

Silicon NPN Power Transistors

2SD1185

**DESCRIPTION**

- With TO-3 package
- High breakdown voltage
- High speed switching

**APPLICATIONS**

- Power switching applications

**PINNING(see Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

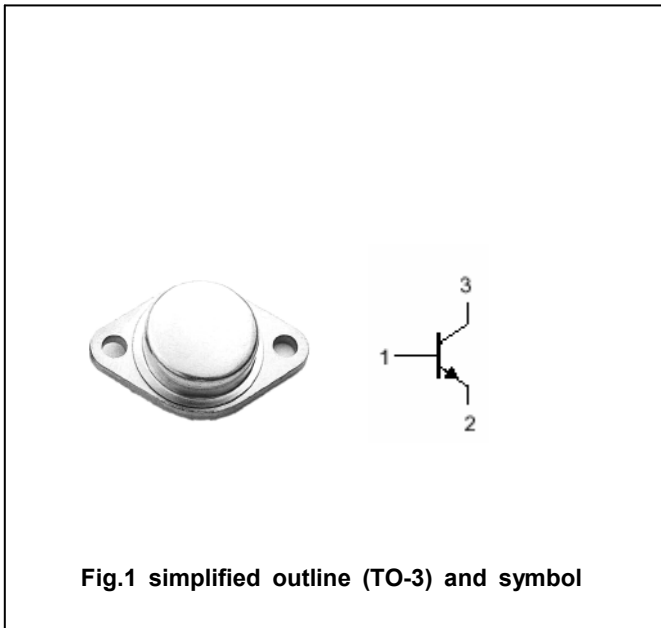


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1200	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	800	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current		5	A
I <sub>CM</sub>	Collector current-peak		7	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25□	50	W
T <sub>j</sub>	Junction temperature		150	□
T <sub>stg</sub>	Storage temperature		-45~150	□

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10mA ; I <sub>C</sub> =0	6			V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; R <sub>BE</sub> =∞	800			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.8A			5.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.8A			1.5	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1200V; R <sub>BE</sub> =0			0.5	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			0.1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.3A ; V <sub>CE</sub> =5V	10		30	

## Switching times

t <sub>f</sub>	Fall time	I <sub>C</sub> =4A ; I <sub>B1</sub> =0.8A; I <sub>B2</sub> =-2A			1.0	μs
t <sub>s</sub>	Storage time			1.0		μs

PACKAGE OUTLINE



Fig.2 outline dimensions (unindicated tolerance:±0.1mm)