

**Silicon PNP Power Transistors**

**2SA489**

**DESCRIPTION**

- With TO-220 package
- Low collector saturation voltage
- Short switching time

**APPLICATIONS**

- Various inductance lamp drivers for electrical equipment
- Inverters;converters
- Power amplification
- Switching regulator ,driver

**PINNING**

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

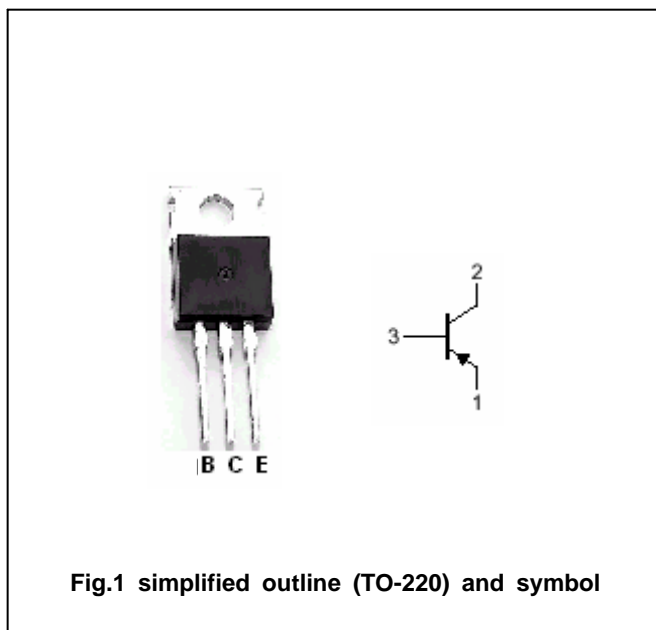


Fig.1 simplified outline (TO-220) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-70	V
$V_{CEO}$	Collector-emitter voltage	Open base	-60	V
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-4	A
$P_C$	Collector power dissipation	$T_C=25$	30	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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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>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =-1mA; I <sub>E</sub> =0	-70			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-1mA; I <sub>C</sub> =0	-5			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>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-0.3A			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-70V; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-5V	40		240	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A; V <sub>CE</sub> =-5V	3			MHz

◆ h<sub>FE</sub> Classifications

R	O	Y
40-80	70-140	120-240

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PACKAGE OUTLINE



Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)