

## 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

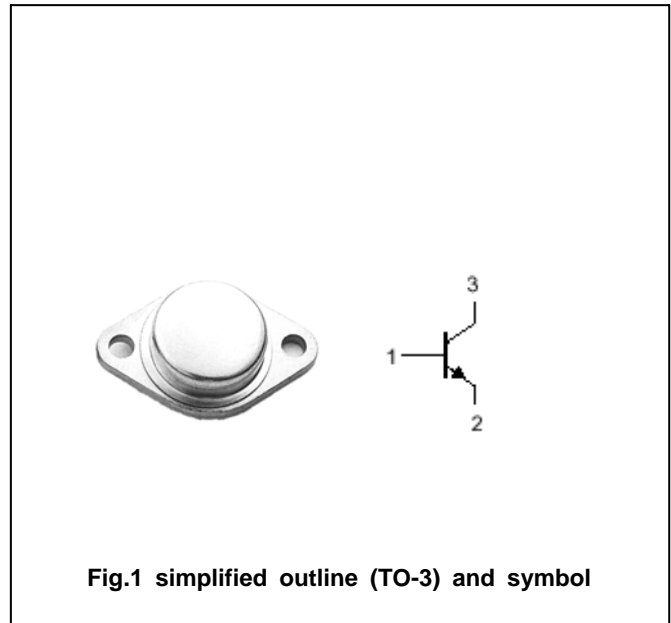


Fig.1 simplified outline (TO-3) and symbol

**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	$T_C=25^\circ\text{C}$	100	W
$T_j$	Junction temperature		150	℃
$T_{stg}$	Storage temperature		-55~150	℃

## Silicon NPN Power Transistors

2SC1783

## CHARACTERISTICS

 $T_j=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=50\text{mA}; I_B=0$	120			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\text{mA}; I_C=0$	6			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=5\text{A}; I_B=0.5\text{A}$			1.5	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=5\text{A}; I_B=0.5\text{A}$			2.0	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=180\text{V}; I_E=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=6\text{V}; I_C=0$			100	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C=3\text{A}; V_{CE}=4\text{V}$	30			
$C_{OB}$	Collector output capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		165		pF
$f_T$	Transition frequency	$I_C=1\text{A}; V_{CE}=10\text{V}$		10		MHz

PACKAGE OUTLINE

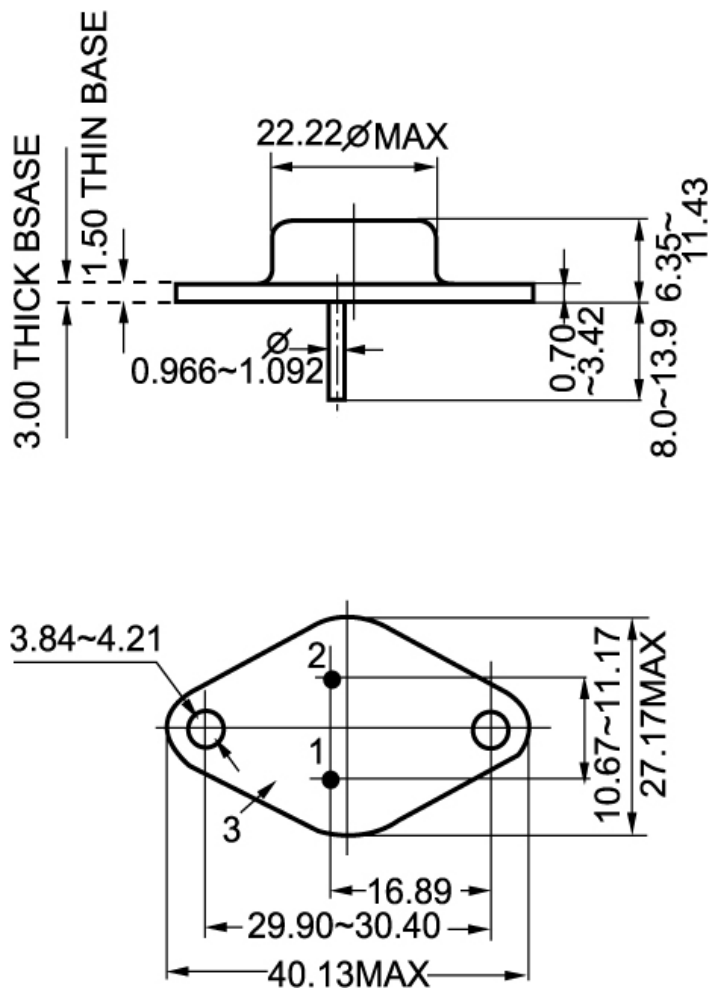


Fig.2 outline dimensions (unindicated tolerance: ±0.1mm)