KNSCHA

Empowering The World

广东科尼盛电子科技有限公司
KNSCHA ELECTRONICS CO.,LIMITED

IATF16949:2016 IS09001:2015 ISO14001:2015

部品规格书
APPROVE SHEET

客户名称 Customer Name	
产品名称 Product Name	NTC直插热敏电阻器 Negative Temperature Coefficient Resistor
客户料号 Customer P/N	
科尼盛料号 KNSCHA P/N	206RV195
型号规格 Product Type	NTC 12D-7 阻抗12Ω,直径ϕD=7mm P=5mm 黑色涂装 外弯脚
日期 Date	2025-04-14

制造 Manufacture	
核准 APPROVAL	制作 PREPARED
王帅	刘[illegible]芬

客户承认栏 CUSTOMER APPROVED		
核准 APPROVED	确认 CHECKED	经办 DESIGNED

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Aluminum Electrolytic Capacitors

- Source Manufacturer
- 25+ Years Experience
- 7X24 Hours Online Service

Film Capacitors

- Source Manufacturer
- 10+ Years Experience

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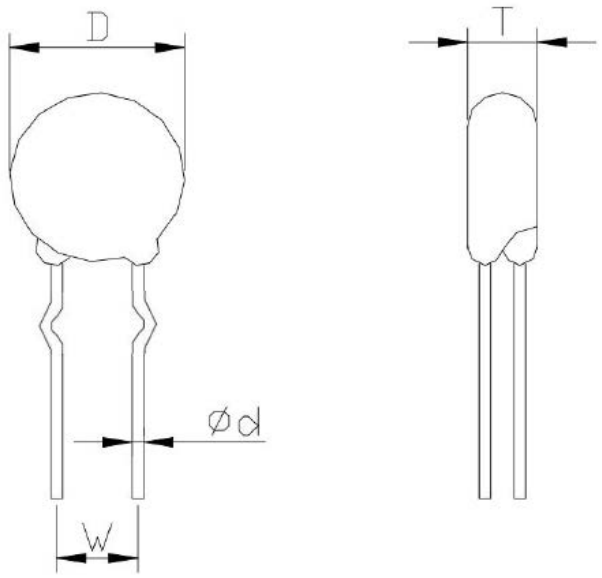
1.0 概述 Summary

NTC 热敏电阻是一种负温度系数电阻器，其阻值随环境温度的升高而降低，这种热敏电阻是由 2 种或 4 种铁、镍、钴、锰或铜的金属氧化物经过成型并在高温下烧结而制得。

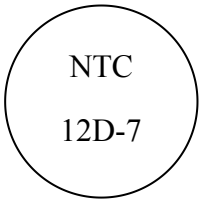
NTC Thermistor is a Negative Temperature Coefficient Resistor whose resistance changes with ambient temperature changes. Thermistor comprises 2 or 4 kinds of metal oxides of iron, nickel, cobalt, manganese and copper, being shaped and sintered at high temperature.

2.0 结构及尺寸 Structure And Dimensions

(1).外形图 Outline Fig



(2). 标记 Mark



(3).外形尺寸 Shape and Dimension : (unit :mm)

D max	W±1.0	Tmax	Φd±0.5	L±0.5
8.5	5	5	0.75	长脚

3.0 型号规格表示方法 How to Order

NTC 12 D - 7

NTC — NTC 热敏电阻器 (NTC Thermistor)

12— 标称电阻为 12Ω (Resistance Value: 12Ω)

D - 7 — 瓷片最大直径为Φ7mm (Diameter of Chip:Φ7mm)

3.1 材料 (Materials)

- 封装材料 (Wrapper) :酚醛 (Phenolic aldehyde)
- 引线 (Down-lead) 镀锡电子线(Tinned Electron Wire)
- 颜色 (Coating Color) :黑色

