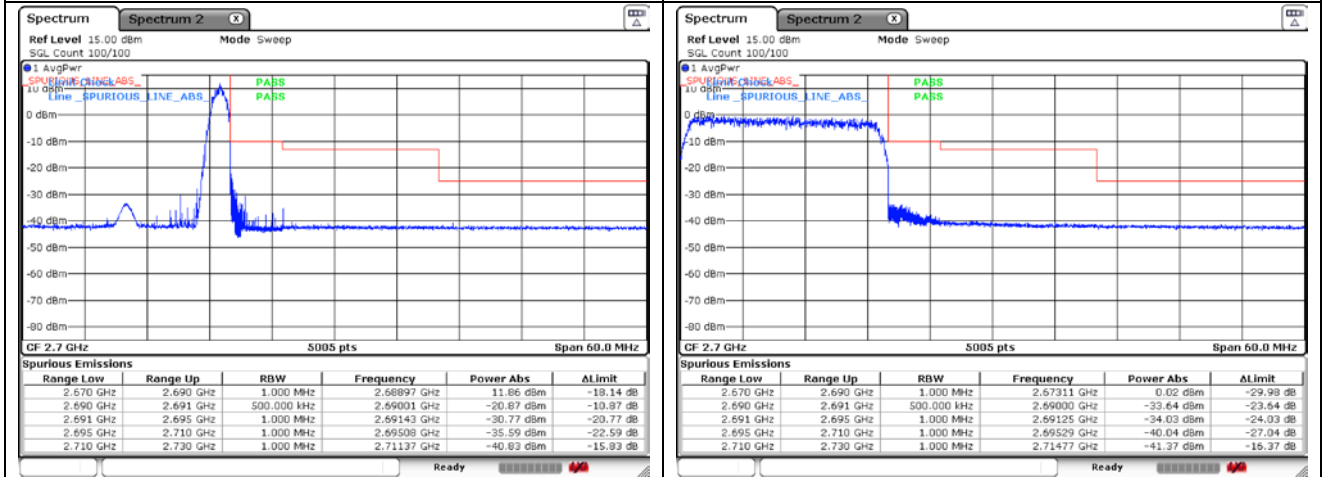


NR band 41 (20 MHz)



CP-OFDM QPSK - Low Channel - 1 RB

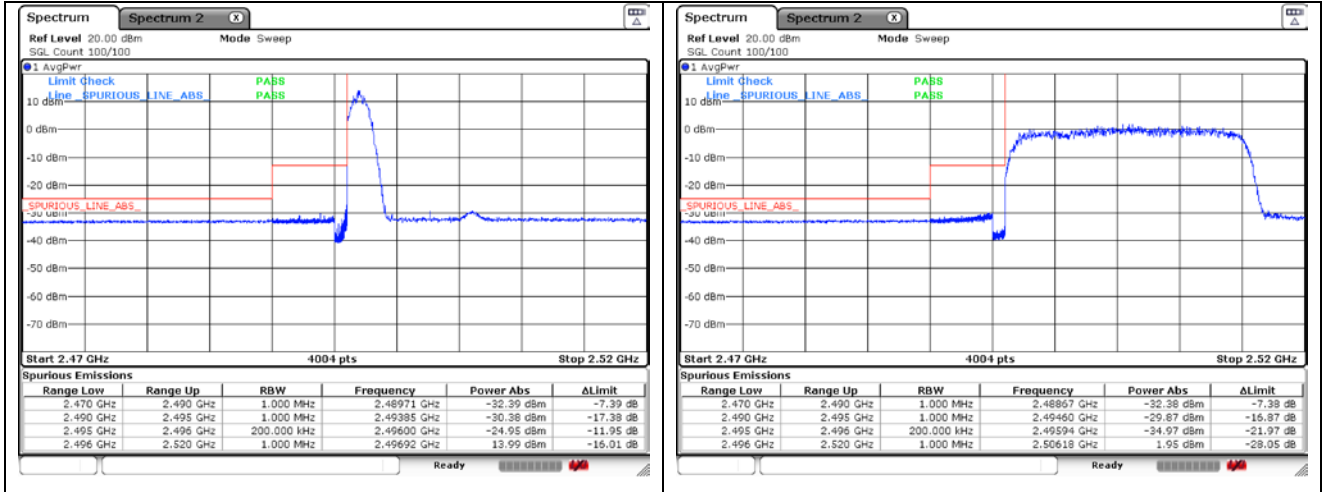
CP-OFDM QPSK Low - Channel - Full RB



CP-OFDM QPSK - High Channel - 1 RB

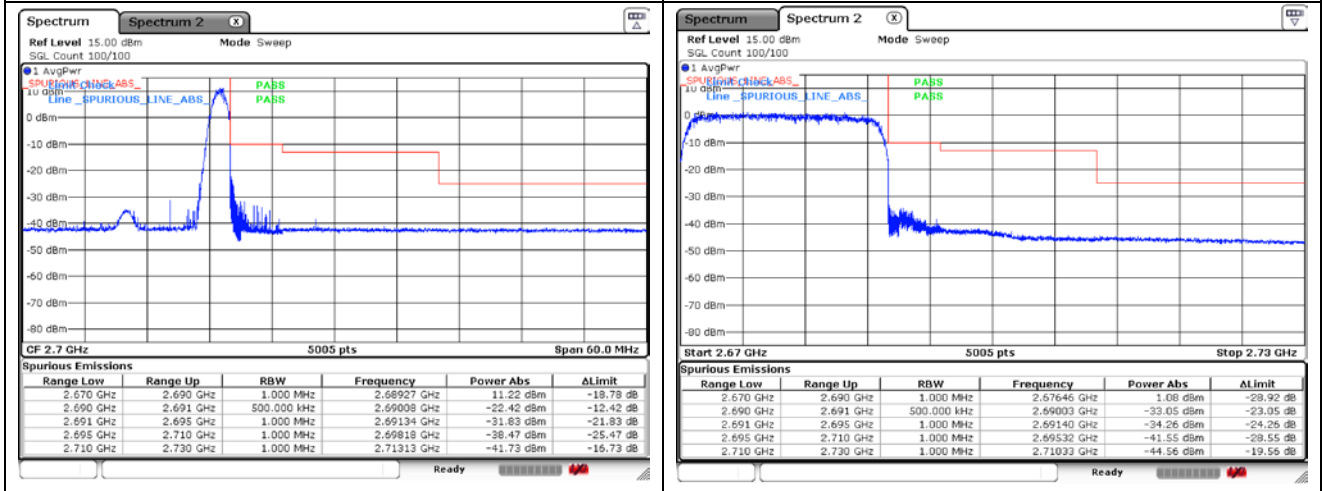
CP-OFDM QPSK - High Channel - Full RB

NR band 41 (20 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB

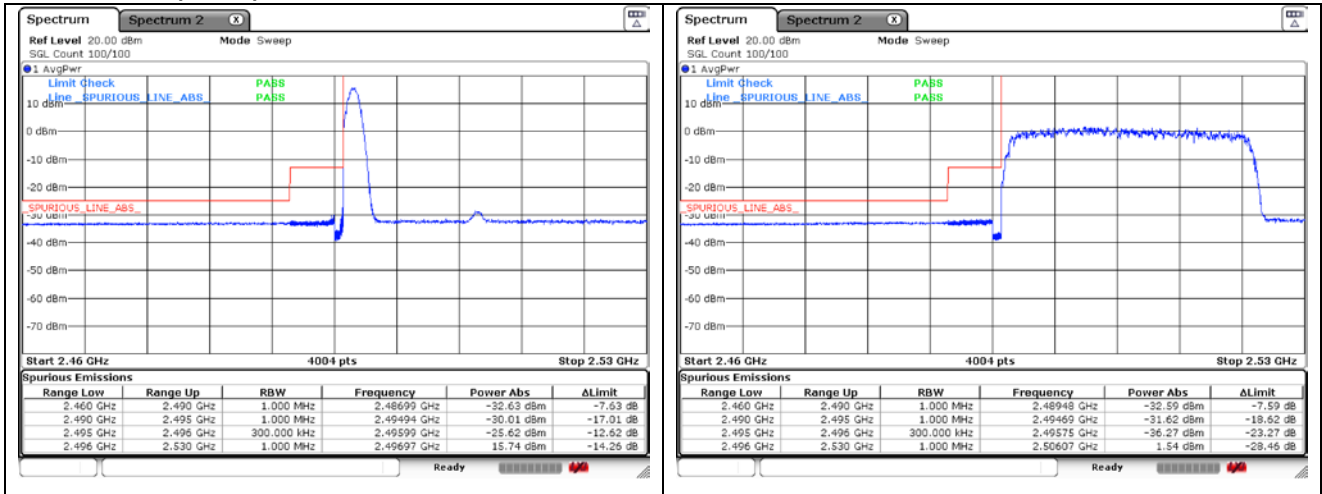
CP-OFDM 16QAM - Low Channel - Full RB



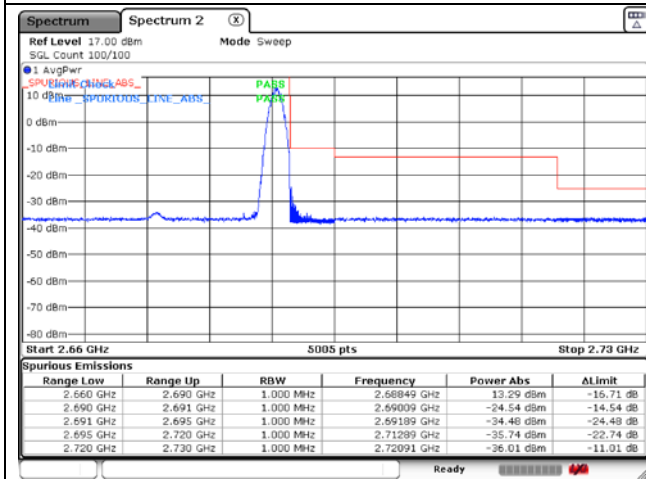
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

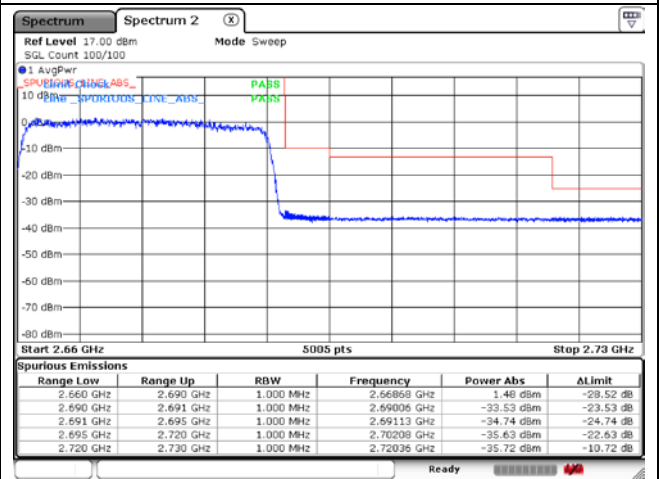
NR band 41 (30 MHz)



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



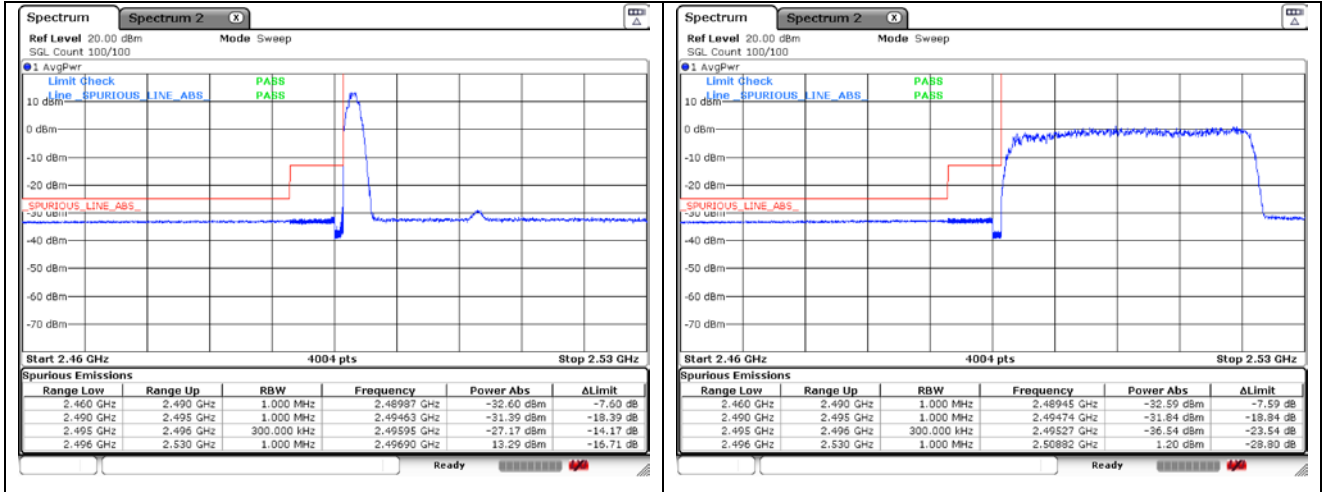
DFT-S-OFDM QPSK - Low Channel - Full RB



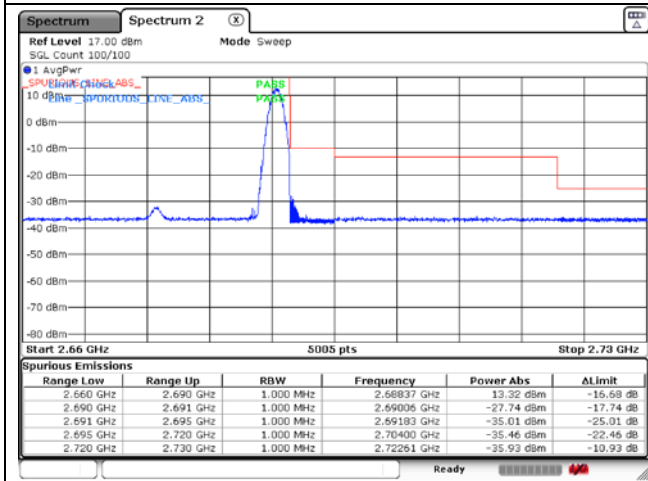
DFT-S-OFDM QPSK - High Channel - 1 RB

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

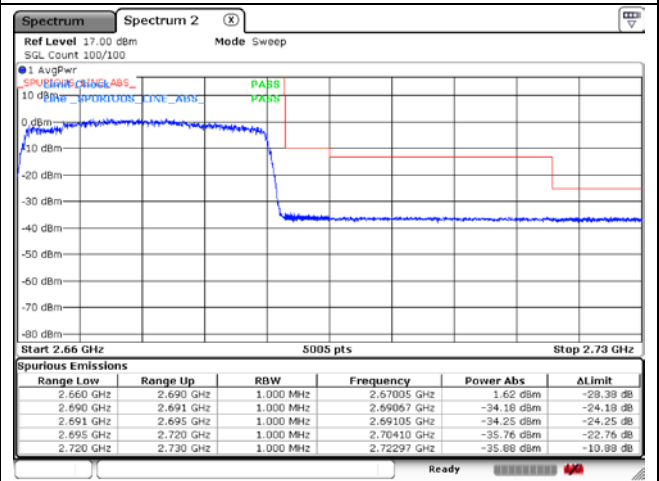
NR band 41 (30 MHz)



