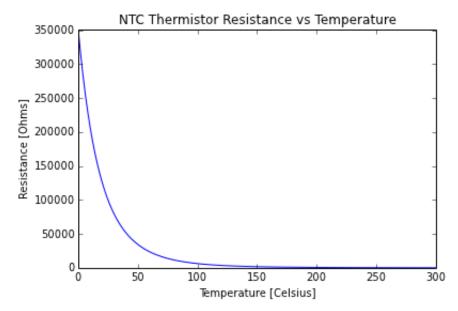
NTC Thermistor

Calculated for EPCOS 100K NTC Thermistor (B57560G1104F)

- hasta 300°C
- Error 1%
- Precio 2,534€
- Datasheet: http://docs-europe.electrocomponents.com/webdocs/11ed/0900766b811edb9b.pdf
- URL: http://es.rs-online.com/web/p/termistores/7691934/

 $R = R_0 e^{\beta (1){T}-\frac{1}{T_0}}$

```
In [1]: import numpy as np
        import matplotlib.pyplot as plt
        from scipy.interpolate import interpld
        import math
        R 0 = 100000.0
        T 0 = 298.0
        Beta = 4092.0 # He usado B 0/100 No sé en que se diferencian entre ell
        T = np.linspace(273.0, 573.0, 300.0)
        R = R \ 0 * np.exp(Beta*((1/T) - (1/T \ 0)))
        T Celsius = np.subtract(T, 273.0)
        plt.axis([np.min(T Celsius), np.max(T Celsius), np.min(R), np.max(R)])
        plt.ticklabel format(style = 'plain', axis = 'both')
        plt.xscale('linear')
        plt.yscale('linear')
        plt.xlabel('Temperature [Celsius]')
        plt.ylabel('Resistance [Ohms]')
        plt.title('NTC Thermistor Resistance vs Temperature')
        plt.plot(T Celsius,R)
        plt.show()
```



```
In [2]:
         for i in range(0, 12):
              j = 25*i
              print 'T[^{\circ}C] = %3d \t R = %6.0f \t R/R 25 = %1.3f' % (T[j]-273, R[
         j], R[j]/R_0)
         T[\circ C] =
                     0
                             R = 351650
                                                R/R 25 = 3.517
         T[\circ C] =
                    25
                             R =
                                   99616
                                                R/R 25 = 0.996
         T[\circ C] =
                    50
                                                R/R 25 = 0.343
                             R =
                                   34323
         T[ºC] =
                  75
                             R =
                                   13788
                                                R/R_25 = 0.138
         T[\circ C] = 100
                             R =
                                    6261
                                                R/R 25 = 0.063
                                                R/R 25 = 0.031
         T[\circ C] = 125
                             R =
                                    3140
         T[\circ C] = 150
                                    1709
                                                R/R 25 = 0.017
                             R =
                                                R/R 25 = 0.010
         T[\circ C] = 175
                             R =
                                     996
         T[\circ C] = 200
                             R =
                                     614
                                                R/R 25 = 0.006
         T[\circ C] = 225
                             R =
                                     398
                                                R/R_25 = 0.004
                                                R/R 25 = 0.003
         T[\circ C] = 250
                             R =
                                     269
         T[\circ C] = 275
                             R =
                                     188
                                                R/R 25 = 0.002
```

NTC Thermistor Circuit

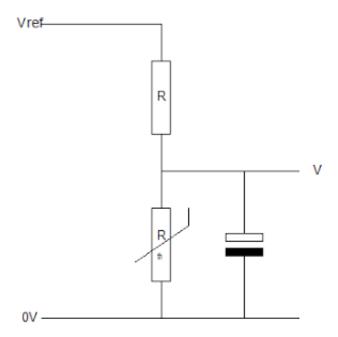
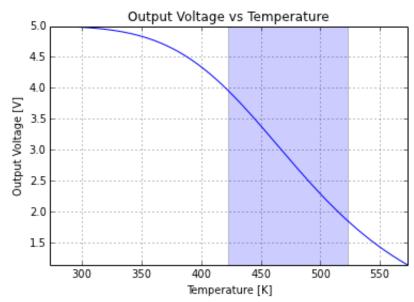


Diagrama del circuito

```
In [3]: V ref = 5.0
                         # Voltaje de entrada del divisor, voltaje de referenc
        ia del ADC [V]
                         # Valor de la resistencia R del divisor de tensión [O
        R = 460.0
        hm]
        \lim \sup = 250
                         # Temperatura de interés inferior [Celsius]
        lim inf = 150
                         # Temperatura de interés superior [Celsius]
        T = np.linspace(273, 573, 301)
        R_NTC = R_0 * np.exp(Beta*((1/T) - (1/T_0)))
        V \circ = V ref*(R NTC/(R+R NTC))
        plt.axis([np.min(T), np.max(T), np.min(V o), np.max(V o)])
        plt.ticklabel format(style = 'plain', axis = 'both')
        plt.xscale('linear')
        plt.yscale('linear')
        plt.xlabel('Temperature [K]')
        plt.ylabel('Output Voltage [V]')
        plt.title('Output Voltage vs Temperature')
        plt.grid(True)
        plt.axvspan(lim inf+273, lim sup+273, ymin=0, ymax=1, alpha=0.2)
        plt.plot(T,V o)
        plt.show()
```



Comprobar que cumple con el criterio de la resolución en el rango de interés

```
In [4]: for i in range(lim_inf, lim_sup) :
    if V_o[i]-V_o[i+1] > 0.00488 :
        s = 'Resolucion OK'
    else :
        s = '!!!Resolucion NOK'
    print 'T[\textsup C] = %d, V_o = %f, R = %f, Delta V_o = %f, %s' % (T[i]-2
    73, V_o[i], R_NTC[i], V_o[i]-V_o[i+1], s)
```

```
T[^{Q}C] = 150, V_o = 3.949161, R = 1728.727221, Delta V_o = 0.019062, Re
solucion OK
T[QC] = 151, V o = 3.930099, R = 1689.732036, Delta V o = 0.019221, Re
solucion OK
T[C] = 152, V o = 3.910879, R = 1651.793812, Delta V o = 0.019377, Re
solucion OK
T[C] = 153, V o = 3.891502, R = 1614.879538, Delta V o = 0.019529, Re
solucion OK
T[^{\circ}C] = 154, V o = 3.871972, R = 1578.957367, Delta V o = 0.019679, Re
solucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
solucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
solucion OK
T[\ ^{\circ}C] = 157, V o = 3.812500, R = 1476.841420, Delta V o = 0.020108, Re
solucion OK
T[^{\circ}C] = 158, V o = 3.792392, R = 1444.590800, Delta V o = 0.020244, Re
solucion OK
T[\ ^{\circ}C] = 159, V o = 3.772147, R = 1413.188903, Delta V o = 0.020377, Re
solucion OK
T[C] = 160, V o = 3.751771, R = 1382.609951, Delta V o = 0.020506, Re
solucion OK
T[\ ^{\circ}C] = 161, V o = 3.731265, R = 1352.829047, Delta V o = 0.020631, Re
solucion OK
T[^{\circ}C] = 162, V o = 3.710634, R = 1323.822141, Delta V o = 0.020753, Re
solucion OK
T[\ ^{\circ}C] = 163, V o = 3.689881, R = 1295.565997, Delta V o = 0.020870, Re
solucion OK
T[\ ^{\circ}C] = 164, V o = 3.669011, R = 1268.038167, Delta V o = 0.020984, Re
solucion OK
T[^{\circ}C] = 165, V o = 3.648027, R = 1241.216957, Delta V o = 0.021094, Re
solucion OK
T[\ ^{\circ}C] = 166, V o = 3.626932, R = 1215.081402, Delta V o = 0.021200, Re
solucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
solucion OK
T[\ ^{\circ}C] = 168, V o = 3.584430, R = 1164.786870, Delta V o = 0.021400, Re
solucion OK
T[^{Q}C] = 169, V_o = 3.563029, R = 1140.589363, Delta V_o = 0.021494, Re
solucion OK
T[C] = 170, V o = 3.541535, R = 1117.000400, Delta V o = 0.021584, Re
solucion OK
T[\ ^{\circ}C] = 171, V o = 3.519951, R = 1094.002269, Delta V o = 0.021670, Re
solucion OK
T[^{\circ}C] = 172, V o = 3.498281, R = 1071.577841, Delta V o = 0.021752, Re
solucion OK
T[C] = 173, V o = 3.476529, R = 1049.710544, Delta V o = 0.021829, Re
solucion OK
T[C] = 174, V o = 3.454700, R = 1028.384349, Delta V o = 0.021902, Re
solucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
solucion OK
T[\ ^{\circ}C] = 176, V o = 3.410827, R = 987.293723, Delta V o = 0.022036, Res
olucion OK
T[C] = 177, V o = 3.388791, R = 967.499757, Delta V o = 0.022096, Res
olucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
olucion OK
T[C] = 179, V o = 3.344543, R = 929.344209, Delta V o = 0.022204, Res
```

```
olucion OK
T[^{\circ}C] = 180, V o = 3.322338, R = 910.955842, Delta V o = 0.022252, Res
olucion OK
T[\ ^{\circ}C] = 181, V o = 3.300086, R = 893.009929, Delta V o = 0.022295, Res
olucion OK
T[\ ^{\circ}C] = 182, V o = 3.277791, R = 875.494119, Delta V o = 0.022335, Res
olucion OK
T[C] = 183, V o = 3.255456, R = 858.396446, Delta V o = 0.022369, Res
olucion OK
T[\ ^{\circ}C] = 184, V o = 3.233087, R = 841.705323, Delta V o = 0.022400, Res
olucion OK
T[C] = 185, V o = 3.210687, R = 825.409525, Delta V o = 0.022426, Res
olucion OK
T[C] = 186, V o = 3.188260, R = 809.498177, Delta V o = 0.022449, Res
olucion OK
T[\ ^{\circ}C] = 187, V o = 3.165812, R = 793.960740, Delta V o = 0.022467, Res
olucion OK
T[C] = 188, V o = 3.143345, R = 778.787006, Delta V o = 0.022481, Res
olucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
olucion OK
T[\ ^{\circ}C] = 190, V o = 3.098374, R = 749.491367, Delta V o = 0.022496, Res
olucion OK
T[\ ^{\circ}C] = 191, V o = 3.075878, R = 735.350575, Delta V o = 0.022497, Res
olucion OK
T[C] = 192, V o = 3.053381, R = 721.535688, Delta V o = 0.022495, Res
olucion OK
T[C] = 193, V o = 3.030886, R = 708.037969, Delta V o = 0.022488, Res
olucion OK
T[\text{QC}] = 194, V o = 3.008398, R = 694.848944, Delta V o = 0.022478, Res
olucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
olucion OK
T[C] = 196, V o = 2.963456, R = 669.364353, Delta V o = 0.022445, Res
olucion OK
T[QC] = 197, V o = 2.941011, R = 657.053088, Delta V o = 0.022423, Res
olucion OK
T[^{\circ}C] = 198, V o = 2.918588, R = 645.019101, Delta V o = 0.022397, Res
olucion OK
T[^{\circ}C] = 199, V o = 2.896191, R = 633.255115, Delta V o = 0.022367, Res
olucion OK
T[\color{C}] = 200, V o = 2.873824, R = 621.754072, Delta V o = 0.022334, Res
olucion OK
T[\ ^{\circ}C] = 201, V o = 2.851490, R = 610.509121, Delta V o = 0.022297, Res
olucion OK
T[C] = 202, V o = 2.829193, R = 599.513614, Delta V o = 0.022256, Res
olucion OK
T[\color{C}] = 203, V o = 2.806936, R = 588.761099, Delta V o = 0.022212, Res
olucion OK
T[\ ^{\circ}C] = 204, V o = 2.784724, R = 578.245312, Delta V o = 0.022165, Res
olucion OK
T[\color{D}] = 205, V_o = 2.762559, R = 567.960172, Delta V_o = 0.022114, Res
olucion OK
T[\ ^{\circ}C] = 206, V o = 2.740446, R = 557.899777, Delta V o = 0.022059, Res
olucion OK
T[\color{C}] = 207, V o = 2.718386, R = 548.058395, Delta V o = 0.022002, Res
olucion OK
T[\mbox{\sc C}] = 208, V_o = 2.696384, R = 538.430458, Delta V_o = 0.021941, Res
olucion OK
```

```
T[^{\circ}C] = 209, V o = 2.674443, R = 529.010562, Delta V o = 0.021877, Res
olucion OK
T[QC] = 210, V o = 2.652566, R = 519.793455, Delta V o = 0.021810, Res
olucion OK
T[QC] = 211, V o = 2.630757, R = 510.774037, Delta V o = 0.021740, Res
olucion OK
T[C] = 212, V o = 2.609017, R = 501.947355, Delta V o = 0.021667, Res
olucion OK
T[^{\circ}C] = 213, V o = 2.587350, R = 493.308593, Delta V o = 0.021591, Res
olucion OK
T[\ ^{\circ}C] = 214, V o = 2.565759, R = 484.853075, Delta V o = 0.021512, Res
olucion OK
T[\ ^{\circ}C] = 215, V o = 2.544247, R = 476.576255, Delta V o = 0.021431, Res
olucion OK
T[\ ^{\circ}C] = 216, V o = 2.522816, R = 468.473717, Delta V o = 0.021347, Res
olucion OK
T[\ ^{\circ}C] = 217, V o = 2.501470, R = 460.541167, Delta V o = 0.021260, Res
olucion OK
T[\color{C}] = 218, V o = 2.480210, R = 452.774433, Delta V o = 0.021171, Res
olucion OK
T[C] = 219, V o = 2.459039, R = 445.169457, Delta V o = 0.021079, Res
olucion OK
T[\ ^{\circ}C] = 220, V o = 2.437960, R = 437.722295, Delta V o = 0.020985, Res
olucion OK
T[\ ^{\circ}C] = 221, V o = 2.416976, R = 430.429114, Delta V o = 0.020888, Res
olucion OK
T[\ ^{\circ}C] = 222, V o = 2.396087, R = 423.286184, Delta V o = 0.020790, Res
olucion OK
T[\ ^{\circ}C] = 223, V o = 2.375298, R = 416.289878, Delta V o = 0.020689, Res
olucion OK
T[^{\circ}C] = 224, V o = 2.354609, R = 409.436672, Delta V o = 0.020586, Res
olucion OK
T[\color{C}] = 225, V o = 2.334023, R = 402.723133, Delta V o = 0.020481, Res
olucion OK
T[\ ^{\circ}C] = 226, V o = 2.313542, R = 396.145926, Delta V o = 0.020374, Res
olucion OK
T[\ ^{\circ}C] = 227, V o = 2.293168, R = 389.701804, Delta V o = 0.020265, Res
olucion OK
T[^{Q}C] = 228, V_o = 2.272903, R = 383.387609, Delta V_o = 0.020155, Res
olucion OK
T[C] = 229, V o = 2.252748, R = 377.200269, Delta V o = 0.020042, Res
olucion OK
T[\ ^{\circ}C] = 230, V o = 2.232706, R = 371.136793, Delta V o = 0.019928, Res
olucion OK
T[\ ^{\circ}C] = 231, V o = 2.212778, R = 365.194270, Delta V o = 0.019813, Res
olucion OK
T[^{\circ}C] = 232, V o = 2.192965, R = 359.369870, Delta V o = 0.019696, Res
olucion OK
T[C] = 233, V o = 2.173269, R = 353.660836, Delta V o = 0.019577, Res
olucion OK
T[^{9}C] = 234, V o = 2.153692, R = 348.064483, Delta V o = 0.019457, Res
olucion OK
T[\ ^{\circ}C] = 235, V o = 2.134236, R = 342.578199, Delta V o = 0.019336, Res
olucion OK
T[C] = 236, V o = 2.114900, R = 337.199442, Delta V o = 0.019213, Res
olucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
olucion OK
T[C] = 238, V o = 2.076598, R = 326.754665, Delta V o = 0.018964, Res
```

```
olucion OK
T[\text{QC}] = 239, V o = 2.057634, R = 321.683885, Delta V o = 0.018838, Res
olucion OK
T[C] = 240, V o = 2.038796, R = 316.711108, Delta V o = 0.018711, Res
olucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
olucion OK
T[C] = 242, V o = 2.001502, R = 307.050709, Delta V o = 0.018454, Res
olucion OK
T[\ ^{\circ}C] = 243, V o = 1.983048, R = 302.358802, Delta V o = 0.018324, Res
olucion OK
T[C] = 244, V o = 1.964723, R = 297.756327, Delta V o = 0.018194, Res
olucion OK
T[C] = 245, V o = 1.946530, R = 293.241277, Delta V o = 0.018063, Res
olucion OK
T[QC] = 246, V o = 1.928467, R = 288.811696, Delta V o = 0.017931, Res
olucion OK
T[C] = 247, V o = 1.910536, R = 284.465679, Delta V o = 0.017798, Res
olucion OK
T[\ ^{\circ}C] = 248, V o = 1.892737, R = 280.201369, Delta V o = 0.017665, Res
olucion OK
T[\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\mbox{\ensuremath{}^{\circ}}\m
olucion OK
```

Tabla resumen

```
In [5]: for i in range(1, 13):
             j = 25*i
             print 'T[^{\circ}C] = %3d, R = %6d, V o = %.3f, Delta V o = %2.3f, I = %.
         6f' % (T[j]-273, R_NTC[j], V_o[j], V_o[j-1]-V_o[j], 5/(R_NTC[j]+R))
         T[\ ^{\circ}C] = 25, R = 100000, V o = 4.977, Delta V o = 0.001, I = 0.000050
         T[\mathcal{C}] = 50, R =
                             34548, V o = 4.934, Delta V o = 0.003, I = 0.000143
         T[\color{C}] = 75, R = 13904, V o = 4.840, Delta V o = 0.005, I = 0.000348
         T[^{\circ}C] = 100, R =
                              6322, V \circ = 4.661, Delta V \circ = 0.009, I = 0.000737
         T[\ ^{\circ}C] = 125, R =
                              3174, V o = 4.367, Delta V o = 0.014, I = 0.001376
         T[^{\circ}C] = 150, R =
                              1728, V \circ = 3.949, Delta V \circ = 0.019, I = 0.002284
         T[OC] = 175, R =
                              1007, V_o = 3.433, Delta V_o = 0.022, I = 0.003407
         T[OC] = 200, R =
                               621, V \circ = 2.874, Delta V \circ = 0.022, I = 0.004622
                               402, V o = 2.334, Delta V o = 0.021, I = 0.005796
         T[^{\circ}C] = 225, R =
                               271, V \circ = 1.858, Delta V \circ = 0.018, I = 0.006831
         T[^{\circ}C] = 250, R =
         T[\ ^{\circ}C] = 275, R =
                               190, V o = 1.463, Delta V o = 0.014, I = 0.007689
         T[OC] = 300, R =
                               137, V \circ = 1.150, Delta V \circ = 0.011, I = 0.008370
```

