

Silicon NPN Power Transistors

BUX98 BUX98A

DESCRIPTION

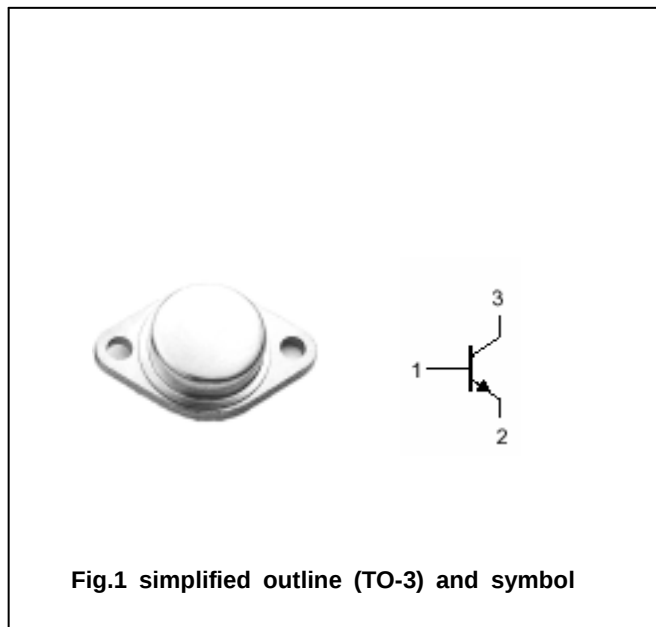
- With TO-3 package
- High voltage capability
- High current capability
- Fast switching speed

APPLICATIONS

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

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

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 ($t_p < 5\text{ ms}$)			60	A
I_B	Base current			8	A
I_{BM}	Base current-peak ($t_p < 5\text{ ms}$)			30	A
P_T	Total power dissipation		$T_C < 25$	250	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	0.7	/W

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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	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 for BUX98A saturation voltage		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			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

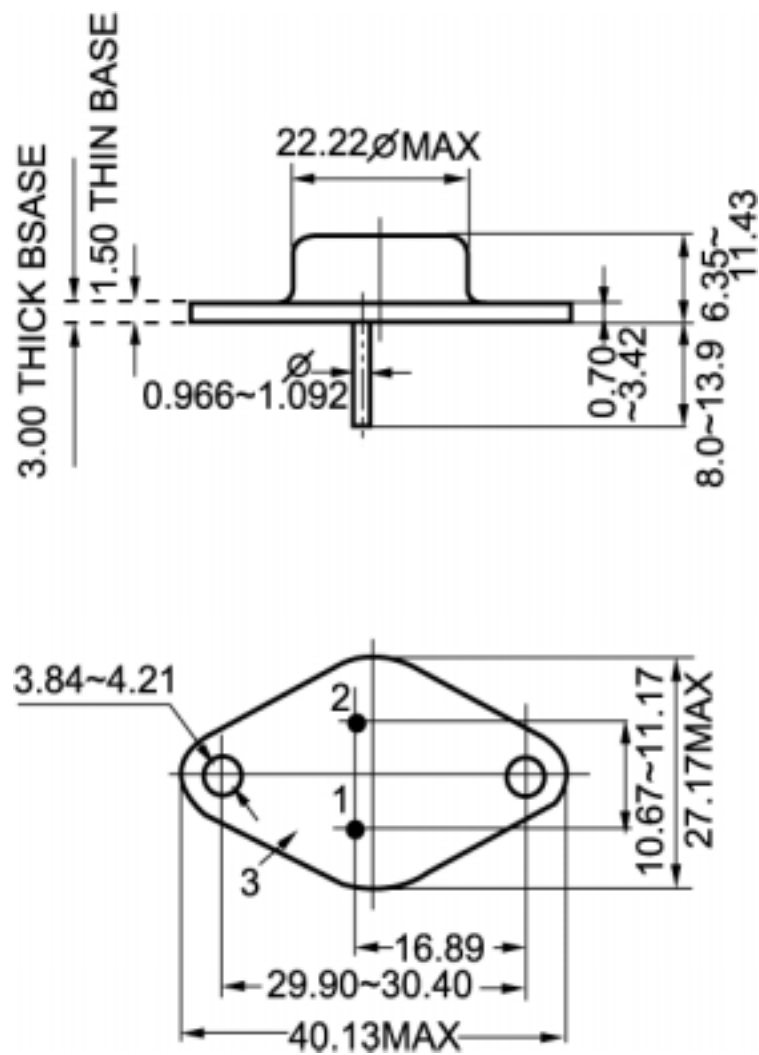


Fig.2 Outline dimensions