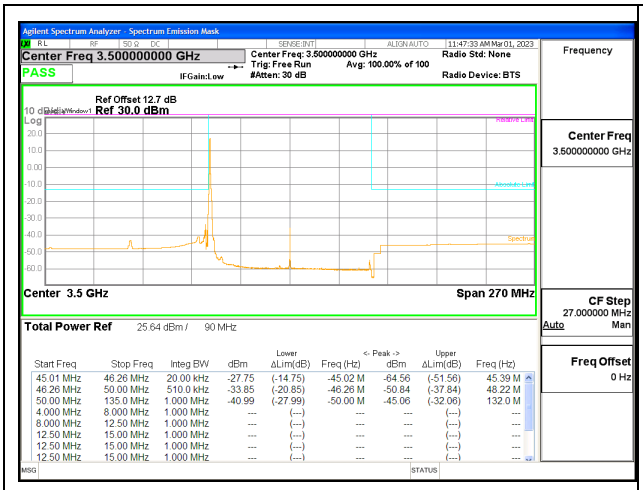
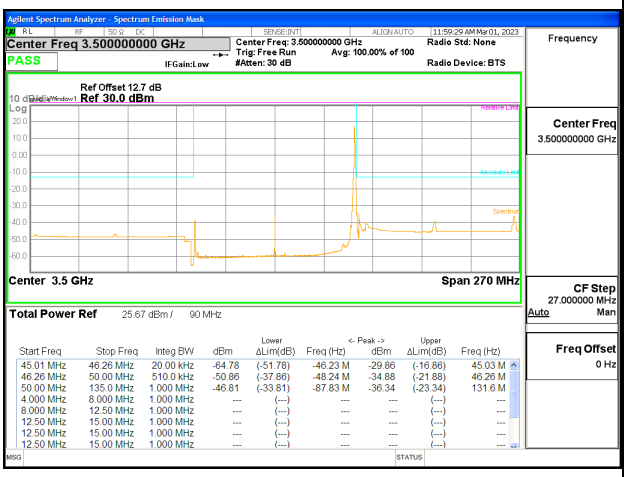


5G NR n77 90MHz BPSK Middle Channel RB1-0, ID:28568

5G NR n77 90MHz BPSK High Channel RB1-0, ID:28568



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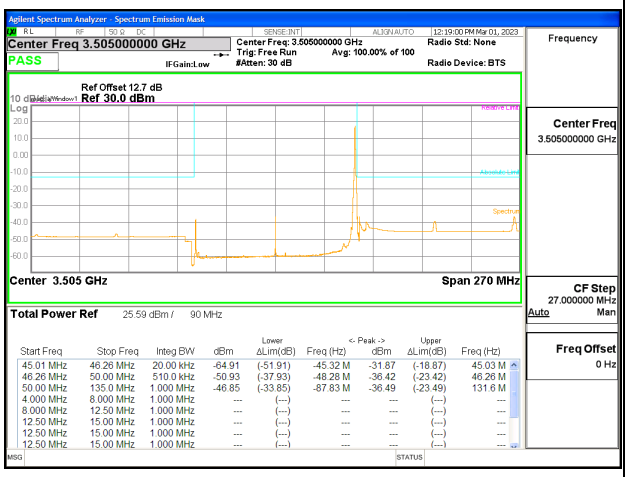
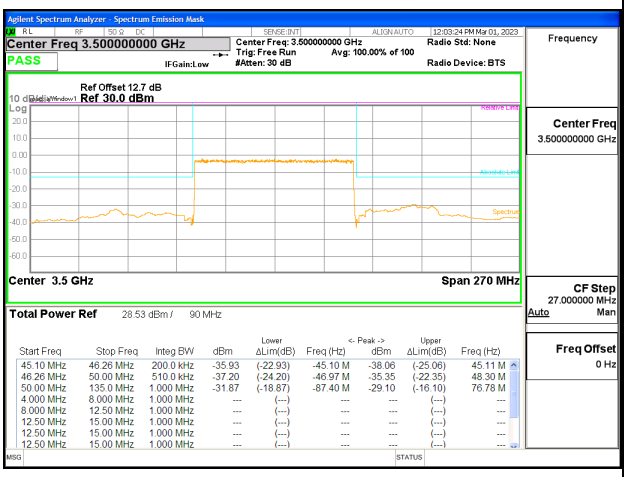


5G NR n77 90MHz BPSK High Channel RB1-244, ID:28568



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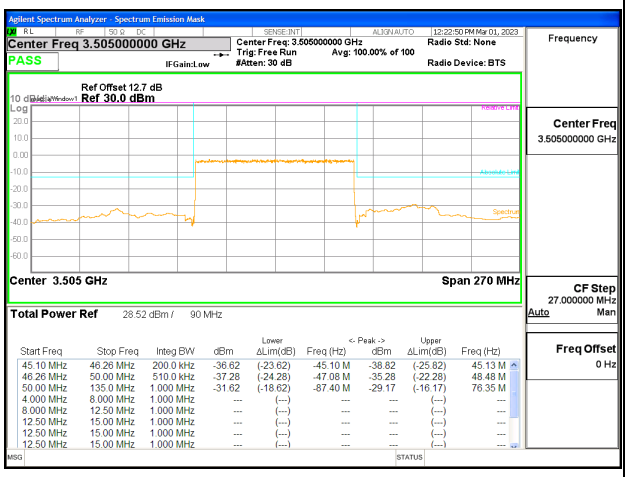

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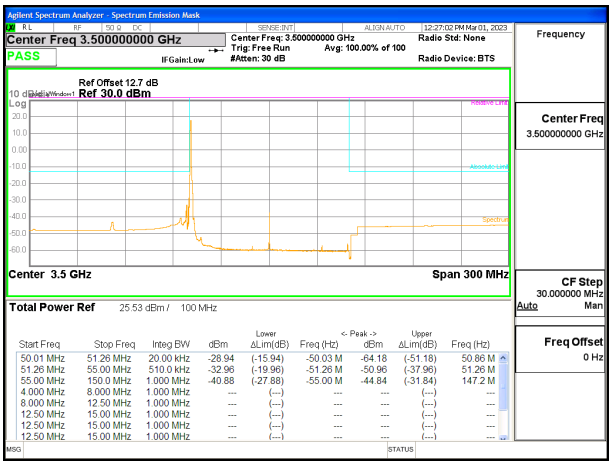
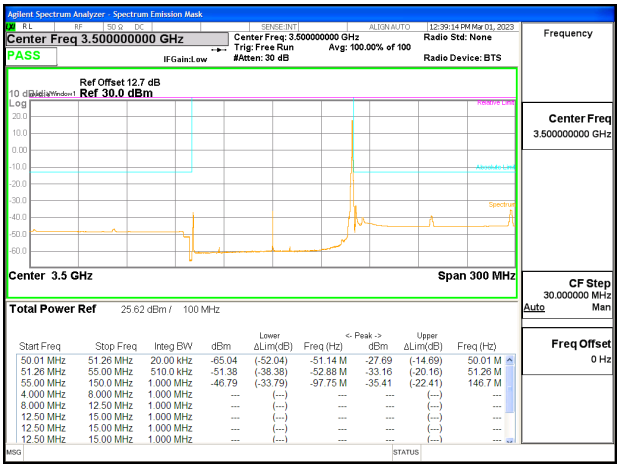


5G NR n77 100MHz BPSK Middle Channel RB1-0, ID:28568



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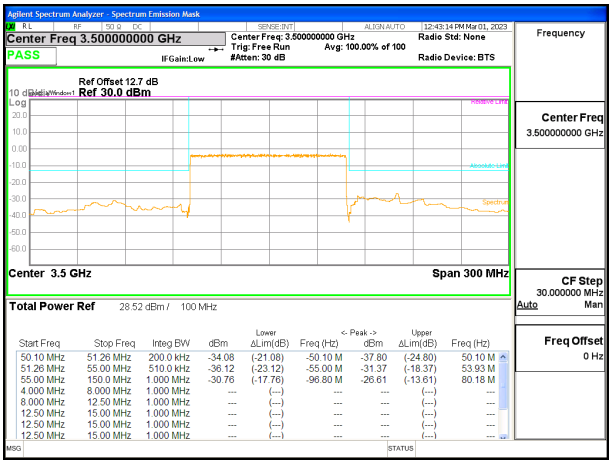


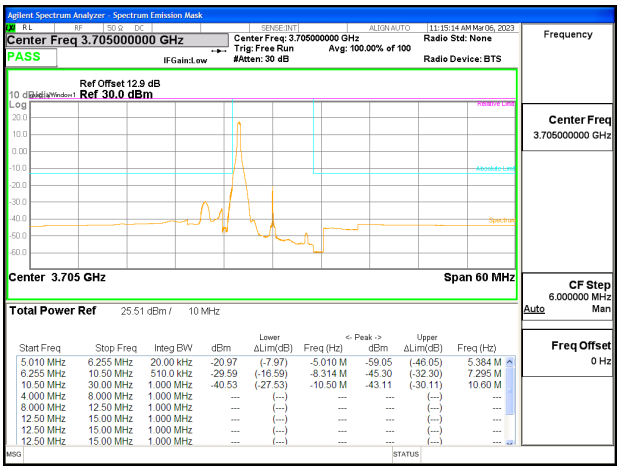
5G NR n77 100MHz BPSK Middle Channel RB270-0, ID:28568

Intentionally Blank

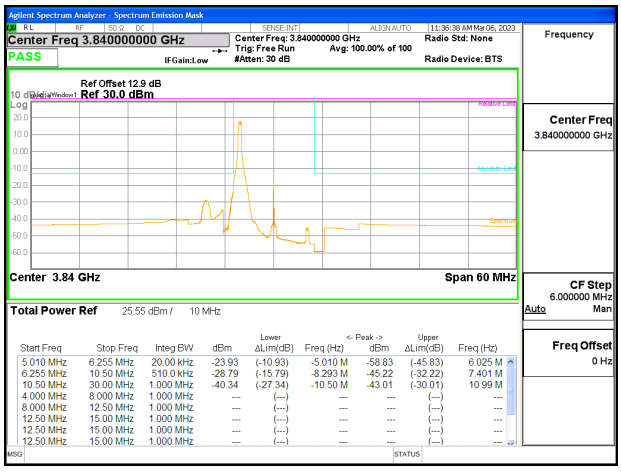
9.2.16. 5G NR n77 (Part 27 3700-3980MHz)

LIMITS

FCC: §27.53
(l) 3.7 GHz Service.The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.



5G NR n77 10MHz BPSK Low Channel RB1-0, ID:28568



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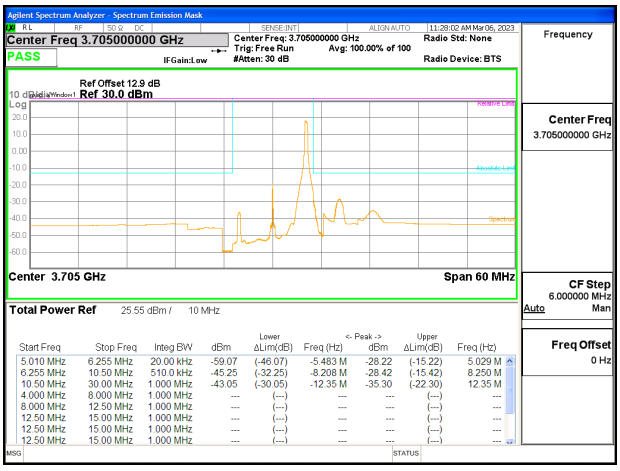
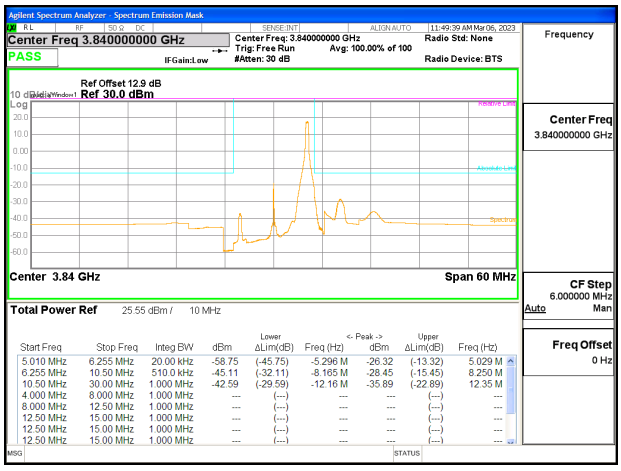
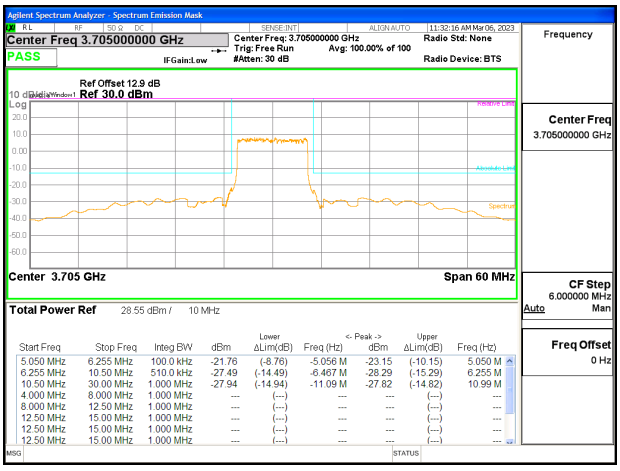


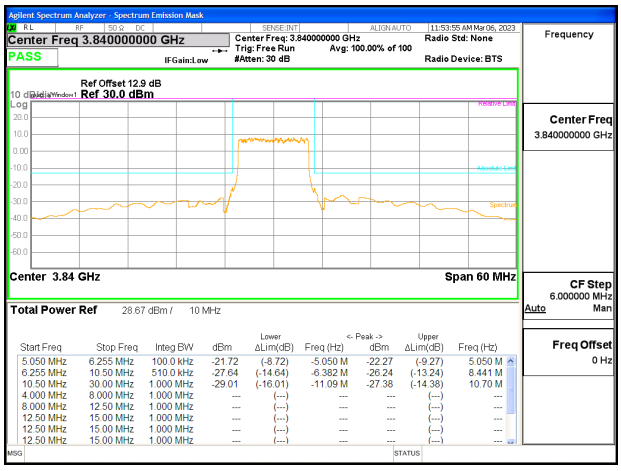
5G NR n77 10MHz BPSK Low Channel RB1-23, ID:28568



