

Silicon NPN Power Transistors

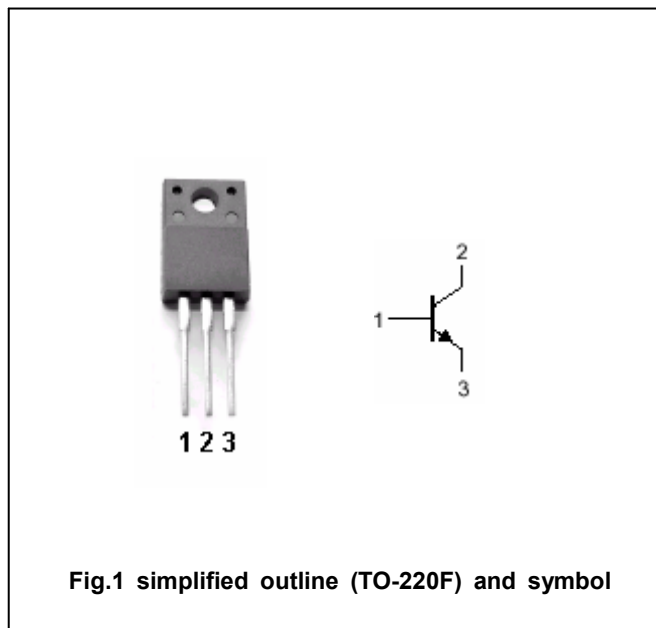
2SD2394

DESCRIPTION

- With TO-220F package
- Low collector saturation voltage
- Wide SOA (safe operating area)
- Complement to type 2SB1565

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	80	V
V_{CEO}	Collector-emitter voltage	Open base	60	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	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	25	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA ; I_B=0$	60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=50\mu A ; I_E=0$	80			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=50\mu A ; I_C=0$	7			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=2A ; I_B=0.2A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=2A ; I_B=0.2A$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=60V ; I_E=0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V ; I_C=0$			10	μA
h_{FE}	DC current gain	$I_C=0.5A ; V_{CE}=5V$	100		320	
C_{OB}	Output capacitance	$I_E=0 ; V_{CB}=10V ; f=1MHz$		35		pF
f_T	Transition frequency	$I_C=0.5A ; V_{CE}=5V ; f=5MHz$		8		MHz

◆ h_{FE} Classifications

E	F
100-200	160-320

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PACKAGE OUTLINE

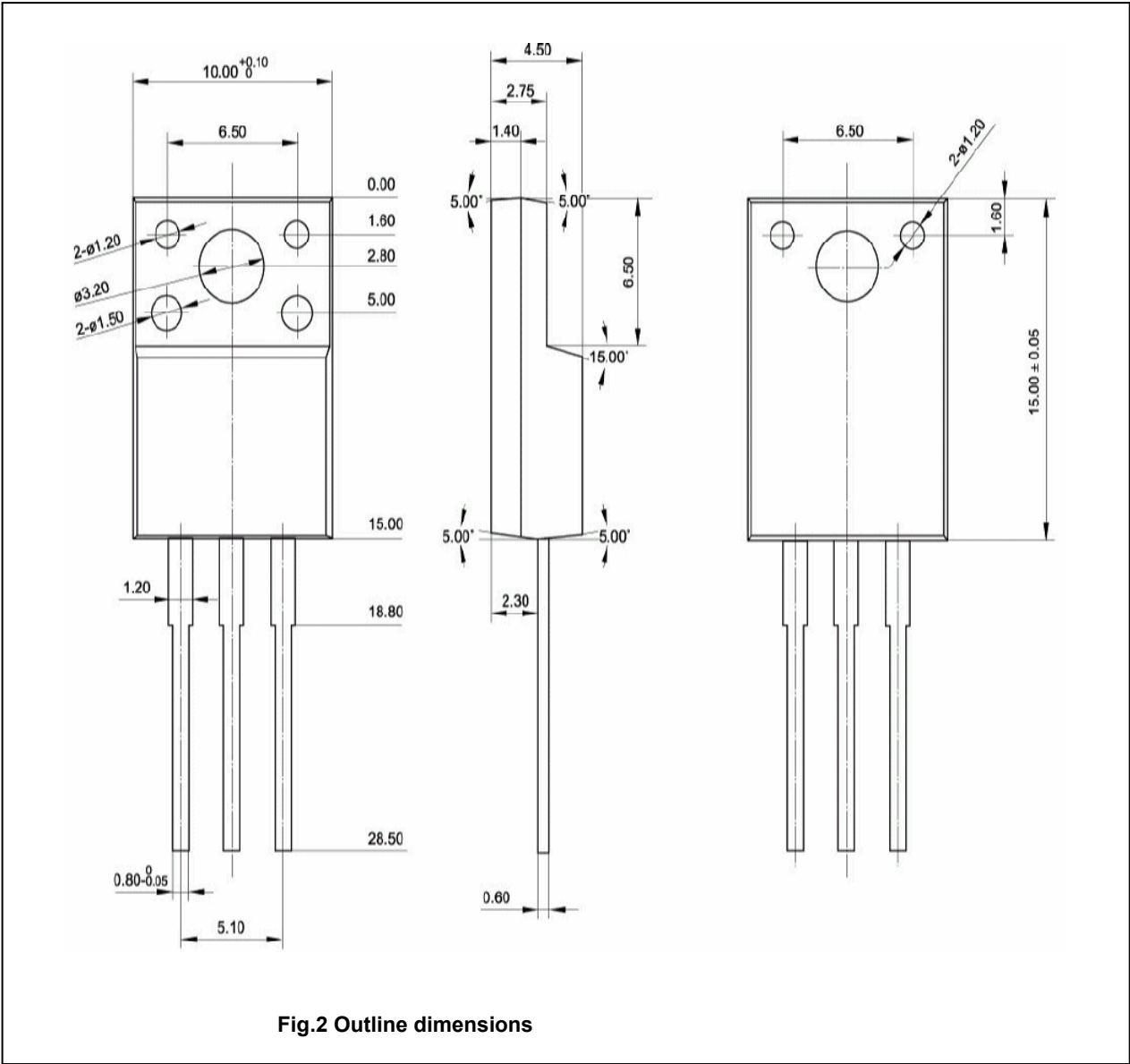


Fig.2 Outline dimensions