

## Silicon PNP Power Transistors

2SB988

**DESCRIPTION**

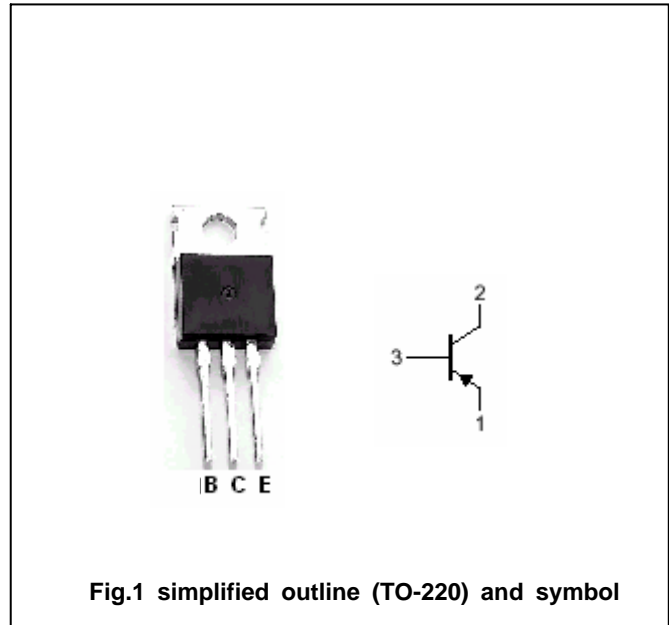
- With TO-220C package
- Low collector saturation voltage

**APPLICATIONS**

- For vertical output and general purpose applications

**PINNING**

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base

**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-60	V
$V_{CEO}$	Collector-emitter voltage	Open base	-60	V
$V_{EBO}$	Emitter-base voltage	Open collector	-7	V
$I_C$	Collector current (DC)		-3	A
$I_B$	Base current		-0.5	A
$P_C$	Collector dissipation	$T_C=25$	30	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-50~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-30mA; I <sub>B</sub> =0	-60			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-0.3A			-1.0	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V			-1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-60V; I <sub>E</sub> =0			-0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-7V; I <sub>C</sub> =0			-0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V	60		200	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-5V	20			
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=1MHz		150		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V		9		MHz

◆ h<sub>FE-1</sub> Classifications

O	Y
60-120	100-200

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PACKAGE OUTLINE

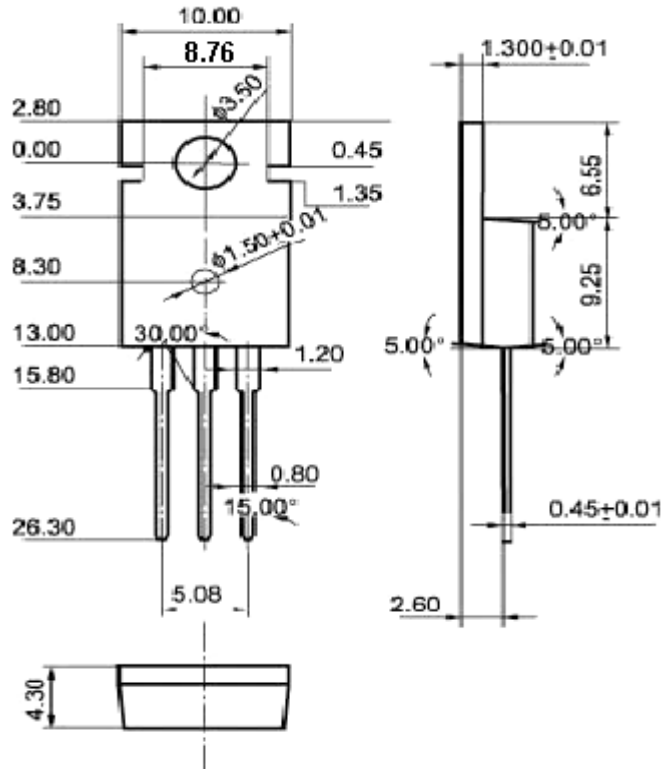


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.10$ mm)