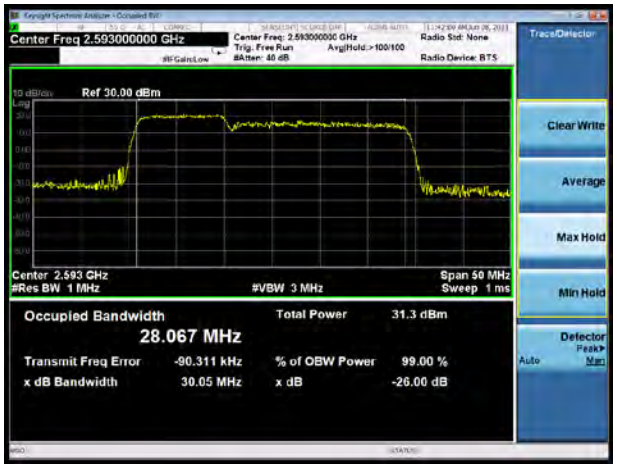
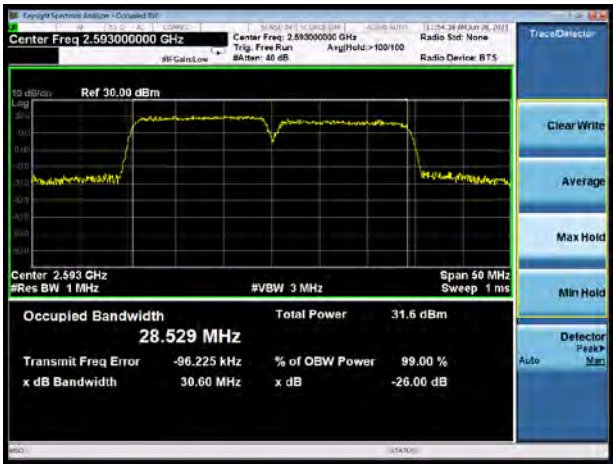
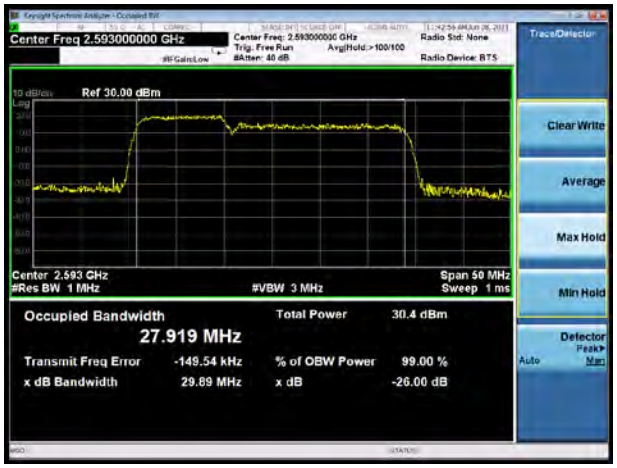
CA_41C QPSK 10MHz +20MHz



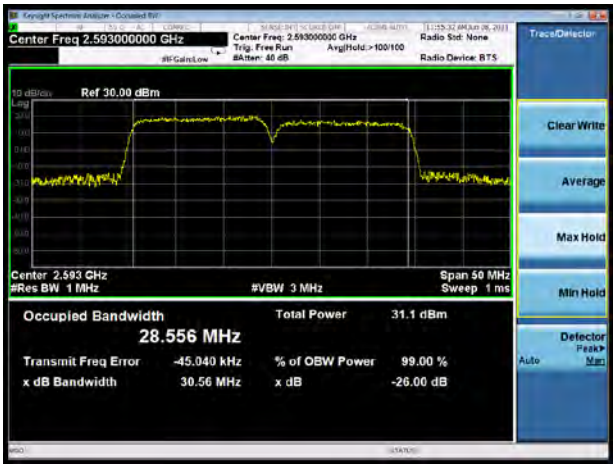
CA_41C QPSK 15MHz +15MHz



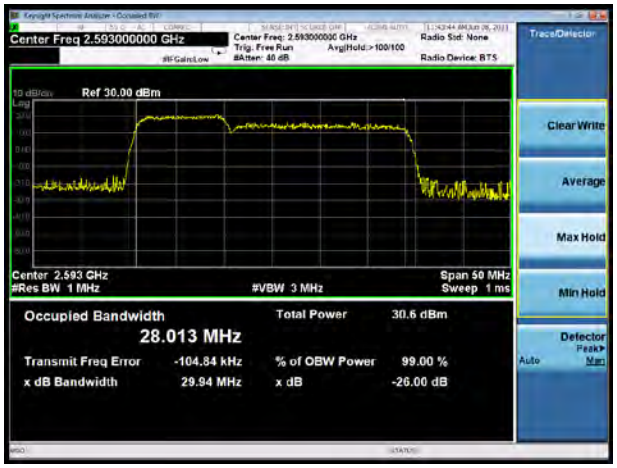
CA_41C 16QAM 10MHz +20MHz



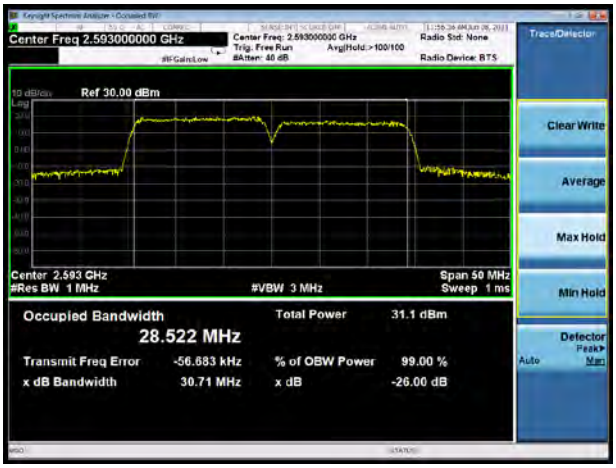
CA_41C 16QAM 15MHz +15MHz



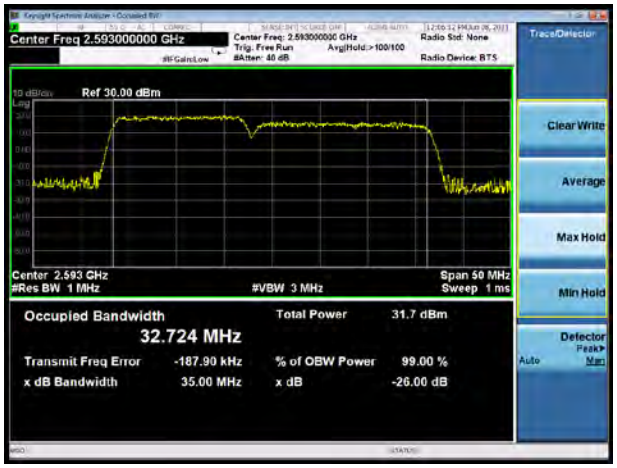
CA_41C 64QAM 10MHz +20MHz



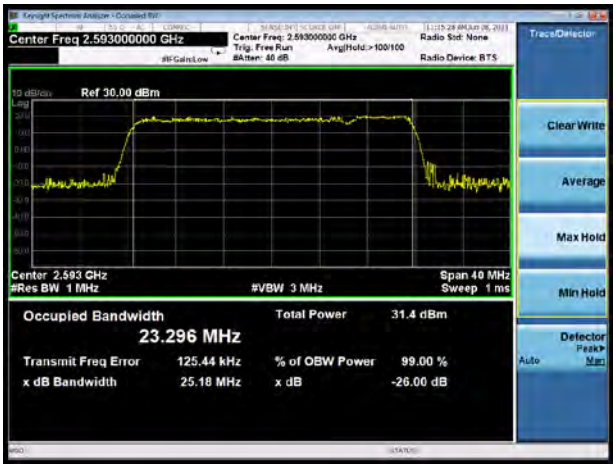
CA_41C 64QAM 15MHz +15MHz



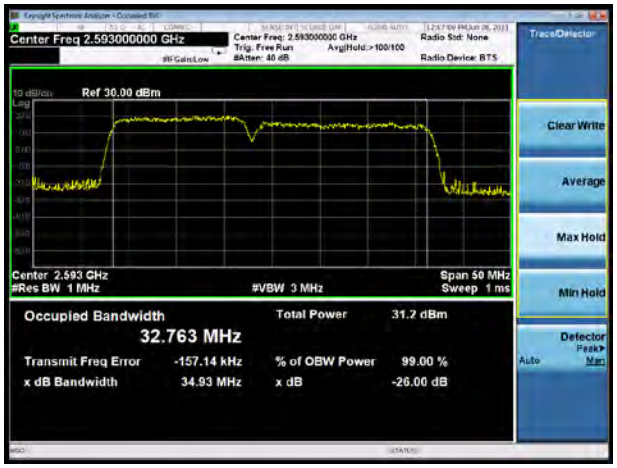
CA_41C QPSK 15MHz +20MHz



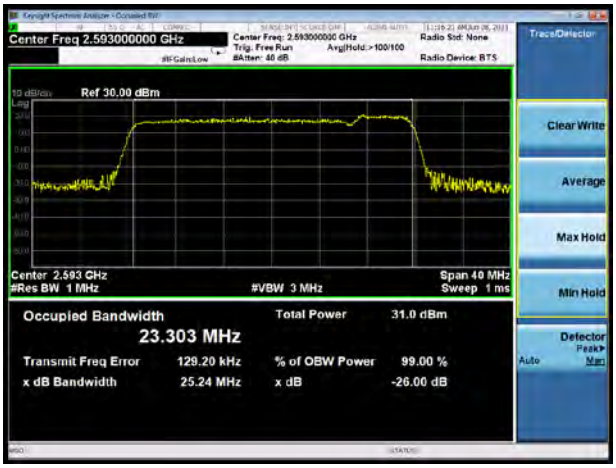
CA_41C QPSK 20MHz +5MHz



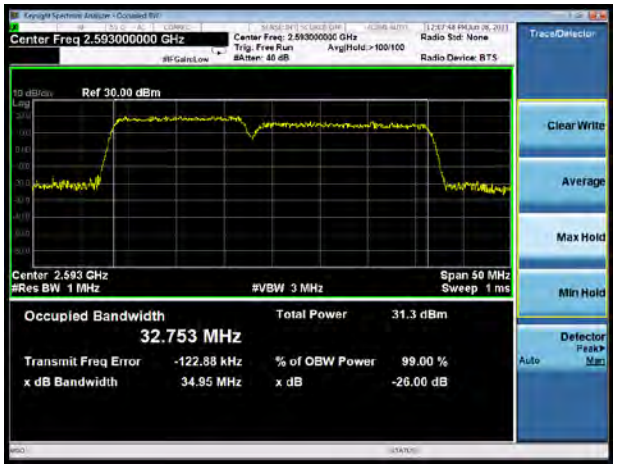
CA_41C 16QAM 15MHz +20MHz



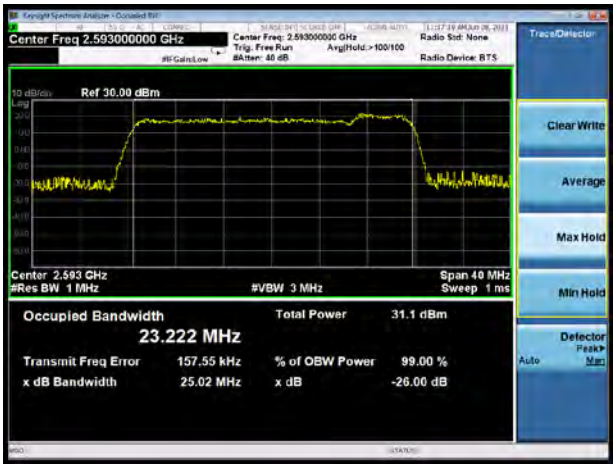
CA_41C 16QAM 20MHz +5MHz



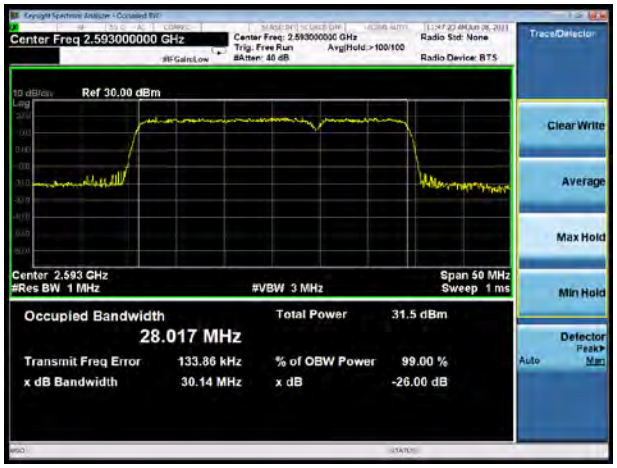
CA_41C 64QAM 15MHz +20MHz



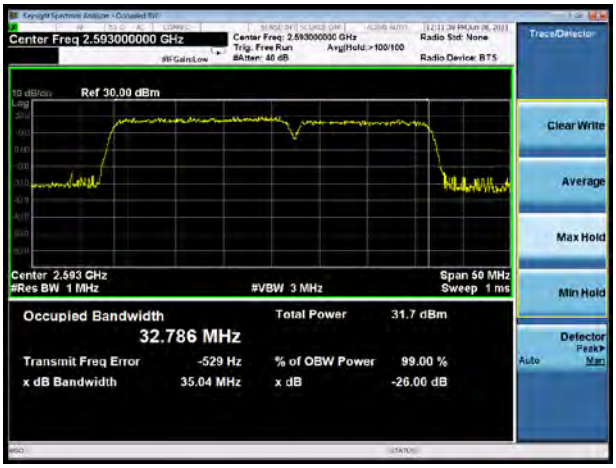
CA_41C 64QAM 20MHz +5MHz



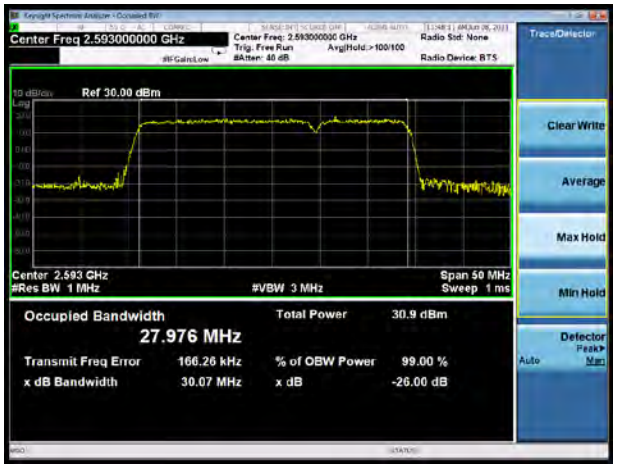
CA_41C QPSK 20MHz +10MHz



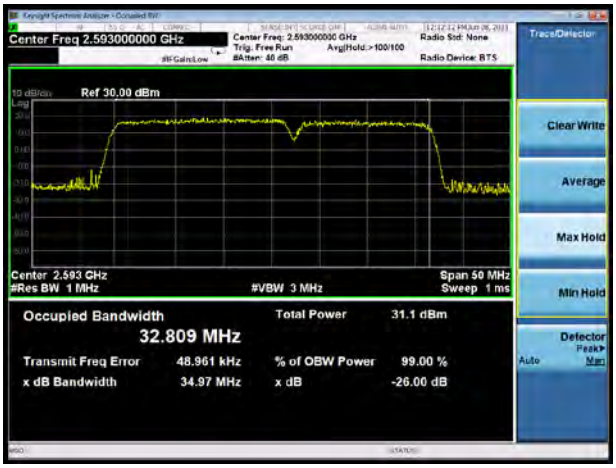
CA_41C QPSK 20MHz +15MHz



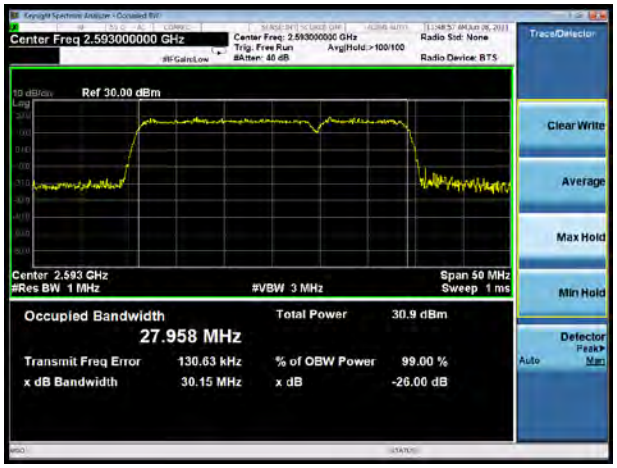
CA_41C 16QAM 20MHz +10MHz



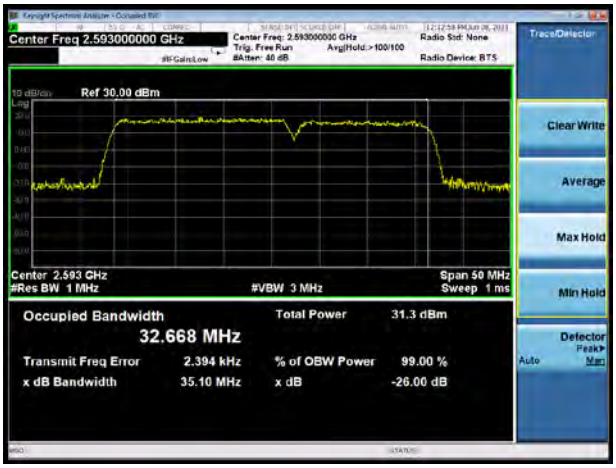
CA_41C 16QAM 20MHz +15MHz



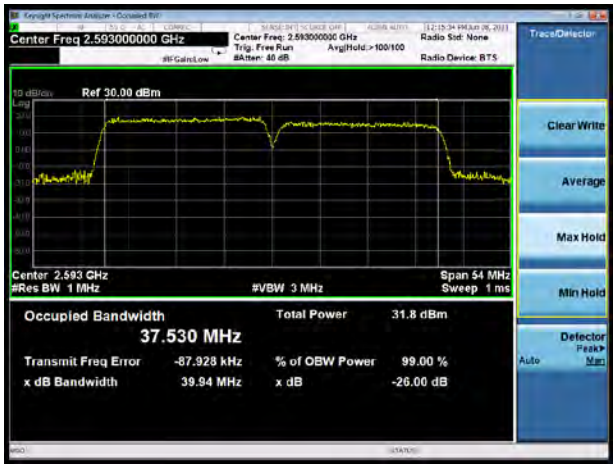
CA_41C 64QAM 20MHz +10MHz



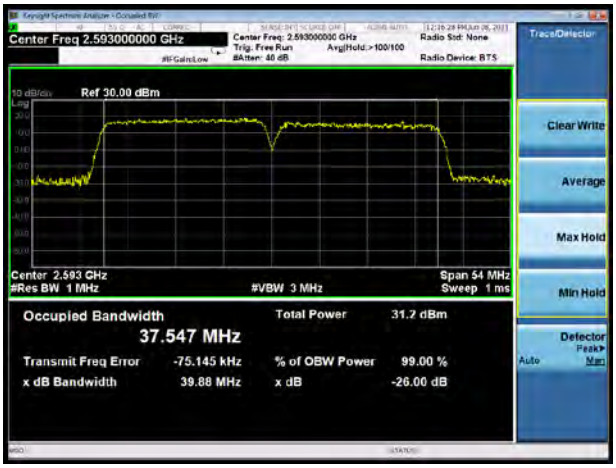
CA_41C 64QAM 20MHz +15MHz



CA_41C QPSK 20MHz +20MHz



CA_41C 16QAM 20MHz +20MHz



CA_41C 64QAM 20MHz +20MHz

5.3 Band Edge Compliance

Ambient condition

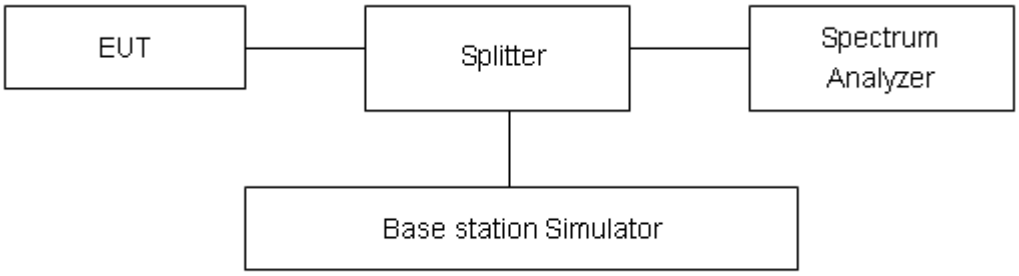
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured.
The testing follows KDB 971168 D01 v03r01 Section 6.0
The EUT was connected to spectrum analyzer and system simulator via a power divider.
The band edges of low and high channels for the highest RF powers were measured.
For LTE Band 7/38/ the middle channel, high channel of LTE Band 41 set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
For LTE Band 41 low channel set RBW >= 2% EBW in the 1MHz band immediately outside and adjacent to the band edge. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
RBW is set to 15 kHz, VBW is set to 43 kHz for LTE Band 4/66 (1.4MHz).
RBW is set to 33 kHz, VBW is set to 100 kHz for LTE Band 4/66 (3MHz).
RBW is set to 51 kHz, VBW is set to 150 kHz for LTE Band 4/7/17/38/41/66 (5MHz).
RBW is set to 100 kHz, VBW is set to 300kHz for LTE Band 4/7/17/38/41/66 (10MHz).
RBW is set to 150 kHz, VBW is set to 470kHz for LTE Band 4/17/38/41/66 (15MHz).
RBW is set to 200 kHz, VBW is set to 620 kHz for LTE Band 4/17/38/41/66 (20MHz)
RBW is set to 100 kHz, VBW is set to 300kHz for LTE Band 12(1.4MHz/3MHz/5MHz/10MHz).

on spectrum analyzer.
Set spectrum analyzer with RMS detector.
The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Checked that all the results comply with the emission limit line.

Test Setup



Limits

Rule Part 27.53(i) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2305 and

2320 MHz.

Rule Part 27.53(h) specifies that " for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 $\log_{10}$ (P) dB"
Rule Part 27.53(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

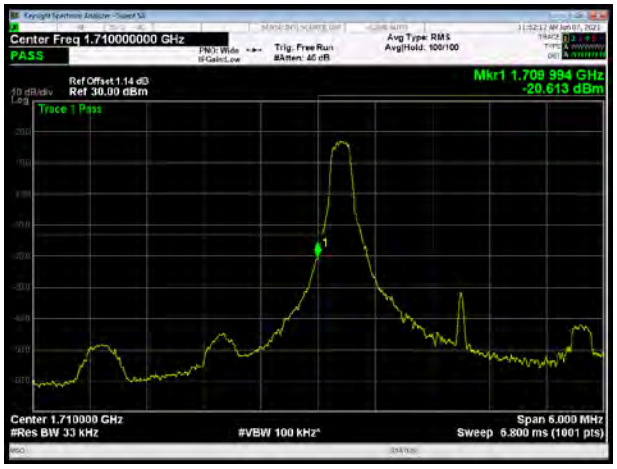
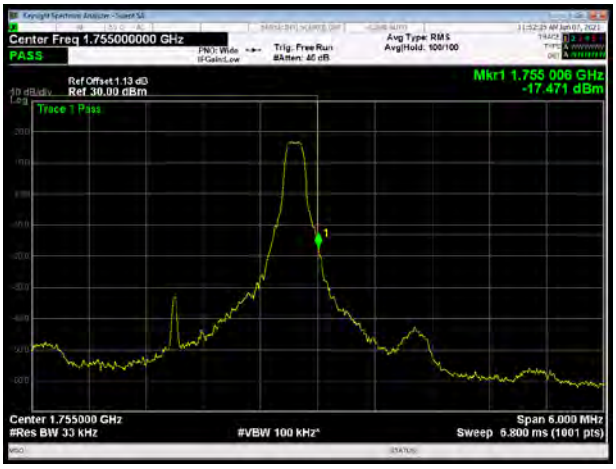
Rule Part 27.53(m) (4)/ specifies that "for BRS and EBS stations. For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (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)(4) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 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.
Example:
The limit line is derived from 43 + 10log (P) dB below the transmitter power P(Watts)
= P(W)- [43 + 10log(P)] (dB)
= [30 + 10log (P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U=0.684dB.

Test Result

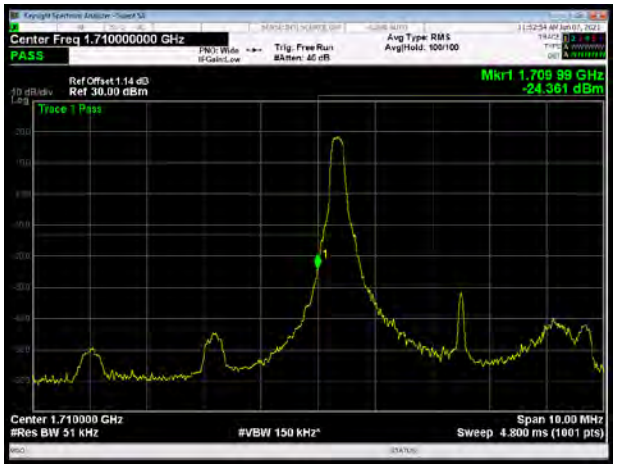
All the test traces in the plots shows the test results clearly.

