

Silicon NPN Power Transistors

2SC3168

DESCRIPTION

- With TO-3 package
- High voltage ,high speed

APPLICATIONS

- For power switching applications

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

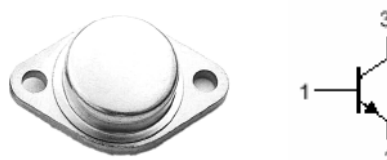


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		20	A
I_{CM}	Collector current-Peak		40	A
I_B	Base current		7	A
I_{BM}	Base current-Peak		14	A
P_T	Total power dissipation	$T_{mb}=25^\circ\text{C}$	200	W
T_j	Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-mb}$	Thermal resistance from junction to mounting base	0.63	$^\circ\text{C}/\text{W}$

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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 =0.2A ; I _B =0	400			V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =10A; I _B =2A			1.0	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =10A; I _B =2A			1.5	V
I _{CBO}	Collector cut-off current	At rated voltage			0.1	mA
I _{CEO}	Collector cut-off current	At rated voltage			0.1	mA
I _{EBO}	Emitter cut-off current	At rated voltage			0.1	mA
h _{FE}	DC current gain	I _C =10A ; V _{CE} =2V	10		40	
f _T	Transition frequency	I _C =2A ; V _{CE} =10V		20		MHz

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PACKAGE OUTLINE

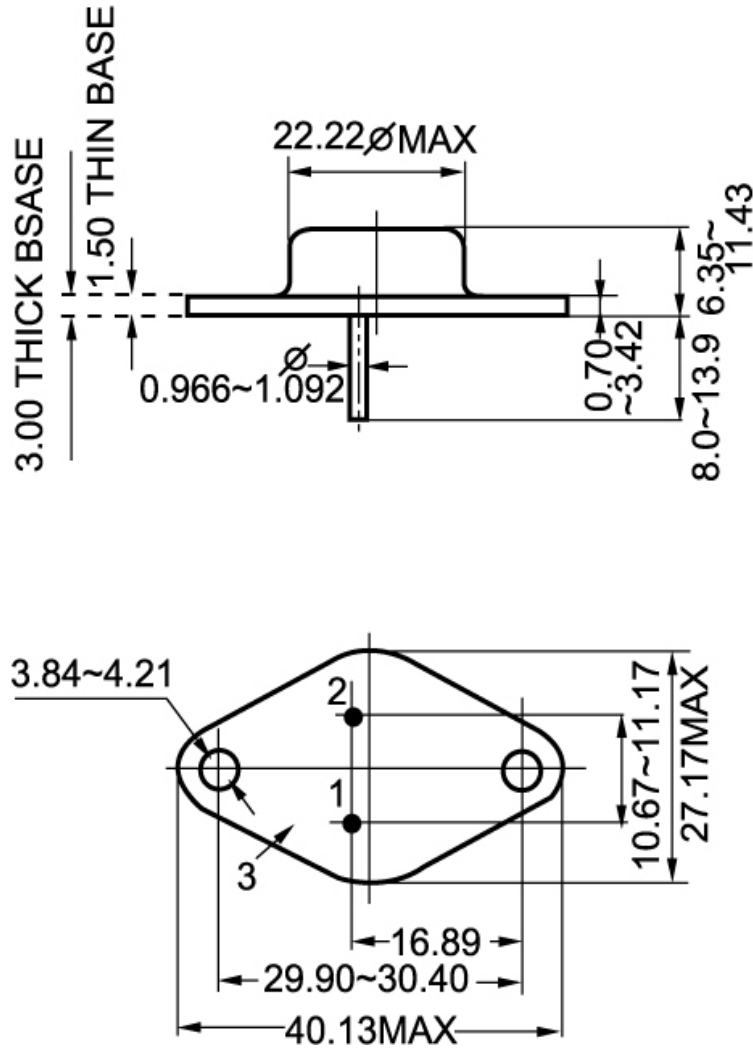


Fig.2 Outline dimensions