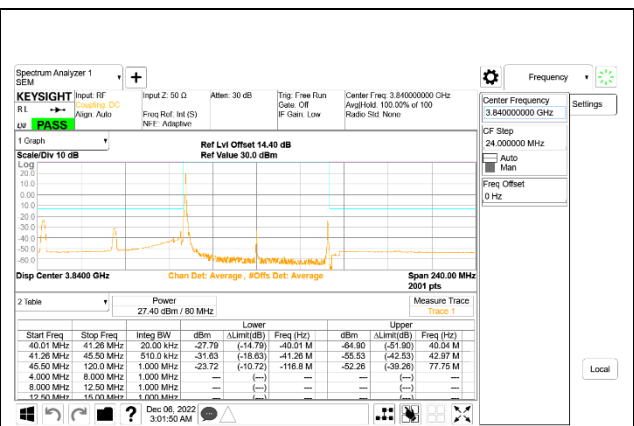
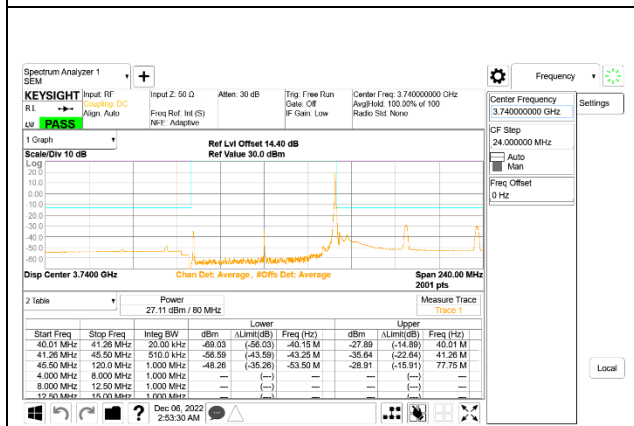


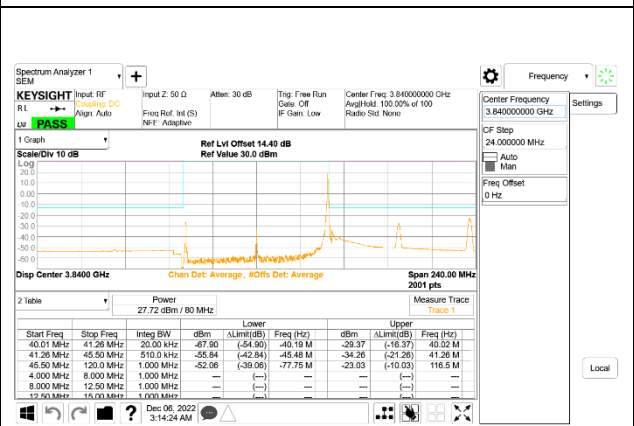
5G NR n77 80MHz BPSK Low Channel RB1-0, ID:28498



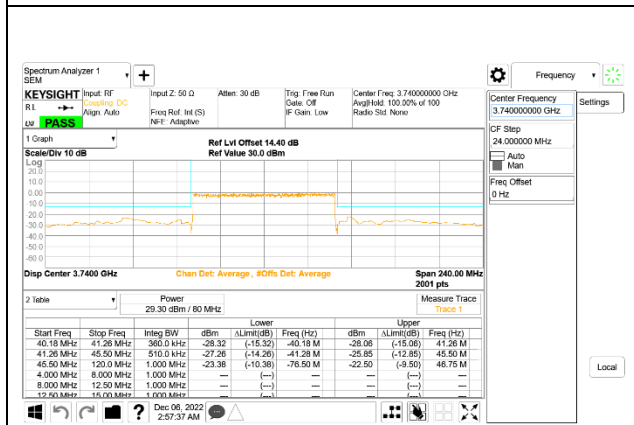
5G NR n77 80MHz BPSK Middle Channel RB1-0, ID:28498



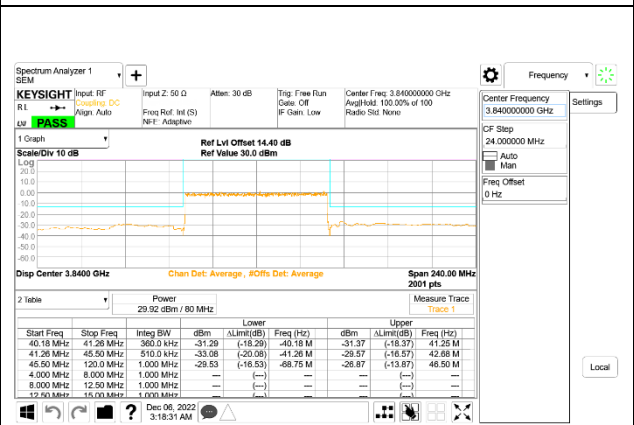
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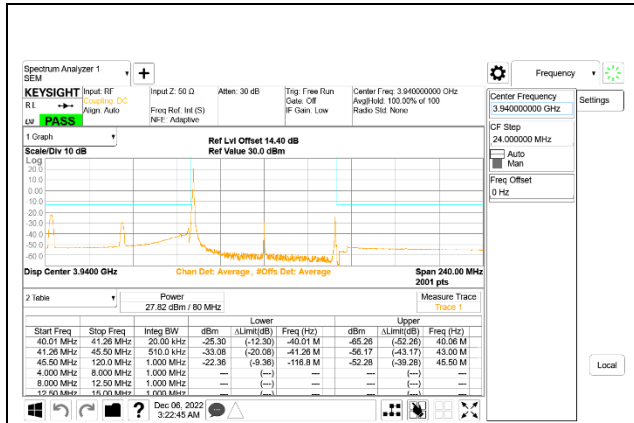
5G NR n77 80MHz BPSK Middle Channel RB1-216, ID:28498



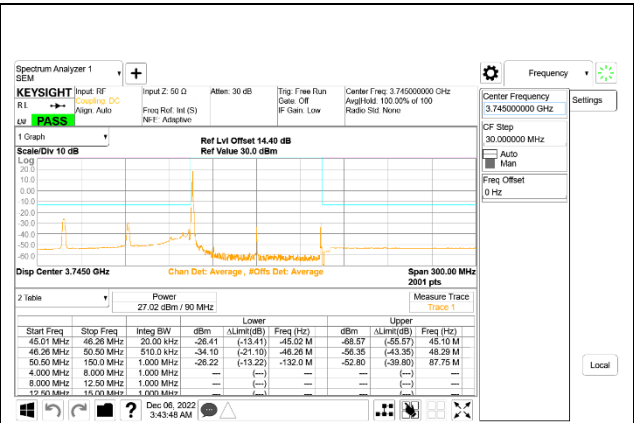
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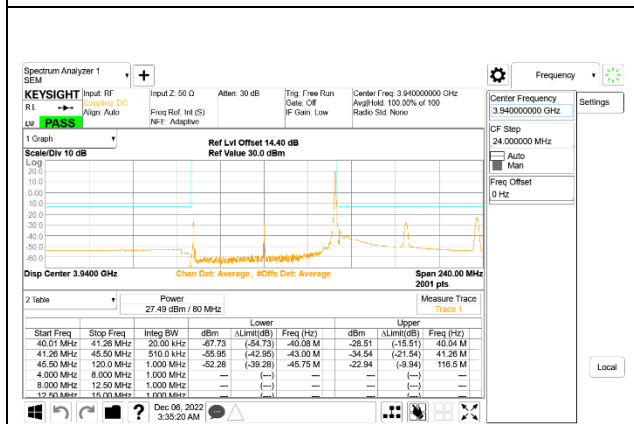
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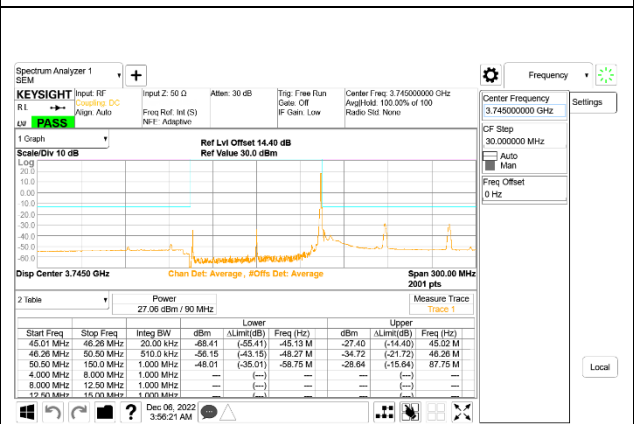
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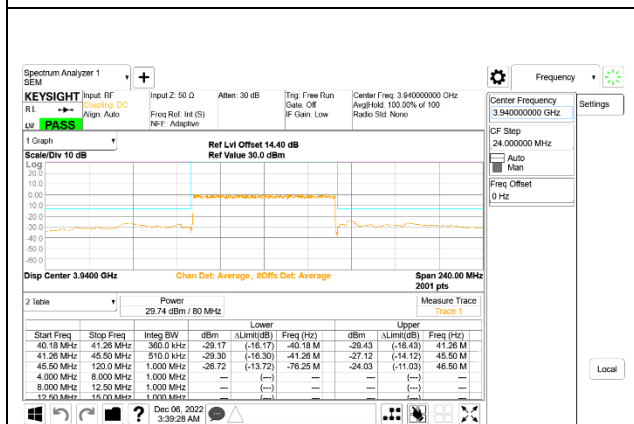
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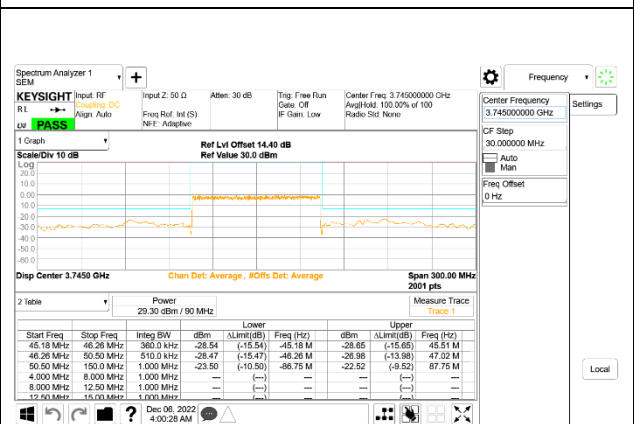
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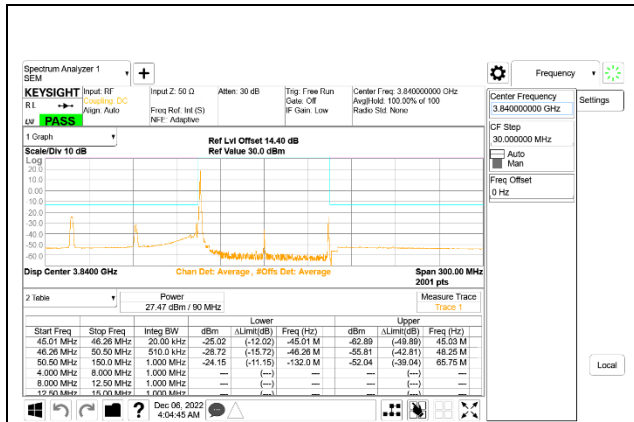
5G NR n77 90MHz BPSK Low Channel RB1-244, ID:28498



