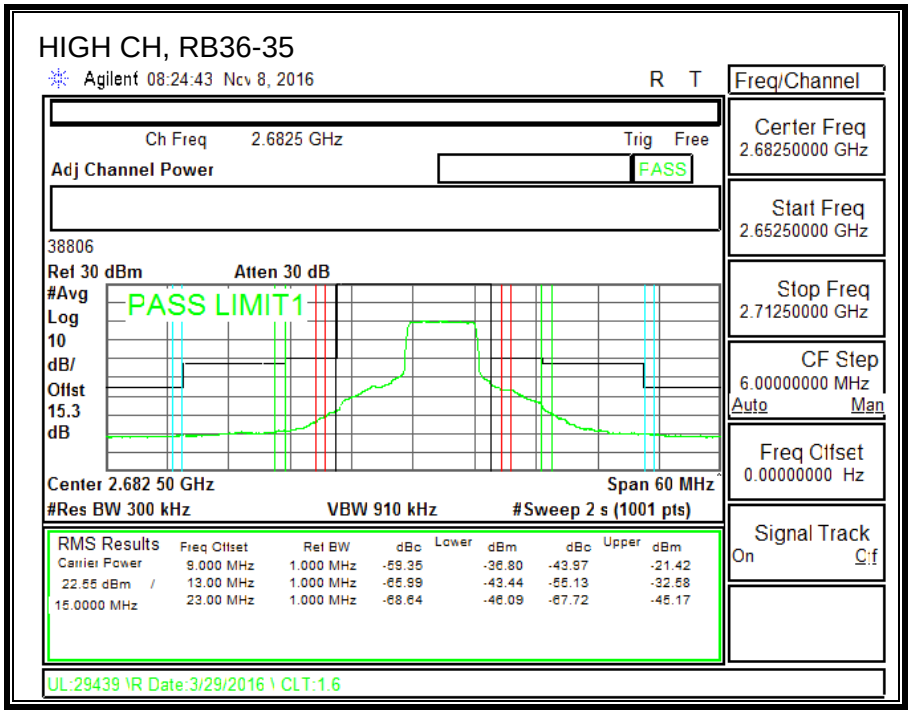
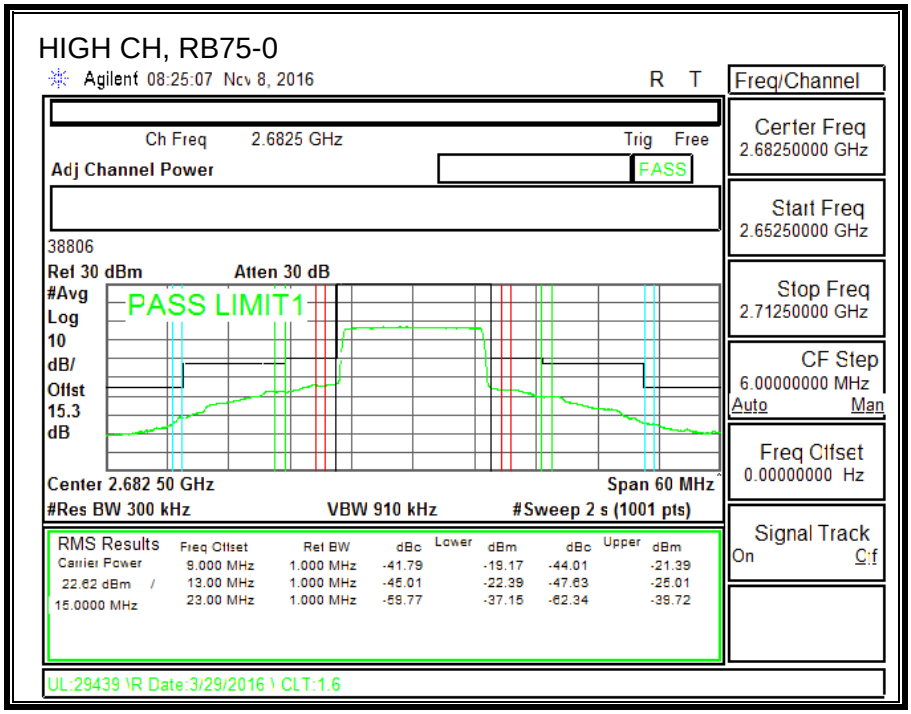
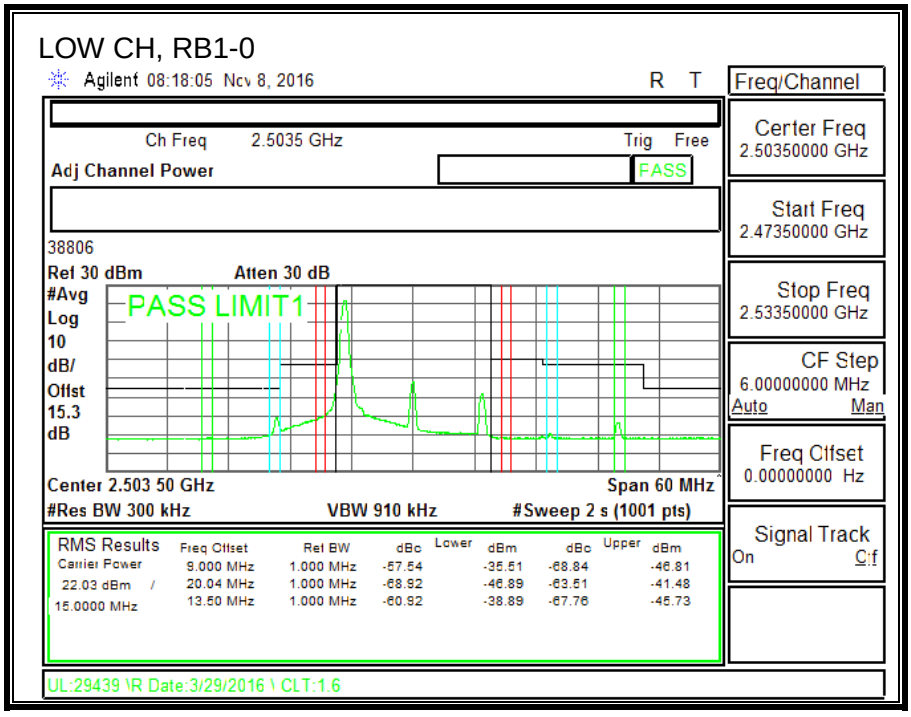
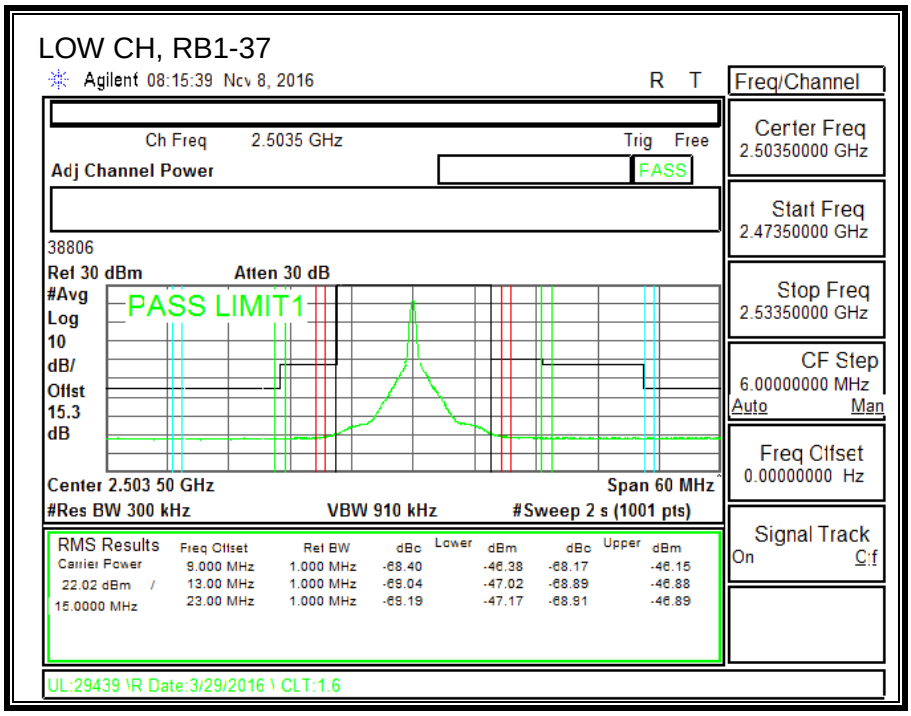
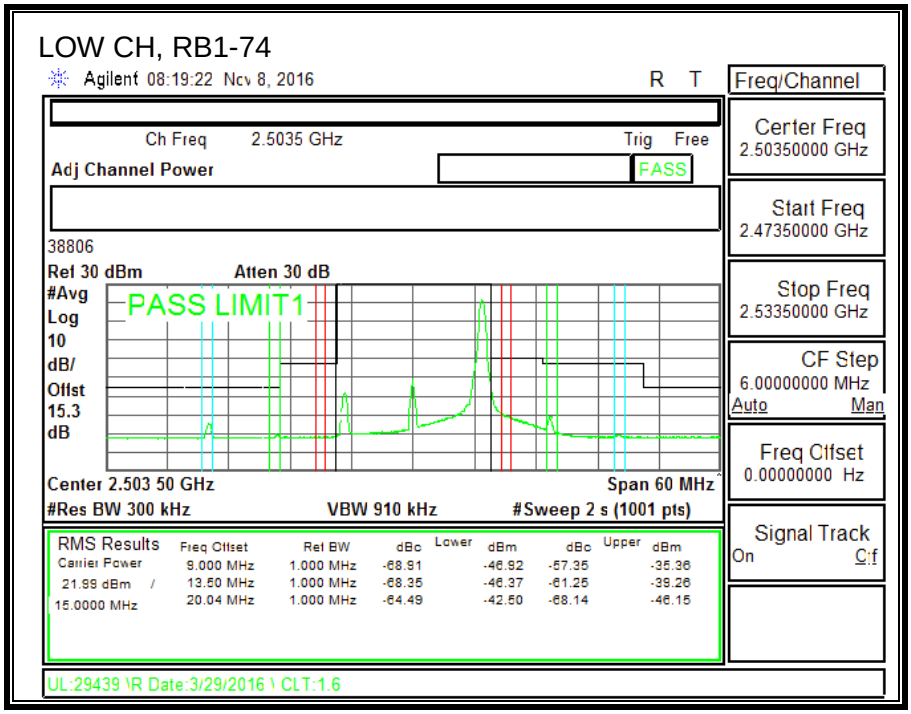


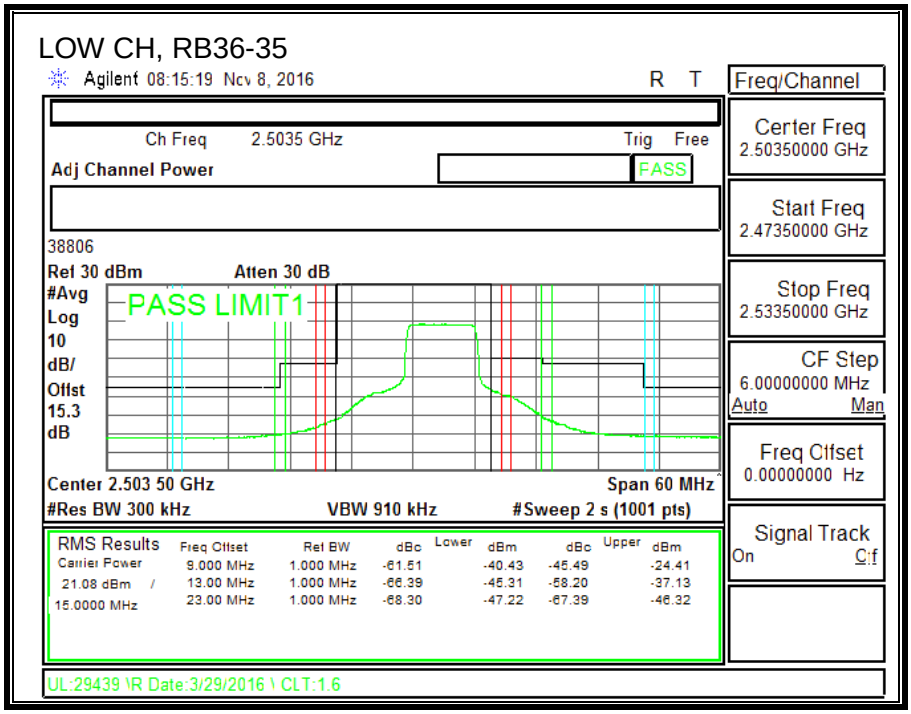


LTE BAND 41 16QAM, (15 MHz)

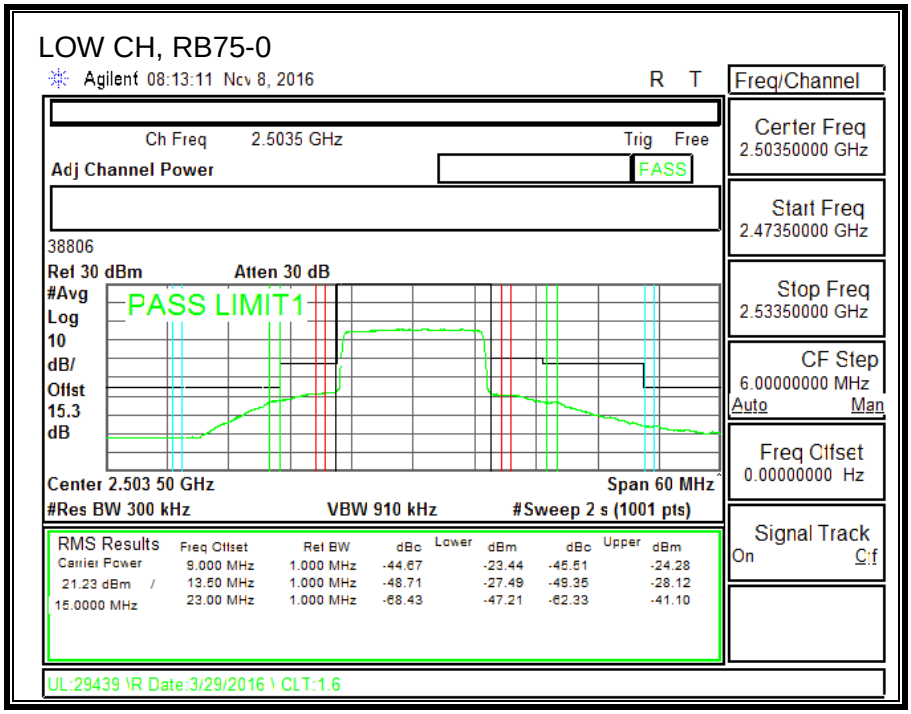




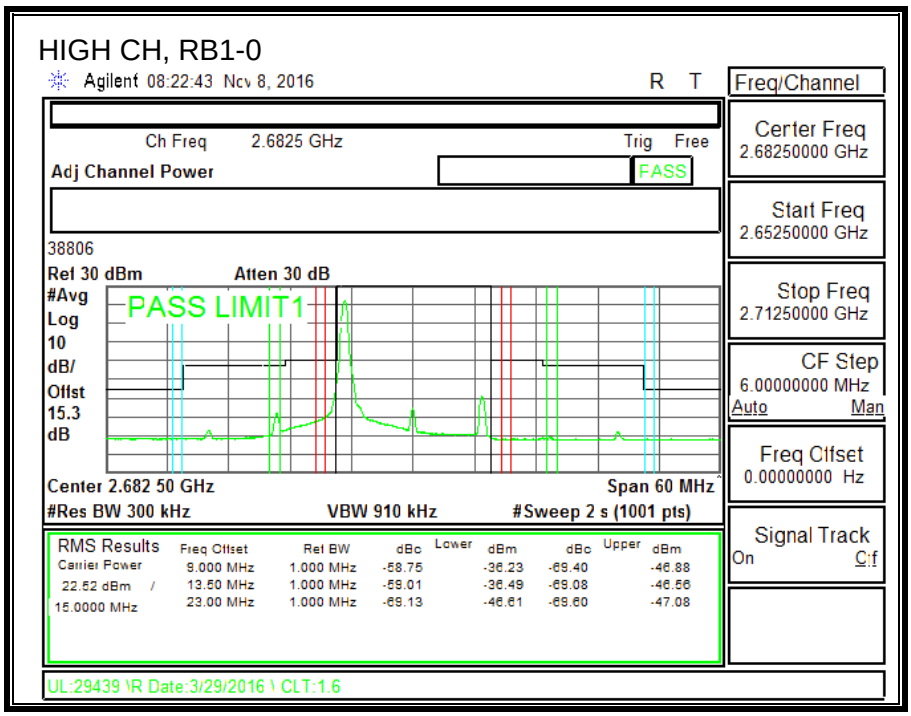




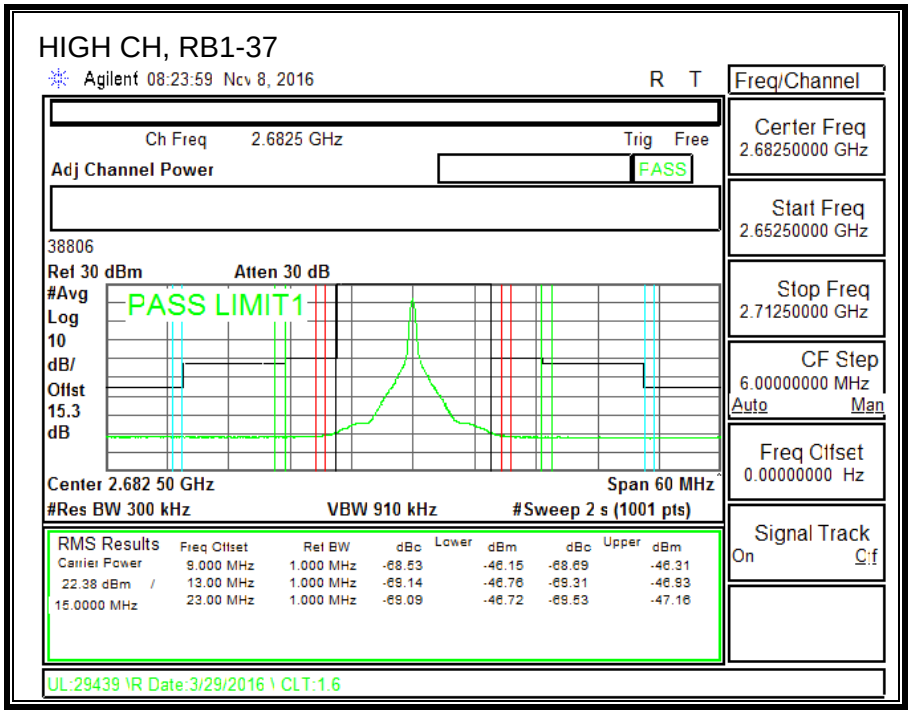
LOW CH, RB75-0



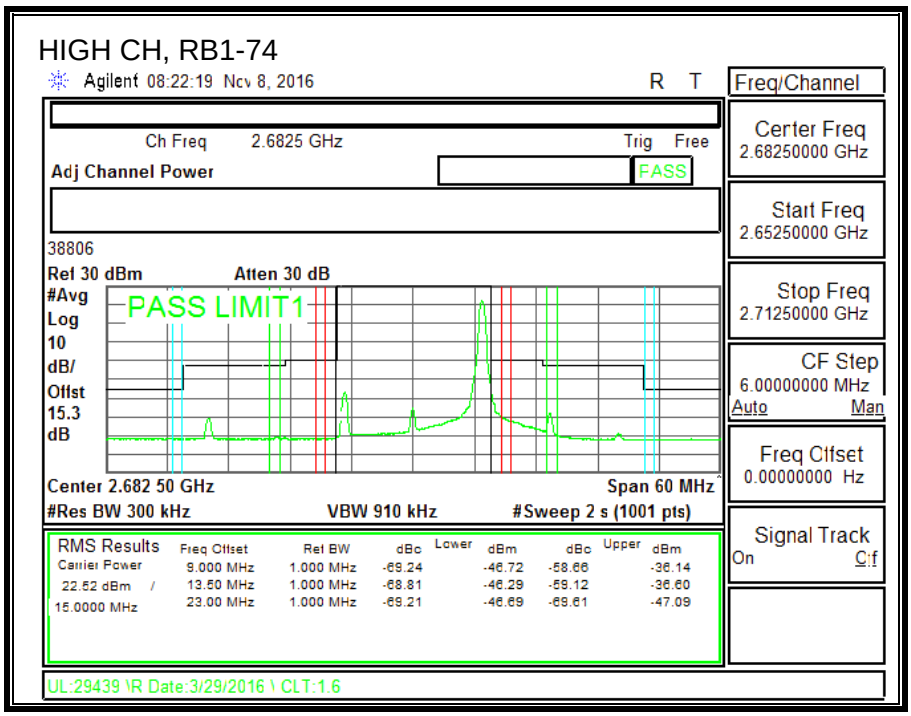
HIGH CH, RB1-0

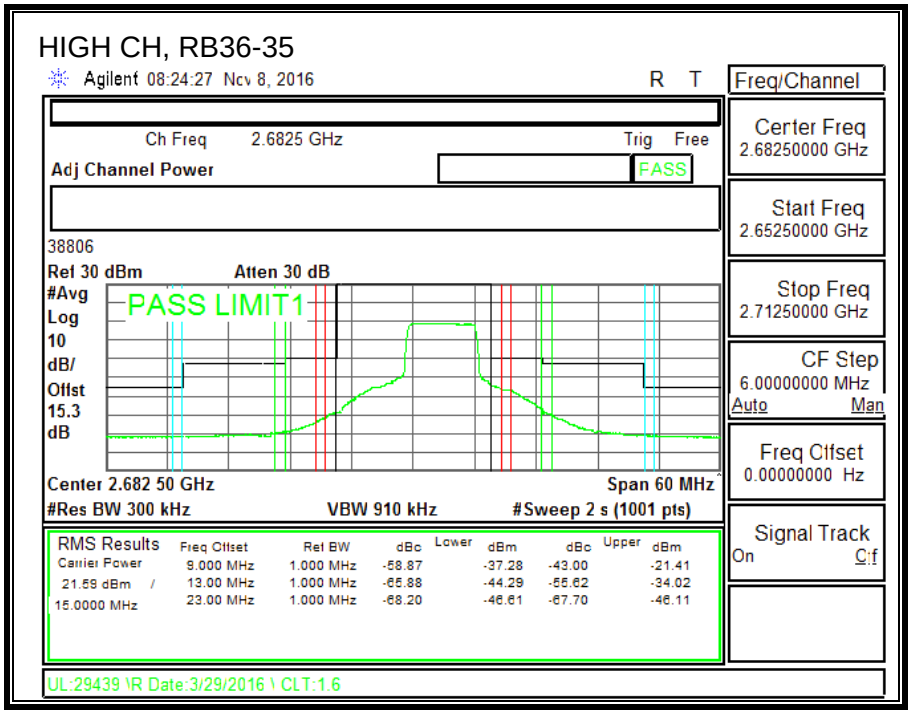


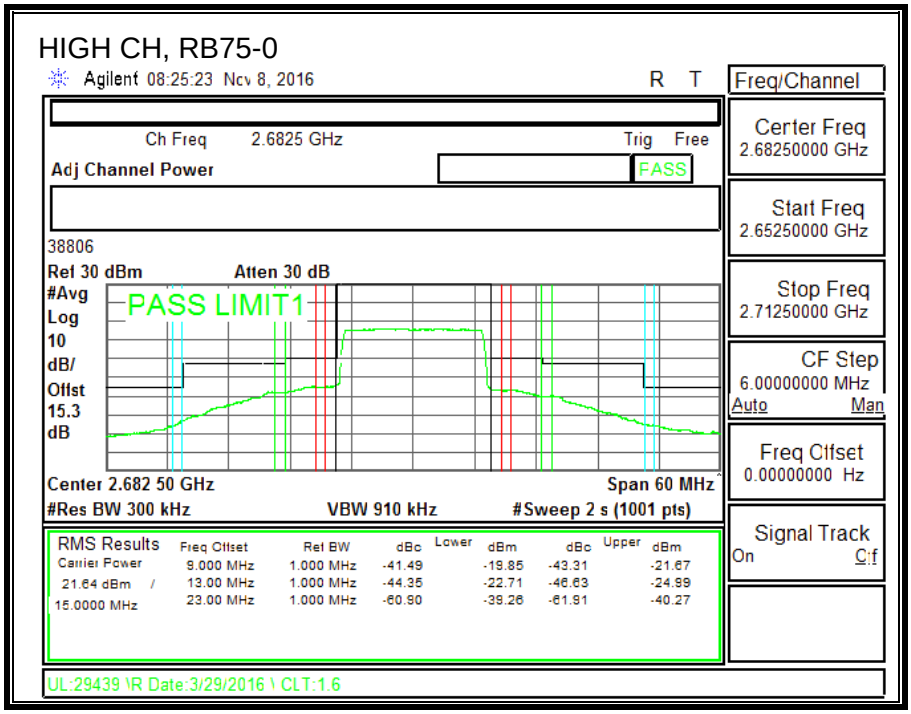
HIGH CH, RB1-37



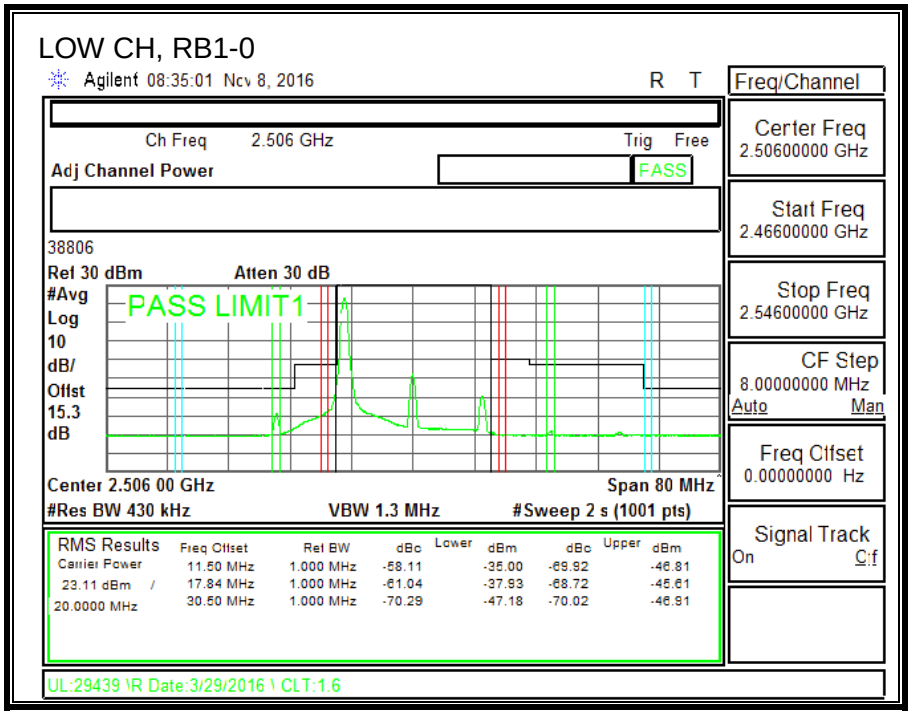
HIGH CH, RB1-74

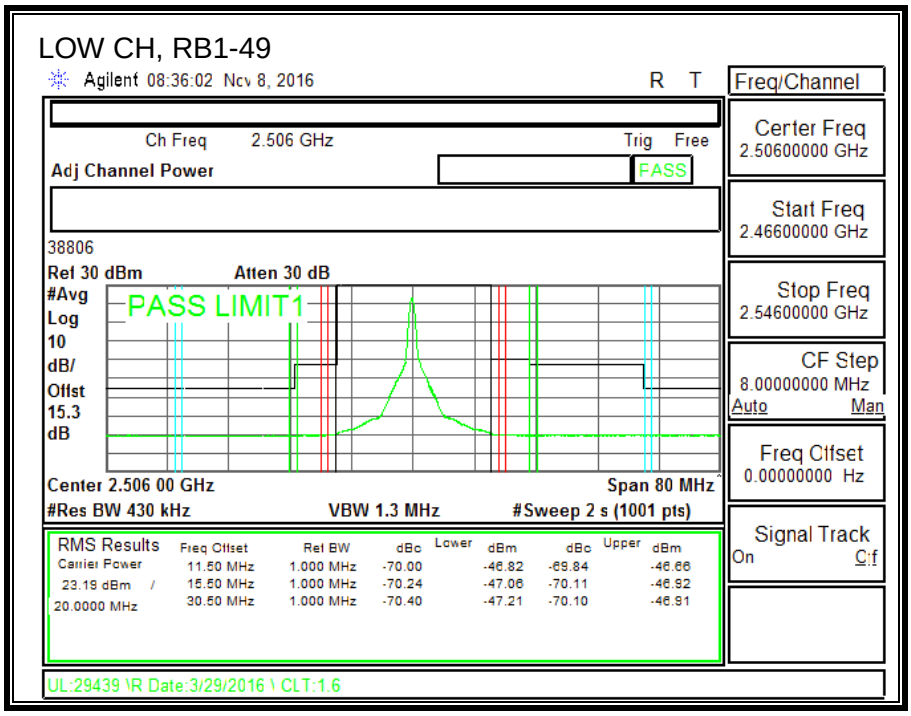


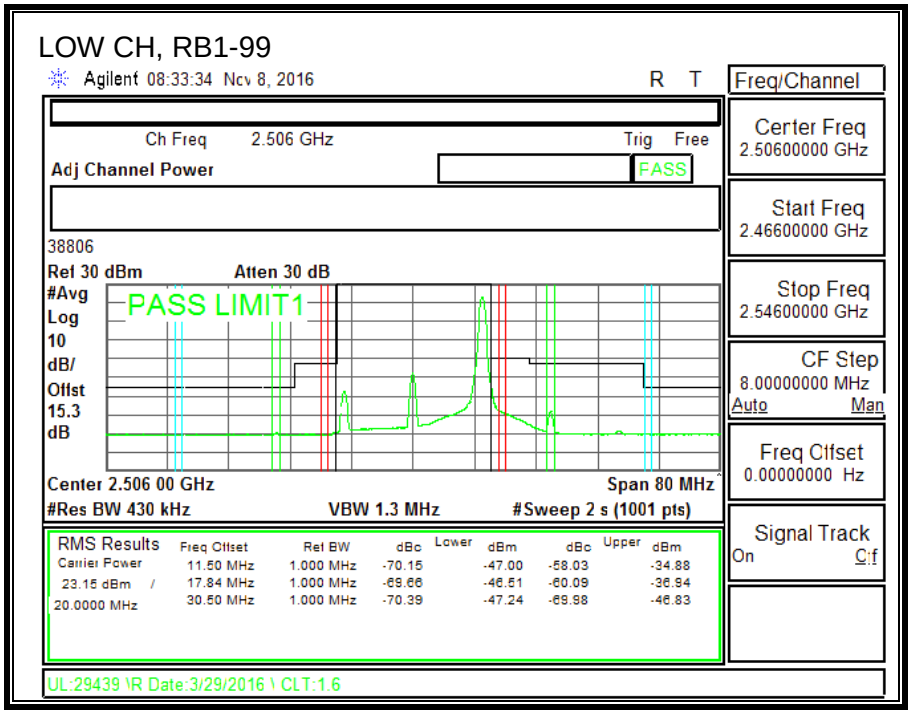


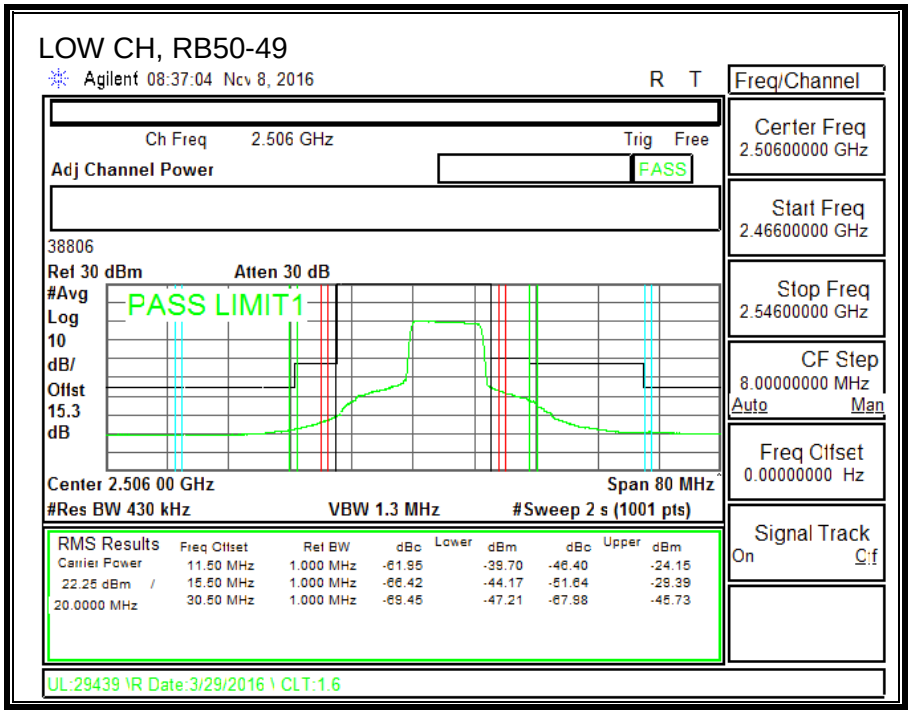


LTE BAND 41 QPSK, (20 MHz)

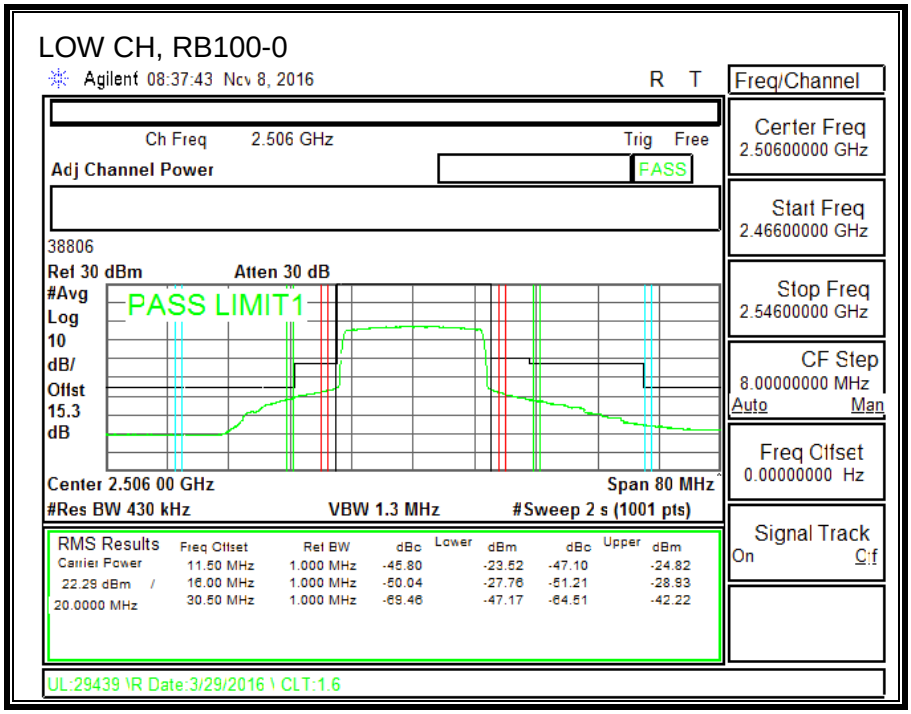




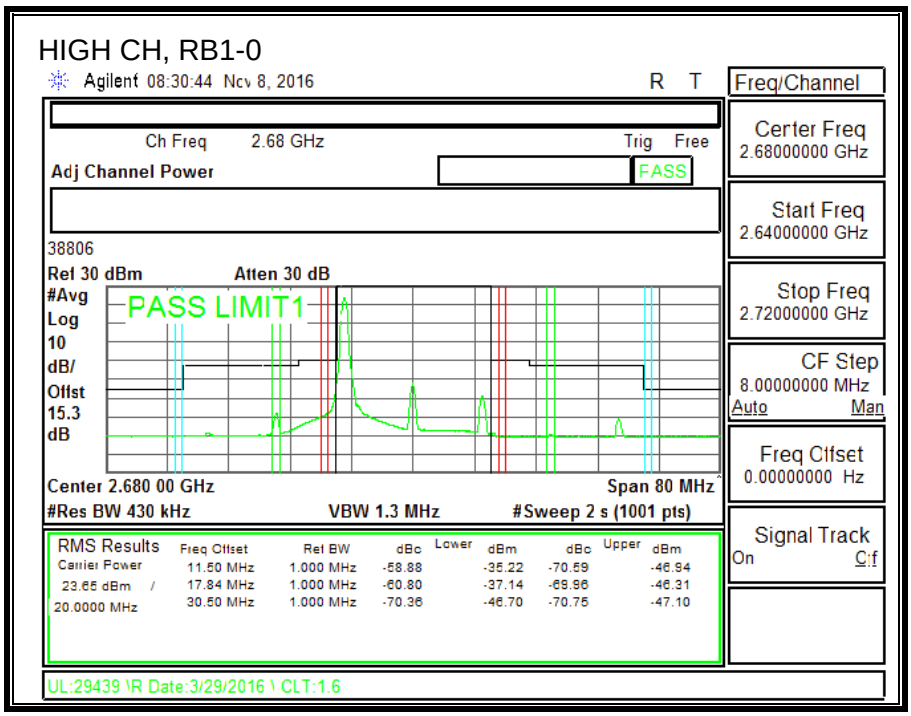




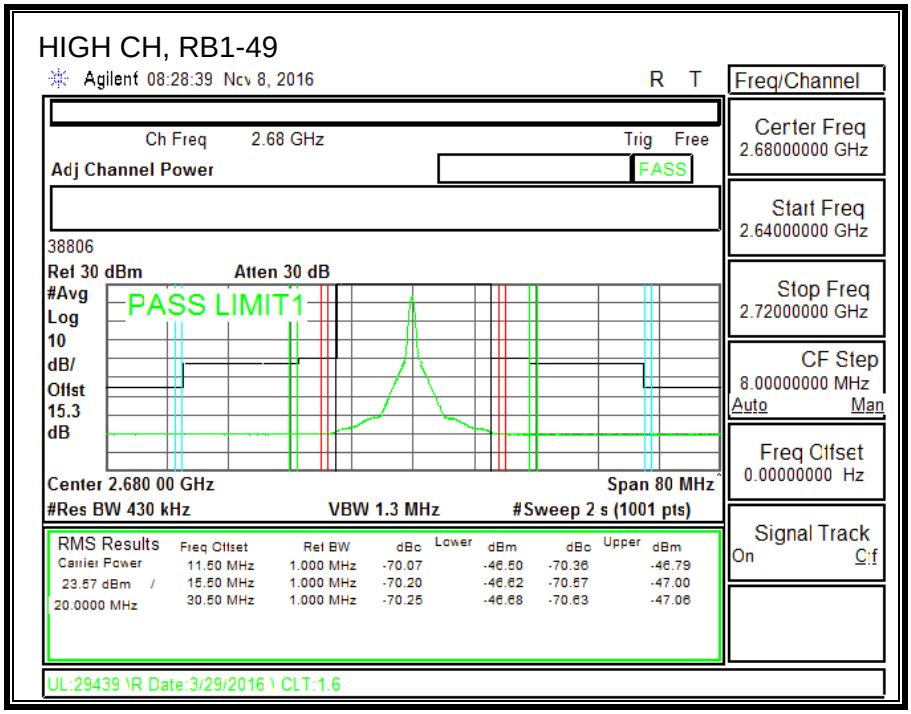
LOW CH, RB100-0



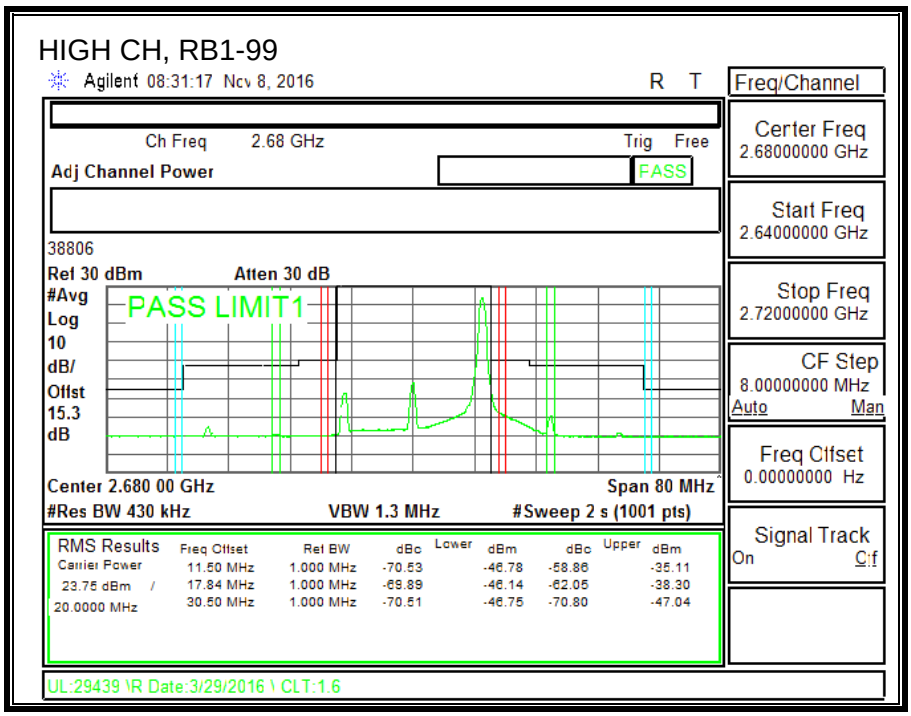
HIGH CH, RB1-0



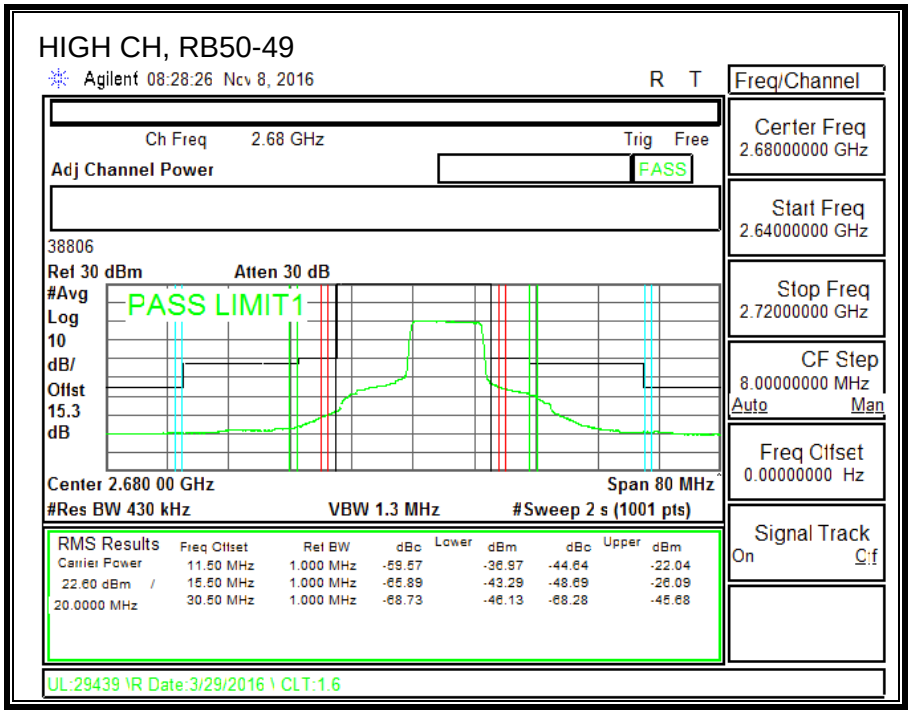
HIGH CH, RB1-49



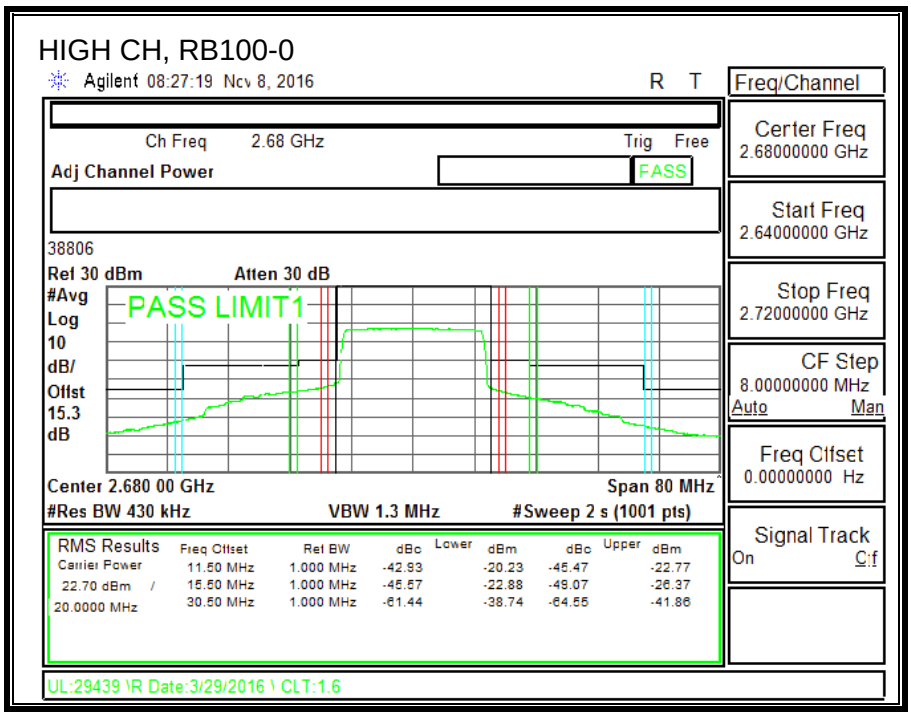
HIGH CH, RB1-99



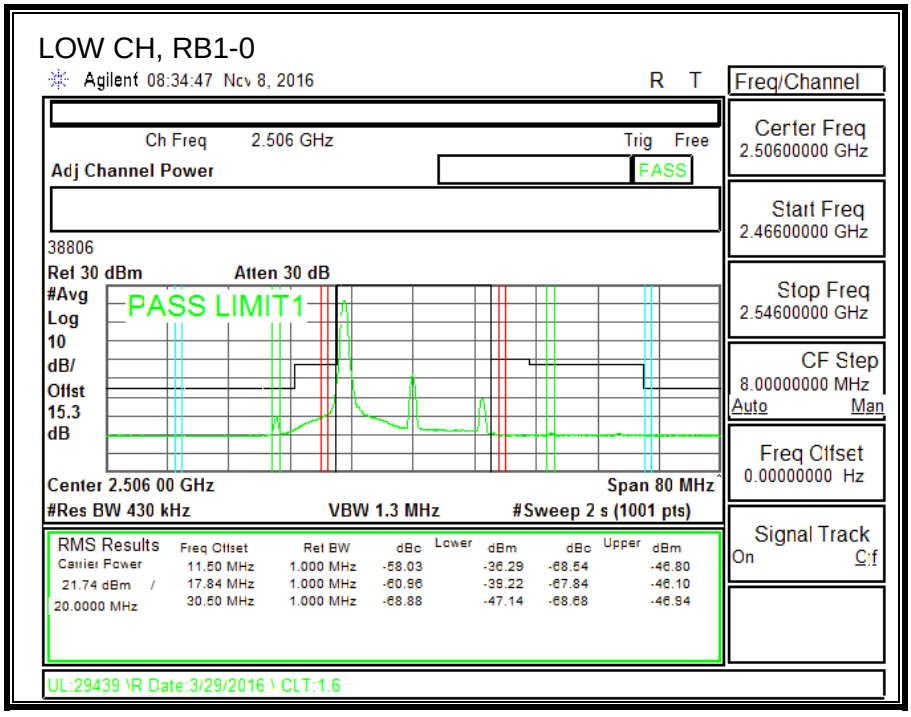
HIGH CH, RB50-49

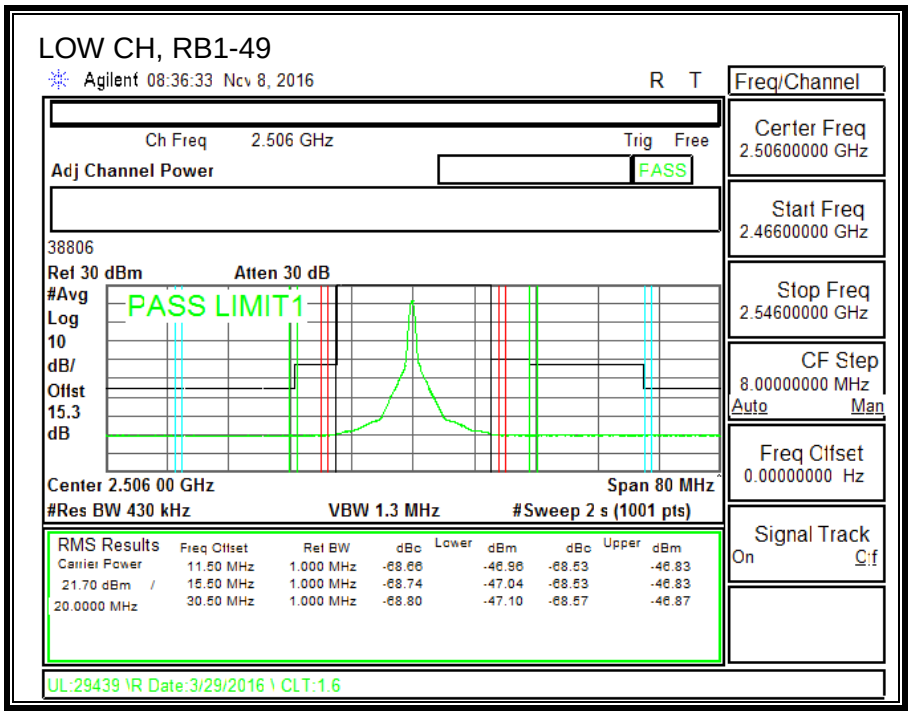


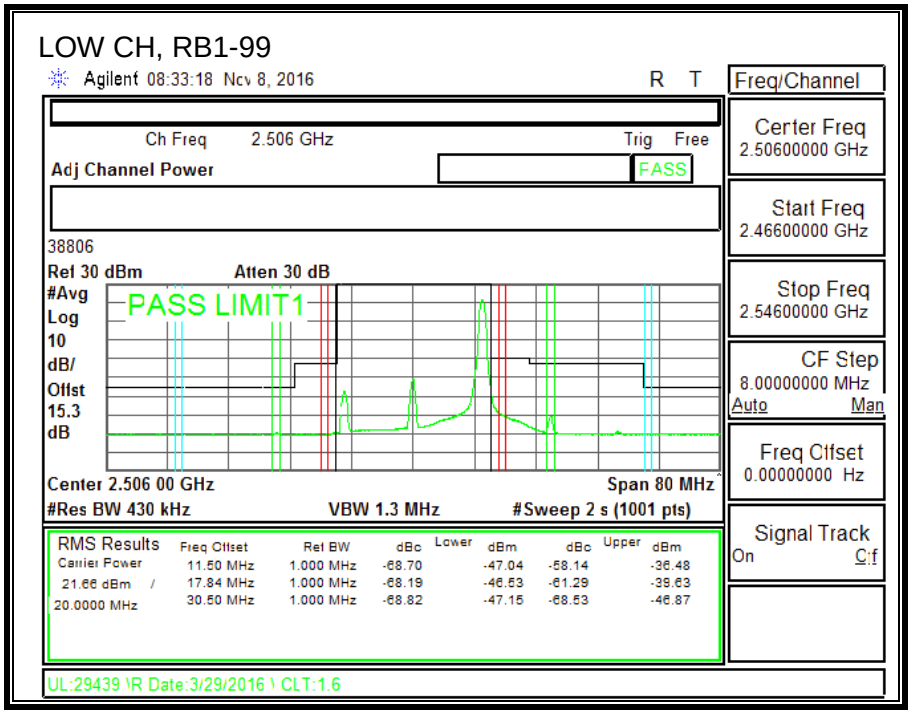
HIGH CH, RB100-0

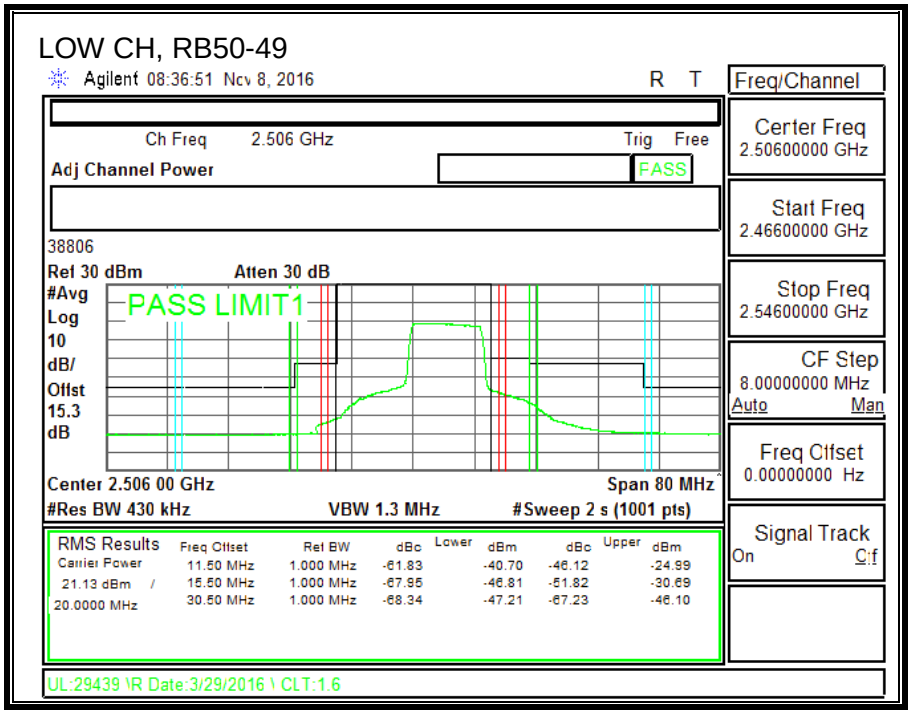


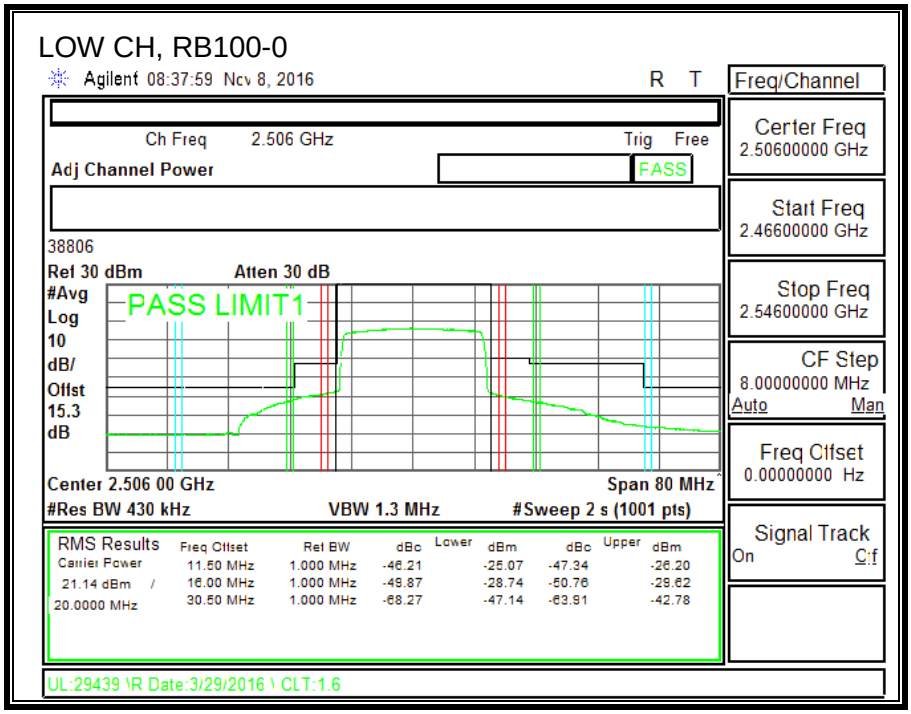
LTE BAND 41 16QAM, (20 MHz)