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



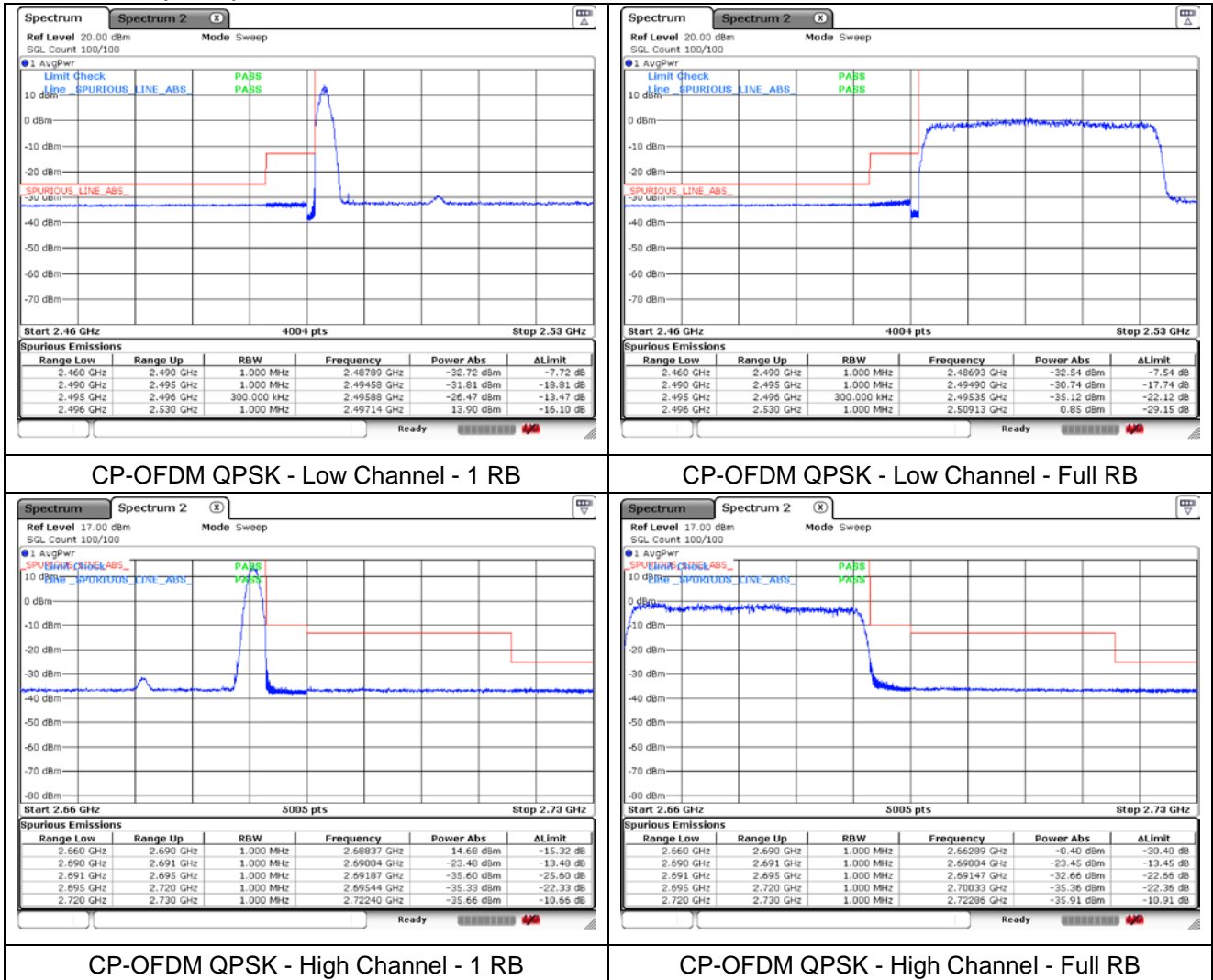
DFT-S-OFDM 16QAM - Low Channel - Full RB



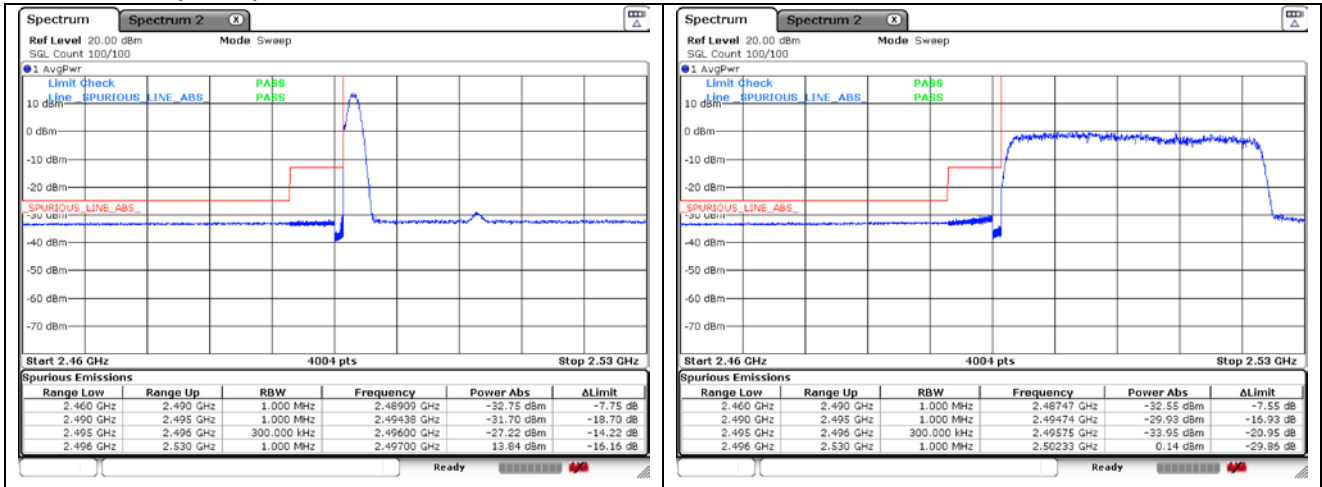
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DFT-S-OFDM 16QAM - High Channel - Full RB

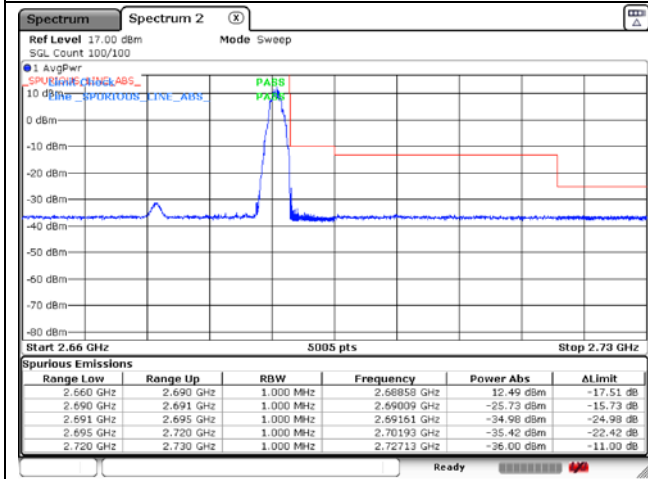
NR band 41 (30 MHz)



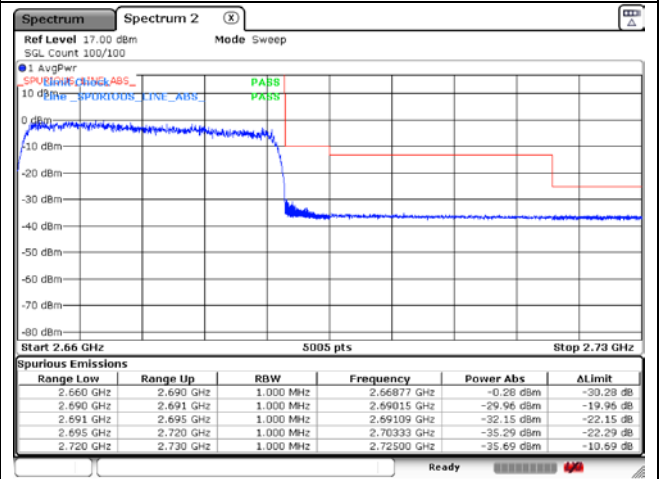
NR band 41 (30 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB



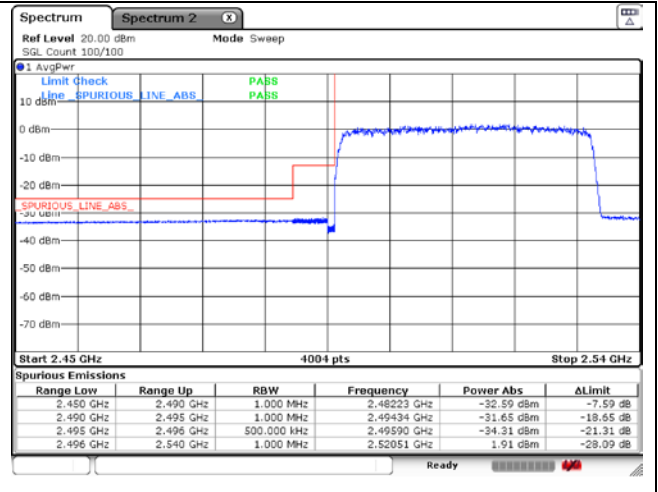
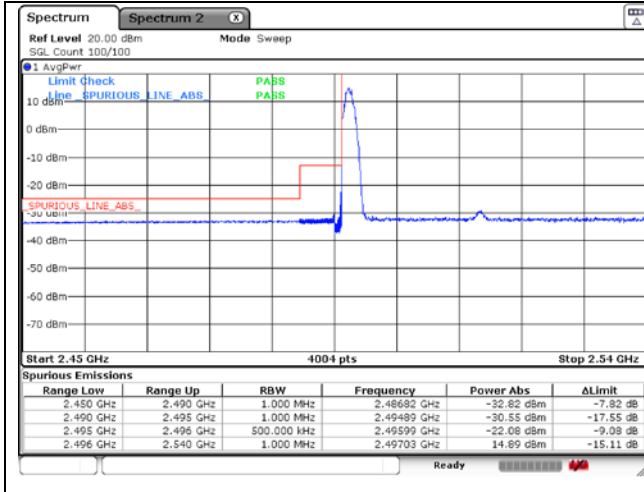
CP-OFDM 16QAM - Low Channel - Full RB



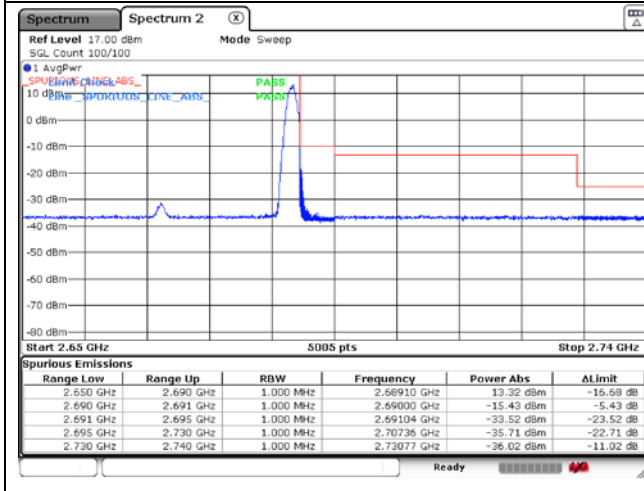
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

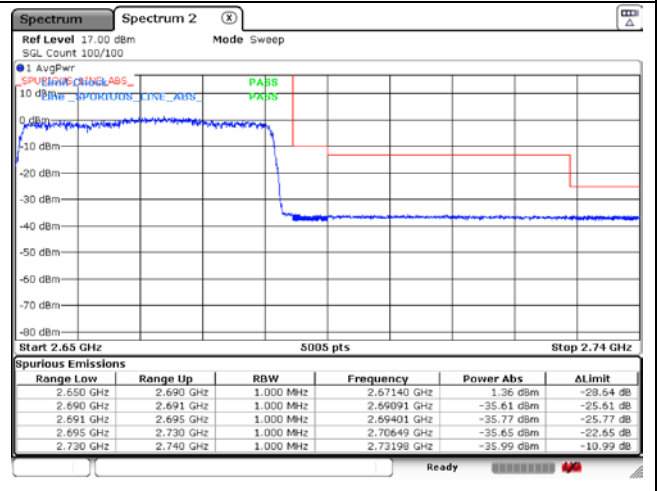
NR band 41 (40 MHz)



