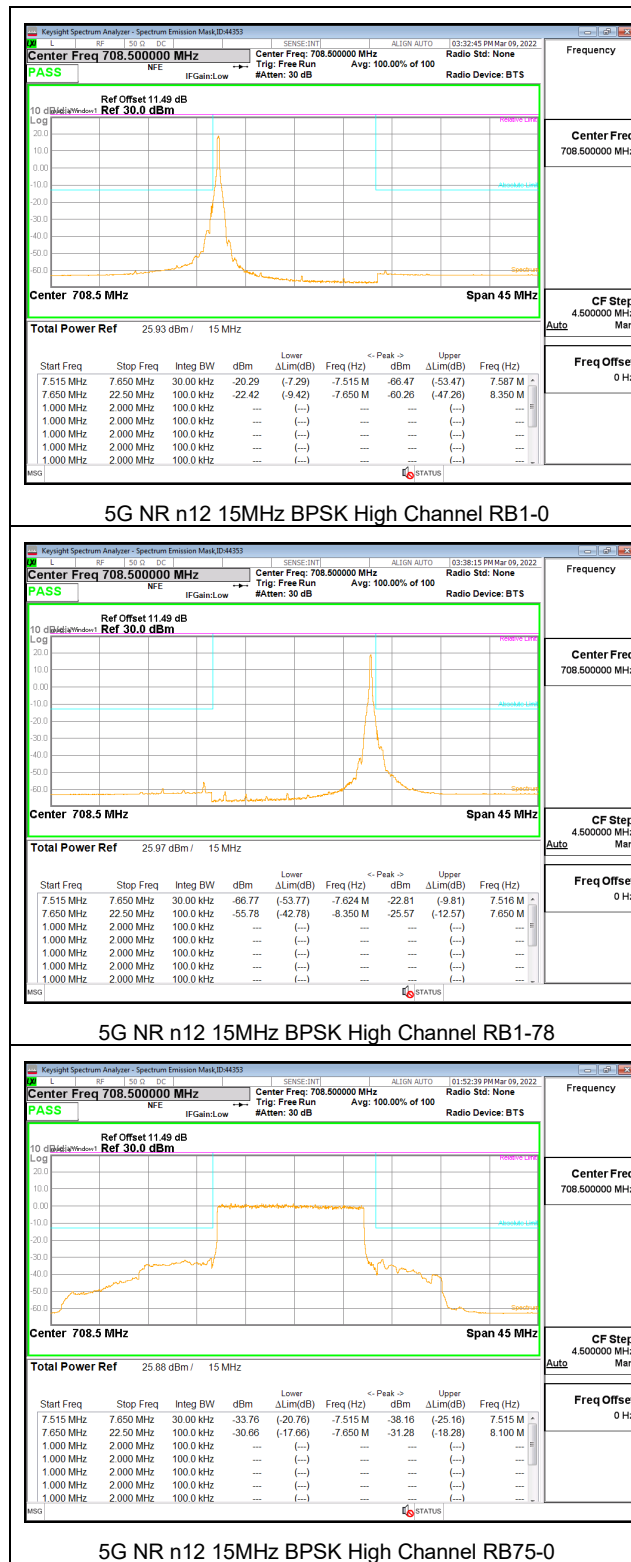










9.2.4. LTE BAND 13 EMISSION MASK

LIMITS

FCC: §27.53

(c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

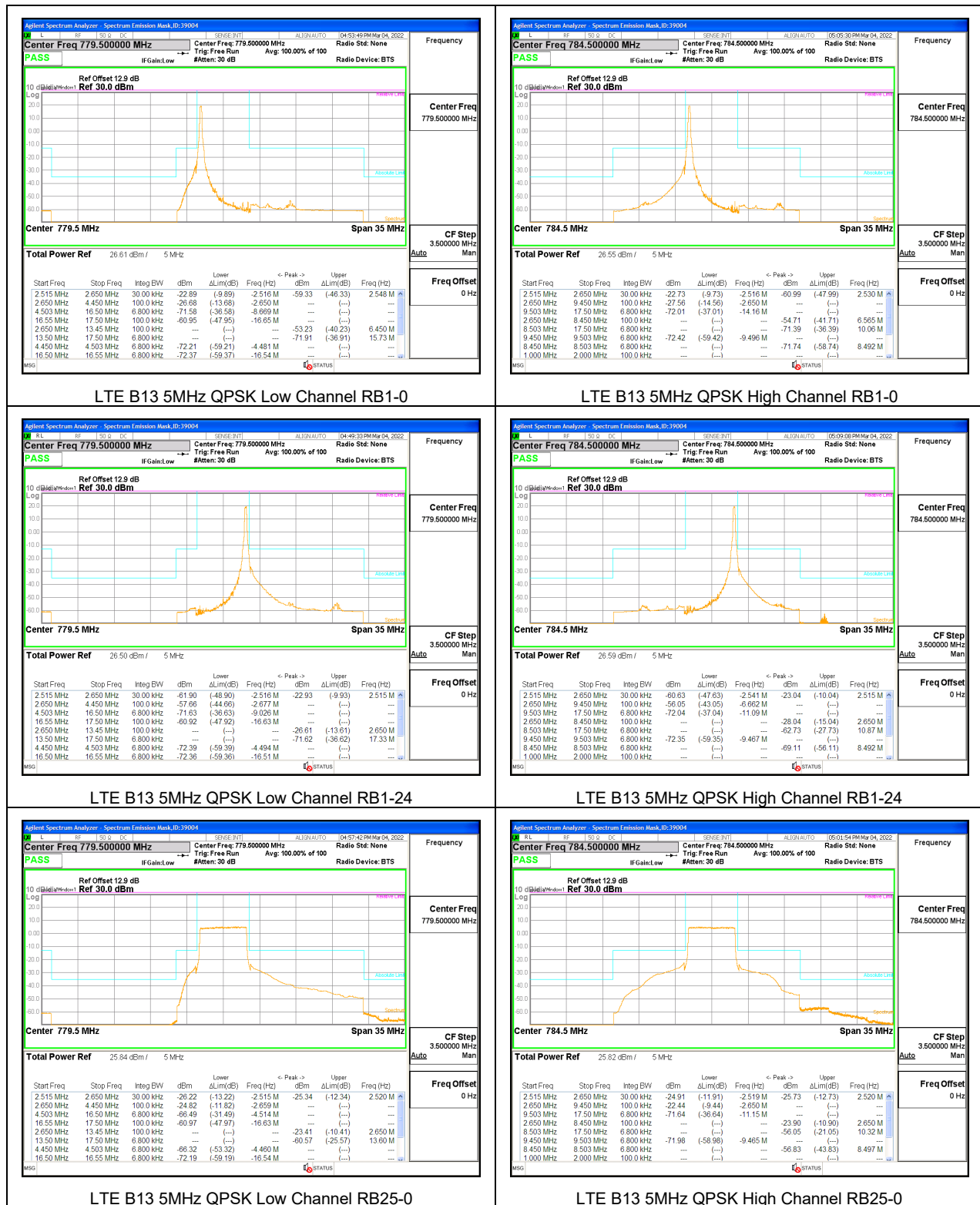
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;

