Silicon NPN Power Transistors 2SC3506

DESCRIPTION

- With TO-3PFa package
- High-speed switching
- High collector-base voltage V_{CBO}
- Satisfactory linearity of forward current transfer ratio h_{FE}

APPLICATIONS

- For high-speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

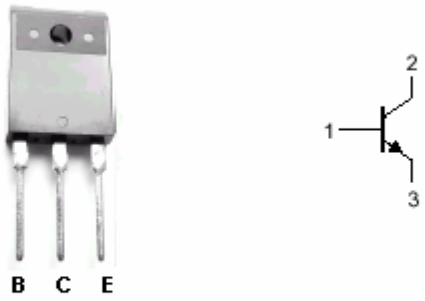

Fig.1 simplified outline (TO-3PFa) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1000	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		3	A
I_{CP}	Collector current-peak		6	A
I_B	Base current		2	A
P_C	Collector power dissipation	T_C=25℃	70	W
			3	
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
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.5A ;L=50mH	800			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A ;I_B=0.4A			1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2A ;I_B=0.4A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=1000V; I_E=0			50	μA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			50	μA
h_{FE}	DC current gain	I_C=2A ; V_{CE}=5V	6			
f_T	Transition frequency	I_C=0.2A ; V_{CE}=5V;f=1MHz		4		MHz
Switching times						
t_{on}	Turn-on time	I_C=2A; V_{CC}=250V I_{B1}=0.4A ,I_{B2}=-0.8A			1.0	μs
t_s	Storage time				2.5	μs
t_f	Fall time				0.5	μs

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PACKAGE OUTLINE

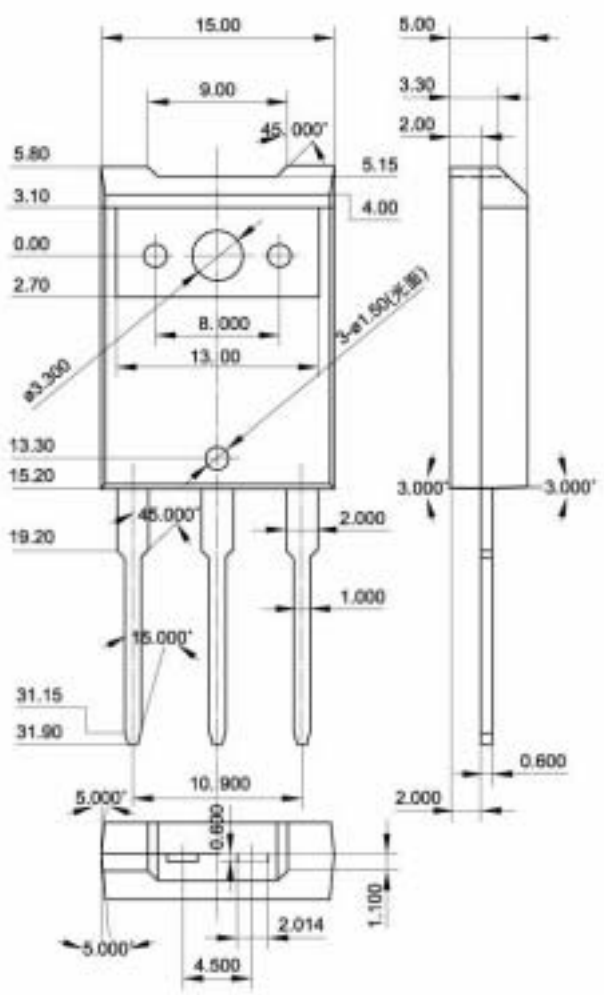

Fig.2 Outline dimensions (unindicated tolerance:±0.30mm)

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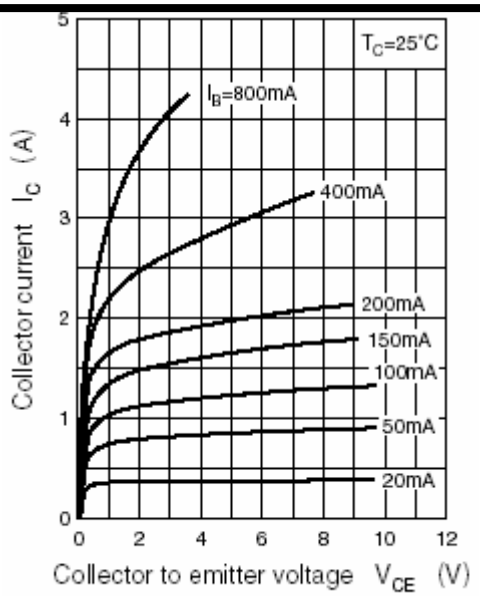

