



MF11 474 Temperature Compensated NTC Thermistor 470K Ohm 5MM For Electronic Equipment Detection

Our Product Introduction

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Basic Information

- Place of Origin: Dongguan China
- Brand Name: linkun
- Certification: CE / ROHS / UL / TUV / SGS
- Model Number: MF11 NTC Thermistor
- Minimum Order Quantity: Negotiation
- Price: Negotiation
- Packaging Details: Export Package / Negotiation
- Delivery Time: Negotiation
- Payment Terms: T/T, L/C, Western Union
- Supply Ability: 24 million per year



Product Specification

- Features: Strong Overload Capacity
- Application: Electronic Product / Industrial Products
- Operating Temperature: -55C~+125C.
- Technology: Ceramic Composition
- Wide Choice Of B Values: 2600~4900K
- Temperature Range: $\pm 5\%$, $\pm 10\%$, $\pm 20\%$
- Resistance 25C: 470K
- Highlight: Practical Temperature NTC Thermistor,
Stable Temperature NTC Thermistor,
Electronic NTC In Thermistor



More Images



Product Description

MF11 474 Temperature Compensated NTC Thermistor 470K Ohm 5MM For Electronic Equipment

Detection

Main features [MF11 Temperature Compensated NTC Thermistor.pdf](#)

1. Temperature characteristics

The figure below shows the circuit symbol of the thermistor and the resistance-temperature characteristic curves of several thermistors. Among them, curve ① and curve ② are the characteristic curves of the negative temperature coefficient thermistor, and its resistance value decreases with the increase of temperature. The relationship between resistance value and temperature of curve ① is approximately exponential. The characteristic of curve ② is that there is a critical temperature. After exceeding the critical temperature, the resistance value drops sharply. Curves ③ and ④ are the characteristic curves of the positive temperature coefficient thermistor, and its resistance value rises with the increase of temperature within a certain temperature range. For comparison, the resistance-temperature characteristic curve of platinum wire is also drawn in the figure.

2. Volt-ampere retention

That is, in the steady state, the relationship between the current I passing through the thermistor and the voltage U across it. The figure below shows the shape of the volt-ampere characteristic curve of a thermistor. Among them, Figure a is the volt-ampere characteristic of the negative temperature coefficient thermistor. It can be seen that when the current is small, the thermistor follows Ohm's law. When the current increases to a certain value, the voltage reaches the maximum value U_m . If the current continues to increase, due to the temperature rise of the thermistor itself, negative resistance characteristics begin to appear. Although the current increases, the resistance value decreases and the terminal voltage decreases.

Specification

Part No	B Value (25/50fC)		Rated zero-power resistance at 25fC	
	Rated Value (K)	Allowable Tolerance (%)	Resistance range (Ω)	Allowable Tolerance (%)
MF11	2600	+/-10	5-7	+/- 5 +/- 10 +/-15 +/- 20
	2800		8-24	
	3000		25-119	
	3200		120-359	
	3600		360-1400	
	3950		1500-5900	
	4050		6000-12000	
	4150		13000-17000	
	4250		18000-44000	
	4300		45000-79000	
	4400		80000-144000	
	4500		145000-199000	
	4600		200000-299000	
	4750		300000-500000	