Look Up Table

```
[R_{NTC} = \frac{V_o R}{V_{ref} - V_o}]
```

```
In [12]: for i in range(0, 1024):
             N = i
             V_o_i = N*(5.0/1024.0)
             R_NTC_i = (V_o_i*R)/(V_ref - V_o_i)
             if R NTC i > 0:
                 aux1 = ( math.log(R_NTC_i) - math.log(R_0) ) / Beta
                 aux2 = 1.0/(T_0)
                 aux1 = 1000000
                 aux2 = 1000000
             T i = 1.0/(aux1 + aux2) \#Kelvin
             T i = T i - 273.0 \#Celsius
             \#T_i = T_interp(R_NTC_i)
             print 'N = %4d \t V o[V] = %.3f \t R NTC[Ohms] = %6.f \t T[\overline{C}] = %
         3.2f' % (N, V_o_i, R_NTC_i, T_i)
         N =
                0
                          V \circ [V] = 0.000
                                                   R_NTC[Ohms] =
                                                                            T[ºC]
          = -273.00
         N =
                          V_0[V] = 0.005
                                                   R_NTC[Ohms] =
                                                                            T[ºC]
               1
                                                                      0
          = 2610.01
                          V_0[V] = 0.010
                                                                           T[ºC]
         N =
                2
                                                   R_NTC[Ohms] =
                                                                      1
          = 1663.15
         N =
                3
                          V \circ [V] = 0.015
                                                   R NTC[Ohms] =
                                                                       1
                                                                            T[ ºC ]
          = 1350.86
                          V_0[V] = 0.020
         N =
                4
                                                   R_NTC[Ohms] =
                                                                       2
                                                                           T[ºC]
          = 1183.96
         N = 5
                          V_{o}[V] = 0.024
                                                   R_NTC[Ohms] =
                                                                       2
                                                                            T[ºC]
          = 1076.29
         N = 6
                          V_0[V] = 0.029
                                                   R_NTC[Ohms] =
                                                                      3
                                                                            T[ºC]
          = 999.38
         N =
                          V \circ [V] = 0.034
                7
                                                   R NTC[Ohms] =
                                                                      3
                                                                            T[ ºC ]
          = 940.83
                          V_0[V] = 0.039
         N = 8
                                                   R_NTC[Ohms] =
                                                                       4
                                                                            T[ ºC ]
          = 894.26
         N =
                          V_0[V] = 0.044
                                                   R_NTC[Ohms] =
                                                                            T[ºC]
          = 856.01
         N = 10
                          V_0[V] = 0.049
                                                                       5
                                                   R_NTC[Ohms] =
                                                                            T[ ºC ]
          = 823.82
         N = 11
                          V_0[V] = 0.054
                                                   R_NTC[Ohms] =
                                                                      5
                                                                           T[ºC]
          = 796.23
         N = 12
                          V_0[V] = 0.059
                                                   R_NTC[Ohms] =
                                                                            T[ºC]
          = 772.19
         N = 13
                          V_0[V] = 0.063
                                                   R NTC[Ohms] =
                                                                            T[ºC]
                                                                       6
          = 751.00
         N = 14
                          V_0[V] = 0.068
                                                   R_NTC[Ohms] =
                                                                            T[ ºC ]
                                                                       6
          = 732.11
         N = 15
                          V_0[V] = 0.073
                                                   R_NTC[Ohms] =
                                                                      7
                                                                            T[ºC]
          = 715.12
         N =
               16
                          V_0[V] = 0.078
                                                   R_NTC[Ohms] =
                                                                      7
                                                                            T[ºC]
          = 699.73
         N =
               17
                          V_0[V] = 0.083
                                                   R_NTC[Ohms] =
                                                                            T[ºC]
                                                                       8
          = 685.69
               18
                          V_0[V] = 0.088
                                                   R_NTC[Ohms] =
                                                                       8
                                                                            T[ºC]
          = 672.80
         N =
               19
                          V \circ [V] = 0.093
                                                   R NTC[Ohms] =
                                                                       9
                                                                            T[ºC]
```

| = 660.92 | _ • • | | | |
|------------------------------|------------------|---------------|-----|------------|
| N = 20 | V_o[V] = 0.098 | R_NTC[Ohms] = | 9 | T[ºC] |
| = 649.90 $N = 21$ | V_o[V] = 0.103 | R_NTC[Ohms] = | 10 | T[ºC] |
| = 639.66 $N = 22$ | V_o[V] = 0.107 | R_NTC[Ohms] = | 10 | T[ºC] |
| = 630.09 $N = 23$ | V_o[V] = 0.112 | R_NTC[Ohms] = | 11 | T[ºC] |
| = 621.12 $N = 24$ | V_o[V] = 0.117 | R_NTC[Ohms] = | 11 | T[ºC] |
| = 612.69 $N = 25$ | V_o[V] = 0.122 | R_NTC[Ohms] = | 12 | T[ºC] |
| = 604.74 $N = 26$ | V_o[V] = 0.127 | R_NTC[Ohms] = | 12 | T[ºC] |
| = 597.23 $N = 27$ | V_o[V] = 0.132 | R_NTC[Ohms] = | 12 | T[ºC] |
| = 590.12 $N = 28$ | V_o[V] = 0.137 | R_NTC[Ohms] = | 13 | T[ºC] |
| = 583.37 $N = 29$ | V_o[V] = 0.142 | R_NTC[Ohms] = | 13 | T[ºC] |
| = 576.95 $N = 30$ | V_o[V] = 0.146 | R_NTC[Ohms] = | 14 | T[ºC] |
| = 570.83 $N = 31$ | $V_o[V] = 0.151$ | R_NTC[Ohms] = | 14 | T[ºC] |
| = 564.99 $N = 32$ | V_o[V] = 0.156 | R_NTC[Ohms] = | 15 | T[ºC] |
| = 559.41 $N = 33$ | V_o[V] = 0.161 | R_NTC[Ohms] = | 15 | T[ºC] |
| = 554.06 $N = 34$ | V_o[V] = 0.166 | R_NTC[Ohms] = | 16 | T[ºC] |
| = 548.93 $N = 35$ | V_o[V] = 0.171 | R_NTC[Ohms] = | 16 | T[ºC] |
| = 544.01 $N = 36$ | V_o[V] = 0.176 | R_NTC[Ohms] = | 17 | T[ºC] |
| = 539.28 $N = 37$ | V_o[V] = 0.181 | R_NTC[Ohms] = | 17 | T[ºC] |
| = 534.72 $N = 38$ | V_o[V] = 0.186 | R_NTC[Ohms] = | 18 | T[ºC] |
| = 530.33 $N = 39$ | V_o[V] = 0.190 | R_NTC[Ohms] = | 18 | T[ºC] |
| = 526.10 $N = 40$ $= 522.01$ | V_o[V] = 0.195 | R_NTC[Ohms] = | 19 | T[ºC] |
| N = 41 $= 518.06$ | V_o[V] = 0.200 | R_NTC[Ohms] = | 19 | T[ºC] |
| N = 42 $= 514.24$ | V_o[V] = 0.205 | R_NTC[Ohms] = | 20 | T[ºC] |
| N = 43 $= 510.54$ | V_o[V] = 0.210 | R_NTC[Ohms] = | 20 | T[ºC] |
| N = 44 $= 506.95$ | V_o[V] = 0.215 | R_NTC[Ohms] = | 21 | T[ºC] |
| N = 45 $= 503.47$ | V_o[V] = 0.220 | R_NTC[Ohms] = | 21 | T[ºC] |
| N = 46 $= 500.10$ | $V_o[V] = 0.225$ | R_NTC[Ohms] = | 22 | T[ºC] |
| N = 47 $= 496.82$ | V_o[V] = 0.229 | R_NTC[Ohms] = | 22 | T[ºC] |
| = 496.82 $N = 48$ $= 493.64$ | V_o[V] = 0.234 | R_NTC[Ohms] = | 23 | T[ºC] |
| = 493.64 m = 10 | 11 - 11 - 11 230 | D MTC(Ohma) - | 2.5 | ጥ በ |

| IN - 43 | v_U[v] - U.239 | v_nıc[onme] - | ۷۵ | τί≂cl |
|------------------------------|--------------------|---------------|----|-------|
| = 490.54 $N = 50$ | $V_0[V] = 0.244$ | R_NTC[Ohms] = | 24 | T[ºC] |
| = 487.53 $N = 51$ $= 484.60$ | $V_0[V] = 0.249$ | R_NTC[Ohms] = | 24 | T[ºC] |
| N = 52 | $V_0[V] = 0.254$ | R_NTC[Ohms] = | 25 | T[ºC] |
| = 481.74 $N = 53$ | V_o[V] = 0.259 | R_NTC[Ohms] = | 25 | T[ºC] |
| = 478.96 $N = 54$ | $V_0[V] = 0.264$ | R_NTC[Ohms] = | 26 | T[ºC] |
| = 476.24 $N = 55$ | $V_0[V] = 0.269$ | R_NTC[Ohms] = | 26 | T[ºC] |
| = 473.59 $N = 56$ $= 471.00$ | $V_0[V] = 0.273$ | R_NTC[Ohms] = | 27 | T[ºC] |
| N = 57 $= 468.48$ | $V_0[V] = 0.278$ | R_NTC[Ohms] = | 27 | T[ºC] |
| N = 58 $= 466.01$ | V_o[V] = 0.283 | R_NTC[Ohms] = | 28 | T[ºC] |
| N = 59 $= 463.60$ | $V_0[V] = 0.288$ | R_NTC[Ohms] = | 28 | T[ºC] |
| N = 60 = 461.24 | $V_0[V] = 0.293$ | R_NTC[Ohms] = | 29 | T[ºC] |
| N = 61 = 458.93 | $V_0[V] = 0.298$ | R_NTC[Ohms] = | 29 | T[ºC] |
| N = 62 = 456.68 | $V_0[V] = 0.303$ | R_NTC[Ohms] = | 30 | T[ºC] |
| N = 63 $= 454.47$ | $V_0[V] = 0.308$ | R_NTC[Ohms] = | 30 | T[ºC] |
| N = 64 $= 452.30$ | $V_{o}[V] = 0.312$ | R_NTC[Ohms] = | 31 | T[ºC] |
| N = 65 $= 450.18$ | $V_0[V] = 0.317$ | R_NTC[Ohms] = | 31 | T[ºC] |
| N = 66 = 448.10 | $V_0[V] = 0.322$ | R_NTC[Ohms] = | 32 | T[ºC] |
| N = 67 $= 446.06$ | $V_0[V] = 0.327$ | R_NTC[Ohms] = | 32 | T[ºC] |
| N = 68 $= 444.07$ | $V_0[V] = 0.332$ | R_NTC[Ohms] = | 33 | T[ºC] |
| N = 69 = 442.10 | $V_0[V] = 0.337$ | R_NTC[Ohms] = | 33 | T[ºC] |
| N = 70 $= 440.18$ | $V_0[V] = 0.342$ | R_NTC[Ohms] = | 34 | T[ºC] |
| N = 71 $= 438.29$ | $V_0[V] = 0.347$ | R_NTC[Ohms] = | 34 | T[ºC] |
| N = 72 $= 436.44$ | $V_0[V] = 0.352$ | R_NTC[Ohms] = | 35 | T[ºC] |
| N = 73 $= 434.62$ | $V_0[V] = 0.356$ | R_NTC[Ohms] = | 35 | T[ºC] |
| N = 74 $= 432.83$ | $V_0[V] = 0.361$ | R_NTC[Ohms] = | 36 | T[ºC] |
| N = 75 | $V_0[V] = 0.366$ | R_NTC[Ohms] = | 36 | T[ºC] |
| = 431.07 $N = 76$ | $V_0[V] = 0.371$ | R_NTC[Ohms] = | 37 | T[ºC] |
| = 429.34 $N = 77$ | V_o[V] = 0.376 | R_NTC[Ohms] = | 37 | T[ºC] |
| = 427.64 $N = 78$ | V_o[V] = 0.381 | R_NTC[Ohms] = | 38 | T[ºC] |
| | | | | |

| - 441 74 | | | | |
|--------------------|--------------------|---------------|--------------|-------|
| N = 79 | $V_0[V] = 0.386$ | R_NTC[Ohms] = | 38 | T[ºC] |
| = 424.33 $N = 80$ | $V_0[V] = 0.391$ | R_NTC[Ohms] = | 39 | T[ºC] |
| = 422.71 $N = 81$ | V_o[V] = 0.396 | R_NTC[Ohms] = | 40 | T[ºC] |
| = 421.12 | | | | |
| N = 82 $= 419.55$ | $V_0[V] = 0.400$ | R_NTC[Ohms] = | 40 | T[ºC] |
| N = 83 $= 418.01$ | $V_0[V] = 0.405$ | R_NTC[Ohms] = | 41 | T[ºC] |
| N = 84 | $V_0[V] = 0.410$ | R_NTC[Ohms] = | 41 | T[ºC] |
| = 416.49 $N = 85$ | $V_0[V] = 0.415$ | R_NTC[Ohms] = | 42 | T[ºC] |
| = 415.00 $N = 86$ | $V_0[V] = 0.420$ | R_NTC[Ohms] = | 42 | T[ºC] |
| = 413.53 $N = 87$ | V_o[V] = 0.425 | R_NTC[Ohms] = | 43 | T[ºC] |
| = 412.07 $N = 88$ | V_o[V] = 0.430 | R_NTC[Ohms] = | 43 | T[ºC] |
| = 410.64 $N = 89$ | V_o[V] = 0.435 | R_NTC[Ohms] = | 44 | T[ºC] |
| = 409.23 N = 90 | $V_0[V] = 0.439$ | R_NTC[Ohms] = | 44 | T[ºC] |
| = 407.85 $N = 91$ | $V_0[V] = 0.444$ | R_NTC[Ohms] = | 45 | T[ºC] |
| = 406.47 $N = 92$ | $V_0[V] = 0.449$ | R_NTC[Ohms] = | 45 | T[ºC] |
| = 405.12 $N = 93$ | - | | | |
| = 403.79 | $V_0[V] = 0.454$ | R_NTC[Ohms] = | 46 | T[ºC] |
| N = 94 = 402.48 | $V_0[V] = 0.459$ | R_NTC[Ohms] = | 46 | T[ºC] |
| N = 95 $= 401.18$ | $V_0[V] = 0.464$ | R_NTC[Ohms] = | 47 | T[ºC] |
| N = 96 = 399.90 | $V_0[V] = 0.469$ | R_NTC[Ohms] = | 48 | T[ºC] |
| N = 97 = 398.63 | $V_0[V] = 0.474$ | R_NTC[Ohms] = | 48 | T[ºC] |
| N = 98 $= 397.39$ | $V_0[V] = 0.479$ | R_NTC[Ohms] = | 49 | T[ºC] |
| N = 99 $= 396.16$ | $V_0[V] = 0.483$ | R_NTC[Ohms] = | 49 | T[ºC] |
| N = 100 | V_o[V] = 0.488 | R_NTC[Ohms] = | 50 | T[ºC] |
| = 394.94 $N = 101$ | $V_0[V] = 0.493$ | R_NTC[Ohms] = | 50 | T[ºC] |
| = 393.74 $N = 102$ | V_o[V] = 0.498 | R_NTC[Ohms] = | 51 | T[ºC] |
| = 392.55 $N = 103$ | V_o[V] = 0.503 | R_NTC[Ohms] = | 51 | T[ºC] |
| = 391.38 $N = 104$ | V_o[V] = 0.508 | R_NTC[Ohms] = | 52 | T[ºC] |
| = 390.22 $N = 105$ | $V_{o}[V] = 0.513$ | R_NTC[Ohms] = | 53 | T[ºC] |
| = 389.08 $N = 106$ | $V_0[V] = 0.518$ | R_NTC[Ohms] = | 53 | T[ºC] |
| = 387.95 $N = 107$ | $V_0[V] = 0.522$ | R NTC[Ohms] = | 54 | T[ºC] |
| = 386.83 | V 01V1 - 0 527 | D MUCIObmel - | 5 <i>/</i> 1 | mroci |
| | | | | |

| N - 100 | v_U[V] - V.JZ/ | к_итебопшеl – | J4 | ı[≍c] |
|-------------------------------|--------------------|---------------|----|-------|
| = 385.73 $N = 109$ $= 384.64$ | V_o[V] = 0.532 | R_NTC[Ohms] = | 55 | T[ºC] |
| N = 110 $= 383.56$ | $V_0[V] = 0.537$ | R_NTC[Ohms] = | 55 | T[ºC] |
| N = 111 | V_o[V] = 0.542 | R_NTC[Ohms] = | 56 | T[ºC] |
| = 382.49 $N = 112$ | V_o[V] = 0.547 | R_NTC[Ohms] = | 56 | T[ºC] |
| = 381.44 $N = 113$ | V_o[V] = 0.552 | R_NTC[Ohms] = | 57 | T[ºC] |
| = 380.39 $N = 114$ | V_o[V] = 0.557 | R_NTC[Ohms] = | 58 | T[ºC] |
| = 379.36 $N = 115$ $= 378.34$ | V_o[V] = 0.562 | R_NTC[Ohms] = | 58 | T[ºC] |
| N = 116 $= 377.33$ | $V_0[V] = 0.566$ | R_NTC[Ohms] = | 59 | T[ºC] |
| N = 117 $= 376.33$ | $V_0[V] = 0.571$ | R_NTC[Ohms] = | 59 | T[ºC] |
| N = 118 $= 375.34$ | $V_0[V] = 0.576$ | R_NTC[Ohms] = | 60 | T[ºC] |
| N = 119 $= 374.36$ | $V_{o}[V] = 0.581$ | R_NTC[Ohms] = | 60 | T[ºC] |
| N = 120 $= 373.39$ | $V_0[V] = 0.586$ | R_NTC[Ohms] = | 61 | T[ºC] |
| N = 121 = 372.43 | $V_0[V] = 0.591$ | R_NTC[Ohms] = | 62 | T[ºC] |
| N = 122 $= 371.49$ | $V_0[V] = 0.596$ | R_NTC[Ohms] = | 62 | T[ºC] |
| N = 123 $= 370.55$ | $V_0[V] = 0.601$ | R_NTC[Ohms] = | 63 | T[ºC] |
| N = 124 = 369.62 | $V_0[V] = 0.605$ | R_NTC[Ohms] = | 63 | T[ºC] |
| N = 125 = 368.69 | $V_0[V] = 0.610$ | R_NTC[Ohms] = | 64 | T[ºC] |
| N = 126 = 367.78 | $V_{o}[V] = 0.615$ | R_NTC[Ohms] = | 65 | T[ºC] |
| N = 127 = 366.88 | $V_0[V] = 0.620$ | R_NTC[Ohms] = | 65 | T[ºC] |
| N = 128 = 365.98 | $V_0[V] = 0.625$ | R_NTC[Ohms] = | 66 | T[ºC] |
| N = 129 = 365.10 | $V_0[V] = 0.630$ | R_NTC[Ohms] = | 66 | T[ºC] |
| N = 130 = 364.22 | $V_0[V] = 0.635$ | R_NTC[Ohms] = | 67 | T[ºC] |
| N = 131 = 363.35 | $V_0[V] = 0.640$ | R_NTC[Ohms] = | 67 | T[ºC] |
| N = 132 = 362.48 | $V_0[V] = 0.645$ | R_NTC[Ohms] = | 68 | T[ºC] |
| N = 133 = 361.63 | $V_0[V] = 0.649$ | R_NTC[Ohms] = | 69 | T[ºC] |
| N = 134 $= 360.78$ | $V_0[V] = 0.654$ | R_NTC[Ohms] = | 69 | T[ºC] |
| N = 135 $= 359.94$ | $V_0[V] = 0.659$ | R_NTC[Ohms] = | 70 | T[ºC] |
| N = 136 = 359.11 | $V_0[V] = 0.664$ | R_NTC[Ohms] = | 70 | T[ºC] |
| N = 137 $- 359 20$ | $V_0[V] = 0.669$ | R_NTC[Ohms] = | 71 | T[ºC] |

| N = 138 | $V_0[V] = 0.674$ | R_NTC[Ohms] = | 72 | T[ºC] |
|---------------------|--------------------|--------------------------|-----|---------|
| = 357.47 | 77 - 1771 - 0 670 | D MMG(Obme) | 70 | mr od 1 |
| N = 139 $= 356.66$ | $V_0[V] = 0.679$ | R_NTC[Ohms] = | 72 | T[ºC] |
| N = 140 | $V_0[V] = 0.684$ | R_NTC[Ohms] = | 73 | T[ºC] |
| = 355.86 | | | | |
| N = 141 | $V_0[V] = 0.688$ | <pre>R_NTC[Ohms] =</pre> | 73 | T[ºC] |
| = 355.06 $N = 142$ | $V_0[V] = 0.693$ | R_NTC[Ohms] = | 74 | T[ºC] |
| = 354.27 | | | | |
| N = 143 $= 353.49$ | $V_0[V] = 0.698$ | R_NTC[Ohms] = | 75 | T[ºC] |
| N = 144 | $V_0[V] = 0.703$ | R_NTC[Ohms] = | 75 | T[ºC] |
| = 352.71 $N = 145$ | $V_0[V] = 0.708$ | D NMC(Obma) - | 76 | mroci |
| = 351.94 | V_O[V] - 0.700 | R_NTC[Ohms] = | 70 | T[ºC] |
| N = 146 | $V_0[V] = 0.713$ | R_NTC[Ohms] = | 76 | T[ºC] |
| = 351.18 $N = 147$ | $V_0[V] = 0.718$ | R_NTC[Ohms] = | 77 | T[ºC] |
| = 350.42 | | | | |
| N = 148 $= 349.67$ | $V_0[V] = 0.723$ | R_NTC[Ohms] = | 78 | T[ºC] |
| N = 149 | $V_0[V] = 0.728$ | R_NTC[Ohms] = | 78 | T[ºC] |
| = 348.93 $N = 150$ | $V_0[V] = 0.732$ | R_NTC[Ohms] = | 79 | T[ºC] |
| = 348.19 | 0[1] 01/02 | 11,10[01] | , , | 1[0] |
| N = 151 $= 347.45$ | $V_o[V] = 0.737$ | R_NTC[Ohms] = | 80 | T[ºC] |
| N = 152 | $V_0[V] = 0.742$ | R_NTC[Ohms] = | 80 | T[ºC] |
| = 346.72 | V 0.571 - 0 747 | D MMC(Obma) - | 0.1 | mr och |
| N = 153 = 346.00 | $V_0[V] = 0.747$ | R_NTC[Ohms] = | 81 | T[ºC] |
| N = 154 | $V_0[V] = 0.752$ | R_NTC[Ohms] = | 81 | T[ºC] |
| = 345.29 $N = 155$ | $V_0[V] = 0.757$ | R NTC[Ohms] = | 82 | T[ºC] |
| = 344.57 | | | | |
| N = 156 $= 343.87$ | $V_o[V] = 0.762$ | R_NTC[Ohms] = | 83 | T[ºC] |
| N = 157 | $V_0[V] = 0.767$ | R_NTC[Ohms] = | 83 | T[ºC] |
| = 343.17 $N = 158$ | $V_0[V] = 0.771$ | R_NTC[Ohms] = | 84 | T[ºC] |
| = 342.47 | _ | - | | |
| N = 159 $= 341.78$ | $V_{0}[V] = 0.776$ | R_NTC[Ohms] = | 85 | T[ºC] |
| N = 160 | $V_0[V] = 0.781$ | R_NTC[Ohms] = | 85 | T[ºC] |
| = 341.10 $N = 161$ | $V_0[V] = 0.786$ | R_NTC[Ohms] = | 86 | T[ºC] |
| = 340.42 | V_O[V] - 0.700 | K_MIC[OIIIIS] = | 00 | 1[=0] |
| N = 162 | $V_0[V] = 0.791$ | R_NTC[Ohms] = | 86 | T[ºC] |
| = 339.74 $N = 163$ | V o[V] = 0.796 | R_NTC[Ohms] = | 87 | T[ºC] |
| = 339.07 | | - | | |
| N = 164 $= 338.41$ | $V_0[V] = 0.801$ | R_NTC[Ohms] = | 88 | T[ºC] |
| N = 165 | $V_0[V] = 0.806$ | R_NTC[Ohms] = | 88 | T[ºC] |
| = 337.74 $N = 166$ | V_o[V] = 0.811 | R NTC[Ohms] = | 89 | T[ºC] |
| = 337.09 | | | | |
| м — 167 | V 01V1 - 0 815 | ם אחרורhmal — | ۵۸ | መ፤ ዕር ነ |

