

Silicon NPN Power Transistors

BU931P

DESCRIPTION

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

APPLICATIONS

- High ruggedness electronic ignitions.
- High voltage ignition coil driver

PINNING

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

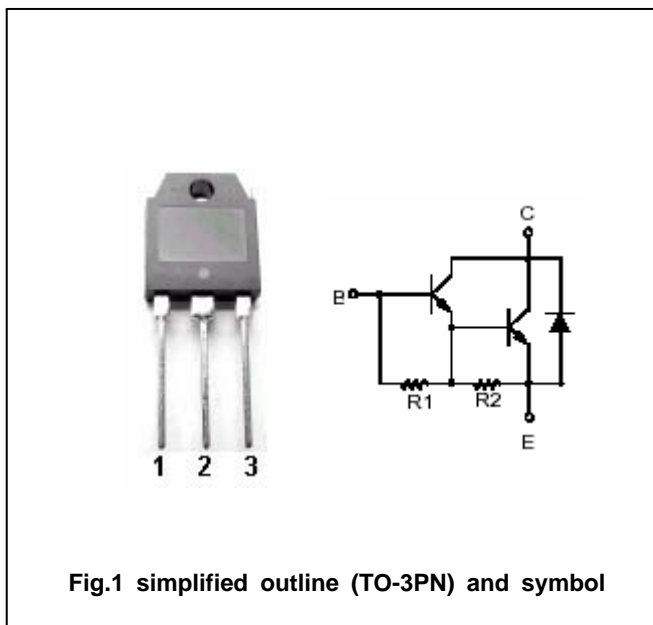


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	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	$T_C=25$	135	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	1.1	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =0.1 A ; I _B =0; L=10mH	400			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =7A ; I _B =0.07A			1.6	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =8A; I _B =0.1 A			1.8	V
V _{CEsat-3}	Collector-emitter saturation voltage	I _C =10A; I _B =0.25 A			1.8	V
V _{BEsat-1}	Base-emitter saturation voltage	I _C =7A ; I _B =0.07A			2.2	V
V _{BEsat-2}	Base-emitter saturation voltage	I _C =8A; I _B =0.1 A			2.4	V
V _{BEsat-3}	Base-emitter saturation voltage	I _C =10A; I _B =0.25 A			2.5	V
I _{CES}	Collector cut-off current	V _{CE} =500V; V _{BE} =0; T _j =125			0.1 0.5	mA
I _{CEO}	Collector cut-off current	V _{CE} =450V; I _B =0; T _j =125			0.1 0.5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			20	mA
h _{FE}	DC current gain	I _C =5A ; V _{CE} =10V	300			
V _F	Diode forward voltage	I _F =10A			2.5	V

PACKAGE OUTLINE

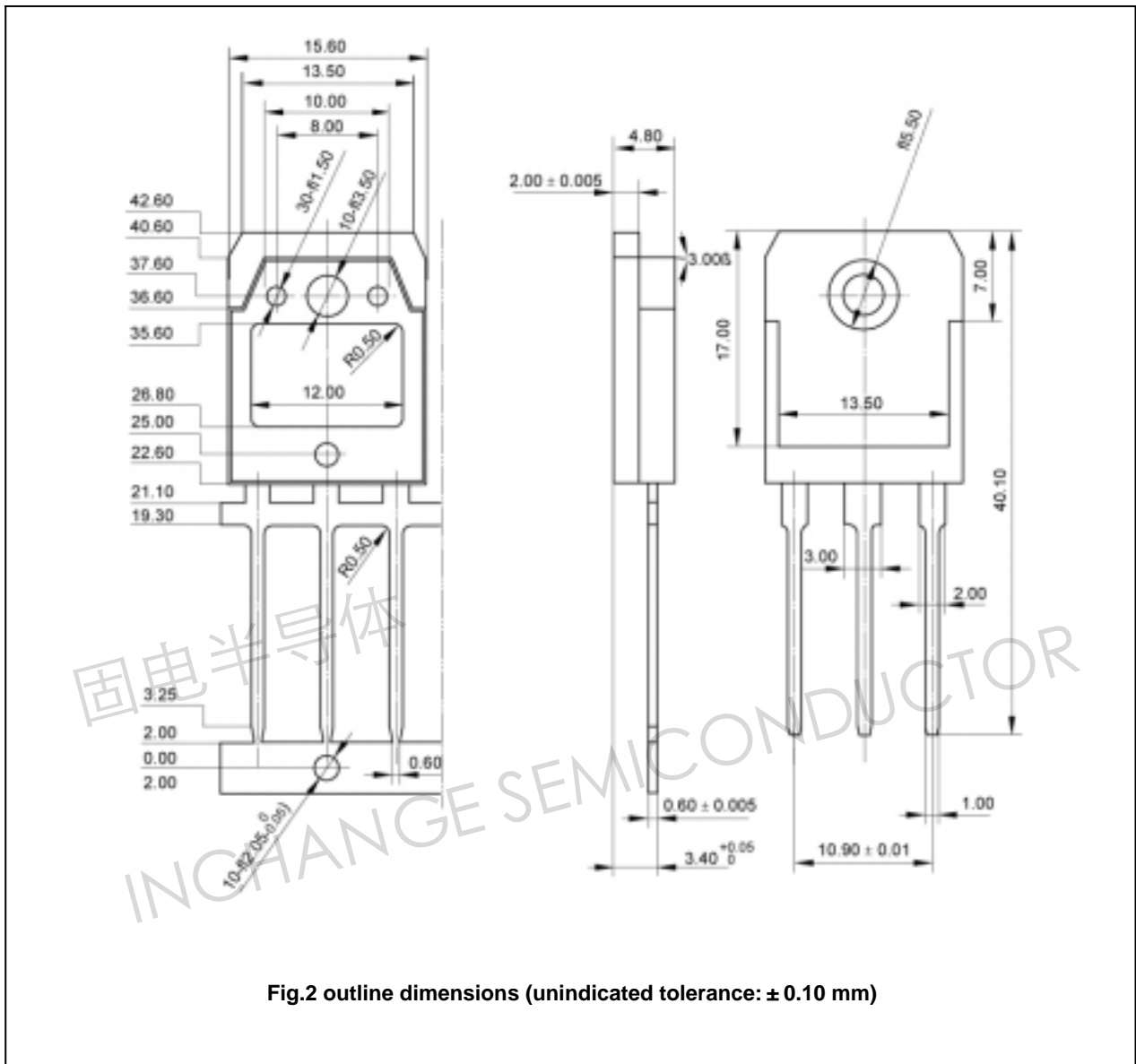


Fig.2 outline dimensions (unindicated tolerance: ± 0.10 mm)