LTE Band 4 QPSK 1.4MHz CH-Low, 1 RB	LTE Band 4 QPSK 1.4MHz CH-High, 1 RB
	
LTE Band 4 QPSK 1.4MHz CH-Low, 100%RB	LTE Band 4 QPSK 1.4MHz CH-High, 100%RB
	
LTE Band 4 QPSK 3MHz CH-Low, 1 RB	LTE Band 4 QPSK 3MHz CH-High, 1 RB
	

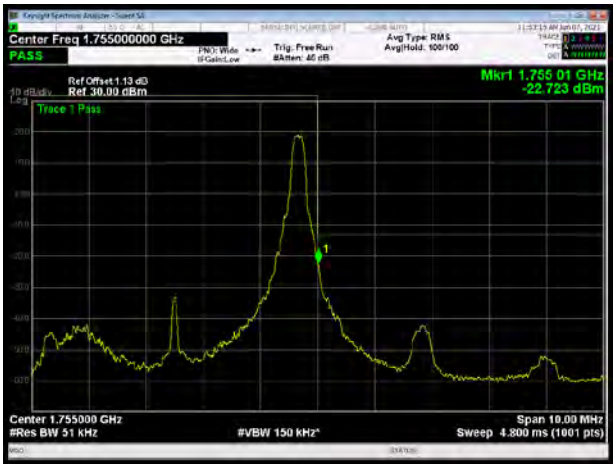
LTE Band 4 QPSK 3MHz CH-Low, 100%RB

LTE Band 4 QPSK 3MHz CH-High, 100%RB

LTE Band 4 QPSK 5MHz CH-Low, 1 RB



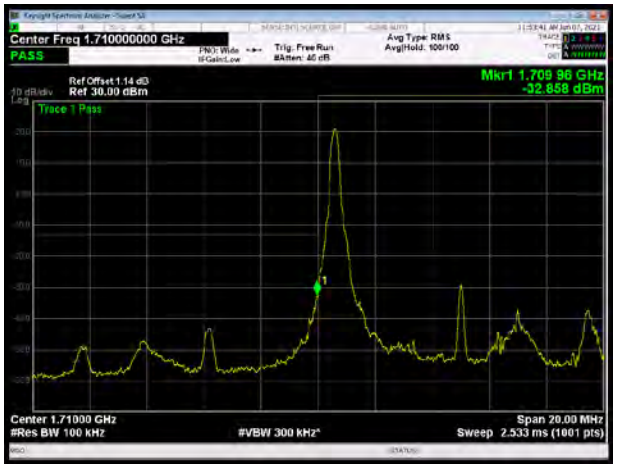
LTE Band 4 QPSK 5MHz CH-High, 1 RB



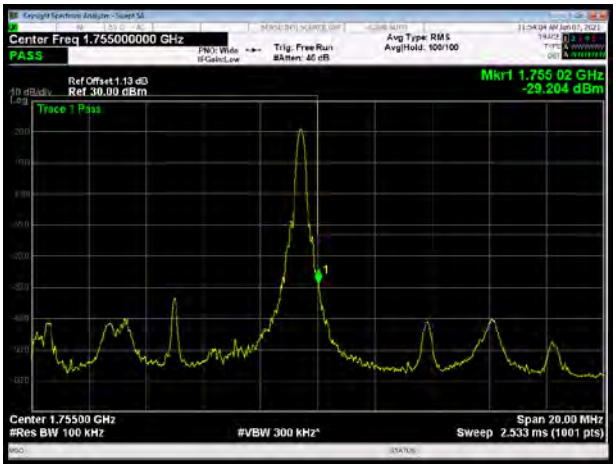
LTE Band 4 QPSK 5MHz CH-Low, 100%RB

LTE Band 4 QPSK 5MHz CH-High, 100%RB

LTE Band 4 QPSK 10MHz CH-Low, 1 RB



LTE Band 4 QPSK 10MHz CH-High, 1 RB

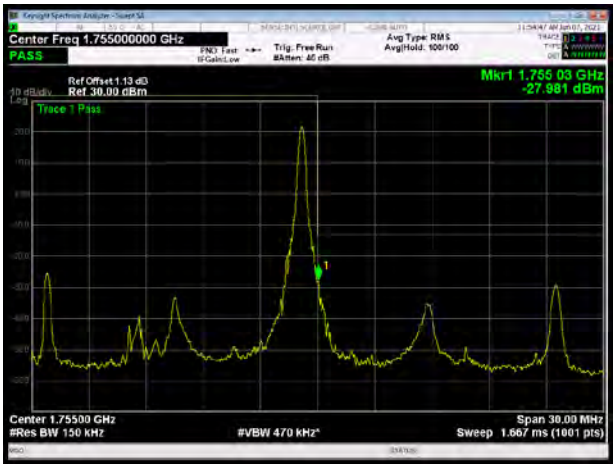


LTE Band 4 QPSK 10MHz CH-Low, 100%RB

LTE Band 4 QPSK 10MHz CH-High, 100%RB

LTE Band 4 QPSK 15MHz CH-Low, 1 RB

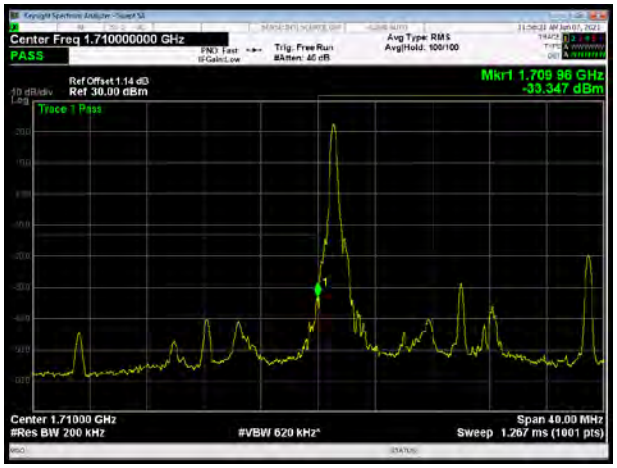
LTE Band 4 QPSK 15MHz CH-High, 1 RB



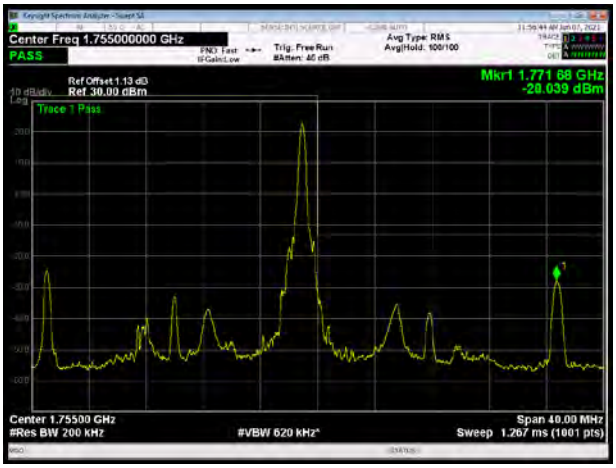
LTE Band 4 QPSK 15MHz CH-Low, 100%RB

LTE Band 4 QPSK 15MHz CH-High, 100%RB

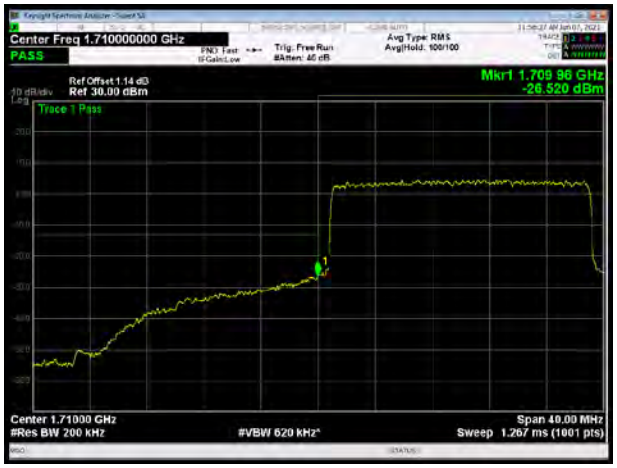
LTE Band 4 QPSK 20MHz CH-Low, 1 RB



LTE Band 4 QPSK 20MHz CH-High, 1 RB



LTE Band 4 QPSK 20MHz CH-Low, 100%RB



LTE Band 4 QPSK 20MHz CH-High, 100%RB

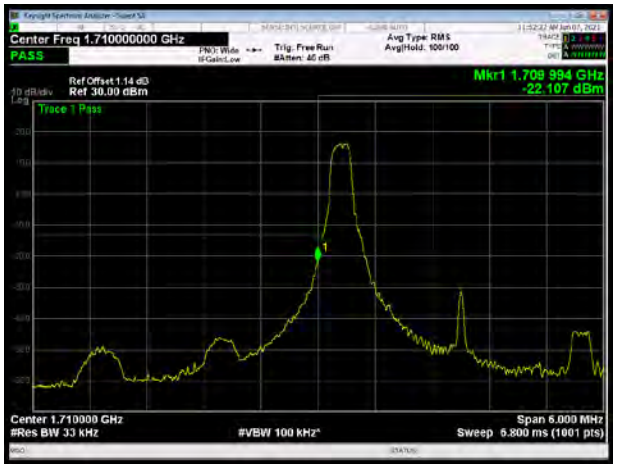
LTE Band 4 16QAM 1.4MHz CH-Low, 1 RB

LTE Band 4 16QAM 1.4MHz CH-High, 1 RB

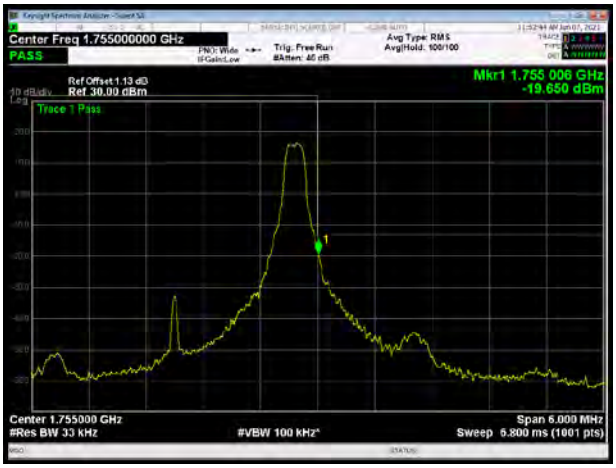
LTE Band 4 16QAM 1.4MHz CH-Low, 100%RB

LTE Band 4 16QAM 1.4MHz CH-High, 100%RB

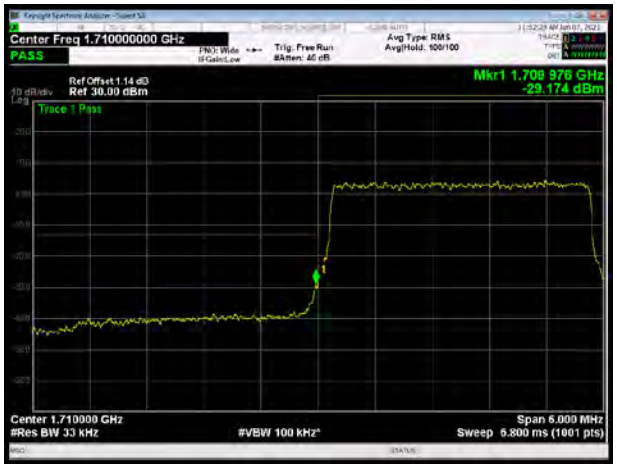
LTE Band 4 16QAM 3MHz CH-Low, 1 RB



LTE Band 4 16QAM 3MHz CH-High, 1 RB

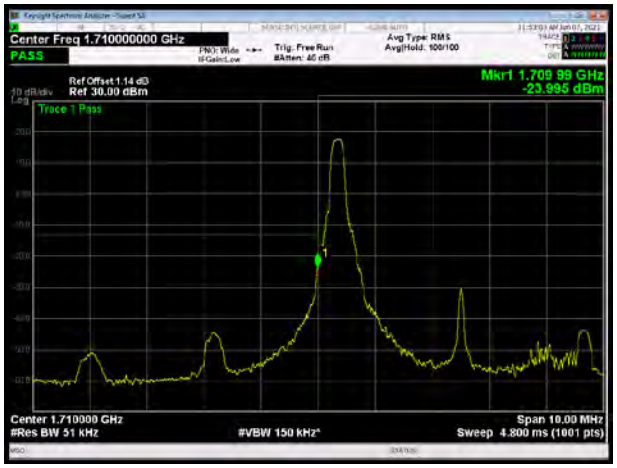


LTE Band 4 16QAM 3MHz CH-Low, 100%RB

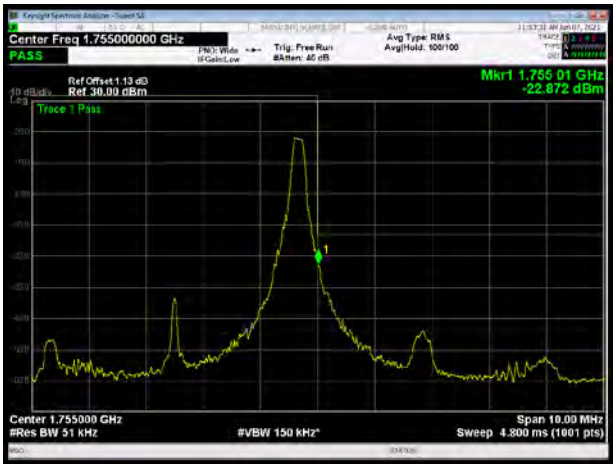


LTE Band 4 16QAM 3MHz CH-High, 100%RB

LTE Band 4 16QAM 5MHz CH-Low, 1 RB



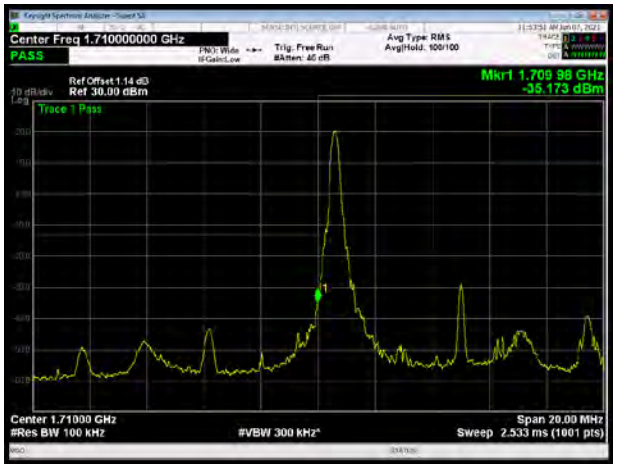
LTE Band 4 16QAM 5MHz CH-High, 1 RB



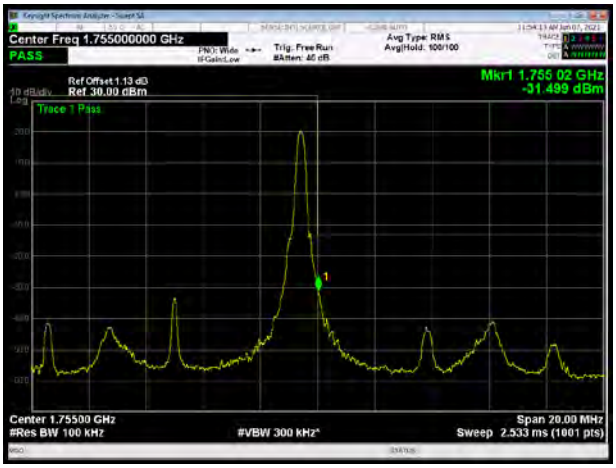
LTE Band 4 16QAM 5MHz CH-Low, 100%RB

LTE Band 4 16QAM 5MHz CH-High, 100%RB

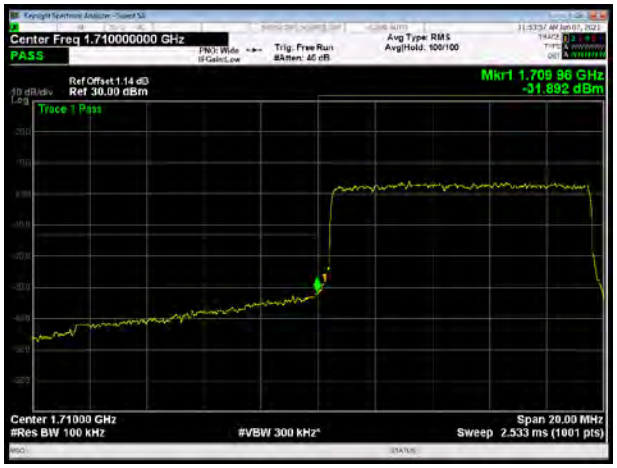
LTE Band 4 16QAM 10MHz CH-Low, 1 RB



LTE Band 4 16QAM 10MHz CH-High, 1 RB

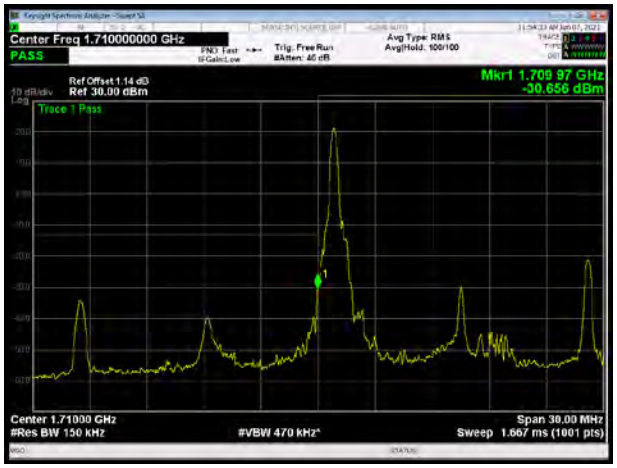


LTE Band 4 16QAM 10MHz CH-Low, 100%RB

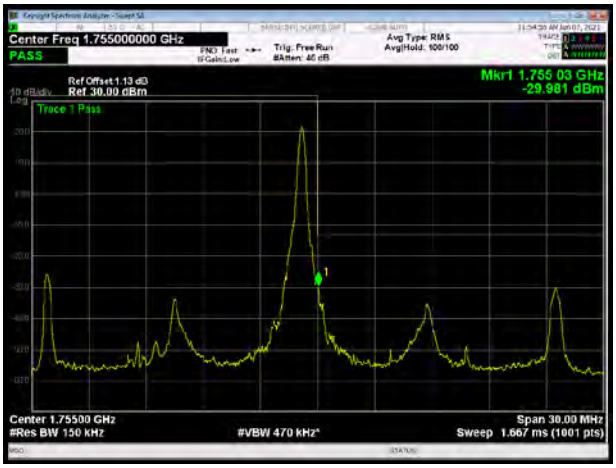


LTE Band 4 16QAM 10MHz CH-High, 100%RB

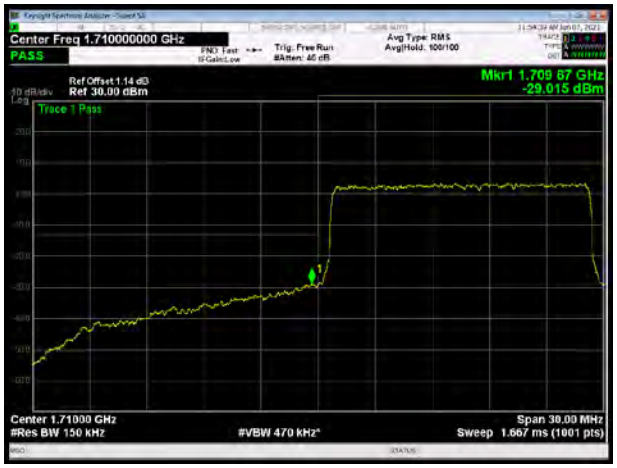
LTE Band 4 16QAM 15MHz CH-Low, 1 RB



LTE Band 4 16QAM 15MHz CH-High, 1 RB

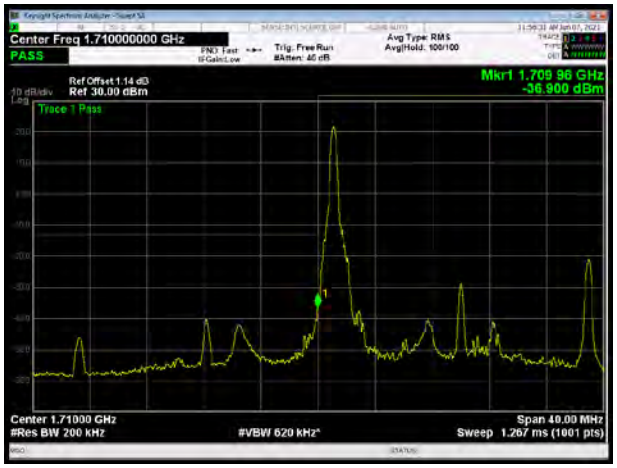


LTE Band 4 16QAM 15MHz CH-Low, 100%RB

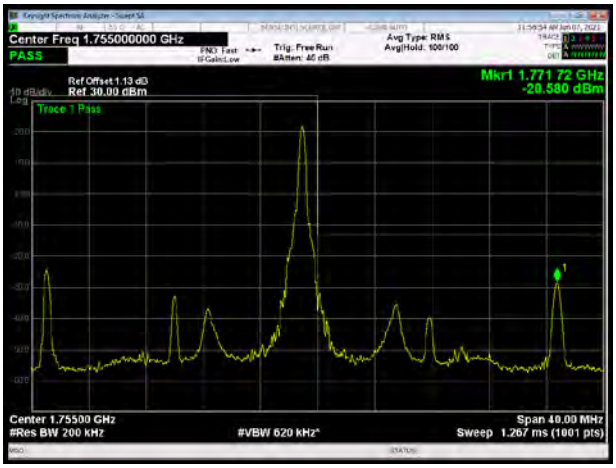


LTE Band 4 16QAM 15MHz CH-High, 100%RB

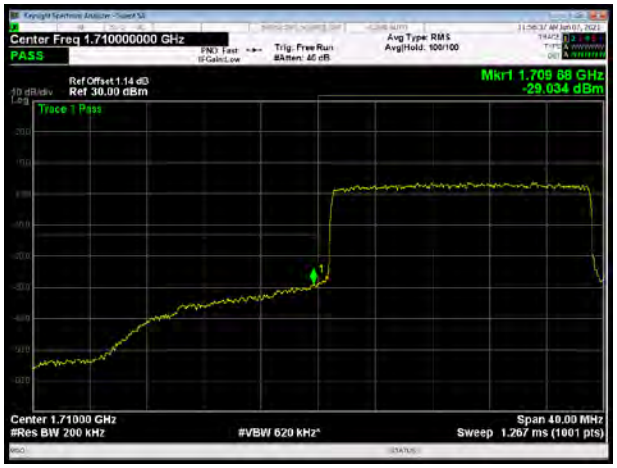
LTE Band 4 16QAM 20MHz CH-Low, 1 RB



LTE Band 4 16QAM 20MHz CH-High, 1 RB



LTE Band 4 16QAM 20MHz CH-Low, 100%RB



LTE Band 4 64QAM 20MHz CH-High, 100%RB

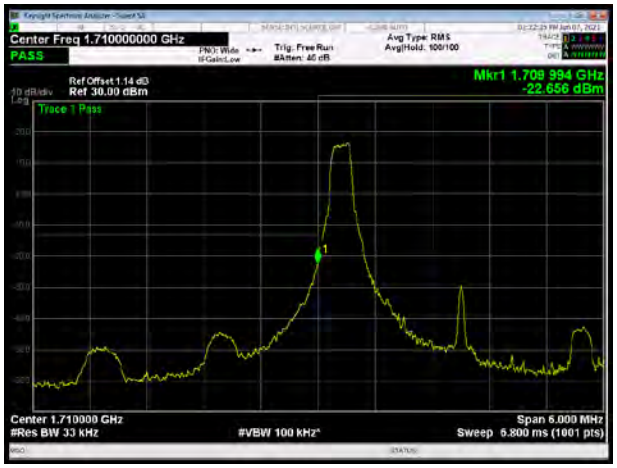
LTE Band 4 64QAM 1.4MHz CH-Low, 1 RB

LTE Band 4 64QAM 1.4MHz CH-High, 1 RB

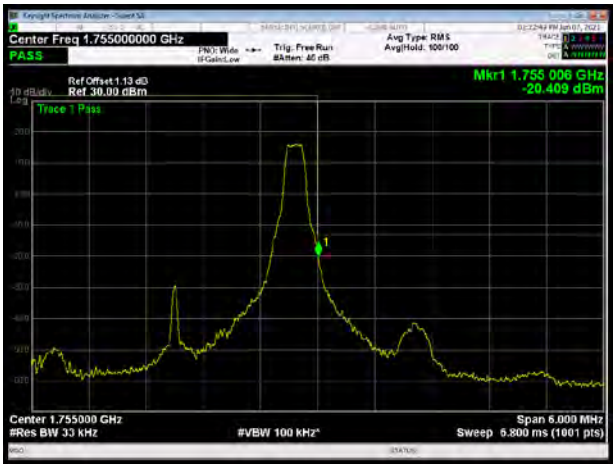
LTE Band 4 64QAM 1.4MHz CH-Low, 100%RB

LTE Band 4 64QAM 1.4MHz CH-High, 100%RB

LTE Band 4 64QAM 3MHz CH-Low, 1 RB



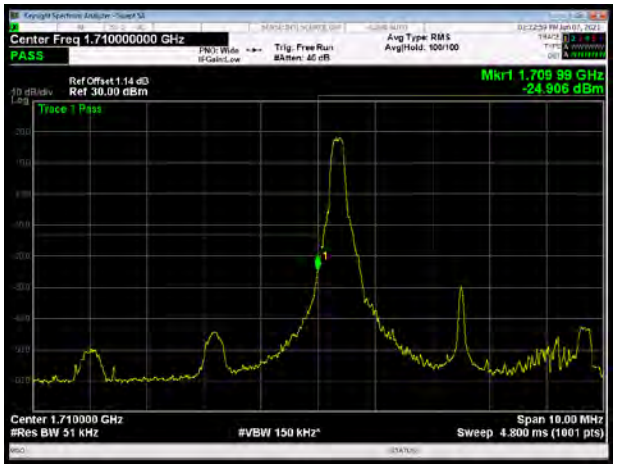
LTE Band 4 64QAM 3MHz CH-High, 1 RB



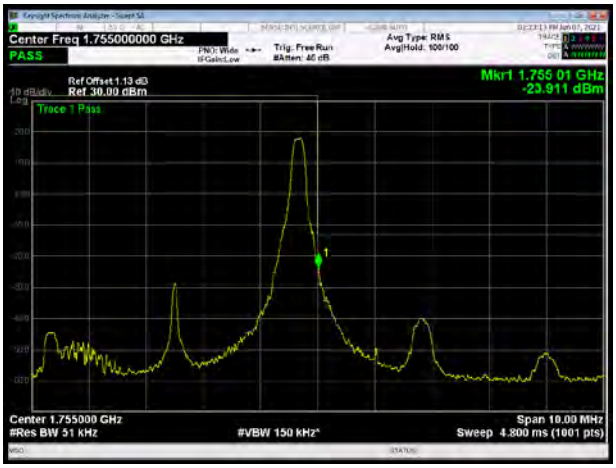
LTE Band 4 64QAM 3MHz CH-Low, 100%RB

LTE Band 4 64QAM 3MHz CH-High, 100%RB

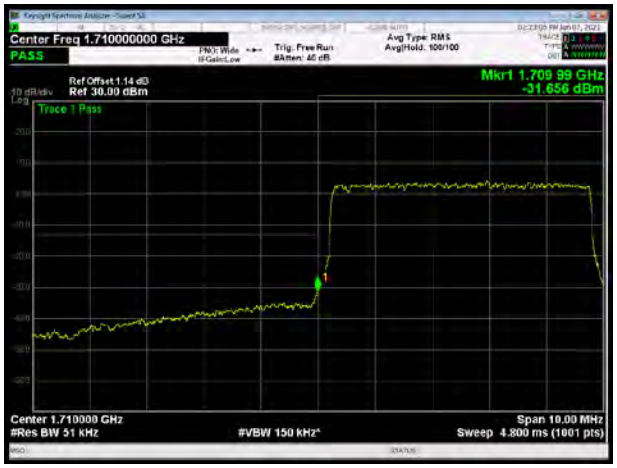
LTE Band 4 64QAM 5MHz CH-Low, 1 RB