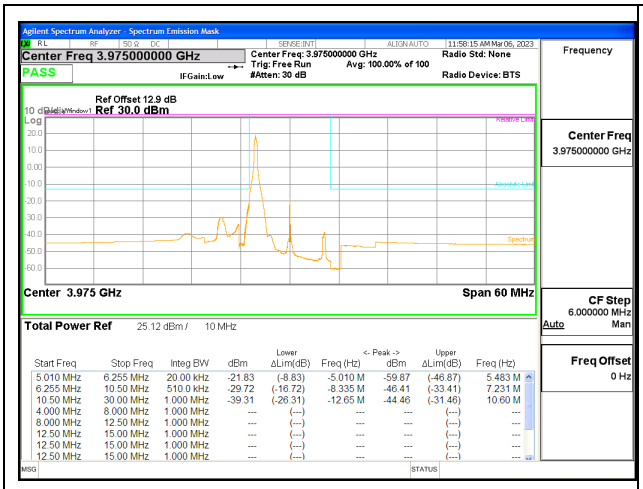
5G NR n77 10MHz BPSK Middle Channel RB1-23, ID:28568



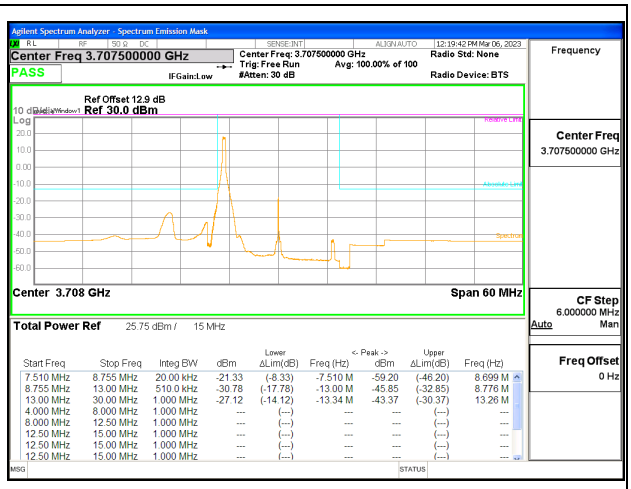
5G NR n77 10MHz BPSK Low Channel RB24-0, ID:28568



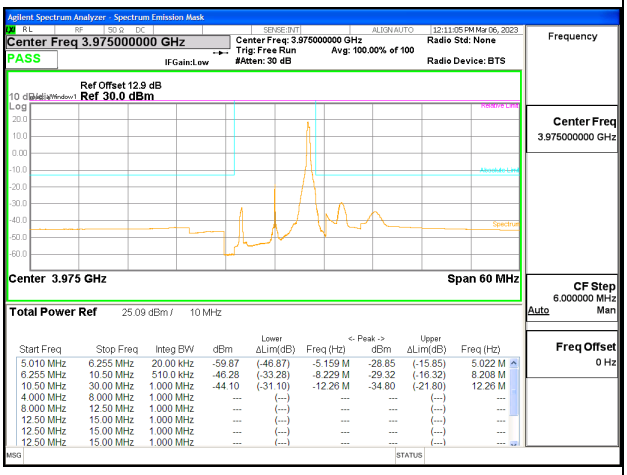
5G NR n77 10MHz BPSK Middle Channel RB24-0, ID:28568



5G NR n77 10MHz BPSK High Channel RB1-0, ID:28568



5G NR n77 15MHz BPSK Low Channel RB1-0, ID:28568



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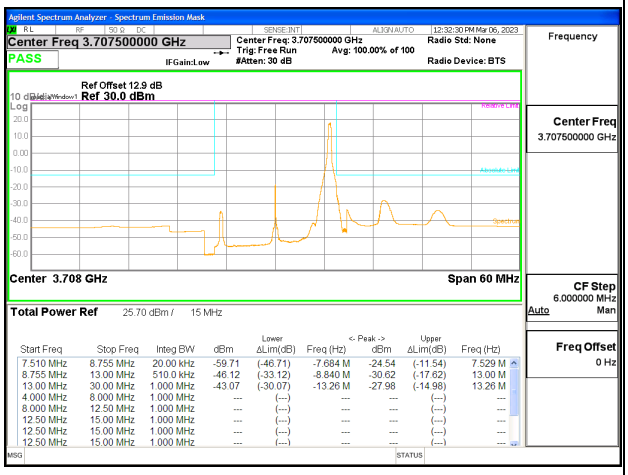
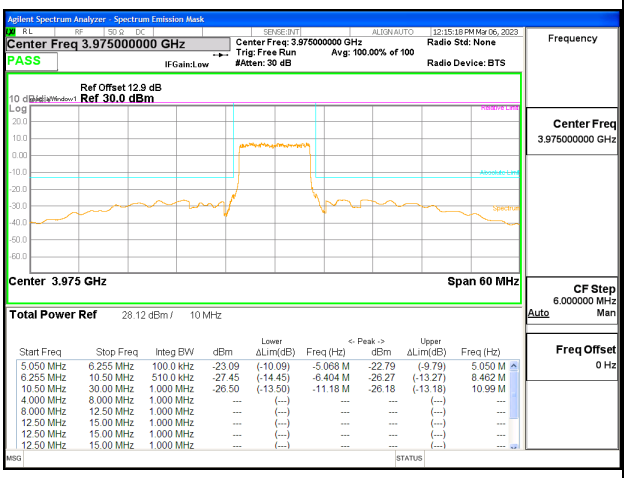


5G NR n77 15MHz BPSK Low Channel RB1-37, ID:28568



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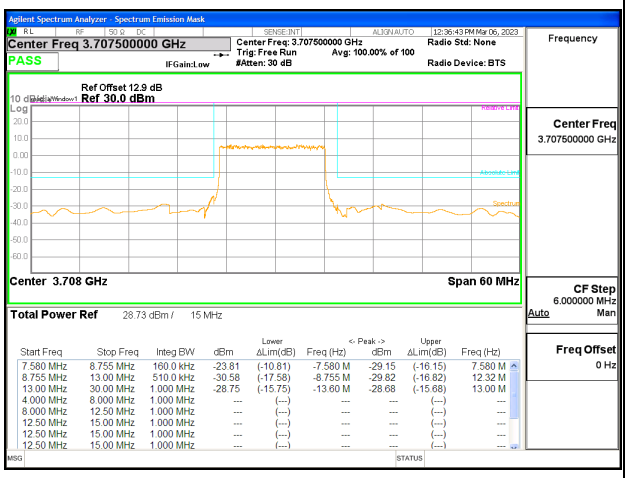
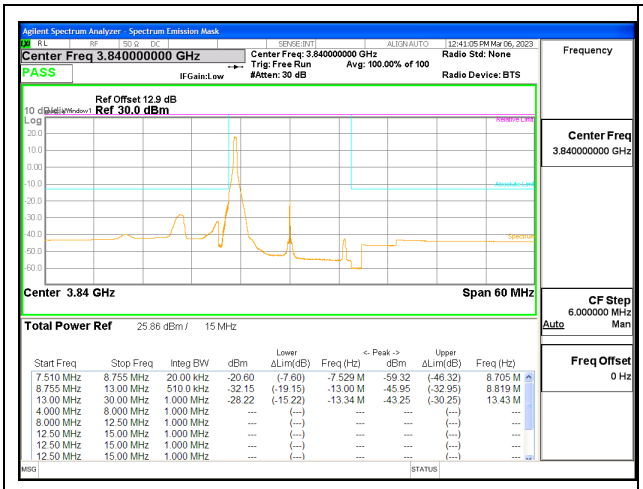
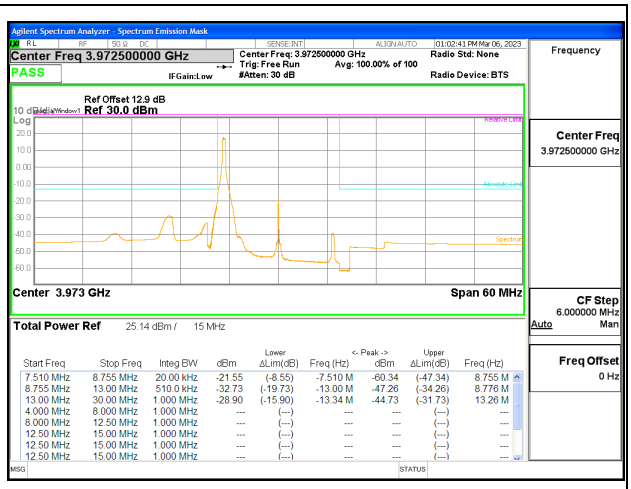


5G NR n77 15MHz BPSK Low Channel RB36-0, ID:28568



5G NR n77 15MHz BPSK Middle Channel RB1-0, ID:28568



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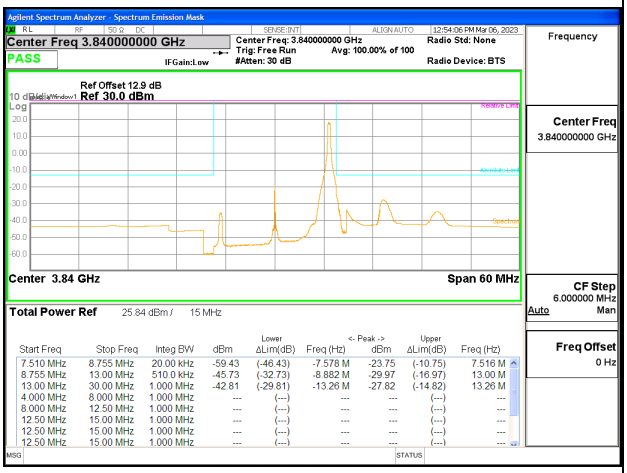

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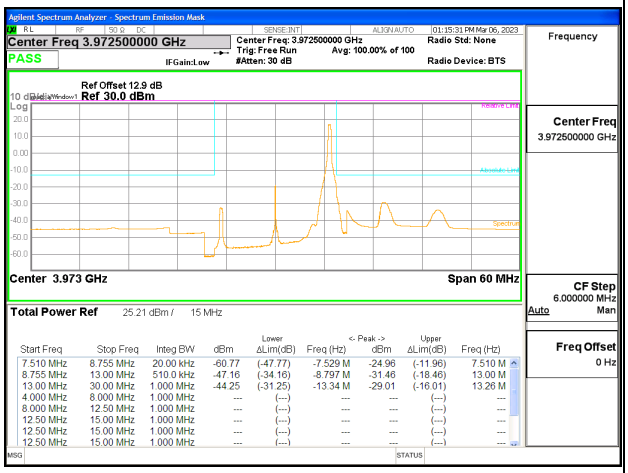

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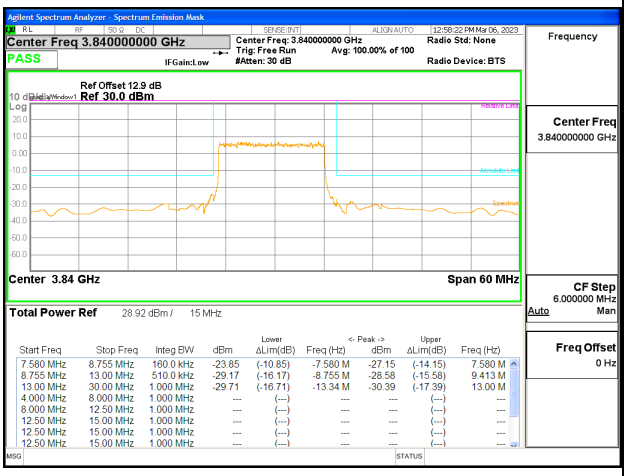

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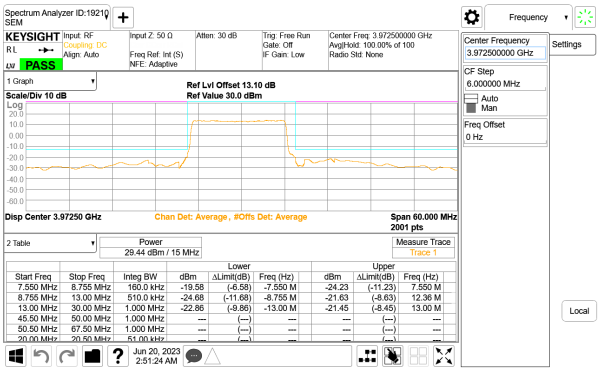
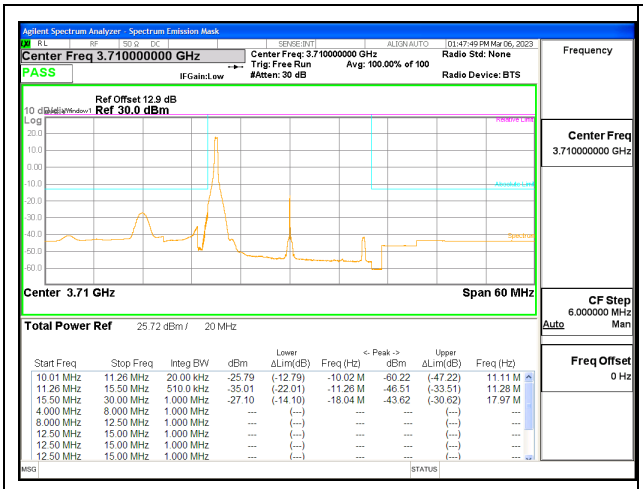
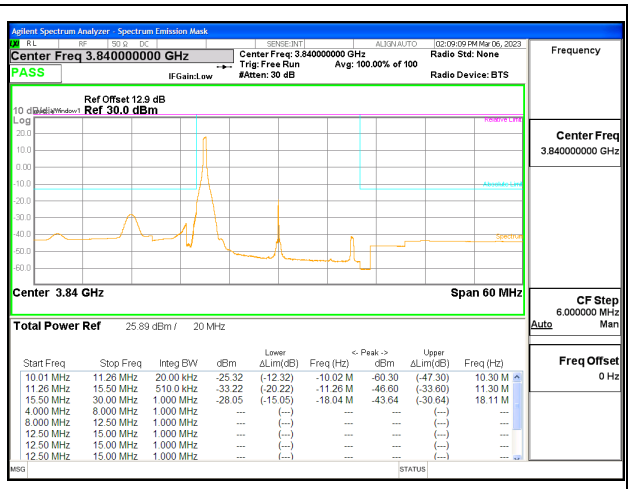