| N - 10/ | ^_O[^] - 0.013 | т_итс[опше] – | 9 U | τί≂cl |
|-------------------------------|--------------------|---------------|------------|--------|
| = 336.44 $N = 168$ | V_o[V] = 0.820 | R_NTC[Ohms] = | 90 | T[ºC] |
| = 335.79 $N = 169$ $= 335.15$ | $V_0[V] = 0.825$ | R_NTC[Ohms] = | 91 | T[ºC] |
| -333.13 $N = 170$ | V_o[V] = 0.830 | R_NTC[Ohms] = | 92 | T[ºC] |
| = 334.51 $N = 171$ | $V_0[V] = 0.835$ | R_NTC[Ohms] = | 92 | T[ºC] |
| = 333.87 $N = 172$ | | | 93 | |
| = 333.24 | $V_{0}[V] = 0.840$ | R_NTC[Ohms] = | | T[ºC] |
| N = 173 = 332.62 | $V_{0}[V] = 0.845$ | R_NTC[Ohms] = | 94 | T[ºC] |
| N = 174 = 332.00 | $V_0[V] = 0.850$ | R_NTC[Ohms] = | 94 | T[ºC] |
| N = 175 = 331.38 | $V_0[V] = 0.854$ | R_NTC[Ohms] = | 95 | T[ºC] |
| N = 176 = 330.77 | $V_0[V] = 0.859$ | R_NTC[Ohms] = | 95 | T[ºC] |
| N = 177 = 330.16 | $V_0[V] = 0.864$ | R_NTC[Ohms] = | 96 | T[ºC] |
| N = 178 $= 329.55$ | $V_0[V] = 0.869$ | R_NTC[Ohms] = | 97 | T[ºC] |
| N = 179 | $V_0[V] = 0.874$ | R_NTC[Ohms] = | 97 | T[ºC] |
| = 328.95 $N = 180$ | $V_0[V] = 0.879$ | R_NTC[Ohms] = | 98 | T[ºC] |
| = 328.35 $N = 181$ | $V_0[V] = 0.884$ | R_NTC[Ohms] = | 99 | T[ºC] |
| = 327.76 $N = 182$ | V_o[V] = 0.889 | R_NTC[Ohms] = | 99 | T[ºC] |
| = 327.17 $N = 183$ | $V_0[V] = 0.894$ | R_NTC[Ohms] = | 100 | T[ºC] |
| = 326.58 $N = 184$ | V o[V] = 0.898 | R NTC[Ohms] = | 101 | T[ºC] |
| = 326.00 $N = 185$ | $V_0[V] = 0.903$ | R_NTC[Ohms] = | 101 | T[ºC] |
| = 325.42 $N = 186$ | $V_0[V] = 0.908$ | R NTC[Ohms] = | 102 | _[ºC] |
| = 324.85 | | | | |
| N = 187 = 324.27 | $V_{0}[V] = 0.913$ | R_NTC[Ohms] = | 103 | T[ºC] |
| N = 188 = 323.71 | V_o[V] = 0.918 | R_NTC[Ohms] = | 103 | T[ºC] |
| N = 189 = 323.14 | $V_0[V] = 0.923$ | R_NTC[Ohms] = | 104 | T[ºC] |
| N = 190 = 322.58 | $V_0[V] = 0.928$ | R_NTC[Ohms] = | 105 | T[ºC] |
| N = 191 = 322.02 | $V_0[V] = 0.933$ | R_NTC[Ohms] = | 105 | T[ºC] |
| N = 192 = 321.46 | $V_0[V] = 0.938$ | R_NTC[Ohms] = | 106 | T[ºC] |
| N = 193 $= 320.91$ | $V_0[V] = 0.942$ | R_NTC[Ohms] = | 107 | T[ºC] |
| N = 194 | $V_0[V] = 0.947$ | R_NTC[Ohms] = | 108 | T[ºC] |
| = 320.36 $N = 195$ | $V_0[V] = 0.952$ | R_NTC[Ohms] = | 108 | T[ºC] |
| = 319.82 $N = 196$ | $V_0[V] = 0.957$ | R_NTC[Ohms] = | 109 | T[ºC] |
| - 210 20 | | | | |

| N = 197 | $V_0[V] = 0.962$ | R_NTC[Ohms] = | 110 | T[ºC] |
|---------------------|--------------------|-----------------|-----|---------|
| = 318.74 $N = 198$ | V_o[V] = 0.967 | R_NTC[Ohms] = | 110 | T[ºC] |
| = 318.20 | | | | |
| N = 199 | $V_{0}[V] = 0.972$ | R_NTC[Ohms] = | 111 | T[ºC] |
| = 317.67 | V - (V) - 0 077 | D NIMOLOhmal - | 110 | mr od 1 |
| N = 200 = 317.14 | $V_0[V] = 0.977$ | R_NTC[Ohms] = | 112 | T[ºC] |
| N = 201 $= 316.61$ | $V_o[V] = 0.981$ | R_NTC[Ohms] = | 112 | T[ºC] |
| N = 202 | $V_0[V] = 0.986$ | R_NTC[Ohms] = | 113 | T[ºC] |
| = 316.08 $N = 203$ | V_o[V] = 0.991 | R_NTC[Ohms] = | 114 | T[ºC] |
| = 315.56 $N = 204$ | V_o[V] = 0.996 | R_NTC[Ohms] = | 114 | T[ºC] |
| = 315.04 | 0[.] 0.330 | <u></u> | | -[0] |
| N = 205 $= 314.53$ | $V_0[V] = 1.001$ | R_NTC[Ohms] = | 115 | T[ºC] |
| N = 206 | $V_0[V] = 1.006$ | R_NTC[Ohms] = | 116 | T[ºC] |
| = 314.02 N = 207 | V_o[V] = 1.011 | R_NTC[Ohms] = | 117 | T[ºC] |
| = 313.50 $N = 208$ | V_o[V] = 1.016 | R_NTC[Ohms] = | 117 | T[ºC] |
| = 313.00 | V_O[V] - 1:010 | K_MIC[OIIIIS] - | 117 | 1[-0] |
| N = 209 = 312.49 | $V_o[V] = 1.021$ | R_NTC[Ohms] = | 118 | T[ºC] |
| N = 210 | $V_0[V] = 1.025$ | R_NTC[Ohms] = | 119 | T[ºC] |
| = 311.99 $N = 211$ | V_o[V] = 1.030 | R_NTC[Ohms] = | 119 | T[ºC] |
| = 311.49 $N = 212$ | V_o[V] = 1.035 | R_NTC[Ohms] = | 120 | T[ºC] |
| = 310.99 $N = 213$ | V_o[V] = 1.040 | R_NTC[Ohms] = | 121 | T[ºC] |
| = 310.50 | _ | - | | |
| N = 214 = 310.01 | $V_0[V] = 1.045$ | R_NTC[Ohms] = | 122 | T[ºC] |
| N = 215 = 309.52 | $V_o[V] = 1.050$ | R_NTC[Ohms] = | 122 | T[ºC] |
| N = 216 | $V_0[V] = 1.055$ | R_NTC[Ohms] = | 123 | T[ºC] |
| = 309.03 $N = 217$ | V_o[V] = 1.060 | R_NTC[Ohms] = | 124 | T[ºC] |
| = 308.55 $N = 218$ | V_o[V] = 1.064 | R_NTC[Ohms] = | 124 | T[ºC] |
| = 308.06 | _ | _ | | |
| N = 219 = 307.58 | $V_0[V] = 1.069$ | R_NTC[Ohms] = | 125 | T[ºC] |
| N = 220 = 307.11 | $V_0[V] = 1.074$ | R_NTC[Ohms] = | 126 | T[ºC] |
| N = 221 | $V_o[V] = 1.079$ | R_NTC[Ohms] = | 127 | T[ºC] |
| = 306.63 $N = 222$ | V_o[V] = 1.084 | R_NTC[Ohms] = | 127 | T[ºC] |
| = 306.16 $N = 223$ | V_o[V] = 1.089 | R_NTC[Ohms] = | 128 | T[ºC] |
| = 305.69 | _ | - | | |
| N = 224 = 305.22 | $V_0[V] = 1.094$ | R_NTC[Ohms] = | 129 | T[ºC] |
| N = 225 | $V_o[V] = 1.099$ | R_NTC[Ohms] = | 130 | T[ºC] |
| = 304.76 $M - 226$ | 77 01771 - 1 104 | D NTC(Ohmal - | 120 | mr oc i |

| IN - ZZU | v_o[v] - 1.104 | r_wicloums] - | 130 | τί≂cl |
|-------------------------------|------------------|---------------|-----|-------|
| = 304.29 $N = 227$ $= 303.83$ | V_o[V] = 1.108 | R_NTC[Ohms] = | 131 | T[ºC] |
| N = 228 = 303.37 | V_o[V] = 1.113 | R_NTC[Ohms] = | 132 | T[ºC] |
| N = 229 | V_o[V] = 1.118 | R_NTC[Ohms] = | 133 | T[ºC] |
| = 302.91 $N = 230$ | V_o[V] = 1.123 | R_NTC[Ohms] = | 133 | T[ºC] |
| = 302.46 $N = 231$ $= 302.01$ | V_o[V] = 1.128 | R_NTC[Ohms] = | 134 | T[ºC] |
| N = 232 $= 301.56$ | V_o[V] = 1.133 | R_NTC[Ohms] = | 135 | T[ºC] |
| N = 233 = 301.11 | V_o[V] = 1.138 | R_NTC[Ohms] = | 135 | T[ºC] |
| N = 234 $= 300.66$ | V_o[V] = 1.143 | R_NTC[Ohms] = | 136 | T[ºC] |
| N = 235 $= 300.22$ | V_o[V] = 1.147 | R_NTC[Ohms] = | 137 | T[ºC] |
| N = 236 $= 299.77$ | V_o[V] = 1.152 | R_NTC[Ohms] = | 138 | T[ºC] |
| N = 237 = 299.33 | V_o[V] = 1.157 | R_NTC[Ohms] = | 139 | T[ºC] |
| N = 238 = 298.90 | V_o[V] = 1.162 | R_NTC[Ohms] = | 139 | T[ºC] |
| N = 239 = 298.46 | V_o[V] = 1.167 | R_NTC[Ohms] = | 140 | T[ºC] |
| N = 240 = 298.02 | V_o[V] = 1.172 | R_NTC[Ohms] = | 141 | T[ºC] |
| N = 241 $= 297.59$ | V_o[V] = 1.177 | R_NTC[Ohms] = | 142 | T[ºC] |
| N = 242 = 297.16 | V_o[V] = 1.182 | R_NTC[Ohms] = | 142 | T[ºC] |
| N = 243 = 296.73 | V_o[V] = 1.187 | R_NTC[Ohms] = | 143 | T[ºC] |
| N = 244 = 296.30 | V_o[V] = 1.191 | R_NTC[Ohms] = | 144 | T[ºC] |
| N = 245 = 295.88 | V_o[V] = 1.196 | R_NTC[Ohms] = | 145 | T[ºC] |
| N = 246 = 295.46 | V_o[V] = 1.201 | R_NTC[Ohms] = | 145 | T[ºC] |
| N = 247 = 295.03 | V_o[V] = 1.206 | R_NTC[Ohms] = | 146 | T[ºC] |
| N = 248 = 294.61 | V_o[V] = 1.211 | R_NTC[Ohms] = | 147 | T[ºC] |
| N = 249 = 294.20 | V_o[V] = 1.216 | R_NTC[Ohms] = | 148 | T[ºC] |
| N = 250 = 293.78 | V_o[V] = 1.221 | R_NTC[Ohms] = | 149 | T[ºC] |
| N = 251 = 293.37 | V_o[V] = 1.226 | R_NTC[Ohms] = | 149 | T[ºC] |
| N = 252 = 292.95 | $V_0[V] = 1.230$ | R_NTC[Ohms] = | 150 | T[ºC] |
| N = 253 = 292.54 | $V_o[V] = 1.235$ | R_NTC[Ohms] = | 151 | T[ºC] |
| N = 254 = 292.13 | $V_0[V] = 1.240$ | R_NTC[Ohms] = | 152 | T[ºC] |
| N = 255 $- 201 72$ | V_o[V] = 1.245 | R_NTC[Ohms] = | 153 | T[ºC] |

| - (7) | | | | |
|---------------------|--------------------|----------------|-------|---------|
| N = 256 | $V_0[V] = 1.250$ | R_NTC[Ohms] = | 153 | T[ºC] |
| = 291.32 $N = 257$ | V_o[V] = 1.255 | R_NTC[Ohms] = | 154 | T[ºC] |
| = 290.91 $N = 258$ | | | 155 | TI OC 1 |
| | V_o[V] = 1.260 | R_NTC[Ohms] = | 133 | T[ºC] |
| = 290.51 $N = 259$ | V_o[V] = 1.265 | R_NTC[Ohms] = | 156 | T[ºC] |
| = 290.11 $N = 260$ | | | 157 | TI OC 1 |
| = 289.71 | $V_0[V] = 1.270$ | R_NTC[Ohms] = | 137 | T[ºC] |
| N = 261 $= 289.31$ | $V_{o}[V] = 1.274$ | R_NTC[Ohms] = | 157 | T[ºC] |
| N = 262 = 288.91 | $V_0[V] = 1.279$ | R_NTC[Ohms] = | 158 | T[ºC] |
| N = 263 | V_o[V] = 1.284 | R_NTC[Ohms] = | 159 | T[ºC] |
| = 288.52 $N = 264$ | V o[V] = 1.289 | R_NTC[Ohms] = | 160 | T[ºC] |
| = 288.13 | | _ | | |
| N = 265 = 287.73 | V_o[V] = 1.294 | R_NTC[Ohms] = | 161 | T[ºC] |
| N = 266 $= 287.34$ | $V_0[V] = 1.299$ | R_NTC[Ohms] = | 161 | T[ºC] |
| N = 267 | $V_0[V] = 1.304$ | R_NTC[Ohms] = | 162 | T[ºC] |
| = 286.96 $N = 268$ | V_o[V] = 1.309 | R_NTC[Ohms] = | 163 | T[ºC] |
| = 286.57 $N = 269$ | V_o[V] = 1.313 | R_NTC[Ohms] = | 164 | T[ºC] |
| = 286.18 | | | | |
| N = 270 = 285.80 | $V_{0}[V] = 1.318$ | R_NTC[Ohms] = | 165 | T[ºC] |
| N = 271 $= 285.41$ | $V_0[V] = 1.323$ | R_NTC[Ohms] = | 166 | T[ºC] |
| N = 272 | $V_0[V] = 1.328$ | R_NTC[Ohms] = | 166 | T[ºC] |
| = 285.03 $N = 273$ | V_o[V] = 1.333 | R_NTC[Ohms] = | 167 | T[ºC] |
| = 284.65 $N = 274$ | V_o[V] = 1.338 | R NTC[Ohms] = | 168 | T[ºC] |
| = 284.27 | _ | | | |
| N = 275 = 283.90 | V_o[V] = 1.343 | R_NTC[Ohms] = | 169 | T[ºC] |
| N = 276 $= 283.52$ | $V_0[V] = 1.348$ | R_NTC[Ohms] = | 170 | T[ºC] |
| N = 277 | $V_0[V] = 1.353$ | R_NTC[Ohms] = | 171 | T[ºC] |
| = 283.14 $N = 278$ | $V_0[V] = 1.357$ | R_NTC[Ohms] = | 171 | T[ºC] |
| = 282.77 $N = 279$ | V_o[V] = 1.362 | R_NTC[Ohms] = | 172 | T[ºC] |
| = 282.40 $N = 280$ | _ | - | 172 | |
| = 282.03 | V_o[V] = 1.367 | R_NTC[Ohms] = | 173 | T[ºC] |
| N = 281 $= 281.66$ | $V_{o}[V] = 1.372$ | R_NTC[Ohms] = | 174 | T[ºC] |
| N = 282 = 281.29 | $V_0[V] = 1.377$ | R_NTC[Ohms] = | 175 | T[ºC] |
| N = 283 | V_o[V] = 1.382 | R_NTC[Ohms] = | 176 | T[ºC] |
| = 280.92 $N = 284$ | V_o[V] = 1.387 | R NTC[Ohms] = | 177 | T[ºC] |
| = 280.56 | V 01V1 - 1 302 | D NTC(Obme) - | 177 | תוטקו |
| 787 | = 1 247 | o and Himmer — | . , , | 01:1 |

| N - ZOJ | v_U[v] - 1.352 | v_nıcfommel – | 1// | τί≂cl |
|-------------------------------|------------------|---------------|-----|-------|
| = 280.19 $N = 286$ $= 279.83$ | V_o[V] = 1.396 | R_NTC[Ohms] = | 178 | T[ºC] |
| N = 287 = 279.47 | V_o[V] = 1.401 | R_NTC[Ohms] = | 179 | T[ºC] |
| N = 288 | V_o[V] = 1.406 | R_NTC[Ohms] = | 180 | T[ºC] |
| = 279.11 $N = 289$ | V_o[V] = 1.411 | R_NTC[Ohms] = | 181 | T[ºC] |
| = 278.75 $N = 290$ $= 278.39$ | V_o[V] = 1.416 | R_NTC[Ohms] = | 182 | T[ºC] |
| N = 291 $= 278.04$ | V_o[V] = 1.421 | R_NTC[Ohms] = | 183 | T[ºC] |
| N = 292 $= 277.68$ | V_o[V] = 1.426 | R_NTC[Ohms] = | 183 | T[ºC] |
| N = 293 $= 277.33$ | V_o[V] = 1.431 | R_NTC[Ohms] = | 184 | T[ºC] |
| N = 294 $= 276.97$ | V_o[V] = 1.436 | R_NTC[Ohms] = | 185 | T[ºC] |
| N = 295 $= 276.62$ | V_o[V] = 1.440 | R_NTC[Ohms] = | 186 | T[ºC] |
| N = 296 $= 276.27$ | V_o[V] = 1.445 | R_NTC[Ohms] = | 187 | T[ºC] |
| N = 297 = 275.92 | V_o[V] = 1.450 | R_NTC[Ohms] = | 188 | T[ºC] |
| N = 298 = 275.57 | V_o[V] = 1.455 | R_NTC[Ohms] = | 189 | T[ºC] |
| N = 299 = 275.22 | V_o[V] = 1.460 | R_NTC[Ohms] = | 190 | T[ºC] |
| N = 300 $= 274.88$ | V_o[V] = 1.465 | R_NTC[Ohms] = | 191 | T[ºC] |
| N = 301 $= 274.53$ | $V_0[V] = 1.470$ | R_NTC[Ohms] = | 192 | T[ºC] |
| N = 302 $= 274.19$ | V_o[V] = 1.475 | R_NTC[Ohms] = | 192 | T[ºC] |
| N = 303 $= 273.84$ | V_o[V] = 1.479 | R_NTC[Ohms] = | 193 | T[ºC] |
| N = 304 $= 273.50$ | V_o[V] = 1.484 | R_NTC[Ohms] = | 194 | T[ºC] |
| N = 305 $= 273.16$ | V_o[V] = 1.489 | R_NTC[Ohms] = | 195 | T[ºC] |
| N = 306 $= 272.82$ | V_o[V] = 1.494 | R_NTC[Ohms] = | 196 | T[ºC] |
| N = 307 = 272.48 | V_o[V] = 1.499 | R_NTC[Ohms] = | 197 | T[ºC] |
| N = 308 = 272.14 | V_o[V] = 1.504 | R_NTC[Ohms] = | 198 | T[ºC] |
| N = 309 = 271.81 | V_o[V] = 1.509 | R_NTC[Ohms] = | 199 | T[ºC] |
| N = 310 $= 271.47$ | V_o[V] = 1.514 | R_NTC[Ohms] = | 200 | T[ºC] |
| N = 311 | V_o[V] = 1.519 | R_NTC[Ohms] = | 201 | T[ºC] |
| = 271.14 $N = 312$ | V_o[V] = 1.523 | R_NTC[Ohms] = | 202 | T[ºC] |
| = 270.80 $N = 313$ | V_o[V] = 1.528 | R_NTC[Ohms] = | 203 | T[ºC] |
| = 270.47 $N = 314$ $= 270.14$ | V_o[V] = 1.533 | R_NTC[Ohms] = | 203 | T[ºC] |

