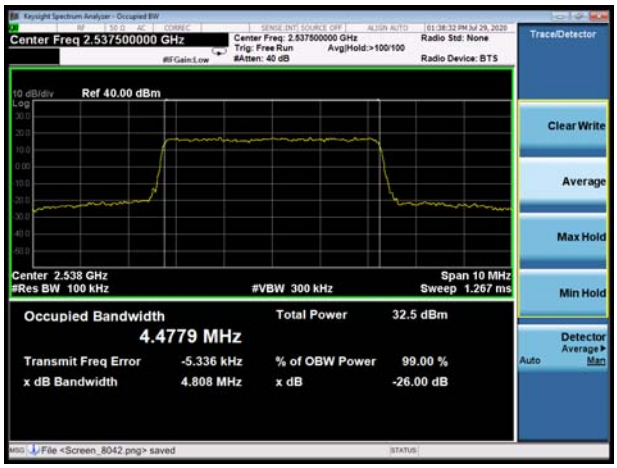
LTE Band 41 64QAM 5MHz CH-Low



LTE Band 41 64QAM 10MHz CH-Low

LTE Band 41 64QAM 5MHz CH-Middle

LTE Band 41 64QAM 10MHz CH-Middle

LTE Band 41 64QAM 5MHz CH-High

LTE Band 41 64QAM 10MHz CH-High

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LTE Band 41 64QAM 15MHz CH-Low

LTE Band 41 64QAM 20MHz CH-Low

LTE Band 41 64QAM 15MHz CH-Middle

LTE Band 41 64QAM 20MHz CH-Middle

LTE Band 41 64QAM 15MHz CH-High

LTE Band 41 64QAM 20MHz CH-High

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CA-7C QPSK 10+20MHz CH-Low

CA-7C QPSK 15+10MHz CH-Low

CA-7C 16QAM 10+20MHz CH- Middle

CA-7C 16QAM 15+10MHz CH- Middle

CA-7C 64QAM 10+20MHz CH- High

CA-7C 64QAM 15+10MHz CH- High

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CA-7C QPSK 15+15MHz CH-Low

CA-7C QPSK 15+20MHz CH-Low

CA-7C 16QAM 15+15MHz CH- Middle

CA-7C 16QAM 15+20MHz CH- Middle

CA-7C 64QAM 15+15MH CH- High

CA-7C 64QAM 15+20MHz CH- High

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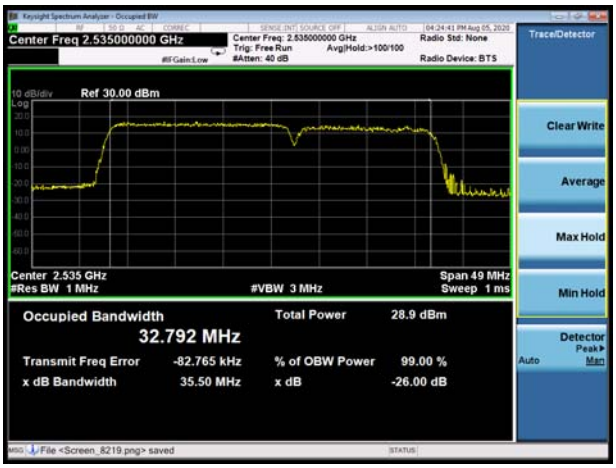
CA-7C QPSK 20+10MHz CH-Low

CA-7C QPSK 20+15MHz CH-Low



CA-7C 16QAM 20+10MHz CH- Middle

CA-7C 16QAM 20+15MHz CH- Middle

CA-7C 64QAM 20+10MHz CH- High

CA-7C 64QAM 20+15MHz CH- High

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CA-7C QPSK 20+20MHz CH-Low

CA-7C 16QAM 20+20MHz CH- Middle

CA-7C 64QAM 20+20MHz CH- High

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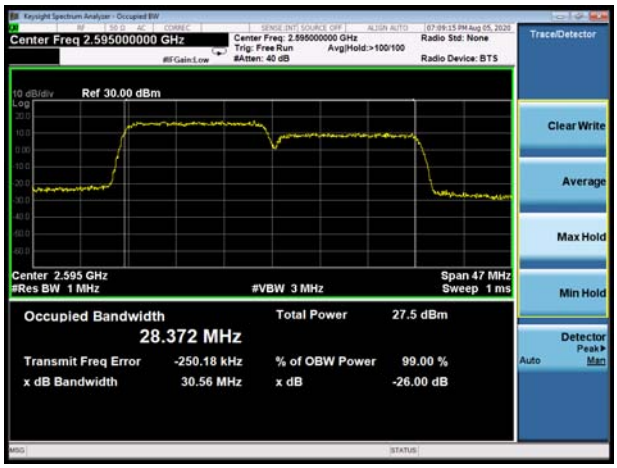
CA-38C QPSK 15+15MHz CH-Low



CA-38C QPSK 20+20MHz CH-Low

CA-38C 16QAM 15+15MHz CH- Middle

CA-38C 16QAM 20+20MHz CH- Middle

CA-38C 64QAM 15+15MHz CH- High

CA-38C 64QAM 20+20MHz CH- High

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5.3 Band Edge Compliance

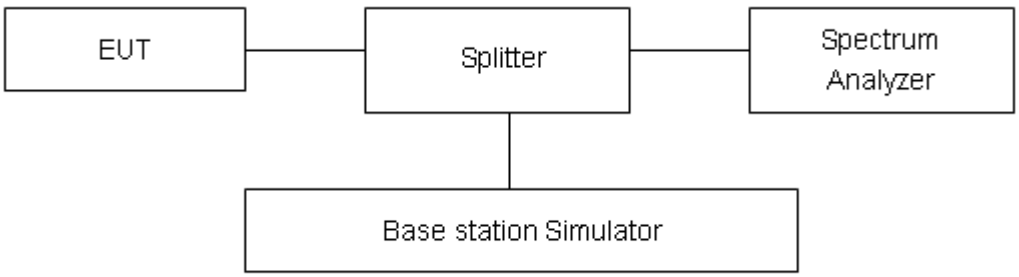
Ambient condition

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 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.
RBW is set to 51 kHz, VBW is set to 160 kHz for WCDMA Band IV.
RBW is set to 15 kHz, VBW is set to 43 kHz for LTE Band 4 (1.4MHz).
RBW is set to 30 kHz, VBW is set to 91kHz for LTE Band 4 (3MHz).
RBW is set to 51 kHz, VBW is set to 150kHz for LTE Band 4 (5MHz).
RBW is set to 100 kHz, VBW is set to 300kHz for LTE Band 4 (10MHz).
RBW is set to 150 kHz, VBW is set to 470kHz for LTE Band 4 (15MHz).
RBW is set to 200 kHz, VBW is set to 620kHz for LTE Band 4 (20MHz)
RBW is set to 50kHz, VBW is set to 200kHz for LTE Band 7/38/41(5MHz).
RBW is set to 100 kHz, VBW is set to 300kHz for LTE Band 7/38/41(10MHz).
RBW is set to 200 kHz, VBW is set to 1MHz for LTE Band 7/38/41(15MHz/20MHz)
RBW is set to 430 kHz, VBW is set to1.3MHz for CA.
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



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Limits

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(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.

