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

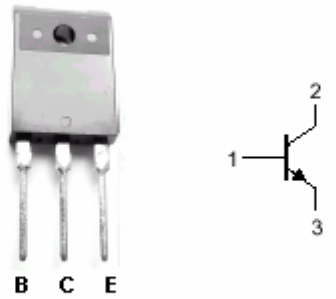

Fig.1 simplified outline (TO-3PFa) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	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	□

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	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

PACKAGE OUTLINE

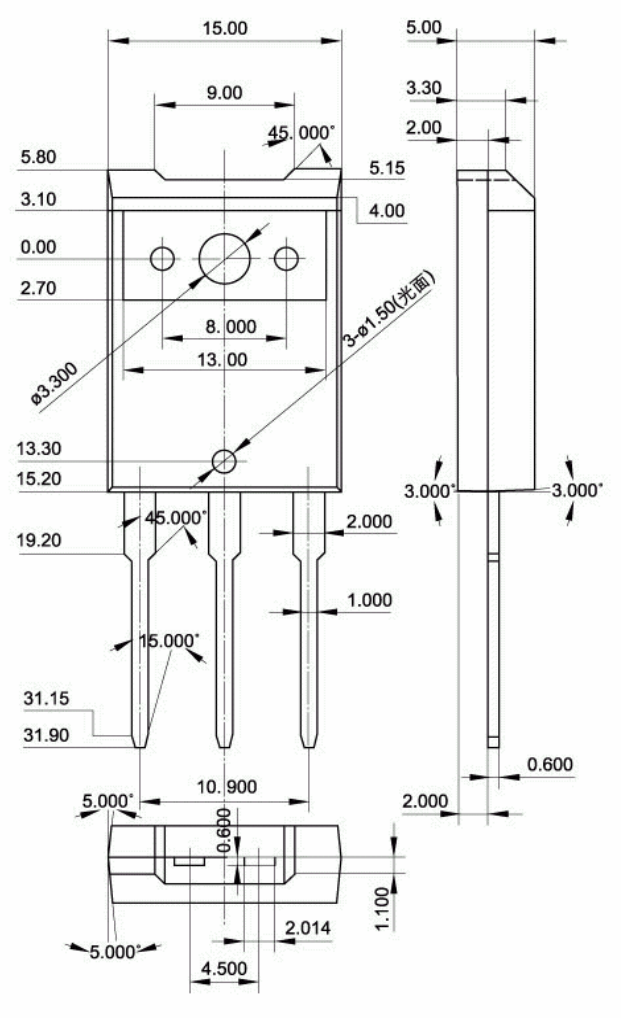

Fig.2 Outline dimensions (unindicated tolerance:±0.30mm)