enter the coeffient of numerator polynomial:[1]

enter the coeffient of denominator polynomial:[2 1 0]

enter the designed velocity error constant:5

enter the desired phase margin:40

enter the additional phase lag,eplision:5

the transfer function of lag compensated system is:

num/den =

1

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2 s^2 + s

the gain margin of un compensated system is: Infdb

the phase margin of un compensated system is: 17.96deg

the transfer function of lead compensated system

num/den =

0.59165 s + 1

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0.22187 s + 1

the transfer function of lag compensator is:

num/den =

2.9582 s + 5

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0.44373 s^3 + 2.2219 s^2 + s

the gain margin of compensated system is: Infdb

the phase margin of compensated system is: 40.52db

the design is accetable