

Silicon 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

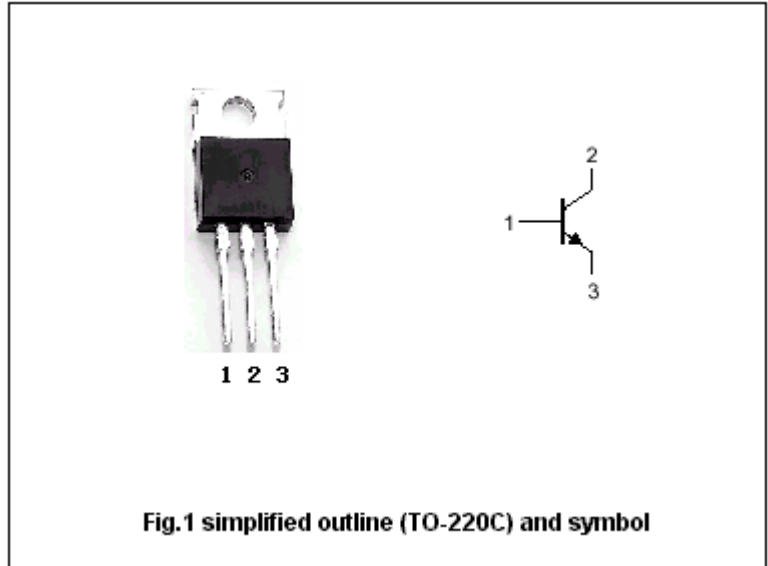


Fig.1 simplified outline (TO-220C) and symbol

LIMITING VALUES

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	800	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current (DC)		8	A
I_{CM}	Collector current-Peak		12	A
I_B	Base current		4	A
P_{tot}	Total power dissipation	$T_C=25$	100	W
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	I _C =10mA ; I _B =0	400			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA ; I _E =0	800			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _C =0	10			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =0.1A I _B =20mA			0.1	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =1A I _B =0.2A			0.2	V
V _{CEsat-3}	Collector-emitter saturation voltage	I _C =2A I _B =0.4A			0.3	V
V _{CEsat-4}	Collector-emitter saturation voltage	I _C =3A I _B =0.6A			0.5	V
V _{BESat-1}	Emitter-base saturation voltage	I _C =1A I _B =0.2A			1.0	V
V _{BESat-2}	Emitter-base saturation voltage	I _C =2A I _B =0.4A			1.1	V
V _{BESat-3}	Emitter-base saturation voltage	I _C =3A I _B =0.6A			1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =800V I _E =0 T _C =125			10 100	μ A
I _{CEO}	Collector cut-off current	V _{CE} =400V I _B =0			100	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =9V I _C =0 T _C =125			10 100	μ A
h _{FE-1}	DC current gain	I _C =0.1A ; V _{CE} =5V	20			
h _{FE-2}	DC current gain	I _C =1A ; V _{CE} =5V	15		45	
h _{FE-3}	DC current gain	I _C =3A ; V _{CE} =1V T _C =125	10 5			
f _T	Transition frequency	I _C =0.2A ; V _{CE} =4V		20		MHz
C _{ob}	Output capacitance	V _{CB} =20V ; f=1MHz		40		pF

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PACKAGE OUTLINE

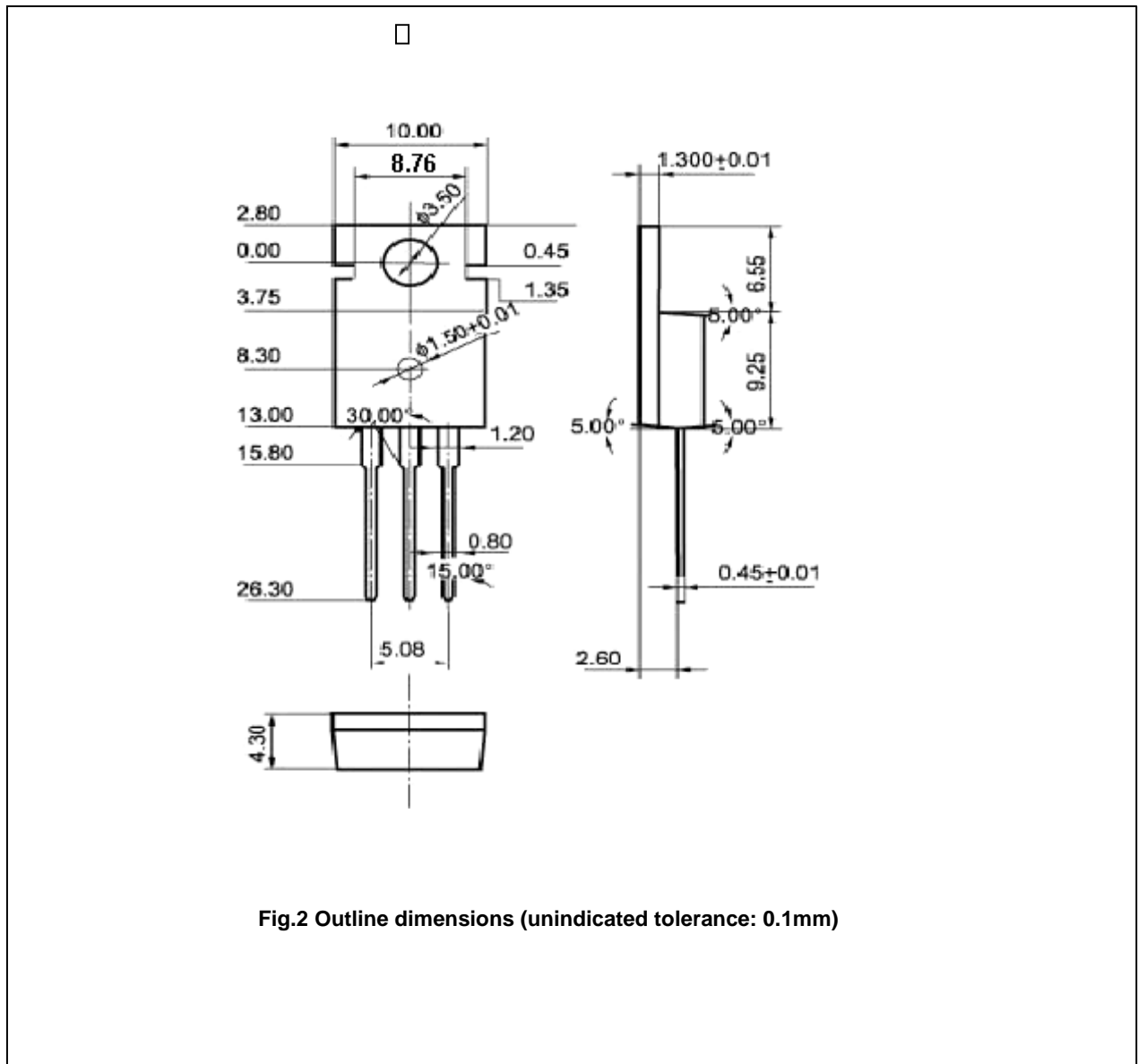


Fig.2 Outline dimensions (unindicated tolerance: 0.1mm)