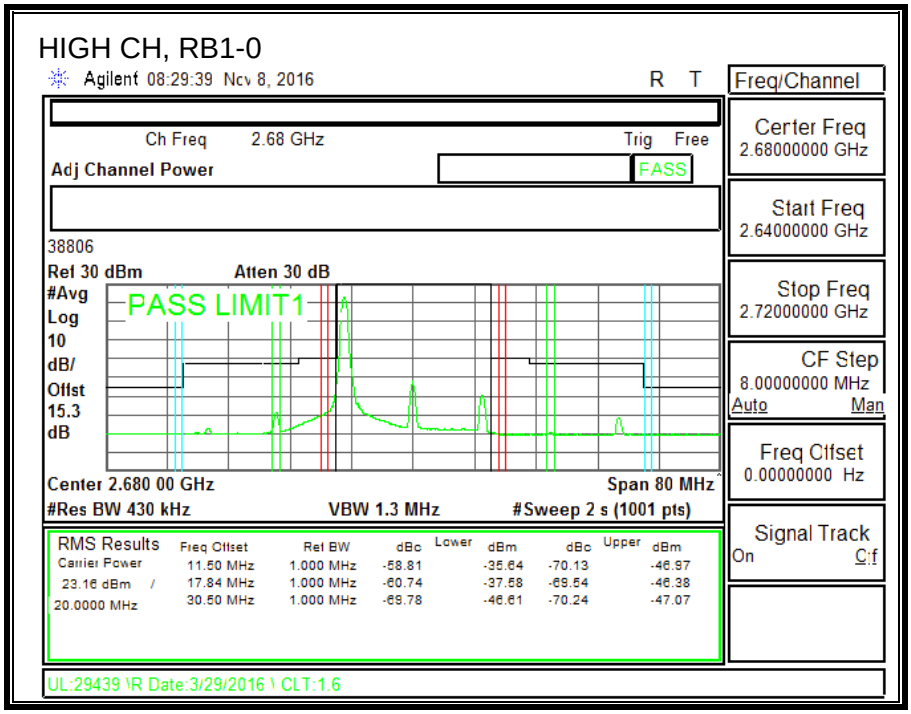


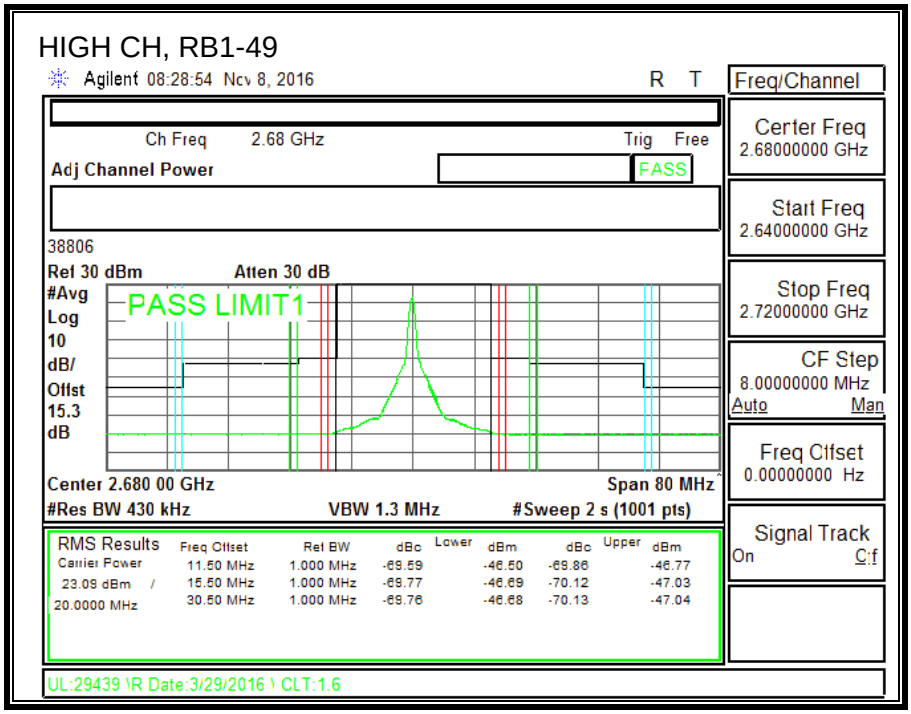


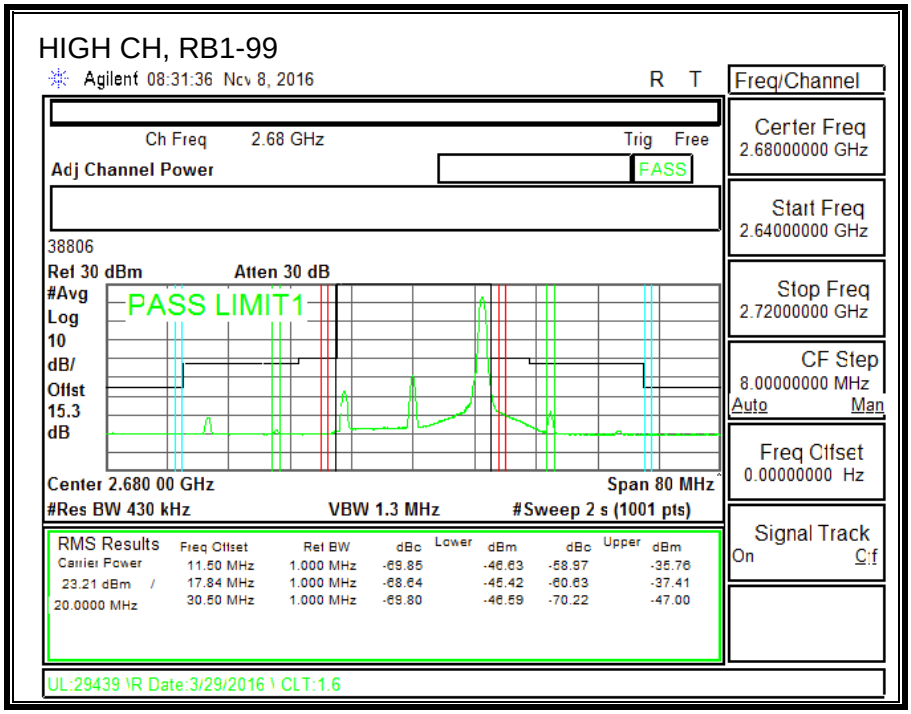


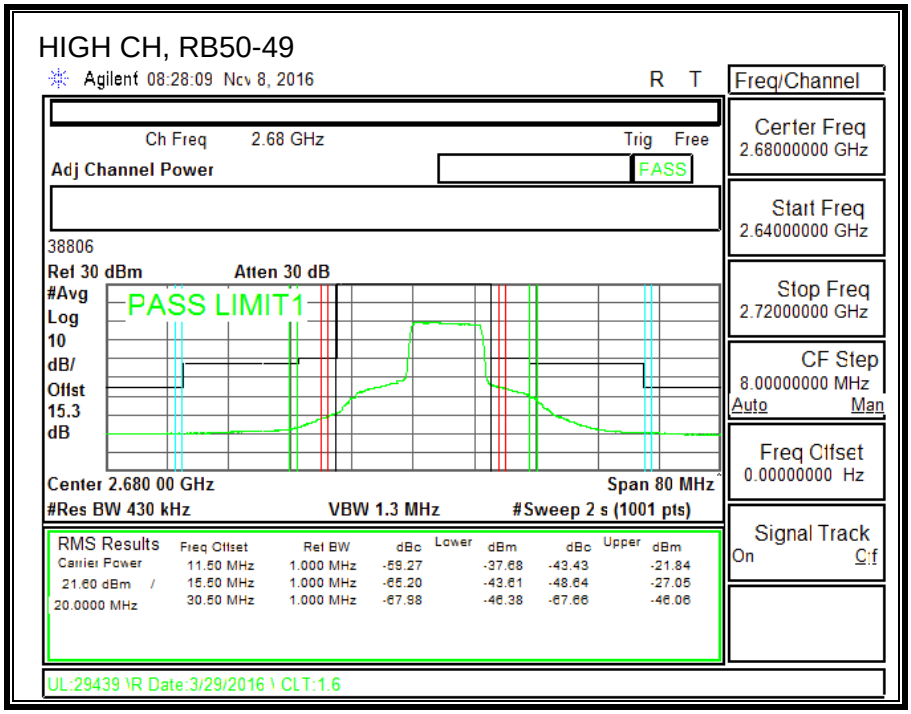


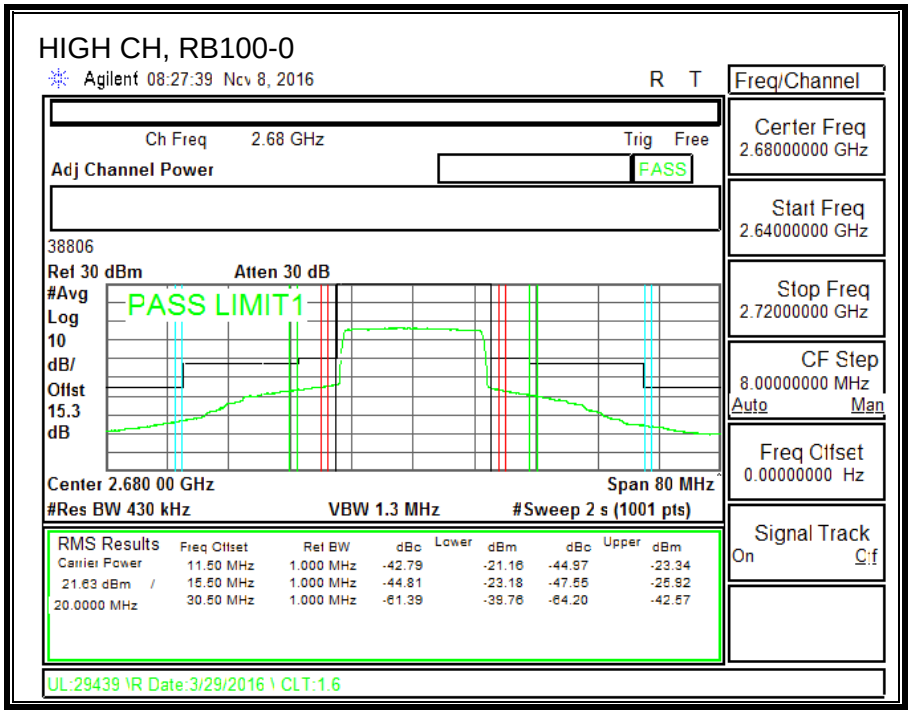












8.3. OUT OF BAND EMISSIONS

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

LIMITS

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.

For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz

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.

TEST PROCEDURE

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

- Set display line at -13 dBm, -25dBm and -40dBm according to the band Limit
  Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz. (NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

MODES TESTED

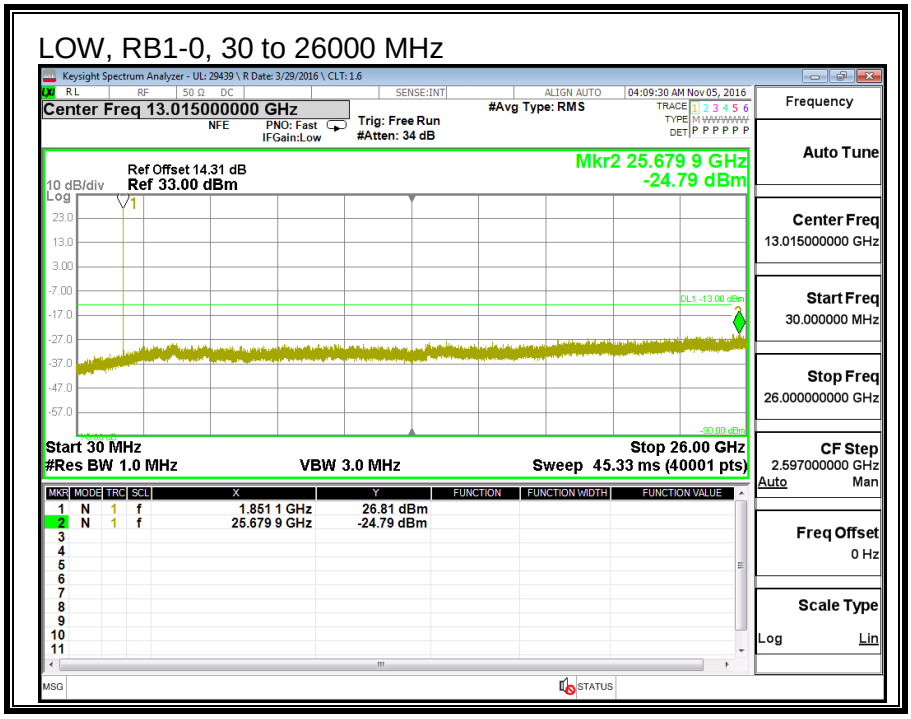
- LTE Band 2
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 41

RESULTS

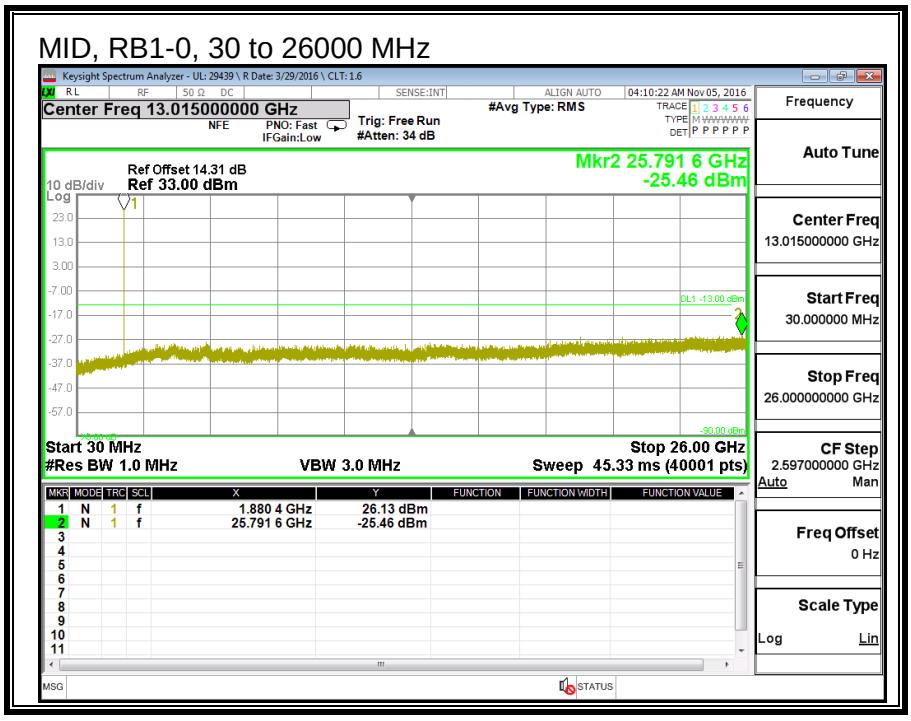
8.3.1. LTE BAND 2

LTE BAND 2 QPSK, (1.4 MHz)

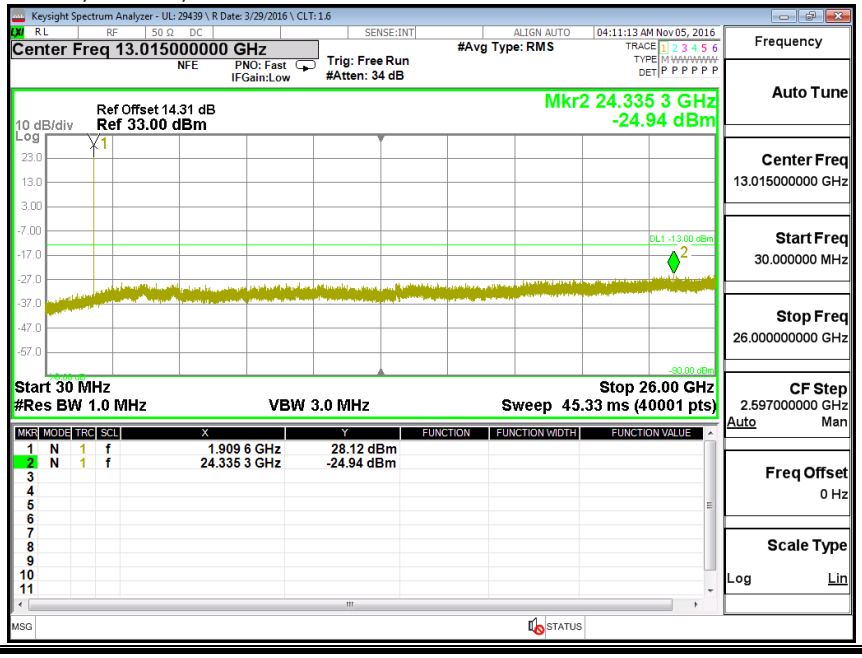
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

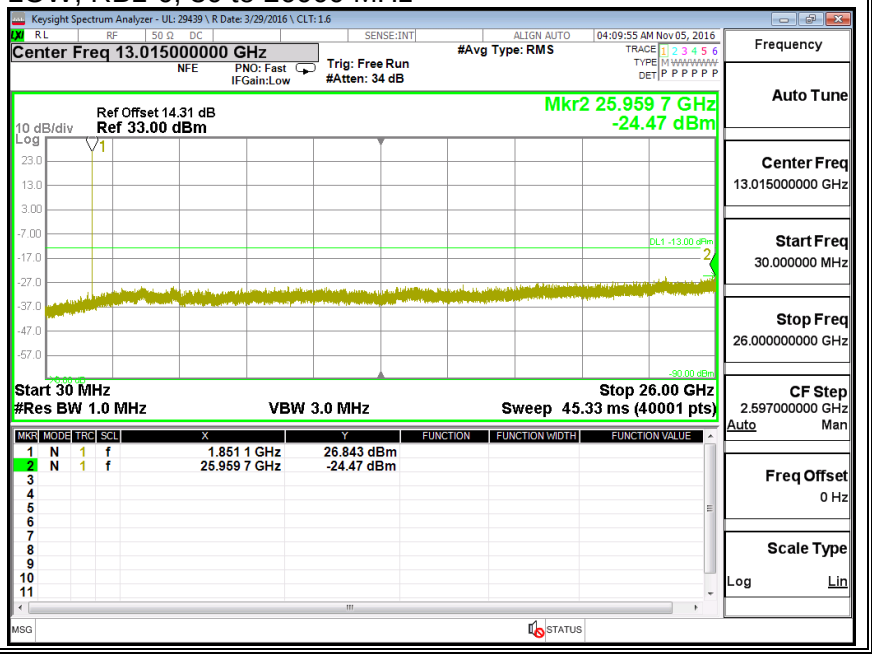


HIGH, RB1-0, 30 to 26000 MHz

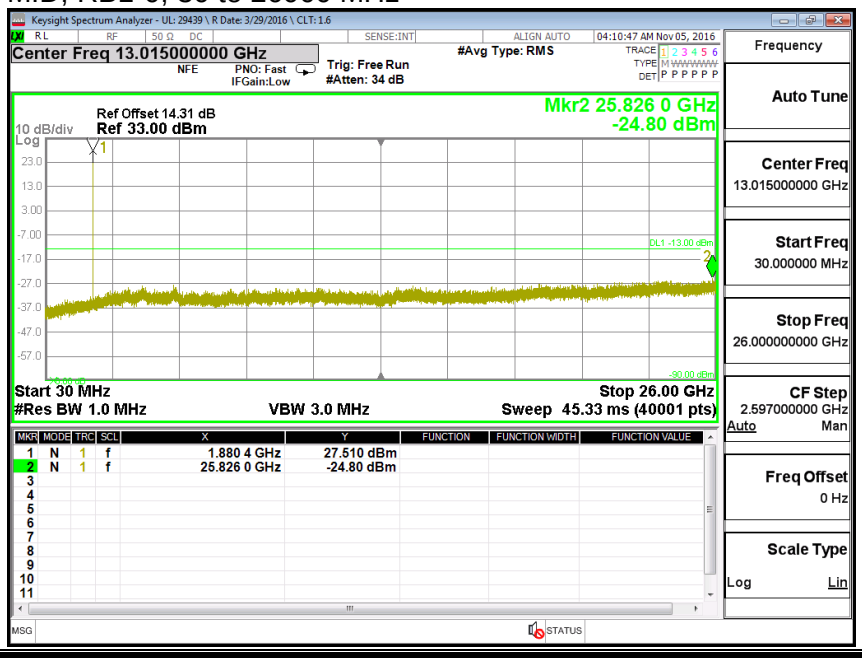


LTE BAND 2 16QAM, (1.4 MHz)

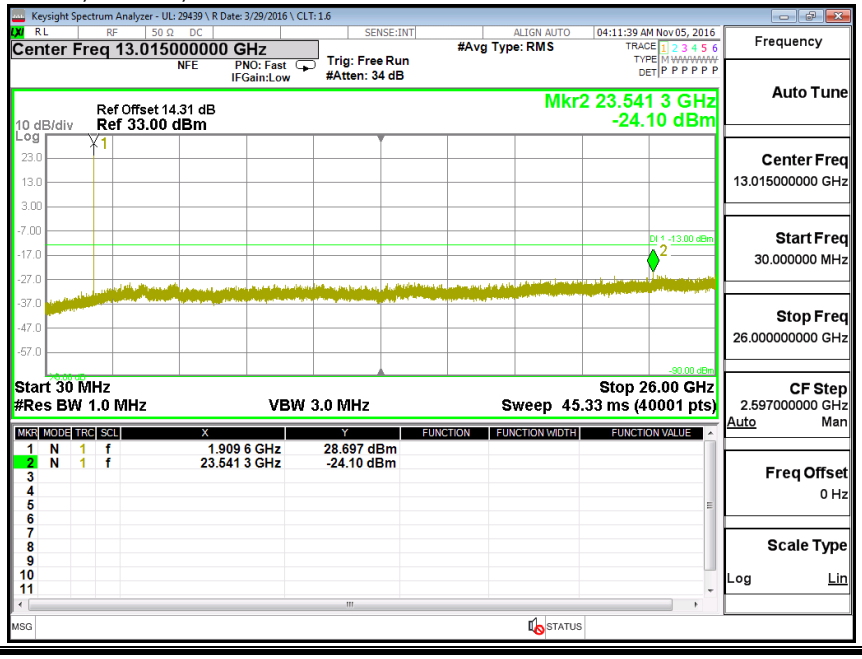
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

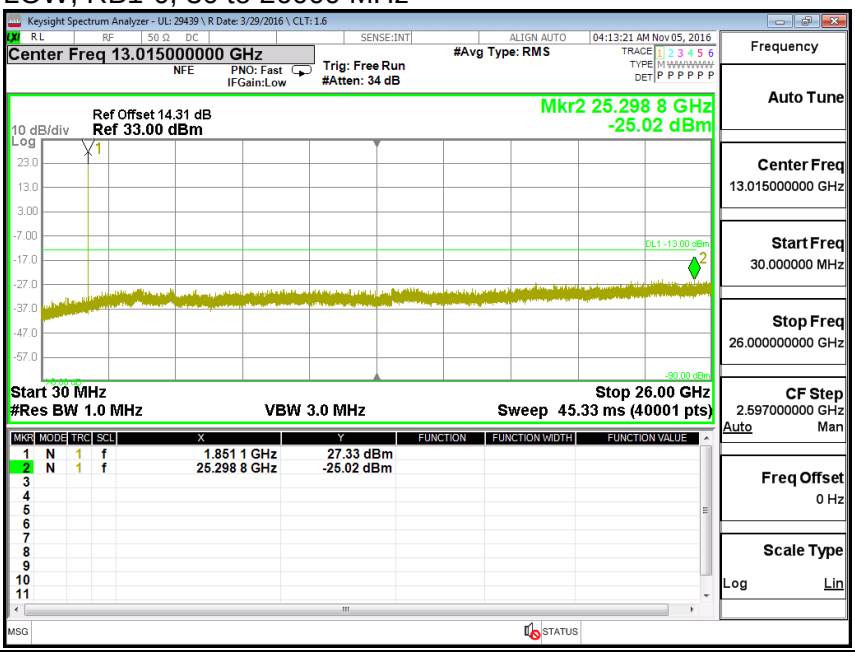


HIGH, RB1-0, 30 to 26000 MHz

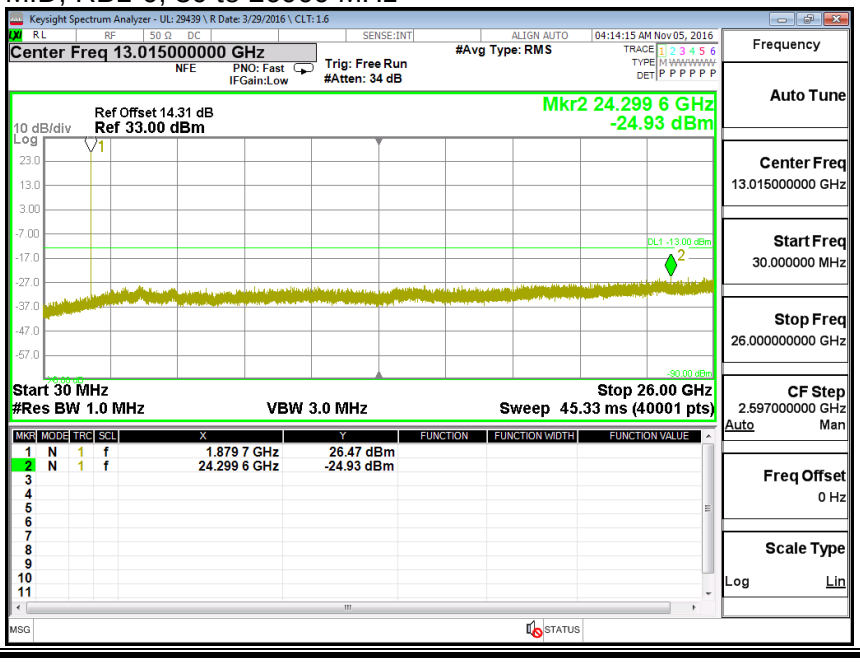


LTE BAND 2 QPSK, (3 MHz)

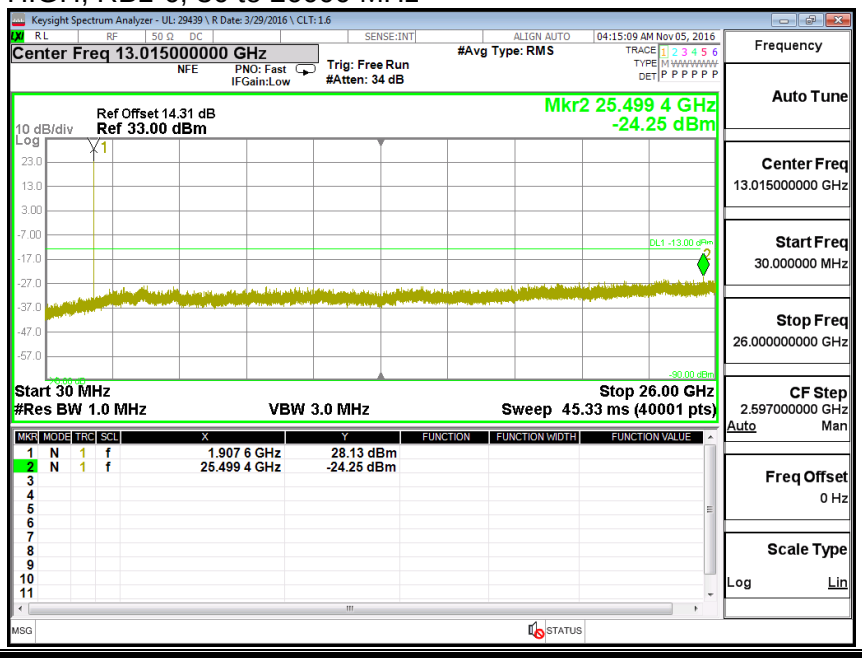
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

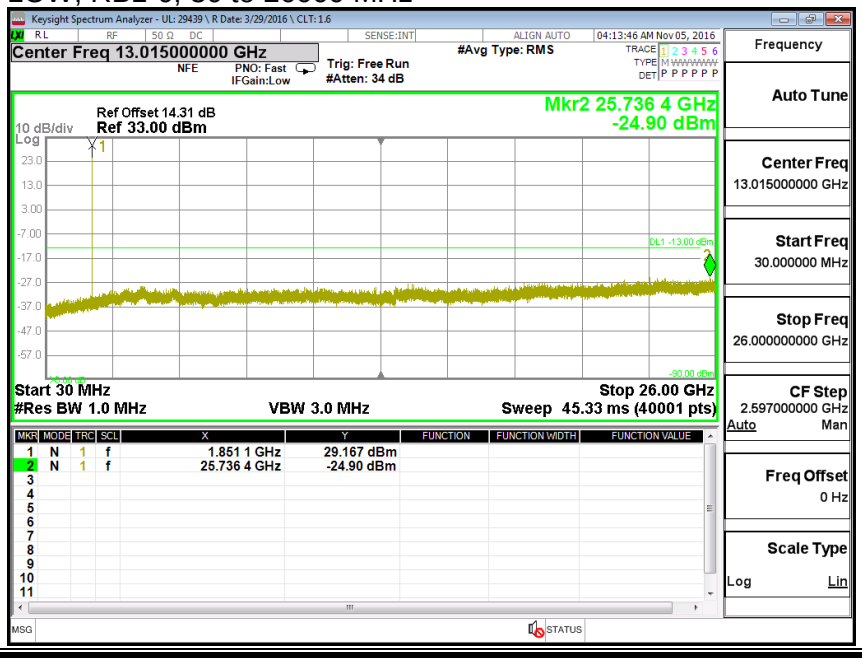


HIGH, RB1-0, 30 to 26000 MHz

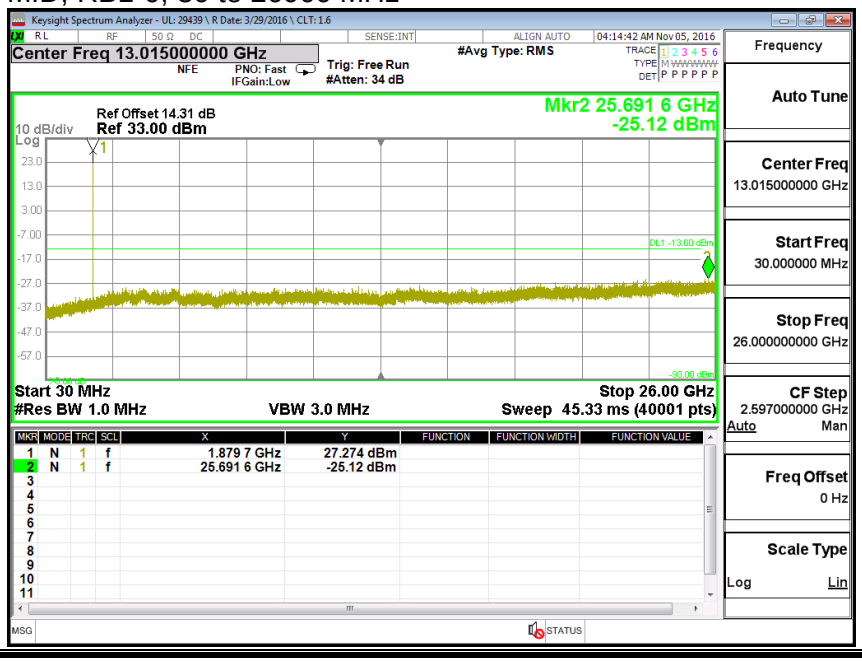


LTE BAND 2 16QAM, (3 MHz)

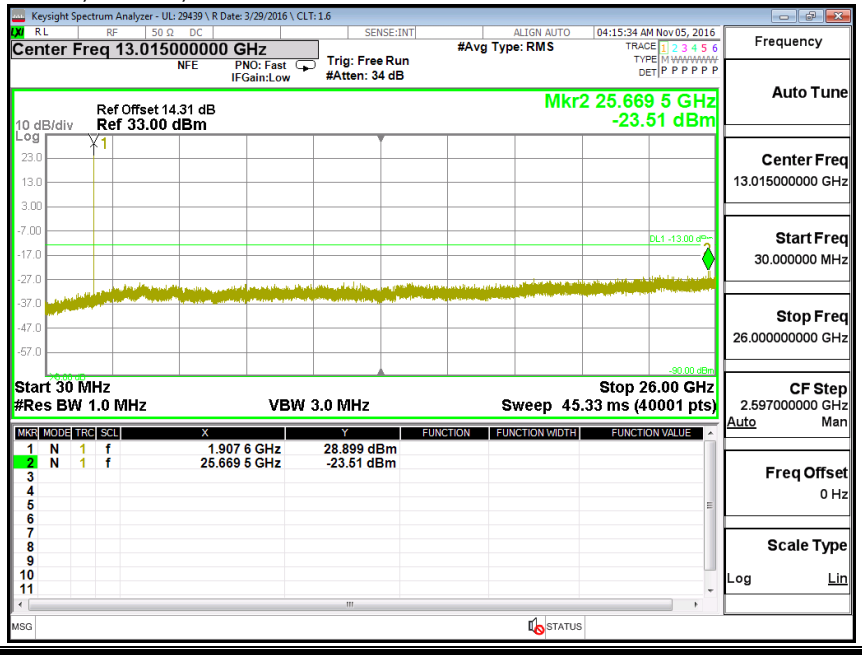
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

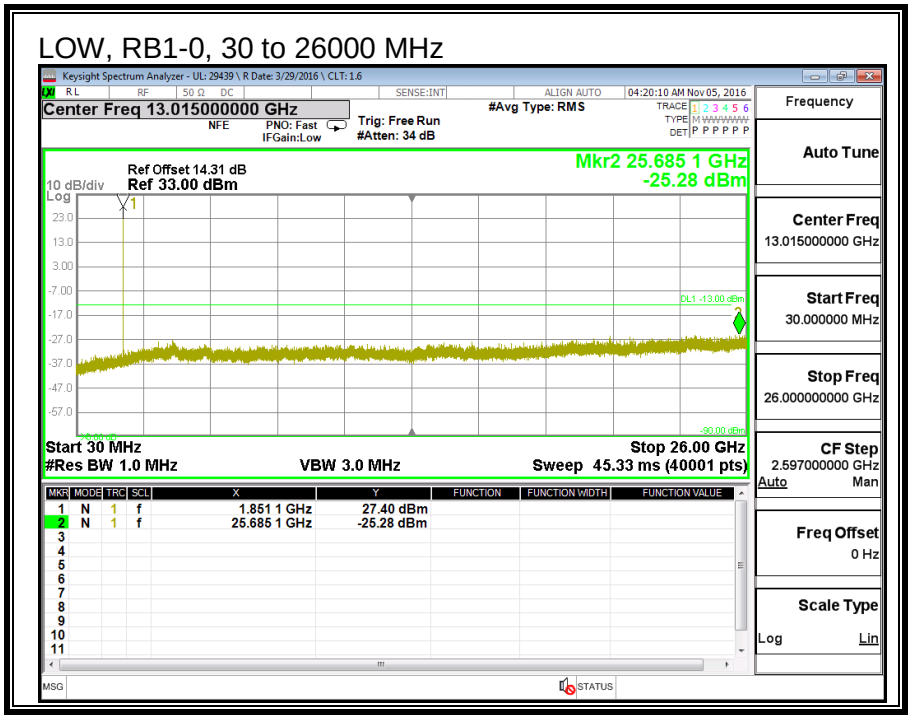


HIGH, RB1-0, 30 to 26000 MHz

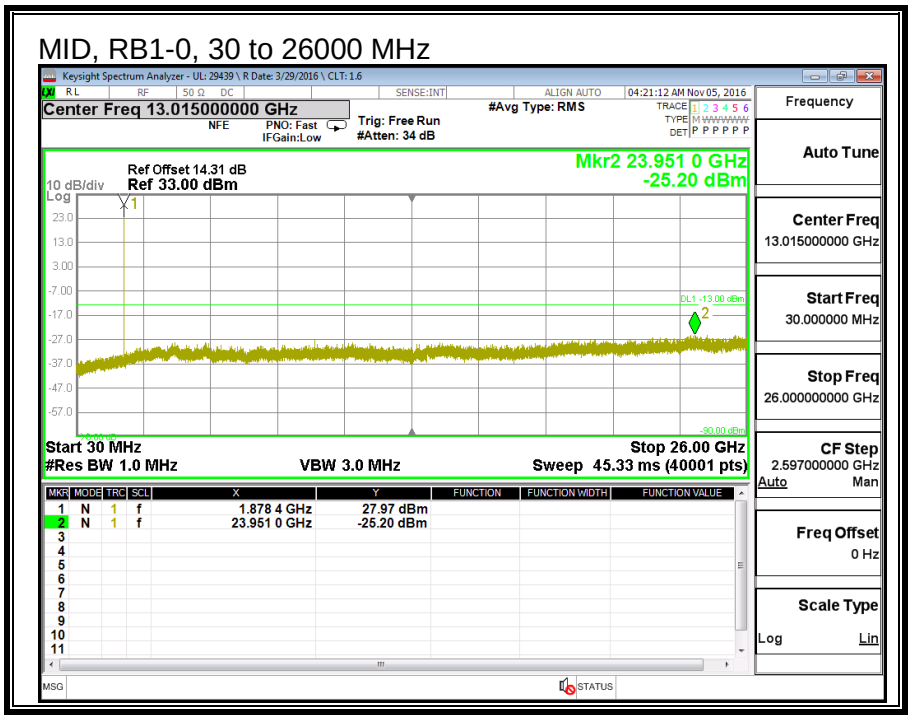


LTE BAND 2 QPSK, (5 MHz)

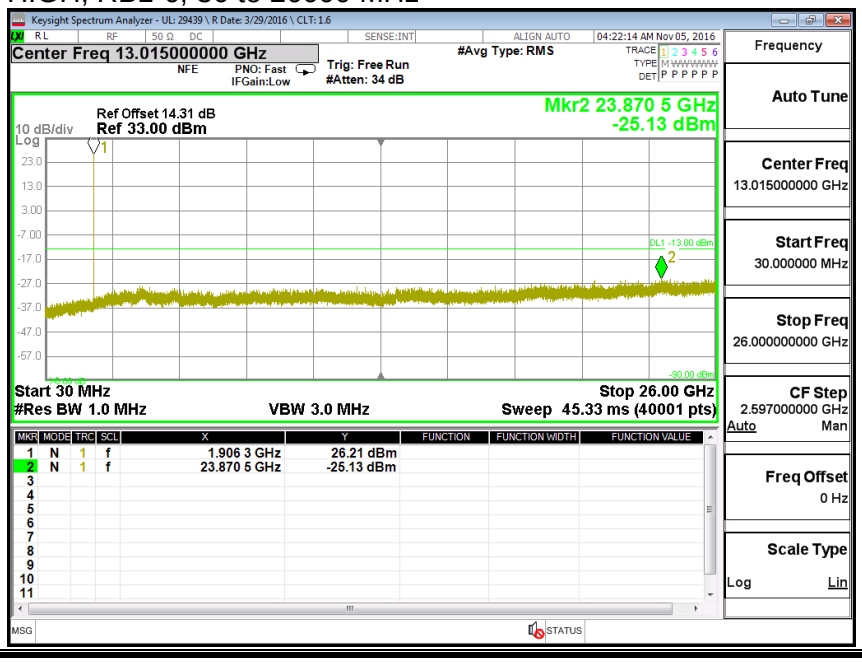
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

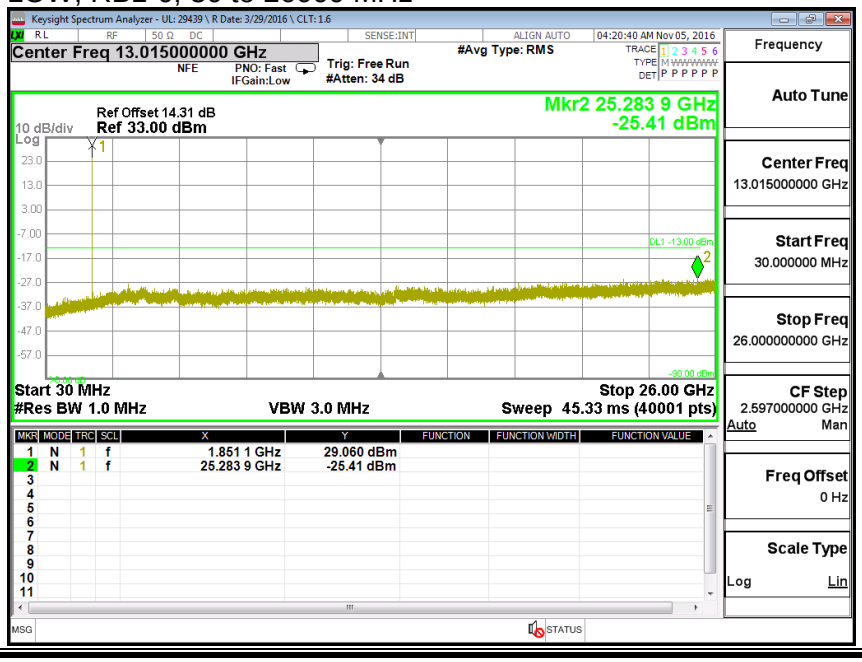


HIGH, RB1-0, 30 to 26000 MHz

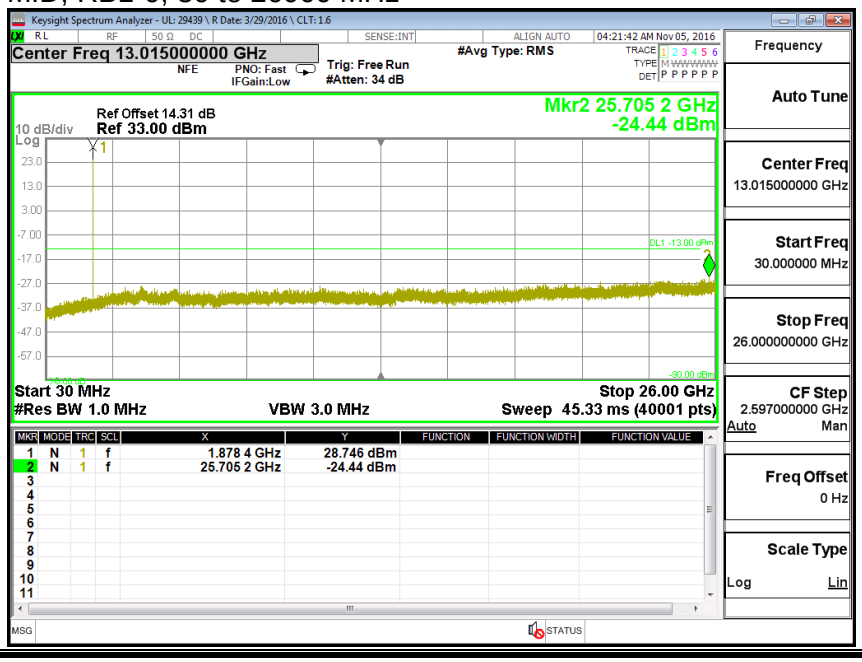


LTE BAND 2 16QAM, (5 MHz)

