

New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005

Silicon NPN Power Transistors

2N6686

DESCRIPTION

- With TO-3 package
- Fast switching speed
- Low collector saturation voltage

APPLICATIONS

- For power supplies and other high-voltage switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

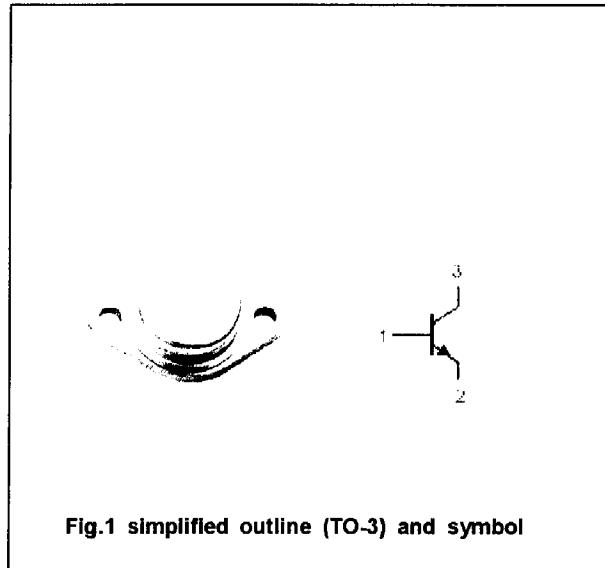


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a=0^\circ C$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	260	V
V_{CEO}	Collector-emitter voltage	Open base	160	V
V_{EBO}	Emitter-base voltage	Open collector	8	V
I_C	Collector current		25	A
I_{CM}	Collector current-peak		50	A
I_B	Base current		8	A
P_c	Collector power dissipation	$T_c=25^\circ C$	200	W
T_j	Junction temperature		200	$^\circ C$
T_{stg}	Storage temperature		-65~200	$^\circ C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th,j-c}$	Thermal resistance junction to case	0.875	$^\circ C/W$

NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors



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	160			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =25A; I _B =2.5A			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =25A; I _B =2.5A			1.8	V
I _{CEV}	Collector cut-off current	V _{CE} =260V; V _{BE} =-1.5V			50	µA
I _{EBO}	Emitter cut-off current	V _{EB} =8V; I _C =0			100	µA
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =2V	30			
h _{FE-2}	DC current gain	I _C =10A ; V _{CE} =2V	25		100	
h _{FE-3}	DC current gain	I _C =25A ; V _{CE} =2V	15			
f _T	Transition frequency	I _C =1A ; V _{CE} =10V	20		100	MHz

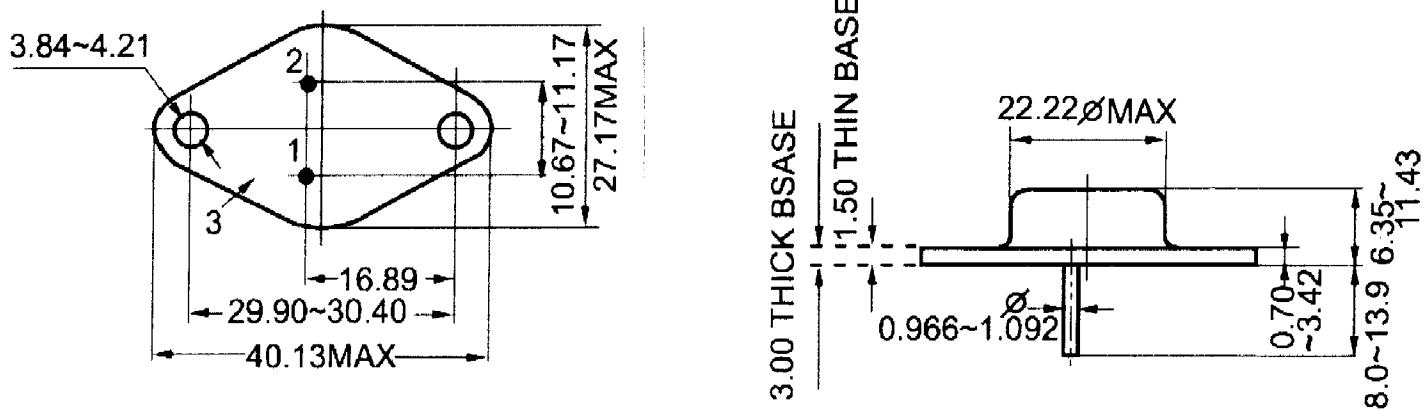


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)