

产品承认书

PRODUCT SPECIFICATION FOR APPROVAL

客 户 名 称 CUSTOMER NAME	
客 户 料 号 P/N OF CUSTOMER	
承 认 字 号 APPROVAL NO.	
产 品 类 别 PRODUCT CATEGORY	功率型负温度系数热敏电阻 POWER TYPE NTC THERMISTORS
产 品 名 称 PRODUCT NAME	PN1R3D9
规 格 型 号 TYPE SPECIFICATION	PN1R3D9S290SEFD
承 认 书 版 本 号 APPROVAL SHEET VERSION	1.0
产 品 环 保 符 合 PRODUCT ENVIRONMENTAL COMPLIANCE	☐ RoHS 2.0 ☐ HF ☐ REACH
承 认 日 期 DATE OF APPROVAL	

供 应 商 SUPPLIER		
制 定 DESIGNED	审 核 CHECKED	批 准 APPROVED
供应商品管部印鉴 SUPPLIER QA SEAL		

客 户 CUSTOMER		
检 验 INSPECTED	审 核 CHECKED	批 准 APPROVED
客户承认印鉴 CUSTOMER APPROVAL SEAL		



修订履历

[illegible]

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1、规格型号 PART IDENTIFICATION

PN	1R3	D9	S	17	S	E	FD
①	②	③	④	⑤	⑥	⑦	⑧

① 产品类别 PART NUMBER ENTIFICATION	PN 指功率型负温度系数热敏电阻；
	PN REFERS TO POWER TYPE NEGATIVE TEMPERATURE COEFFICIENT THERMISTOR
② 25℃零功率阻值 ZERO POWER RESISTANCE AT 25℃	1R3指 1.3Ω；
	1R3 REFERS TO 1.3Ω;
③ 产品系列 PRODUCT SERIES	D9指D9系列；
	D9 REFERS TO THE D9 SERIES
④ 引脚形状 PIN SHAPE	S指直脚
	S IS FOR STRAIGHT FEET
⑤ 引线长度 LEAD LENGTH	290指粉脚下切引线长度≥29mm；
	290 FINGER POWDER FOOT CUTTING LEAD LENGTH ≥29MM;
⑥ 封装材料 ENCAPSULATION MATERIAL	S 指头部包封料为硅树脂；
	S REFERS TO THE HEAD ENVELOPING MATERIAL IS SILICONE
⑦ 环保产品 ECO-FRIENDLY PRODUCTS	E 表示环保；
	E MEANS ENVIRONMENTAL PROTECTION
⑧ 特殊定义 SPECIAL DEFINITION	FD指产品导线直径为0.8mm，脚距5.0mm。
	FD REFERS TO THE CONDUCTOR DIAMETER OF THE PRODUCT IS 0.8MM AND THE FOOT DISTANCE IS 5.0MM.