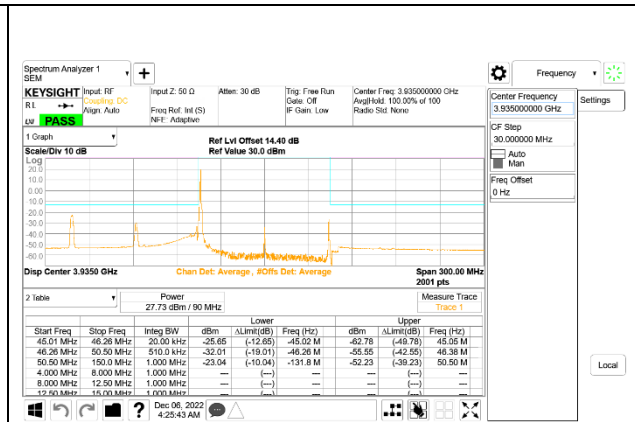
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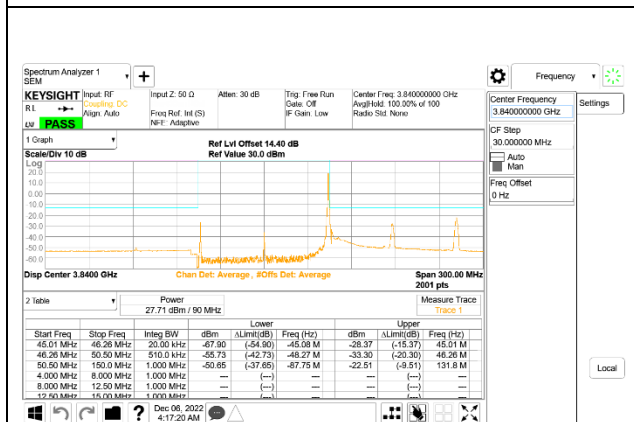
5G NR n77 90MHz BPSK Low Channel RB243-0, ID:28498



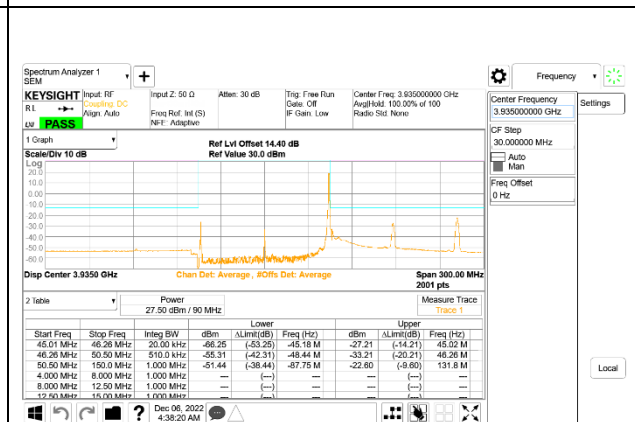
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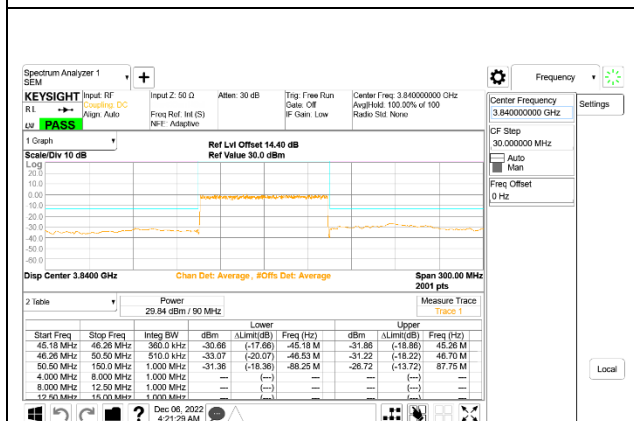
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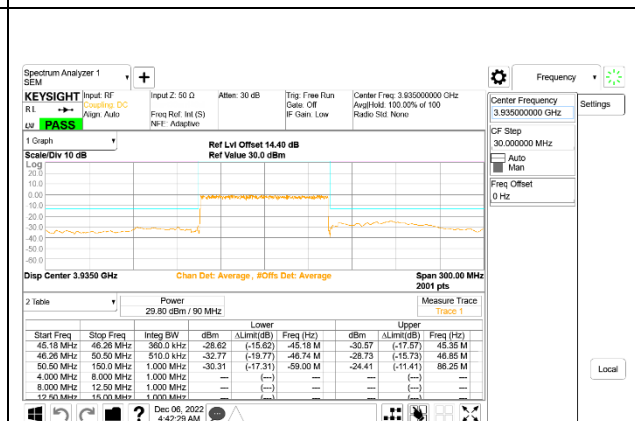
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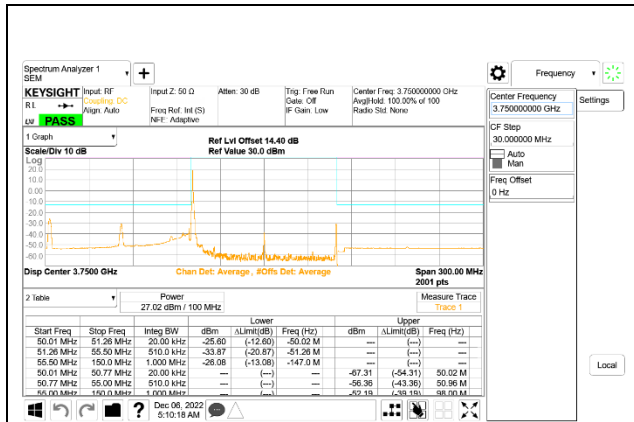
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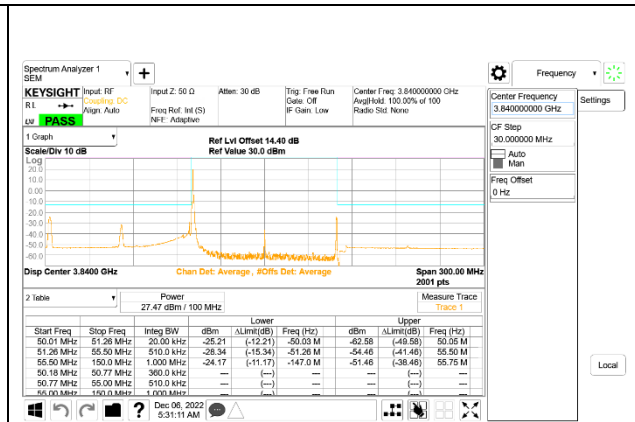
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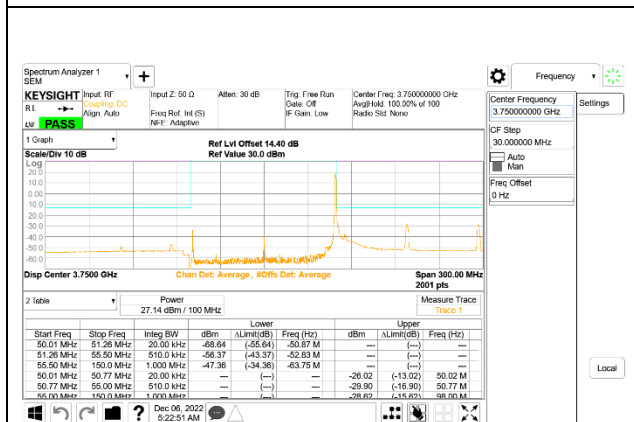
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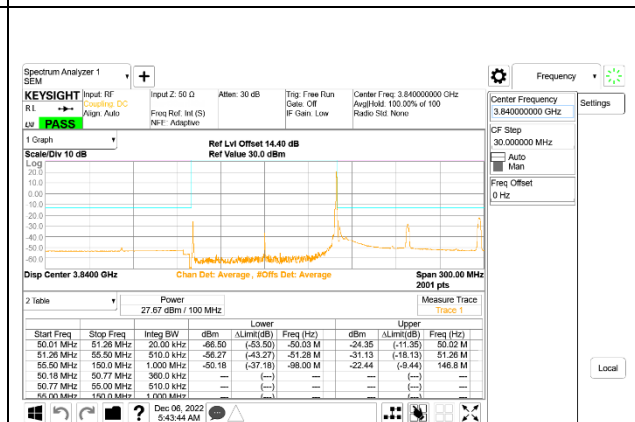
5G NR n77 100MHz BPSK Low Channel RB1-0, ID:28498



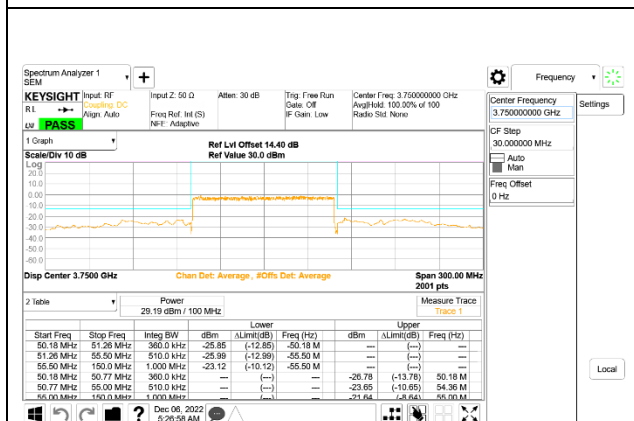
5G NR n77 100MHz BPSK Middle Channel RB1-0, ID:28498



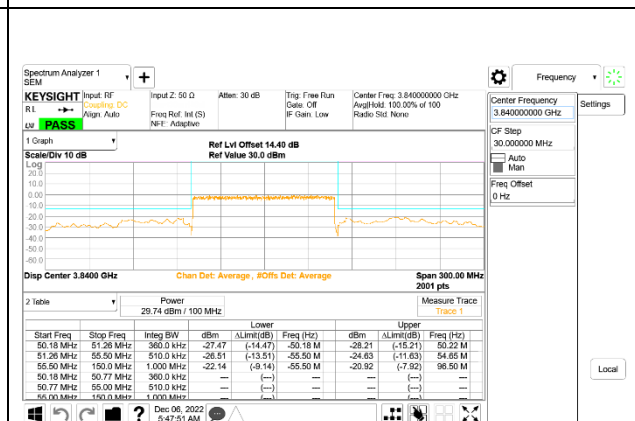
5G NR n77 100MHz BPSK Low Channel RB1-272, ID:28498



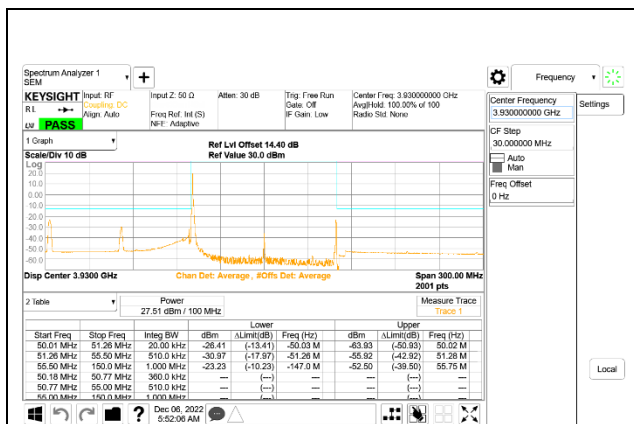
5G NR n77 100MHz BPSK Middle Channel RB1-272, ID:28498