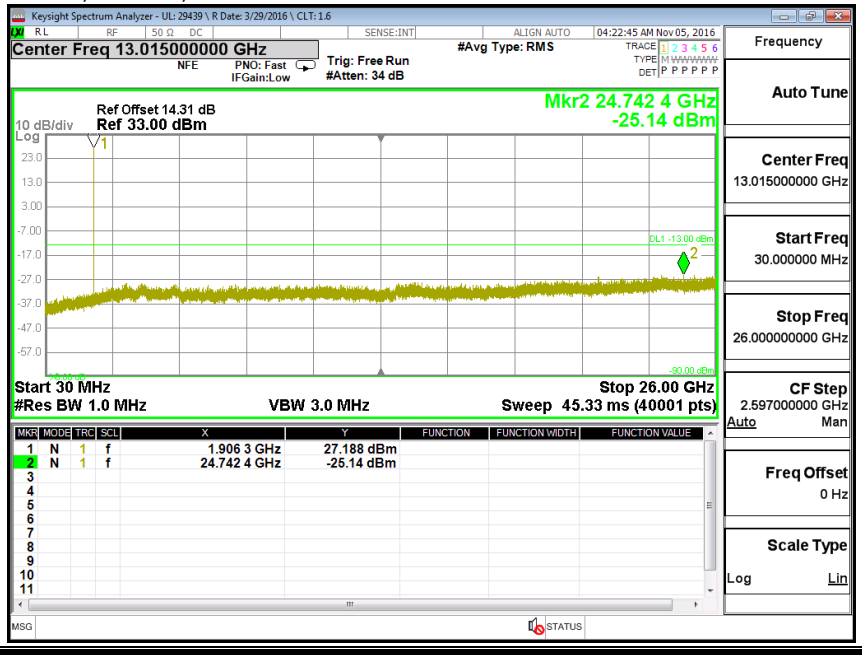
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

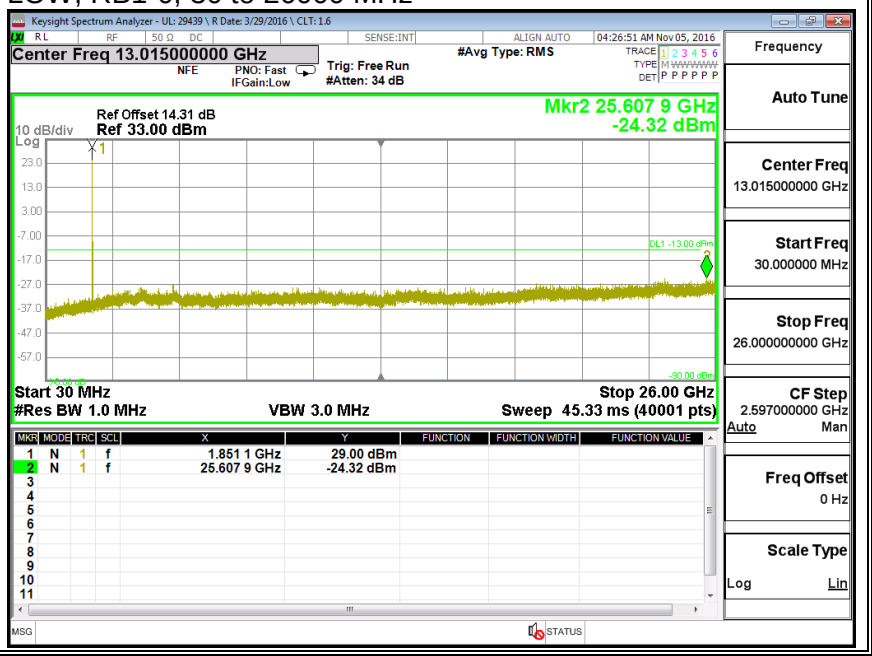


HIGH, RB1-0, 30 to 26000 MHz

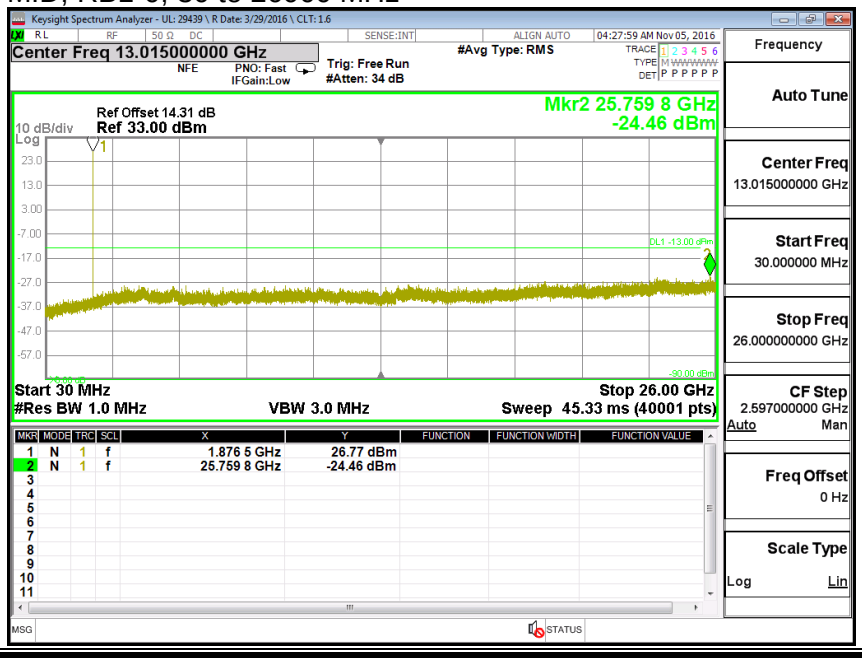


LTE BAND 2 QPSK, (10 MHz)

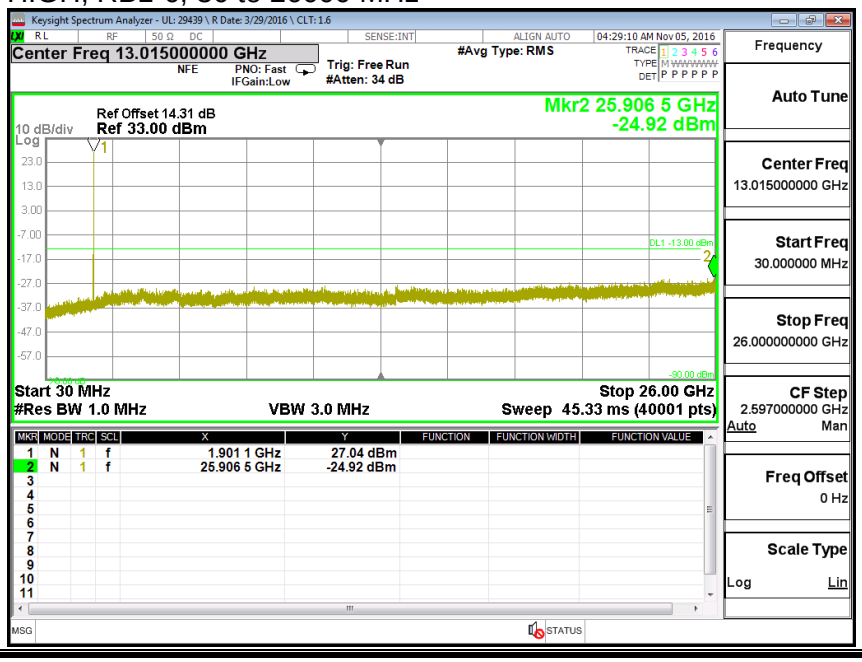
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

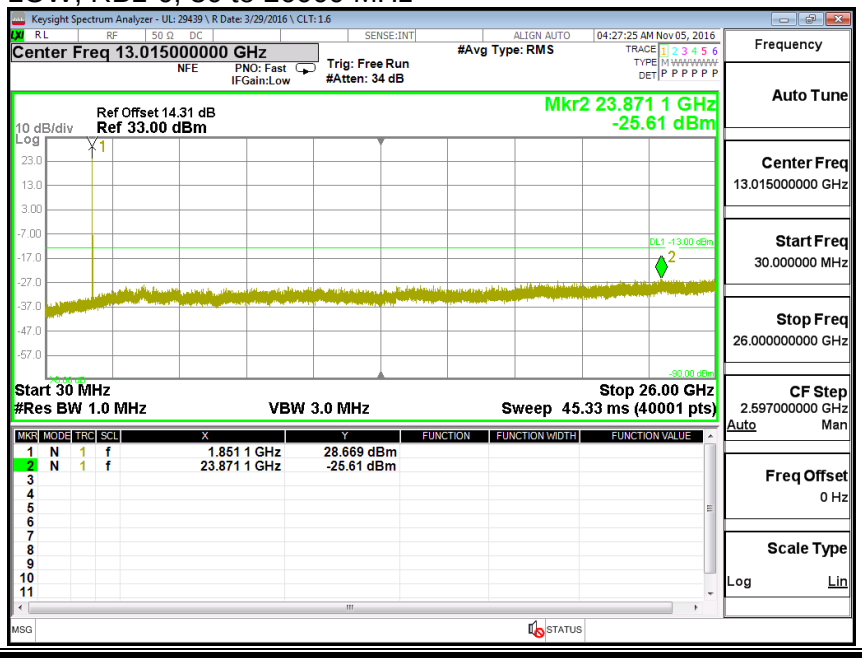


HIGH, RB1-0, 30 to 26000 MHz

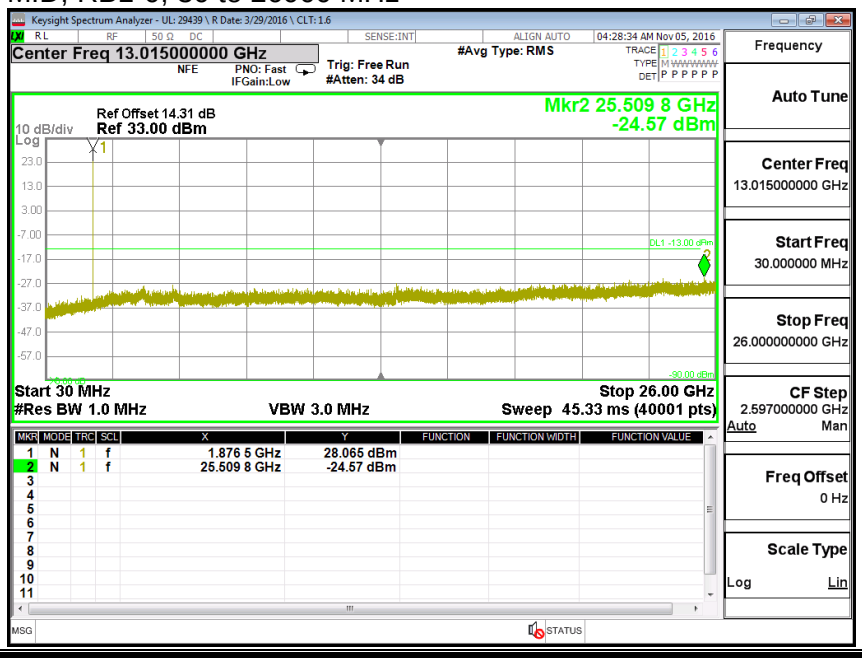


LTE BAND 2 16QAM, (10 MHz)

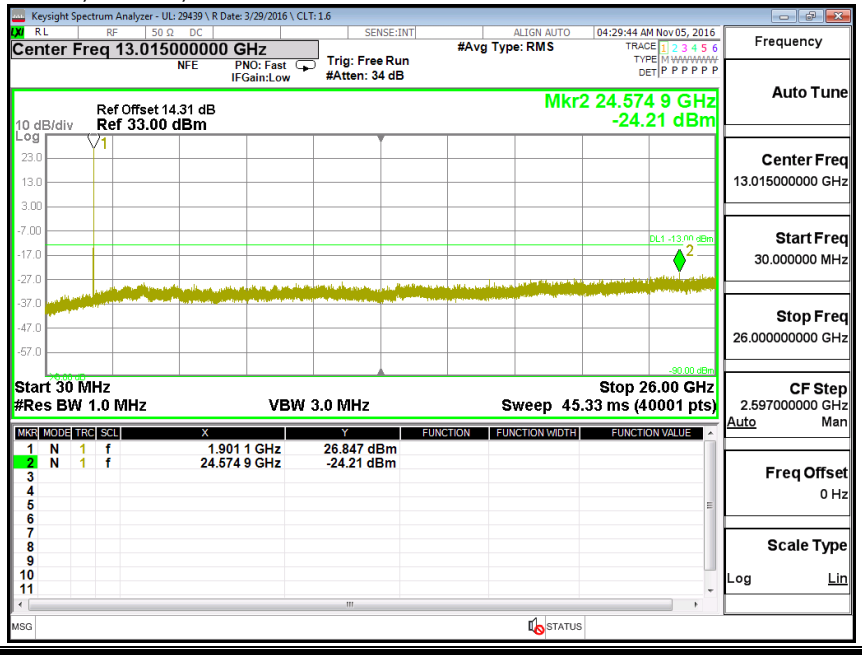
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

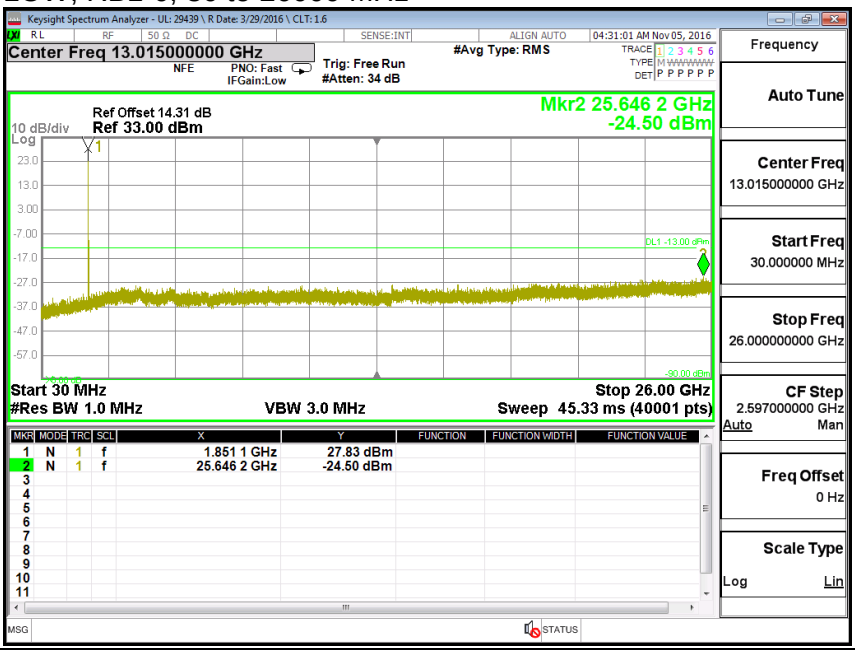


HIGH, RB1-0, 30 to 26000 MHz

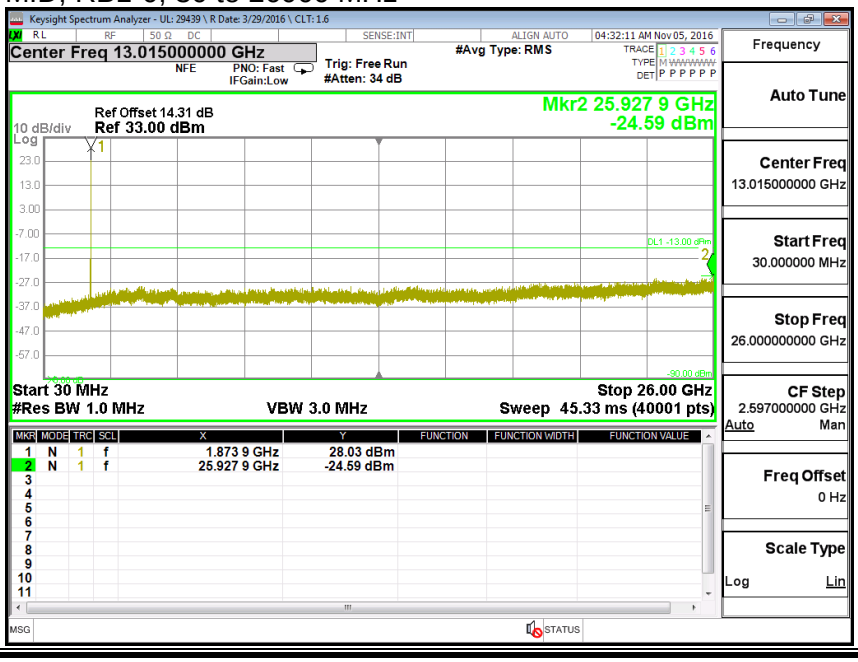


LTE BAND 2 QPSK, (15 MHz)

LOW, RB1-0, 30 to 26000 MHz



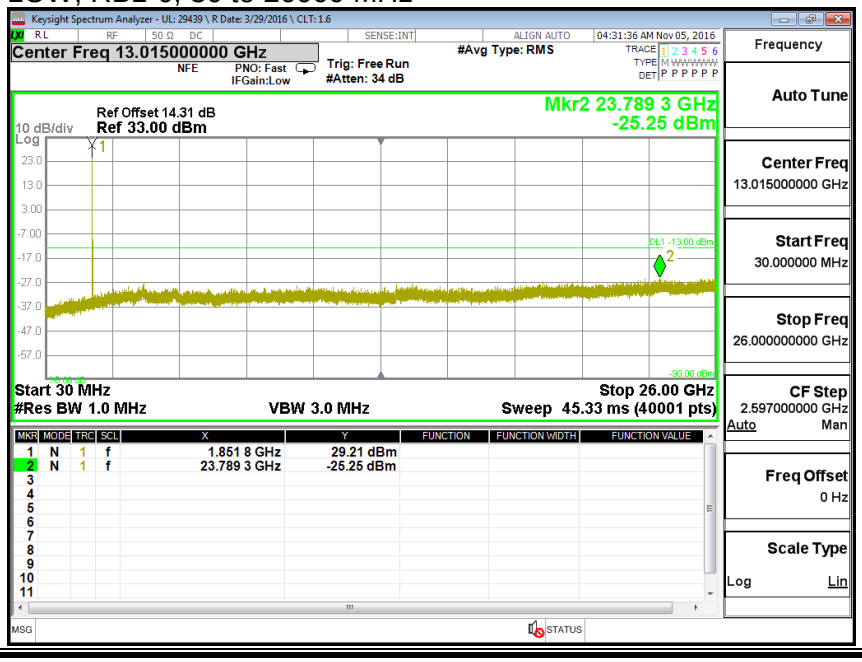
MID, RB1-0, 30 to 26000 MHz



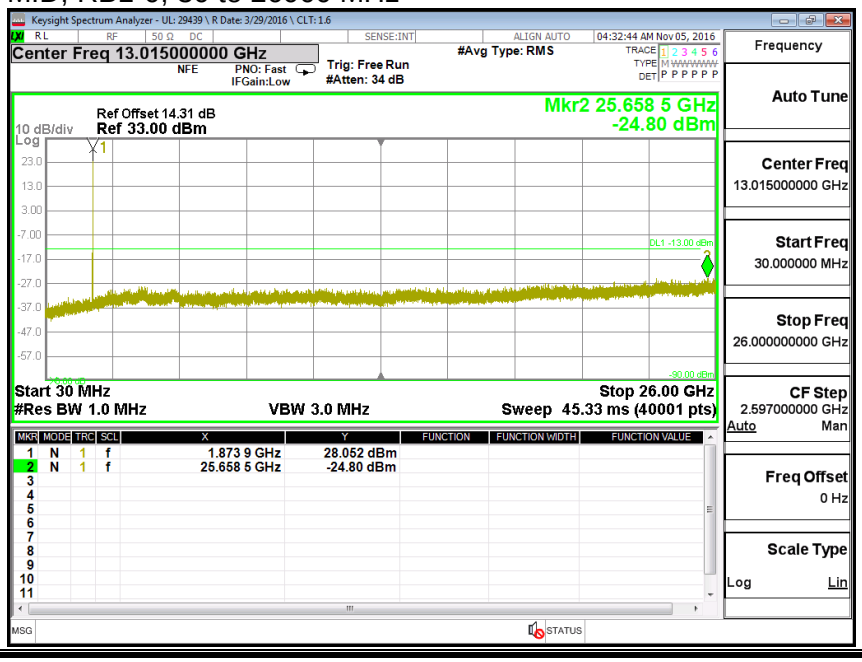
HIGH, RB1-0, 30 to 26000 MHz

LTE BAND 2 16QAM, (15 MHz)

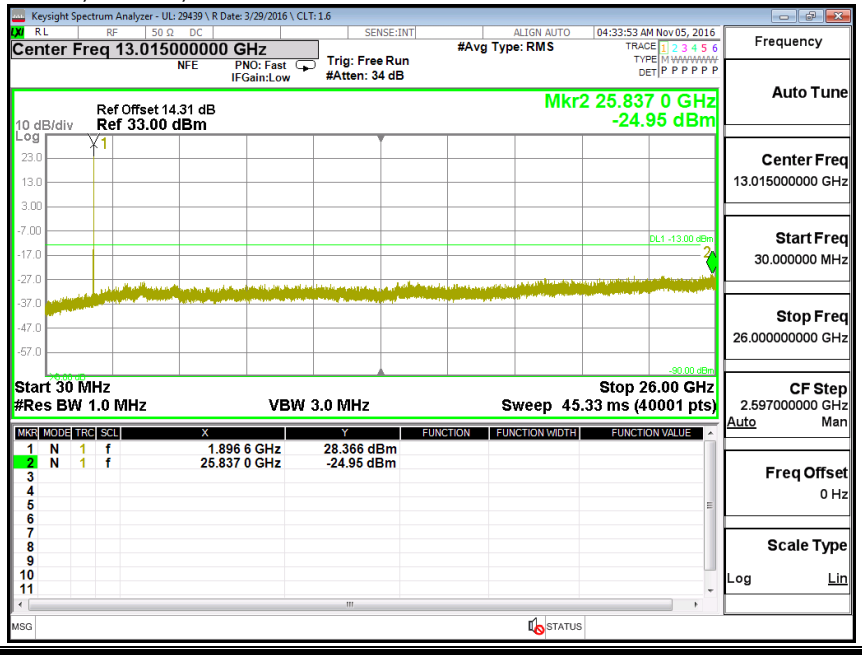
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

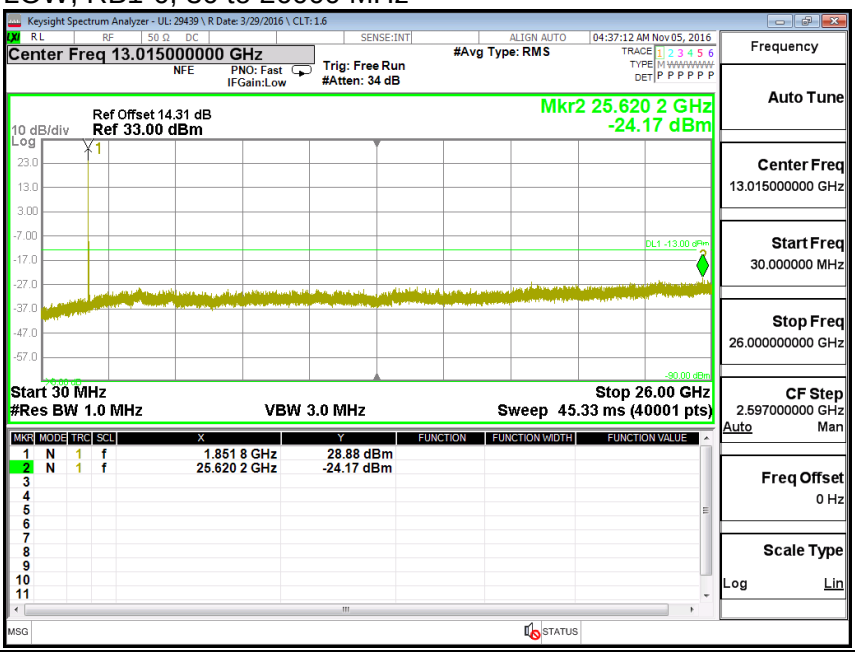


HIGH, RB1-0, 30 to 26000 MHz

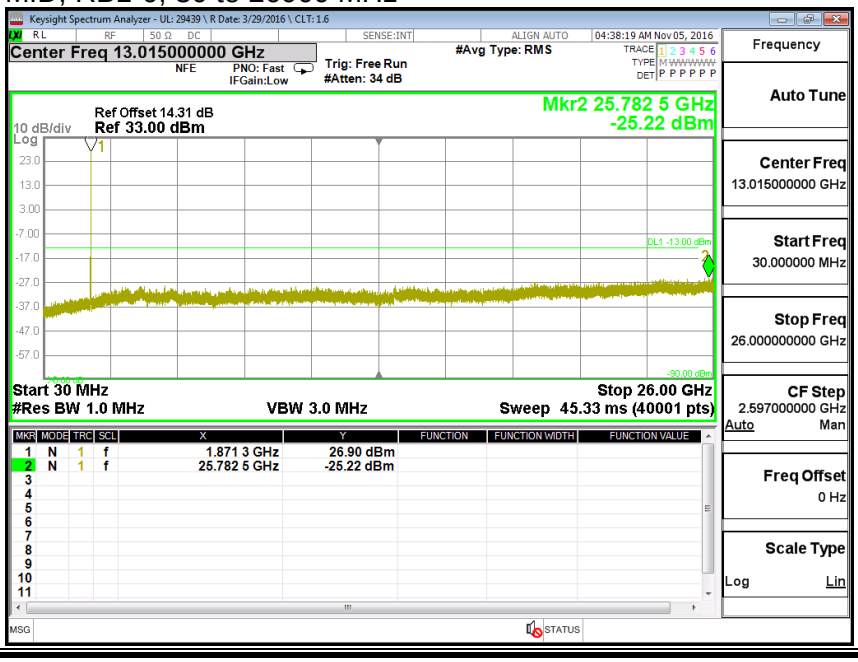


LTE BAND 2 QPSK, (20 MHz)

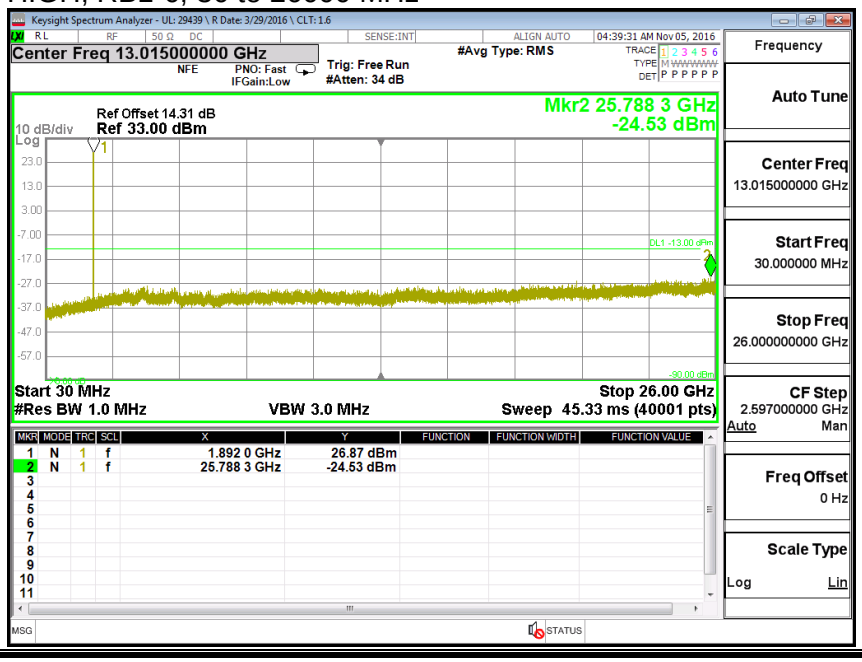
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

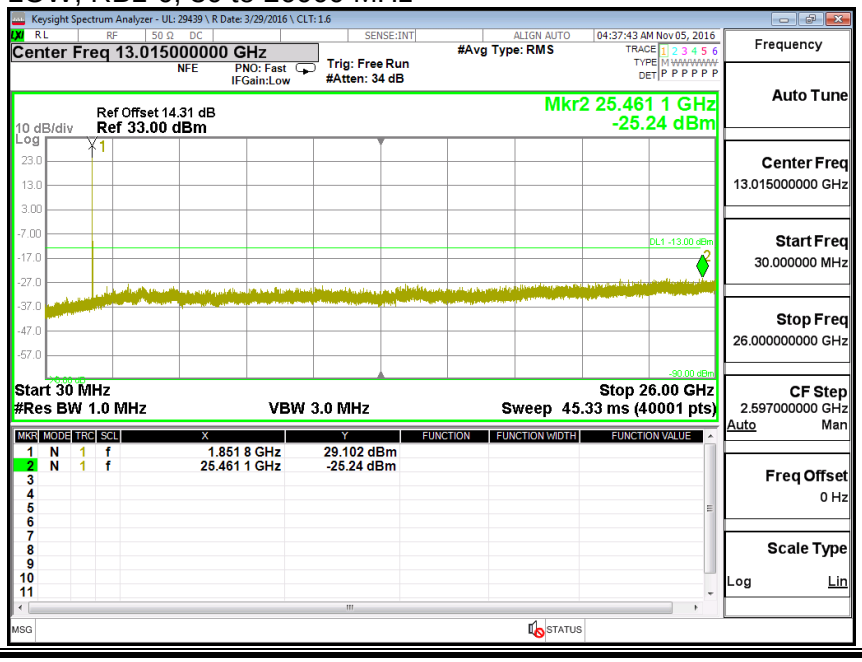


HIGH, RB1-0, 30 to 26000 MHz

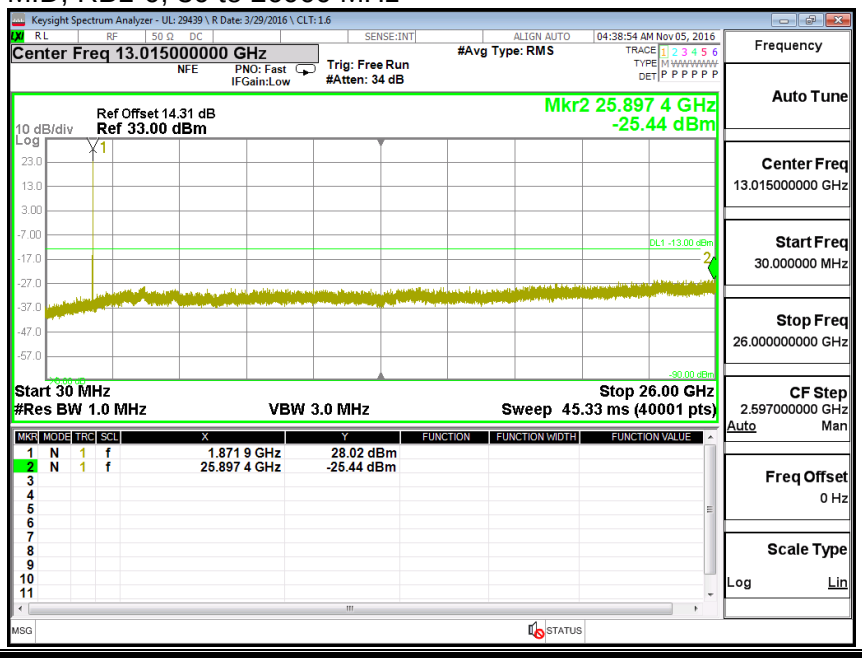


LTE BAND 2 16QAM, (20 MHz)

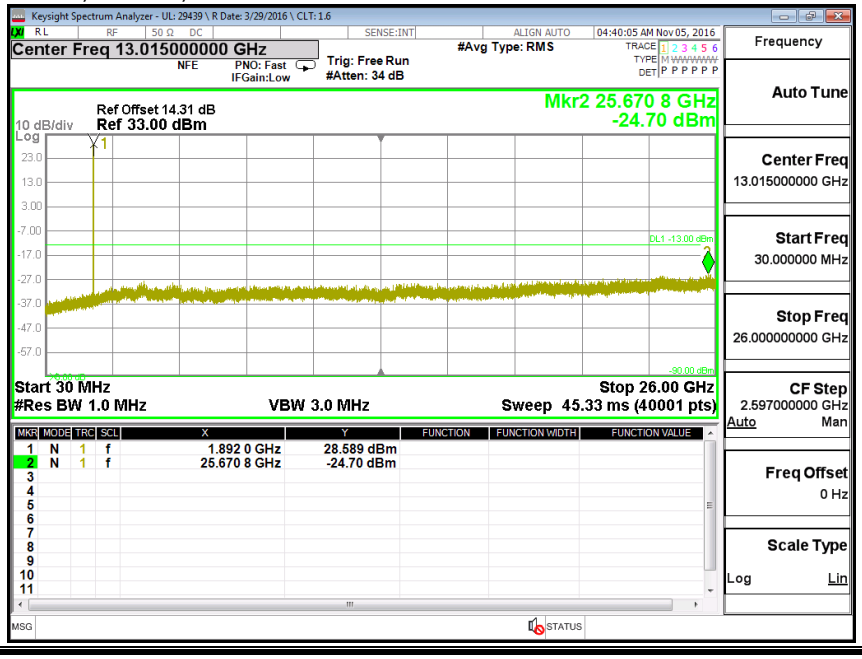
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

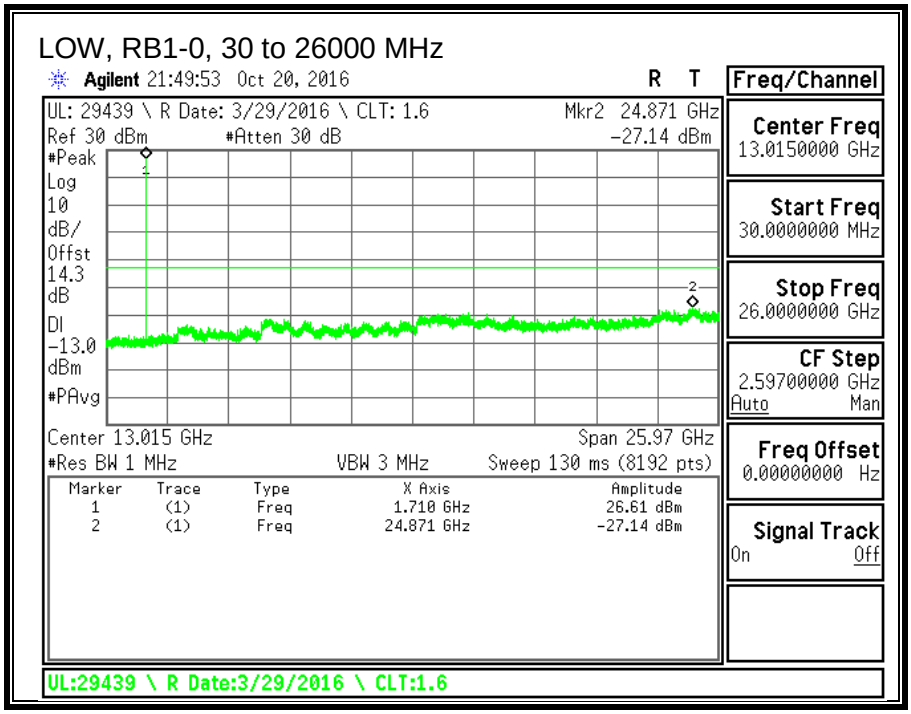


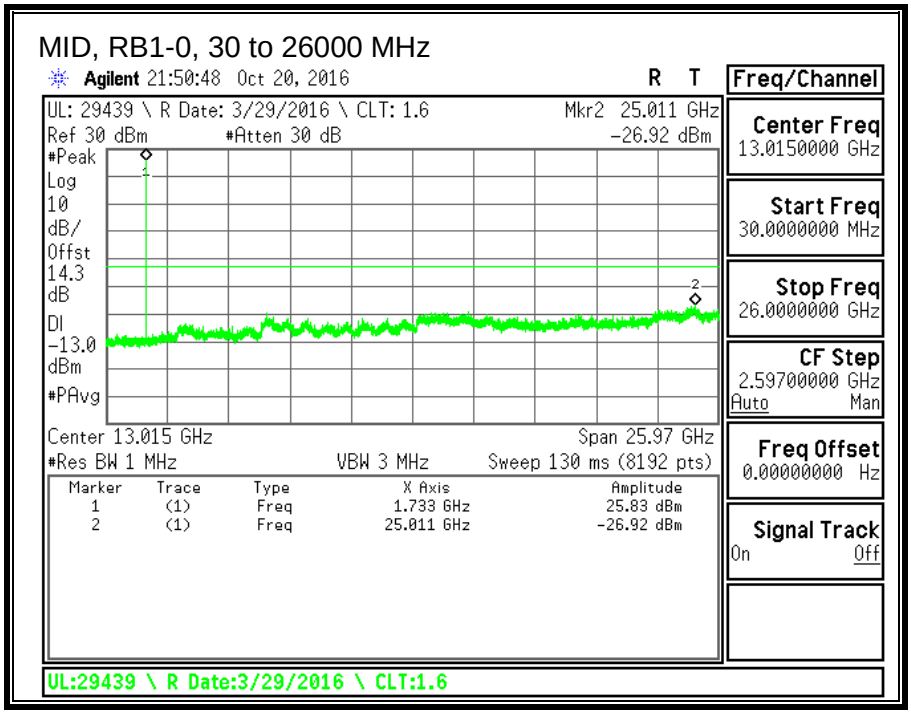
HIGH, RB1-0, 30 to 26000 MHz

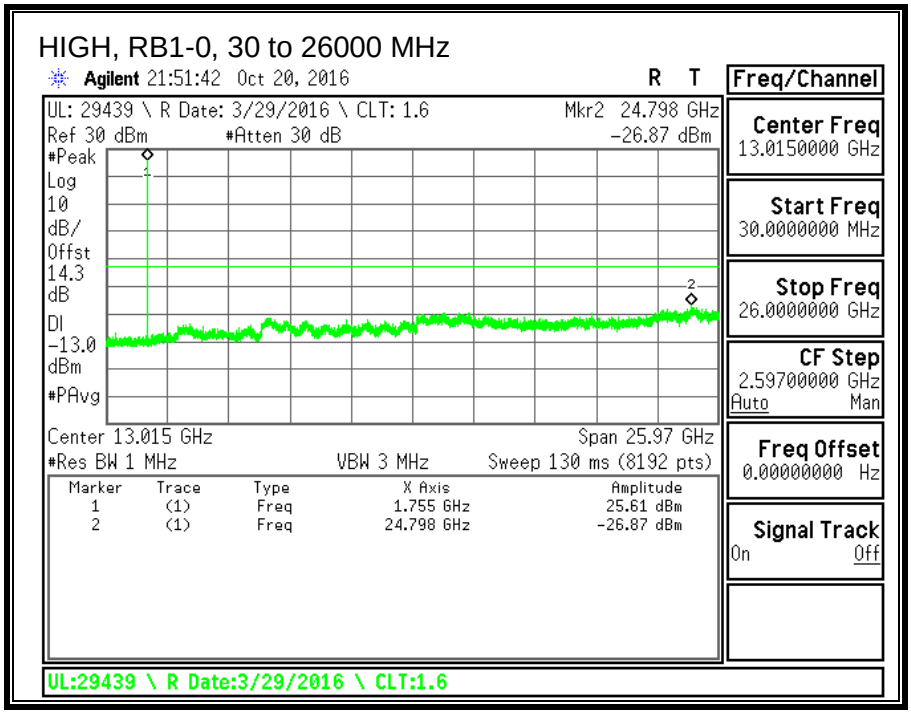


8.3.2. LTE BAND 4

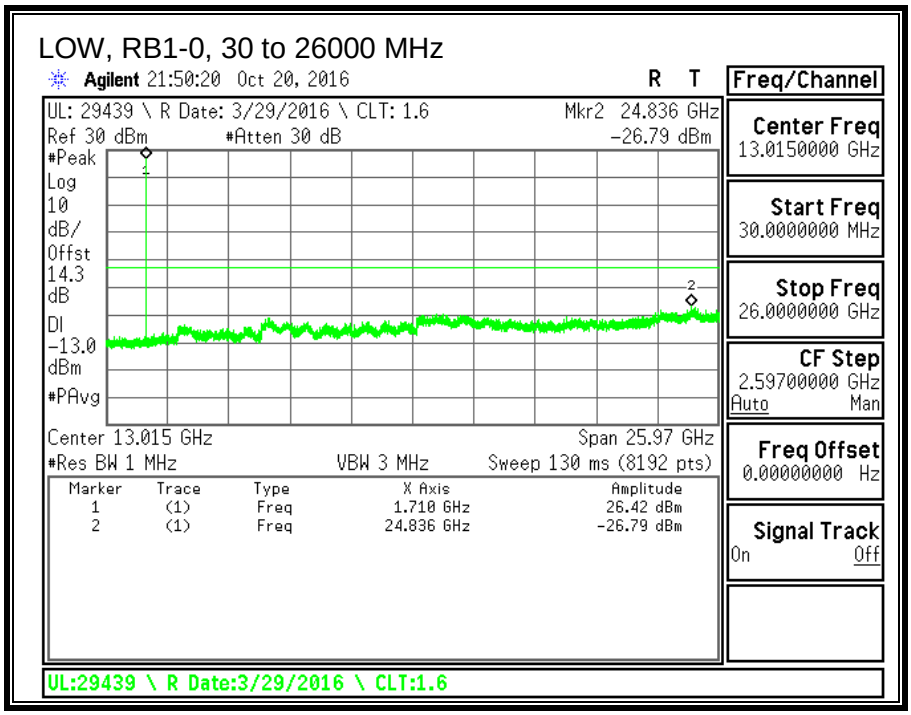
LTE BAND 4 QPSK, (1.4 MHz)



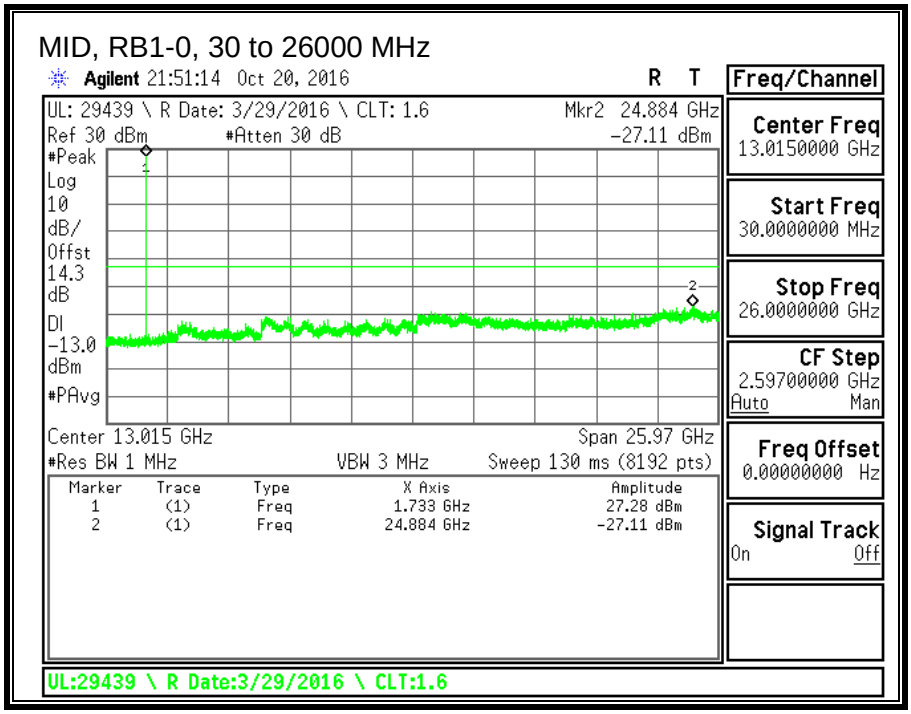




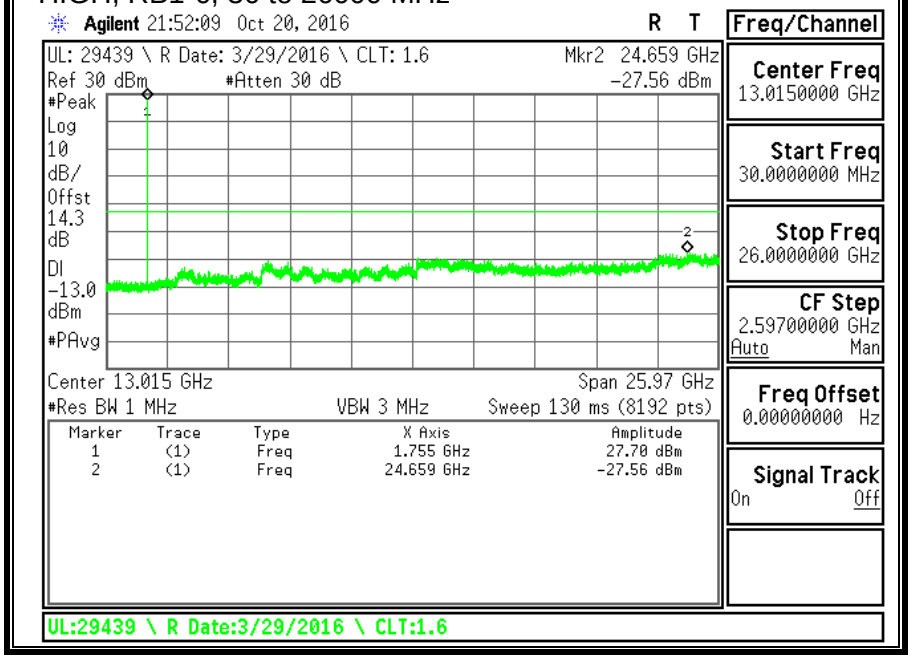
LTE BAND 4 16QAM, (1.4 MHz)



