

Silicon NPN Power Transistors

BU508A

DESCRIPTION

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- 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

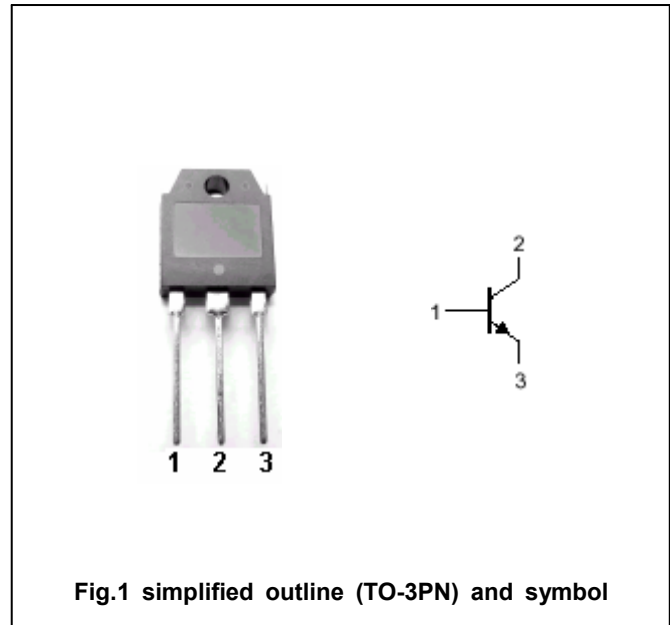


Fig.1 simplified outline (TO-3PN) and symbol

ABSOLUTE MAXIMUM RATINGS (TC=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	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)		8	A
I_{CM}	Collector current (Pulse)		15	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	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

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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
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=4.5\text{A}; I_B=2\text{A}$			1.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=4.5\text{A}; I_B=2\text{A}$			1.3	V
I_{CES}	Collector cut-off current	$V_{CE}=1500\text{V}; V_{BE}=0$ $T_C=125^\circ\text{C}$			1.0 2.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			0.1	mA
h_{FE}	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8			
t_s	Storage time	$I_C=4.5\text{A}; V_{CC}=140\text{V}$ $I_B=1.8\text{A}; L_C=0.9\text{mH}$ $L_B=3\mu\text{H}$		7		μs
t_f	Fall time			0.55		μs
f_T	Transition frequency	$I_C=0.1\text{A}; V_{CE}=5\text{V}$		7		MHz

PACKAGE OUTLINE

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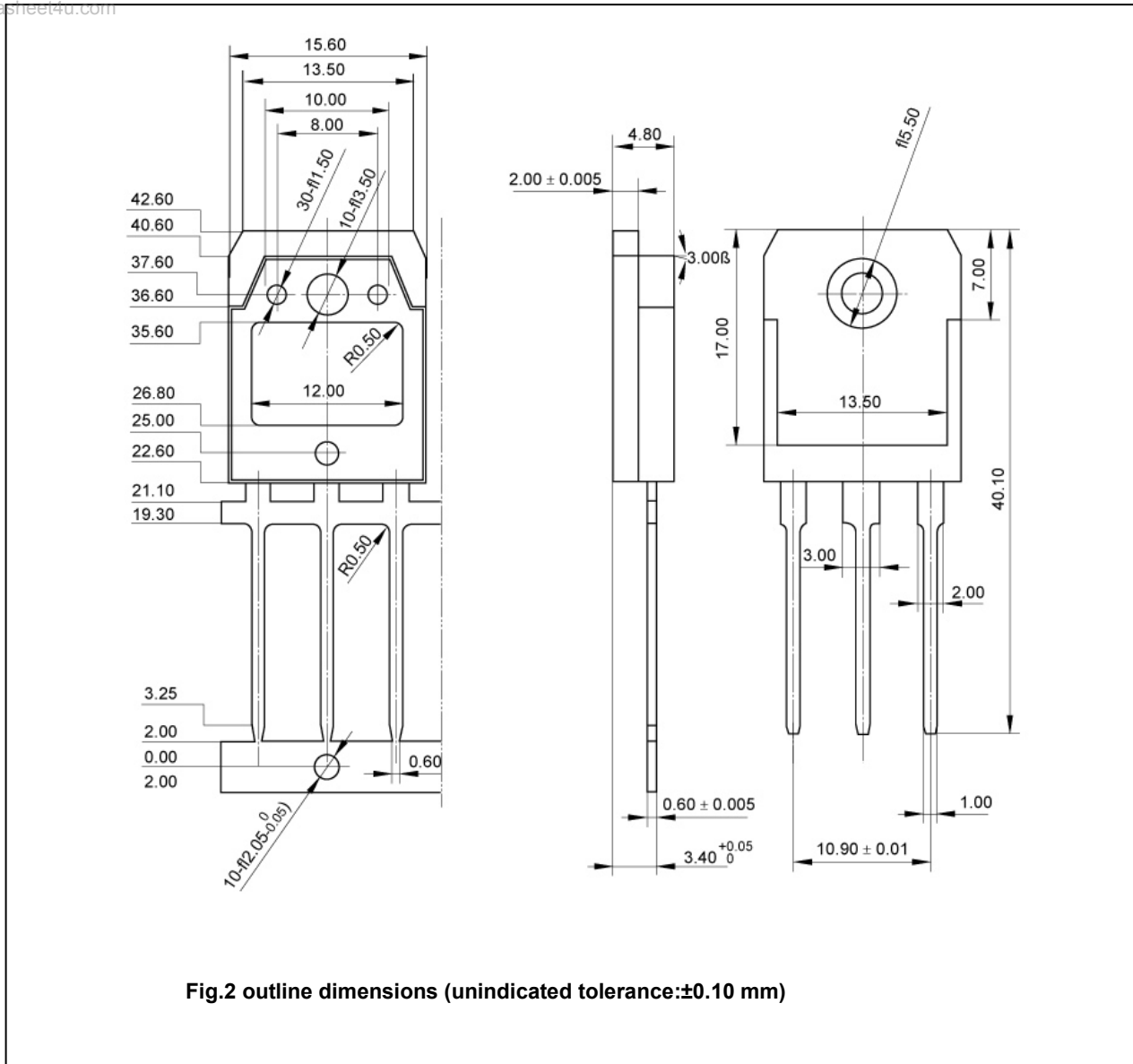


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)