

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(Ta=25℃)

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℃	200	W
T _j	Junction temperature		200	℃
T _{stg}	Storage temperature		-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R _{th j-mb}	Thermal resistance from junction to mounting base	0.63	℃/W

Silicon NPN Power Transistors**2SC3168****CHARACTERISTICS** $T_j=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.2\text{A}$; $I_B=0$	400			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=10\text{A}$; $I_B=2\text{A}$			1.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=10\text{A}$; $I_B=2\text{A}$			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	$I_C=10\text{A}$; $V_{CE}=2\text{V}$	10		40	
f_T	Transition frequency	$I_C=2\text{A}$; $V_{CE}=10\text{V}$		20		MHz

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PACKAGE OUTLINE

