

### 8.3. OUT OF BAND EMISSIONS

#### RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238, §27.53, §90.691 and §90.543

#### LIMITS

FCC: §22.917, §24.238, §27.53 (c), (g), (h), §90.691, §90.543 (Band 14)

The minimum permissible attenuation level of any spurious emissions is  $43 + 10 \log (P)$  dB where transmitting power (P) in Watts.

FCC: §27.53 (a) (Band 30, 40)

The minimum permissible attenuation level of any spurious emissions is  $70 + 10 \log (P)$  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.

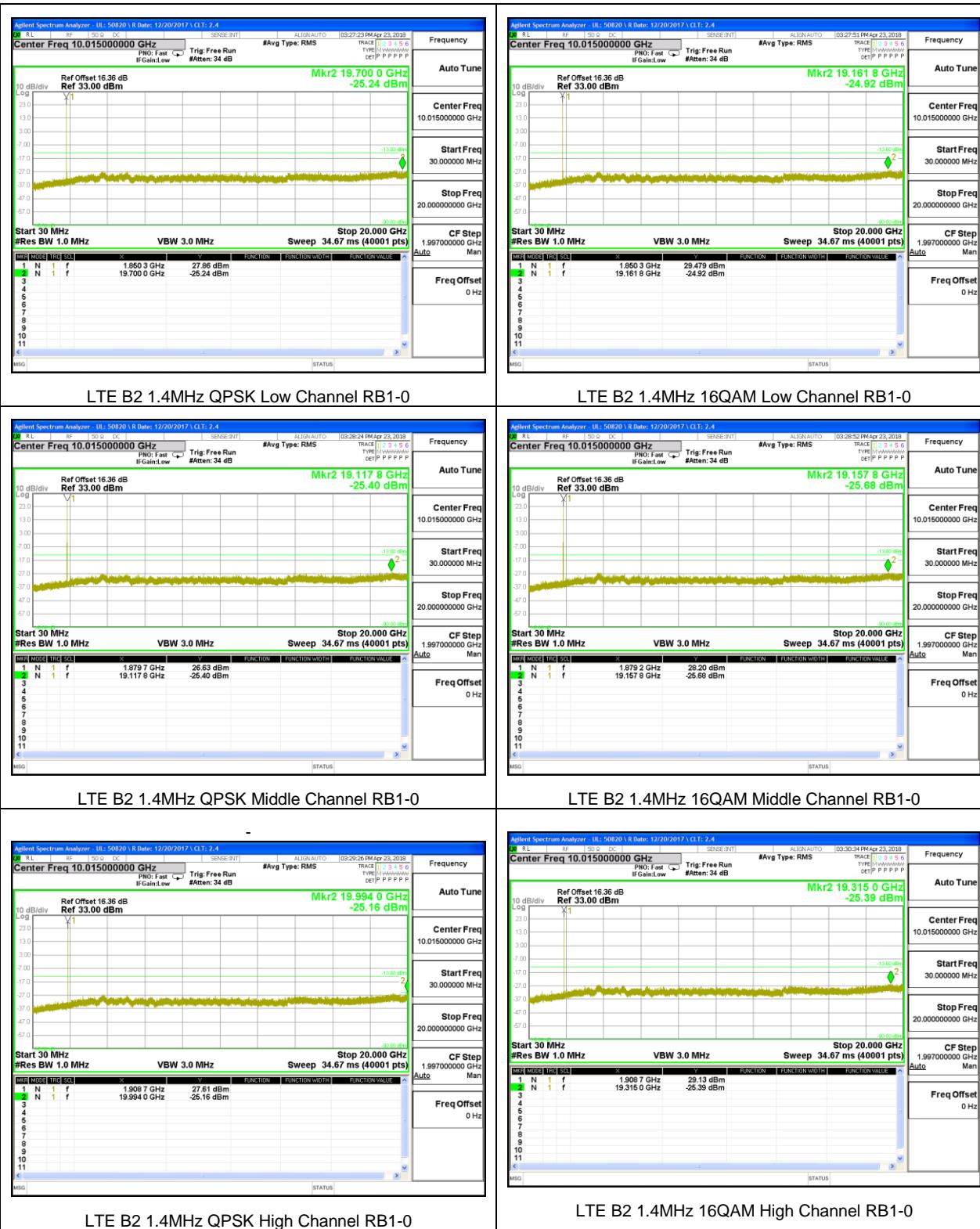
For each out of band emissions measurement:

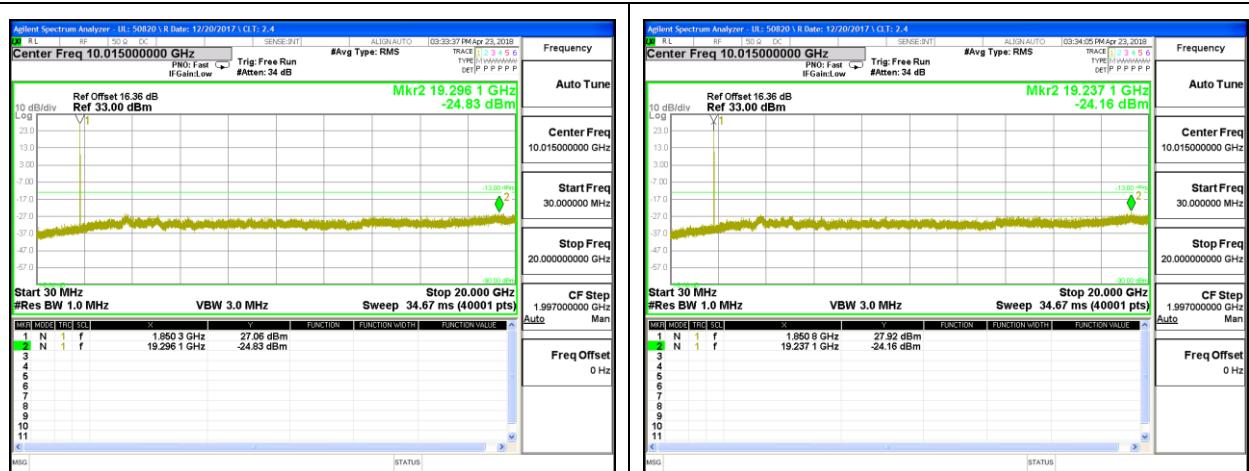
- Set display line at -13 dBm, -25dBm and -40dBm according to the band Limit
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz. (NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