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



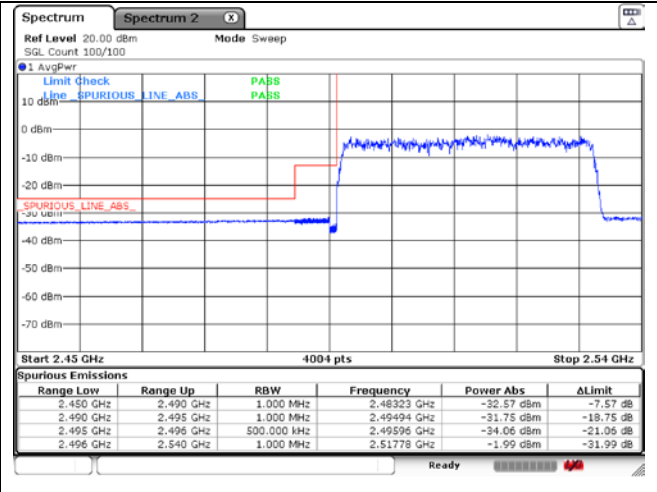
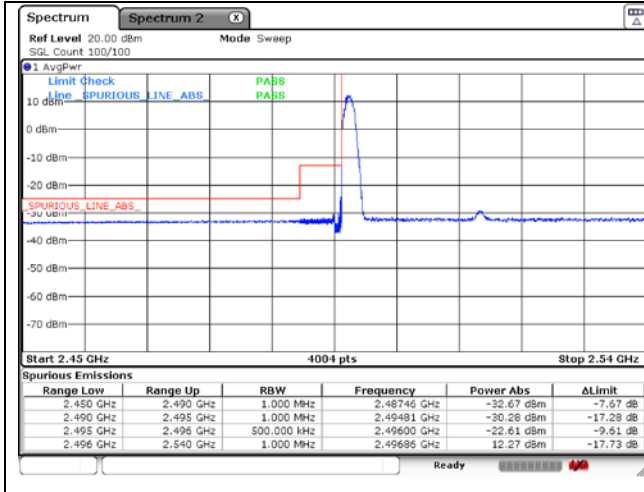
DFT-S-OFDM QPSK - Low Channel - Full RB



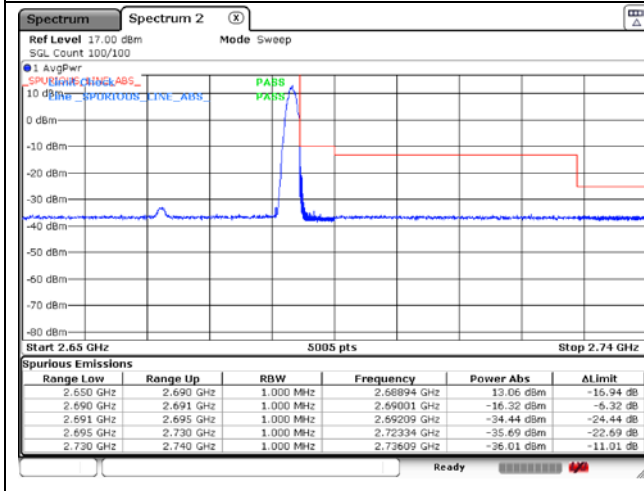
DFT-S-OFDM QPSK - High Channel - 1 RB

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

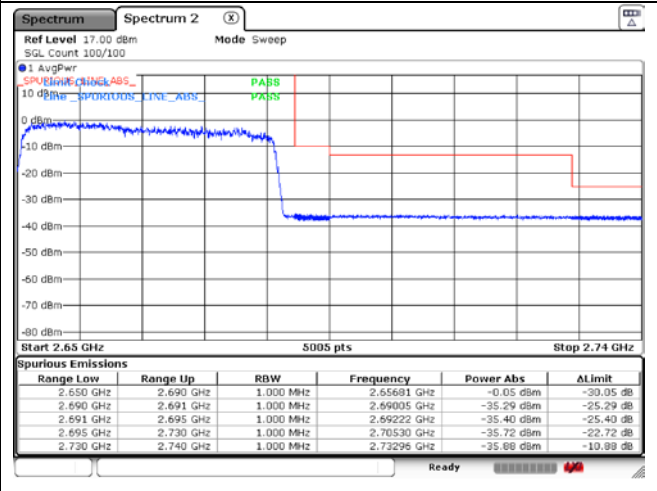
NR band 41 (40 MHz)



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



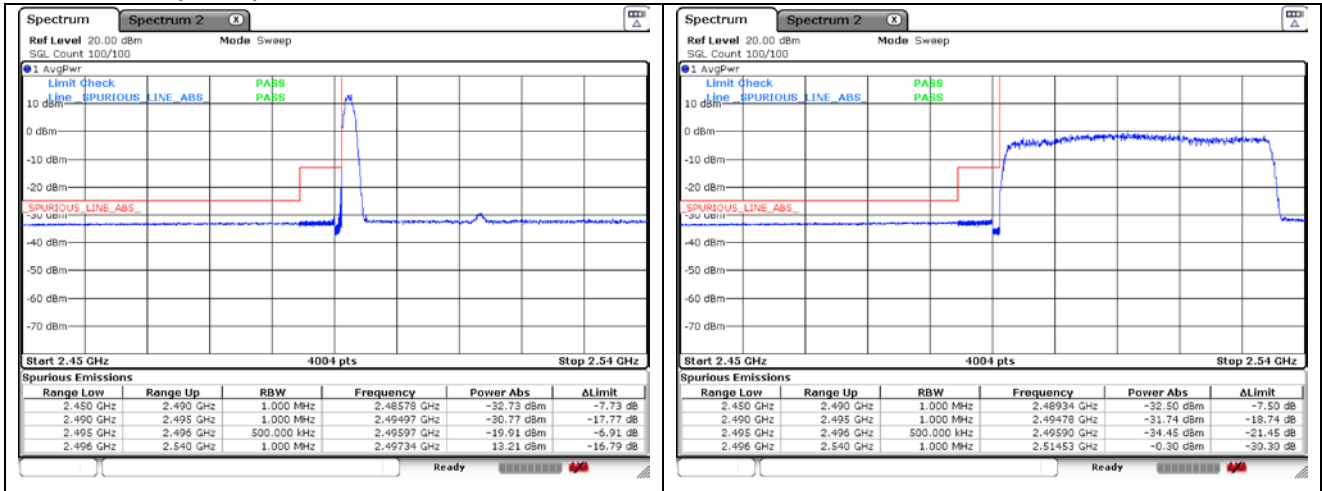
DFT-S-OFDM 16QAM - Low Channel - Full RB



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

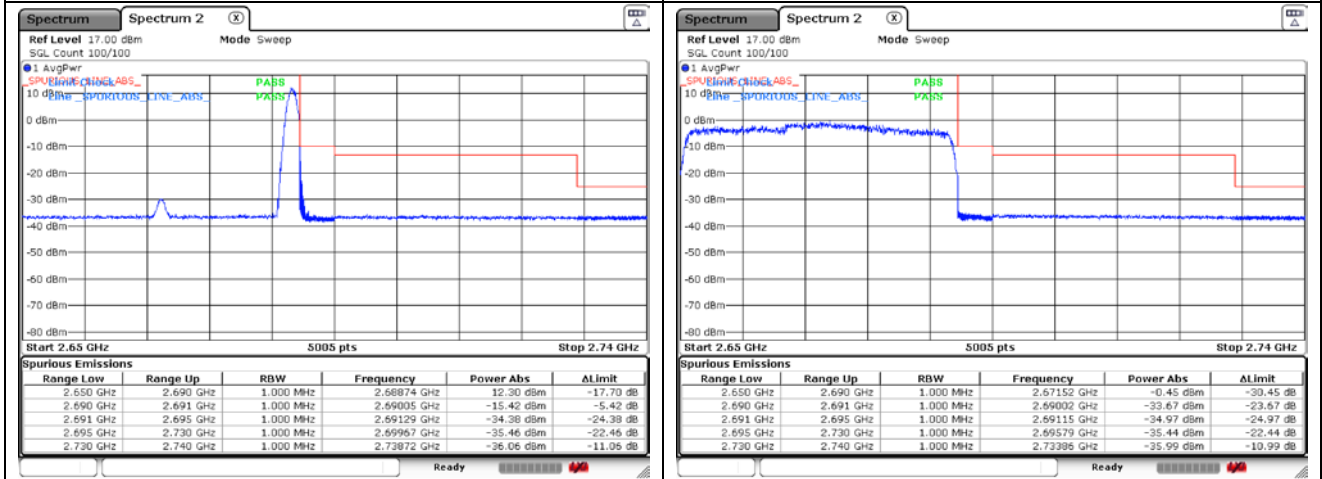
DFT-S-OFDM 16QAM - High Channel - Full RB

NR band 41 (40 MHz)



CP-OFDM QPSK - Low Channel - 1 RB

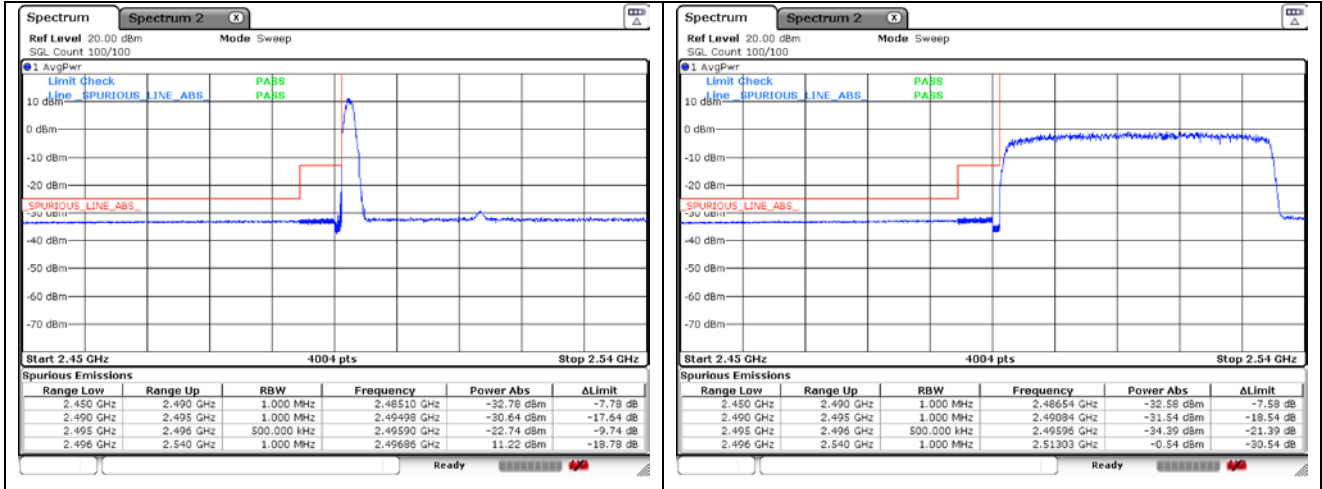
CP-OFDM QPSK - Low Channel - Full RB



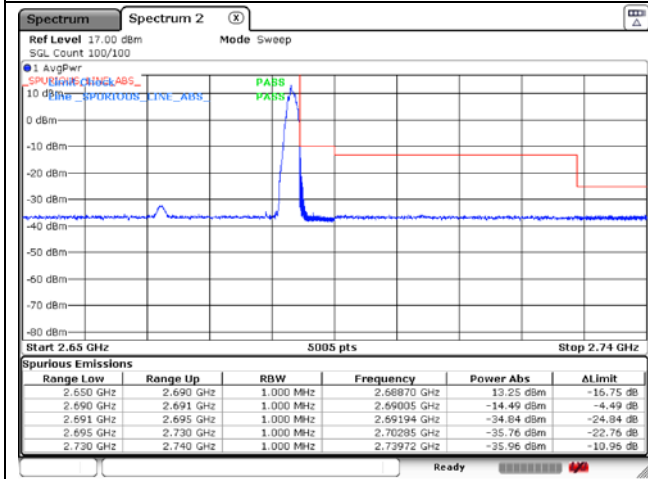
CP-OFDM QPSK - High Channel - 1 RB

CP-OFDM QPSK - High Channel - Full RB

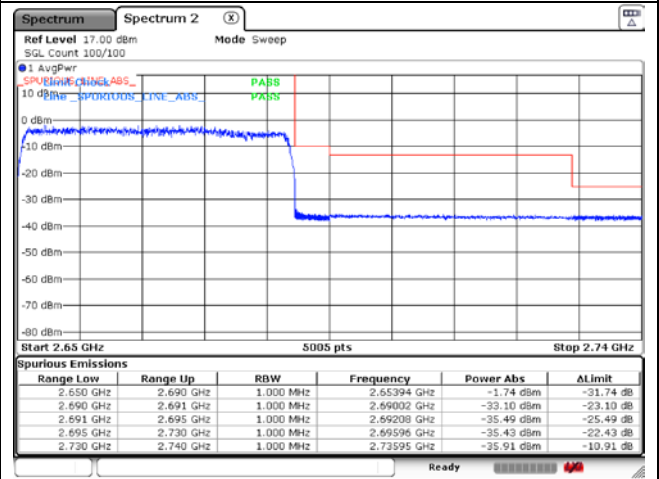
NR band 41 (40 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB



