







5G NR n41 60MHz BPSK Low Channel RB1-0



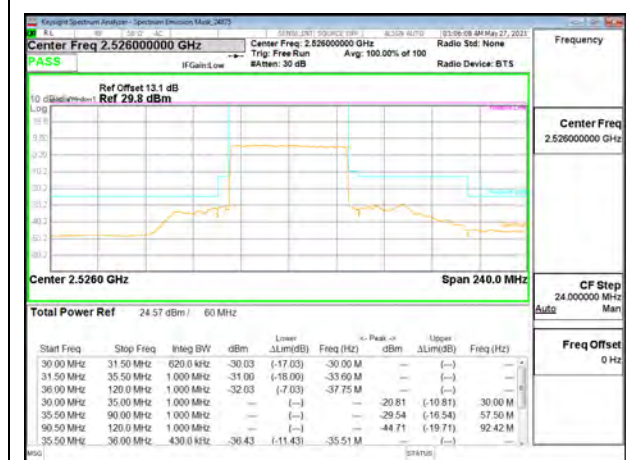
5G NR n41 60MHz BPSK Middle Channel RB1-0



5G NR n41 60MHz BPSK Low Channel RB1-161



5G NR n41 60MHz BPSK Middle Channel RB1-161

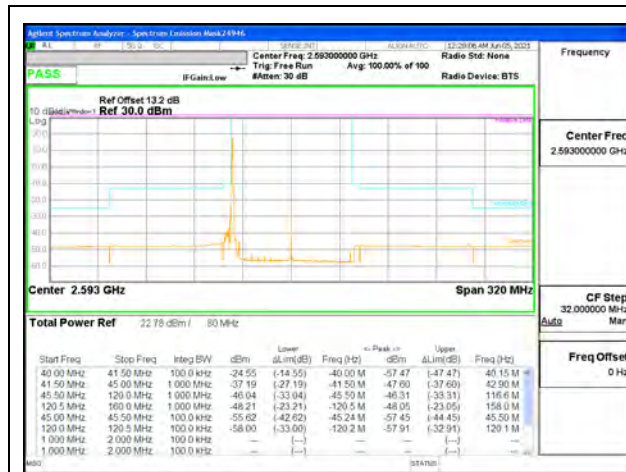


5G NR n41 60MHz BPSK Low Channel RB162-0



5G NR n41 60MHz BPSK Middle Channel RB162-0





5G NR n41 80MHz BPSK Middle Channel RB1-0



5G NR n41 80MHz BPSK High Channel RB1-0



5G NR n41 80MHz BPSK Middle Channel RB1-216



5G NR n41 80MHz BPSK High Channel RB1-216



5G NR n41 80MHz BPSK Middle Channel RB216-0



5G NR n41 80MHz BPSK High Channel RB216-0







9.2.12. LTE BAND 48 EMISSION MASK AND ADJACENT CHANNEL POWER

LIMITS

FCC: §96.41

(e) 3.5 GHz Emissions and Interference Limits—

(1) General protection levels

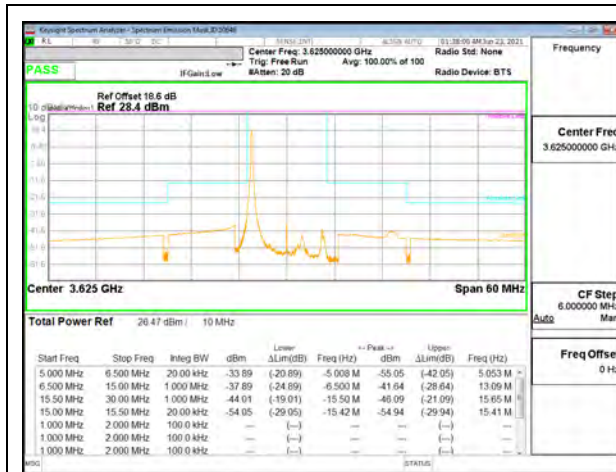
(ii) Except as otherwise specified in paragraph (e)(2) of this section, for channel and frequency assignments made by a CBSD to End User Devices, the conducted power of any End User Device emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0 to B megahertz (where B is the bandwidth in megahertz of the assigned channel or multiple contiguous channels of the End User Device) above the upper CBSD-assigned channel edge and within 0 to B megahertz below the lower CBSD-assigned channel edge. At all frequencies greater than B megahertz above the upper CBSD assigned channel edge and less than B megahertz below the lower CBSD-assigned channel edge, the conducted power of any End User Device emission shall not exceed -25 dBm/MHz. Notwithstanding the emission limits in this paragraph, the Adjacent Channel Leakage Ratio for End User Devices shall be at least 30 dB.

(2) Additional protection levels. Notwithstanding paragraph (e)(1) of this section, for CBSDs and End User Devices, the conducted power of emissions below 3540 MHz or above 3710 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/MHz.

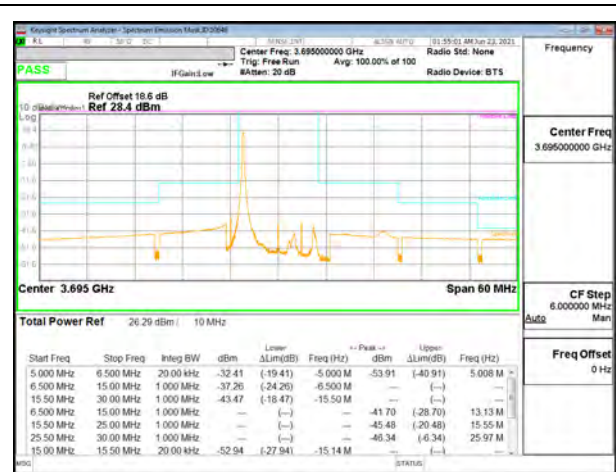
LTE BAND 48 EMISSION MASK







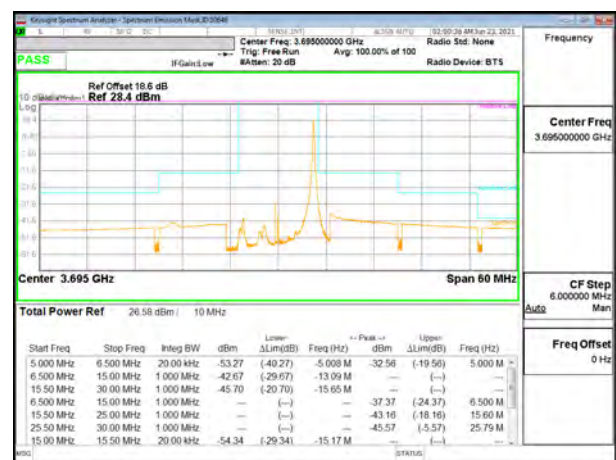
LTE B48 10MHz QPSK Middle Channel RB1-0



LTE B48 10MHz QPSK High Channel RB1-0



LTE B48 10MHz QPSK Middle Channel RB1-49



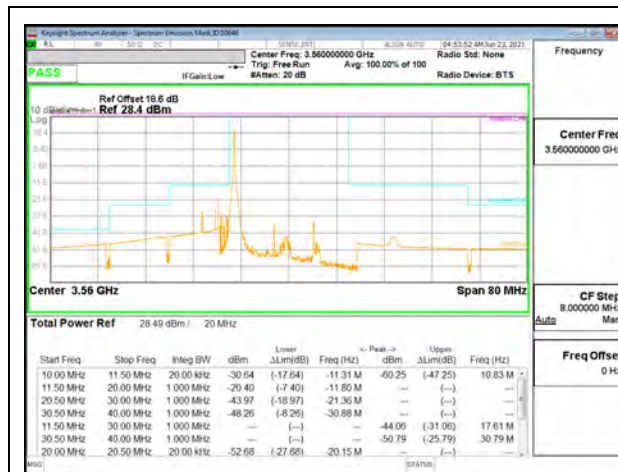
LTE B48 10MHz QPSK High Channel RB1-49



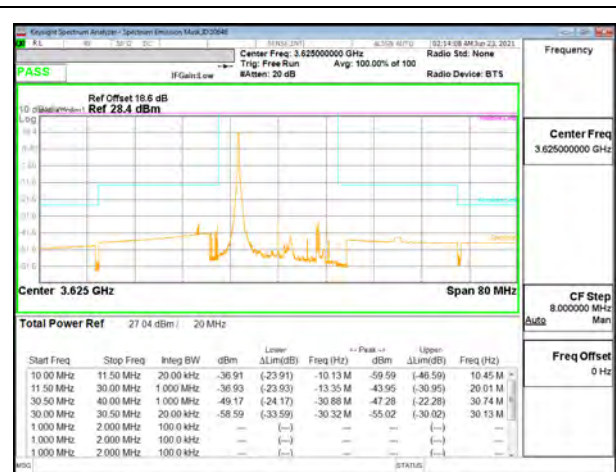
LTE B48 10MHz QPSK Middle Channel RB50-0



LTE B48 10MHz QPSK High Channel RB50-0



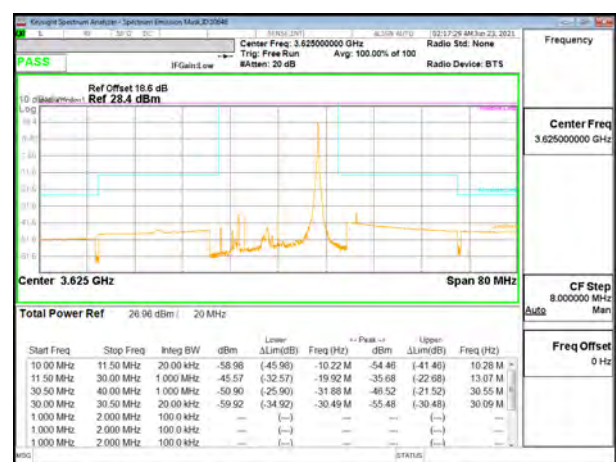
LTE B48 15MHz QPSK Low Channel RB1-0



LTE B48 15MHz QPSK Middle Channel RB1-0



LTE B48 15MHz QPSK Low Channel RB1-74



LTE B48 15MHz QPSK Middle Channel RB1-74

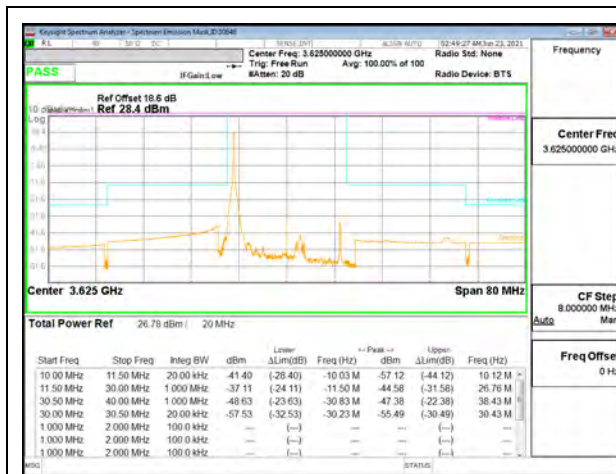


LTE B48 15MHz QPSK Low Channel RB75-0

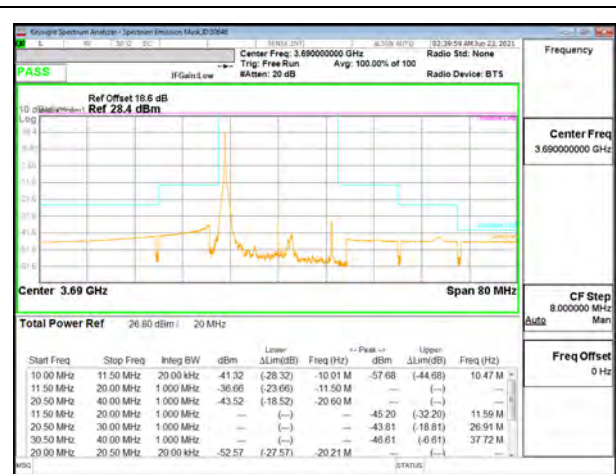


LTE B48 15MHz QPSK Middle Channel RB75-0





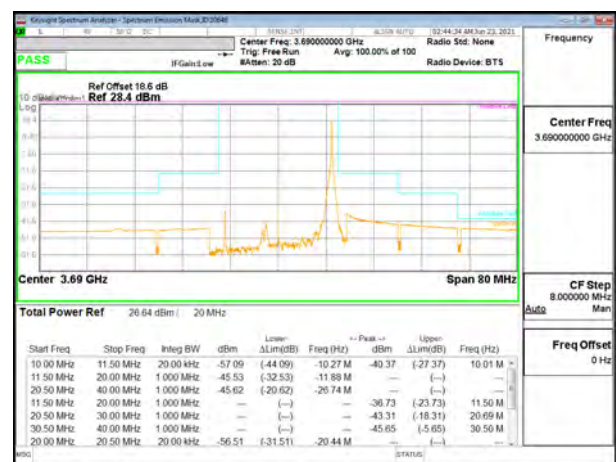
LTE B48 20MHz QPSK Middle Channel RB1-0



LTE B48 20MHz QPSK High Channel RB1-0



LTE B48 20MHz QPSK Middle Channel RB1-99



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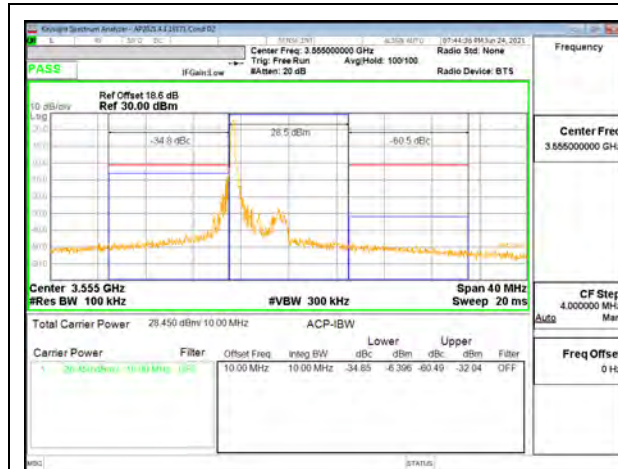