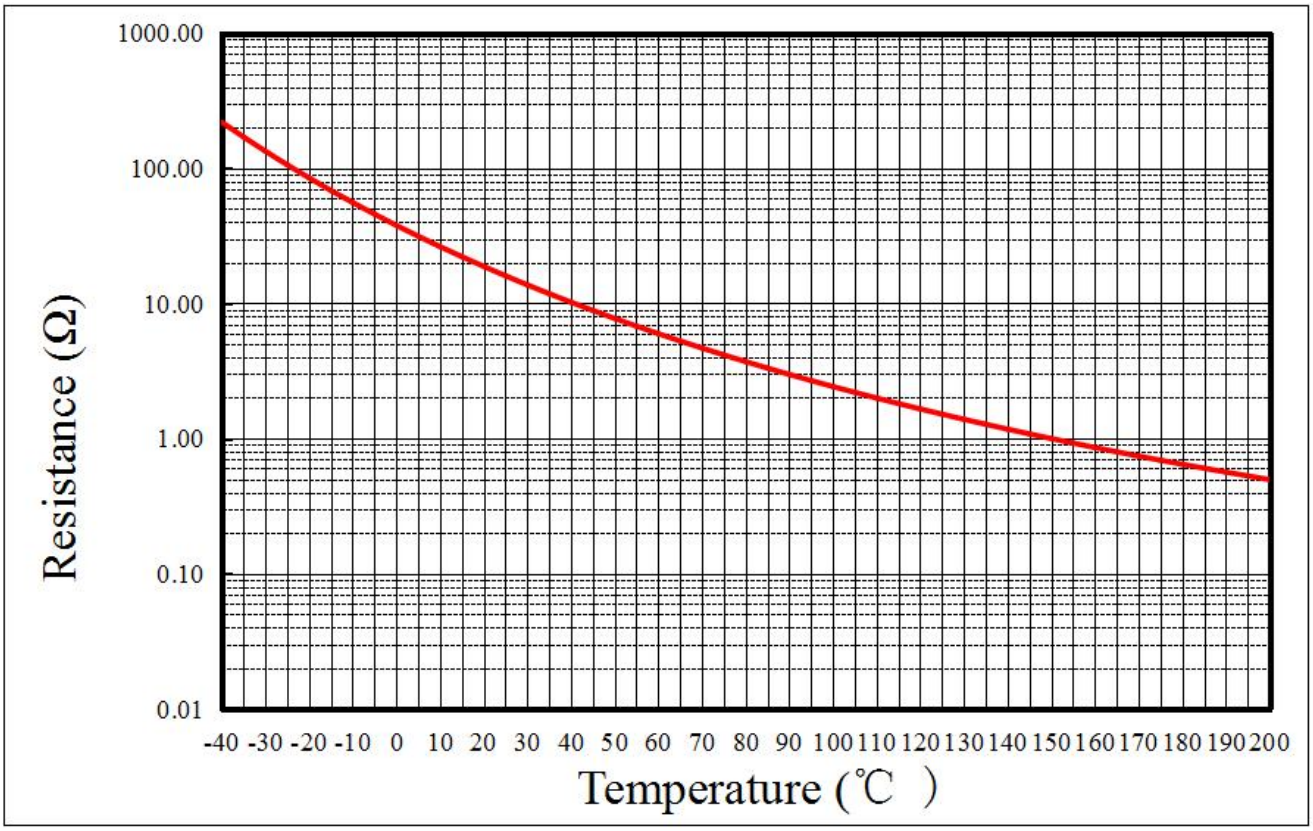
4.0 电气性能 Performance Specification

项目 Item	性能要求 Specification request
1.标称电阻(25℃±1℃) Resistance Value	12Ω±20%
2.最大稳态电流(25℃) Max Steady State Current	1A
3.热时间常数(约) Thermal Time Constant	27S
4.耗散系数(约) Thermal Dissipation Constant	16mW / ℃
5.工作温度 Operation Range	-40℃~+200℃
6.最大电流时近似电阻值（Ω） Approxi mate resistance vlue at maximum	0.816
7.最大冲击电容量（uf/240V） Max Shock Capacity	150

5.0 电气性能及可靠性(electrical Properties and requirements)

