

## Silicon NPN Power Transistors

## 2SD797

## DESCRIPTION

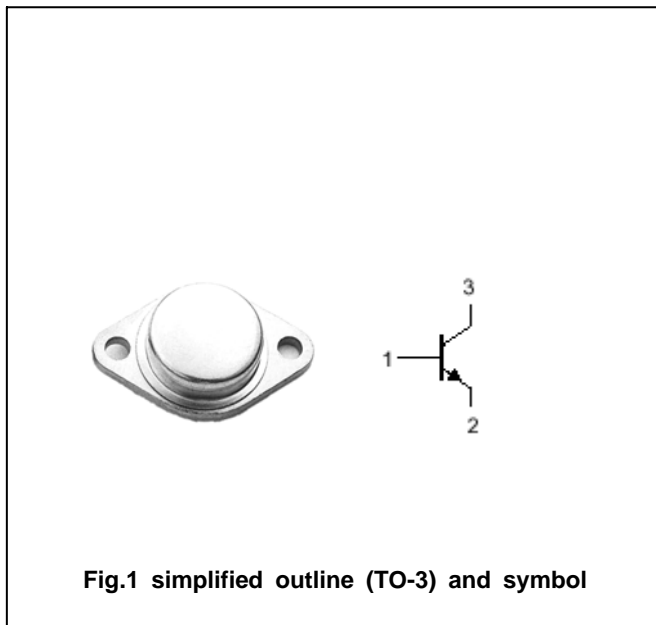
- With TO-3 package
- High current capability
- High power dissipation

## APPLICATIONS

- High power amplifier applications
- High power switching applications
- DC-DC converter applications
- Regulator applications

## PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

Absolute maximum ratings( $T_a = ^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	100	V
$V_{CEO}$	Collector-emitter voltage	Open base	80	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		30	A
$I_B$	Base current		8	A
$P_C$	Collector power dissipation	$T_C = 25^\circ\text{C}$	200	W
$T_j$	Junction temperature		175	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~175	$^\circ\text{C}$

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## 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	80			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A; I <sub>B</sub> =3A			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =15A; I <sub>B</sub> =3A			2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =100V; I <sub>E</sub> =0			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	60		200	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =15A ; V <sub>CE</sub> =5V	10			
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1.0MHz		400		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V		1.5		MHz

## Switching times

t <sub>on</sub>	Turn-on time	R <sub>L</sub> =10 Ω ; I <sub>B1</sub> =-I <sub>B2</sub> =0.5A; V <sub>CC</sub> =50V		2.5		μ s
t <sub>stg</sub>	Storage time			6.0		μ s
t <sub>f</sub>	Fall time			1.5		μ s

PACKAGE OUTLINE

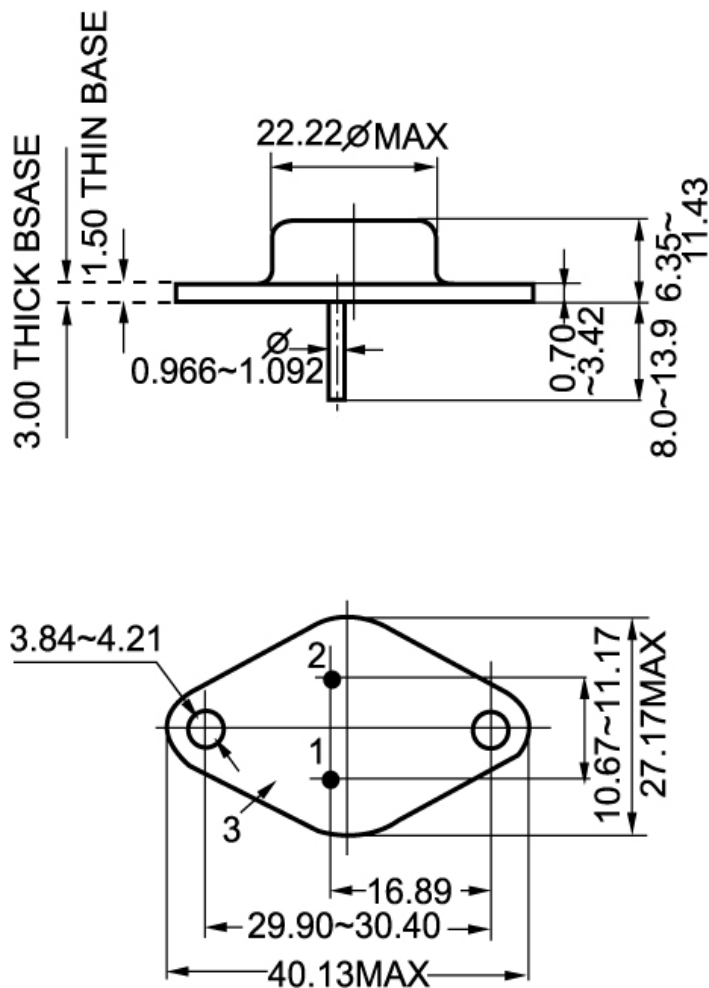


Fig.2 outline dimensions (unindicated tolerance: ±0.1mm)