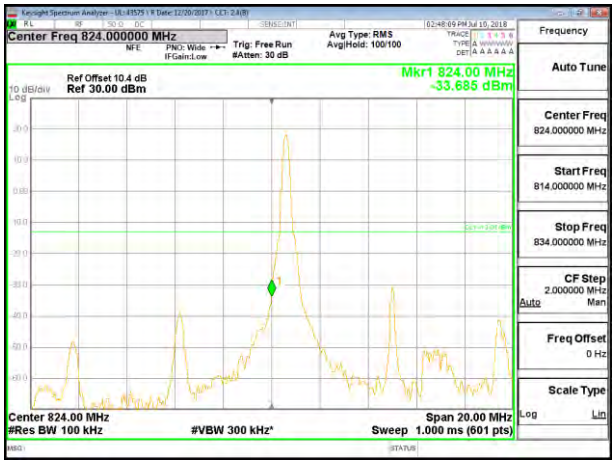
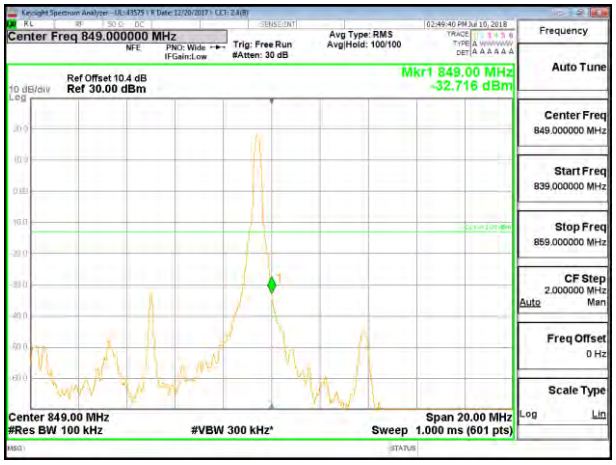
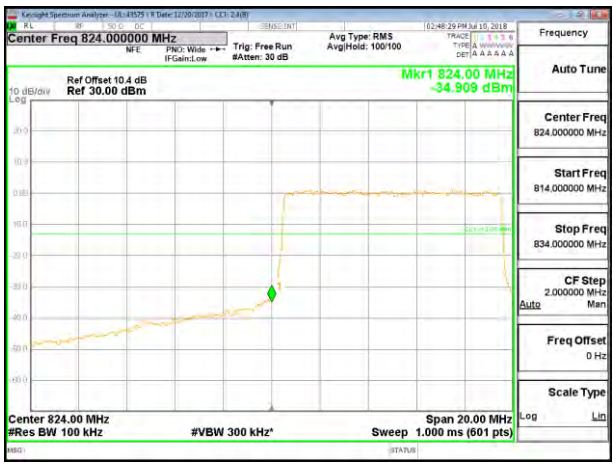


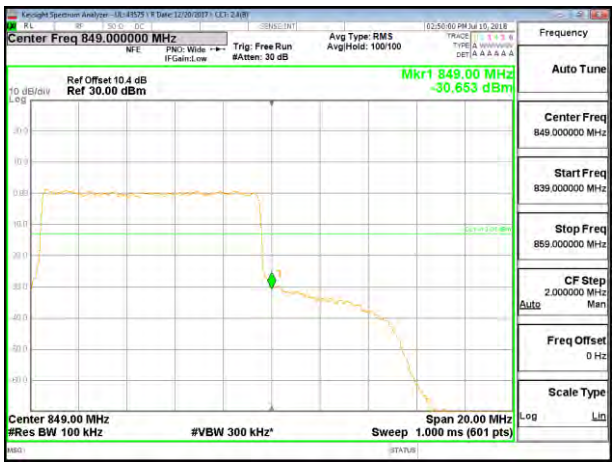
LTE B5 10MHz 16QAM Low Channel RB1-0



LTE B5 10MHz 16QAM High Channel RB1-0

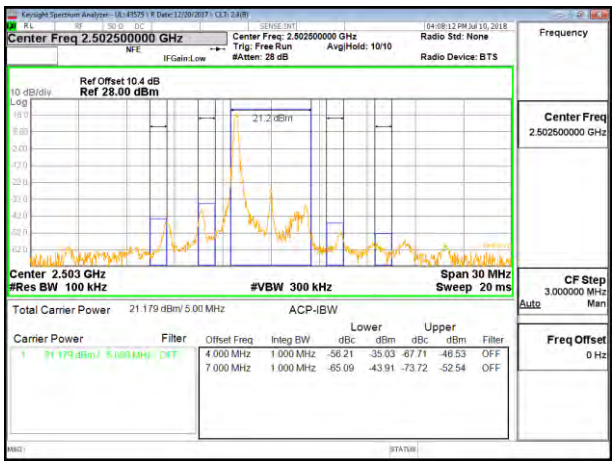


LTE B5 10MHz 16QAM Low Channel RB50-0

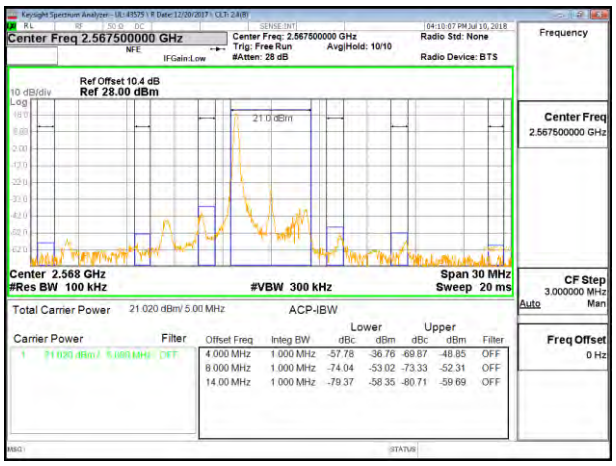


LTE B5 10MHz 16QAM High Channel RB50-0

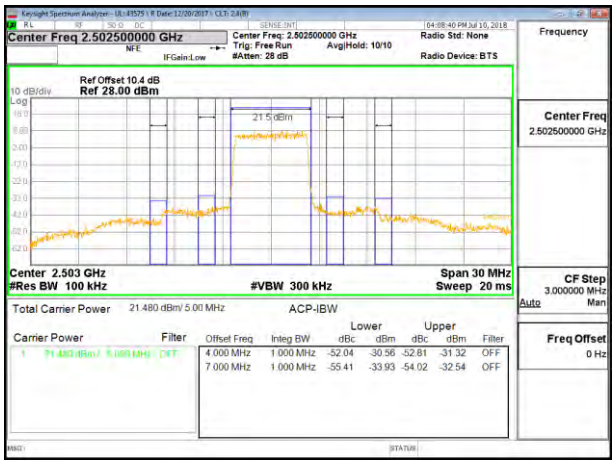
8.2.6. LTE BAND 7 ADJACENT CHANNEL POWER



