

**Inchange Semiconductor**

**Product Specification**

**Silicon PNP Power Transistors**

**2SA1986**

**DESCRIPTION**

- With TO-3P(I) package
- Complement to type 2SC5358

**APPLICATIONS**

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

**PINNING**

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

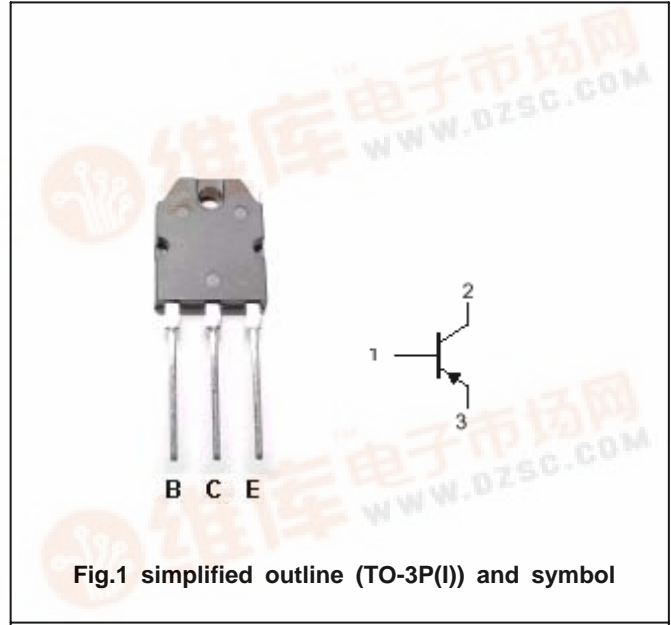


Fig.1 simplified outline (TO-3P(I)) and symbol

**Absolute maximum ratings(Tc=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-230	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-230	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-15	A
I <sub>B</sub>	Base current		-1.5	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	150	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	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> =-50mA; I <sub>B</sub> =0	-230			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-8 A; I <sub>B</sub> =-0.8A			-3.0	V
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-230V; I <sub>E</sub> =0			-5	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-5	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V	55		160	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-7A ; V <sub>CE</sub> =-5V	35			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V		30		MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz		360		pF

