



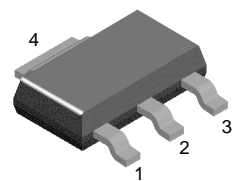
**THE DATASHEET OF
NZT6727**



NZT6727

PNP General Purpose Amplifier

- This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.0A.
- Sourced from process 77.



SOT-223

1. Base 2. Collector 3. Emitter

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

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{CBO}	Collector-Base Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current - Continuous	-1.5	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:

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

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)CEO}$	Collector-Emitter Sustaining Voltage *	$I_C = -10\text{mA}, I_B = 0$	-40		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -1.0\text{mA}, I_E = 0$	-50		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -100\mu\text{A}, I_C = 0$	-5.0		V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -50\text{V}, I_E = 0$		-0.1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -5.0\text{V}, I_C = 0$		-0.1	μA
On Characteristics					
h_{FE}	DC Current Gain	$I_C = -10\text{mA}, V_{CE} = -1.0\text{V}$ $I_C = -100\text{mA}, V_{CE} = -1.0$ $I_C = -1.0\text{A}, V_{CE} = -1.0\text{V}$	55 60 50	250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1.0\text{A}, I_B = -100\text{mA}$		-0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -1.0\text{A}, V_{CE} = -1.0\text{V}$		-1.2	V
Small Signal Characteristics					
h_{fe}	Small Signal current Gain	$I_C = -50\text{mA}, V_{CE} = -10\text{V}, f = 20\text{MHz}$	2.5	25	
C_{cb}	Collector-Base Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1.0\text{MHz}$		30	pF

* Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 1.0\%$

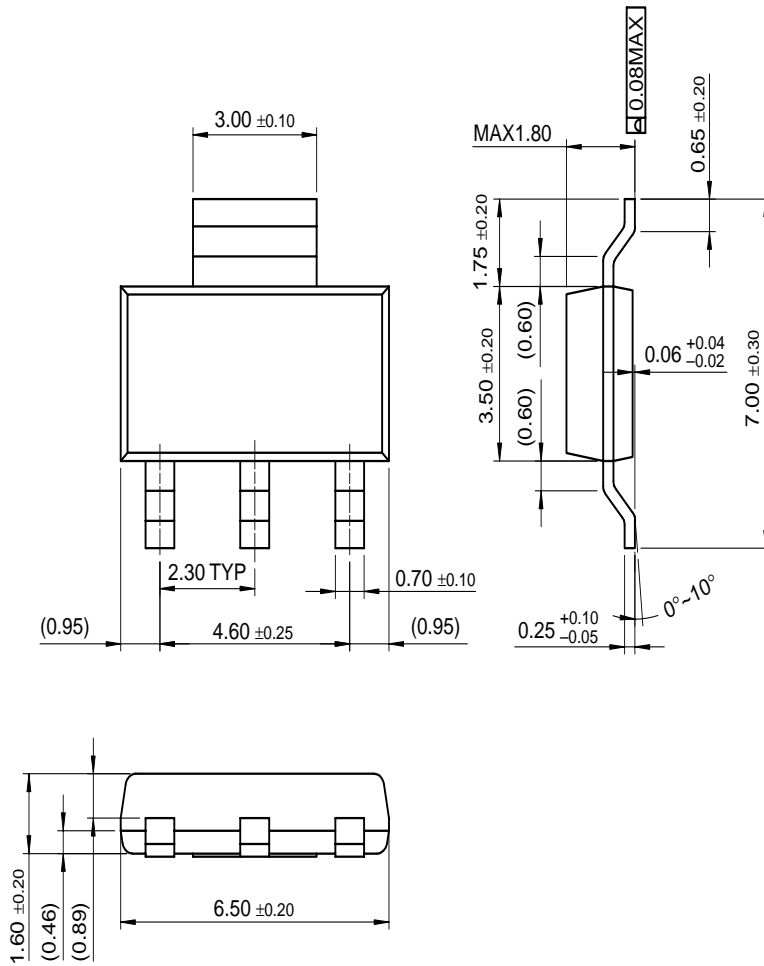
Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation	1.0	W
	Derate above 25°C	8.0	$\text{mW}/^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	125	$^\circ\text{C}/\text{W}$

* Device mounted on FR-4PCB 36mm x 18mm x 1.5mm; mounting pad for the collector lead min. 6cm^2 .

Package Dimensions

SOT-223



Dimensions in Millimeters

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