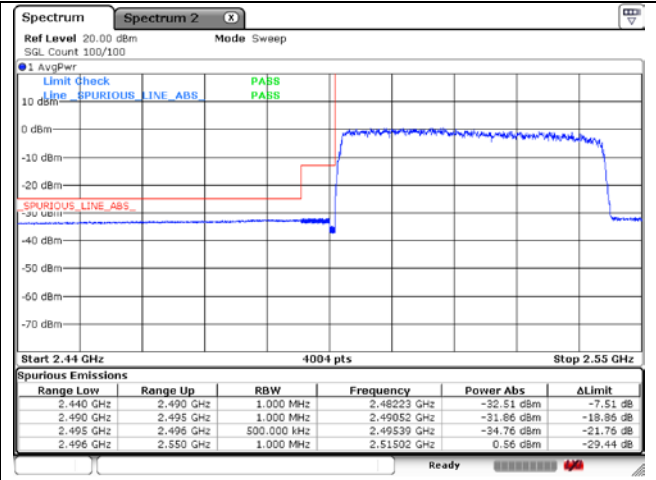
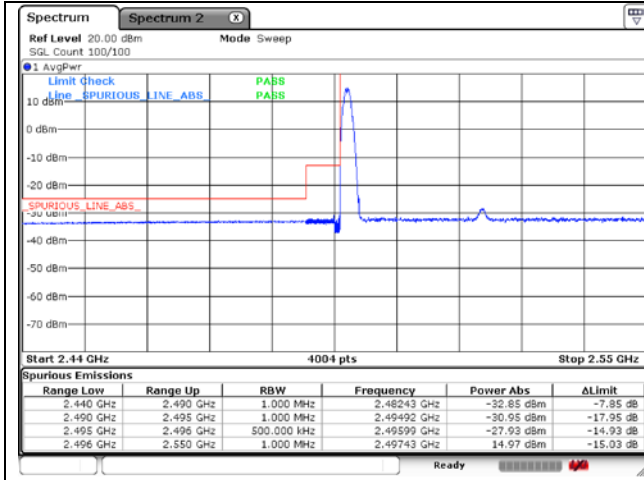
CP-OFDM 16QAM - Low Channel - Full RB



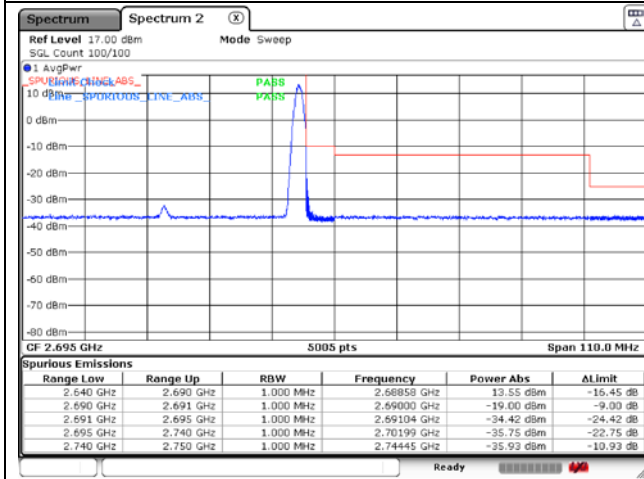
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

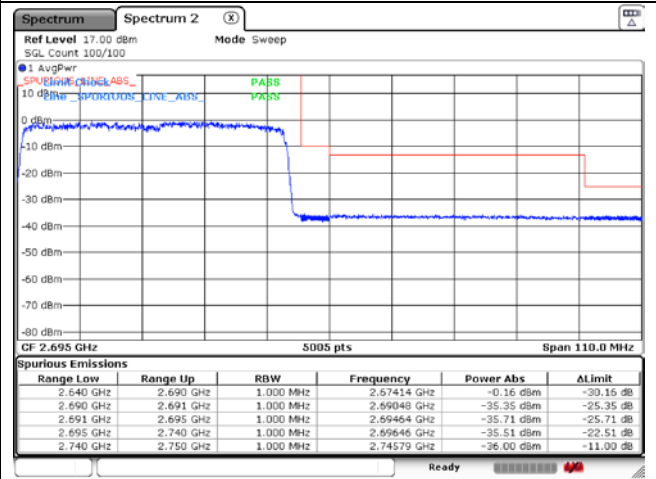
NR band 41 (50 MHz)



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



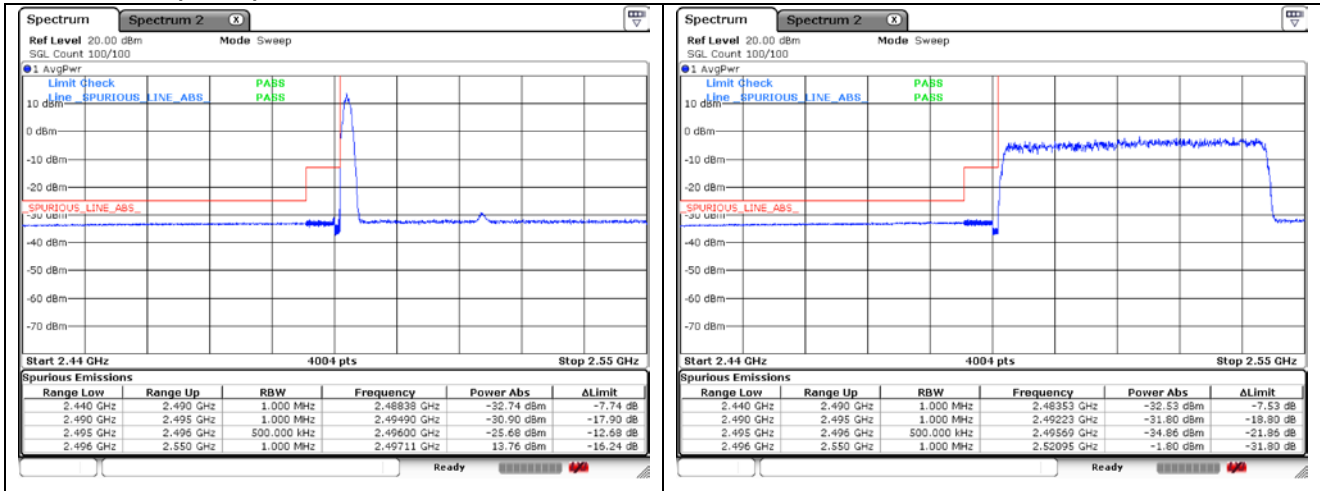
DFT-S-OFDM QPSK - Low Channel - Full RB



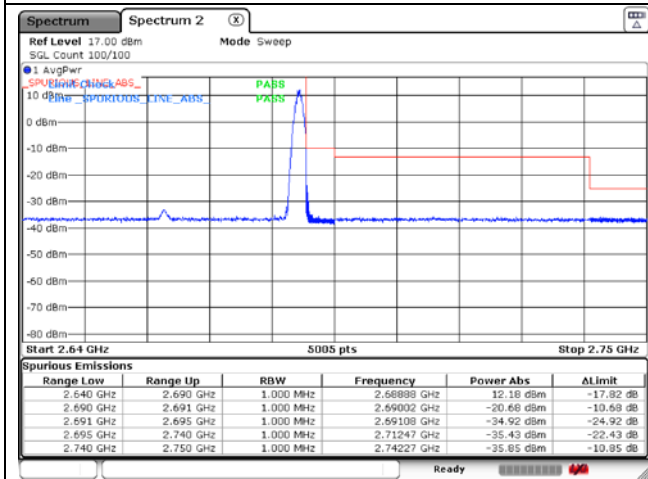
DFT-S-OFDM QPSK - High Channel - 1 RB

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

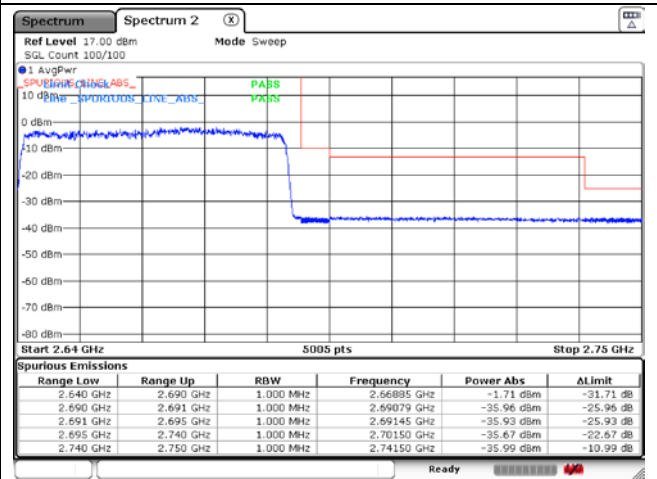
NR band 41 (50 MHz)



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



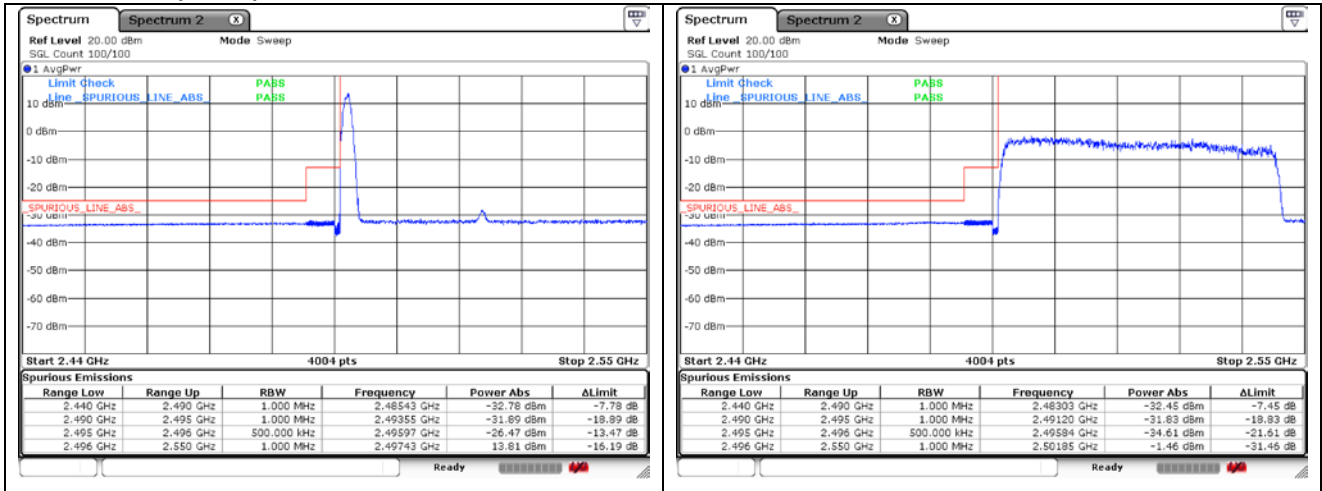
DFT-S-OFDM 16QAM - Low Channel - Full RB



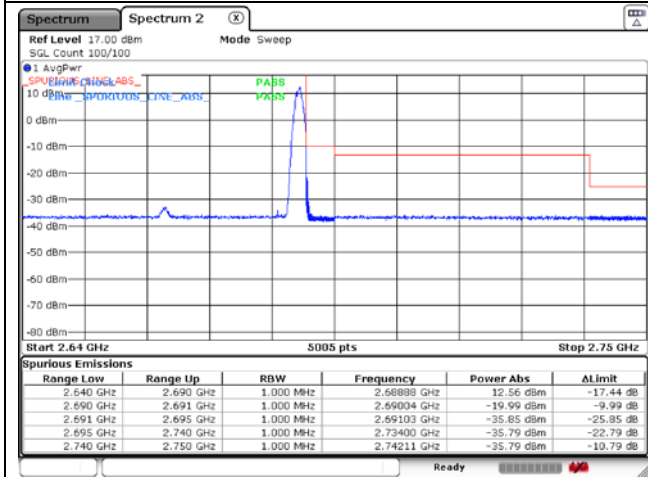
DFT-S-OFDM 16QAM - High Channel - 1 RB

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

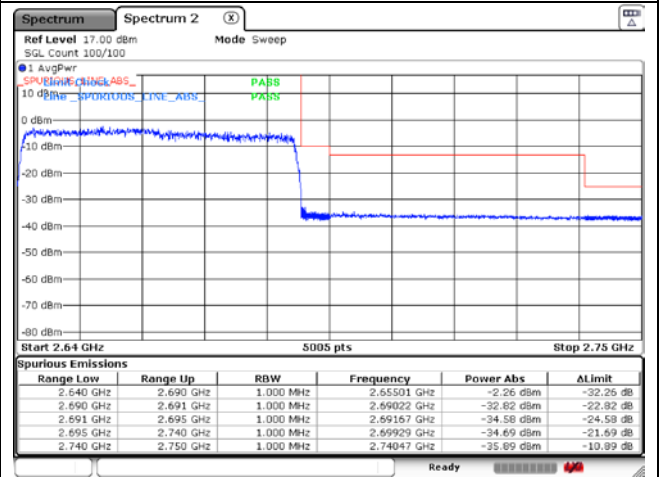
NR band 41 (50 MHz)