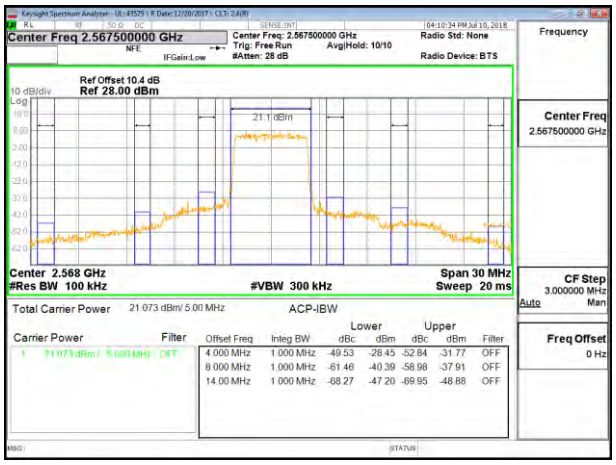
LTE B7 5MHz QPSK Low Channel RB1-0



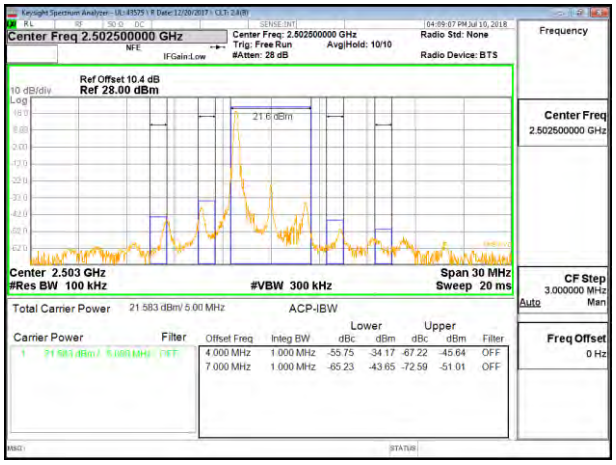
LTE B7 5MHz QPSK High Channel RB1-0



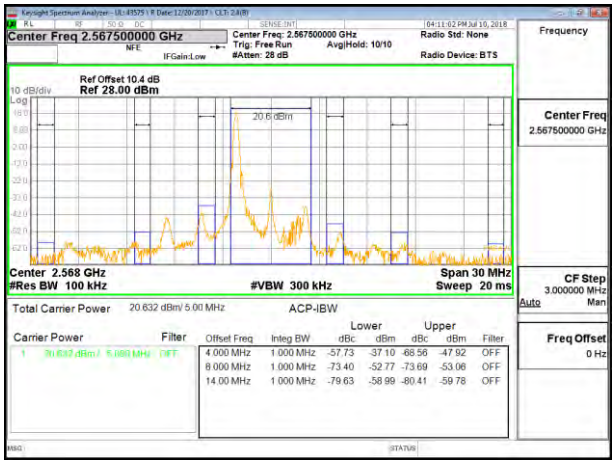
LTE B7 5MHz QPSK Low Channel RB25-0



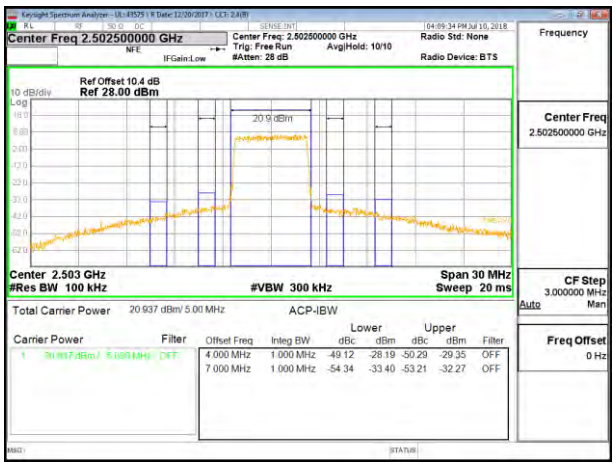
LTE B7 5MHz QPSK High Channel RB25-0



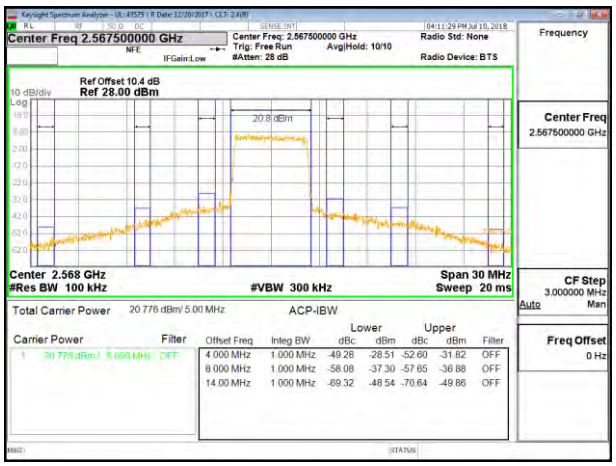
LTE B7 5MHz 16QAM Low Channel RB1-0



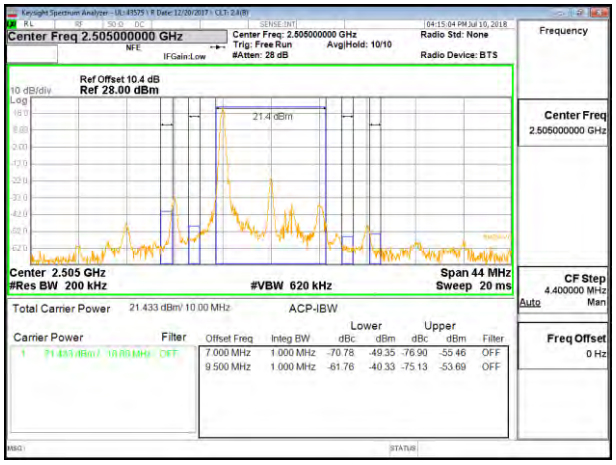
LTE B7 5MHz 16QAM High Channel RB1-0



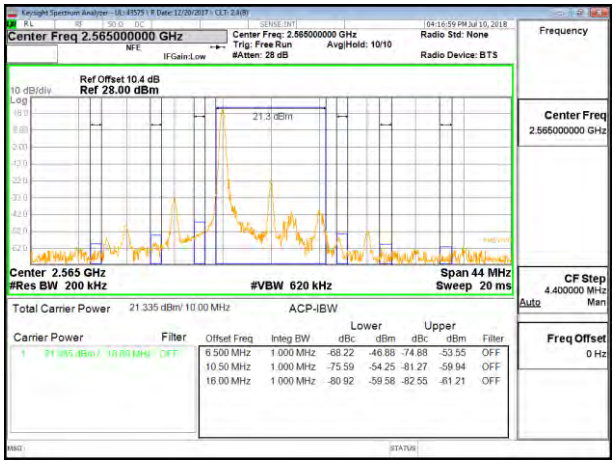
LTE B7 5MHz 16QAM Low Channel RB25-0



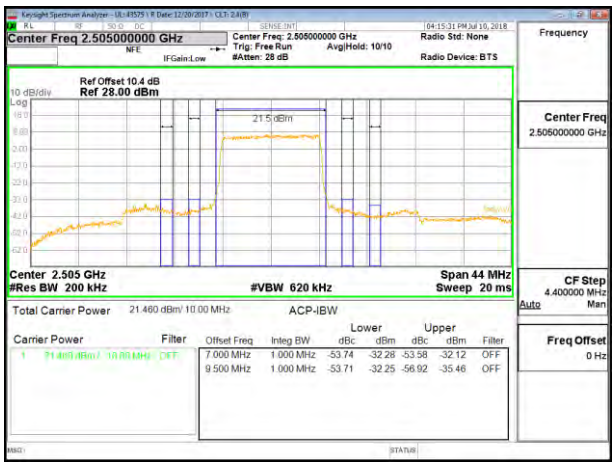
LTE B7 5MHz 16QAM High Channel RB25-0



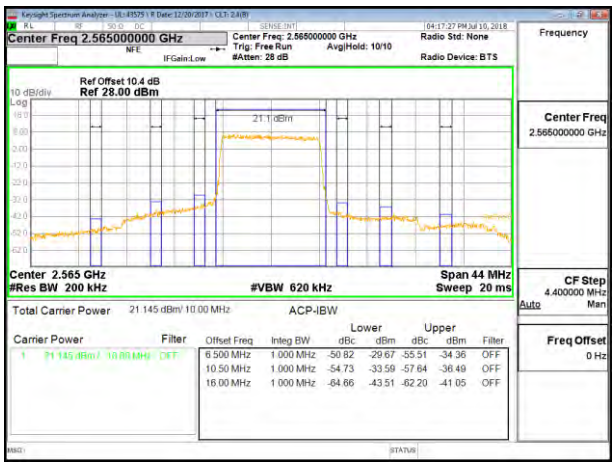
LTE B7 10MHz QPSK Low Channel RB1-0



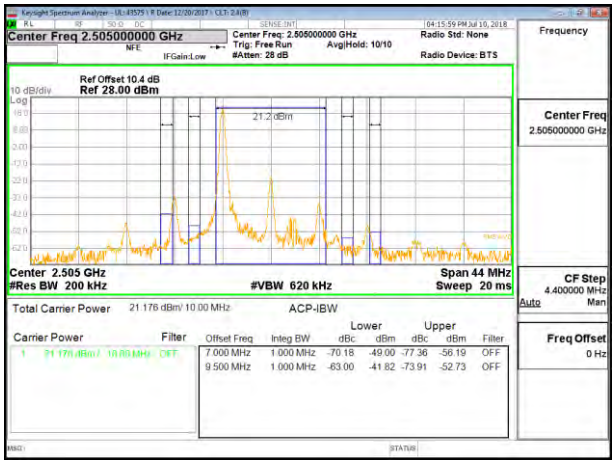
LTE B7 10MHz QPSK High Channel RB1-0



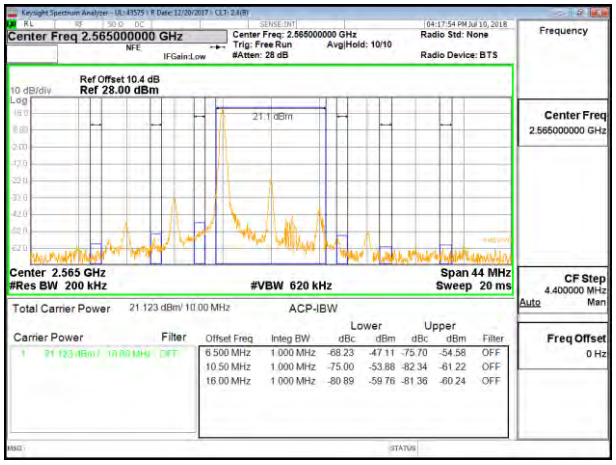
LTE B7 10MHz QPSK Low Channel RB50-0



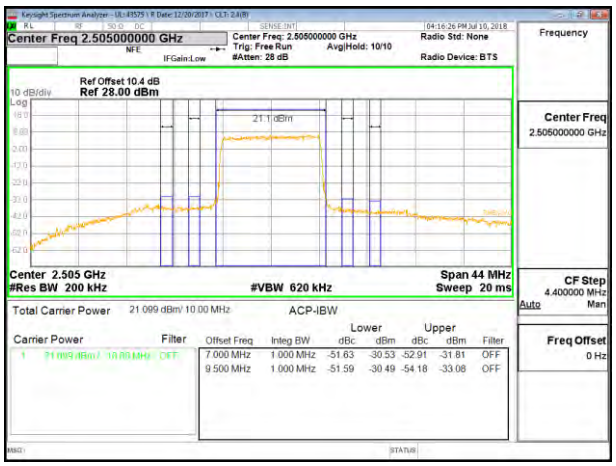
LTE B7 10MHz QPSK High Channel RB50-0



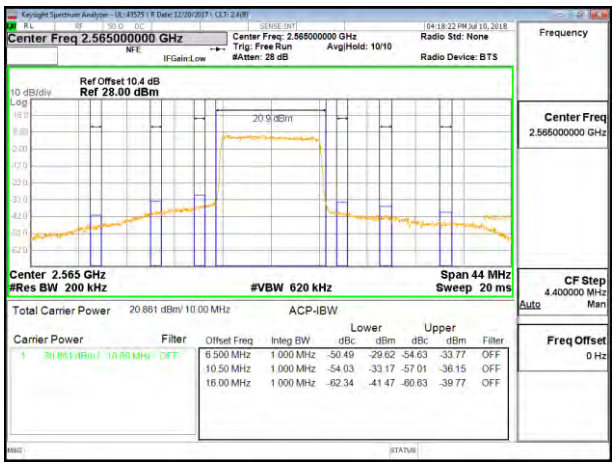
LTE B7 10MHz 16QAM Low Channel RB1-0



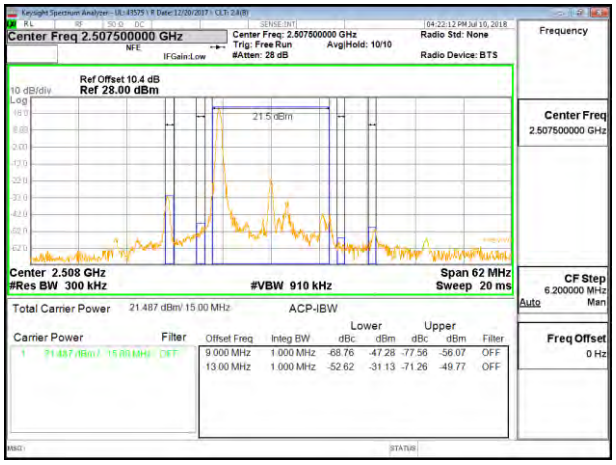
LTE B7 10MHz 16QAM High Channel RB1-0



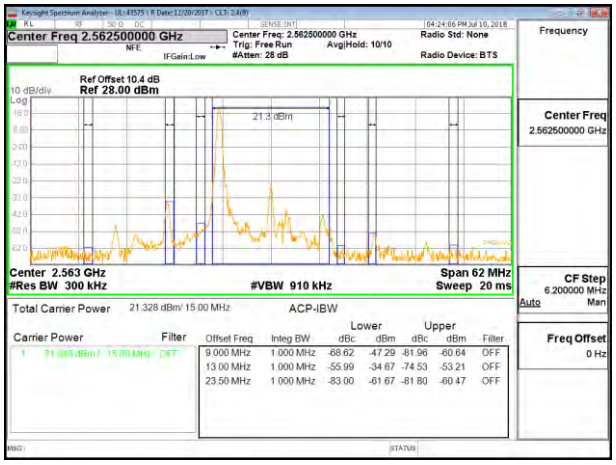
LTE B7 10MHz 16QAM Low Channel RB50-0



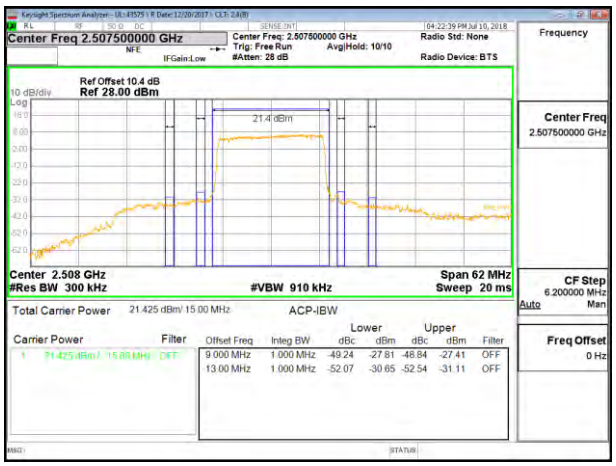
LTE B7 10MHz 16QAM High Channel RB50-0



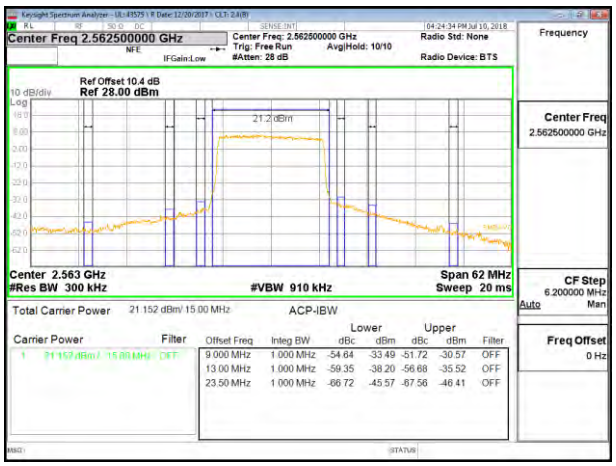
LTE B7 15MHz QPSK Low Channel RB1-0



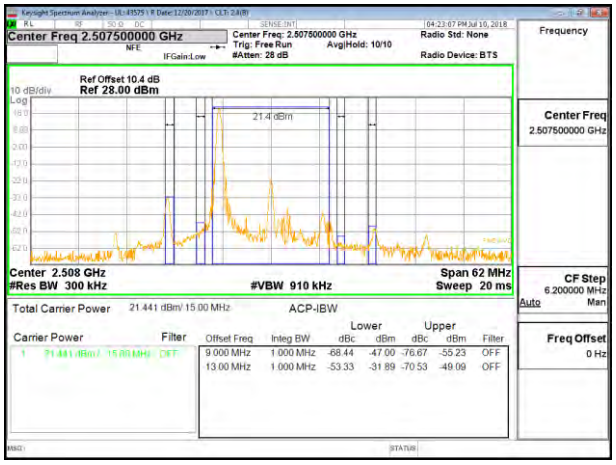
LTE B7 15MHz QPSK High Channel RB1-0



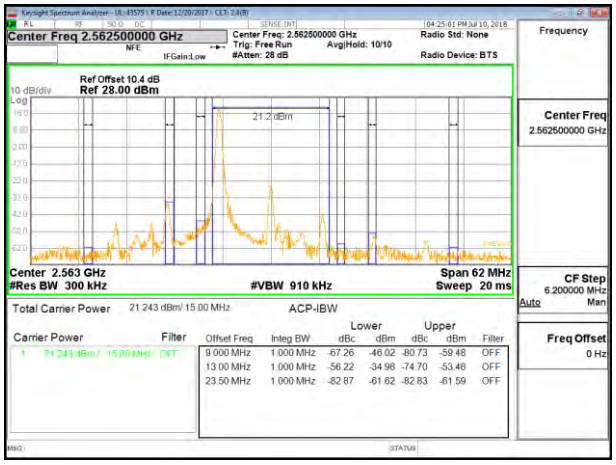
LTE B7 15MHz QPSK Low Channel RB75-0



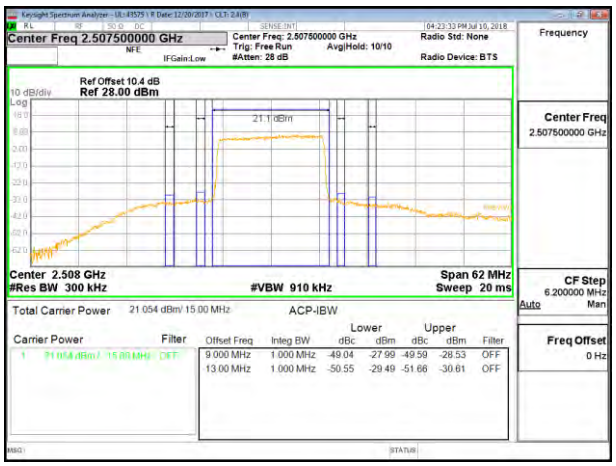
LTE B7 15MHz QPSK High Channel RB75-0



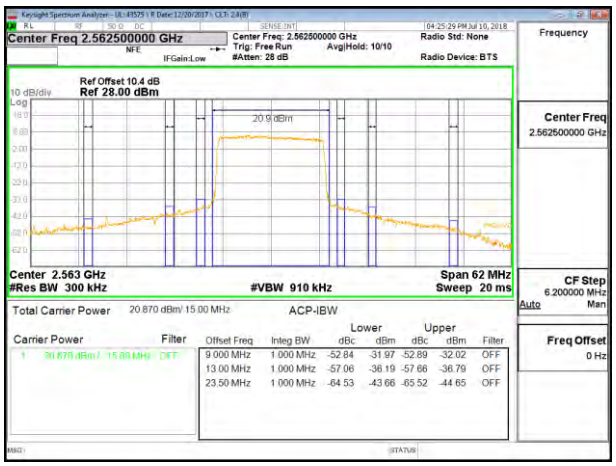
LTE B7 15MHz 16QAM Low Channel RB1-0



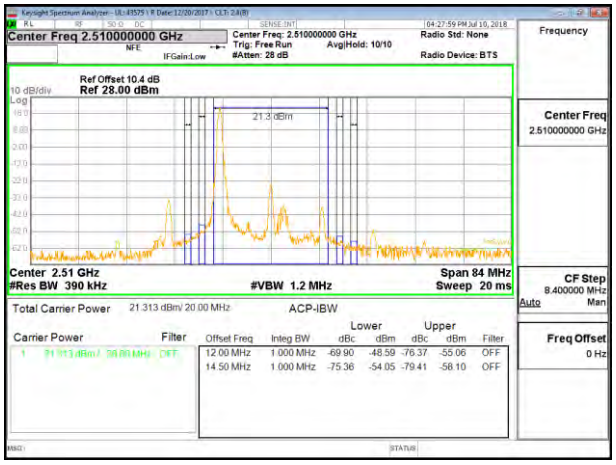
LTE B7 15MHz 16QAM High Channel RB1-0



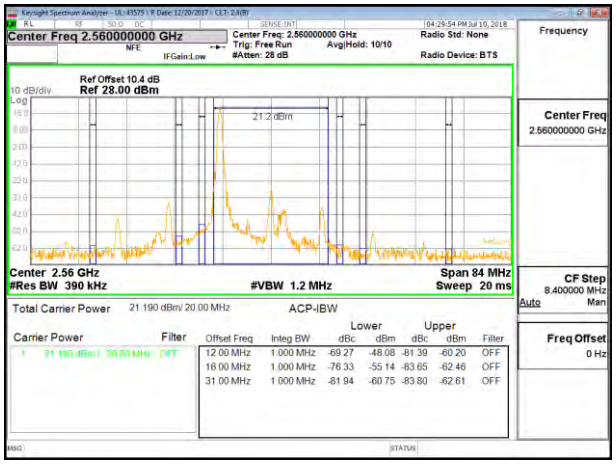
LTE B7 15MHz 16QAM Low Channel RB75-0



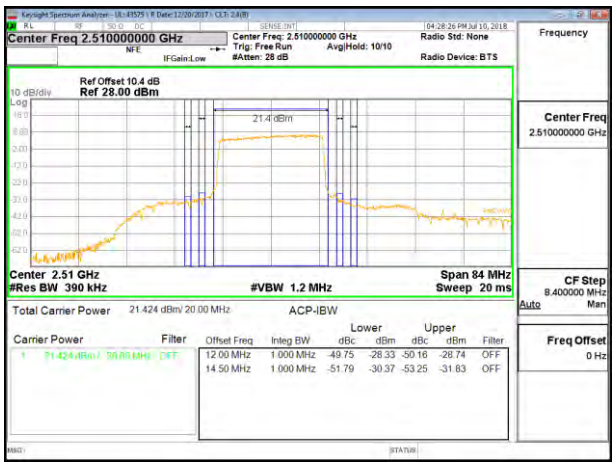
LTE B7 15MHz 16QAM High Channel RB75-0



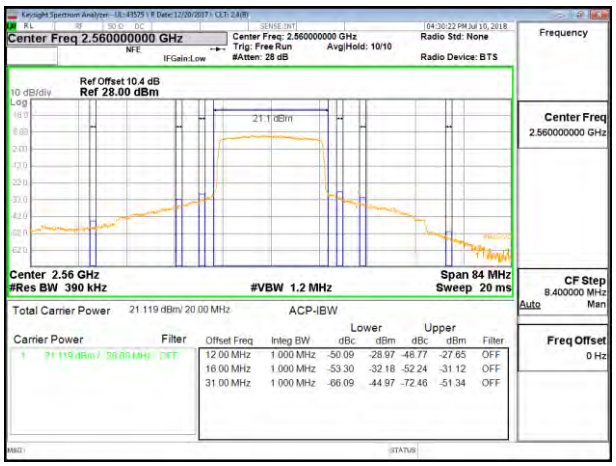
LTE B7 20MHz QPSK Low Channel RB1-0



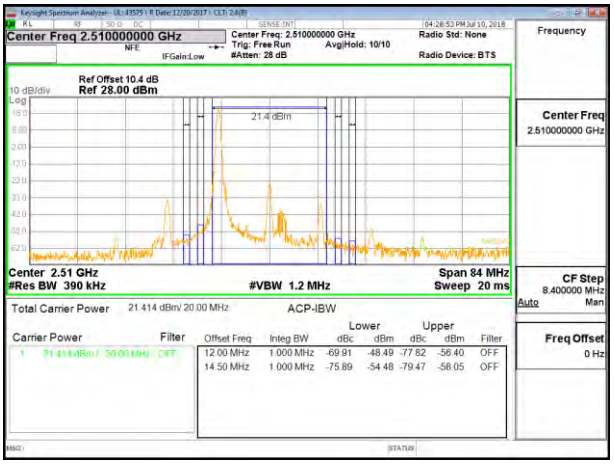
LTE B7 20MHz QPSK High Channel RB1-0



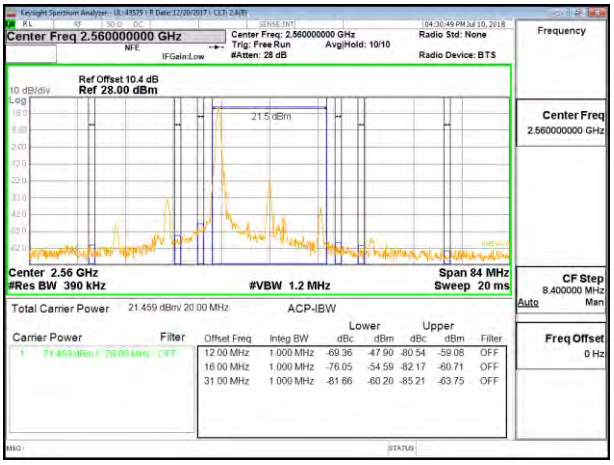
LTE B7 20MHz QPSK Low Channel RB100-0



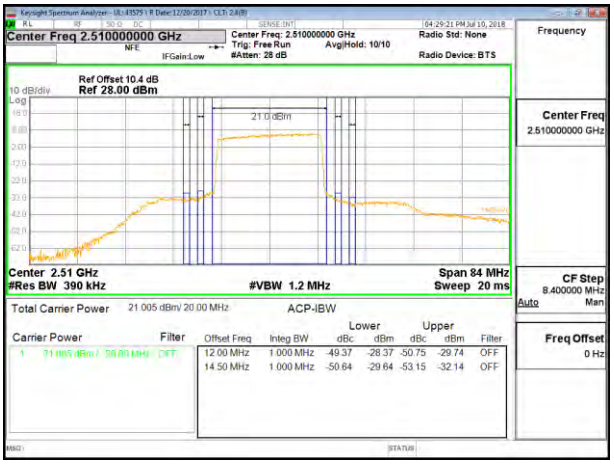
LTE B7 20MHz QPSK High Channel RB100-0



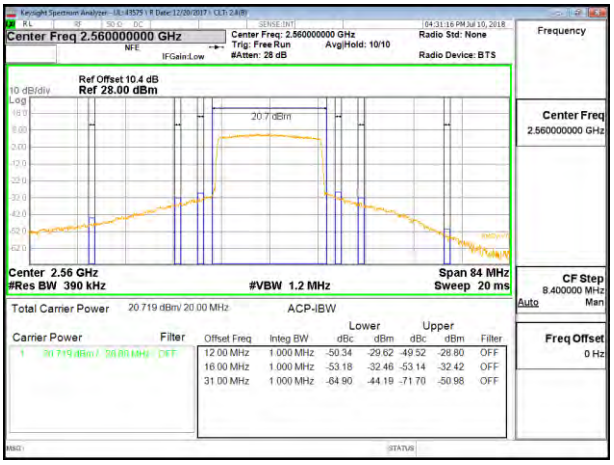
LTE B7 20MHz 16QAM Low Channel RB1-0



LTE B7 20MHz 16QAM High Channel RB1-0



LTE B7 20MHz 16QAM Low Channel RB100-0

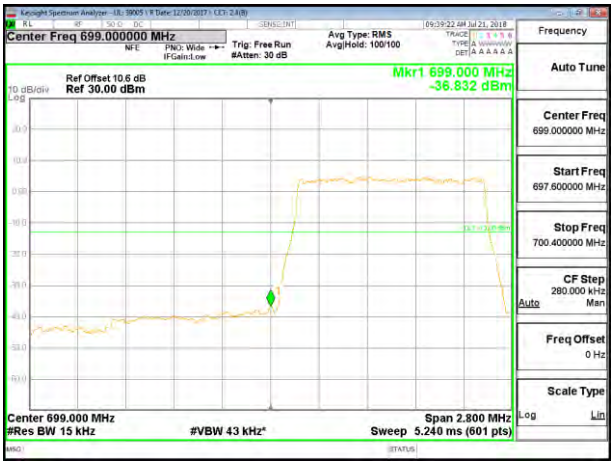


LTE B7 20MHz 16QAM High Channel RB100-0

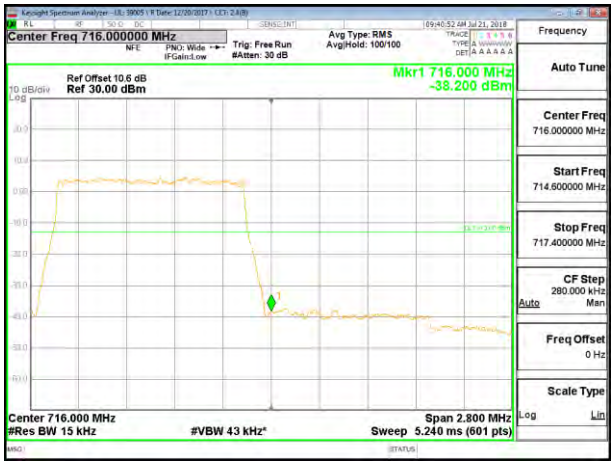
8.2.7. LTE BAND 12 BANDEDGE

LTE B12 1.4MHz QPSK Low Channel RB1-0

LTE B12 1.4MHz QPSK High Channel RB1-0



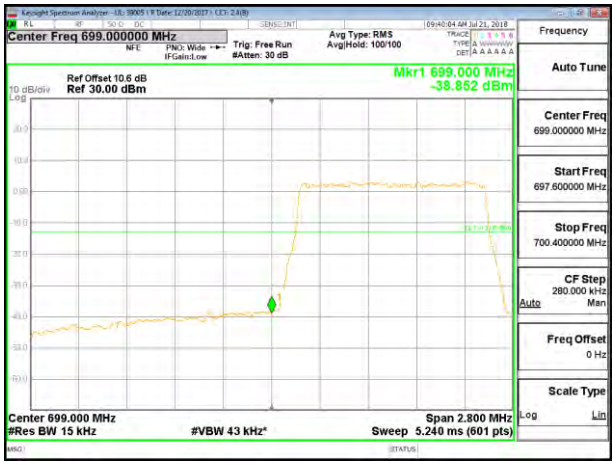
