

Silicon PNP Power Transistors

2SB954 2SB954A

DESCRIPTION

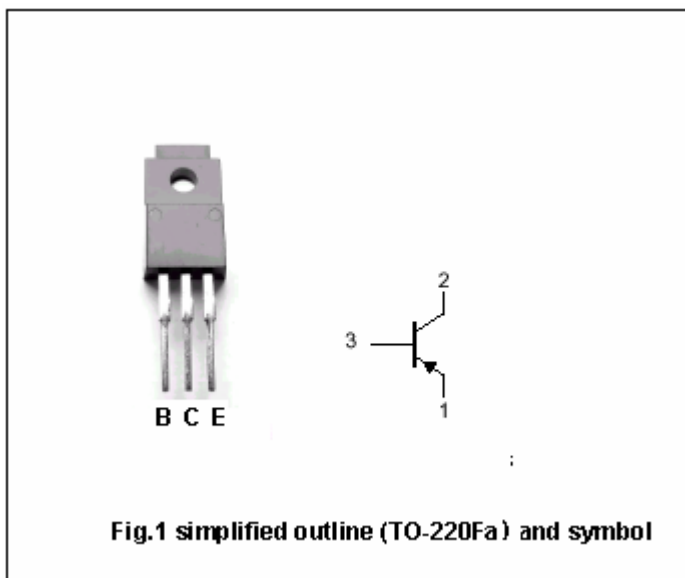
- With TO-220Fa package
- High forward current transfer ratio  $h_{FE}$  which has satisfactory linearity
- Low collector saturation voltage

APPLICATIONS

- For power amplification

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base



Absolute maximum ratings( $T_a=25$  )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2SB954	-60	V
		2SB954A	-80	
$V_{CEO}$	Collector-emitter voltage	2SB954	-60	V
		2SB954A	-80	
$V_{EBO}$	Emitter-base voltage	Open collector	-5	V
$I_C$	Collector current		-1	A
$I_{CM}$	Collector current-peak		-2	A
$P_C$	Collector power dissipation	$T_a=25$	2	W
		$T_C=25$	30	
$T_j$	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	2SB954	I <sub>C</sub> =-30mA ; I <sub>B</sub> =0	-60		V	
		2SB954A		-80			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-1.0A ; I <sub>B</sub> =-0.125A			-1.0	V	
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-4V			-1.3	V	
I <sub>CEO</sub>	Collector cut-off current	2SB954	V <sub>CE</sub> =-30V ; I <sub>B</sub> =0			-300	μA
		2SB954A		V <sub>CE</sub> =-60V ; I <sub>B</sub> =0			
I <sub>CES</sub>	Collector cut-off current	2SB954	V <sub>CE</sub> =-60V ; V <sub>BE</sub> =0			-200	μA
		2SB954A		V <sub>CE</sub> =-80V ; V <sub>BE</sub> =0			
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V ; I <sub>C</sub> =0			-1	mA	
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.2A ; V <sub>CE</sub> =-4V	70		250		
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-1A ; V <sub>CE</sub> =-4V	15				
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.2A ; V <sub>CE</sub> =-5V, f=10MHz		30		MHz	
t <sub>on</sub>	Trun-on time			0.5		μs	
t <sub>s</sub>	Storage time	I <sub>C</sub> =-1A ; V <sub>CC</sub> =-50V I <sub>B1</sub> =-0.1A, I <sub>B2</sub> =0.1A		1.2		μs	
t <sub>f</sub>	Fall time			0.3		μs	

