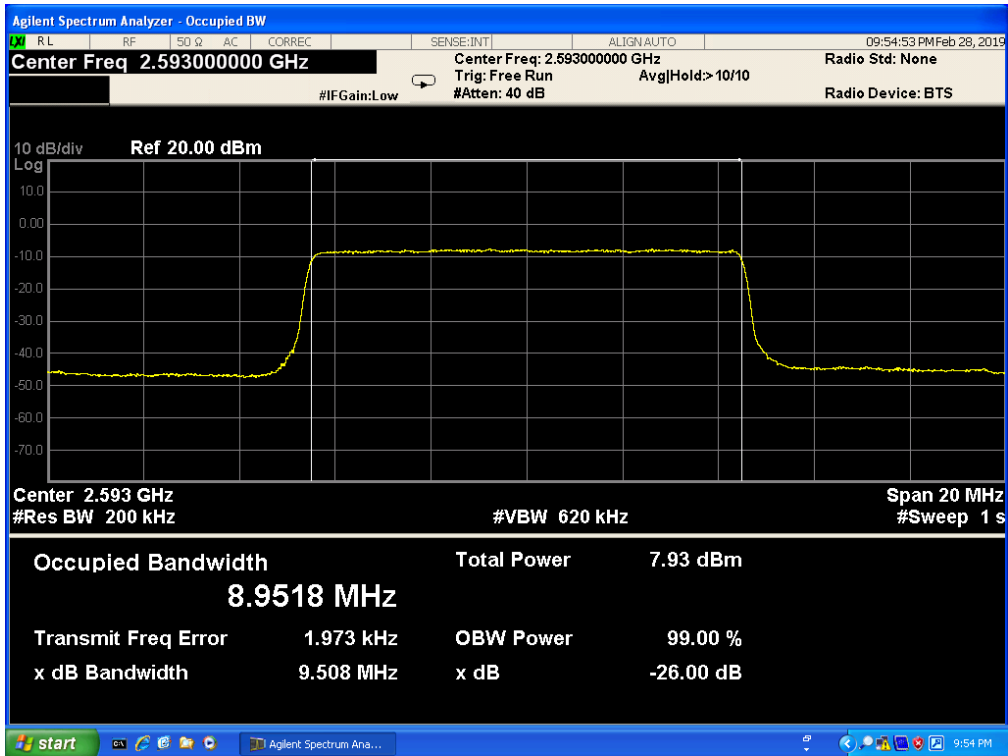
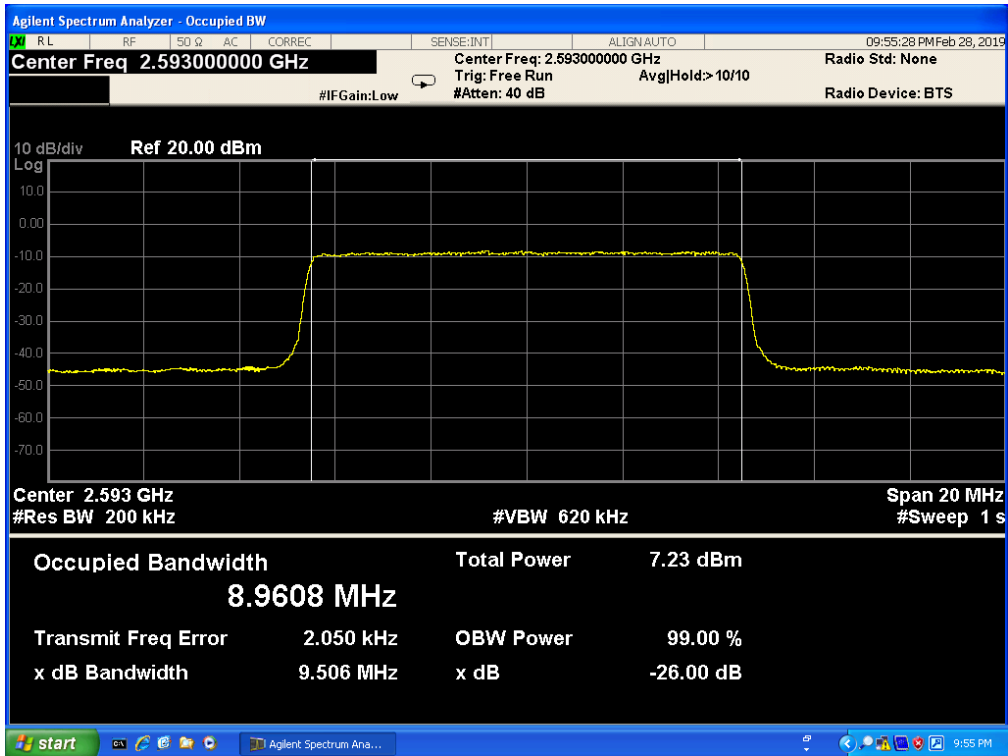


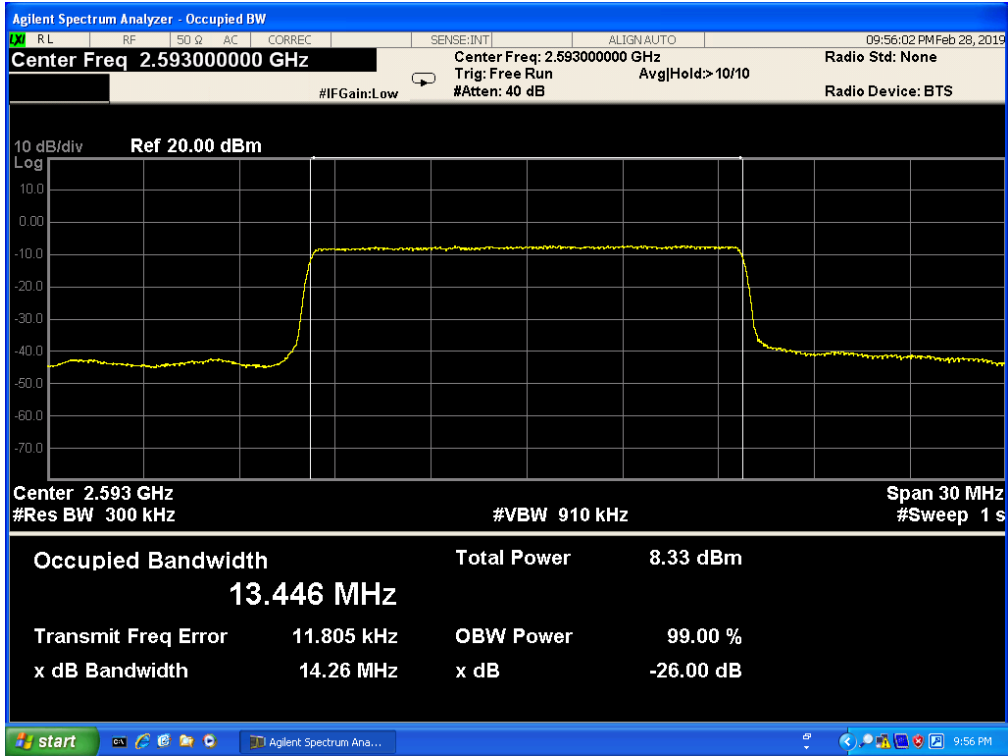
Band 41, UL Channel 40620, UL Frequency 2593.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



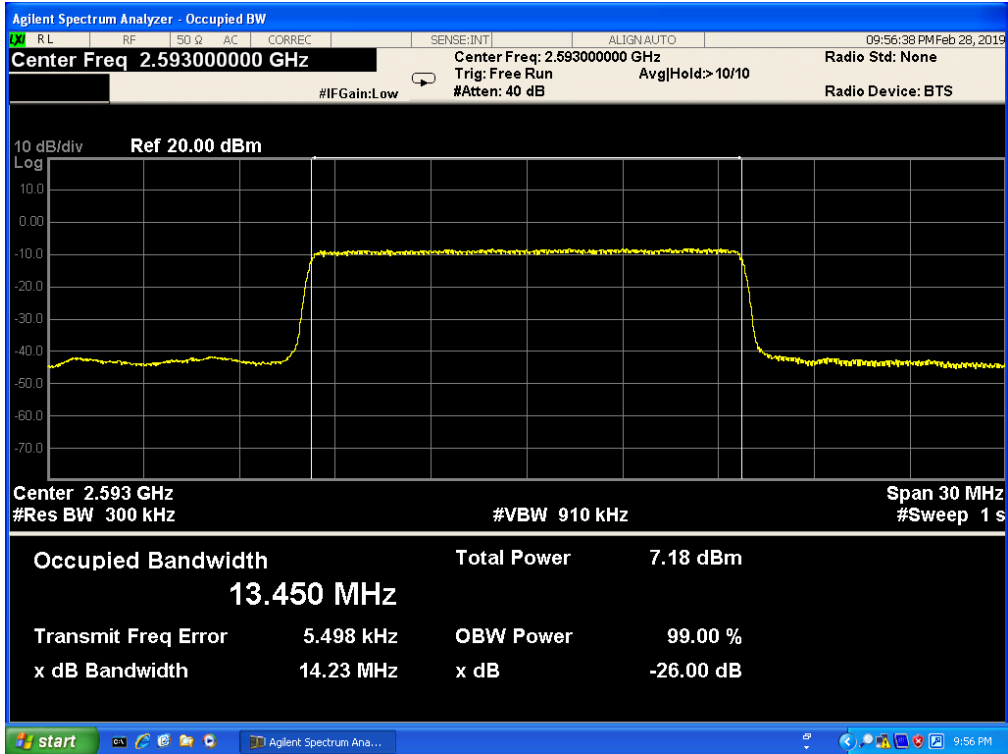
Band 41, UL Channel 40620, UL Frequency 2593.0, BW 10.0, NO. RB 50, RB POS. Low, 16-QAM



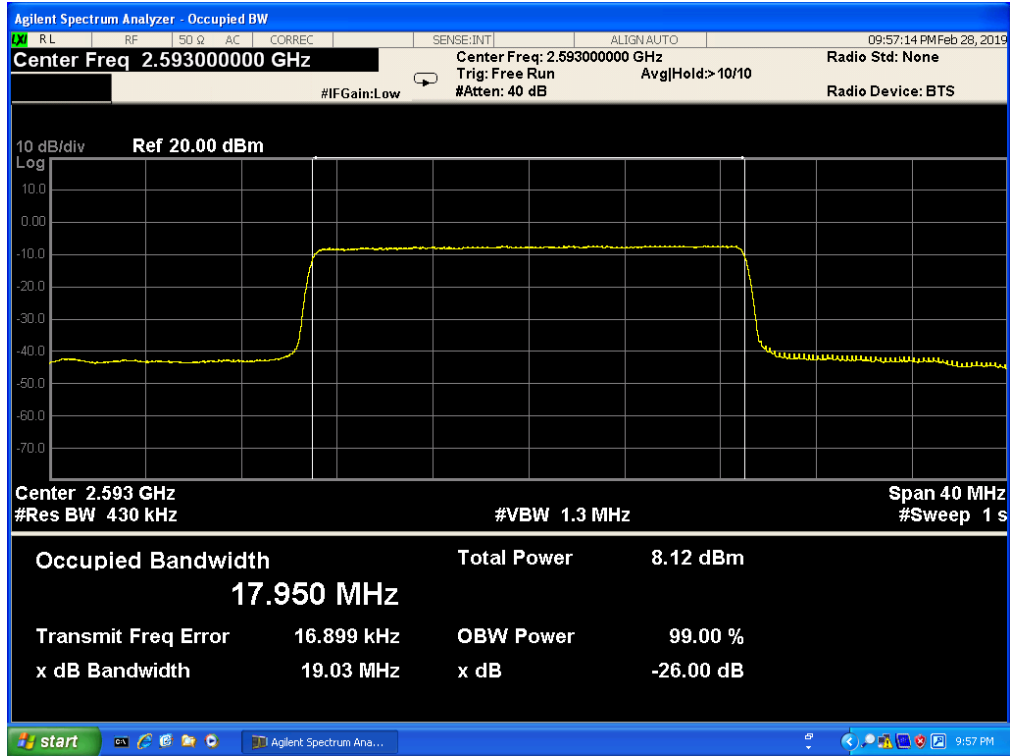
Band 41, UL Channel 40620, UL Frequency 2593.0, BW 15.0, NO. RB 75, RB POS. Low, QPSK



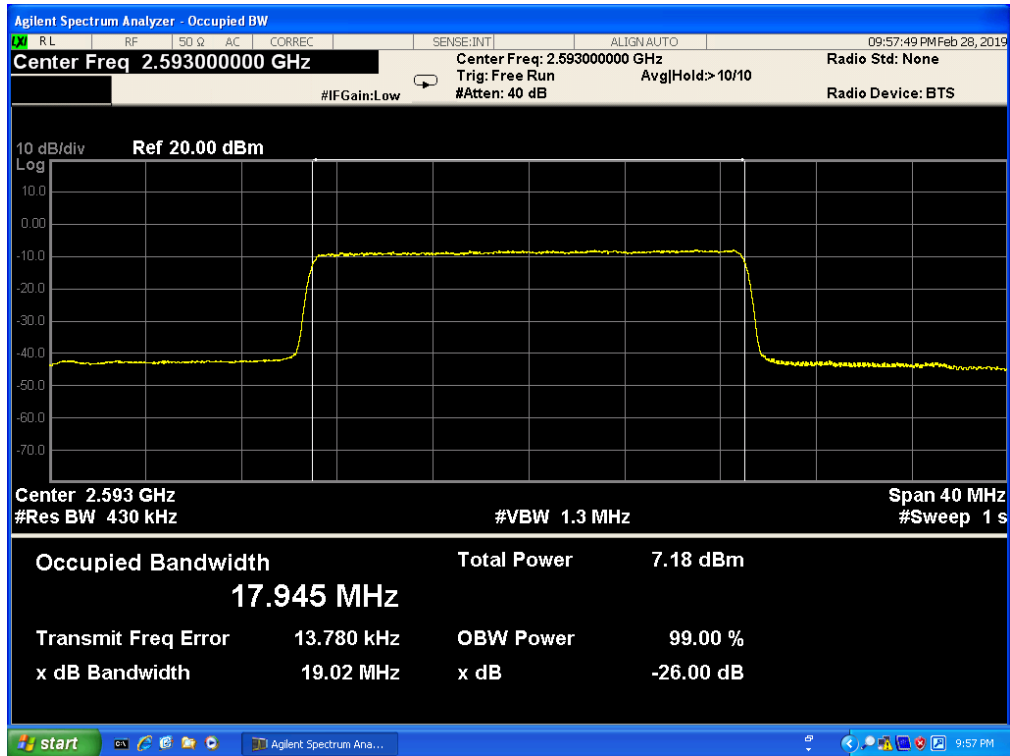
Band 41, UL Channel 40620, UL Frequency 2593.0, BW 15.0, NO. RB 75, RB POS. Low, 16-QAM



Band 41, UL Channel 40620, UL Frequency 2593.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK



Band 41, UL Channel 40620, UL Frequency 2593.0, BW 20.0, NO. RB 100, RB POS. Low, 16-QAM



## 6. BANDEDGE AND EMISSION MASK

### RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53, and §90.691

FCC: §22.359

### LIMITS

FCC: §22.359, §24.238,

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

(m)(4) 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)(6) 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. Show citation box.

The minimum permissible attenuation level of any spurious emission removed from the EA licensee's frequency block by greater than 37.5 kHz is  $43 + \log_{10}(P[\text{Watts}])$ , where P is the transmitter power in Watts.

The minimum permissible attenuation level of any spurious emission removed from the EA licensee's frequency block by up to and including 37.5 kHz is  $50 + 10 \log_{10}(P[\text{Watts}])$ , where P is the transmitter power in Watts.

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**TEST PROCEDURE**

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

Set the spectrum analyzer span to include the block edge frequency (704, 716, 824, 849, 1710 and 1755, 1850 and 1910MHz)

Set a marker to point the corresponding band edge frequency in each test case.

Set display line at -13 dBm

Set resolution bandwidth to at least 1% of emission bandwidth.

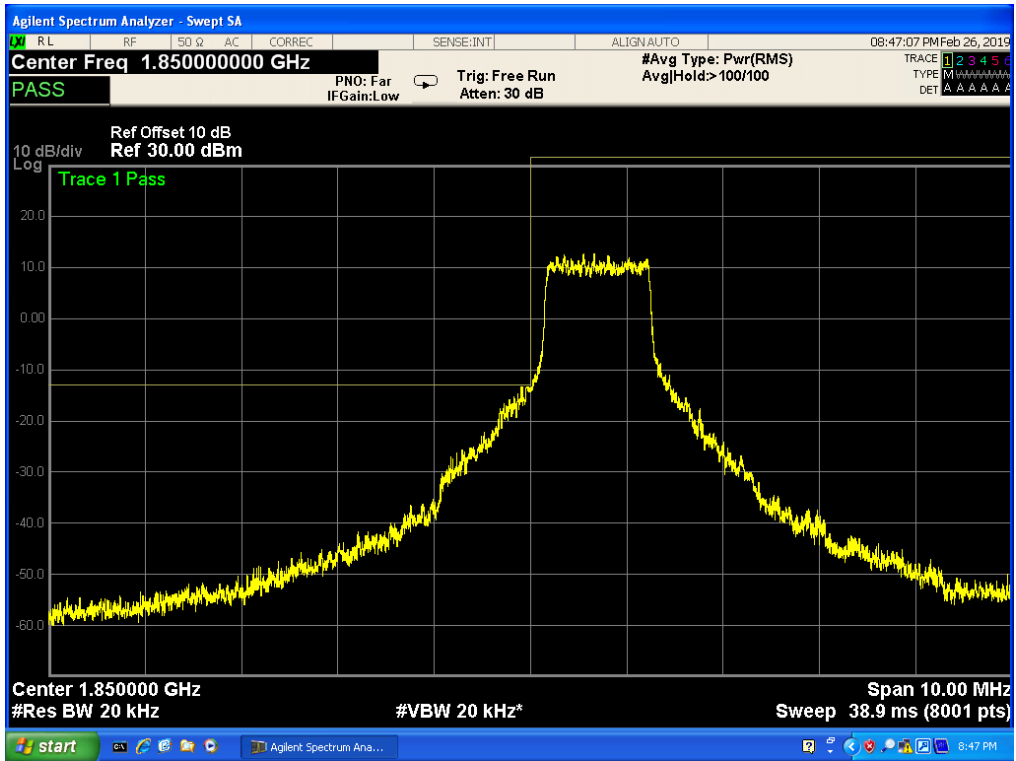
**MODES TESTED**

- LTE Band 2/ LTE Band 4
- LTE Band 5/ LTE Band 7
- LTE Band 12/ LTE Band 13
- LTE Band 14/ LTE Band 25
- LTE Band 26/ LTE Band 41

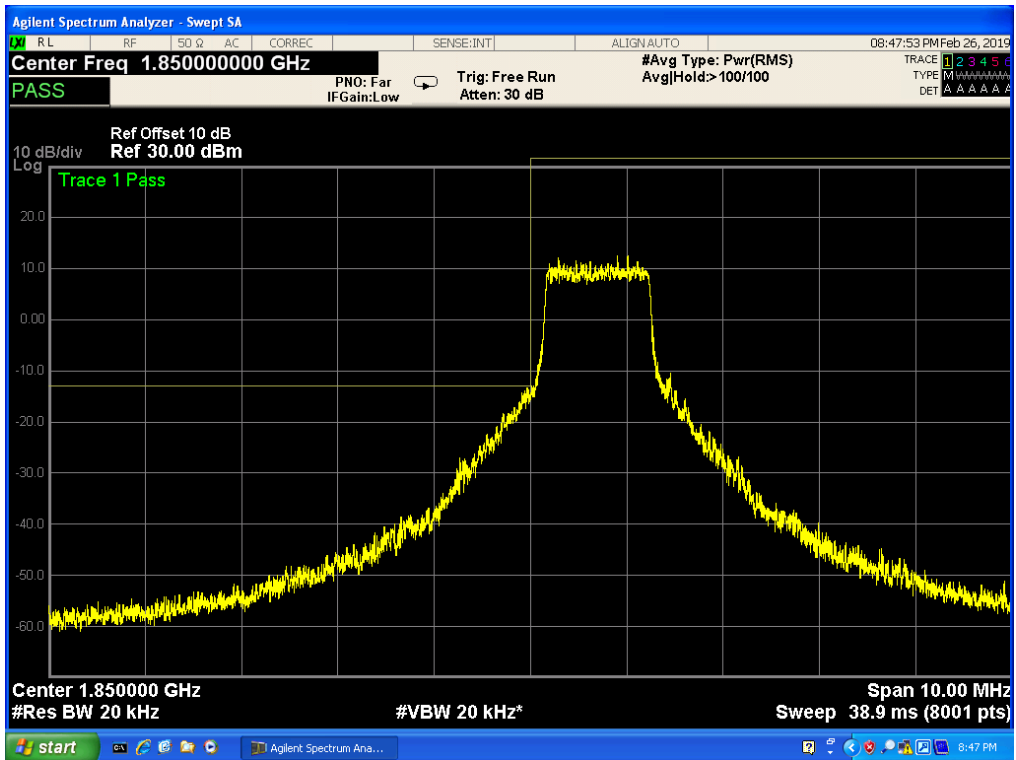
**RESULTS**

6.1 LTE BAND 2

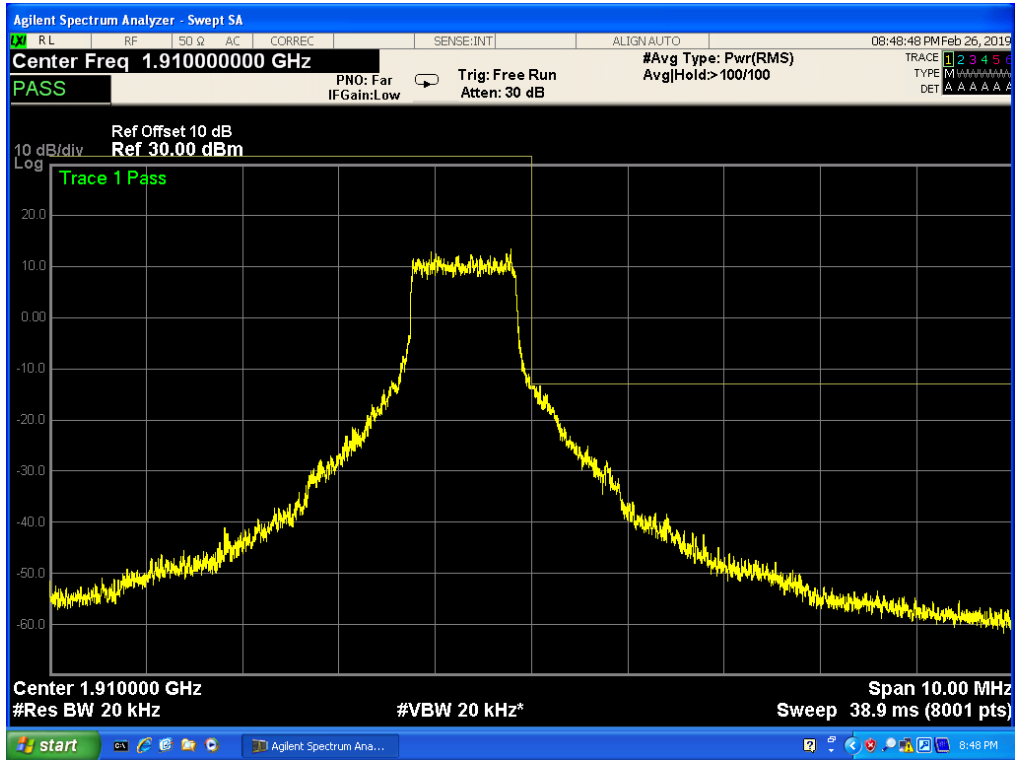
Band 2, UL Channel 18607, UL Frequency 1850.7, BW 1.4, NO. RB 6, RB POS. Low, QPSK



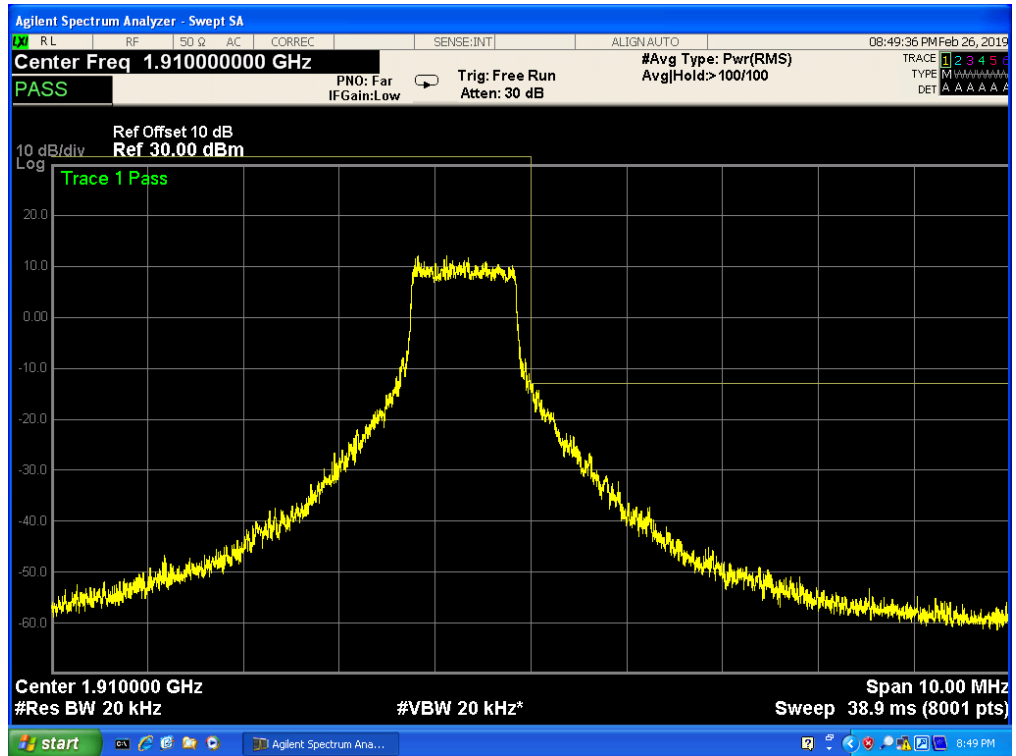
Band 2, UL Channel 18607, UL Frequency 1850.7, BW 1.4, NO. RB 6, RB POS. Low, 16QAM



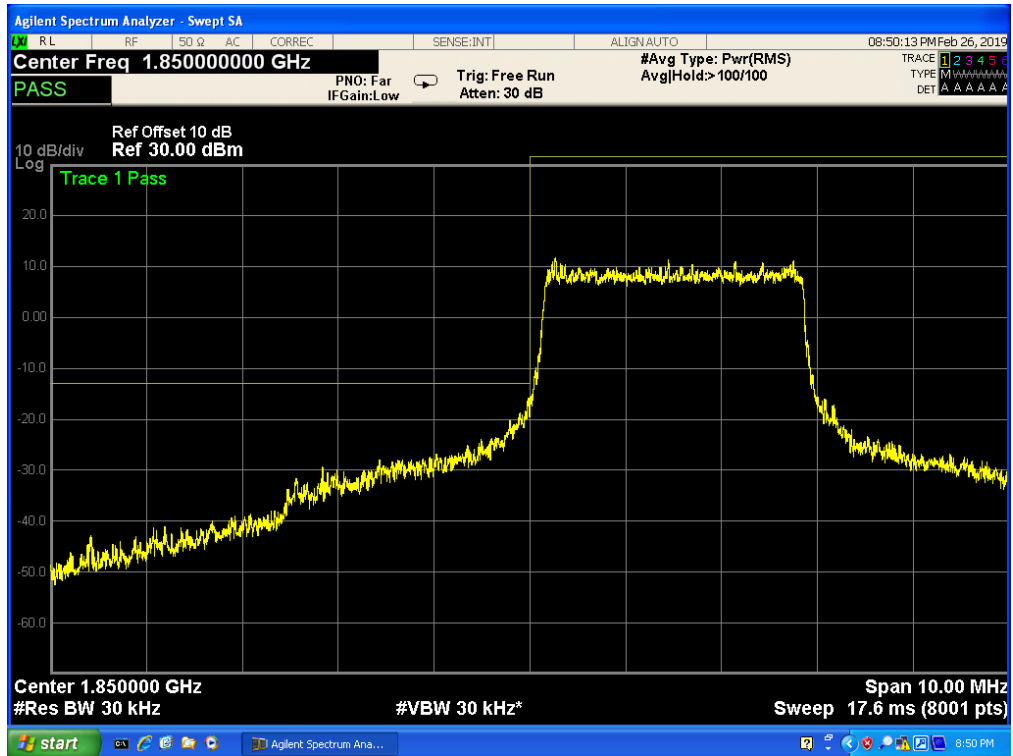
Band 2, UL Channel 19193, UL Frequency 1909.3, BW 1.4, NO. RB 6, RB POS. Low, QPSK