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Test Result

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

WCDMA Band IV CH-Low	WCDMA Band IV CH-High

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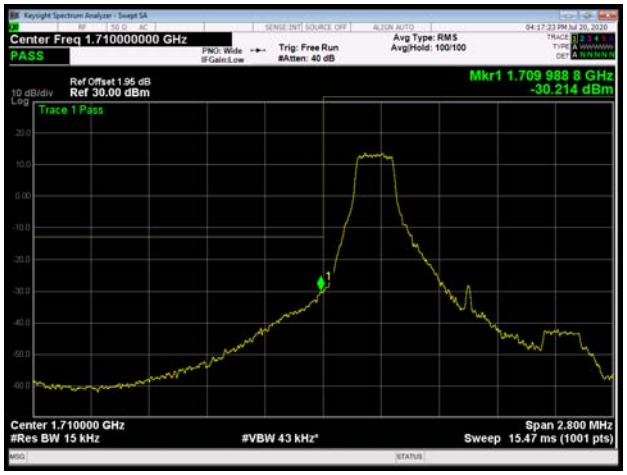
LTE Band 4 QPSK 1.4MHz CH-Low, 1 RB

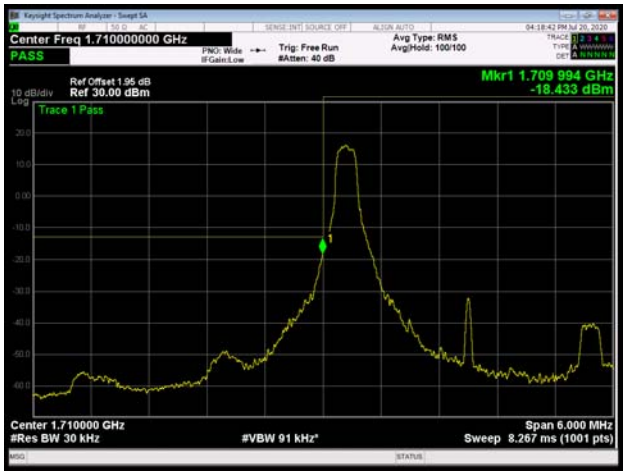


LTE Band 4 QPSK 1.4MHz CH-High, 1 RB

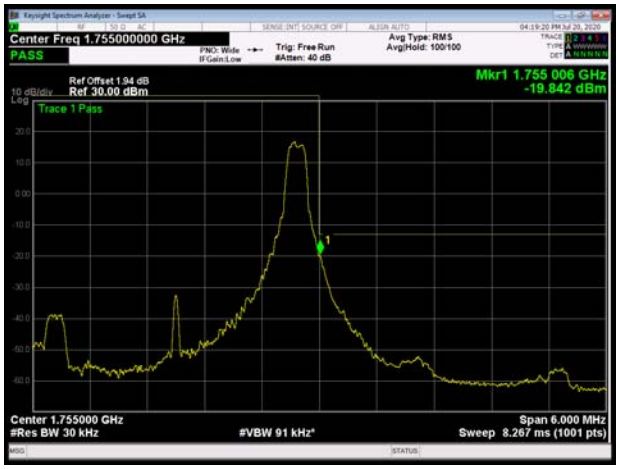
LTE Band 4 QPSK 1.4MHz CH-Low, 100%RB

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



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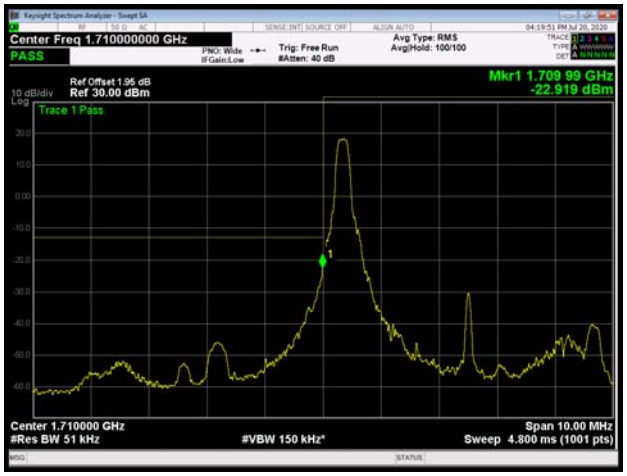
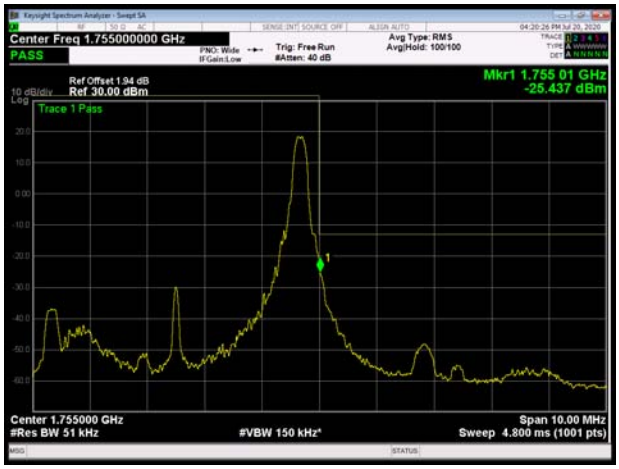
LTE Band 4 QPSK 3MHz CH-Low, 100%RB

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

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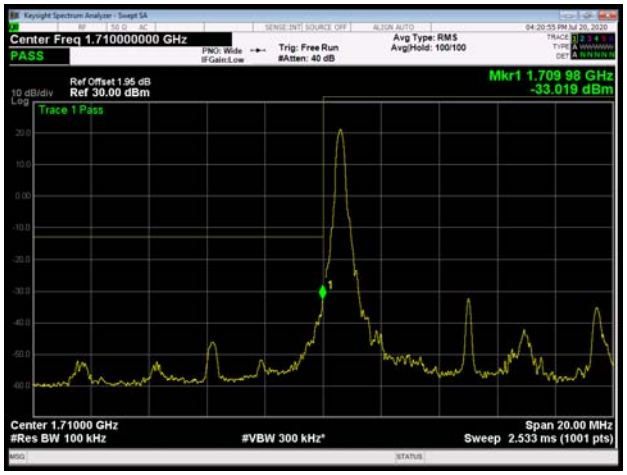
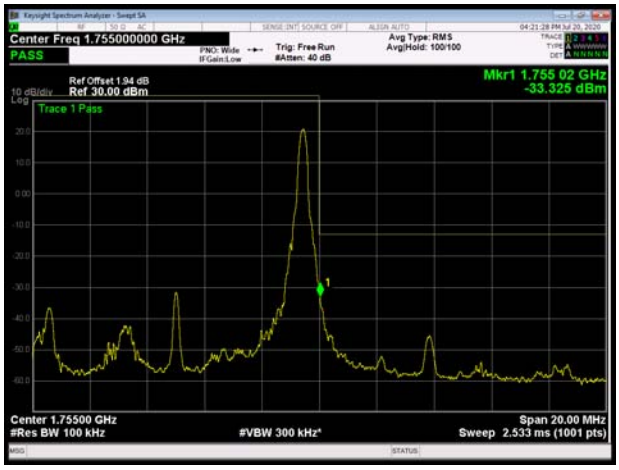
LTE Band 4 QPSK 10MHz CH-Low, 1 RB



