

Silicon PNP Power Transistors

2SB867

DESCRIPTION

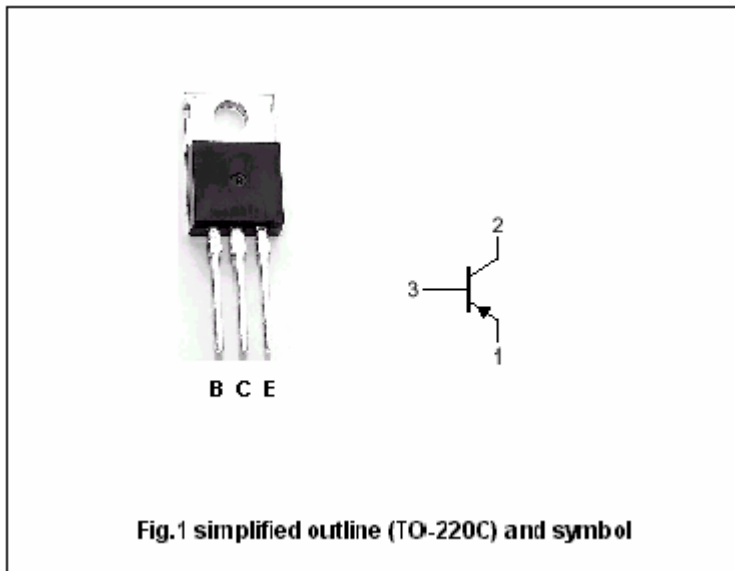
- With TO-220 package
- Low collector saturation voltage
- Complement to type 2SD959
- Excellent linearity of  $h_{FE}$

APPLICATIONS

- For power switching applications

PINNING

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



Absolute maximum ratings (Ta=25 )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	-130	V
$V_{CEO}$	Collector-emitter voltage	Open base	-80	V
$V_{EBO}$	Emitter-base voltage	Open collector	-7	V
$I_C$	Collector current (DC)		-3	A
$I_{CM}$	Collector current -peak		-6	A
$P_C$	Collector power dissipation	$T_C=25$	30	W
$T_j$	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>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-10mA ; I <sub>E</sub> =0	-80			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2A; I <sub>B</sub> =-0.1A			-0.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-2A; I <sub>B</sub> =-0.1A			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-100V; I <sub>E</sub> =0			-10	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-50	μ A
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> =-0.5A ; V <sub>CE</sub> =-2V	60		260	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-10V		30		MHz

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-0.5A I <sub>B1</sub> =-I <sub>B2</sub> =-50mA		0.3		μ s
t <sub>s</sub>	Storage time			1.1		μ s
t <sub>f</sub>	Fall time			0.3		μ s

◆ h<sub>FE-2</sub> classifications

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



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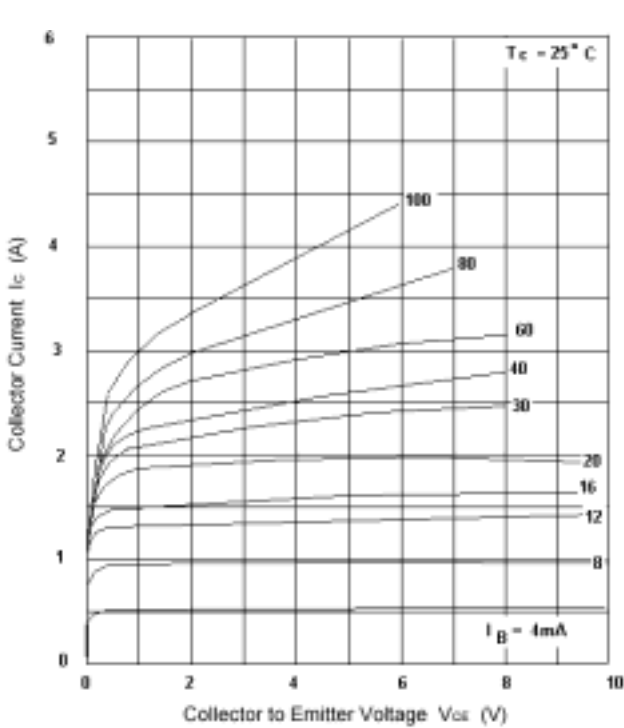


