

Silicon NPN Power Transistors

BUH515

DESCRIPTION

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- With TO-3PML package
- High voltage
- High speed switching

APPLICATIONS

- Horizontal deflection for color TV and monitors.
- Switch mode power supplies.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

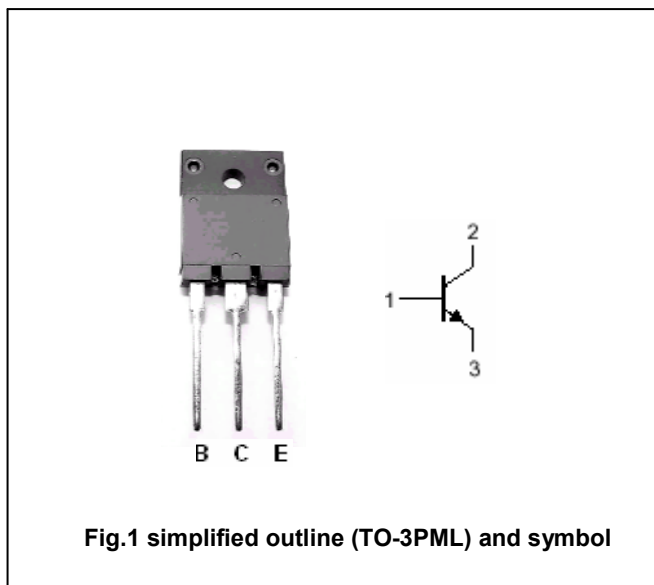


Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1500	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	700	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	10	V
I <sub>C</sub>	Collector current (DC)		8	A
I <sub>CM</sub>	Collector current-peak		12	A
I <sub>B</sub>	Base current (DC)		5	A
I <sub>BM</sub>	Base current-peak		8	A
P <sub>tot</sub>	Total power dissipation	T <sub>C</sub> =25°C	50	W
T <sub>j</sub>	Operating junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

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## CHARACTERISTICS

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

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =100mA; I <sub>B</sub> =0	700			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =10mA; I <sub>C</sub> =0	10			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =1.25A			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =1.25A			1.3	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1500V; V <sub>BE</sub> =0 T <sub>j</sub> =125°C			0.2 2	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			100	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A; V <sub>CE</sub> =5V	6		12	

## Switching times

t <sub>s</sub>	Storage time	I <sub>C</sub> =5A; I <sub>B1</sub> =1.25A; I <sub>B2</sub> =2.5A; V <sub>CC</sub> =400V		2.7	3.9	μs
t <sub>f</sub>	Fall time			190	280	ns

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	2.5	°C/W

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PACKAGE OUTLINE

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Fig.2 Outline dimensions