

## Silicon PNP Power Transistors

2SB688

## DESCRIPTION

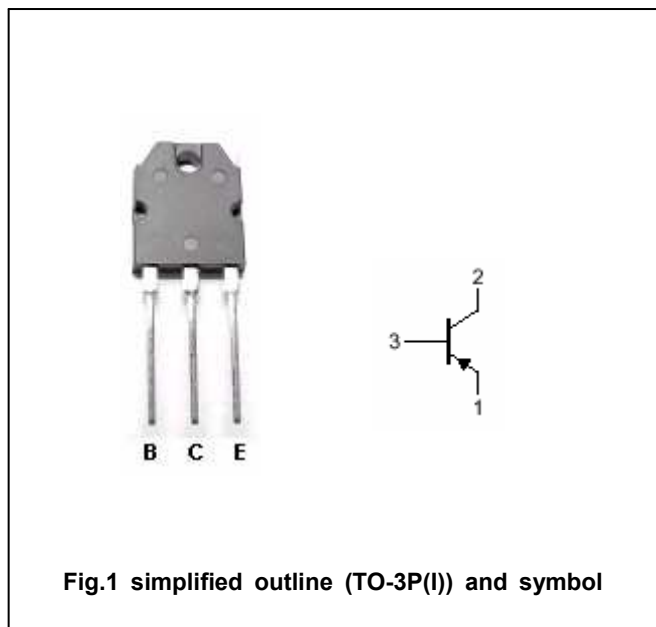
- With TO-3P(I) package
- Complement to type 2SD718

## APPLICATIONS

- Power amplifier applications
- Recommend for 45~50W 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	-120	V
$V_{CEO}$	Collector-emitter voltage	Open base	-120	V
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-8	A
$I_B$	Base current		-0.8	A
$P_T$	Total power dissipation	$T_C=25^\circ\text{C}$	80	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

T<sub>j</sub>=25°C 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	-120			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-5A; I <sub>B</sub> =-0.5A			-2.5	V
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =-5A; V <sub>CE</sub> =-5V			-1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-120V; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-1A; V <sub>CE</sub> =-5V	55		160	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-1A; V <sub>CE</sub> =-5V		10		MHz
C <sub>ob</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =-10V; f=1MHz		280		pF

