

NTC Thermistor

Features

This is a Negative Temperature Coefficient Resistor Whose resistance changes with ambient temperature changes. Thermistor comprises 2 or 4 kinds of metal oxides of iron, nickel, cobalt, manganese and copper, being shaped and Sintered at high temperature (1200°C to 1500°C)

Critical Technical Parameters of NTC Thermistor

* R_t ---Resistance Value at Zero-power

It's a resistance which is got at a fixed temperature on a basis of a testing power which causes resistance to Vary in a range which can be ignored in relation to the total testing error.

* R_{25} ---Resistance Value at Rated Zero-power

The design resistance of the thermistor usually refers to the resistance value got at Zero-power at 25°C , which is usually indicated on the thermistor.

* Max. steady state current. I_{max} .

The maximum allowable continuous current passing through thermistor at 25°C.

* Dissipation Coefficient δ

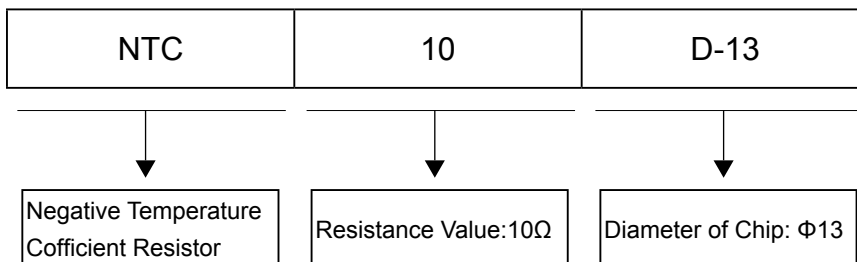
It's the ratio of the changes with a thermistor dissipation power, in a pre-set ambient temperature, to the changes with the temperature. The formula is as below: $\delta = \Delta P / \Delta T$, δ changes in response when the ambient temperature changes, within the ranges of the working temperature.



Applications

Conversion power supply, switch power, UPS power, Kinds of electric heater, electronic energy-saving lamps, electronic ballast etc all kinds of power circuit protection of electronic equipments, filament protection of CRT, bulb and other lighting lamps.

Part Numbering System



NTC Thermistor

Electrical Characteristics

Type Number	Zero Power Resistance At 25°C	Max. Steady State Current At 25°C	Thermal Dissipation Constant	Thermal Time Constant	Operating Temperature Range	Package Dimensions (mm)
	Ω	A	mW/°C	Sec	°C	
D-5 Series Sensing NTC Thermistor						
5D-5	5	1	6	20	-55 ~ +200	
10D-5	10	0.7	6	20	-55 ~ +200	
60D-5	60	0.3	6	18	-55 ~ +200	
200D-5	200	0.1	6	18	-55 ~ +200	
D-7 Series Sensing NTC Thermistor						
5D-7	5	2	10	28	-55 ~ +200	
8D-7	8	1	9	27	-55 ~ +200	
10D-7	10	1	9	27	-55 ~ +200	
12D-7	12	1	9	27	-55 ~ +200	
16D-7	16	0.7	9	27	-55 ~ +200	
22D-7	22	0.6	9	27	-55 ~ +200	
33D-7	33	0.5	10	28	-55 ~ +200	
200D-7	200	0.2	11	28	-55 ~ +200	
D-9 Series Sensing NTC Thermistor						
3D-9	3	4	11	35	-55 ~ +200	
4D-9	4	3	11	35	-55 ~ +200	
5D-9	5	3	11	34	-55 ~ +200	
6D-9	6	2	11	34	-55 ~ +200	
8D-9	8	2	11	32	-55 ~ +200	
9D-9	9	2	11	32	-55 ~ +200	
10D-9	10	1	11	32	-55 ~ +200	
12D-9	12	1	11	32	-55 ~ +200	
16D-9	16	1	11	31	-55 ~ +200	
20D-9	20	1	11	30	-55 ~ +200	
22D-9	22	1	11	30	-55 ~ +200	
30D-9	30	1	11	30	-55 ~ +200	
33D-9	33	1	11	30	-55 ~ +200	
50D-9	50	1	11	30	-55 ~ +200	
60D-9	60	0.8	11	30	-55 ~ +200	
80D-9	80	0.8	11	30	-55 ~ +200	
120D-9	120	0.8	11	30	-55 ~ +200	
200D-9	200	0.5	11	32	-55 ~ +200	
400D-9	400	0.2	11	32	-55 ~ +200	

