

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

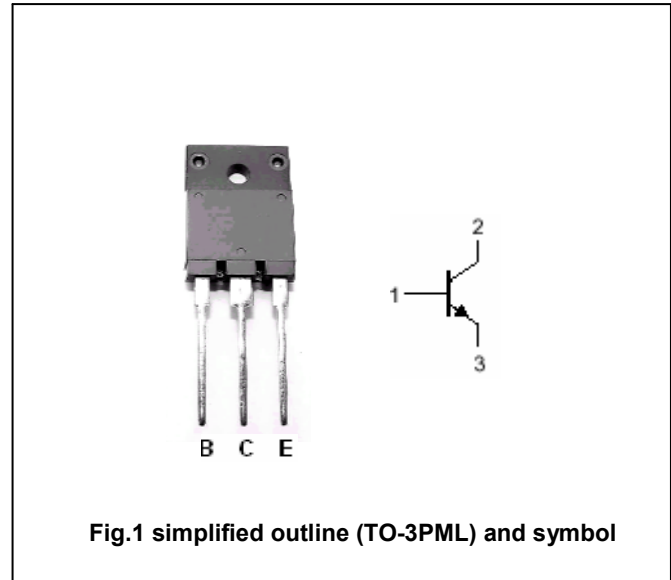


Fig.1 simplified outline (TO-3PML) and symbol

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

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)		8	A
I_{CM}	Collector current-peak		12	A
I_B	Base current (DC)		5	A
I_{BM}	Base current-peak		8	A
P_{tot}	Total power dissipation	$T_C=25^\circ\text{C}$	50	W
T_j	Operating junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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

Switching times

t _s	Storage time	I _C =5A; I _{B1} =1.25A; I _{B2} =2.5A; V _{CC} =400V		2.7	3.9	μs
t _f	Fall time			190	280	ns

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance from junction to case	2.5	°C/W

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PACKAGE OUTLINE

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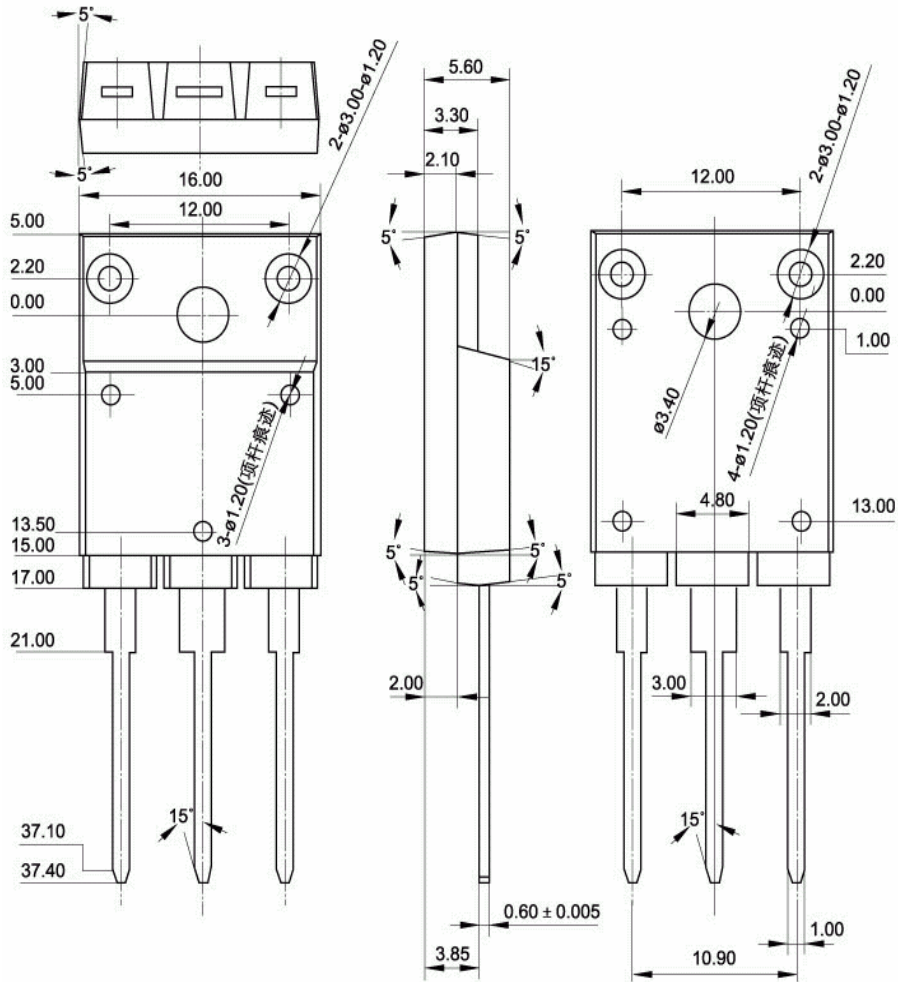


Fig.2 Outline dimensions