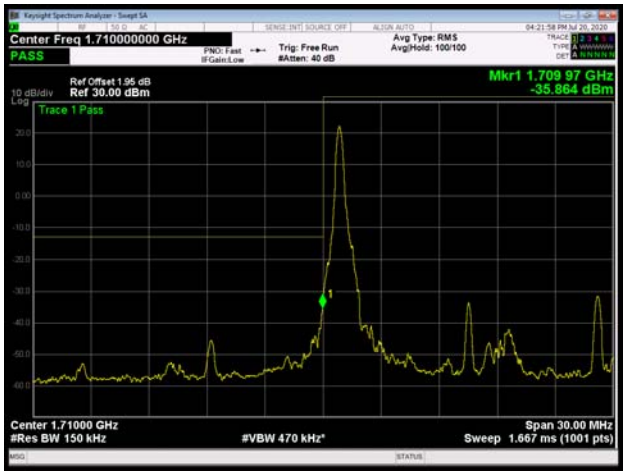
LTE Band 4 QPSK 10MHz CH-High, 1 RB



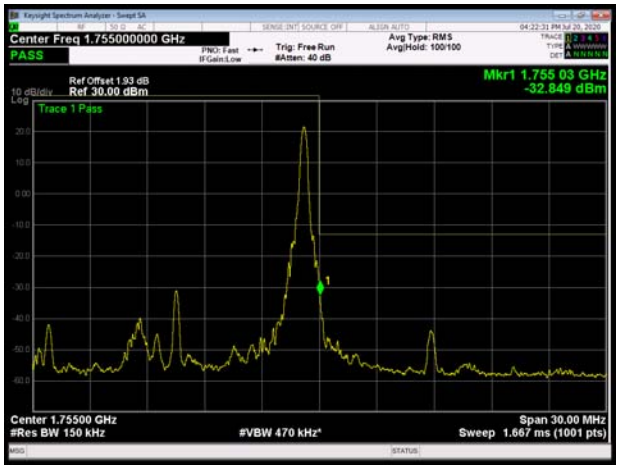
LTE Band 4 QPSK 10MHz CH-Low, 100%RB

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



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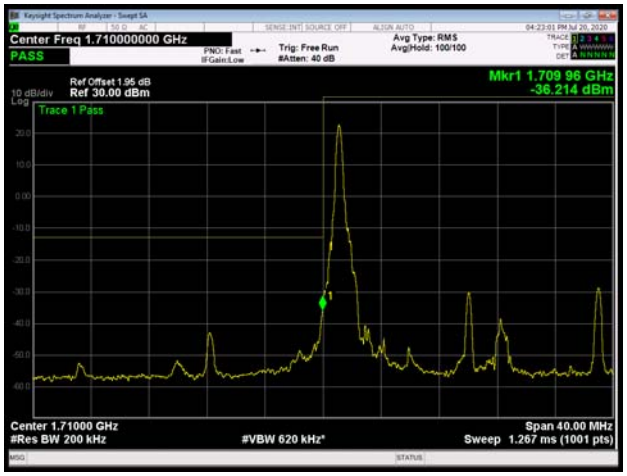
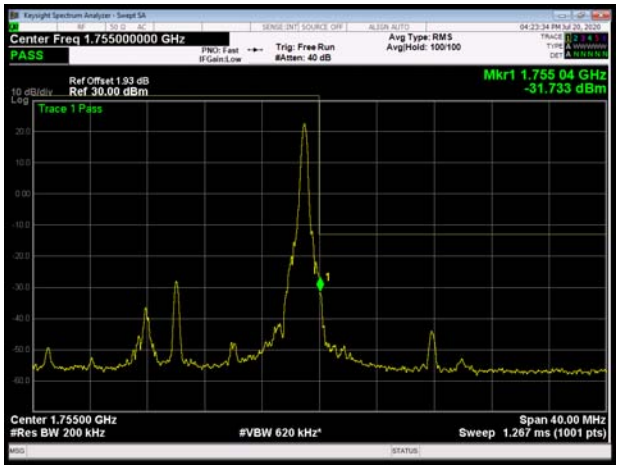
LTE Band 4 QPSK 15MHz CH-Low, 100%RB

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

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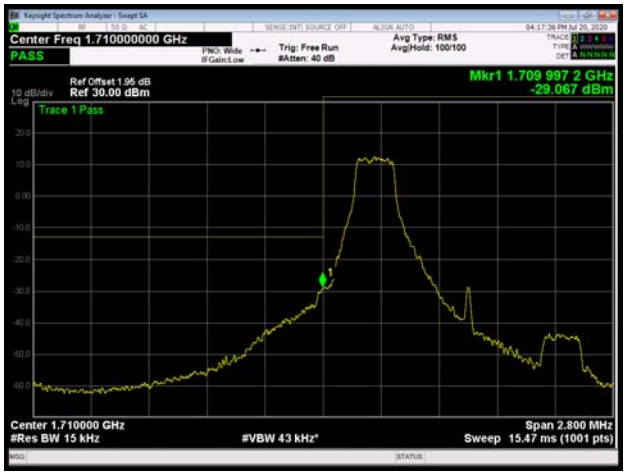
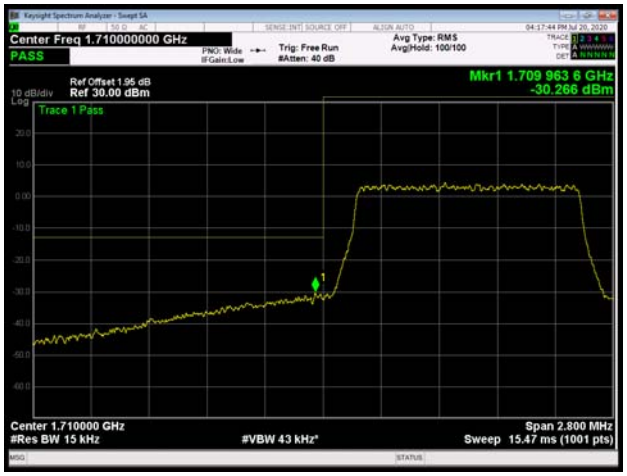
LTE Band 4 16QAM 1.4MHz CH-Low, 1 RB



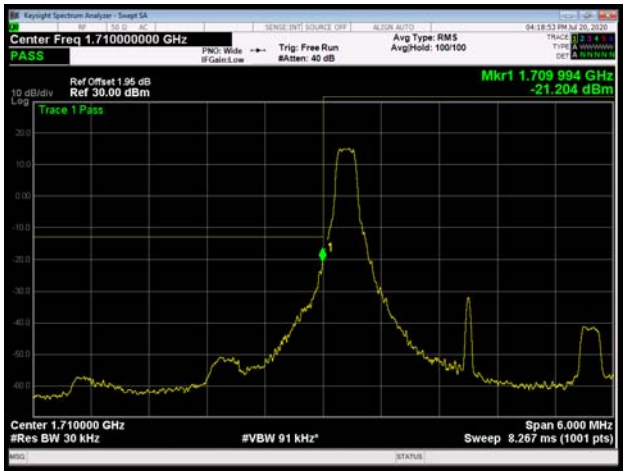
LTE Band 4 16QAM 1.4MHz CH-High, 1 RB

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

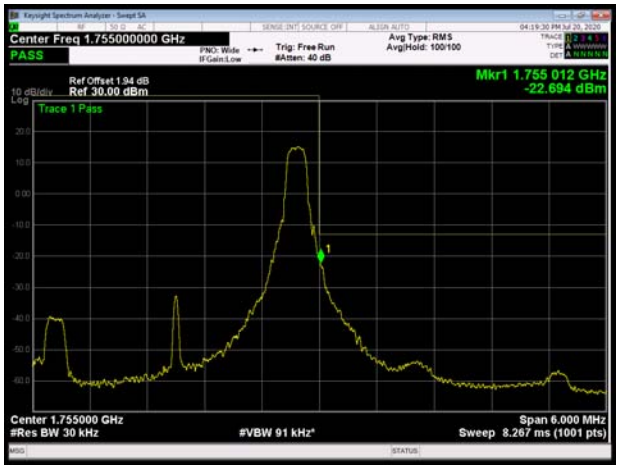


LTE Band 4 16QAM 1.4MHz CH-High, 100%RB

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



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



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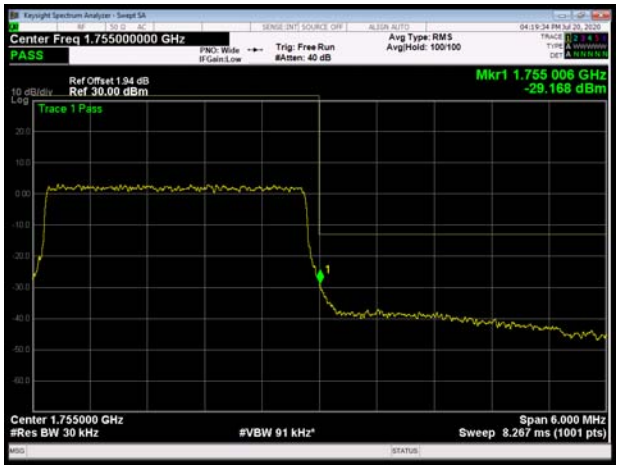
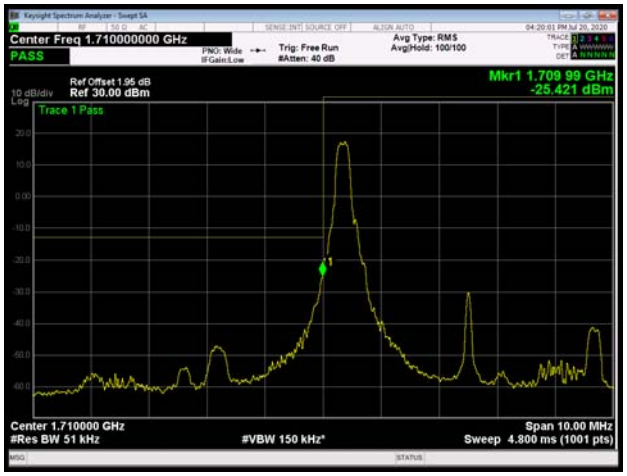
LTE Band 4 16QAM 3MHz CH-Low, 100%RB