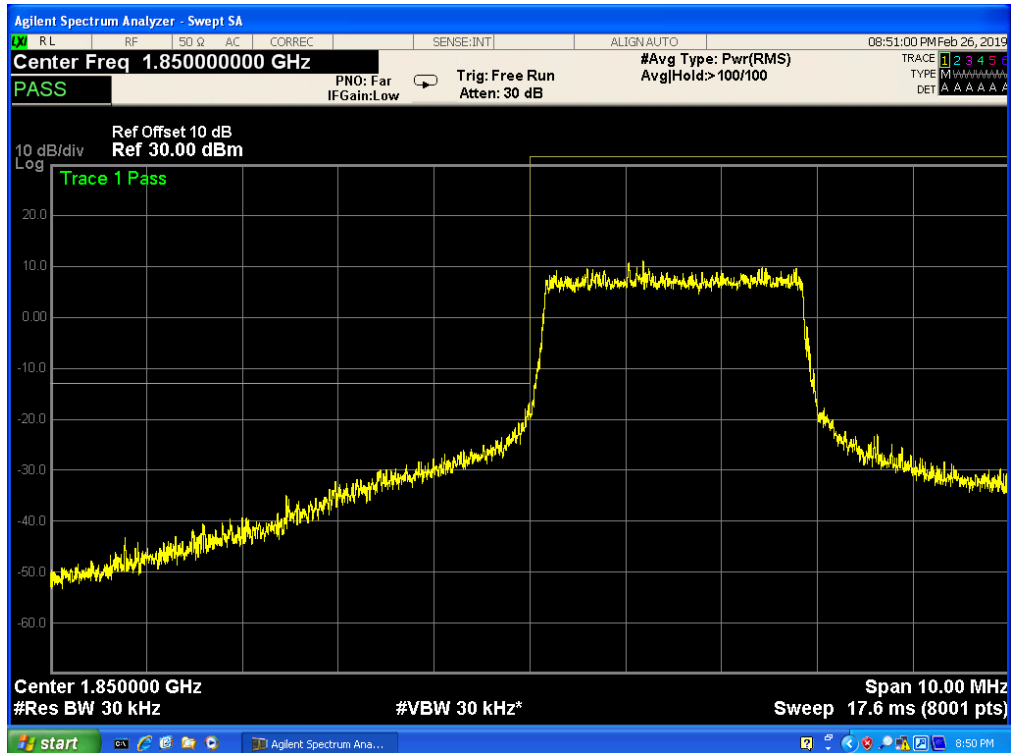
Band 2, UL Channel 19193, UL Frequency 1909.3, BW 1.4, NO. RB 6, RB POS. Low, 16QAM



Band 2, UL Channel 18615, UL Frequency 1851.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK

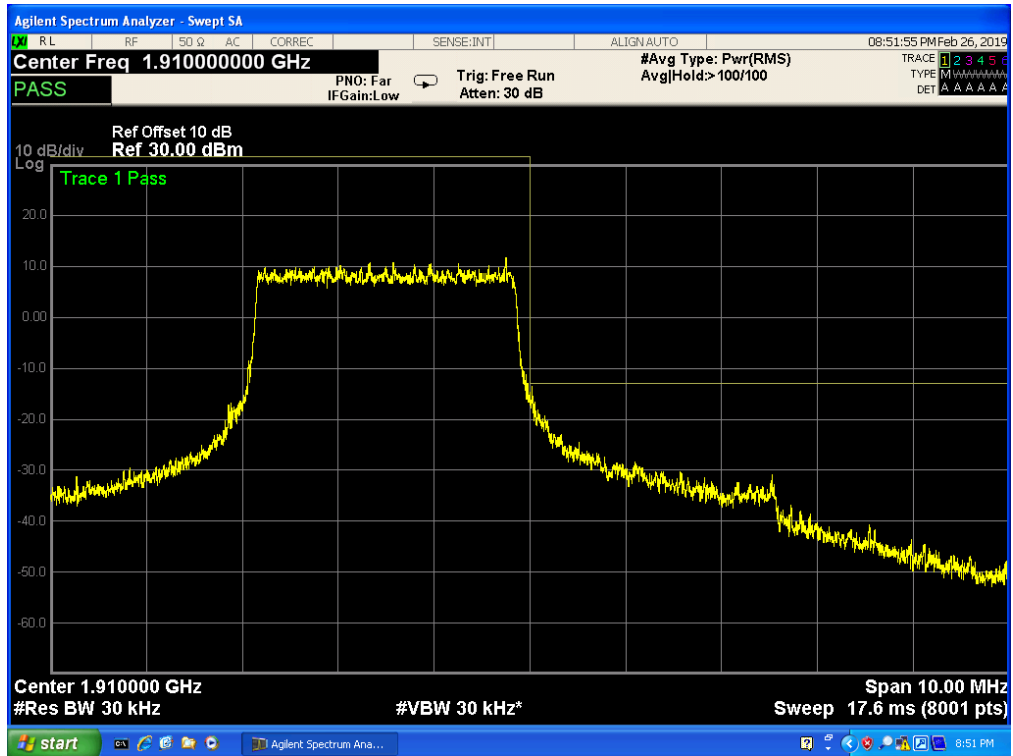


Band 2, UL Channel 18615, UL Frequency 1851.5, BW 3.0, NO. RB 15, RB POS. Low, 16QAM

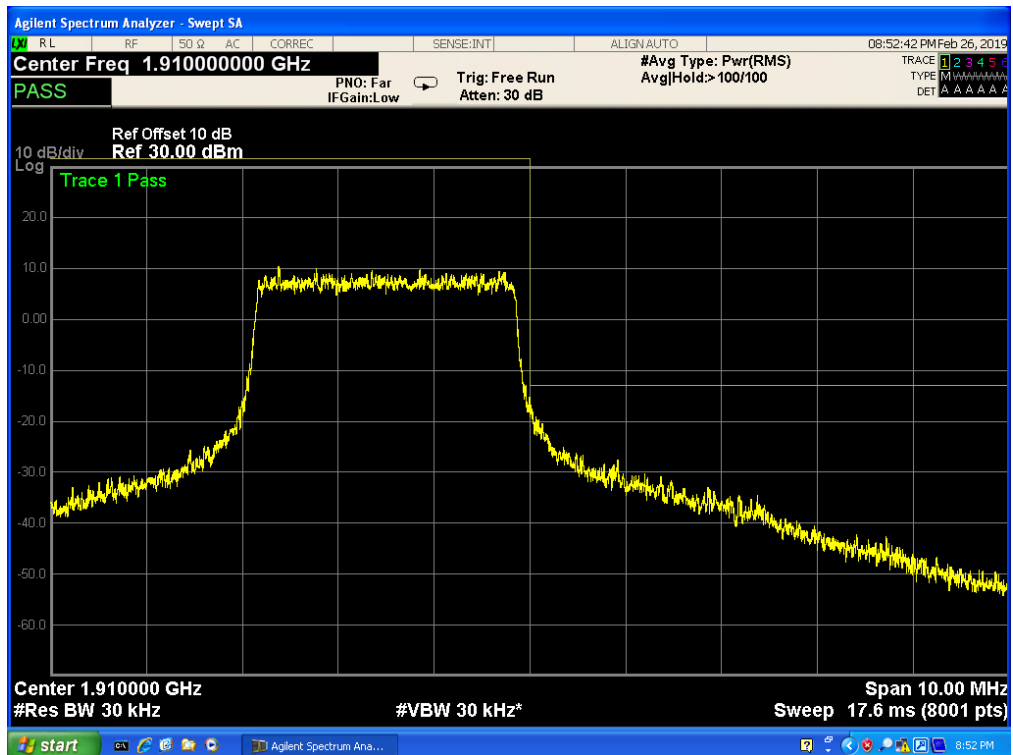




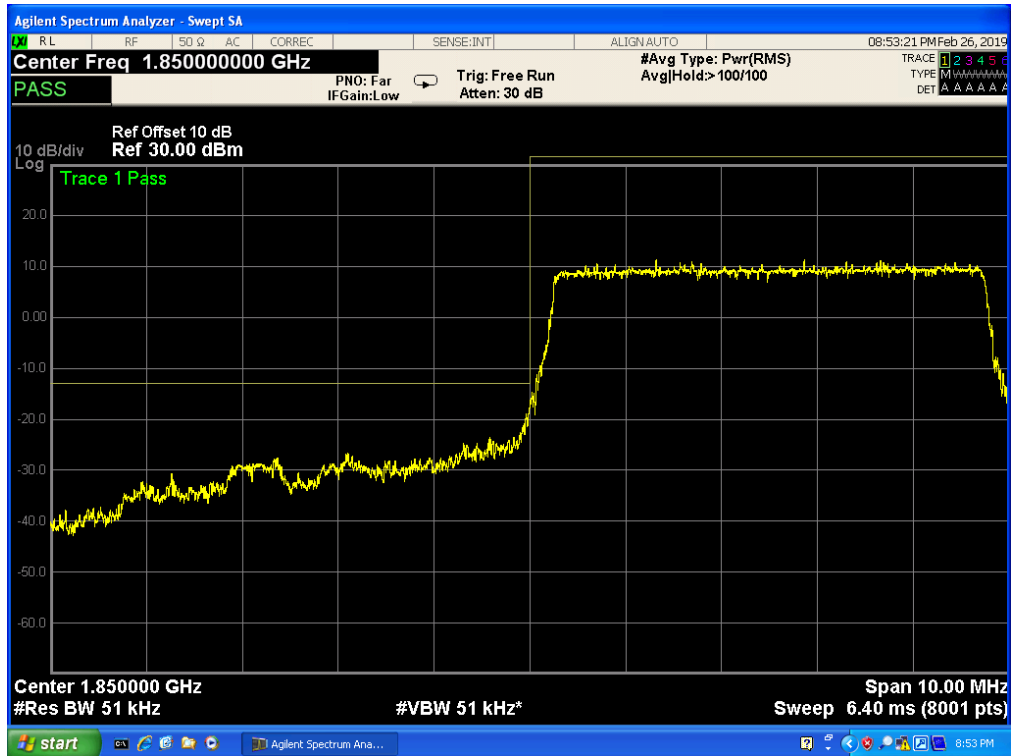
Band 2, UL Channel 19185, UL Frequency 1908.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK



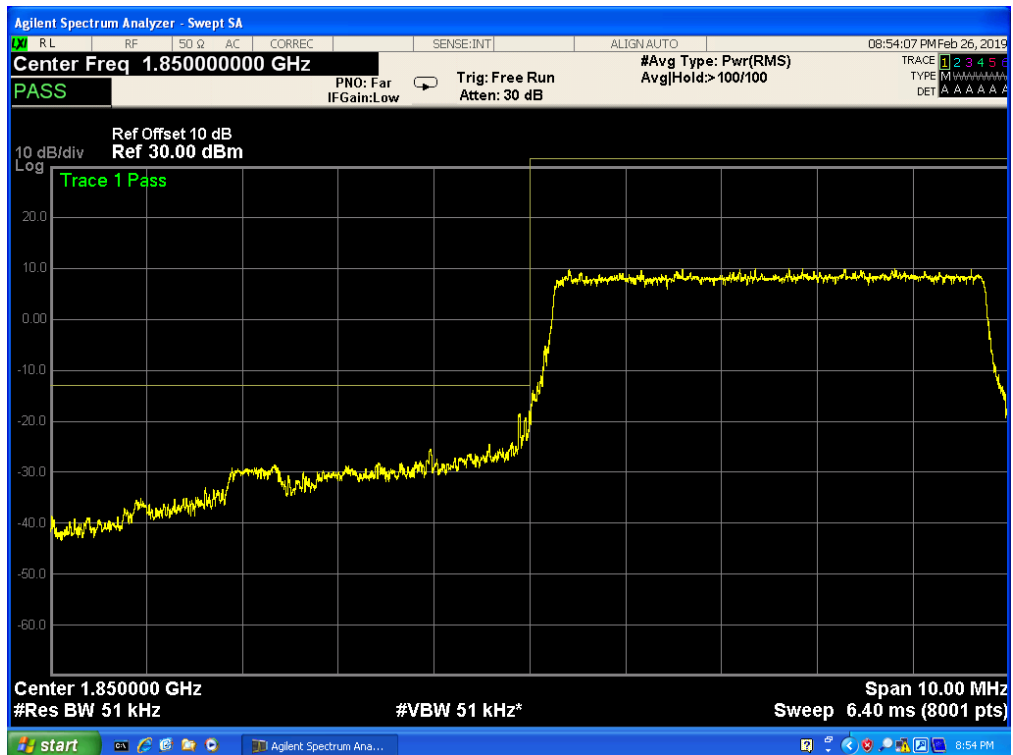
Band 2, UL Channel 19185, UL Frequency 1908.5, BW 3.0, NO. RB 15, RB POS. Low, 16QAM



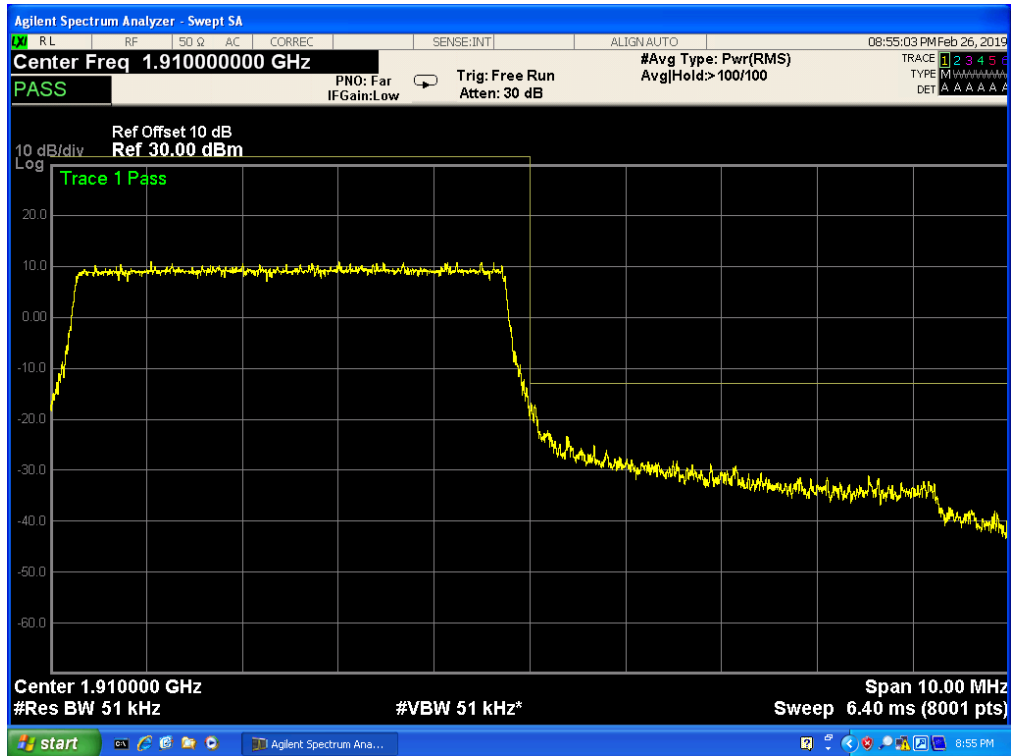
Band 2, UL Channel 18625, UL Frequency 1852.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



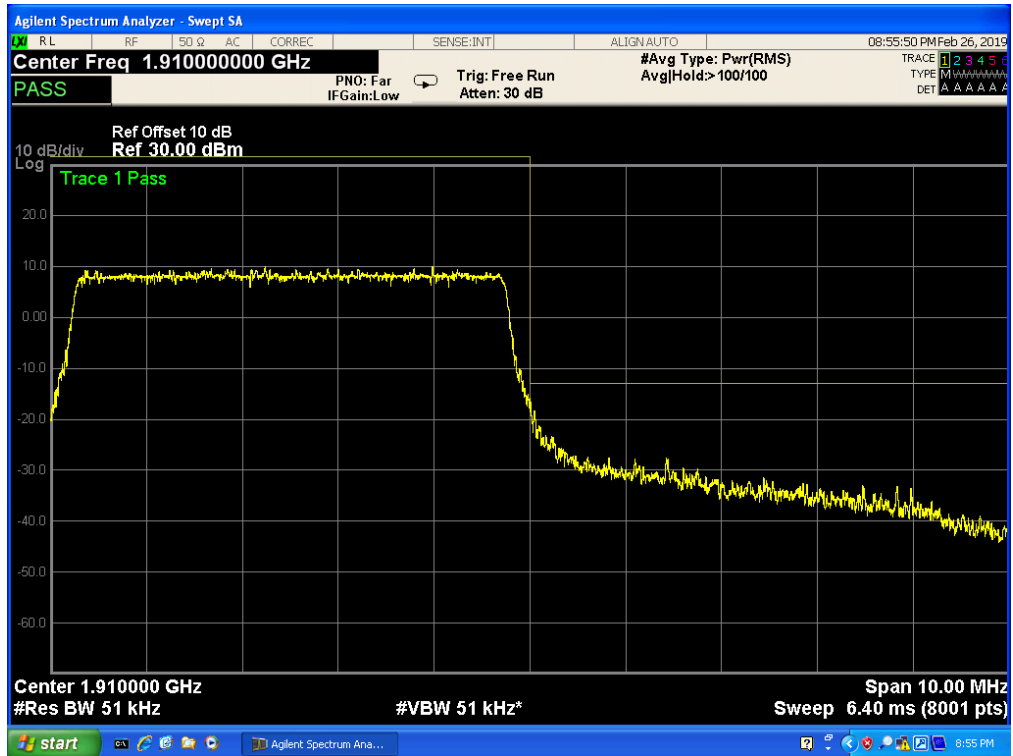
Band 2, UL Channel 18625, UL Frequency 1852.5, BW 5.0, NO. RB 25, RB POS. Low, 16QAM



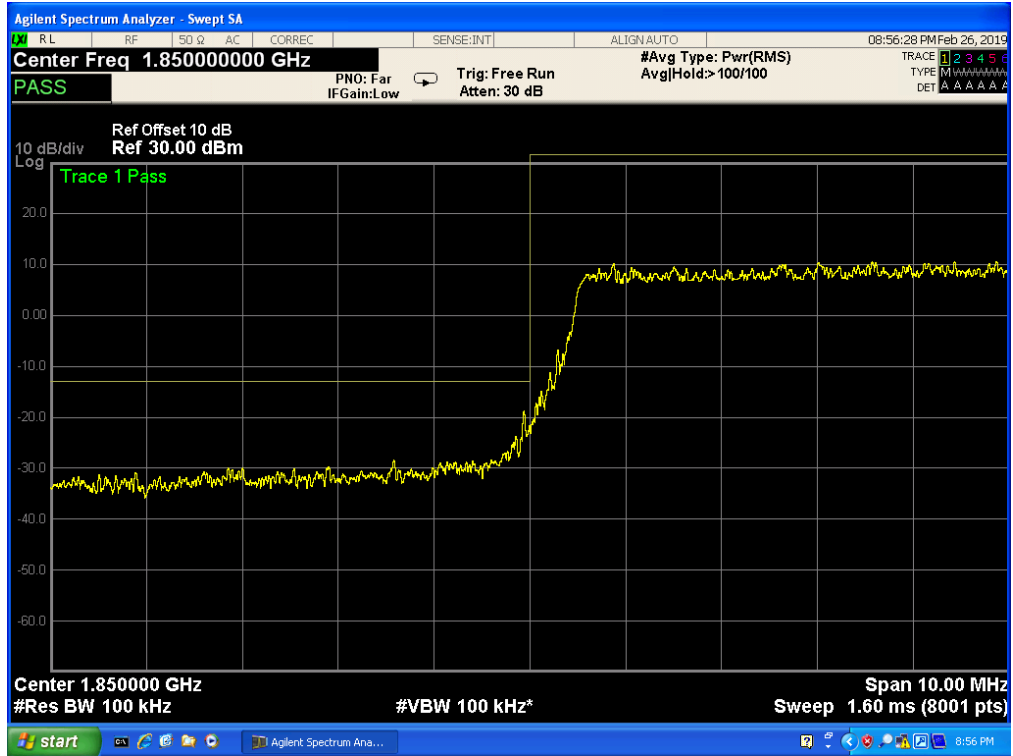
Band 2, UL Channel 19175, UL Frequency 1907.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



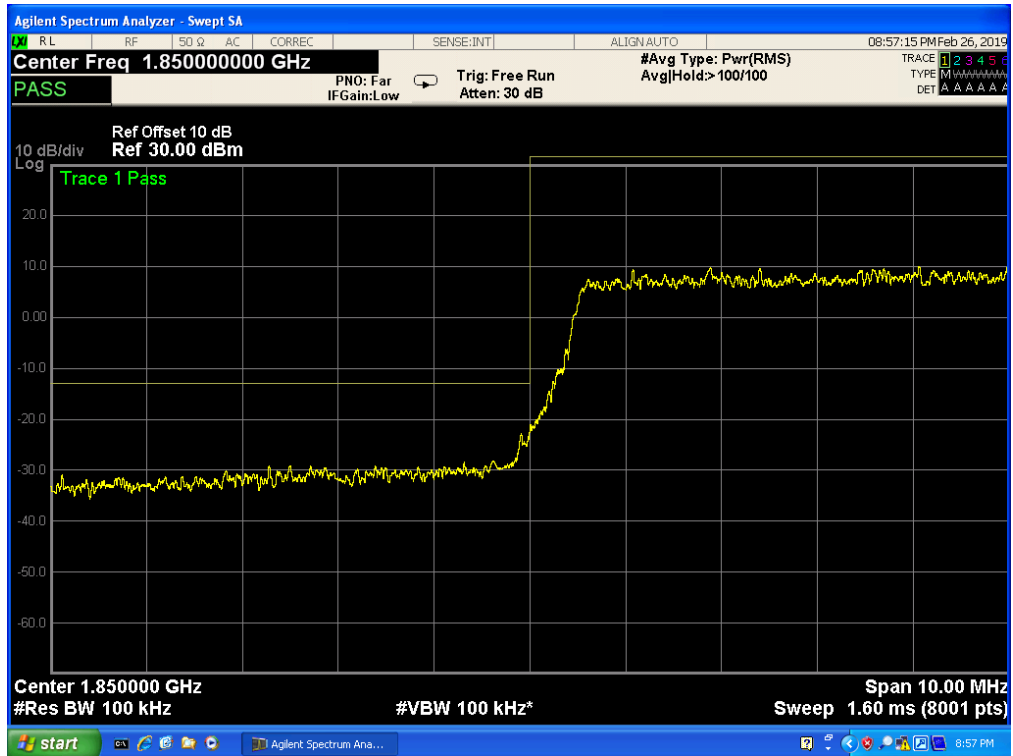
Band 2, UL Channel 19175, UL Frequency 1907.5, BW 5.0, NO. RB 25, RB POS. Low, 16QAM



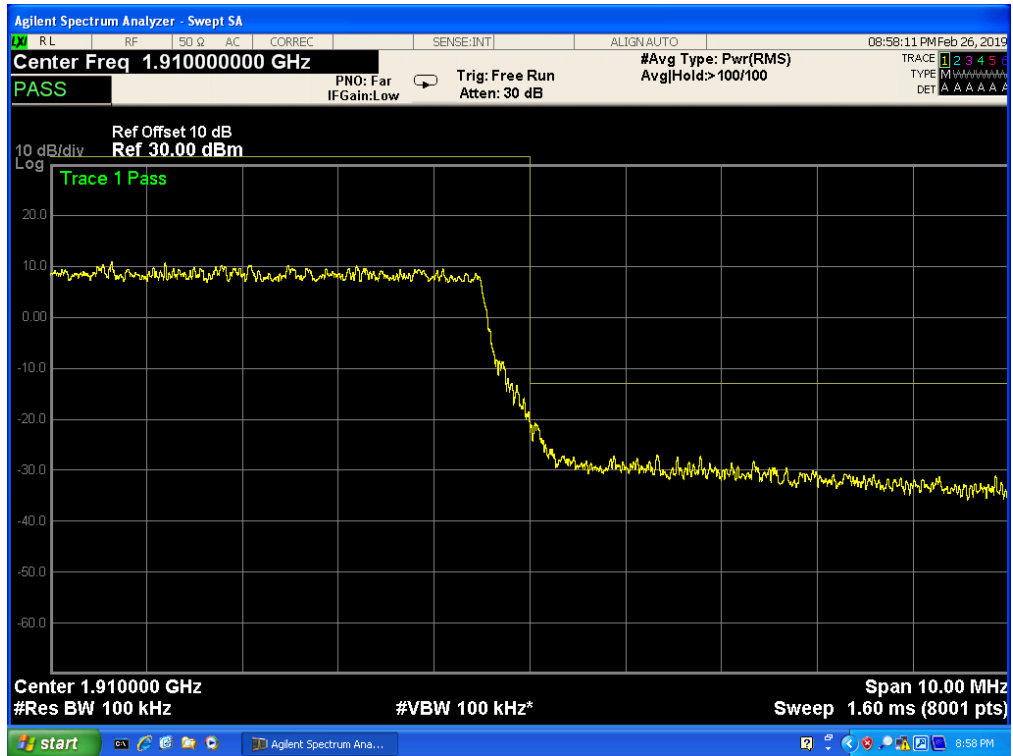
Band 2, UL Channel 18650, UL Frequency 1855.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



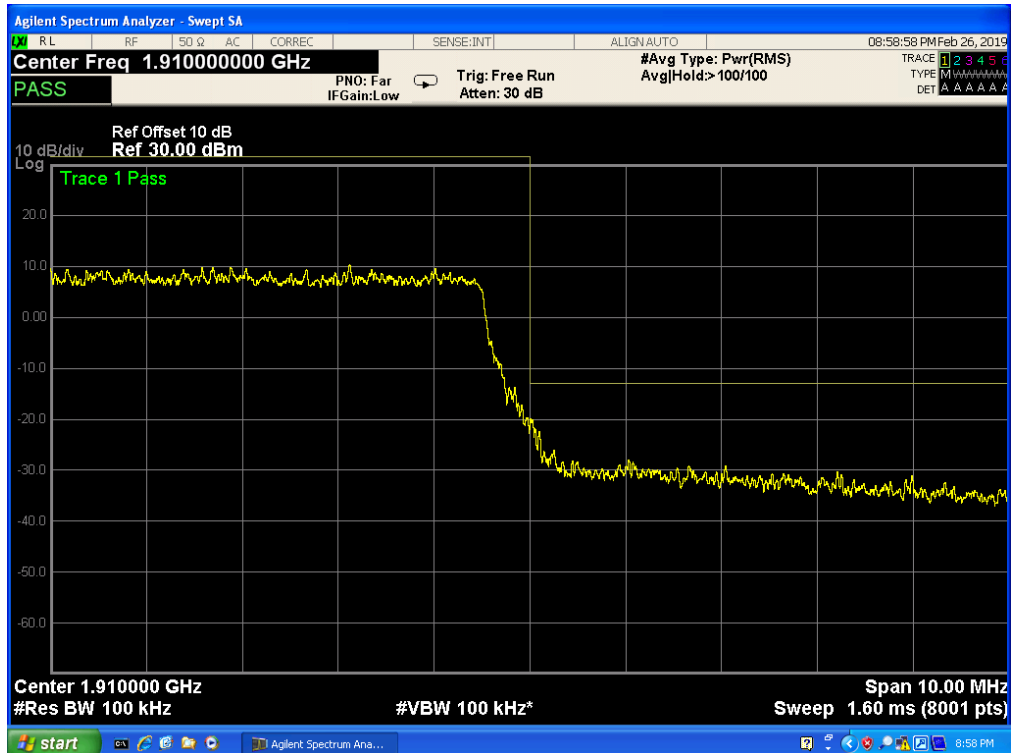
Band 2, UL Channel 18650, UL Frequency 1855.0, BW 10.0, NO. RB 50, RB POS. Low, 16QAM



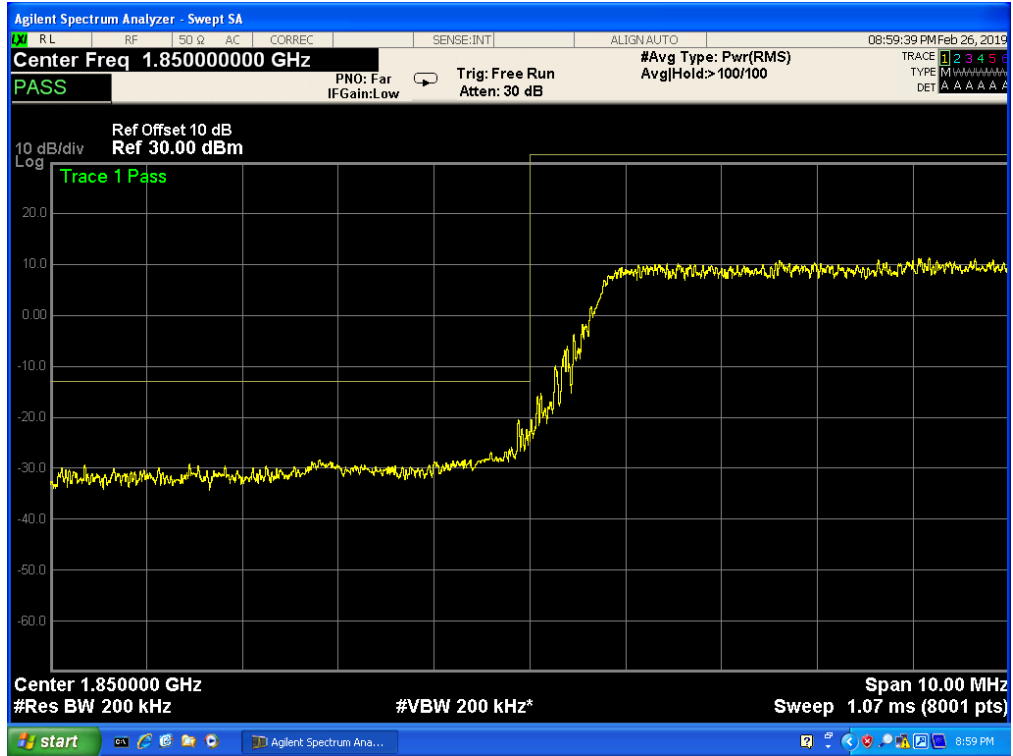
Band 2, UL Channel 19150, UL Frequency 1905.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