5G NR n77 15MHz BPSK High Channel RB36-0



5G NR n77 20MHz BPSK Low Channel RB1-0, ID:28568



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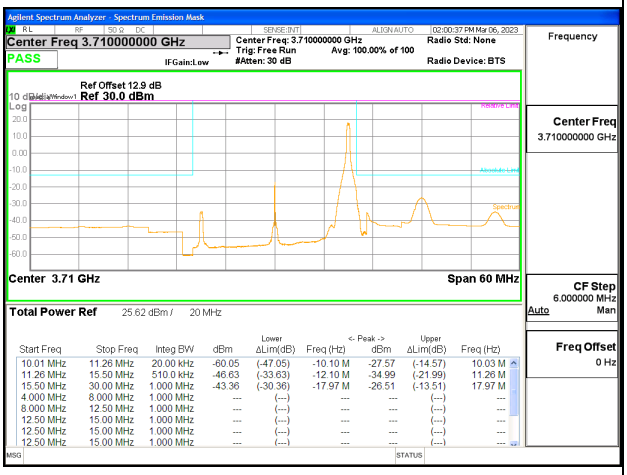
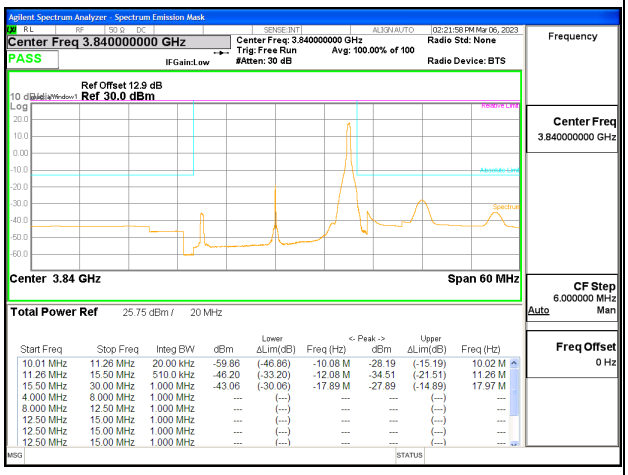


5G NR n77 20MHz BPSK Low Channel RB1-50, ID:28568



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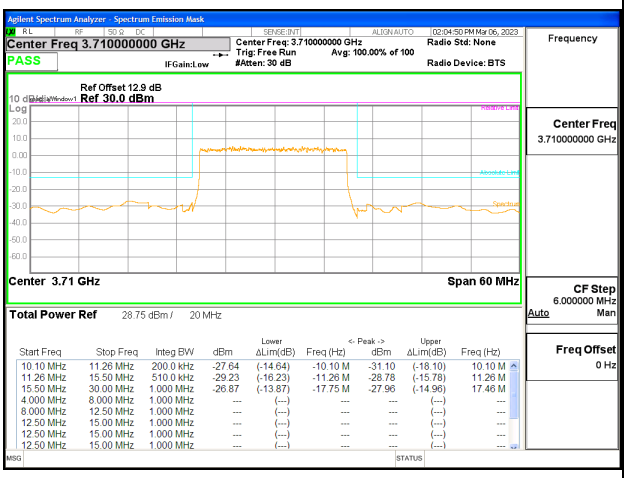

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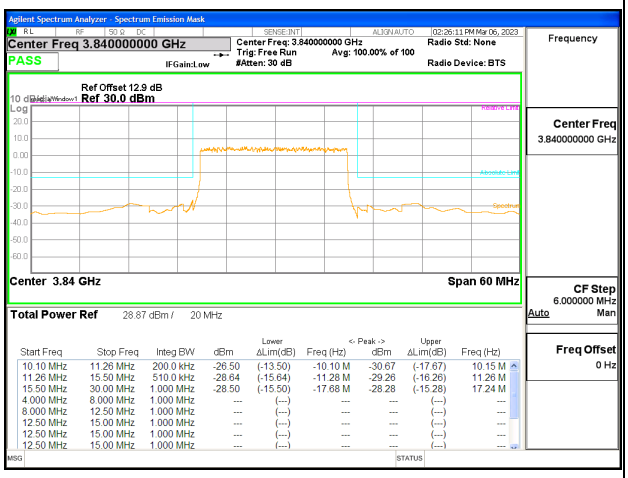

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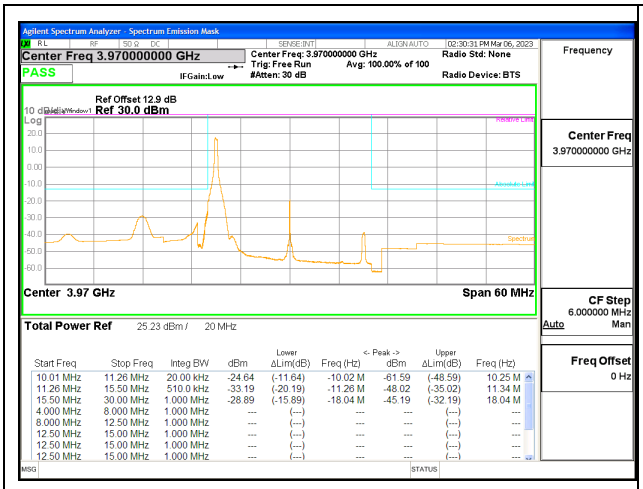

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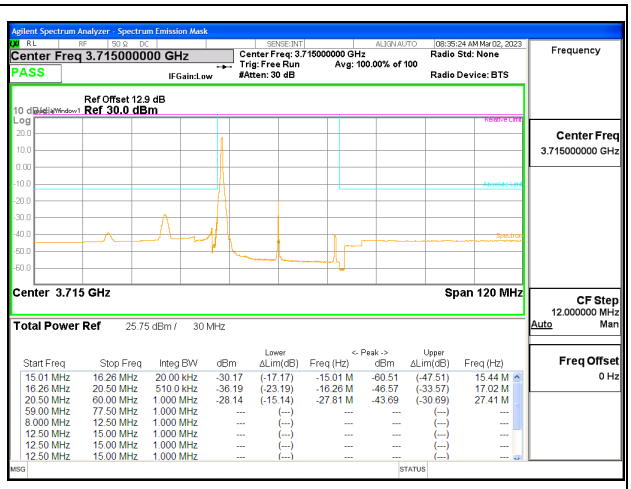

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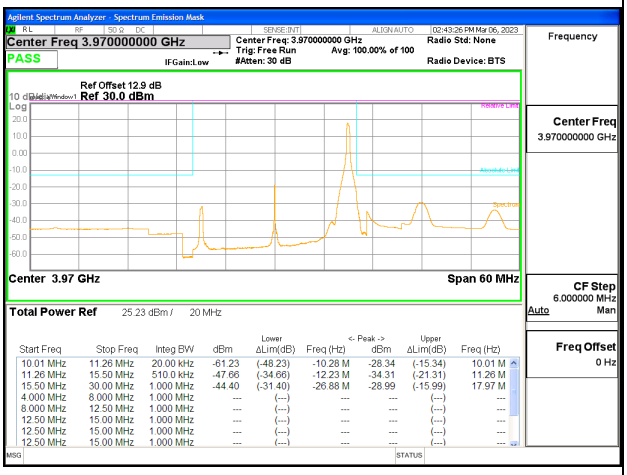

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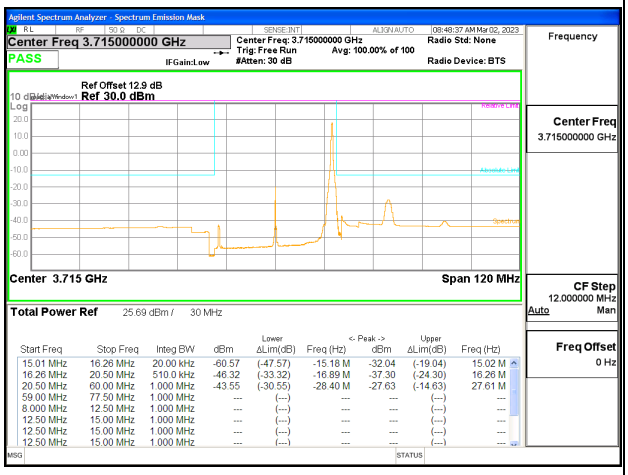

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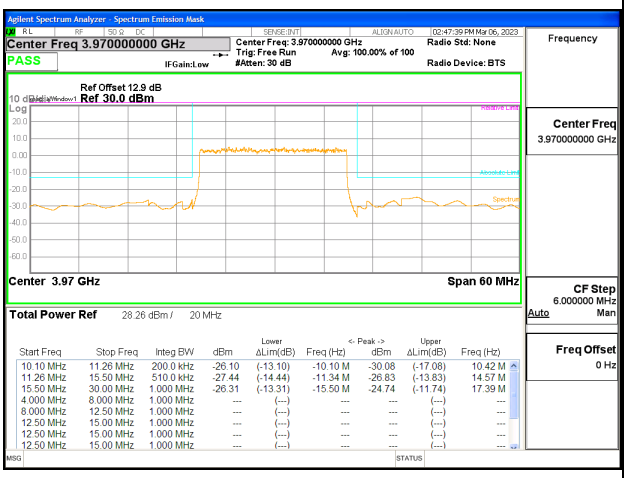

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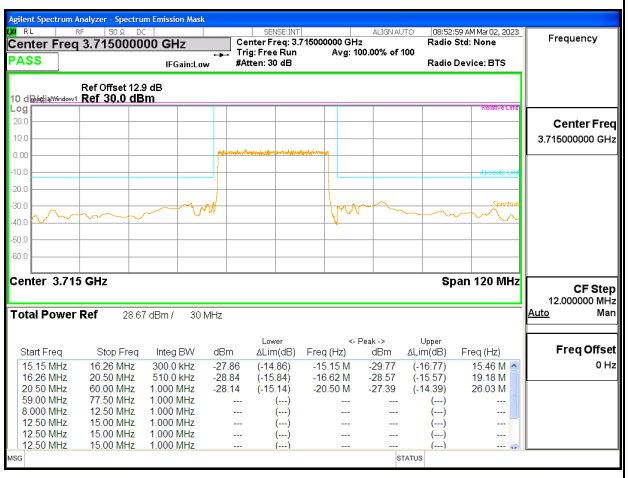

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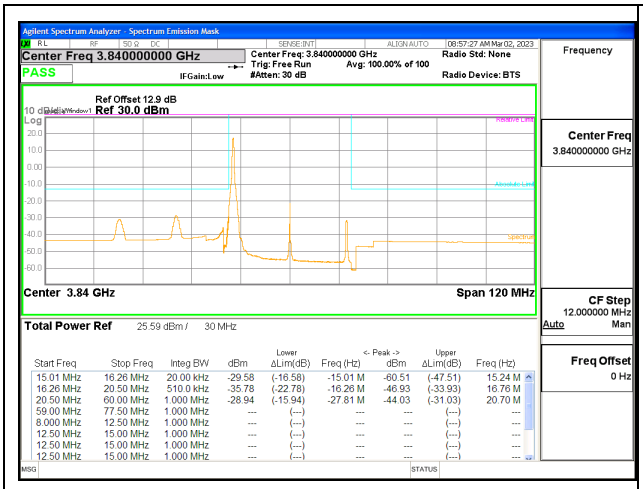
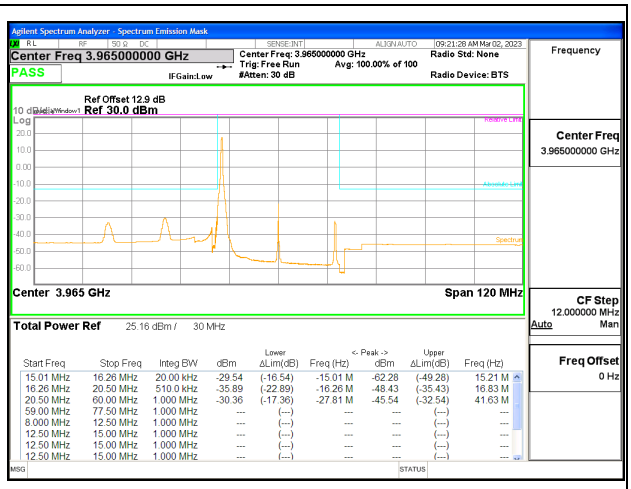
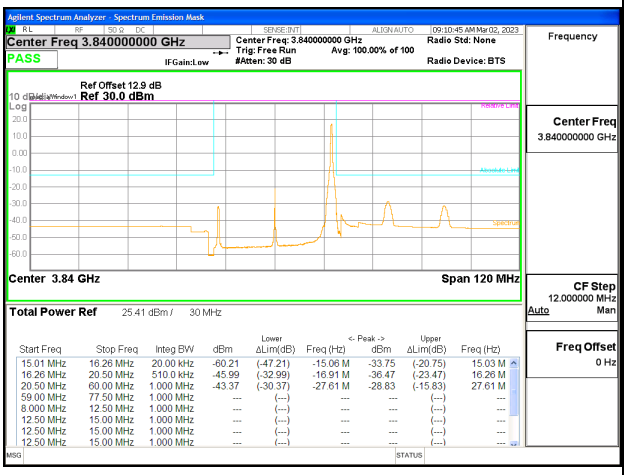


