

General Motors
1255 Terra Bella Ave.
Mountain View, CA 94043

Revised 4/1/2026

GPS L1 1575.42 MHz

$$P_{Tmax} = P_R + 20 \log_{10} f + 20 \log_{10}(30 + d) - 27.55$$

$P_R =$ -140 dBm *Power at 30 meters (100') from the building*

$f =$ 1575.42 MHz

$d =$ 8.23 meters *TX antenna distance from nearest outside wall*

$P_{Tmax} =$ -71.95 dBm *EIRP*

$$P_{Tmax(pW)} = 10^{\left(\frac{P_{Tmax}}{10} + 9\right)}$$

$P_{Tmax(pW)} =$ 63.77 pW *EIRP*

$$pW_{ERP} = pW_{EIRP} / 1.64$$

pW ERP = 38.88 pW *ERP*

GPS L5 1176.45 MHz

$$P_{Tmax} = P_R + 20 \log_{10} f + 20 \log_{10}(30 + d) - 27.55$$

$P_R =$ -140 dBm *Power at 30 meters (100') from the building*

$f =$ 1176.45 MHz

$d =$ 8.23 meters *TX antenna distance from nearest outside wall*

$P_{Tmax} =$ -74.49 dBm *EIRP*

$$P_{Tmax(pW)} = 10^{\left(\frac{P_{Tmax}}{10} + 9\right)}$$

$P_{Tmax(pW)} =$ 35.56 pW *EIRP*

$$pW_{ERP} = pW_{EIRP} / 1.64$$

pW ERP = 21.68 pW *ERP*