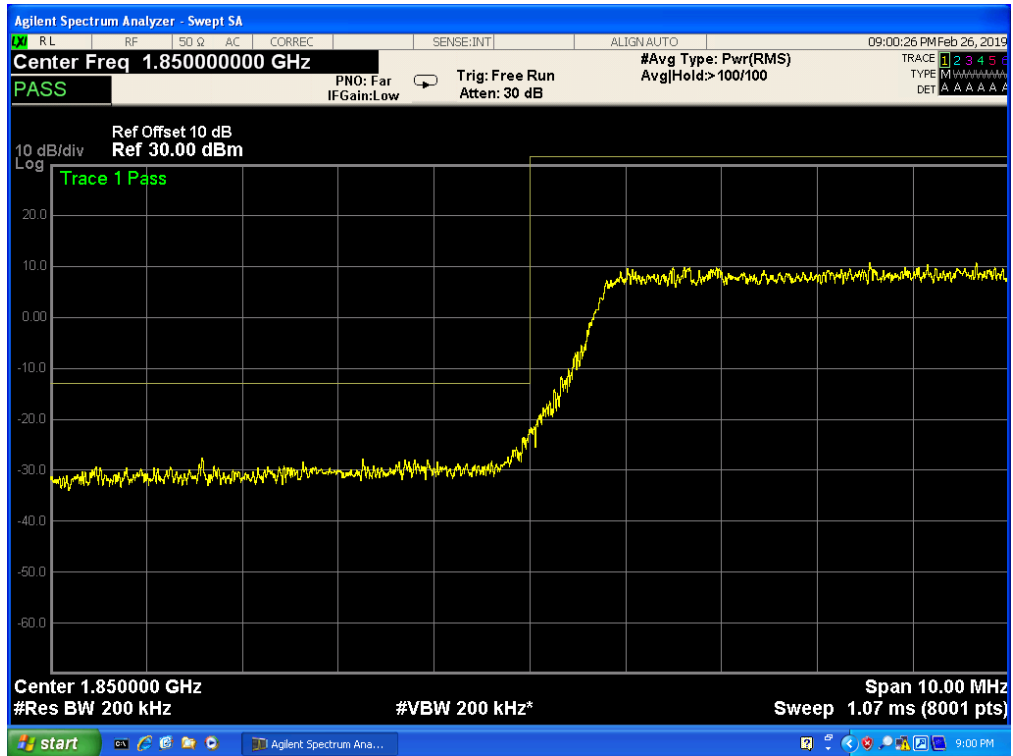
Band 2, UL Channel 19150, UL Frequency 1905.0, BW 10.0, NO. RB 50, RB POS. Low, 16QAM



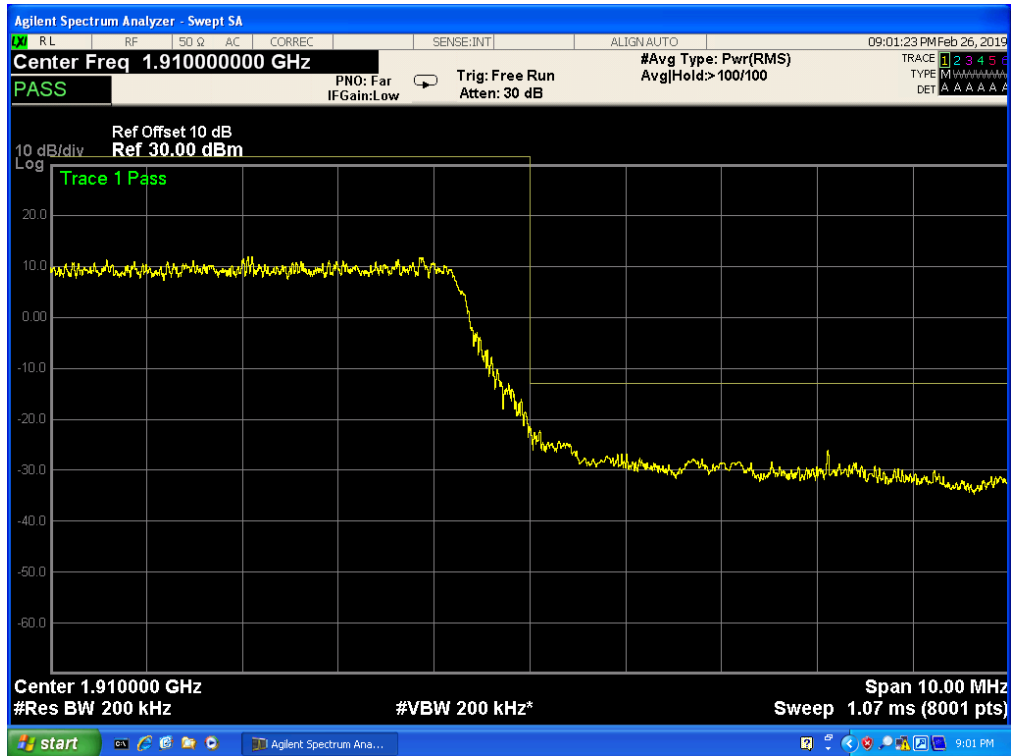
Band 2, UL Channel 18675, UL Frequency 1857.5, BW 15.0, NO. RB 75, RB POS. Low, QPSK



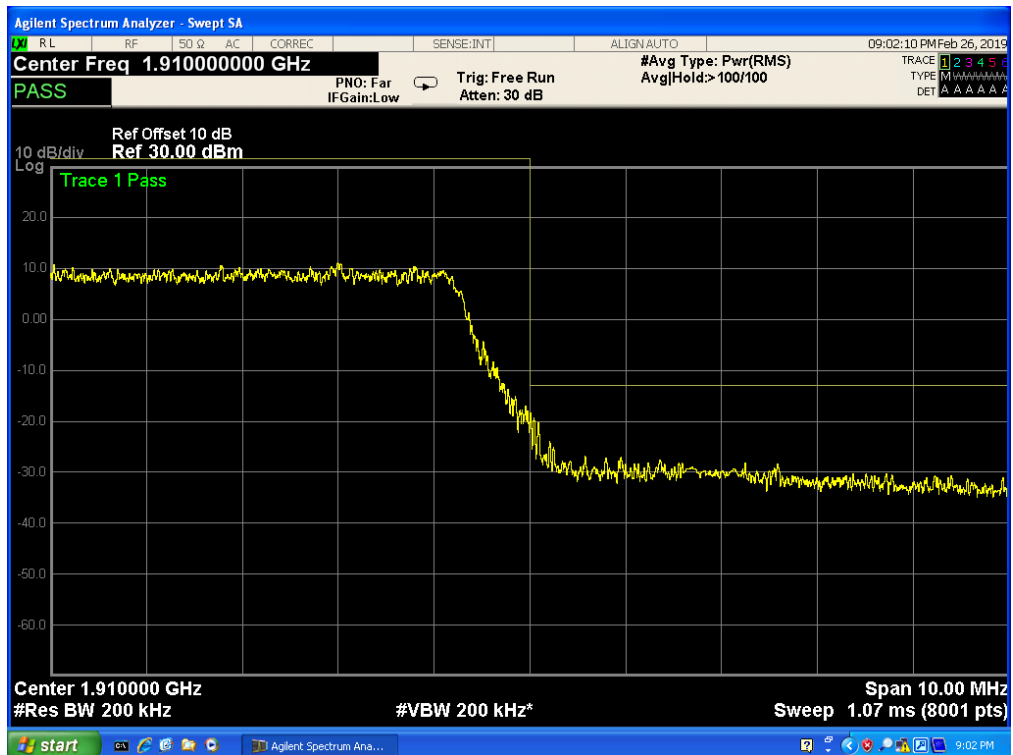
Band 2, UL Channel 18675, UL Frequency 1857.5, BW 15.0, NO. RB 75, RB POS. Low, 16QAM



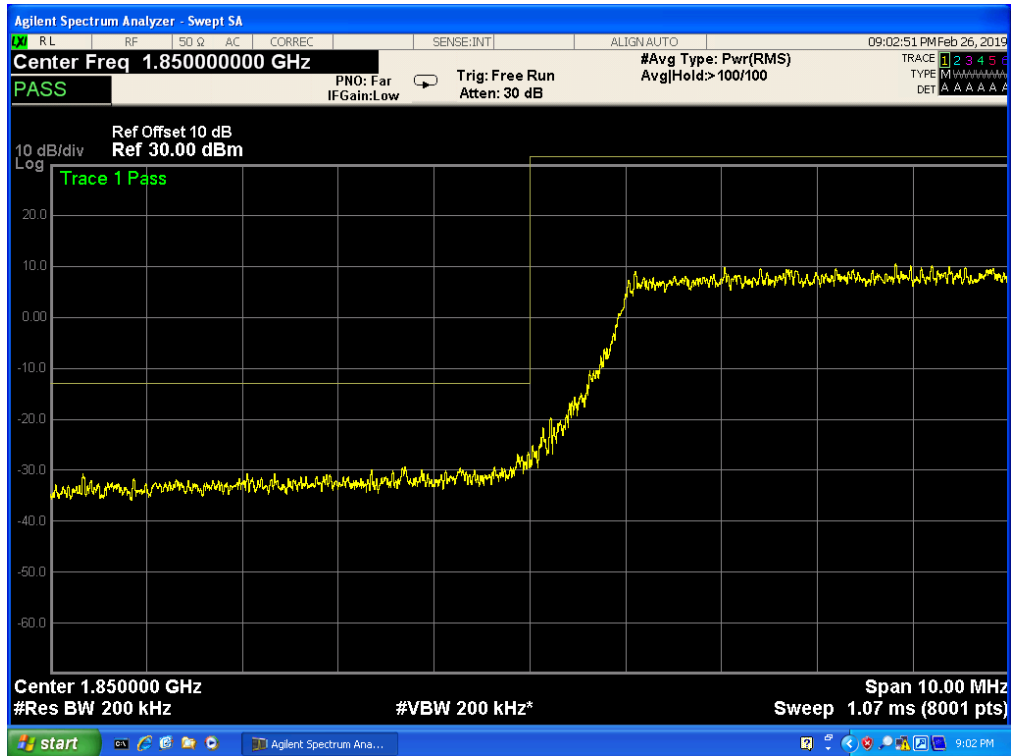
Band 2, UL Channel 19125, UL Frequency 1902.5, BW 15.0, NO. RB 75, RB POS. Low, QPSK



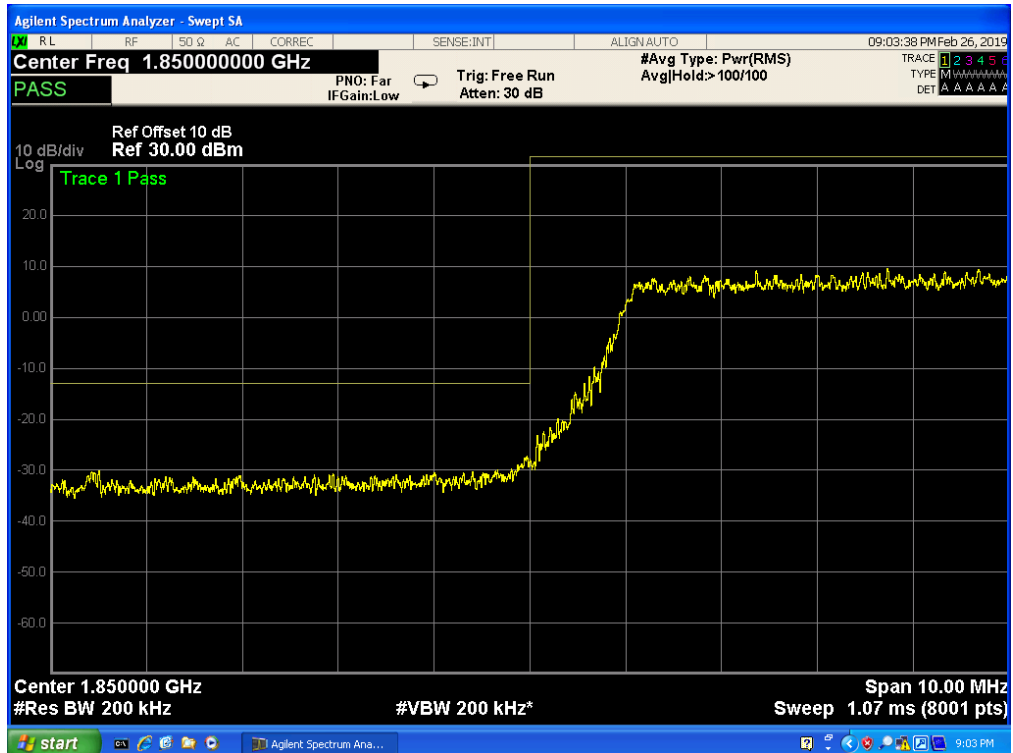
Band 2, UL Channel 19125, UL Frequency 1902.5, BW 15.0, NO. RB 75, RB POS. Low, 16QAM



Band 2, UL Channel 18700, UL Frequency 1860.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK

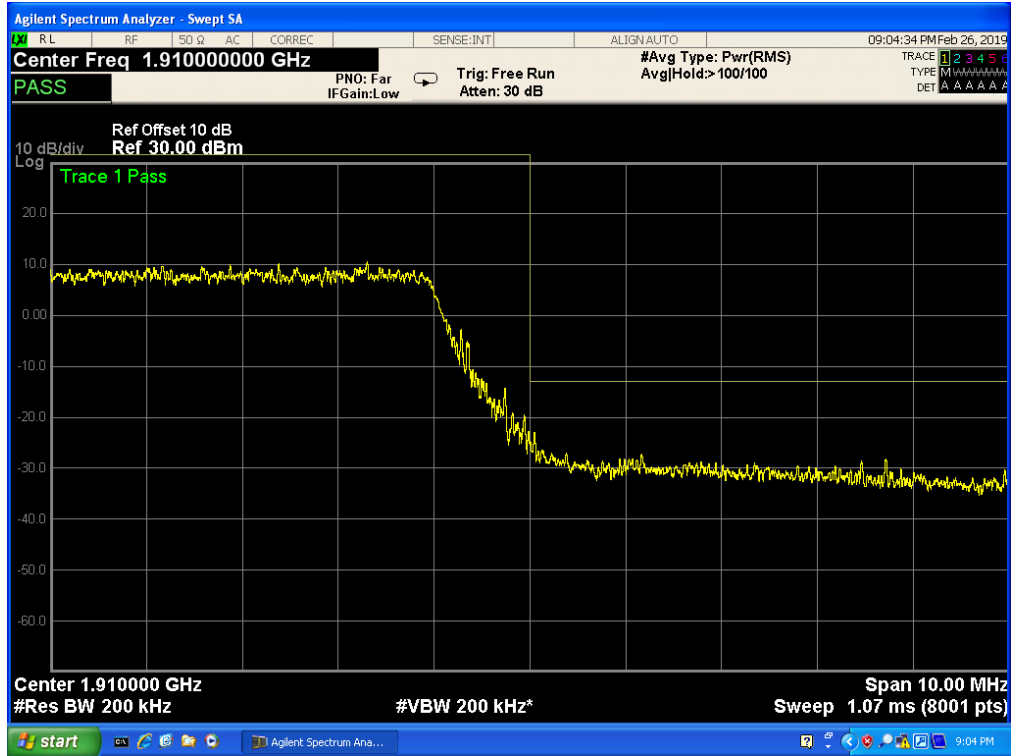


Band 2, UL Channel 18700, UL Frequency 1860.0, BW 20.0, NO. RB 100, RB POS. Low, 16QAM

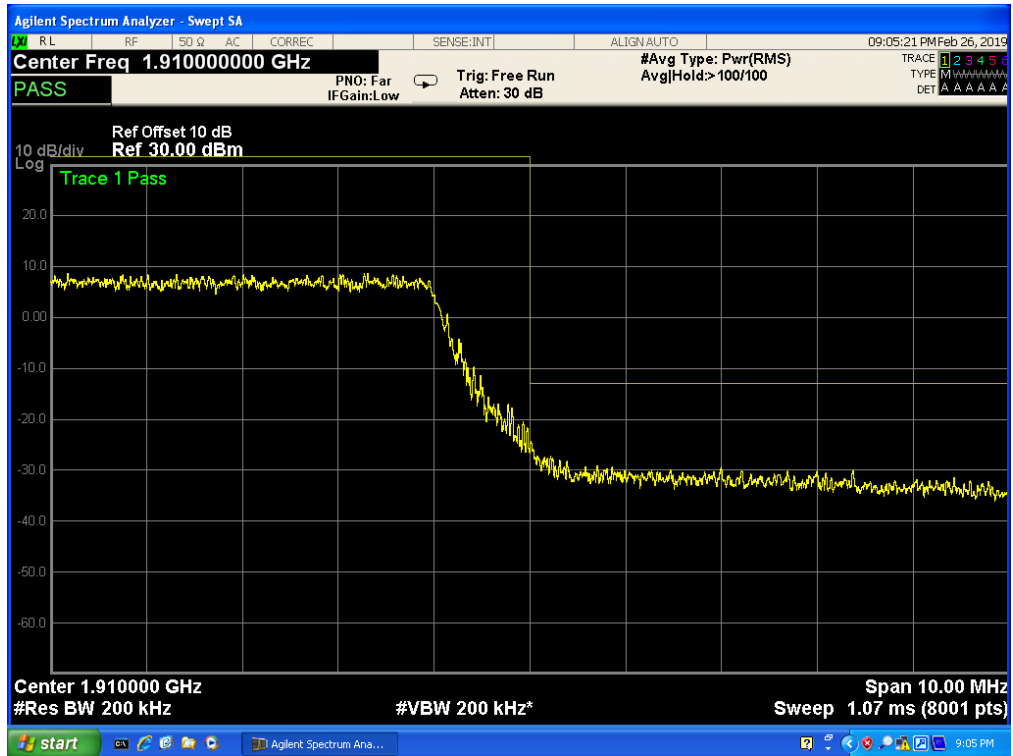




Band 2, UL Channel 19100, UL Frequency 1900.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK

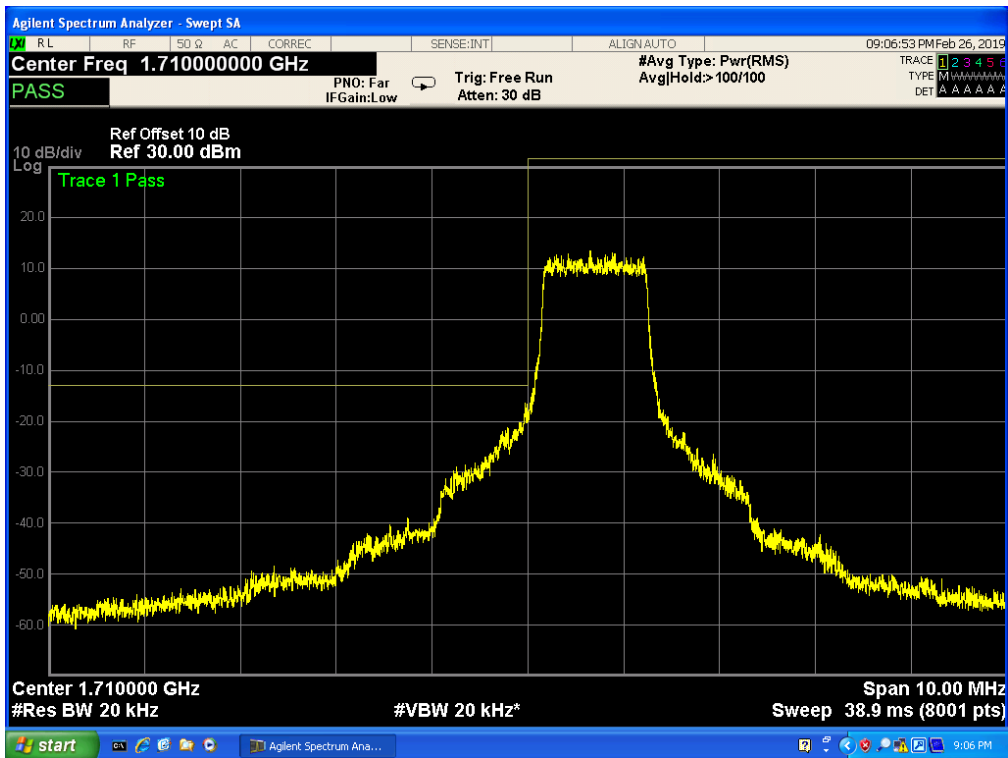


Band 2, UL Channel 19100, UL Frequency 1900.0, BW 20.0, NO. RB 100, RB POS. Low, 16QAM

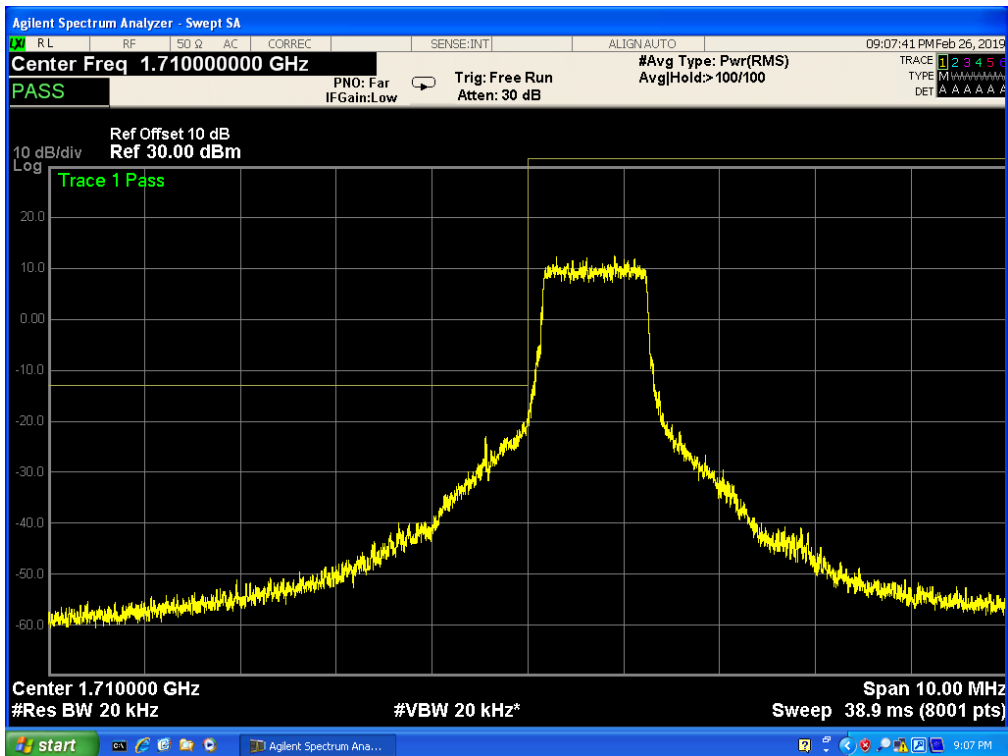


### 6.2 LTE BAND 4

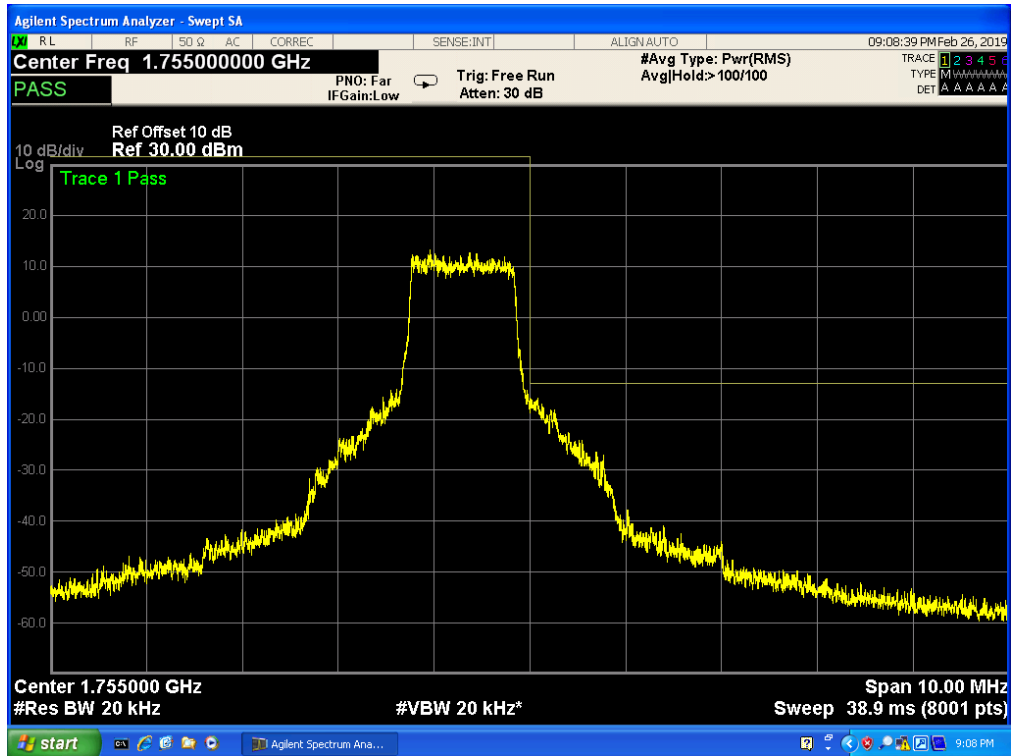
Band 4, UL Channel 19957, UL Frequency 1710.7, BW 1.4, NO. RB 6, RB POS. Low, QPSK



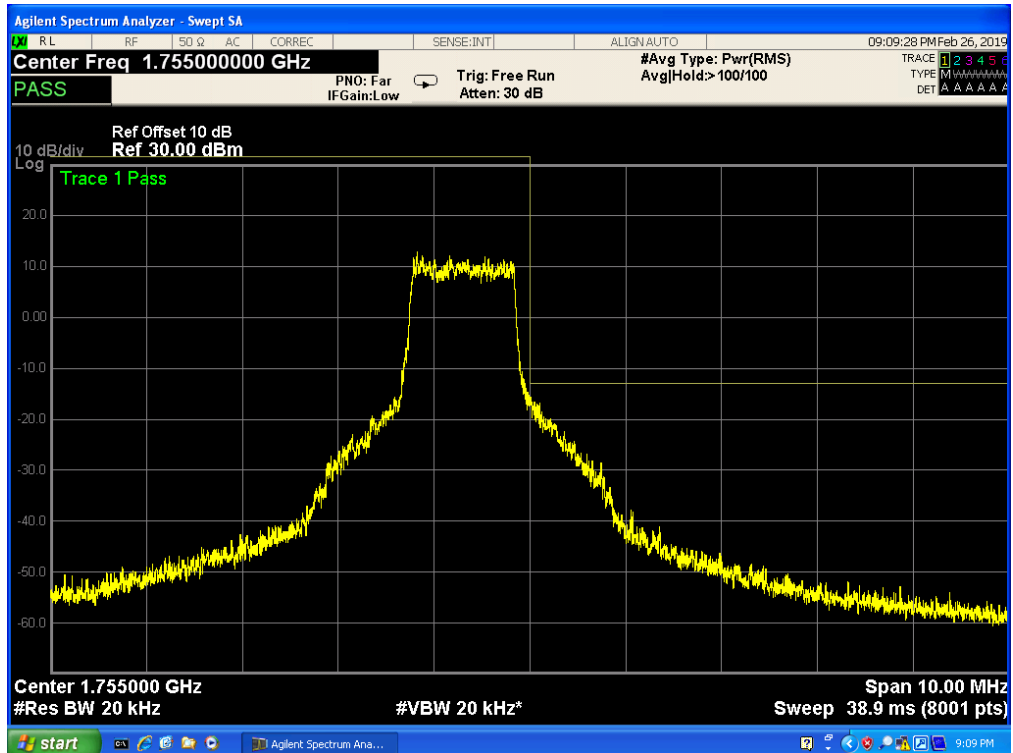
Band 4, UL Channel 19957, UL Frequency 1710.7, BW 1.4, NO. RB 6, RB POS. Low, 16QAM



