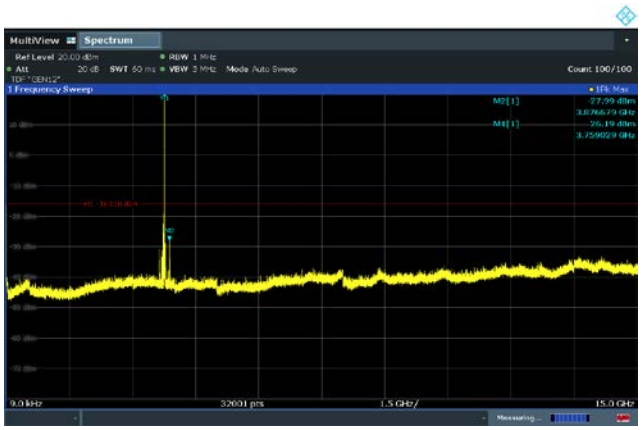
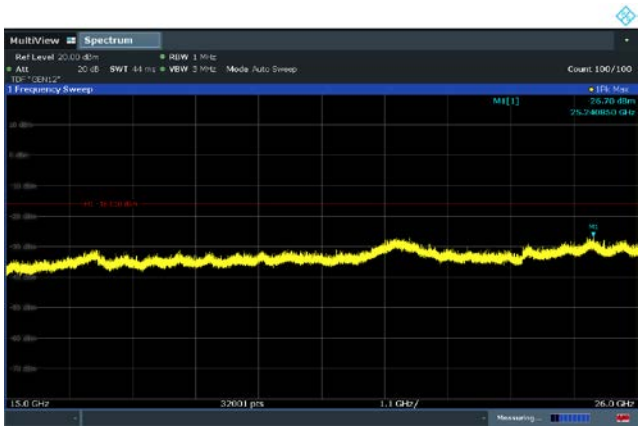
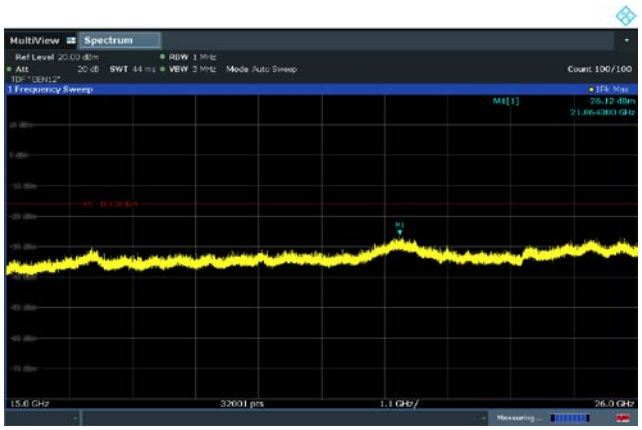
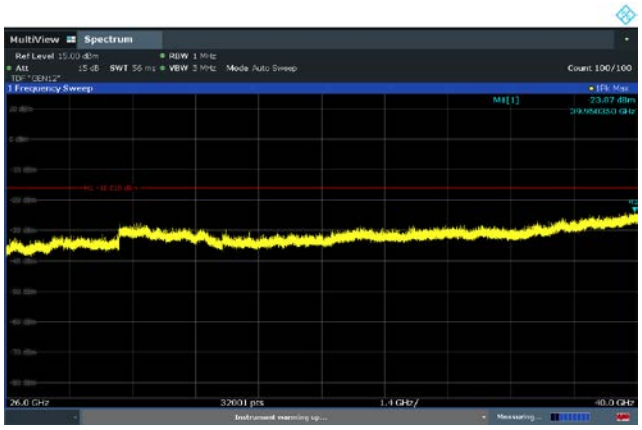
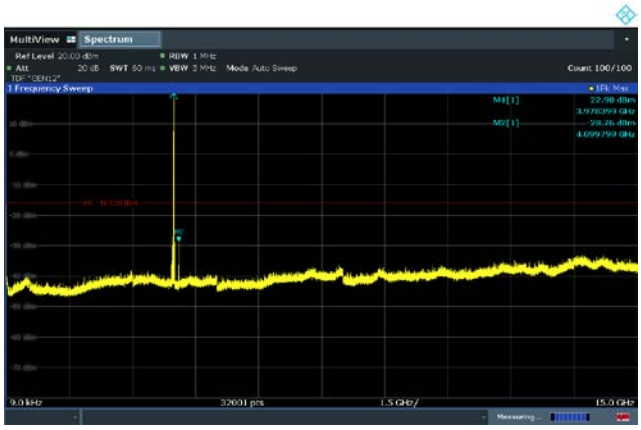
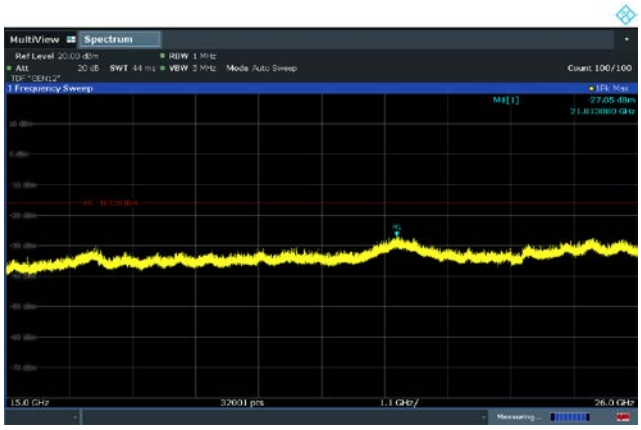
NR band 77/78_High Band_MIMO-Port 1

	
CP-OFDM QPSK - 60 ㎒ Low Channel - 1 RB	CP-OFDM QPSK - 60 ㎒ Middle Channel - 1 RB
	
CP-OFDM QPSK - 60 ㎒ High Channel - 1 RB	CP-OFDM QPSK - 80 ㎒ Low Channel - 1 RB
	
CP-OFDM QPSK - 80 ㎒ Middle Channel - 1 RB	CP-OFDM QPSK - 80 ㎒ High Channel - 1 RB

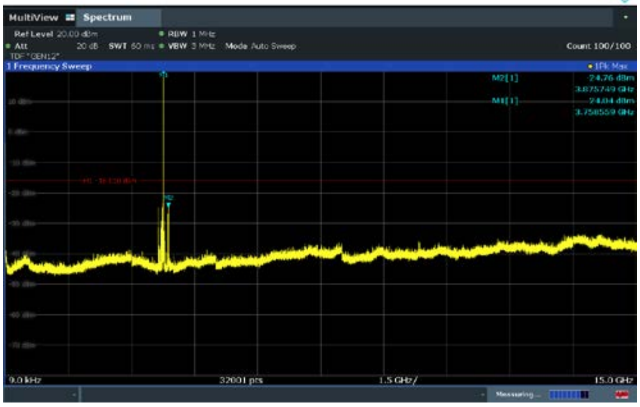
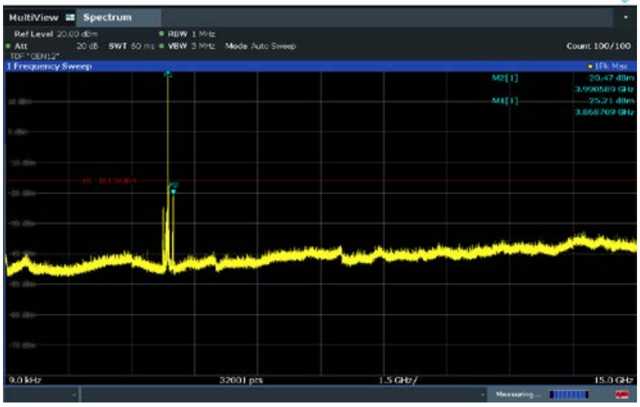
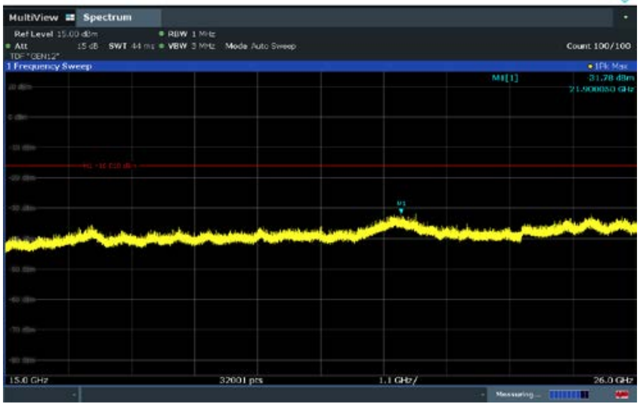
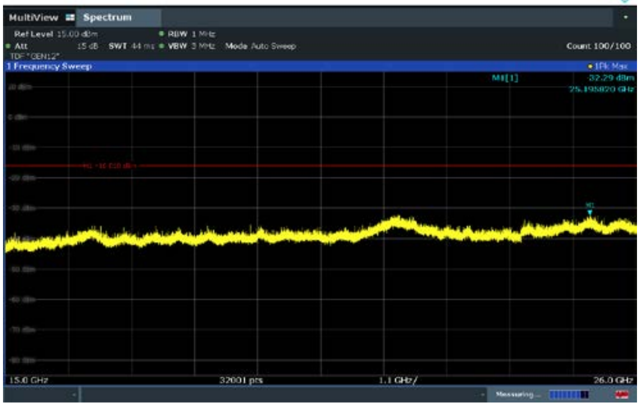
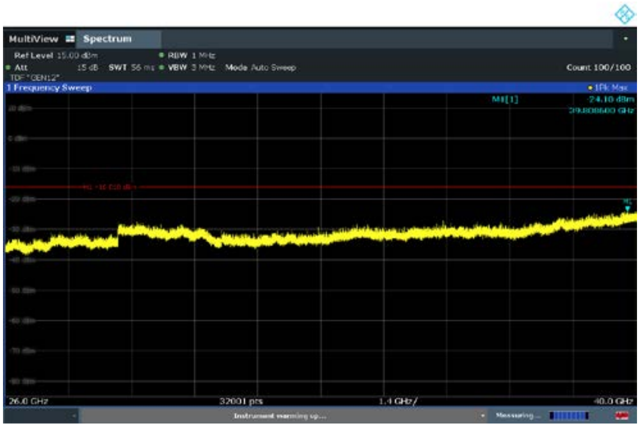
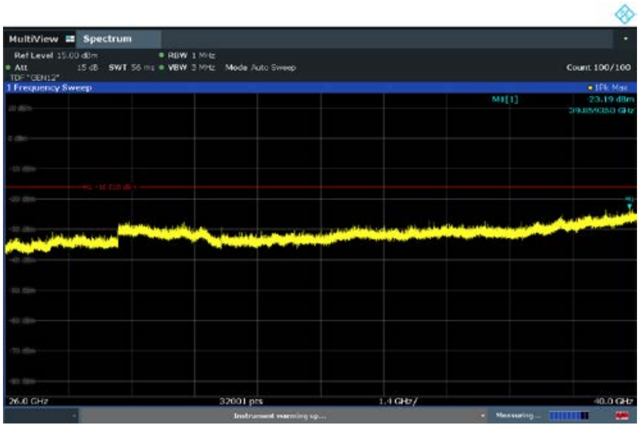
NR band 77/78_High Band_MIMO-Port 1