LTE B48 20MHz QPSK Middle Channel RB100-0

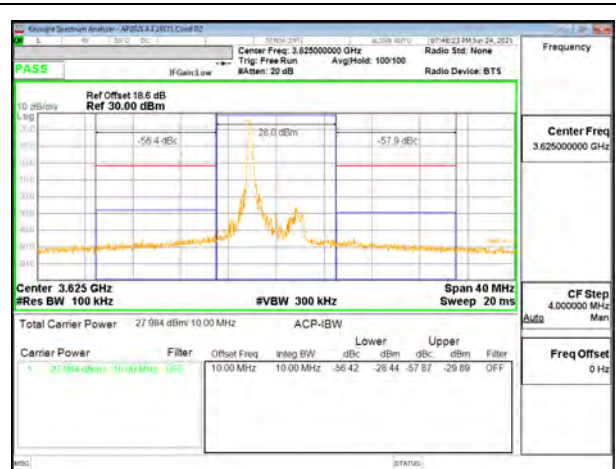


LTE B48 20MHz QPSK High Channel RB100-0

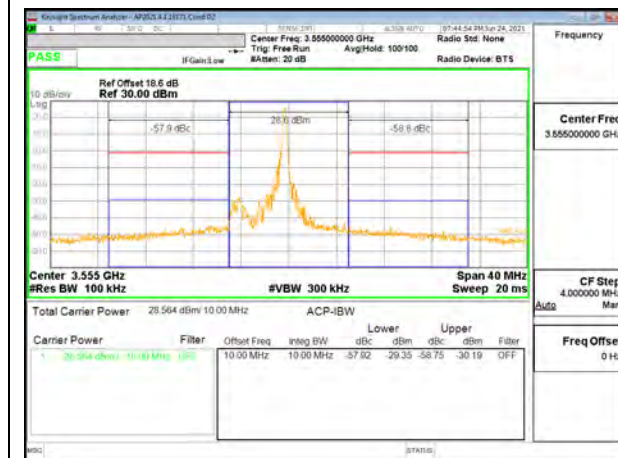
LTE BAND 48 ADJACENT CHANNEL POWER



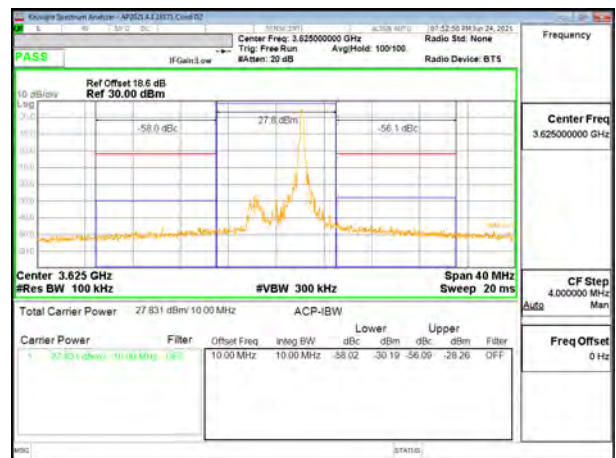
LTE B48 5MHz QPSK Low Channel RB1-0



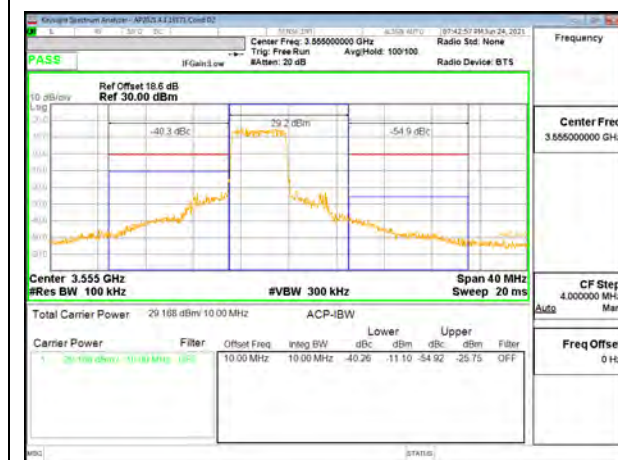
LTE B48 5MHz QPSK Middle Channel RB1-0



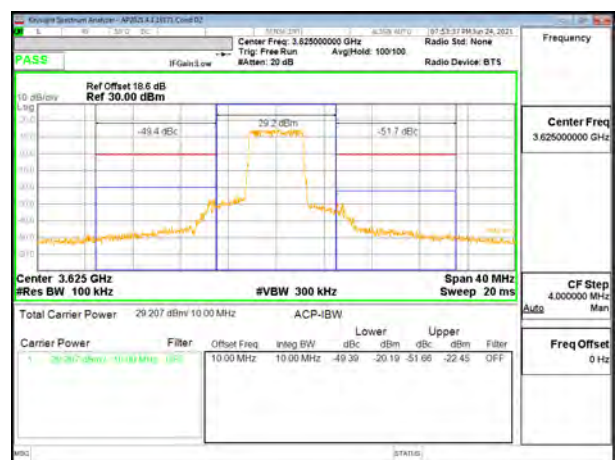
LTE B48 5MHz QPSK Low Channel RB1-24



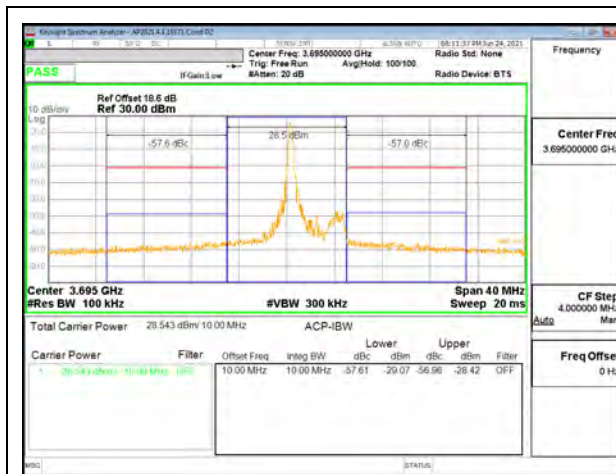
LTE B48 5MHz QPSK Middle Channel RB1-24



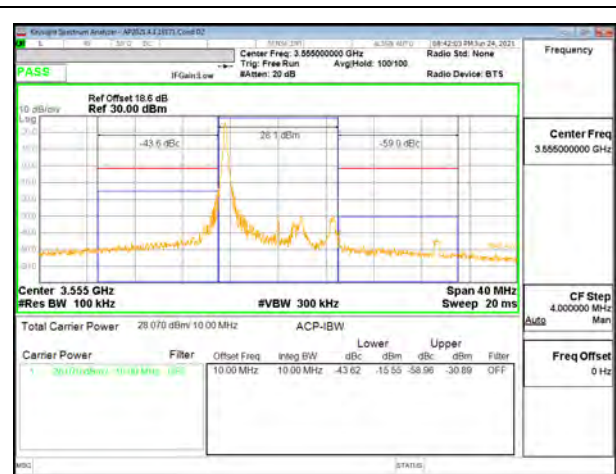
LTE B48 5MHz QPSK Low Channel RB25-0



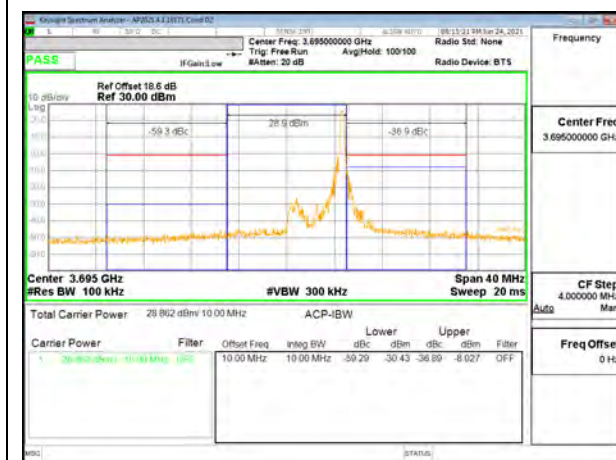
LTE B48 5MHz QPSK Middle Channel RB25-0



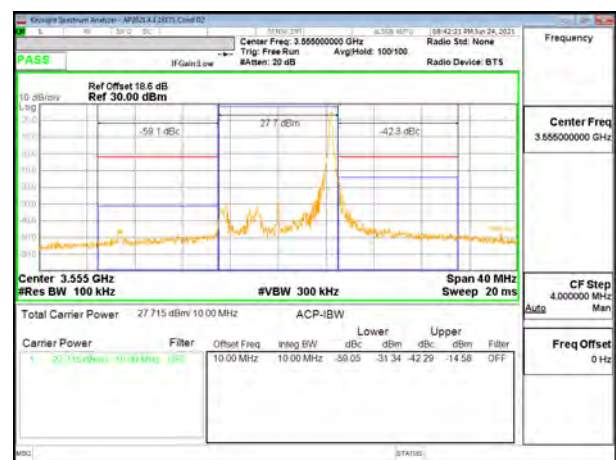
LTE B48 5MHz QPSK High Channel RB1-0



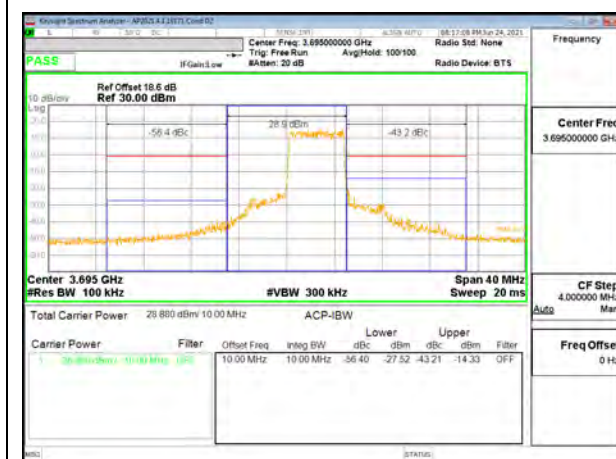
LTE B48 10MHz QPSK Low Channel RB1-0



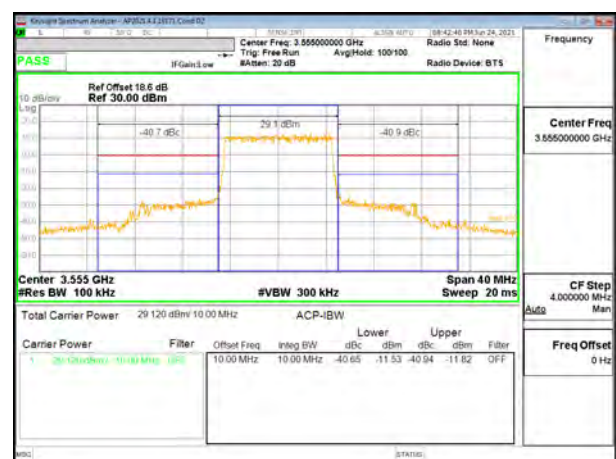
LTE B48 5MHz QPSK High Channel RB1-24



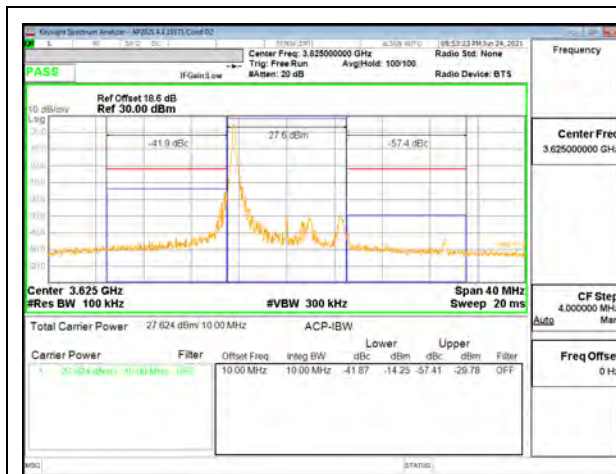
