

Silicon NPN Power Transistors

2N3448

DESCRIPTION

- With TO-3 package
- Excellent Safe Operating Area

APPLICATIONS

- Designed for medium-switching and amplifier applications.

PINNING

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	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		7.5	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	115	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{(th)jc}$	Thermal resistance junction to case	1.17	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=30\text{mA}$; $I_B=0$	100			V
$V_{CE(sat)-1}$	Collector-emitter saturation voltage	$I_C=5\text{A}$; $I_B=0.5\text{A}$			1.2	V
$V_{CE(sat)-2}$	Collector-emitter saturation voltage	$I_C=7\text{A}$; $I_B=1.5\text{A}$			3.0	V
$V_{BE(on)}$	Base-emitter on voltage	$I_C=5\text{A}$; $V_{CE}=5\text{V}$			1.8	V
I_{CEO}	Collector cut-off current	$V_{CE}=80\text{V}$; $I_B=0$			0.7	mA
I_{CBO}	Collector cut-off current	$V_{CB}=100\text{V}$; $I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}$; $I_C=0$			0.1	mA
h_{FE}	DC current gain	$I_C=5\text{A}$; $V_{CE}=5\text{V}$	50		120	
f_T	Transition frequency	$I_C=0.5\text{A}$; $V_{CE}=10\text{V}$		10		MHz

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PACKAGE OUTLINE

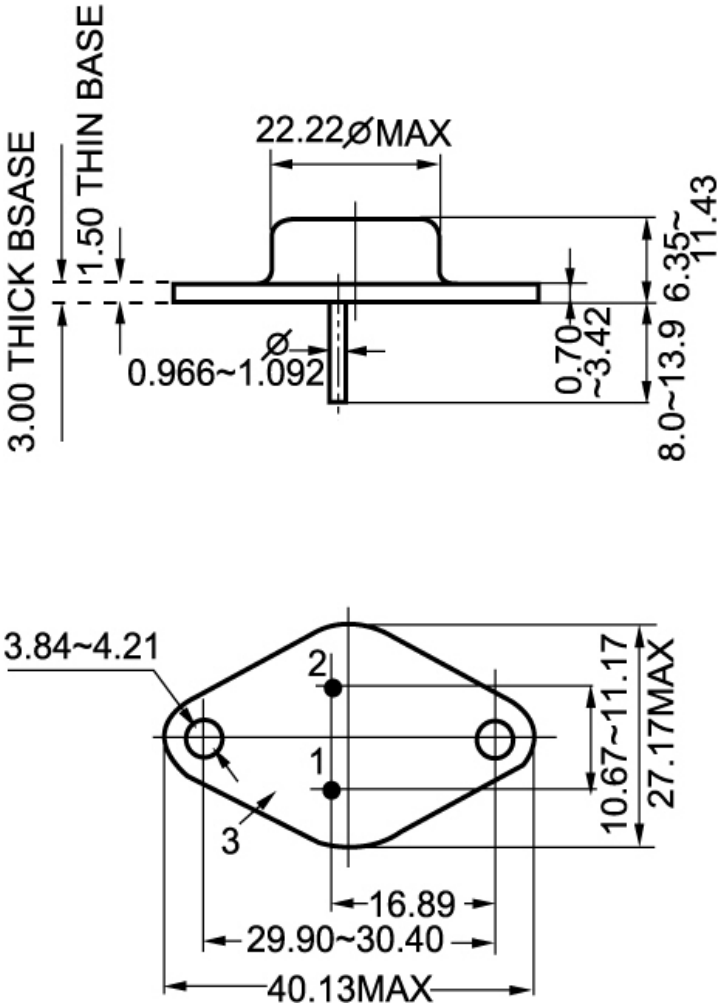


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)