1. f\_m = v/λ = v/(c/f) = vf/c = (10 \* 1500\*10^6)/(3\*10^8)

= 50Hz

2. ρ = R/R\_rms = 0.1R\_rms/R\_rms = 0.1

Use Average fade duration:

e^(ρ^2 - 1)/ρf\_d√(2π) = 0.01/12.53 = 0.0008s

3.

N\_T = √2π \* f\_m ρe^(- ρ ^2) = 12.4

Bit Error Rate = 12/50 = 0.24