

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

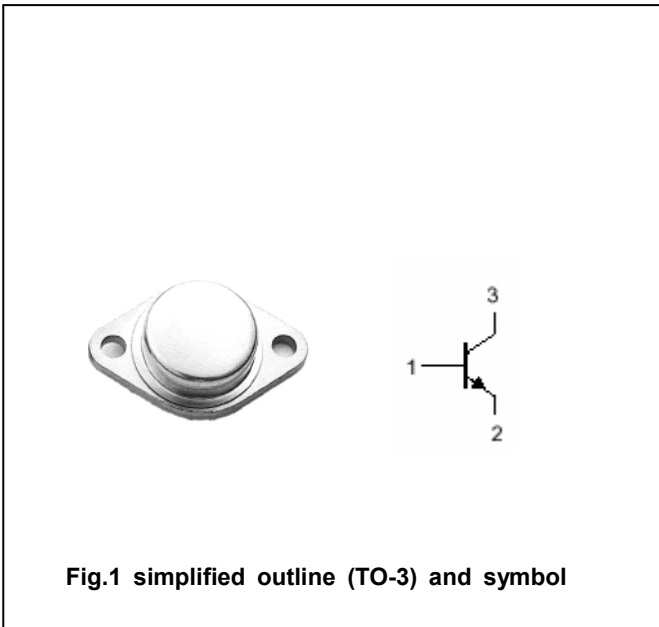


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=25°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°C	125	W
T _j	Junction temperature		200	°C
T _{stg}	Storage temperature		-65~200	°C

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(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