LTE B12 1.4MHz QPSK Low Channel RB6-0



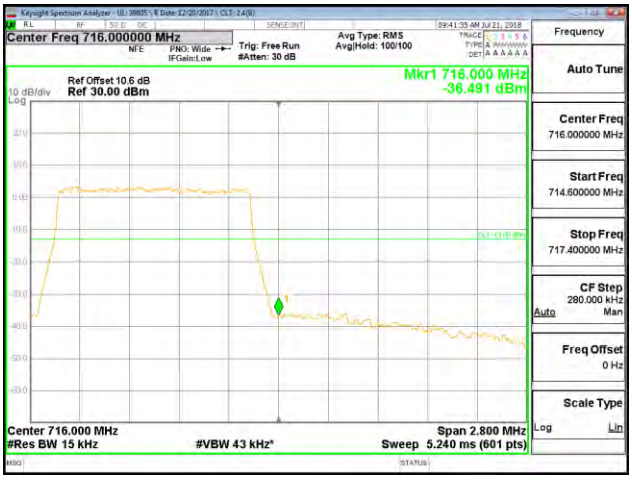
LTE B12 1.4MHz QPSK High Channel RB6-0

LTE B12 1.4MHz 16QAM Low Channel RB1-0

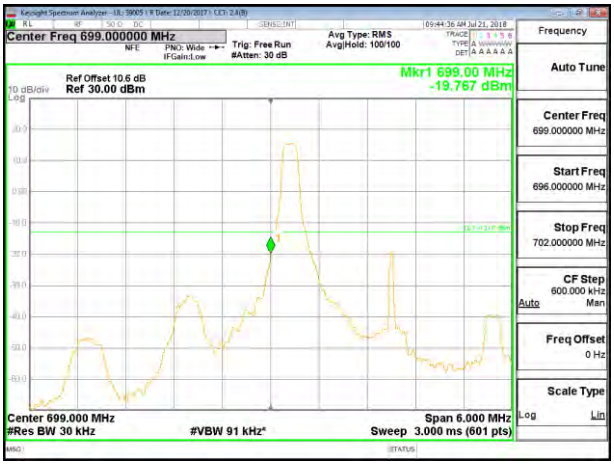
LTE B12 1.4MHz 16QAM High Channel RB1-0



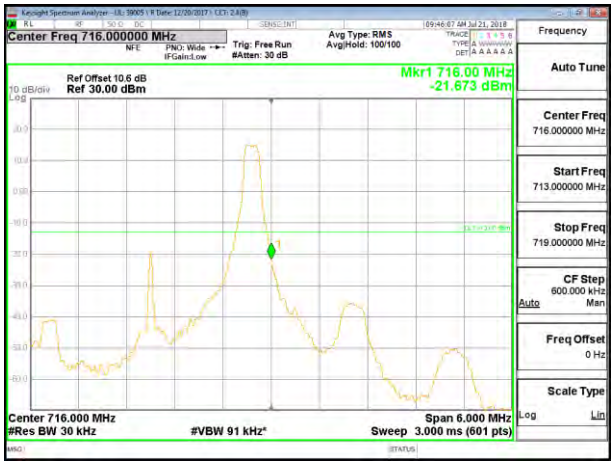
LTE B12 1.4MHz 16QAM Low Channel RB6-0



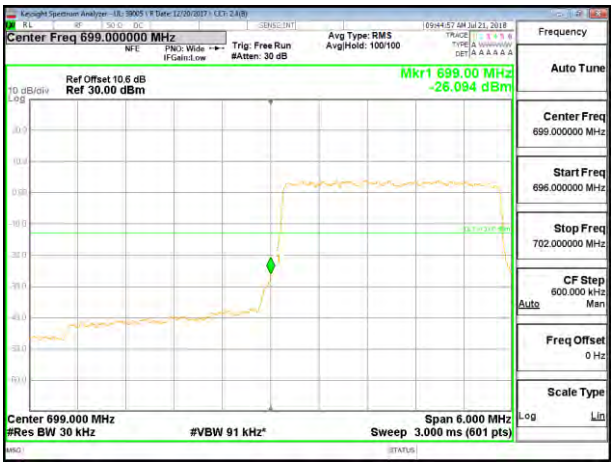
LTE B12 1.4MHz 16QAM High Channel RB6-0



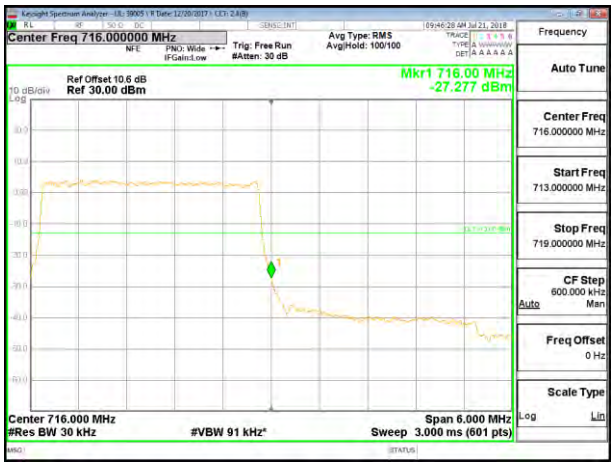
LTE B12 3MHz QPSK Low Channel RB1-0



LTE B12 3MHz QPSK High Channel RB1-0

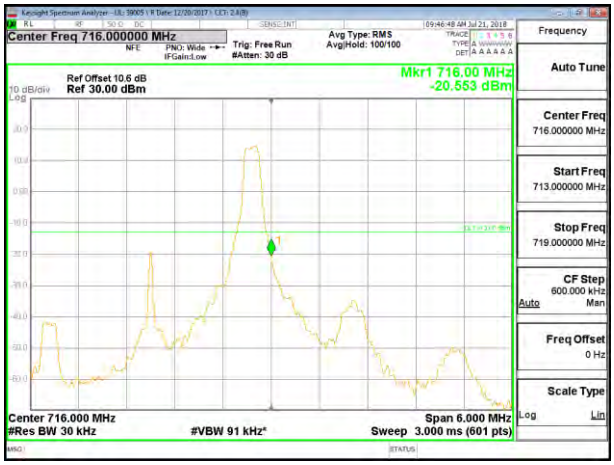


LTE B12 3MHz QPSK Low Channel RB15-0

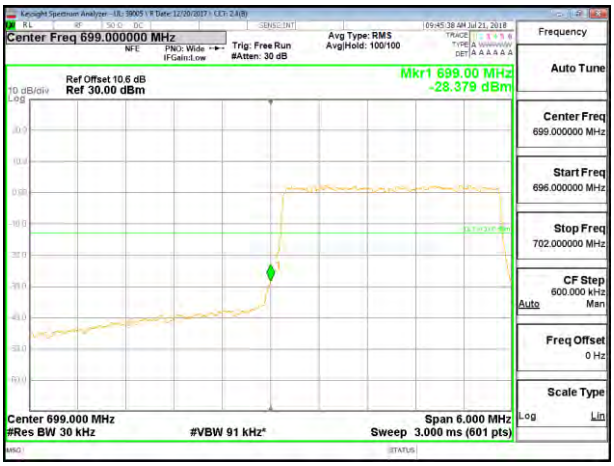


LTE B12 3MHz QPSK High Channel RB15-0

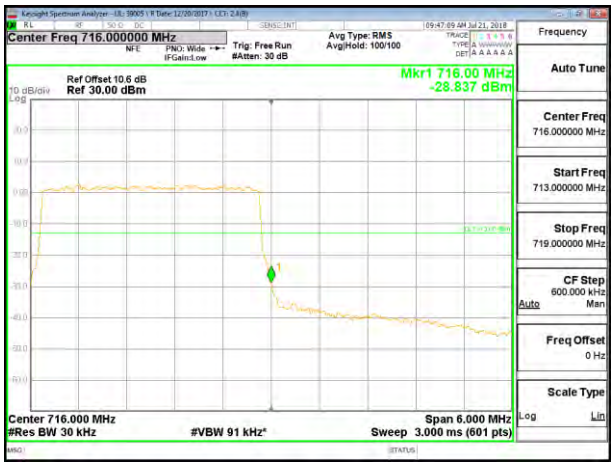
LTE B12 3MHz 16QAM Low Channel RB1-0



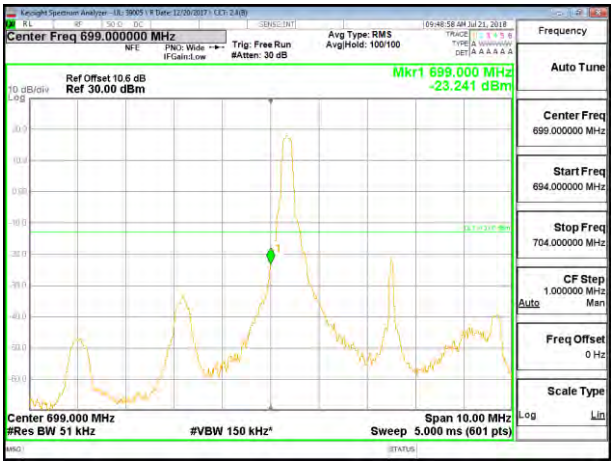
LTE B12 3MHz 16QAM High Channel RB1-0



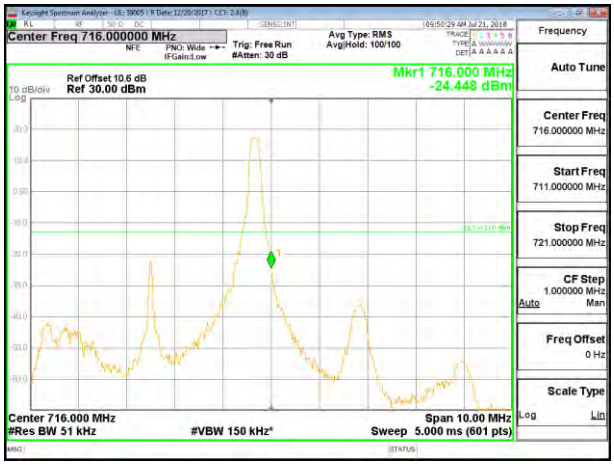
LTE B12 3MHz 16QAM Low Channel RB15-0



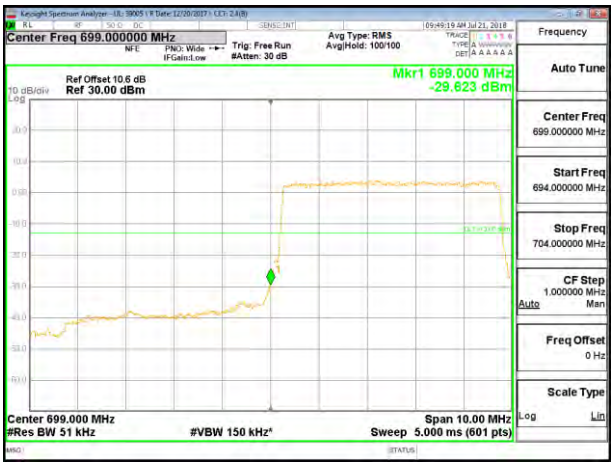
LTE B12 3MHz 16QAM High Channel RB15-0



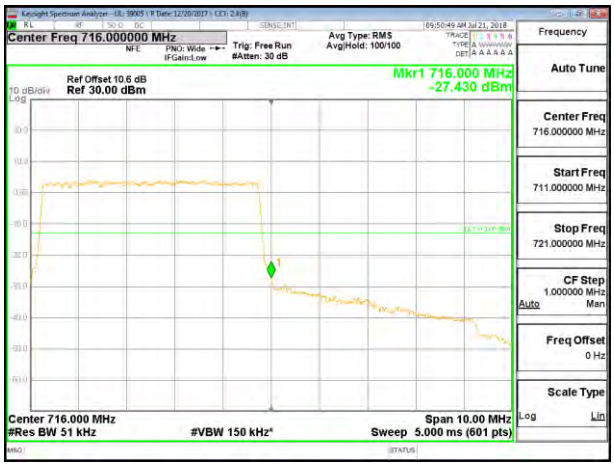
LTE B12 5MHz QPSK Low Channel RB1-0



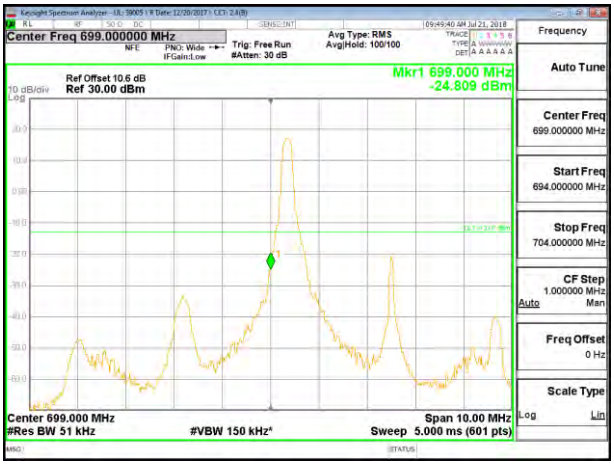
LTE B12 5MHz QPSK High Channel RB1-0



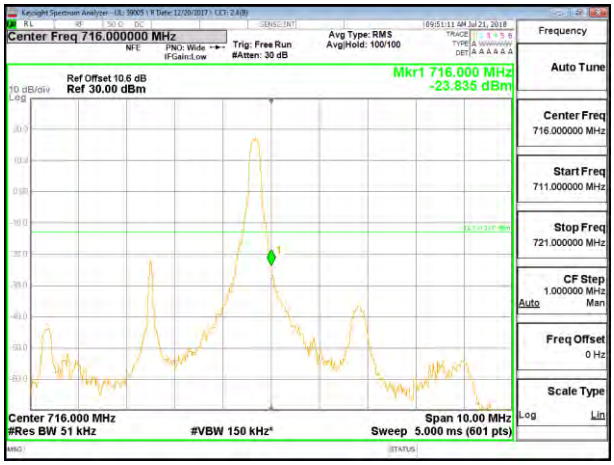
LTE B12 5MHz QPSK Low Channel RB25-0



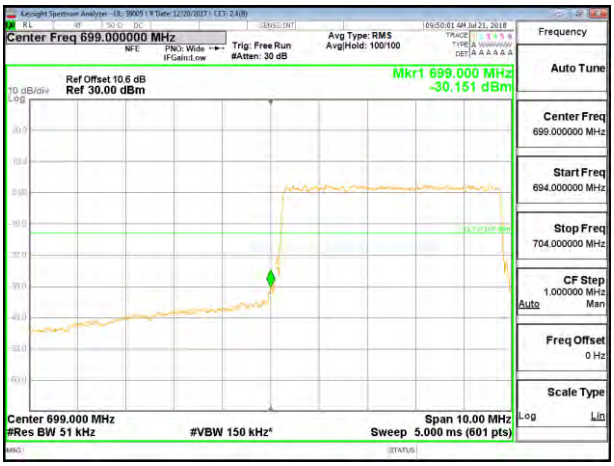
LTE B12 5MHz QPSK High Channel RB25-0



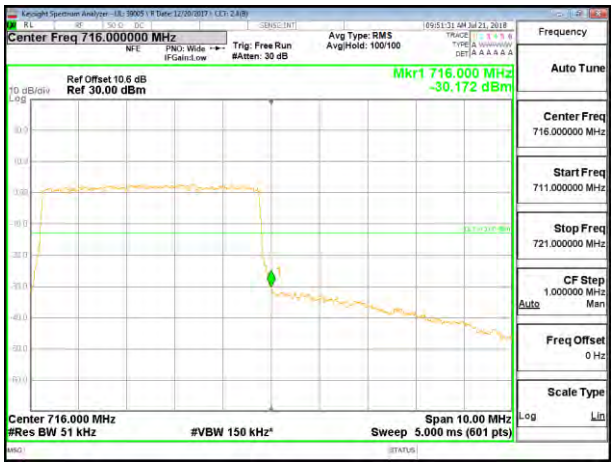
LTE B12 5MHz 16QAM Low Channel RB1-0



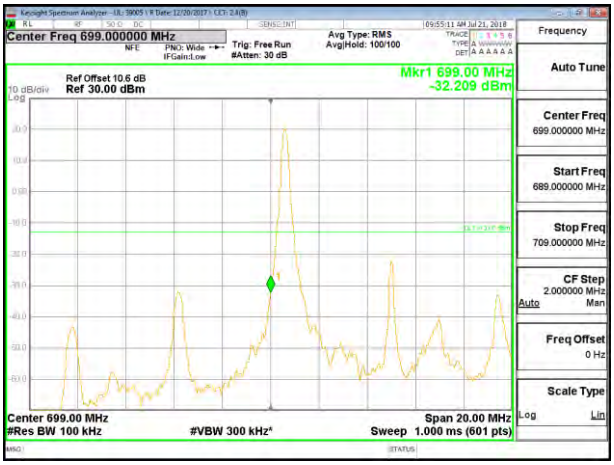
LTE B12 5MHz 16QAM High Channel RB1-0



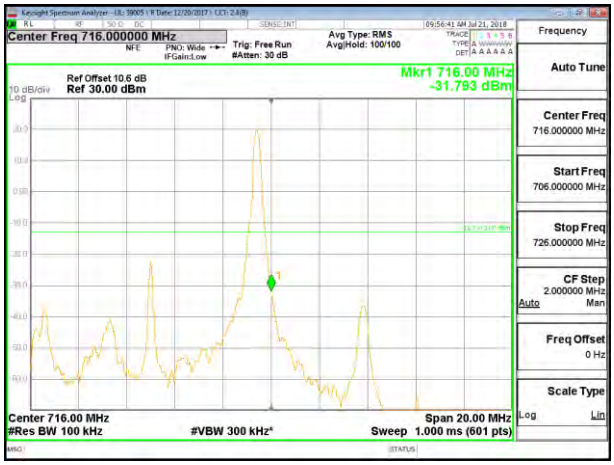
LTE B12 5MHz 16QAM Low Channel RB25-0



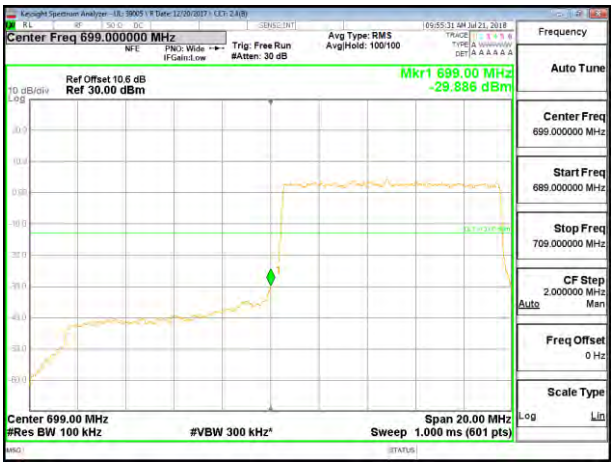
LTE B12 5MHz 16QAM High Channel RB25-0



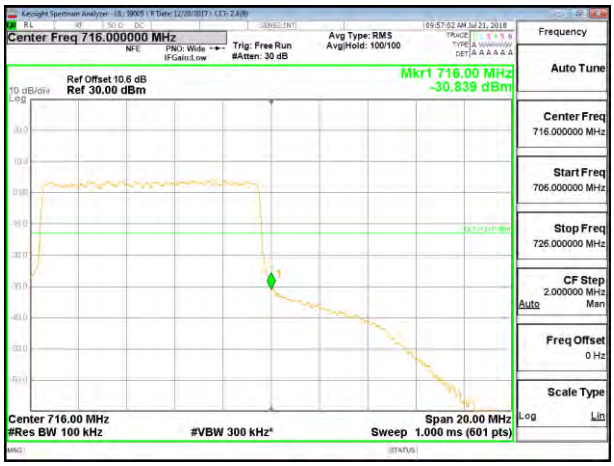
LTE B12 10MHz QPSK Low Channel RB1-0



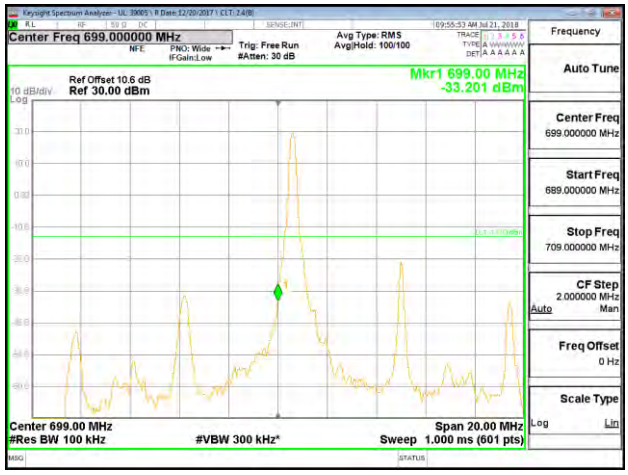
LTE B12 10MHz QPSK High Channel RB1-0



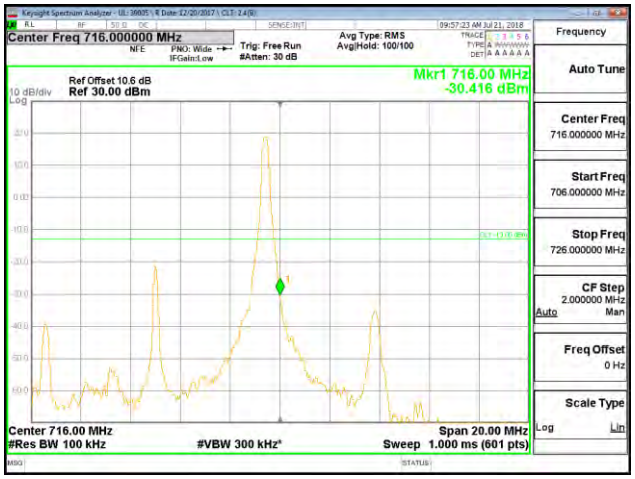
LTE B12 10MHz QPSK Low Channel RB50-0



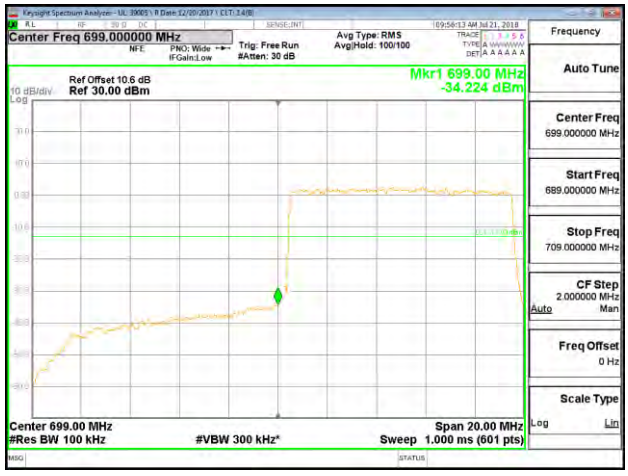
LTE B12 10MHz QPSK High Channel RB50-0



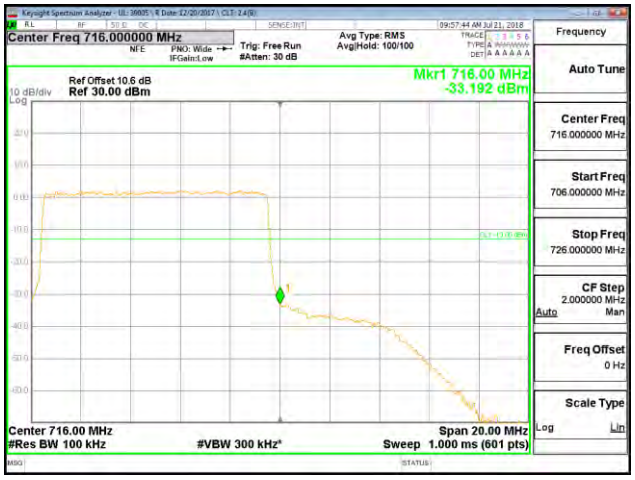
LTE B12 10MHz 16QAM Low Channel RB1-0



LTE B12 10MHz 16QAM High Channel RB1-0

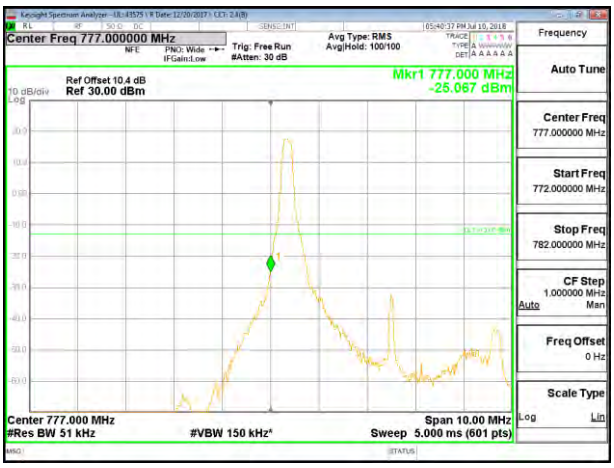


LTE B12 10MHz 16QAM Low Channel RB50-0

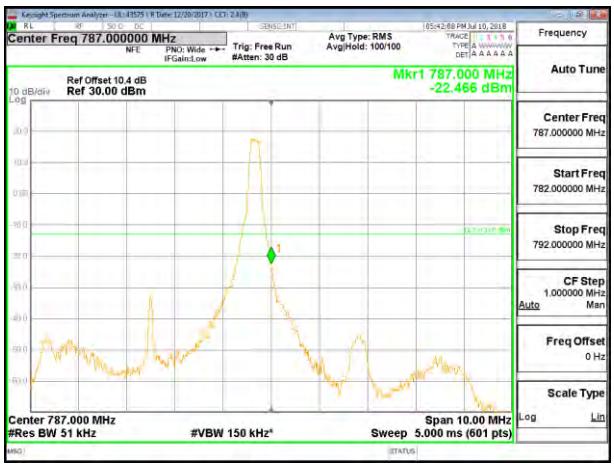


LTE B12 10MHz 16QAM High Channel RB50-0

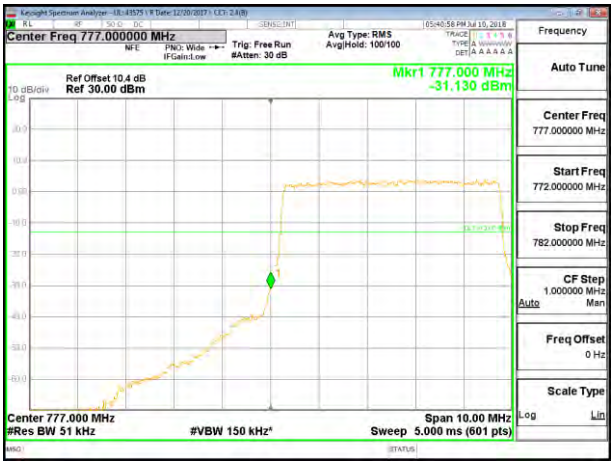
8.2.8. LTE BAND 13 BANDEDGE



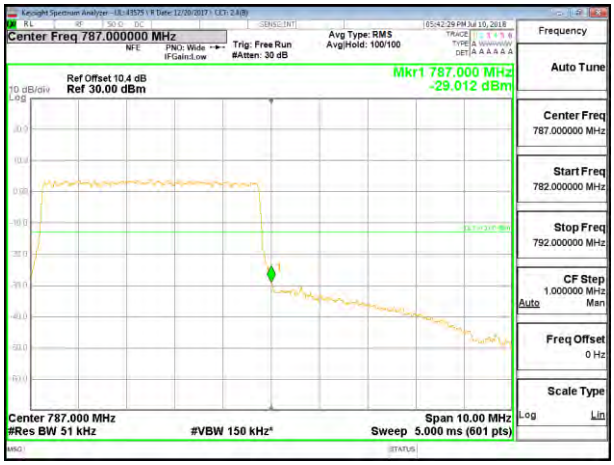
LTE B13 5MHz QPSK Low Channel RB1-0



LTE B13 5MHz QPSK High Channel RB1-0



LTE B13 5MHz QPSK Low Channel RB25-0



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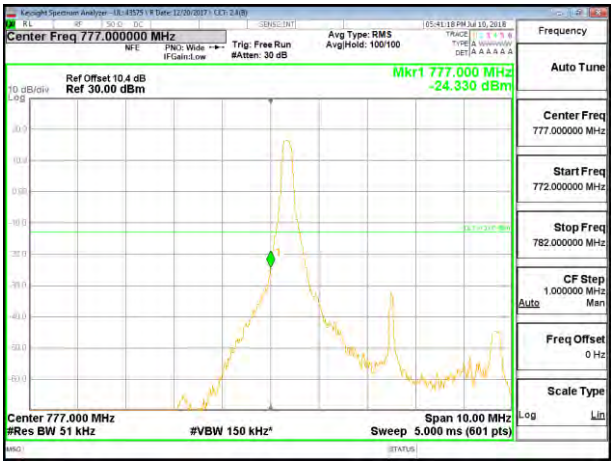
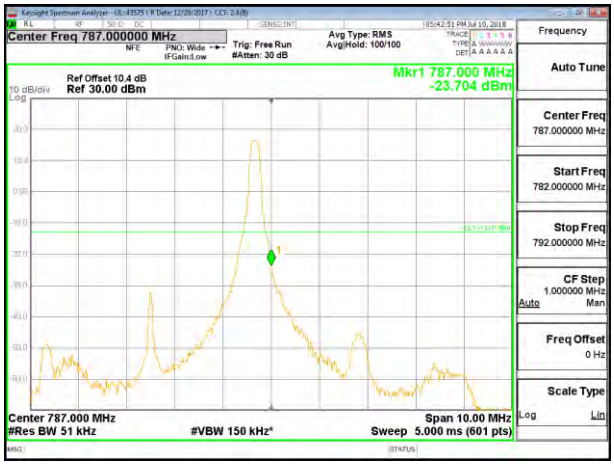
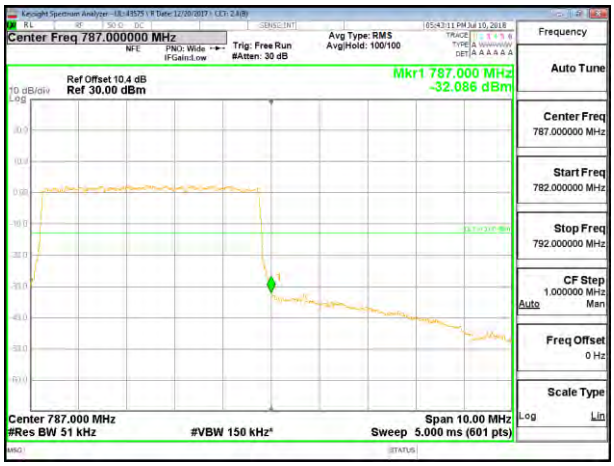