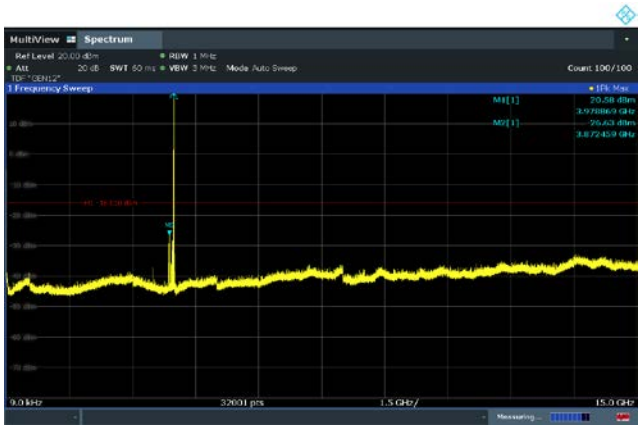


CP-OFDM QPSK - 60 ㎒ High Channel - 1 RB

NR band 77/78_High Band_MIMO-Port 2

	
	
	
CP-OFDM QPSK - 60 ㎒ Low Channel - 1 RB	CP-OFDM QPSK - 60 ㎒ Middle Channel - 1 RB

NR band 77/78_High Band_MIMO-Port 2



CP-OFDM QPSK - 60 ㎒ High Channel - 1 RB

7. Band Edge and Emission Mask

7.1. Limit

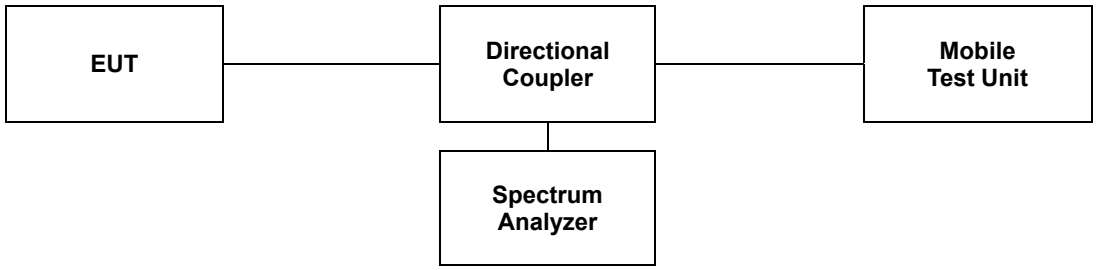
- §27.53(l)(2), for mobile operations in the 3 700-3 980 ㎒ band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 ㏈m/㎒. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz 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 ㎑. In the bands between 1 and 5 ㎒ removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 ㎑. 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 ㏈ below the transmitter power.

- §27.53(n)(2), for mobile operations in the 3 450-3 550 ㎒ band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 ㏈m/㎒. 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 ㎑. In the bands between 1 and 5 ㎒ removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 ㎑. 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 ㏈ 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 ≥ 1 % of OBW
c. VBW ≥ 3 x 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.



Note;

1. In case of MIMO mode, the limits were adjusted by a factor of 10*log(2) ㏈ to account for the device operation as a 2 port MIMO transmitter, as per KDB 622911. MIMO factor calculation as below:
MIMO Factor = 10*log(2) = 3.01 ㏈

Frequency Range	Basic Limit (㏈m)	MIMO Factor (㏈)	Adjusted Limit (㏈m)
1 ㎒ above and below the channel edges	-13	3.01	-16.01
1 ㎒ to 5 ㎒ above and below the channel edges	-13	3.01	-16.01
5 ㎒ above and below the channel edges	-13	3.01	-16.01

7.3. Test Results

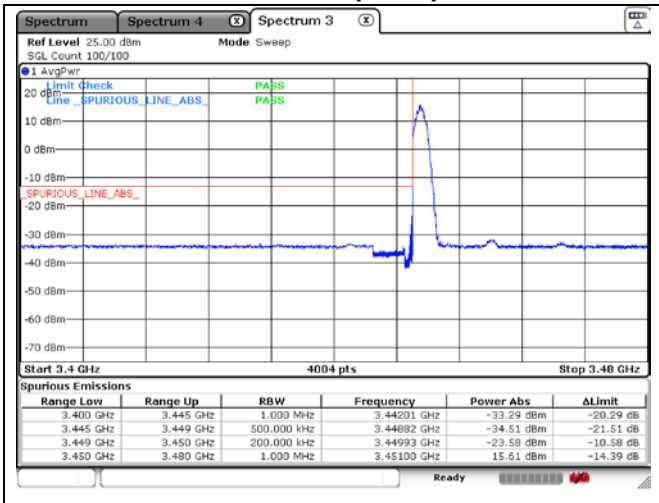
Ambient temperature : (23 ± 1) ℃

Relative humidity : 47 % R.H.

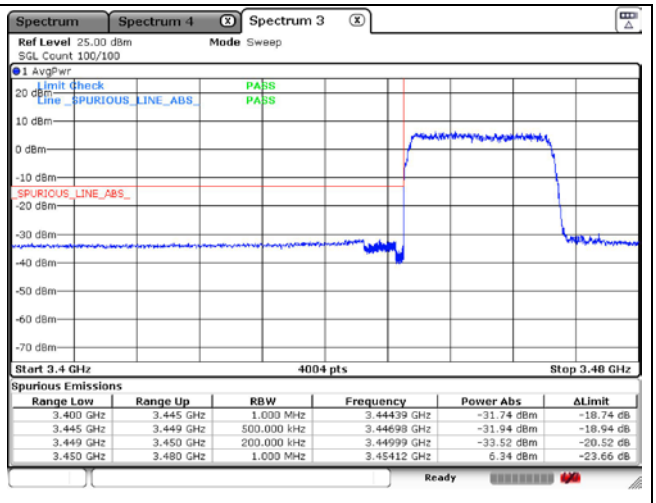
- Test plots

SISO

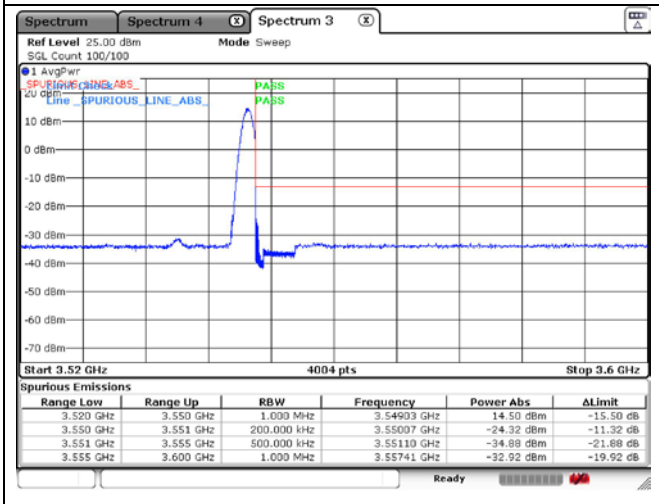
NR band 77/78_Low Band (20 ㎒)



