

## Silicon NPN Power Transistors

## BU508DFI

## DESCRIPTION

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- With TO-3PML package
- High voltage,high speed
- Built-in damper diode

## APPLICATIONS

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

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

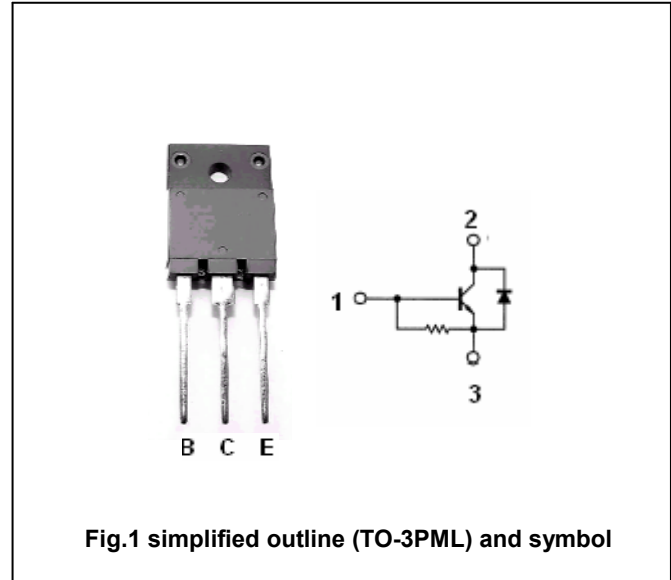


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

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
$I_{CP}$	Collector current (Pulse)		15	A
$P_{tot}$	Total power dissipation	$T_C=25^\circ\text{C}$	50	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~150	$^\circ\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	2.5	$^\circ\text{C}/\text{W}$

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## CHARACTERISTICS

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

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(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> =2A			1.0	V
V <sub>BEsat</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> =1500V, V <sub>BE</sub> =0 T <sub>j</sub> =125°C			1.0 2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5.0V; I <sub>C</sub> =0			300	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	8			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V		7		MHz
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =4A			2.0	V
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>B</sub> =3mH L <sub>C</sub> =0.9mH		7		μs
t <sub>f</sub>	Fall time			0.55		μs

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PACKAGE OUTLINE

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Fig.2 Outline dimensions