LTE B48 10MHz QPSK Low Channel RB1-49



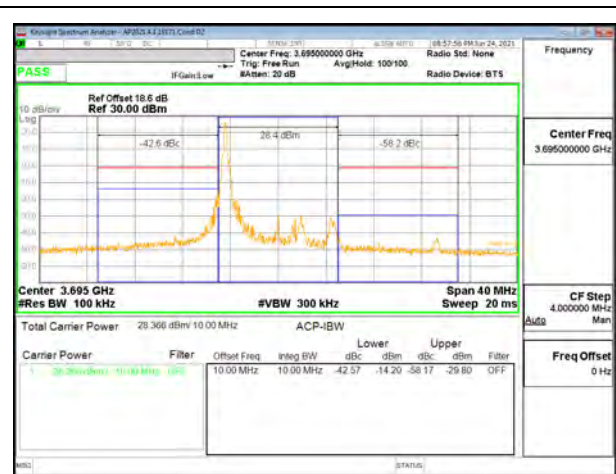
LTE B48 5MHz QPSK High Channel RB25-0



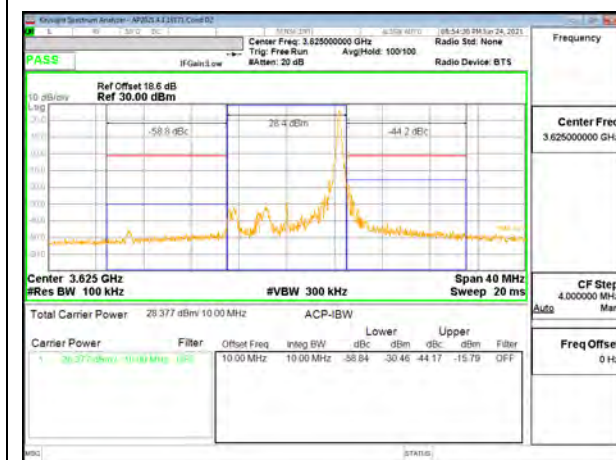
LTE B48 10MHz QPSK Low Channel RB50-0



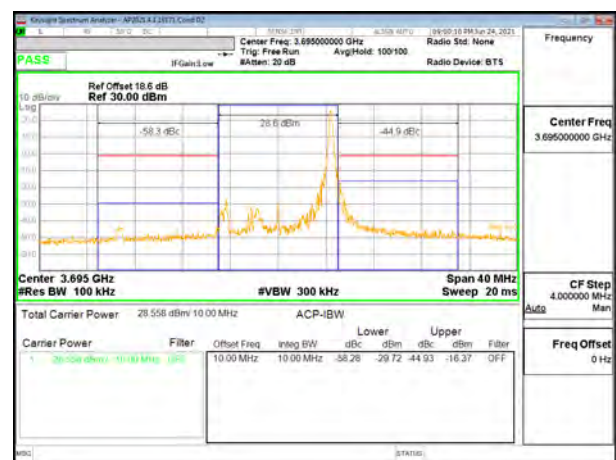
LTE B48 10MHz QPSK Middle Channel RB1-0



LTE B48 10MHz QPSK High Channel RB1-0



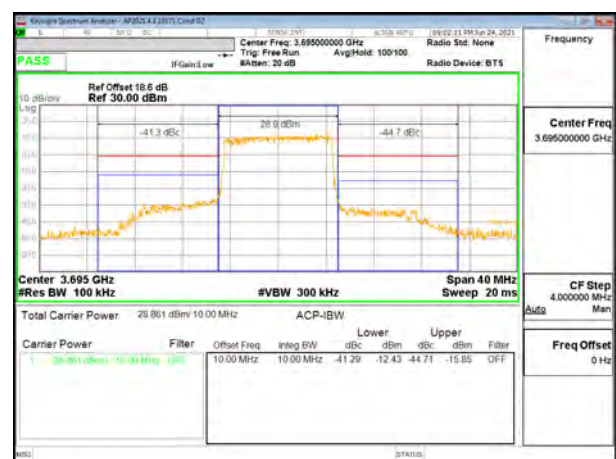
LTE B48 10MHz QPSK Middle Channel RB1-49



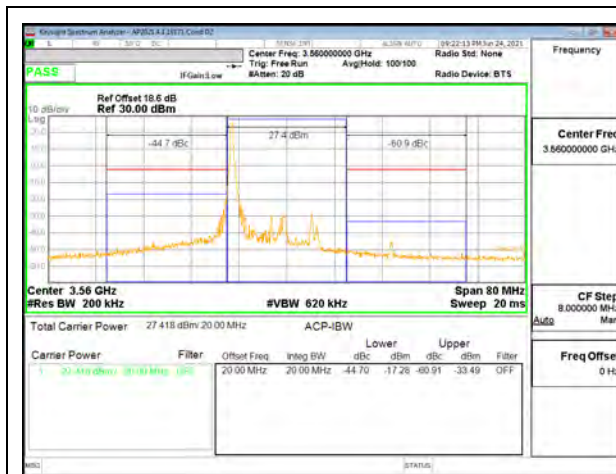
LTE B48 10MHz QPSK High Channel RB1-49



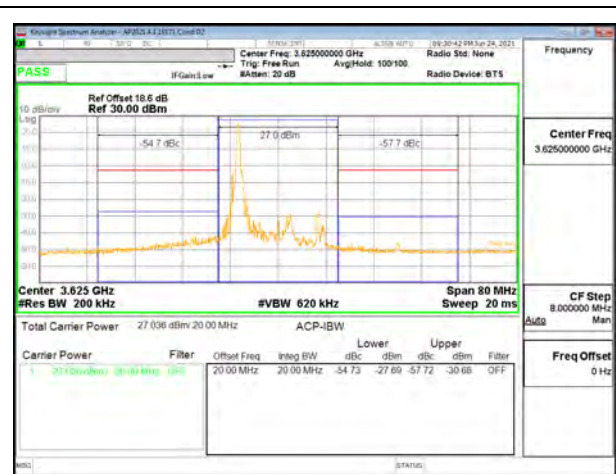
LTE B48 10MHz QPSK Middle Channel RB50-0



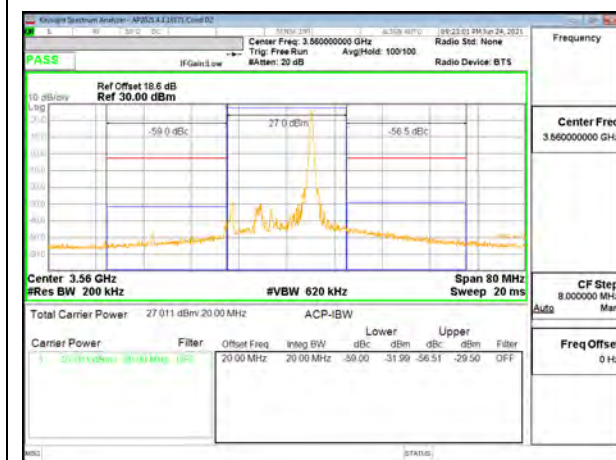
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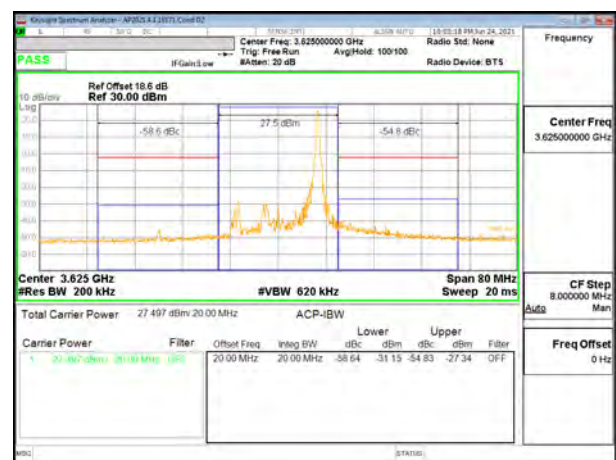
LTE B48 15MHz QPSK Low Channel RB1-0



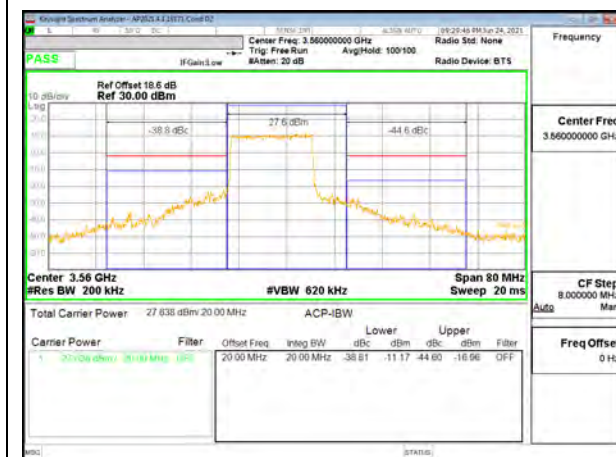
LTE B48 15MHz QPSK Middle Channel RB1-0



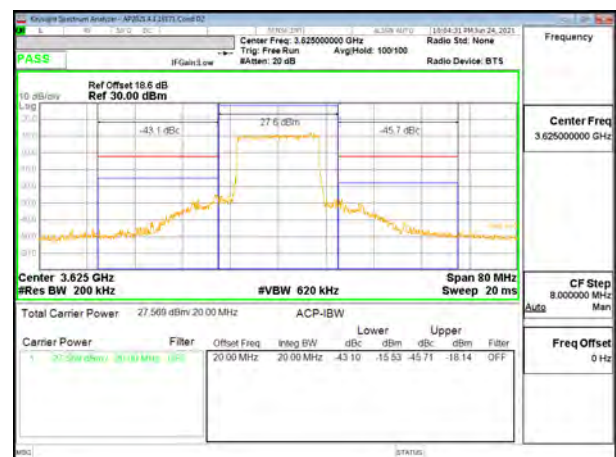
LTE B48 15MHz QPSK Low Channel RB1-74



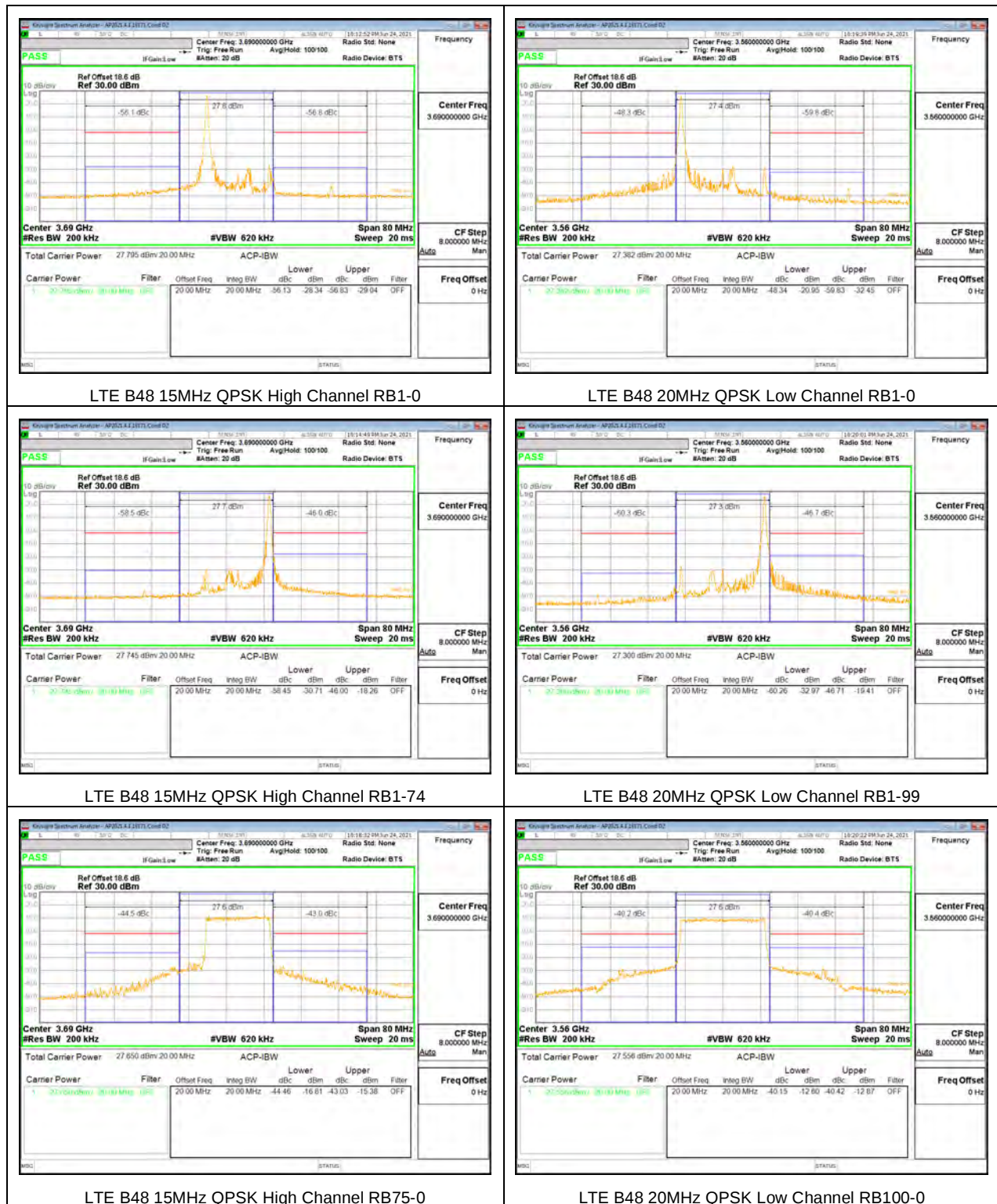
LTE B48 15MHz QPSK Middle Channel RB1-74