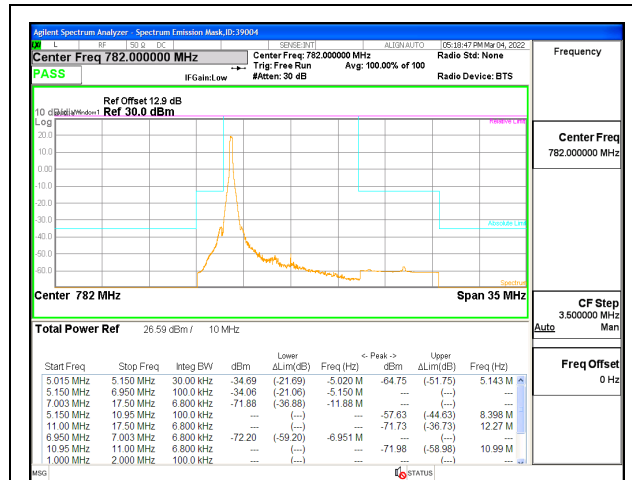
(5) Compliance with the provisions of paragraphs (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

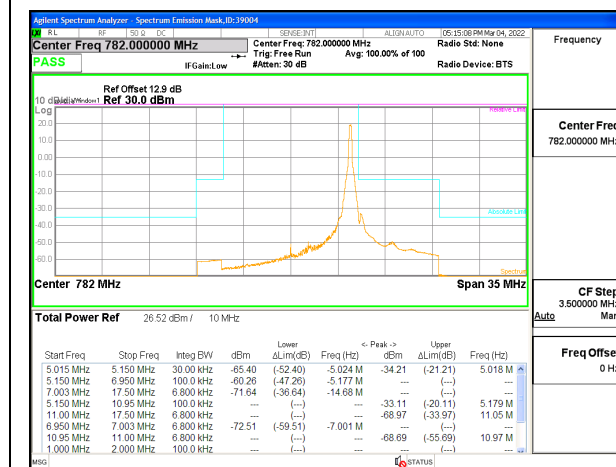
(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40 dBm/MHz).

The RSS-140 the limit of -35 dBm / 6.25 kHz is extended out to 806 MHz. The FCC Part 90 limit from 805 MHz to 806 MHz is -13 dBm measured in 100 kHz. The 6.25 kHz measurement is a more stringent limit (equivalent to -25 dBm / 100 kHz) and therefore demonstrates compliance with both limits.

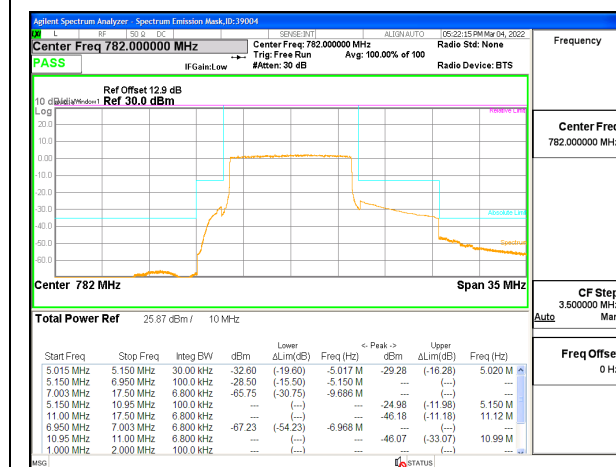




LTE B13 10MHz QPSK Middle Channel RB1-0



LTE B13 10MHz QPSK Middle Channel RB1-49



LTE B13 10MHz QPSK Middle Channel RB50-0

9.2.5. LTE BAND 14 EMISSION MASK

LIMITS

FCC: §90.543 Emission Limitations.

(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(2) On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations.

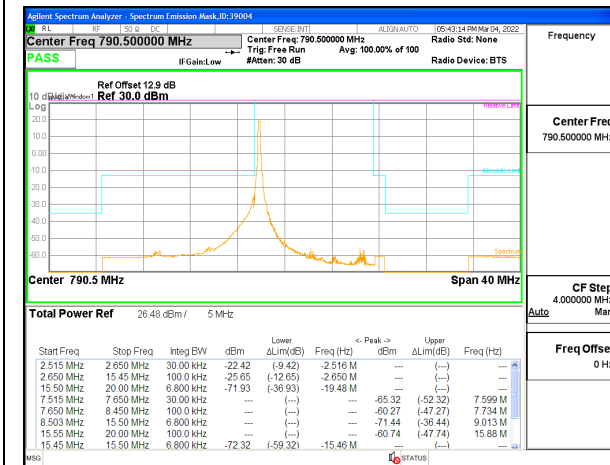
(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

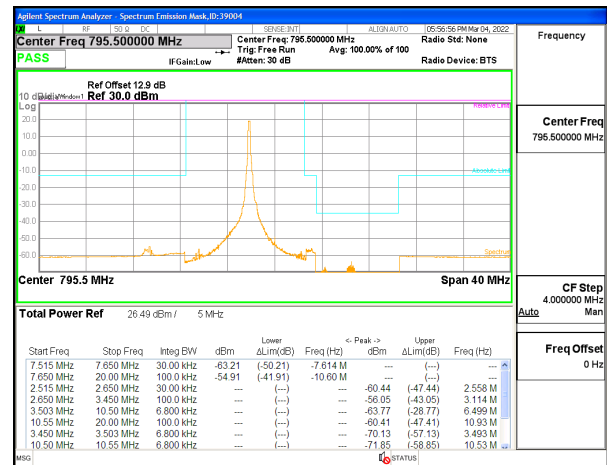
(5) Compliance with the provisions of paragraph (e)(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 kHz may be employed.

