

**Inchange Semiconductor**

**Product Specification**

**Silicon PNP Power Transistors**

**2SB954 2SB954A**

**DESCRIPTION**

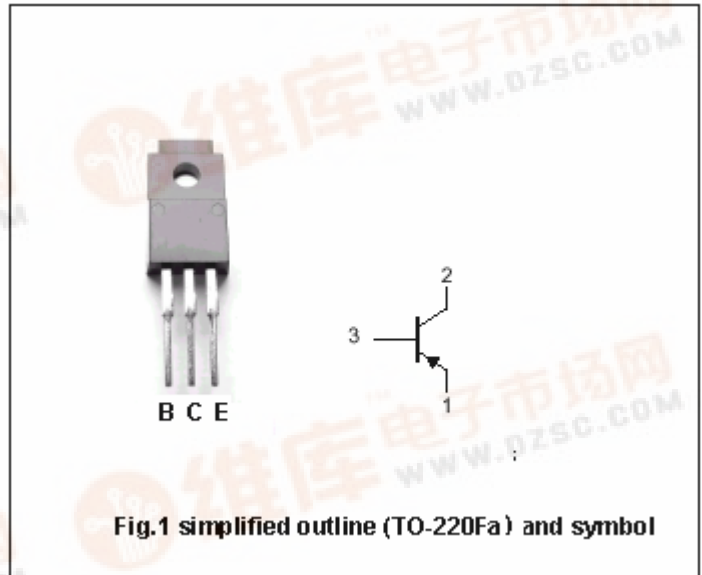
- With TO-220Fa package
- High forward current transfer ratio  $h_{FE}$  which has satisfactory linearity
- Low collector saturation voltage

**APPLICATIONS**

- For power amplification

**PINNING**

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SB954	-60	V
		2SB954A	-80	
V <sub>CEO</sub>	Collector-emitter voltage	2SB954	-60	V
		2SB954A	-80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-5	V
I <sub>C</sub>	Collector current		-1	A
I <sub>CM</sub>	Collector current-peak		-2	A
P <sub>C</sub>	Collector power dissipation	T <sub>a</sub> =25	2	W
		T <sub>C</sub> =25	30	
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>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

