

## Silicon NPN Power Transistors

2SD1459

## DESCRIPTION

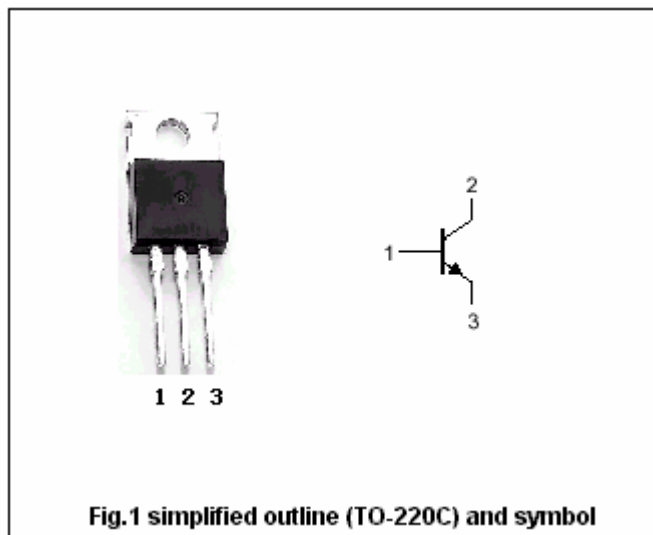
- With TO-220 package
- High allowable collector dissipation.
- Complement to type 2SB1037

## APPLICATIONS

- Color TV vertical output application
- Sound output application

## PINNING

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



## Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	150	V
$V_{CEO}$	Collector-emitter voltage	Open base	150	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		1.5	A
$I_{CM}$	Collector current-peak		3.0	A
$P_C$	Collector power dissipation		2.0	W
		$T_C=25^\circ\text{C}$	30	
$T_j$	Junction temperature		175	℃
$T_{stg}$	Storage temperature		-55~175	℃

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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> =10mA ; I <sub>B</sub> =0	150			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =0.5A, I <sub>B</sub> =50mA			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =0.5A, I <sub>B</sub> =50mA			1.2	V
I <sub>CBO</sub>	Collector cut-offcurrent	V <sub>CB</sub> =120V; I <sub>E</sub> =0			10	μA
I <sub>EBO</sub>	Emitter cut-offcurrent	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.3A ; V <sub>CE</sub> =5V	70		200	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V		8		MHz

◆ h<sub>FE</sub> classifications

Q	R
70-140	100-200

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PACKAGE OUTLINE

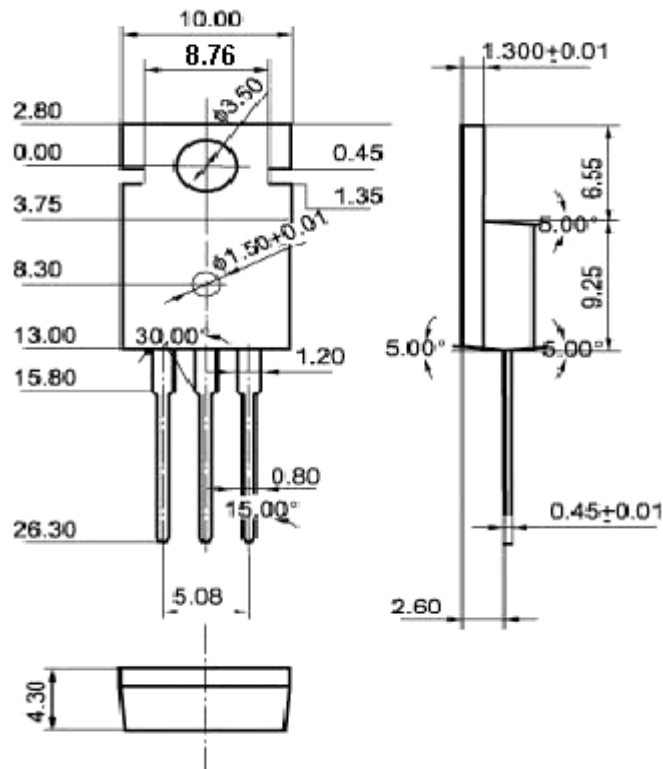


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)

