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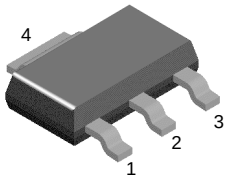
NZT749

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°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	°C

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

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

Electrical Characteristics T_a=25°C unless otherwise noted

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

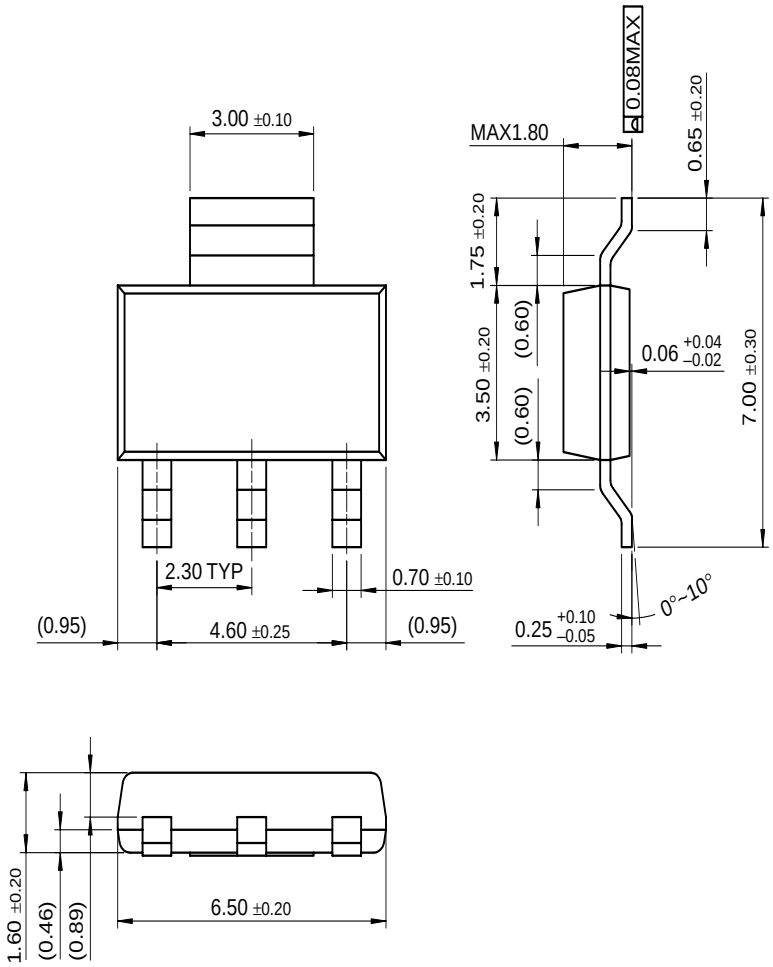
* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

Thermal Characteristics T_a=25°C unless otherwise noted

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

Package Dimensions

SOT-223



Dimensions in Millimeters

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