

Silicon NPN Power Transistors

2SC4231

DESCRIPTION

- With ITO-220 package
- Switching power transistor
- High voltage ,high speed

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

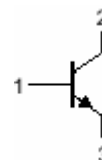


Fig.1 simplified outline (ITO-220) and symbol

Absolute maximum ratings($T_a=25^\circ\text{C}$)

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		2	A
I_{CM}	Collector current-Peak		4	A
I_B	Base current		1	A
I_{BM}	Base current-Peak		2	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	30	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	4.16	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

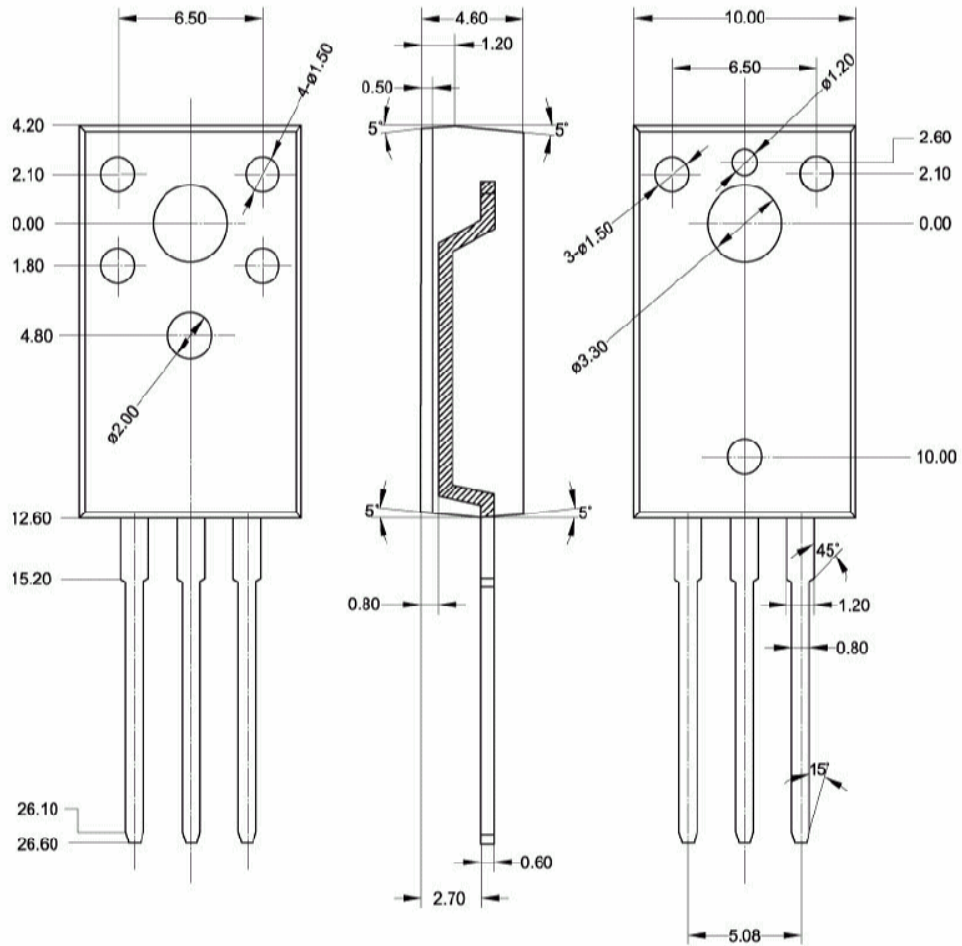
T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A; I _B =0	800			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =1A; I _B =0.2A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =1A; I _B =0.2A			1.5	V
I _{CBO}	Collector cut-off current	At rated voltage			0.1	mA
I _{CEO}	Collector cut-off current					
I _{EBO}	Emitter cut-off current	At rated voltage			0.1	mA
h _{FE-1}	DC current gain	I _C =1A; V _{CE} =5V	8			
h _{FE-2}	DC current gain	I _C =1mA; V _{CE} =5V	7			
f _T	Transition frequency	I _C =0.2A; V _{CE} =10V		8		MHz
t _{on}	Turn-on time	I _C =1; I _{B1} =0.2A; I _{B2} =0.4A; R _L =250Ω V _{BB2} =4V			0.5	μs
t _s	Storage time				3.5	μs
t _f	Fall time				0.3	μs

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: ± 0.20 mm)