

Silicon NPN Power Transistors

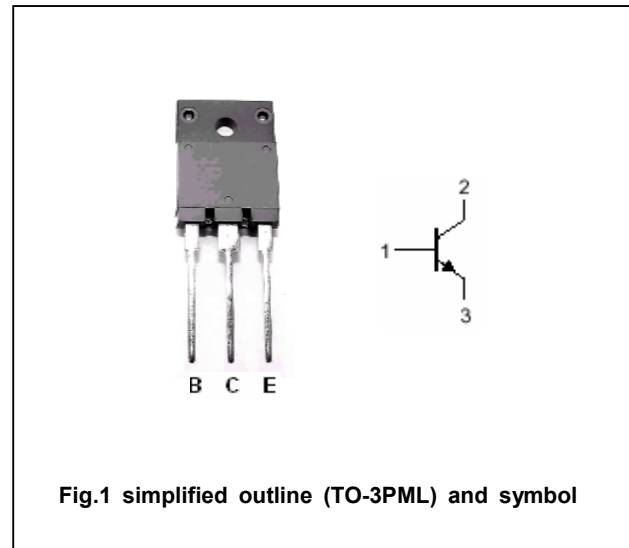
2SC4581

DESCRIPTION

- With TO-3PML package
- High voltage,high speed
- Switching power transistor

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	600	V
V_{CEO}	Collector-emitter voltage	Open base	450	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		10	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		4	A
I_{BM}	Base current-peak		8	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	65	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.92	℃/W

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CEsat}	Collector-emitter saturation voltage	$I_C=5A$; $I_B=1A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=5A$; $I_B=1A$			1.5	V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.2A$; $I_B=0$	450			V
I_{EBO}	Emitter cut-off current	At rated voltage			0.1	mA
I_{CBO}	Collector cut-off current	At rated voltage			0.1	mA
I_{CEO}	Collector cut-off current					
h_{FE-1}	DC current gain	$I_C=5A$; $V_{CE}=5V$	10			
h_{FE-2}	DC current gain	$I_C=1mA$; $V_{CE}=5V$	5			
f_T	Transition frequency	$I_C=1A$; $V_{CE}=10V$		20		MHz

Switching times

t_{on}	Turn-on time	$I_C=5A$; $R_L=30\Omega$ $I_{B1}=1A$; $I_{B2}=2A$ $V_{BB2}=4V$			0.5	μs
t_{stg}	Storage time				2.0	μs
t_f	Fall time				0.2	μs

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PACKAGE OUTLINE

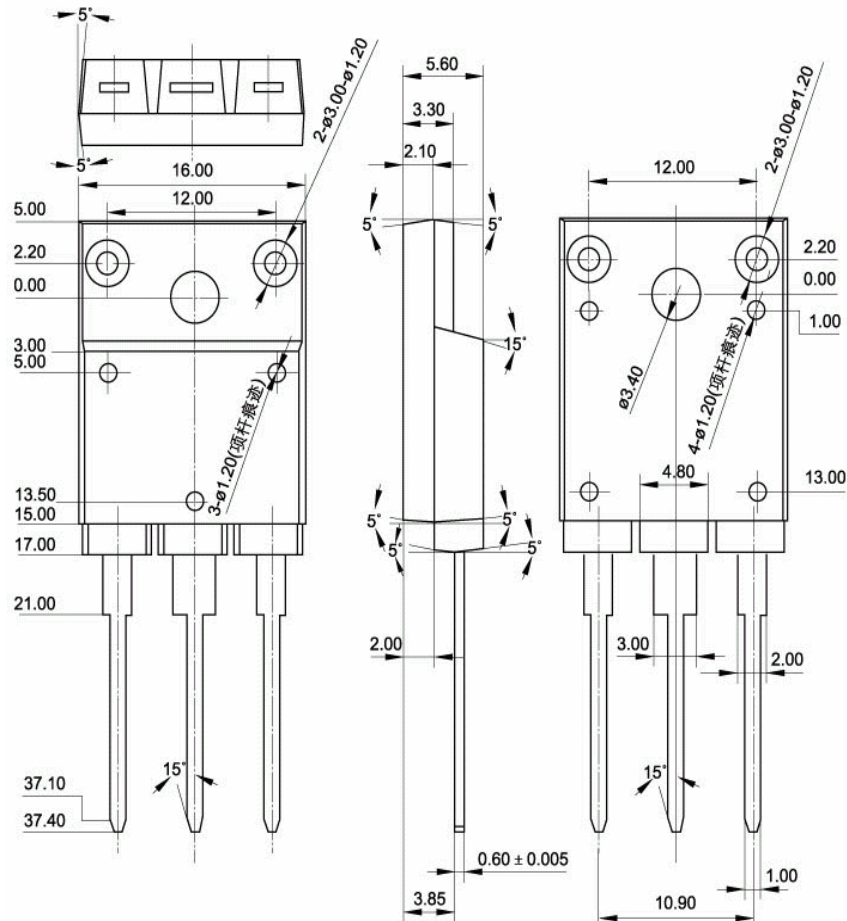


Fig.2 Outline dimensions