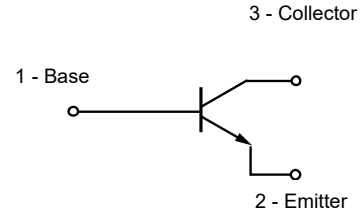


Feature

This device is Pb-Free, Halogen Free/BFR Free and RoHS compliant.

- Package: SOT-723
- Emitter -Base Breakdown Voltage 11V
- Low Saturation Voltage 80mv
- 0.15 continuous collector current
- NPN switch transistor



Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness : ≤3mil

Electrical characteristics per line@25°C(unless otherwise specified)

| Parameter | Symbol | Value | Units |
|-------------------------------------|---------------|---------|-------|
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 50 | V |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 80 | V |
| Emitter -Base Breakdown Voltage | $V_{(BR)EBO}$ | 11 | V |
| Collector Current | I_C | 0.15 | A |
| Total Dissipation @25°C | P_{tot} | 0.15 | W |
| Storage Temperature | T_{stg} | -65~150 | °C |
| Max. Operating Junction Temperature | T_j | 150 | °C |

Absolute maximum rating@25°C

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---------------------------------------|---------------|----------------------------------|------|------|------|---------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C=50\mu A$ | 80 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C=1mA$ | 50 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E=50\mu A$ | | 11 | | V |
| Collector Cut-off Current ($I_E=0$) | I_{CBO} | $V_{CB}=60V$ | | | 0.1 | μA |
| Emitter Cut-off Current ($I_C=0$) | I_{EBO} | $V_{EB}=7V$ | | | 0.1 | μA |
| DC Current Gain | h_{FE} | $I_C=1mA, V_{CE}=6V$ | 200 | | 350 | - |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=50mA, I_B=5mA$ | - | 0.08 | | V |
| Transition frequency | f_T | $V_{CE}=12V, I_E=-2mA, f=100MHz$ | | 200 | | MHz |
| Output Capacitance | C_{ob} | $V_{CE}=12V, I_E=0mA, f=1MHz$ | | 2 | 3.5 | pF |

