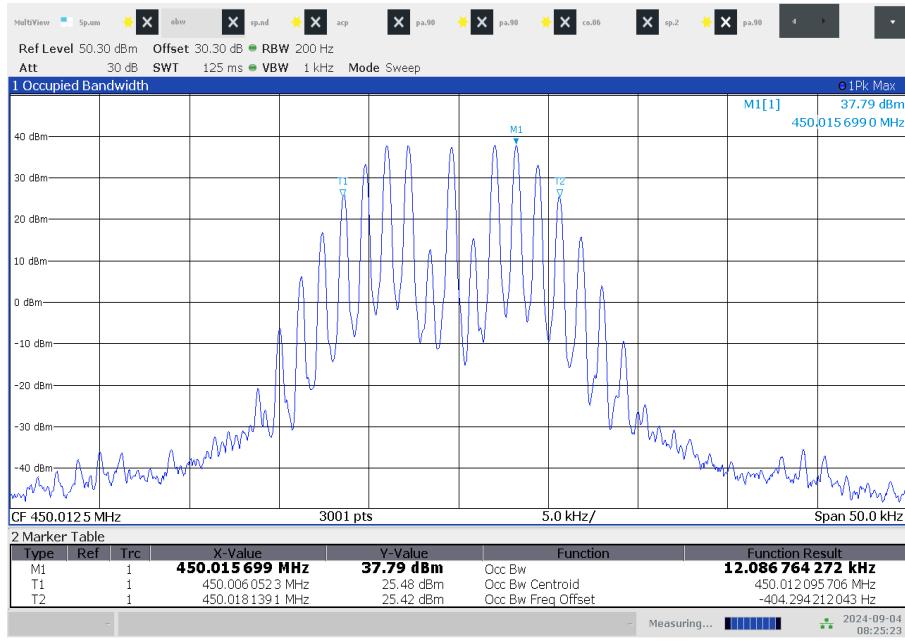
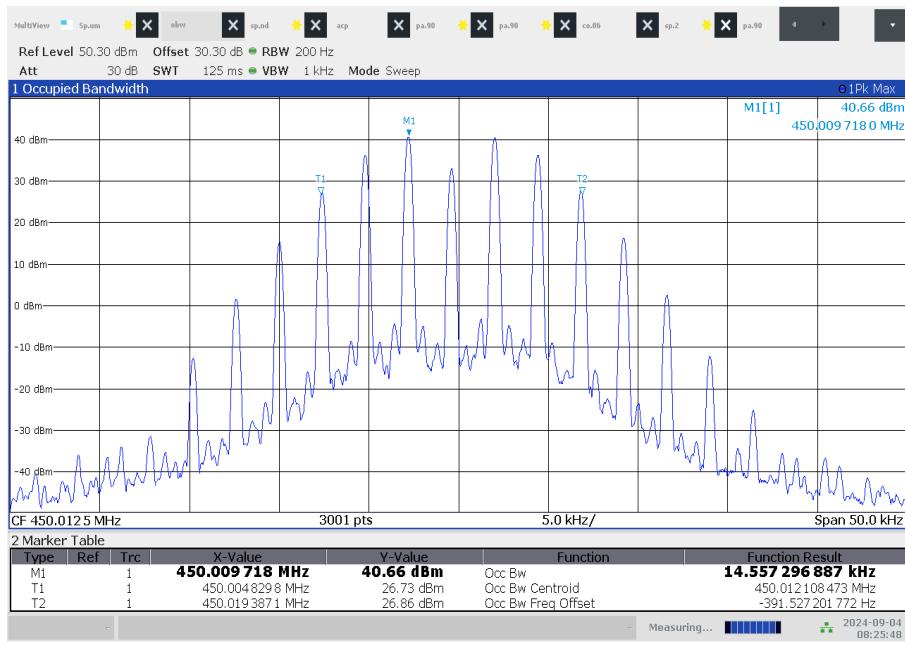


Plot 3: 450.0125 MHz / 2400 bits per second

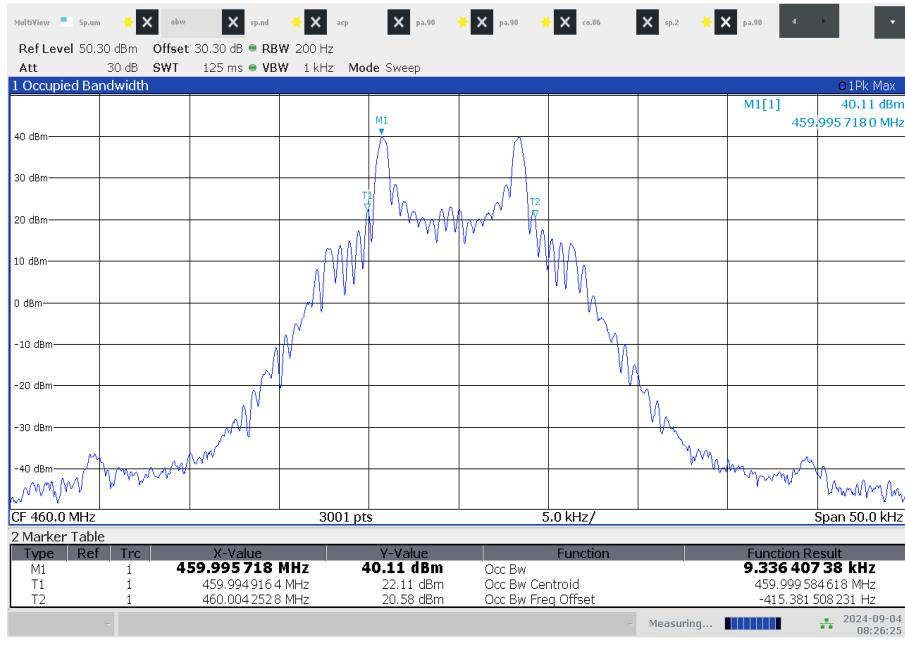


Plot 4: 450.0125 MHz / 4800 bits per second

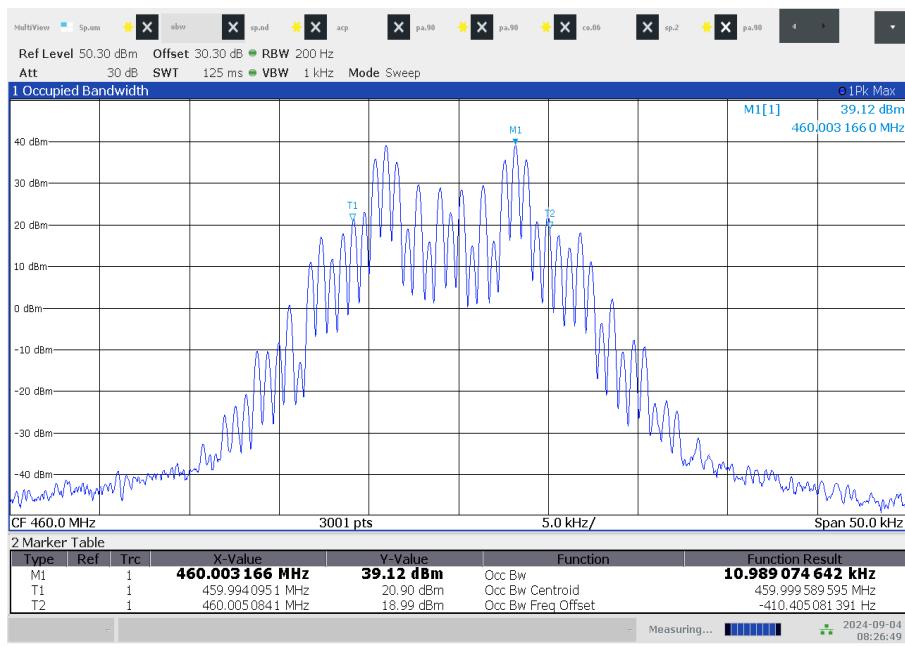


Plots 460.0 MHz

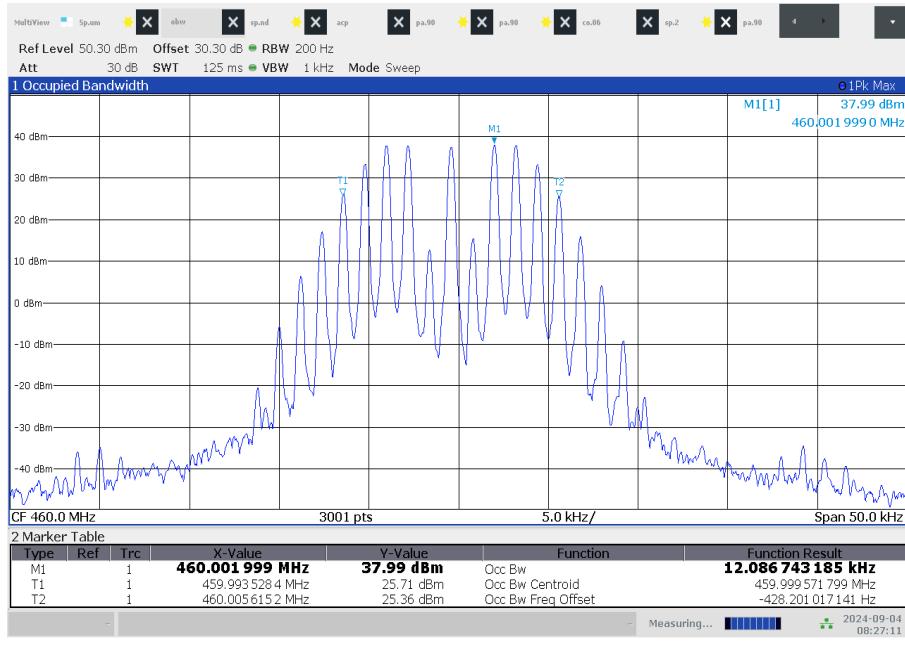
Plot 1: 460.0 MHz / 512 bits per second



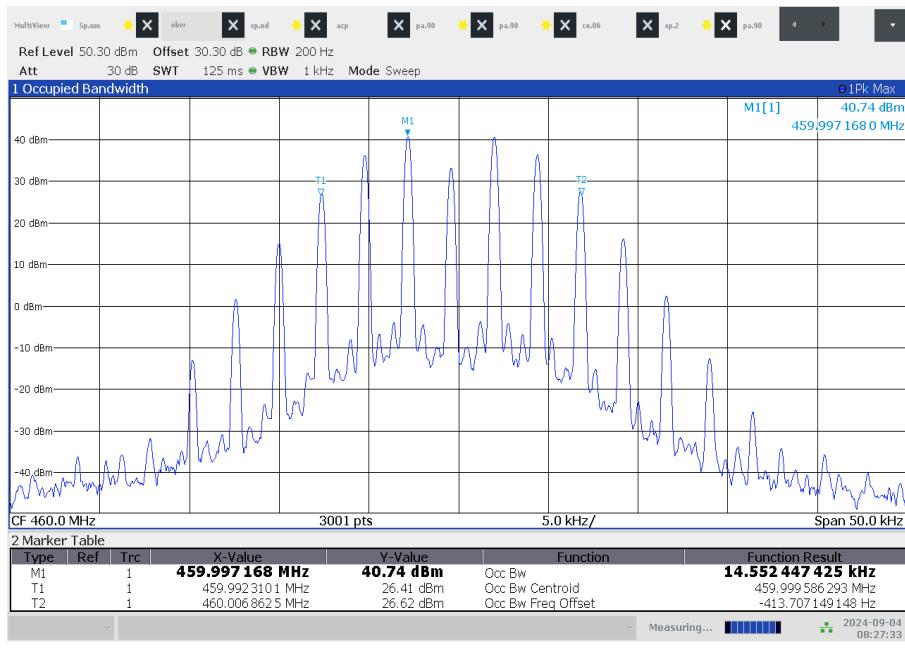
Plot 2: 460.0 MHz / 1200 bits per second



Plot 3: 460.0 MHz / 2400 bits per second

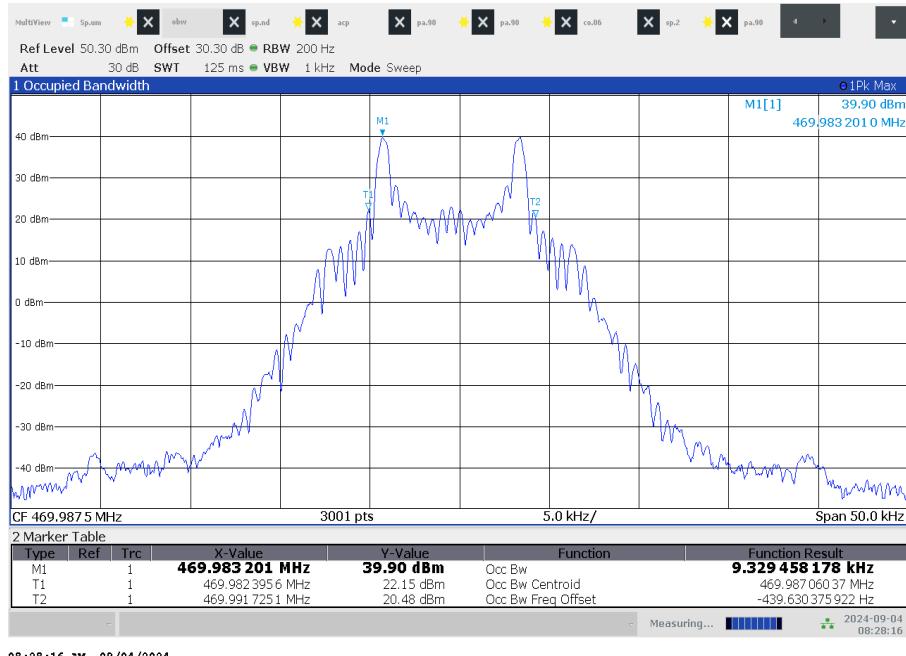


Plot 4: 460.0 MHz / 4800 bits per second

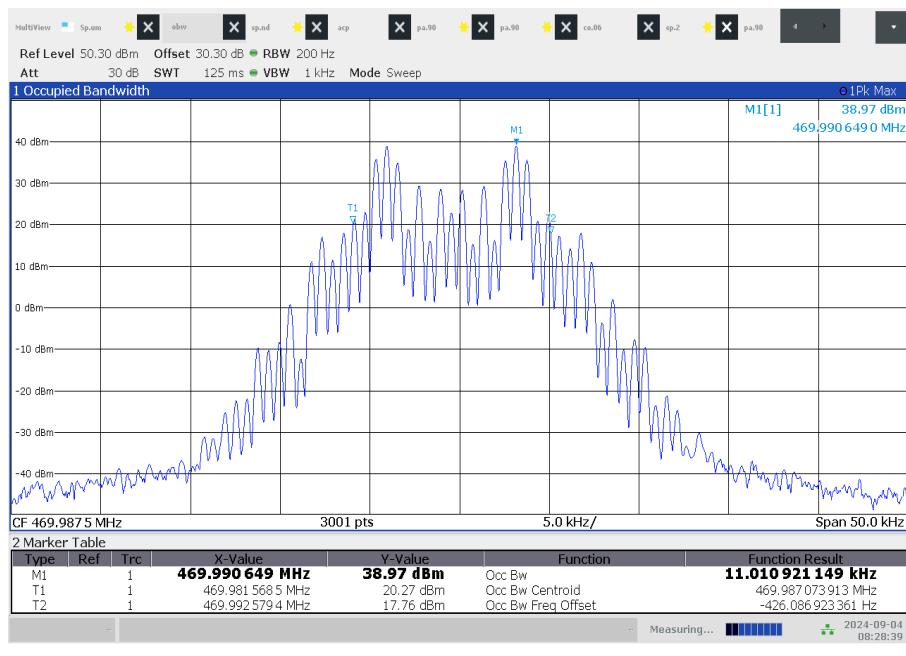


Plots 469.9875 MHz

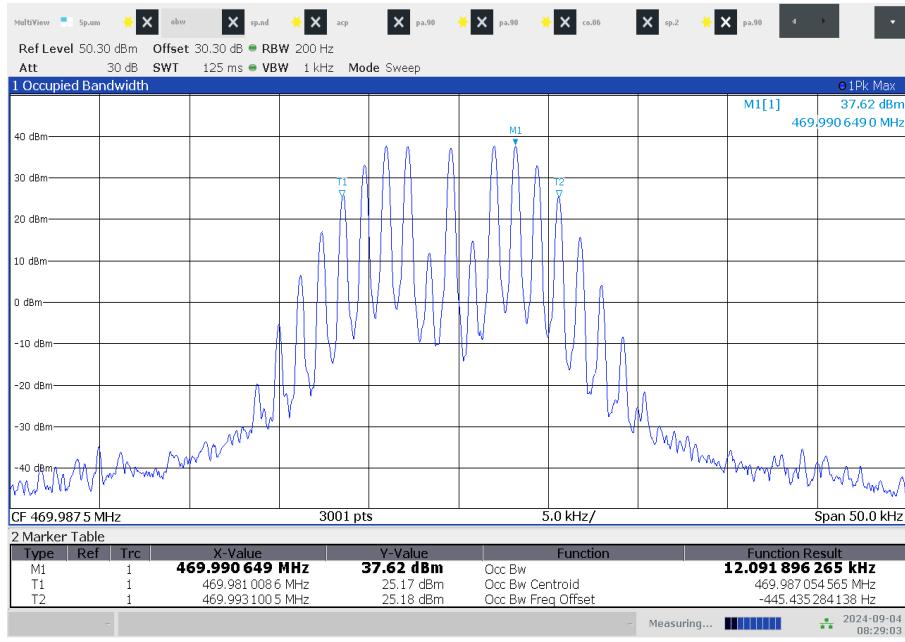
Plot 1: 469.9875 MHz / 512 bits per second



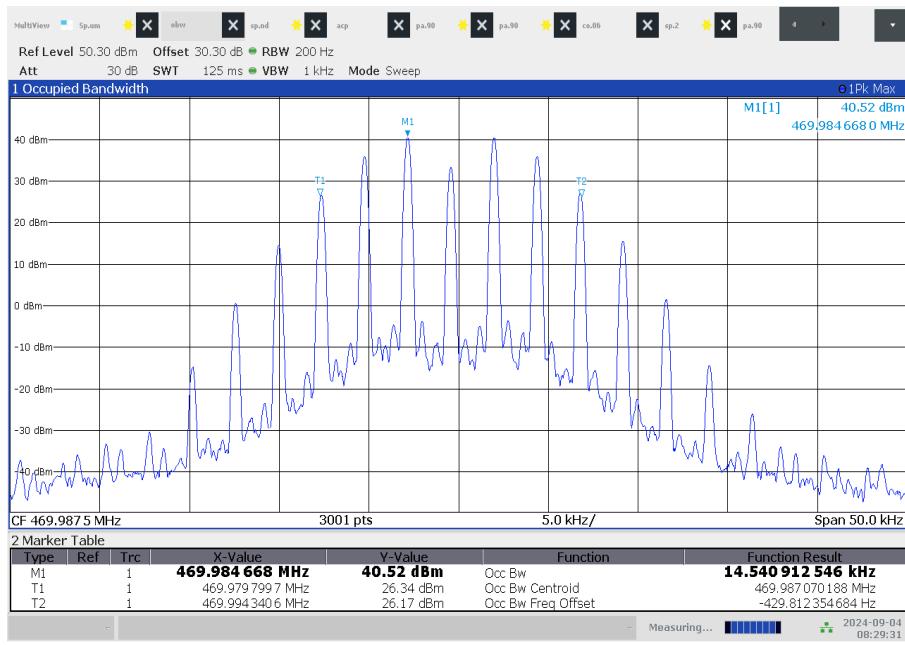
Plot 2: 469.9875 MHz / 1200 bits per second



Plot 3: 469.9875 MHz / 2400 bits per second



Plot 4: 469.9875 MHz / 4800 bits per second



13.4 Spectrum masks

Limits:

FCC
FCC 47 CFR
§ 2.1051
§ 90.210
Emission Mask E - 6.25 kHz or less channel bandwidth equipment.
<p>For transmitters designed to operate with a 6.25 kHz or less bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:</p> <ul style="list-style-type: none"> - On any frequency from the center of the authorized bandwidth f_0 to 3.0 kHz removed from f_0: Zero dB. - On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 3.0 kHz but no more than 4.6 kHz: At least $30 + 16.67(fd - 3 \text{ kHz})$ or $55 + 10 \log (P)$ or 65 dB, whichever is the lesser attenuation. - On any frequency removed from the center of the authorized bandwidth by more than 4.6 kHz: At least $55 + 10 \log (P)$ or 65 dB, whichever is the lesser attenuation.

IC
RSS 119 Issue 12 5.8
Emission Mask E - 6.25 kHz or less channel bandwidth equipment.
<p>For transmitters designed to operate with a 6.25 kHz or less bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:</p> <ul style="list-style-type: none"> - On any frequency from the center of the authorized bandwidth f_0 to 3.0 kHz removed from f_0: Zero dB. - On any frequency removed from the center of the authorized bandwidth by a displacement frequency (fd in kHz) of more than 3.0 kHz but no more than 4.6 kHz: At least $30 + 16.67(fd - 3 \text{ kHz})$ or $55 + 10 \log (P)$, whichever is the lesser attenuation. - On any frequency removed from the center of the authorized bandwidth by more than 4.6 kHz: At least $55 + 10 \log (P)$ or 57 dB, whichever is the lesser attenuation.

FCC	IC
FCC 47 CFR § 2.1051 § 90.210	RSS 119 Issue 12 5.8

Emission Mask D - 12.5 kHz channel bandwidth equipment.

For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- On any frequency from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 : Zero dB.
- On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: At least $7.27(f_d - 2.88)$ dB.
- On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: At least $50 + 10 \log (P)$ dB or 70 dB, whichever is the lesser attenuation.

Emission Mask G - for paging transmitters

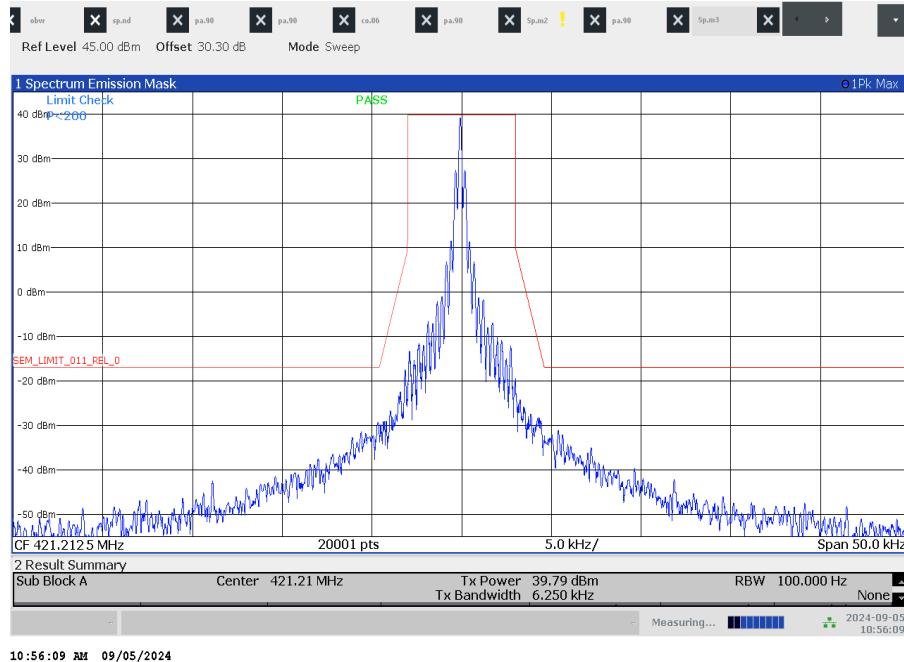
- On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 10 kHz, but no more than 250 percent of the authorized bandwidth: At least $116 \log (f_d/6.1)$ dB, or $50 + 10 \log (P)$ dB, or 70 dB, whichever is the lesser attenuation
- On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least $43 + 10 \log (P)$ dB.

Results: see plots

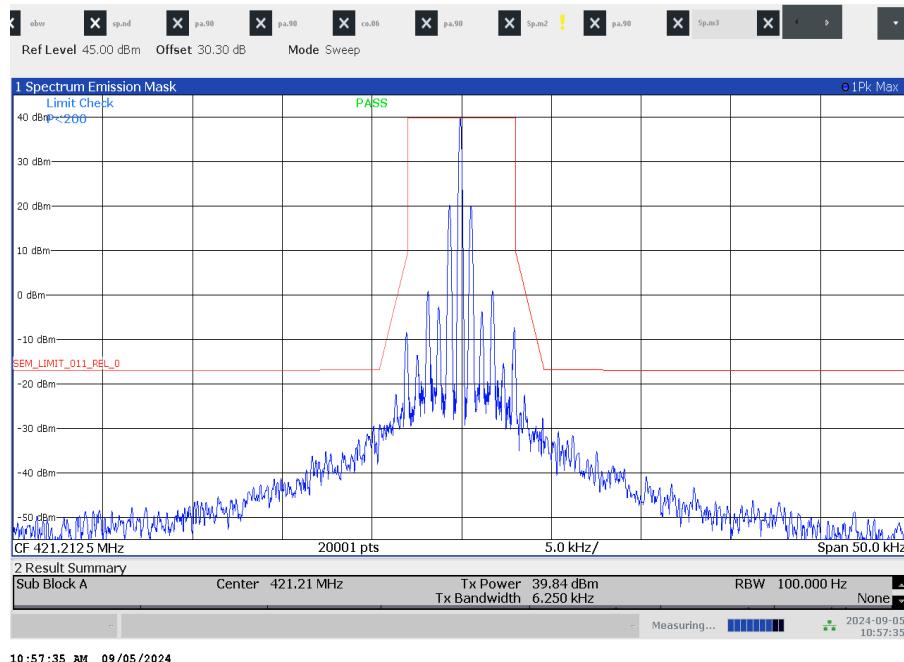
13.4.1 Spectrum masks 6.25 kHz bandwidth (Emission mask E)

Plots 421.2125 MHz

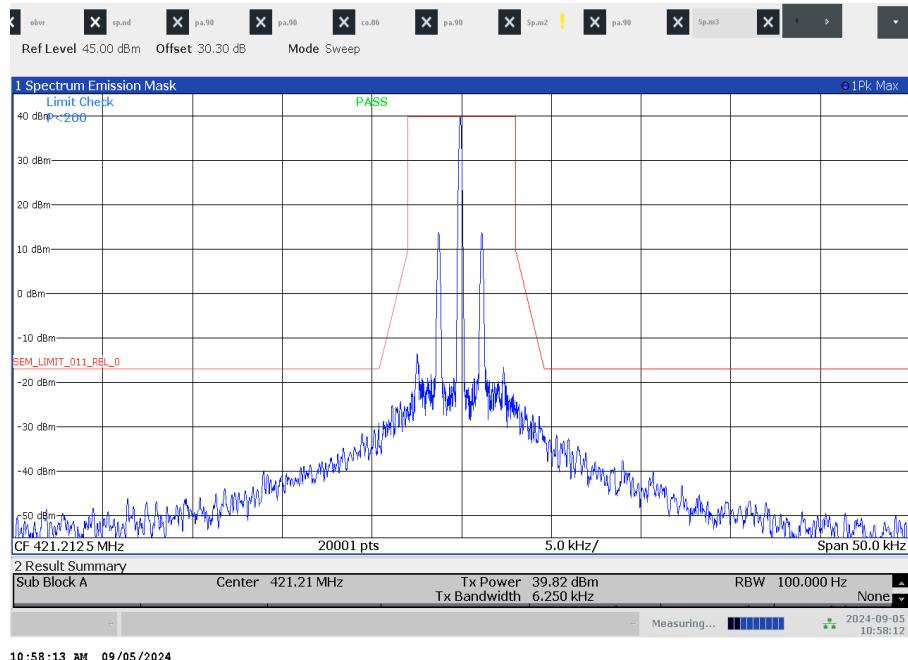
Plot 1: Emission mask E, tx @421.2125 MHz / 512 bits per second – low power – carrier modulated



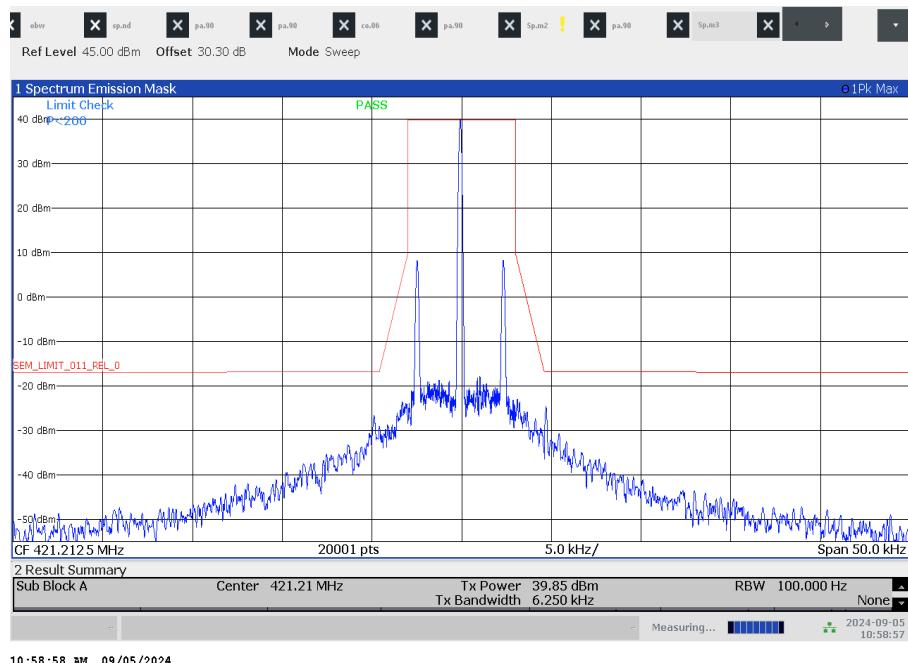
Plot 2: Emission mask E, tx @421.2125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask E, tx @421.2125 MHz / 2400 bits per second – low power – carrier modulated

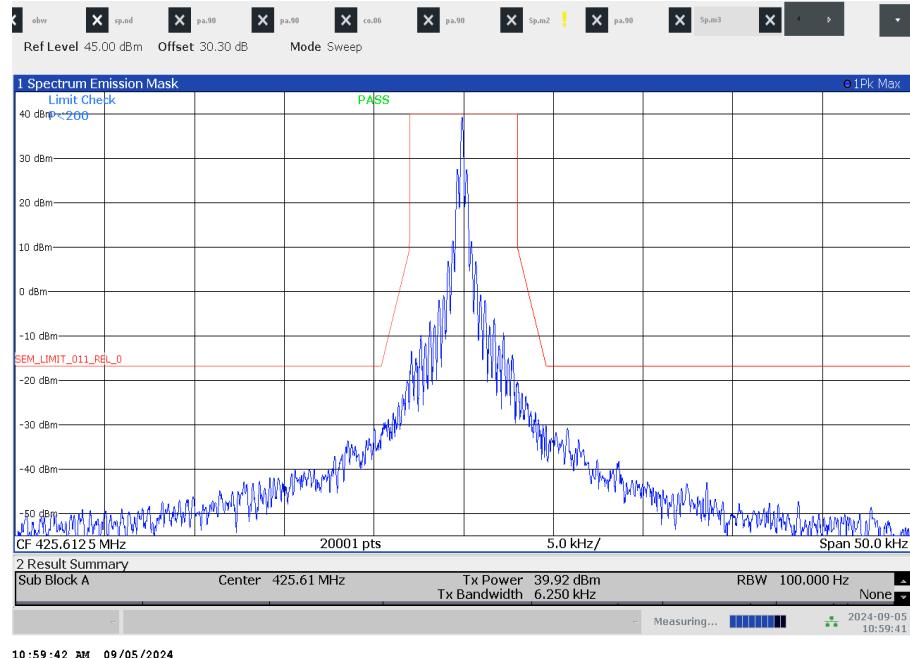


Plot 4: Emission mask E, tx @421.2125 MHz / 4800 bits per second – low power – carrier modulated

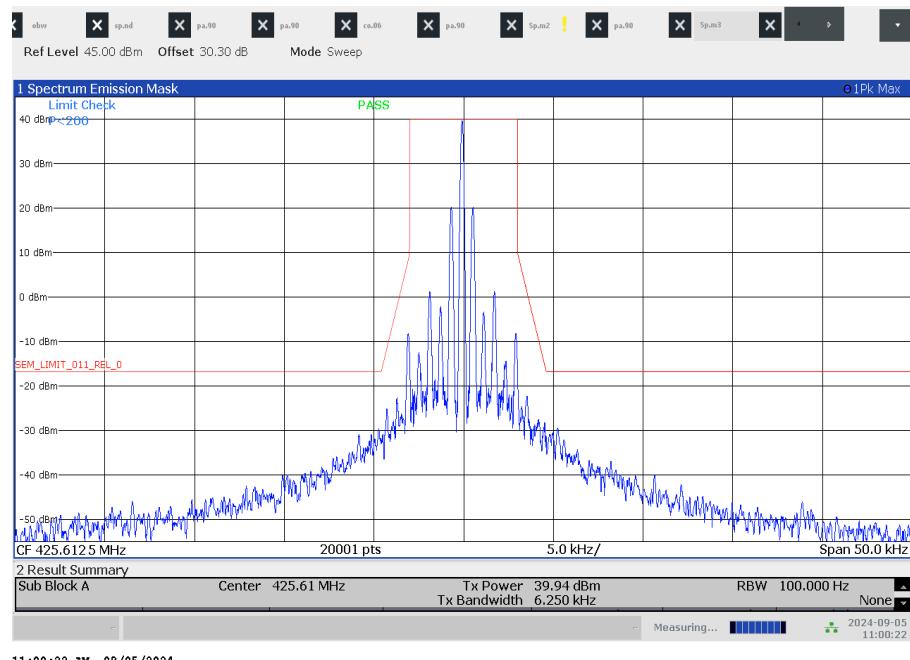


Plots 425.6125 MHz

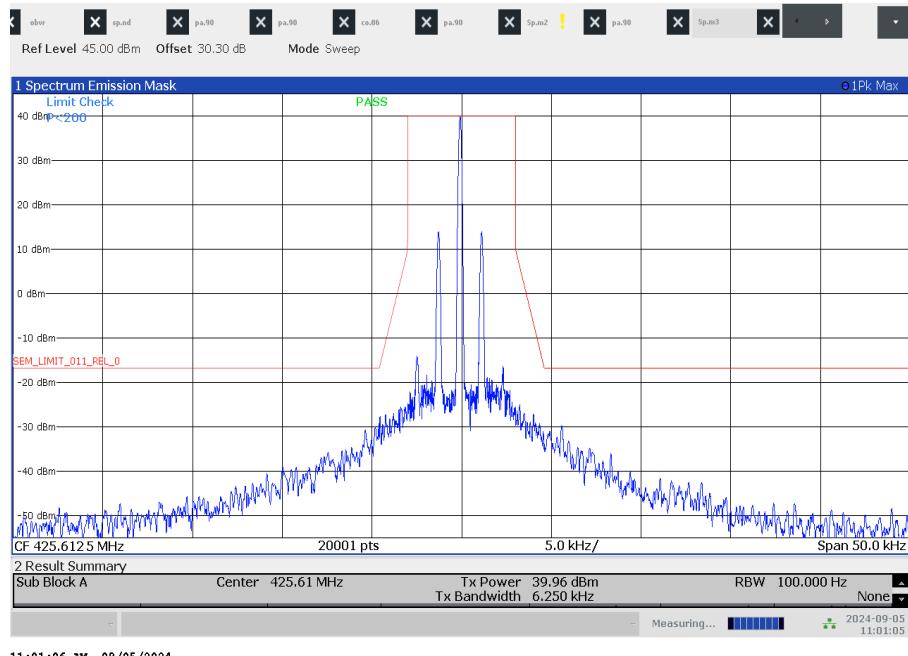
Plot 1: Emission mask E, tx @425.6125 MHz / 512 bits per second – low power – carrier modulated



