

Calcular el valor de Beta para un termistor NTC sobre el que se han medido dos resistencias a dos temperaturas diferentes:

- $R(25^{\circ}\text{C}) = 10000$ ohmios
- $R(50^{\circ}\text{C}) = 3605$ ohmios

$$\beta = \frac{\ln\left(\frac{R_T(T_2)}{R_T(T_1)}\right)}{\left(\frac{1}{T_2} - \frac{1}{T_1}\right)} = \frac{\ln\left(\frac{10000}{3605}\right)}{\left(\frac{1}{273.15 + 25} - \frac{1}{273.15 + 50}\right)} = 3931.98\text{K}$$

SRS Thermistor Calculator v1.1
for Laser Diode and TEC Controllers
by Stanford Research Systems Inc

Please input resistance-temperature pairs:
(Don't use the Enter key)

R (Ω)	T (°C)
R1: 10000	T1: 25
R2: 3605	T2: 50
R3: 1500	T3: 75

Calculated Steinhart-Hart model coefficients:

A = 1.036930255 e-3
 B = 2.499372478 e-4
 C = 0.1929954684 e-7

Calculated β model coefficients:
(R3 and T3 are not used)

R(25°C) = 10000.00 Ω
 β = 3931.98 K

The graph plots Resistance (Ω) on the y-axis (0 to 20000) against Temperature (°C) on the x-axis (0 to 80). It shows three data points (red squares) at (25, 10000), (50, 3605), and (75, 1500). A blue line represents the S-H model fit, and a yellow line represents the β model fit. Both models closely follow the data points.

β S-H Data

Model Calculator
(The coefficients shown on the left are used)

R(Ω) = 10000 ↔ T(°C) = 25.0000 (S-H model)
 T(°C) = 25.0000 ↔ R(Ω) = 10000 (β model)