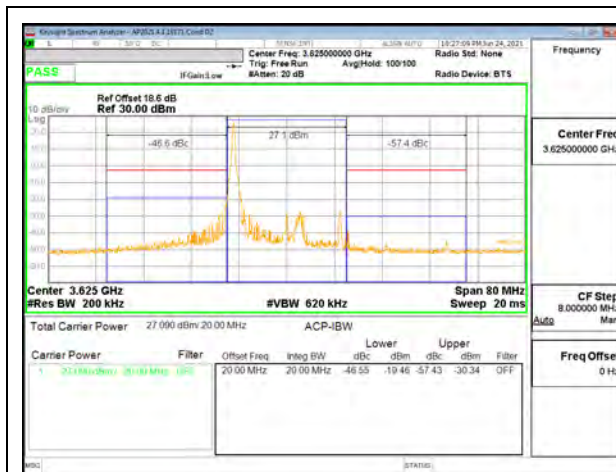


LTE B48 15MHz QPSK Low Channel RB75-0

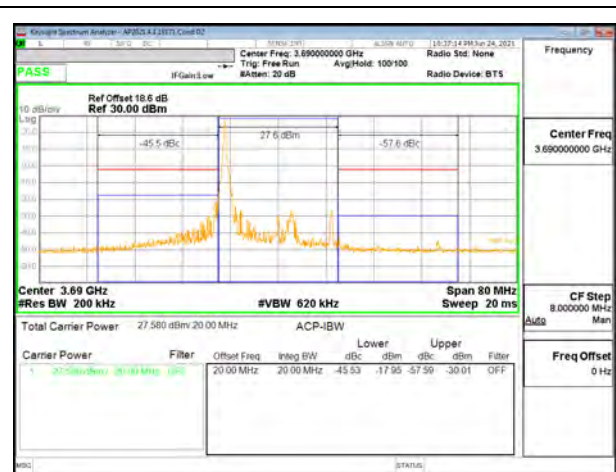


LTE B48 15MHz QPSK Middle Channel RB75-0

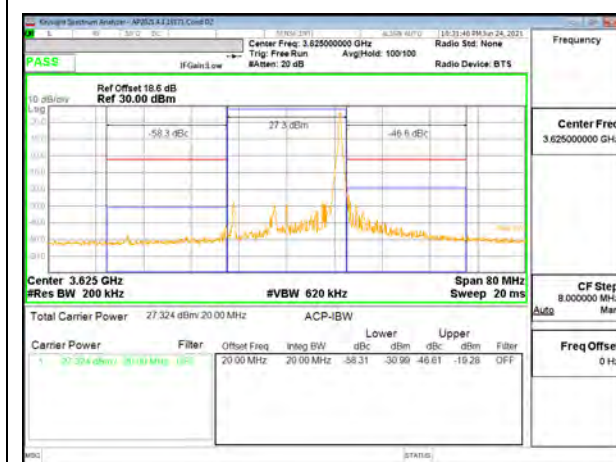




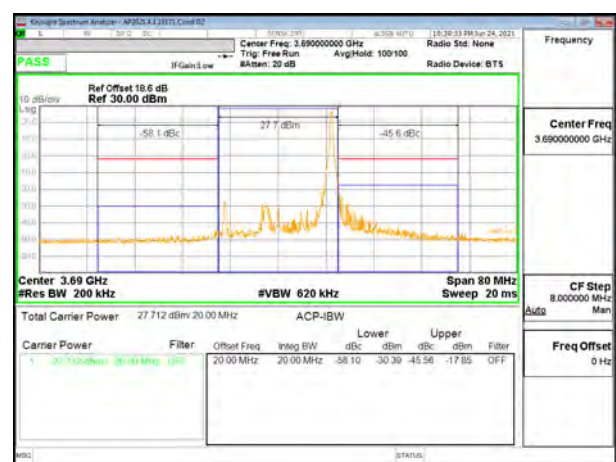
LTE B48 20MHz QPSK Middle Channel RB1-0



LTE B48 20MHz QPSK High Channel RB1-0



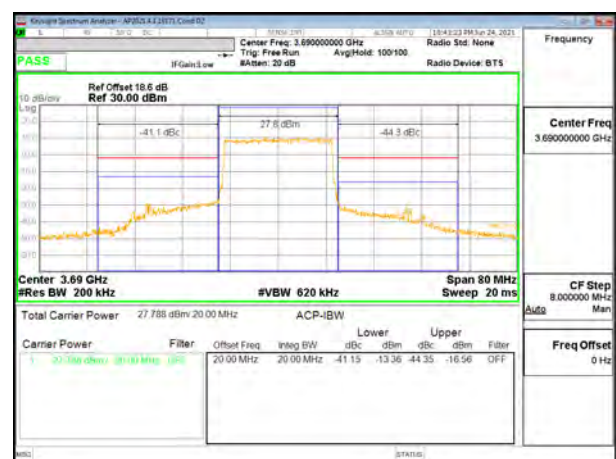
LTE B48 20MHz QPSK Middle Channel RB1-99



LTE B48 20MHz QPSK High Channel RB1-99



LTE B48 20MHz QPSK Middle Channel RB100-0



LTE B48 20MHz QPSK High Channel RB100-0

9.2.13. LTE BAND 66 AND 5G NR n66 EMISSION MASK

LIMITS

FCC: §27.53(h)

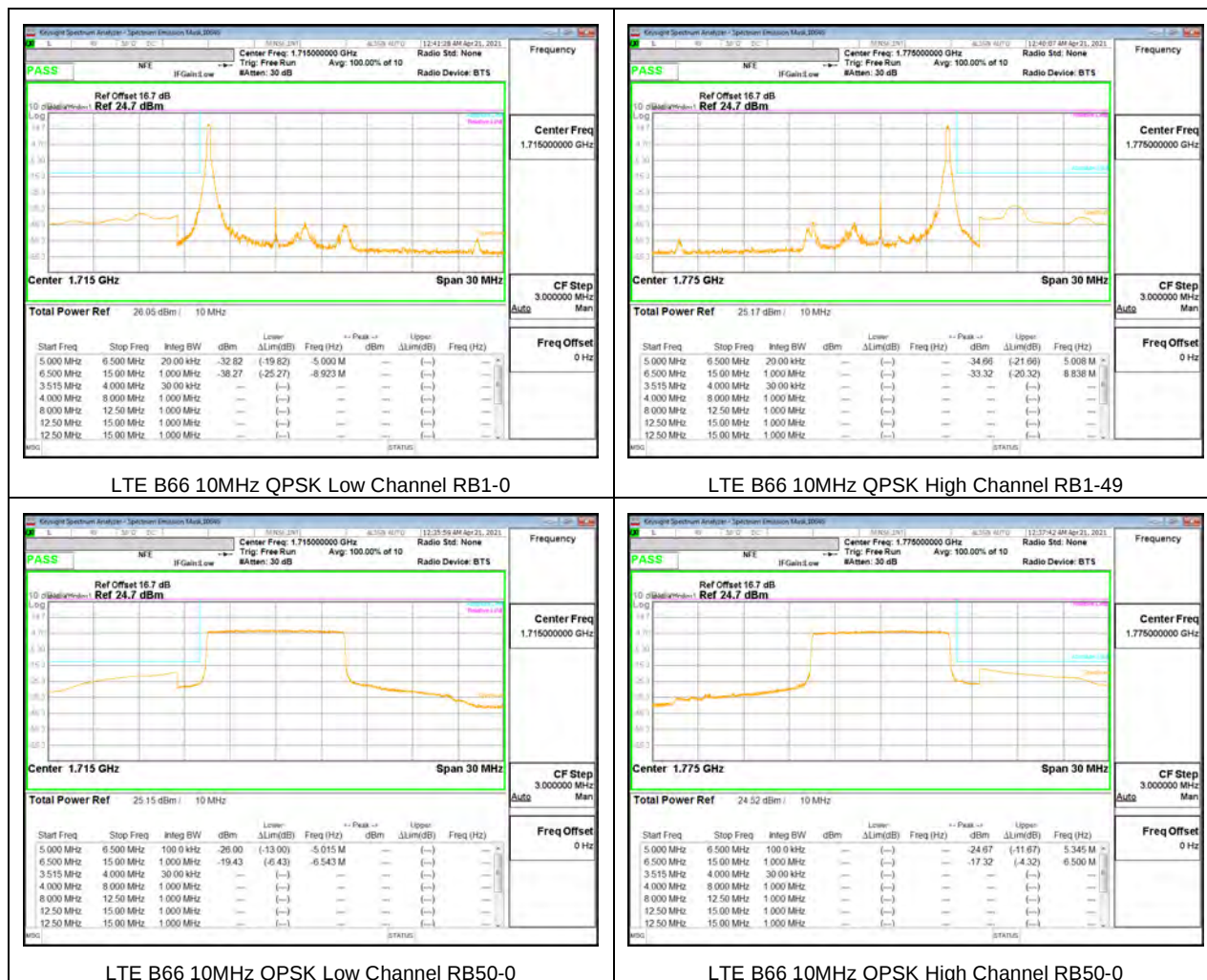
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