5G NR n77 30MHz BPSK Middle Channel RB1-0, ID:28568



5G NR n77 30MHz BPSK High Channel RB1-0, ID:28568



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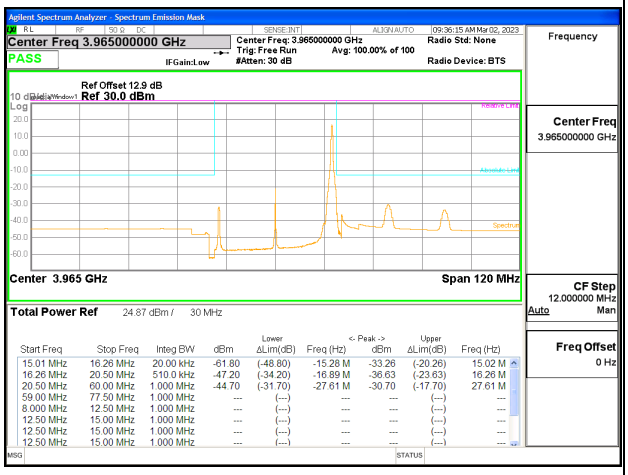

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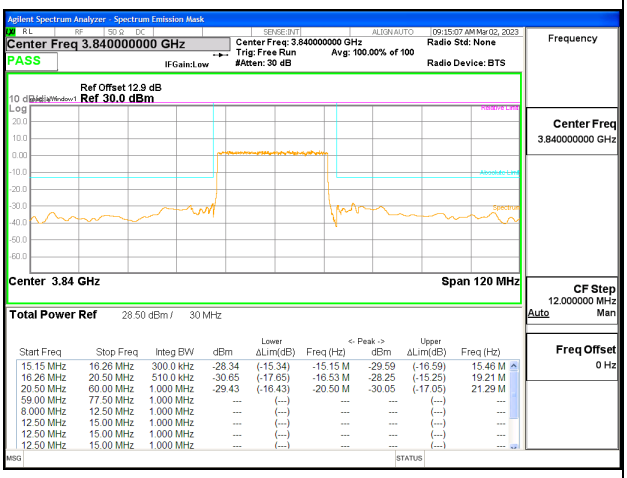

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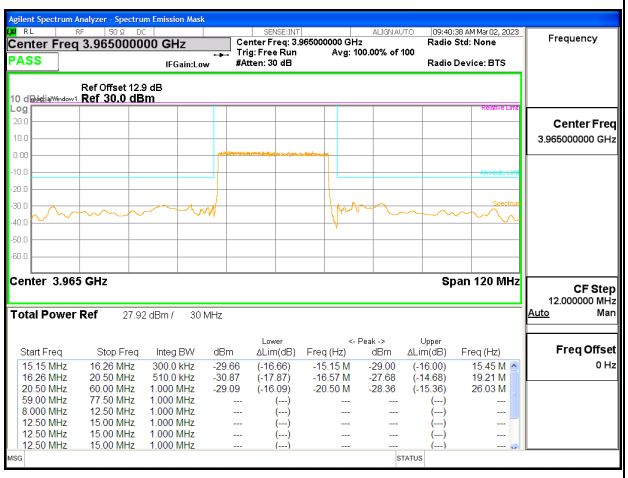

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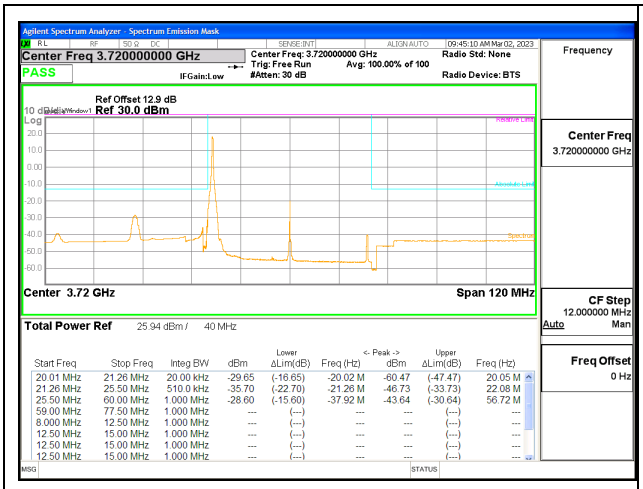
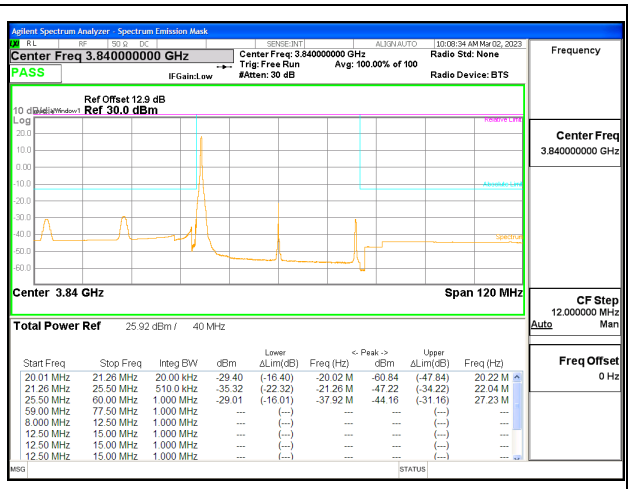


5G NR n77 40MHz BPSK Low Channel RB1-0, ID:28568



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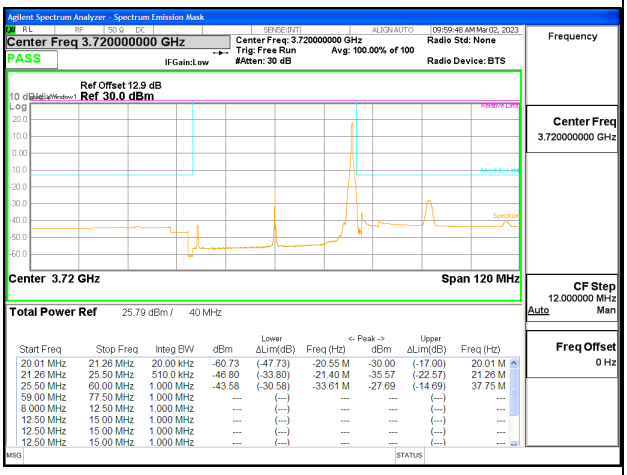

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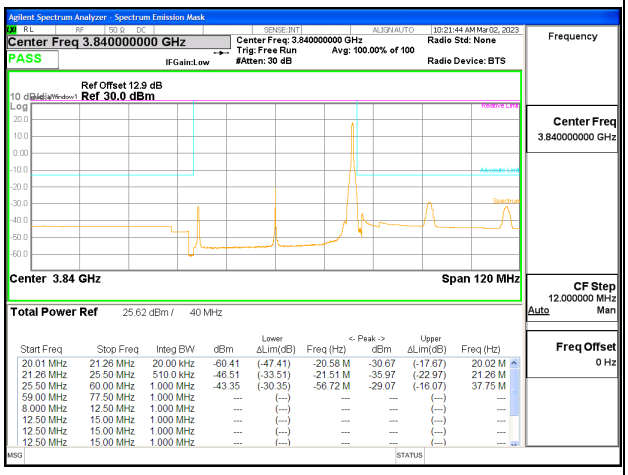

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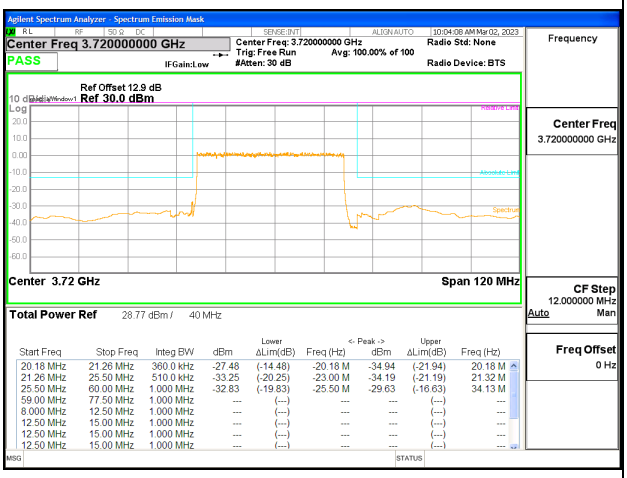

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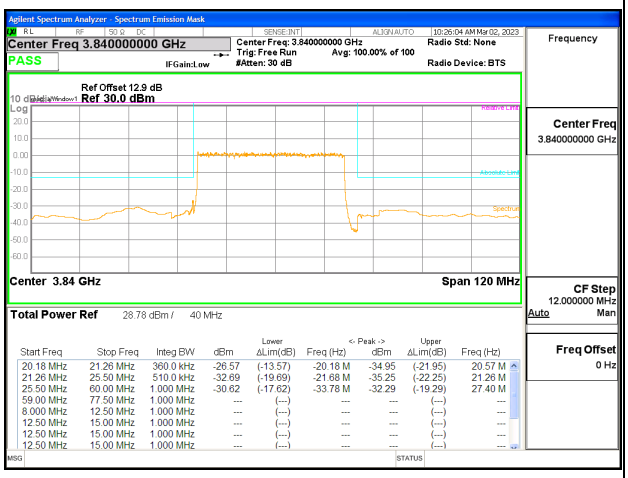

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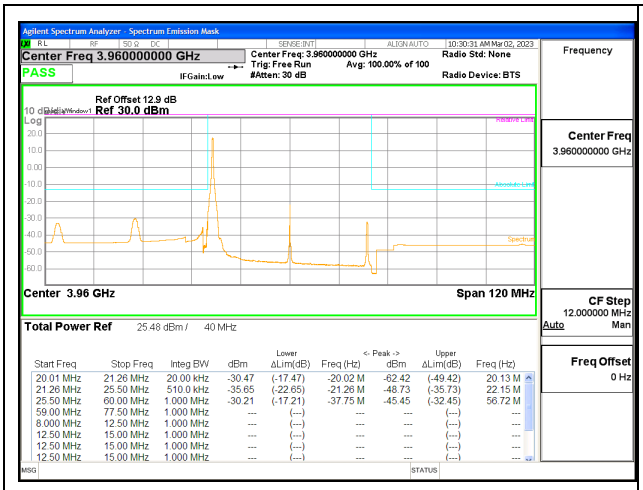

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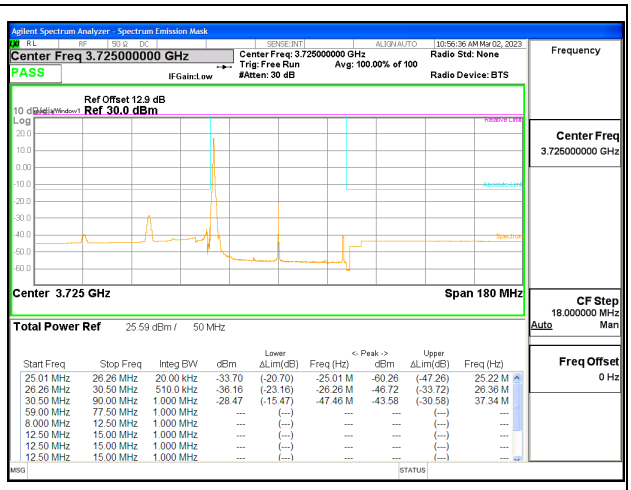
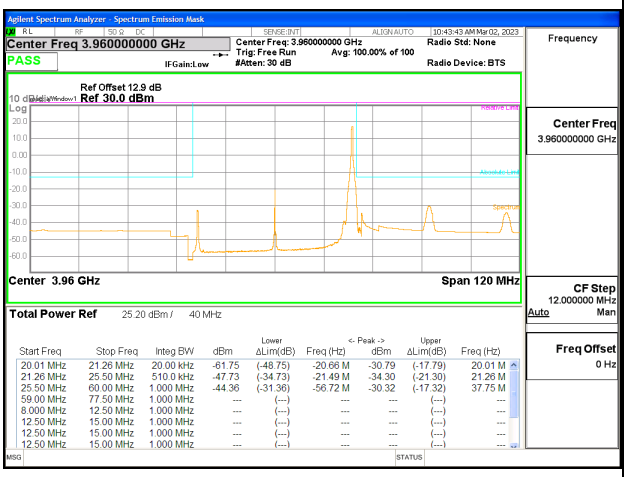


5G NR n77 50MHz BPSK Low Channel RB1-0, ID:28568



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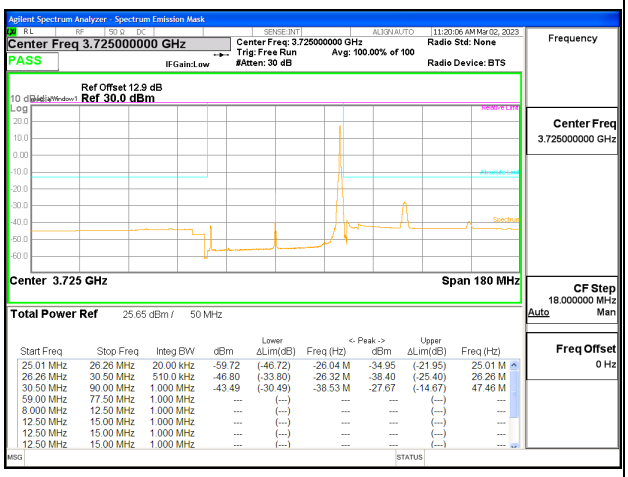
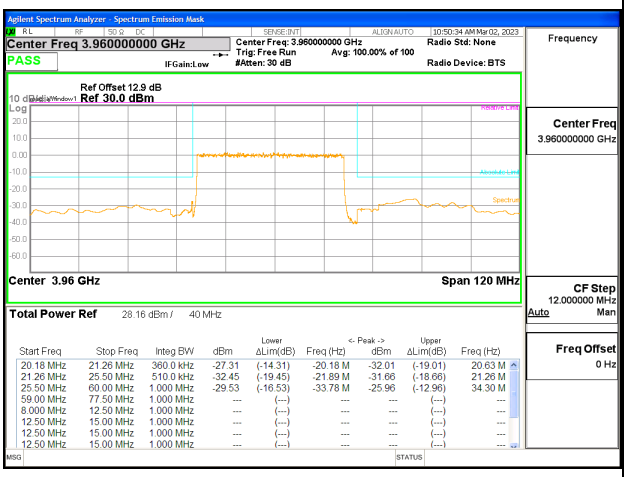