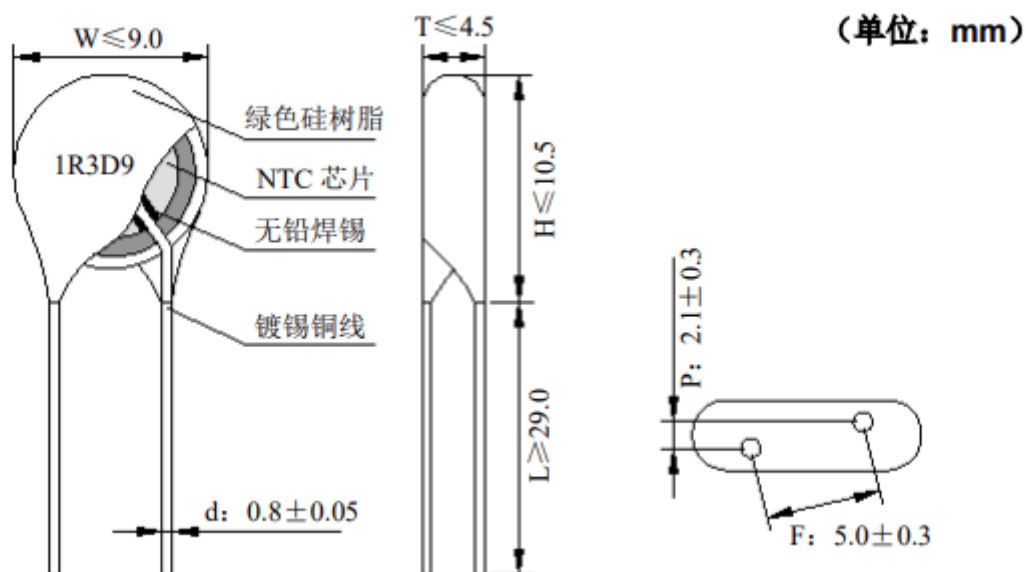
2、产品特性 PRODUCTION FEATURES

2.1 技术参数 TECHNICAL PARAMETER

规格型号 SPECIFICATIONS AND MODELS	PN1R3D9S290SEFD
额定零功率电阻值 R25(Ω) RATED ZERO POWER RESISTANCE VALUE R25(Ω)	1.3
残余电阻(Ω) RESIDUAL RESISTANCE(Ω)	0.074
最大稳态电流 (A) MAXIMUM STEADY-STATE CURRENT (A)	5
最大额定功率 (W) MAXIMUM POWER RATING (W)	2.0
耗散系数 (mw/°C) DISSIPATION FACTOR	16
热时间常数(S) THERMAL TIME CONSTANT (S)	38
工作温度范围 (°C) OPERATING TEMPERATURE RANGE (°C)	-40 ~ 170

2.2 外形尺寸、材质 PRODUCTION DIMENSION、MAATERIAL

(单位UNIT: MM)



备注: 长脚产品脚距测量粉体一下2mm以内, 且长脚产品出厂后存在变形的风险。

NOTE: THE FOOT DISTANCE OF THE LONG FOOT PRODUCT IS LESS THAN 2MM FROM THE MEASURED POWDER, AND THE LONG FOOT PRODUCT HAS THE RISK OF DEFORMATION AFTER LEAVING THE FACTORY.

3、检验规则 INSPECTION REGULATIONS

3.1 出厂检验 DELIVERY INSPECTION

序号 SEQUENCE	检验项目 ITEMS	检验方法 METHOD	性能要求 PERFORMANCE REQUIREMENTS
(1)	R ₂₅	将待测品置于 25℃ 高精度油槽内稳定后测量 IMMERSE SAMPLES IN A 50℃ HIGH-PRECISION OIL TANK AND MEASURE IT	1.3Ω±20%
(2)	外观 APPEARANCE	目视检查 VISUAL INSPECTION	产品符合 2.2 的外形要求，标识清晰，无破裂、针孔、严重变形、污点等 THE PRODUCT MEETS THE SHAPE REQUIREMENTS OF 2.2, WITH CLEAR IDENTIFICATION, ON CRACKS, PINHOLES, SERIOUS DEFORMATION, STAINS, ETC.
(3)	尺寸 DIMENSION	用精度不小于 0.01MM 的卡尺测量 MEASURE WITH A CALIPER WITH AN ACCURACY OF 0.02MM	符合图 2.2 的外形尺寸 MEETS THE SHAPE REQUIREMENTS OF THE DRAWING 2.2

(4)	可焊性 SOLDERABILITY	焊接温度 WELDING TEMPERATURE: $245\pm5^{\circ}\text{C}$; 浸入时间; IMMERSION TIME: $3\pm1\text{s}$	着锡面积 TIN AREA $\geq 95\%$
(5)	耐焊性 WELDING RESISTANCE	焊接温度 WELDING TEMPERATURE: $260\pm10^{\circ}\text{C}$; 浸入时间 IMMERSION TIME: $10\pm1\text{s}$	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 10\%$

3.2 型式检验 PATTERN INSPECTION

序号 SEQUENCE	检验项目 ITEMS	检验标准 STANDARD	检验方法 INSPECTION METHOD	性能要求 PERFORMANCE REQUIREMENTS
(1)	高温存储 HIGH-TEMPERATURE STORAGE	IEC68-2-2/ CNS5550	温度 TEMPERATURE: $170\pm2^{\circ}\text{C}$ 时间 TIME: $1000\pm24\text{h}$;	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 20\%$
(2)	冷热冲击 HOT AND COLD SHOCKS	IEC68-2-14	温度 TEMPERATURE: -40°C , $+150^{\circ}\text{C}$; 周期 PERIOD: 100,30min/cyc;	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 20\%$
(3)	低温存储 CRYOGENIC STORAGE	IEC68-2-1	温度 TEMPERATURE: $-40\pm2^{\circ}\text{C}$; 时间 TIME: $1000\pm24\text{h}$	无外观损伤 NO COSMETIC DAMAGE $ \Delta R_{25}/R_{25} \leq 20\%$

(4)	绝缘电阻测试 INSULATION RESISTANCE TEST	MIL-STD- 202F- Method 302	绝缘电压 INSULATION VOLTAGE: 500V _{DC} ; 时间 TIME: 1 min	无外观损伤 NO COSMETIC DAMAGE 绝缘电 阻 INSULATION RESISTANCE: ≥200MΩ
(5)	耐久性 DURABILITY	UL1434	环境温度 ENVIRONMENTAL TEMPERATURE: 25±2°C; 额定电压, 额定电流, 额定电容 RATED VOLTAGE,RATED CURRENT,RATED CAPACITANCE: 240V _{AC} 下的电容值周期 THE CAPACITANCE UNDER 240VAC 周期PERIOD: 6000	无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25}/$ R_{25} ≤20%