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D-11 Series Sensing NTC Thermistor						
2.5D-11	2.5	5	13	43	-55 ~ +200	
3D-11	3	5	13	43	-55 ~ +200	
4D-11	4	4	13	44	-55 ~ +200	
5D-11	5	4	13	45	-55 ~ +200	
6D-11	6	3	13	45	-55 ~ +200	
8D-11	8	3	14	47	-55 ~ +200	
10D-11	10	3	14	47	-55 ~ +200	
12D-11	12	2	14	48	-55 ~ +200	
16D-11	16	2	14	50	-55 ~ +200	
20D-11	20	2	15	52	-55 ~ +200	
22D-11	22	2	15	52	-55 ~ +200	
30D-11	30	1.5	15	52	-55 ~ +200	
33D-11	33	1.5	15	52	-55 ~ +200	
50D-11	50	1.5	15	52	-55 ~ +200	
60D-11	60	1.5	15	52	-55 ~ +200	
80D-11	80	1.2	15	52	-55 ~ +200	
120D-13	120	1.2	16	65	-55 ~ +200	
D-13 Series Sensing NTC Thermistor						
1.3D-13	1.3	7	13	60	-55 ~ +200	
1.5D-13	1.5	7	13	60	-55 ~ +200	
2.5D-13	2.5	6	13	60	-55 ~ +200	
3D-13	3	6	14	60	-55 ~ +200	
4D-13	4	5	15	67	-55 ~ +200	
5D-13	5	5	15	68	-55 ~ +200	
6D-13	6	4	15	65	-55 ~ +200	
7D-13	7	4	15	65	-55 ~ +200	
8D-13	8	4	15	60	-55 ~ +200	
10D-13	10	4	15	65	-55 ~ +200	
12D-13	12	3	16	65	-55 ~ +200	
15D-13	15	3	16	60	-55 ~ +200	
16D-13	16	3	16	60	-55 ~ +200	
20D-13	20	3	16	65	-55 ~ +200	
30D-13	30	2.5	16	65	-55 ~ +200	
47D-13	47	2	17	65	-55 ~ +200	
120D-13	120	1.2	16	65	-55 ~ +200	

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	Ω	A	mW/°C	Sec	°C	
D-15 Series Sensing NTC Thermistor						
1.3D-15	1.3	8	18	68	-55 ~ +200	
1.5D-15	1.5	8	18	69	-55 ~ +200	
3D-15	3	7	18	76	-55 ~ +200	
5D-15	5	6	20	76	-55 ~ +200	
6D-15	6	5	20	80	-55 ~ +200	
7D-15	7	5	20	80	-55 ~ +200	
8D-15	8	5	20	80	-55 ~ +200	
10D-15	10	5	20	75	-55 ~ +200	
12D-15	12	5	21	75	-55 ~ +200	
15D-15	15	4	21	85	-55 ~ +200	
16D-15	16	4	21	70	-55 ~ +200	
20D-15	20	4	21	86	-55 ~ +200	
30D-15	30	3	21	75	-55 ~ +200	
47D-15	47	3	21	86	-55 ~ +200	
120D-15	120	1.8	22	87	-55 ~ +200	
D-20 Series Sensing NTC Thermistor						
0.7D-20	0.7	11	24	89	-55 ~ +200	
1.3D-20	1.3	9	24	88	-55 ~ +200	
3D-20	3	8	24	88	-55 ~ +200	
5D-20	5	7	24	87	-55 ~ +200	
6D-20	6	6	25	103	-55 ~ +200	
8D-20	8	6	25	105	-55 ~ +200	
10D-20	10	6	25	102	-55 ~ +200	
12D-20	12	5	25	100	-55 ~ +200	
16D-20	16	5	25	100	-55 ~ +200	
D-25 Series Sensing NTC Thermistor						
1D-25	1	12	30	120	-55 ~ +200	
1.5D-25	1.5	10	30	121	-55 ~ +200	
3D-25	3	9	32	124	-55 ~ +200	
5D-25	5	8	32	125	-55 ~ +200	
8D-25	8	7	33	125	-55 ~ +200	
10D-25	10	7	32	125	-55 ~ +200	
12D-25	12	6	32	126	-55 ~ +200	
16D-25	16	6	35	126	-55 ~ +200	

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