

Silicon NPN Power Transistors

BDX65B

DESCRIPTION

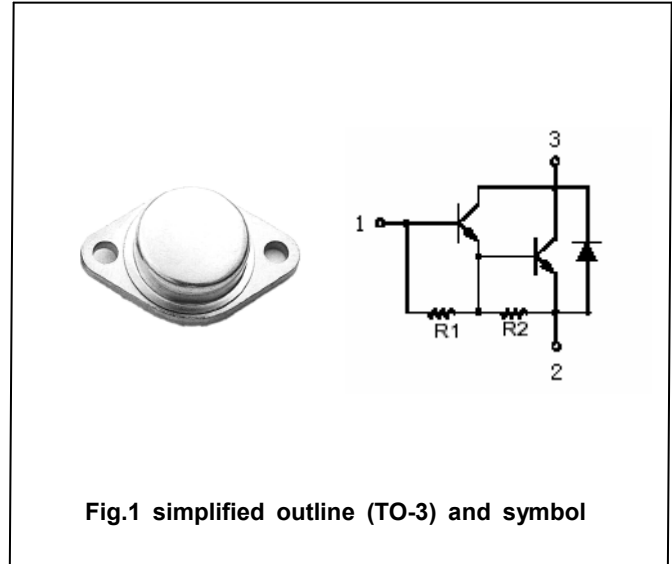
- With TO-3 package
- DARLINGTON
- Complement to type BDX64B

APPLICATIONS

- Designed for power amplification and switching applications.

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	120	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)		16	A
I_B	Base current		0.2	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	117	W
T_j	Junction temperature		-55~200	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.5	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	I _C =0.1A ; I _B =0;L=25mH	100			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =5A ; I _B =20mA			2	V
V _{BE}	Base-emitter on voltage	I _C =5A;V _{CE} =3V			3	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0 T _C =150°C			0.4 3	mA
I _{CEO}	Collector cut-off current	V _{CE} =50V; I _B =0			1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =5V; I _C =0			5	mA
V _F	Diode forward voltage	I _F =3A		1.8		V
h _{FE-1}	DC current gain	I _C =1A ; V _{CE} =3V		1500		
h _{FE-2}	DC current gain	I _C =5A ; V _{CE} =3V	1000			
h _{FE-3}	DC current gain	I _C =10A ; V _{CE} =3V		1500		
f _T	Transition frequency	I _C =5A ; V _{CE} =3V		7		MHz

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PACKAGE OUTLINE

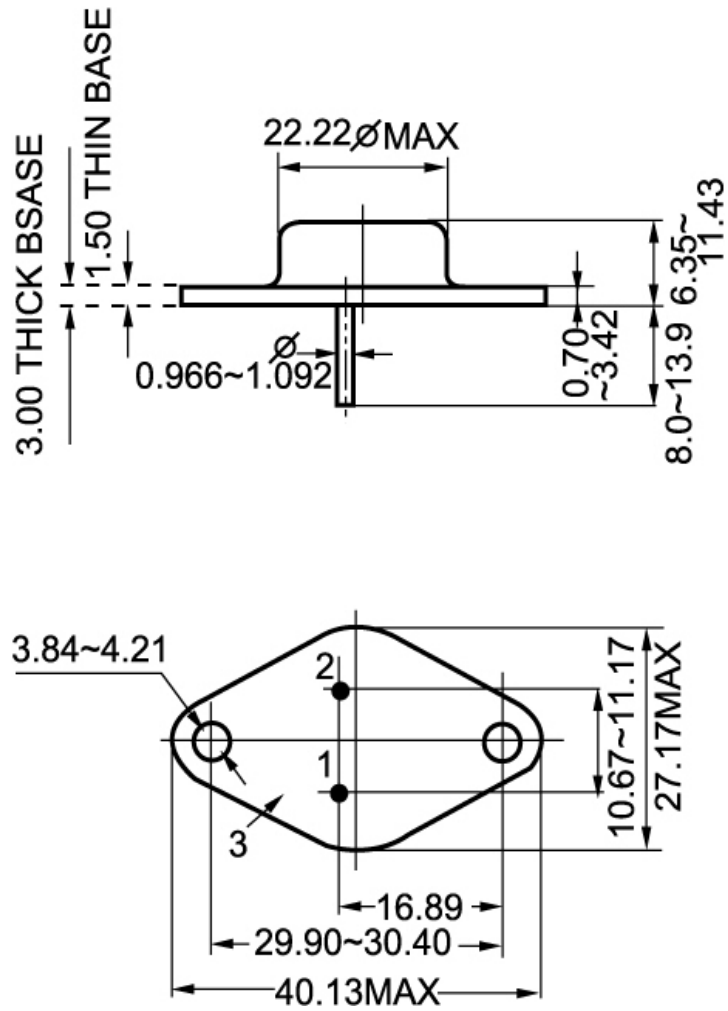


Fig.2 Outline dimensions