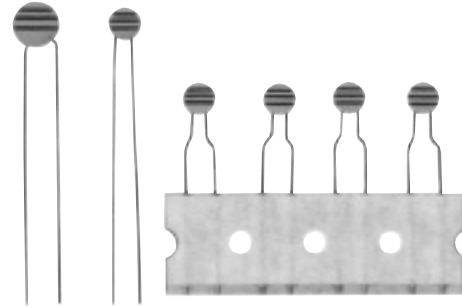


### Disc Type NTC Thermistors

Type: **ERTD**



The "Type ERTD" are disc type negative temperature coefficient thermistors. Resistances are available from 8  $\Omega$  to 150 k $\Omega$  and B Values are from 3000 K to 5000 K.

The thermistors are designed for temperature detection and temperature compensation, featuring excellent electrical and thermal stability.

#### ■ Features

- Wide selection of temperature coefficients
- Excellent electrical and thermal stability

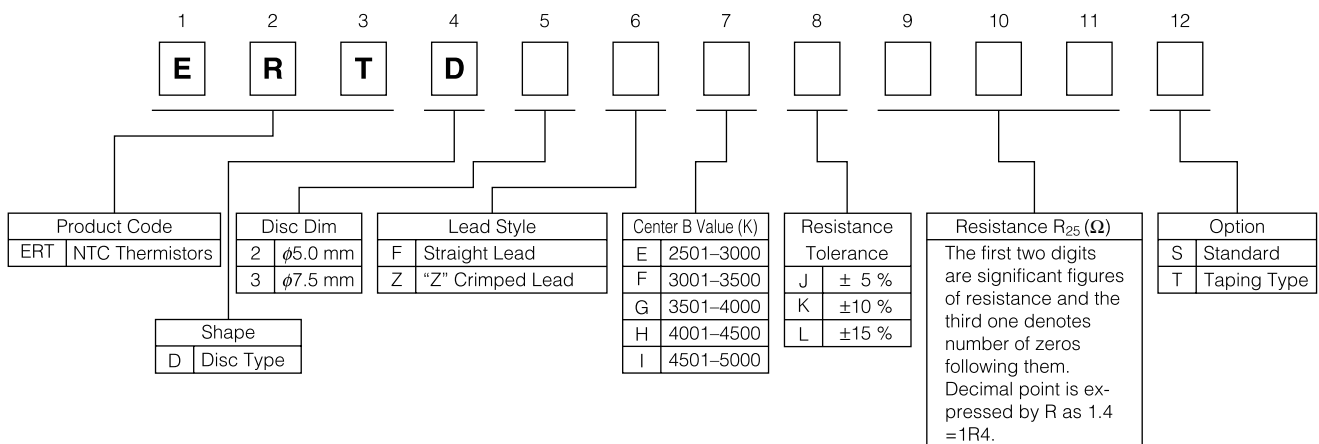
#### ■ Recommended Applications

- Temperature detection
- Temperature compensation for measuring instruments
- Temperature compensation for deflection coil in TV

#### ■ Handling Precautions

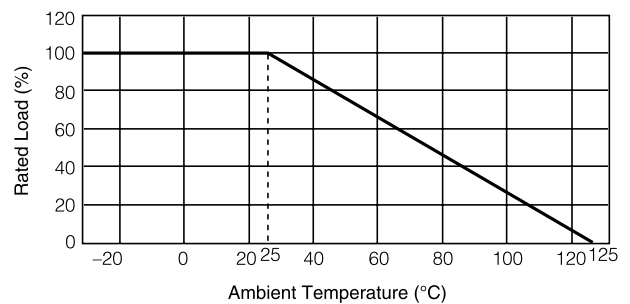
See Page 200

#### ■ Explanation of Part Numbers



#### ■ Derating Curve for the NTC Thermistor

For the NTC Thermistor operated in ambient temperatures above 25 °C, power rating shall be derated in accordance with the figure on the right.