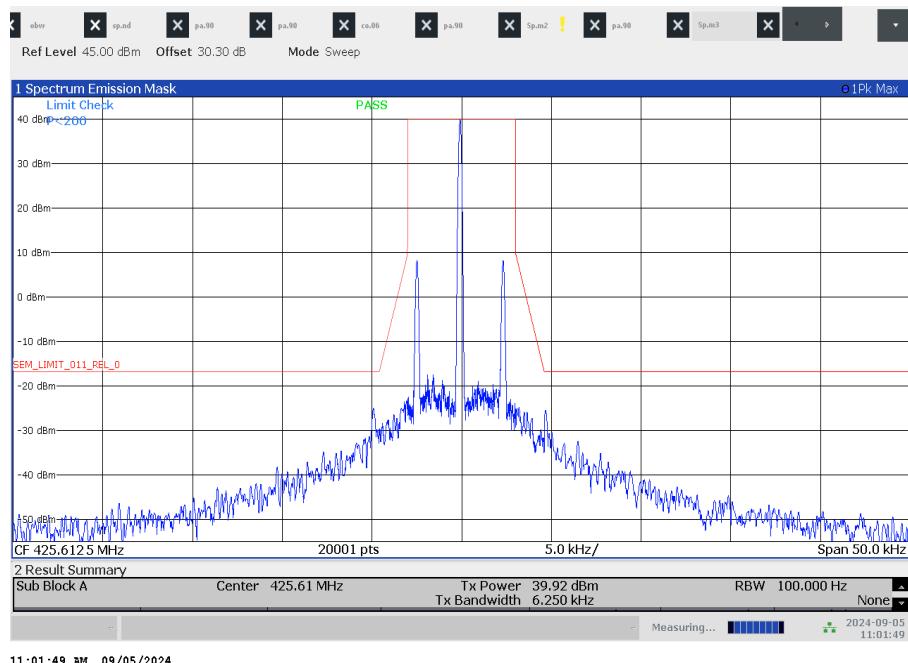
Plot 2: Emission mask E, tx @425.6125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask E, tx @425.6125 MHz / 2400 bits per second – low power – carrier modulated

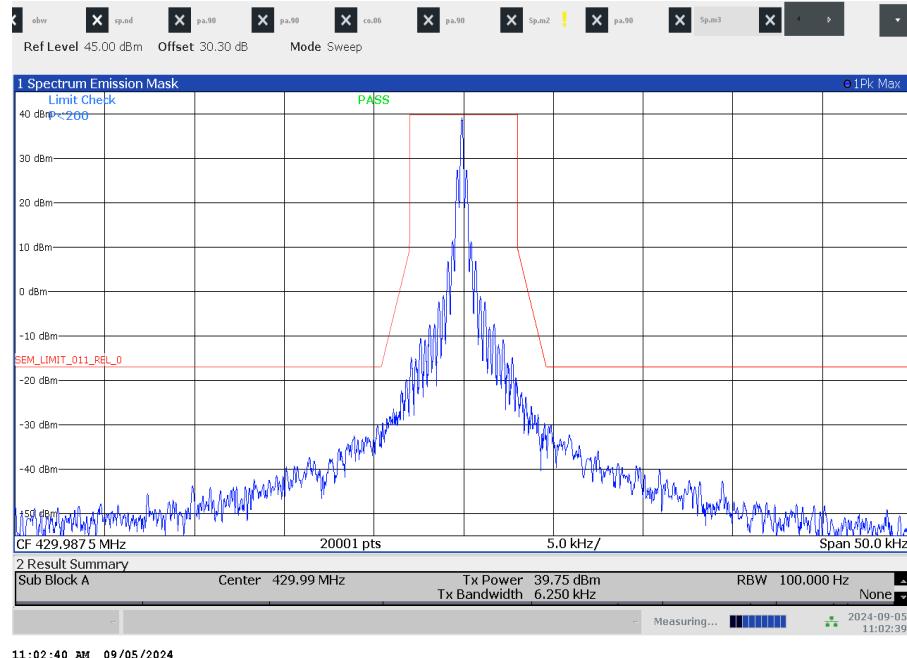


Plot 4: Emission mask E, tx @425.6125 MHz / 4800 bits per second – low power – carrier modulated

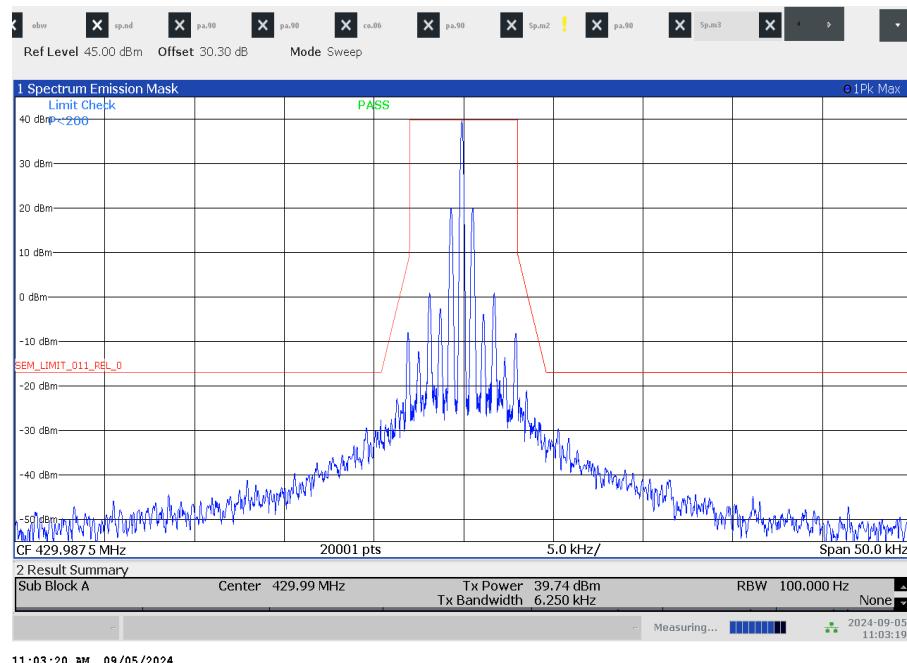


Plots 429.9875 MHz

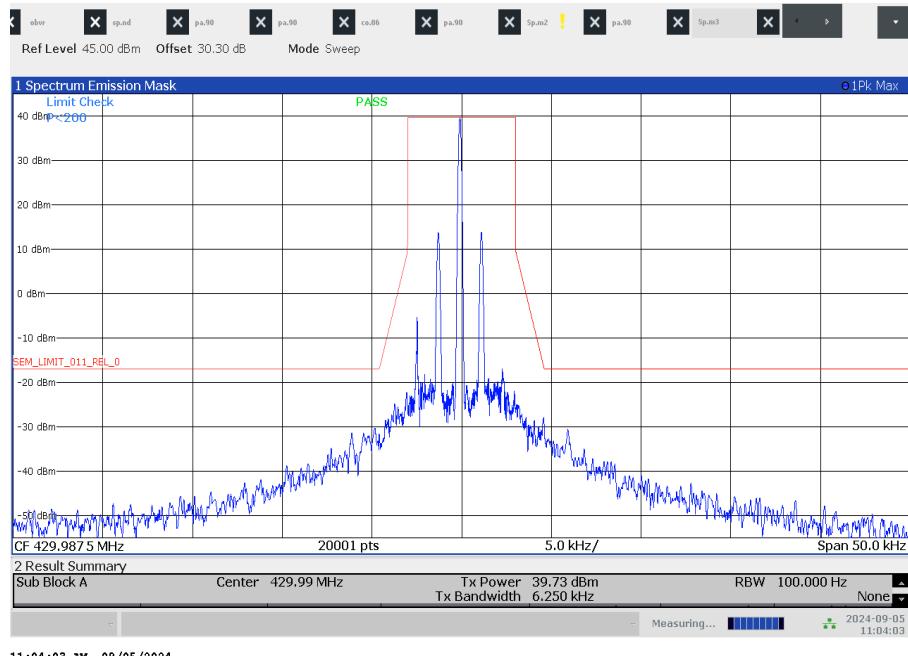
Plot 1: Emission mask E, tx @429.9875 MHz / 512 bits per second – low power – carrier modulated



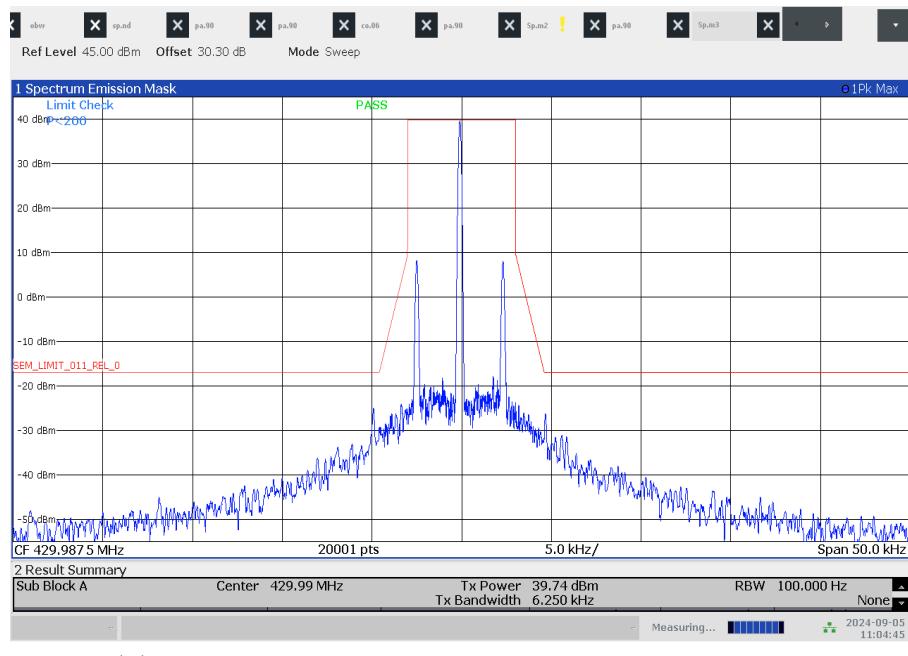
Plot 2: Emission mask E, tx @429.9875 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask E, tx @429.9875 MHz / 2400 bits per second – low power – carrier modulated

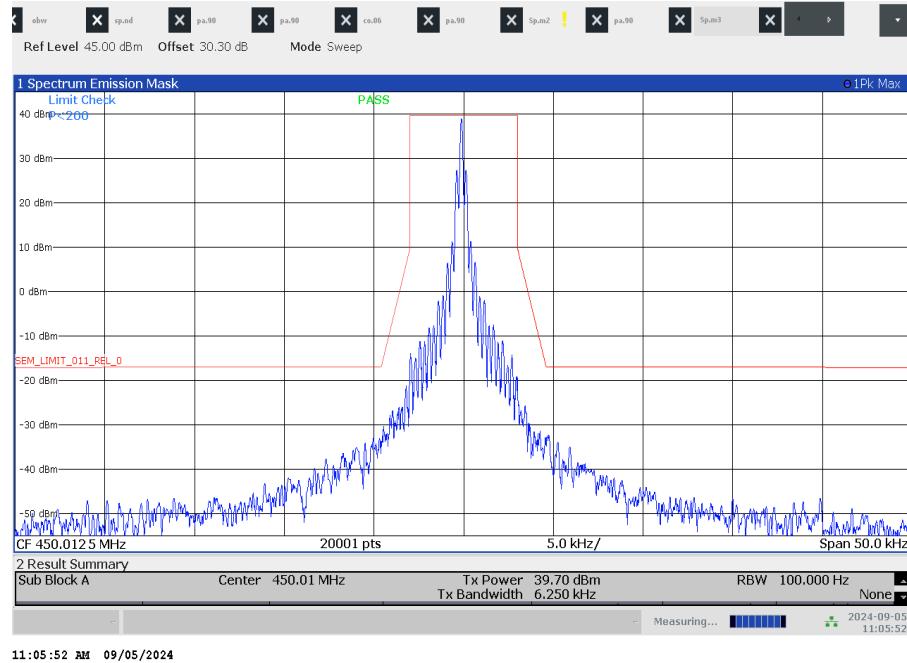


Plot 4: Emission mask E, tx @429.9875 MHz / 4800 bits per second – low power – carrier modulated

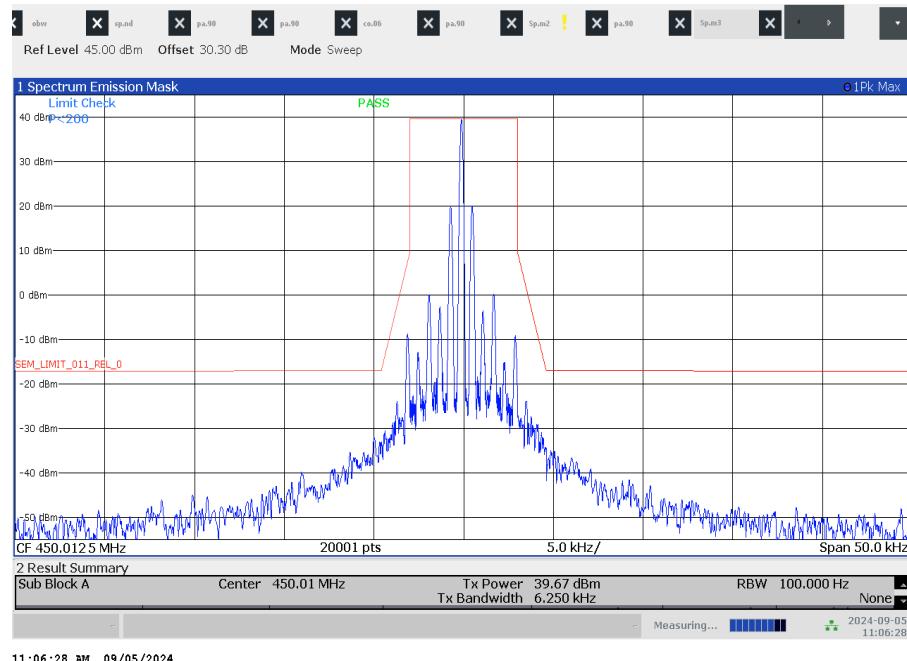


Plots 450.0125 MHz

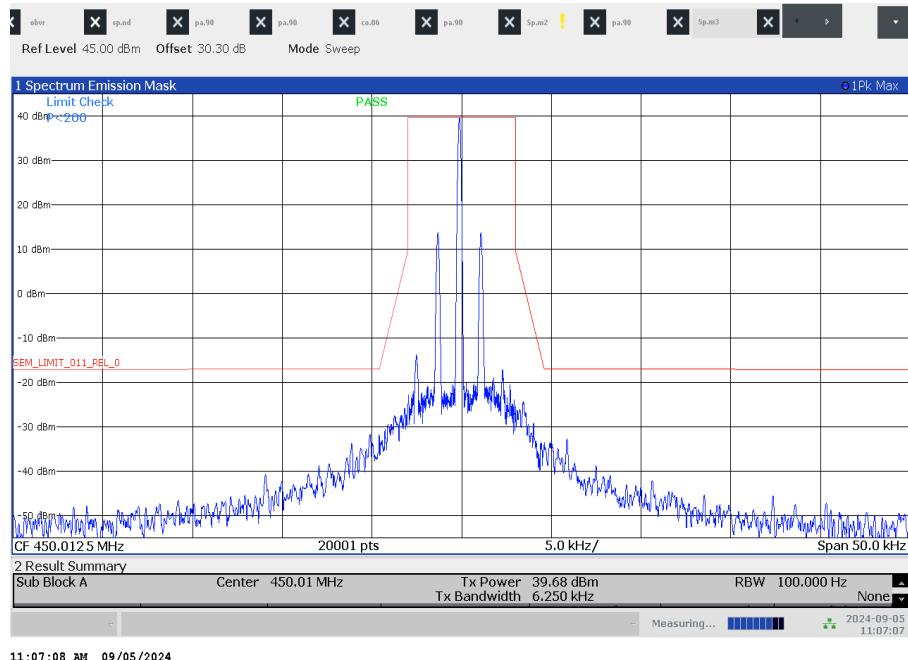
Plot 1: Emission mask E, tx @450.0125 MHz / 512 bits per second – low power – carrier modulated



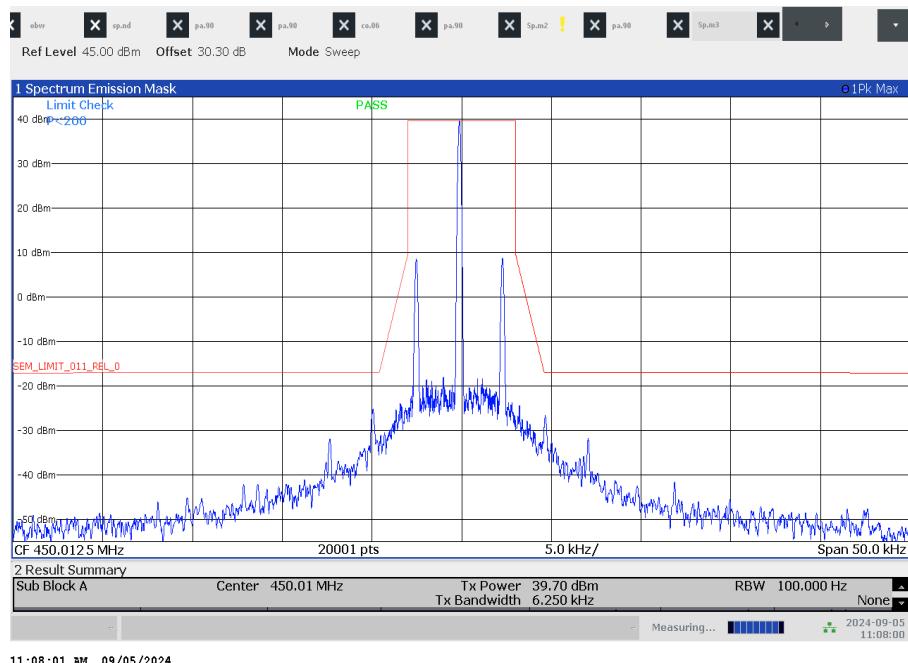
Plot 2: Emission mask E, tx @450.0125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask E, tx @450.0125 MHz / 2400 bits per second – low power – carrier modulated

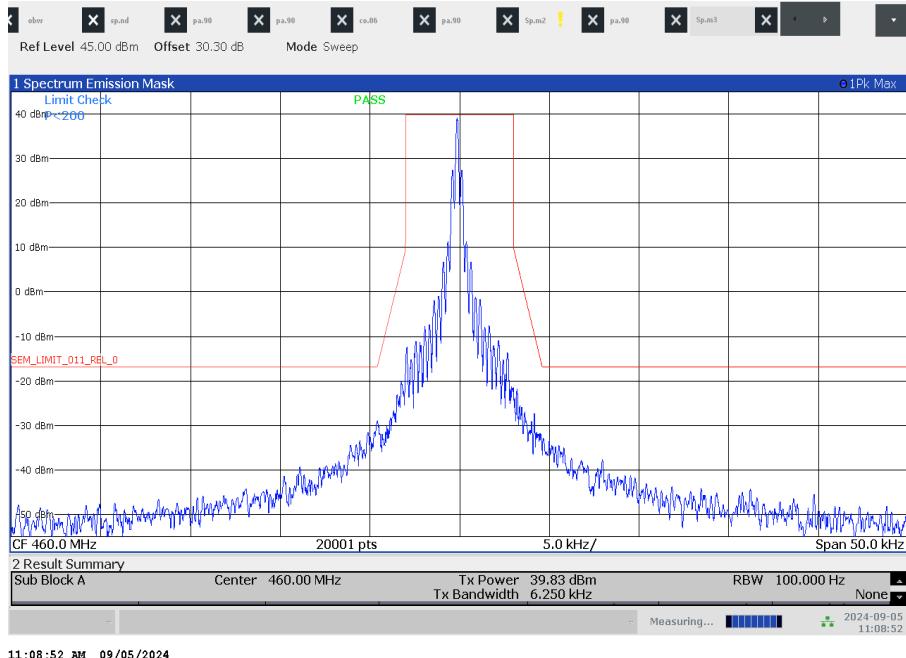


Plot 4: Emission mask E, tx @450.0125 MHz / 4800 bits per second – low power – carrier modulated

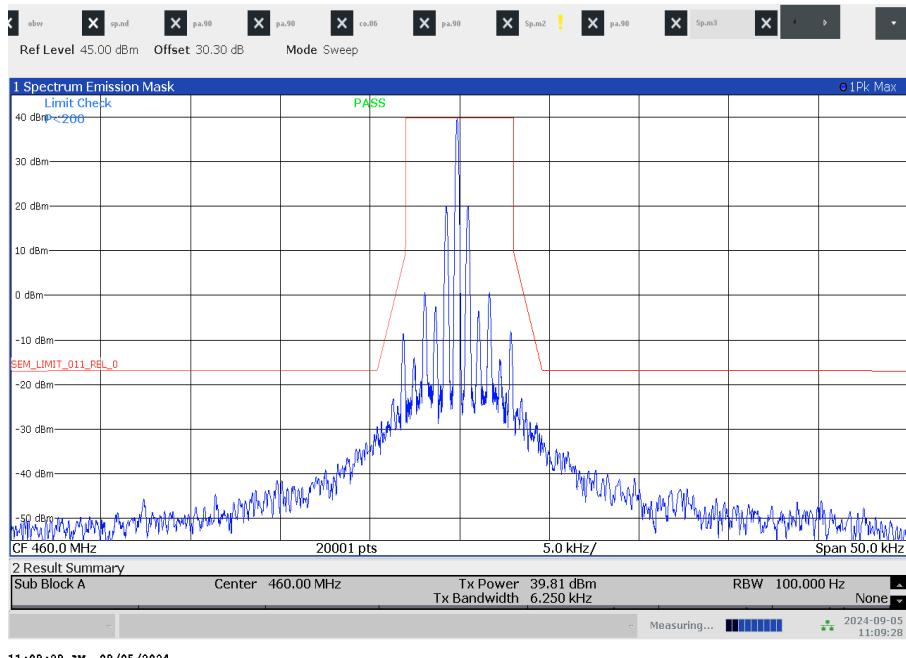


Plots 460.0 MHz

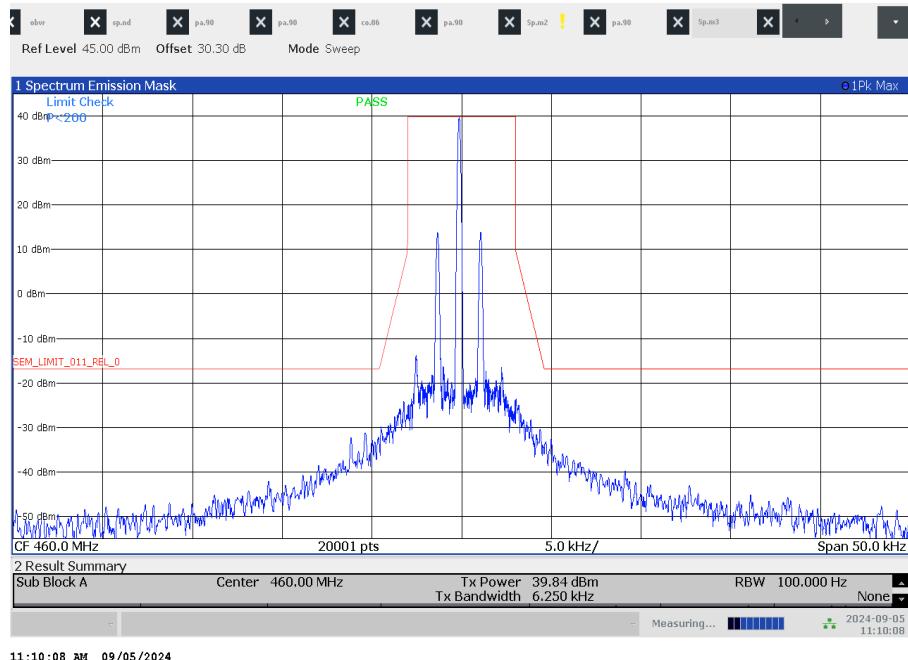
Plot 1: Emission mask E, tx @460.0 MHz / 512 bits per second – low power – carrier modulated



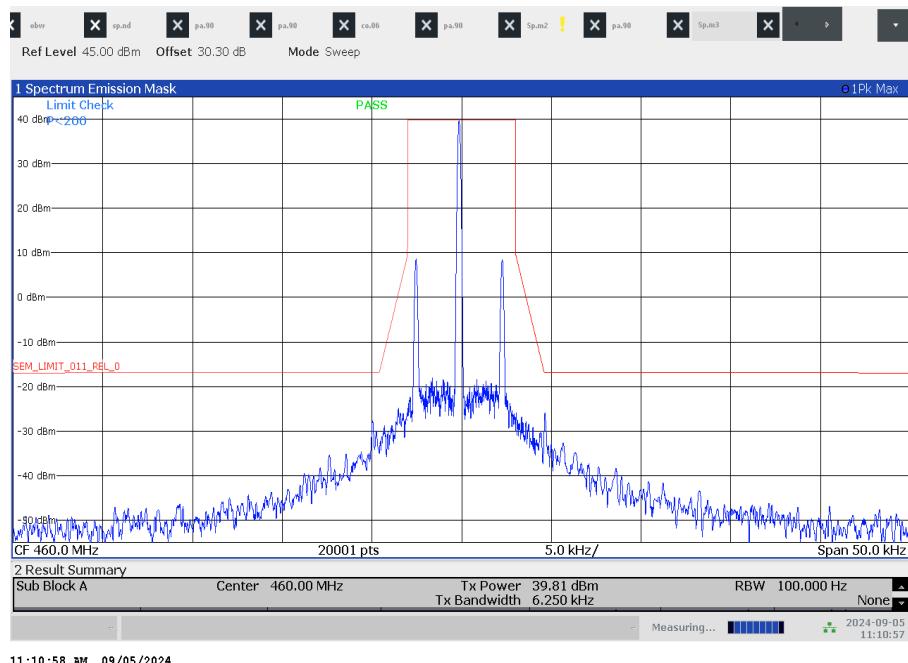
Plot 2: Emission mask E, tx @460.0 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask E, tx @460.0 MHz / 2400 bits per second – low power – carrier modulated

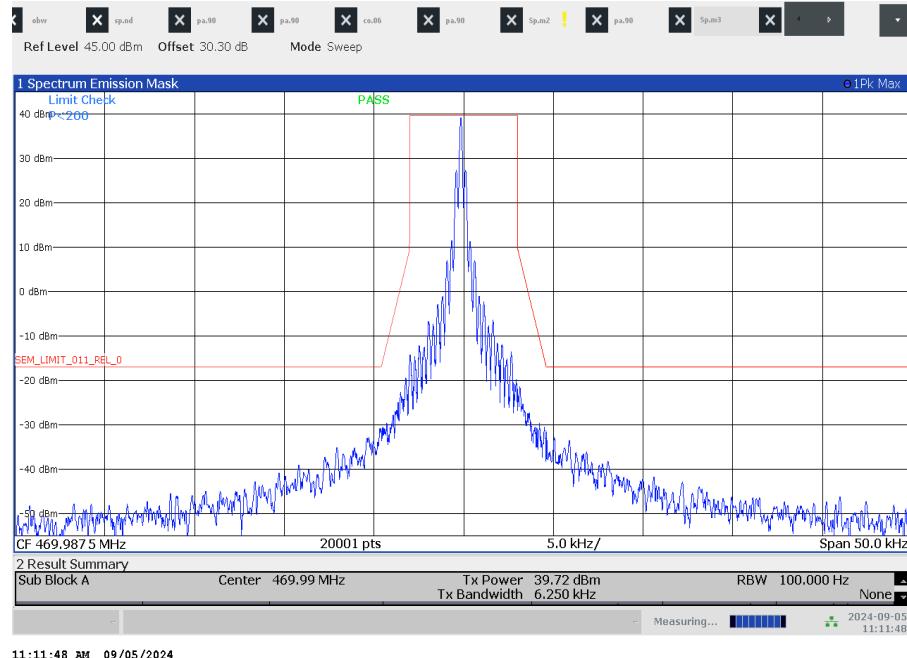


Plot 4: Emission mask E, tx @460.0 MHz / 4800 bits per second – low power – carrier modulated

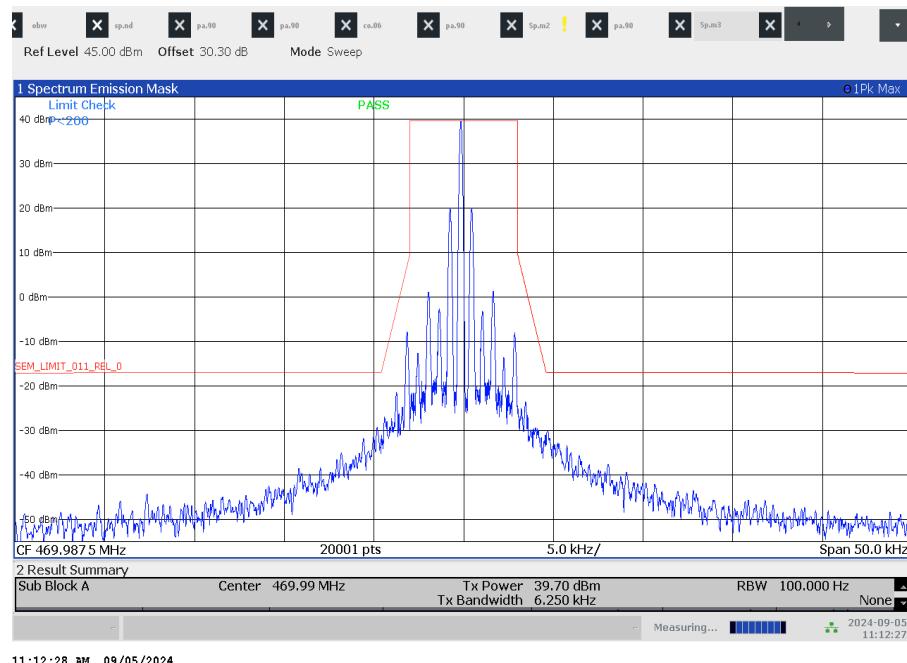


Plots 469.9875 MHz

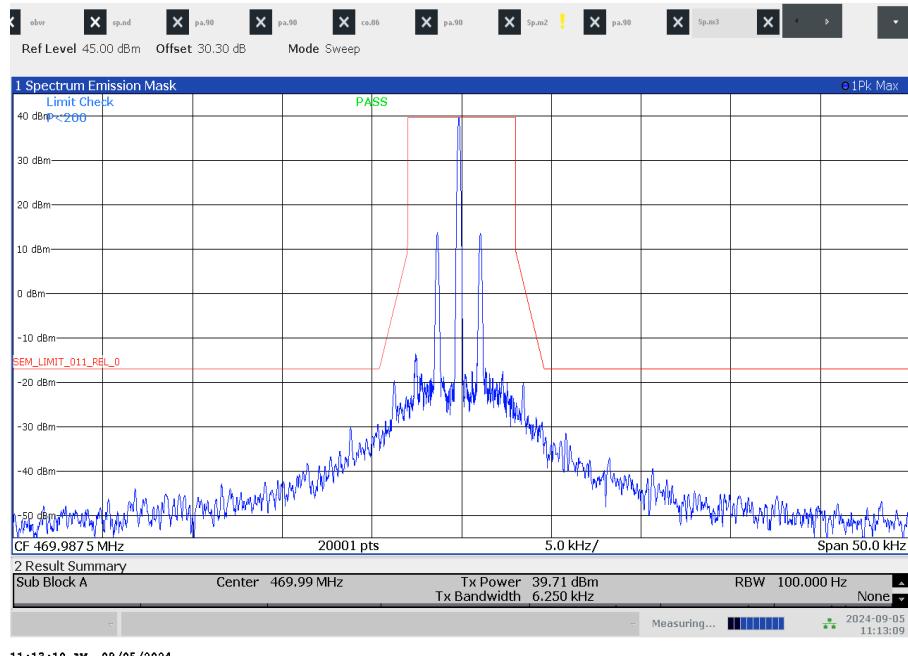
Plot 1: Emission mask E, tx @469.9875 MHz / 512 bits per second – low power – carrier modulated