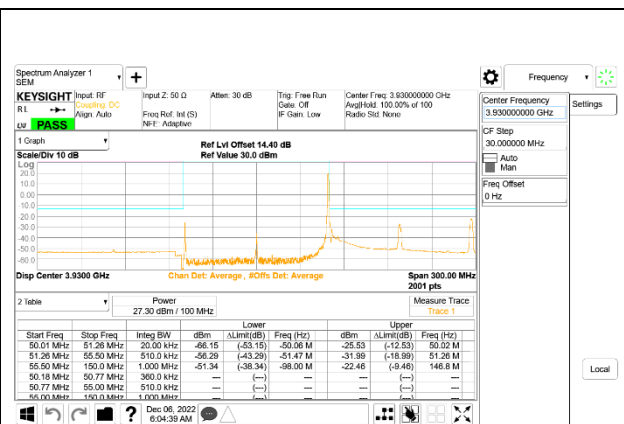
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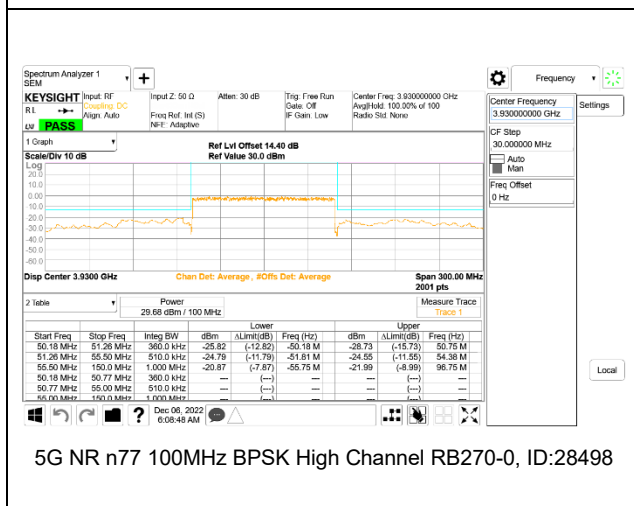
5G NR n77 100MHz BPSK Middle Channel RB270-0, ID:28498



5G NR n77 100MHz BPSK High Channel RB1-0, ID:28498



5G NR n77 100MHz BPSK High Channel RB1-272, ID:28498



5G NR n77 100MHz BPSK High Channel RB270-0, ID:28498

Intentionally Blank

9.3. OUT OF BAND EMISSIONS

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)

RESULTS

Both QPSK and 16QAM modes are tested, QPSK bandwidths results are reported as worst case for LTE bands.
Both BPSK and 16QAM modes are tested, BPSK bandwidths results are reported as worst case for 5G NRs.

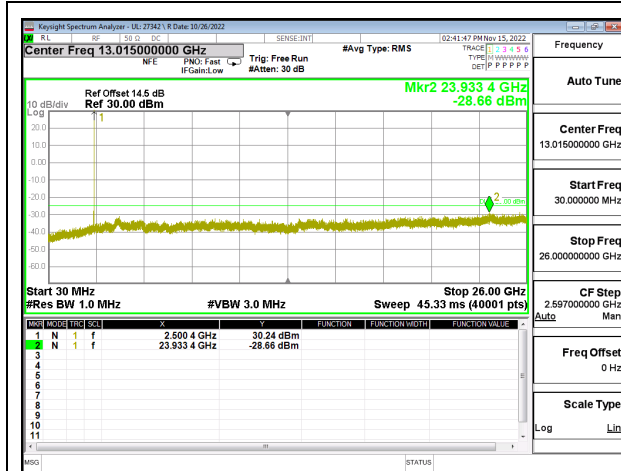
9.3.1. LTE BAND 7 AND 5G NR n7

LIMITS

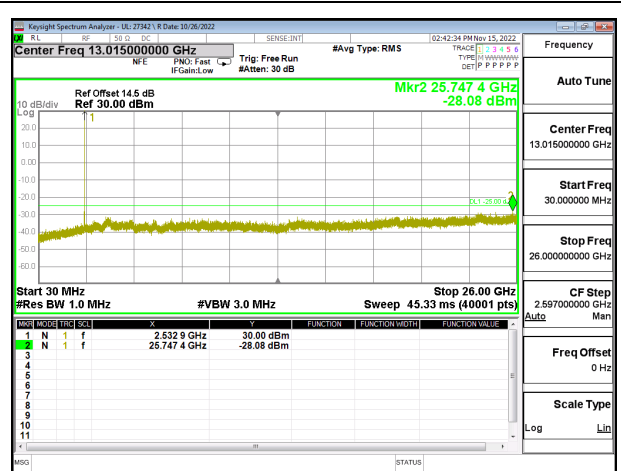
FCC: §27.53 (m)

The minimum permissible attenuation level of any spurious emissions is $55 + 10 \log (P)$ dB where transmitting power (P) in Watts.

