

Silicon NPN Power Transistors

BU508A

DESCRIPTION

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

APPLICATIONS

- For use in horizontal deflection circuits of large screen colour TV receivers.

PINNING

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

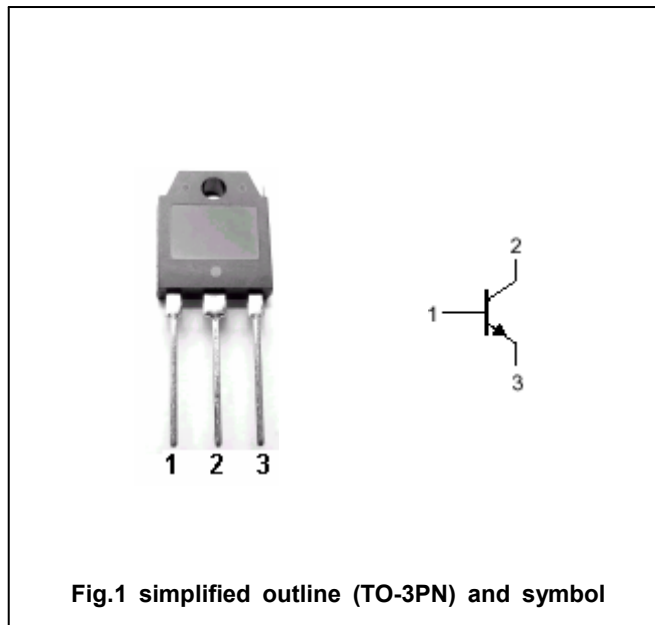


Fig.1 simplified outline (TO-3PN) and symbol

ABSOLUTE MAXIMUM RATINGS (TC=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1200	V
$V_{CEO}$	Collector-emitter voltage	Open base	700	V
$V_{EBO}$	Emitter-base voltage	Open collector	10	V
$I_C$	Collector current (DC)		8	A
$I_{CM}$	Collector current (Pulse)		15	A
$P_C$	Collector power dissipation	$T_C=25^\circ C$	125	W
$T_j$	Junction temperature		150	°C
$T_{stg}$	Storage temperature		-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction case	1.0	°C/W

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10mA; I <sub>C</sub> =0	10			V
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =100mA; I <sub>B</sub> =0	700			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4.5A; I <sub>B</sub> =2A			1.0	V
V <sub>BE(sat)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4.5A; I <sub>B</sub> =2A			1.3	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1200V; V <sub>BE</sub> =0 T <sub>C</sub> =125°C			1.0 2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			0.1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A; V <sub>CE</sub> =5V	8			
t <sub>s</sub>	Storage time	I <sub>C</sub> =4.5A; V <sub>CC</sub> =140V I <sub>B</sub> =1.8A; L <sub>C</sub> =0.9mH L <sub>B</sub> =3μH		7		μs
t <sub>f</sub>	Fall time			0.55		μs
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A; V <sub>CE</sub> =5V		7		MHz

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PACKAGE OUTLINE

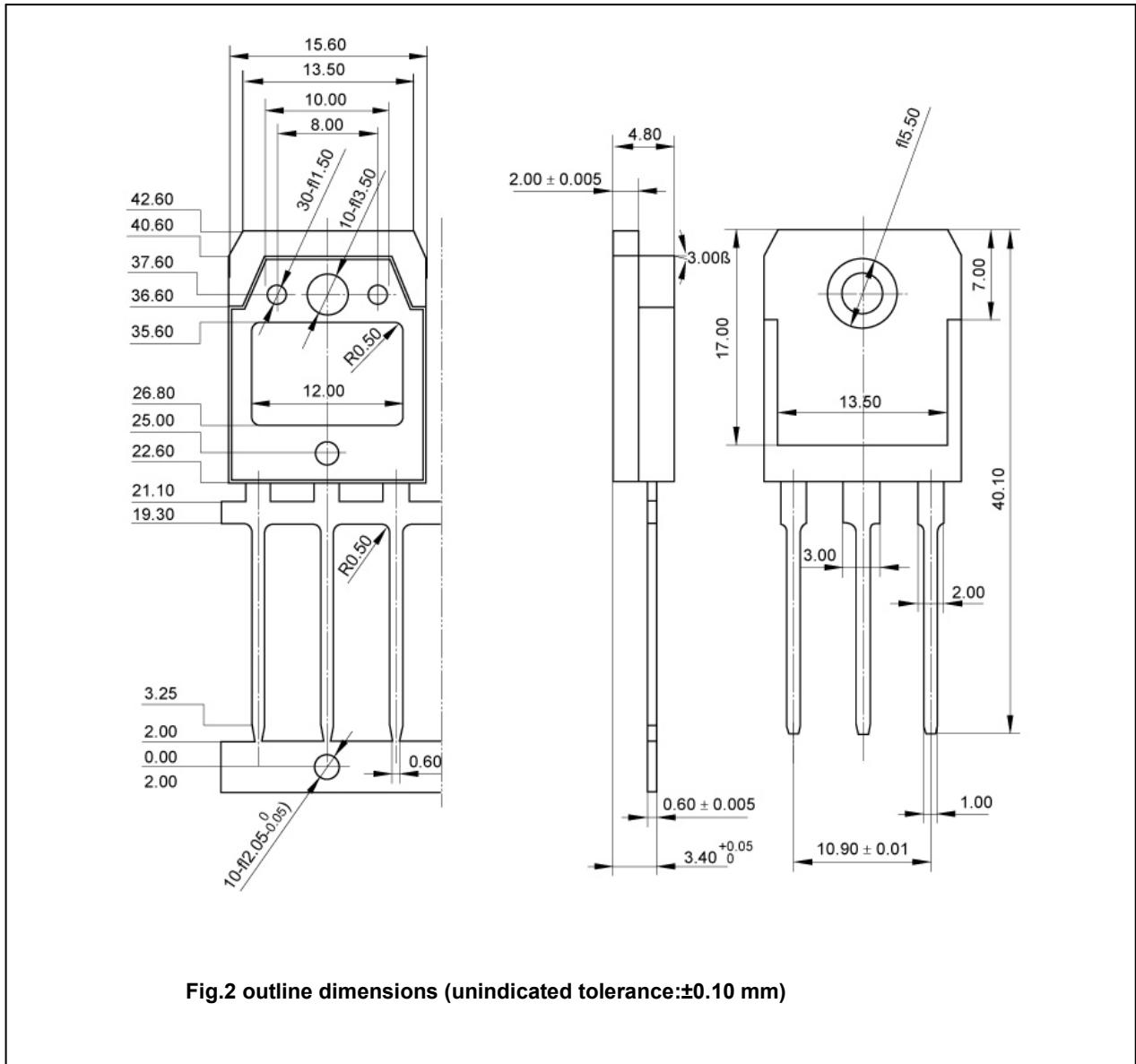


Fig.2 outline dimensions (unindicated tolerance: $\pm 0.10$  mm)