4、包装、贮存 PACKAGE & STORAGE

4.1 包装 PACKAGE

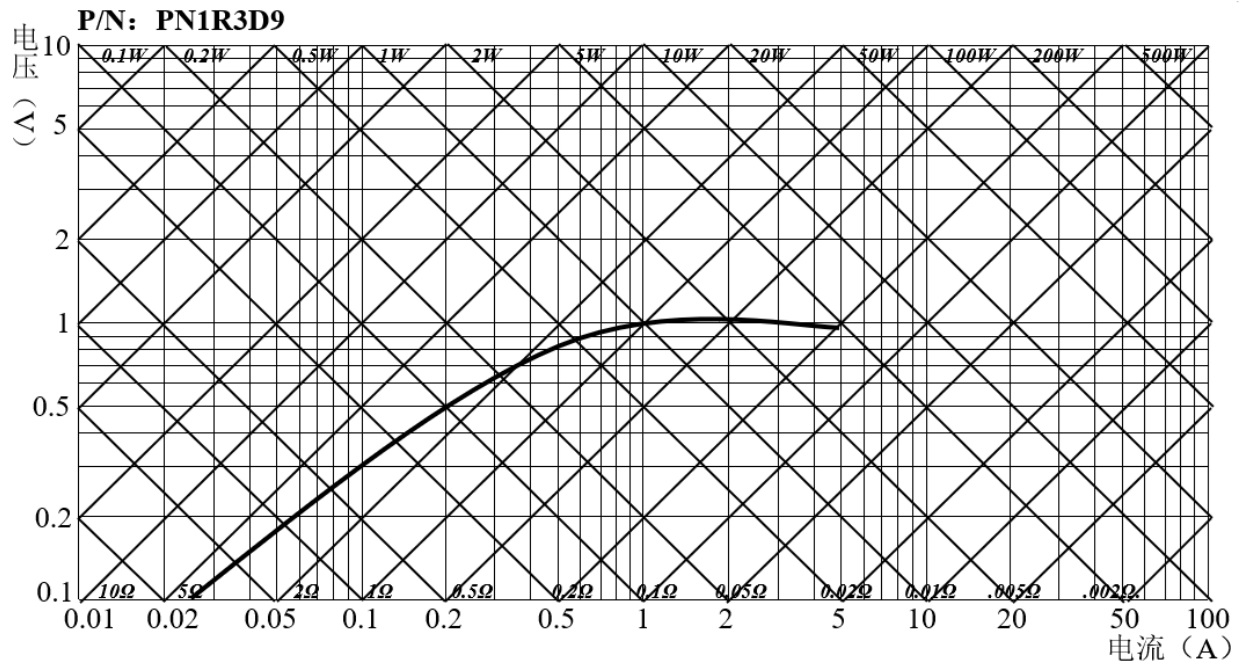
序号 SEQUENCE	包装方式 PACKAGING	包装材料、尺寸 PACKAGING MATERIAL & DIMENSION	产品数量 PART QUANTITY
(1)	包装袋 PACKING BAG	自封袋 ZIPLOCK BAG	500PCS
(2)	内包装盒 INNER PACKING BOX	纸箱 CARTON, L×W×H=185mm×70mm×190mm	
(3)	外包装箱 OUTER PACKING BOX	纸箱 CARTON, L×W×H=370mm×205mm×215mm	