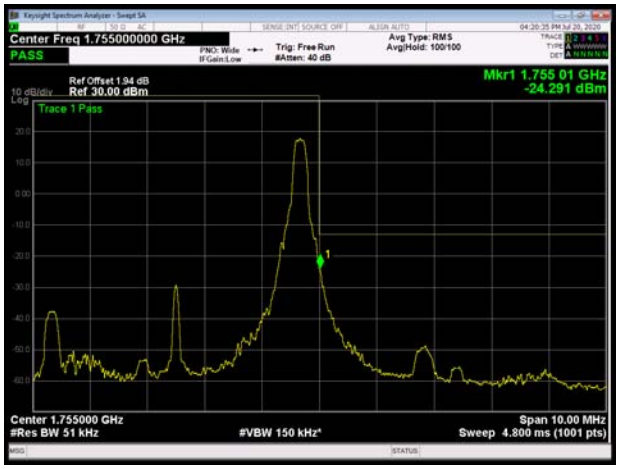
LTE Band 4 16QAM 3MHz CH-High, 100%RB



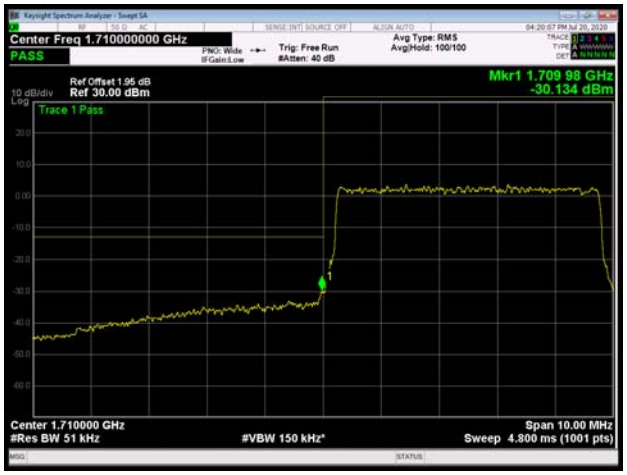
LTE Band 4 16QAM 5MHz CH-Low, 1 RB



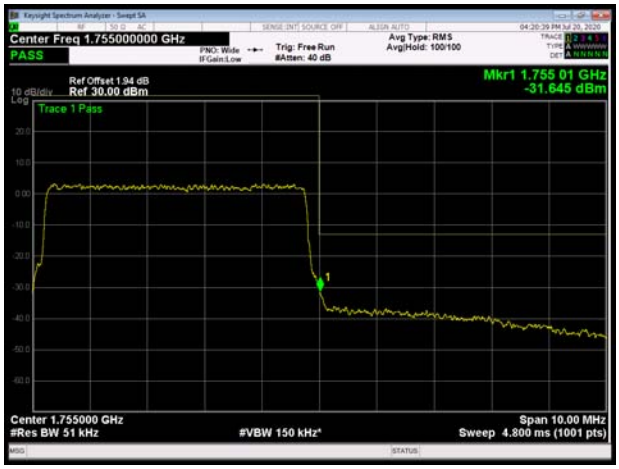
LTE Band 4 16QAM 5MHz CH-High, 1 RB



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



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



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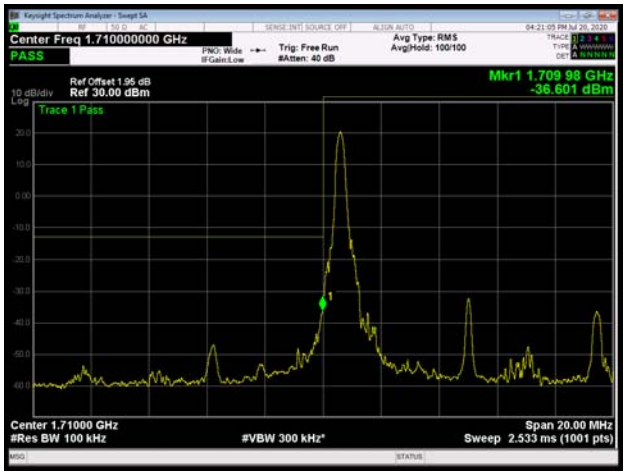
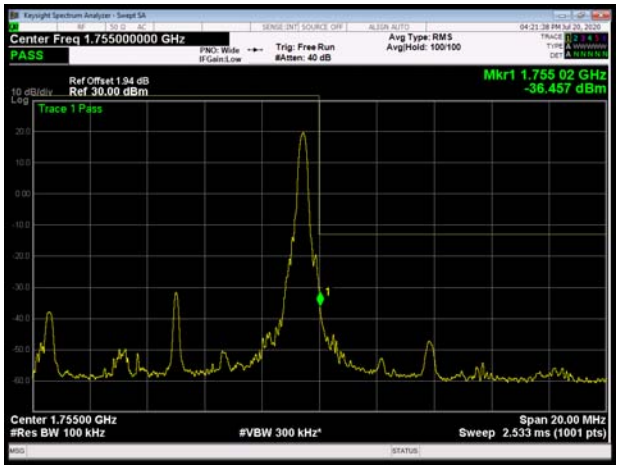
LTE Band 4 16QAM 10MHz CH-Low, 1 RB