### ■ Ratings and Characteristics

Part No.	Zero-Power Resistance at 25 °C(Ω)	B Value** (K)	Maximum Permissible Power(W)	Heat Dissipation Constant (mW/°C)	Thermal Time Constant (s)	Resistance Ratio R <sub>25</sub> /R <sub>50</sub>	Table A/B Curve No.
ERTD2FE□*200S	20	3000				2.18	—
ERTD2FF□*400S	40	3200				2.30	—
ERTD2FG□*750S	75	3700				2.62	1
ERTD2FF□*101S	100	3500				2.48	—
ERTD2FG□*101S	100	3700				2.62	2
ERTD2FG□*171S	170	3700				2.62	3
ERTD2FF□*251S	250	3500				2.48	—
ERTD2FG□*251S	250	3900				2.76	4
ERTD2FG□*301S	300	3900				2.76	—
ERTD2FF□*351S	350	3500				2.48	5
ERTD2FG□*601S	600	4000				2.83	6
ERTD2FG□*801S	800	3900	0.4	4.5	20	2.76	7
ERTD2FG□*102S	1000	3700				2.61	—
ERTD2FG□*142S	1400	3900				2.76	—
ERTD2FG□*202S	2000	4000				2.83	8
ERTD2FG□*332S	3300	4000				2.83	9
ERTD2FH□*462S	4600	4100				2.90	—
ERTD2FH□*802S	8000	4100				2.90	10
ERTD2FH□*103S	10000	4100				2.90	—
ERTD2FH□*153S	15000	4200				2.98	11
ERTD2FH□*333S	33000	4500				3.22	12
ERTD2FH□*503S	50000	4500				3.22	13
ERTD2FI□*154S	150000	4800				3.48	14
ERTD3FE□*8R0S	8	3000				2.18	15
ERTD3FF□*130S	13	3200				2.30	16
ERTD3FF□*160S	16	3200				2.30	—
ERTD3FF□*200S	20	3200				2.30	—
ERTD3FF□*300S	30	3200				2.30	—
ERTD3FF□*400S	40	3200				2.30	—
ERTD3FG□*750S	75	3700	0.6	7.0	27	2.62	—
ERTD3FG□*800S	80	3700				2.62	—
ERTD3FG□*131S	130	3700				2.62	—
ERTD3FG□*501S	500	4000				2.83	—
ERTD3FH□*402S	4000	4100				2.90	—
ERTD3FH□*203S	20000	4500				3.22	—
ERTD3FI□*803S	80000	5000				3.70	17

\*Resistance Tolerance Code

J	K	L
±5 %	±10 %	±15 %

● Operating Temperature Range: -30 to +125 °C

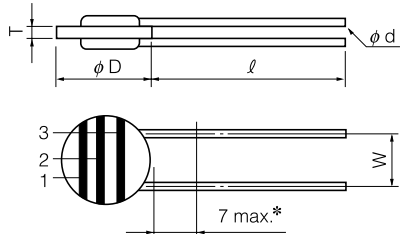
\*\*Tolerance of "B value": ±10 %

$$B = \frac{\ln(R_{25}/R_{50})}{1/298.15 - 1/323.15}$$

$R_{25}$ =Resistance at 25.0 °C  
 $R_{50}$ =Resistance at 50.0 °C

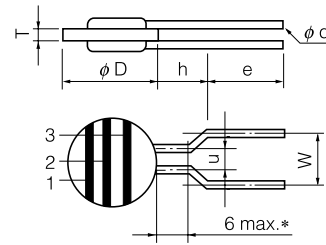
■ Dimensions in mm (not to scale)

Straight Lead Type  
F Type



\*Coating extension on leads

Crimped Lead Type  
Z Type



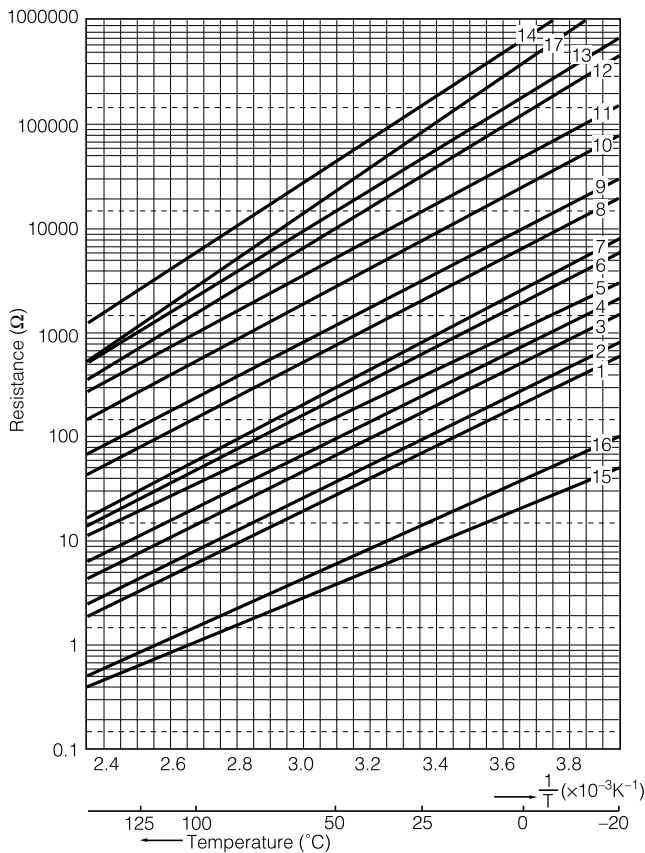
F Type

	$\phi D$	T	$\ell$	W	$\phi d$
D2	$5.0 \pm 0.5$	$1.3 \pm 0.5$	30.0 min.	$2.5 \pm 1.0$	0.4
D3	$7.5 \pm 0.5$	$1.4 \pm 0.5$	30.0 min.	$5.0 \pm 1.0$	0.5

