

Silicon NPN Power Transistors

BU931ZP

DESCRIPTION

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

APPLICATIONS

- Application in high performance electronic car ignition

PINNING

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

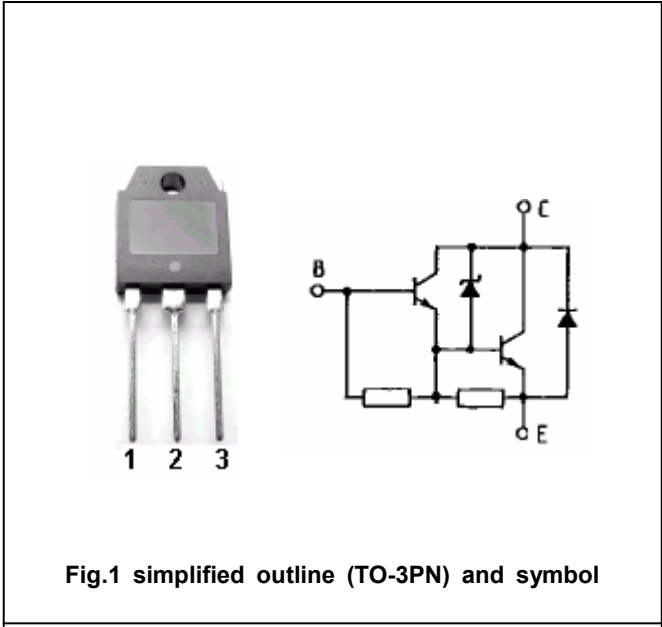


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	350	V
V_{CEO}	Collector-emitter voltage	Open base	350	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		20	A
I_B	Base current		5	A
P_T	Total power dissipation	$T_C=25^{\circ}\text{C}$	125	W
T_j	Max.operating junction temperature		150	℃
T_{stg}	Storage temperature		-40~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-case}$	Thermal resistance junction case	1.0	℃/W

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CHARACTERISTICS

T_j=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CL}	Clamping voltage	I _C =0.1 A ; I _B =0	350		500	V
V _{CE(sat-1)}	Collector-emitter saturation voltage	I _C =7A ; I _B =70mA			1.6	V
V _{CE(sat-2)}	Collector-emitter saturation voltage	I _C =8A; I _B =100m A			1.8	V
V _{CE(sat-3)}	Collector-emitter saturation voltage	I _C =10A; I _B =150m A			2.0	V
V _{BE(sat-1)}	Base-emitter saturation voltage	I _C =8A; I _B =100m A			2.2	V
V _{BE(sat-2)}	Base-emitter saturation voltage	I _C =10A; I _B =250m A			2.5	V
V _{BE-1}	Base-emitter on voltage	I _C =5A ; V _{CE} =2V		1.67		V
V _{BE-2}	Base-emitter on voltage	I _C =10A ; V _{CE} =2V		2.0		V
I _{CL}	Clamping current	V _{CE} =350V; I _B =0			0.25	mA
I _{CE(off)}	Collector-emitter off state current	V _{CC} =16V; V _{BE} =300mV T _j =125℃			0.5	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			50	mA
h _{FE}	DC current gain	I _C =5A ; V _{CE} =2V	300			
V _F	Diode forward voltage	I _F =10A			2.5	V

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PACKAGE OUTLINE

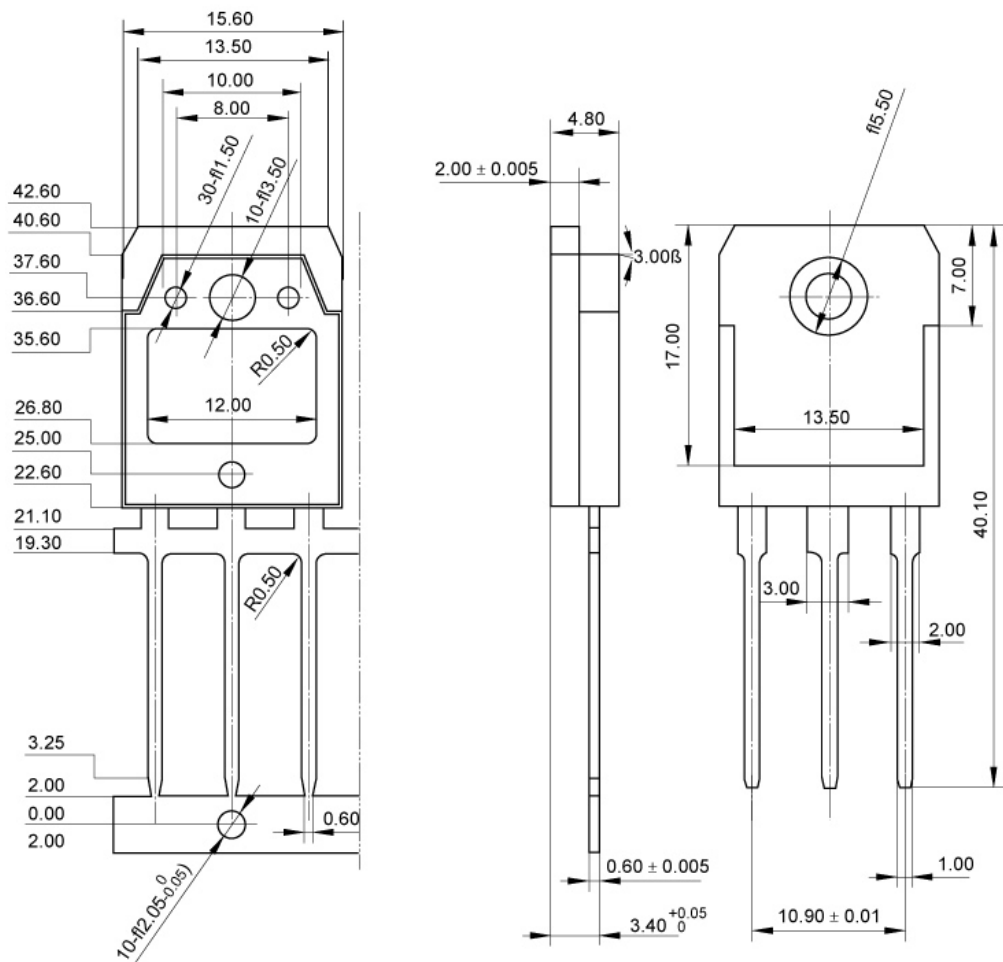


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)