

Silicon PNP Power Transistors

2SB946

DESCRIPTION

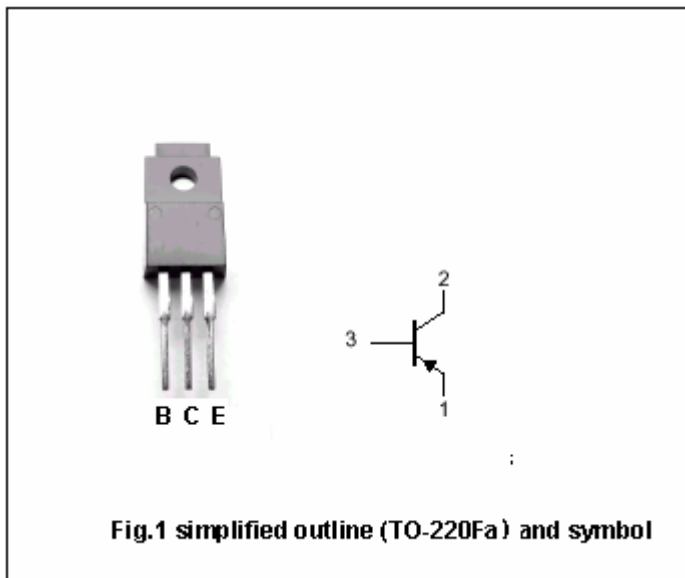
- With TO-220Fa package
- Complement to type 2SD1271
- Low saturation voltage
- Good linearity of h_{FE}
- High current

APPLICATIONS

- For power switching applications

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	Open emitter	-130	V
V_{CEO}	Collector-emitter voltage	Open base	-80	
V_{EBO}	Emitter-base voltage	Open collector	-7	V
I_C	Collector current (DC)		-7	A
I_{CM}	Collector current-Peak		-15	A
P_C	Collector power dissipation	$T_C=25$	40	W
		$T_a=25$	2	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-10mA, I_B=0$	-80			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=-5A; I_B=-0.25A$			-0.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=-5A; I_B=-0.25A$			-1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=-100V; I_E=0$			-10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5V; I_C=0$			-50	μA
h_{FE-1}	DC current gain	$I_C=-0.1A; V_{CE}=-2V$	45			
h_{FE-2}	DC current gain	$I_C=-3A; V_{CE}=-2V$	60		260	
f_T	Transition frequency	$I_C=-0.5A; V_{CE}=-10V$		30		MHz