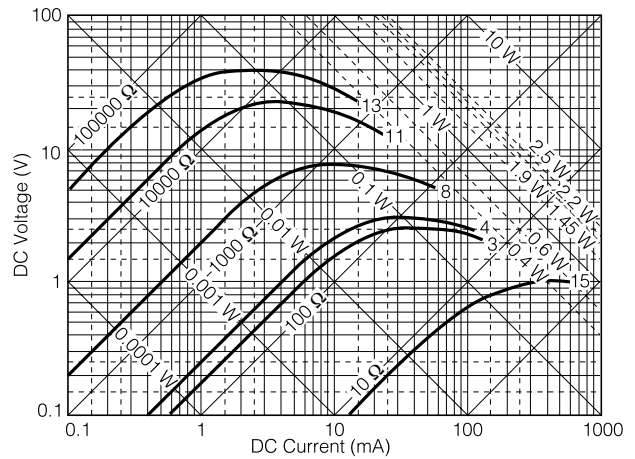
Z Type

	$\phi D$	T	u	e	h	W	$\phi d$
D2	$5.0 \pm 0.5$	$1.3 \pm 0.5$	3.0 max. (nom.2.5)	$4.5 \pm 1.0$	6.0 max. (nom.5.0)	$5.0 \pm 1.0$	0.5

■ Resistance vs. Temperature (Table A)



■ Voltage vs. Current (Table B)

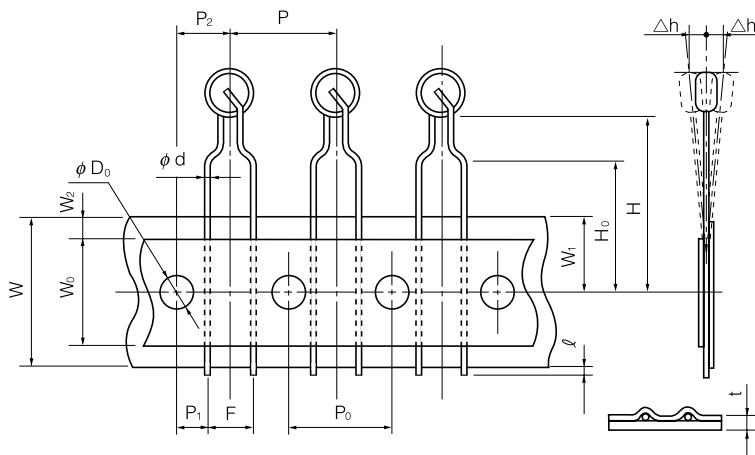


### ■ Resistance Color Code

Color	Code	1(1st Digit)	2(2nd Digit)	3(Multiplier)
Black		0	0	$10^0$
Brown		1	1	$10^1$
Red		2	2	$10^2$
Orange		3	3	$10^3$
Yellow		4	4	$10^4$
Green		5	5	$10^5$
Blue		6	6	$10^6$
Purple		7	7	$10^7$
Gray		8	8	$10^8$
White		9	9	$10^9$
Gold		—	—	$10^{-1}$
Silver		—	—	$10^{-2}$

### ■ Taping Dimensions in mm (not to scale)

Taping Type



P	$12.7 \pm 1.0$
$P_0$	$12.7 \pm 0.3$
$P_1$	$3.85 \pm 0.70$
$P_2$	$6.35 \pm 1.30$
$\phi d$	$0.50 \pm 0.05$
F	$5.0 \pm 1.0$
$\Delta h$	$0 \pm 5.0$
W	$18.0^{+1.0}_{-0.5}$
$W_0$	12.5 min.
$W_1$	$9.00^{+0.75}_{-0.50}$
$W_2$	3.0 max
H	$21.0 \pm 2.0$
$H_0$	$16.0 \pm 0.5$
$l$	2.0 max.
$\phi D_0$	$4.0 \pm 0.3$
t	$0.5 \pm 0.2$