

Silicon PNP Power Transistors

2SB867

DESCRIPTION

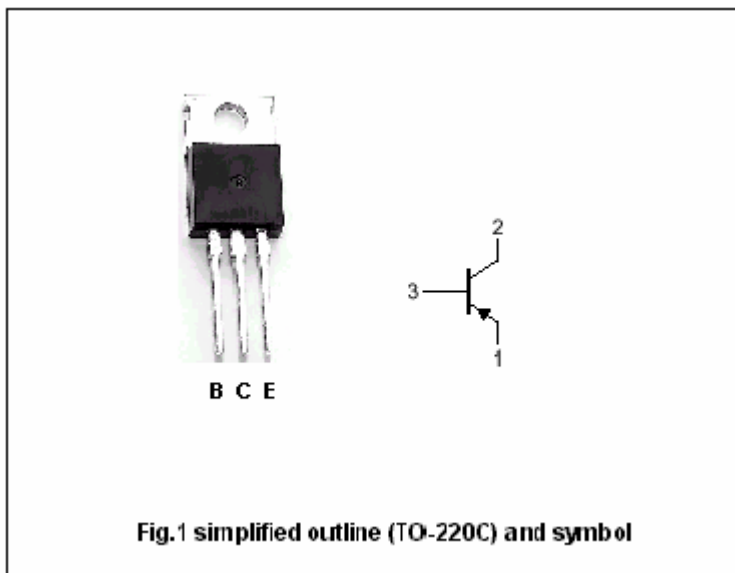
- With TO-220 package
- Low collector saturation voltage
- Complement to type 2SD959
- Excellent linearity of h_{FE}

APPLICATIONS

- For power switching applications

PINNING

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



Absolute maximum ratings ($T_a=25^\circ\text{C}$)

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	$T_c=25^\circ\text{C}$	30	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =-10mA ; I _E =0	-80			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-2A; I _B =-0.1A			-0.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =-2A; I _B =-0.1A			-1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =-100V; I _E =0			-10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =-5V; I _C =0			-50	μA
h _{FE-1}	DC current gain	I _C =-0.1A ; V _{CE} =-2V	45			
h _{FE-2}	DC current gain	I _C =-0.5A ; V _{CE} =-2V	60		260	
f _T	Transition frequency	I _C =-0.5A ; V _{CE} =-10V		30		MHz

Switching times

t _{on}	Turn-on time	I _C =-0.5A I _{B1} =-I _{B2} =-50mA		0.3		μs
t _s	Storage time			1.1		μs
t _f	Fall time			0.3		μs

◆ h_{FE-2} classifications

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

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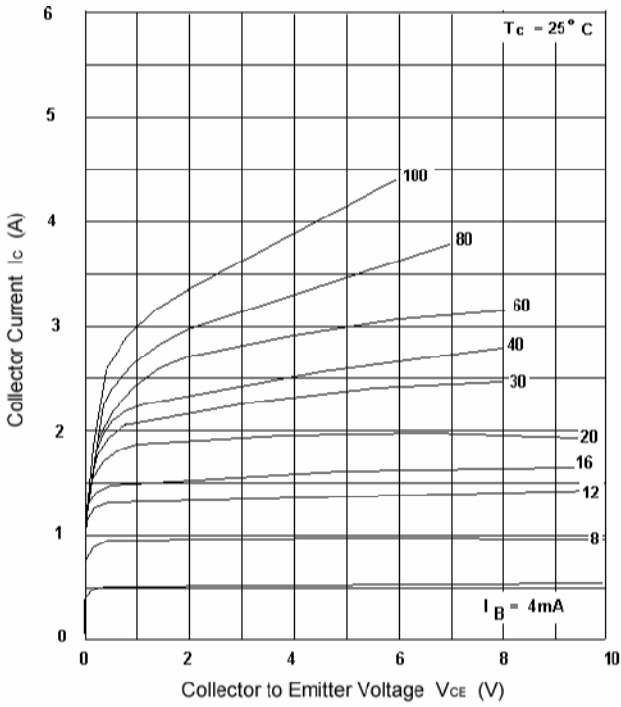