CP-OFDM QPSK - Low Channel - 1 RB



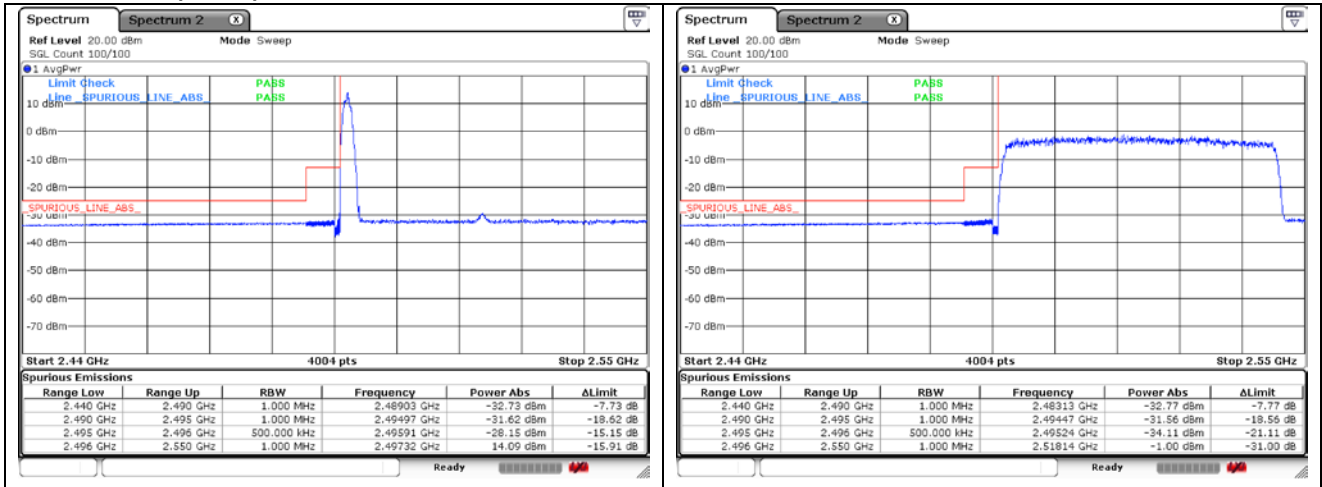
CP-OFDM QPSK - Low Channel - Full RB



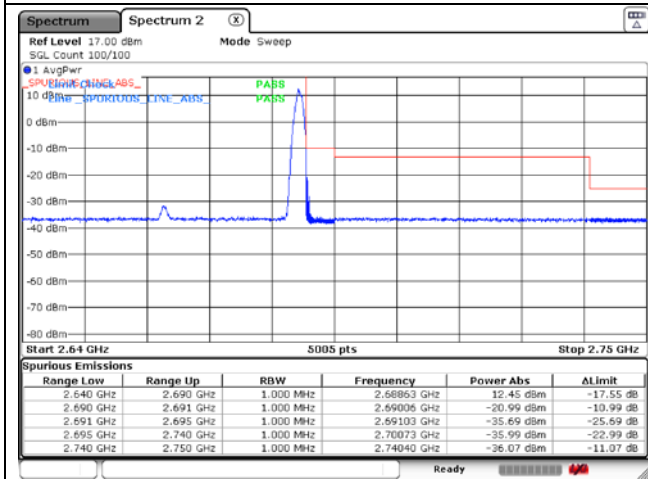
CP-OFDM QPSK - High Channel - 1 RB

CP-OFDM QPSK - High Channel - Full RB

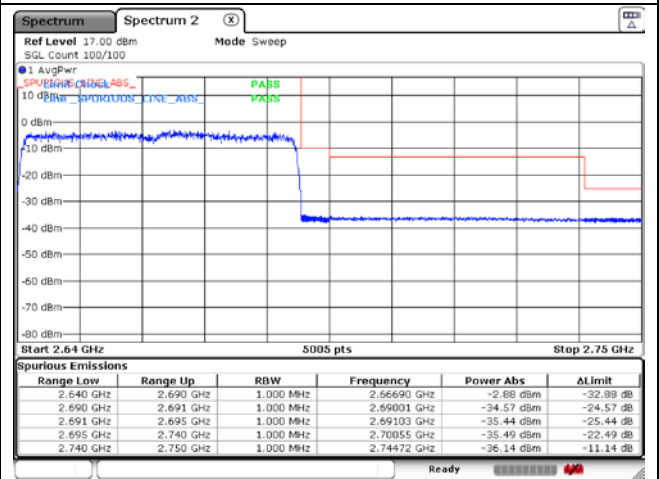
NR band 41 (50 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB



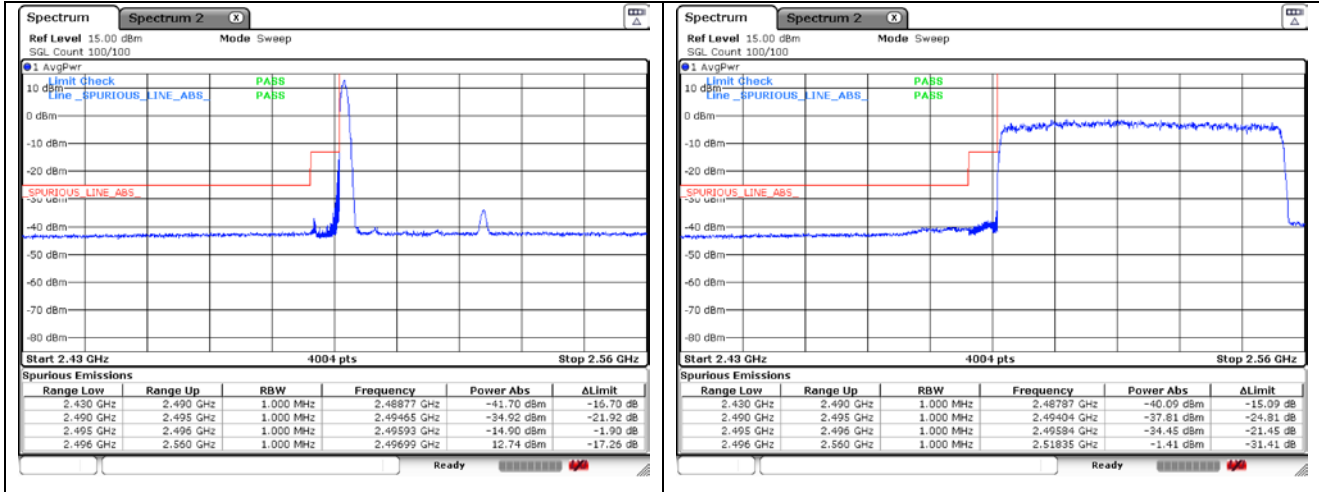
CP-OFDM 16QAM - Low Channel - Full RB



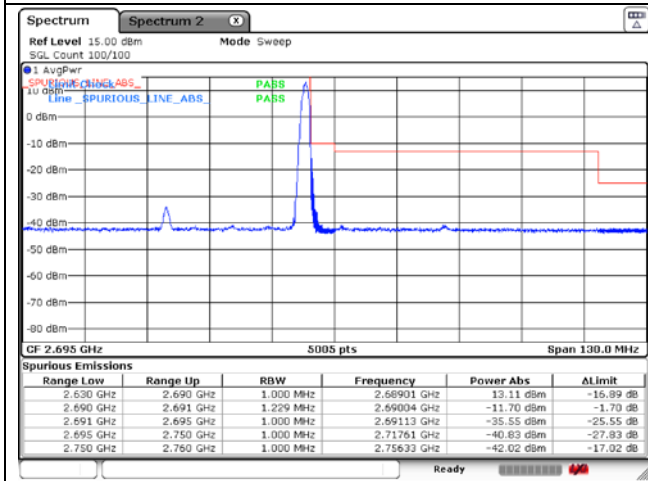
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

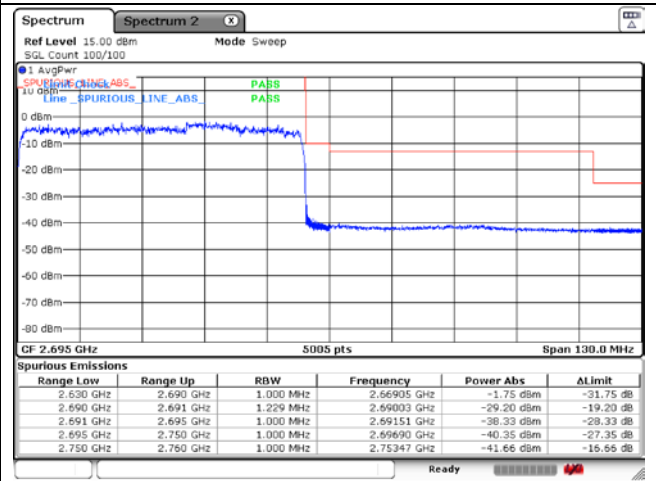
NR band 41 (60 MHz)



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



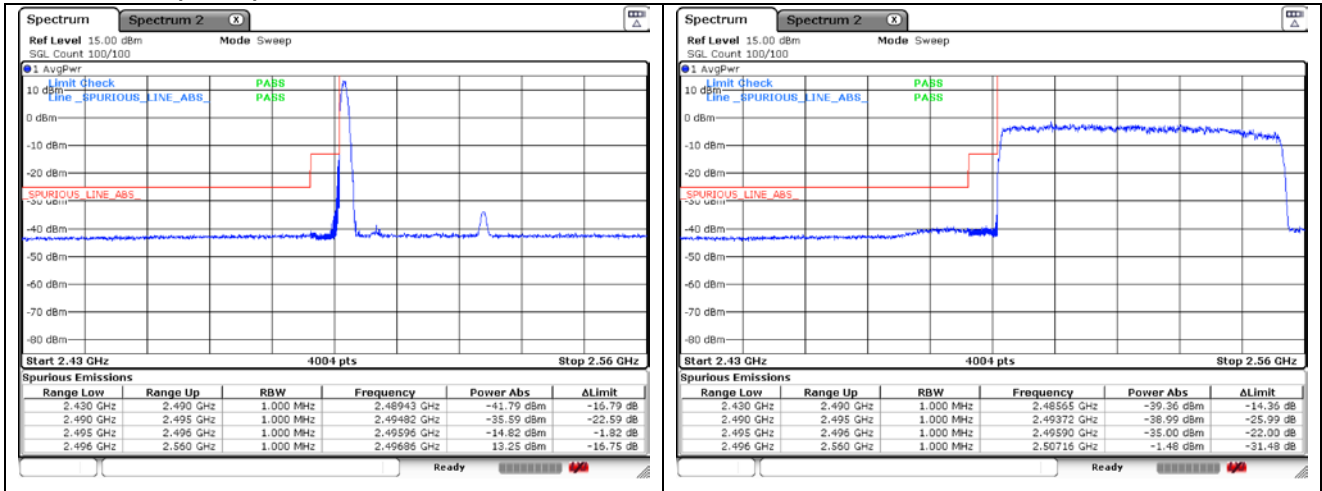
DFT-S-QFDM BPSK - Low Channel - Full RB



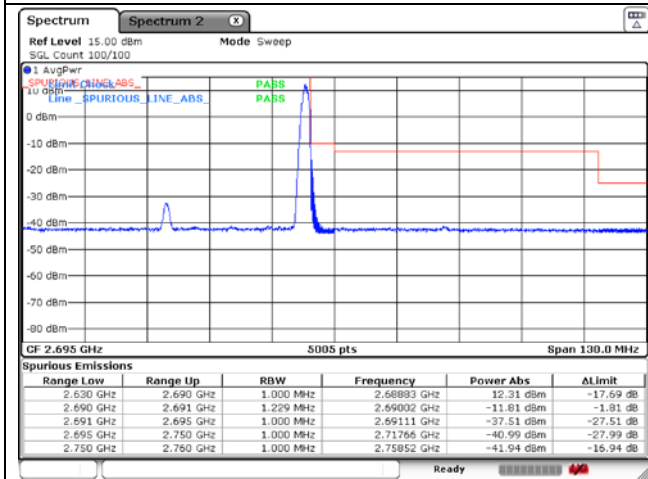
DFT-S-OFDM QPSK - High Channel - 1 RB

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

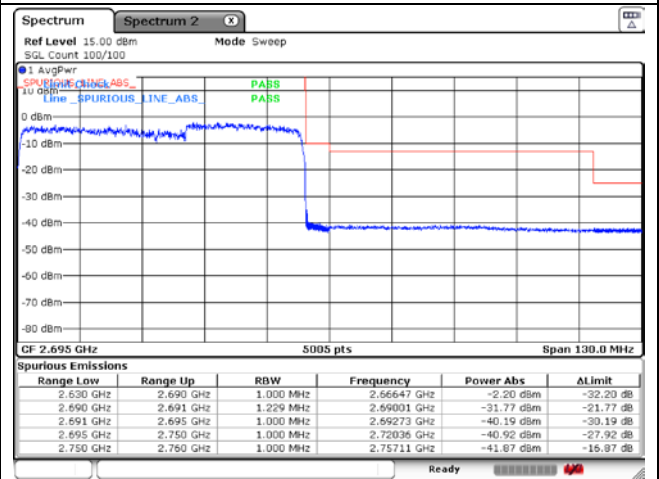
NR band 41 (60 MHz)



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



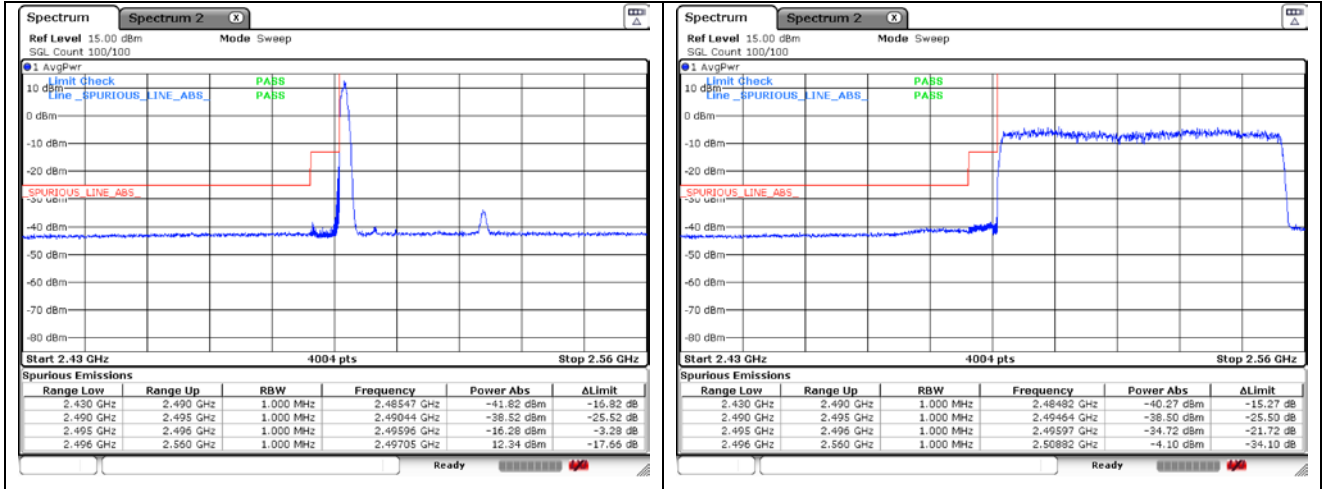
DFT-S-OFDM 16QAM - Low Channel - Full RB