| N = 315 | V_o[V] = 1.538 | R_NTC[Ohms] = | 204 | T[ºC] |
|---------------------|--------------------|---------------|-----|-----------|
| = 269.81 N = 316 | V_o[V] = 1.543 | R_NTC[Ohms] = | 205 | T[ºC] |
| = 269.48 $N = 317$ | V_o[V] = 1.548 | R_NTC[Ohms] = | 206 | T[ºC] |
| = 269.15 | | - <u>-</u> () | | -(-) |
| N = 318 | V_o[V] = 1.553 | R_NTC[Ohms] = | 207 | T[ºC] |
| = 268.82 N = 319 | V_o[V] = 1.558 | R_NTC[Ohms] = | 208 | T[ºC] |
| = 268.50 $N = 320$ | V_o[V] = 1.562 | R_NTC[Ohms] = | 209 | T[ºC] |
| = 268.17 $N = 321$ | V_o[V] = 1.567 | R_NTC[Ohms] = | 210 | T[ºC] |
| = 267.85 $N = 322$ | $V_0[V] = 1.572$ | R_NTC[Ohms] = | 211 | T[ºC] |
| = 267.52 | | | | |
| N = 323 = 267.20 | $V_{o}[V] = 1.577$ | R_NTC[Ohms] = | 212 | T[ºC] |
| N = 324 = 266.88 | $V_0[V] = 1.582$ | R_NTC[Ohms] = | 213 | T[ºC] |
| N = 325 | V_o[V] = 1.587 | R_NTC[Ohms] = | 214 | T[ºC] |
| = 266.56 $N = 326$ | V_o[V] = 1.592 | R_NTC[Ohms] = | 215 | T[ºC] |
| = 266.24 $N = 327$ | V_o[V] = 1.597 | R_NTC[Ohms] = | 216 | T[ºC] |
| = 265.92 $N = 328$ | V_o[V] = 1.602 | R_NTC[Ohms] = | 217 | T[ºC] |
| = 265.60 | _ | | | |
| N = 329 = 265.28 | $V_0[V] = 1.606$ | R_NTC[Ohms] = | 218 | T[ºC] |
| N = 330 = 264.96 | V_o[V] = 1.611 | R_NTC[Ohms] = | 219 | T[ºC] |
| N = 331 $= 264.65$ | V_o[V] = 1.616 | R_NTC[Ohms] = | 220 | T[ºC] |
| N = 332 | V_o[V] = 1.621 | R_NTC[Ohms] = | 221 | T[ºC] |
| = 264.33 $N = 333$ | V_o[V] = 1.626 | R_NTC[Ohms] = | 222 | T[ºC] |
| = 264.02 N = 334 | V_o[V] = 1.631 | R_NTC[Ohms] = | 223 | T[ºC] |
| = 263.71 $N = 335$ | V_o[V] = 1.636 | R_NTC[Ohms] = | 224 | T[ºC] |
| = 263.39 $N = 336$ | V_o[V] = 1.641 | R_NTC[Ohms] = | 225 | T[ºC] |
| = 263.08 | _ | _ | | |
| N = 337 = 262.77 | V_o[V] = 1.646 | R_NTC[Ohms] = | 226 | T[ºC] |
| N = 338 = 262.46 | $V_0[V] = 1.650$ | R_NTC[Ohms] = | 227 | T[ºC] |
| N = 339 $= 262.15$ | $V_0[V] = 1.655$ | R_NTC[Ohms] = | 228 | T[ºC] |
| N = 340 | V_o[V] = 1.660 | R_NTC[Ohms] = | 229 | T[ºC] |
| = 261.84 $N = 341$ | V_o[V] = 1.665 | R_NTC[Ohms] = | 230 | T[ºC] |
| = 261.54 $N = 342$ | V_o[V] = 1.670 | R_NTC[Ohms] = | 231 | T[ºC] |
| = 261.23 N = 343 | V_o[V] = 1.675 | R_NTC[Ohms] = | 232 | T[ºC] |
| = 260.92 $M - 244$ | 77 01771 - 1 690 | D NTC(Ohmal - | 222 | mr oc 1 |

| N - 344 | v_O[v] - 1.000 | r_wicloums1 - | دىى | τί≂cl |
|-------------------------------|------------------|---------------|-----|-------|
| = 260.62 $N = 345$ $= 260.31$ | V_o[V] = 1.685 | R_NTC[Ohms] = | 234 | T[ºC] |
| N = 346 $= 260.01$ | $V_0[V] = 1.689$ | R_NTC[Ohms] = | 235 | T[ºC] |
| N = 347 | V_o[V] = 1.694 | R_NTC[Ohms] = | 236 | T[ºC] |
| = 259.71 $N = 348$ | V_o[V] = 1.699 | R_NTC[Ohms] = | 237 | T[ºC] |
| = 259.41 $N = 349$ | V_o[V] = 1.704 | R_NTC[Ohms] = | 238 | T[ºC] |
| = 259.11 $N = 350$ | $V_0[V] = 1.709$ | R_NTC[Ohms] = | 239 | T[ºC] |
| = 258.81 $N = 351$ $= 258.51$ | V_o[V] = 1.714 | R_NTC[Ohms] = | 240 | T[ºC] |
| N = 352 $= 258.21$ | $V_0[V] = 1.719$ | R_NTC[Ohms] = | 241 | T[ºC] |
| N = 353 $= 257.91$ | $V_0[V] = 1.724$ | R_NTC[Ohms] = | 242 | T[ºC] |
| N = 354 $= 257.61$ | $V_0[V] = 1.729$ | R_NTC[Ohms] = | 243 | T[ºC] |
| N = 355 = 257.31 | V_o[V] = 1.733 | R_NTC[Ohms] = | 244 | T[ºC] |
| N = 356 = 257.02 | V_o[V] = 1.738 | R_NTC[Ohms] = | 245 | T[ºC] |
| N = 357 = 256.72 | $V_0[V] = 1.743$ | R_NTC[Ohms] = | 246 | T[ºC] |
| N = 358 = 256.43 | $V_0[V] = 1.748$ | R_NTC[Ohms] = | 247 | T[ºC] |
| N = 359 = 256.13 | $V_0[V] = 1.753$ | R_NTC[Ohms] = | 248 | T[ºC] |
| N = 360 $= 255.84$ | $V_0[V] = 1.758$ | R_NTC[Ohms] = | 249 | T[ºC] |
| N = 361 = 255.55 | V_o[V] = 1.763 | R_NTC[Ohms] = | 250 | T[ºC] |
| N = 362 $= 255.26$ | V_o[V] = 1.768 | R_NTC[Ohms] = | 252 | T[ºC] |
| N = 363 $= 254.97$ | $V_0[V] = 1.772$ | R_NTC[Ohms] = | 253 | T[ºC] |
| N = 364 $= 254.68$ | $V_0[V] = 1.777$ | R_NTC[Ohms] = | 254 | T[ºC] |
| N = 365 $= 254.39$ | $V_0[V] = 1.782$ | R_NTC[Ohms] = | 255 | T[ºC] |
| N = 366 $= 254.10$ | $V_0[V] = 1.787$ | R_NTC[Ohms] = | 256 | T[ºC] |
| N = 367 $= 253.81$ | $V_0[V] = 1.792$ | R_NTC[Ohms] = | 257 | T[ºC] |
| N = 368 = 253.52 | $V_0[V] = 1.797$ | R_NTC[Ohms] = | 258 | T[ºC] |
| N = 369 = 253.23 | $V_0[V] = 1.802$ | R_NTC[Ohms] = | 259 | T[ºC] |
| N = 370 = 252.95 | $V_0[V] = 1.807$ | R_NTC[Ohms] = | 260 | T[ºC] |
| N = 371 $= 252.66$ | $V_0[V] = 1.812$ | R_NTC[Ohms] = | 261 | T[ºC] |
| N = 372 $= 252.38$ | $V_0[V] = 1.816$ | R_NTC[Ohms] = | 262 | T[ºC] |
| N = 373 $- 252.00$ | V_o[V] = 1.821 | R_NTC[Ohms] = | 264 | T[ºC] |

| - ()()(7 | | | | |
|---------------------|------------------|---------------|-----|----------|
| N = 374 | V_o[V] = 1.826 | R_NTC[Ohms] = | 265 | T[ºC] |
| = 251.81 $N = 375$ | V_o[V] = 1.831 | R_NTC[Ohms] = | 266 | T[ºC] |
| = 251.53 $N = 376$ | | | 267 | |
| | V_o[V] = 1.836 | R_NTC[Ohms] = | 267 | T[ºC] |
| = 251.24 $N = 377$ | V_o[V] = 1.841 | R_NTC[Ohms] = | 268 | T[ºC] |
| = 250.96 $N = 378$ | | | 260 | |
| = 250.68 | V_o[V] = 1.846 | R_NTC[Ohms] = | 269 | T[ºC] |
| N = 379 $= 250.40$ | $V_o[V] = 1.851$ | R_NTC[Ohms] = | 270 | T[ºC] |
| N = 380 | $V_0[V] = 1.855$ | R_NTC[Ohms] = | 271 | T[ºC] |
| = 250.12 $N = 381$ | V_o[V] = 1.860 | R_NTC[Ohms] = | 273 | T[ºC] |
| = 249.84 N = 382 | V o[V] = 1.865 | R_NTC[Ohms] = | 274 | T[ºC] |
| = 249.56 | | | | |
| N = 383 $= 249.28$ | $V_0[V] = 1.870$ | R_NTC[Ohms] = | 275 | T[ºC] |
| N = 384 = 249.00 | $V_0[V] = 1.875$ | R_NTC[Ohms] = | 276 | T[ºC] |
| N = 385 | V_o[V] = 1.880 | R_NTC[Ohms] = | 277 | T[ºC] |
| = 248.73 $N = 386$ | V_o[V] = 1.885 | R_NTC[Ohms] = | 278 | T[ºC] |
| = 248.45 $N = 387$ | V_o[V] = 1.890 | | 279 | T[ºC] |
| = 248.17 | _ | R_NTC[Ohms] = | | |
| N = 388 $= 247.90$ | $V_0[V] = 1.895$ | R_NTC[Ohms] = | 281 | T[ºC] |
| N = 389 $= 247.62$ | $V_0[V] = 1.899$ | R_NTC[Ohms] = | 282 | T[ºC] |
| N = 390 | $V_0[V] = 1.904$ | R_NTC[Ohms] = | 283 | T[ºC] |
| = 247.35 $N = 391$ | V_o[V] = 1.909 | R_NTC[Ohms] = | 284 | T[ºC] |
| = 247.08 $N = 392$ | _ | _ | | |
| N = 392 = 246.80 | V_o[V] = 1.914 | R_NTC[Ohms] = | 285 | T[ºC] |
| N = 393 $= 246.53$ | $V_0[V] = 1.919$ | R_NTC[Ohms] = | 286 | T[ºC] |
| N = 394 | $V_0[V] = 1.924$ | R_NTC[Ohms] = | 288 | T[ºC] |
| = 246.26 $N = 395$ | V_o[V] = 1.929 | R_NTC[Ohms] = | 289 | T[ºC] |
| = 245.99 $N = 396$ | V_o[V] = 1.934 | R_NTC[Ohms] = | 290 | T[ºC] |
| = 245.72 | _ | _ | | |
| N = 397 = 245.44 | V_o[V] = 1.938 | R_NTC[Ohms] = | 291 | T[ºC] |
| N = 398 $= 245.17$ | $V_0[V] = 1.943$ | R_NTC[Ohms] = | 292 | T[ºC] |
| N = 399 | $V_0[V] = 1.948$ | R_NTC[Ohms] = | 294 | T[ºC] |
| = 244.91 $N = 400$ | V_o[V] = 1.953 | R_NTC[Ohms] = | 295 | T[ºC] |
| = 244.64 N = 401 | V o[V] = 1.958 | R_NTC[Ohms] = | 296 | T[ºC] |
| = 244.37 | | _ | | |
| N = 402 = 244.10 | V_o[V] = 1.963 | R_NTC[Ohms] = | 297 | T[ºC] |
| и — 103 | 77 01771 - 1 069 | D MTC(Ohmal - | 200 | ጥ (ዕር ነ |

| IN - 4US | v_o[v] - 1.900 | т_итс[опше] - | 4 2 2 2 | τί≂cl |
|-------------------------------|------------------|---------------|----------------|-------|
| = 243.83 $N = 404$ $= 243.57$ | V_o[V] = 1.973 | R_NTC[Ohms] = | 300 | T[ºC] |
| N = 405 $= 243.30$ | V_o[V] = 1.978 | R_NTC[Ohms] = | 301 | T[ºC] |
| N = 406 | V_o[V] = 1.982 | R_NTC[Ohms] = | 302 | T[ºC] |
| = 243.03 $N = 407$ $= 242.77$ | V_o[V] = 1.987 | R_NTC[Ohms] = | 303 | T[ºC] |
| N = 408 = 242.50 | V_o[V] = 1.992 | R_NTC[Ohms] = | 305 | T[ºC] |
| N = 409 = 242.24 | V_o[V] = 1.997 | R_NTC[Ohms] = | 306 | T[ºC] |
| N = 410 $= 241.98$ | V_o[V] = 2.002 | R_NTC[Ohms] = | 307 | T[ºC] |
| N = 411 $= 241.71$ | $V_0[V] = 2.007$ | R_NTC[Ohms] = | 308 | T[ºC] |
| N = 412 $= 241.45$ | V_o[V] = 2.012 | R_NTC[Ohms] = | 310 | T[ºC] |
| N = 413 = 241.19 | V_o[V] = 2.017 | R_NTC[Ohms] = | 311 | T[ºC] |
| N = 414 = 240.92 | $V_0[V] = 2.021$ | R_NTC[Ohms] = | 312 | T[ºC] |
| N = 415 = 240.66 | $V_0[V] = 2.026$ | R_NTC[Ohms] = | 313 | T[ºC] |
| N = 416 = 240.40 | $V_o[V] = 2.031$ | R_NTC[Ohms] = | 315 | T[ºC] |
| N = 417 = 240.14 | $V_0[V] = 2.036$ | R_NTC[Ohms] = | 316 | T[ºC] |
| N = 418 = 239.88 | $V_0[V] = 2.041$ | R_NTC[Ohms] = | 317 | T[ºC] |
| N = 419 = 239.62 | $V_0[V] = 2.046$ | R_NTC[Ohms] = | 319 | T[ºC] |
| N = 420 = 239.36 | $V_o[V] = 2.051$ | R_NTC[Ohms] = | 320 | T[ºC] |
| N = 421 = 239.10 | $V_0[V] = 2.056$ | R_NTC[Ohms] = | 321 | T[ºC] |
| N = 422 = 238.85 | $V_0[V] = 2.061$ | R_NTC[Ohms] = | 322 | T[ºC] |
| N = 423 = 238.59 | $V_o[V] = 2.065$ | R_NTC[Ohms] = | 324 | T[ºC] |
| N = 424 = 238.33 | $V_o[V] = 2.070$ | R_NTC[Ohms] = | 325 | T[ºC] |
| N = 425 = 238.07 | $V_o[V] = 2.075$ | R_NTC[Ohms] = | 326 | T[ºC] |
| N = 426 = 237.82 | $V_0[V] = 2.080$ | R_NTC[Ohms] = | 328 | T[ºC] |
| N = 427 = 237.56 | $V_o[V] = 2.085$ | R_NTC[Ohms] = | 329 | T[ºC] |
| N = 428 = 237.31 | $V_0[V] = 2.090$ | R_NTC[Ohms] = | 330 | T[ºC] |
| N = 429 = 237.05 | $V_o[V] = 2.095$ | R_NTC[Ohms] = | 332 | T[ºC] |
| N = 430 $= 236.80$ | $V_0[V] = 2.100$ | R_NTC[Ohms] = | 333 | T[ºC] |
| N = 431 = 236.54 | $V_0[V] = 2.104$ | R_NTC[Ohms] = | 334 | T[ºC] |
| N = 432 -236.20 | $V_0[V] = 2.109$ | R_NTC[Ohms] = | 336 | T[ºC] |

| N = 433 | V_o[V] = 2.114 | R_NTC[Ohms] = | 337 | T[ºC] |
|---------------------|-------------------|--------------------------|------|---------|
| = 236.03 | 77 - 1771 - 2 110 | D NIMOLOhmal - | 220 | mr od 1 |
| N = 434 $= 235.78$ | $V_0[V] = 2.119$ | R_NTC[Ohms] = | 338 | T[ºC] |
| N = 435 | $V_0[V] = 2.124$ | R_NTC[Ohms] = | 340 | T[ºC] |
| = 235.53 | | | | |
| N = 436 | $V_0[V] = 2.129$ | <pre>R_NTC[Ohms] =</pre> | 341 | T[ºC] |
| = 235.27 $N = 437$ | V_o[V] = 2.134 | R_NTC[Ohms] = | 342 | T[ºC] |
| = 235.02 | V_0[V] 2.134 | K_MTC[OIIMB] | 312 | 1[-0] |
| N = 438 $= 234.77$ | $V_0[V] = 2.139$ | R_NTC[Ohms] = | 344 | T[ºC] |
| N = 439 | $V_0[V] = 2.144$ | R_NTC[Ohms] = | 345 | T[ºC] |
| = 234.52 | W - 1771 - 2 140 | D. NIMO(Ob 1 | 2.47 | mr.0.01 |
| N = 440 $= 234.27$ | $V_0[V] = 2.148$ | R_NTC[Ohms] = | 347 | T[ºC] |
| N = 441 | $V_0[V] = 2.153$ | R_NTC[Ohms] = | 348 | T[ºC] |
| = 234.02 $N = 442$ | V_o[V] = 2.158 | R_NTC[Ohms] = | 349 | T[ºC] |
| = 233.77 | | <u>-</u> () | | -[-] |
| N = 443 = 233.52 | $V_0[V] = 2.163$ | R_NTC[Ohms] = | 351 | T[ºC] |
| N = 444 | $V_0[V] = 2.168$ | R_NTC[Ohms] = | 352 | T[ºC] |
| = 233.27 $N = 445$ | V 0[V] - 2 172 | D NITCIONTAL - | 25/ | mroci |
| = 233.02 | $V_0[V] = 2.173$ | R_NTC[Ohms] = | 354 | T[ºC] |
| N = 446 | $V_0[V] = 2.178$ | R_NTC[Ohms] = | 355 | T[ºC] |
| = 232.77 $N = 447$ | V_o[V] = 2.183 | R_NTC[Ohms] = | 356 | T[ºC] |
| = 232.52 | | | | |
| N = 448 $= 232.28$ | $V_0[V] = 2.188$ | R_NTC[Ohms] = | 358 | T[ºC] |
| N = 449 | $V_0[V] = 2.192$ | R_NTC[Ohms] = | 359 | T[ºC] |
| = 232.03 $N = 450$ | V o[V] = 2.197 | R_NTC[Ohms] = | 361 | T[ºC] |
| = 231.78 | V_O[V] 2.137 | K_MTC[OIIMB] | 301 | 1[-0] |
| N = 451 $= 231.54$ | $V_0[V] = 2.202$ | R_NTC[Ohms] = | 362 | T[ºC] |
| N = 452 | $V_0[V] = 2.207$ | R_NTC[Ohms] = | 363 | T[ºC] |
| = 231.29 $N = 453$ | 77 0 1771 - 2 212 | D NIMOLOhmal - | 265 | mr och |
| = 231.04 | $V_0[V] = 2.212$ | R_NTC[Ohms] = | 365 | T[ºC] |
| N = 454 | $V_0[V] = 2.217$ | R_NTC[Ohms] = | 366 | T[ºC] |
| = 230.80 $N = 455$ | V_o[V] = 2.222 | R_NTC[Ohms] = | 368 | T[ºC] |
| = 230.55 | _ | _ | | |
| N = 456 $= 230.31$ | $V_0[V] = 2.227$ | R_NTC[Ohms] = | 369 | T[ºC] |
| N = 457 | $V_0[V] = 2.231$ | R_NTC[Ohms] = | 371 | T[ºC] |
| = 230.06 $N = 458$ | V_o[V] = 2.236 | R_NTC[Ohms] = | 372 | T[ºC] |
| = 229.82 | V_0[V] 2.230 | K_MTC[OIIMB] | 372 | 1[-0] |
| N = 459 = 229.57 | $V_0[V] = 2.241$ | R_NTC[Ohms] = | 374 | T[ºC] |
| N = 460 | V_o[V] = 2.246 | R_NTC[Ohms] = | 375 | T[ºC] |
| = 229.33 $N = 461$ | V 0[V] - 2 251 | D NMC(Ob~~1 - | 277 | mroa? |
| N = 461 $= 229.09$ | $V_0[V] = 2.251$ | R_NTC[Ohms] = | 377 | T[ºC] |
| м — 162 | V 01V1 - 2 256 | D NTC(Ohmal - | 270 | መተ ዕራ ነ |

