阅读申明

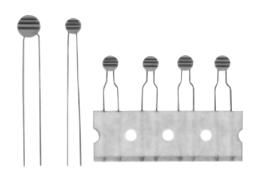
- 1.本站收集的数据手册和产品资料都来自互联网,版权归原作者所有。如读者和版权方有任何异议请及时告之,我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译,其目的是协助用户阅读,该译文无法自动跟随原稿更新,同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料,来自厂商的技术支持或者使用者的心得体会等,其内容可能存在描 叙上的差异,建议读者做出适当判断。
- 4.如需与我们联系,请发邮件到marketing@iczoom.com,主题请标有"数据手册"字样。

Read Statement

- 1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
- 2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
- 3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
- 4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets".

Disc Type NTC Thermistors

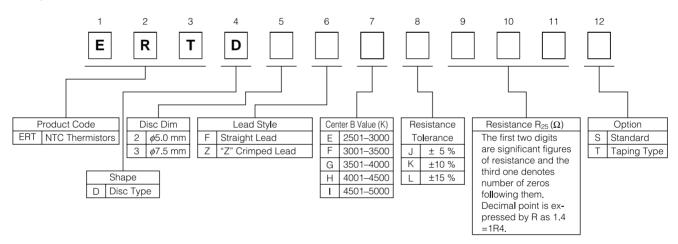
Type: **ERTD**



Disc type negative temperaturecoefficient thermistors. Resistance values from 8 Ω to 150 $k\Omega$ and B Values are from 3000 K to5000 K.

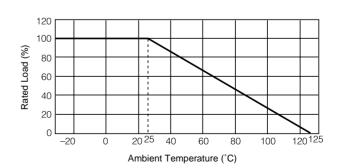
- Features
- Wide selection of temperature coefficients
- Excellent electrical and thermal stability
- Recommended Applications
- Temperature detection
- Temperature compensation for measuring instruments
- Temperature compensation for deflection coil in TV

■ Explanation of Part Numbers



■ Derating Curve for the NTC Thermistor

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



Rev.02/04

■ 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 Ratio (mW/°C) ERTD2FE□*200S 20 3000 2.18	Table A/B Curve No.
	_
ERTD2FF 1400S 40 3200 2.30	_
ERTD2FGL*750S 75 3700 2.62	1
ERTD2FFL*101S 100 3500 2.48	_
ERTD2FGL*101S 100 3700 2.62	2
ERTD2FGL*171S 170 3700 2.62	3
ERTD2FFL*251S 250 3500 2.48	_
ERTD2FGL*251S 250 3900 2.76	4
ERTD2FGL*301S 300 3900 2.76	_
ERTD2FFL*351S 350 3500 2.48	5
ERTD2FGL*601S 600 4000 2.83	6
ERTD2FGL*801S 800 3900 0.4 4.5 20 2.76	7
ERTD2FGL*102S 1000 3700 2.61	_
ERTD2FGL*142S 1400 3900 2.76	_
ERTD2FGL*202S 2000 4000 2.83	8
ERTD2FGL*332S 3300 4000 2.83	9
ERTD2FHL*462S 4600 4100 2.90	_
ERTD2FHL*802S 8000 4100 2.90	10
ERTD2FHL*103S 10000 4100 2.90	_
ERTD2FHL*153S 15000 4200 2.98	11
ERTD2FHL*333S 33000 4500 3.22	12
ERTD2FHL*503S 50000 4500 3.22	13
ERTD2FIL*154S 150000 4800 3.48	14
ERTD3FEL*8R0S 8 3000 2.18	15
ERTD3FFL*130S 13 3200 2.30	16
ERTD3FFL*160S 16 3200 2.30	_
ERTD3FFL*200S 20 3200 2.30	_
ERTD3FFL*300S 30 3200 2.30	_
ERTD3FFL*400S 40 3200 2.30	_
ERTD3FGL*750S 75 3700 0.6 7.0 27 2.62	_
ERTD3FGL*800S 80 3700 2.62	_
ERTD3FGL*131S 130 3700 2.62	_
ERTD3FGL*501S 500 4000 2.83	_
ERTD3FHL*402S 4000 4100 2.90	_
ERTD3FHL*203S 20000 4500 3.22	_
ERTD3FIL *803S 80000 5000 3.70	17

*Resistance Tolerance Code

J	K	L
±5 %	±10 %	±15 %

Operating Temperature Range: −30 to +125 °C

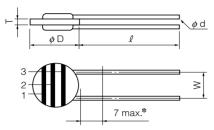
 $B = \frac{\ln (R_{25}/R_{50})}{1/298.15 - 1/323.15}$ $R_{25} = Resistance at 25.0 °C$ $R_{50} = Resistance at 50.0 °C$

^{**}Tolerance of "B value": ±10 %

■ Dimensions in mm (not to scale)

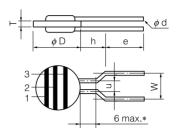
Straight Lead Type

F Type



*Coating extension on leads

Crimped Lead Type Z Type



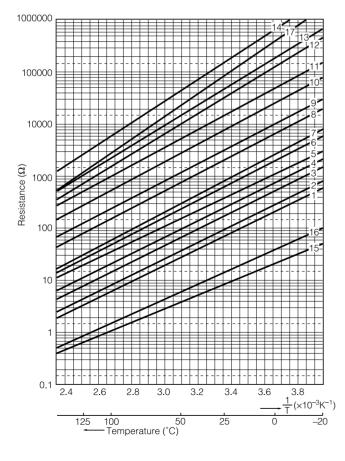
F Type

	φD	T	l	W	<i>φ</i> d
D2	5.0±0.5	1.3±0.5	30.0 min.	2.5±1.0	0.4
D3	7.5±0.5	1.4±0.5	30.0 min.	5.0±1.0	0.5