◆ h<sub>FE</sub> Classifications

R	O
55-110	80-160

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PACKAGE OUTLINE

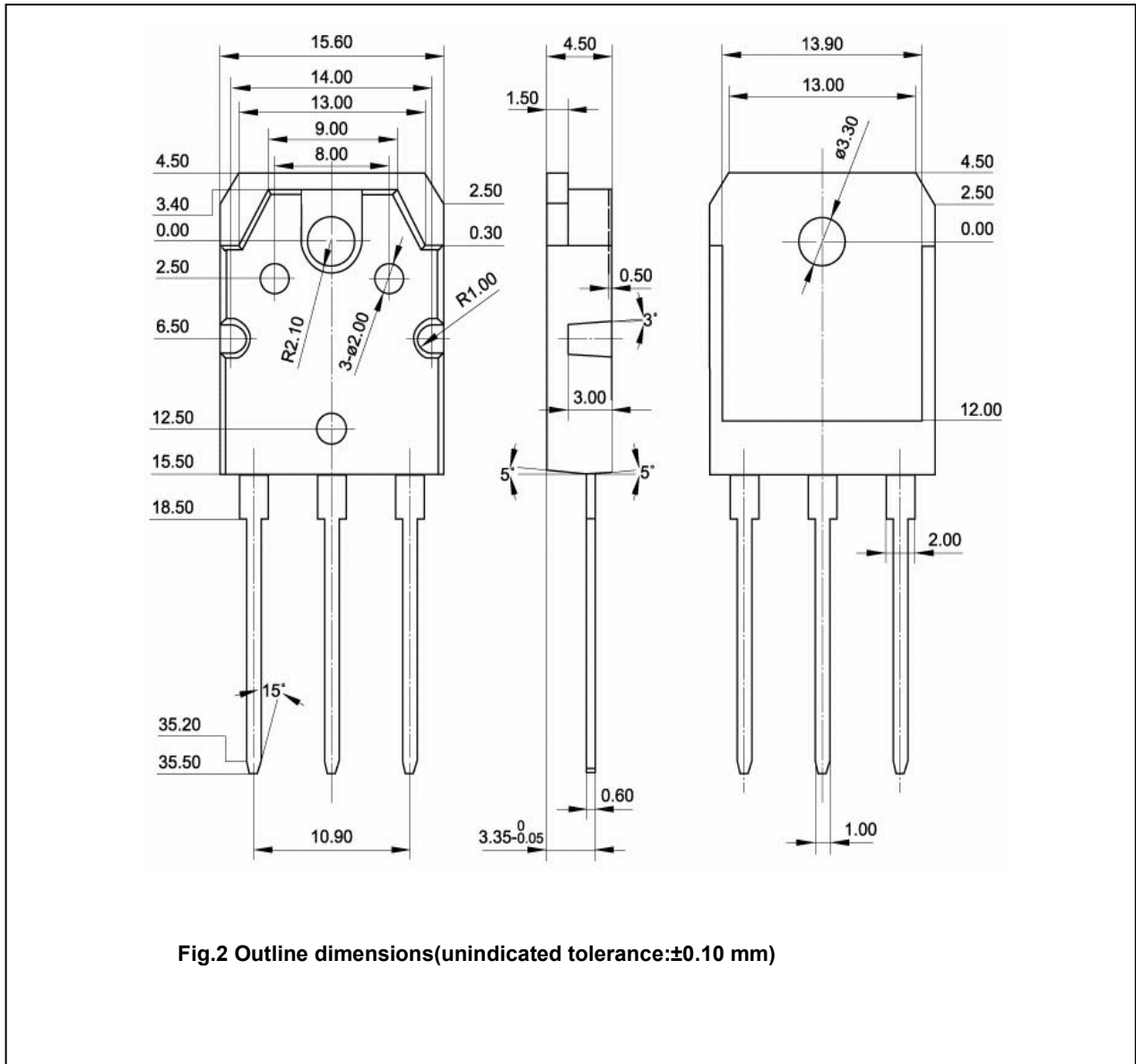


Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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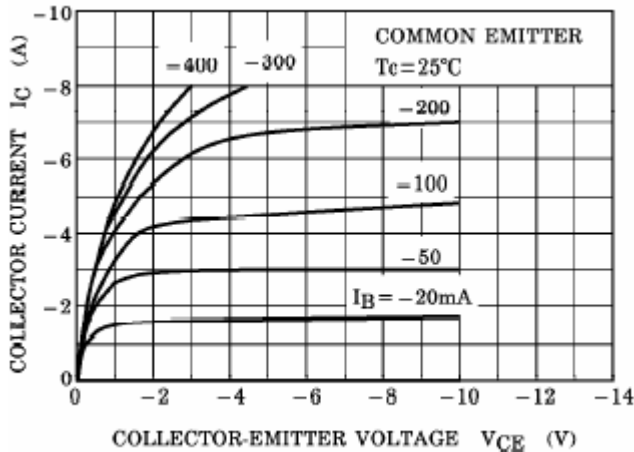


