

## Silicon NPN Power Transistors

BU921

## DESCRIPTION

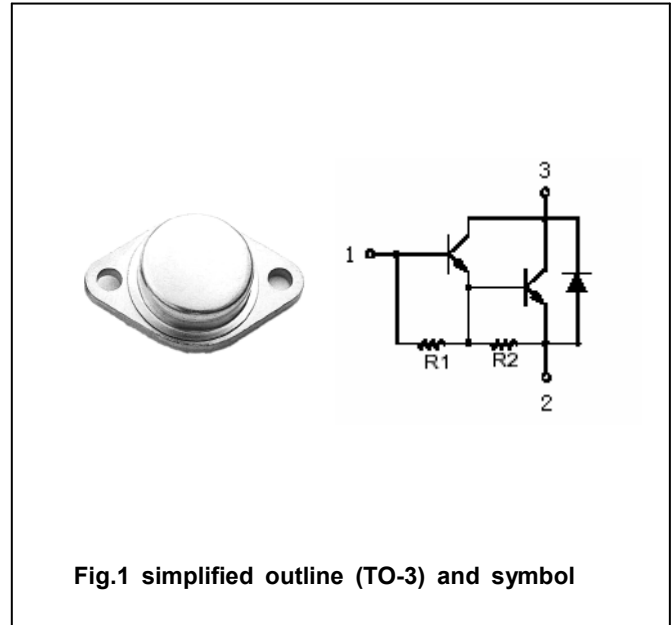
- With TO-3 package
- High current;high voltage
- DARLINGTON

## APPLICATIONS

- Designed for automotive ignition applications and inverter circuits for motor control.

## PINNING(see fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



## Absolute maximum ratings (Tc=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	450	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	400	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current		10	A
I <sub>CM</sub>	Collector current-peak		15	A
I <sub>B</sub>	Base current		5	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25℃	120	W
T <sub>j</sub>	Junction temperature		175	℃
T <sub>stg</sub>	Storage temperature		-65~175	℃

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>thj-c</sub>	Thermal resistance junction to case	1.25	℃/W

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## 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> =0.1A; I <sub>B</sub> =0	400			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =50mA			1.8	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =7 A; I <sub>B</sub> =140mA			1.8	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =50mA			2.2	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =7 A; I <sub>B</sub> =140mA			2.5	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =450V; V <sub>BE</sub> =0 T <sub>C</sub> =150°C			0.25 0.50	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =400V; I <sub>B</sub> =0			0.25	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			50	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =2A; V <sub>EB</sub> =2V	500			
V <sub>F</sub>	Diode forward voltage	I <sub>F</sub> =7A			2.5	V

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PACKAGE OUTLINE

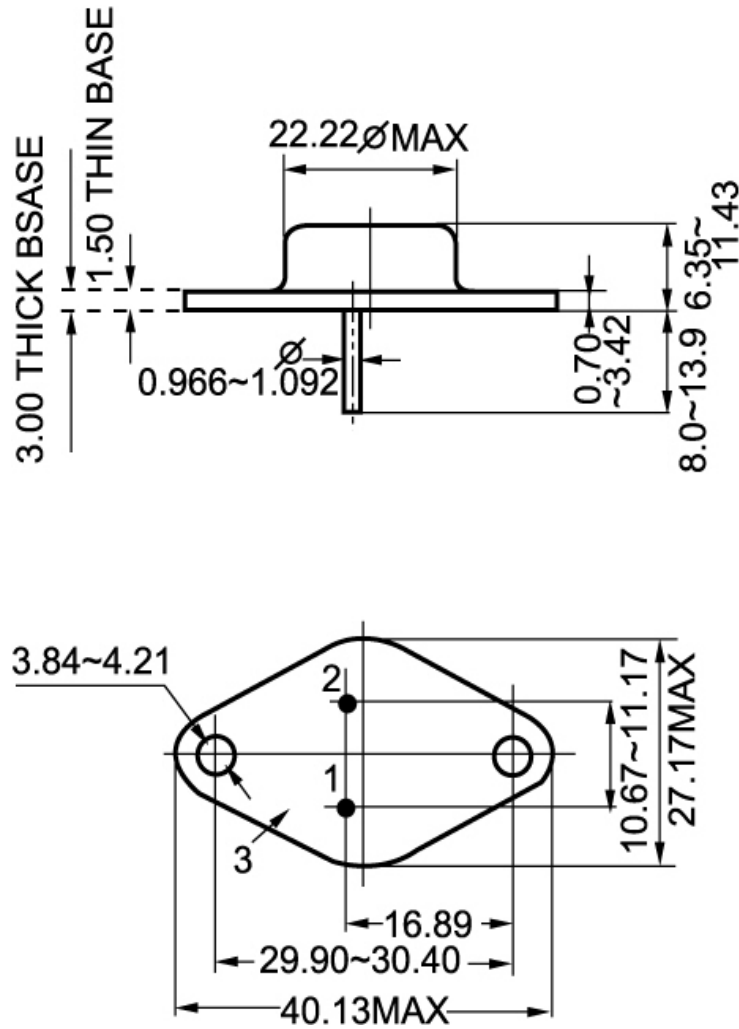


Fig.2 Outline dimensions