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

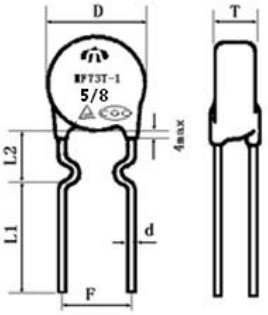
1.Electrical properties

	Item	Test conditions	Unit	Performance requirements
1.1	25℃ nominal zero-power resistance	Ta=25±0.5℃ test power≤0.1mw in air	Ω	5Ω±20%
1.2	B value	$B=[(T_a\times T_b)/(T_b-T_a)]\times \ln(R_a/R_b)$	K	3000±10%
1.3	Maximum current within stated temperature range	/	A	8
1.4	Maximum capacitance	240Vac	μF	820
1.5	Dissipation factor	/	mW/℃	Approx. 22
1.6	Thermal cooling time constant	/	sec	Approx. 75
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	/	℃	-40 ~ 200
1.10	Maximum power within stated temperature range	/	W	3.6

2.Reliability

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℃ Time 2-3seconds	Tin area≥95%
2.3 Resistance to welding heat	Tin pot temp.: 260±5℃, Distance from thermistor 6mm, Time 10±1seconds	ΔR/R≤±25%
2.4 Steady state dampness and heat	Temp: 40℃±2℃, Humidity: 93±2%, Time: 1000 hours	ΔR/R≤±25%
2.5 Rapid change of temperature	-40℃30min→25℃5min→170℃30min→25℃5min, Repeat 5 times	ΔR/R≤±25%
2.6 High-temperature storage	Temp.: 170℃±5℃, Time:1000 hours	ΔR/R≤±25%
2.7 Imax Endurance	Ambient temperature: 25 ±5 ° C I = Imax Time: 1000±24h	ΔR/R≤±25%
2.8Maximum permissible capacitance test	Ambient temperature: 25 ±5 ° C Capacitance = Ctest Number of cycles: 1000	ΔR/R≤±25%

3.Dimension : (Unit: mm)



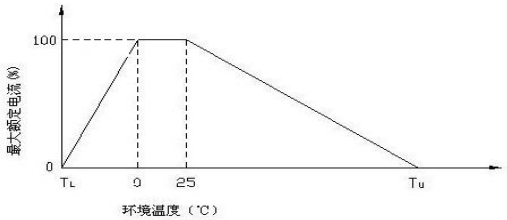
Encapsulation material	Lead wire material
Black silicone resin	Tinned copper wire

