

Silicon PNP Power Transistors

2SB942 2SB942A

DESCRIPTION

- With TO-220Fa package
- High forward current transfer ratio  $h_{FE}$  which has satisfactory linearity
- Low collector saturation voltage
- Complement to type 2SD1267/1267A

APPLICATIONS

- For low-frequency power amplification

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

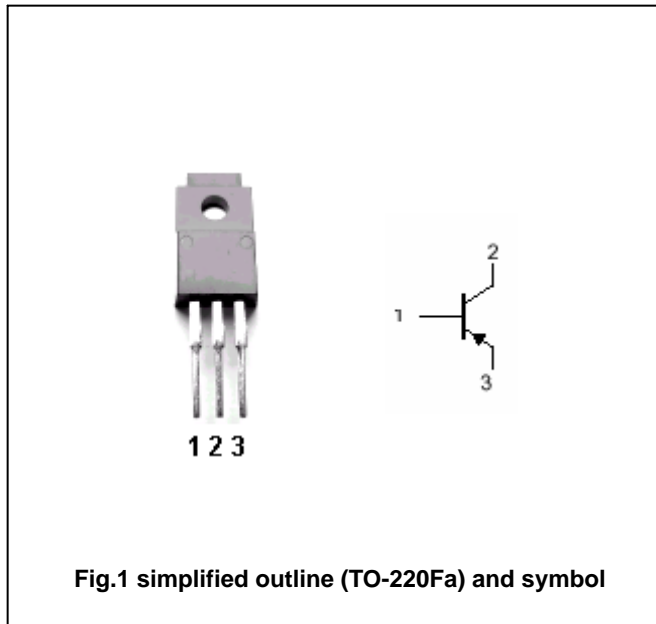


Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings( $T_a=25$  )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2SB942	-60	V
		2SB942A	-80	
$V_{CEO}$	Collector-emitter voltage	2SB942	-60	V
		2SB942A	-80	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-4	A
$I_{CM}$	Collector current-peak		-8	A
$P_C$	Collector power dissipation	$T_a=25$	2	W
		$T_C=25$	40	
$T_j$	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>CEO</sub>	Collector-emitter voltage	2SB942	I <sub>C</sub> =-30mA, I <sub>B</sub> =0	-60			V
		2SB942A		-80			
V <sub>CEsat</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-4A, I <sub>B</sub> =-0.4A			-1.5	V
V <sub>BE</sub>	Base-emitter voltage		I <sub>C</sub> =-3A; V <sub>CE</sub> =-4V			-2	V
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-1	mA
I <sub>CEO</sub>	Collector cut-off current	2SB942	V <sub>CE</sub> =-30V; I <sub>B</sub> =0			-0.7	mA
		2SB942A	V <sub>CE</sub> =-60V; I <sub>B</sub> =0				
I <sub>CES</sub>	Collector cut-off current	2SB942	V <sub>CE</sub> =-60V; V <sub>BE</sub> =0			-0.4	mA
		2SB942A	V <sub>CE</sub> =-80V; V <sub>BE</sub> =0				
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-1A; V <sub>CE</sub> =-4V	70		250	
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-3A; V <sub>CE</sub> =-4V	15			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-0.1A; V <sub>CE</sub> =-10V, f=10MHz		30		MHz

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-4A I <sub>B1</sub> =-0.4A, I <sub>B2</sub> =0.4A		0.2		μs
t <sub>stg</sub>	Storage time			0.5		μs
t <sub>f</sub>	Fall time			0.2		μs

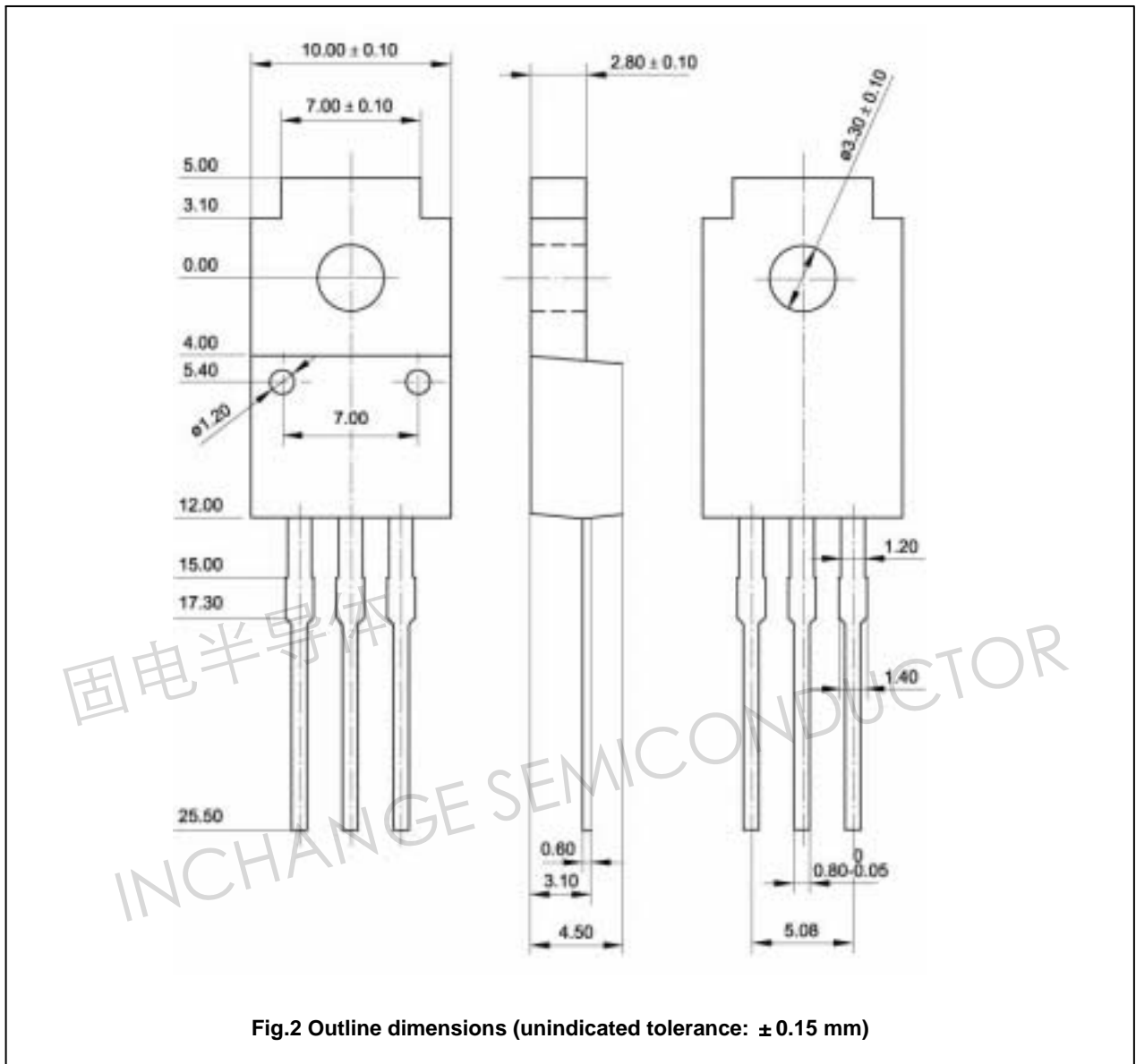
◆ h<sub>FE-1</sub> Classifications

Q	P
70-150	120-250

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PACKAGE OUTLINE



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