

Silicon NPN Power Transistors

BUV21

DESCRIPTION

- With TO-3 package
- High DC current gain@ $I_C=12A$
- Fast switching times
- Low collector saturation voltage

APPLICATIONS

- Designed for high current,high speed and high power applications.

PINNING(see fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

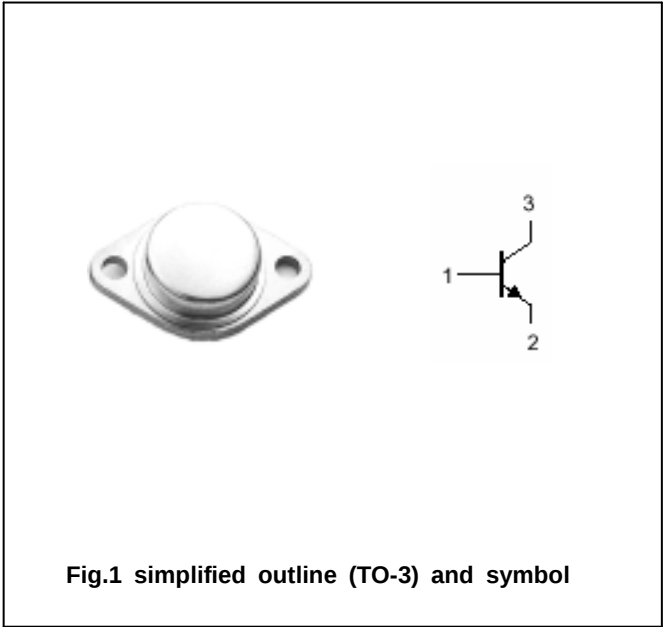


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings ($T_c=25^\circ C$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	250	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		40	A
I_{CM}	Collector current-peak		50	A
I_B	Base current		8	A
P_T	Total power dissipation	$T_C=25$	150	W
T_j	Junction temperature		-65~200	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	0.7	/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	$I_C=0.2A$; $I_B=0$; $L=25mH$	200			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=50mA$; $I_C=0$	7			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	$I_C=12A$; $I_B=1.2A$			0.6	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	$I_C=25A$; $I_B=3A$			1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=25A$; $I_B=3A$			1.5	V
I_{CEX}	Collector cut-off current	$V_{CE}=250V$; $V_{BE}=-1.5V$ $T_C=125$			3.0 12	mA
I_{CEO}	Collector cut-off current	$V_{CE}=160V$; $I_B=0$			3.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V$; $I_C=0$			1.0	mA
h_{FE-1}	DC current gain	$I_C=12A$; $V_{CE}=2V$		20	60	
h_{FE-2}	DC current gain	$I_C=25A$; $V_{CE}=4V$		10		
f_T	Transition frequency	$I_C=2A$; $V_{CE}=15V$; $f=4MHz$	8.0			MHz

Switching times

t_{on}	Turn-on time	$I_C=25A$; $I_{B1}=-I_{B2}=3A$ $V_{CC}=100V$; $R_C=4\Omega$			1.0	μs
t_s	Storage time				1.8	μs
t_f	Fall time				0.4	μs

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PACKAGE OUTLINE

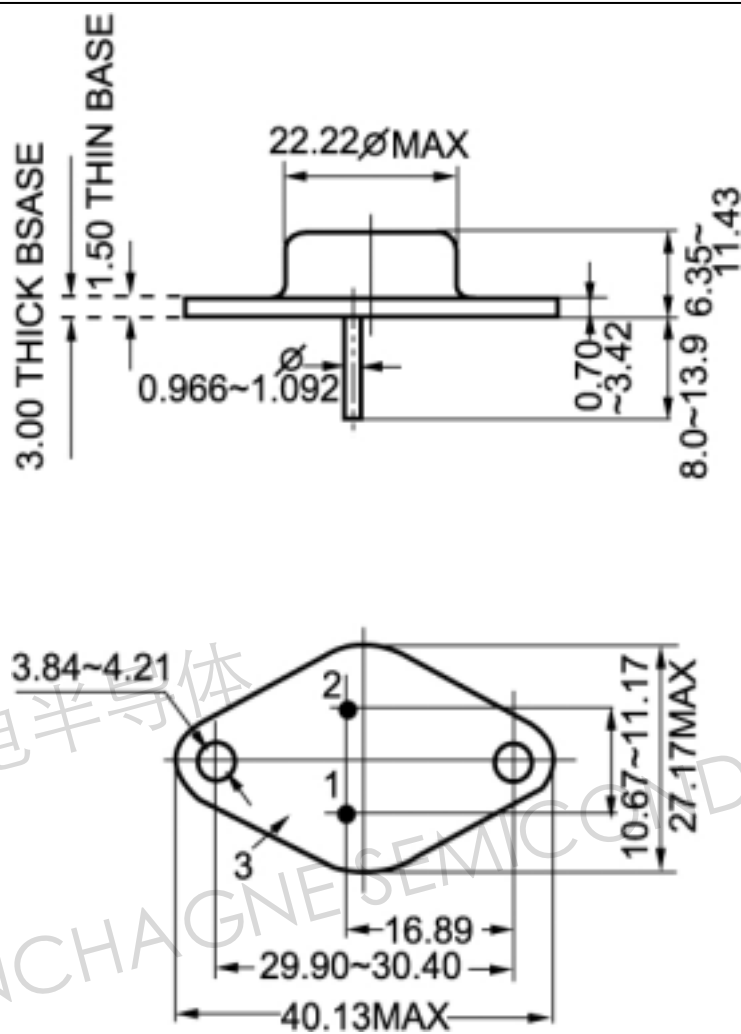


Fig.2 Outline dimensions