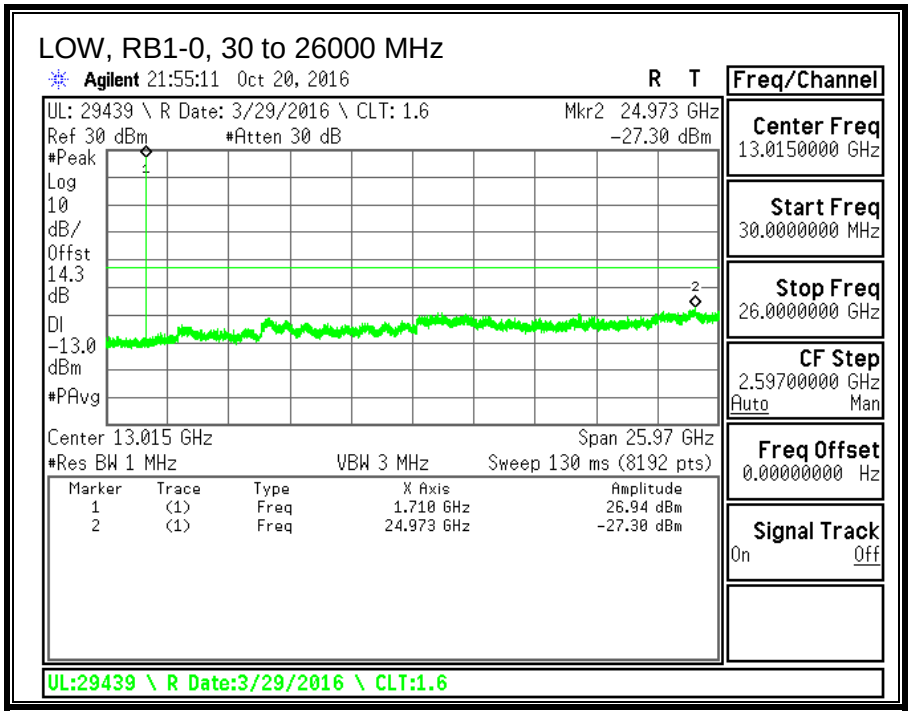
MID, RB1-0, 30 to 26000 MHz

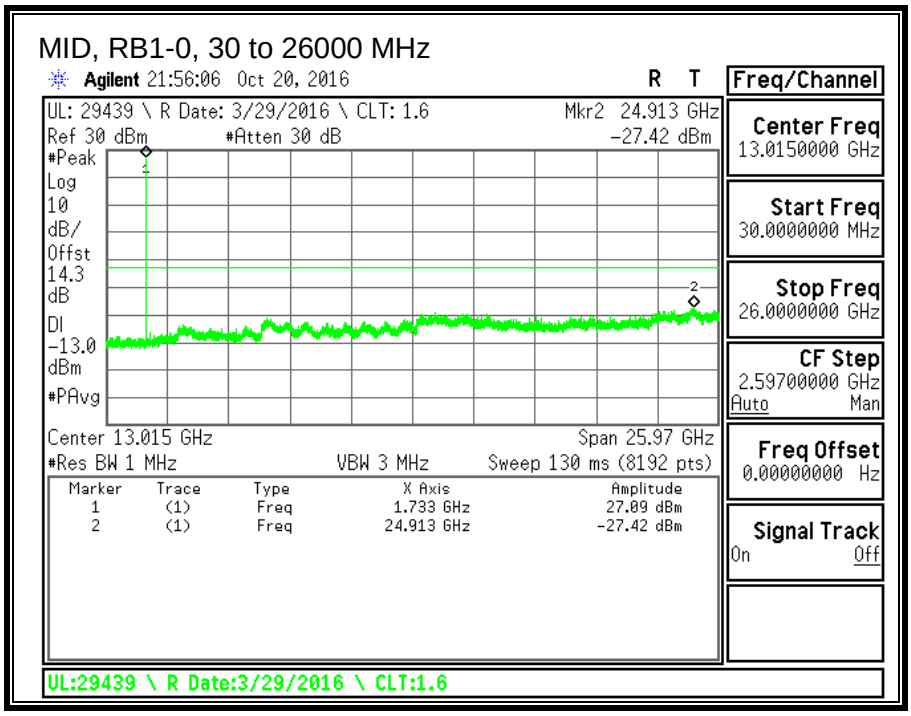


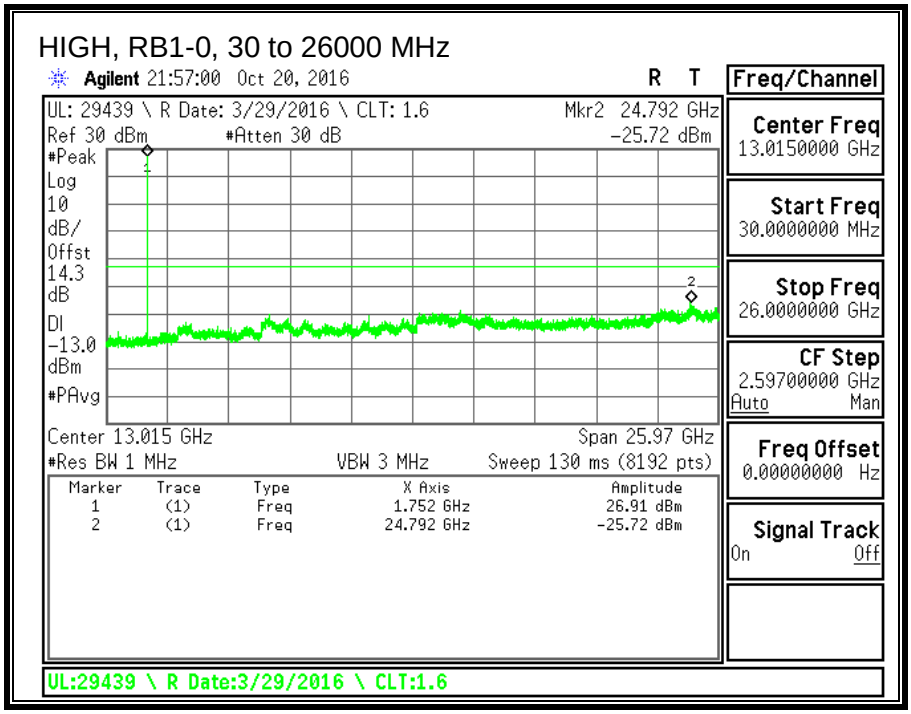
HIGH, RB1-0, 30 to 26000 MHz



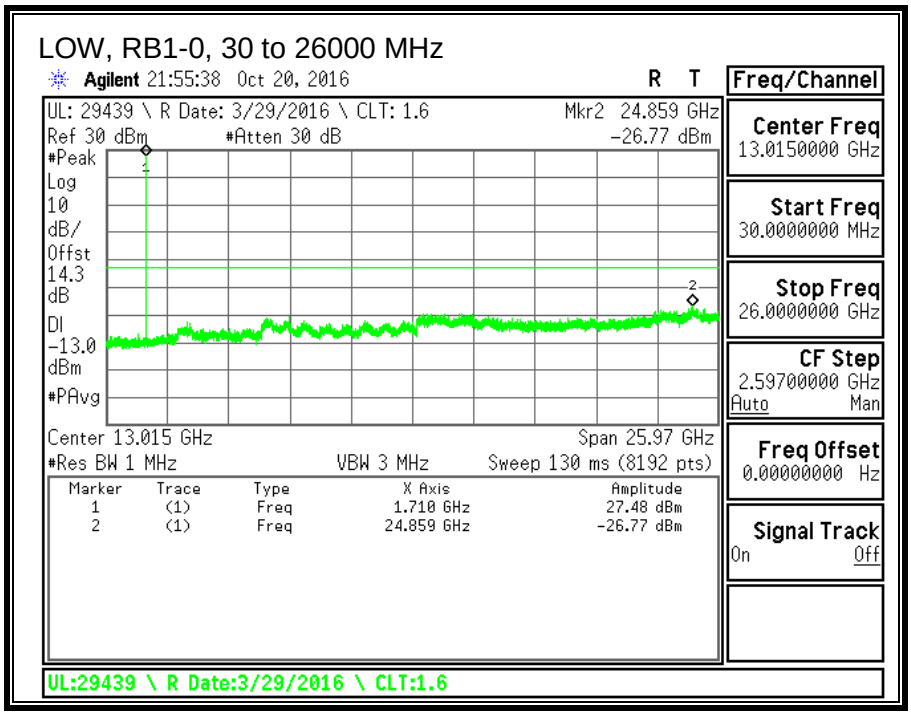
LTE BAND 4 QPSK, (3 MHz)



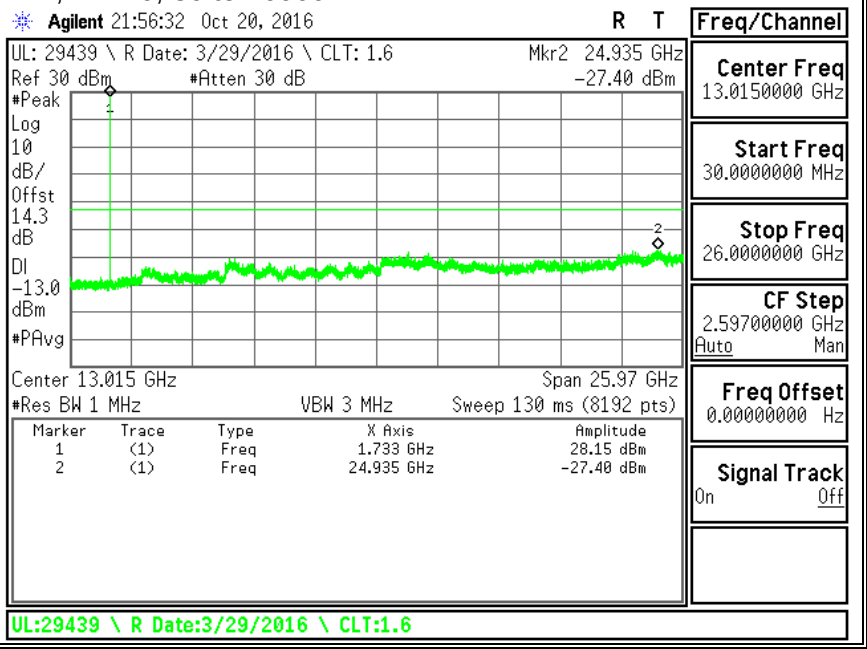




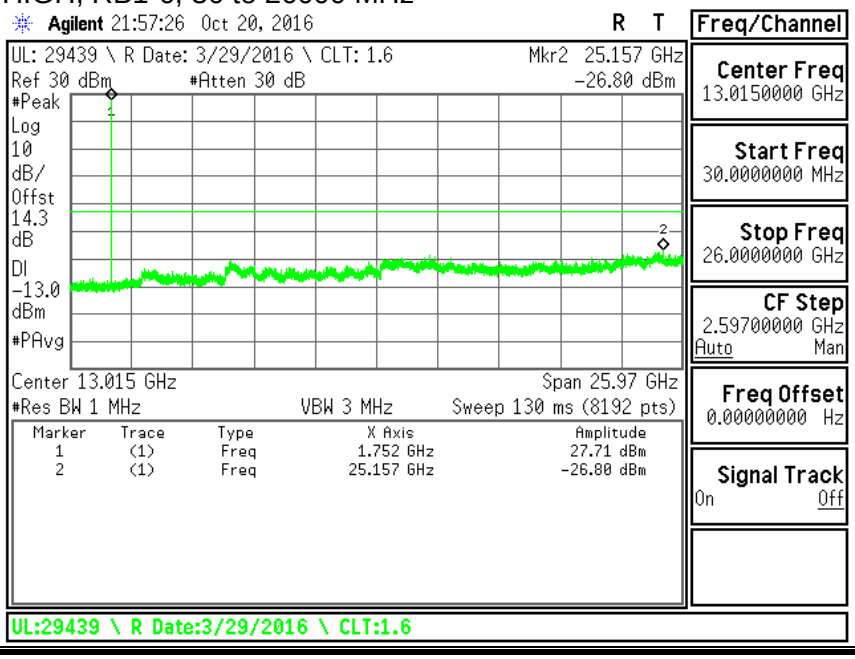
LTE BAND 4 16QAM, (3 MHz)



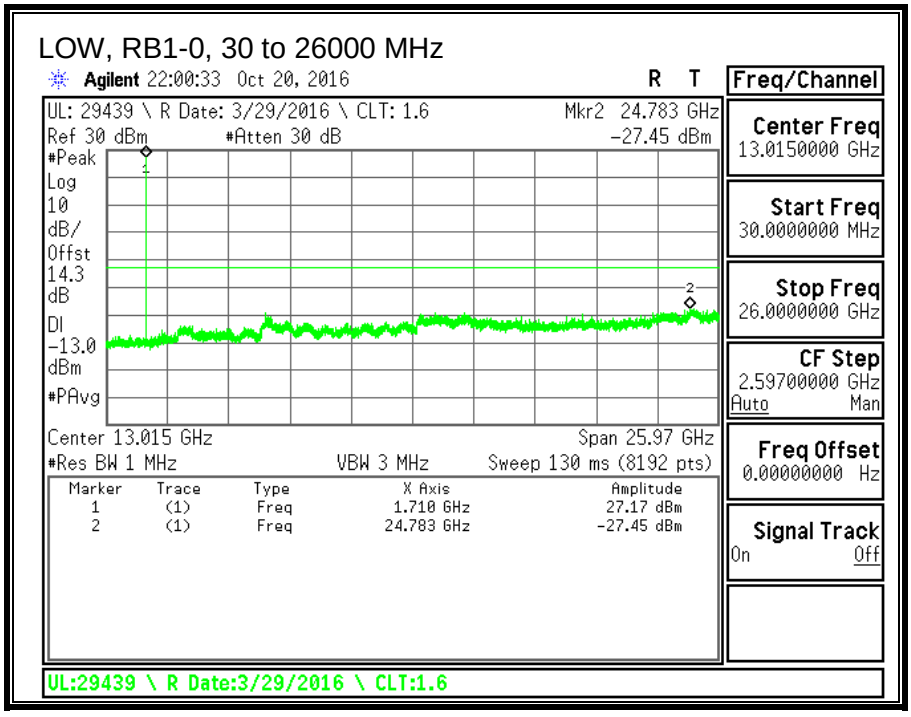
MID, RB1-0, 30 to 26000 MHz

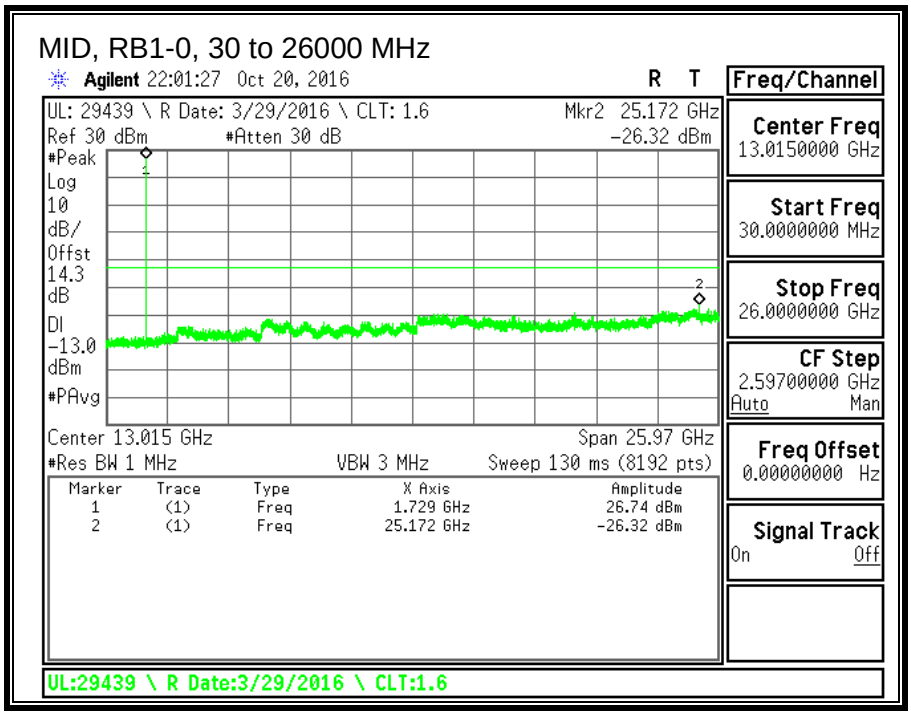


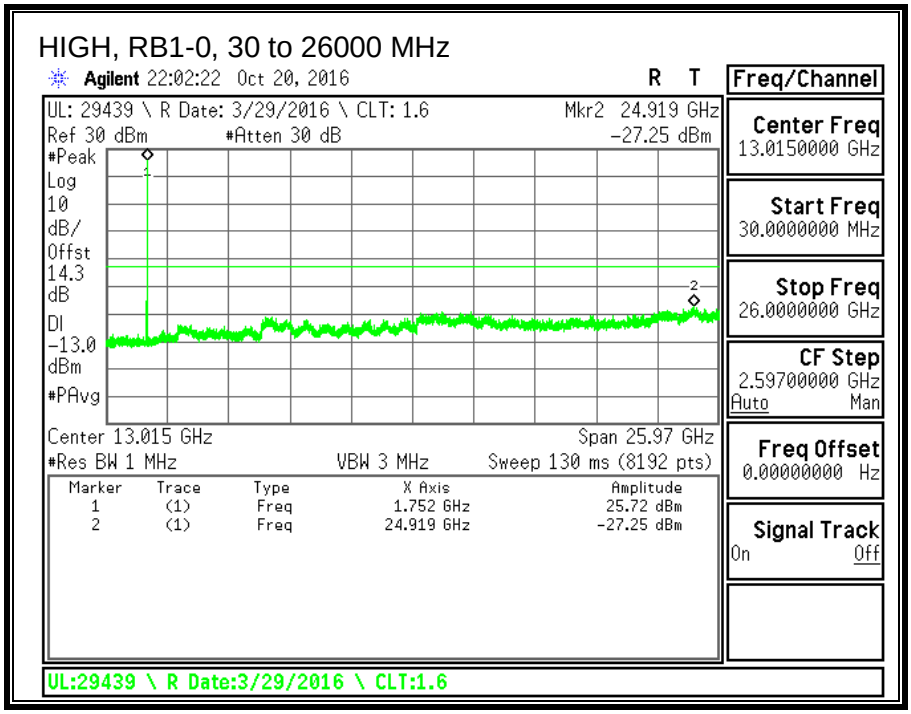
HIGH, RB1-0, 30 to 26000 MHz



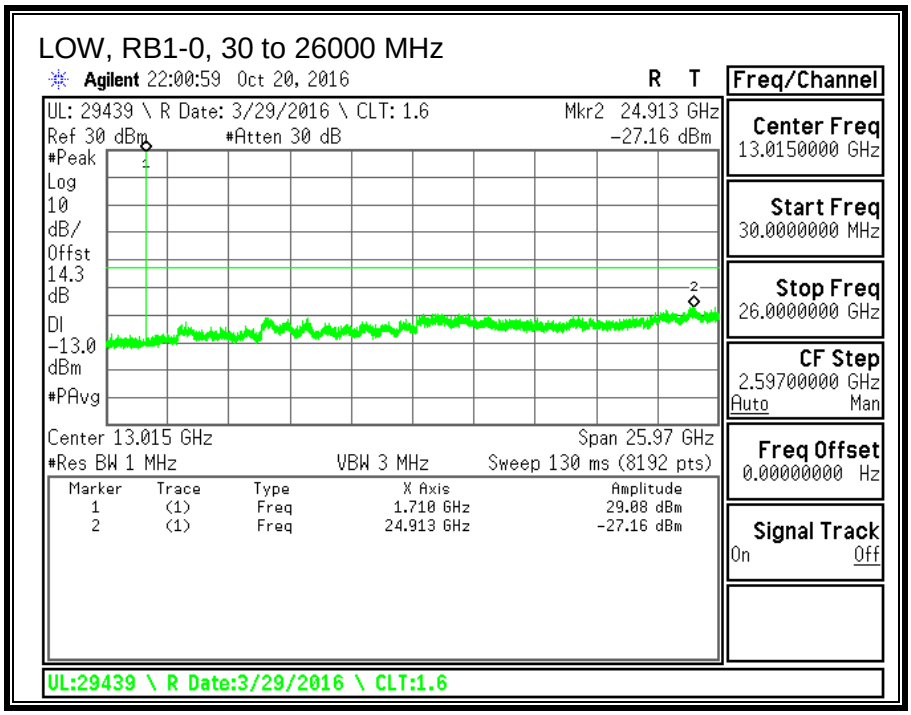
LTE BAND 4 QPSK, (5 MHz)



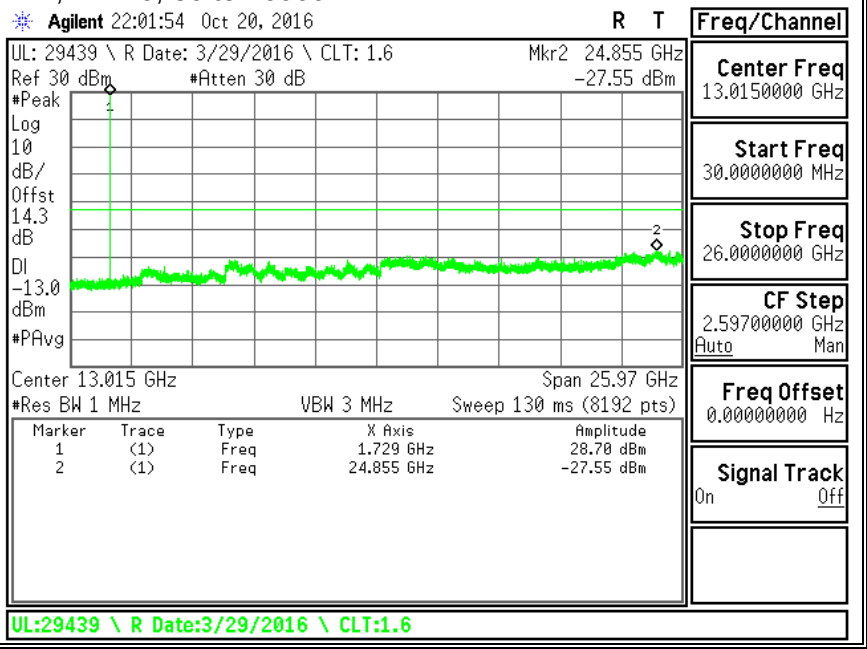




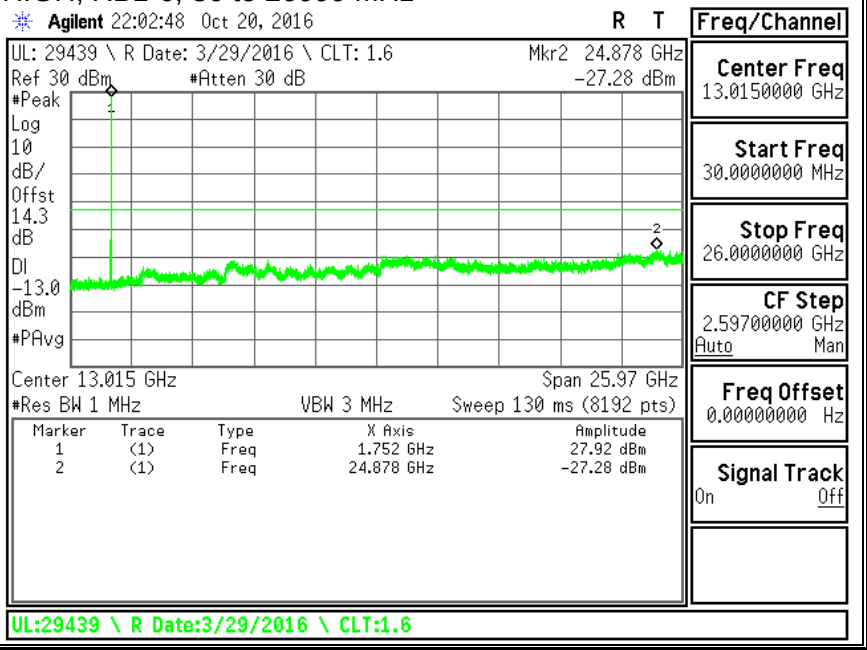
LTE BAND 4 16QAM, (5 MHz)



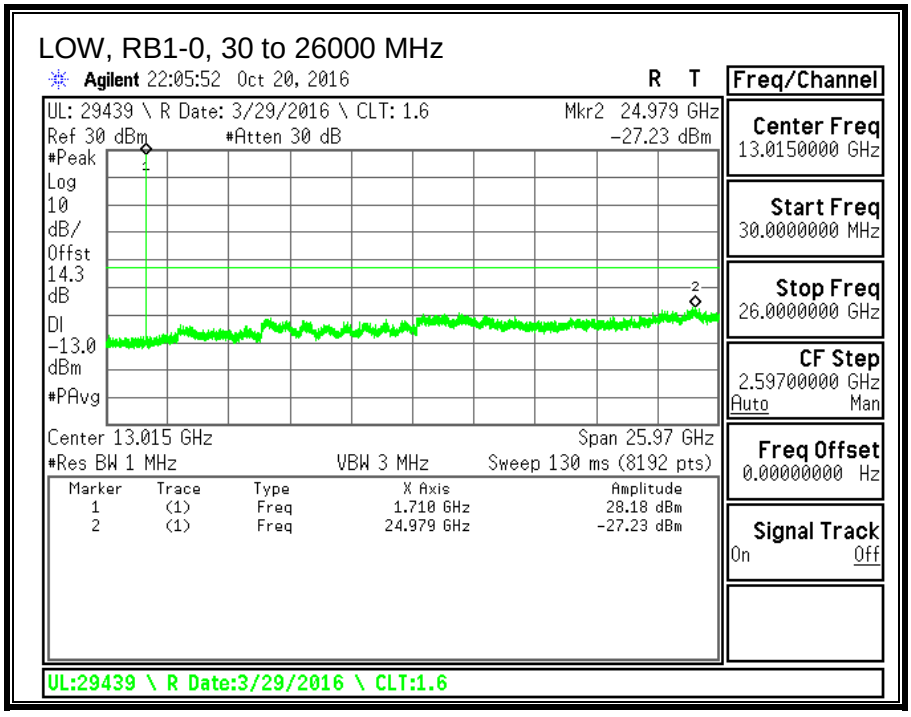
MID, RB1-0, 30 to 26000 MHz

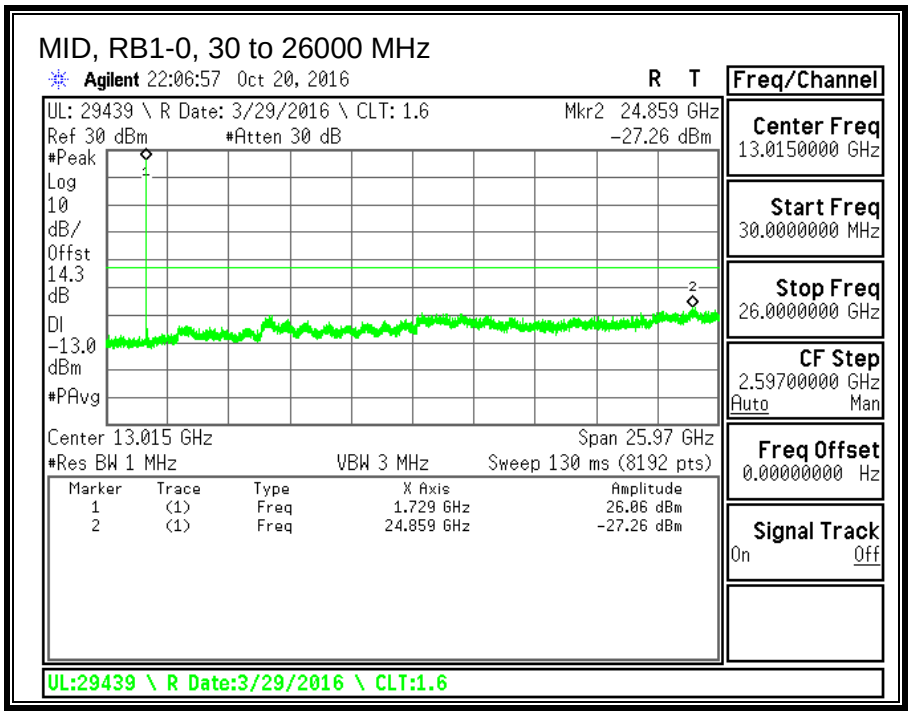


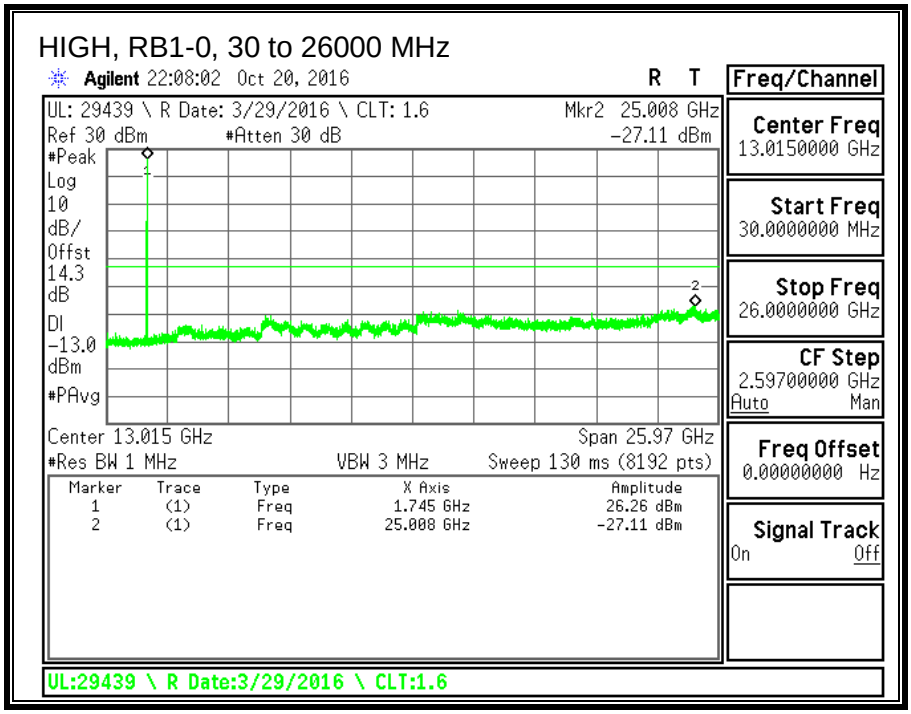
HIGH, RB1-0, 30 to 26000 MHz



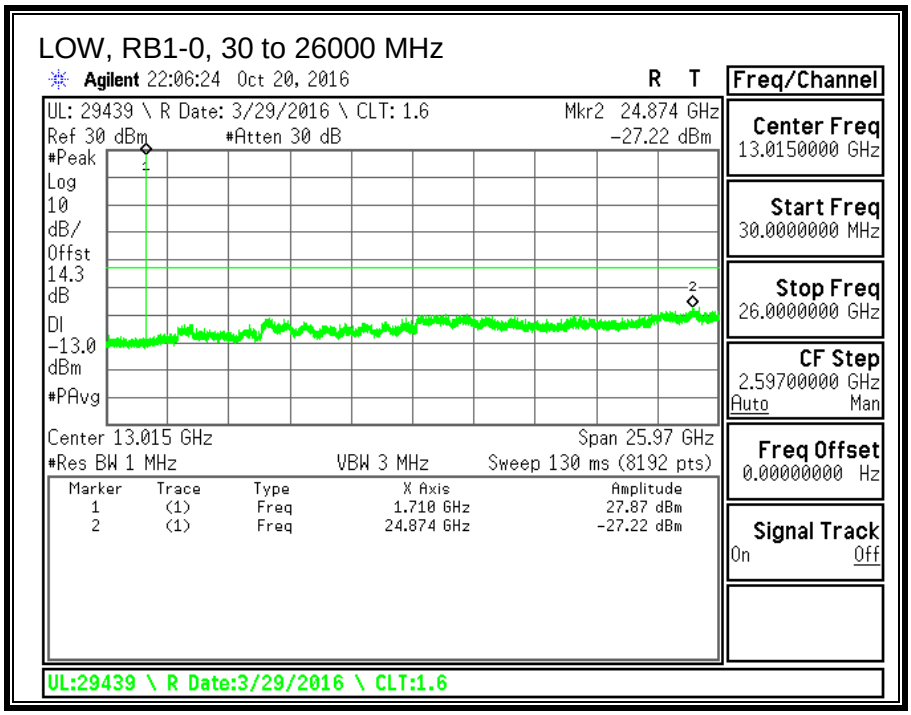
LTE BAND 4 QPSK, (10 MHz)



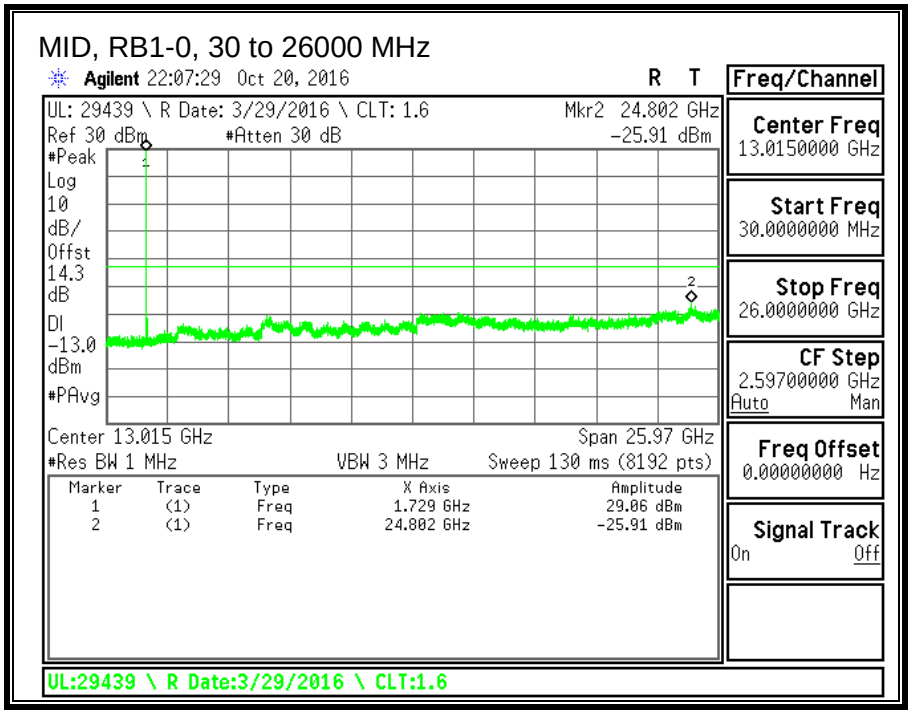




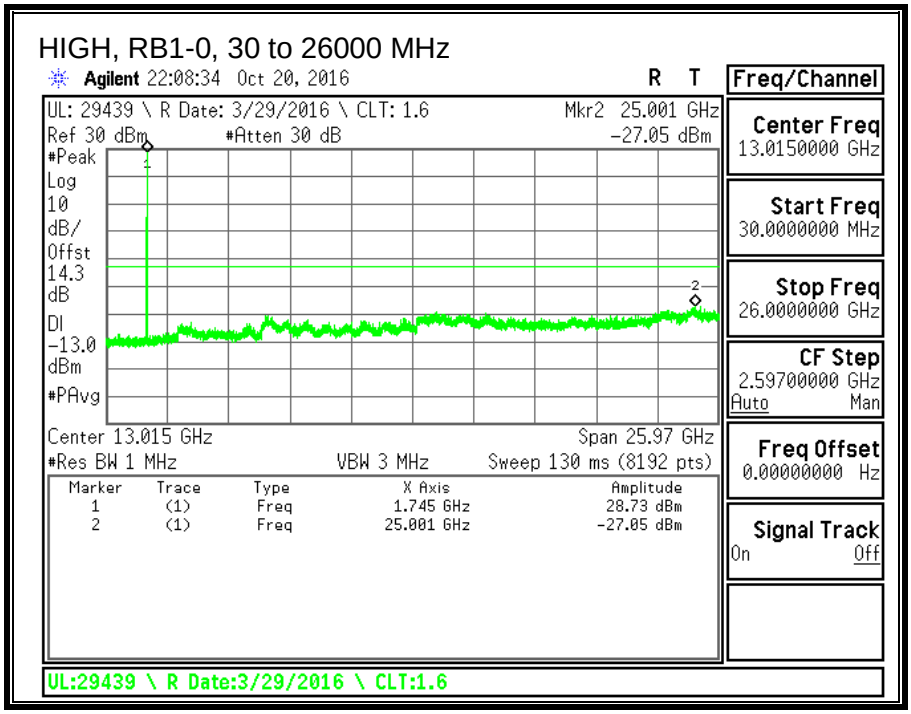
LTE BAND 4 16QAM, (10 MHz)



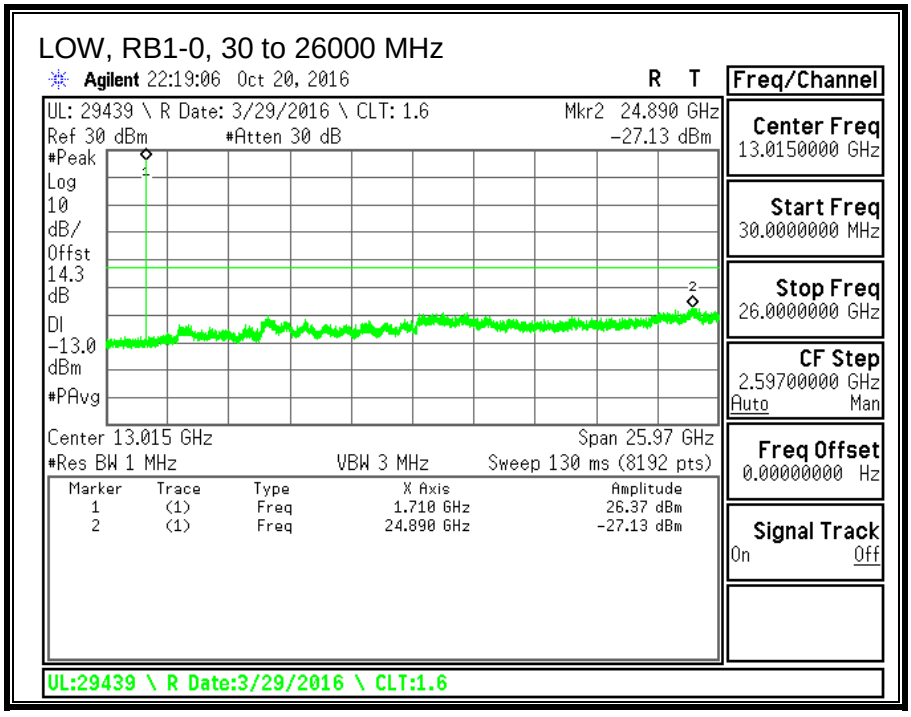
MID, RB1-0, 30 to 26000 MHz

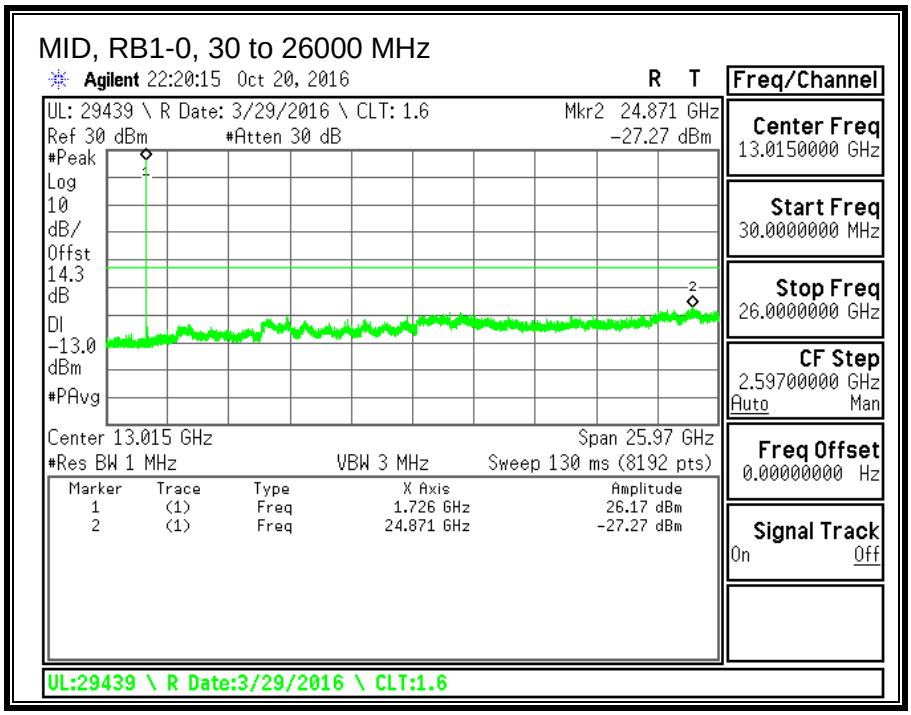


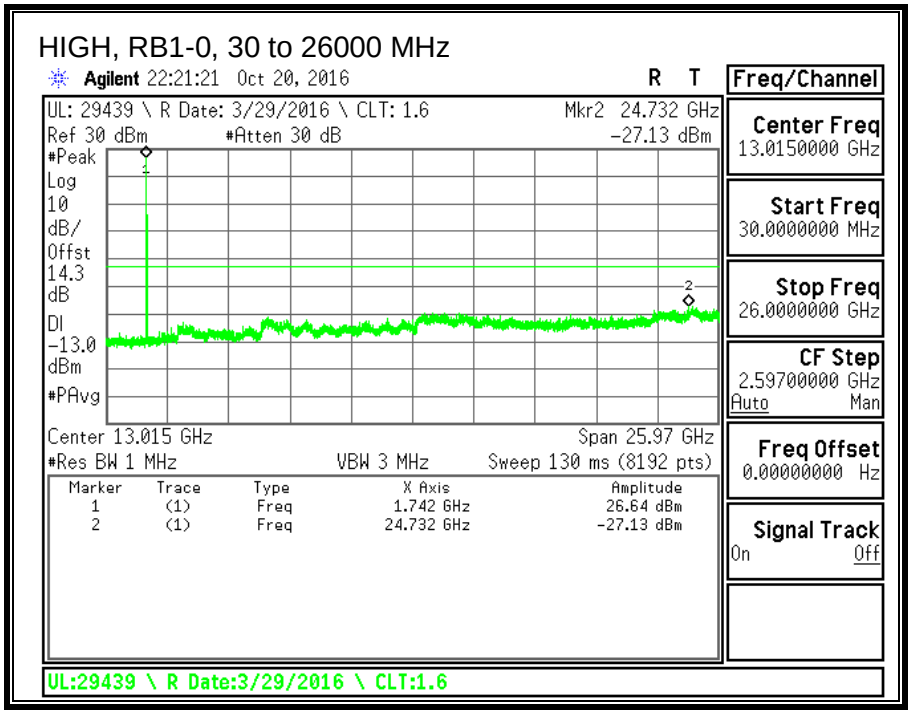
HIGH, RB1-0, 30 to 26000 MHz



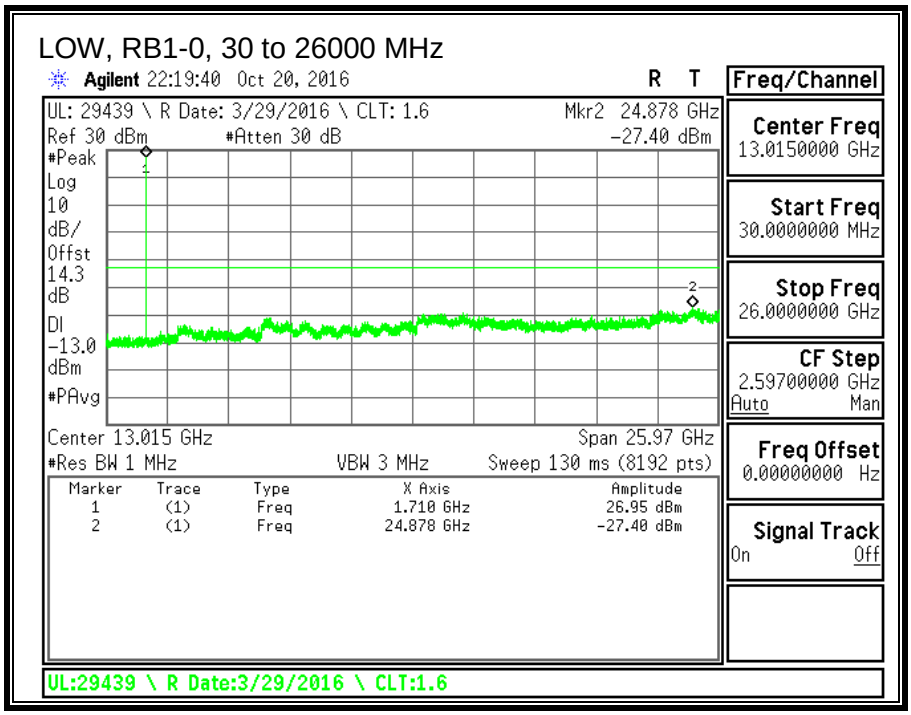
LTE BAND 4 QPSK, (15 MHz)



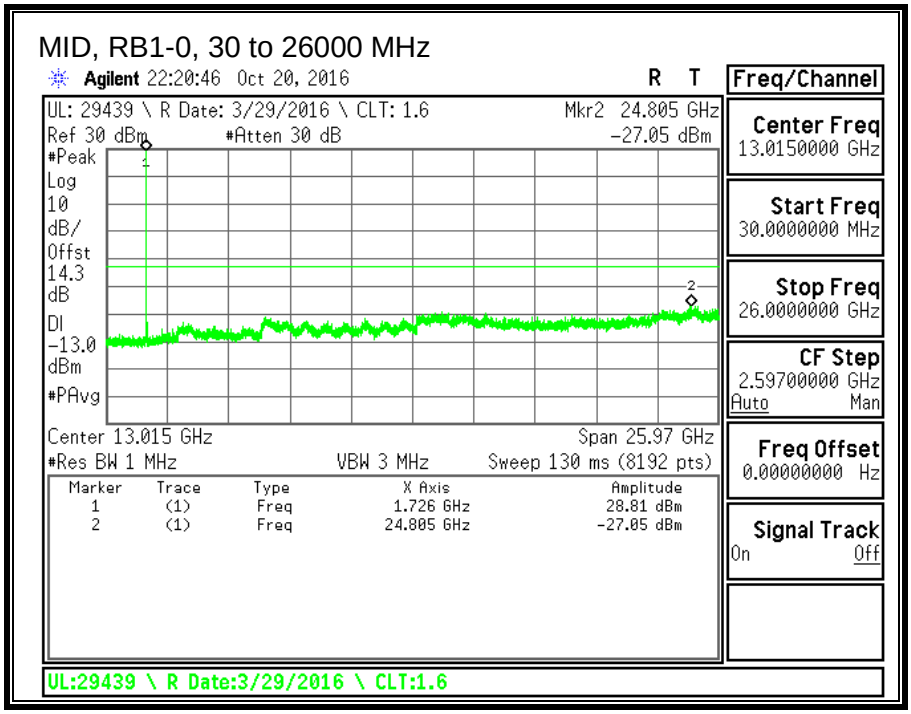




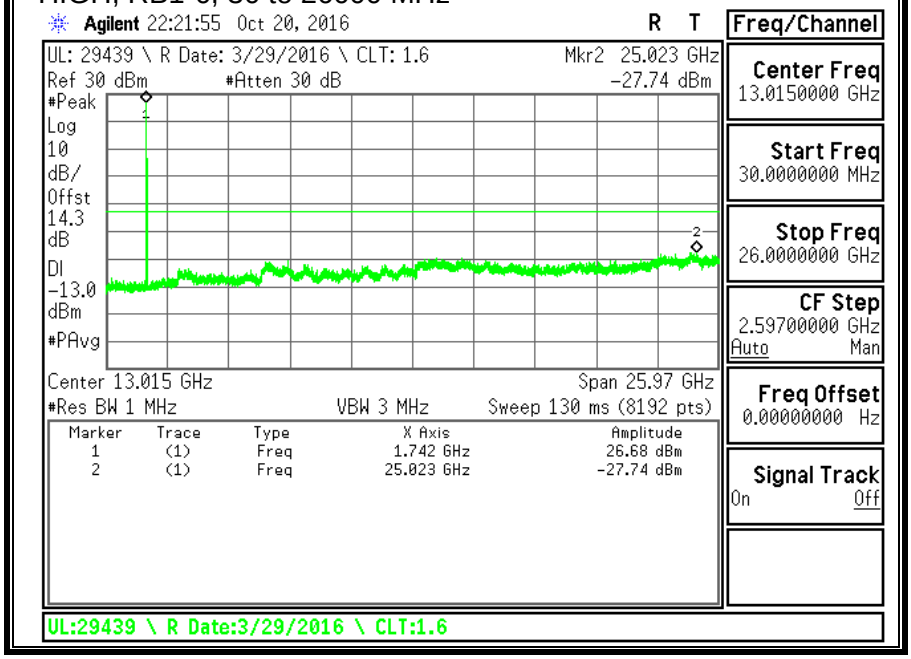
LTE BAND 4 16QAM, (15 MHz)