Fig.3 Static Characteristic

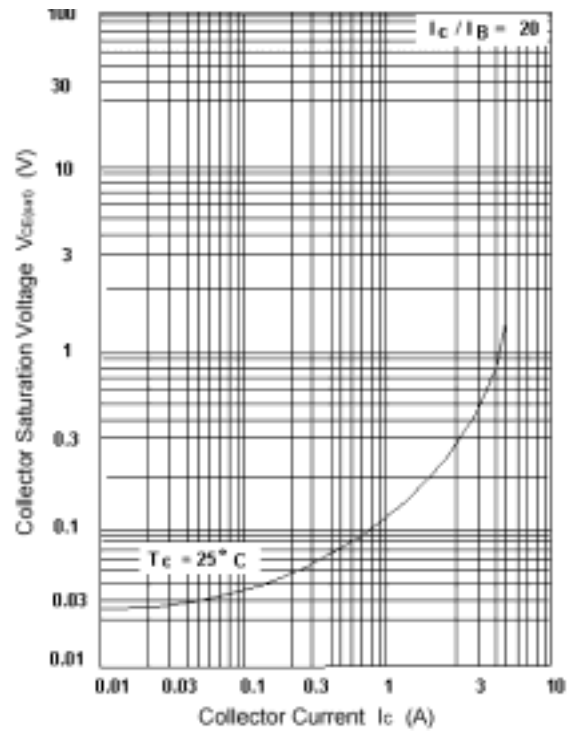


Fig.4 Collector-Emitter Saturation Voltage

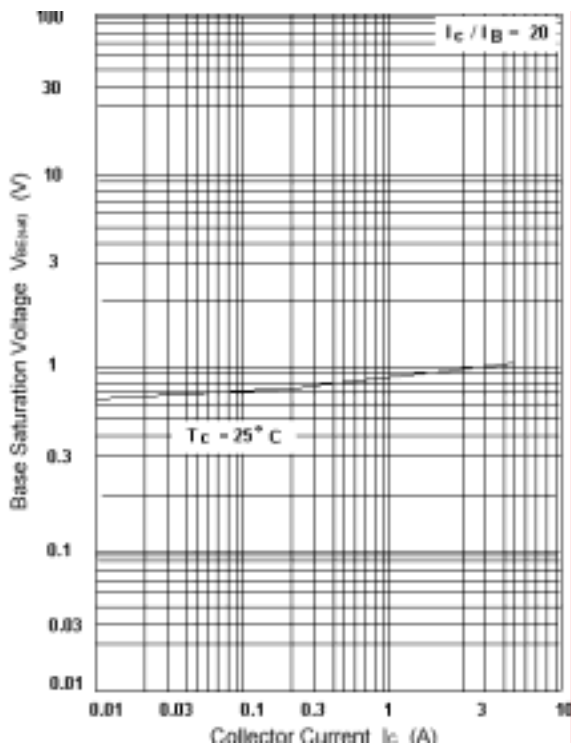


Fig.5 Base-Emitter Saturation Voltage

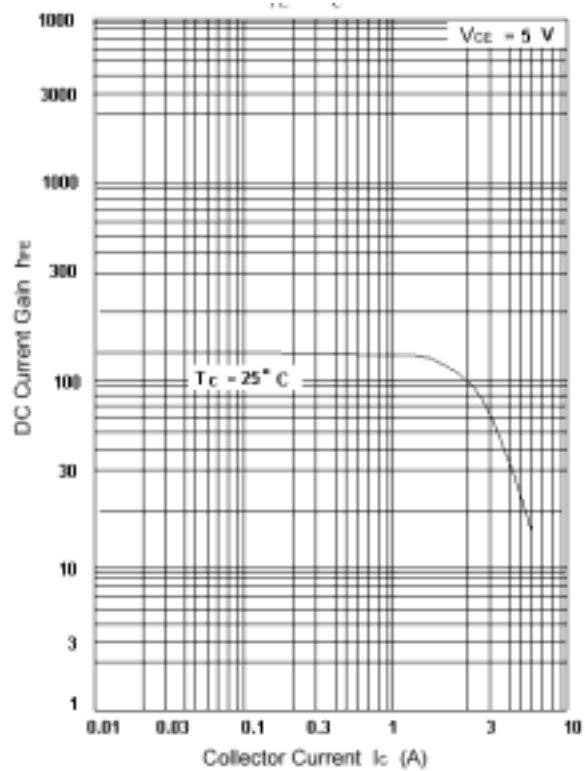


Fig.6 DC current Gain

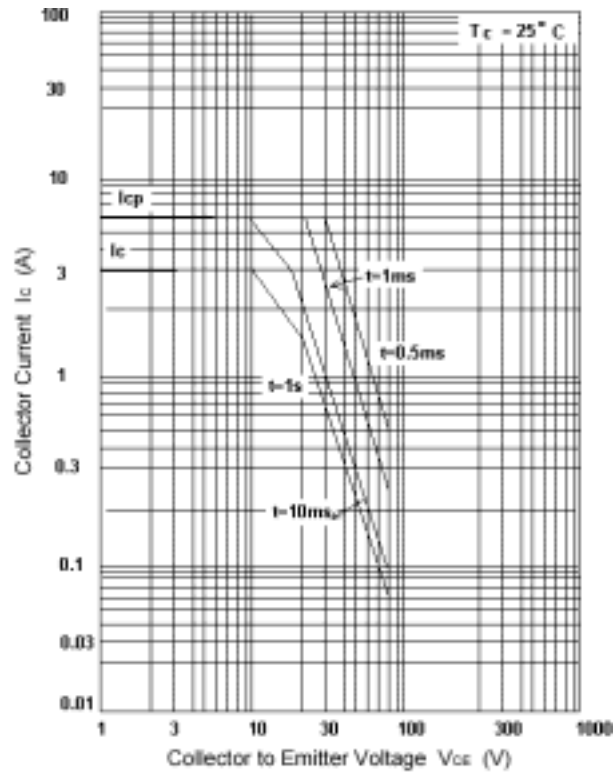


Fig.7 Safe Operating Area