| IN - 4UZ | v_U[V] - 2.230 | r_miclonmel - | 310 | τί≂ς] |
|-------------------------------|--------------------|---------------|-----|-------|
| = 228.85 $N = 463$ $= 228.60$ | V_o[V] = 2.261 | R_NTC[Ohms] = | 380 | T[ºC] |
| N = 464 = 228.36 | V_o[V] = 2.266 | R_NTC[Ohms] = | 381 | T[ºC] |
| N = 465 | V_o[V] = 2.271 | R_NTC[Ohms] = | 383 | T[ºC] |
| = 228.12 $N = 466$ $= 227.88$ | $V_0[V] = 2.275$ | R_NTC[Ohms] = | 384 | T[ºC] |
| N = 467 = 227.64 | $V_0[V] = 2.280$ | R_NTC[Ohms] = | 386 | T[ºC] |
| N = 468 $= 227.39$ | V_o[V] = 2.285 | R_NTC[Ohms] = | 387 | T[ºC] |
| N = 469 = 227.15 | $V_0[V] = 2.290$ | R_NTC[Ohms] = | 389 | T[ºC] |
| N = 470 = 226.91 | $V_{o}[V] = 2.295$ | R_NTC[Ohms] = | 390 | T[ºC] |
| N = 471 = 226.67 | $V_0[V] = 2.300$ | R_NTC[Ohms] = | 392 | T[ºC] |
| N = 472 = 226.43 | $V_0[V] = 2.305$ | R_NTC[Ohms] = | 393 | T[ºC] |
| N = 473 = 226.19 | $V_0[V] = 2.310$ | R_NTC[Ohms] = | 395 | T[ºC] |
| N = 474 = 225.96 | $V_0[V] = 2.314$ | R_NTC[Ohms] = | 396 | T[ºC] |
| N = 475 = 225.72 | $V_0[V] = 2.319$ | R_NTC[Ohms] = | 398 | T[ºC] |
| N = 476 = 225.48 | $V_0[V] = 2.324$ | R_NTC[Ohms] = | 400 | T[ºC] |
| N = 477 = 225.24 | $V_0[V] = 2.329$ | R_NTC[Ohms] = | 401 | T[ºC] |
| N = 478 = 225.00 | $V_0[V] = 2.334$ | R_NTC[Ohms] = | 403 | T[ºC] |
| N = 479 = 224.76 | $V_0[V] = 2.339$ | R_NTC[Ohms] = | 404 | T[ºC] |
| N = 480 = 224.53 | $V_0[V] = 2.344$ | R_NTC[Ohms] = | 406 | T[ºC] |
| N = 481 = 224.29 | $V_0[V] = 2.349$ | R_NTC[Ohms] = | 407 | T[ºC] |
| N = 482 = 224.05 | $V_0[V] = 2.354$ | R_NTC[Ohms] = | 409 | T[ºC] |
| N = 483 = 223.82 | $V_0[V] = 2.358$ | R_NTC[Ohms] = | 411 | T[ºC] |
| N = 484 = 223.58 | $V_0[V] = 2.363$ | R_NTC[Ohms] = | 412 | T[ºC] |
| N = 485 = 223.34 | $V_{0}[V] = 2.368$ | R_NTC[Ohms] = | 414 | T[ºC] |
| N = 486 = 223.11 | $V_0[V] = 2.373$ | R_NTC[Ohms] = | 416 | T[ºC] |
| N = 487 = 222.87 | $V_{0}[V] = 2.378$ | R_NTC[Ohms] = | 417 | T[ºC] |
| N = 488 = 222.64 | $V_0[V] = 2.383$ | R_NTC[Ohms] = | 419 | T[ºC] |
| N = 489 $= 222.40$ | V_o[V] = 2.388 | R_NTC[Ohms] = | 420 | T[ºC] |
| N = 490 = 222.17 | V_o[V] = 2.393 | R_NTC[Ohms] = | 422 | T[ºC] |
| N = 491 $-221 02$ | $V_0[V] = 2.397$ | R_NTC[Ohms] = | 424 | T[ºC] |

| N = 492 | | | | | |
|--|----------|-----------------------|--------------------------|-----|----------|
| N = 493 | N = 492 | $V_0[V] = 2.402$ | R_NTC[Ohms] = | 425 | T[ºC] |
| = 221.47 | | V 01V1 - 2 407 | P NTC(Ohmal - | 127 | mr oc i |
| = 221.23 | | V_O[V] - 2.407 | K_MIC[OIMS] = | 427 | 1[=0] |
| N = 495 | N = 494 | $V_0[V] = 2.412$ | R_NTC[Ohms] = | 429 | T[ºC] |
| 221.00 | = 221.23 | | | | |
| N = 496 | | $V_0[V] = 2.417$ | R_NTC[Ohms] = | 430 | T[ºC] |
| N = 497 | | $V_0[V] = 2.422$ | R_NTC[Ohms] = | 432 | T[ºC] |
| 220.53 | | V 01V1 - 2 427 | D NTC(Ohmal - | 131 | mr oc i |
| 220.30 | | V_O[V] - 2.427 | K_MIC[OIMS] - | 434 | 1[-0] |
| N = 499 | | $V_0[V] = 2.432$ | R_NTC[Ohms] = | 436 | T[ºC] |
| N = 500 | | $V_0[V] = 2.437$ | R_NTC[Ohms] = | 437 | T[ºC] |
| = 219.84 N = 501 219.60 N = 502 219.60 N = 502 | | 77 01771 - 2 441 | D NTC(Ohmal - | 130 | mr oc i |
| = 219.60 | | V_O[V] - 2.441 | K_MIC[OIMS] = | 433 | 1[=0] |
| N = 502 | | $V_0[V] = 2.446$ | R_NTC[Ohms] = | 441 | T[ºC] |
| N = 503 | | $V_0[V] = 2.451$ | R_NTC[Ohms] = | 442 | T[ºC] |
| = 219.14 N = 504 | | V 01V1 - 2 456 | D NTC(Ohmal - | 111 | mr oc i |
| = 218.91 | | V_O[V] - 2.430 | K_MIC[OIMS] - | 444 | 1[-0] |
| N = 505 | | $V_0[V] = 2.461$ | R_NTC[Ohms] = | 446 | T[ºC] |
| N = 506 | | $V_0[V] = 2.466$ | R_NTC[Ohms] = | 448 | T[ºC] |
| = 218.45 N = 507 | | $V \cap [V] = 2 A71$ | P NTC(Ohmel = | 449 | ም (OC 1 |
| = 218.22 N = 508 P = 508 V_o[V] = 2.480 R_NTC[Ohms] = 453 T[°C] E = 217.99 T = 217.76 T C N = 510 V_o[V] = 2.485 R_NTC[Ohms] = 455 T[°C] E = 217.76 T C N = 510 V_o[V] = 2.490 R_NTC[Ohms] = 456 T[°C] E = 217.53 T C E = 217.30 T C E = 217.30 T C E = 217.07 T C N = 512 V_o[V] = 2.500 R_NTC[Ohms] = 460 T[°C] E = 217.07 T C N = 513 V_o[V] = 2.505 R_NTC[Ohms] = 462 T[°C] E = 216.84 T C N = 514 V_o[V] = 2.510 R_NTC[Ohms] = 464 T[°C] E = 216.61 T C E = 216.38 T C N = 515 V_o[V] = 2.515 R_NTC[Ohms] = 465 T[°C] E = 216.15 T T C E = 216.15 T T C E = 215.93 T C N = 517 V_o[V] = 2.524 R_NTC[Ohms] = 469 T[°C] E = 215.93 T C E = 215.70 T C N = 519 V_o[V] = 2.534 R_NTC[Ohms] = 471 T[°C] E = 215.47 T C N = 520 V_o[V] = 2.539 R_NTC[Ohms] = 475 T[°C] E = 215.24 T C E = 216.00 T C E = 216.00 | | V_O[V] - 2.471 | K_MTC[OIMB] | 11) | 1[-0] |
| N = 508 | | $V_0[V] = 2.476$ | R_NTC[Ohms] = | 451 | T[ºC] |
| N = 509 | N = 508 | $V_0[V] = 2.480$ | R_NTC[Ohms] = | 453 | T[ºC] |
| = 217.76 N = 510 | | $V \circ (V) = 2.485$ | R NTC[Ohms] = | 455 | ሞ[Չሮ] |
| = 217.53 N = 511 | = 217.76 | | | | |
| N = 511 | | $V_0[V] = 2.490$ | R_NTC[Ohms] = | 456 | T[ºC] |
| $ \begin{array}{llllllllllllllllllllllllllllllllllll$ | N = 511 | $V_0[V] = 2.495$ | R_NTC[Ohms] = | 458 | T[ºC] |
| = 217.07 N = 513 | | $V \circ [V] = 2.500$ | R NTC[Ohms] = | 460 | T[ºC] |
| | | | - | | |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | $V_0[V] = 2.505$ | R_NTC[Ohms] = | 462 | T[ºC] |
| $N = 515$ $V_o[V] = 2.515$ $R_NTC[Ohms] = 465$ $T[\circ C]$ $= 216.38$ $N = 516$ $V_o[V] = 2.520$ $R_NTC[Ohms] = 467$ $T[\circ C]$ $= 216.15$ $N = 517$ $V_o[V] = 2.524$ $R_NTC[Ohms] = 469$ $T[\circ C]$ $= 215.93$ $N = 518$ $V_o[V] = 2.529$ $R_NTC[Ohms] = 471$ $T[\circ C]$ $= 215.70$ $N = 519$ $V_o[V] = 2.534$ $R_NTC[Ohms] = 473$ $T[\circ C]$ $= 215.47$ $N = 520$ $V_o[V] = 2.539$ $R_NTC[Ohms] = 475$ $T[\circ C]$ $= 215.24$ | | $V_0[V] = 2.510$ | <pre>R_NTC[Ohms] =</pre> | 464 | T[ºC] |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | | V o[V] = 2.515 | R NTC[Ohms] = | 465 | T[ºC] |
| = 216.15 N = 517 $V_o[V] = 2.524$ $R_NTC[Ohms] = 469$ $T[\circ C]$ = 215.93 N = 518 $V_o[V] = 2.529$ $R_NTC[Ohms] = 471$ $T[\circ C]$ = 215.70 N = 519 $V_o[V] = 2.534$ $R_NTC[Ohms] = 473$ $T[\circ C]$ = 215.47 N = 520 $V_o[V] = 2.539$ $R_NTC[Ohms] = 475$ $T[\circ C]$ = 215.24 | | _ | _ | | |
| = 215.93 N = 518 $V_o[V] = 2.529$ $R_NTC[Ohms] = 471$ $T[\circ C]$ = 215.70 N = 519 $V_o[V] = 2.534$ $R_NTC[Ohms] = 473$ $T[\circ C]$ = 215.47 N = 520 $V_o[V] = 2.539$ $R_NTC[Ohms] = 475$ $T[\circ C]$ = 215.24 | | $V_{O[V]} = 2.520$ | R_NTC[Onms] = | 467 | T[ºC] |
| $N = 518$ $V_o[V] = 2.529$ $R_NTC[Ohms] = 471$ $T[\circ C]$ $V_o[V] = 2.534$ $V_o[V] = 2.534$ $V_o[V] = 2.534$ $V_o[V] = 2.539$ | | $V_0[V] = 2.524$ | R_NTC[Ohms] = | 469 | T[ºC] |
| = 215.70 $N = 519$ $V_o[V] = 2.534$ $R_NTC[Ohms] = 473$ $T[\circ C]$ = 215.47 $N = 520$ $V_o[V] = 2.539$ $R_NTC[Ohms] = 475$ $T[\circ C]$ = 215.24 | | V o[V] = 2.529 | R NTC[Ohms] = | 471 | T[ºC] |
| = 215.47 $N = 520$ $V_o[V] = 2.539$ $R_NTC[Ohms] = 475$ $T[\circ C]$ = 215.24 | = 215.70 | _ | _ | | |
| = 215.24 | | $v_{0}[v] = 2.534$ | K_NTC[Ohms] = | 4/3 | T.[oC] |
| | | $V_0[V] = 2.539$ | R_NTC[Ohms] = | 475 | T[ºC] |
| | | W 01W1 - 2 544 | D NMC(Ohme) - | 176 | መ፤ ዕር 1 |

| N - 251 | v_U[v] - 2.J44 | т_итс[oums] - | 4/0 | τί≂cl |
|-------------------------------|--------------------|---------------|-----|-------|
| = 215.01 $N = 522$ $= 214.79$ | V_o[V] = 2.549 | R_NTC[Ohms] = | 478 | T[ºC] |
| N = 523 $= 214.56$ | $V_0[V] = 2.554$ | R_NTC[Ohms] = | 480 | T[ºC] |
| N = 524 | V_o[V] = 2.559 | R_NTC[Ohms] = | 482 | T[ºC] |
| = 214.33 $N = 525$ | V_o[V] = 2.563 | R_NTC[Ohms] = | 484 | T[ºC] |
| = 214.11 $N = 526$ $= 213.88$ | V_o[V] = 2.568 | R_NTC[Ohms] = | 486 | T[ºC] |
| N = 527 $= 213.65$ | $V_{0}[V] = 2.573$ | R_NTC[Ohms] = | 488 | T[ºC] |
| N = 528 = 213.43 | $V_0[V] = 2.578$ | R_NTC[Ohms] = | 490 | T[ºC] |
| N = 529 = 213.20 | V_o[V] = 2.583 | R_NTC[Ohms] = | 492 | T[ºC] |
| N = 530 $= 212.98$ | $V_0[V] = 2.588$ | R_NTC[Ohms] = | 494 | T[ºC] |
| N = 531 $= 212.75$ | $V_0[V] = 2.593$ | R_NTC[Ohms] = | 495 | T[ºC] |
| N = 532 $= 212.52$ | $V_0[V] = 2.598$ | R_NTC[Ohms] = | 497 | T[ºC] |
| N = 533 = 212.30 | V_o[V] = 2.603 | R_NTC[Ohms] = | 499 | T[ºC] |
| N = 534 $= 212.07$ | $V_0[V] = 2.607$ | R_NTC[Ohms] = | 501 | T[ºC] |
| N = 535 $= 211.85$ | V_o[V] = 2.612 | R_NTC[Ohms] = | 503 | T[ºC] |
| N = 536 $= 211.62$ | V_o[V] = 2.617 | R_NTC[Ohms] = | 505 | T[ºC] |
| N = 537 = 211.40 | V_o[V] = 2.622 | R_NTC[Ohms] = | 507 | T[ºC] |
| N = 538 $= 211.17$ | V_o[V] = 2.627 | R_NTC[Ohms] = | 509 | T[ºC] |
| N = 539 $= 210.95$ | V_o[V] = 2.632 | R_NTC[Ohms] = | 511 | T[ºC] |
| N = 540 $= 210.73$ | V_o[V] = 2.637 | R_NTC[Ohms] = | 513 | T[ºC] |
| N = 541 $= 210.50$ | V_o[V] = 2.642 | R_NTC[Ohms] = | 515 | T[ºC] |
| N = 542 $= 210.28$ | V_o[V] = 2.646 | R_NTC[Ohms] = | 517 | T[ºC] |
| N = 543 $= 210.05$ | V_o[V] = 2.651 | R_NTC[Ohms] = | 519 | T[ºC] |
| N = 544 $= 209.83$ | V_o[V] = 2.656 | R_NTC[Ohms] = | 521 | T[ºC] |
| N = 545 $= 209.61$ | V_o[V] = 2.661 | R_NTC[Ohms] = | 523 | T[ºC] |
| N = 546 $= 209.38$ | V_o[V] = 2.666 | R_NTC[Ohms] = | 525 | T[ºC] |
| N = 547 $= 209.16$ | V_o[V] = 2.671 | R_NTC[Ohms] = | 528 | T[ºC] |
| N = 548 $= 208.94$ | $V_0[V] = 2.676$ | R_NTC[Ohms] = | 530 | T[ºC] |
| N = 549 = 208.72 | V_o[V] = 2.681 | R_NTC[Ohms] = | 532 | T[ºC] |
| N = 550 - 208.40 | V_o[V] = 2.686 | R_NTC[Ohms] = | 534 | T[ºC] |

| N = 551 | $V_0[V] = 2.690$ | R_NTC[Ohms] = | 536 | T[ºC] |
|---------------------|--------------------|---------------|-----|-------|
| = 208.27 $N = 552$ | $V_0[V] = 2.695$ | R_NTC[Ohms] = | 538 | T[ºC] |
| = 208.05 $N = 553$ | $V_0[V] = 2.700$ | R_NTC[Ohms] = | 540 | T[ºC] |
| = 207.83 | | | | |
| N = 554 = 207.60 | $V_0[V] = 2.705$ | R_NTC[Ohms] = | 542 | T[ºC] |
| N = 555 $= 207.38$ | $V_0[V] = 2.710$ | R_NTC[Ohms] = | 544 | T[ºC] |
| N = 556 = 207.16 | $V_0[V] = 2.715$ | R_NTC[Ohms] = | 546 | T[ºC] |
| N = 557 $= 206.94$ | $V_0[V] = 2.720$ | R_NTC[Ohms] = | 549 | T[ºC] |
| N = 558 | $V_0[V] = 2.725$ | R_NTC[Ohms] = | 551 | T[ºC] |
| = 206.72 $N = 559$ | $V_0[V] = 2.729$ | R_NTC[Ohms] = | 553 | T[ºC] |
| = 206.50 $N = 560$ | $V_0[V] = 2.734$ | R_NTC[Ohms] = | 555 | T[ºC] |
| = 206.27 $N = 561$ | $V_0[V] = 2.739$ | R_NTC[Ohms] = | 557 | T[ºC] |
| = 206.05 $N = 562$ | V_o[V] = 2.744 | R_NTC[Ohms] = | 560 | T[ºC] |
| = 205.83 $N = 563$ | V_o[V] = 2.749 | R_NTC[Ohms] = | 562 | T[ºC] |
| = 205.61 $N = 564$ | $V_0[V] = 2.754$ | R_NTC[Ohms] = | 564 | T[ºC] |
| = 205.39 $N = 565$ | $V_0[V] = 2.759$ | R_NTC[Ohms] = | 566 | T[ºC] |
| = 205.17 $N = 566$ | V_o[V] = 2.764 | R_NTC[Ohms] = | | T[ºC] |
| = 204.95 $N = 567$ | _ | _ | | |
| = 204.73 | V_o[V] = 2.769 | R_NTC[Ohms] = | 571 | T[ºC] |
| N = 568 = 204.51 | $V_{o}[V] = 2.773$ | R_NTC[Ohms] = | 573 | T[ºC] |
| N = 569 = 204.29 | $V_0[V] = 2.778$ | R_NTC[Ohms] = | 575 | T[ºC] |
| N = 570 = 204.07 | $V_0[V] = 2.783$ | R_NTC[Ohms] = | 578 | T[ºC] |
| N = 571 = 203.85 | $V_0[V] = 2.788$ | R_NTC[Ohms] = | 580 | T[ºC] |
| N = 572 $= 203.63$ | $V_0[V] = 2.793$ | R_NTC[Ohms] = | 582 | T[ºC] |
| N = 573 | $V_0[V] = 2.798$ | R_NTC[Ohms] = | 584 | T[ºC] |
| = 203.41 $N = 574$ | $V_0[V] = 2.803$ | R_NTC[Ohms] = | 587 | T[ºC] |
| = 203.19 $N = 575$ | V_o[V] = 2.808 | R_NTC[Ohms] = | 589 | T[ºC] |
| = 202.97 $N = 576$ | V_o[V] = 2.812 | R_NTC[Ohms] = | 591 | T[ºC] |
| = 202.75 $N = 577$ | V_o[V] = 2.817 | R_NTC[Ohms] = | 594 | T[ºC] |
| = 202.53 $N = 578$ | V_o[V] = 2.822 | R_NTC[Ohms] = | 596 | T[ºC] |
| = 202.31 $N = 579$ | $V_0[V] = 2.827$ | R_NTC[Ohms] = | 599 | T[ºC] |
| = 202.09 $M - 580$ | 7 OLAI - 3 833 | D NTC(Obme) - | 601 | mroci |
| | | | | |

| N - 300 | v_U[V] - 2.032 | r_wicloums] - | ООТ | ı[≃∪] |
|---------------------------------|------------------|---------------|-----|-------|
| = 201.87 $N = 581$ $= 201.65$ | V_o[V] = 2.837 | R_NTC[Ohms] = | 603 | T[ºC] |
| N = 582 $= 201.43$ | $V_0[V] = 2.842$ | R_NTC[Ohms] = | 606 | T[ºC] |
| N = 583 $= 201.22$ | V_o[V] = 2.847 | R_NTC[Ohms] = | 608 | T[ºC] |
| N = 584 $= 201.00$ | $V_0[V] = 2.852$ | R_NTC[Ohms] = | 611 | T[ºC] |
| N = 585 $= 200.78$ | $V_0[V] = 2.856$ | R_NTC[Ohms] = | 613 | T[ºC] |
| N = 586 $= 200.56$ | V_o[V] = 2.861 | R_NTC[Ohms] = | 615 | T[ºC] |
| N = 587 $= 200.34$ | V_o[V] = 2.866 | R_NTC[Ohms] = | 618 | T[ºC] |
| N = 588 $= 200.12$ | V_o[V] = 2.871 | R_NTC[Ohms] = | 620 | T[ºC] |
| N = 589 $= 199.90$ | $V_0[V] = 2.876$ | R_NTC[Ohms] = | 623 | T[ºC] |
| N = 590 $= 199.69$ | V_o[V] = 2.881 | R_NTC[Ohms] = | 625 | T[ºC] |
| N = 591 $= 199.47$ | V_o[V] = 2.886 | R_NTC[Ohms] = | 628 | T[ºC] |
| N = 592 $= 199.25$ | V_o[V] = 2.891 | R_NTC[Ohms] = | 630 | T[ºC] |
| N = 593 $= 199.03$ | V_o[V] = 2.896 | R_NTC[Ohms] = | 633 | T[ºC] |
| N = 594 $= 198.81$ | V_o[V] = 2.900 | R_NTC[Ohms] = | 635 | T[ºC] |
| N = 595 | $V_0[V] = 2.905$ | R_NTC[Ohms] = | 638 | T[ºC] |
| = 198.59 $N = 596$ | V_o[V] = 2.910 | R_NTC[Ohms] = | 641 | T[ºC] |
| = 198.38 N = 597 = 198.16 | $V_0[V] = 2.915$ | R_NTC[Ohms] = | 643 | T[ºC] |
| N = 598 | V_o[V] = 2.920 | R_NTC[Ohms] = | 646 | T[ºC] |
| = 197.94 N = 599 = 197.72 | V_o[V] = 2.925 | R_NTC[Ohms] = | 648 | T[ºC] |
| N = 600 $= 197.50$ | V_o[V] = 2.930 | R_NTC[Ohms] = | 651 | T[ºC] |
| N = 601 = 197.29 | V_o[V] = 2.935 | R_NTC[Ohms] = | 654 | T[ºC] |
| N = 602 $= 197.07$ | $V_0[V] = 2.939$ | R_NTC[Ohms] = | 656 | T[ºC] |
| N = 603 $= 196.85$ | $V_0[V] = 2.944$ | R_NTC[Ohms] = | 659 | T[ºC] |
| N = 604 $= 196.63$ | $V_0[V] = 2.949$ | R_NTC[Ohms] = | 662 | T[ºC] |
| N = 605 $= 196.42$ | $V_0[V] = 2.954$ | R_NTC[Ohms] = | 664 | T[ºC] |
| N = 606 $= 196.20$ | $V_0[V] = 2.959$ | R_NTC[Ohms] = | 667 | T[ºC] |
| N = 607 $= 195.98$ | $V_0[V] = 2.964$ | R_NTC[Ohms] = | 670 | T[ºC] |
| = 195.98 $N = 608$ $= 195.76$ | $V_0[V] = 2.969$ | R_NTC[Ohms] = | 672 | T[ºC] |
| N = 609 - 105 55 | $V_0[V] = 2.974$ | R_NTC[Ohms] = | 675 | T[ºC] |