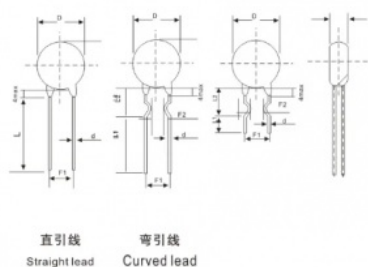
Reliability Test

Item	Requirements	Test Method
1.Temp. Cycling Testing	No visible mechanical damage. $\Delta R_N / R_N \leq 20\%$ ($\Delta R = R_N - R_N' $)	Ta:-40 $\pm$ 3 $^{\circ}$ C/ 30min $\rightarrow$ 25 $\pm$ 2 $^{\circ}$ C/ 5min $\rightarrow$ Tb:160 $\pm$ 3 $^{\circ}$ C/ 30min $\rightarrow$ 25 $\pm$ 2 $^{\circ}$ C/ 5min Cycles: 5times After recovering 4~5 h under 25 $\pm$ 2 $^{\circ}$ C, the rated zero power resistance value R_N' shall be measured.
2.Electrical Cycling Testing		Ambient temp. Range:25 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C. Cycles: 2,000times On / Off: 5 s / 55 s Test Current: 7A After recovering 4~5h under 25 $\pm$ 2 $^{\circ}$ C, the rated zero power resistance value R_N' shall be measured.
3.LoadLife (Endurance) Testing		Ambient temp. Range:25 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C; 7A/ 1,000 $\pm$ 24h After recovering 4~5 h under 25 $\pm$ 2 $^{\circ}$ C, the rated zero power resistance value R_N' shall be measured.
4. Humidity Testing	No visible mechanical damage. $\Delta R_N / R_N \leq 20\%$ ($\Delta R = R_N - R_N' $)	Ambient temp. range : 40 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C R.H.:93 $\pm$ 3% , Energized time:1000 $\pm$ 24 h After recovering 4~5 h under 25 $\pm$ 2 $^{\circ}$ C, the rated zero power resistance value R_N' shall be measured.

Product parameters

P/N	R@25 $^{\circ}$ C	Tolerance(%)	Beta Value	Tolerance(%)
MF11-050	5		2400	
MF11-100	10		2800	
MF11-150	15		2800	
MF11-200	20		2800	
MF11-220	22		2800	
MF11-270	27		3000	
MF11-330	33		3000	
MF11-390	39		3000	

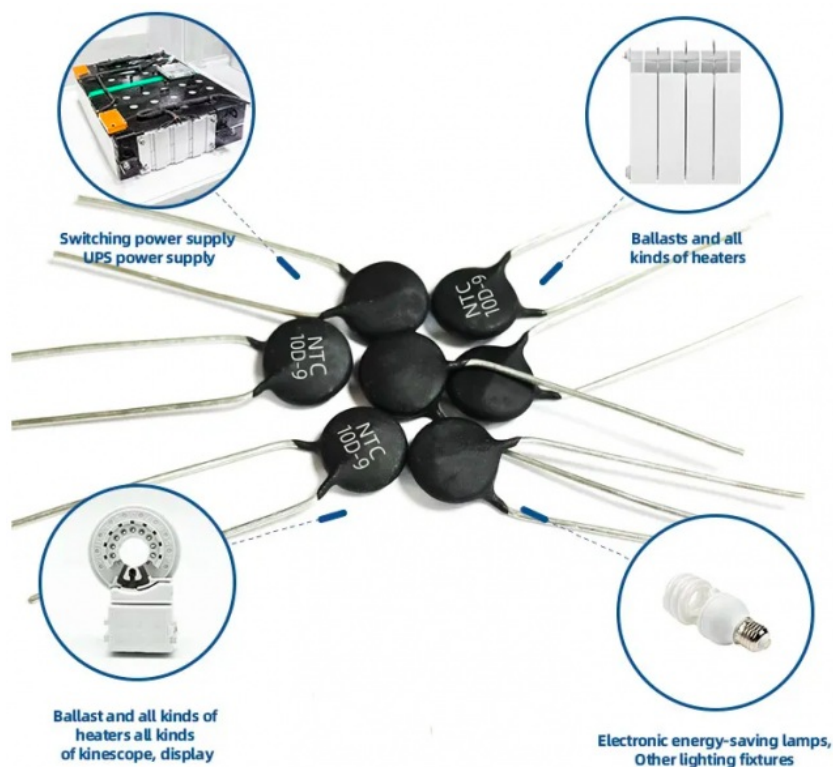
MF11-470	47		3100
MF11-500	50		3100
MF11-680	68		3100
MF11-820	82		3100
MF11-101	100		3200
MF11-121	120		3200
MF11-151	150		3200
MF11-201	200		3200
MF11-221	220		3500
MF11-271	270		3500
MF11-331	330		3500
MF11-391	390		3500
MF11-471	470		3500
MF11-501	500		3500
MF11-561	560		3500
MF11-681	680		3800
MF11-821	820		3800
MF11-102	1000		3800
MF11-122	1200	±5 ±10 ±20	3800 ±5 ±10
MF11-152	1500		3800
MF11-202	2000		4000
MF11-222	2200		4000
MF11-272	2700		4000
MF11-302	3000		4000
MF11-332	3300		4000
MF11-392	3900		4000
MF11-472	4700		4050
MF11-502	5000		4050
MF11-562	5600		4050
MF11-682	6800		4050
MF11-822	8200		4050
MF11-103	10000		4050
MF11-123	12000		4050
MF11-153	15000		4150
MF11-203	20000		4300
MF11-303	30000		4300
MF11-473	47000		4300
MF11-503	50000		4300
MF11-683	68000		4300
MF11-104	100000		4500
MF11-124	120000		4700
MF11-154	150000		4700
MF11-204	200000		4700
MF11-304	300000		4700
MF11-504	500000		4800
MF11-105	1000000		4900



