

## Silicon PNP Power Transistors

## BUL52B

## DESCRIPTION

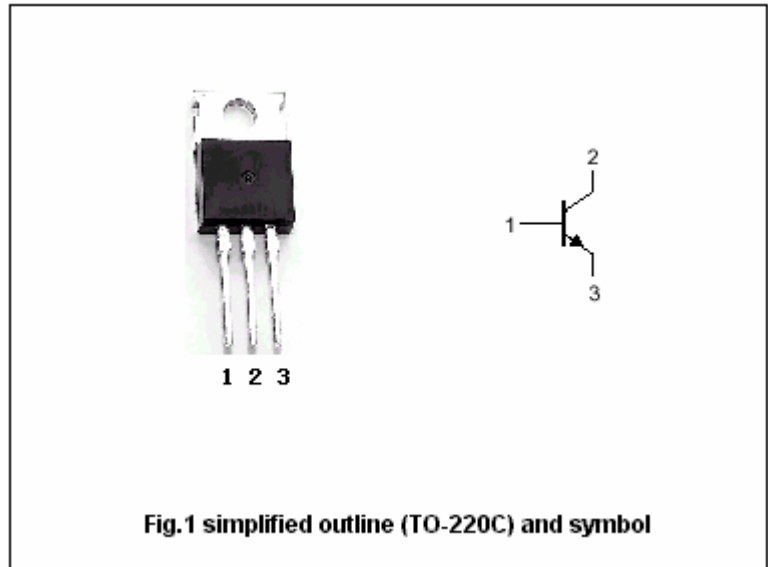
- With TO-220C package
- High voltage
- Fast switching
- High energy rating

## APPLICATIONS

- Designed for use in electronic ballast 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 <sub>CBO</sub>	Collector-base voltage	Open emitter	800	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	400	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	10	V
I <sub>C</sub>	Collector current (DC)		8	A
I <sub>CM</sub>	Collector current-Peak		12	A
I <sub>B</sub>	Base current		4	A
P <sub>tot</sub>	Total power dissipation	T <sub>C</sub> =25°C	100	W
T <sub>stg</sub>	Storage temperature		-55~150	°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>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	400			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =1mA ; I <sub>E</sub> =0	800			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	10			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =0.1A ; I <sub>B</sub> =20mA			0.1	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =1A ; I <sub>B</sub> =0.2A			0.2	V
V <sub>CEsat-3</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =0.4A			0.3	V
V <sub>CEsat-4</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.6A			0.5	V
V <sub>BESat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =1A ; I <sub>B</sub> =0.2A			1.0	V
V <sub>BESat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =2A ; I <sub>B</sub> =0.4A			1.1	V
V <sub>BESat-3</sub>	Base-emitter saturation voltage	I <sub>C</sub> =3A ; I <sub>B</sub> =0.6A			1.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =800V ; I <sub>E</sub> =0 T <sub>C</sub> =125°C			10 100	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =400V ; I <sub>B</sub> =0			100	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =9V ; I <sub>C</sub> =0 T <sub>C</sub> =125°C			10 100	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.1A ; V <sub>CE</sub> =5V	20			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	15		45	
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =3A ; V <sub>CE</sub> =1V T <sub>C</sub> =125°C	10 5			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.2A ; V <sub>CE</sub> =4V		20		MHz
C <sub>ob</sub>	Output capacitance	V <sub>CB</sub> =20V ; f=1MHz		40		pF

PACKAGE OUTLINE

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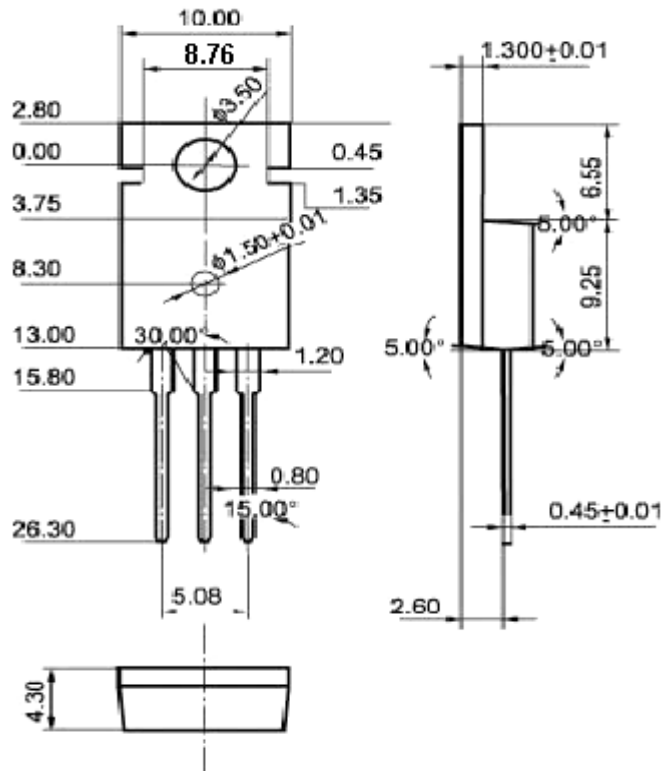


Fig.2 Outline dimensions (unindicated tolerance: 0.1mm)