

Silicon NPN Power Transistors

BUW12 BUW12A

DESCRIPTION

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

APPLICATIONS

- Specially intended for operating
In industrial applications

PINNING (See Fig.2)

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

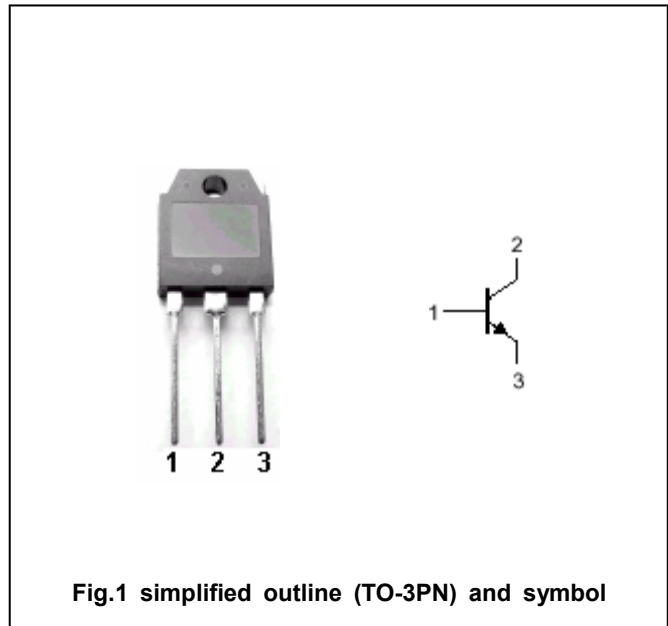


Fig.1 simplified outline (TO-3PN) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUW12	850	V
		BUW12A	1000	
V_{CEO}	Collector-emitter voltage	BUW12	400	V
		BUW12A	450	
V_{EBO}	Emitter-base voltage	Open collector	9	V
I_C	Collector current		8	A
I_{CM}	Collector current-peak		20	A
I_B	Base current		4	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	125	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.2	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	BUW12	I _C =0.1A ; I _B =0; L=25mH	400			V
		BUW12A		450			
V _{CEsat}	Collector-emitter saturation voltage		I _C =6A; I _B =1.2A			1.5	V
V _{BEsat}	Base-emitter saturation voltage		I _C =6A; I _B =1.2A			1.5	V
I _{CES}	Collector cut-off current	BUW12	V _{CE} =850V; V _{BE} =0			1.0	mA
		BUW12A	V _{CE} =1000V; V _{BE} =0				
I _{EBO}	Emitter cut-off current		V _{EB} =9V; I _C =0			10	mA
h _{FE}	DC current gain		I _C =1A ; V _{CE} =5V	15		50	

Switching times resistive load

t _{on}	Turn-on time	I _C =6A ; I _{B1} =-I _{B2} =1.2A V _{CC} =240V			1.0	μs
t _s	Storage time				4.0	μs
t _f	Fall time				0.8	μs

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PACKAGE OUTLINE

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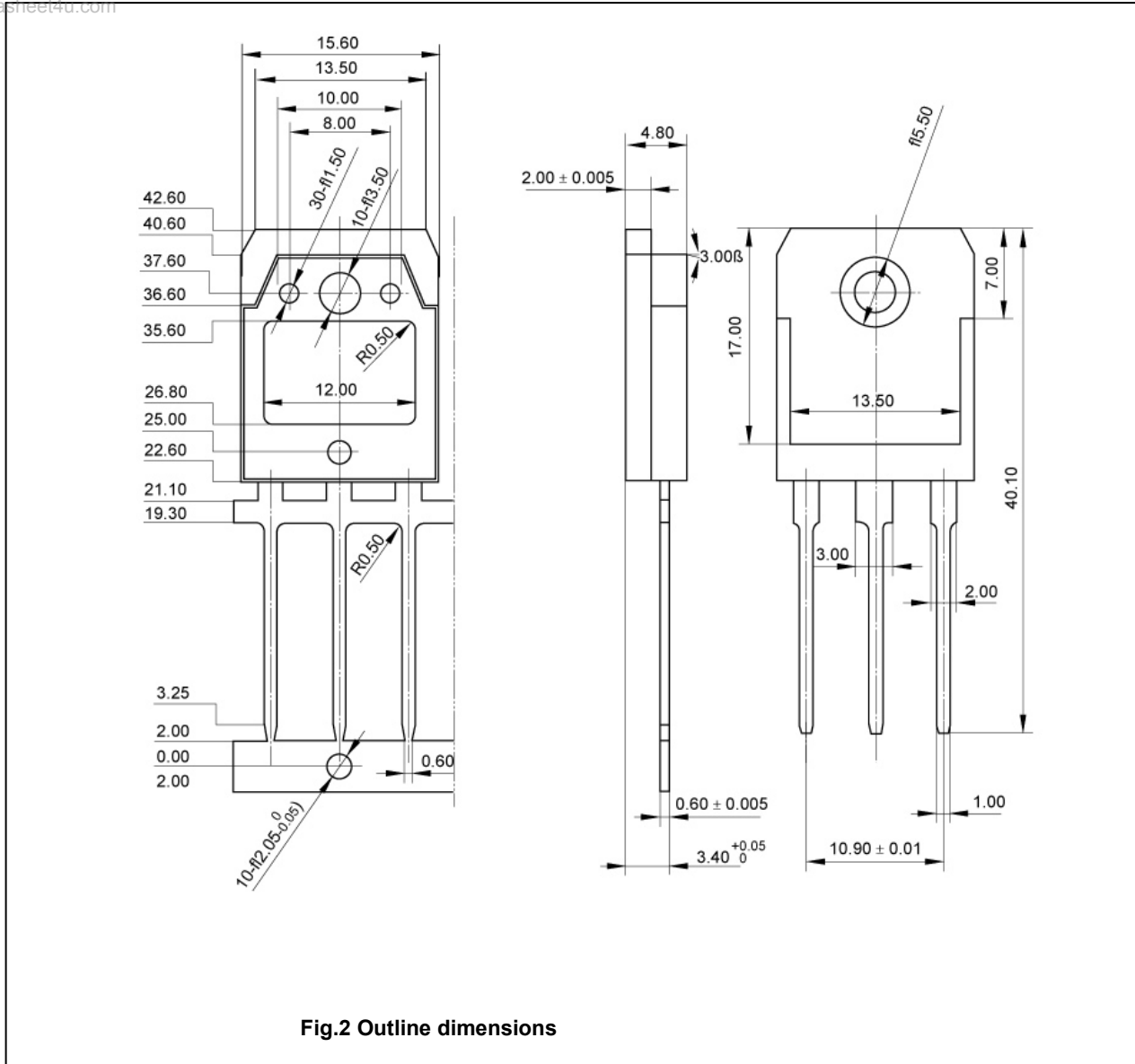


Fig.2 Outline dimensions