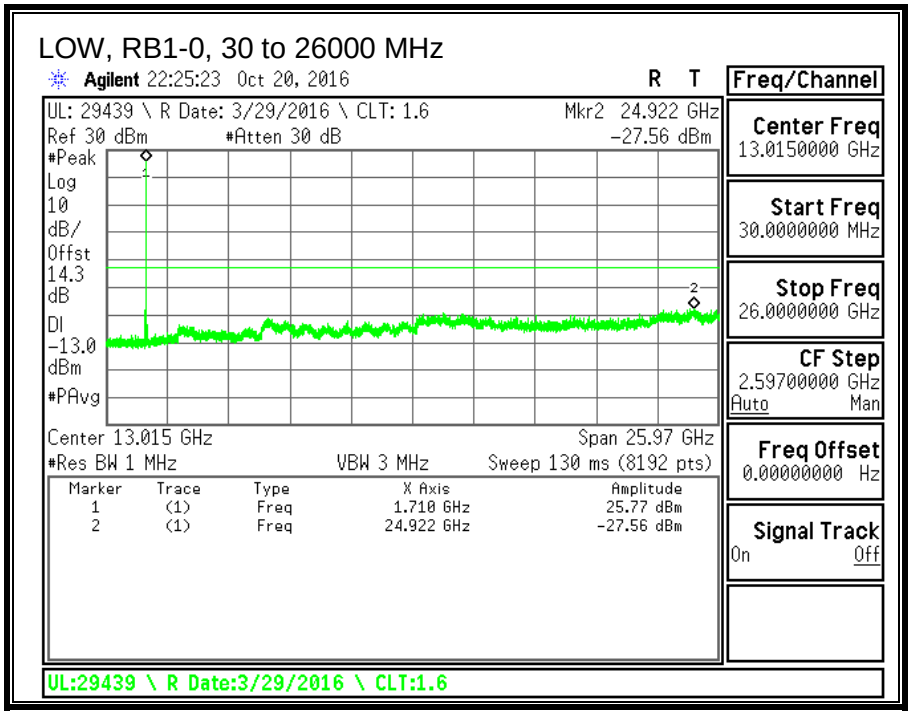
MID, RB1-0, 30 to 26000 MHz

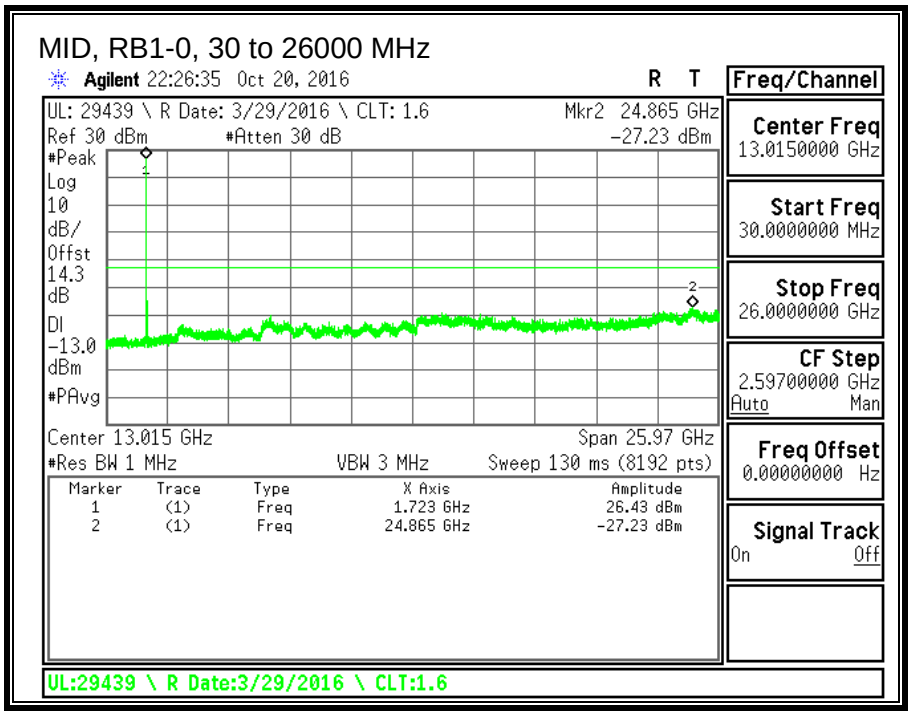


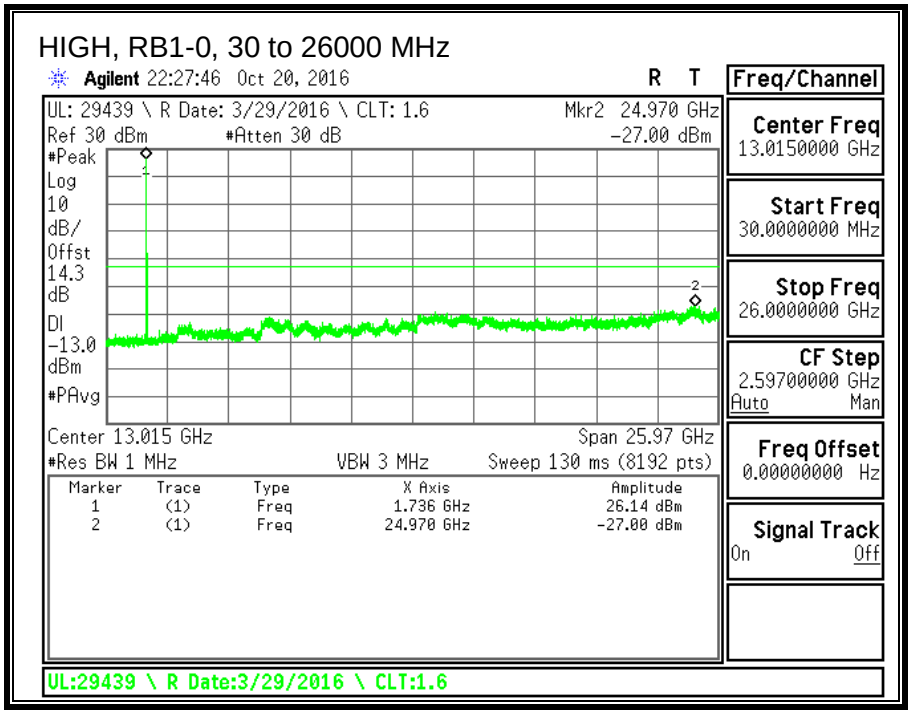
HIGH, RB1-0, 30 to 26000 MHz



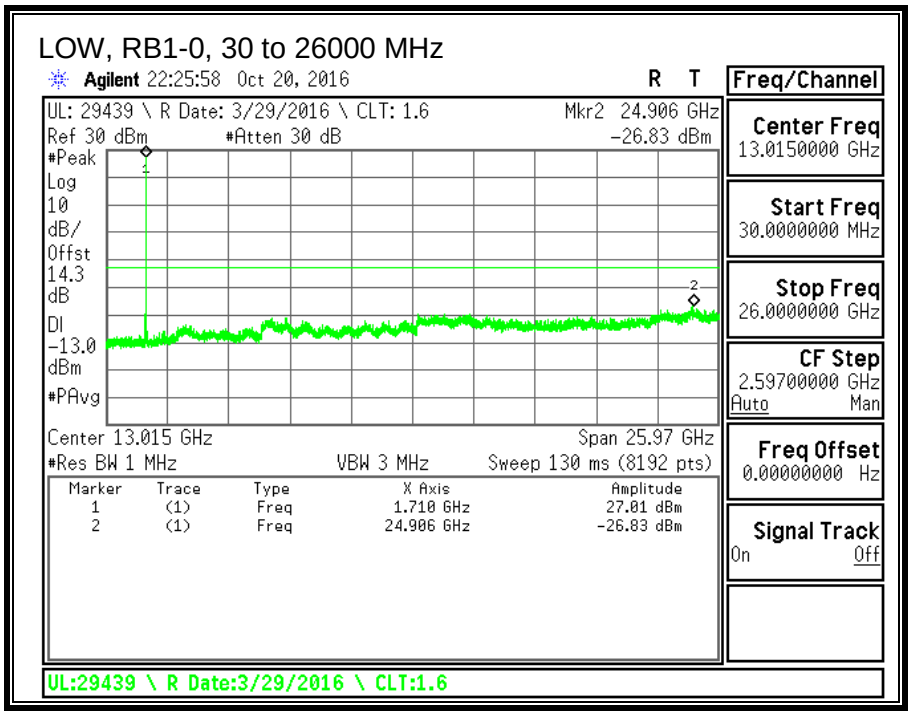
LTE BAND 4 QPSK, (20 MHz)



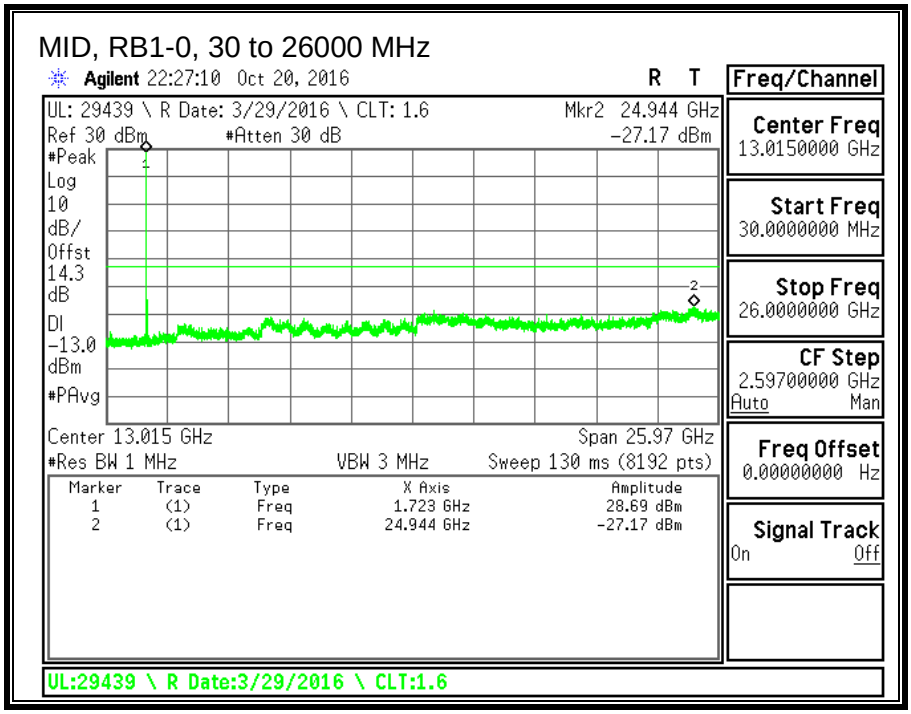




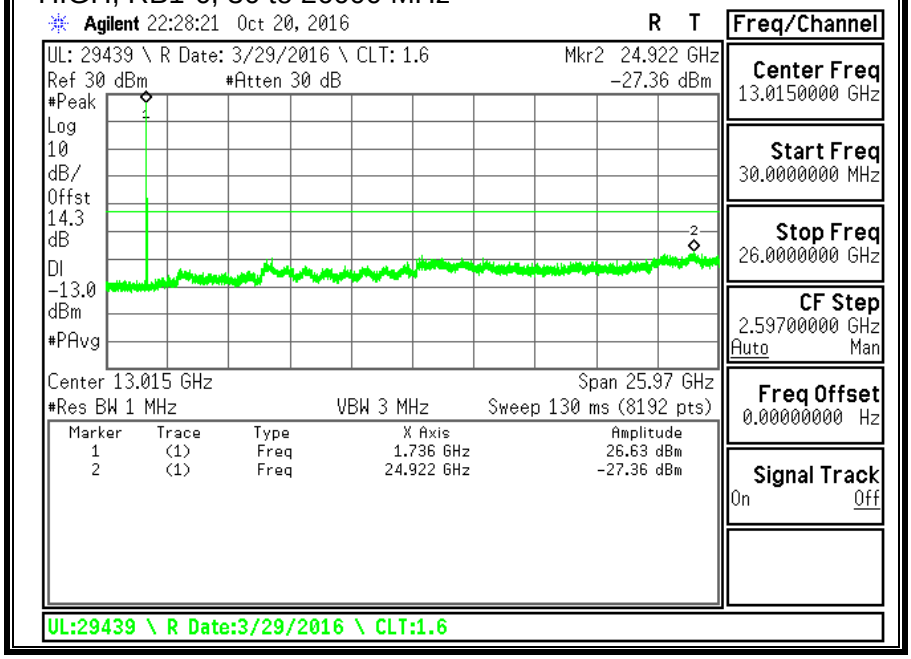
LTE BAND 4 16QAM, (20 MHz)



MID, RB1-0, 30 to 26000 MHz

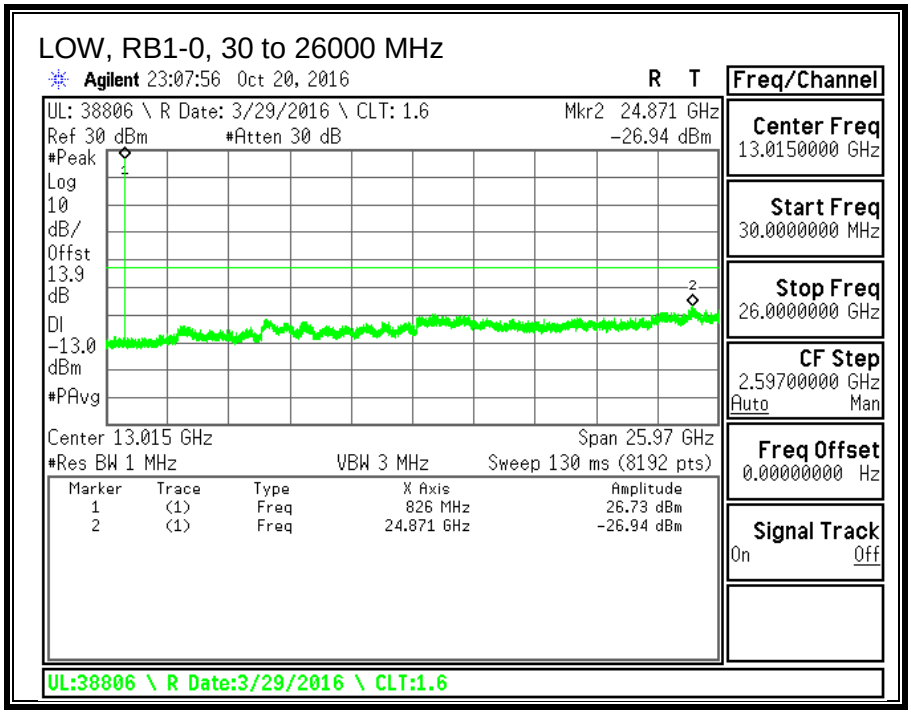


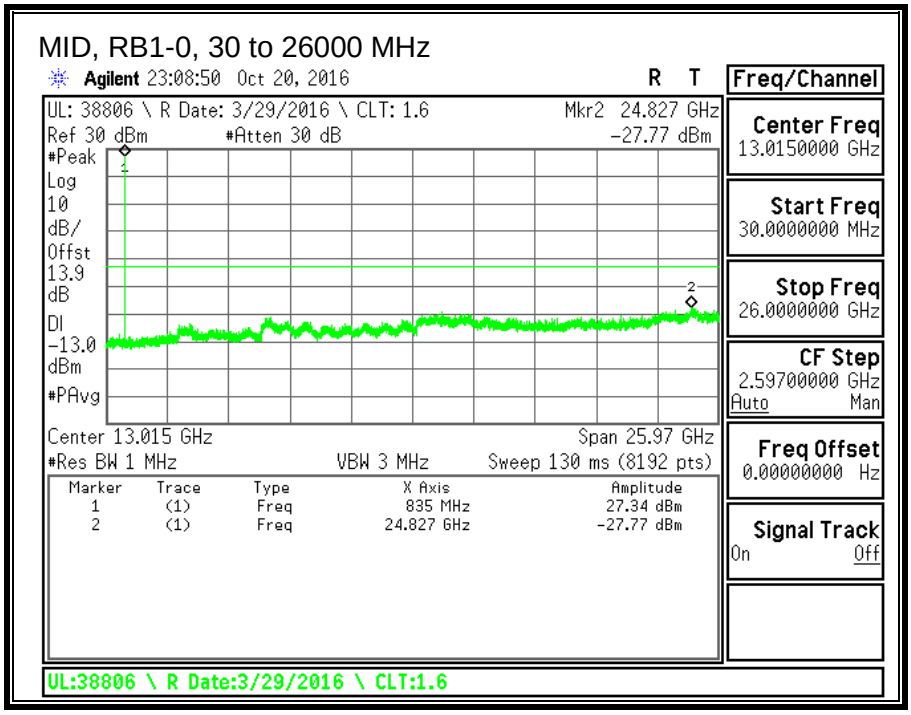
HIGH, RB1-0, 30 to 26000 MHz

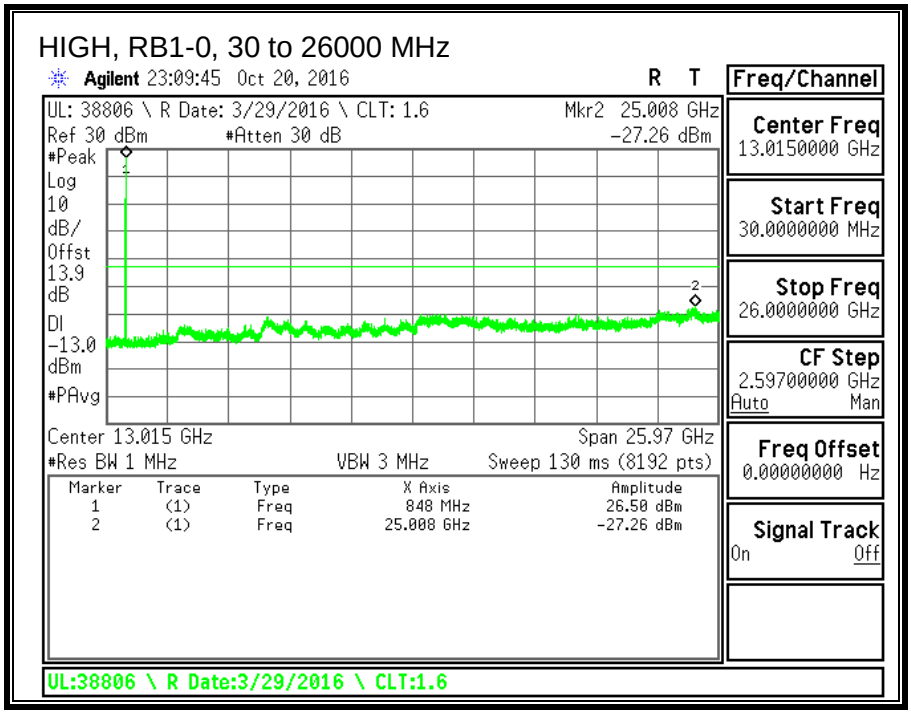


8.3.3. LTE BAND 5

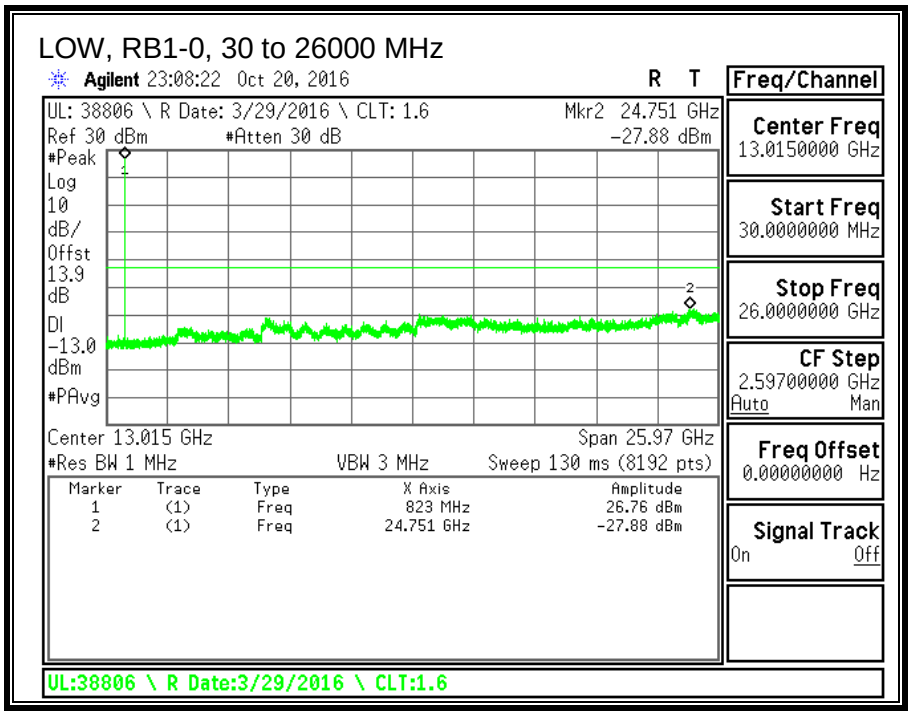
LTE BAND 5 QPSK, (1.4 MHz)



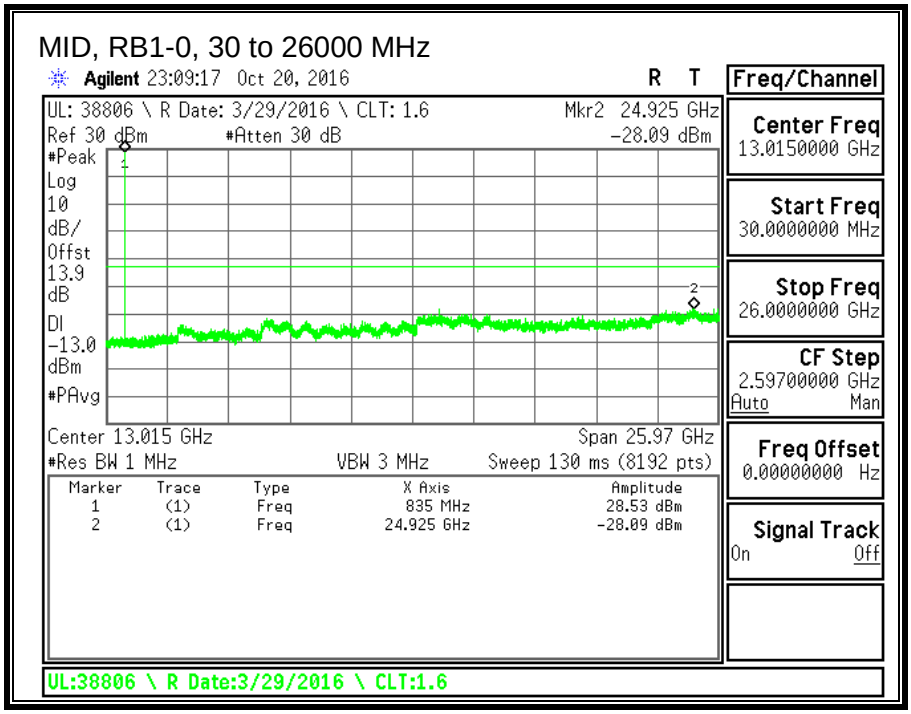




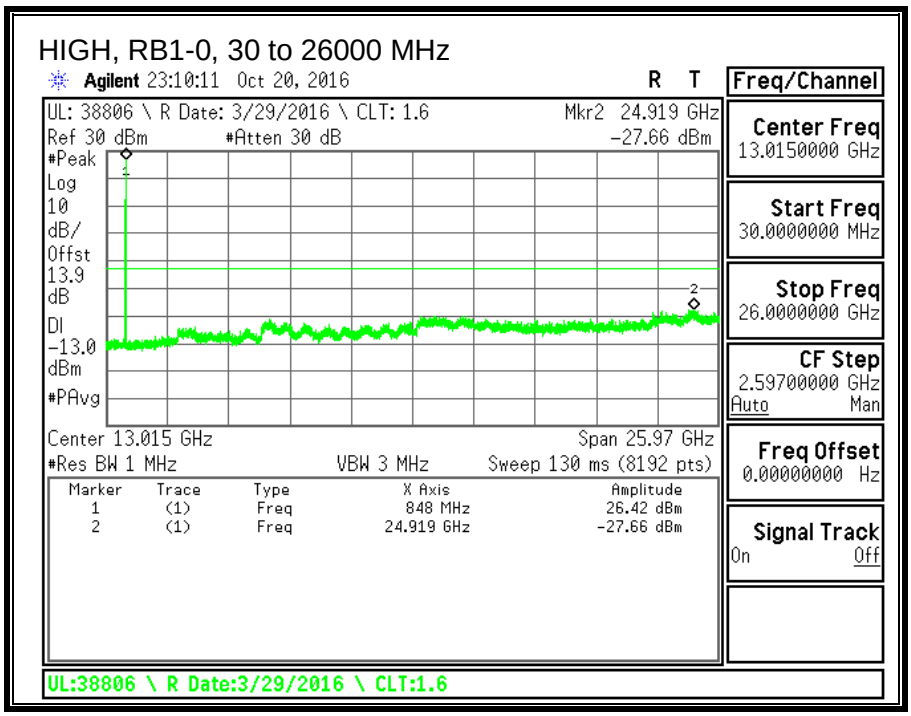
LTE BAND 5 16QAM, (1.4 MHz)



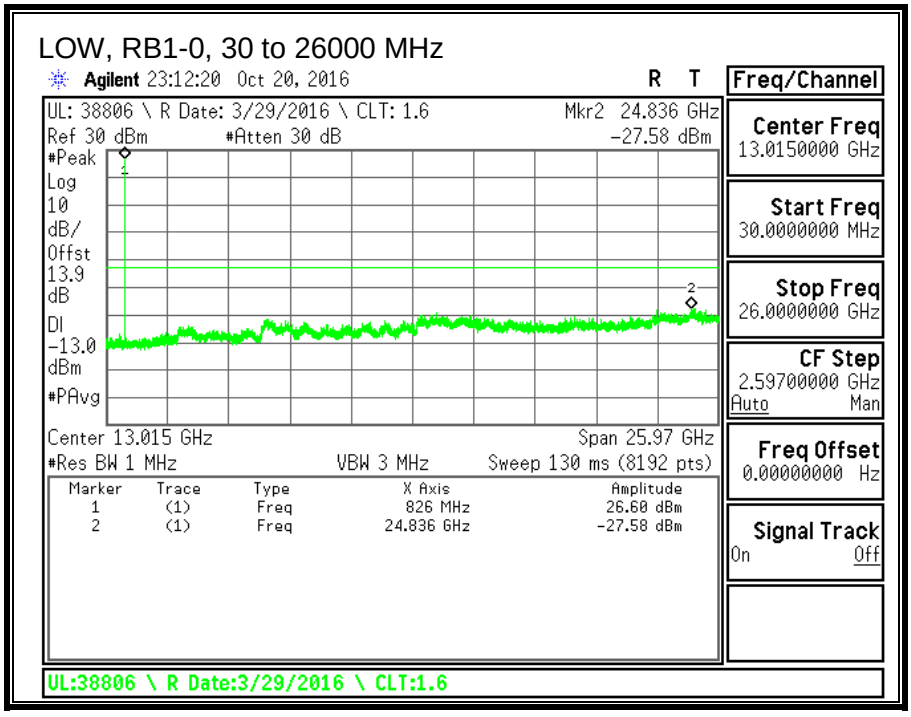
MID, RB1-0, 30 to 26000 MHz

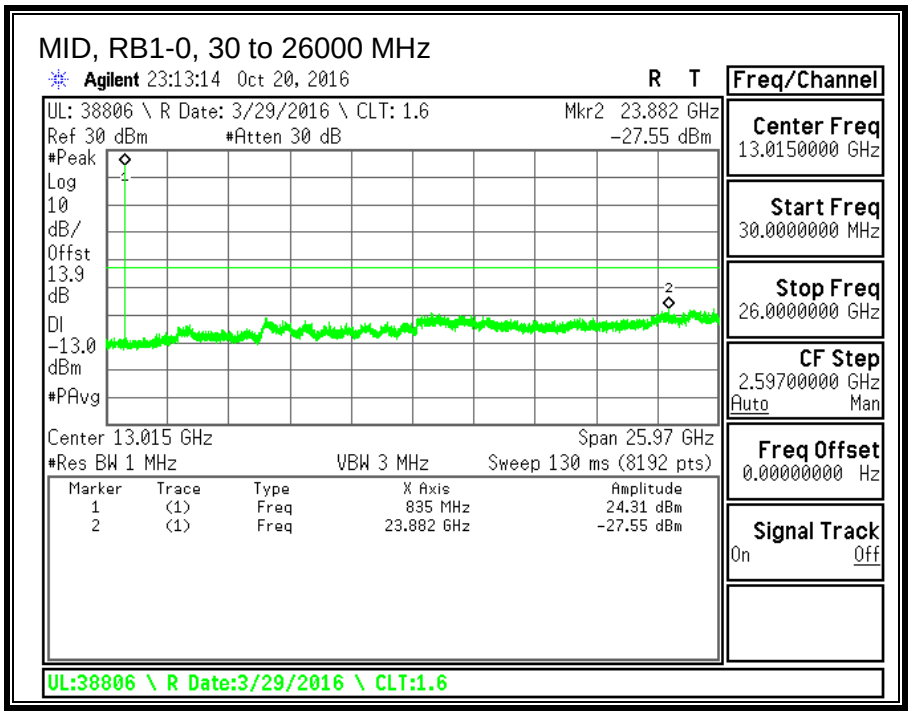


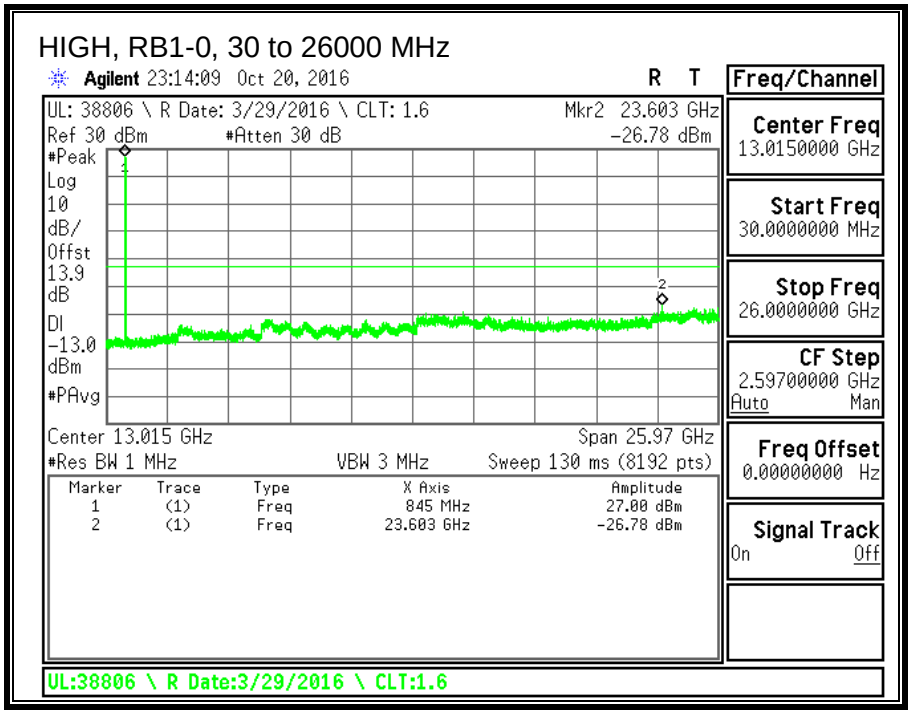
HIGH, RB1-0, 30 to 26000 MHz



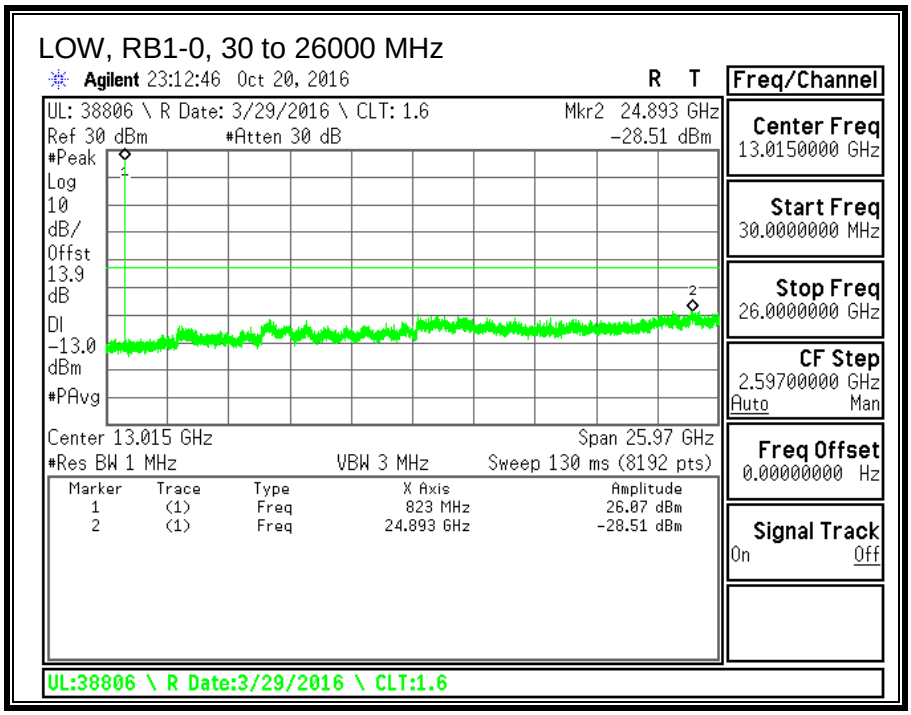
LTE BAND 5 QPSK, (3 MHz)



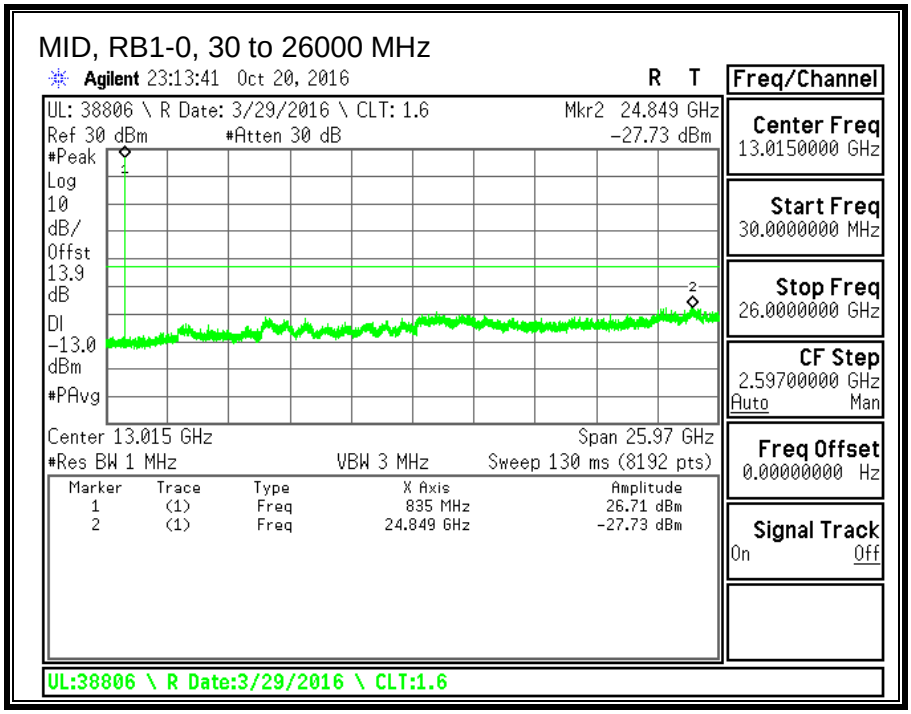




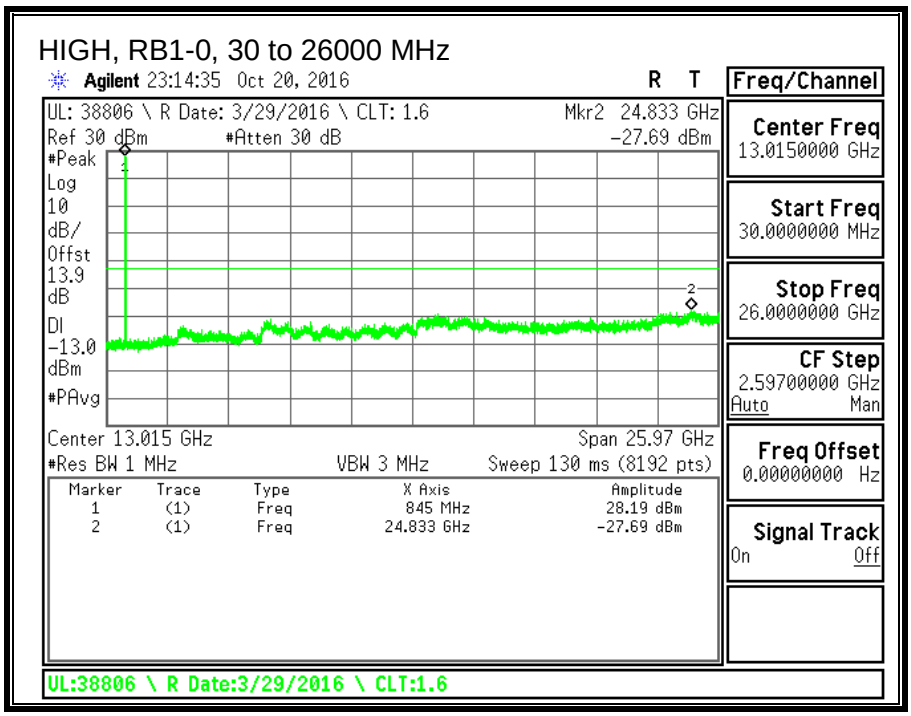
LTE BAND 5 16QAM, (3 MHz)



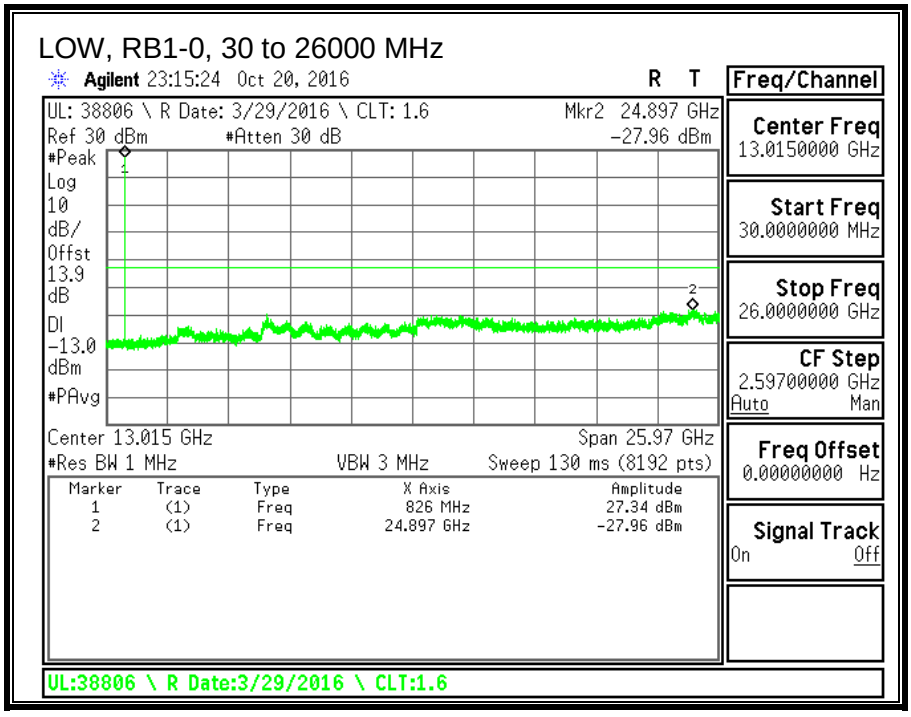
MID, RB1-0, 30 to 26000 MHz

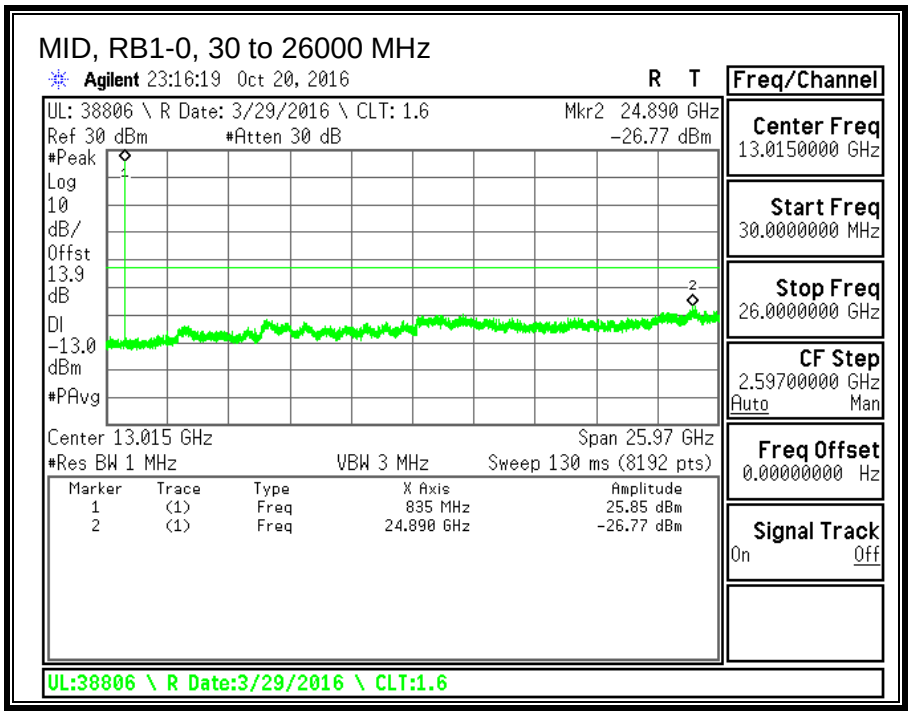


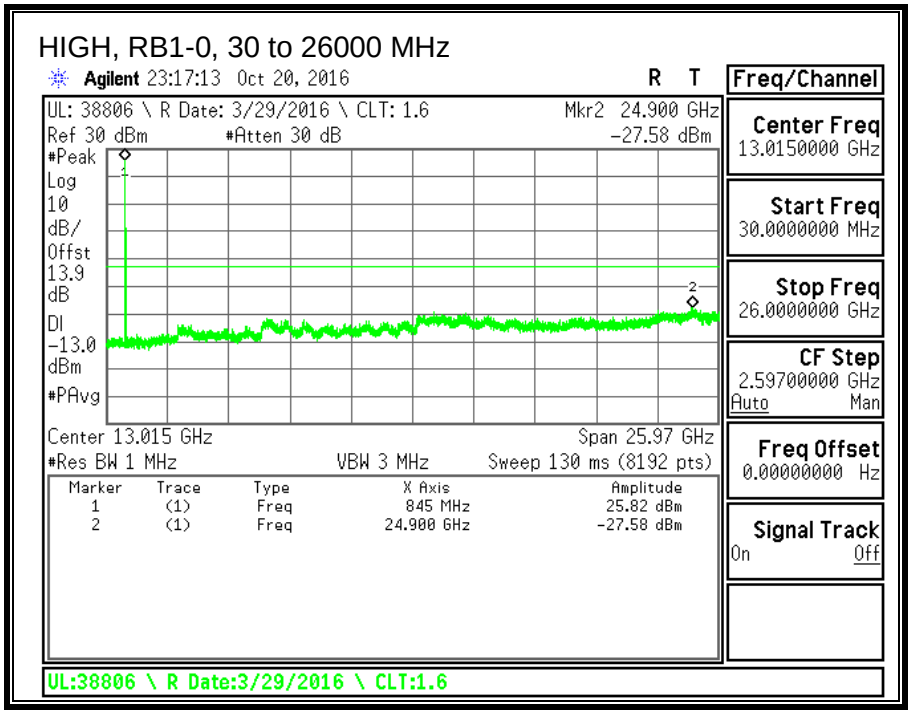
HIGH, RB1-0, 30 to 26000 MHz



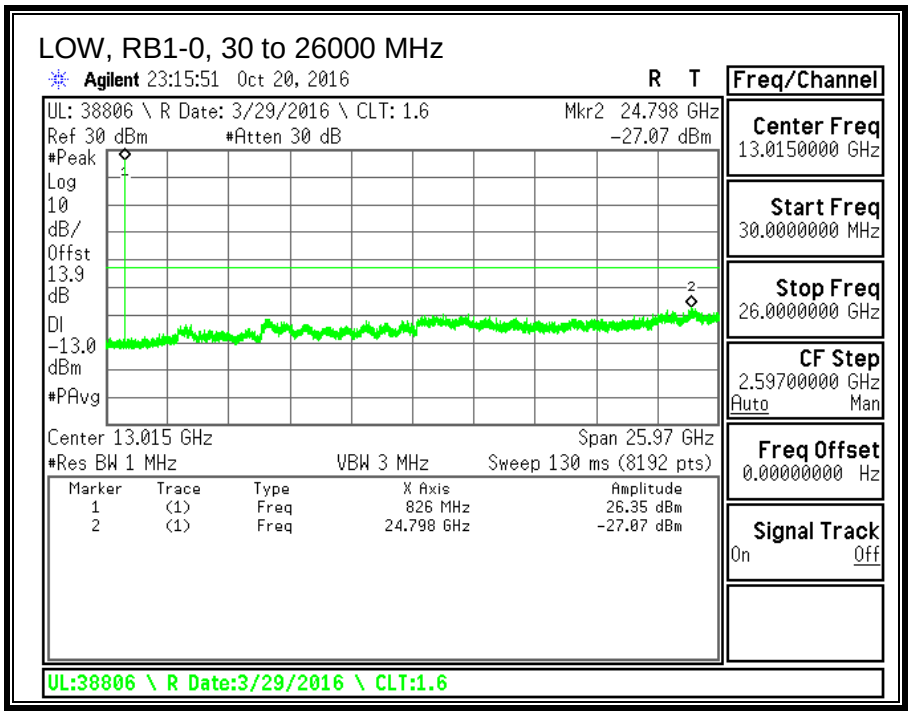
LTE BAND 5 QPSK, (5 MHz)



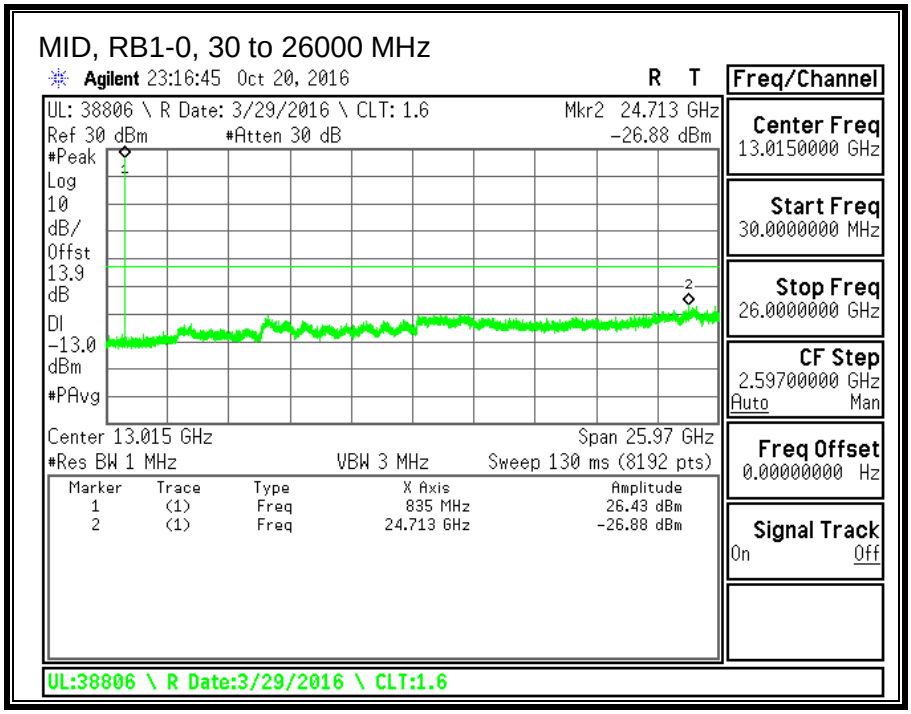




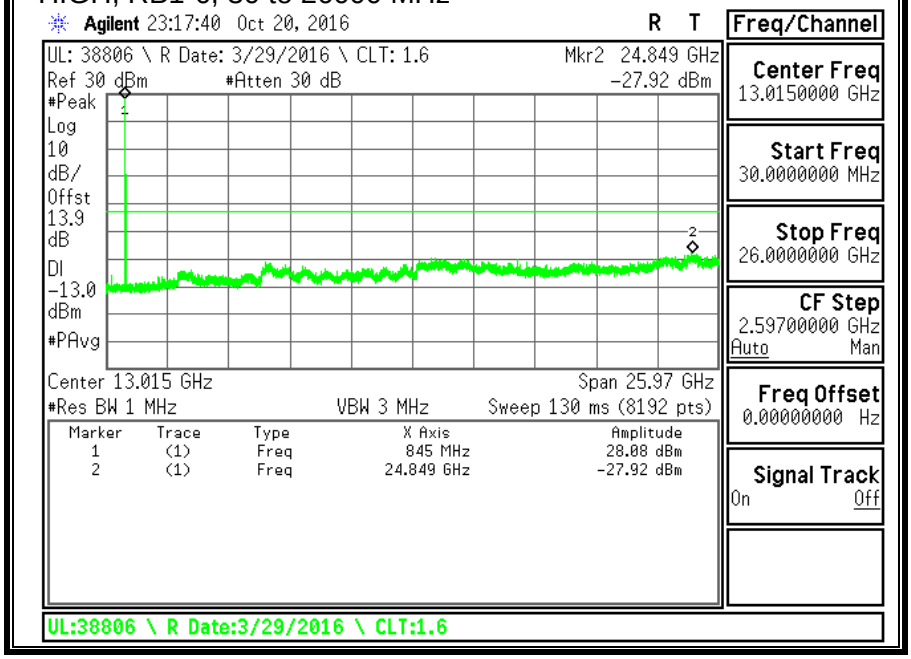
LTE BAND 5 16QAM, (5 MHz)