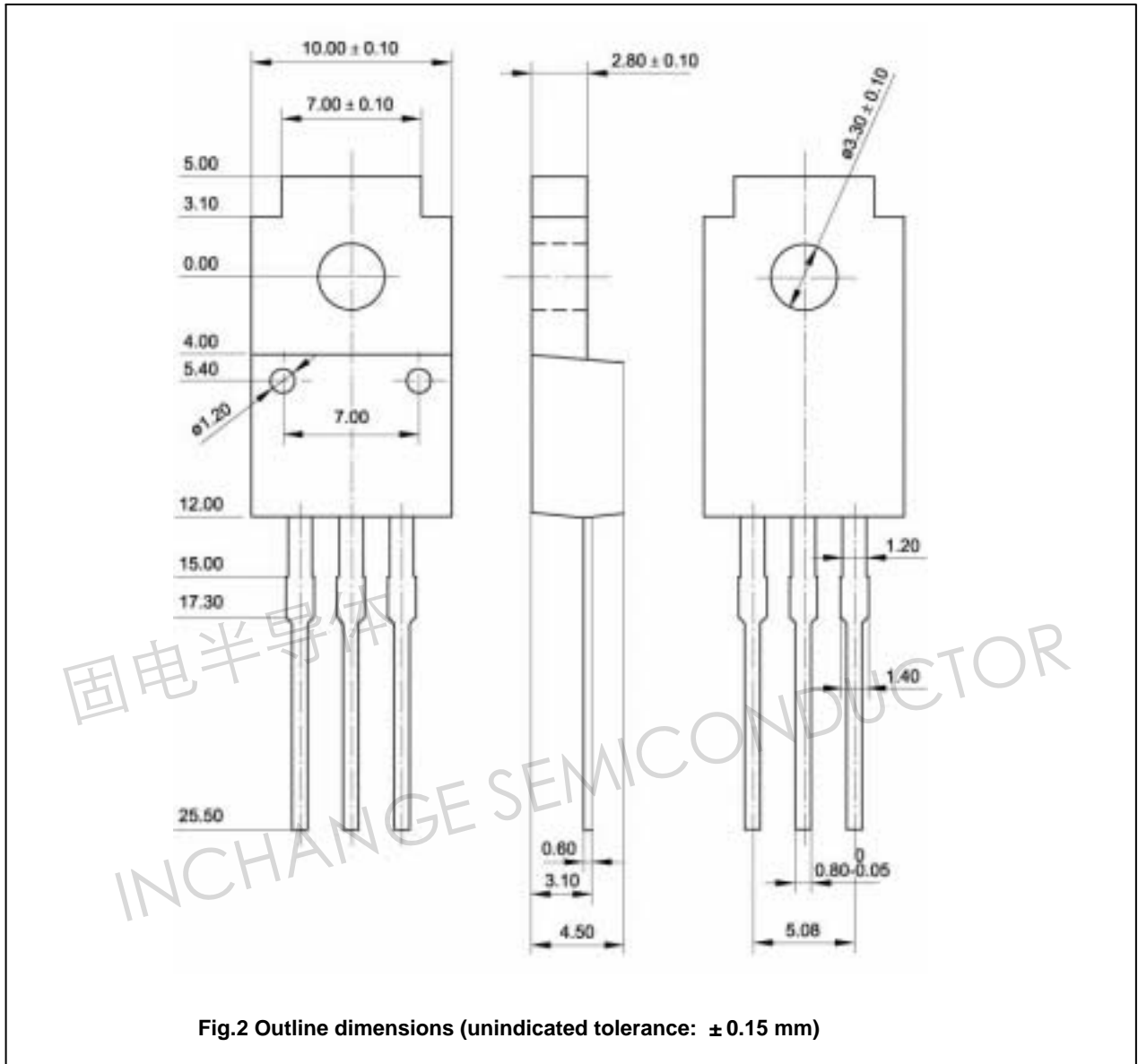
◆ h<sub>FE-1</sub> Classifications

Q	P
70-150	120-250

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PACKAGE OUTLINE



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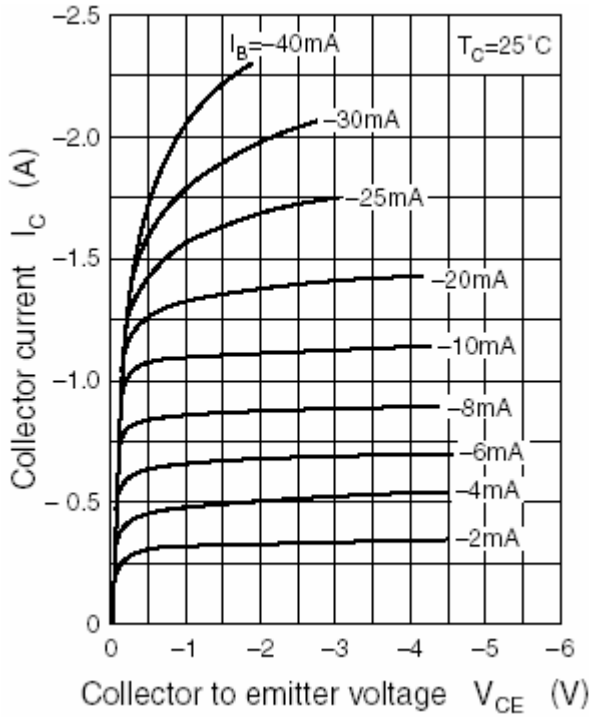


