

Silicon NPN Power Transistors

BUW48

DESCRIPTION

- With TO-3PN package.
- High current capability.
- Fast switching speed.
- Low collector saturation voltage

APPLICATIONS

- Switching regulators.
- Motor control.
- High frequency and efficiency converters

PINNING

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

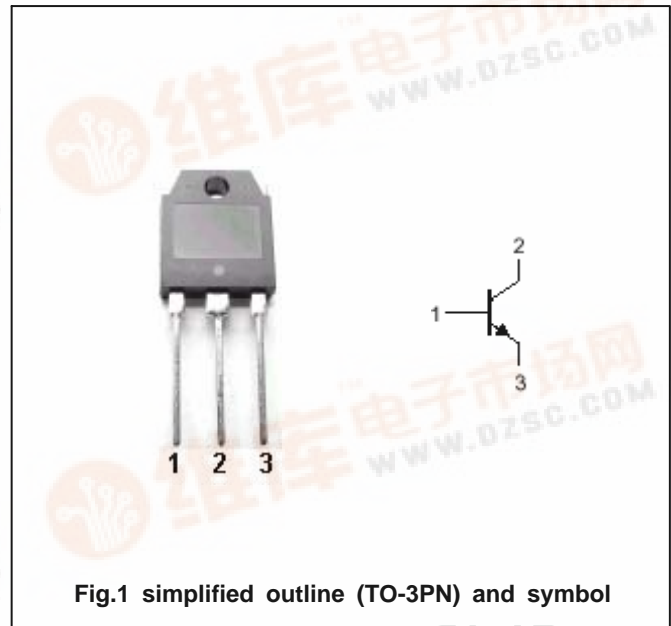


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		30	A
I_{CM}	Collector current (Pulse)		45	A
I_B	Base current		8	A
I_{BM}	Base current (peak)		12	A
P_C	Collector power dissipation	$T_C=25$	150	W
T_j	Junction temperature		175	
T_{stg}	Storage temperature		-65~175	

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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 =50mA; I _C =0	7			V
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A; I _B =0; L=25mH	60			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =20A; I _B =2A			0.6	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =15A; I _B =1.5A			0.5	V
V _{BEsat}	Base-emitter saturation voltage	I _C =40A; I _B =4A			2.1	V
I _{CEx}	Collector cut-off current	V _{CE} =rated ; V _{BE} =-1.5V T _C =125			1 3	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1	mA
f _T	Transition frequency	V _{CE} =15V, f=15MHz; I _C =1A		8		

Switching times :

t _{on}	Turn-on time			1.2	1.5	μs
t _s	Storage time	I _C =40A; I _{B1} =- I _{B2} =4A V _{CC} =60V		0.6	1.1	μs
t _f	Fall time			0.17	0.25	μs

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-case}	Thermal resistance junction case	1	/W

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PACKAGE OUTLINE

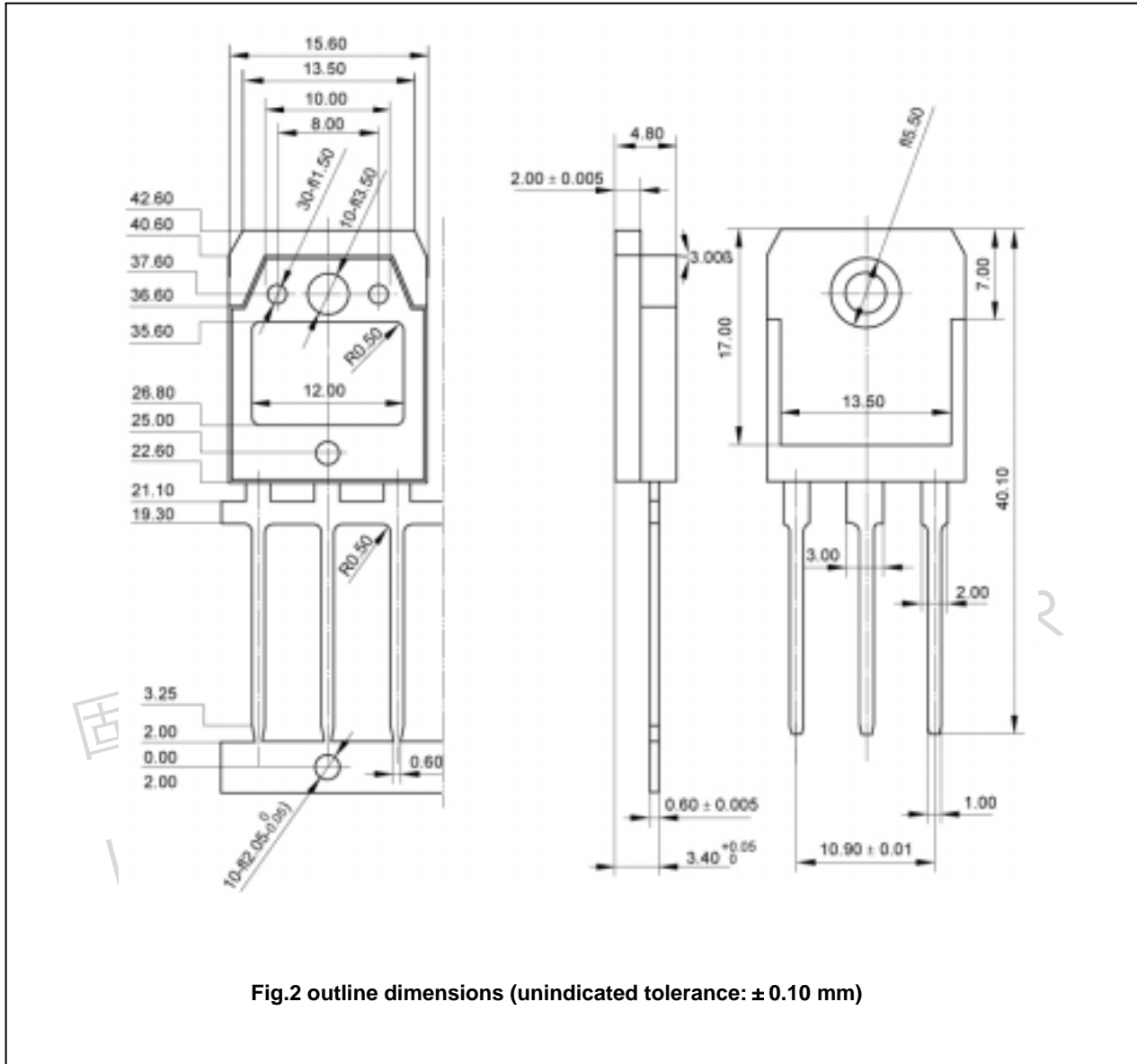


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)