

**Silicon PNP Power Transistors**

**2SB1156**

**DESCRIPTION**

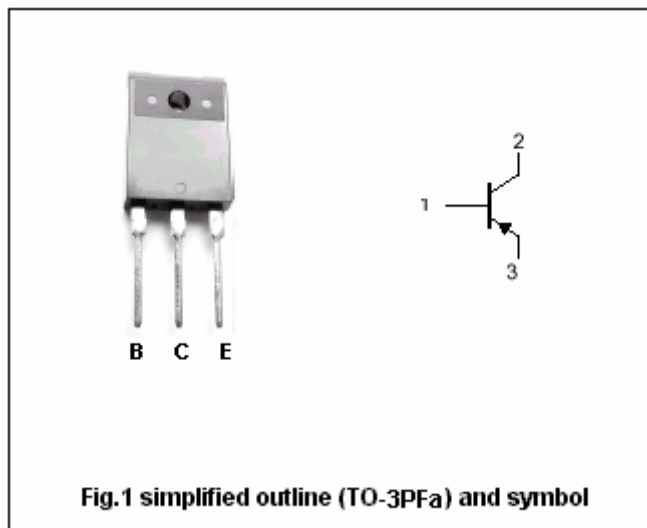
- With TO-3PFa package
- Complement to type 2SD1707
- Low collector saturation voltage
- Large collector current

**APPLICATIONS**

- For power switching applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-130	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-80	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current		-20	A
I <sub>CM</sub>	Collector current-peak		-30	A
P <sub>C</sub>	Collector power dissipation	T <sub>a</sub> =25°C	3	W
		T <sub>C</sub> =25°C	100	
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°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> =-10mA ; I <sub>B</sub> =0	-80			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-8A ; I <sub>B</sub> =-0.4A			-0.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-20A ; I <sub>B</sub> =-2A			-1.5	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-8A ; I <sub>B</sub> =-0.4A			-1.5	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-20A ; I <sub>B</sub> =-2A			-2.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-100V ; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V ; I <sub>C</sub> =0			-50	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.1A ; V <sub>CE</sub> =-2V	45			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-3A ; V <sub>CE</sub> =-2V	60		260	
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =-10A ; V <sub>CE</sub> =-2V	30			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V		25		MHz

## Switching times

t <sub>on</sub>	Turn-on time	V <sub>CC</sub> =-50V ; I <sub>C</sub> =-3A ; I <sub>B1</sub> =-0.8A , I <sub>B2</sub> =0.8A		0.5		μs
t <sub>stg</sub>	Storage time			1.2		μs
t <sub>f</sub>	Fall time			0.2		μs

◆ h<sub>FE-2</sub> classifications

R	Q	P
60-120	90-180	130-260

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PACKAGE OUTLINE



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