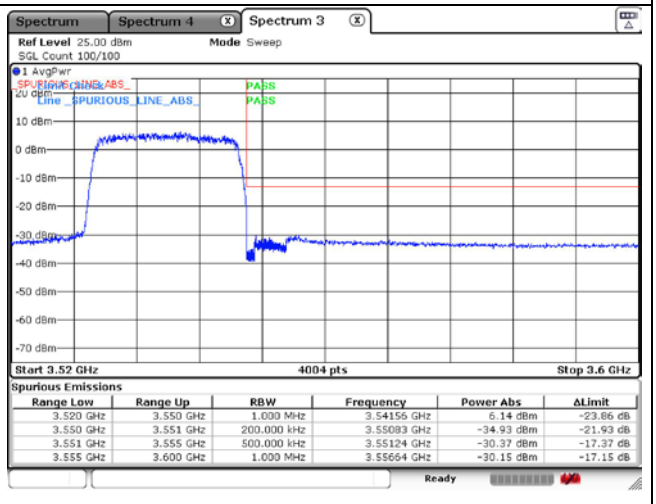
DFT-S-OFDM BPSK - Low Channel - 1 RB



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

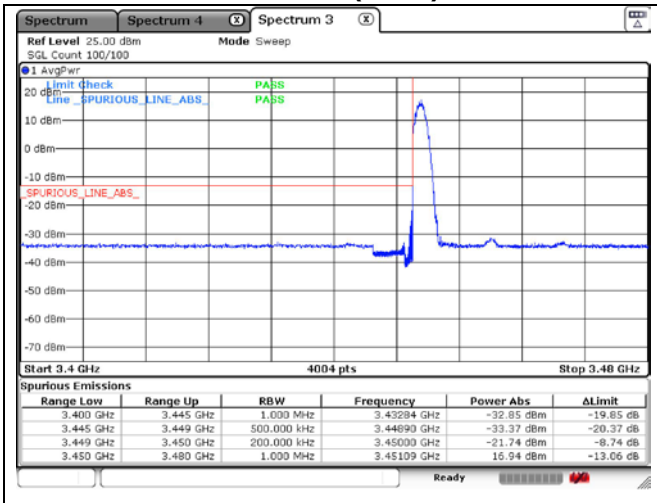


DFT-S-OFDM BPSK - High Channel - 1 RB

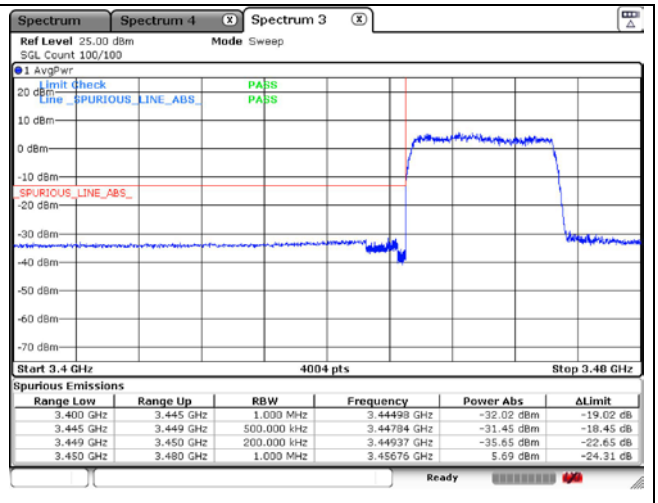


DFT-S-OFDM BPSK - High Channel - Full RB

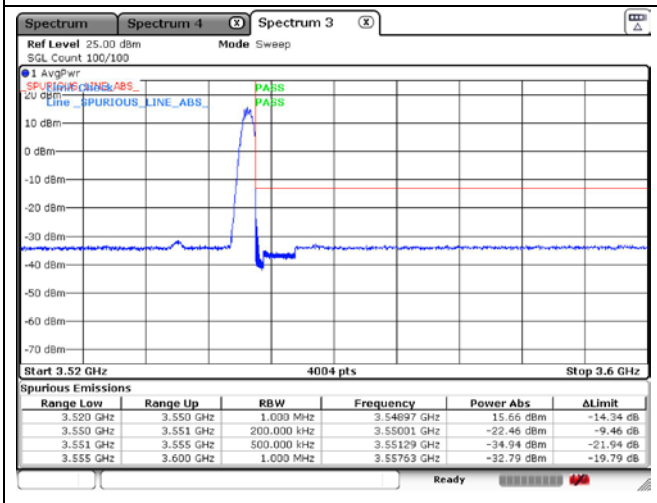
NR band 77/78_Low Band (20 ㎒)



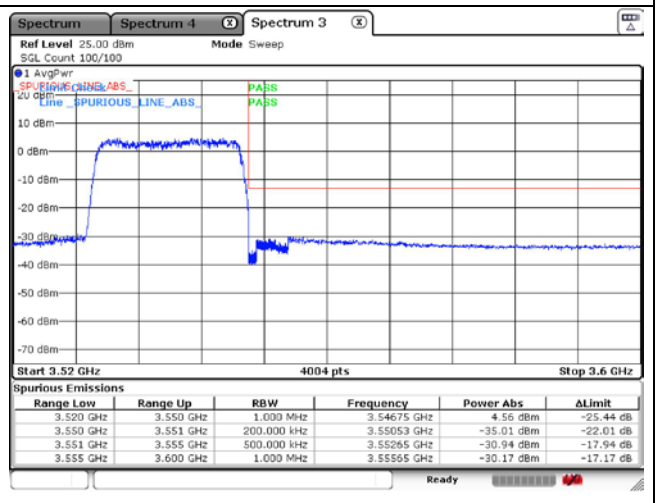
DFT-S-OFDM 16QAM - Low Channel - 1 RB



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

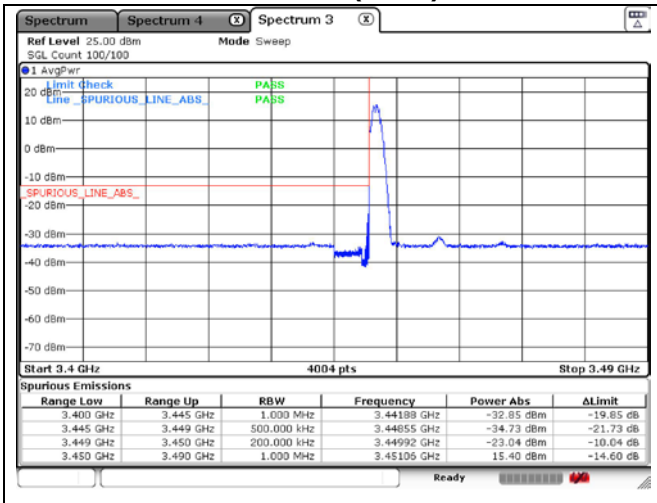


DFT-S-OFDM 16QAM - High Channel - 1 RB

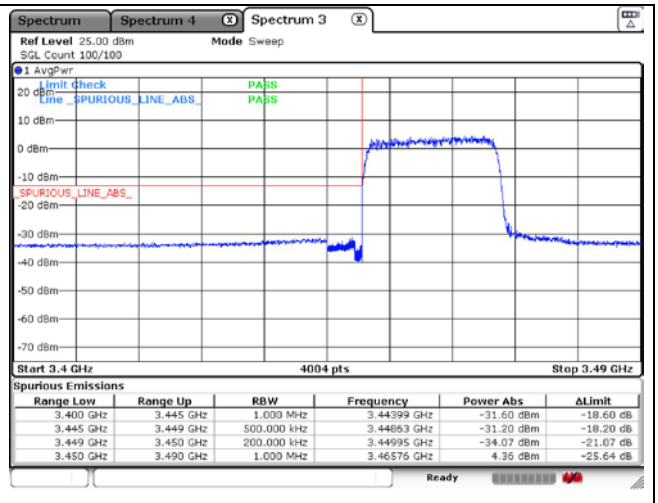


DFT-S-OFDM 16QAM - High Channel - Full RB

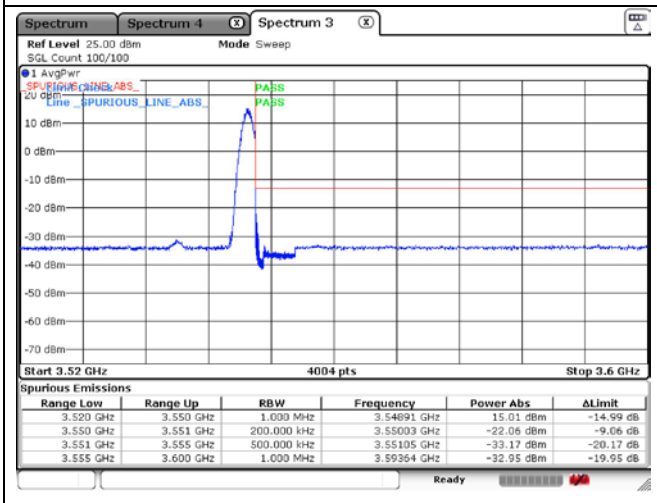
NR band 77/78_Low Band (20 ㎒)



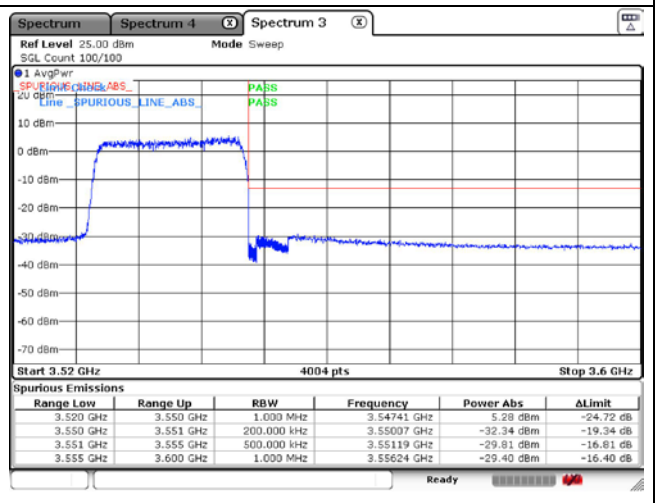
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - Low Channel - Full RB

