

Silicon NPN Power Transistors

2N6249 2N6250 2N6251

DESCRIPTION

- With TO-3 package
- High voltage,high speed
- Low collector saturation voltage

APPLICATIONS

- High voltage inverters
- Switching regulators
- Line operated amplifier

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

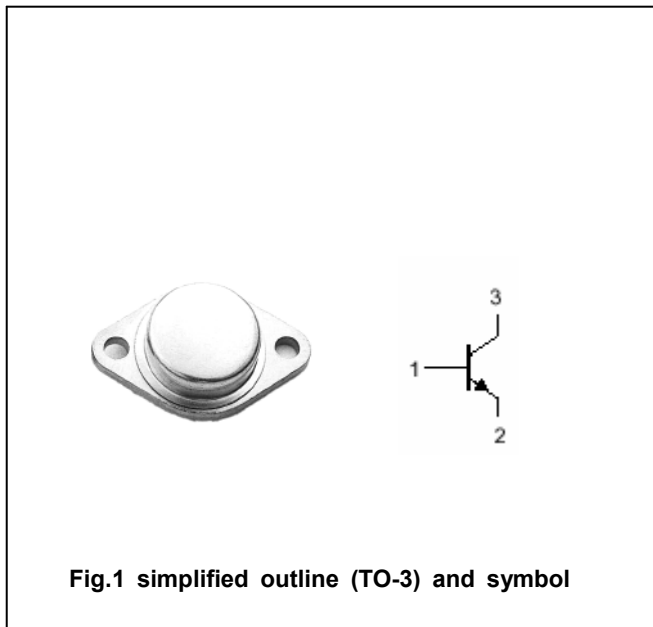


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2N6249	300	V
		2N6250	375	
		2N6251	450	
V _{CEO}	Collector-emitter voltage	2N6249	200	V
		2N6250	275	
		2N6251	350	
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		10	A
I _{CM}	Collector current-peak		30	A
I _B	Base current		10	A
P _T	Total power dissipation	T _C =25°C	175	W
T _j	Junction temperature		200	°C
T _{stg}	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance from junction to case	1.0	°C/W

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CEO(SUS)}	Collector-emitter sustaining voltage	2N6249	I _C =200mA ; I _B =0			V	
		2N6250					200
		2N6251					275
V _{CE(sat)}	Collector-emitter saturation voltage	2N6249	I _C =10A; I _B =1.0A		1.5	V	
		2N6250					I _C =10A; I _B =1.25 A
		2N6251					I _C =10A; I _B =1.67 A
V _{BE(sat)}	Base-emitter saturation voltage	2N6249	I _C =10A; I _B =1.0A		2.25	V	
		2N6250					I _C =10A; I _B =1.25 A
		2N6251					I _C =10A; I _B =1.67 A
I _{CEV}	Collector cut-off current	V _{CE} =RatedV _{CEV} ; V _{BE} =-1.5V T _C =125 °C			5.0 10	mA	
I _{CEO}	Collector cut-off current	2N6249	V _{CE} =150V; I _B =0		5.0	mA	
		2N6250					V _{CE} =225V; I _B =0
		2N6251					V _{CE} =300V; I _B =0
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			1.0	mA	
h _{FE}	DC current gain	2N6249	I _C =10A ; V _{CE} =3V		50		
		2N6250					10
		2N6251					8
f _T	Transition frequency	I _C =1A ; V _{CE} =10V □ f=1MHz	2.5			MHz	
I _{s/b}	Second breakdown collector current With base forward biased	V _{CE} =30V, t=1.0s, Nonrepetitive	5.8			A	

Switching times

t _r	Rise time		For 2N6249 I _C =10A; I _{B1} =-I _{B2} =1.0A; V _{CC} =200V			2.0	μs
t _s	Storage time		For 2N6250 I _C =10A; I _{B1} =-I _{B2} =1.25A; V _{CC} =200V			3.5	μs
t _f	Fall time		For 2N6251 I _C =10A; I _{B1} =-I _{B2} =1.67A; V _{CC} =200V			1.0	μs

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PACKAGE OUTLINE