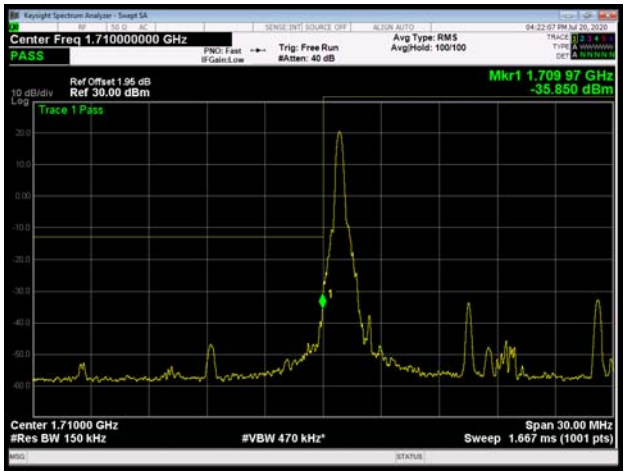
LTE Band 4 16QAM 10MHz CH-High, 1 RB



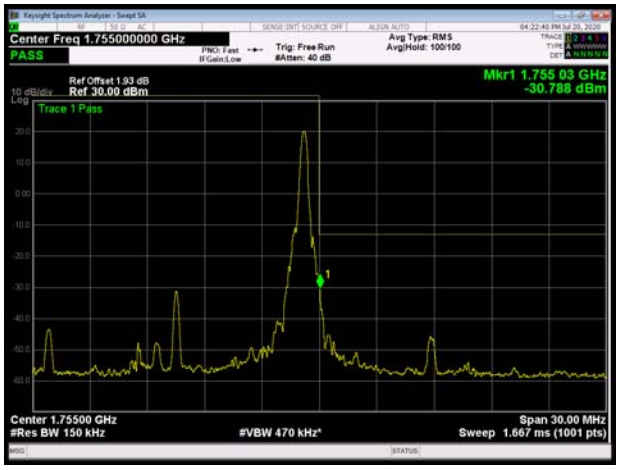
LTE Band 4 16QAM 10MHz CH-Low, 100%RB

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



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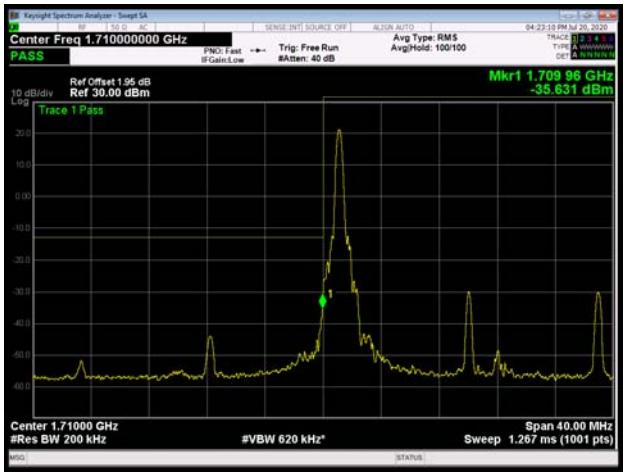
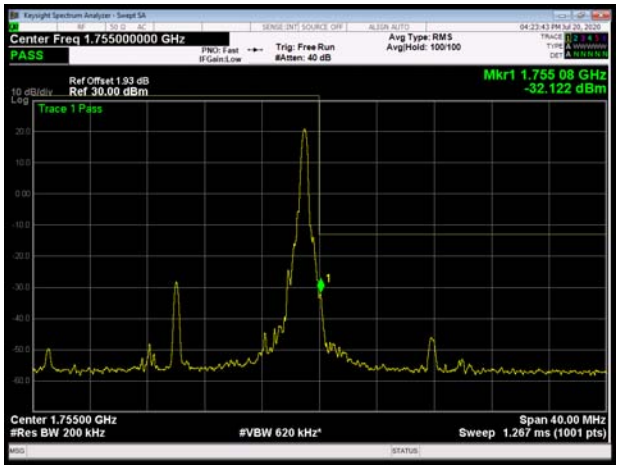
LTE Band 4 16QAM 15MHz CH-Low, 100%RB

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

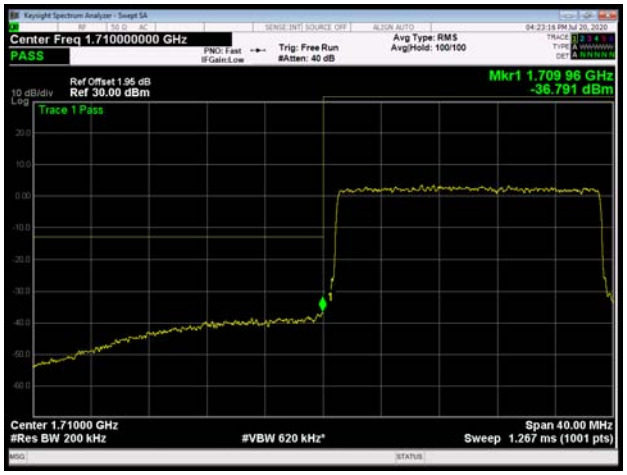
LTE Band 4 16QAM 20MHz CH-Low, 1 RB



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



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



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

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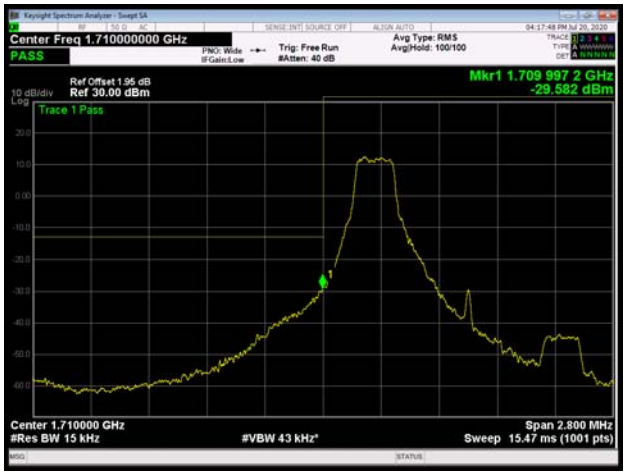
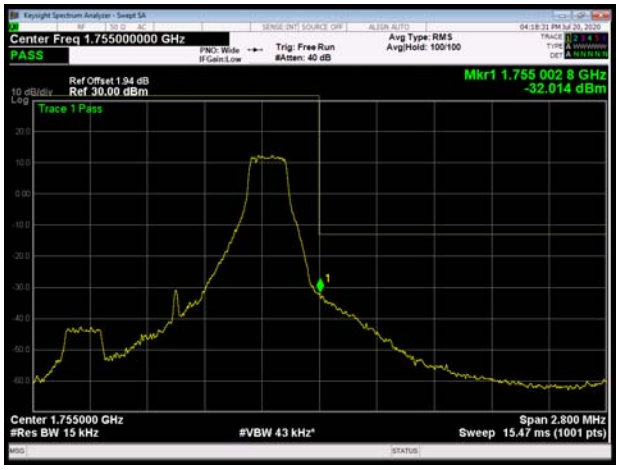
LTE Band 4 64QAM 1.4MHz CH-Low, 1 RB



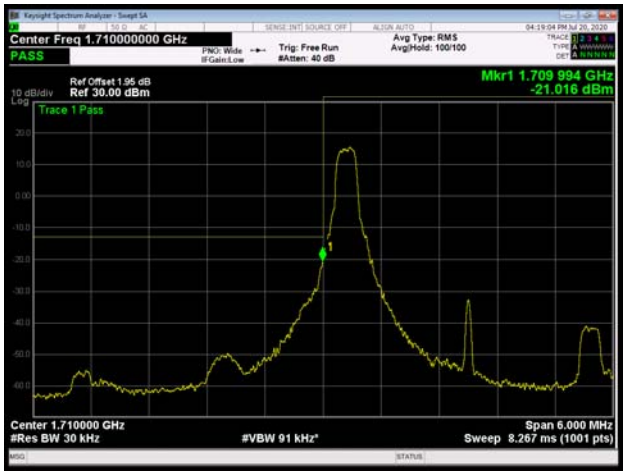
LTE Band 4 64QAM 1.4MHz CH-High, 1 RB



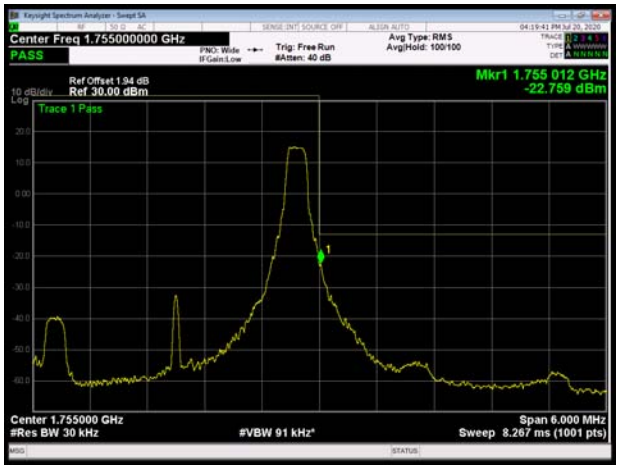
LTE Band 4 64QAM 1.4MHz CH-Low, 100%RB

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



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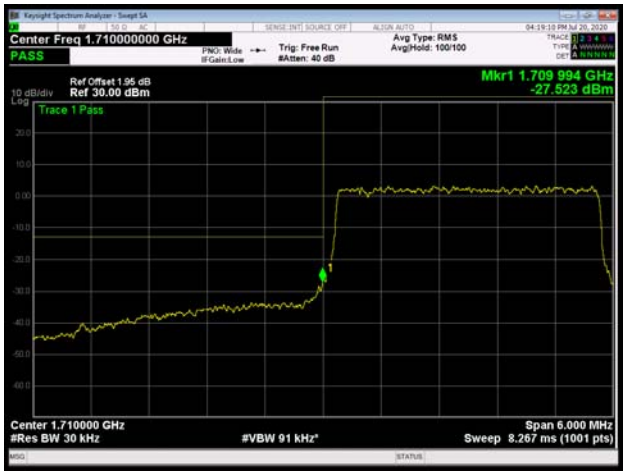
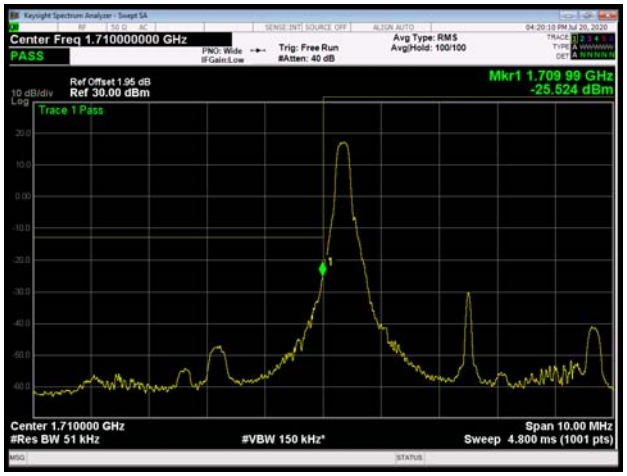
LTE Band 4 64QAM 3MHz CH-Low, 100%RB

