

Silicon NPN Power Transistors

2SD2057

DESCRIPTION

- With TO-3PFa package
- High voltage,high speed
- Built-in damper diode
- Wide area of safe operation

APPLICATIONS

- Horizontal deflection output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

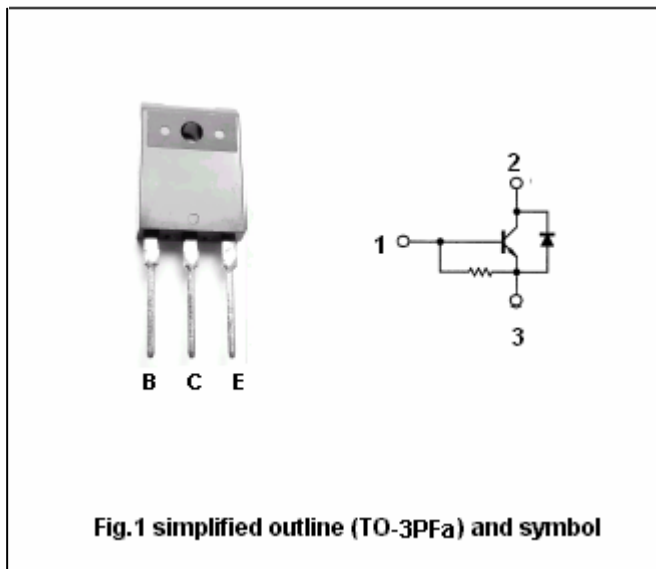


Fig.1 simplified outline (TO-3PFa) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		4	A
P_C	Collector power dissipation	$T_a=25$	3	W
		$T_C=25$	100	
T_j	Max.operating junction temperature		150	
T_{stg}	Storage temperature		-55~150	

Silicon NPN Power Transistors

2SD2057

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =500mA ; I _C =0	7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A; I _B =1.2A			8.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A; I _B =1.2A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =1000V; I _E =0			30	μ A
		V _{CB} =1500V; I _E =0			0.3	mA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =5V	8			
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =10V	4.5		15	
f _T	Transition frequency	I _C =1A ; V _{CE} =10V; f=0.5MHz		2		MHz
V _F	Diode forward voltage	I _C =-6A ; I _B =0			-2.3	V
t _s	Storage time	I _C =5A; I _{B1} =-I _{B2} =1.2A; L _{Leak} =5 μ H			12	μ s
t _f	Fall time				0.8	μ s

Silicon NPN Power Transistors

2SD2057

PACKAGE OUTLINE

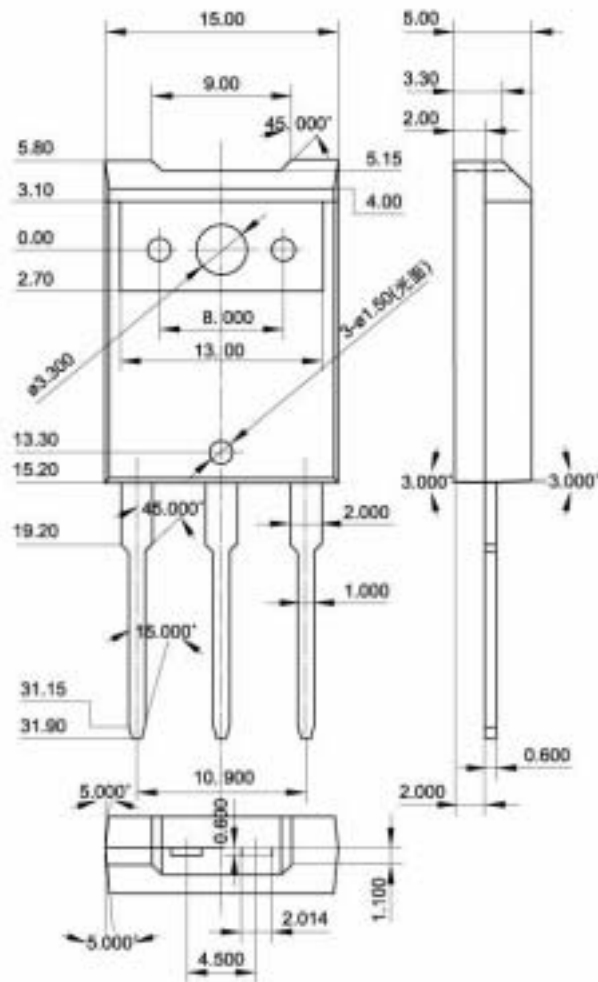


Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.30\text{mm}$)