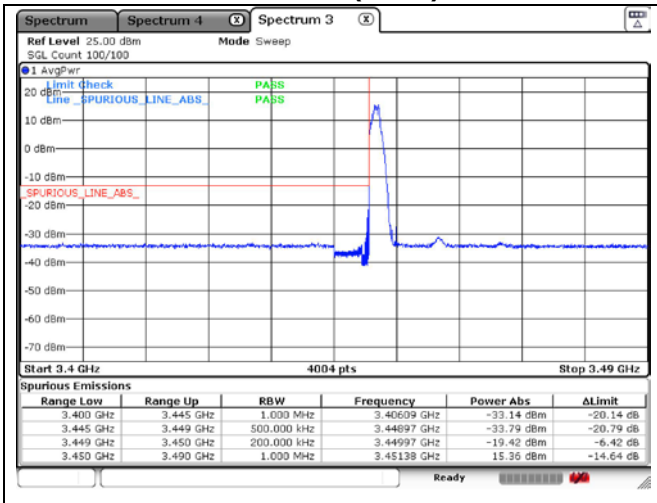


CP-OFDM QPSK - High Channel - 1 RB

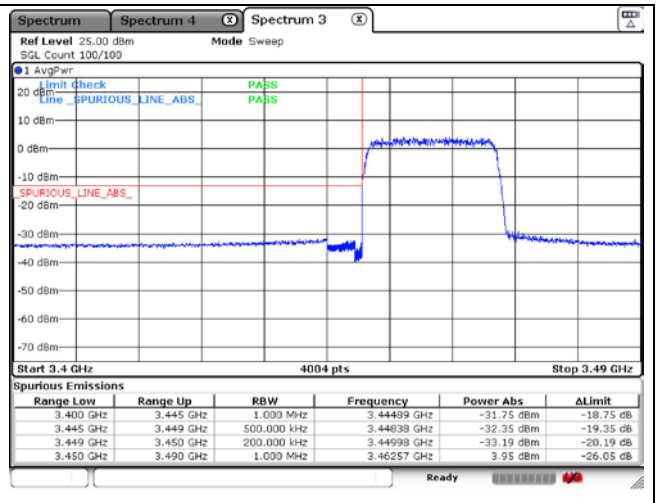


CP-OFDM QPSK - High Channel - Full RB

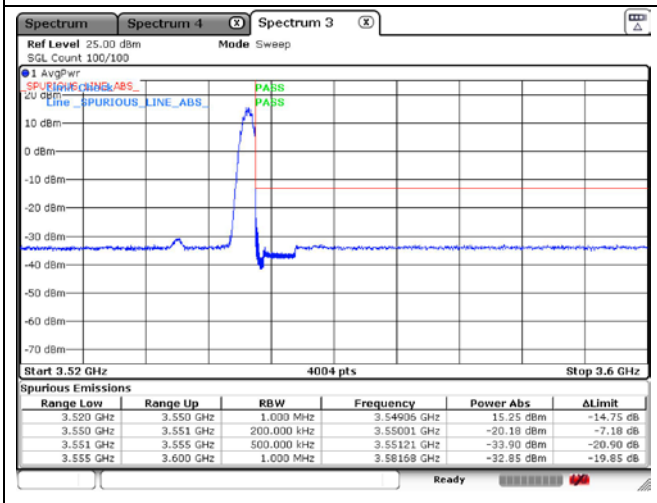
NR band 77/78_Low Band (20 ㎒)



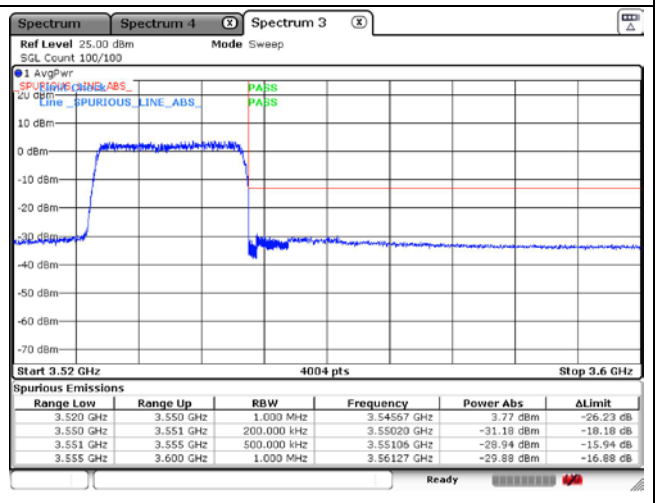
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - Low Channel - Full RB

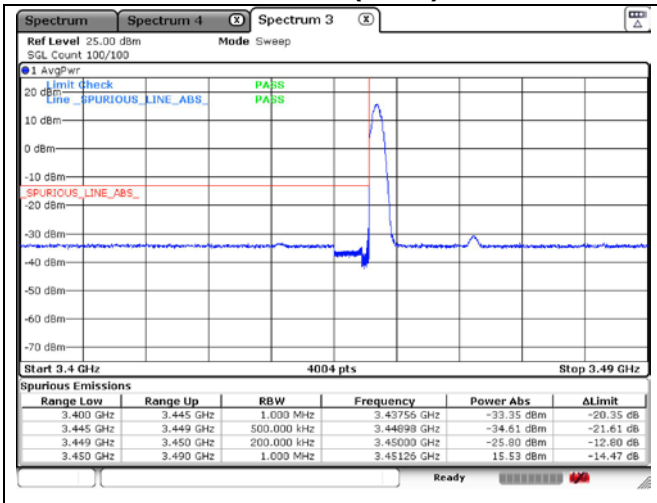


CP-OFDM 16QAM - High Channel - 1 RB

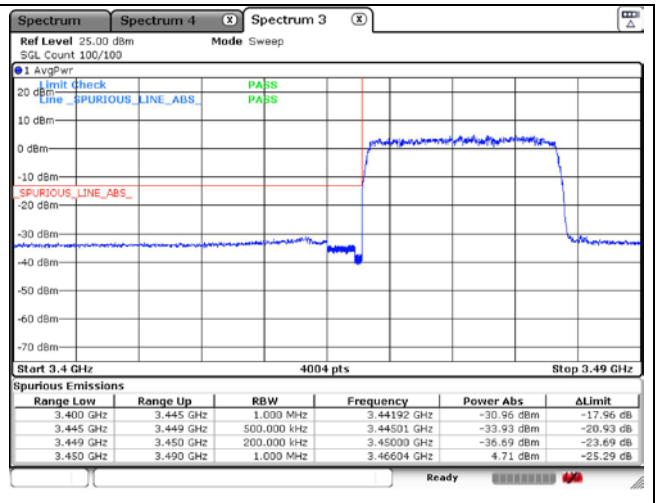


CP-OFDM 16QAM - High Channel - Full RB

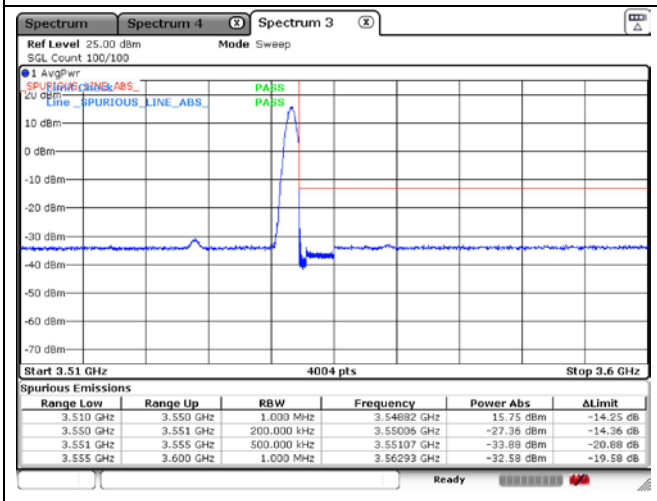
NR band 77/78_Low Band (30 ㎒)