LTE B13 5MHz 16QAM Low Channel RB1-0

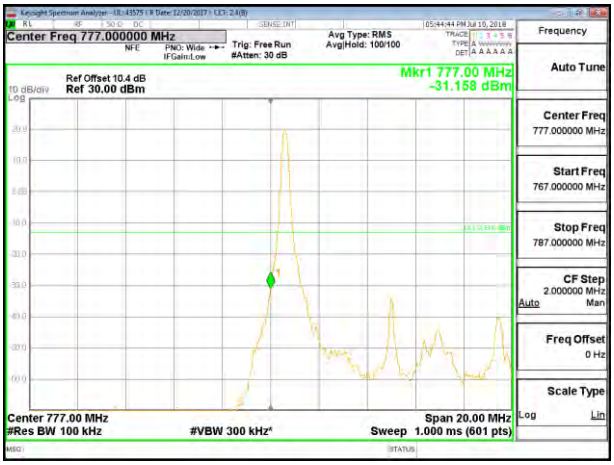


LTE B13 5MHz 16QAM High Channel RB1-0

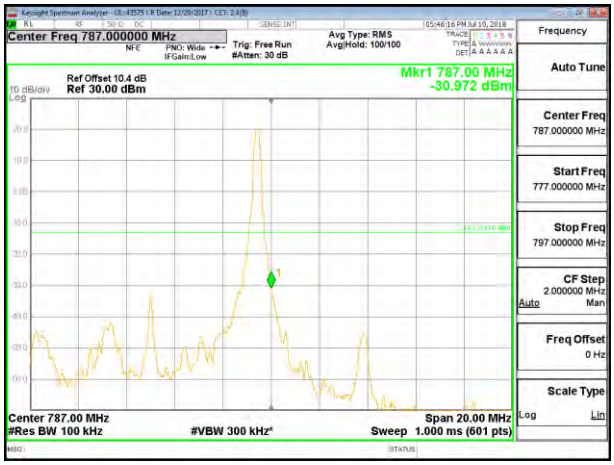
LTE B13 5MHz 16QAM Low Channel RB25-0



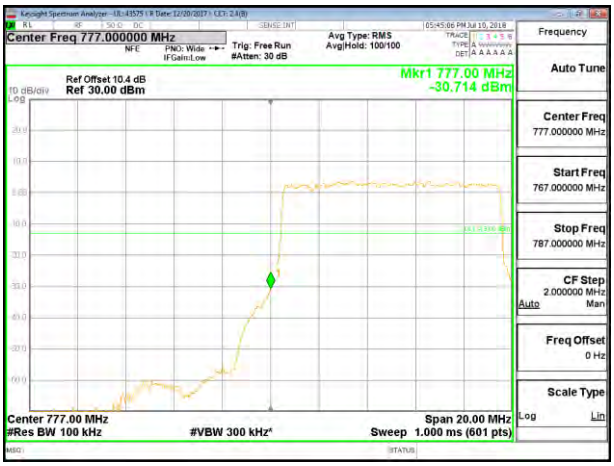
LTE B13 5MHz 16QAM High Channel RB25-0



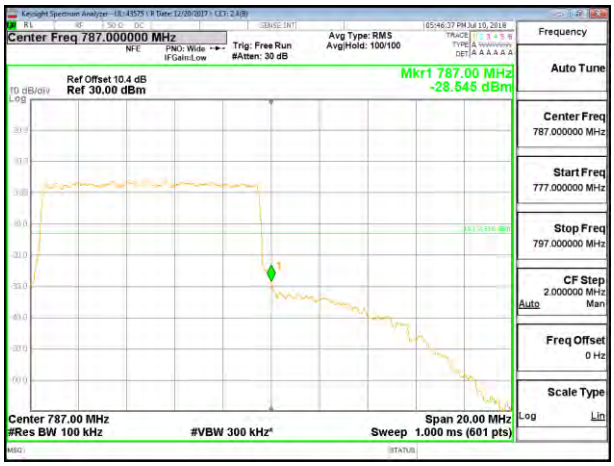
LTE B13 10MHz QPSK Mid Channel RB1-0



LTE B13 10MHz QPSK Mid Channel RB1-0

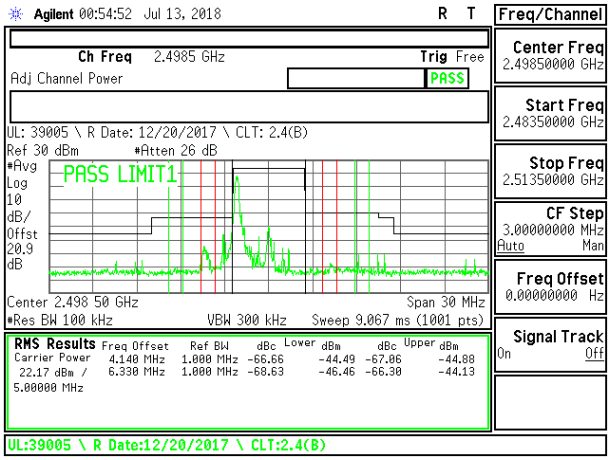


LTE B13 10MHz QPSK Mid Channel RB50-0

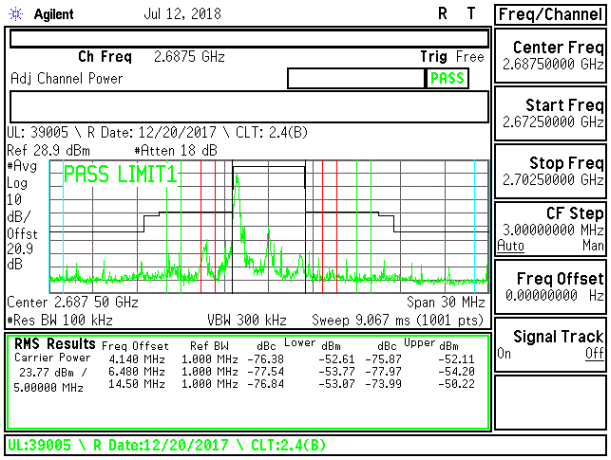


LTE B13 10MHz QPSK Mid Channel RB50-0

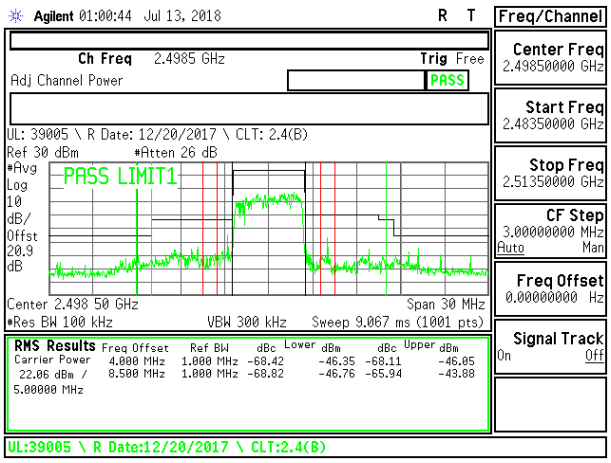
8.2.9. LTE BAND 41 ADJACENT CHANNEL POWER