代号 Dim(mm) 型号 Part No	Dmax	Tmax	d ±0.05	F1 ±1	F2 ±1.5	直引线 Straight lead	弯引线 Curved lead	
						Lmin	L ₁ min	L ₂ ±2
MF72-□D5	7.0	5	0.6/0.45	5/2.5	3	25	17/5	8/5
MF72-□D7	9.0	5	0.6	5	3	25	17/5	8/5
MF72-□D9	11.0	5.5	0.8/0.6	7.5/5	5/3	25	17/5	8/5
MF72-□D11	13.0	5.5	0.8	7.5/5	5/3	25	17/5	8/5
MF72-□D13	15.5	6	0.8	7.5	5	25	17/5	8/5
MF72-□D15	17.5	6	0.8	10/7.5	5	25	17/5	8/5
MF72-□D20	22.5	7	1.0	10/7.5	/	25	/	/
MF72-□D25	27.5	8	1.0	10	/	25	/	/

Applications

Coverison power-supply, switch power, ups power
Electronic energy saving lamps,electronic ballast and all kinds of electric heater
All kinds of RT, display
Bulb and other lighting lamps

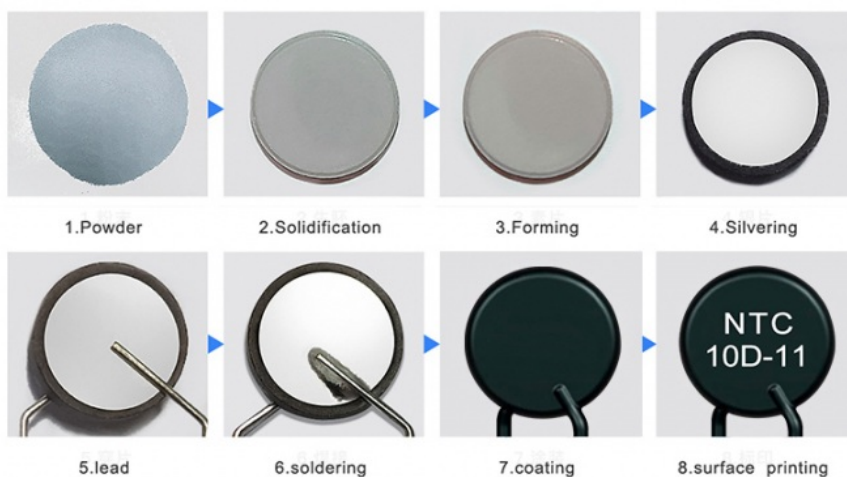


Conventional product electrical performance parameters

Part No.	Mf72	R	Max, Steady State Current(A)	Approx. R of Maz. Cur.	Dissi. Coef. (MW/°C)	Thermal time Constant(S)	Operating Temp.(°C)
5D5	5	1		0.353	6	20	
10D5	10	0.7		0.771	6	20	
60D5	60	0.3		1.878	6	18	
200D5	200	0.1		18.70	6	18	
5D7	5	2		0.283	10	30	
8D7	8	1		0.539	9	28	
10D7	10	1		0.616	9	27	
12D7	12	1		0.816	9	27	
16D7	16	0.7		1.003	9	27	
22D7	22	0.6		1.108	9	27	
33D7	33	0.5		1.485	10	28	
200D7	200	0.2		11.65	11	28	
3D9	3	4		0.120	11	35	
4D9	4	3		0.190	11	35	
5D9	5	3		0.210	11	34	
6D9	6	2		0.315	11	34	
8D9	8	2		0.400	11	32	
10D9	10	2		0.458	11	32	
12D9	12	1		0.652	11	32	
16D9	16	1		0.802	11	31	
20D9	20	1		0.864	11	30	
22D9	22	1		0.950	11	30	
30D9	30	1		1.022	11	30	
33D9	33	1		1.124	11	30	
50D9	50	1		1.252	11	30	
60D9	60	0.8		1.502	11	30	
80D9	80	0.8		2.010	11	30	
120D9	120	0.8		3.015	11	30	
200D9	200	0.5		5.007	11	32	
400D9	400	0.2		30.30	11	32	
2.5D11	2.5	5		0.095	13	43	
3D11	3	5		0.100	13	43	
4D11	4	4		0.150	13	44	
5D11	5	4		0.156	13	45	
6D11	6	3		0.240	13	45	