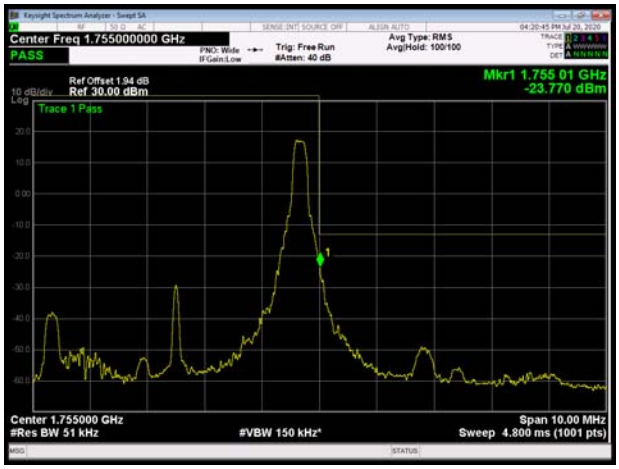


LTE Band 4 64QAM 3MHz CH-High, 100%RB

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

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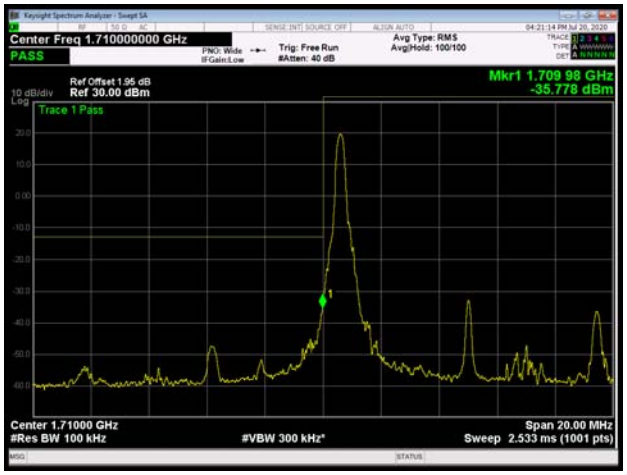
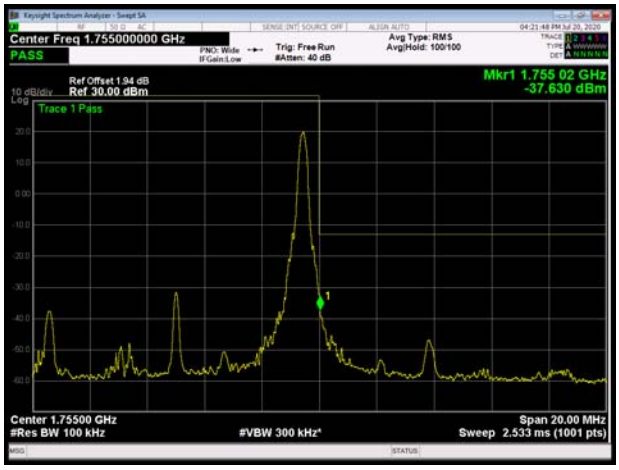
LTE Band 4 64QAM 10MHz CH-Low, 1 RB



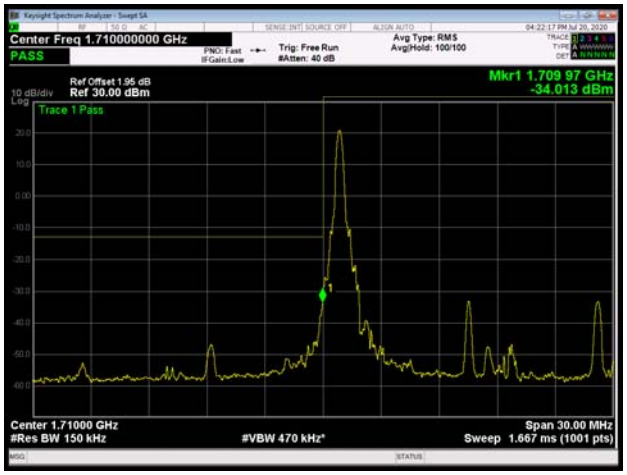
LTE Band 4 64QAM 10MHz CH-High, 1 RB



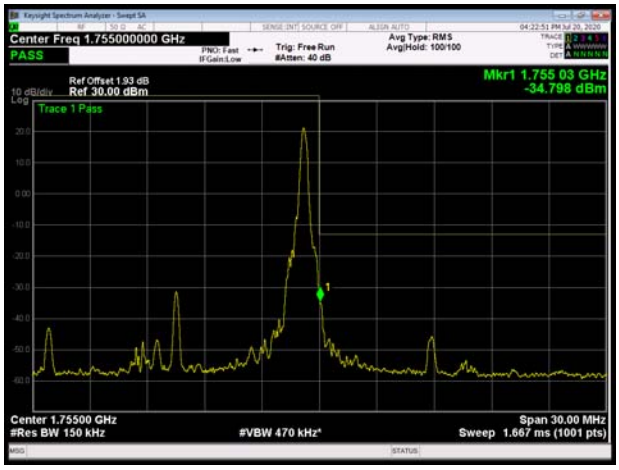
LTE Band 4 64QAM 10MHz CH-Low, 100%RB

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



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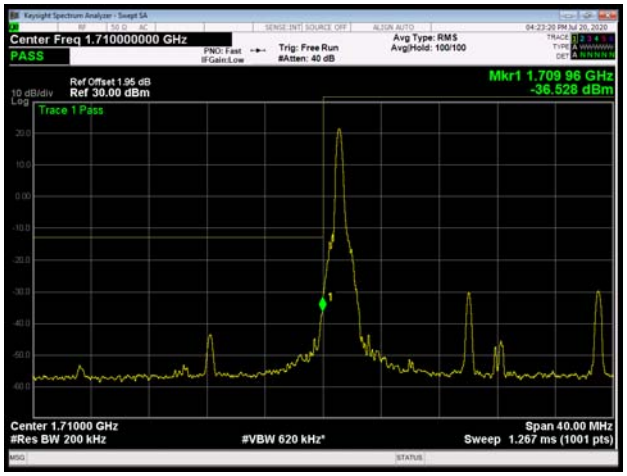
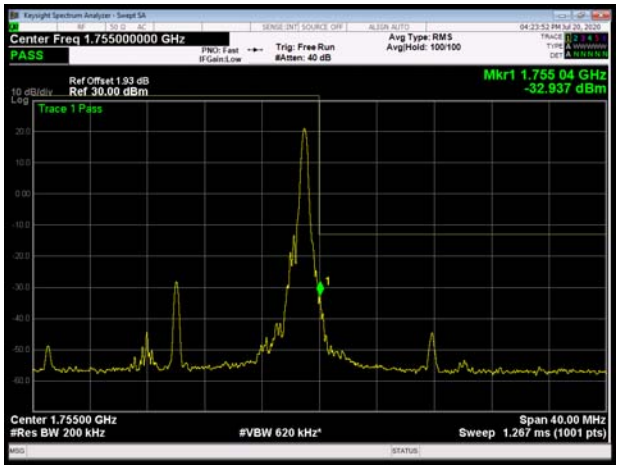
LTE Band 4 64QAM 15MHz CH-Low, 100%RB