Typical Characteristics

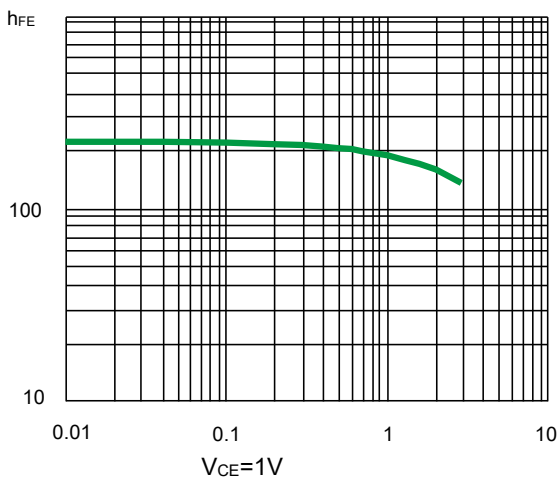


Fig1.DC Current Gain

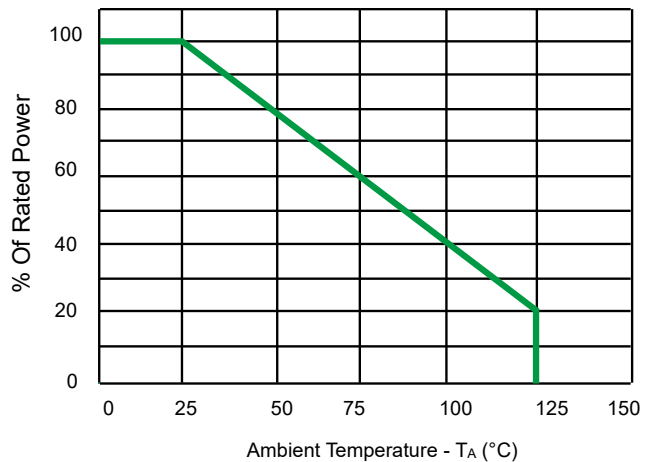


Fig2. Power Derating Curve

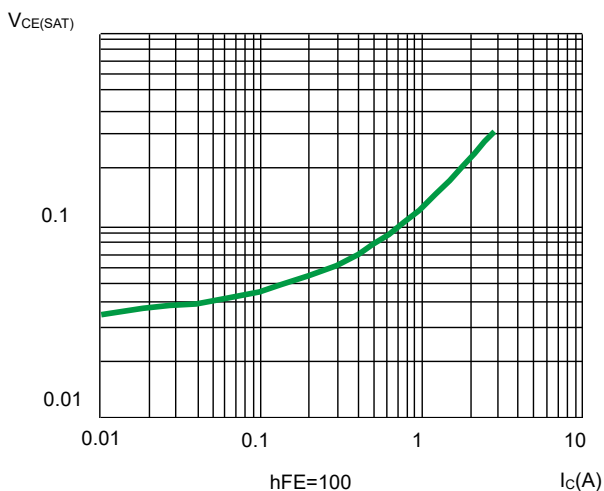


Fig 3.Collector-Emitter Saturation Voltage