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

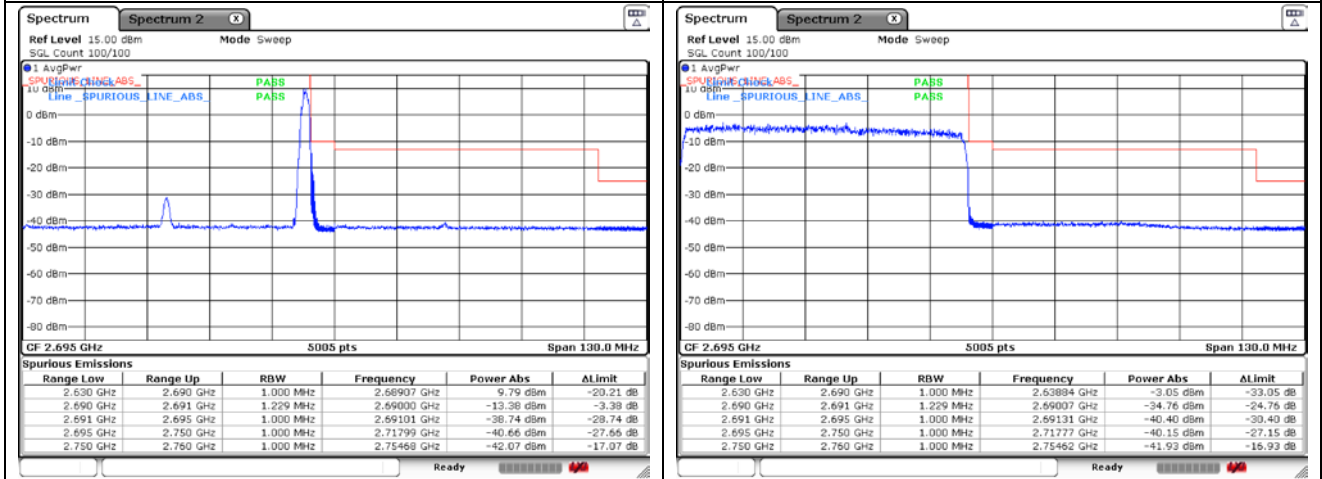
DFT-S-OFDM 16QAM - High Channel - Full RB

NR band 41 (60 MHz)



CP-OFDM QPSK - Low Channel - 1 RB

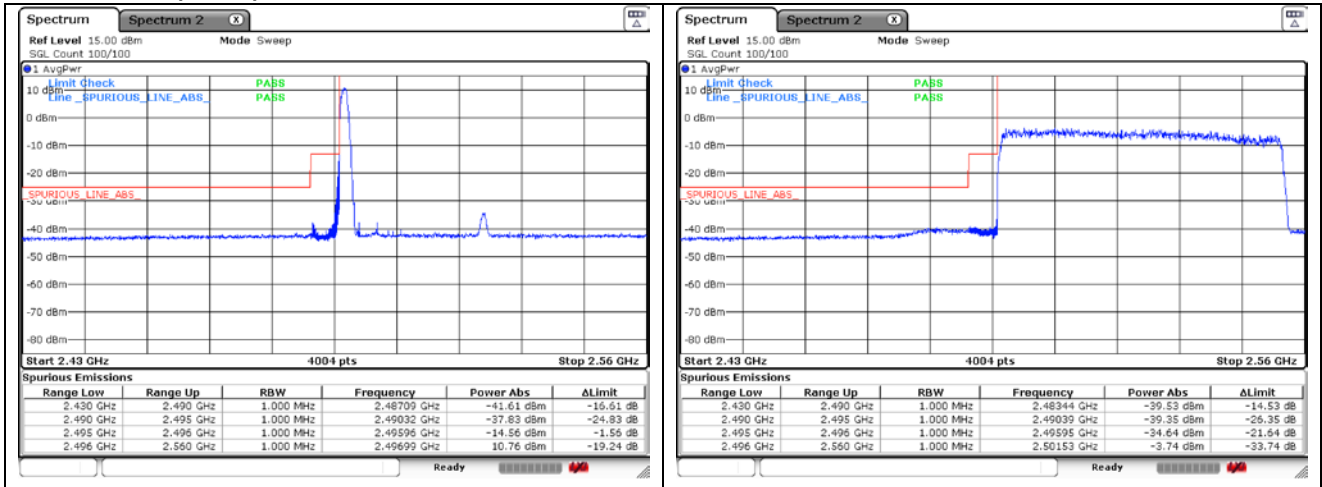
CP-OFDM QPSK - Low Channel - Full RB



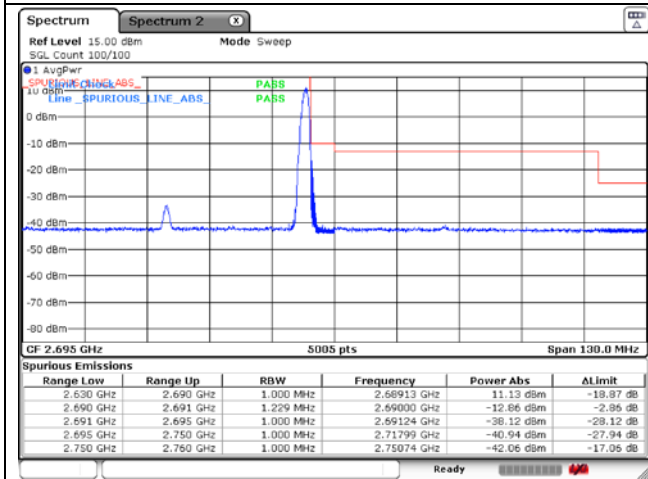
CP-OFDM QPSK - High Channel - 1 RB

CP-OFDM QPSK - High Channel - Full RB

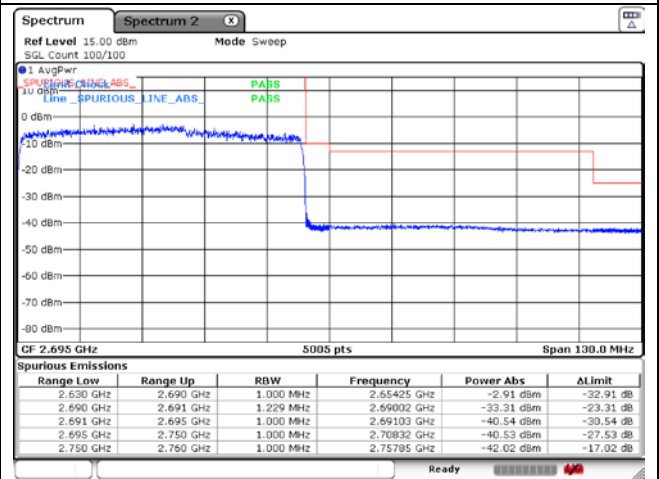
NR band 41 (60 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB



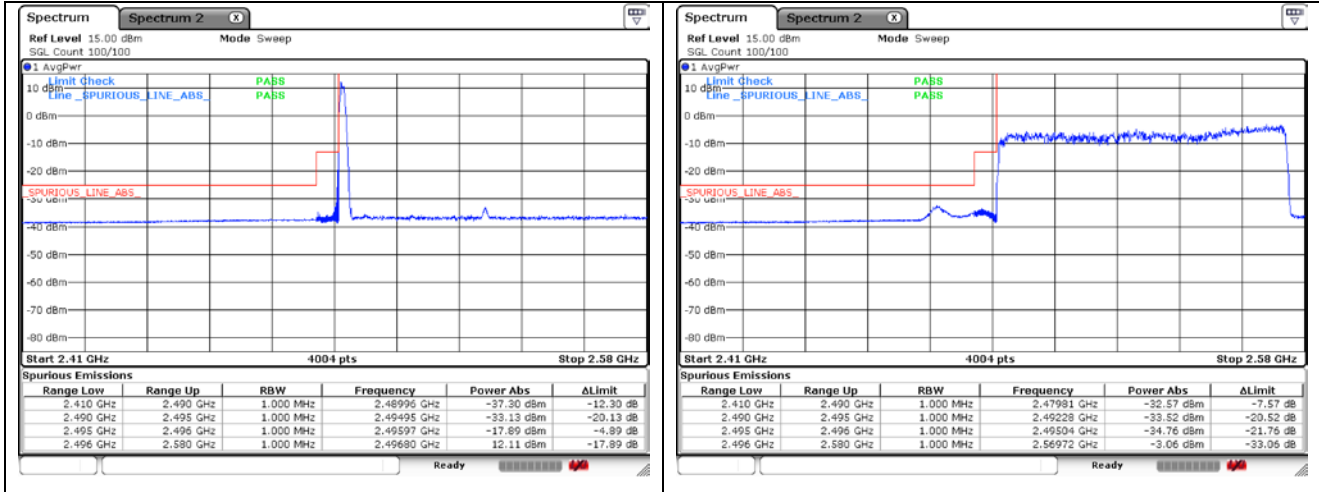
CP-OFDM 16QAM - Low Channel - Full RB



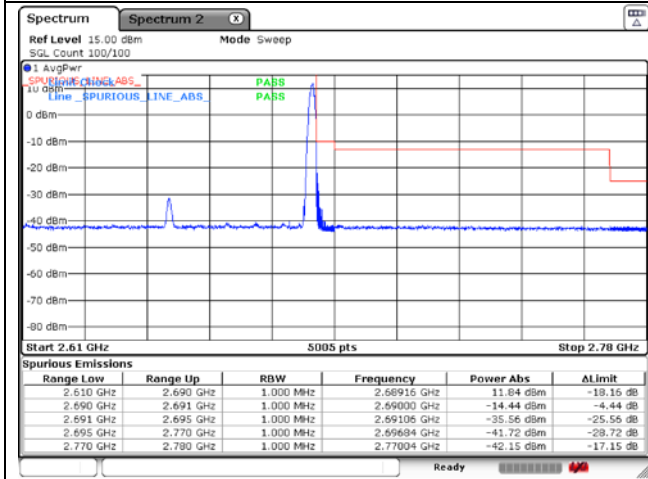
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

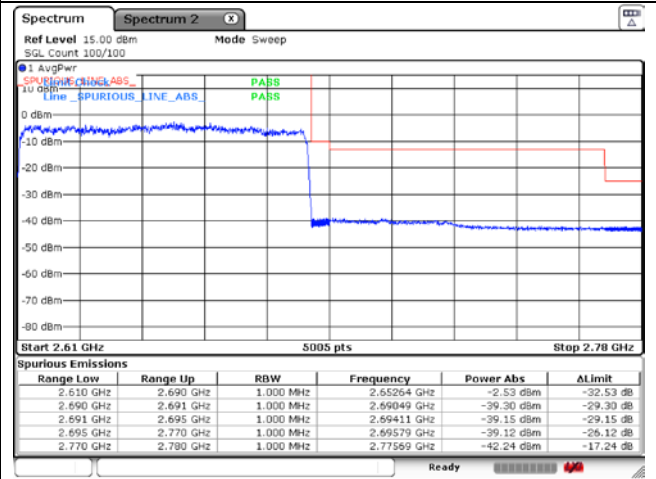
NR band 41 (80 MHz)



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



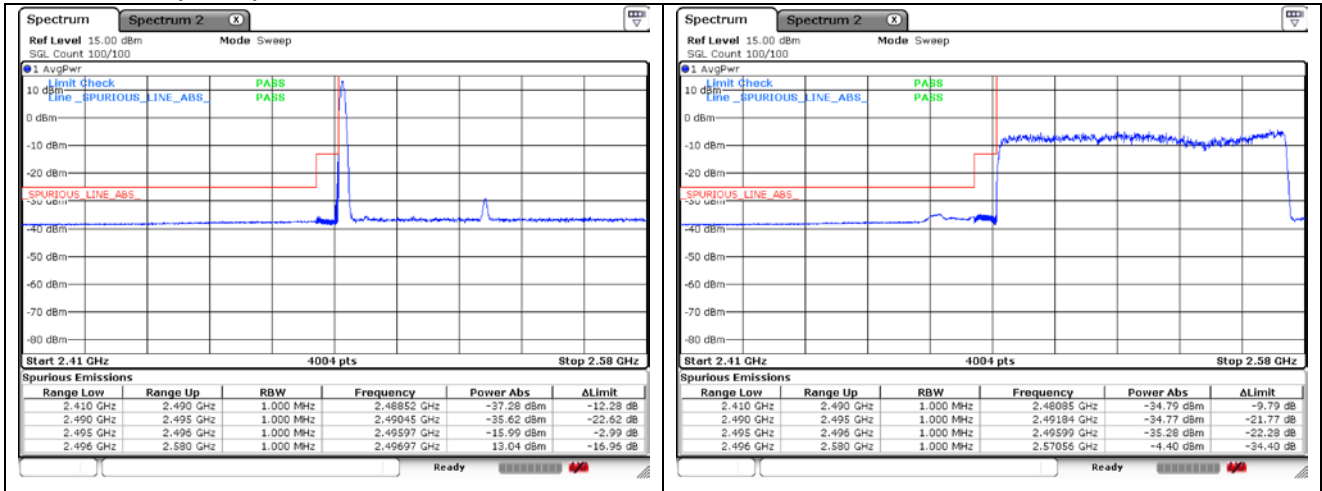
DFT-S-OFDM QPSK - Low Channel - Full RB



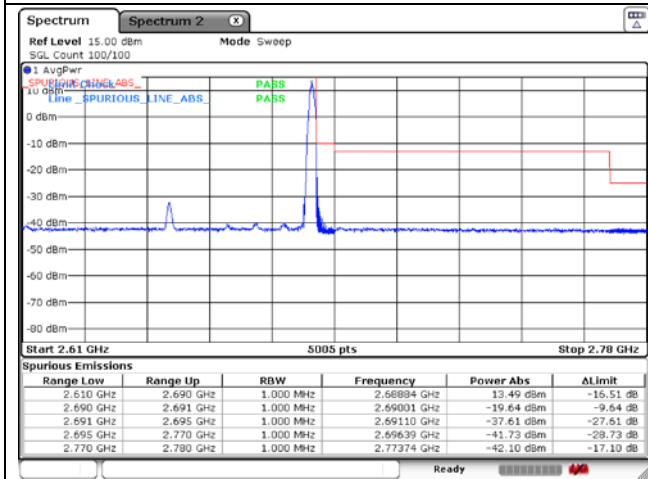
DFT-S-OFDM QPSK - High Channel - 1 RB

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

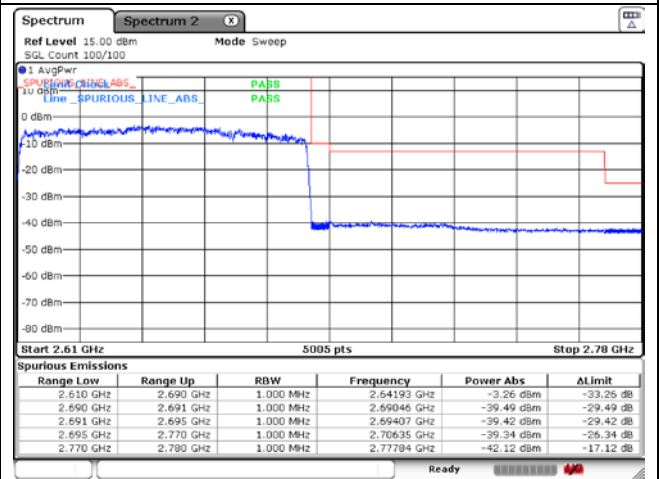
NR band 41 (80 MHz)