LTE Band 4 64QAM 5MHz CH-High, 1 RB

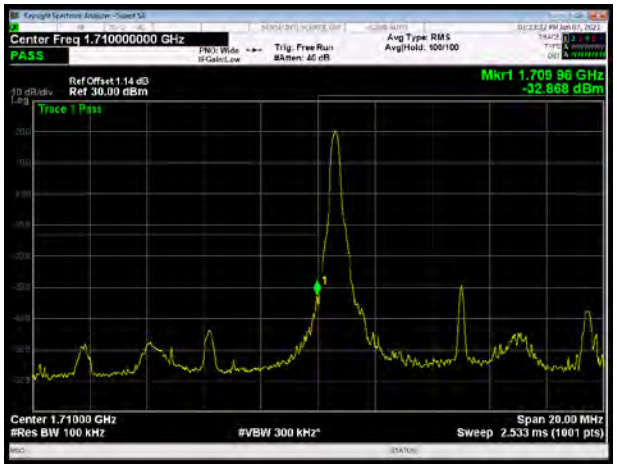


LTE Band 4 64QAM 5MHz CH-Low, 100%RB

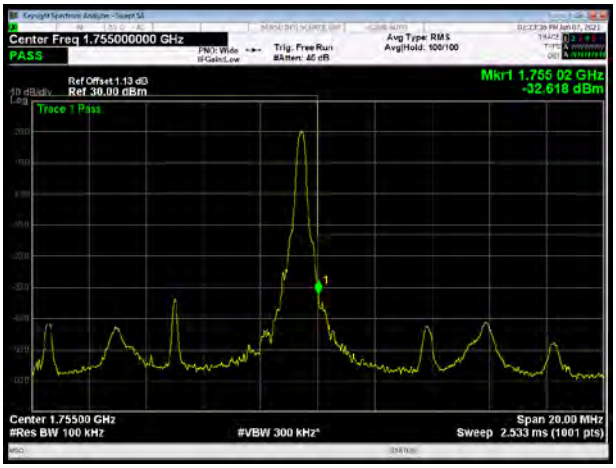


LTE Band 4 64QAM 5MHz CH-High, 100%RB

LTE Band 4 64QAM 10MHz CH-Low, 1 RB



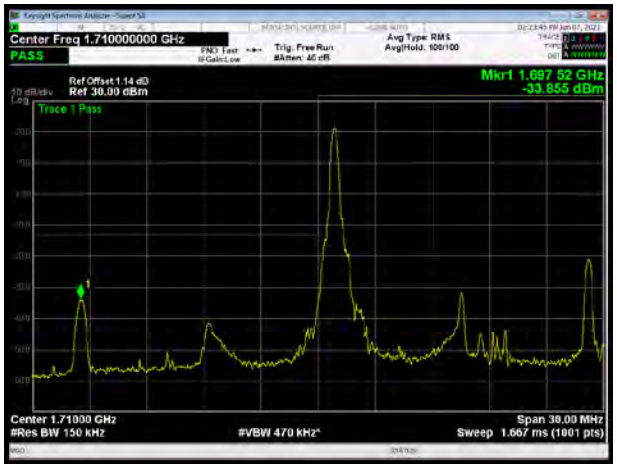
LTE Band 4 64QAM 10MHz CH-High, 1 RB



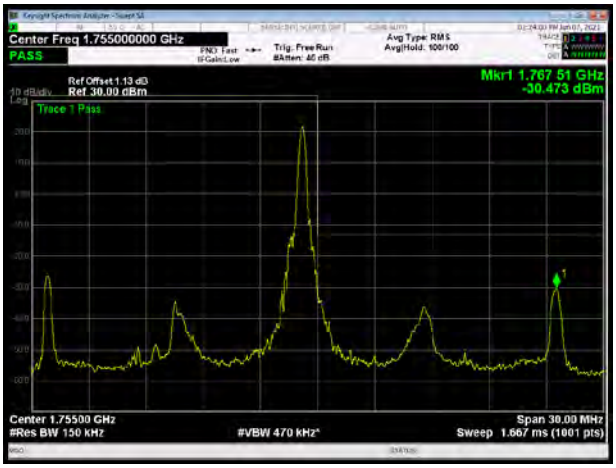
LTE Band 4 64QAM 10MHz CH-Low, 100%RB

LTE Band 4 64QAM 10MHz CH-High, 100%RB

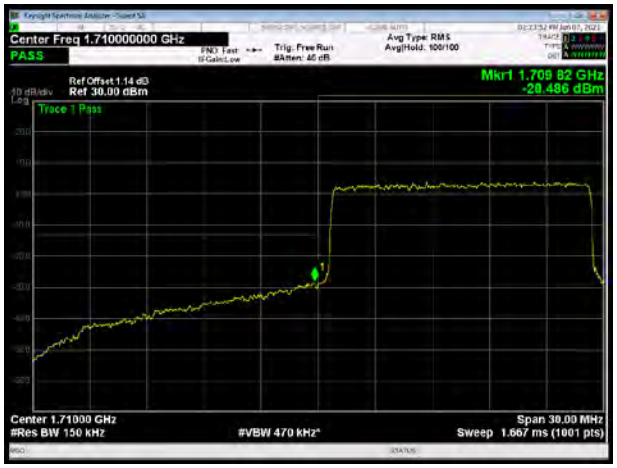
LTE Band 4 64QAM 15MHz CH-Low, 1 RB



LTE Band 4 64QAM 15MHz CH-High, 1 RB



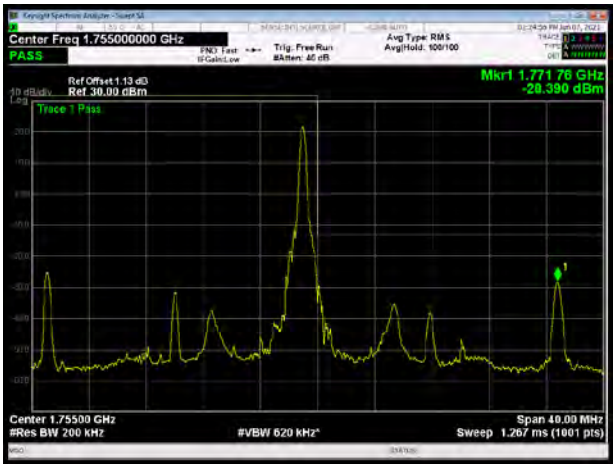
LTE Band 4 64QAM 15MHz CH-Low, 100%RB



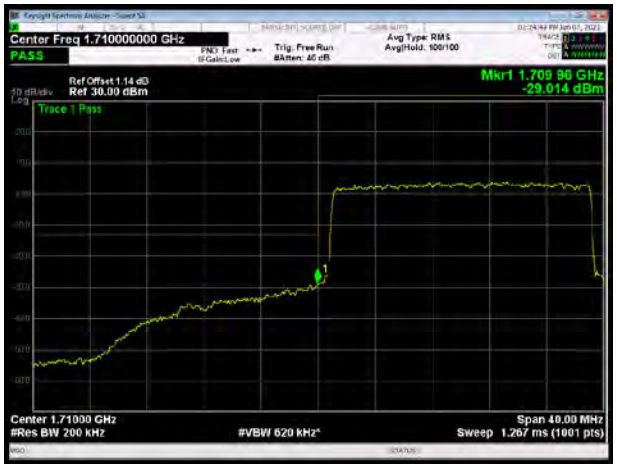
LTE Band 4 64QAM 15MHz CH-High, 100%RB

LTE Band 4 64QAM 20MHz CH-Low, 1 RB

LTE Band 4 64QAM 20MHz CH-High, 1 RB

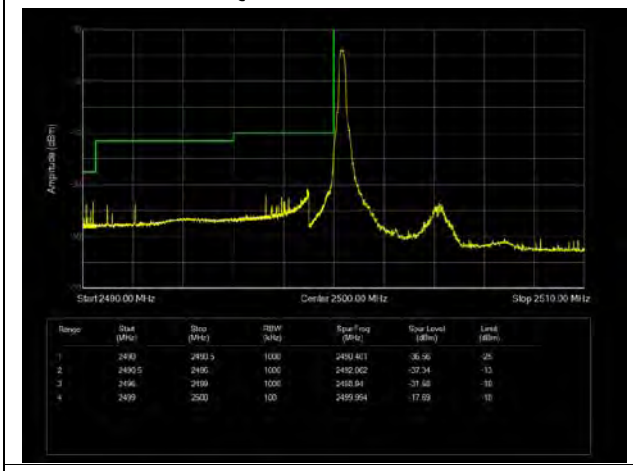


LTE Band 4 64QAM 20MHz CH-Low, 100%RB

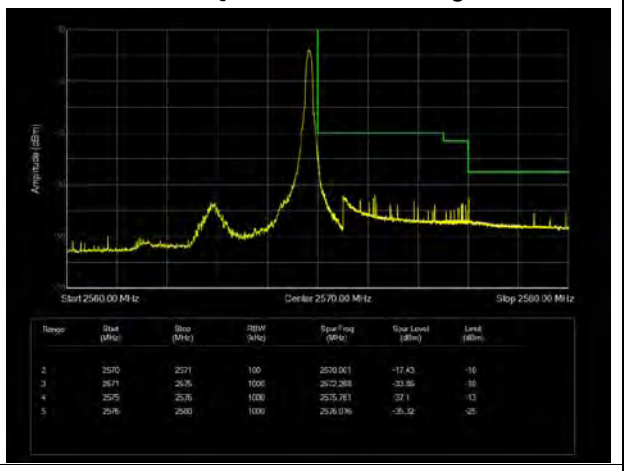


LTE Band 4 64QAM 20MHz CH-High, 100%RB

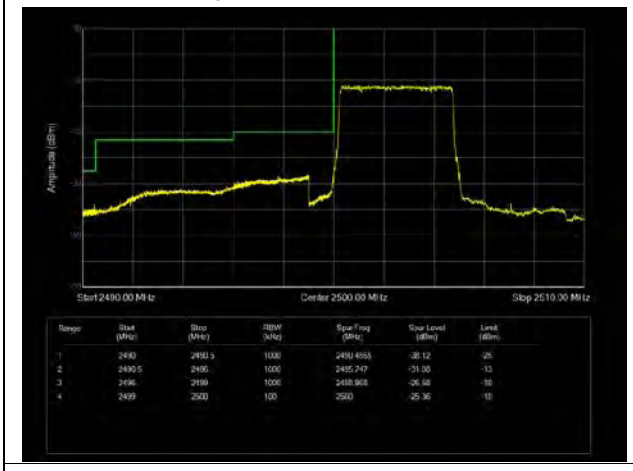
LTE Band 7 QPSK 5MHz CH-Low, 1 RB



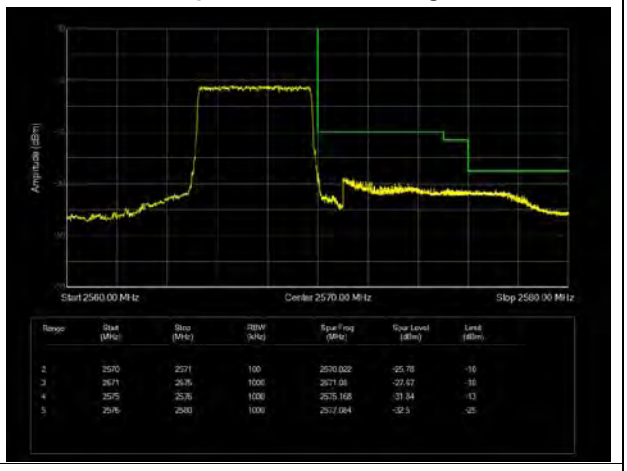
LTE Band 7 QPSK 5MHz CH-High, 1 RB



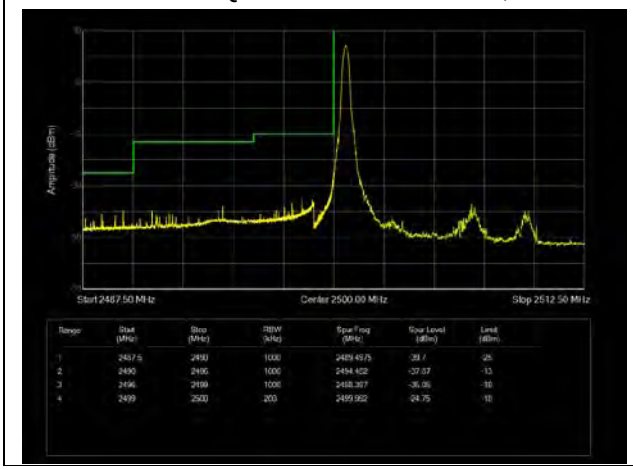
LTE Band 7 QPSK 5MHz CH-Low, 100%RB



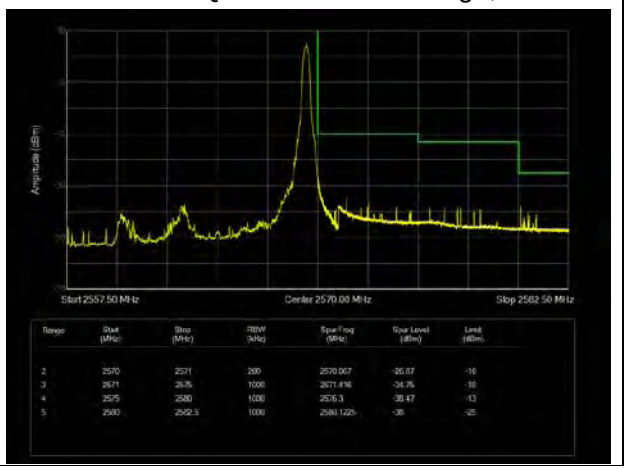
LTE Band 7 QPSK 5MHz CH-High, 100%RB



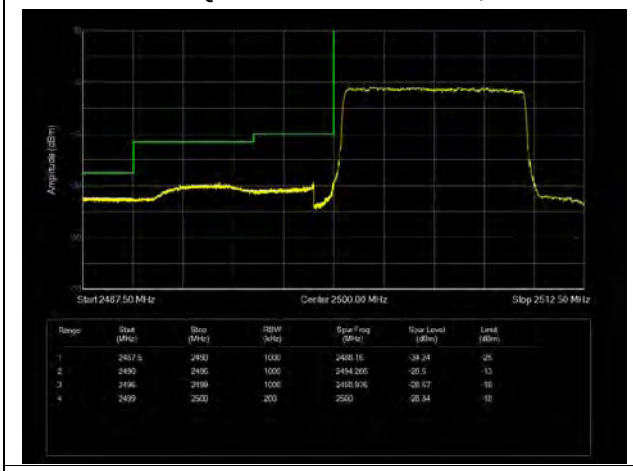
LTE Band 7 QPSK 10MHz CH-Low, 1 RB



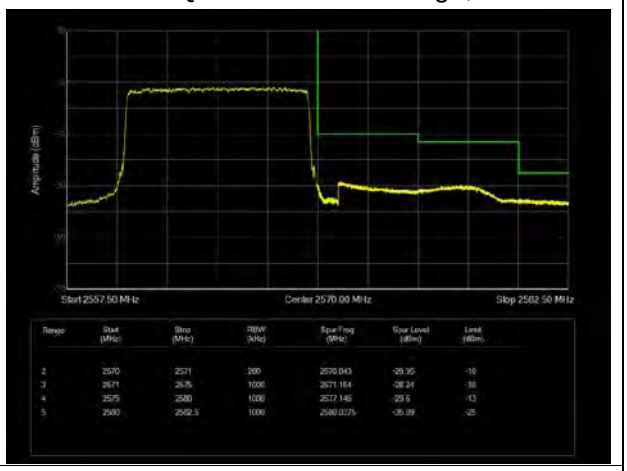
LTE Band 7 QPSK 10MHz CH-High, 1 RB



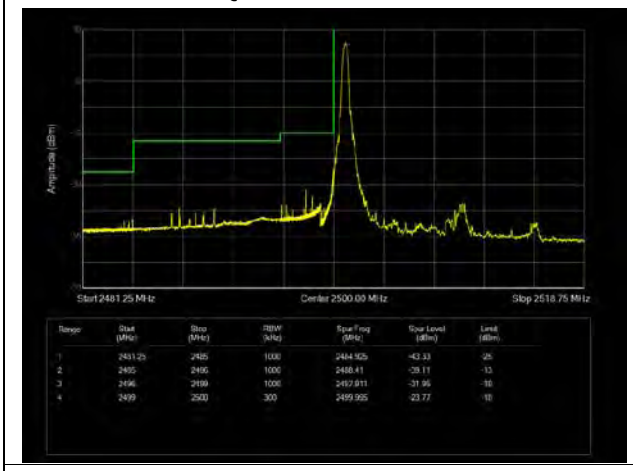
LTE Band 7 QPSK 10MHz CH-Low, 100%RB



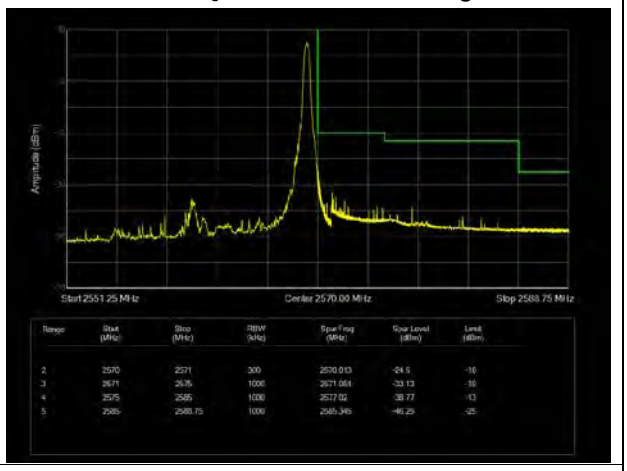
LTE Band 7 QPSK 10MHz CH-High, 100%RB



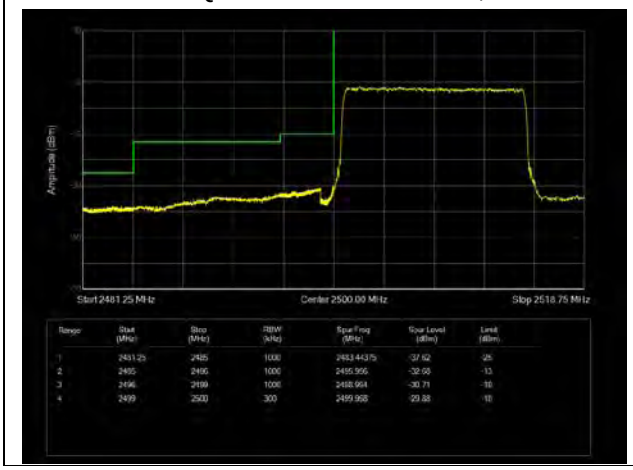
LTE Band 7 QPSK 15MHz CH-Low, 1 RB



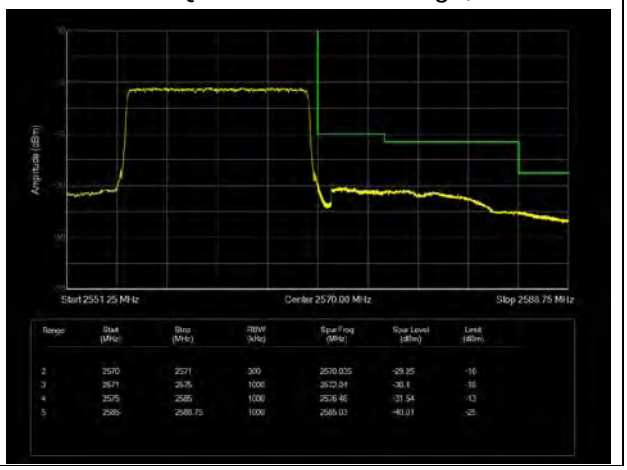
LTE Band 7 QPSK 15MHz CH-High, 1 RB



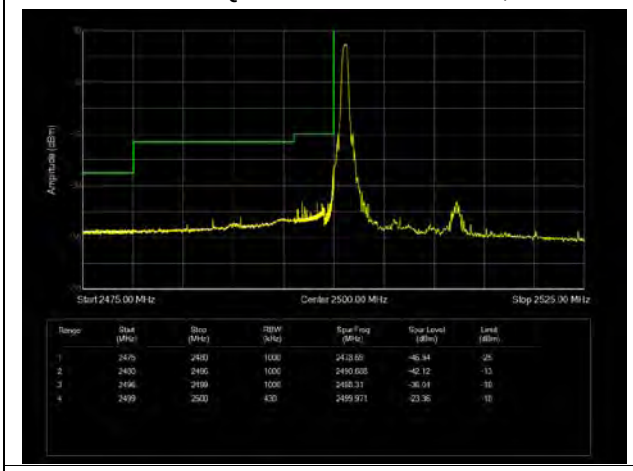
LTE Band 7 QPSK 15MHz CH-Low, 100%RB



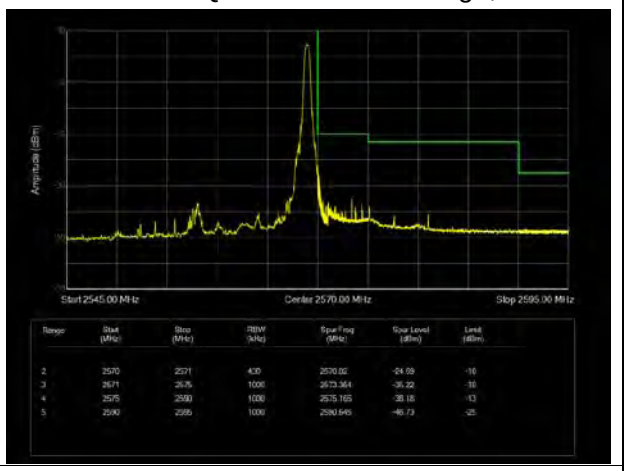
LTE Band 7 QPSK 15MHz CH-High, 100%RB



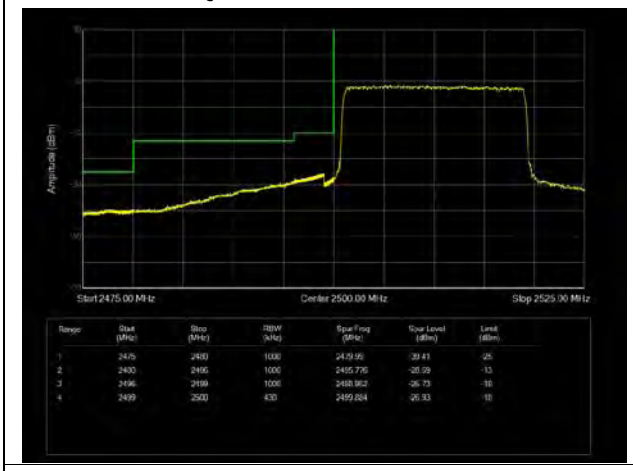
LTE Band 7 QPSK 20MHz CH-Low, 1 RB



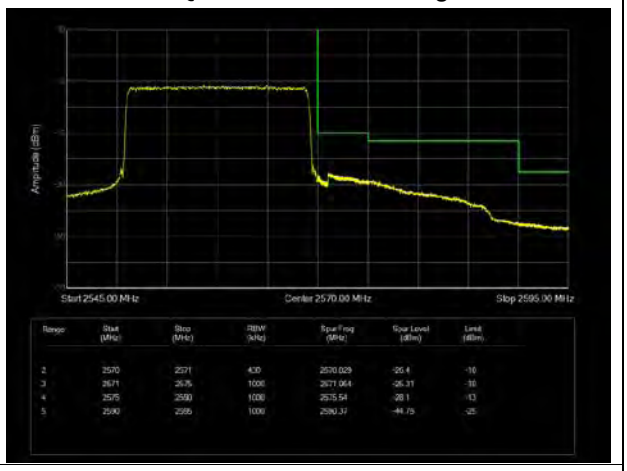
LTE Band 7 QPSK 20MHz CH-High, 1 RB



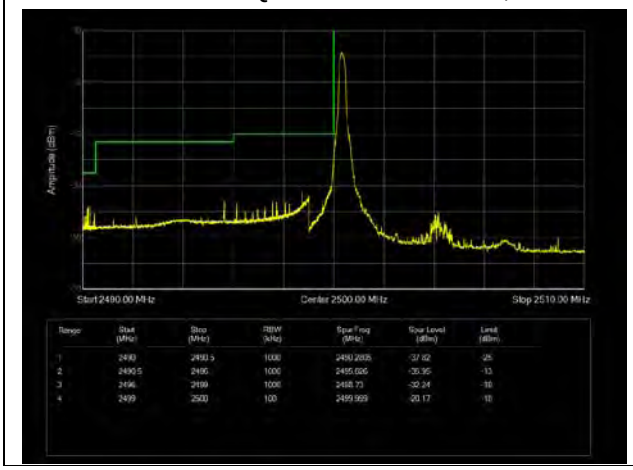
LTE Band 7 QPSK 20MHz CH-Low, 100%RB



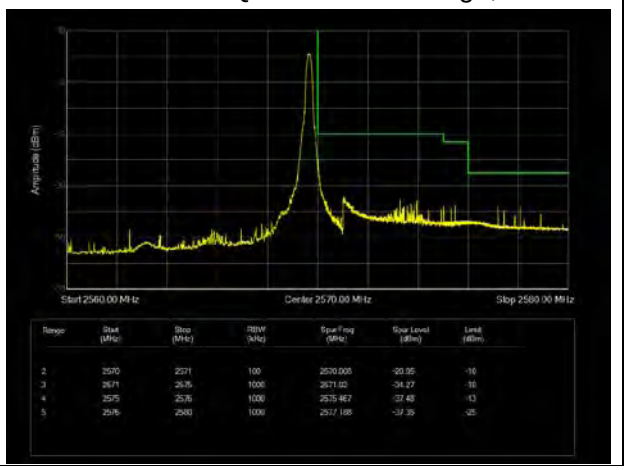
LTE Band 7 QPSK 20MHz CH-High, 100%RB



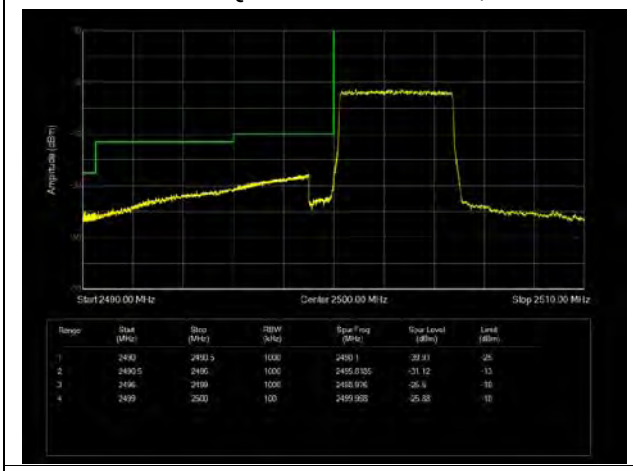
LTE Band 7 16QAM 5MHz CH-Low, 1 RB



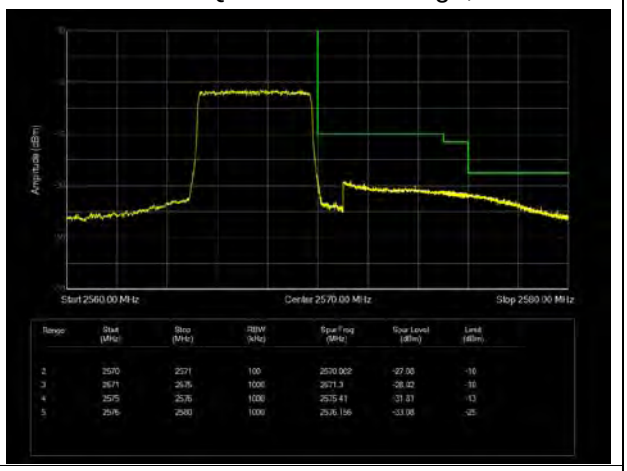
LTE Band 7 16QAM 5MHz CH-High, 1 RB



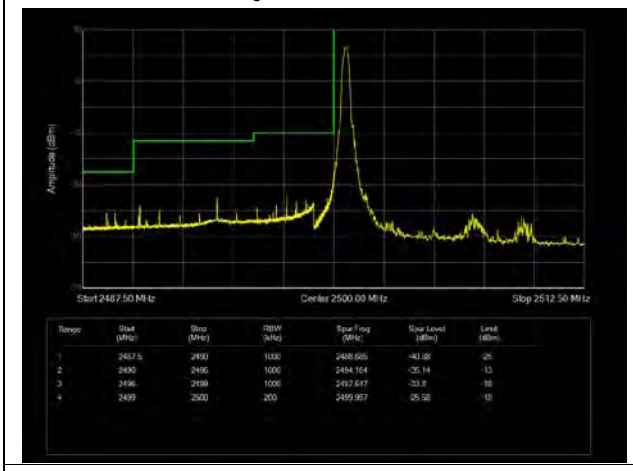
LTE Band 7 16QAM 5MHz CH-Low, 100%RB



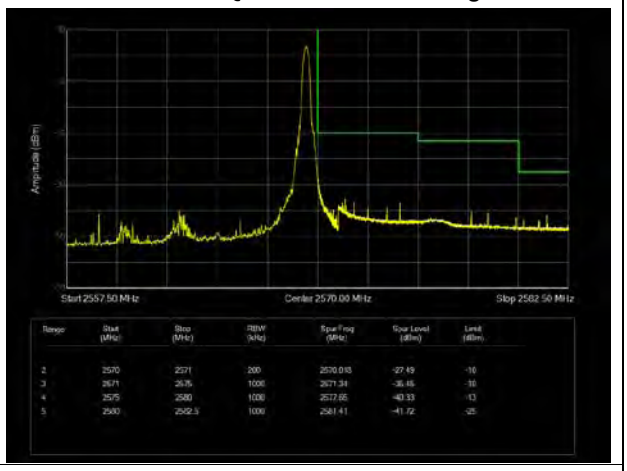
LTE Band 7 16QAM 5MHz CH-High, 100%RB



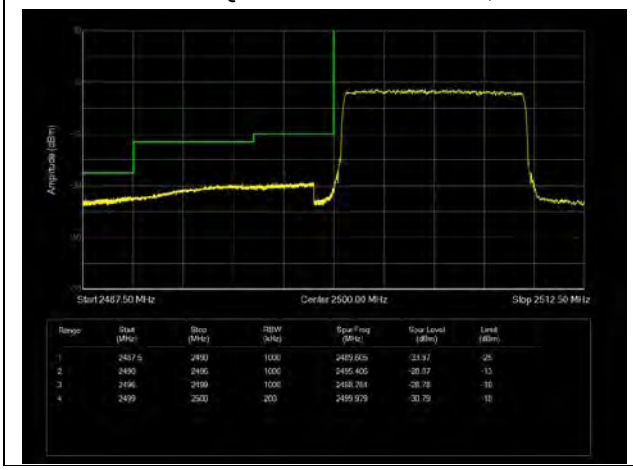
LTE Band 7 16QAM 10MHz CH-Low, 1 RB



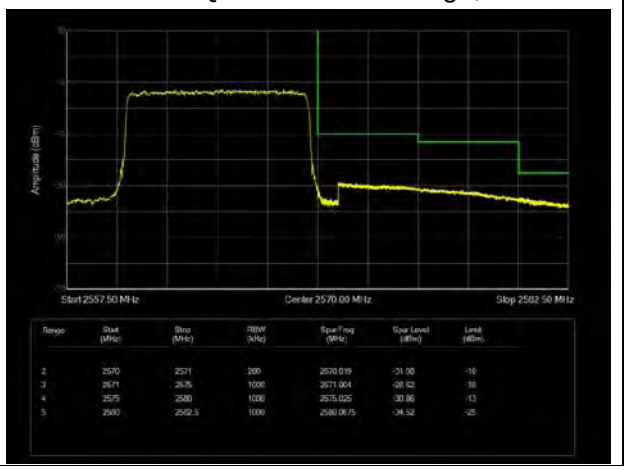
LTE Band 7 16QAM 10MHz CH-High, 1 RB



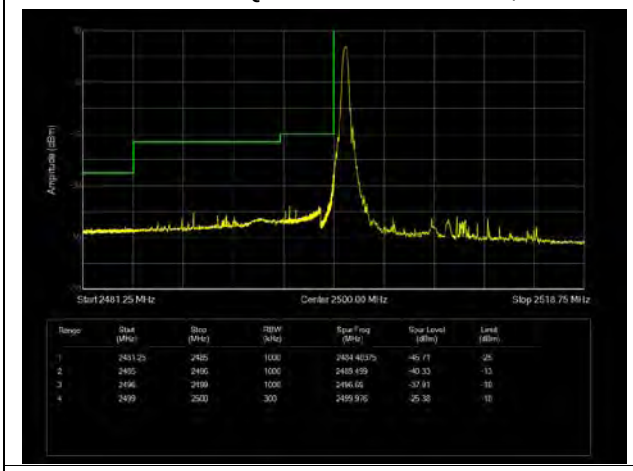
LTE Band 7 16QAM 10MHz CH-Low, 100%RB



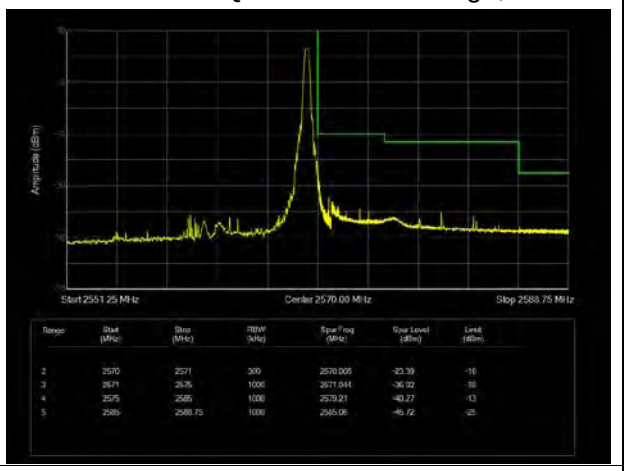
LTE Band 7 16QAM 10MHz CH-High, 100%RB



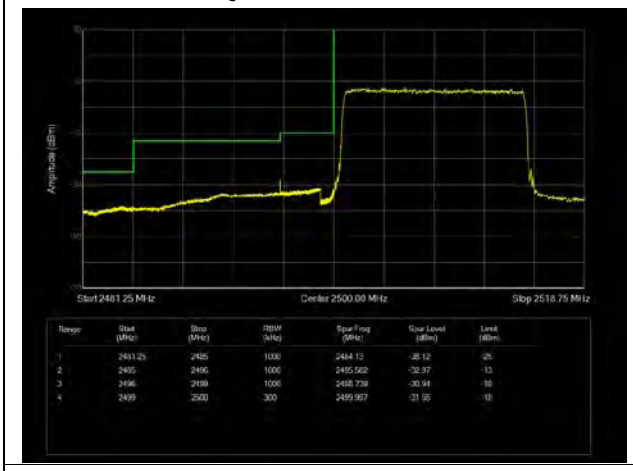
LTE Band 7 16QAM 15MHz CH-Low, 1 RB



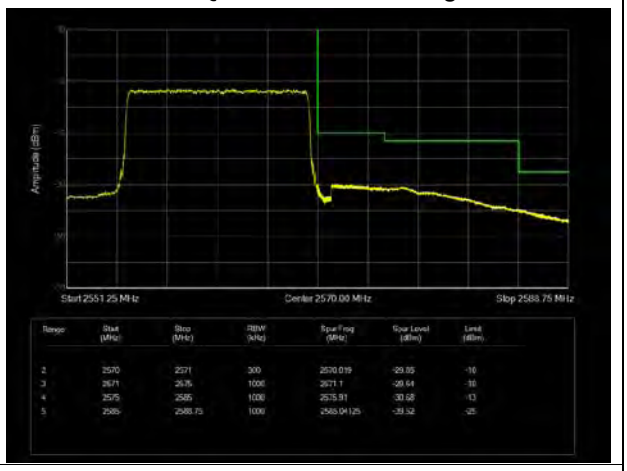
LTE Band 7 16QAM 15MHz CH-High, 1 RB



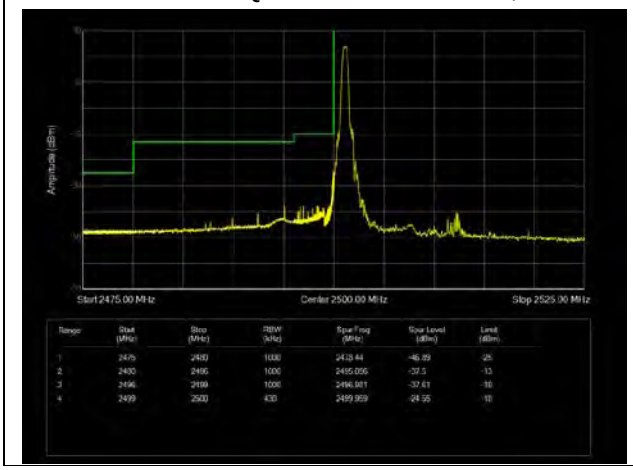
LTE Band 7 16QAM 15MHz CH-Low, 100%RB



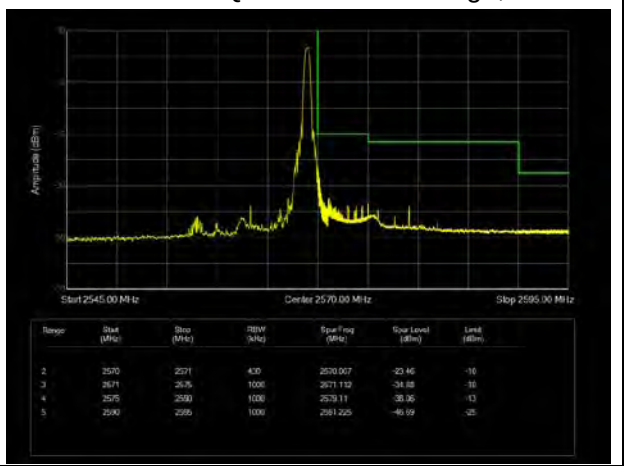
LTE Band 7 16QAM 15MHz CH-High, 100%RB

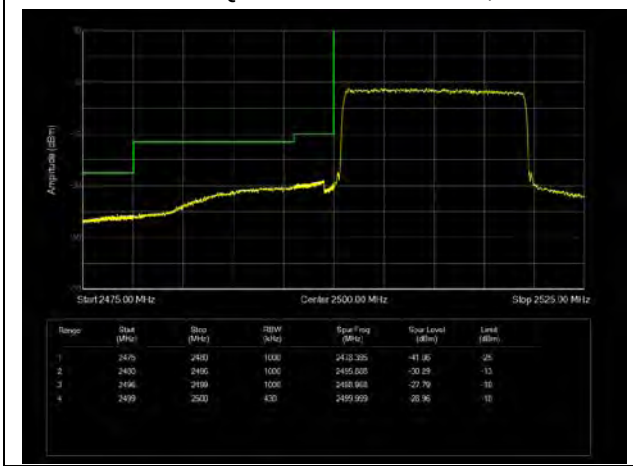
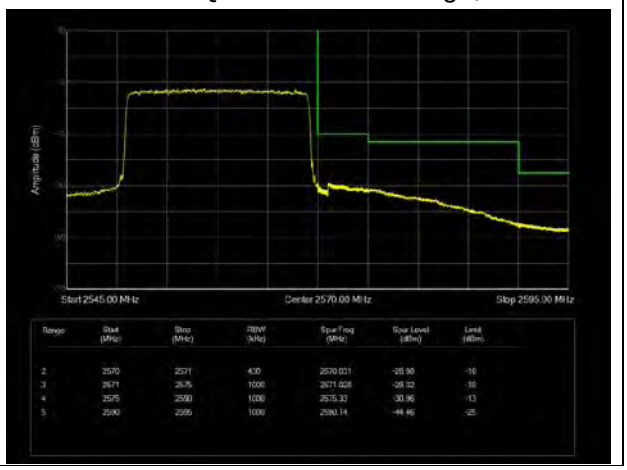