LTE BAND 66 EMISSION MASK





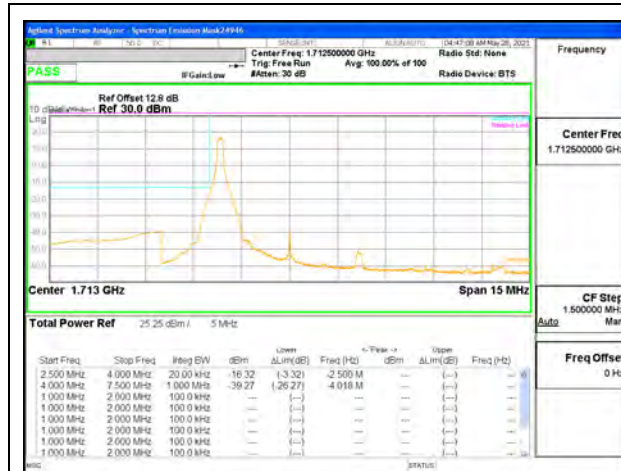




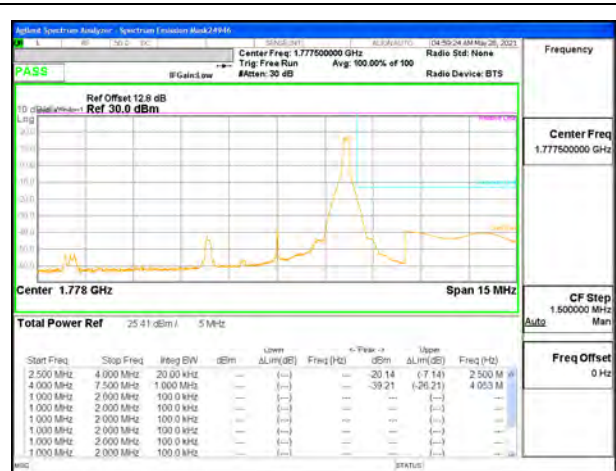




5G NR n66 EMISSION MASK



5G NR n66 5MHz BPSK Low Channel RB1-0



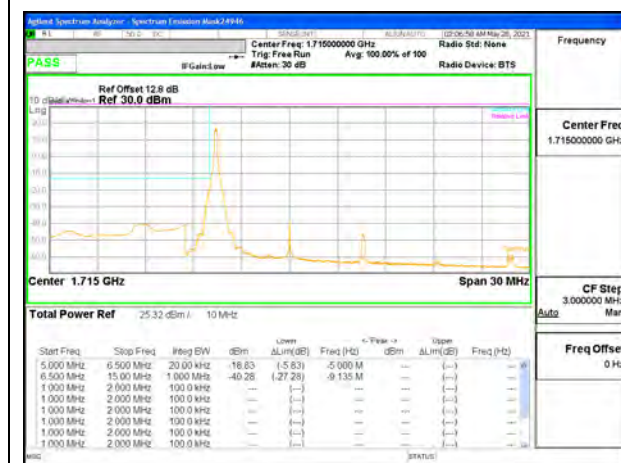
5G NR n66 5MHz BPSK High Channel RB1-24



5G NR n66 5MHz BPSK Low Channel RB25-0



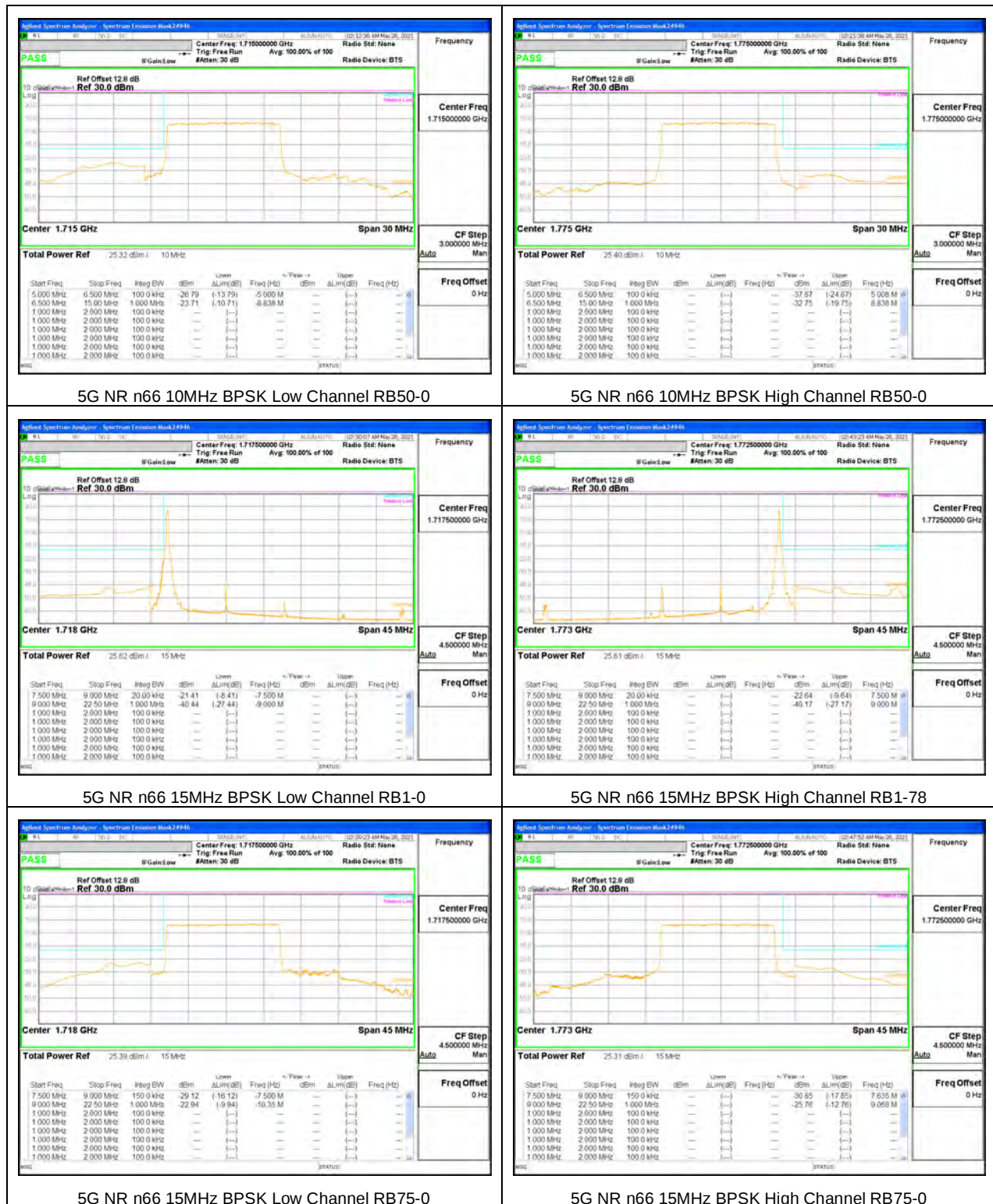
5G NR n66 5MHz BPSK High Channel RB25-0



5G NR n66 10MHz BPSK Low Channel RB1-0



5G NR n66 10MHz BPSK High Channel RB1-51







9.2.14. LTE BAND 71 AND 5G NR n71 EMISSION MASK

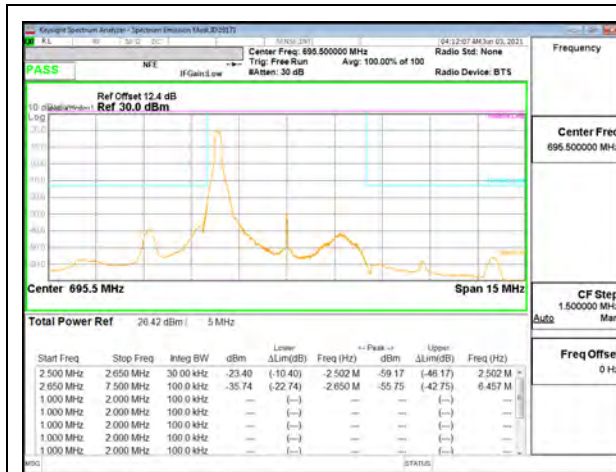
LIMITS

FCC: §27.53

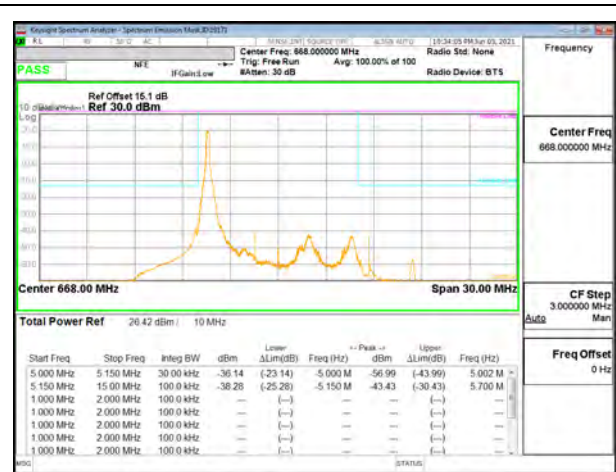
(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance 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.

LTE BAND 71 EMISSION MASK

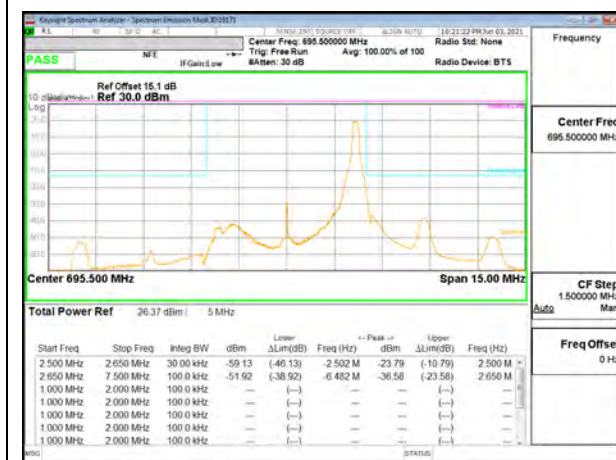




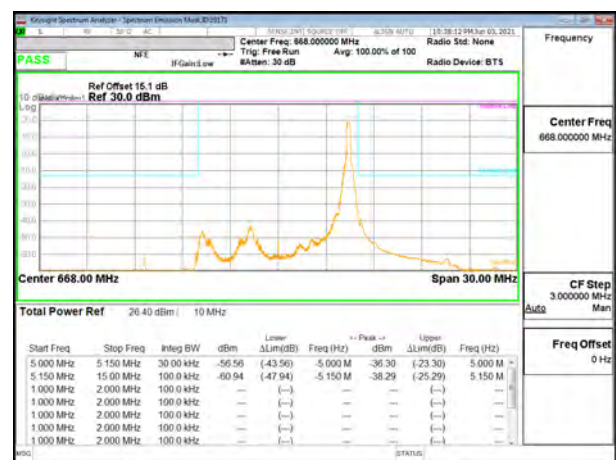
LTE B71 5MHz QPSK High Channel RB1-0



LTE B71 10MHz QPSK Low Channel RB1-0



LTE B71 5MHz QPSK High Channel RB1-24



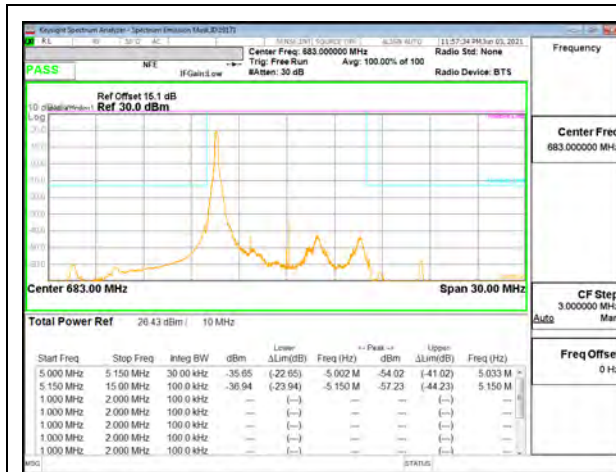
LTE B71 10MHz QPSK Low Channel RB1-49



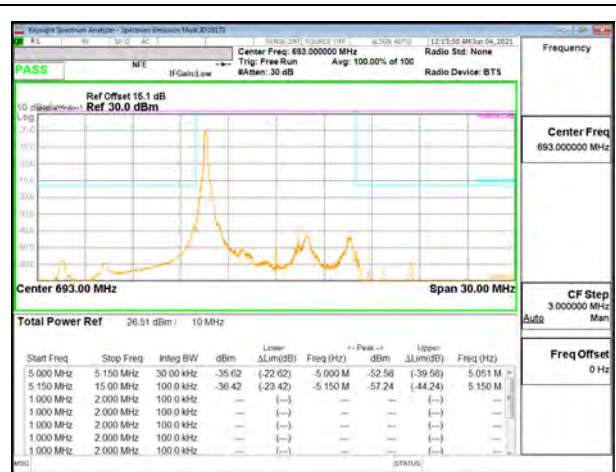
LTE B71 5MHz QPSK High Channel RB25-0



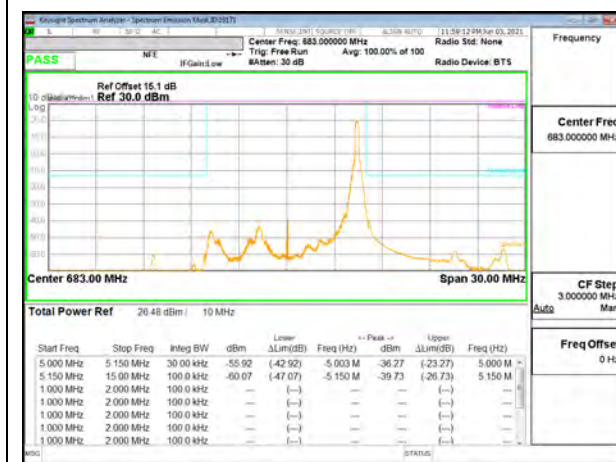
LTE B71 10MHz QPSK Low Channel RB50-0



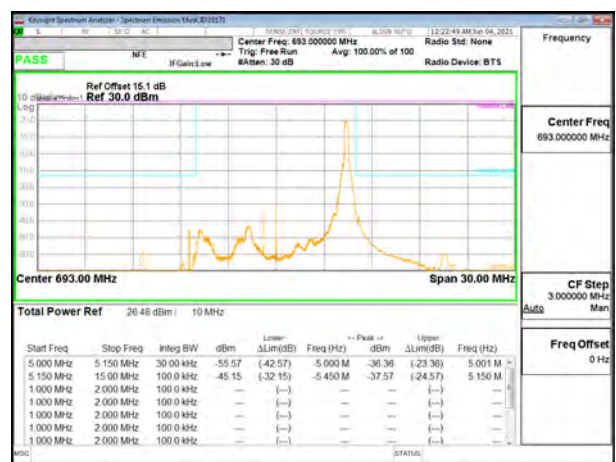
LTE B71 10MHz QPSK Middle Channel RB1-0



LTE B71 10MHz QPSK High Channel RB1-0



LTE B71 10MHz QPSK Middle Channel RB1-49



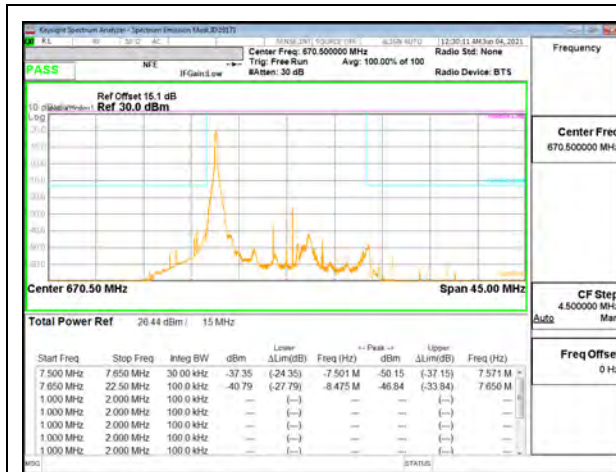
LTE B71 10MHz QPSK High Channel RB1-49



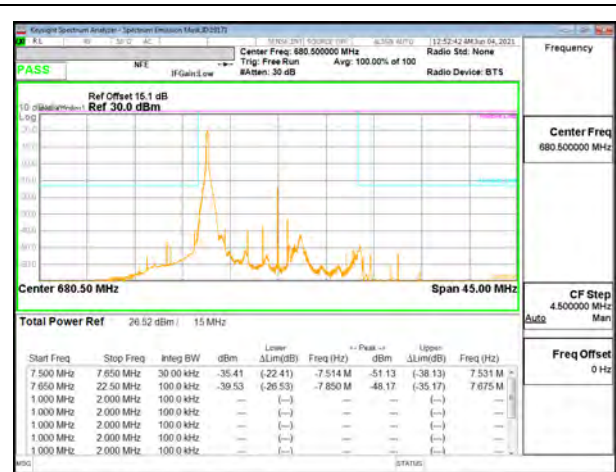
LTE B71 10MHz QPSK Middle Channel RB50-0