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



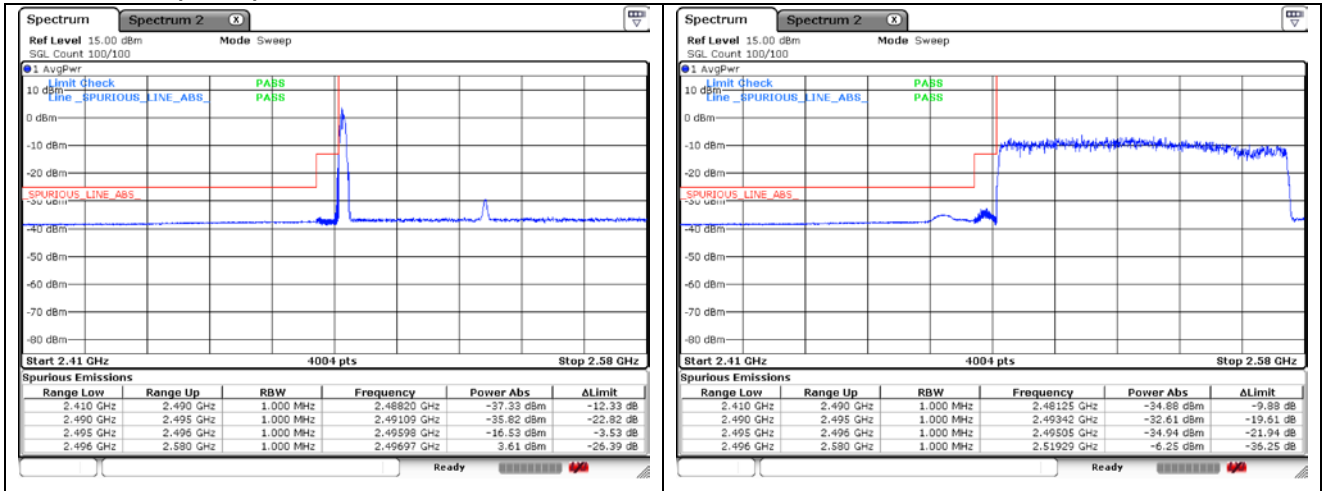
DFT-S-OFDM 16QAM - Low Channel - Full RB



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

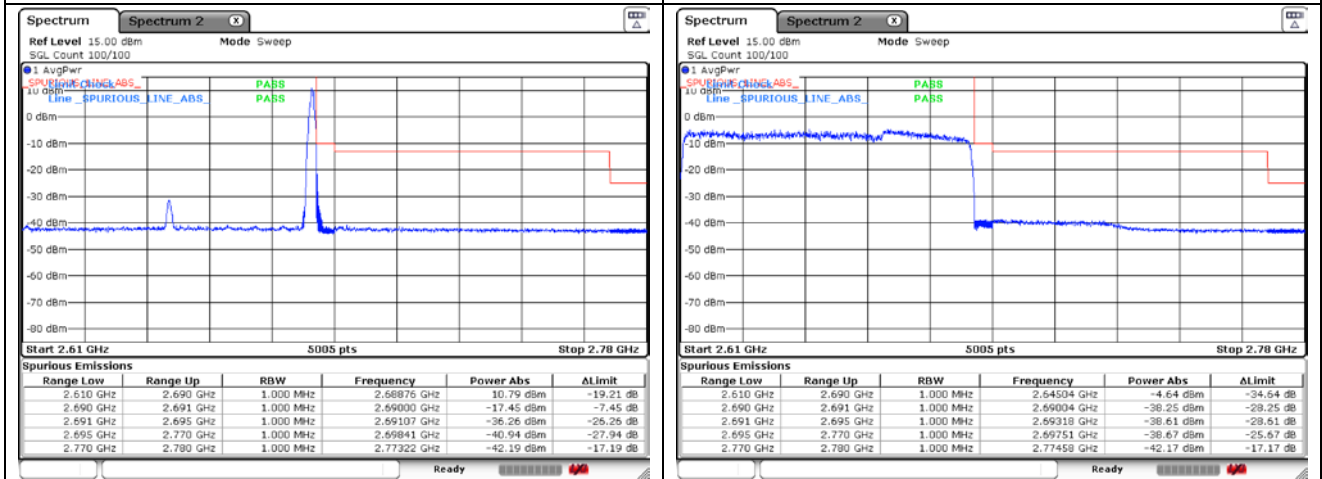
DFT-S-OFDM 16QAM - High Channel - Full RB

NR band 41 (80 MHz)



CP-OFDM QPSK - Low Channel - 1 RB

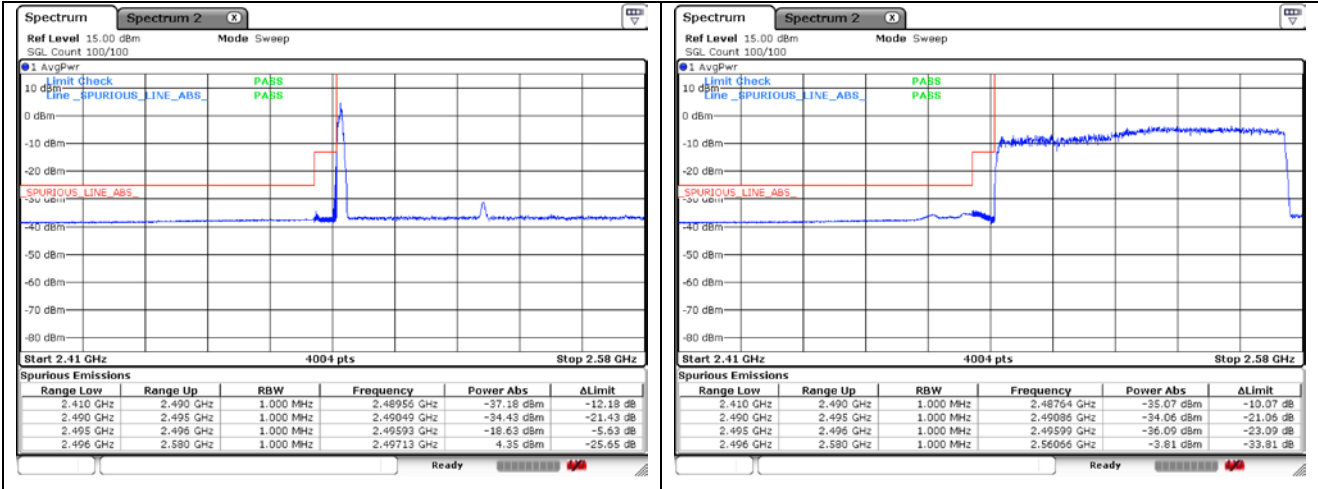
CP-OFDM QPSK - Low Channel - Full RB



CP-OFDM QPSK - High Channel - 1 RB

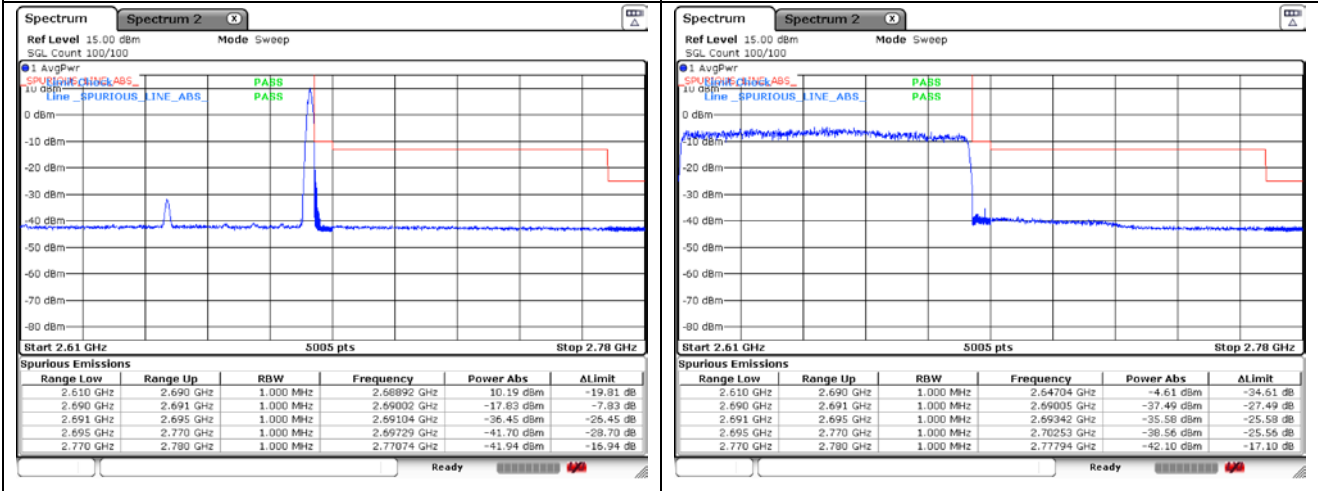
CP-OFDM QPSK - High Channel - Full RB

NR band 41 (80 MHz)



CP-OFDM 16QAM - Low Channel - 1 RB

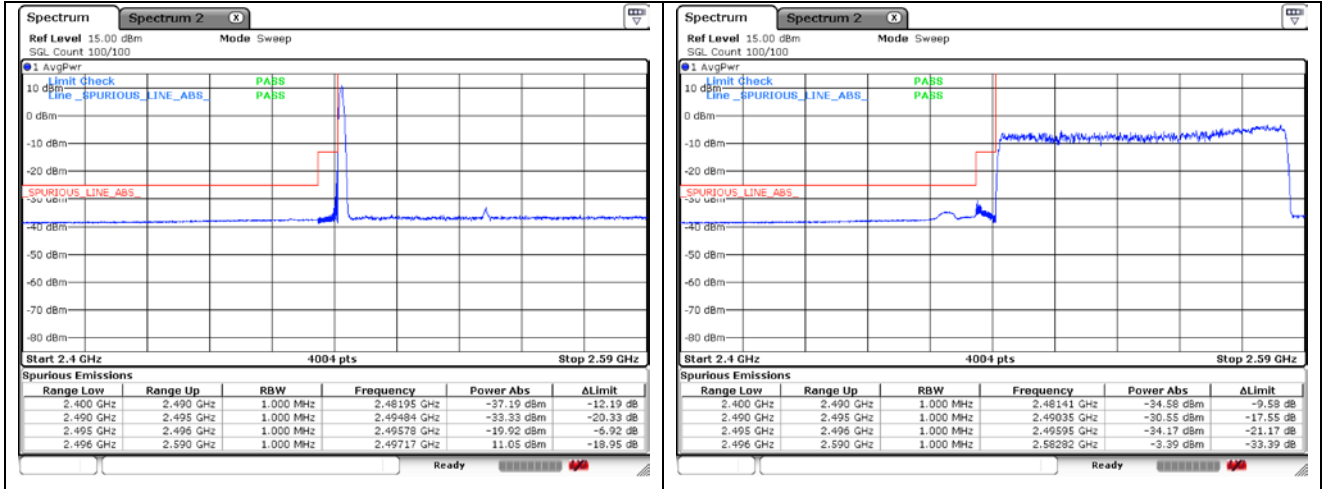
CP-OFDM 16QAM - Low Channel - Full RB



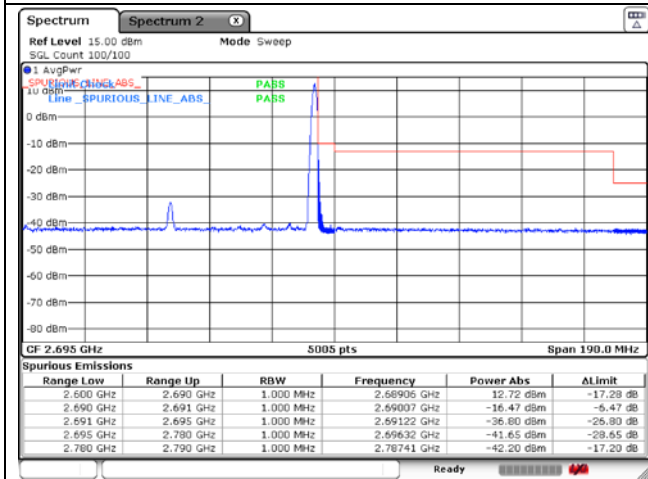
CP-OFDM 16QAM - High Channel - 1 RB

CP-OFDM 16QAM - High Channel - Full RB

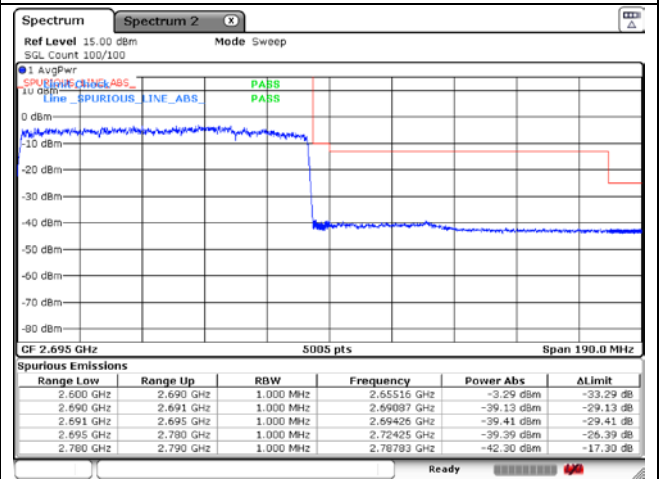
NR band 41 (90 MHz)



