

Silicon NPN Power Transistors

BU508D

DESCRIPTION

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- With TO-3PN package
- High voltage
- Built-in damper diode

APPLICATIONS

- For use in large screen colour deflection circuits.

PINNING

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

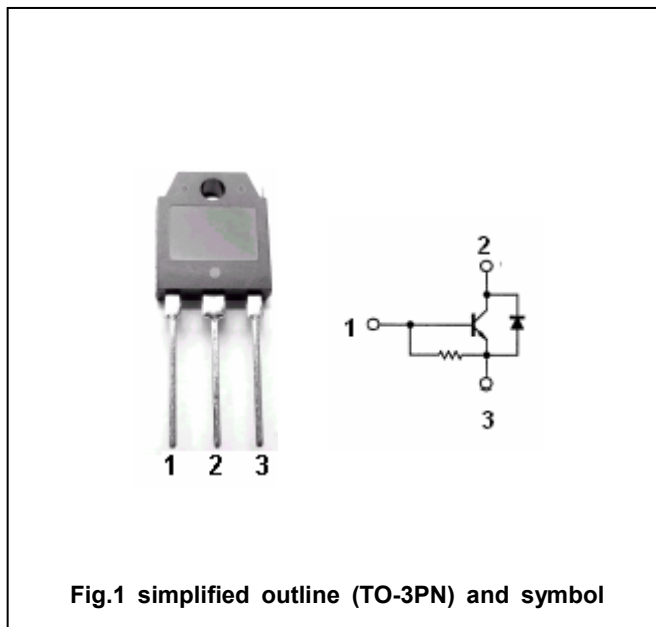


Fig.1 simplified outline (TO-3PN) and symbol

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	5	V
I <sub>C</sub>	Collector current (DC)		5	A
I <sub>CM</sub>	Collector current (Pulse)		8	A
I <sub>B</sub>	Base current		2.5	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	125	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65-150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to 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
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=100\text{mA}; I_B=0$	700			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=4.5\text{A}; I_B=2.0\text{A}$			1.0	V
$V_{BEsat}$	Base-emitter saturation voltage	$I_C=4.5\text{A}; I_B=2.0\text{A}$			1.5	V
$h_{FE}$	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8			
$I_{CES}$	Collector cut-off current	$V_{CE}=1500\text{V}; V_{BE}=0$			1.0	mA
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			300	mA
$V_F$	Diode forward voltage	$I_F=4.0\text{A}$			2.0	V
$f_T$	Transition frequency	$I_C=0.1\text{A}; V_{CE}=5\text{V}$		4		MHz
$C_{ob}$	Collector capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		125		pF
$t_s$	Storage time	$I_C=4.5\text{A}; I_B=1.4\text{A}$ $L_B=10\mu\text{H}$		7		$\mu\text{s}$
$t_f$	Fall time			1.0		$\mu\text{s}$

PACKAGE OUTLINE

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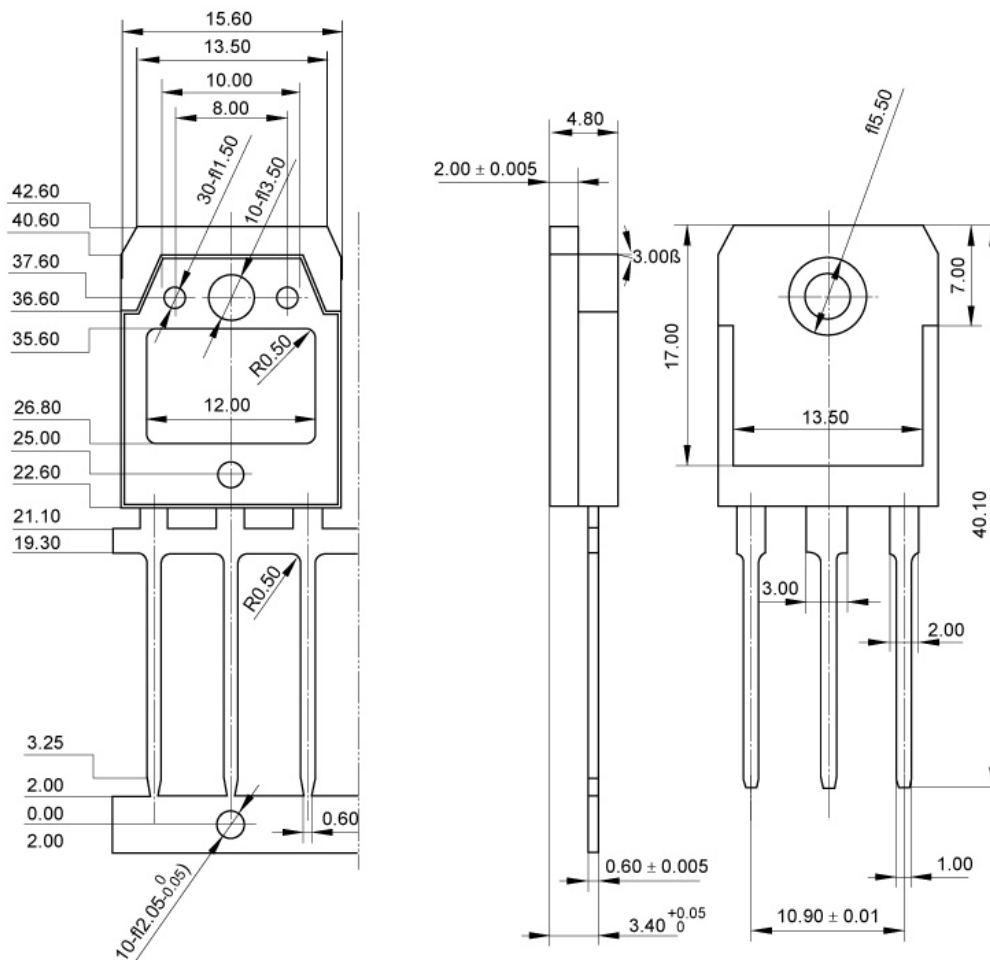


Fig.2 outline dimensions (unindicated tolerance:  $\pm 0.10$  mm)