5G NR n77 50MHz BPSK Low Channel RB1-132, ID:28568



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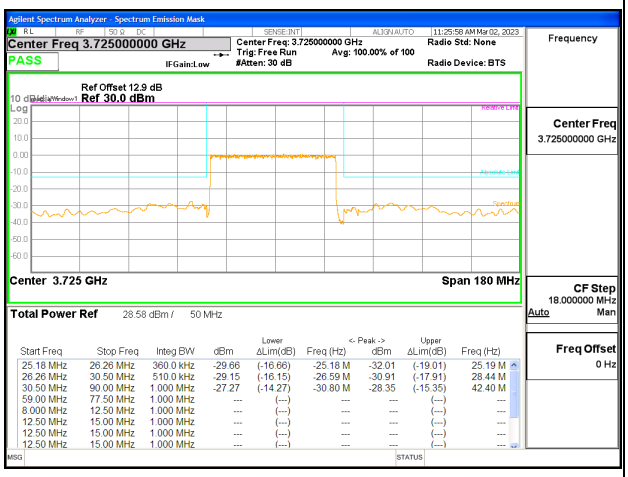

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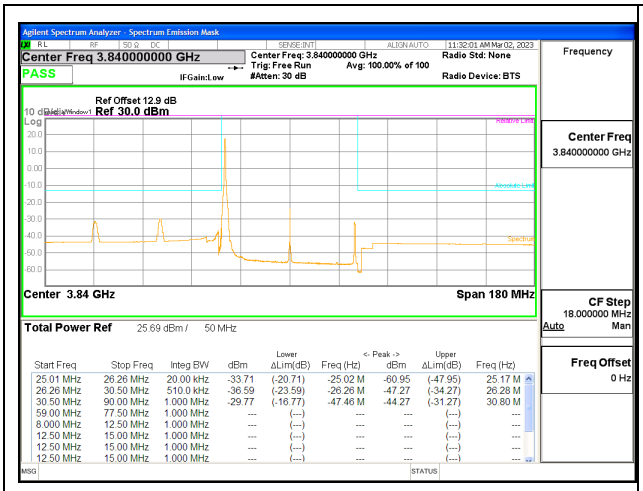
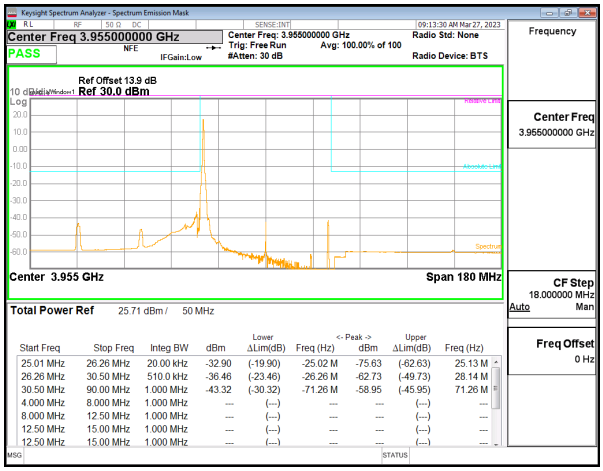


5G NR n77 50MHz BPSK Middle Channel RB1-0, ID:28568



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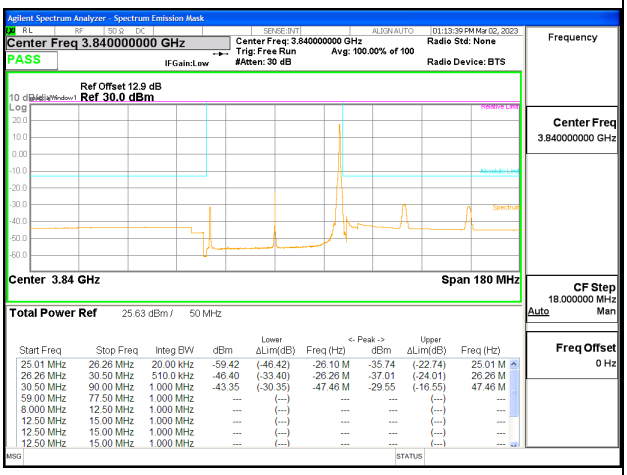

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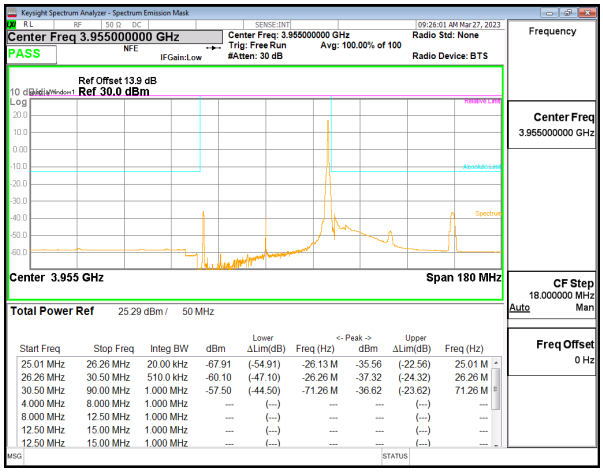

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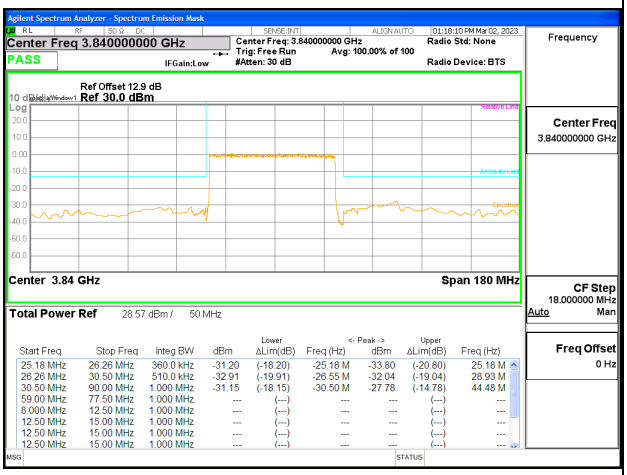

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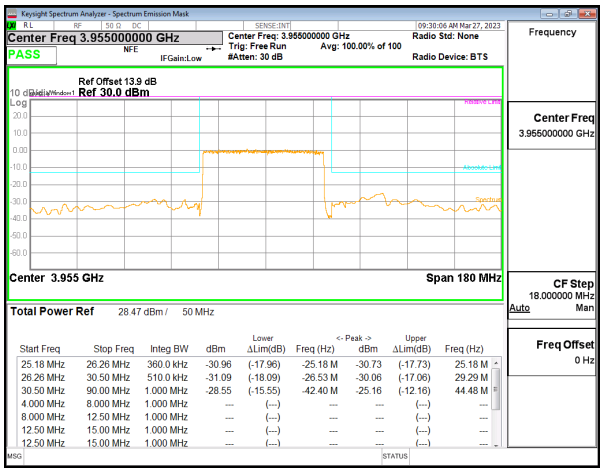

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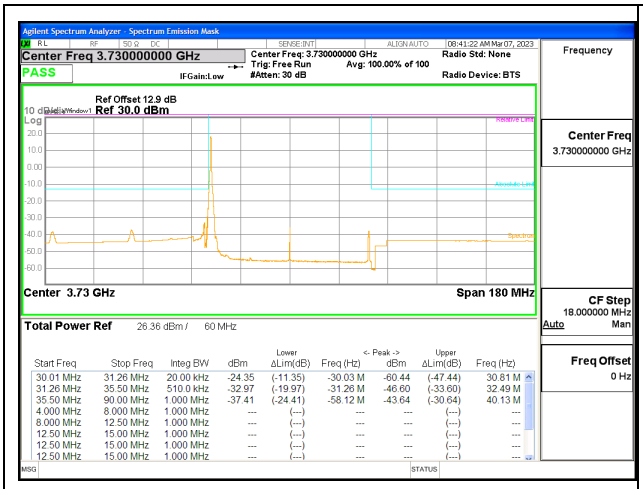
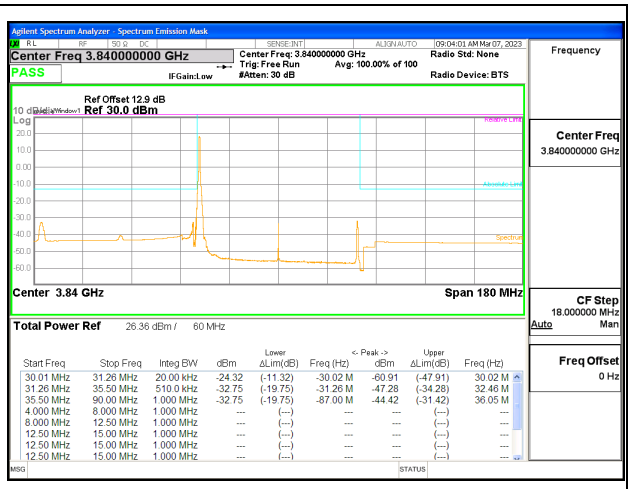


5G NR n77 60MHz BPSK Low Channel RB1-0, ID:28568



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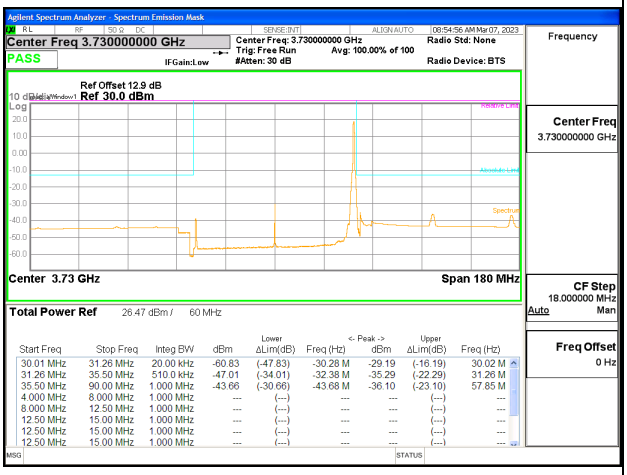

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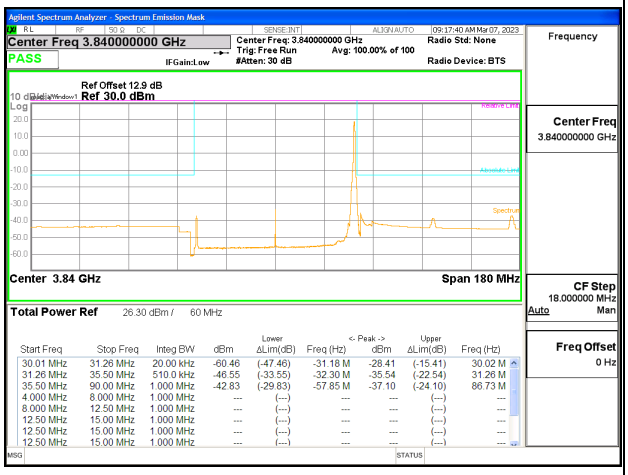

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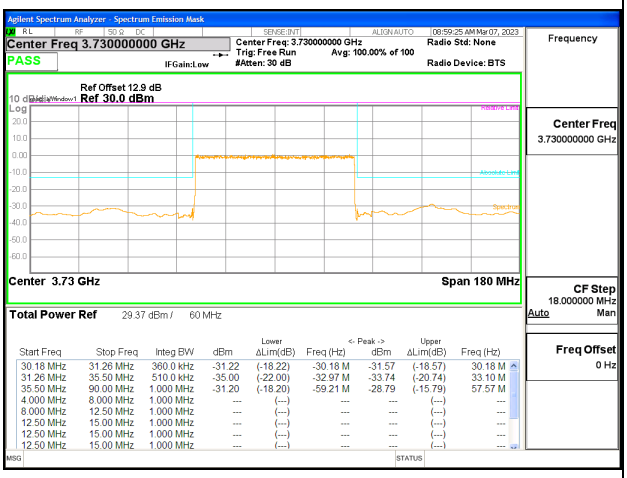
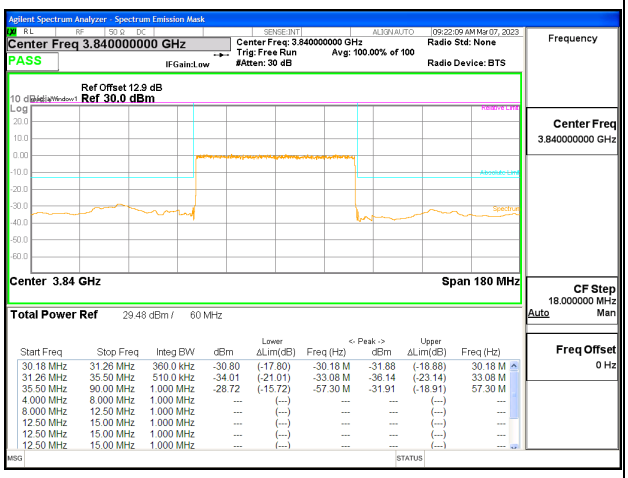


5G NR n77 60MHz BPSK Low Channel RB162-0, ID:28568



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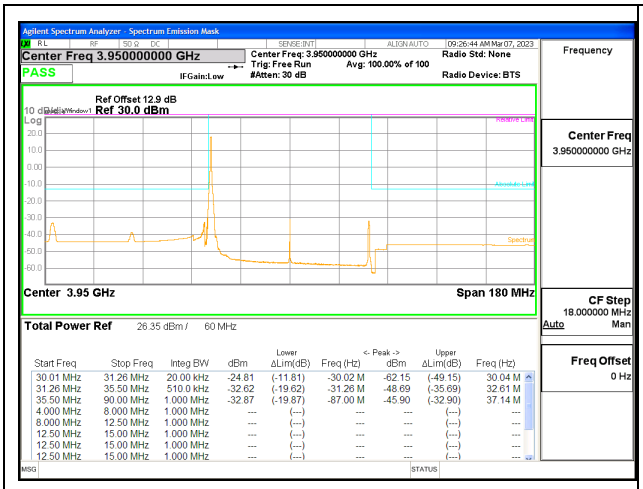