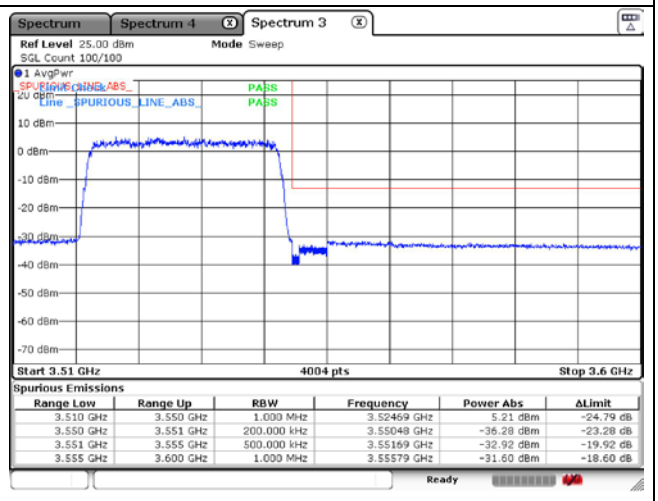
DFT-S-OFDM QPSK - Low Channel - 1 RB



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

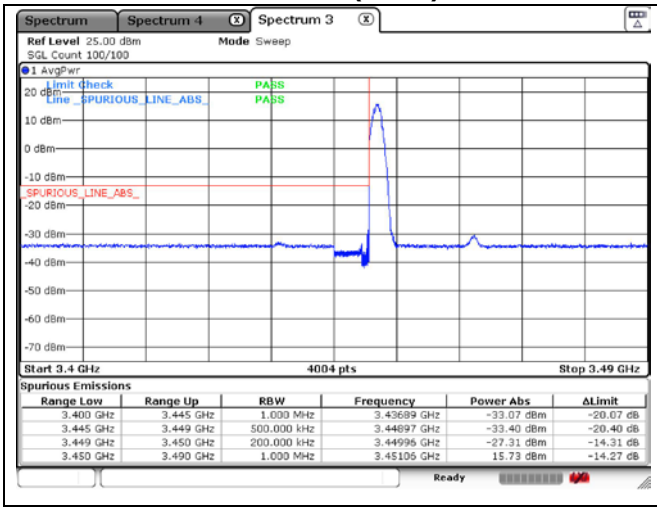


DFT-S-OFDM QPSK - High Channel - 1 RB

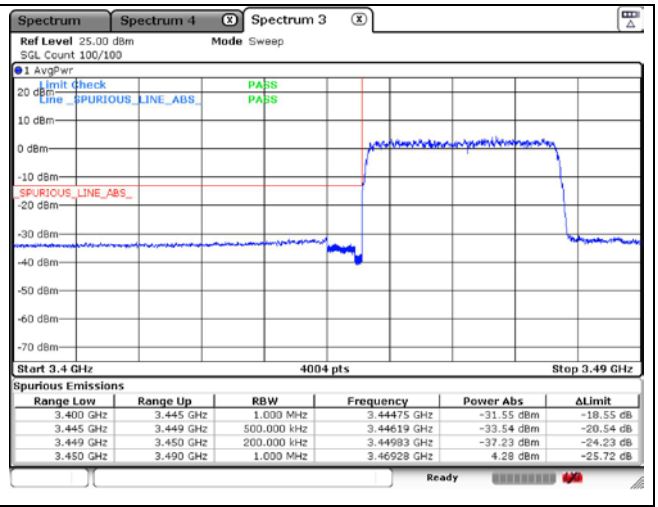


DFT-S-OFDM QPSK - High Channel - Full RB

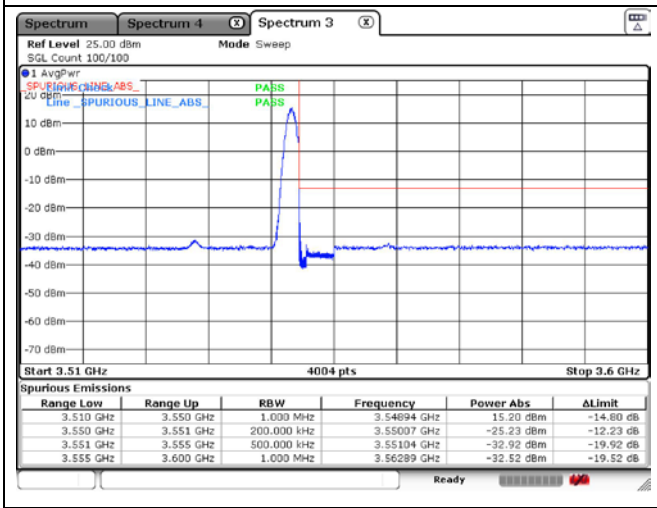
NR band 77/78_Low Band (30 ㎒)



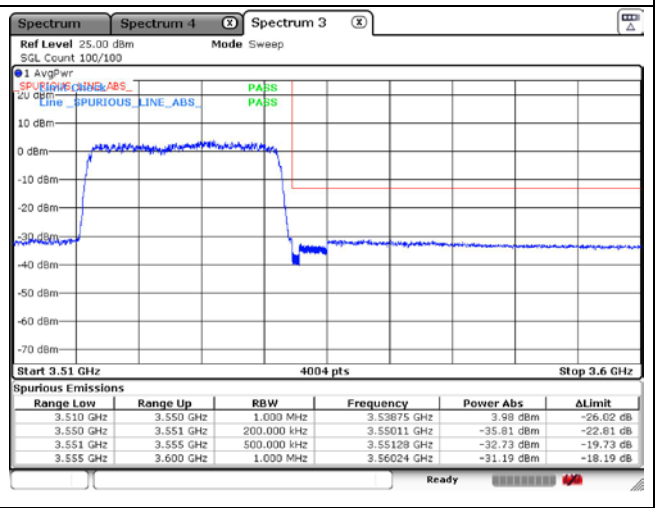
DFT-S-OFDM 16QAM - Low Channel - 1 RB



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

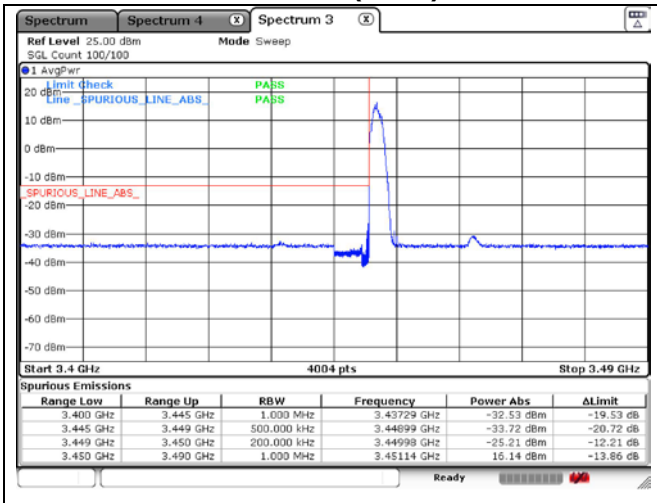


DFT-S-OFDM 16QAM - High Channel - 1 RB

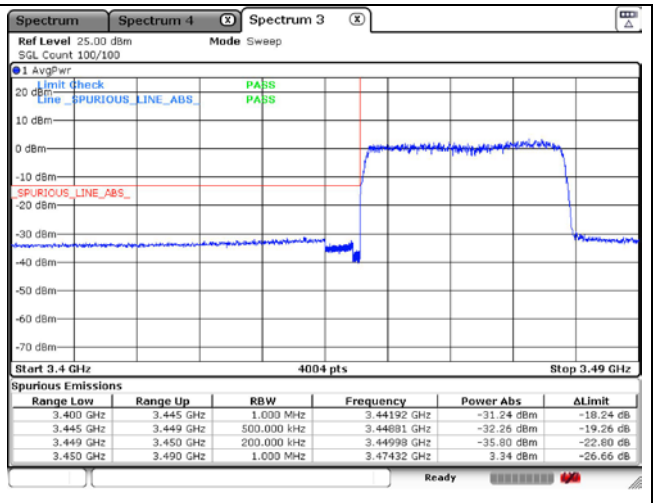


DFT-S-OFDM 16QAM - High Channel - Full RB

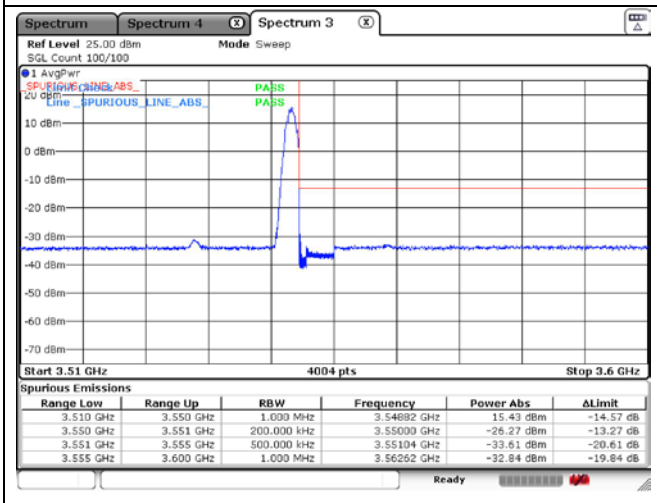
NR band 77/78_Low Band (30 ㎒)



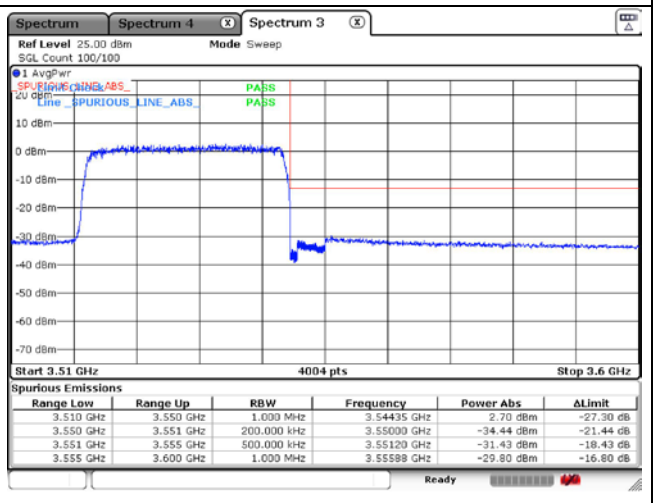
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - Low Channel - Full RB

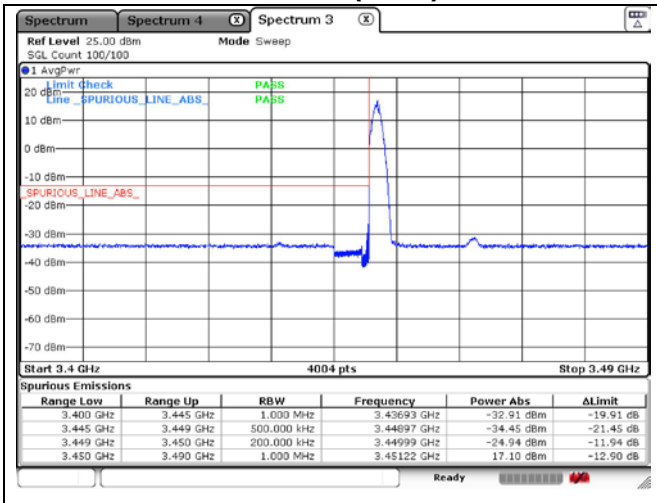


CP-OFDM QPSK - High Channel - 1 RB

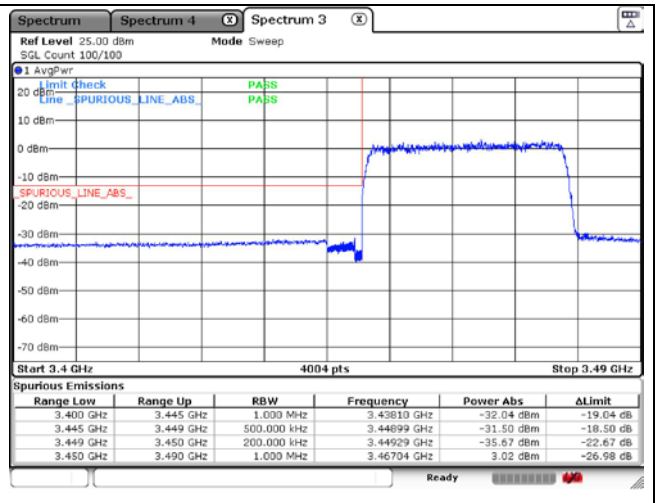


CP-OFDM QPSK - High Channel - Full RB

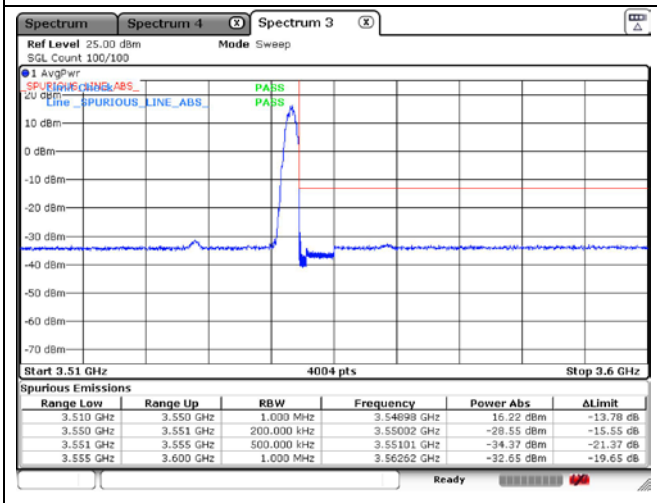
NR band 77/78_Low Band (30 ㎒)