◆ h<sub>FE-1</sub> classifications

R	O
55-110	80-160

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PACKAGE OUTLINE

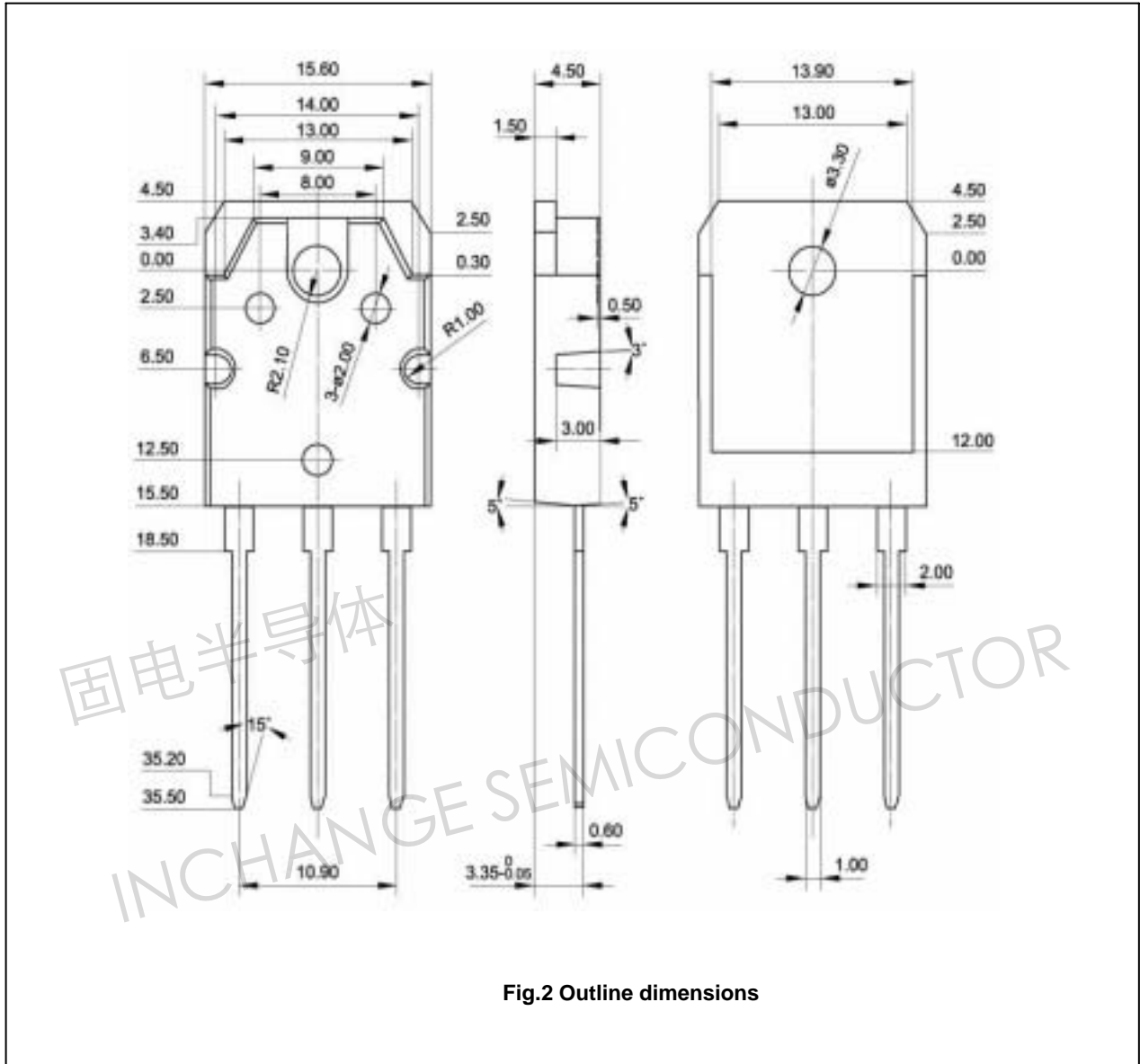


Fig.2 Outline dimensions

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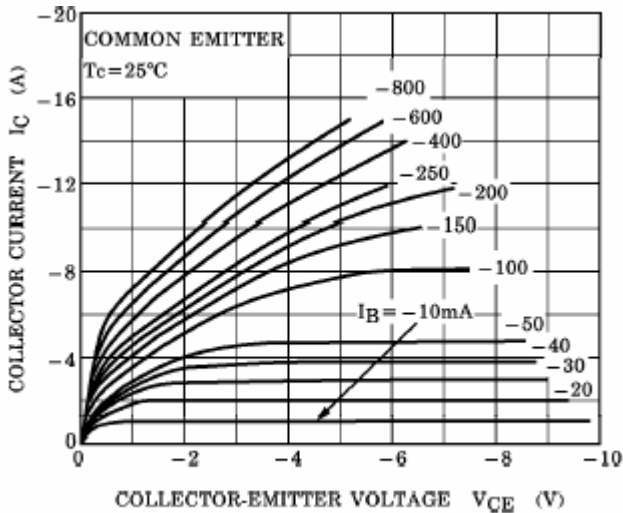