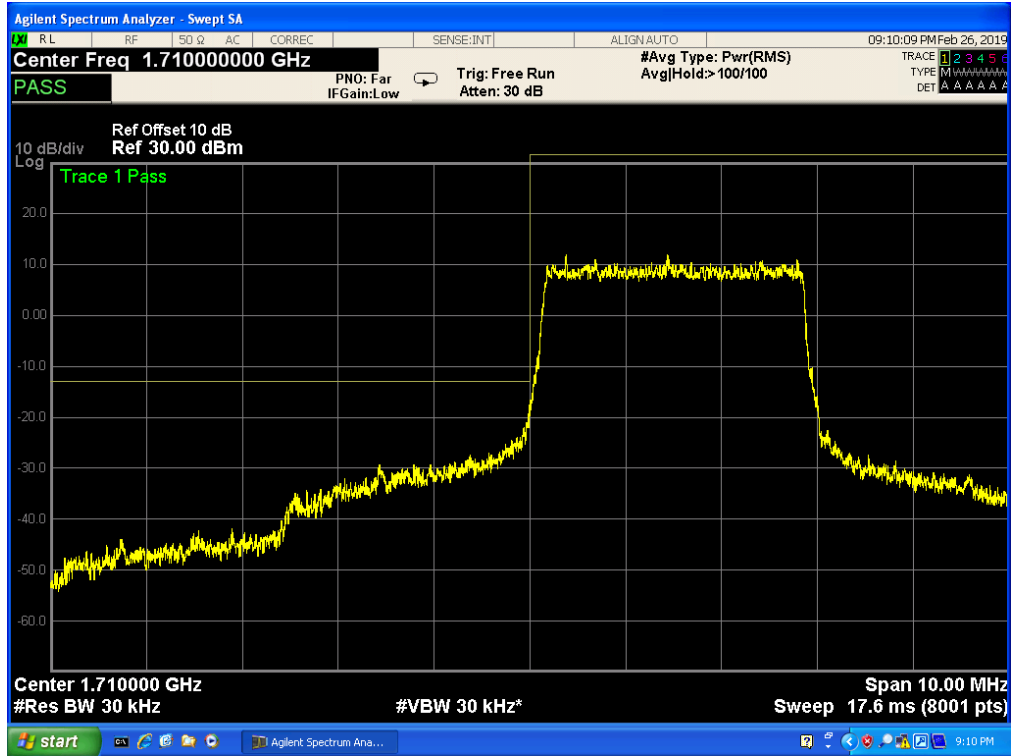
Band 4, UL Channel 20393, UL Frequency 1754.3, BW 1.4, NO. RB 6, RB POS. Low, QPSK



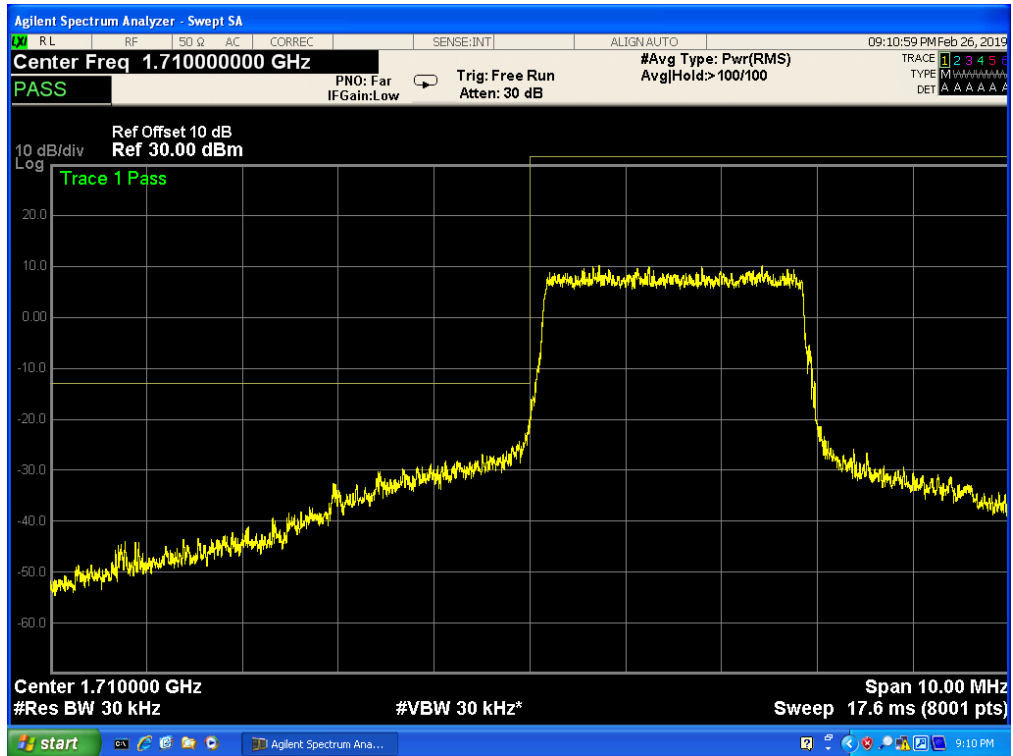
Band 4, UL Channel 20393, UL Frequency 1754.3, BW 1.4, NO. RB 6, RB POS. Low, 16QAM



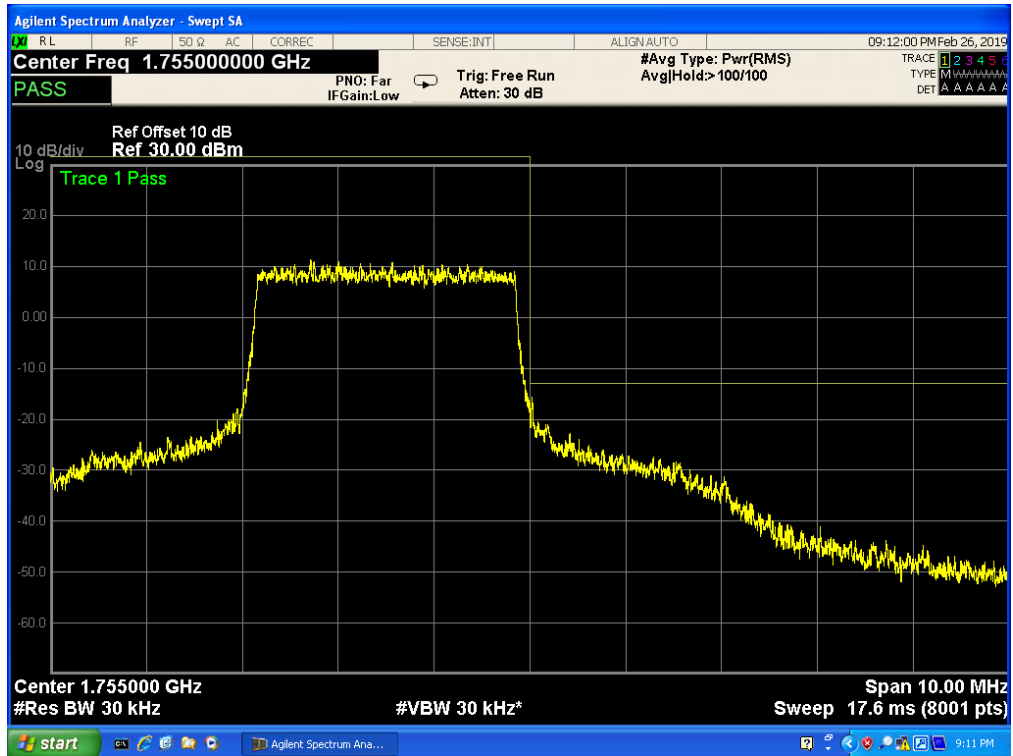
Band 4, UL Channel 19965, UL Frequency 1711.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK



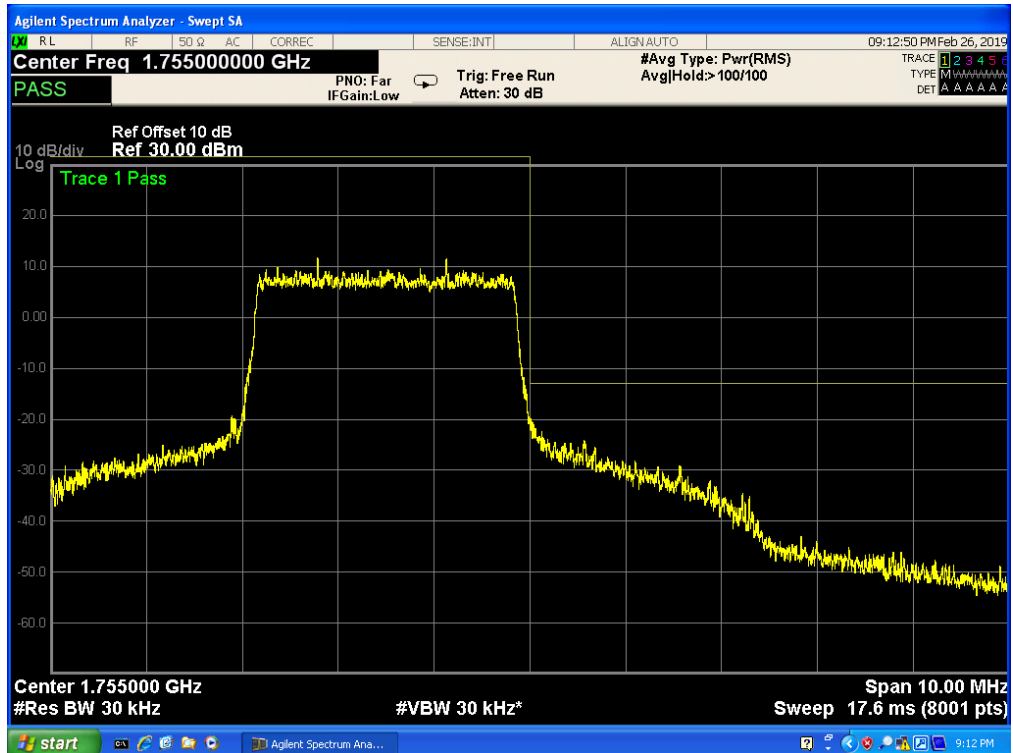
Band 4, UL Channel 19965, UL Frequency 1711.5, BW 3.0, NO. RB 15, RB POS. Low, 16QAM



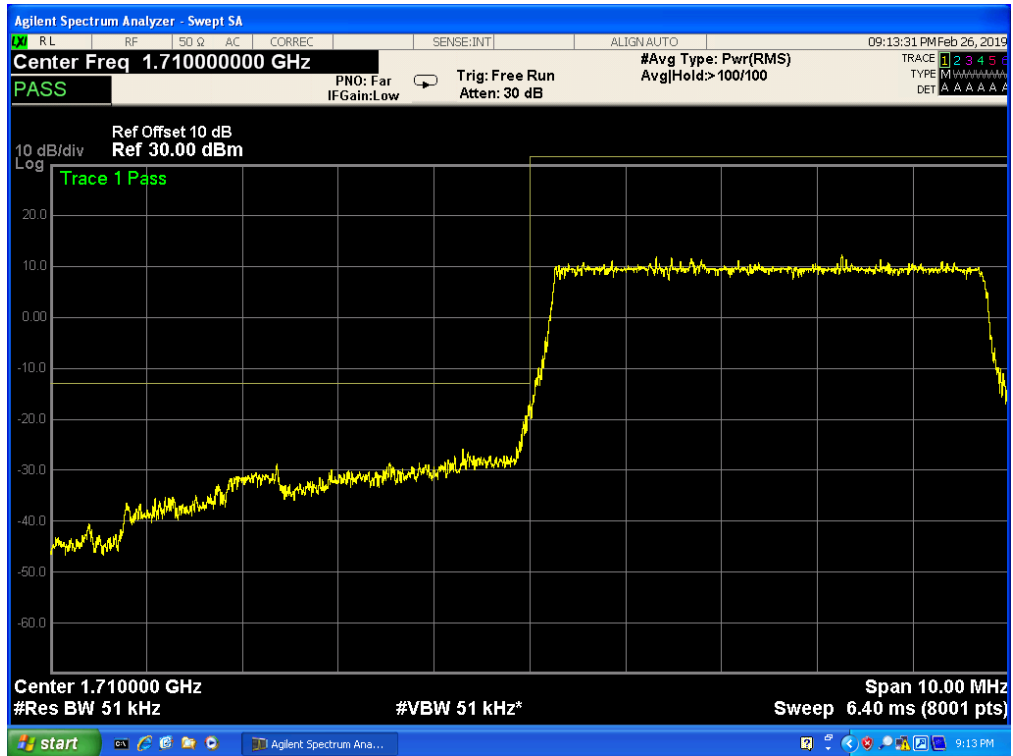
Band 4, UL Channel 20385, UL Frequency 1753.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK



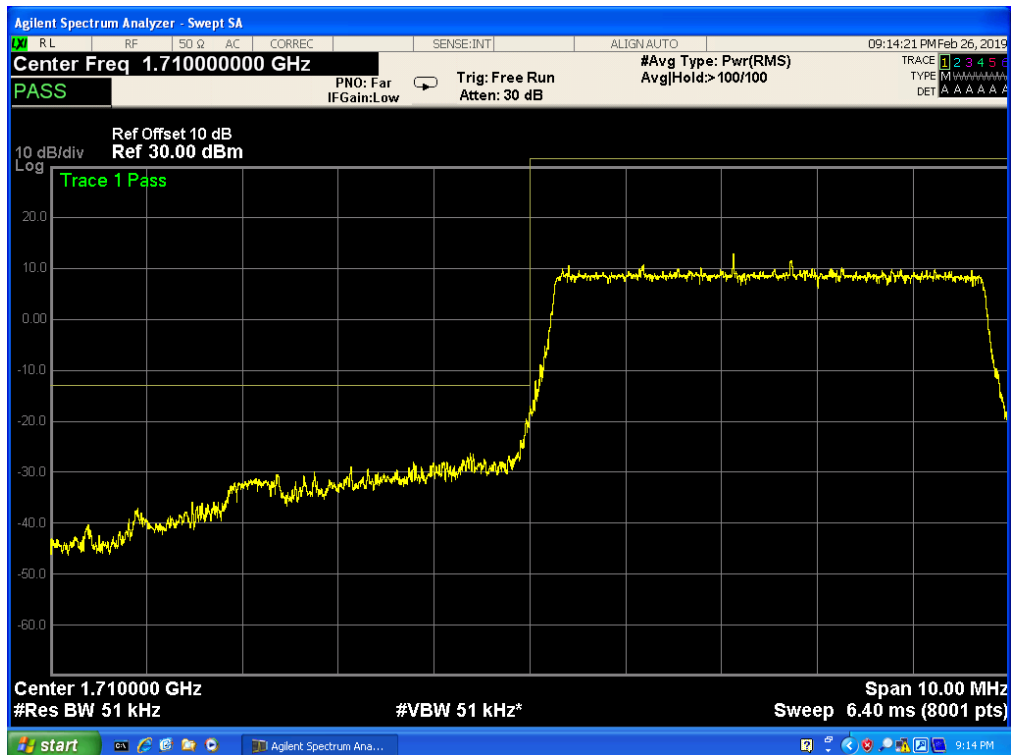
Band 4, UL Channel 20385, UL Frequency 1753.5, BW 3.0, NO. RB 15, RB POS. Low, 16QAM



Band 4, UL Channel 19975, UL Frequency 1712.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



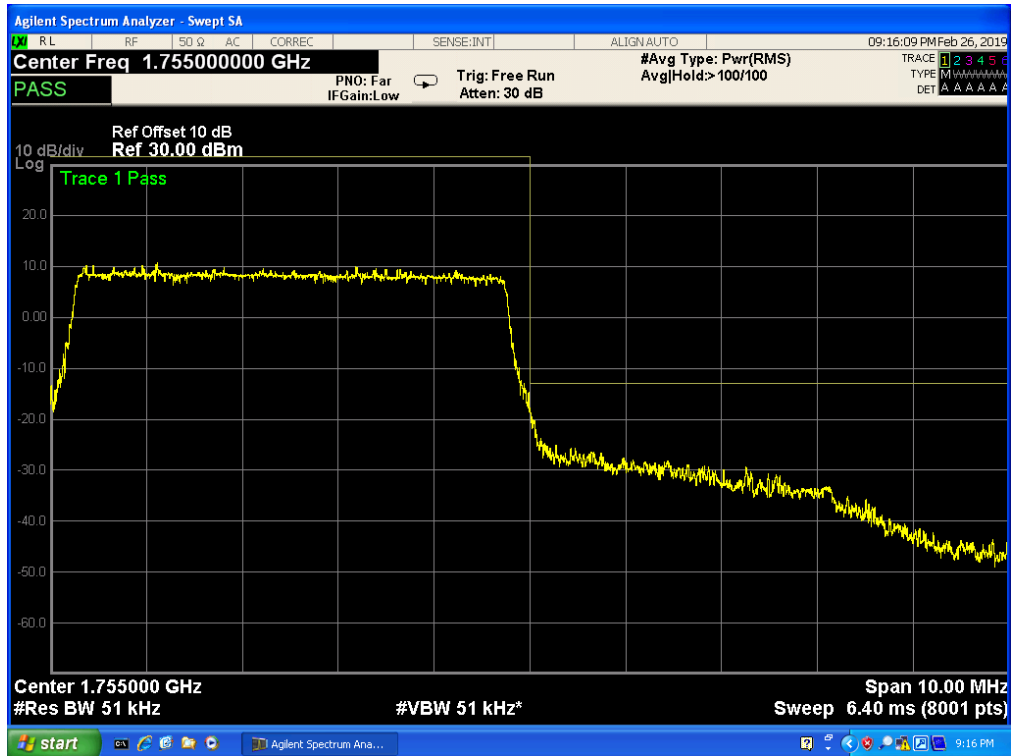
Band 4, UL Channel 19975, UL Frequency 1712.5, BW 5.0, NO. RB 25, RB POS. Low, 16QAM



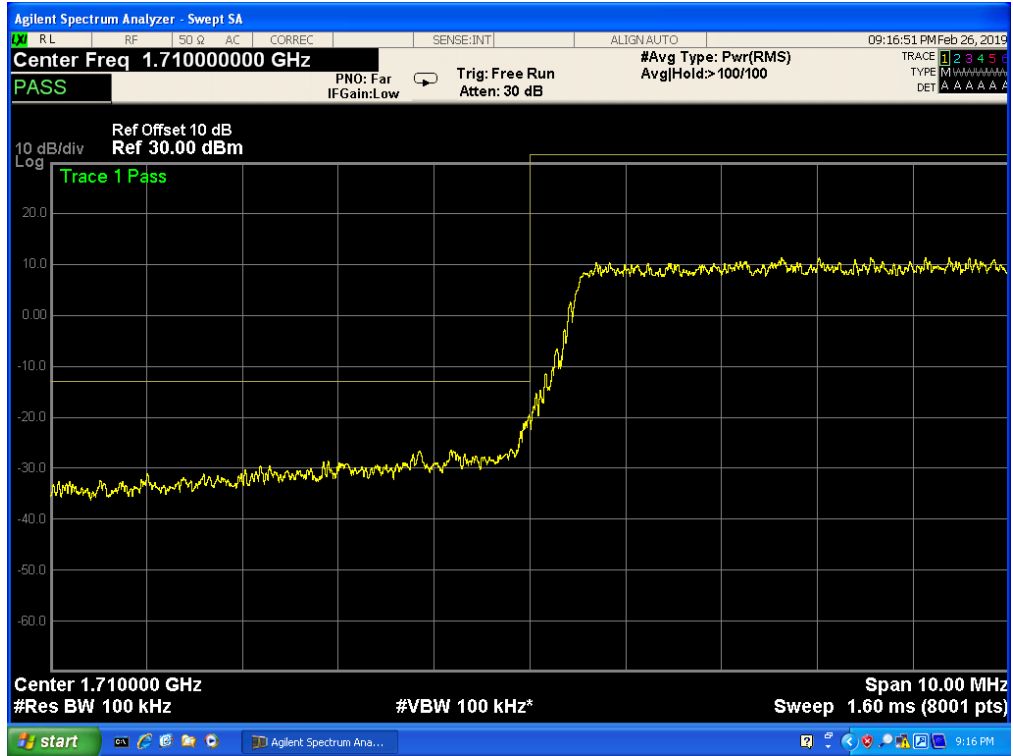
Band 4, UL Channel 20375, UL Frequency 1752.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



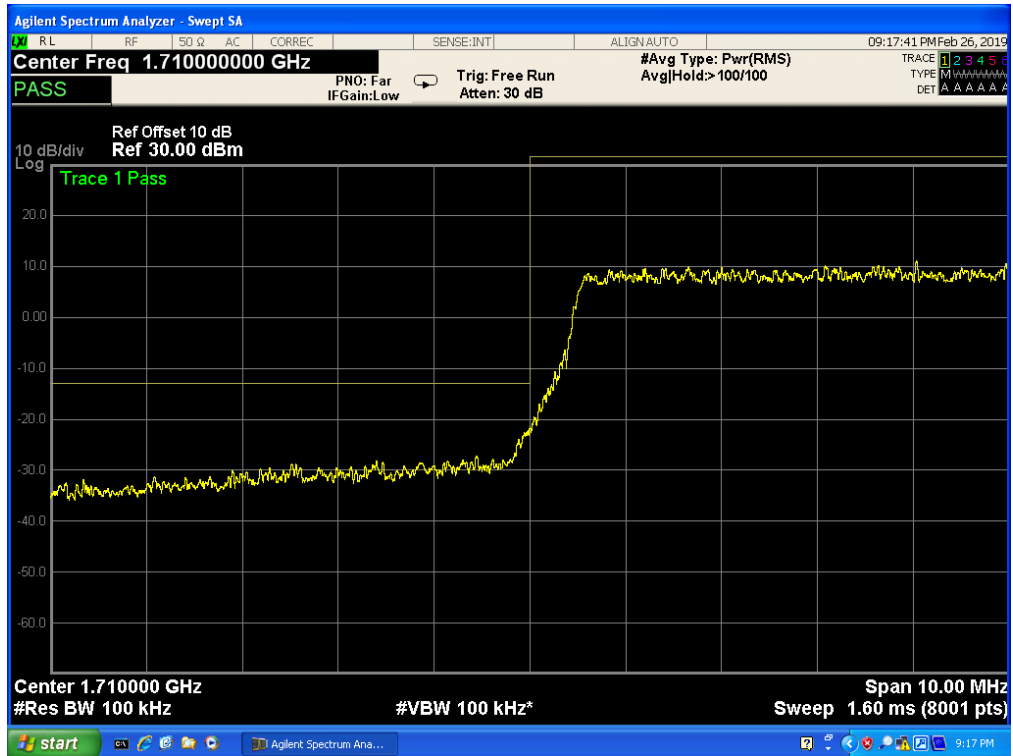
Band 4, UL Channel 20375, UL Frequency 1752.5, BW 5.0, NO. RB 25, RB POS. Low, 16QAM



Band 4, UL Channel 2000, UL Frequency 1715.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK

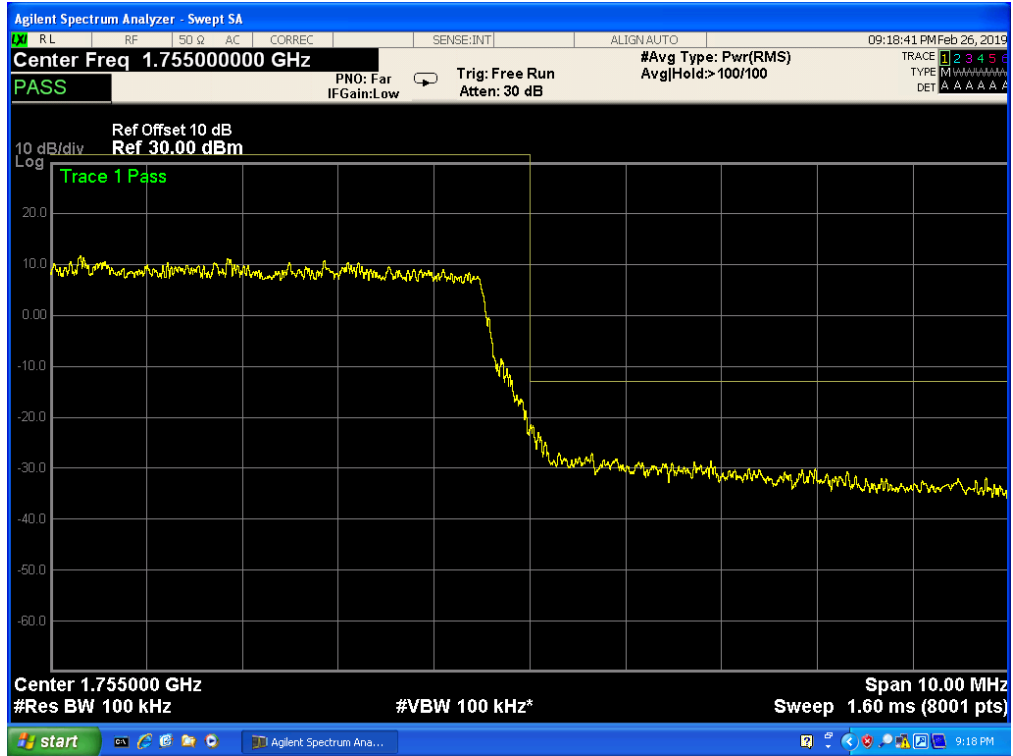


Band 4, UL Channel 2000, UL Frequency 1715.0, BW 10.0, NO. RB 50, RB POS. Low, 16QAM

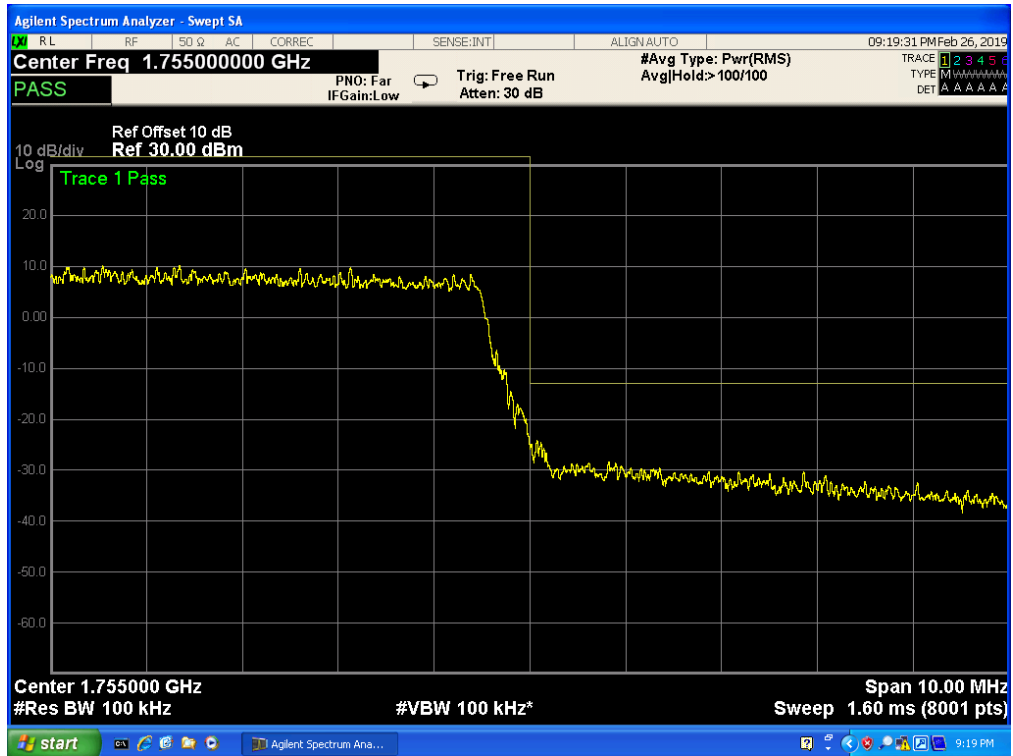




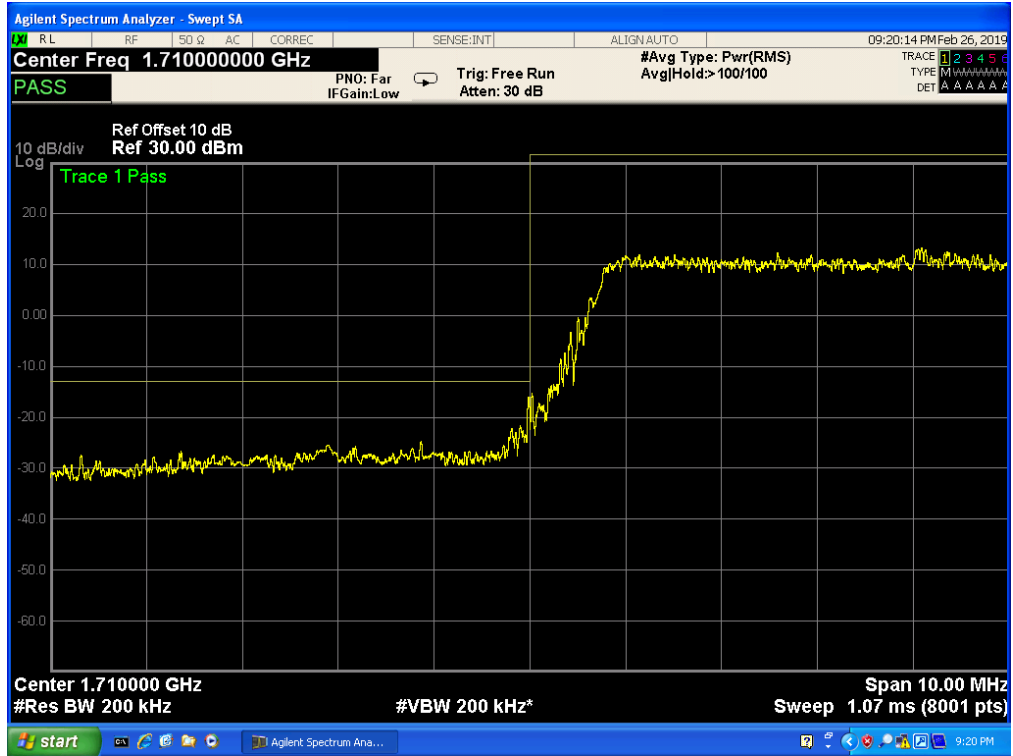
Band 4, UL Channel 20350, UL Frequency 1750.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