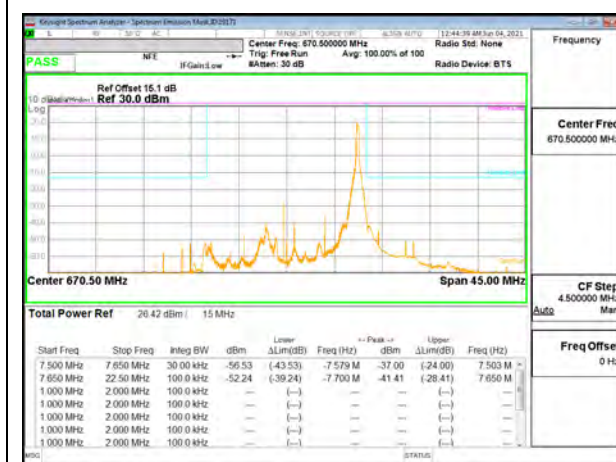
LTE B71 10MHz QPSK High Channel RB50-0



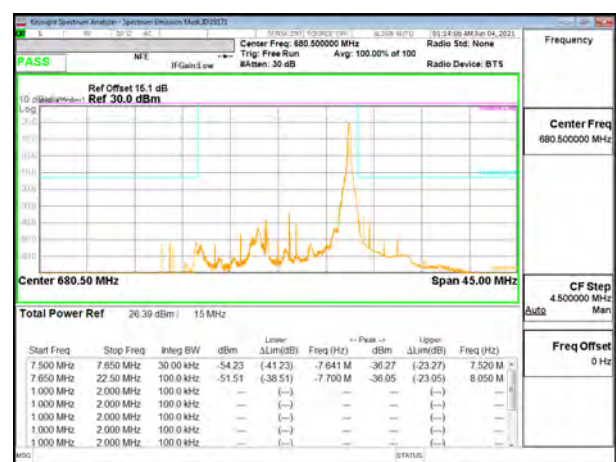
LTE B71 15MHz QPSK Low Channel RB1-0



LTE B71 15MHz QPSK Middle Channel RB1-0



LTE B71 15MHz QPSK Low Channel RB1-74



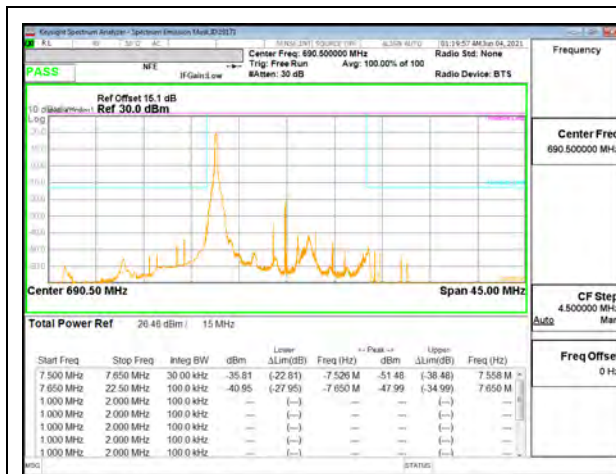
LTE B71 15MHz QPSK Middle Channel RB1-74



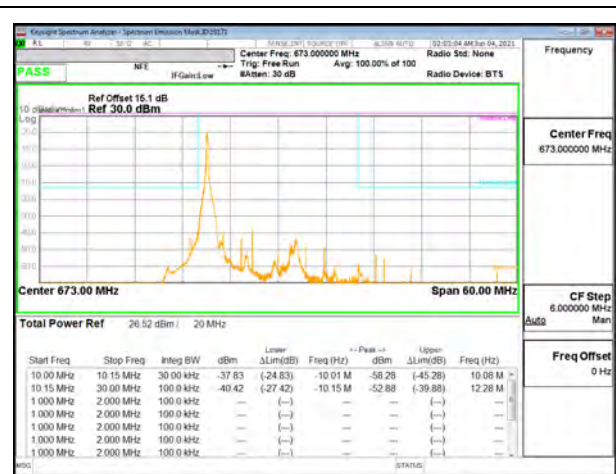
LTE B71 15MHz QPSK Low Channel RB75-0



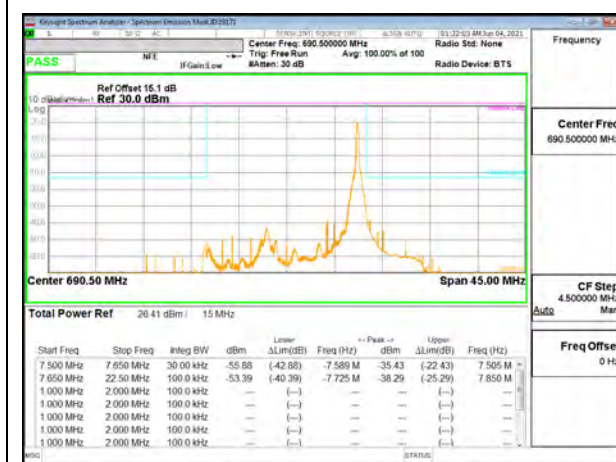
LTE B71 15MHz QPSK Middle Channel RB75-0



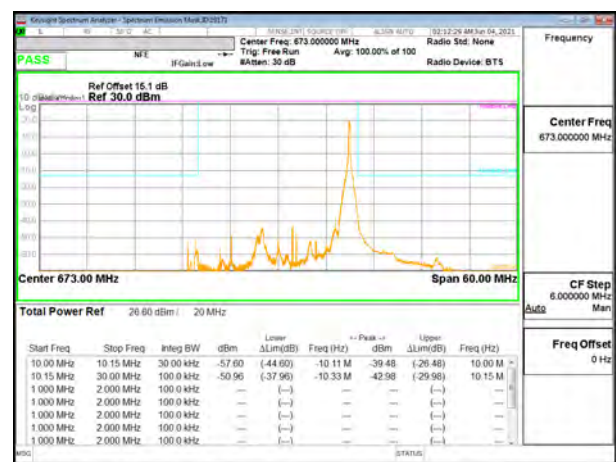
LTE B71 15MHz QPSK High Channel RB1-0



LTE B71 20MHz QPSK Low Channel RB1-0



LTE B71 15MHz QPSK High Channel RB1-74



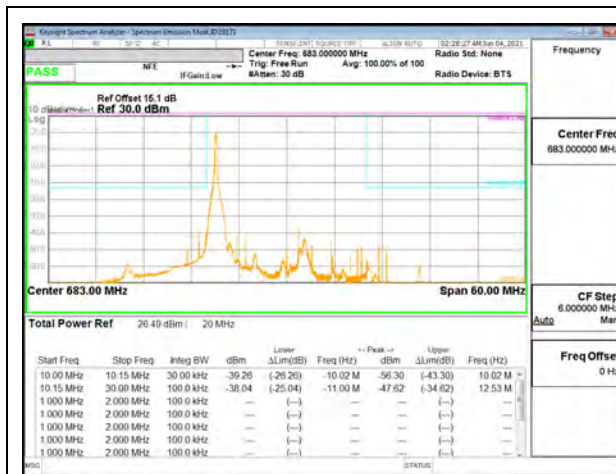
LTE B71 20MHz QPSK Low Channel RB1-99



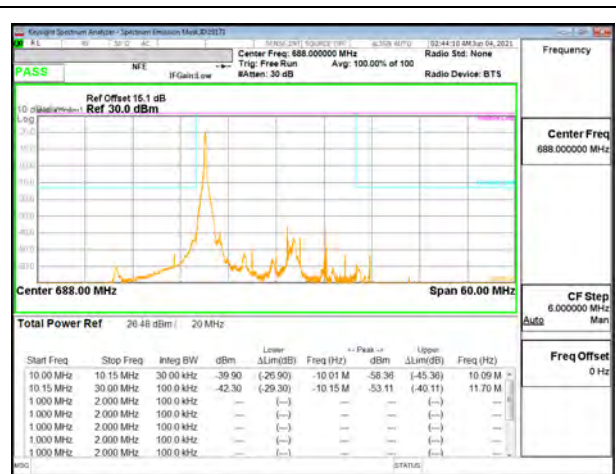
LTE B71 15MHz QPSK High Channel RB75-0



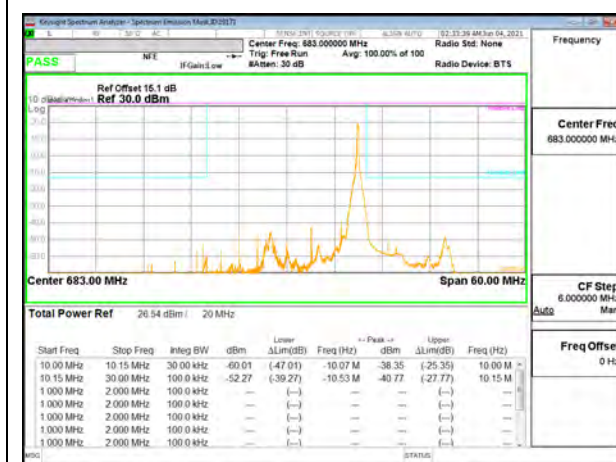
LTE B71 20MHz QPSK Low Channel RB100-0



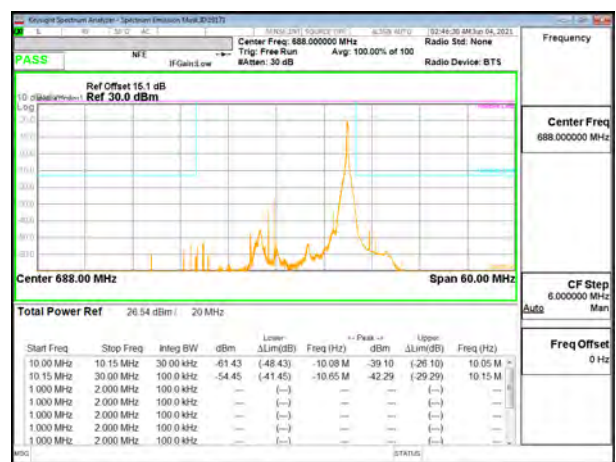
LTE B71 20MHz QPSK Middle Channel RB1-0



LTE B71 20MHz QPSK High Channel RB1-0



LTE B71 20MHz QPSK Middle Channel RB1-99



LTE B71 20MHz QPSK High Channel RB1-99

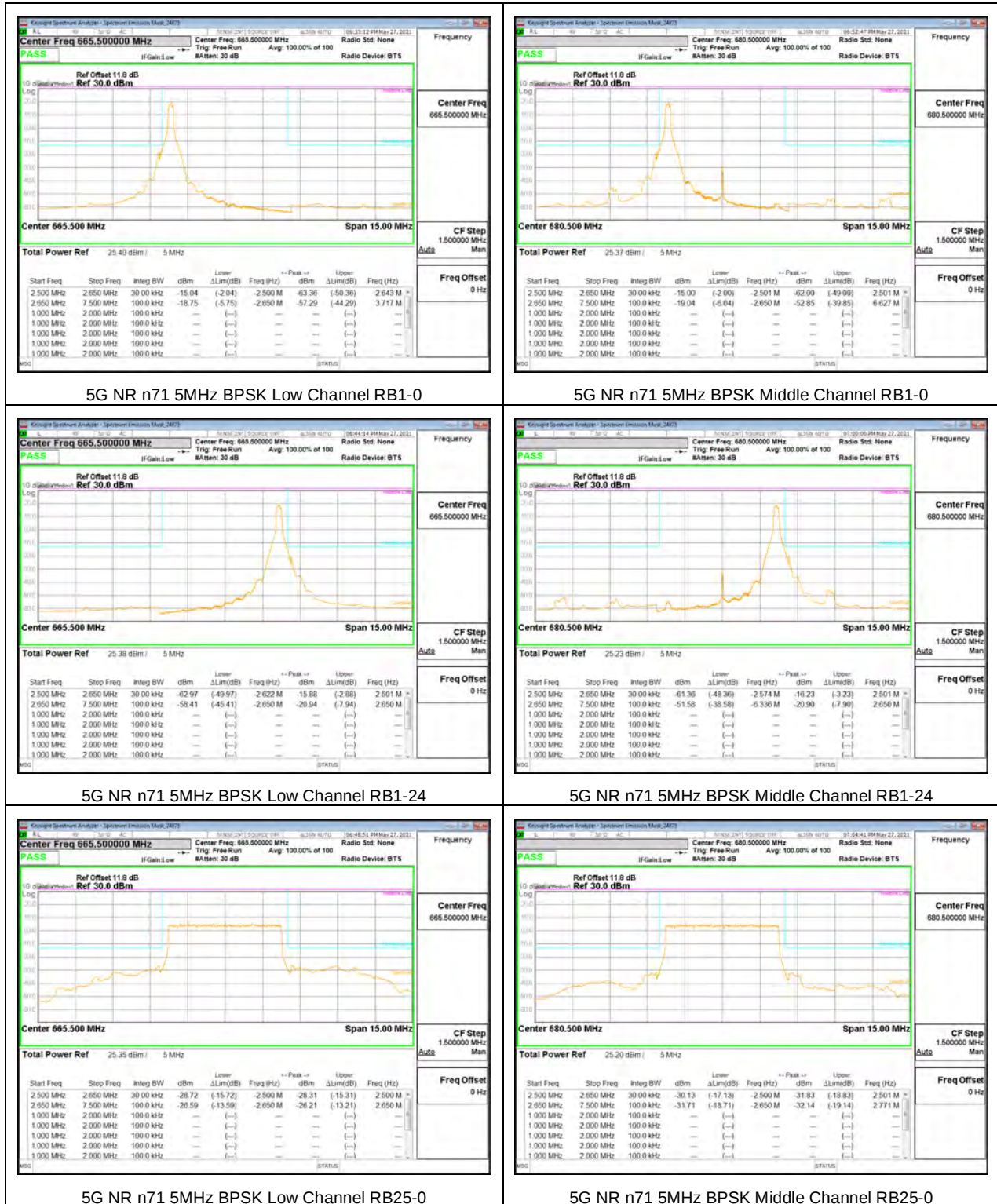


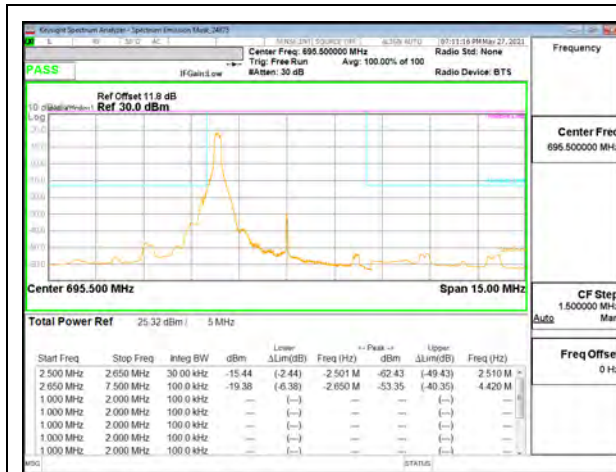
LTE B71 20MHz QPSK Middle Channel RB100-0



