

Pb Free Plating Product

## 2SA1694



80 Watt Silicon PNP Epitaxial Planar Transistor

### DESCRIPTION

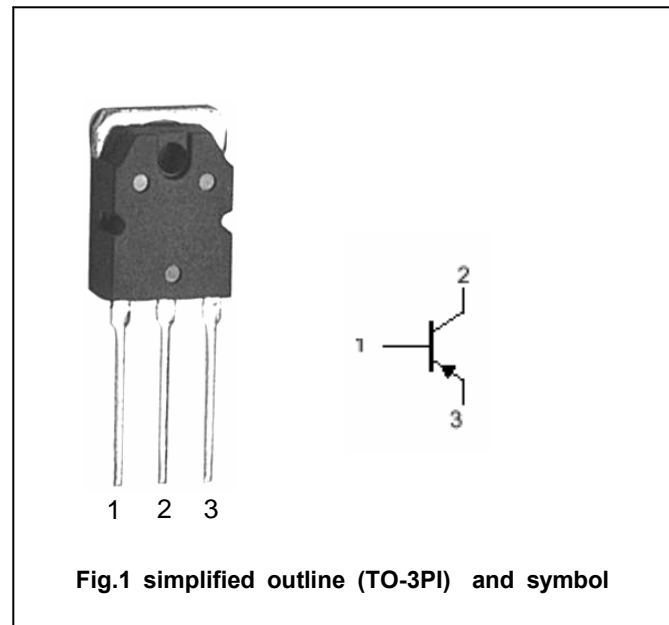
- With TO-3PI package
- Complement to type 2SC4467

### APPLICATIONS

- Audio and general purpose

### PINNING

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



### ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-120	V
$V_{CEO}$	Collector-emitter voltage	Open base	-120	V
$V_{EBO}$	Emitter-base voltage	Open collector	-6	V
$I_C$	Collector current		-8	A
$I_B$	Base current		-3	A
$P_C$	Collector power dissipation	$T_c=25^\circ\text{C}$	80	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

## CHARACTERISTICS

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

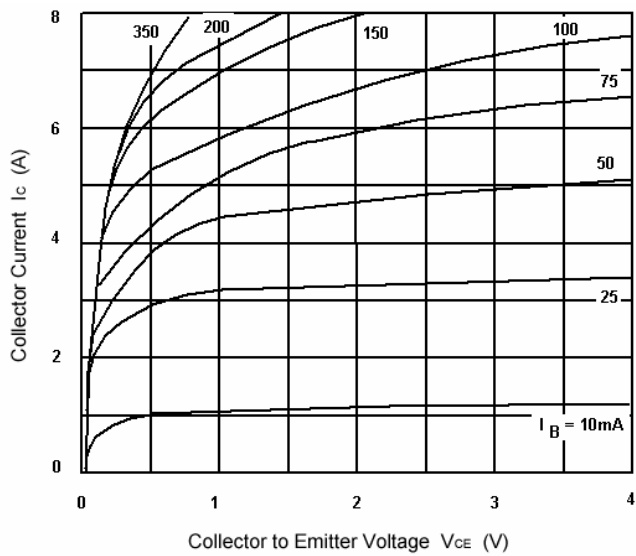
SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-50mA ; I <sub>B</sub> =0	-120			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A ; I <sub>B</sub> =-0.3A			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-120V ; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-6V ; I <sub>C</sub> =0			-10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-4V	50		180	
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V, f=1MHz		300		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-12V		20		MHz

### Switching times

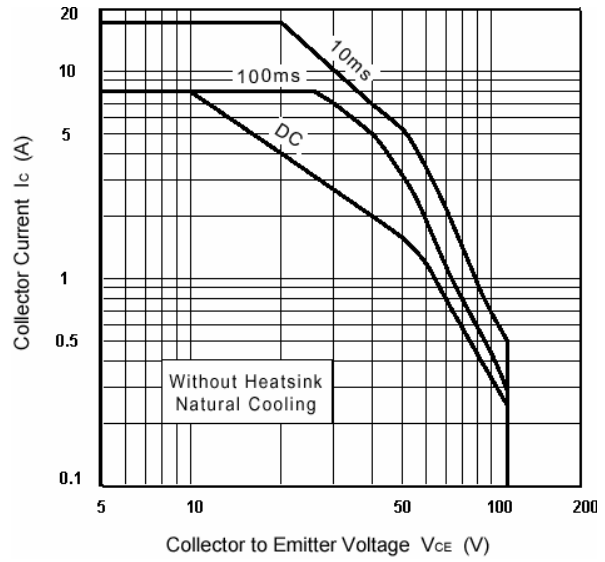
t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-4A; R <sub>L</sub> =10Ω I <sub>B1</sub> =- I <sub>B2</sub> =-0.4A V <sub>CC</sub> =-40V		0.14		μs
t <sub>s</sub>	Storage time			1.40		μs
t <sub>f</sub>	Fall time			0.21		μs

