

**Silicon PNP Power Transistors**

**2SB859**

**DESCRIPTION**

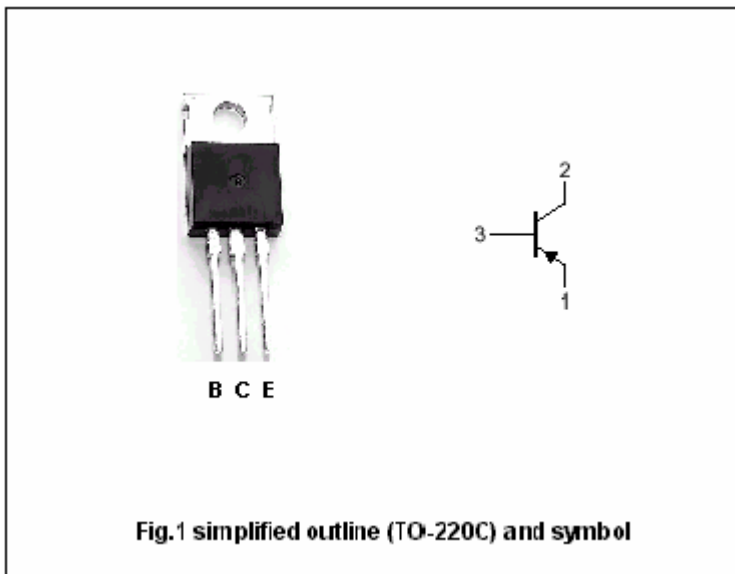
- With TO-220C package
- Complement to type 2SD1135

**APPLICATIONS**

- Low frequency power amplifier

**PINNING**

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



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-100	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-80	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-4	A
I <sub>CP</sub>	Collector current-Peak		-8	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	40	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-45~150	

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## 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; R <sub>BE</sub> =	-80			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-10 μ A; I <sub>C</sub> =0	-5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2 A; I <sub>B</sub> =-0.2 A			-2.0	V
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =-1 A; V <sub>CE</sub> =-5V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-80V; I <sub>E</sub> =0			-0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1 A; V <sub>CE</sub> =-5V	60		200	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-0.1 A; V <sub>CE</sub> =-5V	35			
C <sub>ob</sub>	Collector output capacitance	I <sub>C</sub> =0; V <sub>CB</sub> =-20V; f=1MHz		75		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5 A; V <sub>CE</sub> =-5V		20		MHz

◆ h<sub>FE-1</sub> classifications

B	C
60-120	100-200

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PACKAGE OUTLINE



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

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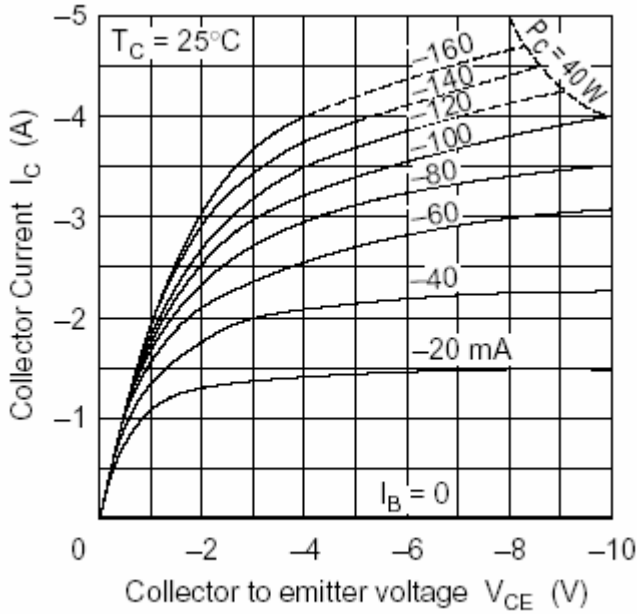


