

## Silicon NPN Power Transistors

## BU941ZPFI

## DESCRIPTION

- With TO-3PML package
- DARLINGTON
- High breakdown voltage

## APPLICATIONS

- High ruggedness electronic ignitions

## PINNING

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

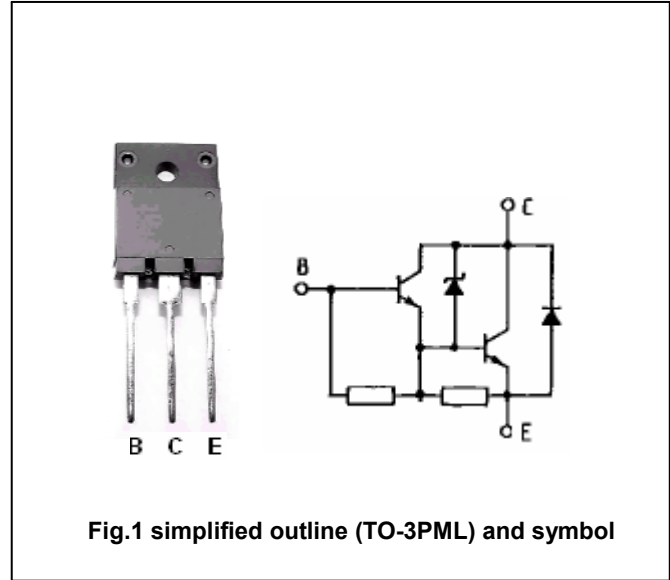


Fig.1 simplified outline (TO-3PML) and symbol

## Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CEO}$	Collector-emitter voltage	Open base	350	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		15	A
$I_{CM}$	Collector current-peak		30	A
$I_B$	Base current		1	A
$I_{BM}$	Base current-peak		5	A
$P_T$	Total power dissipation	$T_C=25^\circ\text{C}$	65	W
$T_j$	Max.operating junction temperature		175	℃
$T_{stg}$	Storage temperature		-65~175	℃

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-case}$	Thermal resistance junction case	2.3	℃/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CL</sub>	Clamping voltage	I <sub>C</sub> =0.1 A ; I <sub>B</sub> =0	350		500	V
V <sub>CE(sat-1)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =100m A			1.8	V
V <sub>CE(sat-2)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =250m A			1.8	V
V <sub>CE(sat-3)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =12A; I <sub>B</sub> =300m A			2.0	V
V <sub>BE(sat-1)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =100m A			2.2	V
V <sub>BE(sat-2)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =250m A			2.5	V
V <sub>BE(sat-3)</sub>	Base-emitter saturation voltage	I <sub>C</sub> =12A; I <sub>B</sub> =300m A			2.7	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =300V; I <sub>B</sub> =0 T <sub>C</sub> =125 °C			0.1 0.5	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			20	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A ; V <sub>CE</sub> =10V	300			
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =10A			2.5	V

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PACKAGE OUTLINE

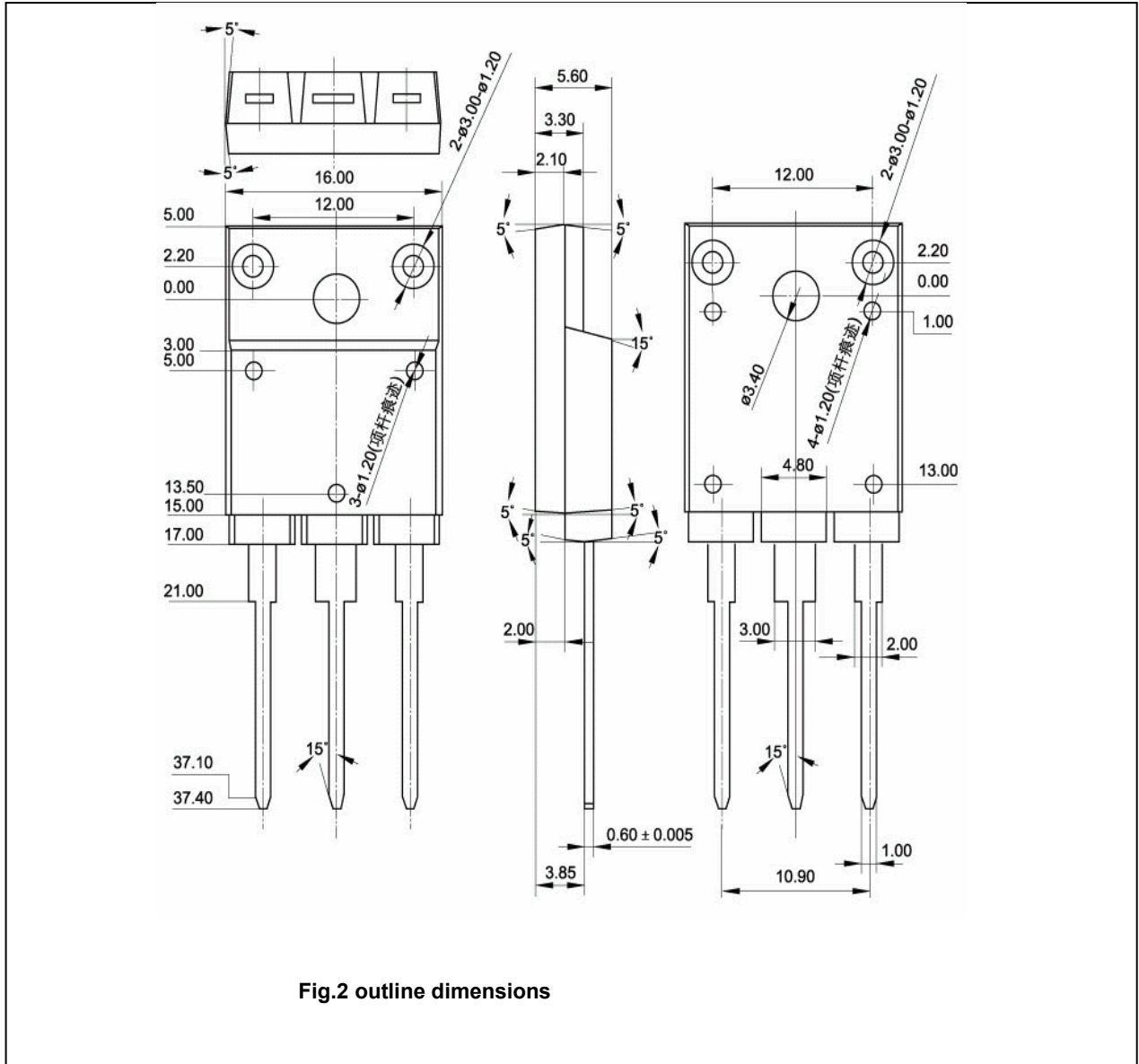


Fig.2 outline dimensions