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

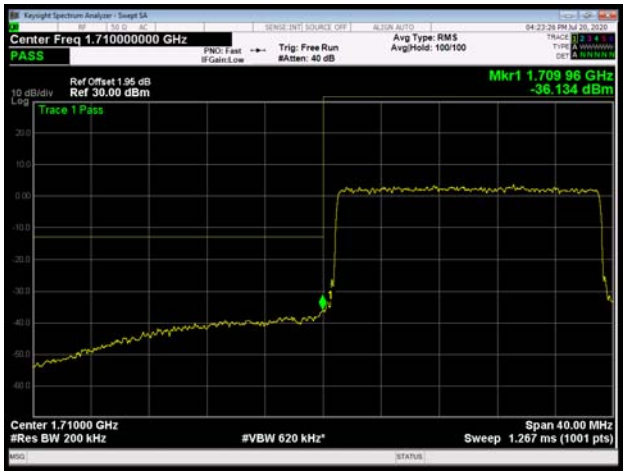
LTE Band 4 64QAM 20MHz CH-Low, 1 RB



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

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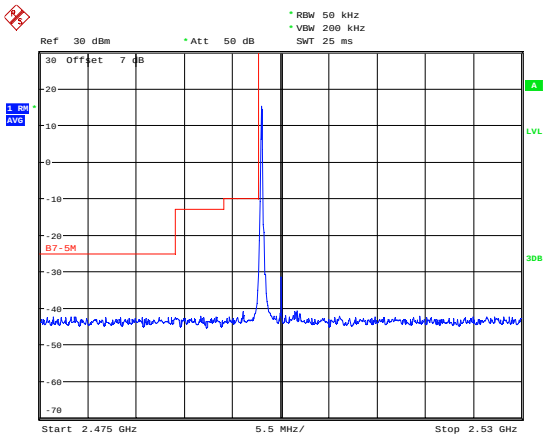
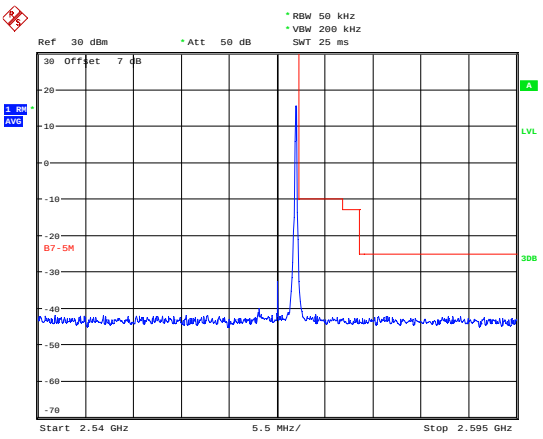
LTE Band 7 QPSK 5MHz CH-Low, 1 RB



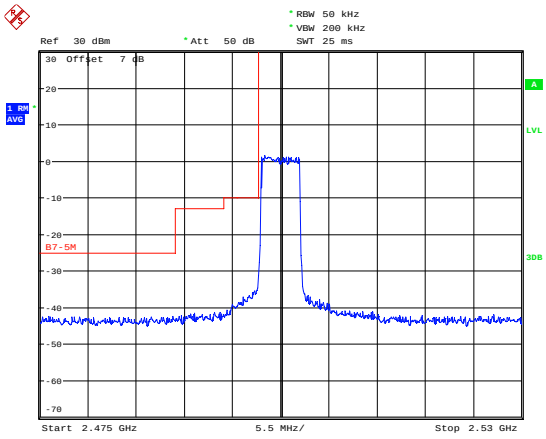
Date: 22.JUL.2020 16:43:22

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



Date: 22.JUL.2020 16:53:29

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



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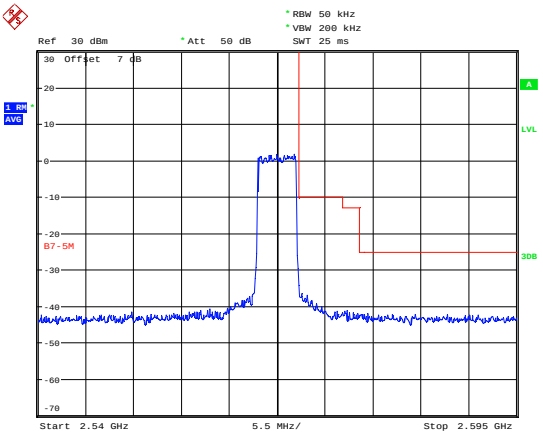
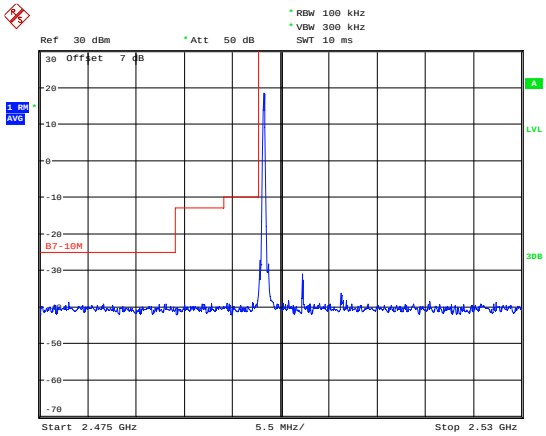
LTE Band 7 QPSK 5MHz CH-High, 100%RB



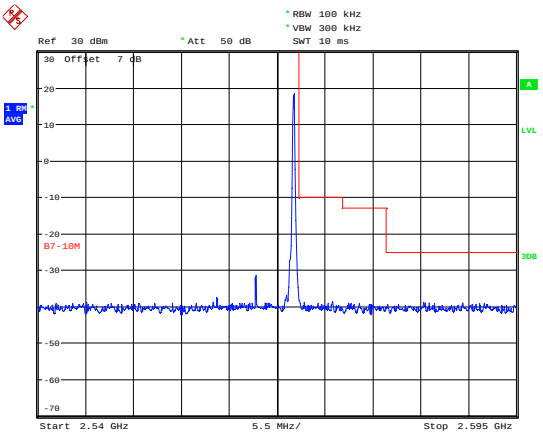
Date: 22.JUL.2020 16:53:41

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



Date: 22.JUL.2020 16:45:39

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



Date: 22.JUL.2020 16:55:34

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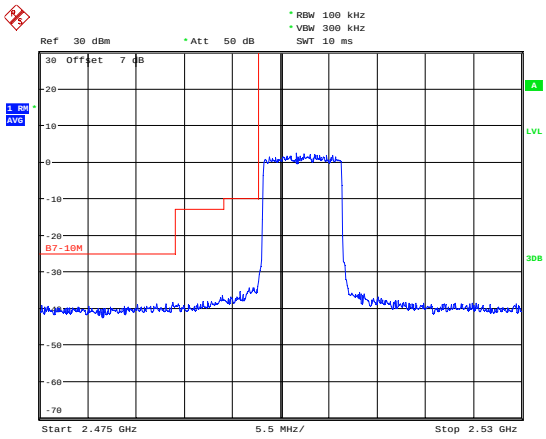
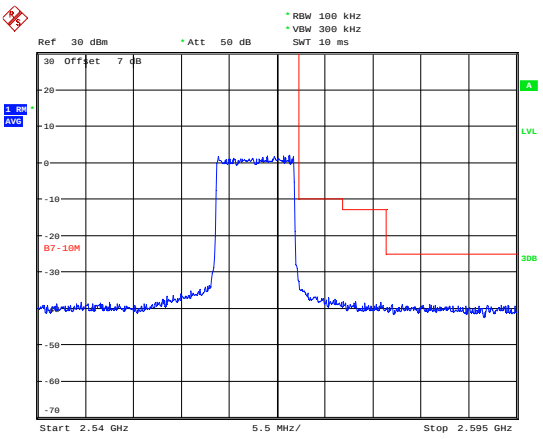
LTE Band 7 QPSK 10MHz CH-Low, 100%RB



