

Silicon NPN Power Transistors

2N6833

DESCRIPTION

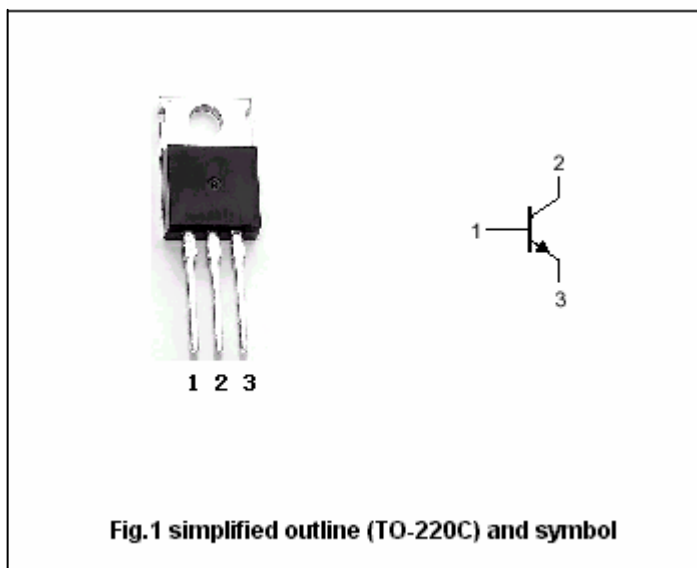
- With TO-220 package
- High voltage, high speed

APPLICATIONS

- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits

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	Open emitter	850	V
V_{CEO}	Collector-emitter voltage	Open base	450	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		4	A
I_{BM}	Base current-peak		8	A
P_T	Total power dissipation	$T_C=25$	80	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.56	/W

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CHARACTERISTICS

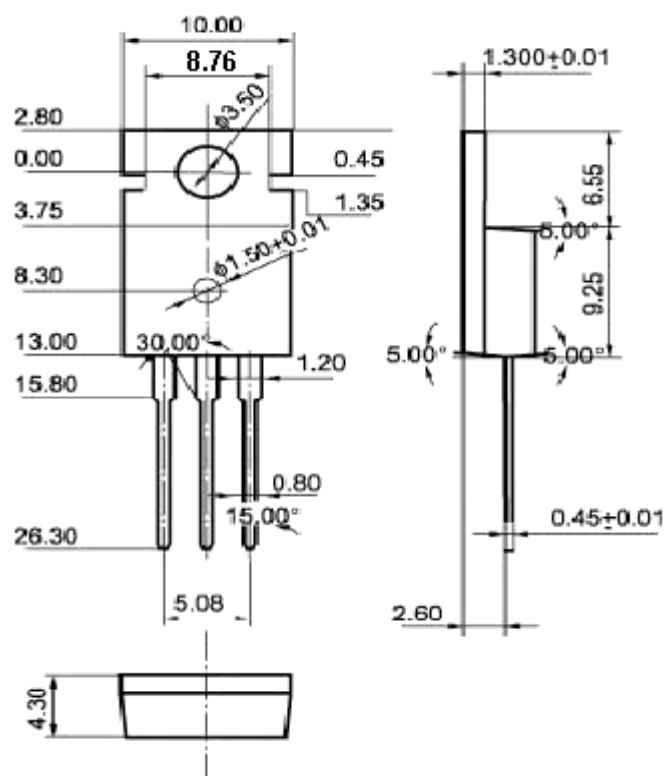
T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	450			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =1.5A; I _B =0.15A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =3A; I _B =0.4A T _C =100			2.5 2.5	V
V _{BE sat}	Base-emitter saturation voltage	I _C =3A; I _B =0.4A T _C =100			1.5 1.5	V
I _{CEV}	Collector cut-off current	V _{CE} =850V; V _{BE} =-1.5V T _C =105			0.25 1.5	mA
I _{EBO}	Emitter cut-off current	V _{BE} =6V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =3A ; V _{CE} =5V	7.5		30	
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =5V	5			
Cob	Output capacitance	I _E =0 ; f=1kHz, V _{CB} =10V	20		200	pF
f _T	Transition frequency	I _C =0.25A ; V _{CE} =10V; f=10MHz	15		75	MHz

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PACKAGE OUTLINE

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