

Silicon NPN Power Transistors

BUX48 BUX48A

DESCRIPTION

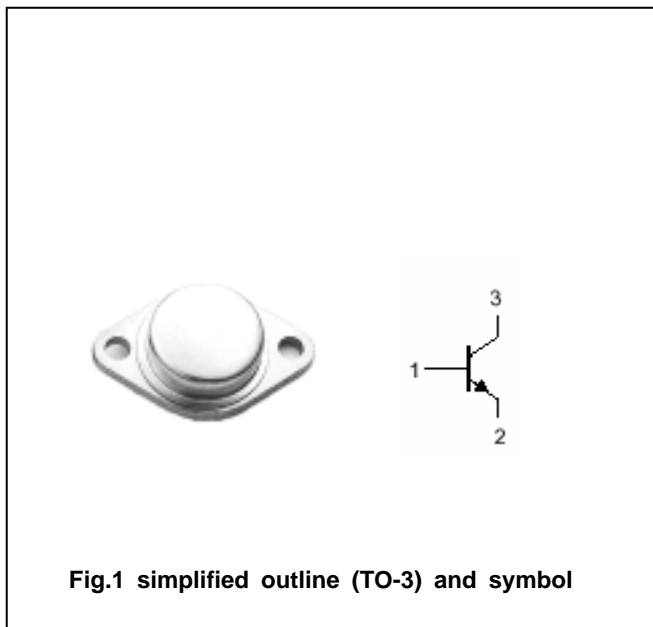
- With TO-3 package
- High voltage capability
- High current capability
- Fast switching speed

APPLICATIONS

- Switch mode power supplies
- Transistor low power converters

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	BUX48	850	V
		BUX48A		
V _{CEO}	Collector-emitter voltage	BUX48	400	V
		BUX48A		
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		15	A
I _{CM}	Collector current-peak		30	A
I _B	Base current		4	A
I _{BM}	Base current-peak		20	A
P _T	Total power dissipation	T _C =25	175	W
T _j	Junction temperature		200	
T _{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance from junction to case	1.0	/W

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	BUX48	I _C =0.2A ; L=25mH	400			V
		BUX48A		450			
V _{(BR)EBO}	Emitter-base breakdown voltage		I _E =50mA; I _C =0	7		30	V
V _{CEsat-1}	Collector-emitter saturation voltage	BUX48	I _C =10A; I _B =2A			1.5	V
		BUX48A	I _C =8A ;I _B =1.6A				
V _{CEsat-2}	Collector-emitter saturation voltage	BUX48	I _C =15A ;I _B =4A			3.5	V
		BUX48A	I _C =12A ;I _B =2.4A			5.0	
V _{CEsat-3}	Collector-emitter saturation voltage for BUX48		I _C =15A ;I _B =3A			5.0	V
V _{BEsat}	Base-emitter saturation voltage	BUX48	I _C =10A ;I _B =2A			1.6	V
		BUX48A	I _C =8A ;I _B =1.6A				
I _{CER}	Collector cut-off current		V _{CE} =rated V _{CE} R; R _{BE} =10 T _C =125			0.5 4	mA
I _{CES}	Collector cut-off current		V _{CE} =rated V _{CE} S; V _{BE} =0 T _C =125			0.2 2	mA
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			1	mA
h _{FE}	DC current gain		I _C =1A ; V _{CE} =5V	15		50	

Switching times resistive load

t _{on}	Turn-on time	for BUX48 I _C =10A ;I _{B1} =- I _{B2} =2A; V _{CC} =150V for BUX48A I _C =8A ;I _{B1} =- I _{B2} =1.6A; V _{CC} =150V			1.0	μs
t _s	Storage time				3.0	μs
t _f	Fall time				0.8	μs

