

Silicon PNP Power Transistors

2SB863

DESCRIPTION

- With TO-3P(I) package
- Complement to type 2SD1148

APPLICATIONS

- Power amplifier applications
- Recommend for 70W high fidelity audio frequency amplifier output stage

PINNING

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

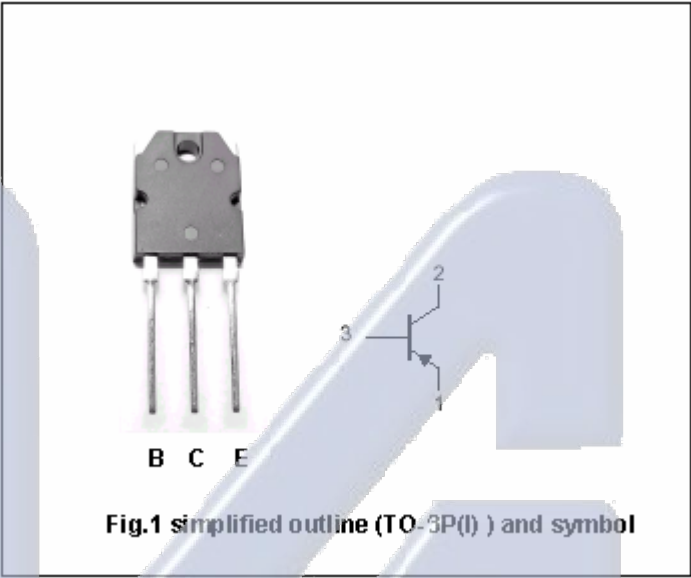


Fig.1 simplified outline (TO-3P(I)) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	-140	V
V _{CEO}	Collector-emitter voltage	Open base	-140	V
V _{EB0}	Emitter-base voltage	Open collector	-5	V
I _C	Collector current		-10	A
I _B	Base current		-1	A
P _C	Collector power dissipation	T _C =25℃	100	W
T _j	Junction temperature		150	℃
T _{stg}	Storage temperature		-55~150	℃

SavantIC Semiconductor

Product Specification

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-50mA; I_B=0$	-140			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=-5.0A; I_B=-0.5A$		-0.60	-2.0	V
V_{BE}	Base-emitter on voltage	$I_C=-5A; V_{CE}=-5V$		-0.96	-1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=-140V; I_E=0$			-5.0	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5V; I_C=0$			-5.0	μA
h_{FE-1}	DC current gain	$I_C=-1A; V_{CE}=-5V$	55		160	
h_{FE-2}	DC current gain	$I_C=-5A; V_{CE}=-5V$	25			
f_T	Transition frequency	$I_C=-1A; V_{CE}=-10V$		15		MHz
C_{OB}	Collector output capacitance	$I_C=0; f=1MHz; V_{CB}=-10V$		400		pF

◆ h_{FE-1} Classifications

R	O
55-110	80-160

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Technical drawing showing the outline dimensions of a mechanical part. The drawing includes three views: a front view (left), a side view (middle), and a top view (right). Dimensions are given in millimeters.

Front View (Left):

- Overall width: 15.60
- Internal width: 14.00
- Internal width: 13.00
- Internal width: 9.00
- Internal width: 8.00
- Top flange thickness: 4.50
- Top flange height: 3.40
- Top flange offset: 0.00
- Top flange radius: R2.10
- Top flange hole diameter: 3- $\varnothing$ 2.00
- Top flange hole radius: R1.00
- Top flange hole offset: 0.30
- Top flange hole diameter: 2.50
- Top flange hole offset: 6.50
- Top flange hole diameter: 12.50
- Top flange hole offset: 15.50
- Top flange hole diameter: 18.50
- Top flange hole offset: 35.20
- Top flange hole offset: 35.50
- Top flange hole angle: 15°
- Top flange hole diameter: 10.90
- Top flange hole offset: 3.35-0.05
- Top flange hole offset: 0.60

Side View (Middle):

- Overall height: 4.50
- Internal height: 1.50
- Internal height: 0.50
- Internal height: 3°
- Internal height: 3.00
- Internal height: 5°
- Internal height: 5°

Top View (Right):

- Overall width: 13.90
- Internal width: 13.00
- Top flange thickness: 4.50
- Top flange height: 2.50
- Top flange offset: 0.00
- Top flange radius: $\varnothing$ 3.30
- Top flange hole diameter: 12.00
- Top flange hole offset: 2.00
- Top flange hole diameter: 1.00

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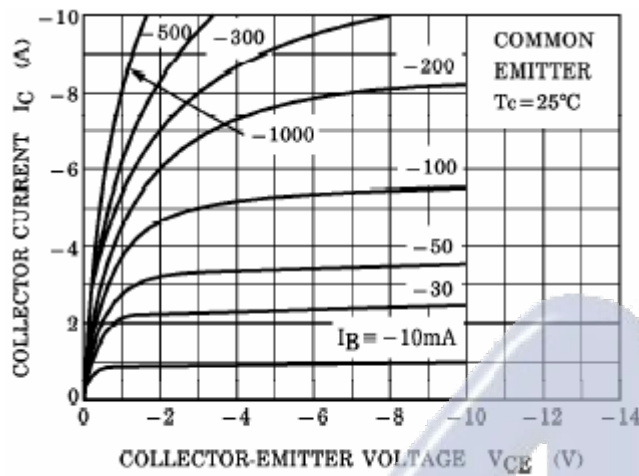


