

SavantIC Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD834

DESCRIPTION

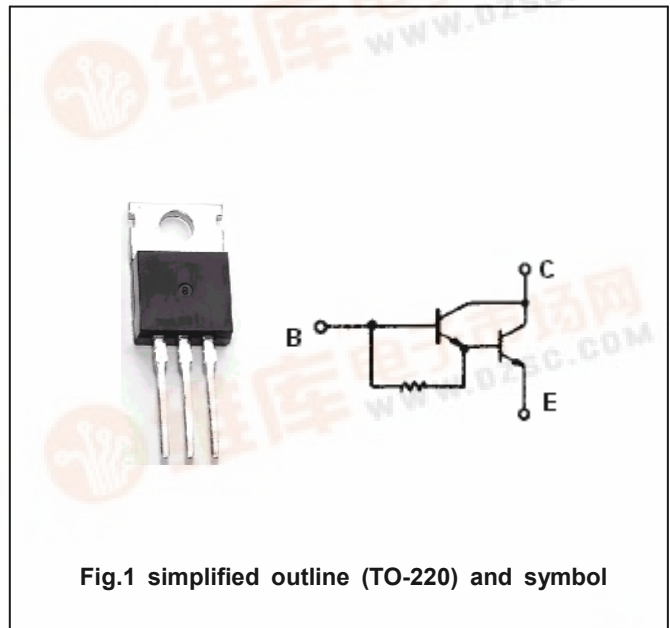
- With TO-220 package
- High DC current gain
- DARLINGTON
- Low collector saturation voltage
- Excellent safe operating area

APPLICATIONS

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

PINNING

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



Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	250	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	200	V
V <sub>CEO(SUS)</sub>	Collector-emitter voltage		180	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	10	V
I <sub>C</sub>	Collector current-continuous		4	A
I <sub>B</sub>	Base current		0.3	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	25	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	MAX	UNIT
Rθ <sub>jc</sub>	Thermal resistance junction to case	5.0	°C/W

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## CHARACTERISTICS

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

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

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =2A; I <sub>B1</sub> =-I <sub>B2</sub> =5mA; R <sub>L</sub> =10Ω PW=20μs; Duty≤2%			1.7	μs
t <sub>s</sub>	Storage time				15.0	μs
t <sub>f</sub>	Fall time				18.0	μs

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PACKAGE OUTLINE

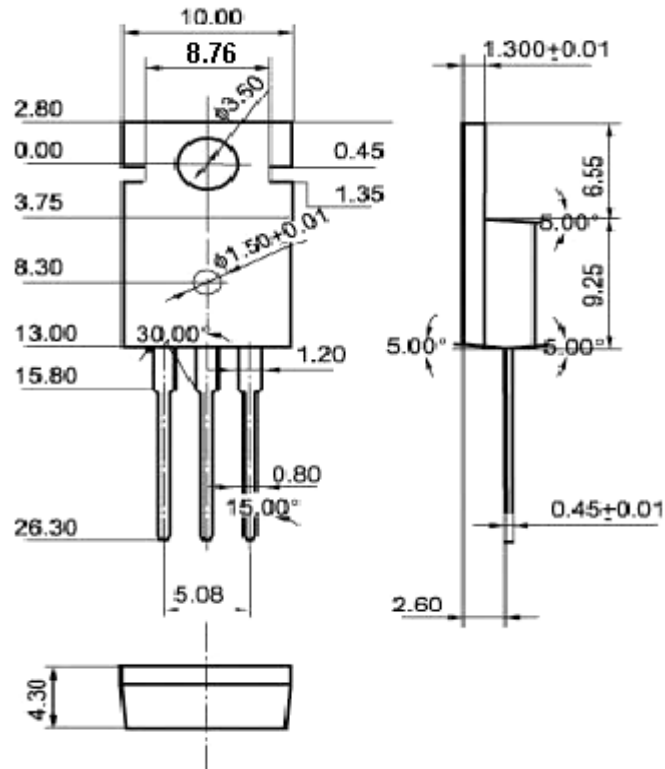


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)