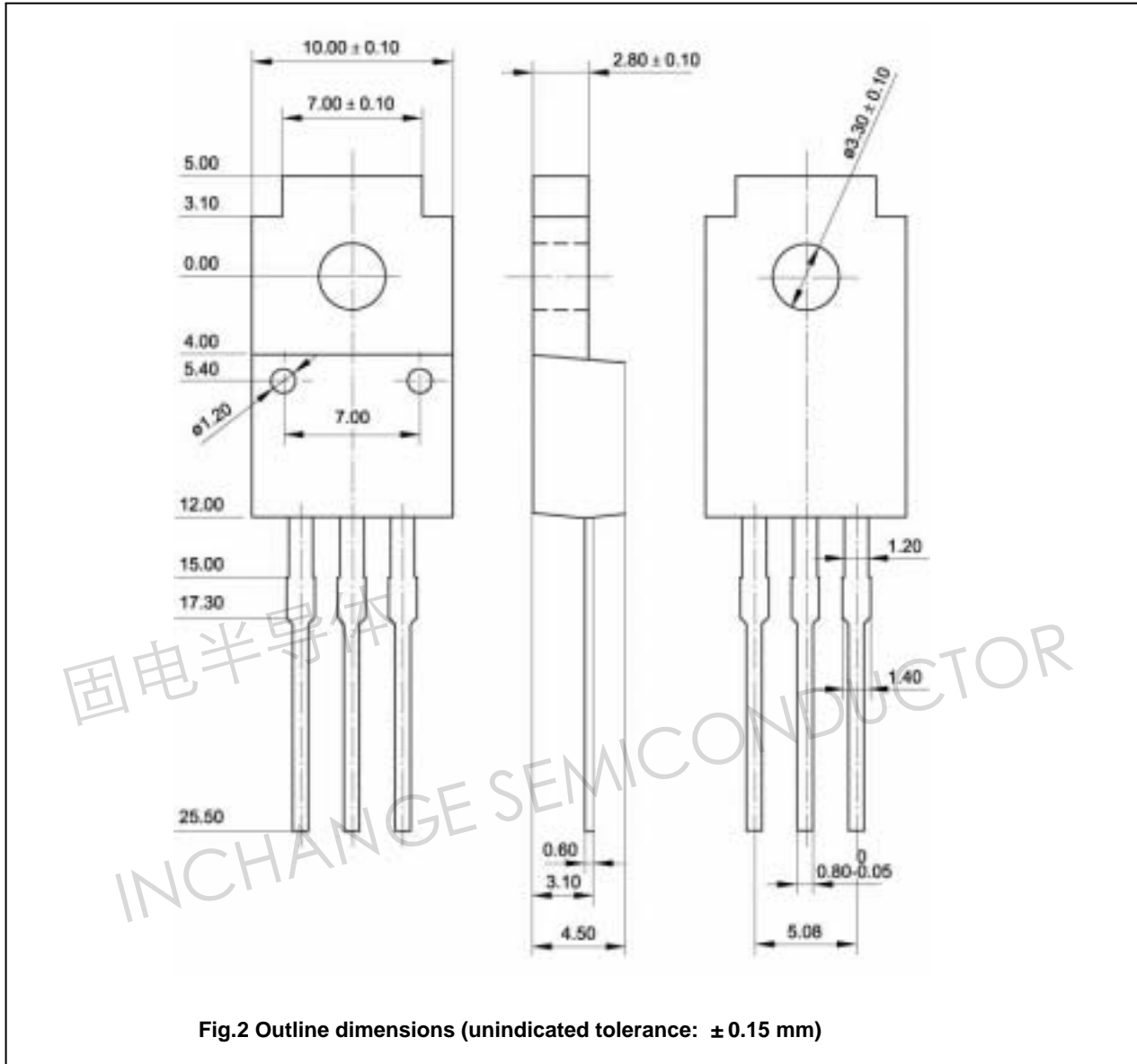
◆ h<sub>FE-1</sub> Classifications

Q	P
70-150	120-250

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PACKAGE OUTLINE



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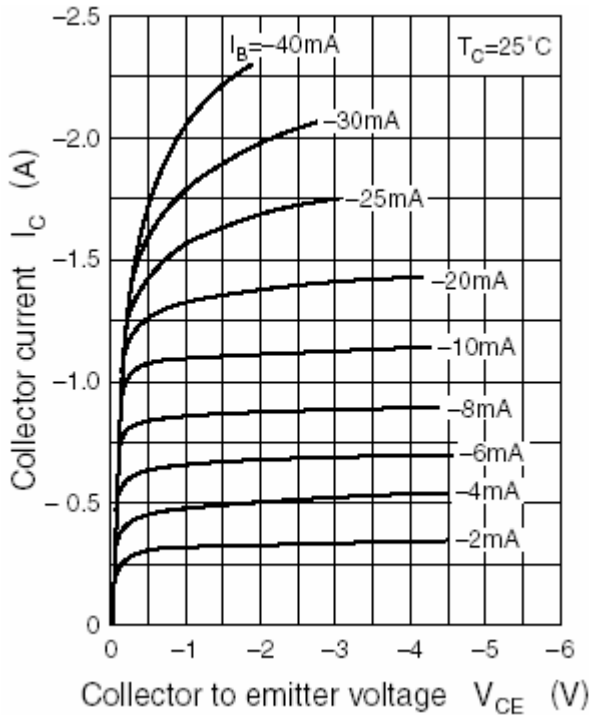