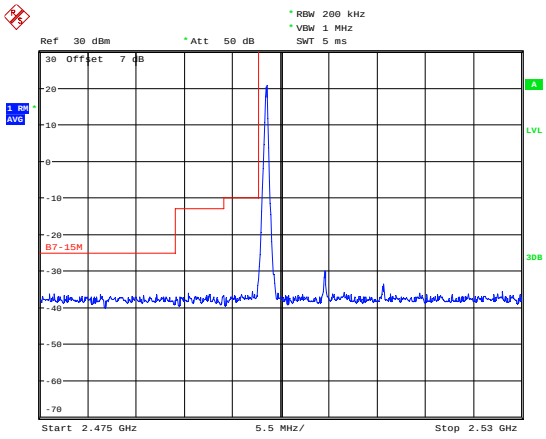
Date: 22.JUL.2020 16:45:49

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



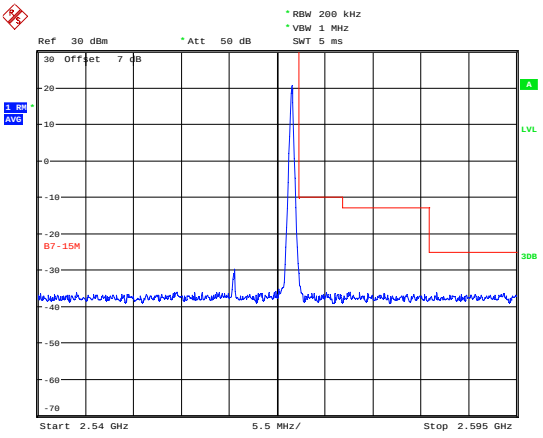
Date: 22.JUL.2020 16:55:44

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



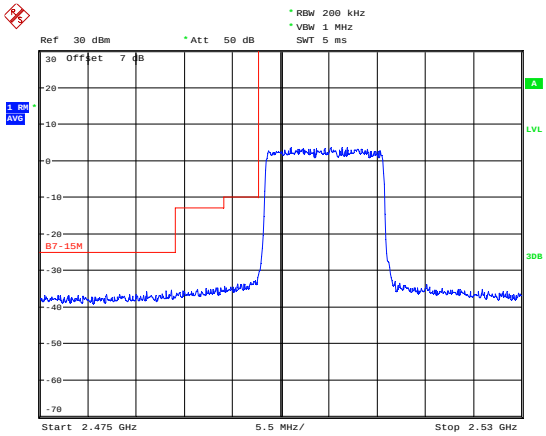
Date: 22.JUL.2020 16:47:38

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



Date: 22.JUL.2020 16:57:35

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



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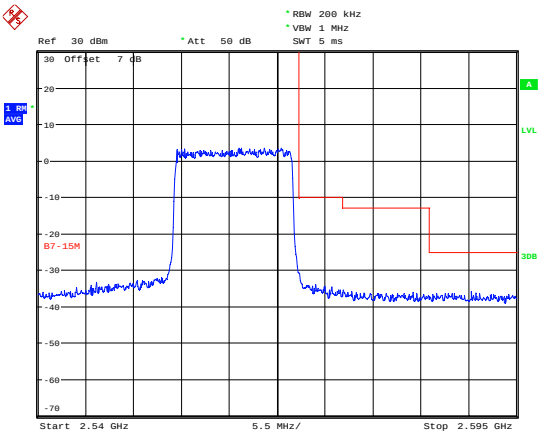
LTE Band 7 QPSK 15MHz CH-High, 100%RB



Date: 22.JUL.2020 16:57:51

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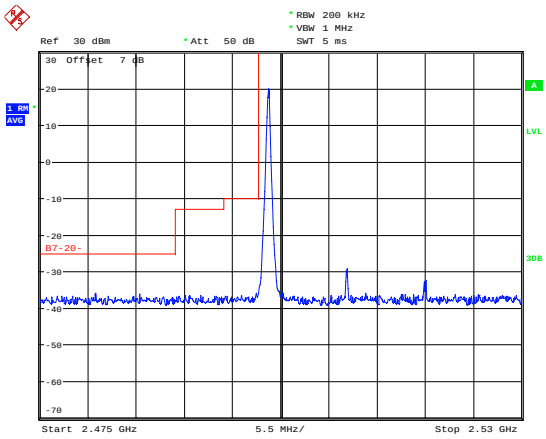
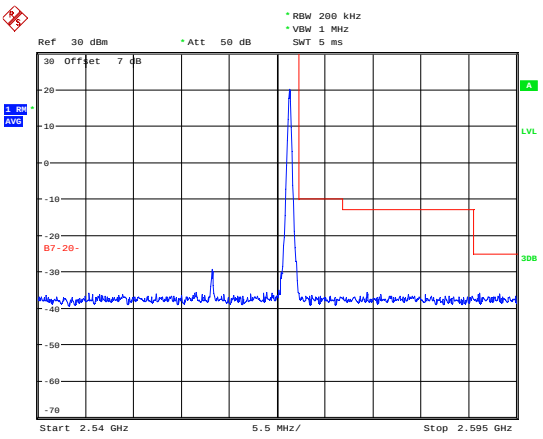
LTE Band 7 QPSK 20MHz CH-Low, 1 RB



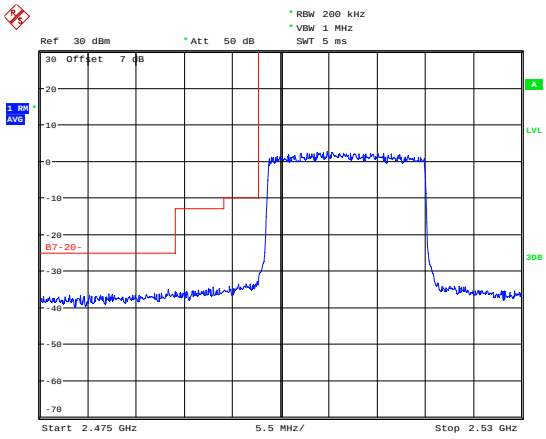
Date: 22.JUL.2020 16:49:26

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



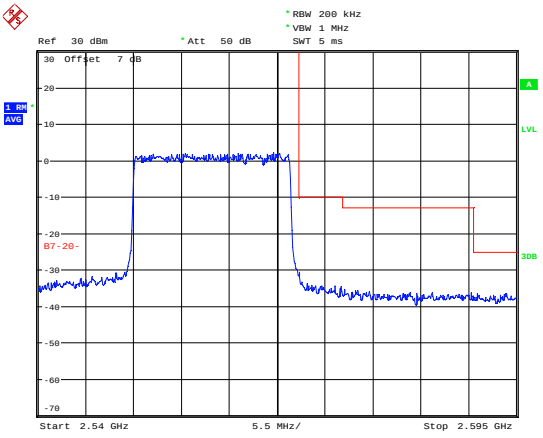
Date: 22.JUL.2020 16:59:40

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



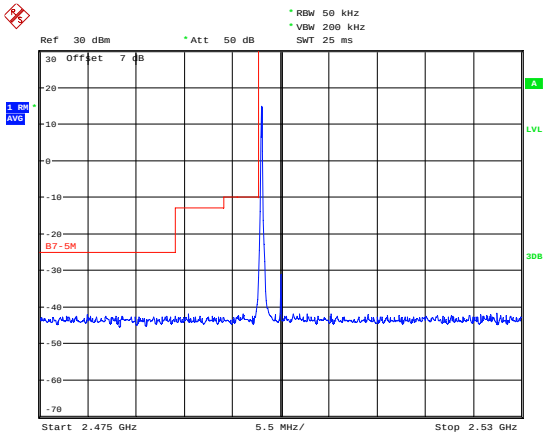
Date: 22.JUL.2020 16:49:38

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



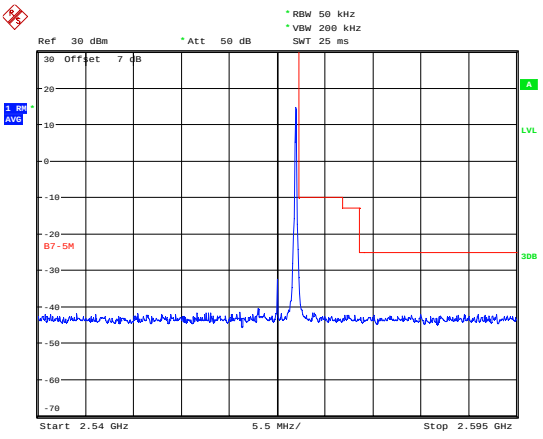
Date: 22.JUL.2020 16:59:51

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



Date: 22.JUL.2020 16:44:00

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



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