

Silicon NPN Power Transistors

2SD1633

DESCRIPTION

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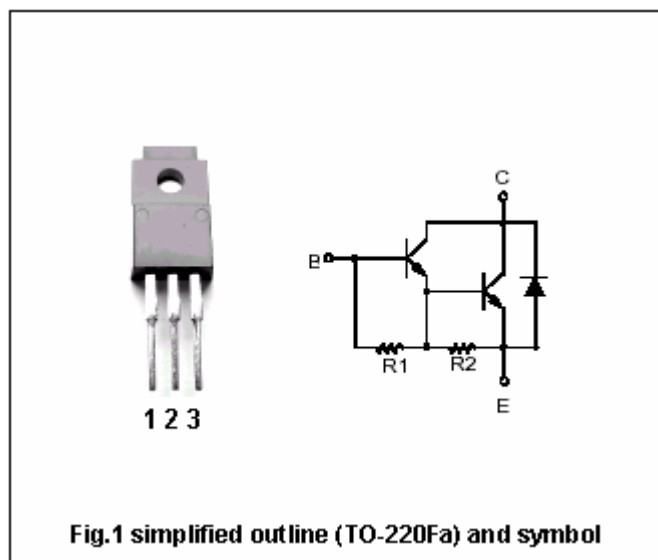
- With TO-220Fa package
- DARLINGTON
- High speed switching
- Good linearity of h_{FE}

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

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	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

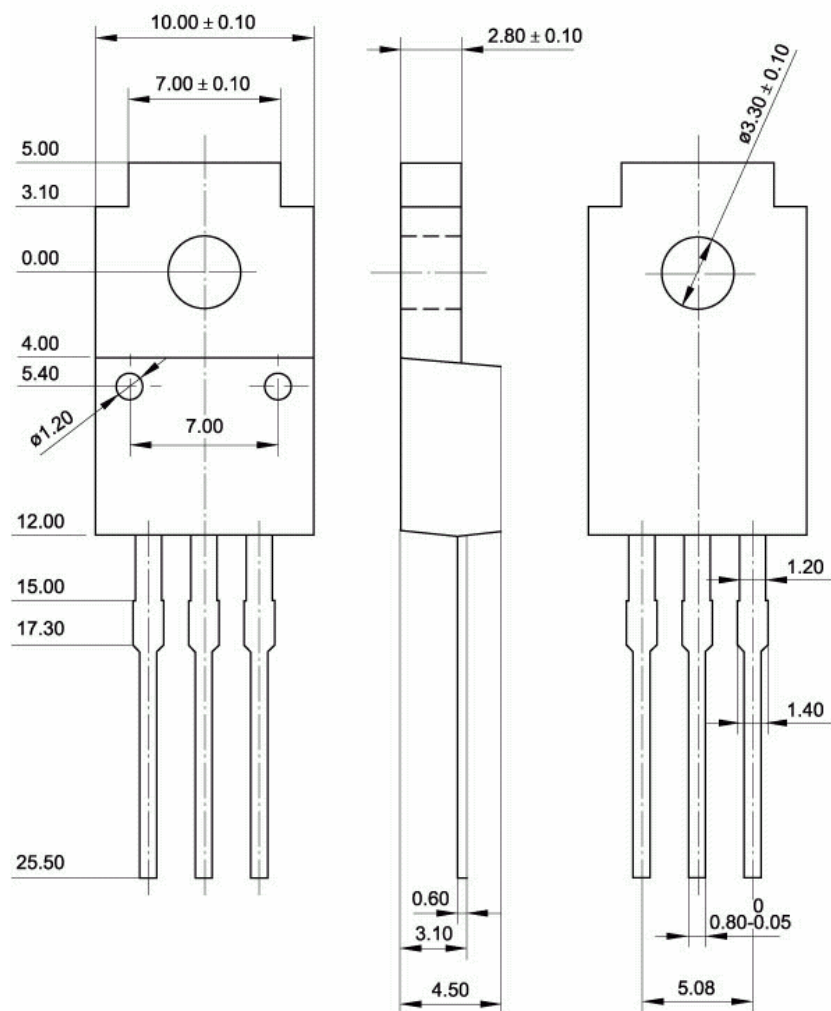
Q	P
1500-6000	5000-10000

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PACKAGE OUTLINE

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