### ◆ h<sub>FE</sub> Classifications

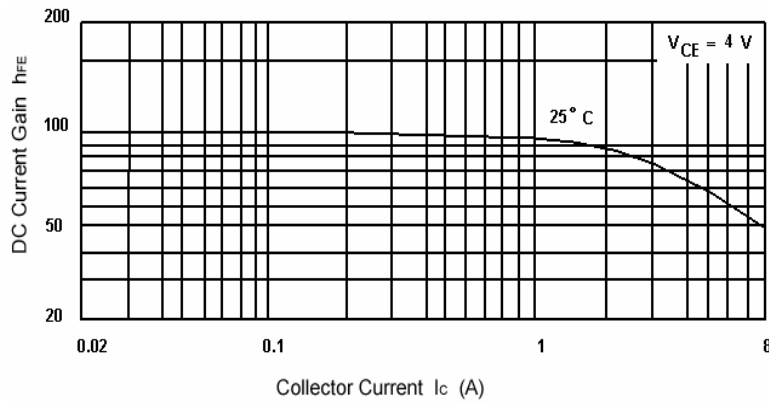
O	P	Y
50-100	70-140	90-180



**Fig.3 Static Characteristic**



**Fig.4 Safe Operating Area**



**Fig.5 DC current Gain**

TO-3PI PACKAGE OUTLINE UNIT:mm

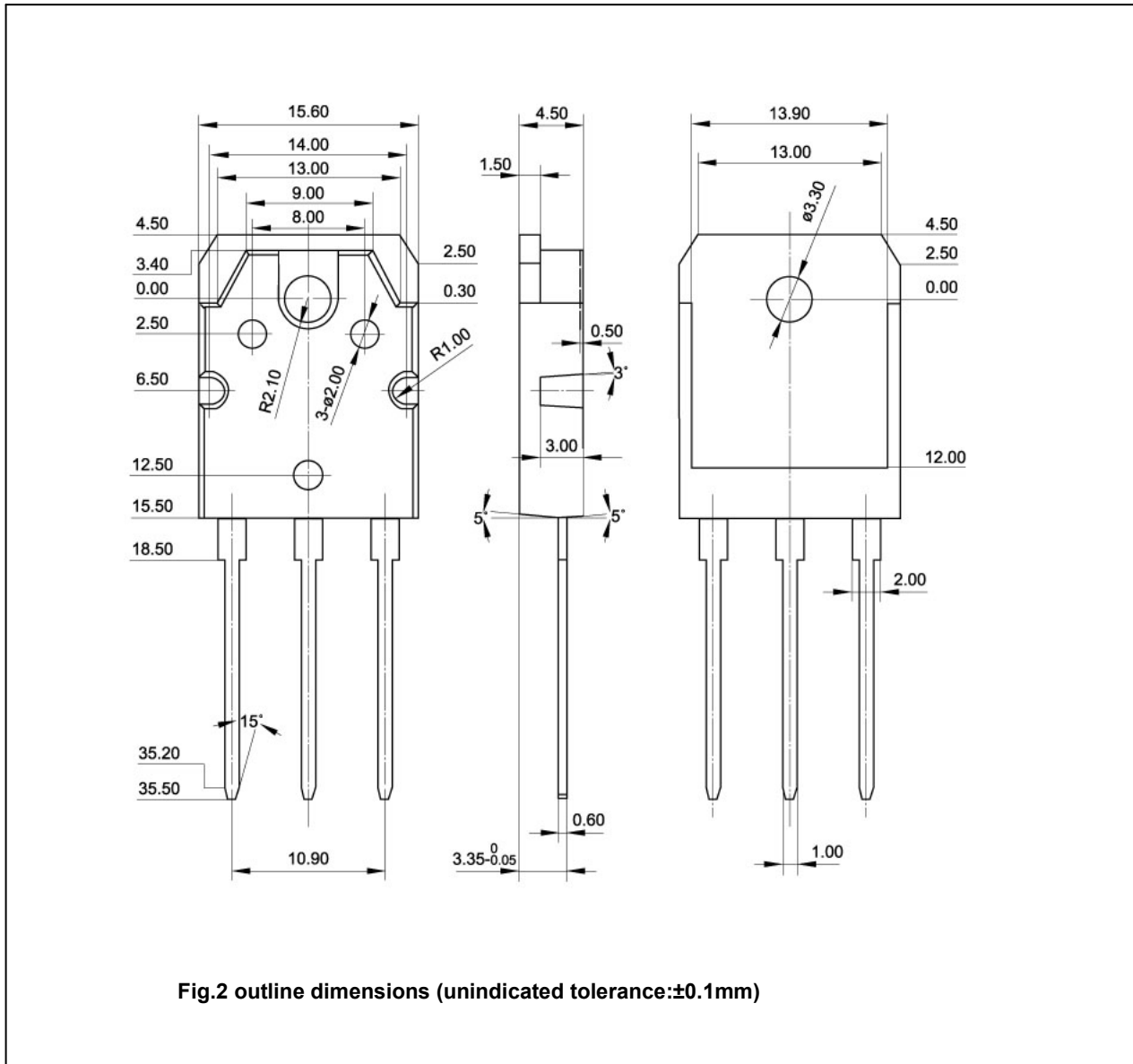


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)