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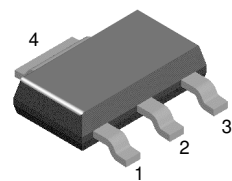
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



NZT749

PNP Current Driver Transistor

- This device is designed for power amplifier, regulator and switching circuit where speed is important.
- Sourced from process 5P.



SOT-223

1. Base 2, 4. Collector 3. Emitter

Absolute Maximum Ratings* $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|--|------------|------------------|
| V_{CEO} | Collector-Emitter Voltage | -25 | V |
| V_{CBO} | Collector-Base Voltage | -35 | V |
| V_{EBO} | Emitter-Base Voltage | -5.0 | V |
| I_C | Collector Current (DC) - Continuous | -4.0 | A |
| T_J, T_{STG} | Operating and Storage Junction Temperature Range | - 55 ~ 150 | $^\circ\text{C}$ |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- These ratings are based on a maximum junction temperature of 150 degrees C.
- These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|-------------------------------------|--------------------------------------|---|----------------|-------|---------------|
| Off Characteristics | | | | | |
| $V_{(BR)CEO}$ | Collector-Emitter Voltage | $I_C = -10\text{mA}, I_B = 0$ | -25 | | V |
| $V_{(BR)CBO}$ | Collector-Base Voltage | $I_C = -100\mu\text{A}, I_E = 0$ | -35 | | V |
| $V_{(BR)EBO}$ | Emitter-Base Voltage | $I_E = -10\mu\text{A}, I_C = 0$ | -5.0 | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = -30\text{V}, I_E = 0$ | | -100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB} = -4\text{V}, I_C = 0$ | | -0.1 | μA |
| On Characteristics * | | | | | |
| h_{FE} | DC Current Gain | $V_{CE} = -2.0\text{V}, I_C = -50\text{mA}$ $V_{CE} = -2.0\text{V}, I_C = -1.0\text{A}$ $V_{CE} = -2.0\text{V}, I_C = -2.0\text{A}$ | 70 80 65 | 300 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -1.0\text{A}, I_B = -100\text{mA}$ | | -0.3 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = -1.0\text{A}, I_B = -100\text{mA}$ | | -1.25 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -1.0\text{A}, V_{CE} = -2.0\text{V}$ | | -1.0 | V |
| Small Signal Characteristics | | | | | |
| f_T | Current gain Bandwidth Product | $V_{CE} = -5.0\text{V}, I_C = -50\text{mA}$ $f = 100\text{MHz}$ | 75 | | MHz |

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

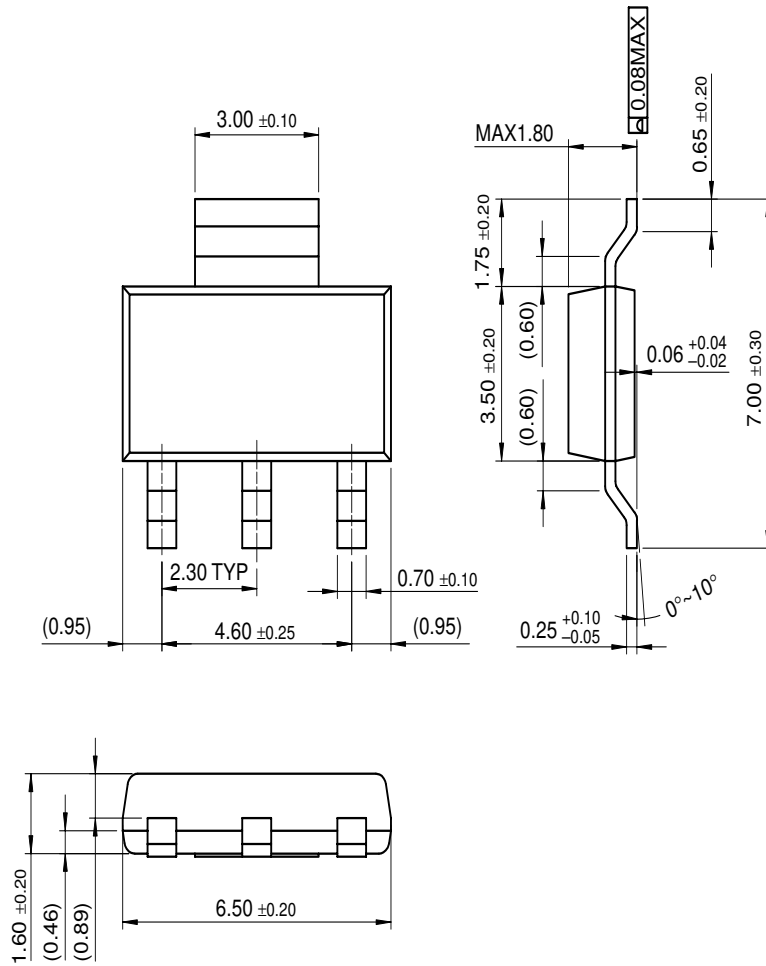
Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Max. | Units |
|-----------------|---|------------|---------------------------------|
| P_D | Total Device Dissipation Derate above 25°C | 1.2 9.7 | W $\text{mW}/^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 103 | $^\circ\text{C}/\text{W}$ |

Package Dimensions

NZT749

SOT-223



Dimensions in Millimeters

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|--------------------------|------------------------|---|
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