#### MODES TESTED

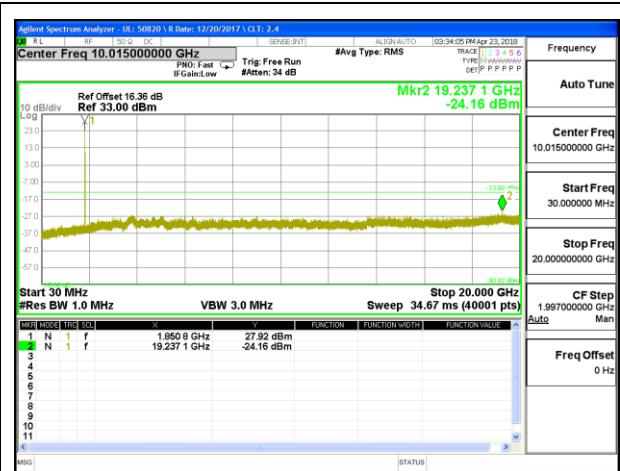
- LTE Band 2
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 14
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41
- LTE Band 66
- LTE Band 71

### 8.3.1. ANT 1, LTE BAND 2

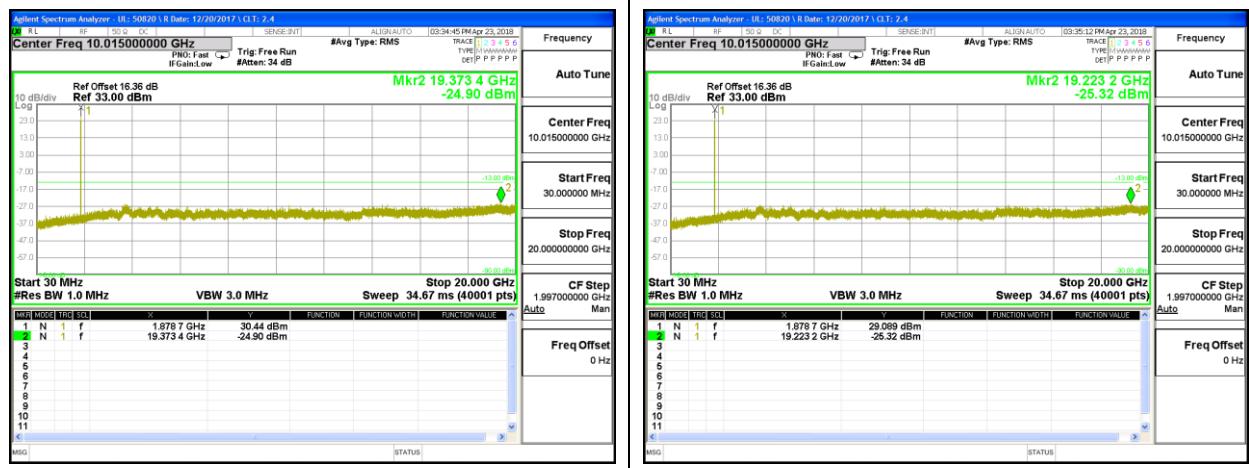




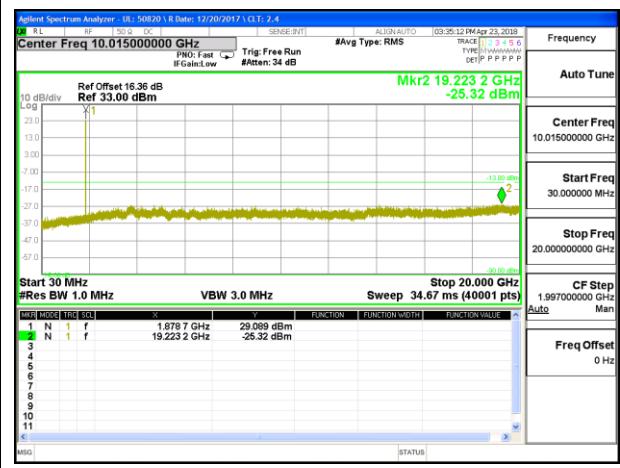
LTE B2 3MHz QPSK Low Channel RB1-0