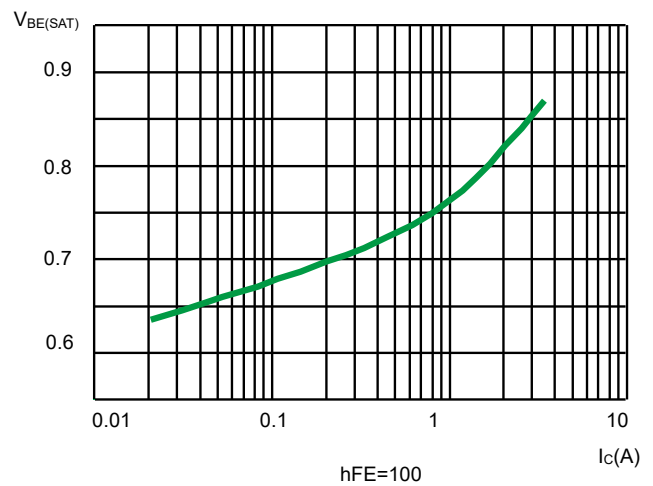


Fig4. Base-Emitter Saturation Voltage

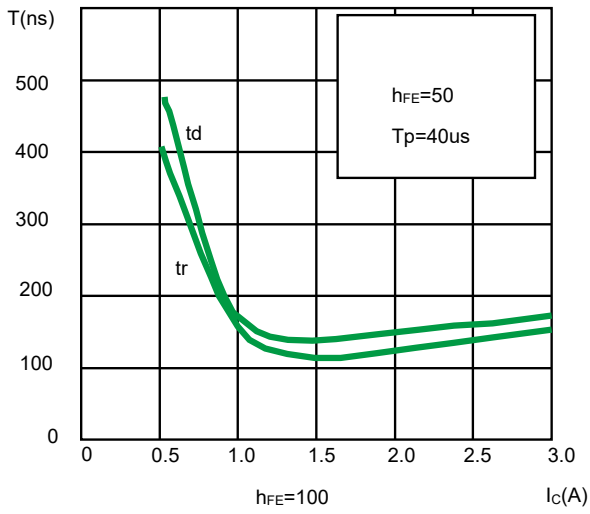


Fig 5. Switching Times Resistive Load

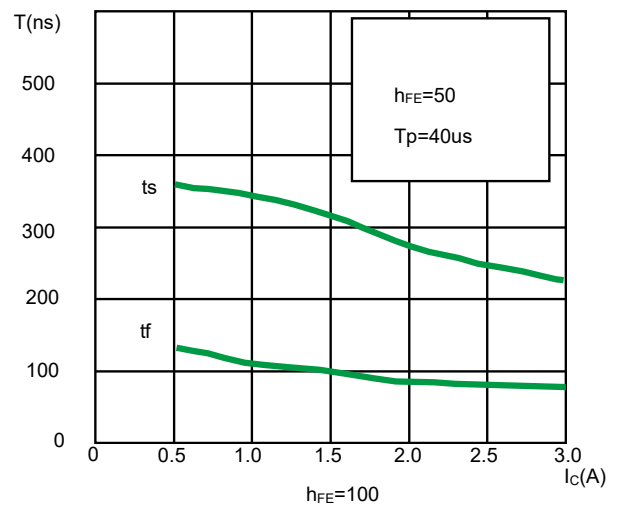
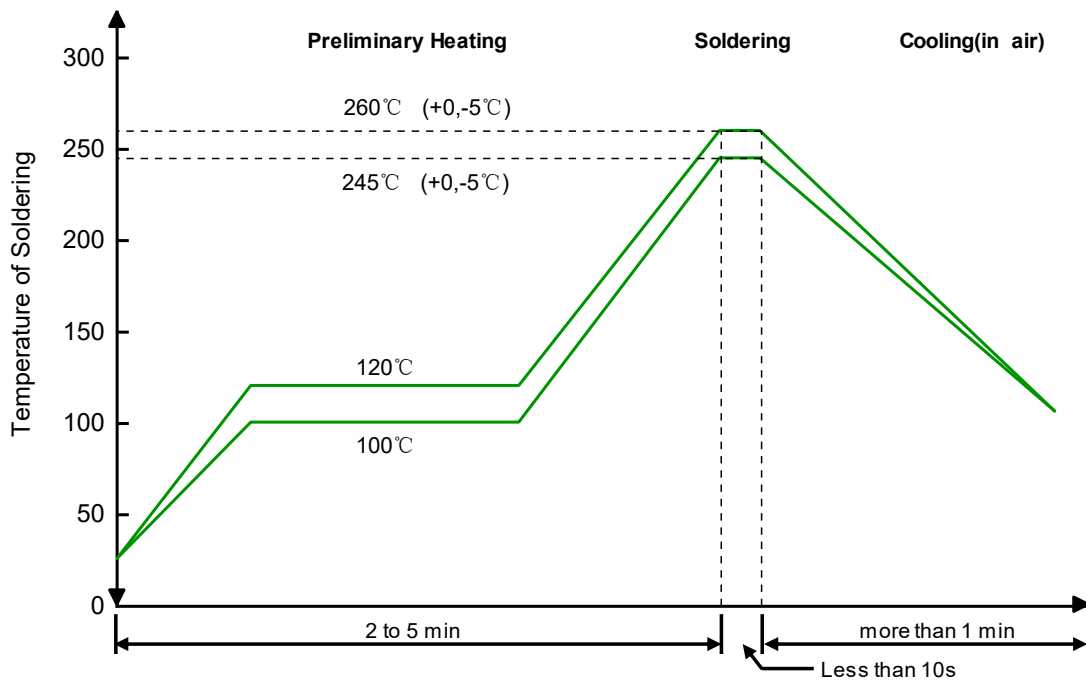


