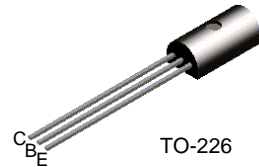


# ZTX749A

ZTX749A

## PNP Low Saturation Transistor

- This device are designed with high current gain and low saturation voltage with collector currents up to 2A continuous.



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

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	-35	V
$V_{CBO}$	Collector-Base Voltage	-45	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current - Continuous	-2	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  $150^\circ\text{C}$ .
- 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
<b>Off Characteristics</b>					
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$	-35		V
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}$	-45		V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -100\mu\text{A}$	-5		V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -30\text{V}$ $V_{CB} = -30\text{V}, T_A = 100^\circ\text{C}$		-100 -10	nA $\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -4\text{V}$		-100	nA
<b>On Characteristics*</b>					
$h_{FE}$	DC Current Gain	$I_C = -50\text{mA}, V_{CE} = -2\text{V}$ $I_C = -1\text{A}, V_{CE} = -2\text{V}$ $I_C = -2\text{A}, V_{CE} = -2\text{V}$ $I_C = -6\text{A}, V_{CE} = -2\text{V}$	70 100 75 15	300	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}, I_B = -100\text{mA}$ $I_C = -2\text{A}, I_B = -200\text{mA}$		-300 -500	mV
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C = -1\text{A}, I_B = -100\text{mA}$		-1.25	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$I_C = -1\text{A}, V_{CE} = -2\text{V}$		-1	V
<b>Small-Signal Characteristics</b>					
$C_{obo}$	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		100	pF
$f_T$	Transition Frequency	$I_C = -100\text{mA}, V_{CE} = -5\text{V}$ $f = 100\text{MHz}$	100		

\* Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$

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

Symbol	Parameter	Max.	Units
$P_D$	Total Device Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	125	$^\circ\text{C/W}$



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### Наши контакты:

**Телефон:** +7 812 627 14 35

**Электронная почта:** [sales@st-electron.ru](mailto:sales@st-electron.ru)

**Адрес:** 198099, Санкт-Петербург,  
Промышленная ул, дом № 19, литера Н,  
помещение 100-Н Офис 331