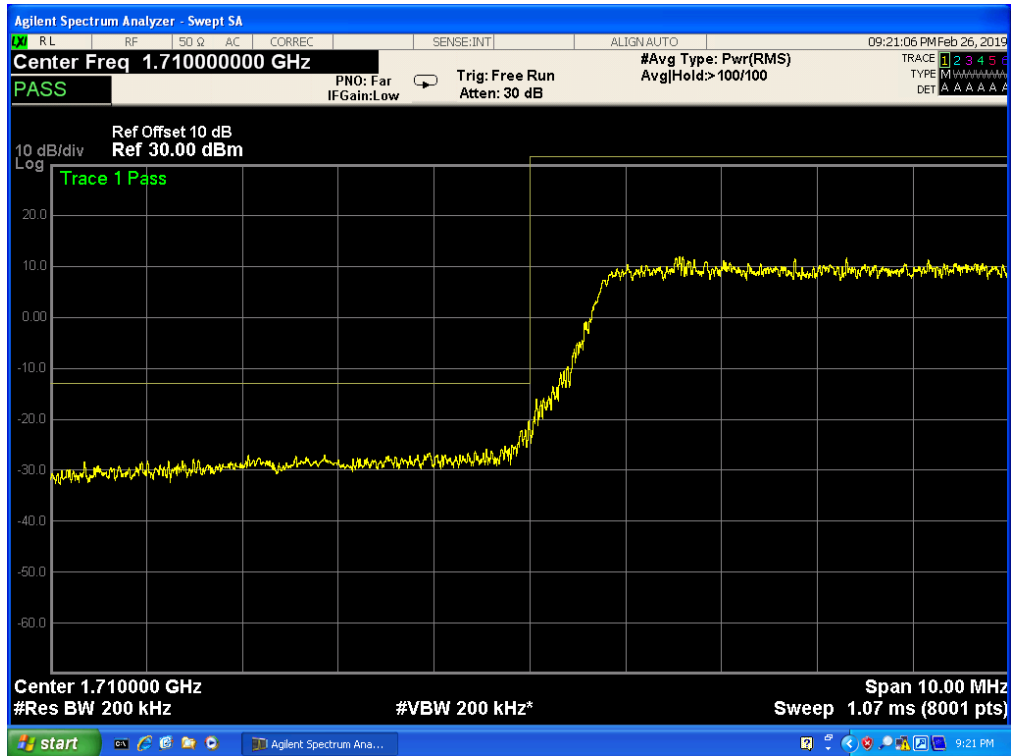
Band 4, UL Channel 20350, UL Frequency 1750.0, BW 10.0, NO. RB 50, RB POS. Low, 16QAM



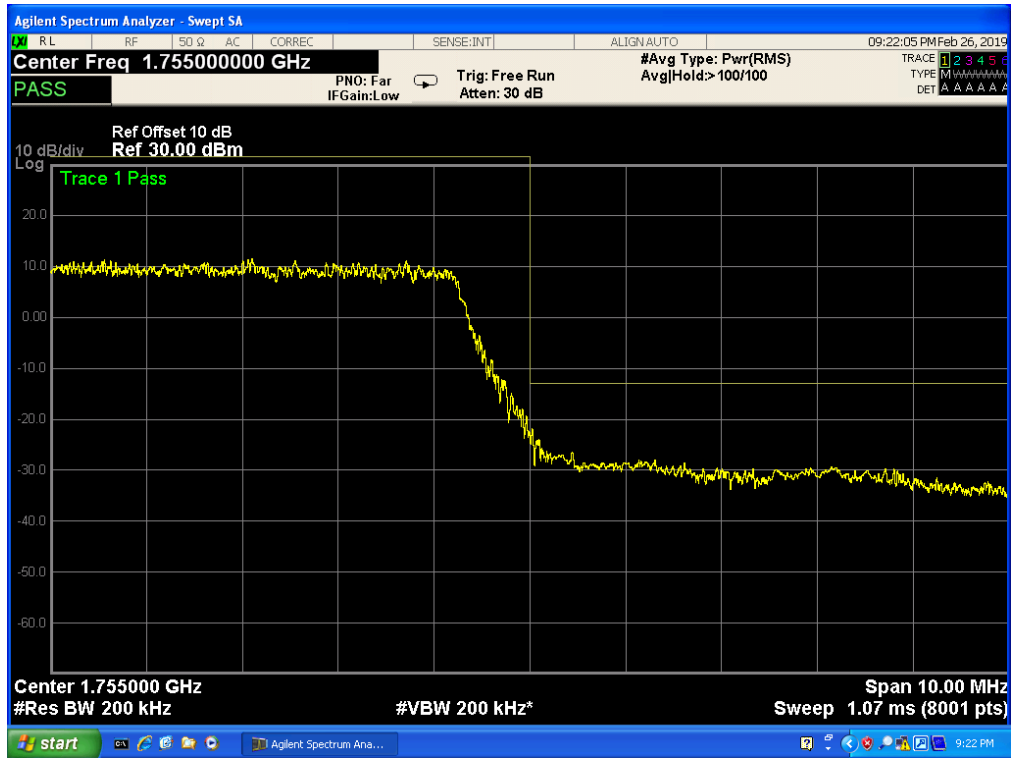
Band 4, UL Channel 20025, UL Frequency 1717.5, BW 15.0, NO. RB 75, RB POS. Low, QPSK



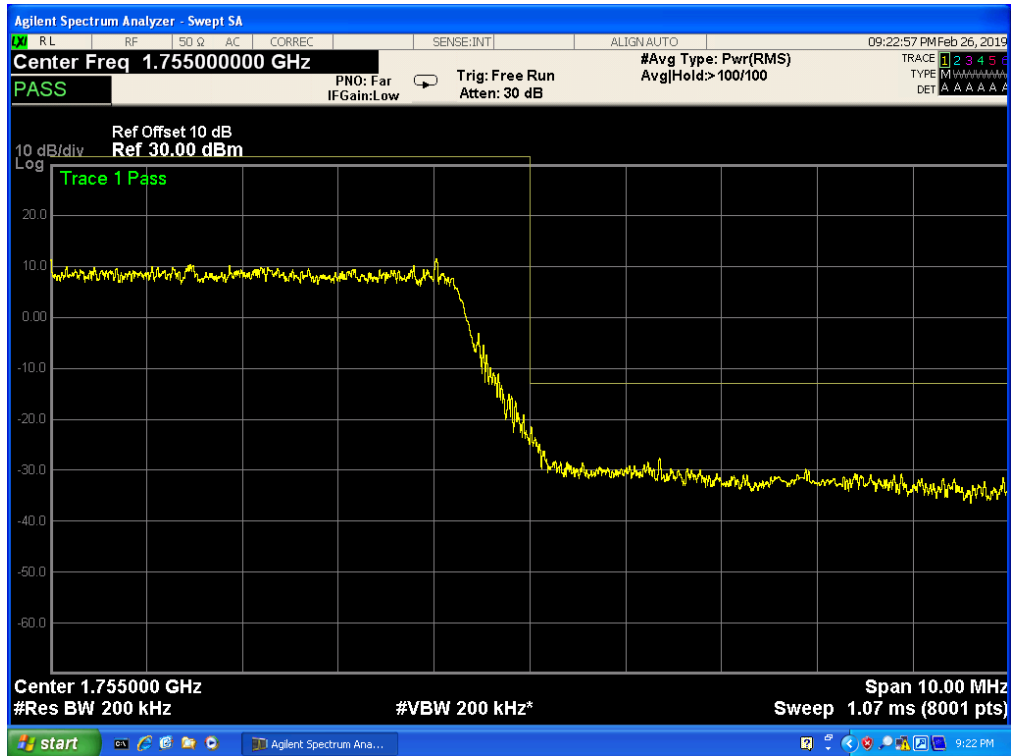
Band 4, UL Channel 20025, UL Frequency 1717.5, BW 15.0, NO. RB 75, RB POS. Low, 16QAM



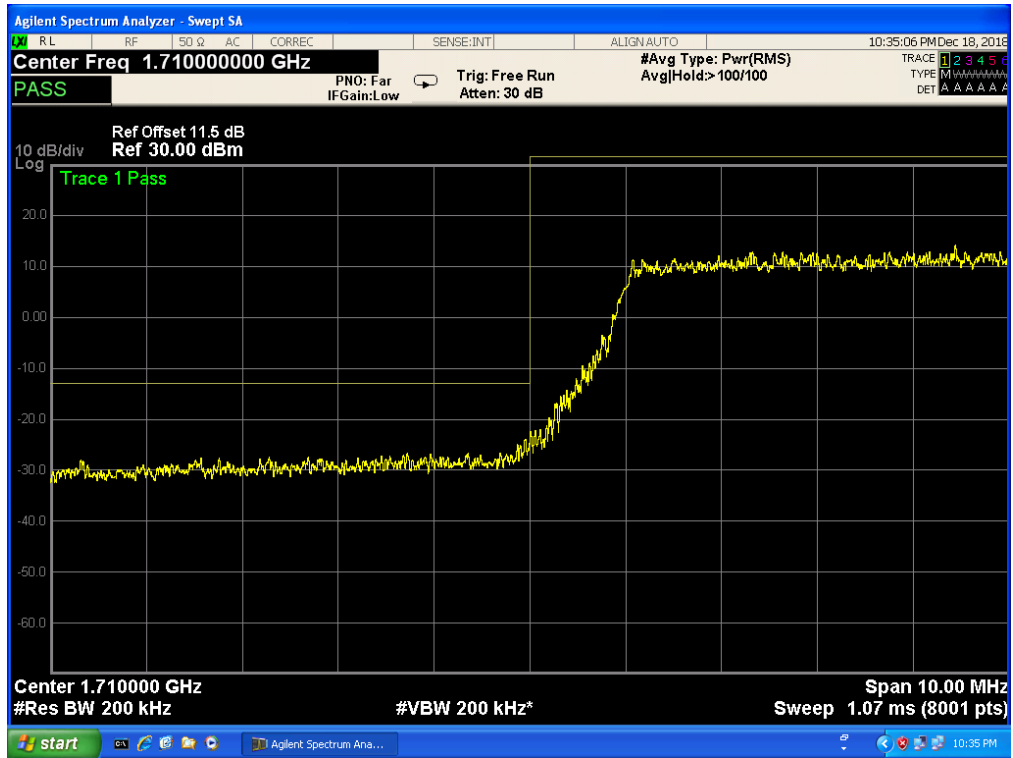
Band 4, UL Channel 20325, UL Frequency 1747.5, BW 15.0, NO. RB 75, RB POS. Low, QPSK



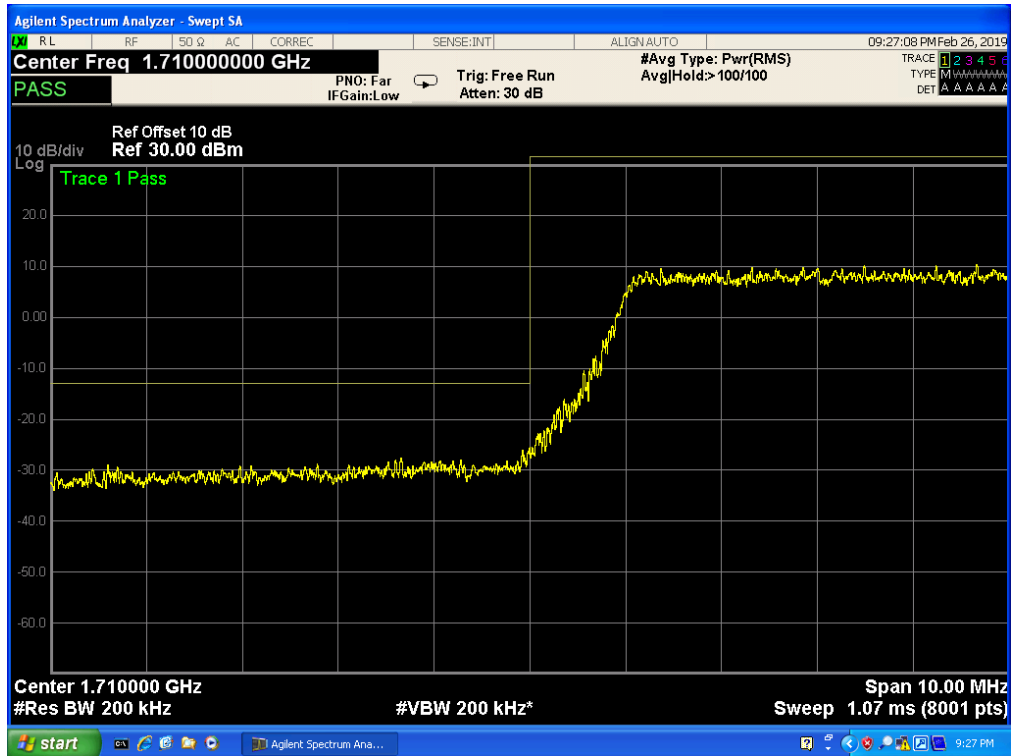
Band 4, UL Channel 20325, UL Frequency 1747.5, BW 15.0, NO. RB 75, RB POS. Low, 16QAM



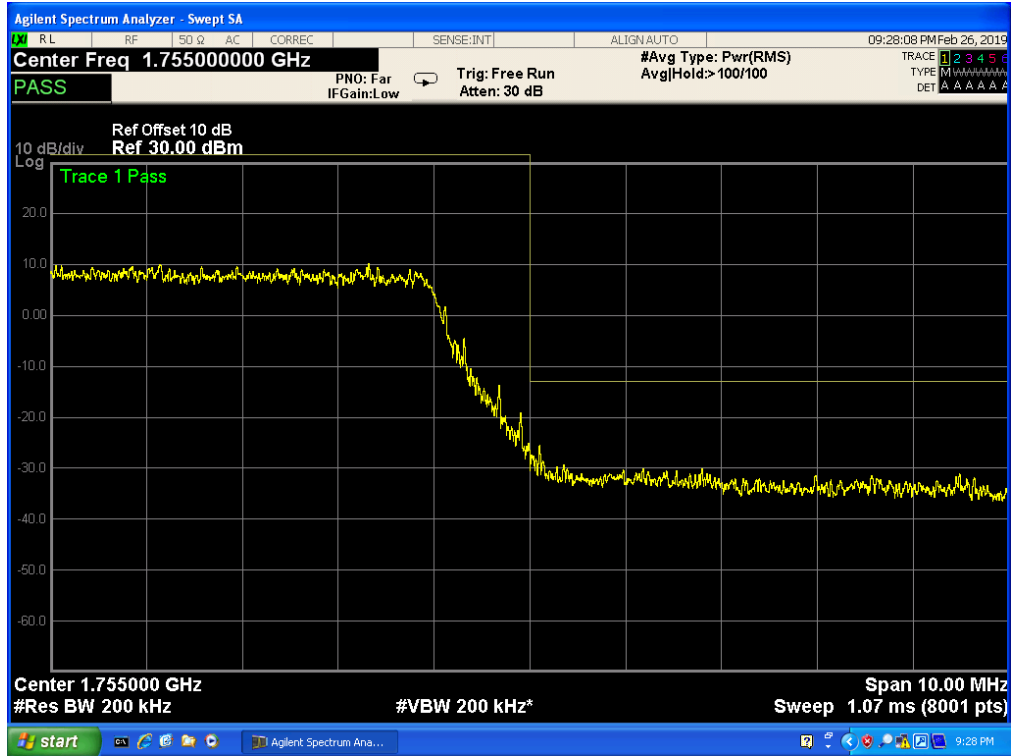
Band 4, UL Channel 20050, UL Frequency 1720.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK



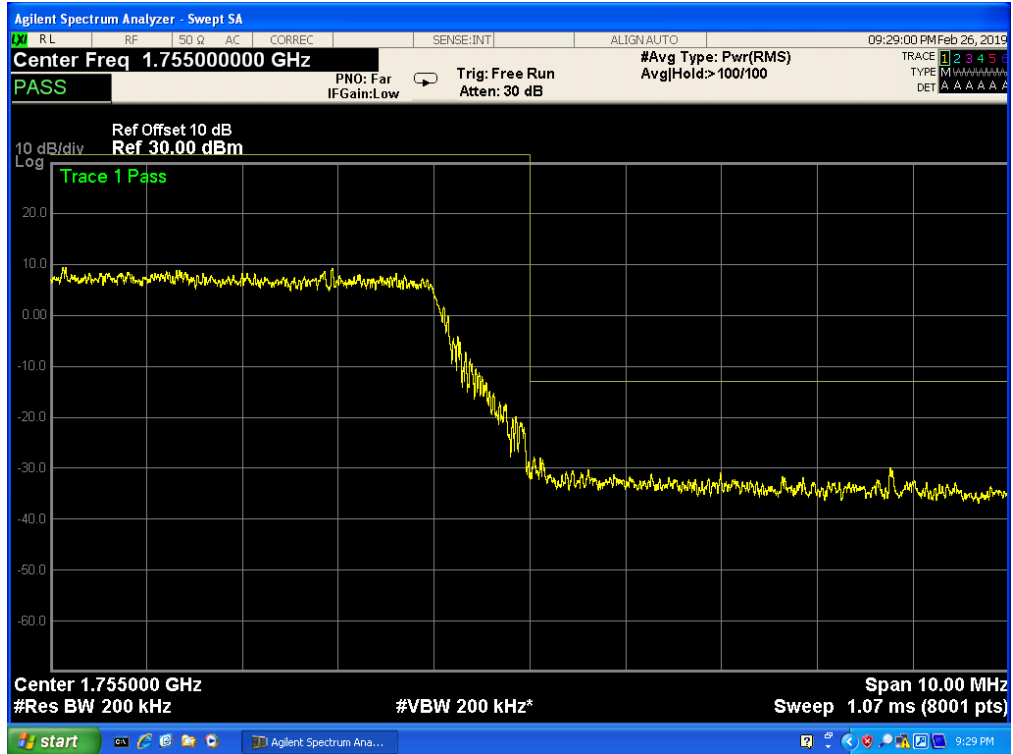
Band 4, UL Channel 20050, UL Frequency 1720.0, BW 20.0, NO. RB 100, RB POS. Low, 16QAM



Band 4, UL Channel 20300, UL Frequency 1745.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK

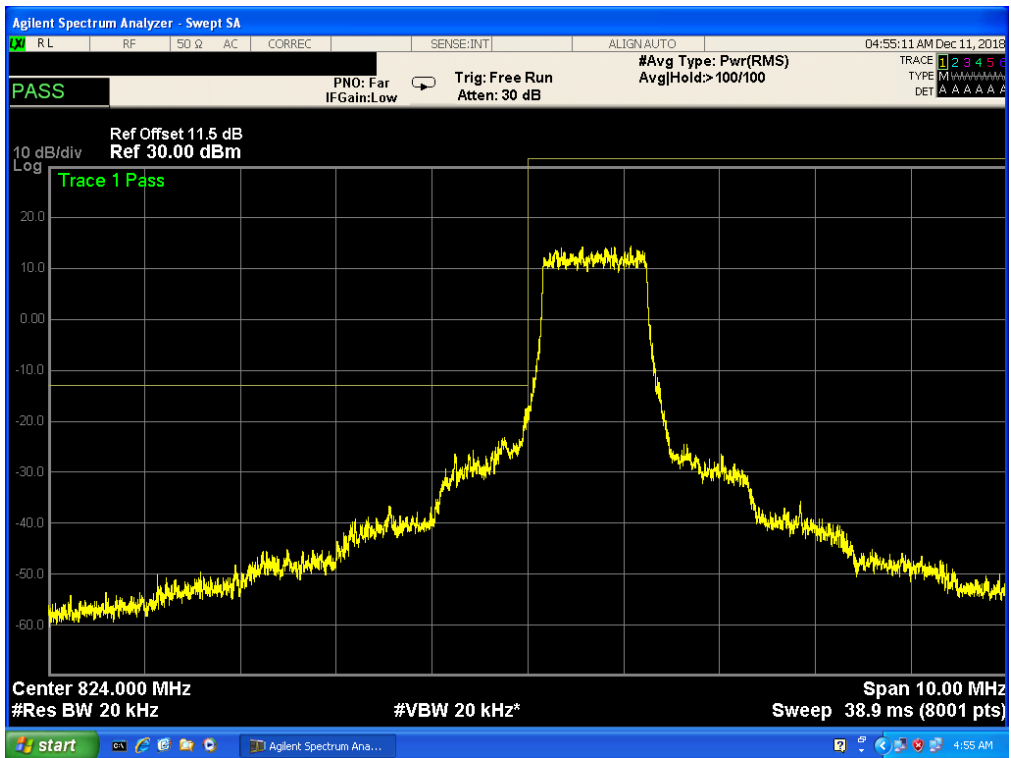


Band 4, UL Channel 20300, UL Frequency 1745.0, BW 20.0, NO. RB 100, RB POS. Low, 16QAM

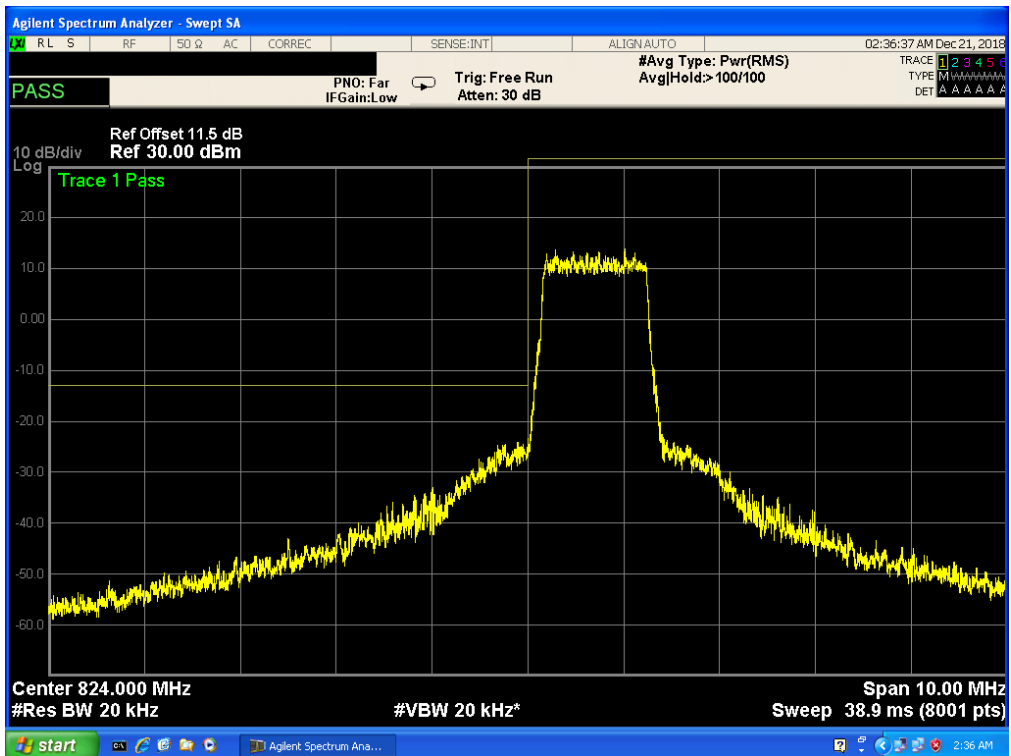


### 6.3 LTE BAND 5

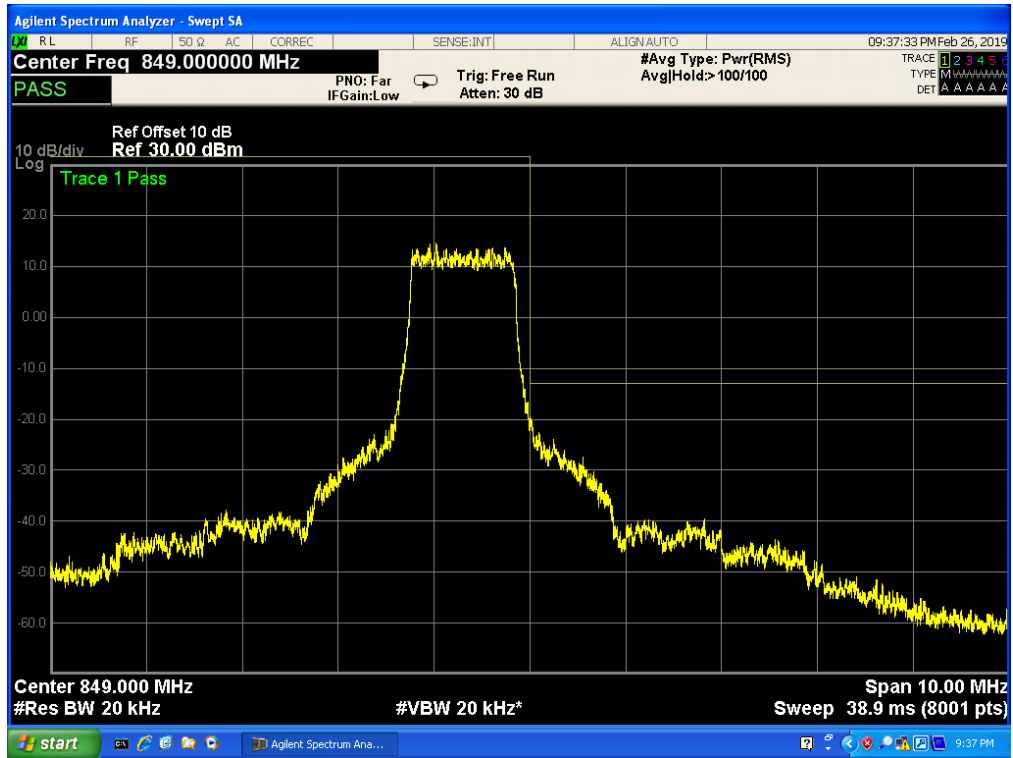
*Band 5, UL Channel 20407, UL Frequency 824.7, BW 1.4, NO. RB 6, RB POS. Low, QPSK*



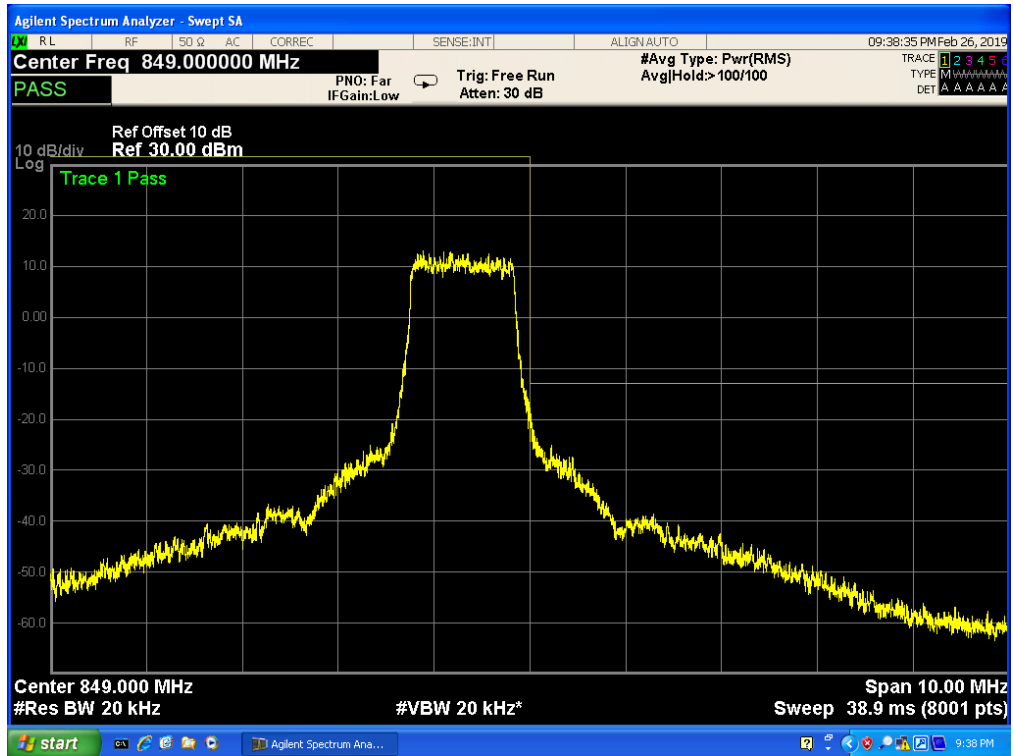
*Band 5, UL Channel 20407, UL Frequency 824.7, BW 1.4, NO. RB 6, RB POS. Low, 16-QAM*



