

Silicon NPN Power Transistors

BUV47 BUV47B

DESCRIPTION

- With TO-3PN package.
- High voltage.
- Very high switching speed.

APPLICATIONS

- Suited for 220V switchmode power supply, DC and AC motor control.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

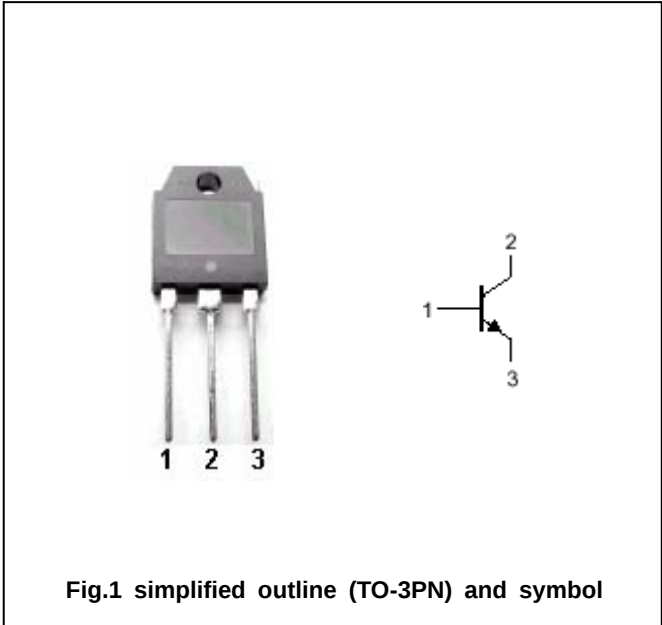


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	850	V
V _{CEO}	Collector-emitter voltage	Open base	400	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		9	A
I _{CM}	Collector current-peak		15	A
I _B	Base current		3	A
P _C	Collector power dissipation	T _C =25	90	W
T _j	Junction temperature		-65~150	
T _{stg}	Storage temperature		-65~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-case}	Thermal resistance junction case	1.38	/W

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-base breakdown voltage		$I_E=10mA; I_C=0$	10			V
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage		$I_C=0.2A; I_B=0; L=25mH$	400			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	BUV47	$I_C=5A; I_B=1A$			1.5	V
		BUV47B	$I_C=6A; I_B=1.2A$				
$V_{CEsat-2}$	Collector-emitter saturation voltage	BUV47	$I_C=8A; I_B=2.5A$			3.0	V
		BUV47B	$I_C=9A; I_B=3A$				
V_{BEsat}	Base-emitter saturation voltage	BUV47	$I_C=5A; I_B=1A$			1.6	V
		BUV47B	$I_C=6A; I_B=1.2A$				
I_{CEX}	Collector cut-off current		$V_{CE}=850V; V_{BE}=-2.5V$			0.15	mA
I_{EBO}	Emitter cut-off current		$V_{EB}=5V; I_C=0$			1.0	mA
h_{FE}	DC current gain		$I_C=10A; V_{CE}=5V$	7	10	14	

Switching times :

t_{on}	Turn-on time	$I_C=5A; I_{B1}=-I_{B2}=1.0A$ $V_{CC}=150V$			1.0	μs
t_s	Storage time				3.0	μs
t_f	Fall time				0.8	μs

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Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)