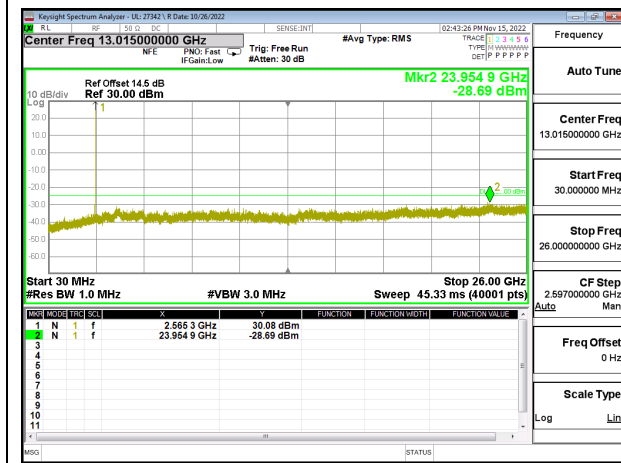
LTE BAND 7



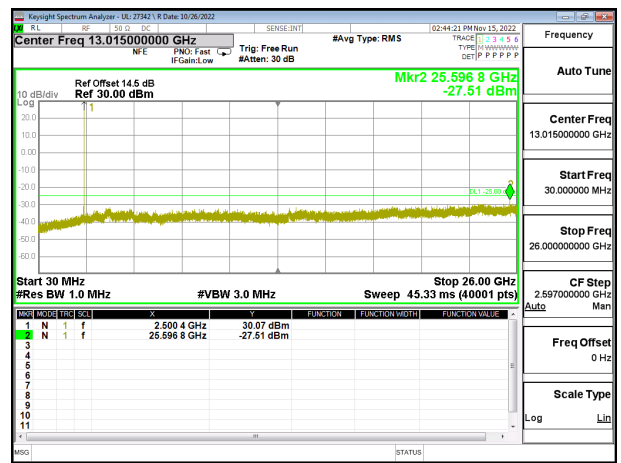
LTE B7 5MHz QPSK Low Channel RB1-0



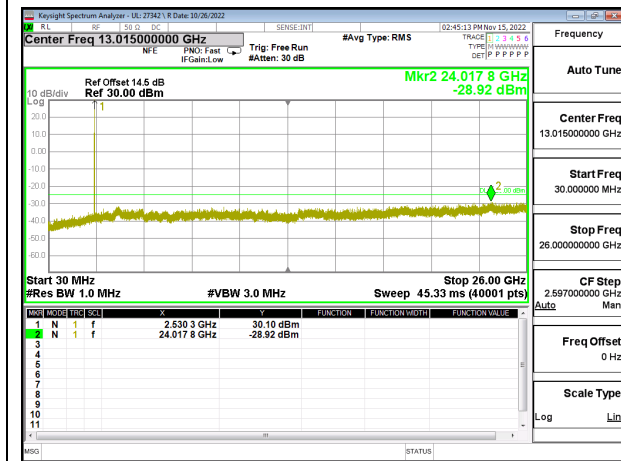
LTE B7 5MHz QPSK Middle Channel RB1-0



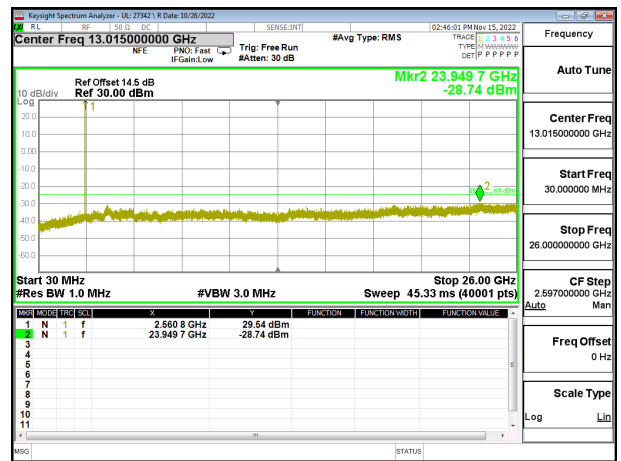
LTE B7 5MHz QPSK High Channel RB1-0



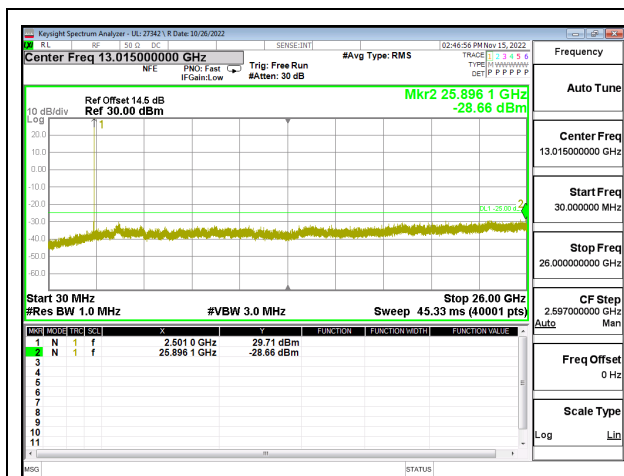
LTE B7 10MHz QPSK Low Channel RB1-0



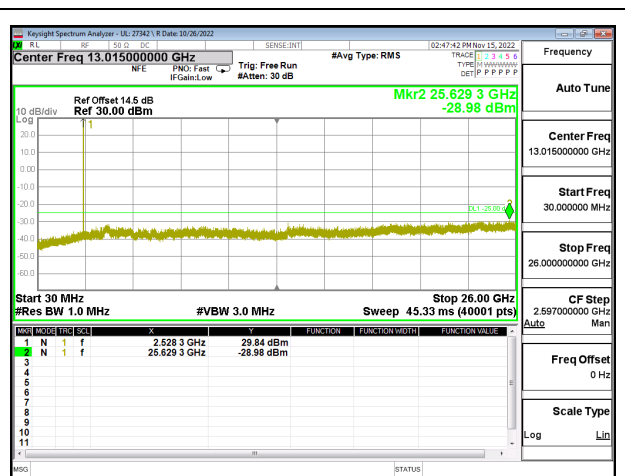
LTE B7 10MHz QPSK Middle Channel RB1-0



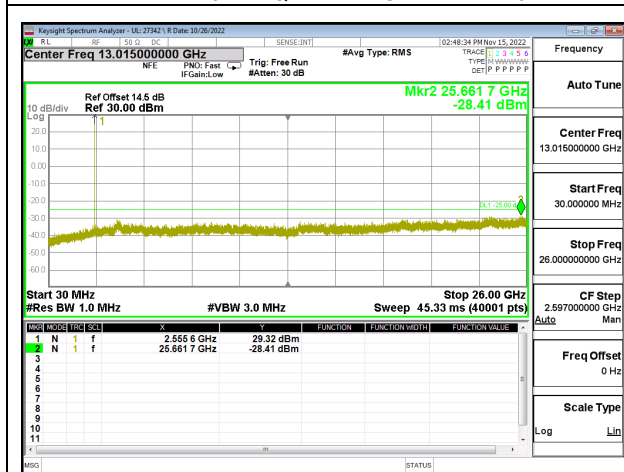
LTE B7 10MHz QPSK High Channel RB1-0



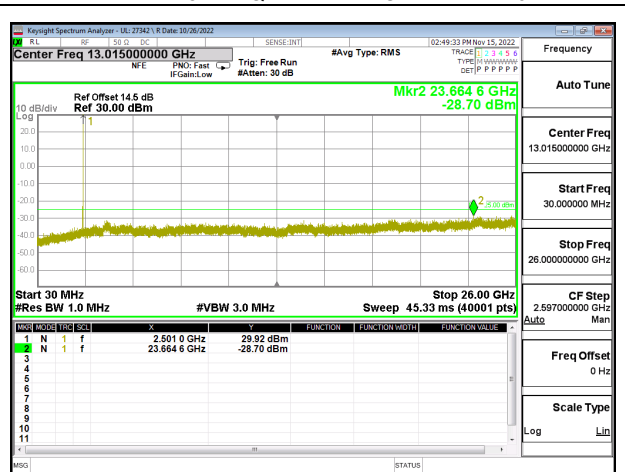
LTE B7 15MHz QPSK Low Channel RB1-0



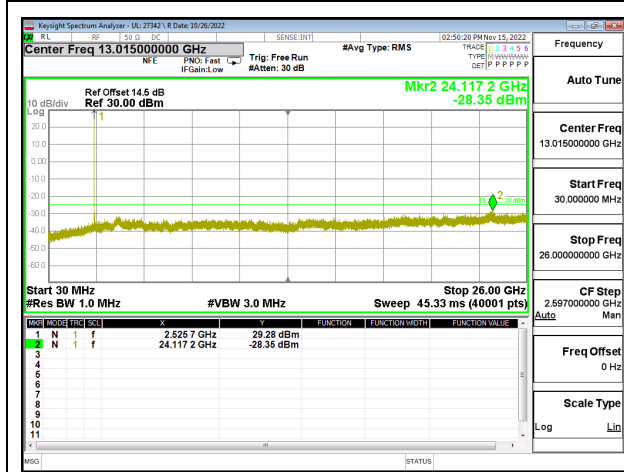
LTE B7 15MHz QPSK Middle Channel RB1-0



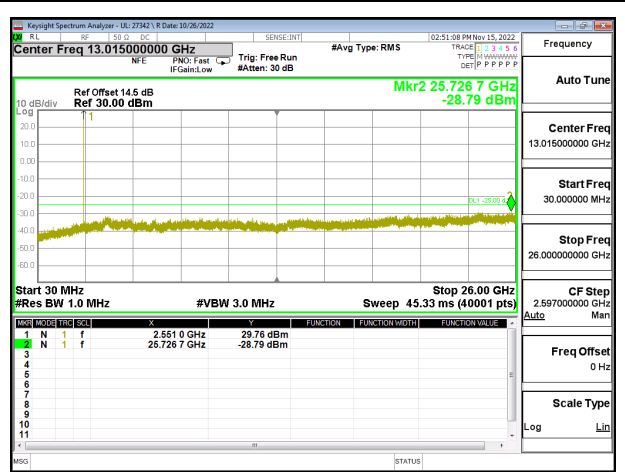
LTE B7 15MHz QPSK High Channel RB1-0



LTE B7 20MHz QPSK Low Channel RB1-0

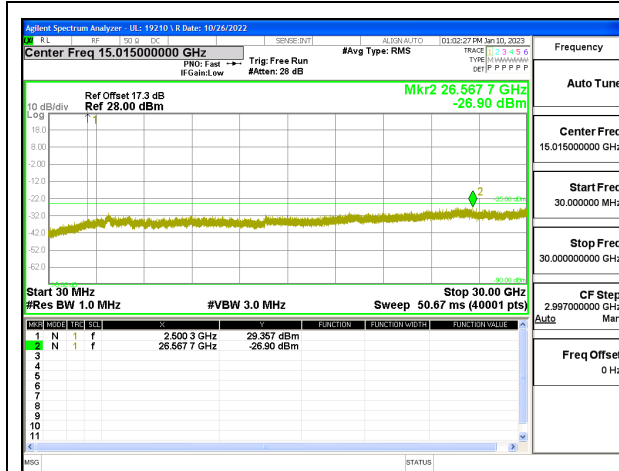


LTE B7 20MHz QPSK Middle Channel RB1-0

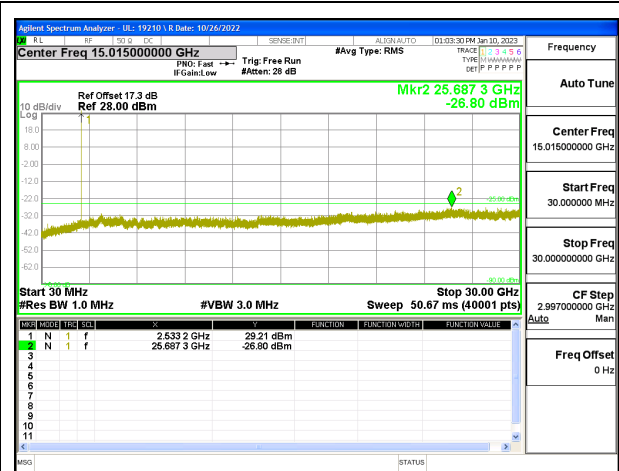


LTE B7 20MHz QPSK High Channel RB1-0

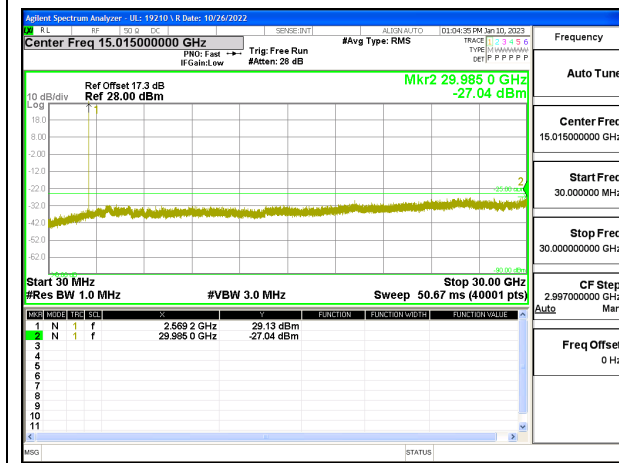
5G NR n7



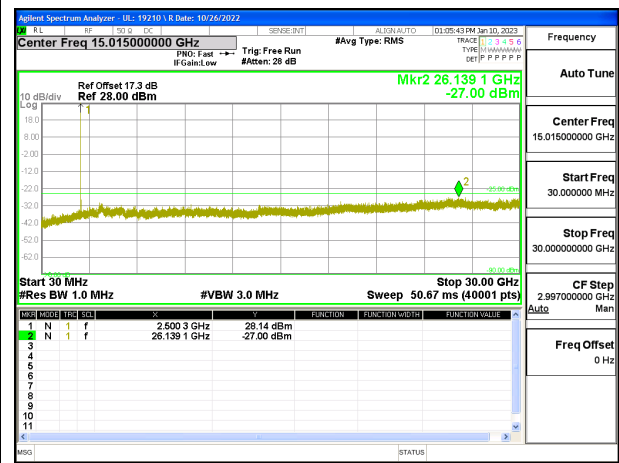
5G NR n7 5MHz BPSK Low Channel RB1-0



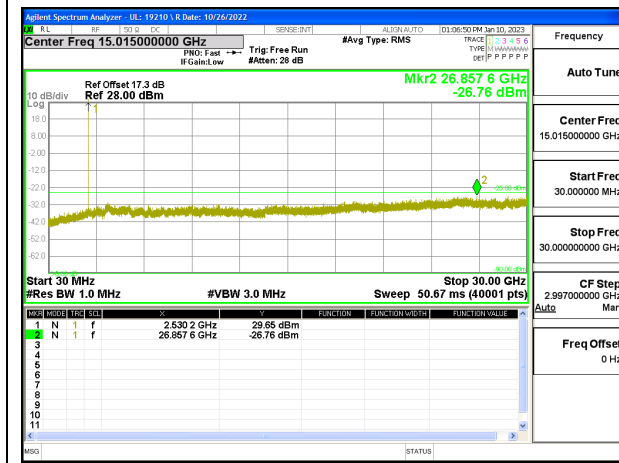
5G NR n7 5MHz BPSK Middle Channel RB1-1



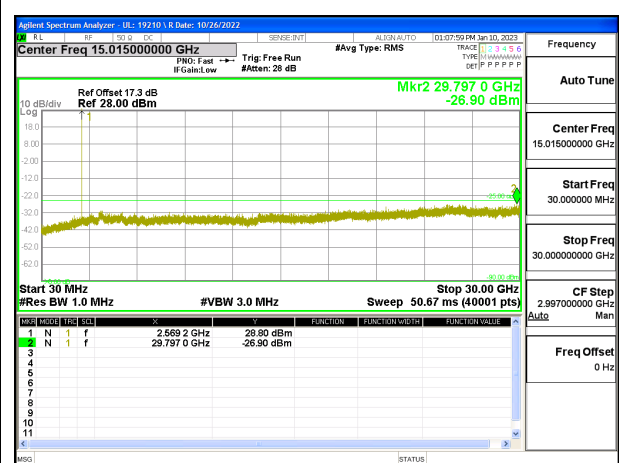
5G NR n7 5MHz BPSK High Channel RB1-24



5G NR n7 10MHz BPSK Low Channel RB1-0



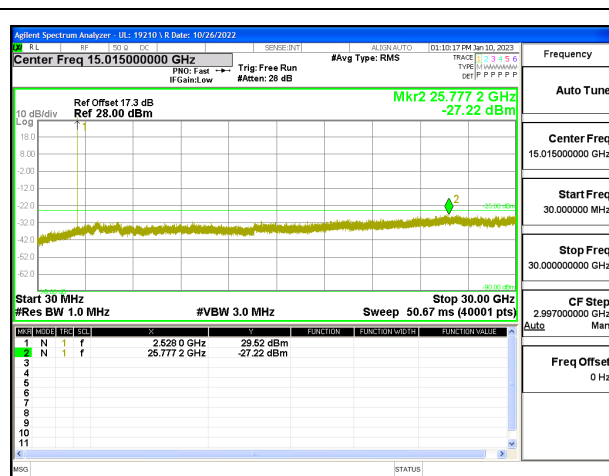
5G NR n7 10MHz BPSK Middle Channel RB1-1