LTE Band 7 16QAM 20MHz CH-Low, 1 RB

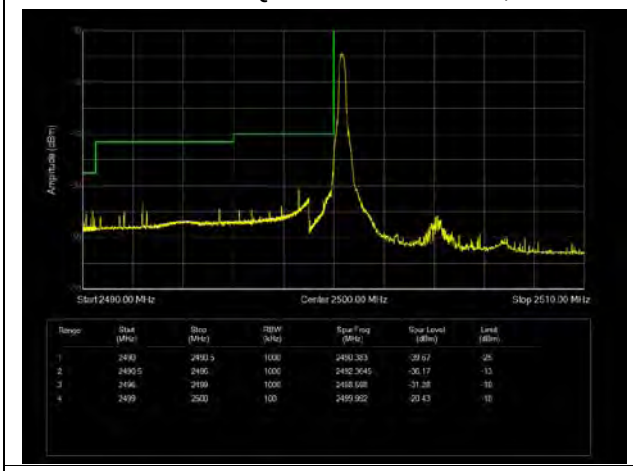


LTE Band 7 16QAM 20MHz CH-High, 1 RB

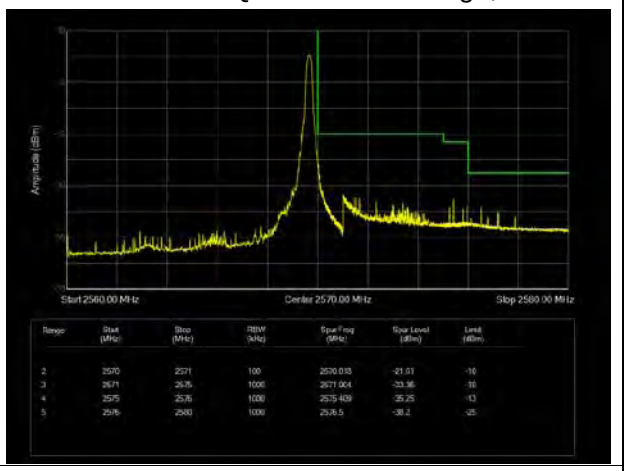


LTE Band 7 16QAM 20MHz CH-Low, 100%RB	LTE Band 7 16QAM 20MHz CH-High, 100%RB
	

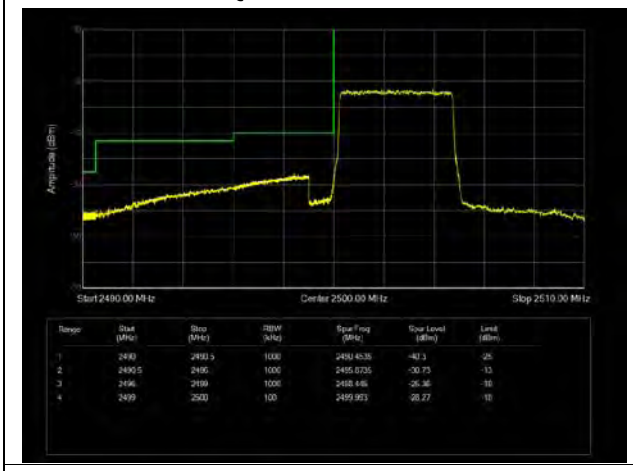
LTE Band 7 64QAM 5MHz CH-Low, 1 RB



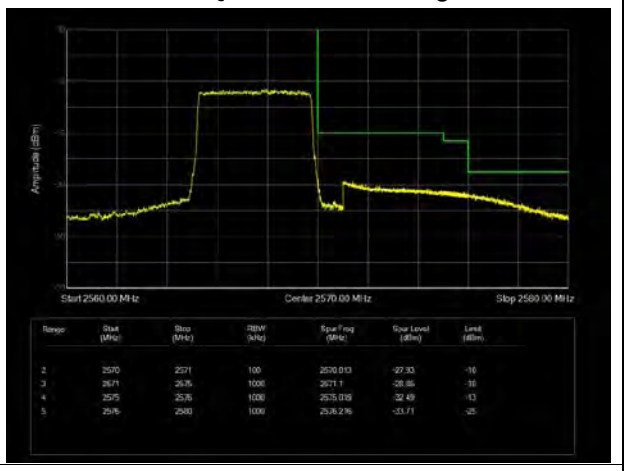
LTE Band 7 64QAM 5MHz CH-High, 1 RB



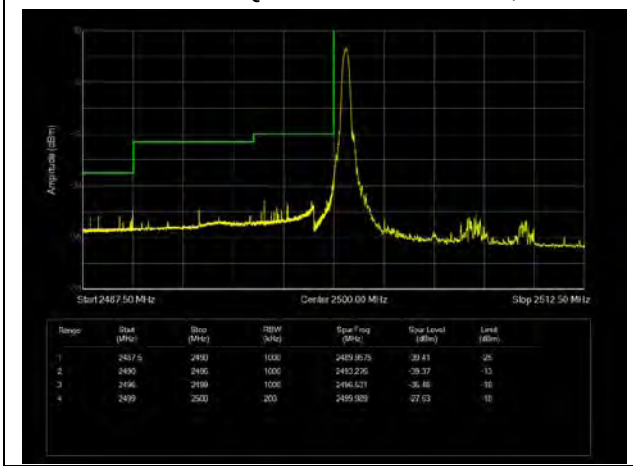
LTE Band 7 64QAM 5MHz CH-Low, 100%RB



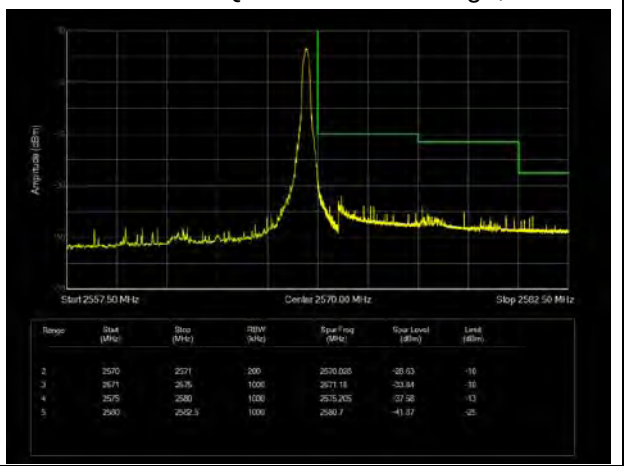
LTE Band 7 64QAM 5MHz CH-High, 100%RB



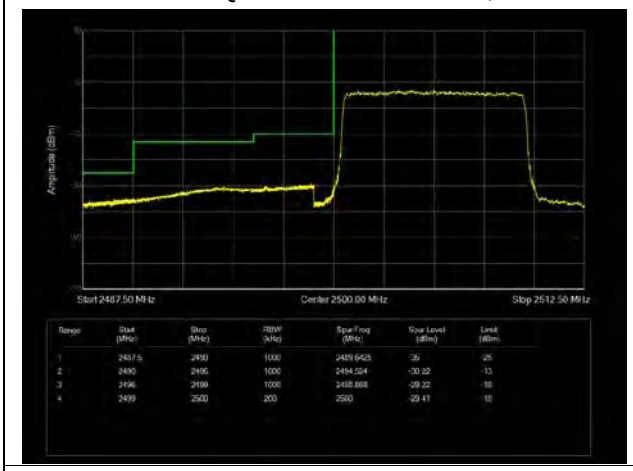
LTE Band 7 64QAM 10MHz CH-Low, 1 RB



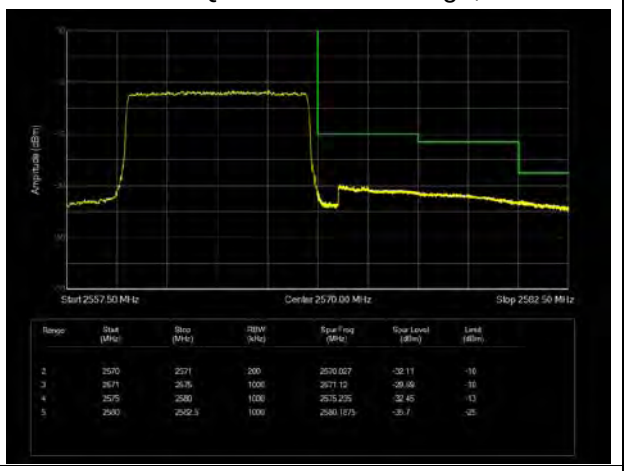
LTE Band 7 64QAM 10MHz CH-High, 1 RB



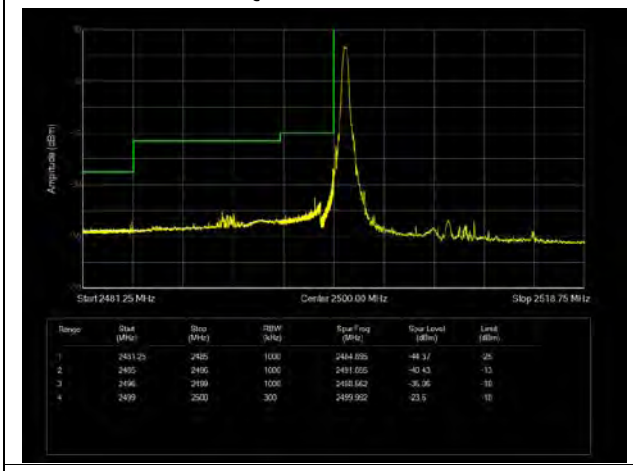
LTE Band 7 64QAM 10MHz CH-Low, 100%RB



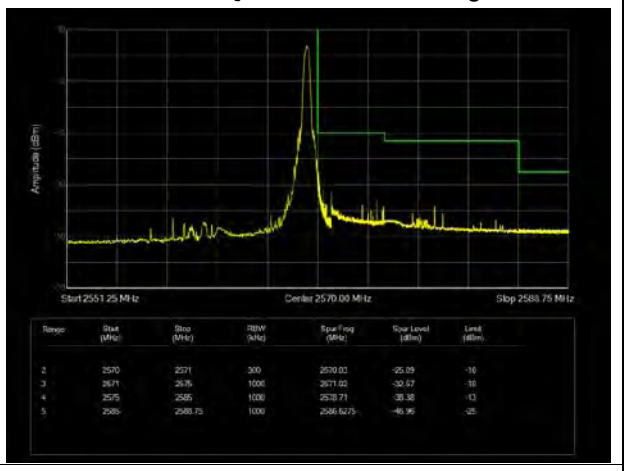
LTE Band 7 64QAM 10MHz CH-High, 100%RB



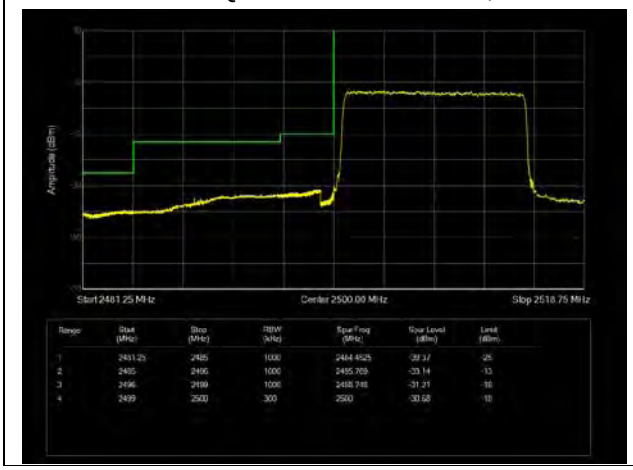
LTE Band 7 64QAM 15MHz CH-Low, 1 RB



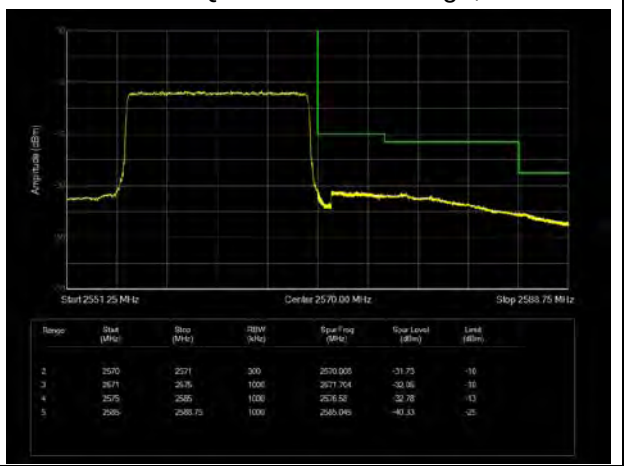
LTE Band 7 64QAM 15MHz CH-High, 1 RB



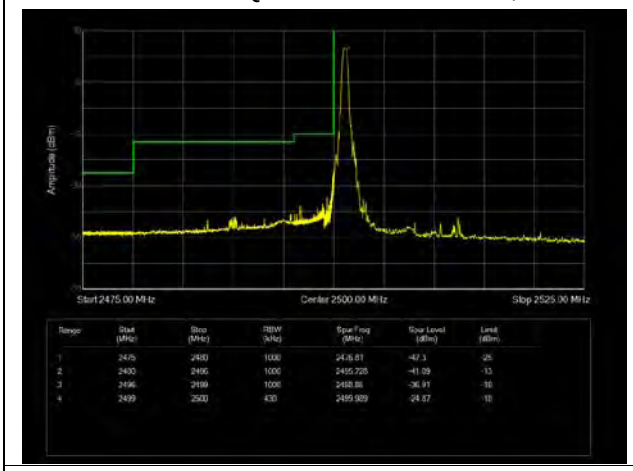
LTE Band 7 64QAM 15MHz CH-Low, 100%RB



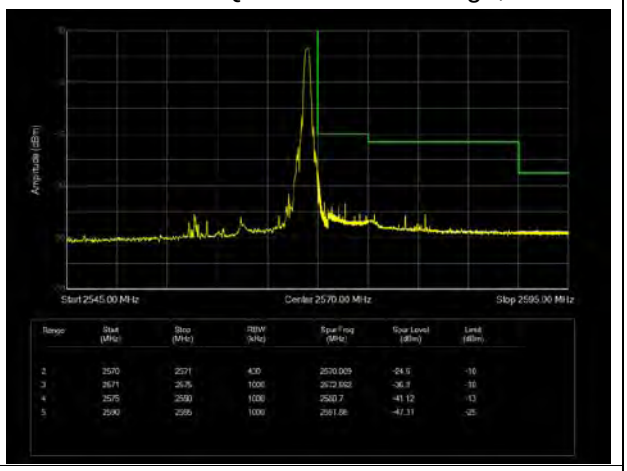
LTE Band 7 64QAM 15MHz CH-High, 100%RB



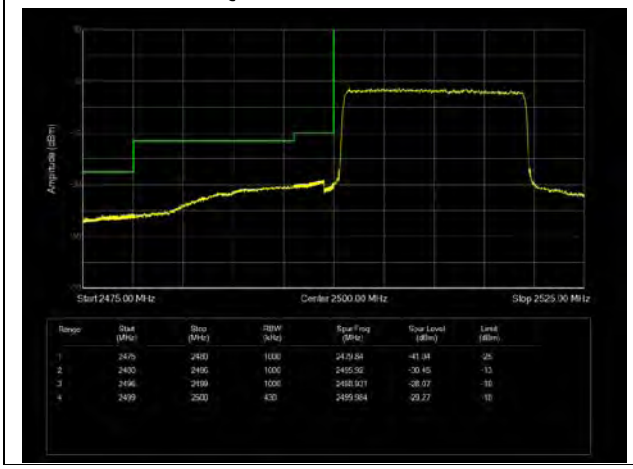
LTE Band 7 64QAM 20MHz CH-Low, 1 RB



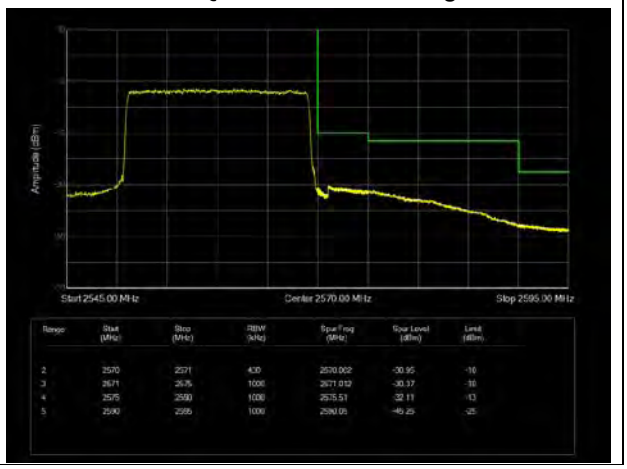
LTE Band 7 64QAM 20MHz CH-High, 1 RB



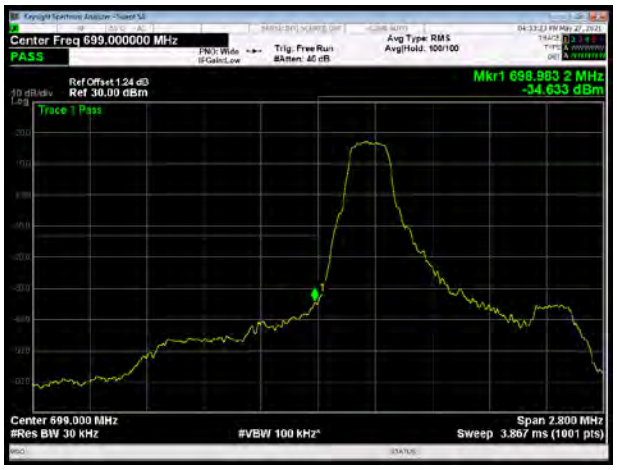
LTE Band 7 64QAM 20MHz CH-Low, 100%RB



LTE Band 7 64QAM 20MHz CH-High, 100%RB



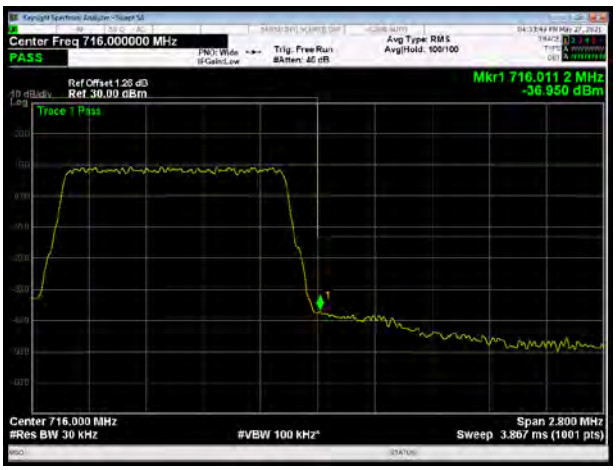
LTE Band 12 QPSK 1.4MHz CH-Low, 1 RB



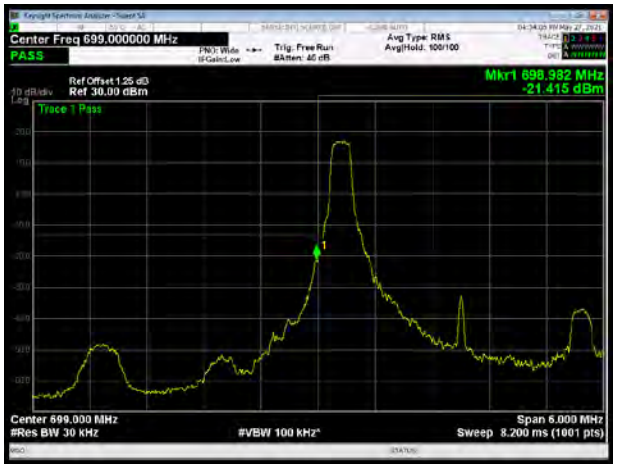
LTE Band 12 QPSK 1.4MHz CH-High, 1 RB

LTE Band 12 QPSK 1.4MHz CH-Low, 100%RB

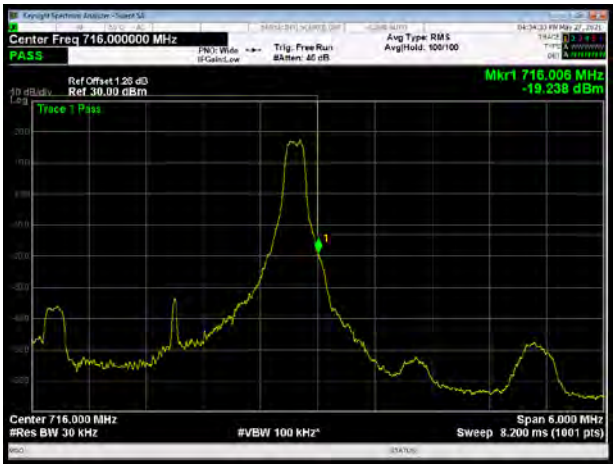
LTE Band 12 QPSK 1.4MHz CH-High, 100%RB



LTE Band 12 QPSK 3MHz CH-Low, 1 RB



LTE Band 12 QPSK 3MHz CH-High, 1 RB

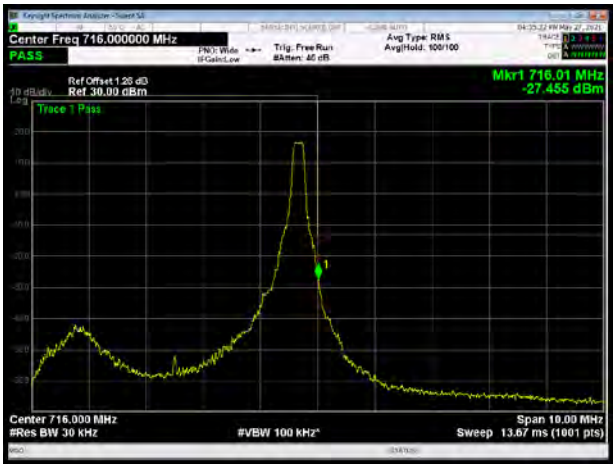


LTE Band 12 QPSK 3MHz CH-Low, 100%RB

LTE Band 12 QPSK 3MHz CH-High, 100%RB

LTE Band 12 QPSK 5MHz CH-Low, 1 RB

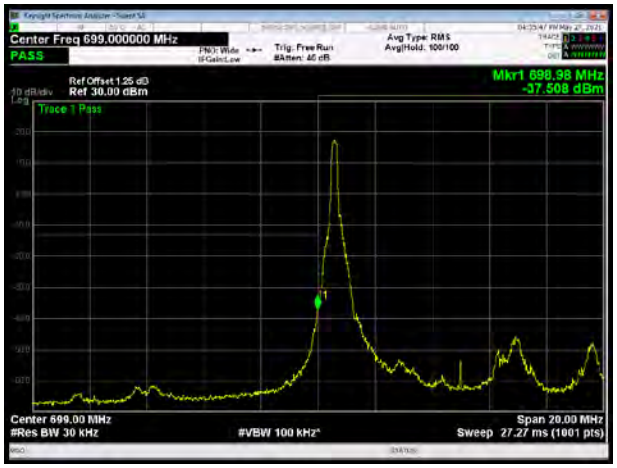
LTE Band 12 QPSK 5MHz CH-High, 1 RB



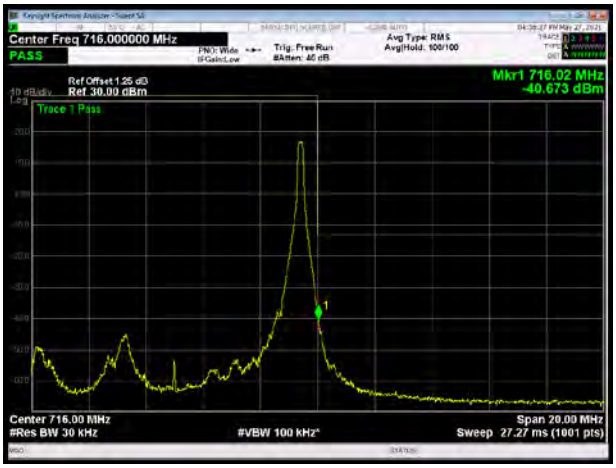
LTE Band 12 QPSK 5MHz CH-Low, 100%RB

LTE Band 12 QPSK 5MHz CH-High, 100%RB

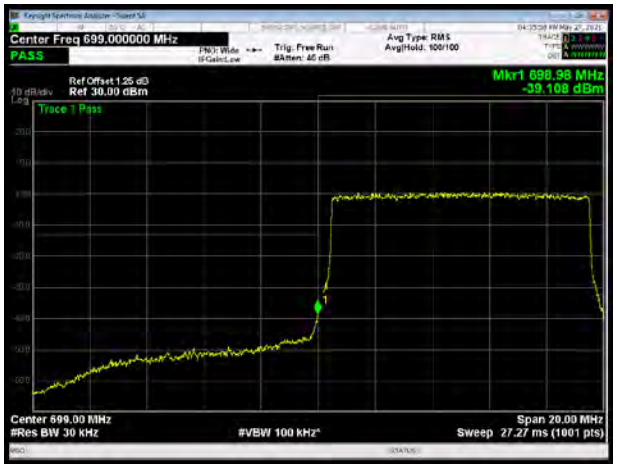
LTE Band 12 QPSK 10MHz CH-Low, 1 RB



LTE Band 12 QPSK 10MHz CH-High, 1 RB



LTE Band 12 QPSK 10MHz CH-Low, 100%RB



LTE Band 12 QPSK 10MHz CH-High, 100%RB

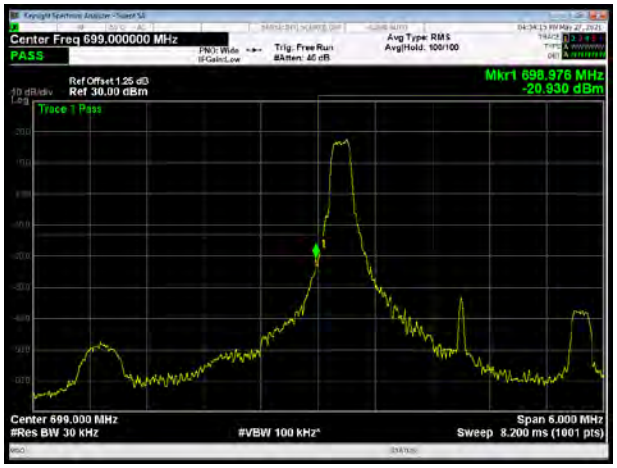
LTE Band 12 16QAM 1.4MHz CH-Low, 1 RB

LTE Band 12 16QAM 1.4MHz CH-High, 1 RB

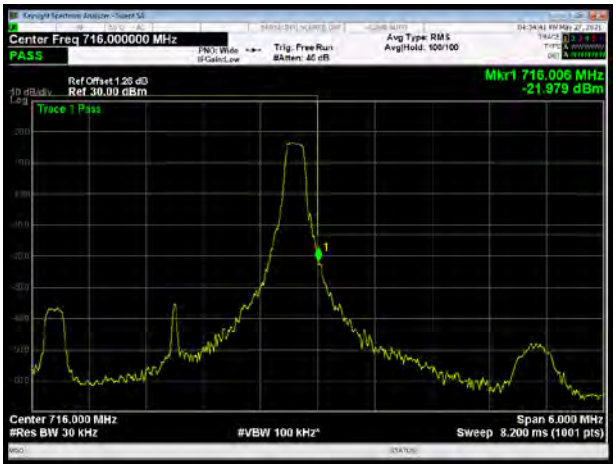
LTE Band 12 16QAM 1.4MHz CH-Low, 100%RB

LTE Band 12 16QAM 1.4MHz CH-High, 100%RB

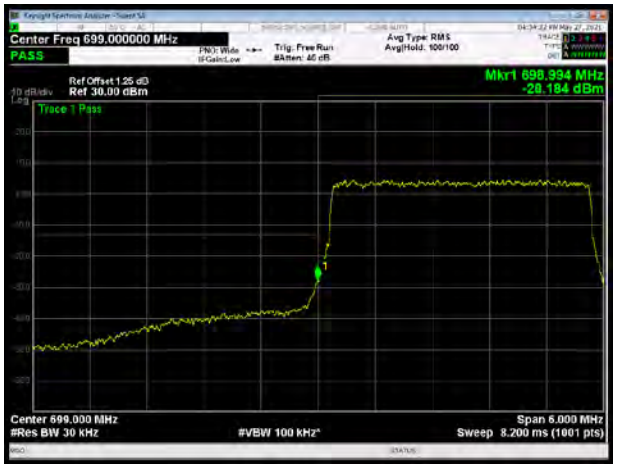
LTE Band 12 16QAM 3MHz CH-Low, 1 RB



LTE Band 12 16QAM 3MHz CH-High, 1 RB

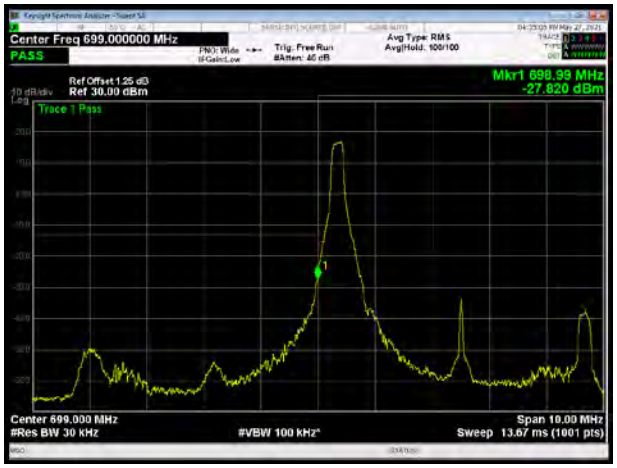


LTE Band 12 16QAM 3MHz CH-Low, 100%RB

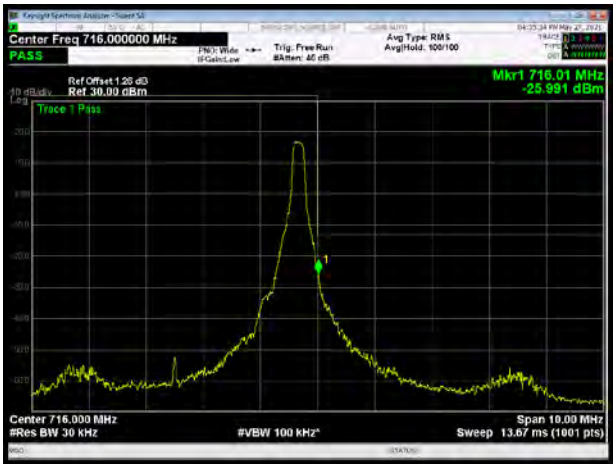


LTE Band 12 16QAM 3MHz CH-High, 100%RB

LTE Band 12 16QAM 5MHz CH-Low, 1 RB

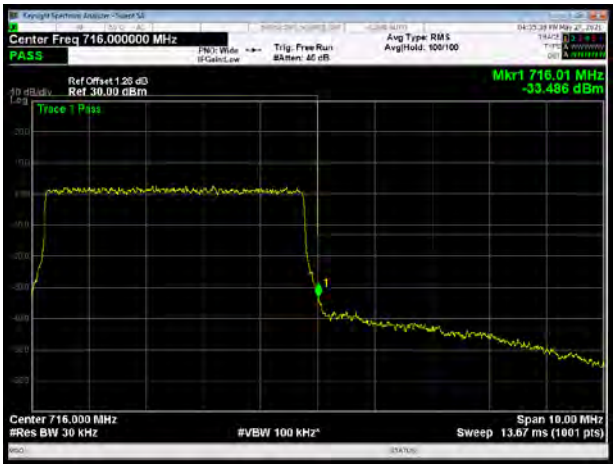


LTE Band 12 16QAM 5MHz CH-High, 1 RB

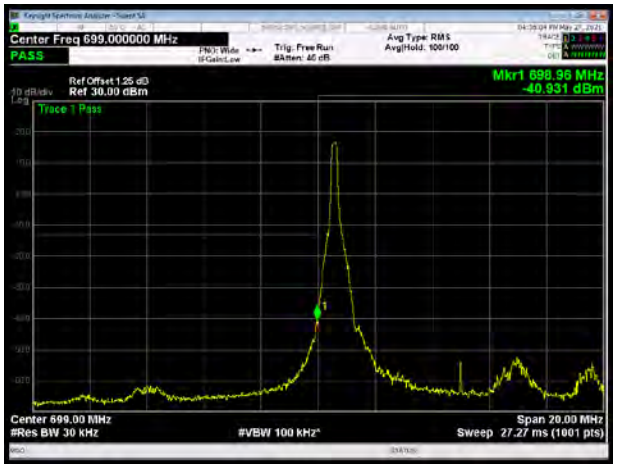


LTE Band 12 16QAM 5MHz CH-Low, 100%RB

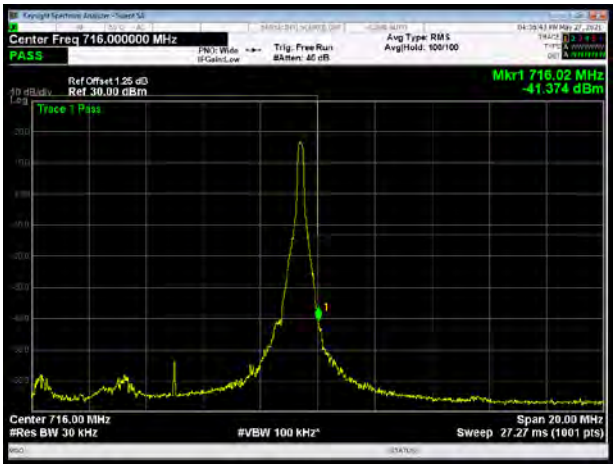
LTE Band 12 16QAM 5MHz CH-High, 100%RB

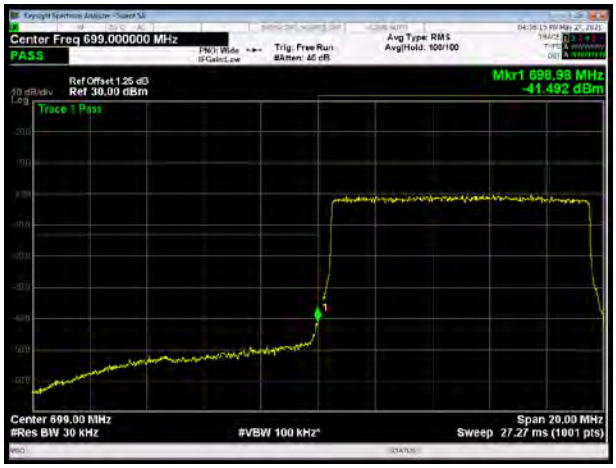


LTE Band 12 16QAM 10MHz CH-Low, 1 RB



LTE Band 12 16QAM 10MHz CH-High, 1 RB



LTE Band 12 16QAM 10MHz CH-Low, 100%RB	LTE Band 12 16QAM 10MHz CH-High, 100%RB
	

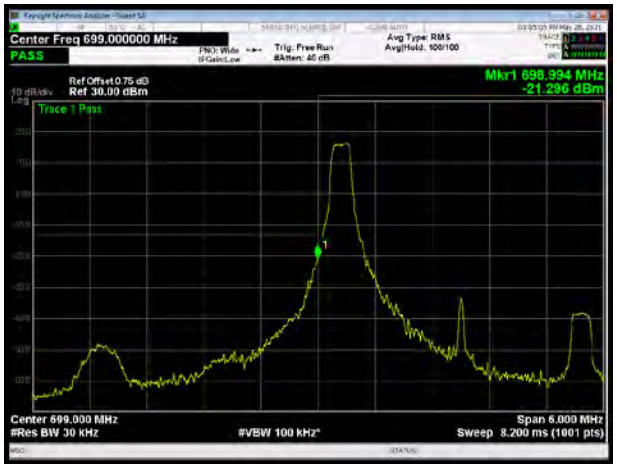
LTE Band 12 64QAM 1.4MHz CH-Low, 1 RB

LTE Band 12 64QAM 1.4MHz CH-High, 1 RB

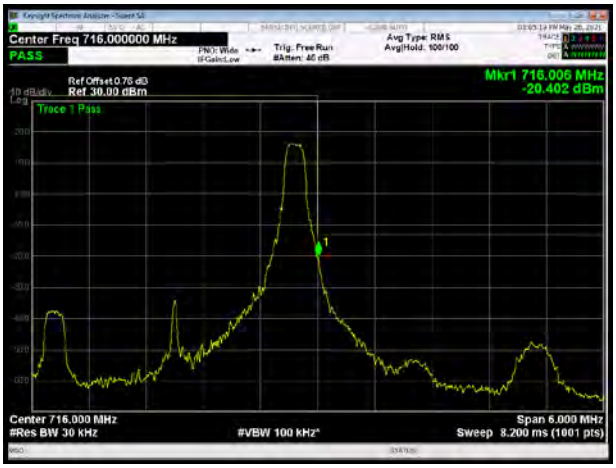
LTE Band 12 64QAM 1.4MHz CH-Low, 100%RB

LTE Band 12 64QAM 1.4MHz CH-High, 100%RB

LTE Band 12 64QAM 3MHz CH-Low, 1 RB



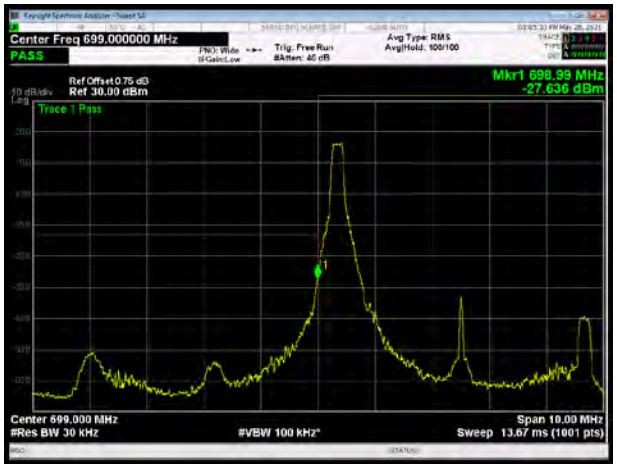
LTE Band 12 64QAM 3MHz CH-High, 1 RB



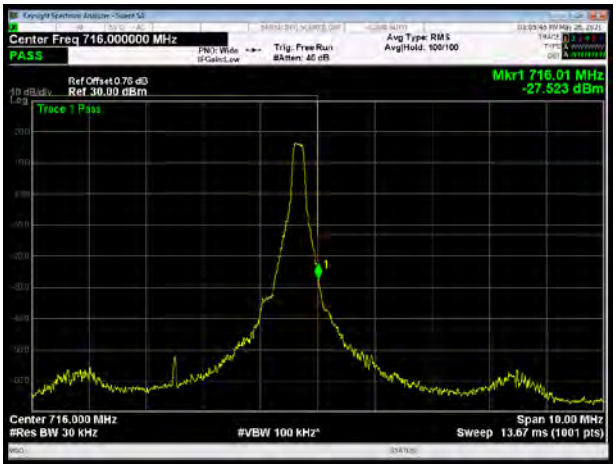
LTE Band 12 64QAM 3MHz CH-Low, 100%RB

LTE Band 12 64QAM 3MHz CH-High, 100%RB

LTE Band 12 64QAM 5MHz CH-Low, 1 RB



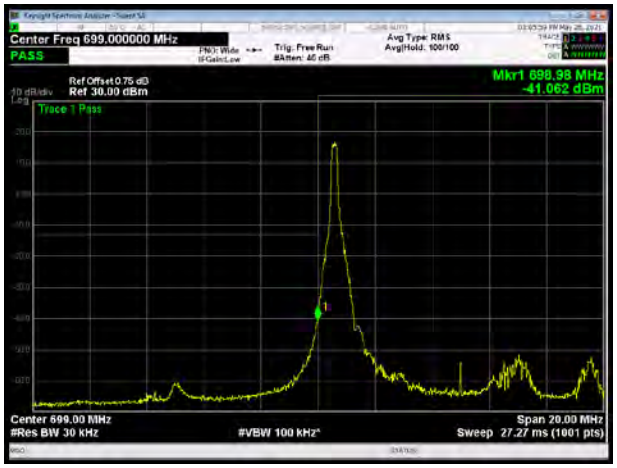
LTE Band 12 64QAM 5MHz CH-High, 1 RB



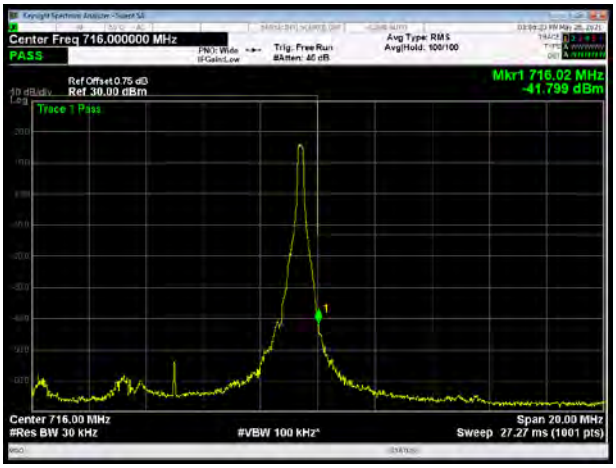
LTE Band 12 64QAM 5MHz CH-Low, 100%RB

LTE Band 12 64QAM 5MHz CH-High, 100%RB

