

## Silicon NPN Power Transistors

BU506

## DESCRIPTION

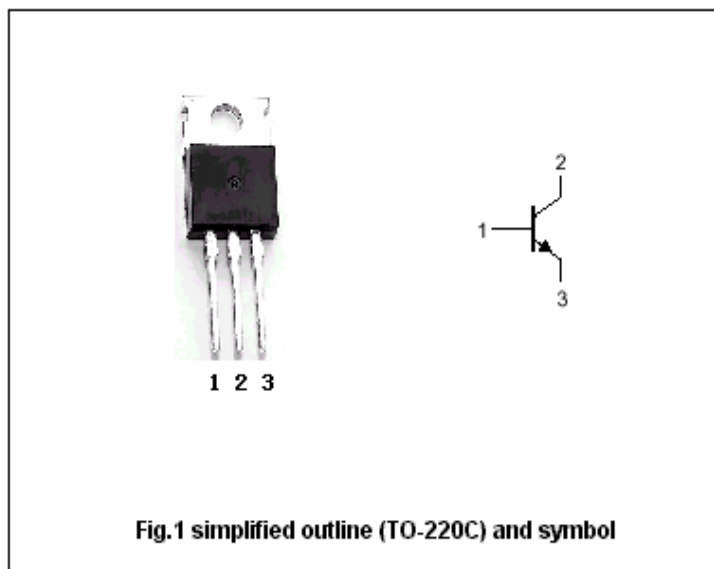
- With TO-220C package
- High voltage
- High-speed switching

## APPLICATIONS

- Horizontal deflection circuits of colour TV receivers.
- Line-operated switch-mode applications.

## PINNING

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



## Absolute maximum ratings (Ta=25°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	6	V
$I_C$	Collector current (DC)		5	A
$I_{CM}$	Collector current (Pulse)		8	A
$I_B$	Base current		3	A
$I_{BM}$	Base current(peak)		5	A
$P_C$	Collector power dissipation	$T_C=25^\circ\text{C}$	100	W
$T_j$	Junction temperature		150	°C
$T_{stg}$	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	700			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A; I <sub>B</sub> =1.33A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A; I <sub>B</sub> =1.33A			1.3	V
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.1A; V <sub>CE</sub> =5V	6	13	30	
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =rated; V <sub>BE</sub> =0 T <sub>C</sub> =125°C			0.5 1.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			10	mA

## Switching times

t <sub>s</sub>	Storage time	I <sub>CM</sub> = 3 A; I <sub>B(end)</sub> = 1 A L <sub>B</sub> = 12μH		6.5		μs
t <sub>f</sub>	Fall time			0.7		μs

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PACKAGE OUTLINE



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