

Silicon PNP Power Transistors

2SA1942

DESCRIPTION

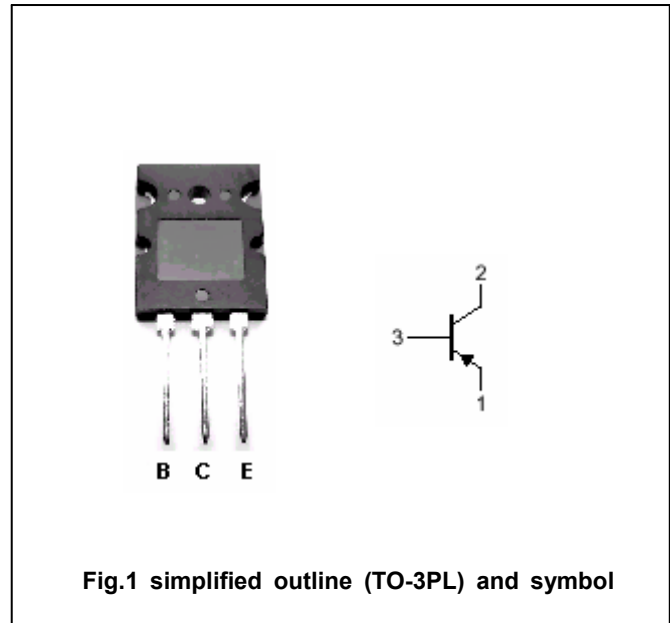
- With TO-3PL package
- Complement to type 2SC5199

APPLICATIONS

- Power amplifier applications
- Recommended 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	-160	V
V_{CEO}	Collector-emitter voltage	Open base	-160	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	$T_C=25^\circ\text{C}$	120	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 =-50mA ; I _B =0	-160			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-8A ; I _B =-0.8A			-2.5	V
V _{BE}	Base-emitter voltage	I _C =-6A ; V _{CE} =-5V			-1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =-160V; I _E =0			-5	μA
I _{EBO}	Emitter cut-off current	V _{EB} =-5V; I _C =0			-5	μA
h _{FE-1}	DC current gain	I _C =-1A ; V _{CE} =-5V	55		160	
h _{FE-2}	DC current gain	I _C =-6A ; V _{CE} =-5V	35			
f _T	Transition frequency	I _C =-1A ; V _{CE} =-5V		30		MHz
C _{OB}	Collector output capacitance	I _E =0; f=1MHz; V _{CB} =-10V		320		pF

◆ h_{FE-1} classifications

R	O
55-110	80-160

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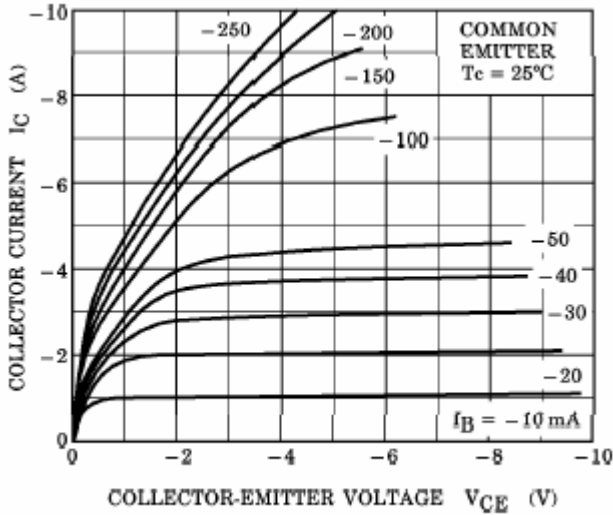