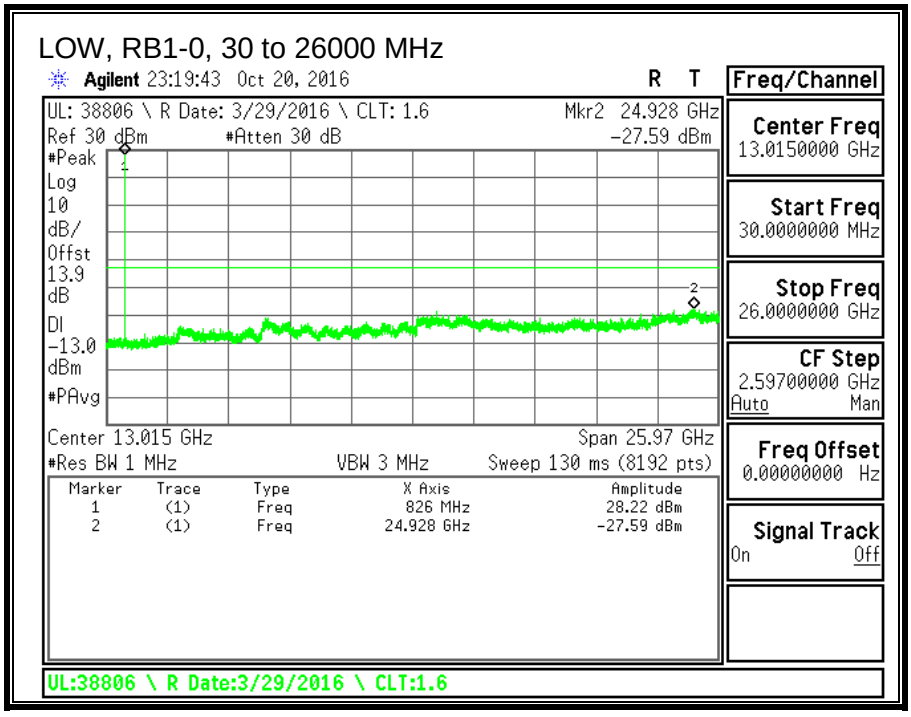
MID, RB1-0, 30 to 26000 MHz

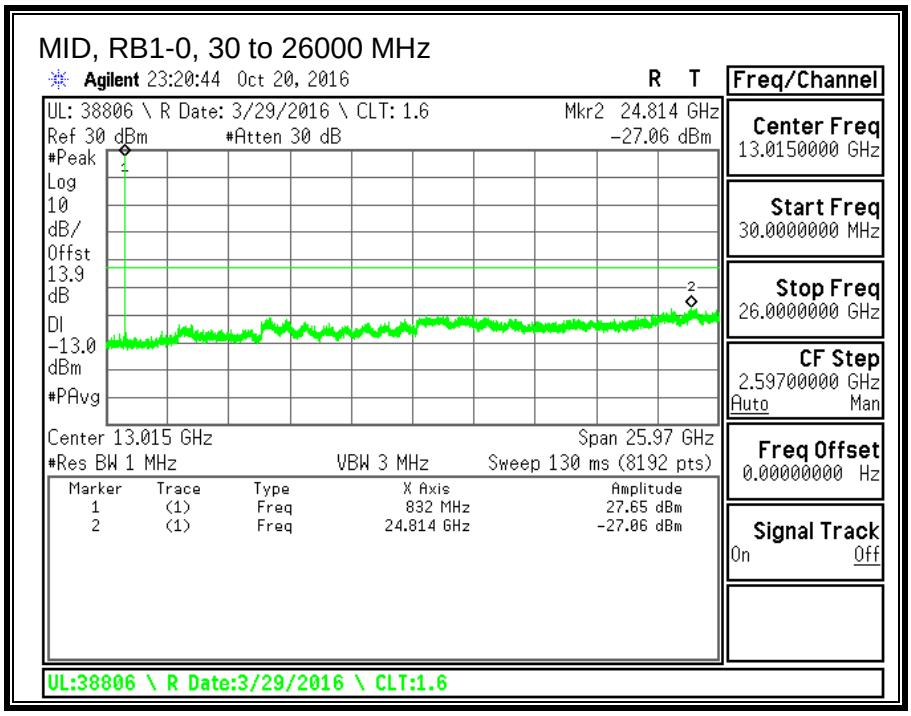


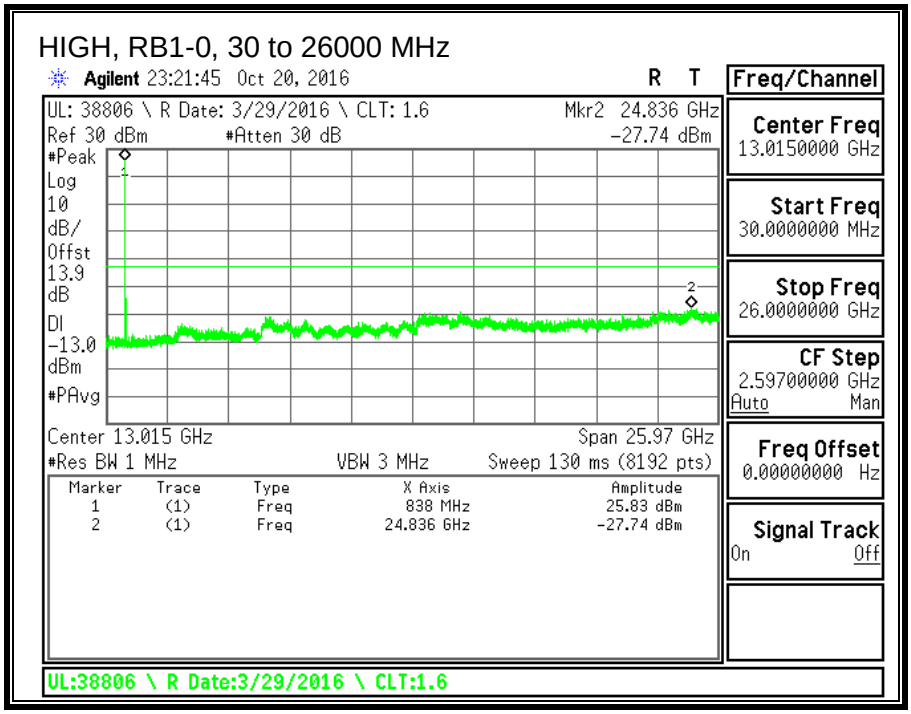
HIGH, RB1-0, 30 to 26000 MHz



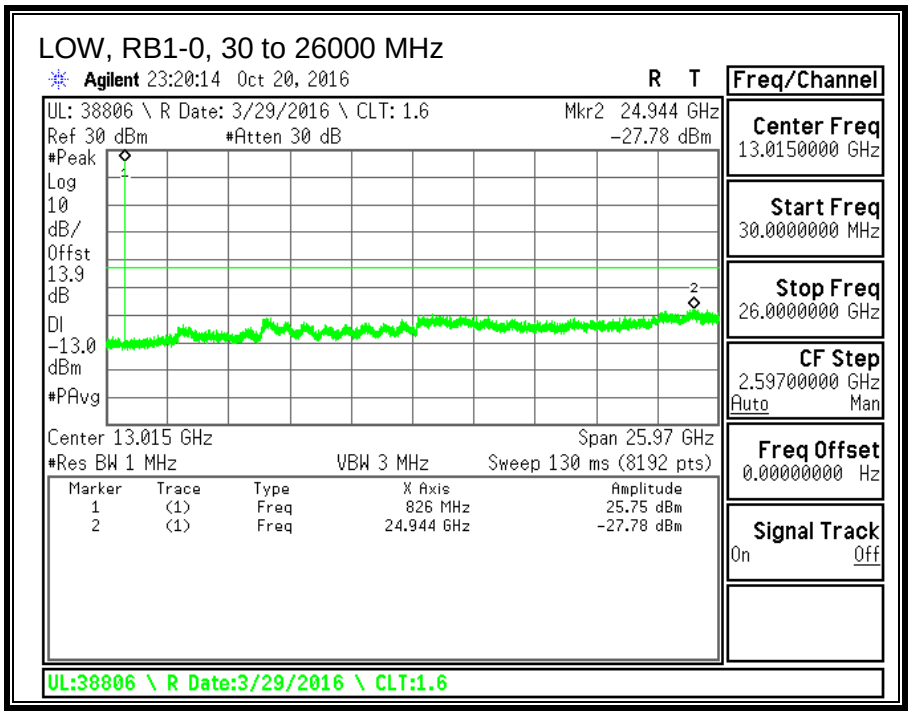
LTE BAND 5 QPSK, (10 MHz)



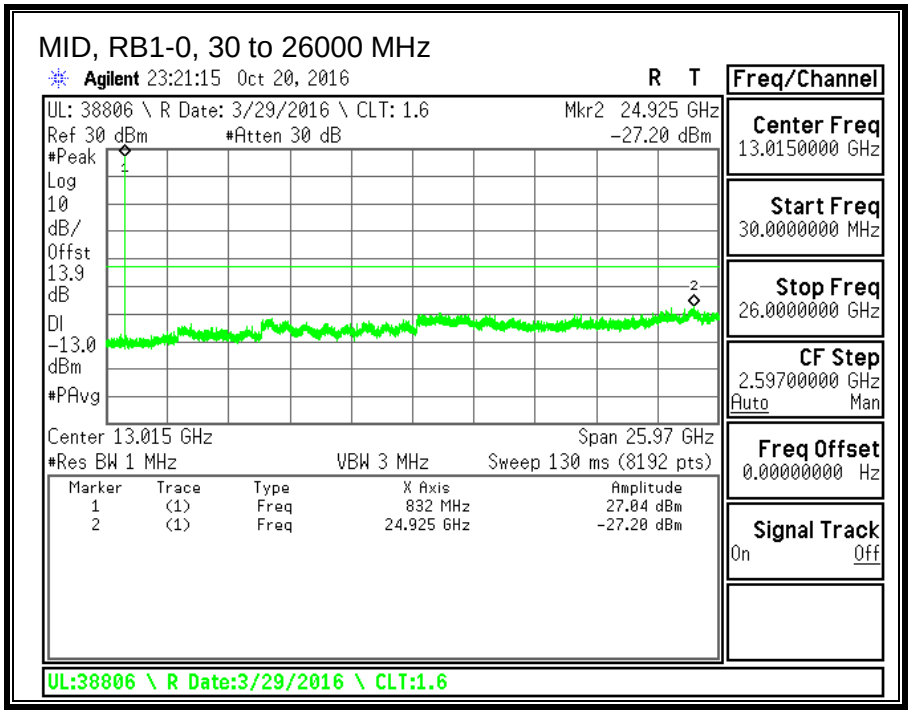




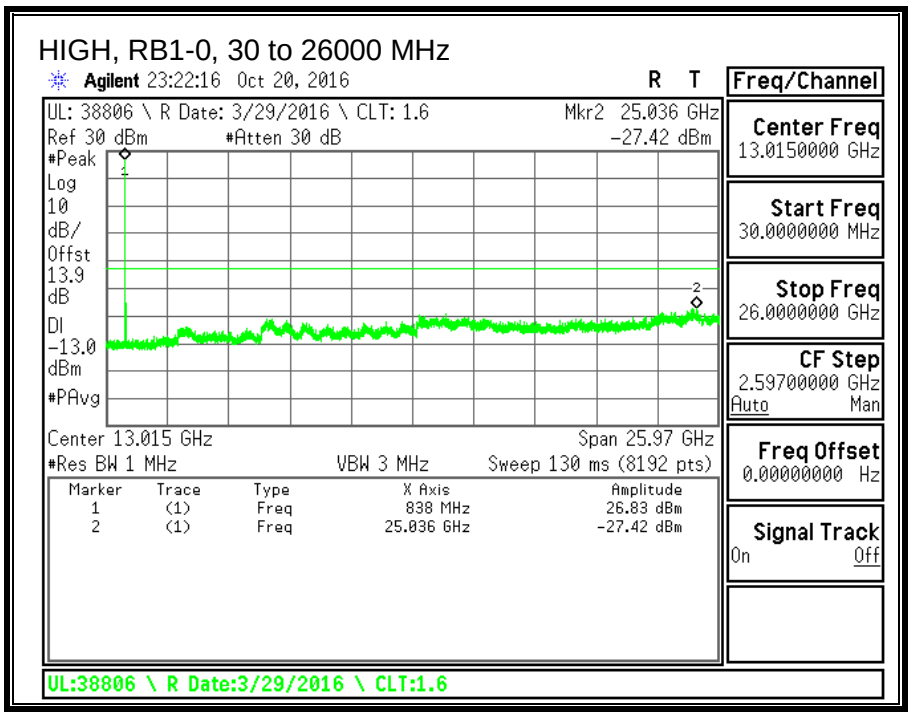
LTE BAND 5 16QAM, (10 MHz)



MID, RB1-0, 30 to 26000 MHz



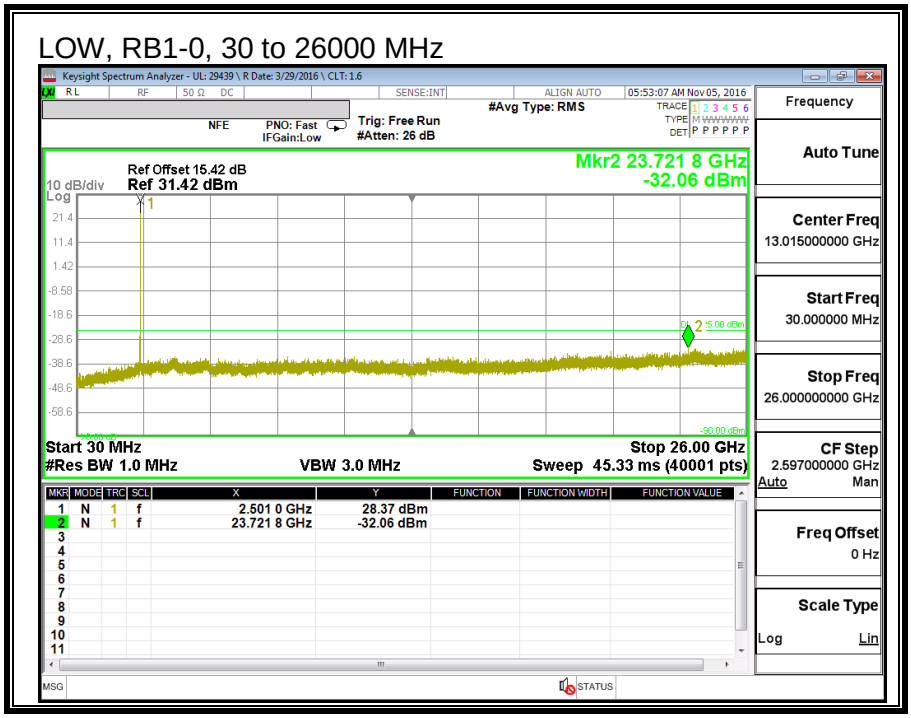
HIGH, RB1-0, 30 to 26000 MHz



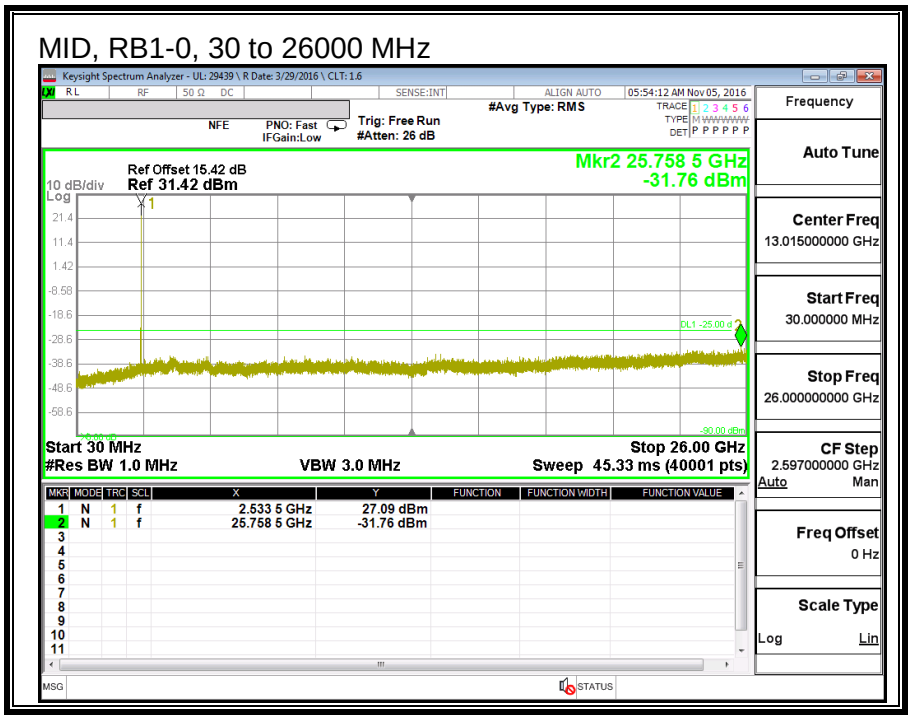
8.3.4. LTE BAND 7

LTE BAND 7 QPSK, (5 MHz)

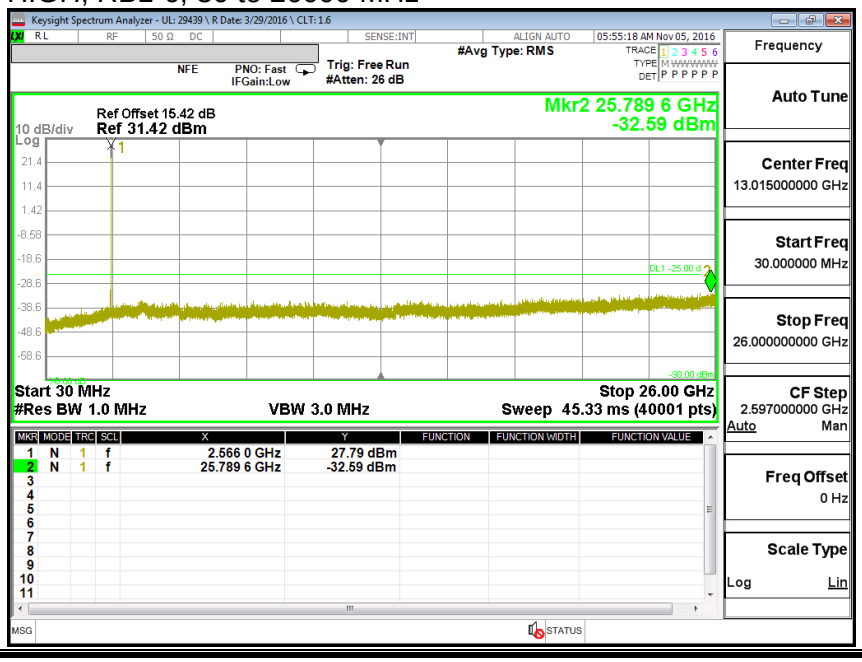
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

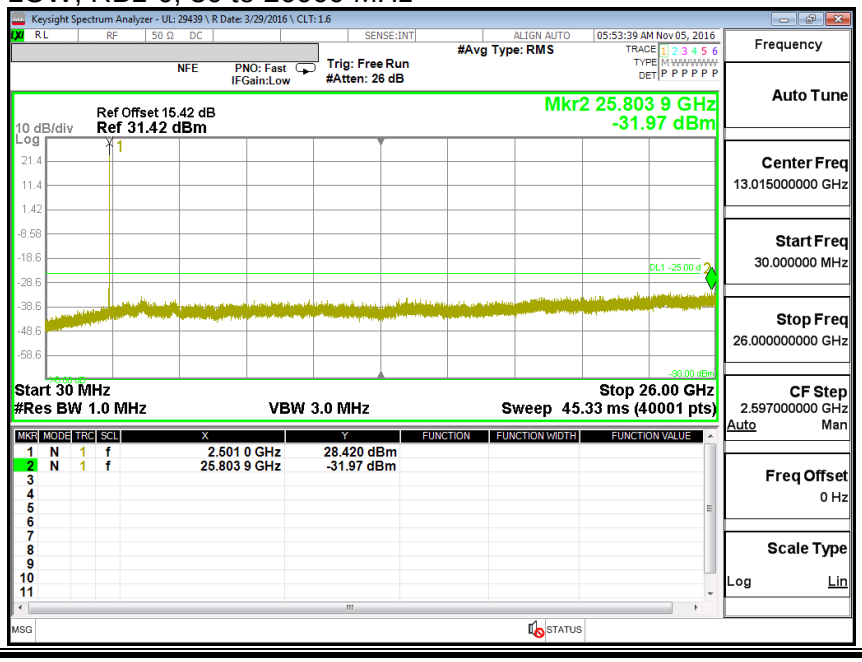


HIGH, RB1-0, 30 to 26000 MHz

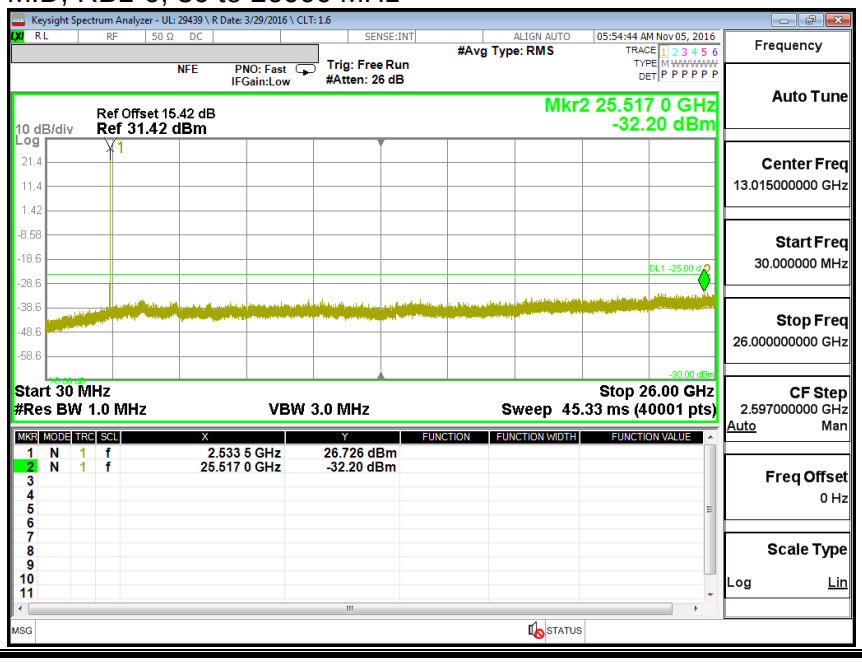


LTE BAND 7 16QAM, (5 MHz)

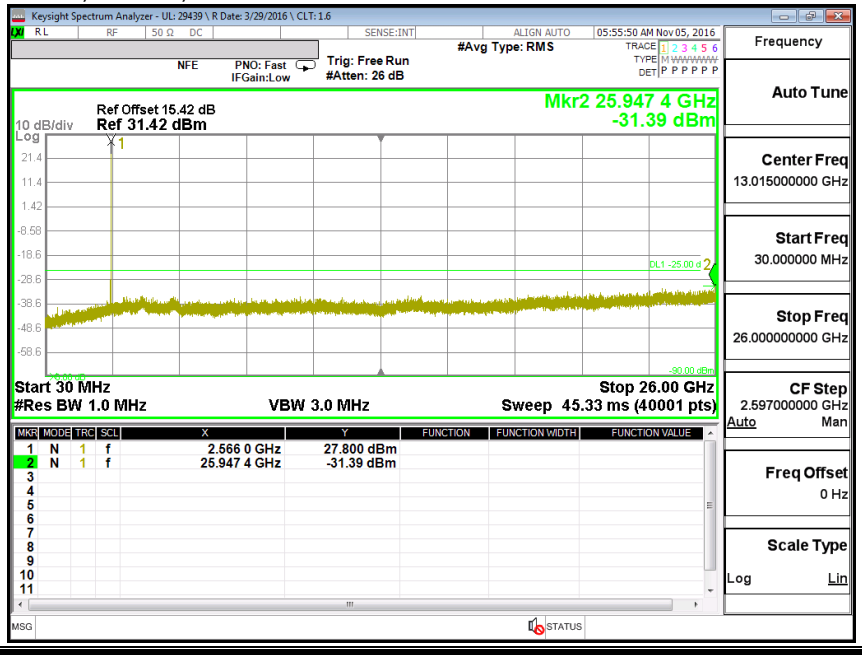
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

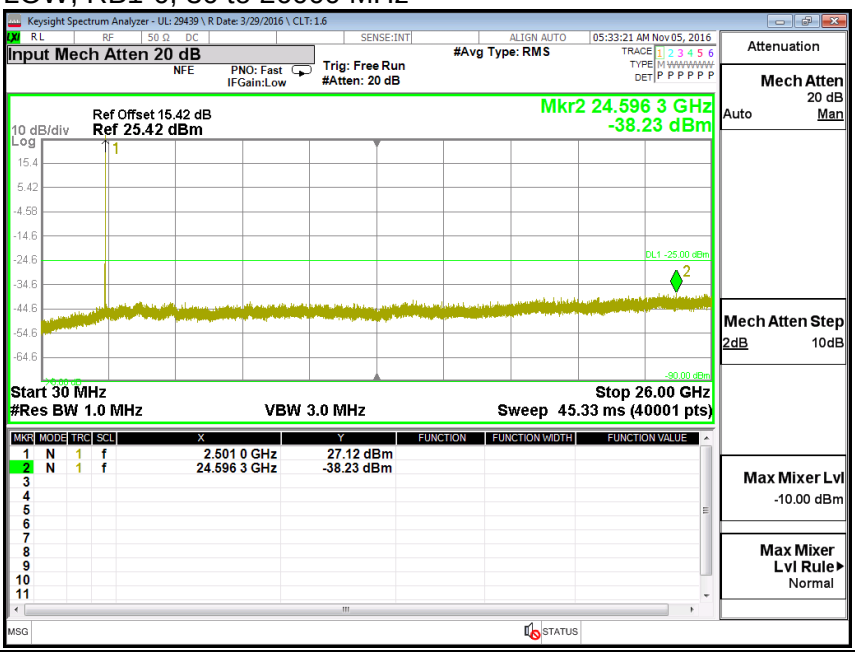


HIGH, RB1-0, 30 to 26000 MHz

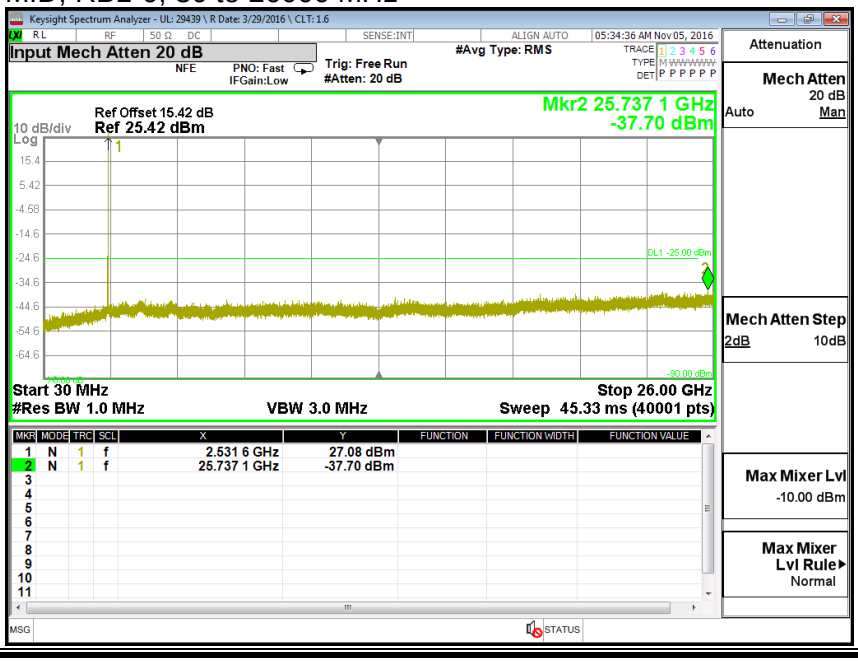


LTE BAND 7 QPSK, (10 MHz)

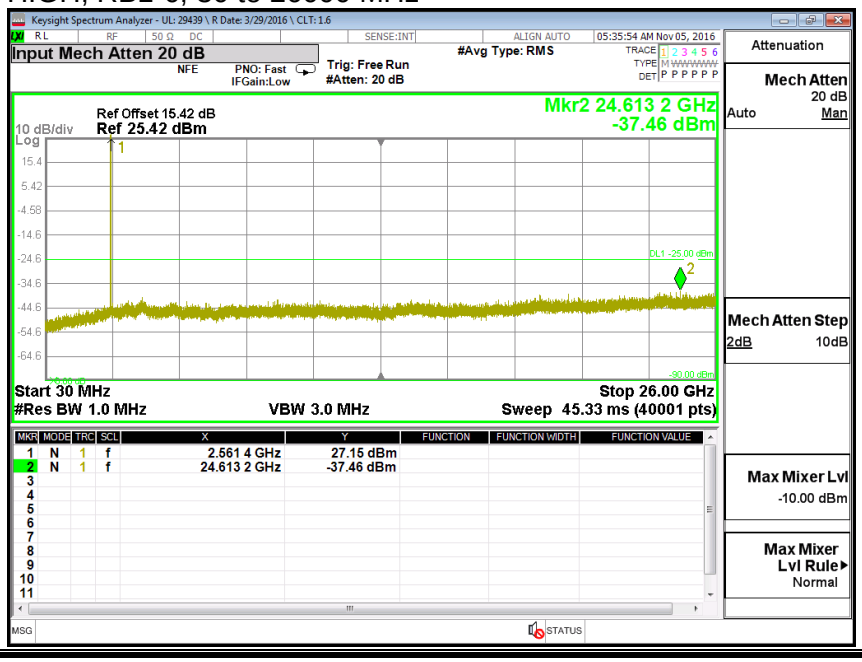
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

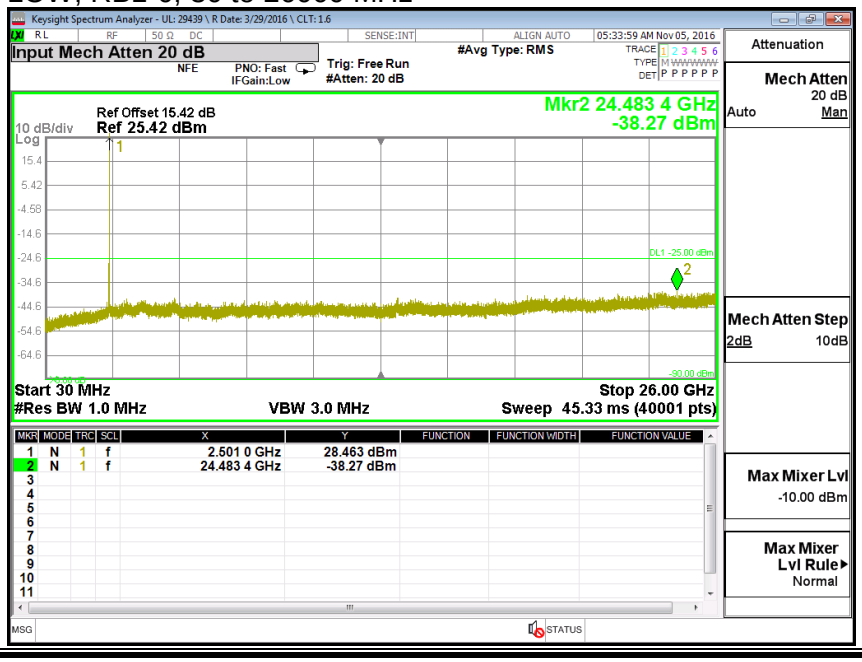


HIGH, RB1-0, 30 to 26000 MHz

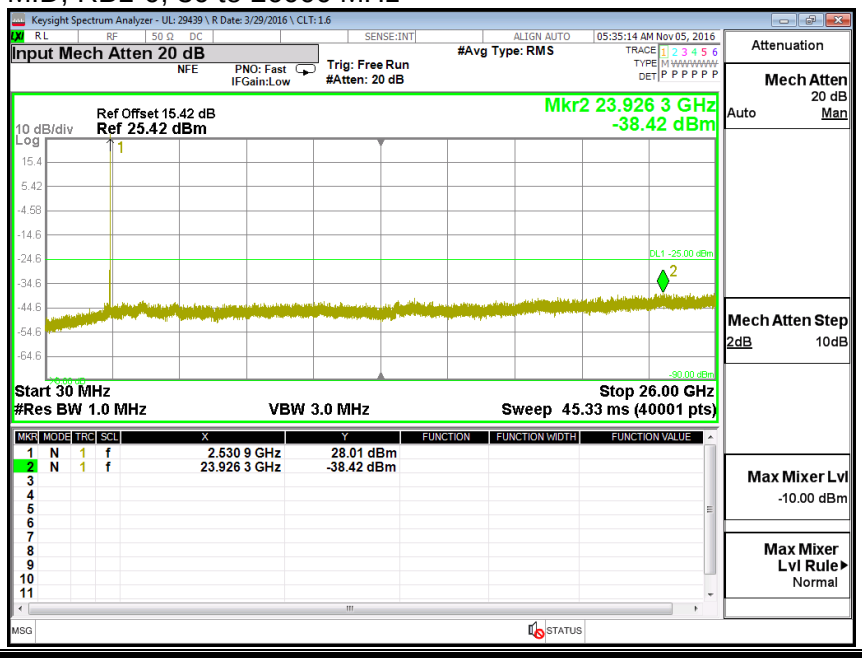


LTE BAND 7 16QAM, (10 MHz)

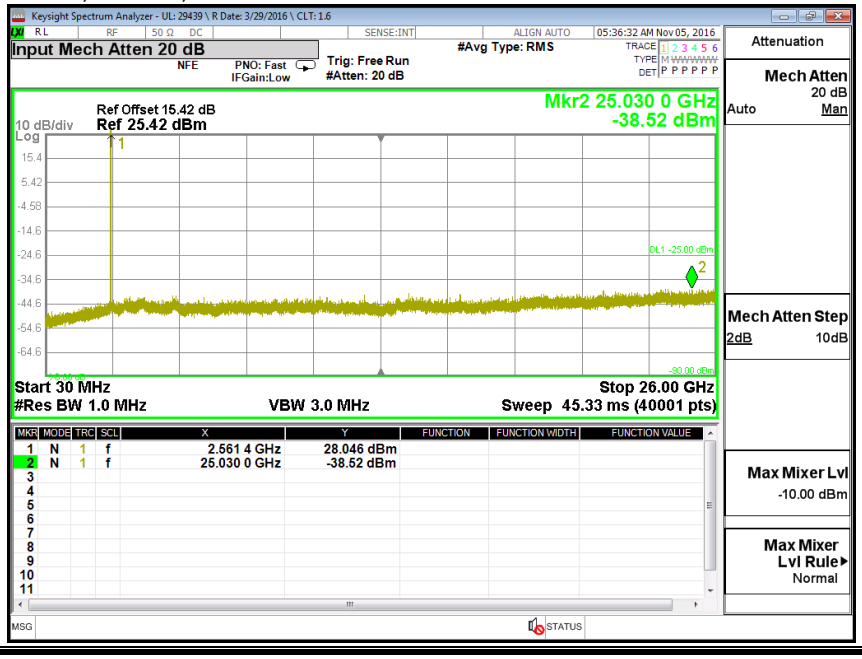
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

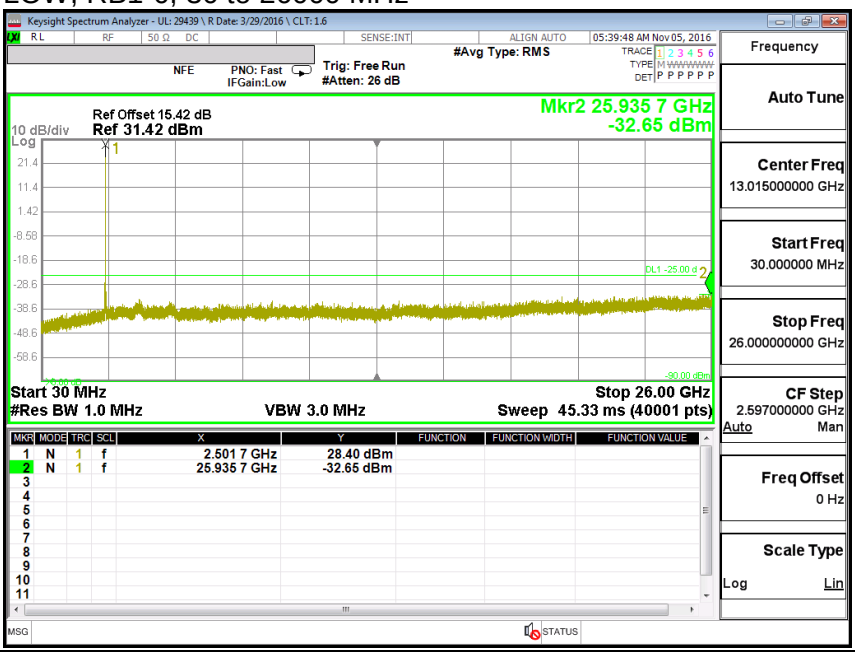


HIGH, RB1-0, 30 to 26000 MHz

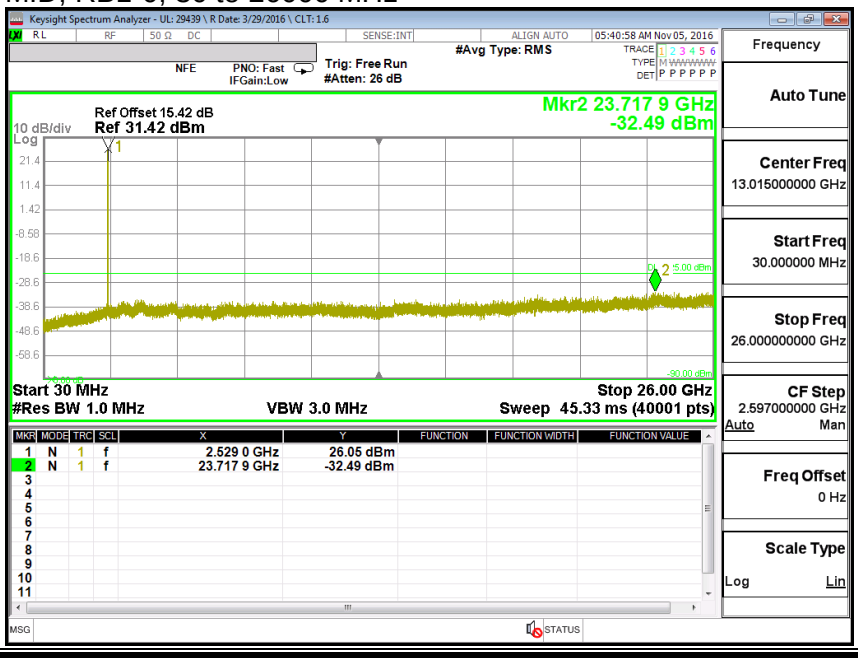


LTE BAND 7 QPSK, (15 MHz)

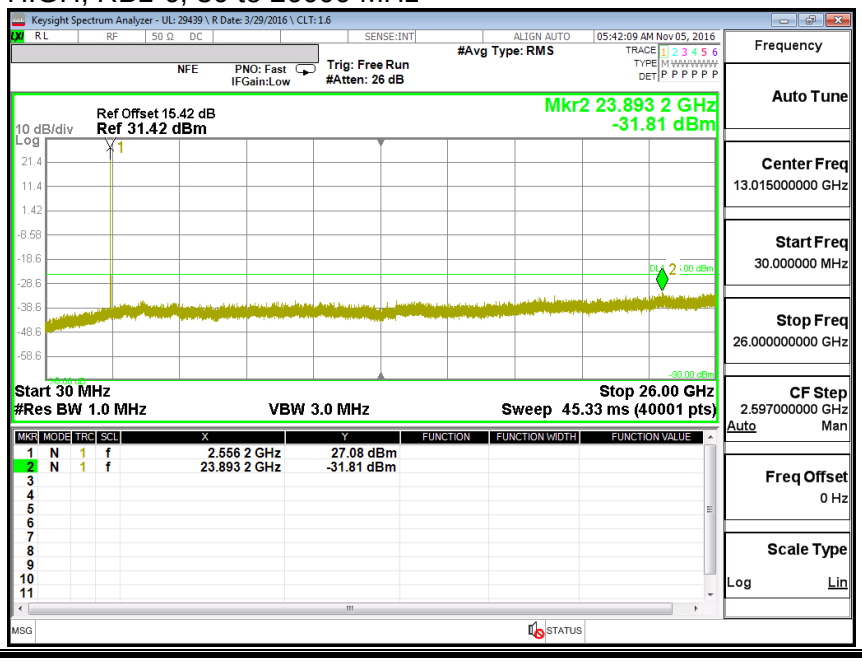
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

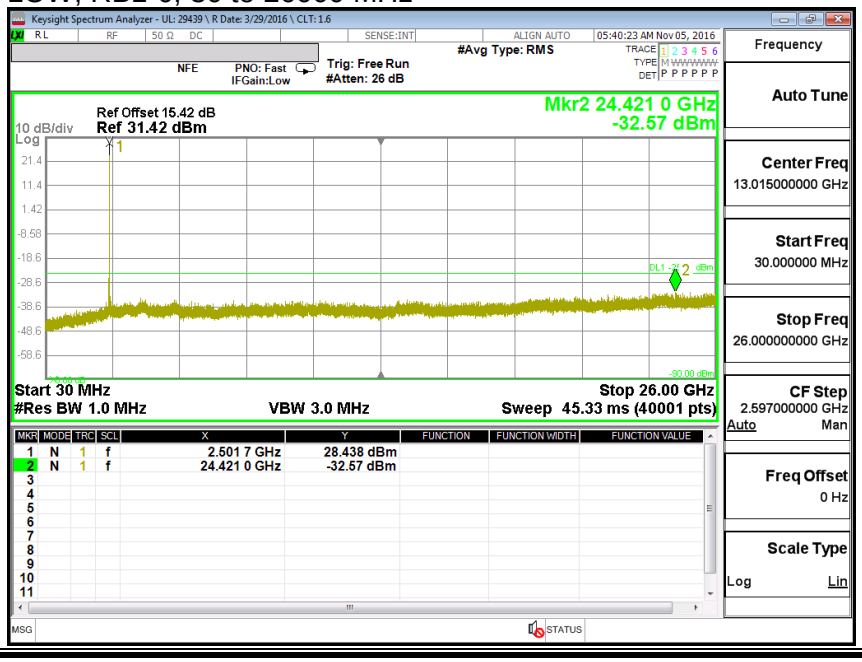


HIGH, RB1-0, 30 to 26000 MHz

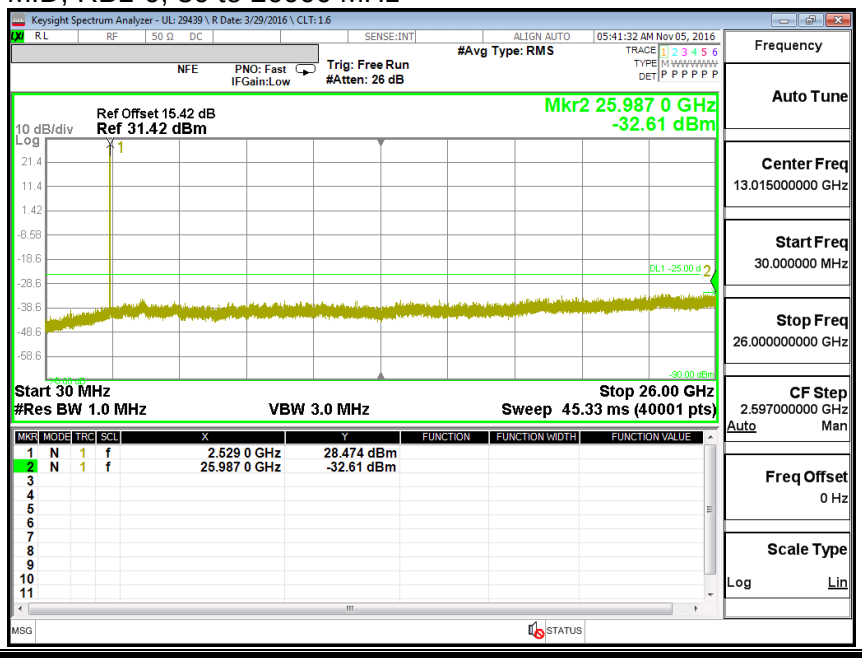


LTE BAND 7 16QAM, (15 MHz)

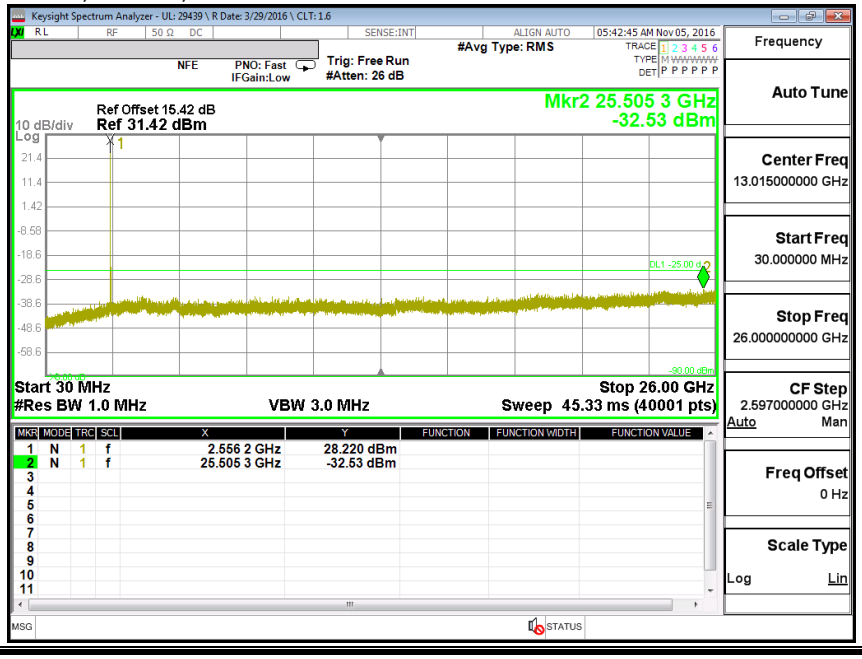
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

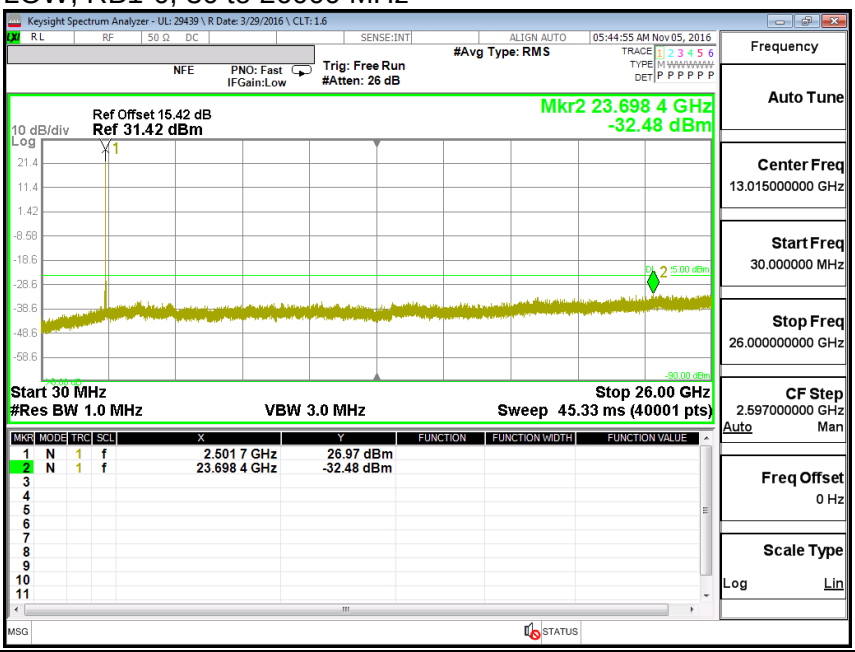


HIGH, RB1-0, 30 to 26000 MHz

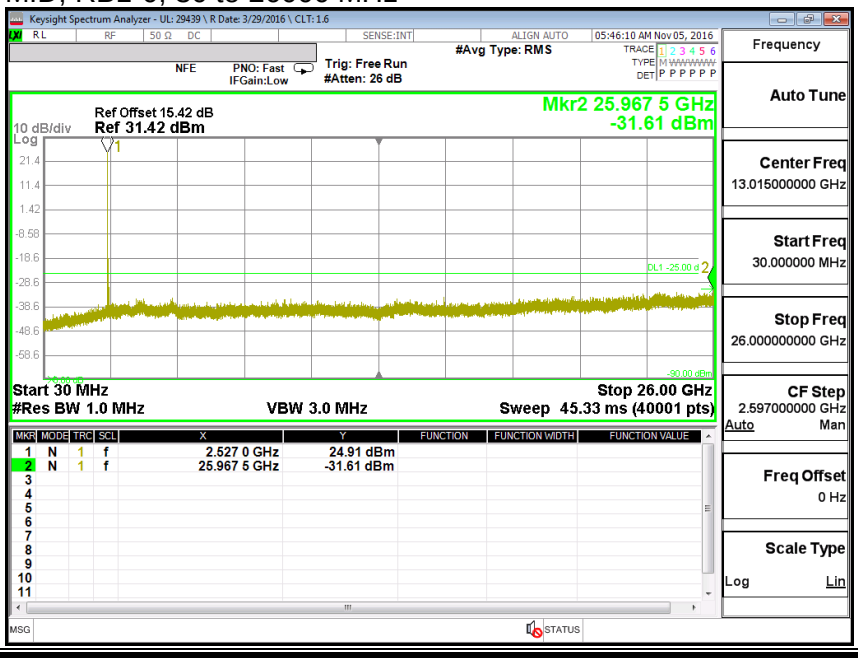


LTE BAND 7 QPSK, (20 MHz)

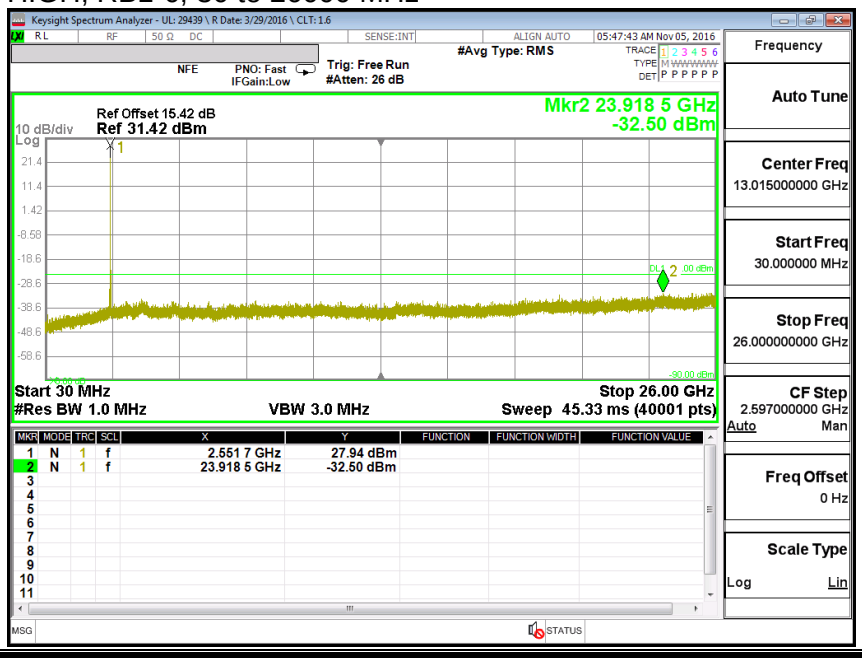
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