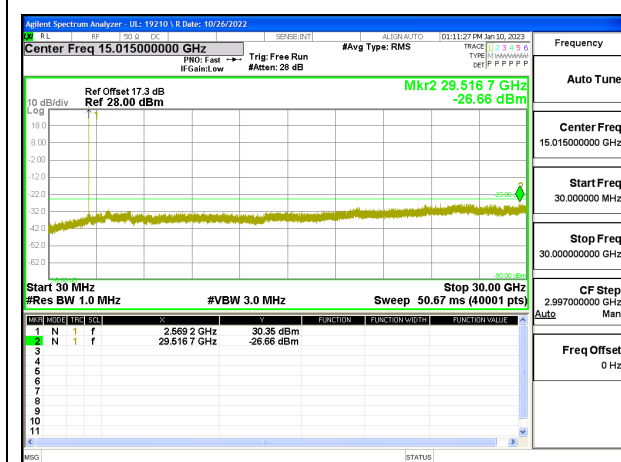
5G NR n7 10MHz BPSK High Channel RB1-51



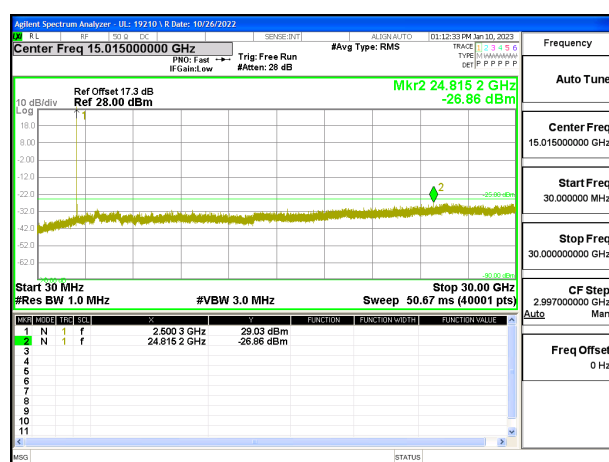
5G NR n7 15MHz BPSK Low Channel RB1-0



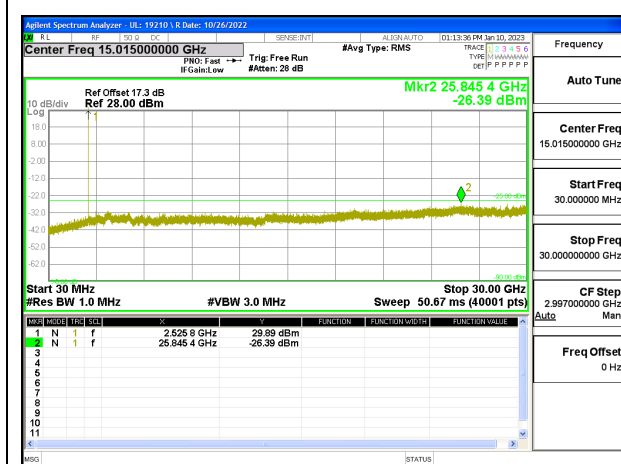
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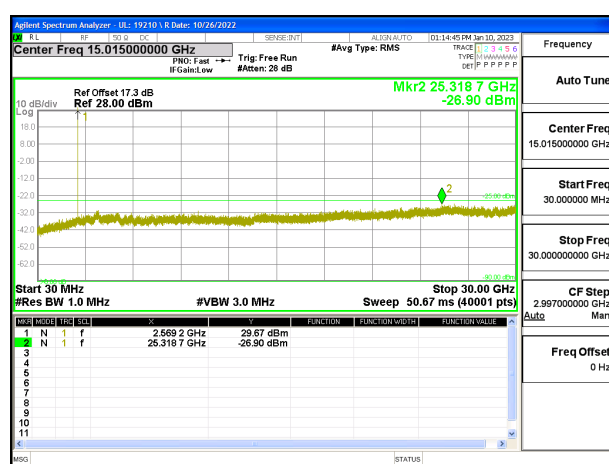
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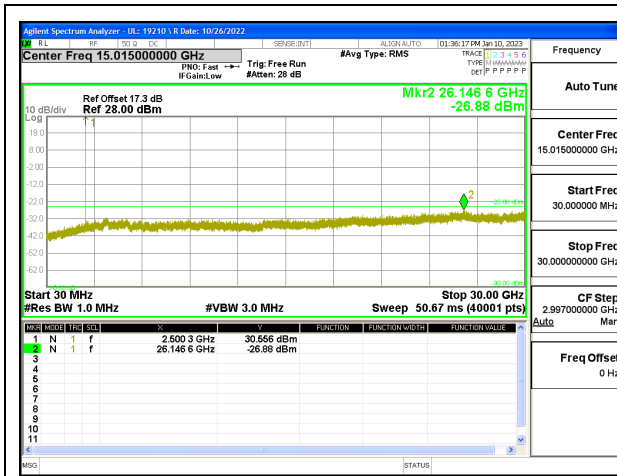
5G NR n7 20MHz BPSK Low Channel RB1-0



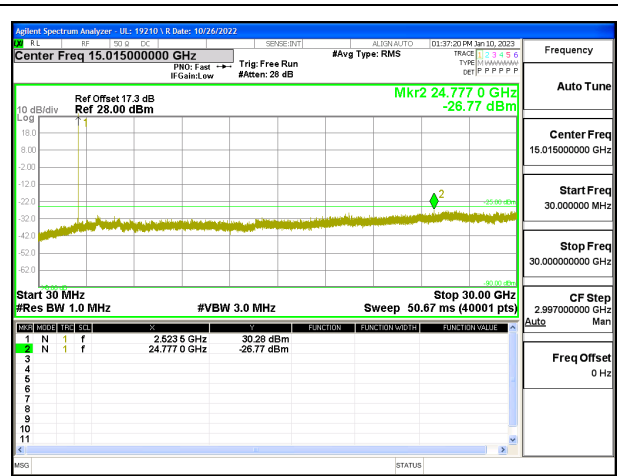
5G NR n7 20MHz BPSK Middle Channel RB1-1



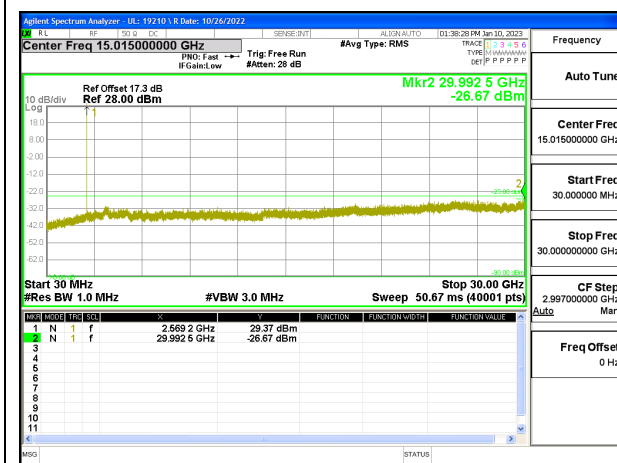
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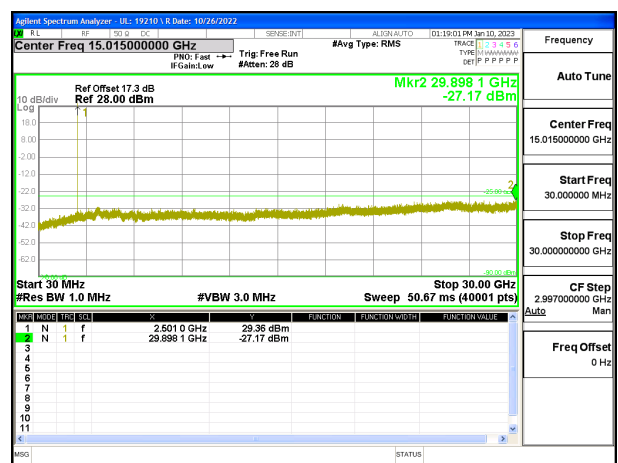
5G NR n7 25MHz BPSK Low Channel RB1-0



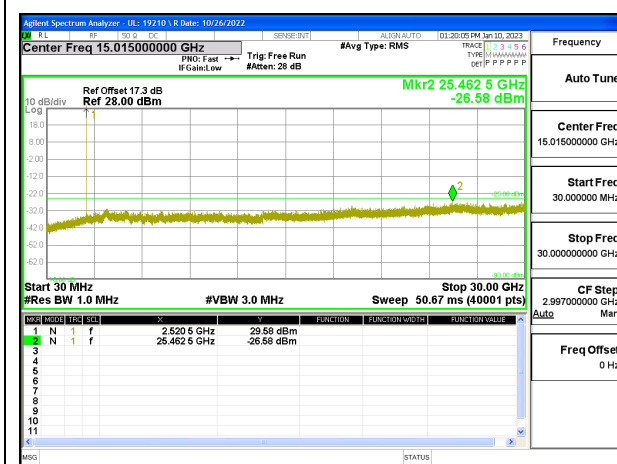
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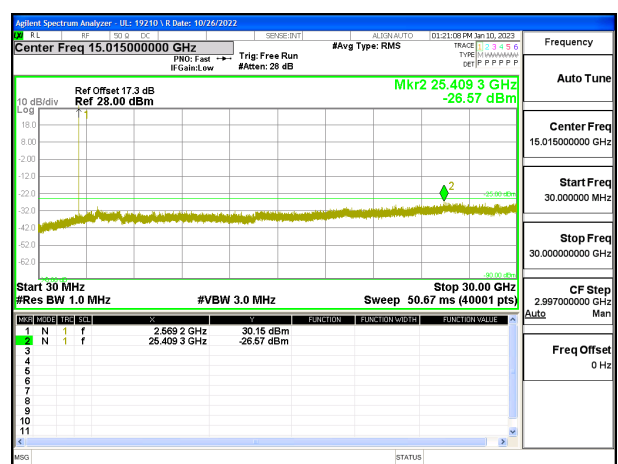
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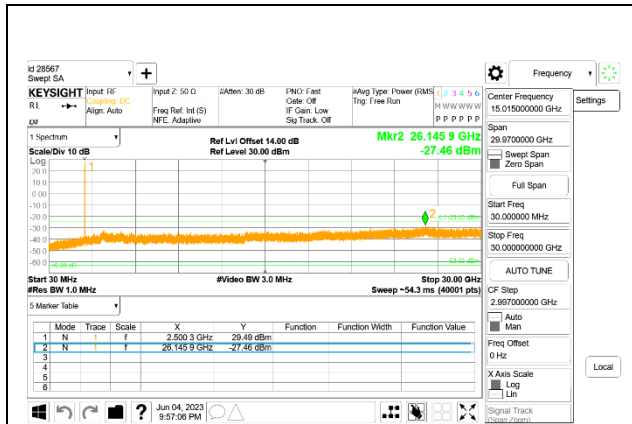
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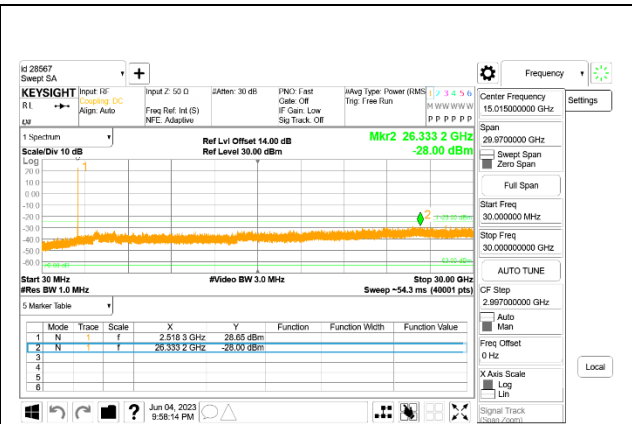
5G NR n7 30MHz BPSK Middle Channel RB1-1



