

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 | PN1R5D7 |
| 规格型号 TYPE SPECIFICATION | PN1R5D7F028SEHD |
| 承认书版本号 APPROVAL SHEET VERSION | 1.0 |
| 产品环保符合 PRODUCT ENVIRONMENTAL COMPLIANCE | <input checked="" type="checkbox"/> RoHS 2.0 <input checked="" type="checkbox"/> HF <input checked="" type="checkbox"/> 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 | | |

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1、规格型号 PART IDENTIFICATION

PN 1R5 D7 F 028 S E HD
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

| | |
|--|--|
| <p>① 产品类别 PART NUMBER IDENTIFICATION</p> | <p>PN 指功率型负温度系数热敏电阻; PN REFERS TO POWER TYPE NEGATIVE TEMPERATURE COEFFICIENT THERMISTOR</p> |
| <p>② 25°C零功率阻值 ZERO POWER RESISTANCE AT 25°C</p> | <p>1R5指 1.5Ω; 1R5 REFERS TO 1.5Ω;</p> |
| <p>③ 产品系列 PRODUCT SERIES</p> | <p>D7指D7系列; D7 REFERS TO THE D7 SERIES</p> |
| <p>④ 引脚形状 PIN SHAPE</p> | <p>F指前后弯 F MEANS BEND BACK AND FORTH</p> |
| <p>⑤ 引线长度 LEAD LENGTH</p> | <p>028指折弯下切脚长度为2.8mm; 028 FINGER BENDING LOWER CUTTING FOOT LENGTH IS 2.8MM:</p> |
| <p>⑥ 封装材料 ENCAPSULATION MATERIAL</p> | <p>S 指头部封装料为硅树脂; S REFERS TO THE HEAD ENVELOPING MATERIAL IS SILICONE</p> |
| <p>⑦ 环保产品 ECO-FRIENDLY PRODUCTS</p> | <p>E 表示环保; E MEANS ENVIRONMENTAL PROTECTION</p> |
| <p>⑧ 特殊定义 SPECIAL DEFINITION</p> | <p>HD指产品导线直径为0.6mm，脚距5.0mm，头部加热缩套管。 HD REFERS TO THE DIAMETER OF THE PRODUCT WIRE IS 0.6MM, THE FOOT DISTANCE IS 5.0MM, AND THE HEAD IS HEATED AND SHRUNK.</p> |