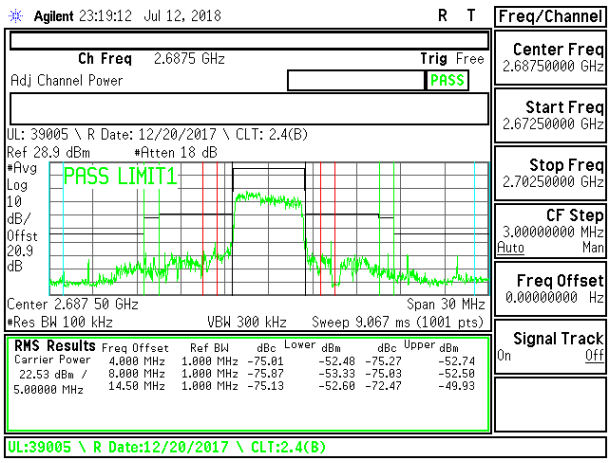
LTE B41 5MHz QPSK Low Channel RB1-0



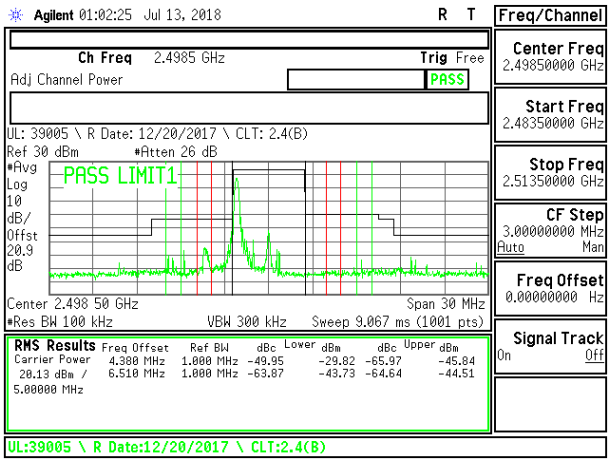
LTE B41 5MHz QPSK High Channel RB1-0



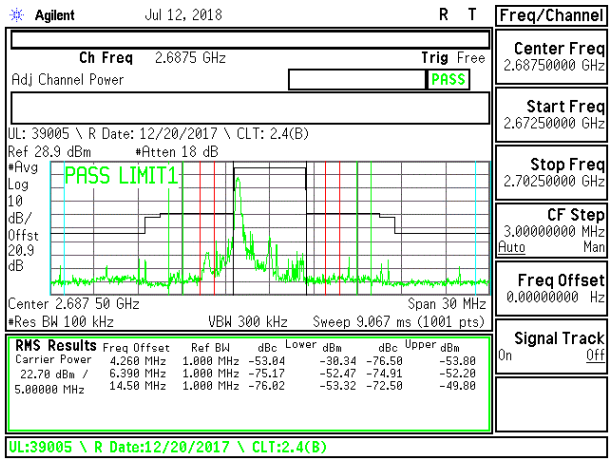
LTE B41 5MHz QPSK Low Channel RB25-0



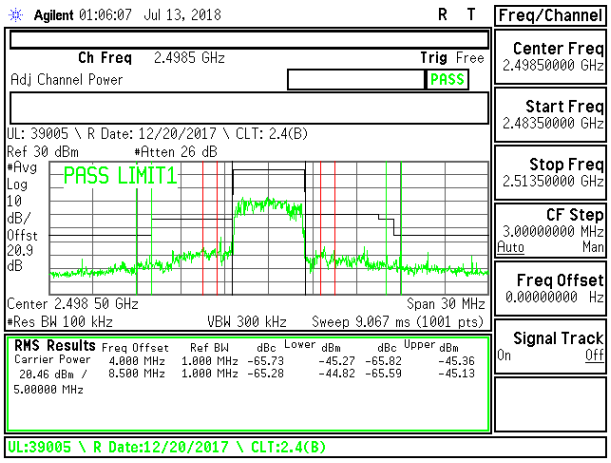
LTE B41 5MHz QPSK High Channel RB25-0



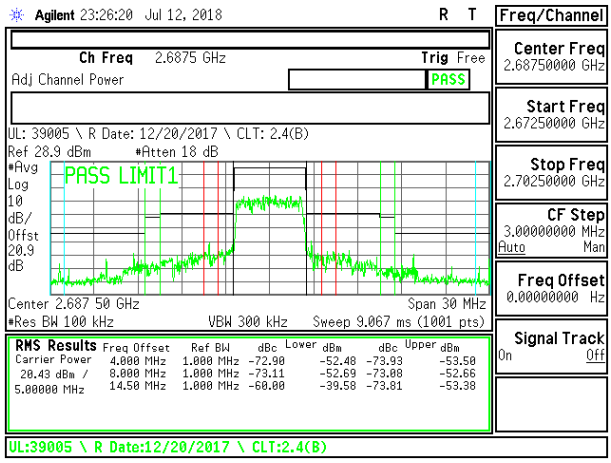
LTE B41 5MHz 16QAM Low Channel RB1-0



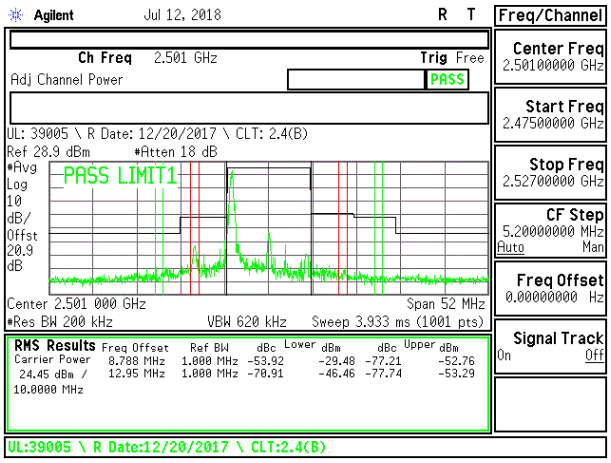
LTE B41 5MHz 16QAM High Channel RB1-0



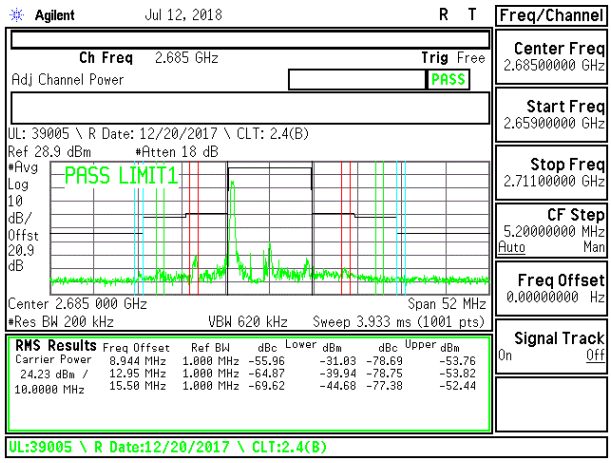
LTE B41 5MHz 16QAM Low Channel RB25-0



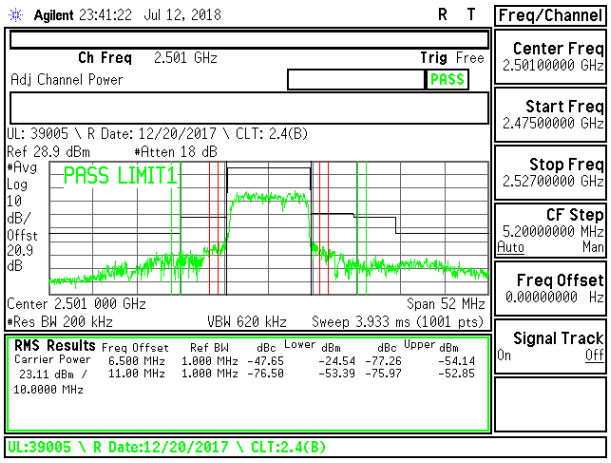
LTE B41 5MHz 16QAM High Channel RB25-0



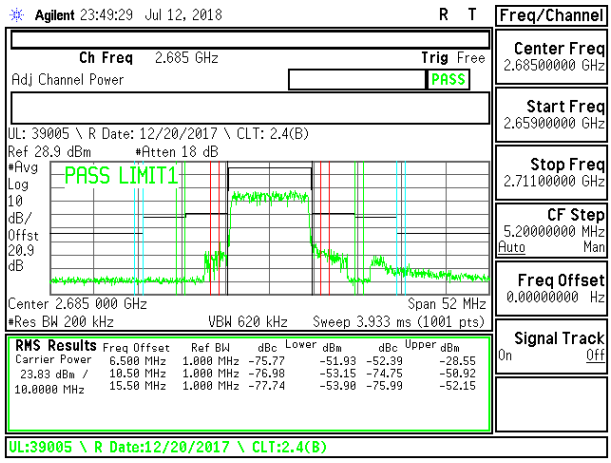
LTE B41 10MHz QPSK Low Channel RB1-0



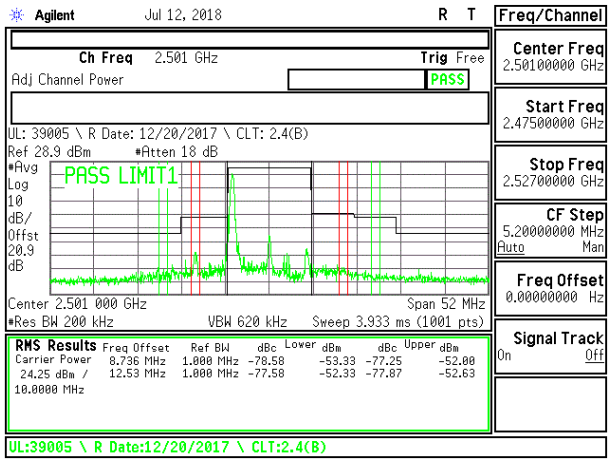
LTE B41 10MHz QPSK High Channel RB1-0



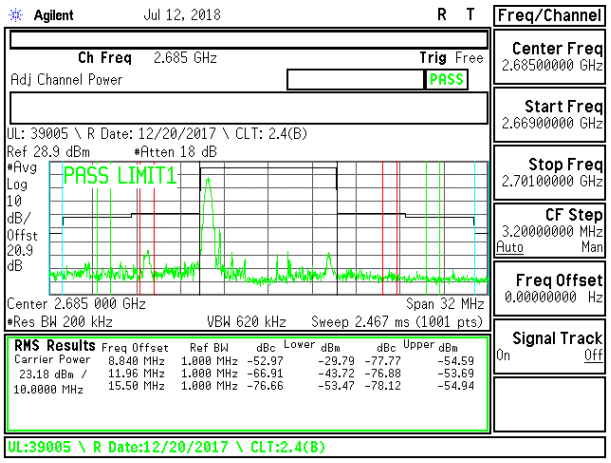
LTE B41 10MHz QPSK Low Channel RB50-0



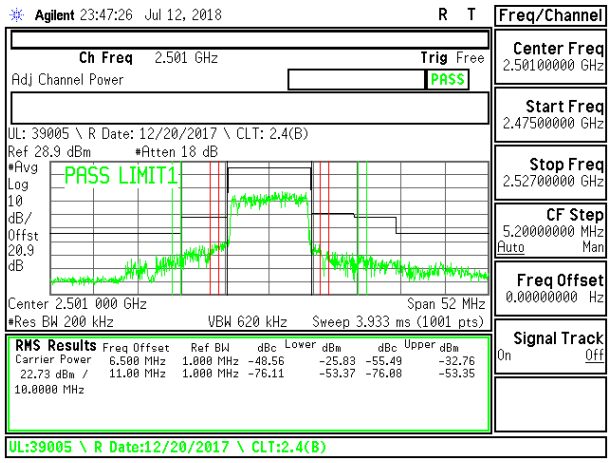
LTE B41 10MHz QPSK High Channel RB50-0



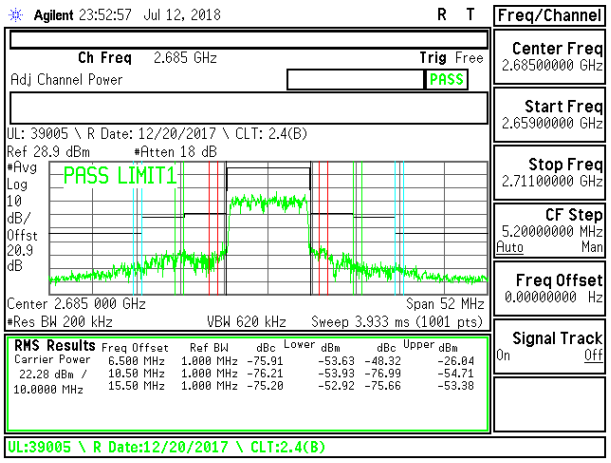
LTE B41 10MHz 16QAM Low Channel RB1-0



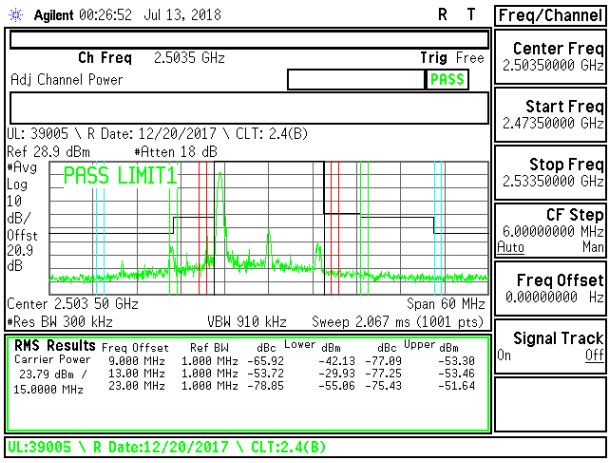
LTE B41 10MHz 16QAM High Channel RB1-0



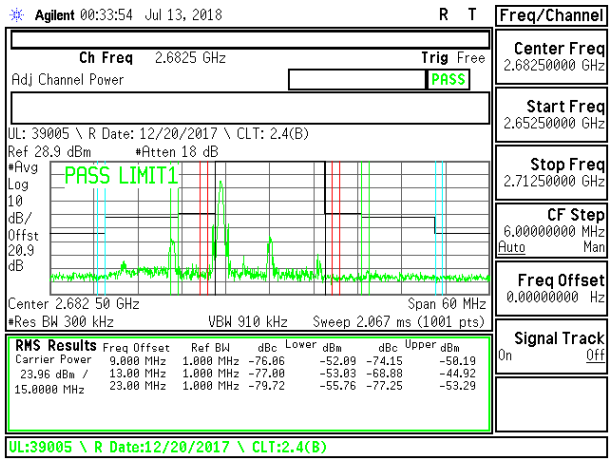
LTE B41 10MHz 16QAM Low Channel RB50-0



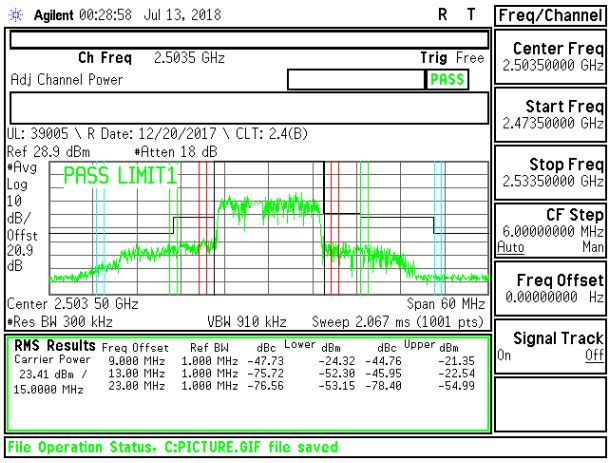
LTE B41 10MHz 16QAM High Channel RB50-0



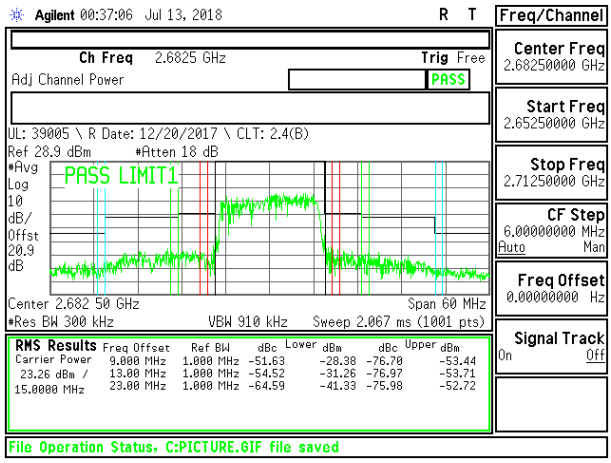
LTE B41 15MHz QPSK Low Channel RB1-0



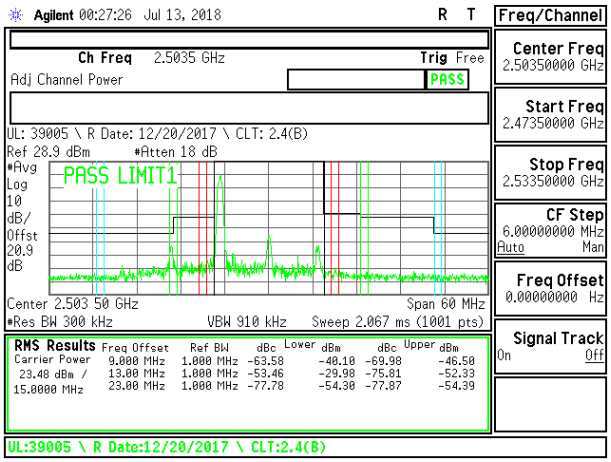
LTE B41 15MHz QPSK High Channel RB1-0



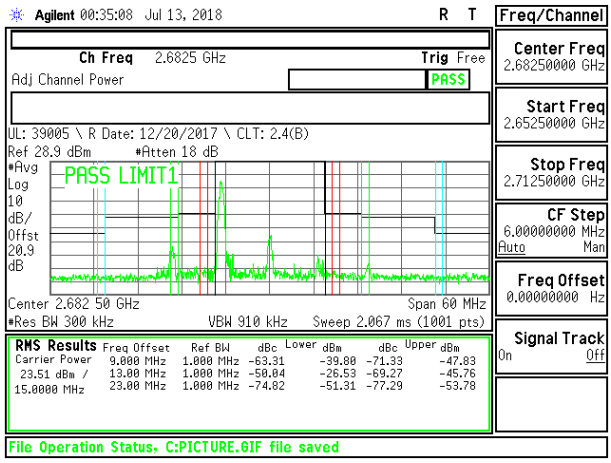
LTE B41 15MHz QPSK Low Channel RB75-0



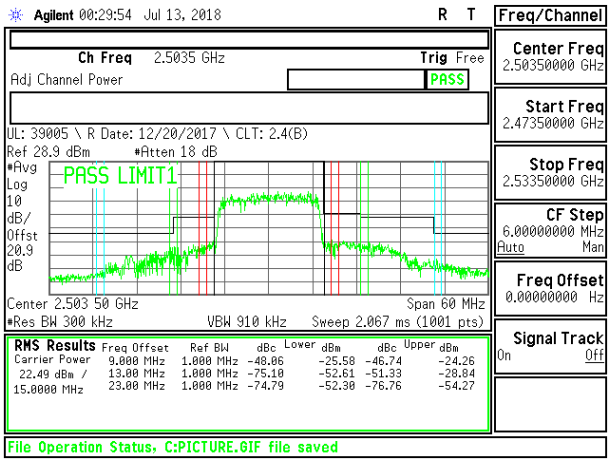
LTE B41 15MHz QPSK High Channel RB75-0



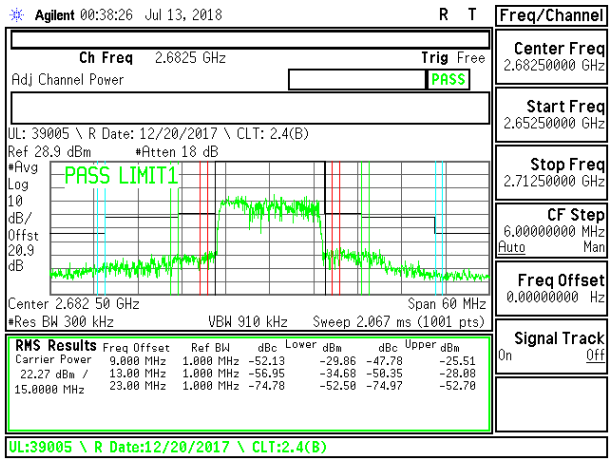
LTE B41 15MHz 16QAM Low Channel RB1-0



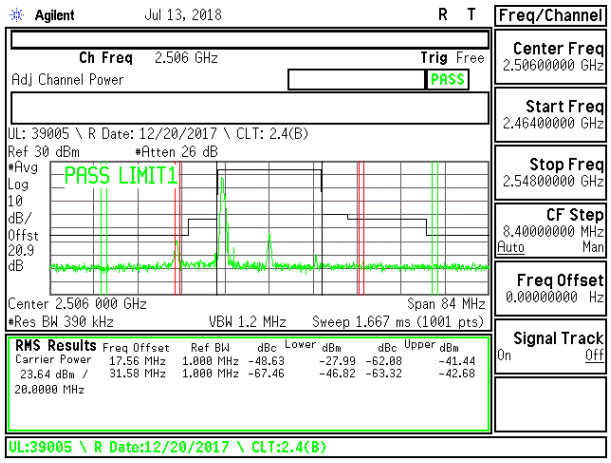
LTE B41 15MHz 16QAM High Channel RB1-0



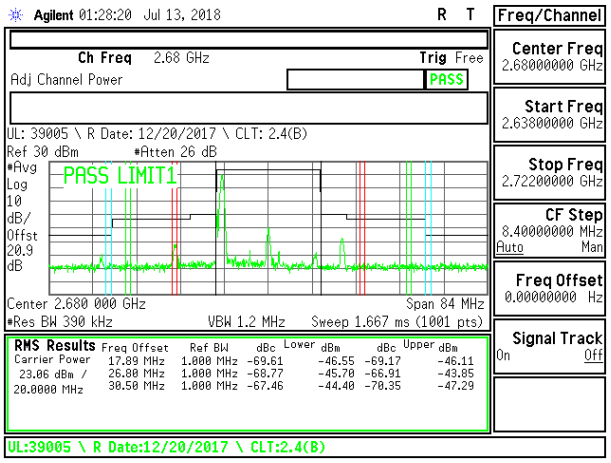
LTE B41 15MHz 16QAM Low Channel RB75-0



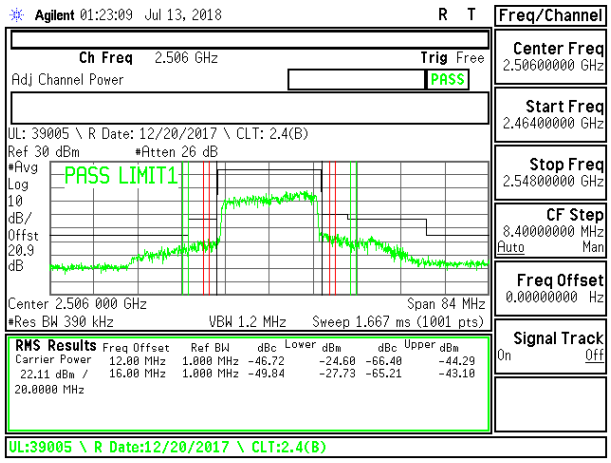
LTE B41 15MHz 16QAM High Channel RB75-0



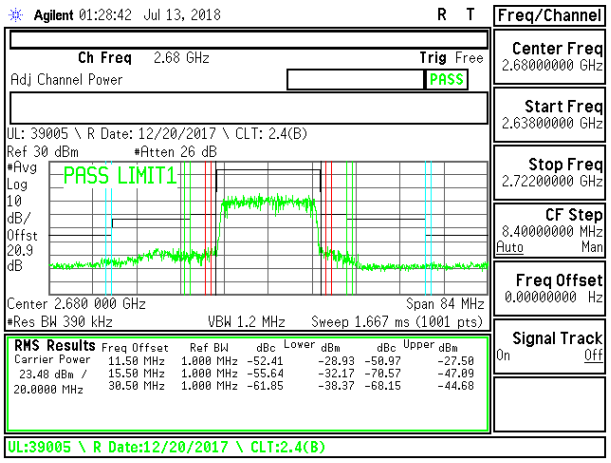
LTE B41 20MHz QPSK Low Channel RB1-0



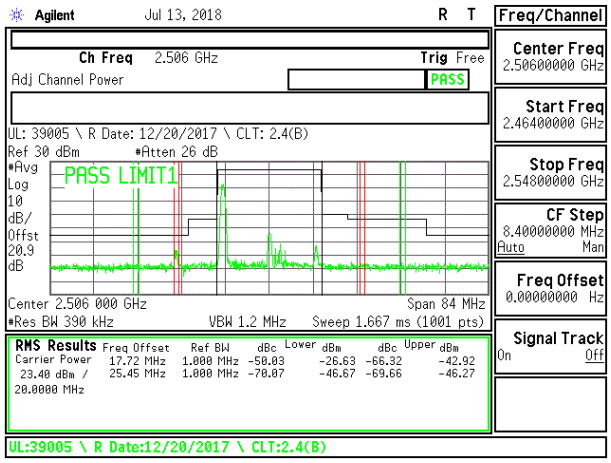
LTE B41 20MHz QPSK High Channel RB1-0



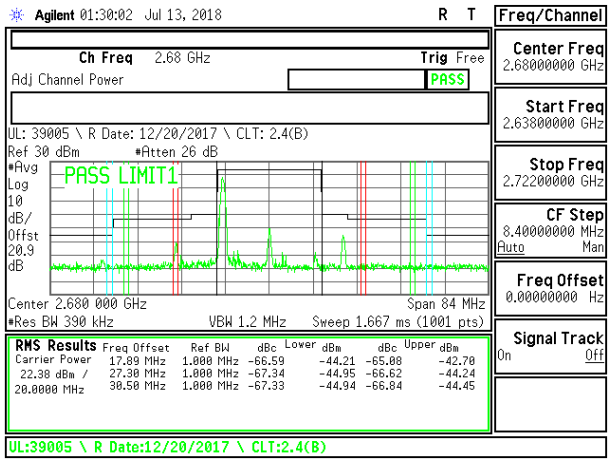
LTE B41 20MHz QPSK Low Channel RB100-0



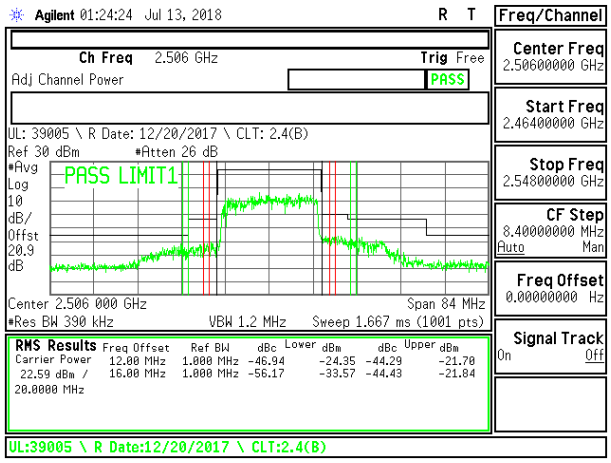
LTE B41 20MHz QPSK High Channel RB100-0



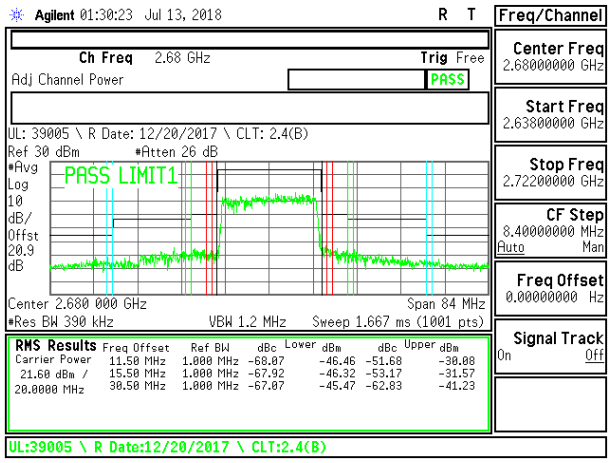
LTE B41 20MHz 16QAM Low Channel RB1-0



LTE B41 20MHz 16QAM High Channel RB1-0



LTE B41 20MHz 16QAM Low Channel RB100-0



LTE B41 20MHz 16QAM High Channel RB100-0

8.3. OUT OF BAND EMISSIONS

RULE PART(S)

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

LIMITS

FCC: §22.917, §24.238, §27.53 (c), (g), (h)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.

FCC: §27.53 (m) (Band 7, 41)
The minimum permissible attenuation level of any spurious emissions is 55 + 10 log (P) dB where transmitting power (P) in Watts.

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)

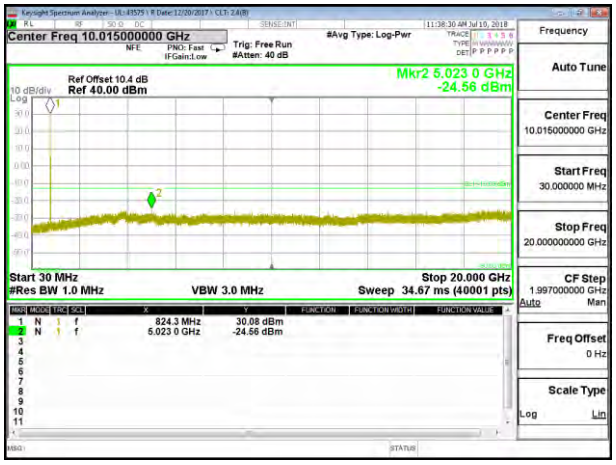
MODES TESTED

- GSM 850
- GSM 1900
- WCDMA Band 5
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 41

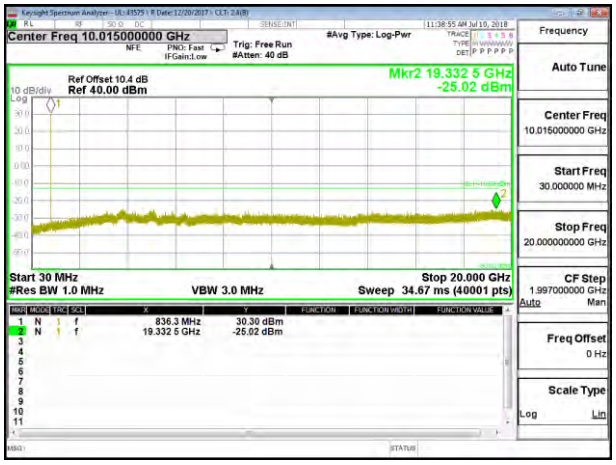
RESULTS

8.3.1. GSM850

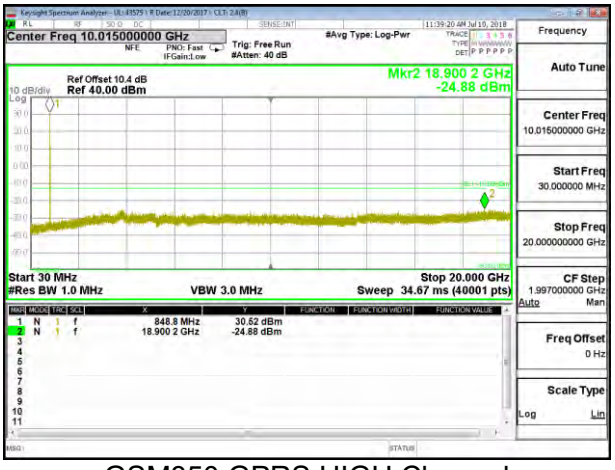
GPRS



GSM850 GPRS LOW Channel

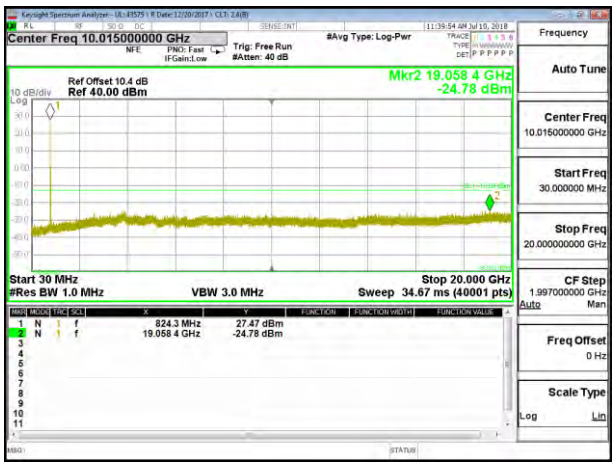


GSM850 GPRS MID Channel



GSM850 GPRS HIGH Channel

EGPRS



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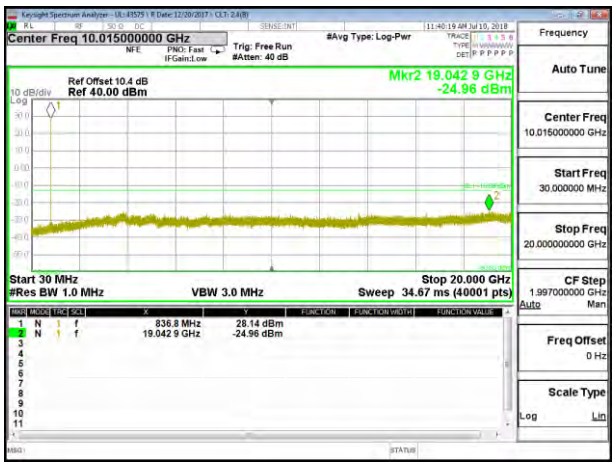
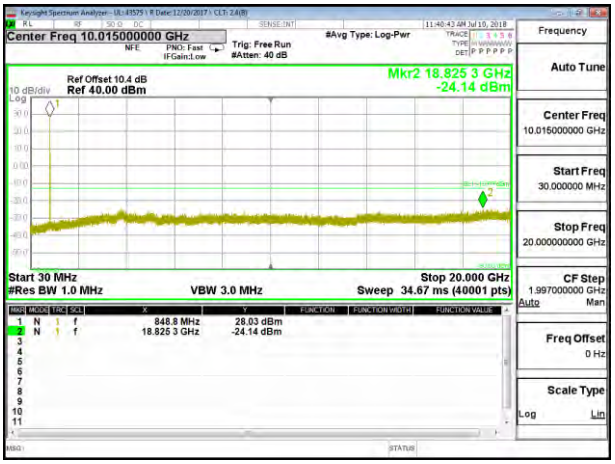


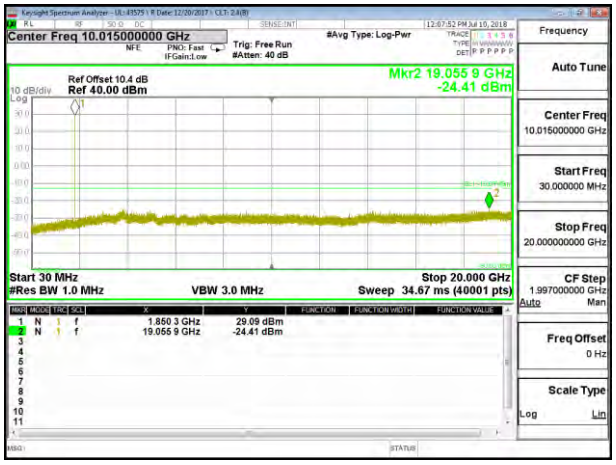
GSM850 EGPRS MID Channel



GSM850 EGPRS HIGH Channel

8.3.2. GSM1900

GPRS



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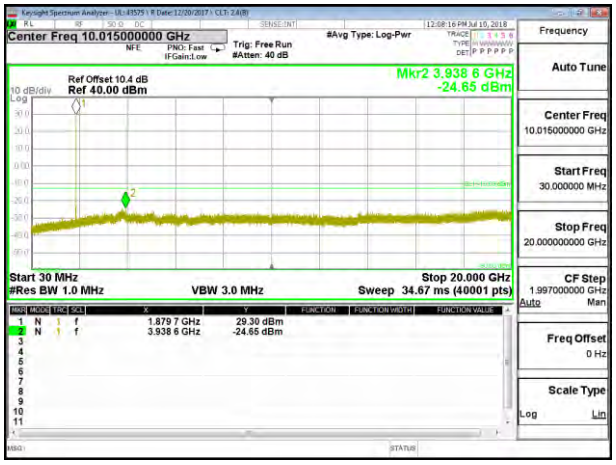