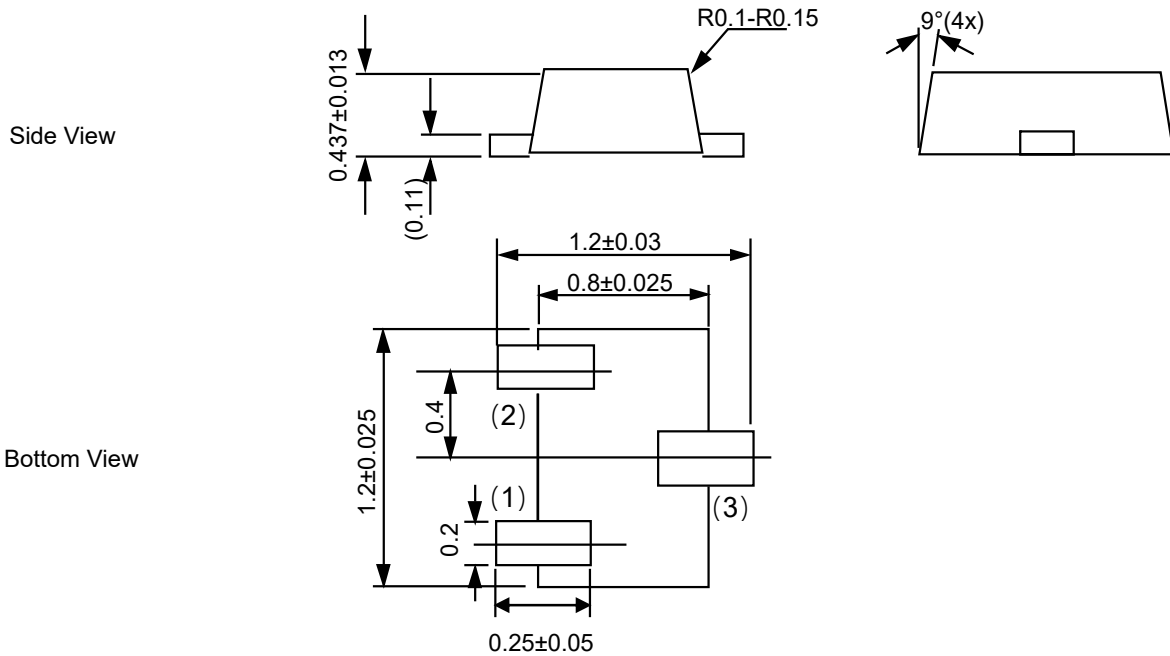
Fig6. Switching Times Resistive Load

Solder Reflow Recommendation

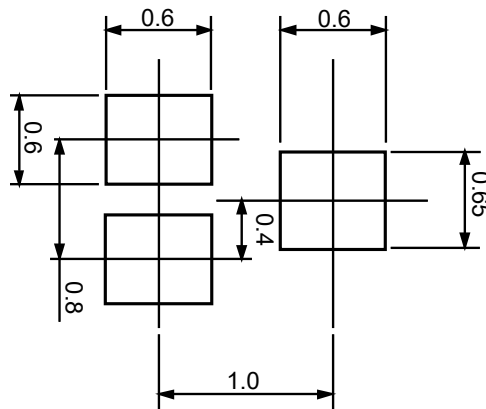


Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SOT-723)



Unit: mm

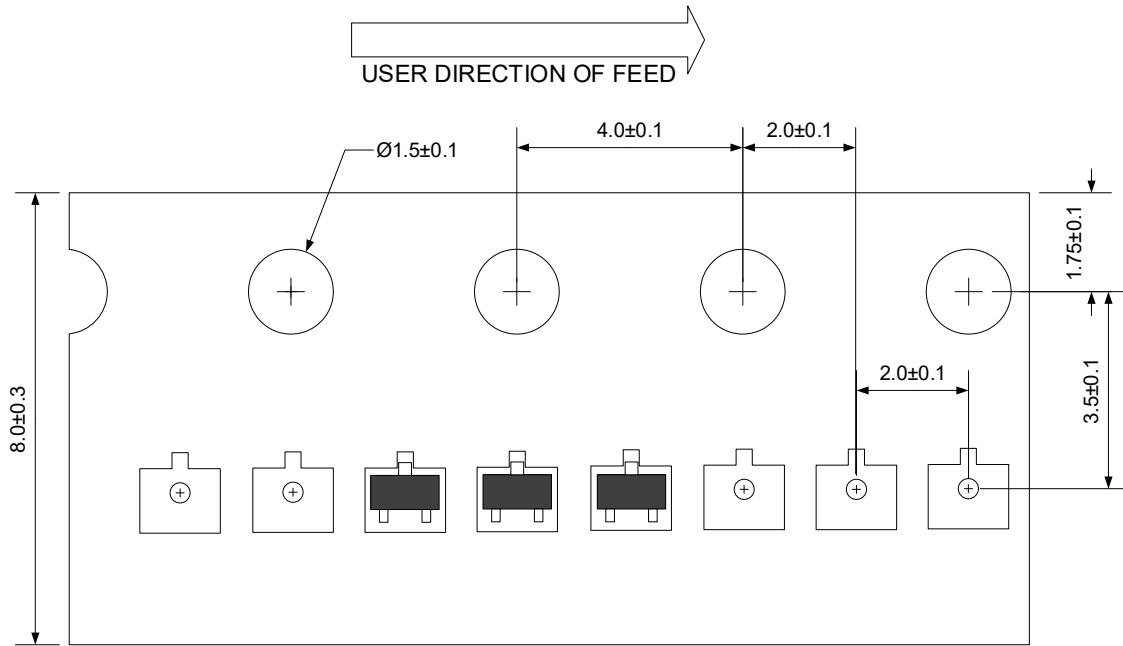


Unit: mm

Ordering information


| Device | Package | Shipping |
|----------------|-------------------|---------------------|
| PNT723T503E0-2 | SOT-723 (Pb-Free) | 10000 / Tape & Reel |

Load with information



Unit:mm


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