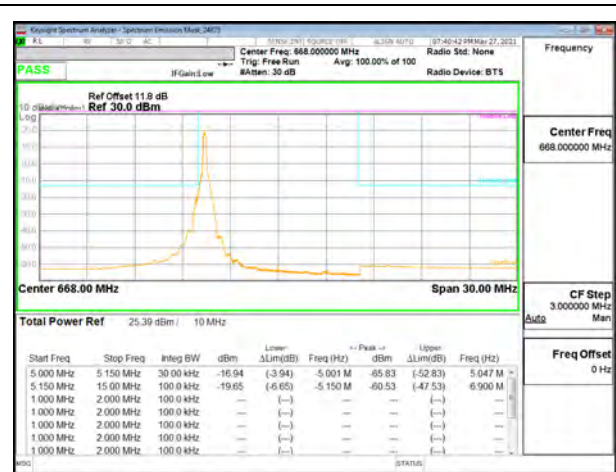
LTE B71 20MHz QPSK High Channel RB100-0

5G NR n71 EMISSION MASK

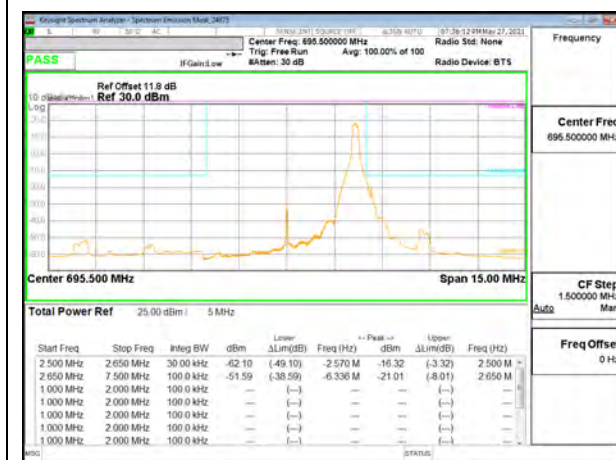




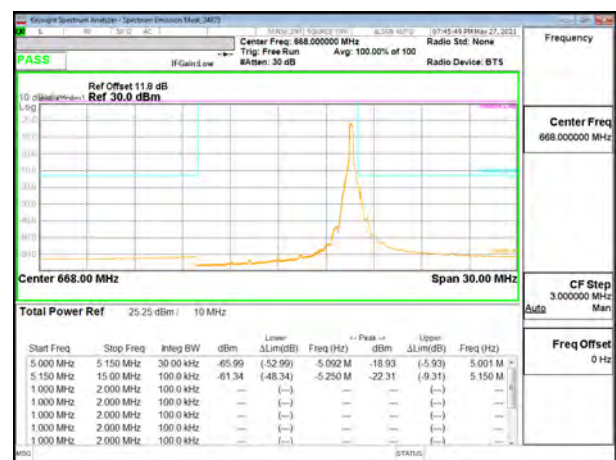
5G NR n71 5MHz BPSK High Channel RB1-0



5G NR n71 10MHz BPSK Low Channel RB1-0



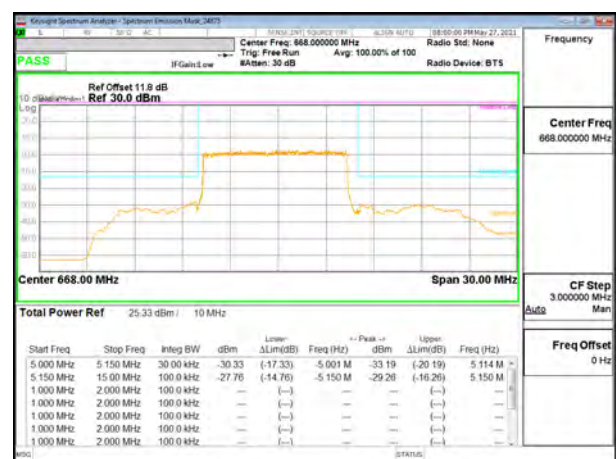
5G NR n71 5MHz BPSK High Channel RB1-24



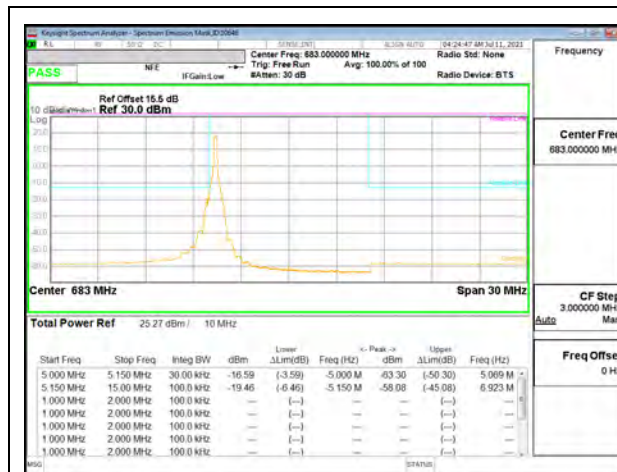
5G NR n71 10MHz BPSK Low Channel RB1-51



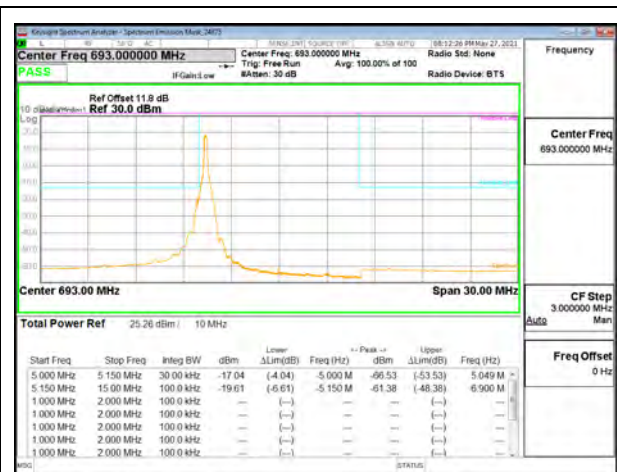
5G NR n71 5MHz BPSK High Channel RB25-0



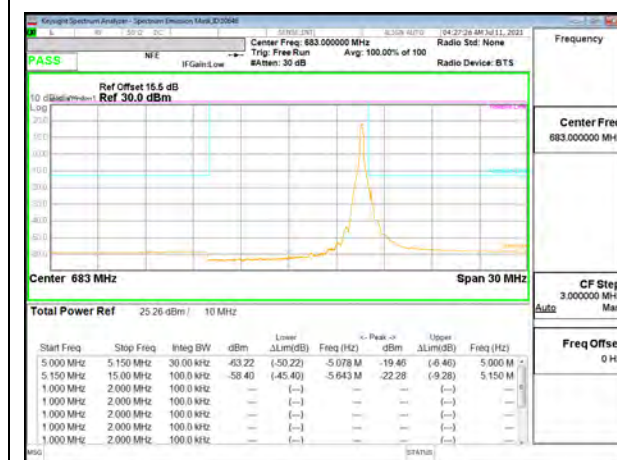
5G NR n71 10MHz BPSK Low Channel RB50-0



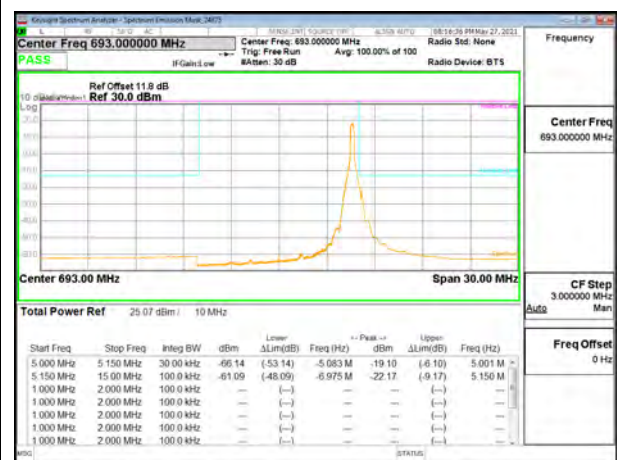
5G NR n71 10MHz BPSK Middle Channel RB1-0



5G NR n71 10MHz BPSK High Channel RB1-0



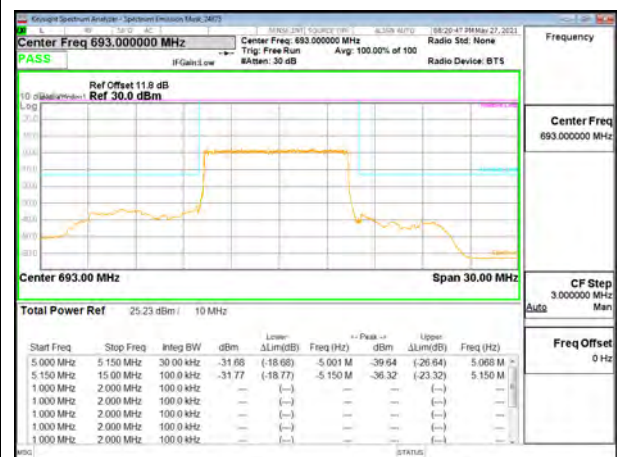
5G NR n71 10MHz BPSK Middle Channel RB1-51



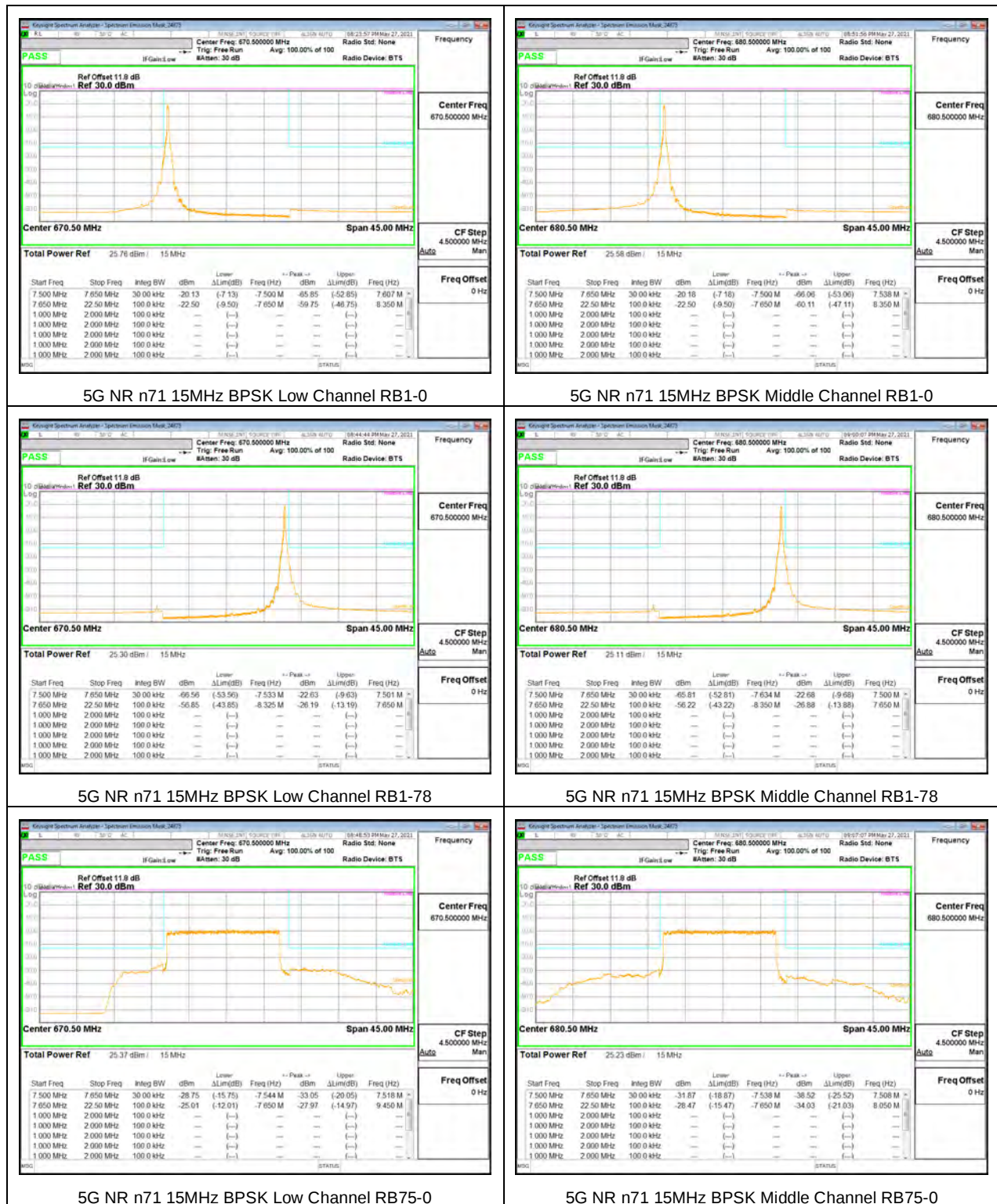
5G NR n71 10MHz BPSK High Channel RB1-51

