```python
# -*- coding: utf-8 -*-
"""
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"""

import numpy as np
import matplotlib.pyplot as plt
#constants
r1 = 415
r2 = 3.2*10**6
r3 = 1.54*10**6
f = 1
c = 2650
L = .05

#Define acoustic pressure amplitudes
def T(f):
    first_term = 2+((r3/r1)+(r1/r3))*(np.cos((2*np.pi*f*L)/c))**2
    second_term = ((r2**2/(r1*r3))+((r1*r3)/r2**2))*(np.sin((2*np.pi*f*L)/c))**2
    return 4/(first_term + second_term)
f_values = np.linspace(150,150000,1000000)
#plt.ylim(.00112,.001122)
#plt.xlim(13200, 133000)

#Plotting
fig = plt.figure(1)

my_fig = fig.add_subplot(1,1,1)
my_fig.grid(True)
plt.plot(f_values, T(f_values), color = 'blue')
my_fig.set_xlabel('Frequency (Hz)')
my_fig.set_ylabel('$T_i$')
my_fig.set_title('Talking to Dolphins (Transmission intensity at different frequencies)')
plt.legend(loc='best')
plt.savefig('Q2PartA.png', dpi=300)

#Messing around with finding max values
#T_values = []
#T_values = (T(f_values))
#m = max(T_values)
#j=0
#maxi = []
#for i in T_values:
#    if i==m:
#        maxi.append(j)
#    j+=1
#
#print(maxi)
#
#
```