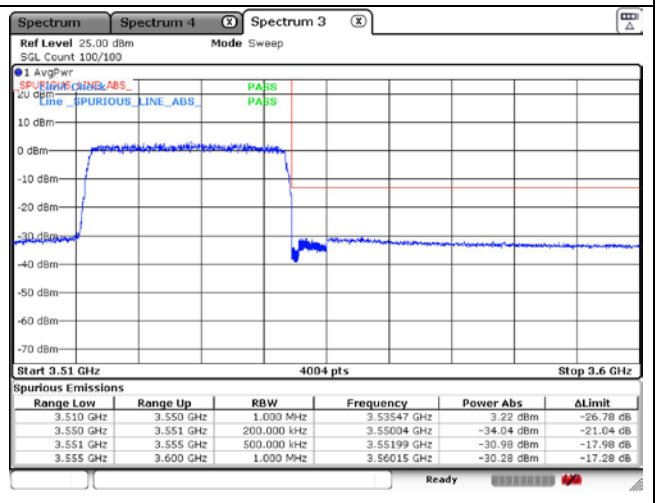
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - Low Channel - Full RB

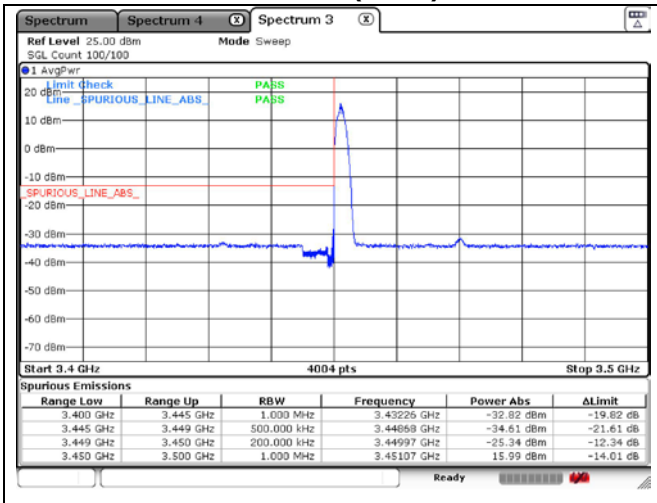


CP-OFDM 16QAM - High Channel - 1 RB

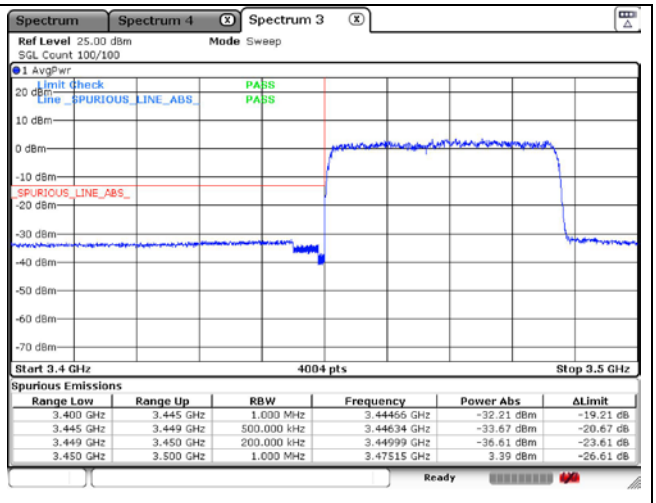


CP-OFDM 16QAM - High Channel - Full RB

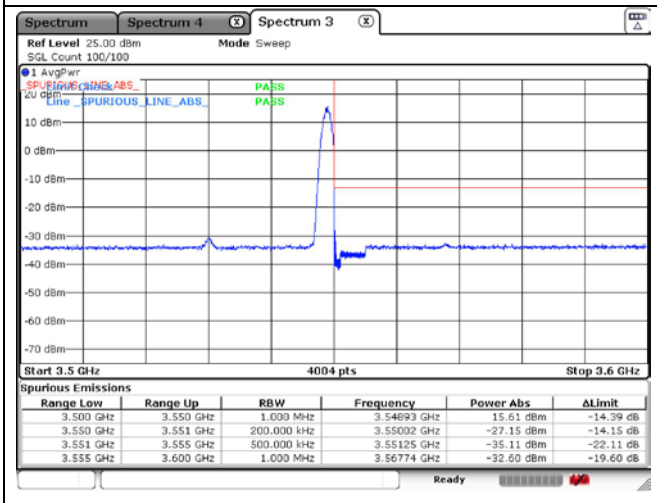
NR band 77/78_Low Band (40 ㎒)



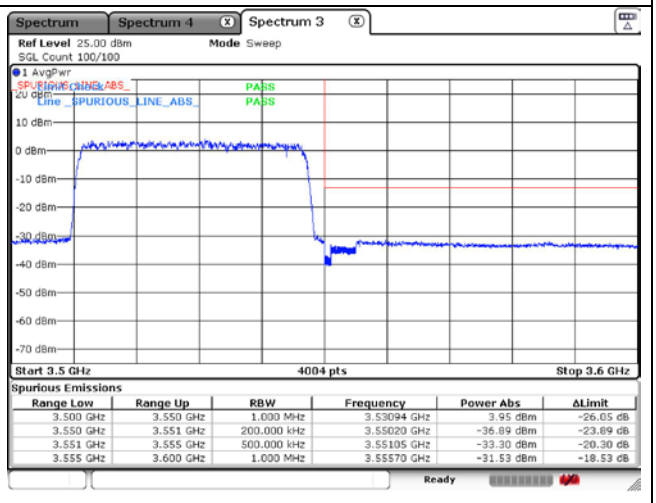
DFT-S-OFDM BPSK - Low Channel - 1 RB



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

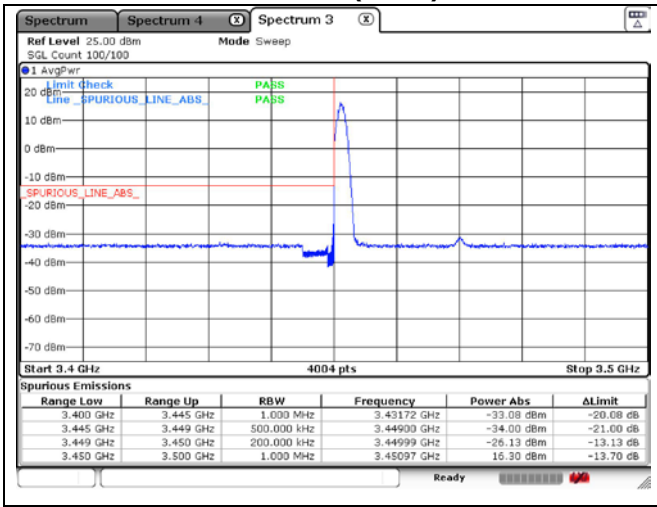


DFT-S-OFDM BPSK - High Channel - 1 RB

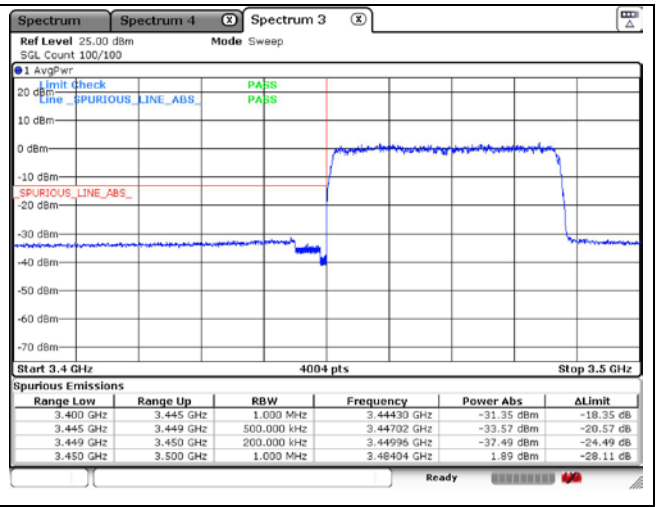


DFT-S-OFDM BPSK - High Channel - Full RB

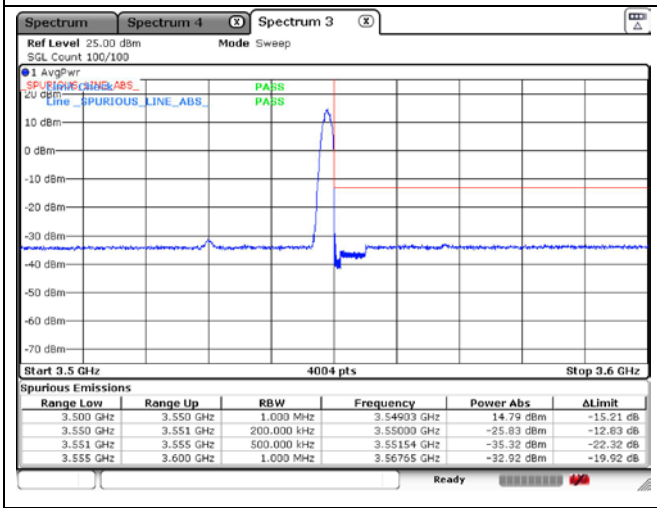
NR band 77/78_Low Band (40 ㎒)



