

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

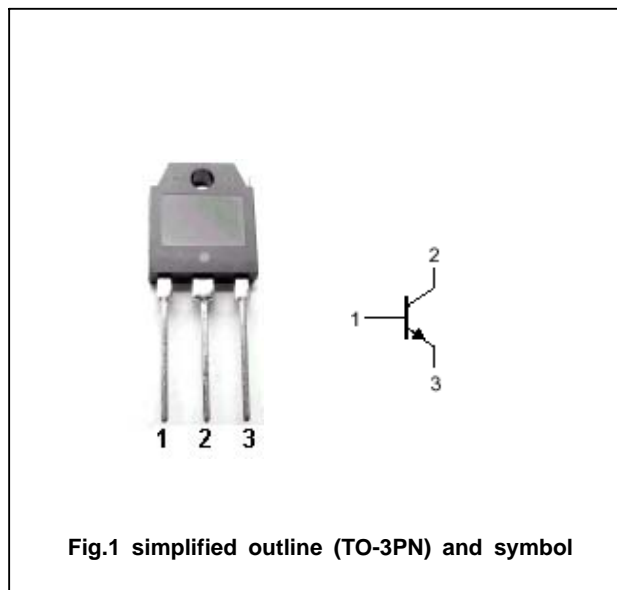


Fig.1 simplified outline (TO-3PN) and symbol

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

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	$T_a=25^\circ\text{C}$	2.5	W
		$T_C=25^\circ\text{C}$	70	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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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 =3A ; I _B =0.6A			1.0	V
V _{BE(sat)}	Base-emitter saturation voltage		I _C =3A ; I _B =0.6A			1.5	V
I _{CBO}	Collector cut-off current	2SC2833	V _{CB} =800V; I _E =0			0.1	mA
		2SC2833A	V _{CB} =900V; I _E =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			0.1	mA
h _{FE-1}	DC current gain		I _C =0.1A ; V _{CE} =5V	15			
h _{FE-2}	DC current gain		I _C =3A ; V _{CE} =5V	8			
f _T	Transition frequency		I _C =0.5A ; V _{CE} =10V; f=1MHz		3		MHz

Switching times

t _{on}	Turn-on time	2SC2833	I _C =3.0A; V _{CC} =200V I _{B1} =0.6A, I _{B2} =-0.6A			1.0	μs			
		2SC2833A				1.2				
t _s	Storage time								3.0	μs
t _f	Fall time	2SC2833							1.0	μs
		2SC2833A							1.2	

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PACKAGE OUTLINE

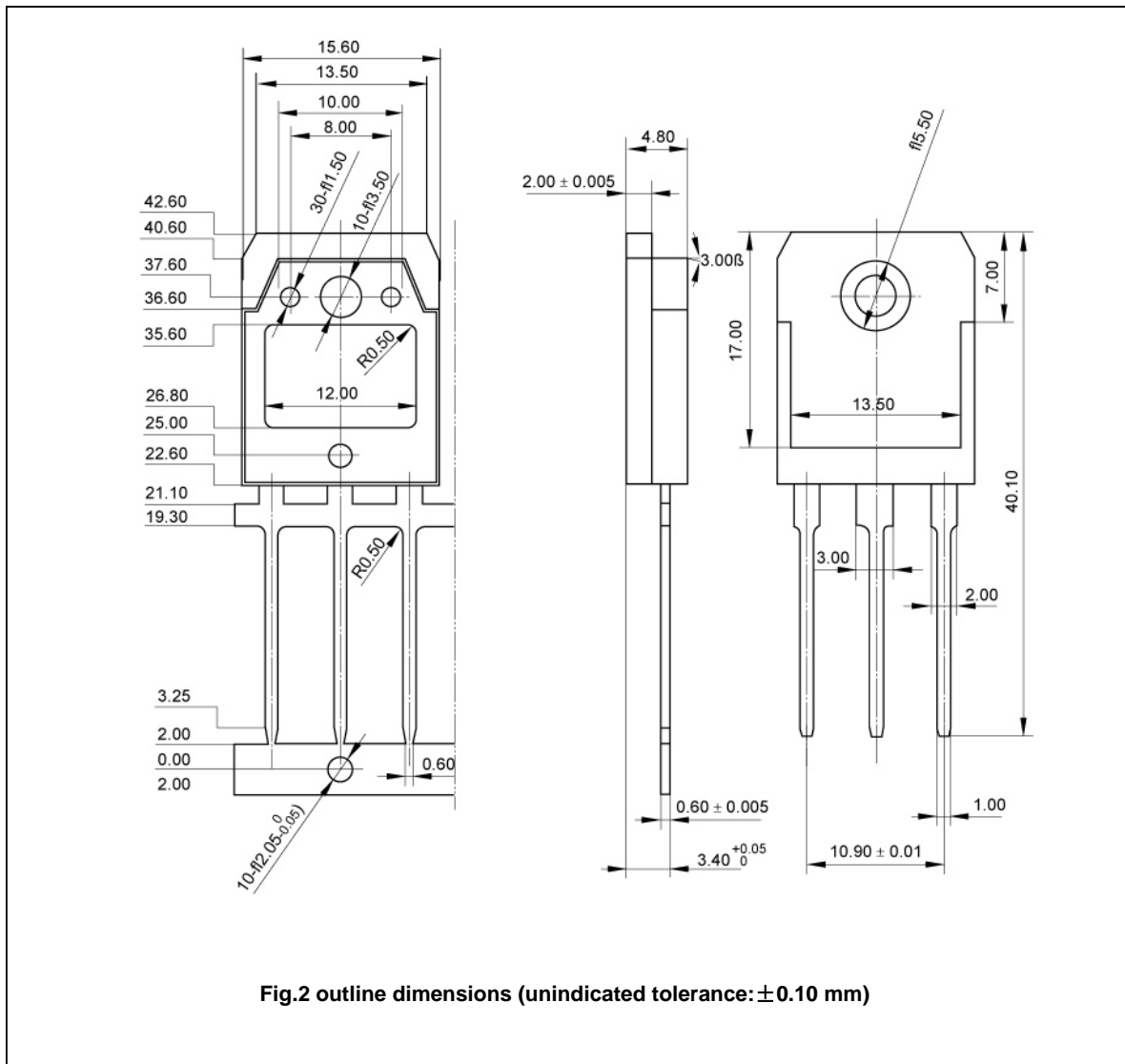


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)