

Silicon NPN Power Transistors

2SD1049

DESCRIPTION

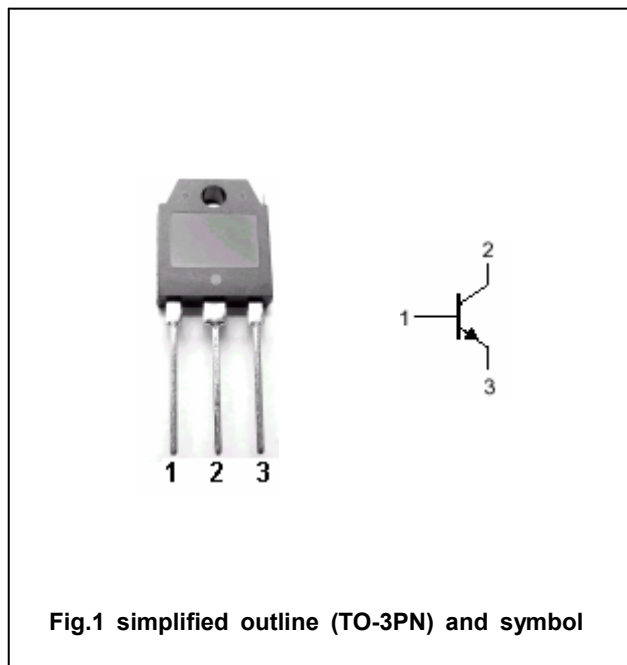
- With TO-3PN package
- High current,
- High speed switching
- High reliability

APPLICATIONS

- Switching regulators
- Motor controls
- High frequency inverters
- General purpose power amplifiers

PINNING

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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		25	A
I_B	Base current		5	A
P_C	Collector power dissipation	$T_c=25^\circ\text{C}$	80	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	MAX	UNIT
$R_{\theta jc}$	Thermal resistance junction to case	1.55	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA ; I _B =0	80			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =0.1mA ; I _E =0	120			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =0.1mA ; I _C =0	7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =25A ; I _B =2.5A			1.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =25A ; I _B =2.5A			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =120V ; I _E =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V ; I _C =0			0.1	mA
h _{FE}	DC current gain	I _C =25A ; V _{CE} =5V	20			

Switching times

t _{on}	Turn-on time	I _C =25A I _{B1} =-I _{B2} =2.5A R _L =3Ω; P _W =20μs; Duty≤2%			1.0	μs
t _{stg}	Storage time				2.5	μs
t _f	Fall time				0.4	μs

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PACKAGE OUTLINE

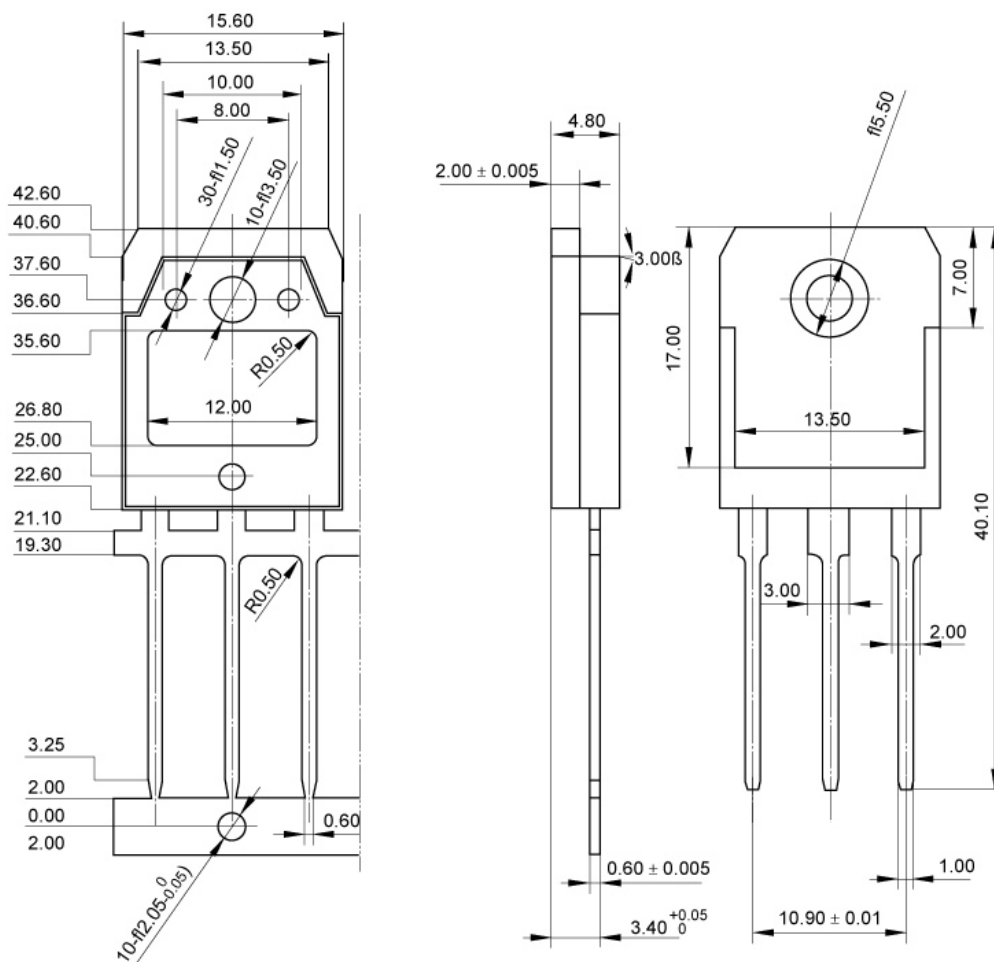


Fig.2 outline dimensions