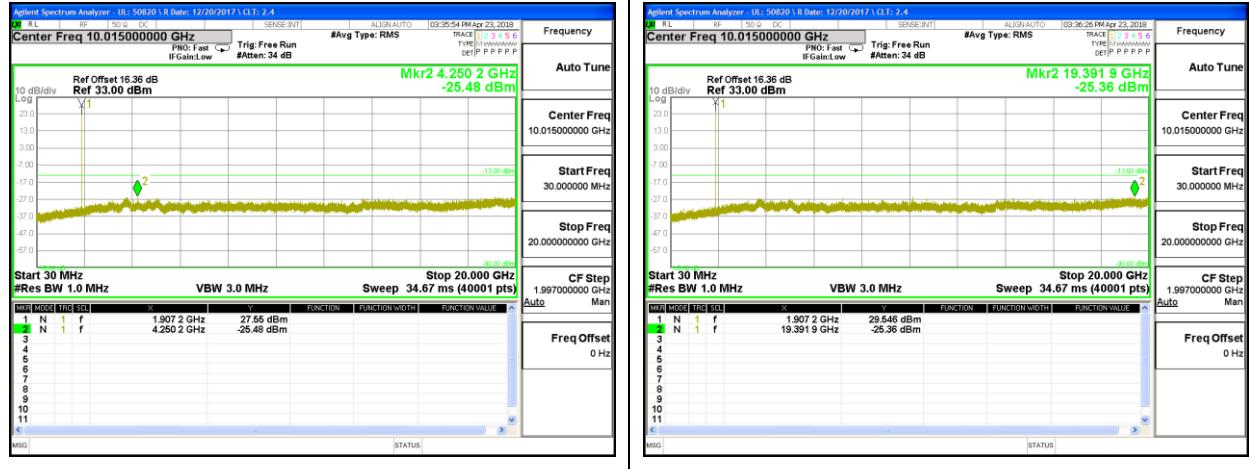
LTE B2 3MHz 16QAM Low Channel RB1-0



LTE B2 3MHz QPSK Middle Channel RB1-0

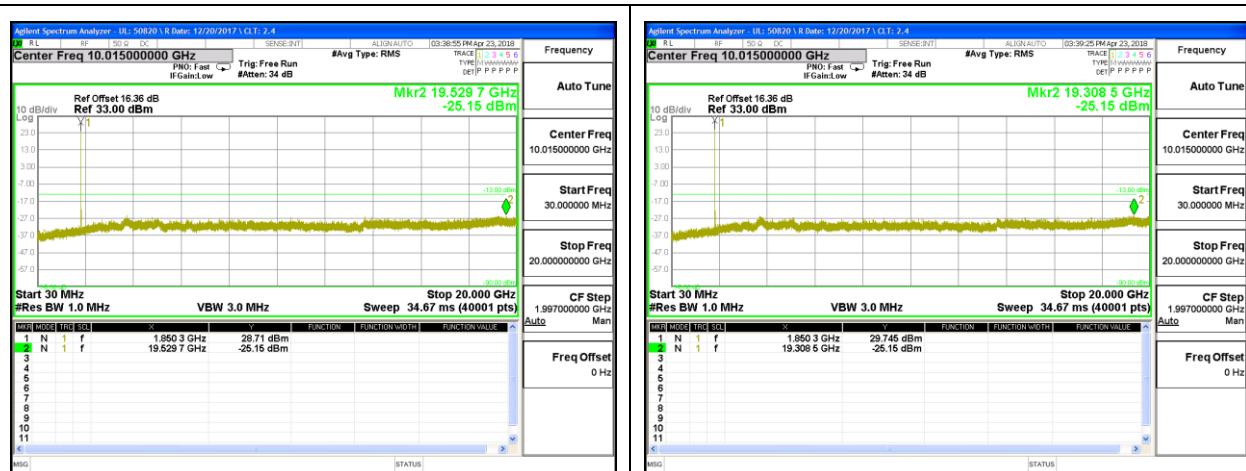


LTE B2 3MHz 16QAM Middle Channel RB1-0

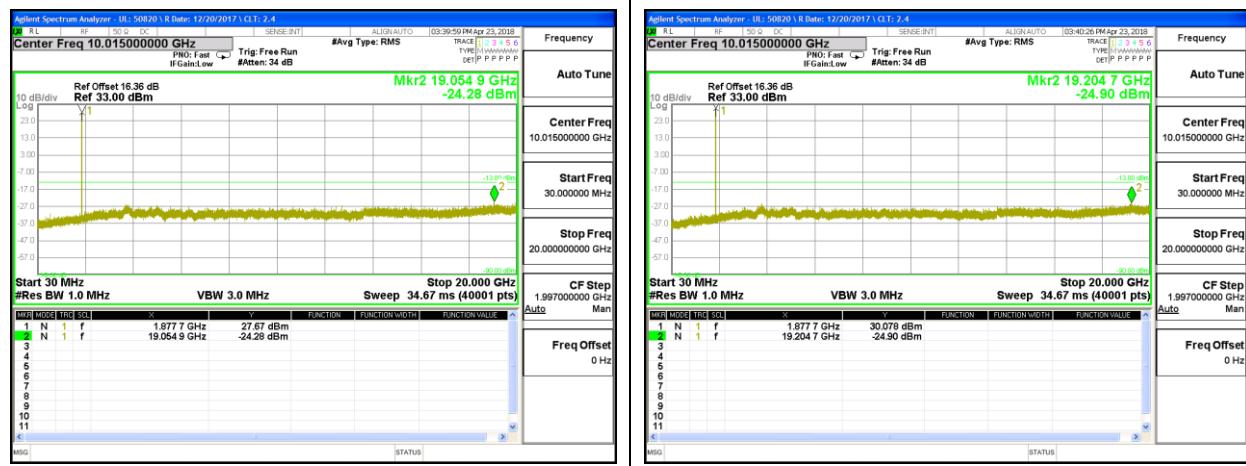


LTE B2 3MHz QPSK High Channel RB1-0

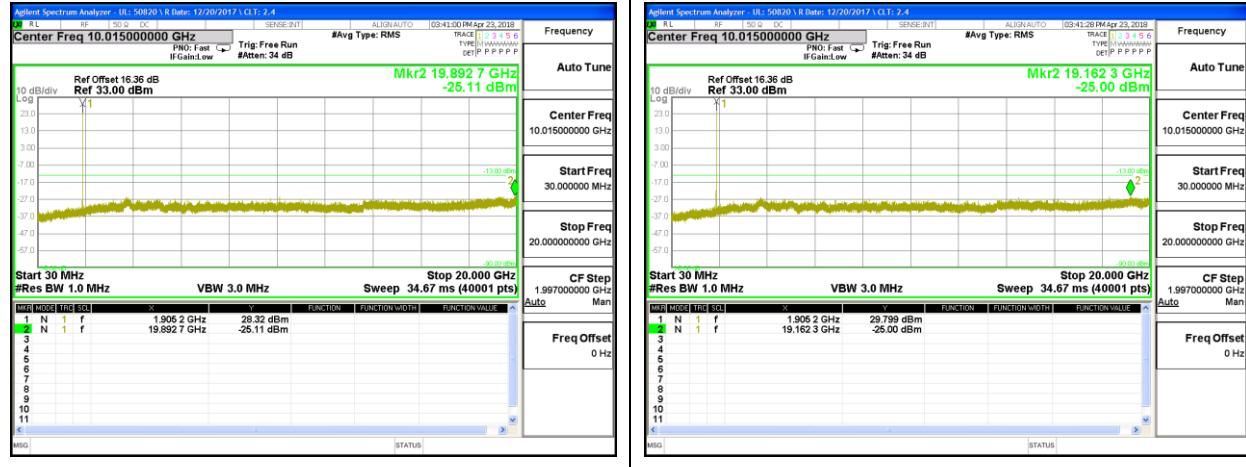
LTE B2 3MHz 16QAM High Channel RB1-0



LTE B2 5MHz QPSK Low Channel RB1-0



