

MF73T-1 type high power NTC thermistor for inrush current limiting

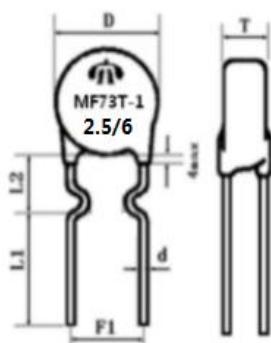
1.Electrical properties

	Item	Symbol	Test conditions	Unit	Performance requirements
1. 1	25°C nominal zero-power resistance	R ₂₅	T _a =25±0.5°C test power≤0.1mw in air	Ω	2.5Ω ±20%
1. 2	B value	B _{25/50}	B=[(T _a ×T _b)/(T _b -T _a)]×ln(R _a /R _b)	K	2600±10%
1. 3	Maximum current within stated temperature range	I _{max}	/	A	6
1. 4	Maximum capacitance	C _T	240Vac	μF	470
1. 5	Dissipation factor	δ	/	mW/°C	Approx. 12
1. 6	Thermal cooling time constant	τ	/	sec	Approx. 50
1. 7	Withstand voltage	/	500V/AC 1min	/	No breakdown or flash-over
1. 8	Insulation resistance	/	500V/DC 1min	MΩ	≥500
1. 9	Working temperature range	/	/	°C	-40 ~ 170
1. 10	Maximum power within stated temperature range	P _{max}	/	W	2.5

2.Reliability

3.Dimension : (Unit: mm)

Item	Test conditions and methods	Technical requirement
2.1 Leading end strength	Pull: wire diameter (mm) Pull (N) 0.5<d≤0.8 10 0.8<d≤1.25 20 Time: 10±1seconds	No visible damage △R/R≤±25%
2.2 Solderability	Temp.. 245±5°C Time 2-3seconds	Tin area≥95%
2.3 Resistance to welding heat	Tin pot temp.: 260±5°C, Distance from thermistor 6mm, Time 10±1seconds	△ R/R≤±25%
2.4 Steady state dampness and heat	Temp: 40°C±2°C, Humidity: 93±2%, Time: 1000 hours	△ R/R≤±25%
2.5 Rapid change of temperature	-40°C30min→25°C5min→170°C 30min→25°C5min, Repeat 5 times	△ R/R≤±25%
2.6 High-temperature storage	Temp.: 170°C±5°C, Time:1000 hours	△ R/R≤±25%
2.7 I _{max} Endurance	Ambient temperature: 25 ±5 ° C I = I _{max} Time: 1000±24h	△ R/R≤±25%
2.8Maximum permissible capacitance test	Ambient temperature: 25 ±5 ° C Capacitance = C _{test} Number of cycles: 1000	△ R/R≤±25%



Encapsulation material	Lead wire material
Black silicone resin	Tinned copper wire

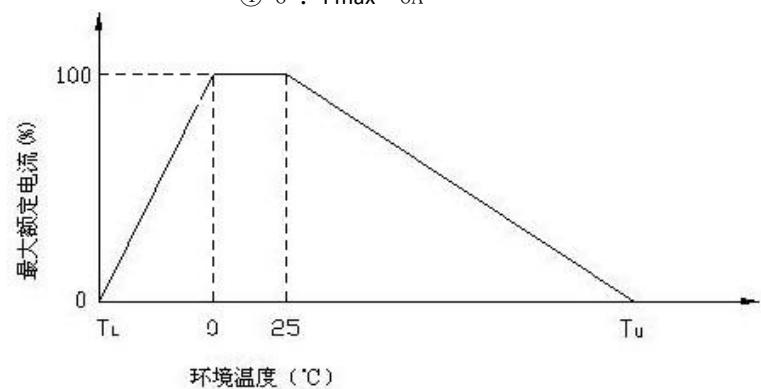
D	L1	L2	F1	T	d
Max 13.0	Min17	8±2	7.5±1	Max5.5	0.8±0.05

