

Silicon NPN Power Transistors

BD939F

DESCRIPTION

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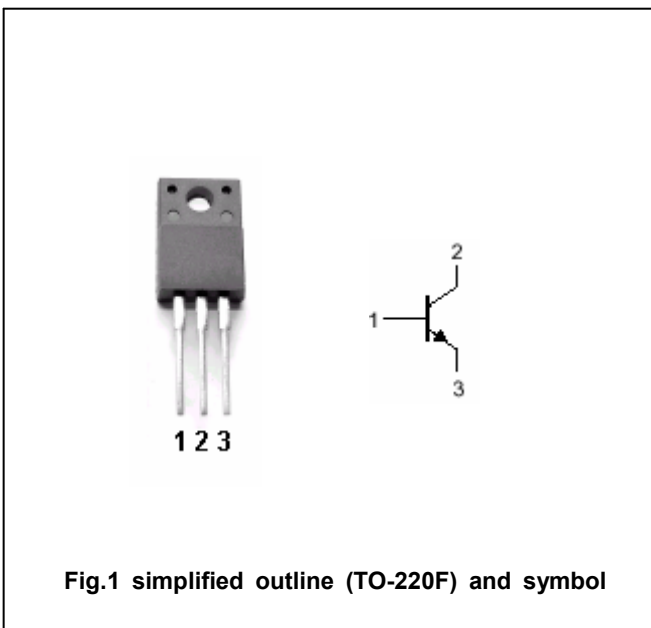
- With TO-220F package
- Low collector saturation voltage

APPLICATIONS

- For power switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		3	A
I_{CM}	Collector current-Peak		6	A
P_C	Collector dissipation	$T_C=25^\circ\text{C}$	14	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-50~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA$; $I_B=0$	100			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA$; $I_C=0$	7			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=1A$; $I_B=0.2A$			0.7	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=1A$; $I_B=0.2A$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=120V$; $I_E=0$			50	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V$; $I_C=0$			50	μA
h_{FE-1}	DC current gain	$I_C=0.2A$; $V_{CE}=4V$	40		250	
h_{FE-2}	DC current gain	$I_C=1A$; $V_{CE}=4V$	15			
f_T	Transition frequency	$I_C=0.25A$; $V_{CE}=10V$	3			MHz

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PACKAGE OUTLINE

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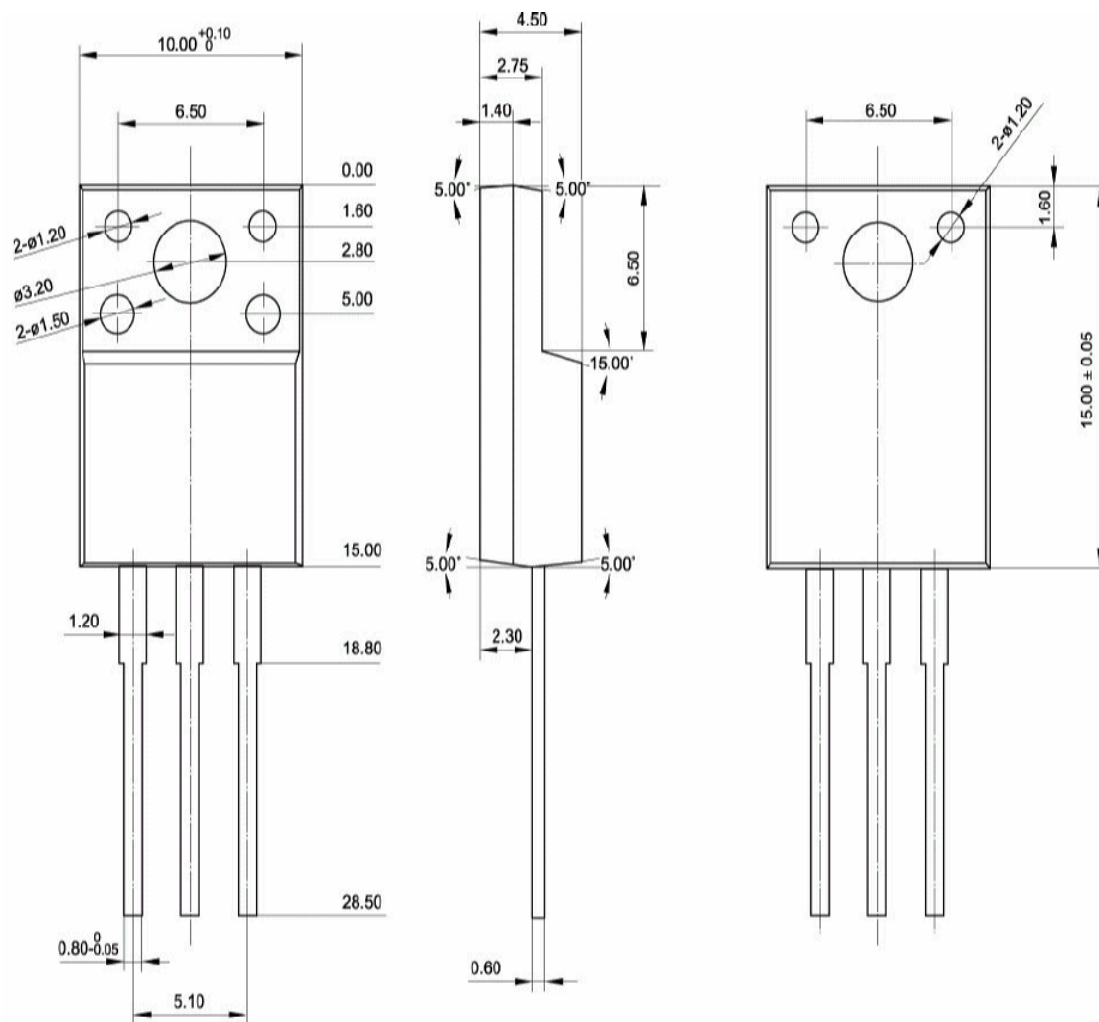


Fig.2 Outline dimensions (unindicated tolerance:±0.10mm)