JSPM

JSPM's

JAYAWANTRAO SAWANT COLLEGE OF ENGINEERING Sr. No. 58, Handewadi Road, Hadapsar, Pune, Maharashtra 411028 Department of Electronics and Telecommunication Engineering



Code:

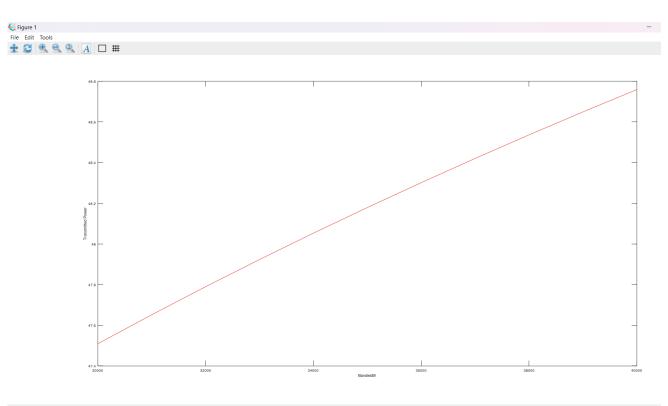
```
clc;
clear all;
k=1.38*(10^(-23)); %Boltzmann Constant
T=273; % temperature
F=5; % Noise Figure
PSD=k*T*F; % Power Spectral Density
B=30*(10^3):(10^3):40*(10^3); % Bandwidth
NP=10*log10(PSD*B); %Noise Power in db
BER=10^(-4); %Bit Error Rate
% Calculation of Signal To Noise Ratio
x=(1-(2*BER));
display(x);
SNR=((x^2)/(1-(x^2)))*2;
display(SNR);
SNRdB=10*log10(SNR);
display(SNRdB);
%Given Data
Gt=12;
Gr=5;
L=167;
M=10;
LC=3;
%Transmitted Power
Pt=SNRdB-Gt-Gr+L+M+LC+NP;
display(Pt);
plot(B,Pt,'r');
xlabel('Bandwidth');
ylabel('Transmitted Power');
```



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Output:



(39196, 48.375)