(f) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in 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. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

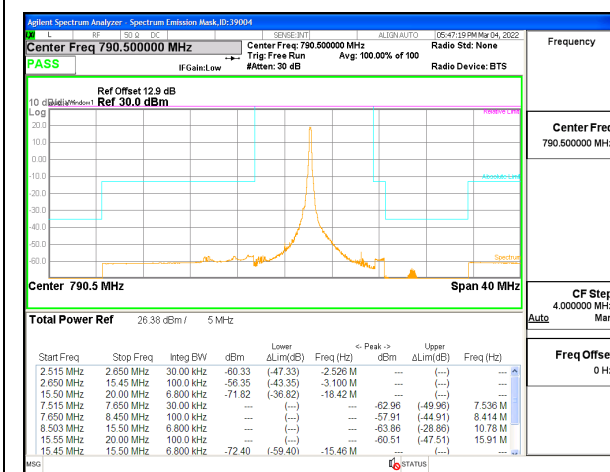
LTE BAND 14 EMISSION MASK



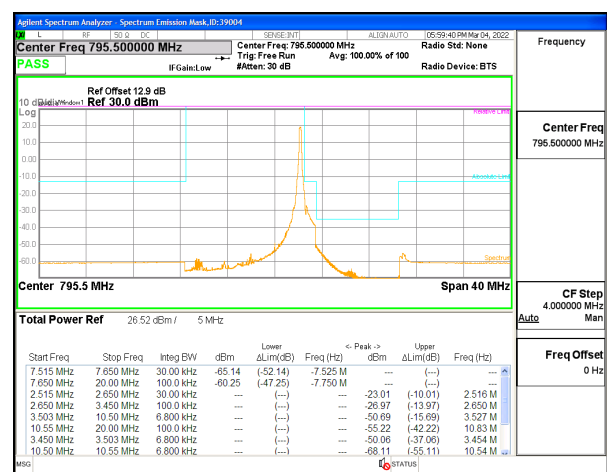
LTE B14 5MHz QPS Low Channel RB1-0



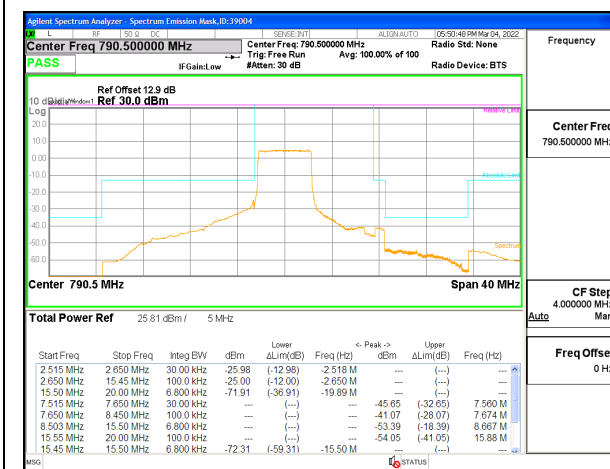
LTE B14 5MHz QPSK High Channel RB1-0



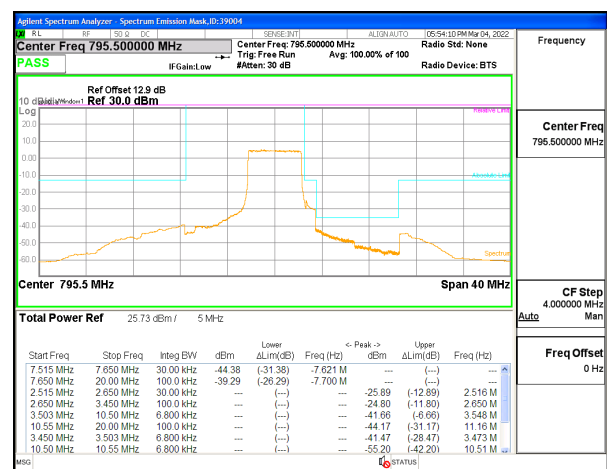
LTE B14 5MHz QPS Low Channel RB1-24



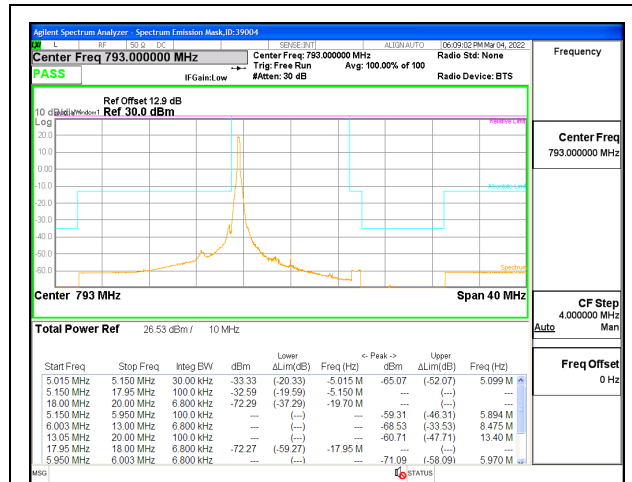
LTE B14 5MHz QPSK High Channel RB1-24



