

Silicon NPN Power Transistors

2SD834

DESCRIPTION

- With TO-220 package
- High DC current gain
- DARLINGTON
- Low collector saturation voltage
- Excellent safe operating area

APPLICATIONS

- Electronic ignitor
- Relay and solenoid drivers
- Switching regulators
- Motor controls

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

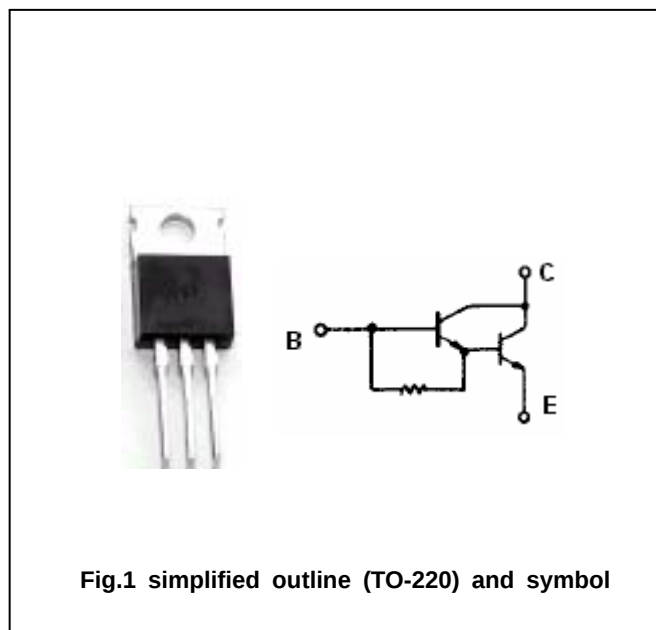


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings (Ta=25 °C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	250	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
$V_{CEO(SUS)}$	Collector-emitter voltage		180	
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current-continuous		4	A
I_B	Base current		0.3	A
P_C	Collector power dissipation	$T_C=25$	25	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	MAX	UNIT
$R_{\theta jc}$	Thermal resistance junction to case	5.0	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =1A ; I _B =0	180			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA ; I _B =0	200			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =0.1mA ; I _E =0	250			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10mA ; I _C =0	10			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A;I _B =2mA			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A;I _B =2mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =250V; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =10V; I _C =0			10	mA
h _{FE}	DC current gain	I _C =2A ; V _{CE} =2V	1500			

Switching times

t _{on}	Turn-on time	I _C =2A;I _{B1} =-I _{B2} =5mA; R _L =10Ω PW=20 μs;Duty ≤ 2%			1.7	μs
t _s	Storage time				15.0	μs
t _f	Fall time				18.0	μs

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PACKAGE OUTLINE

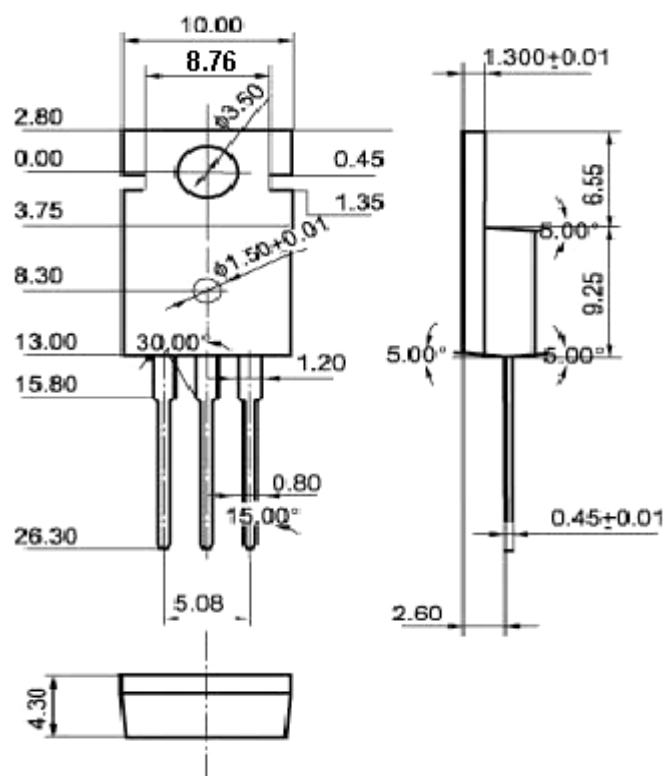


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)