D	L1	L2	F	T	d
Max17.5	Min17	5±2	7.5±1.5	Max6.0	0.8±0.05

4 Product model & marking description

MF73T-1 5 / 8
① ② ③ ④

① : Logo
② MF73T-1: Model Type
③ 5: R25: 5Ω
④ 8 : Imax 8A



5 Derating curve

备注：TL=最低温度（℃）
Tu=最高温度（℃）

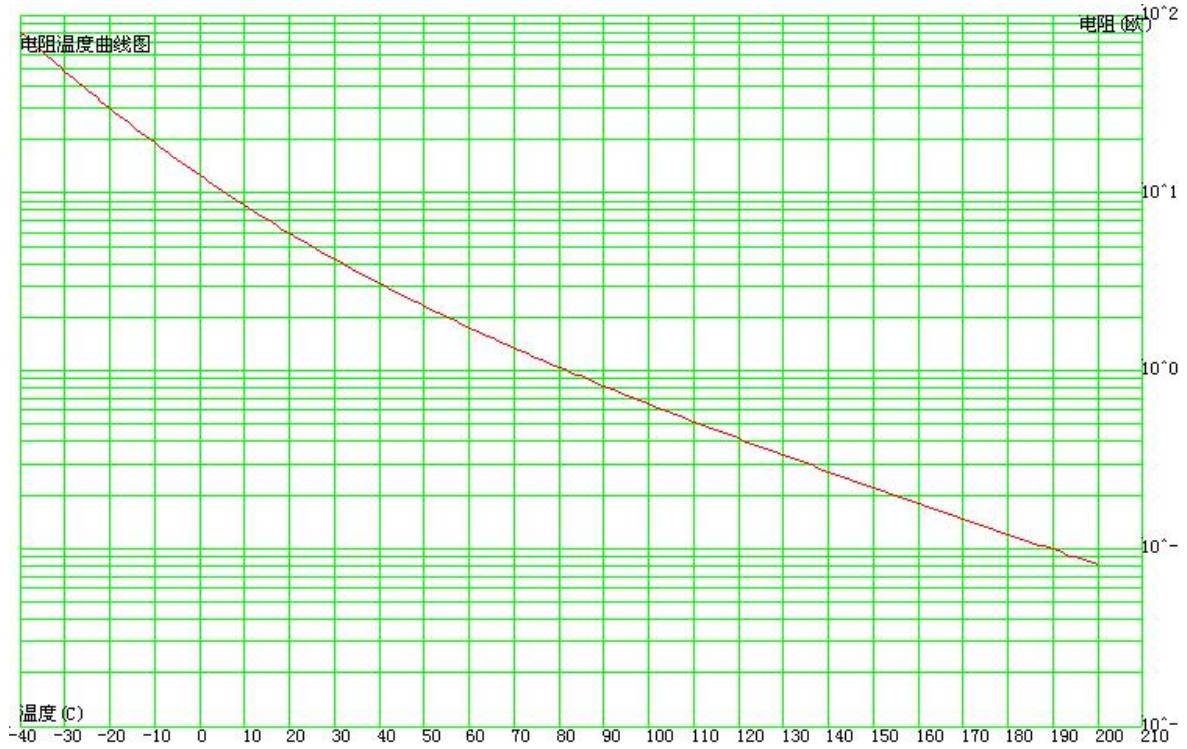


figure 1:Resistance versus temperature

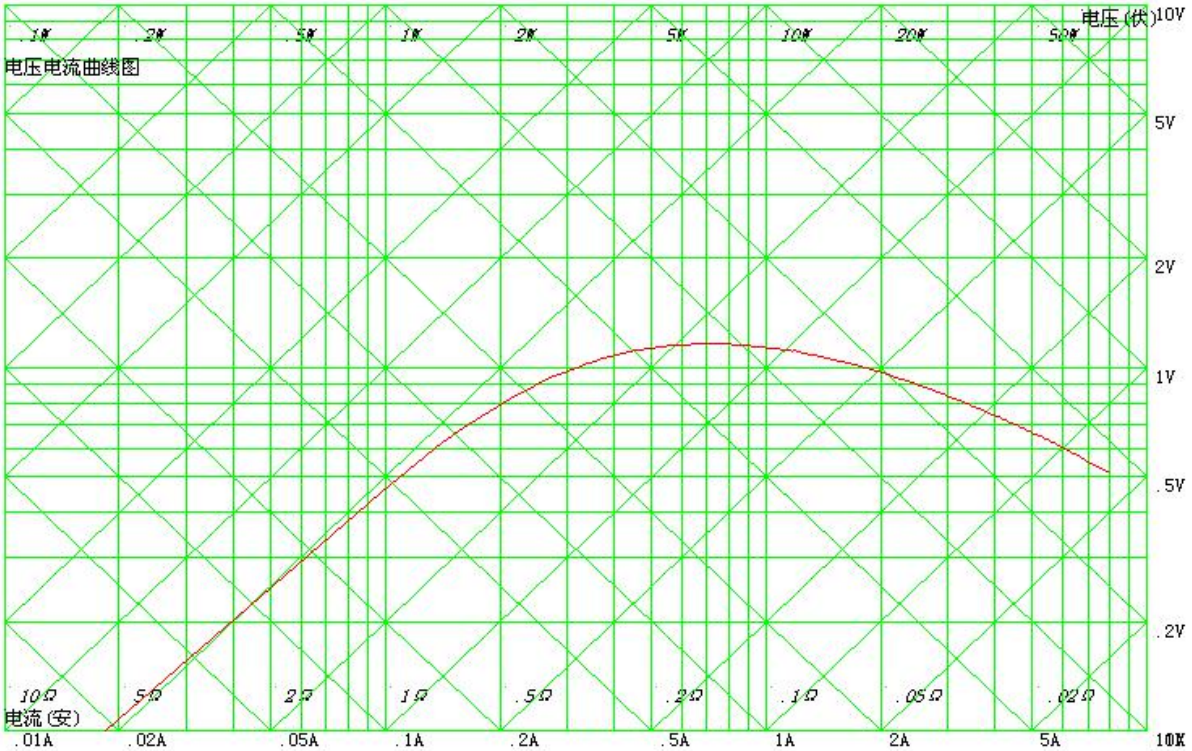


figure 2: Voltage versus current