4.Product model & marking description

MF73T-1 2.5 / 6
 ① ② ③ ④

- ① : Logo
- ② MF73T-1: Model type
- ③ 2.5: R₂₅ 2.5Ω
- ④ 6 : I_{max} 6A

5 Derating curve



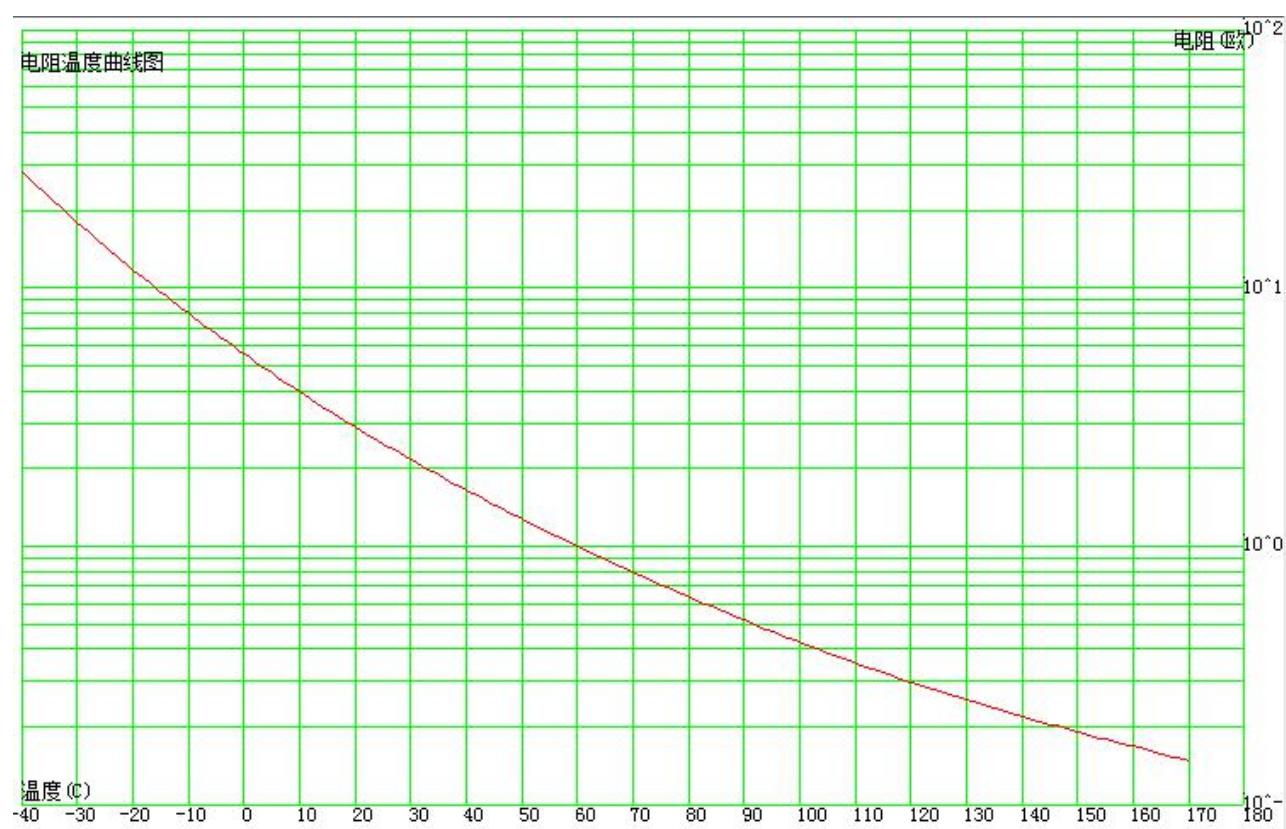


figure 1:Resistance versus temperature

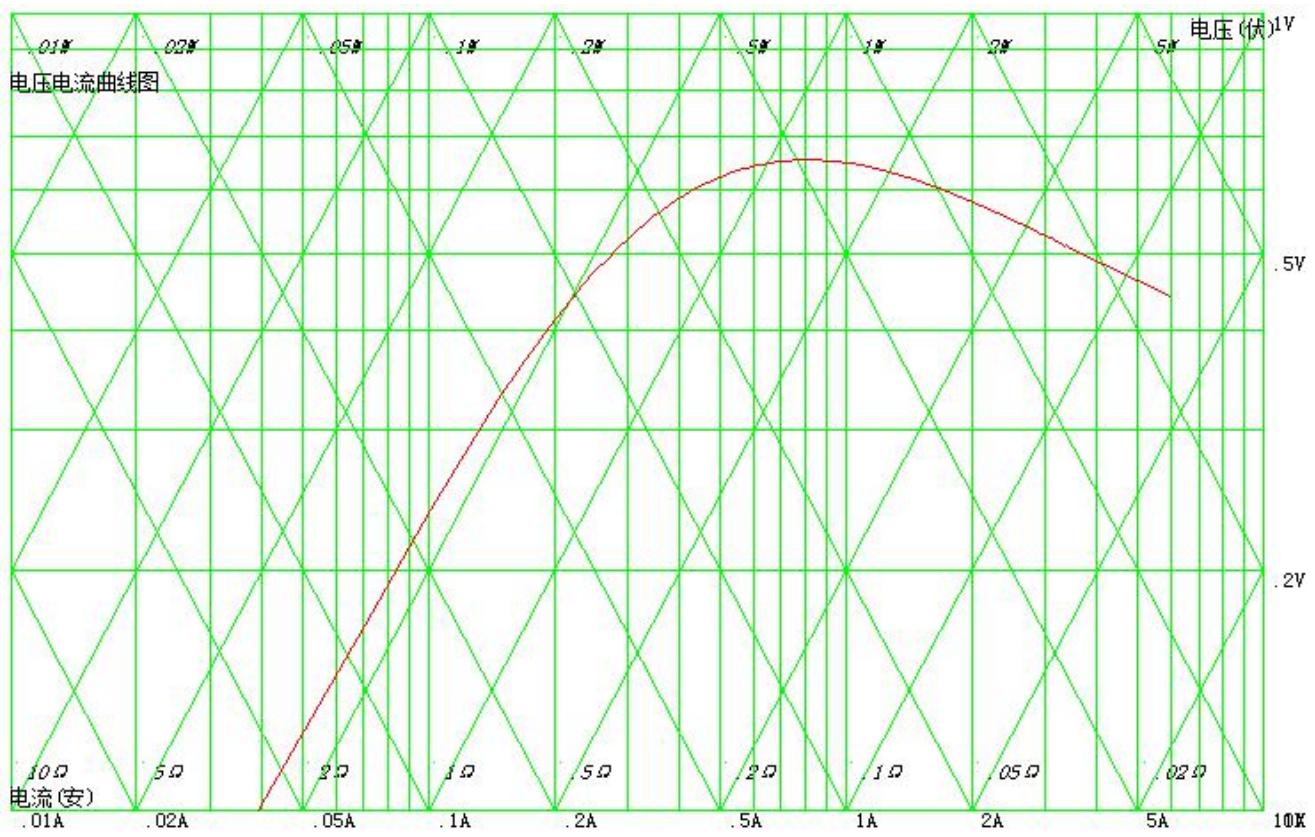


figure 2: Voltage versus current