

Silicon NPN Power Transistors

BUH1015

DESCRIPTION

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

APPLICATIONS

- Horizontal deflection for colour TV and monitors.

PINNING

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

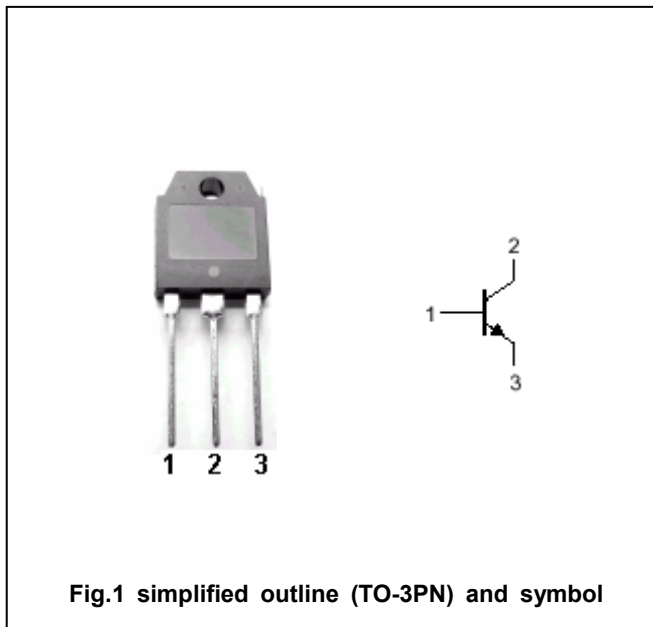


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1500	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	700	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	10	V
I <sub>C</sub>	Collector current (DC)		14	A
I <sub>CM</sub>	Collector current -peak		18	A
I <sub>B</sub>	Base current		8	A
I <sub>BM</sub>	Base current -peak		11	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	160	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

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## CHARACTERISTICS

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 $T_j=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\text{mA}; I_C=0$	10			V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=100\text{mA}; I_B=0$	700			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=10\text{A}; I_B=2\text{A}$			1.5	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=10\text{A}; I_B=2\text{A}$			1.5	V
$I_{CES}$	Collector cut-off current	$V_{CE}=1500\text{V}; V_{BE}=0$ $T_j=125^\circ\text{C}$			0.2 2	mA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			0.1	mA
$h_{FE}$	DC current gain	$I_C=10\text{A}; V_{CE}=5\text{V}$	7	10	14	

## Switching times

$t_s$	Storage time	$I_C=10\text{A}; I_{B1}=2\text{A}; I_{B2}=-6\text{A};$ $V_{CC}=400\text{V}$		1.5		$\mu\text{s}$
$t_f$	Fall time			110		ns

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-case}$	Thermal resistance junction case	0.78	$^\circ\text{C}/\text{W}$

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PACKAGE OUTLINE

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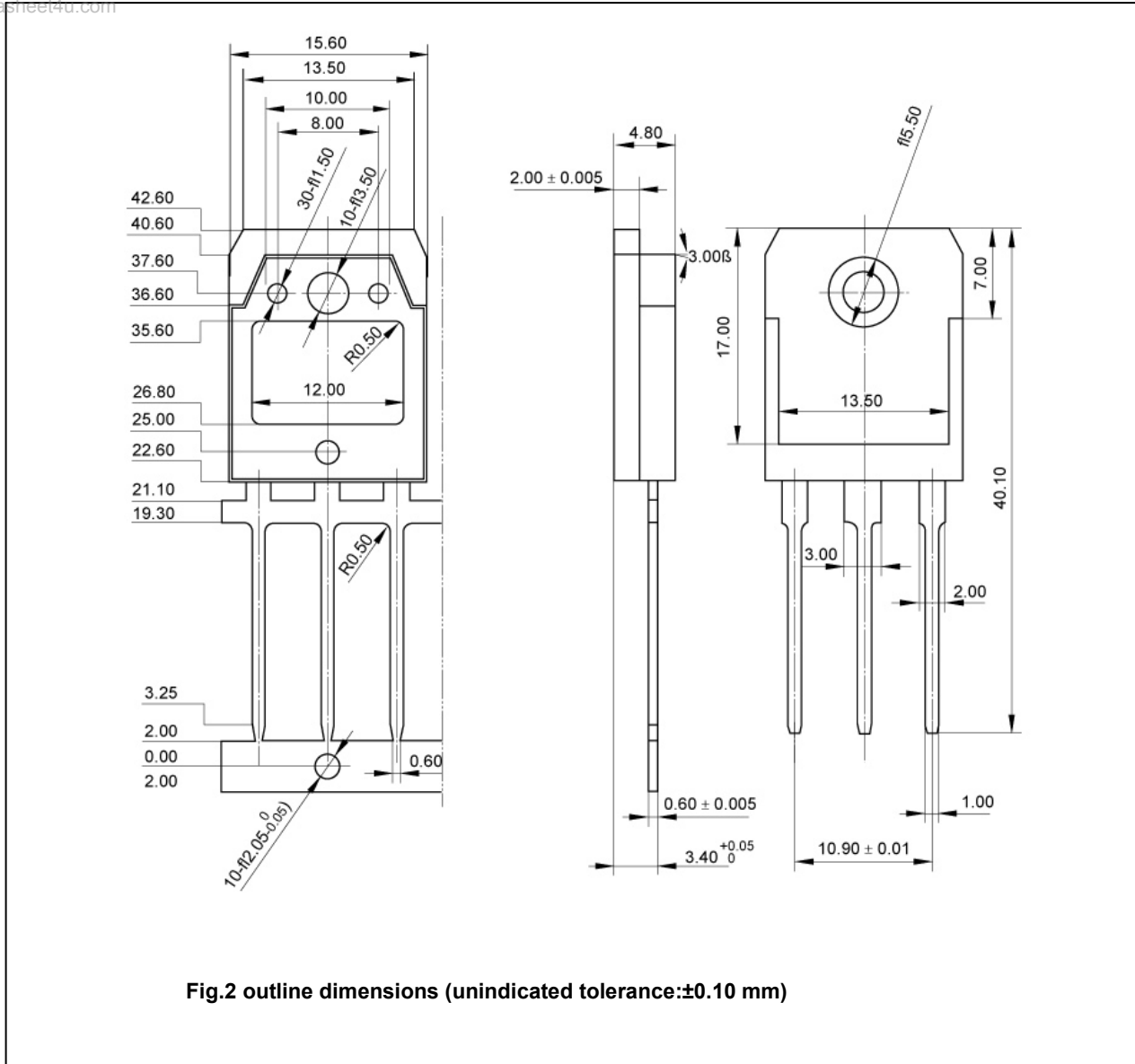


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)