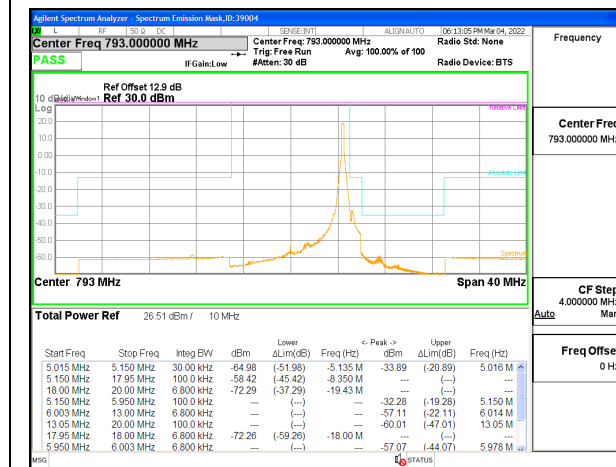
LTE B14 5MHz QPSK Low Channel RB25-0



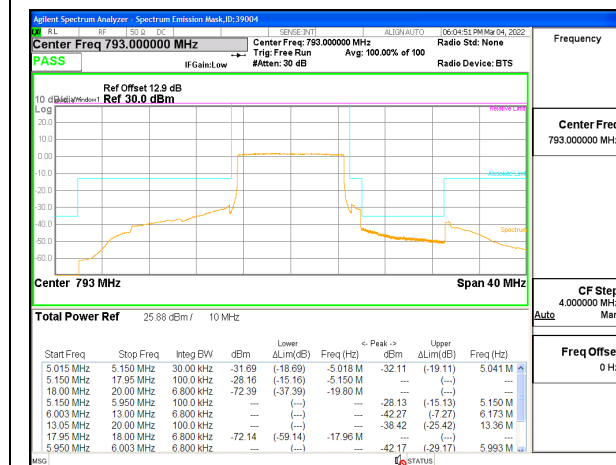
LTE B14 5MHz QPSK High Channel RB25-0



LTE B14 10MHz QPSK Middle Channel RB1-0



LTE B14 10MHz QPSK Middle Channel RB1-49



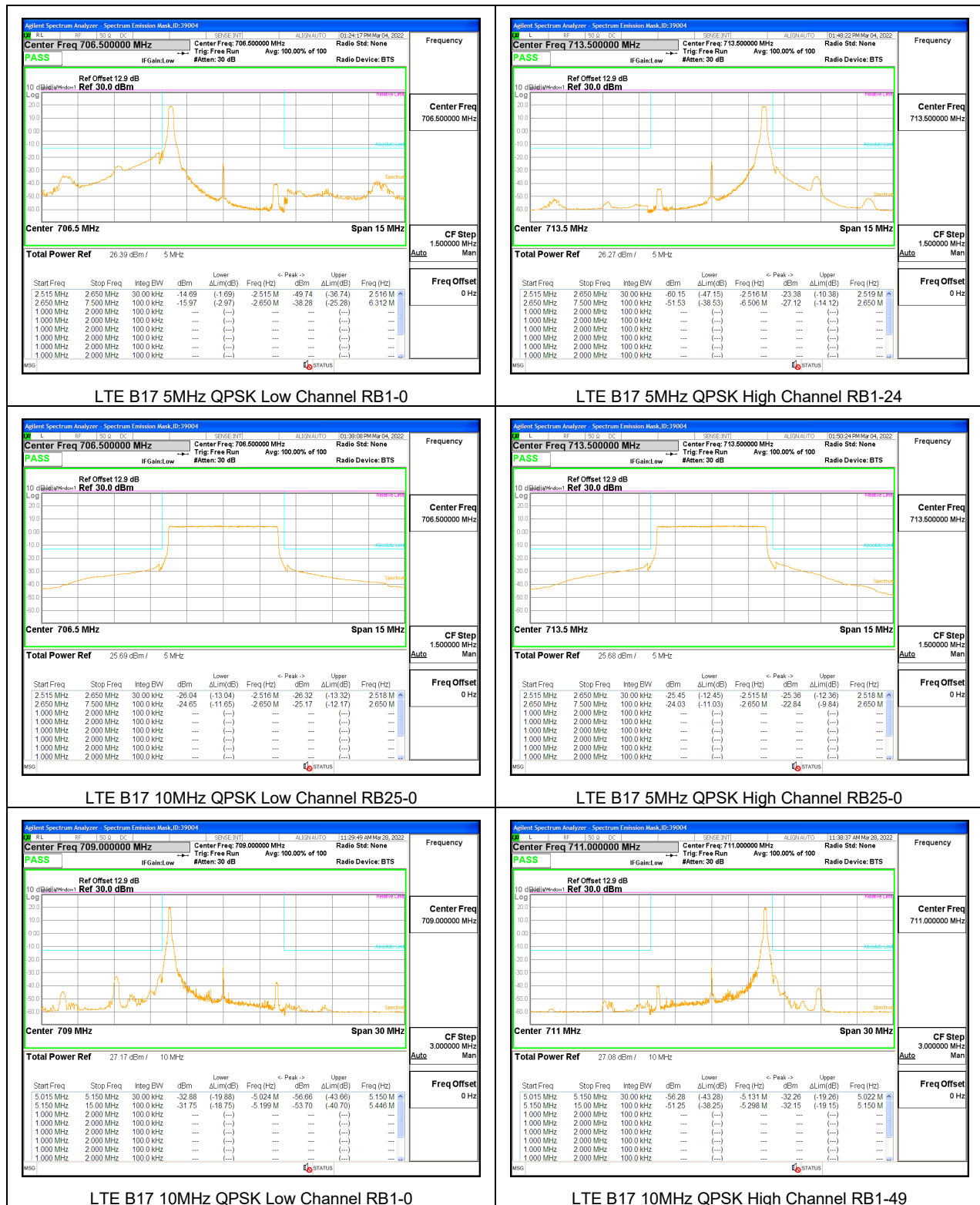
LTE B14 10MHz QPSK Middle Channel RB50-0

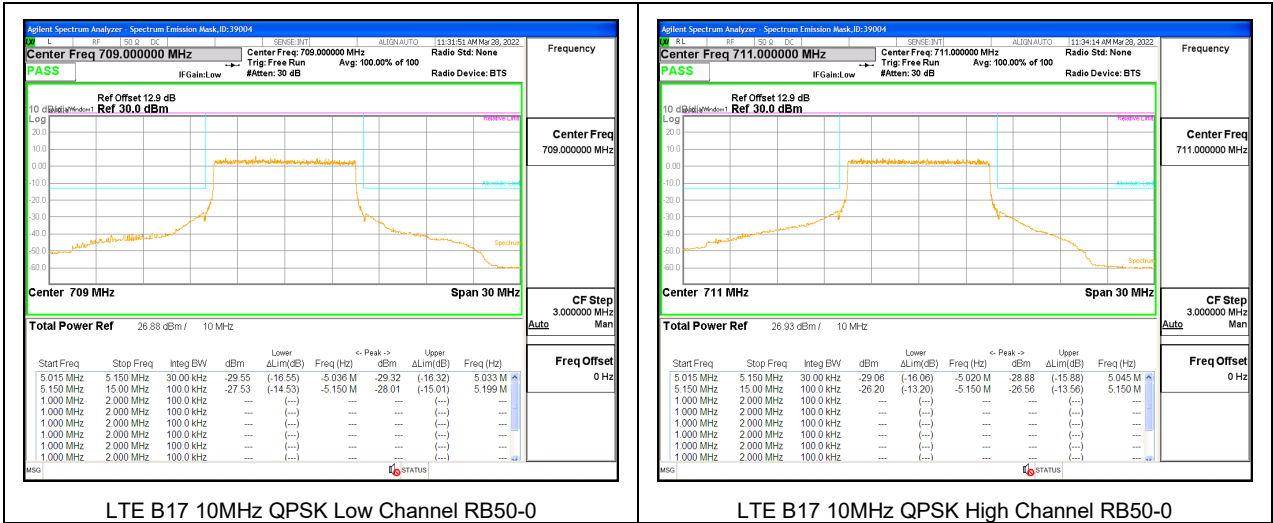
9.2.6. LTE BAND 17 EMISSION MASK

LIMITS

FCC: §27.53

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.





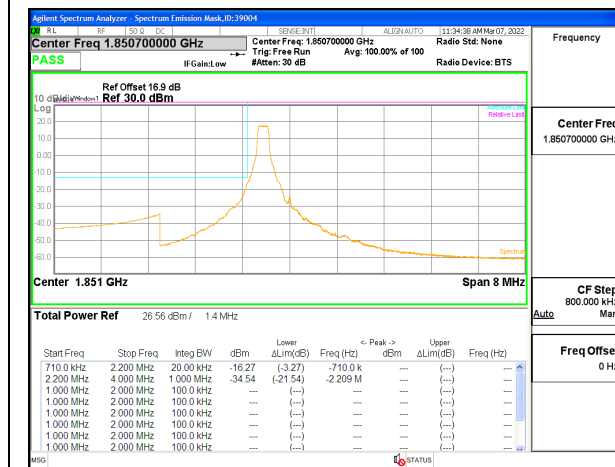
9.2.7. LTE BAND 25 AND 5G NR n25 EMISSION MASK

