

Silicon NPN Power Transistors

2SC5241

DESCRIPTION

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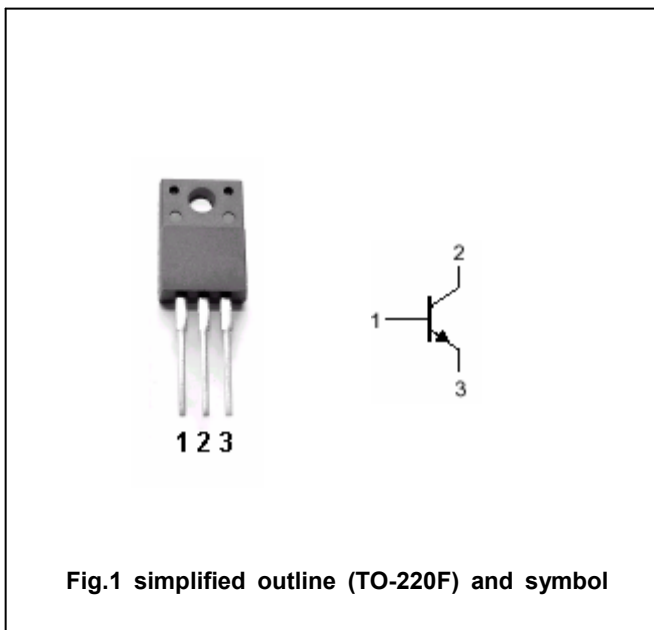
- With TO-220F package
- High voltage,high speed switching

APPLICATIONS

- For switching regulator and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25°C)

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		5	A
I _{CM}	Collector current-peak		10	A
I _B	Base current		2	A
I _{BM}	Base current-peak		4	A
P _T	Total power dissipation	T _C =25°C	30	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	4.16	°C/W

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CHARACTERISTICS

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 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1A ; I_B=0$	450			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=2.5A ; I_B=0.5A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=2.5A ; I_B=0.5A$			1.5	V
I_{CBO}	Collector cut-off current	Rated V_{CBO}			0.1	mA
I_{CEO}	Collector cut-off current	Rated V_{CEO}			0.1	mA
I_{EBO}	Emitter cut-off current	Rated V_{EBO}			0.1	mA
h_{FE-1}	DC current gain	$I_C=2.5A ; V_{CE}=5V$	10			
h_{FE-2}	DC current gain	$I_C=1mA ; V_{CE}=5V$	5			
f_T	Transition frequency	$I_C=0.5A ; V_{CE}=10V$		20		MHz

Switching times

t_{on}	Turn-on time	$I_C=2.5A ; I_{B1}=0.5A$ $I_{B2}=1A$ $V_{BB2}=4V , R_L=60\Omega$			0.5	μs
t_s	Storage time				2.0	μs
t_f	Fall time				0.2	μs

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PACKAGE OUTLINE

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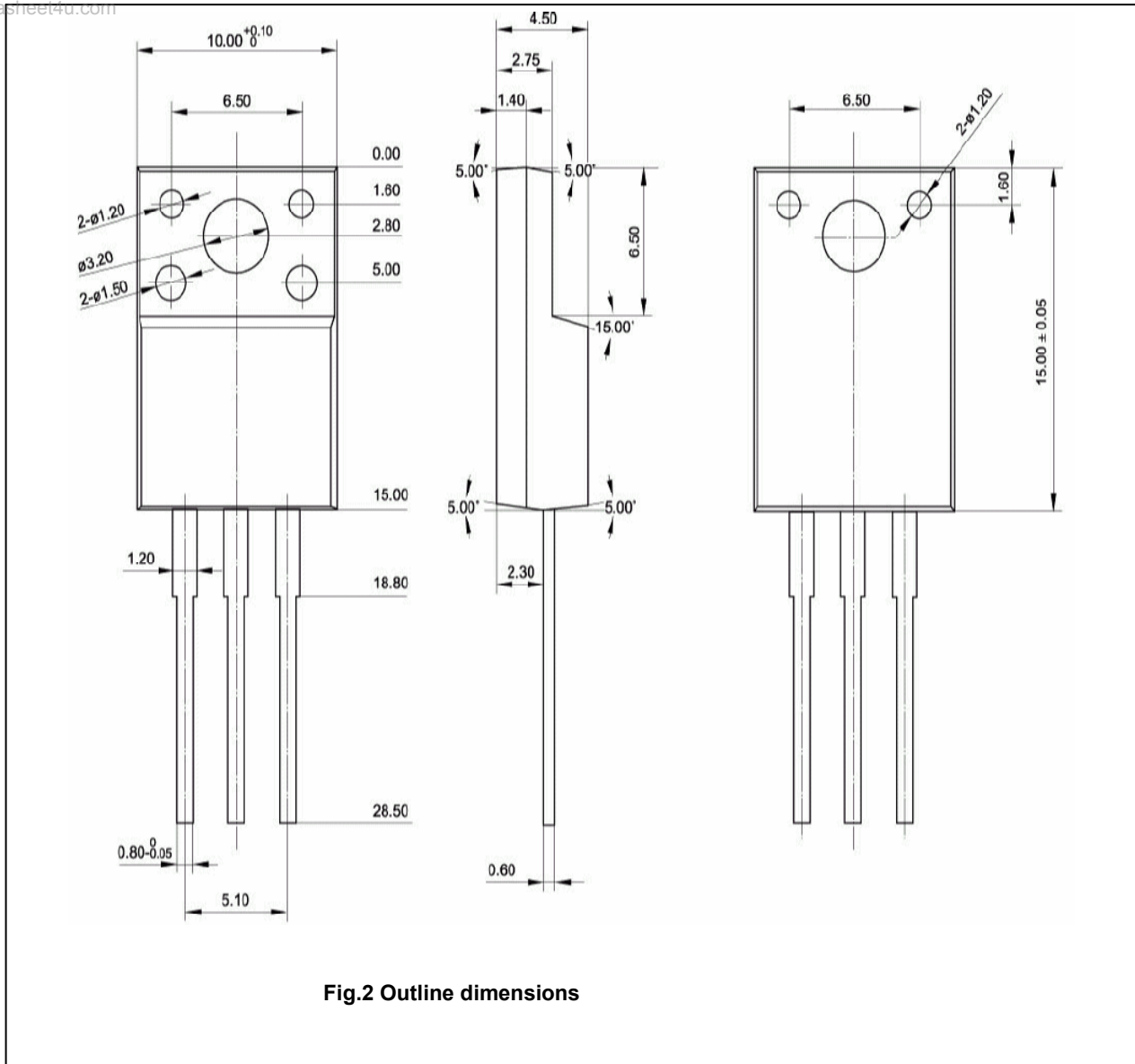


Fig.2 Outline dimensions