

Silicon NPN Power Transistors

2SC3159

DESCRIPTION

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

APPLICATIONS

- For switching regulator applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

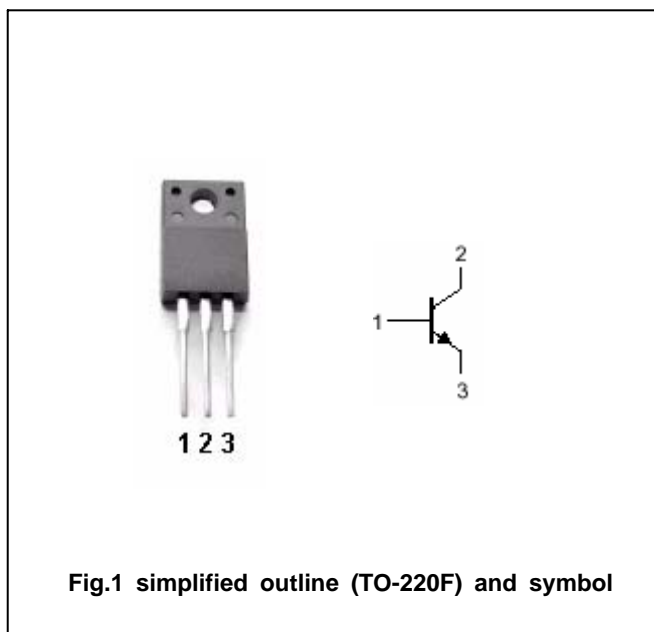


Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25 )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	500	V
$V_{CEO}$	Collector-emitter voltage	Open base	400	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		3.5	A
$P_C$	Collector dissipation	$T_C=25$	80	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	400			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =1mA ; I <sub>E</sub> =0	500			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	7			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =6A; I <sub>B</sub> =1.2A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =6A; I <sub>B</sub> =1.2A			1.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =400V ; I <sub>E</sub> =0			10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	15		80	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =6A ; V <sub>CE</sub> =5V	10			

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PACKAGE OUTLINE

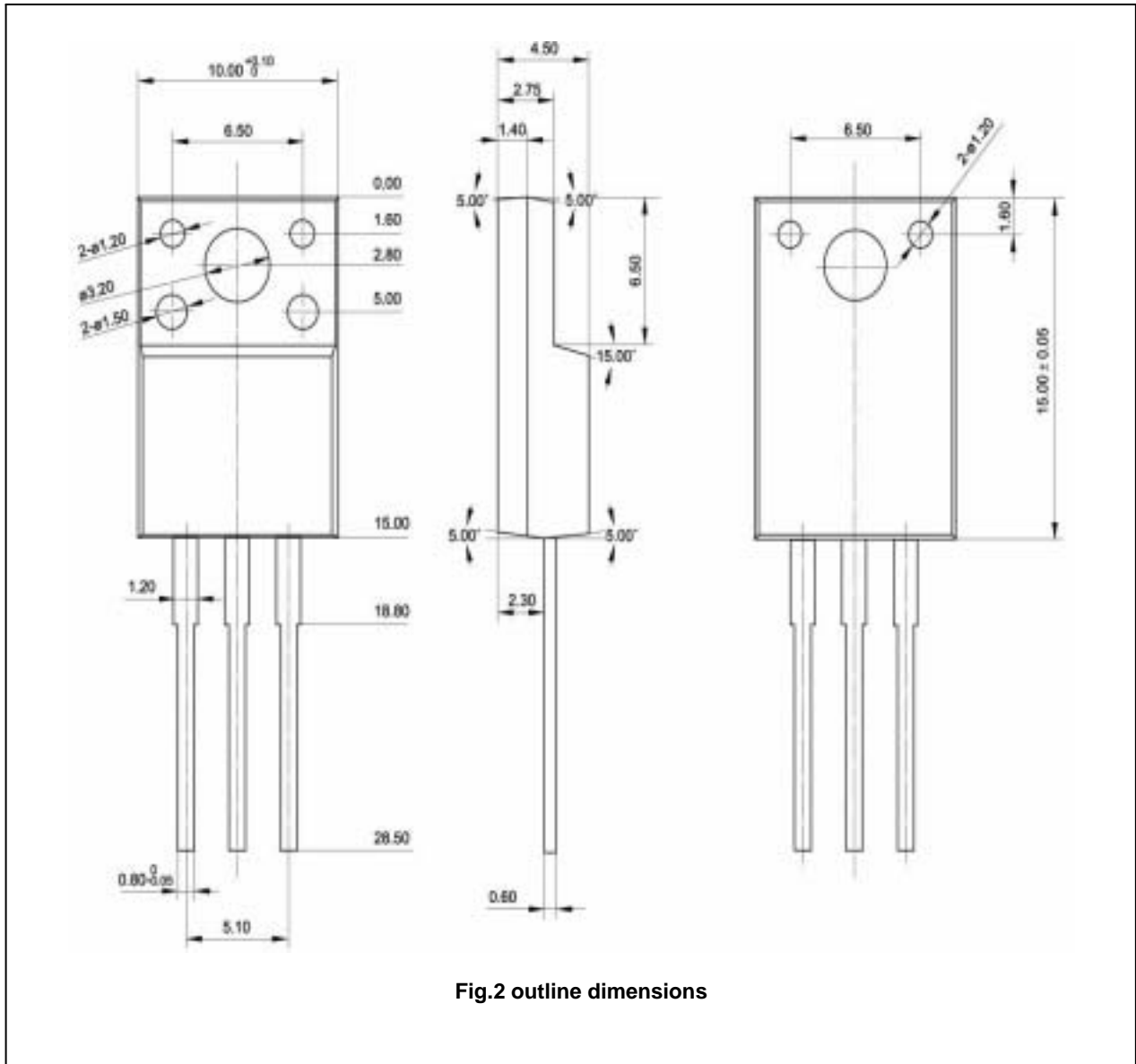


Fig.2 outline dimensions