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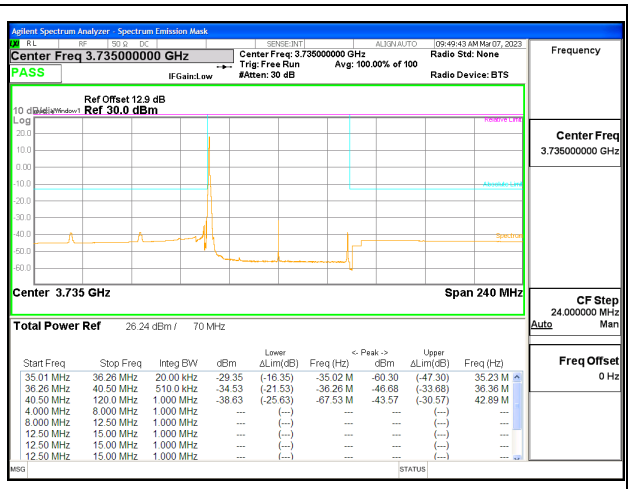

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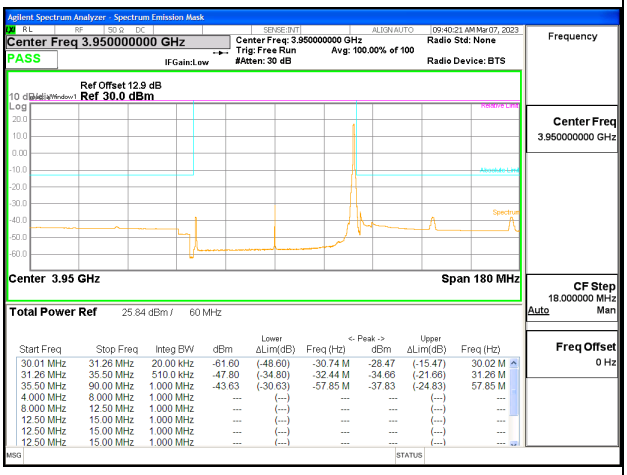

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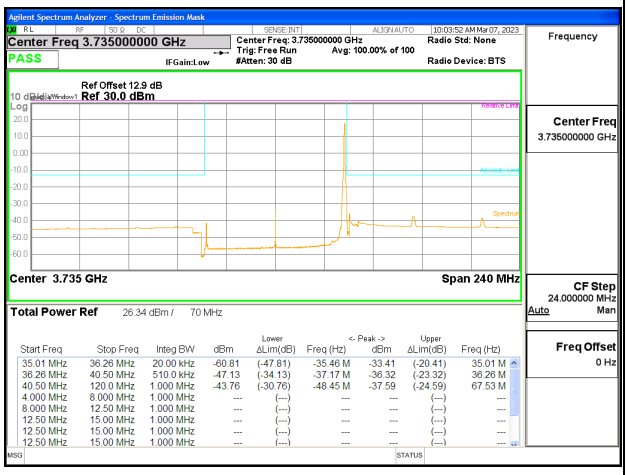
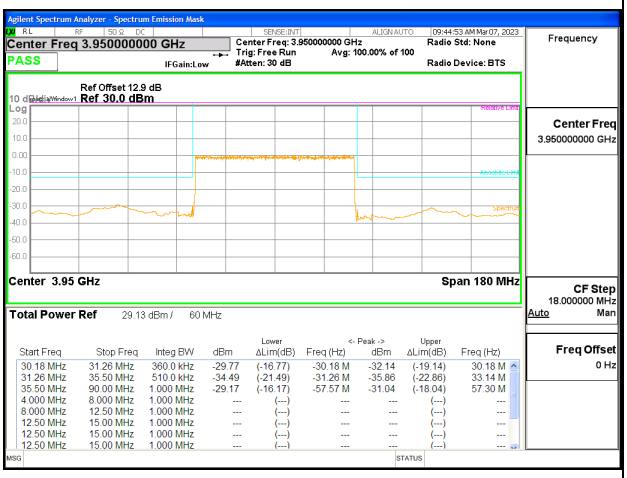


5G NR n77 70MHz BPSK Low Channel RB1-188, ID:28568



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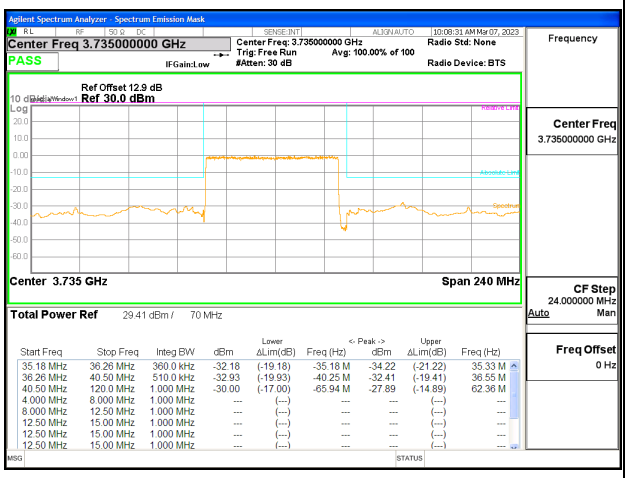
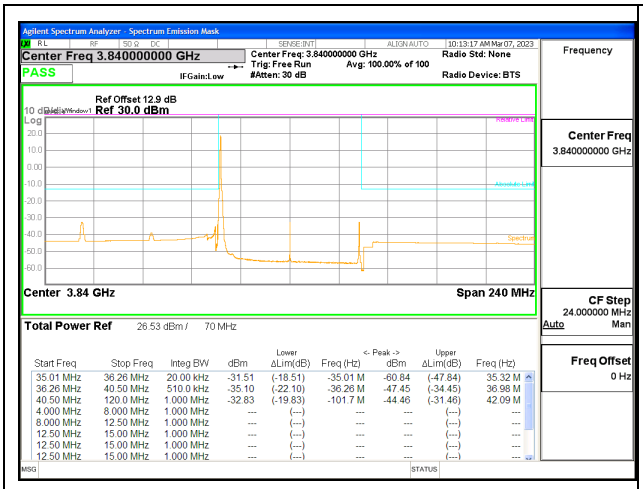
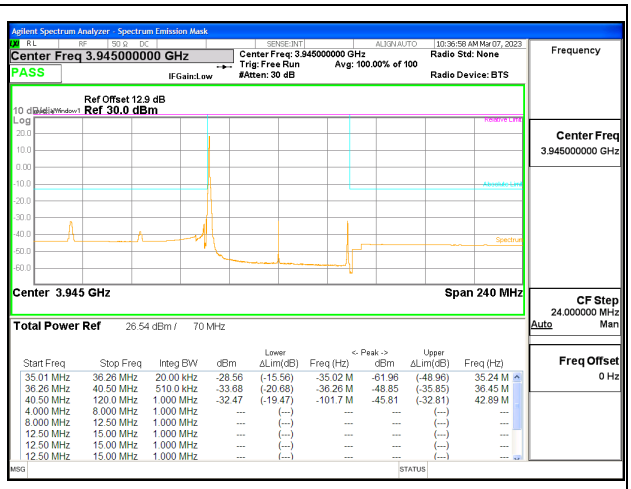


5G NR n77 70MHz BPSK Low Channel RB180-0, ID:28568



5G NR n77 70MHz BPSK Middle Channel RB1-0, ID:28568



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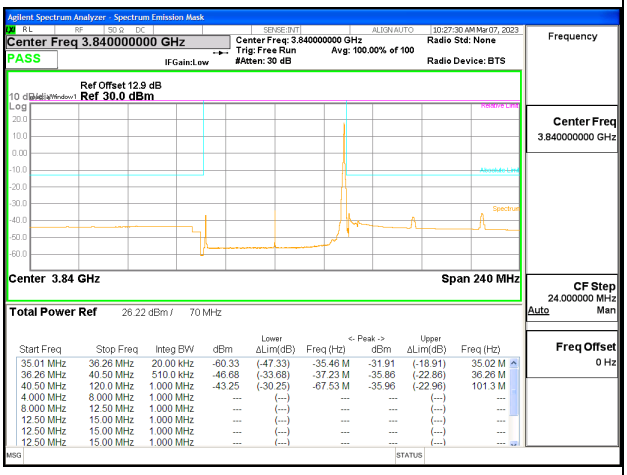
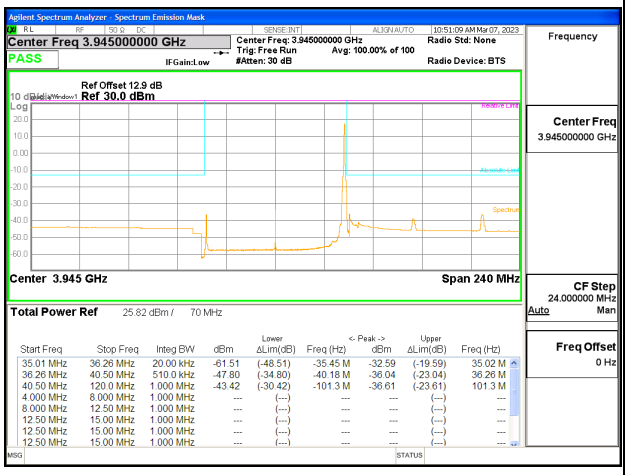


5G NR n77 70MHz BPSK Middle Channel RB1-188, ID:28568



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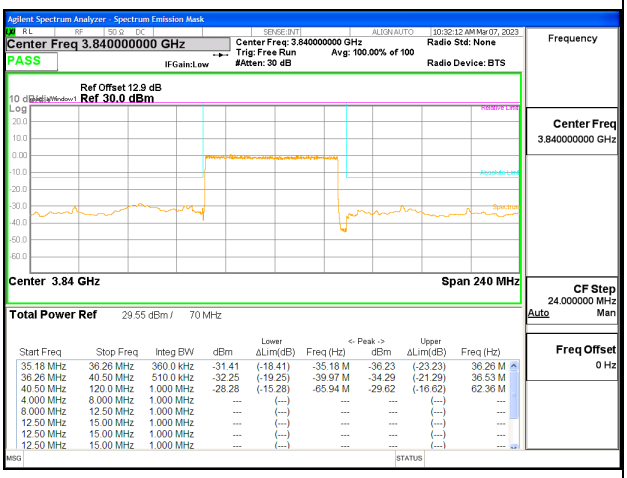

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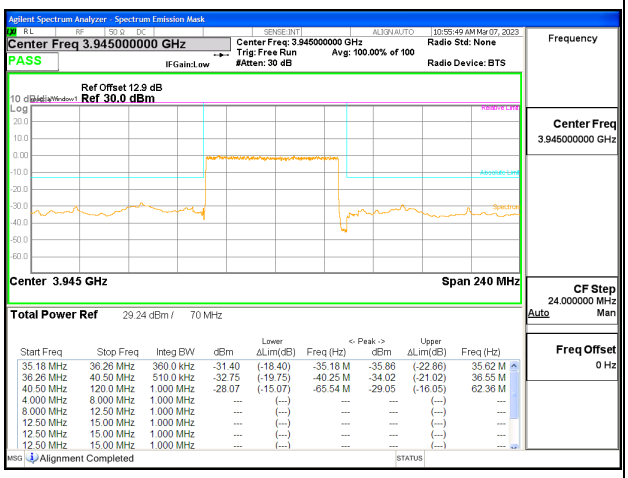

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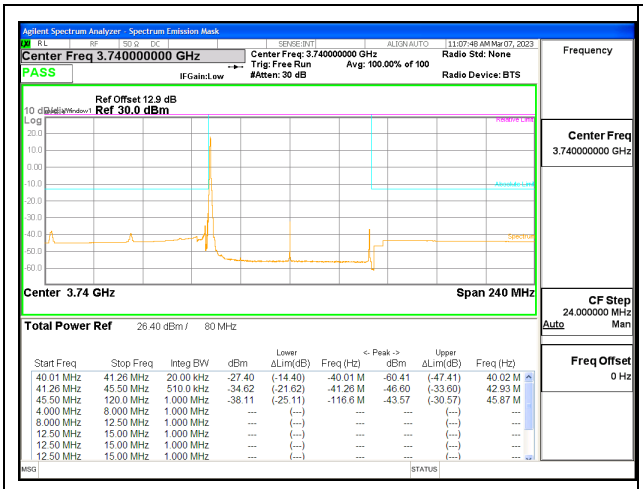
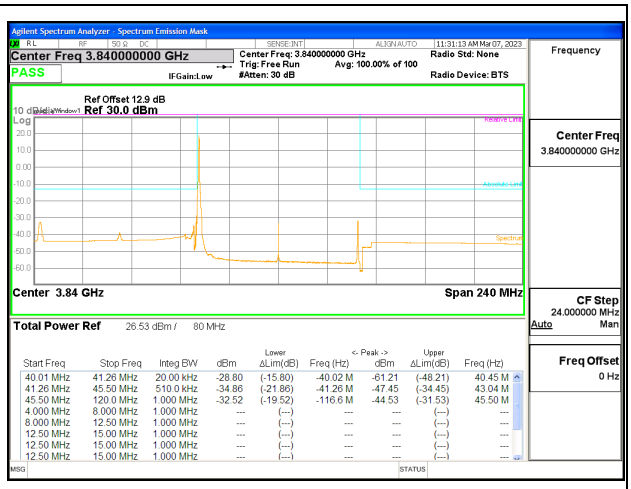