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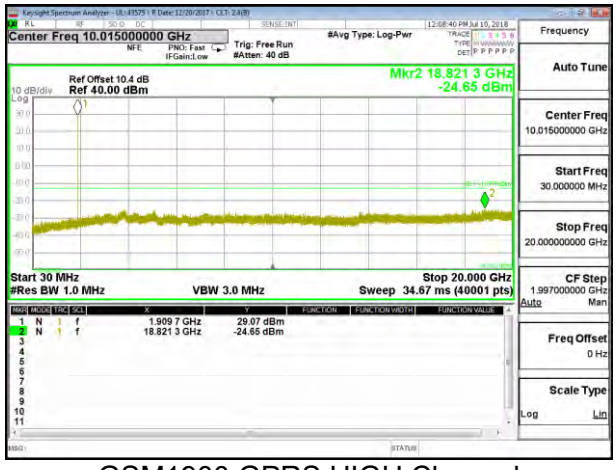
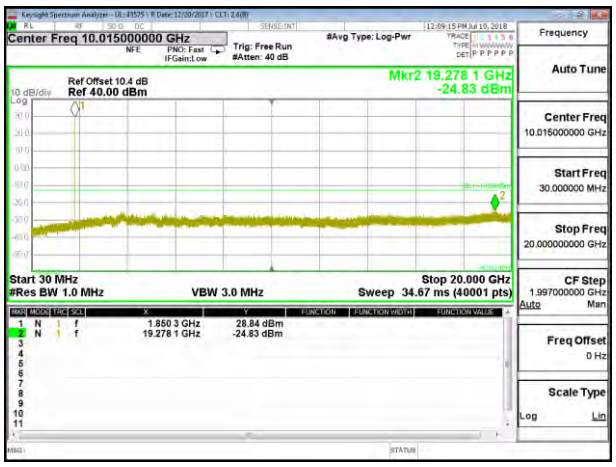


GSM1900 GPRS HIGH Channel

EGPRS



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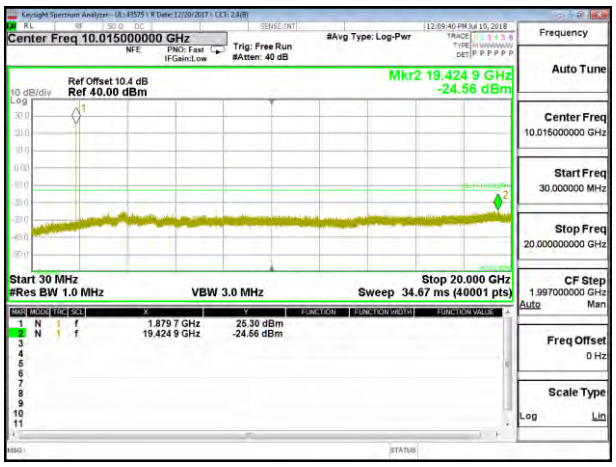

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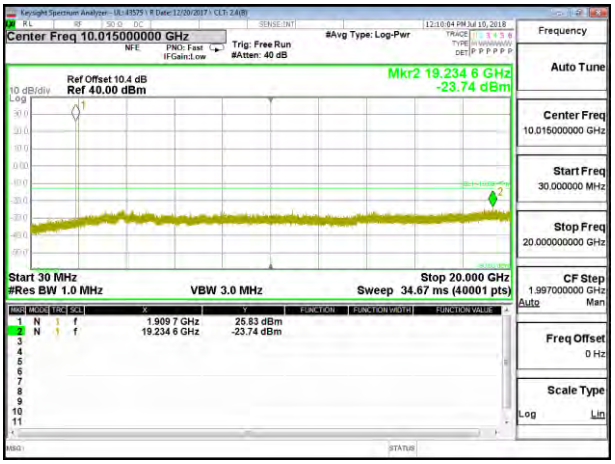
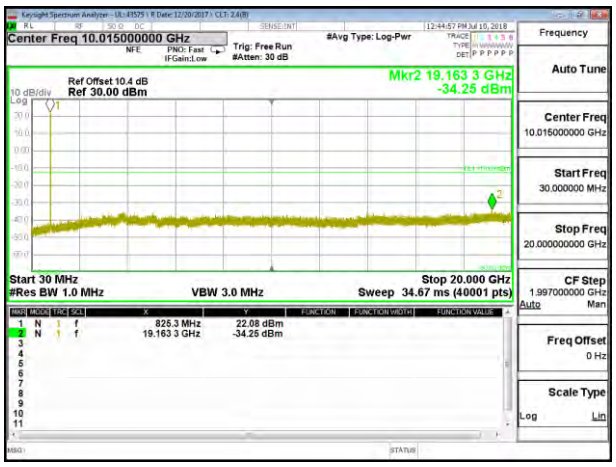


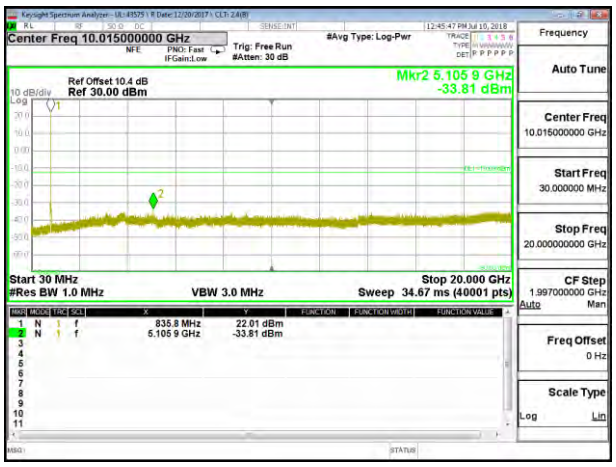
GSM1900 EGPRS HIGH Channel

8.3.3. WCDMA5

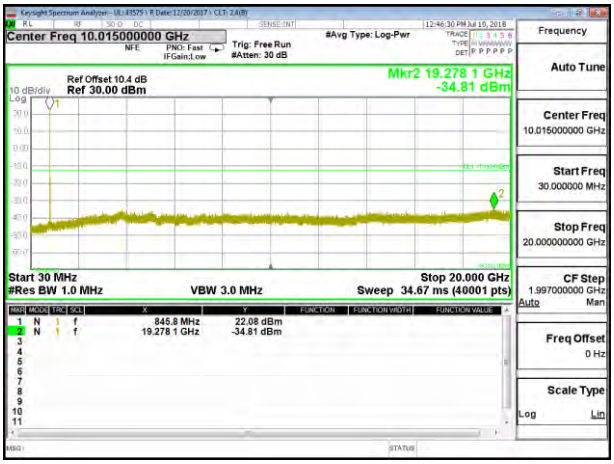
Rel99



BAND5 Rel99 LOW Channel

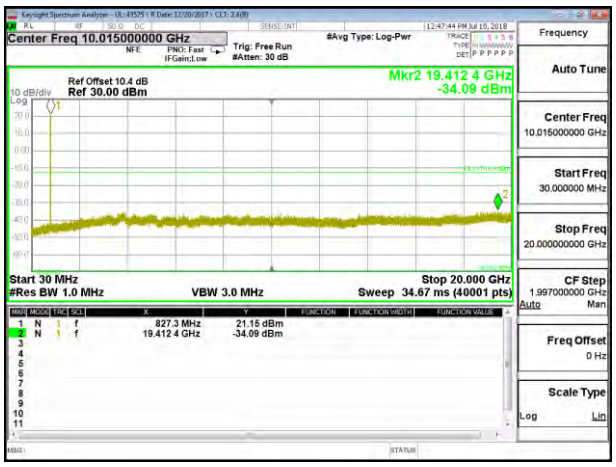


BAND5 Rel99 MID Channel



BAND5 Rel99 HIGH Channel

HSDPA



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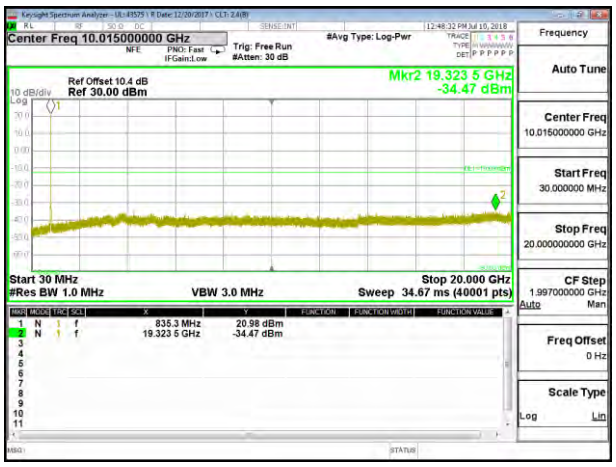

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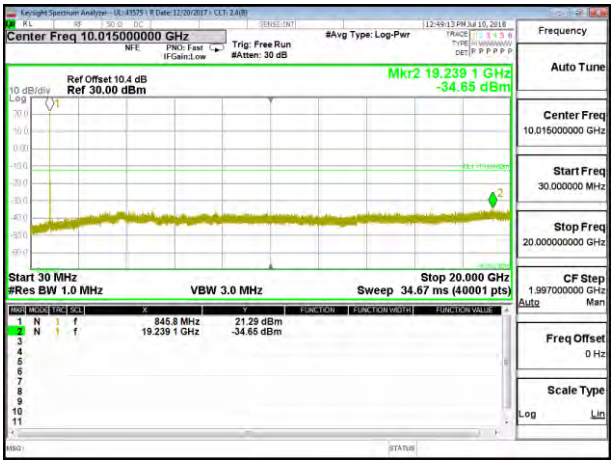
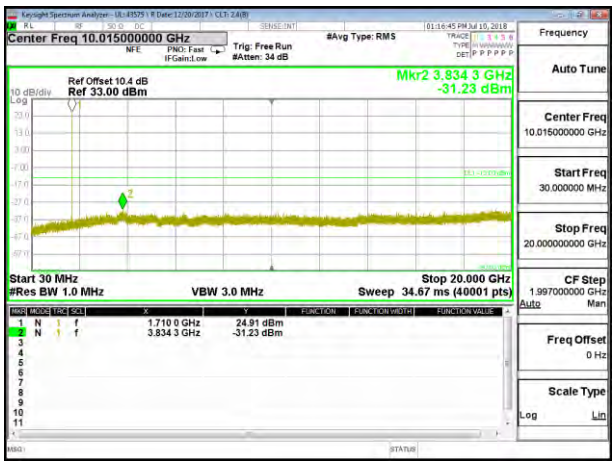
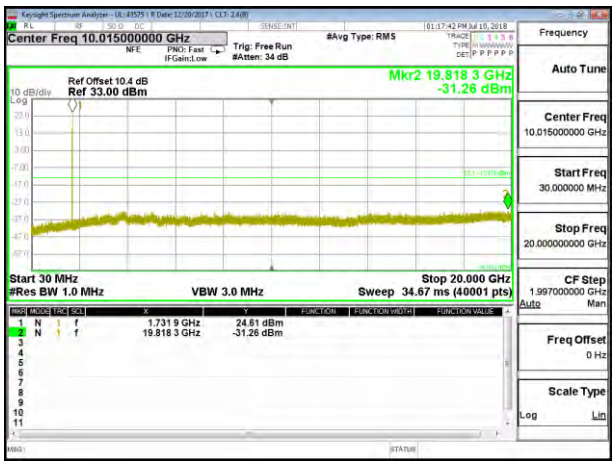


