Roger GPS, repeater budget calculator for NTIA regula

GPS carrier frequency, use code L1 or L2							
L1			Values in light blue cells only can be edited				
1575	MHz						
	Avg Receive Power North America Isotropic Antenna		Receiver + Antenna Gain		External components Cable Loss. This has to be negative value		
			35.0	dB	-2.0	dB	
Level	-130.0	dBm	-95.0	dBm	-97.0	dBm	

tions

				Repeater unit		
Attenuator		Repeater Gain. Adjusted in the repeater		Repeater Antenna Gain		Antenna Isotropic vs Dipole
0.0	dB	17.0	dB	3.0	dB	-2.2
-97.0	dBm	-80.0	dBm	-77.0	dBm	-79.2
0.0 Attenuator needed to reach allowed output limit				Effective Radiated Power		Effective Isotropic Radiated Power

Distance from Building

100	ft
30.48	m
0.019	mi
0.030	km

Free Space Loss

dB -66.1 dB

dBm -143.1 dBm

4.9E-18 W

Repeated Signal Power @ distance

NTIA requires < -140 dBm @ 100 ft

Effective Radiated Power (W) 100 feet from the building

1.99526E-11 in Watts

Same in pico Watts 100 feet from the building

19.9526231496888 pW