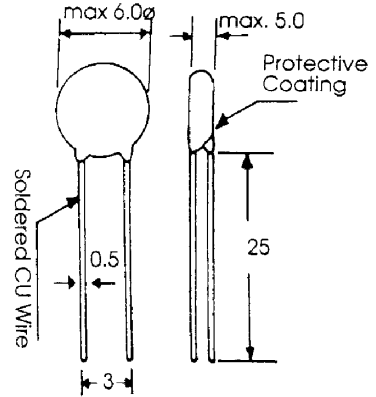


# NTC THERMISTOR

Model No.	Resistance at 25°C(Ω)	B Constant 25/50°C (K)	Resistance Temp. Coeff 25°C(%/°C)
NTC-700	70	3,100	-3.5
NTC-900	90	3,100	-3.5
NTC-101	100	3,100	-3.5
NTC-121	120	3,100	-3.5
NTC-151	150	3,100	-3.5
NTC-201	200	3,100	-3.5
NTC-221	220	3,100	-3.5
NTC-251	250	3,100	-3.5
NTC-271	270	3,100	-3.5
NTC-301	300	3,100	-3.5
NTC-401	400	3,100	-3.5
NTC-501	500	3,100	-3.5
NTC-681	680	3,500	-3.9
NTC-102	1,000	3,800	-4.3
NTC-152	1,500	3,800	-4.3
NTC-202	2,000	3,800	-4.3
NTC-252	2,500	3,900	-4.4
NTC-302	3,000	3,900	-4.4
NTC-402	4,000	3,900	-4.4
NTC-502	5,000	3,900	-4.4
NTC-682	6,800	3,900	-4.4
NTC-103	10,000	4,100	-4.6
NTC-153	15,000	4,100	-4.6
NTC-203	20,000	4,200	-4.7
NTC-303	30,000	4,200	-4.7
NTC-503	50,000	4,200	-4.7
NTC-683	68,000	4,400	-4.9
NTC-104	100,000	4,400	-4.9
NTC-154	150,000	4,400	-4.9
NTC-204	200,000	4,500	-5.1
NTC-304	300,000	4,500	-5.1
NTC-504	500,000	4,600	-5.2

## FOR TEMPERATURE COMPENSATION 5..ø NTC SERIES



\* Resistance Value allowable difference.

J	K	L	M
±5%	±10%	±15%	±20%

- B-Constant deviation : ±10% (Calculated by R25 & R50)
- Thermal dissipation factor : 6.5mw/°C
- Thermal time constant : 20 sec.
- Operating temp. range : -30° ~ +130°C
- Max. Allowable power (25°C) : 0.55W

### PHYSICAL PROPERTIES

#### RESISTANCE - TEMPERATURE CHARACTERISTICS

of the thermistors is the relation between resistance & temperature, the expression as follows:

$$(1) R_1 = R_2 \exp B \left( \frac{1}{T_1} - \frac{1}{T_2} \right)$$

WHERE : R<sub>1</sub> is the resistance value at absolute temperature T<sub>1</sub>  
 R<sub>2</sub> is the resistance value at absolute temperature T<sub>2</sub>  
 B is a constant depending on each thermistor

(2) According to the above formula, B can be expressed by:  
 $B = \ln(R_1/R_2) / (1/T_1 - 1/T_2)$

#### TEMPERATURE COEFFICIENT OF RESISTANCE

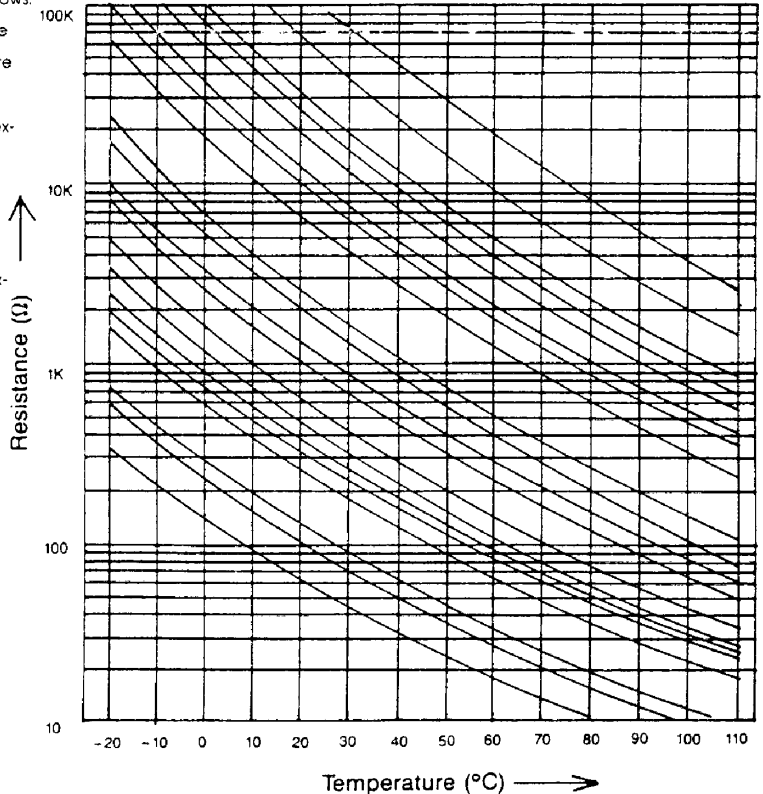
(α) originates from the above formula (1), the expression as follows:  
 $\alpha = -B/T^2$

#### DISSIPATION CONSTANT

(δ) is defined for power in milliwatts necessary for raising temperature of the thermistor by 1°C, as follows:  
 $\delta = P/\Delta t$  (mW/°C)  
 (P : POWER Δt: raise temperature)

#### TIME CONSTANT (T.C.)

is regard as the time required for a thermistor to change 63% of the difference between its initial and final temperature.



NTC SENSOR Thermistors Assembly

HOW TO ORDER

NTC-  A  
 Model No. Assembly