

**Silicon NPN Power Transistors**

**2SC1783**

**DESCRIPTION**

- With TO-3 package
- High power dissipation
- High speed ,high current

**APPLICATIONS**

- For power amplifier applications

**PINNING(see Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

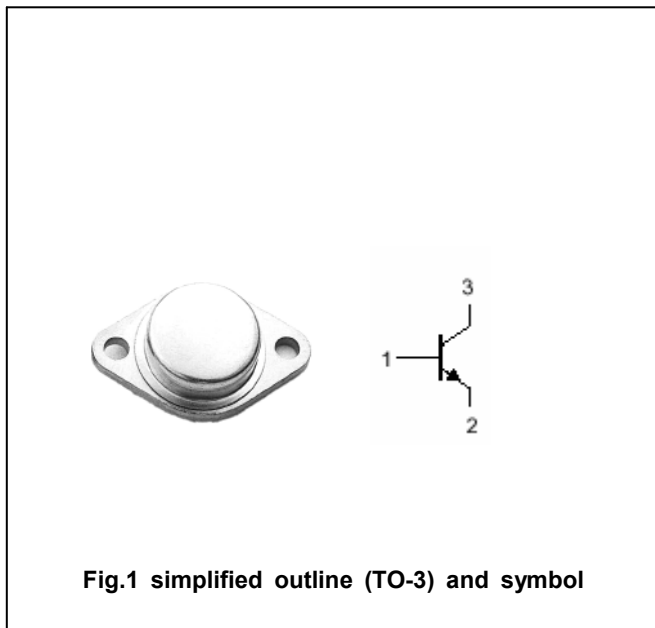


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	180	V
$V_{CEO}$	Collector-emitter voltage	Open base	120	V
$V_{EBO}$	Emitter-base voltage	Open collector	6	V
$I_C$	Collector current		10	A
$P_C$	Collector power dissipation	$T_C=25\text{ }^\circ\text{C}$	100	W
$T_j$	Junction temperature		150	□
$T_{stg}$	Storage temperature		-55~150	□

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## 2SC1783

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =50mA ; I <sub>B</sub> =0	120			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	6			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =180V; I <sub>E</sub> =0			100	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			100	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =3A ; V <sub>CE</sub> =4V	30			
C <sub>OB</sub>	Collector output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz		165		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =10V		10		MHz

PACKAGE OUTLINE



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