LTE Band 12 64QAM 10MHz CH-Low, 1 RB



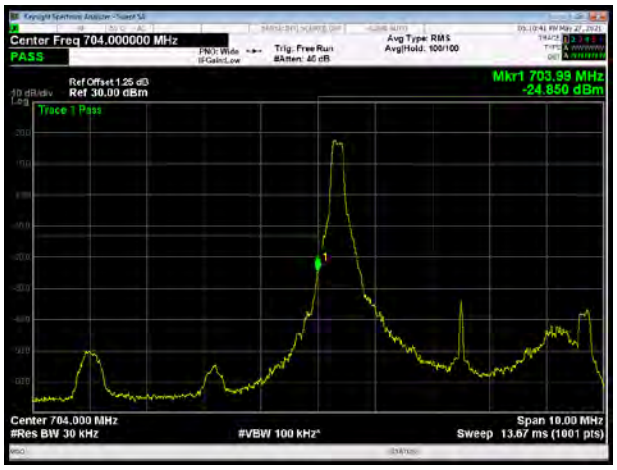
LTE Band 12 64QAM 10MHz CH-High, 1 RB



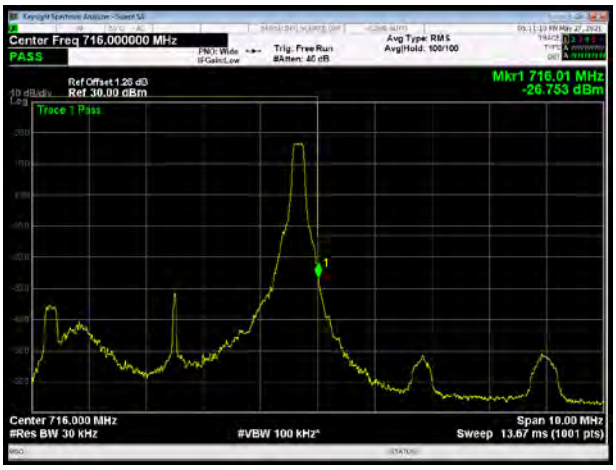
LTE Band 12 64QAM 10MHz CH-Low, 100%RB

LTE Band 12 64QAM 10MHz CH-High, 100%RB

LTE Band 17 QPSK 5MHz CH-Low, 1 RB



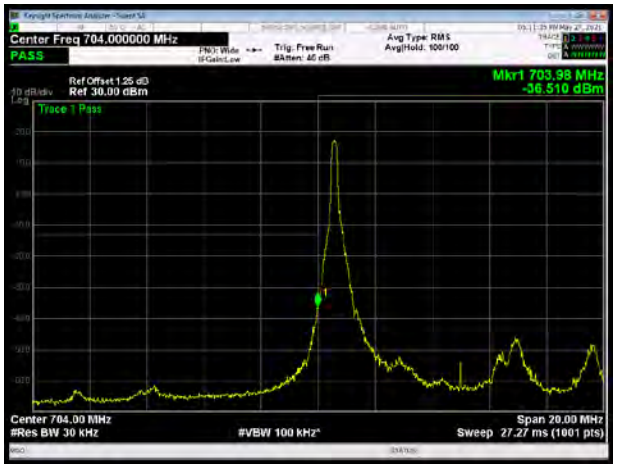
LTE Band 17 QPSK 5MHz CH-High, 1 RB



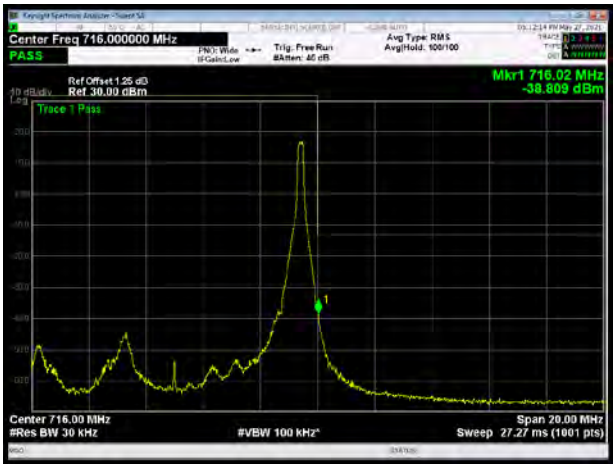
LTE Band 17 QPSK 5MHz CH-Low, 100%RB

LTE Band 17 QPSK 5MHz CH-High, 100%RB

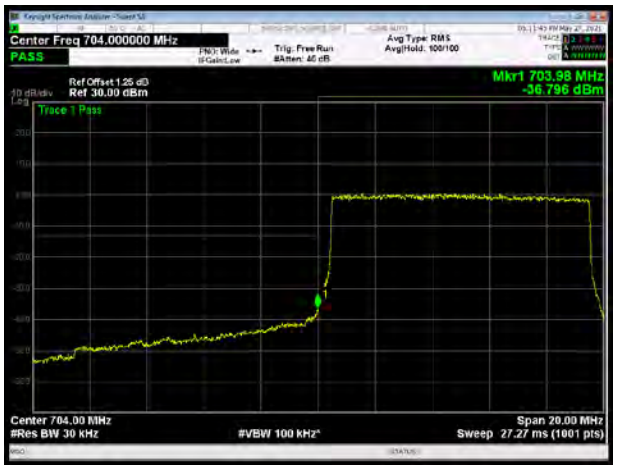
LTE Band 17 QPSK 10MHz CH-Low, 1 RB



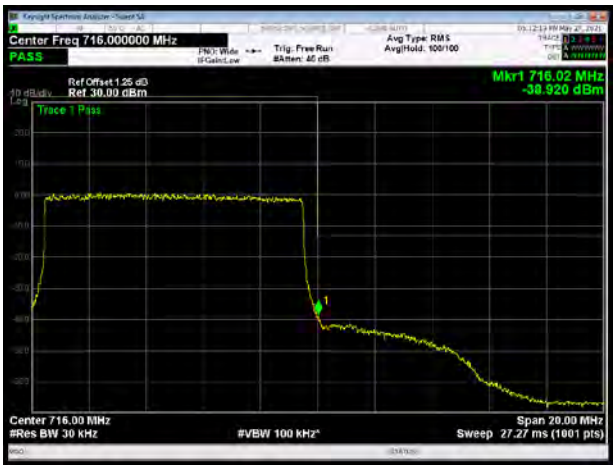
LTE Band 17 QPSK 10MHz CH-High, 1 RB



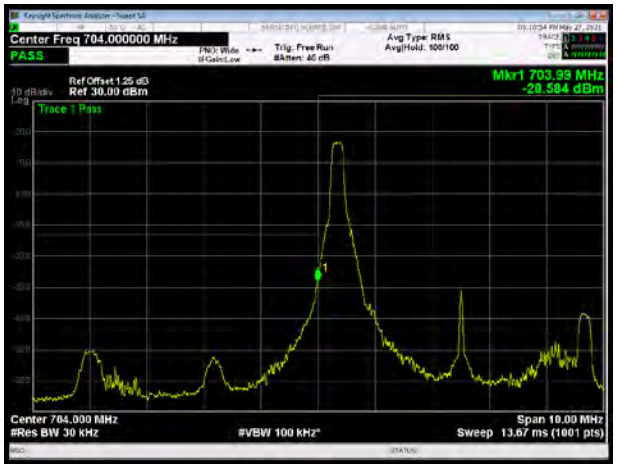
LTE Band 17 QPSK 10MHz CH-Low, 100%RB



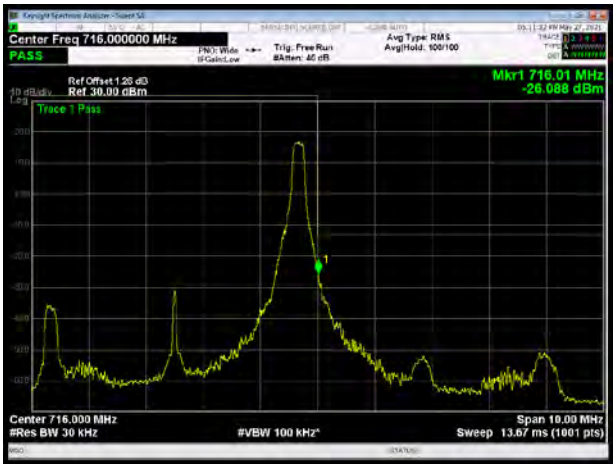
LTE Band 17 QPSK 10MHz CH-High, 100%RB



LTE Band 17 16QAM 5MHz CH-Low, 1 RB



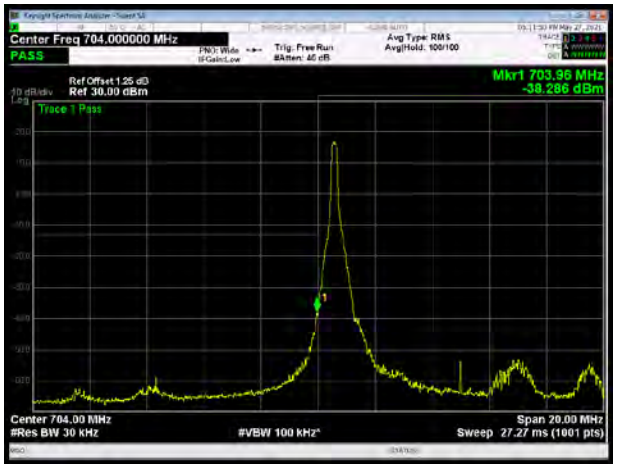
LTE Band 17 16QAM 5MHz CH-High, 1 RB



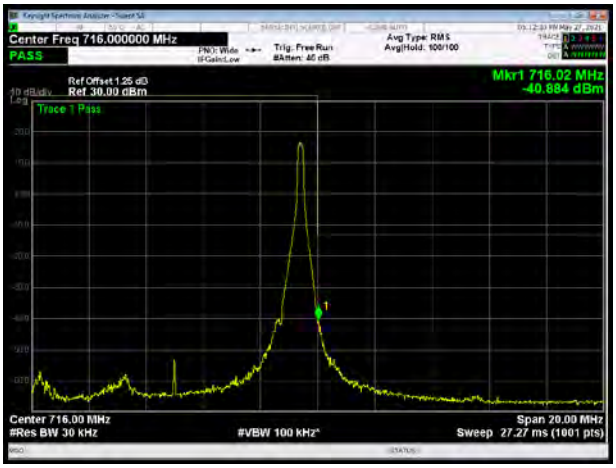
LTE Band 17 16QAM 5MHz CH-Low, 100%RB

LTE Band 17 16QAM 5MHz CH-High, 100%RB

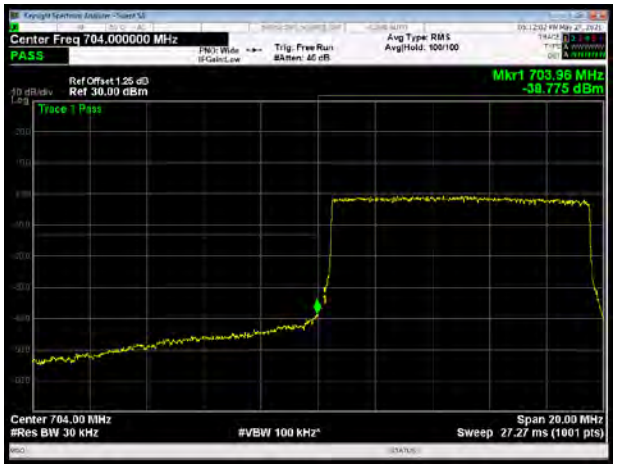
LTE Band 17 16QAM 10MHz CH-Low, 1 RB



LTE Band 17 16QAM 10MHz CH-High, 1 RB

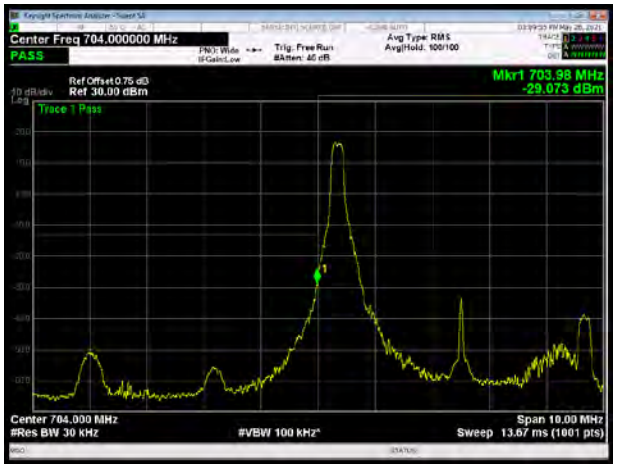


LTE Band 17 16QAM 10MHz CH-Low, 100%RB

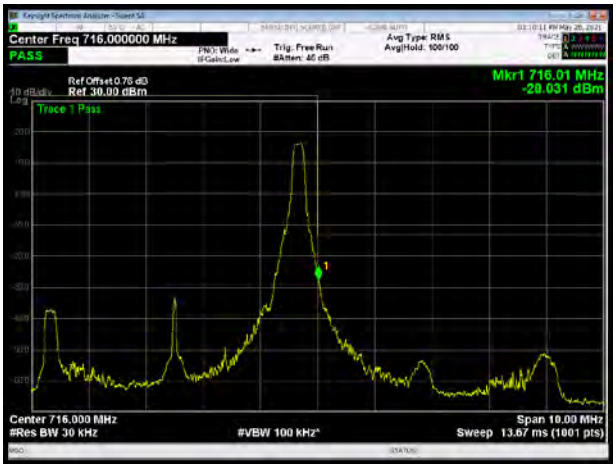


LTE Band 17 16QAM 10MHz CH-High, 100%RB

LTE Band 17 64QAM 5MHz CH-Low, 1 RB



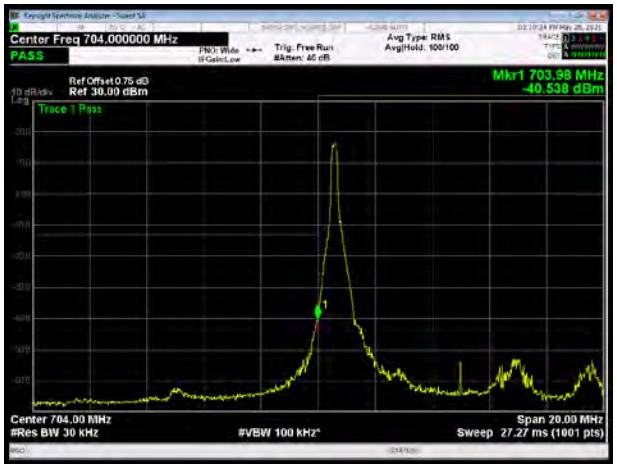
LTE Band 17 64QAM 5MHz CH-High, 1 RB



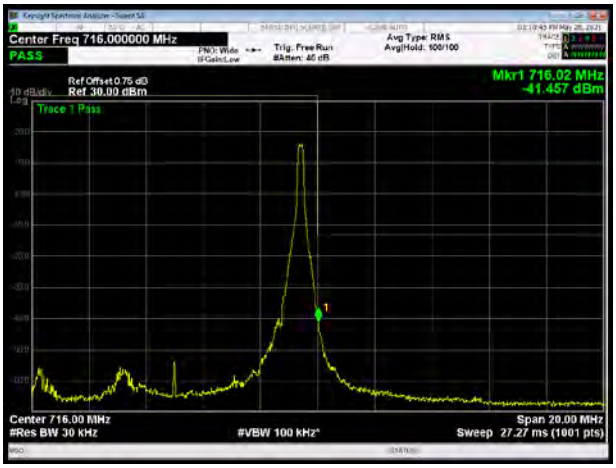
LTE Band 17 64QAM 5MHz CH-Low, 100%RB

LTE Band 17 64QAM 5MHz CH-High, 100%RB

LTE Band 17 64QAM 10MHz CH-Low, 1 RB



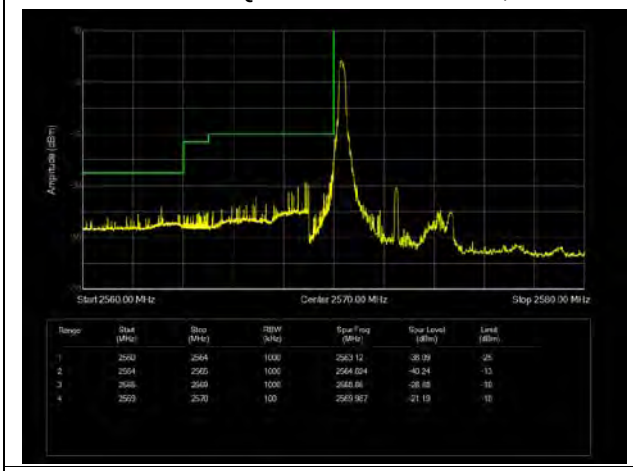
LTE Band 17 64QAM 10MHz CH-High, 1 RB



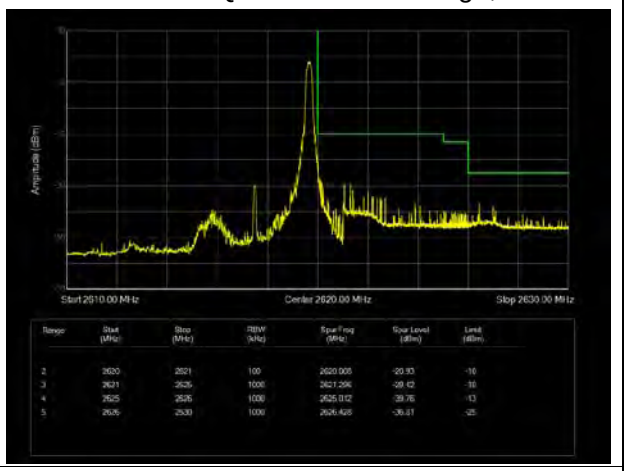
LTE Band 17 64QAM 10MHz CH-Low, 100%RB

LTE Band 17 64QAM 10MHz CH-High, 100%RB

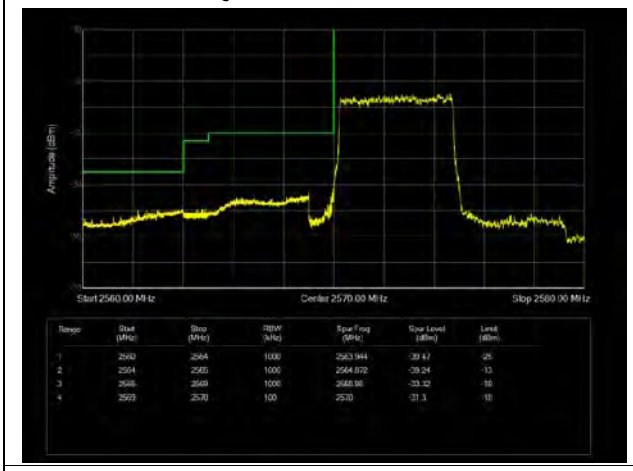
LTE Band 38 QPSK 5MHz CH-Low, 1 RB



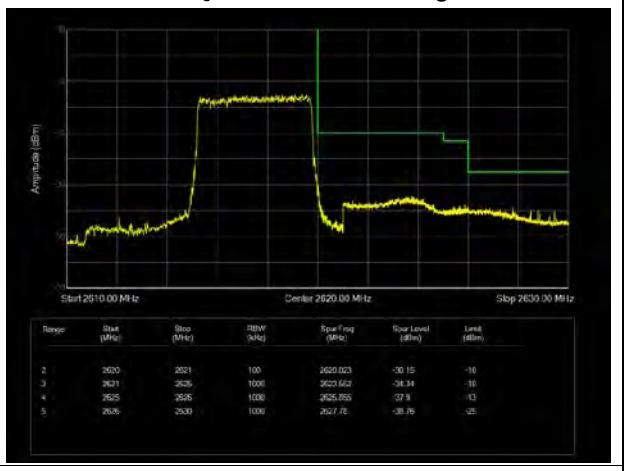
LTE Band 38 QPSK 5MHz CH-High, 1 RB



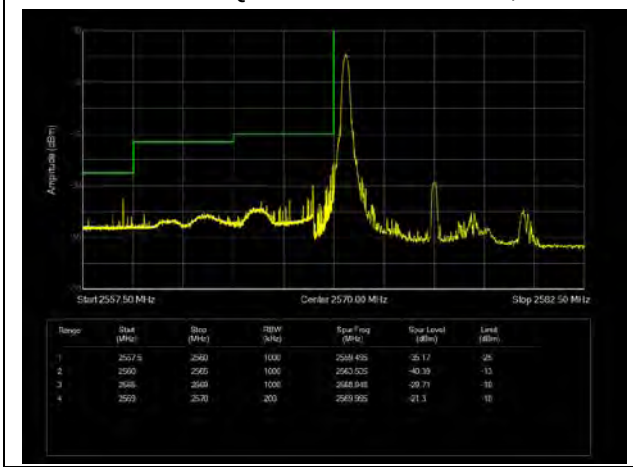
LTE Band 38 QPSK 5MHz CH-Low, 100%RB



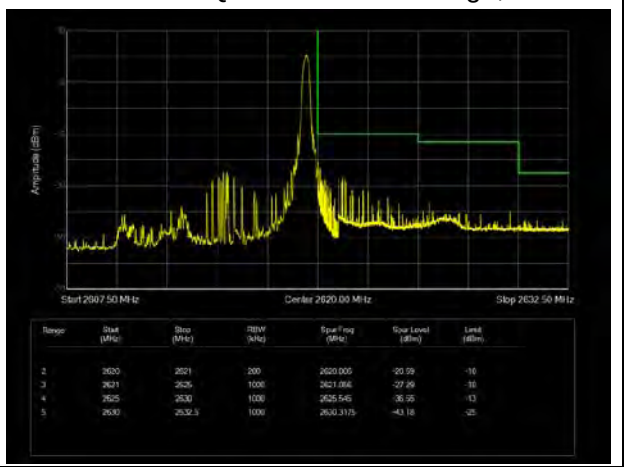
LTE Band 38 QPSK 5MHz CH-High, 100%RB



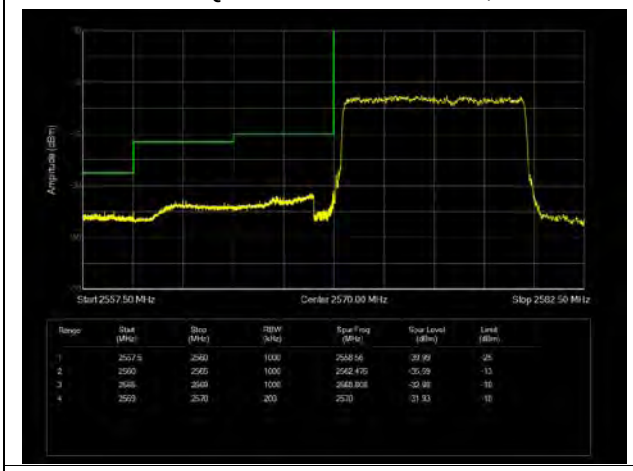
LTE Band 38 QPSK 10MHz CH-Low, 1 RB



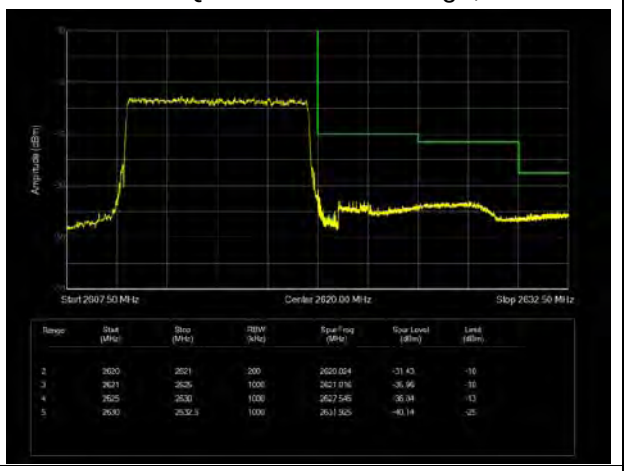
LTE Band 38 QPSK 10MHz CH-High, 1 RB



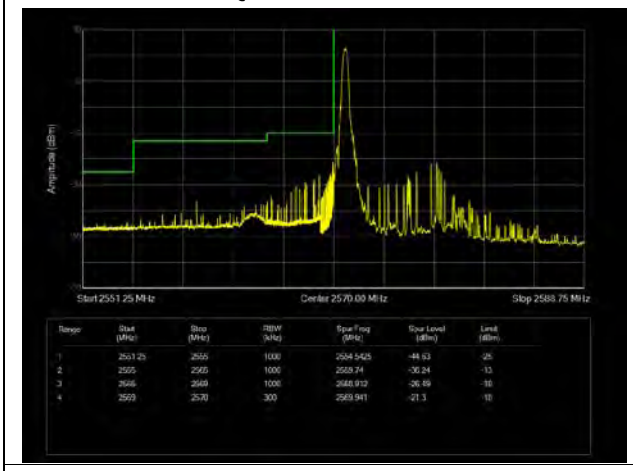
LTE Band 38 QPSK 10MHz CH-Low, 100%RB



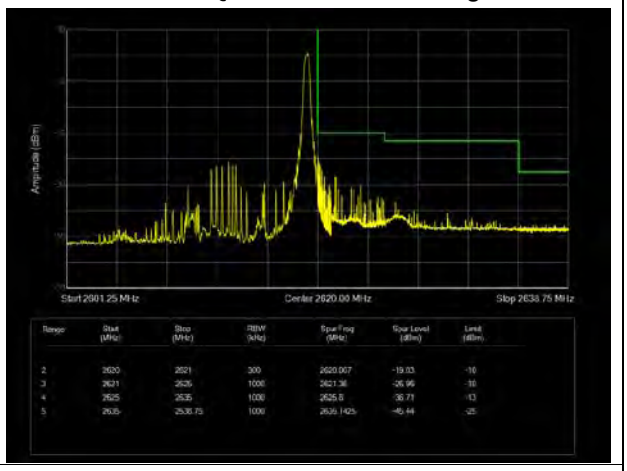
LTE Band 38 QPSK 10MHz CH-High, 100%RB



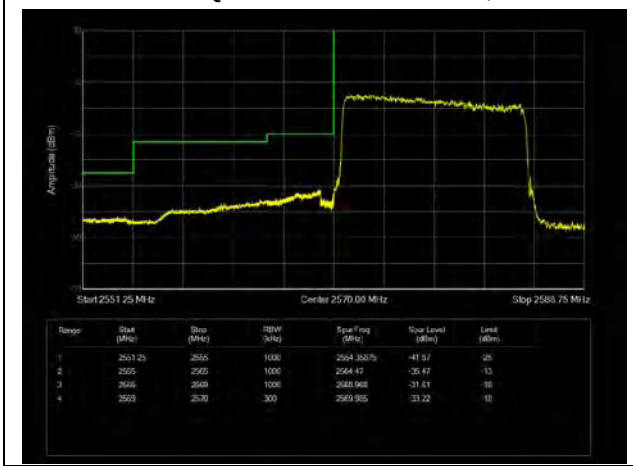
LTE Band 38 QPSK 15MHz CH-Low, 1 RB



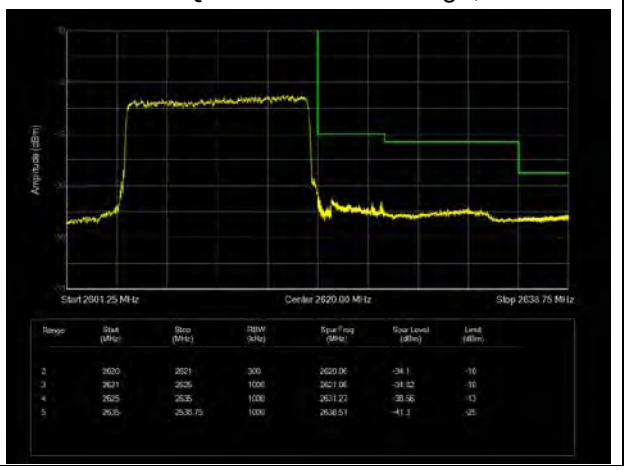
LTE Band 38 QPSK 15MHz CH-High, 1 RB



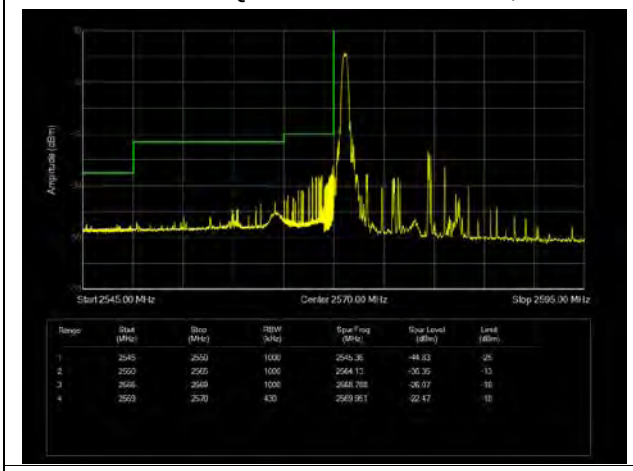
LTE Band 38 QPSK 15MHz CH-Low, 100%RB



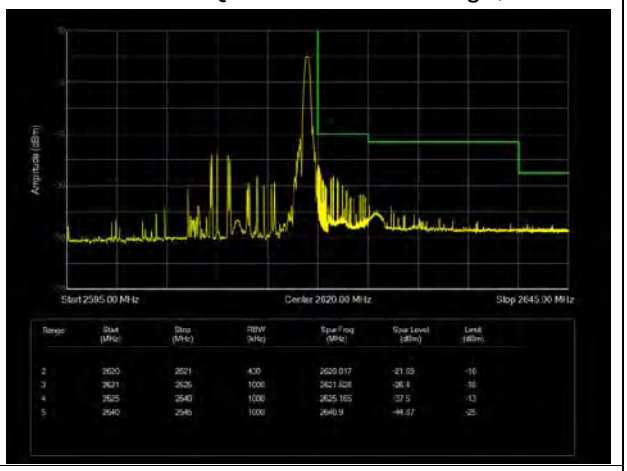
LTE Band 38 QPSK 15MHz CH-High, 100%RB



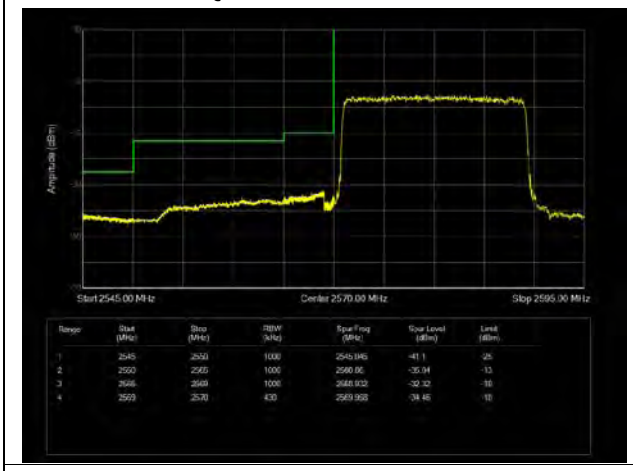
LTE Band 38 QPSK 20MHz CH-Low, 1 RB



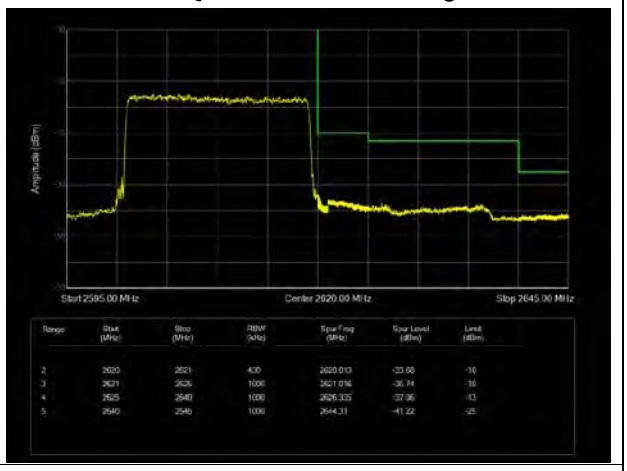
LTE Band 38 QPSK 20MHz CH-High, 1 RB



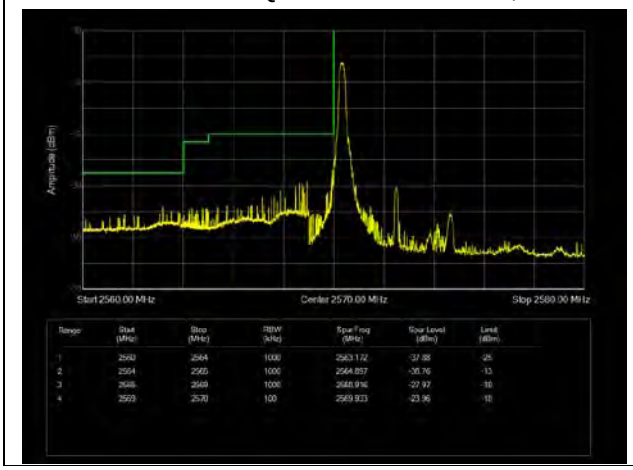
LTE Band 38 QPSK 20MHz CH-Low, 100%RB



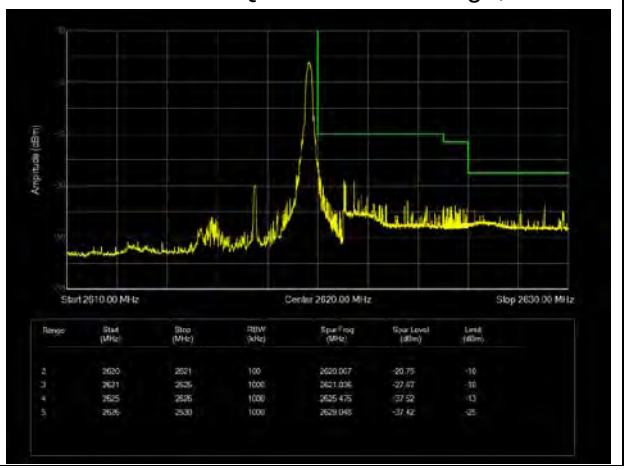
LTE Band 38 QPSK 20MHz CH-High, 100%RB



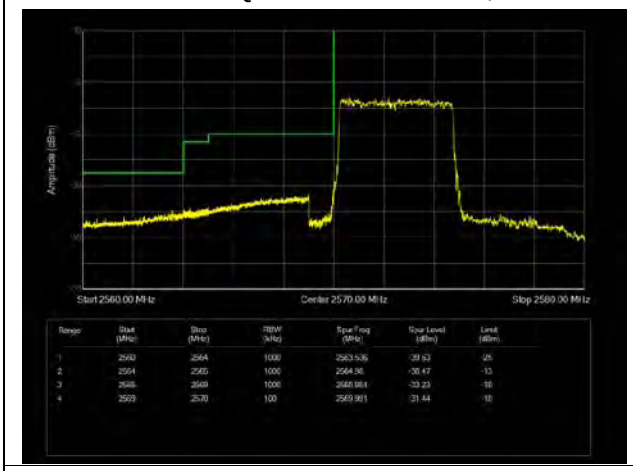
LTE Band 38 16QAM 5MHz CH-Low, 1 RB



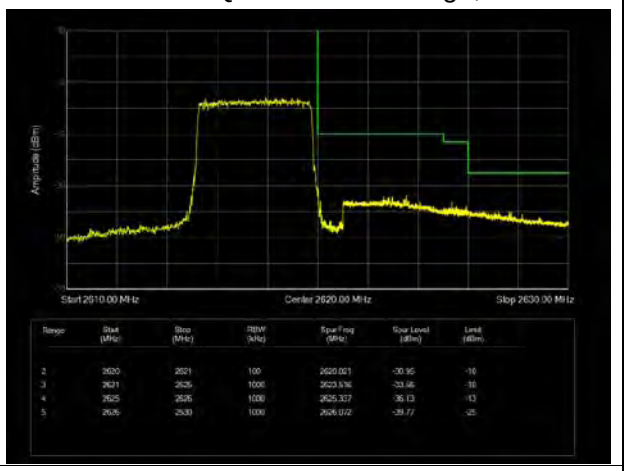
LTE Band 38 16QAM 5MHz CH-High, 1 RB



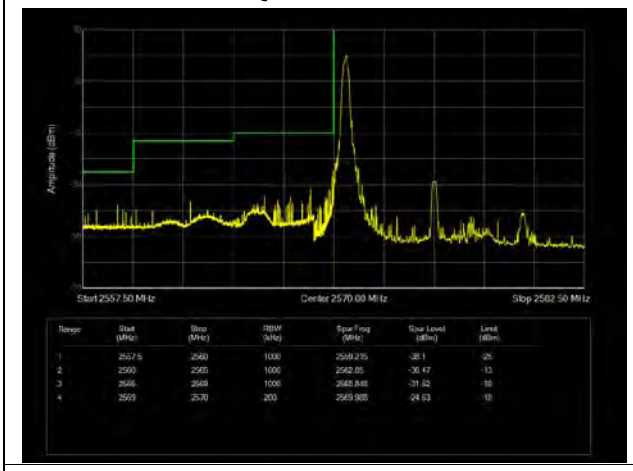
LTE Band 38 16QAM 5MHz CH-Low, 100%RB



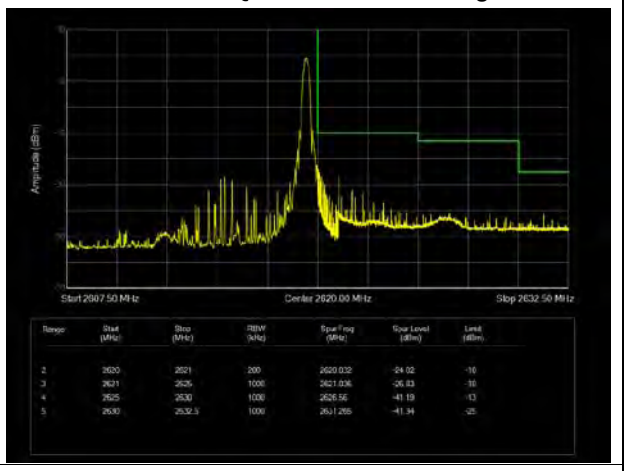
LTE Band 38 16QAM 5MHz CH-High, 100%RB



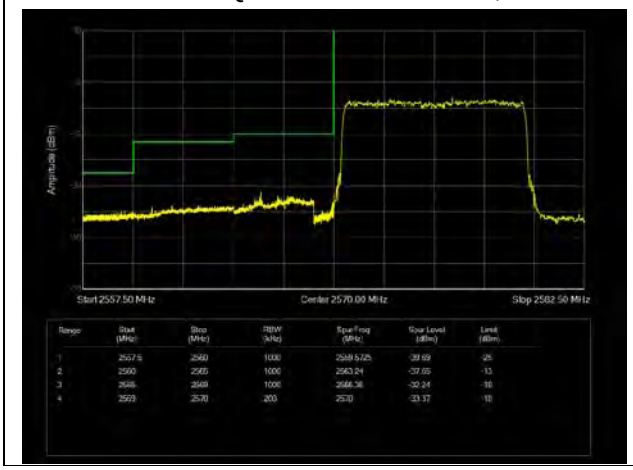
LTE Band 38 16QAM 10MHz CH-Low, 1 RB



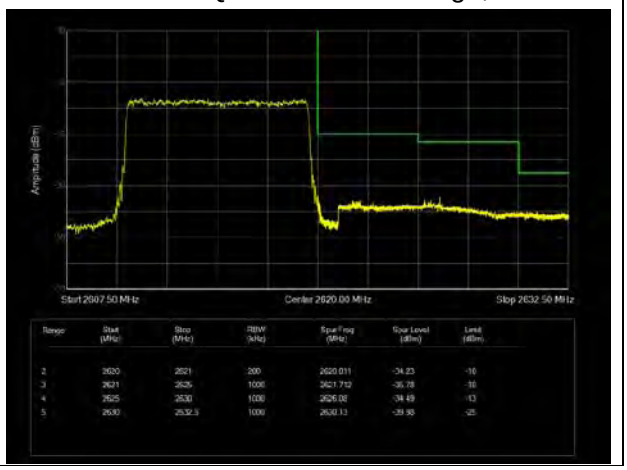
LTE Band 38 16QAM 10MHz CH-High, 1 RB



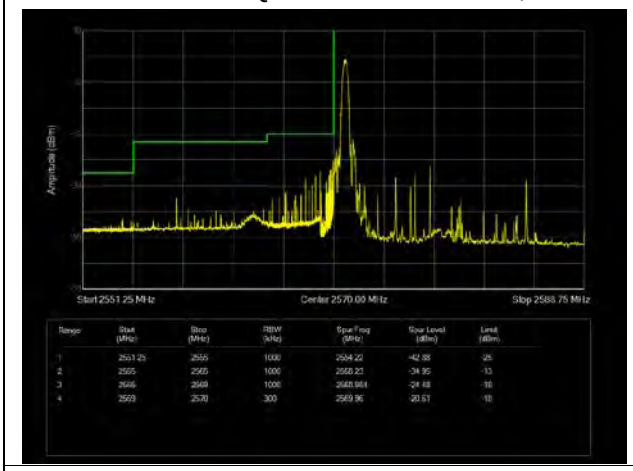
LTE Band 38 16QAM 10MHz CH-Low, 100%RB



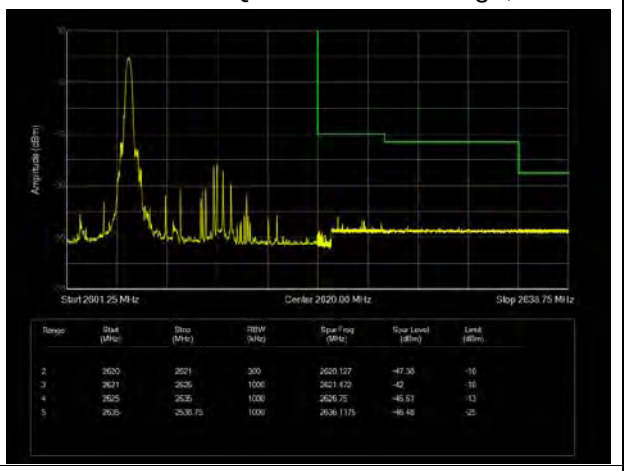
LTE Band 38 16QAM 10MHz CH-High, 100%RB



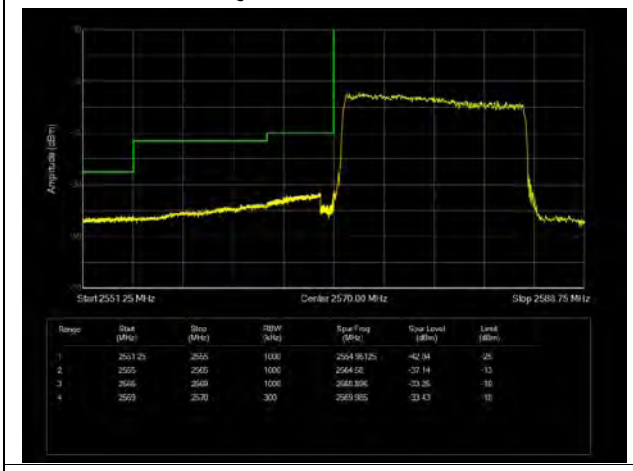
LTE Band 38 16QAM 15MHz CH-Low, 1 RB



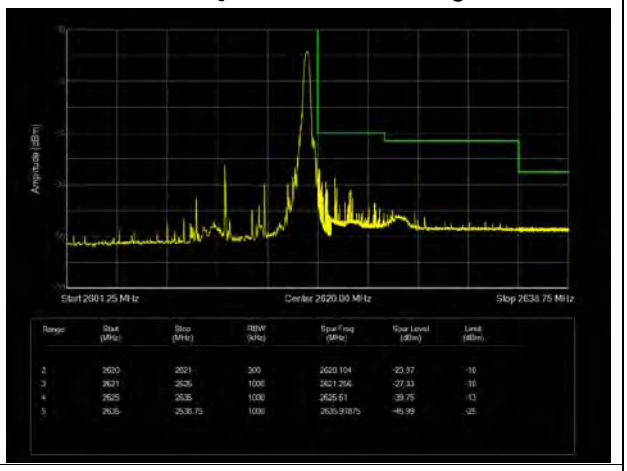
LTE Band 38 16QAM 15MHz CH-High, 1 RB



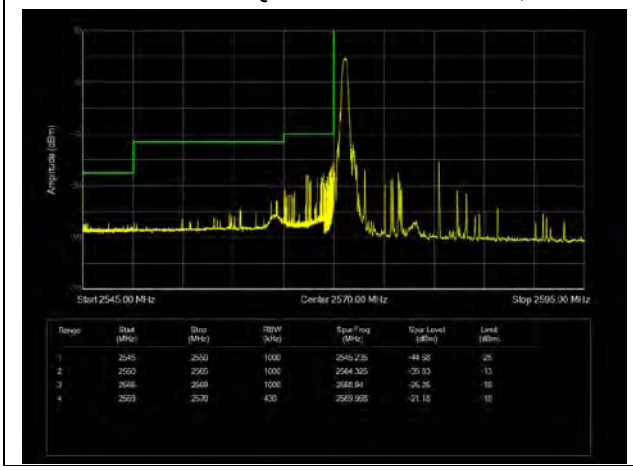
LTE Band 38 16QAM 15MHz CH-Low, 100%RB



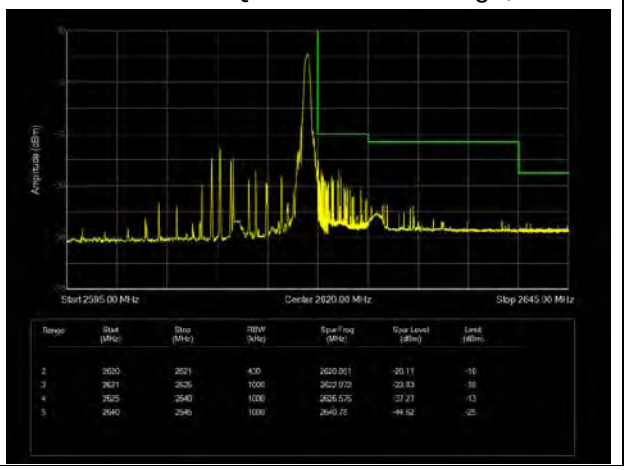
LTE Band 38 16QAM 15MHz CH-High, 100%RB

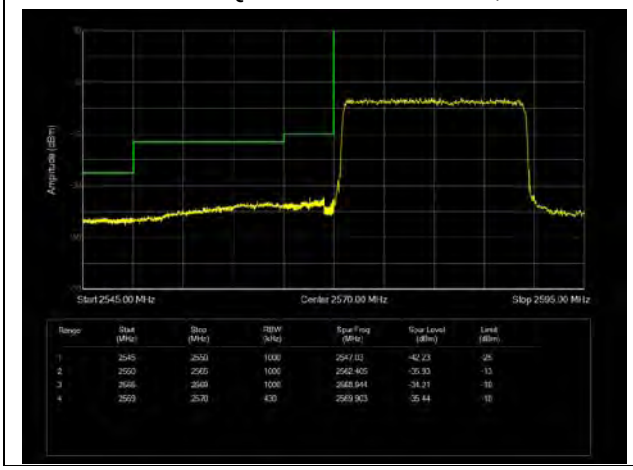
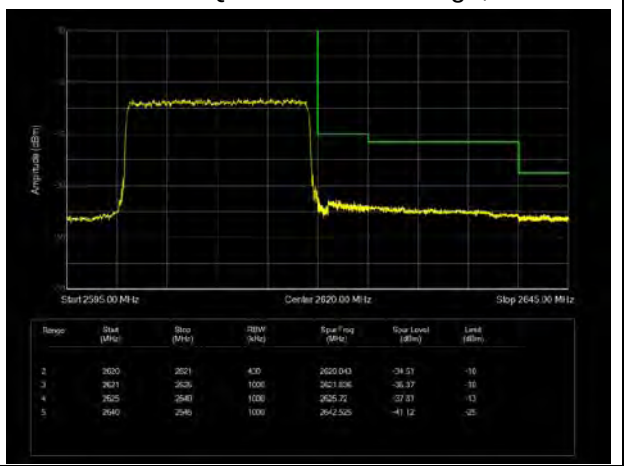