Fig.3 Static Characteristic

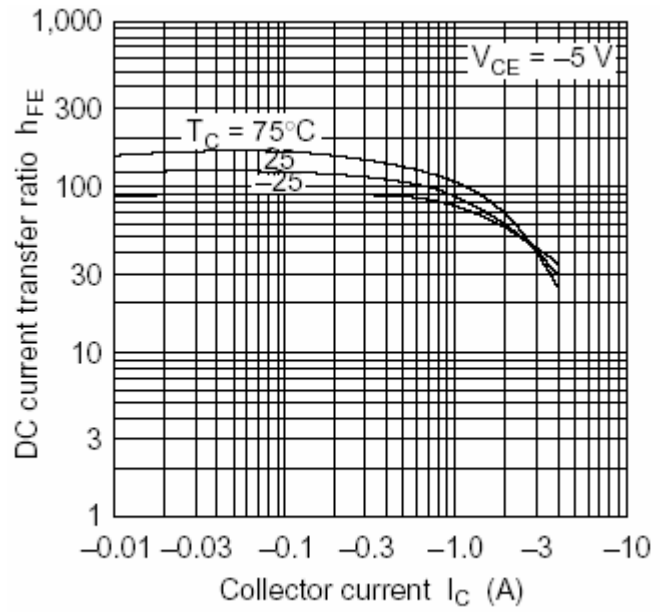


Fig.4 DC current Gain

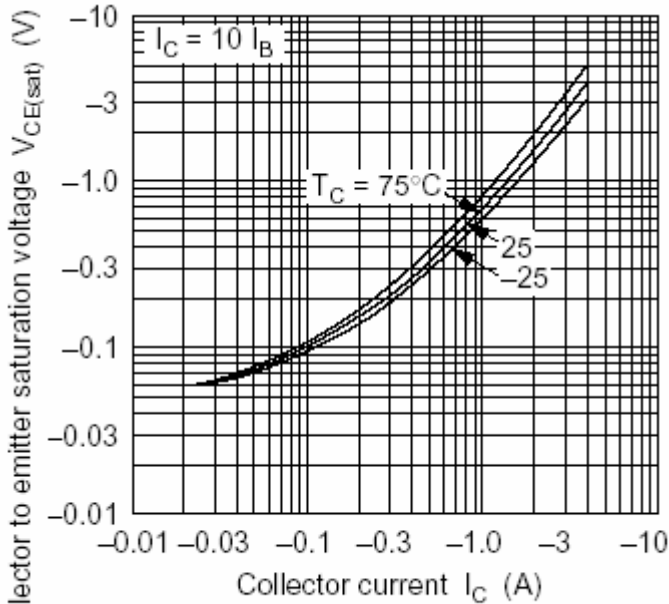


Fig.5 Collector-Emitter Saturation Voltage

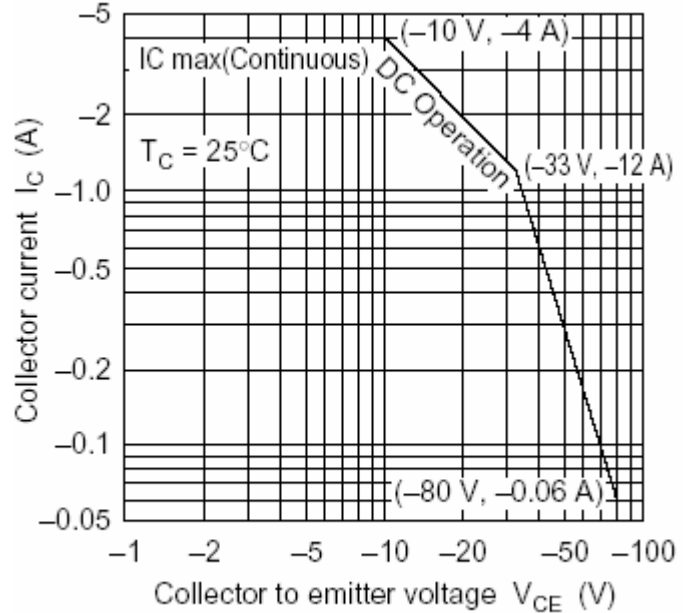


Fig.6 Safe Operating Area