

Silicon NPN Power Transistors

2SD1633

DESCRIPTION

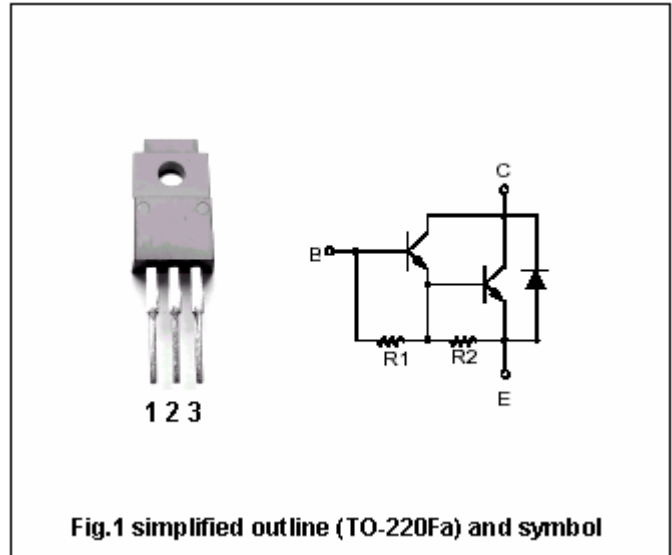
- With TO-220Fa package
- DARLINGTON
- High speed switching
- Good linearity of h_{FE}

APPLICATIONS

- 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	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		5	A
I_{CM}	Collector current-Peak		8	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	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A, I _B =0	100			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A; I _B =3mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A; I _B =3mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			100	μA
I _{CEO}	Collector cut-off current	V _{CE} =100V; I _B =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			5	mA
h _{FE}	DC current gain	I _C =3A; V _{CE} =3V	1500		10000	

Switching times

t _{on}	Turn-on time	I _C =3A; I _{B1} =3mA I _{B2} =-3mA; V _{CC} =50V			3.0	μs
t _s	Storage time				5.0	μs
t _f	Fall time				3.0	μs

◆ h_{FE} Classifications

Q	P
1500-6000	5000-10000

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PACKAGE OUTLINE

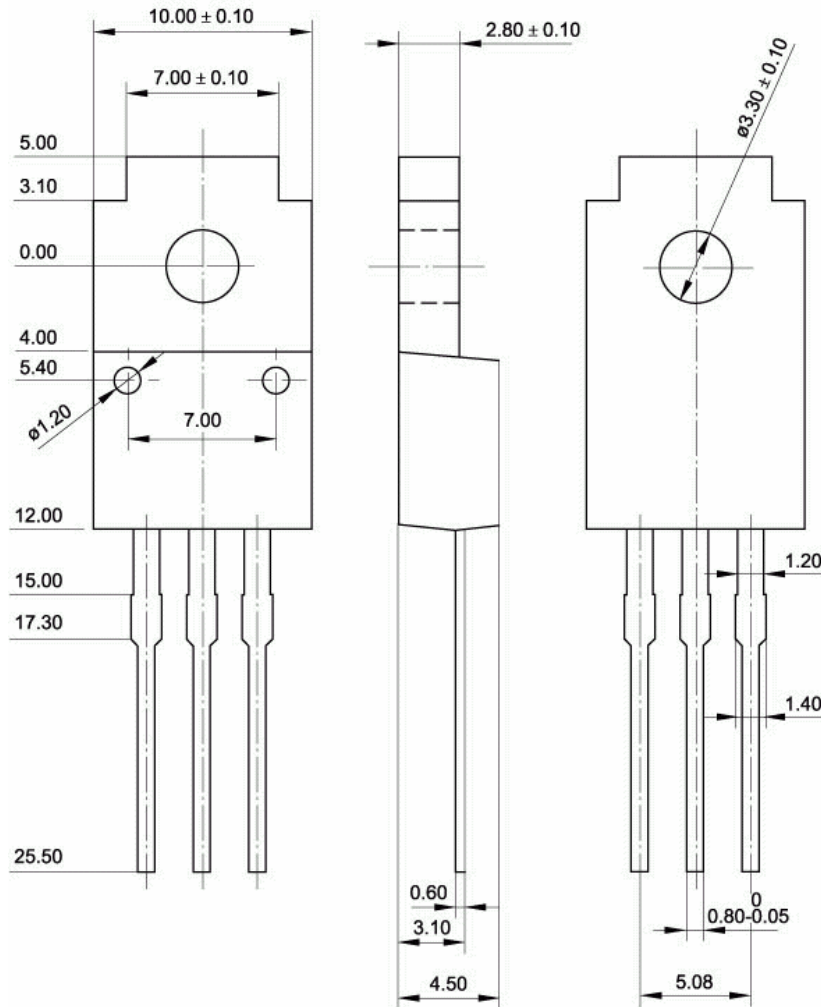


Fig.2 Outline dimensions (unindicated tolerance:±0.15 mm)