

Silicon NPN Power Transistors

BUX81

DESCRIPTION

- With TO-3 package
- High voltage ;fast switching speed
- Low saturation voltage

APPLICATIONS

- Switching-mode power supplies ,CRT scanning,inverters,and other industrial applications

PINNING(see fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

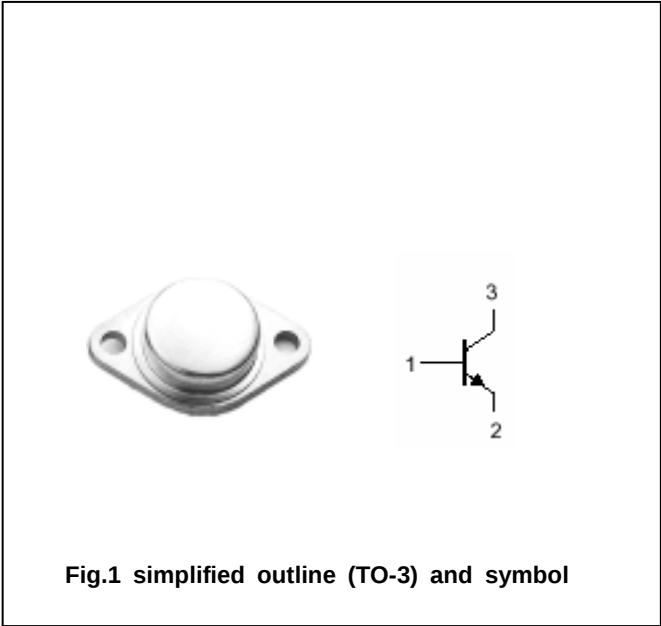


Fig.1 simplified outline (TO-3) and symbol

ABSOLUTE MAXIMUM RATINGS(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1000	V
V_{CEO}	Collector-emitter voltage	Open base	450	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		10	A
I_{CM}	Collector current-peak		15	A
I_B	Base current		4	A
I_{BM}	Base current-peak		6	A
P_T	Total power dissipation	$T_C=25$	150	W
T_j	Junction temperature		200	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction to case	1.17	/W

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1A$; $L=25mH$	450			V
$V_{CESat-1}$	Collector-emitter saturation voltage	$I_C=5A$; $I_B=1A$			1.5	V
$V_{CESat-2}$	Collector-emitter saturation voltage	$I_C=8A$; $I_B=2.5A$			3.0	V
$V_{BESat-1}$	Base-emitter saturation voltage	$I_C=5A$; $I_B=1A$			1.4	V
$V_{BESat-2}$	Base-emitter saturation voltage	$I_C=8A$; $I_B=2.5A$			1.8	V
I_{CES}	Collector cut-off current	$V_{CE}=1000V$; $V_{BE}=0$ $T_C=125$			1.0 3.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=10V$; $I_C=0$			10	mA
h_{FE}	DC current gain	$I_C=1.2A$; $V_{CE}=5V$	20			
f_T	Transition frequency	$I_C=0.5A$; $V_{CE}=10V$		8		MHz
C_{OB}	Output capacitance	$I_E=0$; $V_{CB}=20V$; $f=0.1MHz$		105		pF

Switching times

t_{on}	Turn-on time	$I_C=5A$; $I_{B1}=1A$; $I_{B2}=-2A$ $V_{CC}=250V$			0.5	μs
t_s	Storage time				3.5	μs
t_f	Fall time				0.8	μs

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PACKAGE OUTLINE

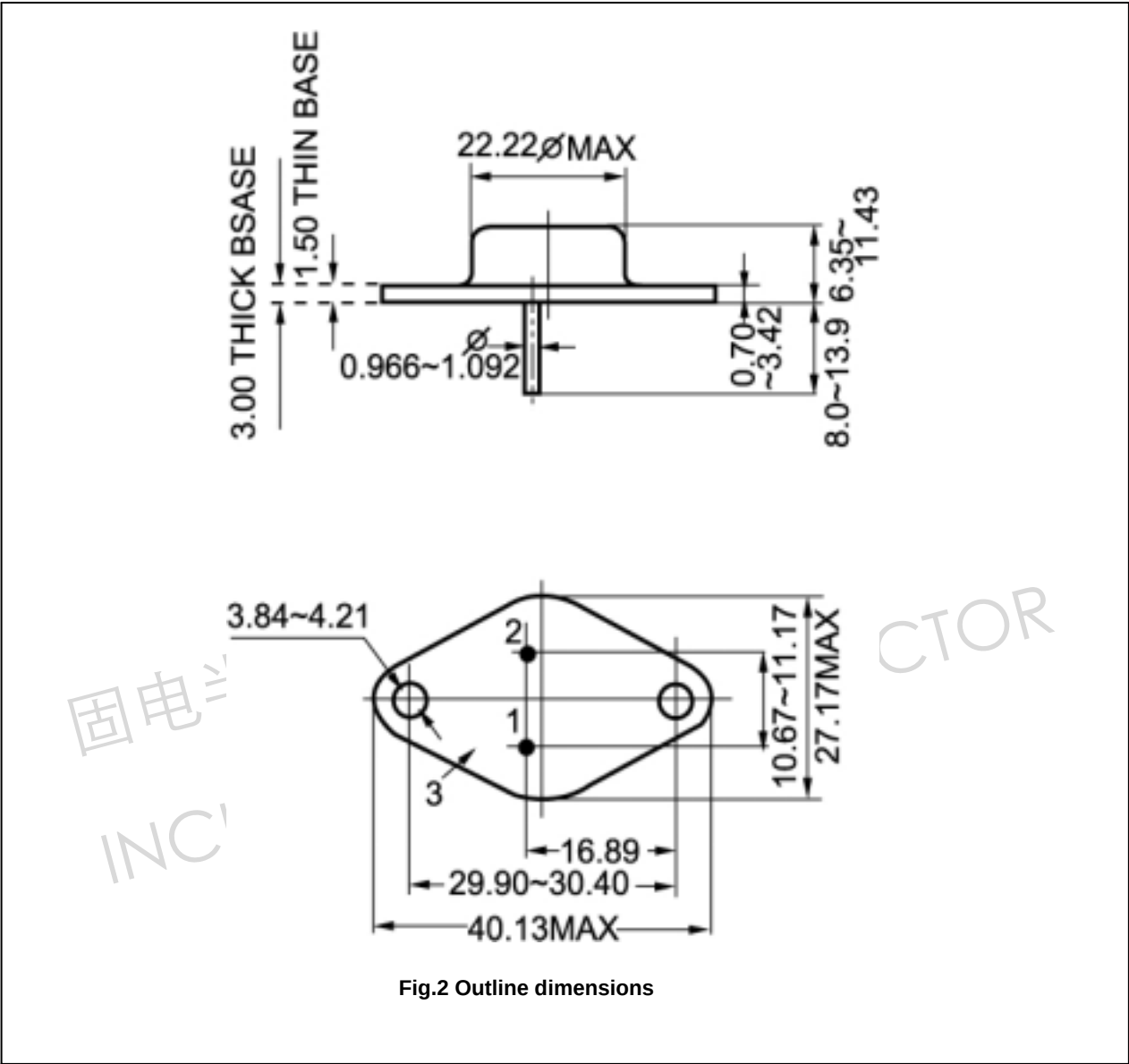


Fig.2 Outline dimensions