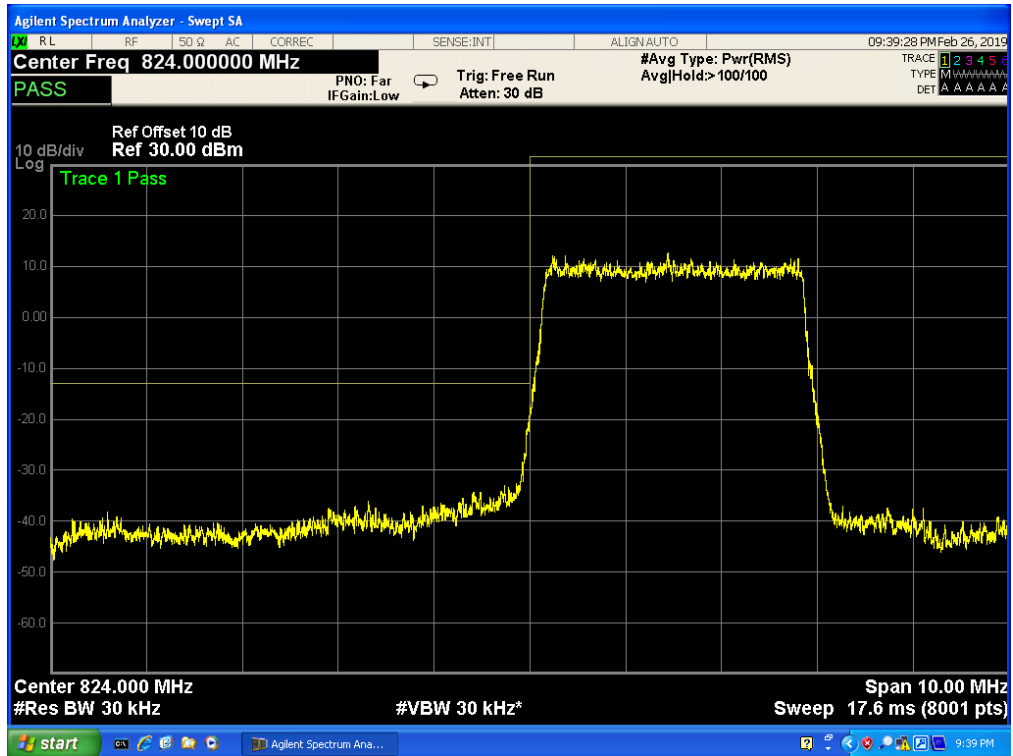
Band 5, UL Channel 20643, UL Frequency 848.3, BW 1.4, NO. RB 6, RB POS. Low, QPSK



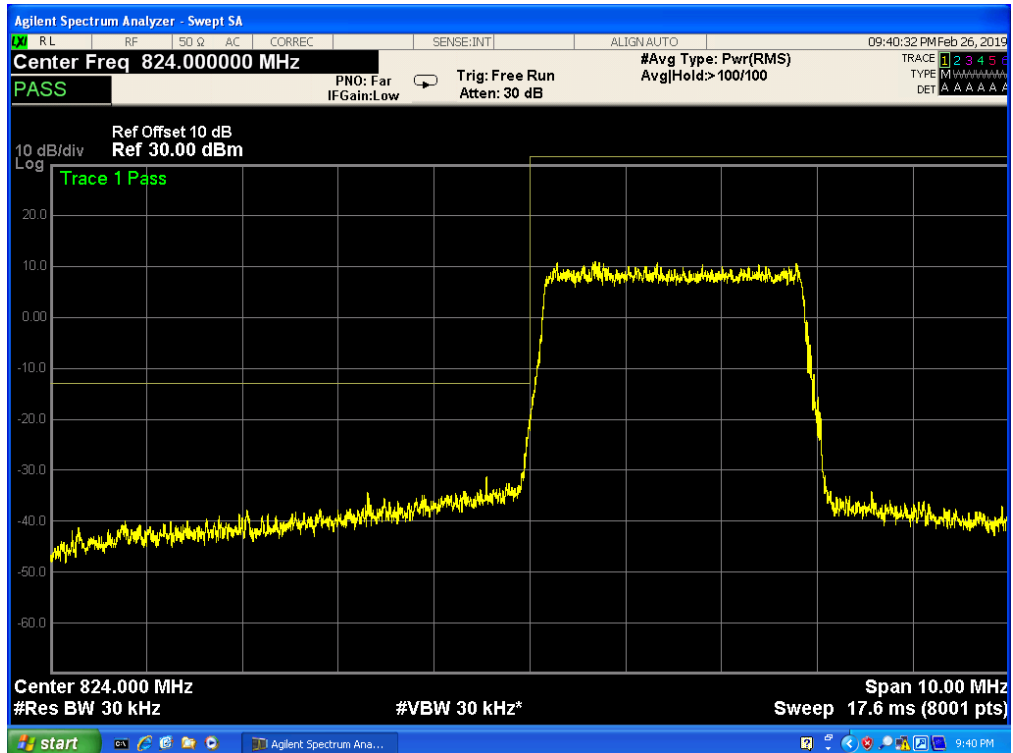
Band 5, UL Channel 20643, UL Frequency 848.3, BW 1.4, NO. RB 6, RB POS. Low, 16-QAM



Band 5, UL Channel 20415, UL Frequency 825.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK

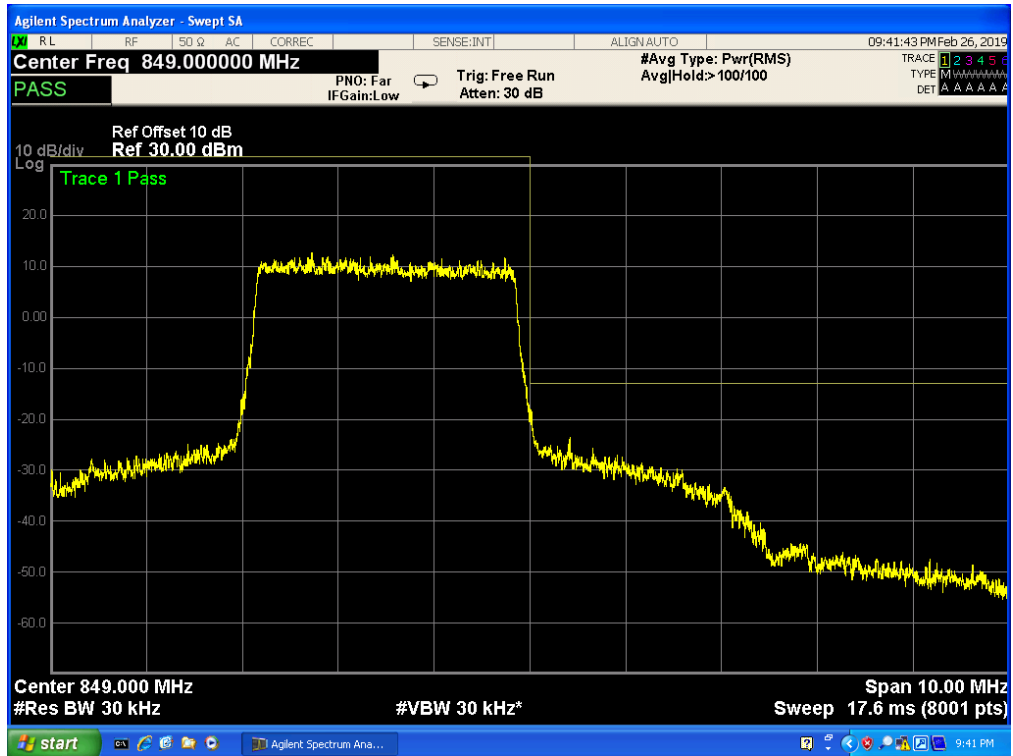


Band 5, UL Channel 20415, UL Frequency 825.5, BW 3.0, NO. RB 15, RB POS. Low, 16-QAM





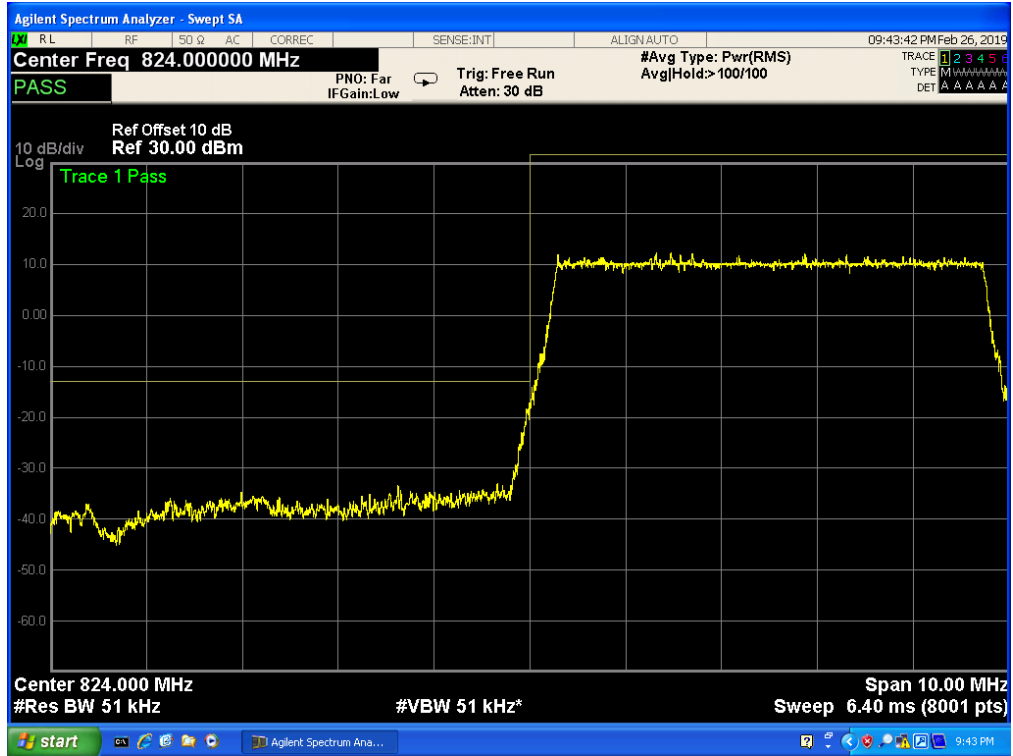
Band 5, UL Channel 20635, UL Frequency 847.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK



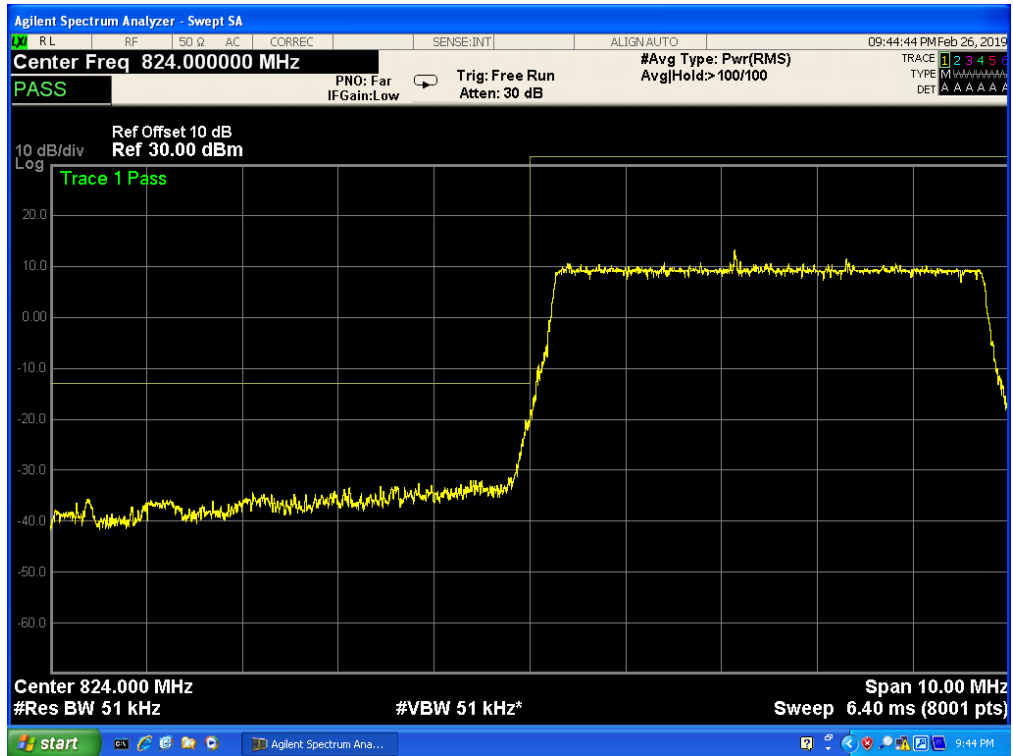
Band 5, UL Channel 20635, UL Frequency 847.5, BW 3.0, NO. RB 15, RB POS. Low, 16-QAM



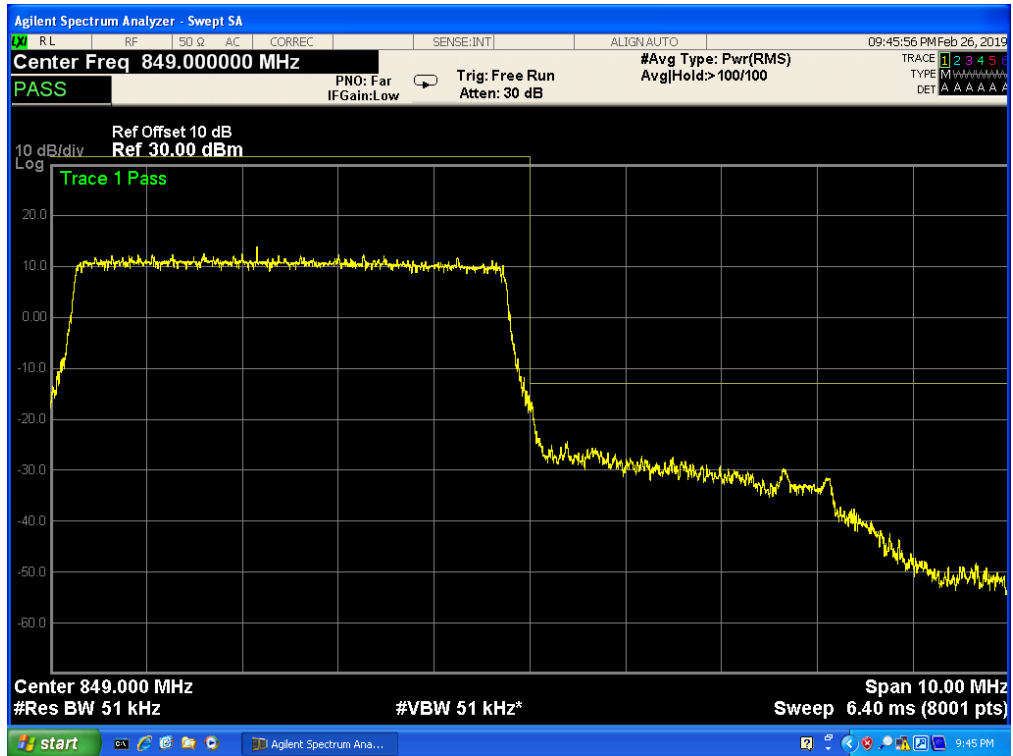
Band 5, UL Channel 20425, UL Frequency 826.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



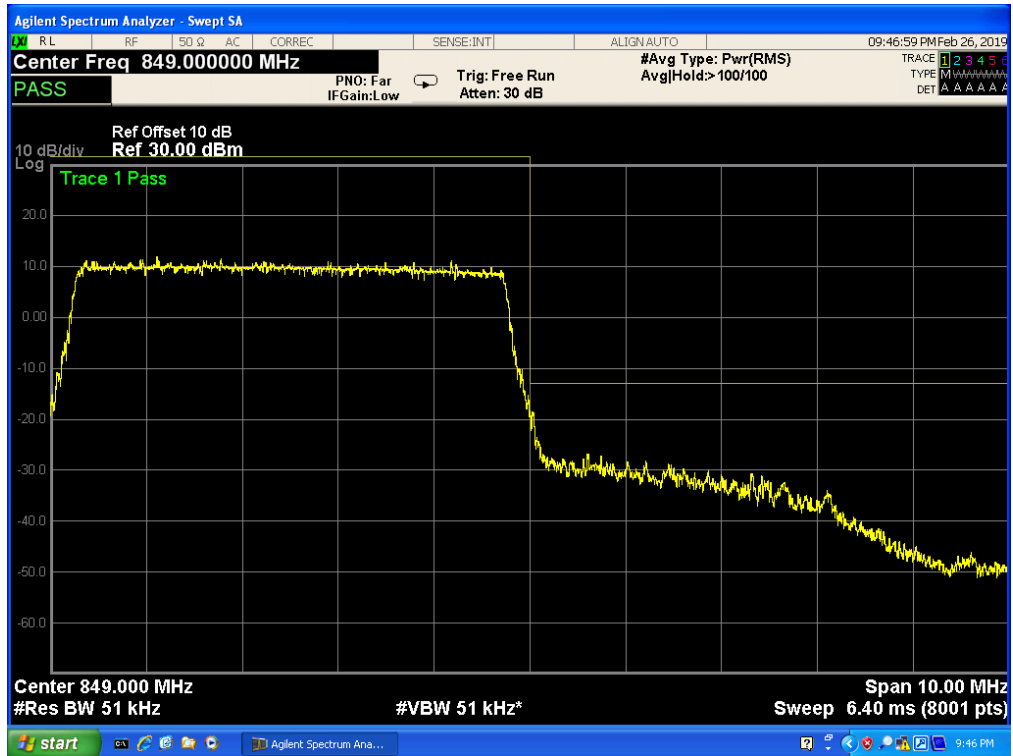
Band 5, UL Channel 20425, UL Frequency 826.5, BW 5.0, NO. RB 25, RB POS. Low, 16-QAM



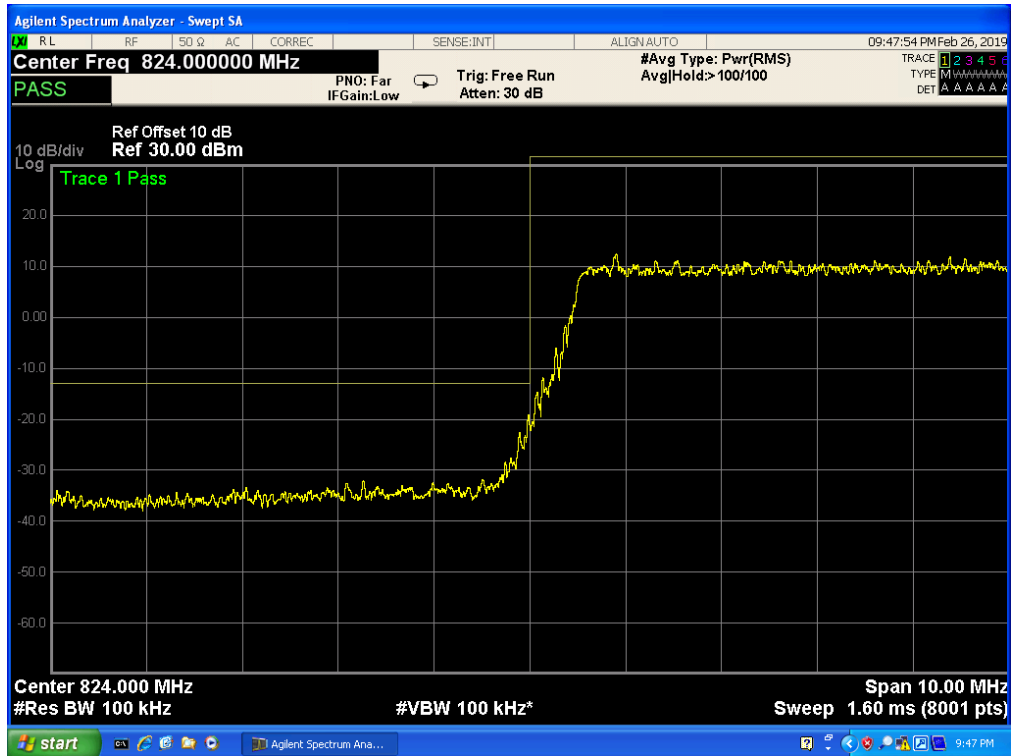
Band 5, UL Channel 20625, UL Frequency 846.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



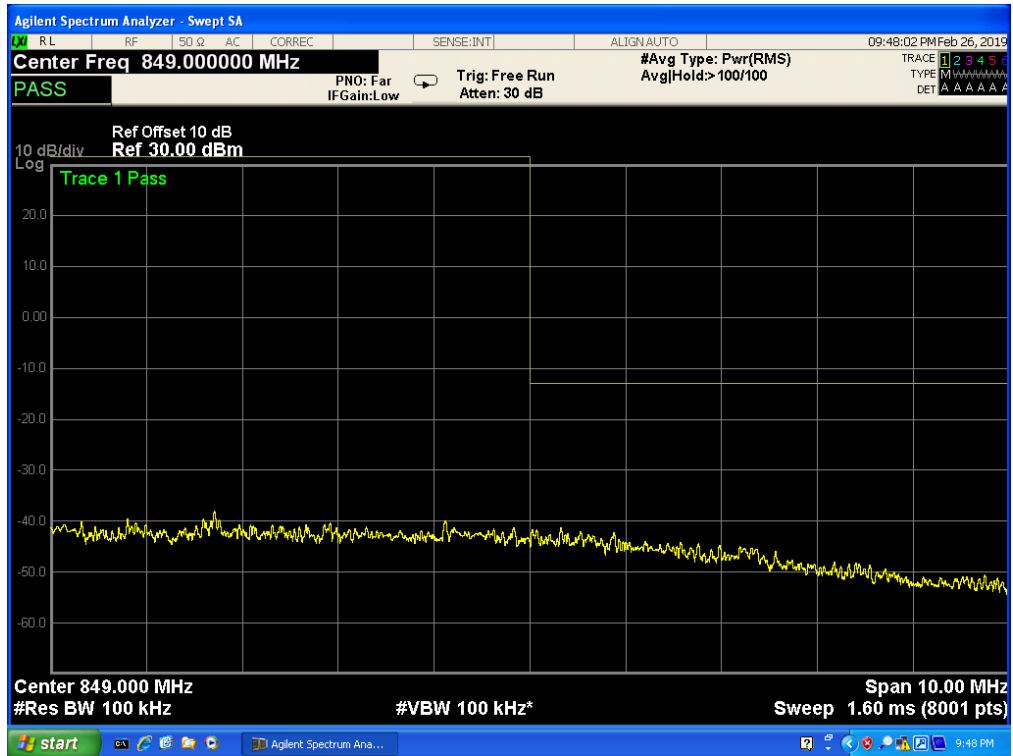
Band 5, UL Channel 20625, UL Frequency 846.5, BW 5.0, NO. RB 25, RB POS. Low, 16-QAM



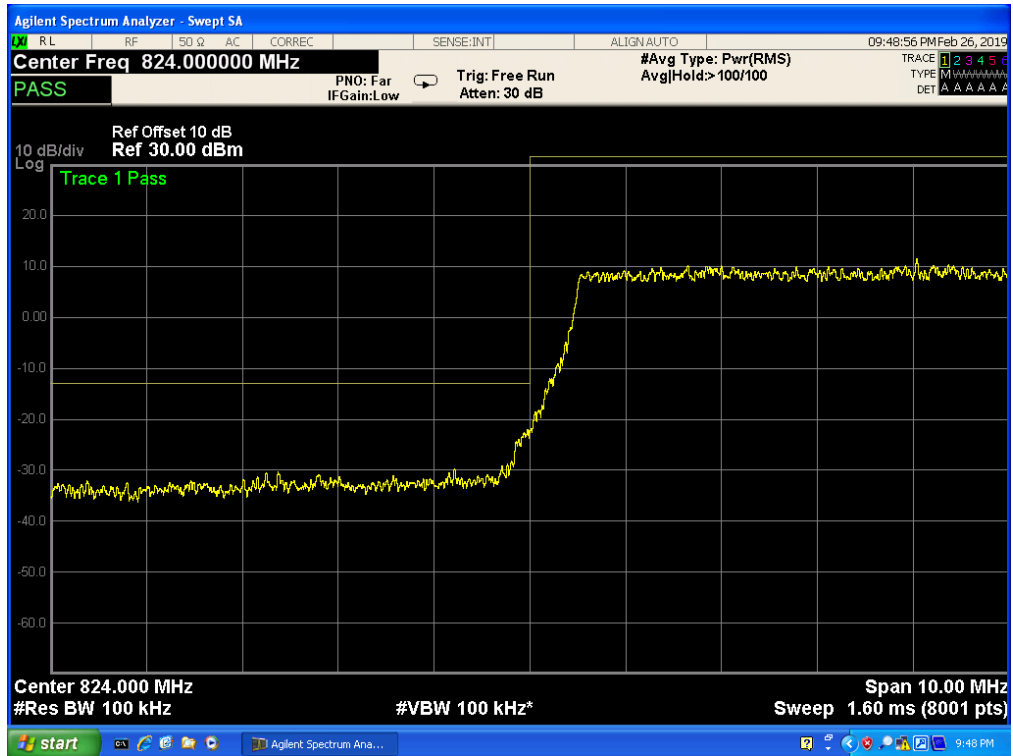
Band 5, UL Channel 20450, UL Frequency 829.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



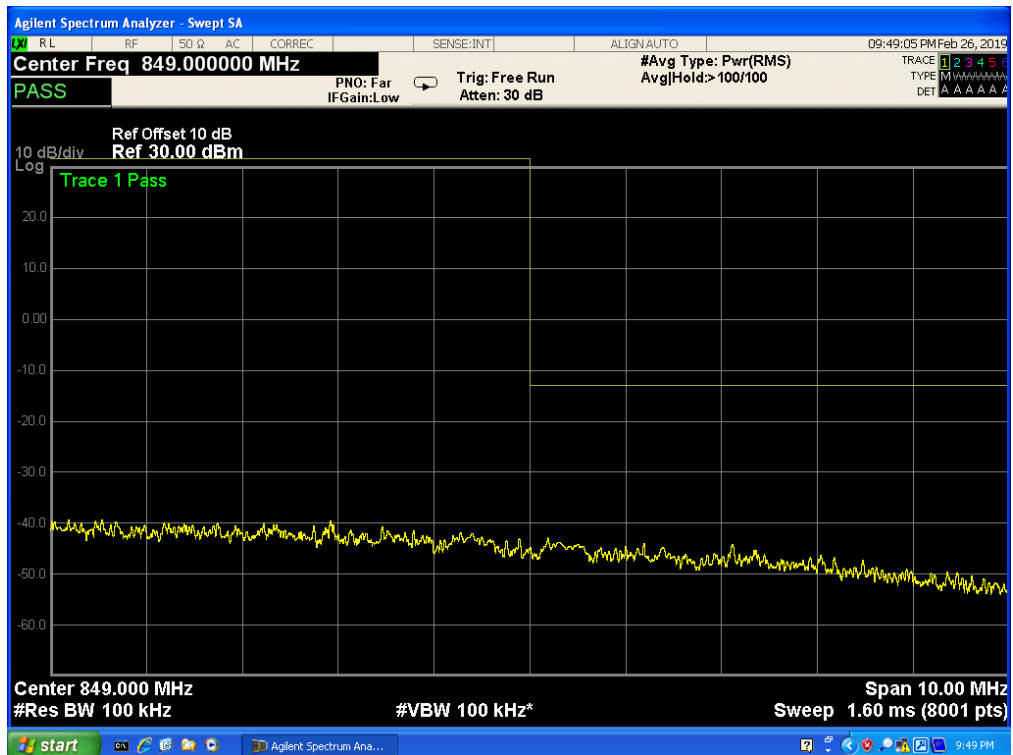
Band 5, UL Channel 20450, UL Frequency 829.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



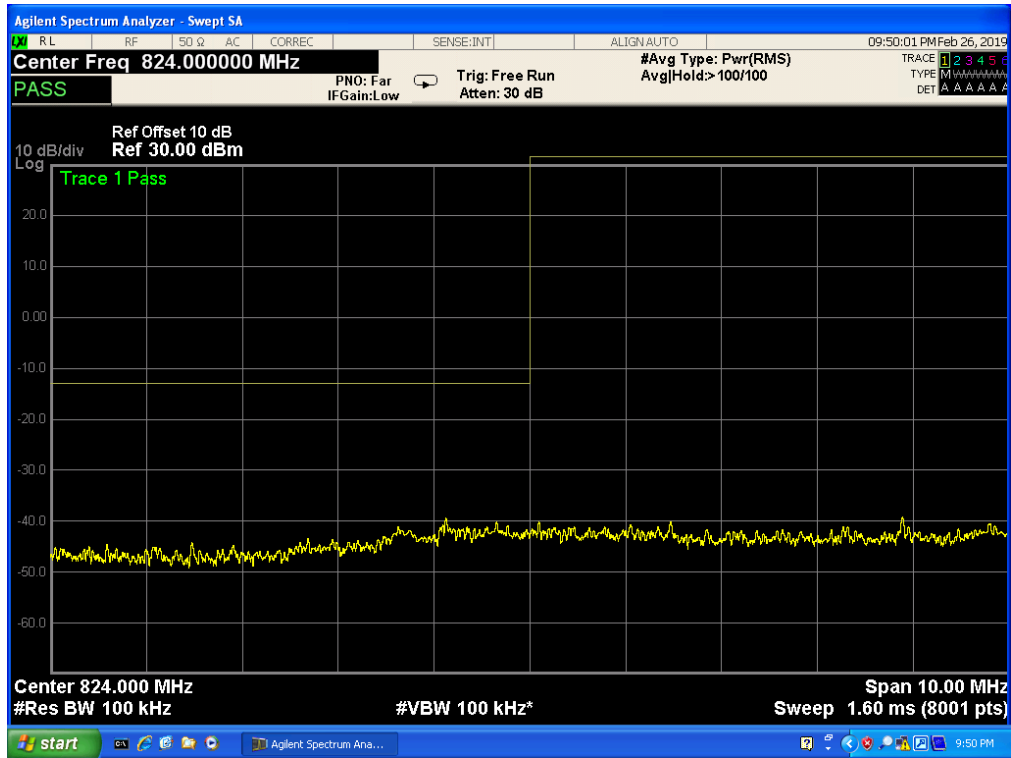
Band 5, UL Channel 20450, UL Frequency 829.0, BW 10.0, NO. RB 50, RB POS. Low, 16-QAM



