

## Silicon NPN Power Transistors

## 2SC2831 2SC2831A

## DESCRIPTION

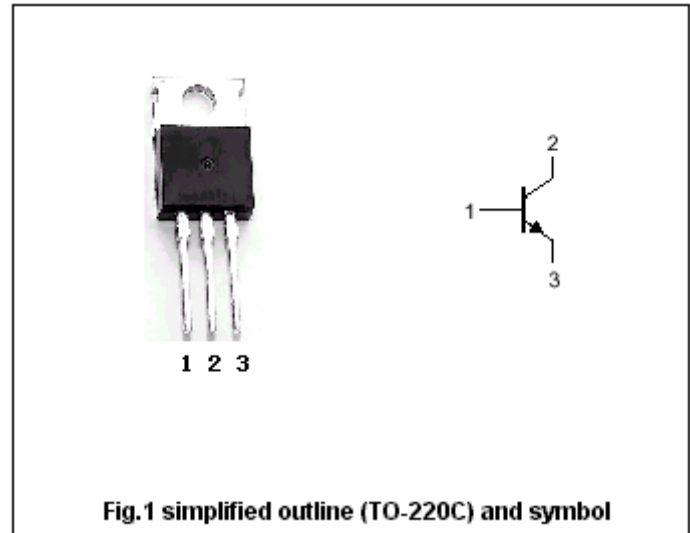
- With TO-220 package
- Low collector saturation voltage
- High  $V_{CBO}$
- High speed switching

## APPLICATIONS

- For high speed switching applications

## PINNING

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

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2SC2831	800	V
		2SC2831A	900	
$V_{CEO}$	Collector-emitter voltage	Open base	500	V
$V_{EBO}$	Emitter-base voltage	Open collector	8	V
$I_C$	Collector current		1.5	A
$I_{CM}$	Collector current-peak		3	A
$I_B$	Base current		0.5	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	25	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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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> =0.2A; L=25mH	500			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =1A; I <sub>B</sub> =0.2A			1.0	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage		I <sub>C</sub> =1A; I <sub>B</sub> =0.2A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	2SC2831	V <sub>CB</sub> =800V; I <sub>E</sub> =0			100	μ A
		2SC2831A	V <sub>CB</sub> =900V; I <sub>E</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =5V; I <sub>C</sub> =0			100	μ A
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V	15			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	8			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =0.2A ; V <sub>CE</sub> =10V		2.5		MHz

## Switching times

t <sub>on</sub>	Turn-on time	2SC2831	I <sub>C</sub> =1A ; I <sub>B1</sub> =-I <sub>B2</sub> =-0.2A V <sub>CC</sub> =200V			1.0	μ s		
		2SC2831A				1.2			
t <sub>stg</sub>	Storage time							3.0	μ s
t <sub>f</sub>	Fall time	2SC2831						1.0	μ s
		2SC2831A			1.2				

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PACKAGE OUTLINE

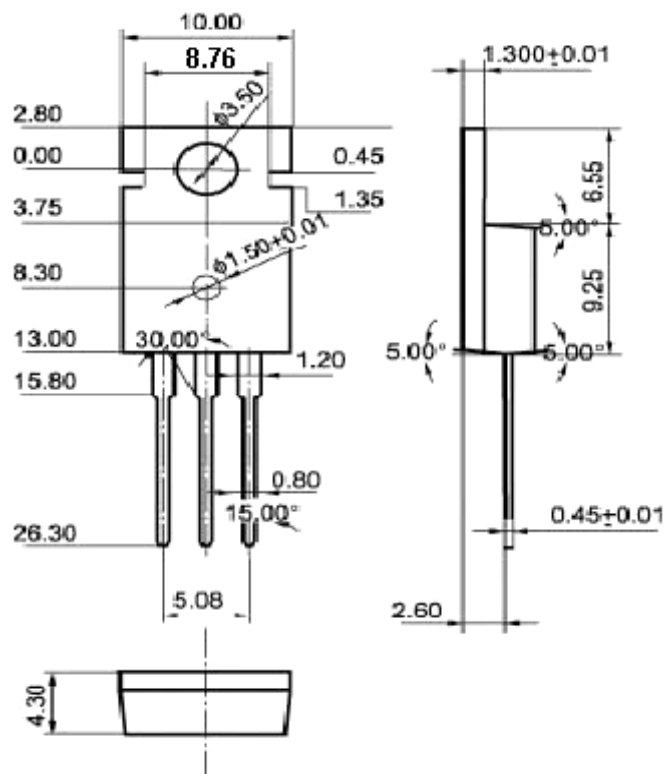


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)