

## Silicon NPN Power Transistors

## BDX65B

## DESCRIPTION

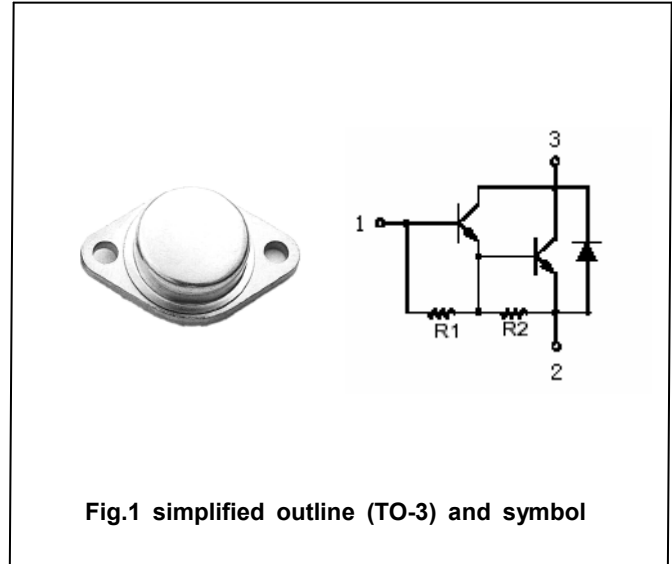
- With TO-3 package
- DARLINGTON
- Complement to type BDX64B

## 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<sub>j</sub>=25°C unless otherwise specified

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

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PACKAGE OUTLINE

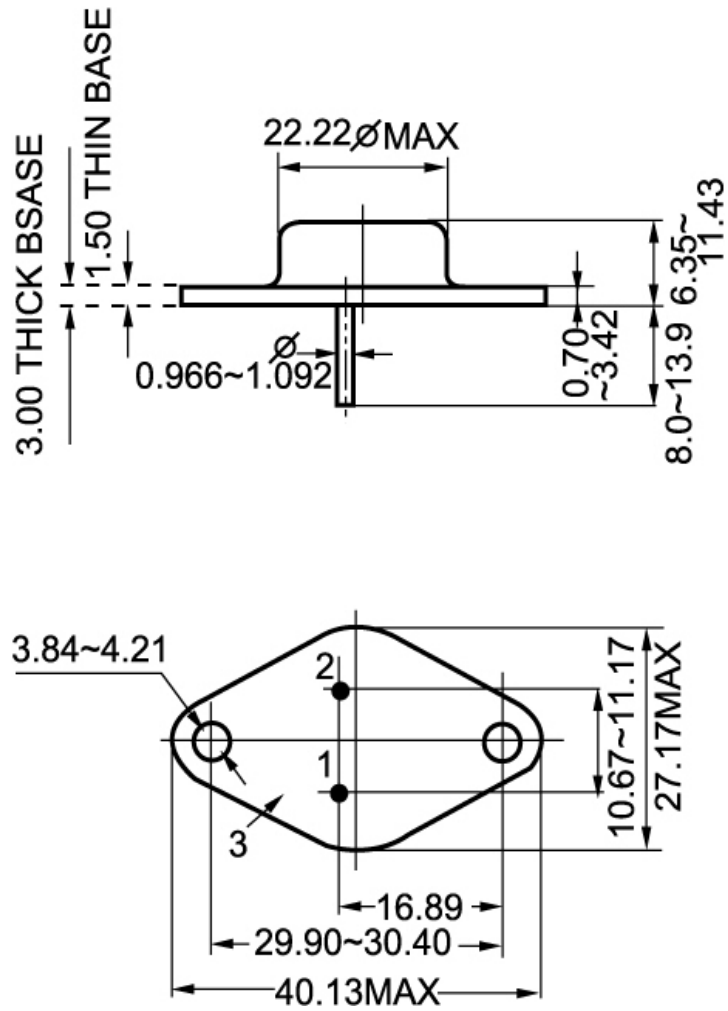


Fig.2 Outline dimensions