5G NR n7 30MHz BPSK High Channel RB1-159



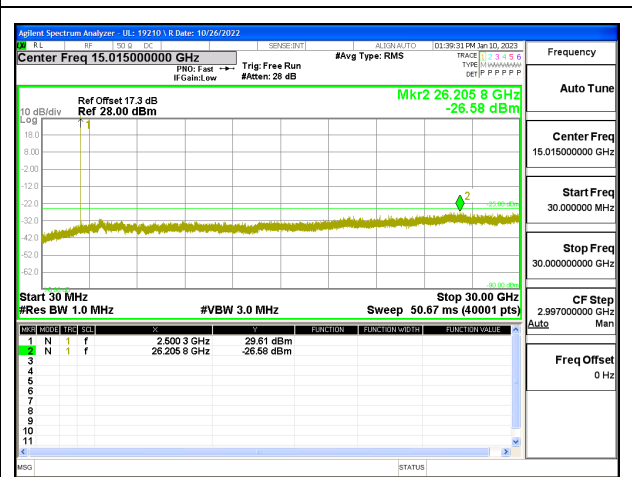
5G NR n7 35MHz BPSK Low Channel RB1-0



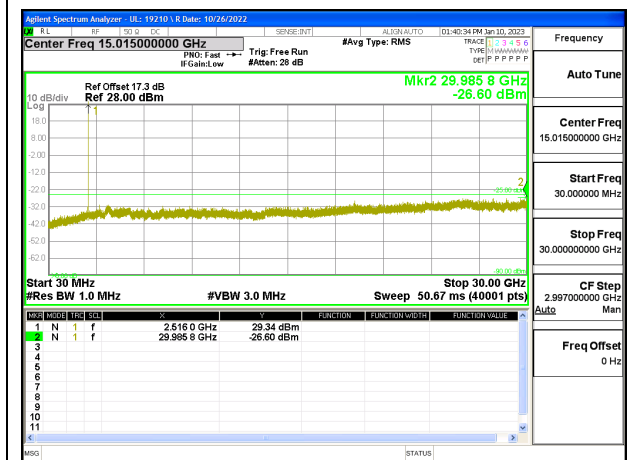
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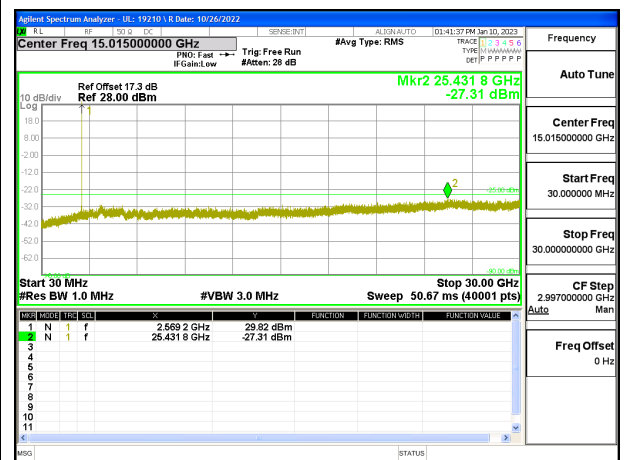
5G NR n7 35MHz BPSK High Channel RB1-17



5G NR n7 40MHz BPSK Low Channel RB1-0



5G NR n7 40MHz BPSK Middle Channel RB1-1



5G NR n7 40MHz BPSK High Channel RB1-215

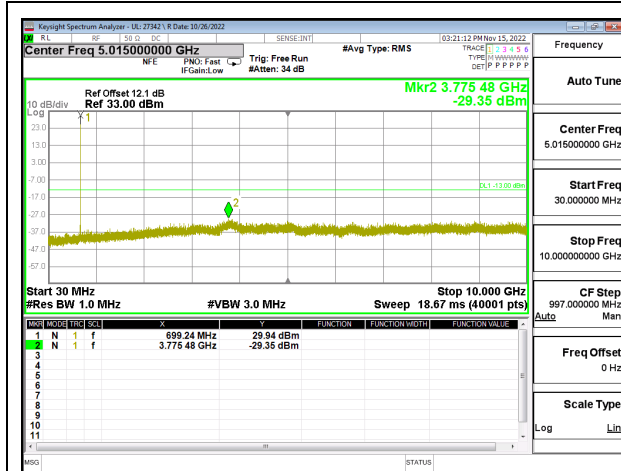
9.3.2. LTE BAND 12 AND 5G NR n12

LIMITS

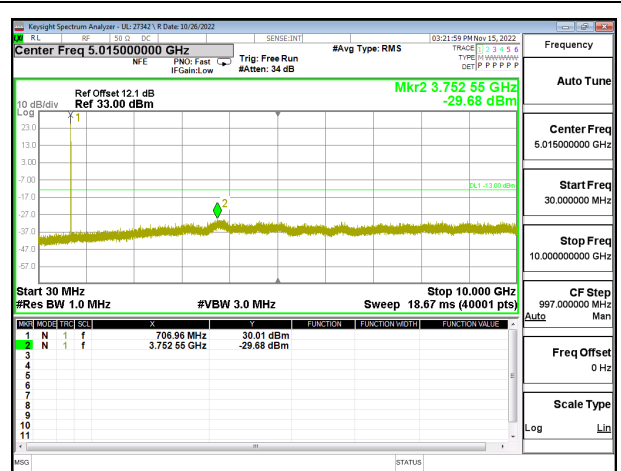
FCC: §27.53 (g)

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

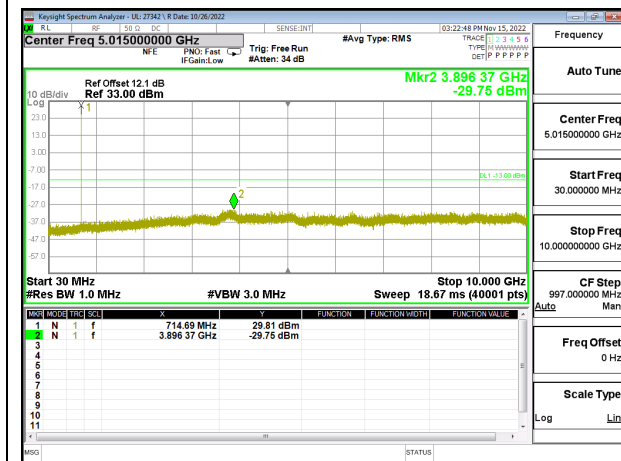
LTE BAND 12



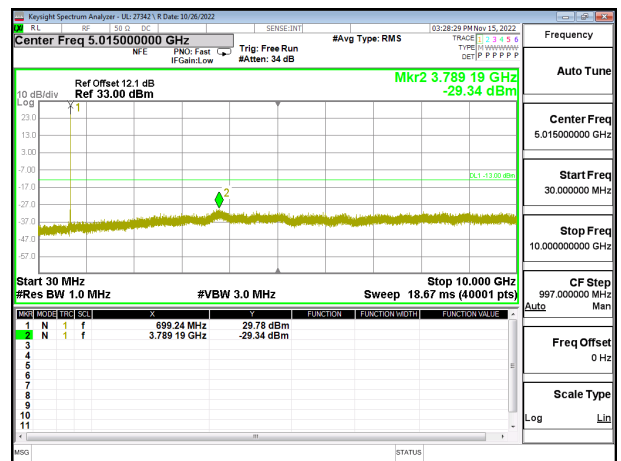
LTE B12 1.4MHz QPSK Low Channel RB1-0



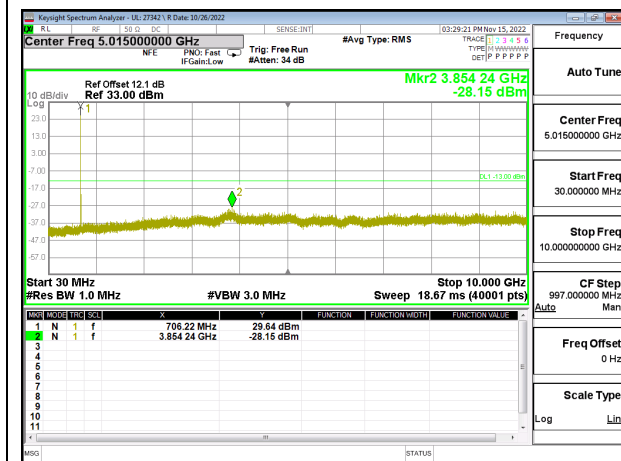
LTE B12 1.4MHz QPSK Middle Channel RB1-0



