

Silicon PNP Power Transistors

2SA1516

DESCRIPTION

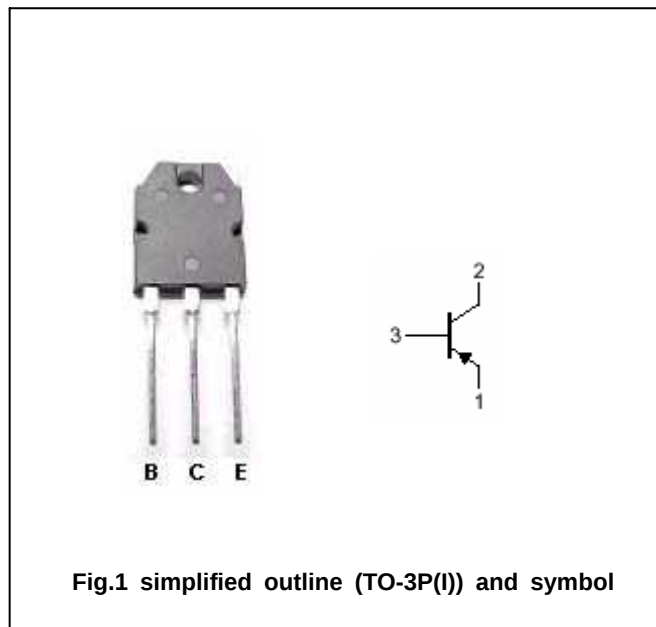
- With TO-3P(I) package
- Complement to type 2SC3907
- High collector voltage

APPLICATIONS

- Power amplifier applications
- Recommend for 80W high fidelity audio frequency amplifier output stage

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	-180	V
V_{CEO}	Collector-emitter voltage	Open base	-180	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-12	A
I_B	Base current		-1.2	A
P_C	Collector power dissipation	$T_C=25$	130	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =-50mA; I _B =0	-180			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-8 A; I _B =-0.8 A			-3.0	V
V _{BE}	Base-emitter voltage	I _C =-7A ; V _{CE} =-5V			-1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =-180V; I _E =0			-5	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =-5V; I _C =0			-5	μ A
h _{FE-1}	DC current gain	I _C =-1A ; V _{CE} =-5V	55		180	
h _{FE-2}	DC current gain	I _C =-7A ; V _{CE} =-5V	35			
f _T	Transition frequency	I _C =-1A ; V _{CE} =-5V		25		MHz
C _{OB}	Output capacitance	I _E =0; V _{CB} =-10V; f=1MHz		470		pF

◆ h_{FE-1} classifications

R	O
55-110	90-180

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Technical drawing of a microchip package showing outline dimensions in millimeters. The drawing includes three views: a top view, a side view, and a front view. The top view shows a square package with a central circular feature and four mounting pins. The side view shows the package height and pin length. The front view shows the package width and pin spacing. Dimensions are provided in millimeters, with some values in parentheses indicating tolerances.

Key dimensions shown:

- Top View:
 - Overall width: 15.60
 - Overall height: 15.60
 - Central circular feature diameter: $\phi 2.10$
 - Pin diameter: $\phi 1.00$
 - Pin spacing: 10.90
 - Pin length: 35.20
 - Pin angle: 15°
- Side View:
 - Package height: 4.50
 - Pin length: 35.20
 - Pin diameter: $\phi 1.00$
 - Pin angle: 15°
- Front View:
 - Overall width: 13.90
 - Overall height: 15.60
 - Central circular feature diameter: $\phi 2.10$
 - Pin diameter: $\phi 1.00$
 - Pin spacing: 10.90
 - Pin length: 35.20
 - Pin angle: 15°

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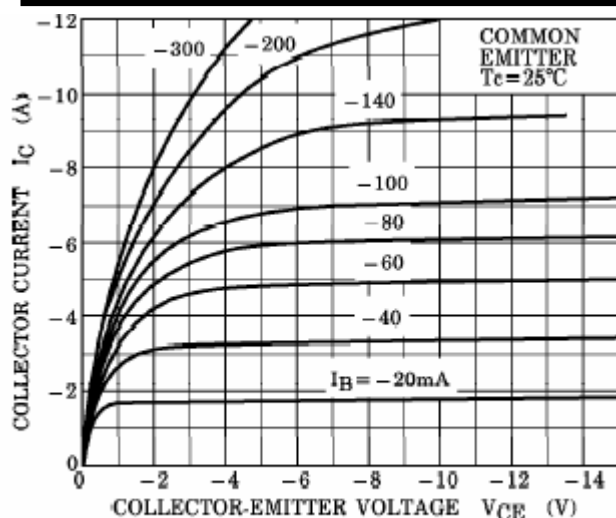


