

Silicon PNP Power Transistors

2SB1163

DESCRIPTION

- With TO-3PL package
- Complement to type 2SD1718
- Excellent linearity of  $h_{FE}$
- Wide area of safe operation (ASO)
- High transition frequency  $f_T$

APPLICATIONS

- For high power amplifier applications

PINNING

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

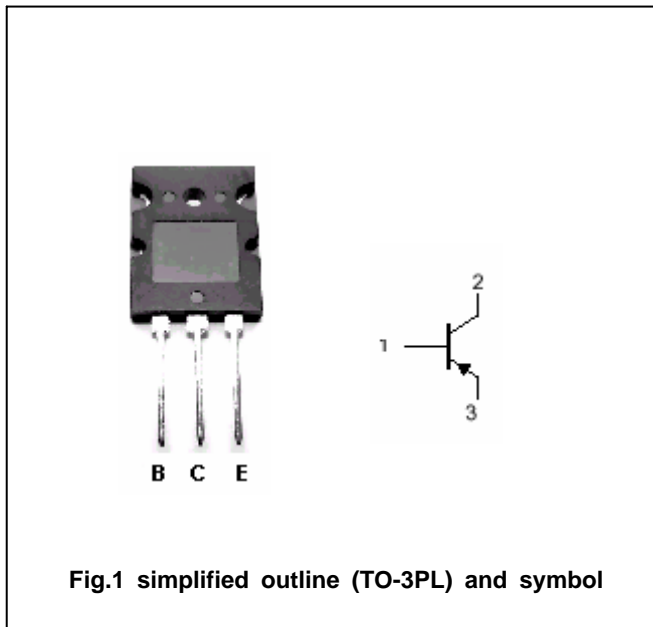


Fig.1 simplified outline (TO-3PL) and symbol

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		-15	A
$I_{CM}$	Collector current-peak		-25	A
$P_C$	Collector power dissipation		3.5	W
		$T_C=25$	150	
$T_j$	Junction temperature		150	
$T_{stg}$	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>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-10A ; I <sub>B</sub> =-1A			-2.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-8A ; V <sub>CE</sub> =-5V			-1.8	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-180V; I <sub>E</sub> =0			-50	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-3V; I <sub>C</sub> =0			-50	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-20mA ; V <sub>CE</sub> =-5V	20			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-5V	60		200	
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =-8A ; V <sub>CE</sub> =-5V	20			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V		20		MHz
C <sub>OB</sub>	Collector output capacitance	f=1MHz; V <sub>CB</sub> =-10V		230		pF

◆ h<sub>FE-2</sub> classifications

Q	S	P
60-100	80-160	100-200

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PACKAGE OUTLINE

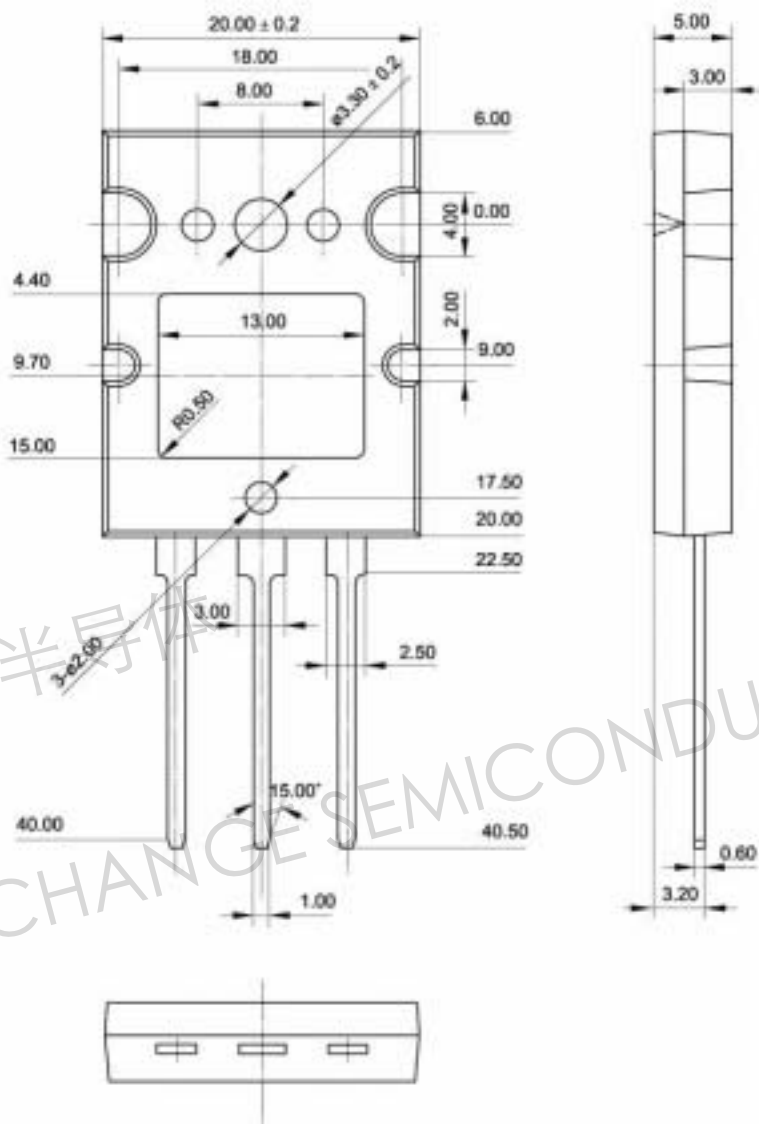


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.50$  mm)