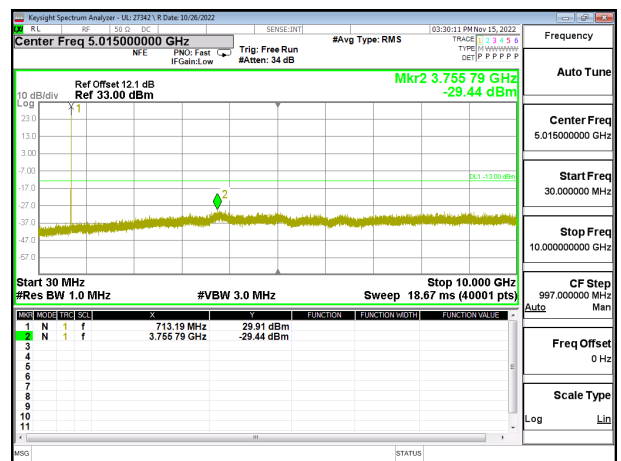
LTE B12 1.4MHz QPSK High Channel RB1-0



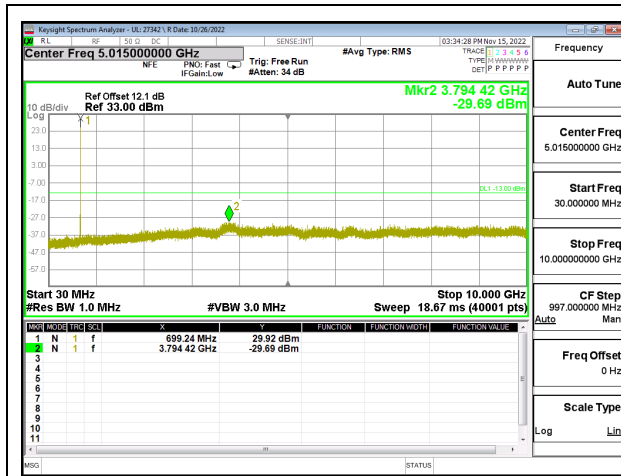
LTE B12 3MHz QPSK Low Channel RB1-0



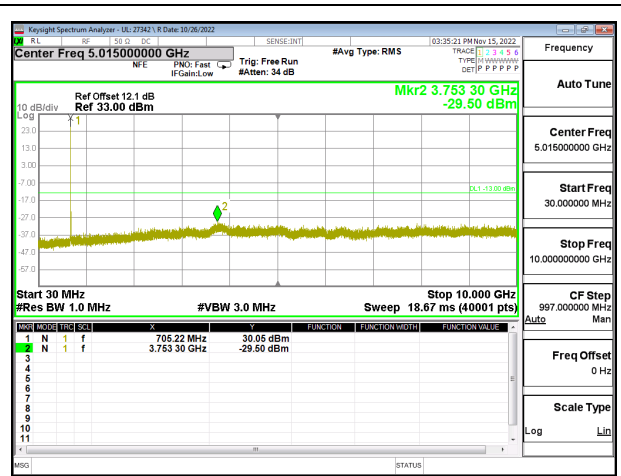
LTE B12 3MHz QPSK Middle Channel RB1-0



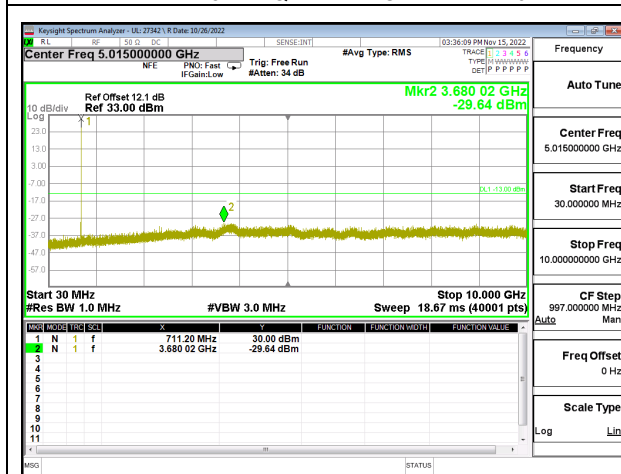
LTE B12 3MHz QPSK High Channel RB1-0



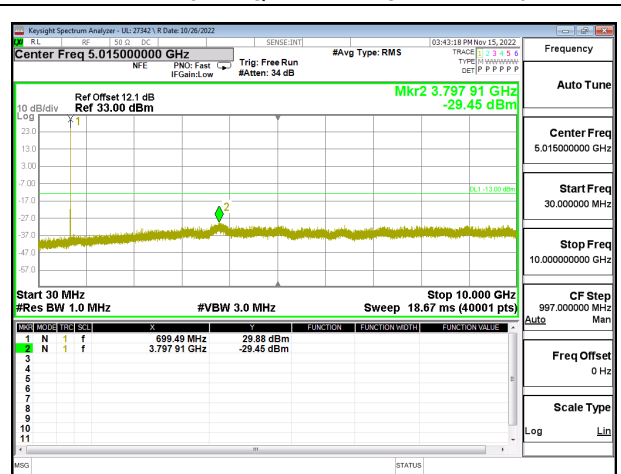
LTE B12 5MHz QPSK Low Channel RB1-0



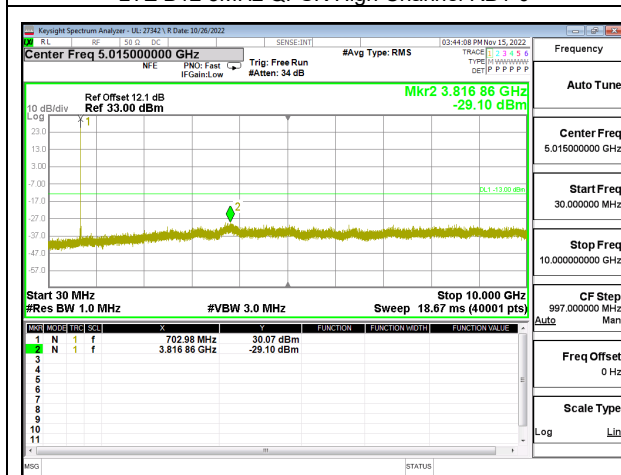
LTE B12 5MHz QPSK Middle Channel RB1-0



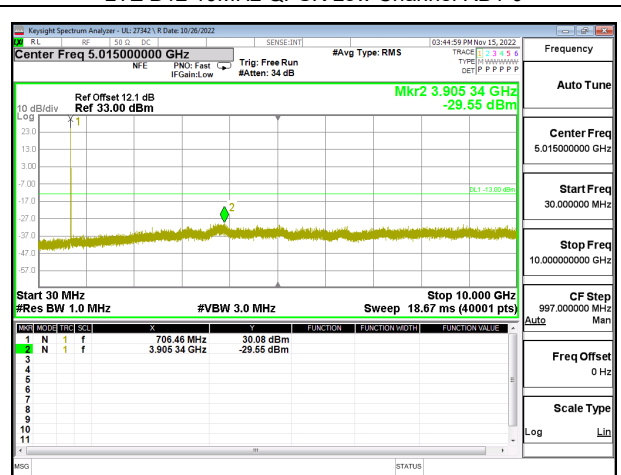
LTE B12 5MHz QPSK High Channel RB1-0



LTE B12 10MHz QPSK Low Channel RB1-0



LTE B12 10MHz QPSK Middle Channel RB1-0



LTE B12 10MHz QPSK High Channel RB1-0

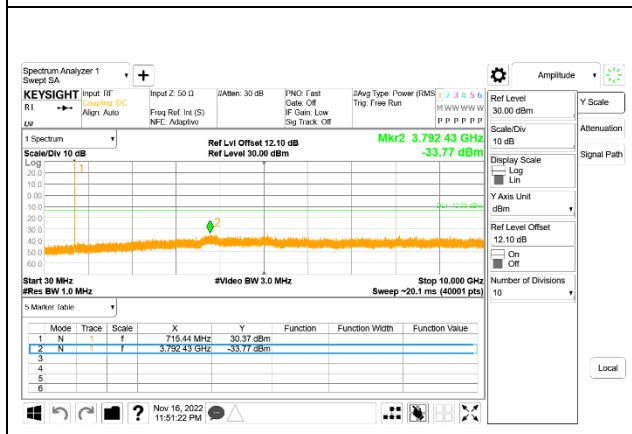
5G NR n12



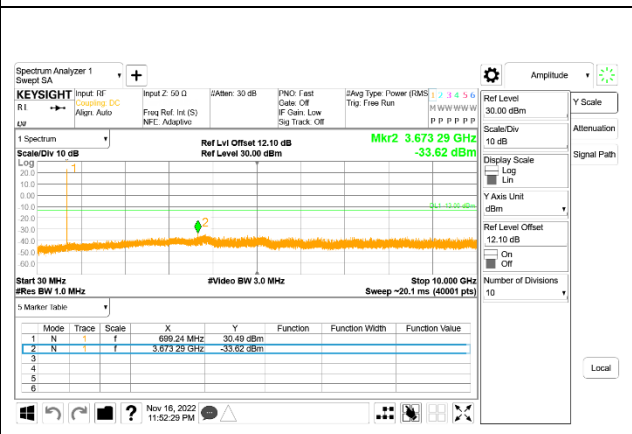
5G NR n12 5MHz BPSK Low Channel RB1-0, ID:28498



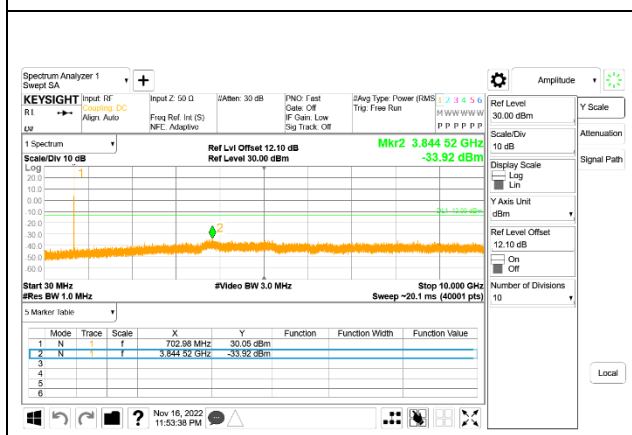
5G NR n12 5MHz BPSK Middle Channel RB1-1, ID:28498



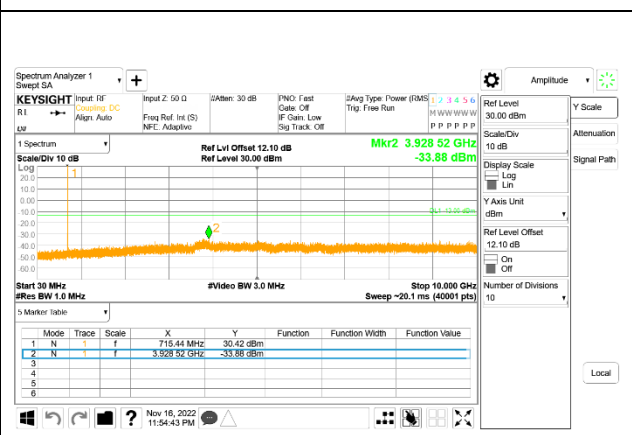
5G NR n12 5MHz BPSK High Channel RB1-24, ID:28498



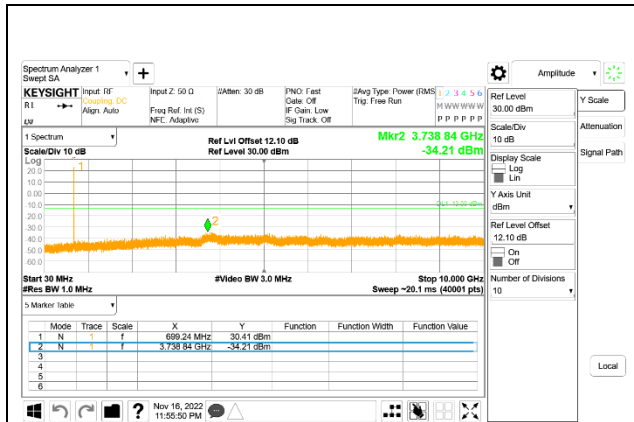
5G NR n12 10MHz BPSK Low Channel RB1-0, ID:28498



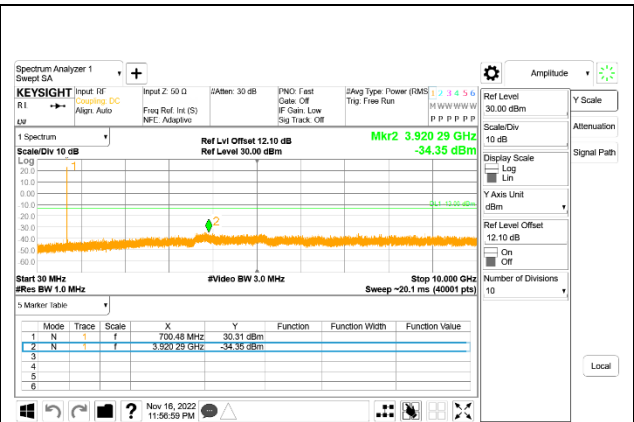
5G NR n12 10MHz BPSK Middle Channel RB1-1, ID:28498



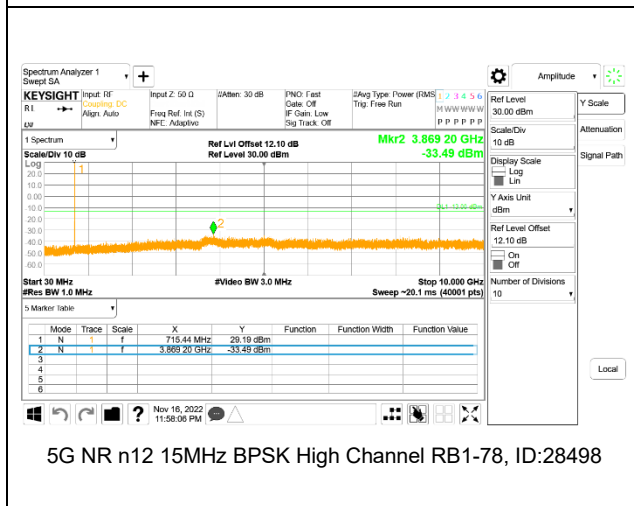
5G NR n12 10MHz BPSK High Channel RB1-51, ID:28498



