

Silicon NPN Power Transistors

BU508DF

DESCRIPTION

With TO-3PFa 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

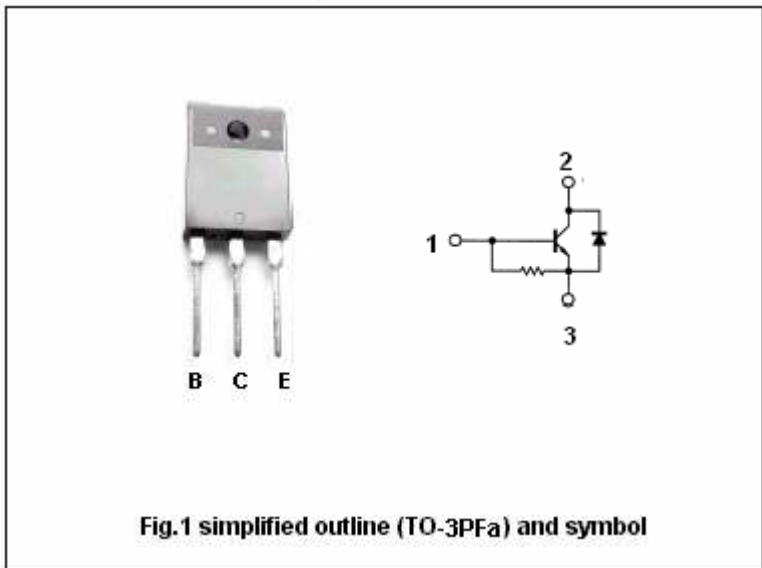


Fig.1 simplified outline (TO-3PFa) and symbol

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)		8	A
I <sub>CP</sub>	Collector current (Pulse)		15	A
I <sub>B</sub>	Base current (DC)		4	A
I <sub>BM</sub>	Base current (Pulse)		6	A
P <sub>tot</sub>	Total power dissipation	T <sub>C</sub> =25°C	34	W
T <sub>j</sub>	Max.operating junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

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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, L=25mH	700			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4.5A; I <sub>B</sub> =1.6A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4.5A ; I <sub>B</sub> =2A			1.1	V
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			300	mA
I <sub>CES</sub>	Collector cut-off current	V <sub>CB</sub> =BV <sub>CB0</sub> I <sub>E</sub> =0 T <sub>C</sub> =125°C			1.0 2.0	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V	6	13	30	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V		7		MHz
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V; f=1MHz		125		pF
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =4.5A		1.6	2.0	V

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PACKAGE OUTLINE

