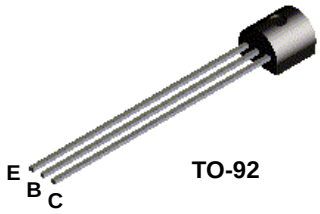
FAIRCHILD SEMICONDUCTOR TM

Discrete POWER & Signal Technologies

TIS93



TO-92

PNP General Purpose Amplifier

This device is designed for use as general purpose amplifiers and switches requiring collector currents to 500 mA. Sourced from Process 63. See PN2907A for characteristics.

Absolute Maximum Ratings*

TA = 25°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 to +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.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		TIS93	
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

PNP General Purpose Amplifier
(continued)

Electrical Characteristics
TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage*	I_C = 10 mA, I_B = 0	40		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 100 µA, I_E = 0	40		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 100 µA, I_C = 0	5.0		V
I_{CBO}	Collector Cutoff Current	V_{CB} = 20 V, I_E = 0		100	nA
I_{EBO}	Emitter Cutoff Current	V_{EB} = 3.0 V, I_C = 0		100	nA
ON CHARACTERISTICS*					
h_{FE}	DC Current Gain	V_{CE} = 2.0 V, I_C = 50 mA	100	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 50 mA, I_B = 5.0 mA		0.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	V_{CE} = 2.0 V, I_C = 50 mA	0.6	1.0	V

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