5G NR n77 80MHz BPSK Low Channel RB1-0, ID:28568



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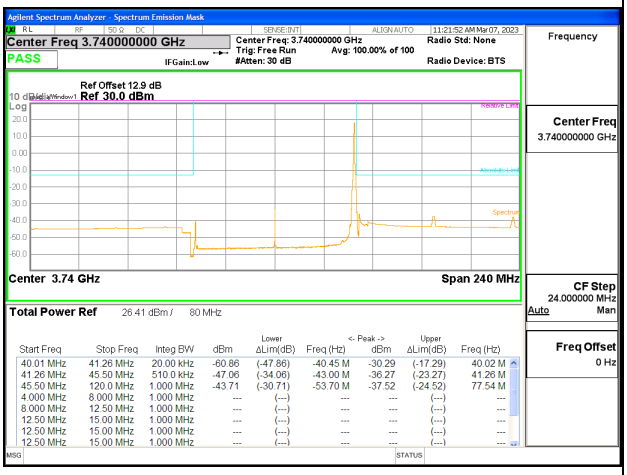
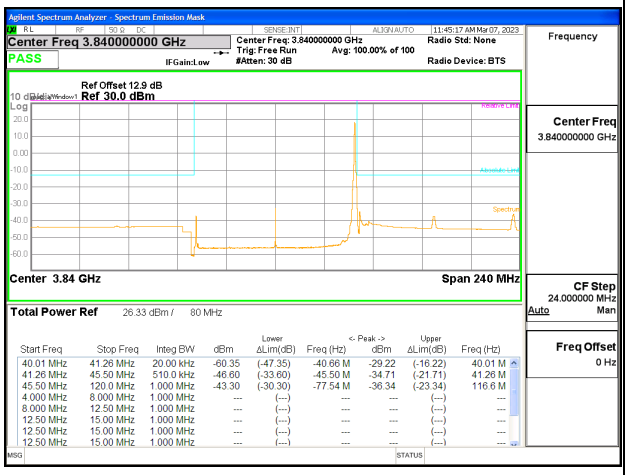
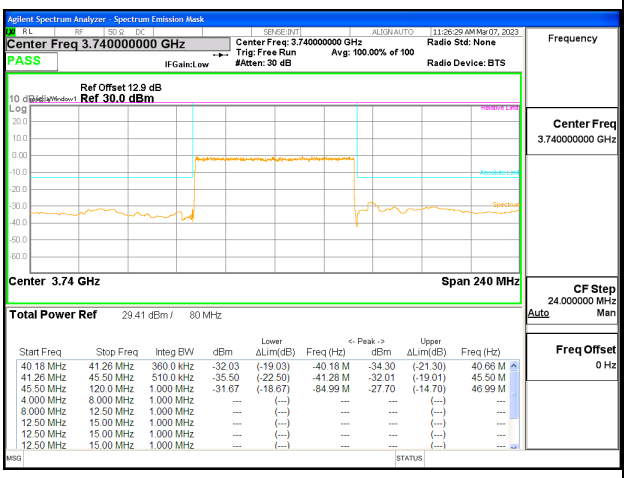


5G NR n77 80MHz BPSK Low Channel RB1-216, ID:28568



5G NR n77 80MHz BPSK Middle Channel RB1-216, ID:28568



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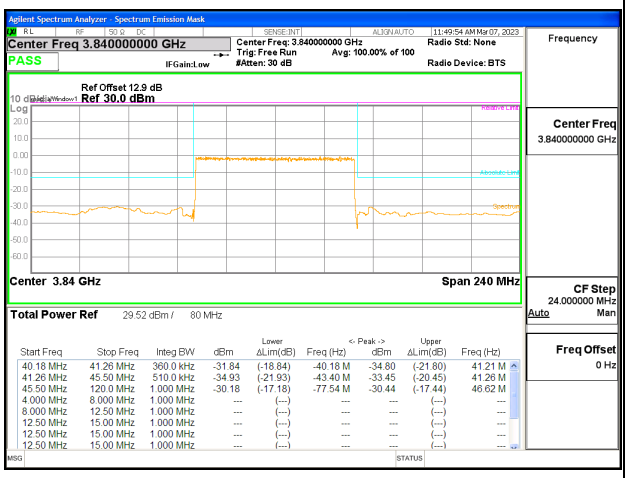

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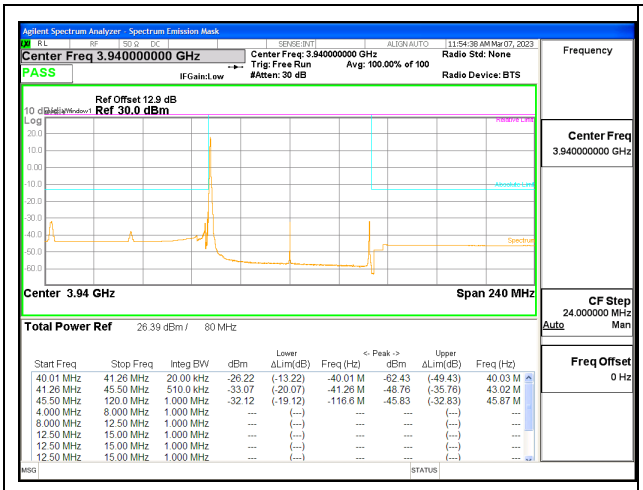
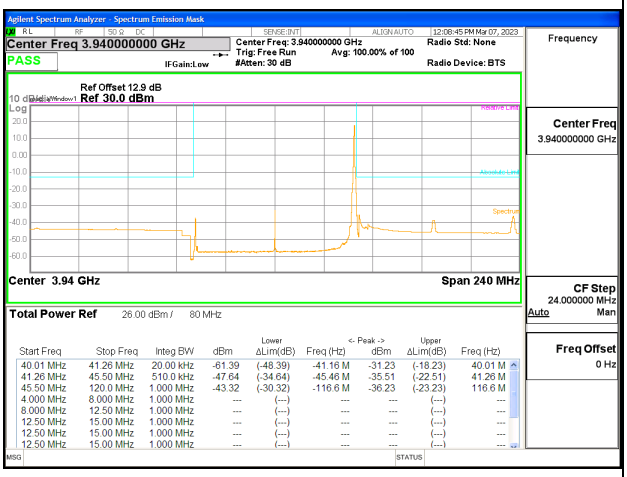


5G NR n77 80MHz BPSK High Channel RB1-0, ID:28568

5G NR n77 90MHz BPSK Low Channel RB1-0, ID:28568



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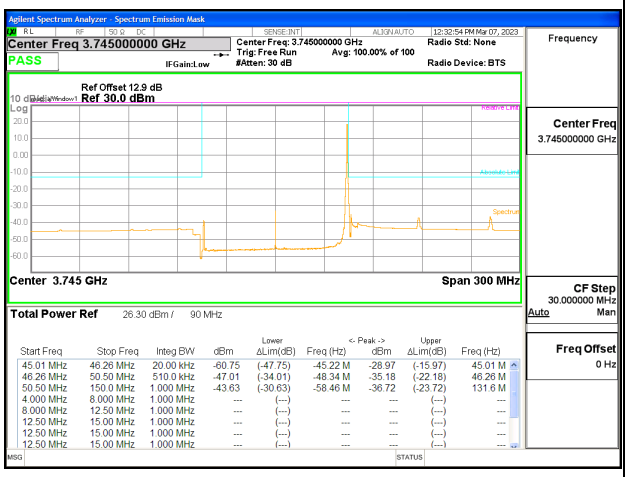
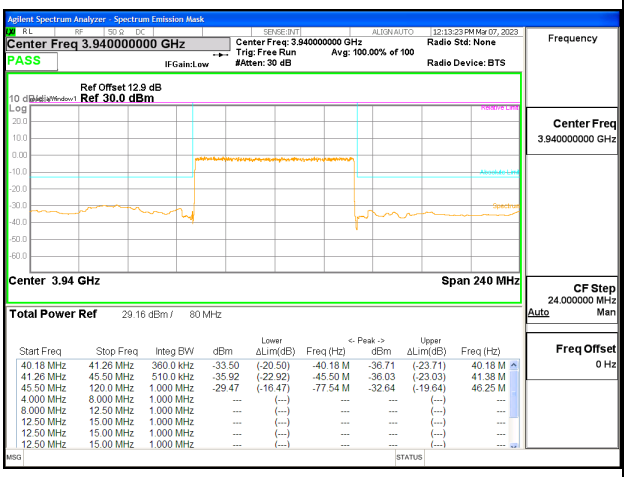


5G NR n77 90MHz BPSK Low Channel RB1-244, ID:28568



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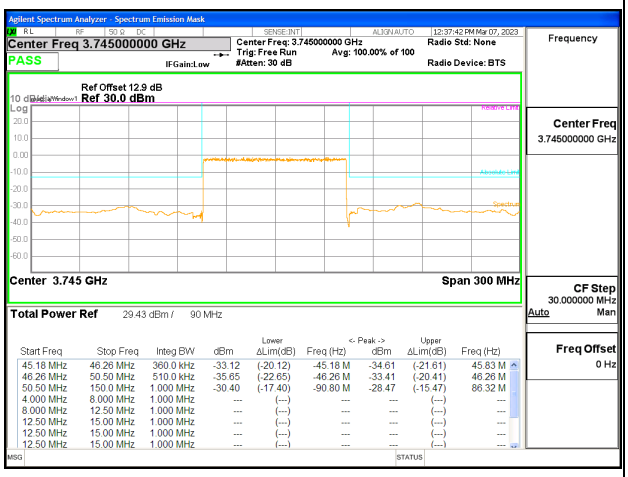
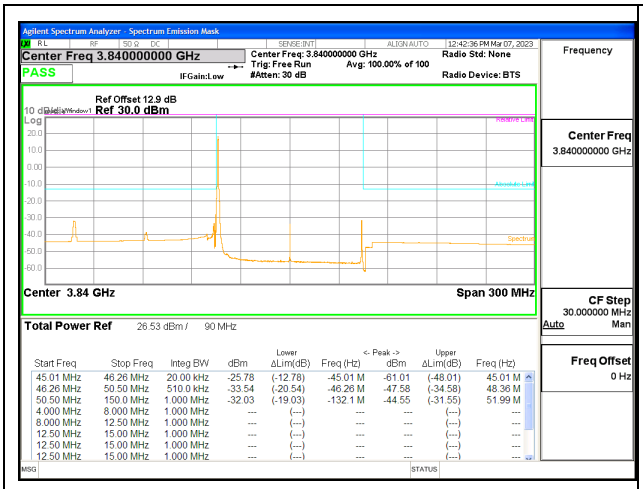
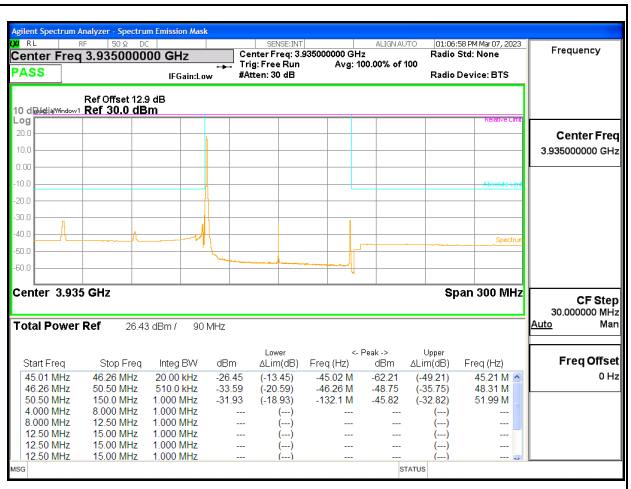


5G NR n77 90MHz BPSK Low Channel RB243-0, ID:28568



5G NR n77 90MHz BPSK Middle Channel RB1-0, ID:28568



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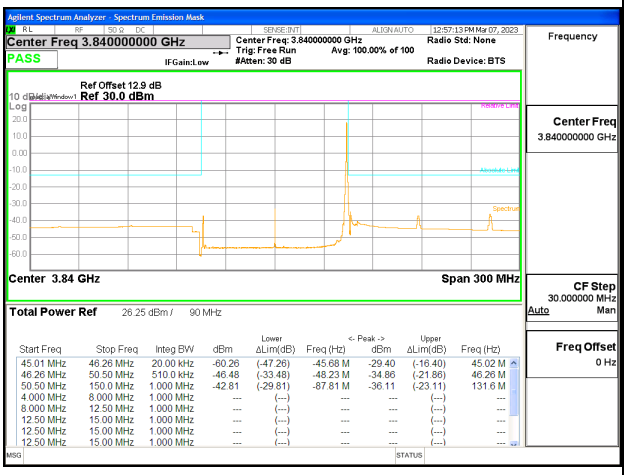

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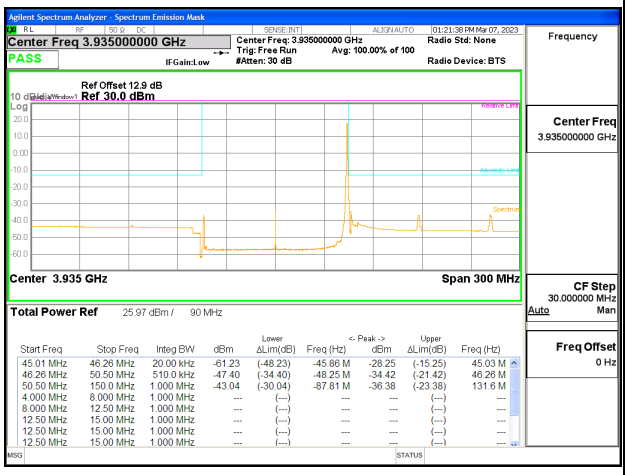

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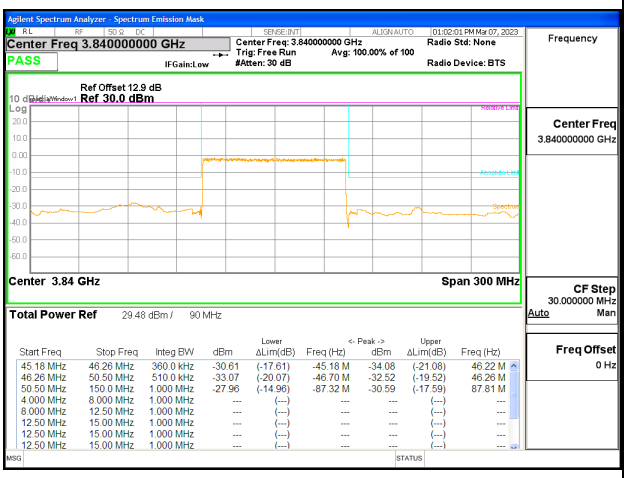

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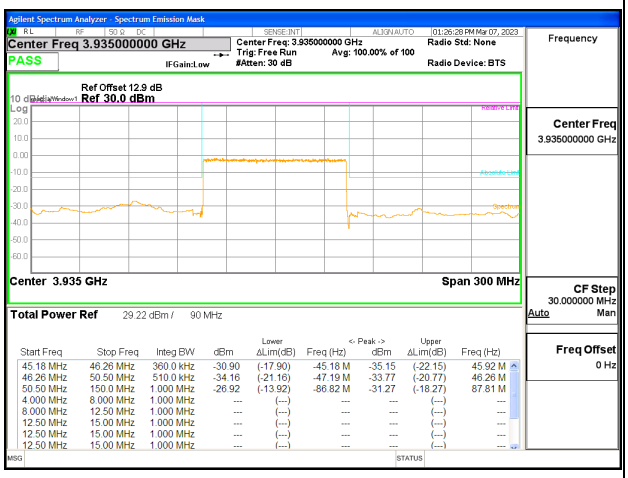