LIMITS

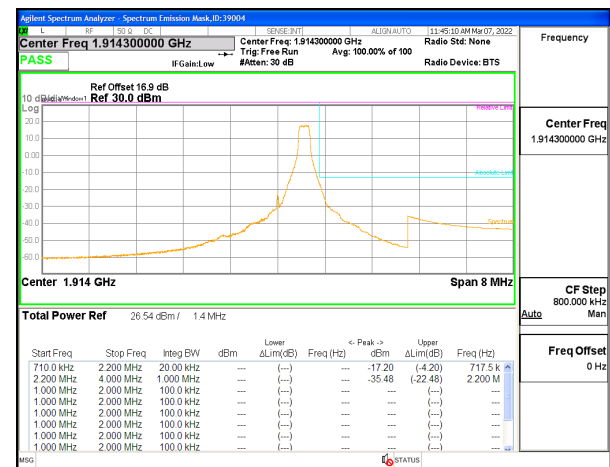
FCC: §24.238 (a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

LTE BAND 25 EMISSION MASK



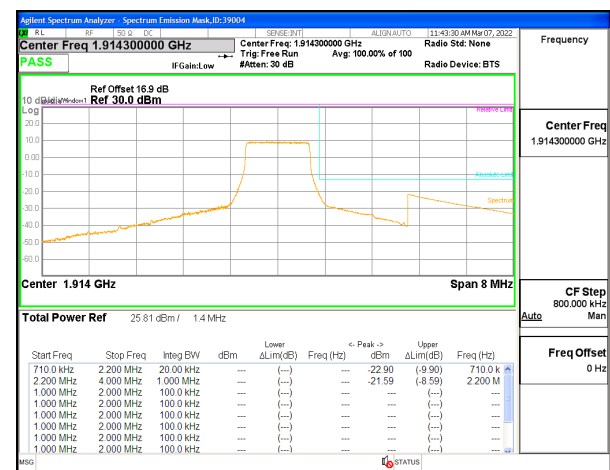
LTE B25 1.4MHz QPSK Low Channel RB1-0



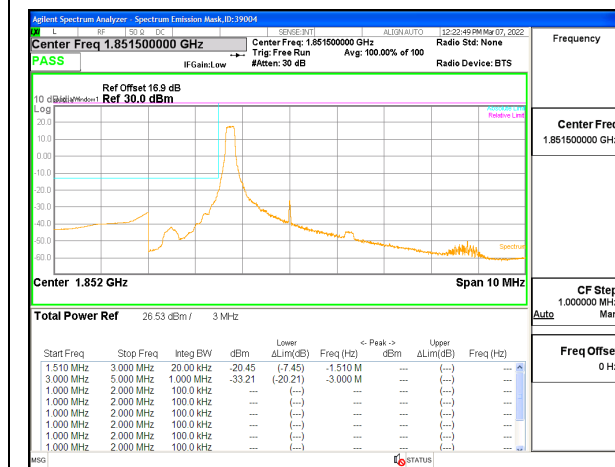
LTE B25 1.4MHz QPSK High Channel RB1-5



LTE B25 1.4MHz QPSK Low Channel RB6-0