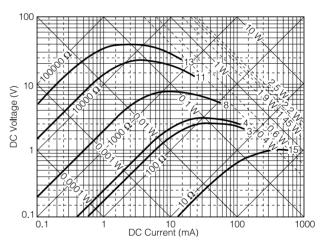
Z Type

	φD	Т	u	е	h	W	ød
D2	5.0±0.5	1.3±0.5	3.0 max. (nom.2.5)	4.5±1.0	6.0 max. (nom.5.0)	5.0±1.0	0.5

■ Resistance vs. Temperature (Table A)



■ Voltage vs. Current (Table B)

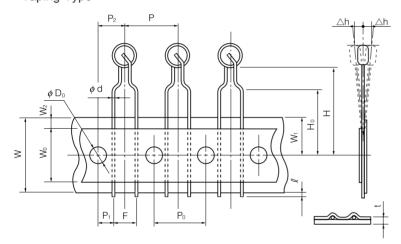


■ Resistance Color Code

Code	1(1st Digit)	2(2nd Digit)	3(Multiplier)
Black	0	0	10°
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



Р	12.7±1.0		
P_0	12.7±0.3		
P_1	3.85±0.70		
P_2	6.35±1.30		
ϕ d	0.50 ± 0.05		
F	5.0±1.0		
Δh	0±5.0		
W	18.0+1.0		
W_0	12.5 min.		
W_1	9.00+0.75		
W_2	3.0 max		
Н	21.0±2.0		
H₀	16.0±0.5		
l	2.0 max.		
ϕD_0	4.0±0.3		
t	0.5±0.2		

Disc Type NTC Thermistors

Handling Precautions

The Disc Type NTC Thermisters (hereafter referred to as "The NTC Thermistors") may fail in burnout, flaming or glowing in the worst case, when subjected to severe conditions of electrical, environmental and/or mechanical stresses.

The following " \triangle Safety Precautions" and "Application Notes" should be taken into consideration. For any questions regarding the "Handling Precautions", please contact our engineering section or factory.

⚠ Precautions for Safety

1.1 Operating Power

The NTC Thermistors should not be operated beyond their specified Maximum Permissible Power in the Catalog or the Individual Specifications, otherwise, burnout or damages due to the thermal run awa could result. (if operated in ambient temperature above 25 °C, power rating should be derated in accordance with the derating curve.)

1.2 Operating Temperature Range

The NTC Thermistors should not be operated beyond their specified Operating Temperature Range of in the Catalog or the Individual Specifications.

(Do not touch the heated part of the NTC Themistors by hand during operation)

1.3 Plastic Molding and Potting

In case of plastic molding or potting, the NTC Thermistors may be damaged or deteriorated by extreme mechanical stresses such as expanding and shrinking forces caused by the heat treatment of the plastics applied (depending on curing conditions and types of plastics)

1.4 Environmental Conditions

The NTC Thermistors should not be operated and/or stored under the following environmental conditions;

- a) Direct exposure to water or drops of water.
- b) Direct exposure to sunlight.
- c) Under conditions of high humidity or water condensation.
- d) Direct exposure to oil, gasoline or organic solvent and/or atomospheres of them.
- e) Under conditions of deoxidized or corrosive atomospheres such as chlorine, hydrogen sulfide, sulfur oxide or vinyl chloride.
- f) Under severe conditions of extreme vibration or shock.

1.5 Mounting

Do not let other parts touch the Thermistors because other coating is not a generated insulator.

1.6 Fail-Safe Design for Equipment

In application of the Termistors, equipment should be protected against deterioration and failures of the Thermistors.

2. Application Notes

2.1 Soldering Flux

Rosin-based and non-activated type soldering flux is recommended.

2.2 Post Soldering Cleaning

In case of solvent cleaning, outer coating material of the NTC Thermistors may acquire the solvent, depending on the cleaning condition and type of cleaning solvent.

2.3 Abnormal Mechanical Stresses

The NTC Thermistors may be damaged or deteriorated, when dropped or exposed to a large impact. Excessive shock and impact should not be applied.

2.4 Soldering

- (1) When soldering the thermistor, solder for as short time as possible to minimize the exposure time of the element to the melting point of solder.
 - Take into account the solder-heat resistance of the product before use.
- (2) In soldering the device, the body and outer coating section should not be touched by molten solder and/or heated iron tip.

2.5 Long Term Storage

- (1) NTC Thermistors should not be stored under severe conditions of high temperature and/or high humidity.
- (2) NTC Thermistors should not be stored under conditions of corrosive atomospheres such as hydrogen sulfide, sulfur oxide, chlorine, and ammonia etc.
- (3) NTC Thermistors should not be exposed to direct sunlight.
- (4) NTC Thermistors should not be stored under conditions of condensation.
- (5) Store them indoors under 40 °C max. and 75 %RH max.
 - Use them within one year of manufacture and check the solderability before use.