Fig.3 Static Characteristic

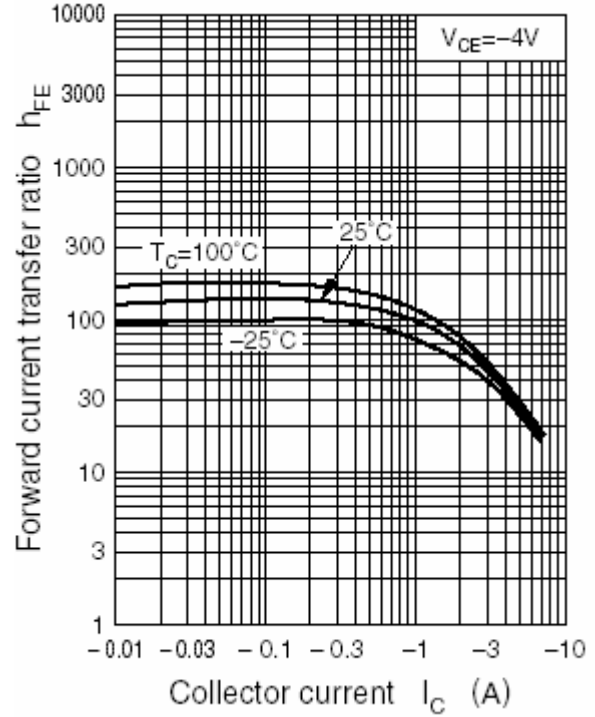


Fig.4 DC current Gain

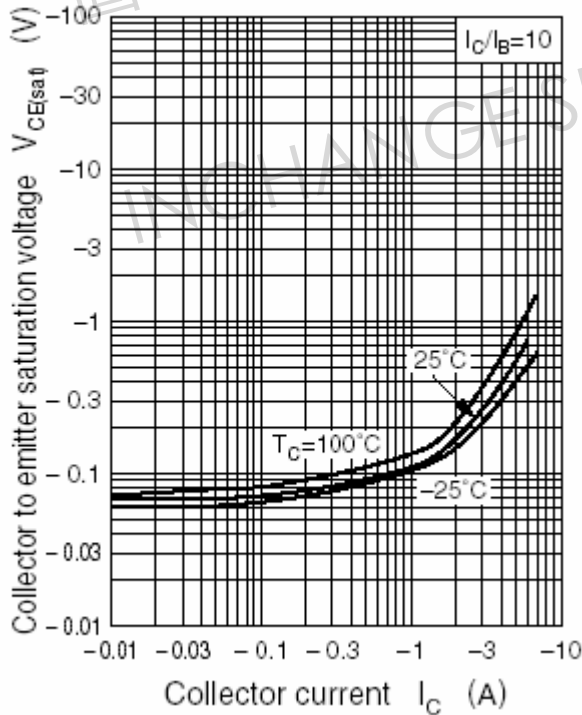


Fig.5 Collector-Emitter Saturation Voltage

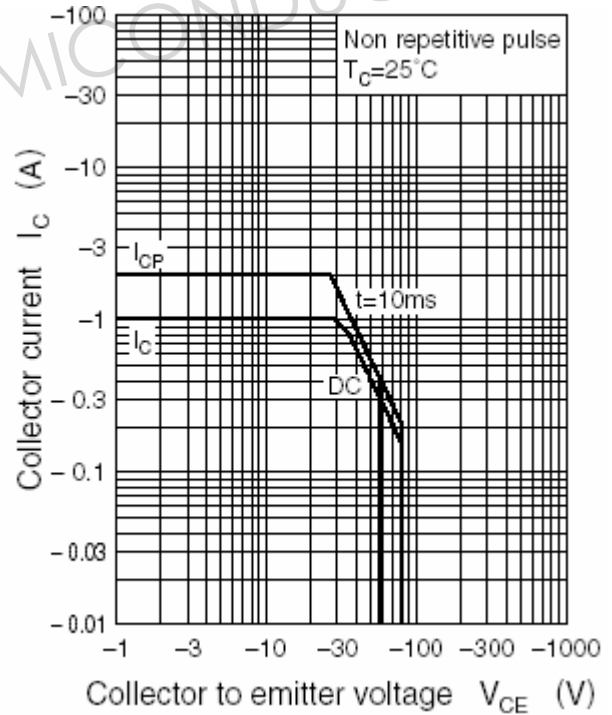


Fig.6 Safe Operating Area