BAND5 HSDPA HIGH Channel

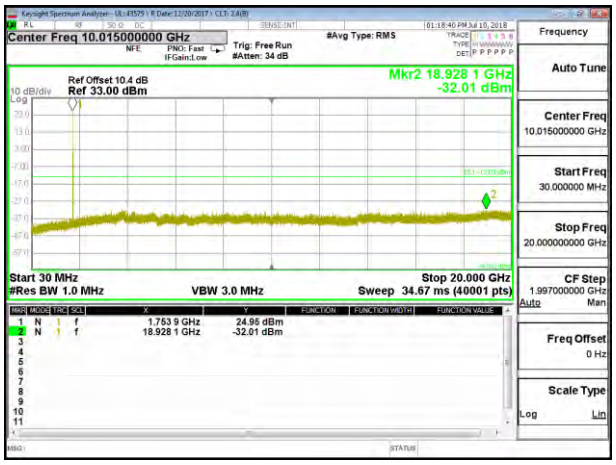
8.3.4. LTE BAND 4



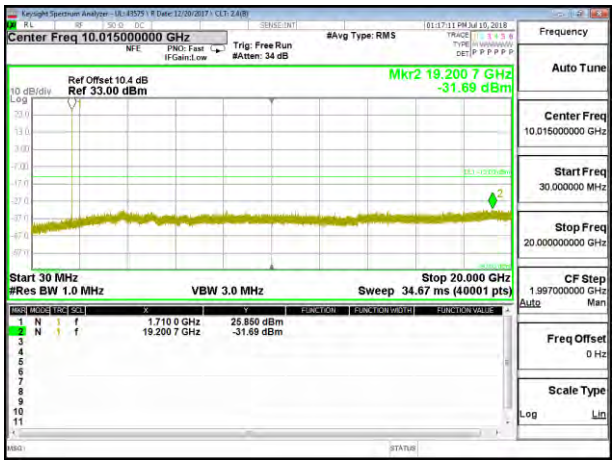
LTE B4 1.4MHz QPSK Low Channel RB1-0



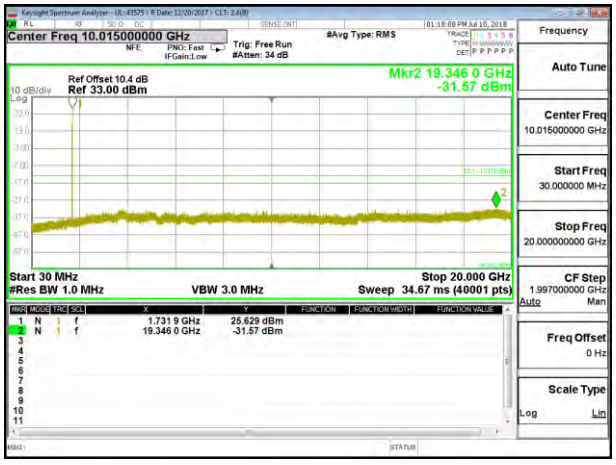
LTE B4 1.4MHz QPSK Mid Channel RB1-0



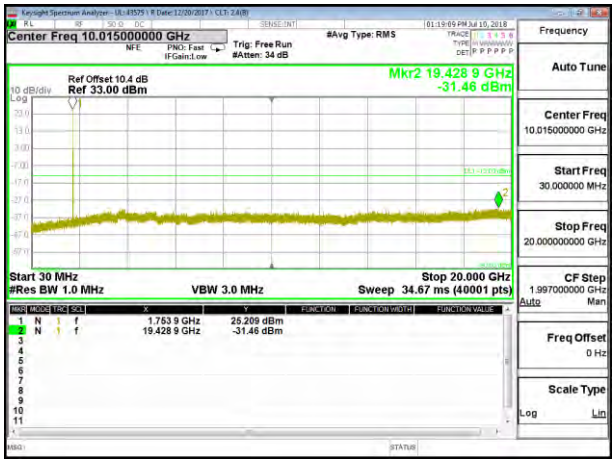
LTE B4 1.4MHz QPSK High Channel RB1-0



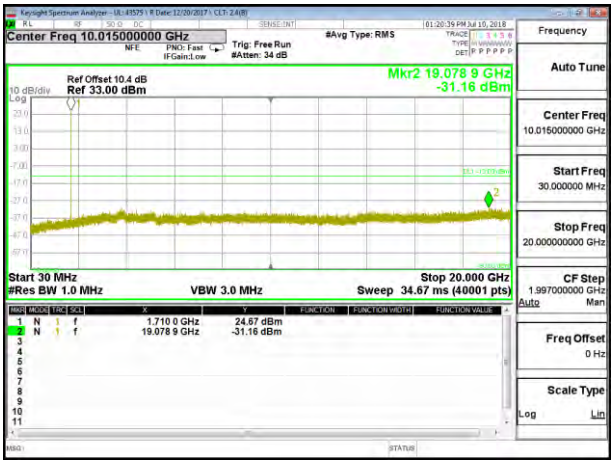
LTE B4 1.4MHz 16QAM Low Channel RB1-0



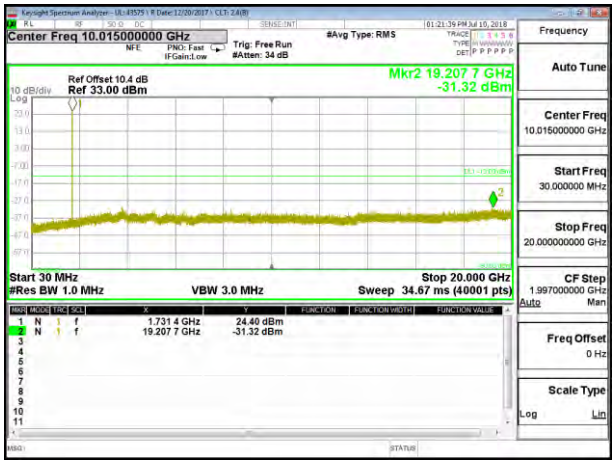
LTE B4 1.4MHz 16QAM Mid Channel RB1-0



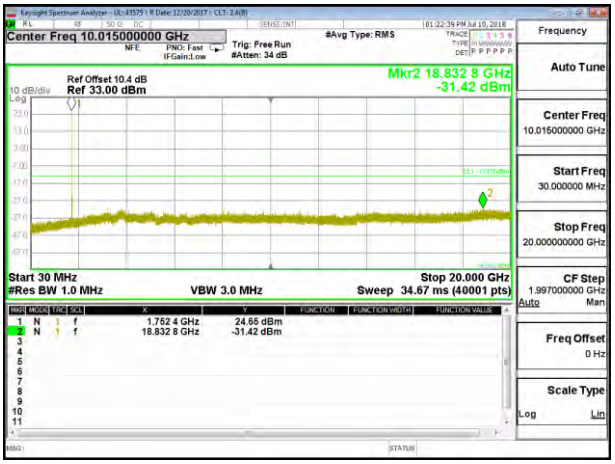
LTE B4 1.4MHz 16QAM High Channel RB1-0



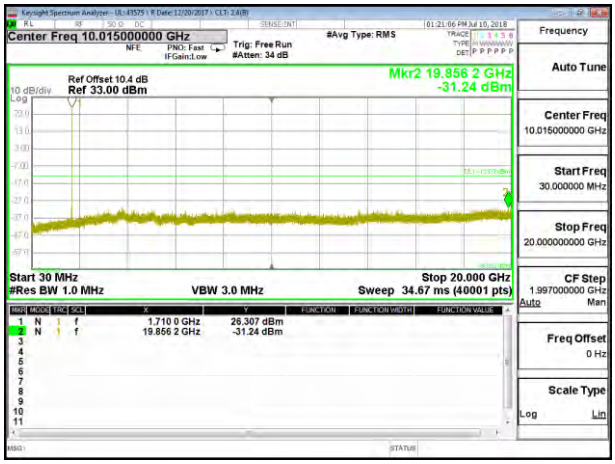
LTE B4 3MHz QPSK Low Channel RB1-0



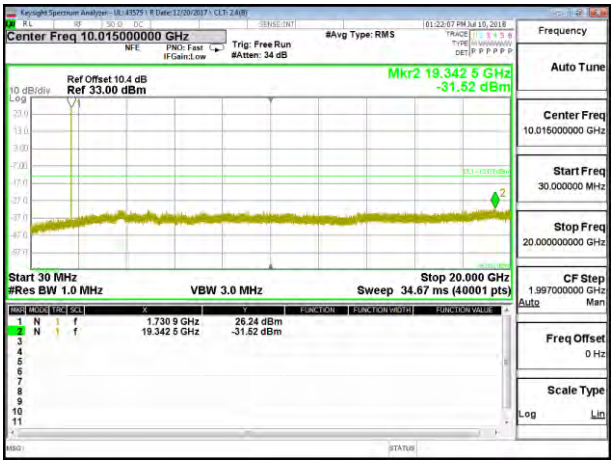
LTE B4 3MHz QPSK Mid Channel RB1-0



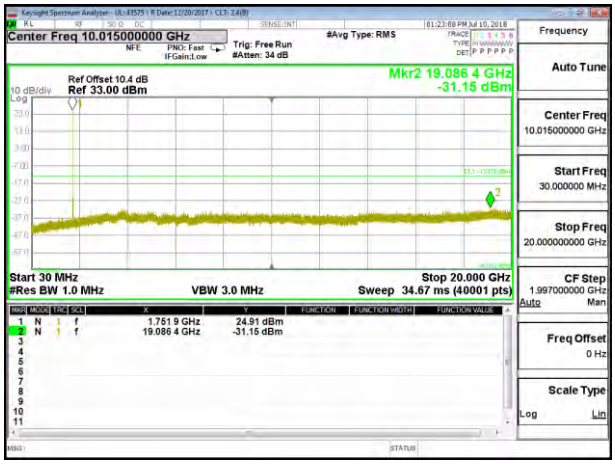
LTE B4 3MHz QPSK High Channel RB1-0



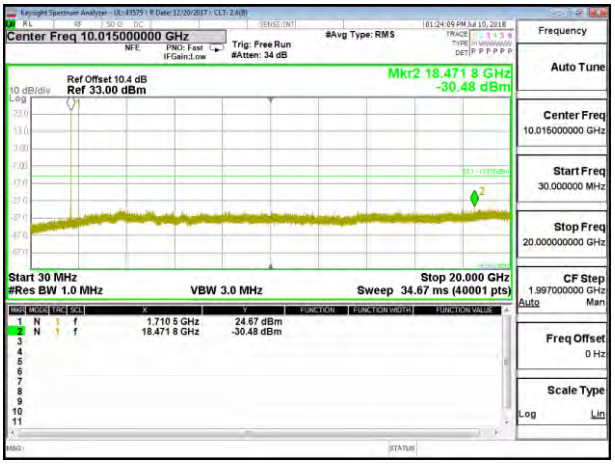
LTE B4 3MHz 16QAM Low Channel RB1-0



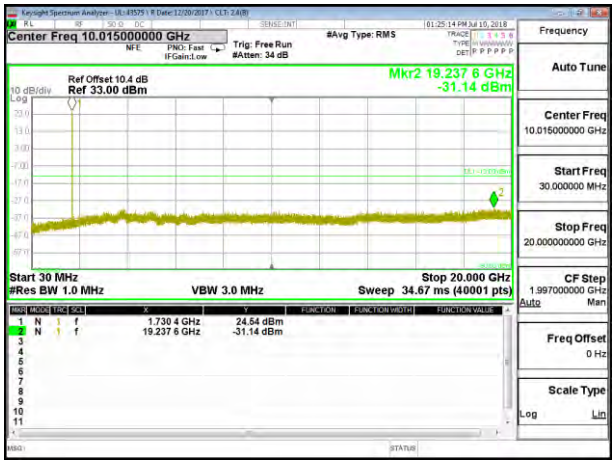
LTE B4 3MHz 16QAM Mid Channel RB1-0



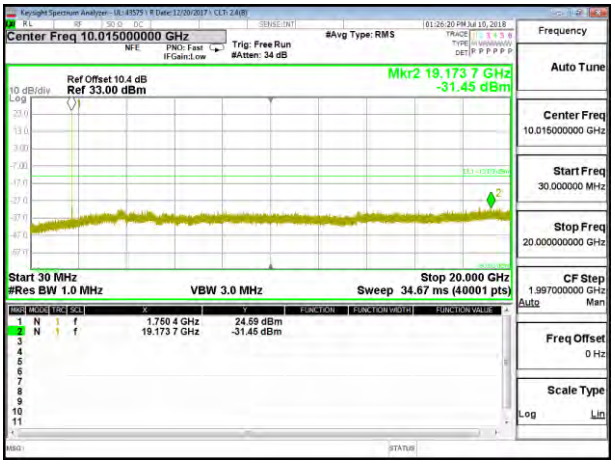
LTE B4 3MHz 16QAM High Channel RB1-0



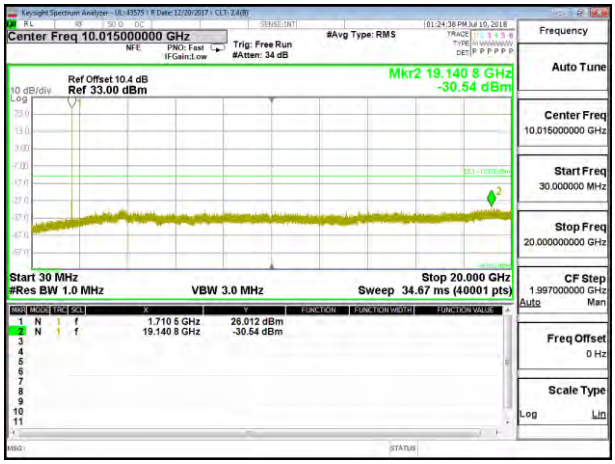
LTE B4 5MHz QPSK Low Channel RB1-0



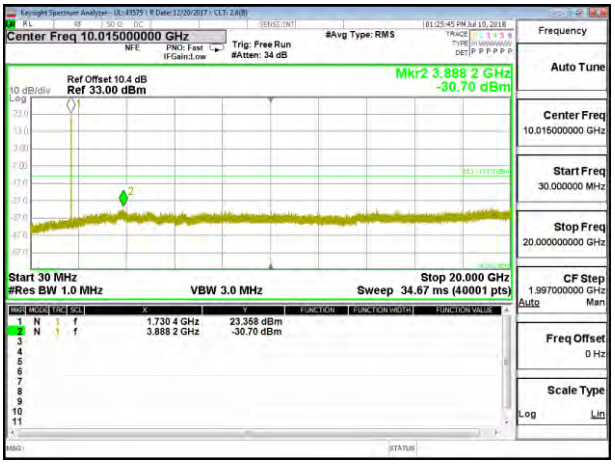
LTE B4 5MHz QPSK Mid Channel RB1-0



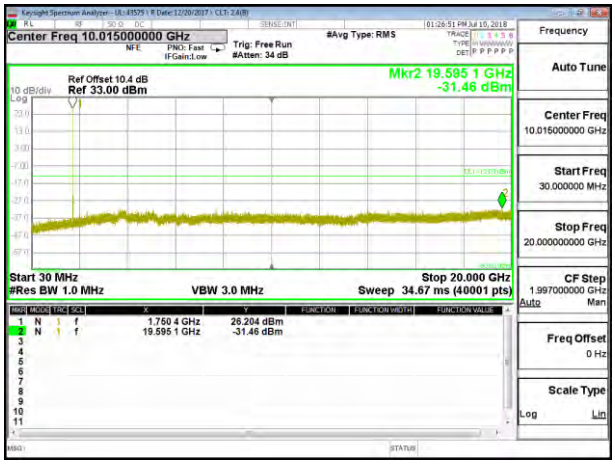
LTE B4 5MHz QPSK High Channel RB1-0



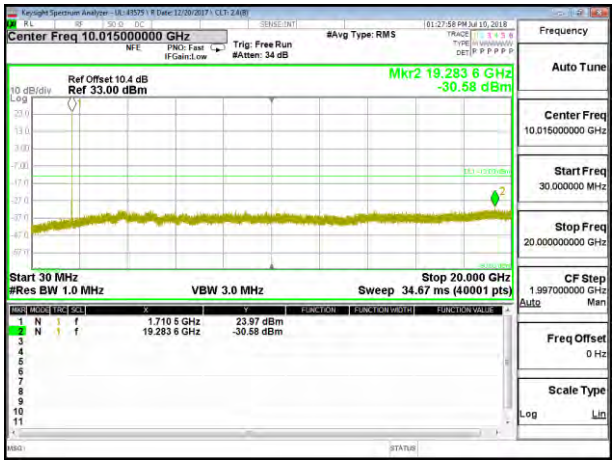
LTE B4 5MHz 16QAM Low Channel RB1-0



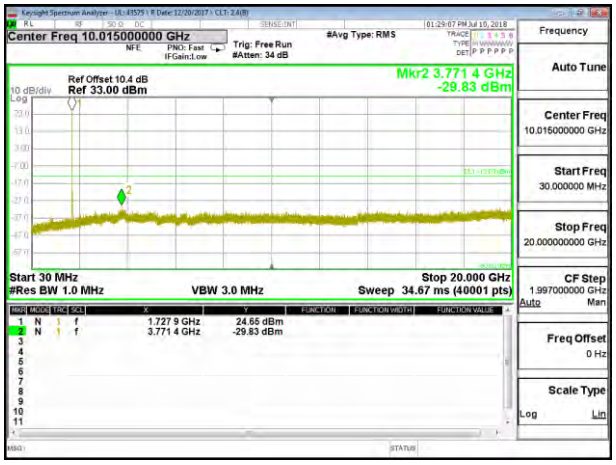
LTE B4 5MHz 16QAM Mid Channel RB1-0



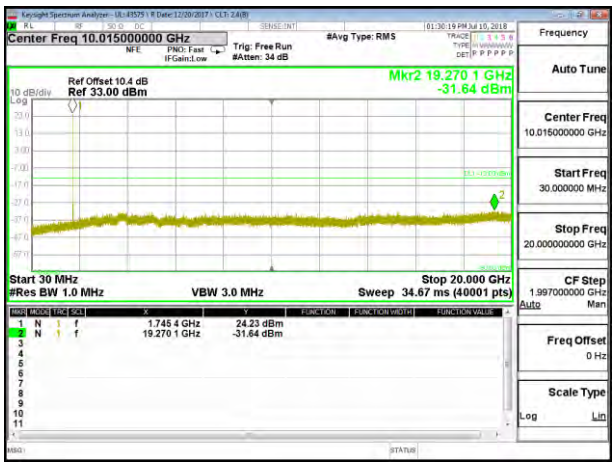
LTE B4 5MHz 16QAM High Channel RB1-0



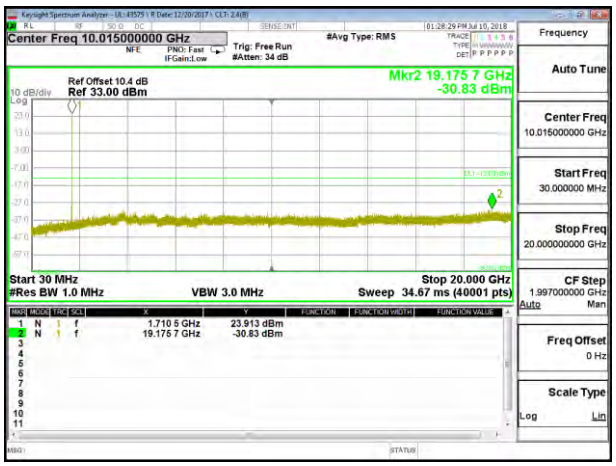
LTE B4 10MHz QPSK Low Channel RB1-0



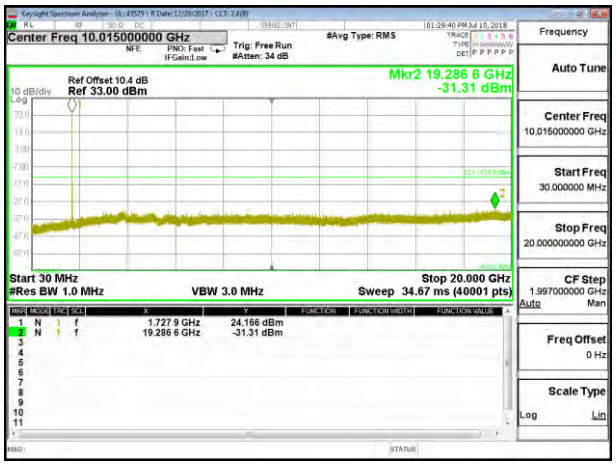
LTE B4 10MHz QPSK Mid Channel RB1-0



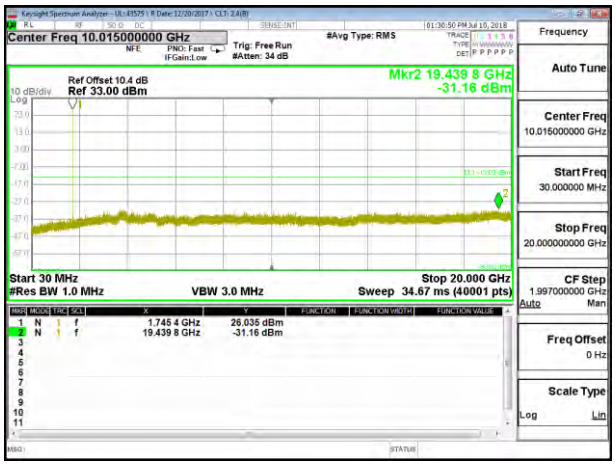
LTE B4 10MHz QPSK High Channel RB1-0



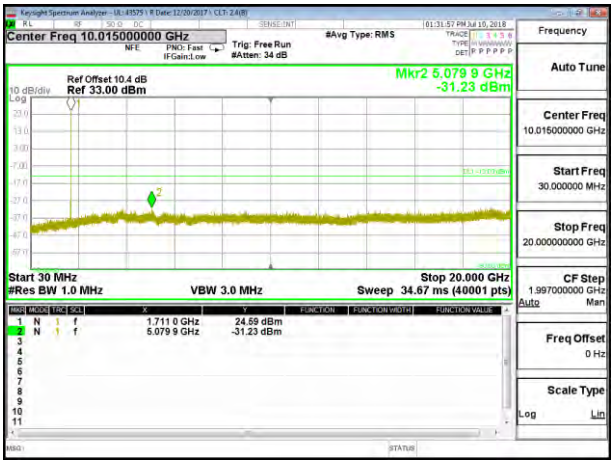
LTE B4 10MHz 16QAM Low Channel RB1-0



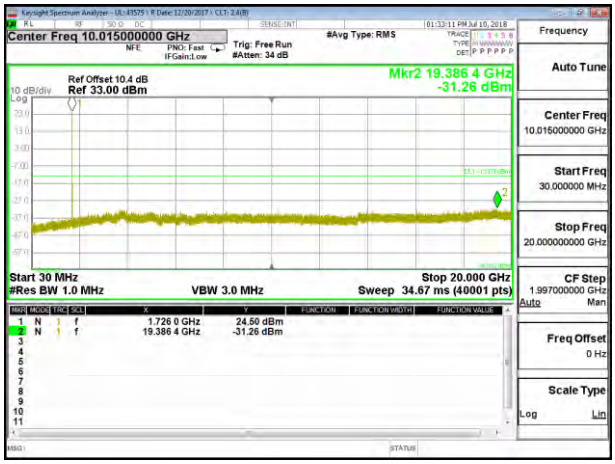
LTE B4 10MHz 16QAM Mid Channel RB1-0



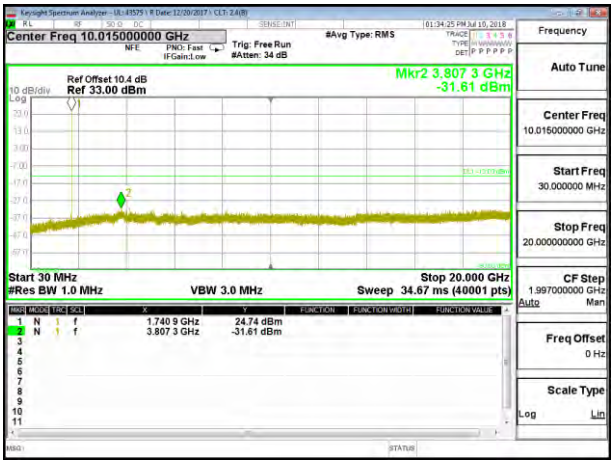
LTE B4 10MHz 16QAM High Channel RB1-0



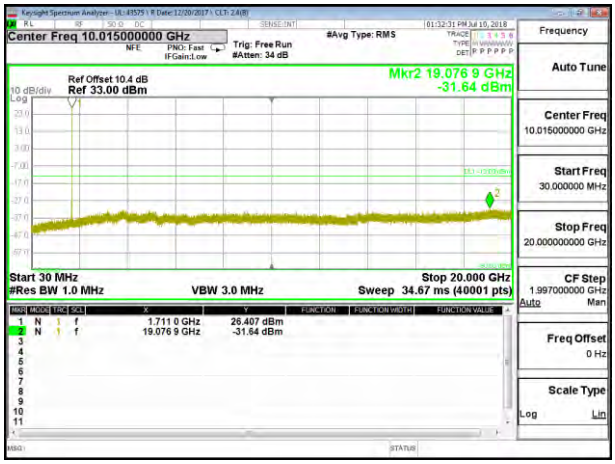
LTE B4 15MHz QPSK Low Channel RB1-0



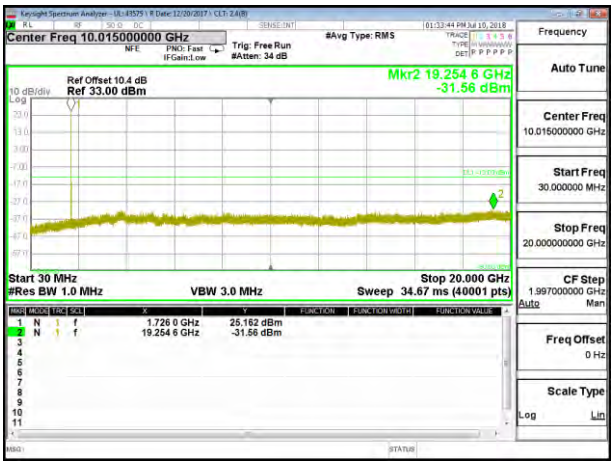
LTE B4 15MHz QPSK Mid Channel RB1-0



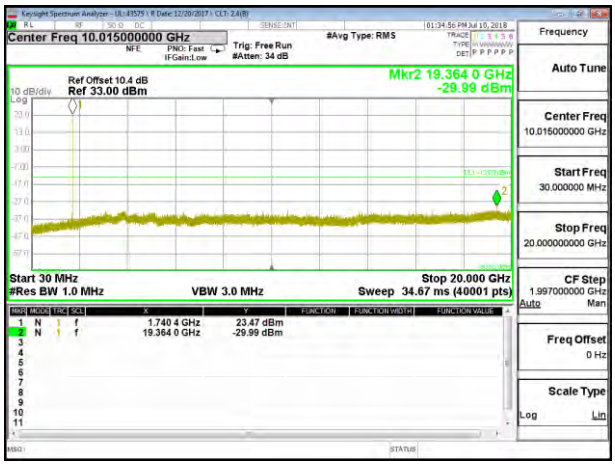
LTE B4 15MHz QPSK High Channel RB1-0



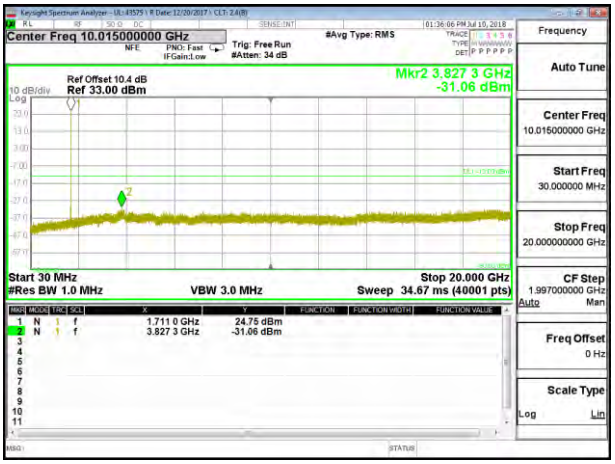
LTE B4 15MHz 16QAM Low Channel RB1-0



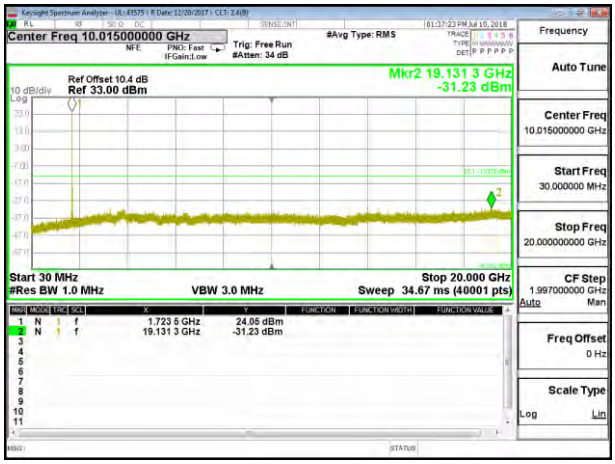
LTE B4 15MHz 16QAM Mid Channel RB1-0