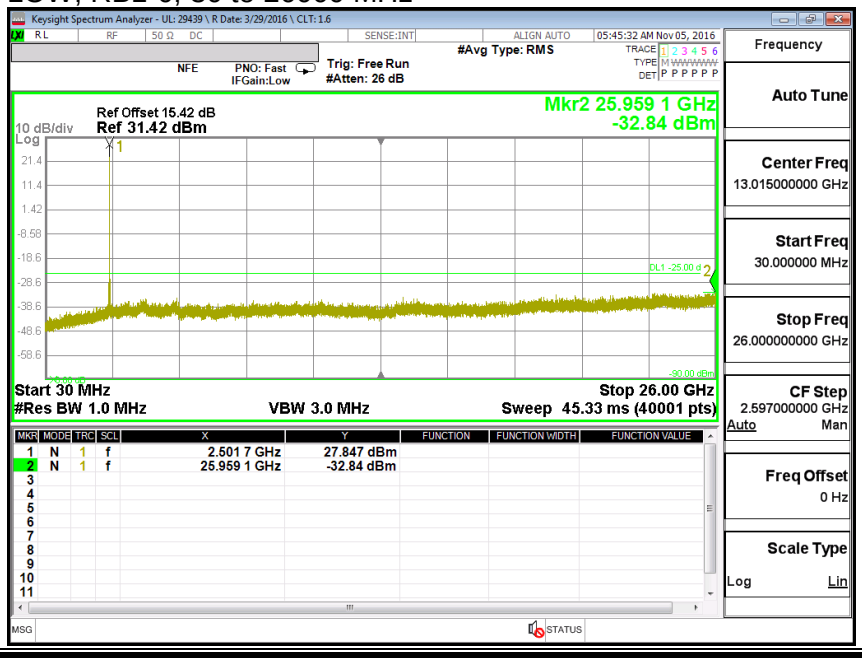


HIGH, RB1-0, 30 to 26000 MHz

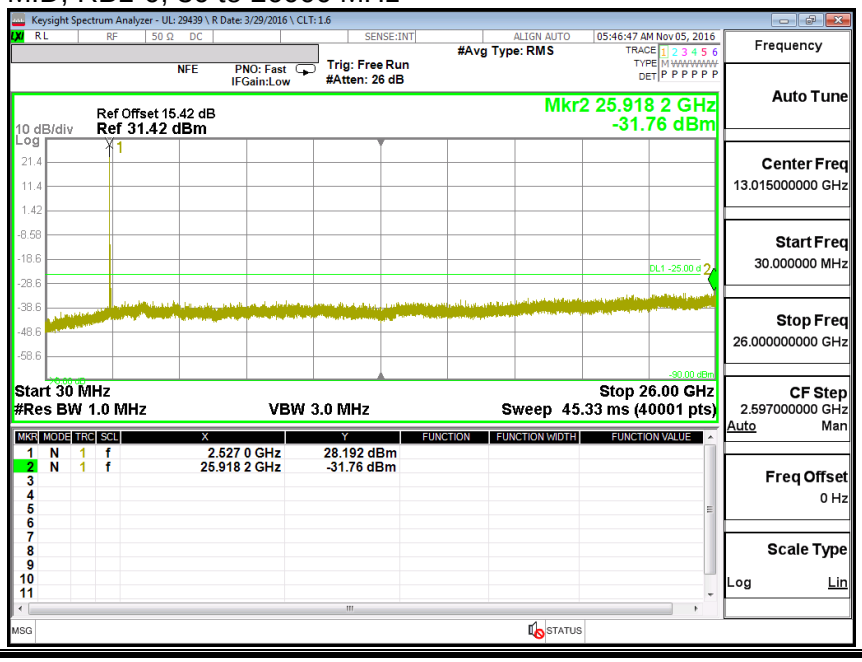


LTE BAND 7 16QAM, (20 MHz)

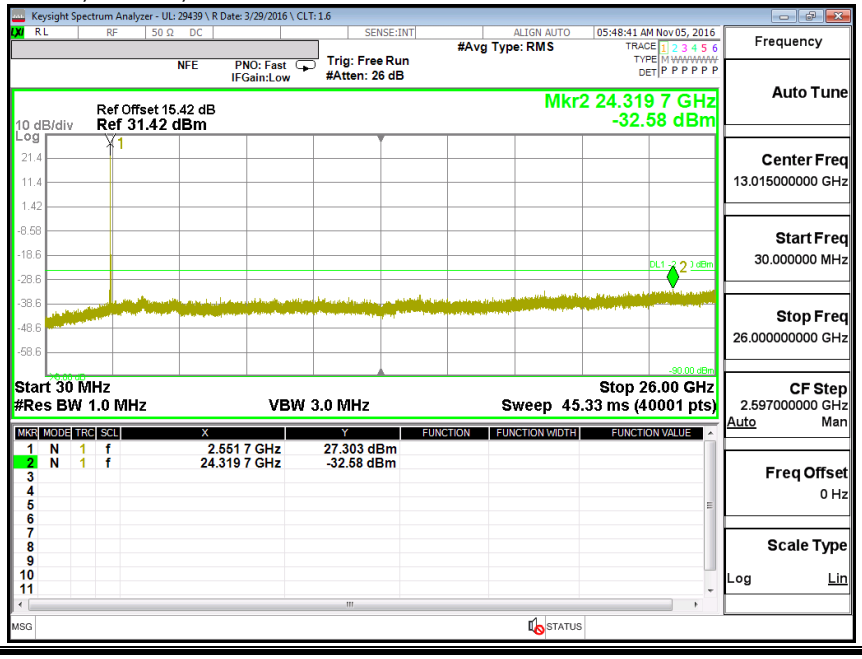
LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz

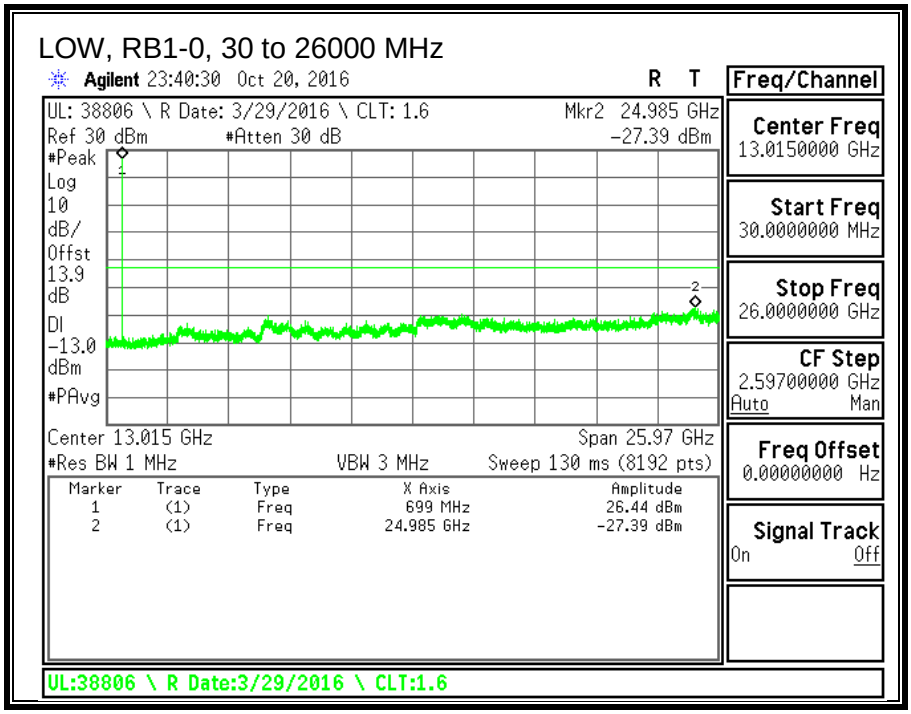


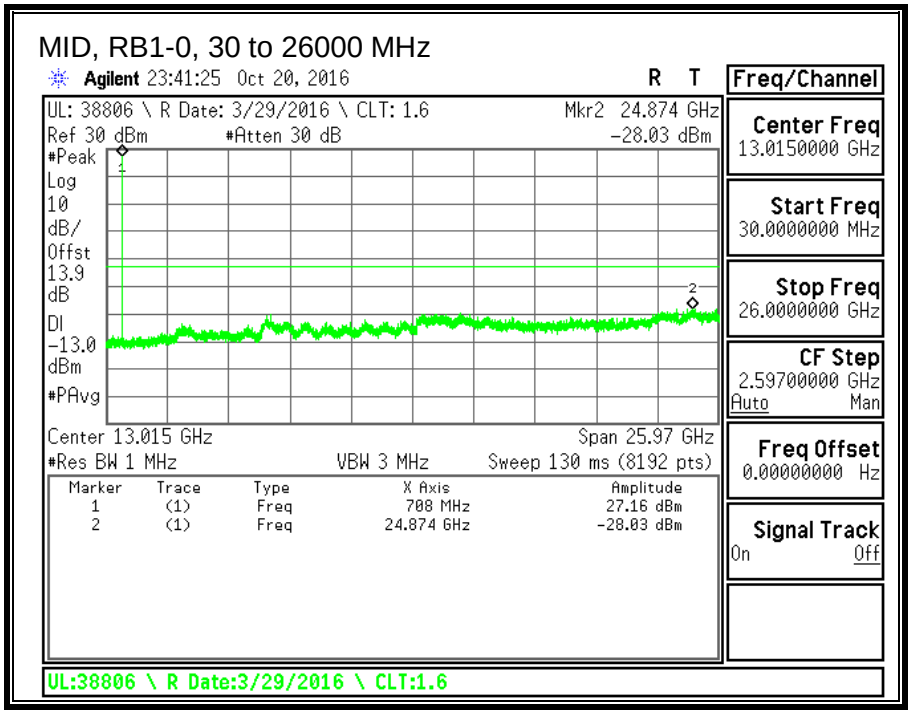
HIGH, RB1-0, 30 to 26000 MHz

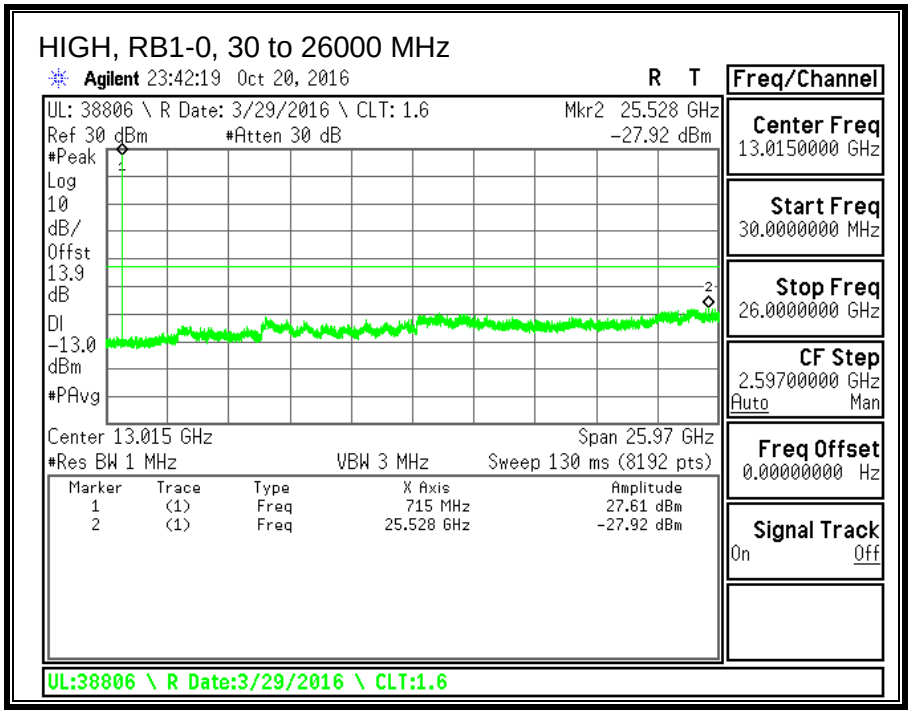


8.3.5. LTE BAND 12

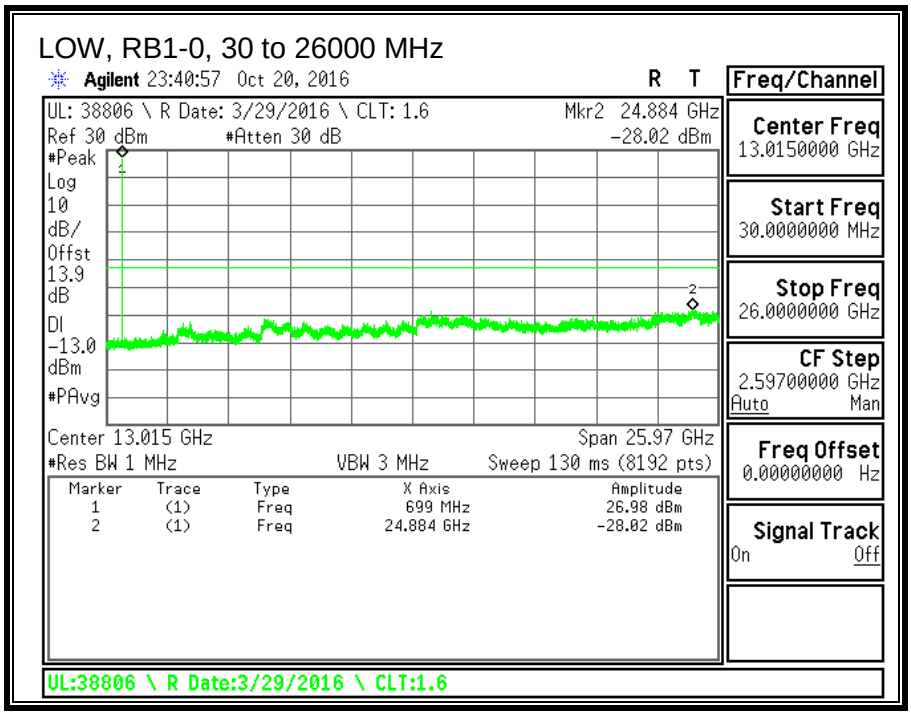
LTE BAND 12 QPSK, (1.4 MHz)



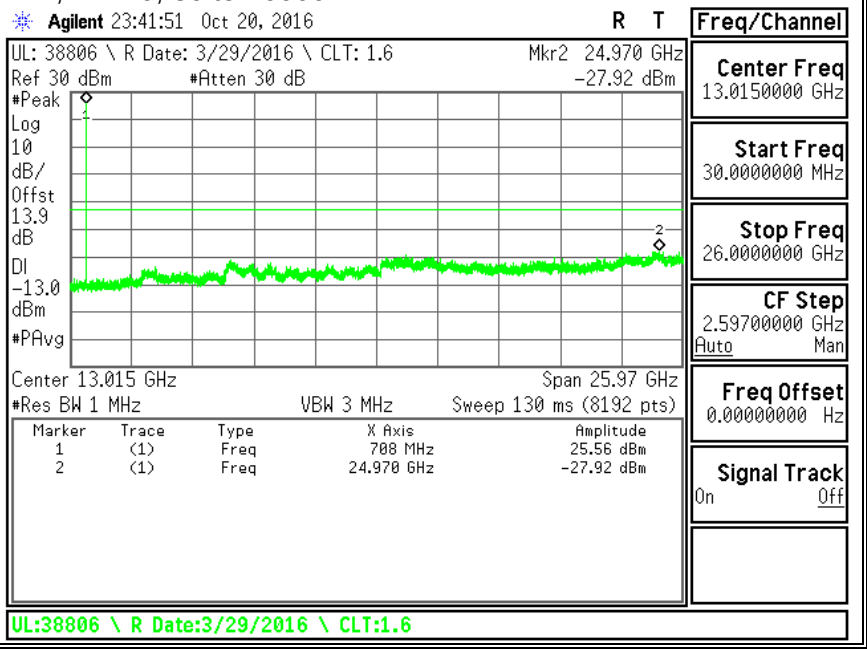




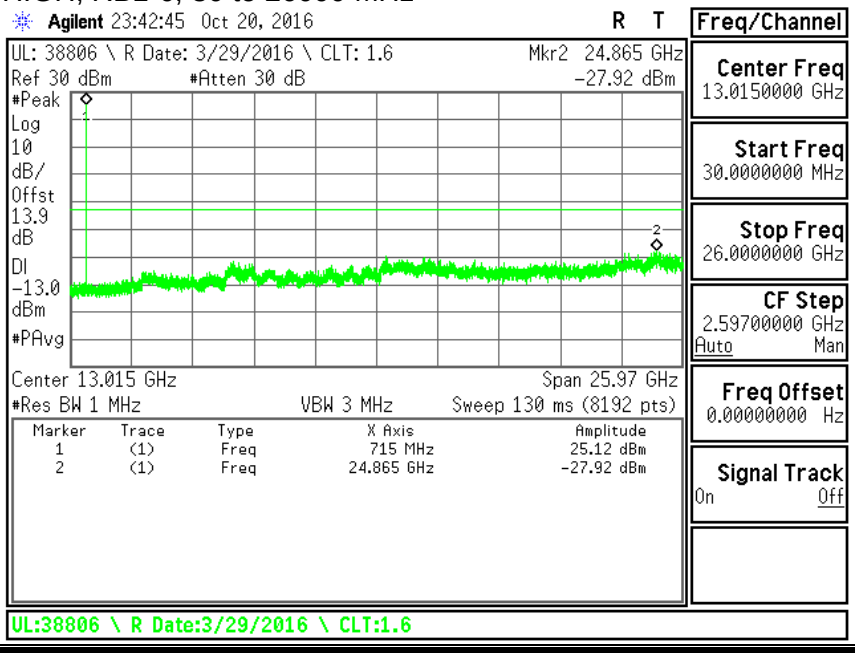
LTE BAND 12 16QAM, (1.4 MHz)



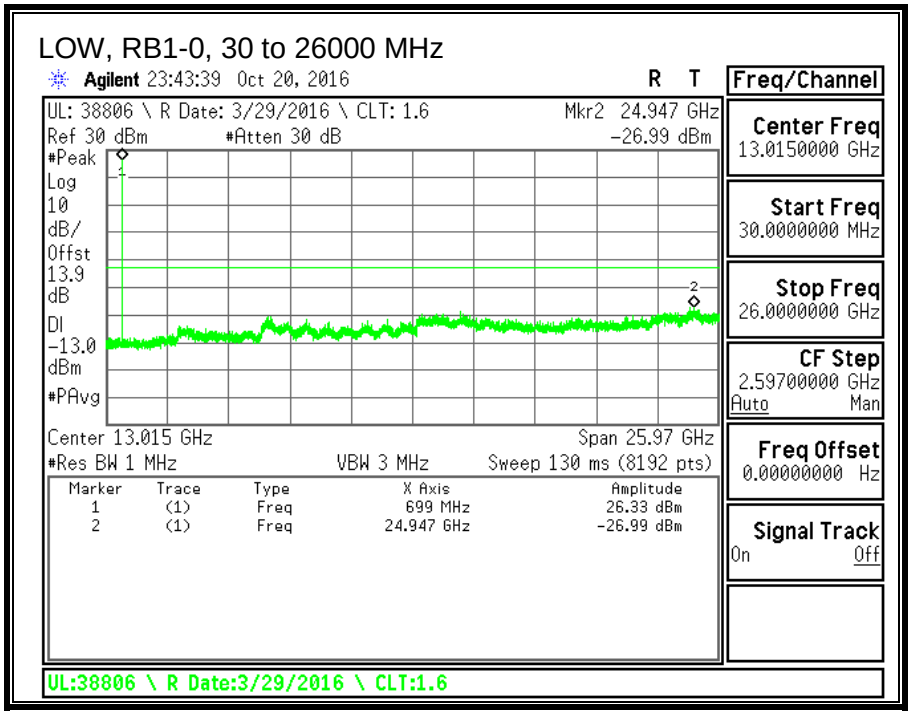
MID, RB1-0, 30 to 26000 MHz

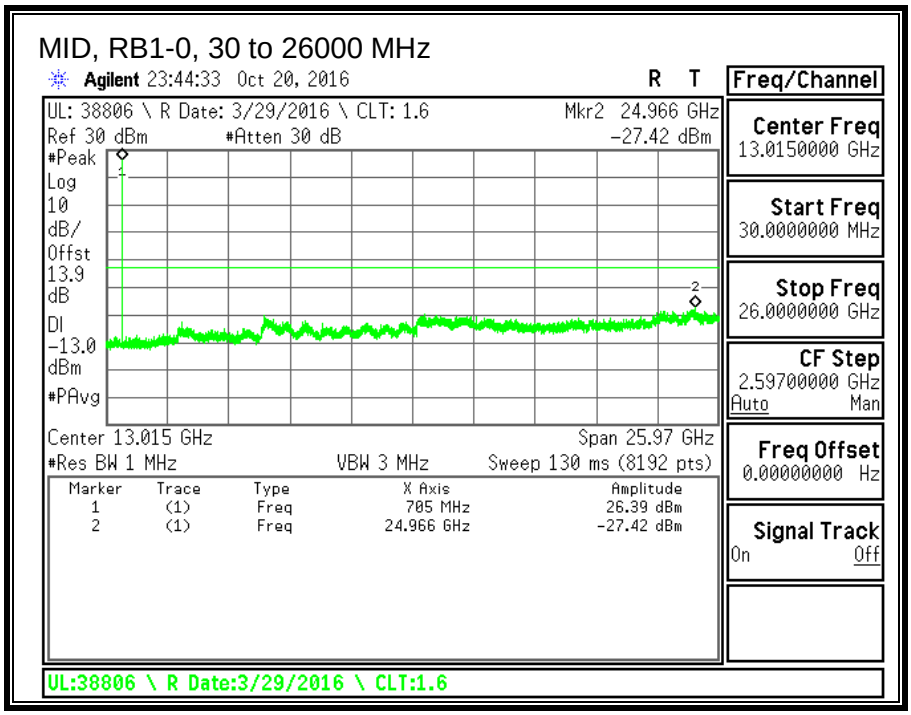


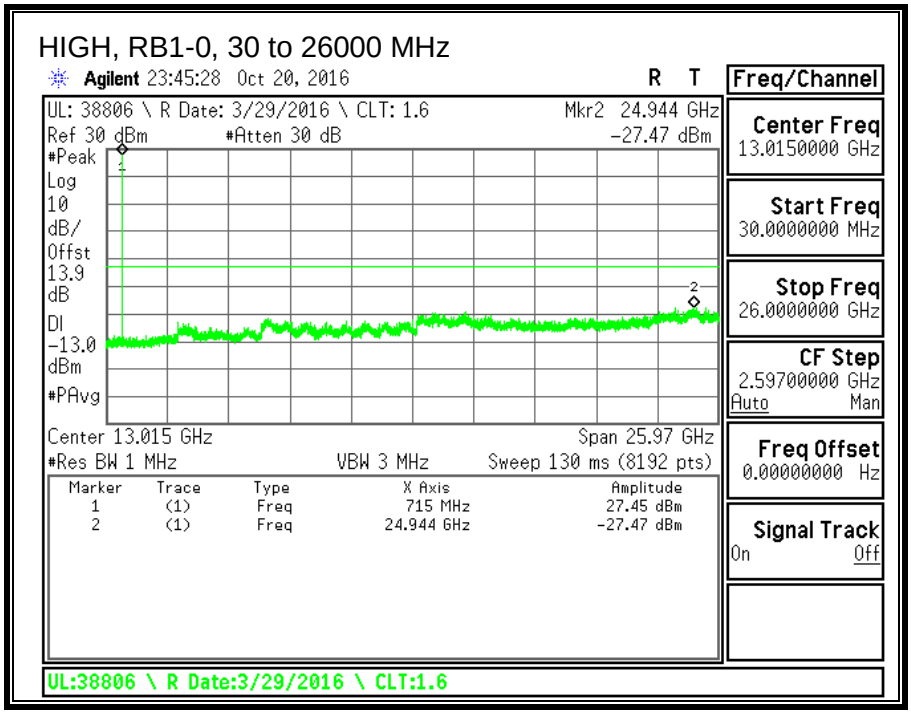
HIGH, RB1-0, 30 to 26000 MHz



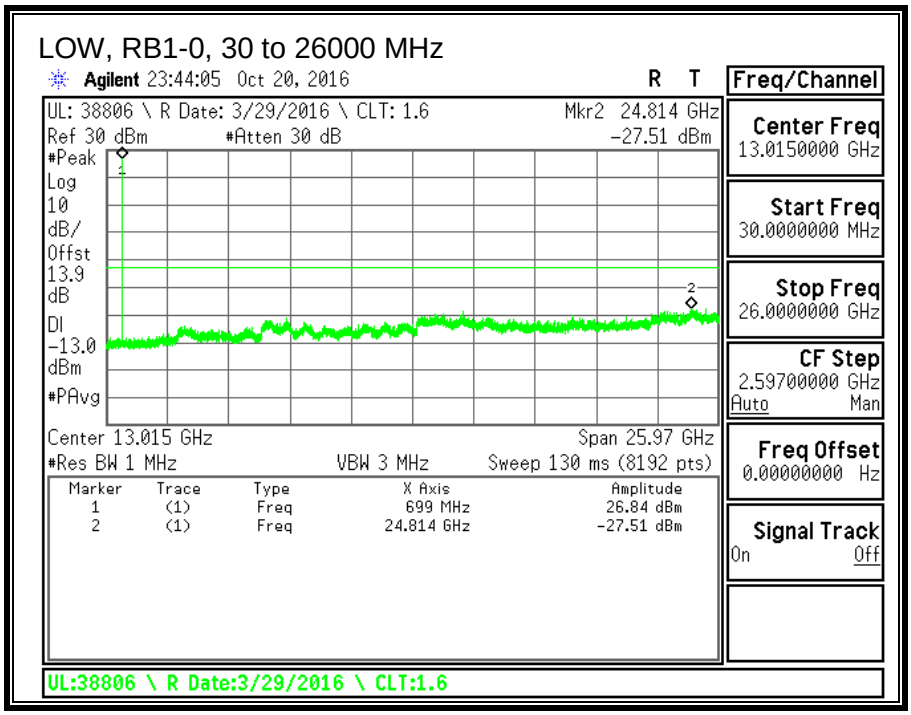
LTE BAND 12 QPSK, (3 MHz)



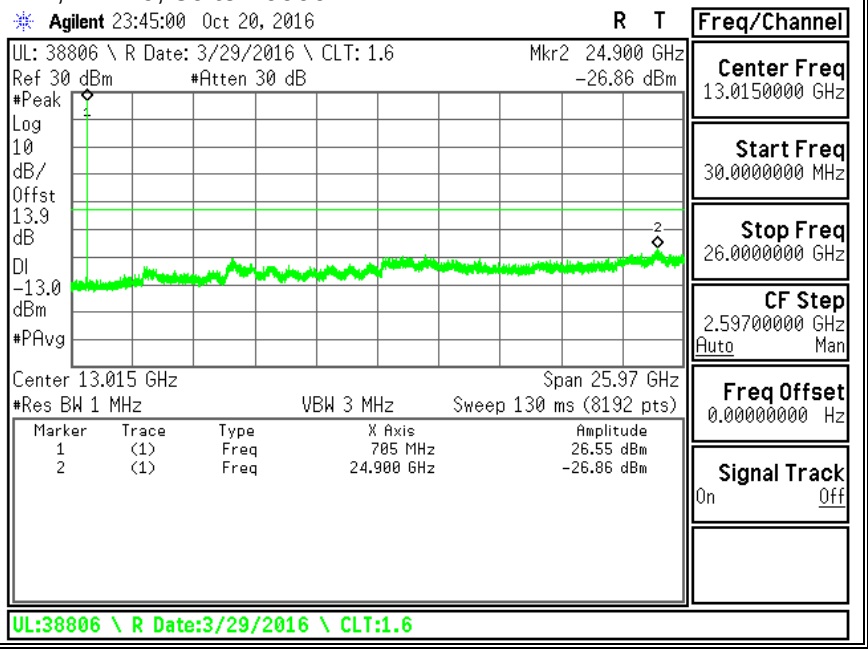




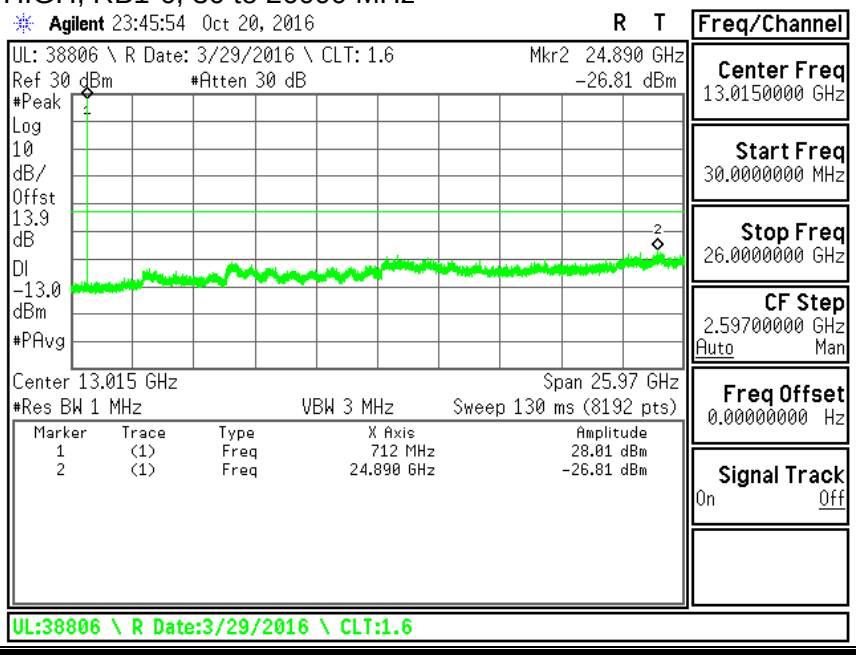
LTE BAND 12 16QAM, (3 MHz)



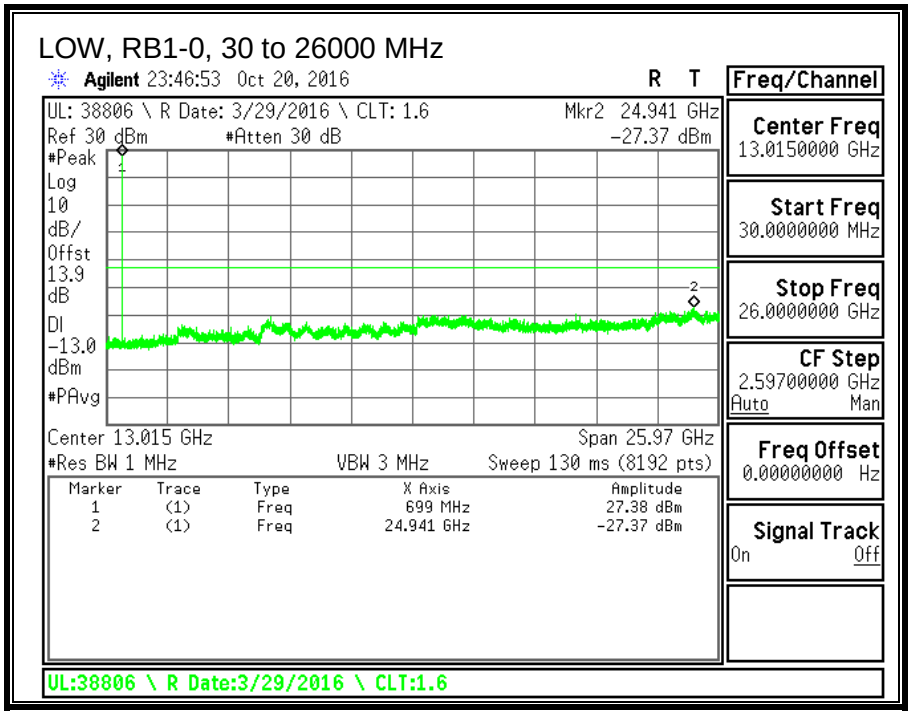
MID, RB1-0, 30 to 26000 MHz

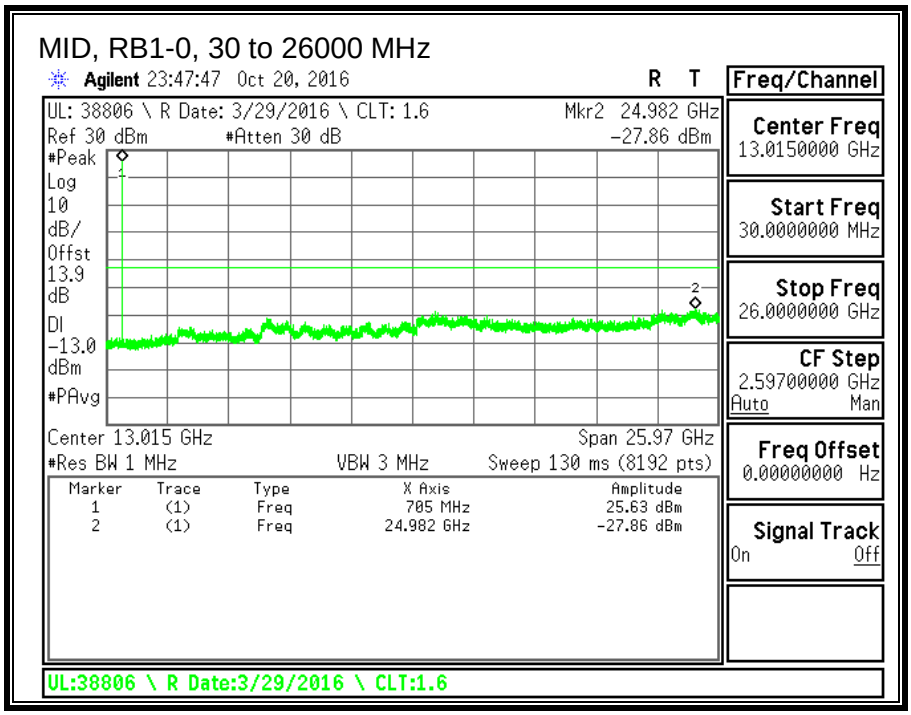


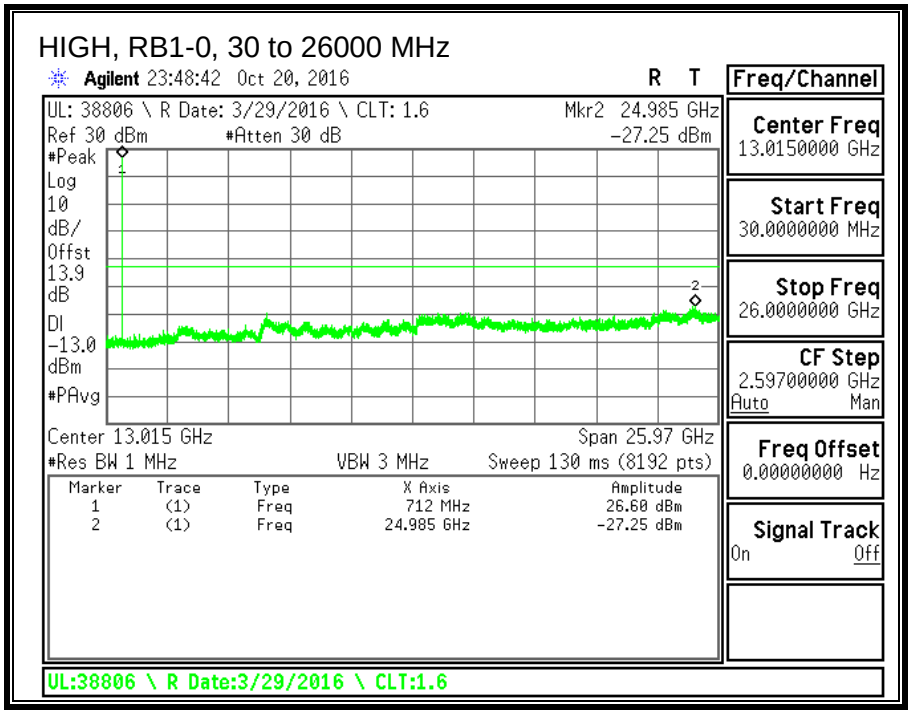
HIGH, RB1-0, 30 to 26000 MHz



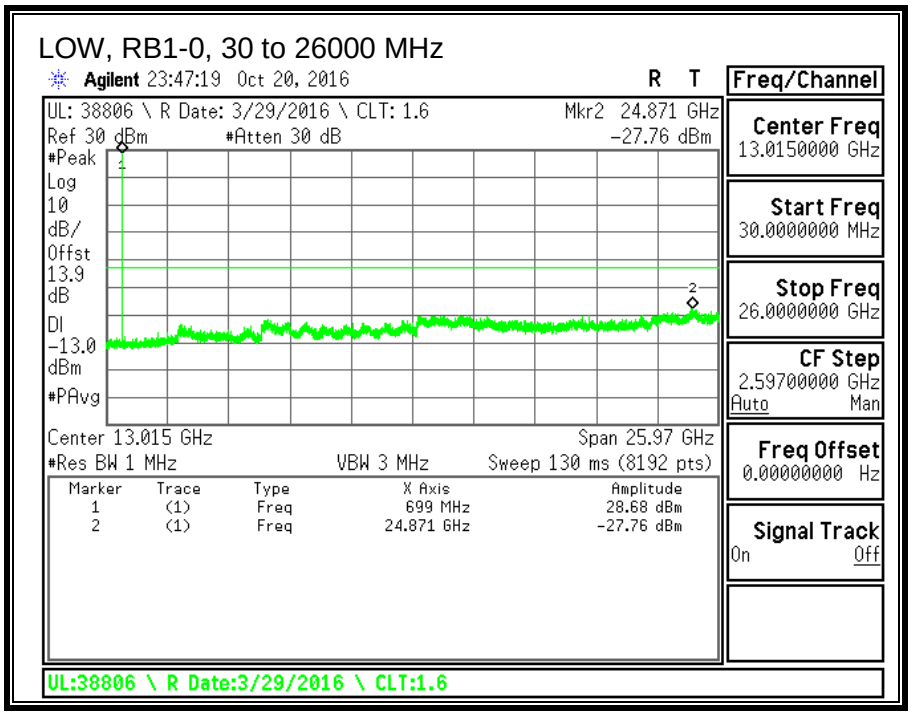
LTE BAND 12 QPSK, (5 MHz)



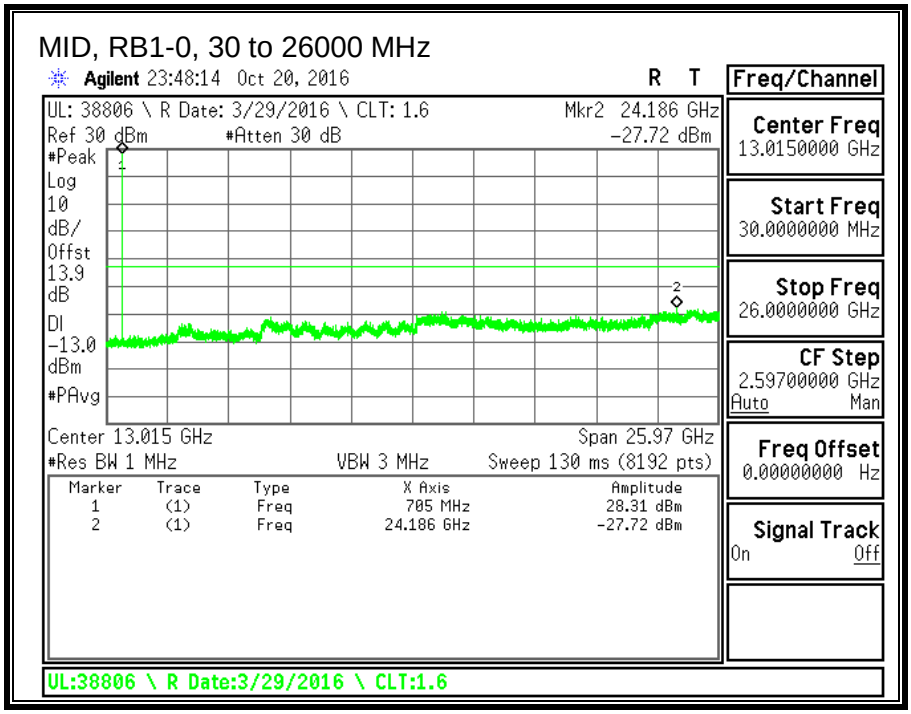




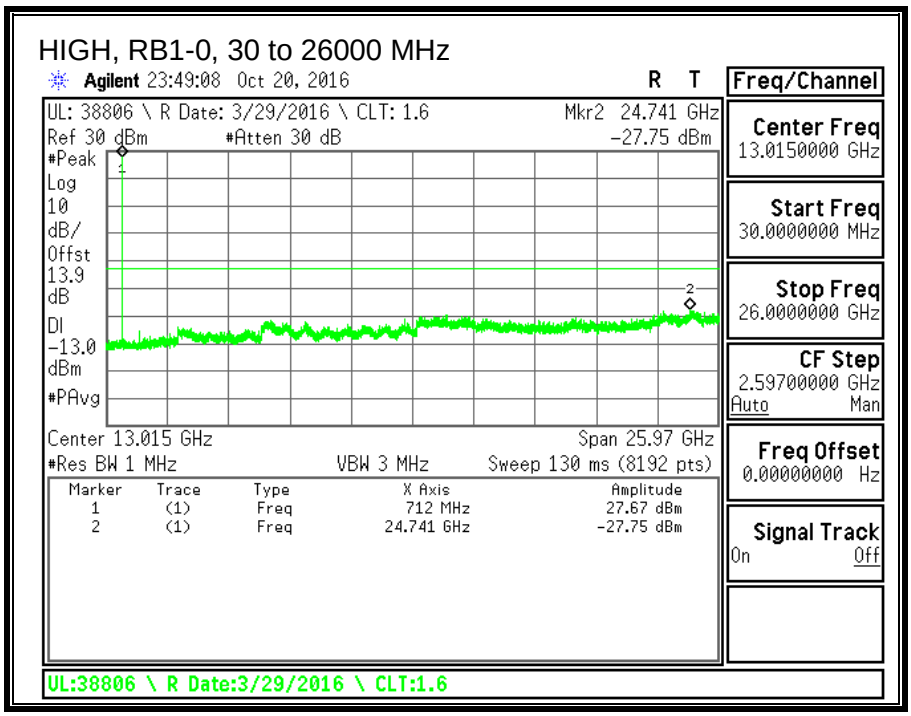
LTE BAND 12 16QAM, (5 MHz)



MID, RB1-0, 30 to 26000 MHz

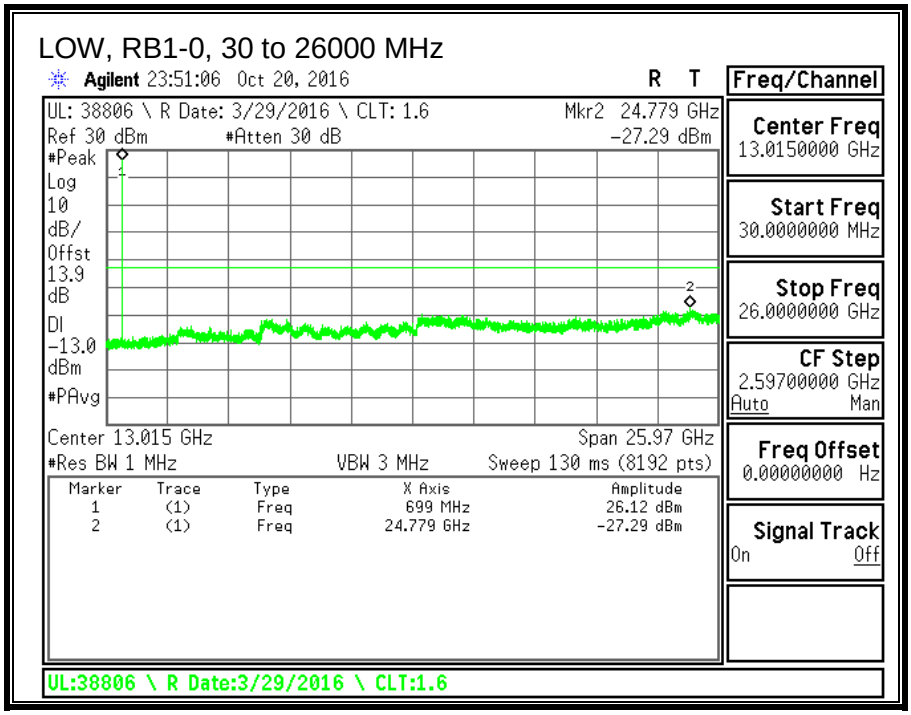


HIGH, RB1-0, 30 to 26000 MHz

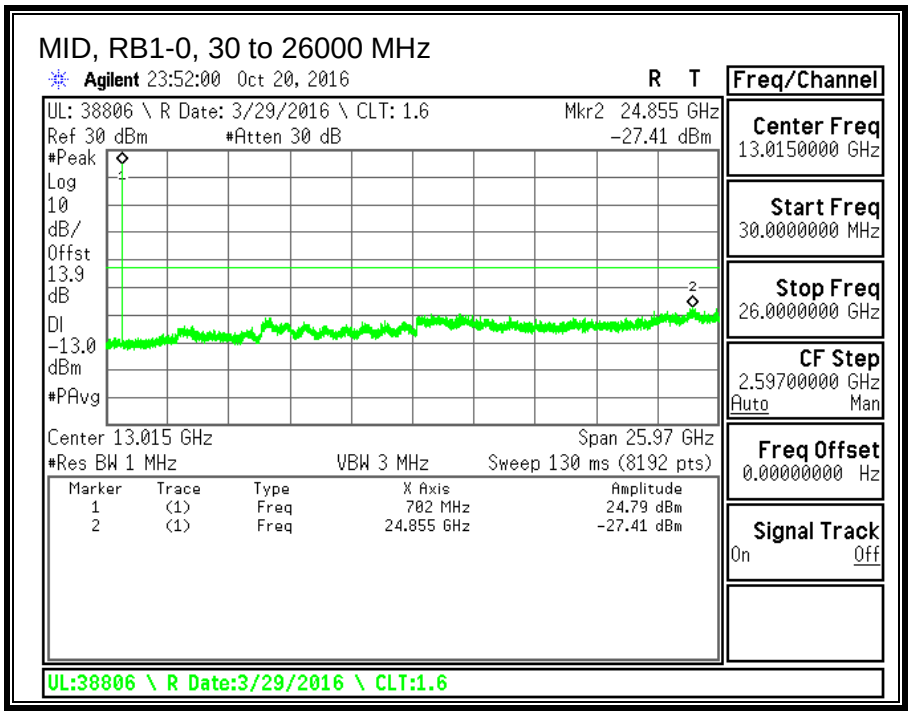


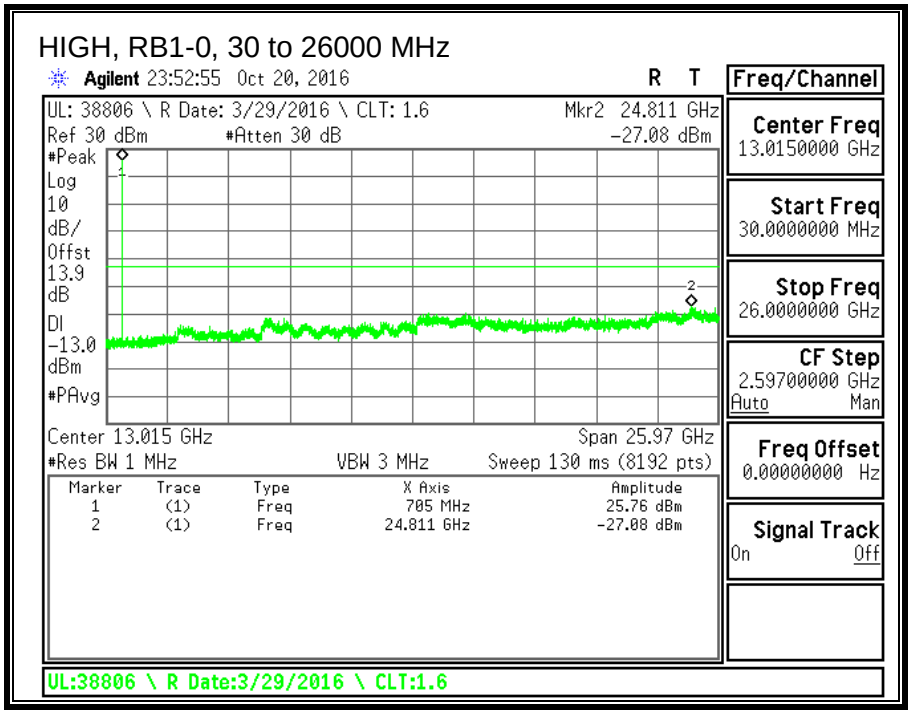
LTE BAND 12 QPSK, (10 MHz)