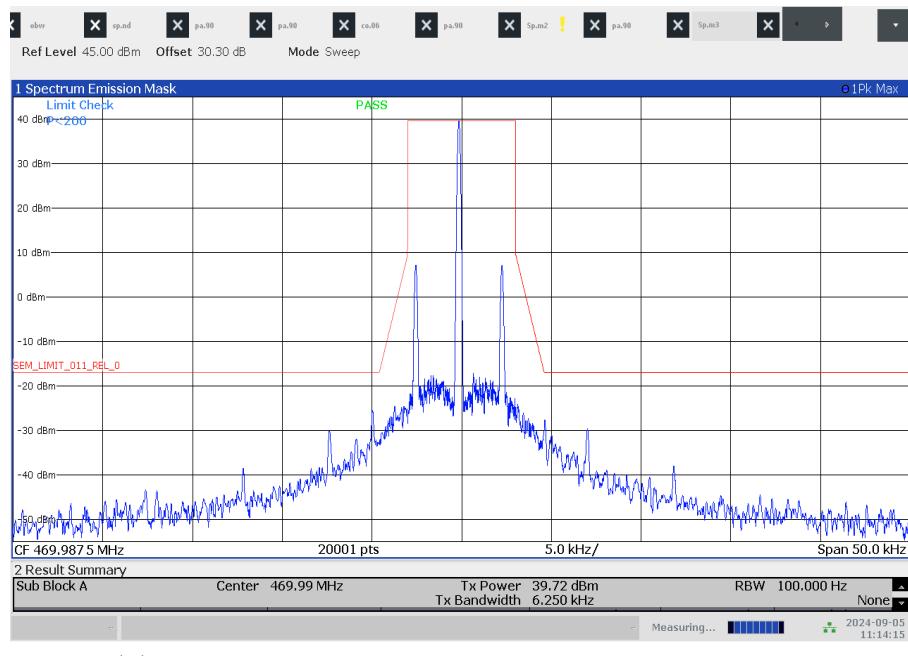
Plot 2: Emission mask E, tx @469.9875 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask E, tx @469.9875 MHz / 2400 bits per second – low power – carrier modulated

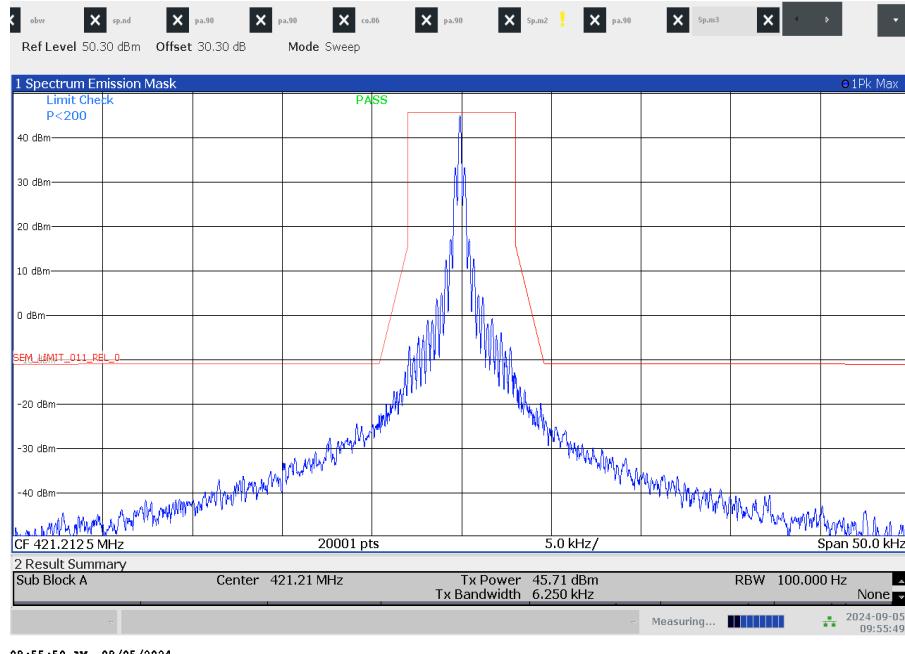


Plot 4: Emission mask E, tx @469.9875 MHz / 4800 bits per second – low power – carrier modulated

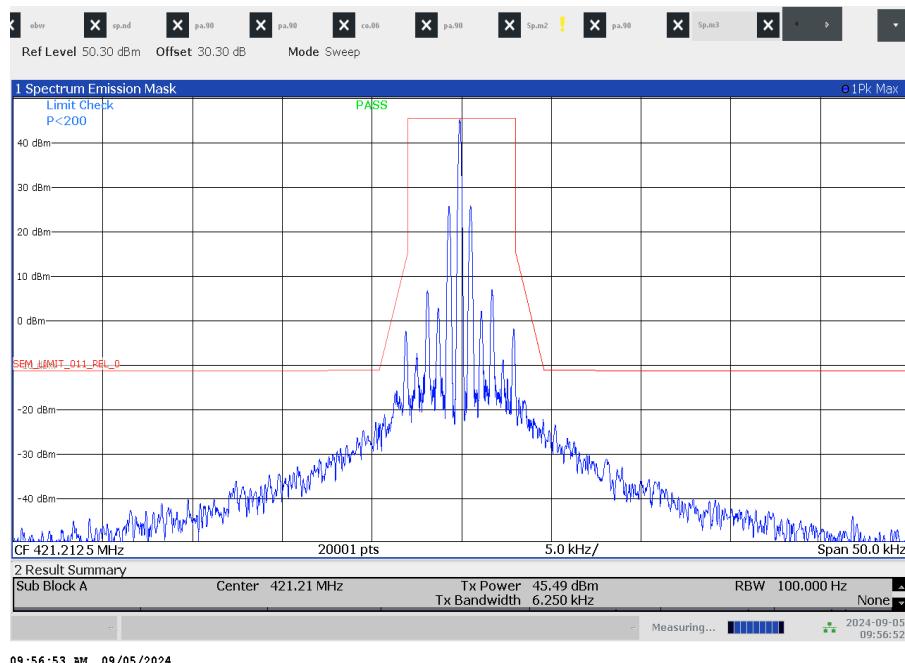


Plots 421.2125 MHz

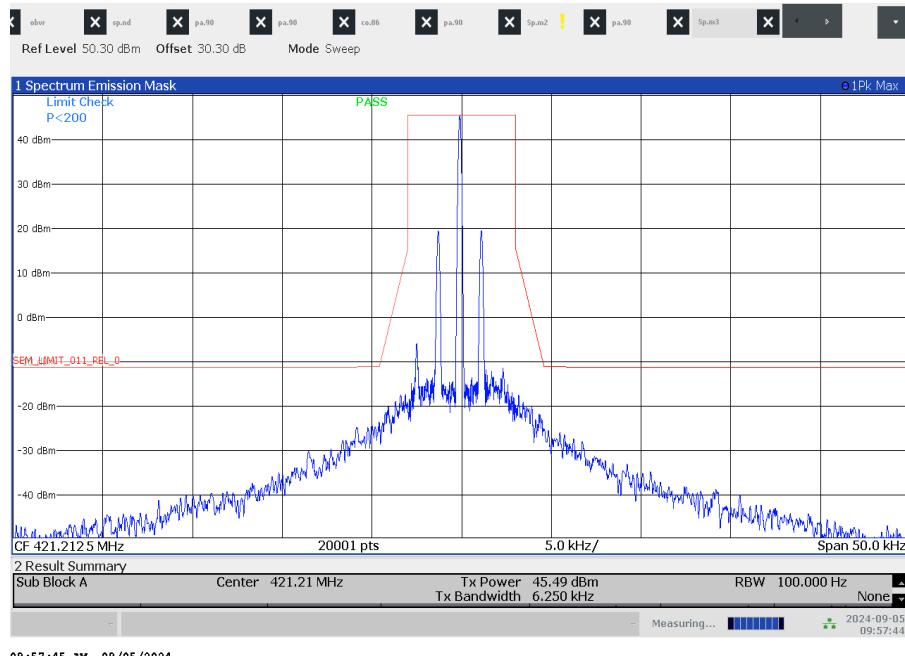
Plot 1: Emission mask E, tx @421.2125 MHz / 512 bits per second – high power – carrier modulated



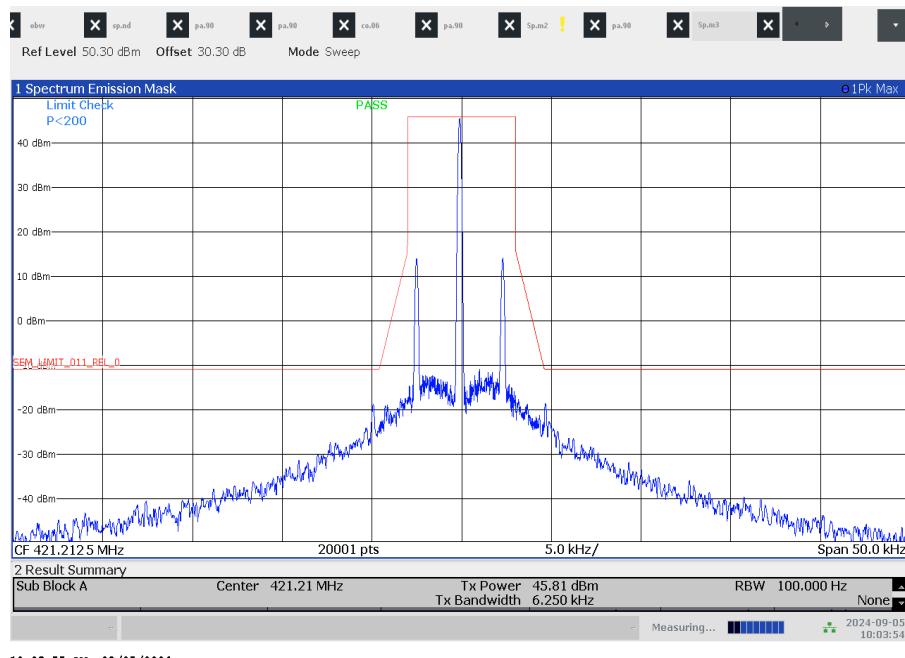
Plot 2: Emission mask E, tx @421.2125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask E, tx @421.2125 MHz / 2400 bits per second – high power – carrier modulated

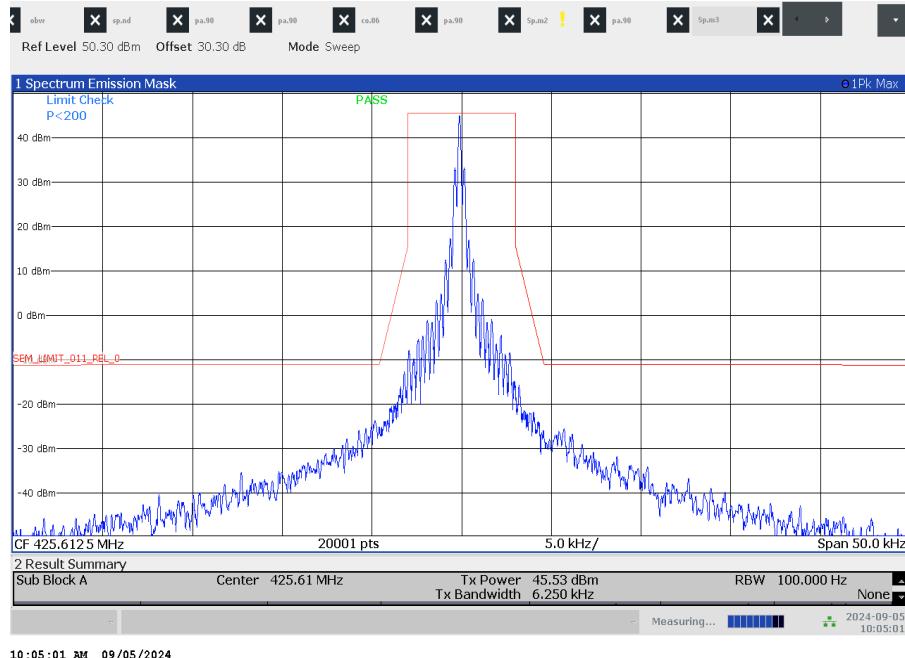


Plot 4: Emission mask E, tx @421.2125 MHz / 4800 bits per second – high power – carrier modulated

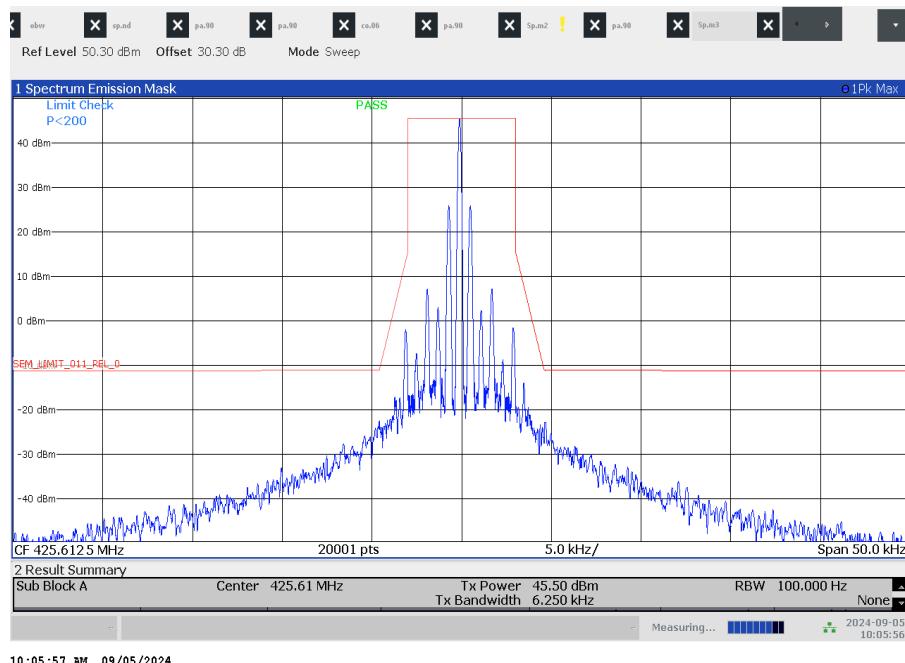


Plots 425.6125 MHz

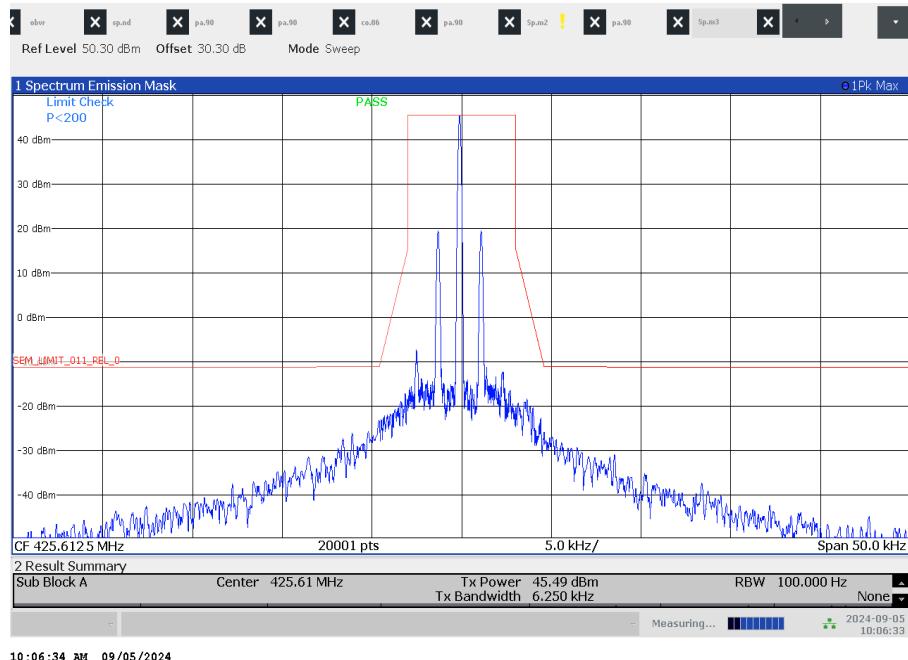
Plot 1: Emission mask E, tx @425.6125 MHz / 512 bits per second – high power – carrier modulated



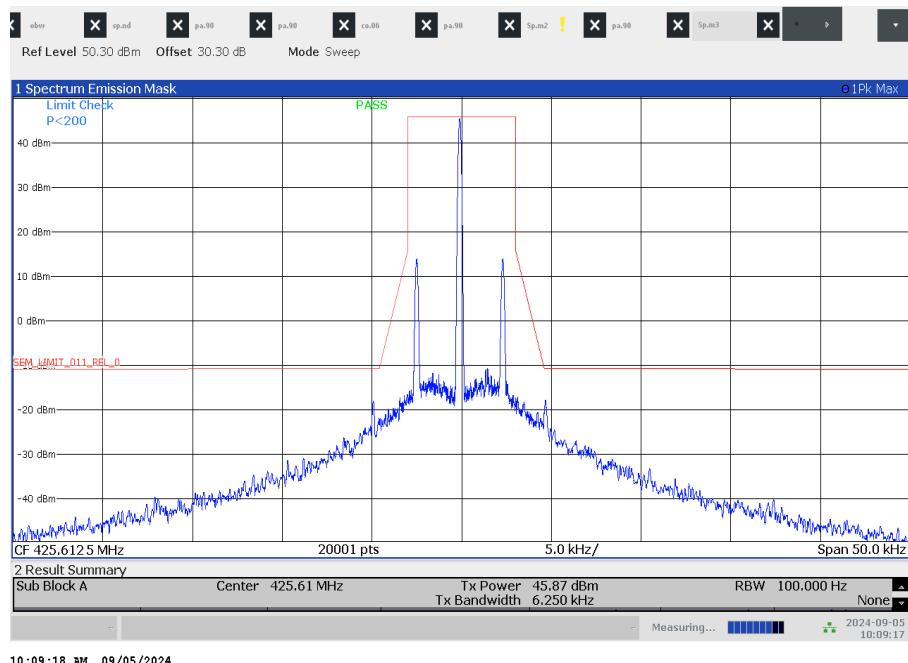
Plot 2: Emission mask E, tx @425.6125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask E, tx @425.6125 MHz / 2400 bits per second – high power – carrier modulated

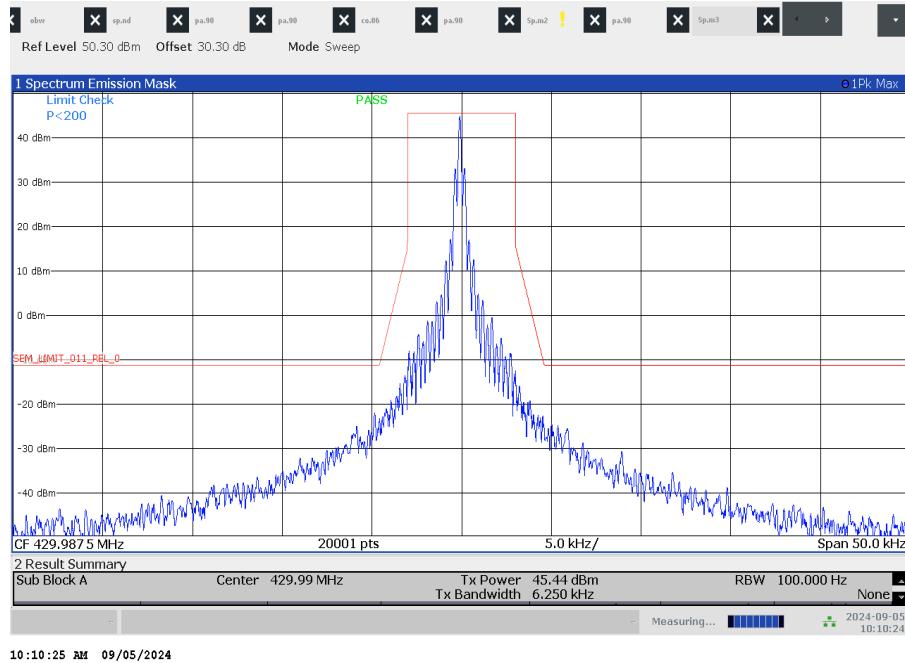


Plot 4: Emission mask E, tx @425.6125 MHz / 4800 bits per second – high power – carrier modulated

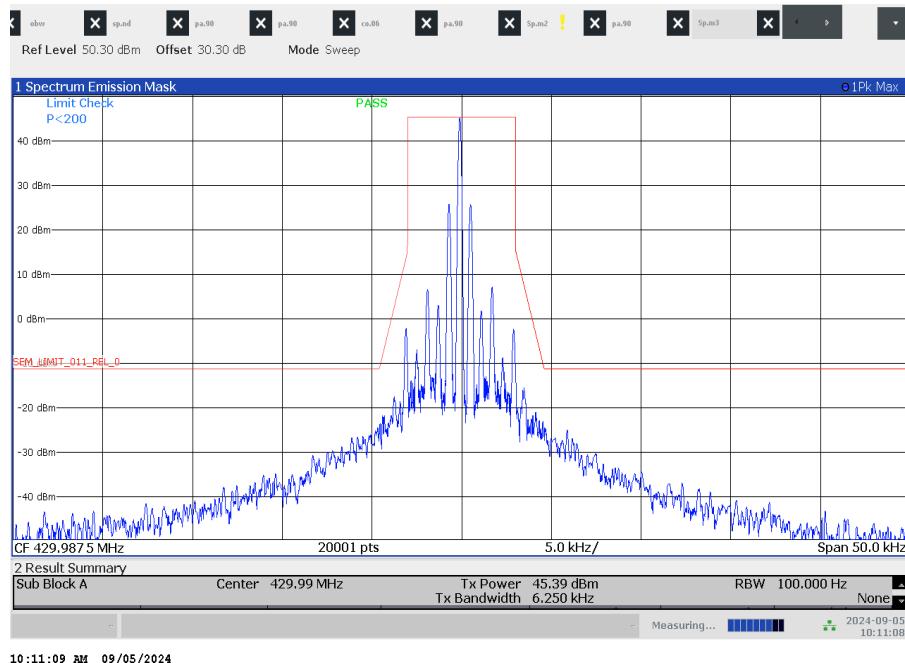


Plots 429.9875 MHz

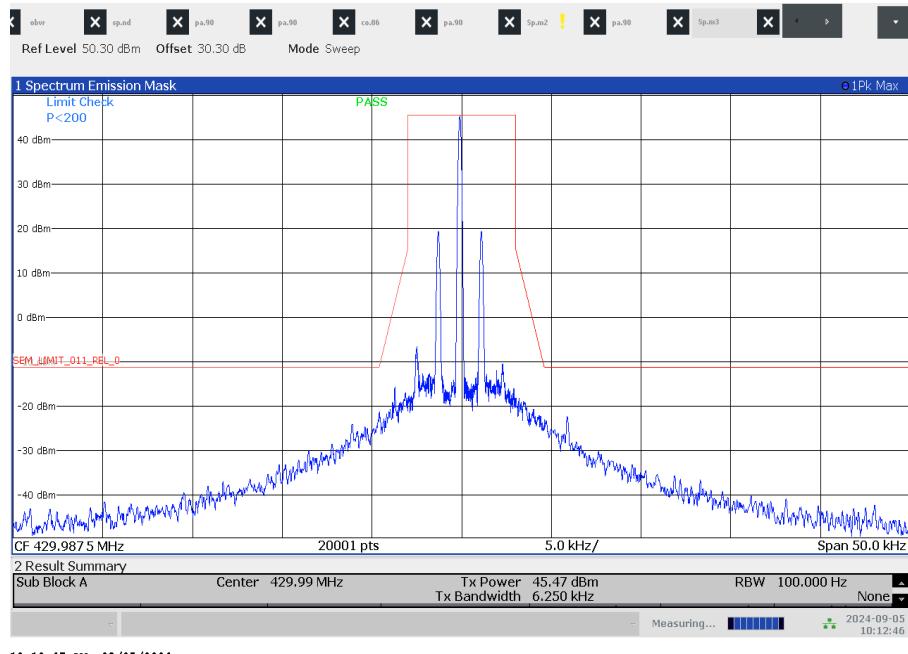
Plot 1: Emission mask E, tx @429.9875 MHz / 512 bits per second – high power – carrier modulated



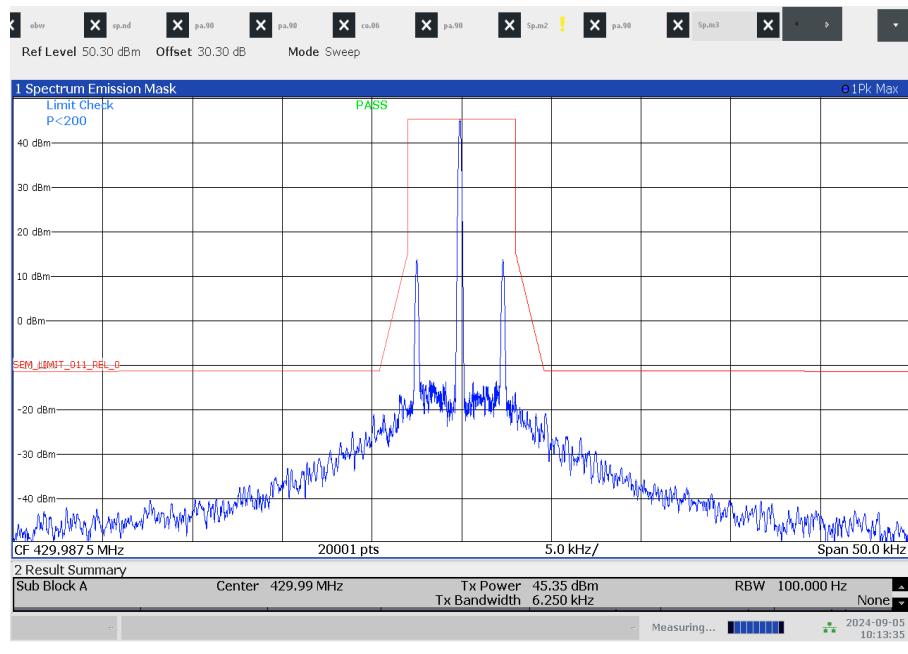
Plot 2: Emission mask E, tx @429.9875 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask E, tx @429.9875 MHz / 2400 bits per second – high power – carrier modulated

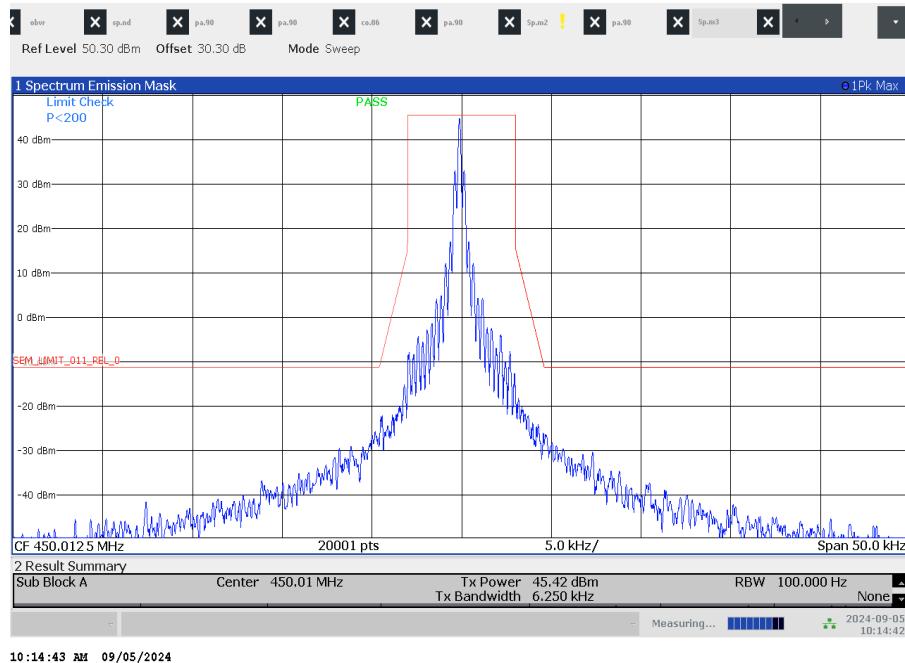


Plot 4: Emission mask E, tx @429.9875 MHz / 4800 bits per second – high power – carrier modulated

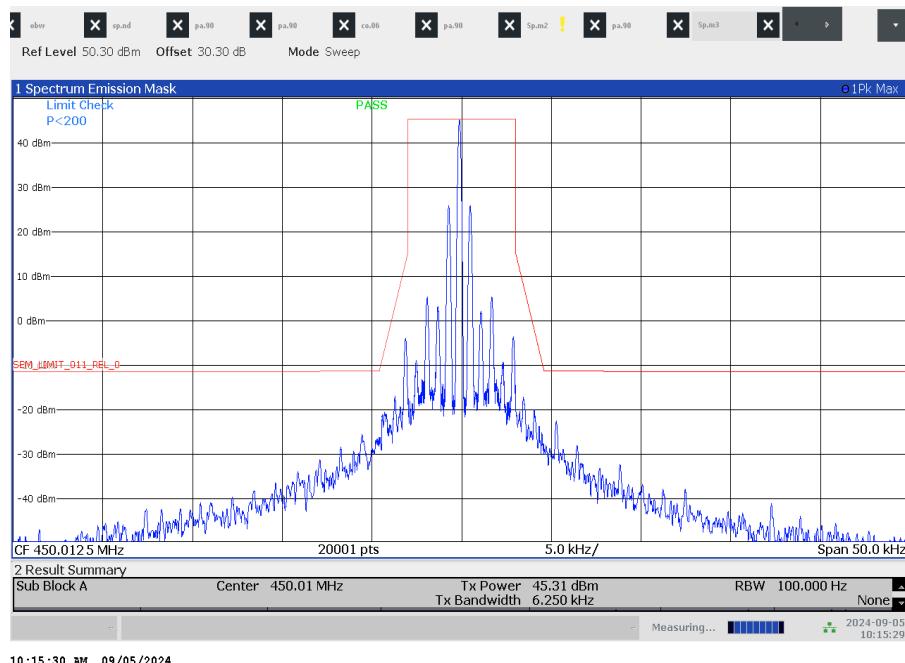


Plots 450.0125 MHz

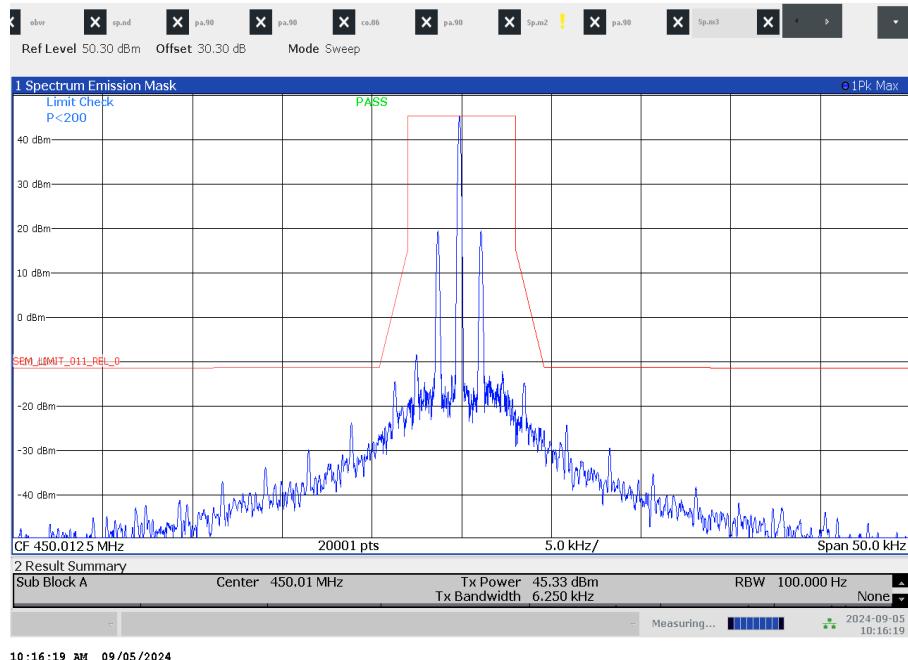
Plot 1: Emission mask E, tx @450.0125 MHz / 512 bits per second – high power – carrier modulated



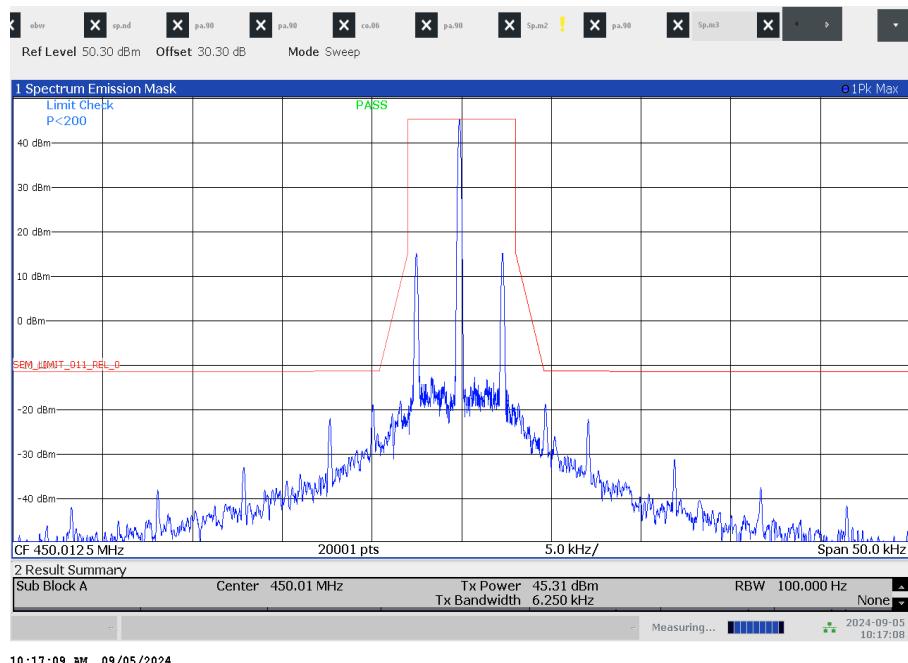
Plot 2: Emission mask E, tx @450.0125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask E, tx @450.0125 MHz / 2400 bits per second – high power – carrier modulated