Fig.3 Static Characteristic

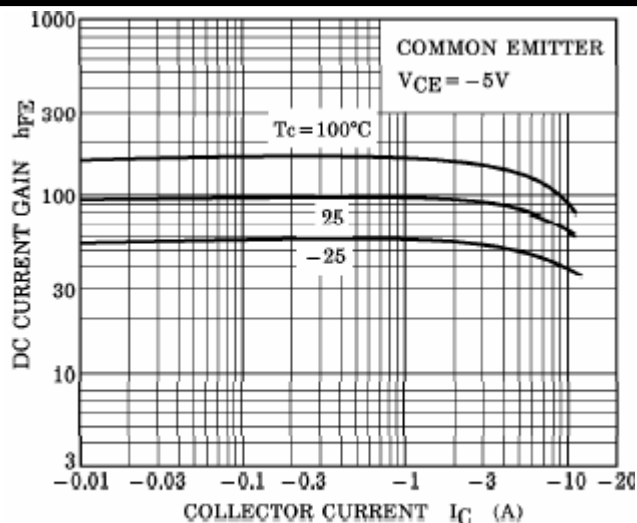


Fig.4 DC current Gain

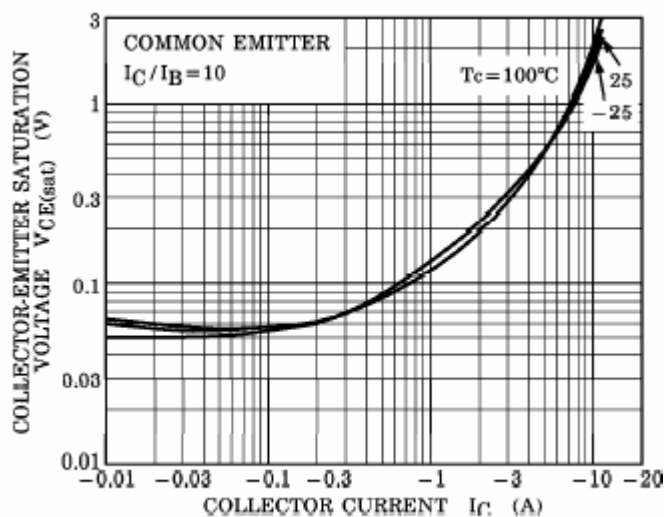


Fig.5 Collector-Emitter Saturation Voltage

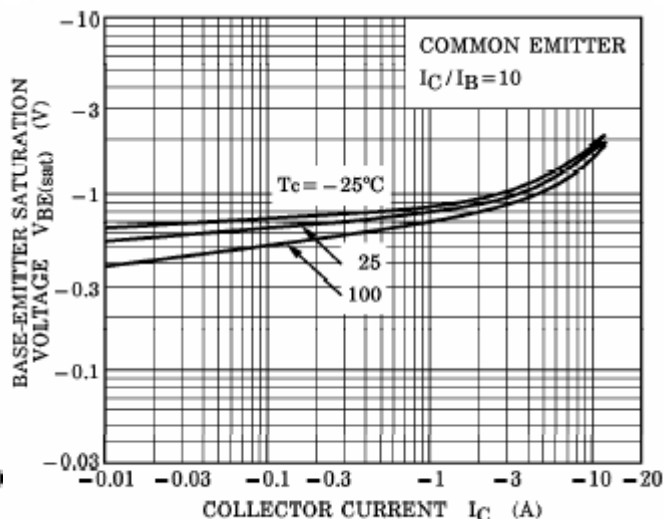


Fig.6 Base-Emitter Saturation Voltage

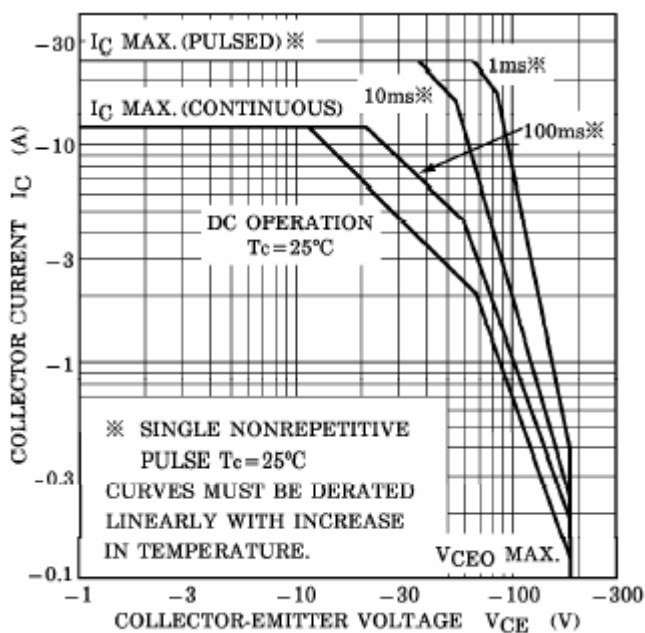


Fig.7 Safe Operating Area