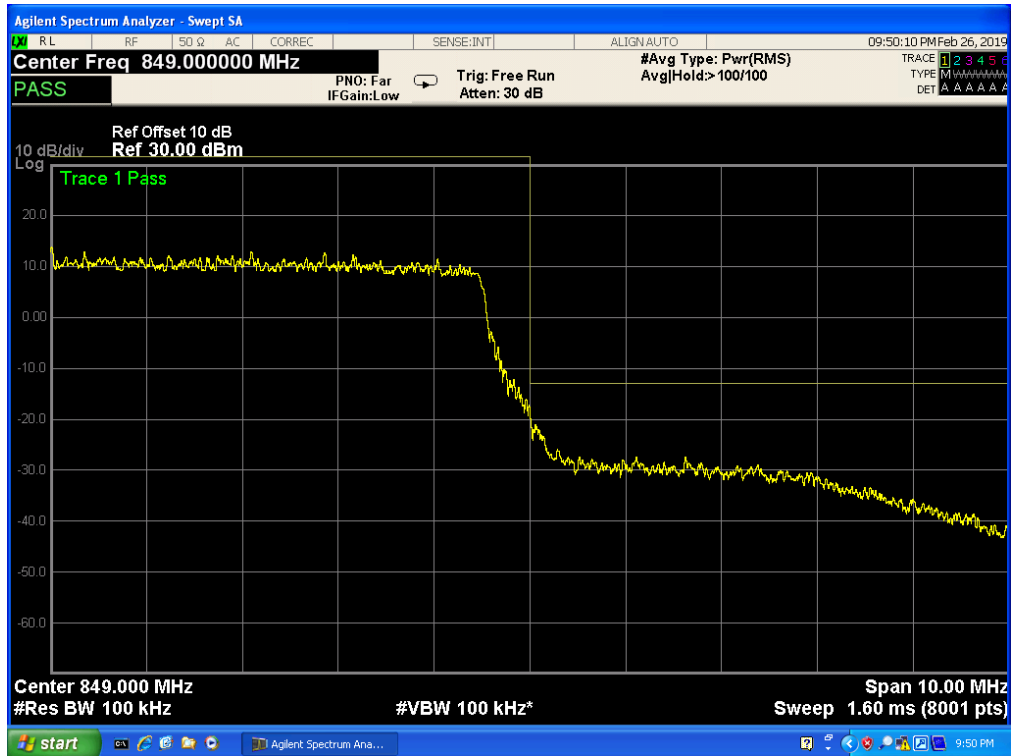
Band 5, UL Channel 20450, UL Frequency 829.0, BW 10.0, NO. RB 50, RB POS. Low, 16-QAM



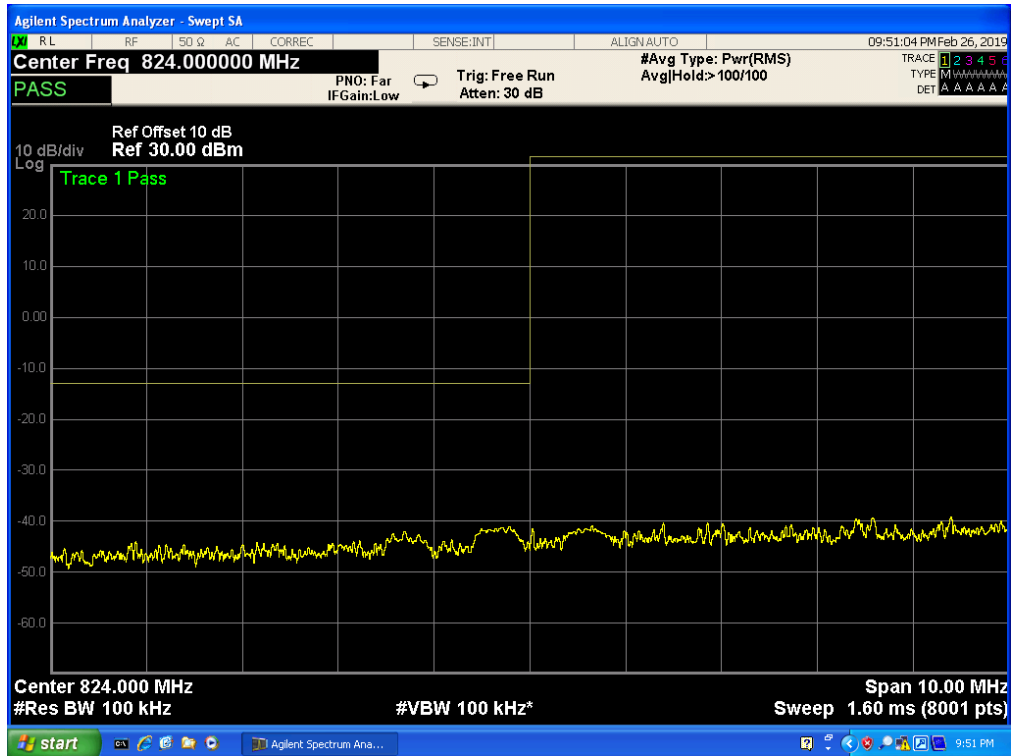
Band 5, UL Channel 20600, UL Frequency 844.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



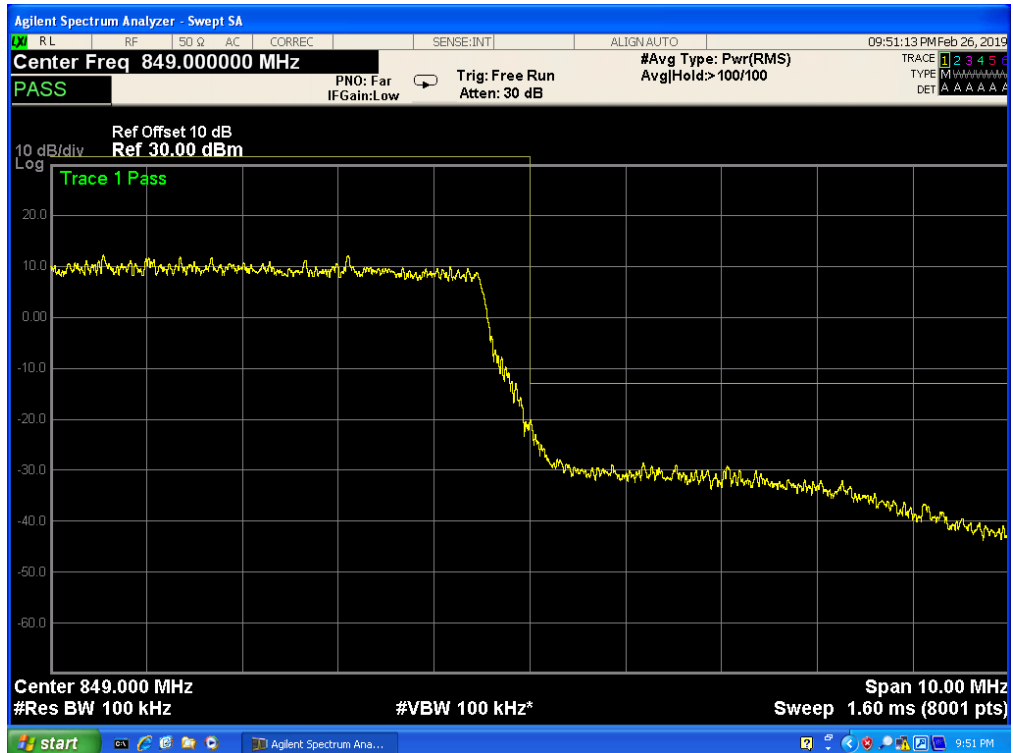
Band 5, UL Channel 20600, UL Frequency 849.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



Band 5, UL Channel 20600, UL Frequency 844.0, BW 10.0, NO. RB 50, RB POS. Low, 16-QAM

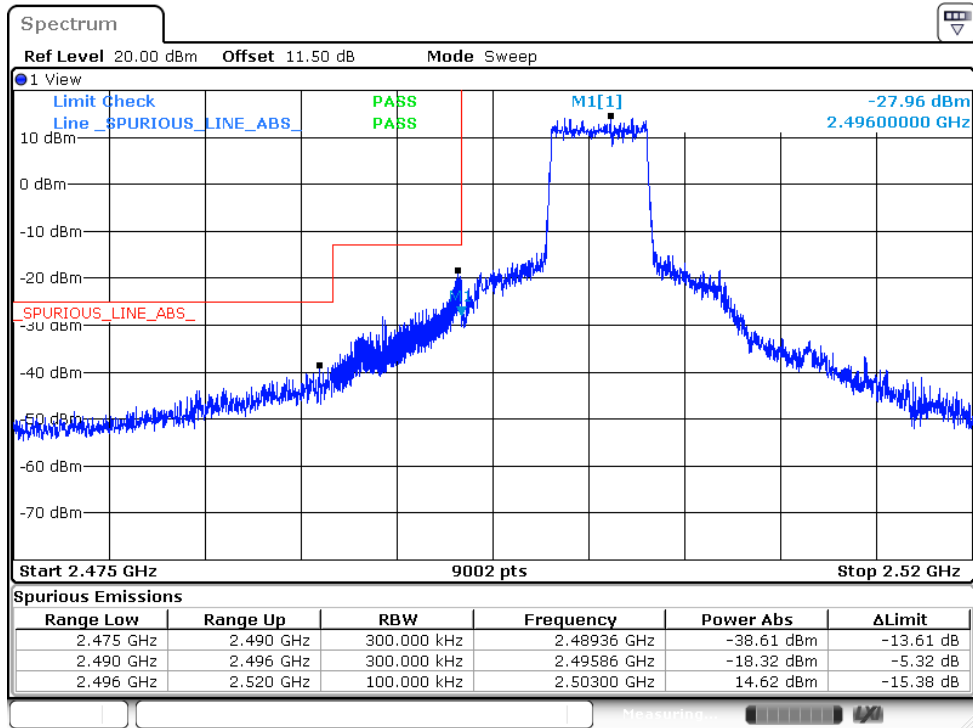


Band 5, UL Channel 20600, UL Frequency 844.0, BW 10.0, NO. RB 50, RB POS. Low, 16-QAM

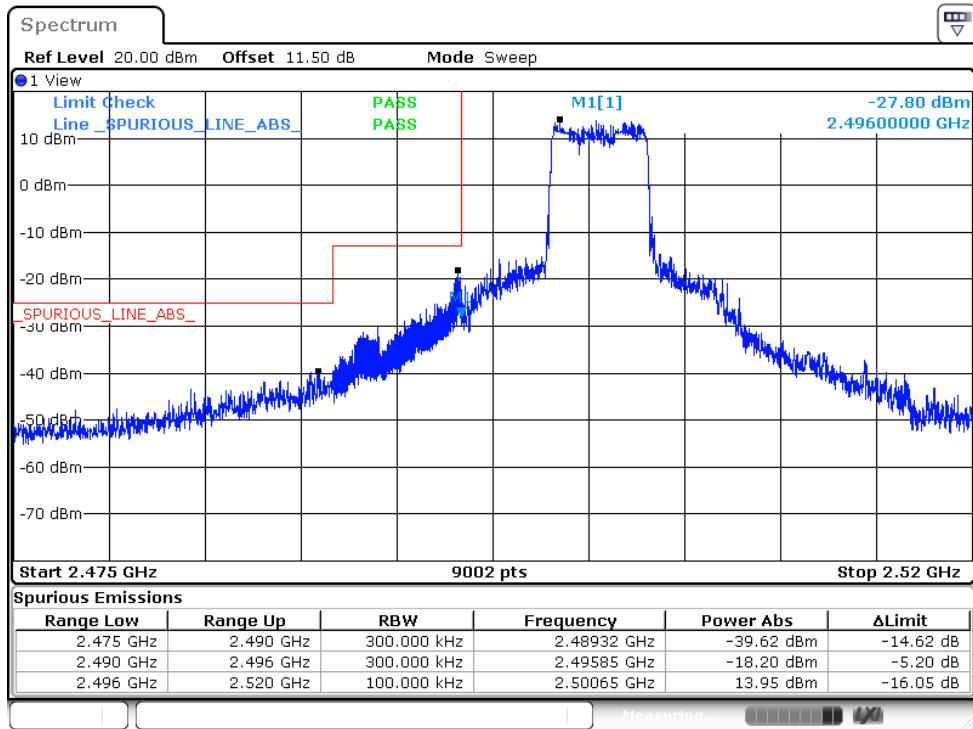


### 6.4 LTE BAND 7

Band 7, UL Channel 20775, UL Frequency 2502.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK

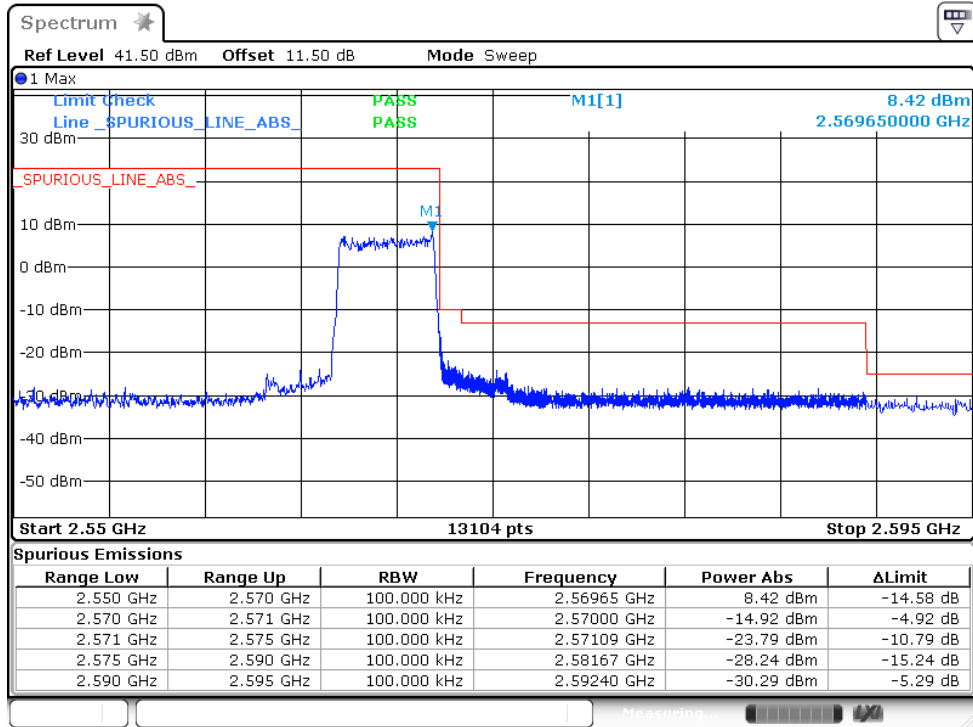


Band 7, UL Channel 20775, UL Frequency 2502.5, BW 5.0, NO. RB 25, RB POS. Low, 16QAM

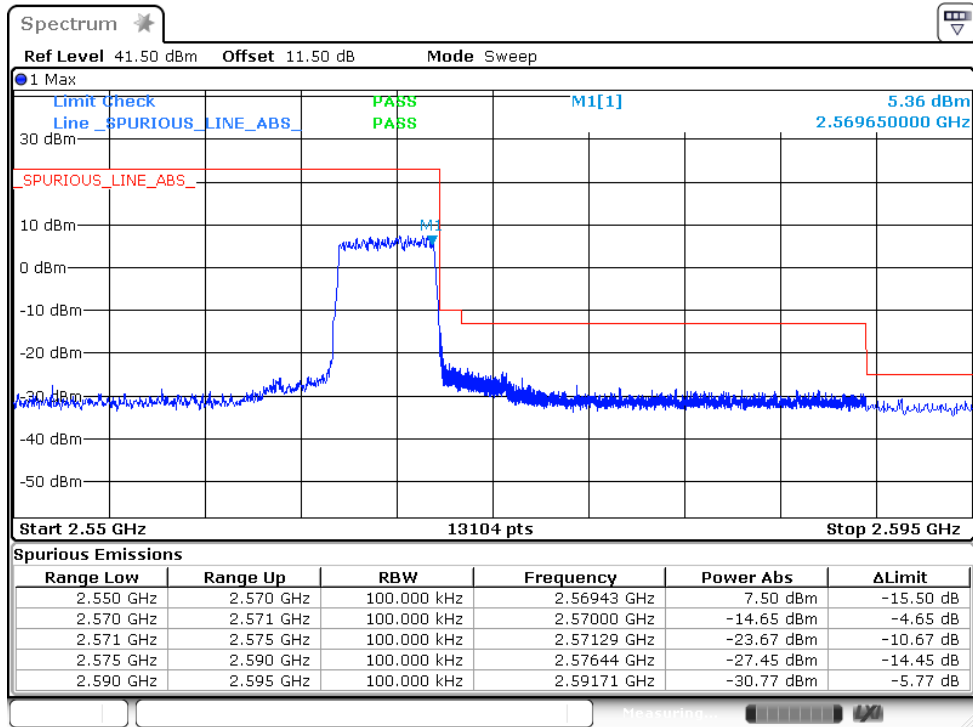




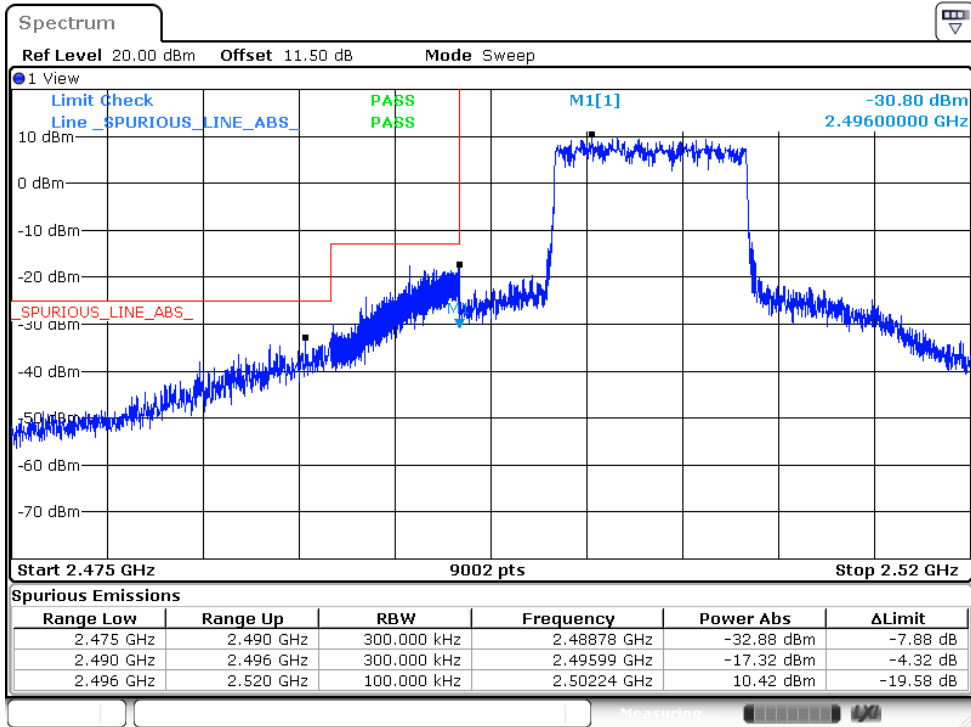
Band 7, UL Channel 21425, UL Frequency 2567.5, BW 5.0, NO. RB 25, RB POS. Low, QPSK



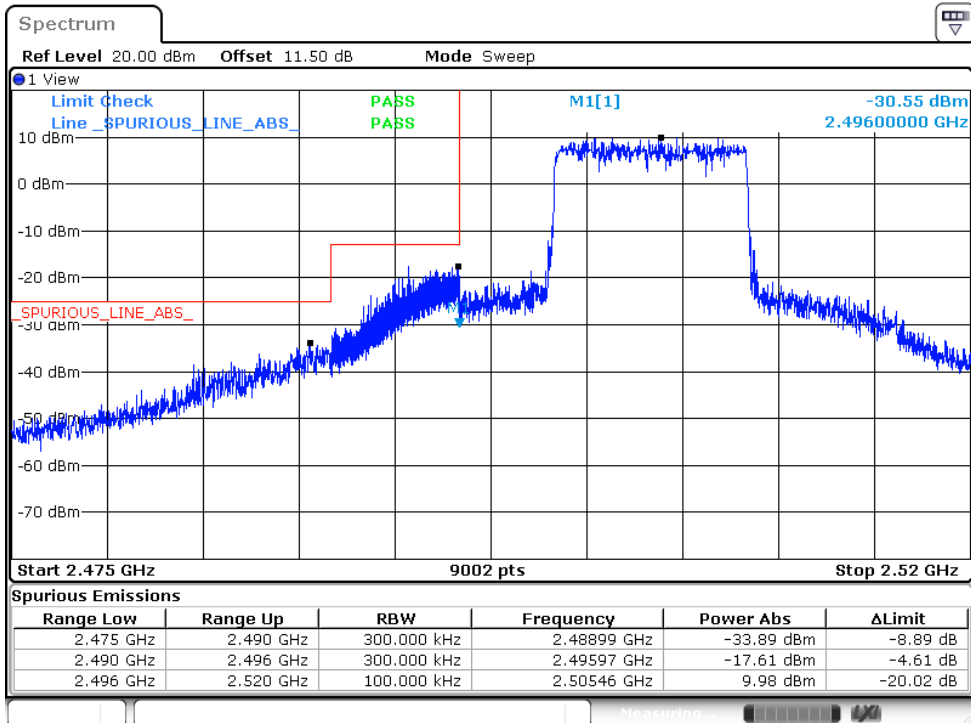
Band 7, UL Channel 21425, UL Frequency 2567.5, BW 5.0, NO. RB 25, RB POS. Low, 16QAM



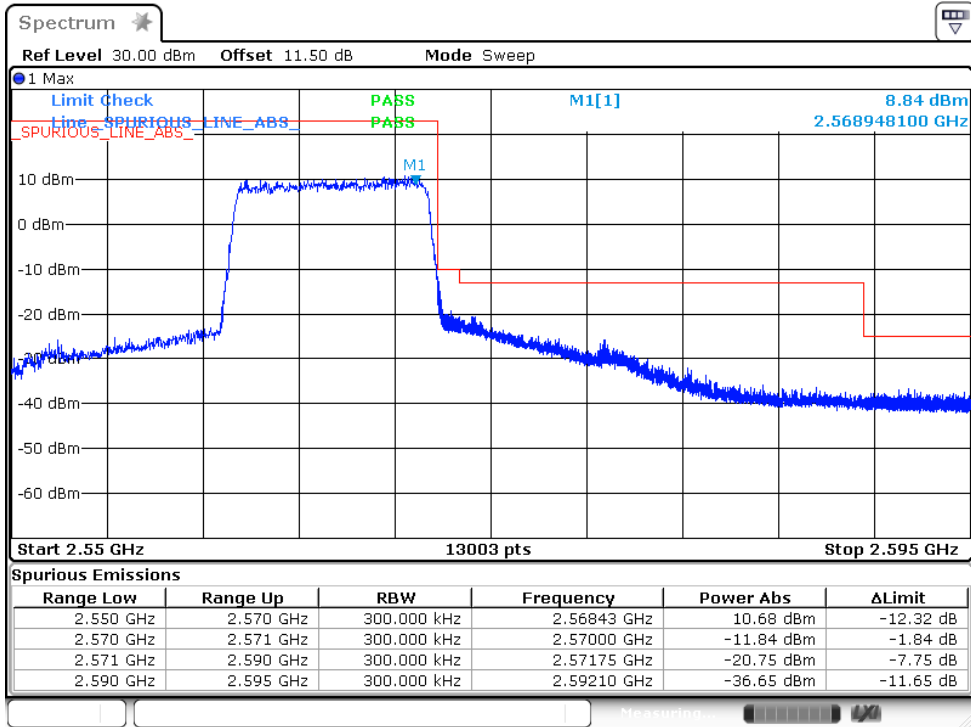
Band 7, UL Channel 20800, UL Frequency 2505.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



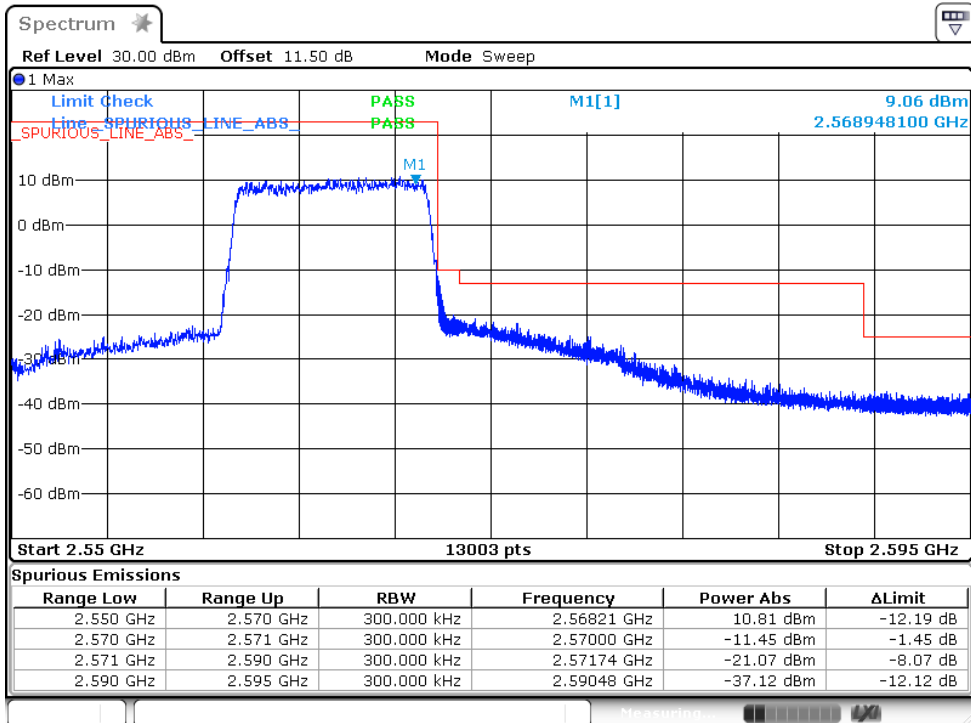
Band 7, UL Channel 20800, UL Frequency 2505.0, BW 10.0, NO. RB 50, RB POS. Low, 16QAM



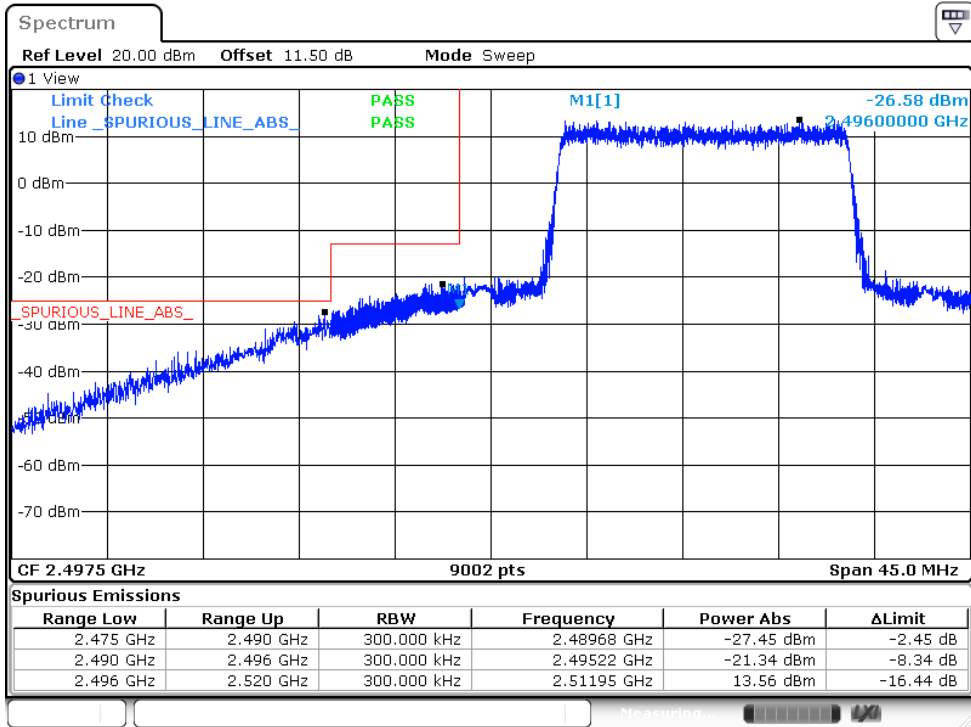
Band 7, UL Channel 21400, UL Frequency 2565.0, BW 10.0, NO. RB 50, RB POS. Low, QPSK