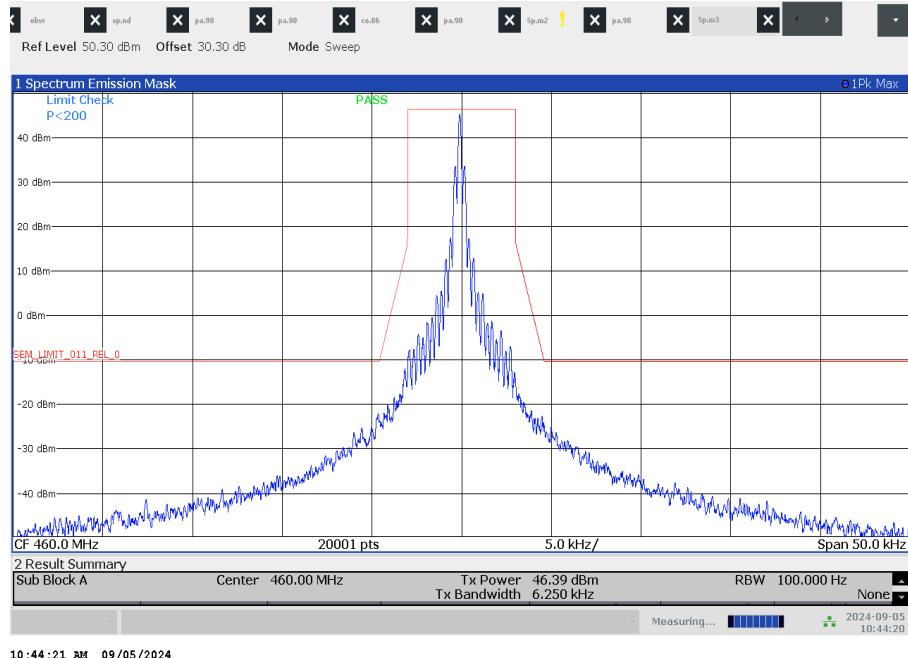


Plot 4: Emission mask E, tx @450.0125 MHz / 4800 bits per second – high power – carrier modulated

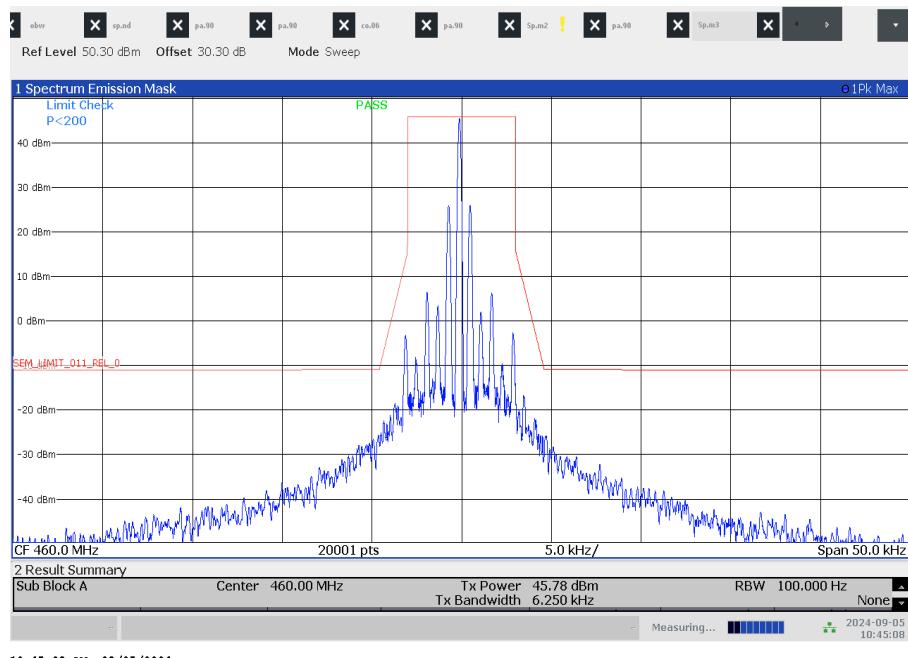


Plots 460.0 MHz

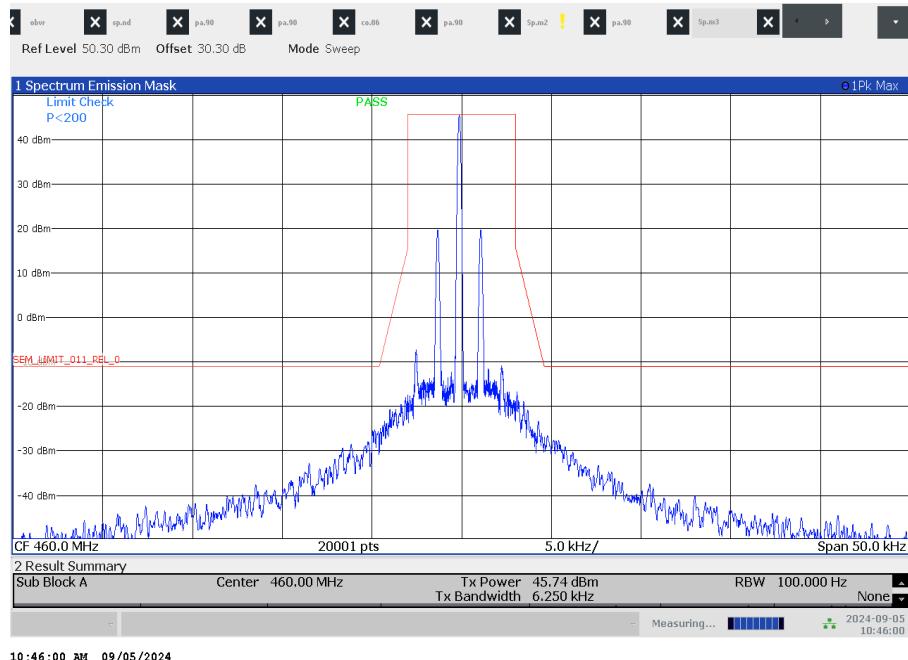
Plot 1: Emission mask E, tx @460.0 MHz / 512 bits per second – high power – carrier modulated



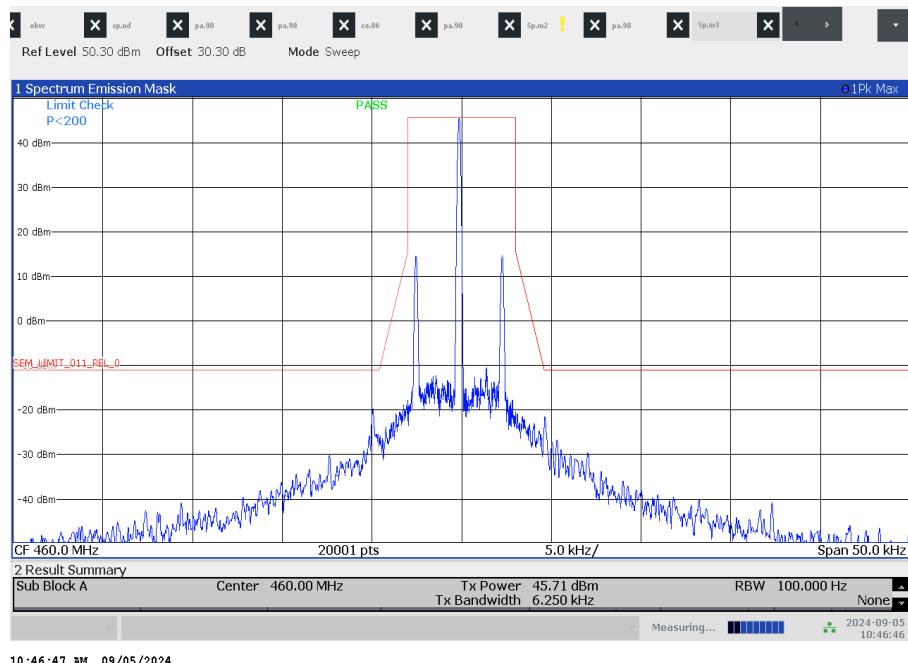
Plot 2: Emission mask E, tx @460.0 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask E, tx @460.0 MHz / 2400 bits per second – high power – carrier modulated

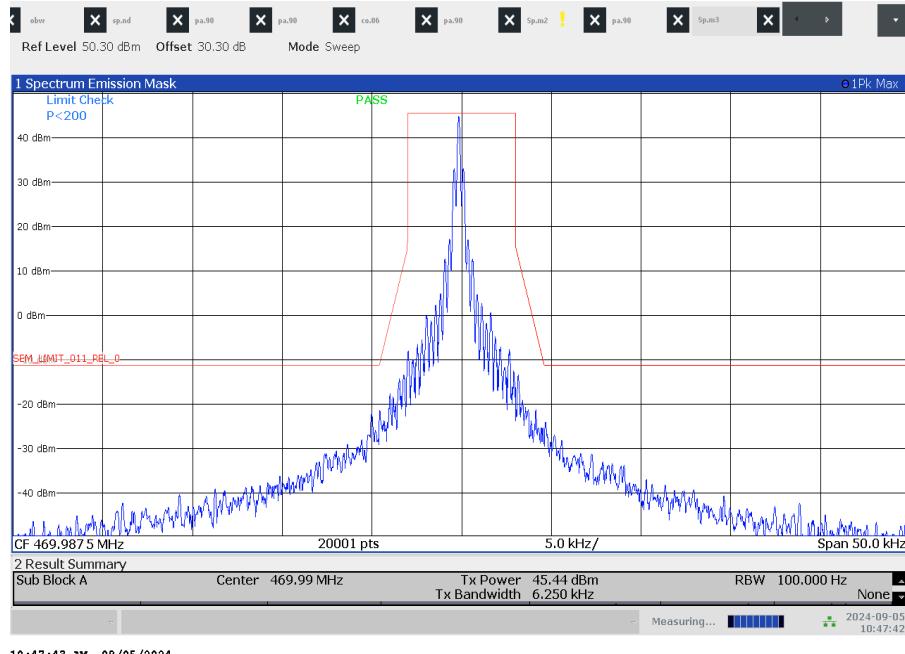


Plot 4: Emission mask E, tx @460.0 MHz / 4800 bits per second – high power – carrier modulated

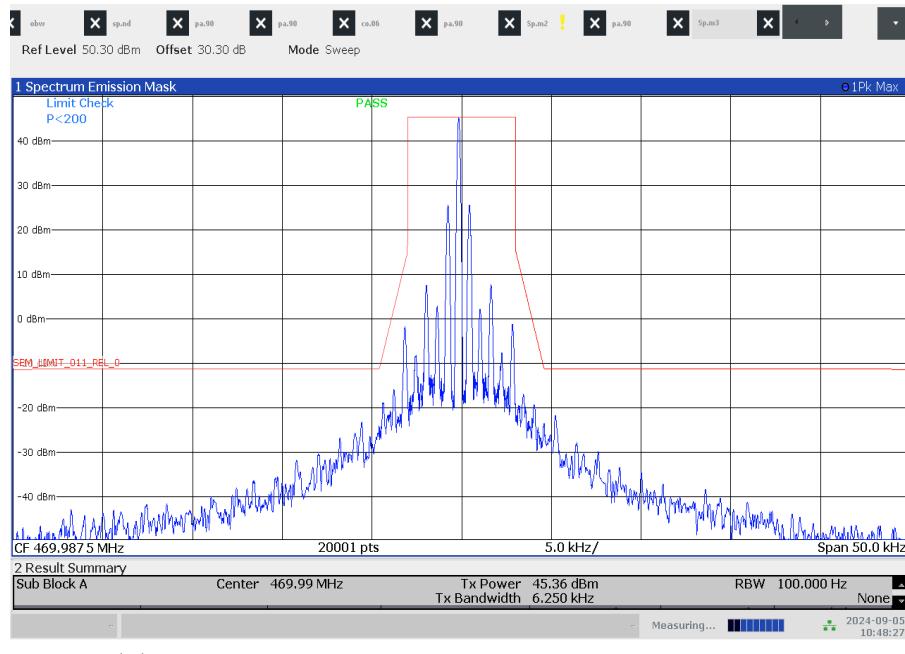


Plots 469.9875 MHz

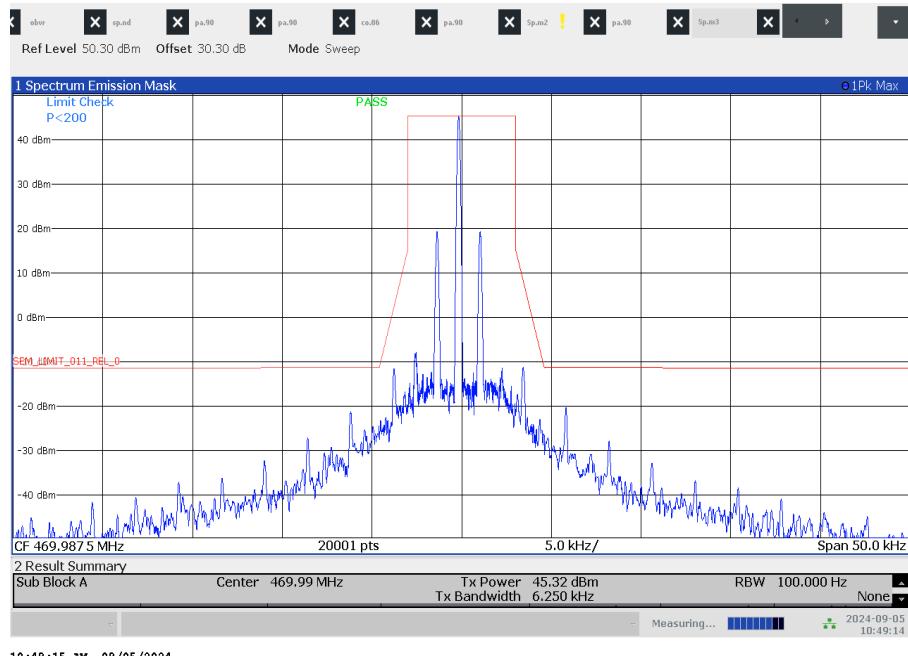
Plot 1: Emission mask E, tx @469.9875 MHz / 512 bits per second – high power – carrier modulated



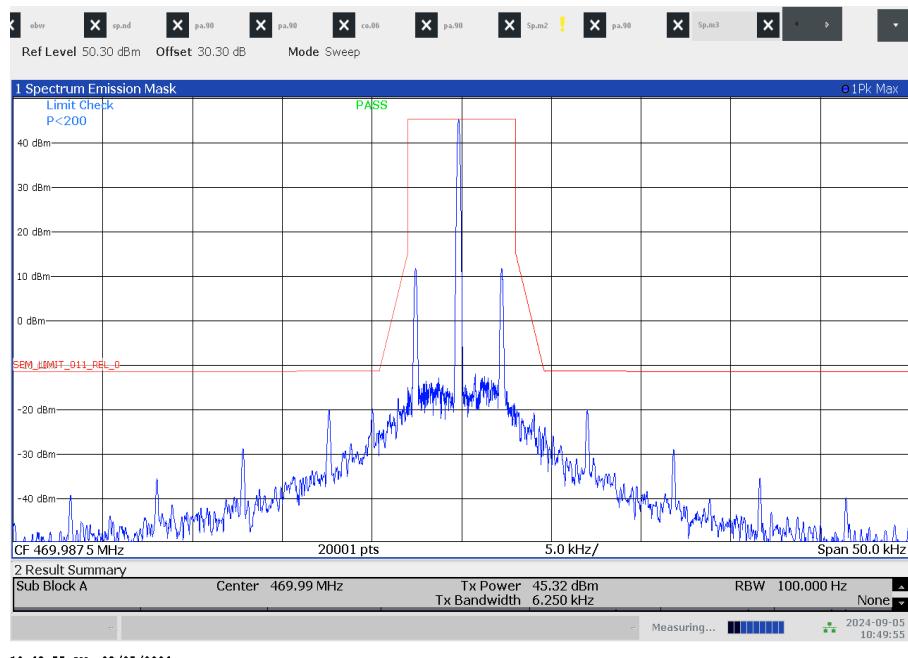
Plot 2: Emission mask E, tx @469.9875 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask E, tx @469.9875 MHz / 2400 bits per second – high power – carrier modulated



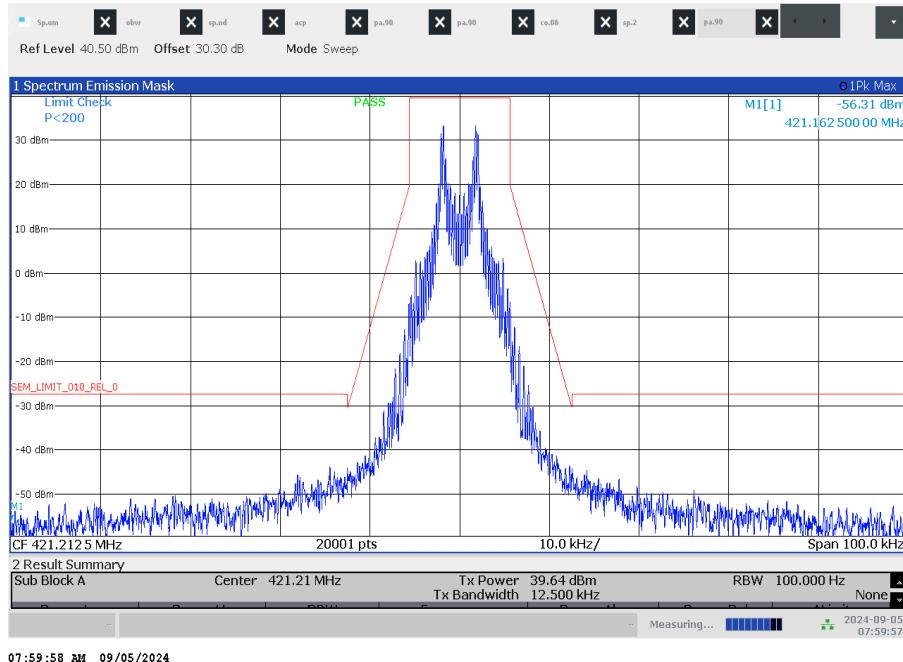
Plot 4: Emission mask E, tx @469.9875 MHz / 4800 bits per second – high power – carrier modulated



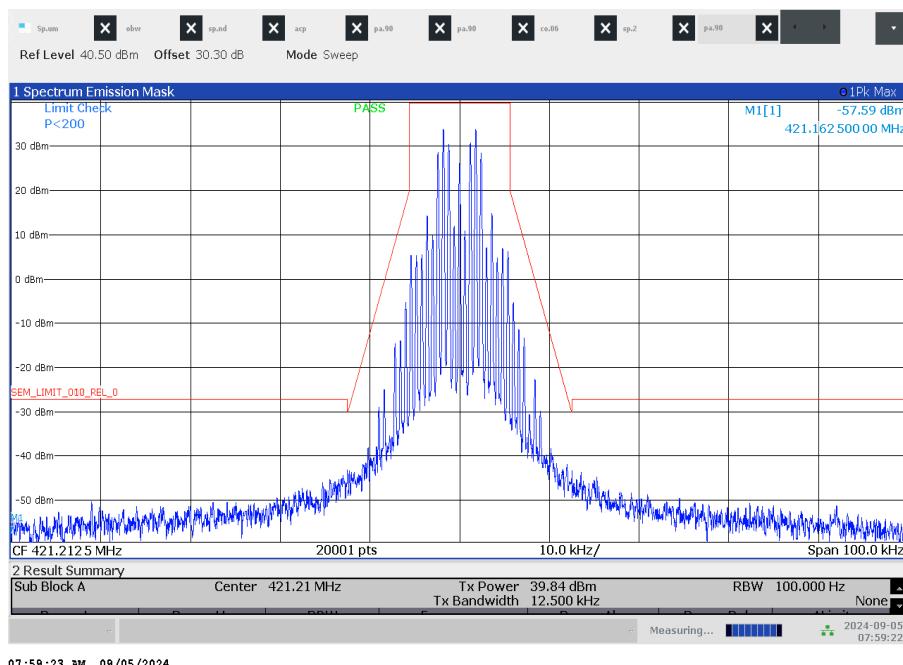
13.4.2 Spectrum masks 12.5 kHz bandwidth (Emission mask D)

Plots 421.2125 MHz

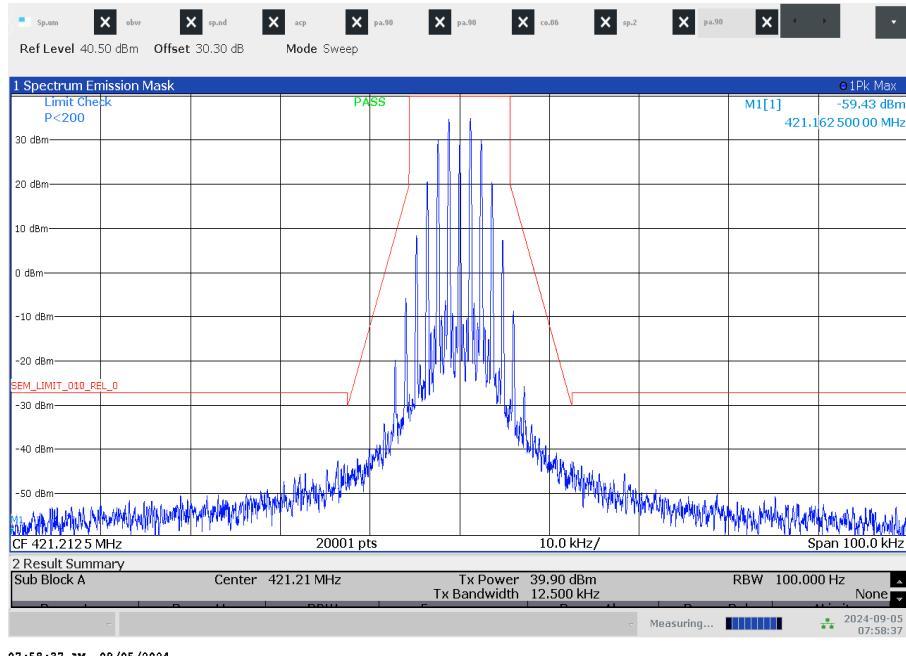
Plot 1: Emission mask D, tx @421.2125 MHz / 512 bits per second – low power – carrier modulated



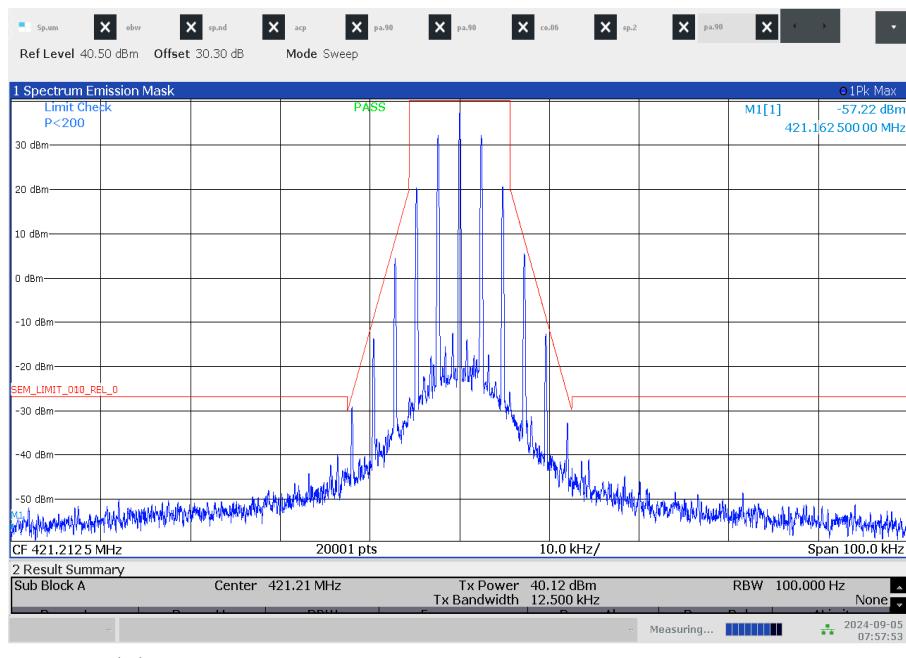
Plot 2: Emission mask D, tx @421.2125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask D, tx @421.2125 MHz / 2400 bits per second – low power – carrier modulated

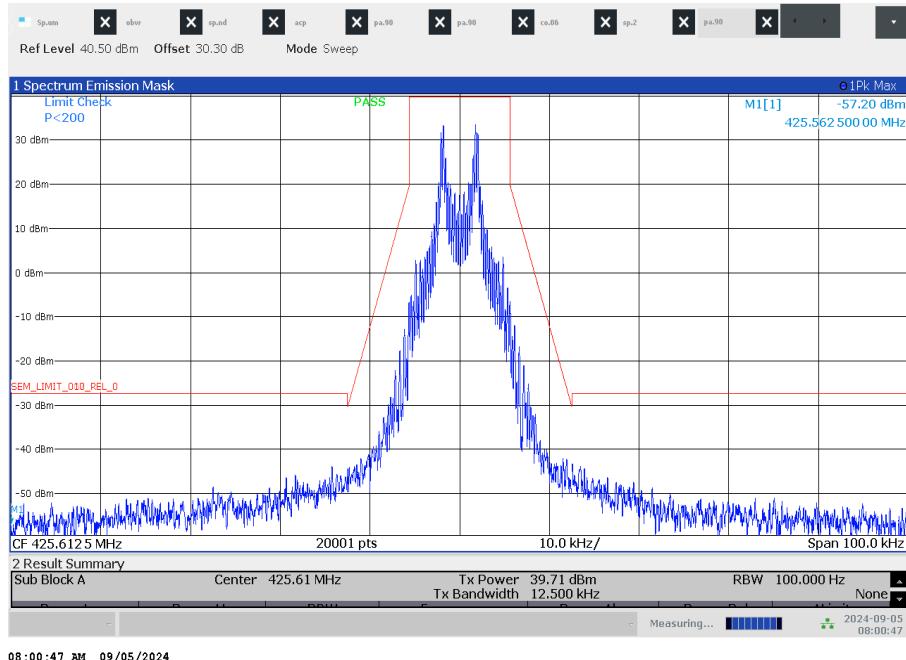


Plot 4: Emission mask D, tx @421.2125 MHz / 4800 bits per second – low power – carrier modulated

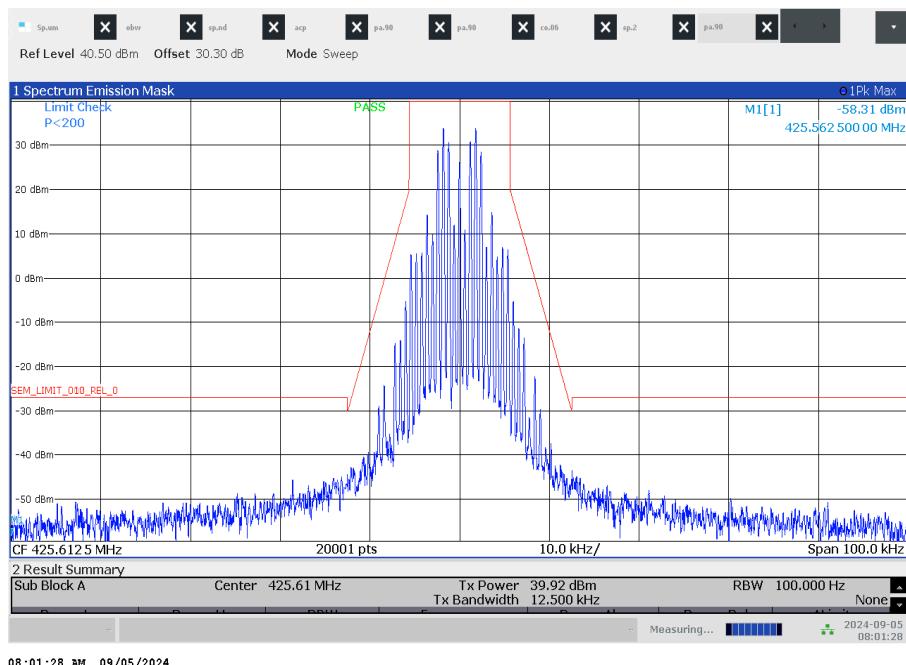


Plots 425.6125 MHz

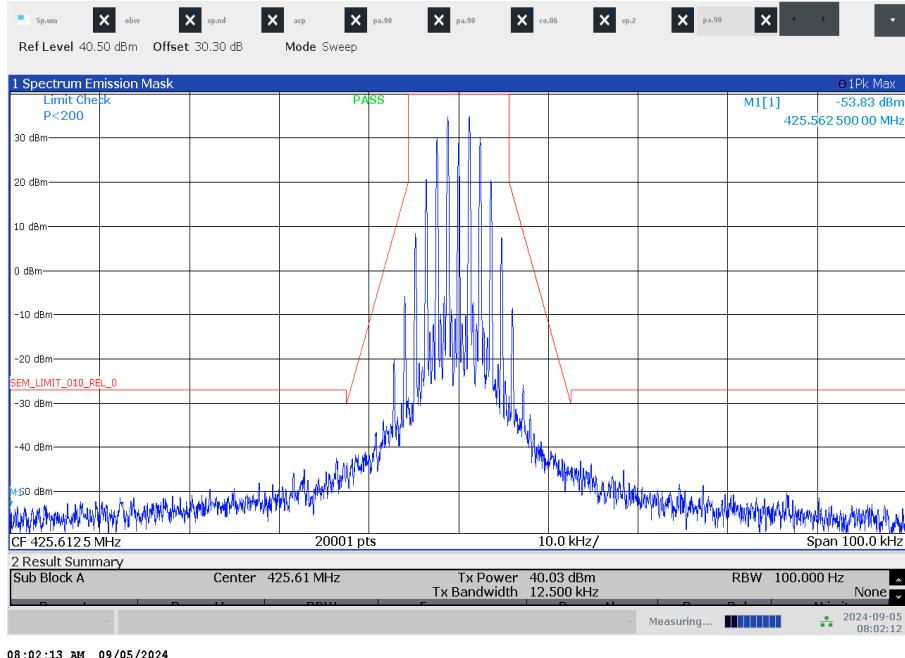
Plot 1: Emission mask D, tx @425.6125 MHz / 512 bits per second – low power – carrier modulated



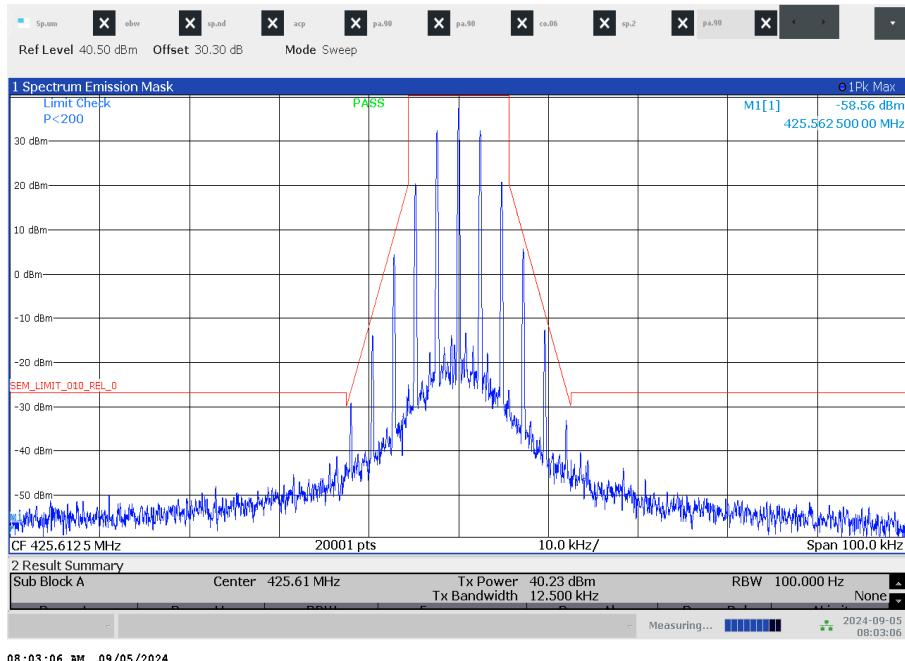
Plot 2: Emission mask D, tx @425.6125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask D, tx @425.6125 MHz / 2400 bits per second – low power – carrier modulated

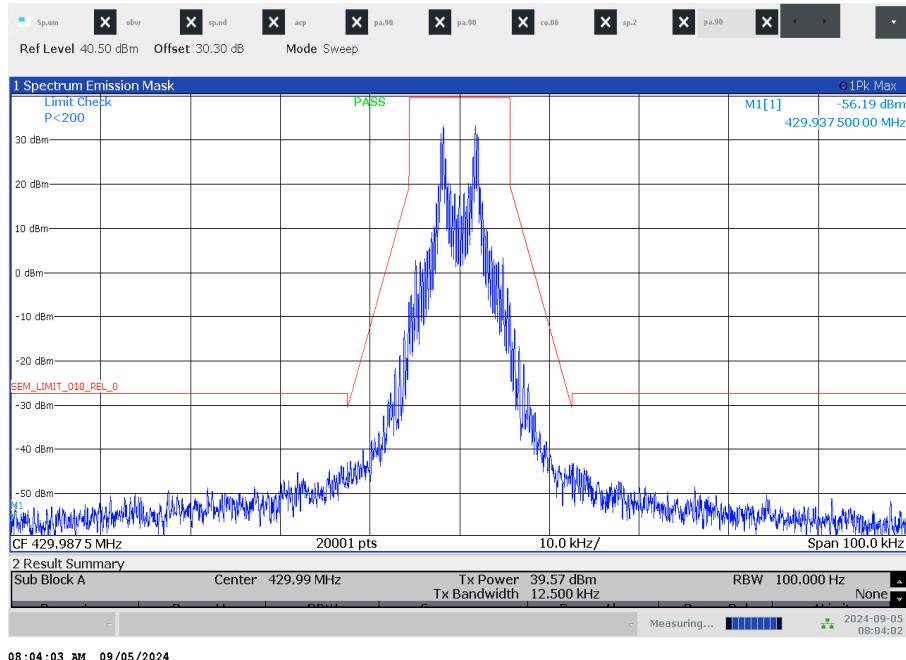


Plot 4: Emission mask D, tx @425.6125 MHz / 4800 bits per second – low power – carrier modulated

