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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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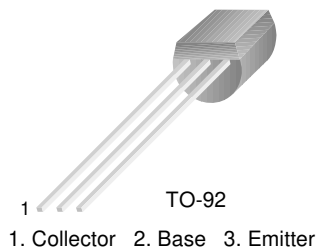
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TIS93

PNP General Purpose Amplifier

- This device is designed for use as general purpose amplifiers and switches requiring collector currents to 500mA.



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	-40	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current - Continuous	-800	mA
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 Breakdown Voltage *	$I_C = -10\text{mA}, I_B = 0$	-40		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_E = 0$	-40		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -100\mu\text{A}, I_C = 0$	-5.0		V
I_{CBO}	Collector Cut-off Current	$V_{CB} = -20\text{V}, I_E = 0$		-100	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -3.0\text{V}, I_C = 0$		- 100	nA
On Characteristics					
h_{FE}	DC Current Gain	$V_{CE} = -2.0\text{V}, I_C = -50\text{mA}$	100	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -50\text{mA}, I_B = -5.0\text{mA}$		-0.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE} = -2.0\text{V}, I_C = -50\text{mA}$		-1.0	V

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

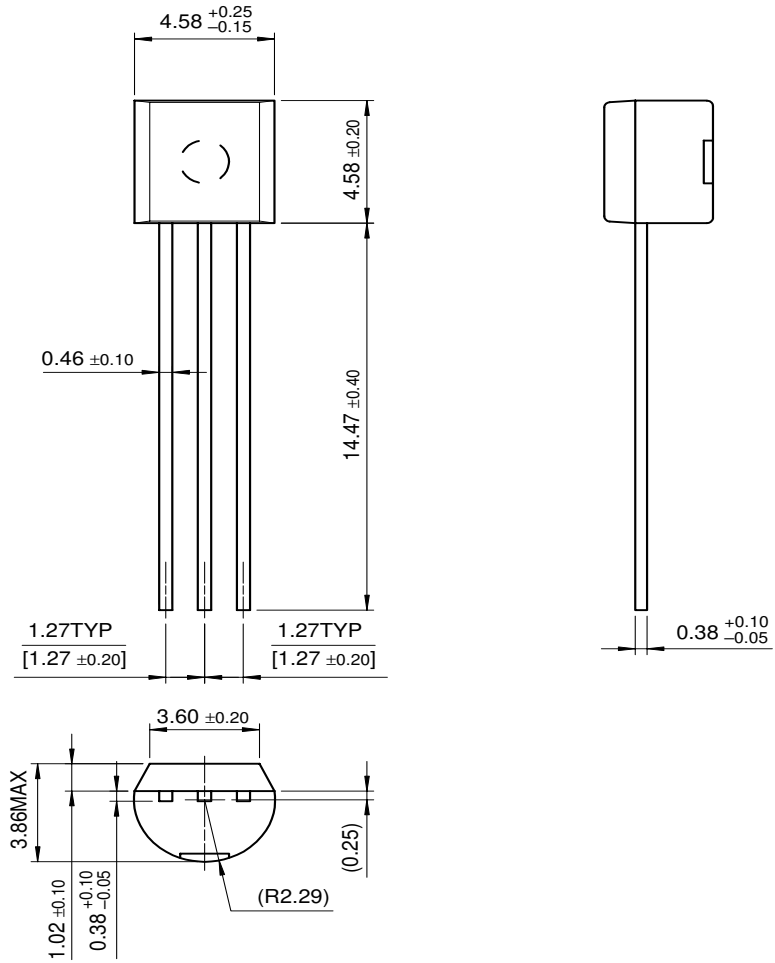
Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation	625	mW
	Derate above 25°C	5.0	$\text{mW}/^\circ\text{C}$
$R_{\theta\text{JC}}$	Thermal Resistance, Junction to Case	83.3	$^\circ\text{C}/\text{W}$
$R_{\theta\text{JA}}$	Thermal Resistance, Junction to Ambient	200	$^\circ\text{C}/\text{W}$

Package Dimensions

TIS93

TO-92



Dimensions in Millimeters

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Definition of Terms

Datasheet Identification	Product Status	Definition
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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