

Silicon NPN Power Transistors

2SC2833 2SC2833A

DESCRIPTION

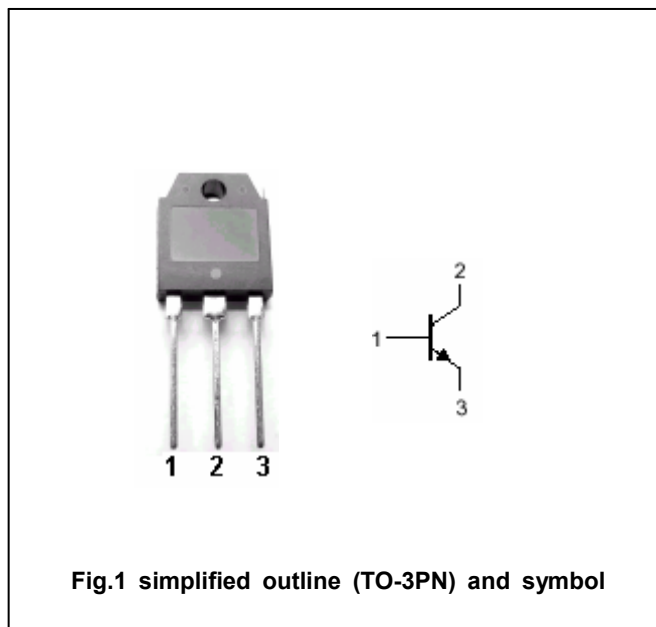
- With TO-3PN package
- High speed switching
- High V_{CBO}
- Low collector saturation voltage

APPLICATIONS

- For high speed switching applications

PINNING

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

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

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2SC2833	Open emitter	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	$T_a=25$		2.5	W
		$T_C=25$		70	
T_j	Junction temperature			150	
T_{stg}	Storage temperature			-55~150	

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CHARACTERISTICS

Tj=25 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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