

Silicon NPN Power Transistors

2SC2833 2SC2833A

DESCRIPTION

- With TO-3PN package
- High speed switching
- High  $V_{CBO}$
- Low collector saturation voltage

APPLICATIONS

- For high speed switching applications

PINNING

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

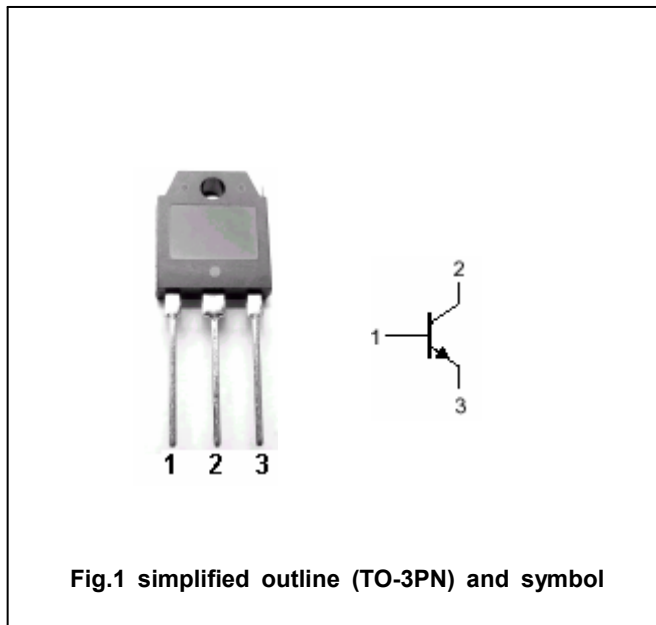


Fig.1 simplified outline (TO-3PN) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2SC2833	800	V
		2SC2833A	900	
$V_{CEO}$	Collector-emitter voltage	Open base	500	V
$V_{EBO}$	Emitter-base voltage	Open collector	8	V
$I_C$	Collector current (DC)		5	A
$I_{CM}$	Collector current-peak		10	A
$I_B$	Base current (DC)		3	A
$P_C$	Collector power dissipation	$T_a=25^\circ C$	2.5	W
		$T_C=25^\circ C$	70	
$T_j$	Junction temperature		150	$^\circ C$
$T_{stg}$	Storage temperature		-55~150	$^\circ C$

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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> =3A ; I <sub>B</sub> =0.6A			1.0	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage		I <sub>C</sub> =3A ; I <sub>B</sub> =0.6A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	2SC2833	V <sub>CB</sub> =800V; I <sub>E</sub> =0			0.1	mA
		2SC2833A	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			0.1	mA
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> =3A ; V <sub>CE</sub> =5V	8			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =0.5A ; V <sub>CE</sub> =10V; f=1MHz		3		MHz

## Switching times

t <sub>on</sub>	Turn-on time	2SC2833	I <sub>C</sub> =3.0A; V <sub>CC</sub> =200V I <sub>B1</sub> =0.6A, I <sub>B2</sub> =-0.6A			1.0	μs		
		2SC2833A				1.2			
t <sub>s</sub>	Storage time							3.0	μs
t <sub>f</sub>	Fall time	2SC2833						1.0	μs
		2SC2833A						1.2	

PACKAGE OUTLINE

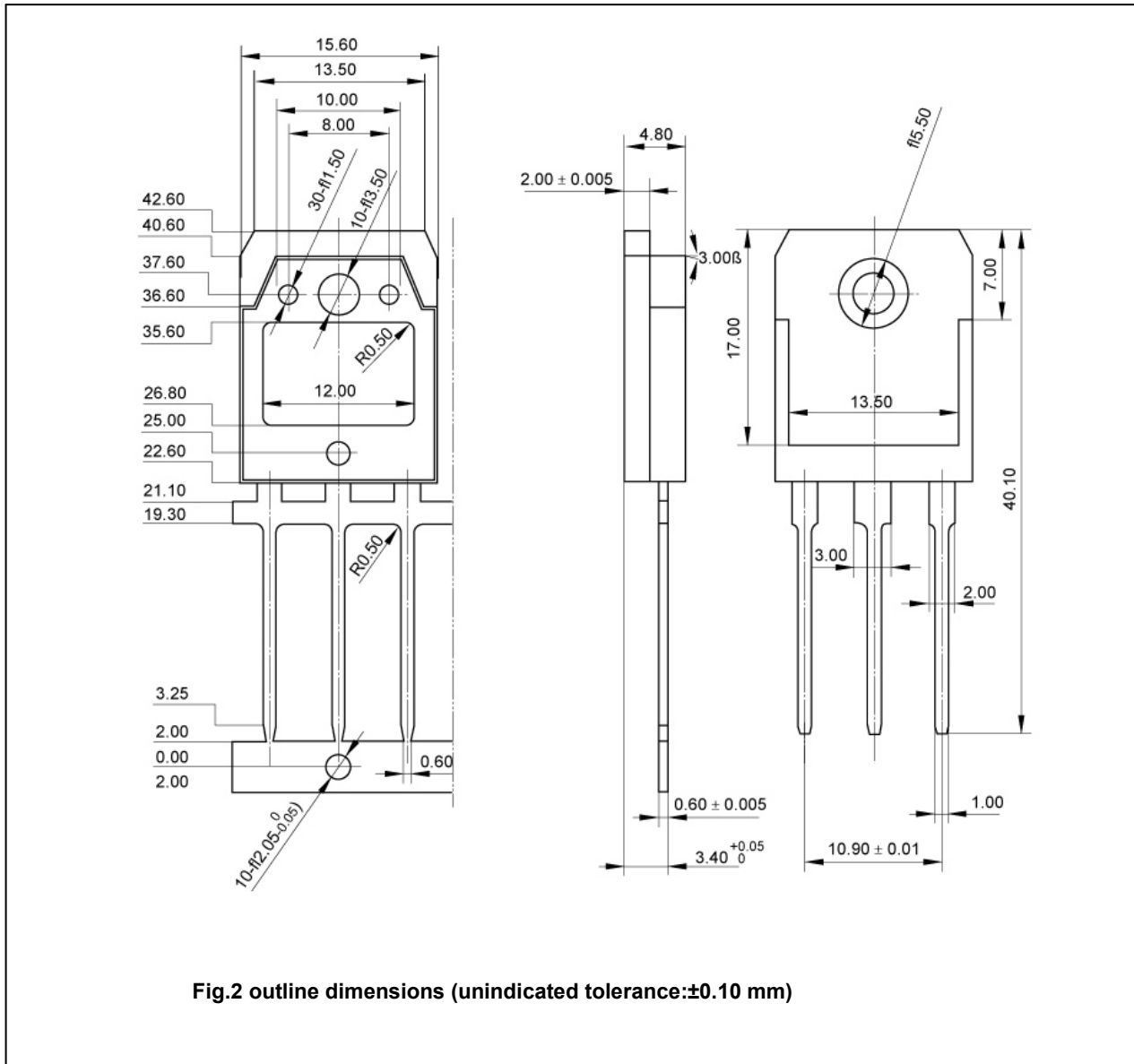


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)