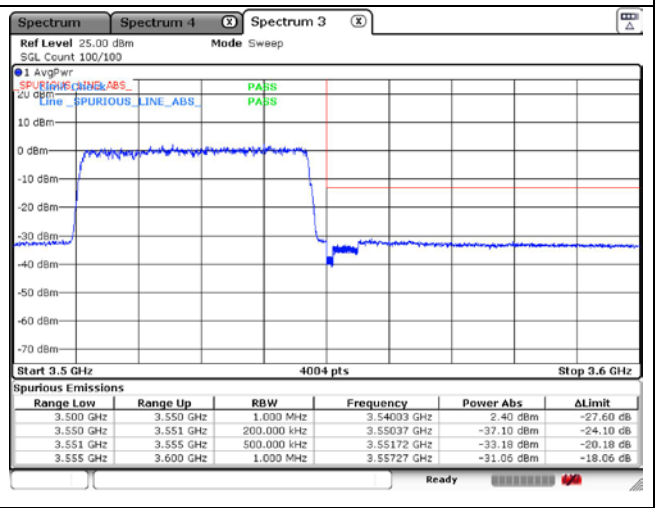
DFT-S-OFDM 16QAM - Low Channel - 1 RB



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

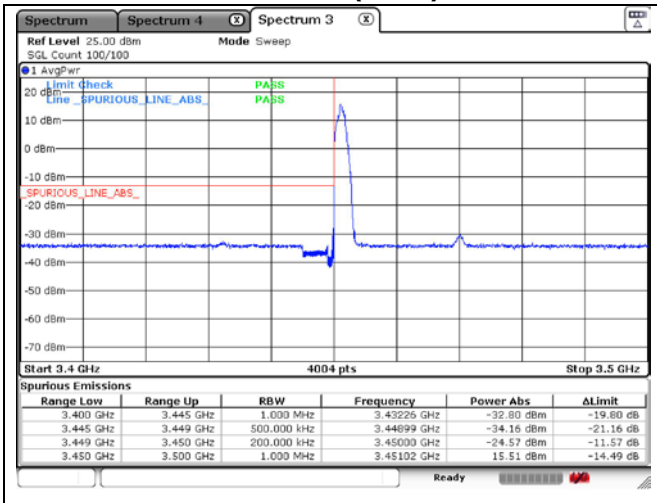


DFT-S-OFDM 16QAM - High Channel - 1 RB

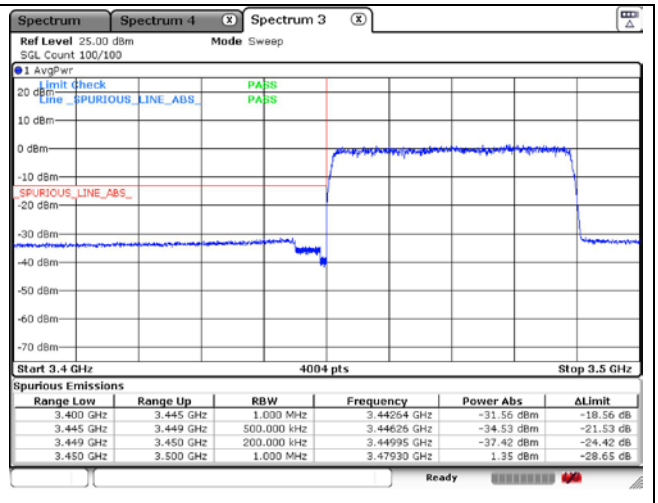


DFT-S-OFDM 16QAM - High Channel - Full RB

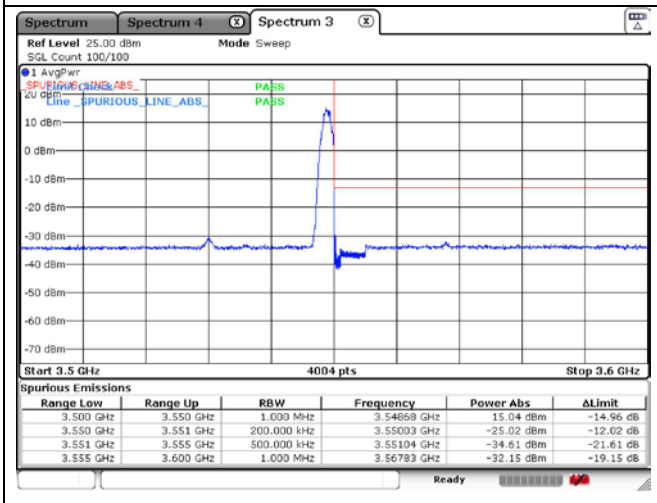
NR band 77/78_Low Band (40 ㎒)



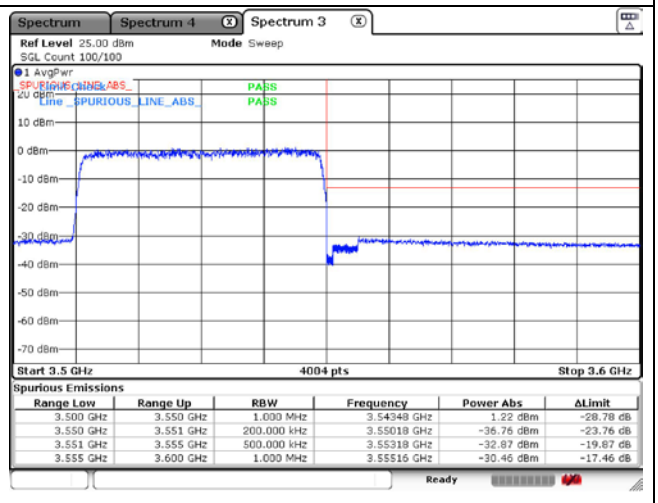
CP-OFDM QPSK - Low Channel - 1 RB



CP-OFDM QPSK - Low Channel - Full RB

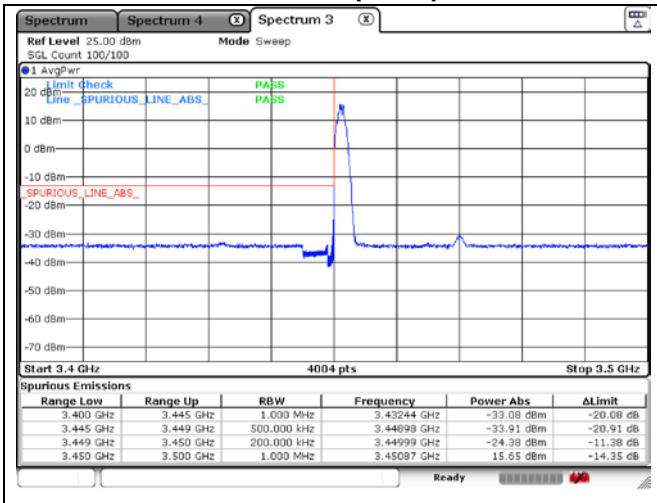


CP-OFDM QPSK - High Channel - 1 RB

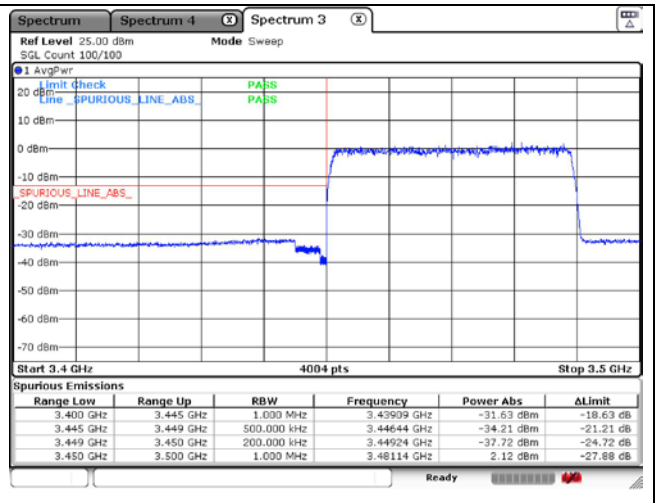


CP-OFDM QPSK - High Channel - Full RB

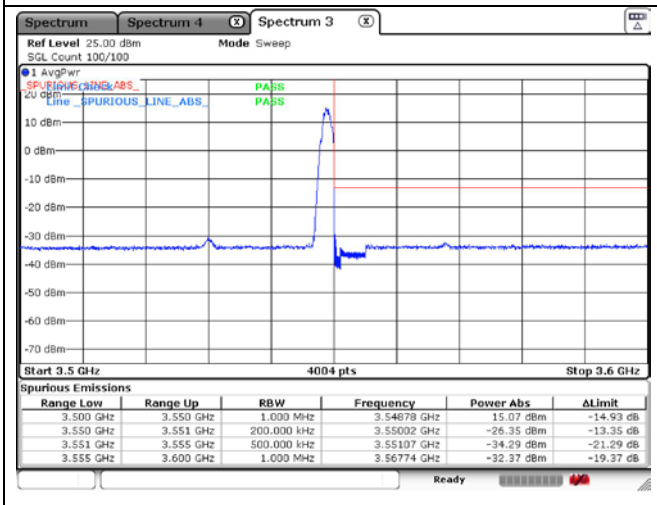
NR band 77/78_Low Band (40 ㎒)