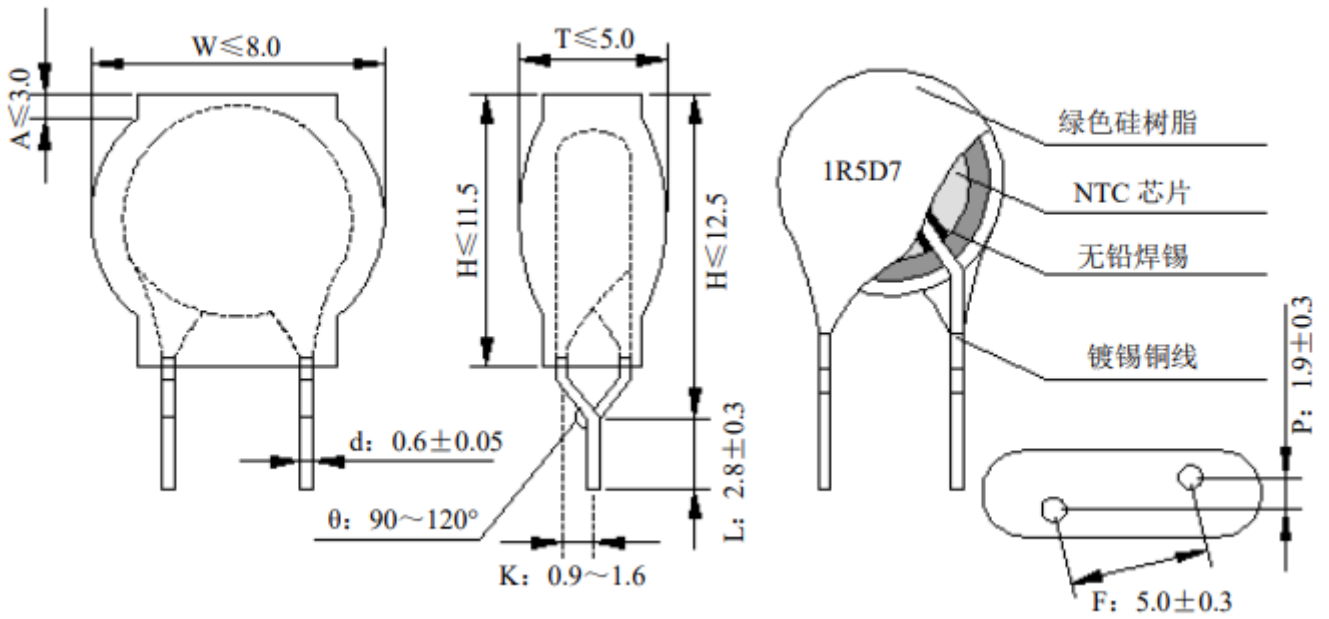
2、产品特性 PRODUCTION FEATURES

2.1 技术参数 TECHNICAL PARAMETER

| | |
|---|-----------------|
| 规格型号 SPECIFICATIONS AND MODELS | PN1R5D7F028SEHD |
| 额定零功率电阻值 R25(Ω) RATED ZERO POWER RESISTANCE VALUE R25(Ω) | 1.5 |
| 残余电阻(Ω) RESIDUAL RESISTANCE(Ω) | 0.275 |
| 最大稳态电流 (A) MAXIMUM STEADY-STATE CURRENT (A) | 5 |
| 最大额定功率 (W) MAXIMUM POWER RATING (W) | 4.6 |
| 耗散系数 (mw/ $^{\circ}\text{C}$) DISSIPATION FACTOR | 9 |
| 热时间常数(S) THERMAL TIME CONSTANT (S) | 27 |
| 工作温度范围 ($^{\circ}\text{C}$) OPERATING TEMPERATURE RANGE ($^{\circ}\text{C}$) | -40 ~ 125 |

2.2 外形尺寸、材质 PRODUCTION DIMENSION、MAATERIAL

(单位UNIT: MM)



备注: 热缩套管 耐温125°C、600V

NOTE: HEAT SHRINK CASING CAN WITHSTAND 125°C, 600V

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°C HIGH-PRECISION OIL TANK AND MEASURE IT | 1.5Ω±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 的游标卡尺测量 MEASURE WITH VERNIER CALIPER WITH ACCURACY NOT LESS THAN 0.01MM | 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±5°C; 浸入时间; IMMERSION TIME: 3±1s | 着锡面积 TIN AREA ≥95% |
| (5) | 耐焊性 WELDING RESISTANCE | 焊接温度 WELDING TEMPERATURE: 260±10°C; 浸入时间 IMMERSION TIME: 10±1s | 无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25}/R_{25}$ ≤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±2°C 时间 TIME: 1000±24h; | 无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25}/$ R_{25} ≤20% |
| (2) | 冷热冲击 HOT AND COLD SHOCKS | IEC68-2-14 | 温度 TEMPERATURE: -40°C, +150°C; 周期 PERIOD: 100,30min/cyc; | 无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25}/$ R_{25} ≤20% |
| (3) | 低温存储 CRYOGENIC STORAGE | IEC68-2-1 | 温度 TEMPERATURE: -40±2°C; 时间 TIME: 1000±24 h | 无外观损伤 NO COSMETIC DAMAGE $\Delta R_{25}/$ R_{25} ≤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

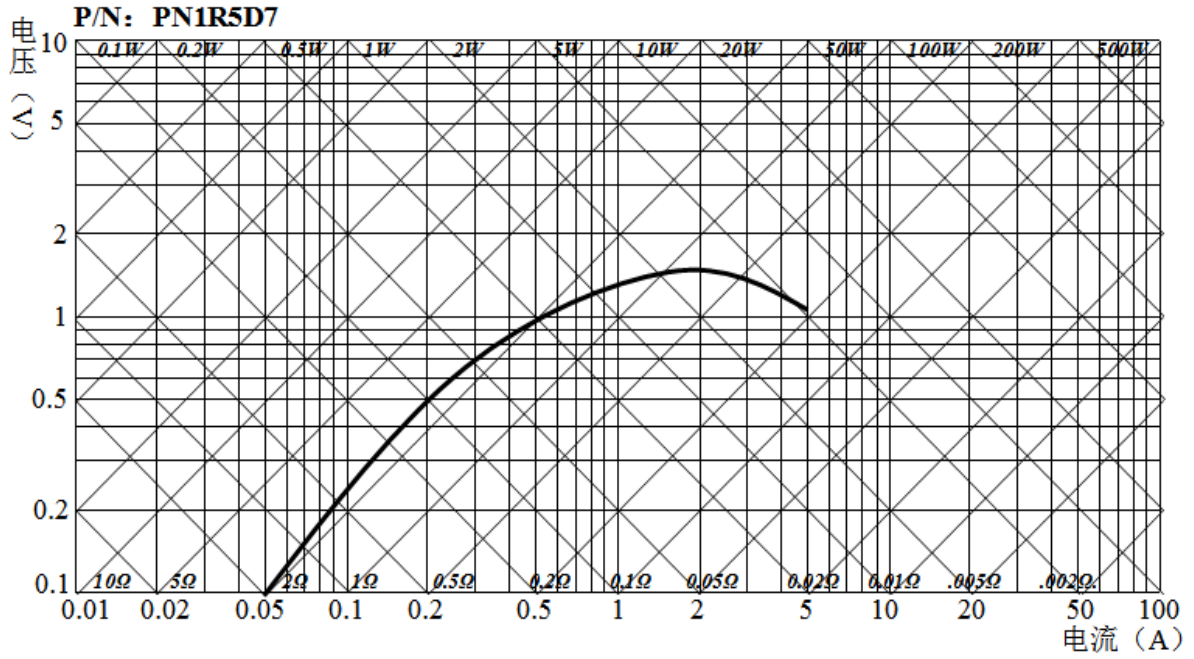
| 序号 SEQUENCE | 包装方式 PACKAGING | 包装材料、尺寸 PACKAGING MATERIAL & DIMENSION | 产品数量 PART QUANTITY |
|----------------|---------------------------|---|-----------------------|
| (1) | 包装袋 PACKING BAG | 自封袋 ZIPLOCK BAG | 1000PCS |
| (2) | 内包装盒 INNER PACKING BOX | 纸箱 CARTON, L×W×H=185mm×70mm×190mm | |
| (3) | 外包装箱 OUTER PACKING BOX | 纸箱 CARTON, L×W×H=370mm×205mm×215mm | |