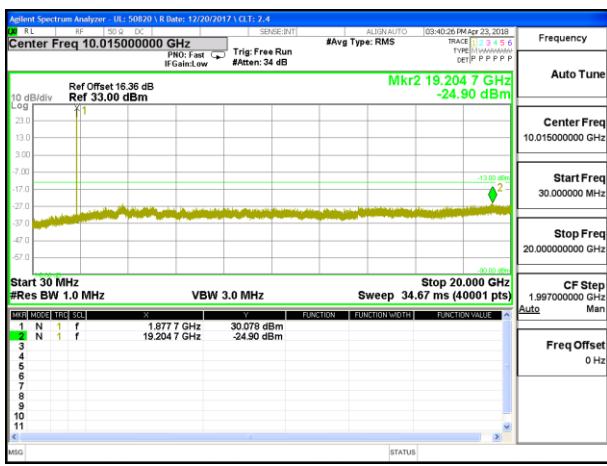
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LTE B2 5MHz QPSK High Channel RB1-0



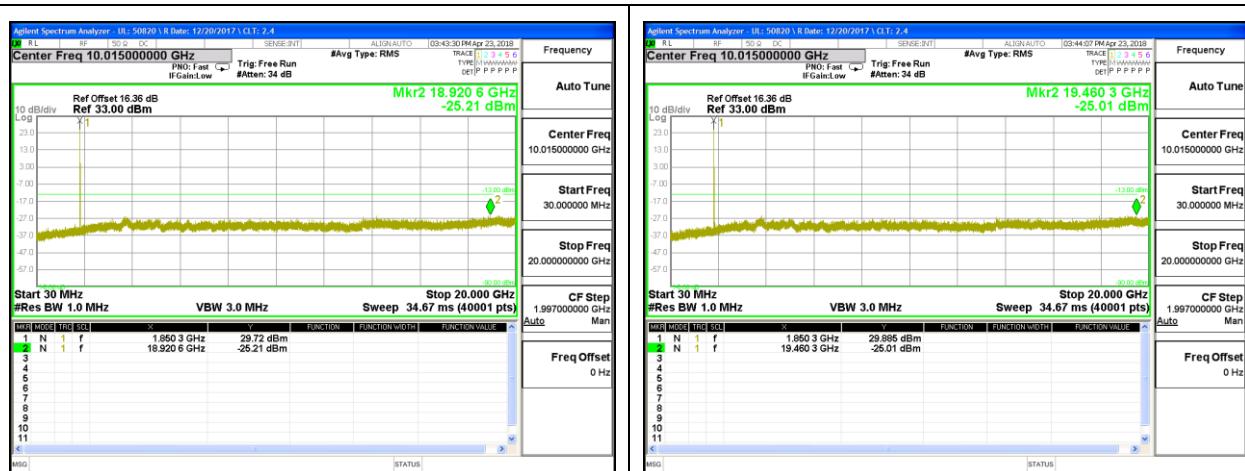
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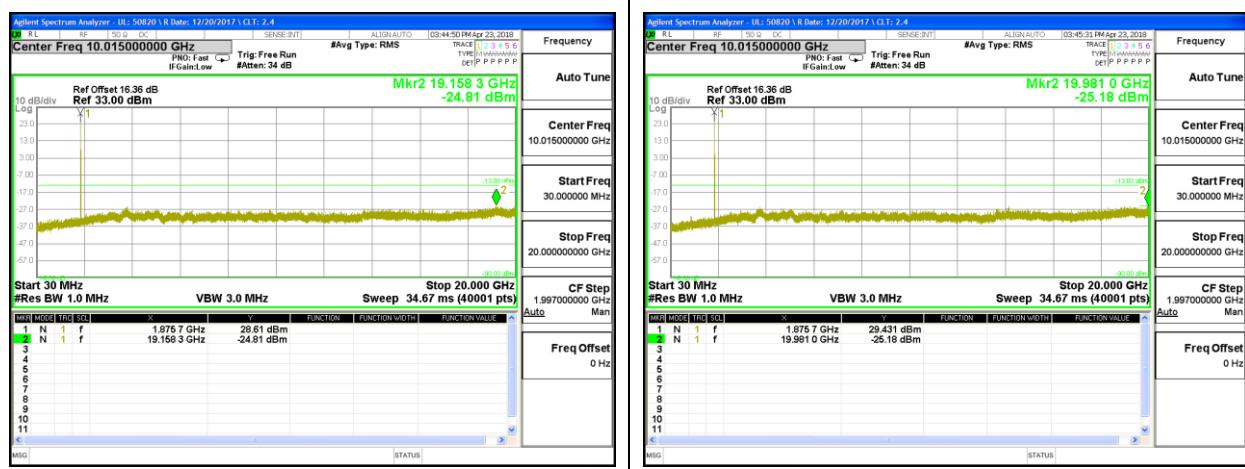
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LTE B2 5MHz 16QAM High Channel RB1-0