| N = 610 | $V_0[V] = 2.979$ | R_NTC[Ohms] = | 678 | T[ºC] |
|---------------------|------------------|---------------|-----|----------|
| = 195.33 $N = 611$ | V_o[V] = 2.983 | R_NTC[Ohms] = | 681 | T[ºC] |
| = 195.11 $N = 612$ | V_o[V] = 2.988 | R_NTC[Ohms] = | 683 | T[ºC] |
| _ 104 00 | | | | |
| = 194.89 $N = 613$ | $V_0[V] = 2.993$ | R_NTC[Ohms] = | 686 | T[ºC] |
| = 194.68 $N = 614$ | $V_0[V] = 2.998$ | R_NTC[Ohms] = | 689 | T[ºC] |
| = 194.46 $N = 615$ | V_o[V] = 3.003 | R_NTC[Ohms] = | 692 | T[ºC] |
| = 194.24 $N = 616$ | V_o[V] = 3.008 | R_NTC[Ohms] = | 695 | T[ºC] |
| = 194.03 $N = 617$ | $V_0[V] = 3.013$ | R_NTC[Ohms] = | 697 | T[ºC] |
| = 193.81 | | D NIME COL 1 | 700 | |
| N = 618 $= 193.59$ | $V_0[V] = 3.018$ | R_NTC[Ohms] = | 700 | T[ºC] |
| N = 619 = 193.37 | $V_0[V] = 3.022$ | R_NTC[Ohms] = | 703 | T[ºC] |
| N = 620 $= 193.16$ | $V_0[V] = 3.027$ | R_NTC[Ohms] = | 706 | T[ºC] |
| N = 621 | $V_0[V] = 3.032$ | R_NTC[Ohms] = | 709 | T[ºC] |
| = 192.94 $N = 622$ | $V_0[V] = 3.037$ | R_NTC[Ohms] = | 712 | T[ºC] |
| = 192.72 $N = 623$ | V_o[V] = 3.042 | R_NTC[Ohms] = | 715 | T[ºC] |
| = 192.51 $N = 624$ | V_o[V] = 3.047 | R_NTC[Ohms] = | 718 | T[ºC] |
| = 192.29 $N = 625$ | V_o[V] = 3.052 | R_NTC[Ohms] = | 721 | T[ºC] |
| = 192.07 $N = 626$ | $V_0[V] = 3.057$ | R_NTC[Ohms] = | 724 | T[ºC] |
| = 191.86 $N = 627$ | $V_0[V] = 3.062$ | R_NTC[Ohms] = | 726 | T[ºC] |
| = 191.64 $N = 628$ | V_o[V] = 3.066 | R_NTC[Ohms] = | 729 | T[ºC] |
| = 191.42 $N = 629$ | $V_0[V] = 3.071$ | R_NTC[Ohms] = | 733 | T[ºC] |
| = 191.20 $N = 630$ | $V_0[V] = 3.076$ | R_NTC[Ohms] = | 736 | -[°C] |
| = 190.99 | | | | |
| N = 631 $= 190.77$ | $V_0[V] = 3.081$ | R_NTC[Ohms] = | 739 | T[ºC] |
| N = 632 = 190.55 | $V_0[V] = 3.086$ | R_NTC[Ohms] = | 742 | T[ºC] |
| N = 633 = 190.34 | $V_0[V] = 3.091$ | R_NTC[Ohms] = | 745 | T[ºC] |
| N = 634 $= 190.12$ | $V_0[V] = 3.096$ | R_NTC[Ohms] = | 748 | T[ºC] |
| N = 635 $= 189.90$ | $V_o[V] = 3.101$ | R_NTC[Ohms] = | 751 | T[ºC] |
| N = 636 | V_o[V] = 3.105 | R_NTC[Ohms] = | 754 | T[ºC] |
| = 189.68 $N = 637$ | $V_0[V] = 3.110$ | R_NTC[Ohms] = | 757 | T[ºC] |
| = 189.47 $N = 638$ | $V_0[V] = 3.115$ | R_NTC[Ohms] = | 760 | T[ºC] |
| = 189.25 $M - 630$ | 77 01771 - 3 120 | D NMC(∩hmal - | 763 | ጥ! ດ∕' ነ |

| = 189.03 | v_O[v] - 3.120 | r_niclonmel - | 103 | τί _π ς] |
|-------------------------------|------------------|---------------|-----|--------------------|
| N = 640 $= 188.82$ | $V_o[V] = 3.125$ | R_NTC[Ohms] = | 767 | T[ºC] |
| N = 641 | V_o[V] = 3.130 | R_NTC[Ohms] = | 770 | T[ºC] |
| = 188.60 | | | | |
| N = 642 | $V_0[V] = 3.135$ | R_NTC[Ohms] = | 773 | T[ºC] |
| = 188.38 $N = 643$ | $V_0[V] = 3.140$ | R_NTC[Ohms] = | 776 | T[ºC] |
| = 188.16 $N = 644$ | V_o[V] = 3.145 | R_NTC[Ohms] = | 780 | T[ºC] |
| = 187.95 $N = 645$ | $V_0[V] = 3.149$ | R_NTC[Ohms] = | 783 | T[ºC] |
| = 187.73 $N = 646$ | V_o[V] = 3.154 | R_NTC[Ohms] = | 786 | T[ºC] |
| = 187.51 $N = 647$ | $V_0[V] = 3.159$ | R_NTC[Ohms] = | 789 | T[ºC] |
| = 187.30 $N = 648$ | V_o[V] = 3.164 | R_NTC[Ohms] = | 793 | T[ºC] |
| = 187.08 $N = 649$ | $V_0[V] = 3.169$ | R_NTC[Ohms] = | 796 | T[ºC] |
| = 186.86 $N = 650$ | $V_0[V] = 3.174$ | R_NTC[Ohms] = | 799 | T[ºC] |
| = 186.64 $N = 651$ | $V_0[V] = 3.179$ | R_NTC[Ohms] = | 803 | T[ºC] |
| = 186.43 $N = 652$ | $V_0[V] = 3.184$ | R_NTC[Ohms] = | 806 | T[ºC] |
| = 186.21 $N = 653$ | V_o[V] = 3.188 | R_NTC[Ohms] = | 810 | T[ºC] |
| = 185.99 $N = 654$ | V_o[V] = 3.193 | R_NTC[Ohms] = | 813 | T[ºC] |
| = 185.77 $N = 655$ | V_o[V] = 3.198 | R_NTC[Ohms] = | 817 | T[ºC] |
| = 185.56 $N = 656$ | V_o[V] = 3.203 | R_NTC[Ohms] = | 820 | T[ºC] |
| = 185.34 $N = 657$ | V_o[V] = 3.208 | R_NTC[Ohms] = | 823 | T[ºC] |
| = 185.12 $N = 658$ | $V_0[V] = 3.213$ | R_NTC[Ohms] = | 827 | T[ºC] |
| = 184.90 $N = 659$ | V_o[V] = 3.218 | R_NTC[Ohms] = | 831 | T[ºC] |
| = 184.68 $N = 660$ $= 184.47$ | $V_0[V] = 3.223$ | R_NTC[Ohms] = | 834 | T[ºC] |
| N = 661 $= 184.25$ | $V_0[V] = 3.228$ | R_NTC[Ohms] = | 838 | T[ºC] |
| N = 662 $= 184.03$ | $V_0[V] = 3.232$ | R_NTC[Ohms] = | 841 | T[ºC] |
| N = 663 $= 183.81$ | $V_0[V] = 3.237$ | R_NTC[Ohms] = | 845 | T[ºC] |
| N = 664 $= 183.59$ | $V_0[V] = 3.242$ | R_NTC[Ohms] = | 848 | T[ºC] |
| N = 665 $= 183.38$ | $V_0[V] = 3.247$ | R_NTC[Ohms] = | 852 | T[ºC] |
| N = 666 = 183.16 | $V_0[V] = 3.252$ | R_NTC[Ohms] = | 856 | T[ºC] |
| N = 667 $= 182.94$ | $V_0[V] = 3.257$ | R_NTC[Ohms] = | 859 | T[ºC] |
| N = 668 -182.72 | $V_0[V] = 3.262$ | R_NTC[Ohms] = | 863 | T[ºC] |
| | | | | |

| N = 669 | $V_0[V] = 3.267$ | R_NTC[Ohms] = | 867 | T[ºC] |
|---------------------|----------------------|---------------|-----|---------|
| = 182.50 $N = 670$ | V_o[V] = 3.271 | R_NTC[Ohms] = | 871 | T[ºC] |
| = 182.28 | | | | |
| N = 671 | V_o[V] = 3.276 | R_NTC[Ohms] = | 874 | T[ºC] |
| = 182.06 $N = 672$ | V_o[V] = 3.281 | R_NTC[Ohms] = | 878 | T[ºC] |
| = 181.84 | | | | |
| N = 673 = 181.63 | V_o[V] = 3.286 | R_NTC[Ohms] = | 882 | T[ºC] |
| N = 674 $= 181.41$ | $V_0[V] = 3.291$ | R_NTC[Ohms] = | 886 | T[ºC] |
| N = 675 | $V_0[V] = 3.296$ | R_NTC[Ohms] = | 890 | T[ºC] |
| = 181.19 $N = 676$ | $V_0[V] = 3.301$ | R_NTC[Ohms] = | 894 | T[ºC] |
| = 180.97 $N = 677$ | V_o[V] = 3.306 | R_NTC[Ohms] = | 897 | T[ºC] |
| = 180.75 | | | | |
| N = 678 = 180.53 | $V_{0}[V] = 3.311$ | R_NTC[Ohms] = | 901 | T[ºC] |
| N = 679 = 180.31 | $V_{o}[V] = 3.315$ | R_NTC[Ohms] = | 905 | T[ºC] |
| N = 680 | V_o[V] = 3.320 | R_NTC[Ohms] = | 909 | T[ºC] |
| = 180.09 $N = 681$ | $V_0[V] = 3.325$ | R_NTC[Ohms] = | 913 | T[ºC] |
| = 179.87 $N = 682$ | V_o[V] = 3.330 | R_NTC[Ohms] = | 917 | T[ºC] |
| = 179.65 $N = 683$ | V_o[V] = 3.335 | R_NTC[Ohms] = | 921 | T[ºC] |
| = 179.43 | | _ | | |
| N = 684 $= 179.21$ | $V_0[V] = 3.340$ | R_NTC[Ohms] = | 925 | T[ºC] |
| N = 685 $= 178.99$ | $V_0[V] = 3.345$ | R_NTC[Ohms] = | 929 | T[ºC] |
| N = 686 | V_o[V] = 3.350 | R_NTC[Ohms] = | 934 | T[ºC] |
| = 178.77 $N = 687$ | $V_0[V] = 3.354$ | R_NTC[Ohms] = | 938 | T[ºC] |
| = 178.55 $N = 688$ | V_o[V] = 3.359 | R_NTC[Ohms] = | 942 | T[ºC] |
| = 178.33 $N = 689$ | V_o[V] = 3.364 | R_NTC[Ohms] = | 946 | T[ºC] |
| = 178.11 | | _ | | |
| N = 690 = 177.89 | V_o[V] = 3.369 | R_NTC[Ohms] = | 950 | T[ºC] |
| N = 691 = 177.67 | $V_0[V] = 3.374$ | R_NTC[Ohms] = | 955 | T[ºC] |
| N = 692 | $V_0[V] = 3.379$ | R_NTC[Ohms] = | 959 | T[ºC] |
| = 177.45 $N = 693$ | $V_0[V] = 3.384$ | R_NTC[Ohms] = | 963 | T[ºC] |
| = 177.23 $N = 694$ | V_o[V] = 3.389 | R_NTC[Ohms] = | 967 | T[ºC] |
| = 177.01 $N = 695$ | V_o[V] = 3.394 | R_NTC[Ohms] = | 972 | T[ºC] |
| = 176.78 $N = 696$ | | _ | 976 | T[ºC] |
| = 176.56 | V_o[V] = 3.398 | R_NTC[Ohms] = | | |
| N = 697 $= 176.34$ | $V_0[V] = 3.403$ | R_NTC[Ohms] = | 980 | T[ºC] |
| M - 600 | 77 01771 - 2 1/10 77 | D NTC(∩hmal — | 025 | TI OC 1 |

| IN — 030 | v_O[v] - 3.400 | v_wicloums1 - | עטע | ı[≃∪] |
|-------------------------------|------------------|---------------|------|---------|
| = 176.12 $N = 699$ | V_o[V] = 3.413 | R_NTC[Ohms] = | 989 | T[ºC] |
| = 175.90 $N = 700$ | V_o[V] = 3.418 | R_NTC[Ohms] = | 994 | T[ºC] |
| = 175.68 | _ 、 , | , | | |
| N = 701 $= 175.45$ | $V_0[V] = 3.423$ | R_NTC[Ohms] = | 998 | T[ºC] |
| N = 702 | $V_0[V] = 3.428$ | R_NTC[Ohms] = | 1003 | T[ºC] |
| = 175.23 $N = 703$ $= 175.01$ | V_o[V] = 3.433 | R_NTC[Ohms] = | 1007 | T[ºC] |
| N = 704 | V_o[V] = 3.438 | R_NTC[Ohms] = | 1012 | T[ºC] |
| = 174.79 $N = 705$ | $V_0[V] = 3.442$ | R_NTC[Ohms] = | 1017 | T[ºC] |
| = 174.56 $N = 706$ | $V_0[V] = 3.447$ | R_NTC[Ohms] = | 1021 | T[ºC] |
| = 174.34 $N = 707$ | $V_0[V] = 3.452$ | R_NTC[Ohms] = | 1026 | T[ºC] |
| = 174.12 $N = 708$ | $V_0[V] = 3.457$ | R_NTC[Ohms] = | 1031 | T[ºC] |
| = 173.89 $N = 709$ | V_o[V] = 3.462 | R_NTC[Ohms] = | 1035 | T[ºC] |
| = 173.67 $N = 710$ | $V_0[V] = 3.467$ | R_NTC[Ohms] = | 1040 | T[ºC] |
| = 173.45 $N = 711$ | $V_0[V] = 3.472$ | R_NTC[Ohms] = | 1045 | T[ºC] |
| = 173.22 $N = 712$ | $V_0[V] = 3.477$ | R_NTC[Ohms] = | 1050 | T[ºC] |
| = 173.00 $N = 713$ | $V_0[V] = 3.481$ | R_NTC[Ohms] = | 1055 | T[ºC] |
| = 172.77 $N = 714$ | V_o[V] = 3.486 | R_NTC[Ohms] = | 1059 | T[ºC] |
| = 172.55 $N = 715$ | $V_0[V] = 3.491$ | R_NTC[Ohms] = | 1064 | T[ºC] |
| = 172.33 $N = 716$ | V_o[V] = 3.496 | R_NTC[Ohms] = | 1069 | T[ºC] |
| = 172.10 N = 717 | $V_0[V] = 3.501$ | R_NTC[Ohms] = | 1074 | T[ºC] |
| = 171.88 $N = 718$ | $V_0[V] = 3.506$ | R_NTC[Ohms] = | 1079 | T[ºC] |
| = 171.65 $N = 719$ | $V_0[V] = 3.511$ | R_NTC[Ohms] = | 1084 | T[ºC] |
| = 171.43 $N = 720$ $= 171.20$ | $V_0[V] = 3.516$ | R_NTC[Ohms] = | 1089 | T[ºC] |
| N = 721 $= 170.97$ | $V_0[V] = 3.521$ | R_NTC[Ohms] = | 1095 | T[ºC] |
| N = 722 $= 170.75$ | $V_0[V] = 3.525$ | R_NTC[Ohms] = | 1100 | T[ºC] |
| N = 723 | $V_0[V] = 3.530$ | R_NTC[Ohms] = | 1105 | T[ºC] |
| = 170.52 $N = 724$ $= 170.30$ | $V_0[V] = 3.535$ | R_NTC[Ohms] = | 1110 | T[ºC] |
| N = 725 | $V_0[V] = 3.540$ | R_NTC[Ohms] = | 1115 | T[ºC] |
| = 170.07 $N = 726$ $= 160.84$ | $V_0[V] = 3.545$ | R_NTC[Ohms] = | 1121 | T[ºC] |
| = 169.84 $N = 727$ $= 169.62$ | $V_0[V] = 3.550$ | R_NTC[Ohms] = | 1126 | T[ºC] |
| - INU NJ | | | | |

| N = 728 | $V_0[V] = 3.555$ | R_NTC[Ohms] = | 1131 | T[ºC] |
|---------------------|------------------|-----------------|------|---------|
| = 169.39 $N = 729$ | V_o[V] = 3.560 | R_NTC[Ohms] = | 1137 | T[ºC] |
| = 169.16 | | | | |
| N = 730 | $V_0[V] = 3.564$ | R_NTC[Ohms] = | 1142 | T[ºC] |
| = 168.93 $N = 731$ | $V_0[V] = 3.569$ | R_NTC[Ohms] = | 1148 | T[ºC] |
| = 168.71 | | K_NIC[OIMS] = | 1140 | 1[-0] |
| N = 732 $= 168.48$ | $V_0[V] = 3.574$ | R_NTC[Ohms] = | 1153 | T[ºC] |
| N = 733 | $V_0[V] = 3.579$ | R_NTC[Ohms] = | 1159 | T[ºC] |
| = 168.25 $N = 734$ | $V_0[V] = 3.584$ | R_NTC[Ohms] = | 1164 | T[ºC] |
| = 168.02 $N = 735$ | V_o[V] = 3.589 | R_NTC[Ohms] = | 1170 | T[ºC] |
| = 167.79 $N = 736$ | V_o[V] = 3.594 | R_NTC[Ohms] = | 1176 | T[ºC] |
| = 167.56 $N = 737$ | $V_0[V] = 3.599$ | R_NTC[Ohms] = | 1181 | T[ºC] |
| = 167.33 | _ | K_NIC[Ollins] = | 1101 | 1[=0] |
| N = 738 $= 167.10$ | $V_0[V] = 3.604$ | R_NTC[Ohms] = | 1187 | T[ºC] |
| N = 739 $= 166.87$ | $V_0[V] = 3.608$ | R_NTC[Ohms] = | 1193 | T[ºC] |
| N = 740 | V_o[V] = 3.613 | R_NTC[Ohms] = | 1199 | T[ºC] |
| = 166.64 $N = 741$ | V_o[V] = 3.618 | R_NTC[Ohms] = | 1204 | T[ºC] |
| = 166.41 $N = 742$ | V_o[V] = 3.623 | R_NTC[Ohms] = | 1210 | T[ºC] |
| = 166.18 $N = 743$ | V o[V] = 3.628 | R NTC[Ohms] = | 1216 | T[ºC] |
| = 165.95 | _ : : | | | |
| N = 744 $= 165.72$ | $V_0[V] = 3.633$ | R_NTC[Ohms] = | 1222 | T[ºC] |
| N = 745 $= 165.49$ | $V_0[V] = 3.638$ | R_NTC[Ohms] = | 1228 | T[ºC] |
| N = 746 = 165.26 | $V_0[V] = 3.643$ | R_NTC[Ohms] = | 1234 | T[ºC] |
| N = 747 | $V_o[V] = 3.647$ | R_NTC[Ohms] = | 1241 | T[ºC] |
| = 165.03 $N = 748$ | $V_0[V] = 3.652$ | R_NTC[Ohms] = | 1247 | T[ºC] |
| = 164.79 $N = 749$ | V_o[V] = 3.657 | R_NTC[Ohms] = | 1253 | T[ºC] |
| = 164.56 $N = 750$ | V_o[V] = 3.662 | R_NTC[Ohms] = | 1259 | T[ºC] |
| = 164.33 | _ | _ | | |
| N = 751 $= 164.10$ | $V_0[V] = 3.667$ | R_NTC[Ohms] = | 1265 | T[ºC] |
| N = 752 $= 163.86$ | $V_0[V] = 3.672$ | R_NTC[Ohms] = | 1272 | T[ºC] |
| N = 753 $= 163.63$ | $V_0[V] = 3.677$ | R_NTC[Ohms] = | 1278 | T[ºC] |
| N = 754 | V_o[V] = 3.682 | R_NTC[Ohms] = | 1285 | T[ºC] |
| = 163.40 $N = 755$ | $V_0[V] = 3.687$ | R_NTC[Ohms] = | 1291 | T[ºC] |
| = 163.16 $N = 756$ | V_o[V] = 3.691 | R_NTC[Ohms] = | 1298 | T[ºC] |
| = 162.93 $M - 757$ | V 01V1 - 3 606 | ם אשמוטאשמו – | 1201 | መ፤ ዕሮ ነ |

