

```
1 '''
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4 last updated: 22/11/2022
5 '''
6
7 #importing necessary functions from libraries
8 from numpy import linspace
9 from numpy.fft import fftfreq
10
11
12 #message signal parameteres
13 amp_vm = 20
14 amp_vc = 30
15 fm = 3
16 fc = 27
17
18 #frequency deviation
19 fd = 1
20
21 #these are sampling values
22 fs = 40*fc
23 dt= 1/fs
24 duration = 1
25 N = duration * fs
26
27 #generating time axis samples
28 time = linspace(0, duration, N)
29
30 #message and carrier singal variables need to be calculated in the main file
31 vm = 0
32 vc = 0
33 vfsk = 0
34
35 #spectrum variables needs to be calculated in the main file
36 spectrum = 0
37
38 #generating frequency axis samples
39 frequency = fftfreq(len(time), dt)
40 print(len(frequency))
41
42
43
```