

Silicon NPN Power Transistors

2SC3012

**DESCRIPTION**

- With TO-3PN package
- Complement to type 2SA1232
- High transition frequency

**APPLICATIONS**

- Audio frequency power amplifier.

**PINNING**

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

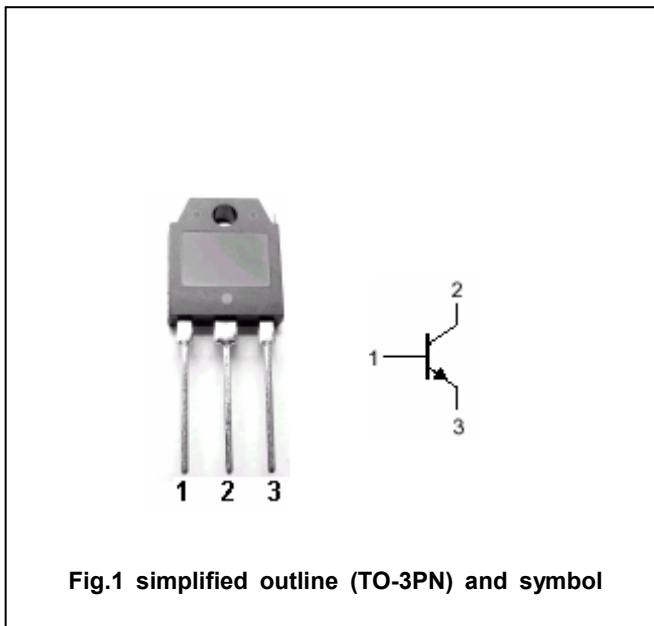


Fig.1 simplified outline (TO-3PN) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	130	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	130	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		10	A
I <sub>CM</sub>	Collector current-peak		15	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25□	100	W
T <sub>j</sub>	Junction temperature		150	□
T <sub>stg</sub>	Storage temperature		-55~150	□

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A		0.6	1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A		1.3	2.0	V
I <sub>CB0</sub>	Collector cut-off current	V <sub>CB</sub> =130V; I <sub>E</sub> =0			50	μA
I <sub>EB0</sub>	Emitter cut-off current	V <sub>EB</sub> =3V; I <sub>C</sub> =0			50	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =2A; V <sub>CE</sub> =5V	60		320	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =5A; V <sub>CE</sub> =5V	40			
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> =1A; V <sub>CE</sub> =5V		60		MHz

◆ h<sub>FE-1</sub> Classifications

R	Q	P
60-120	100-200	160-320

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PACKAGE OUTLINE