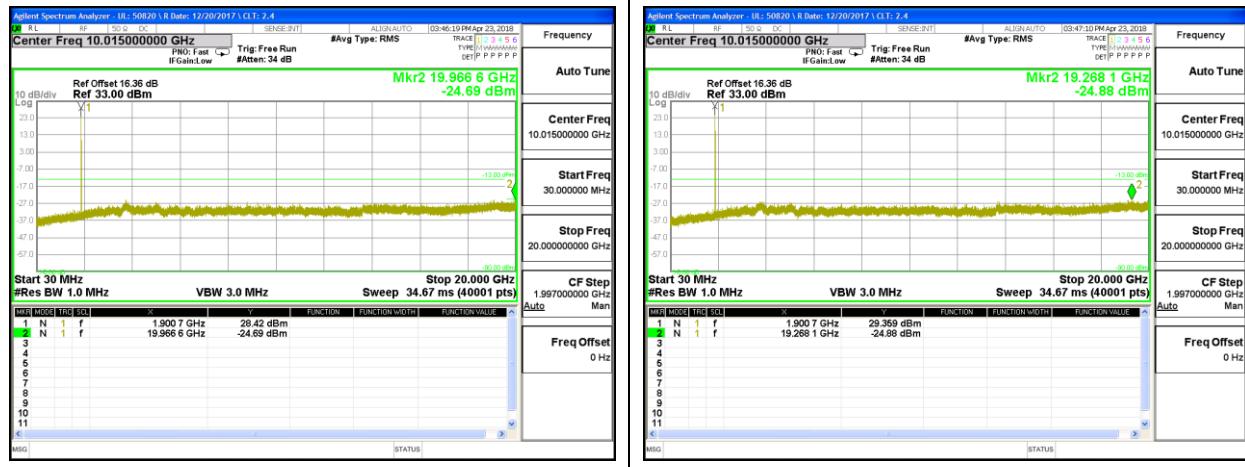
LTE B2 10MHz QPSK Low Channel RB1-0



LTE B2 10MHz 16QAM Low Channel RB1-0



LTE B2 10MHz QPSK Middle Channel RB1-0



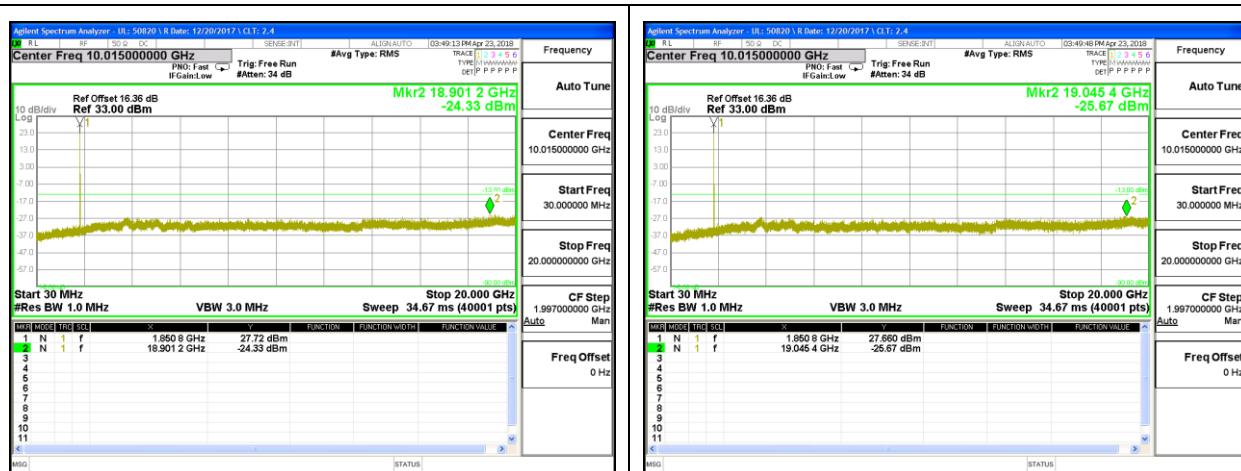
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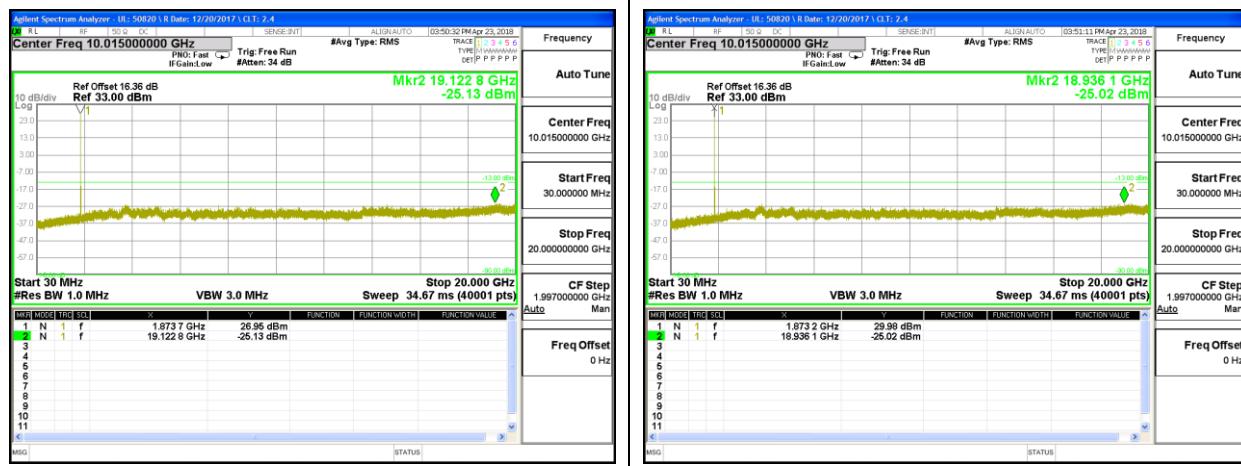
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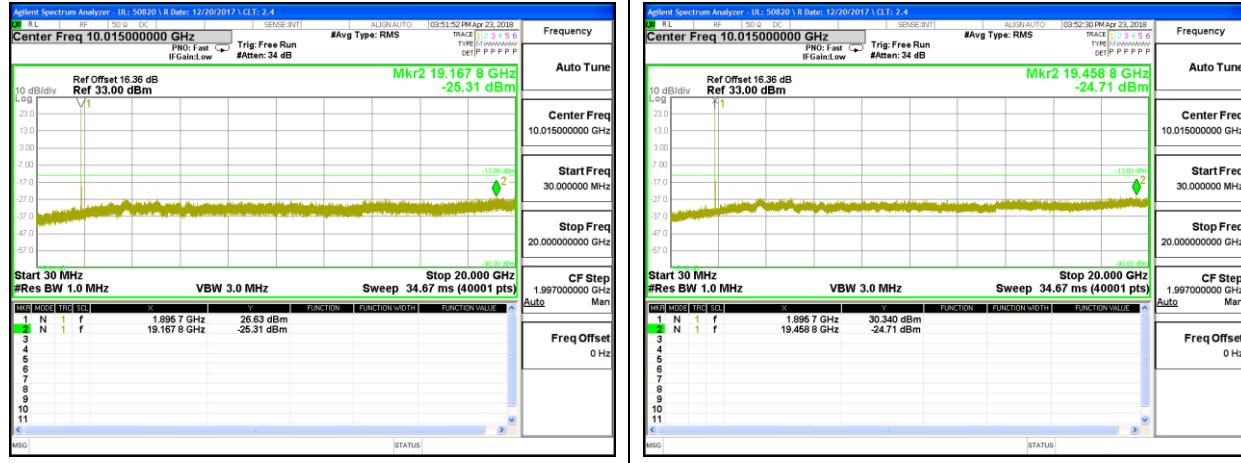
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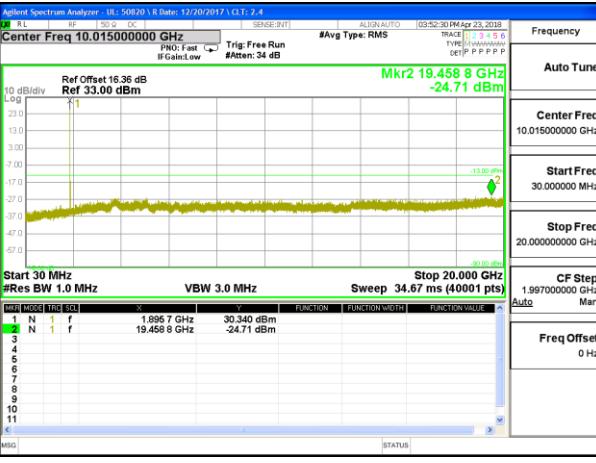
LTE B2 15MHz QPSK Low Channel RB1-0



