

**Silicon PNP Darlington Power Transistors**

**2SB1255**

**DESCRIPTION**

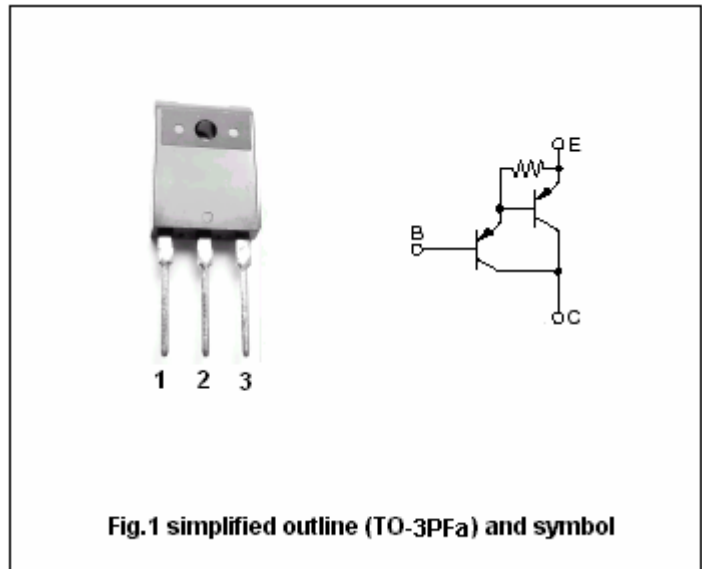
- With TO-3PFa package
- Optimum for 90W Hi-Fi output
- High forward current transfer ratio  $h_{FE}$
- Low collector-emitter saturation voltage
- Complement to type 2SD1895

**APPLICATIONS**

- Power amplification

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-160	V
$V_{CEO}$	Collector-emitter voltage	Open base	-140	V
$V_{EBO}$	Emitter-base voltage	Open collector	-8	V
$I_C$	Collector current		-15	A
$I_{CP}$	Collector current-peak		-12	A
$P_C$	Collector power dissipation	$T_C=25$	100	W
			3	
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO</sub>	Collector-emitter voltage	I <sub>C</sub> =-30mA ; I <sub>B</sub> =0	-140			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-7A ; I <sub>B</sub> =-7mA			-2.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-7A ; I <sub>B</sub> =-7mA			-3.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-160V ; I <sub>E</sub> =0			-100	μ A
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =-140V ; I <sub>B</sub> =0			-100	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V ; I <sub>C</sub> =0			-100	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V	2000			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V	5000		30000	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =-10V ; f=1MHz		20		MHz

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-7A ; V <sub>CC</sub> =-50V I <sub>B1</sub> =-I <sub>B2</sub> =-7mA		1.0		μ s
t <sub>stg</sub>	Storage time			1.5		μ s
t <sub>f</sub>	Fall time			1.2		μ s

◆ h<sub>FE-2</sub> classifications

Q	P
5000-15000	8000-30000

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PACKAGE OUTLINE

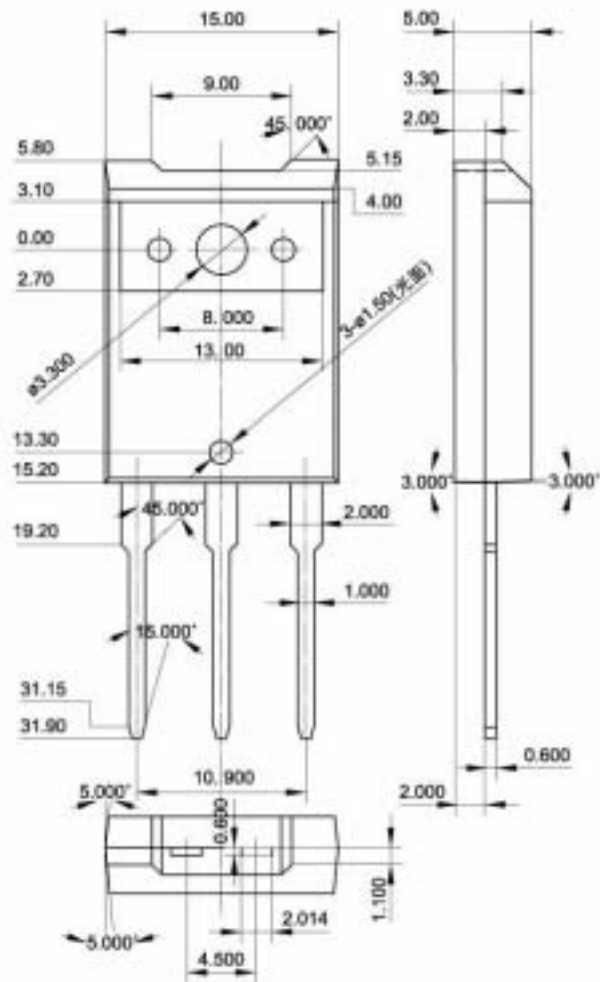


Fig.2 Outline dimensions (unindicated tolerance: ± 0.30mm)