

Silicon NPN Power Transistors

BDX87C

DESCRIPTION

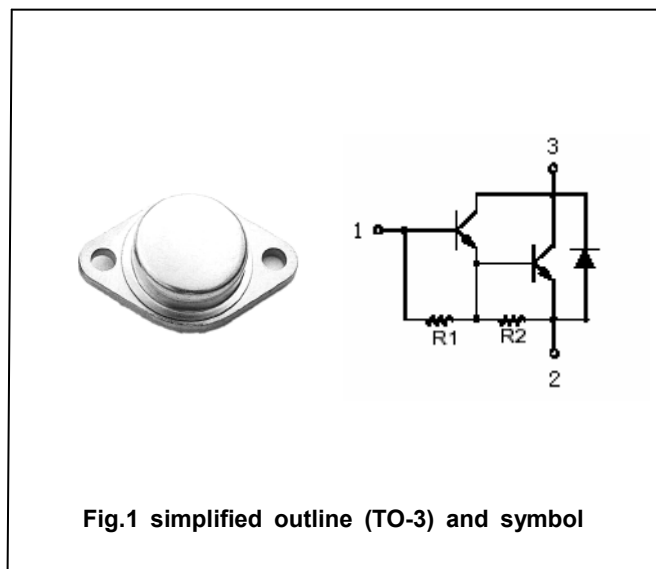
- With TO-3 package
- Complement to type BDX88C
- DARLINGTON

APPLICATIONS

- Designed for use in power linear and switching application.

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		12	A
I_{CM}	Collector current(peak)		18	A
I_B	Base current		0.2	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	120	W
T_j	Max. operating Junction temperature		200	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.45	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0	100			V
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =6A ; I _B =24mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =12A ; I _B =120mA			3.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =12A ; I _B =120mA			4.0	V
V _{BE}	Base-emitter on voltage	I _C =6A ; V _{CE} =3V			2.8	V
h _{FE-1}	DC current gain	I _C =5A ; V _{CE} =3V	1000			
h _{FE-2}	DC current gain	I _C =6A ; V _{CE} =3V	750		18000	
h _{FE-3}	DC current gain	I _C =12A ; V _{CE} =3V	100			
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0 T _C =150°C			0.5 5.0	mA
I _{CEO}	Collector cut-off current	V _{CE} =50V; I _B =0			1.0	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			1.0	mA
V _{F-1}	Diode forward voltage	I _F =3A			1.8	V
V _{F-2}	Diode forward voltage	I _F =8A		2.5		V

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PACKAGE OUTLINE

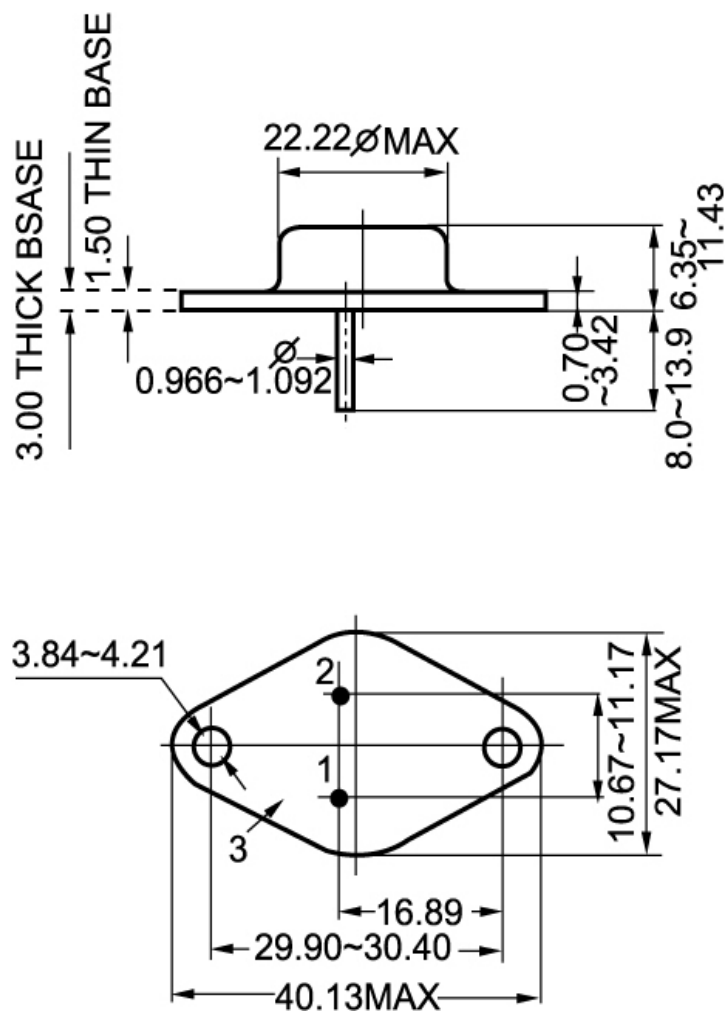
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Fig.2 Outline dimensions