

Silicon NPN Power Transistors

BUX98 BUX98A

DESCRIPTION

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

APPLICATIONS

- High frequency and efficiency converters
- Linear and switching industrial equipment

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

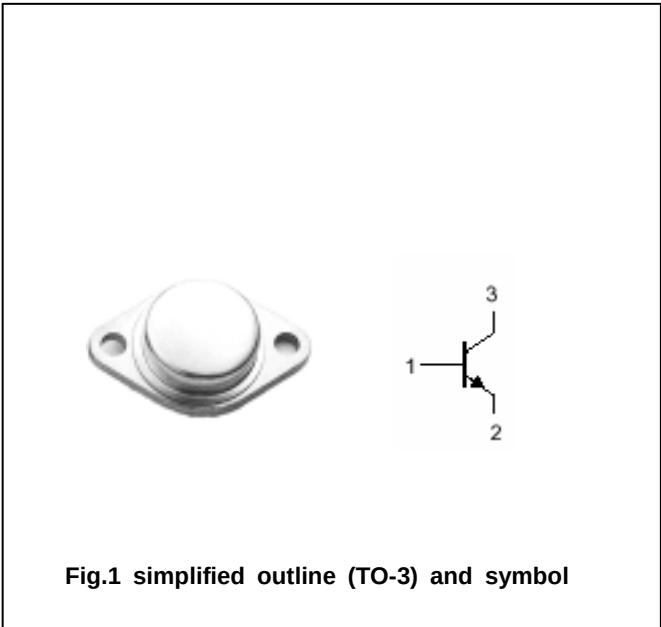


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUX98	Open emitter	850	V
		BUX98A		1000	
V_{CEO}	Collector-emitter voltage	BUX98	Open base	400	V
		BUX98A		450	
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current			30	A
I_{CM}	Collector current-peak (tp <5 ms)			60	A
I_B	Base current			8	A
I_{BM}	Base current-peak (tp <5 ms)			30	A
P_T	Total power dissipation		$T_C < 25^{\circ}C$	250	W
T_j	Junction temperature			200	°C
T_{stg}	Storage temperature			-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	0.7	°C/W

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BUX98	$I_C=0.2A; I_B=0$	400			V
		BUX98A		450			
$V_{CER(SUS)}$	Collector-emitter sustaining voltage	BUX98	$I_C=1A; L=2mH$	850			V
		BUX98A		1000			
$V_{CEsat-1}$	Collector-emitter saturation voltage	BUX98	$I_C=20A; I_B=4A$			1.5	V
		BUX98A	$I_C=16A; I_B=3.2A$				
$V_{CEsat-2}$	Collector-emitter saturation voltage for BUX98A		$I_C=24A; I_B=5A$			5.0	V
V_{BEsat}	Base-emitter saturation voltage	BUX98	$I_C=20A; I_B=4A$			1.6	V
		BUX98A	$I_C=16A; I_B=3.2A$				
I_{CES}	Collector cut-off current		$V_{CE}=V_{CES}; V_{BE}=0$ $T_C=125^\circ C$			0.4 4	mA
I_{CEO}	Collector cut-off current		$V_{CE}=V_{CEO}; I_B=0$			2	mA
I_{EBO}	Emitter cut-off current		$V_{EB}=5V; I_C=0$			2	mA
h_{FE}	DC current gain		$I_C=1A; V_{CE}=5V$	15		50	

Switching times

t_{on}	Turn-on time	for BUX98 $I_C=20A; I_{B1}=-I_{B2}=4A; V_{CC}=150V$			1.0	μs
t_s	Storage time				3.0	μs
t_f	Fall time	for BUX98A $I_C=16A; I_{B1}=-I_{B2}=3.2A; V_{CC}=150V$			0.8	μs

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PACKAGE OUTLINE