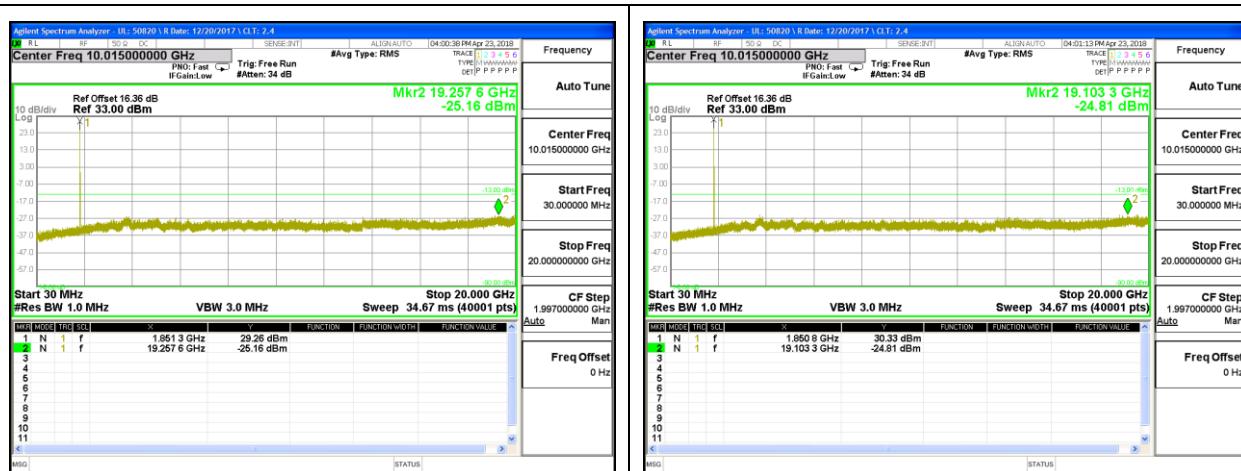
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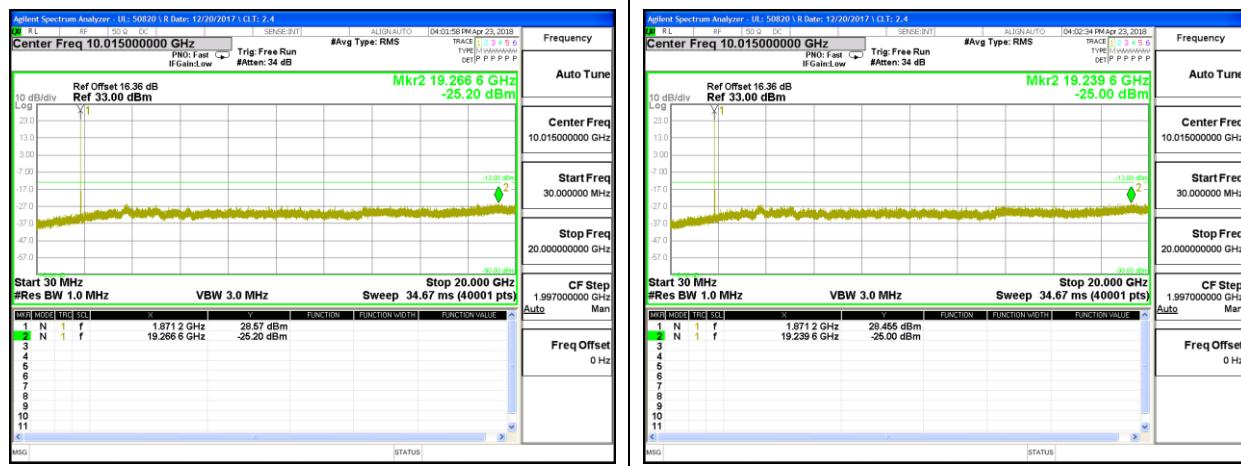
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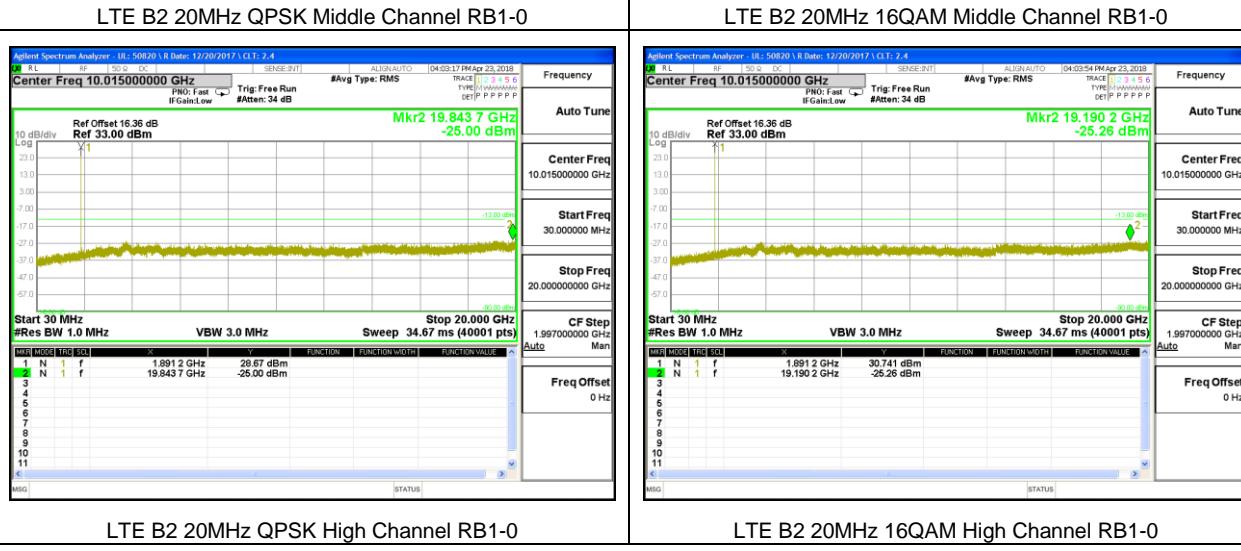
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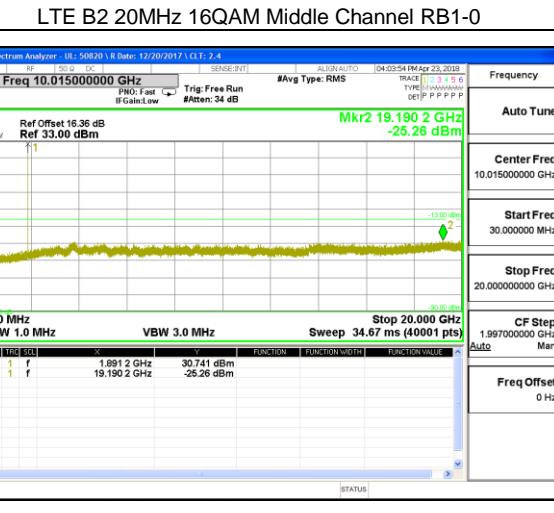
LTE B2 20MHz QPSK Low Channel RB1-0



