

Silicon NPN Power Transistors

2SD1591

DESCRIPTION

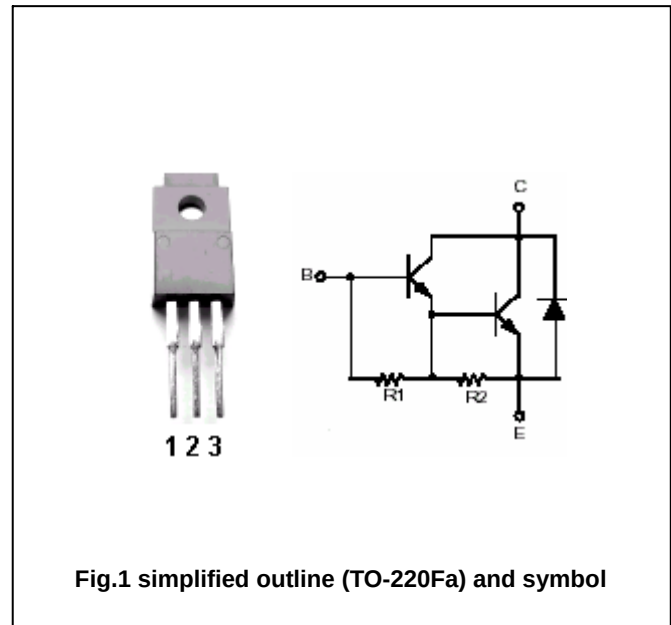
- With TO-220Fa package
- DARLINGTON
- Complement to type 2SB1100

APPLICATIONS

- Low frequency power amplification
- Low speed power switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		10	A
I_{CM}	Collector current-Peak		15	A
I_B	Base current (DC)		0.5	A
P_C	Collector power dissipation	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	30	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

Silicon NPN Power Transistors**2SD1591****CHARACTERISTICS** $T_j=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1\text{A}$; $I_B=0$	100			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=10\text{A}$; $I_B=25\text{mA}$			1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=10\text{A}$; $I_B=25\text{mA}$			2.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=100\text{V}$; $I_E=0$			10	μA
I_{CEO}	Collector cut-off current	$V_{CE}=100\text{V}$; $I_E=0$			500	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}$; $I_C=0$			5	mA
h_{FE}	DC current gain	$I_C=10\text{A}$; $V_{CE}=2\text{V}$	1000		30000	

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PACKAGE OUTLINE

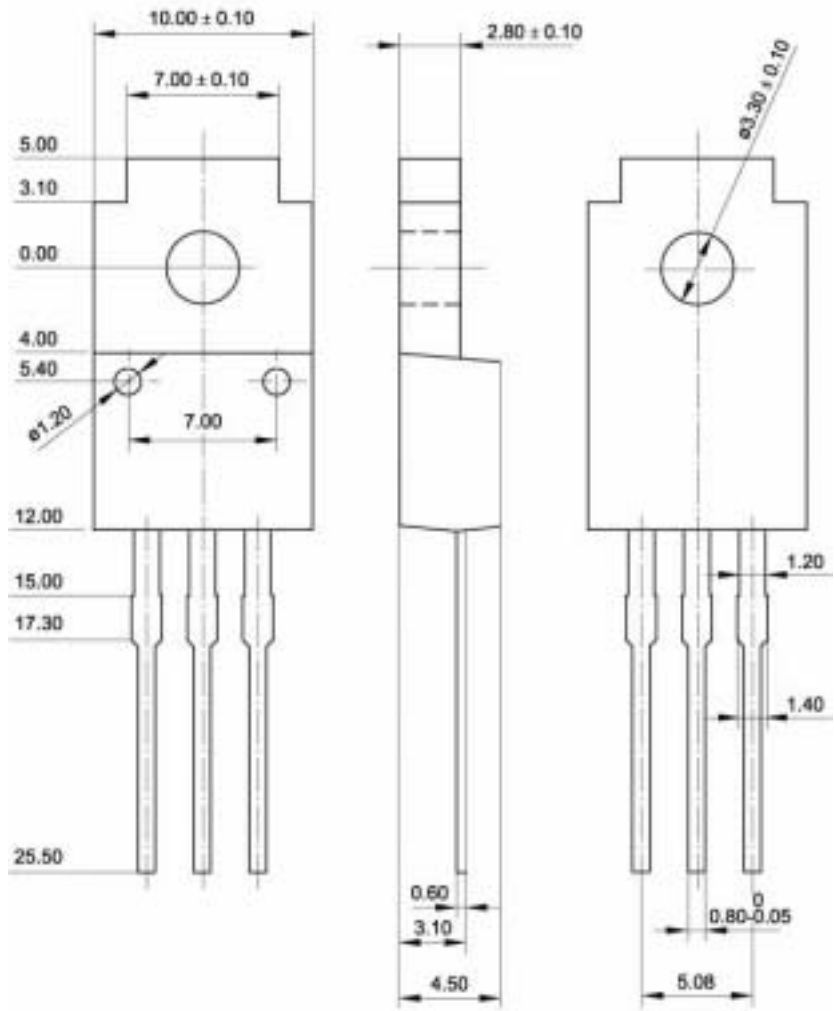


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)