

Silicon NPN Power Transistors

BUX84 BUX85

DESCRIPTION

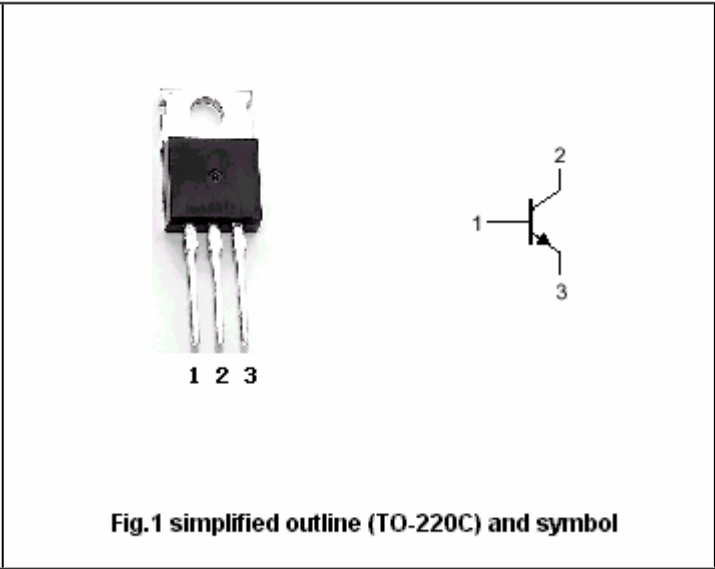
- With TO-220C package
- High switching speed

APPLICATIONS

- Suitable for switching power supplies in TV sets

PINNING

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



Absolut maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUX84	800	V
		BUX85	1000	
V_{CEO}	Collector-emitter voltage	BUX84	400	V
		BUX85	450	
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		2	A
I_{CM}	Collector current-peak		3	A
I_B	Base current		0.75	A
I_{BM}	Base current-peak		1	A
P_{tot}	Total power dissipation	$T_C=25$	40	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to mounting flange	2.5	K/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	BUX84	I _C =100mA ; I _B =0; L=25mH	400			V
		BUX85		450			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =0.3A ; I _B =0.03A			1.5	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =1A ; I _B =0.2A			3.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =1A ; I _B =0.2A			1.1	V
I _{CES}	Collector cut-off current	BUX84	V _{CE} =800V; V _{BE} =0 T _j =125			1.0 1.5	mA
		BUX85	V _{CE} =1000V; V _{BE} =0 T _j =125			0.2 1.5	
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			1.0	mA
h _{FE-1}	DC current gain		I _C =0.1A ; V _{CE} =5V	20		100	
h _{FE-2}	DC current gain		I _C =0.5A ; V _{CE} =5V	15			
f _T	Transition frequency		I _C =0.2A ; V _{CE} =10V; f=1.0MHz		20		MHz

Switching times

t _{on}	Turn-on time	I _C =1A ; V _{CC} =250V I _{B1} =0.2A; I _{B2} =-0.4A		0.2	0.5	μs
t _s	Storage time			2	3.5	μs
t _f	Fall time			0.4		μs

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PACKAGE OUTLINE

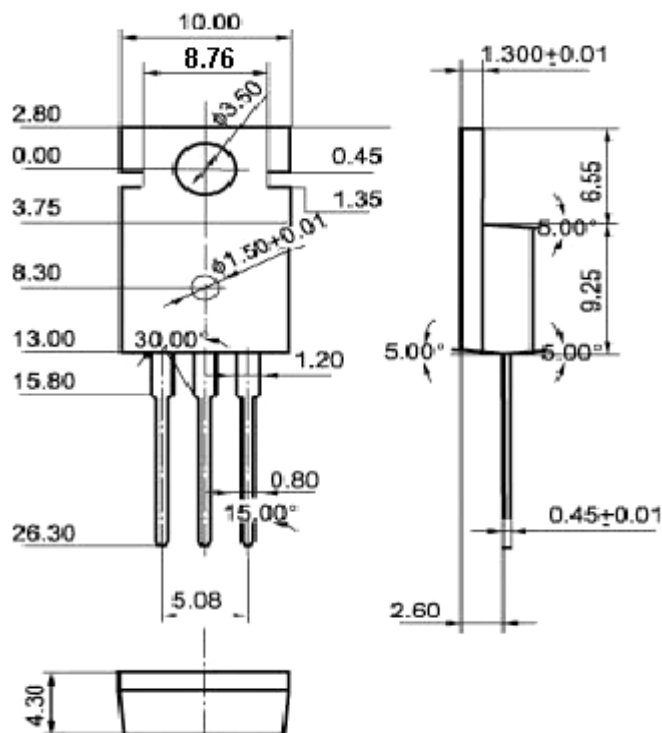


Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)