Fig.3 Static Characteristic

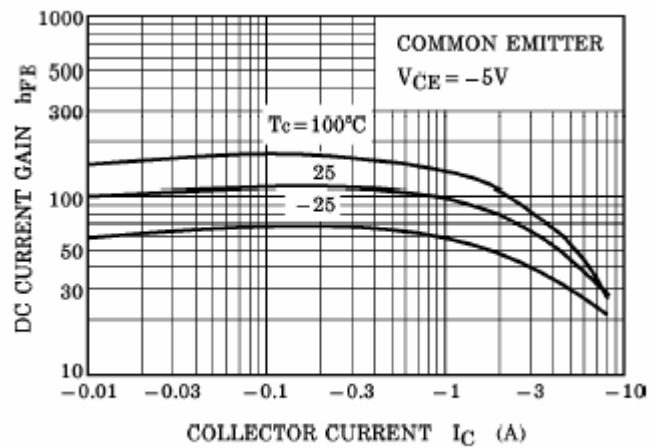


Fig.4 DC current Gain

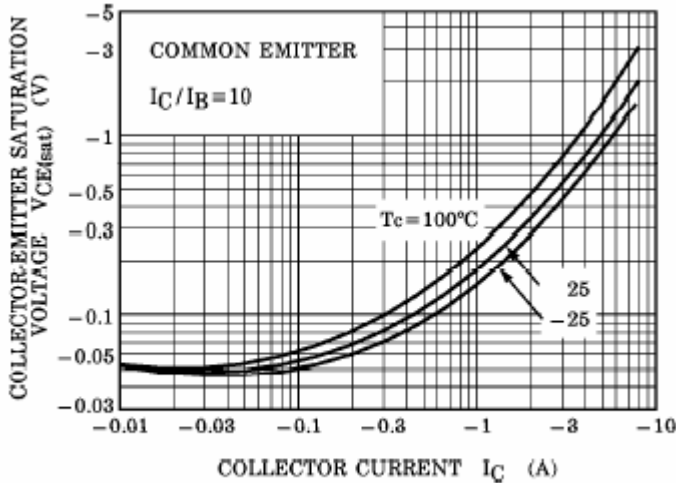


Fig.5 Collector-Emitter Saturation Voltage

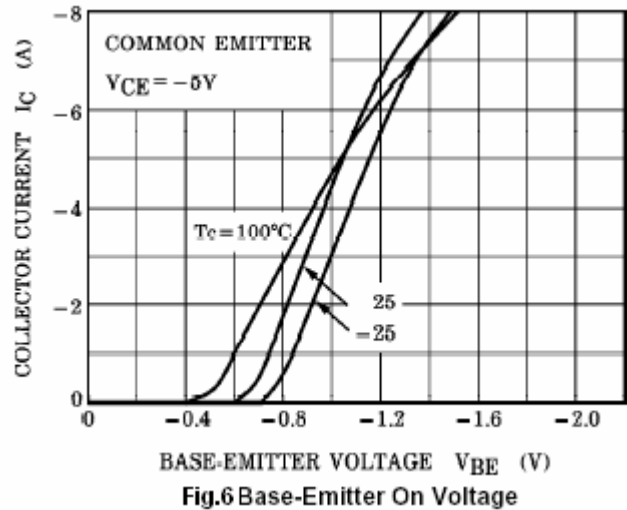


Fig.6 Base-Emitter On Voltage

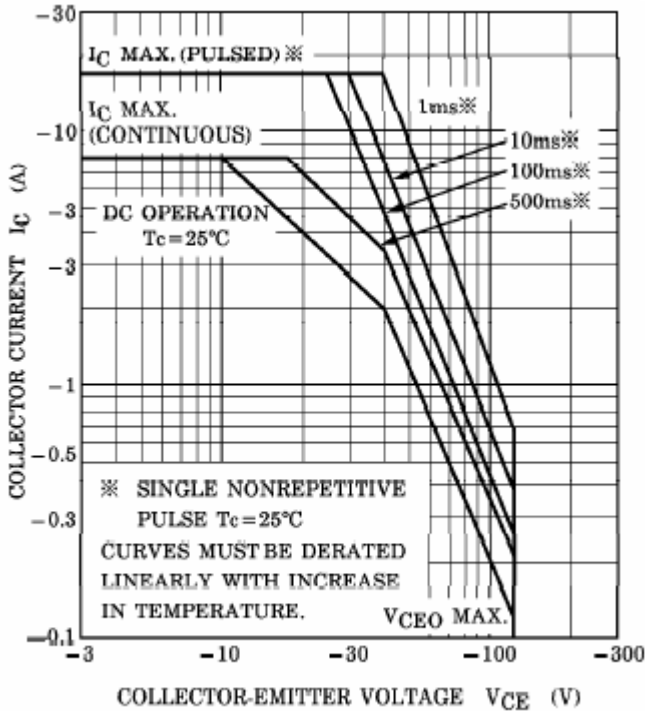


Fig.7 Safe Operating Area