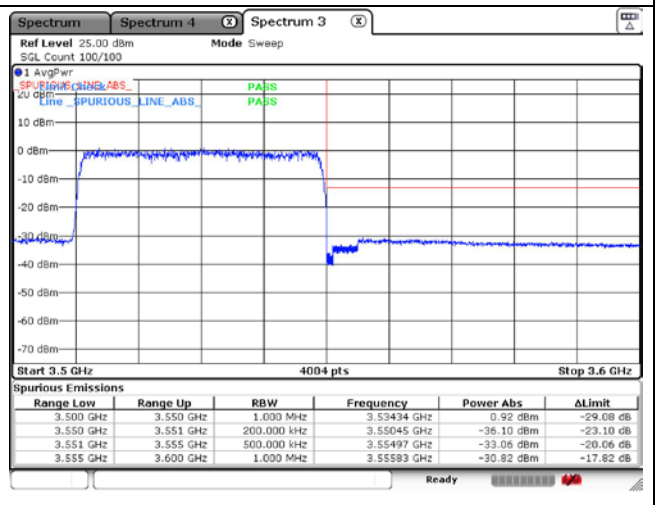
CP-OFDM 16QAM - Low Channel - 1 RB



CP-OFDM 16QAM - Low Channel - Full RB

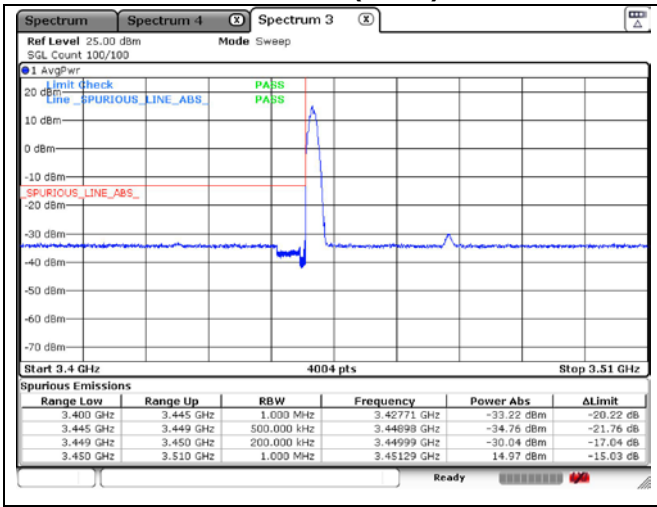


CP-OFDM 16QAM - High Channel - 1 RB

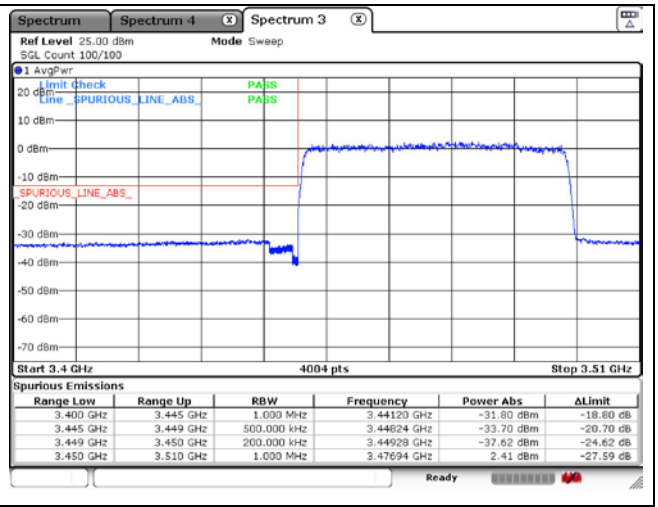


CP-OFDM 16QAM - High Channel - Full RB

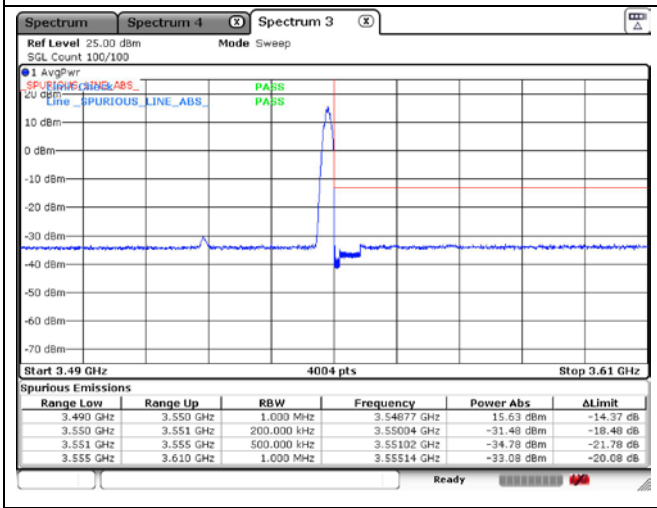
NR band 77/78_Low Band (50 ㎒)



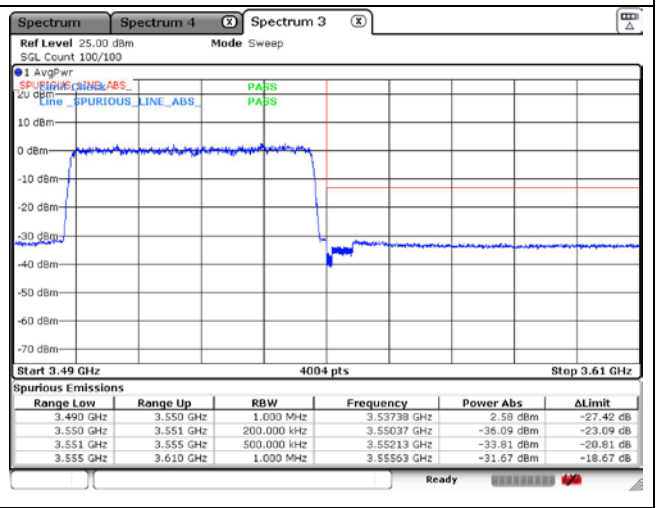
DFT-S-OFDM QPSK - Low Channel - 1 RB



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

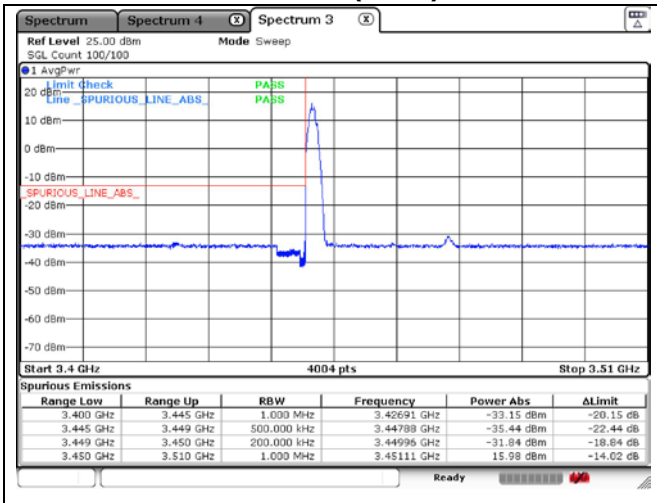


DFT-S-OFDM QPSK - High Channel - 1 RB

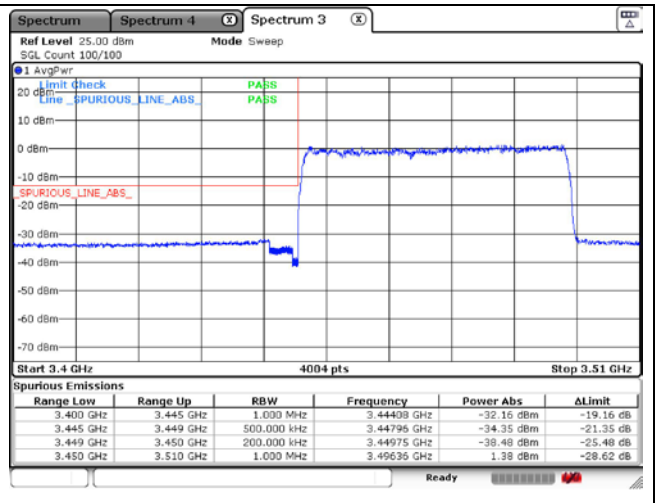


DFT-S-OFDM QPSK - High Channel - Full RB

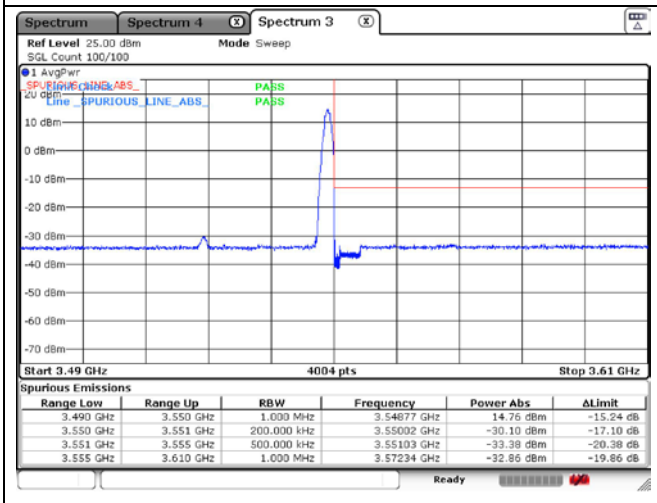
NR band 77/78_Low Band (50 ㎒)



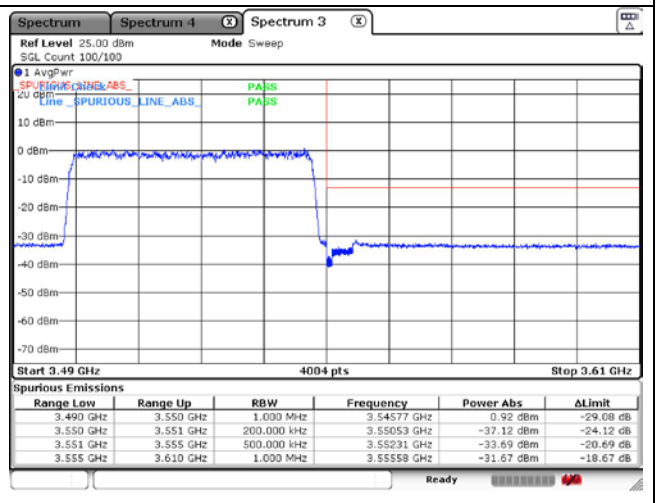
DFT-S-OFDM 16QAM - Low Channel - 1 RB



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



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



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