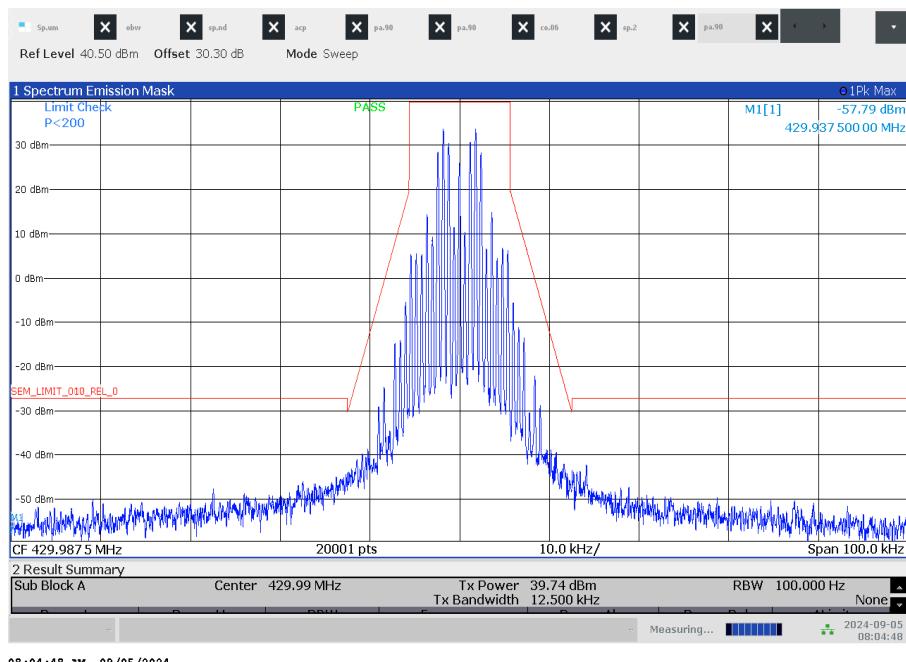


Plots 429.9875 MHz

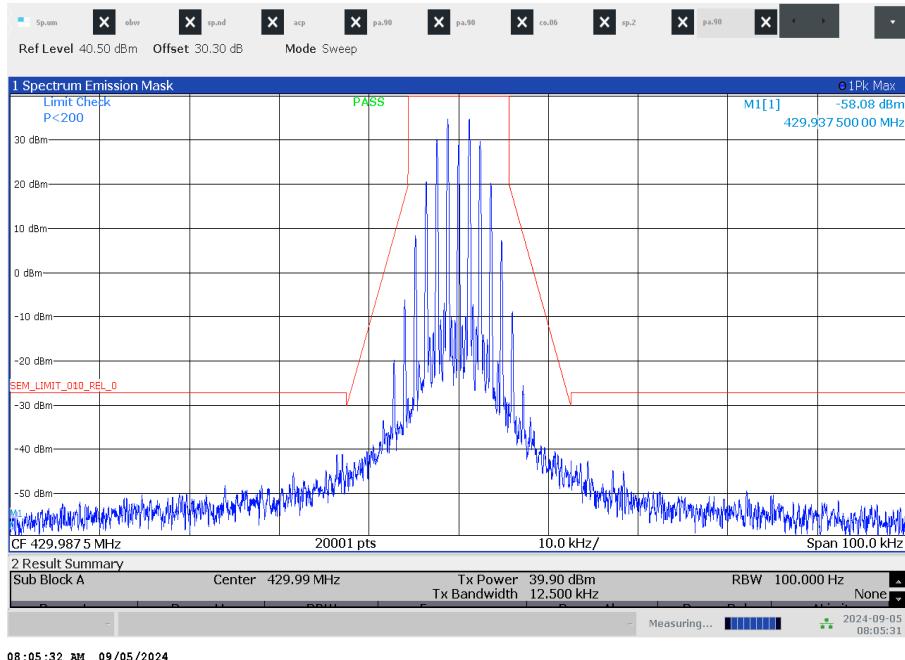
Plot 1: Emission mask D, tx @429.9875 MHz / 512 bits per second – low power – carrier modulated



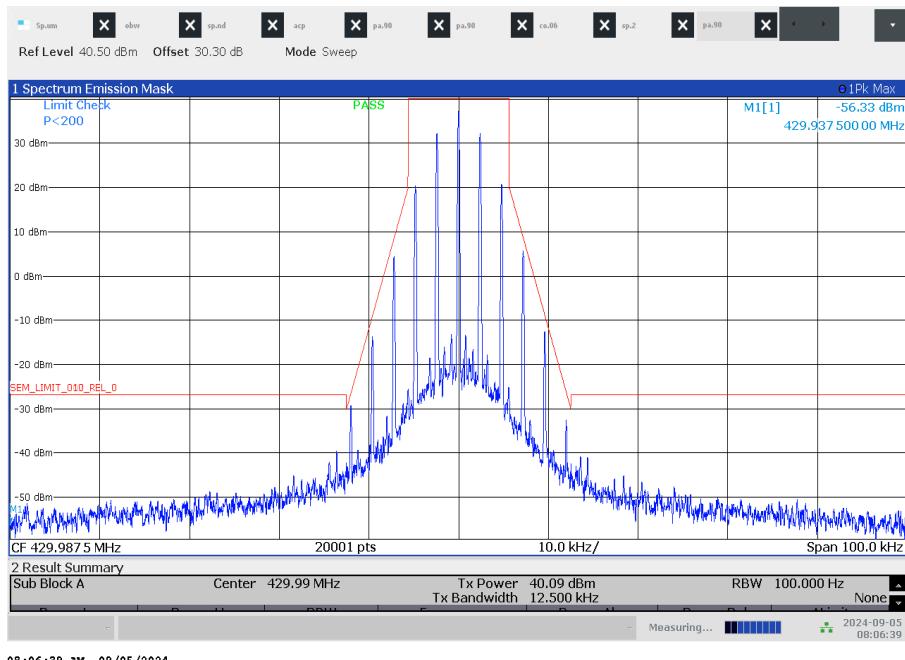
Plot 2: Emission mask D, tx @429.9875 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask D, tx @429.9875 MHz / 2400 bits per second – low power – carrier modulated

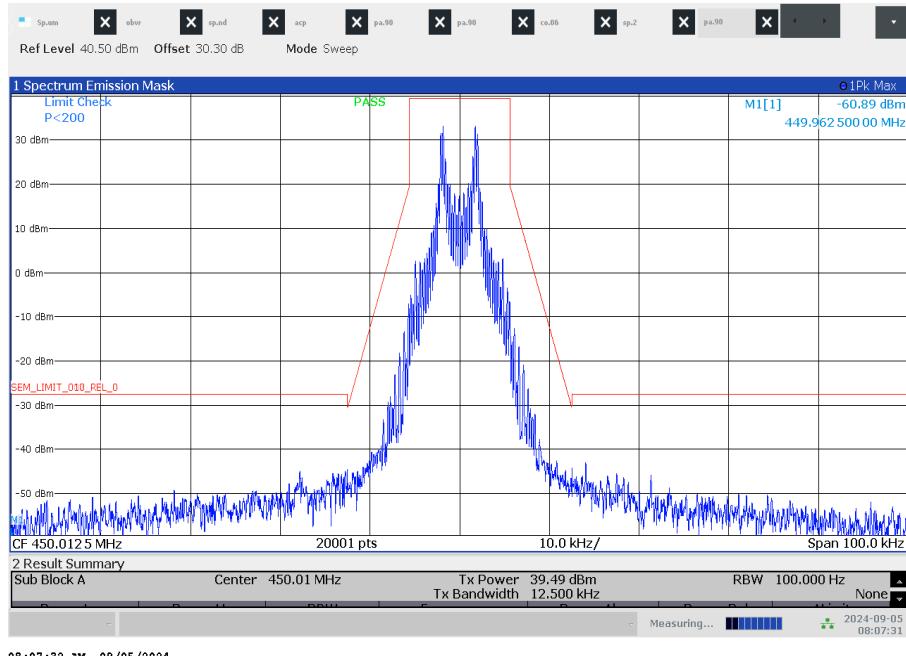


Plot 4: Emission mask D, tx @429.9875 MHz / 4800 bits per second – low power – carrier modulated

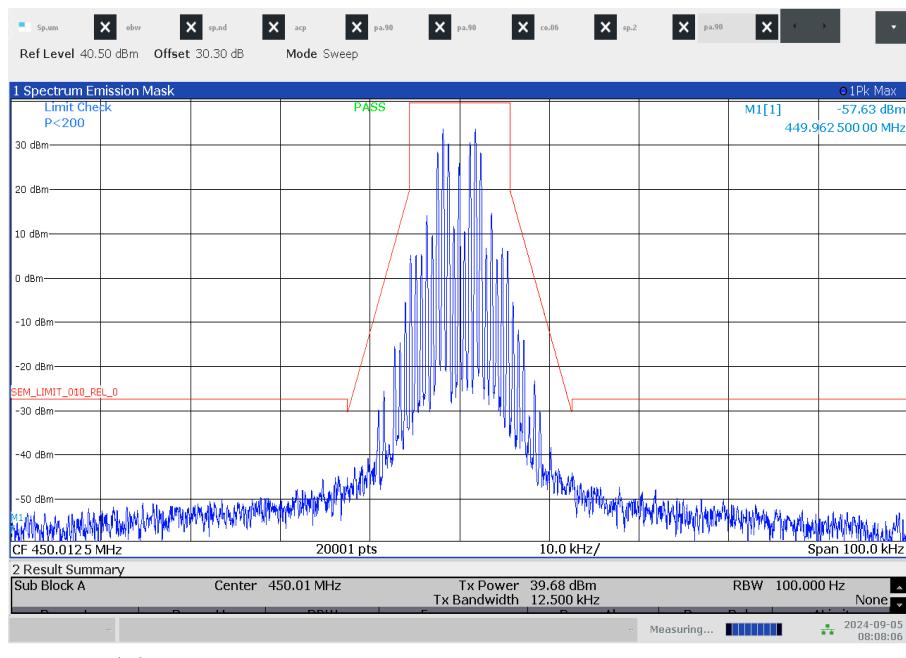


Plots 450.0125 MHz

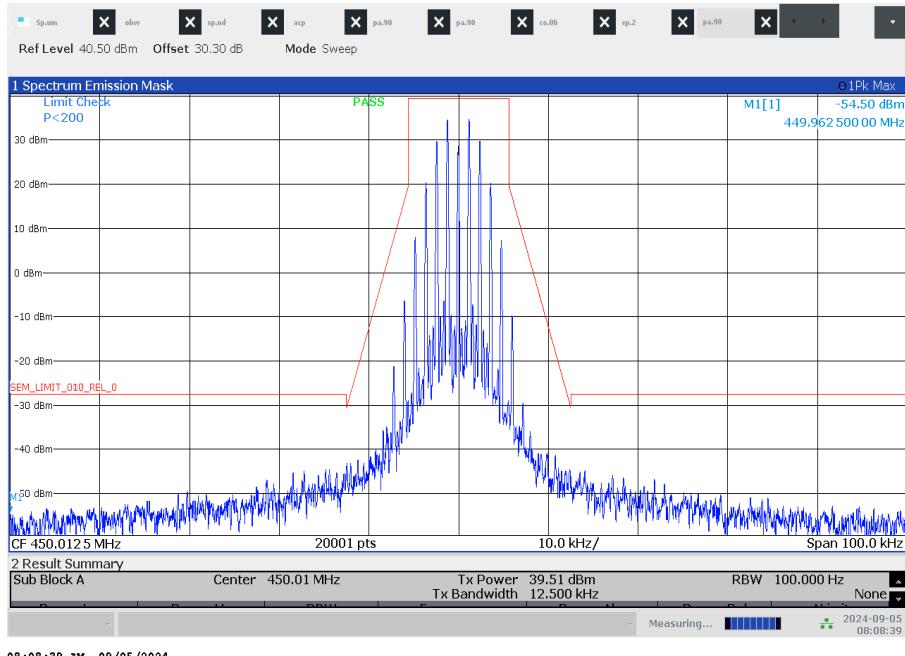
Plot 1: Emission mask D, tx @450.0125 MHz / 512 bits per second – low power – carrier modulated



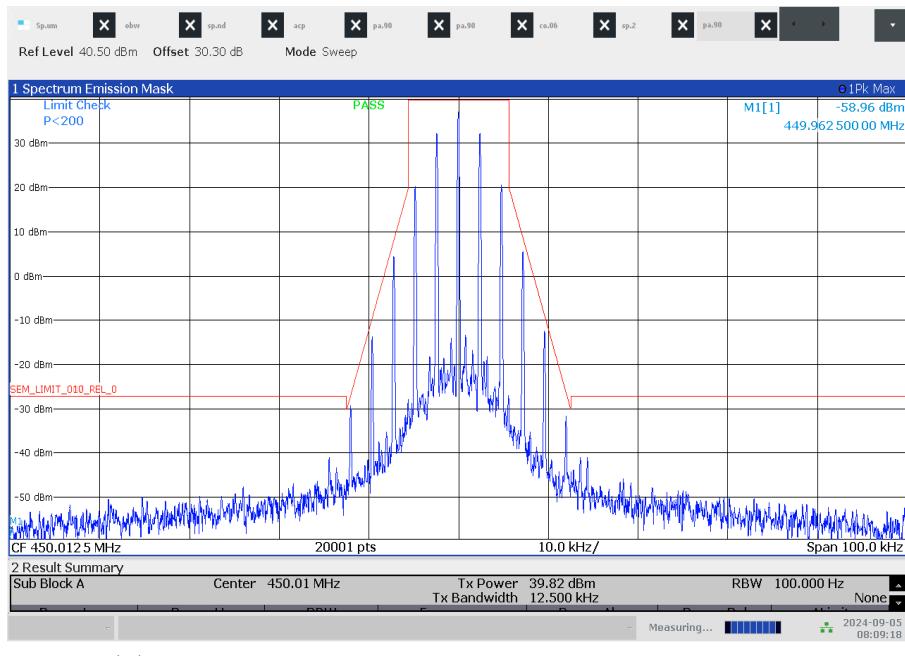
Plot 2: Emission mask D, tx @450.0125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask D, tx @450.0125 MHz / 2400 bits per second – low power – carrier modulated

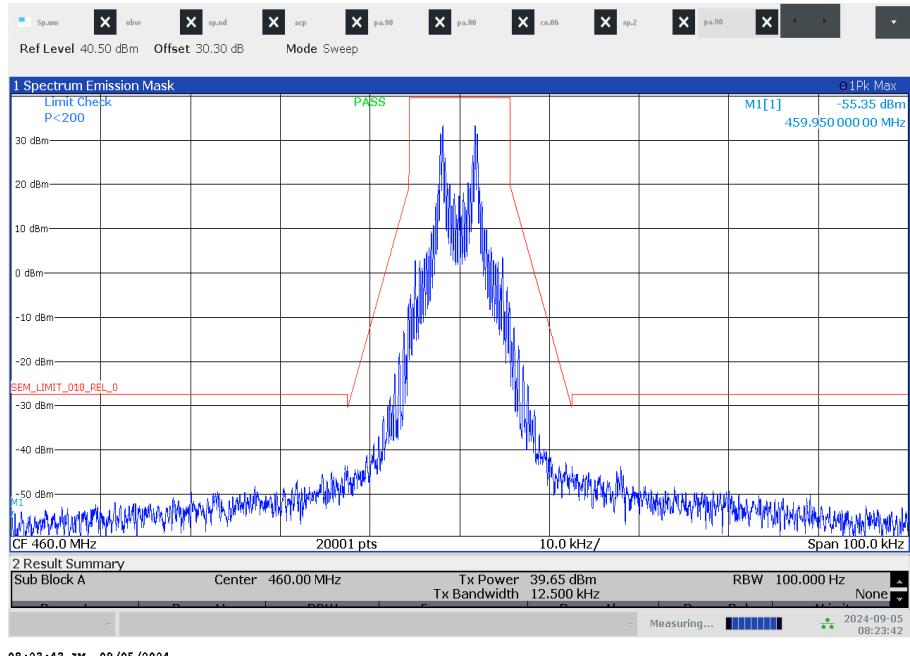


Plot 4: Emission mask D, tx @450.0125 MHz / 4800 bits per second – low power – carrier modulated

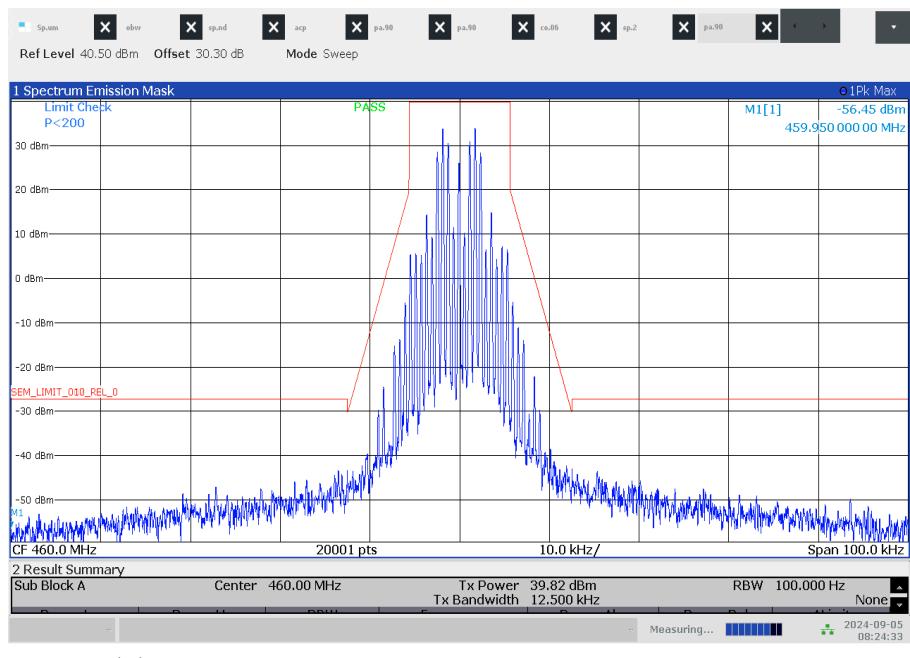


Plots 460.0 MHz

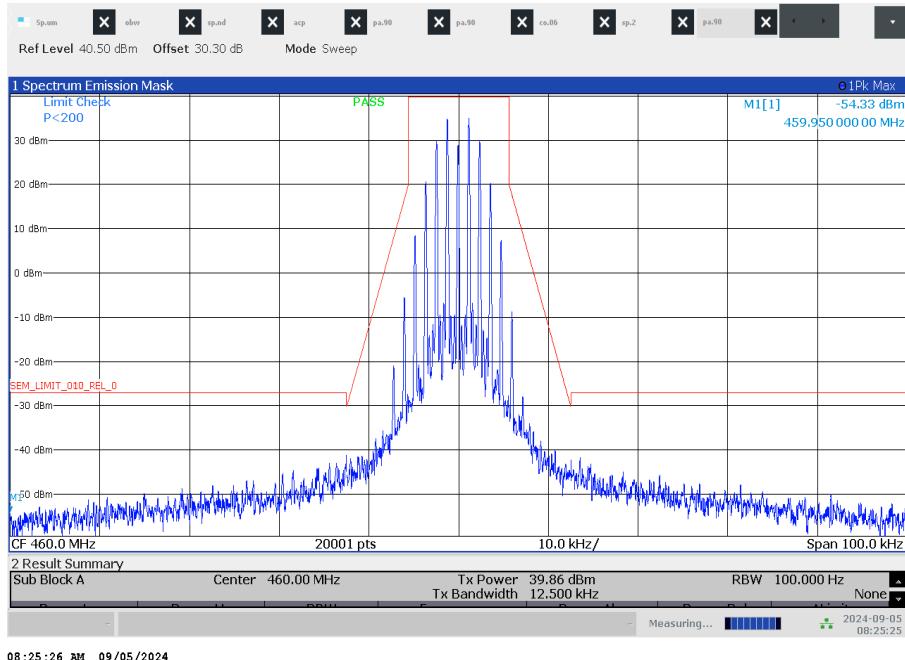
Plot 1: Emission mask D, tx @460.0 MHz / 512 bits per second – low power – carrier modulated



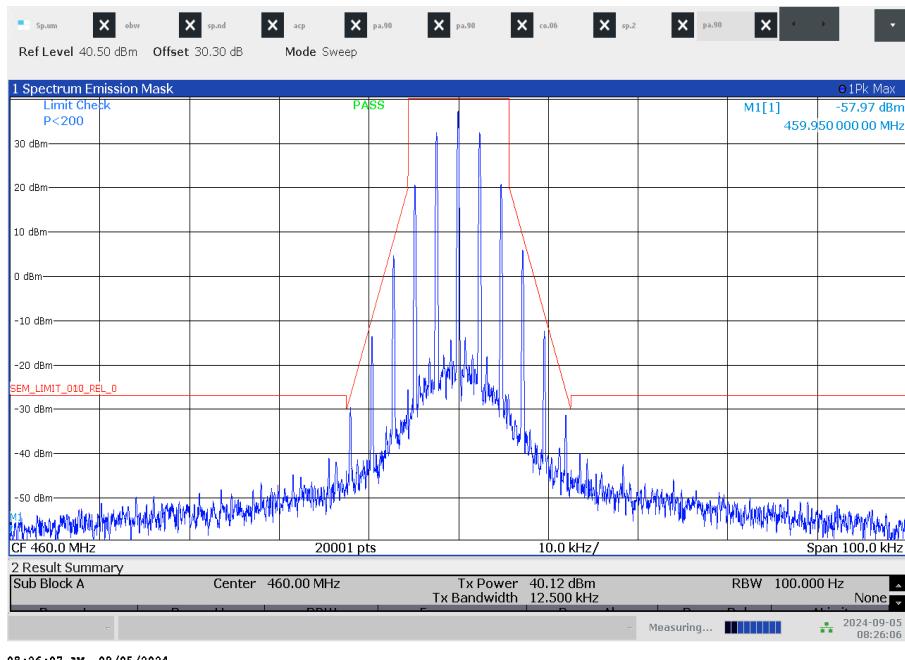
Plot 2: Emission mask D, tx @460.0 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask D, tx @460.0 MHz / 2400 bits per second – low power – carrier modulated

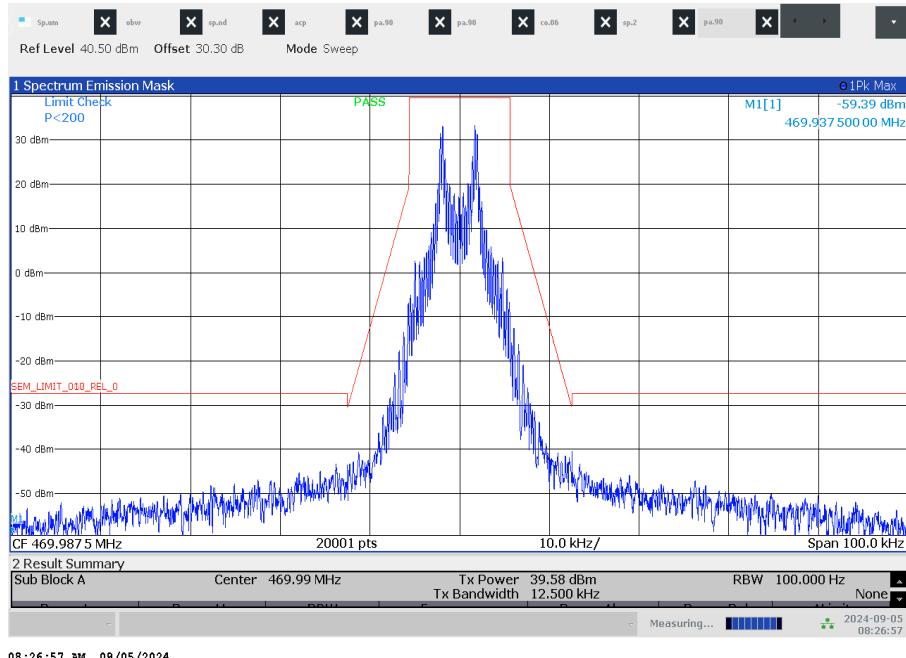


Plot 4: Emission mask D, tx @460.0 MHz / 4800 bits per second – low power – carrier modulated

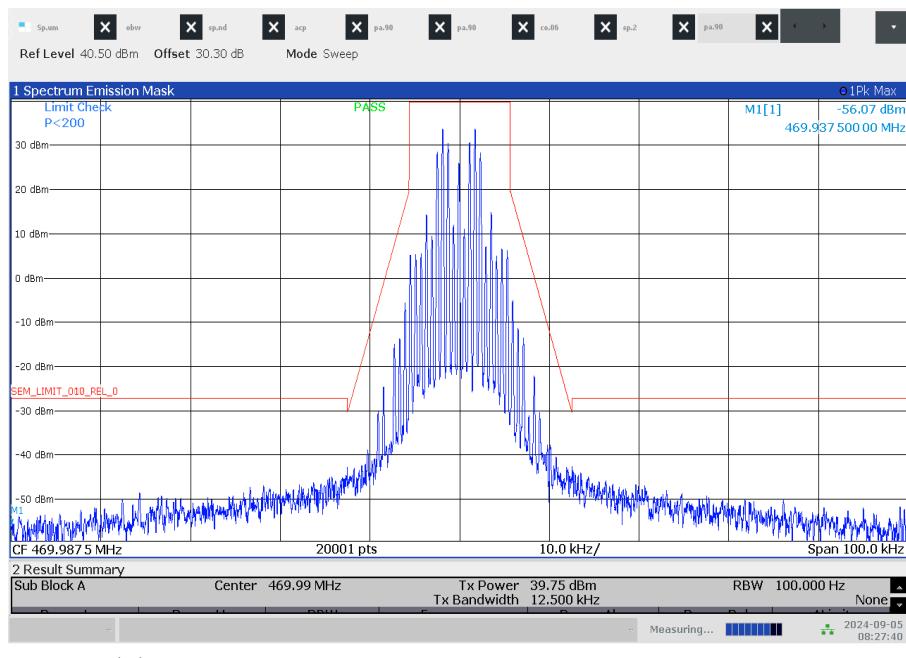


Plots 469.9875 MHz

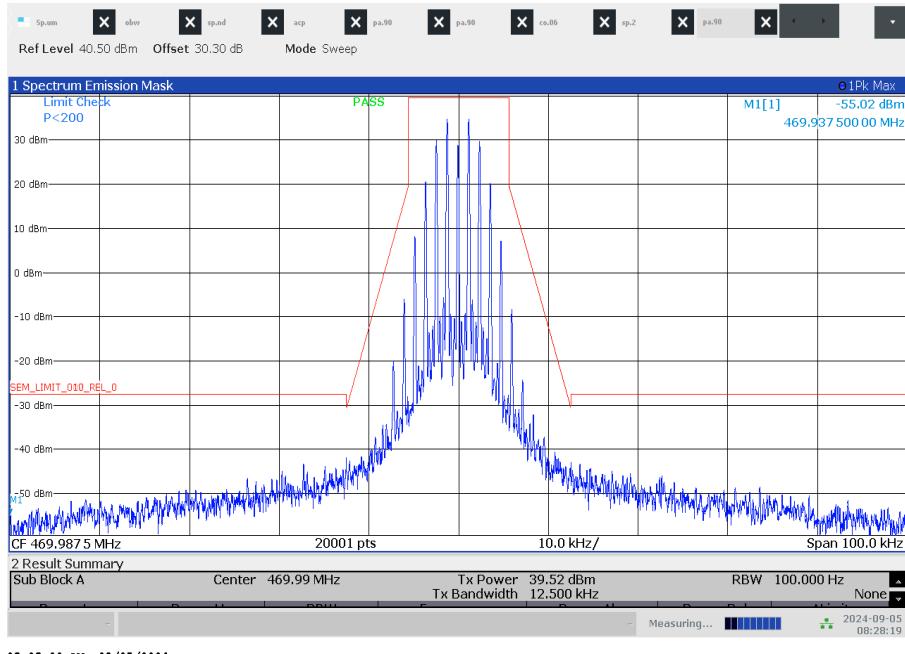
Plot 1: Emission mask D, tx @469.9875 MHz / 512 bits per second – low power – carrier modulated



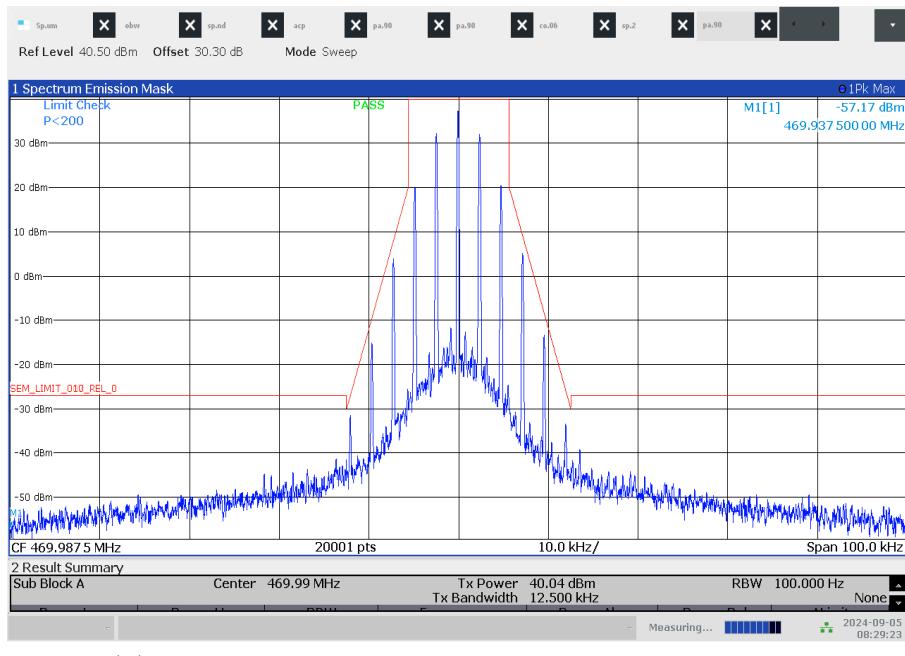
Plot 2: Emission mask D, tx @469.9875 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask D, tx @469.9875 MHz / 2400 bits per second – low power – carrier modulated

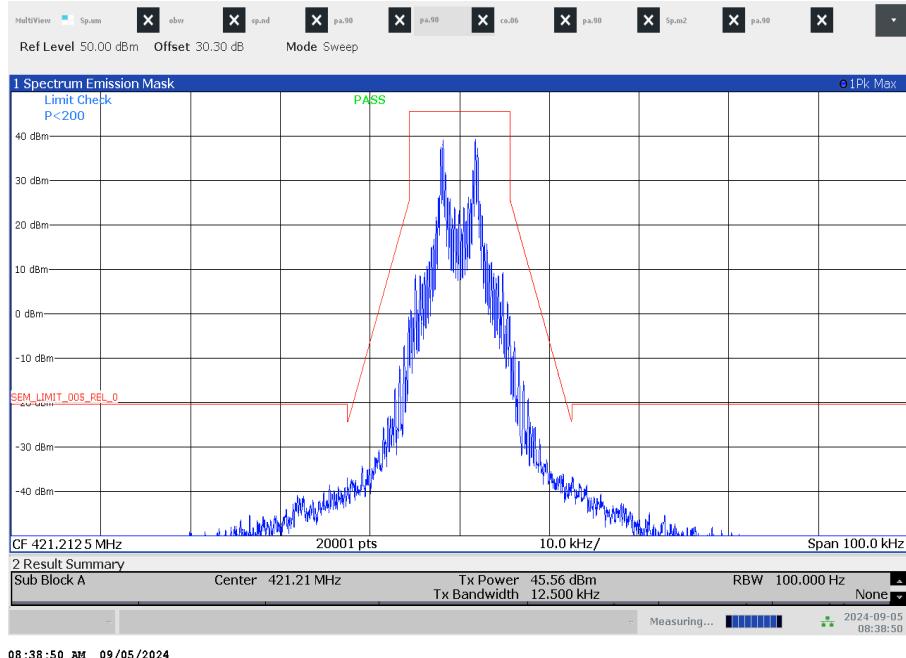


Plot 4: Emission mask D, tx @469.9875 MHz / 4800 bits per second – low power – carrier modulated

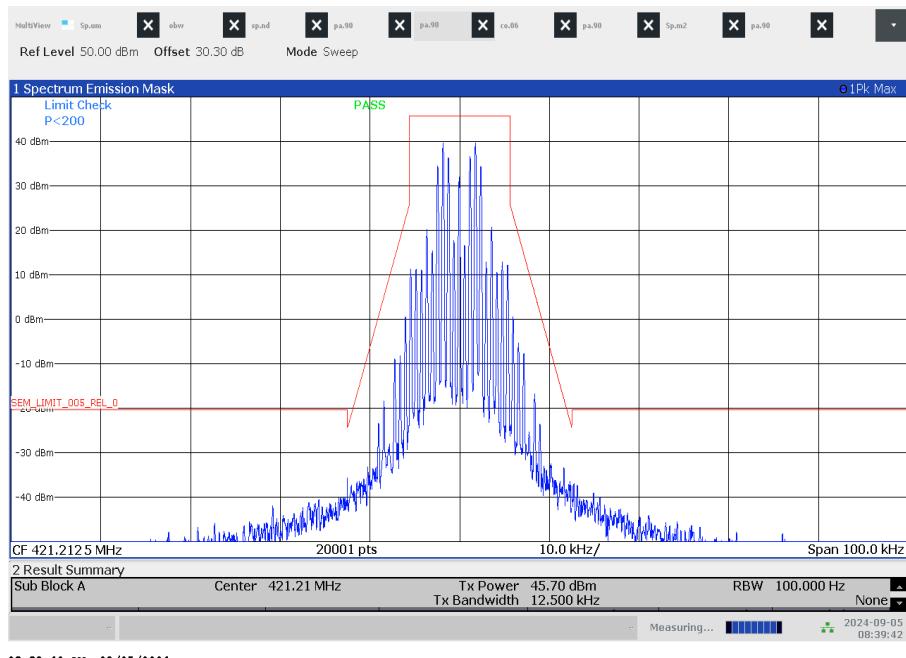


Plots 421.2125 MHz

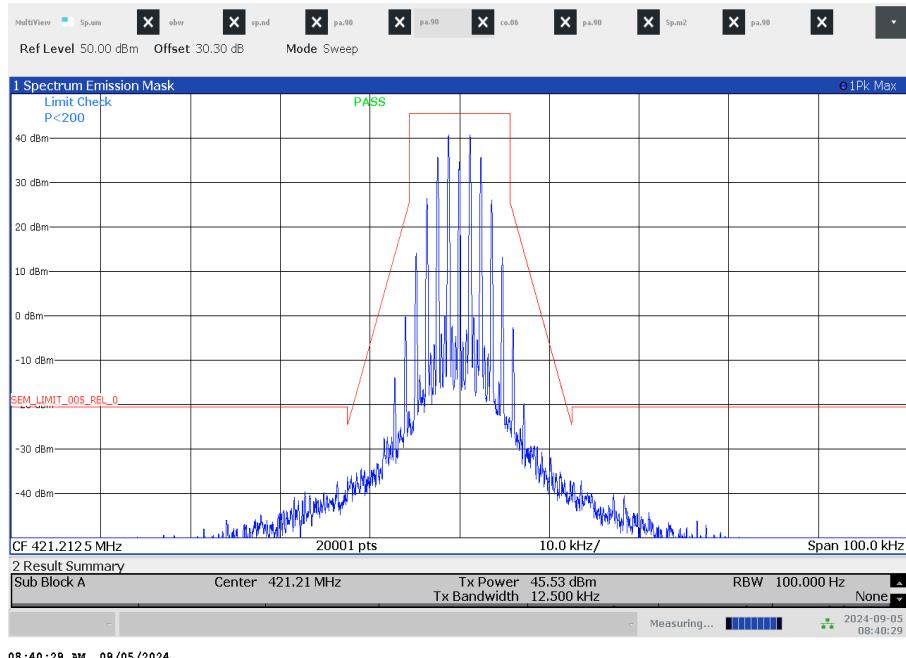
Plot 1: Emission mask D, tx @421.2125 MHz / 512 bits per second – high power – carrier modulated



