



PN 3569

NPN SILICON PLANAR EPITAXIAL TRANSISTOR

**MICRO ELECTRONICS**GENERAL DESCRIPTION :

The PN 3569 is an NPN silicon planar epitaxial transistor designed for amplifier and switching applications for collector current up to 500mA.

MECHANICAL OUTLINE

TO-92A

EBCABSOLUTE MAXIMUM RATINGS :

Continuous Power Dissipation @  $T_A=25^{\circ}\text{C}$ ,  $P_d$   
 Continuous Power Dissipation @  $T_C=25^{\circ}\text{C}$ ,  $P_d$   
 Maximum Collector Junction Temperature,  $T_j$   
 Storage Temperature Range,  $T_{stg}$   
 Soldering Temperature (10 sec. time limit)  
 Collector to Base Voltage,  $V_{CBO}$   
 Collector to Emitter Voltage,  $V_{CEO}$   
 Emitter to Base Voltage,  $V_{EBO}$

0.3W  
 0.8W  
 $125^{\circ}\text{C}$   
 $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$   
 $260^{\circ}\text{C}$   
 80V  
 40V  
 5V

ELECTRICAL CHARACTERISTICS @  $T_A=25^{\circ}\text{C}$  (unless otherwise stated) :

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	$V_{CBO}$	80		V	$I_C=100\mu\text{A}$ $I_E=0$
Collector-Emitter Sustaining Voltage	$V_{CEO(sust)}^*$	40		V	$I_C=30\text{mA}$ $I_B=0$
Emitter-Base Breakdown Voltage	$V_{EBO}$	5		V	$I_E=10\mu\text{A}$ $I_C=0$
Collector Cutoff Current	$I_{CBO}$		50	nA	$V_{CB}=40\text{V}$ $I_E=0$
Collector Cutoff Current	$I_{CBO}$		5	$\mu\text{A}$	$V_{CB}=40\text{V}$ $I_E=0$ $T_A=75^{\circ}\text{C}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.25	V	$I_C=150\text{mA}$ $I_B=15\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.1	V	$I_C=150\text{mA}$ $I_B=15\text{mA}$
D.C. Current Gain	$h_{FE}^*$	100	300		$V_{CE}=1\text{V}$ $I_C=150\text{mA}$

**MICRO ELECTRONICS LTD.**

38 HUNG TO ROAD, KWUN TONG, HONG KONG. TELEX 43510  
 KWUN TONG P. O. BOX 69477 CABLE ADDRESS "MICROTRON"  
 TELEPHONE:- 3-430181-6, 3-893363, 3-892423, 3-898224 FAX: 3-810321

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
D.C. Current Gain	$h_{FE}^*$	100				$V_{CE}=1V$ $I_C=30mA$
High Frequency Current Gain	$h_{fe}$	3				$V_{CE}=10V$ $I_C=50mA$ $f=20Mc$
Output Capacitance	$C_{ob}$		18	20	pF	$V_{CB}=10V$ $I_E=0$
Input Capacitance	$C_{ib}$		44	80	pF	$V_{EB}=0.5V$ $I_C=0$

\* Pulse Conditions : Length=300uS, duty cycle=1%