

Silicon NPN Power Transistors

2N6302

DESCRIPTION

- With TO-3 package
- Low collector saturation voltage
- High DC current gain @ $I_C=8A$

APPLICATIONS

- Designed for use in high power audio amplifier applications and high voltage switching regulator circuits

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

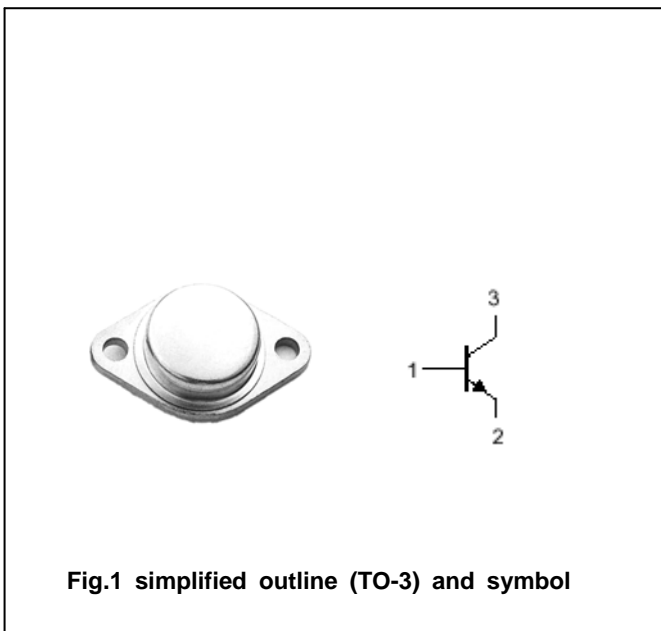


Fig.1 simplified outline (TO-3) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	140	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		16	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		5	A
P_T	Total power dissipation	$T_c=25^{\circ}C$	150	W
T_j	Junction temperature		150	$^{\circ}C$
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	$^{\circ}C/W$

Silicon NPN Power Transistors

2N6302

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	140			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =10A; I _B =1A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =16A; I _B =4A			2.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =10A; I _B =1A			1.8	V
V _{BE}	Base-emitter on voltage	I _C =8A ; V _{CE} =4V			1.5	V
I _{CEV}	Collector cut-off current	V _{CE} =140V; V _{BE} =-1.5V T _C =150°C			1.0 5.0	mA
I _{CBO}	Collector cut-off current	V _{CB} =140V; I _E =0			1.0	mA
I _{CEO}	Collector cut-off current	V _{CE} =70V; I _B =0			2.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =8A ; V _{CE} =4V	15		60	
h _{FE-2}	DC current gain	I _C =16A ; V _{CE} =4V	4			
f _T	Transition frequency	I _C =1A ; V _{CE} =10V;f=1MHz	0.2			MHz

PACKAGE OUTLINE