Fig.3 Static Characteristic

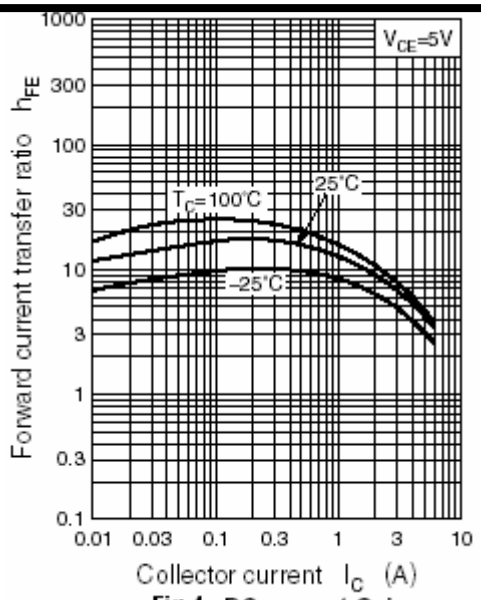

Fig.4 DC current Gain

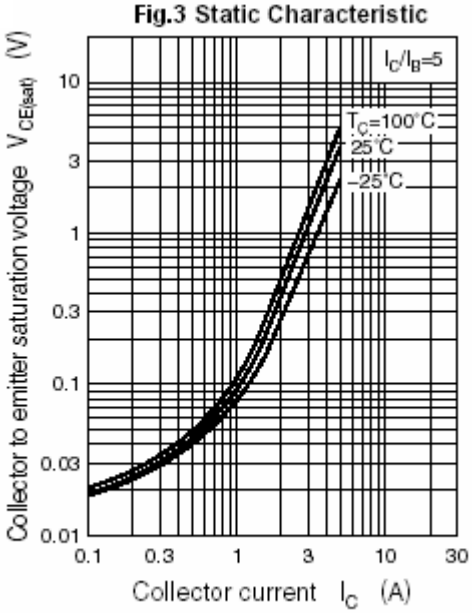

Fig.5 Collector-Emitter Saturation Voltage

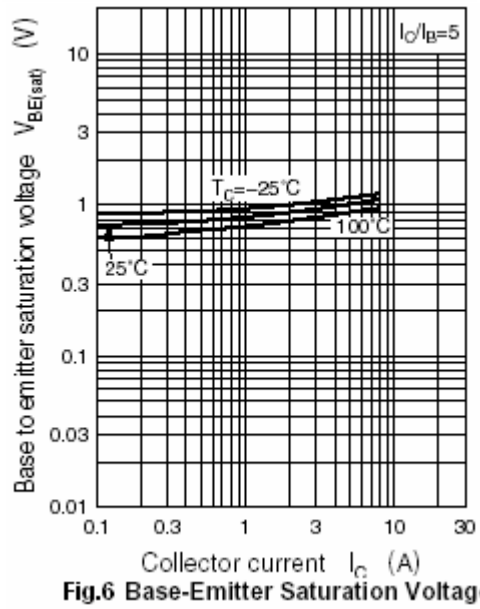

Fig.6 Base-Emitter Saturation Voltage

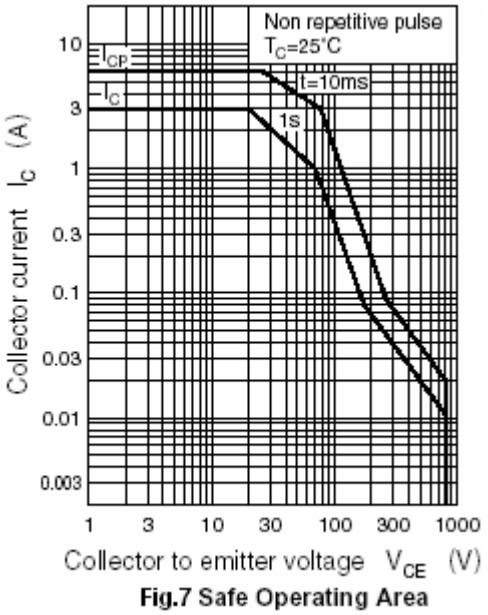

Fig.7 Safe Operating Area