4.2 贮存 STORAGE

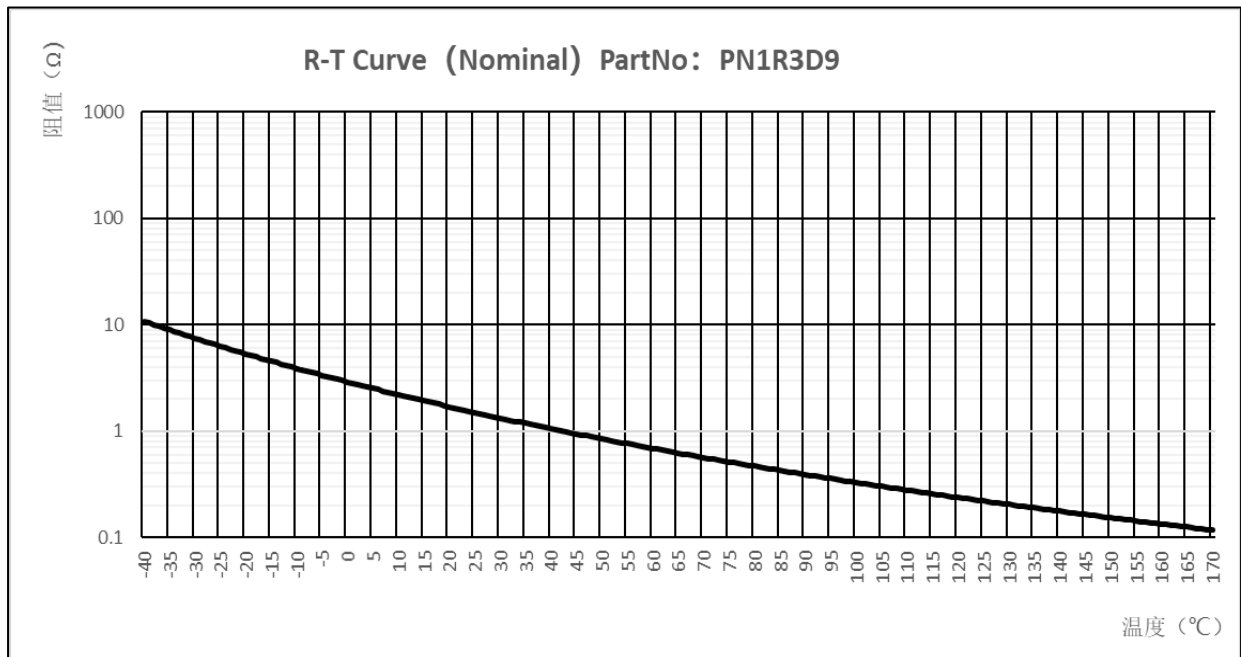
产品密封保存，存放产品的仓库环境温度 - 10℃ ~ + 40℃、相对湿度不大于 70%，仓库内不允许有各种有害气体、易爆的产品及有腐蚀性的化学物品，并且无强烈的机械振动、冲击和强辐射的作用，包装箱应垫高地面至少 20cm，距离墙壁、热源、冷源、窗口或空气入口至少 50cm。

- ★ THIS PRODUCT MUST BE KEPT SEALED.
- ★ STORE IN AN ORDINARY ENVIRONMENT (NORMAL ROOM TEMPERATURE, HUMIDITY AND ATMOSPHERIC PRESSURE).
- ★ STORAGE TEMPERATURE: -10℃~+40℃
- ★ RELATIVE HUMIDITY: ≤70%RH
- ★ KEEP AWAY FROM CORROSIVE GASES, DEOXIDIZING GAS, FLAMMABLE GAS OR DIRECT SUNLIGHT.
- ★ AVOID STRONG MECHANICAL VIBRATION, SHOCK.
- ★ THE PACKING BOX SHOULD BE RAISED AT LEAST 20CM ABOVE THE GROUND AND AT LEAST 50CM AWAY FROM THE WALL, HEAT SOURCE, COLD SOURCE, WINDOWS OR AIR INLET.
- ★ ABNORMAL STORAGE AND OPERATING CONDITIONS MAY CAUSE MALFUNCTION FUNCTION OR FAILURE OF OUR PRODUCTS.

5、电压 - 电流特性曲线 VOLTAGE-CURRENT CHARACTERISTIC CURVE



6、电压 - 电流特性曲线 RESISTANCE-TEMPERATURE CHARACTERISTIC CURVE



7、硅树脂使用注意事项PRECAUTIONS FOR USING SILICONE RESIN

7.1 此涂装材料为硅树脂，相当坚固，但韧性较差，如受不正当外力的情况下，（如搬运重摔、引脚向外掰、插PCB板孔径不对、作用力不当的掰引脚）可能会产生脚裂、本体破损的现象；

THIS COATING MATERIAL IS SILICONE, QUITE STRONG, BUT POOR TOUGHNESS, SUCH AS THE CASE OF IMPROPER EXTERNAL FORCE, (SUCH AS HANDLING HEAVY FALL, PIN OUT, INSERT PCB BOARD APERTURE IS WRONG, IMPROPER FORCE OF THE PIN) MAY PRODUCE FOOT CRACK, BODY DAMAGE PHENOMENON;

7.2 因硅树脂的材料特性，产品在运输过程中，因摩擦易出现摩擦痕迹现象，但易人工擦除，且此现象完全不会影响产品特性。

DUE TO THE MATERIAL CHARACTERISTICS OF SILICONE RESIN, THE PRODUCT IN THE PROCESS OF TRANSPORTATION, DUE TO FRICTION, FRICTION TRACES ARE EASY TO APPEAR, BUT EASY TO MANUALLY ERASE, AND THIS PHENOMENON WILL NOT AFFECT THE PRODUCT CHARACTERISTICS.