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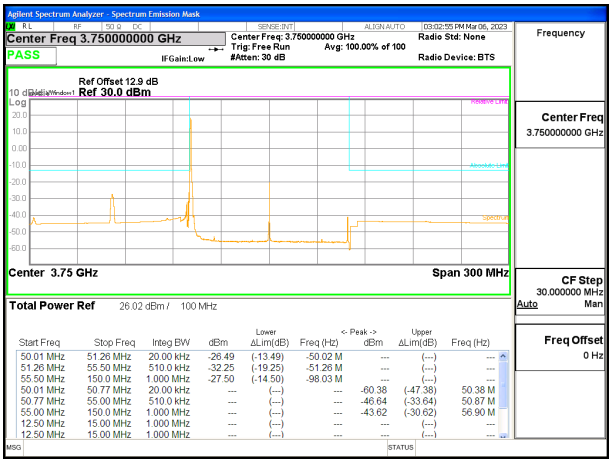

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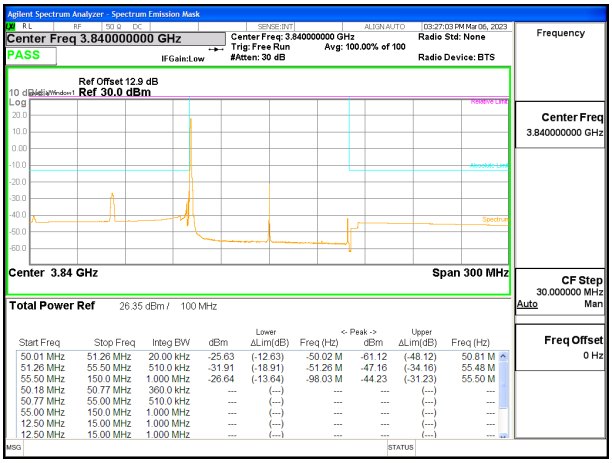

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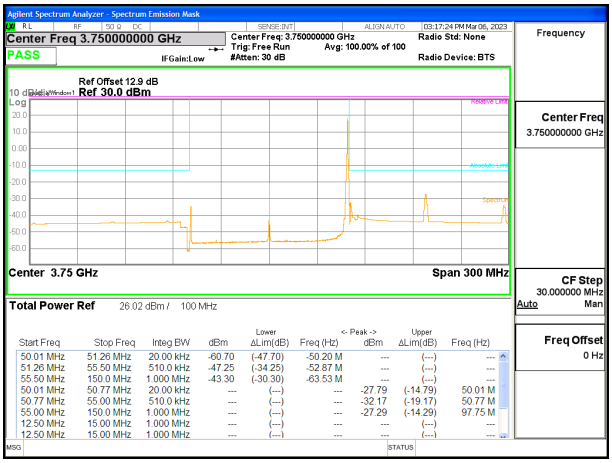
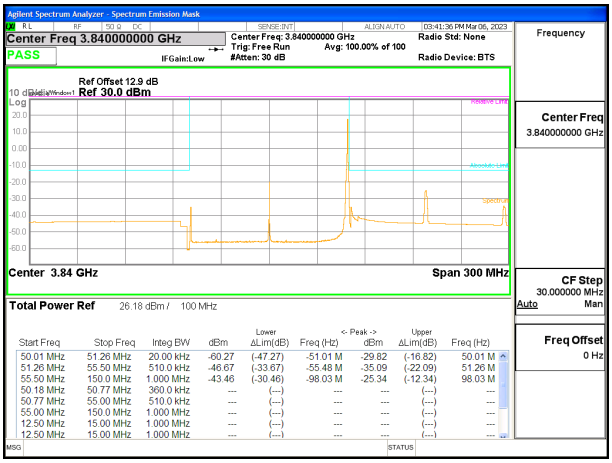


5G NR n77 100MHz BPSK Low Channel RB1-272, ID:28568



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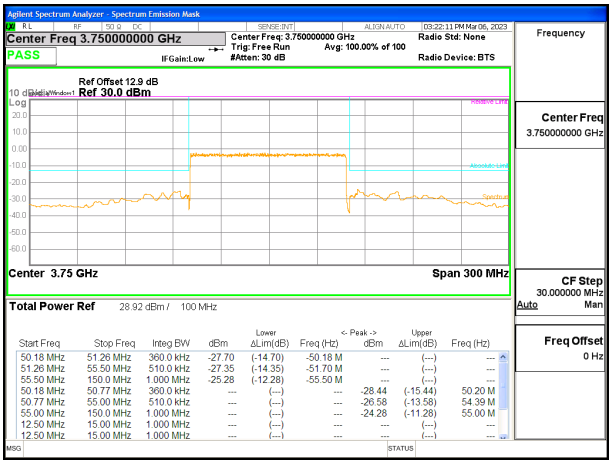

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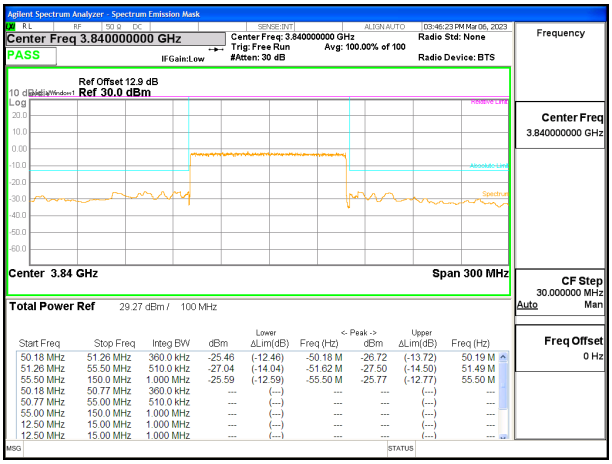

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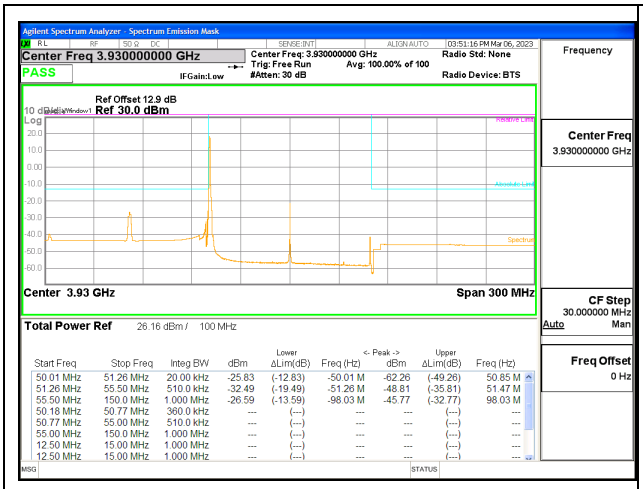
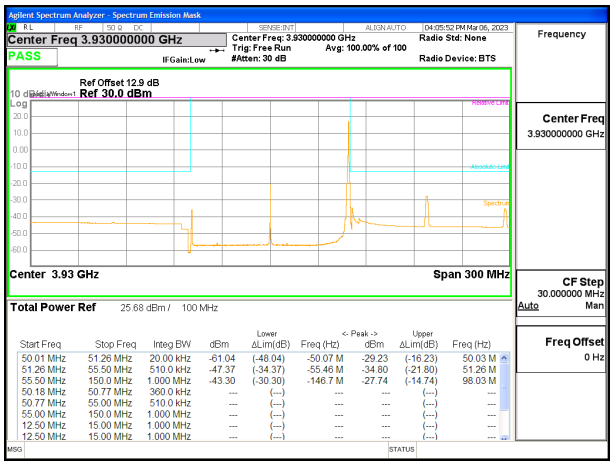
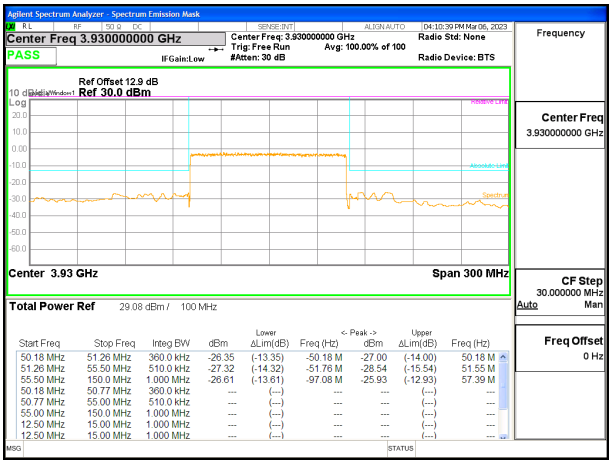


5G NR n77 100MHz BPSK High Channel RB1-0, ID:28568



5G NR n77 100MHz BPSK High Channel RB1-272, ID:28568



5G NR n77 100MHz BPSK High Channel RB270-0, ID:28568

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.

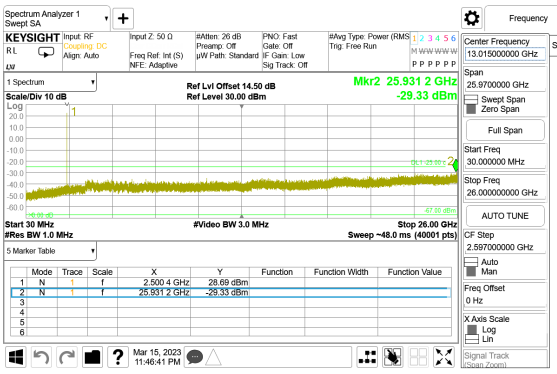
Both BPSK and 16QAM modes are tested, BPSK bandwidths results are reported as worst case for 5G NRs.

9.3.1. LTE BAND 7 AND 5G NR n7

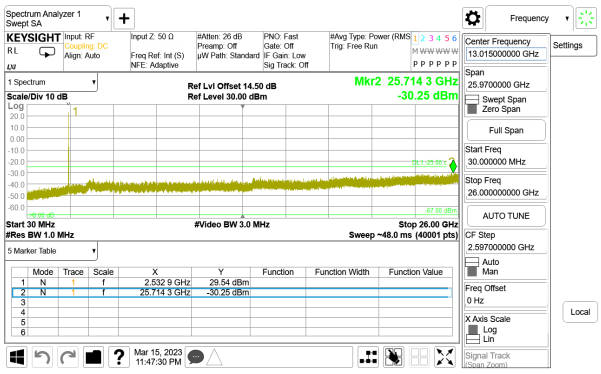
LIMITS

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.

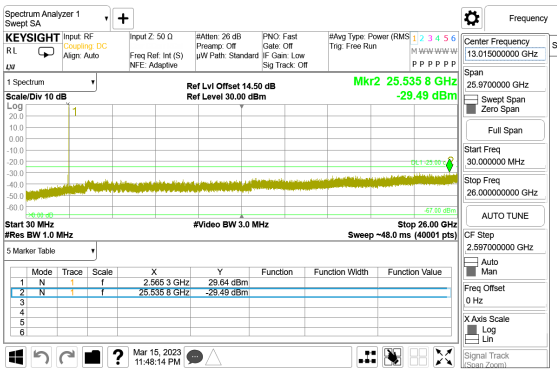
LTE BAND 7



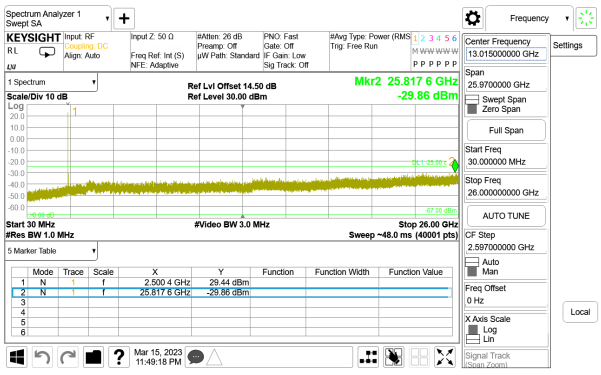
LTE B7 5MHz QPSK Low Channel RB1-0, ID:19210



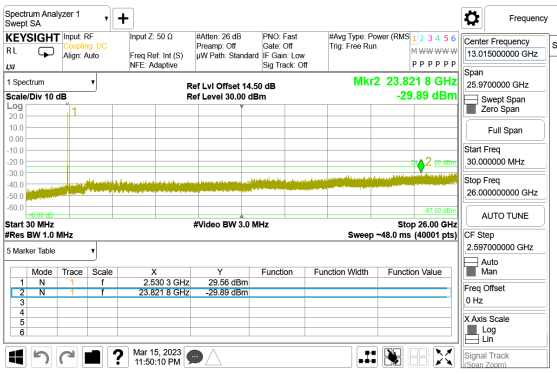
LTE B7 5MHz QPSK Middle Channel RB1-0, ID:19210



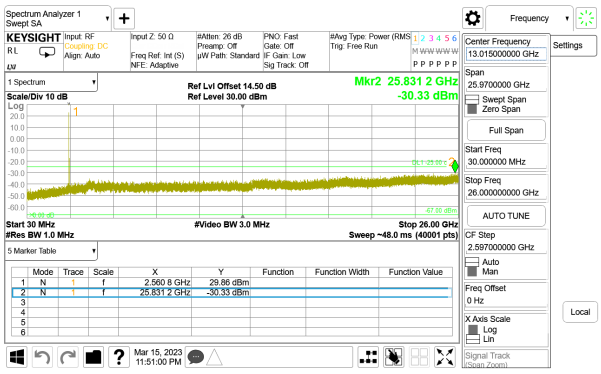
LTE B7 5MHz QPSK High Channel RB1-0, ID:19210



LTE B7 10MHz QPSK Low Channel RB1-0, ID:19210



LTE B7 10MHz QPSK Middle Channel RB1-0, ID:19210



LTE B7 10MHz QPSK High Channel RB1-0, ID:19210