

Silicon NPN Power Transistors

BUX39

DESCRIPTION

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- With TO-3 package
- High current ,high speed

APPLICATIONS

- For switching amplifiers,power gates, switching regulators,switching circuits converters,inverters and control circuits

PINNING(see fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

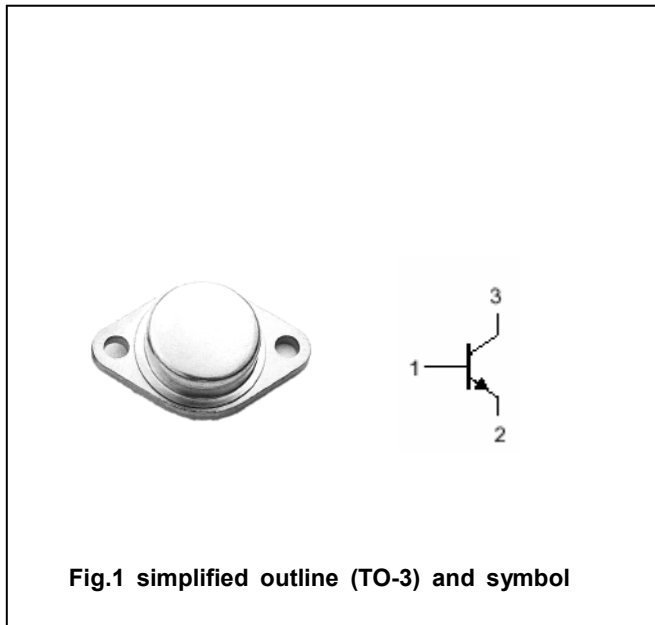


Fig.1 simplified outline (TO-3) and symbol

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	120	V
V _{CEO}	Collector-emitter voltage	Open base	90	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		30	A
I _{CM}	Collector current-peak		40	A
I _B	Base current		6	A
P _T	Total power dissipation	T _C =25°C	120	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	1.46	°C/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.2A; I _B =0; L=25mH	90			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =50mA; I _C =0	7			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =12 A; I _B =1.2 A		0.7	1.2	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =20 A; I _B =2.5 A		1.25	1.6	V
V _{BEsat}	Emitter-base saturation voltage	I _C =20 A; I _B =2.5 A		2.1	2.5	V
I _{CEX}	Collector cut-off current	V _{CE} =120V; V _{BE} =-1.5V T _C =125°C			1.0 5.0	mA
I _{CEO}	Collector cut-off current	V _{CE} =70V; I _E =0			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1.0	mA
h _{FE-1}	DC current gain	I _C =12A ; V _{CE} =4V	15		45	
h _{FE-2}	DC current gain	I _C =20A ; V _{CE} =4V	8			
f _T	Transition frequency	I _C =1A ; V _{CE} =15V	8			MHz

Switching times

t _{on}	Turn-on time	I _C =20A ; I _{B1} =-I _{B2} =-2.5A V _{CC} =30V		0.80	1.5	μs
t _s	Storage time			0.55	1.0	μs
t _f	Fall time			0.15	0.3	μs

PACKAGE OUTLINE

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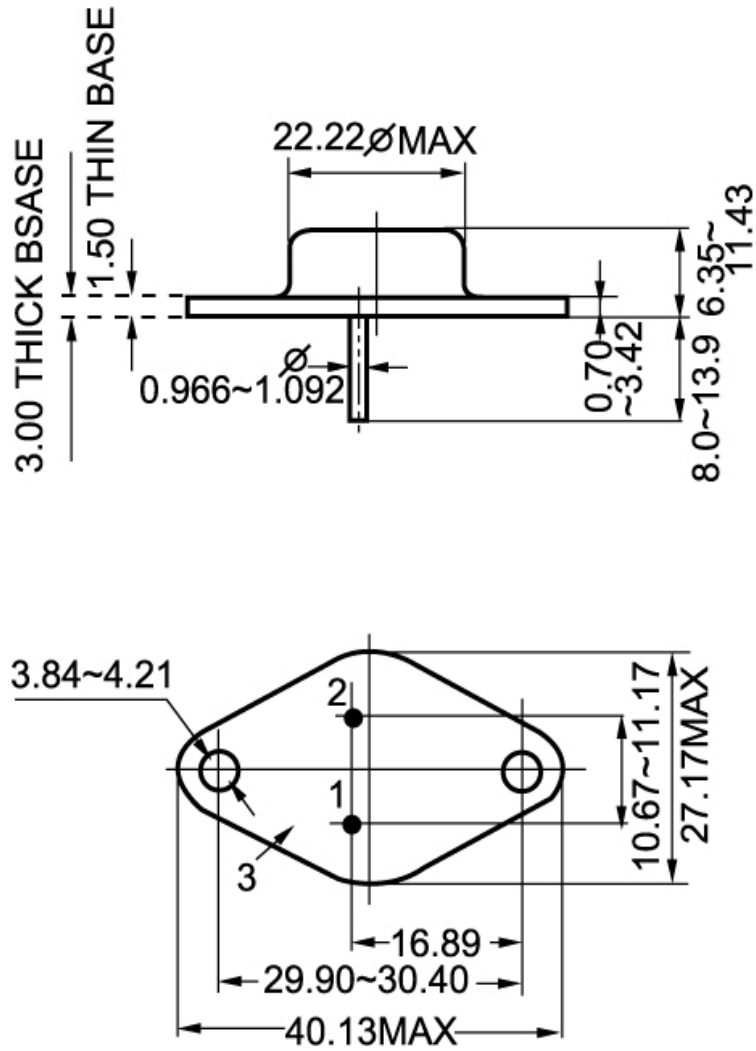


Fig.2 Outline dimensions