

**Silicon Power Transistors**

**2SD1634**

**DESCRIPTION**

- With TO-220Fa package
- DARLINGTON
- High speed switching
- Good linearity of  $h_{FE}$

**APPLICATIONS**

- Power switching

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

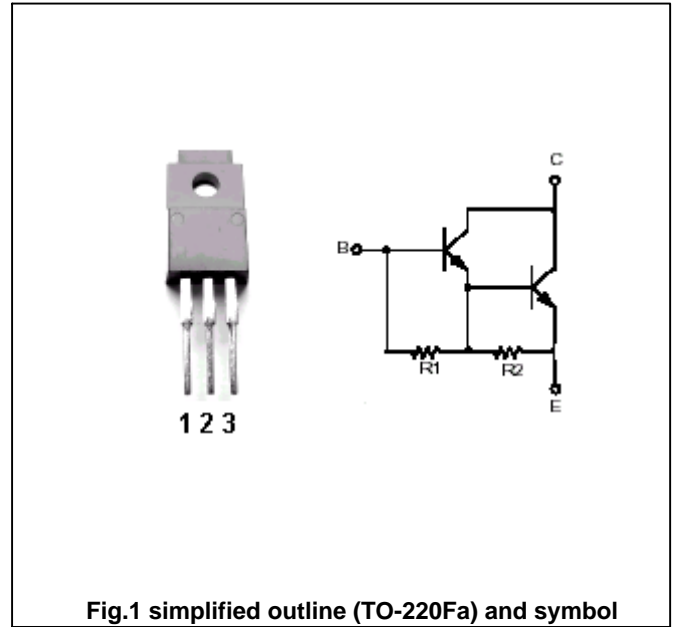


Fig.1 simplified outline (TO-220Fa) and symbol

**ABSOLUTE MAXIMUM RATINGS AT  $T_c=25$**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	100	V
$V_{CEO}$	Collector-emitter voltage	Open base	100	
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current (DC)		8	A
$I_{CM}$	Collector current-Peak		12	A
$I_B$	Base current (DC)		0.5	A
$P_C$	Collector power dissipation	$T_c=25$	50	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

## Silicon Power Transistors

## 2SD1634

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A, I <sub>B</sub> =0	100			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A I <sub>B</sub> =5mA			1.5	V
V <sub>BEsat</sub>	Emitter-base saturation voltage	I <sub>C</sub> =5A I <sub>B</sub> =5mA			2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =100V I <sub>E</sub> =0			100	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =100V I <sub>B</sub> =0			100	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			5	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A; V <sub>CE</sub> =3V	1500		10000	

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =8A; I <sub>B1</sub> =8mA I <sub>B2</sub> =-8mA; V <sub>CC</sub> =50V			3.0	μs
t <sub>s</sub>	Storage time				5.0	μs
t <sub>f</sub>	Fall time				3.0	μs

◆ h<sub>FE</sub> Classifications

Q	P
1500-6000	5000-10000

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PACKAGE OUTLINE

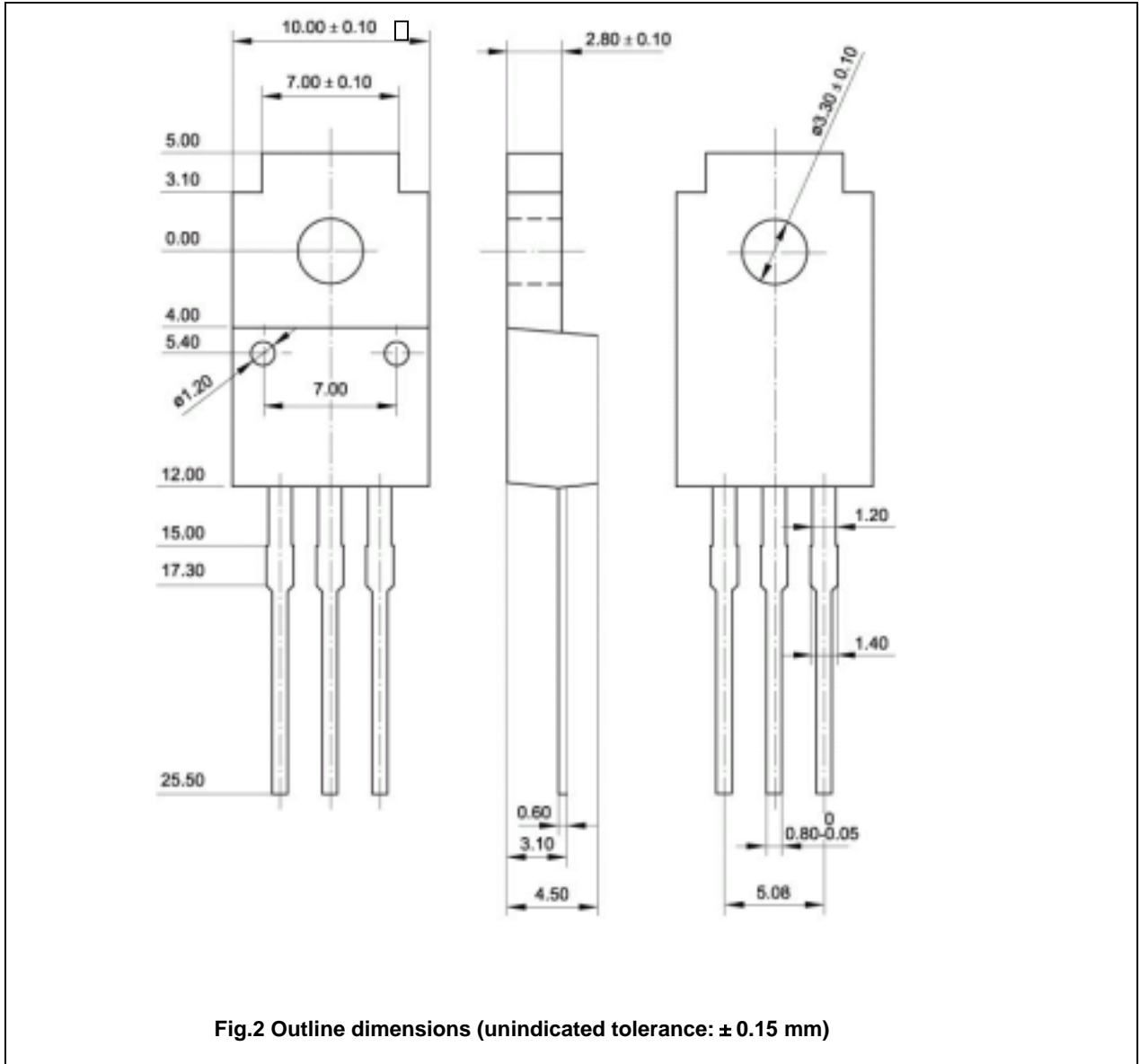


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)