LTE B2 20MHz 16QAM Low Channel RB1-0



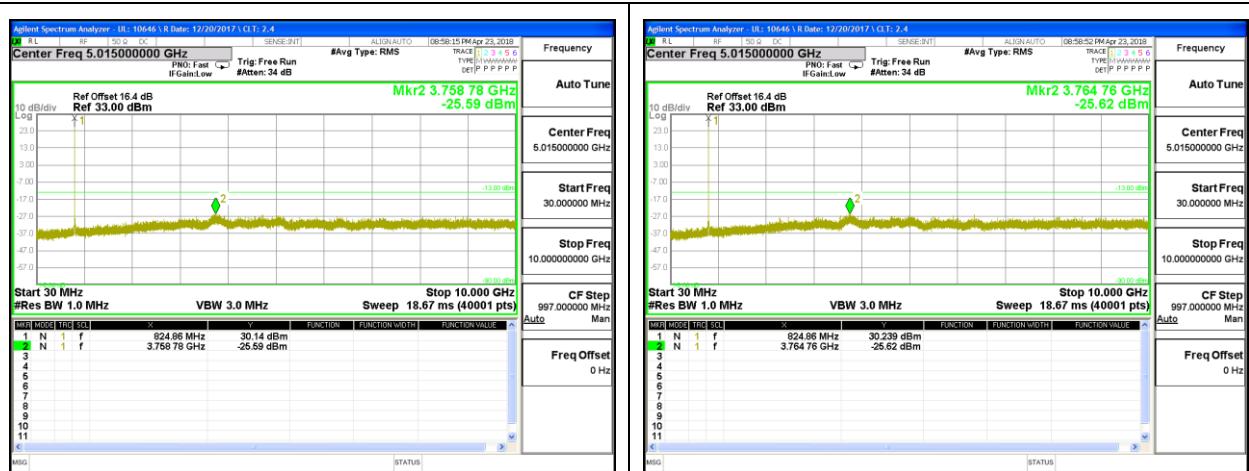
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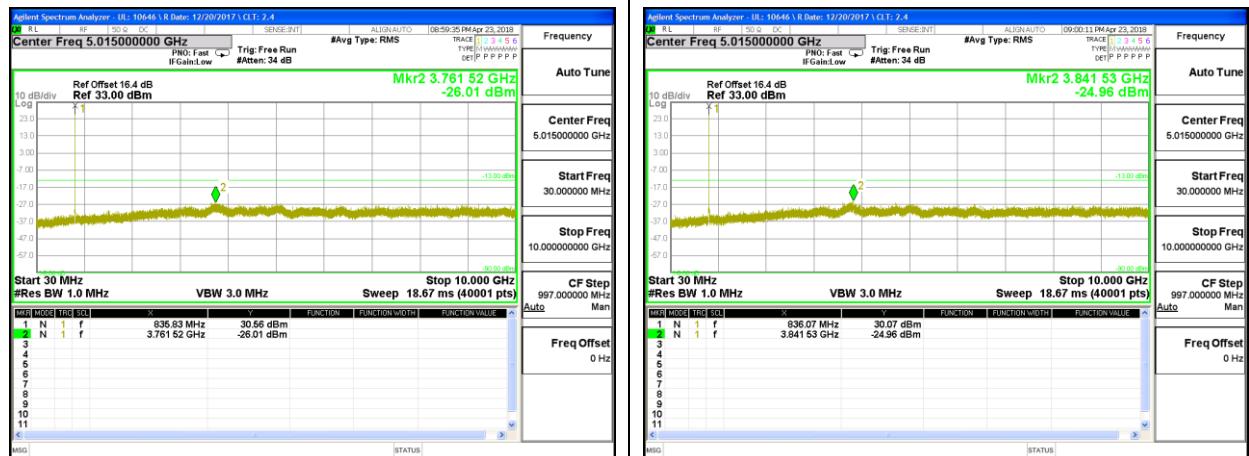
LTE B2 20MHz 16QAM Middle Channel RB1-0

