

Silicon NPN Power Transistors

2N6306

DESCRIPTION

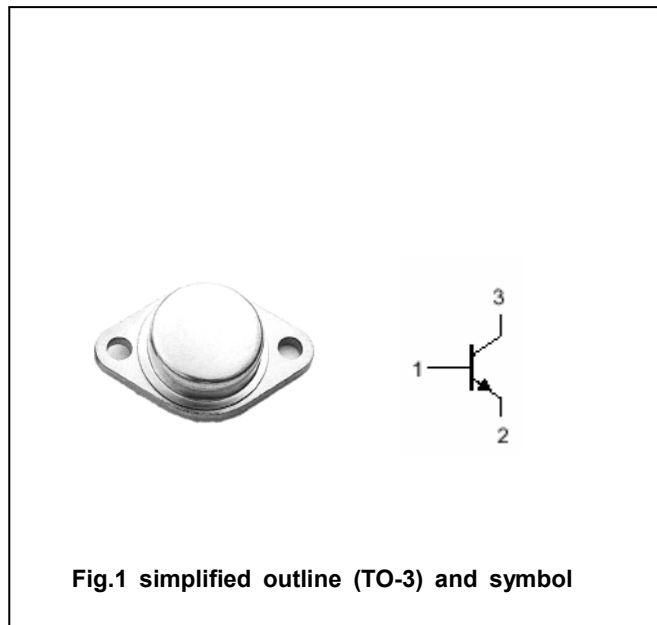
- With TO-3 package
- High breakdown voltage
- High power dissipation

APPLICATIONS

- Designed for high voltage inverters, switching regulators, line operated amplifiers, and switching power supplies applications

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	250	V
V_{EBO}	Emitter-base voltage	Open collector	8	V
I_C	Collector current		8	A
I_B	Base current		4	A
P_T	Total power dissipation	$T_c=25^\circ\text{C}$	125	W
T_j	Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1A$; $I_B=0$	250			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	$I_C=3A$; $I_B=0.6A$			0.8	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	$I_C=8A$; $I_B=2A$			5.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=8A$; $I_B=2A$			2.3	V
V_{BE}	Base-emitter on voltage	$I_C=3A$; $V_{CE}=5V$			1.3	V
I_{CEV}	Collector cut-off current	$V_{CE}=500V$; $V_{BE}=-1.5V$			0.5	mA
I_{CEO}	Collector cut-off current	$V_{CE}=250V$; $I_B=0$			0.5	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=8V$; $I_C=0$			1.0	mA
h_{FE-1}	DC current gain	$I_C=3A$; $V_{CE}=5V$	15		75	
h_{FE-2}	DC current gain	$I_C=8A$; $V_{CE}=5V$	4			
C_{OB}	Output capacitance	$I_E=0$; $V_{CB}=10V$; $f=1MHz$			250	pF
f_T	Transition frequency	$I_C=0.3A$; $V_{CE}=10V$; $f=1MHz$	5			MHz

Switching times

t_r	Rise time	$V_{CC}=125V$; $I_C=3.0A$; $I_B=0.6A$			0.6	μs
t_s	Storage time				1.6	μs
t_f	Fall time				0.4	μs

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PACKAGE OUTLINE

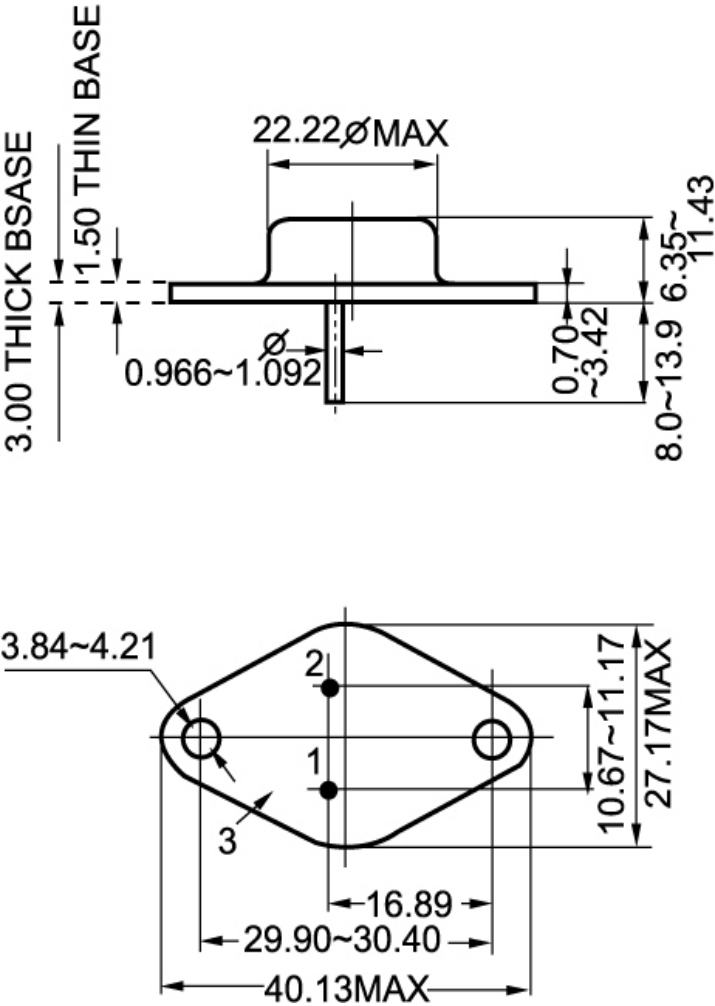


Fig.2 Outline dimensions