

Silicon NPN Power Transistors

BUV47 BUV47B

DESCRIPTION

- With TO-3PN package.
- High voltage.
- Very high switching speed.

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

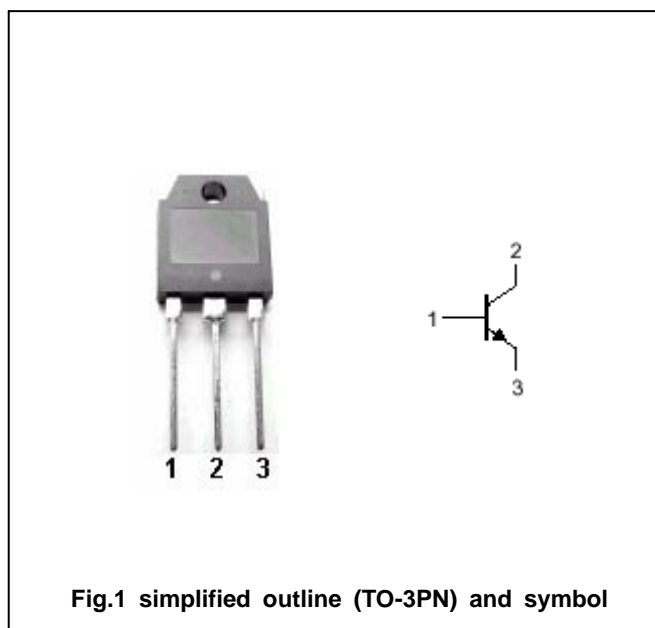


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	850	V
V_{CEO}	Collector-emitter voltage	Open base	400	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
P_C	Collector power dissipation	$T_C=25$	90	W
T_j	Junction temperature		-65~150	
T_{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-case}$	Thermal resistance junction case	1.38	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10mA; I _C =0	10			V	
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A; I _B =0; L=25mH	400			V	
V _{CEsat-1}	Collector-emitter saturation voltage	BUV47	I _C =5A; I _B =1A			1.5	V
		BUV47B	I _C =6A; I _B =1.2A				
V _{CEsat-2}	Collector-emitter saturation voltage	BUV47	I _C =8A; I _B =2.5A			3.0	V
		BUV47B	I _C =9A; I _B =3A				
V _{BEsat}	Base-emitter saturation voltage	BUV47	I _C =5A; I _B =1A			1.6	V
		BUV47B	I _C =6A; I _B =1.2A				
I _{CEX}	Collector cut-off current	V _{CE} =850V; V _{BE} =-2.5V			0.15	mA	
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1.0	mA	
h _{FE}	DC current gain	I _C =10A; V _{CE} =5V	7	10	14		

Switching times :

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

PACKAGE OUTLINE

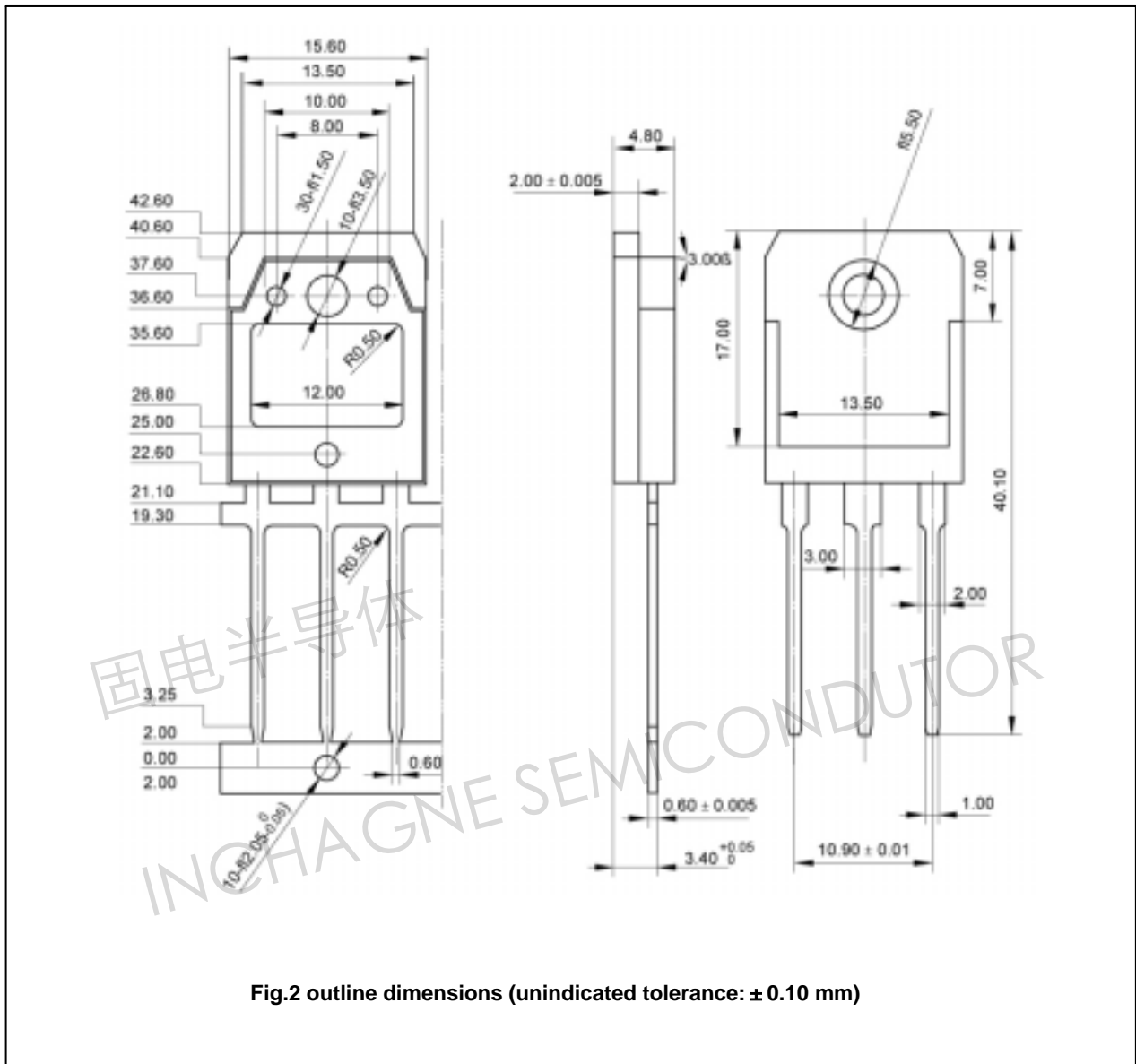


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)