### 8.3.2. ANT 1, LTE BAND 5

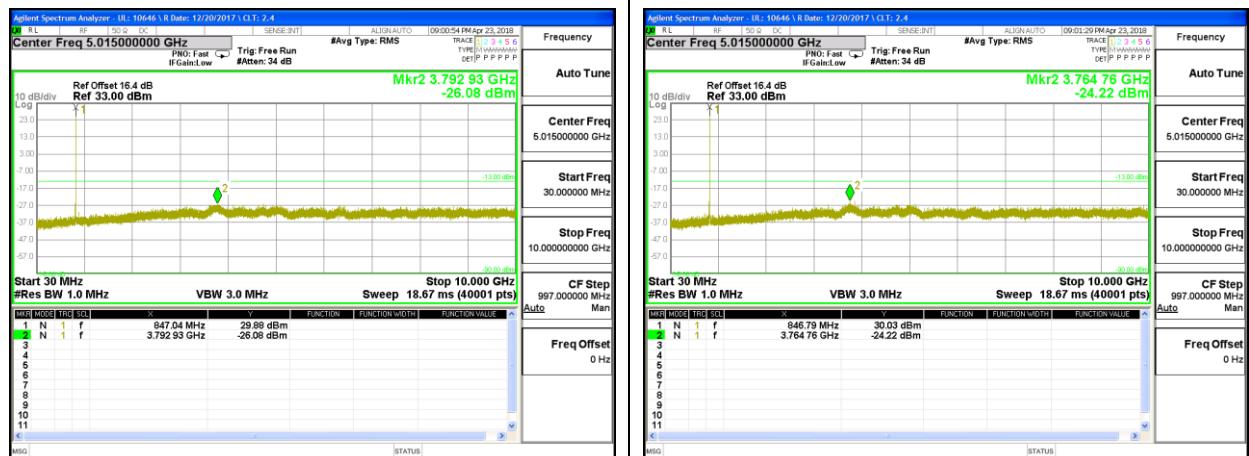




LTE B5 3MHz QPSK Low Channel RB1-0



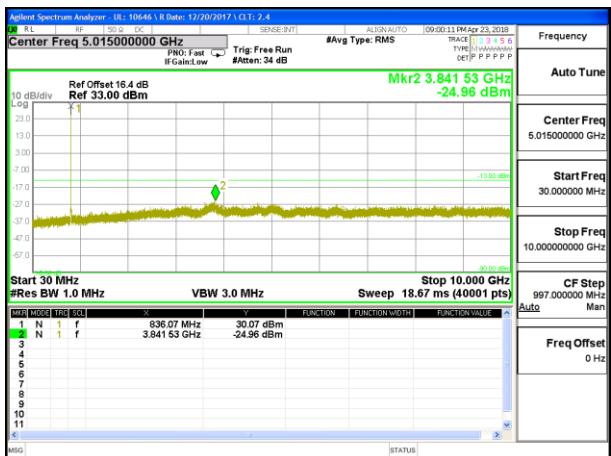
LTE B5 3MHz QPSK Middle Channel RB1-0



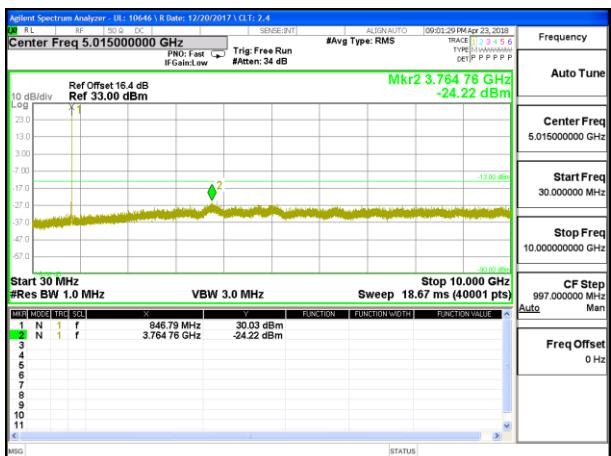
LTE B5 3MHz QPSK High Channel RB1-0



LTE B5 3MHz 16QAM Low Channel RB1-0



LTE B5 3MHz 16QAM Middle Channel RB1-0



LTE B5 3MHz 16QAM High Channel RB1-0