| M - 121 | v_o[v] - ס•ס•ס | r_wicloums] - | 1304 | τί≍∩l |
|---------------------|--------------------|--------------------------|---------|-----------|
| = 162.69 $N = 758$ | V_o[V] = 3.701 | R_NTC[Ohms] = | 1311 | T[ºC] |
| = 162.46 | | | | -[-] |
| N = 759 | $V_0[V] = 3.706$ | <pre>R_NTC[Ohms] =</pre> | 1318 | T[ºC] |
| = 162.22 | | | | |
| N = 760 | $V_0[V] = 3.711$ | R_NTC[Ohms] = | 1324 | T[ºC] |
| = 161.99 | | | | |
| N = 761 $= 161.75$ | $V_0[V] = 3.716$ | R_NTC[Ohms] = | 1331 | T[ºC] |
| -161.75 $N = 762$ | V_o[V] = 3.721 | R_NTC[Ohms] = | 1338 | T[ºC] |
| = 161.51 | | | | . , |
| N = 763 | $V_0[V] = 3.726$ | R_NTC[Ohms] = | 1345 | T[ºC] |
| = 161.28 $N = 764$ | V_o[V] = 3.730 | R_NTC[Ohms] = | 1352 | T[ºC] |
| = 161.04 | | | | -[-] |
| N = 765 | $V_0[V] = 3.735$ | R_NTC[Ohms] = | 1359 | T[ºC] |
| = 160.80 $N = 766$ | $V_{o}[V] = 3.740$ | R_NTC[Ohms] = | 1366 | T[ºC] |
| = 160.56 | V_0[V] = 3.740 | K_NIC[OIMS] - | 1300 | 1[-0] |
| N = 767 | $V_0[V] = 3.745$ | R_NTC[Ohms] = | 1373 | T[ºC] |
| = 160.33 $N = 768$ | V 0[V] = 3 750 | P NTC(Ohmal - | 1380 | mroci |
| = 160.09 | $V_{o}[V] = 3.750$ | R_NTC[Ohms] = | 1300 | T[ºC] |
| N = 769 | $V_0[V] = 3.755$ | R_NTC[Ohms] = | 1387 | T[ºC] |
| = 159.85 | W 01W1 = 2 760 | D NMC(Obma) - | 1204 | mr og 1 |
| N = 770 = 159.61 | $V_{o}[V] = 3.760$ | R_NTC[Ohms] = | 1394 | T[ºC] |
| N = 771 | $V_0[V] = 3.765$ | R_NTC[Ohms] = | 1402 | T[ºC] |
| = 159.37 | 0 550 | | 1 4 0 0 | |
| N = 772 $= 159.13$ | $V_0[V] = 3.770$ | R_NTC[Ohms] = | 1409 | T[ºC] |
| N = 773 | $V_0[V] = 3.774$ | R_NTC[Ohms] = | 1417 | T[ºC] |
| = 158.89 | | | | |
| N = 774 $= 158.65$ | $V_0[V] = 3.779$ | R_NTC[Ohms] = | 1424 | T[ºC] |
| N = 775 | V o[V] = 3.784 | R NTC[Ohms] = | 1432 | T[ºC] |
| = 158.41 | | | | |
| N = 776 $= 158.16$ | $V_0[V] = 3.789$ | R_NTC[Ohms] = | 1439 | T[ºC] |
| N = 777 | $V_0[V] = 3.794$ | R_NTC[Ohms] = | 1447 | T[ºC] |
| = 157.92 | | - | | |
| N = 778 $= 157.68$ | $V_0[V] = 3.799$ | R_NTC[Ohms] = | 1455 | T[ºC] |
| N = 779 | $V_0[V] = 3.804$ | R_NTC[Ohms] = | 1463 | T[ºC] |
| = 157.44 | _ | - | | |
| N = 780 $= 157.19$ | $V_0[V] = 3.809$ | R_NTC[Ohms] = | 1470 | T[ºC] |
| N = 781 | V_o[V] = 3.813 | R_NTC[Ohms] = | 1478 | T[ºC] |
| = 156.95 | , | _ ' ' ' ' | | |
| N = 782 | $V_0[V] = 3.818$ | R_NTC[Ohms] = | 1486 | T[ºC] |
| = 156.71 $N = 783$ | V_o[V] = 3.823 | R_NTC[Ohms] = | 1495 | T[ºC] |
| = 156.46 | [.] | <u>-</u> [] | | - [°] |
| N = 784 | $V_0[V] = 3.828$ | R_NTC[Ohms] = | 1503 | T[ºC] |
| = 156.22 $N = 785$ | V_o[V] = 3.833 | R_NTC[Ohms] = | 1511 | T[ºC] |
| = 155.97 | 0[.] 0.000 | o[o] | | ± [− ♥] |
| N = 786 | $V_0[V] = 3.838$ | R_NTC[Ohms] = | 1519 | T[ºC] |
| - 155 72 | | | | |

| N = 787 | V_o[V] = 3.843 | R_NTC[Ohms] = | 1528 T[ºC] |
|---------------------|--------------------|---------------|------------|
| = 155.48 $N = 788$ | $V_0[V] = 3.848$ | R_NTC[Ohms] = | 1536 T[ºC] |
| = 155.23 | - | | |
| N = 789 | $V_{o}[V] = 3.853$ | R_NTC[Ohms] = | 1544 T[ºC] |
| = 154.99 $N = 790$ | V_o[V] = 3.857 | R_NTC[Ohms] = | 1553 T[ºC] |
| = 154.74 $N = 791$ | $V_0[V] = 3.862$ | R_NTC[Ohms] = | 1562 T[ºC] |
| = 154.49 | | | |
| N = 792 = 154.24 | $V_0[V] = 3.867$ | R_NTC[Ohms] = | 1570 T[ºC] |
| N = 793 $= 154.00$ | $V_0[V] = 3.872$ | R_NTC[Ohms] = | 1579 T[ºC] |
| N = 794 | $V_0[V] = 3.877$ | R_NTC[Ohms] = | 1588 T[ºC] |
| = 153.75 $N = 795$ | V_o[V] = 3.882 | R_NTC[Ohms] = | 1597 T[ºC] |
| = 153.50 $N = 796$ | $V_0[V] = 3.887$ | R_NTC[Ohms] = | 1606 T[ºC] |
| = 153.25 | | _ | |
| N = 797 = 152.99 | $V_0[V] = 3.892$ | R_NTC[Ohms] = | 1615 T[ºC] |
| N = 798 = 152.74 | $V_0[V] = 3.896$ | R_NTC[Ohms] = | 1624 T[ºC] |
| N = 799 | $V_0[V] = 3.901$ | R_NTC[Ohms] = | 1634 T[ºC] |
| = 152.49 $N = 800$ | V_o[V] = 3.906 | R_NTC[Ohms] = | 1643 T[ºC] |
| = 152.24 $N = 801$ | $V_0[V] = 3.911$ | R_NTC[Ohms] = | 1652 T[ºC] |
| = 151.99 | | _ | |
| N = 802 = 151.73 | $V_{o}[V] = 3.916$ | R_NTC[Ohms] = | |
| N = 803 = 151.48 | $V_0[V] = 3.921$ | R_NTC[Ohms] = | 1671 T[ºC] |
| N = 804 = 151.23 | $V_0[V] = 3.926$ | R_NTC[Ohms] = | 1681 T[ºC] |
| N = 805 | $V_0[V] = 3.931$ | R_NTC[Ohms] = | 1691 T[ºC] |
| = 150.97 $N = 806$ | V_o[V] = 3.936 | R_NTC[Ohms] = | 1701 T[ºC] |
| = 150.72 $N = 807$ | $V_0[V] = 3.940$ | R_NTC[Ohms] = | 1711 T[ºC] |
| = 150.46 | | _ | |
| N = 808 = 150.20 | $V_0[V] = 3.945$ | R_NTC[Ohms] = | 1721 T[ºC] |
| N = 809 = 149.95 | $V_0[V] = 3.950$ | R_NTC[Ohms] = | 1731 T[ºC] |
| N = 810 | $V_0[V] = 3.955$ | R_NTC[Ohms] = | 1741 T[ºC] |
| = 149.69 $N = 811$ | $V_0[V] = 3.960$ | R_NTC[Ohms] = | 1751 T[ºC] |
| = 149.43 $N = 812$ | $V_0[V] = 3.965$ | R_NTC[Ohms] = | 1762 T[ºC] |
| = 149.17 $N = 813$ | - | | |
| = 148.91 | $V_0[V] = 3.970$ | R_NTC[Ohms] = | 1772 T[ºC] |
| N = 814 = 148.65 | $V_0[V] = 3.975$ | R_NTC[Ohms] = | 1783 T[ºC] |
| N = 815 $= 148.39$ | $V_0[V] = 3.979$ | R_NTC[Ohms] = | 1794 T[ºC] |
| - 140.39 M - Ω16 | 11 0111 - 3 084 | ם אשפורושפו – | 1ያሰፍ መርዕረብ |

| м — ото | v_O[v] - 3.304 | r_miclonmel - | 1007 | τί≂cl |
|---------------------|--------------------|---------------|------|-------|
| = 148.13 $N = 817$ | V_o[V] = 3.989 | R_NTC[Ohms] = | 1816 | T[ºC] |
| = 147.87 $N = 818$ | V_o[V] = 3.994 | R_NTC[Ohms] = | 1827 | T[ºC] |
| = 147.61 | | | | |
| N = 819 = 147.34 | $V_0[V] = 3.999$ | R_NTC[Ohms] = | 1838 | T[ºC] |
| N = 820 $= 147.08$ | $V_0[V] = 4.004$ | R_NTC[Ohms] = | 1849 | T[ºC] |
| N = 821 $= 146.81$ | $V_0[V] = 4.009$ | R_NTC[Ohms] = | 1860 | T[ºC] |
| N = 822 $= 146.55$ | $V_0[V] = 4.014$ | R_NTC[Ohms] = | 1872 | T[ºC] |
| N = 823 $= 146.28$ | V_o[V] = 4.019 | R_NTC[Ohms] = | 1883 | T[ºC] |
| N = 824 | V_o[V] = 4.023 | R_NTC[Ohms] = | 1895 | T[ºC] |
| = 146.02 $N = 825$ | V_o[V] = 4.028 | R_NTC[Ohms] = | 1907 | T[ºC] |
| = 145.75 $N = 826$ | $V_0[V] = 4.033$ | R_NTC[Ohms] = | 1919 | T[ºC] |
| = 145.48 $N = 827$ | V_o[V] = 4.038 | R_NTC[Ohms] = | 1931 | T[ºC] |
| = 145.21 $N = 828$ | V_o[V] = 4.043 | R_NTC[Ohms] = | 1943 | T[ºC] |
| = 144.95 $N = 829$ | V_o[V] = 4.048 | R_NTC[Ohms] = | 1956 | T[ºC] |
| = 144.68 $N = 830$ | V_o[V] = 4.053 | R_NTC[Ohms] = | 1968 | T[ºC] |
| = 144.41 $N = 831$ | V_o[V] = 4.058 | R_NTC[Ohms] = | 1981 | T[ºC] |
| = 144.13 $N = 832$ | V_o[V] = 4.062 | R_NTC[Ohms] = | 1993 | T[ºC] |
| = 143.86 $N = 833$ | $V_0[V] = 4.067$ | R_NTC[Ohms] = | 2006 | T[ºC] |
| = 143.59 $N = 834$ | $V_0[V] = 4.072$ | R NTC[Ohms] = | 2019 | T[ºC] |
| = 143.32 $N = 835$ | $V_0[V] = 4.077$ | R_NTC[Ohms] = | 2032 | T[ºC] |
| = 143.04 | - | _ | | |
| N = 836 = 142.77 | V_o[V] = 4.082 | R_NTC[Ohms] = | 2046 | T[ºC] |
| N = 837 = 142.49 | $V_{o}[V] = 4.087$ | R_NTC[Ohms] = | 2059 | T[ºC] |
| N = 838 = 142.22 | V_o[V] = 4.092 | R_NTC[Ohms] = | 2072 | T[ºC] |
| N = 839 $= 141.94$ | $V_0[V] = 4.097$ | R_NTC[Ohms] = | 2086 | T[ºC] |
| N = 840 $= 141.66$ | V_o[V] = 4.102 | R_NTC[Ohms] = | 2100 | T[ºC] |
| N = 841 $= 141.38$ | V_o[V] = 4.106 | R_NTC[Ohms] = | 2114 | T[ºC] |
| N = 842 $= 141.10$ | V_o[V] = 4.111 | R_NTC[Ohms] = | 2128 | T[ºC] |
| N = 843 | V_o[V] = 4.116 | R_NTC[Ohms] = | 2142 | T[ºC] |
| = 140.82 $N = 844$ | $V_0[V] = 4.121$ | R_NTC[Ohms] = | 2157 | T[ºC] |
| = 140.54 $N = 845$ | V_o[V] = 4.126 | R_NTC[Ohms] = | 2172 | T[ºC] |
| - 140 26 | | | | |

| N = 846 | $V_0[V] = 4.131$ | R_NTC[Ohms] = | 2186 | T[ºC] |
|---------------------|--------------------|---------------|------|---------|
| = 139.98 $N = 847$ | V_o[V] = 4.136 | R_NTC[Ohms] = | 2201 | T[ºC] |
| = 139.69 | | | | |
| N = 848 | $V_0[V] = 4.141$ | R_NTC[Ohms] = | 2216 | T[ºC] |
| = 139.41 $N = 849$ | V_o[V] = 4.146 | R_NTC[Ohms] = | 2232 | T[ºC] |
| = 139.12 | _ | | | |
| N = 850 $= 138.83$ | $V_{o}[V] = 4.150$ | R_NTC[Ohms] = | 2247 | T[ºC] |
| N = 851 | $V_0[V] = 4.155$ | R_NTC[Ohms] = | 2263 | T[ºC] |
| = 138.55 $N = 852$ | V_o[V] = 4.160 | R_NTC[Ohms] = | 2279 | T[ºC] |
| = 138.26 $N = 853$ | V_o[V] = 4.165 | R_NTC[Ohms] = | 2295 | T[ºC] |
| = 137.97 $N = 854$ | V_o[V] = 4.170 | R_NTC[Ohms] = | 2311 | T[ºC] |
| = 137.68 $N = 855$ | V_o[V] = 4.175 | R_NTC[Ohms] = | 2327 | T[ºC] |
| = 137.39 $N = 856$ | V_o[V] = 4.180 | R_NTC[Ohms] = | 2344 | T[ºC] |
| = 137.10 $N = 857$ | | | 2361 | mr oc i |
| = 136.80 | $V_0[V] = 4.185$ | R_NTC[Ohms] = | 2301 | T[ºC] |
| N = 858 $= 136.51$ | $V_0[V] = 4.189$ | R_NTC[Ohms] = | 2378 | T[ºC] |
| N = 859 = 136.21 | $V_0[V] = 4.194$ | R_NTC[Ohms] = | 2395 | T[ºC] |
| N = 860 $= 135.92$ | $V_0[V] = 4.199$ | R_NTC[Ohms] = | 2412 | T[ºC] |
| N = 861 | $V_0[V] = 4.204$ | R_NTC[Ohms] = | 2430 | T[ºC] |
| = 135.62 $N = 862$ | $V_0[V] = 4.209$ | R_NTC[Ohms] = | 2448 | T[ºC] |
| = 135.32 $N = 863$ | $V_0[V] = 4.214$ | R_NTC[Ohms] = | 2466 | T[ºC] |
| = 135.02 $N = 864$ | $V_0[V] = 4.219$ | R_NTC[Ohms] = | 2484 | T[ºC] |
| = 134.72 $N = 865$ | V_o[V] = 4.224 | R_NTC[Ohms] = | 2503 | T[ºC] |
| = 134.42 $N = 866$ | V_o[V] = 4.229 | R_NTC[Ohms] = | 2521 | T[ºC] |
| = 134.12 $N = 867$ | $V_0[V] = 4.233$ | R_NTC[Ohms] = | 2540 | T[ºC] |
| = 133.81 | | | | |
| N = 868 $= 133.51$ | $V_0[V] = 4.238$ | R_NTC[Ohms] = | 2559 | T[ºC] |
| N = 869 = 133.20 | $V_0[V] = 4.243$ | R_NTC[Ohms] = | 2579 | T[ºC] |
| N = 870 | V_o[V] = 4.248 | R_NTC[Ohms] = | 2599 | T[ºC] |
| = 132.90 $N = 871$ | $V_0[V] = 4.253$ | R_NTC[Ohms] = | 2619 | T[ºC] |
| = 132.59 $N = 872$ | $V_0[V] = 4.258$ | R_NTC[Ohms] = | 2639 | T[ºC] |
| = 132.28 $N = 873$ | V_o[V] = 4.263 | R_NTC[Ohms] = | 2659 | T[ºC] |
| = 131.97 $N = 874$ | V_o[V] = 4.268 | R_NTC[Ohms] = | 2680 | T[ºC] |
| = 131.66 $M - 975$ | V 01V1 - 1 272 | D NMC(Ohma) - | 2701 | mroci |
| | | | | |

| N - 0/3 | v_∪[v] - 4.272 | r_niclonmel - | Z / U I | ı[≚∪] |
|---------------------|--------------------|---------------|---------|-------|
| = 131.34 $N = 876$ | V_o[V] = 4.277 | R_NTC[Ohms] = | 2723 | T[ºC] |
| = 131.03 $N = 877$ | V_o[V] = 4.282 | R NTC[Ohms] = | 2744 | T[ºC] |
| = 130.71 | V_0[V] 1.202 | K_NIC[OIMB] | 2/11 | 1[-0] |
| N = 878 | $V_0[V] = 4.287$ | R_NTC[Ohms] = | 2766 | T[ºC] |
| = 130.40 $N = 879$ | $V_0[V] = 4.292$ | R_NTC[Ohms] = | 2789 | T[ºC] |
| = 130.08 $N = 880$ | $V_0[V] = 4.297$ | R_NTC[Ohms] = | 2811 | T[ºC] |
| = 129.76 $N = 881$ | V_o[V] = 4.302 | R_NTC[Ohms] = | 2834 | T[ºC] |
| = 129.44 $N = 882$ | V_o[V] = 4.307 | R_NTC[Ohms] = | 2857 | T[ºC] |
| = 129.11 $N = 883$ | V_o[V] = 4.312 | R_NTC[Ohms] = | 2881 | T[ºC] |
| = 128.79 $N = 884$ | V_o[V] = 4.316 | R_NTC[Ohms] = | 2905 | T[ºC] |
| = 128.47 $N = 885$ | V_o[V] = 4.321 | R_NTC[Ohms] = | 2929 | T[ºC] |
| = 128.14 $N = 886$ | V_o[V] = 4.326 | R_NTC[Ohms] = | 2953 | T[ºC] |
| = 127.81 $N = 887$ | $V_0[V] = 4.331$ | R_NTC[Ohms] = | 2978 | T[ºC] |
| = 127.48 $N = 888$ | $V_0[V] = 4.336$ | R_NTC[Ohms] = | 3004 | T[ºC] |
| = 127.15 $N = 889$ | | | 3029 | |
| = 126.82 | $V_0[V] = 4.341$ | R_NTC[Ohms] = | | T[ºC] |
| N = 890 = 126.48 | $V_0[V] = 4.346$ | R_NTC[Ohms] = | 3055 | T[ºC] |
| N = 891 $= 126.15$ | $V_{o}[V] = 4.351$ | R_NTC[Ohms] = | 3082 | T[ºC] |
| N = 892 $= 125.81$ | $V_0[V] = 4.355$ | R_NTC[Ohms] = | 3108 | T[ºC] |
| N = 893 = 125.47 | $V_0[V] = 4.360$ | R_NTC[Ohms] = | 3136 | T[ºC] |
| N = 894 $= 125.13$ | $V_0[V] = 4.365$ | R_NTC[Ohms] = | 3163 | T[ºC] |
| N = 895 $= 124.79$ | $V_0[V] = 4.370$ | R_NTC[Ohms] = | 3191 | T[ºC] |
| N = 896 | $V_0[V] = 4.375$ | R_NTC[Ohms] = | 3220 | T[ºC] |
| = 124.45 $N = 897$ | $V_0[V] = 4.380$ | R_NTC[Ohms] = | 3249 | T[ºC] |
| = 124.10 $N = 898$ | $V_0[V] = 4.385$ | R_NTC[Ohms] = | 3278 | T[ºC] |
| = 123.75 $N = 899$ | $V_0[V] = 4.390$ | R_NTC[Ohms] = | 3308 | T[ºC] |
| = 123.40 $N = 900$ | $V_0[V] = 4.395$ | R_NTC[Ohms] = | 3339 | T[ºC] |
| = 123.05 $N = 901$ | $V_0[V] = 4.399$ | R_NTC[Ohms] = | 3370 | T[ºC] |
| = 122.70 $N = 902$ | V_o[V] = 4.404 | R_NTC[Ohms] = | 3401 | T[ºC] |
| = 122.35 $N = 903$ | V_o[V] = 4.409 | R_NTC[Ohms] = | 3433 | T[ºC] |
| = 121.99 $N = 904$ | $V_0[V] = 4.414$ | R_NTC[Ohms] = | 3465 | T[ºC] |
| - 121 62 | , | _ , , | | . , |

