

## Silicon NPN Power Transistors

BU2506DF

## DESCRIPTION

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- With TO-3PFa package
- High voltage
- High speed switching
- Built-in damper diode

## APPLICATIONS

- Intended for use in horizontal deflection circuits of colour TV receivers

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

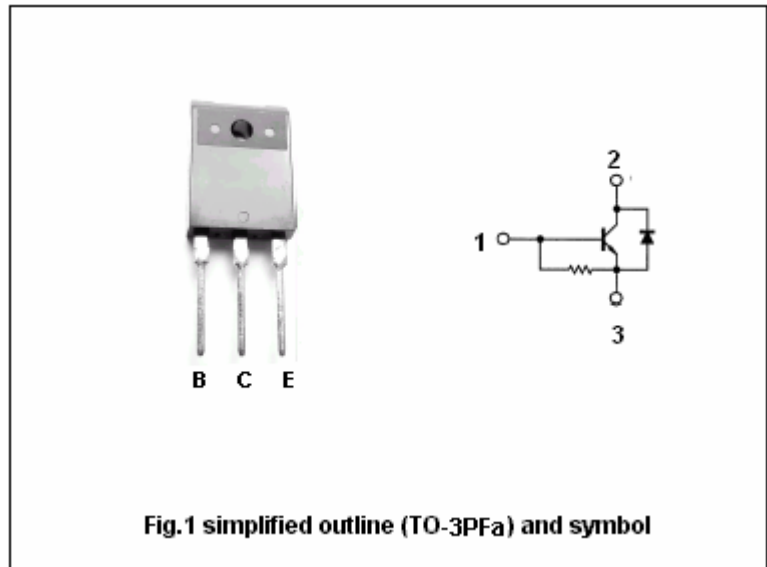


Fig.1 simplified outline (TO-3PFa) and symbol

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
$I_C$	Collector current (DC)		5	A
$I_{CM}$	Collector current (Pulse)		8	A
$I_B$	Base Collector current (DC)		3	A
$I_{BM}$	Base current (Pulse)		5	A
$P_{tot}$	Total power dissipation	$T_C=25^\circ\text{C}$	45	W
$T_j$	Max.operating junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~150	$^\circ\text{C}$

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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>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =100mA ; I <sub>B</sub> =0,	700			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =600mA ; I <sub>C</sub> =0	7.5	13.5		V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.79A			5.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.79A			1.1	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =Rated V <sub>CE</sub> ; 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> =7.5V ; I <sub>C</sub> =0	95		208	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.3A ; V <sub>CE</sub> =5V		12		
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =3A ; V <sub>CE</sub> =5V	3.8	5.5	7.5	
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =3.0A		1.6	2.0	V
C <sub>C</sub>	Collector output capacitance	I <sub>E</sub> =0; f=1MHz; V <sub>CB</sub> =10V		47		pF

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PACKAGE OUTLINE

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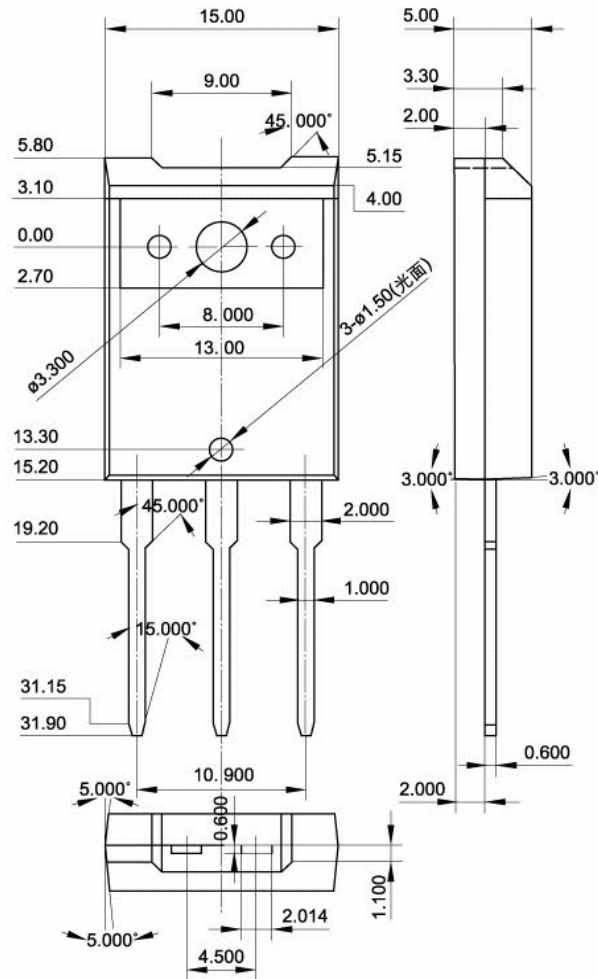


Fig.2 Outline dimensions (unindicated tolerance:±0.30mm)