Fig.3 Static Characteristic

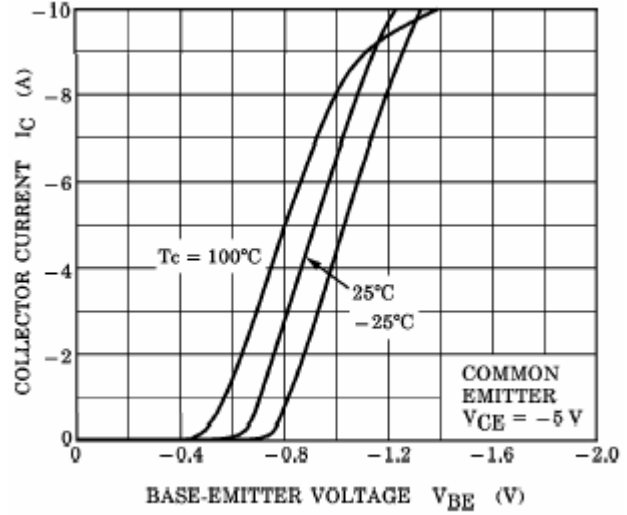


Fig.4 Base-Emitter On Voltage

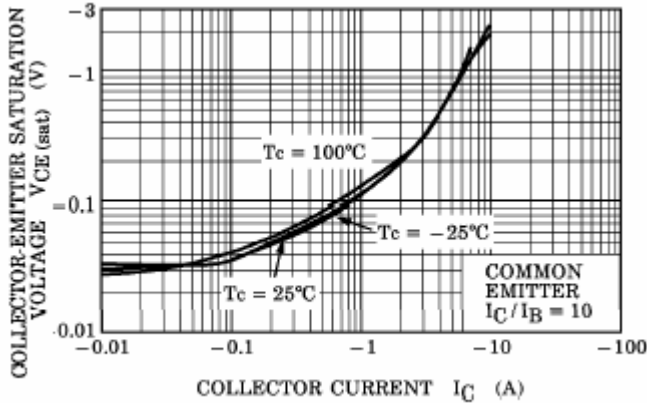


Fig.5 Collector-Emitter Saturation Voltage

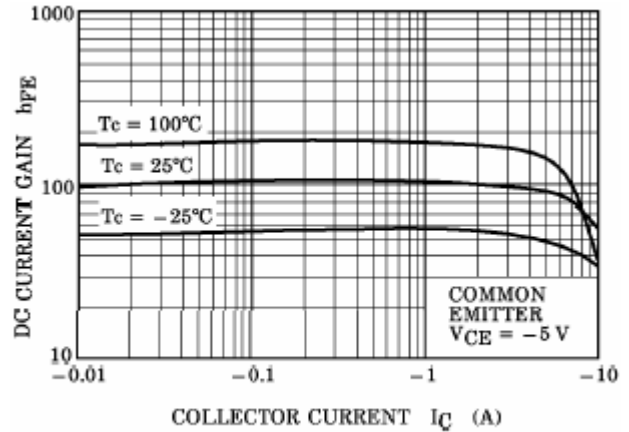


Fig.6 DC current Gain

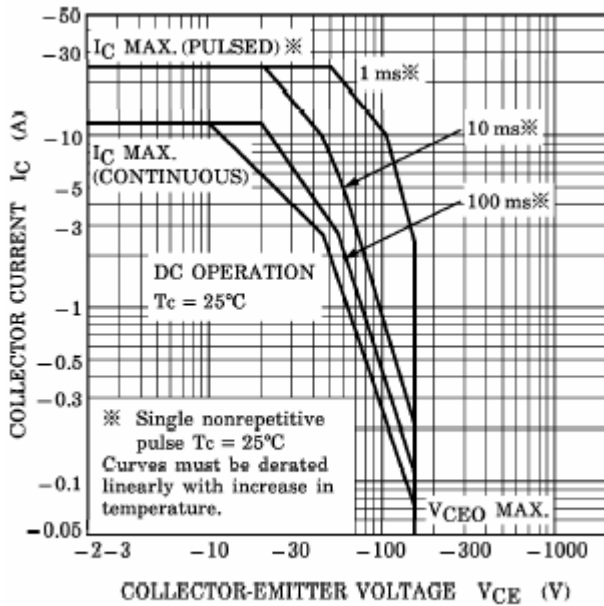


Fig.7 Safe Operating Area