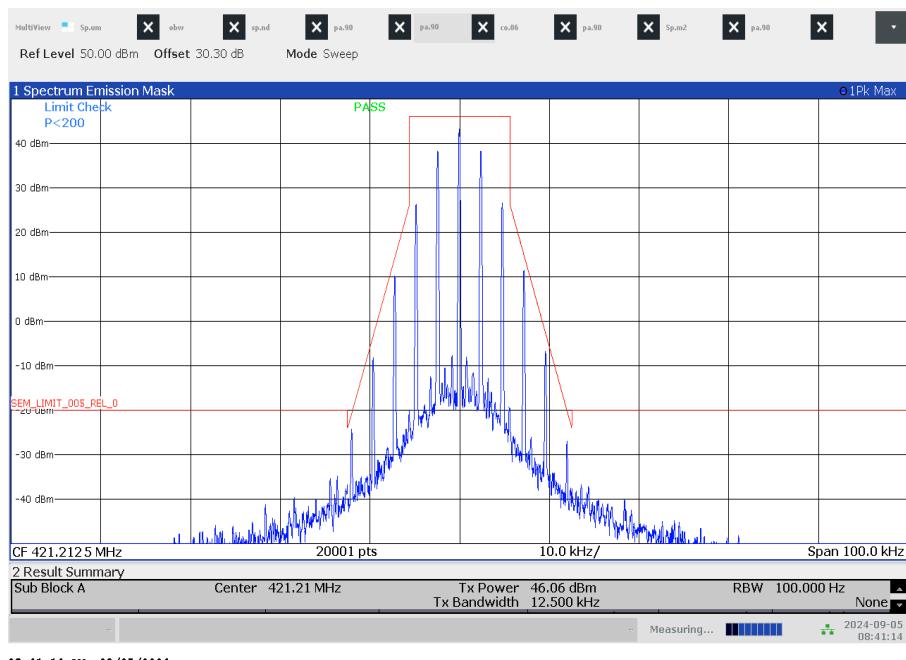
Plot 2: Emission mask D, tx @421.2125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask D, tx @421.2125 MHz / 2400 bits per second – high power – carrier modulated

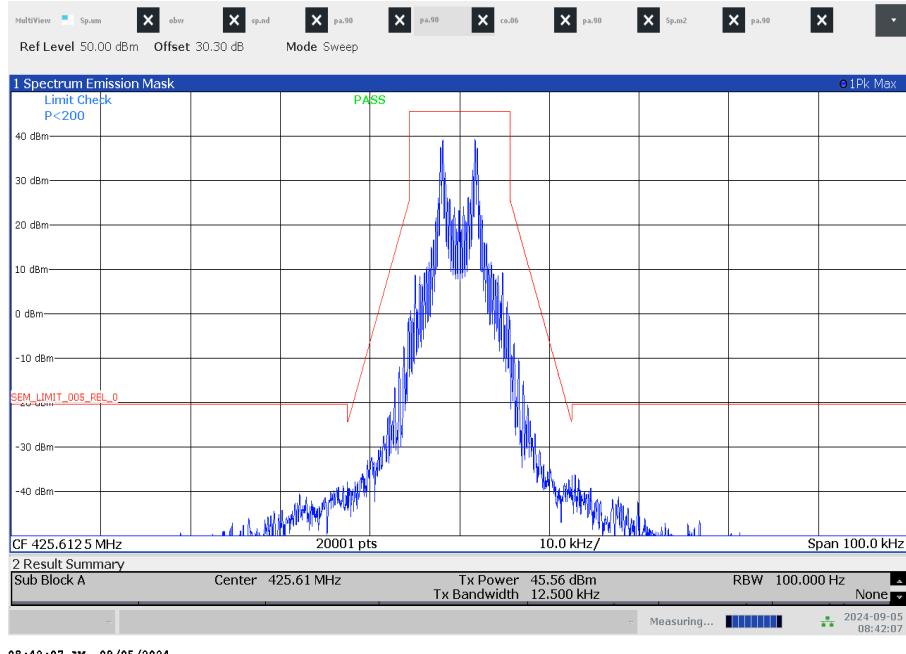


Plot 4: Emission mask D, tx @421.2125 MHz / 4800 bits per second – high power – carrier modulated

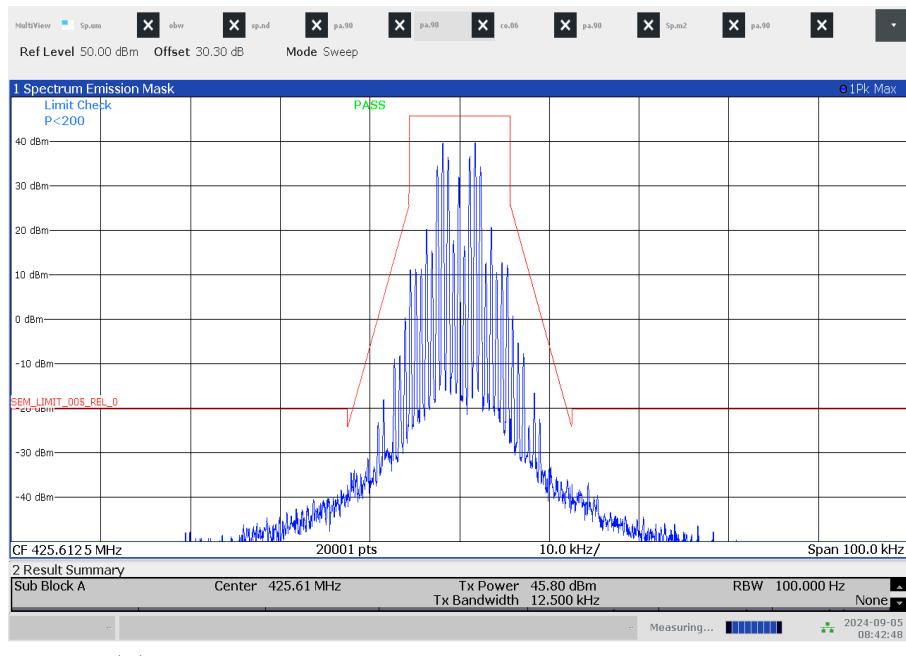


Plots 425.6125 MHz

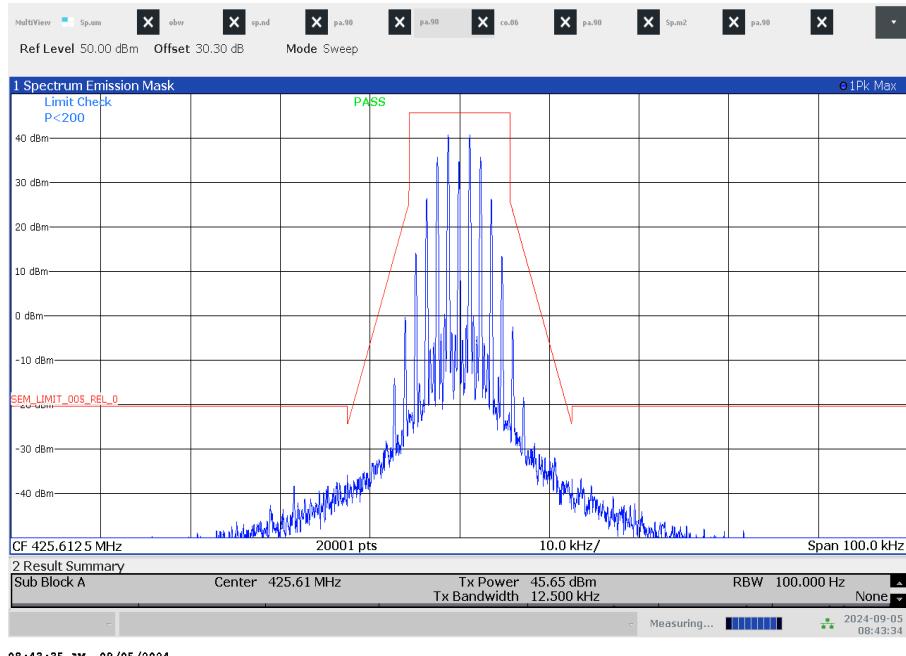
Plot 1: Emission mask D, tx @425.6125 MHz / 512 bits per second – high power – carrier modulated



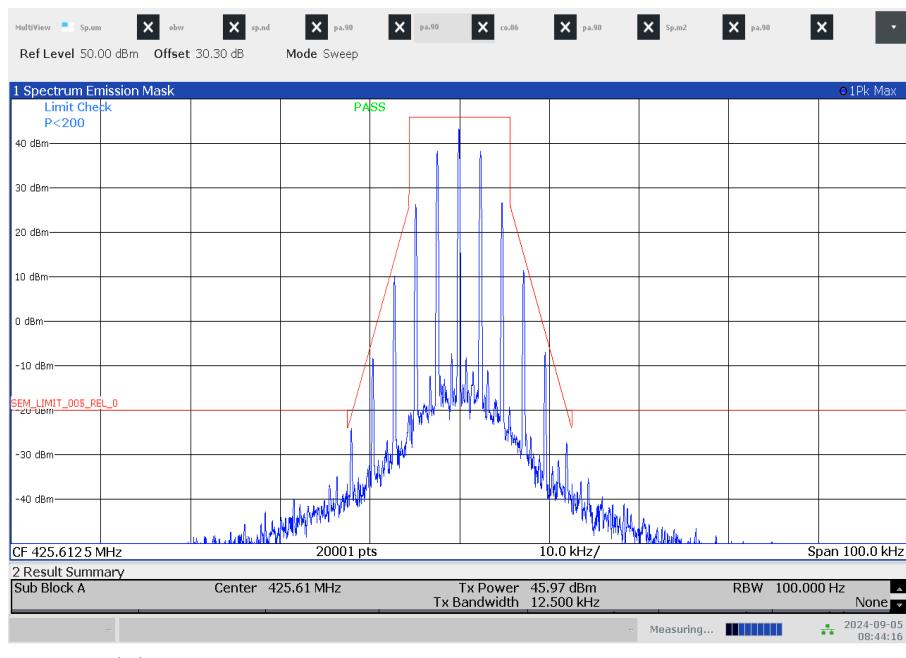
Plot 2: Emission mask D, tx @425.6125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask D, tx @425.6125 MHz / 2400 bits per second – high power – carrier modulated

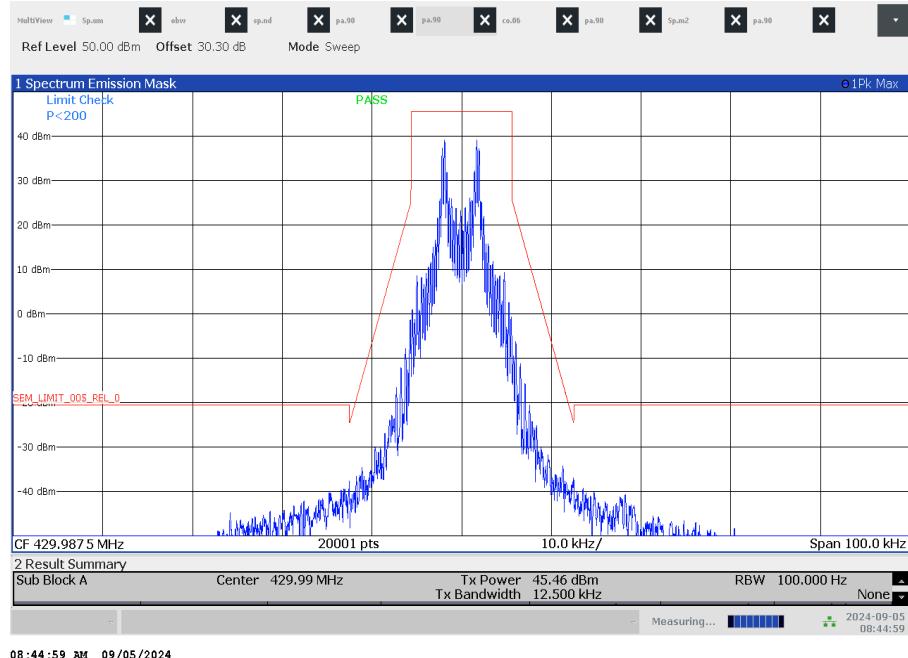


Plot 4: Emission mask D, tx @425.6125 MHz / 4800 bits per second – high power – carrier modulated

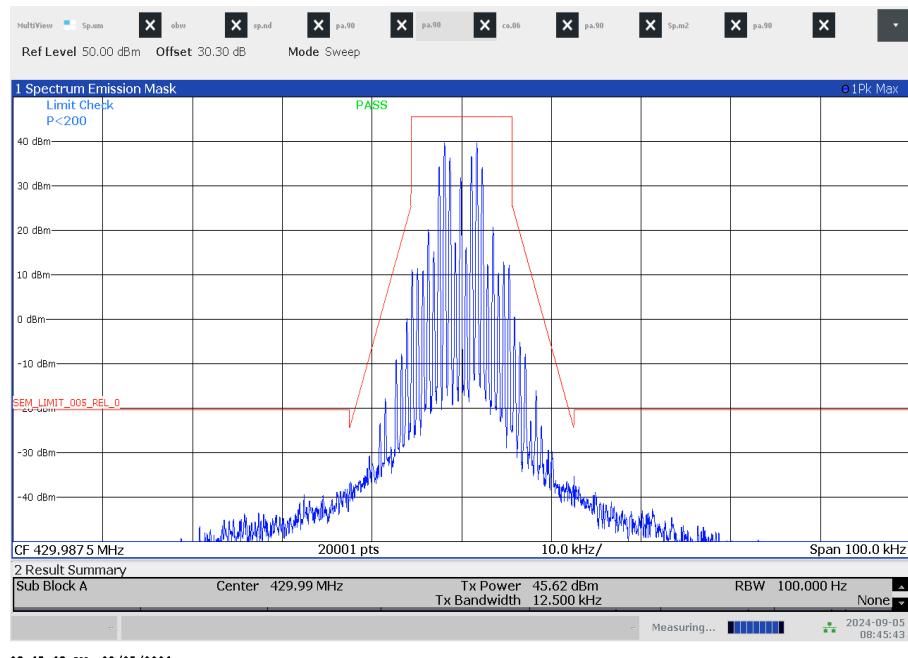


Plots 429.9875 MHz

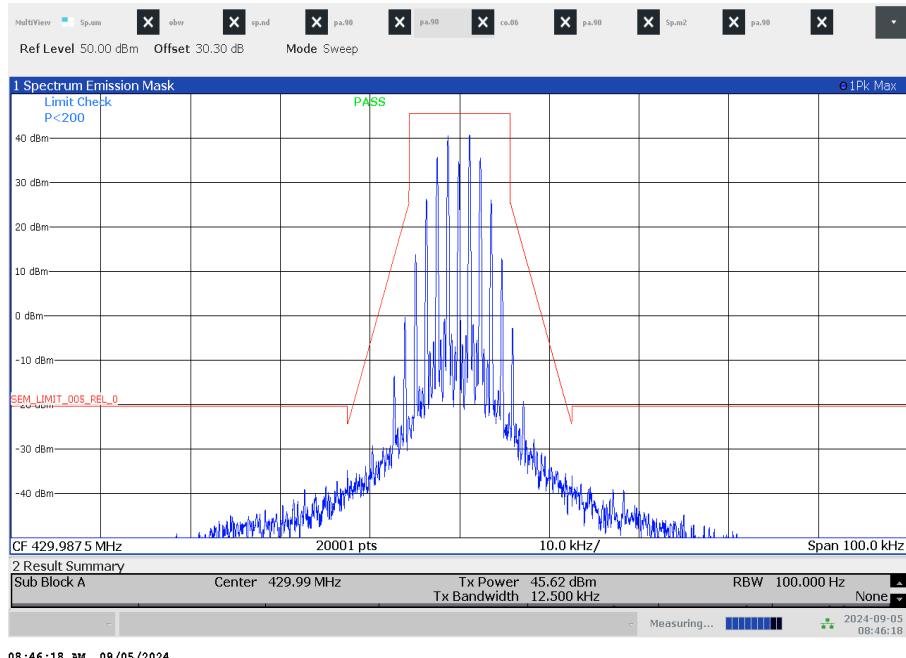
Plot 1: Emission mask D, tx @429.9875 MHz / 512 bits per second – high power – carrier modulated



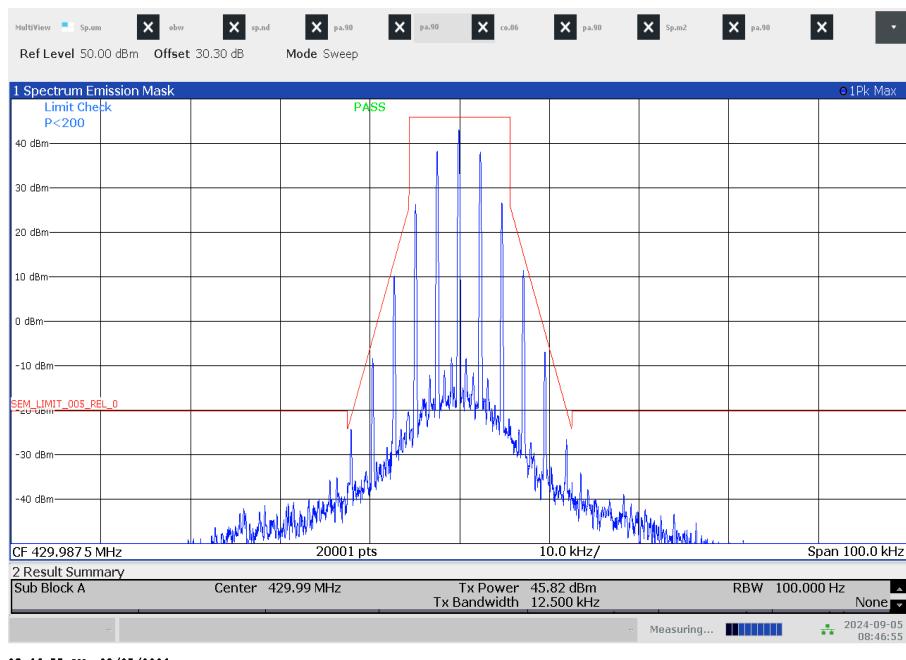
Plot 2: Emission mask D, tx @429.9875 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask D, tx @429.9875 MHz / 2400 bits per second – high power – carrier modulated

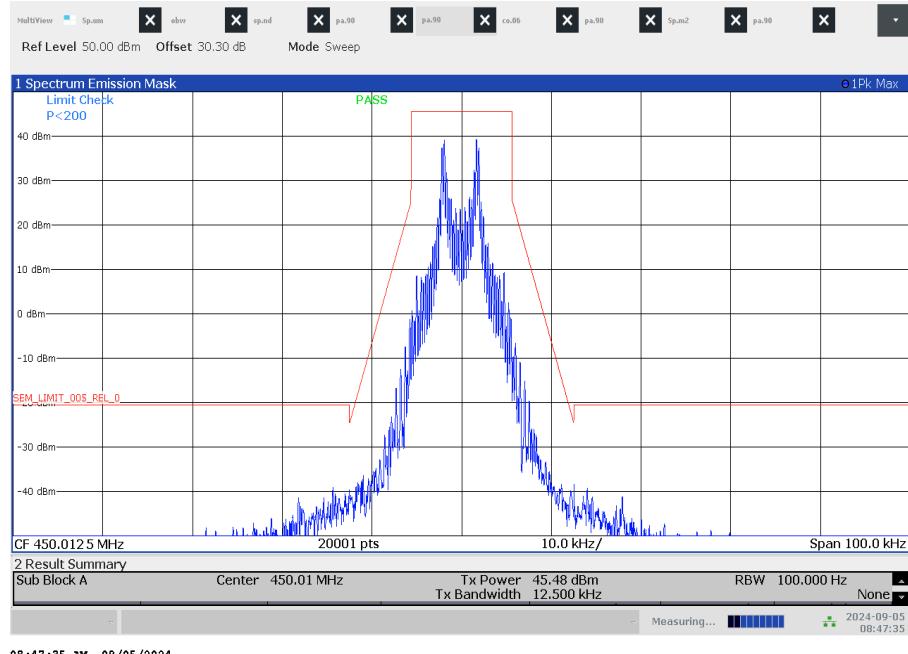


Plot 4: Emission mask D, tx @429.9875 MHz / 4800 bits per second – high power – carrier modulated

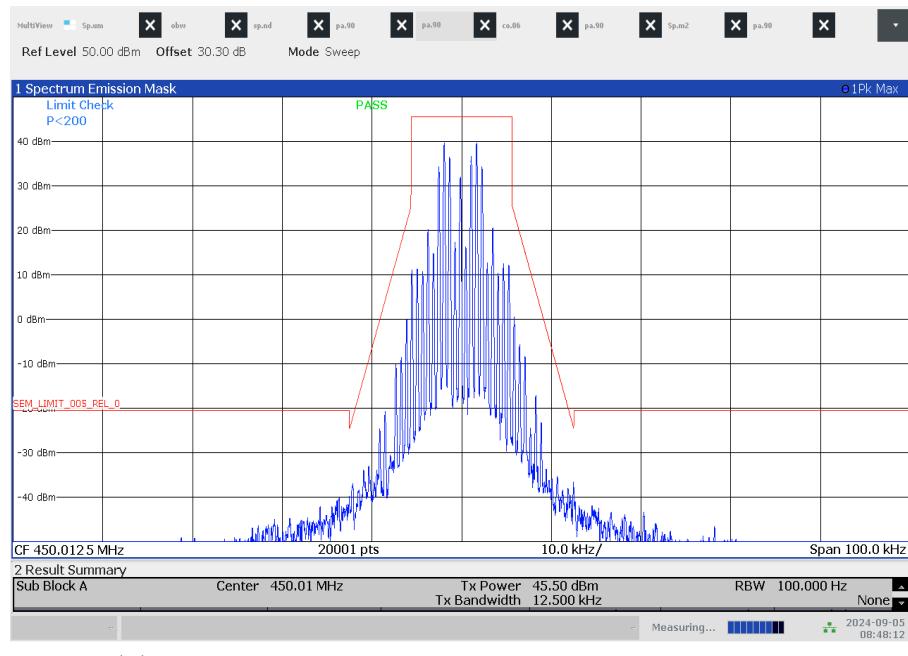


Plots 450.0125 MHz

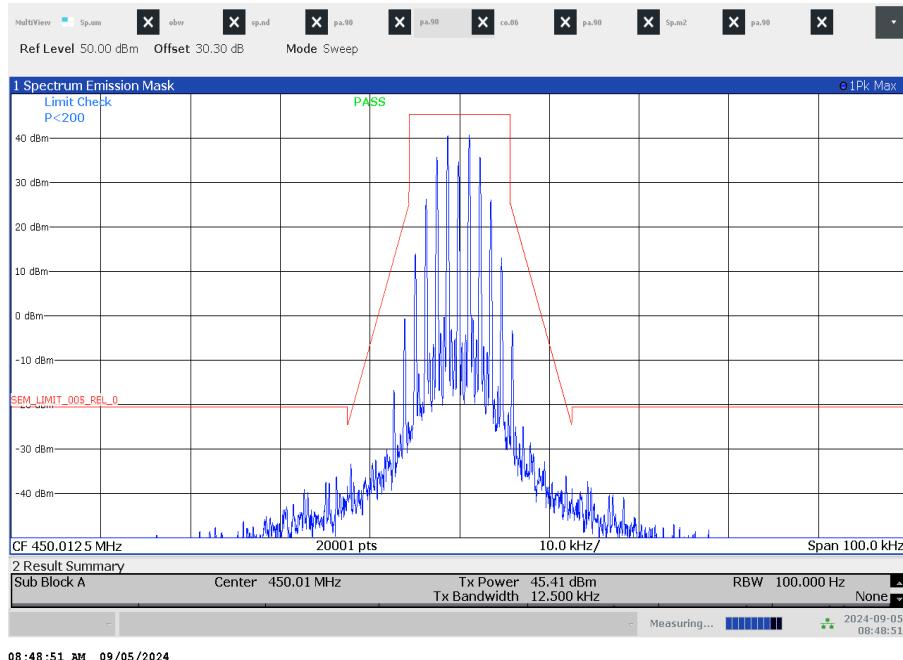
Plot 1: Emission mask D, tx @450.0125 MHz / 512 bits per second – high power – carrier modulated



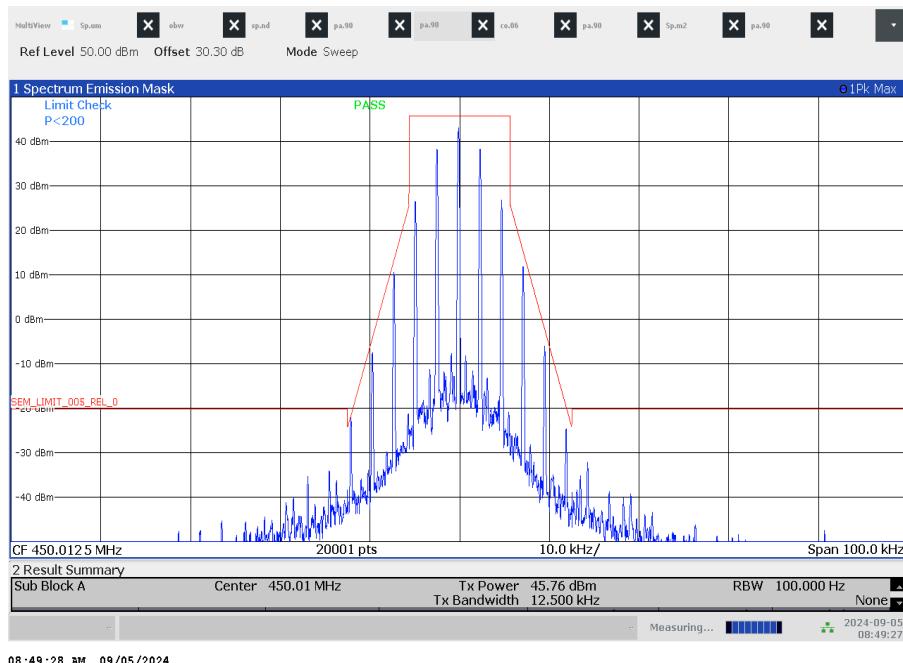
Plot 2: Emission mask D, tx @450.0125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask D, tx @450.0125 MHz / 2400 bits per second – high power – carrier modulated

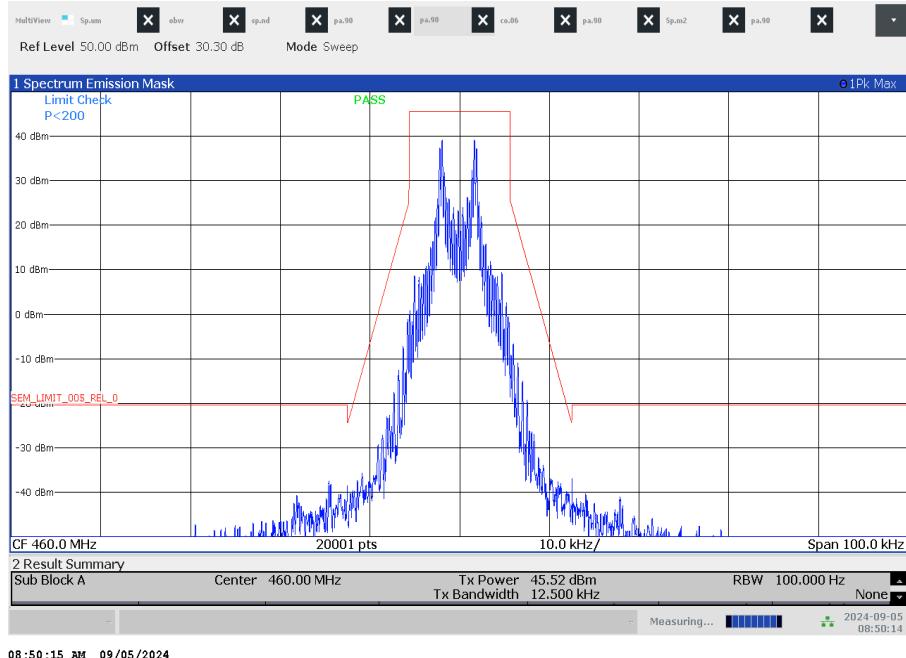


Plot 4: Emission mask D, tx @450.0125 MHz / 4800 bits per second – high power – carrier modulated

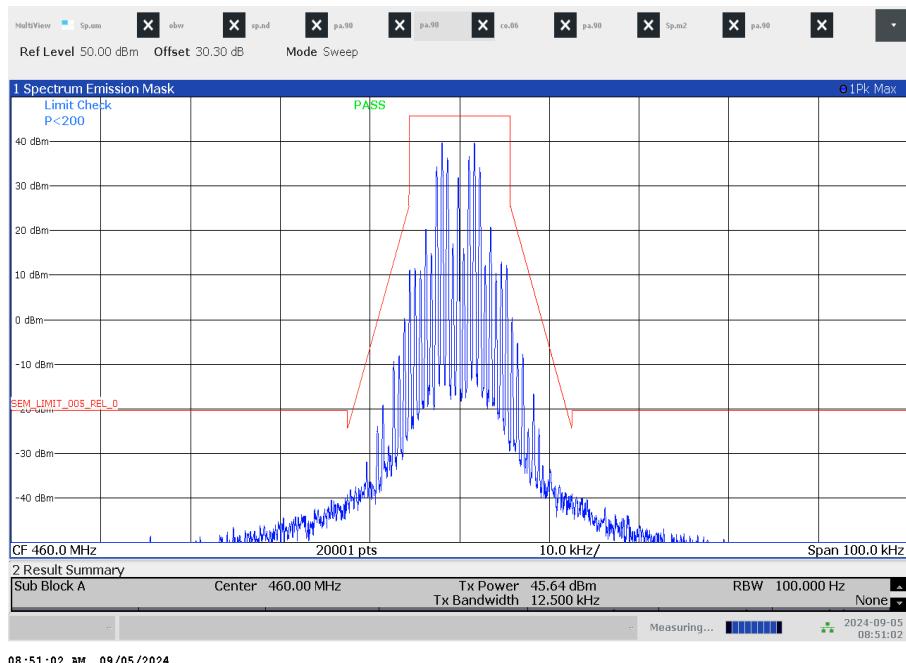


Plots 460.0 MHz

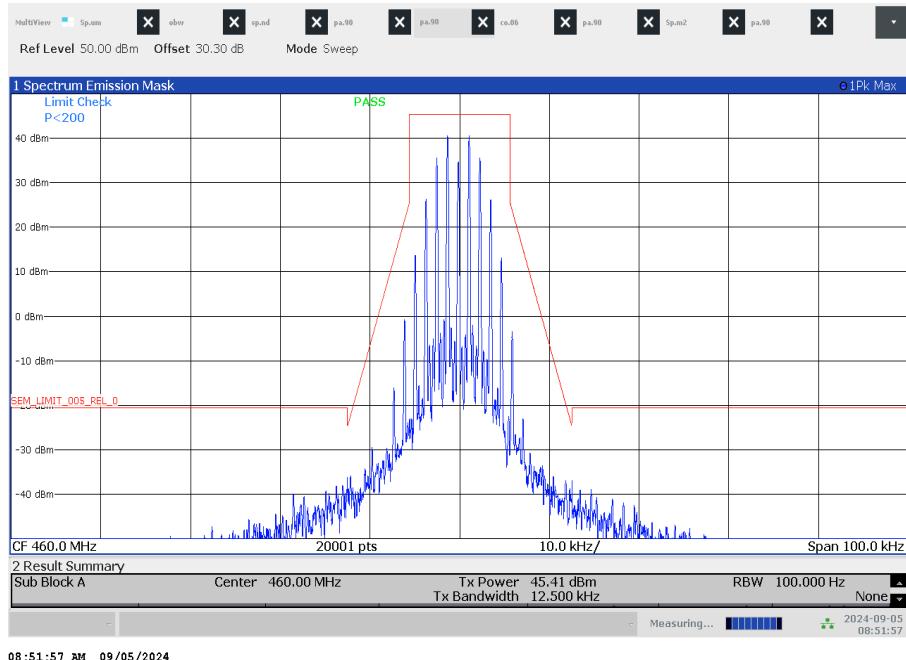
Plot 1: Emission mask D, tx @460.0 MHz / 512 bits per second – high power – carrier modulated



