Basic Characteristics

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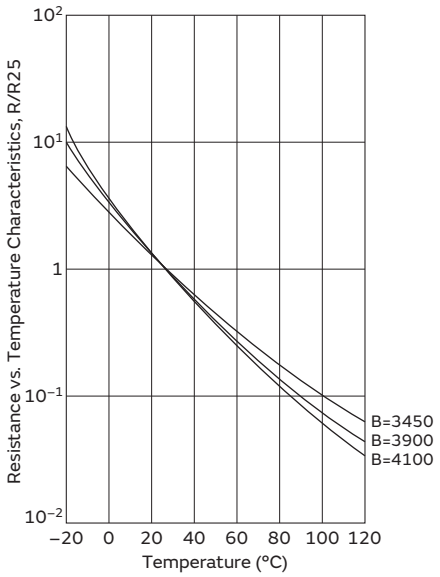
1. Zero-power Resistance of Thermistor: R

$R=R_0 \exp B(1/T-1/T_0)$ ····· (1)

R: Resistance in ambient temperature T (K)
(K: absolute temperature)
R_0: Resistance in ambient temperature T_0 (K)
B: B-Constant of Thermistor

Resistance vs. Temperature



2. B-Constant

as (1) formula

$B=\ell n (R/R_0) / (1/T-1/T_0)$ ····· (2)

3. Thermal Dissipation Constant

When electric power P (mW) is spent in ambient temperature T_1 and thermistor temperature rises T_2, the formula is as follows

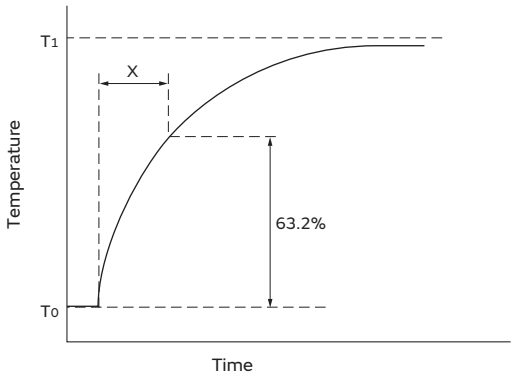
$P=C(T_2-T_1)$ ····· (3)

C: Thermal dissipation constant (mW/°C)
Thermal dissipation constant is varied with dimensions, measurement conditions, etc.

4. Thermal Time Constant

Period in which the thermistor's temperature will change 63.2% of its temperature difference from ambient temperature T_0 (°C) to T_1 (°C).

Thermal Time Constant



Performance

Item	Condition
Resistance	Measured by zero-power in specified ambient temperature.
B-Constant	Calculated between two specified ambient temperatures by the next formula. T and T_0 is absolute temperature (K). $B = \frac{\ell n (R/R_0)}{1/T-1/T_0}$
Thermal Dissipation Constant	Shows necessary electric power that Thermistor's temperature rises 1°C by self-heating. It is calculated by the next formula (mW/°C). $C = \frac{P}{T-T_0}$
Rated Electric Power	Shows the required electric power that causes the thermistor's temperature to rise to a specified temperature by self-heating, at ambient temperature of 25 °C.
Permissible Operating Current	It is possible to keep the thermistor's temperature rising max. 1°C.

Please inquire about test conditions and ratings.