LOW, RB1-0, 30 to 26000 MHz

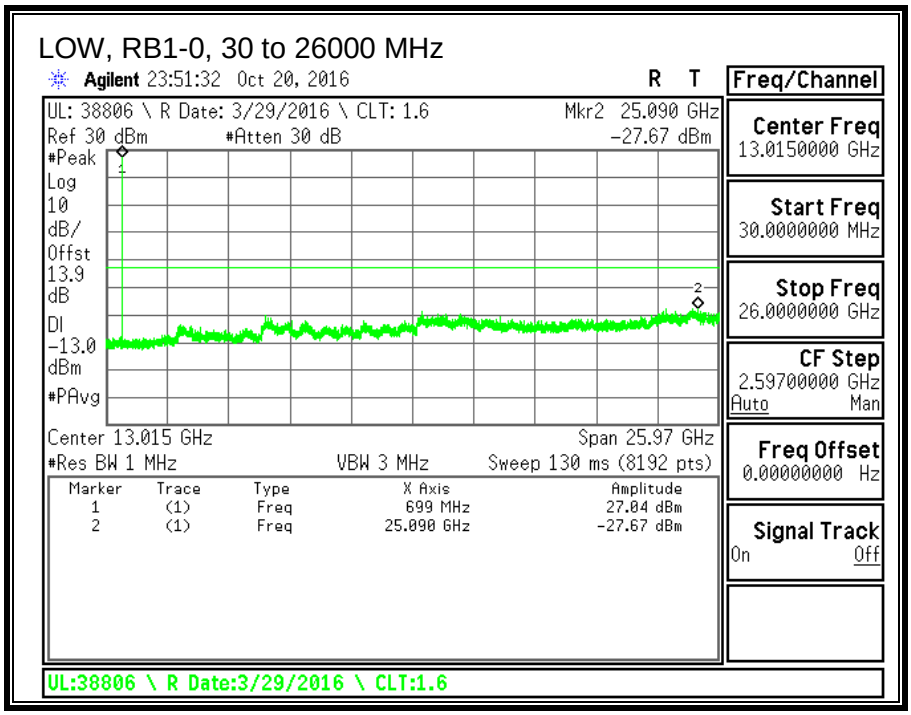


MID, RB1-0, 30 to 26000 MHz

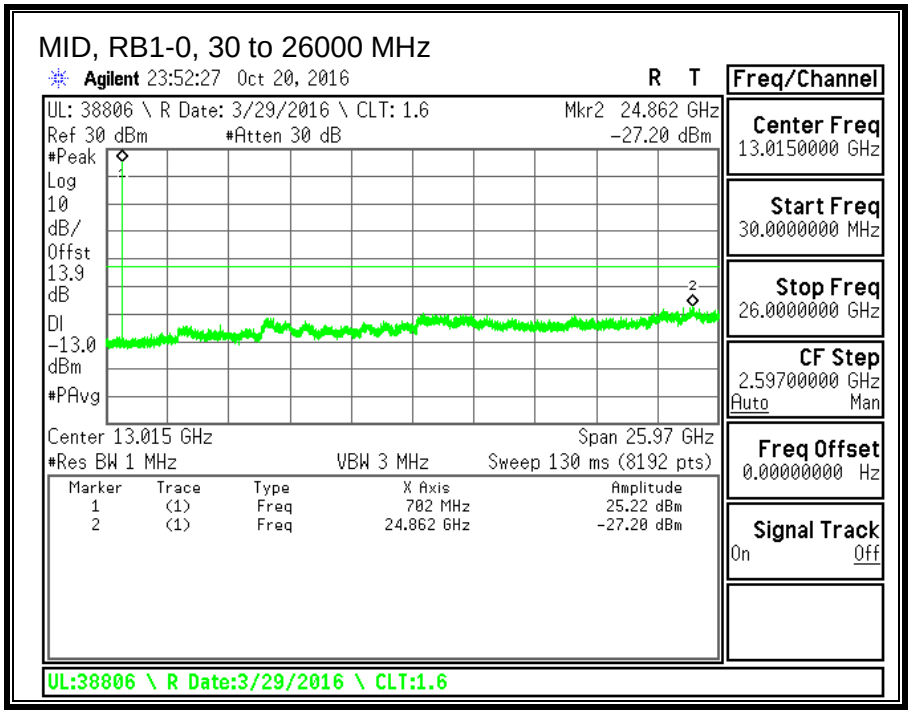




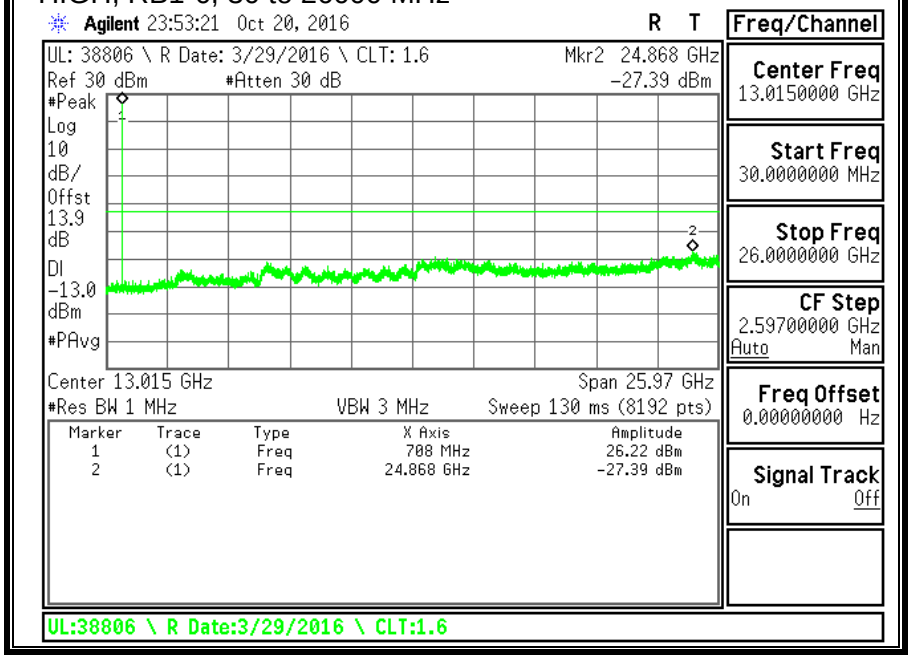
LTE BAND 12 16QAM, (10 MHz)



MID, RB1-0, 30 to 26000 MHz

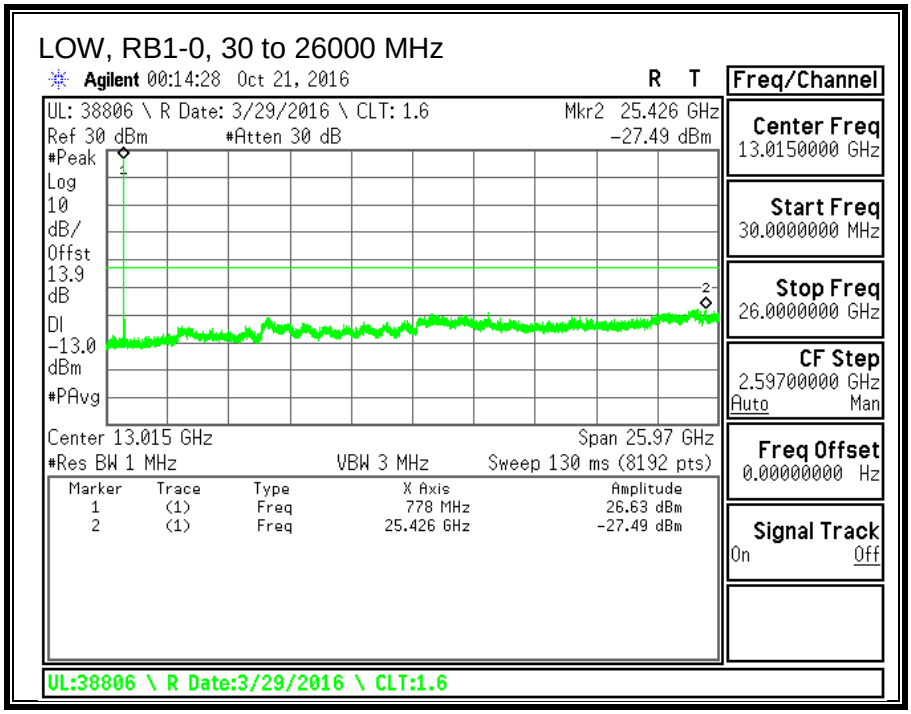


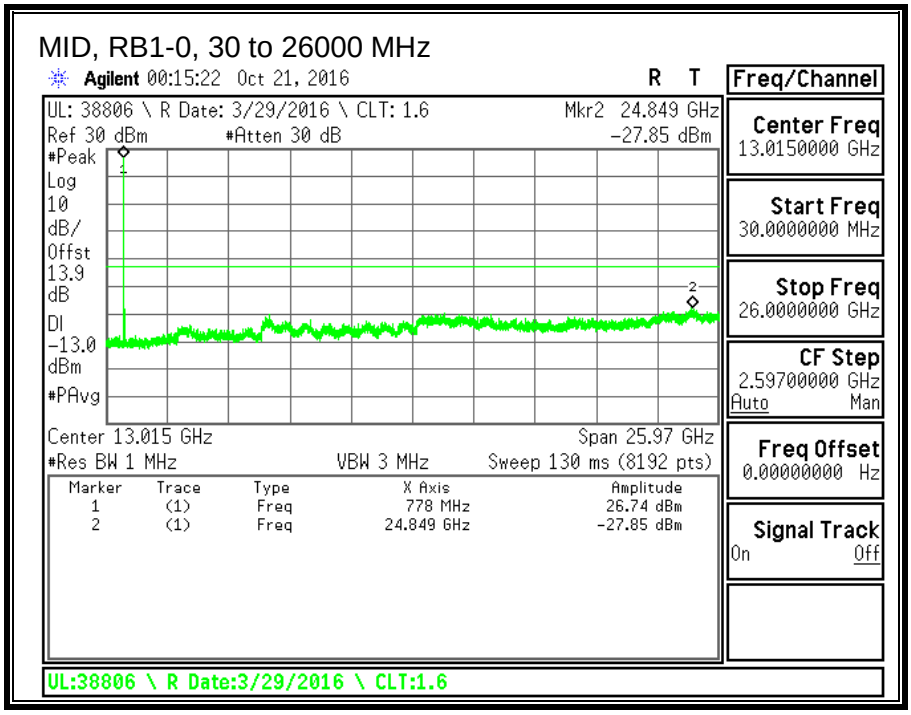
HIGH, RB1-0, 30 to 26000 MHz

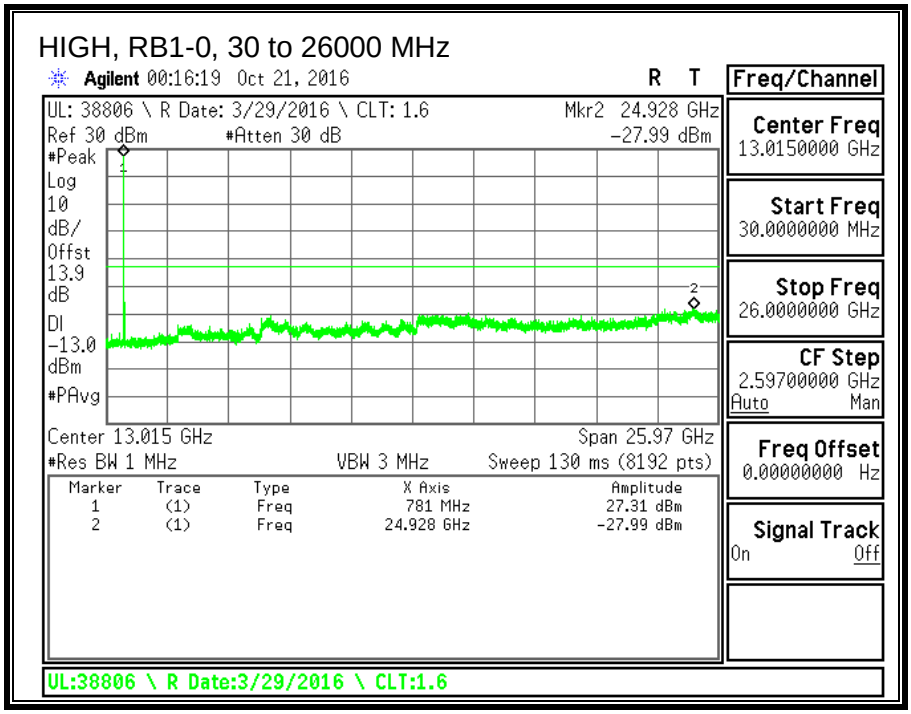


8.3.6. LTE BAND 13

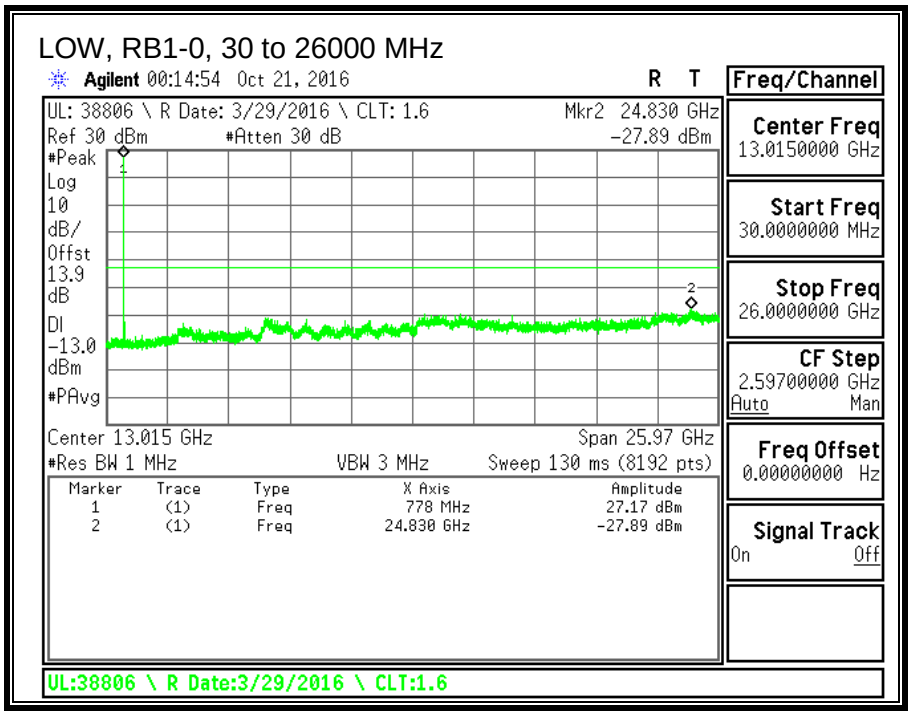
LTE BAND 13 QPSK, (5 MHz)



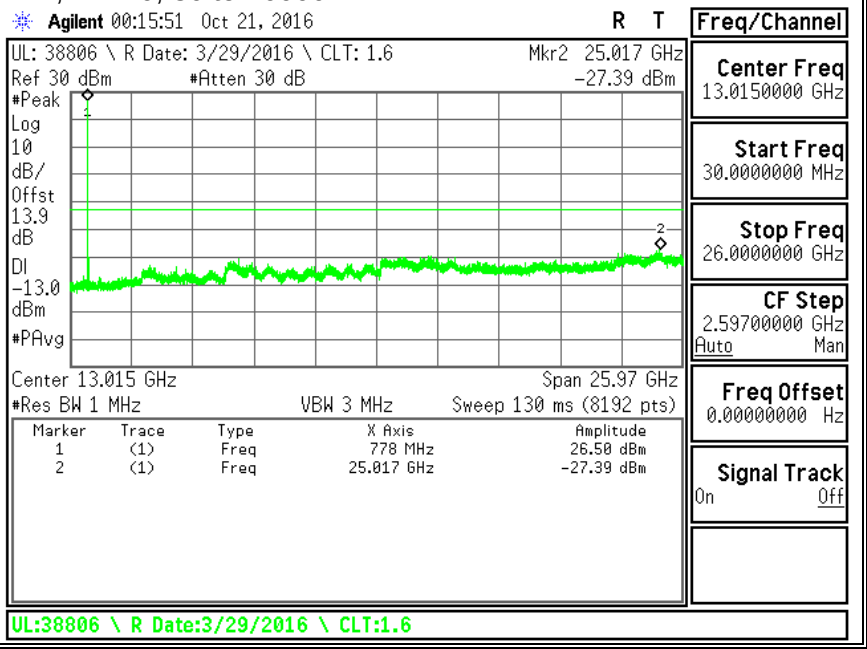




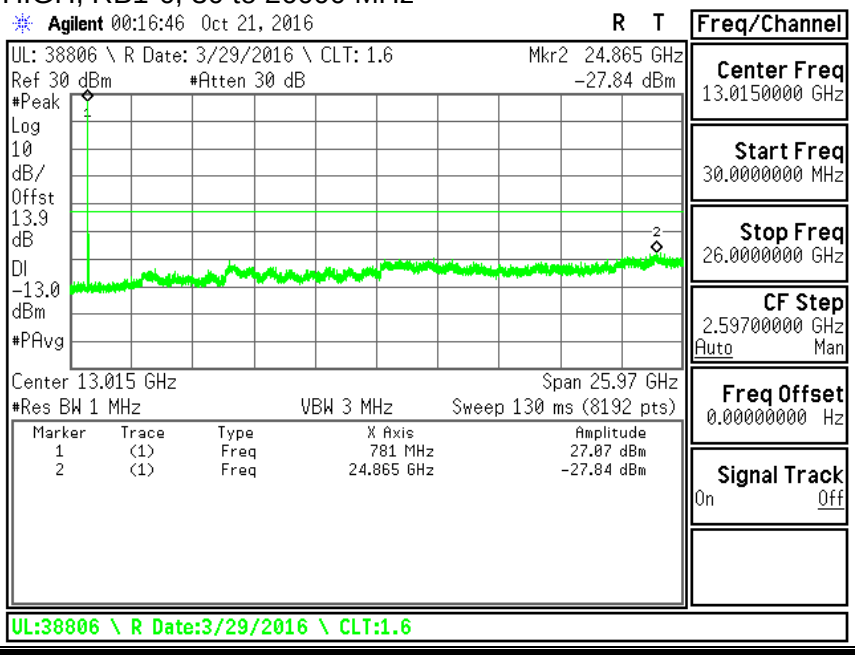
LTE BAND 13 16QAM, (5 MHz)



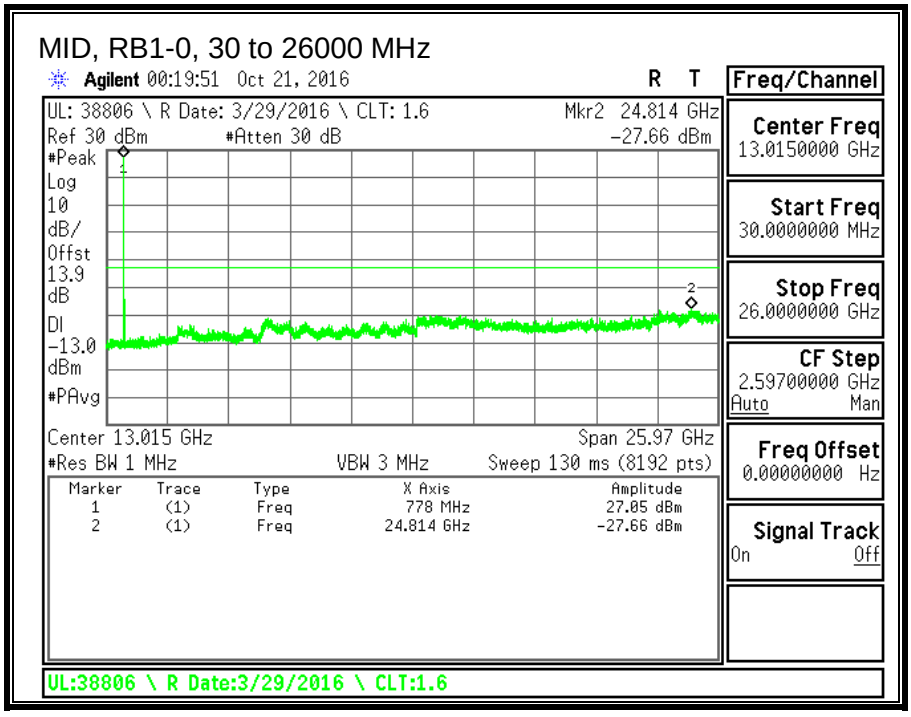
MID, RB1-0, 30 to 26000 MHz



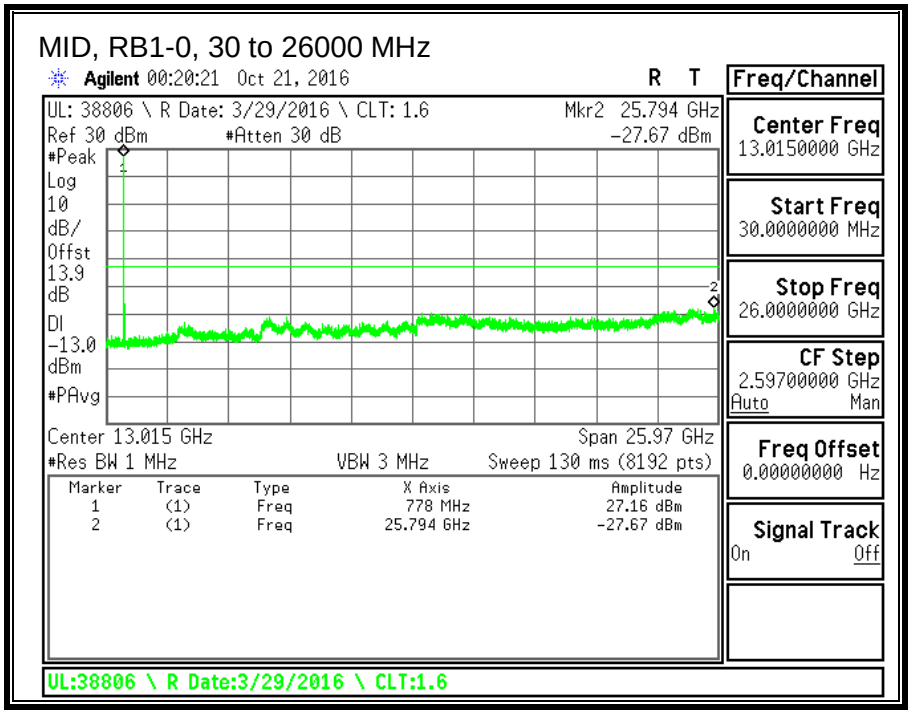
HIGH, RB1-0, 30 to 26000 MHz



LTE BAND 13 QPSK, (10 MHz)

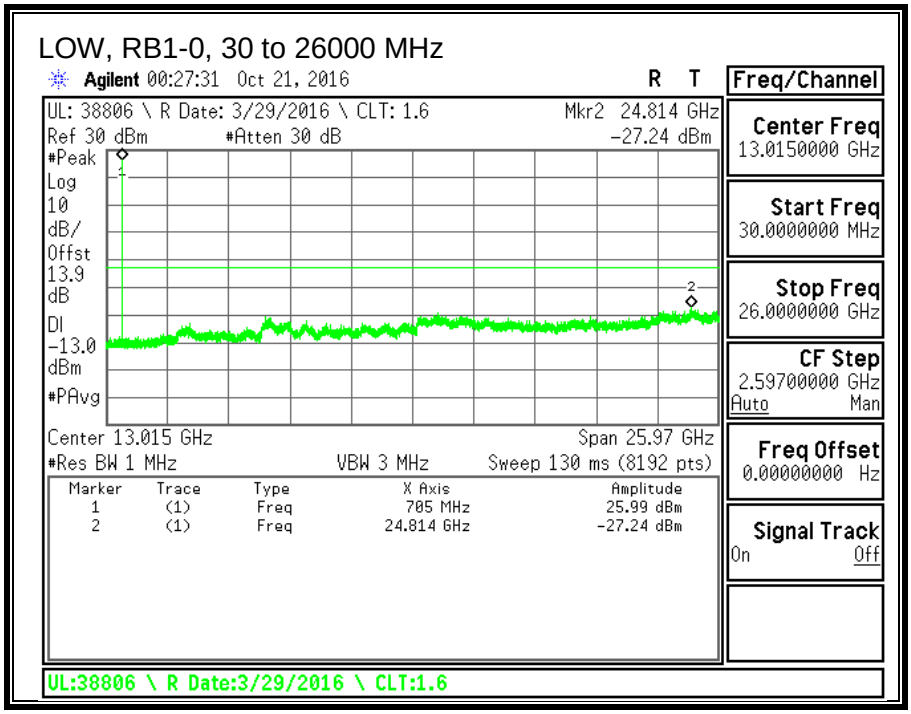


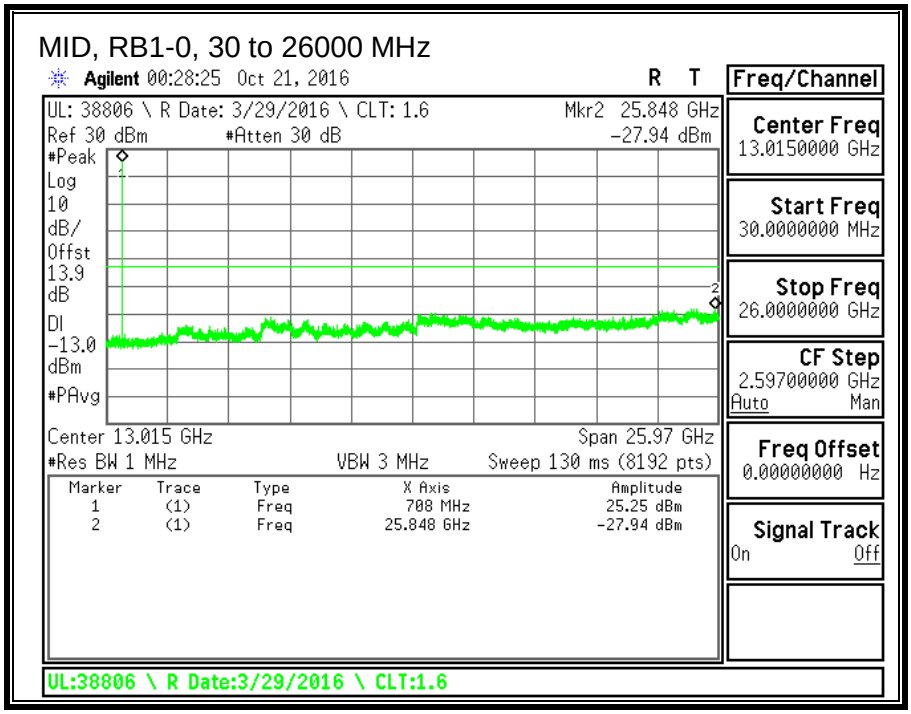
LTE BAND 13 16QAM, (10 MHz)

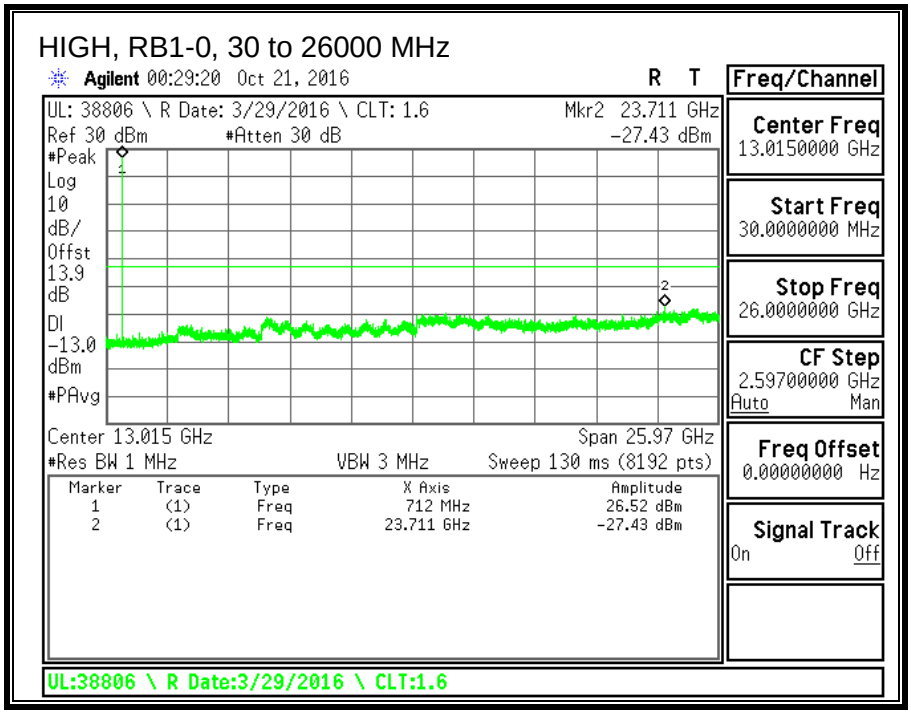


8.3.7. LTE BAND 17

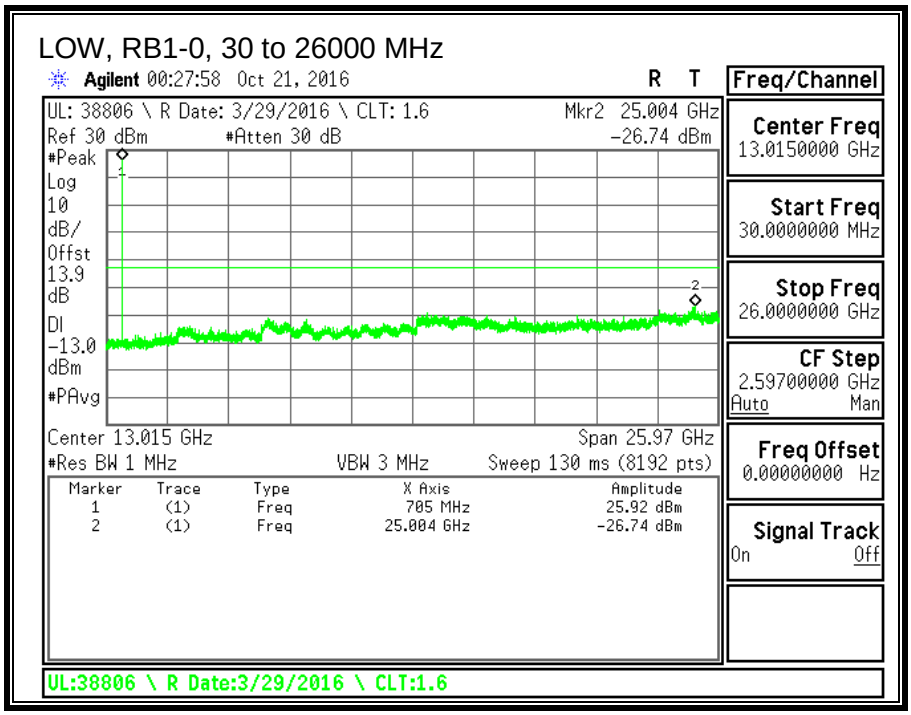
LTE BAND 17 QPSK, (5 MHz)



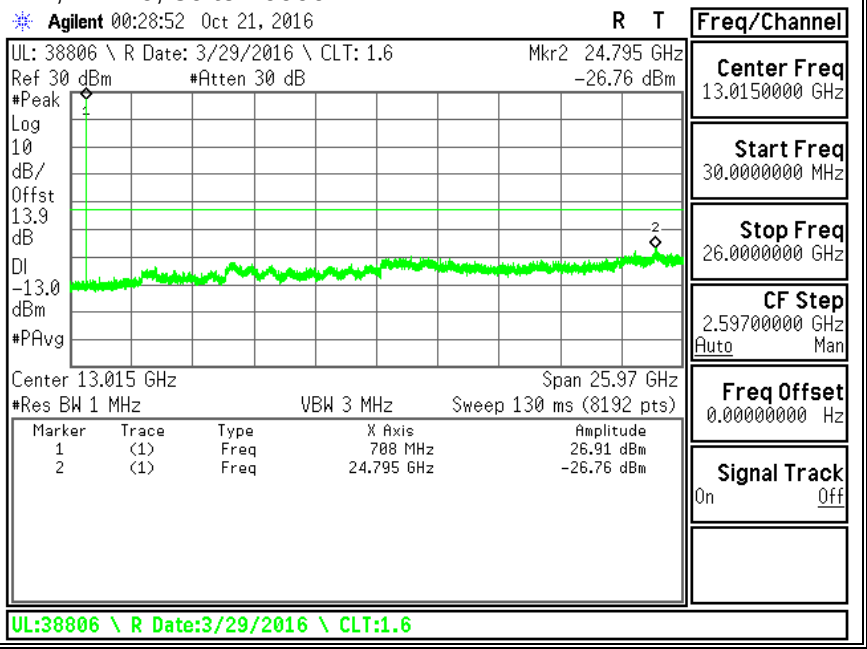




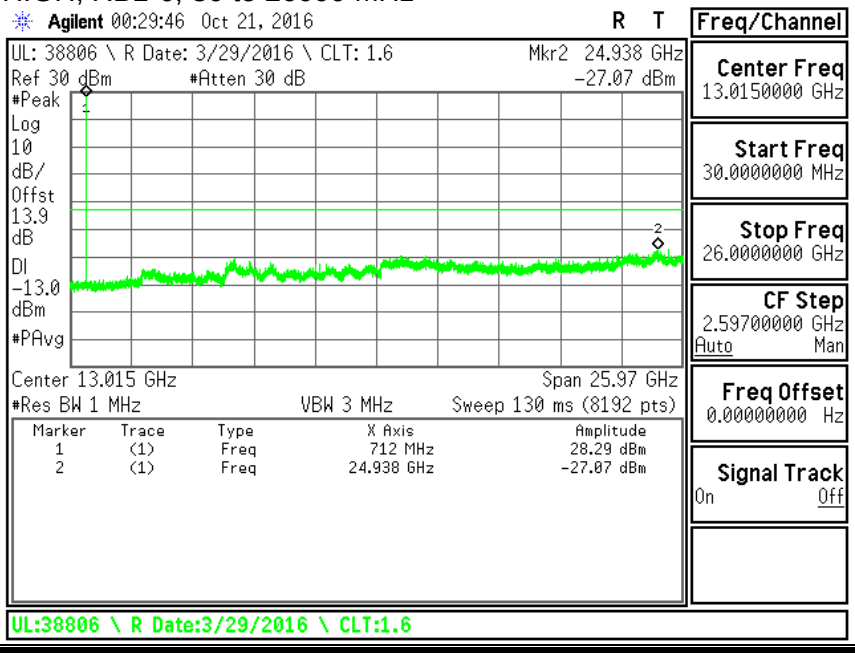
LTE BAND 17 16QAM, (5 MHz)



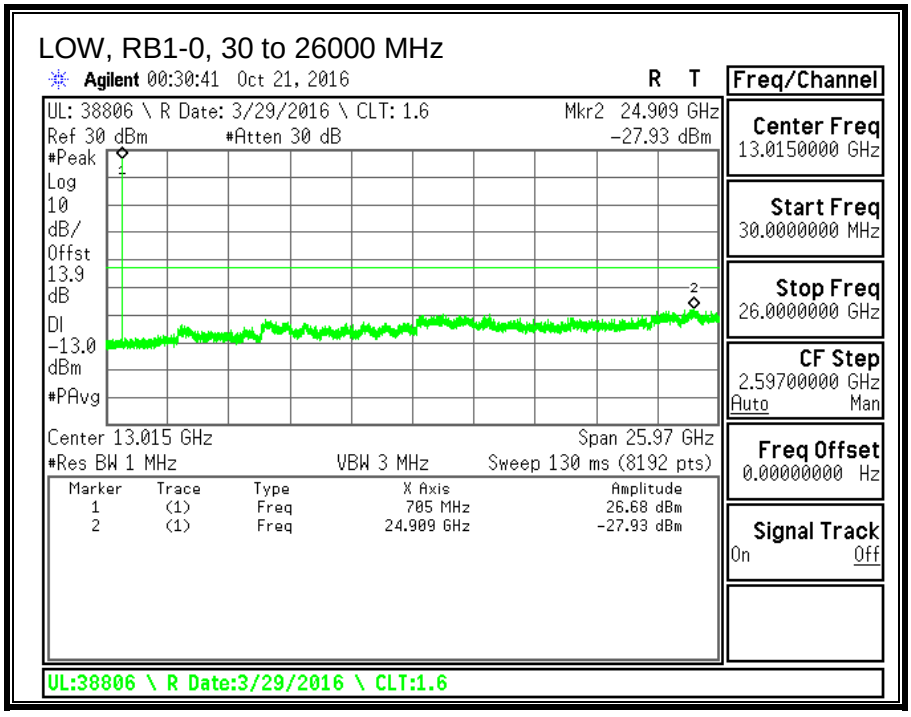
MID, RB1-0, 30 to 26000 MHz

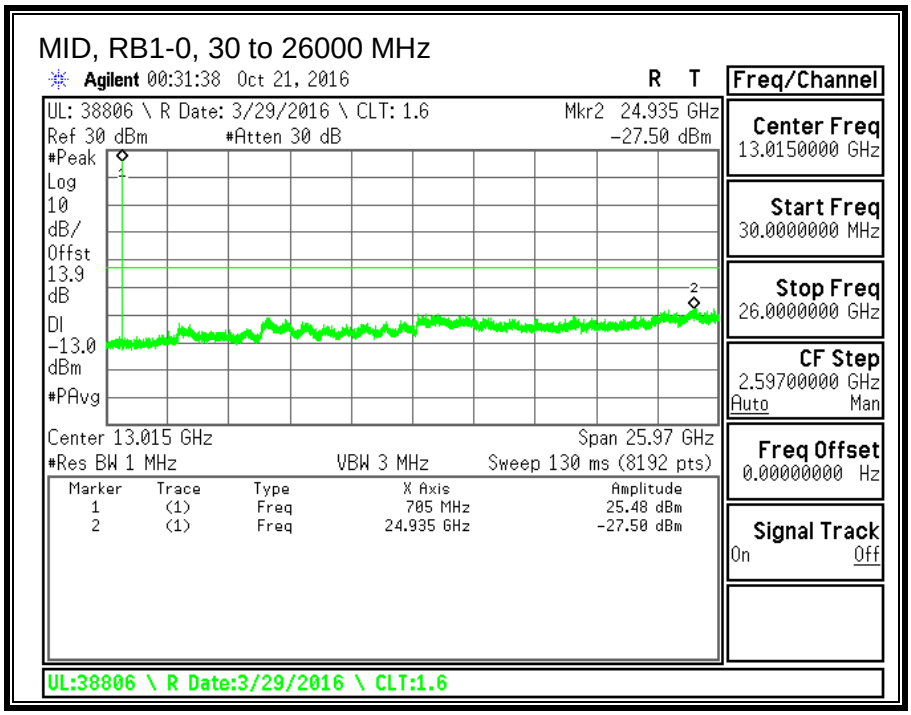


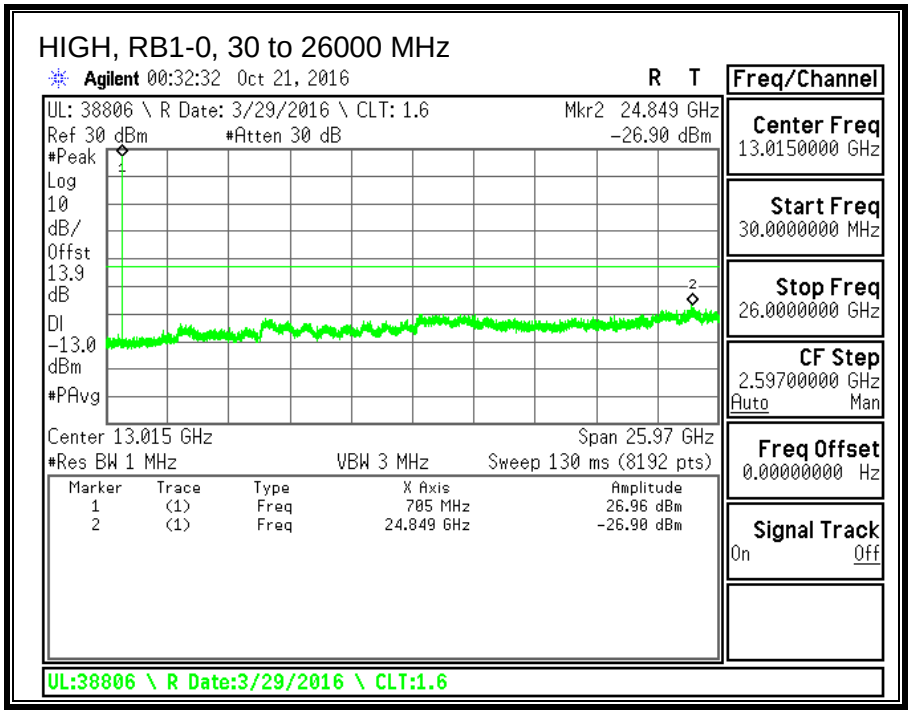
HIGH, RB1-0, 30 to 26000 MHz



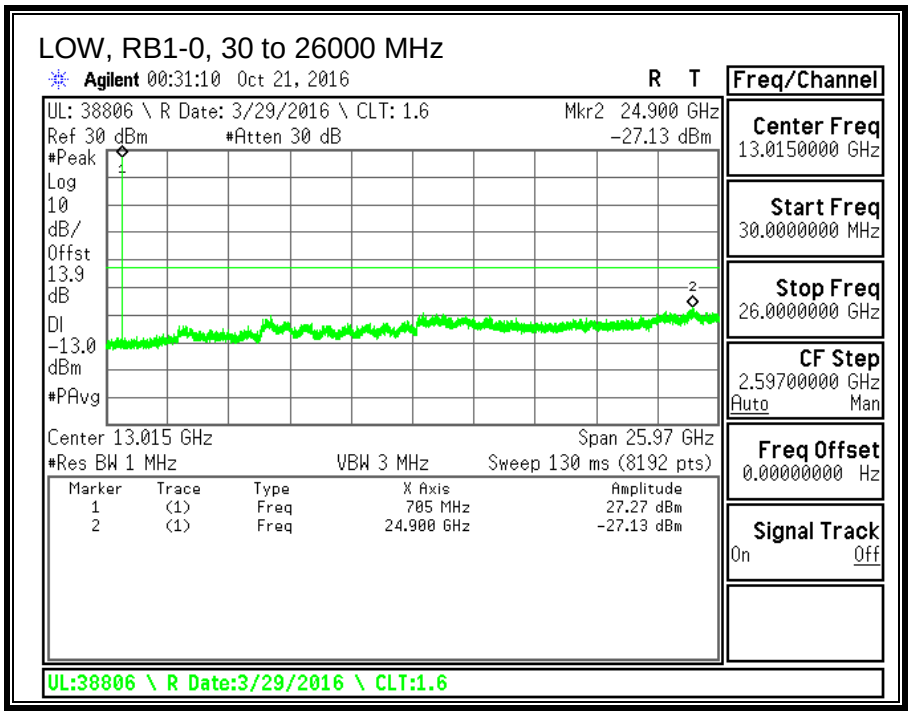
LTE BAND 17 QPSK, (10 MHz)



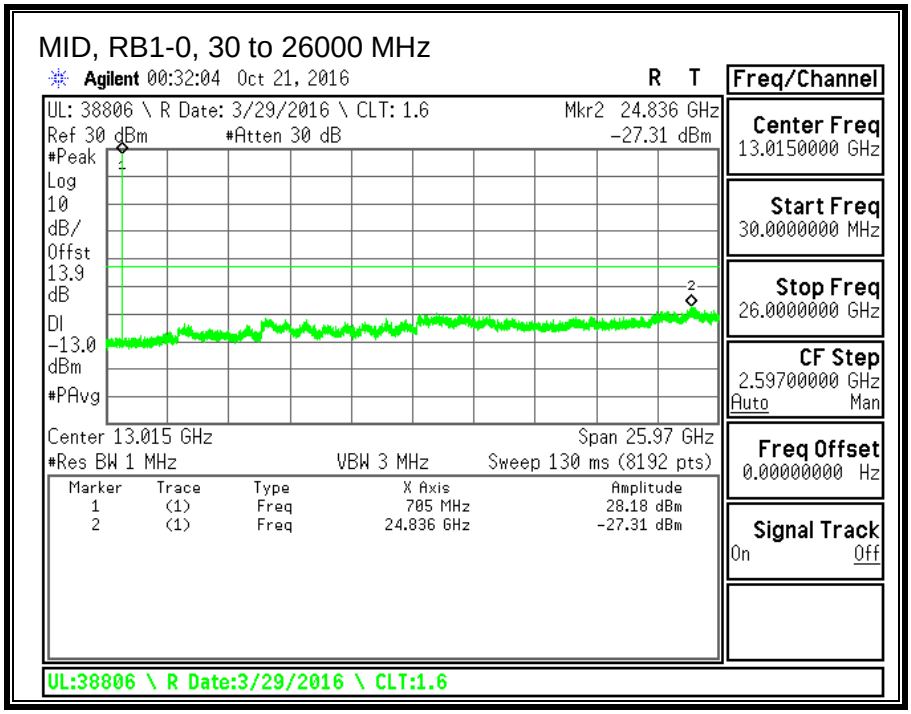




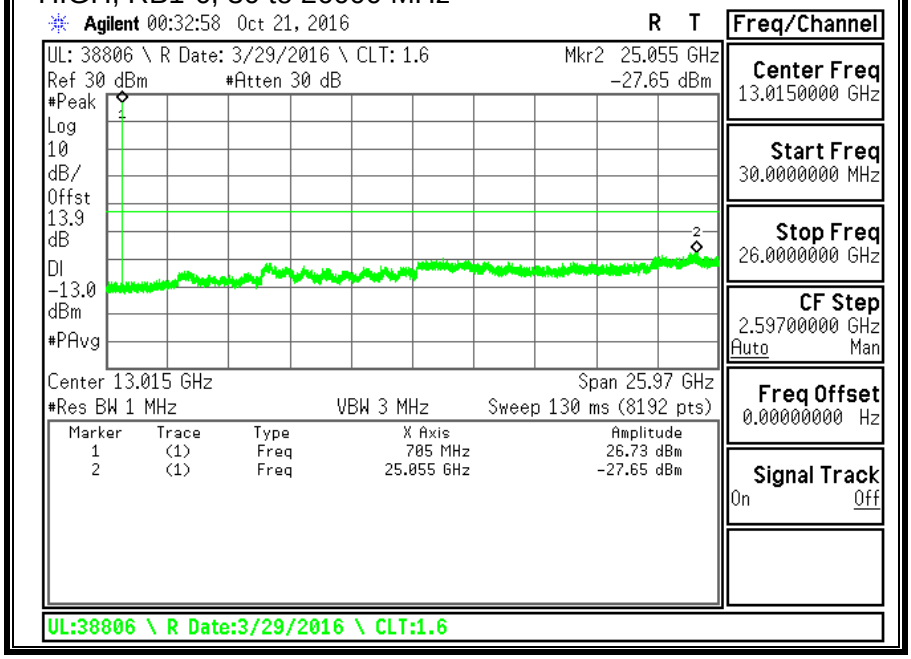
LTE BAND 17 16QAM, (10 MHz)



MID, RB1-0, 30 to 26000 MHz



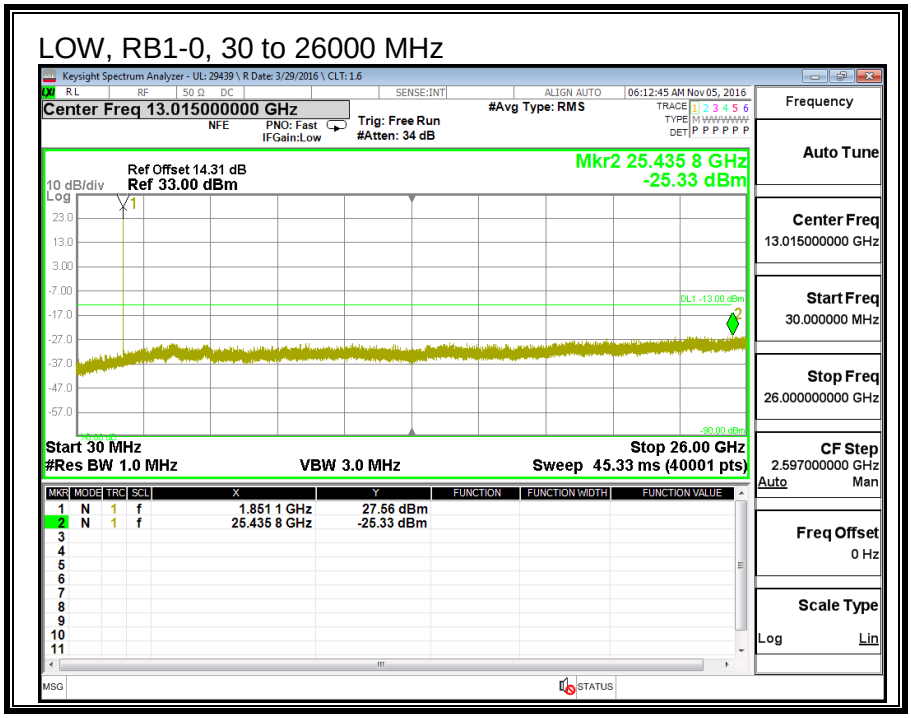
HIGH, RB1-0, 30 to 26000 MHz



8.3.8. LTE BAND 25

LTE BAND 25 QPSK, (1.4 MHz)

LOW, RB1-0, 30 to 26000 MHz



MID, RB1-0, 30 to 26000 MHz