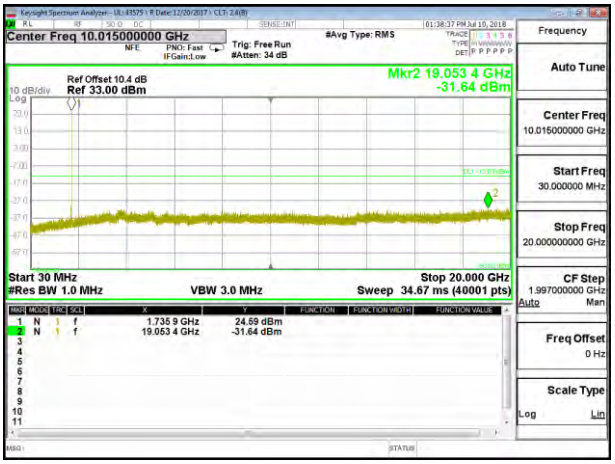
LTE B4 15MHz 16QAM High Channel RB1-0



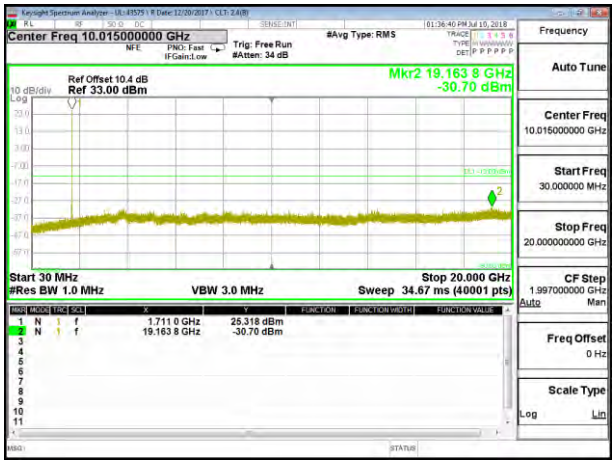
LTE B4 20MHz QPSK Low Channel RB1-0



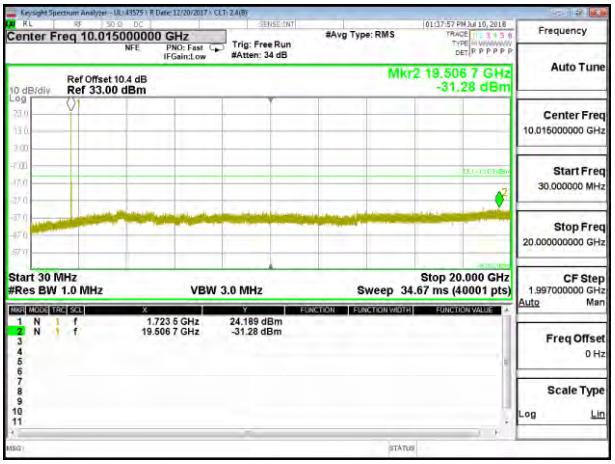
LTE B4 20MHz QPSK Mid Channel RB1-0



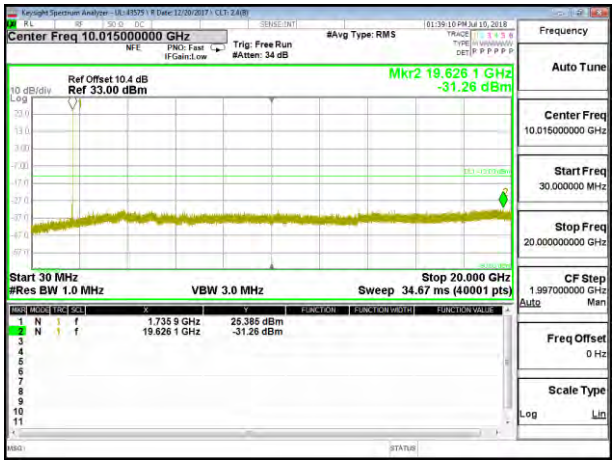
LTE B4 20MHz QPSK High Channel RB1-0



LTE B4 20MHz 16QAM Low Channel RB1-0

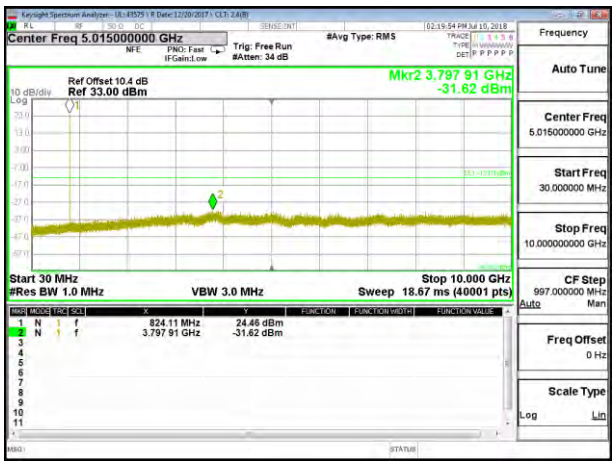


LTE B4 20MHz 16QAM Mid Channel RB1-0

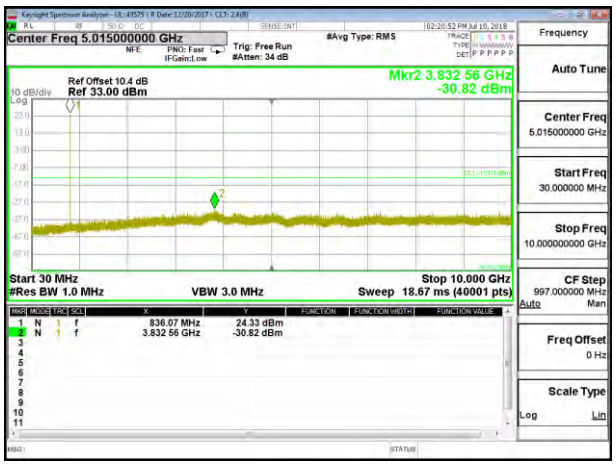


LTE B4 20MHz 16QAM High Channel RB1-0

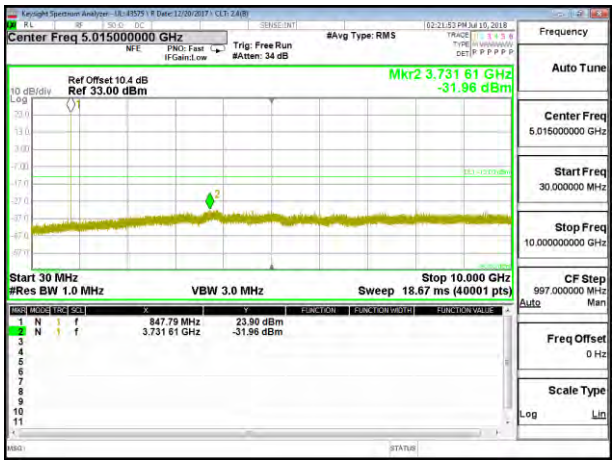
8.3.5. LTE BAND 5



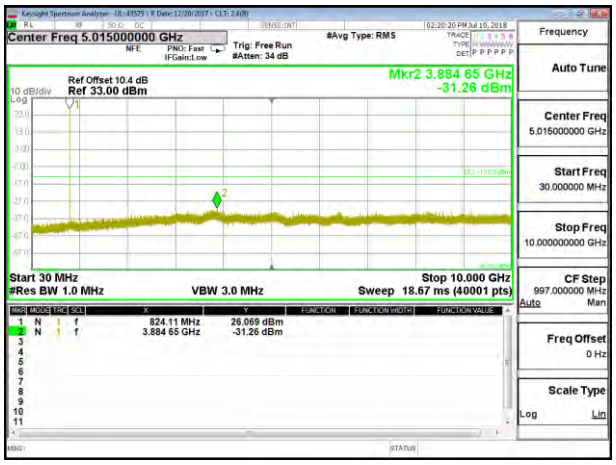
LTE B5 1.4MHz QPSK Low Channel RB1-0



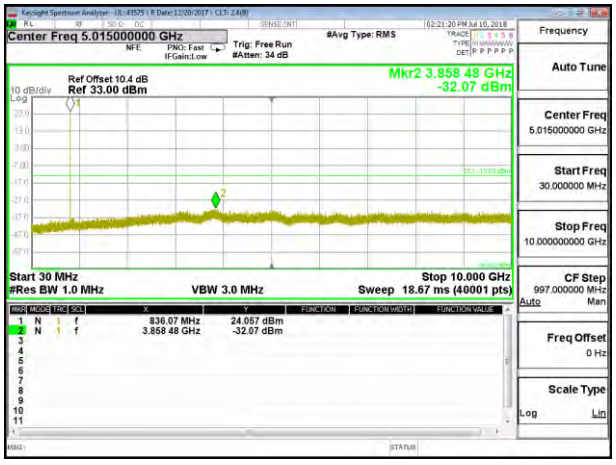
LTE B5 1.4MHz QPSK Mid Channel RB1-0



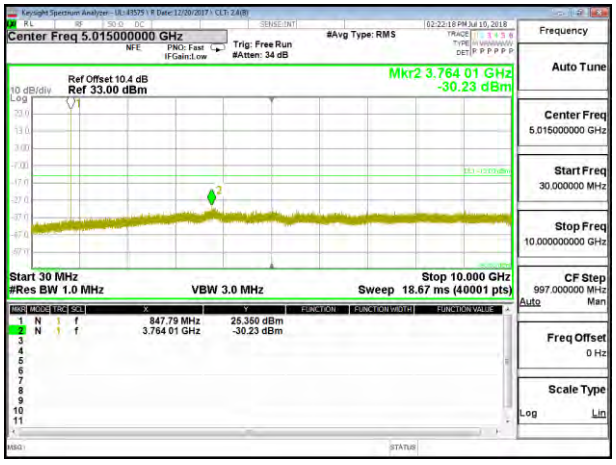
LTE B5 1.4MHz QPSK High Channel RB1-0



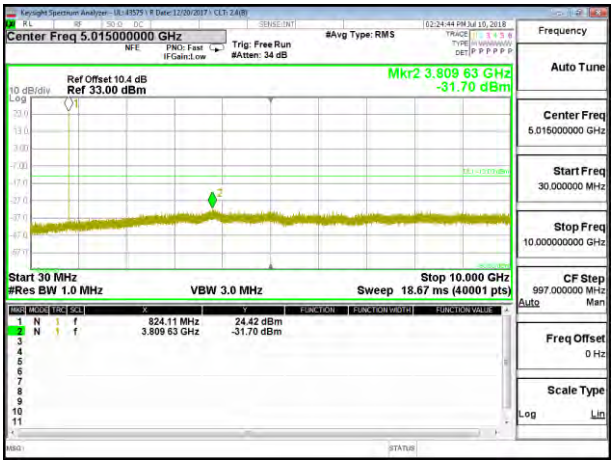
LTE B5 1.4MHz 16QAM Low Channel RB1-0



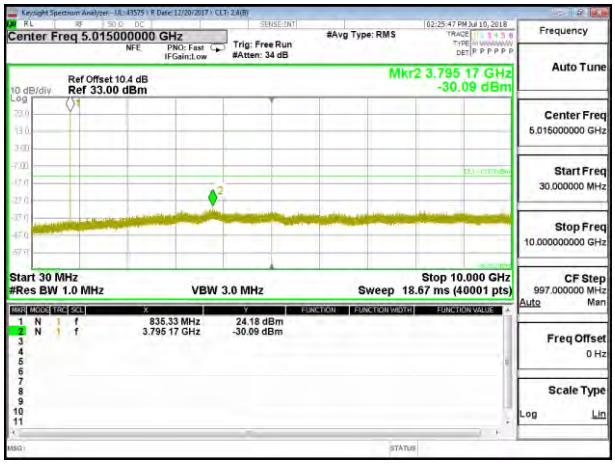
LTE B5 1.4MHz 16QAM Mid Channel RB1-0



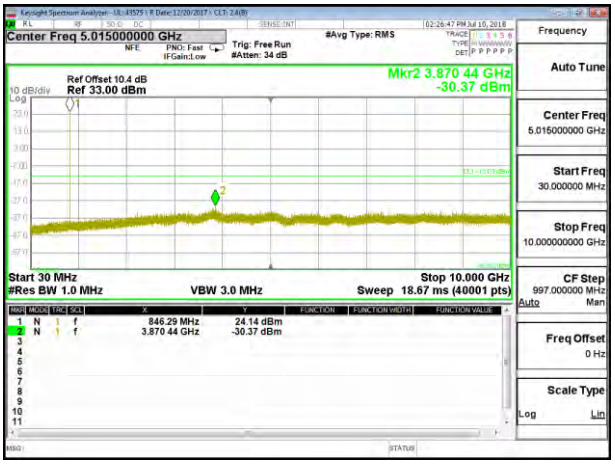
LTE B5 1.4MHz 16QAM High Channel RB1-0



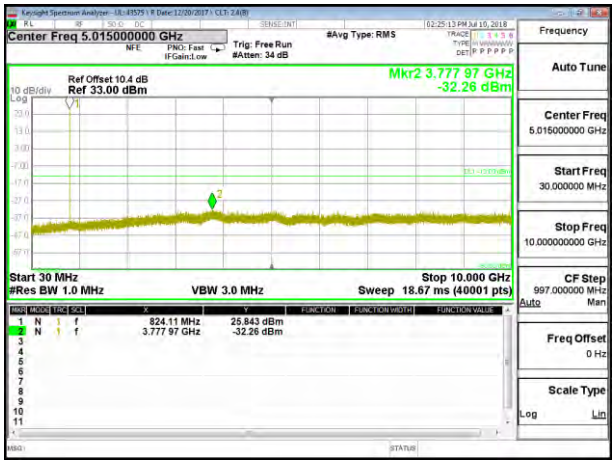
LTE B5 3MHz QPSK Low Channel RB1-0



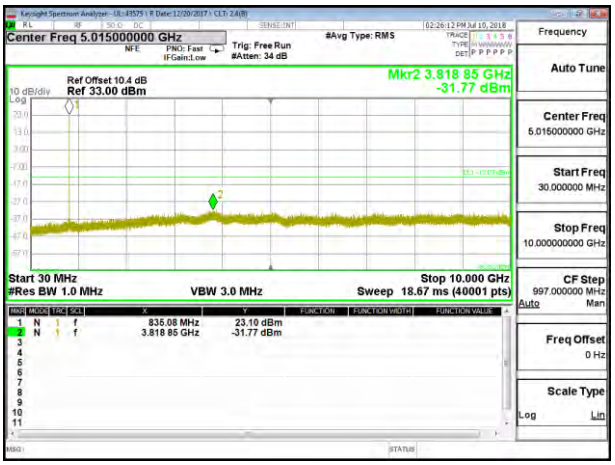
LTE B5 3MHz QPSK Mid Channel RB1-0



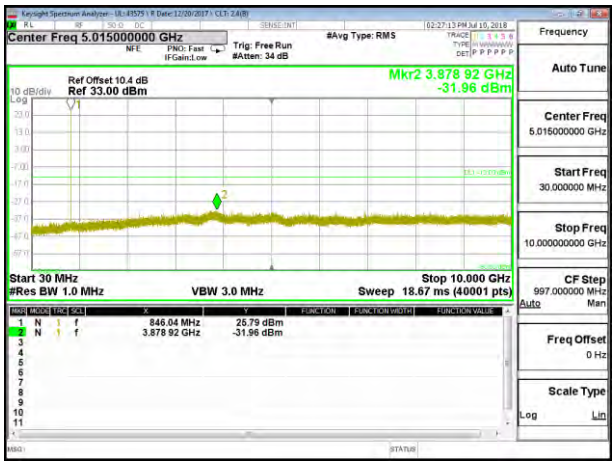
LTE B5 3MHz QPSK High Channel RB1-0



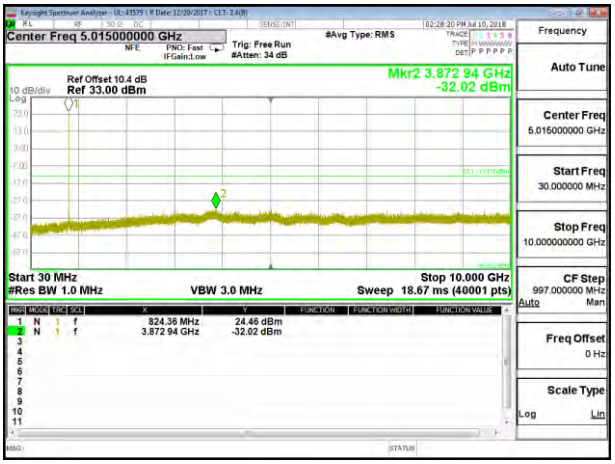
LTE B5 3MHz 16QAM Low Channel RB1-0



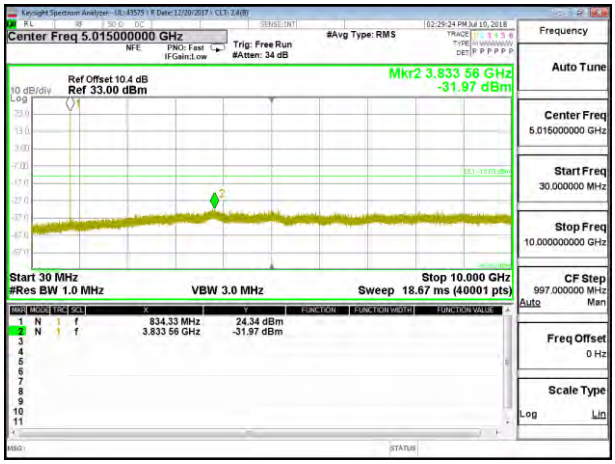
LTE B5 3MHz 16QAM Mid Channel RB1-0



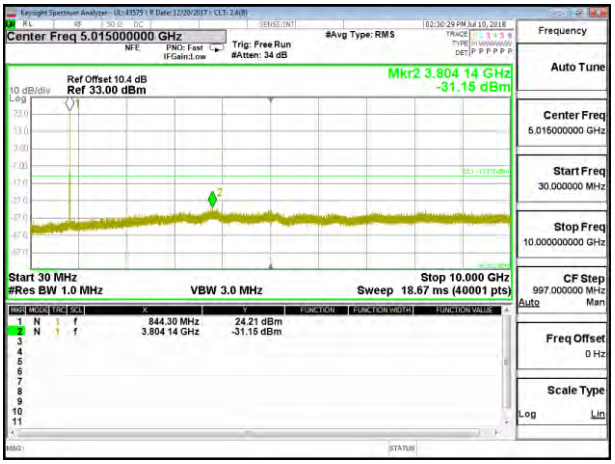
LTE B5 3MHz 16QAM High Channel RB1-0



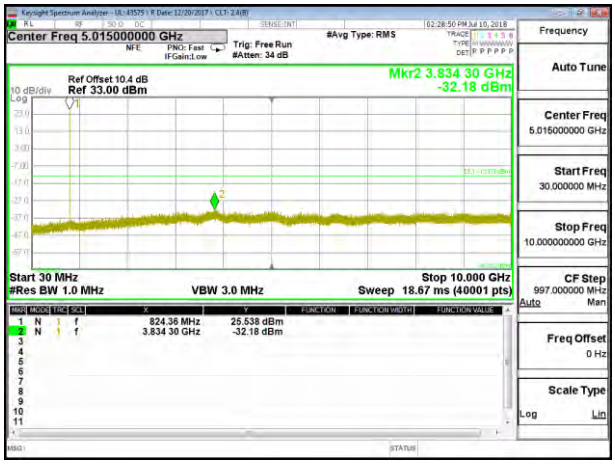
LTE B5 5MHz QPSK Low Channel RB1-0



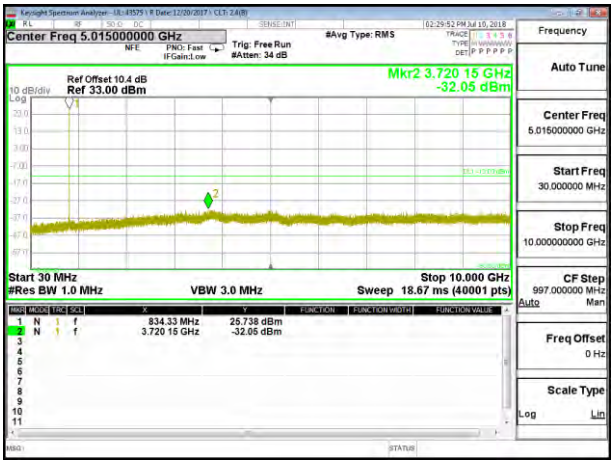
LTE B5 5MHz QPSK Mid Channel RB1-0



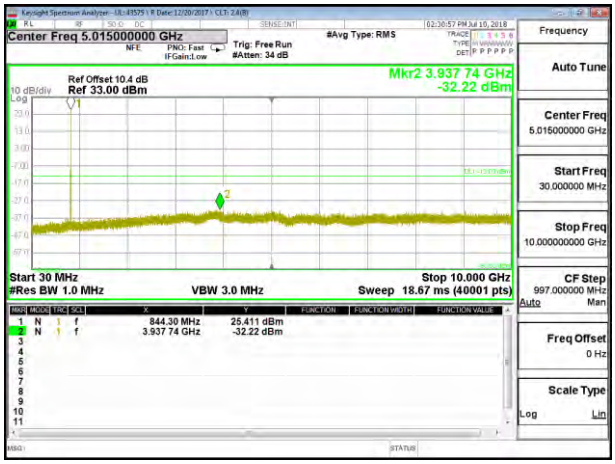
LTE B5 5MHz QPSK High Channel RB1-0



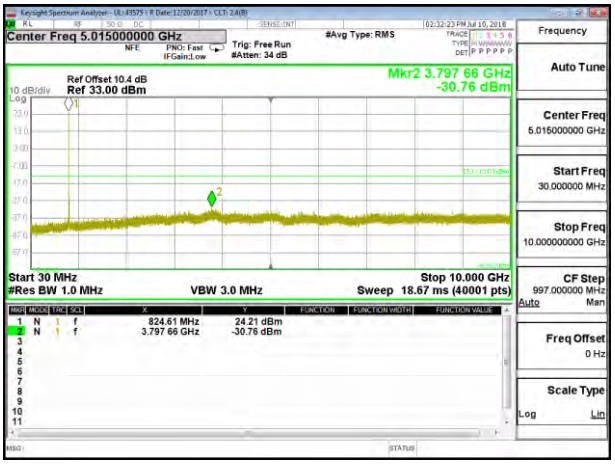
LTE B5 5MHz 16QAM Low Channel RB1-0



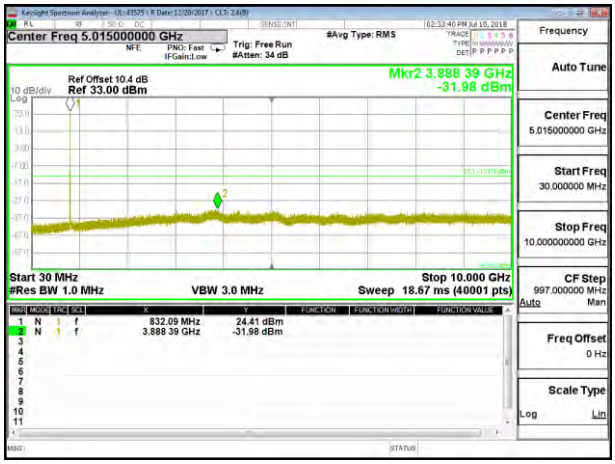
LTE B5 5MHz 16QAM Mid Channel RB1-0



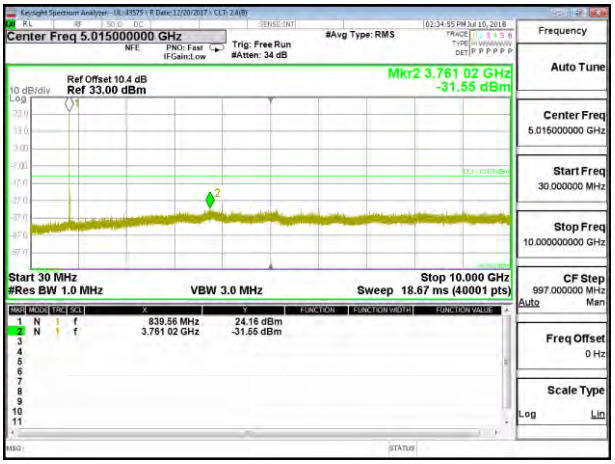
LTE B5 5MHz 16QAM High Channel RB1-0



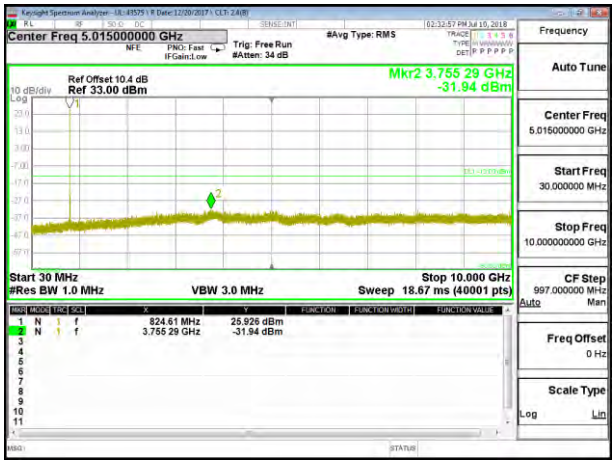
LTE B5 10MHz QPSK Low Channel RB1-0



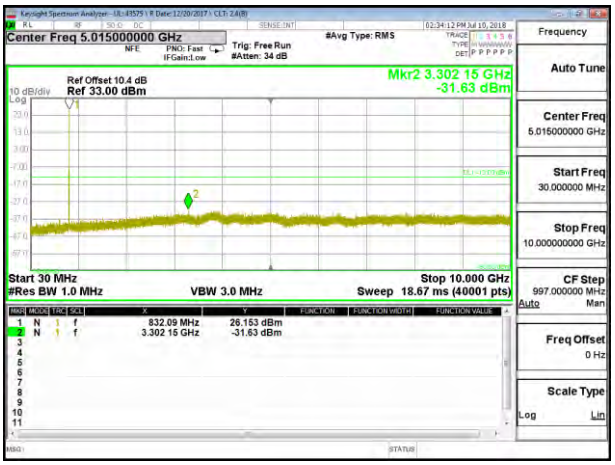
LTE B5 10MHz QPSK Mid Channel RB1-0



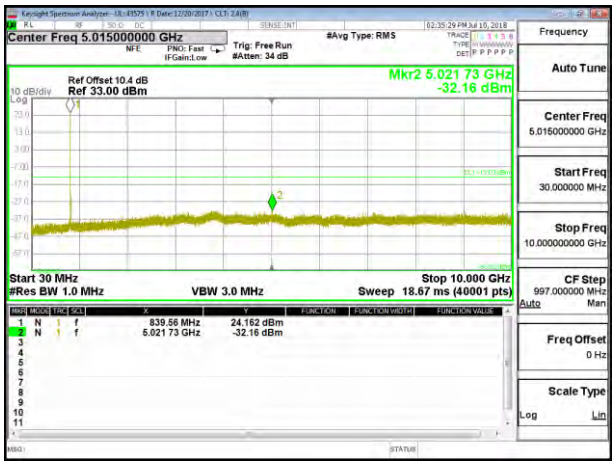
LTE B5 10MHz QPSK High Channel RB1-0



LTE B5 10MHz 16QAM Low Channel RB1-0



LTE B5 10MHz 16QAM Mid Channel RB1-0



LTE B5 10MHz 16QAM High Channel RB1-0