8D11	8	3	0.255	14	47
10D11	10	3	0.275	14	47
12D11	12	2	0.462	14	48
16D11	16	2	0.470	14	50
20D11	20	2	0.512	15	52
22D11	22	2	0.563	15	52
30D11	30	1.5	0.667	15	52
33D11	33	1.5	0.734	15	52
50D11	50	1.5	1.021	15	52
60D11	60	1.5	1.215	15	52
80D11	80	1.2	1.656	15	52
1.3D13	1.3	7	0.062	13	52
1.5D13	1.5	7	0.073	13	60
2.5D13	2.5	6	0.088	13	160
3D13	3	6	0.092	14	60
4D13	4	5	0.120	15	67
5D13	5	5	0.125	15	68
6D13	6	4	0.170	15	65
7D13	7	4	0.188	15	65
8D13	8	4	0.194	15	60
10D13	10	4	0.206	15	65
12D13	12	3	0.316	16	65
15D13	15	3	0.335	16	60
16D13	16	3	0.338	16	60
20D13	20	3	0.372	16	65
30D13	30	2.5	0.517	16	65
47D13	47	2	0.810	17	65
120D13	120	1.2	2.124	16	65
1.3D15	1.3	8	0.048	18	65
1.5D15	1.5	8	0.052	18	68
3D15	3	7	0.075	18	69
5D15	5	6	0.112	18	76
6D15	6	5	0.155	20	76
7D15	7	5	0.173	20	80
8D15	8	5	0.178	20	80
10D15	10	5	0.180	20	80
12D15	12	4	0.250	20	80
15D15	15	4	0.268	21	75
16D15	16	4	0.276	21	75
20D15	20	4	0.288	21	85
30D15	30	3.5	0.438	21	70
47D15	47	3	0.680	21	86
120D15	120	1.8	1.652	22	87
0.7D20	0.7	11	0.018	24	89
1.3D20	1.3	9	0.037	24	88
3D20	3	8	0.055	24	88
5D20	5	7	0.087	24	87
6D20	6	6	0.113	25	103
8D20	8	6	0.142	25	105
10D20	10	6	0.162	25	102
12D20	12	5	0.195	25	100
16D20	16	5	0.212	25	100
0.7D25	0.7	12	0.014	30	120
1.5D25	1.5	10	0.027	30	121
3D25	3	9	0.044	32	124
5D25	5	8	0.070	32	125
8D25	8	7	0.114	33	125
10D25	10	7	0.130	32	125
12D25	12	6	0.156	32	126
16D25	16	6	0.160	35	126

Production Process



Negative temperature coefficient thermistor, also known as NTC thermistor, is a kind of sensor resistance whose resistance value decreases with the increase of temperature. Widely used in various electronic components, such as temperature sensors, resettable fuses and self-adjusting heaters, etc.

PRODUCT CATEGORIES



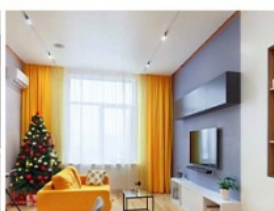
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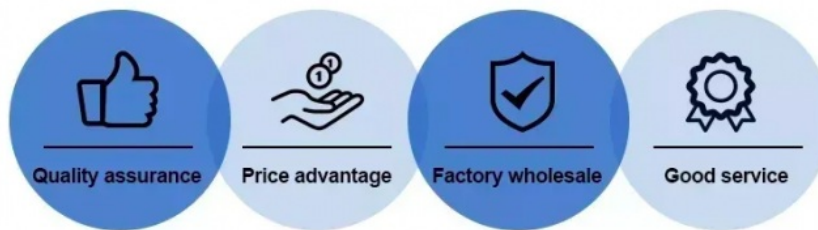


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