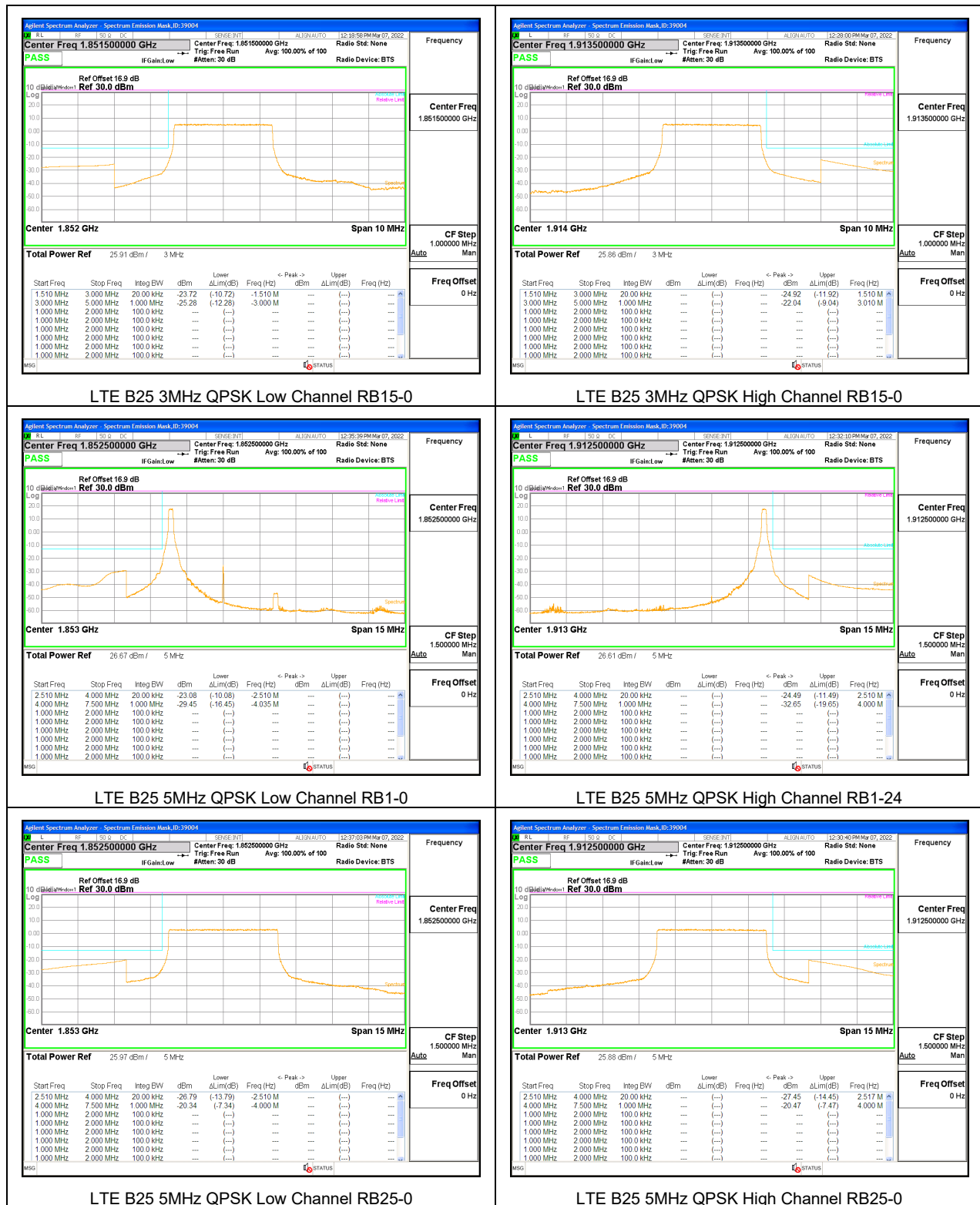
LTE B25 1.4MHz QPSK High Channel RB6-0

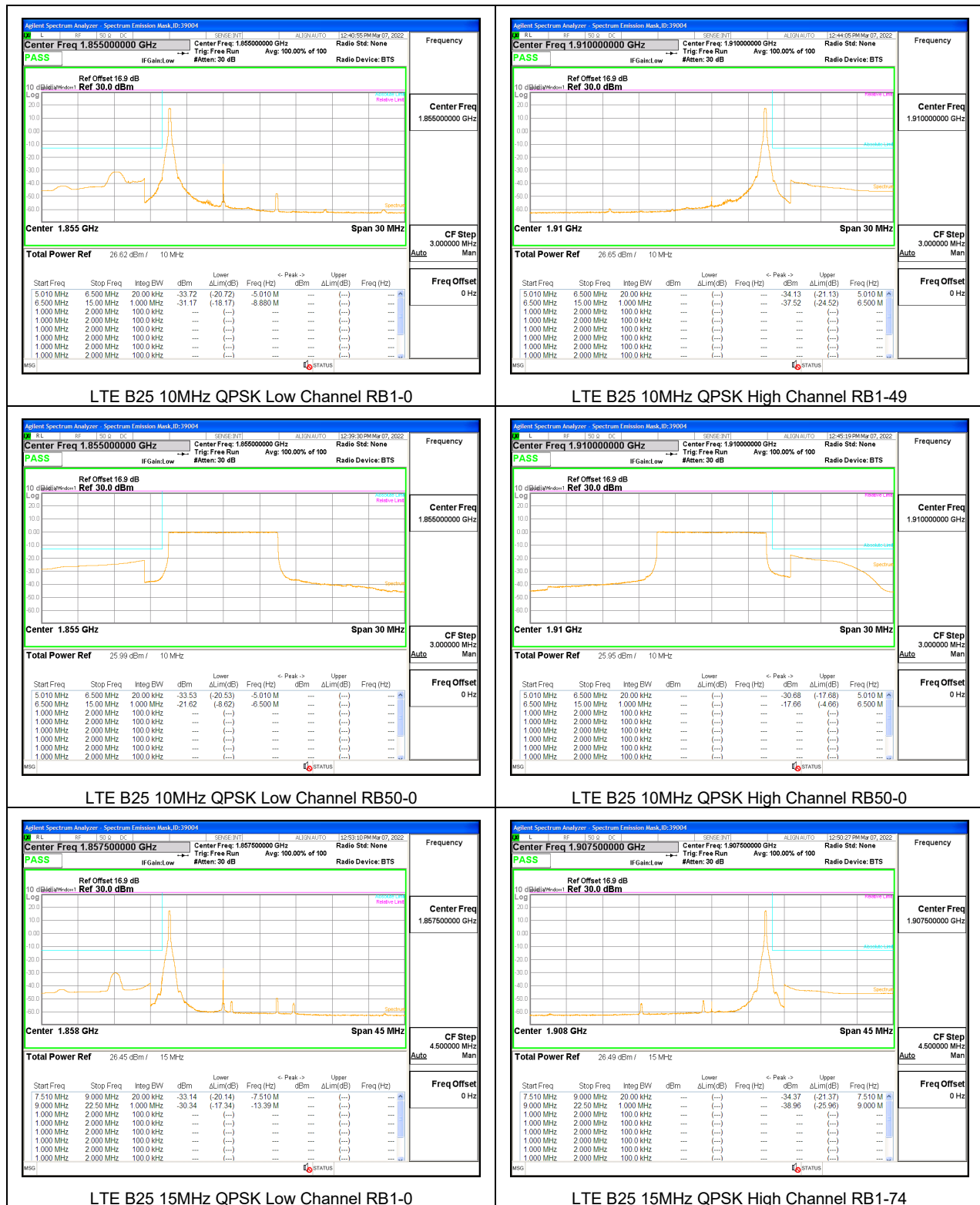


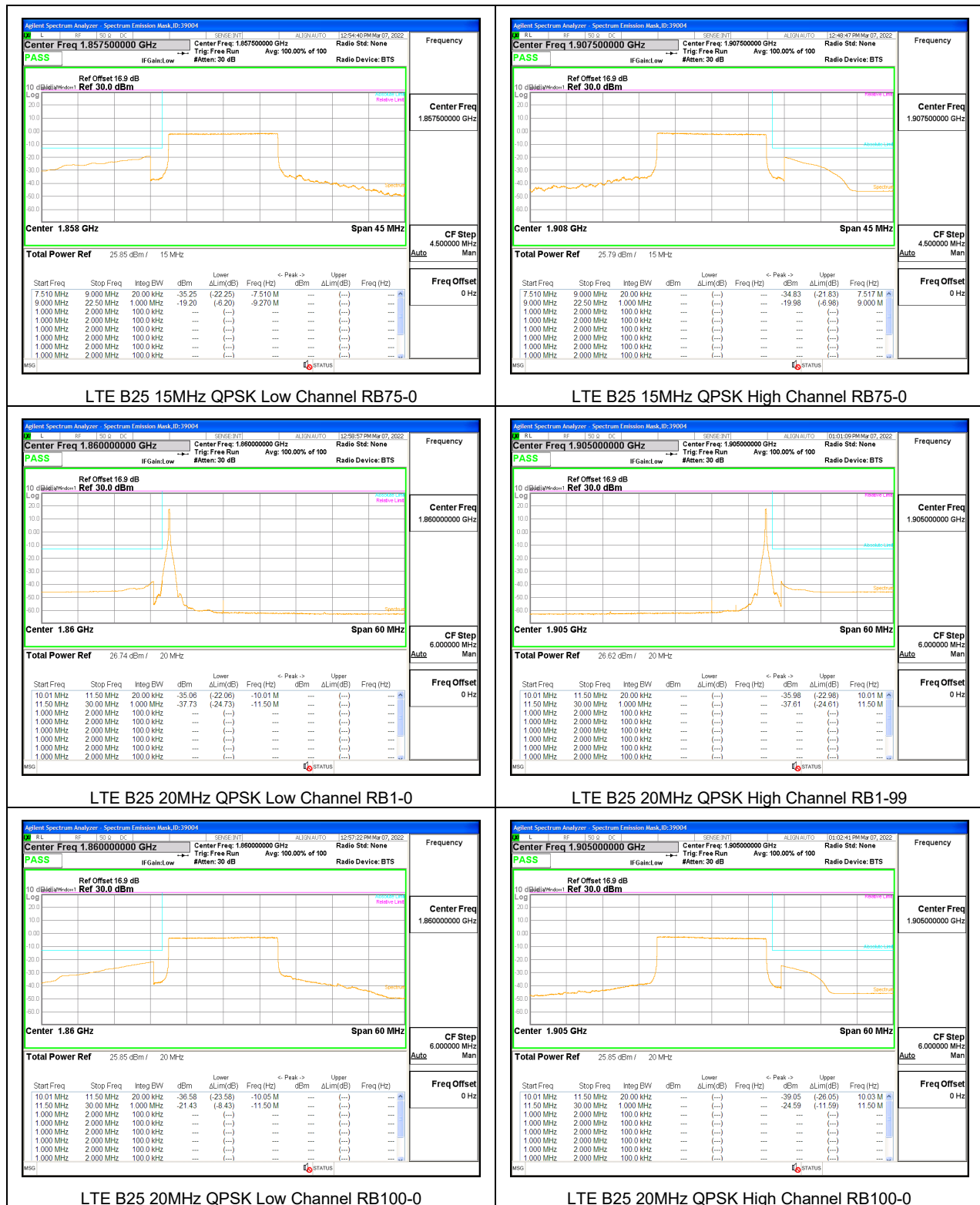
LTE B25 3MHz QPSK Low Channel RB1-0



LTE B25 3MHz QPSK High Channel RB1-14







5G NR n25 EMISSION MASK











9.2.8. LTE BAND 26 EMISSION MASK (PART 90S)

LIMITS

