

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

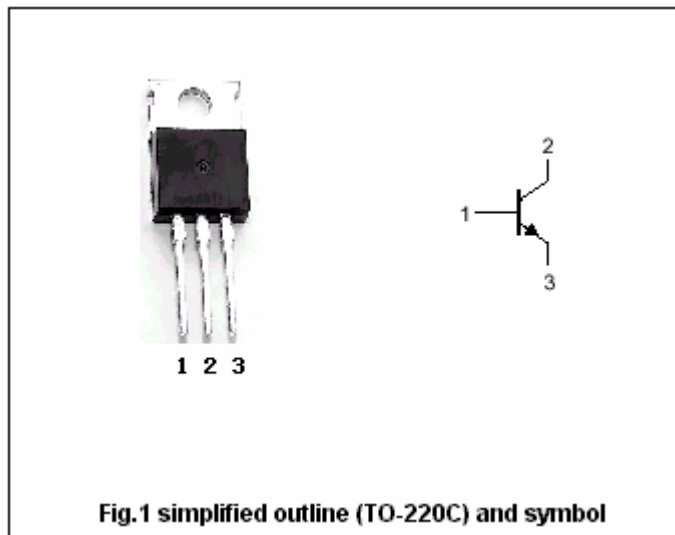


Fig.1 simplified outline (TO-220C) and symbol

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

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	$T_C=25^\circ C$	25	W
T_j	Junction temperature		150	$^\circ C$
T_{stg}	Storage temperature		-55~150	$^\circ C$

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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; L=25mH	500			V
V _{CE(sat)}	Collector-emitter saturation voltage		I _C =1A; I _B =0.2A			1.0	V
V _{BE(sat)}	Base-emitter saturation voltage		I _C =1A; I _B =0.2A			1.5	V
I _{CBO}	Collector cut-off current	2SC2831	V _{CB} =800V; I _E =0			100	μA
		2SC2831A	V _{CB} =900V; I _E =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			100	μA
h _{FE-1}	DC current gain		I _C =0.1A; V _{CE} =5V	15			
h _{FE-2}	DC current gain		I _C =1A; V _{CE} =5V	8			
f _T	Transition frequency		I _C =0.2A; V _{CE} =10V		2.5		MHz

Switching times

t _{on}	Turn-on time	2SC2831	I _C =1A; I _{B1} =-I _{B2} =-0.2A V _{CC} =200V			1.0	μs		
		2SC2831A				1.2			
t _{stg}	Storage time							3.0	μs
t _f	Fall time	2SC2831						1.0	μs
		2SC2831A						1.2	

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PACKAGE OUTLINE

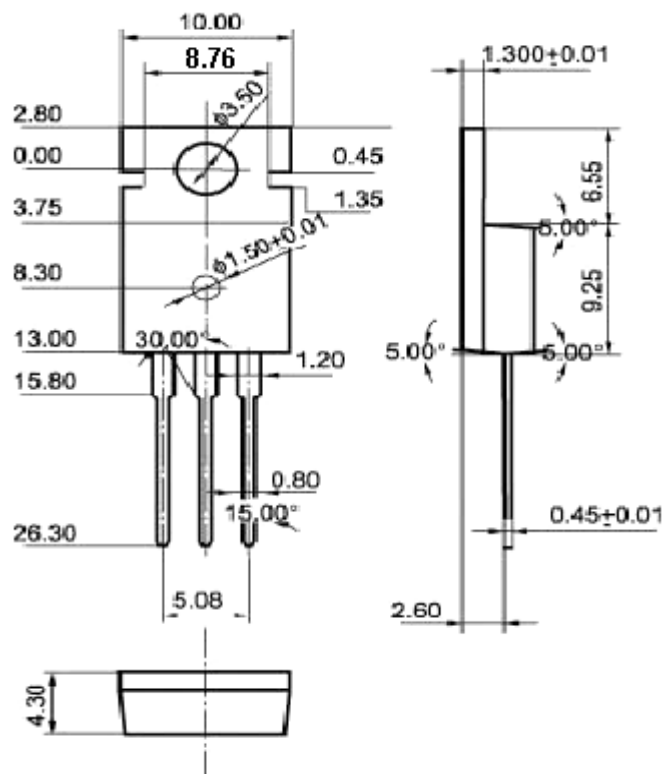


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)