

## Silicon NPN Power Transistors

## BUH417D

## DESCRIPTION

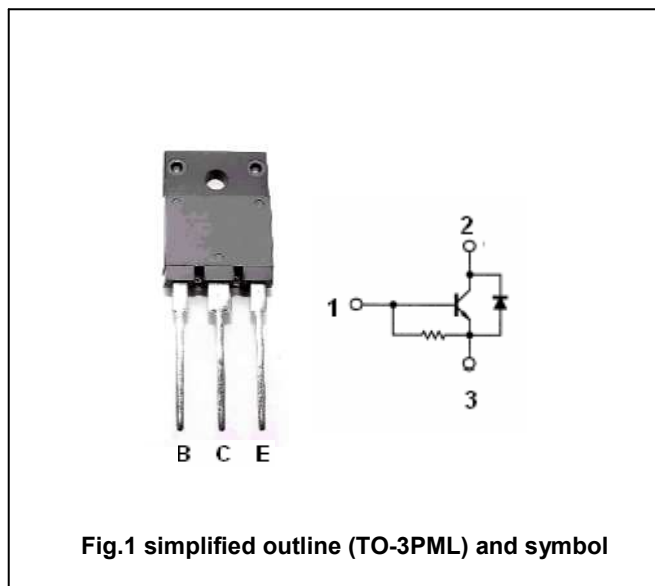
- With TO-3PML package
- High voltage
- High speed switching
- Built-in damper diode

## APPLICATIONS

- Switching power supply for TV's and monitors

## PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	1500	V
$V_{CEO}$	Collector-emitter voltage	Open base	700	V
$V_{EBO}$	Emitter-base voltage	Open collector	10	V
$I_C$	Collector current (DC)		7	A
$I_{CM}$	Collector current -peak	$t_p < 5\text{ms}$	12	A
$I_B$	Base current (DC)		4	A
$I_{BM}$	Base current -peak	$t_p < 5\text{ms}$	7	A
$P_{tot}$	Total power dissipation	$T_C=25^\circ\text{C}$	55	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-65~150	$^\circ\text{C}$

## Silicon NPN Power Transistors

## BUH417D

## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =100mA ; I <sub>B</sub> =0	700			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =1A			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =1A			1.3	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1700V; V <sub>BE</sub> =0 T <sub>j</sub> =125°C			1.0 2.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			200	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	8		36	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =5V	6			
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =4A			2	V

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	2.27	°C/W

Silicon NPN Power Transistors

BUH417D

PACKAGE OUTLINE

