

Silicon NPN Power Transistors

2SC3873

DESCRIPTION

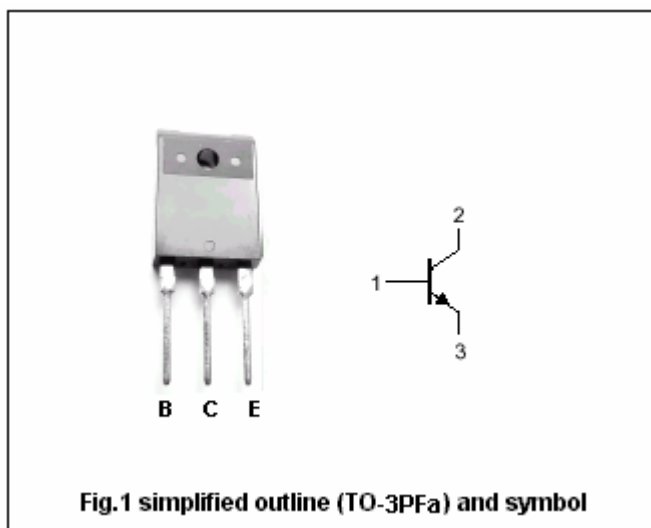
- With TO-3PFa package
- High V_{CBO}
- High speed switching
- Good linearity of h_{FE}
- Wide area of safe operation

APPLICATIONS

- For high speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		12	A
I_{CM}	Collector current-peak		22	A
I_B	Base current		5	A
P_C	Collector power dissipation	$T_C=25$	100	W
		$T_a=25$	3	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA; I _B =0	400			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =7A; I _B =1.4A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =7A; I _B =1.4A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =500V; I _E =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			100	μA
h _{FE-1}	DC current gain	I _C =0.1A; V _{CE} =5V	15			
h _{FE-2}	DC current gain	I _C =7A; V _{CE} =5V	8			
f _T	Transition frequency	I _C =0.5A; V _{CE} =10V		30		MHz

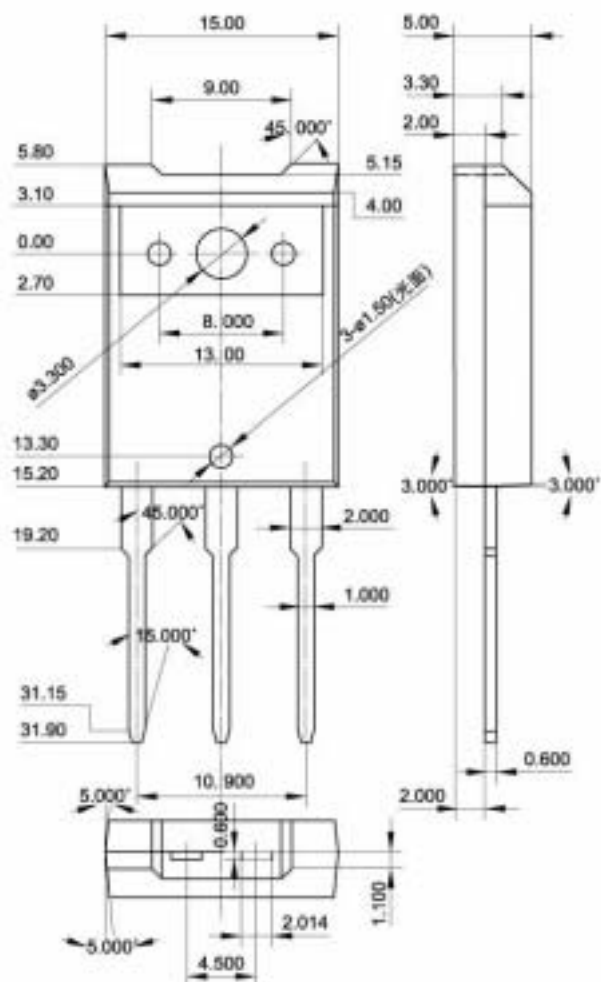
Switching times

t _{on}	Turn-on time	I _C =7A; V _{CC} =150V I _{B1} =1.4A; I _{B2} =-2.8A			0.7	μs
t _{stg}	Storage time				2.0	μs
t _f	Fall time				0.3	μs

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.30\text{mm}$)