5G NR n12 15MHz BPSK Low Channel RB1-0, ID:28498



5G NR n12 15MHz BPSK Middle Channel RB1-1, ID:28498



5G NR n12 15MHz BPSK High Channel RB1-78, ID:28498

Intentionally Blank

9.3.3. LTE BAND 13

LIMITS

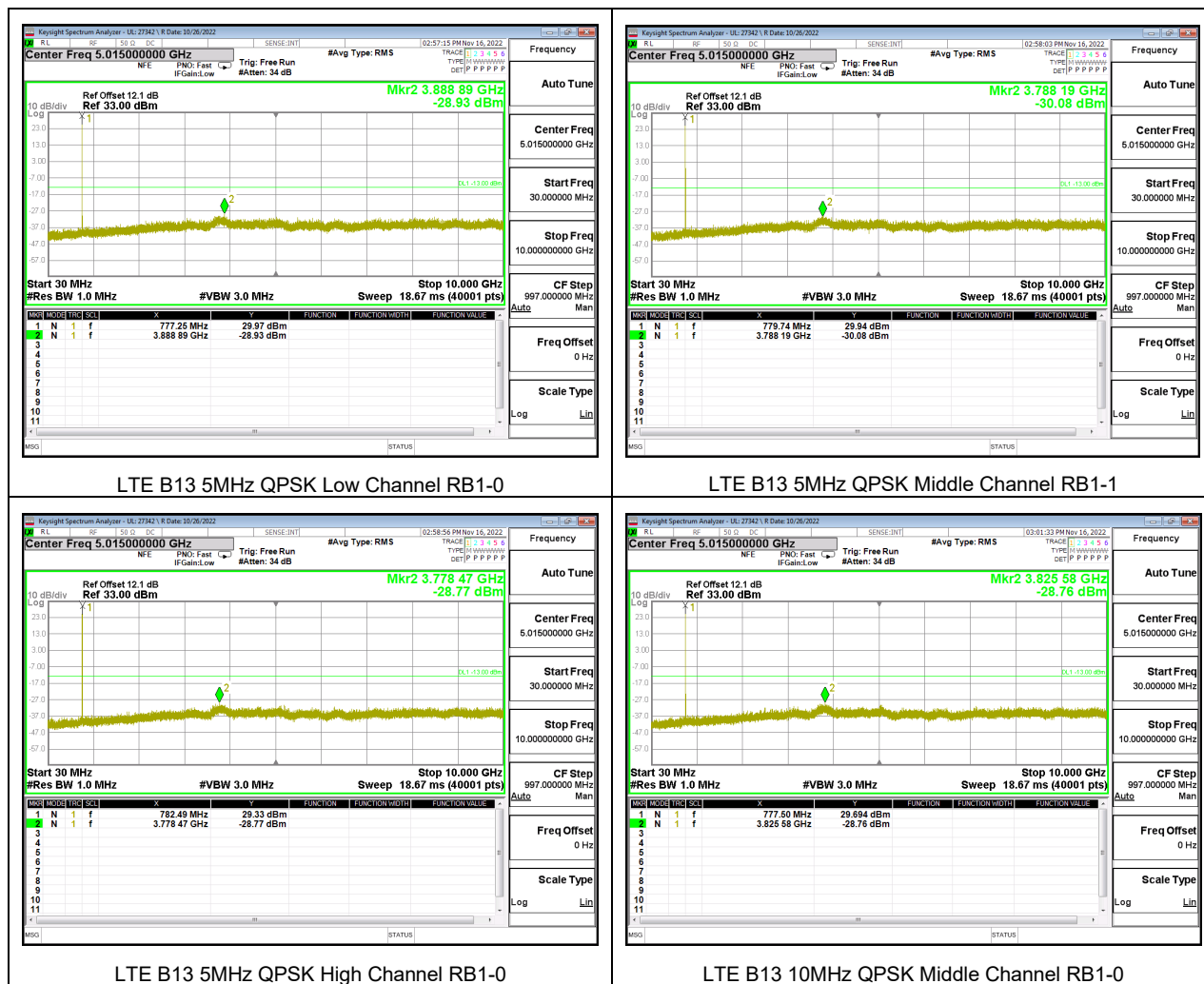
FCC: §27.53 (c), (f)

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log(P)$ dB where transmitting power (P) in Watts. The band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

Note: Radiated data in section 9.1.6 confirms a compliance for the emissions in GPS 1559-1610 MHz band were wideband emissions therefore the -40 dBm/MHz limit was used.

Note: Radiated data in section 9.1.6 confirms a compliance for the emissions in GPS 1559-1610 MHz band were wideband emissions therefore the -40 dBm/MHz limit was used.

LTE BAND 13



Note: Radiated data in section 9.1.6 confirms a compliance with narrowband limits for GPS1559-1610 MHz band.

9.3.4. LTE BAND 14 AND 5G NR n14

LIMITS

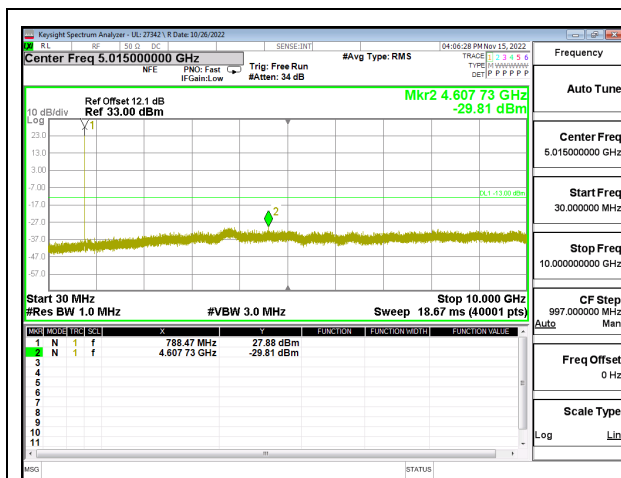
FCC: §90.543 (e), (f)

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log(P)$ dB where transmitting power (P) in Watts. The band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

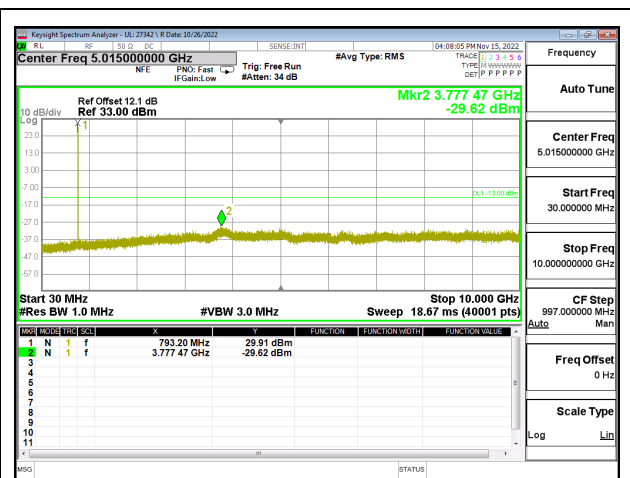
Note: Radiated data in section 9.1.7 confirms a compliance for the emissions in GPS 1559-1610 MHz band were wideband emissions therefore the -40 dBm/MHz limit was used.

Note: Radiated data in section 9.1.7 confirms a compliance for the emissions in GPS 1559-1610 MHz band were wideband emissions therefore the -40 dBm/MHz limit was used.

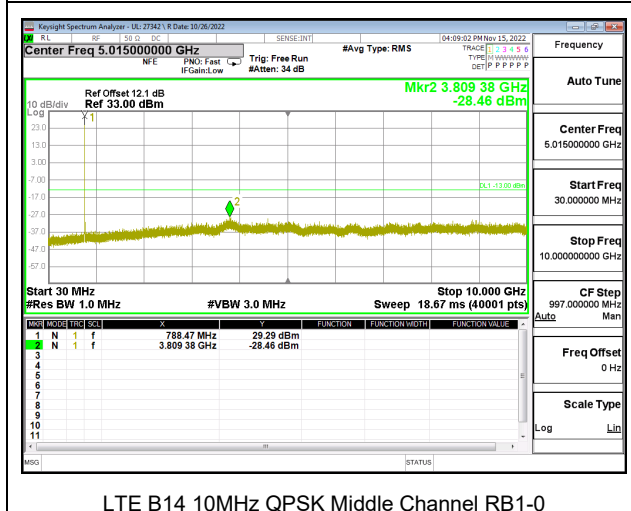
LTE BAND 14



LTE B14 5MHz QPSK Low Channel RB1-0



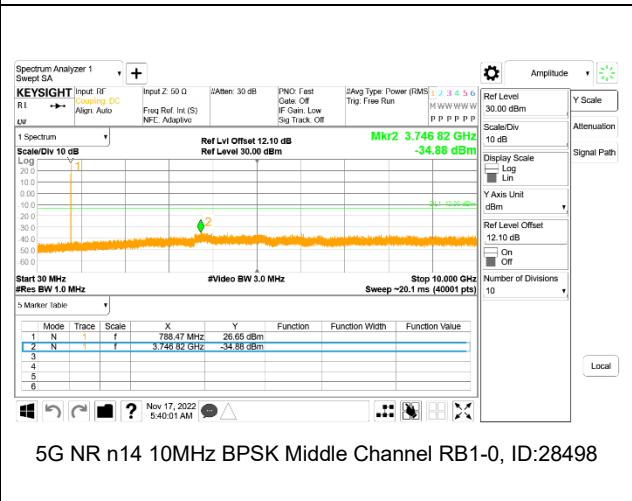
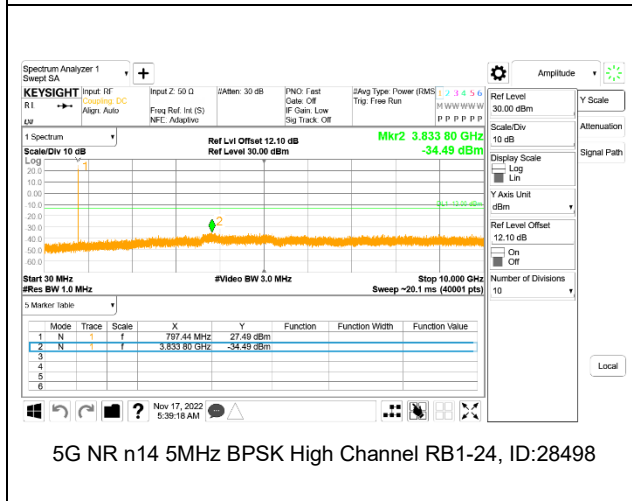
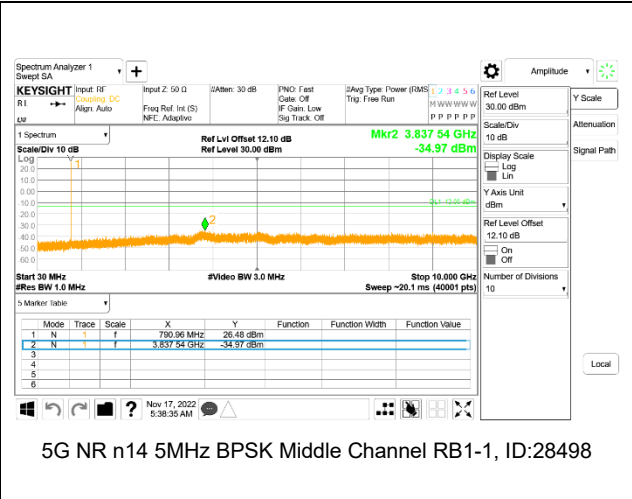
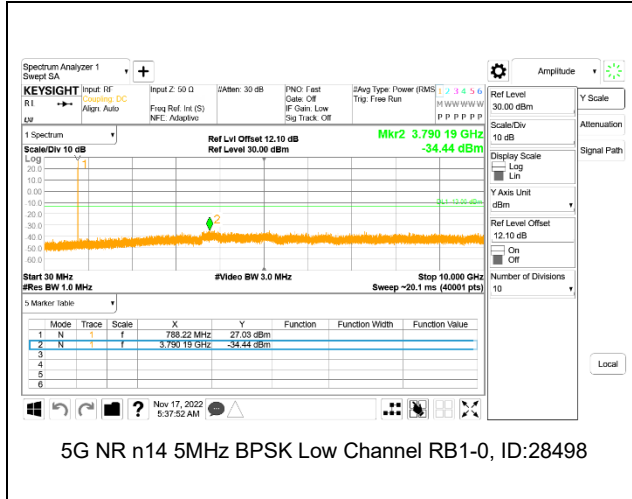
LTE B14 5MHz QPSK High Channel RB1-0



LTE B14 10MHz QPSK Middle Channel RB1-0

Note: Radiated data in section 9.1.7 confirms a compliance with narrowband limits for GPS1559-1610 MHz band.

5G NR n14



9.3.5. LTE BAND 17

LIMITS

FCC: §27.53 (g)

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