FCC: §90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

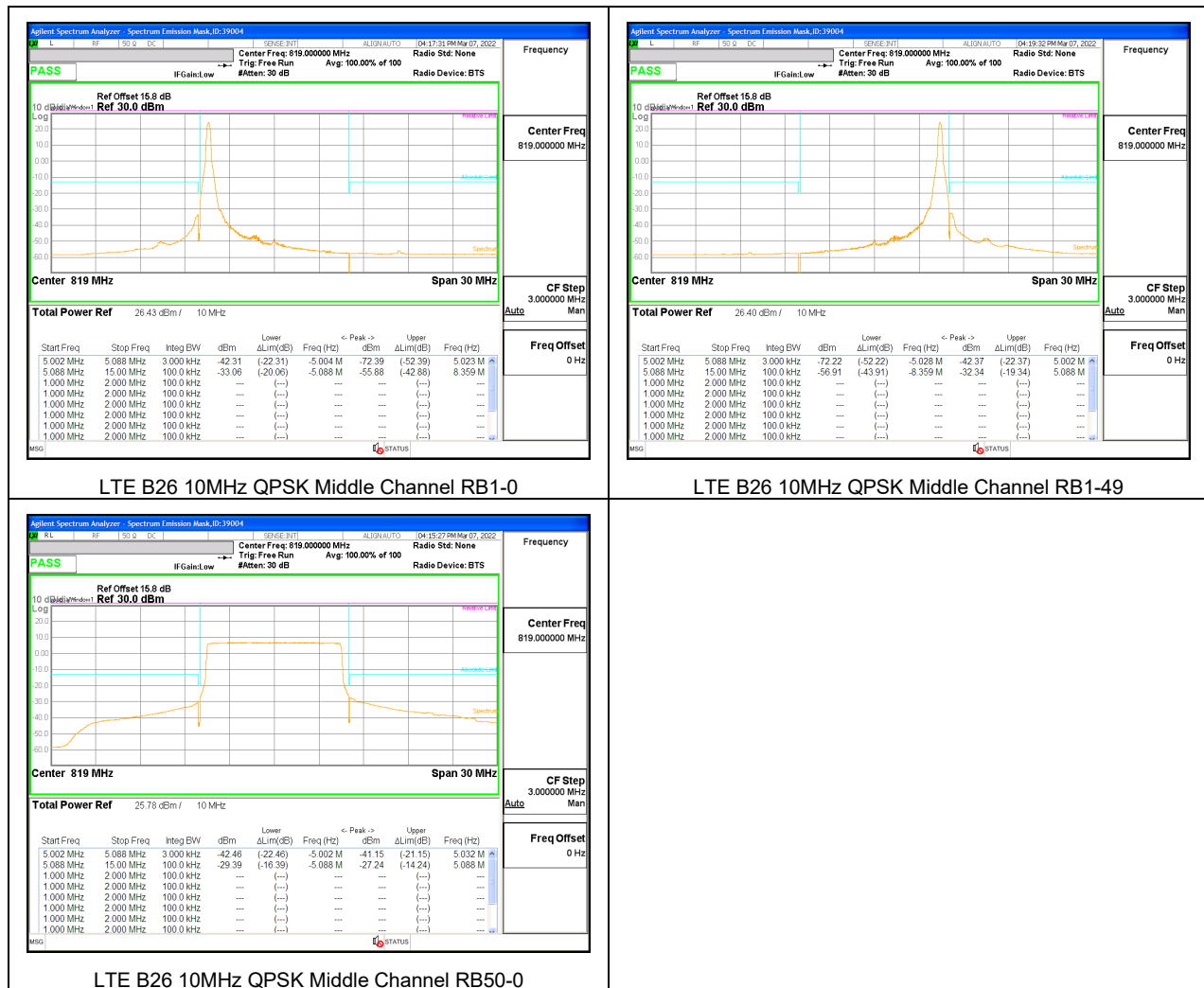
NOTE: According to 971168 D02 Misc Rev Approv License Devices v02r01, Section VIII (c):

For Section 90.691(a) compliance testing, use RBW = 300 Hz for offsets less than 37.5 kHz from a channel edge; RBW = 100 kHz for offsets greater than 37.5 kHz is allowed.