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



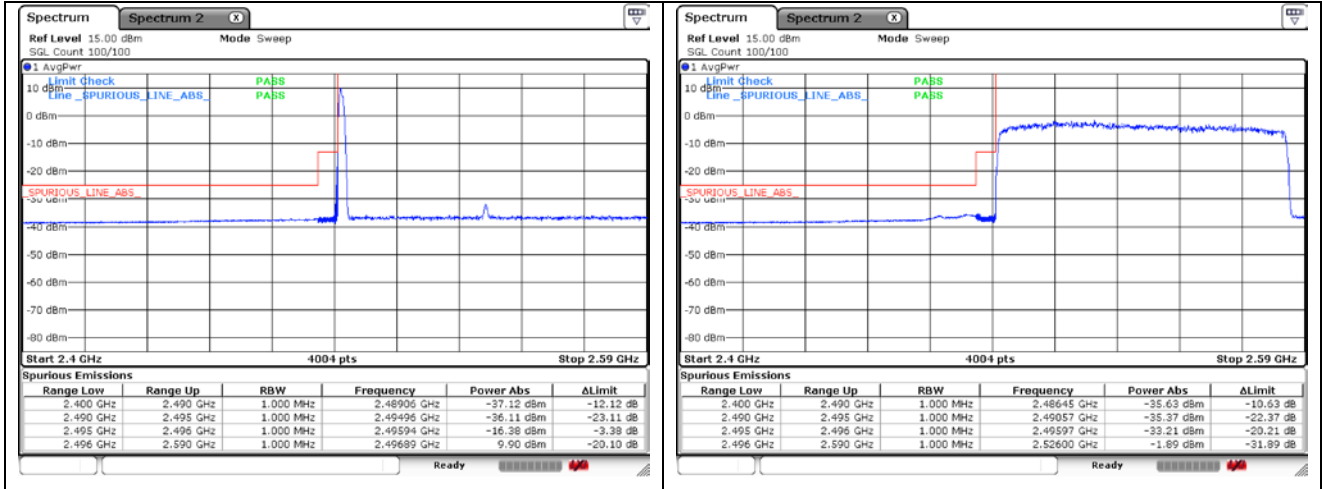
DFT-S-OFDM QPSK - Low Channel - Full RB



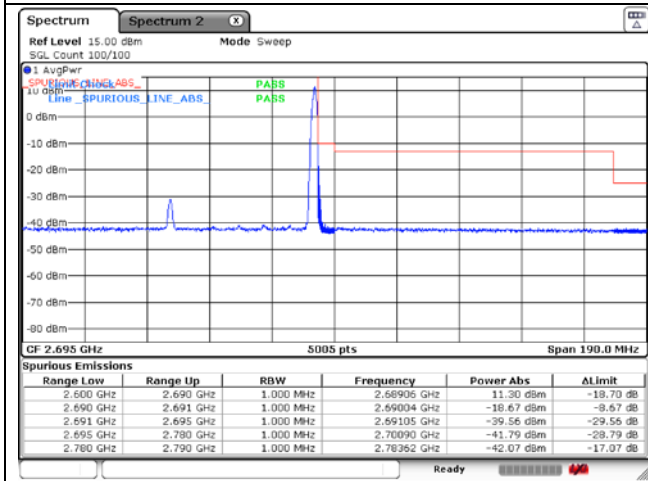
DFT-S-OFDM QPSK - High Channel - 1 RB

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

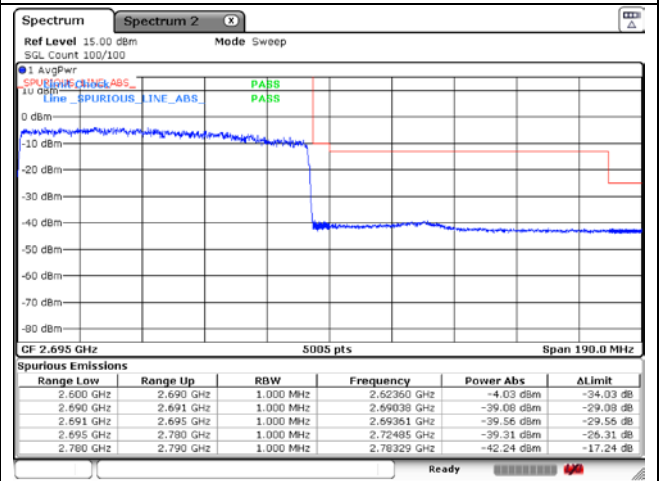
NR band 41 (90 MHz)



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



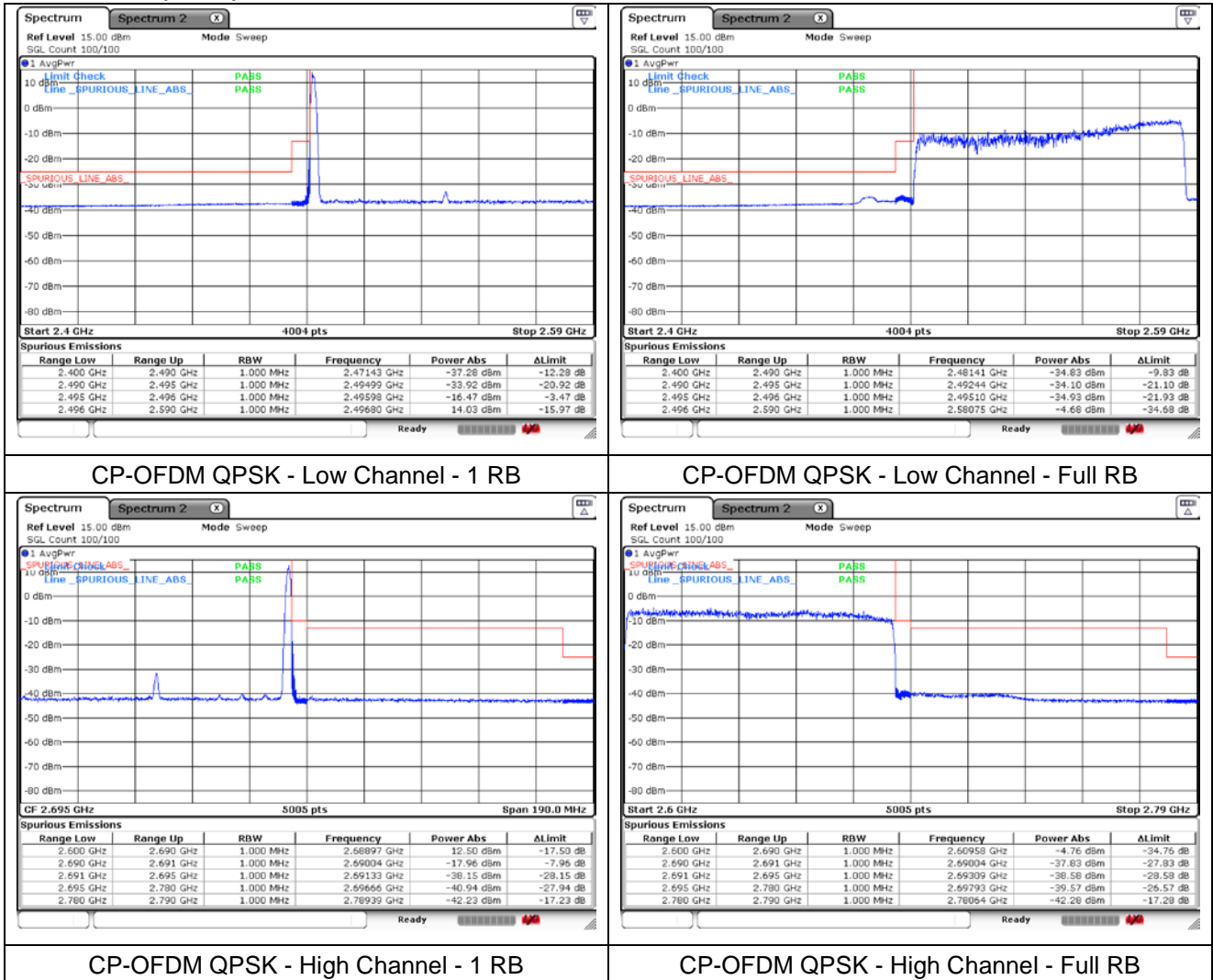
DFT-S-OFDM 16QAM - Low Channel - Full RB



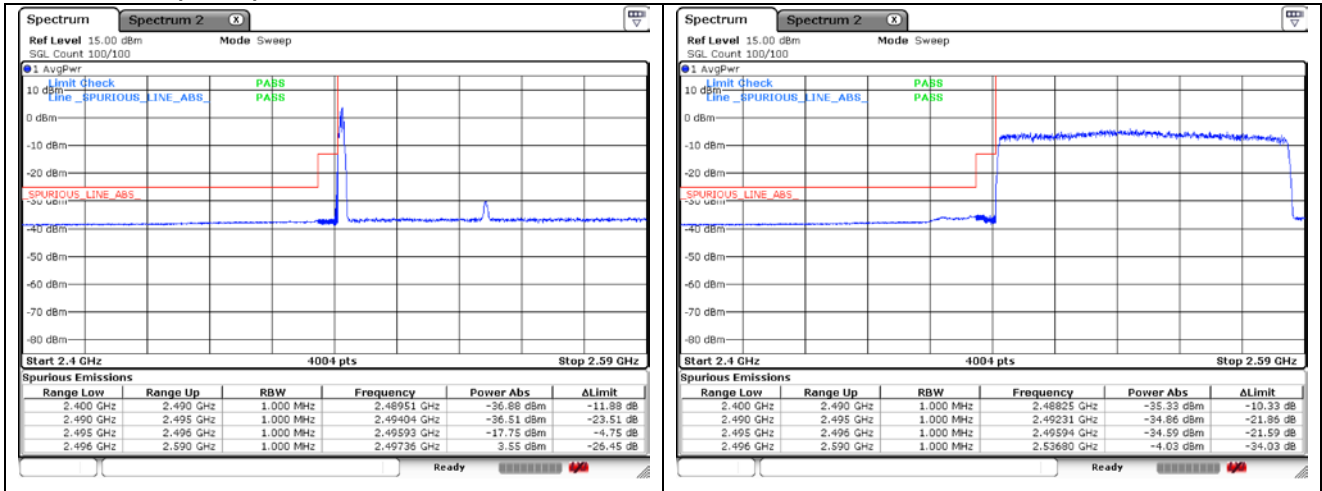
DFT-S-OFDM 16QAM - High Channel - 1 RB

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

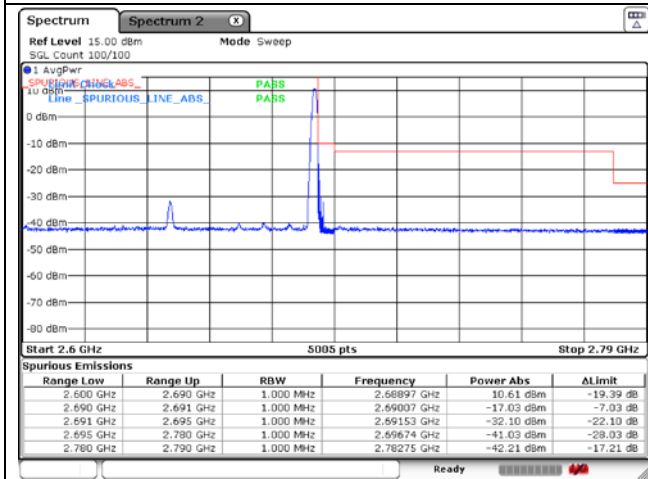
NR band 41 (90 MHz)



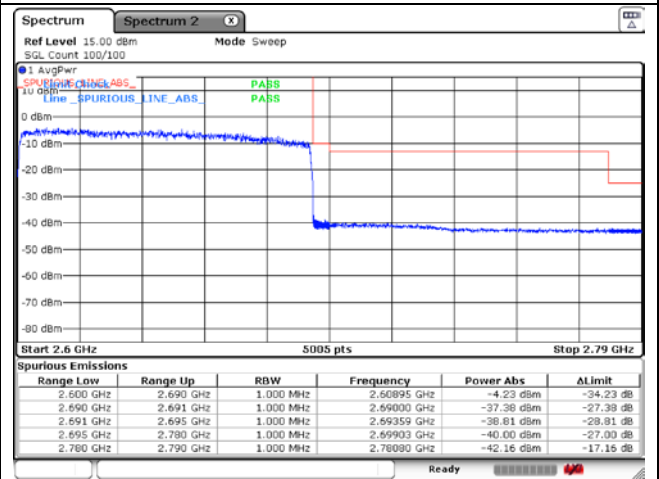
NR band 41 (90 MHz)



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