Fig.3 Static Characteristic

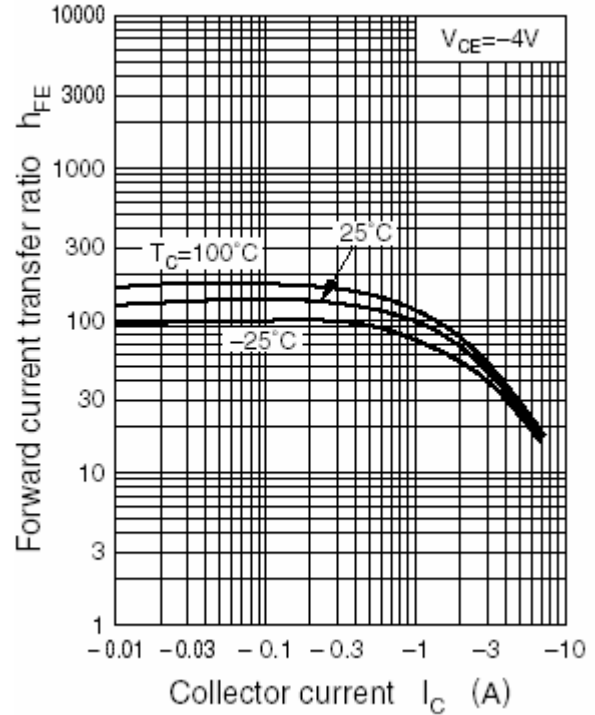


Fig.4 DC current Gain

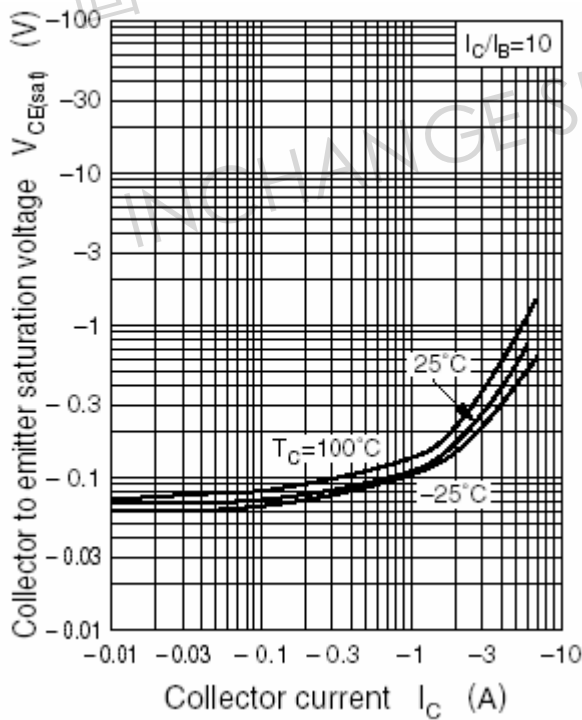


Fig.5 Collector-Emitter Saturation Voltage

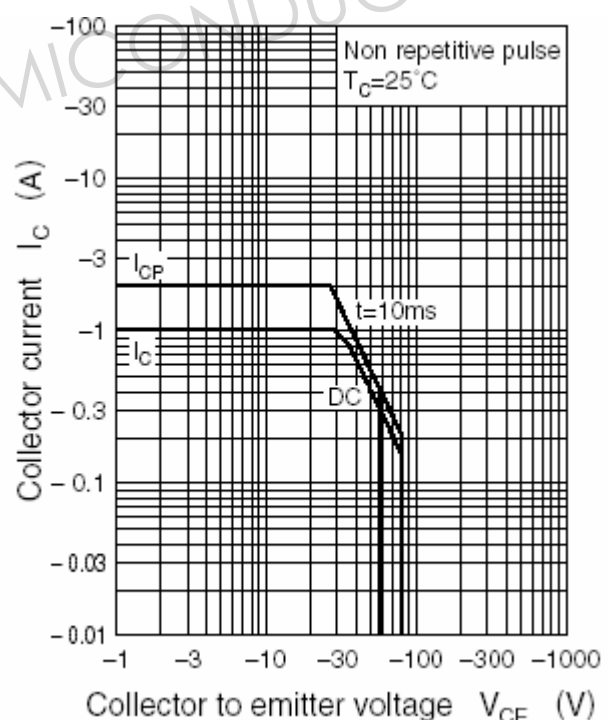


Fig.6 Safe Operating Area