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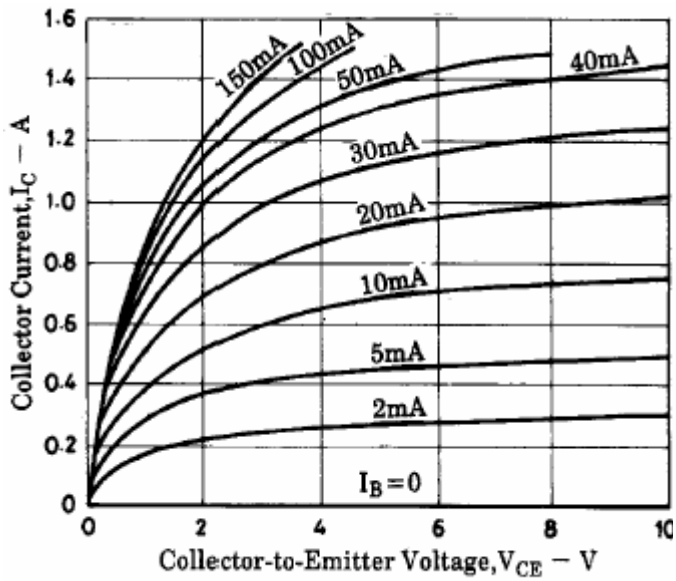


Fig.3 Static Characteristic

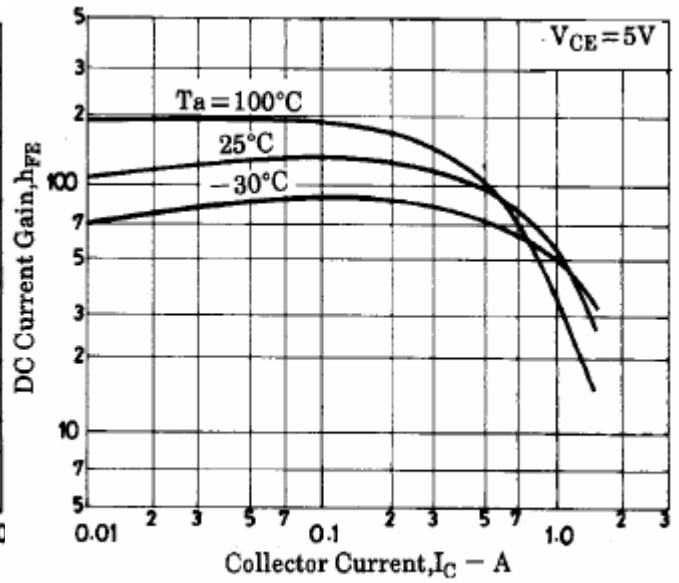


Fig.4 DC current Gain

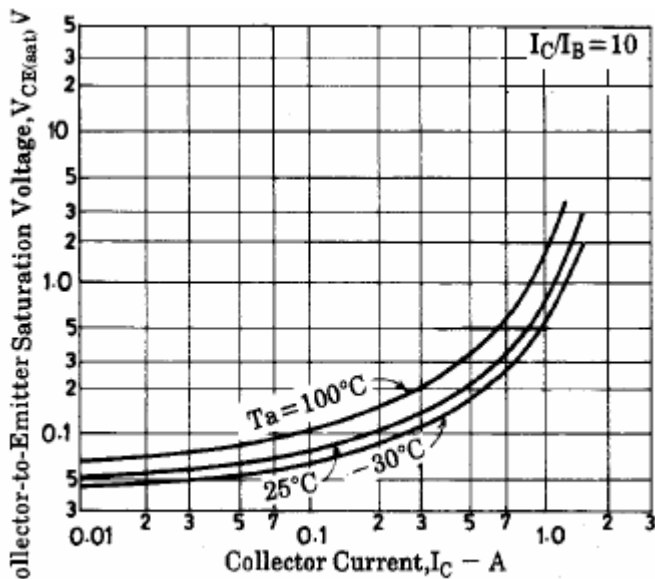


Fig.5 Collector-Emitter Saturation Voltage

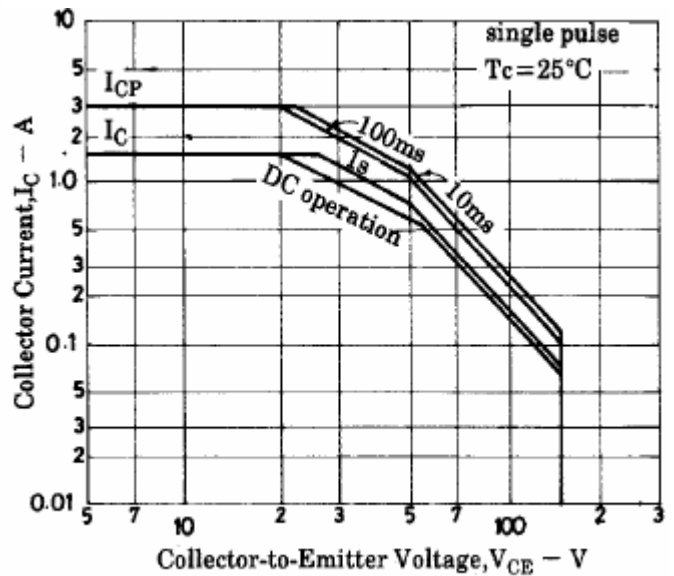


Fig.6 Safe Operating Area