Fig.3 Static Characteristic

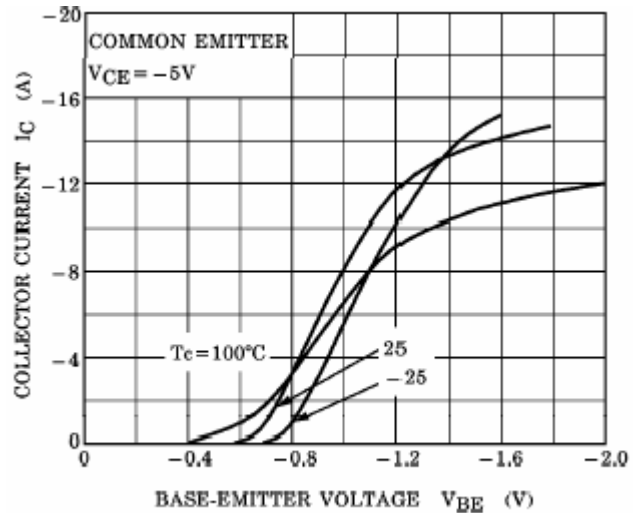


Fig.4 Base-Emitter On Voltage

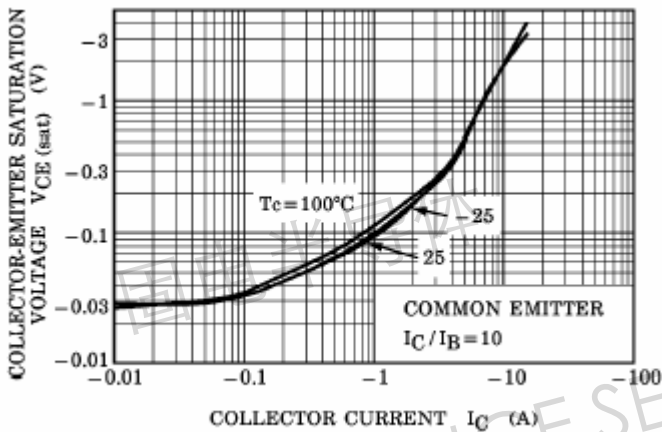


Fig.5 Collector-Emitter Saturation Voltage

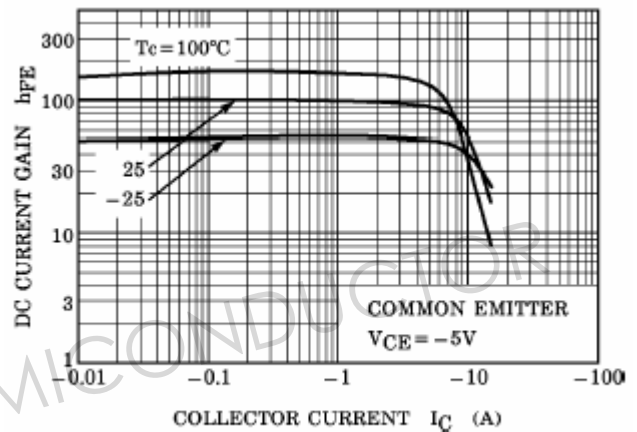


Fig.6 DC current Gain

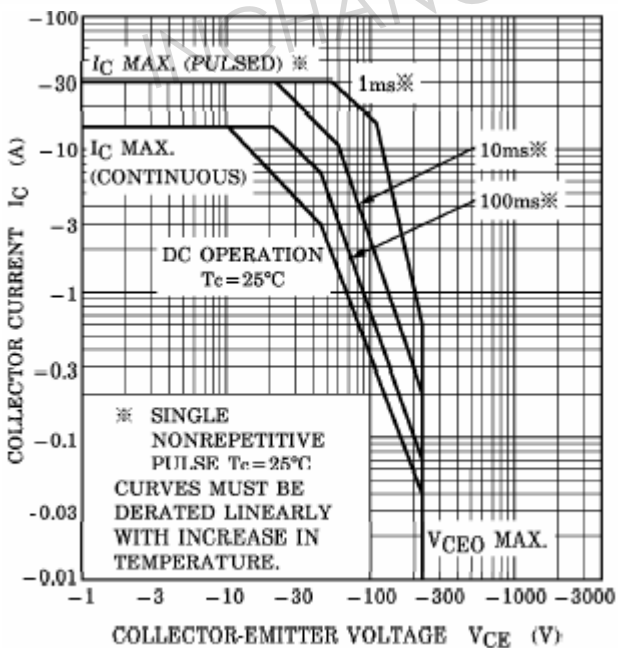


Fig.7 Safe Operating Area