

Silicon NPN Power Transistors

BUV46 BUV46A

DESCRIPTION

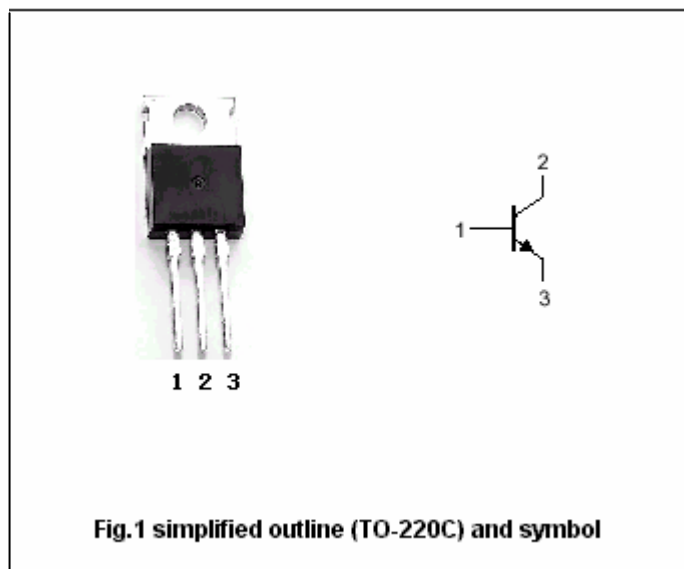
- With TO-220C package
- High voltage
- Fast switching

APPLICATIONS

- General purpose switching
- Switch mode power supplies
- Electronic ballasts for fluorescent lighting

PINNING

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

Absolute maximum ratings ($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUV46	Open emitter	850	V
		BUV46A		1000	
V_{CEO}	Collector-emitter voltage	BUV46	Open base	400	V
		BUV46A		450	
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current (DC)			5	A
I_B	Base current			3	A
P_{tot}	Total power dissipation		$T_c=25^\circ\text{C}$	70	W
T_j	Max.operating junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-case}$	Thermal resistance junction case	1.76	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	BUV46	I _C =0.1A ; I _B =0	400			V
		BUV46A		450			
V _{CEsat-1}	Collector-emitter saturation voltage	BUV46	I _C =2.5A ; I _B =0.5A			1.5	V
		BUV46A	I _C =2A ; I _B =0.4A				
V _{CEsat-2}	Collector-emitter saturation voltage	BUV46	I _C =3.5A ; I _B =0.7A			5.0	V
		BUV46A	I _C =3A ; I _B =0.6A				
V _{BEsat}	Base-emitter saturation voltage	BUV46	I _C =2.5A ; I _B =0.5A			1.3	V
		BUV46A	I _C =2A ; I _B =0.4A				
I _{CER}	Collector cut-off current		V _{CE} = V _{CEX} ; R _{BE} = 10 Ω T _C =125℃			0.1 1.0	mA
I _{CEX}	Collector cut-off current		V _{CE} = V _{CEX} ; V _{BE} = -2.5 V T _C =125℃			0.3 2.0	mA
I _{EBO}	Emitter cut-off current		V _{EB} =7V ; I _C =0			1.0	mA

Switching times

t _{on}	Turn-on time	For BUV46 I _C =2.5A ; I _{B1} =-I _{B2} =0.5A ; V _{CC} =150V For BUV46A I _C =2A ; I _{B1} =-I _{B2} =0.4A ; V _{CC} =150V			1.0	μs
t _s	Storage time				3.0	μs
t _f	Fall time				0.8	μs

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PACKAGE OUTLINE

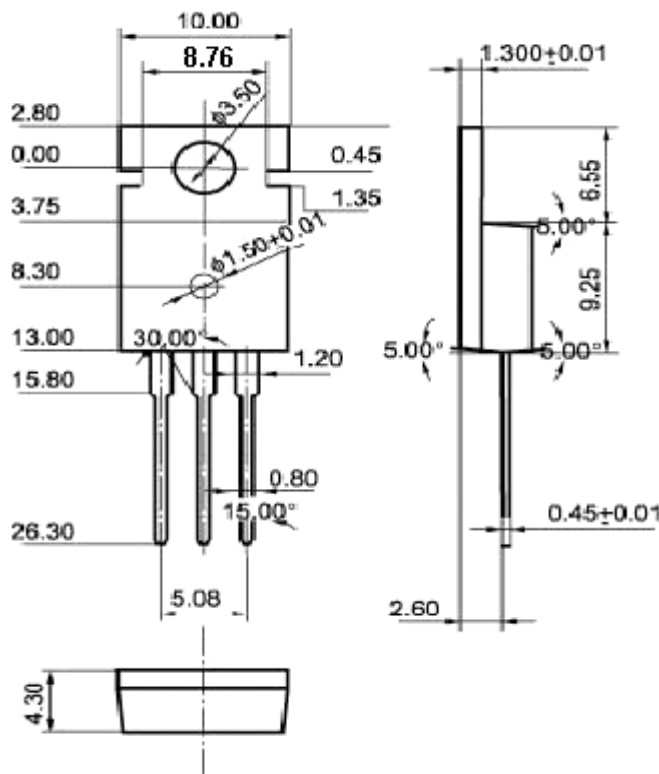


Fig.2 Outline dimensions (unindicated tolerance: 0.1mm)