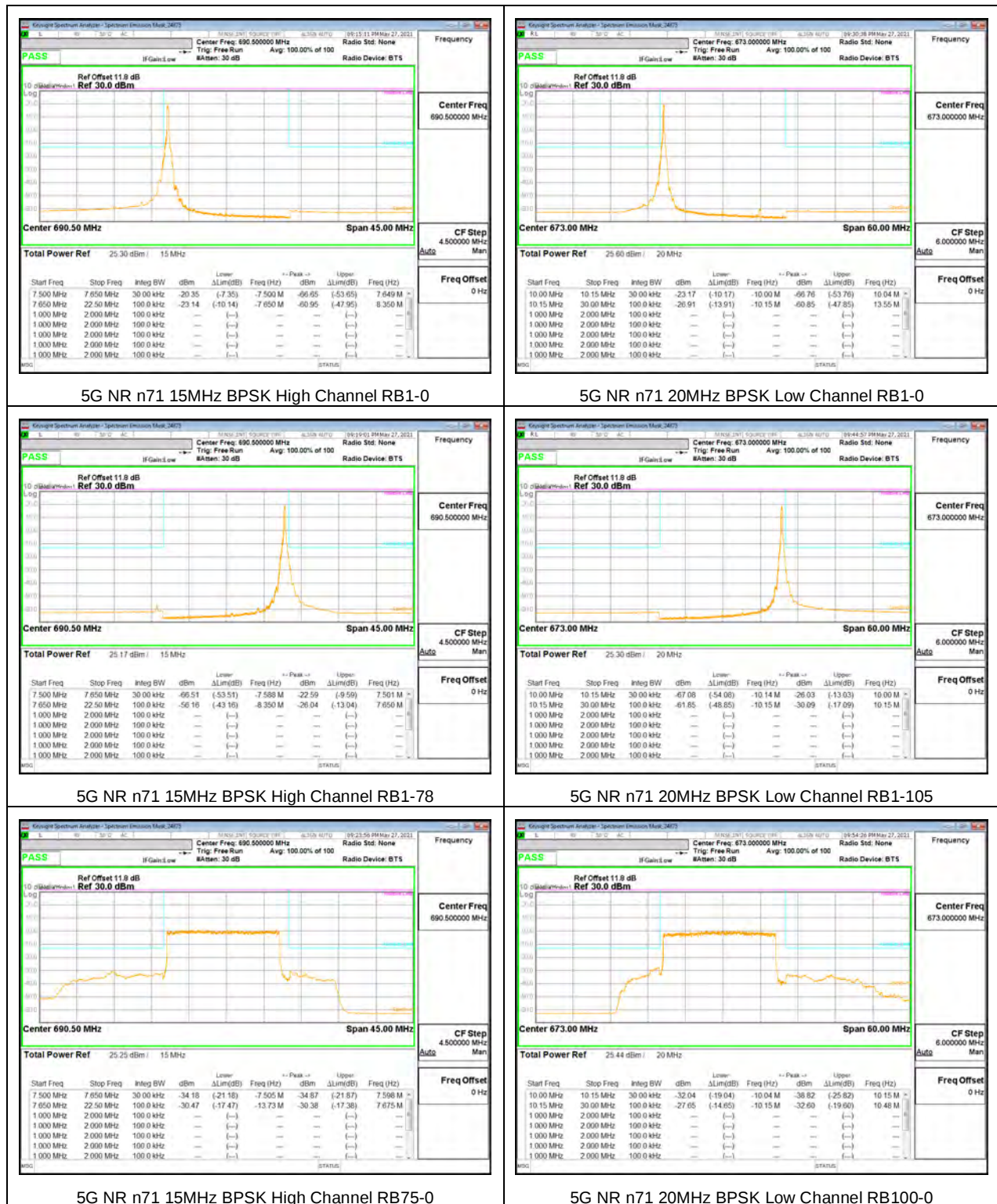


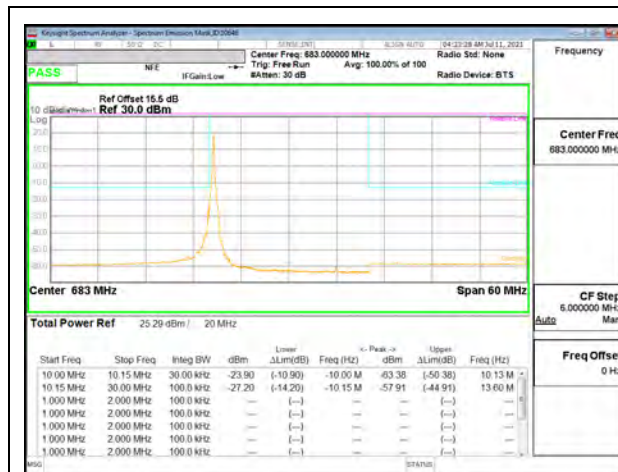
5G NR n71 10MHz BPSK Middle Channel RB50-0



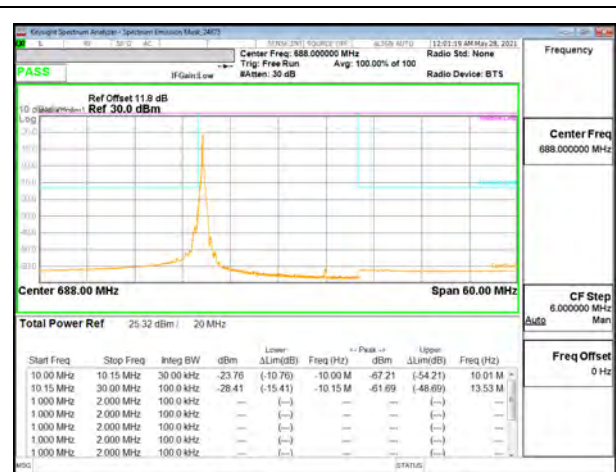
5G NR n71 10MHz BPSK High Channel RB50-0







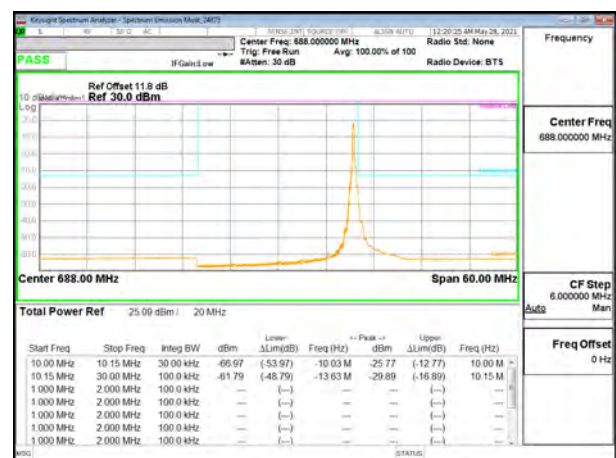
5G NR n71 20MHz BPSK Middle Channel RB1-0



5G NR n71 20MHz BPSK High Channel RB1-0



5G NR n71 20MHz BPSK Middle Channel RB1-105



5G NR n71 20MHz BPSK High Channel RB1-105



5G NR n71 20MHz BPSK Middle Channel RB100-0



5G NR n71 20MHz BPSK High Channel RB100-0

9.2.15. 5G NR n77 EMISSION MASK (Part 27 3450-3550MHz)

LIMITS

FCC: §27.53

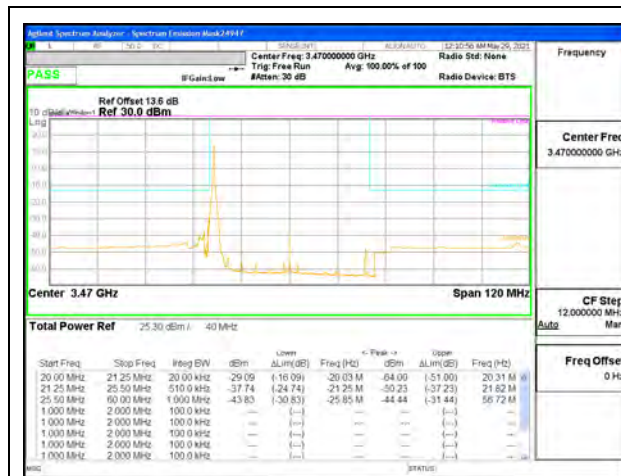
(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (n)(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, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 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.





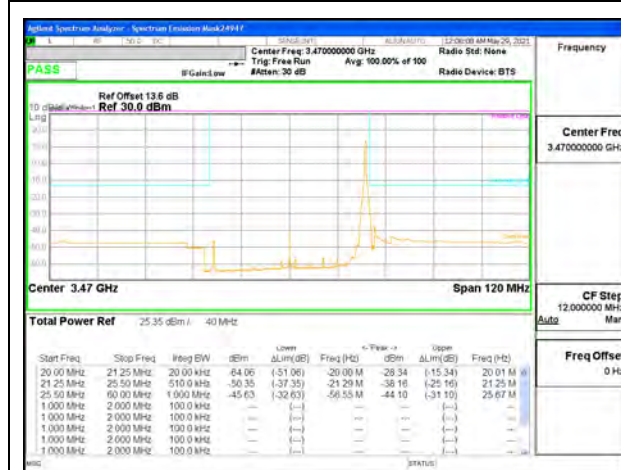




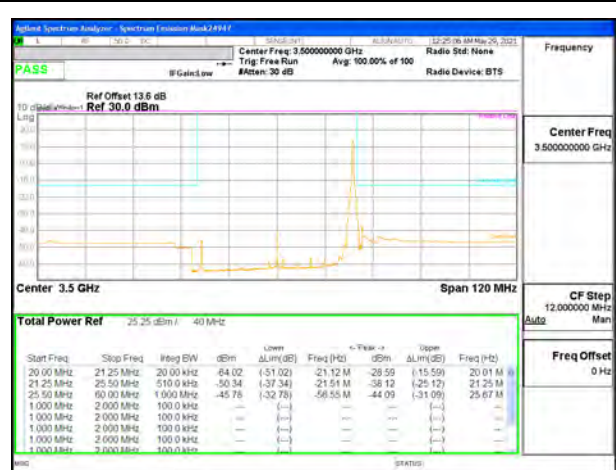
5G NR n77 40MHz BPSK Low Channel RB1-0



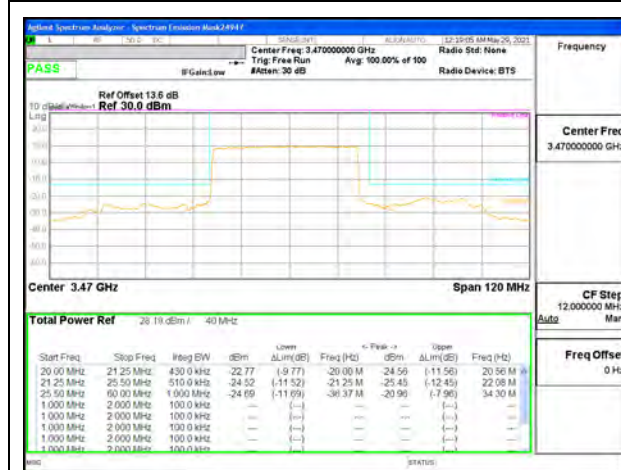
5G NR n77 40MHz BPSK Middle Channel RB1-0



5G NR n77 40MHz BPSK Low Channel RB1-105



5G NR n77 40MHz BPSK Middle Channel RB1-105



5G NR n77 40MHz BPSK Low Channel RB100-0



5G NR n77 40MHz BPSK Middle Channel RB100-0

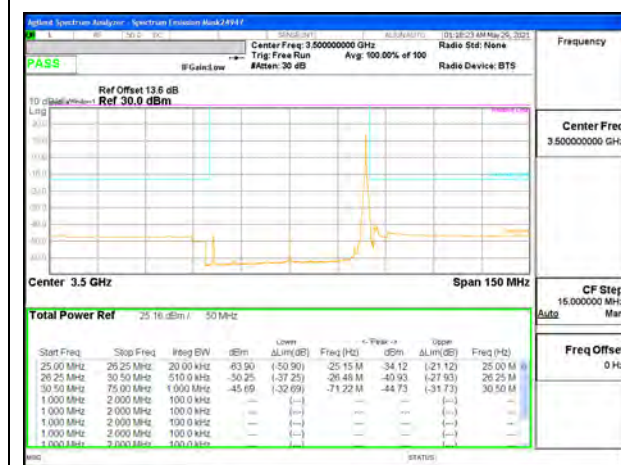




5G NR n77 50MHz BPSK Middle Channel RB1-0



5G NR n77 50MHz BPSK High Channel RB1-0



5G NR n77 50MHz BPSK Middle Channel RB1-132



5G NR n77 50MHz BPSK High Channel RB1-132



5G NR n77 50MHz BPSK Middle Channel RB128-0



5G NR n77 50MHz BPSK High Channel RB128-0