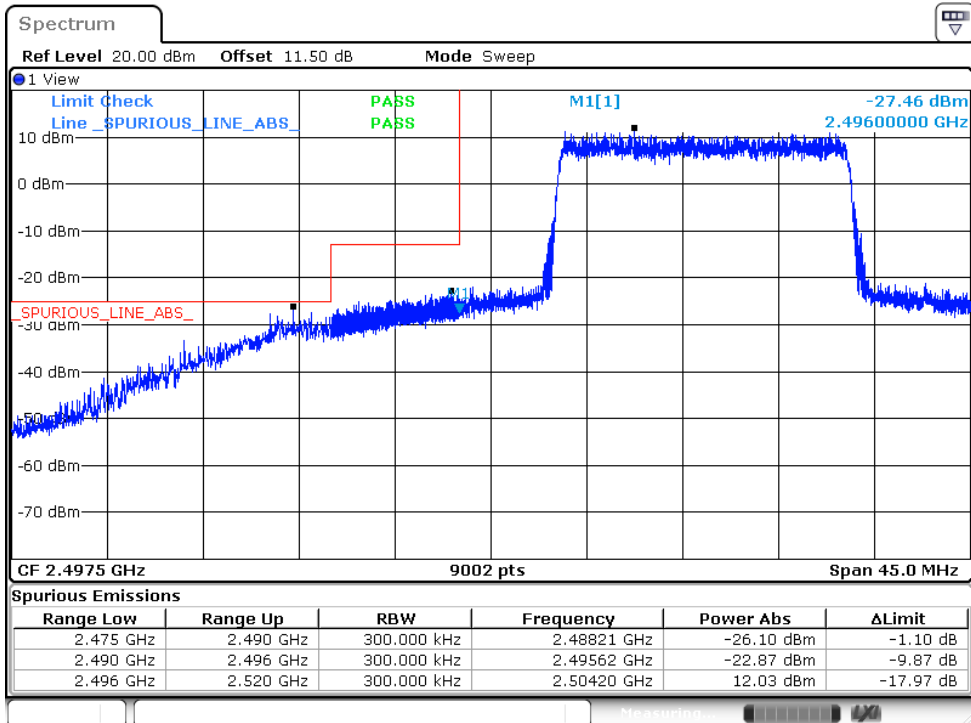
Band 7, UL Channel 21400, UL Frequency 2565.0, BW 10.0, NO. RB 50, RB POS. Low, 16QAM



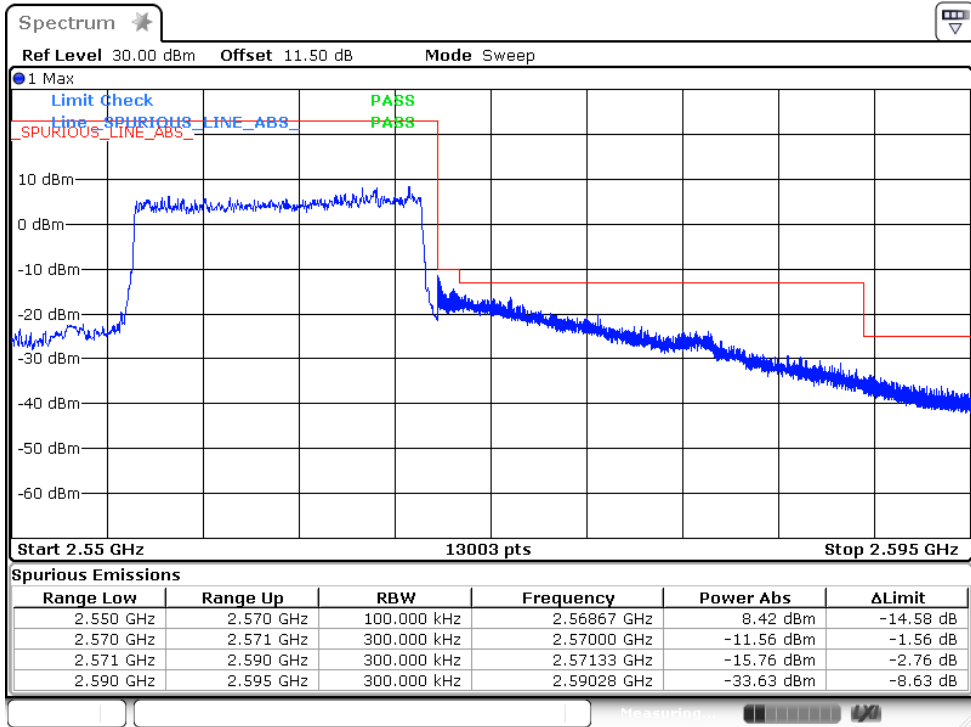
Band 7, UL Channel 20825, UL Frequency 2507.5, BW 15.0, NO. RB 75, RB POS. Low, QPSK



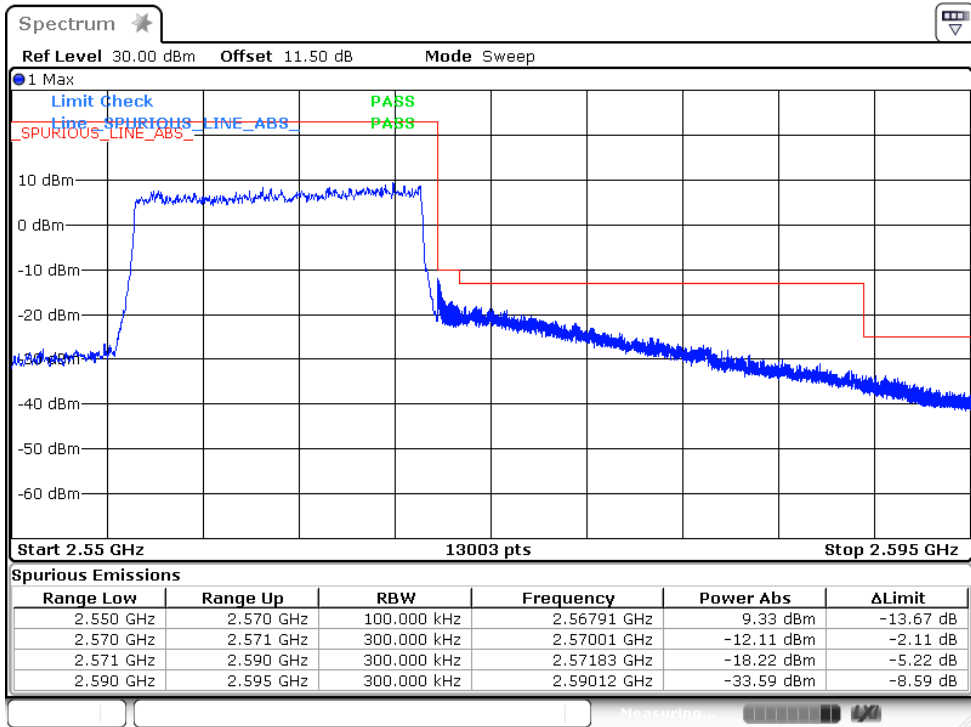
Band 7, UL Channel 20825, UL Frequency 2507.5, BW 15.0, NO. RB 75, RB POS. Low, 16QAM



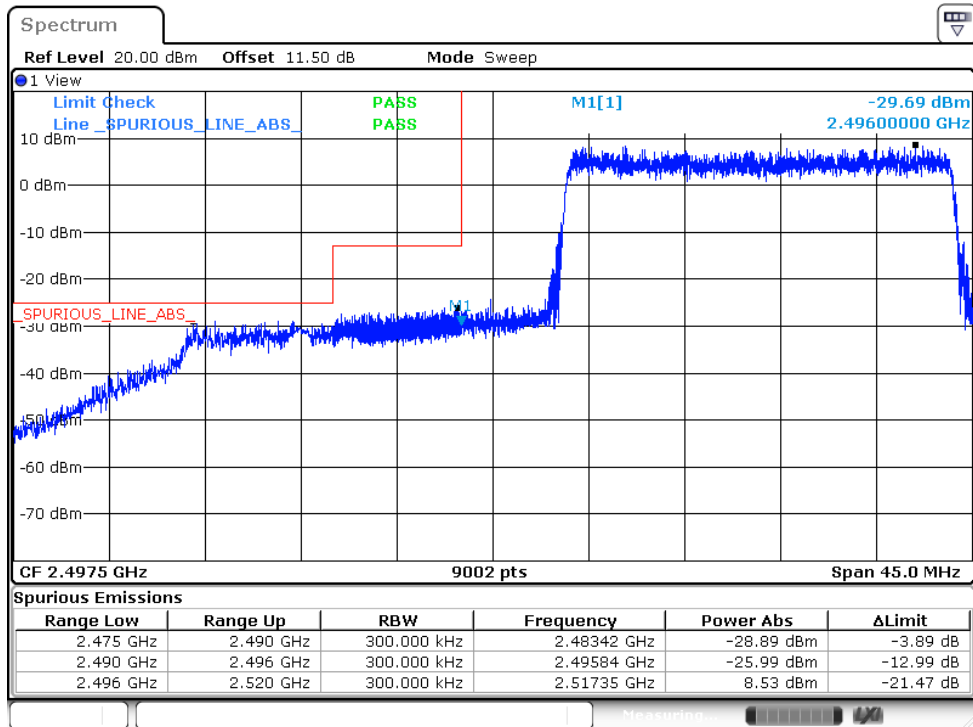
Band 7, UL Channel 21375, UL Frequency 2562.5, BW 15.0, NO. RB 75, RB POS. Low, QPSK



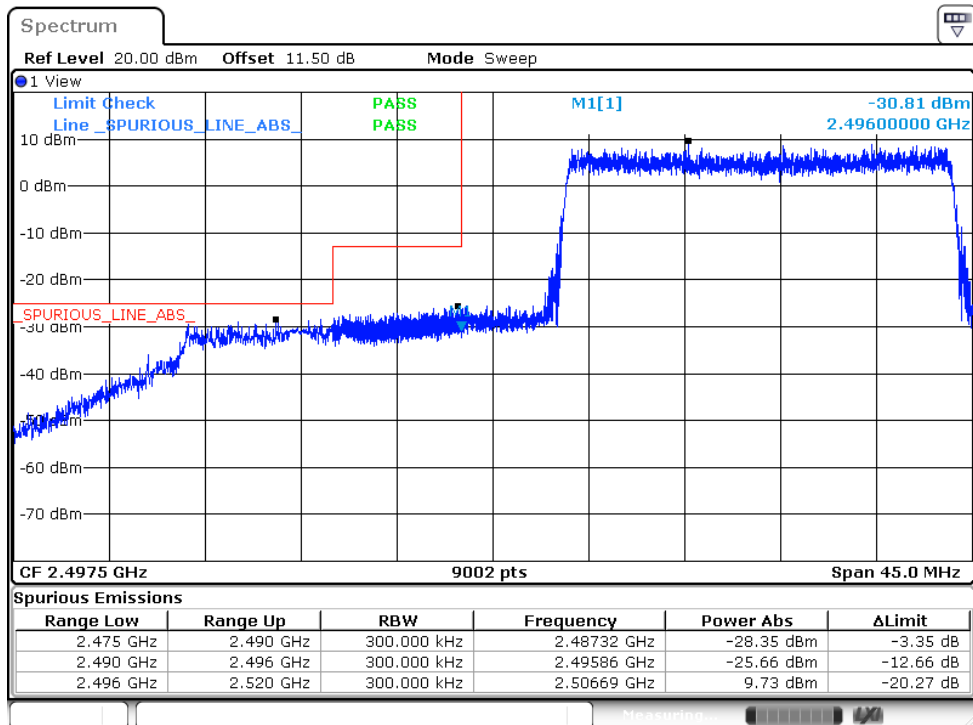
Band 7, UL Channel 21375, UL Frequency 2562.5, BW 15.0, NO. RB 75, RB POS. Low, 16QAM



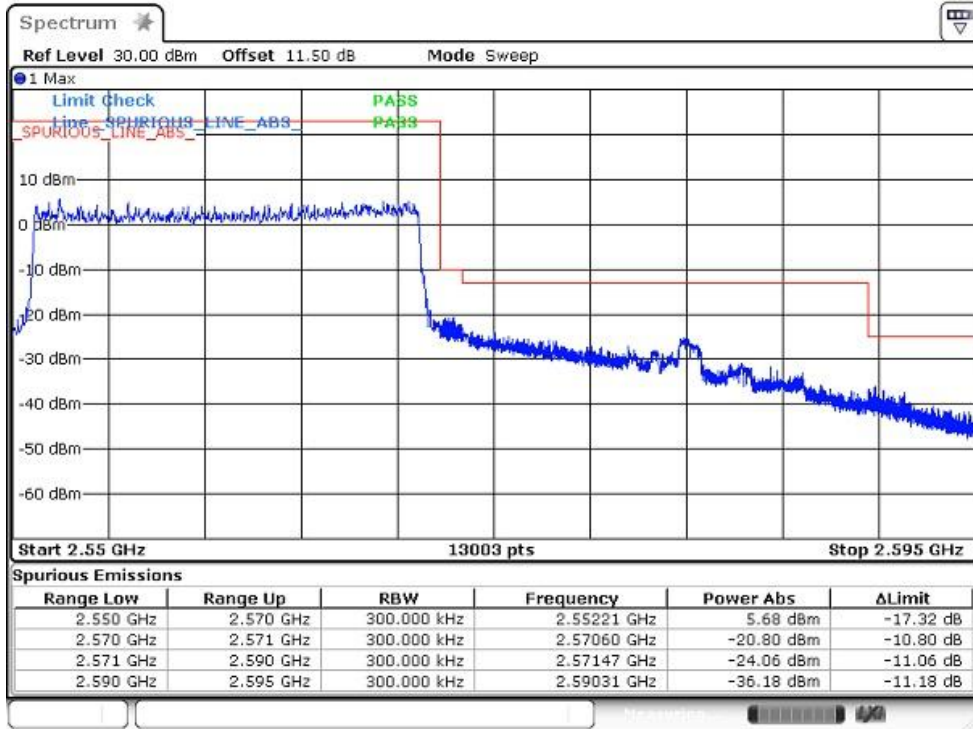
Band 7, UL Channel 20850, UL Frequency 2510.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK



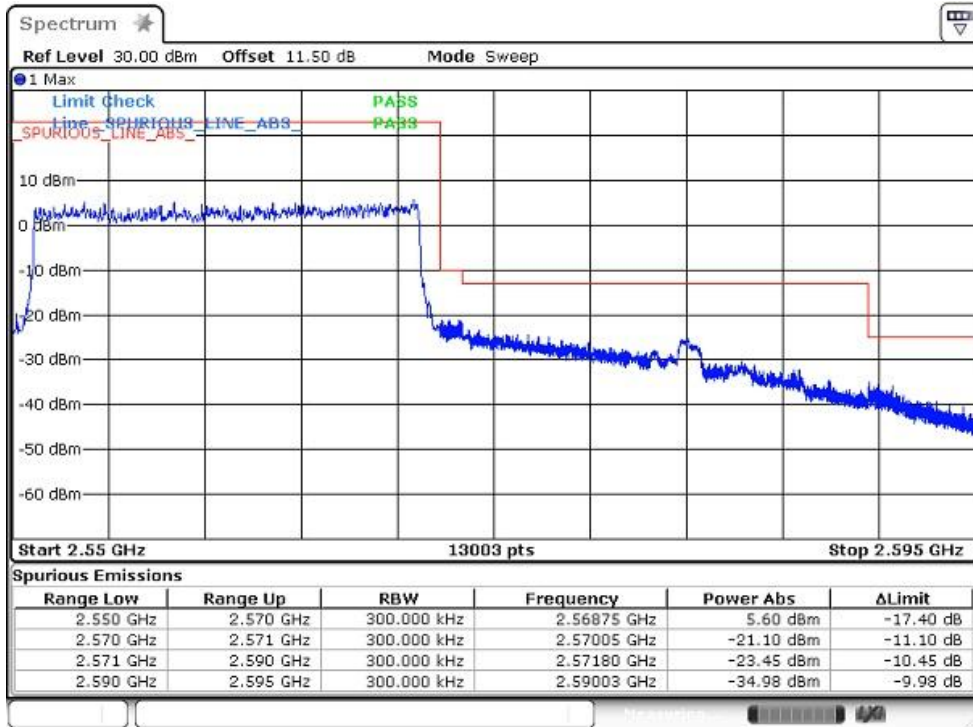
Band 7, UL Channel 20850, UL Frequency 2510.0, BW 20.0, NO. RB 100, RB POS. Low, 16QAM



Band 7, UL Channel 21350, UL Frequency 2560.0, BW 20.0, NO. RB 100, RB POS. Low, QPSK

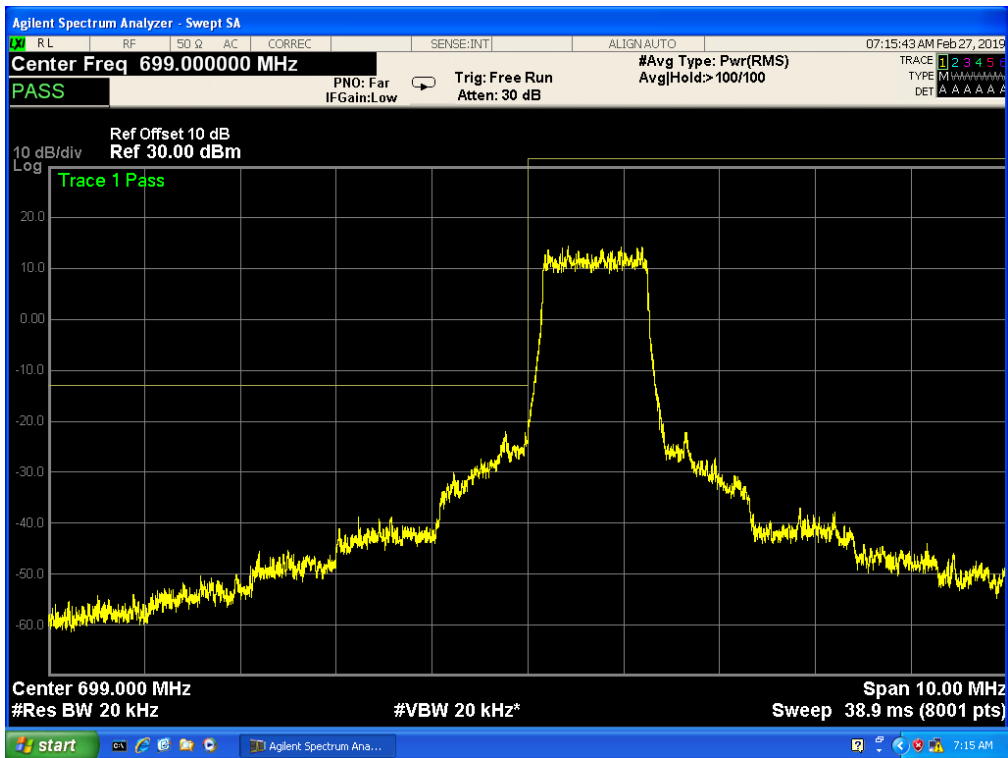


Band 7, UL Channel 21350, UL Frequency 2560.0, BW 20.0, NO. RB 100, RB POS. Low, 16QAM

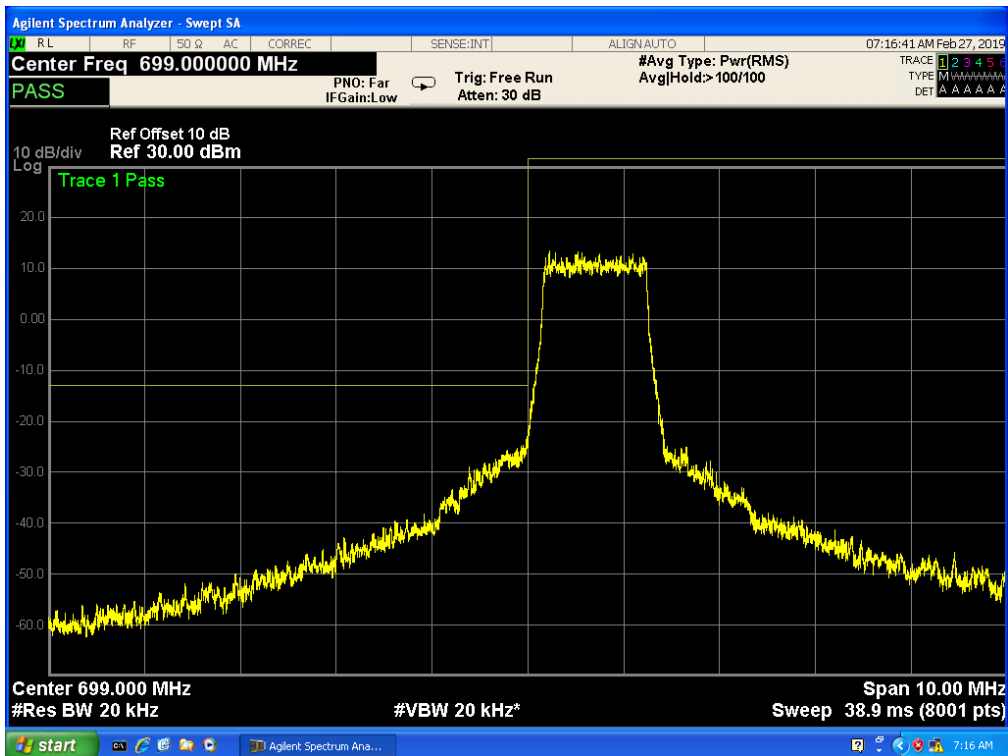


### 6.5 LTE BAND 12

Band 12, UL Channel 23017, UL Frequency 699.7, BW 1.4, NO. RB 6, RB POS. Low, QPSK

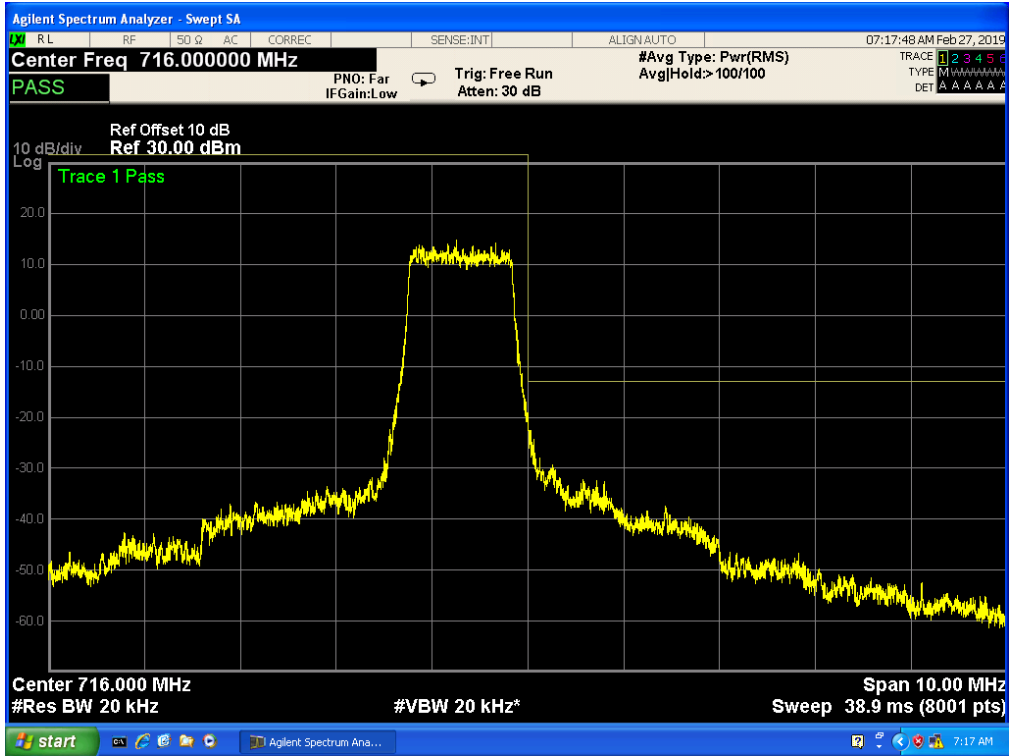


Band 12, UL Channel 23017, UL Frequency 699.7, BW 1.4, NO. RB 6, RB POS. Low, 16-QAM

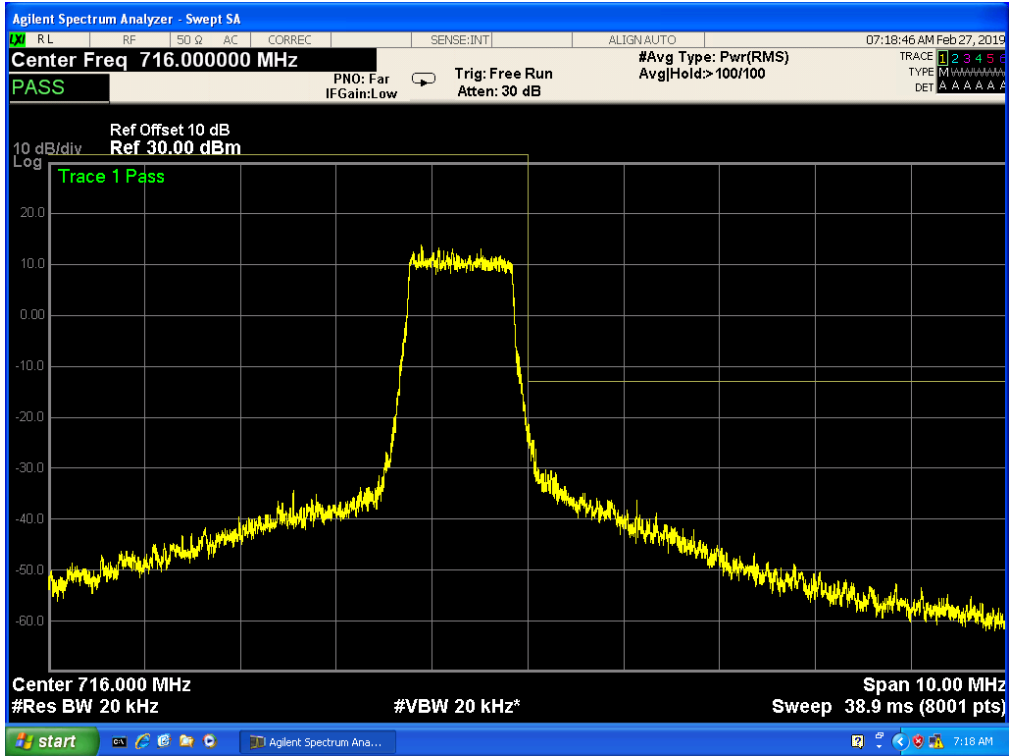




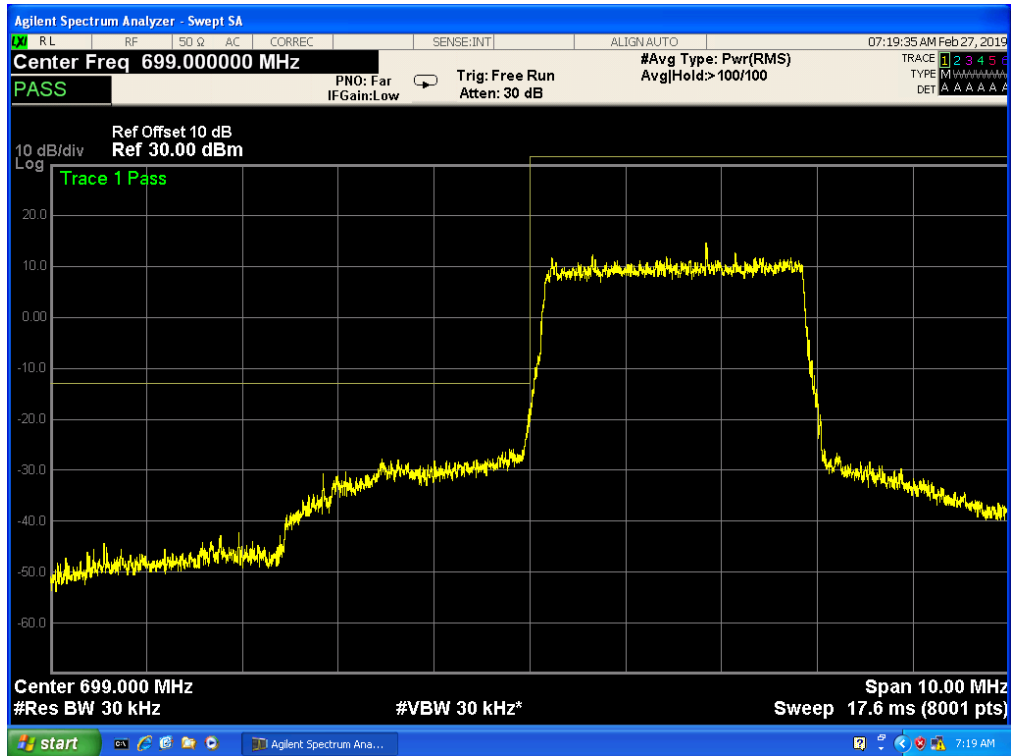
Band 12, UL Channel 23173, UL Frequency 715.3, BW 1.4, NO. RB 6, RB POS. Low, QPSK



Band 12, UL Channel 23173, UL Frequency 715.3, BW 1.4, NO. RB 6, RB POS. Low, 16-QAM



Band 12, UL Channel 23025, UL Frequency 700.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK



Band 12, UL Channel 23025, UL Frequency 700.5, BW 3.0, NO. RB 15, RB POS. Low, QPSK

