

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

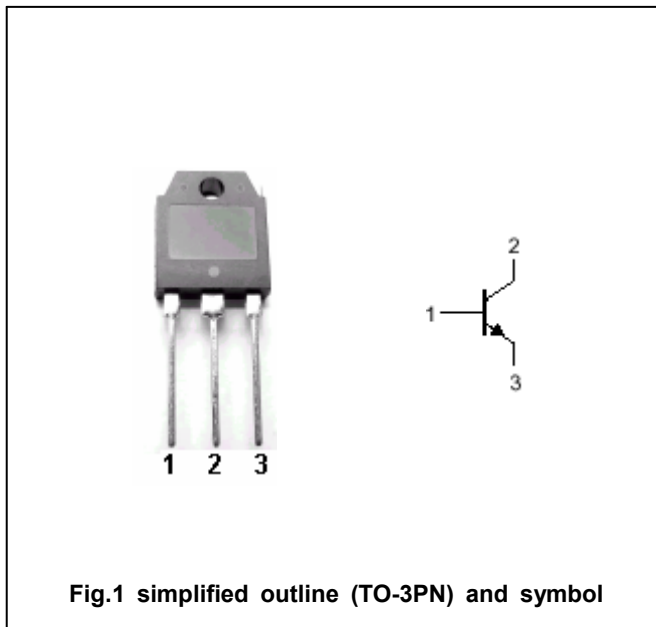


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1500	V
V _{CEO}	Collector-emitter voltage	Open base	700	V
V _{EBO}	Emitter-base voltage	Open collector	10	V
I _C	Collector current (DC)		14	A
I _{CM}	Collector current -peak		18	A
I _B	Base current		8	A
I _{BM}	Base current -peak		11	A
P _C	Collector power dissipation	T _C =25°C	160	W
T _j	Junction temperature		150	°C
T _{stg}	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		μs
t_f	Fall time			110		ns

THERMAL CHARACTERISTICS

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

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PACKAGE OUTLINE

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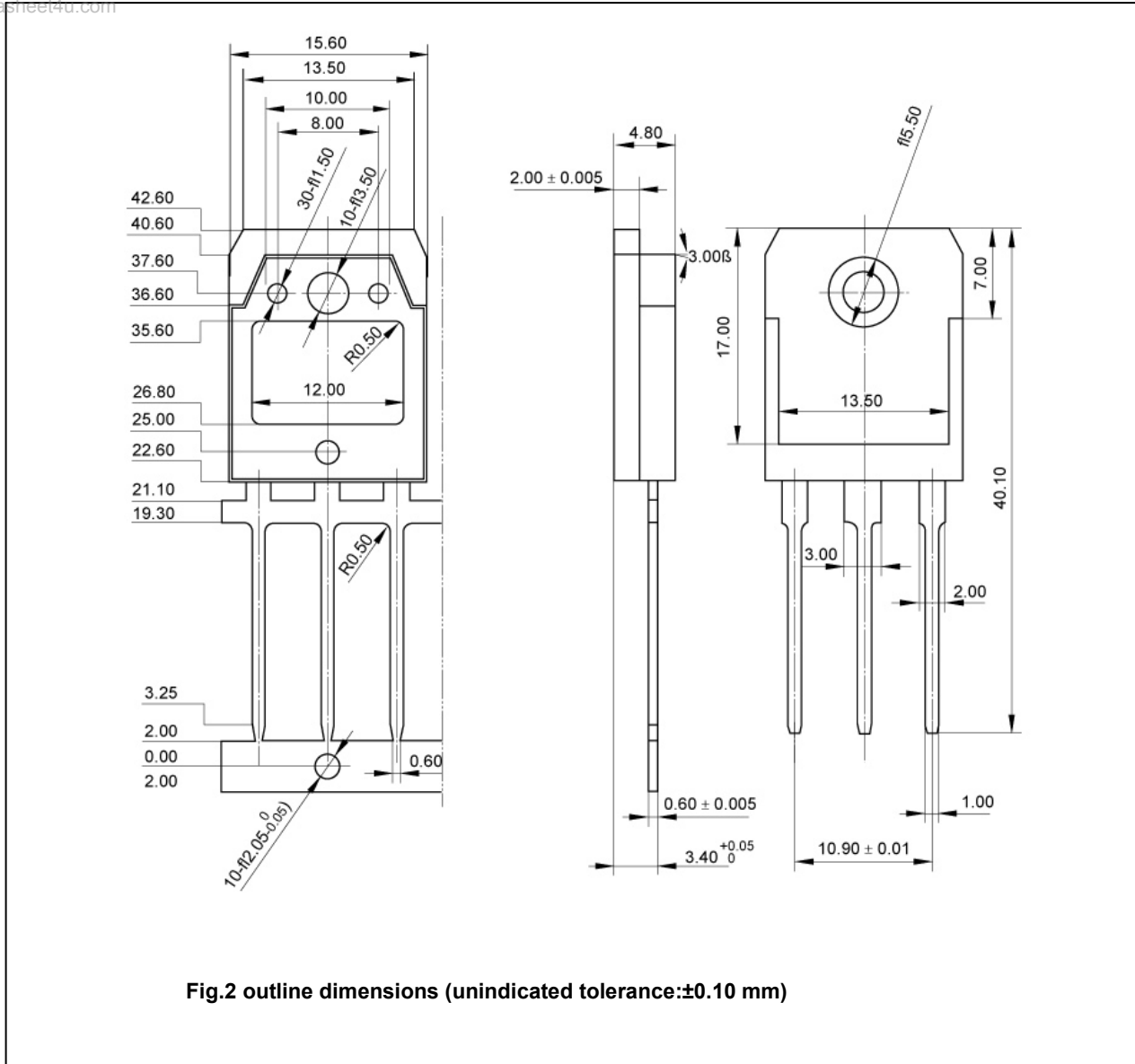


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)