

Silicon NPN Power Transistors

2N6511

DESCRIPTION

- With TO-3 package
- High breakdown voltage
- Low collector saturation voltage

APPLICATIONS

- For use in switching power supply applications and other inductive switching circuits

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

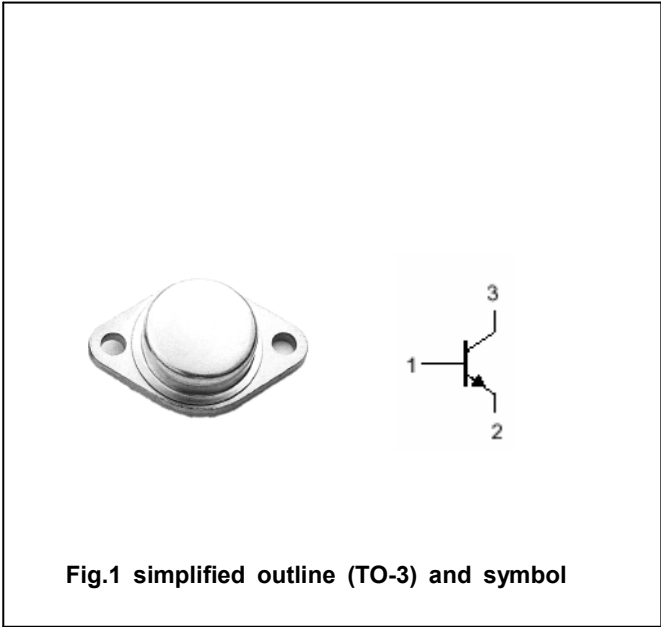


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	400	V
V_{CEO}	Collector-emitter voltage	Open base	250	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		7	A
I_{CM}	Collector current-peak		14	A
P_D	Total power dissipation	$T_C=25^\circ\text{C}$	120	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-65~200	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.25	□/W

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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1\text{A}; I_B=0$	250			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	$I_C=3\text{A}; I_B=0.4\text{A}$			1.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.5	V
I_{CES}	Collector cut-off current	$V_{CE}=400\text{V}; V_{BE(off)}=-1.5\text{V}$ $T_C=100^\circ\text{C}$			0.1 1.5	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}; I_C=0$			0.1	mA
h_{FE}	DC current gain	$I_C=4\text{A}; V_{CE}=3\text{V}$	10		50	
f_T	Transition frequency	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		3		MHz

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PACKAGE OUTLINE

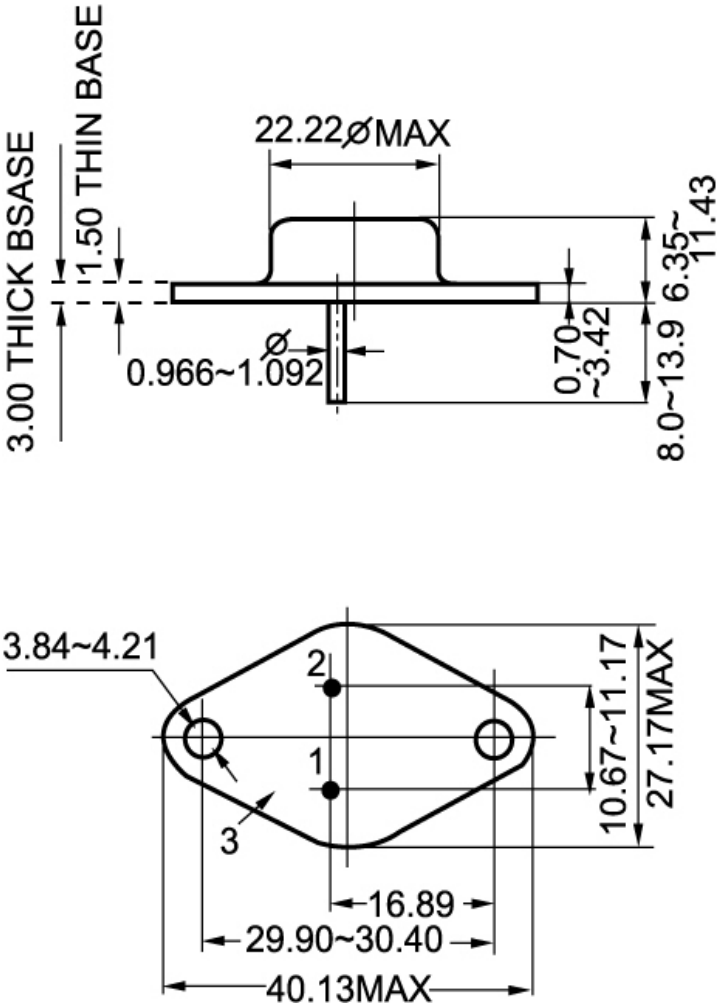


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)