Fig.3 Static Characteristic

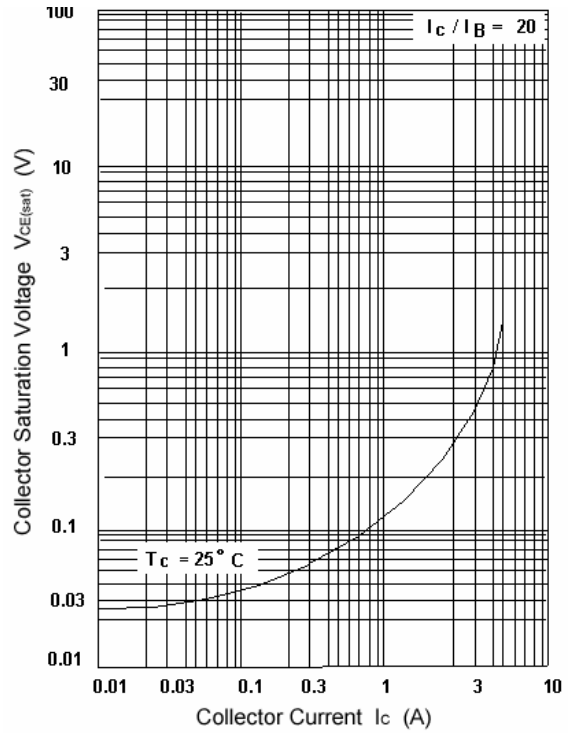


Fig.4 Collector-Emitter Saturation Voltage

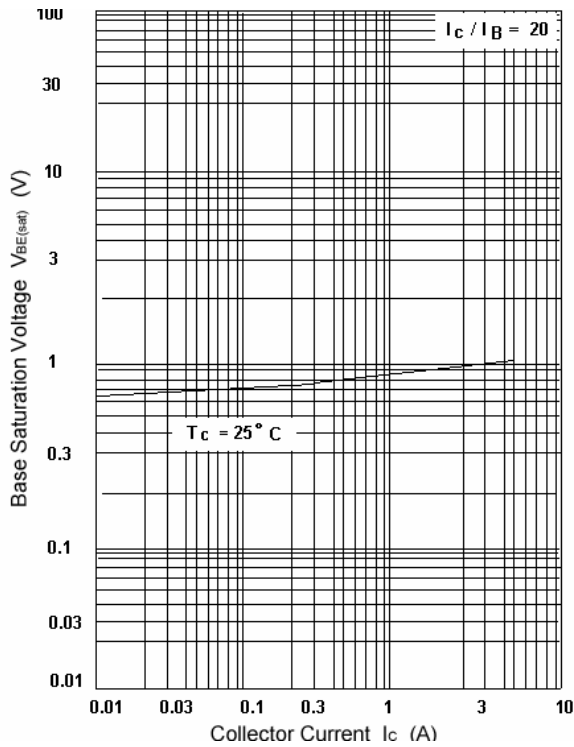


Fig.5 Base-Emitter Saturation Voltage

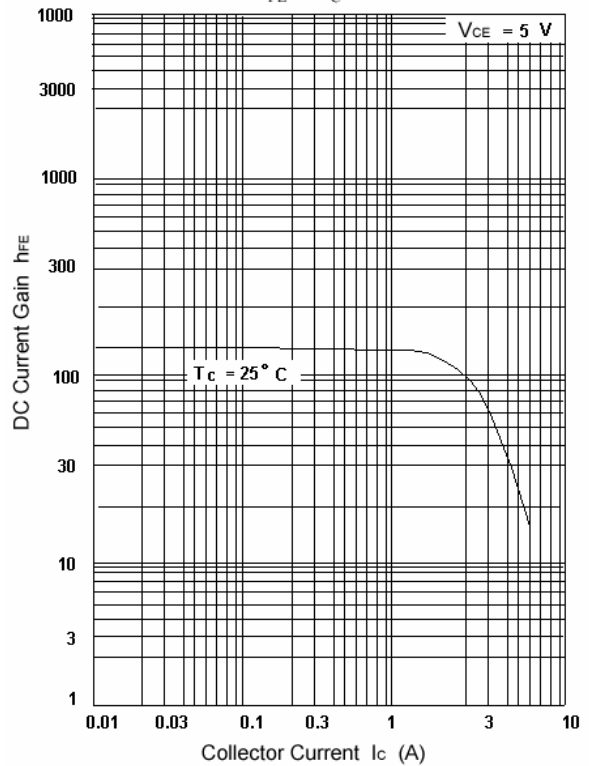


Fig.6 DC current Gain

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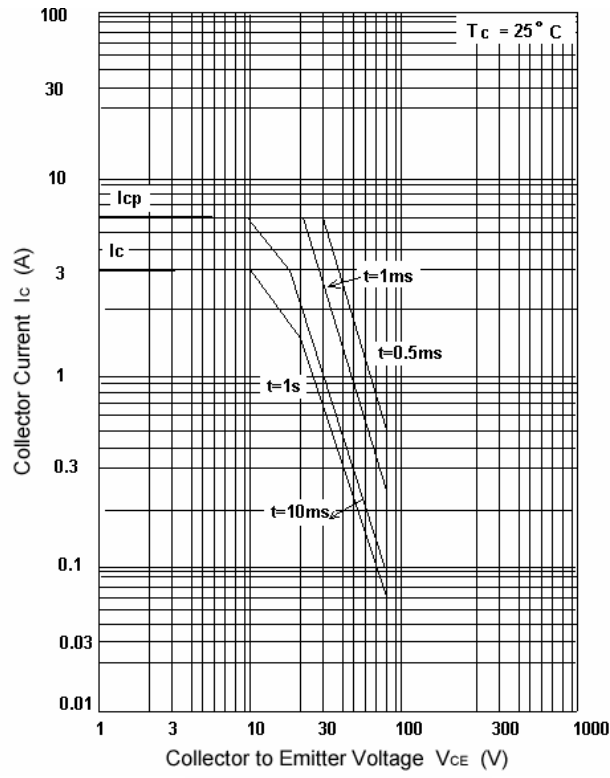


Fig.7 Safe Operating Area