

Silicon NPN Power Transistors

BD939F

DESCRIPTION

- 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

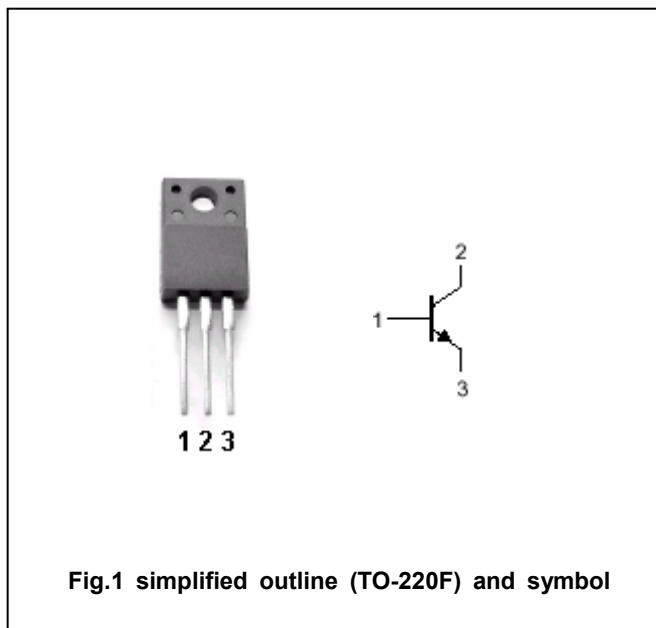


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings(Ta=25°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°C	14	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-50~150	°C

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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

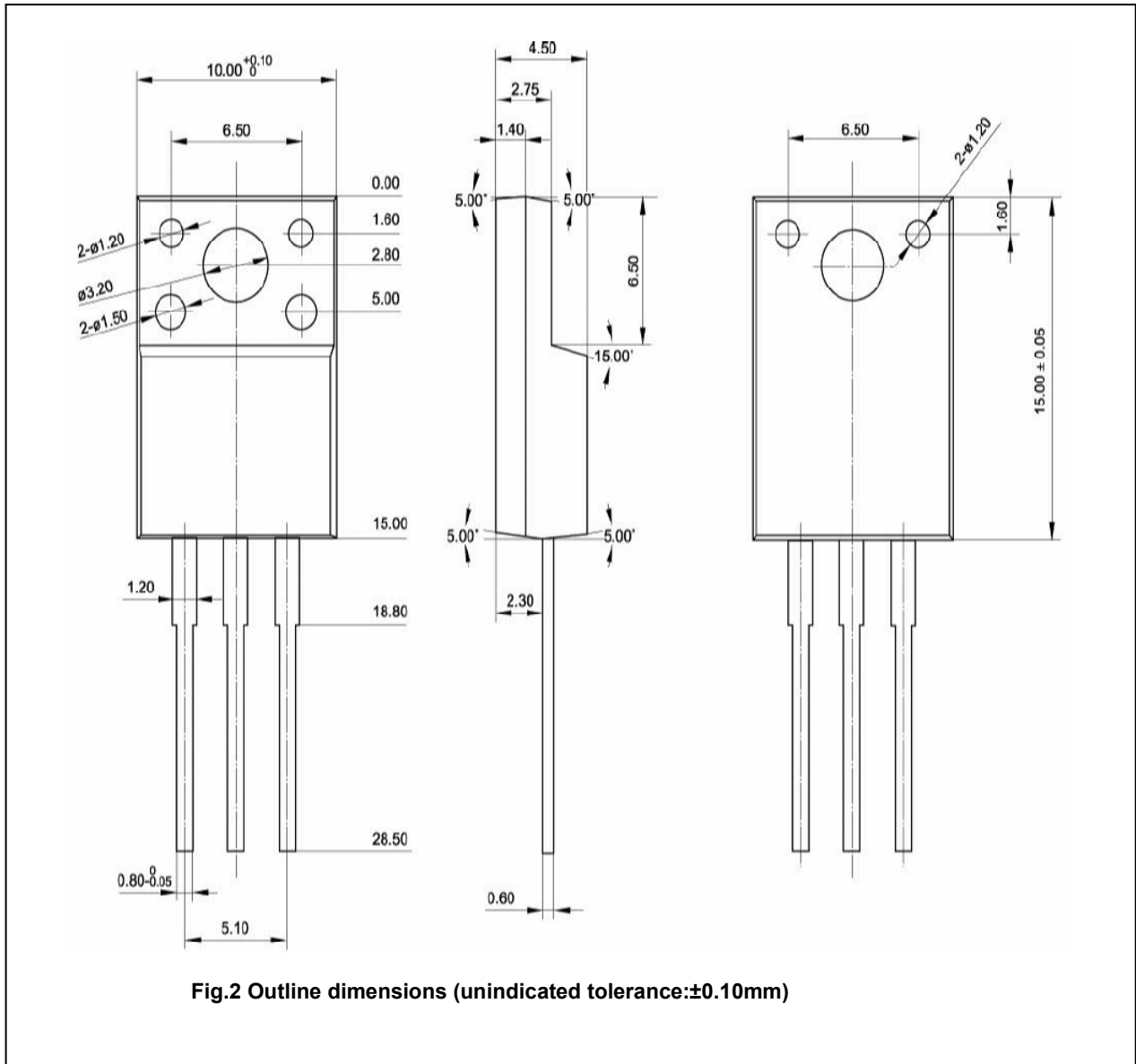


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)