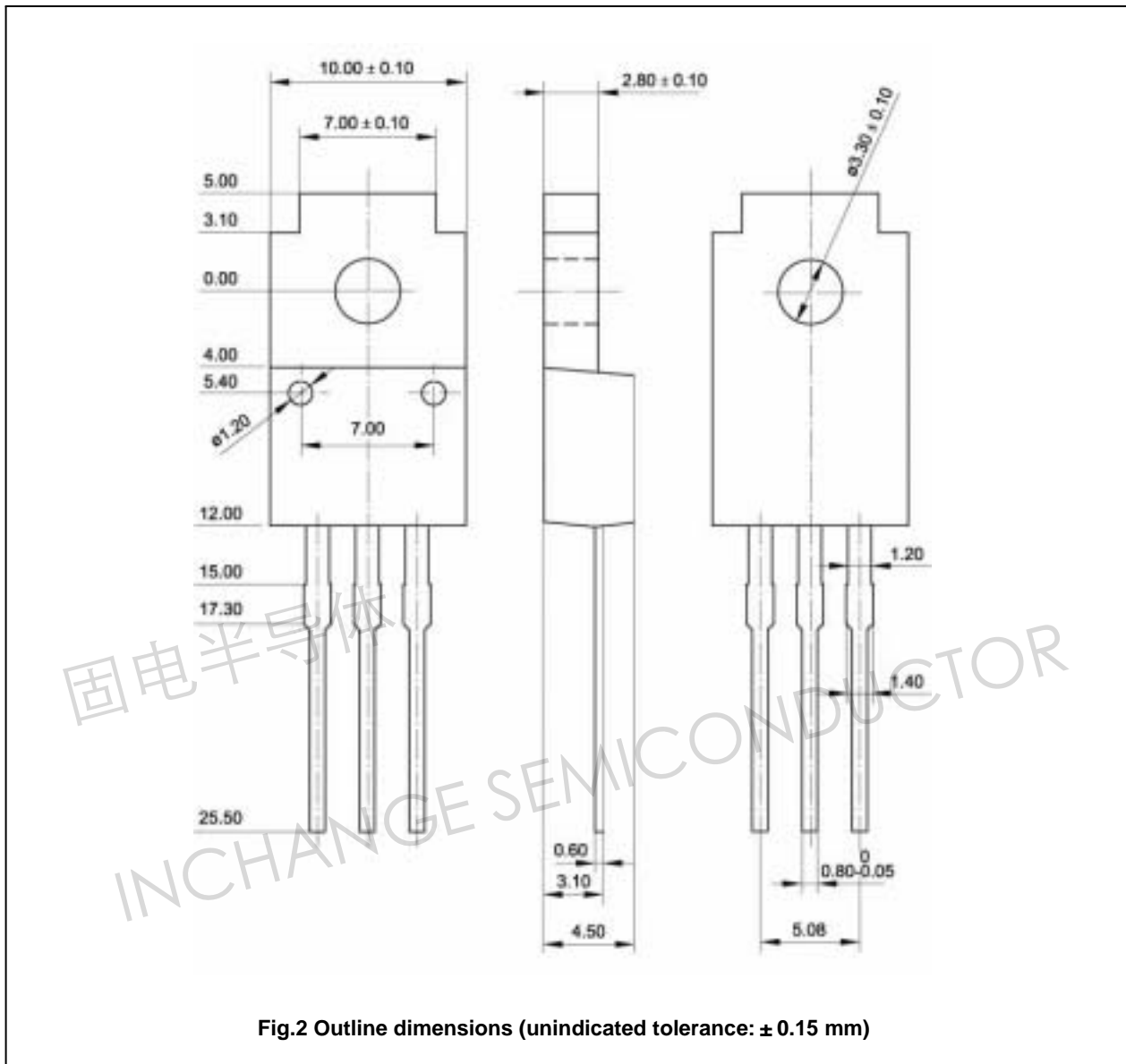
Switching times

t_{on}	Turn-on time	$I_C=-3A; I_{B1}=-0.3A; I_{B2}=0.3A$		0.5		μs
t_s	Storage time			1.5		μs
t_f	Fall time			0.1		μs

◆ **h_{FE-2} Classifications**

R	Q	P
60-120	90-180	130-260

PACKAGE OUTLINE



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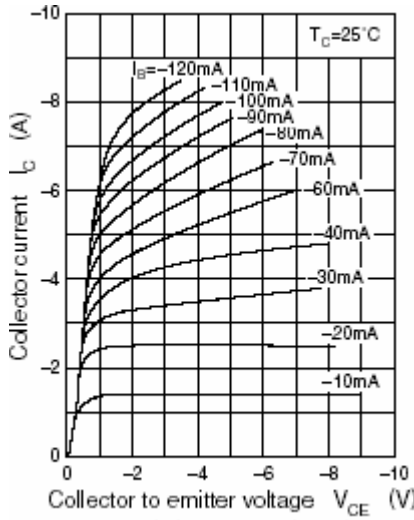


Fig.3 Static Characteristic

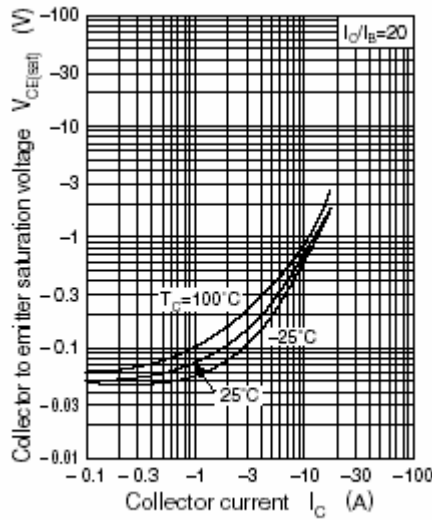


Fig.4 Collector-Emitter Saturation Voltage

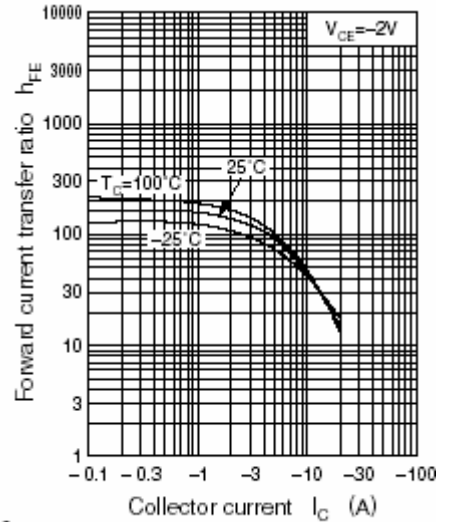


Fig.5 DC current Gain

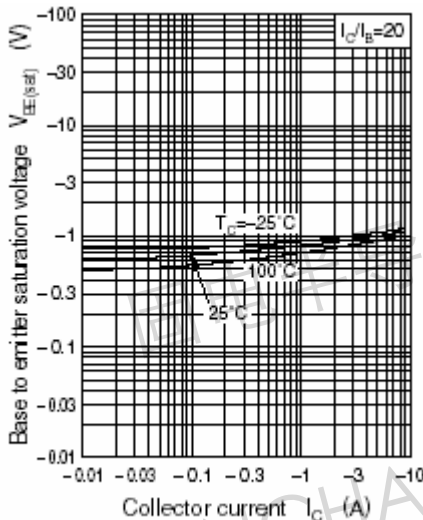


Fig.6 Base-Emitter Saturation Voltage

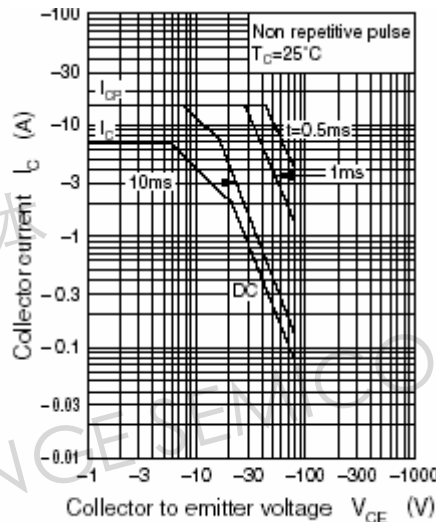


Fig.7 Safe Operating Area