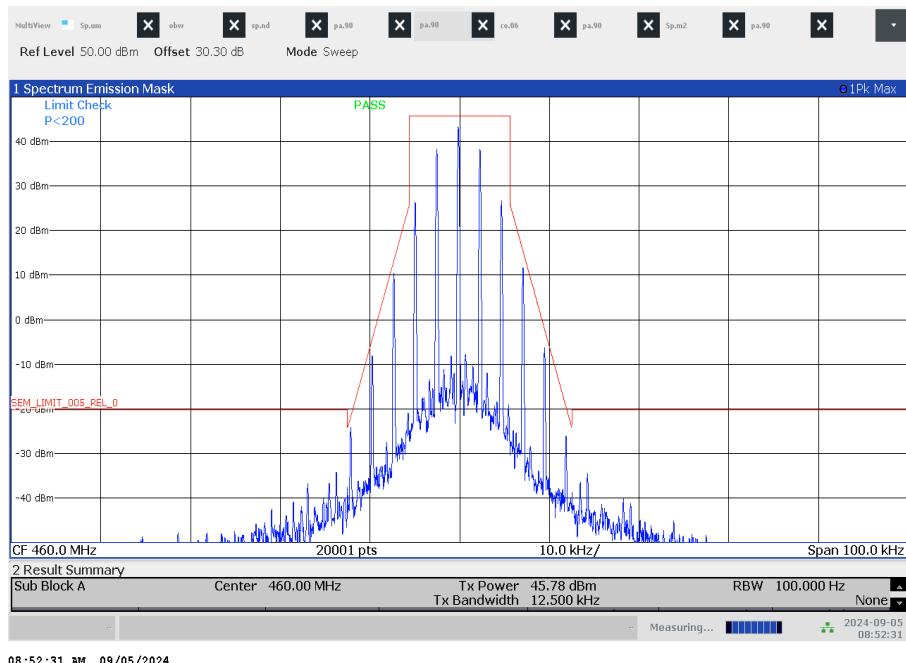
Plot 2: Emission mask D, tx @460.0 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask D, tx @460.0 MHz / 2400 bits per second – high power – carrier modulated

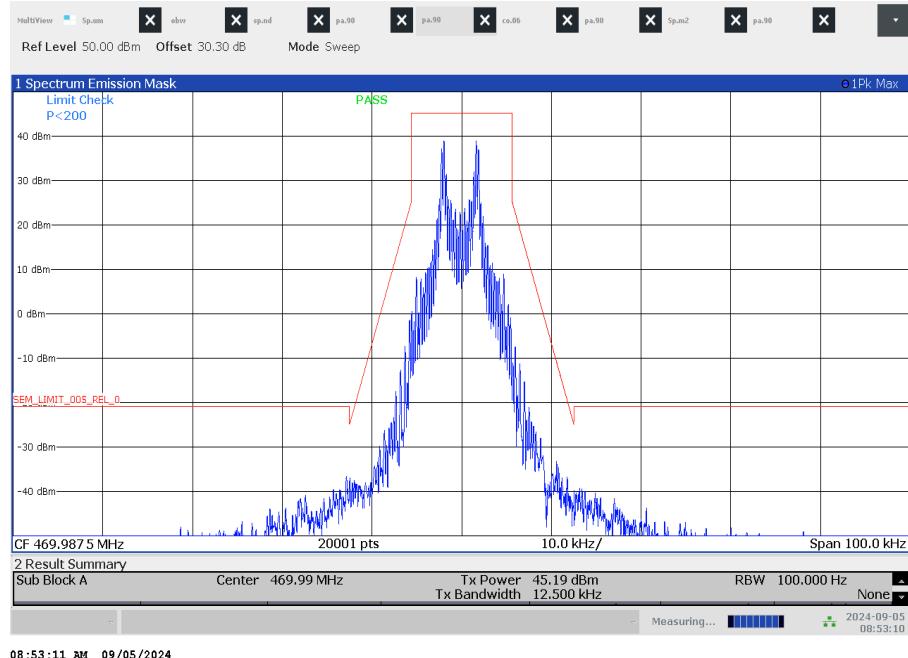


Plot 4: Emission mask D, tx @460.0 MHz / 4800 bits per second – high power – carrier modulated

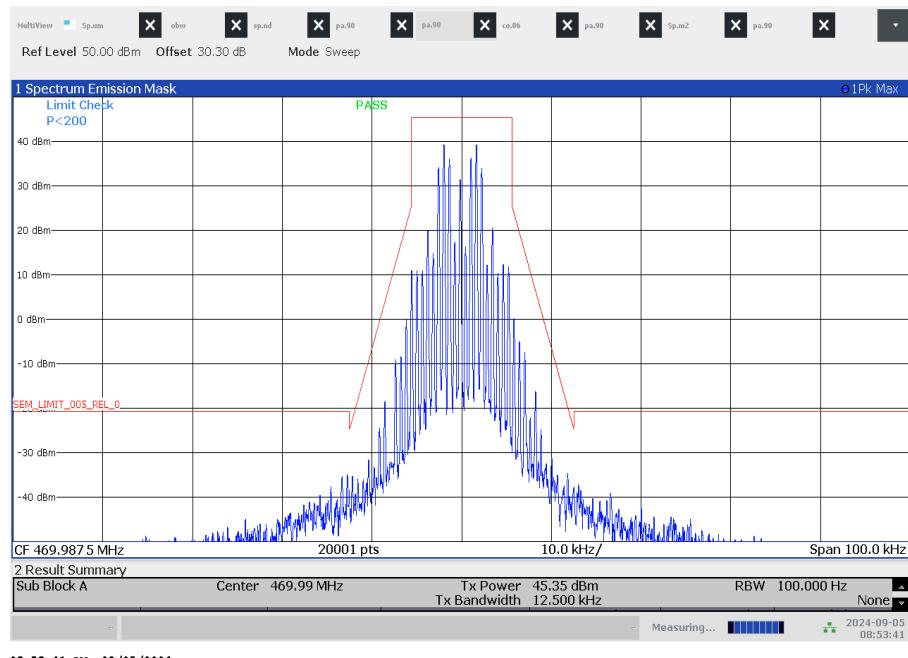


Plots 469.9875 MHz

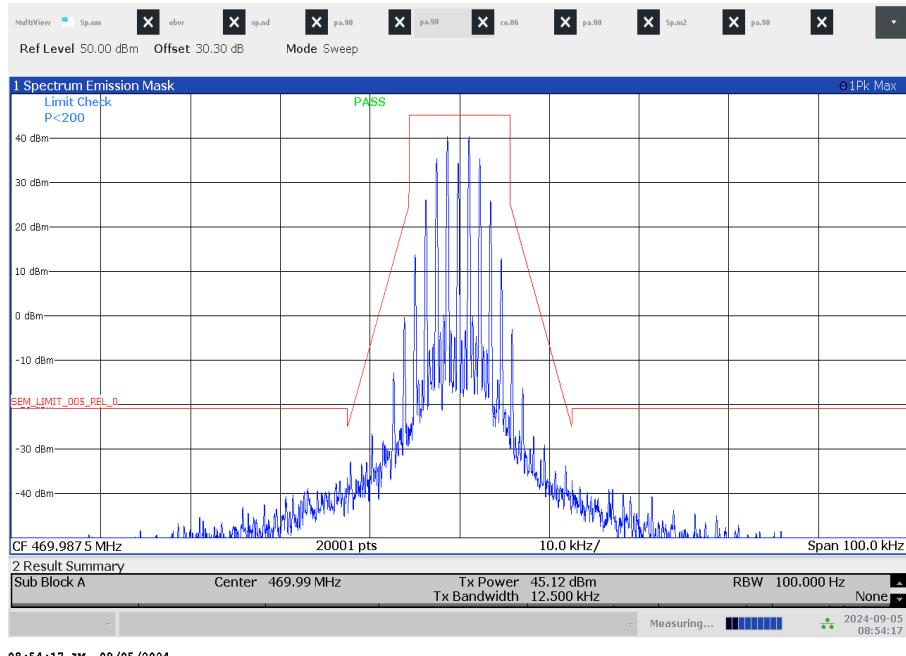
Plot 1: Emission mask D, tx @469.9875 MHz / 512 bits per second – high power – carrier modulated



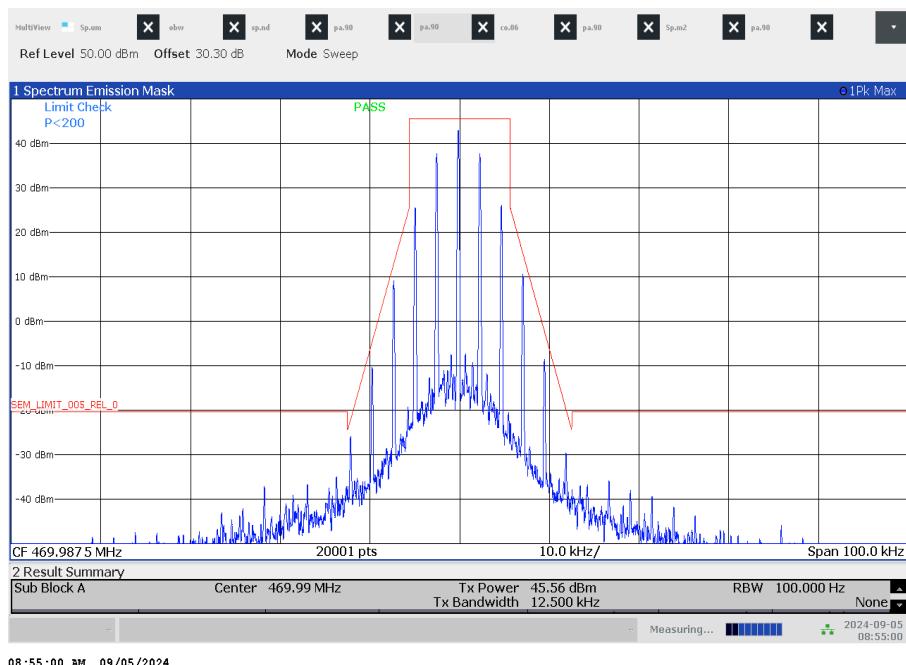
Plot 2: Emission mask D, tx @469.9875 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask D, tx @469.9875 MHz / 2400 bits per second – high power – carrier modulated



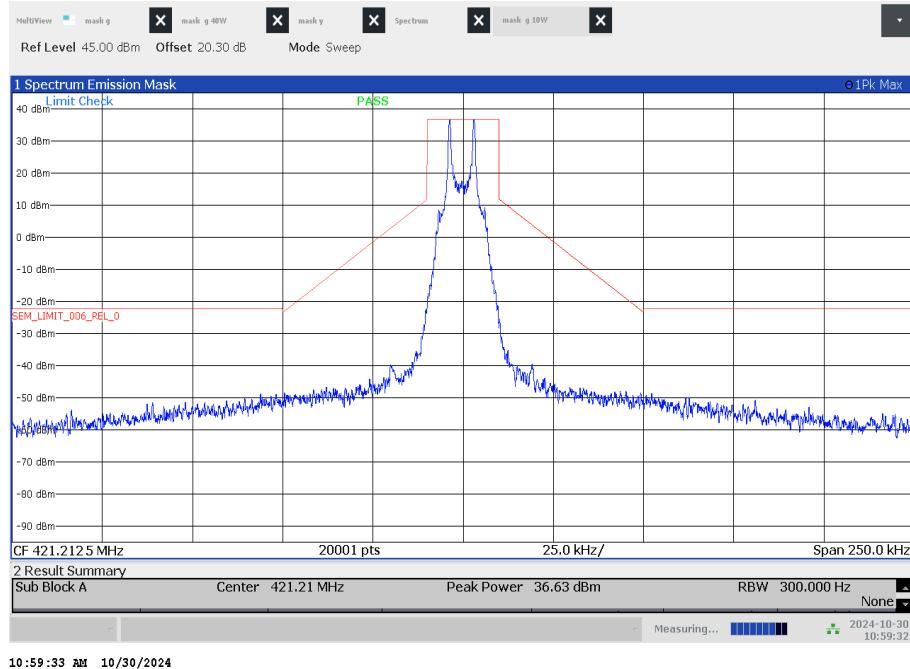
Plot 4: Emission mask D, tx @469.9875 MHz / 4800 bits per second – high power – carrier modulated



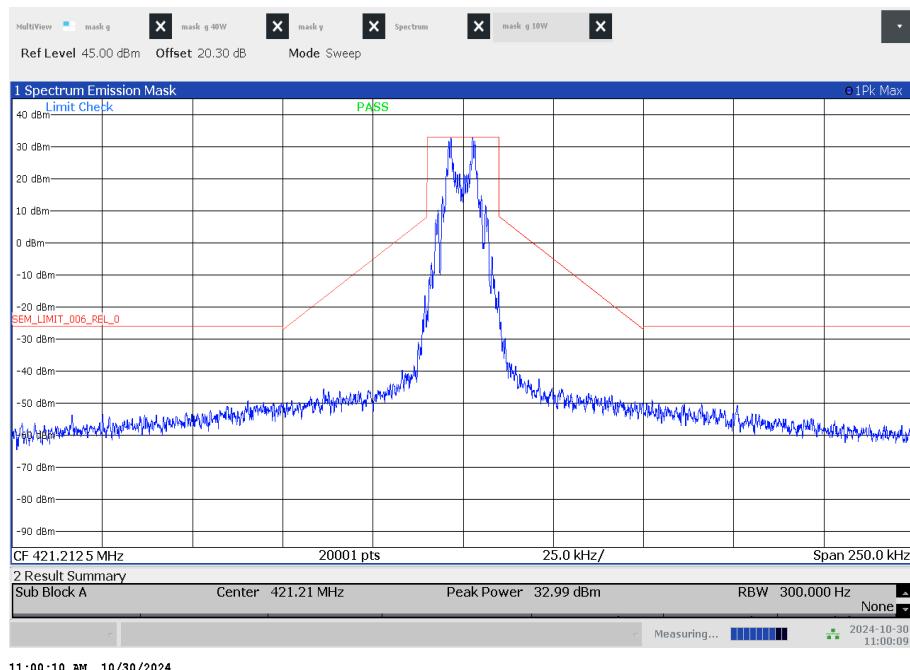
13.4.3 Spectrum masks 20 kHz bandwidth (Emission mask G)

Plots 421.2125 MHz

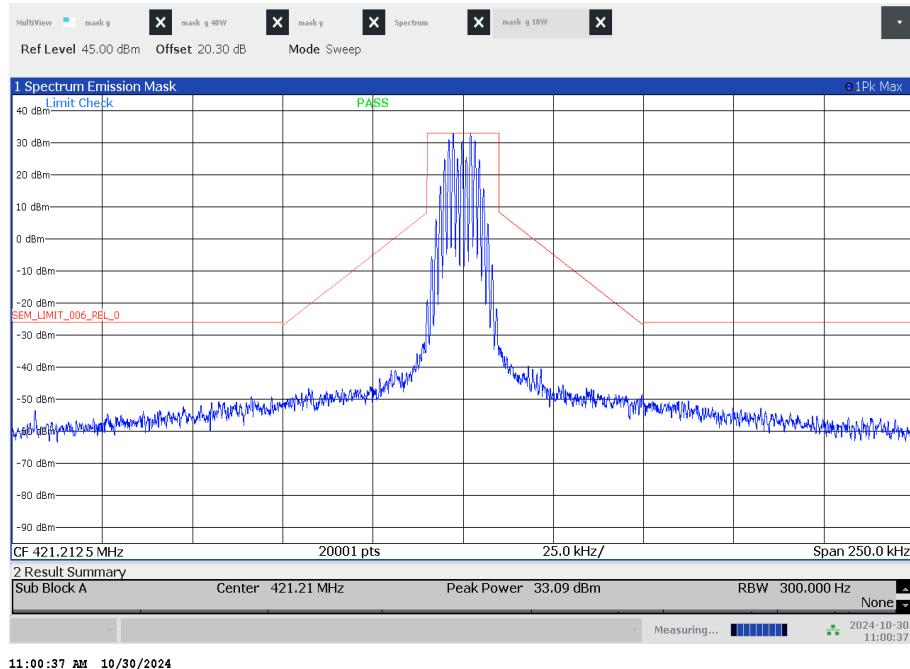
Plot 1: Emission mask G, tx @421.2125 MHz / 512 bits per second – low power – carrier modulated



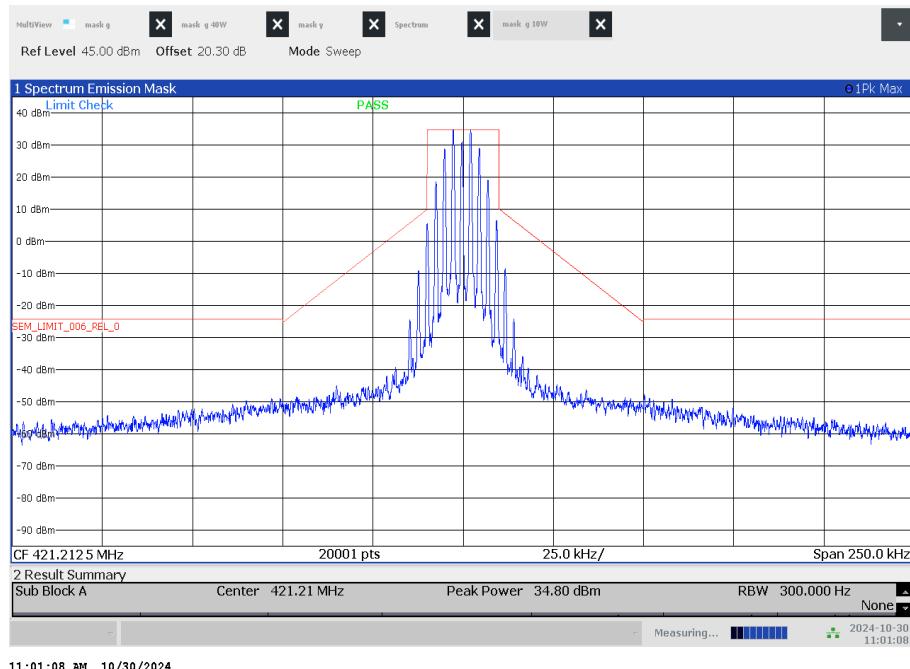
Plot 2: Emission mask G, tx @421.2125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask G, tx @421.2125 MHz / 2400 bits per second – low power – carrier modulated

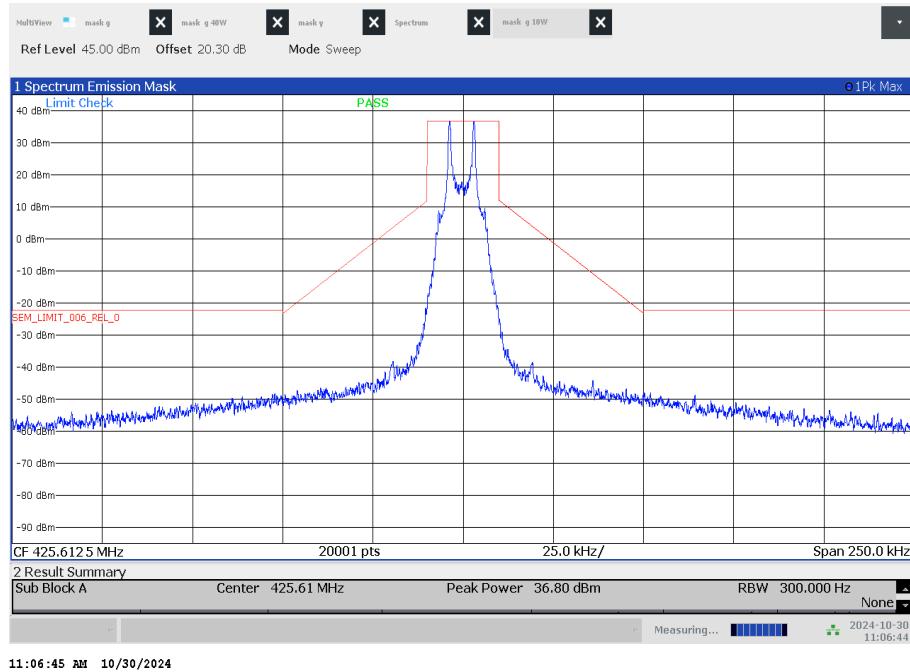


Plot 4: Emission mask G, tx @421.2125 MHz / 4800 bits per second – low power – carrier modulated

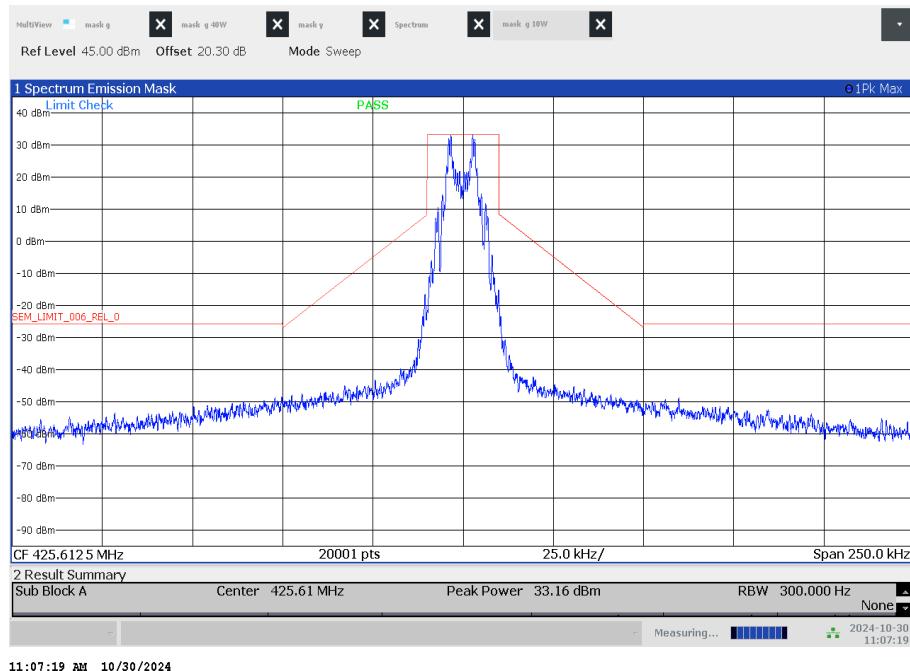


Plots 425.6125 MHz

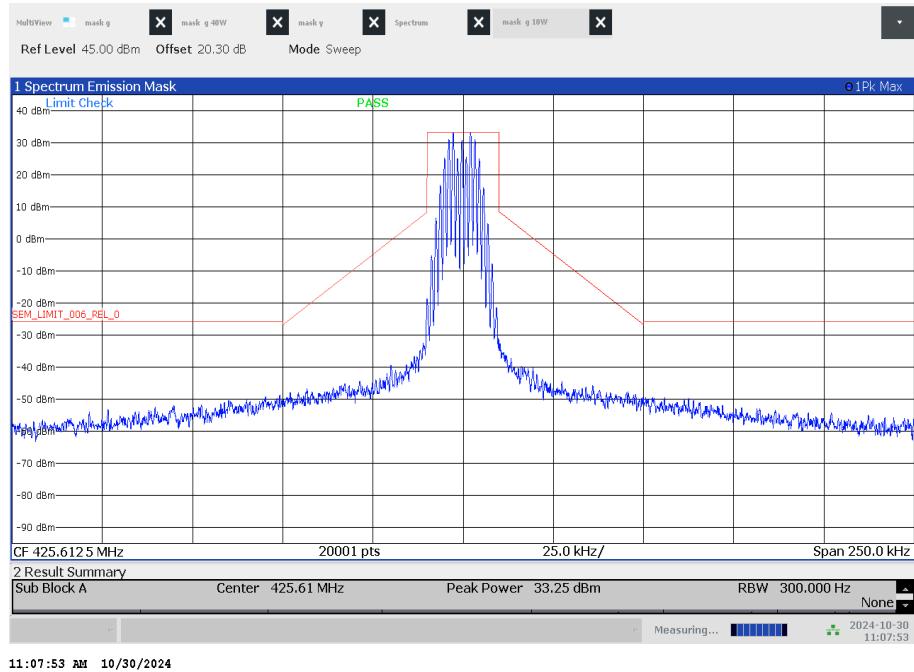
Plot 1: Emission mask G, tx @425.6125 MHz / 512 bits per second – low power – carrier modulated



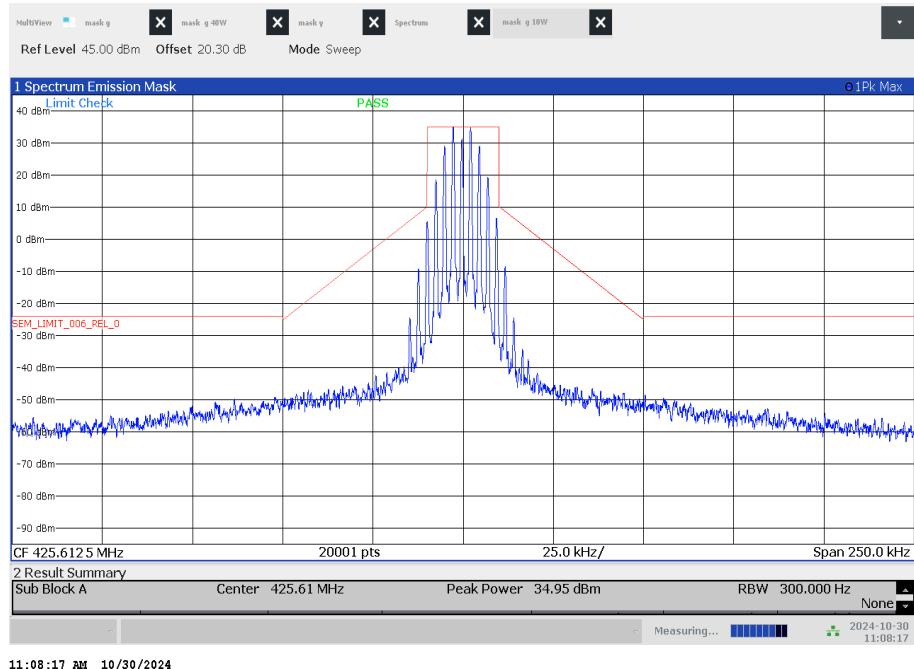
Plot 2: Emission mask G, tx @425.6125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask G, tx @425.6125 MHz / 2400 bits per second – low power – carrier modulated

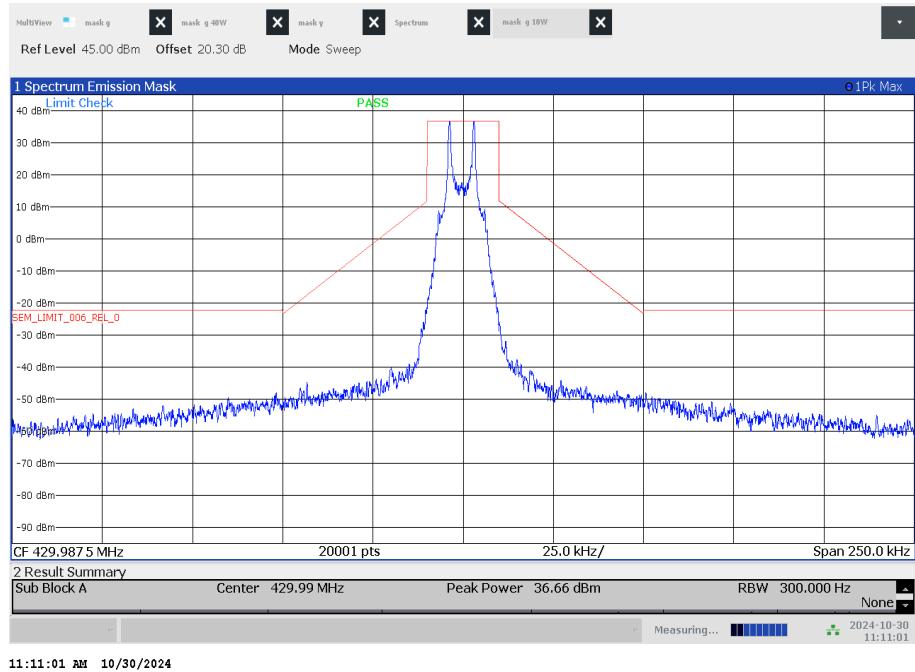


Plot 4: Emission mask G, tx @425.6125 MHz / 4800 bits per second – low power – carrier modulated

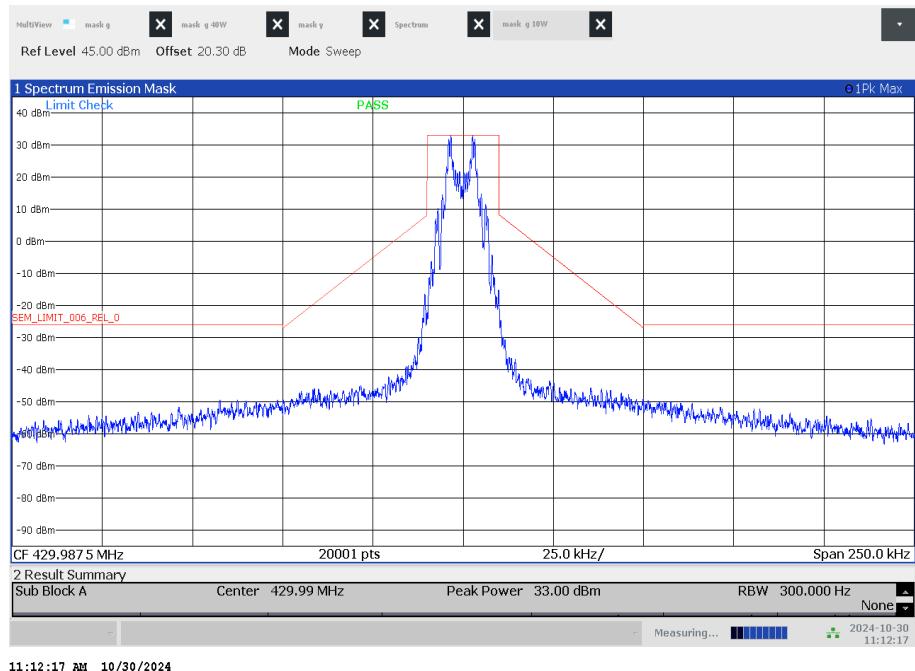


Plots 429.9875 MHz

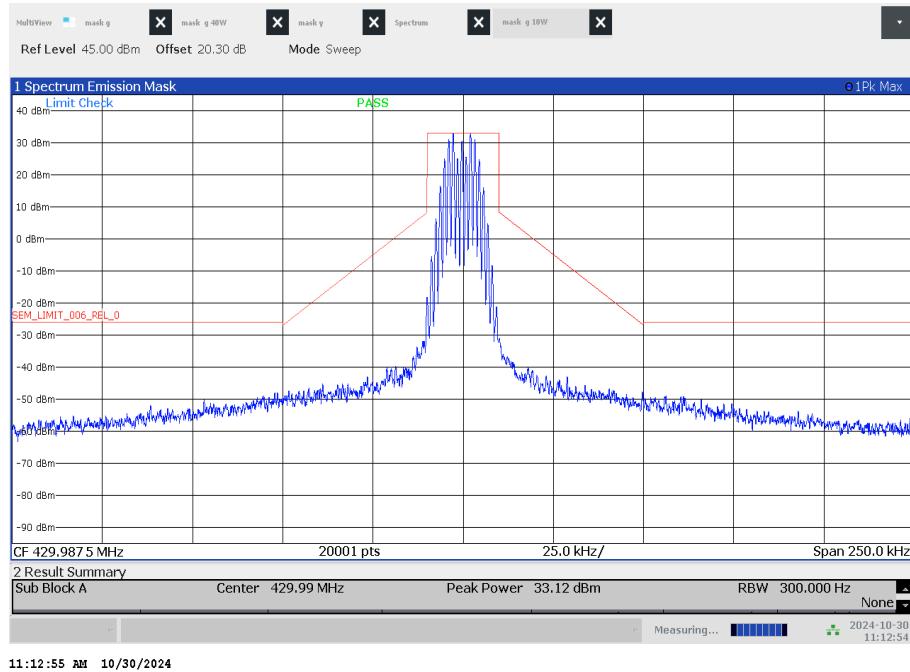
Plot 1: Emission mask G, tx @429.9875 MHz / 512 bits per second – low power – carrier modulated



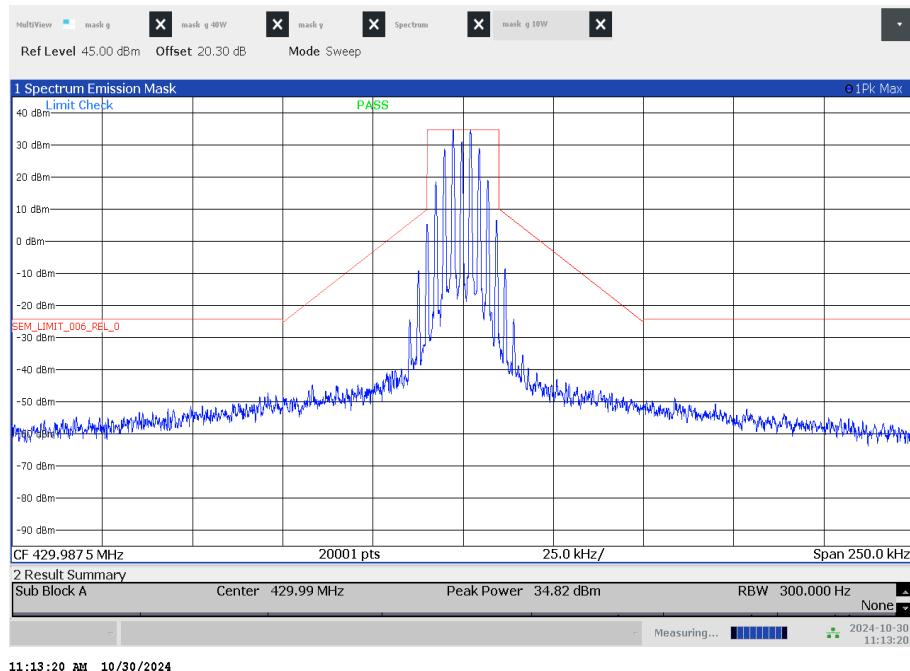
Plot 2: Emission mask G, tx @429.9875 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask G, tx @429.9875 MHz / 2400 bits per second – low power – carrier modulated

