

Silicon NPN Power Transistors

2N6249 2N6250 2N6251

DESCRIPTION

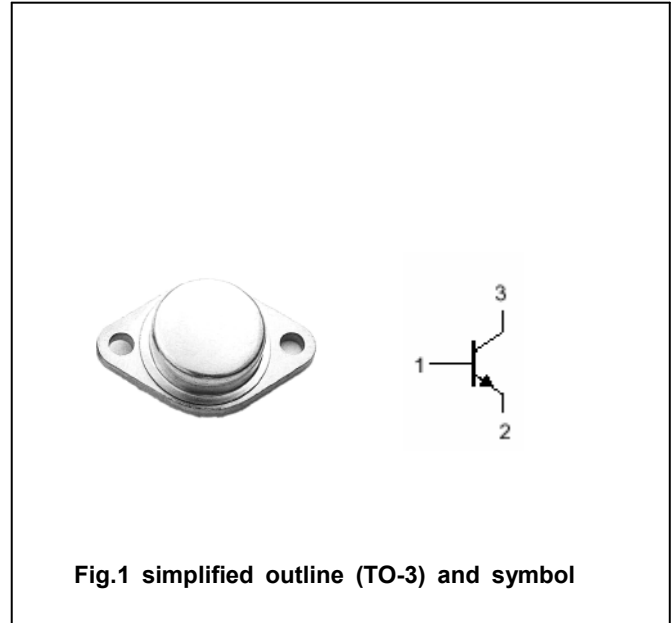
- With TO-3 package
- High voltage,high speed
- Low collector saturation voltage

APPLICATIONS

- High voltage inverters
- Switching regulators
- Line operated amplifier

PINNING

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

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

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	$T_C=25^\circ\text{C}$	175	W
T_j	Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.0	$^\circ\text{C}/\text{W}$

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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				
		2N6251				
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} =Rated V _{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		10	50
		2N6250				
		2N6251				
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

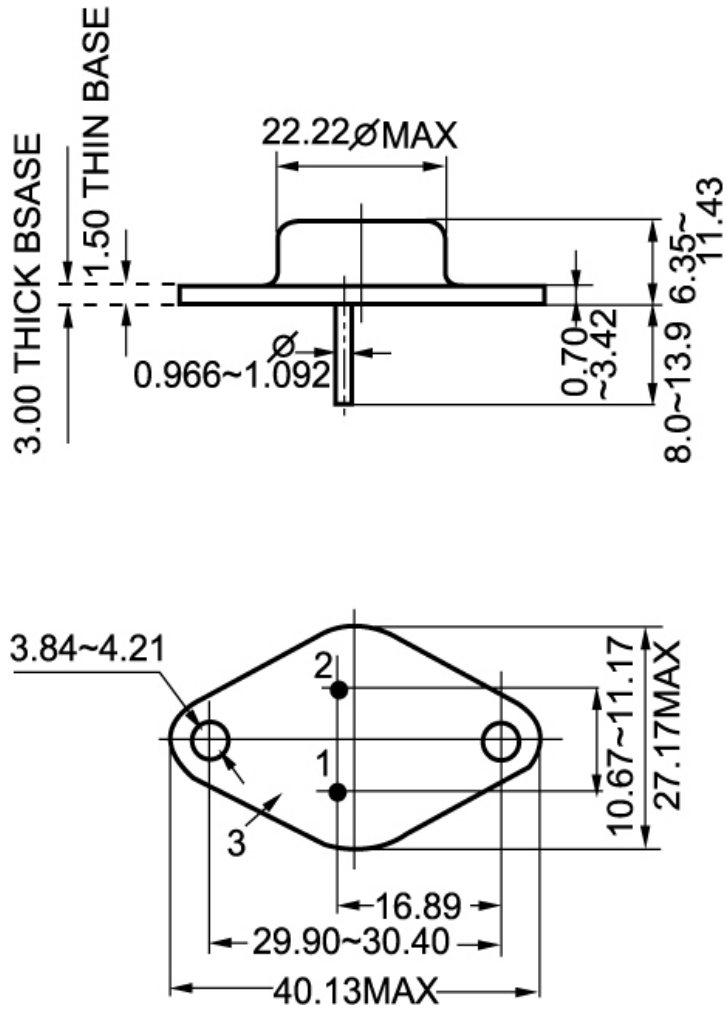


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)