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

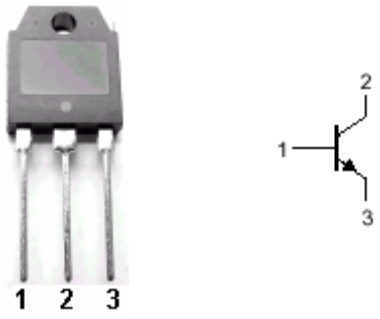

Fig.1 simplified outline (TO-3PN) and symbol

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
$R_{th\ j\text{-}case}$	Thermal resistance junction case	1.38	□/W

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

PACKAGE OUTLINE

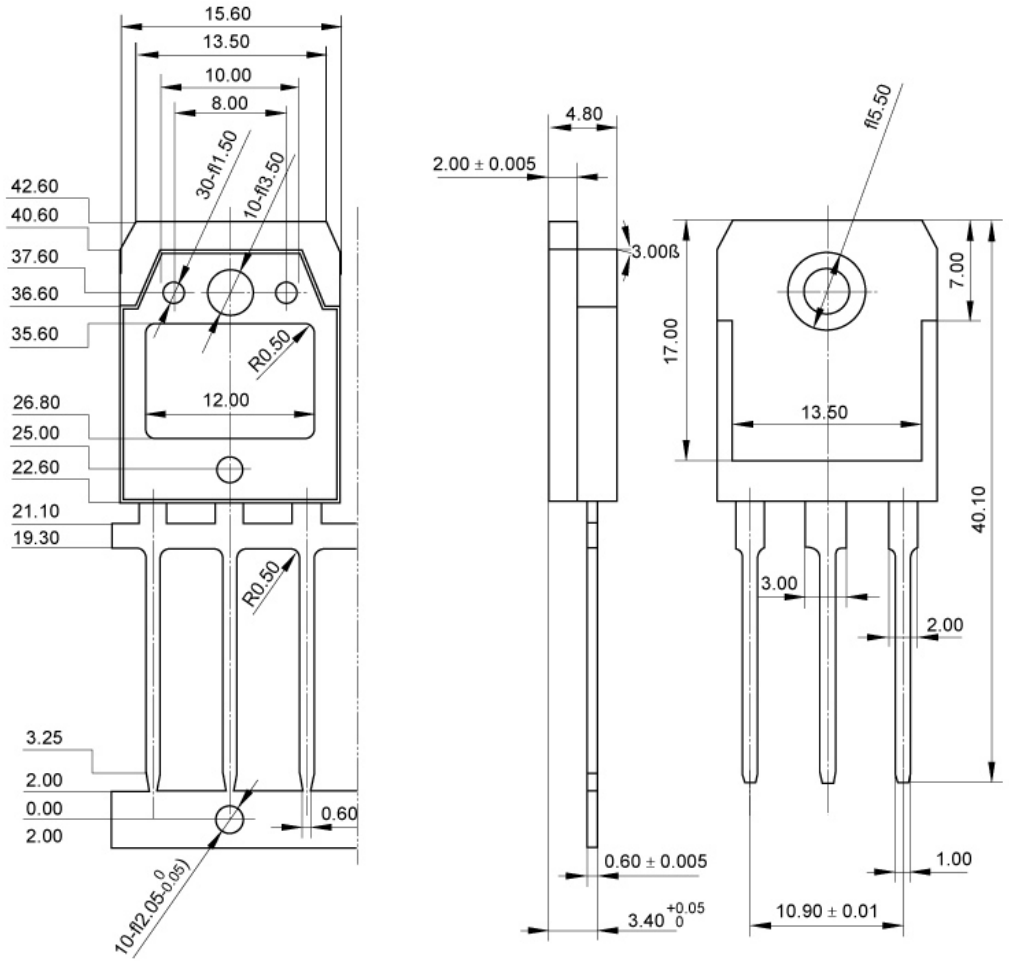

Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)