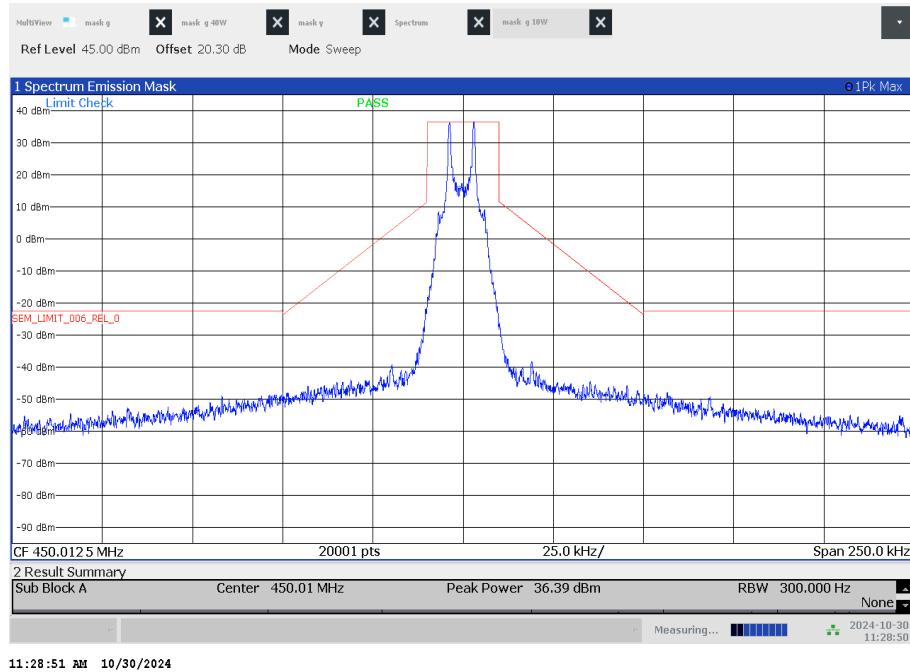


Plot 4: Emission mask G, tx @429.9875 MHz / 4800 bits per second – low power – carrier modulated

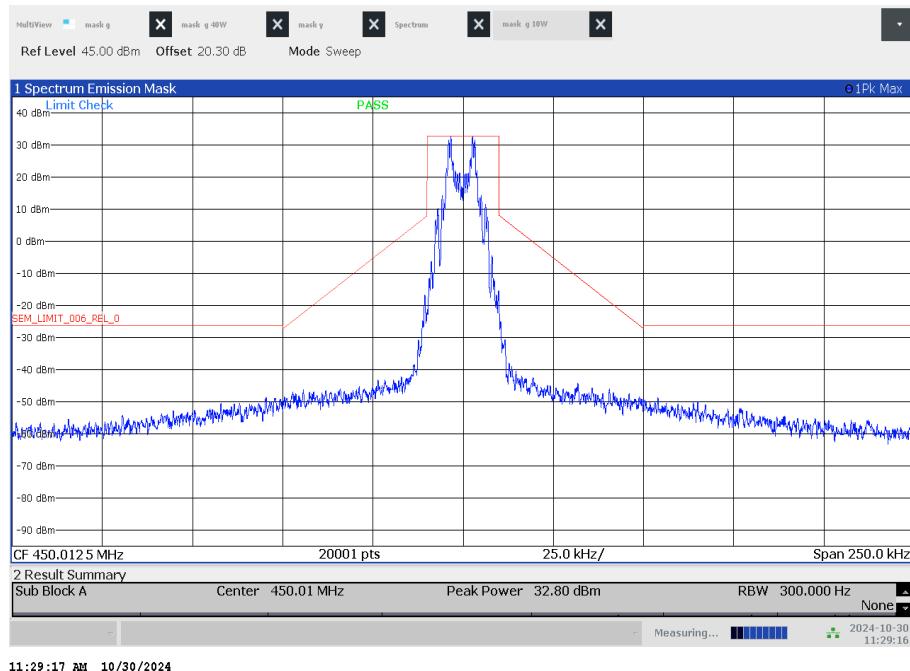


Plots 450.0125 MHz

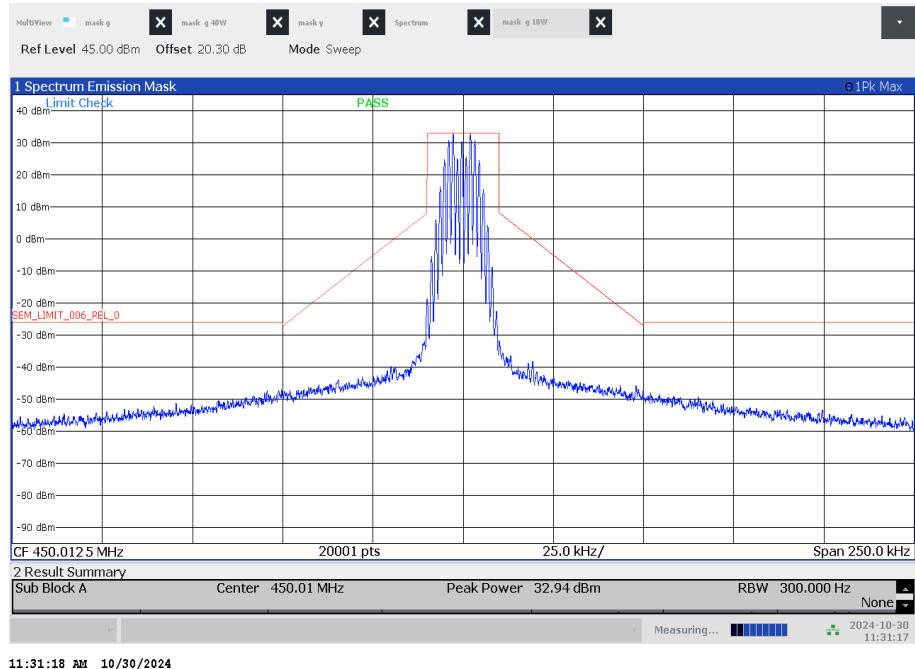
Plot 1: Emission mask G, tx @450.0125 MHz / 512 bits per second – low power – carrier modulated



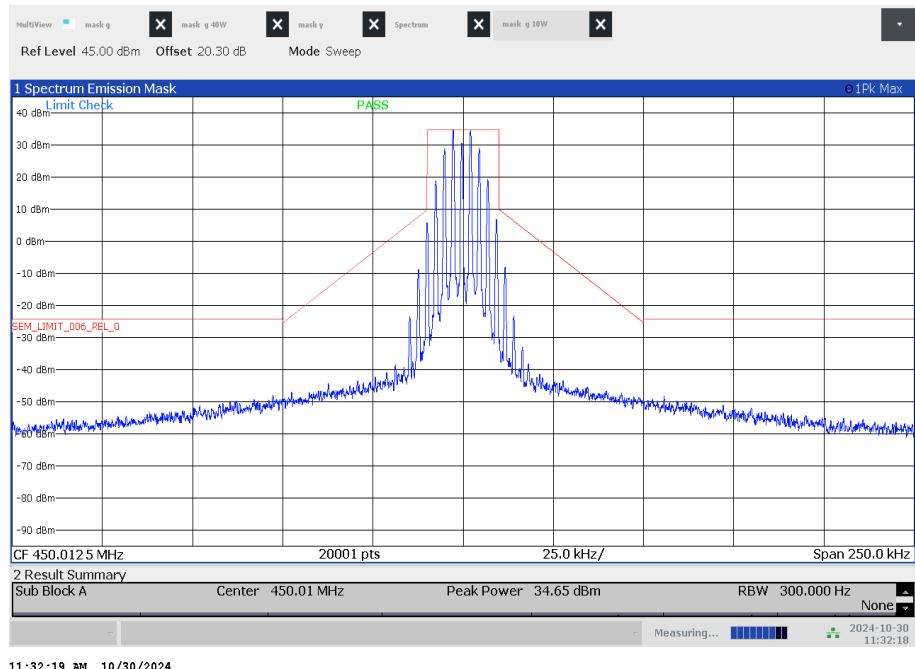
Plot 2: Emission mask G, tx @450.0125 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask G, tx @450.0125 MHz / 2400 bits per second – low power – carrier modulated

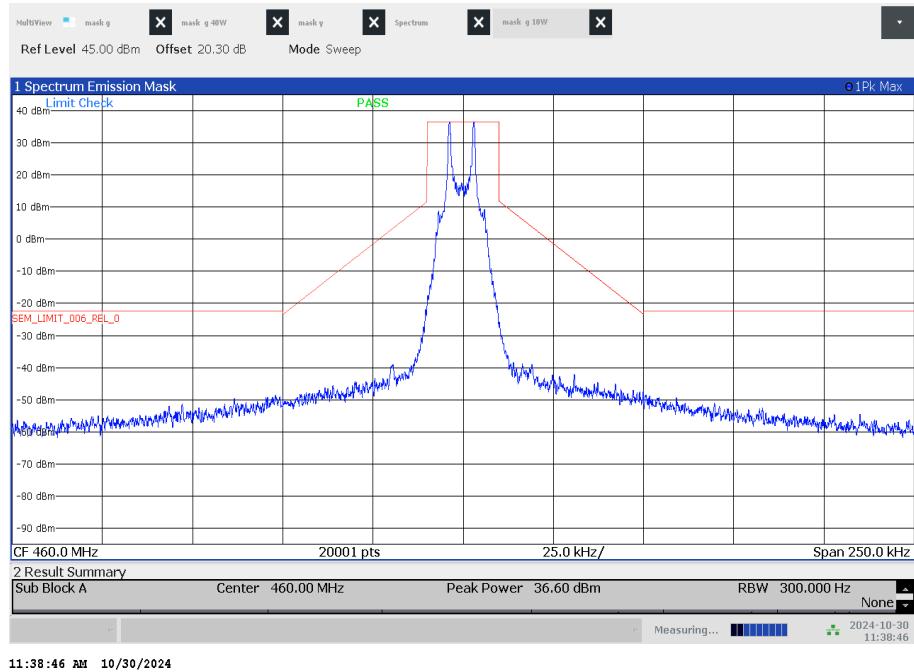


Plot 4: Emission mask G, tx @450.0125 MHz / 4800 bits per second – low power – carrier modulated

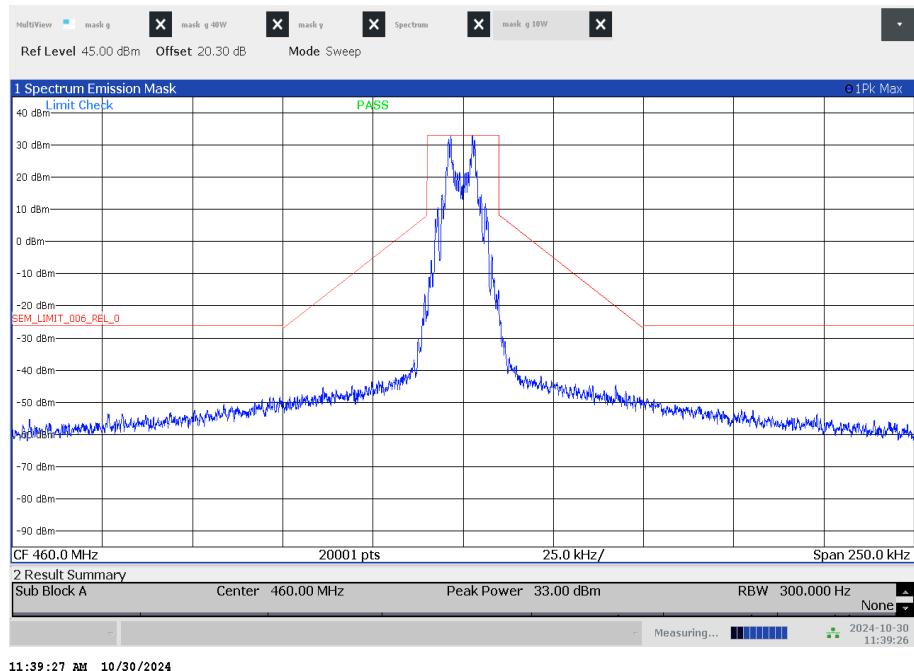


Plots 460.0 MHz

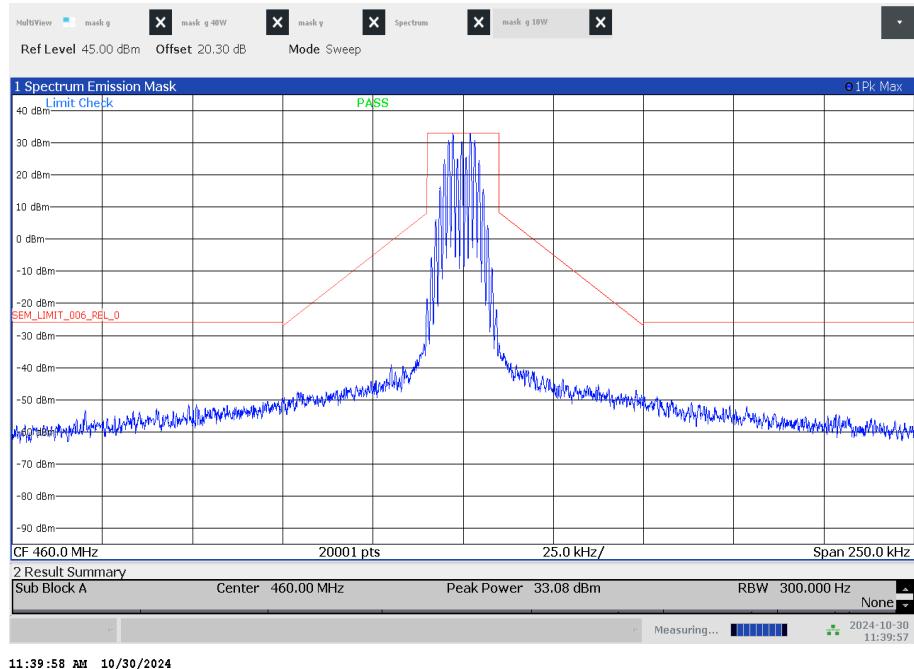
Plot 1: Emission mask G, tx @460.0 MHz / 512 bits per second – low power – carrier modulated



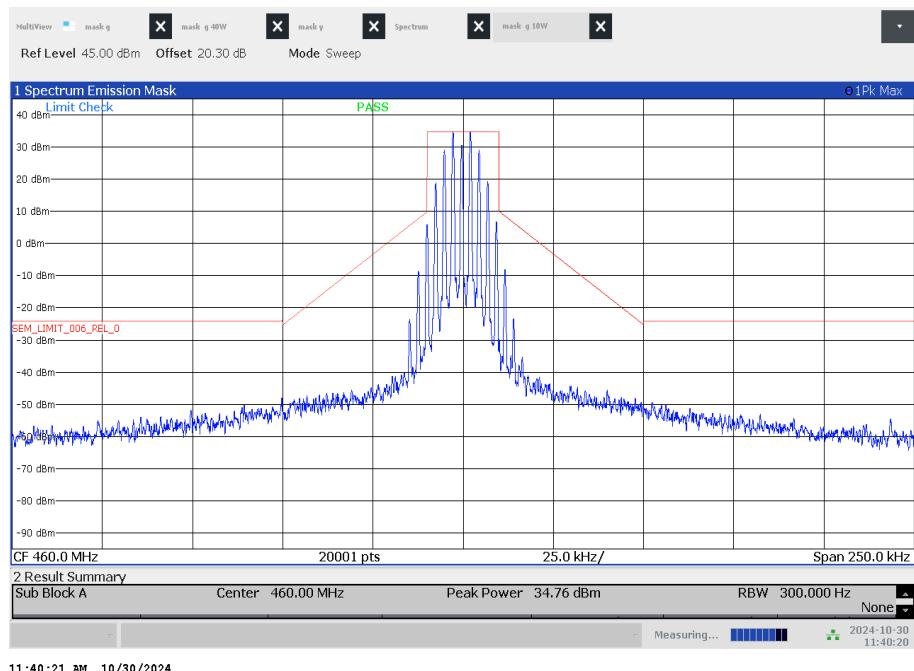
Plot 2: Emission mask G, tx @460.0 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask G, tx @460.0 MHz / 2400 bits per second – low power – carrier modulated

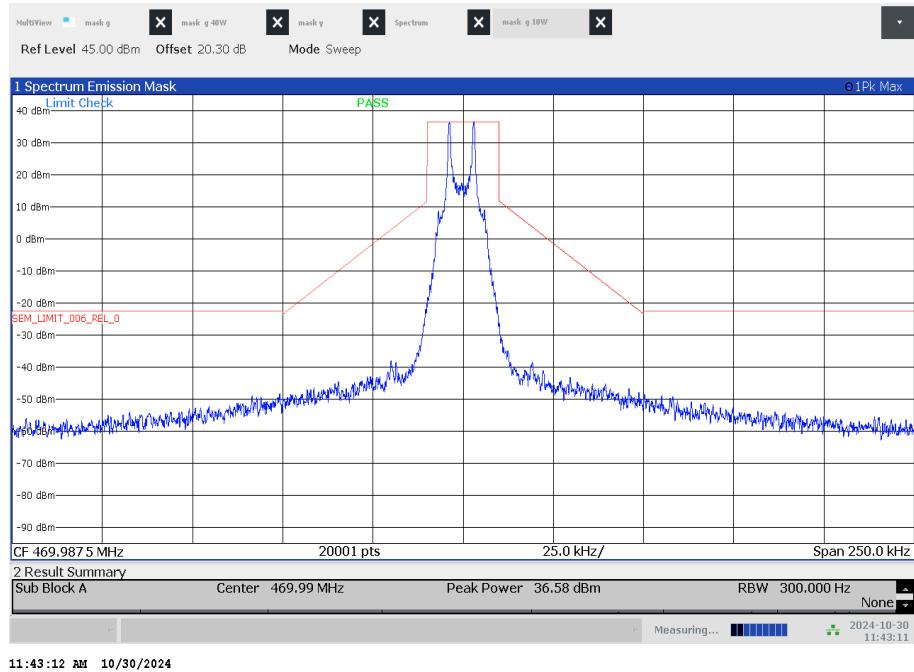


Plot 4: Emission mask G, tx @460.0 MHz / 4800 bits per second – low power – carrier modulated

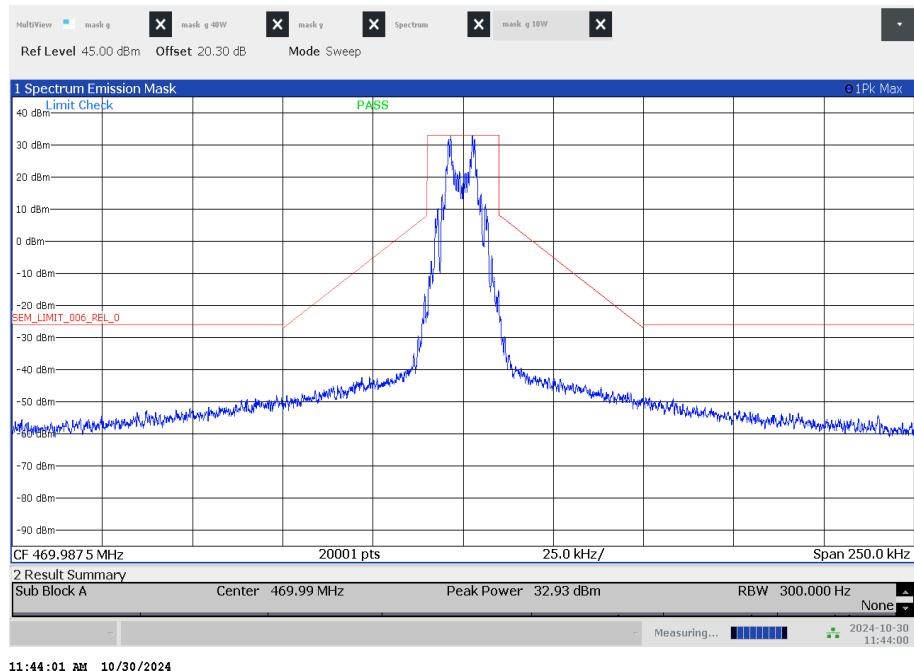


Plots 469.9875 MHz

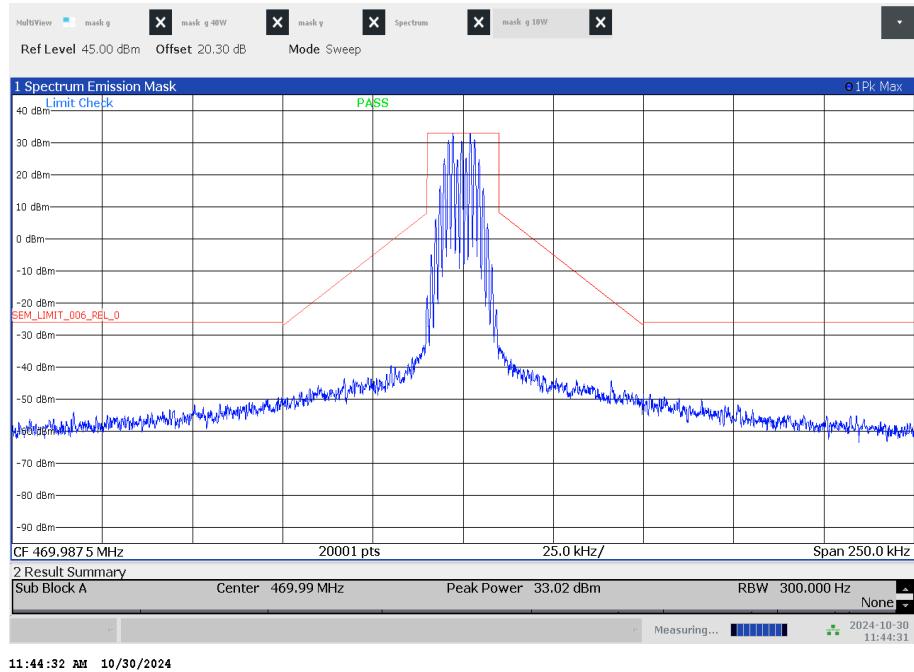
Plot 1: Emission mask G, tx @469.9875 MHz / 512 bits per second – low power – carrier modulated



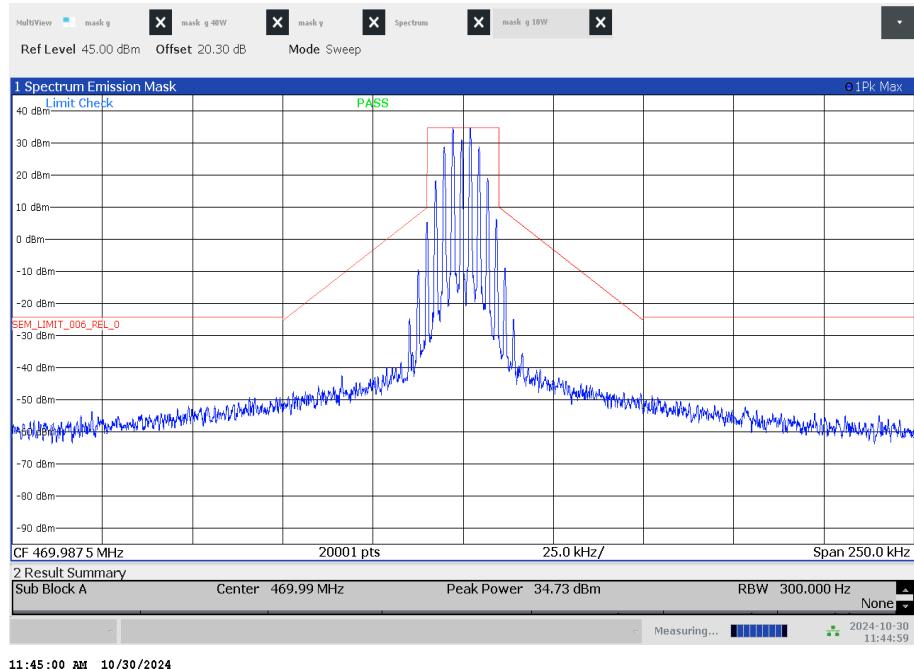
Plot 2: Emission mask G, tx @469.9875 MHz / 1200 bits per second – low power – carrier modulated



Plot 3: Emission mask G, tx @469.9875 MHz / 2400 bits per second – low power – carrier modulated

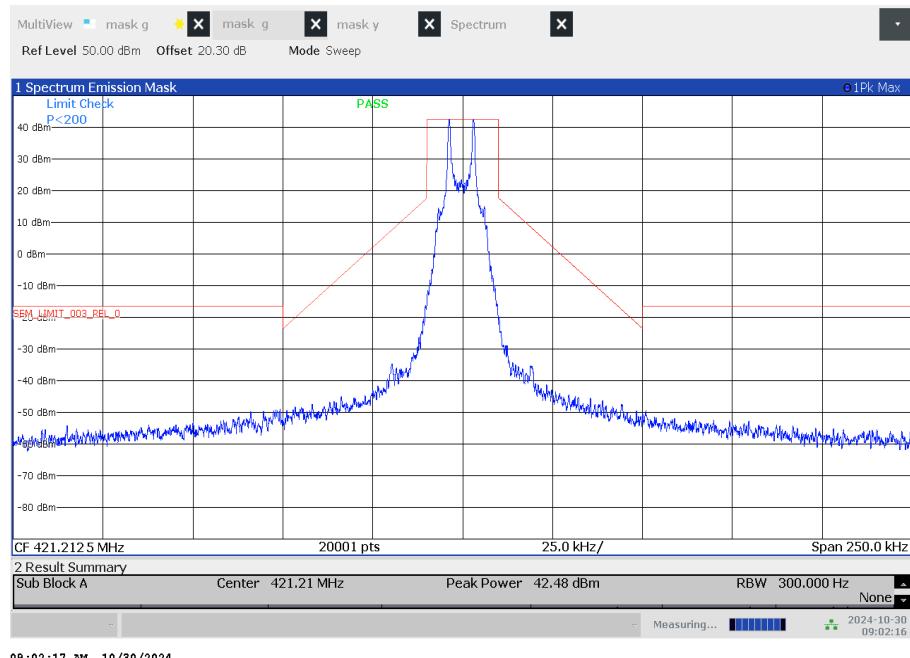


Plot 4: Emission mask G, tx @469.9875 MHz / 4800 bits per second – low power – carrier modulated

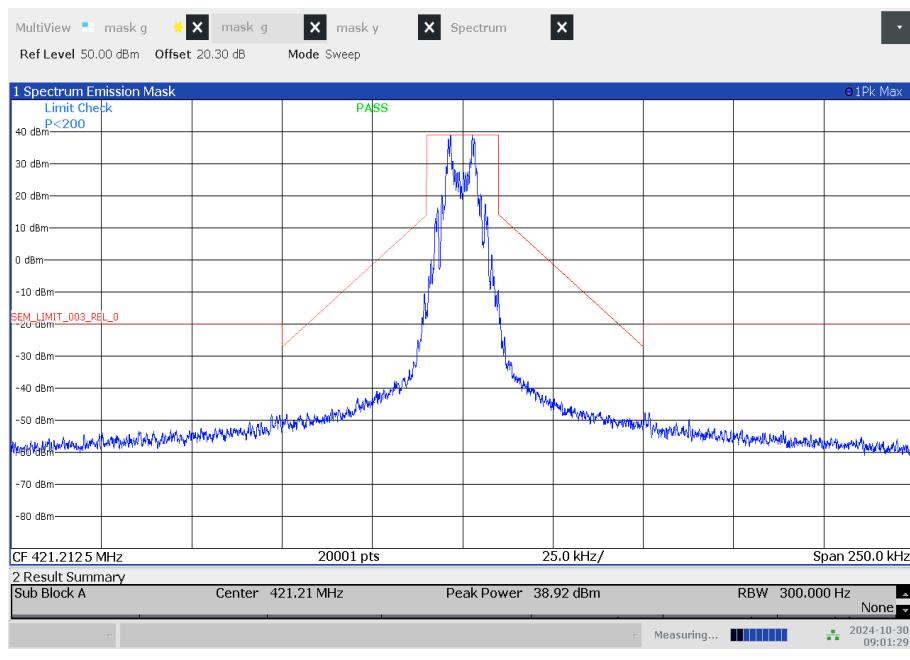


Plots 421.2125 MHz

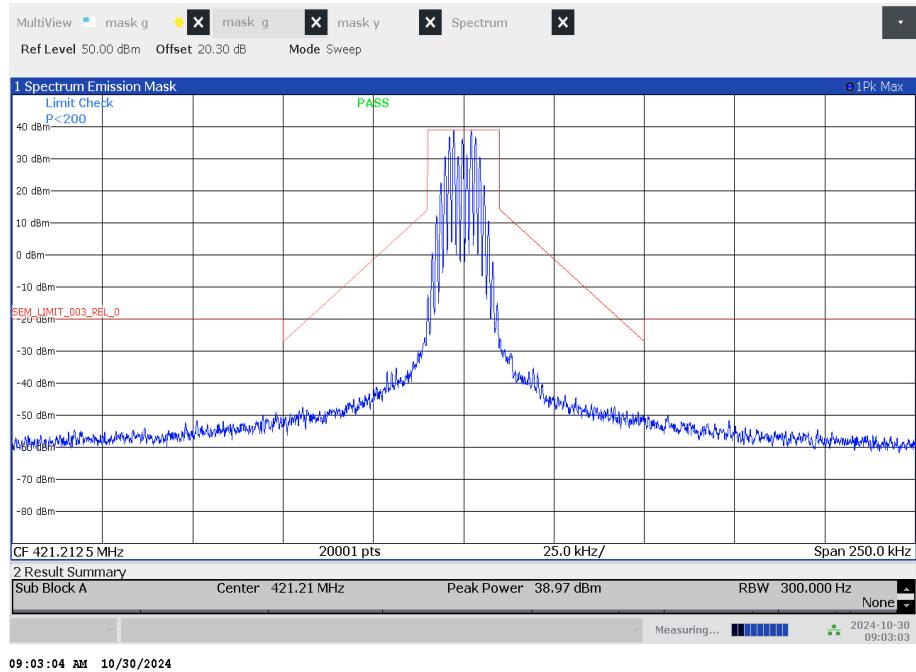
Plot 1: Emission mask G, tx @421.2125 MHz / 512 bits per second – high power – carrier modulated



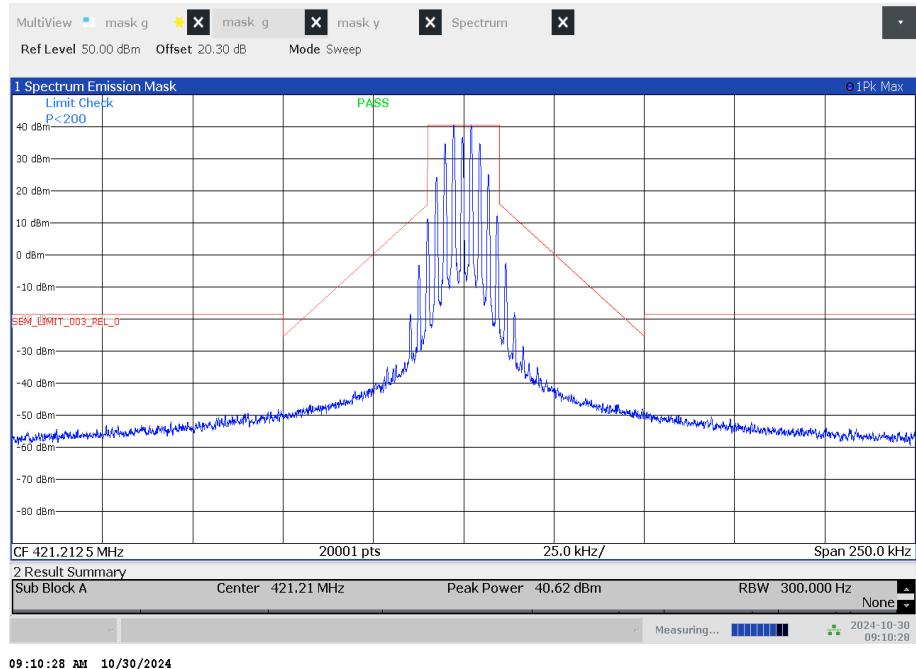
Plot 2: Emission mask G, tx @421.2125 MHz / 1200 bits per second – high power – carrier modulated



Plot 3: Emission mask G, tx @421.2125 MHz / 2400 bits per second – high power – carrier modulated

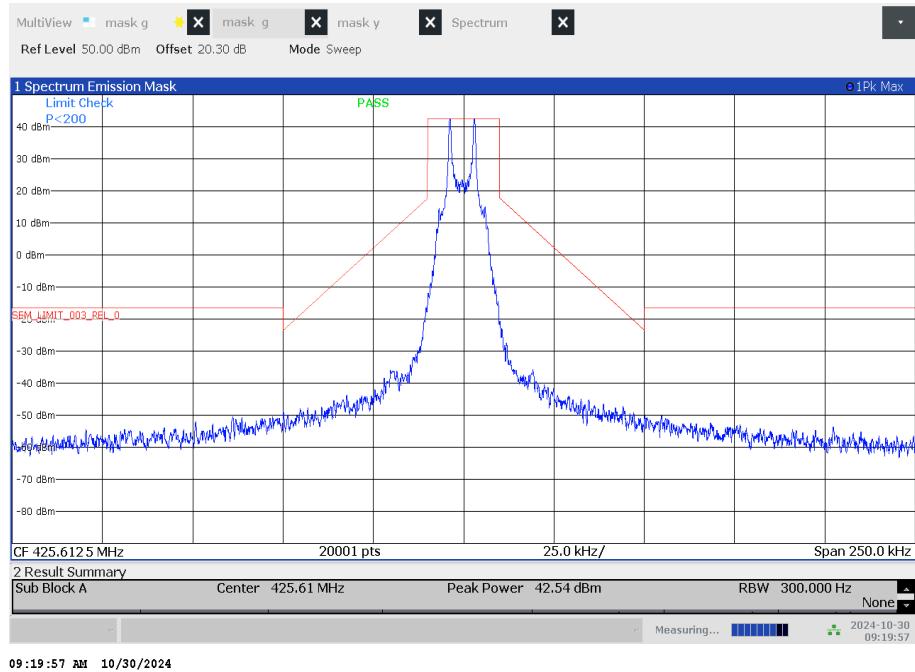


Plot 4: Emission mask G, tx @421.2125 MHz / 4800 bits per second – high power – carrier modulated



Plots 425.6125 MHz

Plot 1: Emission mask G, tx @425.6125 MHz / 512 bits per second – high power – carrier modulated



Plot 2: Emission mask G, tx @425.6125 MHz / 1200 bits per second – high power – carrier modulated

