

Silicon NPN Power Transistors

BU508D

DESCRIPTION

- 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

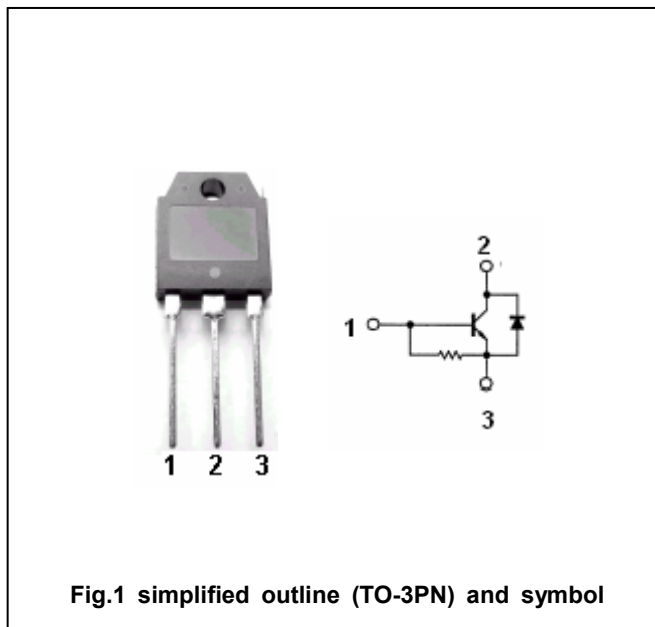


Fig.1 simplified outline (TO-3PN) and symbol

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

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =100mA; I <sub>B</sub> =0	700			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4.5A; I <sub>B</sub> =2.0A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4.5A; I <sub>B</sub> =2.0A			1.5	V
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A; V <sub>CE</sub> =5V	8			
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1500V; V <sub>BE</sub> =0			1.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			300	mA
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =4.0A			2.0	V
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A; V <sub>CE</sub> =5V		4		MHz
C <sub>ob</sub>	Collector capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz		125		pF
t <sub>s</sub>	Storage time	I <sub>C</sub> =4.5A; I <sub>B</sub> =1.4A L <sub>B</sub> =10μH		7		μs
t <sub>f</sub>	Fall time			1.0		μs

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PACKAGE OUTLINE

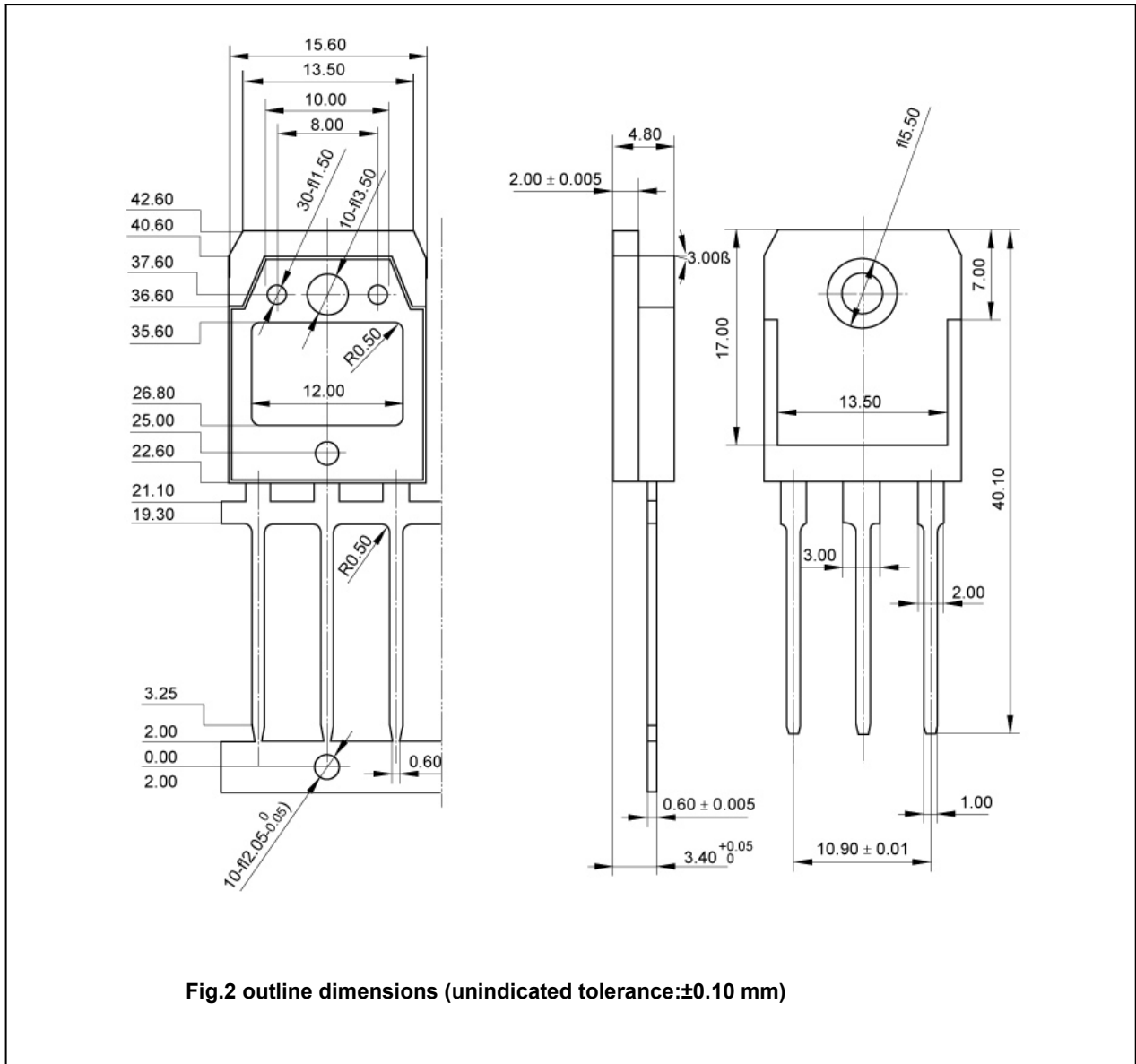


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)