LTE Band 38 16QAM 20MHz CH-Low, 1 RB

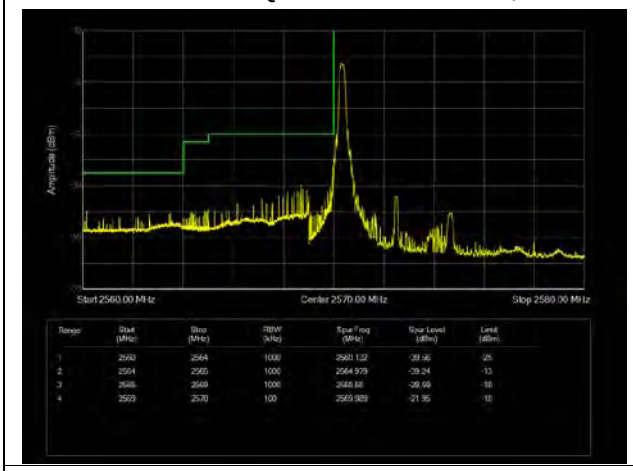


LTE Band 38 16QAM 20MHz CH-High, 1 RB

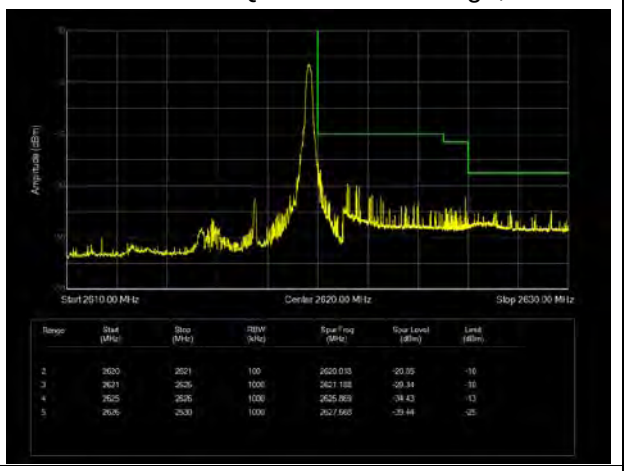


LTE Band 38 16QAM 20MHz CH-Low, 100%RB	LTE Band 38 16QAM 20MHz CH-High, 100%RB
	

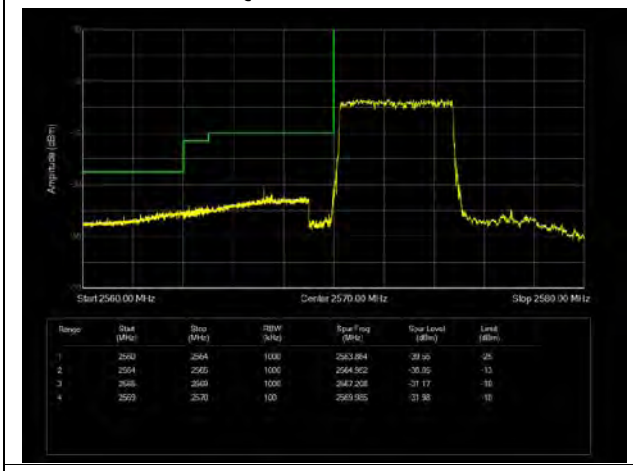
LTE Band 38 64QAM 5MHz CH-Low, 1 RB



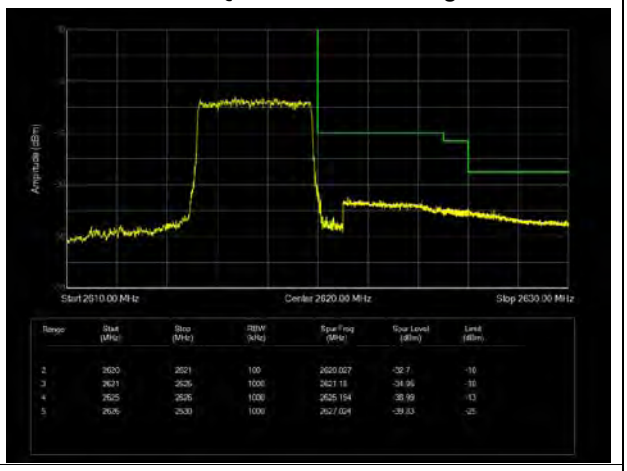
LTE Band 38 64QAM 5MHz CH-High, 1 RB



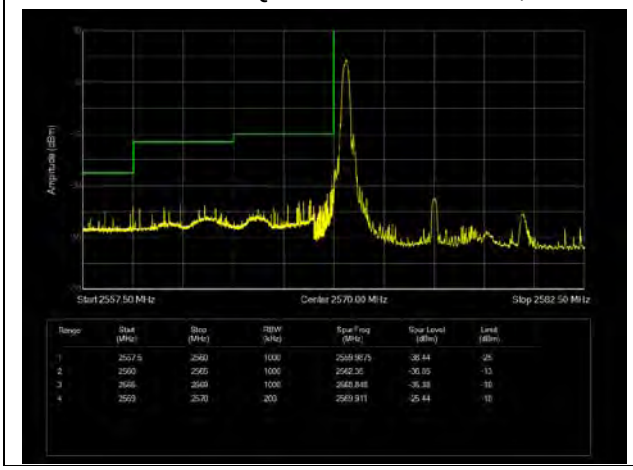
LTE Band 38 64QAM 5MHz CH-Low, 100%RB



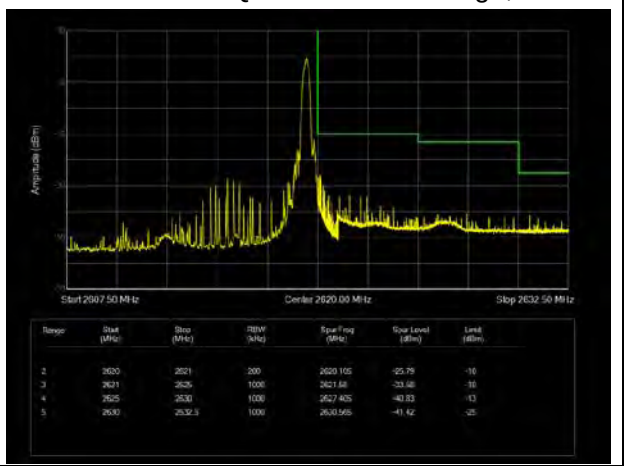
LTE Band 38 64QAM 5MHz CH-High, 100%RB



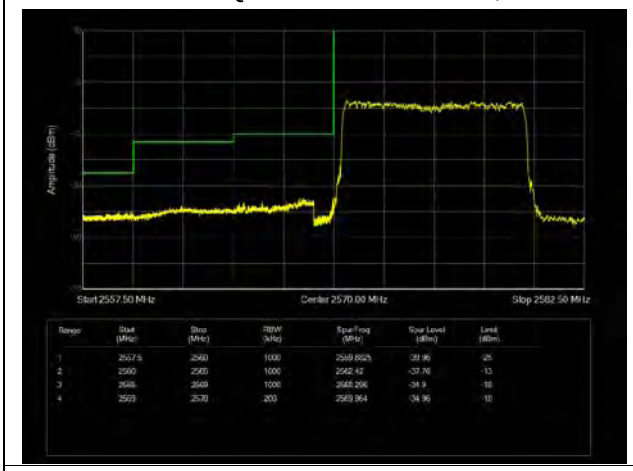
LTE Band 38 64QAM 10MHz CH-Low, 1 RB



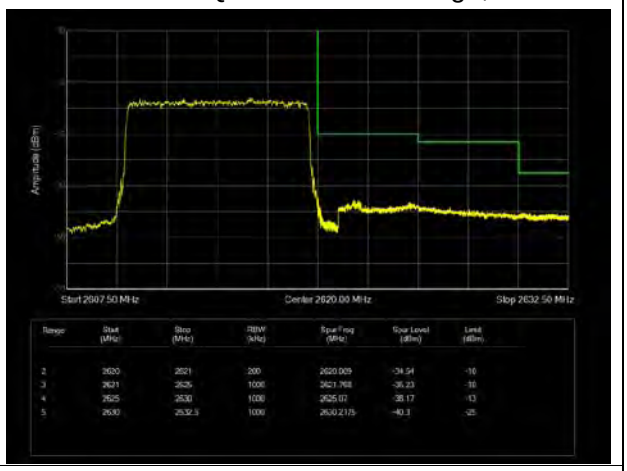
LTE Band 38 64QAM 10MHz CH-High, 1 RB



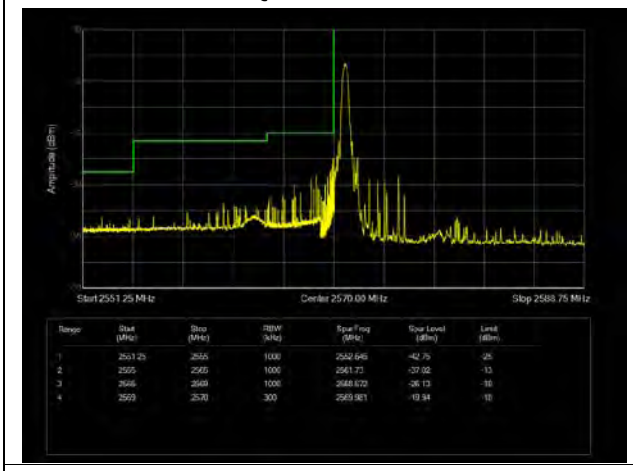
LTE Band 38 64QAM 10MHz CH-Low, 100%RB



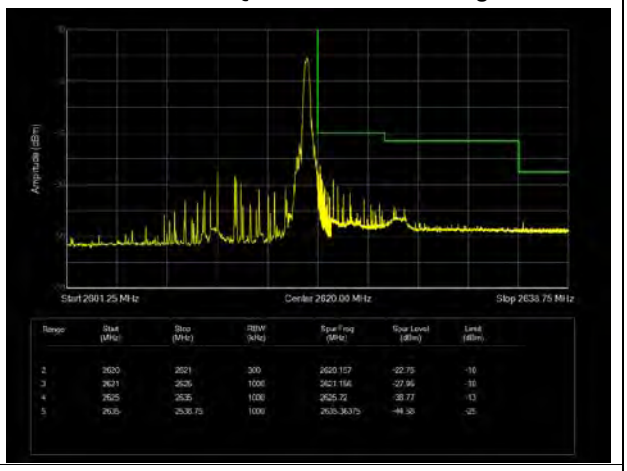
LTE Band 38 64QAM 10MHz CH-High, 100%RB



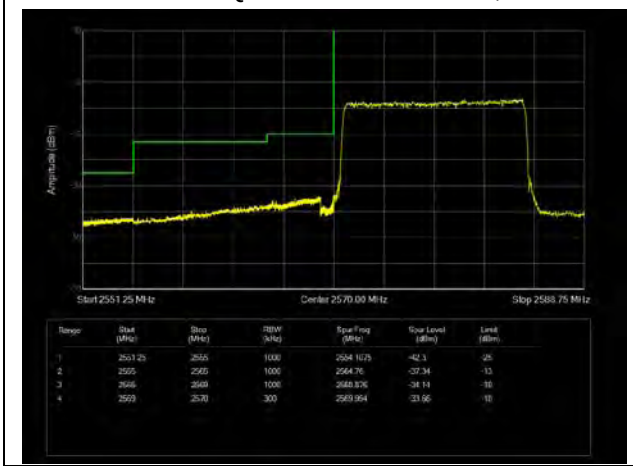
LTE Band 38 64QAM 15MHz CH-Low, 1 RB



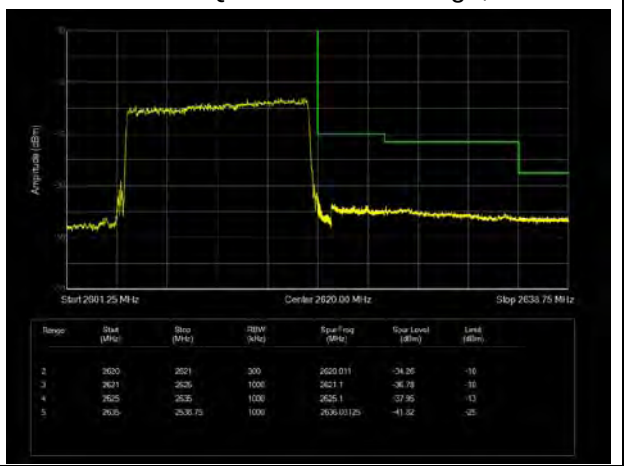
LTE Band 38 64QAM 15MHz CH-High, 1 RB



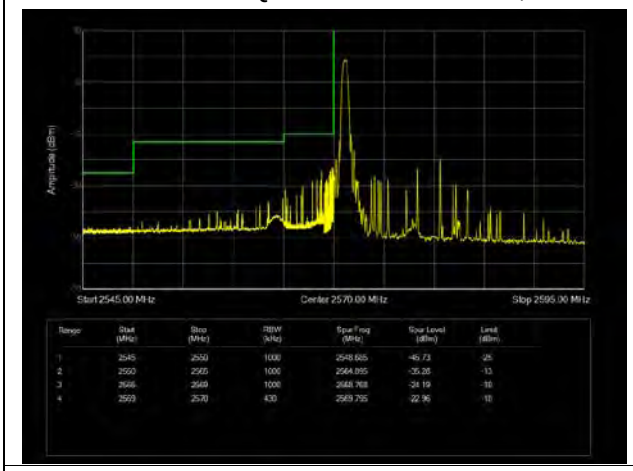
LTE Band 38 64QAM 15MHz CH-Low, 100%RB



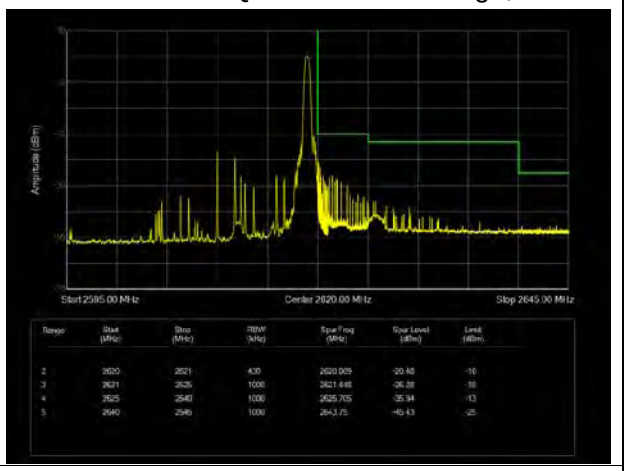
LTE Band 38 64QAM 15MHz CH-High, 100%RB



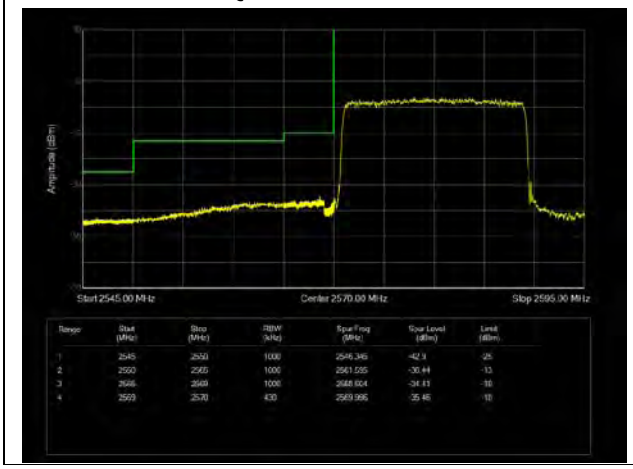
LTE Band 38 64QAM 20MHz CH-Low, 1 RB



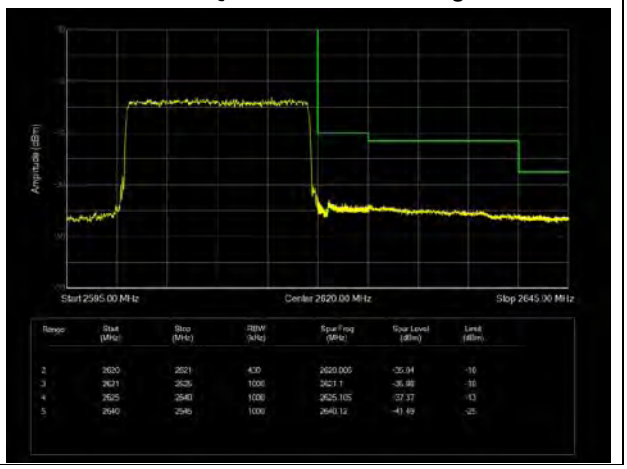
LTE Band 38 64QAM 20MHz CH-High, 1 RB



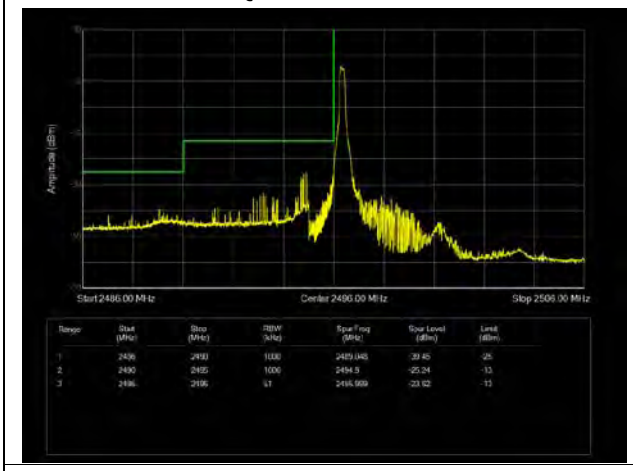
LTE Band 38 64QAM 20MHz CH-Low, 100%RB



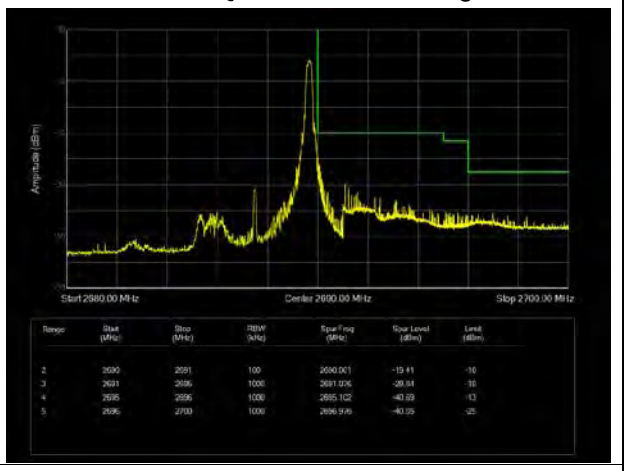
LTE Band 38 64QAM 20MHz CH-High, 100%RB



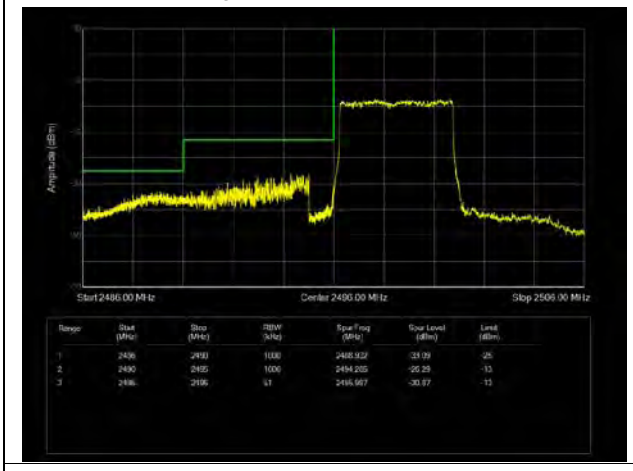
LTE Band 41 QPSK 5MHz CH-Low, 1 RB



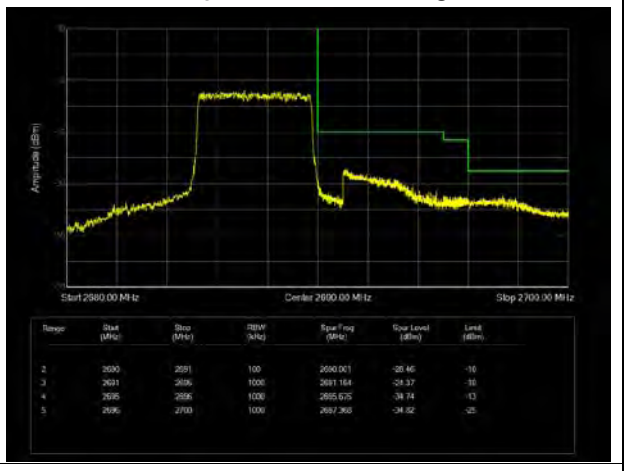
LTE Band 41 QPSK 5MHz CH-High, 1 RB



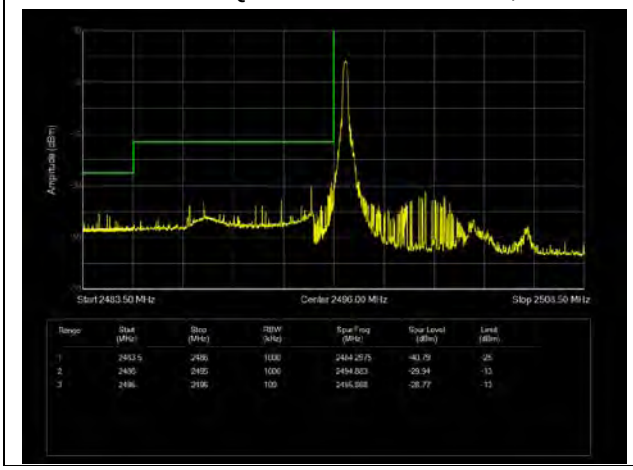
LTE Band 41 QPSK 5MHz CH-Low, 100%RB



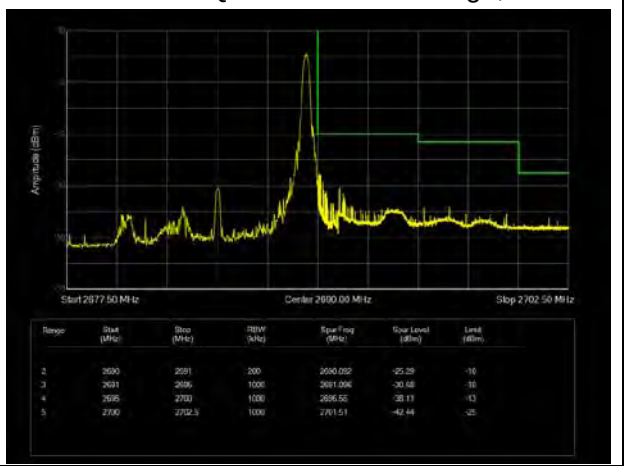
LTE Band 41 QPSK 5MHz CH-High, 100%RB



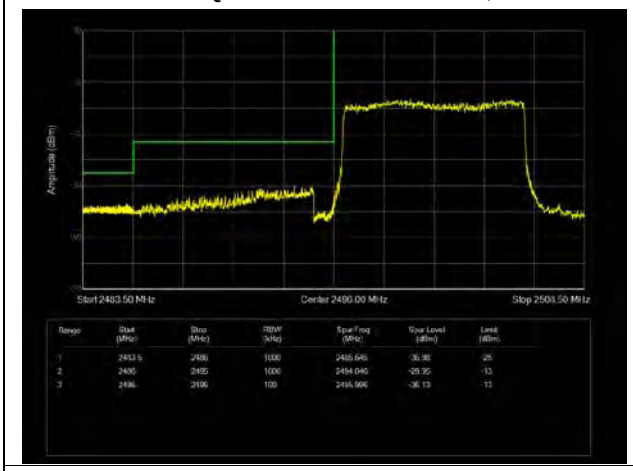
LTE Band 41 QPSK 10MHz CH-Low, 1 RB



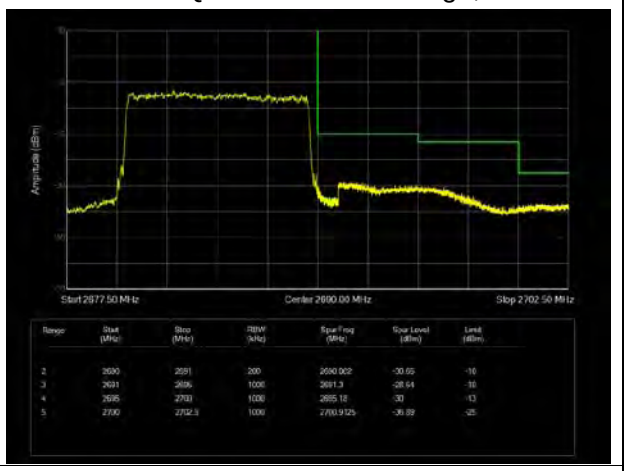
LTE Band 41 QPSK 10MHz CH-High, 1 RB



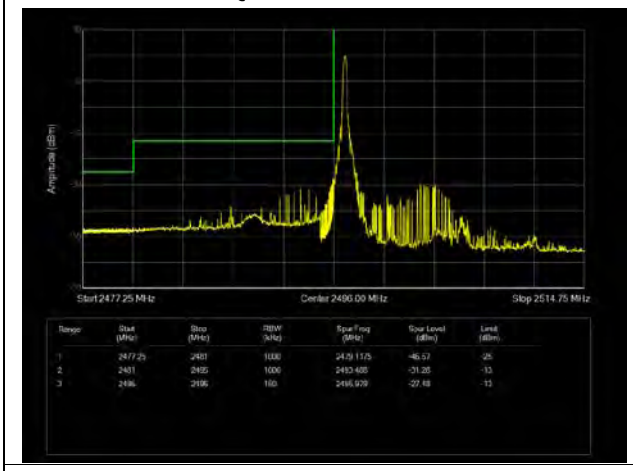
LTE Band 41 QPSK 10MHz CH-Low, 100%RB



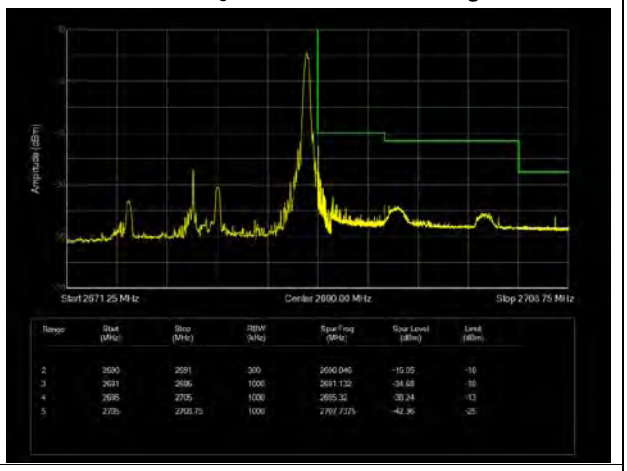
LTE Band 41 QPSK 10MHz CH-High, 100%RB



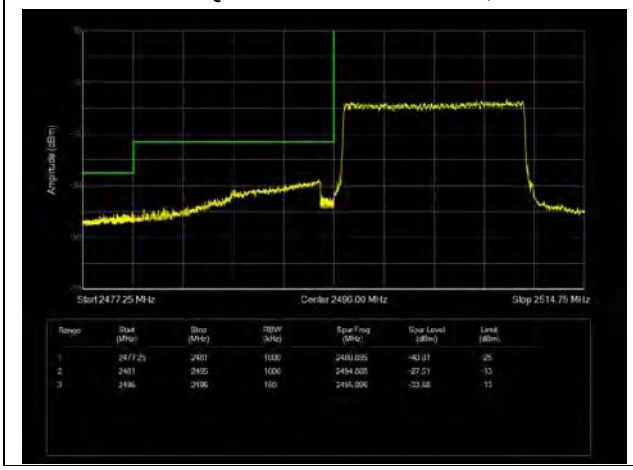
LTE Band 41 QPSK 15MHz CH-Low, 1 RB



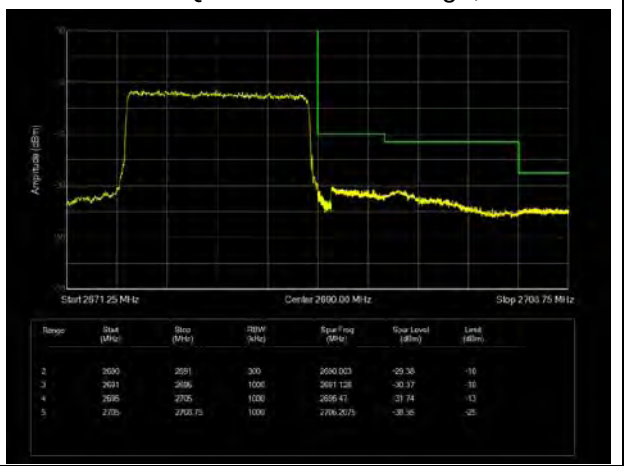
LTE Band 41 QPSK 15MHz CH-High, 1 RB



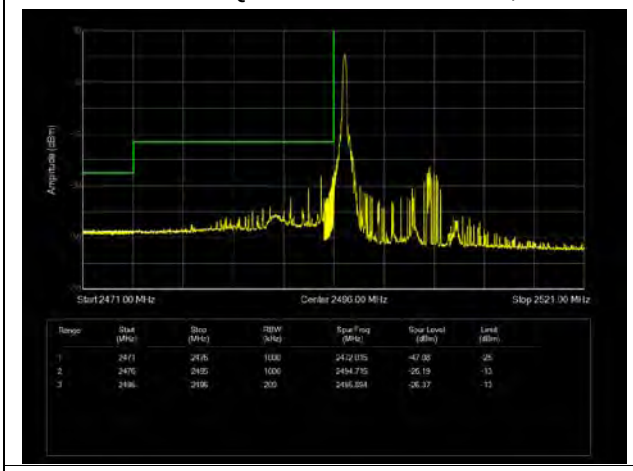
LTE Band 41 QPSK 15MHz CH-Low, 100%RB



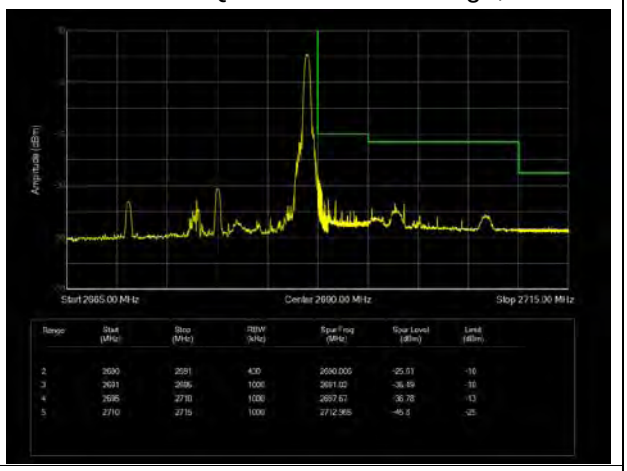
LTE Band 41 QPSK 15MHz CH-High, 100%RB



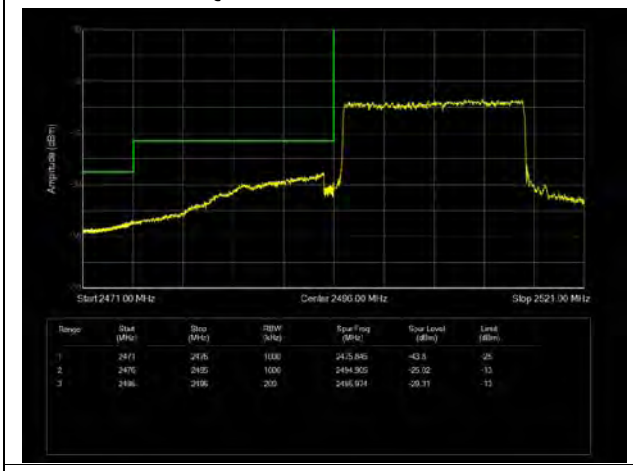
LTE Band 41 QPSK 20MHz CH-Low, 1 RB



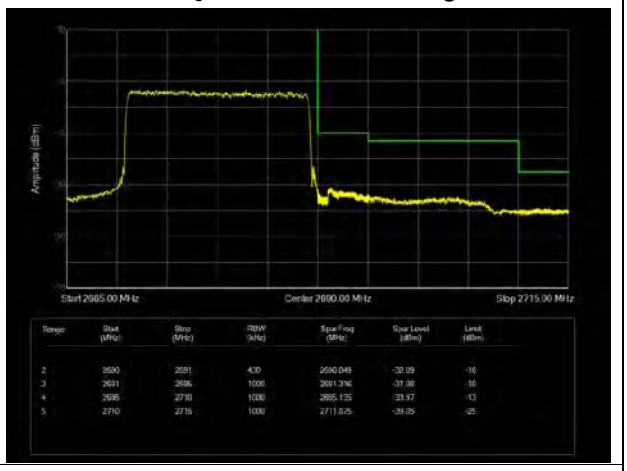
LTE Band 41 QPSK 20MHz CH-High, 1 RB



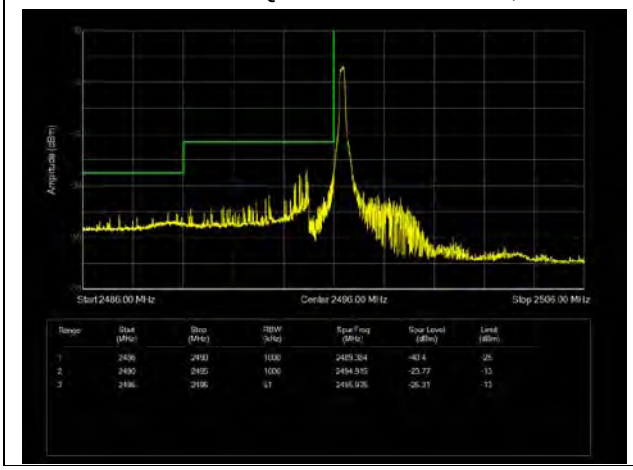
LTE Band 41 QPSK 20MHz CH-Low, 100%RB



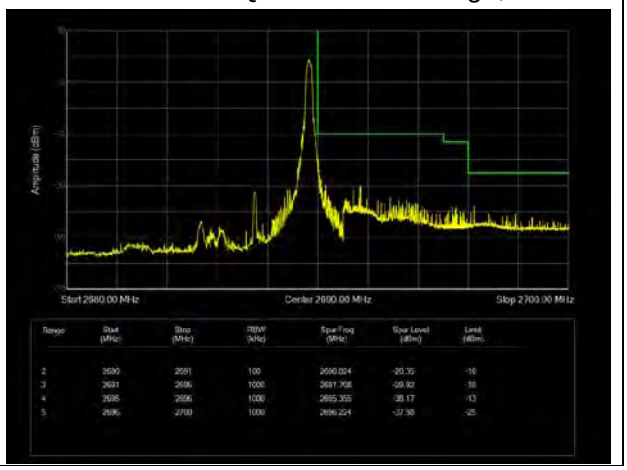
LTE Band 41 QPSK 20MHz CH-High, 100%RB



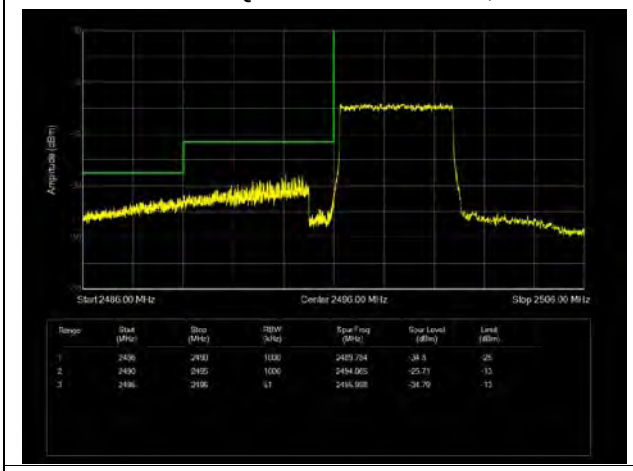
LTE Band 41 16QAM 5MHz CH-Low, 1 RB



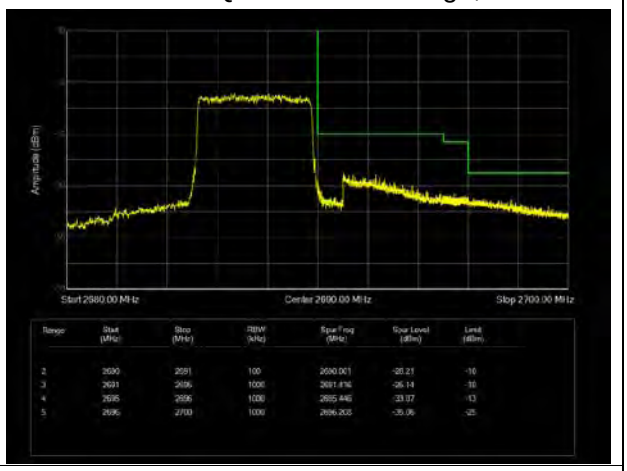
LTE Band 41 16QAM 5MHz CH-High, 1 RB



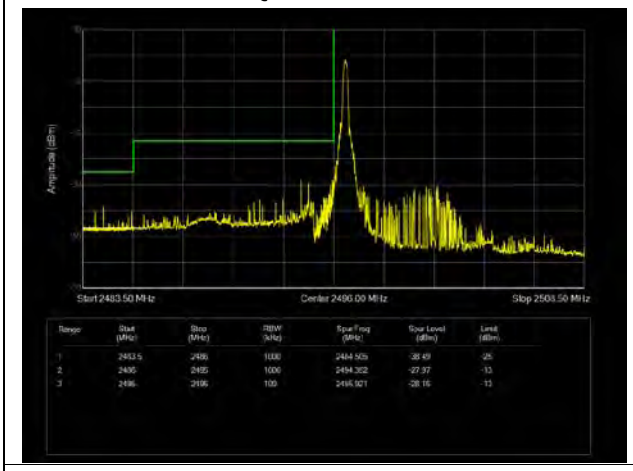
LTE Band 41 16QAM 5MHz CH-Low, 100%RB



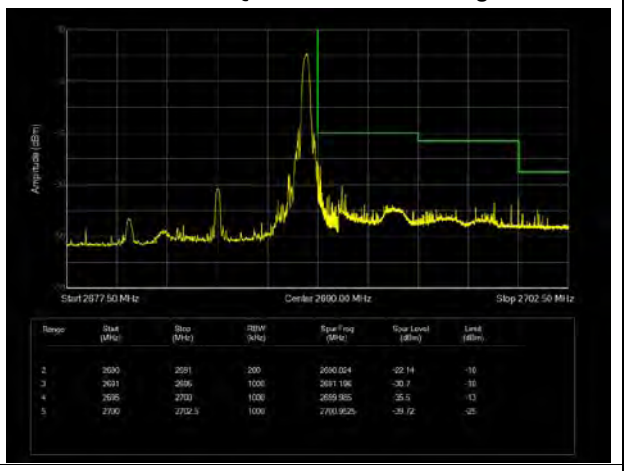
LTE Band 41 16QAM 5MHz CH-High, 100%RB



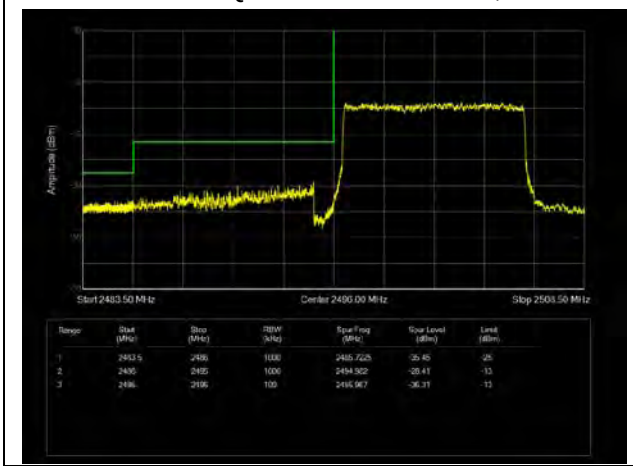
LTE Band 41 16QAM 10MHz CH-Low, 1 RB



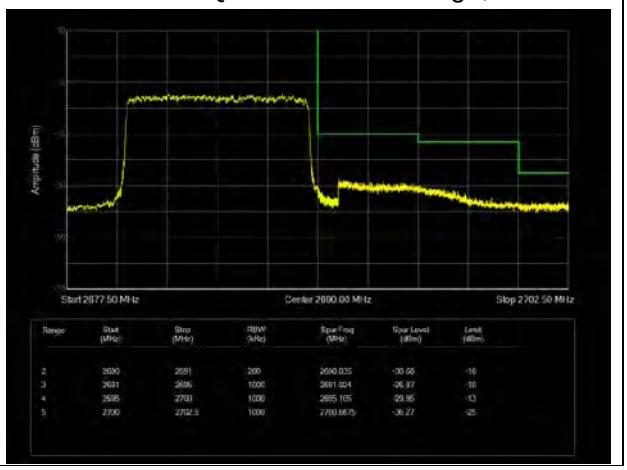
LTE Band 41 16QAM 10MHz CH-High, 1 RB



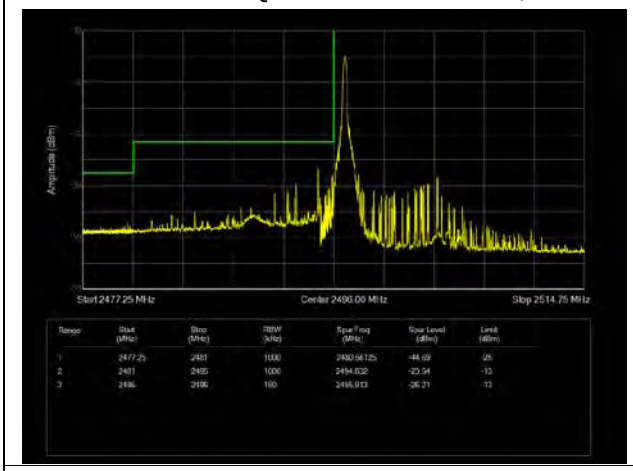
LTE Band 41 16QAM 10MHz CH-Low, 100%RB



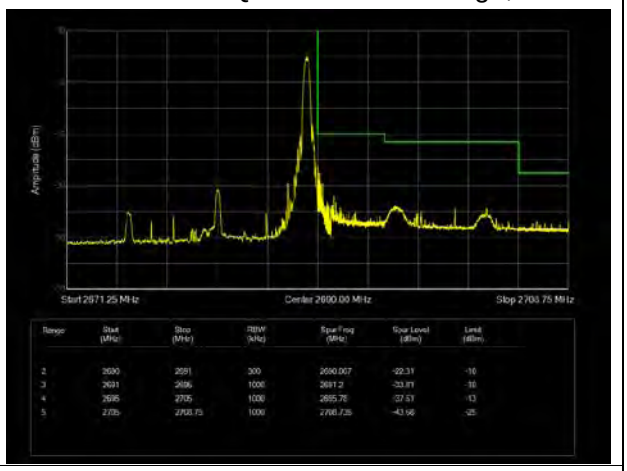
LTE Band 41 16QAM 10MHz CH-High, 100%RB



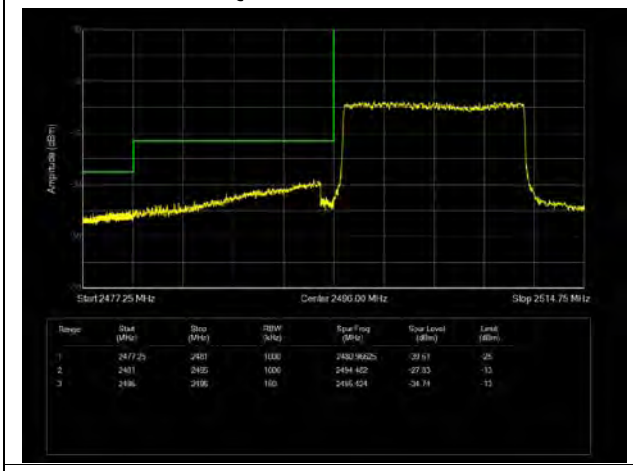
LTE Band 41 16QAM 15MHz CH-Low, 1 RB



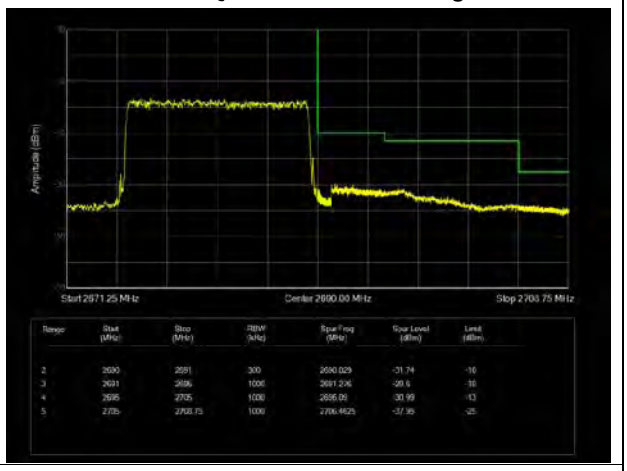
LTE Band 41 16QAM 15MHz CH-High, 1 RB



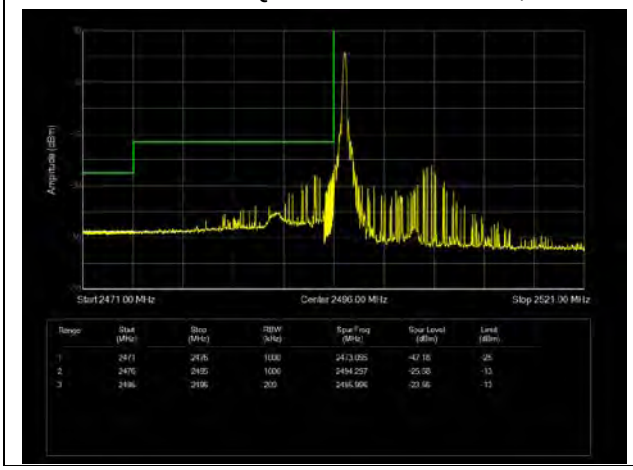
LTE Band 41 16QAM 15MHz CH-Low, 100%RB



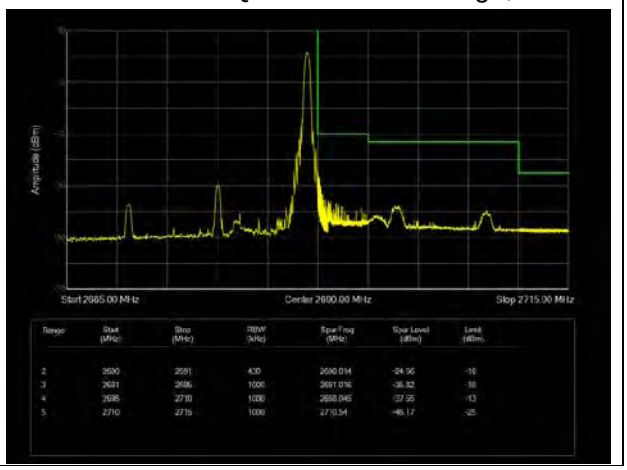
LTE Band 41 16QAM 15MHz CH-High, 100%RB

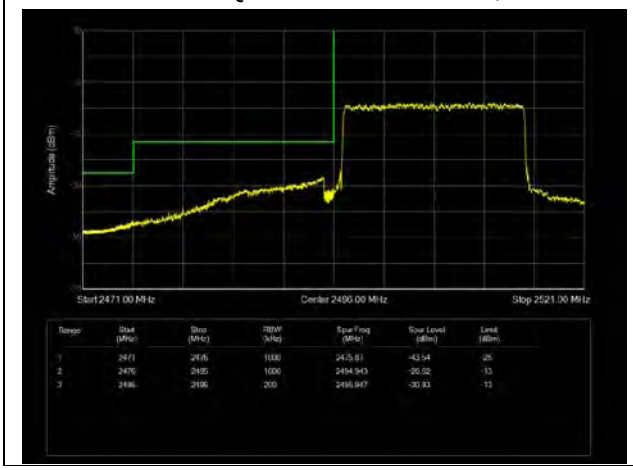
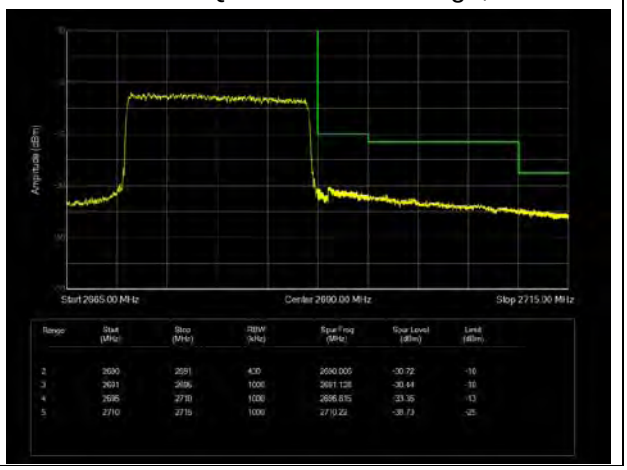