4.2 贮存 STORAGE

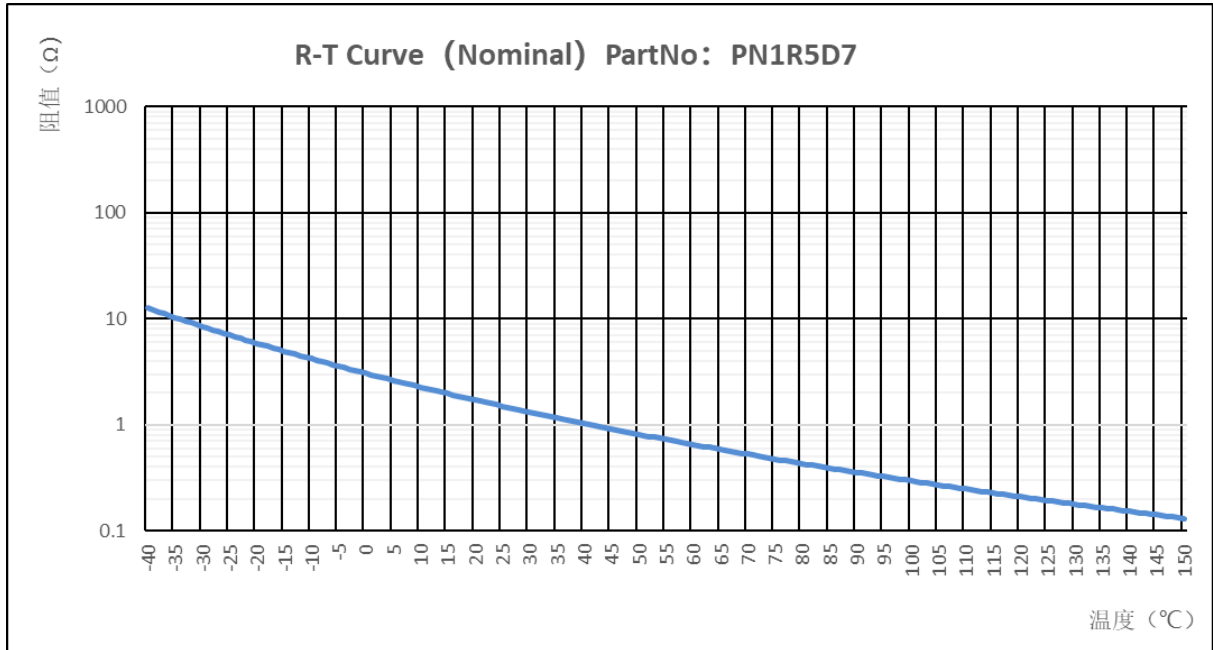
产品密封保存，存放产品的仓库环境温度 -10°C ~ +40°C、相对湿度不大于 70%，仓库内不允许有各种有害气体、易爆的产品及有腐蚀性的化学物品，并且无强烈的机械振动、冲击和强辐射的作用，包装箱应垫高地面至少 20cm，距离墙壁、热源、冷源、窗口或空气入口至少 50cm。

- ★ THIS PRODUCT MUST BE KEPT SEALED.
- ★ STORE IN AN ORDINARY ENVIRONMENT (NORMAL ROOM TEMPERATURE, HUMIDITY AND ATMOSPHERIC PRESSURE).
- ★ STORAGE TEMPERATURE: -10°C ~ +40°C
- ★ 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.