项目 Item	试验条件 Test conditions	性能要求 Specification request
零功率电阻值 Zero Power Resistance	在 25℃下,当由于电阻体内部发热引起的电阻值变化相对于总测量误差可以忽略不计时所测得的电阻值。	见电性特性参数 See Electrical Parameters
B 值 B-Value	B 值可以用 25℃和 50℃时的零功率电阻值计算出来。其计算公式是: $B=\frac{T1*T2}{T2-T1}*\ln\left(\frac{R1}{R2}\right)$ The B Value can be calculated using the zero Power resistance value at 25℃ and 50℃. The eqution is as above	见电性特性参数 See Electrical Parameters
热耗散系数 Thermal Dissipation Constant	在规定的温度下,热敏电阻中耗散的功率变化与热敏电阻相应温度变化之比。其单位:mw/℃ The ratio of the change of the dissipation power to the corresponding change of the temperature at specified temperature. The unit is:mw/℃	见电性特性参数 See Electrical Parameters
热时间常数 Thermal Time Constant	在零功率条件下,当温度发生变化时,热敏电阻的温度变化为其初始的和最终的温度差的 63.2%所需的时间。 Under zero power condition, Thermal Time constant is the time required by a thermistor that its body temperature reach 63.2%of the difference between its initial and final termperature	见电性特性参数 See Electrical Parameters
引出端强度 leads terminal tensile strength	在引出端一边施加 1.0kg 拉力,10 秒 Rasten body with a load applied to each 1.0kg for 10 sec.	无可见损伤 电阻变化率:±20% No break out and damage Resistance change:within ±20%
引出端变曲强度 leads terminal bend strength	固定电阻体,在一根引出端悬挂 0.5kg 重力变曲 90°;然后再回复,再把方向弯曲 90°, Fixed body and hang 0.5kg on one terminal, bend 90° them back, again in opposite	无可见损伤 电阻变化率:±20% No break out and damage Resistance change:within ±20%

振动 vibration	频率：10~50Hz 振幅：1.55mm 方向和时间：X、Y 及 Z 轴各 2 小时 Frequency:10~50Hz Amplitude modulation:1.55mm Dirction and time:X、Y and Z direction for 2 hrs each	无机械损伤 No substantial damage
可 焊 性 Solderability	焊 锡 槽 温 度：235±5℃ Temperature: 235±5℃ 时 间：3S Time: 3S	涂布面积：≥98% Covered termination: ≥98%
耐焊接热 Solder ability	把引端浸入 350±10℃的焊锡 4.0±0.8mm 深，持续 3.0±0.5 秒时间，静置 24 小时后测试 the leadwinres shall be dipped in a molten solder of 350±10℃ for 3.0±0.5 seconds up to the point 4.0±0.8mm.after the specimen shall be left at room ambient temperature for 24 hours,the resistance shall be measured	电阻变化率：±10% Resistance change:within ±10%
高温放置 （高温保存） Dry heat (high temperature storage)	在 125±2℃中放置 1000+48 小时，静置 2 小时后测试 0 Specimen shall be subjected to an ambient of 125±2℃ for 1000+48hours.and after the specimen 0 shall be left at room ambient for 1 to 2 hours,the resistance shall be measured	电阻变化率： ±10% Resistance change: within ±10%
低温放置 （低温保存） Cold (low temperature storage)	在－40±3℃中放置 1000+48 小时，静置 2 小时后测试 0 Specimen shall be subjected to an ambient of -40±3℃ For 1000+48 hours.and after the specimen 0 shall be left at room ambient for 1 to 2 hours,the resistance shall be measured	电阻变化率： ±10% Resistance change: within ±10%
稳态湿热 humidity test	40±2℃ 95%RH,1000HR	电阻变化率：±10% Resistance change: within ±10%

温度快速变化 Temp Cycle test	-40℃/30´ → 25℃/5´ → +125℃/30´ → 25℃/5´	电阻变化率：±20% Resistance change: within ±20%
工作温度 Operating Temperature	热敏电阻器长期连续工作所允许的温度范围。 Allowable temperature range while the thermistor work continuously for long time	-40C+200℃
储存条件 Storage Conditions	-10℃~40℃ RH≤75%	

6.0 R-T 关系图