

Single Degree of Freedom Vibration Calculator:

Free vibration

Parameters:.....

* Mass [m]:
(Default value = 1 unit)

* Spring rate (Stiffness) [K]:
(Default value = 1 unit)

* Damping ratio (coefficient) [C]:
(Default value = 0.1)

.....Harmonic input:.....
.....frequency:.....

Result:.....give calculate>>>

Circular frequency [ωn] =

Natural frequency [fn] =

Period of oscillation [T] =

Critical damping [cc] =

Damping factor [c] =

Damped natural angular frequency [ωd] =

Damped natural frequency [fd] =

Quality factor [Q] =

Transmissibility [TR] =

Forced vibration

10

15

0.2

input frequency = 0

Calculate

1.225

0.195

5.13

24.495

4.899

1.2

0.191

2.5

0.0

kg

N/m

rad/s

Hz

seconds

N s/m

N s/m

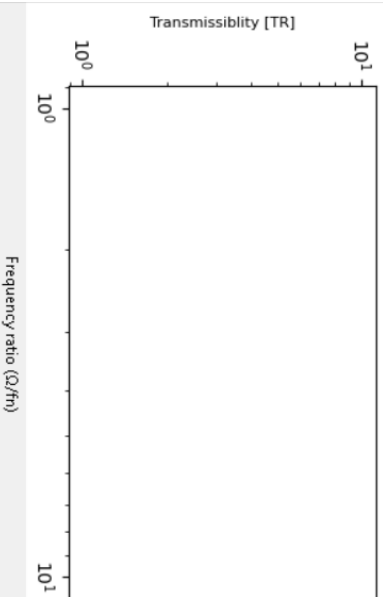
rad/s

Hz

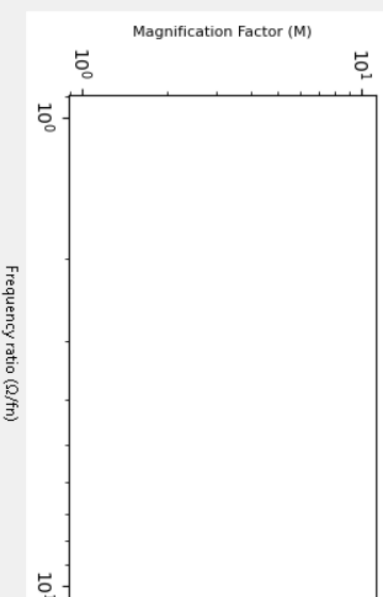
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Transmissibility vs Frequency Ratio Graph(log-log)



Magnification Factor vs Frequency Ratio Graph(log-log)



Phase angle vs Frequency Ratio Graph

