

Silicon NPN Power Transistors

BUV47A

DESCRIPTION

- With TO-3PN package
- High breakdown voltage
- Fast switching time

APPLICATIONS

- Suited for 220V switchmode power supply,DC and AC motor control

PINNING

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

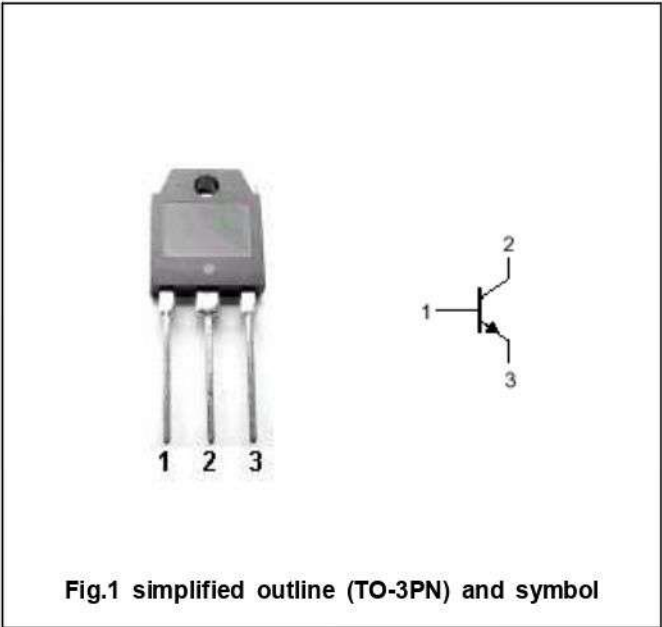


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Tc=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1000	V
V _{CEO}	Collector-emitter voltage	Open base	450	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		9	A
I _{CM}	Collector current-peak		15	A
I _B	Base current		3	A
I _{BM}	Base current -peak		6	A
P _C	Collector power dissipation	T _C =25℃	120	W
T _j	Junction temperature		150	℃
T _{stg}	Storage temperature		-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{thj-c}	Thermal resistance junction to case	1.0	℃/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A ; L=25mH	450			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =50mA ; I _C =0	7		30	V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =5A ; I _B =1.0A			1.5	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =8A ; I _B =2.5A			3.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =5A ; I _B =1.0A			1.6	V
I _{CES}	Collector cut-off current	V _{CE} =1000V ; V _{BE} =0 T _C =125°C			0.15 1.5	mA
I _{CER}	Collector cut-off current	V _{CB} =1000V ; R _{BE} =10Ω T _C =125°C			0.4 3.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V ; I _C =0			1	mA
h _{FE}	DC current gain	I _C =1A ; V _{CE} =5V	15		50	
f _T	Transition frequency	I _C =0.5A ; V _{CE} =10V ; f=1MHz		8		MHz
C _{OB}	Output capacitance	I _C =0 ; V _{CB} =20V ; f=0.1MHz		105		pF

Switching times resistive load

t _{on}	Turn-on time	I _C =5A ; I _{B1} =-I _{B2} =1A V _{CC} =150V			1.0	μs
t _s	Storage time				3.0	μs
t _f	Fall time				0.8	μs

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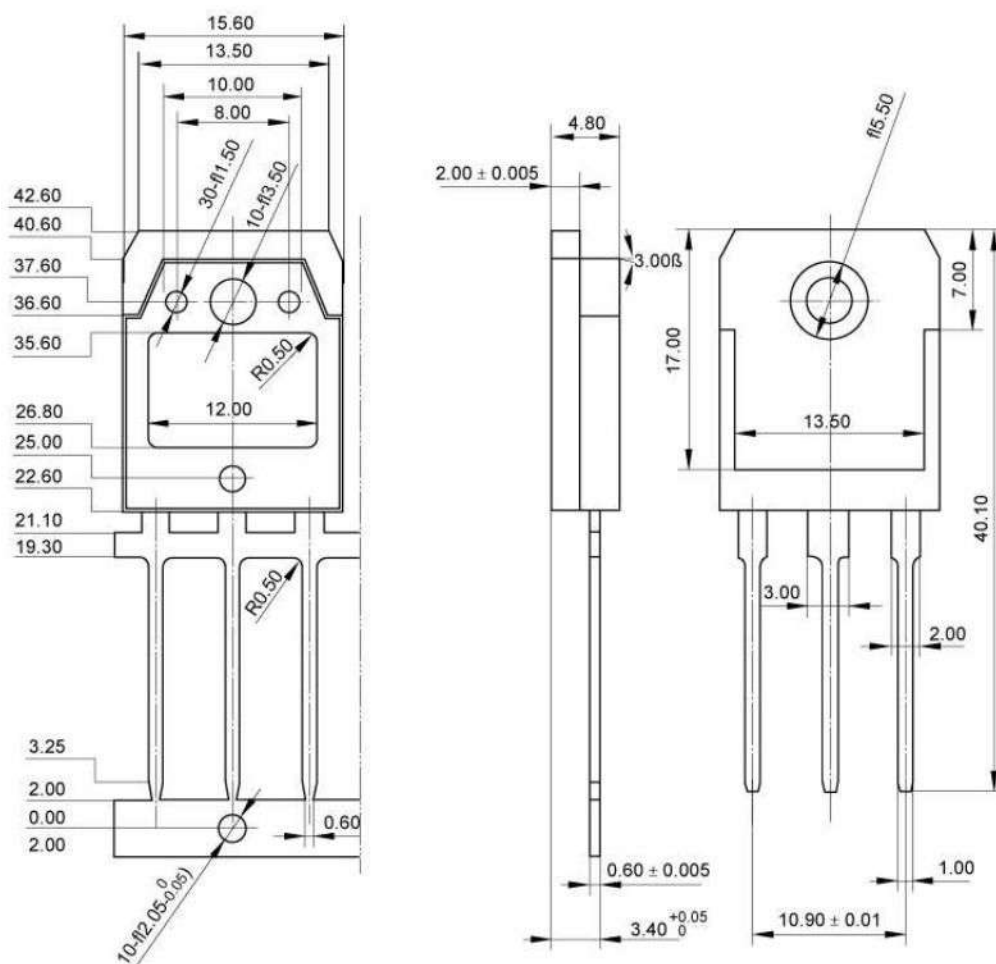


Fig.2 outline dimensions