Fig.3 Static Characteristic

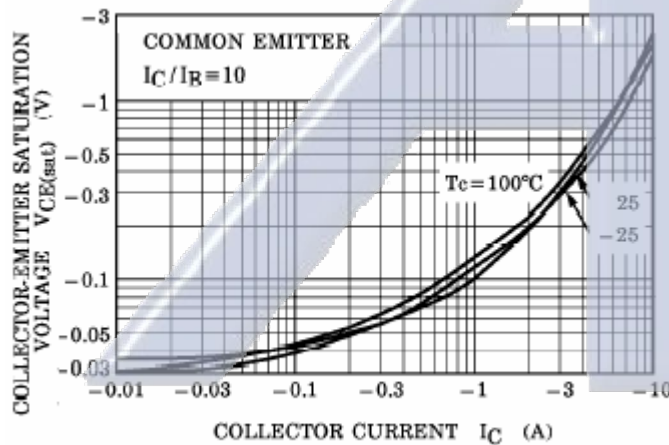


Fig.5 Collector-Emitter Saturation Voltage

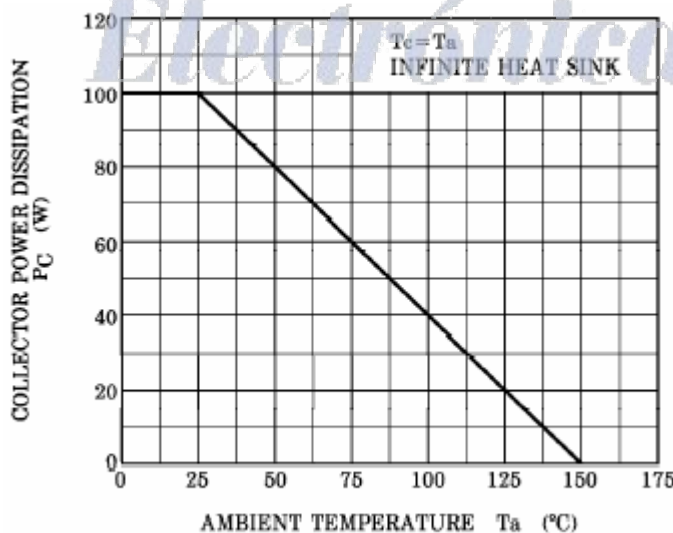
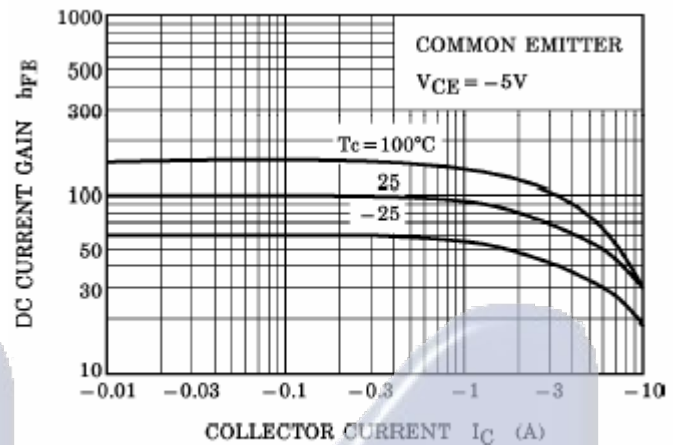
Fig.6 P_c - T_a Derating

Fig.4 DC current Gain

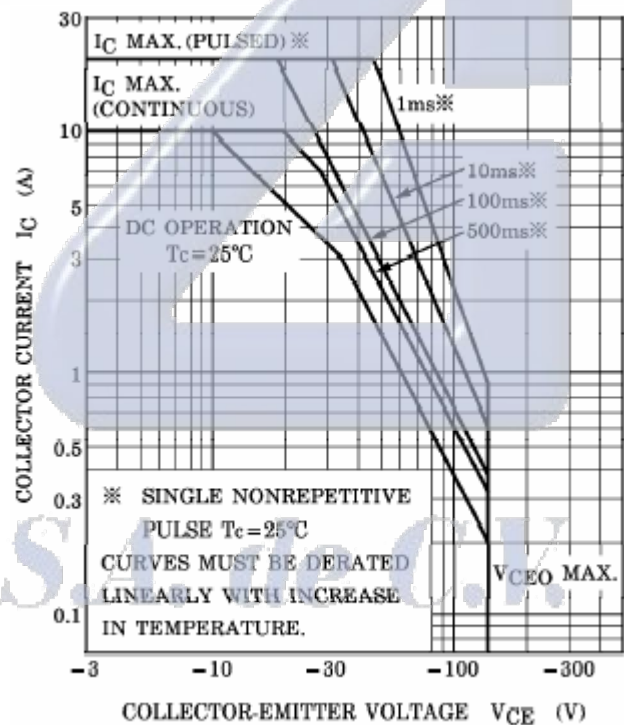


Fig.5 Safe Operating Area