

Roger GPS, repeater budget calculator for NTIA regulations



GPS carrier frequency,
use code L1 or L2

L1

1575

MHz

Values in light blue cells only can be edited

Distance from Building

198.4

ft

60.47232

m

0.038

mi

0.060

km

Avg Receive Power North America Isotropic Antenna			External components				Repeater unit				Free Space Loss					
			Receiver + Antenna		Cable Loss.		Attenuator		Repeater Gain.				Repeater Antenna		Antenna Isotropic vs	
			Gain		This has to be negative value				Adjusted in the repeater				Gain		Dipole	
Level	-130.0	dBm	35.0	dB	-19.0	dB	0.0	dB	32.0	dB	3.0	dB	-2.2	dB	-72.0	dB
			-95.0	dBm	-114.0	dBm	-114.0	dBm	-82.0	dBm	-79.0	dBm	-81.2	dBm	-151.0	dBm
							0.0								7.9E-19	W
							Attenuator needed to reach allowed output limit				Effective Radiated Power		Effective Isotropic Radiated Power		Repeated Signal Power @ distance	
													NTIA requires < -140 @ 100 ft		dBm	

Effective Radiated Power (W) 198.4 feet from the building
1.25893E-11 in Watts
Same in pico Watts 198.4 feet from the building
12.5892541179416 pW