Code

commandwindow

clear all

clc

format bank

s=tf('s')

Gp=3/((s+1)\*(2\*s+1)\*(3\*s+1))

rlocus(Gp,[0:0.0001:3]);

[Ps,Kc]=rlocus(Gp,[0:0.0001:3])

[Kc' Ps']

Answer

2.49 -1.73 -0.05 -0.05

 2.49 -1.73 -0.05 -0.05

 2.49 -1.73 -0.05 -0.05

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 2.49 -1.73 -0.05 -0.05

graph



Discussion

the system is stable because all the values of poles are all negative ranging from kc value of 0 to 3.