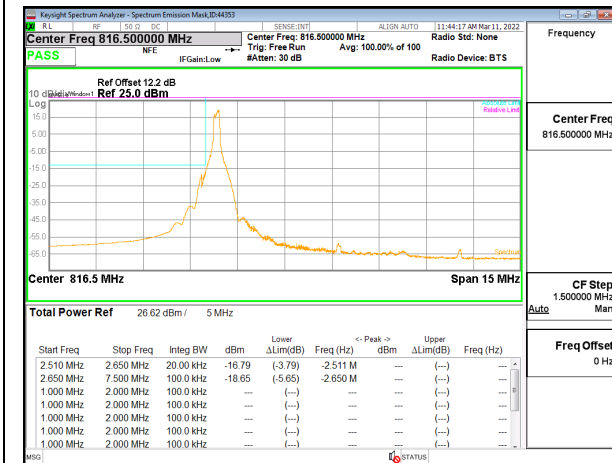
LTE BAND 26 (90S) EMISSION MASK



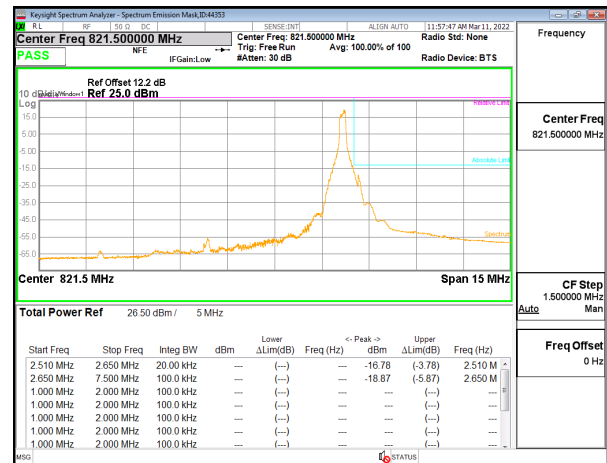




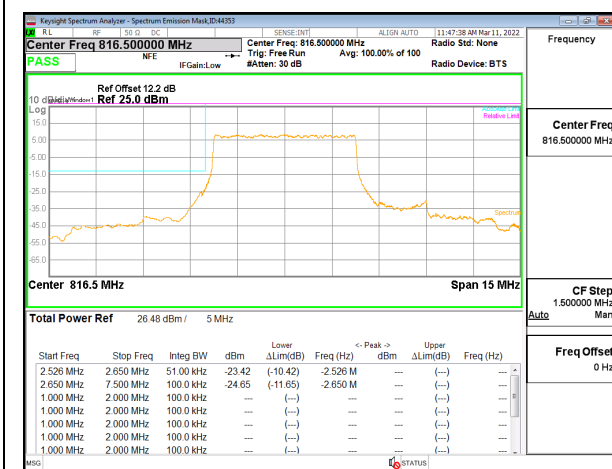
5G NR n26 (90S) EMISSION MASK



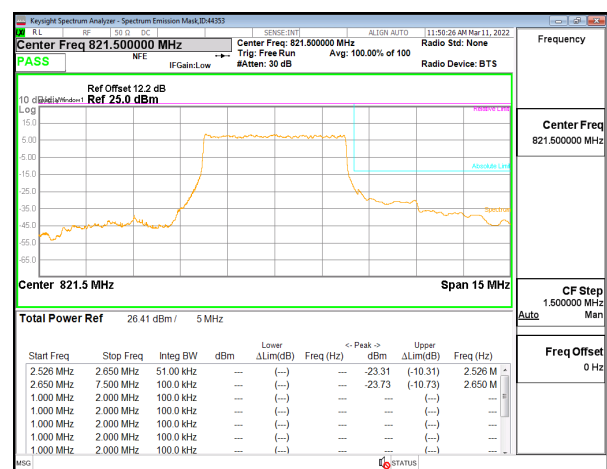
5G NR n26 90s 5MHz QPSK Low Channel RB1-0



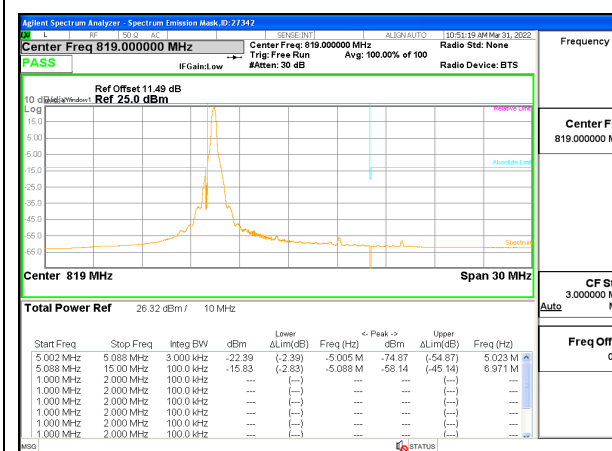
5G NR n26 90s 5MHz QPSK High Channel RB1-24



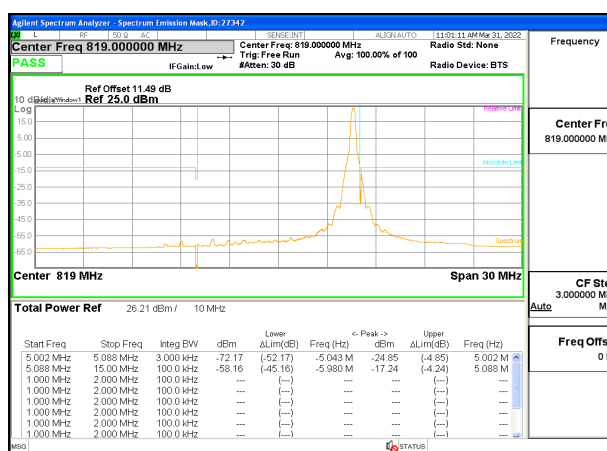
5G NR n26 90s 5MHz QPSK Low Channel RB25-0



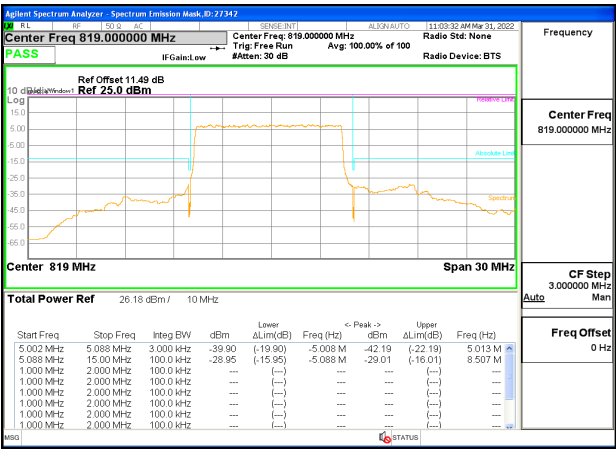
5G NR n26 90s 5MHz QPSK High Channel RB25-0



5G NR n26 90s 10MHz QPSK Middle Channel RB1-0



5G NR n26 90s 10MHz QPSK Middle Channel RB1-51



5G NR n26 90s 10MHz QPSK Middle Channel RB50-0

9.2.9. LTE BAND 30 AND 5G NR n30 EMISSION MASK

LIMITS

FCC: §27.53

(a) For operations in the 2305-2320 MHz band and the 2345-2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:

(4) For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:

(i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;

(ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;

(iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

ISED: RSS195§5.6

The transmitter unwanted emissions shall be measured with a resolution bandwidth of 1 MHz. A smaller resolution bandwidth is permitted provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz. However, in the 1 MHz bands immediately adjacent to the edges of the frequency range(s) in which the equipment is allowed to operate, a resolution bandwidth of as close as possible to, without being less than 1% of the occupied bandwidth, shall be employed provided that the measured power is integrated over the full required measurement bandwidth of 1 MHz.

RSS195§5.6.2 Mobile, Portable and Low-Power Fixed Subscriber Equipment

The power of any emission outside the frequency range(s) in which the equipment operates shall be attenuated below the transmitter power, P(dBW), by the amount indicated in Table 2 and graphically represented in Figure 2, where p is the transmitter output power measured in watts.