LTE Band 41 16QAM 20MHz CH-Low, RB 1

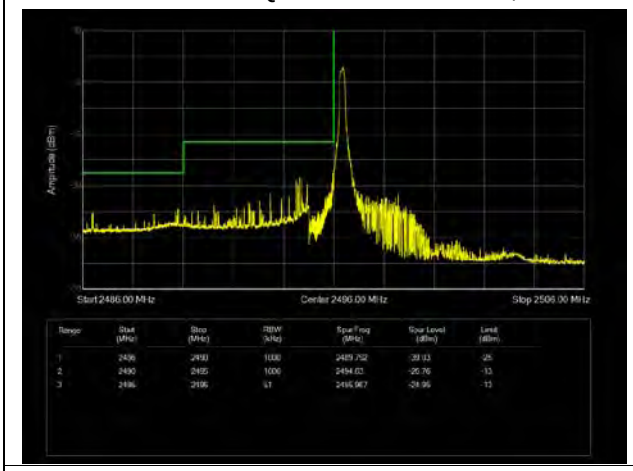


LTE Band 41 16QAM 20MHz CH-High, RB 1

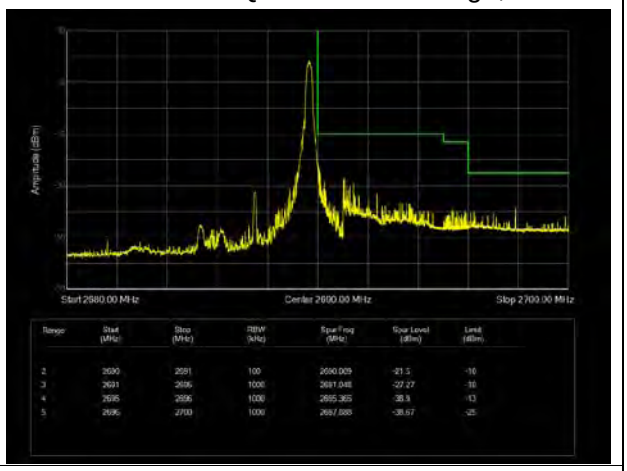


LTE Band 41 16QAM 20MHz CH-Low, 100%RB	LTE Band 41 16QAM 20MHz CH-High, 100%RB
	

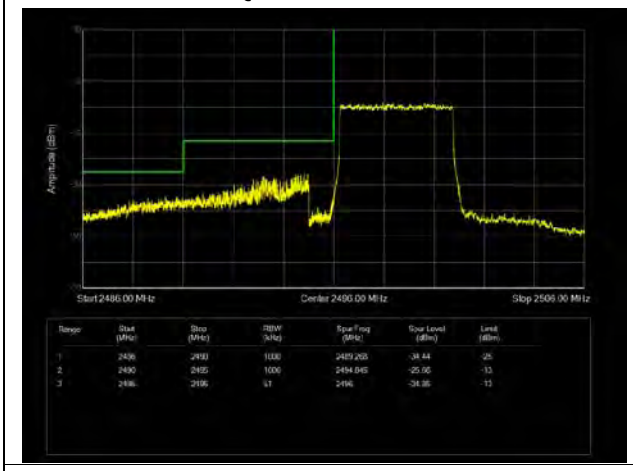
LTE Band 41 64QAM 5MHz CH-Low, 1 RB



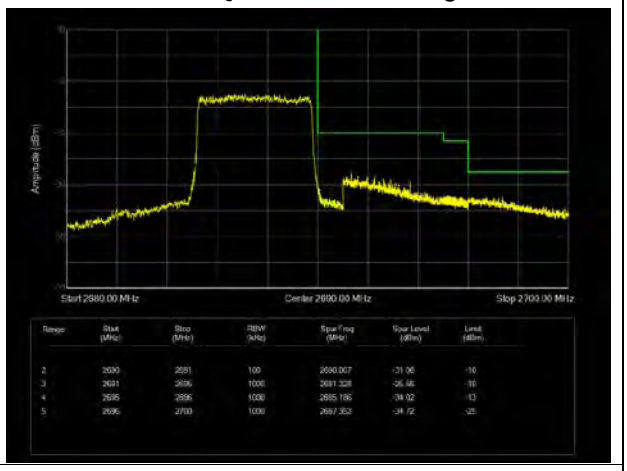
LTE Band 41 64QAM 5MHz CH-High, 1 RB



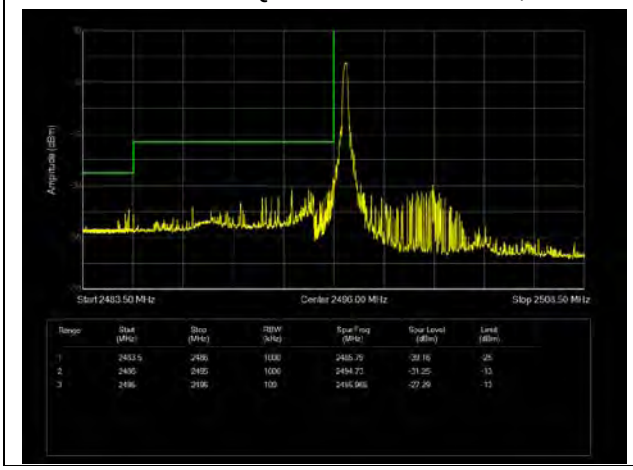
LTE Band 41 64QAM 5MHz CH-Low, 100%RB



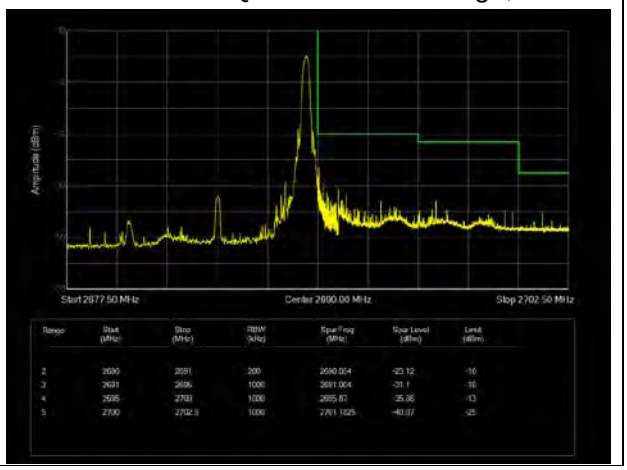
LTE Band 41 64QAM 5MHz CH-High, 100%RB



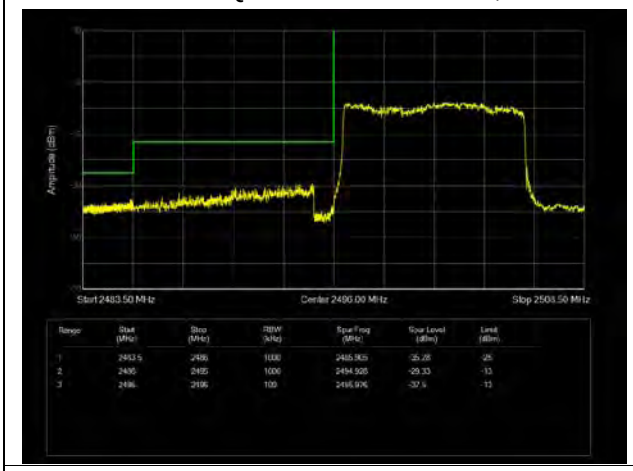
LTE Band 41 64QAM 10MHz CH-Low, 1 RB



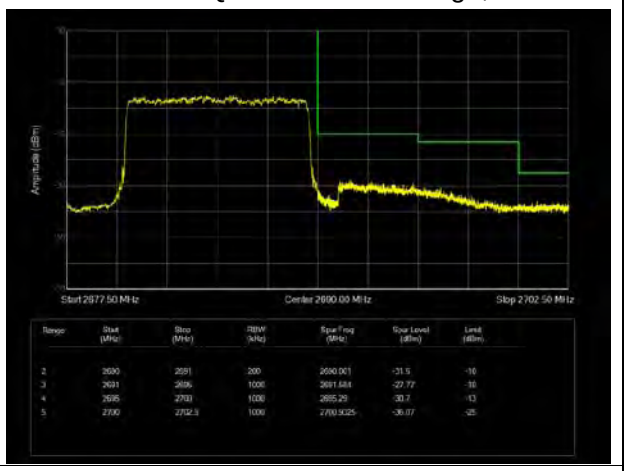
LTE Band 41 64QAM 10MHz CH-High, 1 RB



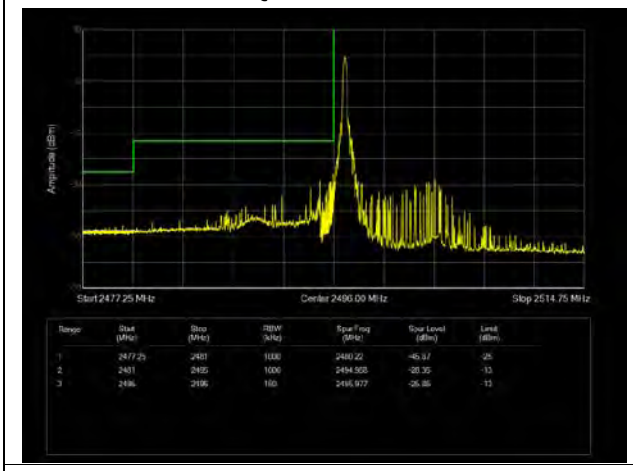
LTE Band 41 64QAM 10MHz CH-Low, 100%RB



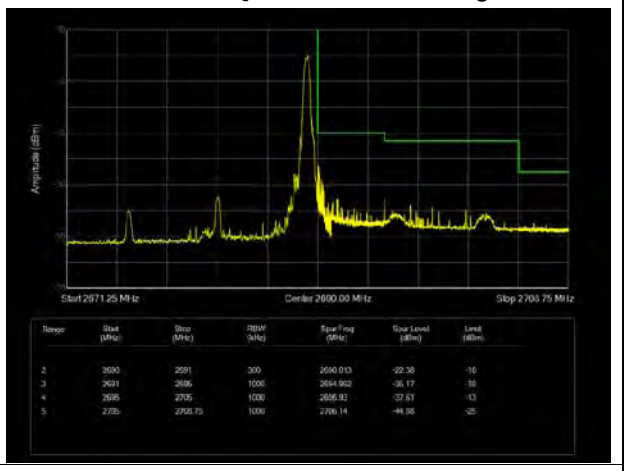
LTE Band 41 64QAM 10MHz CH-High, 100%RB



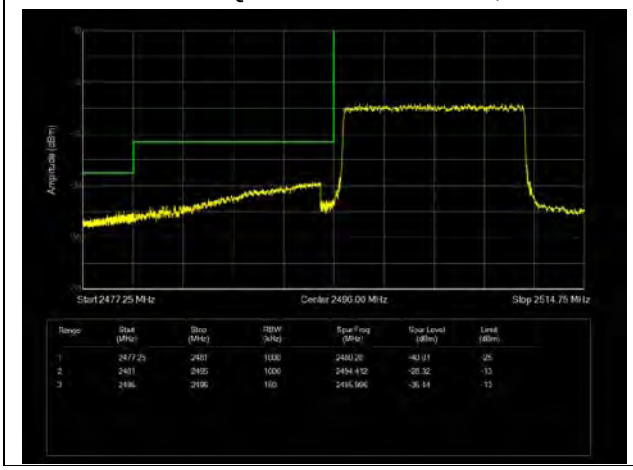
LTE Band 41 64QAM 15MHz CH-Low, 1 RB



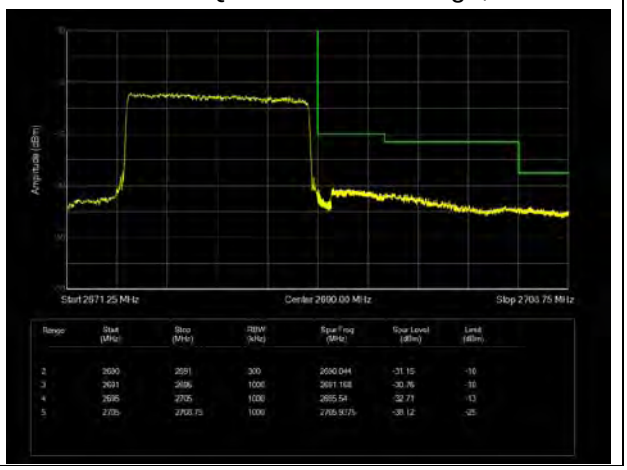
LTE Band 41 64QAM 15MHz CH-High, 1 RB



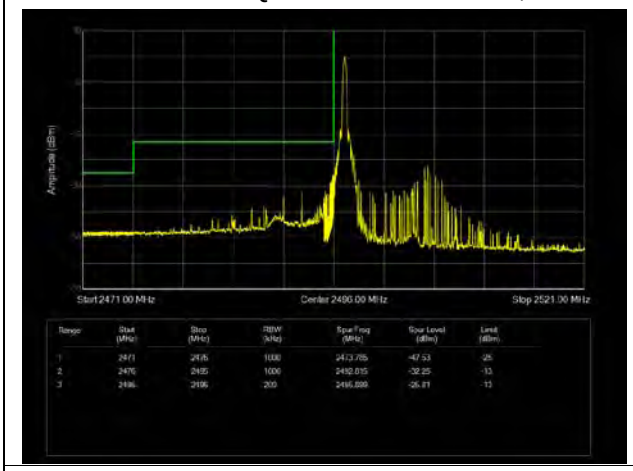
LTE Band 41 64QAM 15MHz CH-Low, 100%RB



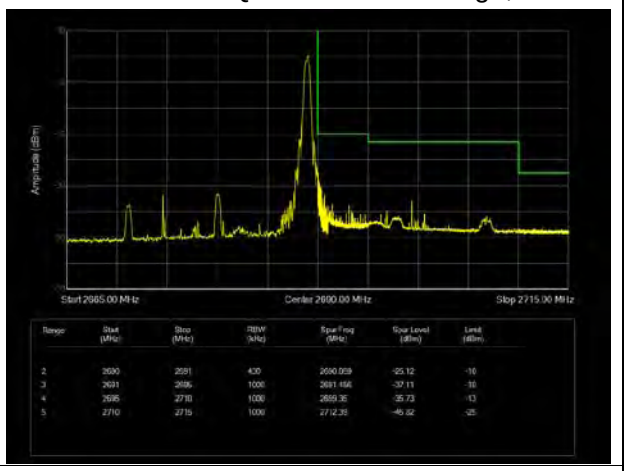
LTE Band 41 64QAM 15MHz CH-High, 100%RB



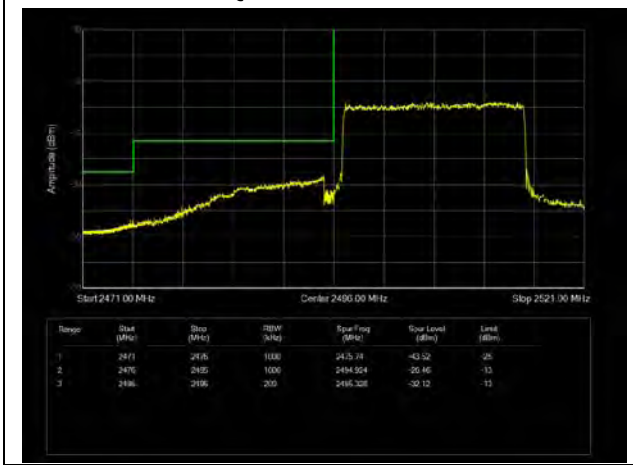
LTE Band 41 64QAM 20MHz CH-Low, RB 1



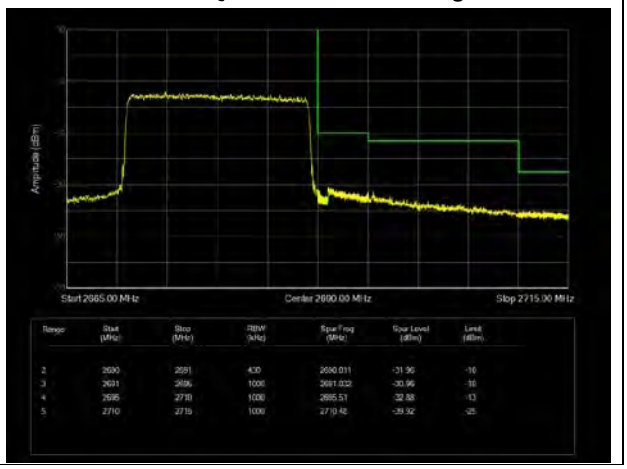
LTE Band 41 64QAM 20MHz CH-High, RB 1



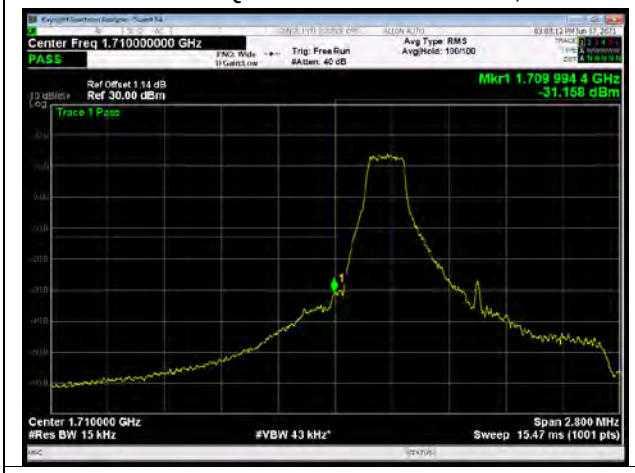
LTE Band 41 64QAM 20MHz CH-Low, 100%RB



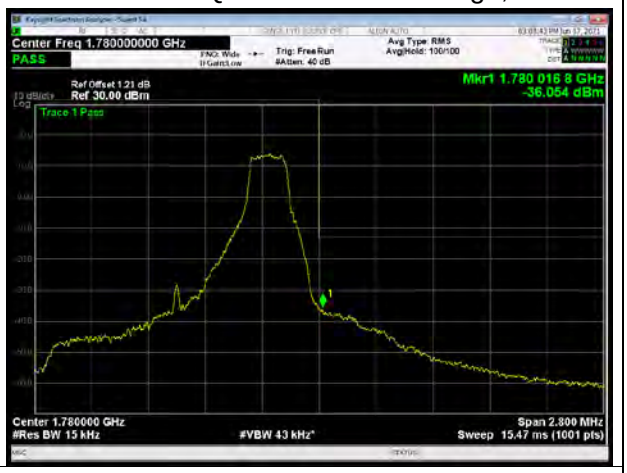
LTE Band 41 64QAM 20MHz CH-High, 100%RB



LTE Band 66 QPSK 1.4MHz CH-Low, 1 RB



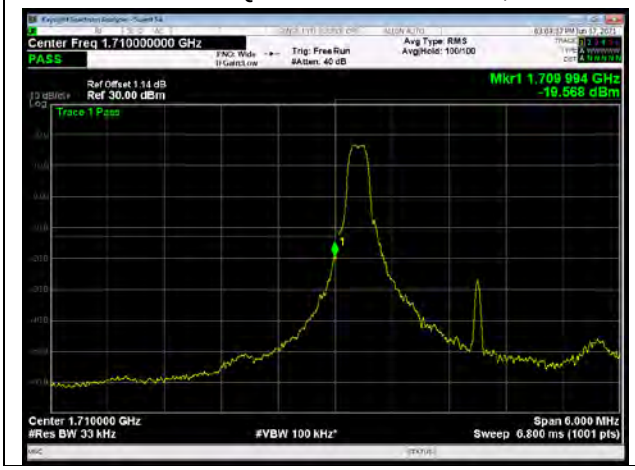
LTE Band 66 QPSK 1.4MHz CH-High, 1 RB



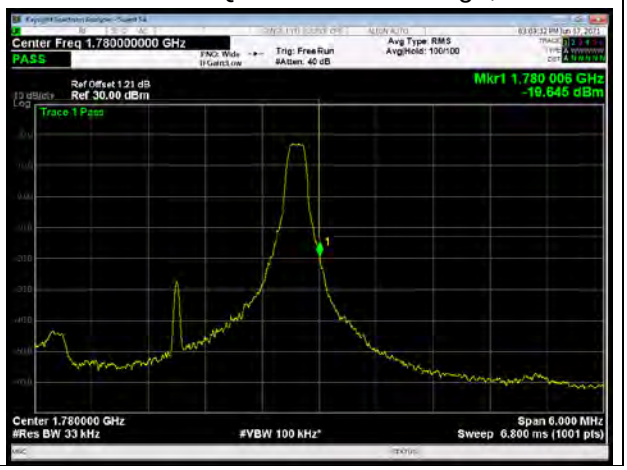
LTE Band 66 QPSK 1.4MHz CH-Low, 100%RB

LTE Band 66 QPSK 1.4MHz CH-High, 100%RB

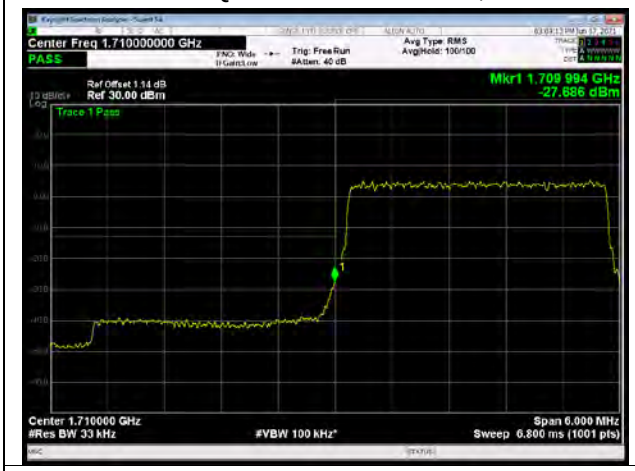
LTE Band 66 QPSK 3MHz CH-Low, 1 RB



LTE Band 66 QPSK 3MHz CH-High, 1 RB

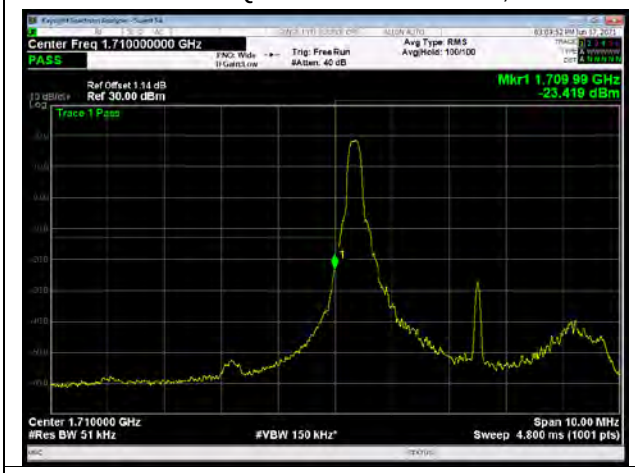


LTE Band 66 QPSK 3MHz CH-Low, 100%RB

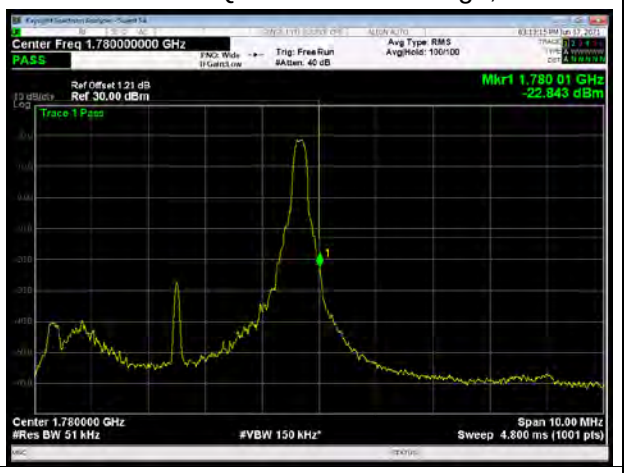


LTE Band 66 QPSK 3MHz CH-High, 100%RB

LTE Band 66 QPSK 5MHz CH-Low, 1 RB

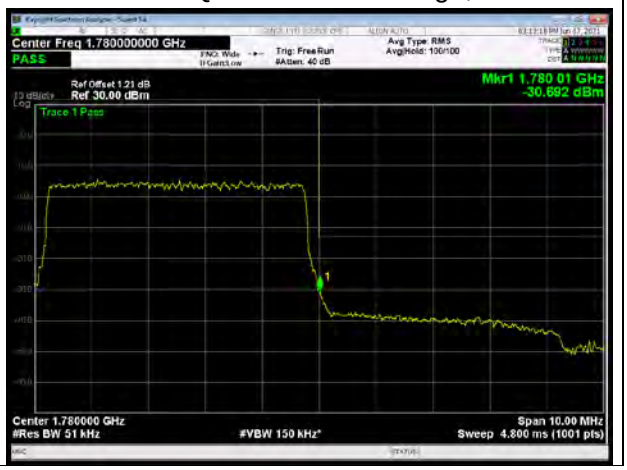


LTE Band 66 QPSK 5MHz CH-High, 1 RB

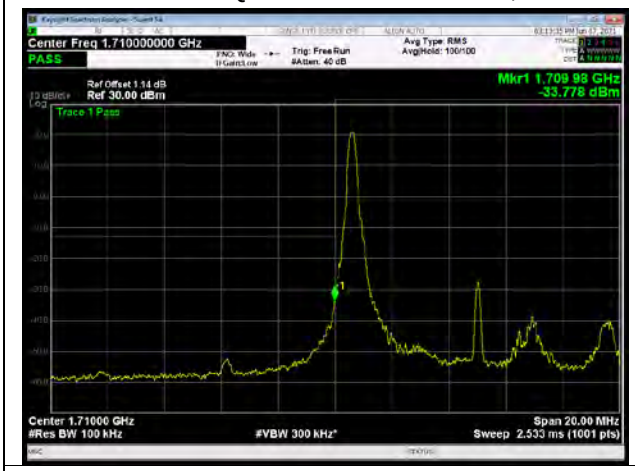


LTE Band 66 QPSK 5MHz CH-Low, 100%RB

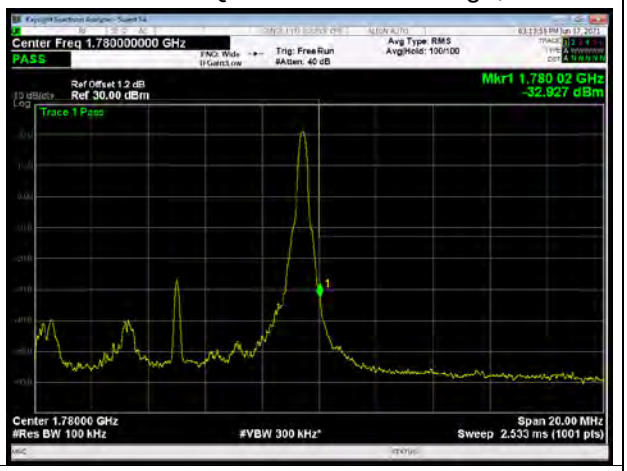
LTE Band 66 QPSK 5MHz CH-High, 100%RB



LTE Band 66 QPSK 10MHz CH-Low, 1 RB



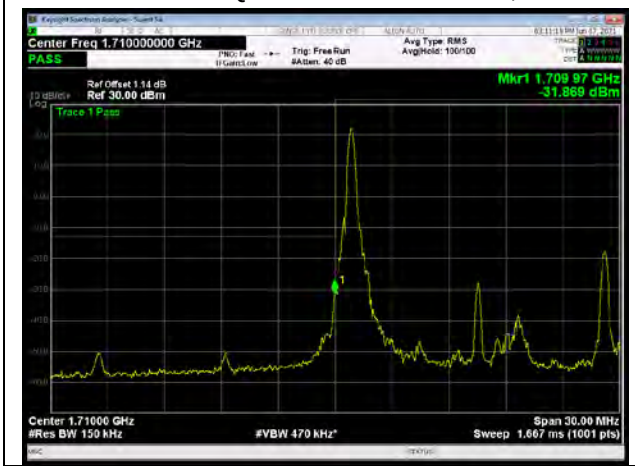
LTE Band 66 QPSK 10MHz CH-High, 1 RB



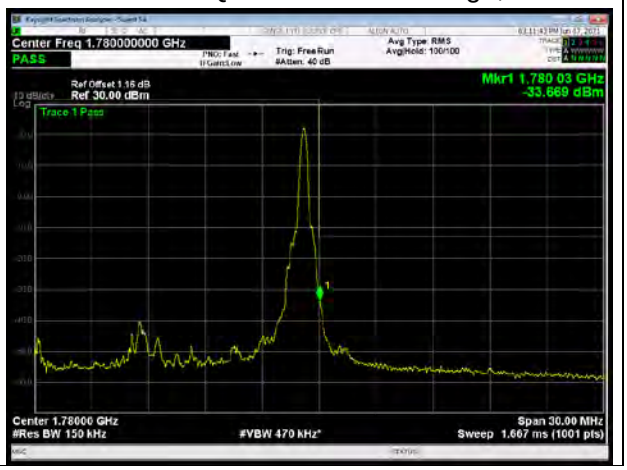
LTE Band 66 QPSK 10MHz CH-Low, 100%RB

LTE Band 66 QPSK 10MHz CH-High, 100%RB

LTE Band 66 QPSK 15MHz CH-Low, 1 RB



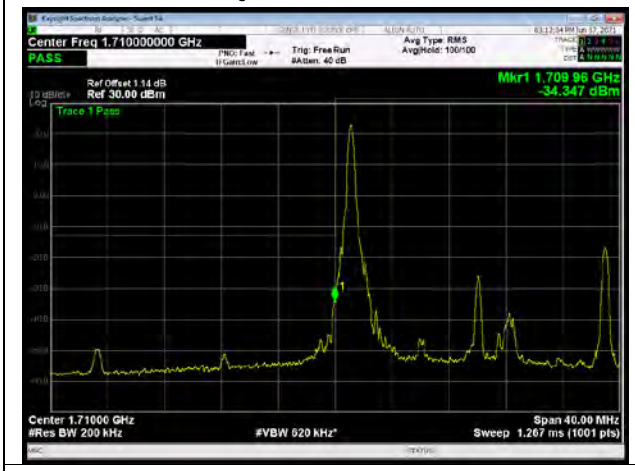
LTE Band 66 QPSK 15MHz CH-High, 1 RB



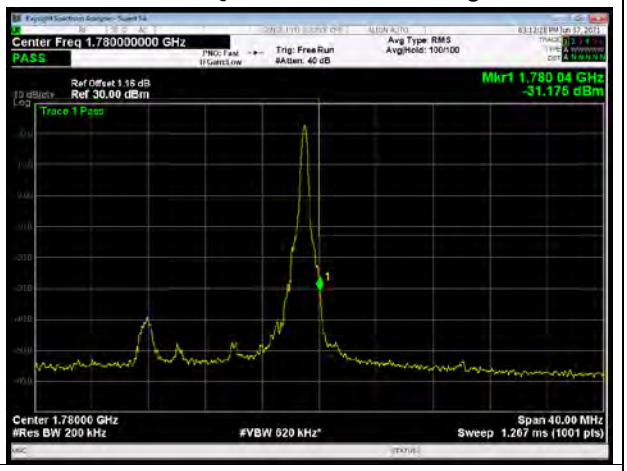
LTE Band 66 QPSK 15MHz CH-Low, 100%RB

LTE Band 66 QPSK 15MHz CH-High, 100%RB

LTE Band 66 QPSK 20MHz CH-Low, 1 RB



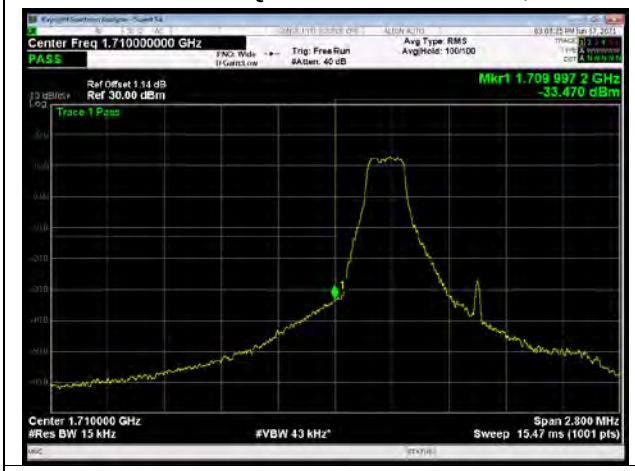
LTE Band 66 QPSK 20MHz CH-High, 1 RB



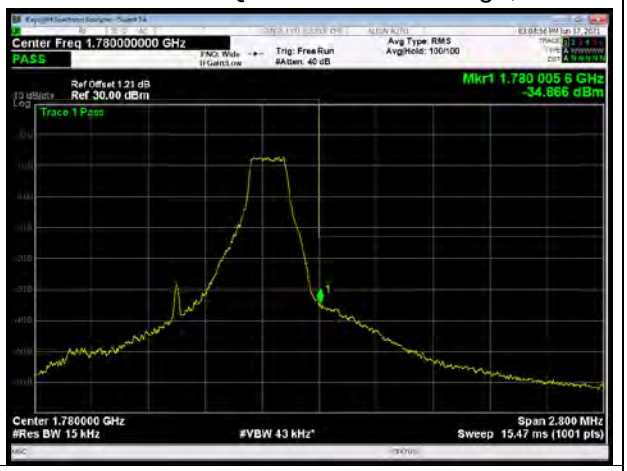
LTE Band 66 QPSK 20MHz CH-Low, 100%RB

LTE Band 66 QPSK 20MHz CH-High, 100%RB

LTE Band 66 16QAM 1.4MHz CH-Low, 1 RB



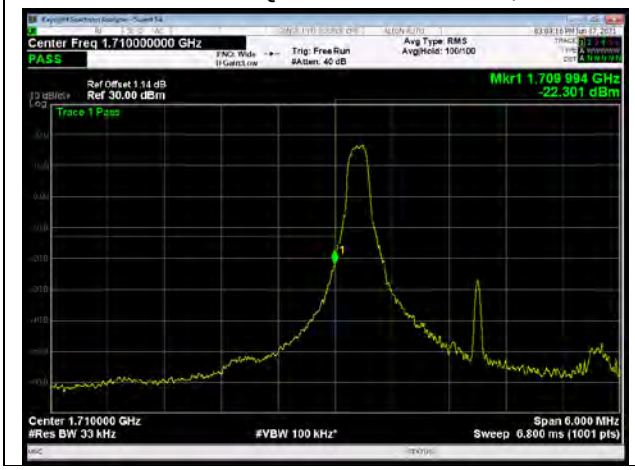
LTE Band 66 16QAM 1.4MHz CH-High, 1 RB



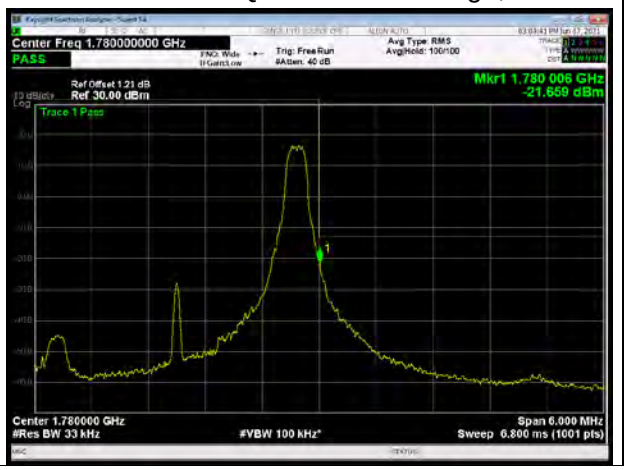
LTE Band 66 16QAM 1.4MHz CH-Low, 100%RB

LTE Band 66 16QAM 1.4MHz CH-High,100%RB

LTE Band 66 16QAM 3MHz CH-Low, 1 RB

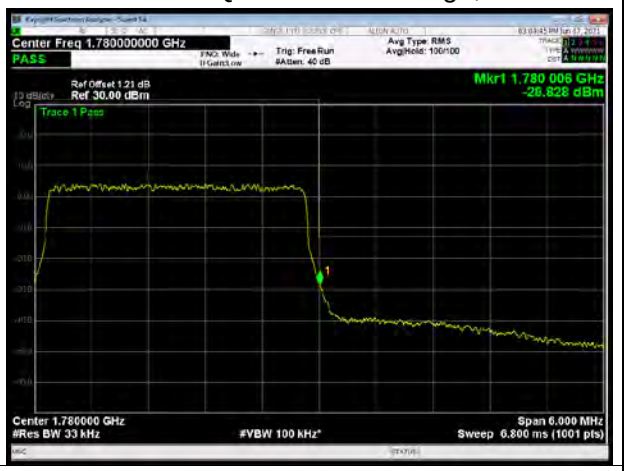


LTE Band 66 16QAM 3MHz CH-High, 1 RB

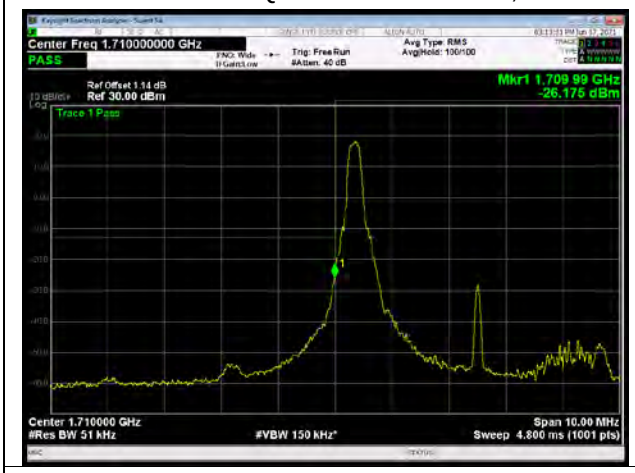


LTE Band 66 16QAM 3MHz CH-Low, 100%RB

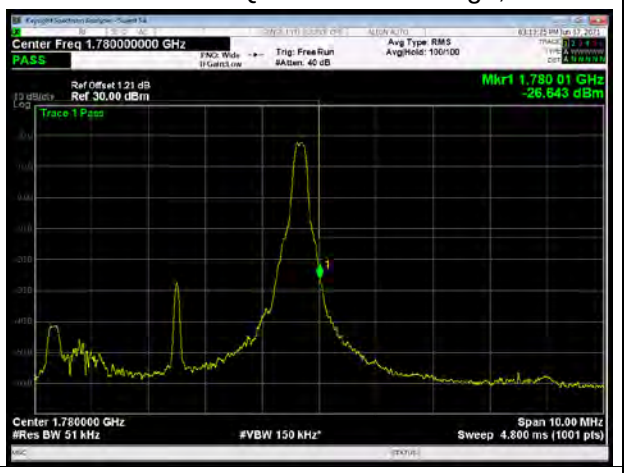
LTE Band 66 16QAM 3MHz CH-High, 100%RB



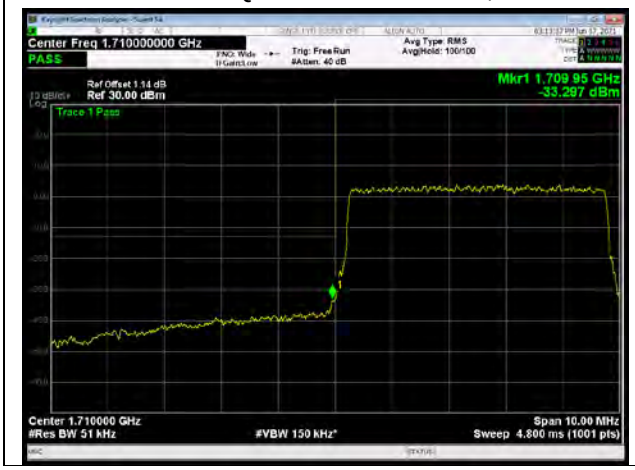
LTE Band 66 16QAM 5MHz CH-Low, 1 RB



LTE Band 66 16QAM 5MHz CH-High, 1 RB

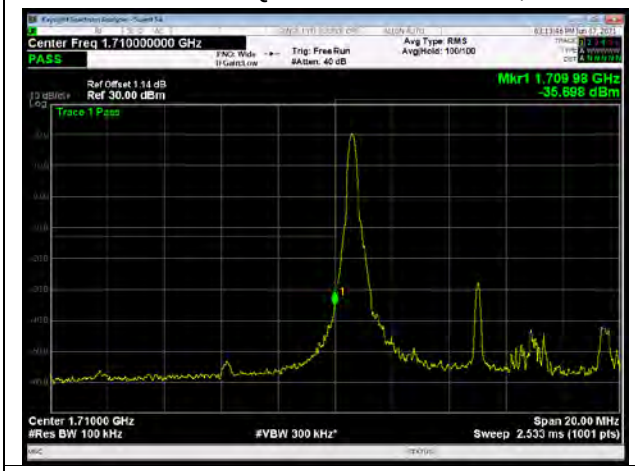


LTE Band 66 16QAM 5MHz CH-Low, 100%RB

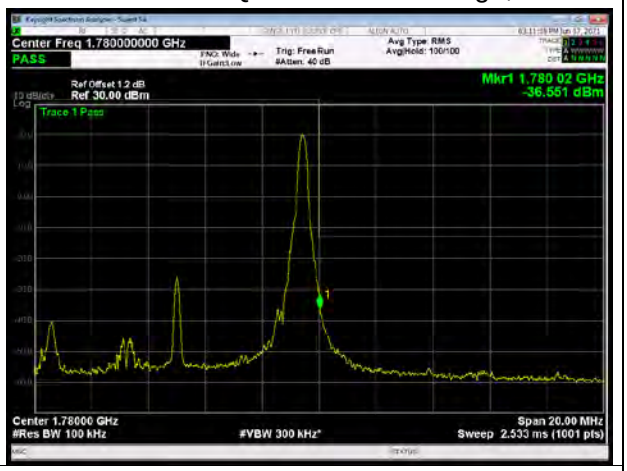


LTE Band 66 16QAM 5MHz CH-High, 100%RB

LTE Band 66 16QAM 10MHz CH-Low, 1 RB



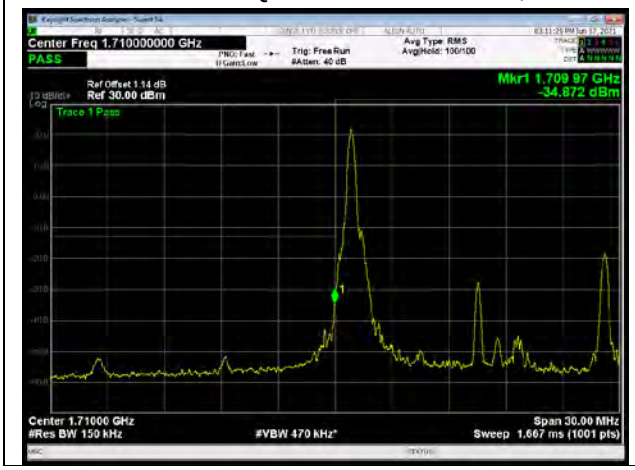
LTE Band 66 16QAM 10MHz CH-High, 1 RB



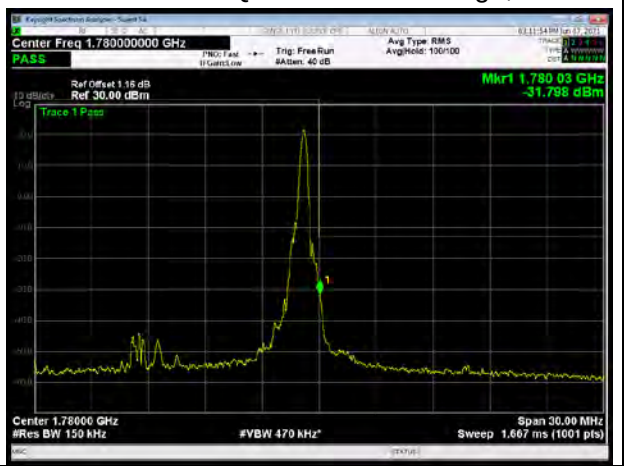
LTE Band 66 16QAM 10MHz CH-Low, 100%RB

LTE Band 66 16QAM 10MHz CH-High, 100%RB

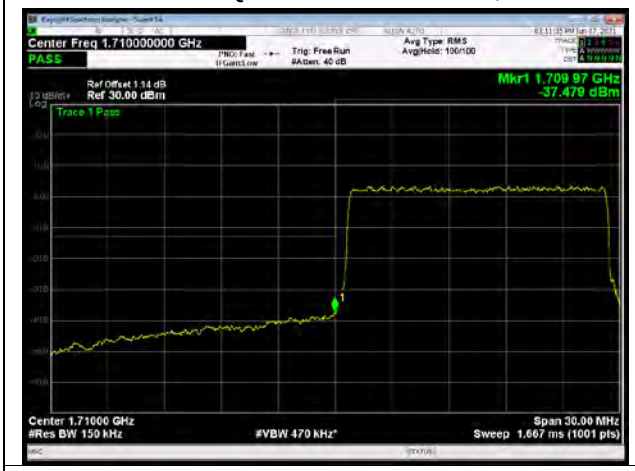
LTE Band 66 16QAM 15MHz CH-Low, 1 RB



LTE Band 66 16QAM 15MHz CH-High, 1 RB

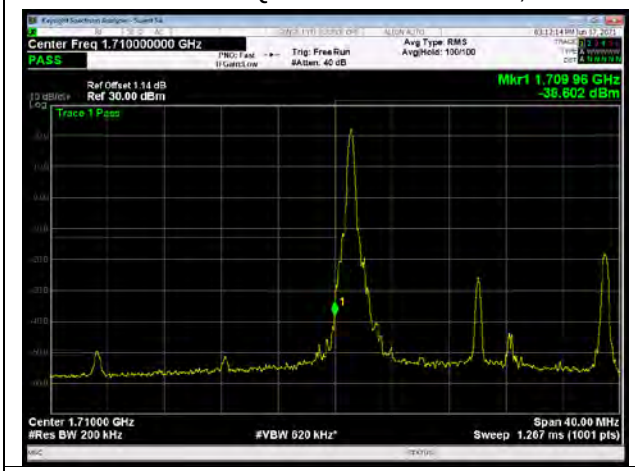


LTE Band 66 16QAM 15MHz CH-Low, 100%RB

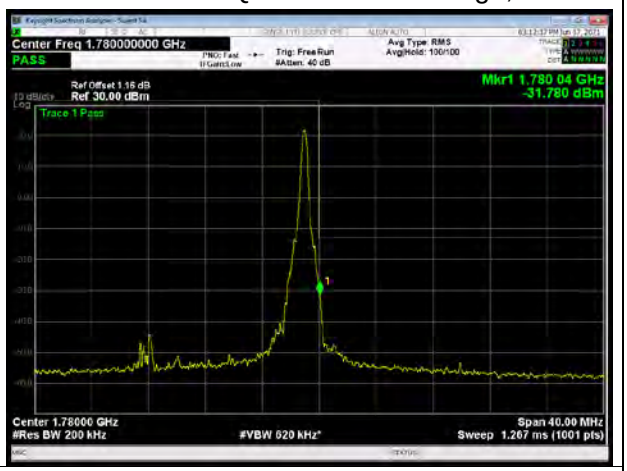


LTE Band 66 16QAM 15MHz CH-High, 100%RB

LTE Band 66 16QAM 20MHz CH-Low, 1 RB

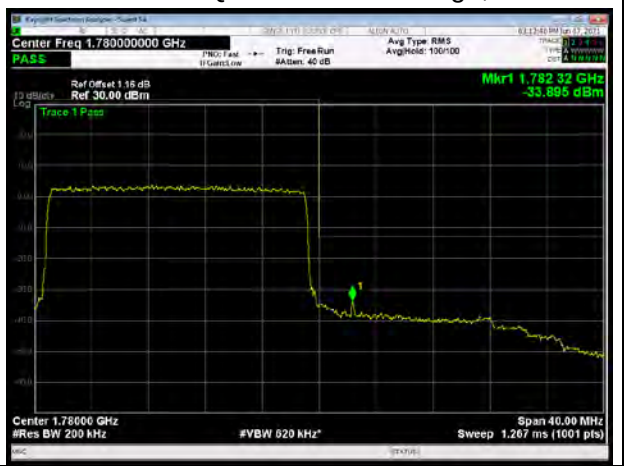


LTE Band 66 16QAM 20MHz CH-High, 1 RB

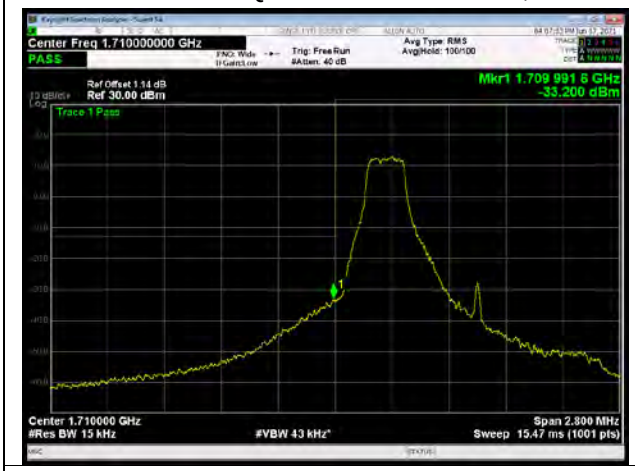


LTE Band 66 16QAM 20MHz CH-Low, 100%RB

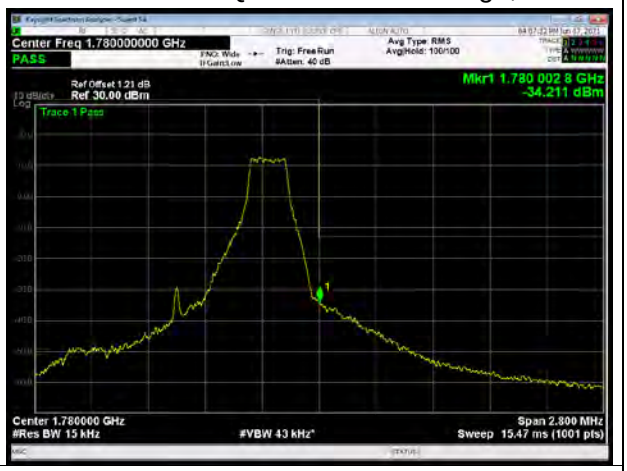
LTE Band 66 16QAM 20MHz CH-High, 100%RB



LTE Band 66 64QAM 1.4MHz CH-Low, 1 RB



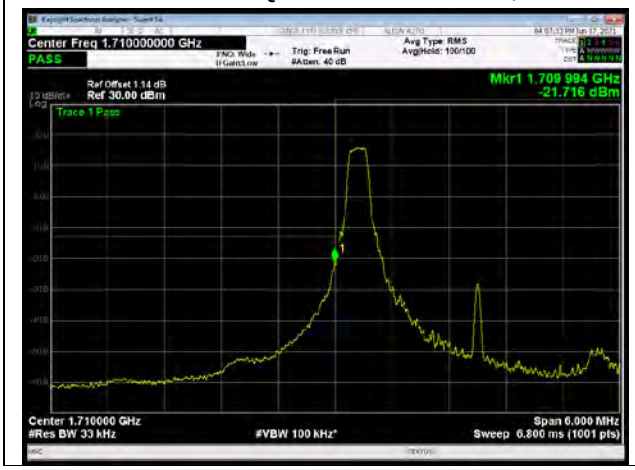
LTE Band 66 64QAM 1.4MHz CH-High, 1 RB



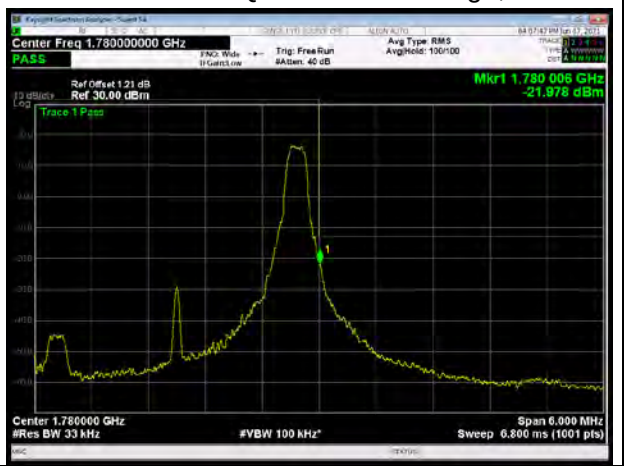
LTE Band 66 64QAM 1.4MHz CH-Low, 100%RB

LTE Band 66 64QAM 1.4MHz CH-High,100%RB

LTE Band 66 64QAM 3MHz CH-Low, 1 RB

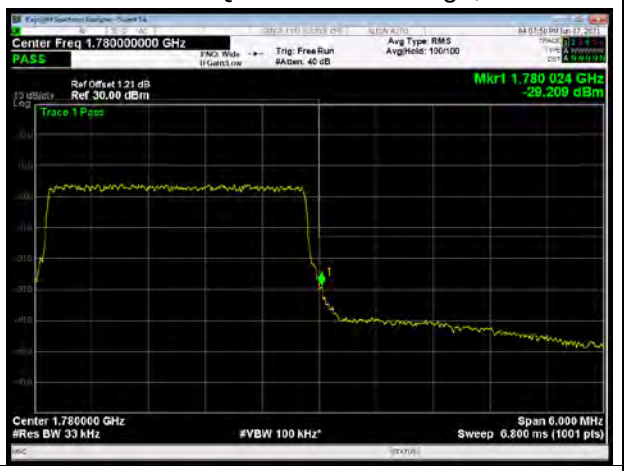


LTE Band 66 64QAM 3MHz CH-High, 1 RB

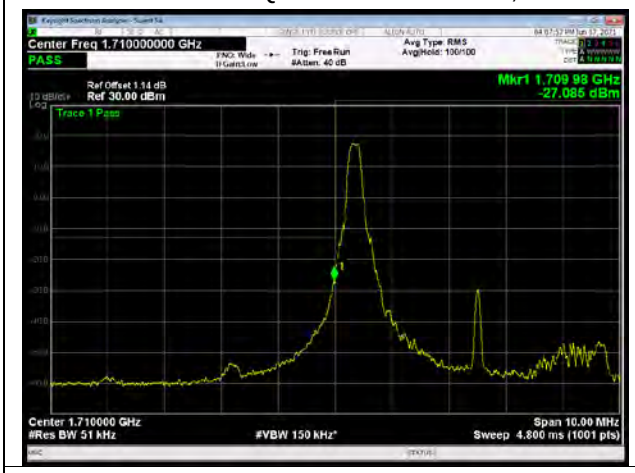


LTE Band 66 64QAM 3MHz CH-Low, 100%RB

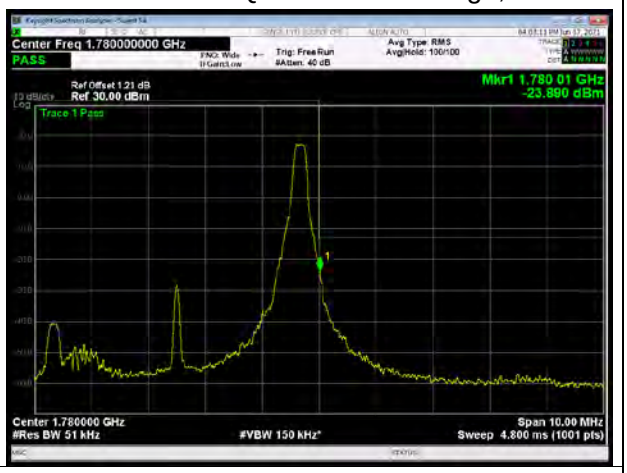
LTE Band 66 64QAM 3MHz CH-High, 100%RB



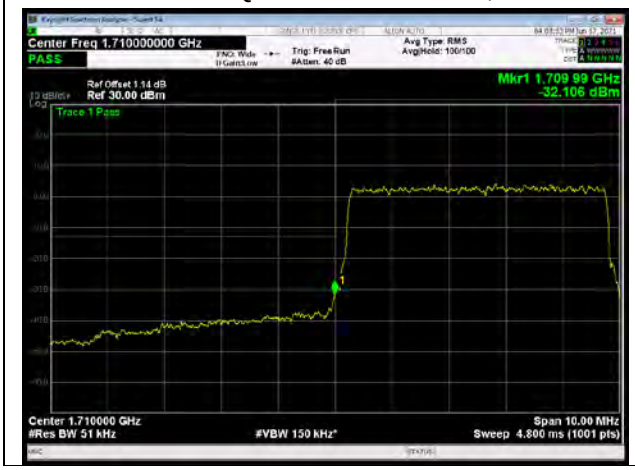
LTE Band 66 64QAM 5MHz CH-Low, 1 RB



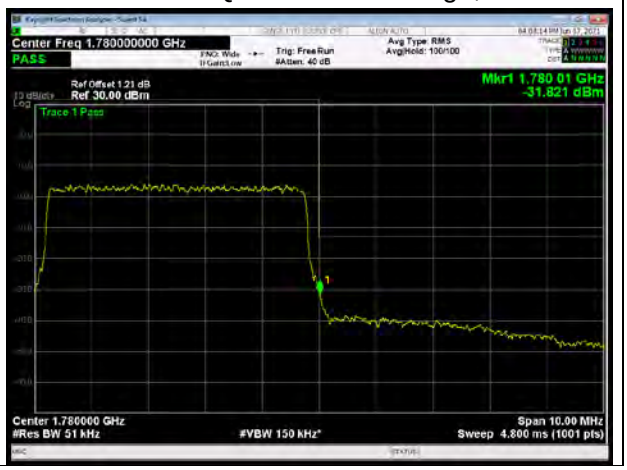
LTE Band 66 64QAM 5MHz CH-High, 1 RB



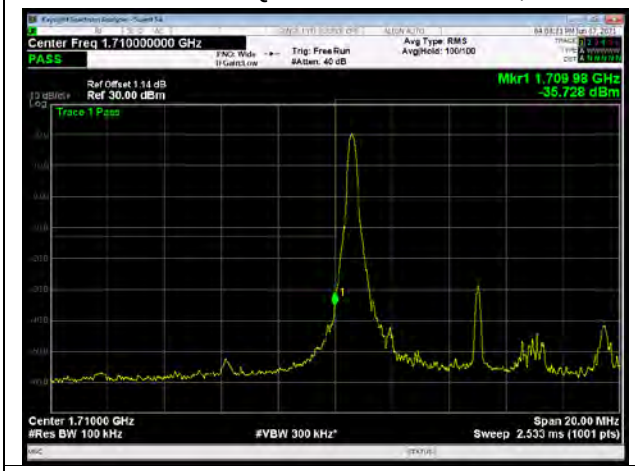
LTE Band 66 64QAM 5MHz CH-Low, 100%RB



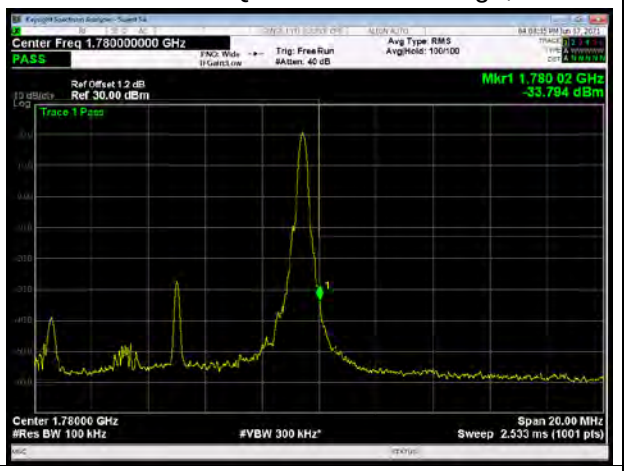
LTE Band 66 64QAM 5MHz CH-High, 100%RB



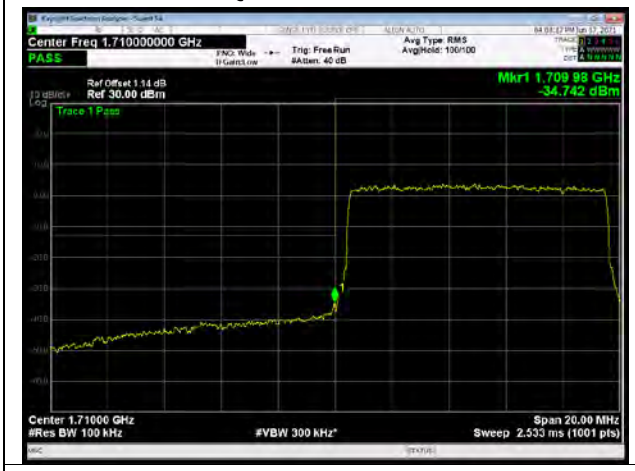
LTE Band 66 64QAM 10MHz CH-Low, 1 RB



LTE Band 66 64QAM 10MHz CH-High, 1 RB

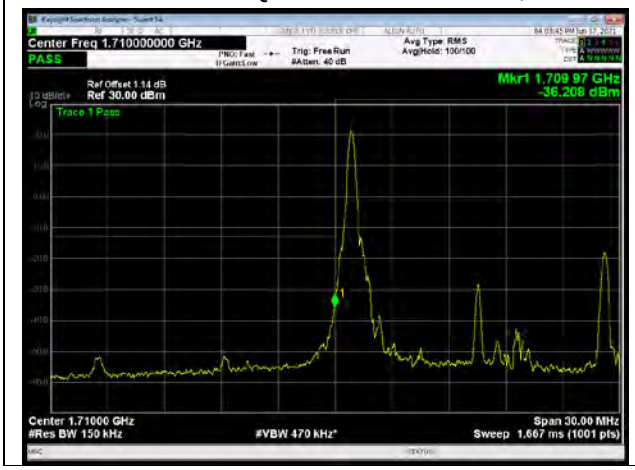


LTE Band 66 64QAM 10MHz CH-Low, 100%RB

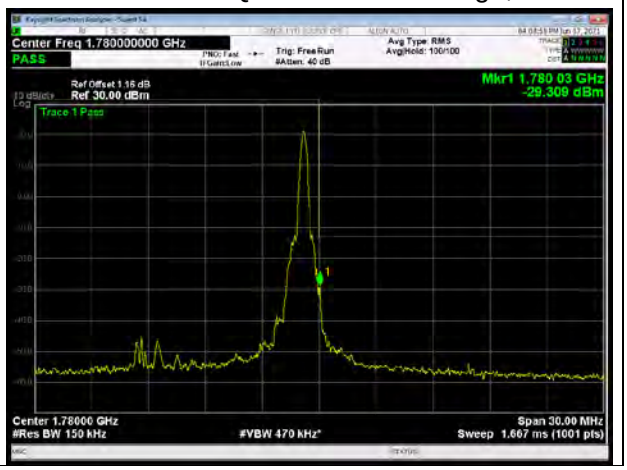


LTE Band 66 64QAM 10MHz CH-High, 100%RB

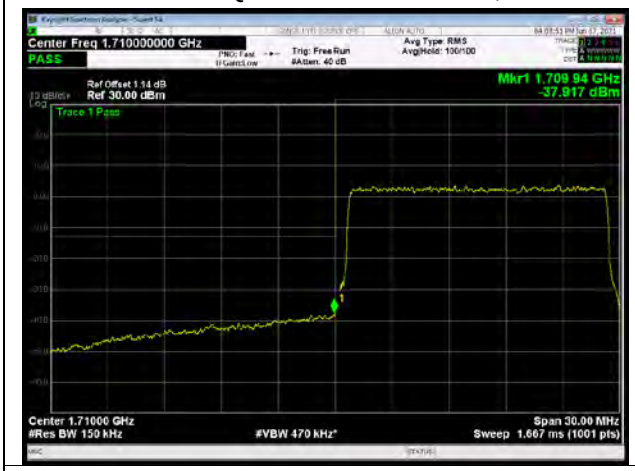
LTE Band 66 64QAM 15MHz CH-Low, 1 RB



LTE Band 66 64QAM 15MHz CH-High, 1 RB

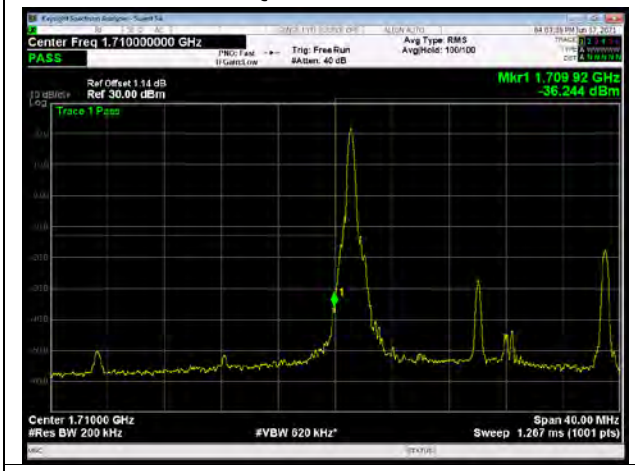


