

Silicon NPN Power Transistors

2SC4233

DESCRIPTION

- With TO-220C package
- High breakdown voltage
- Switching power transistor

PINNING

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

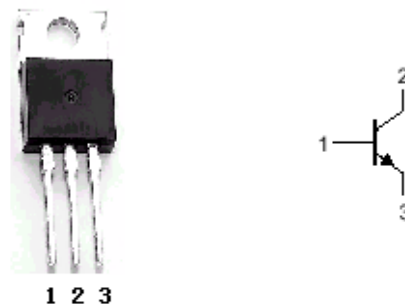


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1200	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		3	A
I_{CM}	Collector current-peak		6	A
I_B	Base current		1	A
I_{BM}	Base current-peak		2	A
P_C	Collector dissipation	$T_C=25^\circ\text{C}$	60	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction case	2.08	$^\circ\text{C}/\text{W}$

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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 =0.1A; R _{BE} =∞	800			V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =1.5A; I _B =0.3A			1.0	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =1.5A; I _B =0.3A			1.5	V
I _{CBO}	Collector cut-off current	At rated voltage			100	μ A
I _{CEO}	Collector cut-off current					
I _{EBO}	Emitter cut-off current	At rated voltage			100	μ A
h _{FE-1}	DC current gain	I _C =1.5A; V _{CE} =5V	8			
h _{FE-2}	DC current gain	I _C =1mA; V _{CE} =5V	7			
f _T	Transition frequency	I _C =0.3A; V _{CE} =10V		8		MHz

Switching times

t _{on}	Turn-on time	V _{BB2} =4V; I _C =1.5A I _{B1} =0.3A; I _{B2} =0.6A R _L =170 Ω			0.5	μ s
t _{stg}	Storage time				3.5	μ s
t _f	Fall time				0.3	μ s

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PACKAGE OUTLINE

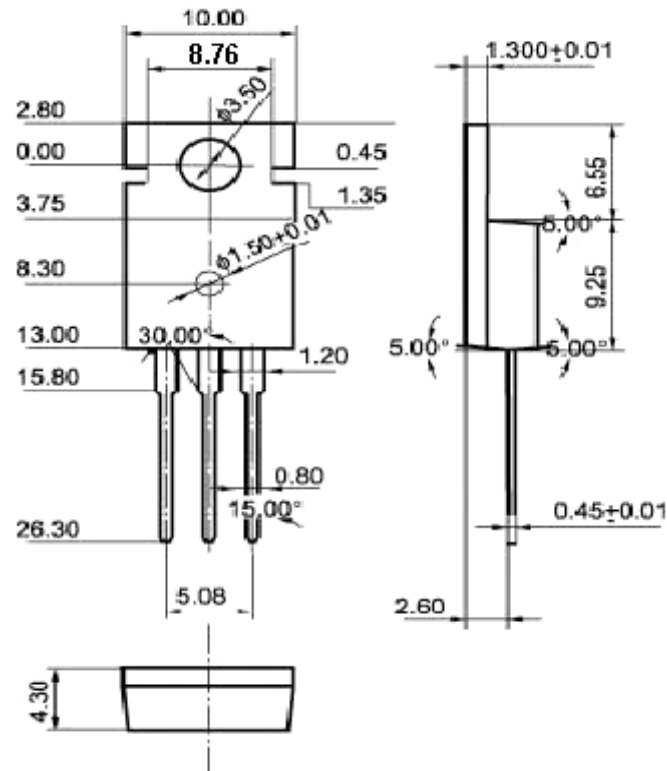


Fig.2 Outline dimensions (unindicated tolerance: ±0.10 mm)