| N = 905 | $V_0[V] = 4.419$ | R_NTC[Ohms] = | 3498 | T[ºC] |
|---------------------|--------------------|---------------|------|-------------------------|
| = 121.27 $N = 906$ | V_o[V] = 4.424 | R_NTC[Ohms] = | 3532 | T[ºC] |
| = 120.91 $N = 907$ | $V_0[V] = 4.429$ | R_NTC[Ohms] = | 3566 | T[ºC] |
| = 120.54 | | | | |
| N = 908 $= 120.18$ | $V_0[V] = 4.434$ | R_NTC[Ohms] = | 3601 | T[ºC] |
| N = 909 $= 119.81$ | $V_0[V] = 4.438$ | R_NTC[Ohms] = | 3636 | T[ºC] |
| N = 910 | $V_0[V] = 4.443$ | R_NTC[Ohms] = | 3672 | T[ºC] |
| = 119.44 $N = 911$ | $V_0[V] = 4.448$ | R_NTC[Ohms] = | 3708 | T[ºC] |
| = 119.07 $N = 912$ | $V_0[V] = 4.453$ | R_NTC[Ohms] = | 3746 | T[ºC] |
| = 118.69 $N = 913$ | $V_0[V] = 4.458$ | R_NTC[Ohms] = | 3784 | T[ºC] |
| = 118.31 $N = 914$ | V_o[V] = 4.463 | R_NTC[Ohms] = | 3822 | T[ºC] |
| = 117.94 $N = 915$ | V_o[V] = 4.468 | R_NTC[Ohms] = | 3861 | T[ºC] |
| = 117.55 $N = 916$ | V_o[V] = 4.473 | R_NTC[Ohms] = | 3901 | T[ºC] |
| = 117.17 $N = 917$ | V_o[V] = 4.478 | R_NTC[Ohms] = | 3942 | T[ºC] |
| = 116.78 $N = 918$ | V_o[V] = 4.482 | R_NTC[Ohms] = | 3984 | T[ºC] |
| = 116.40 $N = 919$ | V_o[V] = 4.487 | R_NTC[Ohms] = | 4026 | T[ºC] |
| = 116.00 $N = 920$ | $V_0[V] = 4.492$ | R_NTC[Ohms] = | 4069 | T[ºC] |
| = 115.61 $N = 921$ | $V_0[V] = 4.497$ | R_NTC[Ohms] = | | T[ºC] |
| = 115.21 $N = 922$ | $V_0[V] = 4.502$ | R_NTC[Ohms] = | 4158 | T[ºC] |
| = 114.82 $N = 923$ | $V_0[V] = 4.507$ | R_NTC[Ohms] = | 4204 | T[ºC] |
| = 114.41 | | _ | | |
| N = 924 = 114.01 | $V_0[V] = 4.512$ | R_NTC[Ohms] = | 4250 | T[ºC] |
| N = 925 = 113.60 | $V_0[V] = 4.517$ | R_NTC[Ohms] = | 4298 | T[ºC] |
| N = 926 = 113.19 | $V_{o}[V] = 4.521$ | R_NTC[Ohms] = | 4347 | T[ºC] |
| N = 927 = 112.78 | $V_0[V] = 4.526$ | R_NTC[Ohms] = | 4396 | T[ºC] |
| N = 928 = 112.36 | $V_0[V] = 4.531$ | R_NTC[Ohms] = | 4447 | T[ºC] |
| N = 929 $= 111.95$ | $V_0[V] = 4.536$ | R_NTC[Ohms] = | 4498 | T[ºC] |
| N = 930 $= 111.52$ | $V_0[V] = 4.541$ | R_NTC[Ohms] = | 4551 | T[ºC] |
| N = 931 $= 111.10$ | $V_0[V] = 4.546$ | R_NTC[Ohms] = | 4605 | T[ºC] |
| N = 932 $= 110.67$ | $V_0[V] = 4.551$ | R_NTC[Ohms] = | 4660 | T[ºC] |
| N = 933 $= 110.24$ | $V_0[V] = 4.556$ | R_NTC[Ohms] = | 4716 | T[ºC] |
| M - 034 | V 01771 - 1 561 | D NTC(Ohmel - | 1771 | ጥ ፤ ዕ ሮ 1 |

| N - 334 | ν_υ[ν] - 4.ουτ | r_nicloums] - | 4//4 1 | ۲CJ |
|-------------------------------|------------------|---------------|---------|------|
| = 109.81 $N = 935$ $= 109.37$ | $V_0[V] = 4.565$ | R_NTC[Ohms] = | 4833 T[| ºC] |
| N = 936 $= 108.93$ | $V_0[V] = 4.570$ | R_NTC[Ohms] = | 4893 T[| ºC] |
| N = 937 | $V_0[V] = 4.575$ | R_NTC[Ohms] = | 4954 T[| ºC] |
| = 108.48 $N = 938$ $= 108.03$ | $V_0[V] = 4.580$ | R_NTC[Ohms] = | 5017 T[| ºC] |
| N = 939 $= 107.58$ | $V_0[V] = 4.585$ | R_NTC[Ohms] = | 5082 T[| ºC] |
| N = 940 $= 107.12$ | $V_0[V] = 4.590$ | R_NTC[Ohms] = | 5148 T[| ºC] |
| N = 941 = 106.66 | $V_0[V] = 4.595$ | R_NTC[Ohms] = | 5215 Т[| ºC] |
| N = 942 = 106.20 | $V_0[V] = 4.600$ | R_NTC[Ohms] = | 5284 T[| ºC] |
| N = 943 = 105.73 | $V_0[V] = 4.604$ | R_NTC[Ohms] = | 5355 T[| ºC] |
| N = 944 $= 105.26$ | $V_0[V] = 4.609$ | R_NTC[Ohms] = | 5428 T[| ºC] |
| N = 945 $= 104.78$ | $V_0[V] = 4.614$ | R_NTC[Ohms] = | 5503 T[| ºC] |
| N = 946 $= 104.30$ | $V_0[V] = 4.619$ | R_NTC[Ohms] = | 5579 T[| ºC] |
| N = 947 = 103.82 | $V_0[V] = 4.624$ | R_NTC[Ohms] = | 5657 T[| ºC] |
| N = 948 = 103.33 | $V_0[V] = 4.629$ | R_NTC[Ohms] = | 5738 T[| ºC] |
| N = 949 $= 102.83$ | $V_0[V] = 4.634$ | R_NTC[Ohms] = | 5821 T[| ºC] |
| N = 950 = 102.34 | $V_0[V] = 4.639$ | R_NTC[Ohms] = | 5905 T[| ºC] |
| N = 951 $= 101.83$ | $V_0[V] = 4.644$ | R_NTC[Ohms] = | 5993 Т[| ºC] |
| N = 952 $= 101.32$ | $V_0[V] = 4.648$ | R_NTC[Ohms] = | 6082 T[| oC] |
| N = 953 = 100.81 | $V_0[V] = 4.653$ | R_NTC[Ohms] = | 6174 T[| ºC] |
| N = 954 = 100.29 | $V_0[V] = 4.658$ | R_NTC[Ohms] = | 6269 T[| ºC] |
| N = 955 $= 99.76$ | $V_0[V] = 4.663$ | R_NTC[Ohms] = | 6367 Т[| ºC] |
| N = 956 $= 99.23$ | $V_0[V] = 4.668$ | R_NTC[Ohms] = | 6467 T[| ºC] |
| N = 957 $= 98.70$ | $V_0[V] = 4.673$ | R_NTC[Ohms] = | 6570 Т[| ºC] |
| N = 958 $= 98.16$ | $V_0[V] = 4.678$ | R_NTC[Ohms] = | 6677 Т[| ºC] |
| N = 959 $= 97.61$ | $V_0[V] = 4.683$ | R_NTC[Ohms] = | 6787 Т[| ºC] |
| N = 960 $= 97.05$ | $V_0[V] = 4.688$ | R_NTC[Ohms] = | 6900 Т[| ºC] |
| N = 961 $= 96.49$ | $V_0[V] = 4.692$ | R_NTC[Ohms] = | 7017 T[| ºC] |
| N = 962 $= 95.92$ | $V_0[V] = 4.697$ | R_NTC[Ohms] = | 7137 T[| ºC] |
| N = 963 $- 95.35$ | $V_0[V] = 4.702$ | R_NTC[Ohms] = | 7262 Т[| oC] |

| -93.33 $N = 964$ | $V_0[V] = 4.707$ | R_NTC[Ohms] = | 7391 | T[ºC] |
|--------------------|---------------------|---------------|-------|--------|
| = 94.77 | _ | | | |
| N = 965 $= 94.18$ | $V_0[V] = 4.712$ | R_NTC[Ohms] = | 7524 | T[ºC] |
| N = 966 | $V_0[V] = 4.717$ | R_NTC[Ohms] = | 7661 | T[ºC] |
| = 93.58 | | | | |
| N = 967 = 92.98 | $V_o[V] = 4.722$ | R_NTC[Ohms] = | 7804 | T[ºC] |
| N = 968 = 92.37 | $V_0[V] = 4.727$ | R_NTC[Ohms] = | 7951 | T[ºC] |
| N = 969 | $V_0[V] = 4.731$ | R_NTC[Ohms] = | 8104 | T[ºC] |
| = 91.75 $N = 970$ | V_o[V] = 4.736 | R_NTC[Ohms] = | 8263 | T[ºC] |
| = 91.12 $N = 971$ | $V_{0}[V] = 4.741$ | R_NTC[Ohms] = | 8428 | T[ºC] |
| = 90.48 | | | | |
| N = 972 = 89.83 | $V_0[V] = 4.746$ | R_NTC[Ohms] = | 8598 | T[ºC] |
| N = 973 | $V_0[V] = 4.751$ | R_NTC[Ohms] = | 8776 | T[ºC] |
| = 89.18 $N = 974$ | $V_0[V] = 4.756$ | R_NTC[Ohms] = | 8961 | T[ºC] |
| = 88.51 $N = 975$ | $V_0[V] = 4.761$ | R_NTC[Ohms] = | 9153 | T[ºC] |
| = 87.83 $N = 976$ | | | 9353 | |
| = 87.14 | $V_0[V] = 4.766$ | R_NTC[Ohms] = | 9333 | T[ºC] |
| N = 977 = 86.45 | $V_0[V] = 4.771$ | R_NTC[Ohms] = | 9562 | T[ºC] |
| N = 978 = 85.74 | $V_0[V] = 4.775$ | R_NTC[Ohms] = | 9780 | T[ºC] |
| N = 979 | $V_0[V] = 4.780$ | R_NTC[Ohms] = | 10008 | T[ºC] |
| = 85.01 $N = 980$ | $V_0[V] = 4.785$ | R_NTC[Ohms] = | 10245 | T[ºC] |
| = 84.28 $N = 981$ | $V_0[V] = 4.790$ | R NTC[Ohms] = | 10494 | T[ºC] |
| = 83.53 | | _ | | |
| N = 982 = 82.77 | $V_0[V] = 4.795$ | R_NTC[Ohms] = | 10755 | T[ºC] |
| N = 983 = 82.00 | $V_0[V] = 4.800$ | R_NTC[Ohms] = | 11029 | T[ºC] |
| N = 984 | $V_0[V] = 4.805$ | R_NTC[Ohms] = | 11316 | T[ºC] |
| = 81.21 $N = 985$ | $V_0[V] = 4.810$ | R_NTC[Ohms] = | 11618 | T[ºC] |
| = 80.40 $N = 986$ | V_o[V] = 4.814 | R_NTC[Ohms] = | 11936 | T[ºC] |
| = 79.58 $N = 987$ | V_o[V] = 4.819 | R_NTC[Ohms] = | 12271 | T[ºC] |
| = 78.74 | _ | - | | |
| N = 988 = 77.88 | $V_0[V] = 4.824$ | R_NTC[Ohms] = | 12624 | T[ºC] |
| N = 989 = 77.01 | $V_0[V] = 4.829$ | R_NTC[Ohms] = | 12998 | T[ºC] |
| N = 990 | $V_0[V] = 4.834$ | R_NTC[Ohms] = | 13394 | T[ºC] |
| = 76.11 $N = 991$ | $V_0[V] = 4.839$ | R_NTC[Ohms] = | 13814 | T[ºC] |
| = 75.19 $N = 992$ | V_o[V] = 4.844 | R_NTC[Ohms] = | 14260 | T[ºC] |
| = 74.26 $M - 993$ | 0 N Q N — 1771 ~ 77 | D NTC(Ohmal - | 1/725 | тгос 1 |
| | | | | |

| IN — 323 | v_∪[v] - 4.049 | итс[опшр] – татоо | τί≍∩l |
|---------------------|------------------|-------------------------|-------|
| = 73.29 $N = 994$ | $V_0[V] = 4.854$ | R_NTC[Ohms] = 15241 | T[ºC] |
| = 72.31 $N = 995$ | V_o[V] = 4.858 | R_NTC[Ohms] = 15783 | T[ºC] |
| = 71.29 | | | |
| N = 996 $= 70.25$ | $V_0[V] = 4.863$ | $R_{NTC[Ohms]} = 16363$ | T[ºC] |
| N = 997 $= 69.18$ | $V_0[V] = 4.868$ | $R_{NTC[Ohms]} = 16986$ | T[ºC] |
| N = 998 $= 68.07$ | $V_0[V] = 4.873$ | $R_{NTC[Ohms]} = 17657$ | T[ºC] |
| N = 999 $= 66.93$ | $V_0[V] = 4.878$ | R_NTC[Ohms] = 18382 | T[ºC] |
| N = 1000 $= 65.75$ | $V_0[V] = 4.883$ | R_NTC[Ohms] = 19167 | T[ºC] |
| N = 1001 $= 64.54$ | $V_0[V] = 4.888$ | $R_NTC[Ohms] = 20020$ | T[ºC] |
| N = 1002 $= 63.28$ | $V_0[V] = 4.893$ | R_NTC[Ohms] = 20951 | T[ºC] |
| N = 1003 $= 61.97$ | $V_0[V] = 4.897$ | R_NTC[Ohms] = 21970 | T[ºC] |
| N = 1004 = 60.61 | $V_0[V] = 4.902$ | $R_{NTC[Ohms]} = 23092$ | T[ºC] |
| N = 1005 | $V_0[V] = 4.907$ | R_NTC[Ohms] = 24332 | T[ºC] |
| = 59.19 $N = 1006$ | $V_0[V] = 4.912$ | $R_{NTC[Ohms]} = 25709$ | T[ºC] |
| = 57.71 $N = 1007$ | $V_0[V] = 4.917$ | R_NTC[Ohms] = 27248 | T[ºC] |
| = 56.17 $N = 1008$ | $V_0[V] = 4.922$ | R_NTC[Ohms] = 28980 | T[ºC] |
| = 54.54 $N = 1009$ | $V_0[V] = 4.927$ | R_NTC[Ohms] = 30943 | T[ºC] |
| = 52.83 $N = 1010$ | $V_0[V] = 4.932$ | R_NTC[Ohms] = 33186 | T[ºC] |
| = 51.03 $N = 1011$ | $V_0[V] = 4.937$ | $R_{NTC[Ohms]} = 35774$ | T[ºC] |
| = 49.11 $N = 1012$ | $V_0[V] = 4.941$ | R_NTC[Ohms] = 38793 | T[ºC] |
| = 47.07 $N = 1013$ | $V_0[V] = 4.946$ | $R_{NTC[Ohms]} = 42362$ | T[ºC] |
| = 44.88 $N = 1014$ | $V_0[V] = 4.951$ | R_NTC[Ohms] = 46644 | T[ºC] |
| = 42.52 $N = 1015$ | $V_0[V] = 4.956$ | R_NTC[Ohms] = 51878 | T[ºC] |
| = 39.96 $N = 1016$ | $V_0[V] = 4.961$ | R_NTC[Ohms] = 58420 | T[ºC] |
| = 37.14 $N = 1017$ | $V_0[V] = 4.966$ | R_NTC[Ohms] = 66831 | T[ºC] |
| = 34.01 $N = 1018$ | $V_0[V] = 4.971$ | $R_{NTC[Ohms]} = 78047$ | T[ºC] |
| = 30.48 $N = 1019$ | $V_0[V] = 4.976$ | R_NTC[Ohms] = 93748 | T[ºC] |
| = 26.41 $N = 1020$ | $V_0[V] = 4.980$ | R_NTC[Ohms] = 117300 | T[ºC] |
| = 21.58 $N = 1021$ | $V_0[V] = 4.985$ | R_NTC[Ohms] = 156553 | T[ºC] |
| = 15.58 $N = 1022$ | $V_0[V] = 4.990$ | R_NTC[Ohms] = 235060 | T[ºC] |
| ÷ *••• | | | |

T[QC]

```
In [17]: print 'double temperature lut[] = { ',
         for i in range(0, 1024) :
             N = i
             V \circ i = N*(5.0/1024.0)
             R_NTC_i = (V_o_i*R)/(V_ref - V_o_i)
             if R NTC i > 0:
                  aux1 = ( math.log(R NTC i) - math.log(R 0) ) / Beta
                  aux2 = 1.0/(T 0)
             T i = 1.0/(aux1 + aux2) \#Kelvin
             T_i = T_i - 273.0 \# Celsius
             if T i < 0:
                  T i = 0 #Positions with this error: lut[0] and lut[1023]
             if N < 1023:
                 print '%3.2f,' % (T i),
                 print '%3.2f' % (T i),
         print '};'
```

double temperature_lut[] = { 0.00, 2610.01, 1663.15, 1350.86, 1183.96 , 1076.29, 999.38, 940.83, 894.26, 856.01, 823.82, 796.23, 772.19, 751 .00, 732.11, 715.12, 699.73, 685.69, 672.80, 660.92, 649.90, 639.66, 6 30.09, 621.12, 612.69, 604.74, 597.23, 590.12, 583.37, 576.95, 570.83, 564.99, 559.41, 554.06, 548.93, 544.01, 539.28, 534.72, 530.33, 526.1 0, 522.01, 518.06, 514.24, 510.54, 506.95, 503.47, 500.10, 496.82, 493 .64, 490.54, 487.53, 484.60, 481.74, 478.96, 476.24, 473.59, 471.00, 4 68.48, 466.01, 463.60, 461.24, 458.93, 456.68, 454.47, 452.30, 450.18, 448.10, 446.06, 444.07, 442.10, 440.18, 438.29, 436.44, 434.62, 432.8 3, 431.07, 429.34, 427.64, 425.97, 424.33, 422.71, 421.12, 419.55, 418 .01, 416.49, 415.00, 413.53, 412.07, 410.64, 409.23, 407.85, 406.47, 4 05.12, 403.79, 402.48, 401.18, 399.90, 398.63, 397.39, 396.16, 394.94, 393.74, 392.55, 391.38, 390.22, 389.08, 387.95, 386.83, 385.73, 384.6 4, 383.56, 382.49, 381.44, 380.39, 379.36, 378.34, 377.33, 376.33, 375 .34, 374.36, 373.39, 372.43, 371.49, 370.55, 369.62, 368.69, 367.78, 3 66.88, 365.98, 365.10, 364.22, 363.35, 362.48, 361.63, 360.78, 359.94, 359.11, 358.29, 357.47, 356.66, 355.86, 355.06, 354.27, 353.49, 352.7 1, 351.94, 351.18, 350.42, 349.67, 348.93, 348.19, 347.45, 346.72, 346 .00, 345.29, 344.57, 343.87, 343.17, 342.47, 341.78, 341.10, 340.42, 3 39.74, 339.07, 338.41, 337.74, 337.09, 336.44, 335.79, 335.15, 334.51, 333.87, 333.24, 332.62, 332.00, 331.38, 330.77, 330.16, 329.55, 328.9 5, 328.35, 327.76, 327.17, 326.58, 326.00, 325.42, 324.85, 324.27, 323 .71, 323.14, 322.58, 322.02, 321.46, 320.91, 320.36, 319.82, 319.28, 3 18.74, 318.20, 317.67, 317.14, 316.61, 316.08, 315.56, 315.04, 314.53, 314.02, 313.50, 313.00, 312.49, 311.99, 311.49, 310.99, 310.50, 310.0 1, 309.52, 309.03, 308.55, 308.06, 307.58, 307.11, 306.63, 306.16, 305 .69, 305.22, 304.76, 304.29, 303.83, 303.37, 302.91, 302.46, 302.01, 3 01.56, 301.11, 300.66, 300.22, 299.77, 299.33, 298.90, 298.46, 298.02, 297.59, 297.16, 296.73, 296.30, 295.88, 295.46, 295.03, 294.61, 294.2 0, 293.78, 293.37, 292.95, 292.54, 292.13, 291.72, 291.32, 290.91, 290 .51, 290.11, 289.71, 289.31, 288.91, 288.52, 288.13, 287.73, 287.34, 2 86.96, 286.57, 286.18, 285.80, 285.41, 285.03, 284.65, 284.27, 283.90,

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.60, 265.28, 264.96, 264.65, 264.33, 264.02, 263.71, 263.39, 263.08, 2
62.77, 262.46, 262.15, 261.84, 261.54, 261.23, 260.92, 260.62, 260.31,
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52.38, 252.09, 251.81, 251.53, 251.24, 250.96, 250.68, 250.40, 250.12,
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3, 238.07, 237.82, 237.56, 237.31, 237.05, 236.80, 236.54, 236.29, 236
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33.77, 233.52, 233.27, 233.02, 232.77, 232.52, 232.28, 232.03, 231.78,
 231.54, 231.29, 231.04, 230.80, 230.55, 230.31, 230.06, 229.82, 229.5
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3, 221.00, 220.77, 220.53, 220.30, 220.07, 219.84, 219.60, 219.37, 219
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