LTE Band 66 64QAM 15MHz CH-Low, 100%RB

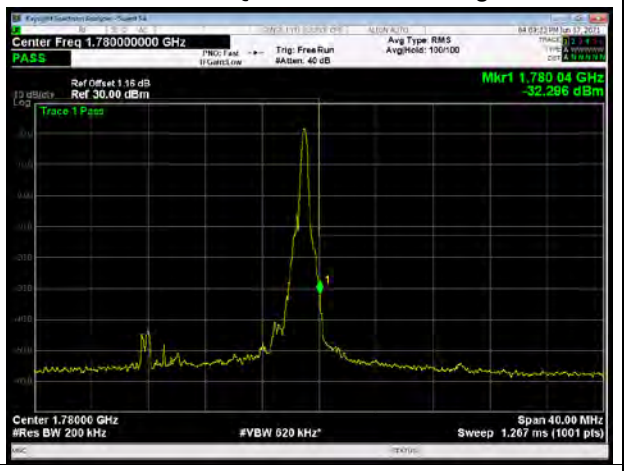


LTE Band 66 64QAM 15MHz CH-High, 100%RB

LTE Band 66 64QAM 20MHz CH-Low, 1 RB



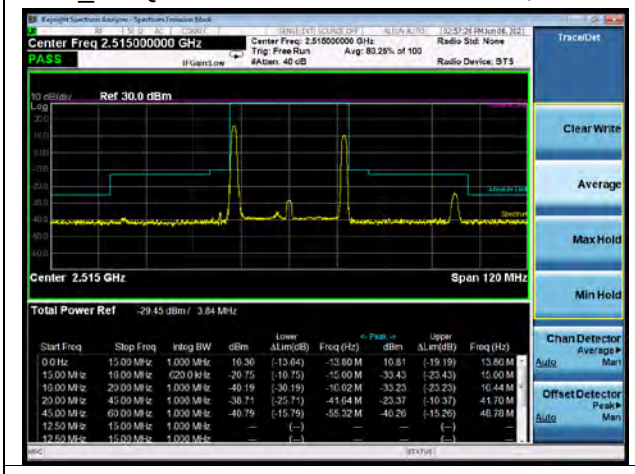
LTE Band 66 64QAM 20MHz CH-High, 1 RB



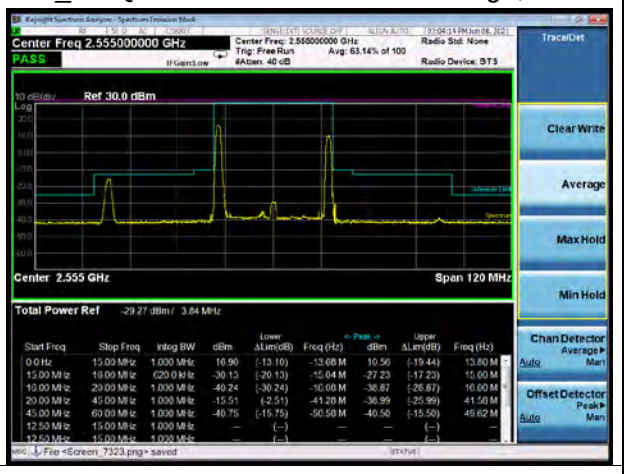
LTE Band 66 64QAM 20MHz CH-Low, 100%RB

LTE Band 66 64QAM 20MHz CH-High, 100%RB

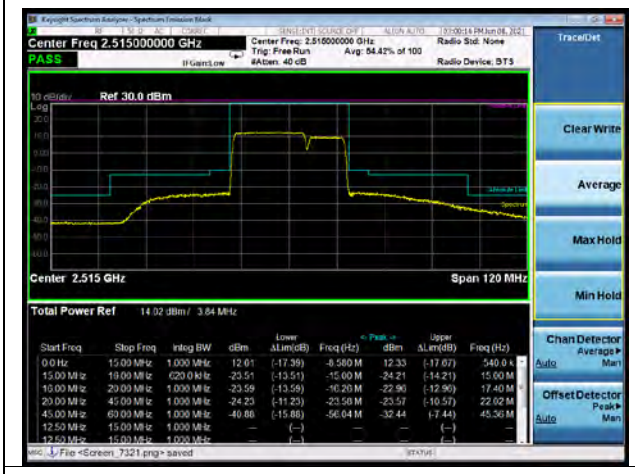
CA_7C QPSK 20MHz+10MHz CH-Low, RB 1



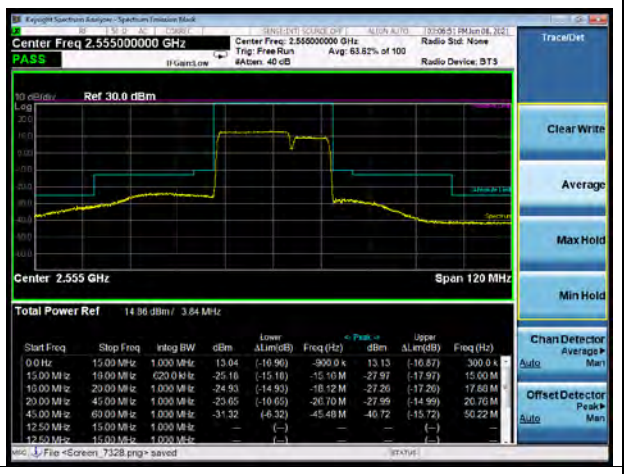
CA_7C QPSK 20MHz+10MHz CH- High, RB 1



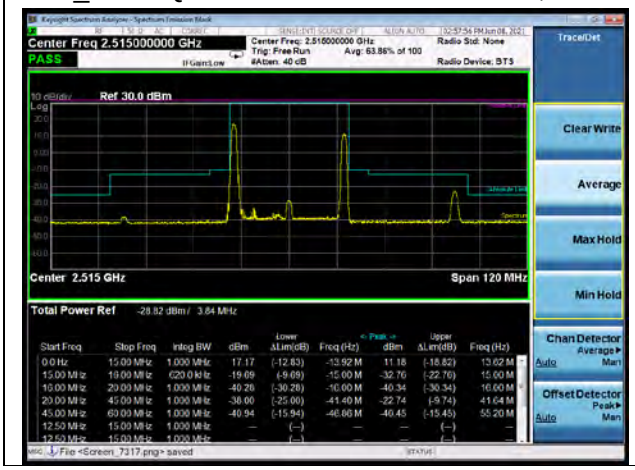
CA_7C QPSK 20MHz+10MHz CH-Low, 100%RB



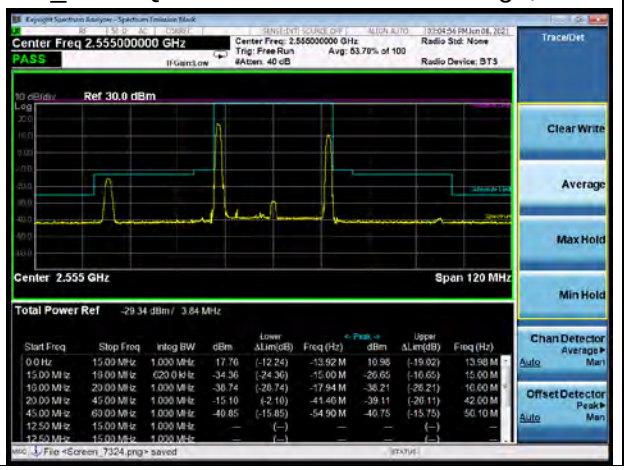
CA_7C QPSK 20MHz+10MHz CH- High, 100%RB



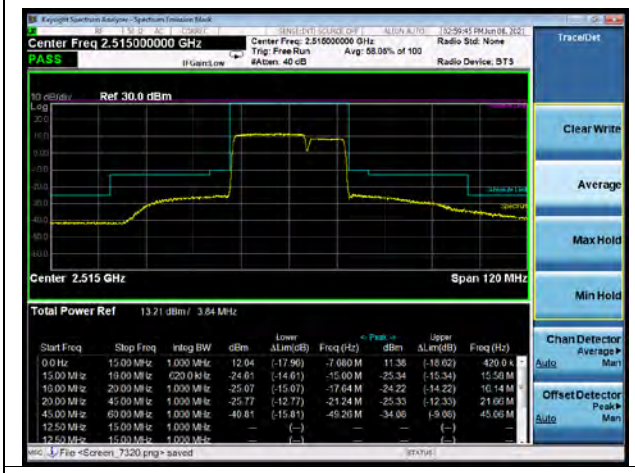
CA_7C 16QAM 20MHz+10MHz CH-Low, 1RB



CA_7C 16QAM 20MHz+10MHz CH- High, 1RB

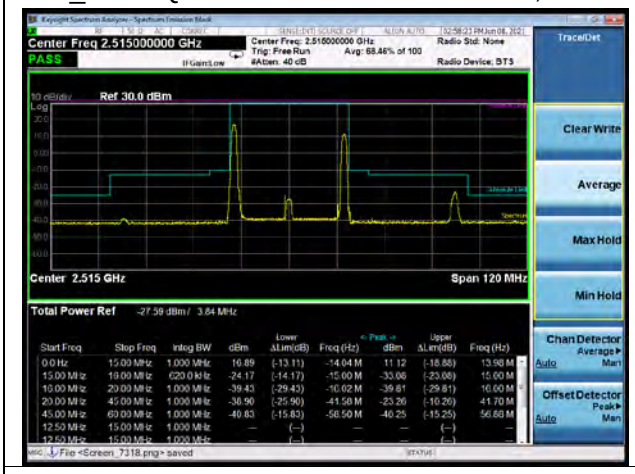


CA_7C 16QAM 20MHz+10MHz CH-Low, 100%RB

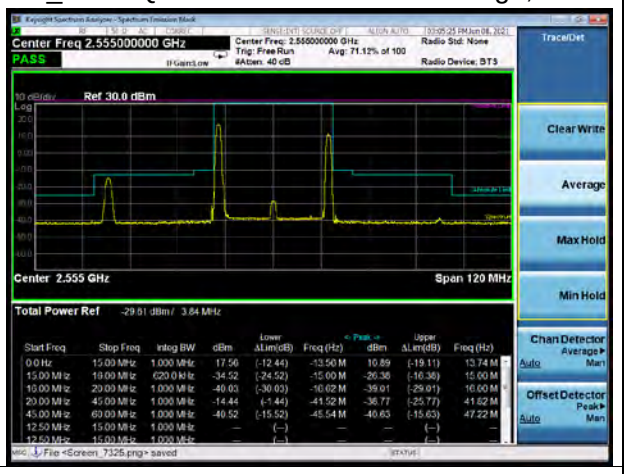


CA_7C 16QAM 20MHz+10MHz CH- High, 100%RB

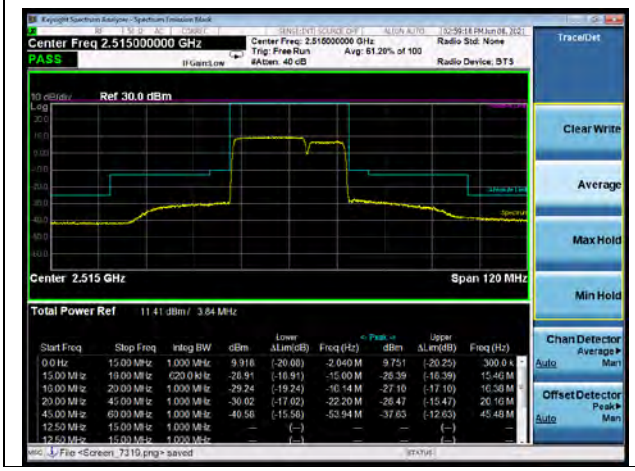
CA_7C 64QAM 20MHz+10MHz CH-Low, RB 1



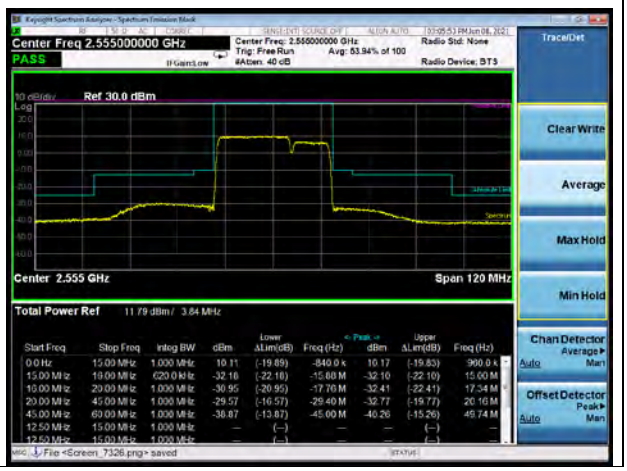
CA_7C 64QAM 20MHz+10MHz CH- High, RB 1



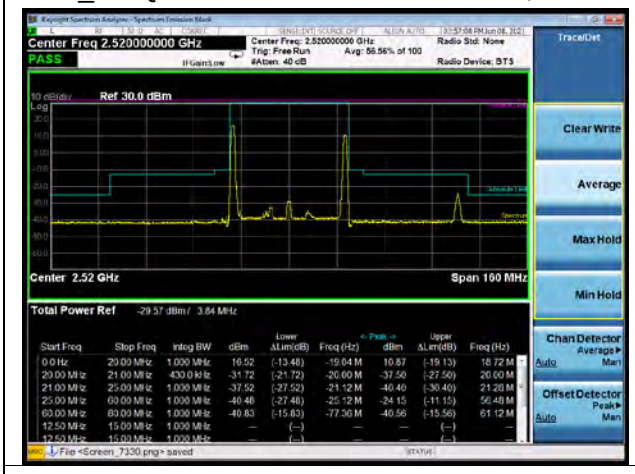
CA_7C 64QAM 20MHz+10MHz CH-Low, 100%RB



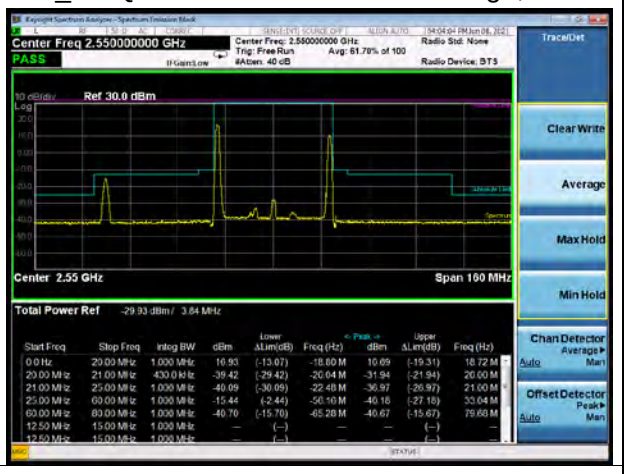
CA_7C 64QAM 20MHz+10MHz CH- High, 100%RB



CA_7C QPSK 20MHz+20MHz CH-Low, RB 1



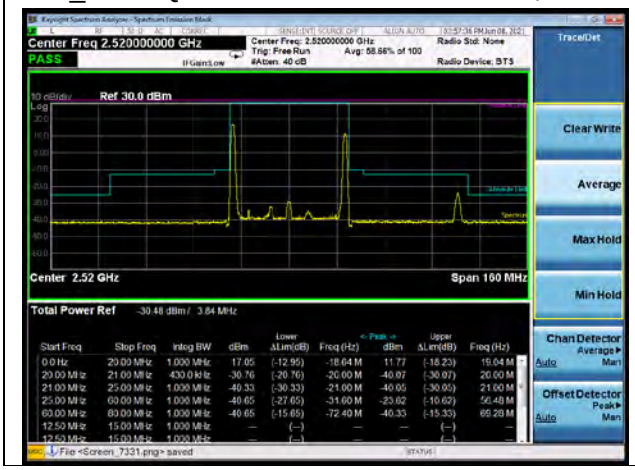
CA_7C QPSK 20MHz+20MHz CH- High, RB 1



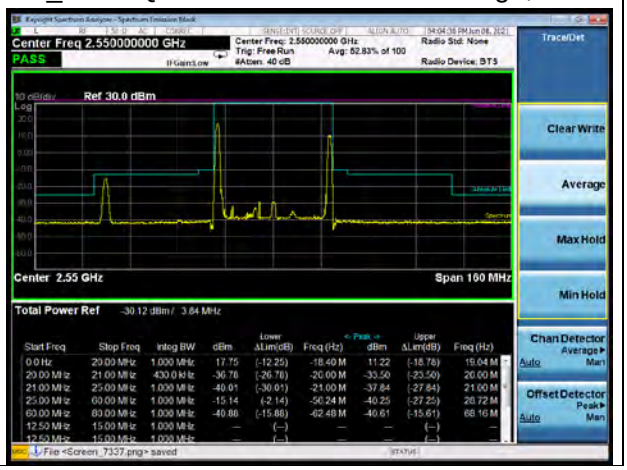
CA_7C QPSK 20MHz+20MHz CH-Low, 100%RB

CA_7C QPSK 20MHz+20MHz CH- High, 100%RB

CA_7C 16QAM 20MHz+20MHz CH-Low, RB 1



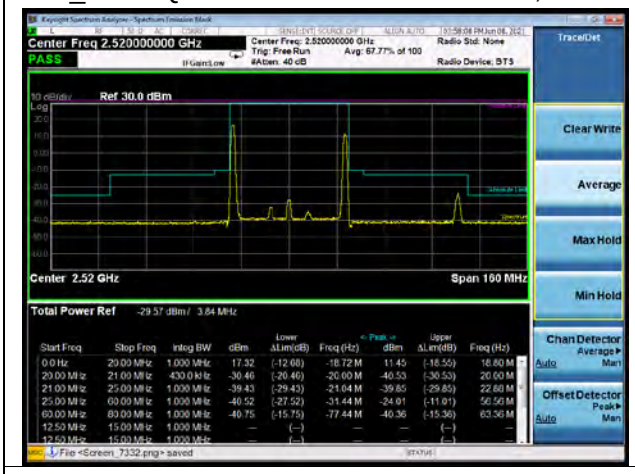
CA_7C 16QAM 20MHz+20MHz CH- High, RB 1



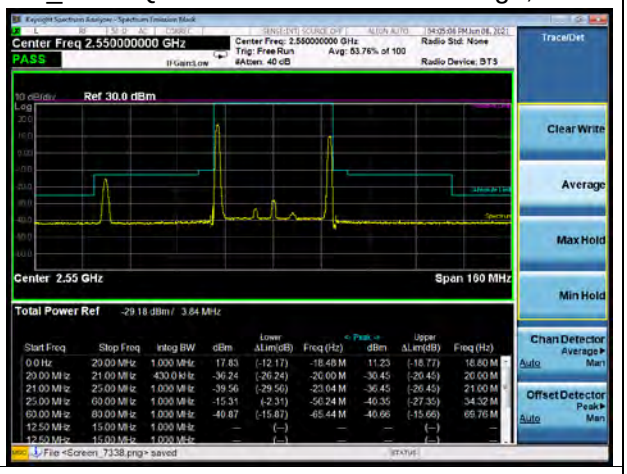
CA_7C 16QAM 20MHz+20MHz CH-Low, 100%RB

CA_7C 16QAM 20MHz+20MHz CH- High, 100%RB

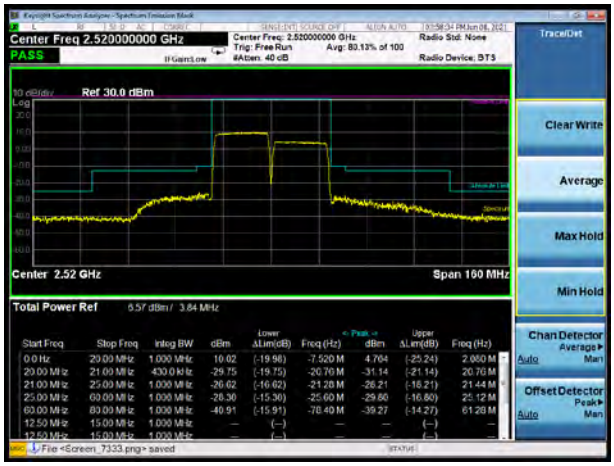
CA_7C 64QAM 20MHz+20MHz CH-Low, RB 1



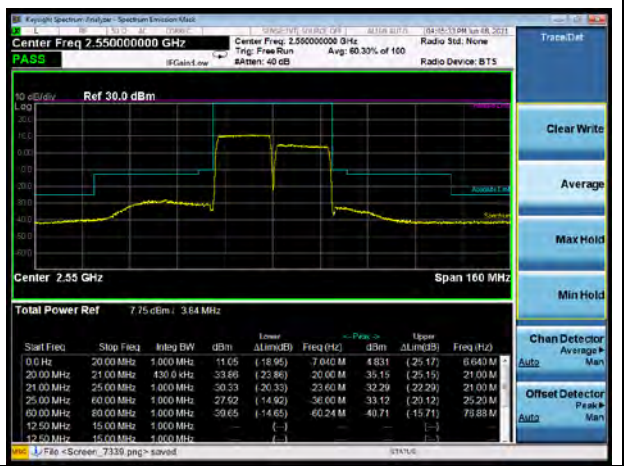
CA_7C 64QAM 20MHz+20MHz CH- High, RB 1



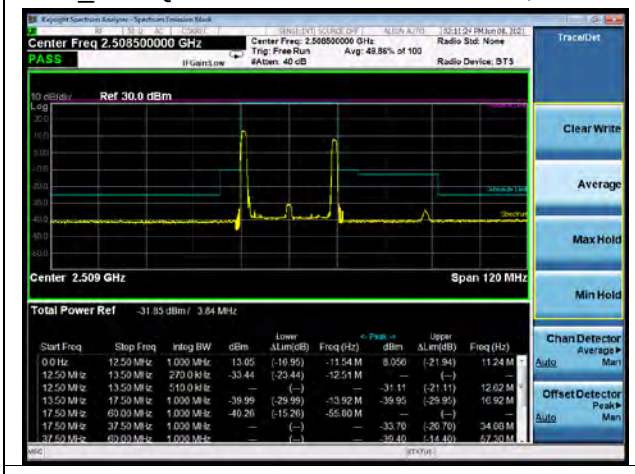
CA_7C 64QAM 20MHz+20MHz CH-Low, 100%RB



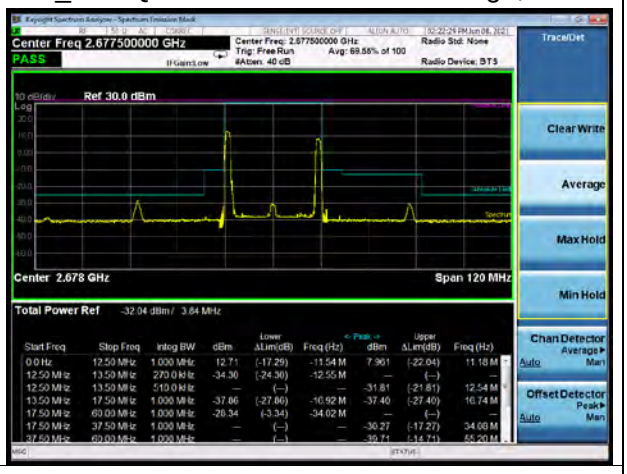
CA_7C 64QAM 20MHz+20MHz CH- High, 100%RB



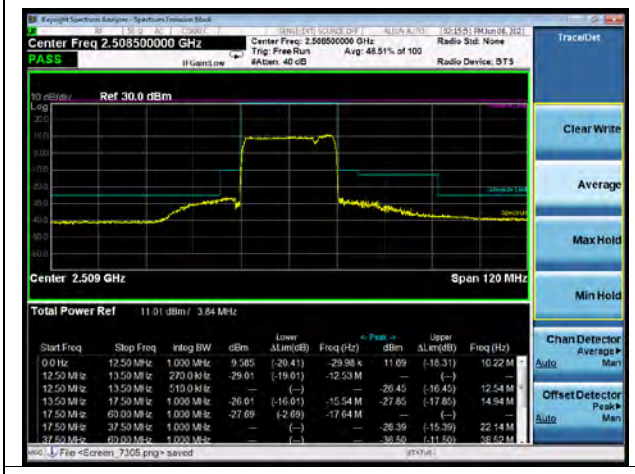
CA_41C QPSK 20MHz+5MHz CH-Low, RB 1



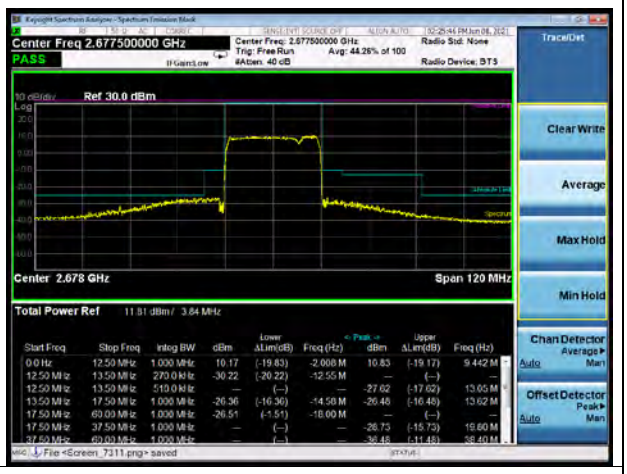
CA_41C QPSK 20MHz+5MHz CH- High, RB 1



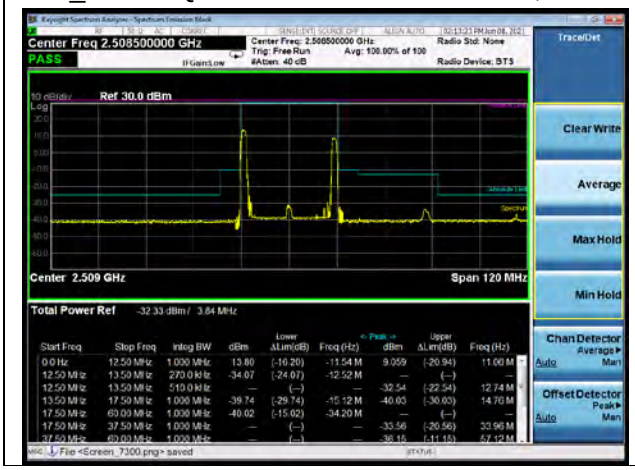
CA_41C QPSK 20MHz+5MHz CH-Low, 100%RB



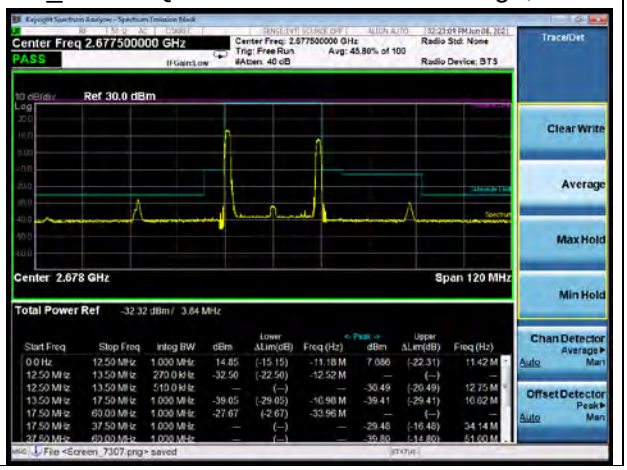
CA_41C QPSK 20MHz+5MHz CH- High, 100%RB



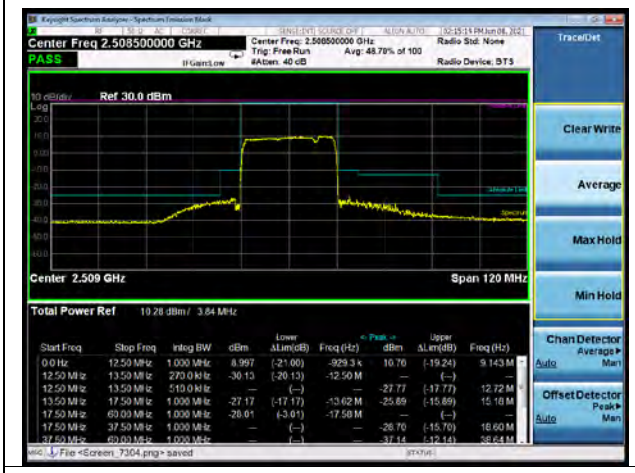
CA_41C 16QAM 20MHz+5MHz CH-Low, RB 1



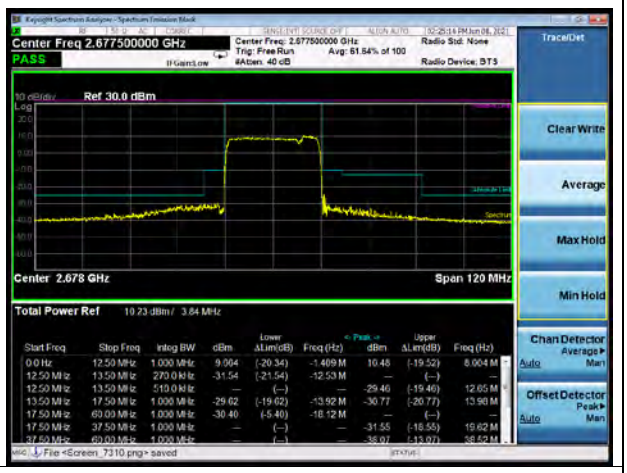
CA_41C 16QAM 20MHz+5MHz CH- High, RB 1



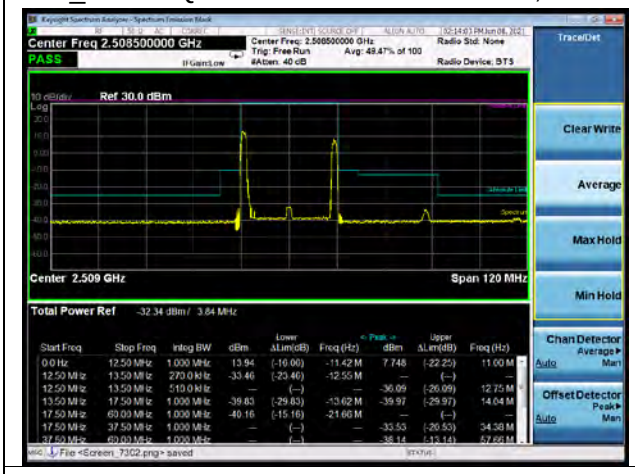
CA_41C 16QAM 20MHz+5MHz CH-Low, 100%RB



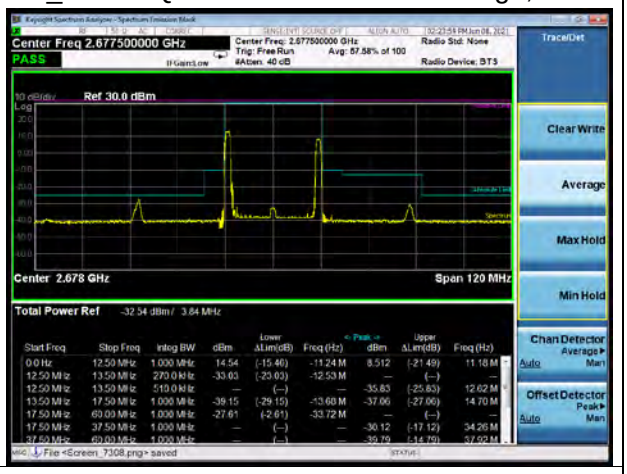
CA_41C 16QAM 20MHz+5MHz CH- High, 100%RB



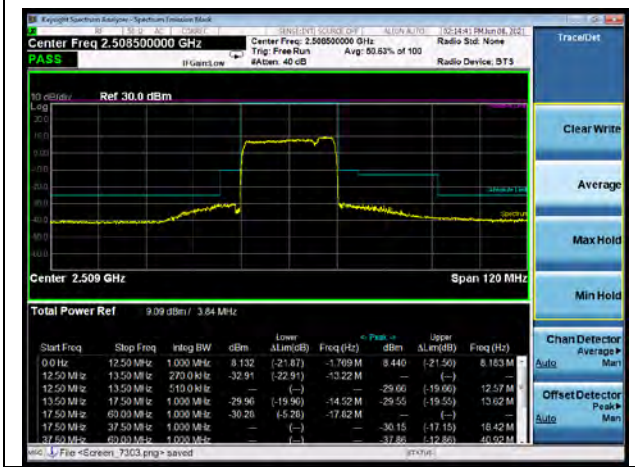
CA_41C 64QAM 20MHz+5MHz CH-Low, RB 1



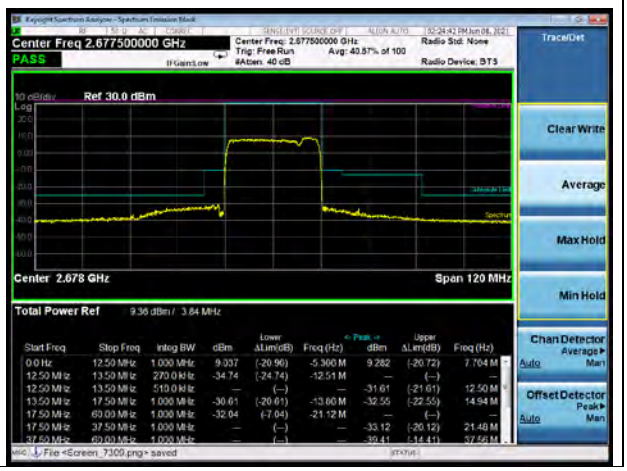
CA_41C 64QAM 20MHz+5MHz CH- High, RB 1



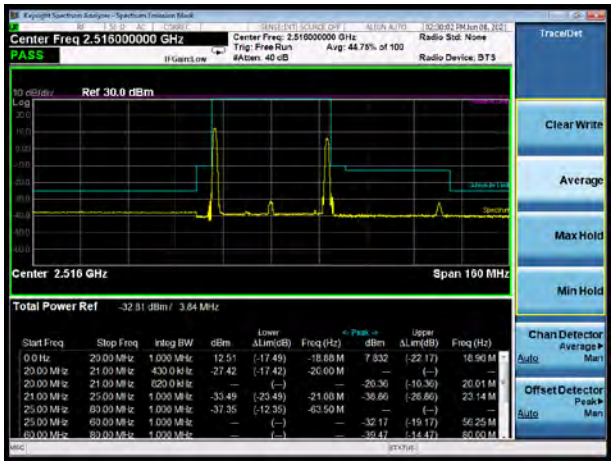
CA_41C 64QAM 20MHz+5MHz CH-Low, 100%RB



CA_41C 64QAM 20MHz+5MHz CH- High, 100%RB



CA_41C QPSK 20MHz+20MHz CH-Low, RB 1

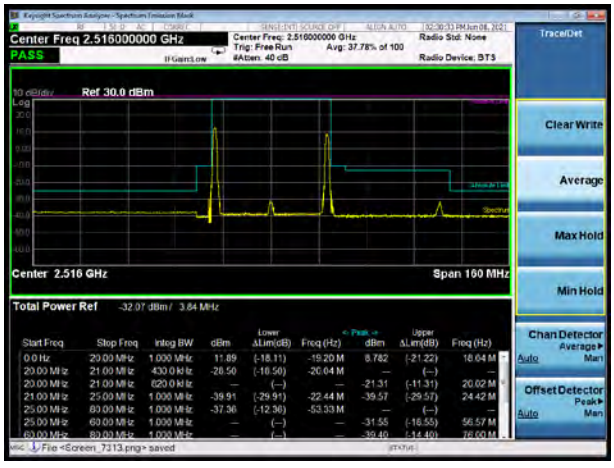


CA_41C QPSK 20MHz+20MHz CH- High, RB 1

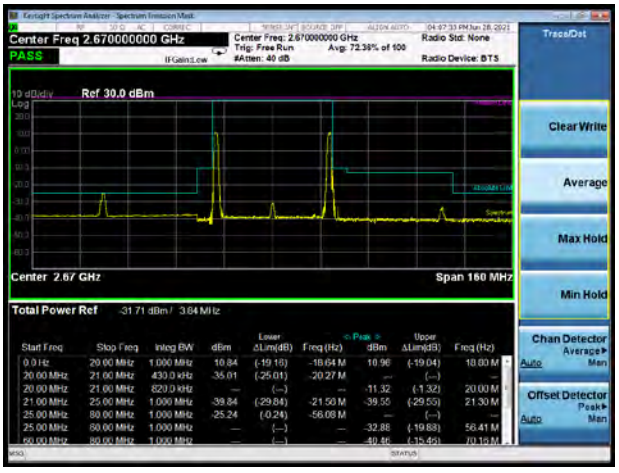
CA_41C QPSK 20MHz+20MHz CH-Low, 100%RB

CA_41C QPSK 20MHz+20MHz CH- High, 100%RB

CA_41C 16QAM 20MHz+20MHz CH-Low, RB 1



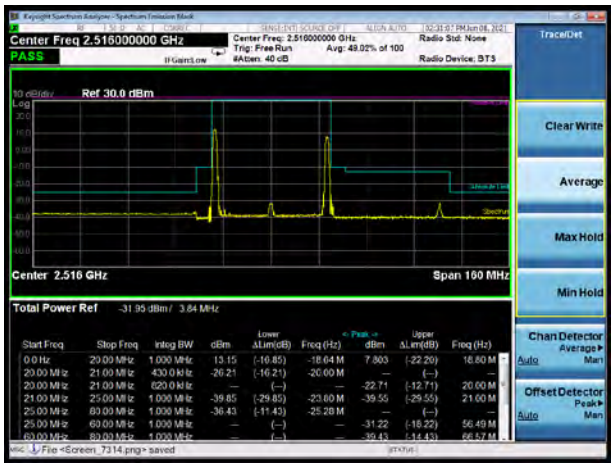
CA_41C 16QAM 20MHz+20MHz CH- High, RB 1



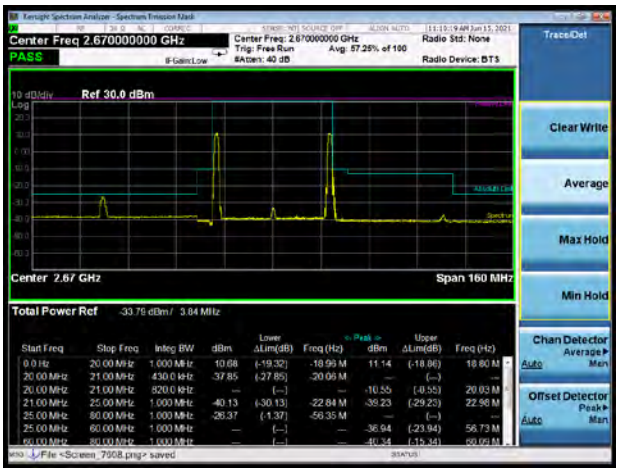
CA_41C 16QAM 20MHz+20MHz CH-Low, 100%RB

CA_41C 16QAM 20MHz+20MHz CH- High, 100%RB

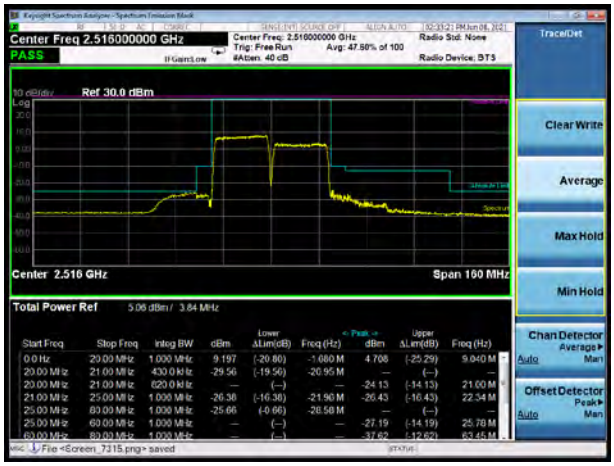
CA_41C 64QAM 20MHz+20MHz CH-Low, RB 1



CA_41C 64QAM 20MHz+20MHz CH- High, RB 1



CA_41C 64QAM 20MHz+20MHz CH-Low, 100%RB



CA_41C 64QAM 20MHz+20MHz CH- High, 100%RB

5.4 Peak-to-Average Power Ratio (PAPR)

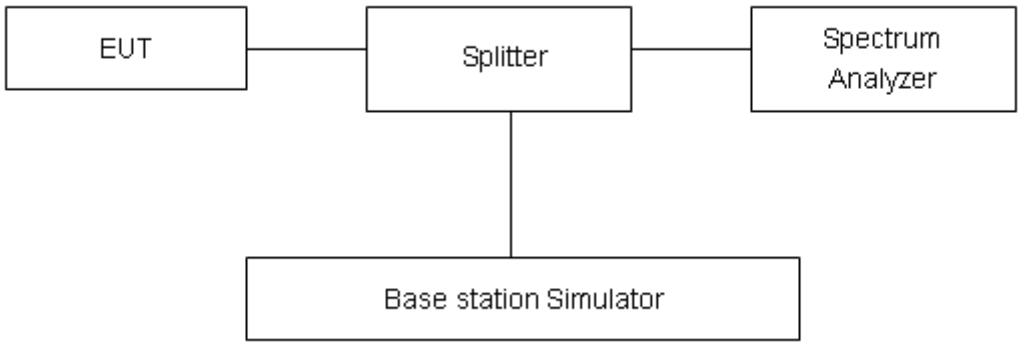
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

Measure the total peak power and record as PPk. And measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (*e.g.*, dBm). Determine the PAPR from:
PAPR (dB) = PPk (dBm) - PAvg (dBm).

Test Setup



Limits

Rule Part 27.50(d)(5) Equipment employed must be authorized in accordance with the provisions of 24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for thenormal distribution is with the coverage factor k = 2, U= 0.4 dB.

Test Results

LTE Band 4								
Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Peak (dBm)	Avg (dBm)	PAPR (dB)	Limit (dB)	Conclusion
QPSK	1.4	19957	1710.7	27.52	22.22	5.30	≤13	PASS
		20175	1732.5	27.67	22.34	5.33	≤13	PASS
		20393	1754.3	26.70	22.18	4.52	≤13	PASS
	3	19965	1711.5	27.42	22.26	5.16	≤13	PASS
		20175	1732.5	27.63	22.37	5.26	≤13	PASS
		20385	1753.5	26.81	22.28	4.53	≤13	PASS
	5	19975	1712.5	27.49	22.29	5.20	≤13	PASS
		20175	1732.5	27.72	22.38	5.34	≤13	PASS
		20375	1752.5	26.90	22.29	4.61	≤13	PASS
	10	20000	1715	27.44	22.34	5.10	≤13	PASS
		20175	1732.5	27.70	22.37	5.33	≤13	PASS
		20350	1750	27.04	22.30	4.74	≤13	PASS
	15	20025	1717.5	27.72	22.34	5.38	≤13	PASS
		20175	1732.5	27.92	22.39	5.53	≤13	PASS
		20325	1747.5	27.24	22.34	4.90	≤13	PASS
	20	20050	1720	27.53	22.41	5.12	≤13	PASS
		20175	1732.5	27.60	22.42	5.18	≤13	PASS
		20300	1745	27.12	22.37	4.75	≤13	PASS
16QAM	1.4	19957	1710.7	27.22	21.19	6.03	≤13	PASS
		20175	1732.5	27.34	21.32	6.02	≤13	PASS
		20393	1754.3	26.71	21.24	5.47	≤13	PASS
	3	19965	1711.5	27.23	21.30	5.93	≤13	PASS
		20175	1732.5	27.45	21.39	6.06	≤13	PASS
		20385	1753.5	26.80	21.30	5.50	≤13	PASS
	5	19975	1712.5	27.26	21.31	5.95	≤13	PASS
		20175	1732.5	27.46	21.40	6.06	≤13	PASS
		20375	1752.5	26.88	21.32	5.56	≤13	PASS
	10	20000	1715	27.24	21.34	5.90	≤13	PASS
		20175	1732.5	27.43	21.39	6.04	≤13	PASS
		20350	1750	26.94	21.32	5.62	≤13	PASS
	15	20025	1717.5	27.39	21.37	6.02	≤13	PASS
		20175	1732.5	27.54	21.40	6.14	≤13	PASS
		20325	1747.5	27.12	21.38	5.74	≤13	PASS
	20	20050	1720	27.30	21.43	5.87	≤13	PASS
		20175	1732.5	27.41	21.43	5.98	≤13	PASS
		20300	1745	27.07	21.40	5.67	≤13	PASS